CFA | Cape Fear Analytical LLC
an affiliate of The GEL Group INC

3306 Kitty Hawk Road, Suite 120 Wilmington, NC 28405
P 910.795.0421

www.capefearanalytical.com

October 04, 2019

Mr. Jeffrey Parker
Pacific Groundwater Group
2377 Eastlake Avenue E
Seattle, Washington 98102

Re: Swan Island Lagoon Sediment Investigation
Work Order: 15469
SDG: 2006-00115_2

Dear Mr. Parker:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 30, 2019. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

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,

Cynde Larkins

Cynde Larkins
Project Manager

Enclosures

problem solved

Other CF

CFA WO #15469

Chain of Custody Record

Client Contact	Project Manager: Janet Knox	Site Contact/Sampler: Jeff Parker	Date: 8/27/2019 – 8/28/2019	COC No: 3 of 8 COCs
Jeff Parker & Janet Knox	Tel/Fax:	Lab Contact:	Carrier:	Job No. 2006-00115
Pacific Groundwater Group	Analysis Turnaround Time			SDG No.
2377 Eastlake Ave E, Seattle WA 98102	*standard*			
206 329 0141 Phone	TAT if different from Below ____			
206 329 6968 FAX	[x] standard			
Swan Island Lagoon Sediment Investigation	[ ] 1 week			
Site:	[ ] 2 days			
P O #	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	#	Dioxins/Furans 1613B	Archive	Sample Specific Notes:
J6-SC1b-20to30-8Z819	8/28/19	0920		S	1		X		3.8°
J6-SC1b-30to40-8Z819	8/28/19	0925		S	1		X		
J6-SC1b-40to50-8Z819	8/28/19	1025		S	1		X		
J6-SC1b-50to60-8Z819	8/28/19	1030		S	1		X		
J6-SC1b-60to70-8Z819	8/28/19	1035		S	1		X		
J6-SC1b-70to80-8Z819	8/28/19	1040		S	1		X		3.3°
J6-SC1b-80to90-8Z819	8/28/19	1155		S	1		X		
J6-SC1b-90to100-8Z819	8/28/19	1200		S	1		X		
J6-SC1b-100to110-8Z819	8/28/19	1205		S	1		X		
J6-SC1b-110to120-8Z819	8/28/19	1210		S	1		X		
J6-SC1b-00to10-82719	8/27/19	1930		S	1			X	
J6-SC1b-10to20-82719	8/27/19	1935		S	1			X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
[ ] Non-Hazard [ ] Flammable [ ] Skin Irritant Poison B [ ] Unknown [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] Return To Client [ ] Disposal By Lab [x] Archive For _____ Months

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	PGG	8/29/19 1300	Fedex		
Relinquished by: Fedex	Company:	Date/Time:	Received by:	Company: CFA	Date/Time: 9/30/19 9:55
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Other CF

CFA WO #15469

Chain of Custody Record

Client Contact	Project Manager: Janet Knox	Site Contact/Sampler: Jeff Parker	Date: 8/28/2019	COC No:
Jeff Parker & Janet Knox	Tel/Fax:	Lab Contact:	Carrier:	4 of 8 COCs
Pacific Groundwater Group	Analysis Turnaround Time			Job No. 2006-00115
2377 Eastlake Ave E, Seattle WA 98102	standard			
206 329 0141 Phone	TAT if different from Below			SDG No.
206 329 6968 FAX	[X] standard			
Swan Island Lagoon Sediment Investigation	[ ] 1 week			
Site:	[ ] 2 days			
P O #	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Dioxins/Furans 1613B	Archive	Sample Specific Notes:
H3-SC1b-20to30-8[28]19	8/28/19	2015		S	1	X		5.2"
H3-SC1b-30to40-8[28]19	8/28/19	0825		S	1	X		
H3-SC1b-40to50-8[29]19	8/29/19	0830		S	1	X		
H3-SC1b-50to60-8[29]19	8/29/19	0835		S	1	X		
H3-SC1b-60to70-8[29]19	8/29/19	0900		S	1	X		
H3-SC1b-70to80-8[29]19	8/29/19	0905		S	1	X		
H3-SC1b-80to90-8[29]19	8/29/19	0930		S	1	X		
H3-SC1b-90to100-8[29]19	8/29/19	0935		S	1	X		
H3-SC1b-100to110-8[29]19	8/29/19	0950		S	1	X		
H3-SC1b-00to10-82819	8/28/19	2005		S	1	X	X	
H3-SC1b-10-20-82819	8/28/19	2010		S	1	X	X	
	8/ /19			S	1			

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

[ ] Non-Hazard [ ] Flammable [ ] Skin Irritant Poison B [ ] Unknown [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

[ ] Return To Client [ ] Disposal By Lab [X] Archive For _____ Months

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	PGG	8/29/19 1300	Fedex		
Relinquished by: Fedex	Company:	Date/Time:	Received by: [signature]	Company: CFA	Date/Time: 8/30/19 9:55
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical

Client: Pacific Groundwater Group	Work Order: 15469
Shipping Company: FedEx	Date/Time Received: 30AUG19 0955

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			✓
Samples identified as Foreign Soil?			✓

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		✓	
Samples < 2x background?		✓	

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			✓

Air Witness: _____

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other(describe)
2	Custody seal/s present on cooler?	✓			Seal intact? (Yes) No
3	Chain of Custody documents included with shipment?	✓			
4	Samples requiring cold preservation within 0-6°C?	✓			Preservation Method: (ice bags) blue ice dry ice none other (describe) Temperature Blank present: (Yes) No 3.9°-0.1=3.8° 5.3°-0.1=5.2° 3.4°-0.1=3.3°
5	Aqueous samples found to have visible solids?			✓	Sample IDs, containers affected:
5	Samples requiring chemical preservation at proper pH?		✓		Sample IDs, containers affected and pH observed: pH=8 on both water containers If preservative added, Lot#:
7	Samples requiring preservation have no residual chlorine?	✓			Sample IDs, containers affected: If preservative added, Lot#:
8	Samples received within holding time?	✓			Sample IDs, tests affected:
9	Sample IDs on COC match IDs on containers?			✓	Sample IDs, containers affected: See below *
10	Date & time of COC match date & time on containers?	✓			Sample IDs, containers affected:
11	Number of containers received match number indicated on COC?			✓	List type and number of containers / Sample IDs, containers affected: 2-1L NMAG received for 711-82719 75-4 oz amber glass soil jars No containers received for 712-82819
12	COC form is properly signed in relinquished/received sections?	✓			

Comments:

* Sample ID discrepancies:

COC	Label
J6-SC1b-00to10-82719	J6-SC1-00to10-82719
J6-SC1b-10to20-82719	J6-SC1-10to20-82719
L3-SC1b-00to10-82619	CR 30AUG19 L3-SC2-00to10-82619
L3-SC1b-10to20-82619	L3-SC2-10to20-82619
D6-SC1b-10to20-82619	D6-SC2-10to20-82619

Checklist performed by: Initials: CL for RO Date: 30AUG19

CF-UD-F-7

Subject: RE: Swan Island sample receipt 30AUG19
From: "Jeff S. Parker" <JParker@PGWG.COM>
Date: 8/30/2019, 5:55 PM
To: Cynde Larkins <Cynde.larkins@cfanalytical.com>
CC: Janet Knox <janet@PGWG.COM>

WO #15469

Hi Cynde,
Good catch.
Re: H3-SC1b-30to40-82919 ("29" is the correct ID), so the COC date of "28" is wrong and should be "29"

Thanks,
Jeff

From: Cynde Larkins <Cynde.larkins@cfanalytical.com>
Sent: Friday, August 30, 2019 2:52 PM
To: Jeff S. Parker <JParker@PGWG.COM>
Cc: Janet Knox <janet@PGWG.COM>
Subject: Re: Swan Island sample receipt 30AUG19

Jeff,

I have found one more discrepancy for you to look at. The ID and date on the label for this sample was marked through/corrected to -82919 and 8/29/19, but the COC has 8/28/19 as the collection date and it is difficult to discern the date in the ID: H3-SC1b-30to40-82919 (or -82819).

Thank you,
Cynde

On 8/30/2019 3:08 PM, Jeff S. Parker wrote:

> That'll work!
>
> **From:** Cynde Larkins <Cynde.larkins@cfanalytical.com>
> **Sent:** Friday, August 30, 2019 12:05 PM
> **To:** Jeff S. Parker <JParker@PGWG.COM>
> **Cc:** Janet Knox <janet@PGWG.COM>
> **Subject:** Re: Swan Island sample receipt 30AUG19
>
> Yes sir, I'll send you our Sample Receipt Notification form and the COC's as soon as I finish logging them.
> I was going to split them up into 4 (more easily manageable) SDG's if that is okay?
>
> Chris mentioned SRM's to me this morning, I'll make sure he contacts you about that.
>
> Thank you!

Cynde

On 8/30/2019 3:02 PM, Jeff S. Parker wrote:

> HI Cynde,
>
> Can you send me copies of the COCs or the login file when you get a chance. We taped the COCs in the cooler before making copies and I didn't get a count of the # analyzed. We may need to remove a couple if we're way over our scope.
>
> Also, I need to communicate with Chris about ordering the EDF-5183 (Cambridge SRM) to run with this batch. So, please hold the samples until we get those ordered and added too.
>
> Thanks!
> Jeff

From: Jeff S. Parker
Sent: Friday, August 30, 2019 11:55 AM
To: Cynde Larkins <Cynde.larkins@cfanalytical.com>
Subject: RE: Swan Island sample receipt 30AUG19

No problems, thanks!

From: Cynde Larkins <Cynde.larkins@cfanalytical.com>
Sent: Friday, August 30, 2019 11:42 AM
To: Jeff S. Parker <JParker@PGWG.COM>
Subject: Re: Swan Island sample receipt 30AUG19

Thank you!

By the way - that "00to20" was my mistake. The COC and the label have "00to10". My apologies!

On 8/30/2019 2:36 PM, Jeff S. Parker wrote:

> HI Cynde,
> I'm glad you got them without too much ice melt! Here are the answers to the login questions:
>
> 1. D6-SC1b-10to20-82619 is archive, 411-SC1b-50to60-82619 is analyze.
> 2. We misplaced those in a cooler to another lab and will get those

to you asap.

3. The ID on the COC are correct (highlighted are correct) for those samples with one exception where both are incorrect. The first L3 sample should be "00to10" instead of "00to20":

ID on COC	
J6-SC1b-00to10-82719	J(
J6-SC1b-10to20-082719	J(
L3-SC1b-00to20-82619	L:
L3-SC1b-10to20-82619	L:
D6-SC1b-10to20-82619	D

Thanks,
Jeff

Jeffrey Parker, LG | Environmental Geologist
Pacific Groundwater Group **Water Resource & Environmental Consulting**
(360) 570-8244 | jparker@pgwg.com |
www.pgwg.com

From: Cynde Larkins <Cynde.larkins@cfanalytical.com>
Sent: Friday, August 30, 2019 11:28 AM
To: Jeff S. Parker <JParker@PGWG.COM>
Subject: Swan Island sample receipt 30AUG19

Good afternoon,

CFA received your samples today for the Swan Island Lagoon project in good condition and within temperature. There are several discrepancies listed below that I need to your help to resolve.

1. Sample D6-SC1b-10to20-82619, collected 8/26/19 at 12:10, is marked on the COC for both 1613B analysis and Archive. The sample listed beneath this one, 411-SC1b-50to60-82619, collected 8/26/19 at 15:00 is not marked for either 1613B or Archive. It looks like one of the X's is on the wrong line perhaps? Please advise.

2. There were no bottles received for sample 712-82819. Two containers were received for 711-82719.

3. There are sample ID discrepancies between the COC and the labels

for the samples listed in the table below (collection dates and times match). Please verify which ID should be used for log in.

ID on COC	ID on label
J6-SC1b-00to10-82719	J6-SC1-00to10-82719
J6-SC1b-10to20-082719	J6-SC1-10to20-82719
L3-SC1b-00to20-82619	L3-SC2-00to20-82619
L3-SC1b-10to20-82619	L3-SC2-10to20-82619
D6-SC1b-10to20-82619	D6-SC2-10to20-82619

Thank you!

--
Cynde Larkins
Project Manager
Cape Fear Analytical, LLC
3306 Kitty Hawk Road, Suite 120
Wilmington, NC 28405
(910) 795-0421

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feedback@cfanalytical.com
http://www.gellaboratories.com

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feedback@cfanalytical.com
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http://www.gellaboratories.com

High Resolution Dioxins and Furans Analysis

Case Narrative

HDOX Case Narrative
Pacific Groundwater Group (PGWG)
SDG 2006-00115_2
Work Order 15469

Method/Analysis Information

Product:	**Dioxins/Furans by EPA Method 1613B in Solids**
Analytical Method:	EPA Method 1613B
Extraction Method:	SW846 3540C
Analytical Batch Number:	41747
Clean Up Batch Number:	41746
Extraction Batch Number:	41745

Sample Analysis

Samples were received at 3.8°C (15469001, 15469002, 15469003, 15469004, 15469005) , 3.3°C (15469006, 15469007, 15469008, 15469009, 15469010, 15469011, 15469012) and 5.2°C (15469013, 15469014, 15469015, 15469016, 15469017, 15469018, 15469019, 15469020, 15469021, 15469022, 15469023). The following samples were analyzed using the analytical protocol as established in Method 1613B:

Sample ID	Client ID
12024792	Method Blank (MB)
12024793	Laboratory Control Sample (LCS)
12024794	Laboratory Control Sample Duplicate (LCSD)
12024795	15469001(J6-SC1b-20to30-82819) Matrix Spike (MS)
12024796	15469001(J6-SC1b-20to30-82819) Matrix Spike Duplicate (MSD)
15469001	J6-SC1b-20to30-82819
15469002	J6-SC1b-30to40-82819
15469003	J6-SC1b-40to50-82819
15469004	J6-SC1b-50to60-82819
15469005	J6-SC1b-60to70-82819
15469006	J6-SC1b-70to80-82819
15469007	J6-SC1b-80to90-82819
15469008	J6-SC1b-90to100-82819
15469009	J6-SC1b-100to110-82819
15469010	J6-SC1b-110to120-82819
15469011	J6-SC1b-00to10-82719
15469012	J6-SC1b-10to20-82719
15469013	H3-SC1b-20to30-82819
15469014	H3-SC1b-30to40-82919

15469015	H3-SC1b-40to50-82919
15469016	H3-SC1b-50to60-82919
15469017	H3-SC1b-60to70-82919
15469018	H3-SC1b-70to80-82919
15469019	H3-SC1b-80to90-82919
15469020	H3-SC1b-90to100-82919
15469021	H3-SC1b-100to110-82919
15469022	H3-SC1b-00to10-82819
15469023	H3-SC1b-10-20-82819

The samples in this SDG were analyzed on a "dry weight" basis.

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# 15.

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) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement
The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

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

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 15469001 (J6-SC1b-20to30-82819)- Batch 41747 was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike/Duplicate (MS/MSD) Recovery Statement
The MS recoveries for this SDG were not within the acceptance limits. The failures confirm in the matrix spike duplicate and are attributed to matrix interference. 12024795 (J6-SC1b-20to30-82819) and 12024796 (J6-SC1b-20to30-82819)- Batch 41747.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent differences (RPD) between each MS and MSD were not within the required acceptance limits. Sample data is validated based on acceptable LCS/LCSD results. 12024796 (J6-SC1b-20to30-82819)- Batch 41747.

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
The following NCR was generated for this SDG: 647562 12024795 (J6-SC1b-20to30-82819) and 12024796 (J6-SC1b-20to30-82819)- Batch 41747.

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. Manual integrations were required for data files in this SDG.

Sample preparation
No difficulties were encountered during sample preparation.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

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

Qualifier Definition Report
for

PGWG001 Pacific Groundwater Group

Client SDG: 2006-00115_2 CFA Work Order: 15469

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

B The target analyte was detected in the associated blank.

E Value is estimated - Concentration of the target analyte exceeds the instrument calibration range

J Value is estimated

K Estimated Maximum Possible Concentration

Q Quantitative Interference; value is estimated

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

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

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: Heather Patterson **Name: Heather Patterson**

Date: 04 OCT 2019 **Title: Group Leader**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469001**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 01:26**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.2 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.527	pg/g	0.189	0.988
40321-76-4	1,2,3,7,8-PeCDD	J	1.27	pg/g	0.171	4.94
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.859	pg/g	0.371	4.94
57653-85-7	1,2,3,6,7,8-HxCDD		7.87	pg/g	0.360	4.94
19408-74-3	1,2,3,7,8,9-HxCDD	J	3.53	pg/g	0.373	4.94
35822-46-9	1,2,3,4,6,7,8-HpCDD		171	pg/g	0.998	4.94
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2630	pg/g	1.79	9.88
51207-31-9	2,3,7,8-TCDF	B	1.57	pg/g	0.371	0.988
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.792	pg/g	0.200	4.94
57117-31-4	2,3,4,7,8-PeCDF	J	1.73	pg/g	0.174	4.94
70648-26-9	1,2,3,4,7,8-HxCDF	J	3.01	pg/g	0.181	4.94
57117-44-9	1,2,3,6,7,8-HxCDF	J	3.96	pg/g	0.189	4.94
60851-34-5	2,3,4,6,7,8-HxCDF	J	2.55	pg/g	0.202	4.94
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.889	pg/g	0.203	4.94
67562-39-4	1,2,3,4,6,7,8-HpCDF		35.3	pg/g	0.381	4.94
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	2.61	pg/g	0.508	4.94
39001-02-0	1,2,3,4,6,7,8,9-OCDF		109	pg/g	0.648	9.88
41903-57-5	Total TeCDD	JK	4.10	pg/g	0.189	0.988
36088-22-9	Total PeCDD	J	10.8	pg/g	0.171	4.94
34465-46-8	Total HxCDD	J	57.7	pg/g	0.360	4.94
37871-00-4	Total HpCDD		382	pg/g	0.998	4.94
30402-14-3	Total TeCDF	JK	15.9	pg/g	0.371	0.988
30402-15-4	Total PeCDF	J	30.3	pg/g	0.0794	4.94
55684-94-1	Total HxCDF	JK	58.0	pg/g	0.181	4.94
38998-75-3	Total HpCDF	J	128	pg/g	0.381	4.94
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		7.68	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		7.68	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		148	198	pg/g	75.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		165	198	pg/g	83.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		174	198	pg/g	87.9	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		135	198	pg/g	68.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		188	198	pg/g	95.1	(23%-140%)
13C-OCDD		402	395	pg/g	102	(17%-157%)
13C-2,3,7,8-TCDF		136	198	pg/g	69.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		154	198	pg/g	77.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		156	198	pg/g	78.7	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		148	198	pg/g	74.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		139	198	pg/g	70.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		141	198	pg/g	71.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		160	198	pg/g	81.2	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469001**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 01:26**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.2 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		154	198	pg/g	77.8	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		187	198	pg/g	94.9	(26%-138%)
37Cl-2,3,7,8-TCDD		18.6	19.8	pg/g	94.2	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469001**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 16:31**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.2 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	B	1.41	pg/g	0.187	0.988

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B The target analyte was detected in the associated blank.
J Value is estimated
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469002**	**Date Collected:**	**08/28/2019 09:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**45.6**
Client ID:	**J6-SC1b-30to40-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 03:51**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-6**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.04 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.303	pg/g	0.141	0.966
40321-76-4	1,2,3,7,8-PeCDD	J	0.622	pg/g	0.185	4.83
39227-28-6	1,2,3,4,7,8-HxCDD	JK	0.585	pg/g	0.352	4.83
57653-85-7	1,2,3,6,7,8-HxCDD	J	4.71	pg/g	0.326	4.83
19408-74-3	1,2,3,7,8,9-HxCDD	J	2.10	pg/g	0.348	4.83
35822-46-9	1,2,3,4,6,7,8-HpCDD		110	pg/g	0.666	4.83
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1320	pg/g	1.02	9.66
51207-31-9	2,3,7,8-TCDF	BJ	0.894	pg/g	0.261	0.966
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.481	pg/g	0.120	4.83
57117-31-4	2,3,4,7,8-PeCDF	J	1.03	pg/g	0.111	4.83
70648-26-9	1,2,3,4,7,8-HxCDF	J	2.32	pg/g	0.148	4.83
57117-44-9	1,2,3,6,7,8-HxCDF	J	1.74	pg/g	0.163	4.83
60851-34-5	2,3,4,6,7,8-HxCDF	J	1.42	pg/g	0.166	4.83
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.464	pg/g	0.188	4.83
67562-39-4	1,2,3,4,6,7,8-HpCDF		24.6	pg/g	0.240	4.83
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	1.83	pg/g	0.311	4.83
39001-02-0	1,2,3,4,6,7,8,9-OCDF		94.8	pg/g	0.359	9.66
41903-57-5	Total TeCDD	JK	1.90	pg/g	0.141	0.966
36088-22-9	Total PeCDD	JK	5.52	pg/g	0.185	4.83
34465-46-8	Total HxCDD	JK	32.8	pg/g	0.326	4.83
37871-00-4	Total HpCDD		222	pg/g	0.666	4.83
30402-14-3	Total TeCDF	JK	7.69	pg/g	0.261	0.966
30402-15-4	Total PeCDF	JK	15.3	pg/g	0.0616	4.83
55684-94-1	Total HxCDF	JK	36.8	pg/g	0.148	4.83
38998-75-3	Total HpCDF	J	99.9	pg/g	0.240	4.83
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		4.46	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		4.46	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		151	193	pg/g	78.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		170	193	pg/g	87.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		163	193	pg/g	84.6	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		138	193	pg/g	71.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		186	193	pg/g	96.4	(23%-140%)
13C-OCDD		393	386	pg/g	102	(17%-157%)
13C-2,3,7,8-TCDF		139	193	pg/g	72.2	(24%-169%)
13C-1,2,3,7,8-PeCDF		158	193	pg/g	81.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		160	193	pg/g	82.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		152	193	pg/g	78.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		131	193	pg/g	67.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		140	193	pg/g	72.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		158	193	pg/g	81.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469002**	**Date Collected:**	**08/28/2019 09:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**45.6**
Client ID:	**J6-SC1b-30to40-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 03:51**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-6**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.04 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		155	193	pg/g	80.3	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		185	193	pg/g	95.8	(26%-138%)
37Cl-2,3,7,8-TCDD		18.8	19.3	pg/g	97.4	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

K **Estimated Maximum Possible Concentration**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469003**	**Date Collected:**	**08/28/2019 10:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**44.6**
Client ID:	**J6-SC1b-40to50-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 04:40**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK	0.297	pg/g	0.149	0.972
40321-76-4	1,2,3,7,8-PeCDD	J	0.533	pg/g	0.147	4.86
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.632	pg/g	0.235	4.86
57653-85-7	1,2,3,6,7,8-HxCDD	J	4.00	pg/g	0.237	4.86
19408-74-3	1,2,3,7,8,9-HxCDD	J	1.82	pg/g	0.241	4.86
35822-46-9	1,2,3,4,6,7,8-HpCDD		95.0	pg/g	0.665	4.86
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1220	pg/g	1.01	9.72
51207-31-9	2,3,7,8-TCDF	BJ	0.746	pg/g	0.420	0.972
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.484	pg/g	0.155	4.86
57117-31-4	2,3,4,7,8-PeCDF	JK	1.03	pg/g	0.140	4.86
70648-26-9	1,2,3,4,7,8-HxCDF	J	2.03	pg/g	0.143	4.86
57117-44-9	1,2,3,6,7,8-HxCDF	J	1.62	pg/g	0.148	4.86
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	1.28	pg/g	0.155	4.86
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.550	pg/g	0.183	4.86
67562-39-4	1,2,3,4,6,7,8-HpCDF		18.9	pg/g	0.247	4.86
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	1.44	pg/g	0.317	4.86
39001-02-0	1,2,3,4,6,7,8,9-OCDF		59.5	pg/g	0.410	9.72
41903-57-5	Total TeCDD	JK	1.57	pg/g	0.149	0.972
36088-22-9	Total PeCDD	JK	4.79	pg/g	0.147	4.86
34465-46-8	Total HxCDD	J	29.5	pg/g	0.235	4.86
37871-00-4	Total HpCDD		196	pg/g	0.665	4.86
30402-14-3	Total TeCDF	JK	6.20	pg/g	0.420	0.972
30402-15-4	Total PeCDF	JK	14.4	pg/g	0.0614	4.86
55684-94-1	Total HxCDF	JK	30.7	pg/g	0.143	4.86
38998-75-3	Total HpCDF	J	72.3	pg/g	0.247	4.86
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		3.96	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		3.96	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	194	pg/g	83.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		186	194	pg/g	95.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		165	194	pg/g	85.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		150	194	pg/g	77.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		198	194	pg/g	102	(23%-140%)
13C-OCDD		422	389	pg/g	108	(17%-157%)
13C-2,3,7,8-TCDF		150	194	pg/g	77.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		174	194	pg/g	89.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		173	194	pg/g	89.1	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		162	194	pg/g	83.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		138	194	pg/g	70.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		149	194	pg/g	76.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		167	194	pg/g	86.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469003**	**Date Collected:**	**08/28/2019 10:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**44.6**
Client ID:	**J6-SC1b-40to50-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 04:40**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		161	194	pg/g	82.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		197	194	pg/g	101	(26%-138%)
37Cl-2,3,7,8-TCDD		19.7	19.4	pg/g	101	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

K **Estimated Maximum Possible Concentration**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469004**	**Date Collected:**	**08/28/2019 10:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**42.2**
Client ID:	**J6-SC1b-50to60-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 05:28**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.77 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK	0.439	pg/g	0.160	0.922
40321-76-4	1,2,3,7,8-PeCDD	J	0.982	pg/g	0.240	4.61
39227-28-6	1,2,3,4,7,8-HxCDD	JK	1.12	pg/g	0.387	4.61
57653-85-7	1,2,3,6,7,8-HxCDD		6.56	pg/g	0.369	4.61
19408-74-3	1,2,3,7,8,9-HxCDD	J	2.96	pg/g	0.387	4.61
35822-46-9	1,2,3,4,6,7,8-HpCDD		169	pg/g	0.793	4.61
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1830	pg/g	1.39	9.22
51207-31-9	2,3,7,8-TCDF	B	1.62	pg/g	0.387	0.922
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.936	pg/g	0.203	4.61
57117-31-4	2,3,4,7,8-PeCDF	J	1.76	pg/g	0.188	4.61
70648-26-9	1,2,3,4,7,8-HxCDF		5.79	pg/g	0.230	4.61
57117-44-9	1,2,3,6,7,8-HxCDF	J	2.68	pg/g	0.240	4.61
60851-34-5	2,3,4,6,7,8-HxCDF	J	2.51	pg/g	0.256	4.61
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	1.05	pg/g	0.282	4.61
67562-39-4	1,2,3,4,6,7,8-HpCDF		54.1	pg/g	0.470	4.61
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	3.45	pg/g	0.592	4.61
39001-02-0	1,2,3,4,6,7,8,9-OCDF		184	pg/g	0.441	9.22
41903-57-5	Total TeCDD	JK	2.94	pg/g	0.160	0.922
36088-22-9	Total PeCDD	JK	7.38	pg/g	0.240	4.61
34465-46-8	Total HxCDD	JK	42.6	pg/g	0.369	4.61
37871-00-4	Total HpCDD		329	pg/g	0.793	4.61
30402-14-3	Total TeCDF	JK	17.3	pg/g	0.387	0.922
30402-15-4	Total PeCDF	J	26.6	pg/g	0.0669	4.61
55684-94-1	Total HxCDF	J	71.2	pg/g	0.230	4.61
38998-75-3	Total HpCDF	J	206	pg/g	0.470	4.61
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		7.28	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		7.28	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		143	184	pg/g	77.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		165	184	pg/g	89.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		168	184	pg/g	91.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		133	184	pg/g	71.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		188	184	pg/g	102	(23%-140%)
13C-OCDD		404	369	pg/g	110	(17%-157%)
13C-2,3,7,8-TCDF		136	184	pg/g	73.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		152	184	pg/g	82.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		154	184	pg/g	83.5	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		151	184	pg/g	82.0	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		128	184	pg/g	69.4	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		139	184	pg/g	75.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		156	184	pg/g	84.6	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469004**	**Date Collected:**	**08/28/2019 10:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**42.2**
Client ID:	**J6-SC1b-50to60-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 05:28**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.77 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		153	184	pg/g	83.3	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		190	184	pg/g	103	(26%-138%)
37Cl-2,3,7,8-TCDD		16.8	18.4	pg/g	91.1	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469004**	**Date Collected:**	**08/28/2019 10:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**42.2**
Client ID:	**J6-SC1b-50to60-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 17:36**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-6**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.77 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	B	1.28	pg/g	0.182	0.922

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469005**	**Date Collected:**	**08/28/2019 10:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**J6-SC1b-60to70-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 06:17**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.95 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.507	pg/g	0.193	0.928
40321-76-4	1,2,3,7,8-PeCDD	J	1.17	pg/g	0.185	4.64
39227-28-6	1,2,3,4,7,8-HxCDD	J	2.81	pg/g	0.260	4.64
57653-85-7	1,2,3,6,7,8-HxCDD		7.77	pg/g	0.297	4.64
19408-74-3	1,2,3,7,8,9-HxCDD	J	3.88	pg/g	0.284	4.64
35822-46-9	1,2,3,4,6,7,8-HpCDD		208	pg/g	0.709	4.64
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2250	pg/g	1.09	9.28
51207-31-9	2,3,7,8-TCDF	B	0.937	pg/g	0.308	0.928
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.911	pg/g	0.202	4.64
57117-31-4	2,3,4,7,8-PeCDF	J	1.73	pg/g	0.197	4.64
70648-26-9	1,2,3,4,7,8-HxCDF		5.98	pg/g	0.236	4.64
57117-44-9	1,2,3,6,7,8-HxCDF	J	3.75	pg/g	0.251	4.64
60851-34-5	2,3,4,6,7,8-HxCDF	J	3.23	pg/g	0.243	4.64
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	1.13	pg/g	0.197	4.64
67562-39-4	1,2,3,4,6,7,8-HpCDF		75.5	pg/g	0.329	4.64
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	4.54	pg/g	0.436	4.64
39001-02-0	1,2,3,4,6,7,8,9-OCDF		276	pg/g	0.433	9.28
41903-57-5	Total TeCDD	J	3.90	pg/g	0.193	0.928
36088-22-9	Total PeCDD	JKQ	11.5	pg/g	0.185	4.64
34465-46-8	Total HxCDD	J	64.9	pg/g	0.260	4.64
37871-00-4	Total HpCDD		406	pg/g	0.709	4.64
30402-14-3	Total TeCDF	JK	12.9	pg/g	0.308	0.928
30402-15-4	Total PeCDF	JKQ	34.1	pg/g	0.0538	4.64
55684-94-1	Total HxCDF	JK	98.7	pg/g	0.197	4.64
38998-75-3	Total HpCDF	J	287	pg/g	0.329	4.64
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		8.80	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		8.80	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		142	186	pg/g	76.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		151	186	pg/g	81.6	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		167	186	pg/g	89.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		106	186	pg/g	57.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		184	186	pg/g	99.1	(23%-140%)
13C-OCDD		387	371	pg/g	104	(17%-157%)
13C-2,3,7,8-TCDF		136	186	pg/g	73.2	(24%-169%)
13C-1,2,3,7,8-PeCDF		146	186	pg/g	78.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		146	186	pg/g	78.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		176	186	pg/g	95.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		106	186	pg/g	57.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		136	186	pg/g	73.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		127	186	pg/g	68.4	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469005**	**Date Collected:**	**08/28/2019 10:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**J6-SC1b-60to70-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 06:17**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.95 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		153	186	pg/g	82.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		190	186	pg/g	102	(26%-138%)
37Cl-2,3,7,8-TCDD		16.8	18.6	pg/g	90.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469005**	**Date Collected:**	**08/28/2019 10:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**J6-SC1b-60to70-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 17:58**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.95 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	BJ	0.754	pg/g	0.172	0.928

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B The target analyte was detected in the associated blank.
J Value is estimated
K Estimated Maximum Possible Concentration
Q Quantitative Interference; value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469006**	**Date Collected:**	**08/28/2019 10:40**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31.2**
Client ID:	**J6-SC1b-70to80-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:05**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.39 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.092	pg/g	0.092	0.945
40321-76-4	1,2,3,7,8-PeCDD	U	0.0992	pg/g	0.0992	4.72
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.139	pg/g	0.139	4.72
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.148	pg/g	0.148	4.72
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.147	pg/g	0.147	4.72
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.941	pg/g	0.181	4.72
3268-87-9	1,2,3,4,6,7,8,9-OCDD		11.9	pg/g	0.285	9.45
51207-31-9	2,3,7,8-TCDF	BJ	0.367	pg/g	0.153	0.945
57117-41-6	1,2,3,7,8-PeCDF	U	0.13	pg/g	0.130	4.72
57117-31-4	2,3,4,7,8-PeCDF	U	0.108	pg/g	0.108	4.72
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.108	pg/g	0.108	4.72
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.112	pg/g	0.112	4.72
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.114	pg/g	0.114	4.72
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.152	pg/g	0.152	4.72
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.478	pg/g	0.164	4.72
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.225	pg/g	0.225	4.72
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	1.21	pg/g	0.244	9.45
41903-57-5	Total TeCDD	BJK	0.108	pg/g	0.0495	0.945
36088-22-9	Total PeCDD	U	0.0992	pg/g	0.0992	4.72
34465-46-8	Total HxCDD	BJK	0.414	pg/g	0.139	4.72
37871-00-4	Total HpCDD	J	2.14	pg/g	0.181	4.72
30402-14-3	Total TeCDF	BJ	0.586	pg/g	0.153	0.945
30402-15-4	Total PeCDF	BJ	0.253	pg/g	0.075	4.72
55684-94-1	Total HxCDF	BJK	0.608	pg/g	0.108	4.72
38998-75-3	Total HpCDF	BJ	1.67	pg/g	0.164	4.72
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0548	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.216	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		148	189	pg/g	78.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		169	189	pg/g	89.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		162	189	pg/g	85.6	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		134	189	pg/g	71.2	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		183	189	pg/g	96.9	(23%-140%)
13C-OCDD		384	378	pg/g	102	(17%-157%)
13C-2,3,7,8-TCDF		136	189	pg/g	72.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		135	189	pg/g	71.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		156	189	pg/g	82.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		145	189	pg/g	76.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		131	189	pg/g	69.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		139	189	pg/g	73.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		155	189	pg/g	81.9	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469006**	**Date Collected:**	**08/28/2019 10:40**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31.2**
Client ID:	**J6-SC1b-70to80-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:05**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.39 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		152	189	pg/g	80.4	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		181	189	pg/g	95.9	(26%-138%)
37Cl-2,3,7,8-TCDD		17.7	18.9	pg/g	93.7	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469007**	**Date Collected:**	**08/28/2019 11:55**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**28.8**
Client ID:	**J6-SC1b-80to90-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:53**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.199	pg/g	0.199	0.965
40321-76-4	1,2,3,7,8-PeCDD	U	0.187	pg/g	0.187	4.82
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.233	pg/g	0.233	4.82
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.216	pg/g	0.216	4.82
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.23	pg/g	0.230	4.82
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	3.71	pg/g	0.438	4.82
3268-87-9	1,2,3,4,6,7,8,9-OCDD		37.7	pg/g	0.417	9.65
51207-31-9	2,3,7,8-TCDF	BJ	0.293	pg/g	0.278	0.965
57117-41-6	1,2,3,7,8-PeCDF	U	0.162	pg/g	0.162	4.82
57117-31-4	2,3,4,7,8-PeCDF	U	0.145	pg/g	0.145	4.82
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.139	pg/g	0.139	4.82
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.146	pg/g	0.146	4.82
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.154	pg/g	0.154	4.82
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.19	pg/g	0.190	4.82
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	1.24	pg/g	0.130	4.82
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.174	pg/g	0.174	4.82
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	3.74	pg/g	0.446	9.65
41903-57-5	Total TeCDD	U	0.199	pg/g	0.199	0.965
36088-22-9	Total PeCDD	U	0.187	pg/g	0.187	4.82
34465-46-8	Total HxCDD	BJ	1.02	pg/g	0.216	4.82
37871-00-4	Total HpCDD	J	7.11	pg/g	0.438	4.82
30402-14-3	Total TeCDF	BJ	0.604	pg/g	0.278	0.965
30402-15-4	Total PeCDF	BJK	0.612	pg/g	0.104	4.82
55684-94-1	Total HxCDF	BJK	1.45	pg/g	0.139	4.82
38998-75-3	Total HpCDF	J	4.62	pg/g	0.130	4.82
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0913	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.375	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		160	193	pg/g	83.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		184	193	pg/g	95.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		169	193	pg/g	87.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		146	193	pg/g	75.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		196	193	pg/g	102	(23%-140%)
13C-OCDD		404	386	pg/g	105	(17%-157%)
13C-2,3,7,8-TCDF		151	193	pg/g	78.5	(24%-169%)
13C-1,2,3,7,8-PeCDF		176	193	pg/g	91.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		176	193	pg/g	91.0	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		158	193	pg/g	81.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		138	193	pg/g	71.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		147	193	pg/g	76.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		166	193	pg/g	85.8	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469007**	**Date Collected:**	**08/28/2019 11:55**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**28.8**
Client ID:	**J6-SC1b-80to90-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:53**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		164	193	pg/g	84.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		197	193	pg/g	102	(26%-138%)
37Cl-2,3,7,8-TCDD		18.9	19.3	pg/g	97.7	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469008**	**Date Collected:**	**08/28/2019 12:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31**
Client ID:	**J6-SC1b-90to100-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 08:42**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.83 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.33	pg/g	0.330	0.977
40321-76-4	1,2,3,7,8-PeCDD	U	0.282	pg/g	0.282	4.89
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.282	pg/g	0.282	4.89
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.287	pg/g	0.287	4.89
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.291	pg/g	0.291	4.89
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.569	pg/g	0.569	4.89
3268-87-9	1,2,3,4,6,7,8,9-OCDD	U	0.833	pg/g	0.833	9.77
51207-31-9	2,3,7,8-TCDF	U	0.573	pg/g	0.573	0.977
57117-41-6	1,2,3,7,8-PeCDF	U	0.199	pg/g	0.199	4.89
57117-31-4	2,3,4,7,8-PeCDF	U	0.191	pg/g	0.191	4.89
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.213	pg/g	0.213	4.89
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.219	pg/g	0.219	4.89
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.227	pg/g	0.227	4.89
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.332	pg/g	0.332	4.89
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.297	pg/g	0.297	4.89
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.452	pg/g	0.452	4.89
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	1.14	pg/g	1.14	9.77
41903-57-5	Total TeCDD	U	0.33	pg/g	0.330	0.977
36088-22-9	Total PeCDD	U	0.282	pg/g	0.282	4.89
34465-46-8	Total HxCDD	U	0.282	pg/g	0.282	4.89
37871-00-4	Total HpCDD	U	0.569	pg/g	0.569	4.89
30402-14-3	Total TeCDF	U	0.573	pg/g	0.573	0.977
30402-15-4	Total PeCDF	U	0.191	pg/g	0.191	4.89
55684-94-1	Total HxCDF	U	0.213	pg/g	0.213	4.89
38998-75-3	Total HpCDF	U	0.297	pg/g	0.297	4.89
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.466	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		149	195	pg/g	76.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		173	195	pg/g	88.7	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		166	195	pg/g	85.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		160	195	pg/g	81.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		196	195	pg/g	100	(23%-140%)
13C-OCDD		395	391	pg/g	101	(17%-157%)
13C-2,3,7,8-TCDF		142	195	pg/g	72.8	(24%-169%)
13C-1,2,3,7,8-PeCDF		163	195	pg/g	83.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		162	195	pg/g	82.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		163	195	pg/g	83.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		151	195	pg/g	77.4	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		155	195	pg/g	79.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		160	195	pg/g	81.8	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469008**	**Date Collected:**	**08/28/2019 12:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31**
Client ID:	**J6-SC1b-90to100-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 08:42**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.83 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		168	195	pg/g	85.8	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		195	195	pg/g	99.5	(26%-138%)
37Cl-2,3,7,8-TCDD		17.6	19.5	pg/g	90.2	(35%-197%)

Comments:

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

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469009**	**Date Collected:**	**08/28/2019 12:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**30.5**
Client ID:	**J6-SC1b-100to110-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 09:56**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.58 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0979	pg/g	0.0979	0.924
40321-76-4	1,2,3,7,8-PeCDD	U	0.114	pg/g	0.114	4.62
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.116	pg/g	0.116	4.62
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.112	pg/g	0.112	4.62
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.116	pg/g	0.116	4.62
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.246	pg/g	0.246	4.62
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	0.722	pg/g	0.578	9.24
51207-31-9	2,3,7,8-TCDF	BJ	0.301	pg/g	0.170	0.924
57117-41-6	1,2,3,7,8-PeCDF	U	0.0903	pg/g	0.0903	4.62
57117-31-4	2,3,4,7,8-PeCDF	U	0.0792	pg/g	0.0792	4.62
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.0901	pg/g	0.0901	4.62
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.0981	pg/g	0.0981	4.62
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0997	pg/g	0.0997	4.62
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.151	pg/g	0.151	4.62
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.111	pg/g	0.110	4.62
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.188	pg/g	0.188	4.62
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.495	pg/g	0.495	9.24
41903-57-5	Total TeCDD	U	0.0979	pg/g	0.0979	0.924
36088-22-9	Total PeCDD	U	0.114	pg/g	0.114	4.62
34465-46-8	Total HxCDD	U	0.112	pg/g	0.112	4.62
37871-00-4	Total HpCDD	U	0.246	pg/g	0.246	4.62
30402-14-3	Total TeCDF	BJ	0.519	pg/g	0.170	0.924
30402-15-4	Total PeCDF	U	0.0792	pg/g	0.0792	4.62
55684-94-1	Total HxCDF	U	0.0901	pg/g	0.0901	4.62
38998-75-3	Total HpCDF	BJ	0.111	pg/g	0.110	4.62
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0314	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.192	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		149	185	pg/g	80.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		141	185	pg/g	76.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		145	185	pg/g	78.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		158	185	pg/g	85.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		154	185	pg/g	83.2	(23%-140%)
13C-OCDD		229	369	pg/g	61.9	(17%-157%)
13C-2,3,7,8-TCDF		137	185	pg/g	73.9	(24%-169%)
13C-1,2,3,7,8-PeCDF		137	185	pg/g	74.3	(24%-185%)
13C-2,3,4,7,8-PeCDF		135	185	pg/g	73.3	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		153	185	pg/g	82.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		149	185	pg/g	80.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		147	185	pg/g	79.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		145	185	pg/g	78.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469009**	**Date Collected:**	**08/28/2019 12:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**30.5**
Client ID:	**J6-SC1b-100to110-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 09:56**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.58 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		151	185	pg/g	81.6	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		145	185	pg/g	78.4	(26%-138%)
37Cl-2,3,7,8-TCDD		16.9	18.5	pg/g	91.3	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

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

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469010**	**Date Collected:**	**08/28/2019 12:10**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.1**
Client ID:	**J6-SC1b-110to120-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 10:44**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.22 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0786	pg/g	0.0786	0.889
40321-76-4	1,2,3,7,8-PeCDD	U	0.0672	pg/g	0.0672	4.44
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.086	pg/g	0.086	4.44
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.0775	pg/g	0.0775	4.44
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.0827	pg/g	0.0827	4.44
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.203	pg/g	0.203	4.44
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	0.731	pg/g	0.327	8.89
51207-31-9	2,3,7,8-TCDF	BJ	0.245	pg/g	0.116	0.889
57117-41-6	1,2,3,7,8-PeCDF	U	0.0731	pg/g	0.0731	4.44
57117-31-4	2,3,4,7,8-PeCDF	U	0.0629	pg/g	0.0629	4.44
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.064	pg/g	0.064	4.44
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.0652	pg/g	0.0652	4.44
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0699	pg/g	0.0699	4.44
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.112	pg/g	0.112	4.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.0978	pg/g	0.0777	4.44
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.132	pg/g	0.132	4.44
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.368	pg/g	0.368	8.89
41903-57-5	Total TeCDD	U	0.0786	pg/g	0.0786	0.889
36088-22-9	Total PeCDD	U	0.0672	pg/g	0.0672	4.44
34465-46-8	Total HxCDD	U	0.0775	pg/g	0.0775	4.44
37871-00-4	Total HpCDD	U	0.203	pg/g	0.203	4.44
30402-14-3	Total TeCDF	BJ	0.478	pg/g	0.116	0.889
30402-15-4	Total PeCDF	U	0.0556	pg/g	0.0556	4.44
55684-94-1	Total HxCDF	U	0.064	pg/g	0.064	4.44
38998-75-3	Total HpCDF	BJ	0.0978	pg/g	0.0777	4.44
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0257	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.139	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		141	178	pg/g	79.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		131	178	pg/g	73.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		132	178	pg/g	74.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		142	178	pg/g	79.6	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		143	178	pg/g	80.2	(23%-140%)
13C-OCDD		220	356	pg/g	61.9	(17%-157%)
13C-2,3,7,8-TCDF		124	178	pg/g	69.9	(24%-169%)
13C-1,2,3,7,8-PeCDF		122	178	pg/g	68.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		123	178	pg/g	69.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		135	178	pg/g	75.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		140	178	pg/g	78.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		134	178	pg/g	75.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		132	178	pg/g	74.5	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469010**	**Date Collected:**	**08/28/2019 12:10**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.1**
Client ID:	**J6-SC1b-110to120-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 10:44**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.22 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		141	178	pg/g	79.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		134	178	pg/g	75.6	(26%-138%)
37Cl-2,3,7,8-TCDD		16.8	17.8	pg/g	94.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

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

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469013**	**Date Collected:**	**08/28/2019 20:15**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**H3-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/25/2019 02:45**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A24SEP19A_3-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.47 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	B	1.62	pg/g	0.557	0.953

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B The target analyte was detected in the associated blank.
E Value is estimated - Concentration of the target analyte exceeds the instrument calibration range
J Value is estimated
K Estimated Maximum Possible Concentration
Q Quantitative Interference; value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469013**	**Date Collected:**	**08/28/2019 20:15**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**H3-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 11:32**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-5**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.47 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.761	pg/g	0.223	0.953
40321-76-4	1,2,3,7,8-PeCDD	JK	1.84	pg/g	0.236	4.77
39227-28-6	1,2,3,4,7,8-HxCDD	J	2.51	pg/g	0.471	4.77
57653-85-7	1,2,3,6,7,8-HxCDD		13.6	pg/g	0.460	4.77
19408-74-3	1,2,3,7,8,9-HxCDD		5.97	pg/g	0.475	4.77
35822-46-9	1,2,3,4,6,7,8-HpCDD		315	pg/g	1.13	4.77
3268-87-9	1,2,3,4,6,7,8,9-OCDD	E	3870	pg/g	2.35	9.53
51207-31-9	2,3,7,8-TCDF	B	1.66	pg/g	0.471	0.953
57117-41-6	1,2,3,7,8-PeCDF	J	1.95	pg/g	0.275	4.77
57117-31-4	2,3,4,7,8-PeCDF		10.7	pg/g	0.238	4.77
70648-26-9	1,2,3,4,7,8-HxCDF		10.4	pg/g	0.328	4.77
57117-44-9	1,2,3,6,7,8-HxCDF		11.6	pg/g	0.345	4.77
60851-34-5	2,3,4,6,7,8-HxCDF		11.2	pg/g	0.336	4.77
72918-21-9	1,2,3,7,8,9-HxCDF	J	2.32	pg/g	0.454	4.77
67562-39-4	1,2,3,4,6,7,8-HpCDF		230	pg/g	0.608	4.77
55673-89-7	1,2,3,4,7,8,9-HpCDF		8.92	pg/g	0.778	4.77
39001-02-0	1,2,3,4,6,7,8,9-OCDF		408	pg/g	1.03	9.53
41903-57-5	Total TeCDD	JK	24.5	pg/g	0.223	0.953
36088-22-9	Total PeCDD	JKQ	31.3	pg/g	0.236	4.77
34465-46-8	Total HxCDD	J	106	pg/g	0.460	4.77
37871-00-4	Total HpCDD		697	pg/g	1.13	4.77
30402-14-3	Total TeCDF	JK	69.5	pg/g	0.471	0.953
30402-15-4	Total PeCDF	JKQ	210	pg/g	0.130	4.77
55684-94-1	Total HxCDF	J	276	pg/g	0.328	4.77
38998-75-3	Total HpCDF	JK	621	pg/g	0.608	4.77
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		18.6	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		18.6	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		122	191	pg/g	64.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		121	191	pg/g	63.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		164	191	pg/g	86.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		148	191	pg/g	77.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		197	191	pg/g	103	(23%-140%)
13C-OCDD		412	381	pg/g	108	(17%-157%)
13C-2,3,7,8-TCDF		131	191	pg/g	68.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		115	191	pg/g	60.3	(24%-185%)
13C-2,3,4,7,8-PeCDF		112	191	pg/g	58.5	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		166	191	pg/g	87.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		135	191	pg/g	70.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		145	191	pg/g	76.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		126	191	pg/g	66.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469013**	**Date Collected:**	**08/28/2019 20:15**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**H3-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 11:32**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-5**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.47 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		177	191	pg/g	93.1	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		214	191	pg/g	112	(26%-138%)
37Cl-2,3,7,8-TCDD		13.6	19.1	pg/g	71.3	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
E **Value is estimated - Concentration of the target analyte exceeds the instrument calibration range**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469014**	**Date Collected:**	**08/29/2019 08:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.7**
Client ID:	**H3-SC1b-30to40-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 00:38**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-2**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.09 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.158	pg/g	0.158	0.969
40321-76-4	1,2,3,7,8-PeCDD	U	0.161	pg/g	0.161	4.84
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.225	pg/g	0.225	4.84
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.229	pg/g	0.229	4.84
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.233	pg/g	0.233	4.84
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	4.29	pg/g	0.372	4.84
3268-87-9	1,2,3,4,6,7,8,9-OCDD		52.6	pg/g	0.740	9.69
51207-31-9	2,3,7,8-TCDF	BJ	0.475	pg/g	0.347	0.969
57117-41-6	1,2,3,7,8-PeCDF	U	0.202	pg/g	0.202	4.84
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.378	pg/g	0.183	4.84
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.316	pg/g	0.181	4.84
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.649	pg/g	0.188	4.84
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.382	pg/g	0.188	4.84
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.242	pg/g	0.242	4.84
67562-39-4	1,2,3,4,6,7,8-HpCDF		10.8	pg/g	0.345	4.84
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.455	pg/g	0.455	4.84
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	6.35	pg/g	0.661	9.69
41903-57-5	Total TeCDD	BJK	0.262	pg/g	0.158	0.969
36088-22-9	Total PeCDD	JK	0.469	pg/g	0.161	4.84
34465-46-8	Total HxCDD	BJ	1.82	pg/g	0.225	4.84
37871-00-4	Total HpCDD	J	9.69	pg/g	0.372	4.84
30402-14-3	Total TeCDF	JK	2.51	pg/g	0.347	0.969
30402-15-4	Total PeCDF	JK	5.94	pg/g	0.105	4.84
55684-94-1	Total HxCDF	JK	8.96	pg/g	0.181	4.84
38998-75-3	Total HpCDF		18.7	pg/g	0.345	4.84
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.464	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.675	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		137	194	pg/g	70.7	(25%-164%)
13C-1,2,3,7,8-PeCDD		159	194	pg/g	82.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		143	194	pg/g	74.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		128	194	pg/g	65.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		163	194	pg/g	83.9	(23%-140%)
13C-OCDD		328	388	pg/g	84.7	(17%-157%)
13C-2,3,7,8-TCDF		126	194	pg/g	64.8	(24%-169%)
13C-1,2,3,7,8-PeCDF		150	194	pg/g	77.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		148	194	pg/g	76.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		130	194	pg/g	67.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		124	194	pg/g	64.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		127	194	pg/g	65.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		143	194	pg/g	73.9	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469014**	**Date Collected:**	**08/29/2019 08:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.7**
Client ID:	**H3-SC1b-30to40-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 00:38**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-2**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.09 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		138	194	pg/g	71.0	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		162	194	pg/g	83.6	(26%-138%)
37Cl-2,3,7,8-TCDD		18.0	19.4	pg/g	92.6	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469015**	**Date Collected:**	**08/29/2019 08:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**25.9**
Client ID:	**H3-SC1b-40to50-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:09**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.46 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0962	pg/g	0.0962	0.934
40321-76-4	1,2,3,7,8-PeCDD	JK	0.325	pg/g	0.108	4.67
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.261	pg/g	0.132	4.67
57653-85-7	1,2,3,6,7,8-HxCDD	J	2.08	pg/g	0.134	4.67
19408-74-3	1,2,3,7,8,9-HxCDD	BJ	0.859	pg/g	0.136	4.67
35822-46-9	1,2,3,4,6,7,8-HpCDD		34.2	pg/g	0.325	4.67
3268-87-9	1,2,3,4,6,7,8,9-OCDD		559	pg/g	1.00	9.34
51207-31-9	2,3,7,8-TCDF	BJ	0.803	pg/g	0.166	0.934
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.562	pg/g	0.0831	4.67
57117-31-4	2,3,4,7,8-PeCDF	J	2.10	pg/g	0.0739	4.67
70648-26-9	1,2,3,4,7,8-HxCDF	J	1.72	pg/g	0.132	4.67
57117-44-9	1,2,3,6,7,8-HxCDF		6.08	pg/g	0.141	4.67
60851-34-5	2,3,4,6,7,8-HxCDF	J	2.88	pg/g	0.136	4.67
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.527	pg/g	0.173	4.67
67562-39-4	1,2,3,4,6,7,8-HpCDF		94.2	pg/g	0.218	4.67
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	1.18	pg/g	0.310	4.67
39001-02-0	1,2,3,4,6,7,8,9-OCDF		45.4	pg/g	0.349	9.34
41903-57-5	Total TeCDD	JK	1.61	pg/g	0.0962	0.934
36088-22-9	Total PeCDD	JKQ	4.90	pg/g	0.108	4.67
34465-46-8	Total HxCDD	J	17.4	pg/g	0.132	4.67
37871-00-4	Total HpCDD		87.7	pg/g	0.325	4.67
30402-14-3	Total TeCDF	JK	14.9	pg/g	0.166	0.934
30402-15-4	Total PeCDF	JKQ	50.2	pg/g	0.0457	4.67
55684-94-1	Total HxCDF	J	75.2	pg/g	0.132	4.67
38998-75-3	Total HpCDF	J	170	pg/g	0.218	4.67
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		3.97	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		4.02	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		131	187	pg/g	70.4	(25%-164%)
13C-1,2,3,7,8-PeCDD		115	187	pg/g	61.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		154	187	pg/g	82.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		137	187	pg/g	73.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		186	187	pg/g	99.9	(23%-140%)
13C-OCDD		347	373	pg/g	93.0	(17%-157%)
13C-2,3,7,8-TCDF		134	187	pg/g	72.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		108	187	pg/g	57.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		110	187	pg/g	58.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		148	187	pg/g	79.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		131	187	pg/g	70.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		136	187	pg/g	72.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		136	187	pg/g	72.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469015**	**Date Collected:**	**08/29/2019 08:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**25.9**
Client ID:	**H3-SC1b-40to50-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:09**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.46 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		163	187	pg/g	87.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		187	187	pg/g	100	(26%-138%)
37Cl-2,3,7,8-TCDD		15.4	18.7	pg/g	82.7	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469016**	**Date Collected:**	**08/29/2019 08:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**29.8**
Client ID:	**H3-SC1b-50to60-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:58**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0716	pg/g	0.0716	0.927
40321-76-4	1,2,3,7,8-PeCDD	U	0.0736	pg/g	0.0736	4.64
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.0979	pg/g	0.0979	4.64
57653-85-7	1,2,3,6,7,8-HxCDD	BJK	0.217	pg/g	0.095	4.64
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.0985	pg/g	0.0985	4.64
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	1.96	pg/g	0.200	4.64
3268-87-9	1,2,3,4,6,7,8,9-OCDD		24.9	pg/g	0.363	9.27
51207-31-9	2,3,7,8-TCDF	BJ	0.282	pg/g	0.131	0.927
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.113	pg/g	0.0671	4.64
57117-31-4	2,3,4,7,8-PeCDF	BJ	0.213	pg/g	0.0593	4.64
70648-26-9	1,2,3,4,7,8-HxCDF	BJ	0.202	pg/g	0.064	4.64
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.655	pg/g	0.0666	4.64
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.319	pg/g	0.0686	4.64
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.089	pg/g	0.089	4.64
67562-39-4	1,2,3,4,6,7,8-HpCDF		10.3	pg/g	0.110	4.64
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.174	pg/g	0.174	4.64
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	3.05	pg/g	0.265	9.27
41903-57-5	Total TeCDD	BJK	0.167	pg/g	0.0716	0.927
36088-22-9	Total PeCDD	JK	0.395	pg/g	0.0736	4.64
34465-46-8	Total HxCDD	BJK	1.60	pg/g	0.095	4.64
37871-00-4	Total HpCDD	J	4.94	pg/g	0.200	4.64
30402-14-3	Total TeCDF	JK	2.07	pg/g	0.131	0.927
30402-15-4	Total PeCDF	JK	6.06	pg/g	0.0428	4.64
55684-94-1	Total HxCDF	J	8.49	pg/g	0.064	4.64
38998-75-3	Total HpCDF		16.7	pg/g	0.110	4.64
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.366	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.454	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		136	185	pg/g	73.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		126	185	pg/g	68.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		152	185	pg/g	81.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		132	185	pg/g	71.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		167	185	pg/g	89.9	(23%-140%)
13C-OCDD		283	371	pg/g	76.3	(17%-157%)
13C-2,3,7,8-TCDF		127	185	pg/g	68.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		117	185	pg/g	62.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		118	185	pg/g	63.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		145	185	pg/g	78.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		128	185	pg/g	69.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		132	185	pg/g	71.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		142	185	pg/g	76.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469016**	**Date Collected:**	**08/29/2019 08:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**29.8**
Client ID:	**H3-SC1b-50to60-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:58**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		151	185	pg/g	81.5	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		163	185	pg/g	88.1	(26%-138%)
37Cl-2,3,7,8-TCDD		16.3	18.5	pg/g	88.0	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469017**	**Date Collected:**	**08/29/2019 09:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.1**
Client ID:	**H3-SC1b-60to70-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 14:46**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.48 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0733	pg/g	0.0733	0.949
40321-76-4	1,2,3,7,8-PeCDD	J	0.271	pg/g	0.108	4.75
39227-28-6	1,2,3,4,7,8-HxCDD	JK	0.178	pg/g	0.118	4.75
57653-85-7	1,2,3,6,7,8-HxCDD	J	1.22	pg/g	0.118	4.75
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.509	pg/g	0.120	4.75
35822-46-9	1,2,3,4,6,7,8-HpCDD		24.1	pg/g	0.321	4.75
3268-87-9	1,2,3,4,6,7,8,9-OCDD		373	pg/g	0.944	9.49
51207-31-9	2,3,7,8-TCDF	BJK	0.389	pg/g	0.143	0.949
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.253	pg/g	0.0706	4.75
57117-31-4	2,3,4,7,8-PeCDF	J	1.13	pg/g	0.0632	4.75
70648-26-9	1,2,3,4,7,8-HxCDF	BJ	0.862	pg/g	0.0883	4.75
57117-44-9	1,2,3,6,7,8-HxCDF	J	2.16	pg/g	0.0966	4.75
60851-34-5	2,3,4,6,7,8-HxCDF	J	1.41	pg/g	0.0987	4.75
72918-21-9	1,2,3,7,8,9-HxCDF	BJK	0.247	pg/g	0.119	4.75
67562-39-4	1,2,3,4,6,7,8-HpCDF		43.6	pg/g	0.183	4.75
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.592	pg/g	0.281	4.75
39001-02-0	1,2,3,4,6,7,8,9-OCDF		28.6	pg/g	0.380	9.49
41903-57-5	Total TeCDD	BJK	0.625	pg/g	0.0733	0.949
36088-22-9	Total PeCDD	JKQ	2.73	pg/g	0.108	4.75
34465-46-8	Total HxCDD	JK	11.3	pg/g	0.118	4.75
37871-00-4	Total HpCDD		62.6	pg/g	0.321	4.75
30402-14-3	Total TeCDF	JK	8.61	pg/g	0.143	0.949
30402-15-4	Total PeCDF	JKQ	28.7	pg/g	0.0454	4.75
55684-94-1	Total HxCDF	JK	35.8	pg/g	0.0883	4.75
38998-75-3	Total HpCDF	J	81.3	pg/g	0.183	4.75
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		2.12	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		2.16	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		131	190	pg/g	69.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		121	190	pg/g	63.9	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		143	190	pg/g	75.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		132	190	pg/g	69.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		163	190	pg/g	85.8	(23%-140%)
13C-OCDD		283	380	pg/g	74.6	(17%-157%)
13C-2,3,7,8-TCDF		125	190	pg/g	65.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		114	190	pg/g	59.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		115	190	pg/g	60.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		139	190	pg/g	73.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		124	190	pg/g	65.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		129	190	pg/g	68.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		129	190	pg/g	68.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469017**	**Date Collected:**	**08/29/2019 09:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.1**
Client ID:	**H3-SC1b-60to70-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 14:46**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.48 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		147	190	pg/g	77.3	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		164	190	pg/g	86.3	(26%-138%)
37Cl-2,3,7,8-TCDD		15.5	19.0	pg/g	81.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469018**	**Date Collected:**	**08/29/2019 09:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**48.9**
Client ID:	**H3-SC1b-70to80-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 15:35**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**20.11 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0882	pg/g	0.0882	0.974
40321-76-4	1,2,3,7,8-PeCDD	JK	0.234	pg/g	0.169	4.87
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.163	pg/g	0.163	4.87
57653-85-7	1,2,3,6,7,8-HxCDD	BJK	0.386	pg/g	0.163	4.87
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.456	pg/g	0.167	4.87
35822-46-9	1,2,3,4,6,7,8-HpCDD		5.54	pg/g	0.208	4.87
3268-87-9	1,2,3,4,6,7,8,9-OCDD		57.1	pg/g	0.580	9.74
51207-31-9	2,3,7,8-TCDF	BJK	0.732	pg/g	0.155	0.974
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.335	pg/g	0.191	4.87
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.614	pg/g	0.163	4.87
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.563	pg/g	0.115	4.87
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.802	pg/g	0.123	4.87
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.540	pg/g	0.116	4.87
72918-21-9	1,2,3,7,8,9-HxCDF	QU	0.163	pg/g	0.163	4.87
67562-39-4	1,2,3,4,6,7,8-HpCDF		9.08	pg/g	0.130	4.87
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.356	pg/g	0.182	4.87
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	5.78	pg/g	0.358	9.74
41903-57-5	Total TeCDD	JK	2.35	pg/g	0.0882	0.974
36088-22-9	Total PeCDD	JKQ	2.47	pg/g	0.169	4.87
34465-46-8	Total HxCDD	JK	5.20	pg/g	0.163	4.87
37871-00-4	Total HpCDD		14.0	pg/g	0.208	4.87
30402-14-3	Total TeCDF	JK	9.53	pg/g	0.155	0.974
30402-15-4	Total PeCDF	JKQ	9.93	pg/g	0.0508	4.87
55684-94-1	Total HxCDF	JKQ	9.91	pg/g	0.115	4.87
38998-75-3	Total HpCDF	J	17.3	pg/g	0.130	4.87
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.944	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		1.00	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		127	195	pg/g	65.4	(25%-164%)
13C-1,2,3,7,8-PeCDD		109	195	pg/g	56.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		165	195	pg/g	85.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		142	195	pg/g	73.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		185	195	pg/g	95.1	(23%-140%)
13C-OCDD		349	390	pg/g	89.6	(17%-157%)
13C-2,3,7,8-TCDF		131	195	pg/g	67.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		107	195	pg/g	54.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		105	195	pg/g	53.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		157	195	pg/g	80.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		128	195	pg/g	65.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		144	195	pg/g	74.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF	Q	115	195	pg/g	59.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469018**	**Date Collected:**	**08/29/2019 09:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**48.9**
Client ID:	**H3-SC1b-70to80-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 15:35**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**20.11 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		166	195	pg/g	85.4	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		192	195	pg/g	98.8	(26%-138%)
37Cl-2,3,7,8-TCDD		13.9	19.5	pg/g	71.3	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469019**	**Date Collected:**	**08/29/2019 09:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**43.1**
Client ID:	**H3-SC1b-80to90-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 16:23**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.65 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0673	pg/g	0.0673	0.943
40321-76-4	1,2,3,7,8-PeCDD	U	0.109	pg/g	0.109	4.71
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.126	pg/g	0.126	4.71
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.131	pg/g	0.131	4.71
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.132	pg/g	0.132	4.71
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	1.04	pg/g	0.140	4.71
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	8.95	pg/g	0.341	9.43
51207-31-9	2,3,7,8-TCDF	BJ	0.413	pg/g	0.106	0.943
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.117	pg/g	0.083	4.71
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.111	pg/g	0.0717	4.71
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.141	pg/g	0.0698	4.71
57117-44-9	1,2,3,6,7,8-HxCDF	BJK	0.100	pg/g	0.0713	4.71
60851-34-5	2,3,4,6,7,8-HxCDF	BJK	0.083	pg/g	0.0753	4.71
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0975	pg/g	0.0975	4.71
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.685	pg/g	0.0734	4.71
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.115	pg/g	0.115	4.71
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	0.368	pg/g	0.275	9.43
41903-57-5	Total TeCDD	BJ	0.571	pg/g	0.0673	0.943
36088-22-9	Total PeCDD	JK	0.287	pg/g	0.109	4.71
34465-46-8	Total HxCDD	BJK	1.00	pg/g	0.126	4.71
37871-00-4	Total HpCDD	J	2.61	pg/g	0.140	4.71
30402-14-3	Total TeCDF	JK	1.90	pg/g	0.106	0.943
30402-15-4	Total PeCDF	BJK	0.824	pg/g	0.0455	4.71
55684-94-1	Total HxCDF	BJK	0.892	pg/g	0.0698	4.71
38998-75-3	Total HpCDF	BJ	1.19	pg/g	0.0734	4.71
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.131	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.244	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		135	189	pg/g	71.7	(25%-164%)
13C-1,2,3,7,8-PeCDD		117	189	pg/g	62.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		152	189	pg/g	80.5	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		145	189	pg/g	77.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		179	189	pg/g	94.6	(23%-140%)
13C-OCDD		313	377	pg/g	82.9	(17%-157%)
13C-2,3,7,8-TCDF		133	189	pg/g	70.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		107	189	pg/g	56.8	(24%-185%)
13C-2,3,4,7,8-PeCDF		111	189	pg/g	58.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		147	189	pg/g	78.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		138	189	pg/g	72.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		139	189	pg/g	73.7	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		142	189	pg/g	75.2	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469019**	**Date Collected:**	**08/29/2019 09:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**43.1**
Client ID:	**H3-SC1b-80to90-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 16:23**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.65 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		159	189	pg/g	84.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		176	189	pg/g	93.4	(26%-138%)
37Cl-2,3,7,8-TCDD		16.0	18.9	pg/g	84.8	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469020**	**Date Collected:**	**08/29/2019 09:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.6**
Client ID:	**H3-SC1b-90to100-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 17:11**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.91 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0459	pg/g	0.0459	0.933
40321-76-4	1,2,3,7,8-PeCDD	U	0.0664	pg/g	0.0664	4.66
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.104	pg/g	0.104	4.66
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.102	pg/g	0.102	4.66
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.105	pg/g	0.105	4.66
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJK	0.496	pg/g	0.150	4.66
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	3.59	pg/g	0.276	9.33
51207-31-9	2,3,7,8-TCDF	BJ	0.405	pg/g	0.119	0.933
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.097	pg/g	0.0638	4.66
57117-31-4	2,3,4,7,8-PeCDF	U	0.0567	pg/g	0.0567	4.66
70648-26-9	1,2,3,4,7,8-HxCDF	BJ	0.0485	pg/g	0.0405	4.66
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.0429	pg/g	0.0429	4.66
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0448	pg/g	0.0448	4.66
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.0653	pg/g	0.061	4.66
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.127	pg/g	0.0543	4.66
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0852	pg/g	0.0852	4.66
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.214	pg/g	0.214	9.33
41903-57-5	Total TeCDD	BJK	0.367	pg/g	0.0459	0.933
36088-22-9	Total PeCDD	JK	0.0746	pg/g	0.0664	4.66
34465-46-8	Total HxCDD	BJK	0.636	pg/g	0.102	4.66
37871-00-4	Total HpCDD	BJK	1.23	pg/g	0.150	4.66
30402-14-3	Total TeCDF	BJK	0.854	pg/g	0.119	0.933
30402-15-4	Total PeCDF	BJK	0.356	pg/g	0.0311	4.66
55684-94-1	Total HxCDF	BJ	0.201	pg/g	0.0405	4.66
38998-75-3	Total HpCDF	BJ	0.127	pg/g	0.0543	4.66
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0621	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.147	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	187	pg/g	80.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		134	187	pg/g	71.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		166	187	pg/g	88.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		150	187	pg/g	80.2	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		178	187	pg/g	95.2	(23%-140%)
13C-OCDD		297	373	pg/g	79.7	(17%-157%)
13C-2,3,7,8-TCDF		142	187	pg/g	76.4	(24%-169%)
13C-1,2,3,7,8-PeCDF		126	187	pg/g	67.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		127	187	pg/g	68.1	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		158	187	pg/g	84.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		145	187	pg/g	77.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		147	187	pg/g	78.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		156	187	pg/g	83.5	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469020**	**Date Collected:**	**08/29/2019 09:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.6**
Client ID:	**H3-SC1b-90to100-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 17:11**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.91 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		162	187	pg/g	87.0	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		173	187	pg/g	92.9	(26%-138%)
37Cl-2,3,7,8-TCDD		16.9	18.7	pg/g	90.6	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
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

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469021**	**Date Collected:**	**08/29/2019 09:50**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**35**
Client ID:	**H3-SC1b-100to110-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 18:00**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-13**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0634	pg/g	0.0634	0.940
40321-76-4	1,2,3,7,8-PeCDD	U	0.0741	pg/g	0.0741	4.70
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.0784	pg/g	0.0784	4.70
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.0765	pg/g	0.0765	4.70
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.079	pg/g	0.079	4.70
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	1.03	pg/g	0.142	4.70
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	9.18	pg/g	0.376	9.40
51207-31-9	2,3,7,8-TCDF	BJ	0.352	pg/g	0.0833	0.940
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.0545	pg/g	0.0449	4.70
57117-31-4	2,3,4,7,8-PeCDF	U	0.0408	pg/g	0.0408	4.70
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.0446	pg/g	0.0446	4.70
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.047	pg/g	0.0451	4.70
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0464	pg/g	0.0464	4.70
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0692	pg/g	0.0692	4.70
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.416	pg/g	0.0489	4.70
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0829	pg/g	0.0829	4.70
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	0.323	pg/g	0.222	9.40
41903-57-5	Total TeCDD	BJ	0.284	pg/g	0.0634	0.940
36088-22-9	Total PeCDD	JK	0.299	pg/g	0.0741	4.70
34465-46-8	Total HxCDD	BJK	0.980	pg/g	0.0765	4.70
37871-00-4	Total HpCDD	J	2.73	pg/g	0.142	4.70
30402-14-3	Total TeCDF	BJK	0.893	pg/g	0.0833	0.940
30402-15-4	Total PeCDF	BJK	0.367	pg/g	0.0301	4.70
55684-94-1	Total HxCDF	BJK	0.451	pg/g	0.0446	4.70
38998-75-3	Total HpCDF	BJ	0.782	pg/g	0.0489	4.70
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0588	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.154	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	188	pg/g	79.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		140	188	pg/g	74.7	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		157	188	pg/g	83.3	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		147	188	pg/g	78.0	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		168	188	pg/g	89.4	(23%-140%)
13C-OCDD		263	376	pg/g	70.0	(17%-157%)
13C-2,3,7,8-TCDF		137	188	pg/g	72.6	(24%-169%)
13C-1,2,3,7,8-PeCDF		132	188	pg/g	70.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		134	188	pg/g	71.1	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		150	188	pg/g	79.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		143	188	pg/g	75.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		142	188	pg/g	75.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		151	188	pg/g	80.3	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469021**	**Date Collected:**	**08/29/2019 09:50**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**35**
Client ID:	**H3-SC1b-100to110-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 18:00**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-13**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		157	188	pg/g	83.7	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		161	188	pg/g	85.4	(26%-138%)
37Cl-2,3,7,8-TCDD		17.0	18.8	pg/g	90.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12024793	LCS for batch 41745	13C-2,3,7,8-TCDD		77.4	(20%-175%)
		13C-1,2,3,7,8-PeCDD		72.2	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		73.5	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		80.0	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		74.9	(22%-166%)
		13C-OCDD		56.6	(13%-199%)
		13C-2,3,7,8-TCDF		66.7	(22%-152%)
		13C-1,2,3,7,8-PeCDF		70.1	(21%-192%)
		13C-2,3,4,7,8-PeCDF		66.5	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		75.0	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		72.4	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		70.7	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		70.7	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		70.0	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		69.8	(20%-186%)
		37Cl-2,3,7,8-TCDD		94.4	(31%-191%)
15469009	J6-SC1b-100to110-82819	13C-2,3,7,8-TCDD		80.5	(25%-164%)
		13C-1,2,3,7,8-PeCDD		76.2	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		78.8	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		85.7	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		83.2	(23%-140%)
		13C-OCDD		61.9	(17%-157%)
		13C-2,3,7,8-TCDF		73.9	(24%-169%)
		13C-1,2,3,7,8-PeCDF		74.3	(24%-185%)
		13C-2,3,4,7,8-PeCDF		73.3	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		82.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		80.7	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		79.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		78.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		81.6	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		78.4	(26%-138%)
		37Cl-2,3,7,8-TCDD		91.3	(35%-197%)
15469010	J6-SC1b-110to120-82819	13C-2,3,7,8-TCDD		79.5	(25%-164%)
		13C-1,2,3,7,8-PeCDD		73.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		74.4	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		79.6	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		80.2	(23%-140%)
		13C-OCDD		61.9	(17%-157%)
		13C-2,3,7,8-TCDF		69.9	(24%-169%)
		13C-1,2,3,7,8-PeCDF		68.9	(24%-185%)
		13C-2,3,4,7,8-PeCDF		69.4	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		75.8	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		78.8	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		75.6	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		74.5	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		79.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		75.6	(26%-138%)
		37Cl-2,3,7,8-TCDD		94.5	(35%-197%)
15469013	H3-SC1b-20to30-82819	13C-2,3,7,8-TCDD		64.2	(25%-164%)

Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15469013	H3-SC1b-20to30-82819	13C-1,2,3,7,8-PeCDD		63.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		86.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		77.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		103	(23%-140%)
		13C-OCDD		108	(17%-157%)
		13C-2,3,7,8-TCDF		68.7	(24%-169%)
		13C-1,2,3,7,8-PeCDF		60.3	(24%-185%)
		13C-2,3,4,7,8-PeCDF		58.5	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		87.1	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		70.8	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		76.3	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		66.0	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		93.1	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		112	(26%-138%)
		37Cl-2,3,7,8-TCDD		71.3	(35%-197%)
15469015	H3-SC1b-40to50-82919	13C-2,3,7,8-TCDD		70.4	(25%-164%)
		13C-1,2,3,7,8-PeCDD		61.4	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		82.7	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		73.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		99.9	(23%-140%)
		13C-OCDD		93.0	(17%-157%)
		13C-2,3,7,8-TCDF		72.0	(24%-169%)
		13C-1,2,3,7,8-PeCDF		57.7	(24%-185%)
		13C-2,3,4,7,8-PeCDF		58.8	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		79.5	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		70.0	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		72.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		72.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		87.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		100	(26%-138%)
		37Cl-2,3,7,8-TCDD		82.7	(35%-197%)
15469016	H3-SC1b-50to60-82919	13C-2,3,7,8-TCDD		73.2	(25%-164%)
		13C-1,2,3,7,8-PeCDD		68.0	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		81.8	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		71.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		89.9	(23%-140%)
		13C-OCDD		76.3	(17%-157%)
		13C-2,3,7,8-TCDF		68.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		62.9	(24%-185%)
		13C-2,3,4,7,8-PeCDF		63.4	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		78.1	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		69.3	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		71.1	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		76.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		81.5	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		88.1	(26%-138%)
		37Cl-2,3,7,8-TCDD		88.0	(35%-197%)
15469017	H3-SC1b-60to70-82919	13C-2,3,7,8-TCDD		69.2	(25%-164%)
		13C-1,2,3,7,8-PeCDD		63.9	(25%-181%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15469017	H3-SC1b-60to70-82919	13C-1,2,3,4,7,8-HxCDD		75.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		69.5	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		85.8	(23%-140%)
		13C-OCDD		74.6	(17%-157%)
		13C-2,3,7,8-TCDF		65.7	(24%-169%)
		13C-1,2,3,7,8-PeCDF		59.9	(24%-185%)
		13C-2,3,4,7,8-PeCDF		60.4	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		73.4	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		65.6	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		68.1	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		68.0	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		77.3	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		86.3	(26%-138%)
		37Cl-2,3,7,8-TCDD		81.5	(35%-197%)
15469018	H3-SC1b-70to80-82919	13C-2,3,7,8-TCDD		65.4	(25%-164%)
		13C-1,2,3,7,8-PeCDD		56.2	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		85.0	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		73.1	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		95.1	(23%-140%)
		13C-OCDD		89.6	(17%-157%)
		13C-2,3,7,8-TCDF		67.1	(24%-169%)
		13C-1,2,3,7,8-PeCDF		54.7	(24%-185%)
		13C-2,3,4,7,8-PeCDF		53.8	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		80.5	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		65.9	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		74.1	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF	Q	59.0	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		85.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		98.8	(26%-138%)
		37Cl-2,3,7,8-TCDD		71.3	(35%-197%)
15469019	H3-SC1b-80to90-82919	13C-2,3,7,8-TCDD		71.7	(25%-164%)
		13C-1,2,3,7,8-PeCDD		62.3	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		80.5	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		77.1	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		94.6	(23%-140%)
		13C-OCDD		82.9	(17%-157%)
		13C-2,3,7,8-TCDF		70.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		56.8	(24%-185%)
		13C-2,3,4,7,8-PeCDF		58.6	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		78.2	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		72.9	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		73.7	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		75.2	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		84.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		93.4	(26%-138%)
		37Cl-2,3,7,8-TCDD		84.8	(35%-197%)
15469020	H3-SC1b-90to100-82919	13C-2,3,7,8-TCDD		80.3	(25%-164%)
		13C-1,2,3,7,8-PeCDD		71.8	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		88.8	(32%-141%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15469020	H3-SC1b-90to100-82919	13C-1,2,3,6,7,8-HxCDD		80.2	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		95.2	(23%-140%)
		13C-OCDD		79.7	(17%-157%)
		13C-2,3,7,8-TCDF		76.4	(24%-169%)
		13C-1,2,3,7,8-PeCDF		67.5	(24%-185%)
		13C-2,3,4,7,8-PeCDF		68.1	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		84.8	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		77.8	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		78.6	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		83.5	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		87.0	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		92.9	(26%-138%)
		37Cl-2,3,7,8-TCDD		90.6	(35%-197%)
15469021	H3-SC1b-100to110-82919	13C-2,3,7,8-TCDD		79.8	(25%-164%)
		13C-1,2,3,7,8-PeCDD		74.7	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		83.3	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		78.0	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		89.4	(23%-140%)
		13C-OCDD		70.0	(17%-157%)
		13C-2,3,7,8-TCDF		72.6	(24%-169%)
		13C-1,2,3,7,8-PeCDF		70.2	(24%-185%)
		13C-2,3,4,7,8-PeCDF		71.1	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		79.9	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		75.9	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		75.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		80.3	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		83.7	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		85.4	(26%-138%)
		37Cl-2,3,7,8-TCDD		90.5	(35%-197%)
12024794	LCSD for batch 41745	13C-2,3,7,8-TCDD		82.4	(20%-175%)
		13C-1,2,3,7,8-PeCDD		76.1	(21%-227%)
		13C-1,2,3,4,7,8-HxCDD		78.9	(21%-193%)
		13C-1,2,3,6,7,8-HxCDD		86.1	(25%-163%)
		13C-1,2,3,4,6,7,8-HpCDD		86.7	(22%-166%)
		13C-OCDD		68.1	(13%-199%)
		13C-2,3,7,8-TCDF		74.7	(22%-152%)
		13C-1,2,3,7,8-PeCDF		75.2	(21%-192%)
		13C-2,3,4,7,8-PeCDF		72.5	(13%-328%)
		13C-1,2,3,4,7,8-HxCDF		83.1	(19%-202%)
		13C-1,2,3,6,7,8-HxCDF		81.3	(21%-159%)
		13C-2,3,4,6,7,8-HxCDF		79.3	(22%-176%)
		13C-1,2,3,7,8,9-HxCDF		80.8	(17%-205%)
		13C-1,2,3,4,6,7,8-HpCDF		86.0	(21%-158%)
		13C-1,2,3,4,7,8,9-HpCDF		83.7	(20%-186%)
		37Cl-2,3,7,8-TCDD		93.4	(31%-191%)
12024792	MB for batch 41745	13C-2,3,7,8-TCDD		84.5	(25%-164%)
		13C-1,2,3,7,8-PeCDD		76.2	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		76.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		82.4	(28%-130%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12024792	MB for batch 41745	13C-1,2,3,4,6,7,8-HpCDD		84.5	(23%-140%)
		13C-OCDD		65.7	(17%-157%)
		13C-2,3,7,8-TCDF		74.4	(24%-169%)
		13C-1,2,3,7,8-PeCDF		74.9	(24%-185%)
		13C-2,3,4,7,8-PeCDF		72.8	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		80.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		78.5	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		76.4	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		79.2	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		84.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		80.8	(26%-138%)
		37Cl-2,3,7,8-TCDD		93.7	(35%-197%)
15469014	H3-SC1b-30to40-82919	13C-2,3,7,8-TCDD		70.7	(25%-164%)
		13C-1,2,3,7,8-PeCDD		82.2	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		74.0	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		65.8	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		83.9	(23%-140%)
		13C-OCDD		84.7	(17%-157%)
		13C-2,3,7,8-TCDF		64.8	(24%-169%)
		13C-1,2,3,7,8-PeCDF		77.6	(24%-185%)
		13C-2,3,4,7,8-PeCDF		76.6	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		67.2	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		64.1	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		65.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		73.9	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		71.0	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		83.6	(26%-138%)
		37Cl-2,3,7,8-TCDD		92.6	(35%-197%)
15469001	J6-SC1b-20to30-82819	13C-2,3,7,8-TCDD		75.0	(25%-164%)
		13C-1,2,3,7,8-PeCDD		83.4	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		87.9	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		68.1	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		95.1	(23%-140%)
		13C-OCDD		102	(17%-157%)
		13C-2,3,7,8-TCDF		69.0	(24%-169%)
		13C-1,2,3,7,8-PeCDF		77.7	(24%-185%)
		13C-2,3,4,7,8-PeCDF		78.7	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		74.8	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		70.2	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		71.4	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		81.2	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		77.8	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		94.9	(26%-138%)
		37Cl-2,3,7,8-TCDD		94.2	(35%-197%)
12024795	J6-SC1b-20to30-82819(15469001MS)	13C-2,3,7,8-TCDD		77.1	(25%-164%)
		13C-1,2,3,7,8-PeCDD		85.4	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		91.2	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		69.6	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		91.4	(23%-140%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12024795	J6-SC1b-20to30-82819(15469001MS)	13C-OCDD		105	(17%-157%)
		13C-2,3,7,8-TCDF		71.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		79.6	(24%-185%)
		13C-2,3,4,7,8-PeCDF		79.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		78.3	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		70.0	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		72.8	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		80.1	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		83.9	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		91.0	(26%-138%)
		37Cl-2,3,7,8-TCDD		89.8	(35%-197%)
12024796	J6-SC1b-20to30-82819(15469001MSD)	13C-2,3,7,8-TCDD		81.3	(25%-164%)
		13C-1,2,3,7,8-PeCDD		93.5	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		87.9	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.9	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		100	(23%-140%)
		13C-OCDD		107	(17%-157%)
		13C-2,3,7,8-TCDF		75.5	(24%-169%)
		13C-1,2,3,7,8-PeCDF		85.5	(24%-185%)
		13C-2,3,4,7,8-PeCDF		86.6	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		78.9	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		72.2	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		74.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		85.9	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		84.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		103	(26%-138%)
		37Cl-2,3,7,8-TCDD		96.3	(35%-197%)
15469002	J6-SC1b-30to40-82819	13C-2,3,7,8-TCDD		78.2	(25%-164%)
		13C-1,2,3,7,8-PeCDD		87.8	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		84.6	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		71.4	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		96.4	(23%-140%)
		13C-OCDD		102	(17%-157%)
		13C-2,3,7,8-TCDF		72.2	(24%-169%)
		13C-1,2,3,7,8-PeCDF		81.9	(24%-185%)
		13C-2,3,4,7,8-PeCDF		82.6	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		78.9	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		67.9	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		72.4	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		81.7	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		80.3	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		95.8	(26%-138%)
		37Cl-2,3,7,8-TCDD		97.4	(35%-197%)
15469003	J6-SC1b-40to50-82819	13C-2,3,7,8-TCDD		83.1	(25%-164%)
		13C-1,2,3,7,8-PeCDD		95.8	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		85.0	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		77.3	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		102	(23%-140%)
		13C-OCDD		108	(17%-157%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15469003	J6-SC1b-40to50-82819	13C-2,3,7,8-TCDF		77.3	(24%-169%)
		13C-1,2,3,7,8-PeCDF		89.5	(24%-185%)
		13C-2,3,4,7,8-PeCDF		89.1	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		83.5	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		70.9	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		76.5	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		86.0	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		82.9	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		101	(26%-138%)
		37Cl-2,3,7,8-TCDD		101	(35%-197%)
15469004	J6-SC1b-50to60-82819	13C-2,3,7,8-TCDD		77.3	(25%-164%)
		13C-1,2,3,7,8-PeCDD		89.3	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		91.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		71.9	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		102	(23%-140%)
		13C-OCDD		110	(17%-157%)
		13C-2,3,7,8-TCDF		73.7	(24%-169%)
		13C-1,2,3,7,8-PeCDF		82.7	(24%-185%)
		13C-2,3,4,7,8-PeCDF		83.5	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		82.0	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		69.4	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		75.4	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		84.6	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		83.3	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		103	(26%-138%)
		37Cl-2,3,7,8-TCDD		91.1	(35%-197%)
15469005	J6-SC1b-60to70-82819	13C-2,3,7,8-TCDD		76.3	(25%-164%)
		13C-1,2,3,7,8-PeCDD		81.6	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		89.7	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		57.3	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		99.1	(23%-140%)
		13C-OCDD		104	(17%-157%)
		13C-2,3,7,8-TCDF		73.2	(24%-169%)
		13C-1,2,3,7,8-PeCDF		78.6	(24%-185%)
		13C-2,3,4,7,8-PeCDF		78.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		95.1	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		57.0	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		73.3	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		68.4	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		82.2	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		102	(26%-138%)
		37Cl-2,3,7,8-TCDD		90.5	(35%-197%)
15469006	J6-SC1b-70to80-82819	13C-2,3,7,8-TCDD		78.5	(25%-164%)
		13C-1,2,3,7,8-PeCDD		89.3	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		85.6	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		71.2	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		96.9	(23%-140%)
		13C-OCDD		102	(17%-157%)
		13C-2,3,7,8-TCDF		72.0	(24%-169%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 2006-00115_2

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
15469006	J6-SC1b-70to80-82819	13C-1,2,3,7,8-PeCDF		71.2	(24%-185%)
		13C-2,3,4,7,8-PeCDF		82.6	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		76.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		69.6	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		73.4	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		81.9	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		80.4	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		95.9	(26%-138%)
		37Cl-2,3,7,8-TCDD		93.7	(35%-197%)
15469007	J6-SC1b-80to90-82819	13C-2,3,7,8-TCDD		83.1	(25%-164%)
		13C-1,2,3,7,8-PeCDD		95.3	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		87.4	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		75.5	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		102	(23%-140%)
		13C-OCDD		105	(17%-157%)
		13C-2,3,7,8-TCDF		78.5	(24%-169%)
		13C-1,2,3,7,8-PeCDF		91.1	(24%-185%)
		13C-2,3,4,7,8-PeCDF		91.0	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		81.7	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		71.3	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		76.3	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		85.8	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		84.9	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		102	(26%-138%)
		37Cl-2,3,7,8-TCDD		97.7	(35%-197%)
15469008	J6-SC1b-90to100-82819	13C-2,3,7,8-TCDD		76.3	(25%-164%)
		13C-1,2,3,7,8-PeCDD		88.7	(25%-181%)
		13C-1,2,3,4,7,8-HxCDD		85.1	(32%-141%)
		13C-1,2,3,6,7,8-HxCDD		81.9	(28%-130%)
		13C-1,2,3,4,6,7,8-HpCDD		100	(23%-140%)
		13C-OCDD		101	(17%-157%)
		13C-2,3,7,8-TCDF		72.8	(24%-169%)
		13C-1,2,3,7,8-PeCDF		83.5	(24%-185%)
		13C-2,3,4,7,8-PeCDF		82.9	(21%-178%)
		13C-1,2,3,4,7,8-HxCDF		83.2	(26%-152%)
		13C-1,2,3,6,7,8-HxCDF		77.4	(26%-123%)
		13C-2,3,4,6,7,8-HxCDF		79.3	(28%-136%)
		13C-1,2,3,7,8,9-HxCDF		81.8	(29%-147%)
		13C-1,2,3,4,6,7,8-HpCDF		85.8	(28%-143%)
		13C-1,2,3,4,7,8,9-HpCDF		99.5	(26%-138%)
		37Cl-2,3,7,8-TCDD		90.2	(35%-197%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 2006-00115_2
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 41745
Matrix: SOIL
Lab Sample ID: 12024793
Instrument: HRP763
Analysis Date: 09/21/2019 22:43
Dilution: 1
Analyst: MLS
Prep Batch ID: 41745
Batch ID: 41747

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	18.1	90.3	67-158
40321-76-4	LCS	1,2,3,7,8-PeCDD	100	99.8	99.8	70-142
39227-28-6	LCS	1,2,3,4,7,8-HxCDD	100	97.2	97.2	70-164
57653-85-7	LCS	1,2,3,6,7,8-HxCDD	100	102	102	76-134
19408-74-3	LCS	1,2,3,7,8,9-HxCDD	100	106	106	64-162
35822-46-9	LCS	1,2,3,4,6,7,8-HpCDD	100	102	102	70-140
3268-87-9	LCS	1,2,3,4,6,7,8,9-OCDD	200	201	101	78-144
51207-31-9	LCS	2,3,7,8-TCDF	20.0	20.9	104	75-158
57117-41-6	LCS	1,2,3,7,8-PeCDF	100	106	106	80-134
57117-31-4	LCS	2,3,4,7,8-PeCDF	100	107	107	68-160
70648-26-9	LCS	1,2,3,4,7,8-HxCDF	100	105	105	72-134
57117-44-9	LCS	1,2,3,6,7,8-HxCDF	100	112	112	84-130
60851-34-5	LCS	2,3,4,6,7,8-HxCDF	100	109	109	70-156
72918-21-9	LCS	1,2,3,7,8,9-HxCDF	100	107	107	78-130
67562-39-4	LCS	1,2,3,4,6,7,8-HpCDF	100	110	110	82-122
55673-89-7	LCS	1,2,3,4,7,8,9-HpCDF	100	106	106	78-138
39001-02-0	LCS	1,2,3,4,6,7,8,9-OCDF	200	204	102	63-170

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 2006-00115_2 **Sample Type:** Laboratory Control Sample Duplicate

Client ID: LCSD for batch 41745 **Matrix:** SOIL

Lab Sample ID: 12024794

Instrument: HRP763 **Analysis Date:** 09/24/2019 09:35 **Dilution:** 1

Analyst: MLS **Prep Batch ID:** 41745

Batch ID: 41747

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	17.7	88.7	67-158	1.79	0-20
40321-76-4	LCSD	1,2,3,7,8-PeCDD	100	102	102	70-142	1.96	0-20
39227-28-6	LCSD	1,2,3,4,7,8-HxCDD	100	99.1	99.1	70-164	2.02	0-20
57653-85-7	LCSD	1,2,3,6,7,8-HxCDD	100	106	106	76-134	3.61	0-20
19408-74-3	LCSD	1,2,3,7,8,9-HxCDD	100	108	108	64-162	1.69	0-20
35822-46-9	LCSD	1,2,3,4,6,7,8-HpCDD	100	107	107	70-140	4.39	0-20
3268-87-9	LCSD	1,2,3,4,6,7,8,9-OCDD	200	207	104	78-144	2.72	0-20
51207-31-9	LCSD	2,3,7,8-TCDF	20.0	21.5	107	75-158	2.64	0-20
57117-41-6	LCSD	1,2,3,7,8-PeCDF	100	108	108	80-134	1.99	0-20
57117-31-4	LCSD	2,3,4,7,8-PeCDF	100	110	110	68-160	2.78	0-20
70648-26-9	LCSD	1,2,3,4,7,8-HxCDF	100	109	109	72-134	3.98	0-20
57117-44-9	LCSD	1,2,3,6,7,8-HxCDF	100	118	118	84-130	4.81	0-20
60851-34-5	LCSD	2,3,4,6,7,8-HxCDF	100	115	115	70-156	5.75	0-20
72918-21-9	LCSD	1,2,3,7,8,9-HxCDF	100	112	112	78-130	4.25	0-20
67562-39-4	LCSD	1,2,3,4,6,7,8-HpCDF	100	111	111	82-122	0.851	0-20
55673-89-7	LCSD	1,2,3,4,7,8,9-HpCDF	100	110	110	78-138	3.27	0-20
39001-02-0	LCSD	1,2,3,4,6,7,8,9-OCDF	200	212	106	63-170	4.17	0-20

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 2006-00115_2
Client ID: J6-SC1b-20to30-82819(15469001MS)
Lab Sample ID: 12024795
Instrument: HRP763
Analyst: MLS

Sample Type: Matrix Spike
Matrix: SOIL
%Moisture: 47.3
Analysis Date: 09/28/2019 02:14
Prep Batch ID: 41745
Batch ID: 41747

Dilution: 1

CAS No.		Parmname	Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	MS	2,3,7,8-TCDD	19.9	J	19.9	97.7	70-130
40321-76-4	MS	1,2,3,7,8-PeCDD	99.3	J	104	103	70-130
39227-28-6	MS	1,2,3,4,7,8-HxCDD	99.3	J	102	101	70-130
57653-85-7	MS	1,2,3,6,7,8-HxCDD	99.3		122	114	70-130
19408-74-3	MS	1,2,3,7,8,9-HxCDD	99.3	J	119	117	70-130
35822-46-9	MS	1,2,3,4,6,7,8-HpCDD	99.3		487	319 *	70-130
3268-87-9	MS	1,2,3,4,6,7,8,9-OCDD	199		5860	1620 *	70-130
51207-31-9	MS	2,3,7,8-TCDF	19.9	B	23.7	111	70-130
57117-41-6	MS	1,2,3,7,8-PeCDF	99.3	BJ	105	105	70-130
57117-31-4	MS	2,3,4,7,8-PeCDF	99.3	J	109	108	70-130
70648-26-9	MS	1,2,3,4,7,8-HxCDF	99.3	J	108	105	70-130
57117-44-9	MS	1,2,3,6,7,8-HxCDF	99.3	J	118	115	70-130
60851-34-5	MS	2,3,4,6,7,8-HxCDF	99.3	J	113	111	70-130
72918-21-9	MS	1,2,3,7,8,9-HxCDF	99.3	BJ	105	105	70-130
67562-39-4	MS	1,2,3,4,6,7,8-HpCDF	99.3		184	150 *	70-130
55673-89-7	MS	1,2,3,4,7,8,9-HpCDF	99.3	J	110	108	70-130
39001-02-0	MS	1,2,3,4,6,7,8,9-OCDF	199		470	182 *	70-130

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 2006-00115_2
Client ID: J6-SC1b-20to30-82819(15469001MSD)
Lab Sample ID: 12024796
Instrument: HRP763
Analyst: MLS

Sample Type: Matrix Spike Duplicate
Matrix: SOIL
%Moisture: 47.3
Analysis Date: 09/28/2019 03:03
Dilution: 1
Prep Batch ID: 41745
Batch ID: 41747

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	19.9	J	18.9	92.7	70-130	5.13	0-20
40321-76-4	MSD	1,2,3,7,8-PeCDD	99.3	J	102	101	70-130	1.97	0-20
39227-28-6	MSD	1,2,3,4,7,8-HxCDD	99.3	J	97.1	96.9	70-130	4.60	0-20
57653-85-7	MSD	1,2,3,6,7,8-HxCDD	99.3		107	100	70-130	12.6	0-20
19408-74-3	MSD	1,2,3,7,8,9-HxCDD	99.3	J	110	108	70-130	7.98	0-20
35822-46-9	MSD	1,2,3,4,6,7,8-HpCDD	99.3		202	31.2 *	70-130	82.8 *	0-20
3268-87-9	MSD	1,2,3,4,6,7,8,9-OCDD	199		1640	-498 *	70-130	112 *	0-20
51207-31-9	MSD	2,3,7,8-TCDF	19.9	B	21.5	101	70-130	9.60	0-20
57117-41-6	MSD	1,2,3,7,8-PeCDF	99.3	BJ	103	103	70-130	2.42	0-20
57117-31-4	MSD	2,3,4,7,8-PeCDF	99.3	J	104	103	70-130	4.96	0-20
70648-26-9	MSD	1,2,3,4,7,8-HxCDF	99.3	J	109	107	70-130	1.77	0-20
57117-44-9	MSD	1,2,3,6,7,8-HxCDF	99.3	J	105	102	70-130	11.4	0-20
60851-34-5	MSD	2,3,4,6,7,8-HxCDF	99.3	J	109	107	70-130	3.17	0-20
72918-21-9	MSD	1,2,3,7,8,9-HxCDF	99.3	BJ	105	105	70-130	0.112	0-20
67562-39-4	MSD	1,2,3,4,6,7,8-HpCDF	99.3		123	88.1	70-130	40.0 *	0-20
55673-89-7	MSD	1,2,3,4,7,8,9-HpCDF	99.3	J	103	101	70-130	7.22	0-20
39001-02-0	MSD	1,2,3,4,6,7,8,9-OCDF	199		267	79.9	70-130	54.9 *	0-20

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number:	**2006-00115_2**	**Sample Type:**	**Matrix Spike**
Client ID:	**J6-SC1b-20to30-82819(15469001MS)**	**Matrix:**	**SOIL**
Lab Sample ID:	**12024795**	**%Moisture:**	**47.3**
Instrument:	**HRP763**	**Analysis Date:**	**09/30/2019 16:53**
Analyst:	**MLS**	**Prep Batch ID:**	**41745**
		Batch ID:	**41747**

Dilution: 1

CAS No.		Parmname	Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits
51207-31-9	MS	2,3,7,8-TCDF	19.9	B	24.4	116	70-130

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number:	**2006-00115_2**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**J6-SC1b-20to30-82819(15469001MSD)**	**Matrix:**	**SOIL**
Lab Sample ID:	**12024796**	**%Moisture:**	**47.3**
Instrument:	**HRP763**	**Analysis Date:**	**09/30/2019 17:15**
Analyst:	**MLS**	**Prep Batch ID:**	**41745**
		Batch ID:	**41747**

Dilution: 1

CAS No.		Parmname	Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
51207-31-9	MSD	2,3,7,8-TCDF	19.9	B	22.6	107	70-130	7.64	0-20

Method Blank Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 41745**	**Instrument ID:**	**HRP763**	**Data File:**	**b23sep19a_3-4**
Lab Sample ID:	**12024792**	**Prep Date:**	**16-SEP-19**	**Analyzed:**	**09/24/19 10:23**
Column:					

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 41745	12024793	b21sep19a_2-1	09/21/19	2243
02	J6-SC1b-100to110-82819	15469009	b23sep19a-3	09/23/19	0956
03	J6-SC1b-110to120-82819	15469010	b23sep19a-4	09/23/19	1044
04	H3-SC1b-20to30-82819	15469013	b23sep19a-5	09/23/19	1132
05	H3-SC1b-40to50-82919	15469015	b23sep19a-7	09/23/19	1309
06	H3-SC1b-50to60-82919	15469016	b23sep19a-8	09/23/19	1358
07	H3-SC1b-60to70-82919	15469017	b23sep19a-9	09/23/19	1446
08	H3-SC1b-70to80-82919	15469018	b23sep19a-10	09/23/19	1535
09	H3-SC1b-80to90-82919	15469019	b23sep19a-11	09/23/19	1623
10	H3-SC1b-90to100-82919	15469020	b23sep19a-12	09/23/19	1711
11	H3-SC1b-100to110-82919	15469021	b23sep19a-13	09/23/19	1800
12	LCSD for batch 41745	12024794	b23sep19a_3-3	09/24/19	0935
13	H3-SC1b-20to30-82819	15469013	A24SEP19A_3-4	09/25/19	0245
14	H3-SC1b-30to40-82919	15469014	b26sep19a_5-2	09/28/19	0038
15	J6-SC1b-20to30-82819	15469001	b26sep19a_5-3	09/28/19	0126
16	J6-SC1b-20to30-82819(15469001MS)	12024795	b26sep19a_5-4	09/28/19	0214
17	J6-SC1b-20to30-82819(15469001MSD)	12024796	b26sep19a_5-5	09/28/19	0303
18	J6-SC1b-30to40-82819	15469002	b26sep19a_5-6	09/28/19	0351
19	J6-SC1b-40to50-82819	15469003	b26sep19a_5-7	09/28/19	0440
20	J6-SC1b-50to60-82819	15469004	b26sep19a_5-8	09/28/19	0528
21	J6-SC1b-60to70-82819	15469005	b26sep19a_5-9	09/28/19	0617
22	J6-SC1b-70to80-82819	15469006	b26sep19a_5-10	09/28/19	0705
23	J6-SC1b-80to90-82819	15469007	b26sep19a_5-11	09/28/19	0753
24	J6-SC1b-90to100-82819	15469008	b26sep19a_5-12	09/28/19	0842
25	J6-SC1b-20to30-82819	15469001	b30sep19a_2-3	09/30/19	1631
26	J6-SC1b-20to30-82819(15469001MS)	12024795	b30sep19a_2-4	09/30/19	1653
27	J6-SC1b-20to30-82819(15469001MSD)	12024796	b30sep19a_2-5	09/30/19	1715
28	J6-SC1b-50to60-82819	15469004	b30sep19a_2-6	09/30/19	1736
29	J6-SC1b-60to70-82819	15469005	b30sep19a_2-7	09/30/19	1758

Sample Raw Data

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469001**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 01:26**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.2 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.527	pg/g	0.189	0.988
40321-76-4	1,2,3,7,8-PeCDD	J	1.27	pg/g	0.171	4.94
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.859	pg/g	0.371	4.94
57653-85-7	1,2,3,6,7,8-HxCDD		7.87	pg/g	0.360	4.94
19408-74-3	1,2,3,7,8,9-HxCDD	J	3.53	pg/g	0.373	4.94
35822-46-9	1,2,3,4,6,7,8-HpCDD		171	pg/g	0.998	4.94
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2630	pg/g	1.79	9.88
51207-31-9	2,3,7,8-TCDF	B	1.57	pg/g	0.371	0.988
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.792	pg/g	0.200	4.94
57117-31-4	2,3,4,7,8-PeCDF	J	1.73	pg/g	0.174	4.94
70648-26-9	1,2,3,4,7,8-HxCDF	J	3.01	pg/g	0.181	4.94
57117-44-9	1,2,3,6,7,8-HxCDF	J	3.96	pg/g	0.189	4.94
60851-34-5	2,3,4,6,7,8-HxCDF	J	2.55	pg/g	0.202	4.94
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.889	pg/g	0.203	4.94
67562-39-4	1,2,3,4,6,7,8-HpCDF		35.3	pg/g	0.381	4.94
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	2.61	pg/g	0.508	4.94
39001-02-0	1,2,3,4,6,7,8,9-OCDF		109	pg/g	0.648	9.88
41903-57-5	Total TeCDD	JK	4.10	pg/g	0.189	0.988
36088-22-9	Total PeCDD	J	10.8	pg/g	0.171	4.94
34465-46-8	Total HxCDD	J	57.7	pg/g	0.360	4.94
37871-00-4	Total HpCDD		382	pg/g	0.998	4.94
30402-14-3	Total TeCDF	JK	15.9	pg/g	0.371	0.988
30402-15-4	Total PeCDF	J	30.3	pg/g	0.0794	4.94
55684-94-1	Total HxCDF	JK	58.0	pg/g	0.181	4.94
38998-75-3	Total HpCDF	J	128	pg/g	0.381	4.94
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		7.68	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		7.68	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		148	198	pg/g	75.0	(25%-164%)
13C-1,2,3,7,8-PeCDD		165	198	pg/g	83.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		174	198	pg/g	87.9	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		135	198	pg/g	68.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		188	198	pg/g	95.1	(23%-140%)
13C-OCDD		402	395	pg/g	102	(17%-157%)
13C-2,3,7,8-TCDF		136	198	pg/g	69.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		154	198	pg/g	77.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		156	198	pg/g	78.7	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		148	198	pg/g	74.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		139	198	pg/g	70.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		141	198	pg/g	71.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		160	198	pg/g	81.2	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469001**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 01:26**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.2 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		154	198	pg/g	77.8	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		187	198	pg/g	94.9	(26%-138%)
37Cl-2,3,7,8-TCDD		18.6	19.8	pg/g	94.2	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:59:30 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.49e2	9.91e2	1.84e3	31.11	1.000	0.86	NO	0.267	0.0958	1.30e4	1894	6.9	1.47e4	1415	10.4	bb	bb
2	12378-PeCDD	1.99e3	1.20e3	3.19e3	34.06	1.000	1.66	NO	0.644	0.0867	3.21e4	1757	18.3	1.89e4	1202	15.7	bb	bb
3	123478-HxCDD	1.15e3	9.70e2	2.12e3	36.64	1.000	1.18	NO	0.435	0.188	2.93e4	2226	13.2	2.50e4	2900	8.6	MM	MM
4	123678-HxCDD	1.08e4	8.32e3	1.91e4	36.74	1.001	1.29	NO	3.982	0.182	1.47e5	2226	65.9	1.09e5	2900	37.4	MM	MM
5	123789-HxCDD	4.64e3	3.77e3	8.42e3	36.97	1.007	1.23	NO	1.785	0.189	7.53e4	2226	33.8	5.50e4	2900	19.0	db	MM
6	1234678-HpCDD	1.89e5	1.81e5	3.70e5	39.99	1.001	1.05	NO	86.537	0.505	2.10e6	4618	455.7	2.01e6	4448	452.9	bb	bb
7	OCDD	2.36e6	2.73e6	5.09e6	44.18	1.000	0.86	NO	1333.589	0.907	1.89e7	4676	4035.5	2.12e7	6086	3478.3	bb	bd
8	2378-TCDF	2.48e3	3.21e3	5.69e3	30.33	1.001	0.77	NO	0.795	0.188	2.16e4	2899	7.4	2.90e4	2101	13.8	db	db
9	12378-PeCDF	1.69e3	9.64e2	2.65e3	33.26	1.001	1.75	NO	0.401	0.101	3.42e4	1994	17.1	2.12e4	2805	7.6	dd	bb
10	23478-PeCDF	4.11e3	2.32e3	6.43e3	33.87	1.001	1.77	NO	0.875	0.0883	6.81e4	1994	34.1	4.69e4	2805	16.7	db	MM
11	123478-HxCDF	4.78e3	4.11e3	8.88e3	35.94	1.000	1.16	NO	1.526	0.0916	7.71e4	1810	42.6	5.77e4	1759	32.8	bd	bd
12	123678-HxCDF	7.23e3	6.05e3	1.33e4	36.04	1.001	1.19	NO	2.006	0.0957	1.08e5	1810	59.8	9.44e4	1759	53.7	dd	MM
13	234678-HxCDF	4.37e3	3.54e3	7.92e3	36.51	1.000	1.23	NO	1.292	0.102	6.07e4	1810	33.5	4.92e4	1759	28.0	bb	bb
14	123789-HxCDF	1.41e3	1.08e3	2.49e3	37.28	1.000	1.31	NO	0.450	0.103	2.23e4	1810	12.3	1.93e4	1759	11.0	bb	bb
15	1234678-HpCDF	4.89e4	4.87e4	9.76e4	38.76	1.000	1.00	NO	17.856	0.193	5.99e5	2705	221.3	5.96e5	2523	236.0	MM	bd
16	1234789-HpCDF	3.19e3	3.30e3	6.49e3	40.62	1.000	0.97	NO	1.321	0.257	4.48e4	2705	16.6	3.97e4	2523	15.7	bd	bd
17	OCDF	1.08e5	1.25e5	2.34e5	44.45	1.006	0.86	NO	55.055	0.328	8.34e5	2213	376.8	1.01e6	2115	477.3	bb	bd
18	13C-2378-TCDD	3.34e5	4.39e5	7.73e5	31.10	1.018	0.76	NO	74.955	0.130	4.18e6	2982	1402.6	5.54e6	1978	2800.9	bb	bb
19	13C-12378-PeCDD	3.51e5	2.31e5	5.82e5	34.06	1.115	1.52	NO	83.405	0.172	6.06e6	1818	3330.5	4.02e6	2643	1521.4	bb	bb
20	13C-123478-HxCDD	2.88e5	2.34e5	5.22e5	36.64	0.991	1.23	NO	87.873	0.222	4.04e6	4038	1000.1	3.33e6	3218	1034.3	bd	bd
21	13C-123678-HxCDD	2.99e5	2.42e5	5.41e5	36.72	0.993	1.24	NO	68.091	0.166	4.41e6	4038	1091.6	3.53e6	3218	1098.1	dd	dd
22	13C-1234678-HpCDD	2.30e5	2.23e5	4.53e5	39.97	1.081	1.03	NO	95.141	0.240	2.41e6	3091	779.5	2.34e6	3186	733.3	bd	bd
23	13C-OCDD	3.91e5	4.44e5	8.35e5	44.17	1.195	0.88	NO	203.291	0.265	3.04e6	3422	887.6	3.46e6	2563	1349.6	bd	bd
24	13C-2378-TCDF	3.45e5	4.57e5	8.03e5	30.30	0.992	0.76	NO	68.994	0.147	3.21e6	3630	885.0	4.17e6	2720	1532.4	bb	bb
25	13C-12378-PeCDF	4.41e5	2.87e5	7.28e5	33.24	1.089	1.53	NO	77.742	0.232	7.91e6	3480	2272.9	5.05e6	4586	1101.0	bb	bd
26	13C-23478-PeCDF	4.61e5	2.96e5	7.57e5	33.85	1.109	1.56	NO	78.749	0.226	8.52e6	3480	2448.0	5.50e6	4586	1199.4	bb	bb
27	13C-123478-HxCDF	1.75e5	3.38e5	5.13e5	35.93	0.972	0.52	NO	74.779	0.252	2.93e6	4344	673.6	5.70e6	5185	1100.3	bd	bd
28	13C-123678-HxCDF	2.19e5	4.09e5	6.28e5	36.02	0.974	0.54	NO	70.239	0.194	3.09e6	4344	710.5	5.86e6	5185	1129.9	db	db
29	13C-234678-HxCDF	1.88e5	3.54e5	5.42e5	36.51	0.988	0.53	NO	71.352	0.228	2.67e6	4344	614.1	5.05e6	5185	973.2	bd	bb
30	13C-123789-HxCDF	1.79e5	3.41e5	5.20e5	37.27	1.008	0.52	NO	81.164	0.270	2.80e6	4344	643.9	5.25e6	5185	1012.0	bb	bb
31	13C-1234678-HpCDF	1.43e5	3.16e5	4.59e5	38.75	1.048	0.45	NO	77.809	0.228	1.77e6	3400	519.5	3.86e6	4012	963.3	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:59:30 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.23e5	2.78e5	4.01e5	40.62	1.099	0.44	NO	94.866	0.319	1.28e6	3400	375.4	2.78e6	4012	693.3	bd	bd
33	13C-1234-TCDD	3.91e5	5.04e5	8.96e5	30.54	0.000	0.78	NO	100.000	0.149	3.63e6	2982	1218.2	4.69e6	1978	2373.5	bb	bb
34	13C-123789-HxCDD	4.16e5	3.37e5	7.52e5	36.96	0.000	1.23	NO	100.000	0.175	5.72e6	4038	1416.0	4.68e6	3218	1453.8	dd	dd
35	37Cl-2378-TCDD	9.08e4		9.08e4	31.11	1.019			9.420	0.0300	1.15e6	1075	1072.0				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:59:30 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.90e2	1.52e2	3.42e2	31.35	1.25	YES	0.050	0.0958	3.26e3	1894	1.7	3.29e3	1415	2.3	bb	MM
2	2378-TCDD	8.49e2	9.91e2	1.84e3	31.11	0.86	NO	0.267	0.0958	1.30e4	1894	6.9	1.47e4	1415	10.4	bb	bb
3	Total-tetradioxins	5.80e2	6.43e2	1.22e3	30.92	0.90	YES	0.178	0.0958	8.48e3	1894	4.5	8.28e3	1415	5.9	bb	bb
4	Total-tetradioxins	3.03e2	5.22e2	8.25e2	30.01	0.58	YES	0.120	0.0958	5.24e3	1894	2.8	6.70e3	1415	4.7	MM	bb
5	Total-tetradioxins	2.58e2	4.66e2	7.24e2	29.38	0.55	YES	0.105	0.0958	3.51e3	1894	1.9	4.84e3	1415	3.4	MM	bd
6	Total-tetradioxins	8.24e2	1.11e3	1.93e3	28.44	0.74	NO	0.281	0.0958	7.33e3	1894	3.9	1.38e4	1415	9.8	MM	bb
7	Total-tetradioxins	8.17e2	9.63e2	1.78e3	28.02	0.85	NO	0.259	0.0958	8.65e3	1894	4.6	1.16e4	1415	8.2	bb	MM
8	Total-tetradioxins	2.24e3	3.28e3	5.52e3	27.74	0.68	NO	0.802	0.0958	2.20e4	1894	11.6	2.98e4	1415	21.1	MM	bd
9	Total-tetradioxins	2.78e2	4.50e2	7.28e2	30.19	0.62	YES	0.106	0.0958	2.05e3	1894	1.1	5.57e3	1415	3.9	MM	MM
10	Total-tetradioxins	2.73e2	4.16e2	6.89e2	30.54	0.66	NO	0.100	0.0958	3.40e3	1894	1.8	5.88e3	1415	4.2	MM	MM
11	Total-tetradioxins	5.12e2	6.41e2	1.15e3	29.58	0.80	NO	0.167	0.0958	5.37e3	1894	2.8	7.94e3	1415	5.6	MM	db
12	Total-tetradioxins	3.72e2	5.57e2	9.29e2	29.16	0.67	NO	0.135	0.0958	3.54e3	1894	1.9	6.24e3	1415	4.4	MM	MM

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	2.45e3	1.69e3	4.14e3	33.28	1.46	NO	0.837	0.0867	5.76e4	1757	32.8	2.92e4	1202	24.3	bd	bd
2	Total-pentadioxins	1.49e3	9.70e2	2.46e3	33.00	1.54	NO	0.498	0.0867	3.31e4	1757	18.8	2.29e4	1202	19.1	MM	bb
3	Total-pentadioxins	4.74e3	3.22e3	7.96e3	32.74	1.47	NO	1.609	0.0867	8.99e4	1757	51.2	6.93e4	1202	57.7	bb	bb
4	Total-pentadioxins	1.76e2	1.34e2	3.10e2	32.51	1.32	NO	0.063	0.0867	4.38e3	1757	2.5	3.52e3	1202	2.9	MM	MM
5	Total-pentadioxins	5.23e2	3.07e2	8.30e2	34.32	1.70	NO	0.168	0.0867	9.91e3	1757	5.6	7.23e3	1202	6.0	bb	MM
6	12378-PeCDD	1.99e3	1.20e3	3.19e3	34.06	1.66	NO	0.644	0.0867	3.21e4	1757	18.3	1.89e4	1202	15.7	bb	bb
7	Total-pentadioxins	2.36e2	1.74e2	4.10e2	33.79	1.36	NO	0.083	0.0867	4.92e3	1757	2.8	3.38e3	1202	2.8	bb	MM
8	Total-pentadioxins	2.59e3	1.58e3	4.17e3	33.56	1.64	NO	0.842	0.0867	3.93e4	1757	22.4	2.39e4	1202	19.9	MM	db
9	Total-pentadioxins	2.57e3	1.71e3	4.28e3	33.39	1.50	NO	0.865	0.0867	3.26e4	1757	18.6	2.33e4	1202	19.4	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:59:30 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	3.72e2	3.25e2	6.98e2	37.52	1.14	NO	0.146	0.186	1.11e4	2226	5.0	6.32e3	2900	2.2	db	dd
2	123789-HxCDD	4.64e3	3.77e3	8.42e3	36.97	1.23	NO	1.785	0.189	7.53e4	2226	33.8	5.50e4	2900	19.0	db	MM
3	Total-hexadioxins	7.81e2	7.36e2	1.52e3	36.91	1.06	NO	0.316	0.186	1.46e4	2226	6.5	1.18e4	2900	4.1	MM	MM
4	123678-HxCDD	1.08e4	8.32e3	1.91e4	36.74	1.29	NO	3.982	0.182	1.47e5	2226	65.9	1.09e5	2900	37.4	MM	MM
5	Total-hexadioxins	3.21e4	2.63e4	5.84e4	36.08	1.22	NO	12.186	0.186	4.35e5	2226	195.3	3.56e5	2900	122.6	dd	db
6	Total-hexadioxins	2.70e3	2.05e3	4.75e3	35.87	1.32	NO	0.991	0.186	4.41e4	2226	19.8	3.35e4	2900	11.5	MM	bd
7	Total-hexadioxins	2.56e4	2.01e4	4.57e4	35.43	1.27	NO	9.529	0.186	4.11e5	2226	184.6	3.40e5	2900	117.3	bb	bb
8	123478-HxCDD	1.15e3	9.70e2	2.12e3	36.64	1.18	NO	0.435	0.188	2.93e4	2226	13.2	2.50e4	2900	8.6	MM	MM

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	1.09e2	1.93e3	2.04e3	39.37	0.06	YES	0.477	0.505	0.00e0	4618	0.0	3.00e4	4448	6.8	bb	db
2	Total-heptadioxins	2.31e5	2.26e5	4.57e5	39.09	1.02	NO	106.921	0.505	2.68e6	4618	580.2	2.61e6	4448	586.7	bb	bd
3	1234678-HpCDD	1.89e5	1.81e5	3.70e5	39.99	1.05	NO	86.537	0.505	2.10e6	4618	455.7	2.01e6	4448	452.9	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:59:30 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	2.88e3	4.16e3	7.05e3	28.91	0.69	NO	0.983	0.188	2.41e4	2899	8.3	3.11e4	2101	14.8	MM	db
2	Total-tetrafurans	4.84e2	7.39e2	1.22e3	28.76	0.65	NO	0.171	0.188	5.79e3	2899	2.0	7.40e3	2101	3.5	bd	bd
3	Total-tetrafurans	1.30e3	1.67e3	2.97e3	28.29	0.78	NO	0.414	0.188	1.14e4	2899	3.9	1.96e4	2101	9.3	db	db
4	Total-tetrafurans	3.66e2	5.78e2	9.44e2	28.15	0.63	YES	0.132	0.188	8.50e3	2899	2.9	1.37e4	2101	6.5	MM	MM
5	Total-tetrafurans	2.68e3	3.24e3	5.92e3	28.00	0.83	NO	0.827	0.188	1.90e4	2899	6.6	2.94e4	2101	14.0	MM	MM
6	Total-tetrafurans	3.39e3	4.87e3	8.26e3	27.68	0.70	NO	1.153	0.188	3.29e4	2899	11.3	4.65e4	2101	22.2	db	db
7	Total-tetrafurans	1.10e3	1.24e3	2.34e3	27.35	0.89	YES	0.327	0.188	1.20e4	2899	4.1	1.58e4	2101	7.5	dd	MM
8	Total-tetrafurans	7.02e2	1.11e3	1.82e3	27.28	0.63	YES	0.253	0.188	9.20e3	2899	3.2	1.45e4	2101	6.9	dd	MM
9	Total-tetrafurans	4.12e3	5.60e3	9.72e3	26.99	0.74	NO	1.356	0.188	3.89e4	2899	13.4	5.65e4	2101	26.9	bd	bd
10	Total-tetrafurans	1.34e3	1.94e3	3.28e3	26.47	0.69	NO	0.457	0.188	1.53e4	2899	5.3	2.09e4	2101	9.9	bb	bb
11	Total-tetrafurans	6.44e2	1.02e3	1.66e3	26.04	0.63	YES	0.232	0.188	7.63e3	2899	2.6	1.04e4	2101	4.9	bb	bb
12	Total-tetrafurans	6.24e2	8.02e2	1.43e3	31.83	0.78	NO	0.199	0.188	1.10e4	2899	3.8	1.31e4	2101	6.2	bb	bb
13	Total-tetrafurans	2.24e2	1.96e2	4.19e2	30.88	1.14	YES	0.059	0.188	3.98e3	2899	1.4	3.77e3	2101	1.8	db	bb
14	Total-tetrafurans	1.61e3	1.82e3	3.44e3	30.68	0.88	NO	0.479	0.188	1.76e4	2899	6.1	1.97e4	2101	9.4	bd	bb
15	2378-TCDF	2.48e3	3.21e3	5.69e3	30.33	0.77	NO	0.795	0.188	2.16e4	2899	7.4	2.90e4	2101	13.8	db	db
16	Total-tetrafurans	1.71e2	1.08e2	2.80e2	30.09	1.58	YES	0.039	0.188	5.00e3	2899	1.7	2.48e3	2101	1.2	bd	bd
17	Total-tetrafurans	5.12e2	5.86e2	1.10e3	29.62	0.87	NO	0.153	0.188	5.98e3	2899	2.1	6.45e3	2101	3.1	db	db
18	Total-tetrafurans	1.70e3	2.32e3	4.02e3	29.38	0.73	NO	0.561	0.188	1.92e4	2899	6.6	2.34e4	2101	11.1	bd	bd

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	3.88e4	2.49e4	6.37e4	31.83	1.56	NO	9.128	0.0402	7.10e5	790	898.4	4.42e5	1254	352.6	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:59:30 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	5.32e2	3.53e2	8.85e2	33.14	1.51	NO	0.127	0.0944	1.19e4	1994	6.0	9.10e3	2805	3.2	dd	db
2	Total-pentafurans	4.12e3	2.79e3	6.91e3	33.03	1.48	NO	0.990	0.0944	7.75e4	1994	38.9	5.72e4	2805	20.4	dd	bd
3	Total-pentafurans	4.88e2	2.97e2	7.85e2	32.90	1.64	NO	0.113	0.0944	1.24e4	1994	6.2	5.63e3	2805	2.0	dd	MM
4	Total-pentafurans	1.44e4	9.40e3	2.38e4	32.69	1.53	NO	3.408	0.0944	1.65e5	1994	82.6	1.03e5	2805	36.7	bd	bb
5	23478-PeCDF	4.11e3	2.32e3	6.43e3	33.87	1.77	NO	0.875	0.0883	6.81e4	1994	34.1	4.69e4	2805	16.7	db	MM
6	Total-pentafurans	3.95e2	2.22e2	6.18e2	33.79	1.78	NO	0.089	0.0944	1.03e4	1994	5.2	5.57e3	2805	2.0	bd	MM
7	Total-pentafurans	1.69e3	9.99e2	2.69e3	33.42	1.70	NO	0.386	0.0944	2.91e4	1994	14.6	2.18e4	2805	7.8	db	bb
8	12378-PeCDF	1.69e3	9.64e2	2.65e3	33.26	1.75	NO	0.401	0.101	3.42e4	1994	17.1	2.12e4	2805	7.6	dd	bb

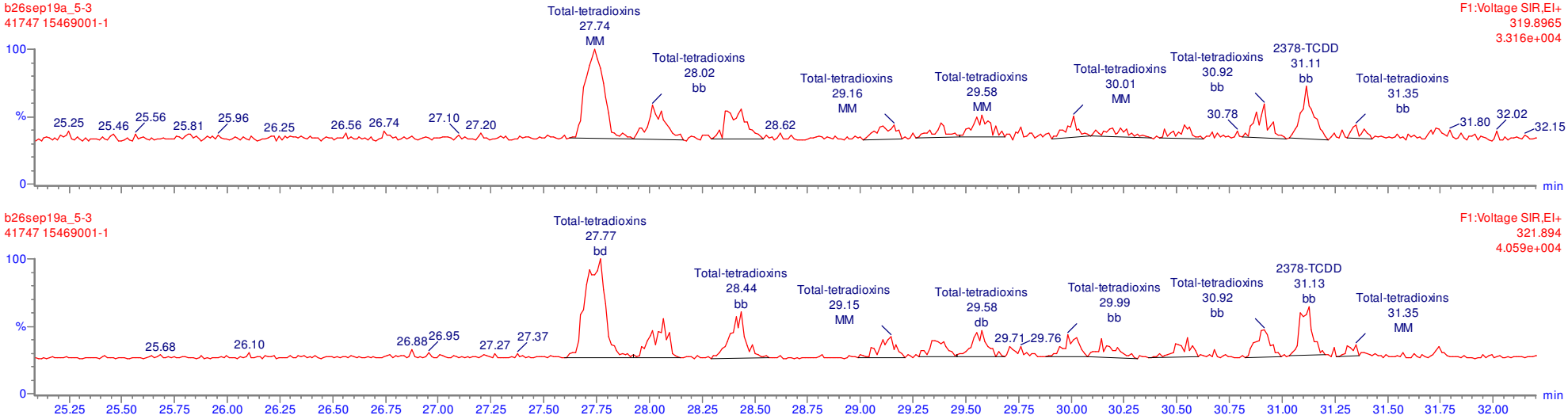
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	1.41e3	1.08e3	2.49e3	37.28	1.31	NO	0.450	0.103	2.23e4	1810	12.3	1.93e4	1759	11.0	bb	bb
2	234678-HxCDF	4.37e3	3.54e3	7.92e3	36.51	1.23	NO	1.292	0.102	6.07e4	1810	33.5	4.92e4	1759	28.0	bb	bb
3	Total-hexafurans	4.14e2	2.85e2	6.98e2	36.23	1.45	YES	0.116	0.0980	7.11e3	1810	3.9	6.62e3	1759	3.8	db	MM
4	123678-HxCDF	7.23e3	6.05e3	1.33e4	36.04	1.19	NO	2.006	0.0957	1.08e5	1810	59.8	9.44e4	1759	53.7	dd	MM
5	123478-HxCDF	4.78e3	4.11e3	8.88e3	35.94	1.16	NO	1.526	0.0916	7.71e4	1810	42.6	5.77e4	1759	32.8	bd	bd
6	Total-hexafurans	4.14e4	3.51e4	7.65e4	35.55	1.18	NO	12.683	0.0980	6.92e5	1810	382.1	6.07e5	1759	345.1	bb	db
7	Total-hexafurans	5.97e2	5.18e2	1.11e3	35.40	1.15	NO	0.185	0.0980	1.04e4	1810	5.8	8.64e3	1759	4.9	bb	bd
8	Total-hexafurans	2.79e4	2.31e4	5.10e4	35.13	1.21	NO	8.452	0.0980	4.59e5	1810	253.5	3.75e5	1759	213.0	db	db
9	Total-hexafurans	8.53e3	7.40e3	1.59e4	35.01	1.15	NO	2.641	0.0980	1.53e5	1810	84.3	1.28e5	1759	72.5	bd	bd

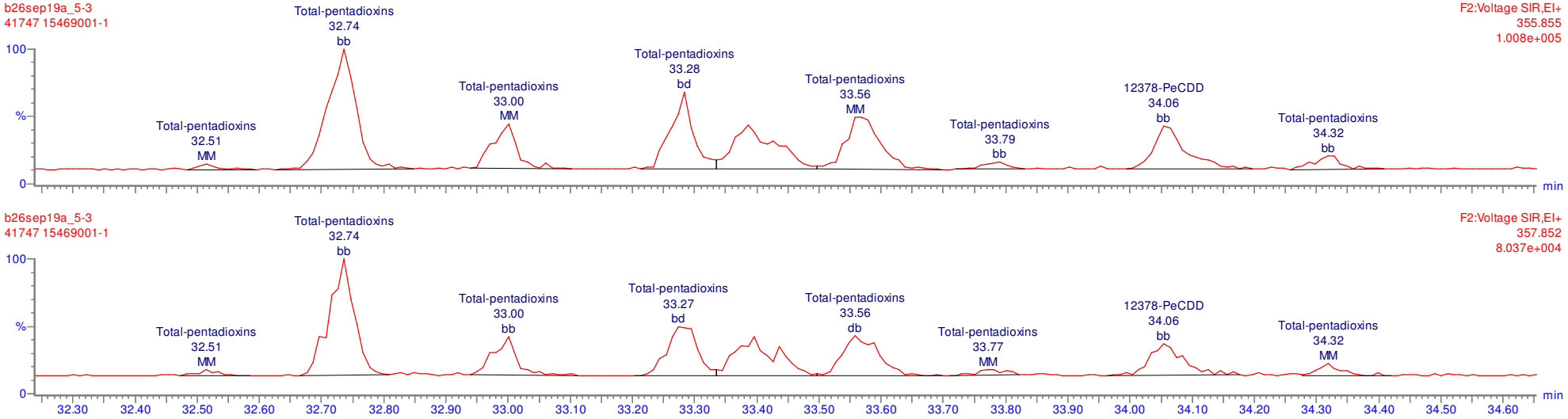
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234789-HpCDF	3.19e3	3.30e3	6.49e3	40.62	0.97	NO	1.321	0.257	4.48e4	2705	16.6	3.97e4	2523	15.7	bd	bd
2	Total-heptafurans	1.18e5	1.16e5	2.34e5	39.27	1.01	NO	45.053	0.223	1.43e6	2705	527.2	1.38e6	2523	547.8	MM	MM
3	Total-heptafurans	1.04e3	1.04e3	2.08e3	39.10	1.00	NO	0.400	0.223	1.18e4	2705	4.4	1.37e4	2523	5.4	MM	MM
4	1234678-HpCDF	4.89e4	4.87e4	9.76e4	38.76	1.00	NO	17.856	0.193	5.99e5	2705	221.3	5.96e5	2523	236.0	MM	bd
5	Total-heptafurans	3.30e2	9.90e1	4.29e2	40.77	3.33	YES	0.083	0.223	7.98e3	2705	2.9	4.16e3	2523	1.7	db	db

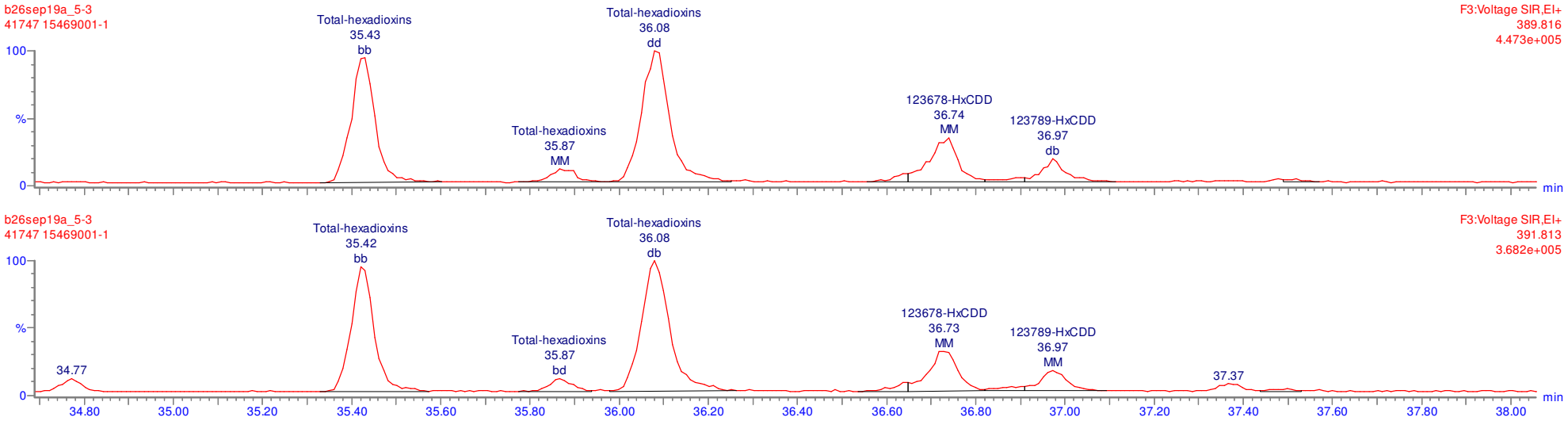
MANUAL INTEGRATION
METHOD 1613
HRP763_1



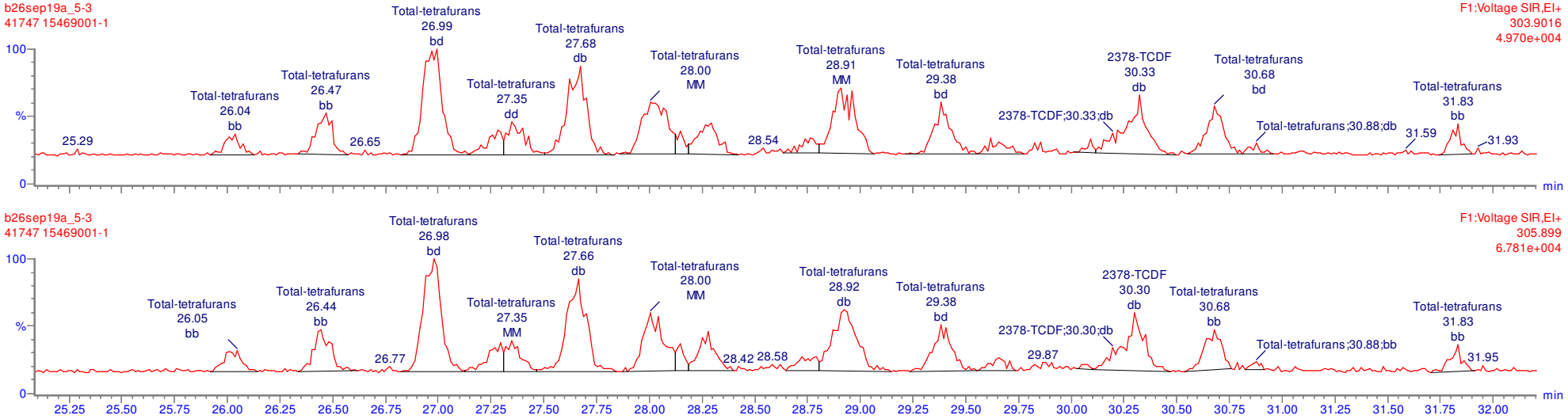
MANUAL INTEGRATION
METHOD 1613
HRP763_1



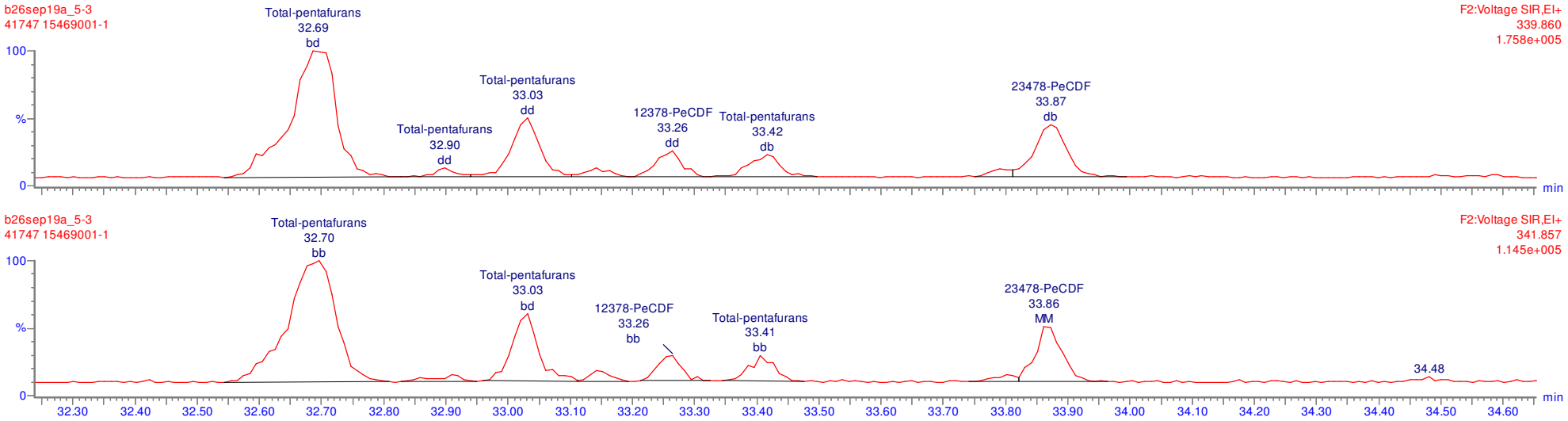
MANUAL INTEGRATION
METHOD 1613
HRP763_1



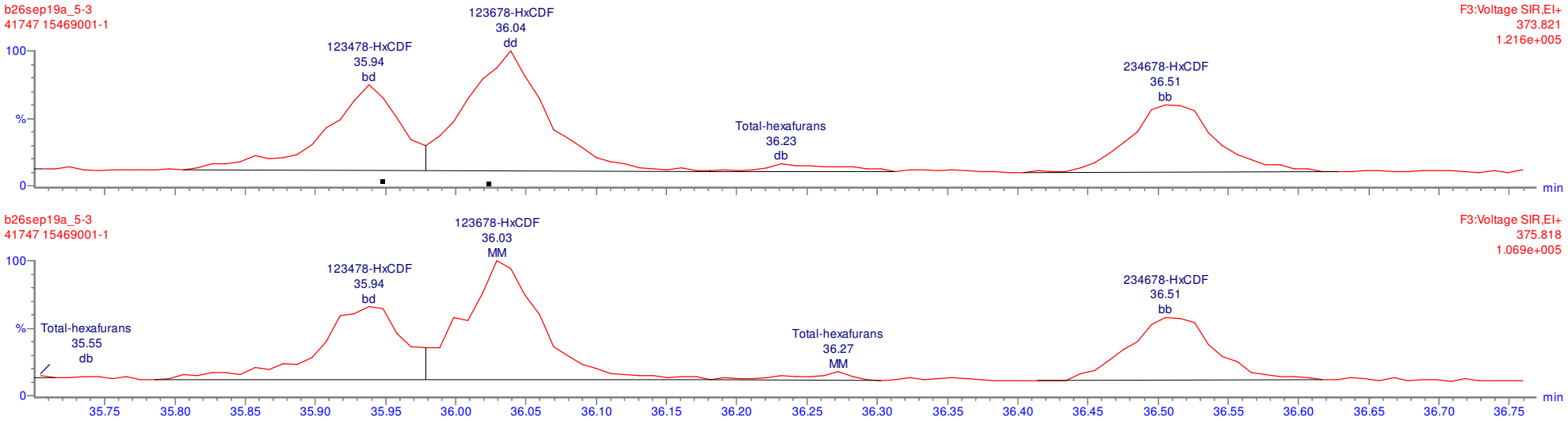
MANUAL INTEGRATION
METHOD 1613
HRP763_1



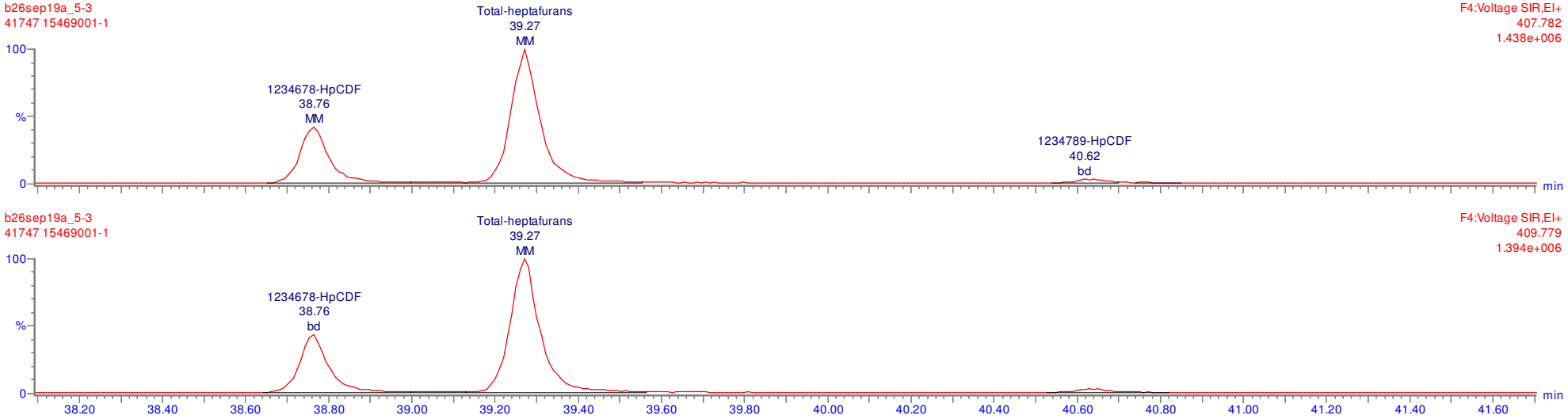
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



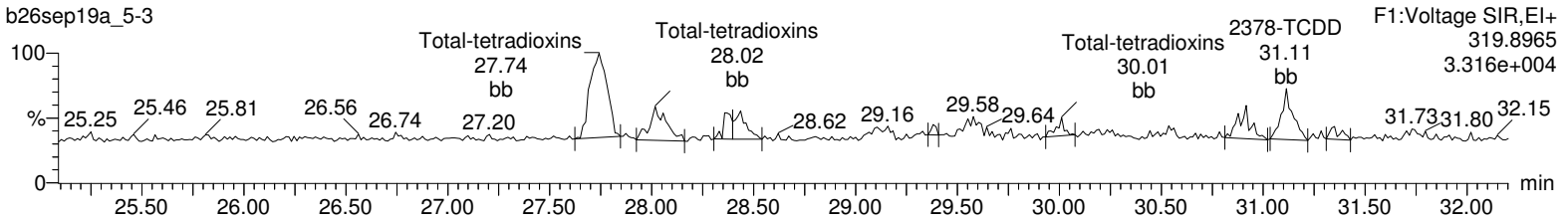
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

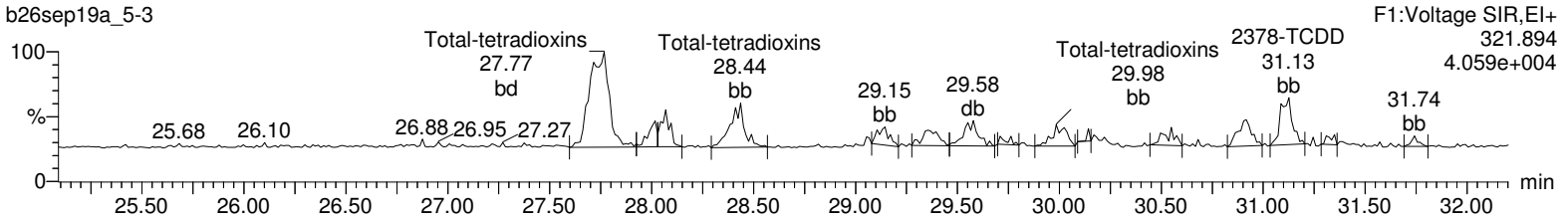
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

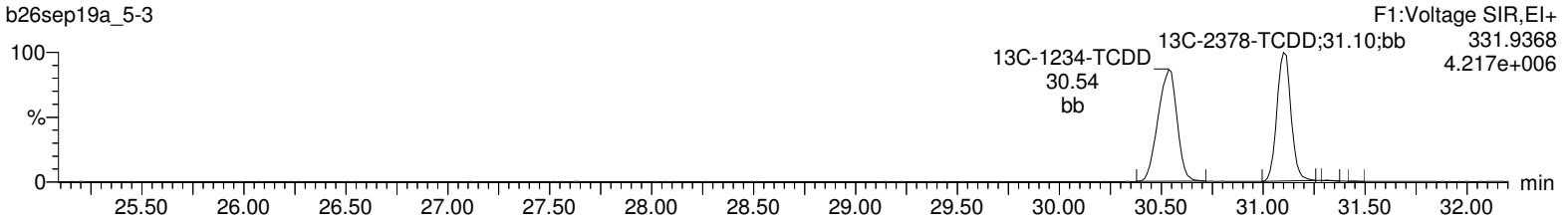
Total-tetradioxins



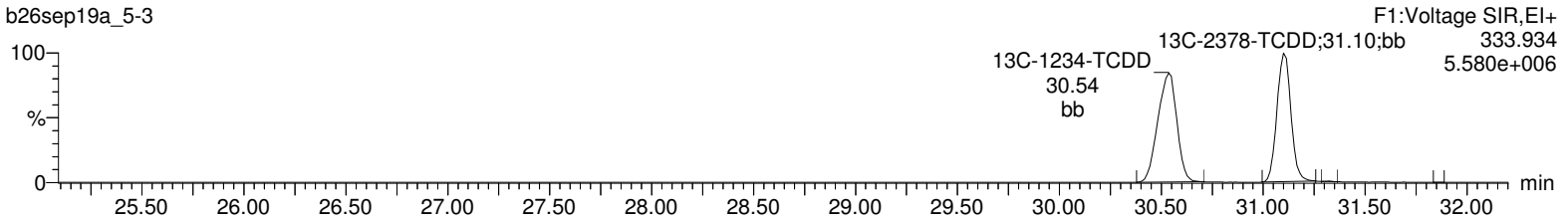
Total-tetradioxins



13C-2378-TCDD



13C-2378-TCDD



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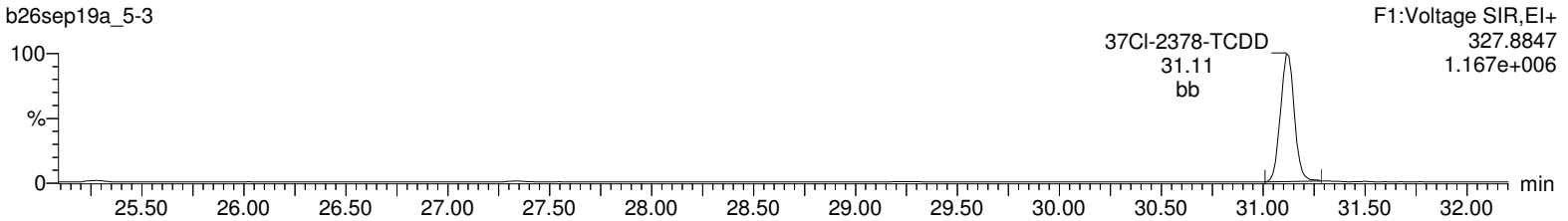
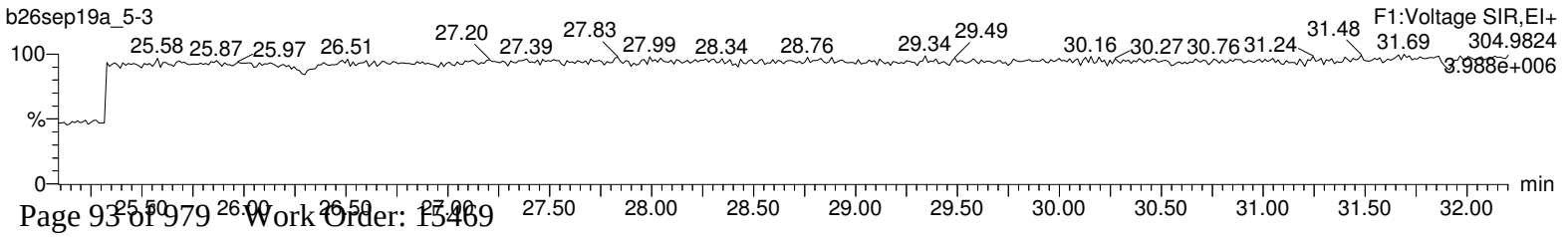


Lock Mass F1



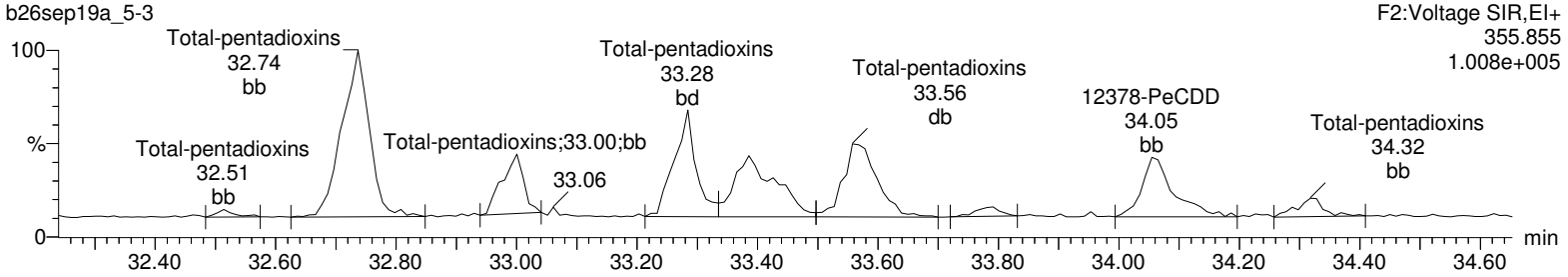
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

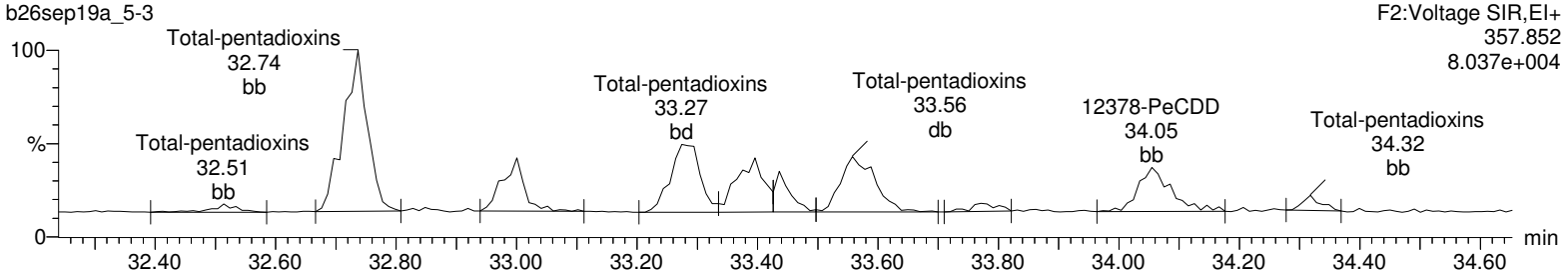
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

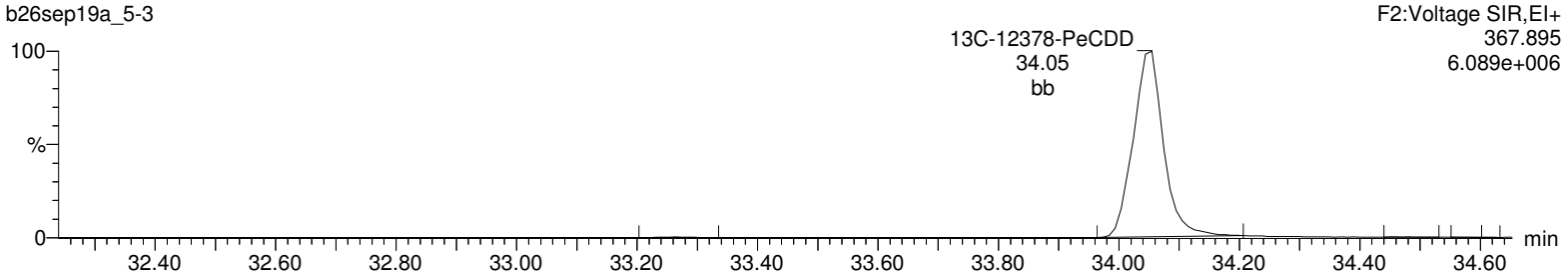
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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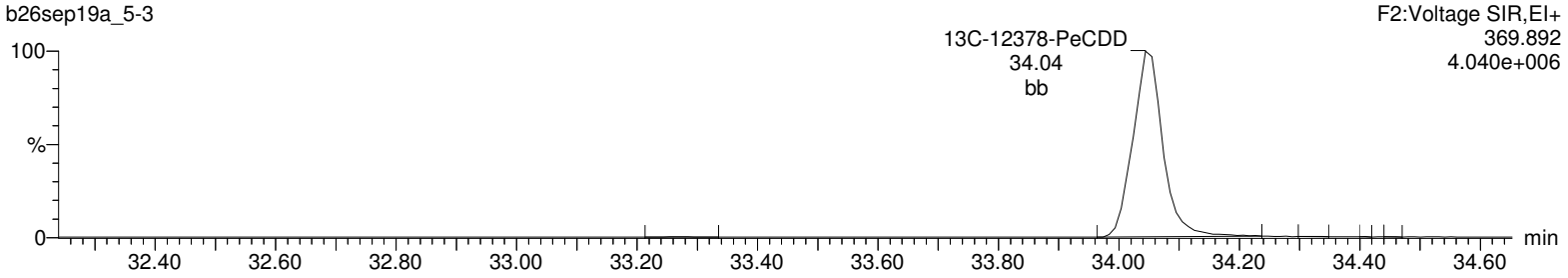
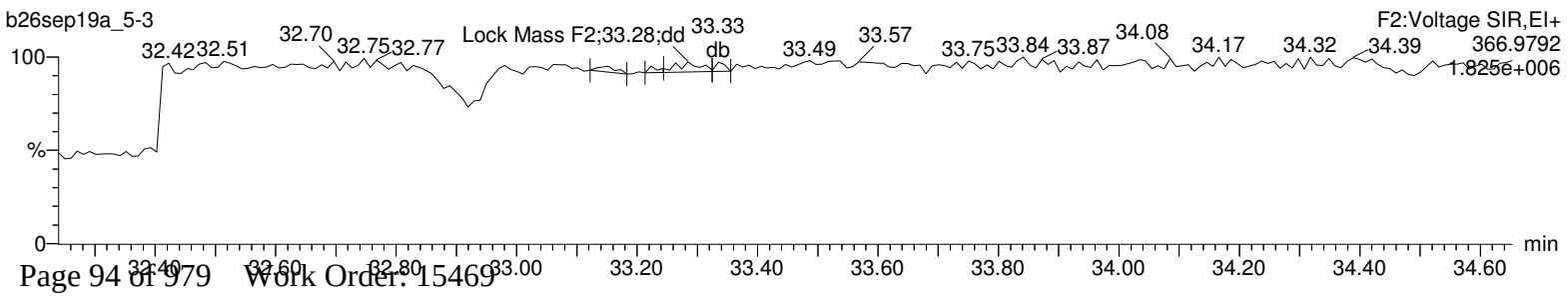


Lock Mass F2



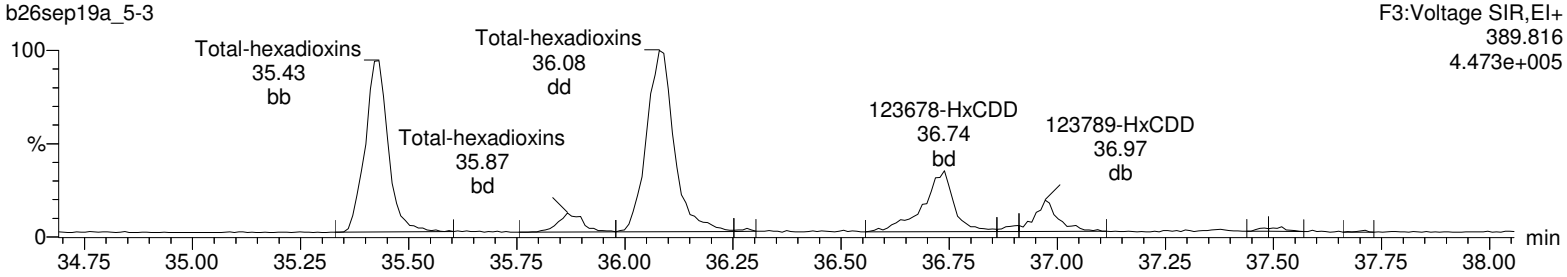
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

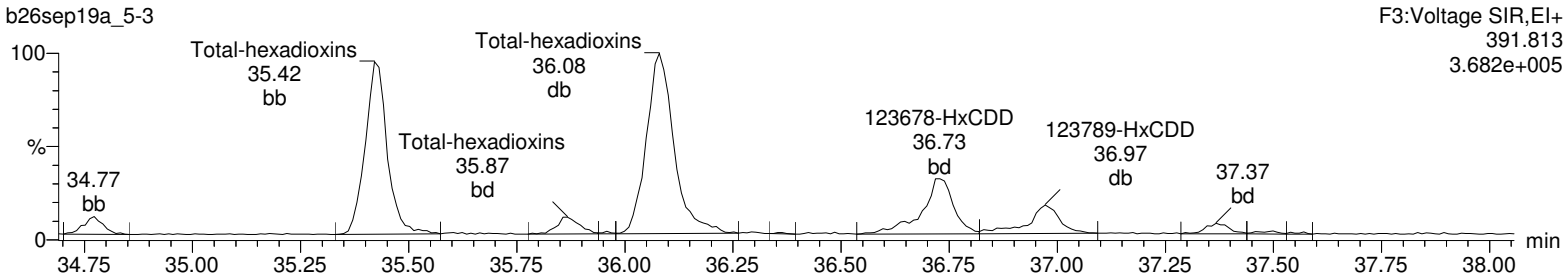
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

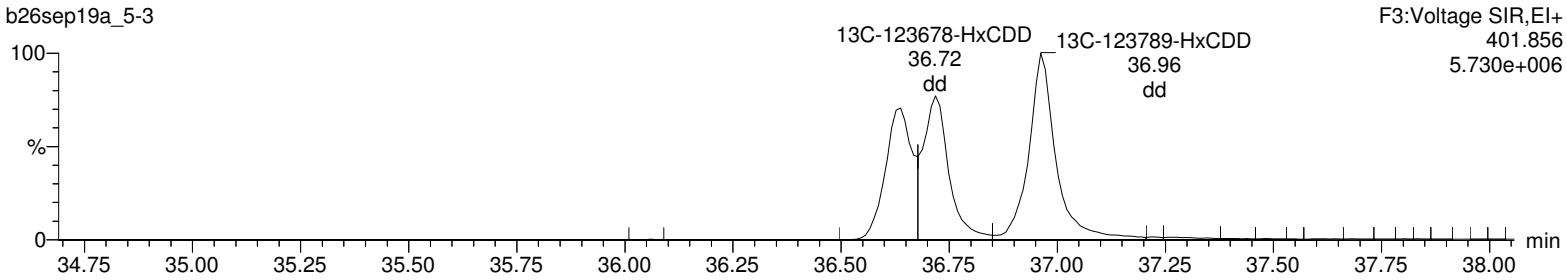
Total-hexadioxins



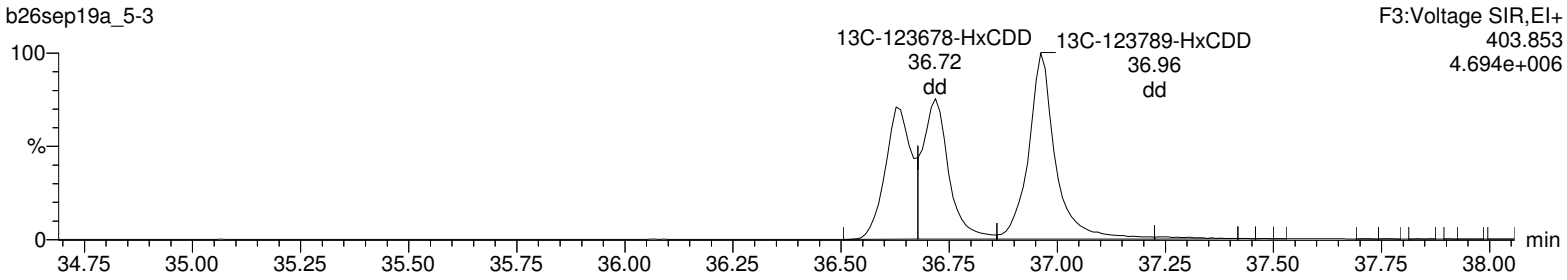
Total-hexadioxins



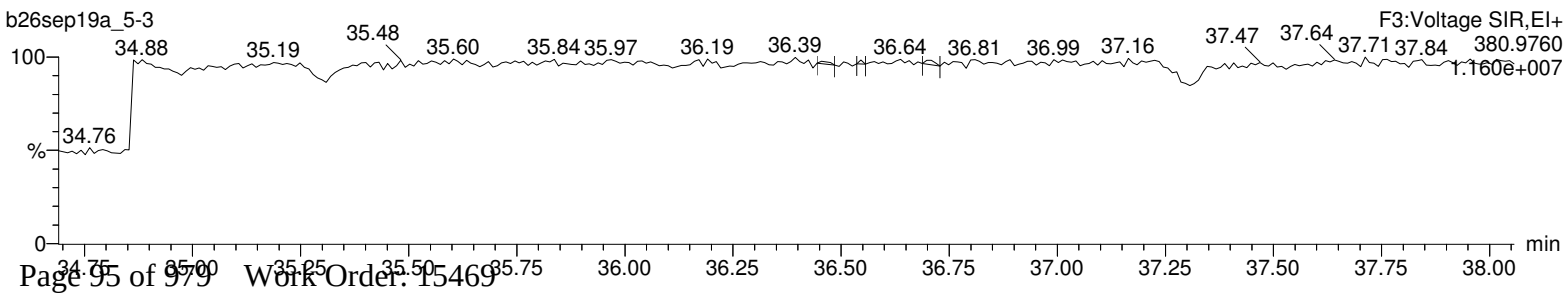
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



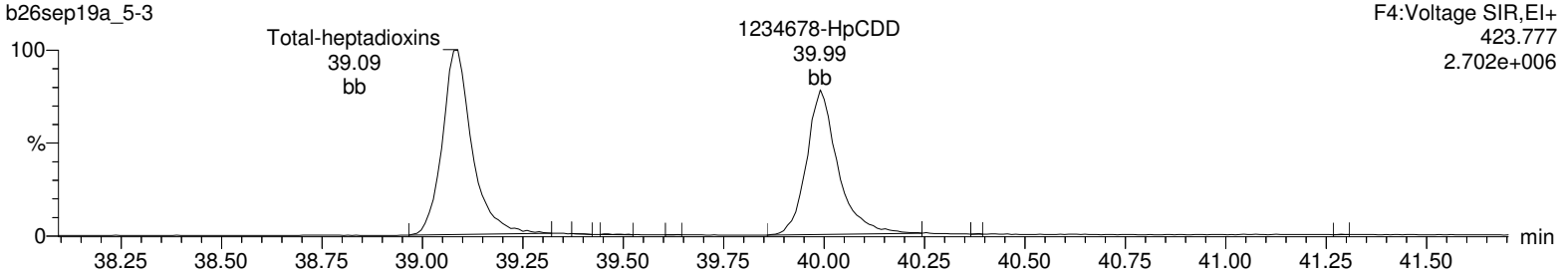
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

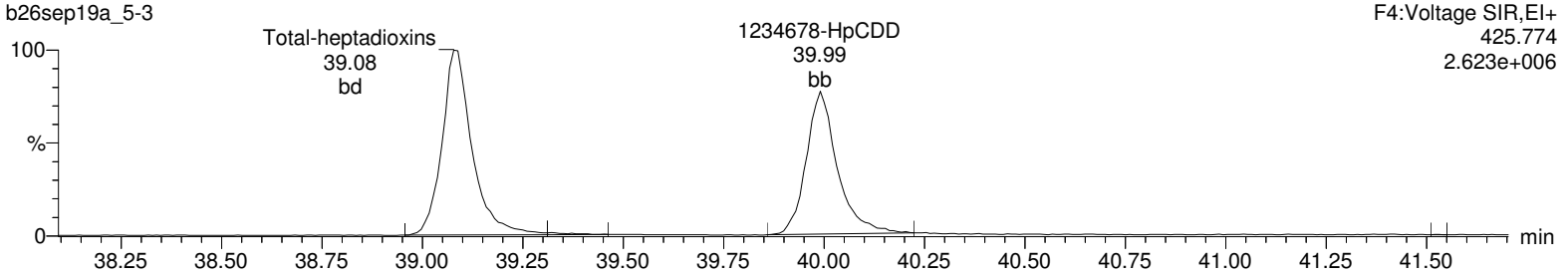
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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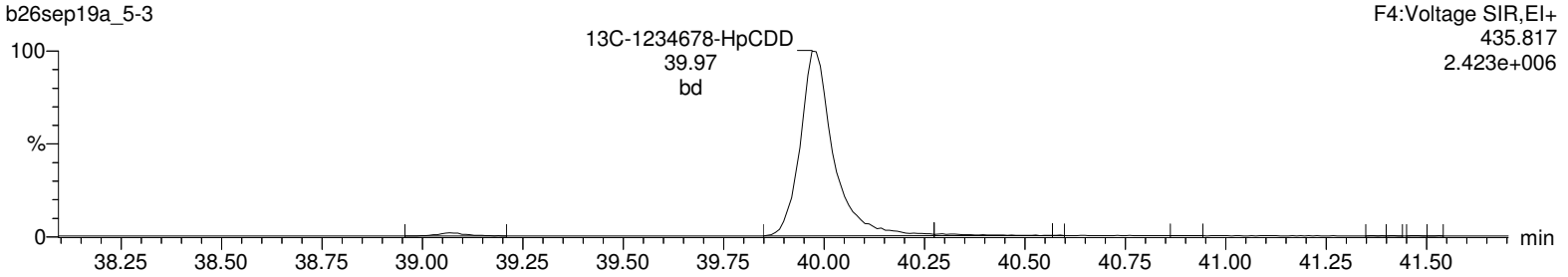

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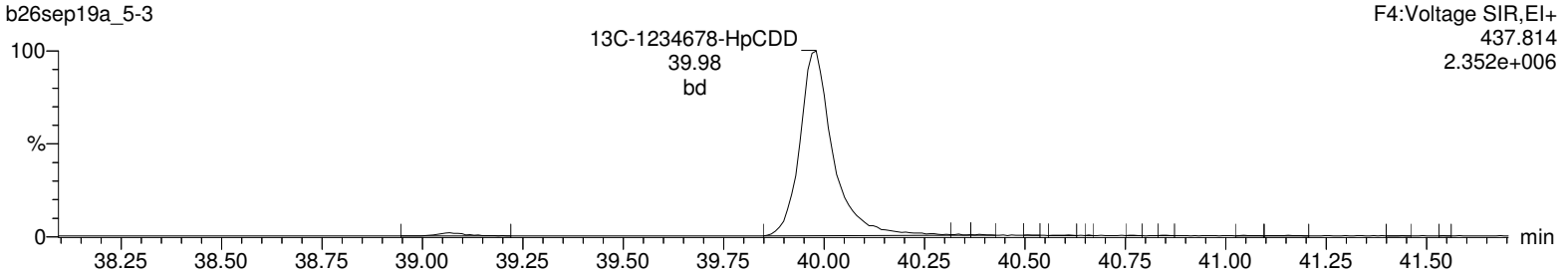
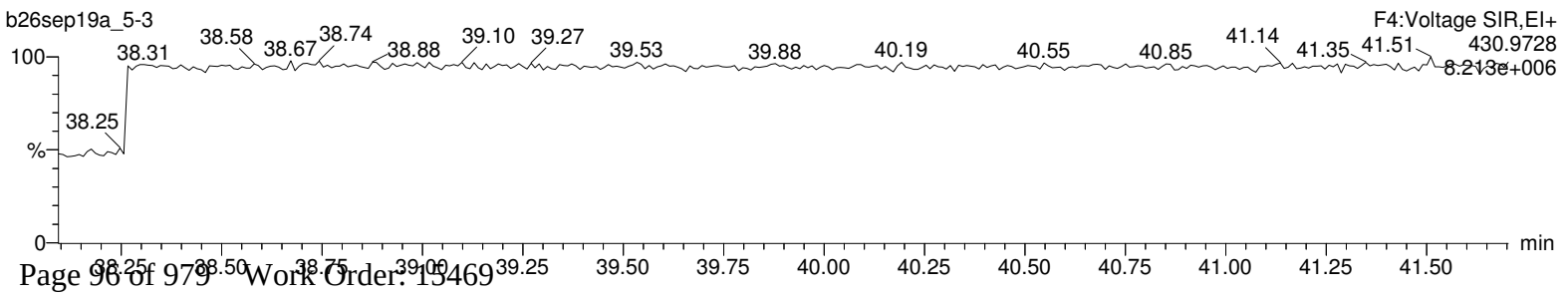


Lock Mass F4



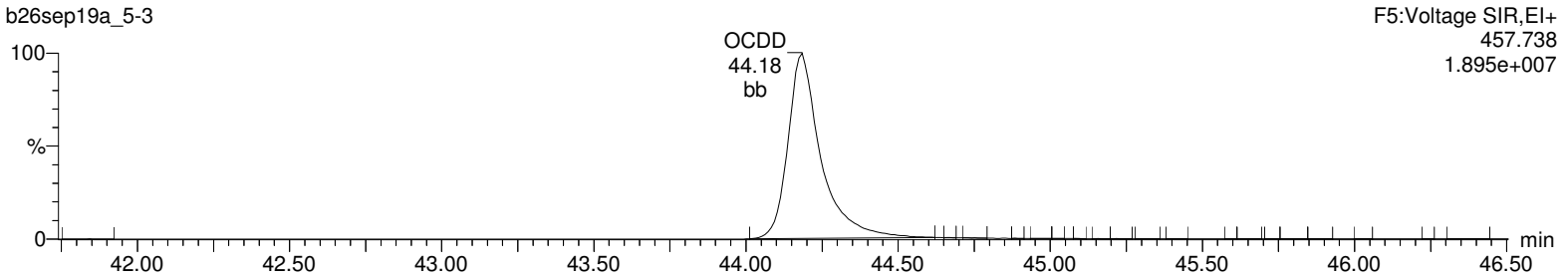
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

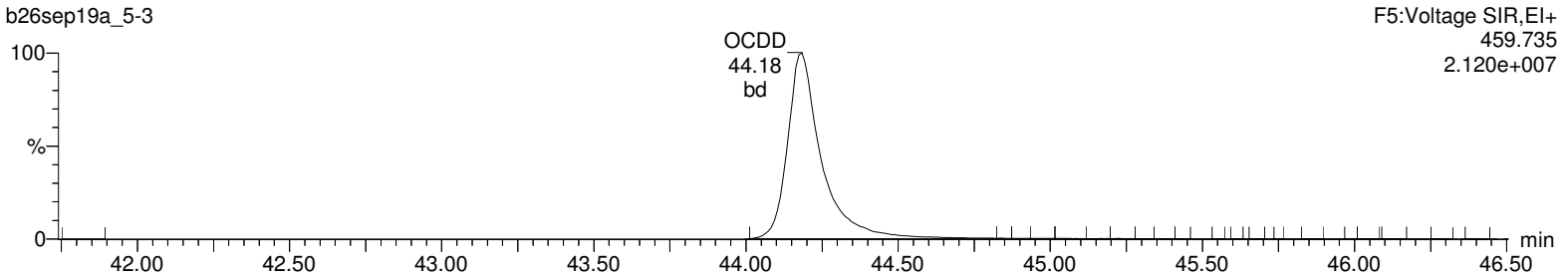
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

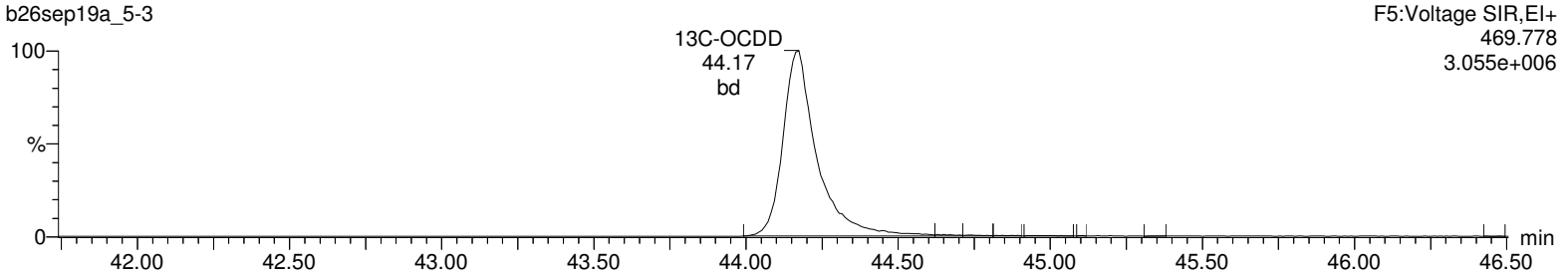
OCDD



OCDD



13C-OCDD



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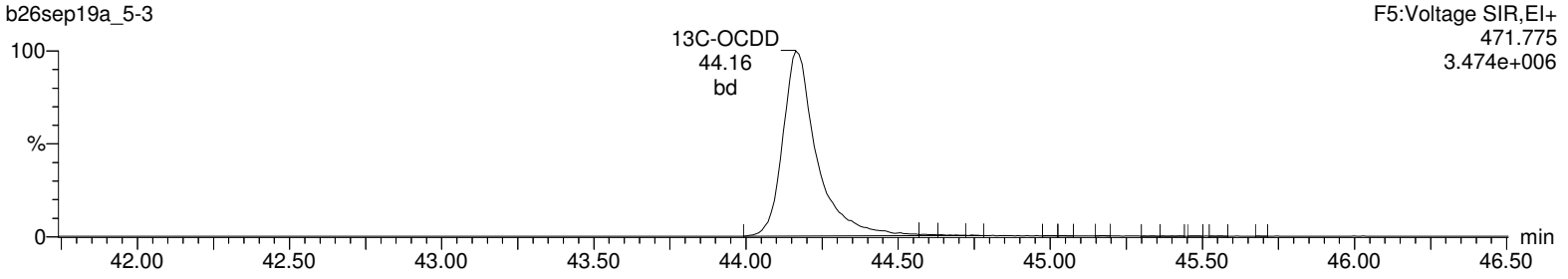
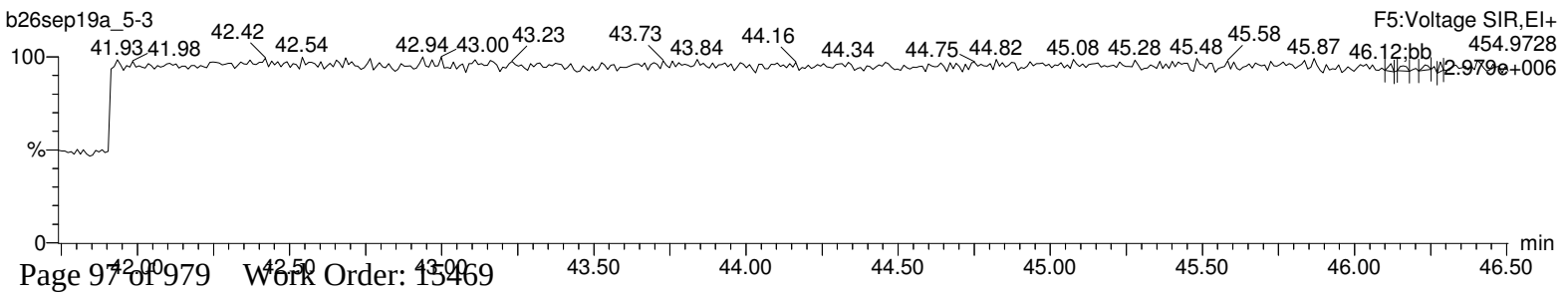


Lock Mass F5



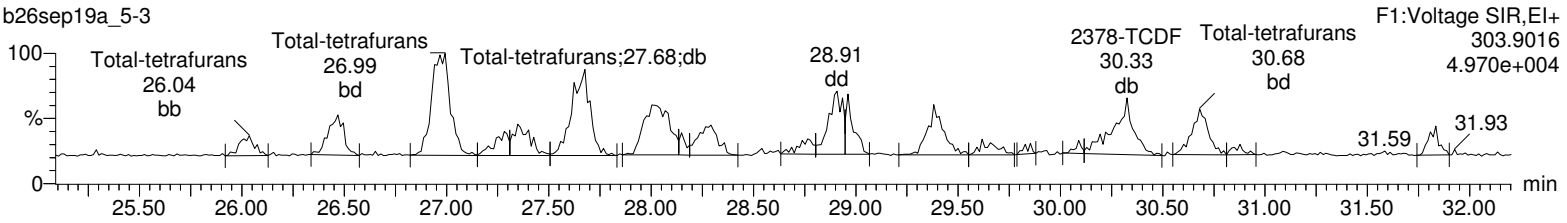
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

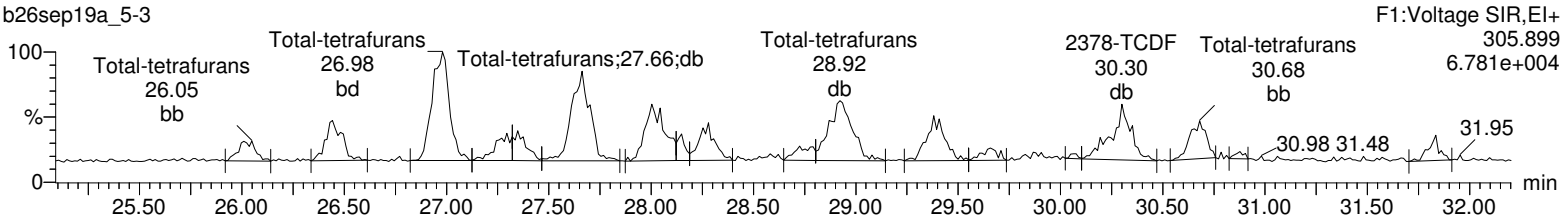
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

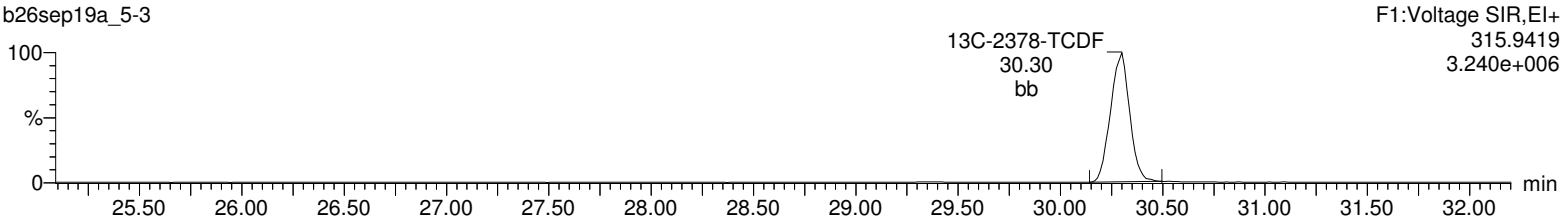
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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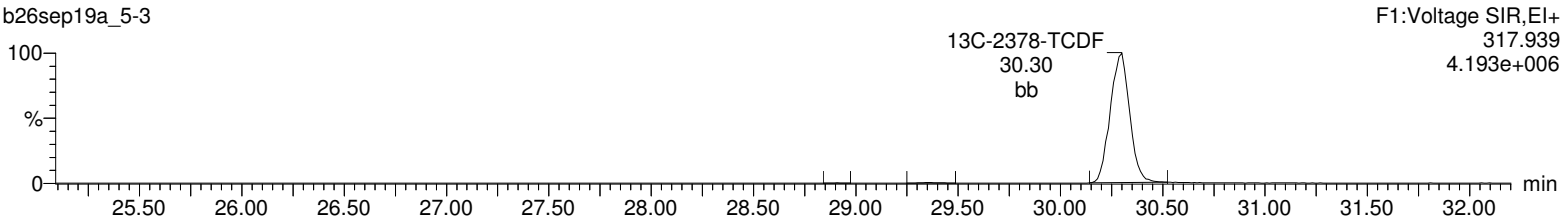
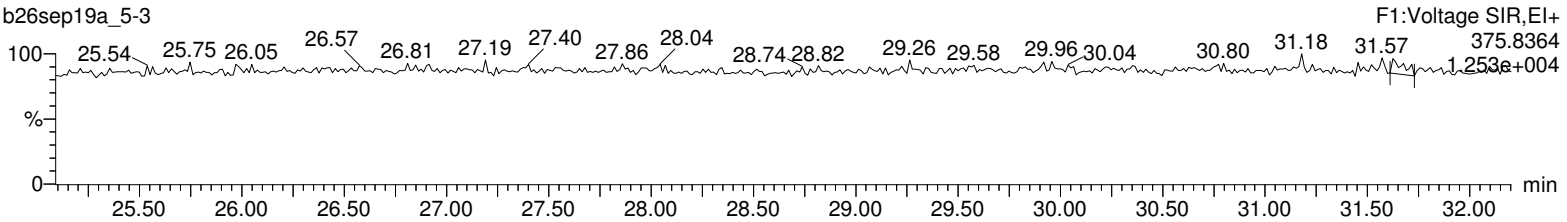
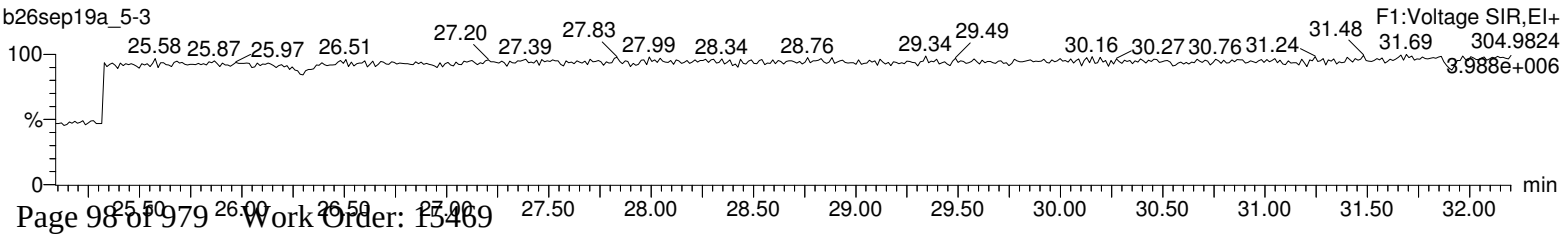


HxDPE



Lock Mass F1



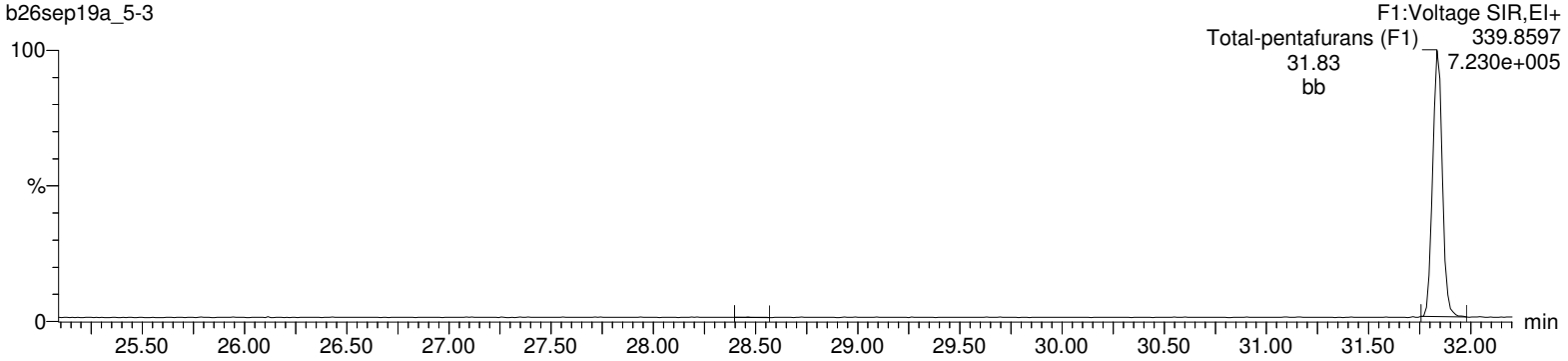
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

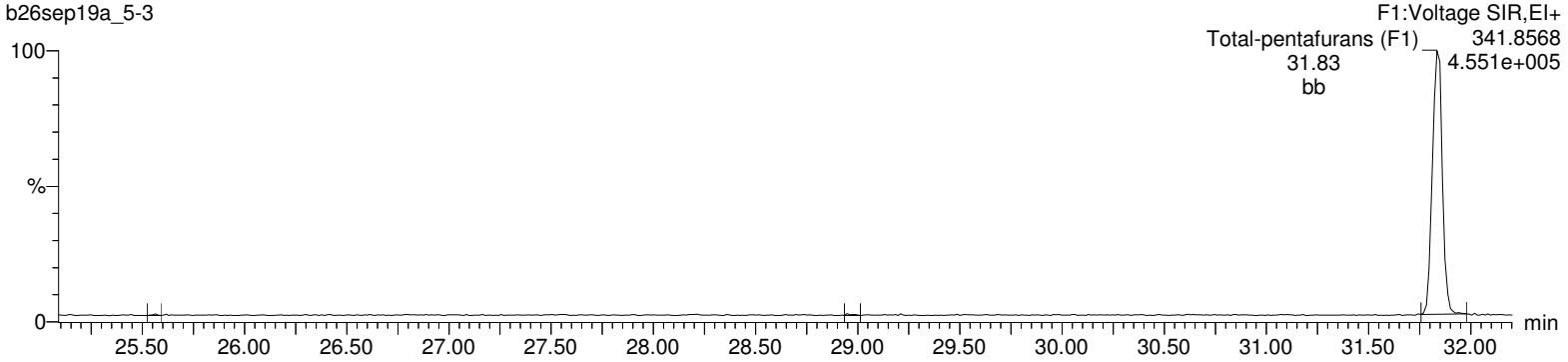
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

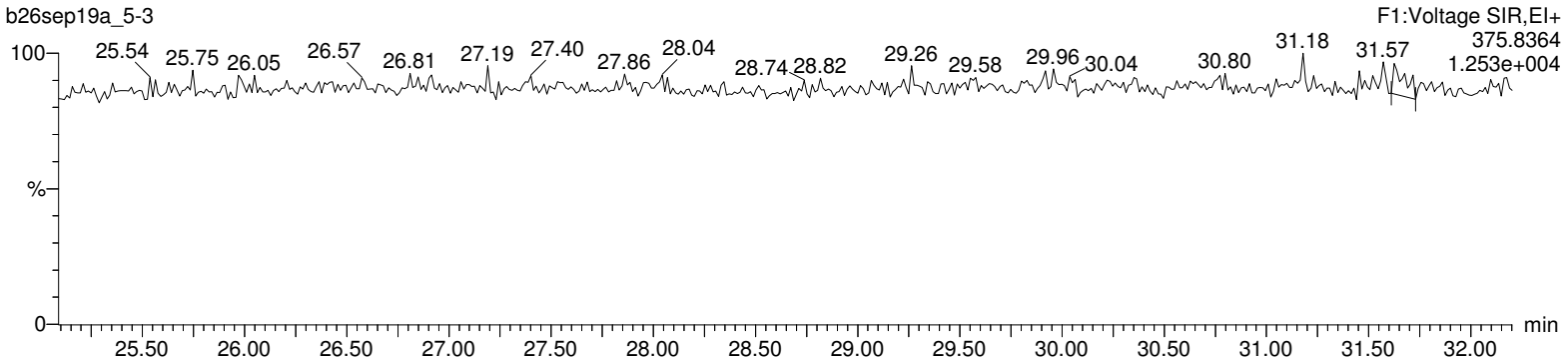
Total-pentafurans (F1)



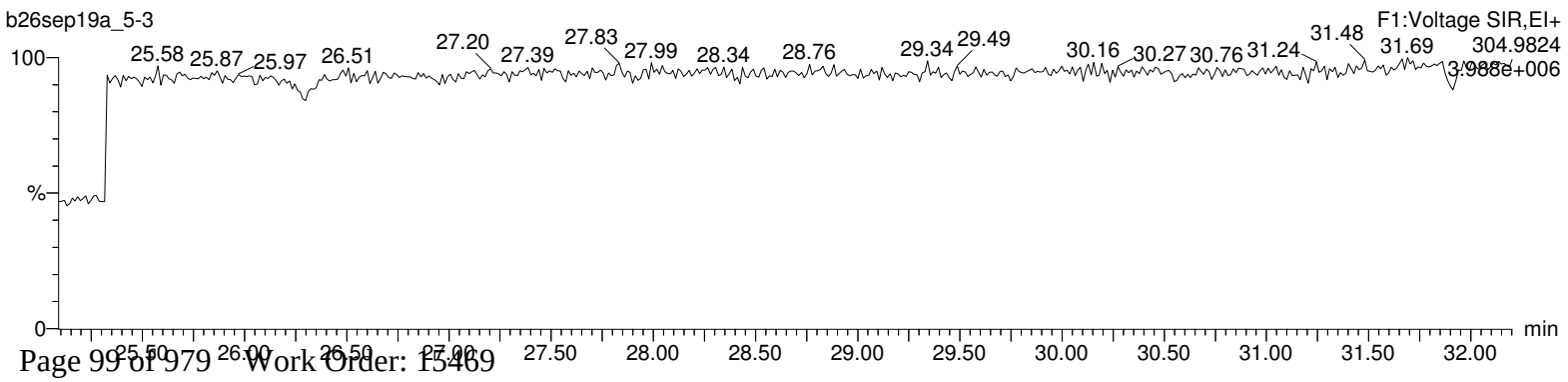
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
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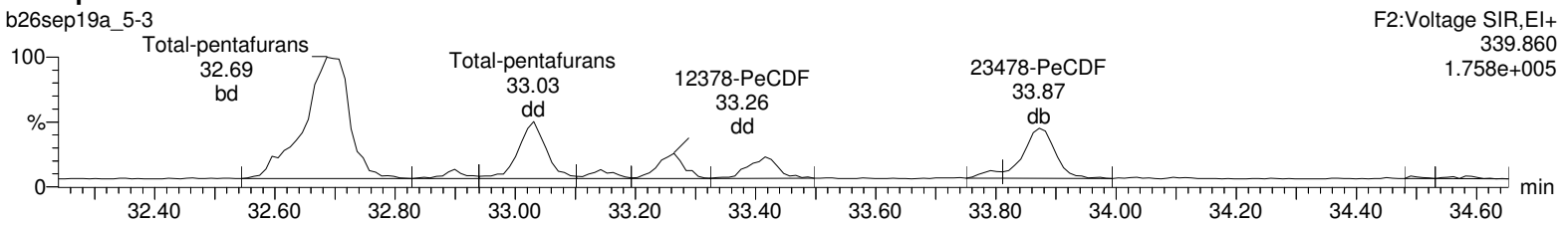
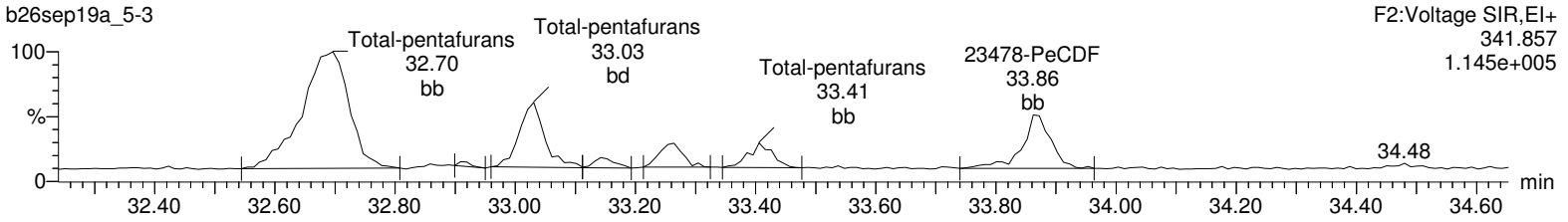
Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

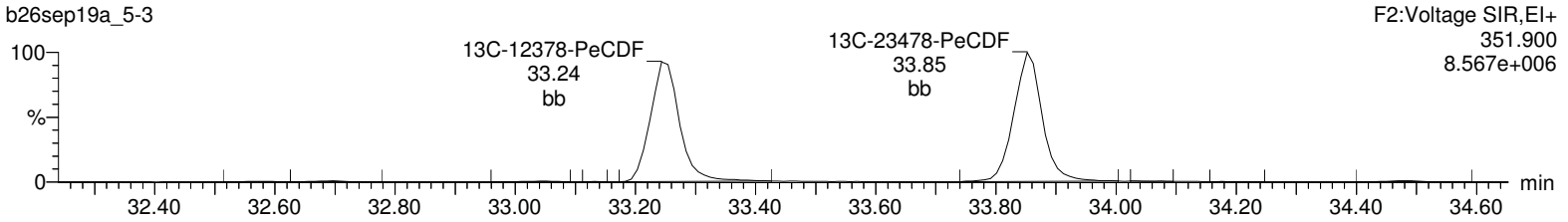
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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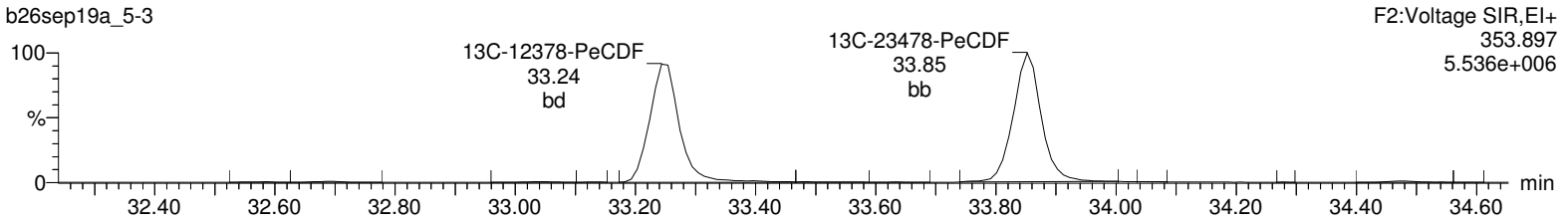
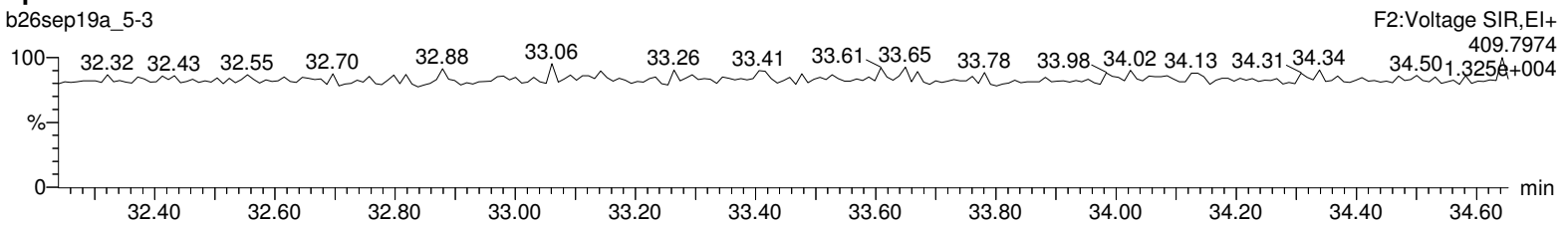
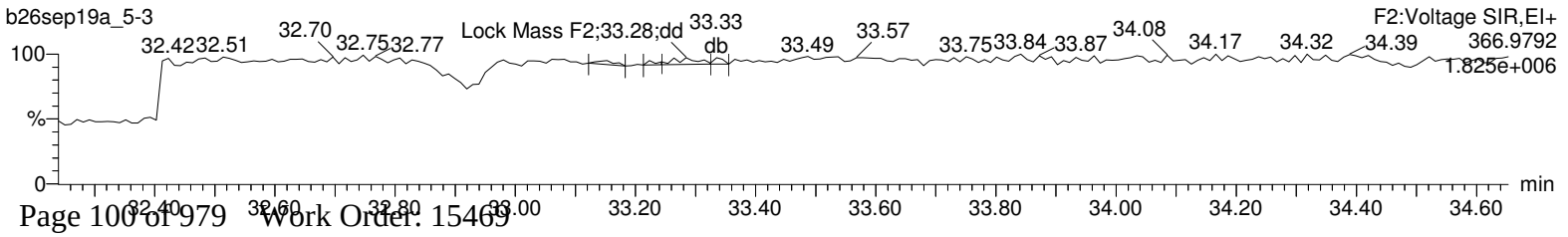


HpDPE



Lock Mass F2



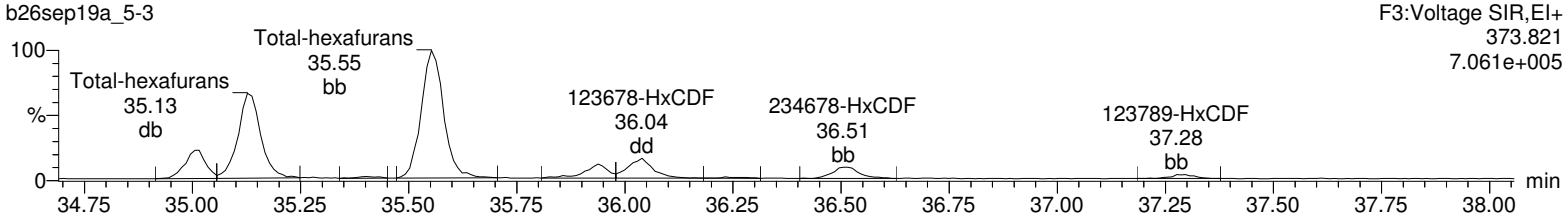
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

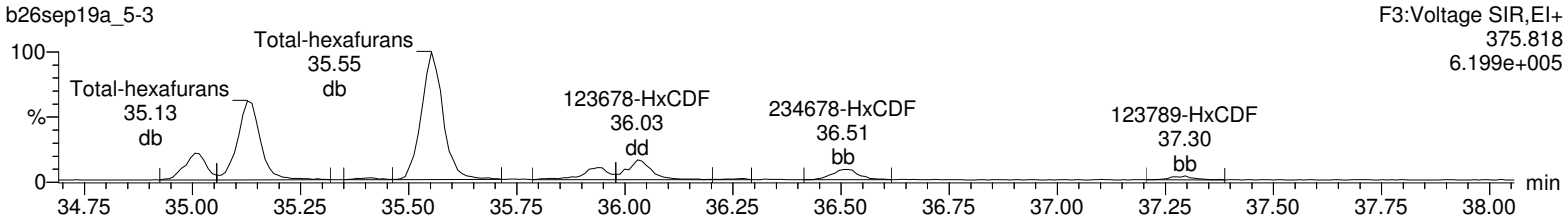
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

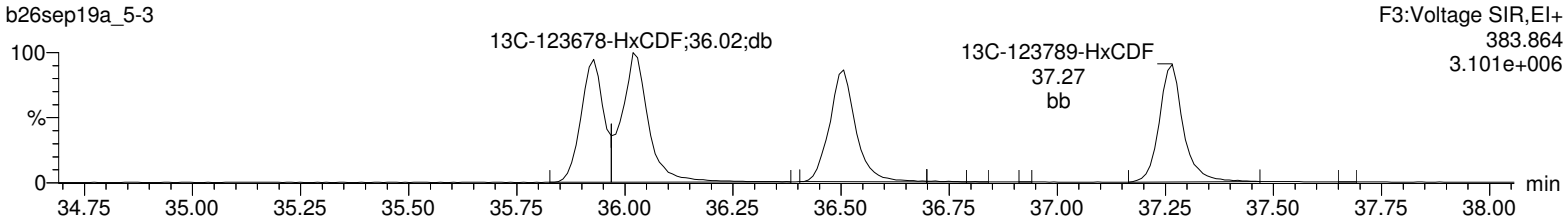
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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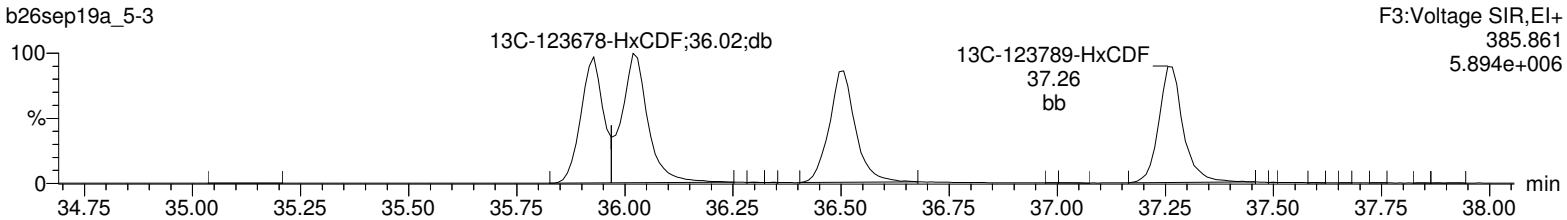

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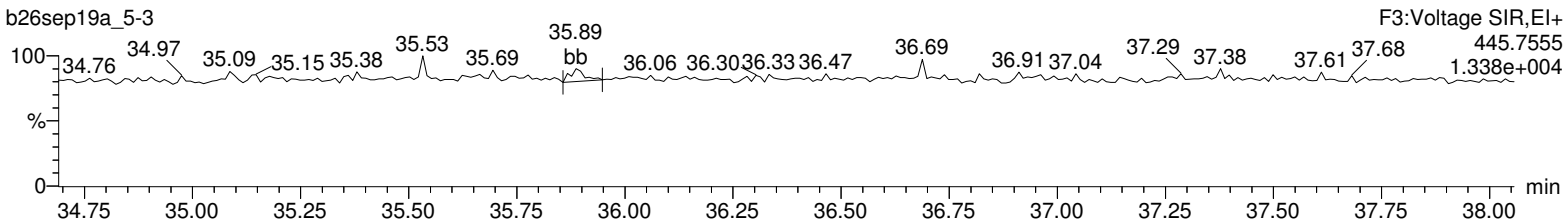
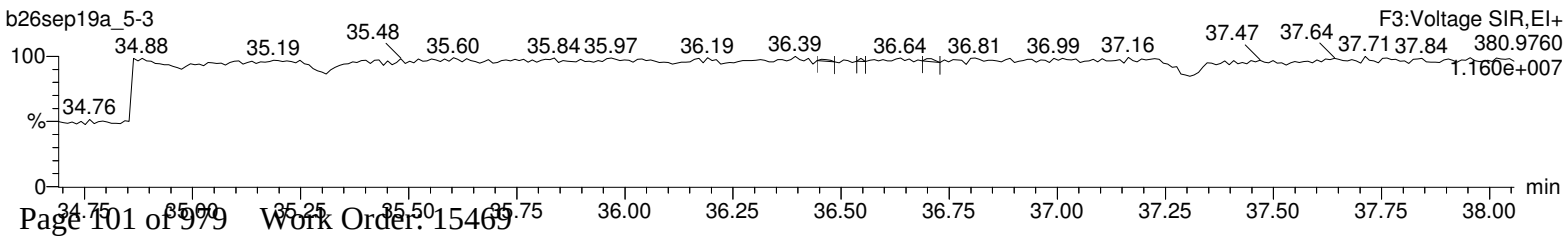


Lock Mass F3



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
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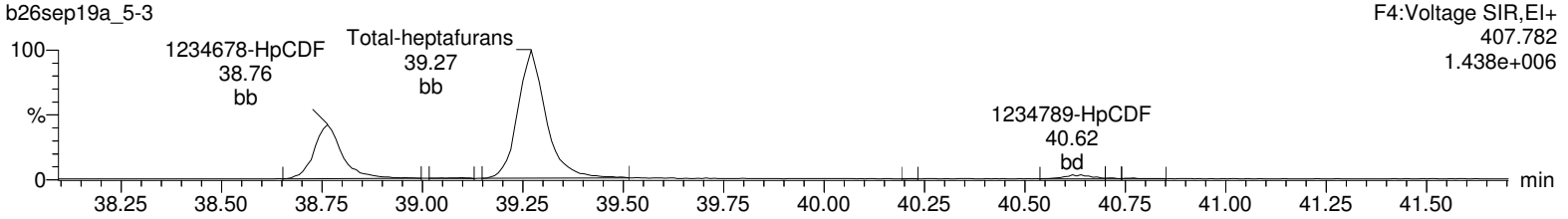
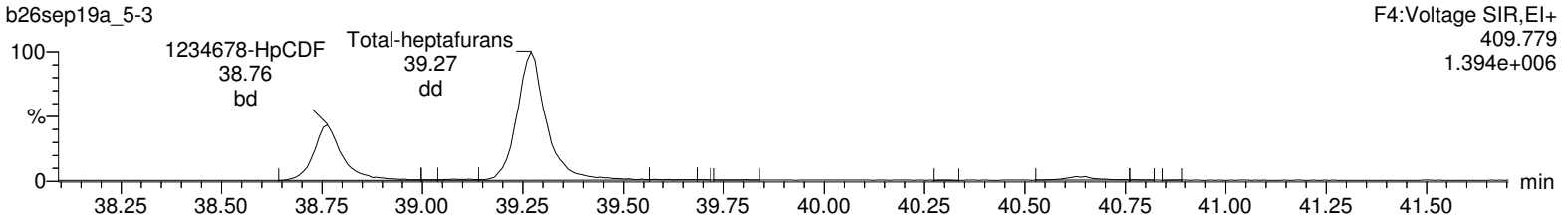
Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

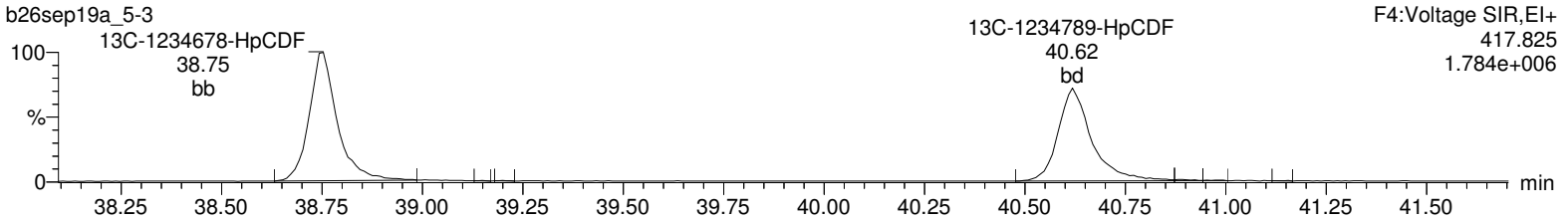
Total-heptafurans



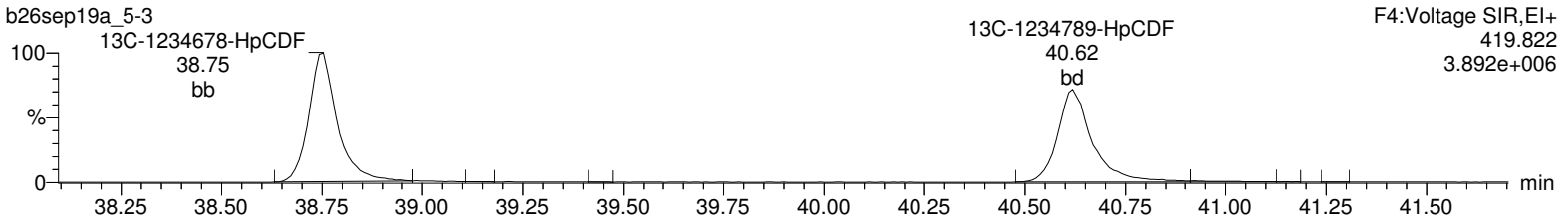
Total-heptafurans



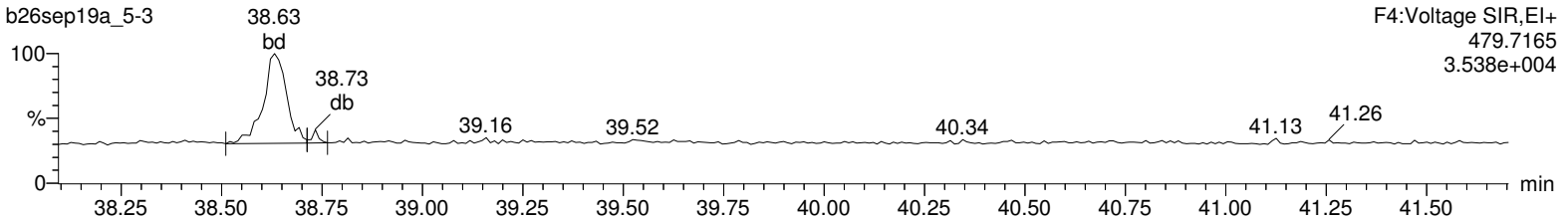
13C-1234678-HpCDF



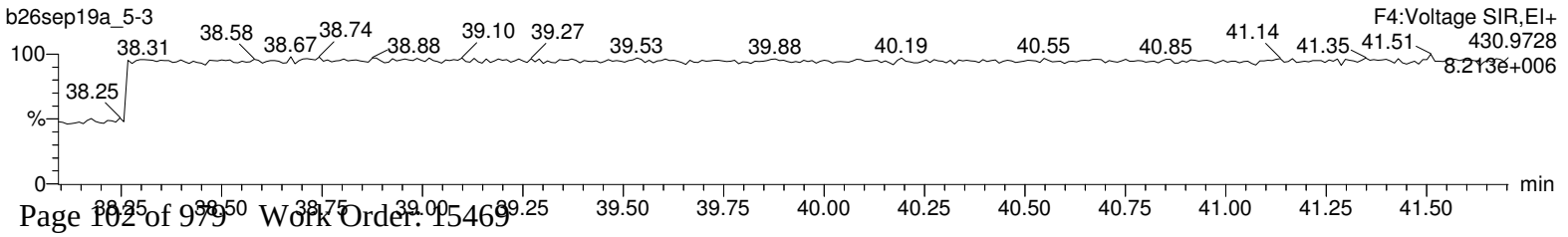
13C-1234678-HpCDF



NoDPE



Lock Mass F4



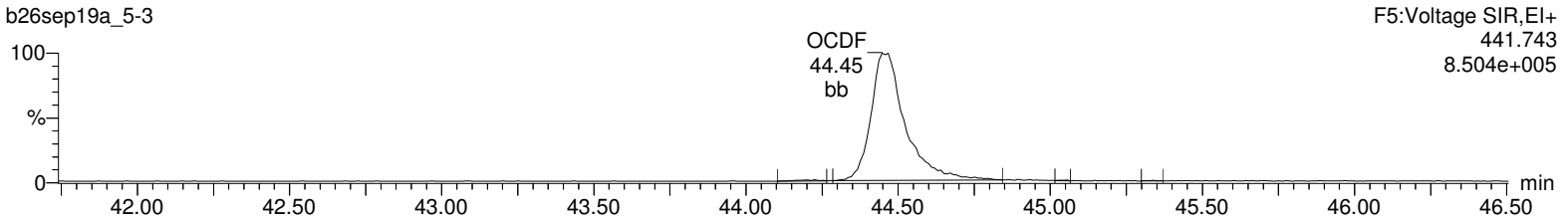
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

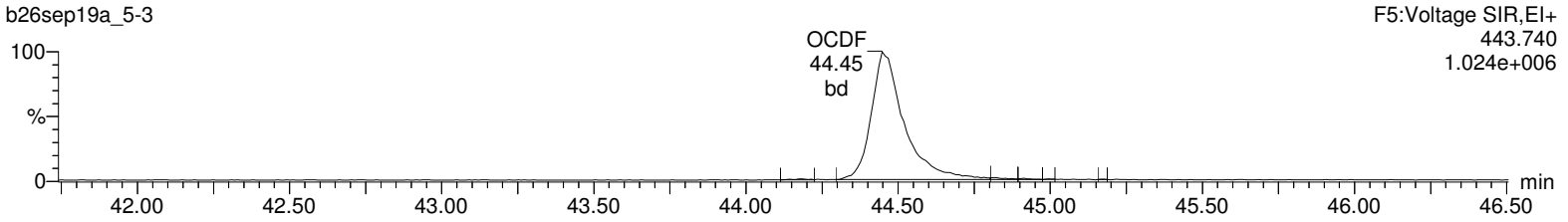
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-3, Date: 28-Sep-2019, Time: 01:26:34, ID: 15469001-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

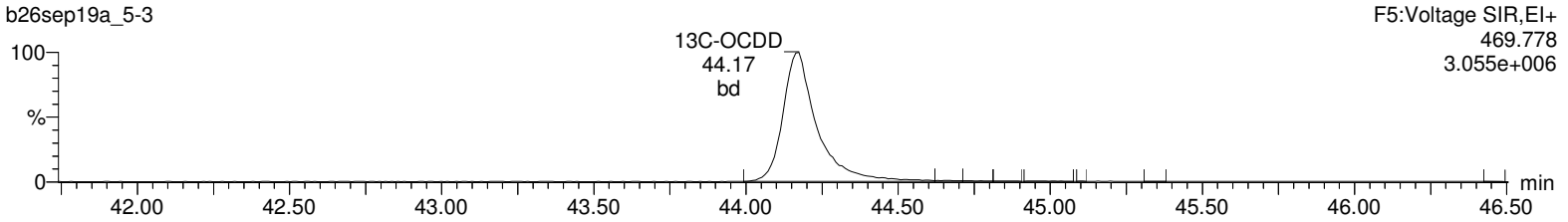
OCDF



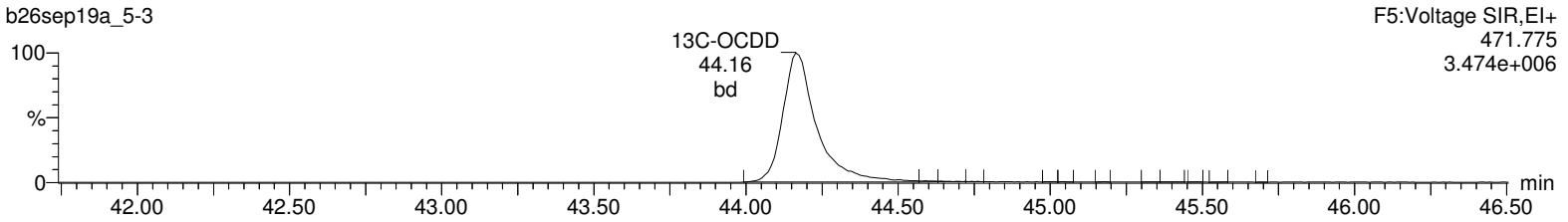
OCDF



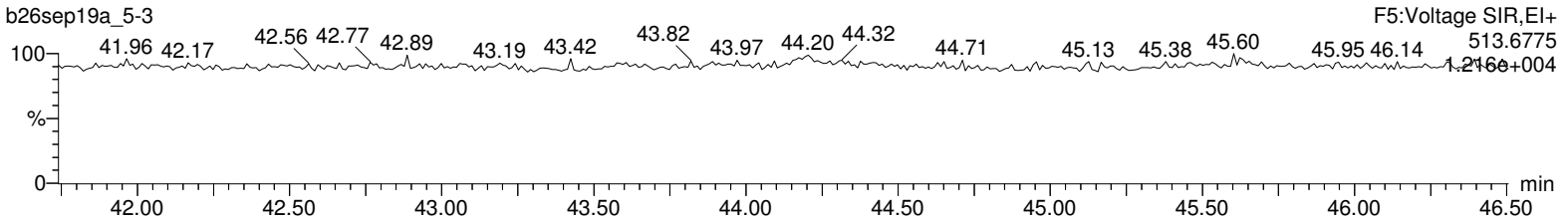
13C-OCDD



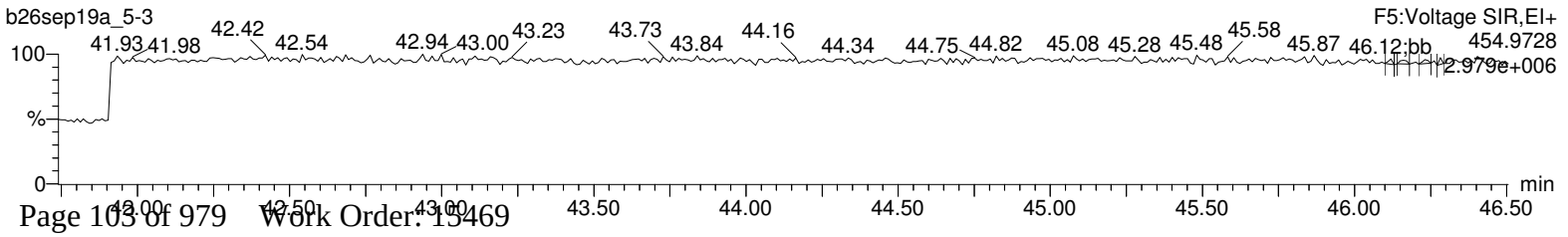
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469001**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 16:31**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.2 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	B	1.41	pg/g	0.187	0.988

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B The target analyte was detected in the associated blank.
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 **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19a_2-3, Date: 30-Sep-2019, Time: 16:31:53, ID: 15469001-2, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	4.49e3	6.16e3	1.06e4	16.29	1.001	0.73	NO	0.714	0.0947	6.19e4	3161	19.6	9.44e4	4182	22.6	dd	dd
2	13C-2378-TCDF	7.58e5	9.77e5	1.73e6	16.28	1.065	0.77	NO	59.802	0.109	1.18e7	12140	974.6	1.53e7	6906	2219.9	bb	bb
3	13C-1234-TCDD	8.27e5	1.08e6	1.90e6	15.28	0.000	0.77	NO	100.000	0.108	1.50e7	6539	2288.2	1.98e7	5864	3369.3	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

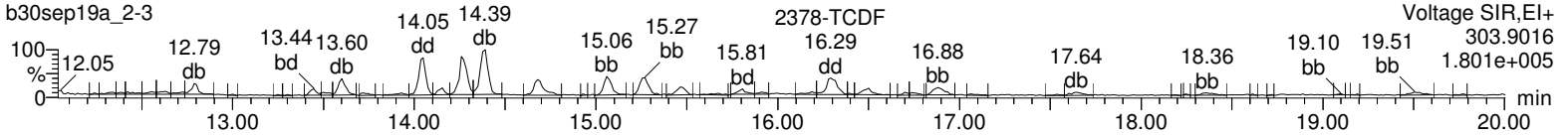
Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

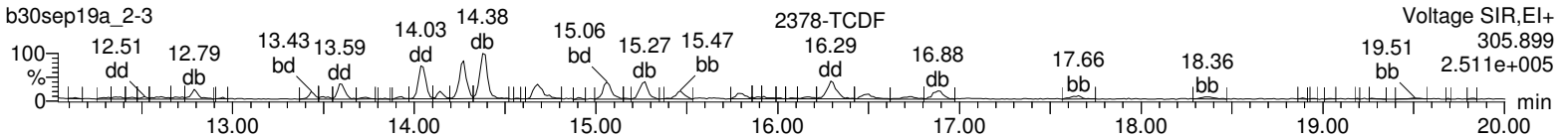
Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19a_2-3, Date: 30-Sep-2019, Time: 16:31:53, ID: 15469001-2, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

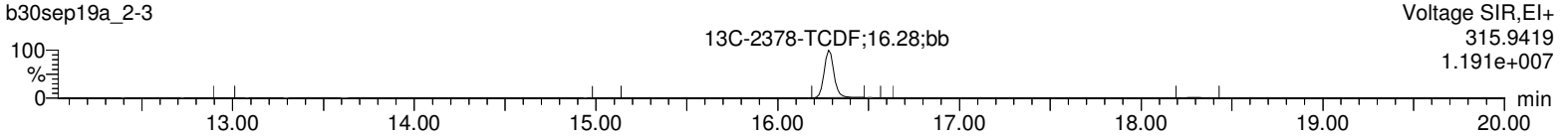
2378-TCDF



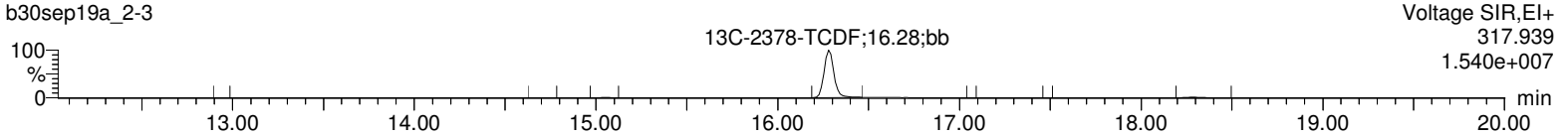
2378-TCDF



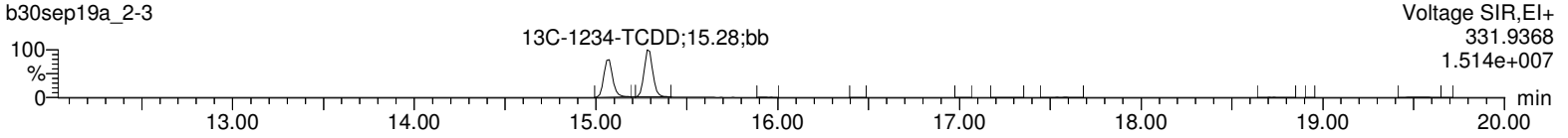
13C-2378-TCDF



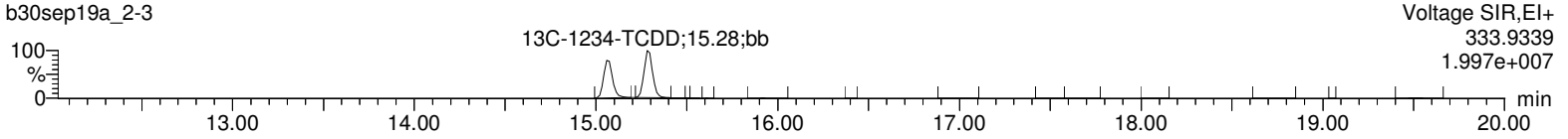
13C-2378-TCDF



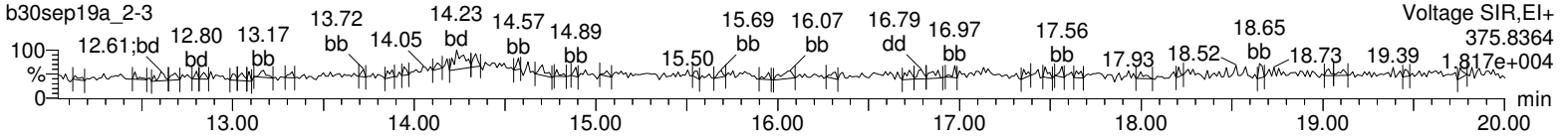
13C-1234-TCDD



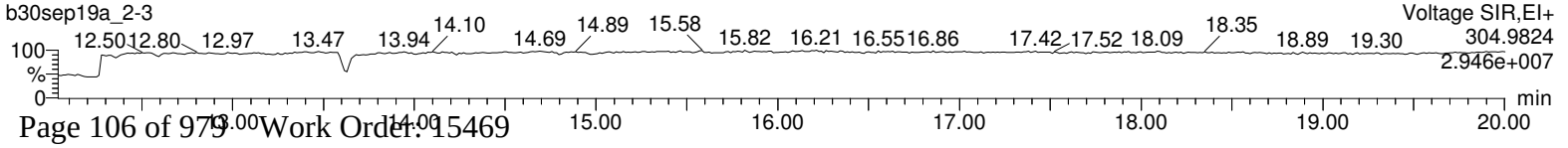
13C-1234-TCDD



HxDPE



Lock Mass F1



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469002**	**Date Collected:**	**08/28/2019 09:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**45.6**
Client ID:	**J6-SC1b-30to40-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 03:51**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-6**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.04 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.303	pg/g	0.141	0.966
40321-76-4	1,2,3,7,8-PeCDD	J	0.622	pg/g	0.185	4.83
39227-28-6	1,2,3,4,7,8-HxCDD	JK	0.585	pg/g	0.352	4.83
57653-85-7	1,2,3,6,7,8-HxCDD	J	4.71	pg/g	0.326	4.83
19408-74-3	1,2,3,7,8,9-HxCDD	J	2.10	pg/g	0.348	4.83
35822-46-9	1,2,3,4,6,7,8-HpCDD		110	pg/g	0.666	4.83
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1320	pg/g	1.02	9.66
51207-31-9	2,3,7,8-TCDF	BJ	0.894	pg/g	0.261	0.966
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.481	pg/g	0.120	4.83
57117-31-4	2,3,4,7,8-PeCDF	J	1.03	pg/g	0.111	4.83
70648-26-9	1,2,3,4,7,8-HxCDF	J	2.32	pg/g	0.148	4.83
57117-44-9	1,2,3,6,7,8-HxCDF	J	1.74	pg/g	0.163	4.83
60851-34-5	2,3,4,6,7,8-HxCDF	J	1.42	pg/g	0.166	4.83
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.464	pg/g	0.188	4.83
67562-39-4	1,2,3,4,6,7,8-HpCDF		24.6	pg/g	0.240	4.83
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	1.83	pg/g	0.311	4.83
39001-02-0	1,2,3,4,6,7,8,9-OCDF		94.8	pg/g	0.359	9.66
41903-57-5	Total TeCDD	JK	1.90	pg/g	0.141	0.966
36088-22-9	Total PeCDD	JK	5.52	pg/g	0.185	4.83
34465-46-8	Total HxCDD	JK	32.8	pg/g	0.326	4.83
37871-00-4	Total HpCDD		222	pg/g	0.666	4.83
30402-14-3	Total TeCDF	JK	7.69	pg/g	0.261	0.966
30402-15-4	Total PeCDF	JK	15.3	pg/g	0.0616	4.83
55684-94-1	Total HxCDF	JK	36.8	pg/g	0.148	4.83
38998-75-3	Total HpCDF	J	99.9	pg/g	0.240	4.83
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		4.46	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		4.46	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		151	193	pg/g	78.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		170	193	pg/g	87.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		163	193	pg/g	84.6	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		138	193	pg/g	71.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		186	193	pg/g	96.4	(23%-140%)
13C-OCDD		393	386	pg/g	102	(17%-157%)
13C-2,3,7,8-TCDF		139	193	pg/g	72.2	(24%-169%)
13C-1,2,3,7,8-PeCDF		158	193	pg/g	81.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		160	193	pg/g	82.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		152	193	pg/g	78.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		131	193	pg/g	67.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		140	193	pg/g	72.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		158	193	pg/g	81.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469002**	**Date Collected:**	**08/28/2019 09:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**45.6**
Client ID:	**J6-SC1b-30to40-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 03:51**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-6**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.04 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		155	193	pg/g	80.3	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		185	193	pg/g	95.8	(26%-138%)
37Cl-2,3,7,8-TCDD		18.8	19.3	pg/g	97.4	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

K **Estimated Maximum Possible Concentration**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:51:42 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.55e2	6.38e2	1.09e3	31.11	1.000	0.71	NO	0.157	0.0729	9.72e3	1679	5.8	7.99e3	1003	8.0	db	bb
2	12378-PeCDD	9.29e2	6.96e2	1.62e3	34.06	1.001	1.33	NO	0.322	0.0957	1.42e4	1085	13.1	9.91e3	2603	3.8	bb	dd
3	123478-HxCDD	7.31e2	7.31e2	1.46e3	36.64	1.001	1.00	YES	0.303	0.182	2.12e4	2566	8.3	1.87e4	2681	7.0	bd	bd
4	123678-HxCDD	7.05e3	5.56e3	1.26e4	36.73	1.001	1.27	NO	2.440	0.169	9.70e4	2566	37.8	7.88e4	2681	29.4	dd	dd
5	123789-HxCDD	2.92e3	2.40e3	5.32e3	36.97	1.007	1.22	NO	1.089	0.180	5.16e4	2566	20.1	3.38e4	2681	12.6	MM	db
6	1234678-HpCDD	1.30e5	1.24e5	2.54e5	39.99	1.001	1.05	NO	56.929	0.345	1.47e6	3728	394.5	1.38e6	3044	452.2	bb	bb
7	OCDD	1.26e6	1.42e6	2.67e6	44.17	1.000	0.89	NO	682.065	0.526	1.00e7	3698	2713.2	1.13e7	2967	3808.0	bb	bb
8	2378-TCDF	1.41e3	1.95e3	3.36e3	30.33	1.001	0.72	NO	0.463	0.135	1.05e4	1786	5.9	1.81e4	1895	9.5	MM	MM
9	12378-PeCDF	1.03e3	6.44e2	1.68e3	33.25	1.000	1.60	NO	0.249	0.0619	2.60e4	1493	17.4	1.35e4	1669	8.1	bb	bb
10	23478-PeCDF	2.27e3	1.71e3	3.99e3	33.85	1.000	1.33	NO	0.534	0.0575	3.75e4	1493	25.1	3.20e4	1669	19.2	MM	MM
11	123478-HxCDF	4.17e3	3.42e3	7.59e3	35.93	1.000	1.22	NO	1.202	0.0768	7.22e4	1758	41.1	5.75e4	1598	36.0	MM	dd
12	123678-HxCDF	3.26e3	2.69e3	5.94e3	36.02	1.000	1.21	NO	0.903	0.0846	4.69e4	1758	26.7	3.67e4	1598	23.0	MM	dd
13	234678-HxCDF	2.45e3	2.25e3	4.70e3	36.51	1.000	1.09	NO	0.736	0.0860	3.95e4	1758	22.5	3.10e4	1598	19.4	bb	bb
14	123789-HxCDF	7.08e2	6.64e2	1.37e3	37.27	1.000	1.07	NO	0.240	0.0971	1.24e4	1758	7.1	1.43e4	1598	8.9	MM	MM
15	1234678-HpCDF	3.70e4	3.68e4	7.38e4	38.76	1.001	1.01	NO	12.734	0.124	4.67e5	1662	281.2	4.75e5	1785	266.2	bb	bb
16	1234789-HpCDF	2.36e3	2.48e3	4.84e3	40.62	1.000	0.95	NO	0.949	0.161	2.40e4	1662	14.4	2.93e4	1785	16.4	bb	bb
17	OCDF	1.01e5	1.14e5	2.14e5	44.45	1.006	0.89	NO	49.099	0.186	7.97e5	1232	647.0	9.28e5	1396	665.2	bd	bb
18	13C-2378-TCDD	3.36e5	4.45e5	7.81e5	31.10	1.019	0.75	NO	78.212	0.127	4.45e6	2839	1566.4	5.89e6	1946	3024.3	bb	bd
19	13C-12378-PeCDD	3.60e5	2.33e5	5.93e5	34.04	1.115	1.54	NO	87.809	0.157	6.87e6	2246	3060.6	4.48e6	1756	2550.3	bb	bb
20	13C-123478-HxCDD	2.95e5	2.21e5	5.16e5	36.62	0.991	1.33	NO	84.637	0.154	4.41e6	3348	1315.9	3.65e6	1918	1901.2	bd	bd
21	13C-123678-HxCDD	3.12e5	2.72e5	5.84e5	36.71	0.993	1.15	NO	71.438	0.115	4.68e6	3348	1398.0	3.88e6	1918	2025.1	dd	dd
22	13C-1234678-HpCDD	2.37e5	2.35e5	4.72e5	39.97	1.082	1.01	NO	96.434	0.220	2.61e6	3021	863.9	2.55e6	3010	848.0	bb	bd
23	13C-OCDD	3.99e5	4.59e5	8.58e5	44.16	1.195	0.87	NO	203.240	0.193	3.23e6	2092	1543.2	3.66e6	2457	1488.2	bb	bd
24	13C-2378-TCDF	3.54e5	4.60e5	8.13e5	30.29	0.992	0.77	NO	72.191	0.137	3.32e6	3587	925.0	4.19e6	2236	1873.5	bb	bb
25	13C-12378-PeCDF	4.52e5	2.91e5	7.43e5	33.24	1.089	1.56	NO	81.889	0.203	8.57e6	4113	2083.5	5.52e6	2853	1935.7	bd	bb
26	13C-23478-PeCDF	4.67e5	3.02e5	7.69e5	33.85	1.109	1.55	NO	82.633	0.198	8.59e6	4113	2087.8	5.49e6	2853	1925.9	bb	bb
27	13C-123478-HxCDF	1.90e5	3.67e5	5.56e5	35.92	0.972	0.52	NO	78.863	0.215	3.28e6	3693	887.8	6.29e6	4798	1309.9	bd	bd
28	13C-123678-HxCDF	2.15e5	4.09e5	6.24e5	36.02	0.975	0.52	NO	67.940	0.165	3.24e6	3693	876.8	6.28e6	4798	1308.9	dd	dd
29	13C-234678-HxCDF	1.93e5	3.72e5	5.65e5	36.49	0.988	0.52	NO	72.383	0.194	2.95e6	3693	798.6	5.72e6	4798	1192.0	bd	bb
30	13C-123789-HxCDF	1.83e5	3.55e5	5.38e5	37.26	1.008	0.52	NO	81.748	0.230	2.77e6	3693	748.7	5.30e6	4798	1104.4	bb	bd
31	13C-1234678-HpCDF	1.51e5	3.36e5	4.86e5	38.74	1.048	0.45	NO	80.269	0.168	1.82e6	2408	754.1	4.15e6	3288	1262.6	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:51:42 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.30e5	2.86e5	4.16e5	40.61	1.099	0.45	NO	95.765	0.234	1.36e6	2408	565.1	3.04e6	3288	925.6	bd	bb
33	13C-1234-TCDD	3.80e5	4.88e5	8.68e5	30.52	0.000	0.78	NO	100.000	0.146	3.58e6	2839	1262.6	4.61e6	1946	2369.7	bb	bb
34	13C-123789-HxCDD	4.30e5	3.43e5	7.73e5	36.95	0.000	1.26	NO	100.000	0.122	6.02e6	3348	1798.1	4.91e6	1918	2558.8	dd	dd
35	37Cl-2378-TCDD	9.10e4		9.10e4	31.11	1.019			9.745	0.0434	1.20e6	1531	783.7				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:51:42 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	5.47e1	6.49e1	1.20e2	30.16	0.84	NO	0.017	0.0729	3.55e3	1679	2.1	2.55e3	1003	2.5	bd	bd
2	Total-tetradioxins	1.80e2	2.04e2	3.84e2	30.01	0.89	YES	0.055	0.0729	3.80e3	1679	2.3	2.78e3	1003	2.8	bb	bb
3	Total-tetradioxins	3.56e2	3.93e2	7.49e2	29.54	0.91	YES	0.108	0.0729	4.13e3	1679	2.5	4.56e3	1003	4.5	MM	db
4	Total-tetradioxins	1.82e2	3.06e2	4.88e2	29.35	0.60	YES	0.070	0.0729	2.30e3	1679	1.4	3.54e3	1003	3.5	MM	bd
5	Total-tetradioxins	5.85e2	5.80e2	1.17e3	28.40	1.01	YES	0.168	0.0729	6.84e3	1679	4.1	6.61e3	1003	6.6	MM	MM
6	Total-tetradioxins	4.11e2	6.24e2	1.03e3	28.03	0.66	NO	0.149	0.0729	5.00e3	1679	3.0	7.53e3	1003	7.5	MM	MM
7	Total-tetradioxins	1.16e3	1.63e3	2.79e3	27.74	0.71	NO	0.401	0.0729	1.11e4	1679	6.6	1.92e4	1003	19.1	bb	bb
8	Total-tetradioxins	5.48e1	5.52e1	1.10e2	31.74	0.99	YES	0.016	0.0729	1.72e3	1679	1.0	3.08e3	1003	3.1	bb	bb
9	Total-tetradioxins	8.36e1	1.00e2	1.84e2	31.35	0.83	NO	0.026	0.0729	2.16e3	1679	1.3	2.04e3	1003	2.0	bb	bb
10	2378-TCDD	4.55e2	6.38e2	1.09e3	31.11	0.71	NO	0.157	0.0729	9.72e3	1679	5.8	7.99e3	1003	8.0	db	bb
11	Total-tetradioxins	2.74e2	4.55e2	7.29e2	30.89	0.60	YES	0.105	0.0729	3.93e3	1679	2.3	6.56e3	1003	6.5	MM	bb
12	Total-tetradioxins	2.20e2	2.51e2	4.71e2	30.52	0.88	NO	0.068	0.0729	2.74e3	1679	1.6	3.92e3	1003	3.9	MM	bb
13	Total-tetradioxins	5.59e1	8.04e1	1.36e2	30.19	0.70	NO	0.020	0.0729	2.14e3	1679	1.3	2.93e3	1003	2.9	db	db
14	Total-tetradioxins	1.51e2	1.39e2	2.90e2	29.80	1.09	YES	0.042	0.0729	2.66e3	1679	1.6	2.81e3	1003	2.8	MM	MM
15	Total-tetradioxins	2.08e2	2.00e2	4.08e2	29.11	1.04	YES	0.059	0.0729	2.53e3	1679	1.5	3.82e3	1003	3.8	MM	db

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	7.20e2	6.32e2	1.35e3	32.98	1.14	YES	0.268	0.0957	1.43e4	1085	13.2	1.64e4	2603	6.3	db	db
2	Total-pentadioxins	8.94e1	3.82e2	4.72e2	32.87	0.23	YES	0.094	0.0957	2.46e3	1085	2.3	8.58e3	2603	3.3	dd	dd
3	Total-pentadioxins	2.82e3	1.77e3	4.59e3	32.72	1.59	NO	0.909	0.0957	5.51e4	1085	50.8	3.82e4	2603	14.7	bd	bd
4	Total-pentadioxins	2.40e2	1.01e2	3.41e2	34.32	2.39	YES	0.068	0.0957	5.03e3	1085	4.6	4.07e3	2603	1.6	bb	bd
5	12378-PeCDD	9.29e2	6.96e2	1.62e3	34.06	1.33	NO	0.322	0.0957	1.42e4	1085	13.1	9.91e3	2603	3.8	bb	dd
6	Total-pentadioxins	1.43e2	1.74e2	3.17e2	33.78	0.83	YES	0.063	0.0957	4.00e3	1085	3.7	4.14e3	2603	1.6	db	bd
7	Total-pentadioxins	9.07e1	6.13e1	1.52e2	33.75	1.48	NO	0.030	0.0957	3.59e3	1085	3.3	3.33e3	2603	1.3	bd	db
8	Total-pentadioxins	1.22e3	9.51e2	2.17e3	33.57	1.29	YES	0.431	0.0957	2.19e4	1085	20.2	1.80e4	2603	6.9	bb	db
9	Total-pentadioxins	1.54e3	1.04e3	2.59e3	33.38	1.48	NO	0.512	0.0957	2.16e4	1085	19.9	1.25e4	2603	4.8	db	MM
10	Total-pentadioxins	1.25e3	8.37e2	2.08e3	33.26	1.49	NO	0.413	0.0957	2.67e4	1085	24.6	1.72e4	2603	6.6	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:51:42 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	2.92e3	2.40e3	5.32e3	36.97	1.22	NO	1.089	0.180	5.16e4	2566	20.1	3.38e4	2681	12.6	MM	db
2	123678-HxCDD	7.05e3	5.56e3	1.26e4	36.73	1.27	NO	2.440	0.169	9.70e4	2566	37.8	7.88e4	2681	29.4	dd	dd
3	123478-HxCDD	7.31e2	7.31e2	1.46e3	36.64	1.00	YES	0.303	0.182	2.12e4	2566	8.3	1.87e4	2681	7.0	bd	bd
4	Total-hexadioxins	1.96e4	1.53e4	3.49e4	36.07	1.28	NO	7.037	0.177	2.76e5	2566	107.7	2.20e5	2681	81.9	dd	bb
5	Total-hexadioxins	1.99e3	1.52e3	3.51e3	35.86	1.31	NO	0.707	0.177	3.37e4	2566	13.2	2.94e4	2681	11.0	bd	bb
6	Total-hexadioxins	1.45e4	1.11e4	2.56e4	35.42	1.30	NO	5.156	0.177	2.58e5	2566	100.4	1.99e5	2681	74.2	bb	bb
7	Total-hexadioxins	1.10e2	4.11e2	5.21e2	37.37	0.27	YES	0.105	0.177	2.92e3	2566	1.1	7.19e3	2681	2.7	bb	bb
8	Total-hexadioxins	6.55e2	5.79e2	1.23e3	36.90	1.13	NO	0.249	0.177	1.52e4	2566	5.9	1.34e4	2681	5.0	MM	MM

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	1.30e5	1.24e5	2.54e5	39.99	1.05	NO	56.929	0.345	1.47e6	3728	394.5	1.38e6	3044	452.2	bb	bb
2	Total-heptadioxins	1.32e5	1.26e5	2.58e5	39.08	1.05	NO	57.909	0.345	1.64e6	3728	440.1	1.52e6	3044	497.7	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:51:42 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.42e3	2.07e3	3.49e3	28.99	0.68	NO	0.481	0.135	9.93e3	1786	5.6	1.42e4	1895	7.5	MM	MM
2	Total-tetrafurans	3.77e2	3.39e2	7.16e2	28.76	1.11	YES	0.099	0.135	6.80e3	1786	3.8	7.05e3	1895	3.7	dd	MM
3	Total-tetrafurans	1.62e2	1.57e2	3.19e2	28.59	1.03	YES	0.044	0.135	2.91e3	1786	1.6	3.49e3	1895	1.8	bd	MM
4	Total-tetrafurans	6.48e2	1.10e3	1.75e3	28.28	0.59	YES	0.241	0.135	8.11e3	1786	4.5	9.98e3	1895	5.3	MM	db
5	Total-tetrafurans	6.11e2	9.91e2	1.60e3	28.11	0.62	YES	0.221	0.135	7.77e3	1786	4.4	1.11e4	1895	5.9	dd	dd
6	Total-tetrafurans	9.96e2	1.18e3	2.17e3	28.02	0.85	NO	0.299	0.135	1.30e4	1786	7.3	1.44e4	1895	7.6	bd	bd
7	Total-tetrafurans	1.83e3	2.36e3	4.19e3	27.68	0.78	NO	0.577	0.135	1.48e4	1786	8.3	2.12e4	1895	11.2	db	MM
8	Total-tetrafurans	8.27e2	1.18e3	2.01e3	27.33	0.70	NO	0.276	0.135	9.35e3	1786	5.2	1.07e4	1895	5.6	dd	MM
9	Total-tetrafurans	3.04e2	3.22e2	6.26e2	27.24	0.94	YES	0.086	0.135	4.73e3	1786	2.6	5.69e3	1895	3.0	MM	MM
10	Total-tetrafurans	1.60e3	2.36e3	3.96e3	26.97	0.68	NO	0.545	0.135	1.71e4	1786	9.5	2.59e4	1895	13.7	bb	bb
11	Total-tetrafurans	7.98e2	9.61e2	1.76e3	26.46	0.83	NO	0.242	0.135	9.06e3	1786	5.1	9.44e3	1895	5.0	bb	bb
12	Total-tetrafurans	4.59e2	4.76e2	9.35e2	26.02	0.96	YES	0.129	0.135	5.74e3	1786	3.2	5.24e3	1895	2.8	bb	MM
13	Total-tetrafurans	3.57e2	4.44e2	8.02e2	31.80	0.80	NO	0.110	0.135	5.55e3	1786	3.1	5.01e3	1895	2.6	bd	bb
14	Total-tetrafurans	1.60e2	1.27e2	2.87e2	31.66	1.27	YES	0.040	0.135	3.77e3	1786	2.1	2.61e3	1895	1.4	db	bb
15	Total-tetrafurans	8.66e2	1.22e3	2.08e3	30.65	0.71	NO	0.287	0.135	9.41e3	1786	5.3	1.78e4	1895	9.4	bb	bb
16	2378-TCDF	1.41e3	1.95e3	3.36e3	30.33	0.72	NO	0.463	0.135	1.05e4	1786	5.9	1.81e4	1895	9.5	MM	MM
17	Total-tetrafurans	2.56e2	2.52e2	5.08e2	29.63	1.01	YES	0.070	0.135	4.31e3	1786	2.4	4.07e3	1895	2.1	MM	MM
18	Total-tetrafurans	1.16e3	1.36e3	2.52e3	29.39	0.85	NO	0.347	0.135	1.04e4	1786	5.8	1.45e4	1895	7.6	bd	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.86e4	1.16e4	3.02e4	31.83	1.61	NO	4.248	0.0319	3.23e5	780	413.5	2.14e5	914	233.8	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
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Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	2.27e3	1.71e3	3.99e3	33.85	1.33	NO	0.534	0.0575	3.75e4	1493	25.1	3.20e4	1669	19.2	MM	MM
2	Total-pentafurans	1.09e3	7.80e2	1.87e3	33.41	1.40	NO	0.263	0.0596	1.81e4	1493	12.2	1.32e4	1669	7.9	bb	bb
3	12378-PeCDF	1.03e3	6.44e2	1.68e3	33.25	1.60	NO	0.249	0.0619	2.60e4	1493	17.4	1.35e4	1669	8.1	bb	bb
4	Total-pentafurans	3.84e2	1.86e2	5.70e2	33.14	2.07	YES	0.080	0.0596	8.92e3	1493	6.0	4.46e3	1669	2.7	db	db
5	Total-pentafurans	1.97e3	1.23e3	3.20e3	33.02	1.61	NO	0.450	0.0596	3.74e4	1493	25.1	2.60e4	1669	15.6	dd	MM
6	Total-pentafurans	4.92e2	2.61e2	7.53e2	32.90	1.89	YES	0.106	0.0596	7.43e3	1493	5.0	4.31e3	1669	2.6	MM	MM
7	Total-pentafurans	7.27e3	4.93e3	1.22e4	32.70	1.48	NO	1.717	0.0596	1.11e5	1493	74.2	7.16e4	1669	42.9	db	db
8	Total-pentafurans	1.15e3	6.28e2	1.78e3	32.60	1.83	YES	0.250	0.0596	2.73e4	1493	18.3	1.65e4	1669	9.9	bd	bd
9	Total-pentafurans	2.38e2	1.74e2	4.13e2	33.78	1.37	NO	0.058	0.0596	5.98e3	1493	4.0	5.07e3	1669	3.0	MM	MM

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123478-HxCDF	4.17e3	3.42e3	7.59e3	35.93	1.22	NO	1.202	0.0768	7.22e4	1758	41.1	5.75e4	1598	36.0	MM	dd
2	Total-hexafurans	3.25e2	2.55e2	5.81e2	35.85	1.27	NO	0.093	0.0858	8.48e3	1758	4.8	6.82e3	1598	4.3	MM	bd
3	Total-hexafurans	3.18e4	2.61e4	5.79e4	35.54	1.22	NO	9.261	0.0858	5.56e5	1758	316.2	4.57e5	1598	286.2	dd	db
4	Total-hexafurans	5.27e2	5.31e2	1.06e3	35.41	0.99	YES	0.169	0.0858	9.39e3	1758	5.3	8.82e3	1598	5.5	MM	bd
5	Total-hexafurans	1.68e4	1.45e4	3.13e4	35.13	1.16	NO	5.009	0.0858	2.92e5	1758	166.3	2.53e5	1598	158.3	db	dd
6	Total-hexafurans	4.73e3	4.30e3	9.03e3	35.01	1.10	NO	1.445	0.0858	9.16e4	1758	52.1	8.81e4	1598	55.1	bd	bd
7	Total-hexafurans	1.26e2	9.89e1	2.25e2	37.34	1.28	NO	0.036	0.0858	3.99e3	1758	2.3	2.75e3	1598	1.7	MM	MM
8	123789-HxCDF	7.08e2	6.64e2	1.37e3	37.27	1.07	NO	0.240	0.0971	1.24e4	1758	7.1	1.43e4	1598	8.9	MM	MM
9	234678-HxCDF	2.45e3	2.25e3	4.70e3	36.51	1.09	NO	0.736	0.0860	3.95e4	1758	22.5	3.10e4	1598	19.4	bb	bb
10	Total-hexafurans	2.76e2	1.95e2	4.70e2	36.32	1.42	NO	0.075	0.0858	6.90e3	1758	3.9	4.40e3	1598	2.8	db	bb
11	Total-hexafurans	2.82e2	1.10e2	3.93e2	36.25	2.56	YES	0.063	0.0858	4.86e3	1758	2.8	2.61e3	1598	1.6	dd	db
12	123678-HxCDF	3.26e3	2.69e3	5.94e3	36.02	1.21	NO	0.903	0.0846	4.69e4	1758	26.7	3.67e4	1598	23.0	MM	dd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

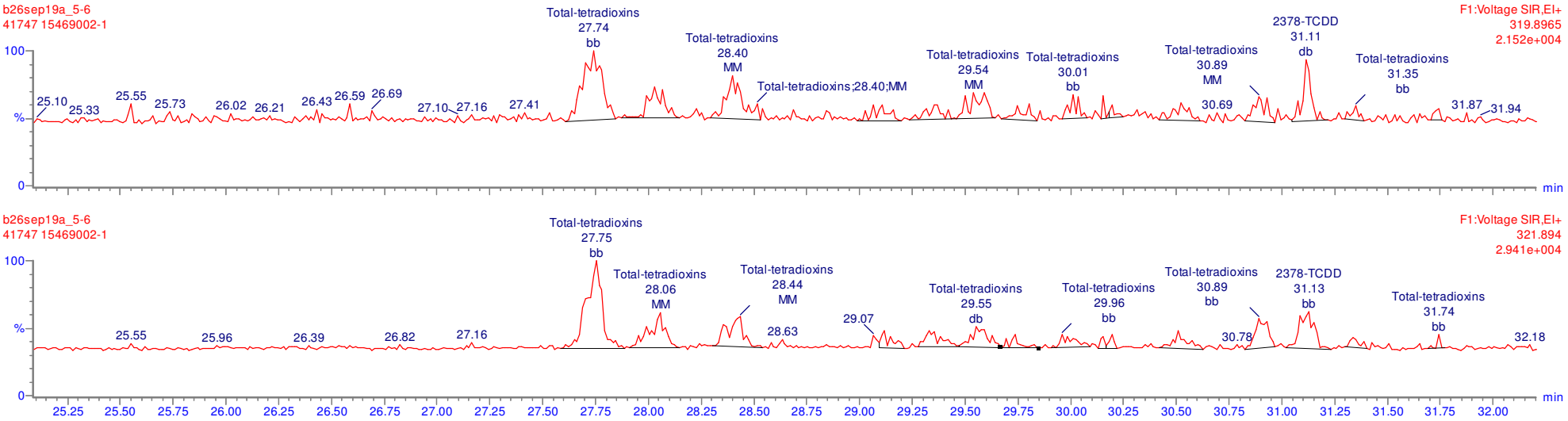
Last Altered: Tuesday, October 01, 2019 10:51:17 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:51:42 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

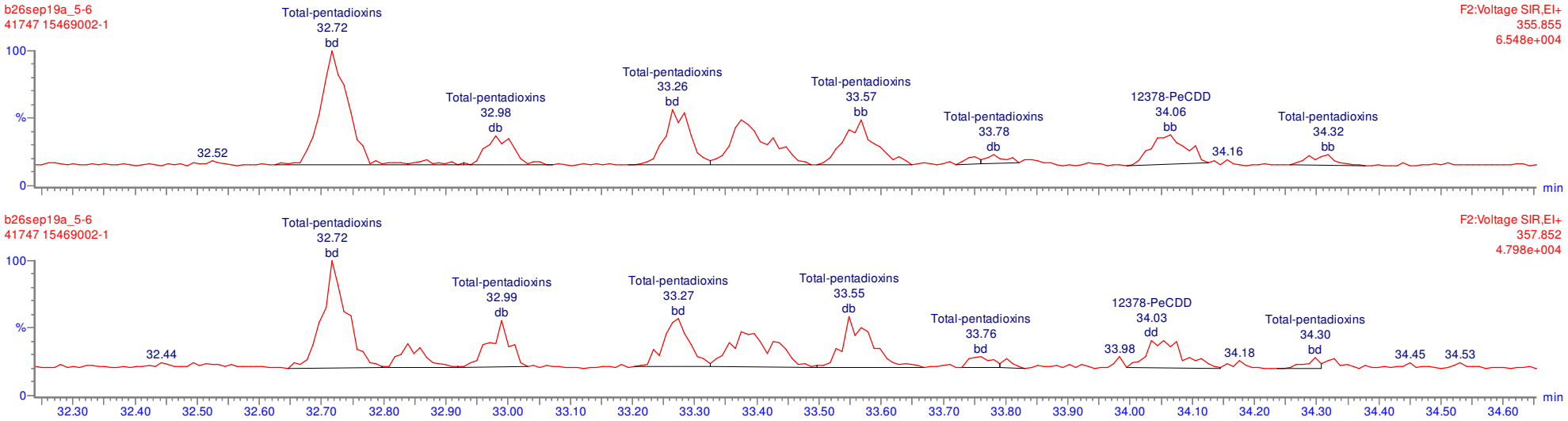
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	2.64e2	2.47e2	5.10e2	39.08	1.07	NO	0.094	0.141	5.86e3	1662	3.5	6.02e3	1785	3.4	bb	bb
2	1234678-HpCDF	3.70e4	3.68e4	7.38e4	38.76	1.01	NO	12.734	0.124	4.67e5	1662	281.2	4.75e5	1785	266.2	bb	bb
3	1234789-HpCDF	2.36e3	2.48e3	4.84e3	40.62	0.95	NO	0.949	0.161	2.40e4	1662	14.4	2.93e4	1785	16.4	bb	bb
4	Total-heptafurans	1.05e5	1.03e5	2.07e5	39.26	1.02	NO	38.036	0.141	1.33e6	1662	798.1	1.34e6	1785	749.6	bd	bb

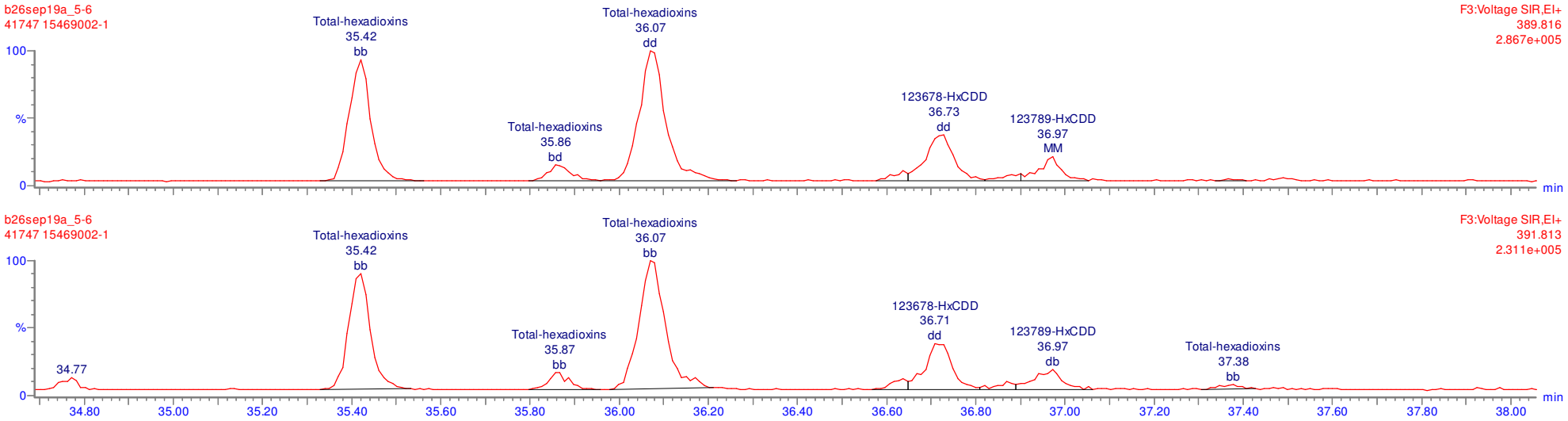
MANUAL INTEGRATION
METHOD 1613
HRP763_1



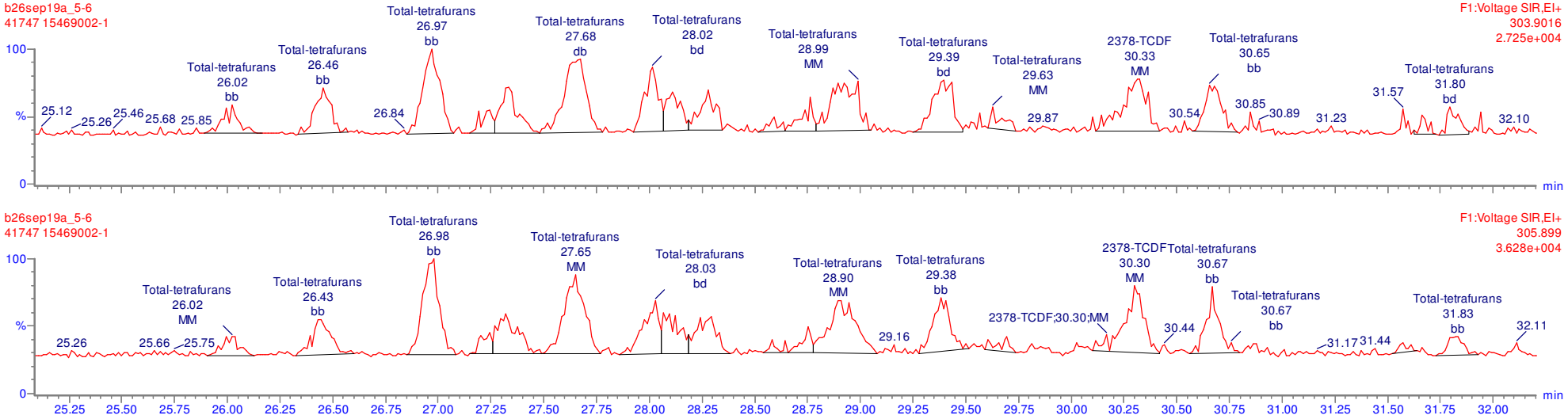
MANUAL INTEGRATION
METHOD 1613
HRP763_1



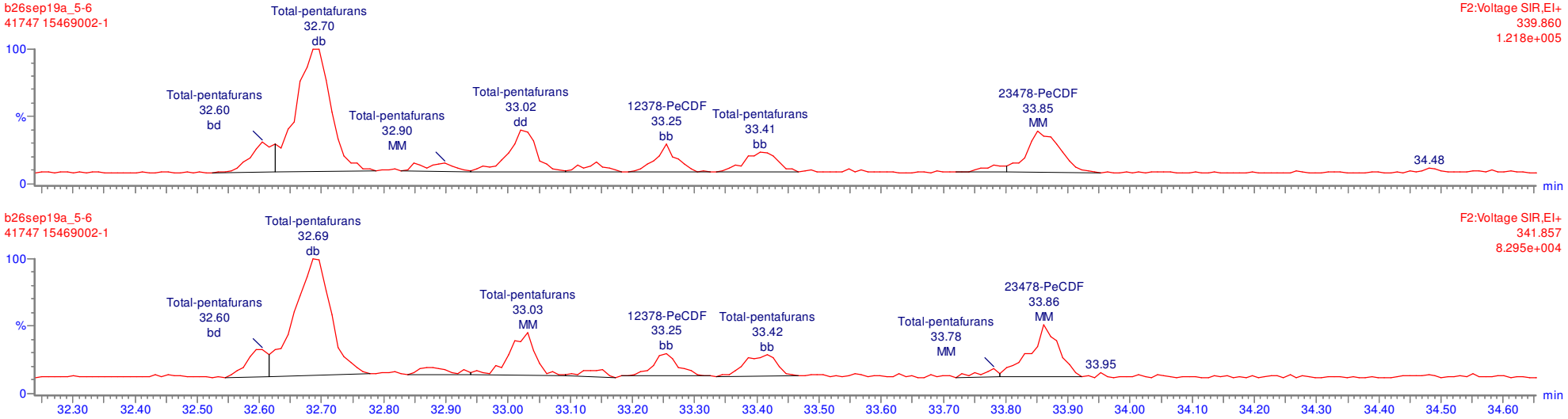
MANUAL INTEGRATION
METHOD 1613
HRP763_1



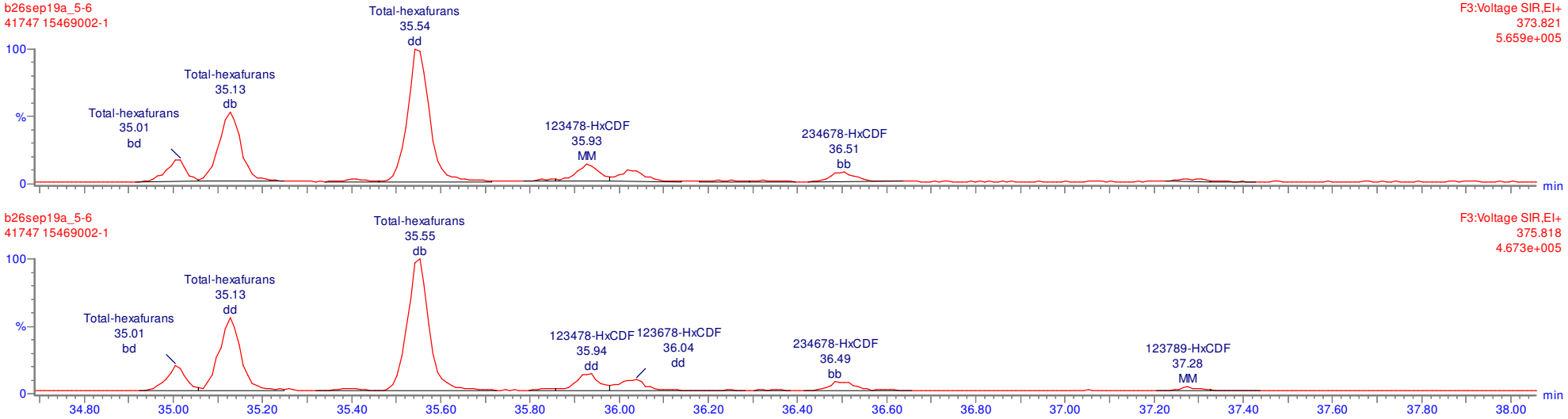
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



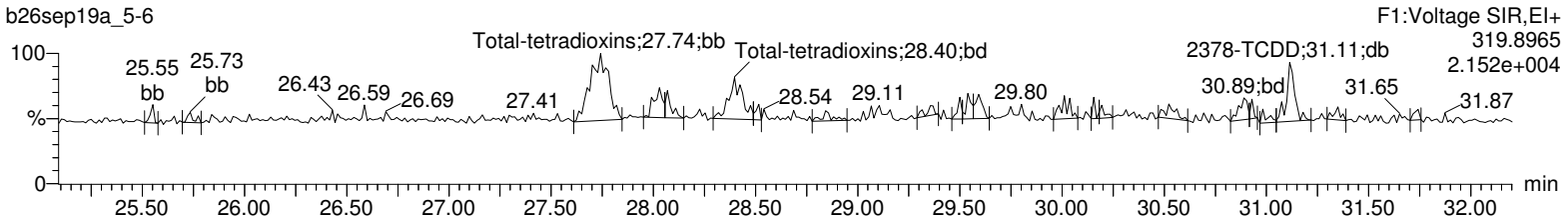
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

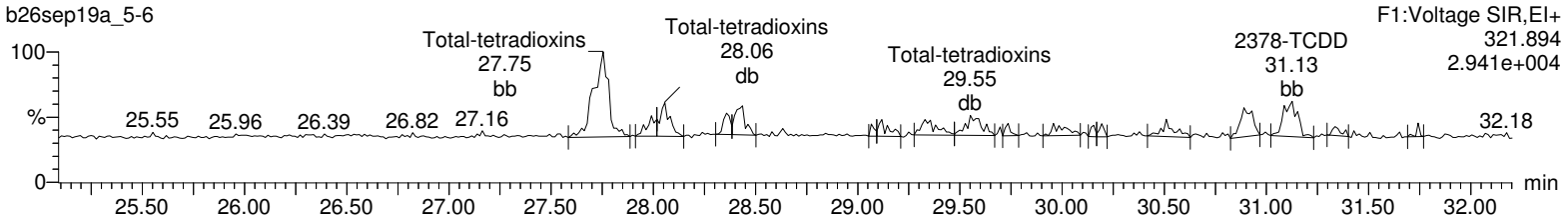
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

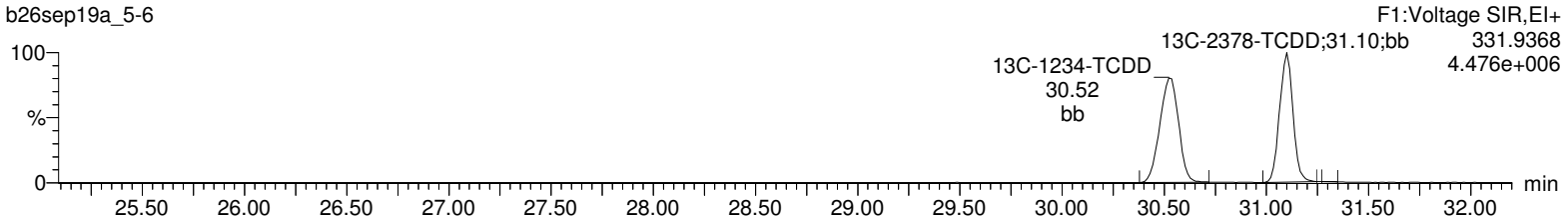
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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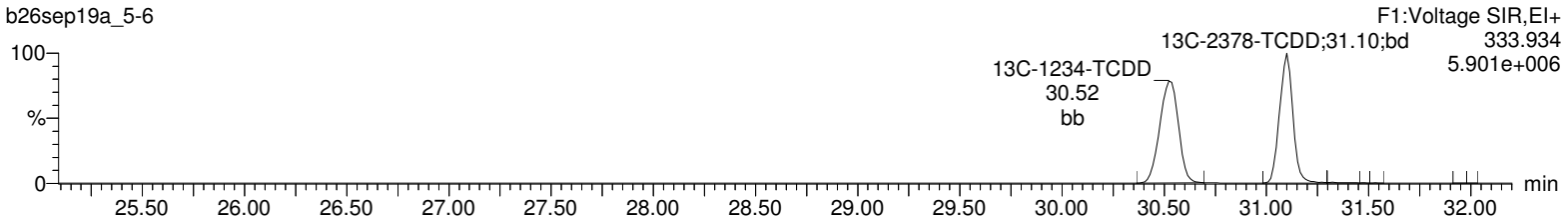
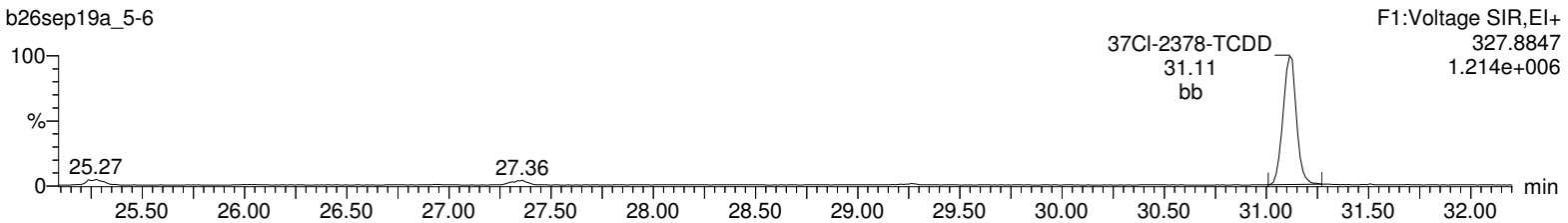
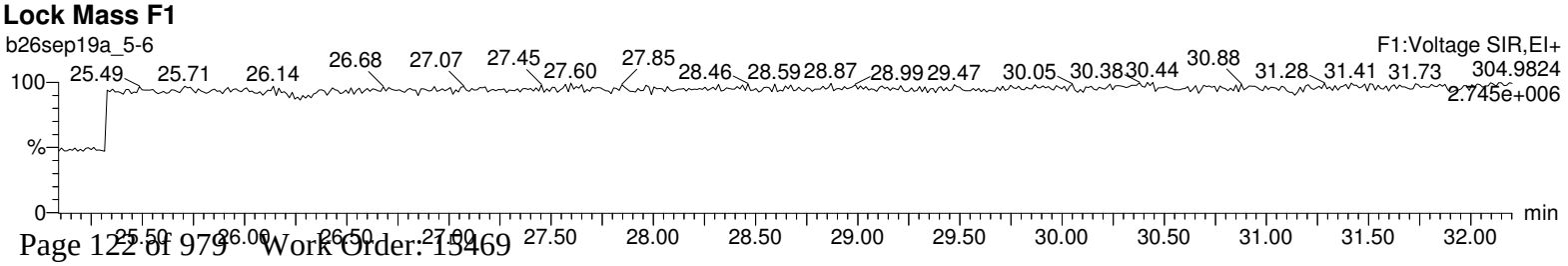


37Cl-2378-TCDD



Lock Mass F1



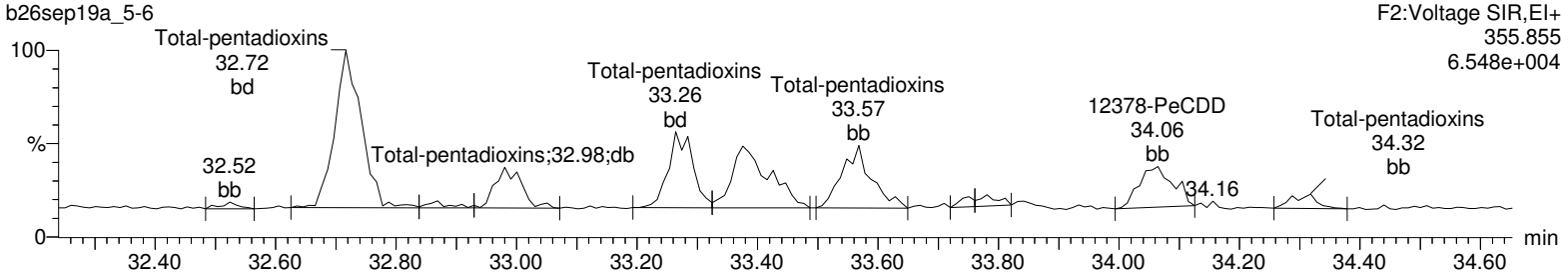
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

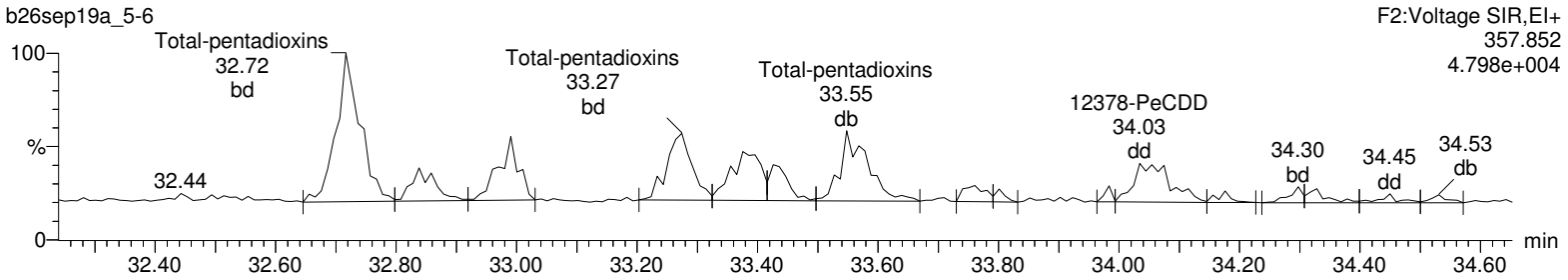
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

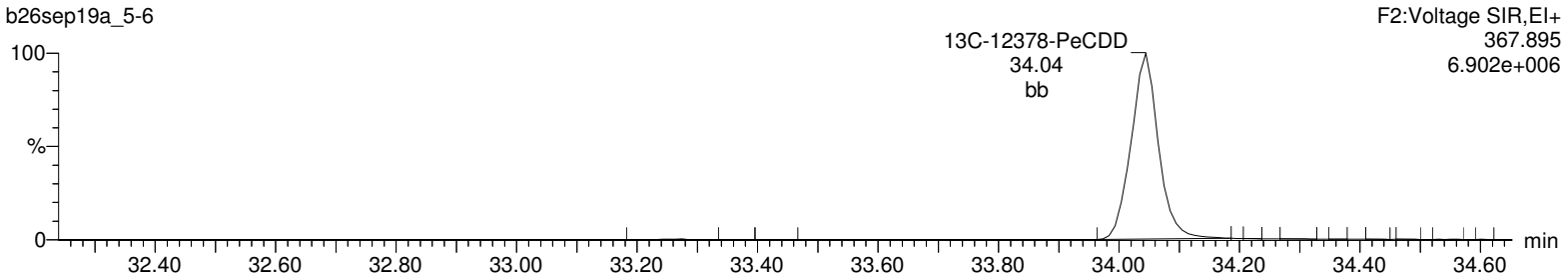
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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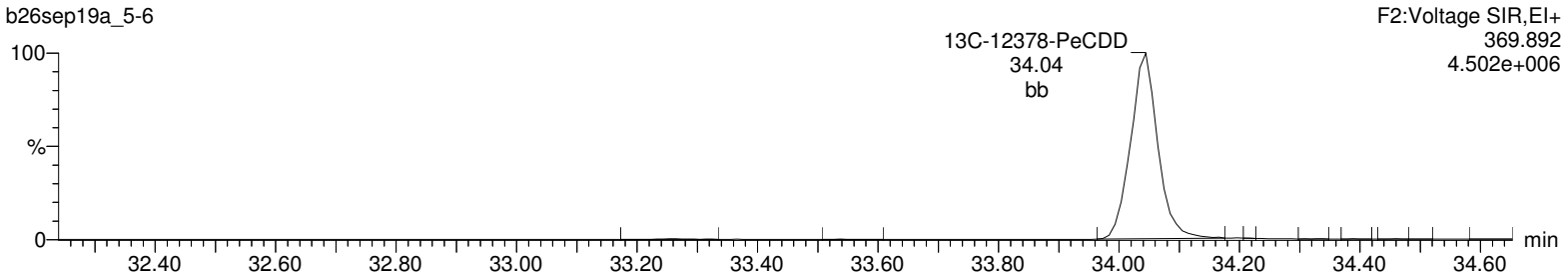
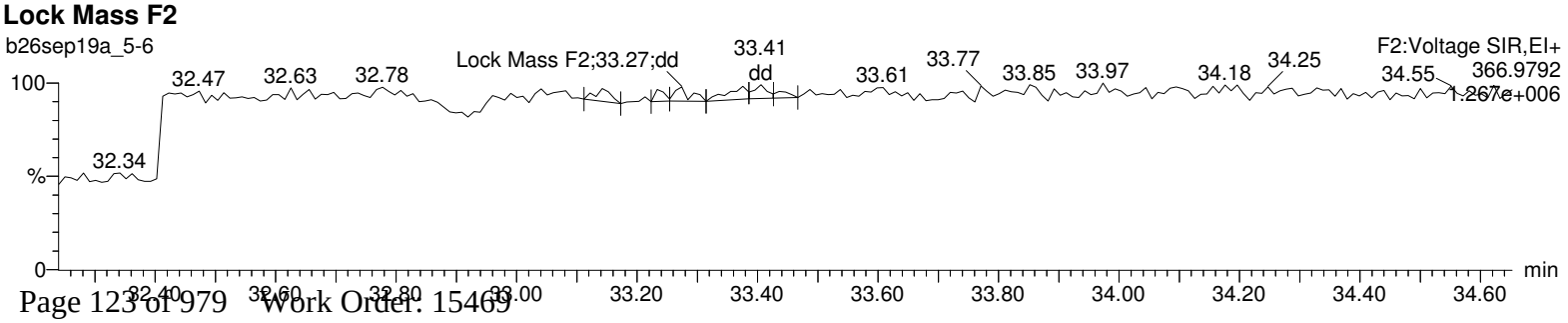


Lock Mass F2



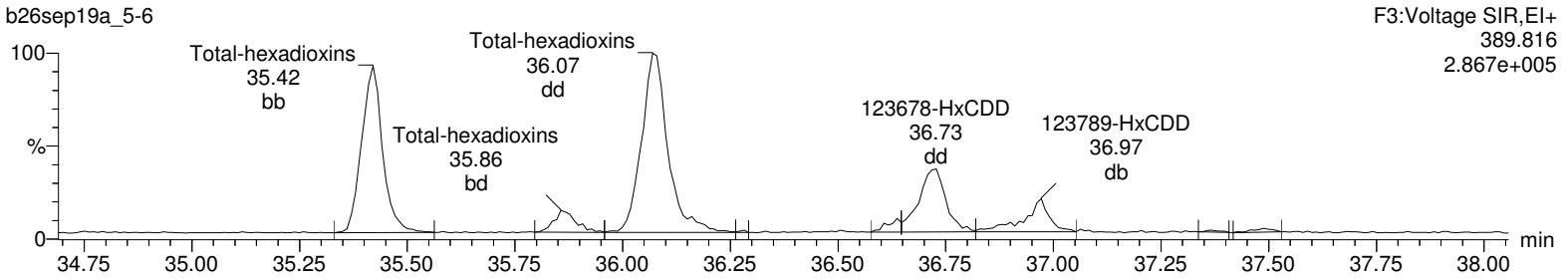
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

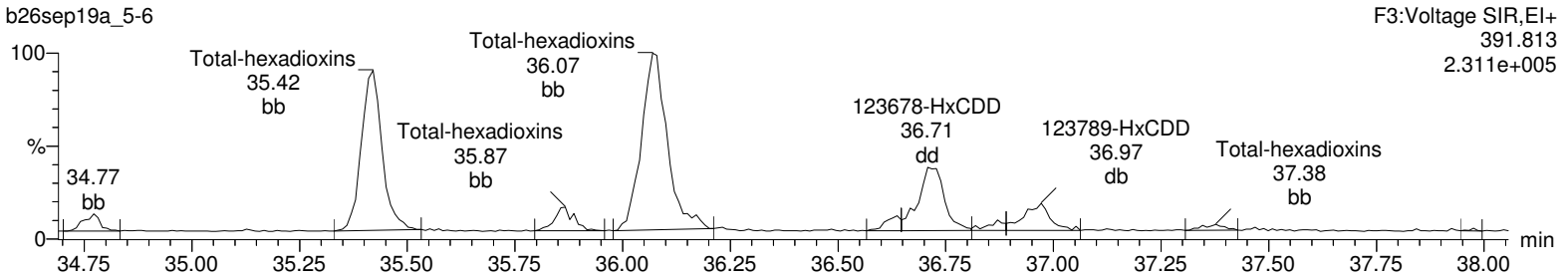
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

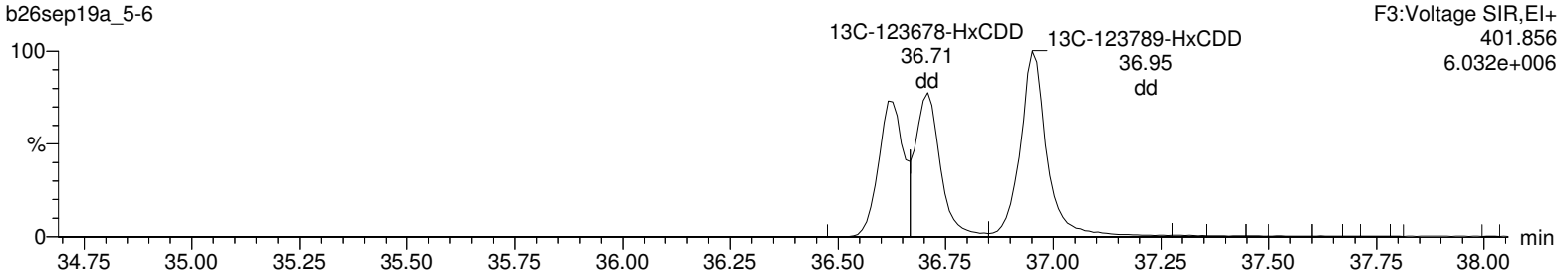
Total-hexadioxins



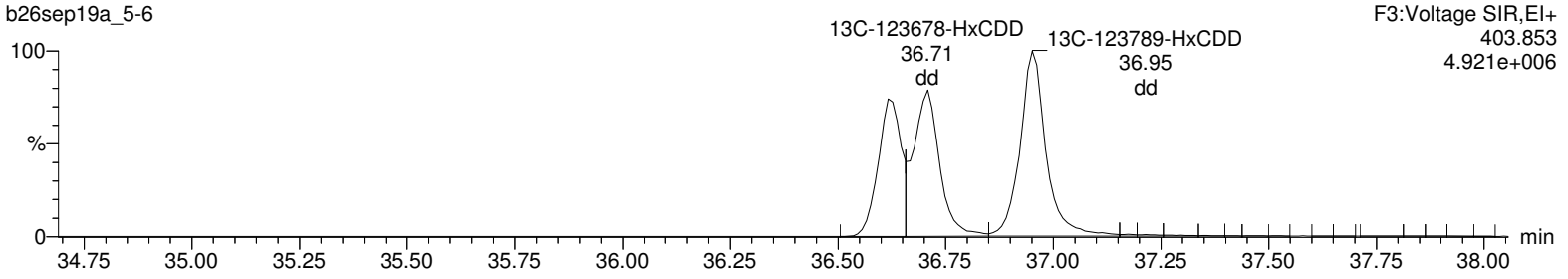
Total-hexadioxins



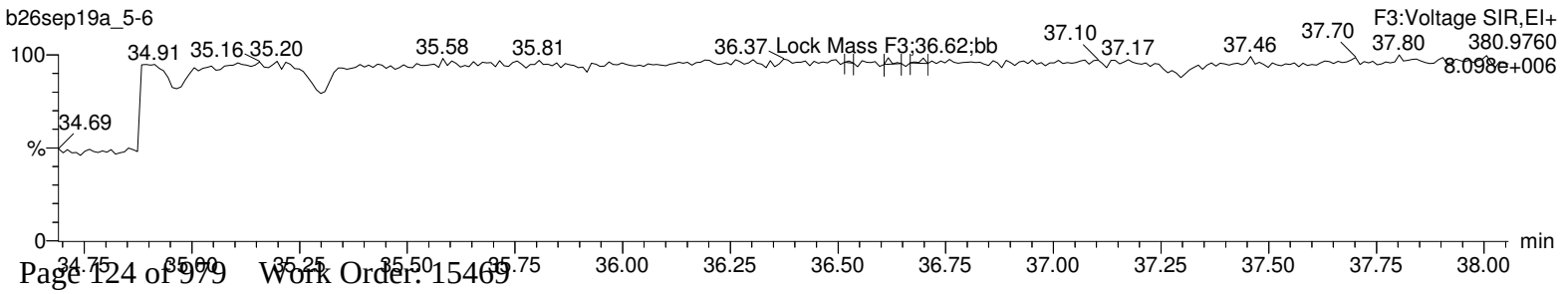
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



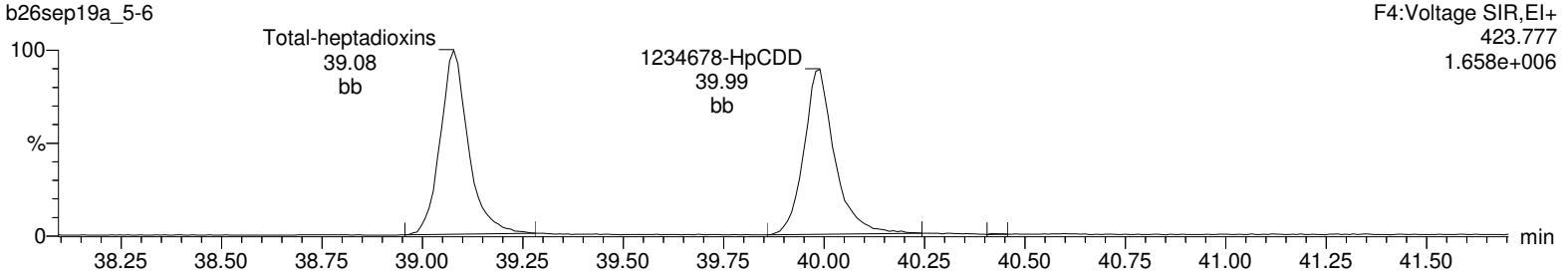
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

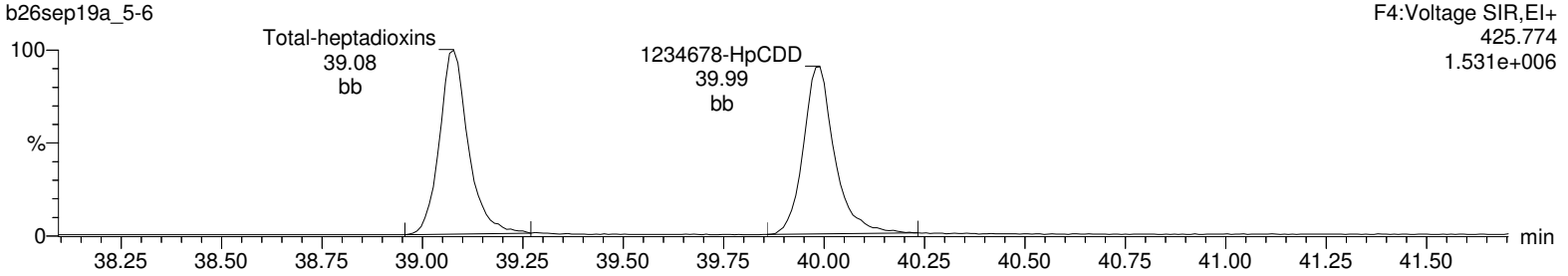
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

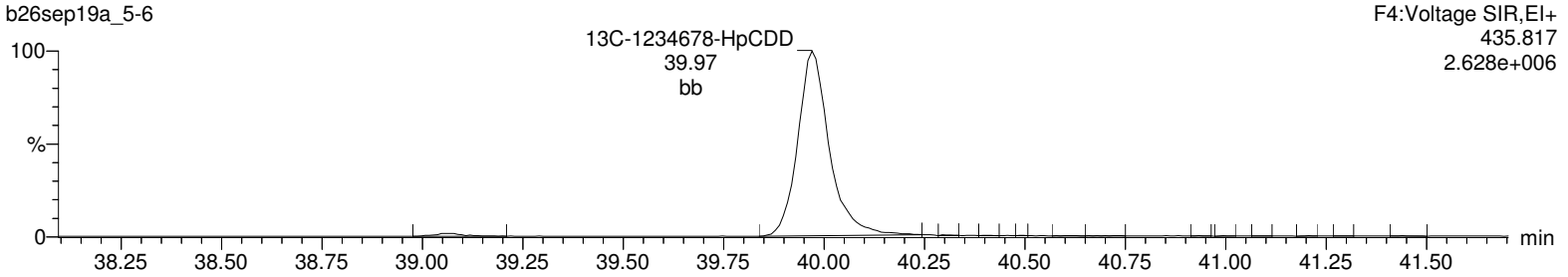
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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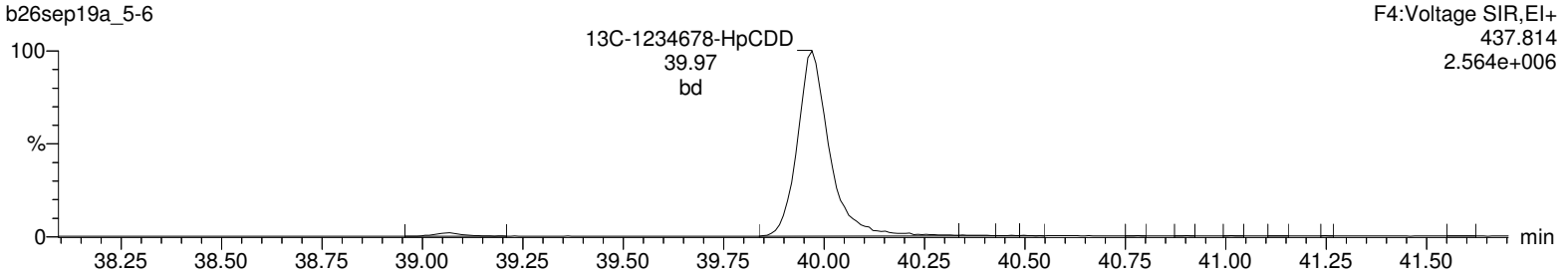
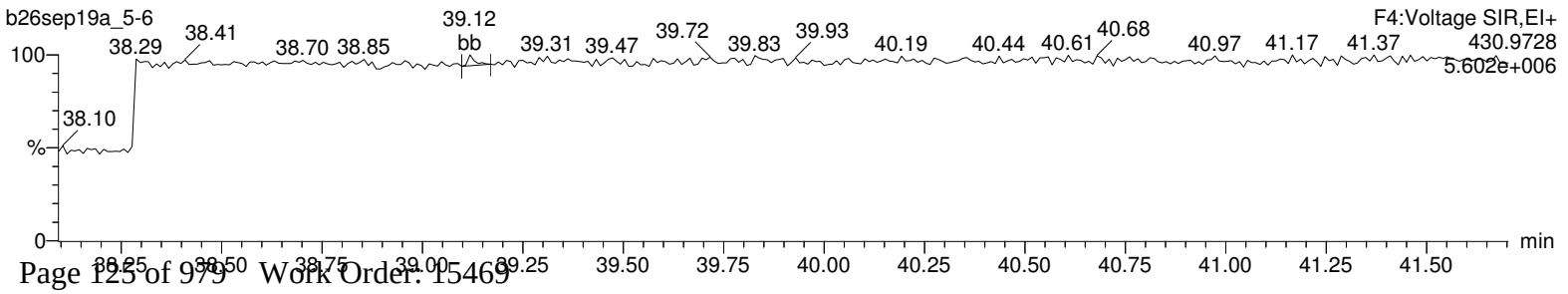


Lock Mass F4



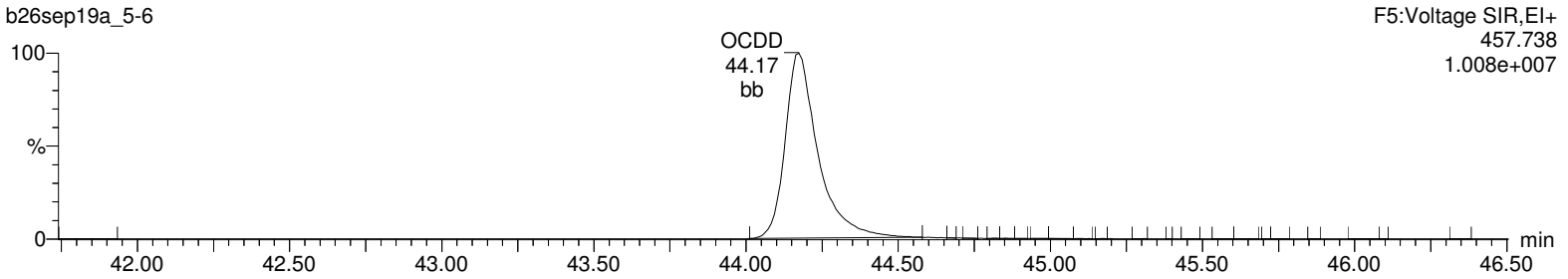
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

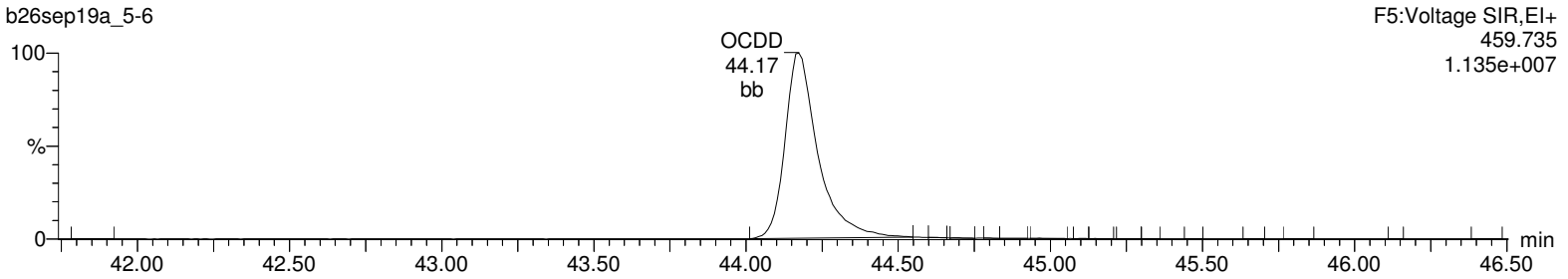
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

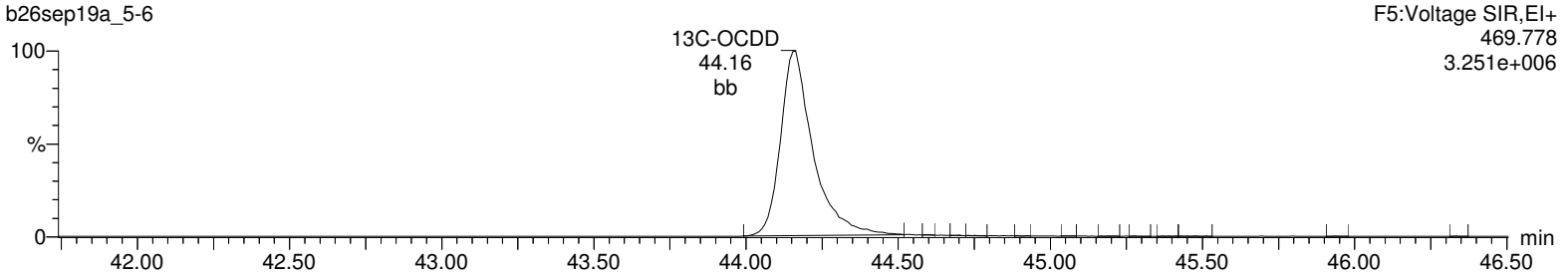
OCDD



OCDD



13C-OCDD



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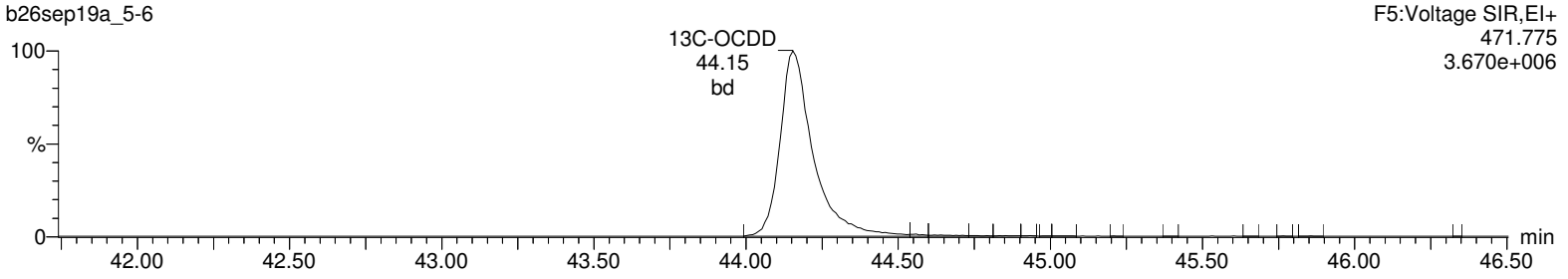
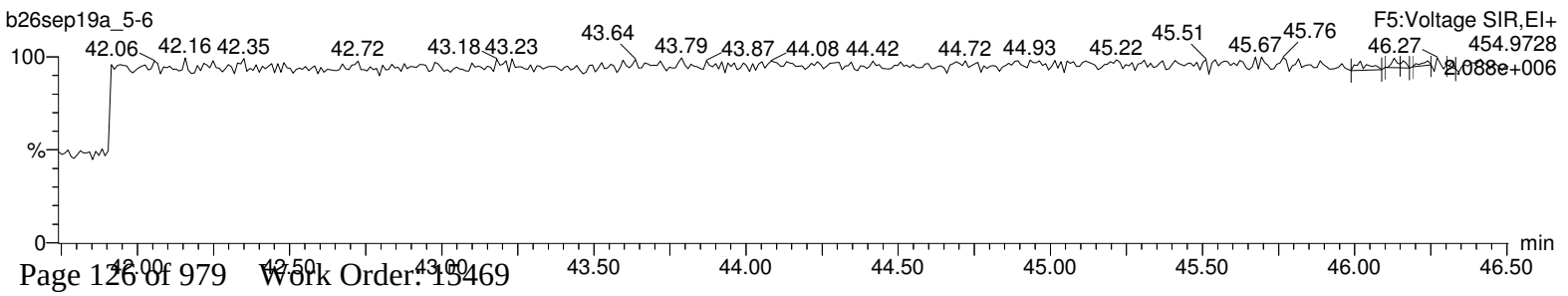


Lock Mass F5



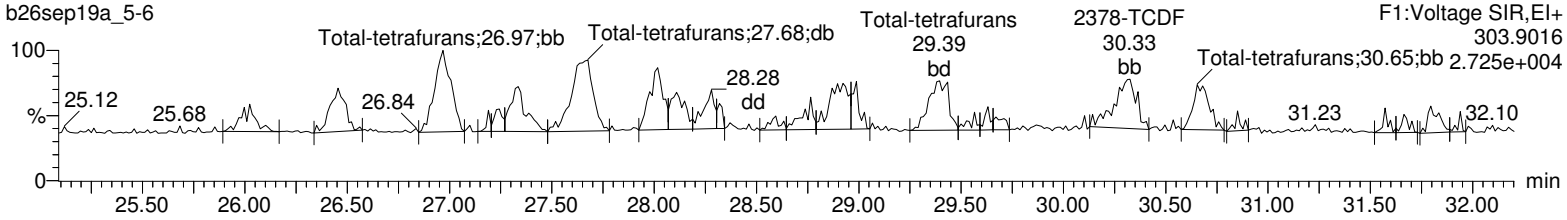
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

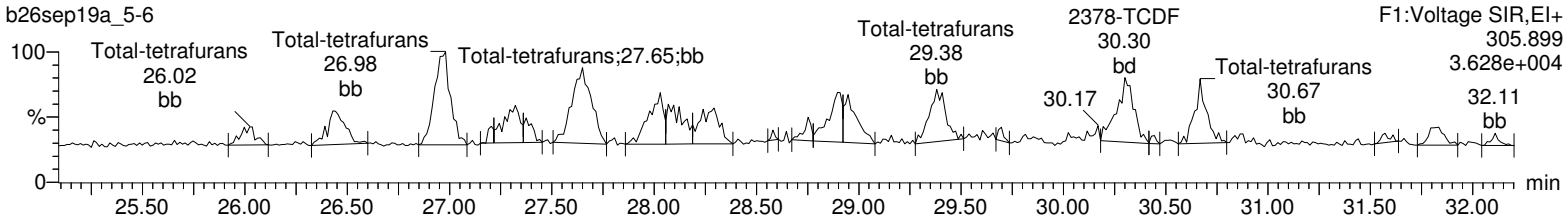
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

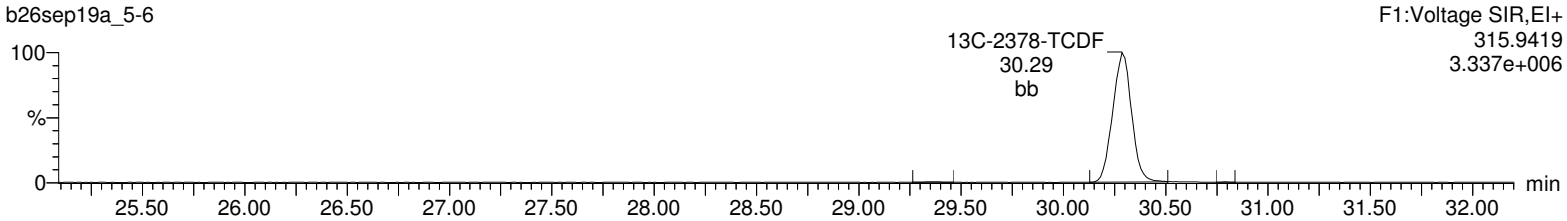
Total-tetrafurans



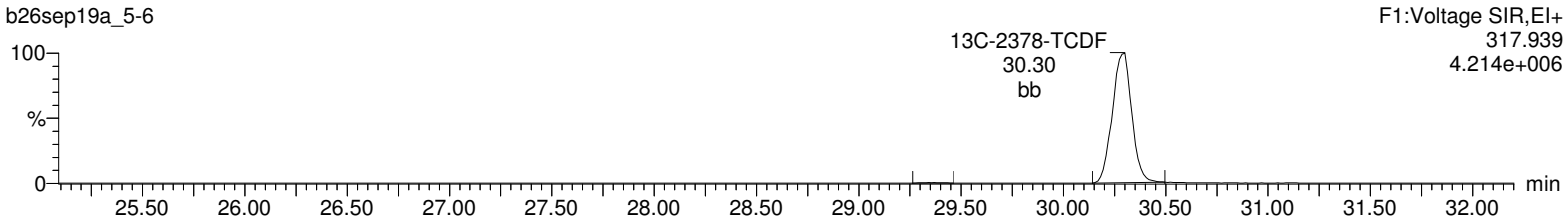
Total-tetrafurans



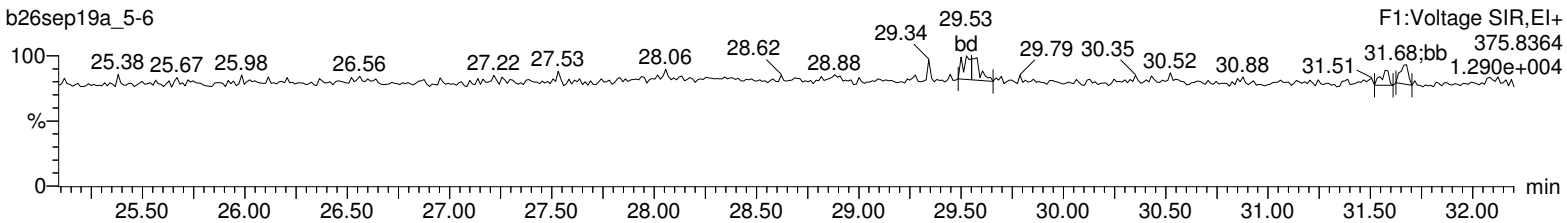
13C-2378-TCDF



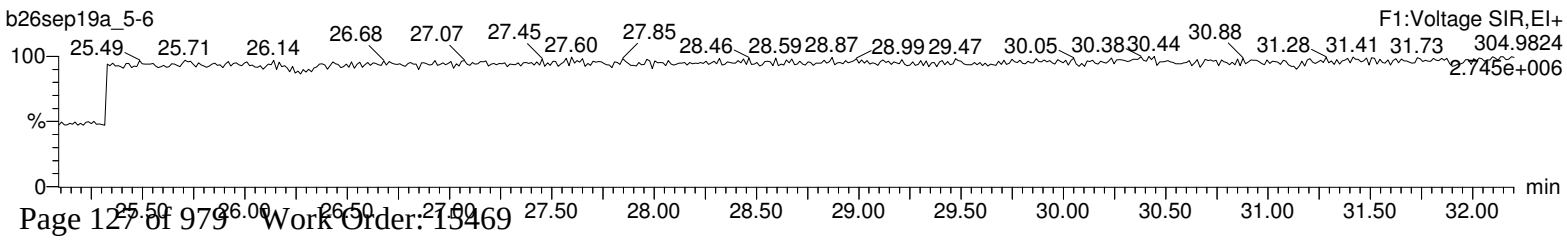
13C-2378-TCDF



HxDPE



Lock Mass F1



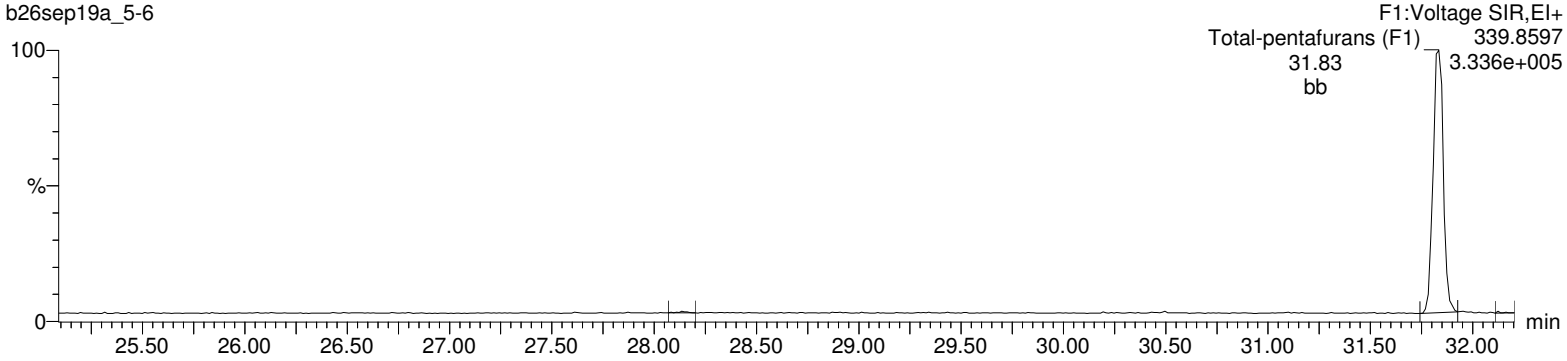
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

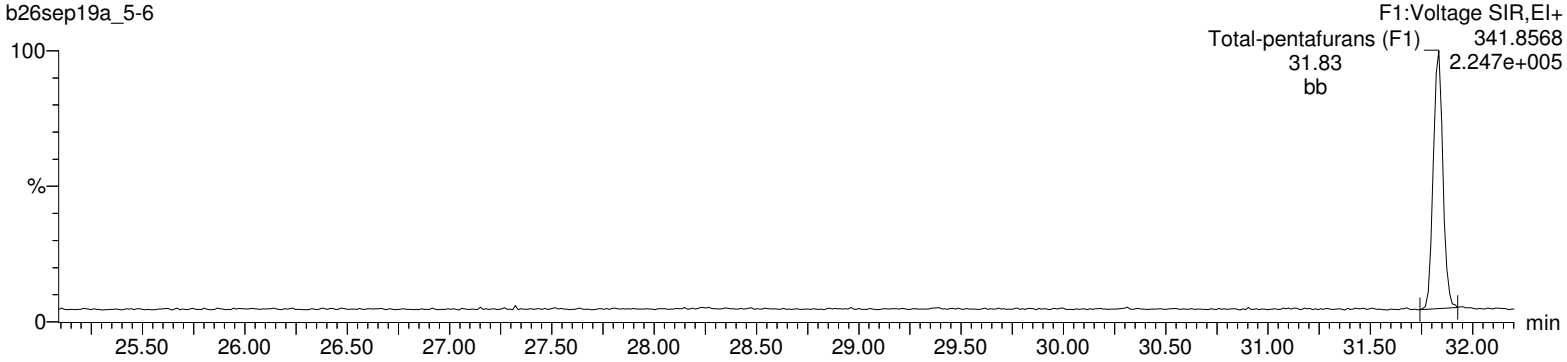
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

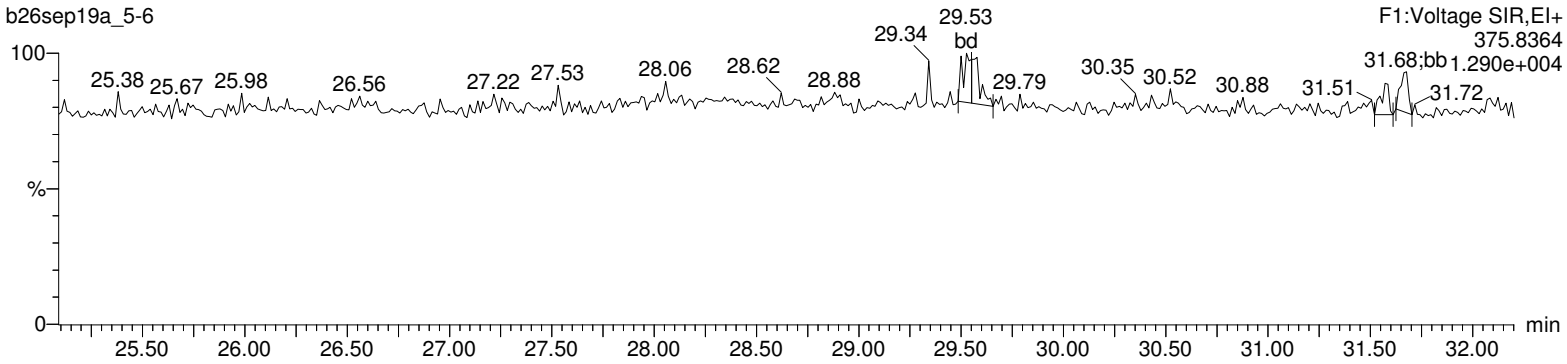
Total-pentafurans (F1)



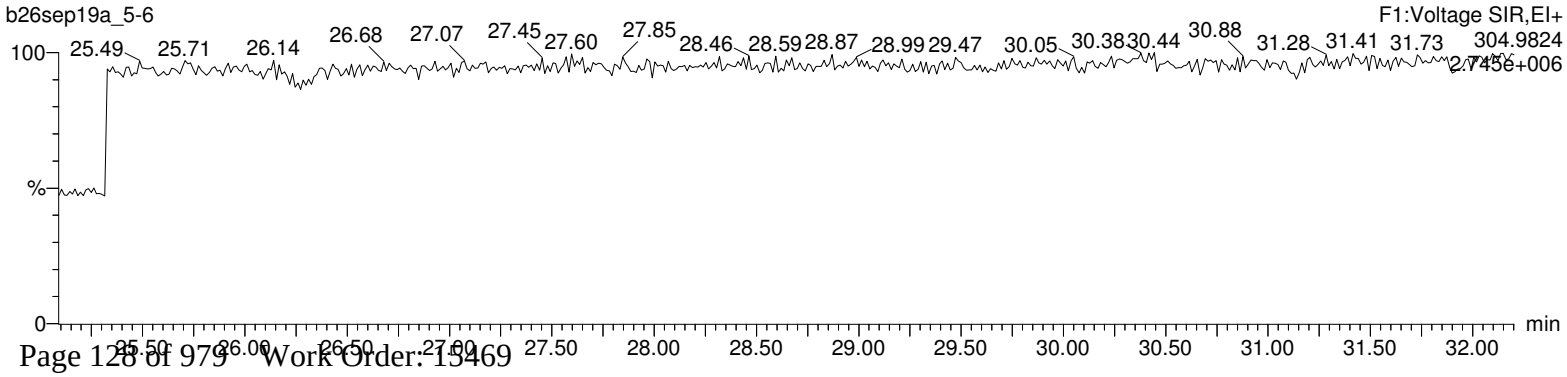
Total-pentafurans (F1)



HxDPE



Lock Mass F1



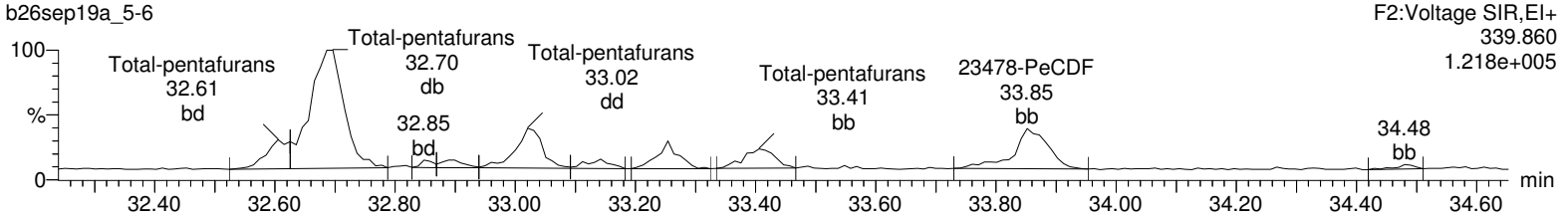
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

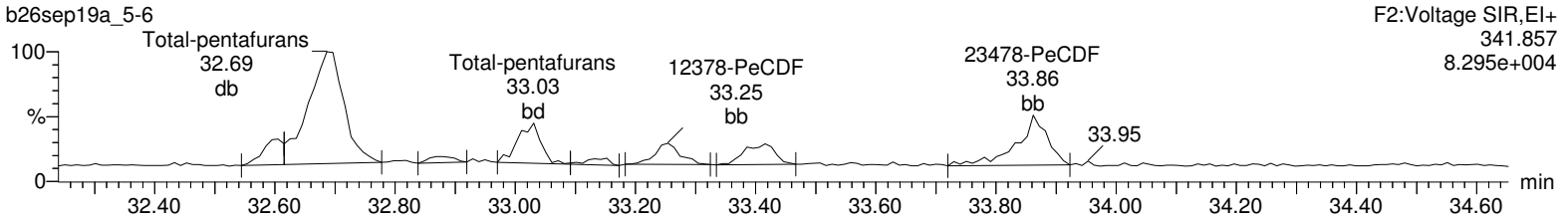
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

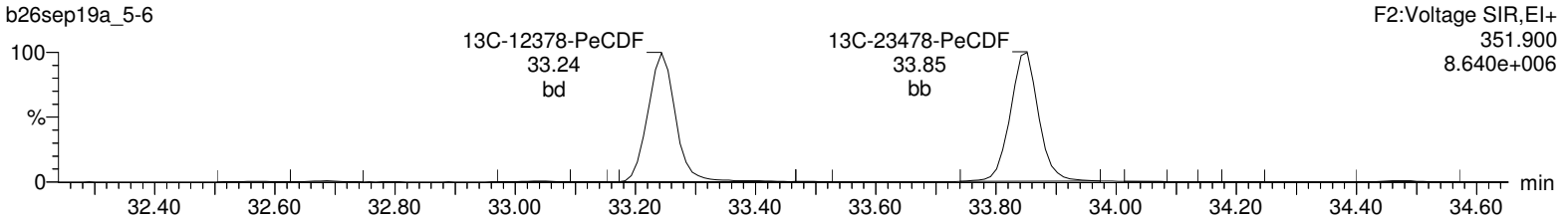
Total-pentafurans



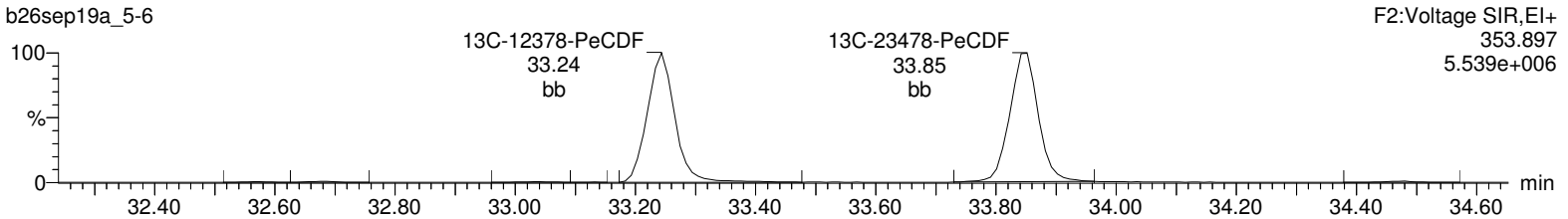
Total-pentafurans



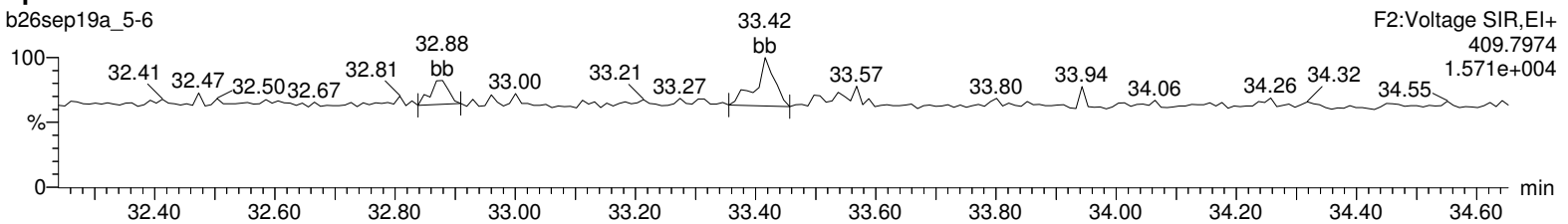
13C-12378-PeCDF



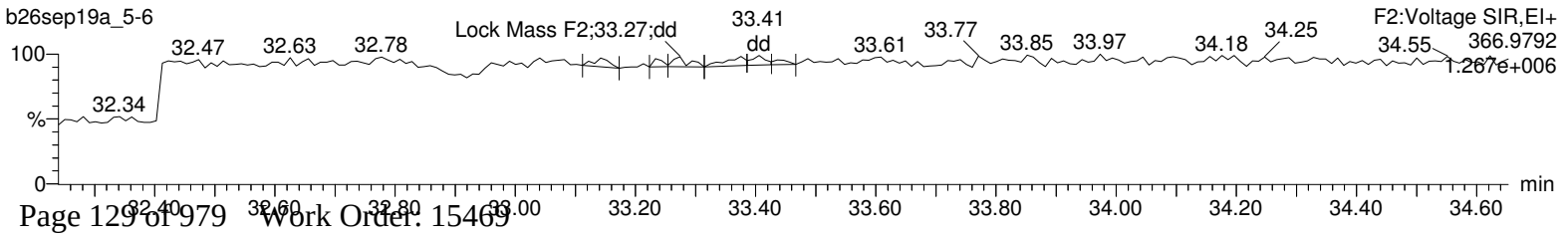
13C-12378-PeCDF



HpDPE



Lock Mass F2



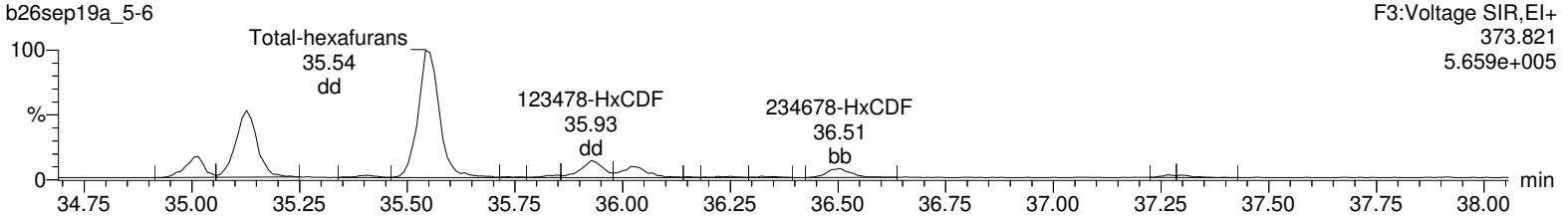
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

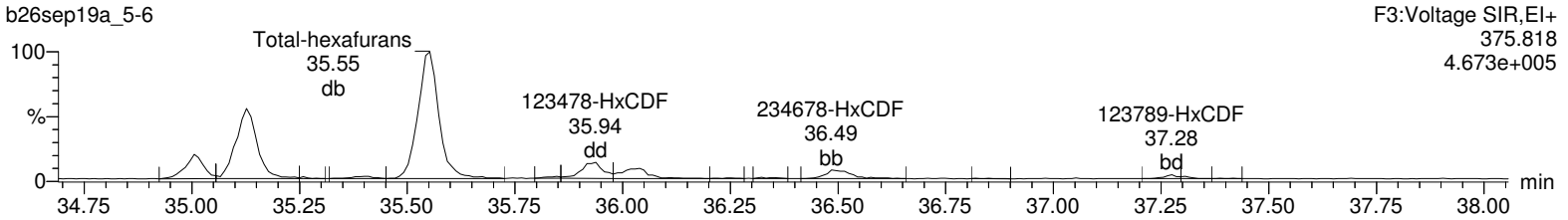
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

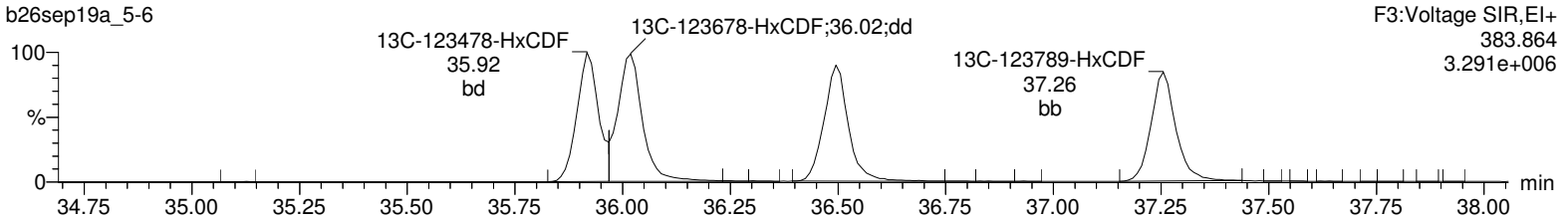
Total-hexafurans



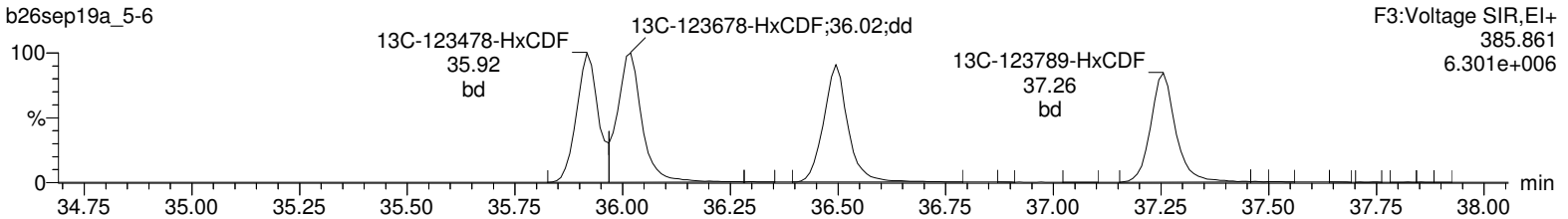
Total-hexafurans



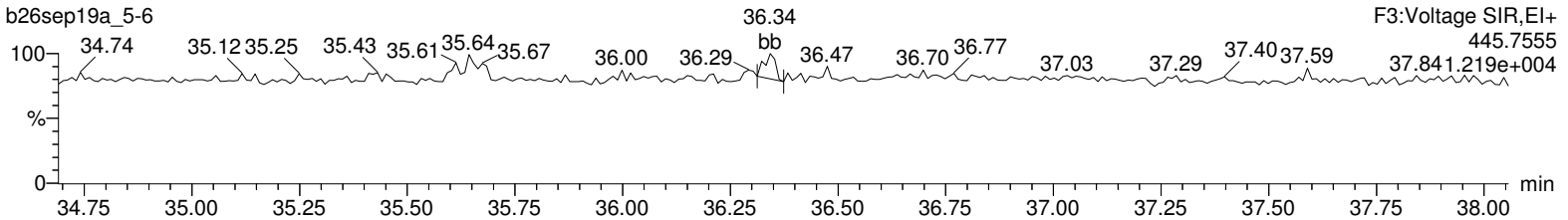
13C-123478-HxCDF



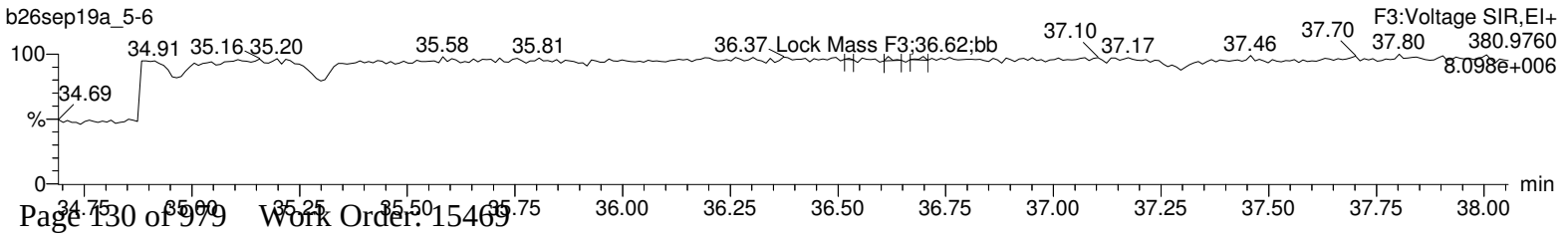
13C-123478-HxCDF



OcDPE



Lock Mass F3



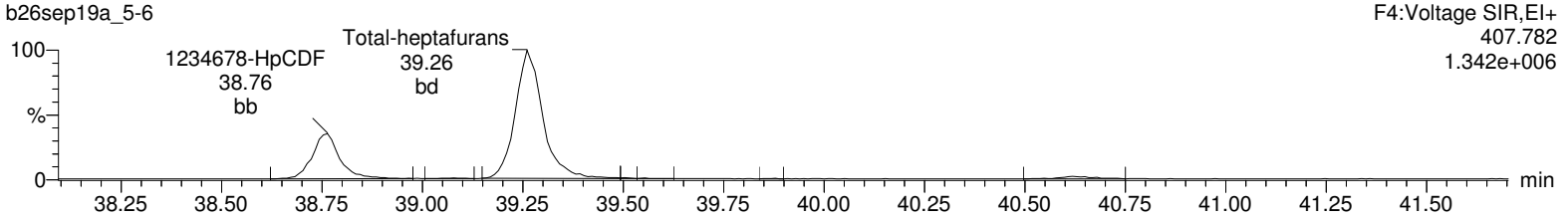
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

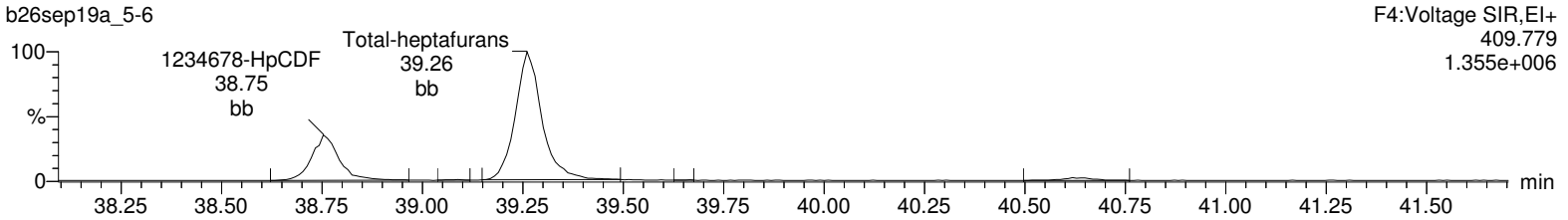
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

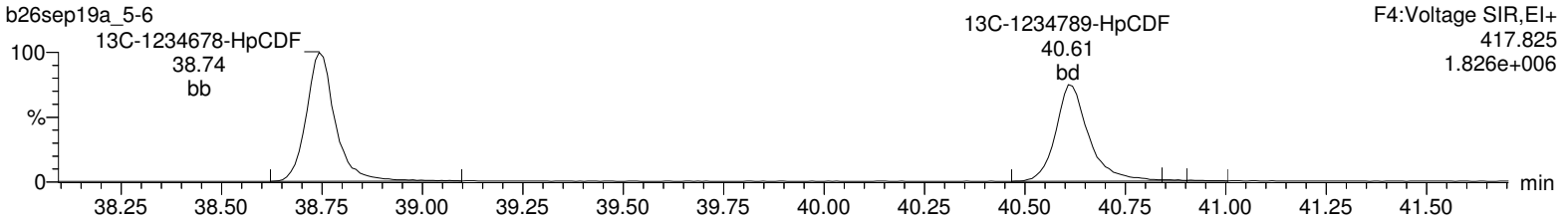
Total-heptafurans



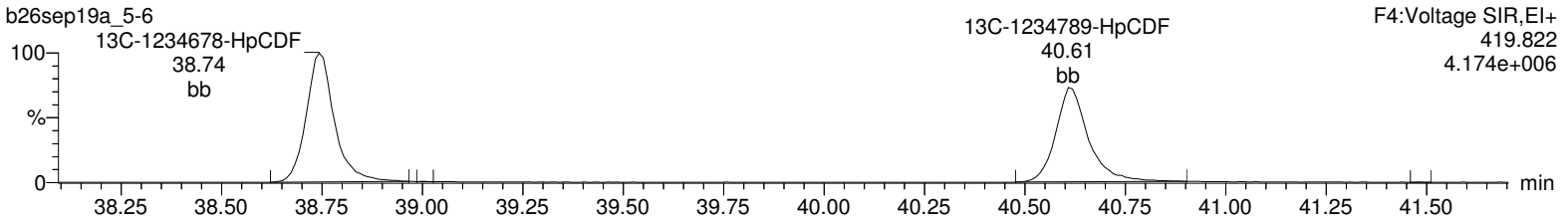
Total-heptafurans



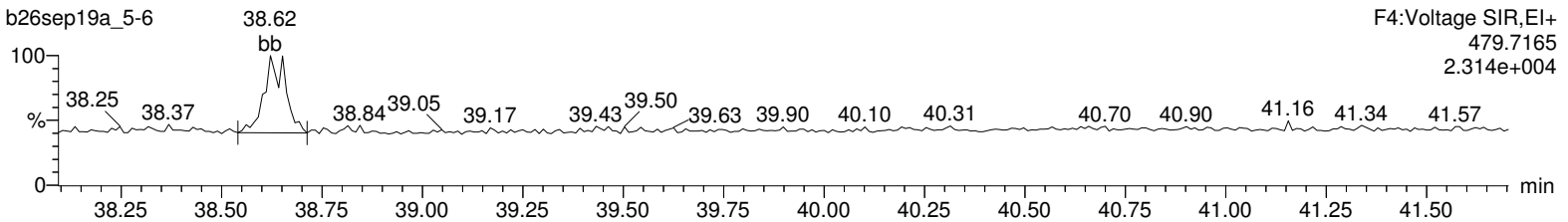
13C-1234678-HpCDF



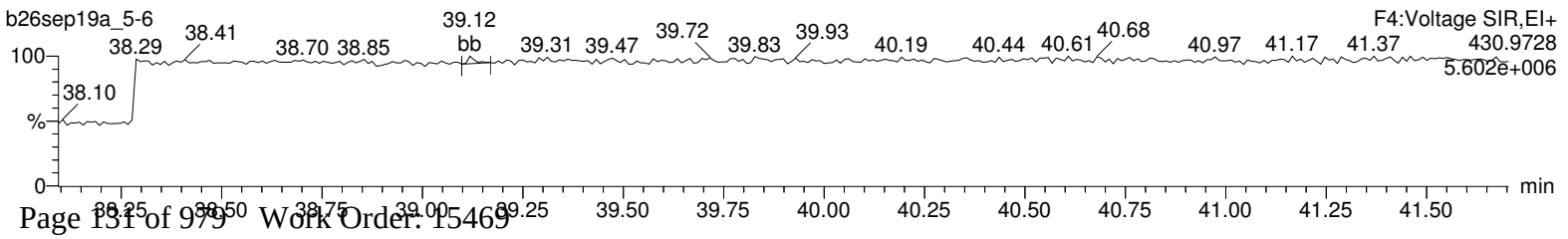
13C-1234678-HpCDF



NoDPE



Lock Mass F4



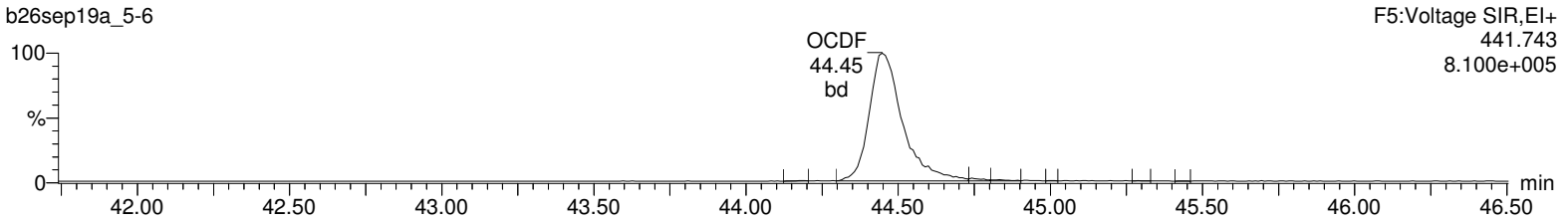
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

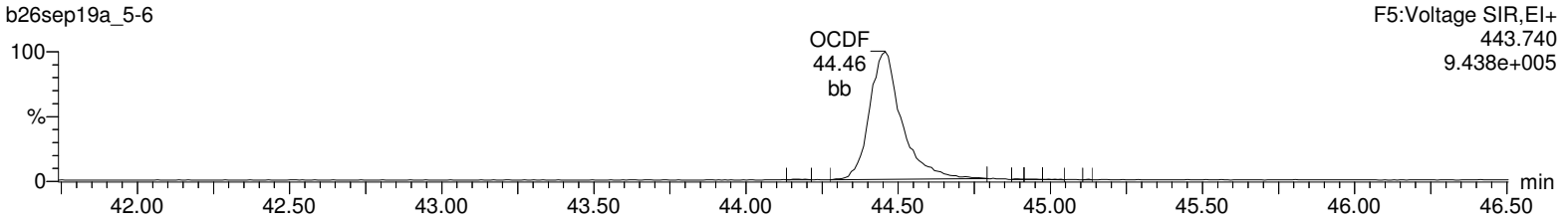
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-6, Date: 28-Sep-2019, Time: 03:51:50, ID: 15469002-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

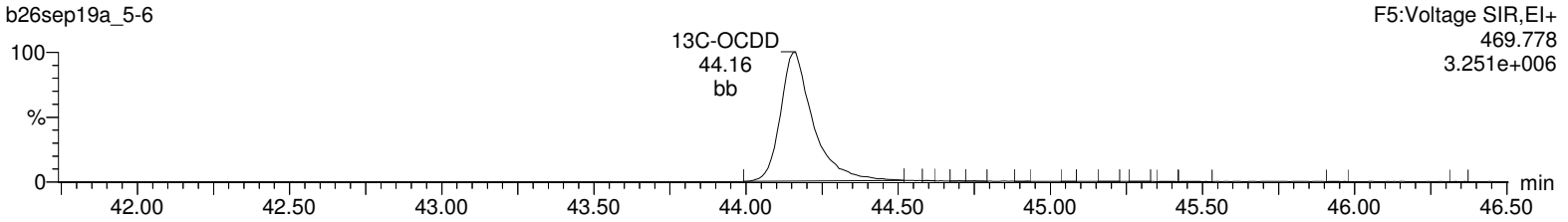
OCDF



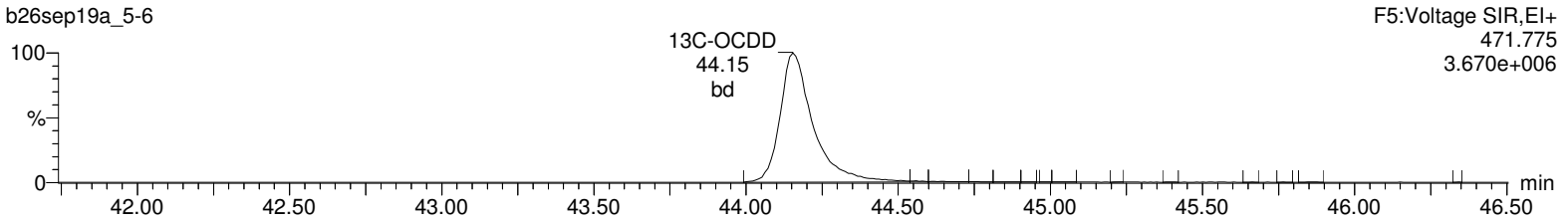
OCDF



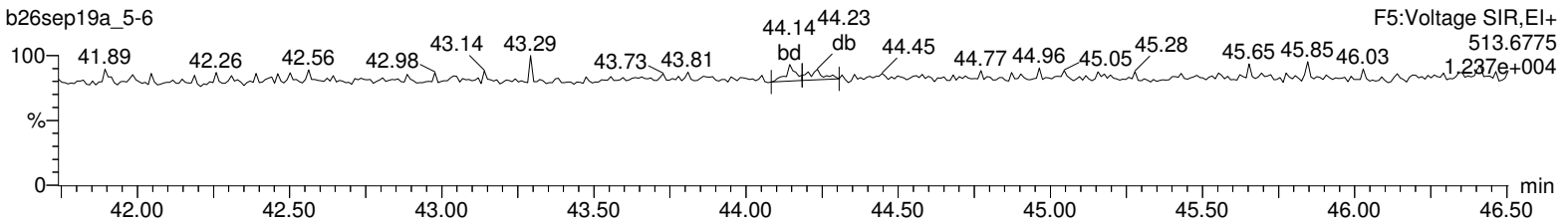
13C-OCDD



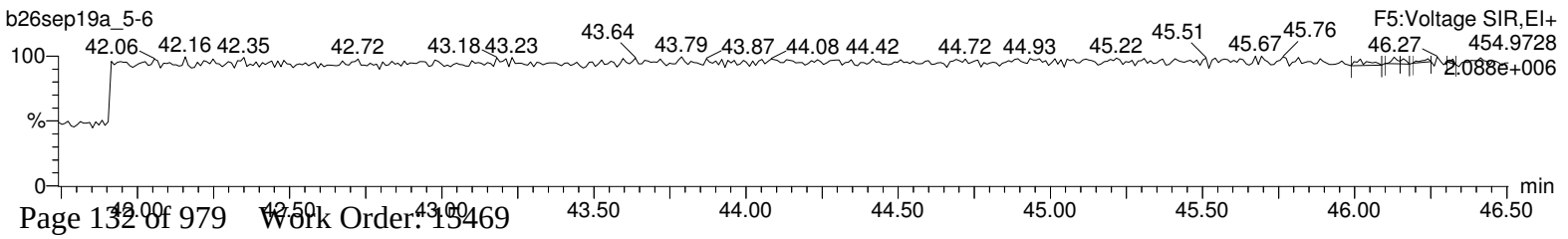
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469003**	**Date Collected:**	**08/28/2019 10:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**44.6**
Client ID:	**J6-SC1b-40to50-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 04:40**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK	0.297	pg/g	0.149	0.972
40321-76-4	1,2,3,7,8-PeCDD	J	0.533	pg/g	0.147	4.86
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.632	pg/g	0.235	4.86
57653-85-7	1,2,3,6,7,8-HxCDD	J	4.00	pg/g	0.237	4.86
19408-74-3	1,2,3,7,8,9-HxCDD	J	1.82	pg/g	0.241	4.86
35822-46-9	1,2,3,4,6,7,8-HpCDD		95.0	pg/g	0.665	4.86
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1220	pg/g	1.01	9.72
51207-31-9	2,3,7,8-TCDF	BJ	0.746	pg/g	0.420	0.972
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.484	pg/g	0.155	4.86
57117-31-4	2,3,4,7,8-PeCDF	JK	1.03	pg/g	0.140	4.86
70648-26-9	1,2,3,4,7,8-HxCDF	J	2.03	pg/g	0.143	4.86
57117-44-9	1,2,3,6,7,8-HxCDF	J	1.62	pg/g	0.148	4.86
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	1.28	pg/g	0.155	4.86
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.550	pg/g	0.183	4.86
67562-39-4	1,2,3,4,6,7,8-HpCDF		18.9	pg/g	0.247	4.86
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	1.44	pg/g	0.317	4.86
39001-02-0	1,2,3,4,6,7,8,9-OCDF		59.5	pg/g	0.410	9.72
41903-57-5	Total TeCDD	JK	1.57	pg/g	0.149	0.972
36088-22-9	Total PeCDD	JK	4.79	pg/g	0.147	4.86
34465-46-8	Total HxCDD	J	29.5	pg/g	0.235	4.86
37871-00-4	Total HpCDD		196	pg/g	0.665	4.86
30402-14-3	Total TeCDF	JK	6.20	pg/g	0.420	0.972
30402-15-4	Total PeCDF	JK	14.4	pg/g	0.0614	4.86
55684-94-1	Total HxCDF	JK	30.7	pg/g	0.143	4.86
38998-75-3	Total HpCDF	J	72.3	pg/g	0.247	4.86
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		3.96	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		3.96	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	194	pg/g	83.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		186	194	pg/g	95.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		165	194	pg/g	85.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		150	194	pg/g	77.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		198	194	pg/g	102	(23%-140%)
13C-OCDD		422	389	pg/g	108	(17%-157%)
13C-2,3,7,8-TCDF		150	194	pg/g	77.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		174	194	pg/g	89.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		173	194	pg/g	89.1	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		162	194	pg/g	83.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		138	194	pg/g	70.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		149	194	pg/g	76.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		167	194	pg/g	86.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469003**	**Date Collected:**	**08/28/2019 10:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**44.6**
Client ID:	**J6-SC1b-40to50-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 04:40**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		161	194	pg/g	82.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		197	194	pg/g	101	(26%-138%)
37Cl-2,3,7,8-TCDD		19.7	19.4	pg/g	101	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

K **Estimated Maximum Possible Concentration**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:32:41 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:33:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.80e2	6.62e2	1.04e3	31.13	1.001	0.57	YES	0.153	0.0769	5.48e3	1377	4.0	9.78e3	1413	6.9	MM	MM
2	12378-PeCDD	7.95e2	5.97e2	1.39e3	34.05	1.000	1.33	NO	0.274	0.0756	1.31e4	1932	6.8	8.94e3	836	10.7	MM	MM
3	123478-HxCDD	7.96e2	6.95e2	1.49e3	36.65	1.001	1.15	NO	0.325	0.121	1.77e4	1606	11.0	1.62e4	2069	7.8	MM	bd
4	123678-HxCDD	5.91e3	4.97e3	1.09e4	36.71	1.000	1.19	NO	2.058	0.122	9.18e4	1606	57.2	6.69e4	2069	32.3	MM	dd
5	123789-HxCDD	2.53e3	2.00e3	4.53e3	36.97	1.007	1.26	NO	0.938	0.124	3.94e4	1606	24.5	2.88e4	2069	13.9	db	MM
6	1234678-HpCDD	1.12e5	1.06e5	2.18e5	39.98	1.000	1.06	NO	48.883	0.342	1.31e6	3645	358.3	1.24e6	3159	392.7	bb	bb
7	OCDD	1.18e6	1.31e6	2.49e6	44.17	1.000	0.90	NO	628.334	0.521	9.53e6	2960	3221.1	1.08e7	3614	2982.9	bd	bb
8	2378-TCDF	1.15e3	1.61e3	2.75e3	30.30	1.000	0.72	NO	0.384	0.216	1.02e4	2457	4.1	1.50e4	3135	4.8	db	MM
9	12378-PeCDF	9.47e2	7.44e2	1.69e3	33.25	1.000	1.27	YES	0.249	0.0799	2.06e4	1648	12.5	1.42e4	2285	6.2	bb	db
10	23478-PeCDF	2.22e3	1.72e3	3.94e3	33.86	1.000	1.29	YES	0.530	0.0720	3.47e4	1648	21.1	2.83e4	2285	12.4	db	MM
11	123478-HxCDF	3.54e3	3.05e3	6.60e3	35.93	1.000	1.16	NO	1.043	0.0737	6.37e4	1457	43.7	5.83e4	1671	34.9	MM	dd
12	123678-HxCDF	2.99e3	2.43e3	5.41e3	36.03	1.000	1.23	NO	0.834	0.0760	4.95e4	1457	33.9	3.59e4	1671	21.5	db	db
13	234678-HxCDF	2.33e3	1.88e3	4.22e3	36.51	1.000	1.24	NO	0.660	0.0800	3.69e4	1457	25.3	2.87e4	1671	17.2	bb	bb
14	123789-HxCDF	8.83e2	7.27e2	1.61e3	37.28	1.001	1.21	NO	0.283	0.0944	1.32e4	1457	9.1	1.11e4	1671	6.7	bb	MM
15	1234678-HpCDF	2.76e4	2.74e4	5.50e4	38.76	1.001	1.01	NO	9.712	0.127	3.53e5	1917	184.3	3.33e5	1631	204.3	bb	bb
16	1234789-HpCDF	2.05e3	1.72e3	3.77e3	40.62	1.000	1.19	NO	0.741	0.163	2.76e4	1917	14.4	1.99e4	1631	12.2	bb	bb
17	OCDF	6.29e4	7.19e4	1.35e5	44.45	1.007	0.88	NO	30.605	0.211	5.10e5	1310	389.6	5.86e5	1657	354.0	bb	bb
18	13C-2378-TCDD	3.31e5	4.35e5	7.65e5	31.10	1.019	0.76	NO	83.079	0.142	4.40e6	2741	1606.8	5.77e6	2135	2700.7	bb	bb
19	13C-12378-PeCDD	3.58e5	2.39e5	5.97e5	34.04	1.115	1.50	NO	95.779	0.166	6.45e6	2235	2887.1	4.28e6	1613	2655.0	bb	bd
20	13C-123478-HxCDD	2.71e5	2.19e5	4.91e5	36.63	0.991	1.24	NO	85.033	0.185	4.50e6	2888	1560.0	3.61e6	3091	1166.5	bd	bd
21	13C-123678-HxCDD	3.28e5	2.69e5	5.97e5	36.71	0.993	1.22	NO	77.277	0.138	4.67e6	2888	1617.1	3.86e6	3091	1247.8	dd	dd
22	13C-1234678-HpCDD	2.40e5	2.32e5	4.72e5	39.97	1.082	1.03	NO	102.007	0.208	2.68e6	2906	921.5	2.65e6	2484	1069.0	bd	bd
23	13C-OCDD	4.05e5	4.61e5	8.66e5	44.15	1.195	0.88	NO	216.935	0.213	3.23e6	2168	1490.8	3.67e6	2586	1419.3	bd	bd
24	13C-2378-TCDF	3.46e5	4.57e5	8.03e5	30.29	0.992	0.76	NO	77.257	0.144	3.13e6	3304	946.6	4.15e6	2250	1844.9	bb	bb
25	13C-12378-PeCDF	4.57e5	2.92e5	7.49e5	33.24	1.089	1.57	NO	89.469	0.281	8.28e6	3880	2133.8	5.21e6	4861	1072.5	dd	dd
26	13C-23478-PeCDF	4.66e5	2.99e5	7.65e5	33.85	1.109	1.56	NO	89.074	0.274	8.57e6	3880	2208.0	5.42e6	4861	1114.3	bb	bb
27	13C-123478-HxCDF	1.88e5	3.69e5	5.57e5	35.92	0.972	0.51	NO	83.549	0.231	3.15e6	3667	859.1	6.14e6	4962	1237.9	bd	bd
28	13C-123678-HxCDF	2.09e5	4.07e5	6.16e5	36.02	0.975	0.51	NO	70.858	0.178	3.31e6	3667	903.9	6.38e6	4962	1286.2	db	dd
29	13C-234678-HxCDF	1.93e5	3.71e5	5.65e5	36.49	0.988	0.52	NO	76.461	0.209	2.96e6	3667	808.5	5.65e6	4962	1137.7	bd	bd
30	13C-123789-HxCDF	1.87e5	3.49e5	5.36e5	37.26	1.008	0.53	NO	86.029	0.248	2.72e6	3667	741.0	5.15e6	4962	1038.2	bd	bb
31	13C-1234678-HpCDF	1.46e5	3.30e5	4.75e5	38.74	1.048	0.44	NO	82.916	0.194	1.80e6	2257	797.0	4.05e6	3956	1023.6	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:32:41 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:33:35 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.28e5	2.87e5	4.15e5	40.61	1.099	0.44	NO	101.097	0.271	1.37e6	2257	605.7	3.05e6	3956	770.9	bb	bb
33	13C-1234-TCDD	3.49e5	4.52e5	8.00e5	30.52	0.000	0.77	NO	100.000	0.164	3.24e6	2741	1182.1	4.20e6	2135	1968.9	bb	bb
34	13C-123789-HxCDD	4.03e5	3.28e5	7.31e5	36.95	0.000	1.23	NO	100.000	0.146	5.63e6	2888	1950.6	4.59e6	3091	1485.7	dd	dd
35	37Cl-2378-TCDD	8.71e4		8.71e4	31.11	1.019			10.110	0.0411	1.12e6	1315	854.3				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:32:41 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:33:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.80e2	6.62e2	1.04e3	31.13	0.57	YES	0.153	0.0769	5.48e3	1377	4.0	9.78e3	1413	6.9	MM	MM
2	Total-tetradioxins	2.11e2	2.32e2	4.43e2	30.89	0.91	YES	0.065	0.0769	3.03e3	1377	2.2	3.19e3	1413	2.3	MM	bb
3	Total-tetradioxins	2.31e2	3.40e2	5.70e2	29.62	0.68	NO	0.084	0.0769	2.48e3	1377	1.8	3.60e3	1413	2.5	MM	db
4	Total-tetradioxins	2.87e2	4.35e2	7.22e2	28.44	0.66	NO	0.106	0.0769	3.65e3	1377	2.7	4.58e3	1413	3.2	bb	bb
5	Total-tetradioxins	1.08e3	1.51e3	2.59e3	27.70	0.72	NO	0.380	0.0769	1.06e4	1377	7.7	1.63e4	1413	11.5	bb	MM
6	Total-tetradioxins	5.08e2	6.53e2	1.16e3	28.02	0.78	NO	0.170	0.0769	3.81e3	1377	2.8	8.05e3	1413	5.7	MM	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	2.24e2	1.77e2	4.01e2	34.32	1.27	YES	0.079	0.0756	3.85e3	1932	2.0	3.53e3	836	4.2	bb	bb
2	12378-PeCDD	7.95e2	5.97e2	1.39e3	34.05	1.33	NO	0.274	0.0756	1.31e4	1932	6.8	8.94e3	836	10.7	MM	MM
3	Total-pentadioxins	1.67e2	9.23e1	2.60e2	33.78	1.82	YES	0.051	0.0756	3.81e3	1932	2.0	2.06e3	836	2.5	MM	bb
4	Total-pentadioxins	9.67e2	7.43e2	1.71e3	33.56	1.30	YES	0.337	0.0756	1.69e4	1932	8.8	1.28e4	836	15.4	bb	db
5	Total-pentadioxins	1.25e3	9.02e2	2.15e3	33.38	1.39	NO	0.424	0.0756	1.74e4	1932	9.0	1.12e4	836	13.5	db	MM
6	Total-pentadioxins	1.05e3	8.62e2	1.91e3	33.27	1.22	YES	0.376	0.0756	2.44e4	1932	12.6	1.57e4	836	18.8	bd	bd
7	Total-pentadioxins	6.74e2	4.27e2	1.10e3	32.99	1.58	NO	0.217	0.0756	1.37e4	1932	7.1	1.01e4	836	12.1	MM	bb
8	Total-pentadioxins	2.60e3	1.65e3	4.24e3	32.73	1.58	NO	0.836	0.0756	4.43e4	1932	22.9	3.18e4	836	38.1	bb	bd

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	5.38e2	3.78e2	9.15e2	36.89	1.42	NO	0.186	0.122	1.21e4	1606	7.6	7.99e3	2069	3.9	dd	MM
2	123678-HxCDD	5.91e3	4.97e3	1.09e4	36.71	1.19	NO	2.058	0.122	9.18e4	1606	57.2	6.69e4	2069	32.3	MM	dd
3	Total-hexadioxins	1.74e4	1.36e4	3.10e4	36.07	1.28	NO	6.315	0.122	2.39e5	1606	149.0	1.98e5	2069	95.8	db	bb
4	Total-hexadioxins	1.59e3	1.20e3	2.78e3	35.87	1.33	NO	0.567	0.122	2.99e4	1606	18.6	2.14e4	2069	10.3	bd	bb
5	Total-hexadioxins	1.30e4	1.04e4	2.34e4	35.42	1.25	NO	4.775	0.122	2.30e5	1606	143.1	1.95e5	2069	94.1	bb	bb
6	Total-hexadioxins	1.95e2	1.70e2	3.65e2	37.46	1.14	NO	0.074	0.122	6.01e3	1606	3.7	5.32e3	2069	2.6	bb	bb
7	123789-HxCDD	2.53e3	2.00e3	4.53e3	36.97	1.26	NO	0.938	0.124	3.94e4	1606	24.5	2.88e4	2069	13.9	db	MM
8	123478-HxCDD	7.96e2	6.95e2	1.49e3	36.65	1.15	NO	0.325	0.121	1.77e4	1606	11.0	1.62e4	2069	7.8	MM	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:32:41 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:33:35 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	1.12e5	1.06e5	2.18e5	39.98	1.06	NO	48.883	0.342	1.31e6	3645	358.3	1.24e6	3159	392.7	bb	bb
2	Total-heptadioxins	1.19e5	1.12e5	2.31e5	39.08	1.06	NO	51.926	0.342	1.45e6	3645	399.0	1.44e6	3159	454.5	bd	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.61e3	1.93e3	3.54e3	28.02	0.83	NO	0.494	0.216	1.04e4	2457	4.2	1.48e4	3135	4.7	MM	MM
2	Total-tetrafurans	1.63e3	2.43e3	4.07e3	27.65	0.67	NO	0.567	0.216	1.45e4	2457	5.9	2.48e4	3135	7.9	bb	bb
3	Total-tetrafurans	8.90e2	1.17e3	2.06e3	27.33	0.76	NO	0.287	0.216	7.75e3	2457	3.2	8.95e3	3135	2.9	MM	bb
4	Total-tetrafurans	1.65e3	1.88e3	3.53e3	26.95	0.88	NO	0.493	0.216	1.93e4	2457	7.9	1.69e4	3135	5.4	bb	bb
5	Total-tetrafurans	5.98e2	8.65e2	1.46e3	26.46	0.69	NO	0.204	0.216	7.10e3	2457	2.9	1.13e4	3135	3.6	bb	bb
6	Total-tetrafurans	3.19e2	3.28e2	6.46e2	25.97	0.97	YES	0.090	0.216	5.09e3	2457	2.1	3.60e3	3135	1.1	MM	MM
7	Total-tetrafurans	4.25e2	4.51e2	8.76e2	31.78	0.94	YES	0.122	0.216	6.41e3	2457	2.6	7.19e3	3135	2.3	bb	bb
8	Total-tetrafurans	8.80e1	1.47e2	2.35e2	30.86	0.60	YES	0.033	0.216	1.89e3	2457	0.8	2.90e3	3135	0.9	bb	bb
9	Total-tetrafurans	6.52e2	1.09e3	1.74e3	30.67	0.60	YES	0.243	0.216	6.74e3	2457	2.7	1.08e4	3135	3.4	MM	bb
10	2378-TCDF	1.15e3	1.61e3	2.75e3	30.30	0.72	NO	0.384	0.216	1.02e4	2457	4.1	1.50e4	3135	4.8	db	MM
11	Total-tetrafurans	2.26e2	1.98e2	4.24e2	30.19	1.14	YES	0.059	0.216	5.52e3	2457	2.2	4.13e3	3135	1.3	bd	bd
12	Total-tetrafurans	9.90e2	1.49e3	2.48e3	29.39	0.66	NO	0.346	0.216	1.19e4	2457	4.9	1.36e4	3135	4.3	MM	MM
13	Total-tetrafurans	1.21e3	1.50e3	2.71e3	28.93	0.81	NO	0.377	0.216	1.14e4	2457	4.7	1.24e4	3135	3.9	MM	MM
14	Total-tetrafurans	5.08e1	5.16e1	1.02e2	28.62	0.99	YES	0.014	0.216	2.21e3	2457	0.9	2.76e3	3135	0.9	bb	bb
15	Total-tetrafurans	7.09e2	7.71e2	1.48e3	28.29	0.92	YES	0.207	0.216	9.09e3	2457	3.7	8.18e3	3135	2.6	MM	db
16	Total-tetrafurans	2.33e2	3.88e2	6.21e2	29.58	0.60	YES	0.087	0.216	2.26e3	2457	0.9	4.54e3	3135	1.4	MM	MM
17	Total-tetrafurans	3.22e2	5.50e2	8.72e2	28.76	0.59	YES	0.122	0.216	3.45e3	2457	1.4	6.76e3	3135	2.2	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.81e4	1.12e4	2.93e4	31.82	1.61	NO	4.120	0.0316	3.14e5	597	526.9	1.99e5	1043	190.8	bd	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:32:41 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:33:35 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	2.22e3	1.72e3	3.94e3	33.86	1.29	YES	0.530	0.0720	3.47e4	1648	21.1	2.83e4	2285	12.4	db	MM
2	Total-pentafurans	3.53e2	1.31e2	4.84e2	33.79	2.68	YES	0.068	0.0758	7.76e3	1648	4.7	4.47e3	2285	2.0	bd	MM
3	Total-pentafurans	1.00e3	6.70e2	1.67e3	33.42	1.49	NO	0.235	0.0758	1.80e4	1648	10.9	1.24e4	2285	5.4	bb	bb
4	12378-PeCDF	9.47e2	7.44e2	1.69e3	33.25	1.27	YES	0.249	0.0799	2.06e4	1648	12.5	1.42e4	2285	6.2	bb	db
5	Total-pentafurans	3.51e2	2.16e2	5.67e2	33.12	1.63	NO	0.080	0.0758	7.18e3	1648	4.4	5.09e3	2285	2.2	MM	dd
6	Total-pentafurans	1.93e3	1.36e3	3.29e3	33.02	1.42	NO	0.463	0.0758	3.55e4	1648	21.6	2.67e4	2285	11.7	MM	dd
7	Total-pentafurans	2.59e2	2.67e2	5.27e2	32.90	0.97	YES	0.074	0.0758	4.78e3	1648	2.9	7.49e3	2285	3.3	MM	dd
8	Total-pentafurans	6.94e3	4.36e3	1.13e4	32.69	1.59	NO	1.589	0.0758	9.94e4	1648	60.3	6.44e4	2285	28.2	MM	dd
9	Total-pentafurans	8.21e2	6.98e2	1.52e3	32.60	1.18	YES	0.214	0.0758	2.18e4	1648	13.2	1.95e4	2285	8.5	bd	bd

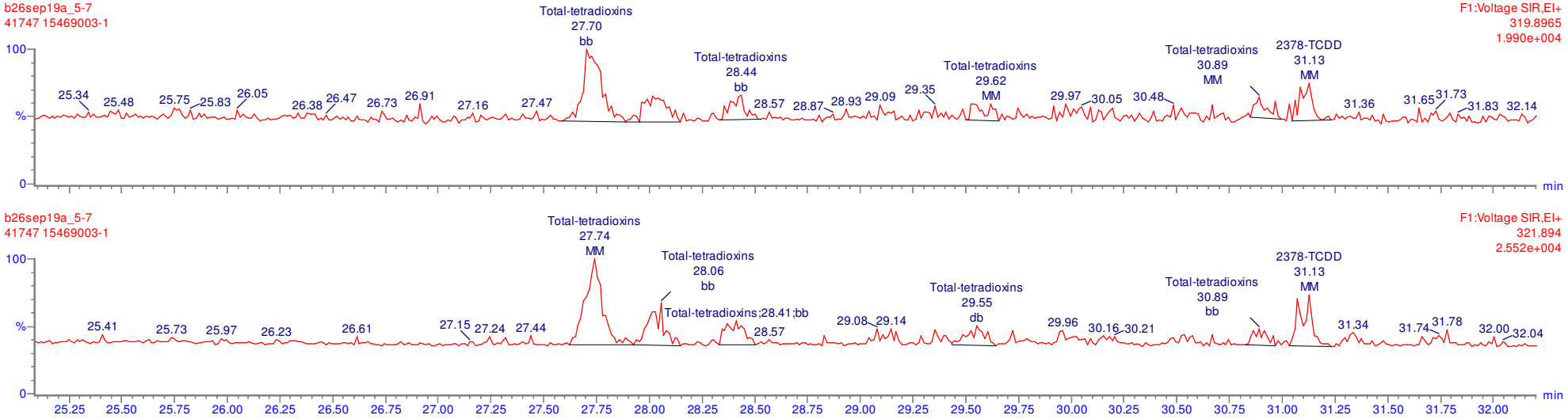
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	8.83e2	7.27e2	1.61e3	37.28	1.21	NO	0.283	0.0944	1.32e4	1457	9.1	1.11e4	1671	6.7	bb	MM
2	234678-HxCDF	2.33e3	1.88e3	4.22e3	36.51	1.24	NO	0.660	0.0800	3.69e4	1457	25.3	2.87e4	1671	17.2	bb	bb
3	123678-HxCDF	2.99e3	2.43e3	5.41e3	36.03	1.23	NO	0.834	0.0760	4.95e4	1457	33.9	3.59e4	1671	21.5	db	db
4	123478-HxCDF	3.54e3	3.05e3	6.60e3	35.93	1.16	NO	1.043	0.0737	6.37e4	1457	43.7	5.83e4	1671	34.9	MM	dd
5	Total-hexafurans	3.46e2	2.92e2	6.38e2	35.86	1.19	NO	0.102	0.0806	9.96e3	1457	6.8	8.58e3	1671	5.1	MM	bd
6	Total-hexafurans	2.51e4	1.99e4	4.49e4	35.55	1.26	NO	7.217	0.0806	4.51e5	1457	309.8	3.48e5	1671	208.6	bb	bb
7	Total-hexafurans	3.76e2	2.56e2	6.33e2	35.41	1.47	YES	0.102	0.0806	7.95e3	1457	5.5	4.75e3	1671	2.8	bb	MM
8	Total-hexafurans	1.45e4	1.22e4	2.67e4	35.13	1.19	NO	4.290	0.0806	2.49e5	1457	170.7	2.24e5	1671	134.2	db	db
9	Total-hexafurans	4.42e3	3.43e3	7.85e3	35.01	1.29	NO	1.260	0.0806	7.53e4	1457	51.7	7.00e4	1671	41.9	bd	bd

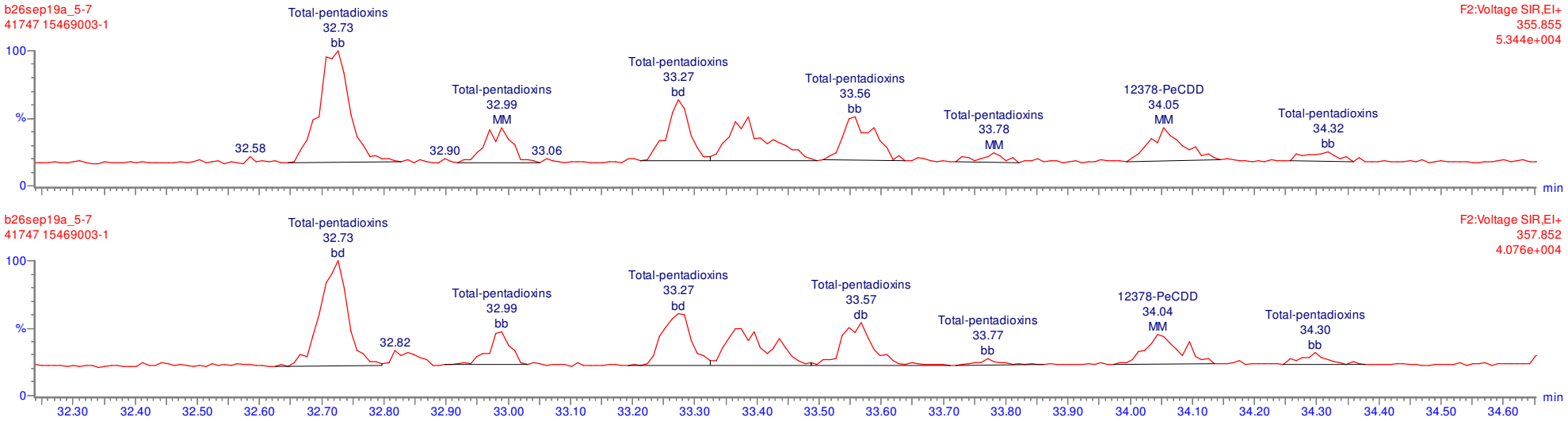
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234789-HpCDF	2.05e3	1.72e3	3.77e3	40.62	1.19	NO	0.741	0.163	2.76e4	1917	14.4	1.99e4	1631	12.2	bb	bb
2	Total-heptafurans	7.27e4	7.12e4	1.44e5	39.26	1.02	NO	26.734	0.144	9.41e5	1917	490.9	9.11e5	1631	558.8	bd	bb
3	1234678-HpCDF	2.76e4	2.74e4	5.50e4	38.76	1.01	NO	9.712	0.127	3.53e5	1917	184.3	3.33e5	1631	204.3	bb	bb

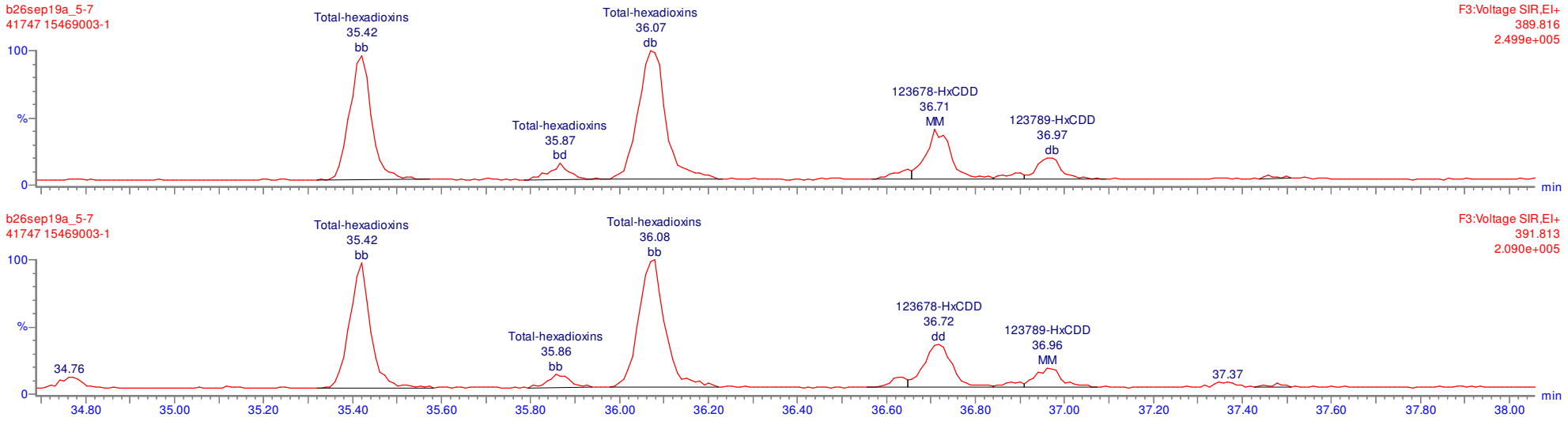
MANUAL INTEGRATION
METHOD 1613
HRP763_1



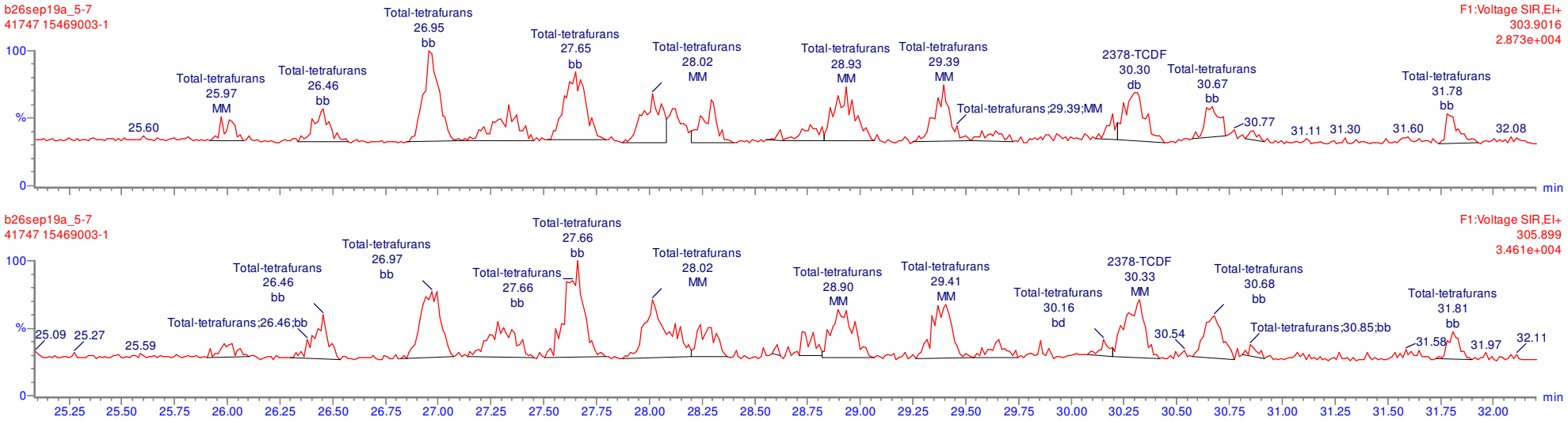
MANUAL INTEGRATION
METHOD 1613
HRP763_1



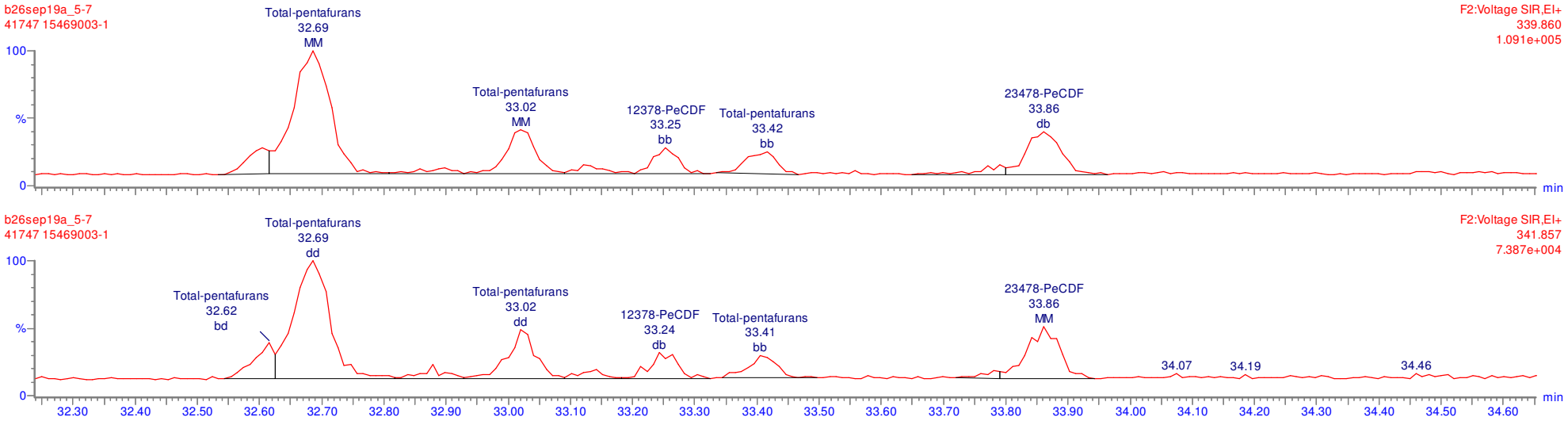
MANUAL INTEGRATION
METHOD 1613
HRP763_1



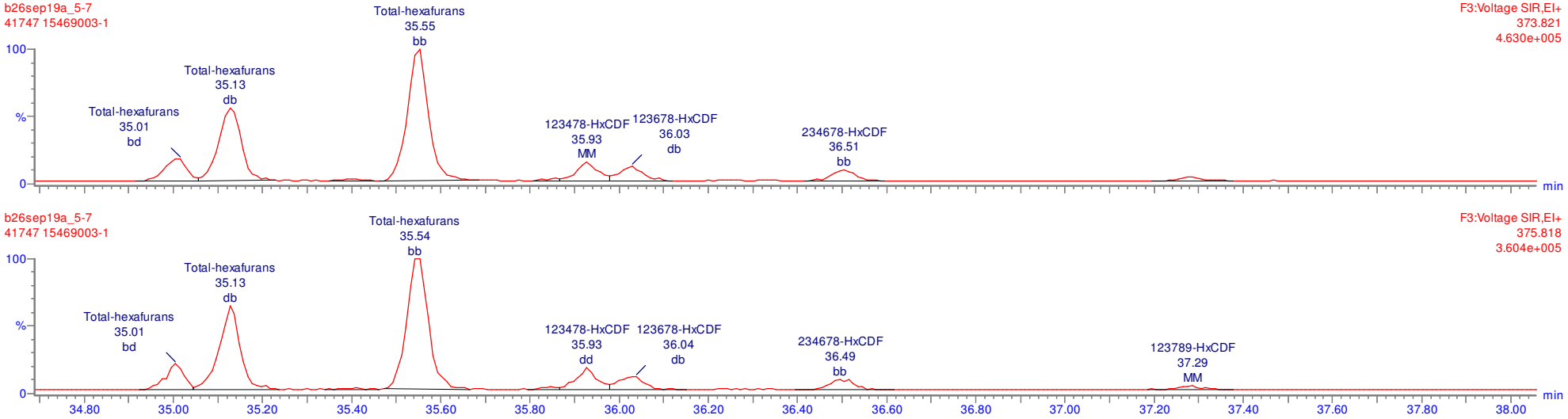
MANUAL INTEGRATION
METHOD 1613
HRP763_1



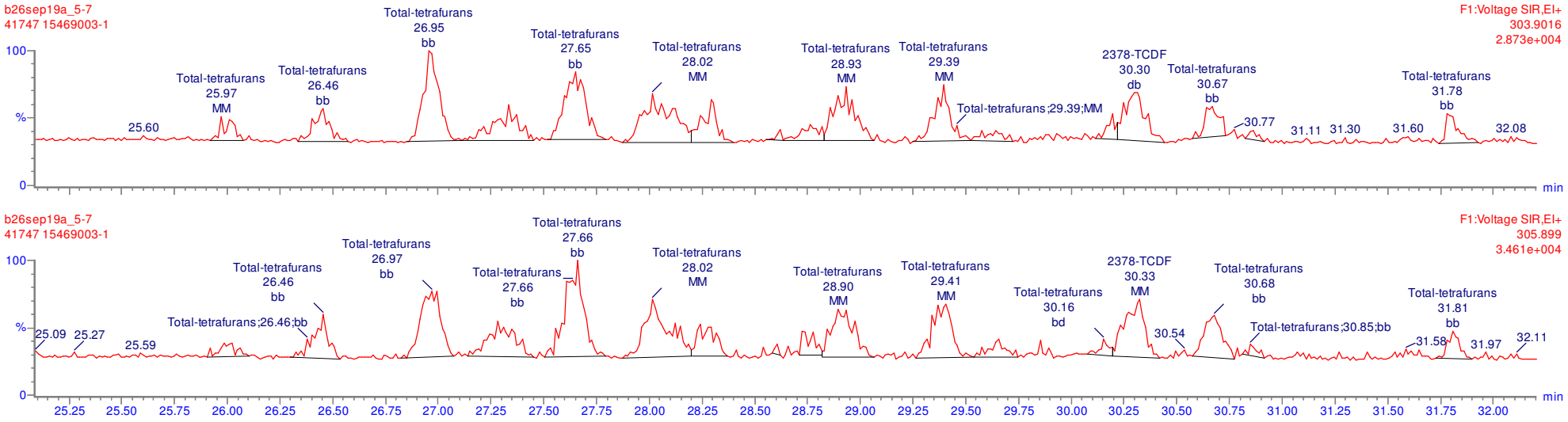
MANUAL INTEGRATION
METHOD 1613
HRP763_1



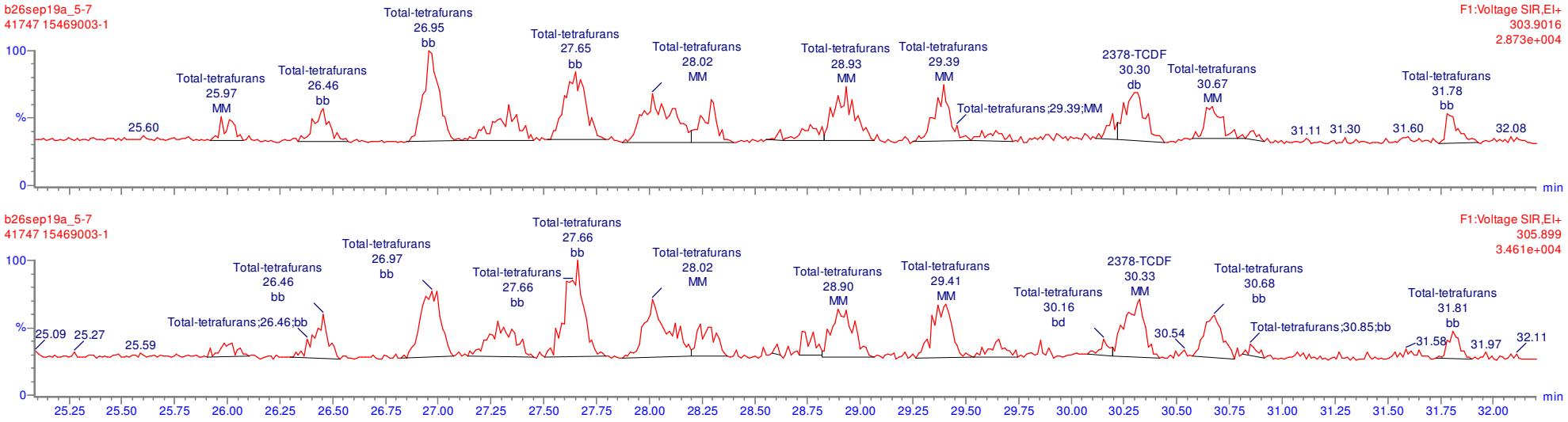
MANUAL INTEGRATION
METHOD 1613
HRP763_1



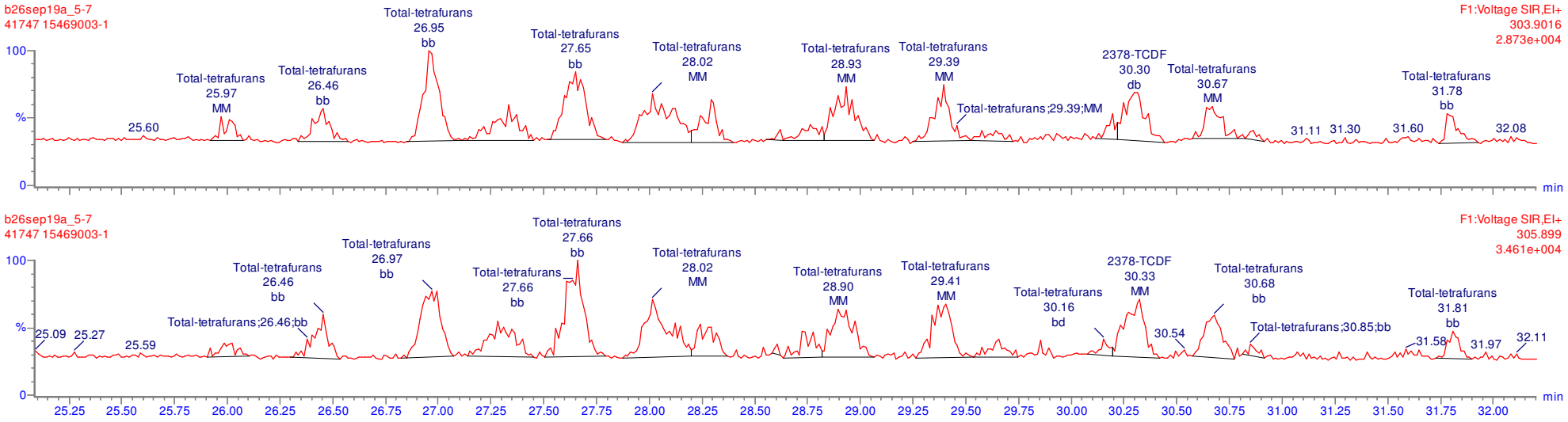
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



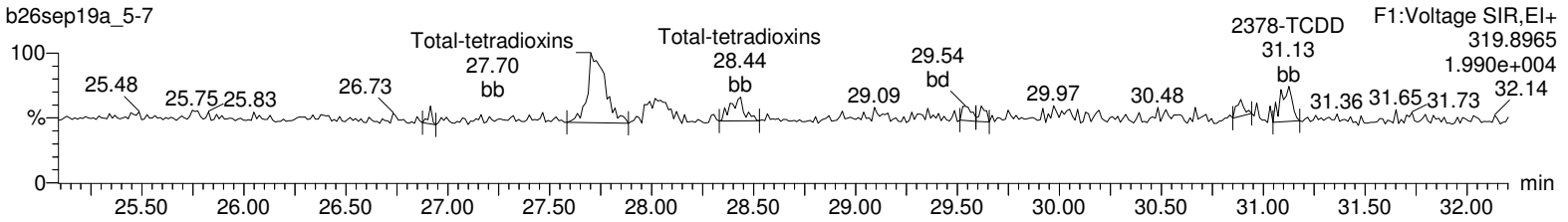
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

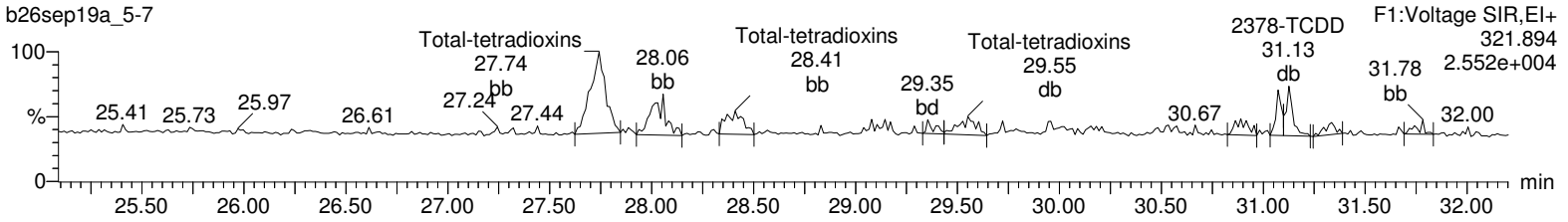
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

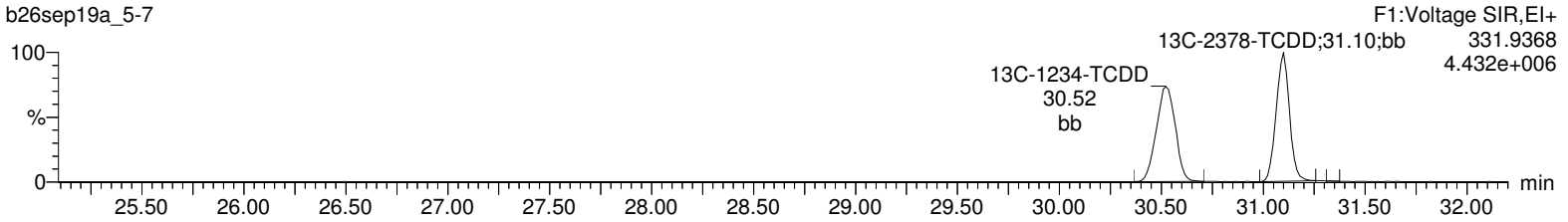
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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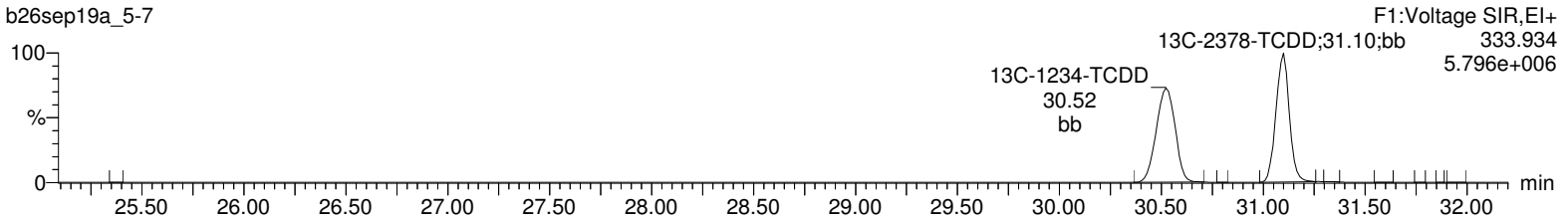

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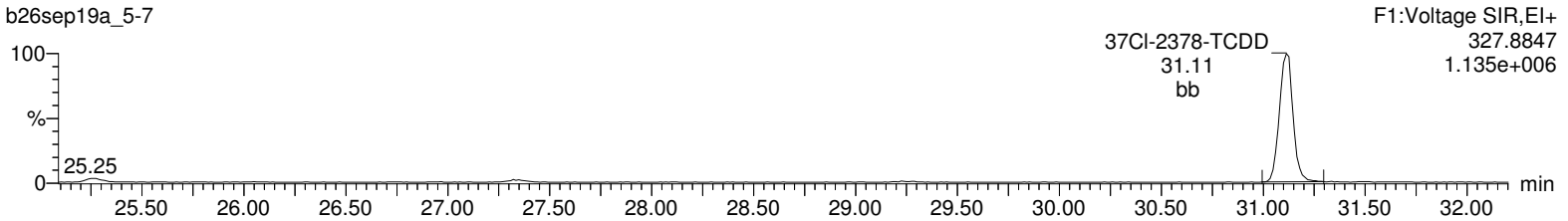
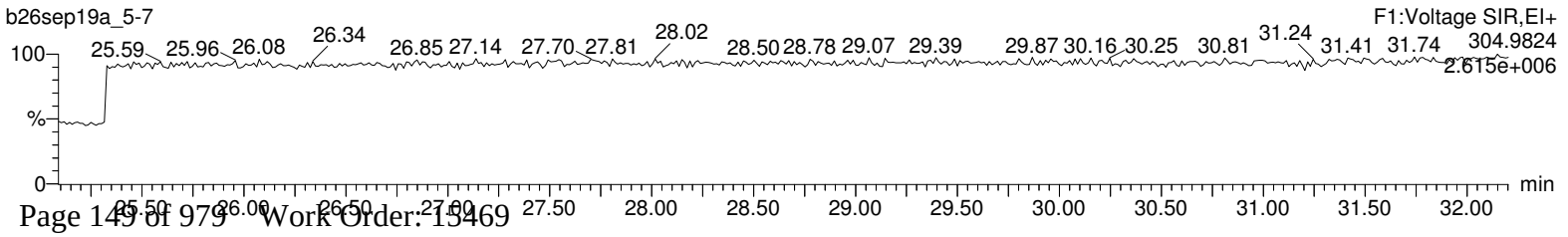


Lock Mass F1



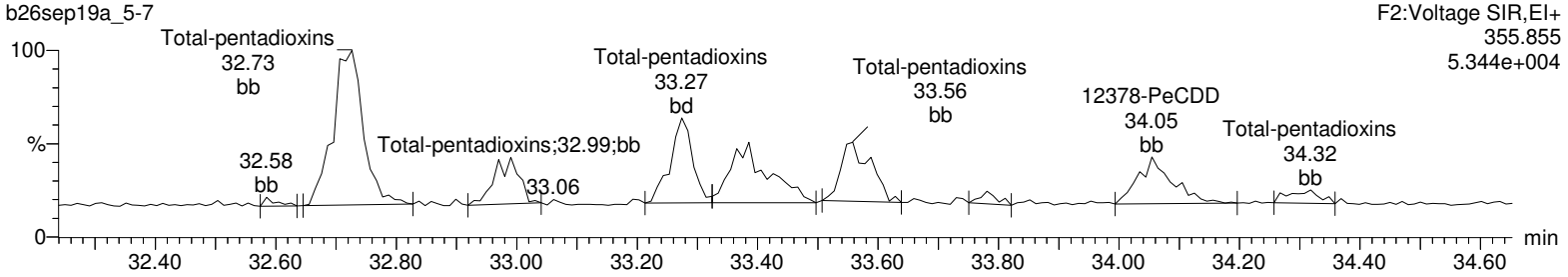
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

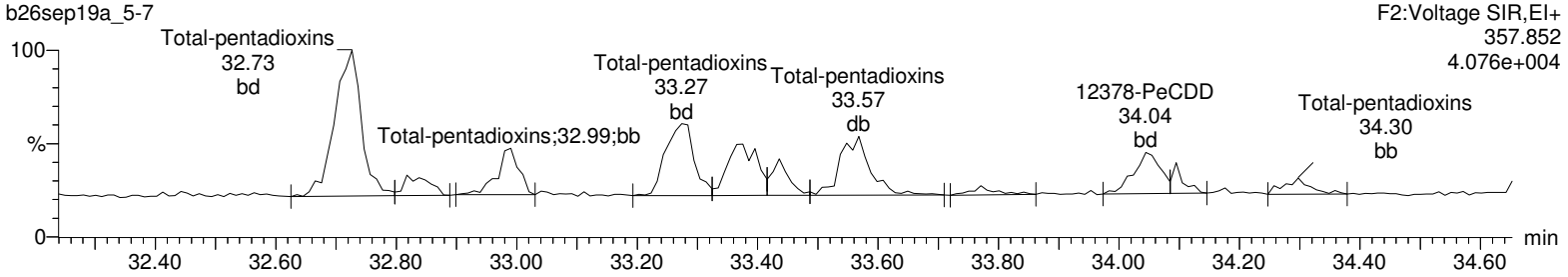
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentadioxins



Total-pentadioxins



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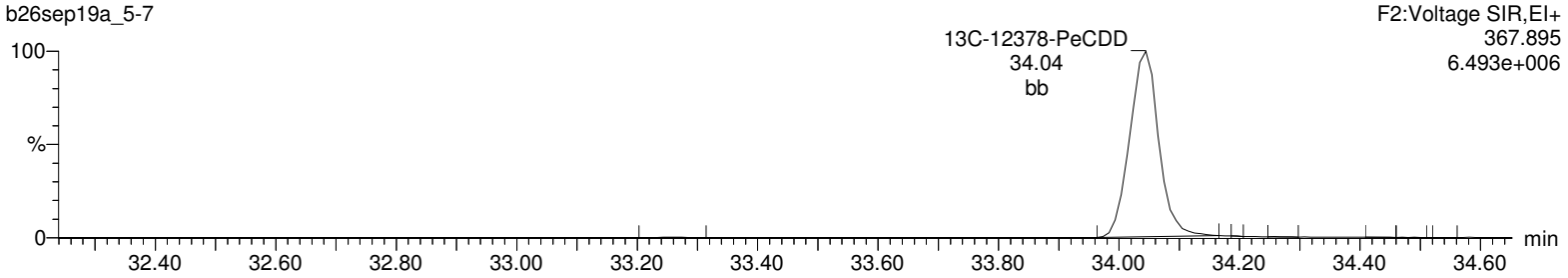

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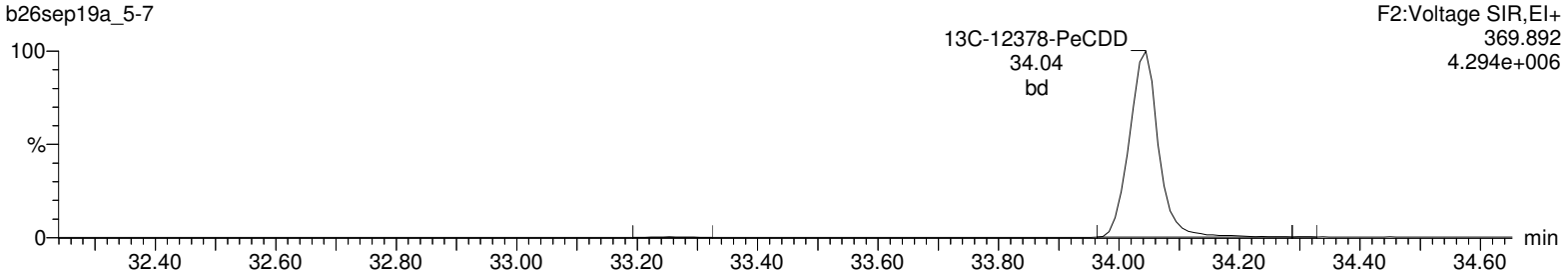
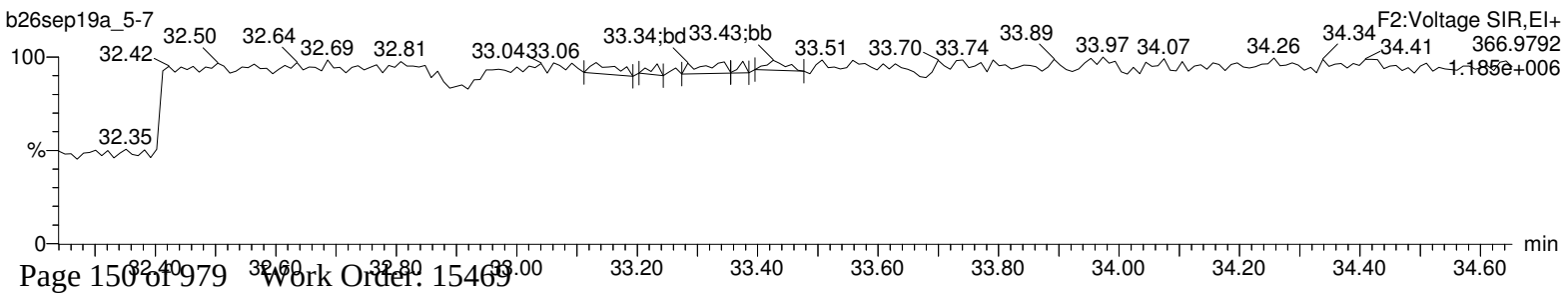


Lock Mass F2



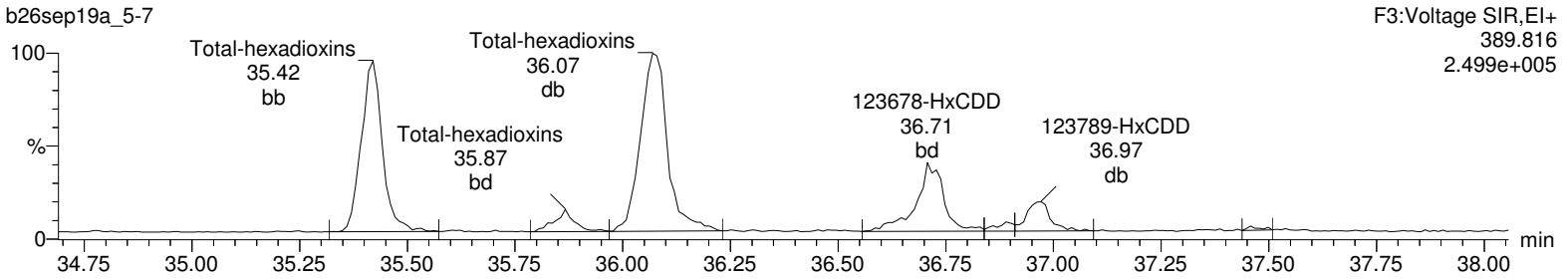
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

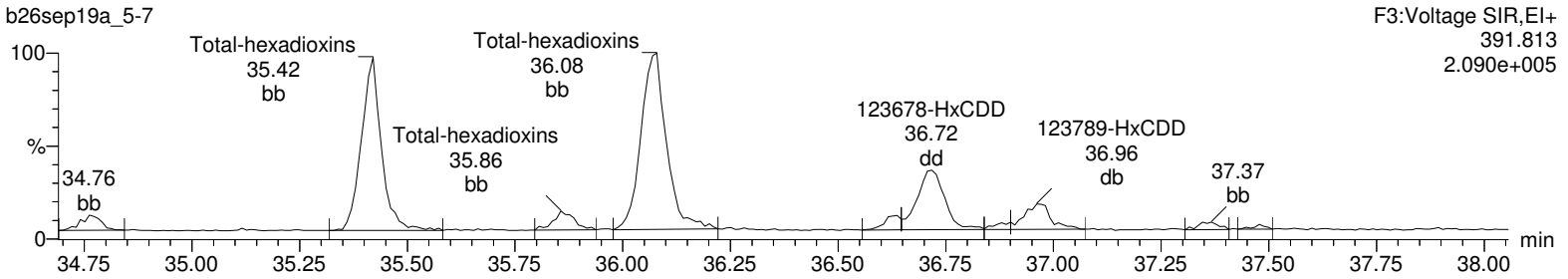
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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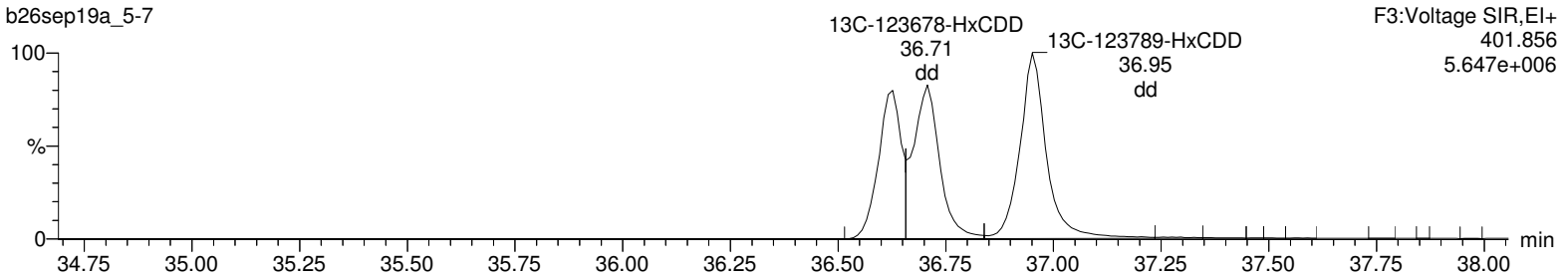

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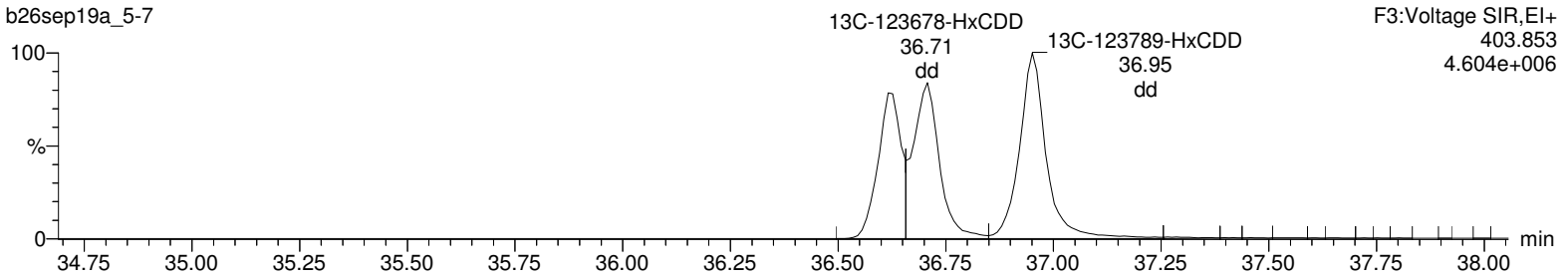
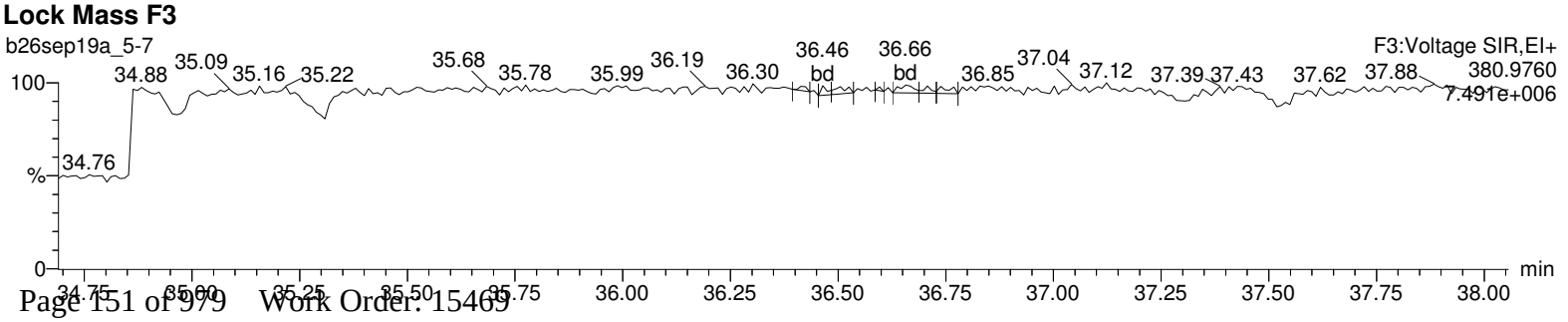


Lock Mass F3



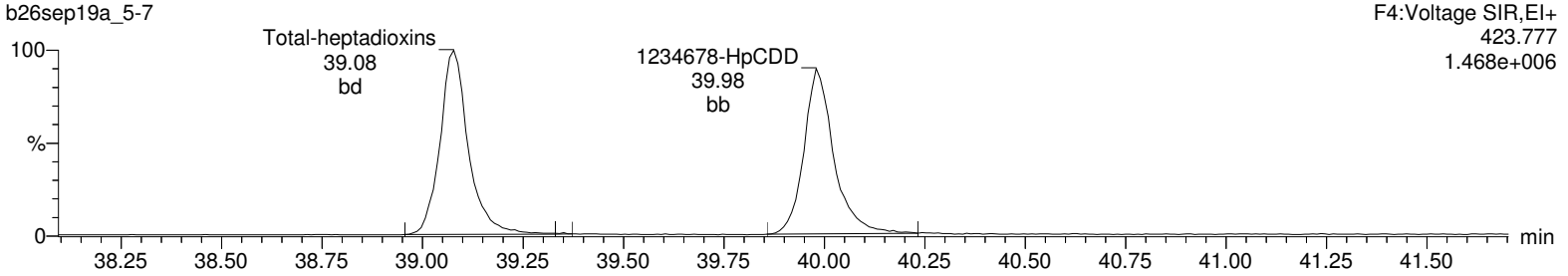
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

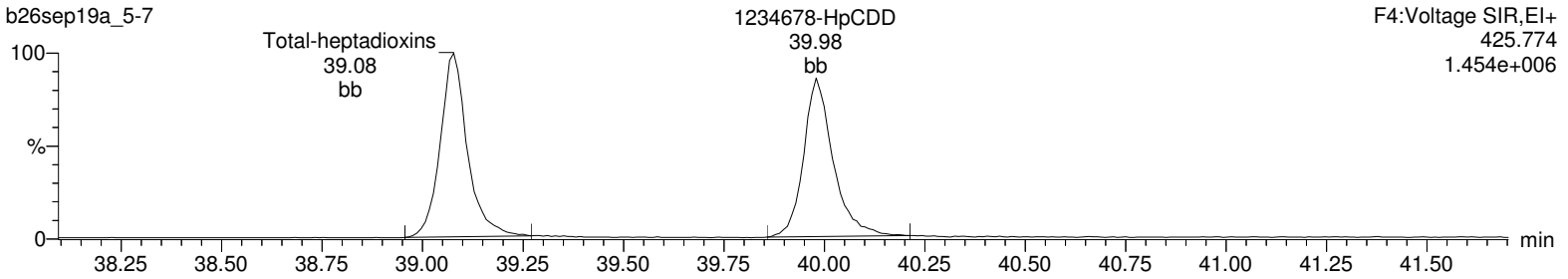
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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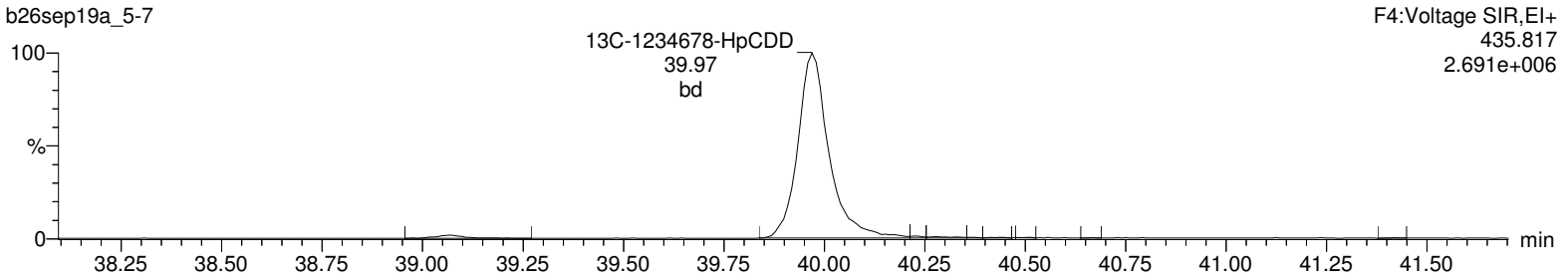

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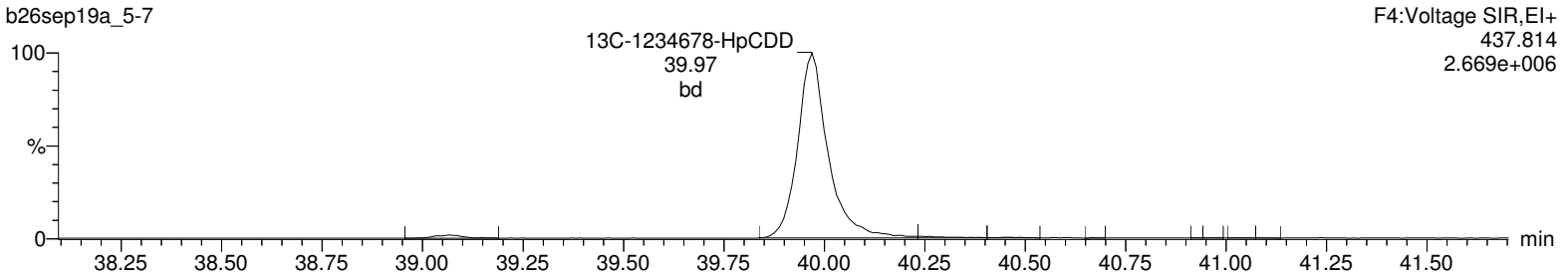
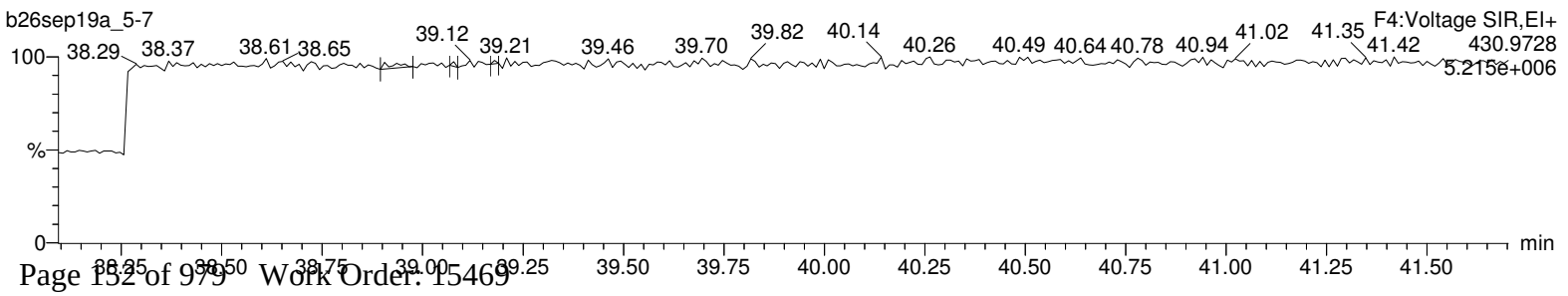


Lock Mass F4



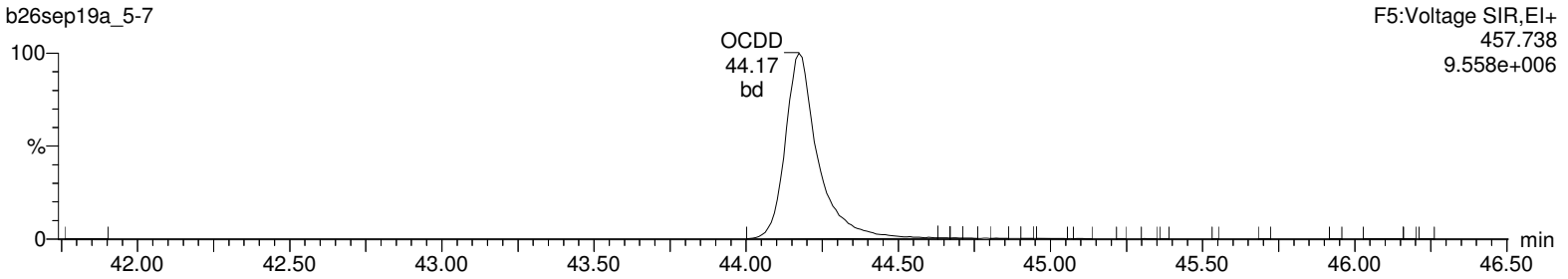
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

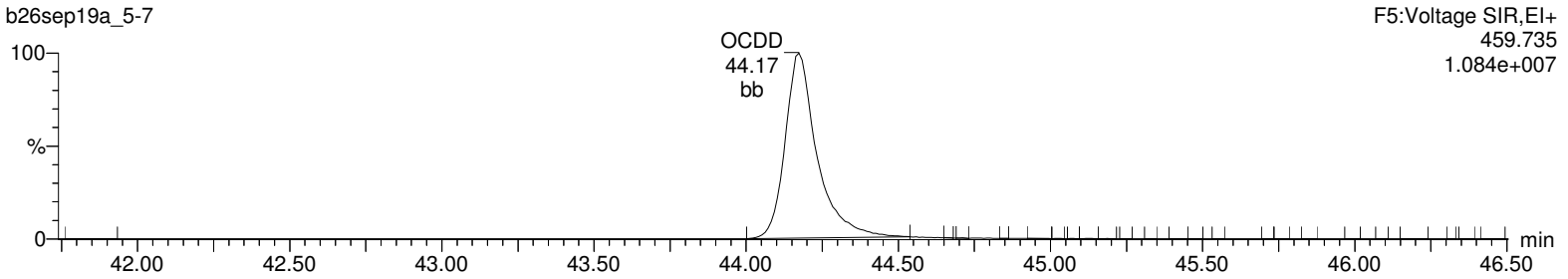
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

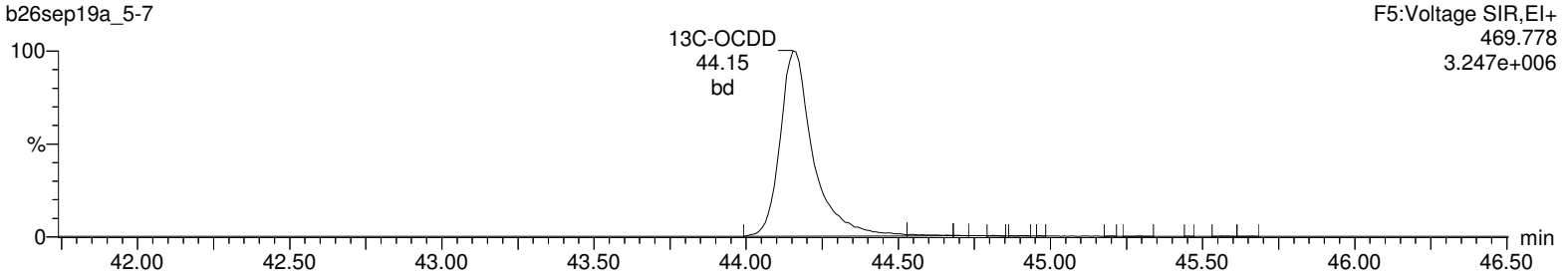
OCDD



OCDD



13C-OCDD



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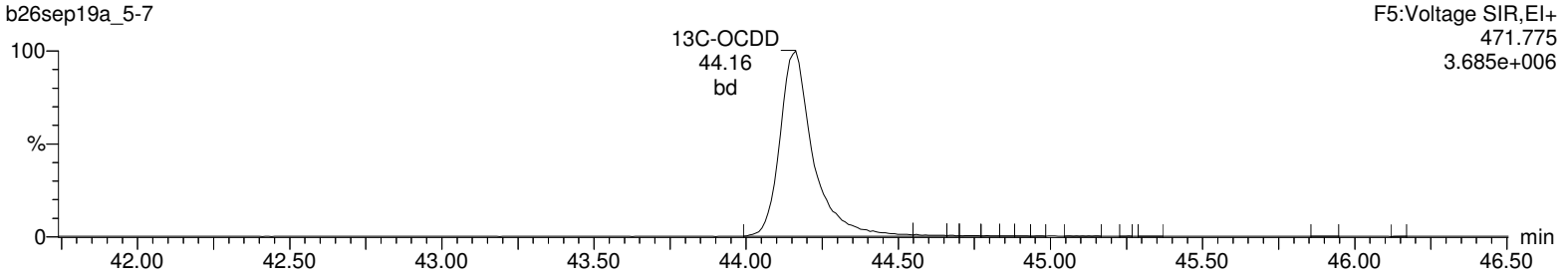
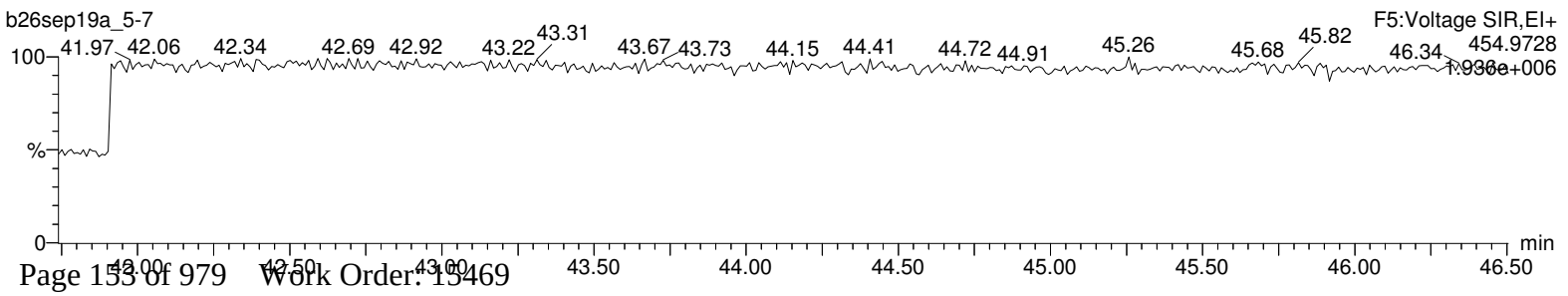


Lock Mass F5



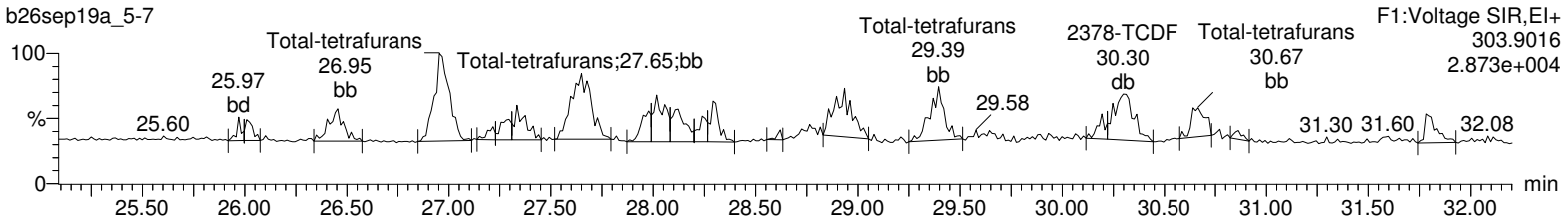
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

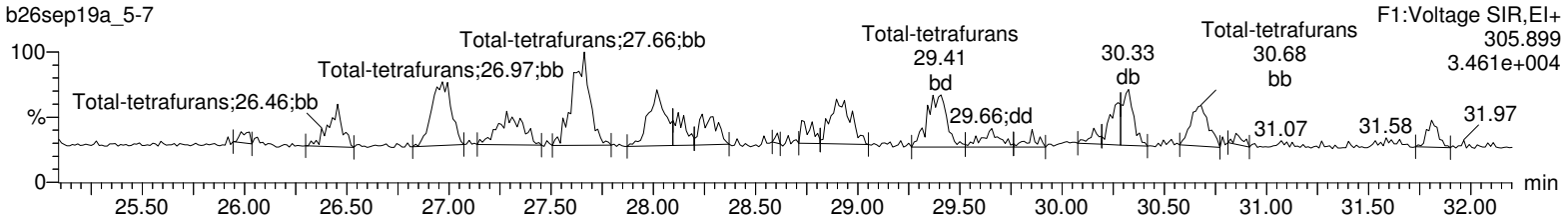
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

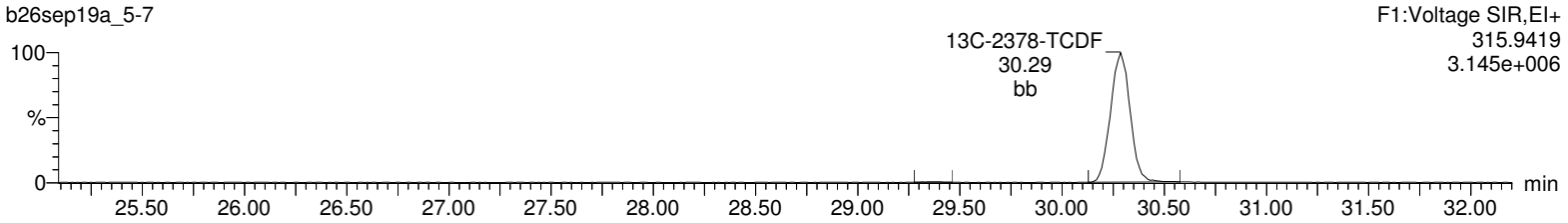
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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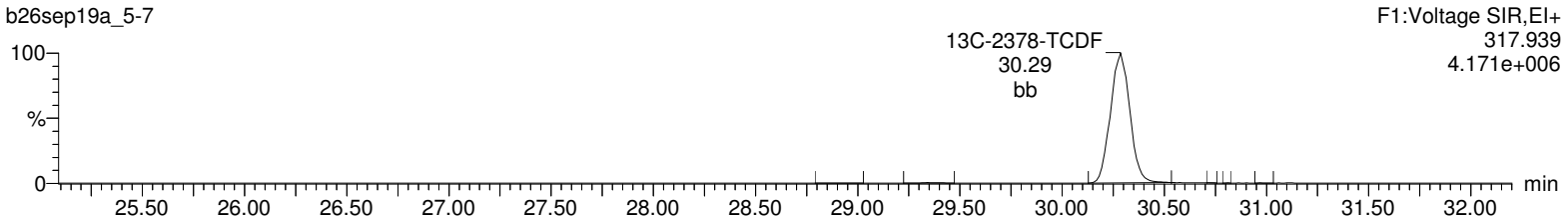

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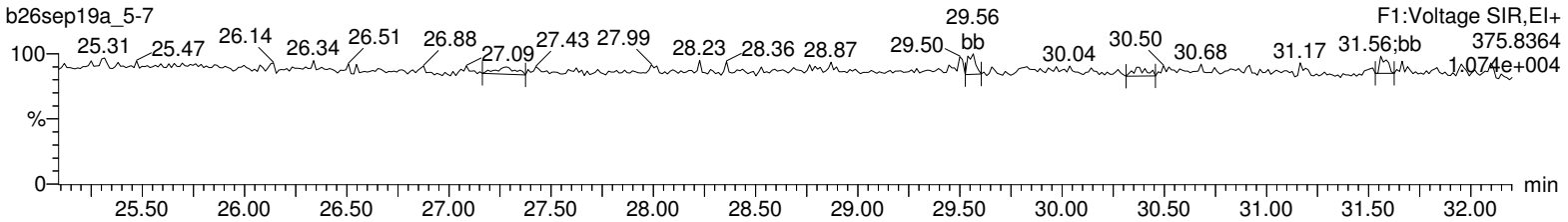
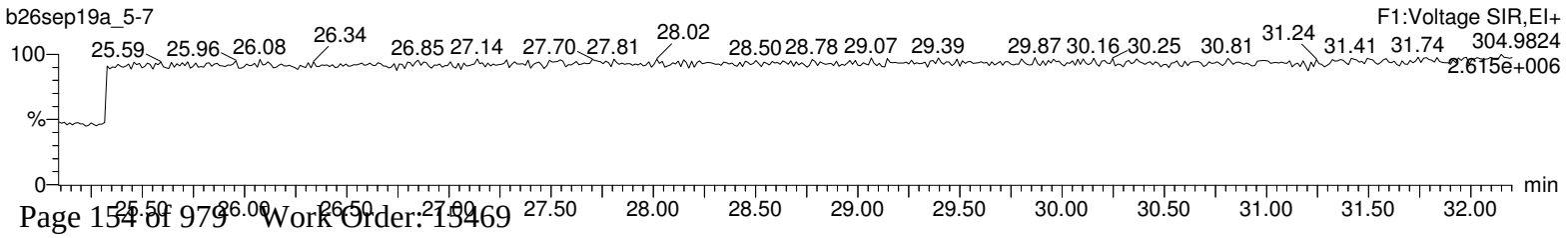


Lock Mass F1



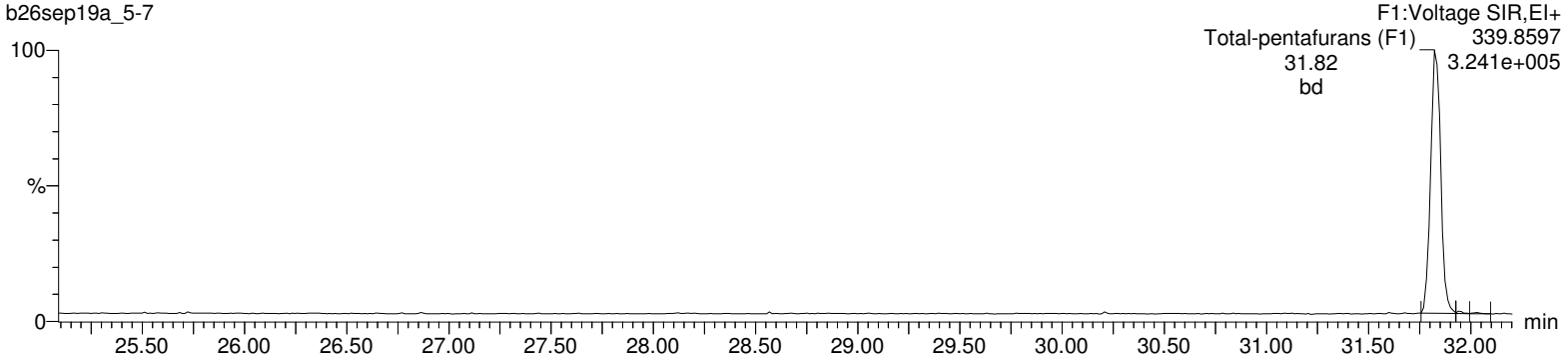
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

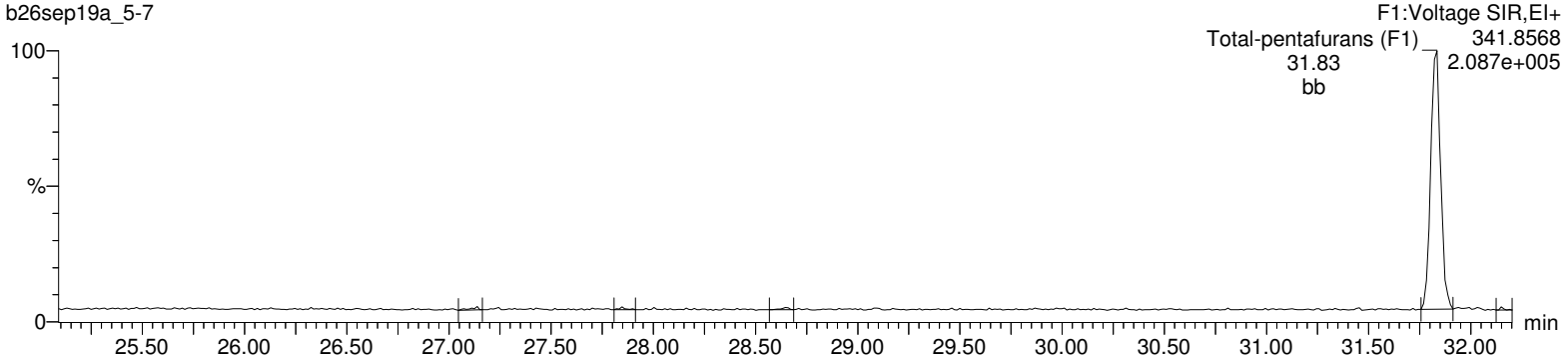
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

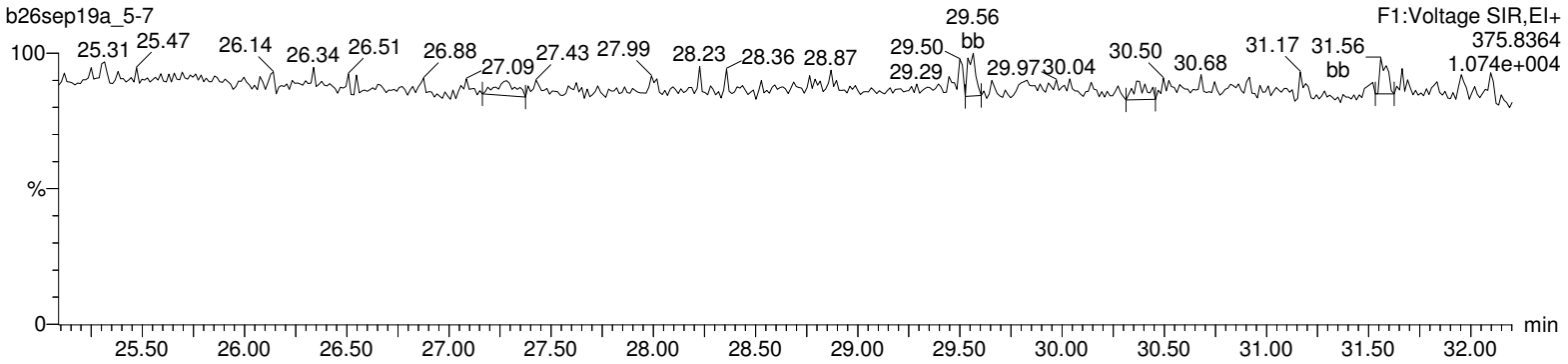
Total-pentafurans (F1)



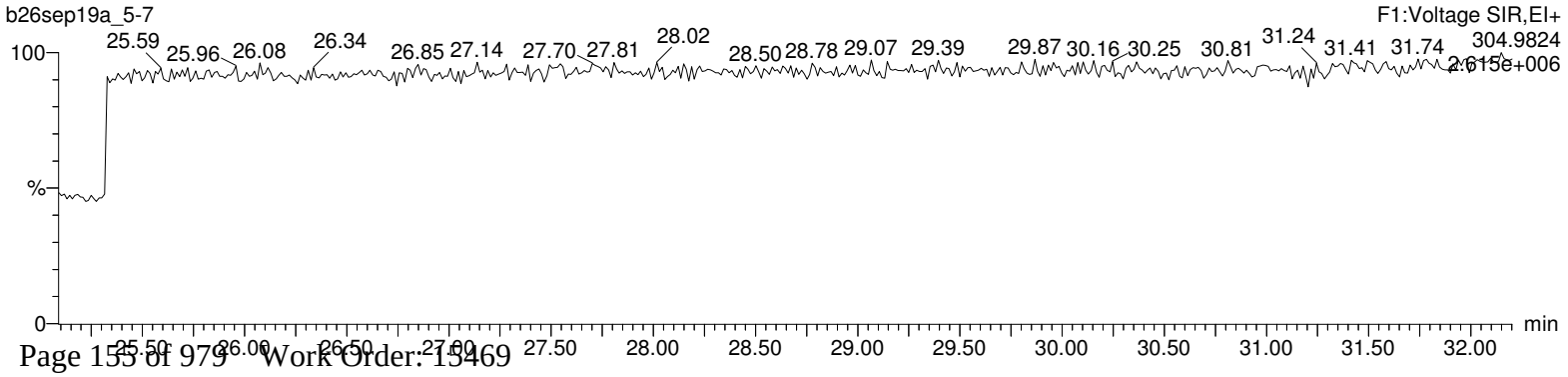
Total-pentafurans (F1)



HxDPE



Lock Mass F1



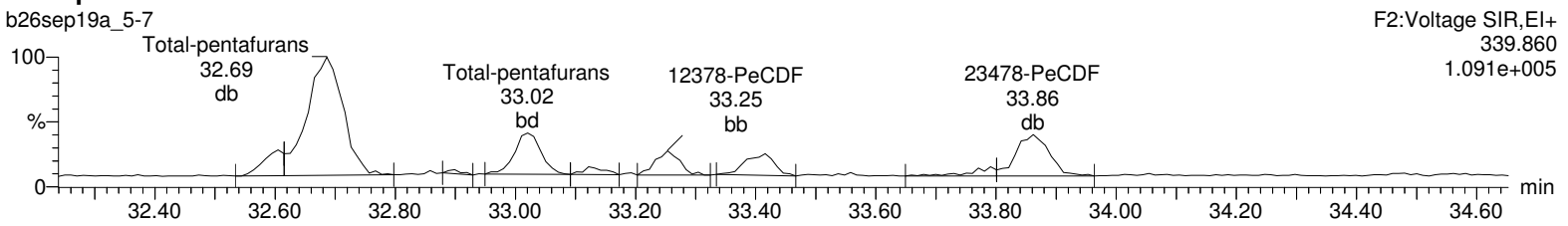
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

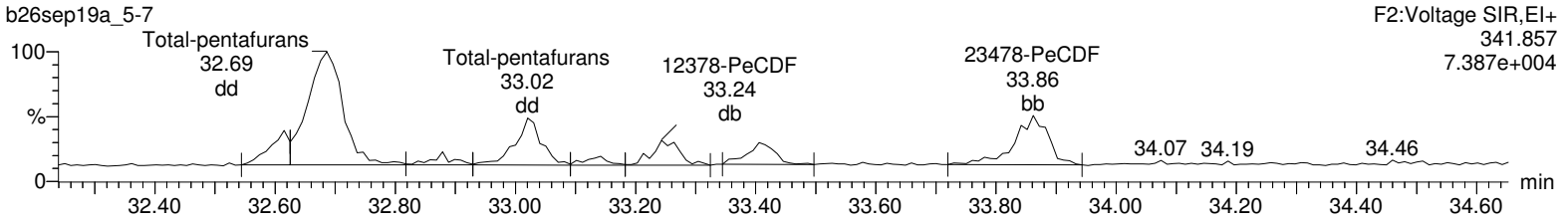
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

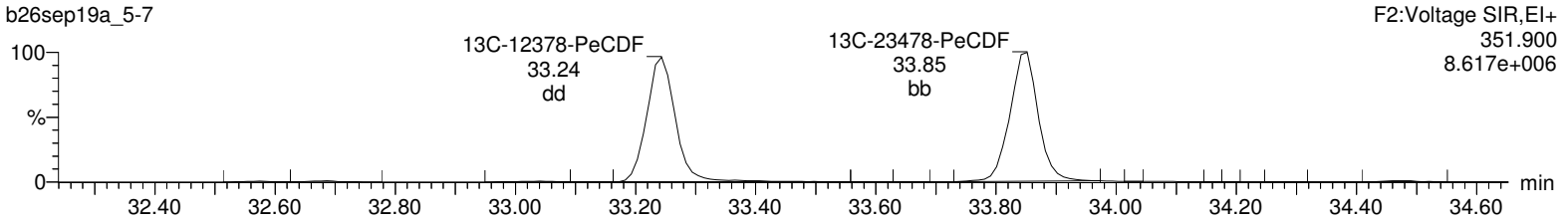
Total-pentafurans



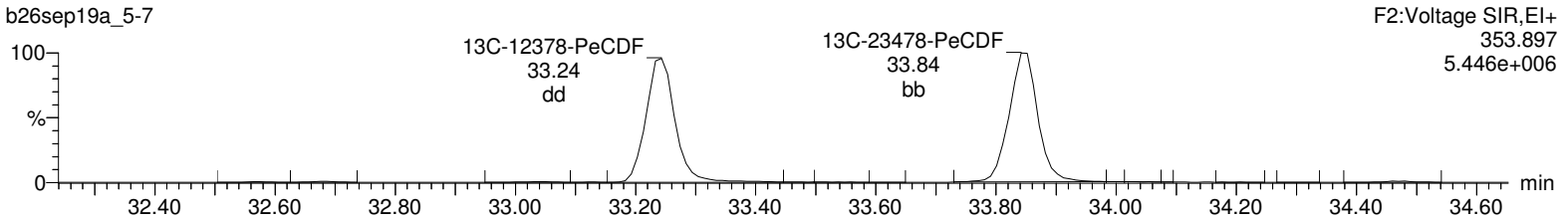
Total-pentafurans



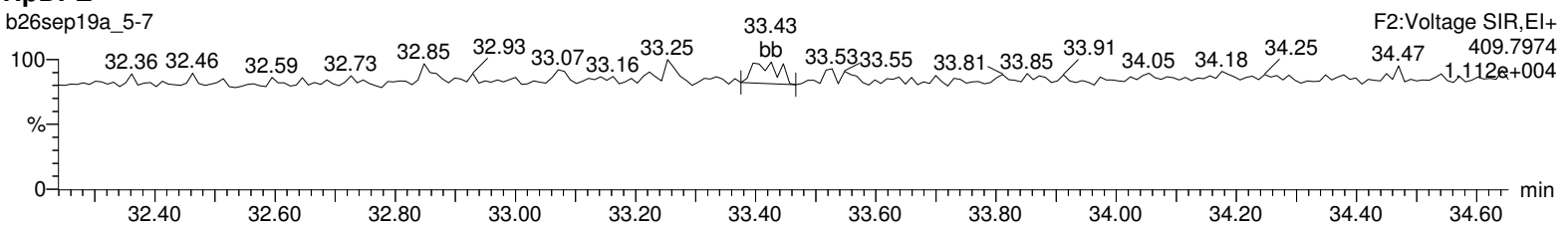
13C-12378-PeCDF



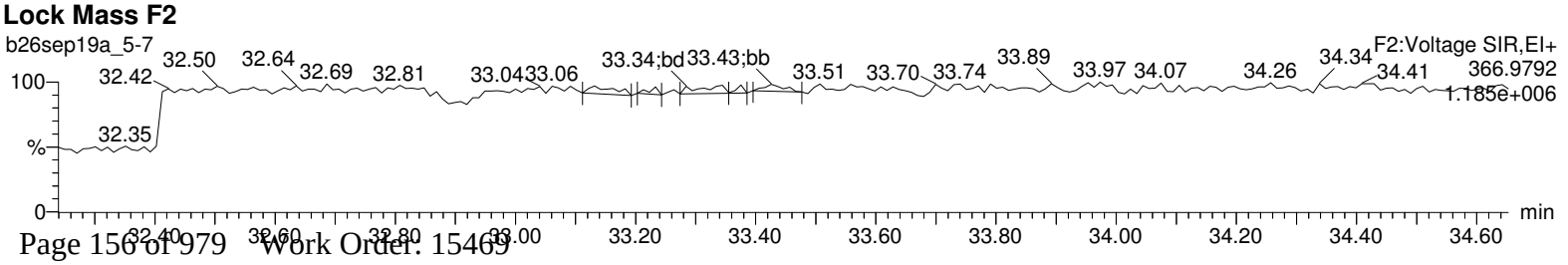
13C-12378-PeCDF



HpDPE



Lock Mass F2



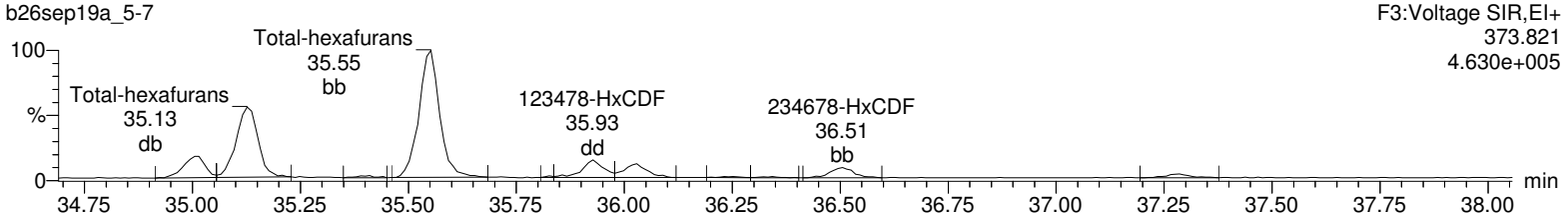
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

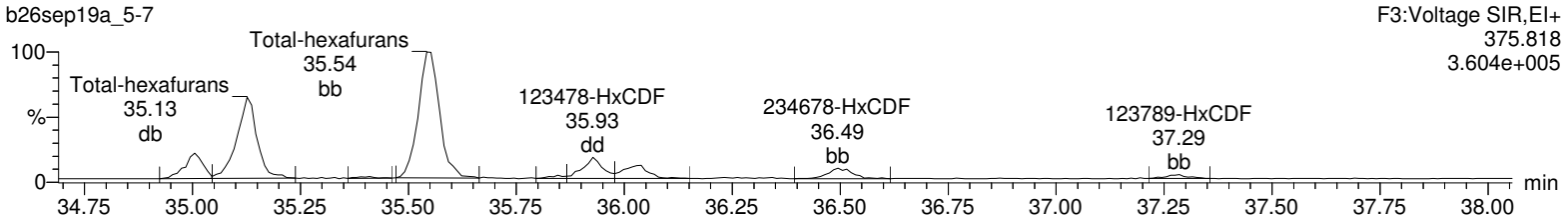
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

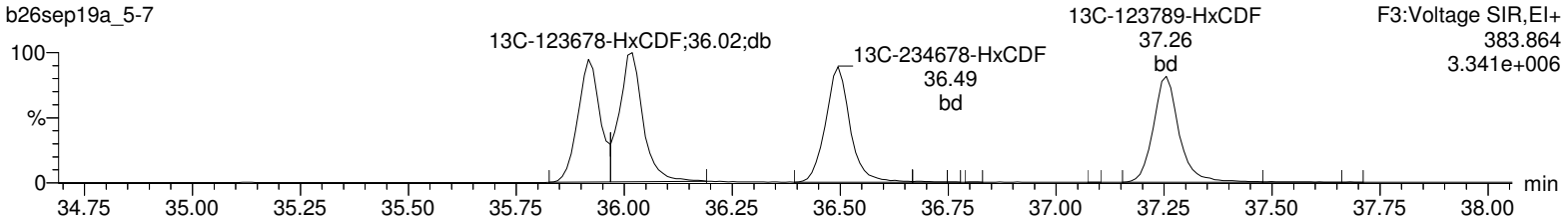
Total-hexafurans



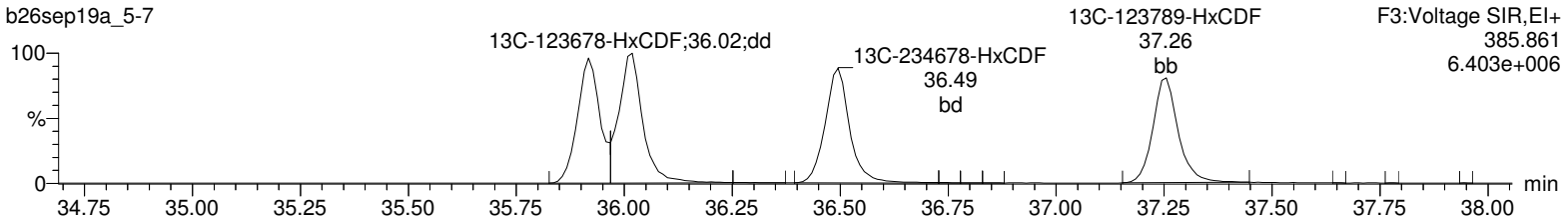
Total-hexafurans



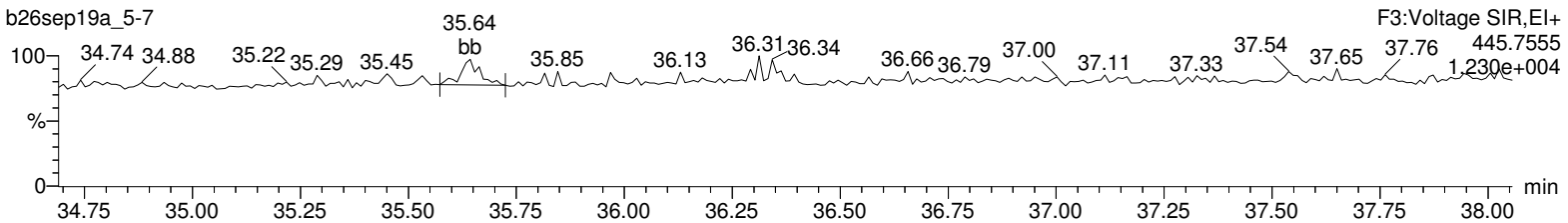
13C-123478-HxCDF



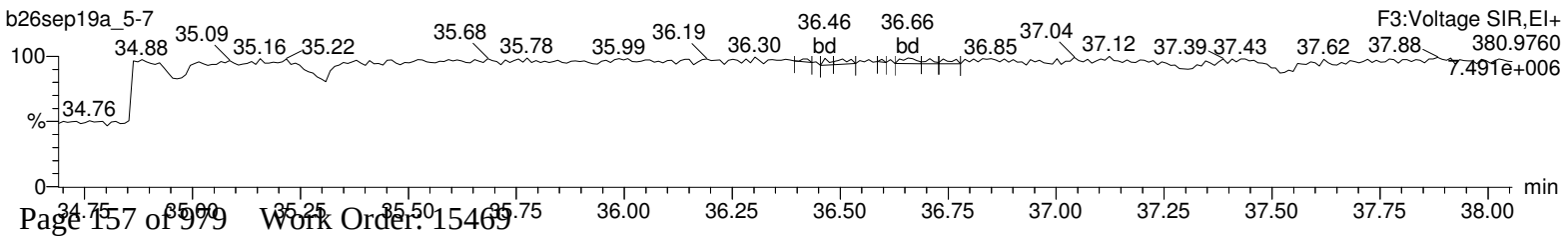
13C-123478-HxCDF



OcDPE



Lock Mass F3



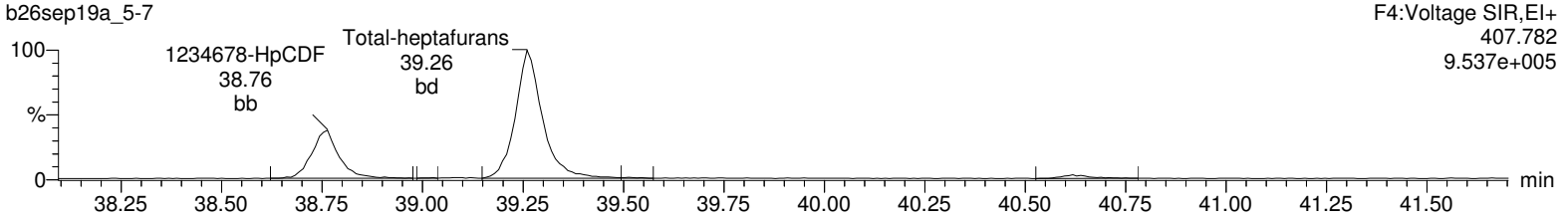
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

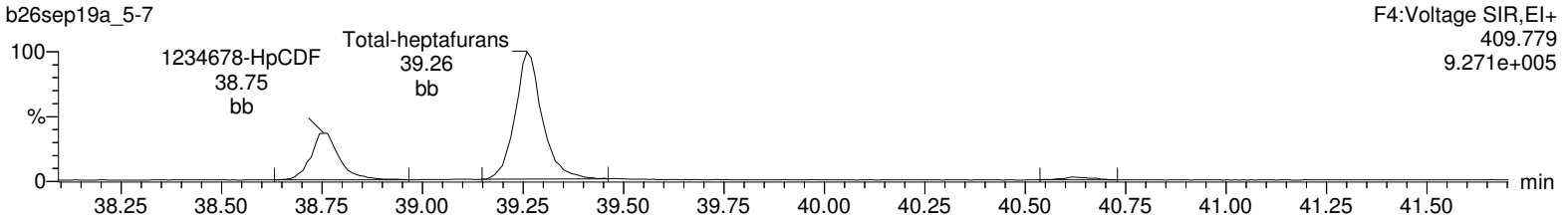
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

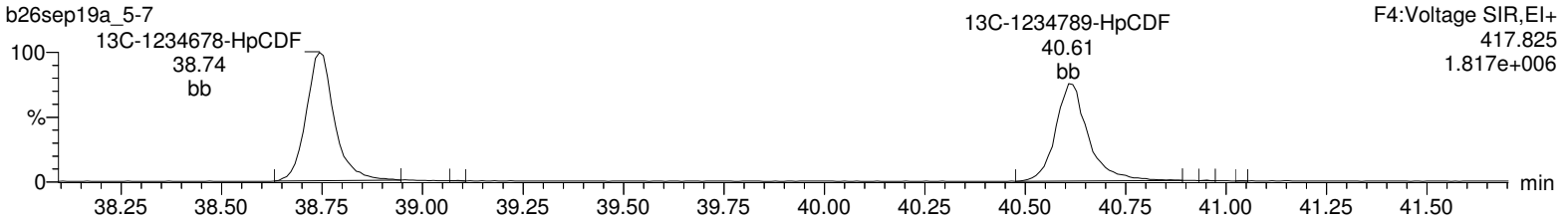
Total-heptafurans



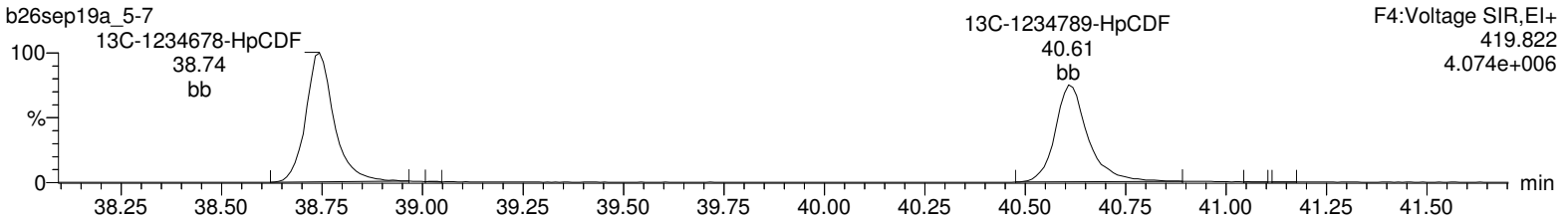
Total-heptafurans



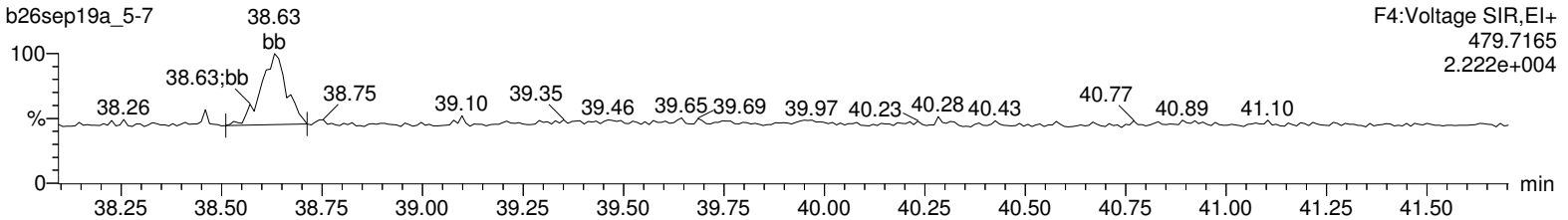
13C-1234678-HpCDF



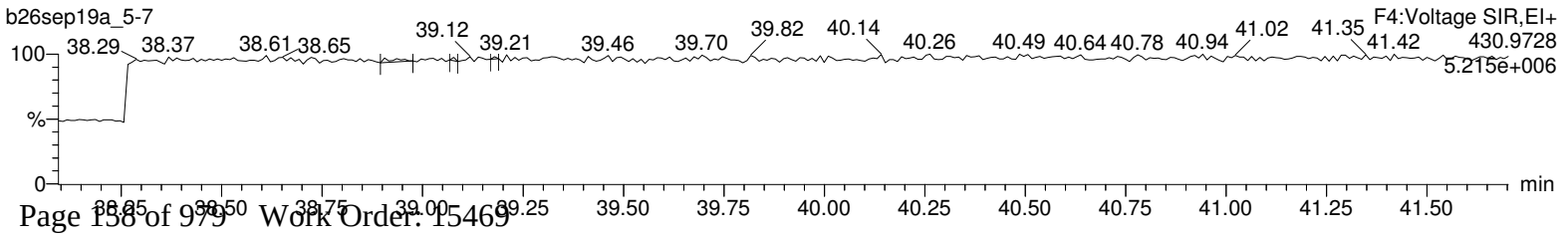
13C-1234678-HpCDF



NoDPE



Lock Mass F4



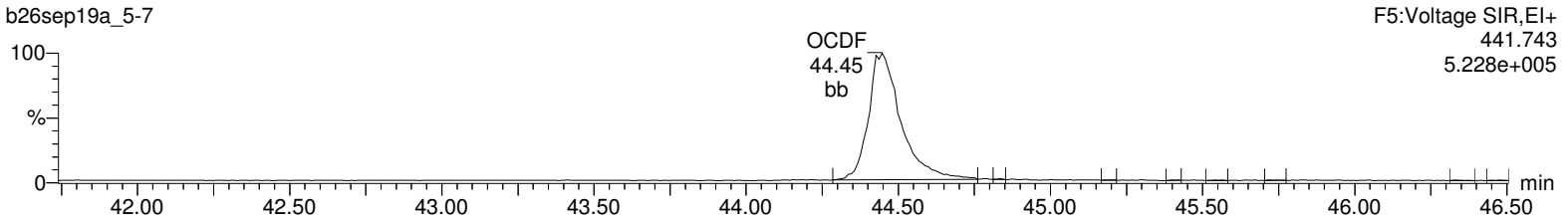
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

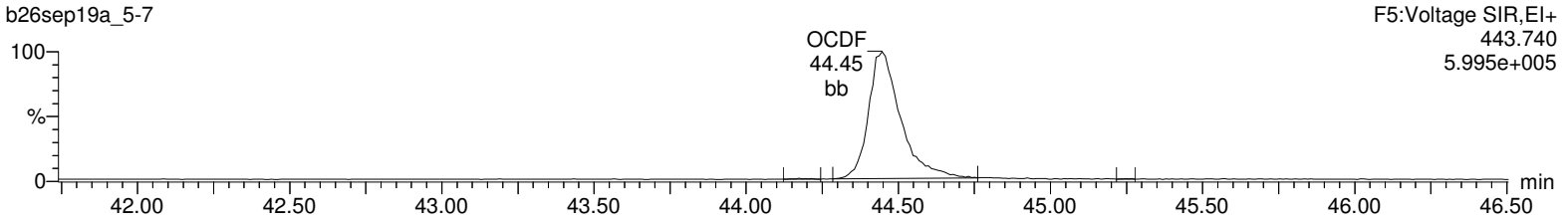
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-7, Date: 28-Sep-2019, Time: 04:40:16, ID: 15469003-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

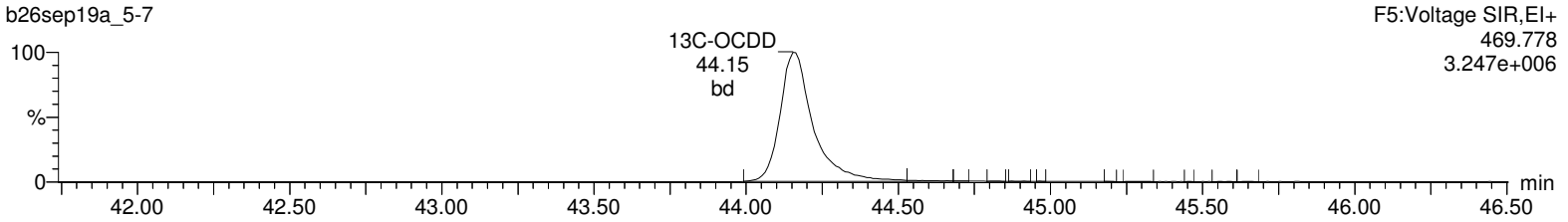
OCDF



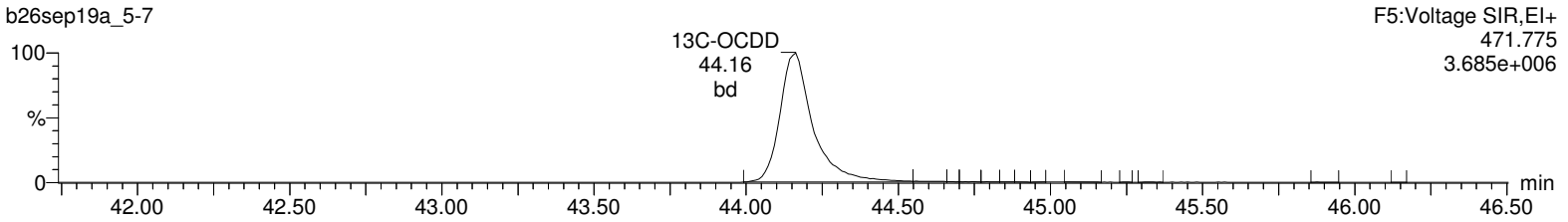
OCDF



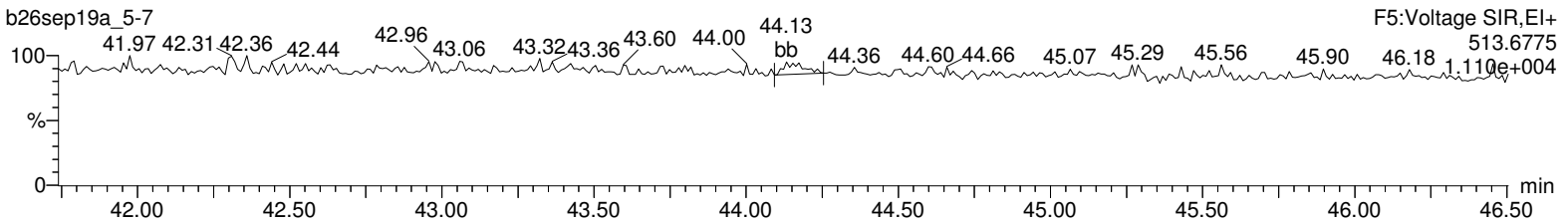
13C-OCDD



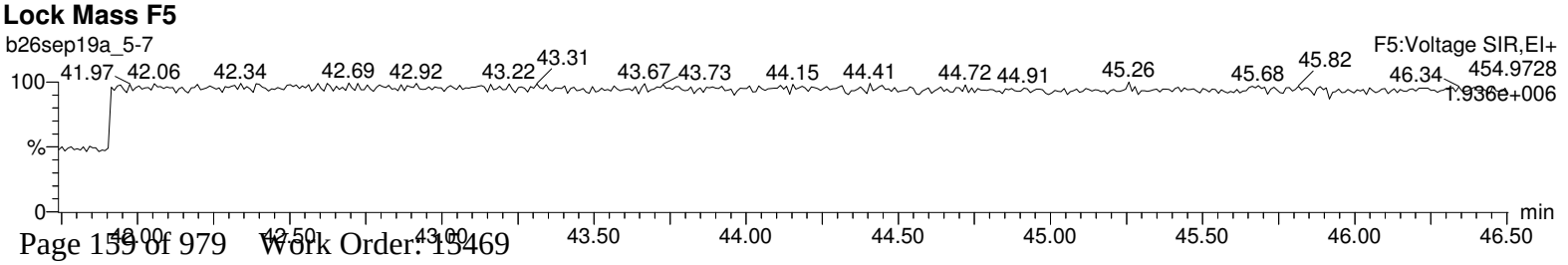
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469004**	**Date Collected:**	**08/28/2019 10:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**42.2**
Client ID:	**J6-SC1b-50to60-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 05:28**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.77 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK	0.439	pg/g	0.160	0.922
40321-76-4	1,2,3,7,8-PeCDD	J	0.982	pg/g	0.240	4.61
39227-28-6	1,2,3,4,7,8-HxCDD	JK	1.12	pg/g	0.387	4.61
57653-85-7	1,2,3,6,7,8-HxCDD		6.56	pg/g	0.369	4.61
19408-74-3	1,2,3,7,8,9-HxCDD	J	2.96	pg/g	0.387	4.61
35822-46-9	1,2,3,4,6,7,8-HpCDD		169	pg/g	0.793	4.61
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1830	pg/g	1.39	9.22
51207-31-9	2,3,7,8-TCDF	B	1.62	pg/g	0.387	0.922
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.936	pg/g	0.203	4.61
57117-31-4	2,3,4,7,8-PeCDF	J	1.76	pg/g	0.188	4.61
70648-26-9	1,2,3,4,7,8-HxCDF		5.79	pg/g	0.230	4.61
57117-44-9	1,2,3,6,7,8-HxCDF	J	2.68	pg/g	0.240	4.61
60851-34-5	2,3,4,6,7,8-HxCDF	J	2.51	pg/g	0.256	4.61
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	1.05	pg/g	0.282	4.61
67562-39-4	1,2,3,4,6,7,8-HpCDF		54.1	pg/g	0.470	4.61
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	3.45	pg/g	0.592	4.61
39001-02-0	1,2,3,4,6,7,8,9-OCDF		184	pg/g	0.441	9.22
41903-57-5	Total TeCDD	JK	2.94	pg/g	0.160	0.922
36088-22-9	Total PeCDD	JK	7.38	pg/g	0.240	4.61
34465-46-8	Total HxCDD	JK	42.6	pg/g	0.369	4.61
37871-00-4	Total HpCDD		329	pg/g	0.793	4.61
30402-14-3	Total TeCDF	JK	17.3	pg/g	0.387	0.922
30402-15-4	Total PeCDF	J	26.6	pg/g	0.0669	4.61
55684-94-1	Total HxCDF	J	71.2	pg/g	0.230	4.61
38998-75-3	Total HpCDF	J	206	pg/g	0.470	4.61
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		7.28	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		7.28	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		143	184	pg/g	77.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		165	184	pg/g	89.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		168	184	pg/g	91.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		133	184	pg/g	71.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		188	184	pg/g	102	(23%-140%)
13C-OCDD		404	369	pg/g	110	(17%-157%)
13C-2,3,7,8-TCDF		136	184	pg/g	73.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		152	184	pg/g	82.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		154	184	pg/g	83.5	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		151	184	pg/g	82.0	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		128	184	pg/g	69.4	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		139	184	pg/g	75.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		156	184	pg/g	84.6	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469004**	**Date Collected:**	**08/28/2019 10:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**42.2**
Client ID:	**J6-SC1b-50to60-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 05:28**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.77 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		153	184	pg/g	83.3	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		190	184	pg/g	103	(26%-138%)
37Cl-2,3,7,8-TCDD		16.8	18.4	pg/g	91.1	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
Printed: Friday, October 04, 2019 9:34:48 AM Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	5.16e2	8.43e2	1.36e3	31.11	1.000	0.61	YES	0.238	0.0870	7.96e3	1362	5.8	1.34e4	1318	10.2	bb	db
2	12378-PeCDD	1.39e3	8.73e2	2.27e3	34.06	1.001	1.60	NO	0.533	0.130	2.09e4	2741	7.6	1.31e4	1320	9.9	bb	bb
3	123478-HxCDD	1.54e3	9.82e2	2.53e3	36.66	1.001	1.57	YES	0.607	0.210	2.75e4	1884	14.6	1.94e4	3292	5.9	MM	bd
4	123678-HxCDD	8.59e3	6.28e3	1.49e4	36.72	1.000	1.37	NO	3.561	0.200	1.28e5	1884	68.0	1.07e5	3292	32.5	MM	db
5	123789-HxCDD	3.67e3	2.88e3	6.55e3	36.96	1.007	1.27	NO	1.608	0.210	5.26e4	1884	27.9	4.63e4	3292	14.1	db	db
6	1234678-HpCDD	1.77e5	1.71e5	3.48e5	39.98	1.000	1.04	NO	91.947	0.430	2.08e6	3872	537.4	2.01e6	3639	552.3	bb	bb
7	OCDD	1.59e6	1.79e6	3.38e6	44.18	1.000	0.89	NO	994.162	0.753	1.32e7	4702	2803.0	1.47e7	3944	3738.4	bb	bb
8	2378-TCDF	2.28e3	3.11e3	5.40e3	30.33	1.001	0.73	NO	0.878	0.210	1.59e4	2552	6.2	2.14e4	2227	9.6	MM	MM
9	12378-PeCDF	1.75e3	1.12e3	2.87e3	33.24	1.000	1.56	NO	0.508	0.110	3.57e4	1422	25.1	2.54e4	3350	7.6	bb	bb
10	23478-PeCDF	3.59e3	2.40e3	5.99e3	33.87	1.001	1.50	NO	0.957	0.102	6.03e4	1422	42.4	4.28e4	3350	12.8	db	MM
11	123478-HxCDF	8.86e3	7.68e3	1.65e4	35.93	1.000	1.15	NO	3.141	0.125	1.39e5	2466	56.3	1.08e5	1986	54.5	dd	bd
12	123678-HxCDF	4.36e3	3.49e3	7.85e3	36.03	1.000	1.25	NO	1.455	0.130	6.96e4	2466	28.2	5.52e4	1986	27.8	dd	db
13	234678-HxCDF	3.94e3	3.33e3	7.27e3	36.49	1.000	1.18	NO	1.362	0.139	6.04e4	2466	24.5	5.02e4	1986	25.3	bb	bb
14	123789-HxCDF	1.55e3	1.16e3	2.71e3	37.28	1.001	1.33	NO	0.570	0.153	2.35e4	2466	9.5	1.97e4	1986	9.9	bb	bb
15	1234678-HpCDF	7.07e4	7.10e4	1.42e5	38.76	1.001	1.00	NO	29.377	0.255	9.03e5	2725	331.2	9.38e5	3525	266.1	bb	bb
16	1234789-HpCDF	4.13e3	4.13e3	8.26e3	40.63	1.000	1.00	NO	1.871	0.321	4.94e4	2725	18.1	4.57e4	3525	13.0	bb	bb
17	OCDF	1.78e5	2.00e5	3.77e5	44.45	1.006	0.89	NO	99.868	0.239	1.48e6	1414	1044.3	1.73e6	1636	1055.8	bb	bb
18	13C-2378-TCDD	2.78e5	3.62e5	6.40e5	31.10	1.019	0.77	NO	77.312	0.135	3.75e6	2629	1426.1	4.93e6	1811	2724.7	bb	bb
19	13C-12378-PeCDD	3.03e5	1.97e5	5.00e5	34.04	1.115	1.53	NO	89.288	0.161	5.55e6	2186	2539.8	3.49e6	1406	2486.5	bb	bd
20	13C-123478-HxCDD	2.47e5	1.99e5	4.46e5	36.63	0.991	1.24	NO	91.055	0.252	3.65e6	3185	1146.6	2.94e6	3894	756.0	bd	bd
21	13C-123678-HxCDD	2.59e5	2.13e5	4.72e5	36.71	0.993	1.22	NO	71.943	0.188	4.01e6	3185	1259.3	3.25e6	3894	835.0	dd	dd
22	13C-1234678-HpCDD	2.04e5	1.96e5	4.00e5	39.97	1.082	1.04	NO	101.926	0.183	2.36e6	2202	1073.8	2.27e6	1916	1185.0	bd	bd
23	13C-OCDD	3.44e5	3.99e5	7.43e5	44.16	1.195	0.86	NO	219.250	0.241	2.91e6	2608	1115.0	3.32e6	2072	1599.7	bb	bd
24	13C-2378-TCDF	2.99e5	3.89e5	6.88e5	30.29	0.992	0.77	NO	73.695	0.132	2.77e6	2715	1019.0	3.59e6	2197	1634.9	bb	bb
25	13C-12378-PeCDF	3.78e5	2.44e5	6.22e5	33.24	1.089	1.55	NO	82.729	0.272	7.27e6	4091	1776.9	4.76e6	4052	1176.0	dd	dd
26	13C-23478-PeCDF	3.94e5	2.50e5	6.44e5	33.84	1.108	1.58	NO	83.477	0.265	7.39e6	4091	1807.2	4.65e6	4052	1148.3	bb	bb
27	13C-123478-HxCDF	1.59e5	3.05e5	4.64e5	35.92	0.972	0.52	NO	81.978	0.245	2.67e6	3588	745.1	5.10e6	4346	1173.3	bd	bd
28	13C-123678-HxCDF	1.76e5	3.36e5	5.12e5	36.02	0.975	0.52	NO	69.432	0.188	2.79e6	3588	776.8	5.26e6	4346	1209.3	db	db
29	13C-234678-HxCDF	1.64e5	3.08e5	4.72e5	36.49	0.988	0.53	NO	75.374	0.221	2.45e6	3588	683.8	4.63e6	4346	1066.3	bd	bb
30	13C-123789-HxCDF	1.52e5	2.95e5	4.47e5	37.26	1.008	0.52	NO	84.636	0.262	2.33e6	3588	650.5	4.46e6	4346	1025.3	bd	bd
31	13C-1234678-HpCDF	1.26e5	2.79e5	4.05e5	38.74	1.048	0.45	NO	83.256	0.223	1.60e6	2189	730.3	3.55e6	4041	878.5	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
Printed: Friday, October 04, 2019 9:34:48 AM Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.10e5	2.50e5	3.60e5	40.61	1.099	0.44	NO	103.260	0.312	1.21e6	2189	553.8	2.61e6	4041	646.4	bd	bd
33	13C-1234-TCDD	3.15e5	4.04e5	7.19e5	30.53	0.000	0.78	NO	100.000	0.155	3.13e6	2629	1191.0	4.02e6	1811	2220.2	bb	bb
34	13C-123789-HxCDD	3.40e5	2.81e5	6.21e5	36.95	0.000	1.21	NO	100.000	0.199	4.87e6	3185	1528.6	4.10e6	3894	1053.9	dd	dd
35	37Cl-2378-TCDD	7.06e4		7.06e4	31.11	1.019			9.113	0.0662	9.67e5	2037	474.9				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
Printed: Friday, October 04, 2019 9:34:48 AM Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.50e3	2.39e3	3.88e3	27.74	0.63	YES	0.681	0.0870	1.66e4	1362	12.2	2.69e4	1318	20.4	MM	MM
2	Total-tetradioxins	4.15e2	7.70e2	1.18e3	28.03	0.54	YES	0.208	0.0870	4.81e3	1362	3.5	1.01e4	1318	7.7	MM	db
3	Total-tetradioxins	4.46e2	5.79e2	1.02e3	28.40	0.77	NO	0.180	0.0870	6.08e3	1362	4.5	6.70e3	1318	5.1	bb	bb
4	Total-tetradioxins	4.18e2	4.85e2	9.03e2	29.57	0.86	NO	0.158	0.0870	4.95e3	1362	3.6	6.18e3	1318	4.7	MM	MM
5	Total-tetradioxins	1.88e2	2.57e2	4.45e2	30.56	0.73	NO	0.078	0.0870	2.42e3	1362	1.8	2.85e3	1318	2.2	bb	MM
6	2378-TCDD	5.16e2	8.43e2	1.36e3	31.11	0.61	YES	0.238	0.0870	7.96e3	1362	5.8	1.34e4	1318	10.2	bb	db
7	Total-tetradioxins	1.28e2	1.71e2	2.99e2	31.32	0.75	NO	0.052	0.0870	2.65e3	1362	1.9	4.14e3	1318	3.1	MM	bb
8	Total-tetradioxins	1.28e2	5.76e1	1.86e2	31.73	2.22	YES	0.033	0.0870	4.02e3	1362	3.0	1.45e3	1318	1.1	bb	bb
9	Total-tetradioxins	2.28e2	8.28e1	3.11e2	29.17	2.75	YES	0.054	0.0870	1.78e3	1362	1.3	2.75e3	1318	2.1	MM	dd
10	Total-tetradioxins	2.12e2	2.71e2	4.83e2	29.32	0.78	NO	0.085	0.0870	2.27e3	1362	1.7	3.59e3	1318	2.7	MM	MM
11	Total-tetradioxins	2.66e2	4.64e2	7.30e2	30.92	0.57	YES	0.128	0.0870	3.75e3	1362	2.8	5.10e3	1318	3.9	MM	bd

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	3.16e3	2.41e3	5.57e3	32.73	1.31	YES	1.310	0.130	6.55e4	2741	23.9	4.06e4	1320	30.7	MM	bd
2	Total-pentadioxins	7.74e2	8.09e2	1.58e3	32.98	0.96	YES	0.372	0.130	1.84e4	2741	6.7	1.79e4	1320	13.6	bb	db
3	Total-pentadioxins	1.66e3	1.16e3	2.83e3	33.26	1.43	NO	0.664	0.130	3.66e4	2741	13.4	2.32e4	1320	17.6	bd	bd
4	Total-pentadioxins	1.08e3	7.77e2	1.85e3	33.38	1.39	NO	0.436	0.130	2.13e4	2741	7.8	1.63e4	1320	12.3	dd	MM
5	Total-pentadioxins	4.67e2	3.42e2	8.10e2	33.43	1.36	NO	0.190	0.130	1.18e4	2741	4.3	9.84e3	1320	7.5	dd	MM
6	Total-pentadioxins	1.25e3	8.64e2	2.12e3	33.57	1.45	NO	0.497	0.130	2.05e4	2741	7.5	1.40e4	1320	10.6	db	MM
7	12378-PeCDD	1.39e3	8.73e2	2.27e3	34.06	1.60	NO	0.533	0.130	2.09e4	2741	7.6	1.31e4	1320	9.9	bb	bb
8	Total-pentadioxins	2.72e2	1.20e2	3.92e2	34.30	2.27	YES	0.092	0.130	6.62e3	2741	2.4	3.81e3	1320	2.9	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
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Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	1.69e4	1.36e4	3.05e4	35.42	1.25	NO	7.368	0.207	2.82e5	1884	149.4	2.32e5	3292	70.4	bb	bb
2	Total-hexadioxins	2.14e3	1.64e3	3.77e3	35.88	1.31	NO	0.911	0.207	3.34e4	1884	17.7	2.70e4	3292	8.2	bd	bb
3	Total-hexadioxins	2.09e4	1.66e4	3.75e4	36.08	1.26	NO	9.061	0.207	3.09e5	1884	164.3	2.61e5	3292	79.3	db	bb
4	Total-hexadioxins	9.79e1	5.70e1	1.55e2	36.49	1.72	YES	0.037	0.207	3.43e3	1884	1.8	4.02e3	3292	1.2	bb	bb
5	123678-HxCDD	8.59e3	6.28e3	1.49e4	36.72	1.37	NO	3.561	0.200	1.28e5	1884	68.0	1.07e5	3292	32.5	MM	db
6	Total-hexadioxins	5.50e2	2.61e2	8.12e2	36.88	2.11	YES	0.196	0.207	1.15e4	1884	6.1	1.19e4	3292	3.6	dd	bd
7	123789-HxCDD	3.67e3	2.88e3	6.55e3	36.96	1.27	NO	1.608	0.210	5.26e4	1884	27.9	4.63e4	3292	14.1	db	db
8	123478-HxCDD	1.54e3	9.82e2	2.53e3	36.66	1.57	YES	0.607	0.210	2.75e4	1884	14.6	1.94e4	3292	5.9	MM	bd

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	1.67e5	1.59e5	3.26e5	39.08	1.06	NO	86.298	0.430	2.13e6	3872	551.2	2.02e6	3639	555.2	bb	bb
2	1234678-HpCDD	1.77e5	1.71e5	3.48e5	39.98	1.04	NO	91.947	0.430	2.08e6	3872	537.4	2.01e6	3639	552.3	bb	bb
3	Total-heptadioxins	1.42e2	1.03e2	2.45e2	40.38	1.37	YES	0.065	0.430	6.71e3	3872	1.7	3.72e3	3639	1.0	bb	bb
4	Total-heptadioxins	1.24e2	1.44e2	2.68e2	40.88	0.86	YES	0.071	0.430	5.37e3	3872	1.4	4.89e3	3639	1.3	bb	bb
5	Total-heptadioxins	1.22e2	8.95e1	2.12e2	41.61	1.37	YES	0.056	0.430	7.99e3	3872	2.1	3.31e3	3639	0.9	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
Printed: Friday, October 04, 2019 9:34:48 AM Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.54e2	8.31e2	1.38e3	25.98	0.67	NO	0.225	0.210	6.66e3	2552	2.6	1.07e4	2227	4.8	MM	bb
2	Total-tetrafurans	1.43e3	1.94e3	3.37e3	26.44	0.74	NO	0.548	0.210	1.72e4	2552	6.7	2.16e4	2227	9.7	bb	bb
3	Total-tetrafurans	2.33e3	3.28e3	5.61e3	26.97	0.71	NO	0.914	0.210	2.52e4	2552	9.9	3.87e4	2227	17.4	bd	bb
4	Total-tetrafurans	2.64e3	2.94e3	5.57e3	27.26	0.90	YES	0.907	0.210	1.72e4	2552	6.8	2.04e4	2227	9.1	MM	MM
5	Total-tetrafurans	3.63e3	4.58e3	8.21e3	27.65	0.79	NO	1.335	0.210	3.10e4	2552	12.2	4.86e4	2227	21.8	bb	bb
6	Total-tetrafurans	3.20e3	4.38e3	7.58e3	28.00	0.73	NO	1.234	0.210	1.96e4	2552	7.7	2.32e4	2227	10.4	MM	MM
7	Total-tetrafurans	1.41e3	1.96e3	3.37e3	28.31	0.72	NO	0.549	0.210	1.67e4	2552	6.5	1.79e4	2227	8.1	db	db
8	Total-tetrafurans	1.67e2	3.57e2	5.25e2	28.62	0.47	YES	0.085	0.210	4.33e3	2552	1.7	5.99e3	2227	2.7	bd	bd
9	Total-tetrafurans	7.54e2	1.00e3	1.75e3	28.75	0.75	NO	0.285	0.210	8.15e3	2552	3.2	1.24e4	2227	5.6	dd	dd
10	Total-tetrafurans	2.11e3	2.78e3	4.89e3	28.95	0.76	NO	0.796	0.210	1.69e4	2552	6.6	1.94e4	2227	8.7	MM	db
11	Total-tetrafurans	2.09e3	2.98e3	5.07e3	29.39	0.70	NO	0.825	0.210	1.86e4	2552	7.3	3.04e4	2227	13.6	bd	bd
12	Total-tetrafurans	2.74e2	5.71e2	8.45e2	29.54	0.48	YES	0.137	0.210	7.03e3	2552	2.8	8.31e3	2227	3.7	dd	dd
13	Total-tetrafurans	9.40e2	9.16e2	1.86e3	29.64	1.03	YES	0.302	0.210	1.25e4	2552	4.9	1.42e4	2227	6.4	dd	dd
14	Total-tetrafurans	3.12e2	4.11e2	7.23e2	29.87	0.76	NO	0.118	0.210	3.81e3	2552	1.5	7.42e3	2227	3.3	MM	db
15	Total-tetrafurans	2.30e2	3.41e2	5.72e2	30.06	0.68	NO	0.093	0.210	3.25e3	2552	1.3	5.81e3	2227	2.6	MM	bd
16	2378-TCDF	2.28e3	3.11e3	5.40e3	30.33	0.73	NO	0.878	0.210	1.59e4	2552	6.2	2.14e4	2227	9.6	MM	MM
17	Total-tetrafurans	1.73e3	2.02e3	3.75e3	30.67	0.86	NO	0.610	0.210	1.71e4	2552	6.7	2.22e4	2227	10.0	bb	bd
18	Total-tetrafurans	2.97e2	3.96e2	6.93e2	30.86	0.75	NO	0.113	0.210	5.11e3	2552	2.0	5.56e3	2227	2.5	bb	db
19	Total-tetrafurans	2.74e2	3.07e2	5.81e2	31.58	0.89	YES	0.095	0.210	7.69e3	2552	3.0	5.07e3	2227	2.3	bd	bd
20	Total-tetrafurans	7.68e1	1.55e2	2.32e2	31.66	0.49	YES	0.038	0.210	2.34e3	2552	0.9	3.12e3	2227	1.4	db	dd
21	Total-tetrafurans	5.73e2	6.86e2	1.26e3	31.82	0.84	NO	0.205	0.210	7.94e3	2552	3.1	8.12e3	2227	3.6	bb	db
22	Total-tetrafurans	7.02e1	5.81e1	1.28e2	32.12	1.21	YES	0.021	0.210	1.65e3	2552	0.6	3.22e3	2227	1.4	bb	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	2.63e4	1.70e4	4.33e4	31.83	1.55	NO	7.271	0.0363	4.85e5	658	736.9	3.07e5	980	312.8	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
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Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	2.69e3	1.72e3	4.41e3	32.63	1.57	NO	0.741	0.106	5.60e4	1422	39.4	3.93e4	3350	11.7	bd	bd
2	Total-pentafurans	1.18e4	7.17e3	1.90e4	32.70	1.64	NO	3.190	0.106	1.83e5	1422	128.9	1.06e5	3350	31.6	db	db
3	Total-pentafurans	4.43e2	2.61e2	7.04e2	32.89	1.70	NO	0.118	0.106	1.17e4	1422	8.2	5.22e3	3350	1.6	bb	MM
4	Total-pentafurans	3.35e3	2.19e3	5.54e3	33.02	1.53	NO	0.931	0.106	7.02e4	1422	49.4	4.83e4	3350	14.4	bd	bd
5	Total-pentafurans	5.42e2	3.83e2	9.25e2	33.13	1.42	NO	0.155	0.106	1.18e4	1422	8.3	7.37e3	3350	2.2	db	db
6	12378-PeCDF	1.75e3	1.12e3	2.87e3	33.24	1.56	NO	0.508	0.110	3.57e4	1422	25.1	2.54e4	3350	7.6	bb	bb
7	Total-pentafurans	2.20e3	1.60e3	3.81e3	33.42	1.37	NO	0.640	0.106	3.69e4	1422	26.0	2.65e4	3350	7.9	bb	bb
8	Total-pentafurans	6.35e2	4.40e2	1.07e3	33.80	1.44	NO	0.181	0.106	1.41e4	1422	9.9	1.15e4	3350	3.4	bd	MM
9	23478-PeCDF	3.59e3	2.40e3	5.99e3	33.87	1.50	NO	0.957	0.102	6.03e4	1422	42.4	4.28e4	3350	12.8	db	MM

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	8.17e3	6.60e3	1.48e4	34.99	1.24	NO	2.845	0.136	1.52e5	2466	61.8	1.18e5	1986	59.5	bd	bd
2	Total-hexafurans	2.78e4	2.28e4	5.07e4	35.13	1.22	NO	9.762	0.136	4.86e5	2466	196.9	4.00e5	1986	201.3	dd	MM
3	Total-hexafurans	2.49e2	2.05e2	4.55e2	35.26	1.22	NO	0.088	0.136	7.79e3	2466	3.2	5.31e3	1986	2.7	db	MM
4	Total-hexafurans	6.46e2	4.97e2	1.14e3	35.40	1.30	NO	0.220	0.136	1.62e4	2466	6.6	1.18e4	1986	6.0	bd	bb
5	Total-hexafurans	5.54e4	4.38e4	9.92e4	35.54	1.27	NO	19.111	0.136	9.50e5	2466	385.1	7.65e5	1986	385.3	db	bb
6	123478-HxCDF	8.86e3	7.68e3	1.65e4	35.93	1.15	NO	3.141	0.125	1.39e5	2466	56.3	1.08e5	1986	54.5	dd	bd
7	123678-HxCDF	4.36e3	3.49e3	7.85e3	36.03	1.25	NO	1.455	0.130	6.96e4	2466	28.2	5.52e4	1986	27.8	dd	db
8	Total-hexafurans	2.62e2	2.02e2	4.64e2	36.23	1.30	NO	0.089	0.136	5.21e3	2466	2.1	6.80e3	1986	3.4	dd	bd
9	Total-hexafurans	4.21e2	3.21e2	7.42e2	36.32	1.31	NO	0.143	0.136	7.65e3	2466	3.1	6.52e3	1986	3.3	db	db
10	234678-HxCDF	3.94e3	3.33e3	7.27e3	36.49	1.18	NO	1.362	0.139	6.04e4	2466	24.5	5.02e4	1986	25.3	bb	bb
11	123789-HxCDF	1.55e3	1.16e3	2.71e3	37.28	1.33	NO	0.570	0.153	2.35e4	2466	9.5	1.97e4	1986	9.9	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

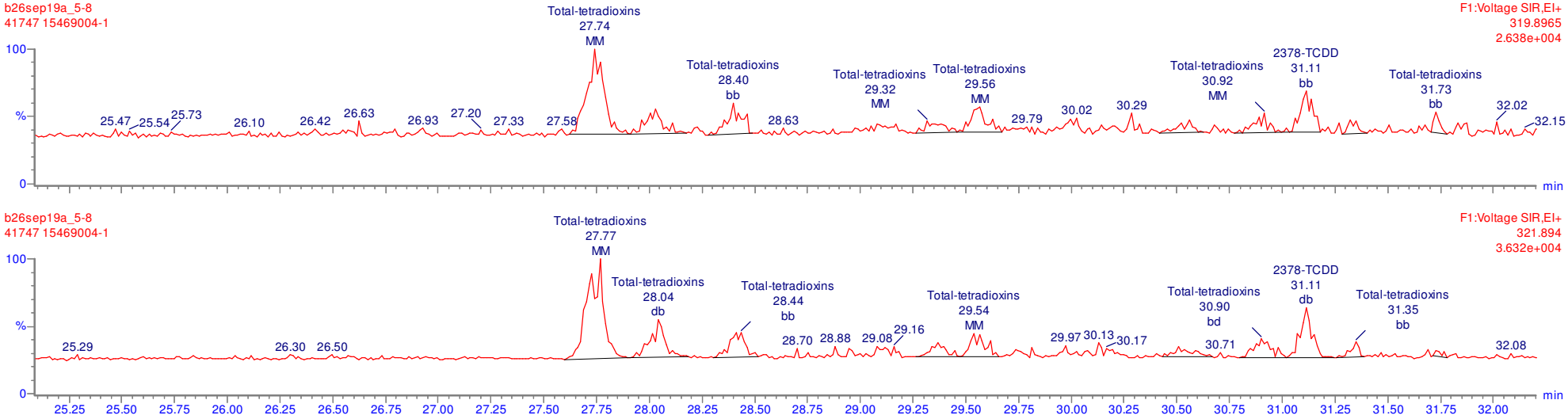
Last Altered: Friday, October 04, 2019 9:34:26 AM Eastern Standard Time
Printed: Friday, October 04, 2019 9:34:48 AM Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

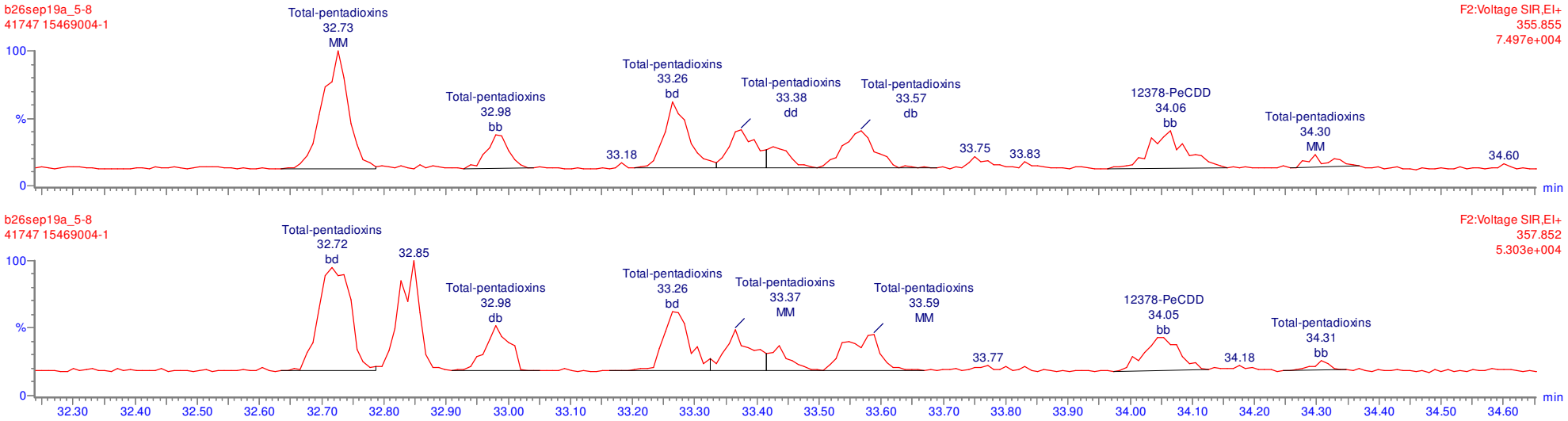
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	7.07e4	7.10e4	1.42e5	38.76	1.00	NO	29.377	0.255	9.03e5	2725	331.2	9.38e5	3525	266.1	bb	bb
2	Total-heptafurans	4.31e2	6.91e2	1.12e3	39.10	0.62	YES	0.243	0.286	8.33e3	2725	3.1	1.16e4	3525	3.3	bb	bb
3	Total-heptafurans	1.89e5	1.85e5	3.73e5	39.26	1.02	NO	80.756	0.286	2.43e6	2725	890.4	2.40e6	3525	679.9	bb	bd
4	Total-heptafurans	6.94e1	5.07e1	1.20e2	39.73	1.37	YES	0.026	0.286	3.42e3	2725	1.3	4.06e3	3525	1.2	bb	bb
5	1234789-HpCDF	4.13e3	4.13e3	8.26e3	40.63	1.00	NO	1.871	0.321	4.94e4	2725	18.1	4.57e4	3525	13.0	bb	bb

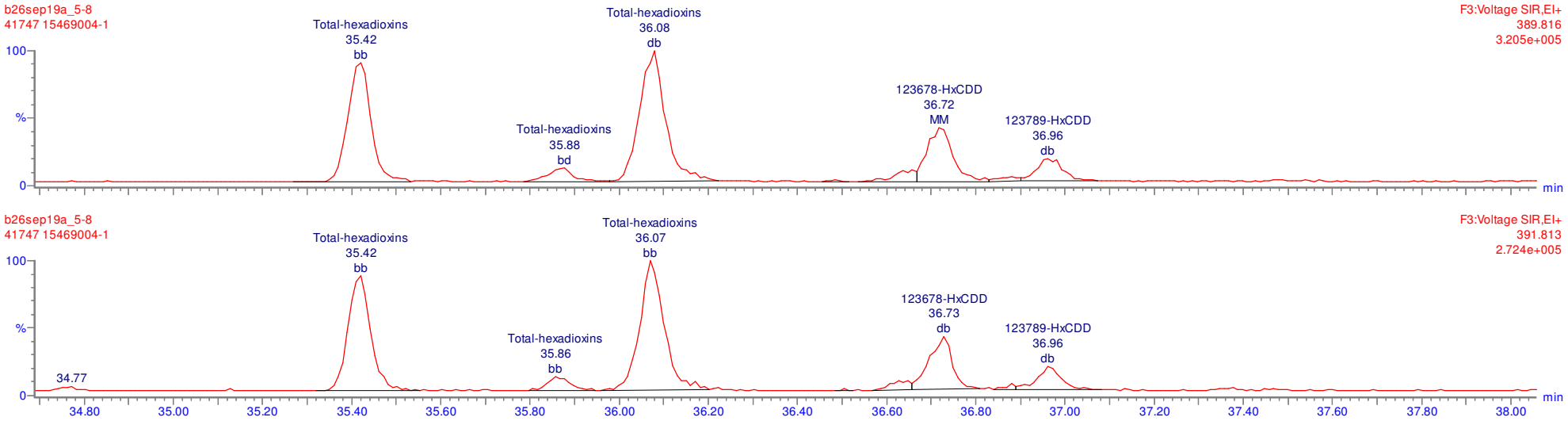
MANUAL INTEGRATION
METHOD 1613
HRP763_1



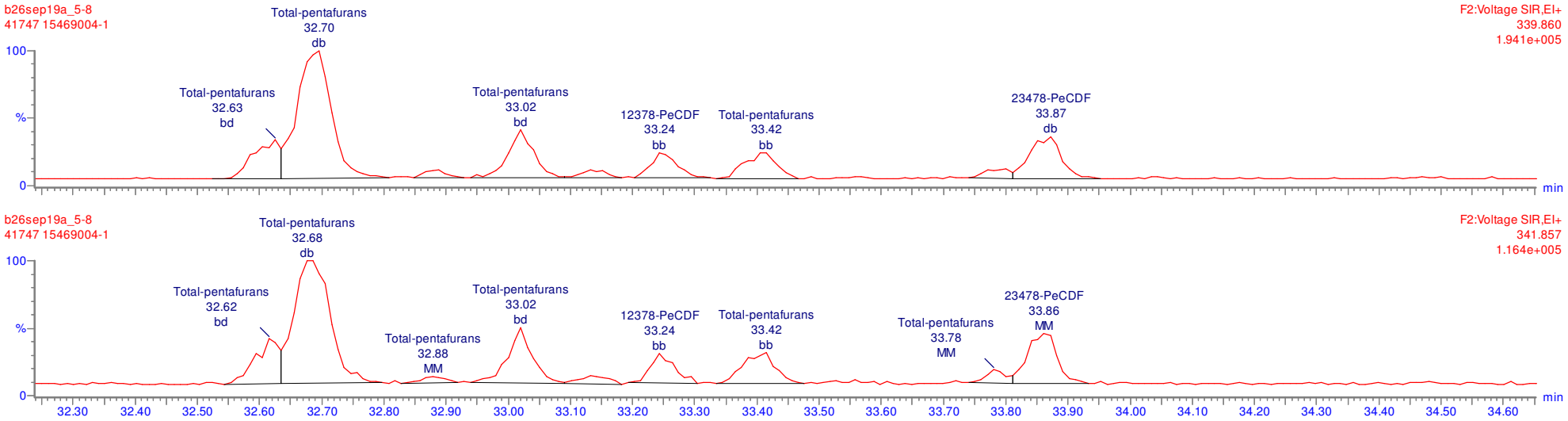
MANUAL INTEGRATION
METHOD 1613
HRP763_1



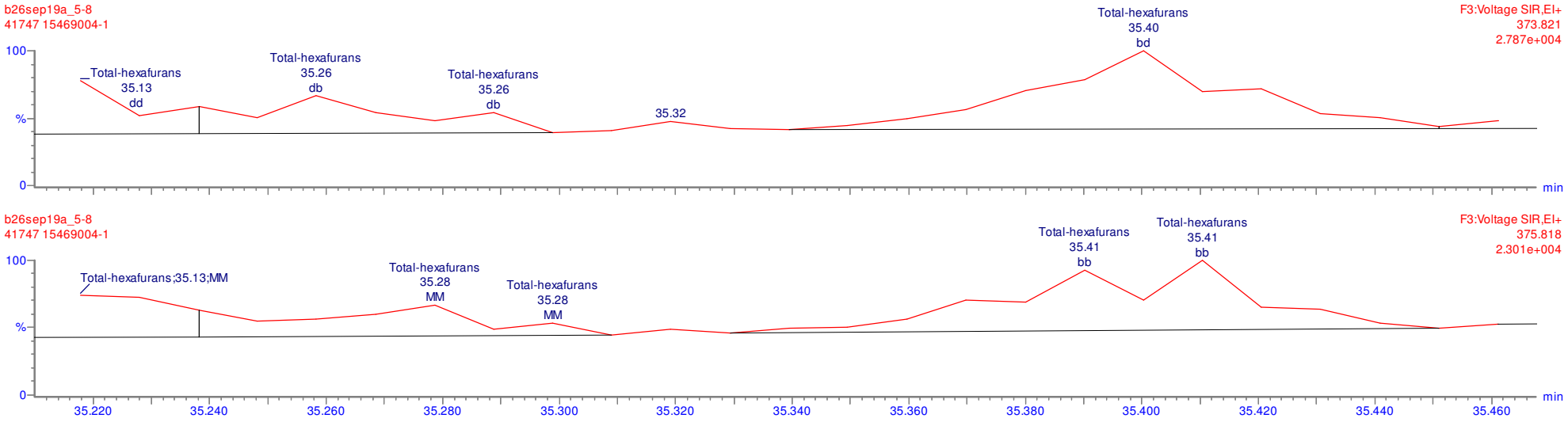
MANUAL INTEGRATION
METHOD 1613
HRP763_1



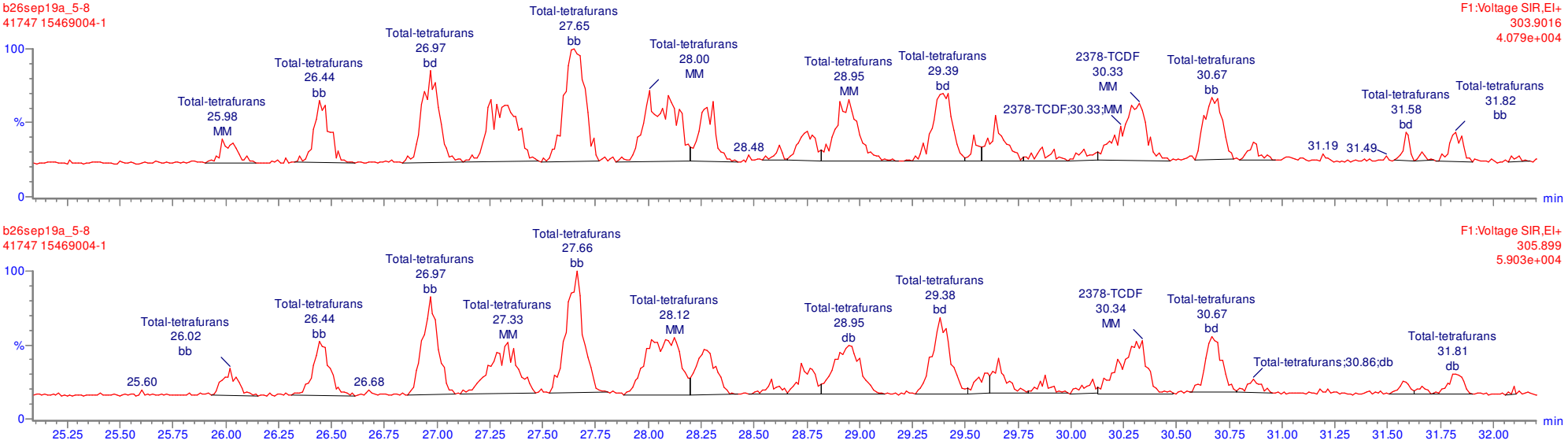
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



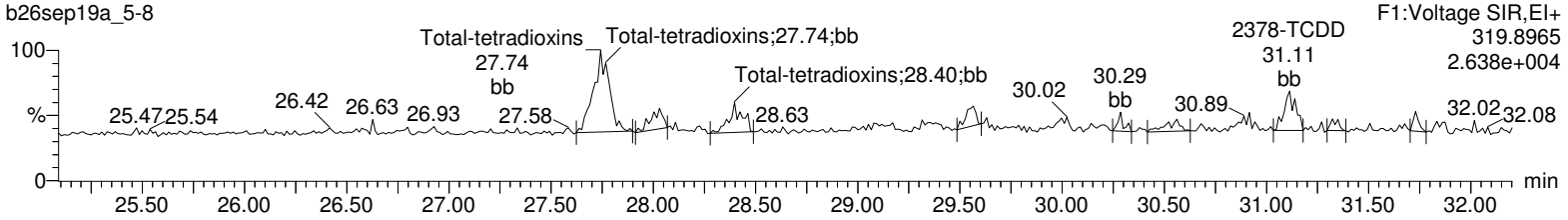
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

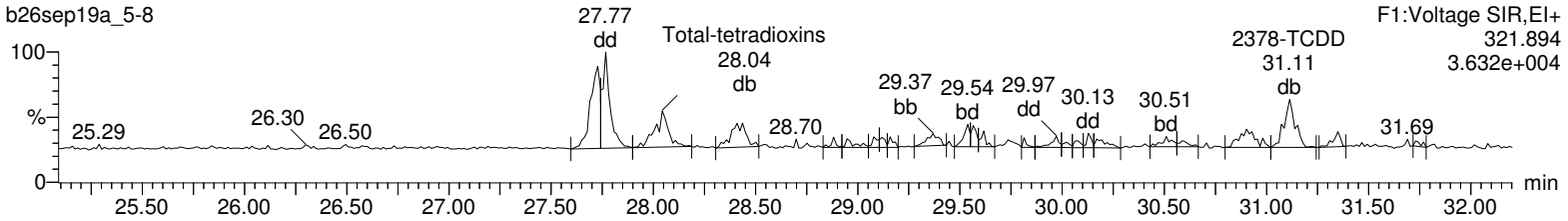
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

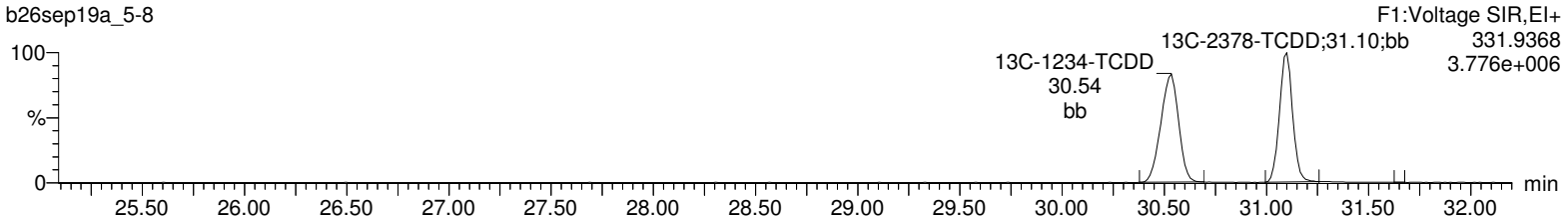
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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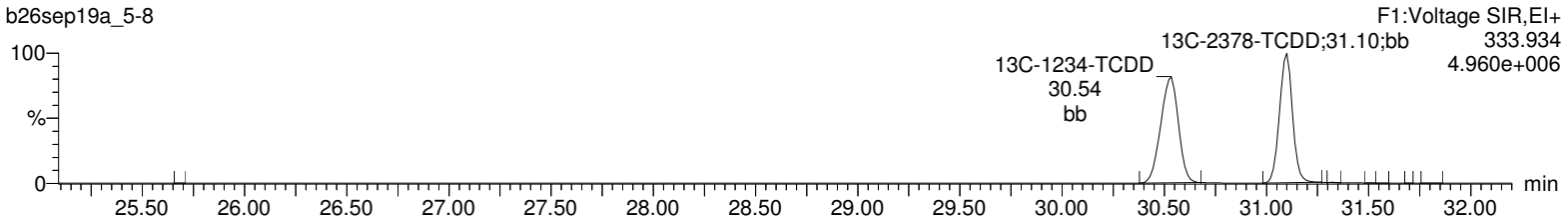
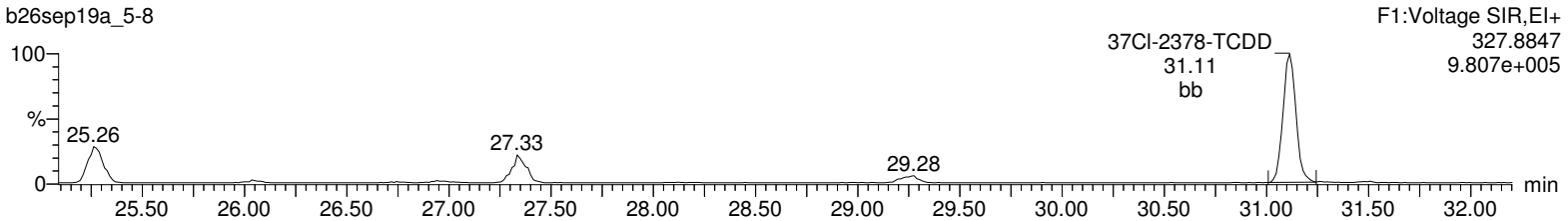
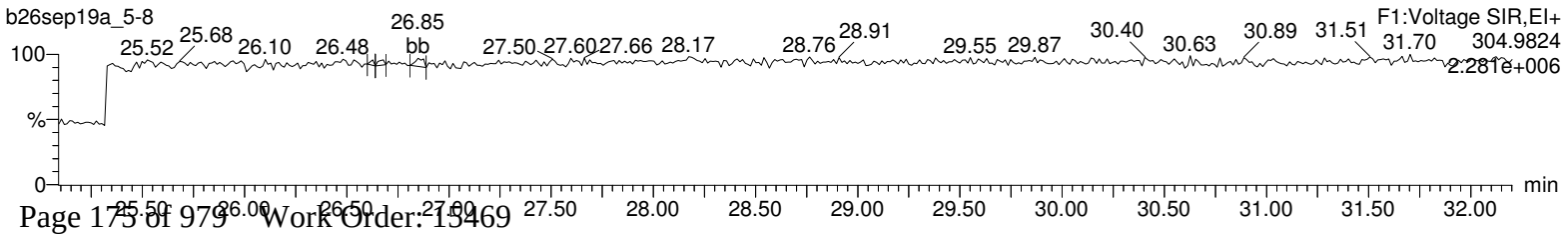


37Cl-2378-TCDD



Lock Mass F1



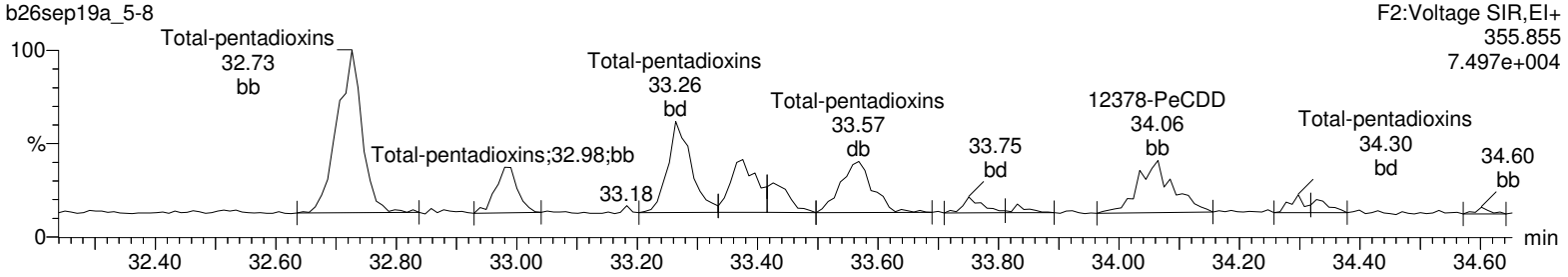
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

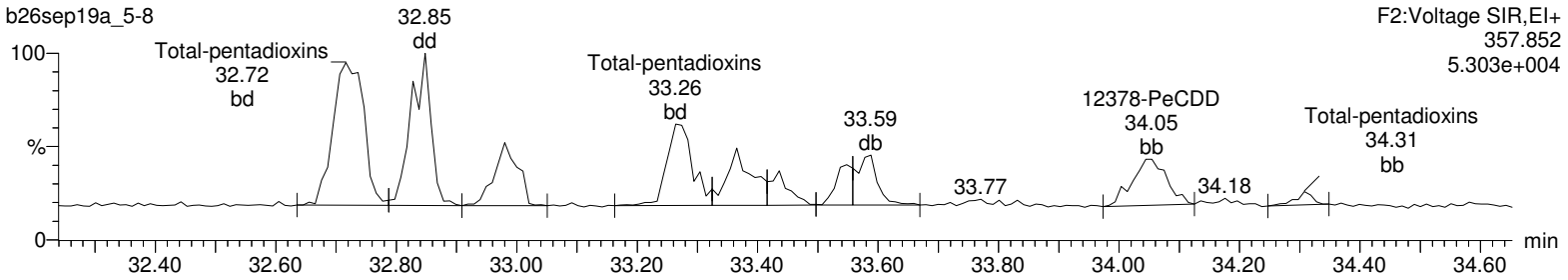
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

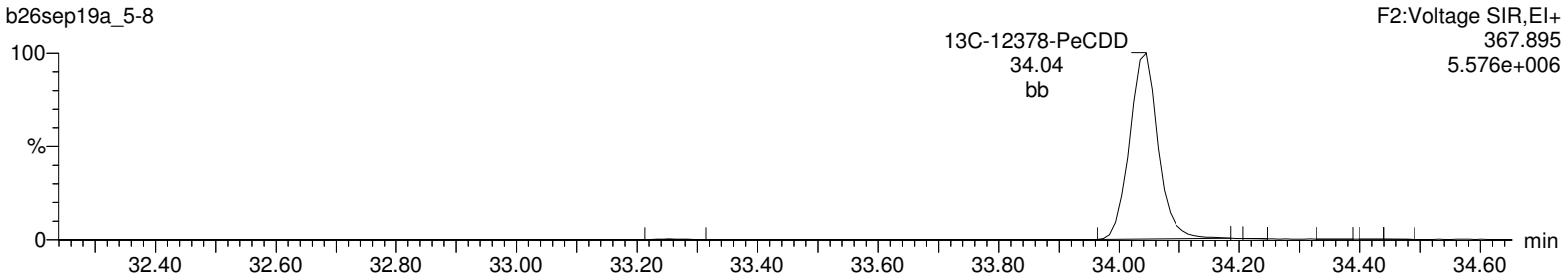
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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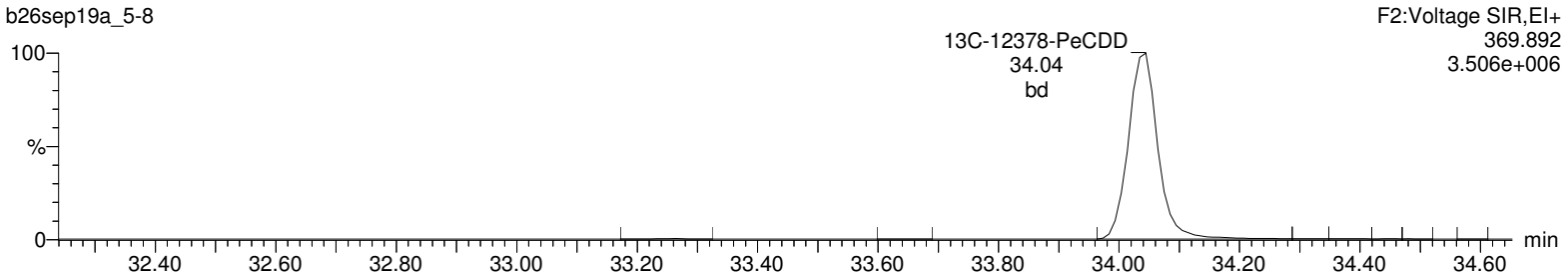
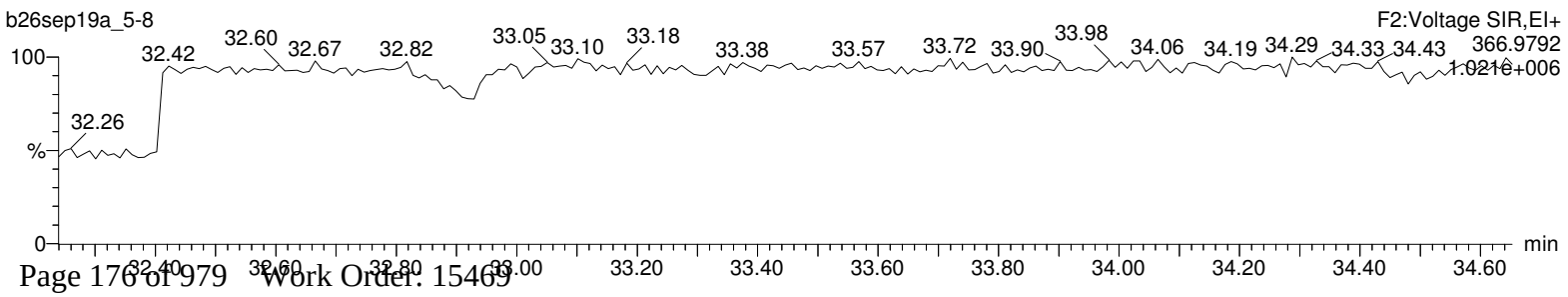


Lock Mass F2



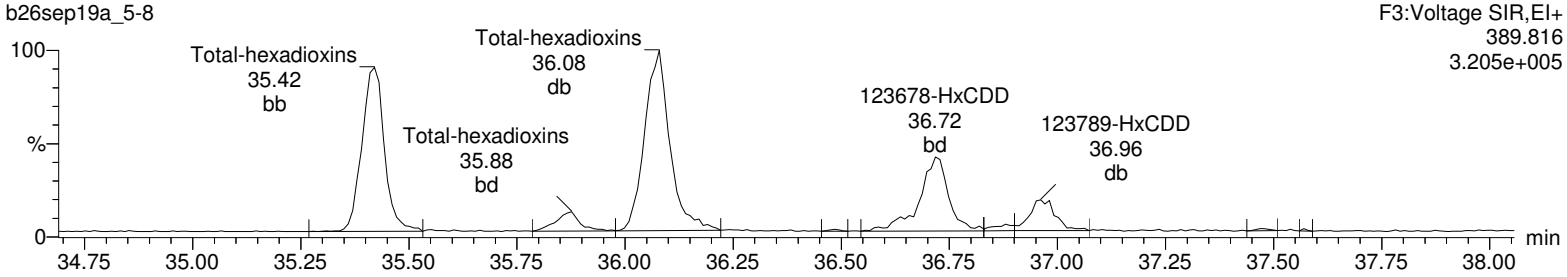
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

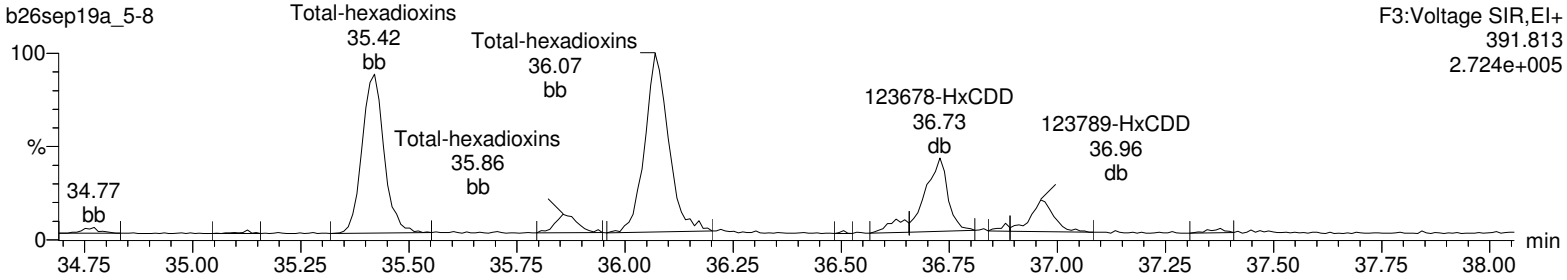
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

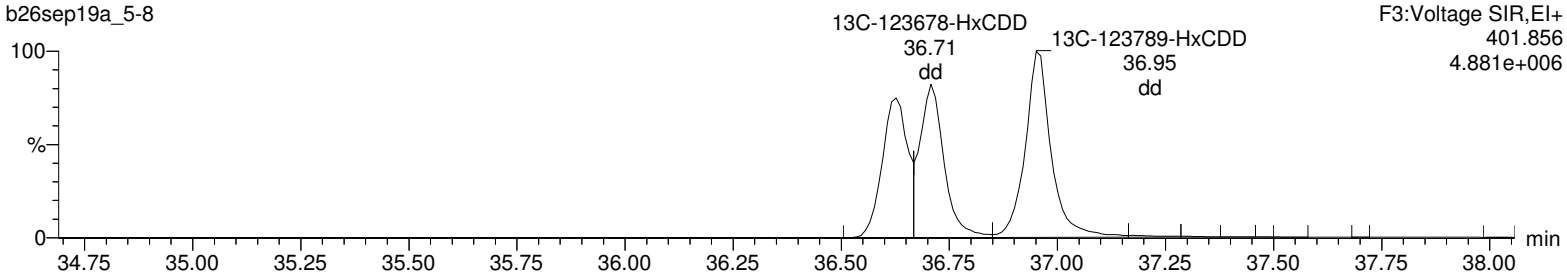
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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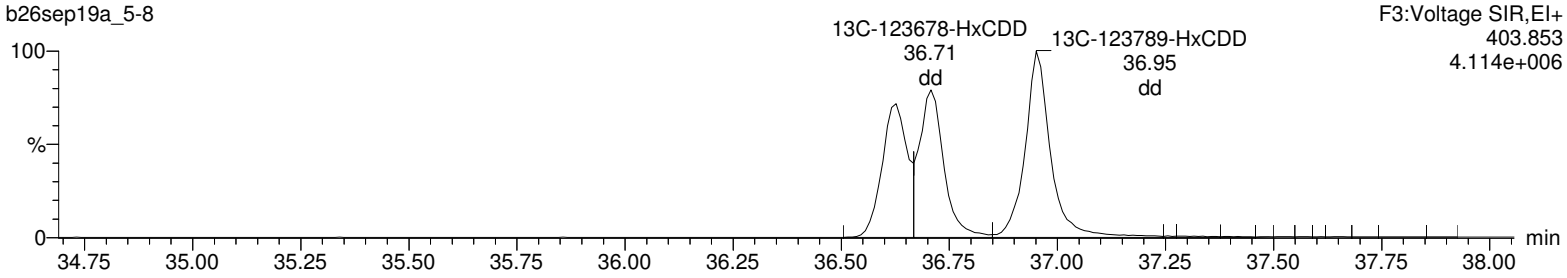
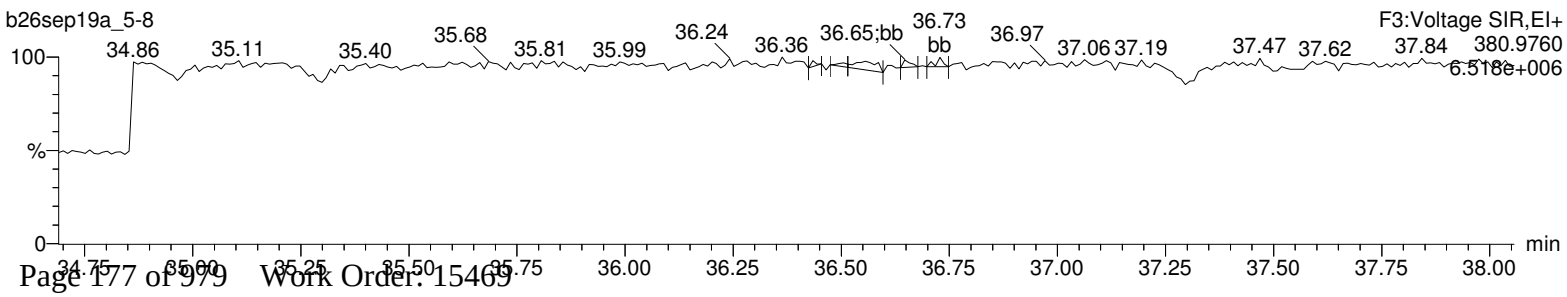


Lock Mass F3



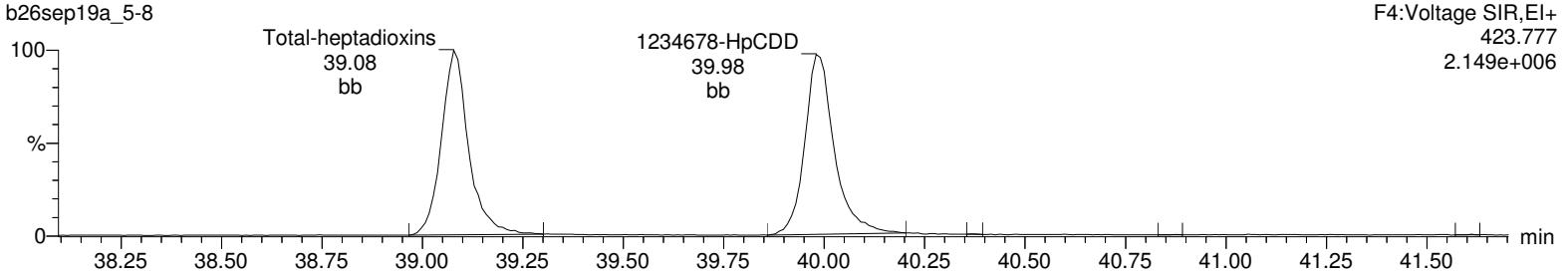
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

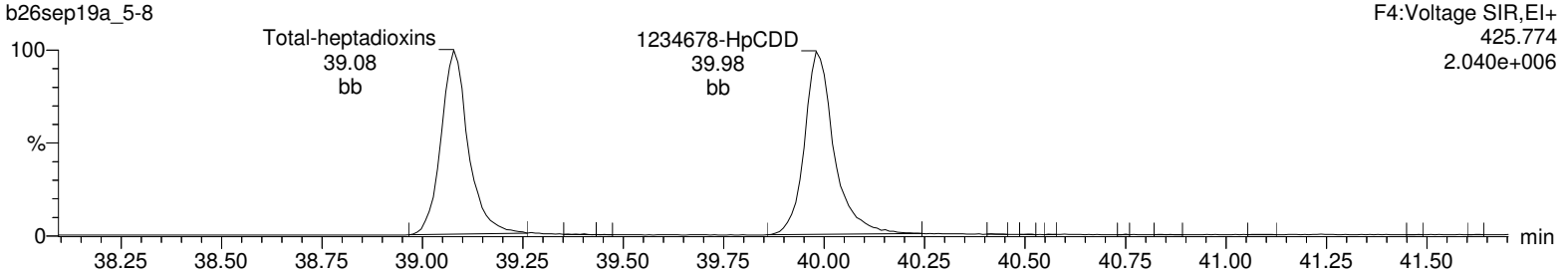
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

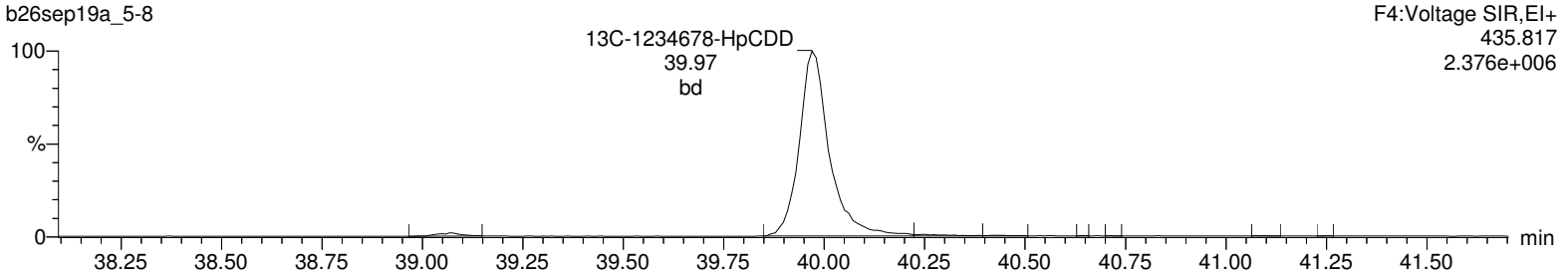
Total-heptadioxins



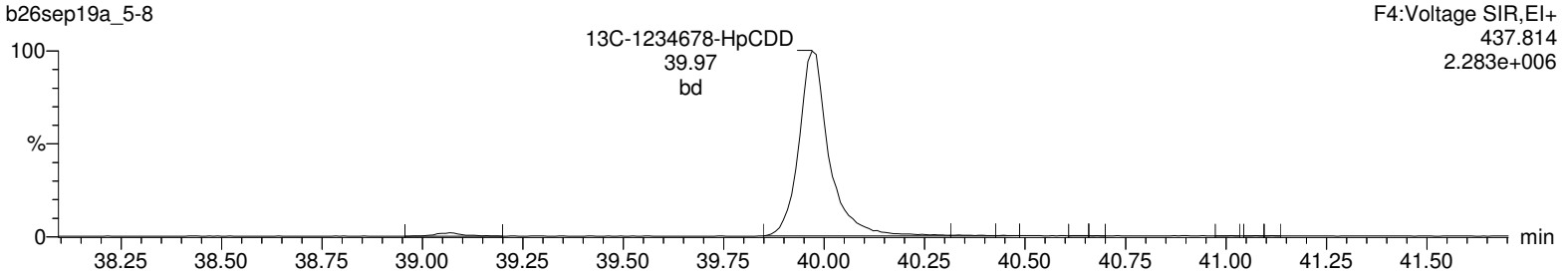
Total-heptadioxins



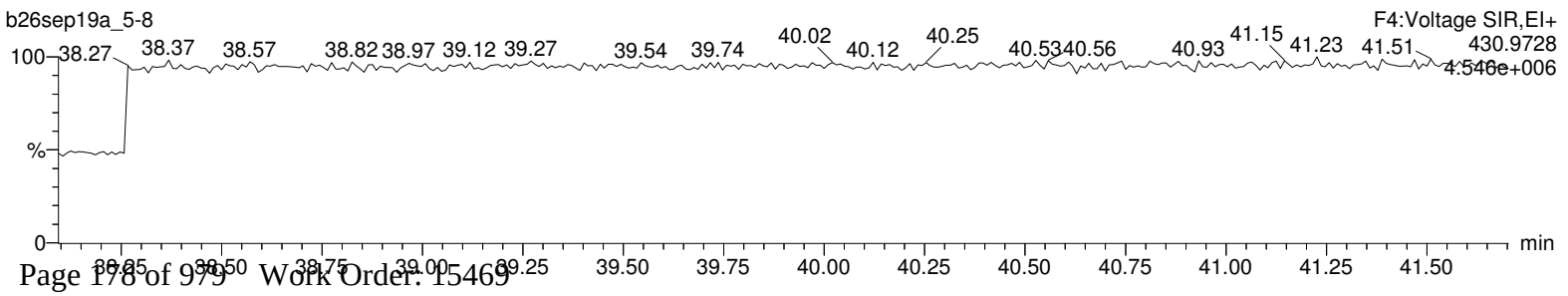
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



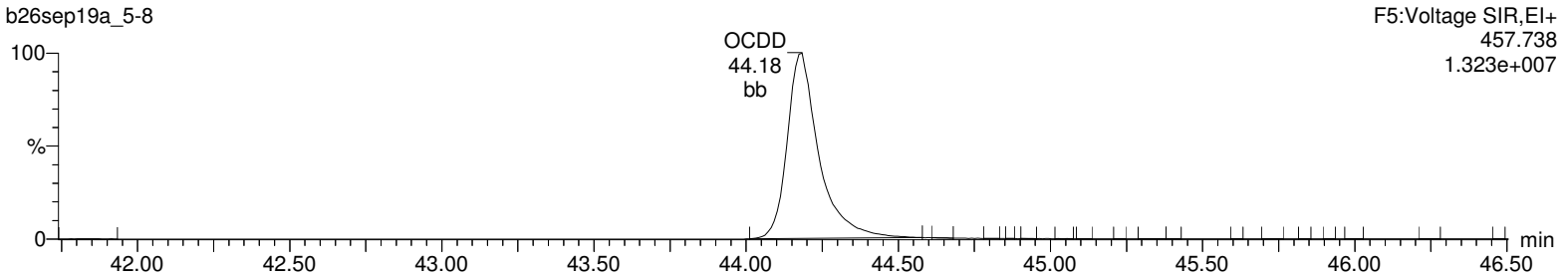
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

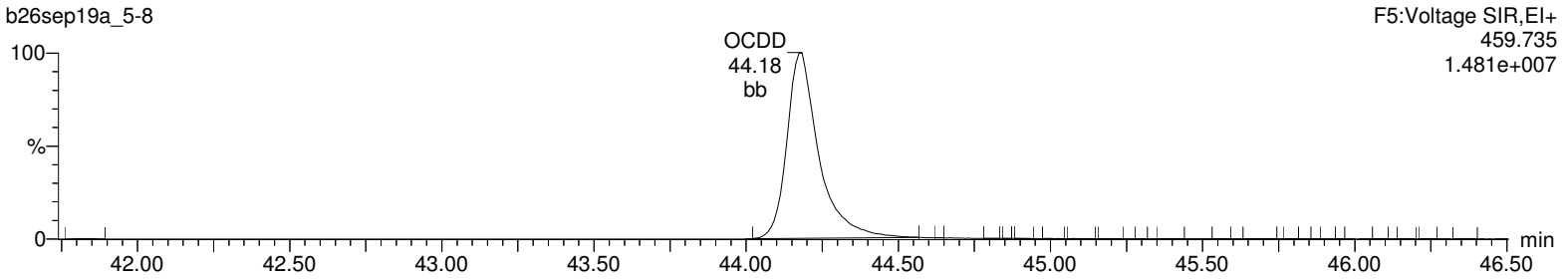
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

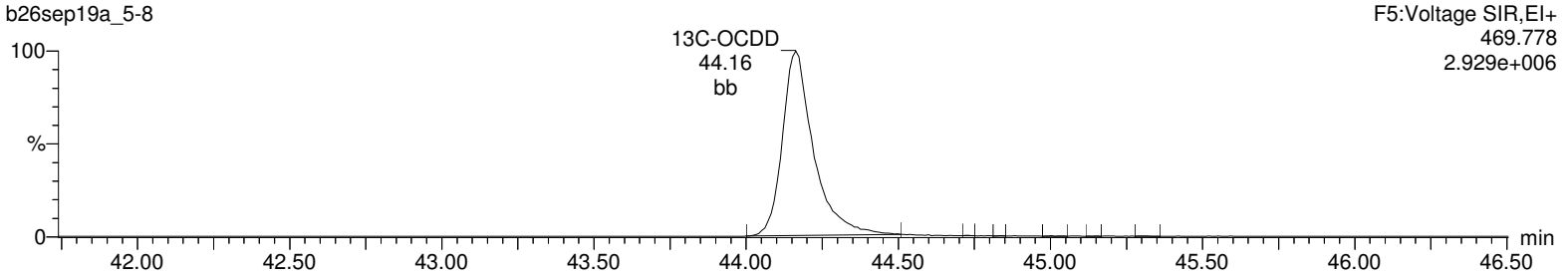
OCDD



OCDD



13C-OCDD



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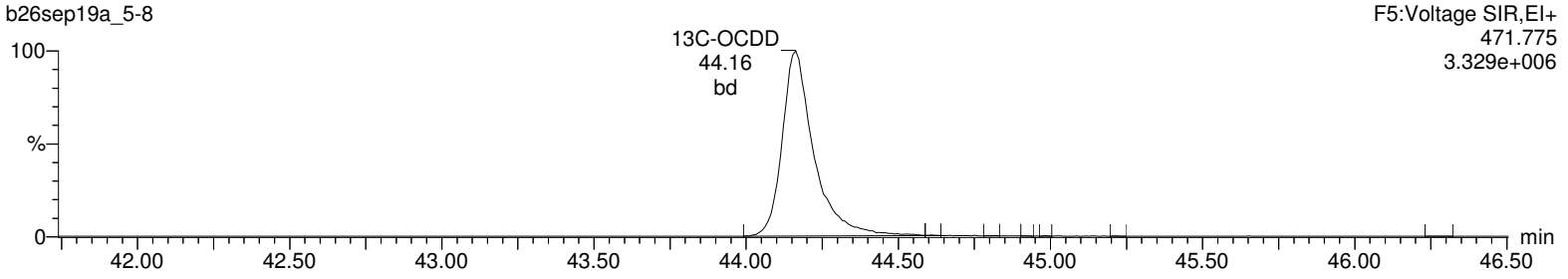
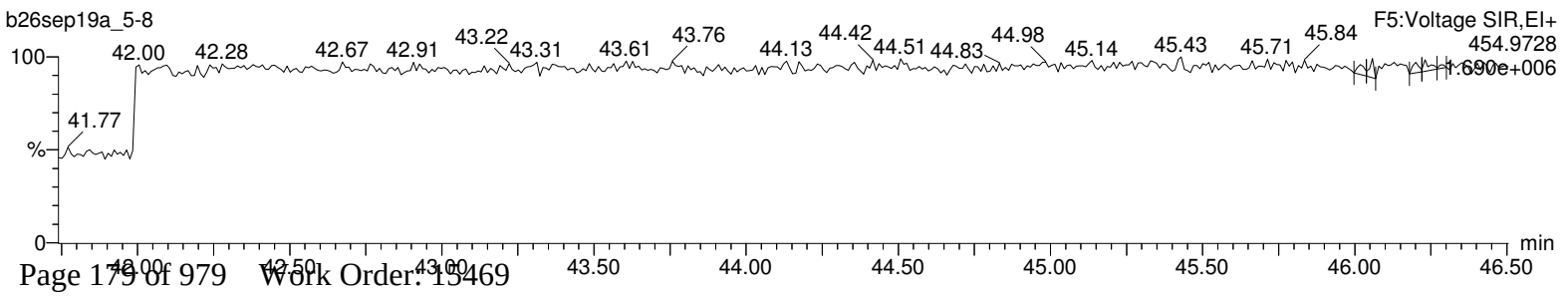


Lock Mass F5



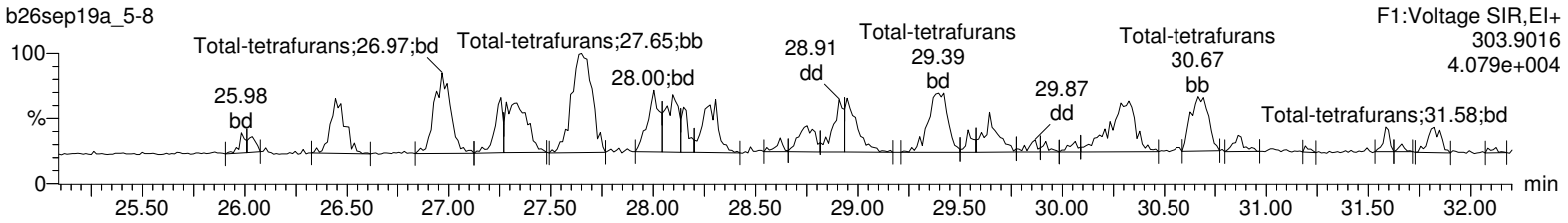
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

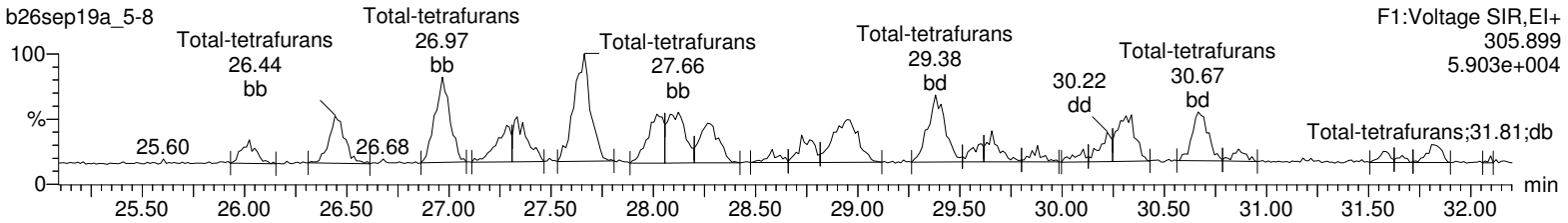
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

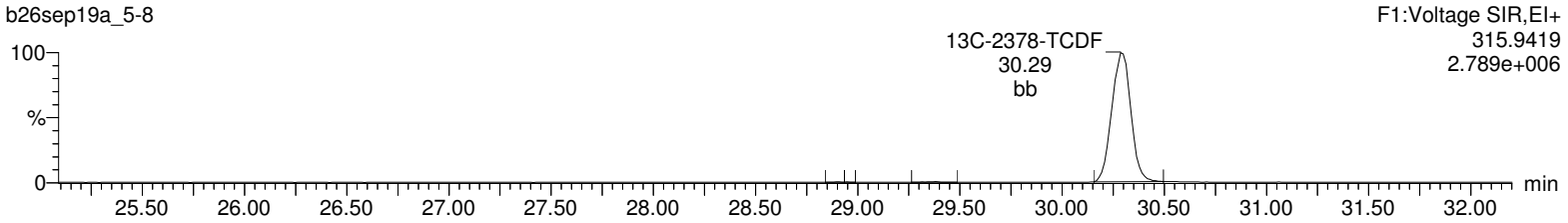
Total-tetrafurans



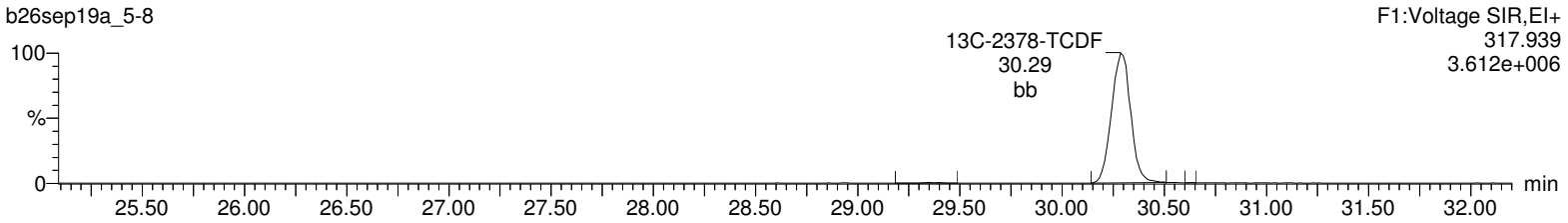
Total-tetrafurans



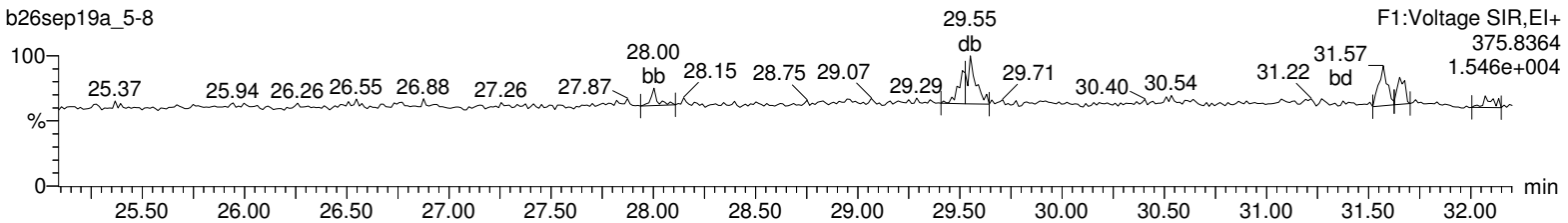
13C-2378-TCDF



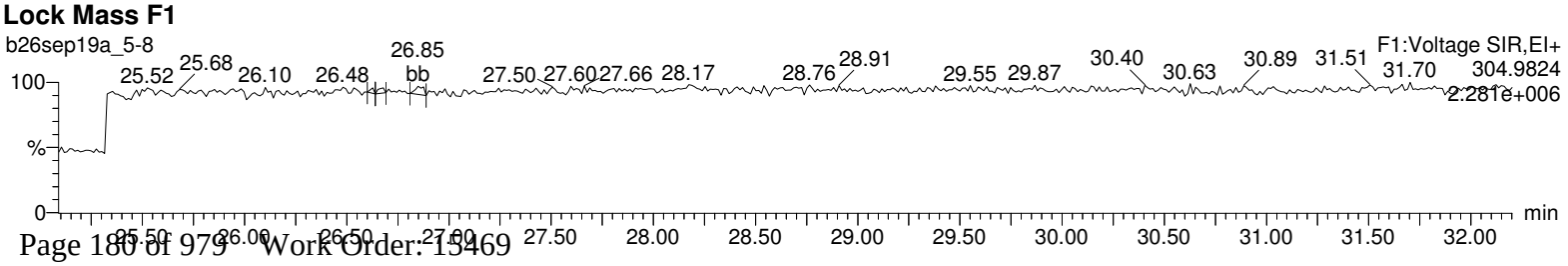
13C-2378-TCDF



HxDPE



Lock Mass F1



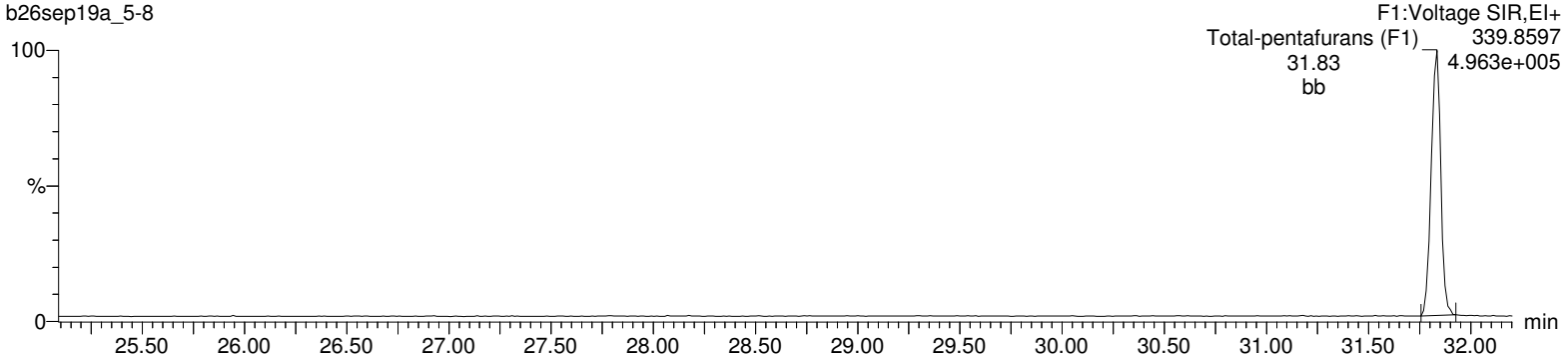
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

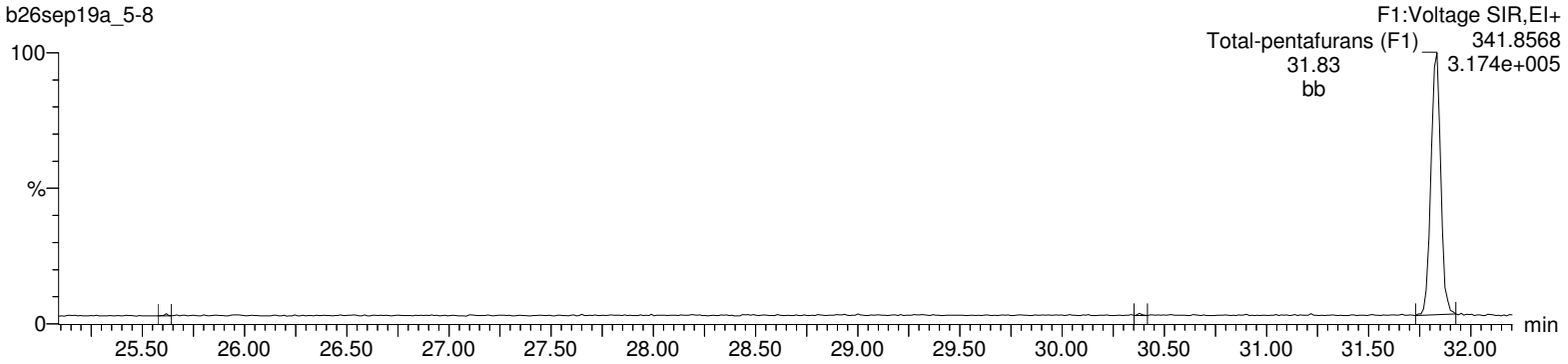
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

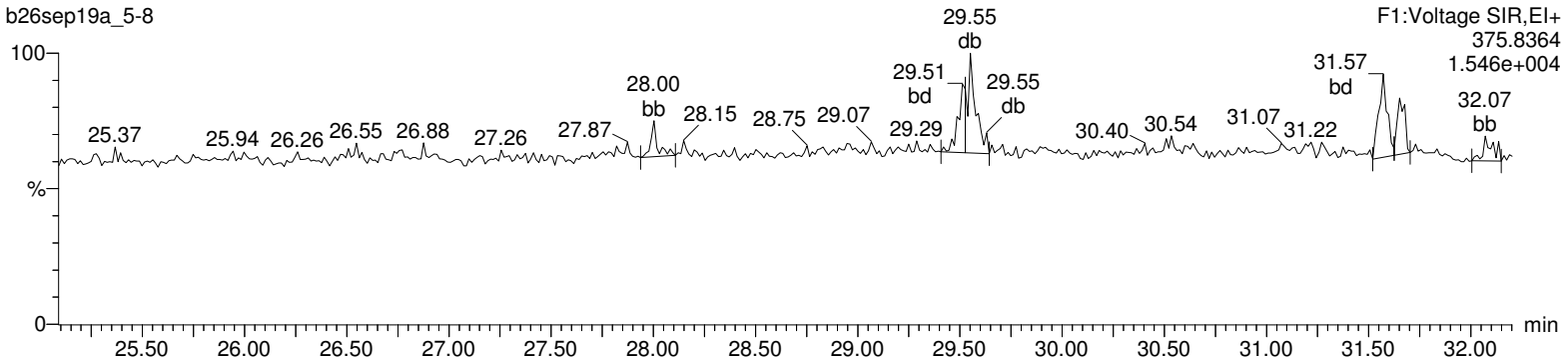
Total-pentafurans (F1)



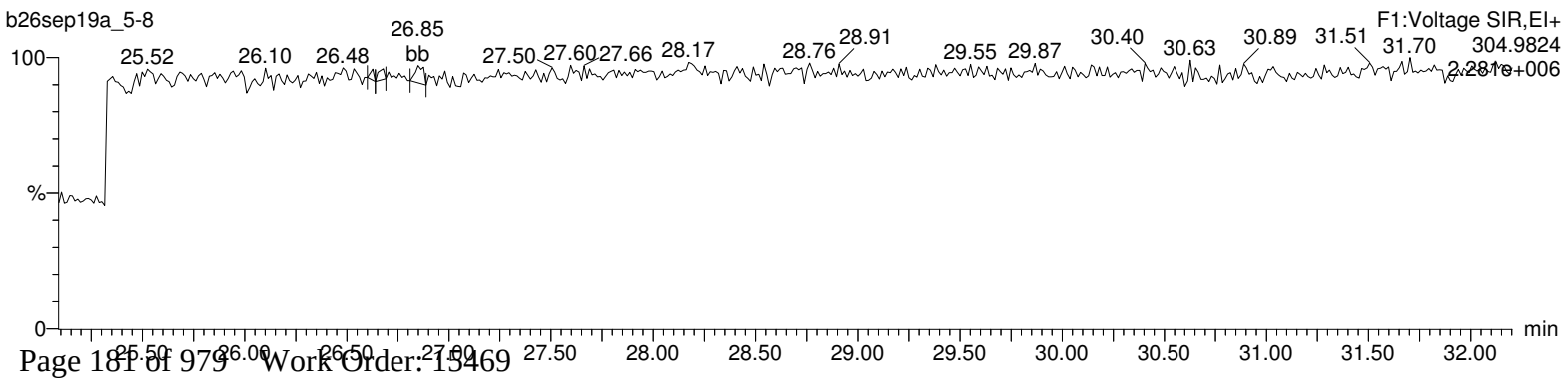
Total-pentafurans (F1)



HxDPE



Lock Mass F1



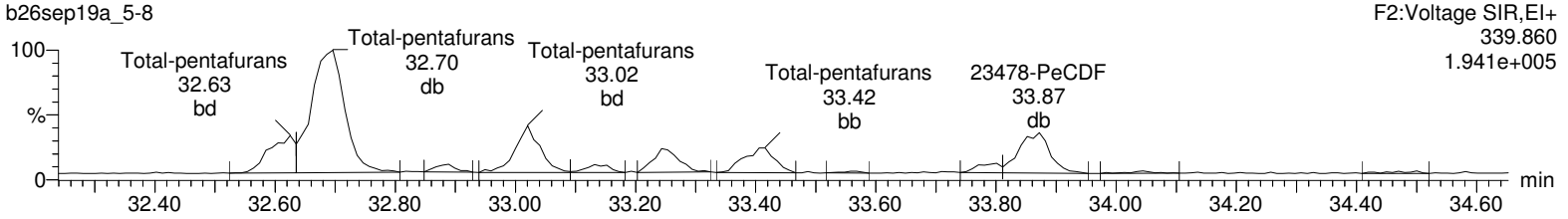
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

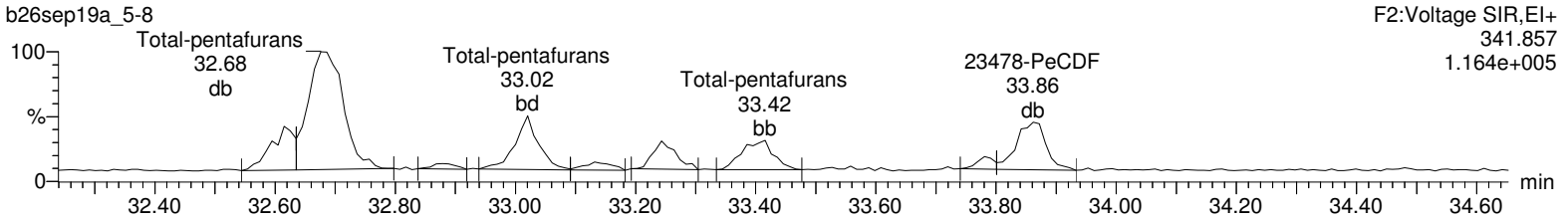
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

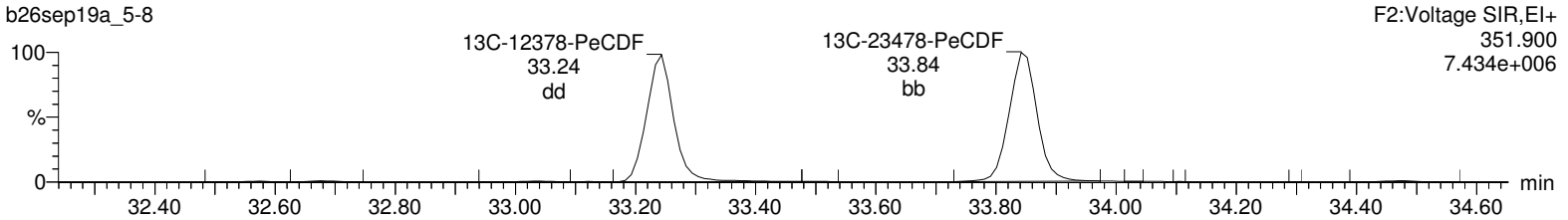
Total-pentafurans



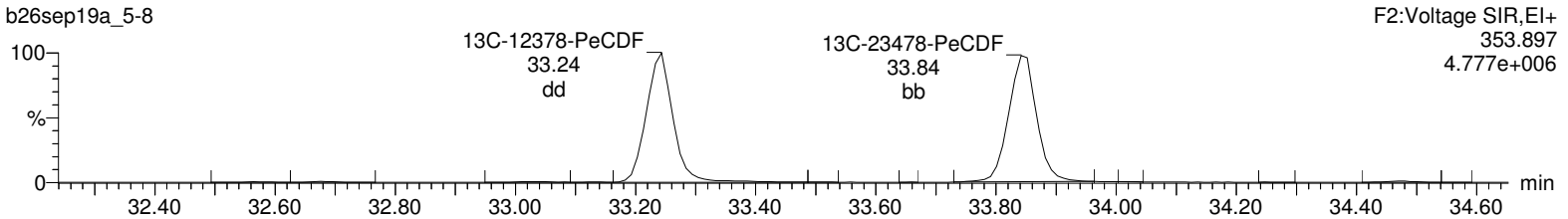
Total-pentafurans



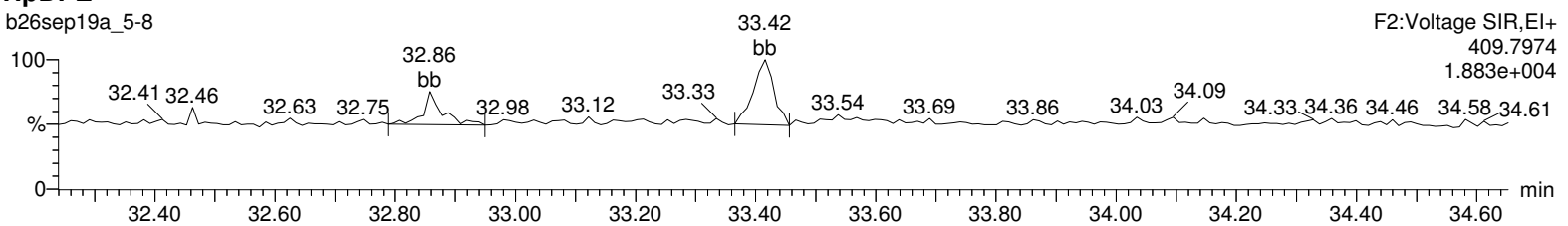
13C-12378-PeCDF



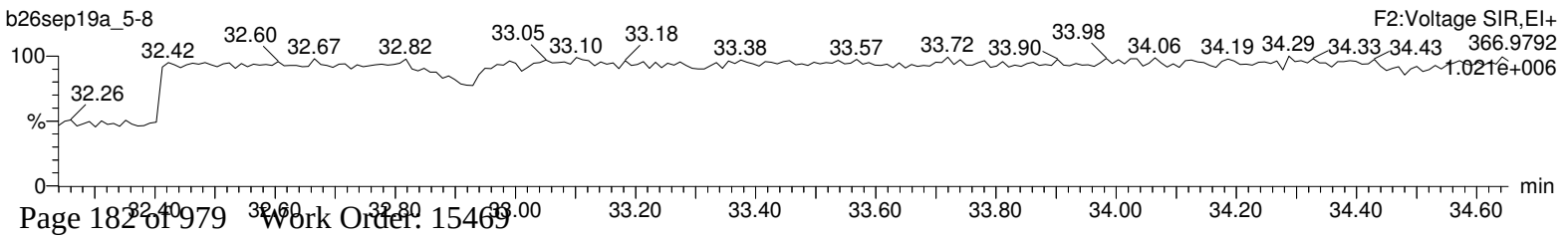
13C-12378-PeCDF



HpDPE



Lock Mass F2



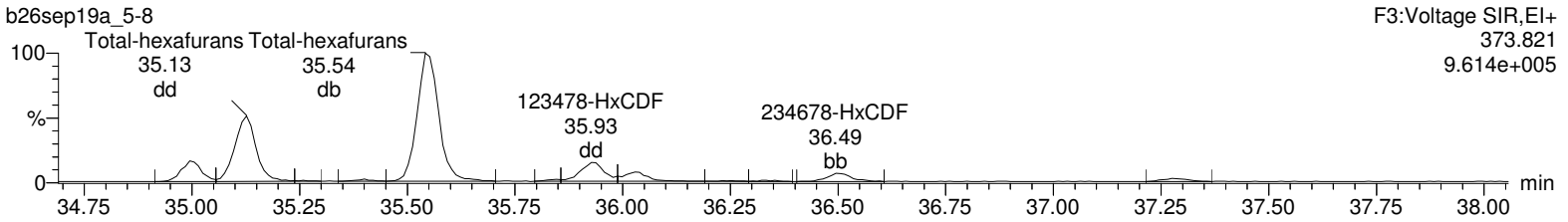
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

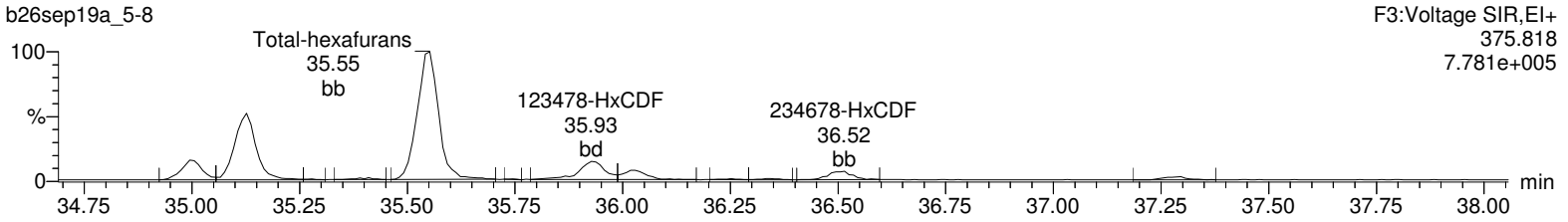
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

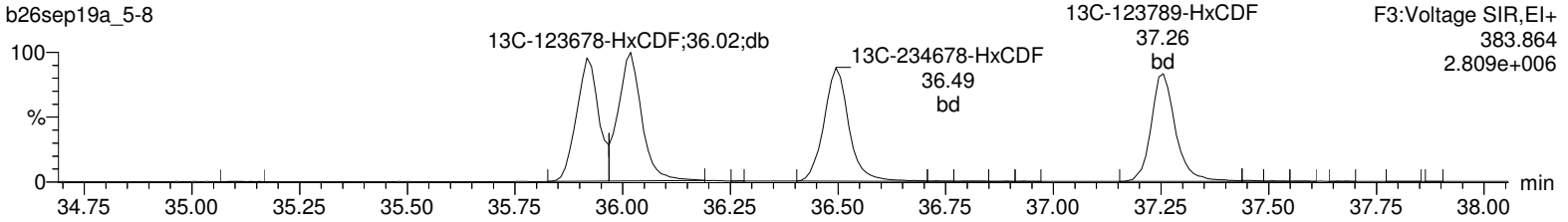
Total-hexafurans



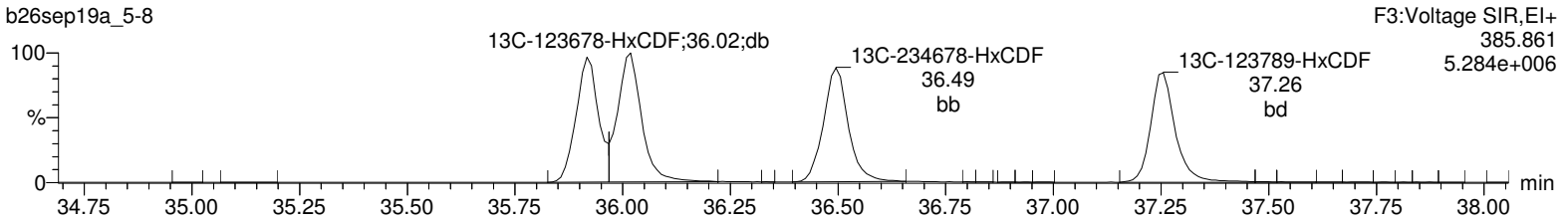
Total-hexafurans



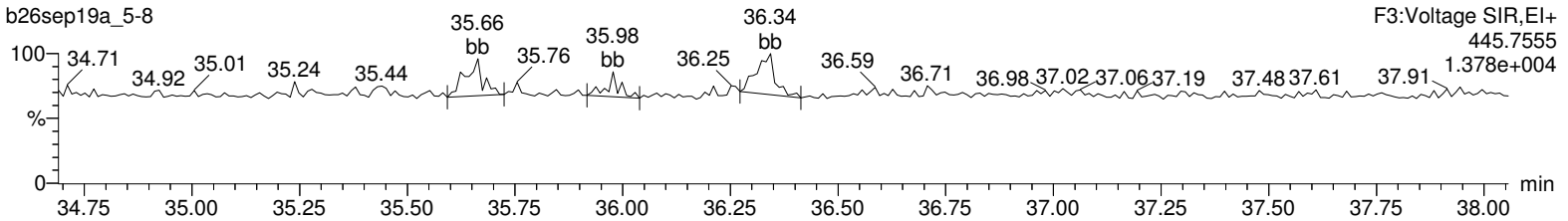
13C-123478-HxCDF



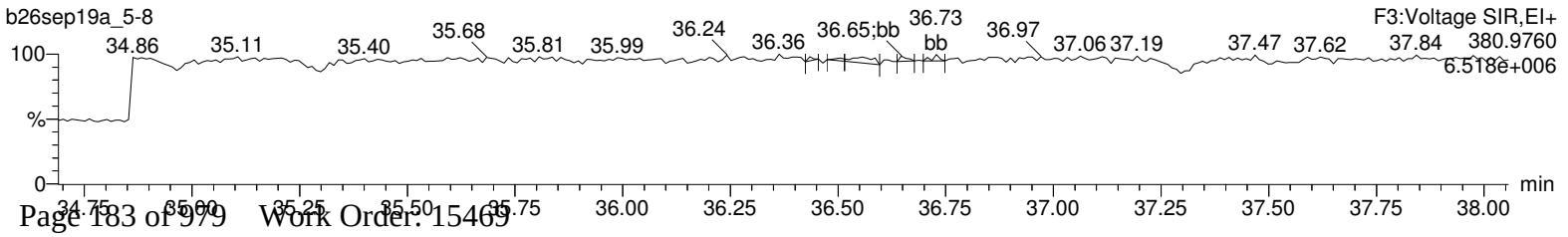
13C-123478-HxCDF



OcDPE



Lock Mass F3



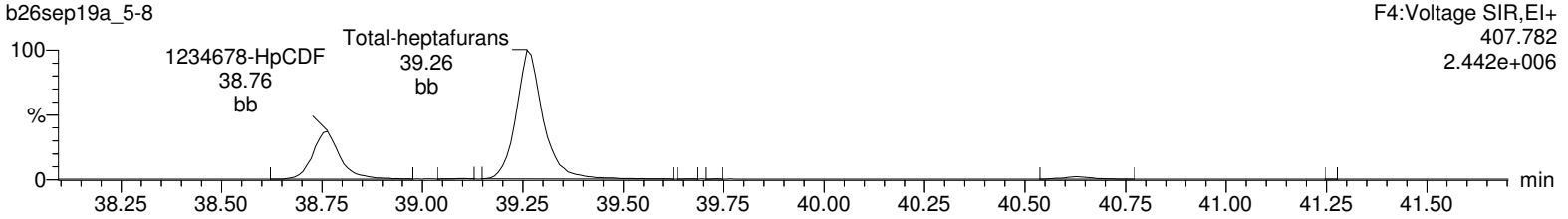
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

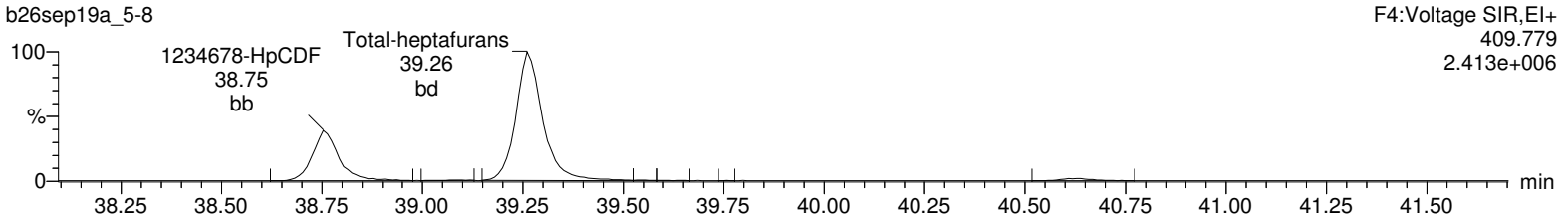
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

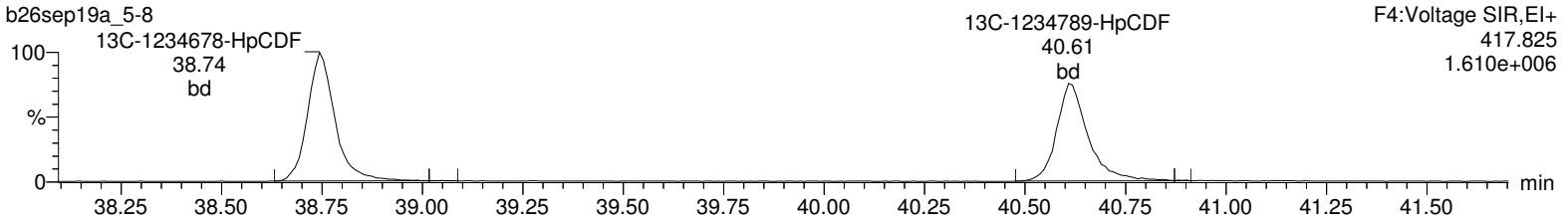
Total-heptafurans



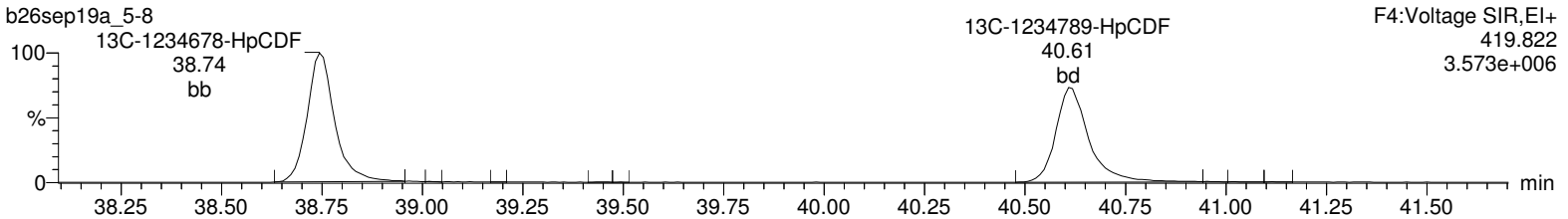
Total-heptafurans



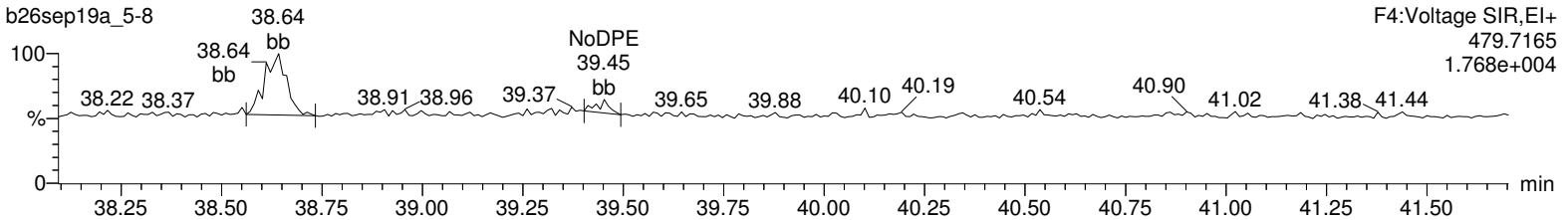
13C-1234678-HpCDF



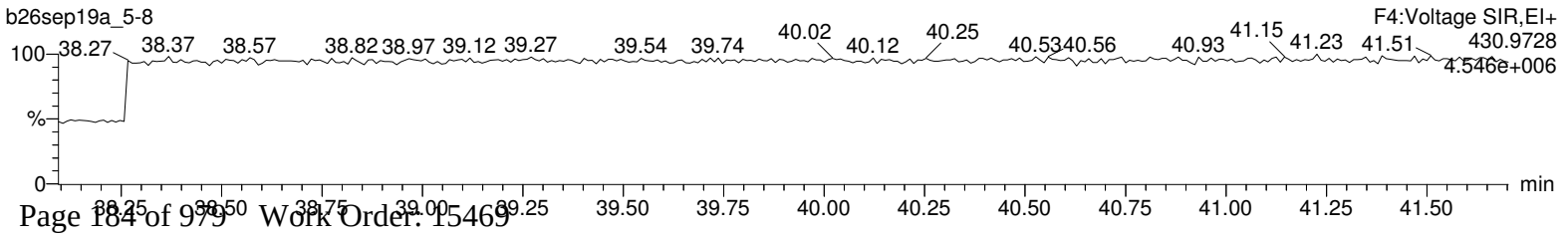
13C-1234678-HpCDF



NoDPE



Lock Mass F4



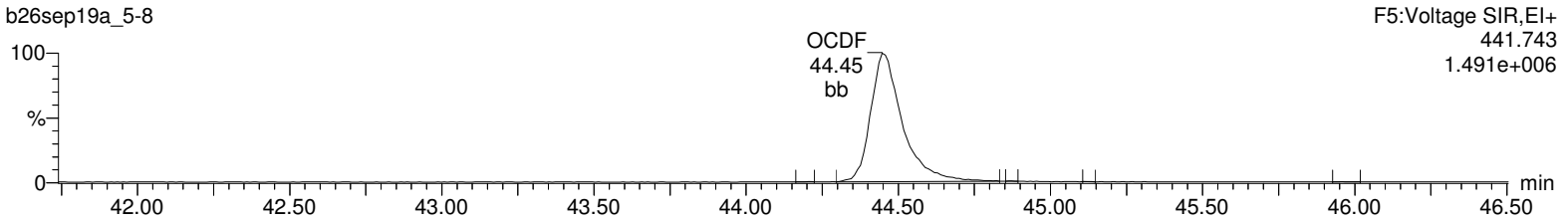
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

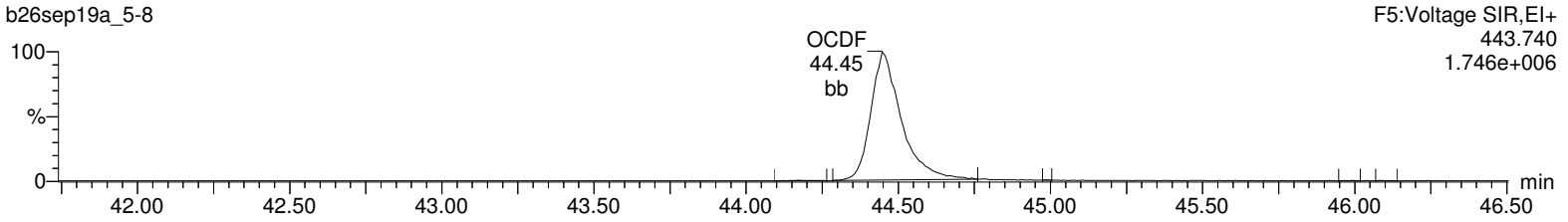
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-8, Date: 28-Sep-2019, Time: 05:28:41, ID: 15469004-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

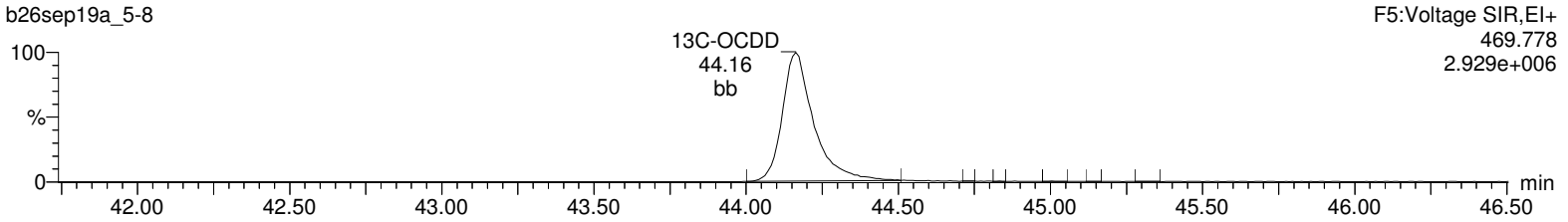
OCDF



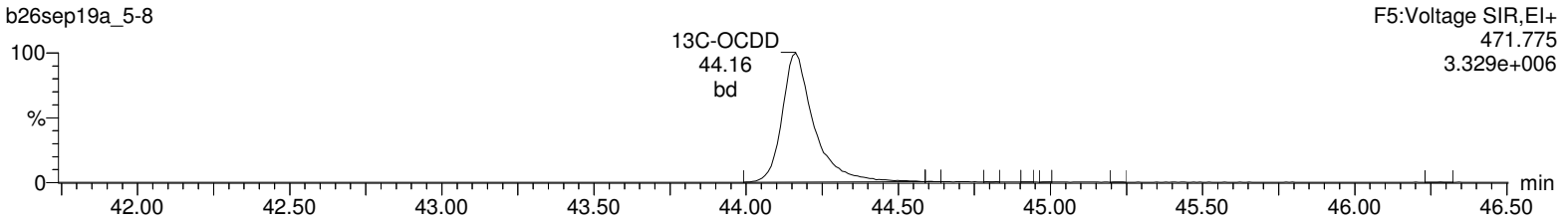
OCDF



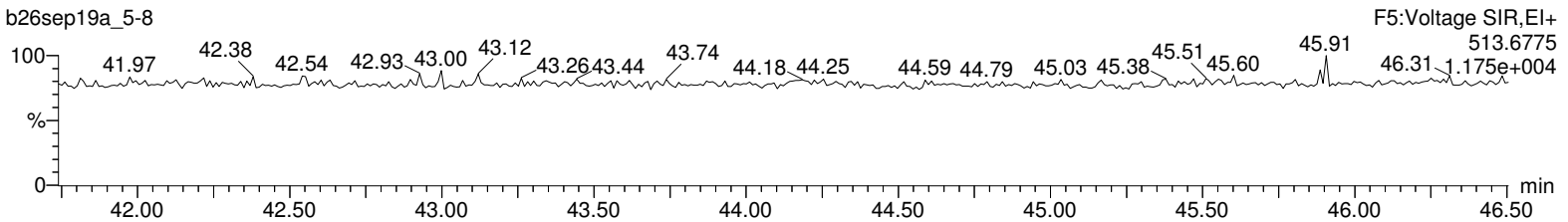
13C-OCDD



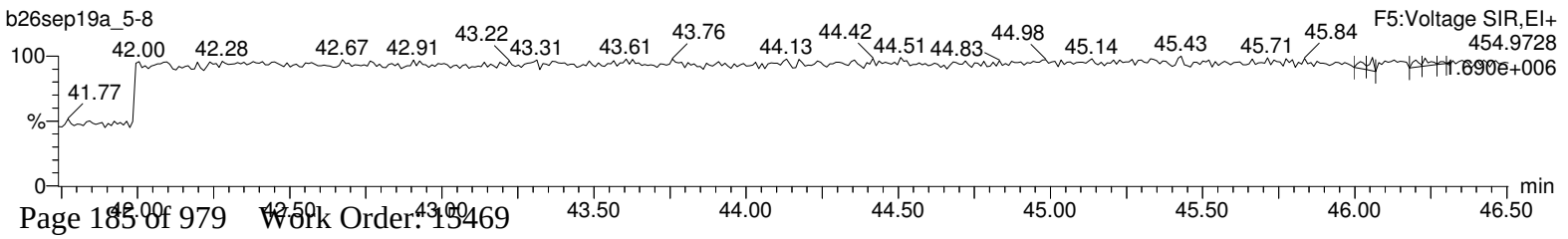
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469004**	**Date Collected:**	**08/28/2019 10:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**42.2**
Client ID:	**J6-SC1b-50to60-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 17:36**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-6**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.77 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	B	1.28	pg/g	0.182	0.922

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-6, Date: 30-Sep-2019, Time: 17:36:41, ID: 15469004-2, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	4.34e3	5.08e3	9.41e3	16.29	1.001	0.86	NO	0.692	0.0990	7.43e4	3451	21.5	9.65e4	3781	25.5	dd	db
2	13C-2378-TCDF	6.84e5	8.99e5	1.58e6	16.28	1.065	0.76	NO	61.205	0.123	1.10e7	12228	901.6	1.44e7	7486	1929.9	bb	bb
3	13C-1234-TCDD	7.46e5	9.51e5	1.70e6	15.28	0.000	0.78	NO	100.000	0.119	1.39e7	7226	1921.3	1.79e7	5298	3373.5	db	db

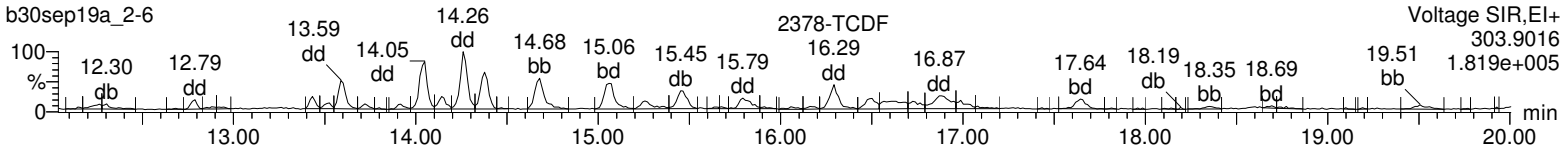
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

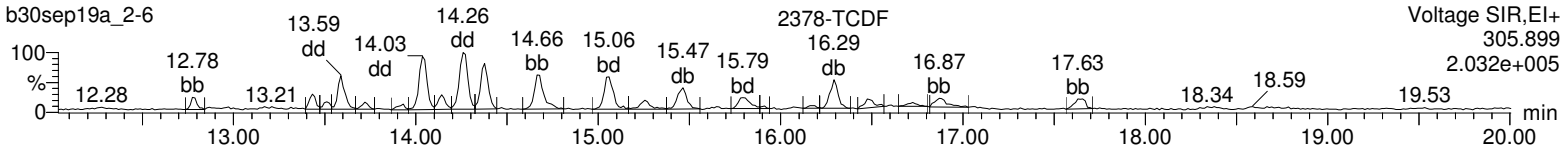
Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-6, Date: 30-Sep-2019, Time: 17:36:41, ID: 15469004-2, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

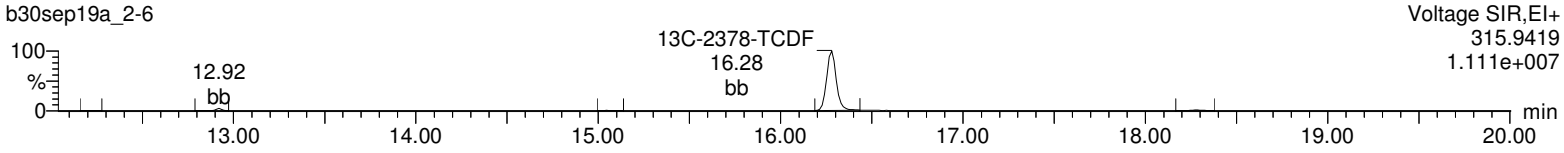
2378-TCDF



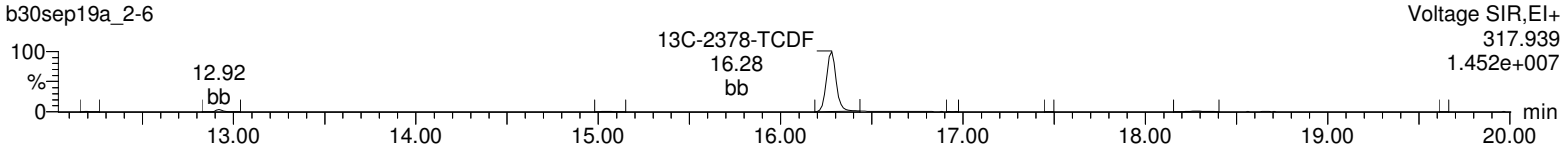
2378-TCDF



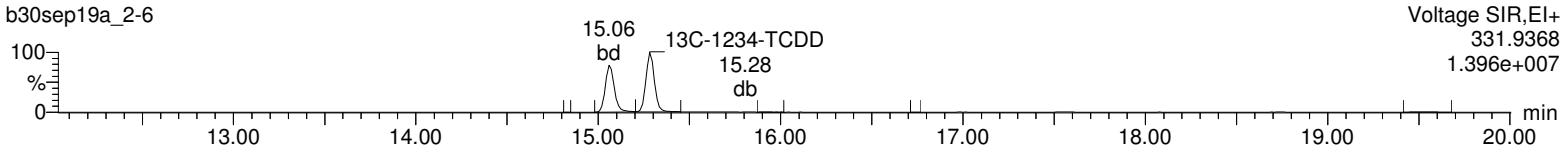
13C-2378-TCDF



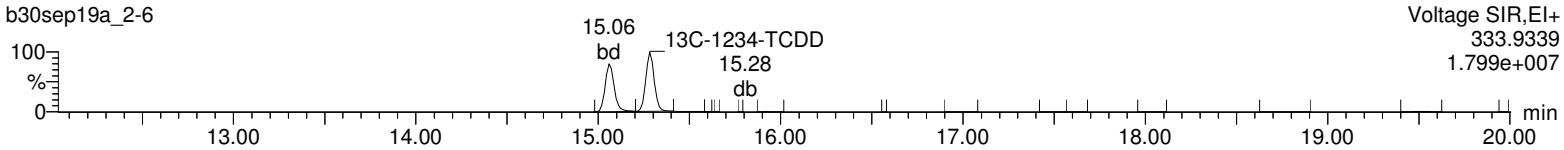
13C-2378-TCDF



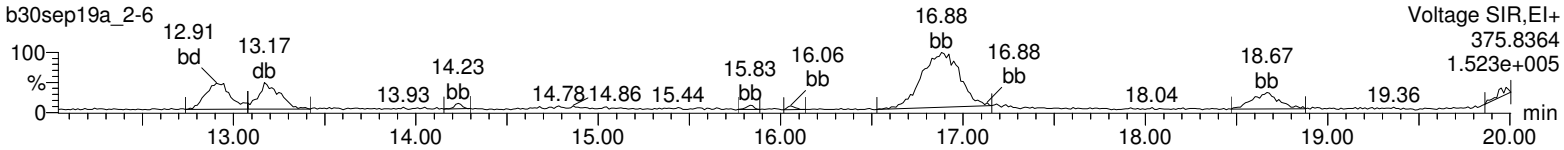
13C-1234-TCDD



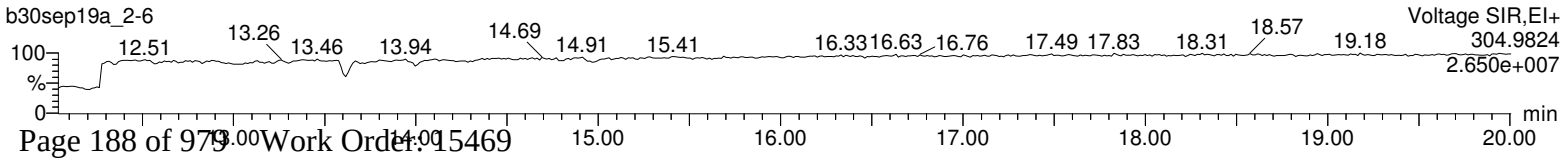
13C-1234-TCDD



HxDPE



Lock Mass F1



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469005**	**Date Collected:**	**08/28/2019 10:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**J6-SC1b-60to70-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 06:17**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.95 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.507	pg/g	0.193	0.928
40321-76-4	1,2,3,7,8-PeCDD	J	1.17	pg/g	0.185	4.64
39227-28-6	1,2,3,4,7,8-HxCDD	J	2.81	pg/g	0.260	4.64
57653-85-7	1,2,3,6,7,8-HxCDD		7.77	pg/g	0.297	4.64
19408-74-3	1,2,3,7,8,9-HxCDD	J	3.88	pg/g	0.284	4.64
35822-46-9	1,2,3,4,6,7,8-HpCDD		208	pg/g	0.709	4.64
3268-87-9	1,2,3,4,6,7,8,9-OCDD		2250	pg/g	1.09	9.28
51207-31-9	2,3,7,8-TCDF	B	0.937	pg/g	0.308	0.928
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.911	pg/g	0.202	4.64
57117-31-4	2,3,4,7,8-PeCDF	J	1.73	pg/g	0.197	4.64
70648-26-9	1,2,3,4,7,8-HxCDF		5.98	pg/g	0.236	4.64
57117-44-9	1,2,3,6,7,8-HxCDF	J	3.75	pg/g	0.251	4.64
60851-34-5	2,3,4,6,7,8-HxCDF	J	3.23	pg/g	0.243	4.64
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	1.13	pg/g	0.197	4.64
67562-39-4	1,2,3,4,6,7,8-HpCDF		75.5	pg/g	0.329	4.64
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	4.54	pg/g	0.436	4.64
39001-02-0	1,2,3,4,6,7,8,9-OCDF		276	pg/g	0.433	9.28
41903-57-5	Total TeCDD	J	3.90	pg/g	0.193	0.928
36088-22-9	Total PeCDD	JKQ	11.5	pg/g	0.185	4.64
34465-46-8	Total HxCDD	J	64.9	pg/g	0.260	4.64
37871-00-4	Total HpCDD		406	pg/g	0.709	4.64
30402-14-3	Total TeCDF	JK	12.9	pg/g	0.308	0.928
30402-15-4	Total PeCDF	JKQ	34.1	pg/g	0.0538	4.64
55684-94-1	Total HxCDF	JK	98.7	pg/g	0.197	4.64
38998-75-3	Total HpCDF	J	287	pg/g	0.329	4.64
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		8.80	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		8.80	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		142	186	pg/g	76.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		151	186	pg/g	81.6	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		167	186	pg/g	89.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		106	186	pg/g	57.3	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		184	186	pg/g	99.1	(23%-140%)
13C-OCDD		387	371	pg/g	104	(17%-157%)
13C-2,3,7,8-TCDF		136	186	pg/g	73.2	(24%-169%)
13C-1,2,3,7,8-PeCDF		146	186	pg/g	78.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		146	186	pg/g	78.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		176	186	pg/g	95.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		106	186	pg/g	57.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		136	186	pg/g	73.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		127	186	pg/g	68.4	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469005**	**Date Collected:**	**08/28/2019 10:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**J6-SC1b-60to70-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 06:17**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.95 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		153	186	pg/g	82.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		190	186	pg/g	102	(26%-138%)
37Cl-2,3,7,8-TCDD		16.8	18.6	pg/g	90.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:45:57 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:47:26 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	7.77e2	1.14e3	1.92e3	31.14	1.000	0.68	NO	0.273	0.104	1.36e4	1791	7.6	1.20e4	1922	6.3	bb	db
2	12378-PeCDD	1.79e3	1.26e3	3.06e3	34.08	1.000	1.42	NO	0.628	0.0996	2.97e4	1857	16.0	1.90e4	1713	11.1	bb	bd
3	123478-HxCDD	4.34e3	3.37e3	7.71e3	36.70	1.000	1.29	NO	1.512	0.140	6.95e4	1898	36.6	5.15e4	2711	19.0	MM	MM
4	123678-HxCDD	9.57e3	7.74e3	1.73e4	36.79	1.000	1.24	NO	4.184	0.160	1.58e5	1898	83.5	1.33e5	2711	49.0	dd	MM
5	123789-HxCDD	5.44e3	3.95e3	9.39e3	37.04	1.007	1.38	NO	2.089	0.153	1.04e5	1898	54.7	7.49e4	2711	27.6	db	db
6	1234678-HpCDD	2.61e5	2.51e5	5.12e5	40.01	1.001	1.04	NO	112.188	0.382	3.10e6	4747	652.7	3.05e6	3950	771.6	bb	bb
7	OCDD	2.28e6	2.58e6	4.86e6	44.20	1.000	0.89	NO	1210.680	0.585	1.99e7	4733	4195.2	2.24e7	3520	6374.1	bb	bb
8	2378-TCDF	1.71e3	2.15e3	3.86e3	30.35	1.001	0.79	NO	0.505	0.166	1.23e4	2219	5.6	1.72e4	2246	7.7	db	MM
9	12378-PeCDF	2.03e3	1.27e3	3.30e3	33.27	1.000	1.61	NO	0.491	0.109	4.72e4	1731	27.2	3.08e4	3914	7.9	MM	dd
10	23478-PeCDF	4.25e3	2.64e3	6.88e3	33.88	1.001	1.61	NO	0.930	0.106	8.32e4	1731	48.1	5.04e4	3914	12.9	db	db
11	123478-HxCDF	1.35e4	1.09e4	2.44e4	35.98	1.001	1.24	NO	3.220	0.127	1.46e5	2629	55.6	1.15e5	1842	62.4	bd	bd
12	123678-HxCDF	6.09e3	5.02e3	1.11e4	36.08	1.001	1.21	NO	2.018	0.135	1.11e5	2629	42.2	9.18e4	1842	49.9	dd	MM
13	234678-HxCDF	6.25e3	4.96e3	1.12e4	36.56	1.000	1.26	NO	1.738	0.131	7.75e4	2629	29.5	5.96e4	1842	32.4	bb	bb
14	123789-HxCDF	1.62e3	1.28e3	2.90e3	37.32	1.000	1.27	NO	0.607	0.106	3.37e4	2629	12.8	2.79e4	1842	15.1	bb	bb
15	1234678-HpCDF	1.21e5	1.20e5	2.40e5	38.77	1.000	1.01	NO	40.654	0.177	1.57e6	3120	504.2	1.58e6	2530	623.3	bb	bb
16	1234789-HpCDF	6.50e3	6.78e3	1.33e4	40.65	1.000	0.96	NO	2.448	0.235	7.73e4	3120	24.8	7.19e4	2530	28.4	bb	bd
17	OCDF	3.10e5	3.53e5	6.63e5	44.48	1.006	0.88	NO	148.467	0.233	2.66e6	1785	1490.7	3.04e6	1865	1632.1	bd	bd
18	13C-2378-TCDD	3.40e5	4.51e5	7.91e5	31.13	1.018	0.75	NO	76.285	0.118	4.32e6	2630	1641.2	5.56e6	1811	3071.7	bb	bd
19	13C-12378-PeCDD	3.45e5	2.28e5	5.72e5	34.06	1.115	1.52	NO	81.588	0.135	6.35e6	1589	3996.4	4.08e6	1856	2200.1	bb	bb
20	13C-123478-HxCDD	3.03e5	2.43e5	5.46e5	36.69	0.991	1.24	NO	89.731	0.165	4.89e6	4448	1100.0	3.97e6	2022	1964.5	MM	MM
21	13C-123678-HxCDD	2.58e5	2.09e5	4.67e5	36.78	0.993	1.23	NO	57.330	0.123	4.49e6	4448	1009.2	3.63e6	2022	1794.2	dd	dd
22	13C-1234678-HpCDD	2.44e5	2.40e5	4.83e5	39.99	1.080	1.02	NO	99.073	0.137	3.04e6	2354	1290.5	2.90e6	1944	1492.1	bb	bb
23	13C-OCDD	4.05e5	4.73e5	8.78e5	44.19	1.194	0.86	NO	208.620	0.173	3.56e6	2061	1726.4	4.10e6	2635	1557.3	bb	bd
24	13C-2378-TCDF	3.70e5	4.86e5	8.56e5	30.31	0.992	0.76	NO	73.161	0.106	3.25e6	2785	1165.9	4.26e6	1729	2462.8	bb	bb
25	13C-12378-PeCDF	4.50e5	2.90e5	7.40e5	33.26	1.088	1.55	NO	78.615	0.193	8.68e6	3313	2619.0	5.60e6	3291	1702.0	db	db
26	13C-23478-PeCDF	4.63e5	2.99e5	7.62e5	33.86	1.108	1.55	NO	78.879	0.188	8.33e6	3313	2513.8	5.37e6	3291	1632.7	bb	bb
27	13C-123478-HxCDF	2.27e5	4.41e5	6.68e5	35.96	0.971	0.52	NO	95.067	0.149	2.64e6	3001	878.9	5.09e6	3761	1354.0	bd	bd
28	13C-123678-HxCDF	1.79e5	3.43e5	5.23e5	36.06	0.974	0.52	NO	57.031	0.115	2.70e6	3001	899.5	5.09e6	3761	1353.9	db	db
29	13C-234678-HxCDF	1.97e5	3.74e5	5.71e5	36.56	0.987	0.53	NO	73.270	0.135	2.60e6	3001	867.9	5.03e6	3761	1338.0	bd	bb
30	13C-123789-HxCDF	1.55e5	2.94e5	4.49e5	37.31	1.008	0.53	NO	68.411	0.160	3.42e6	3001	1141.0	6.47e6	3761	1720.9	bb	bb
31	13C-1234678-HpCDF	1.55e5	3.42e5	4.97e5	38.76	1.047	0.45	NO	82.172	0.146	2.09e6	2330	895.1	4.50e6	3348	1343.9	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:45:57 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:47:26 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.37e5	3.05e5	4.42e5	40.64	1.098	0.45	NO	102.168	0.204	1.52e6	2330	654.5	3.45e6	3348	1031.6	bd	bb
33	13C-1234-TCDD	3.92e5	5.08e5	9.01e5	30.56	0.000	0.77	NO	100.000	0.135	3.57e6	2630	1358.5	4.71e6	1811	2601.7	bb	bb
34	13C-123789-HxCDD	4.28e5	3.43e5	7.71e5	37.02	0.000	1.25	NO	100.000	0.130	6.90e6	4448	1550.5	5.64e6	2022	2791.1	dd	dd
35	37Cl-2378-TCDD	8.77e4		8.77e4	31.14	1.019			9.045	0.0378	1.10e6	1333	825.9				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:45:57 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:47:26 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	7.77e2	1.14e3	1.92e3	31.14	0.68	NO	0.273	0.104	1.36e4	1791	7.6	1.20e4	1922	6.3	bb	db
2	Total-tetradioxins	2.44e2	3.06e2	5.50e2	30.93	0.80	NO	0.078	0.104	4.58e3	1791	2.6	3.41e3	1922	1.8	bd	bd
3	Total-tetradioxins	3.47e2	4.06e2	7.52e2	30.55	0.85	NO	0.107	0.104	5.07e3	1791	2.8	3.90e3	1922	2.0	bb	MM
4	Total-tetradioxins	1.98e2	3.92e2	5.90e2	30.22	0.50	YES	0.084	0.104	3.49e3	1791	1.9	4.83e3	1922	2.5	MM	db
5	Total-tetradioxins	2.31e2	3.98e2	6.29e2	30.06	0.58	YES	0.089	0.104	3.48e3	1791	1.9	4.18e3	1922	2.2	bb	bd
6	Total-tetradioxins	1.94e2	3.75e2	5.69e2	29.79	0.52	YES	0.081	0.104	3.35e3	1791	1.9	5.38e3	1922	2.8	db	MM
7	Total-tetradioxins	6.04e2	7.46e2	1.35e3	29.60	0.81	NO	0.192	0.104	5.85e3	1791	3.3	6.89e3	1922	3.6	dd	bb
8	Total-tetradioxins	2.15e2	1.35e2	3.50e2	29.42	1.59	YES	0.050	0.104	3.45e3	1791	1.9	2.51e3	1922	1.3	bd	MM
9	Total-tetradioxins	2.93e2	5.31e2	8.24e2	29.12	0.55	YES	0.117	0.104	3.82e3	1791	2.1	5.63e3	1922	2.9	MM	bb
10	Total-tetradioxins	8.88e2	1.13e3	2.01e3	28.44	0.79	NO	0.286	0.104	7.91e3	1791	4.4	1.09e4	1922	5.7	db	bb
11	Total-tetradioxins	8.76e2	1.07e3	1.95e3	28.06	0.82	NO	0.277	0.104	1.05e4	1791	5.8	1.13e4	1922	5.9	bd	db
12	Total-tetradioxins	3.30e3	4.24e3	7.54e3	27.74	0.78	NO	1.071	0.104	3.01e4	1791	16.8	4.14e4	1922	21.6	bb	bd
13	Total-tetradioxins	2.24e2	2.75e2	4.99e2	31.38	0.82	NO	0.071	0.104	4.41e3	1791	2.5	4.33e3	1922	2.3	bb	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	5.83e2	3.92e2	9.74e2	34.35	1.49	NO	0.200	0.0996	7.78e3	1857	4.2	5.62e3	1713	3.3	bb	bb
2	12378-PeCDD	1.79e3	1.26e3	3.06e3	34.08	1.42	NO	0.628	0.0996	2.97e4	1857	16.0	1.90e4	1713	11.1	bb	bd
3	Total-pentadioxins	2.12e3	1.49e3	3.61e3	33.58	1.42	NO	0.742	0.0996	3.89e4	1857	21.0	2.44e4	1713	14.2	db	db
4	Total-pentadioxins	6.72e2	5.09e2	1.18e3	33.46	1.32	NO	0.243	0.0996	1.93e4	1857	10.4	1.26e4	1713	7.4	dd	MM
5	Total-pentadioxins	1.79e3	1.35e3	3.14e3	33.39	1.33	NO	0.646	0.0996	3.12e4	1857	16.8	2.43e4	1713	14.2	dd	MM
6	Total-pentadioxins	2.82e3	1.69e3	4.51e3	33.28	1.67	NO	0.927	0.0996	5.65e4	1857	30.5	3.59e4	1713	20.9	bd	bd
7	Total-pentadioxins	1.35e3	9.94e2	2.34e3	33.01	1.35	NO	0.481	0.0996	3.48e4	1857	18.7	2.77e4	1713	16.1	bb	bb
8	Total-pentadioxins	8.70e1	6.85e2	7.72e2	32.87	0.13	YES	0.159	0.0996	4.96e3	1857	2.7	2.48e4	1713	14.5	db	db
9	Total-pentadioxins	6.61e3	4.00e3	1.06e4	32.79	1.65	NO	2.180	0.0996	1.13e5	1857	60.7	8.80e4	1713	51.3	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:45:57 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:47:26 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	9.76e1	4.81e2	5.79e2	37.39	0.20	YES	0.127	0.150	4.13e3	1898	2.2	1.04e4	2711	3.9	bb	bb
2	123789-HxCDD	5.44e3	3.95e3	9.39e3	37.04	1.38	NO	2.089	0.153	1.04e5	1898	54.7	7.49e4	2711	27.6	db	db
3	Total-hexadioxins	1.35e3	1.05e3	2.41e3	36.96	1.29	NO	0.527	0.150	2.49e4	1898	13.1	1.97e4	2711	7.3	dd	dd
4	123678-HxCDD	9.57e3	7.74e3	1.73e4	36.79	1.24	NO	4.184	0.160	1.58e5	1898	83.5	1.33e5	2711	49.0	dd	MM
5	123478-HxCDD	4.34e3	3.37e3	7.71e3	36.70	1.29	NO	1.512	0.140	6.95e4	1898	36.6	5.15e4	2711	19.0	MM	MM
6	Total-hexadioxins	3.08e4	2.52e4	5.60e4	36.12	1.22	NO	12.247	0.150	3.54e5	1898	186.5	2.76e5	2711	101.8	db	dd
7	Total-hexadioxins	3.35e3	3.04e3	6.40e3	35.92	1.10	NO	1.400	0.150	4.52e4	1898	23.8	4.05e4	2711	14.9	bd	bd
8	Total-hexadioxins	3.27e4	2.67e4	5.94e4	35.45	1.22	NO	13.005	0.150	5.15e5	1898	271.5	4.17e5	2711	153.8	bb	bb
9	Total-hexadioxins	2.84e2	3.44e2	6.28e2	36.64	0.83	YES	0.137	0.150	8.67e3	1898	4.6	8.46e3	2711	3.1	MM	MM

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	2.61e5	2.51e5	5.12e5	40.01	1.04	NO	112.188	0.382	3.10e6	4747	652.7	3.05e6	3950	771.6	bb	bb
2	Total-heptadioxins	2.49e5	2.37e5	4.86e5	39.10	1.05	NO	106.471	0.382	3.26e6	4747	687.1	3.01e6	3950	762.6	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:45:57 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:47:26 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.71e3	2.80e3	4.51e3	29.42	0.61	YES	0.590	0.166	1.78e4	2219	8.0	2.56e4	2246	11.4	bb	bb
2	Total-tetrafurans	1.72e3	2.30e3	4.02e3	28.96	0.75	NO	0.526	0.166	1.46e4	2219	6.6	1.88e4	2246	8.4	db	db
3	Total-tetrafurans	5.07e2	5.69e2	1.08e3	28.79	0.89	YES	0.141	0.166	6.57e3	2219	3.0	6.48e3	2246	2.9	bd	dd
4	Total-tetrafurans	9.95e2	1.13e3	2.13e3	28.29	0.88	NO	0.278	0.166	9.54e3	2219	4.3	1.12e4	2246	5.0	db	db
5	Total-tetrafurans	3.71e3	4.98e3	8.69e3	28.02	0.75	NO	1.138	0.166	2.79e4	2219	12.6	3.65e4	2246	16.2	bd	MM
6	Total-tetrafurans	3.33e3	4.14e3	7.47e3	27.70	0.81	NO	0.978	0.166	2.74e4	2219	12.3	4.17e4	2246	18.6	MM	db
7	Total-tetrafurans	1.19e3	1.04e3	2.23e3	27.37	1.14	YES	0.292	0.166	1.46e4	2219	6.6	1.91e4	2246	8.5	db	dd
8	Total-tetrafurans	5.70e2	1.62e3	2.19e3	27.30	0.35	YES	0.287	0.166	8.93e3	2219	4.0	2.08e4	2246	9.2	MM	dd
9	Total-tetrafurans	3.96e3	5.59e3	9.54e3	27.01	0.71	NO	1.249	0.166	4.03e4	2219	18.1	5.91e4	2246	26.3	bb	bd
10	Total-tetrafurans	1.24e3	1.66e3	2.90e3	26.46	0.75	NO	0.379	0.166	1.37e4	2219	6.2	1.66e4	2246	7.4	bb	bb
11	Total-tetrafurans	9.10e2	1.15e3	2.06e3	26.06	0.79	NO	0.269	0.166	1.19e4	2219	5.4	1.29e4	2246	5.8	bb	bb
12	Total-tetrafurans	9.12e2	9.13e2	1.83e3	31.82	1.00	YES	0.239	0.166	1.09e4	2219	4.9	1.07e4	2246	4.8	bb	bb
13	Total-tetrafurans	1.04e2	1.89e2	2.93e2	31.60	0.55	YES	0.038	0.166	2.32e3	2219	1.0	4.09e3	2246	1.8	bb	bd
14	Total-tetrafurans	3.82e2	4.24e2	8.06e2	30.90	0.90	YES	0.105	0.166	6.85e3	2219	3.1	4.98e3	2246	2.2	db	MM
15	Total-tetrafurans	8.47e2	1.04e3	1.88e3	30.72	0.82	NO	0.246	0.166	8.28e3	2219	3.7	1.23e4	2246	5.5	MM	MM
16	2378-TCDF	1.71e3	2.15e3	3.86e3	30.35	0.79	NO	0.505	0.166	1.23e4	2219	5.6	1.72e4	2246	7.7	db	MM
17	Total-tetrafurans	4.31e2	2.89e2	7.19e2	30.21	1.49	YES	0.094	0.166	7.03e3	2219	3.2	6.49e3	2246	2.9	dd	MM
18	Total-tetrafurans	9.26e1	1.14e2	2.07e2	30.09	0.81	NO	0.027	0.166	2.78e3	2219	1.3	3.24e3	2246	1.4	bd	bb
19	Total-tetrafurans	1.22e2	2.05e2	3.27e2	29.93	0.59	YES	0.043	0.166	2.86e3	2219	1.3	2.49e3	2246	1.1	bb	bb
20	Total-tetrafurans	5.42e2	7.12e2	1.25e3	29.64	0.76	NO	0.164	0.166	4.69e3	2219	2.1	5.60e3	2246	2.5	bb	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	4.68e4	2.96e4	7.64e4	31.86	1.58	NO	10.824	0.0290	7.74e5	669	1157.4	4.74e5	856	554.2	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:45:57 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:47:26 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	4.25e3	2.64e3	6.88e3	33.88	1.61	NO	0.930	0.106	8.32e4	1731	48.1	5.04e4	3914	12.9	db	db
2	Total-pentafurans	4.58e2	2.74e2	7.32e2	33.81	1.67	NO	0.104	0.107	1.43e4	1731	8.2	1.08e4	3914	2.7	bd	bd
3	Total-pentafurans	2.08e3	1.54e3	3.62e3	33.43	1.34	NO	0.513	0.107	3.47e4	1731	20.0	2.72e4	3914	6.9	bb	db
4	12378-PeCDF	2.03e3	1.27e3	3.30e3	33.27	1.61	NO	0.491	0.109	4.72e4	1731	27.2	3.08e4	3914	7.9	MM	dd
5	Total-pentafurans	6.50e2	4.50e2	1.10e3	33.16	1.44	NO	0.156	0.107	1.93e4	1731	11.2	1.49e4	3914	3.8	MM	dd
6	Total-pentafurans	5.10e3	3.11e3	8.20e3	33.04	1.64	NO	1.162	0.107	1.06e5	1731	61.1	6.85e4	3914	17.5	MM	dd
7	Total-pentafurans	4.84e2	4.32e2	9.16e2	32.94	1.12	YES	0.130	0.107	1.54e4	1731	8.9	1.68e4	3914	4.3	dd	dd
8	Total-pentafurans	1.77e4	1.17e4	2.94e4	32.76	1.51	NO	4.160	0.107	1.99e5	1731	115.1	1.28e5	3914	32.6	bd	bd

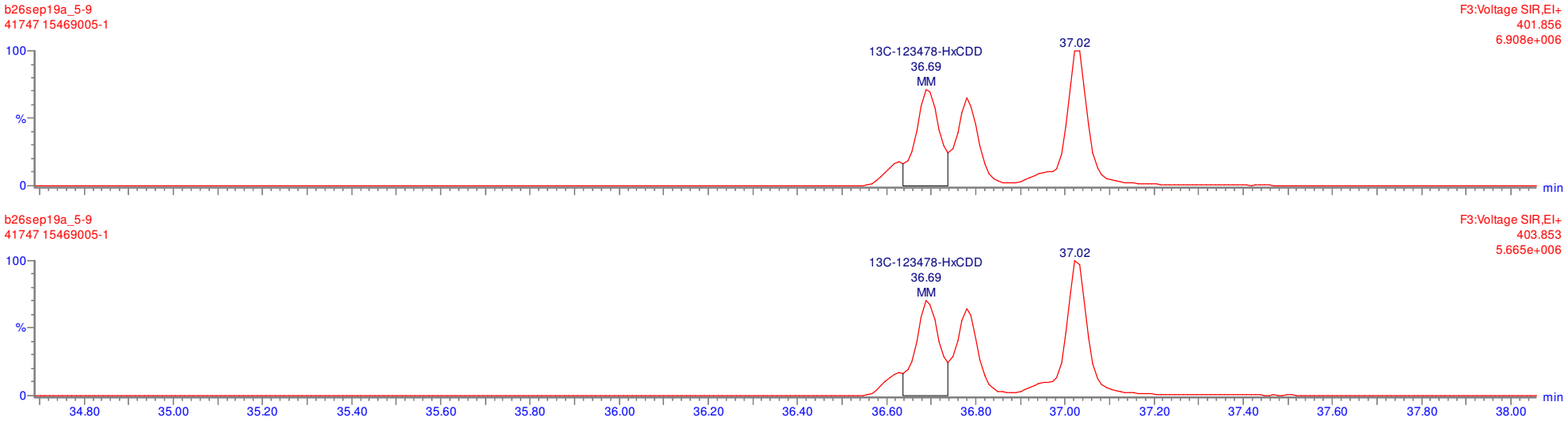
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	1.04e3	1.20e3	2.24e3	35.43	0.87	YES	0.369	0.126	1.88e4	2629	7.2	1.81e4	1842	9.8	bd	MM
2	Total-hexafurans	4.72e4	3.70e4	8.43e4	35.16	1.28	NO	13.921	0.126	7.35e5	2629	279.6	6.30e5	1842	342.2	db	db
3	Total-hexafurans	1.27e4	1.03e4	2.30e4	35.04	1.23	NO	3.803	0.126	2.31e5	2629	88.0	2.02e5	1842	109.8	bd	bd
4	123789-HxCDF	1.62e3	1.28e3	2.90e3	37.32	1.27	NO	0.607	0.106	3.37e4	2629	12.8	2.79e4	1842	15.1	bb	bb
5	234678-HxCDF	6.25e3	4.96e3	1.12e4	36.56	1.26	NO	1.738	0.131	7.75e4	2629	29.5	5.96e4	1842	32.4	bb	bb
6	Total-hexafurans	5.12e2	5.97e2	1.11e3	36.28	0.86	YES	0.183	0.126	6.46e3	2629	2.5	8.65e3	1842	4.7	MM	MM
7	123678-HxCDF	6.09e3	5.02e3	1.11e4	36.08	1.21	NO	2.018	0.135	1.11e5	2629	42.2	9.18e4	1842	49.9	dd	MM
8	123478-HxCDF	1.35e4	1.09e4	2.44e4	35.98	1.24	NO	3.220	0.127	1.46e5	2629	55.6	1.15e5	1842	62.4	bd	bd
9	Total-hexafurans	9.18e4	7.37e4	1.66e5	35.58	1.25	NO	27.335	0.126	1.44e6	2629	545.9	1.10e6	1842	598.4	MM	MM

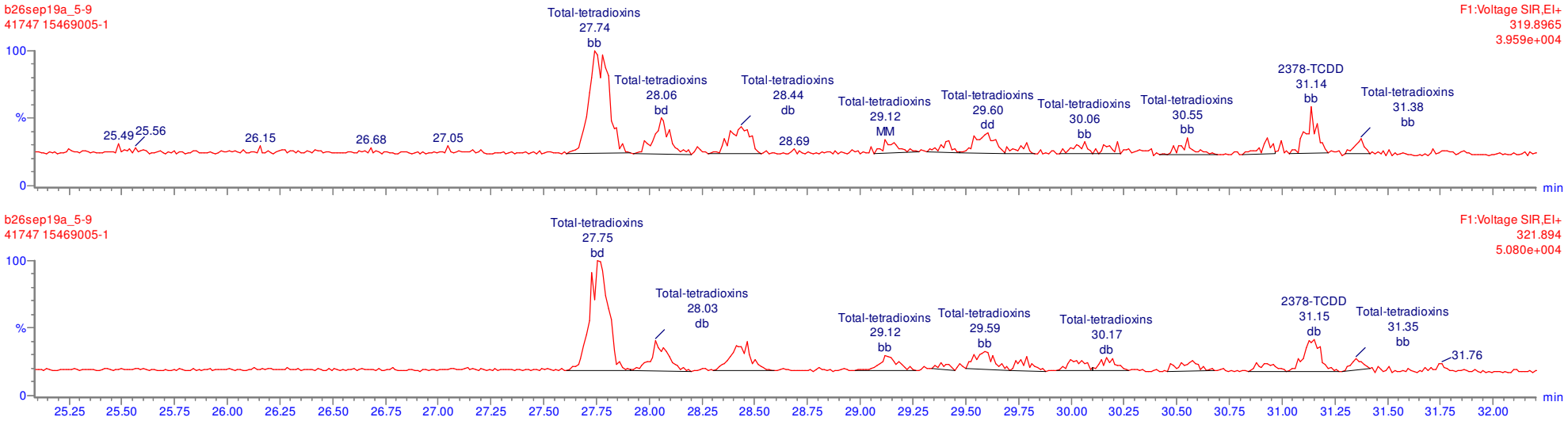
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	3.17e5	3.14e5	6.31e5	39.29	1.01	NO	111.173	0.204	4.21e6	3120	1349.0	4.22e6	2530	1669.2	bd	bb
2	Total-heptafurans	7.01e2	7.80e2	1.48e3	39.11	0.90	NO	0.261	0.204	1.49e4	3120	4.8	1.52e4	2530	6.0	bb	bb
3	1234678-HpCDF	1.21e5	1.20e5	2.40e5	38.77	1.01	NO	40.654	0.177	1.57e6	3120	504.2	1.58e6	2530	623.3	bb	bb
4	Total-heptafurans	7.98e1	7.29e1	1.53e2	40.86	1.09	NO	0.027	0.204	3.36e3	3120	1.1	3.31e3	2530	1.3	bb	db
5	1234789-HpCDF	6.50e3	6.78e3	1.33e4	40.65	0.96	NO	2.448	0.235	7.73e4	3120	24.8	7.19e4	2530	28.4	bb	bd

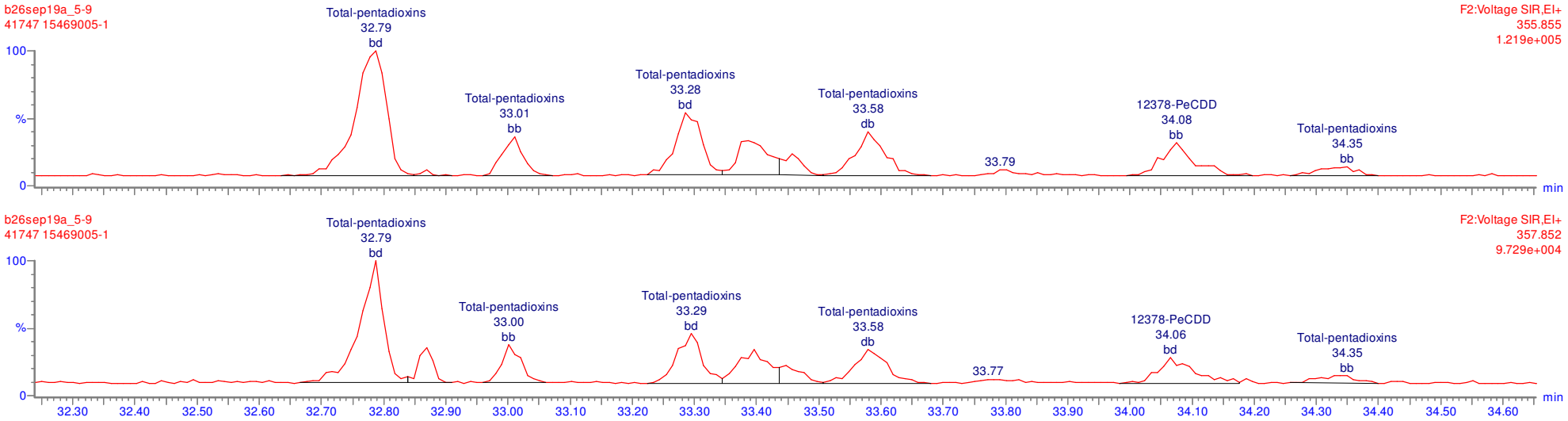
MANUAL INTEGRATION
METHOD 1613
HRP763_1



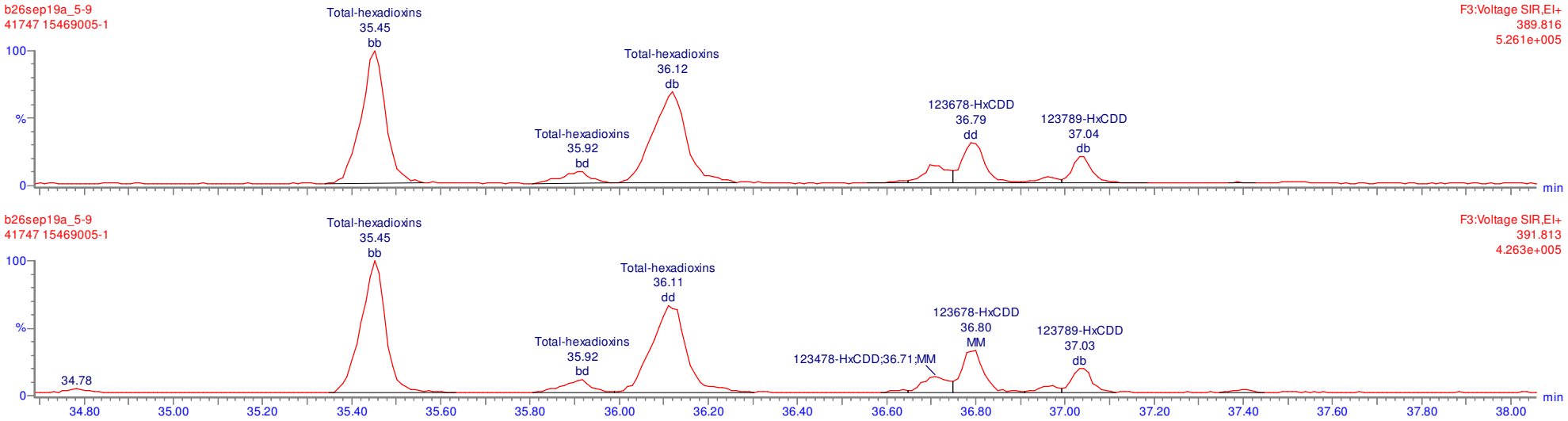
MANUAL INTEGRATION
METHOD 1613
HRP763_1



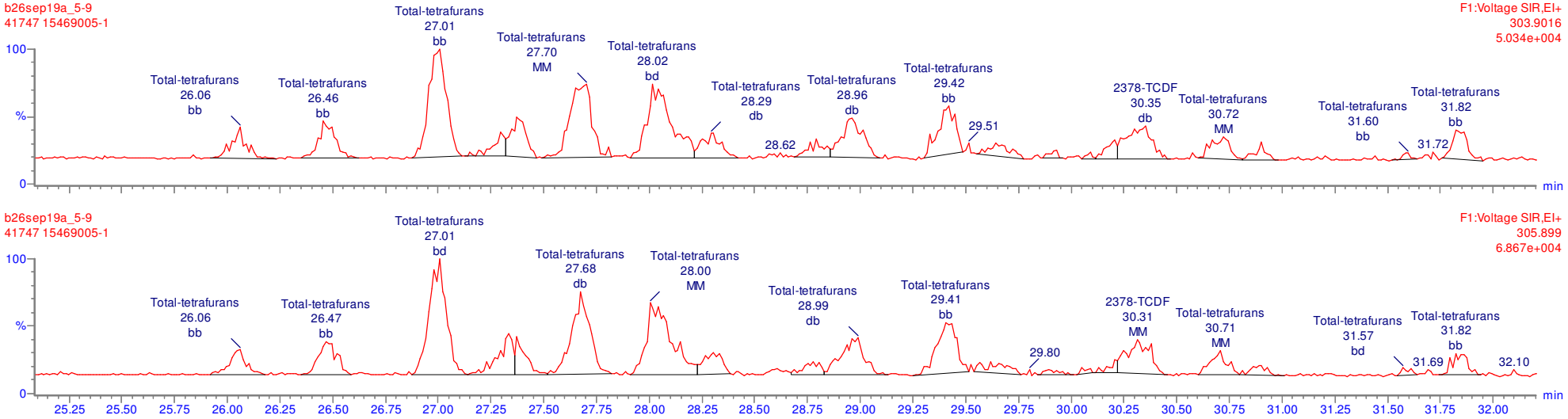
MANUAL INTEGRATION
METHOD 1613
HRP763_1



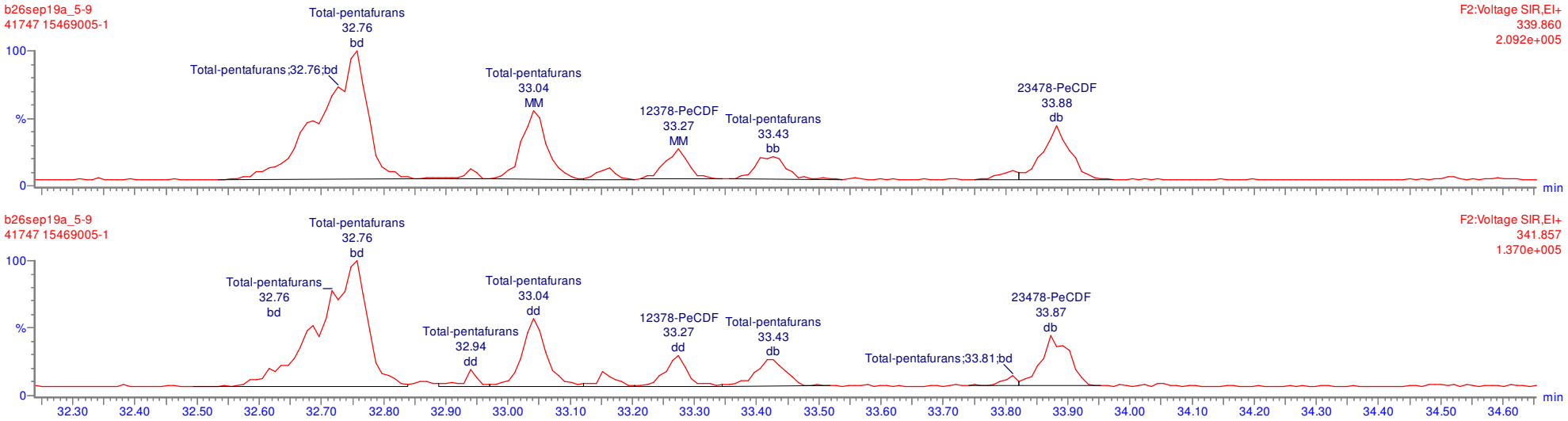
MANUAL INTEGRATION
METHOD 1613
HRP763_1



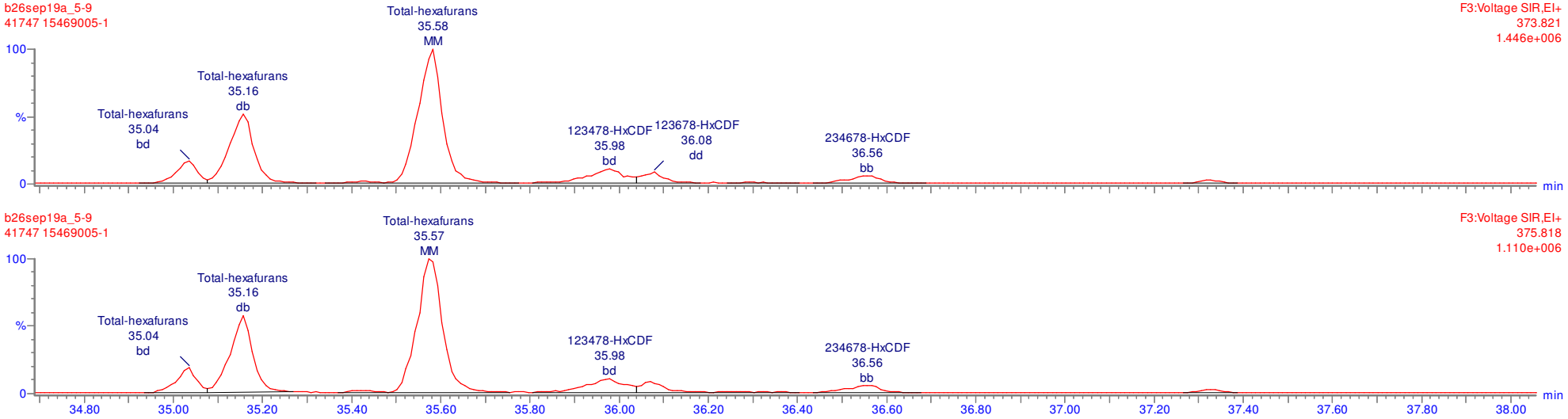
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



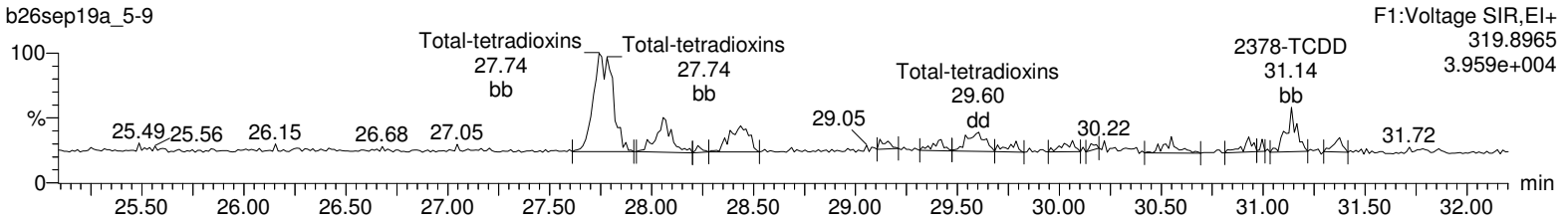
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

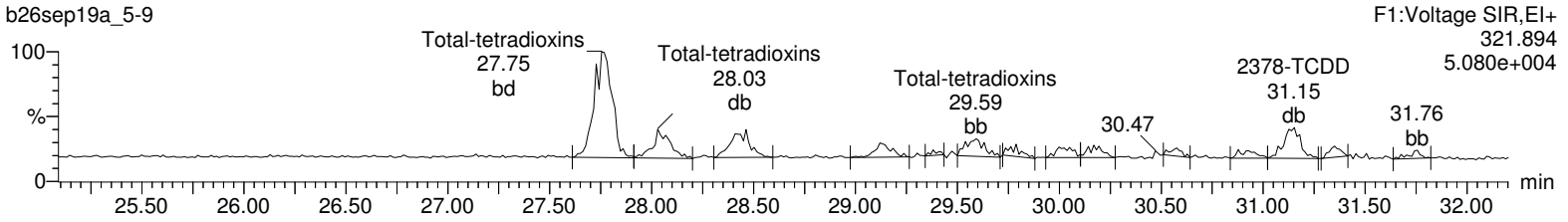
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

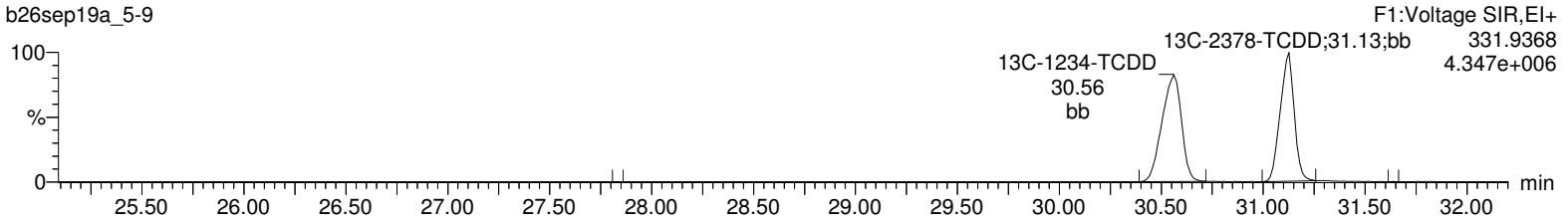
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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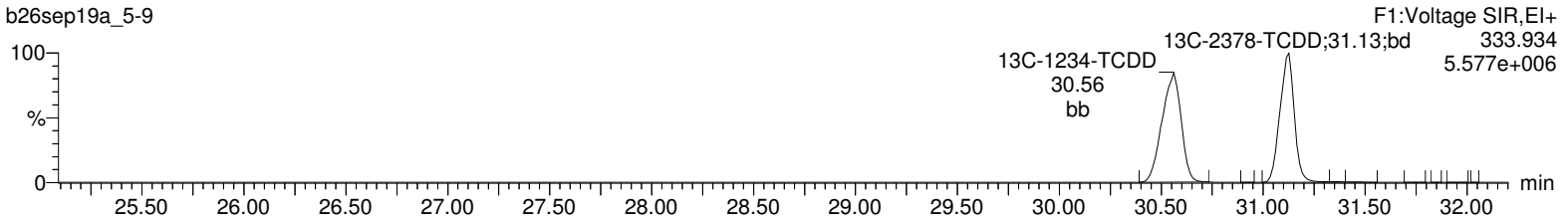

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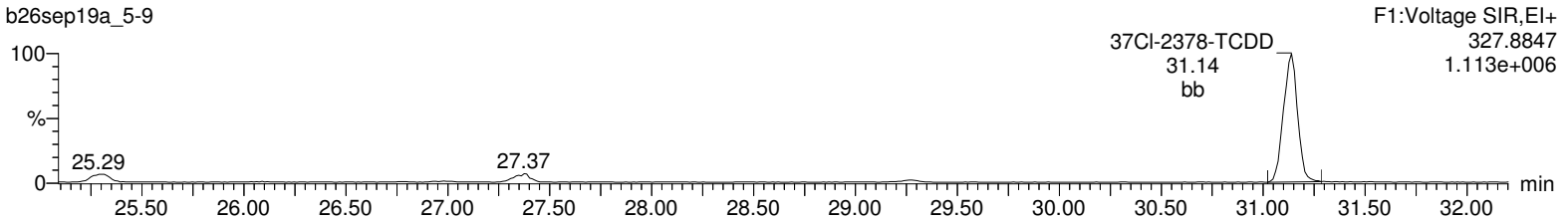

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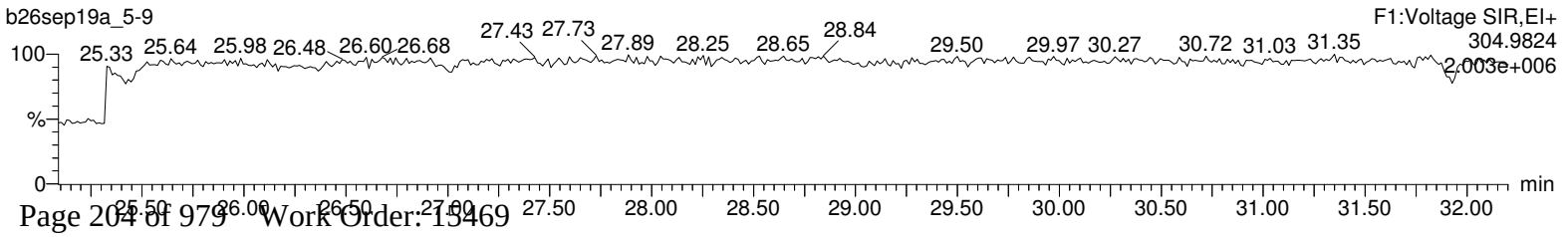


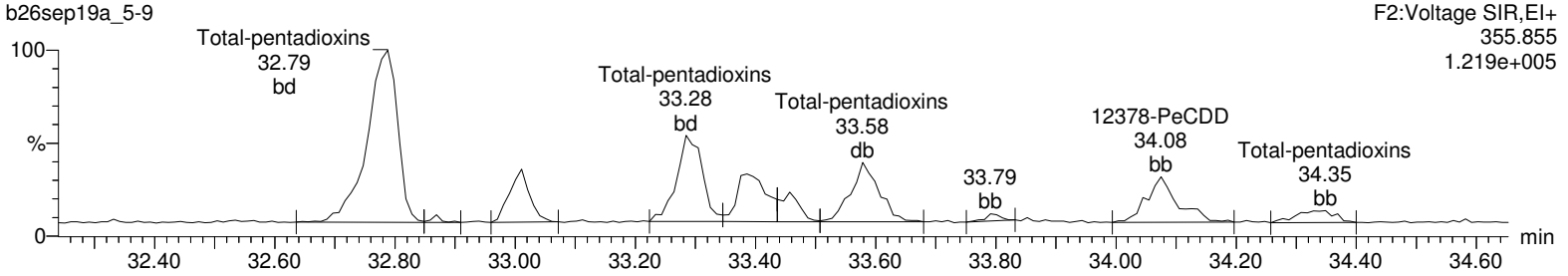
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

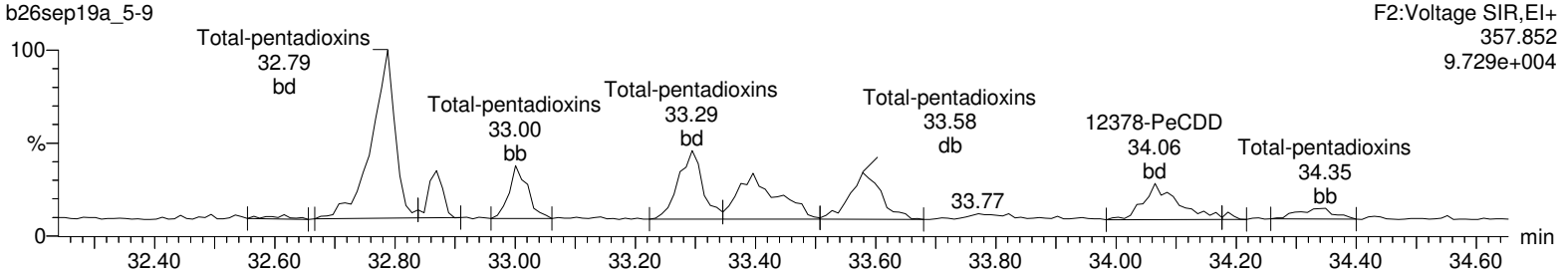
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentadioxins



Total-pentadioxins



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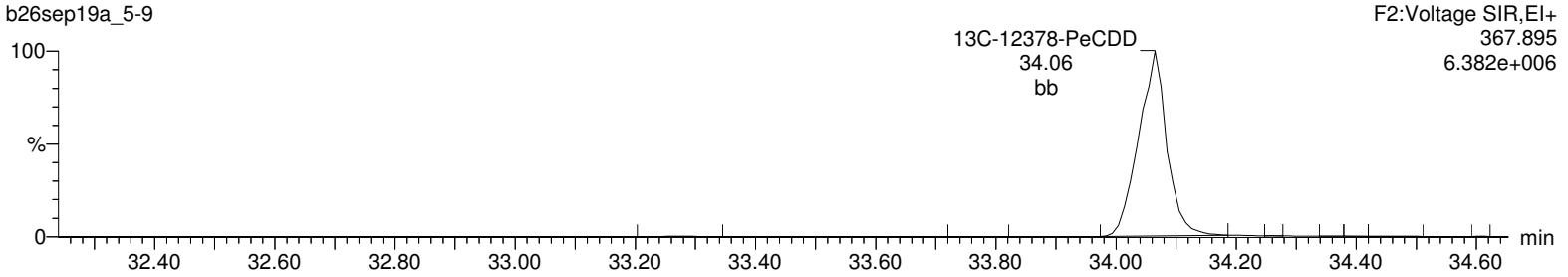

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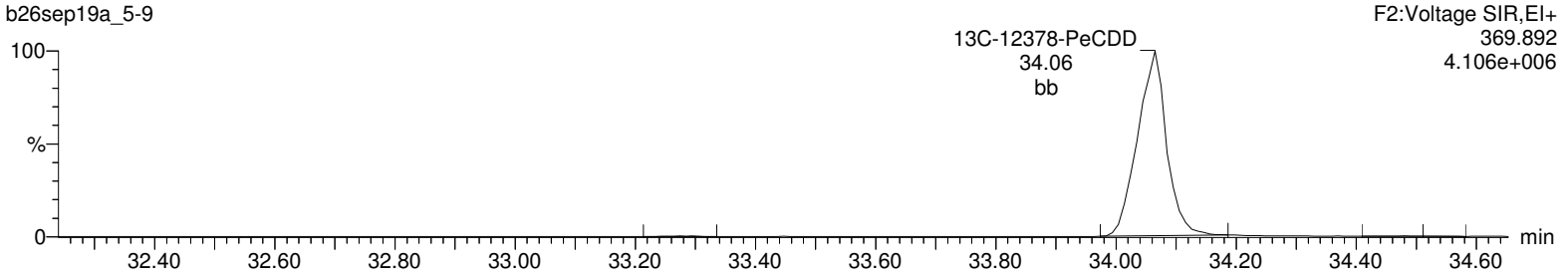
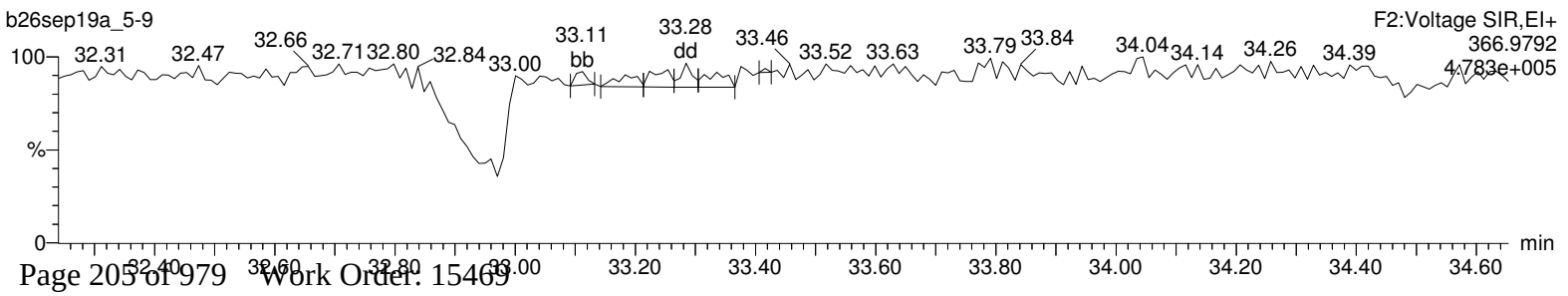


Lock Mass F2



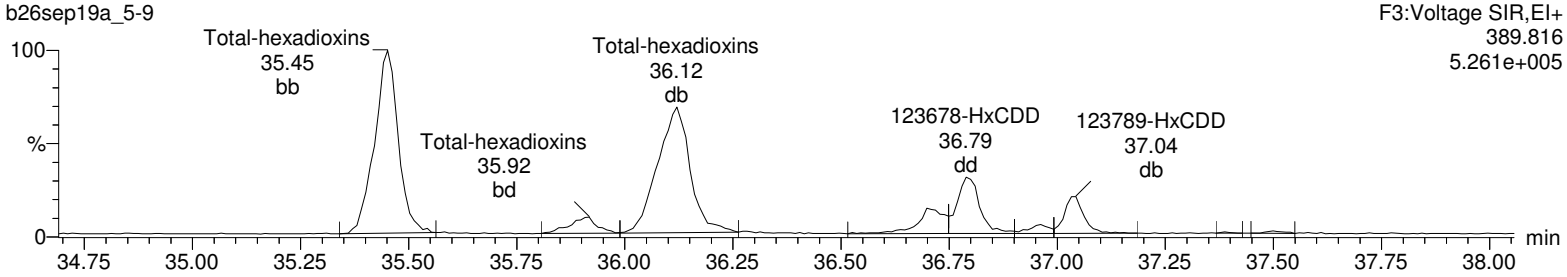
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

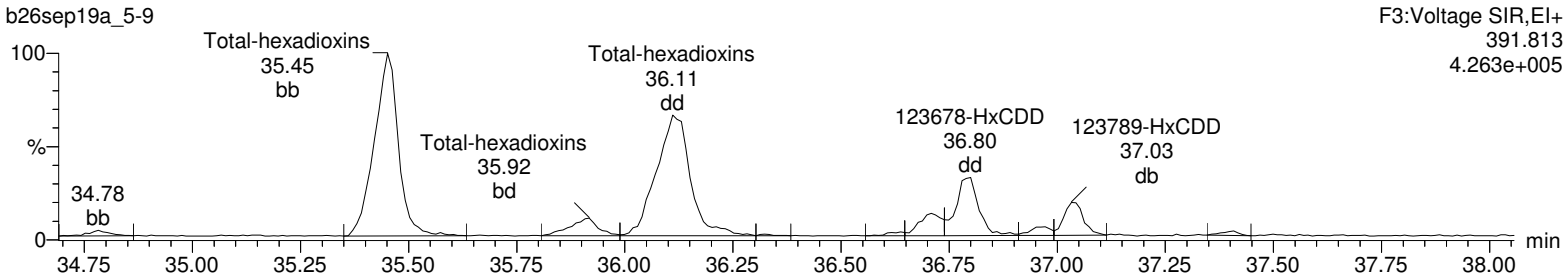
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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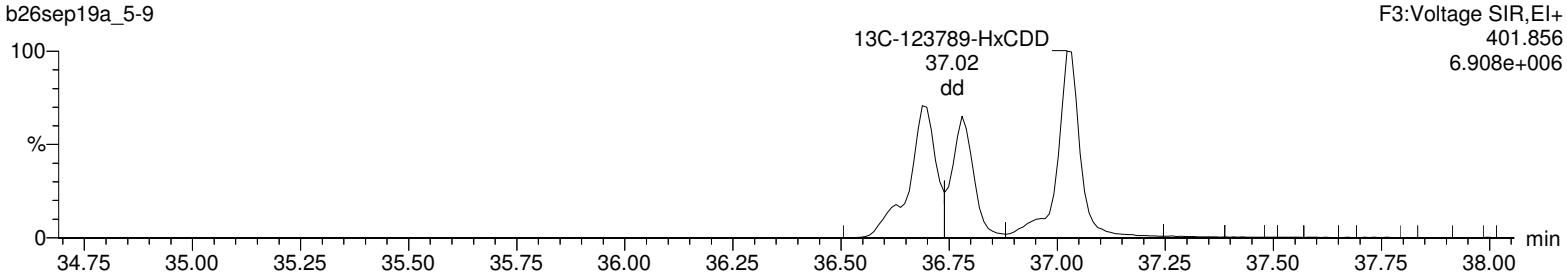

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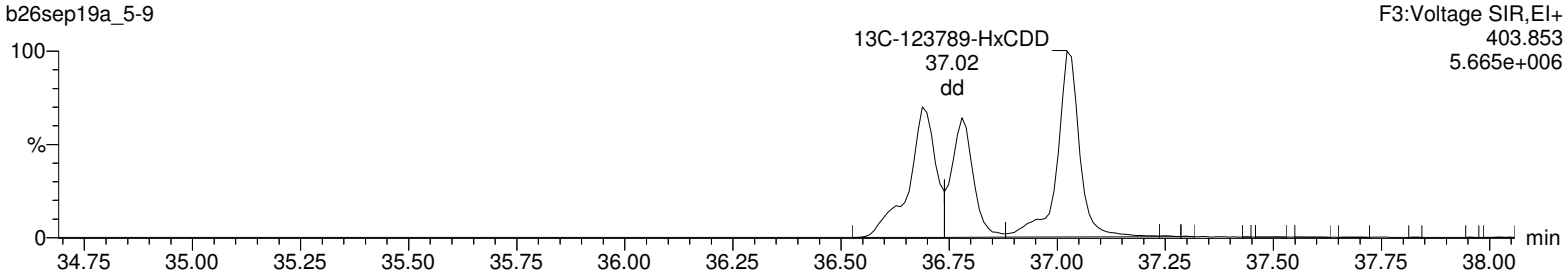
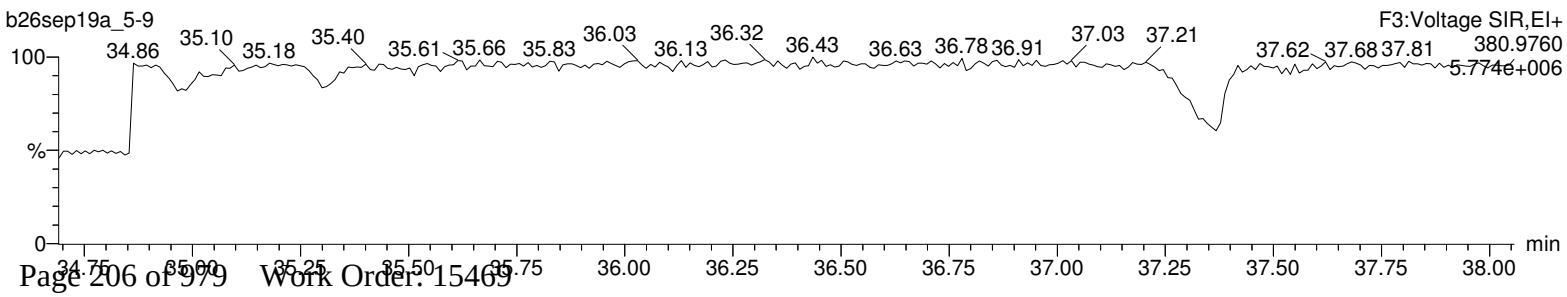


Lock Mass F3



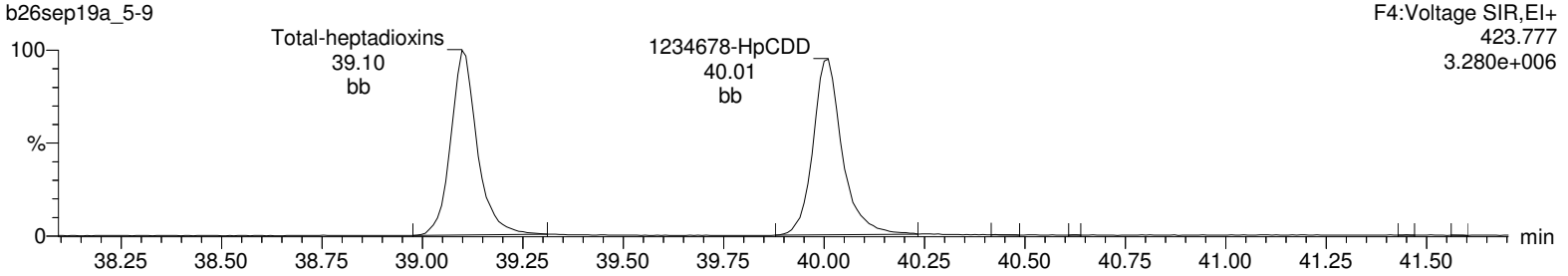
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

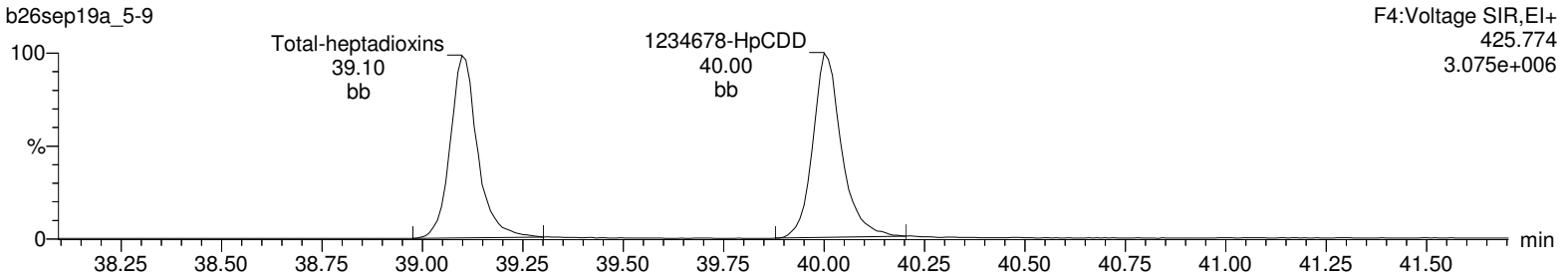
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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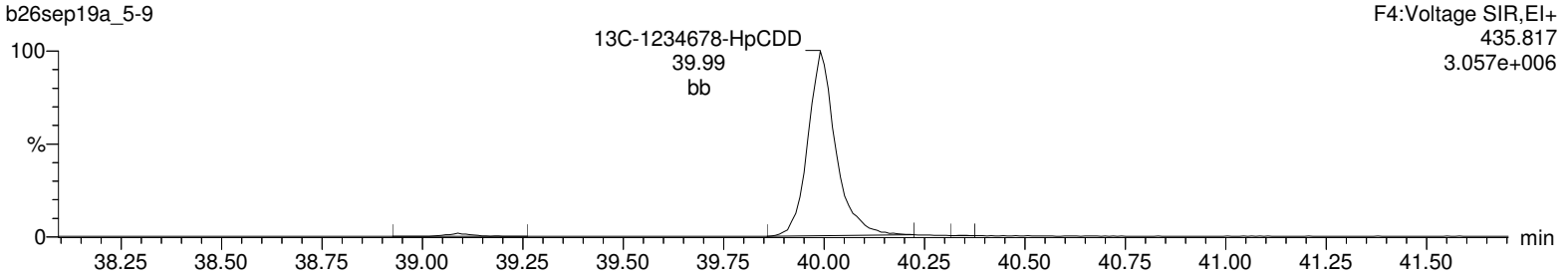

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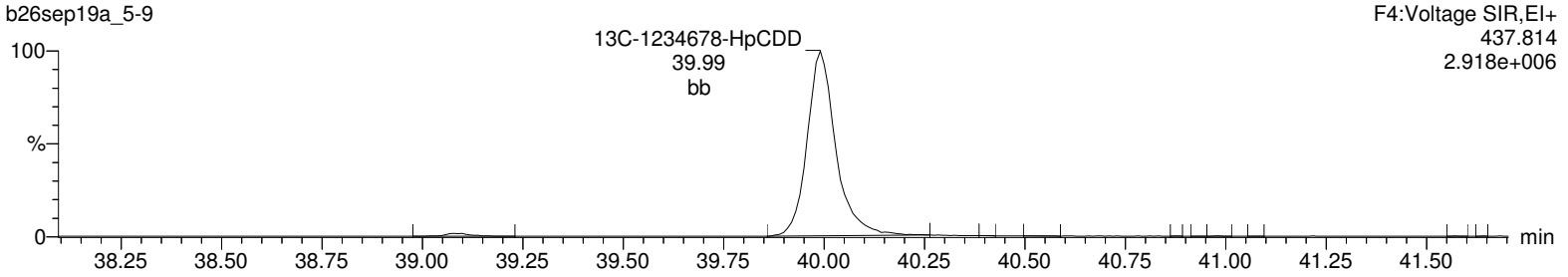
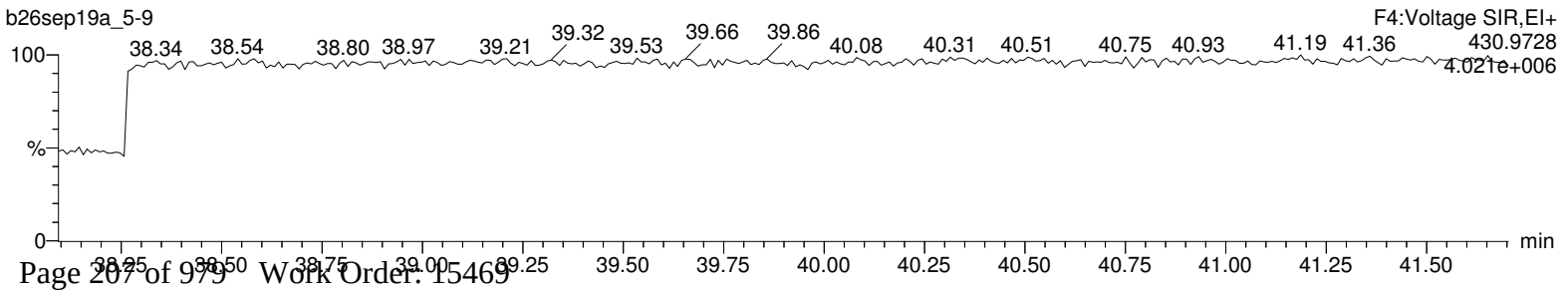


Lock Mass F4



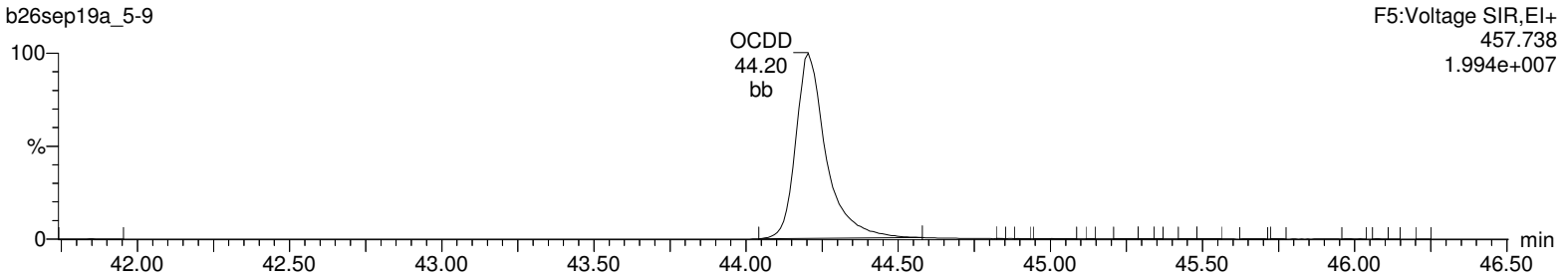
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

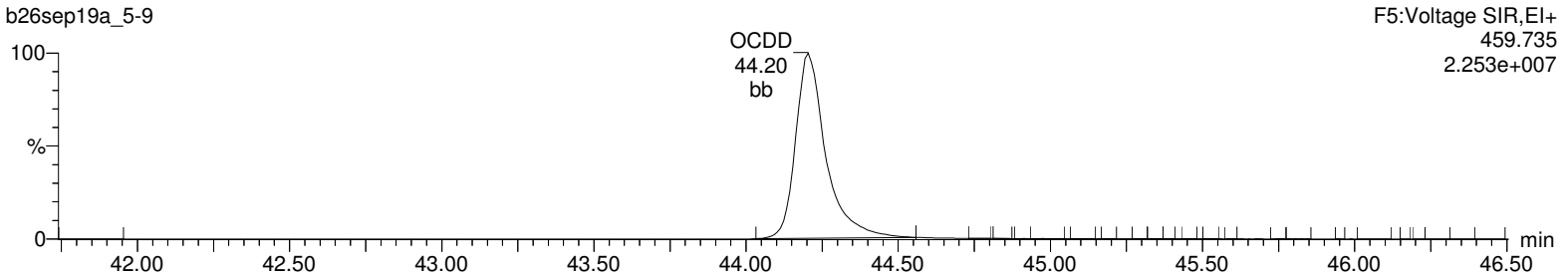
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

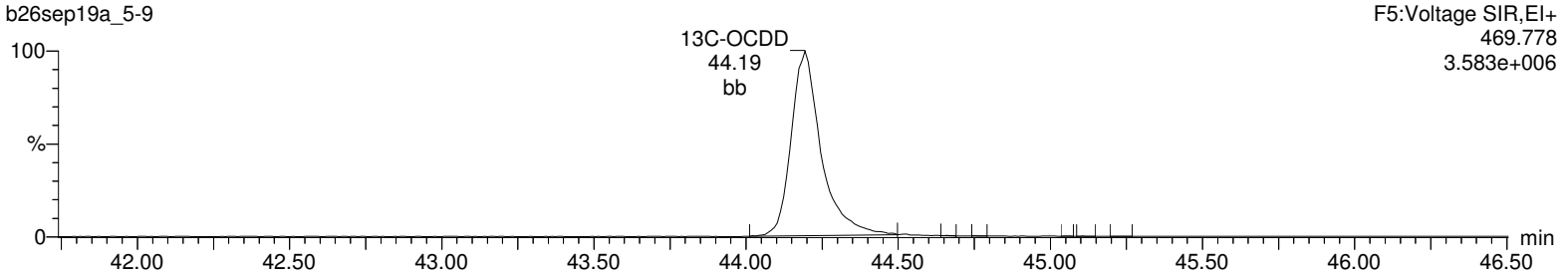
OCDD



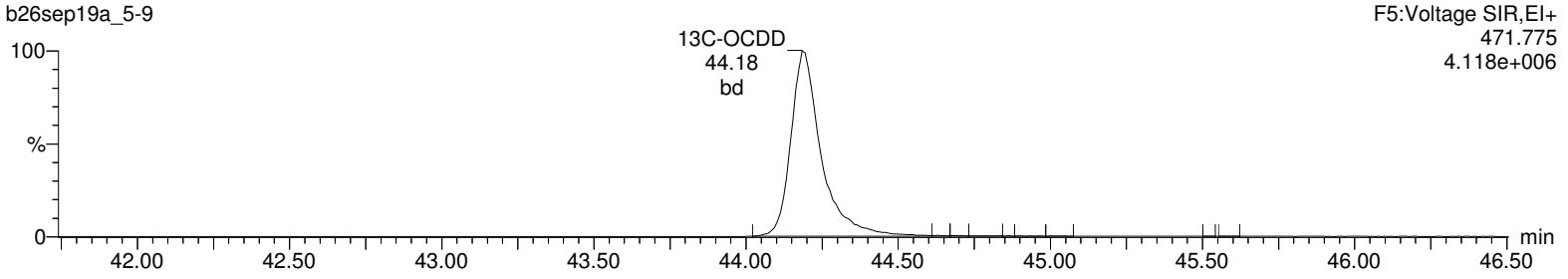
OCDD



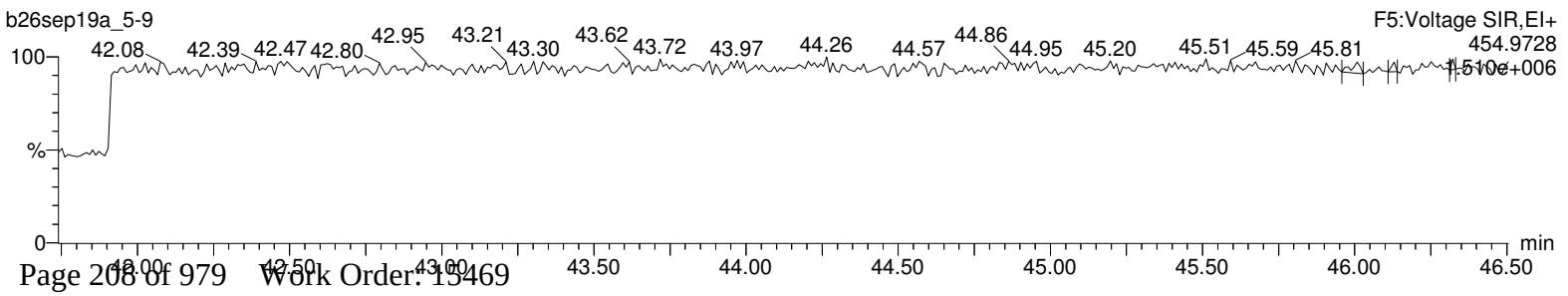
13C-OCDD



13C-OCDD



Lock Mass F5



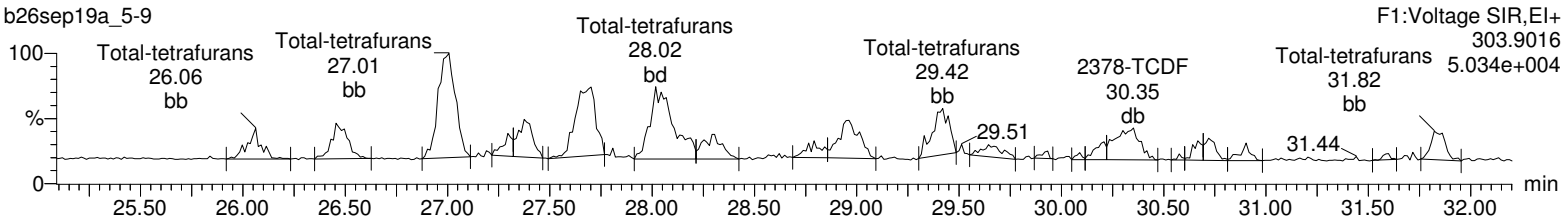
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

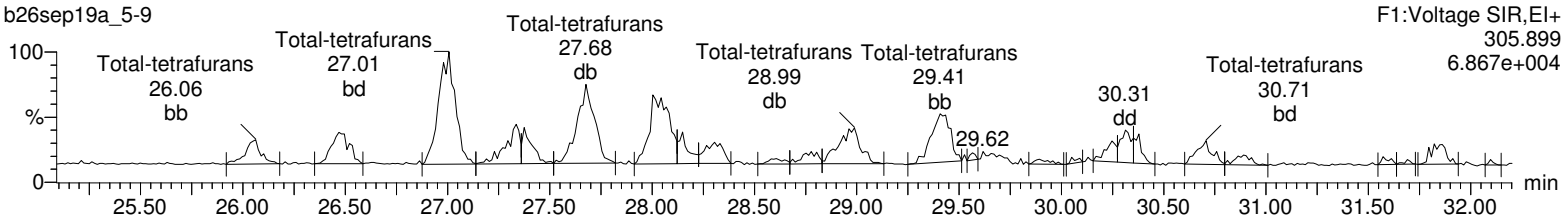
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

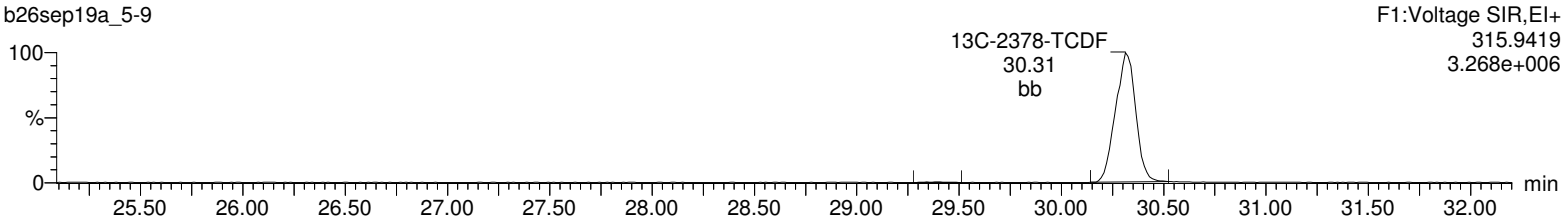
Total-tetrafurans



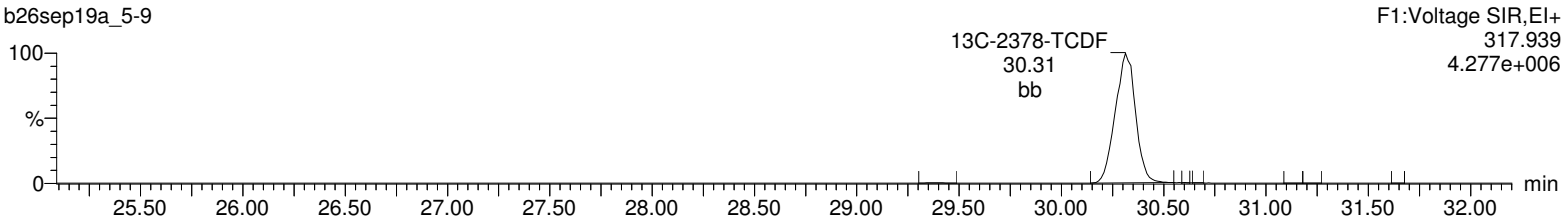
Total-tetrafurans



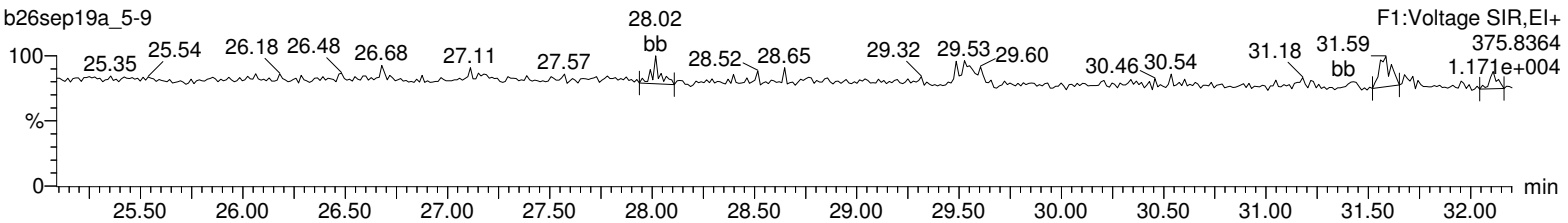
13C-2378-TCDF



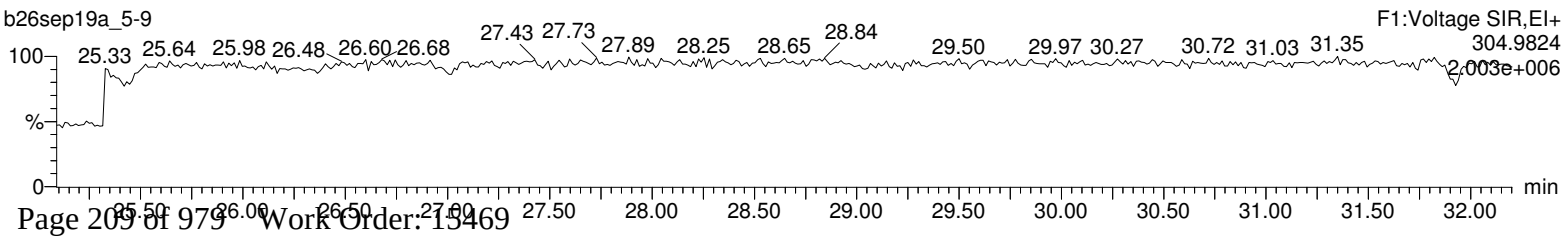
13C-2378-TCDF



HxDPE



Lock Mass F1



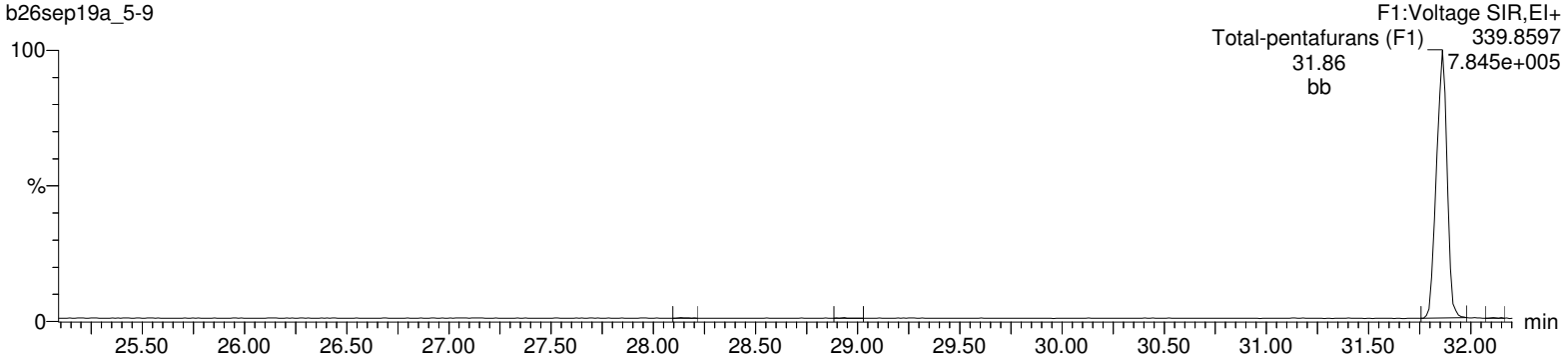
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

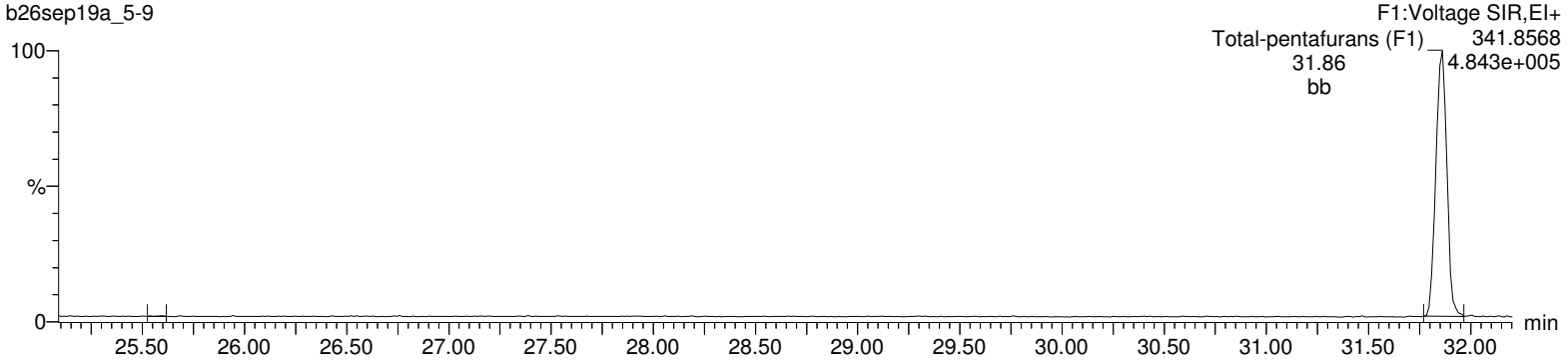
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

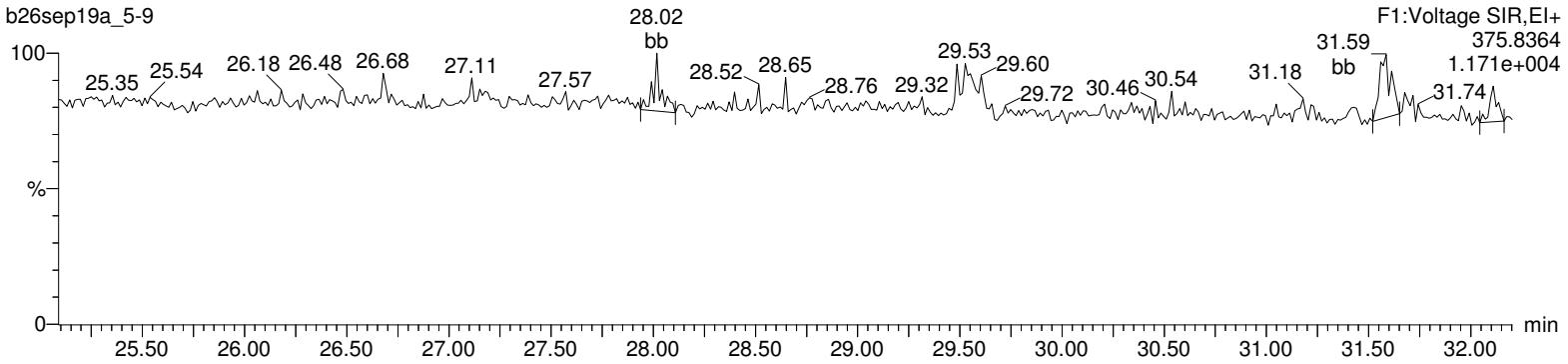
Total-pentafurans (F1)



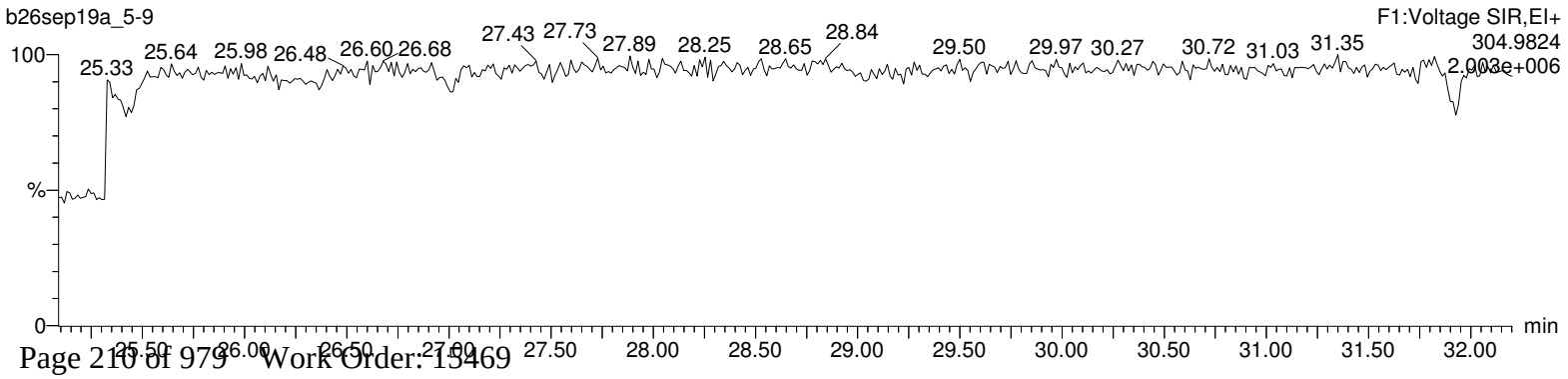
Total-pentafurans (F1)



HxDPE



Lock Mass F1



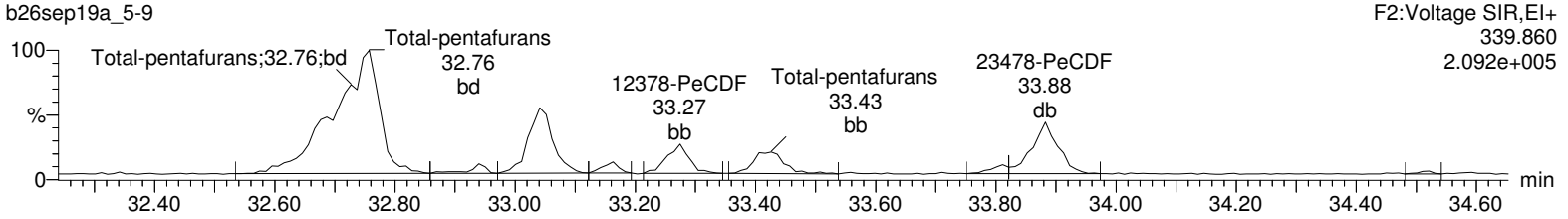
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

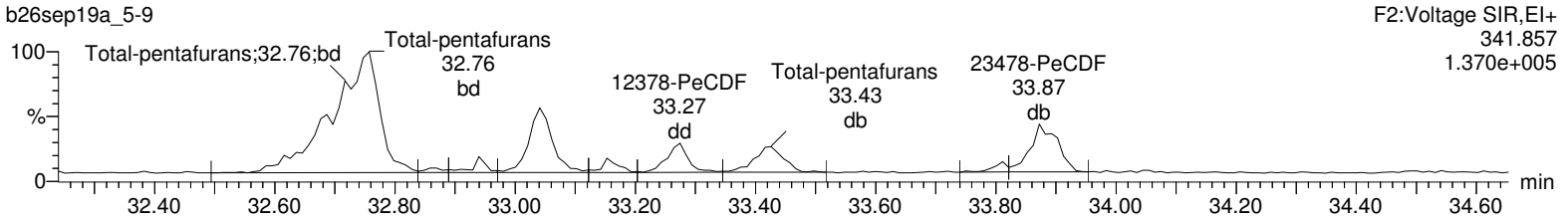
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

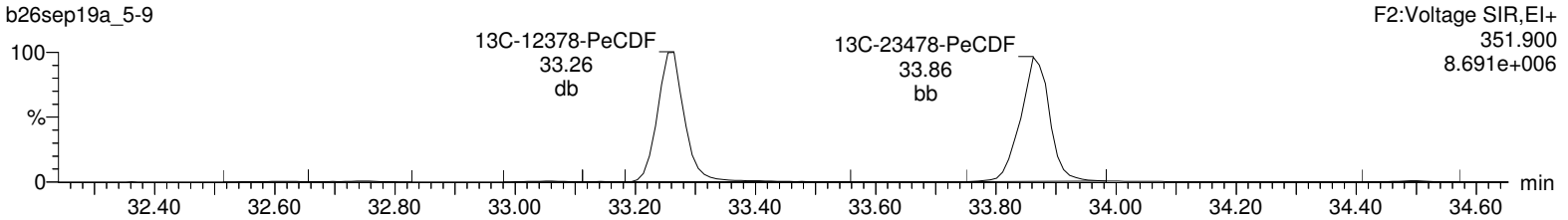
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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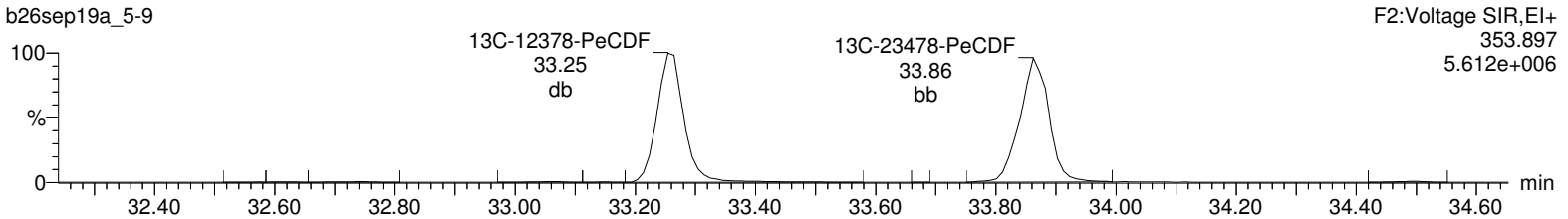
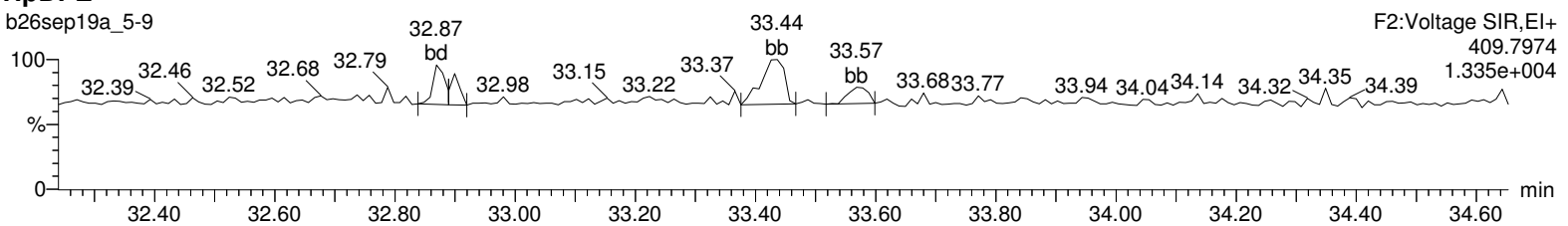
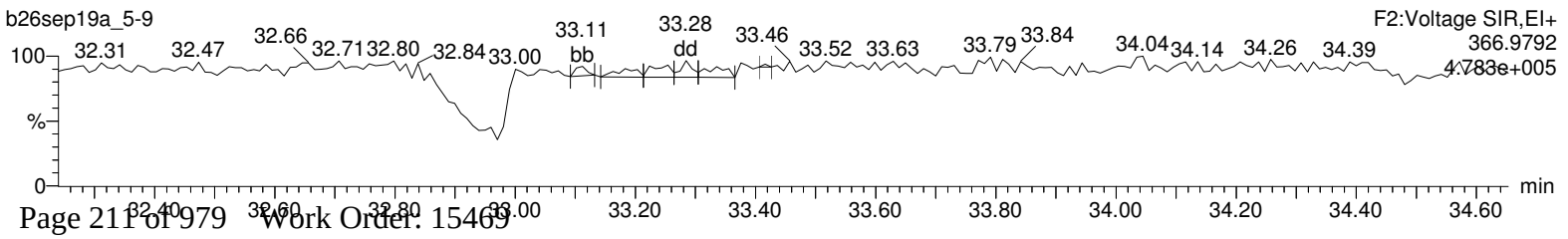


HpDPE



Lock Mass F2



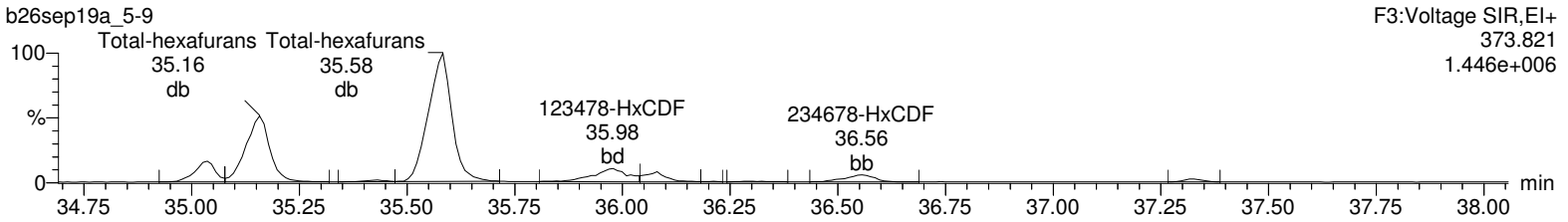
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

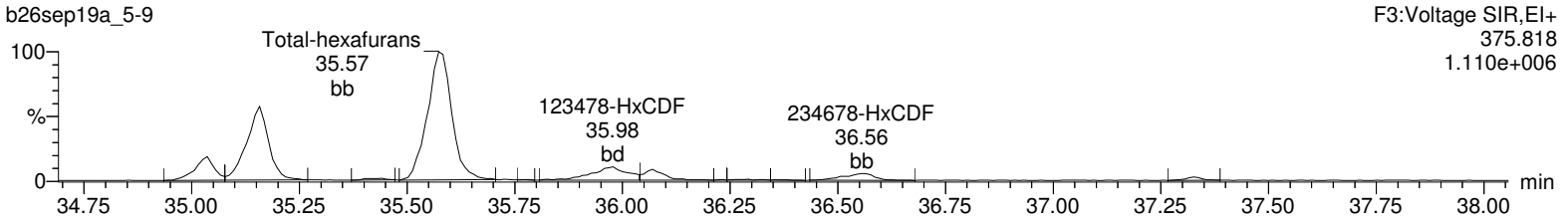
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

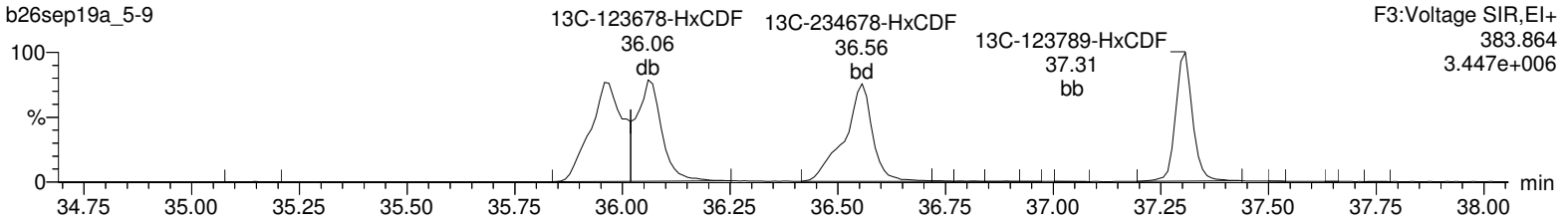
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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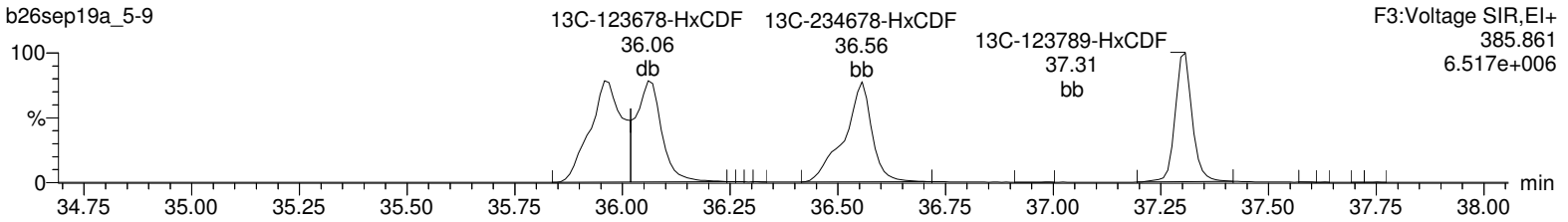
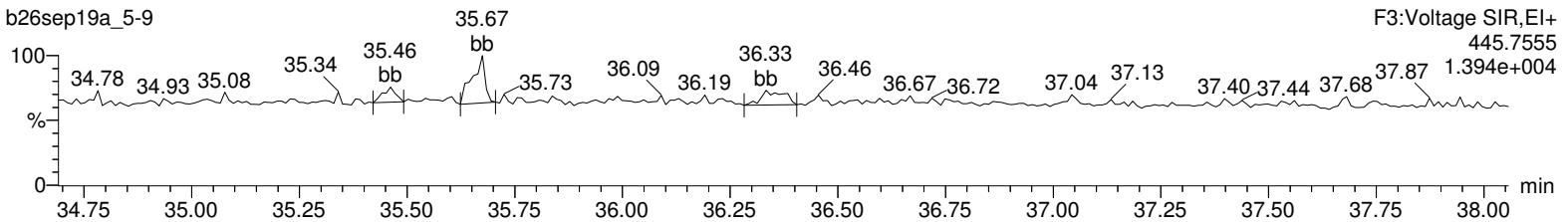
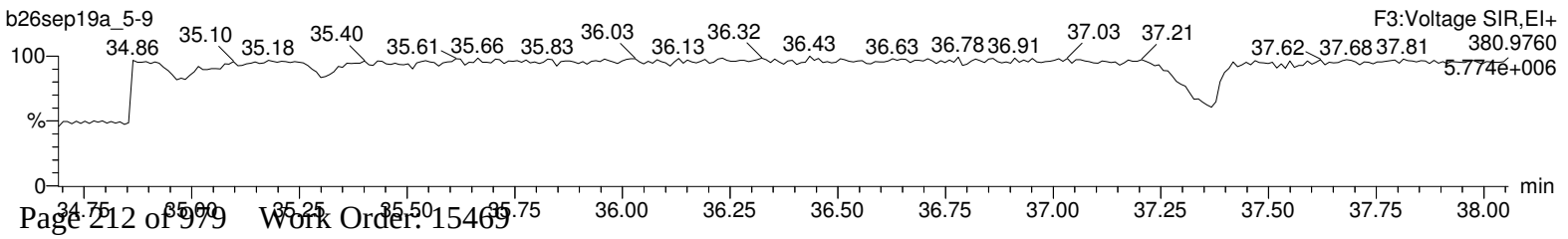


OcDPE



Lock Mass F3



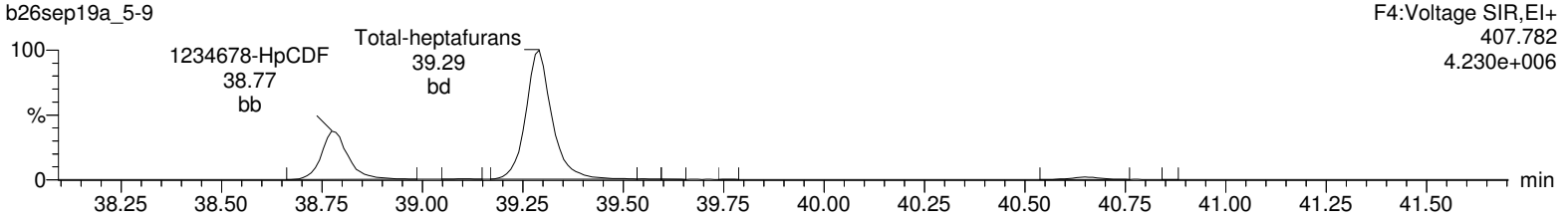
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

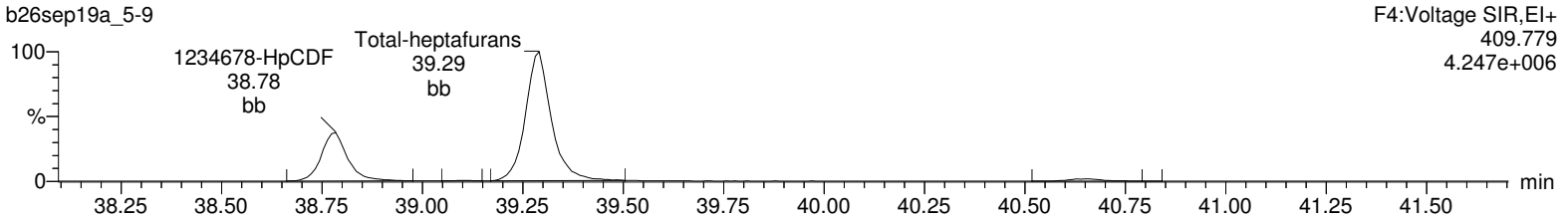
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

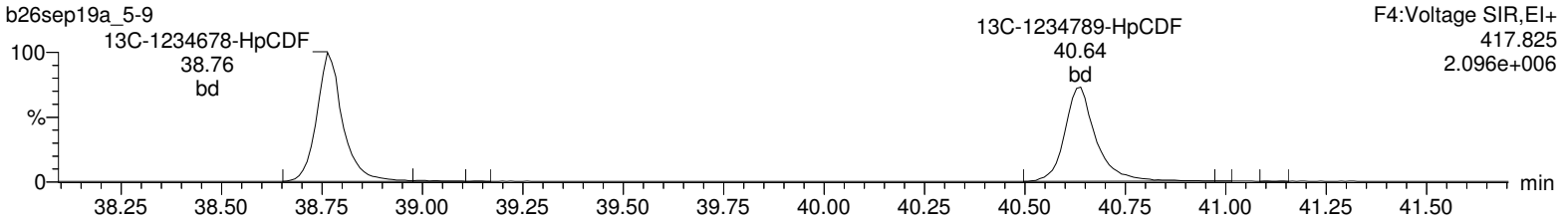
Total-heptafurans



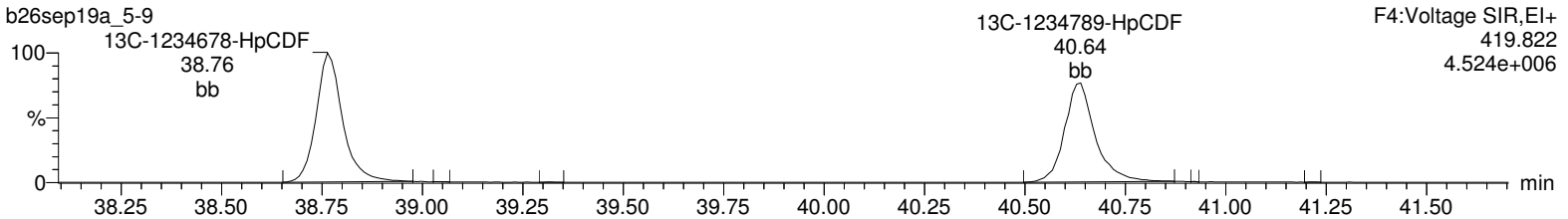
Total-heptafurans



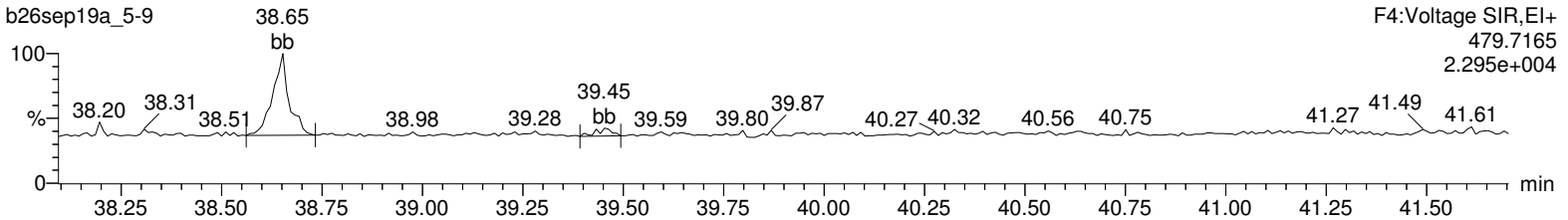
13C-1234678-HpCDF



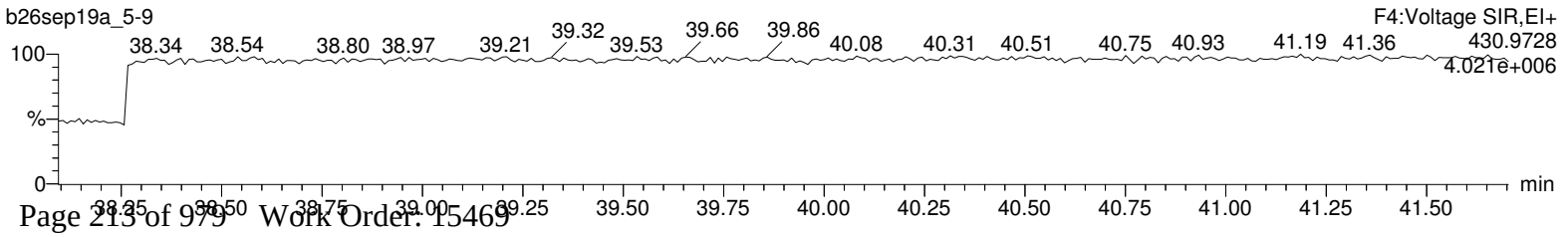
13C-1234678-HpCDF



NoDPE



Lock Mass F4



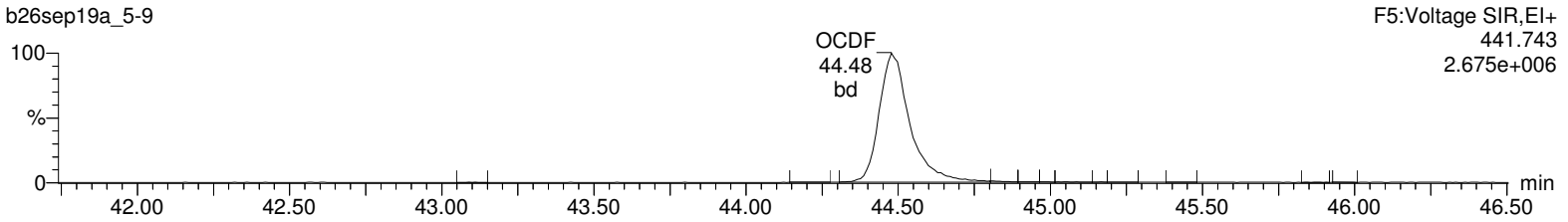
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

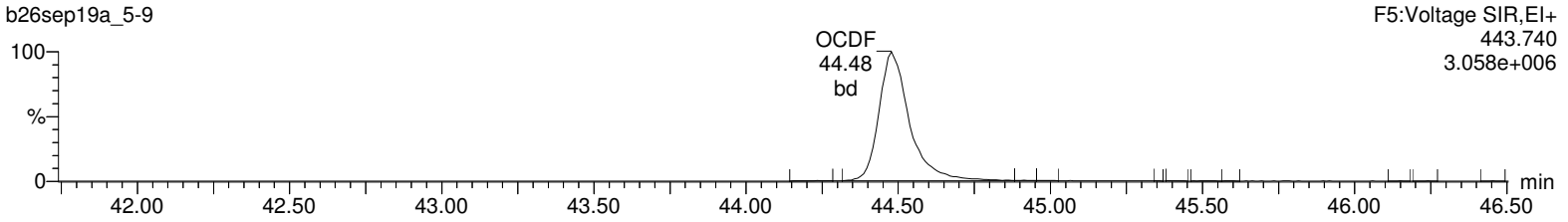
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-9, Date: 28-Sep-2019, Time: 06:17:08, ID: 15469005-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

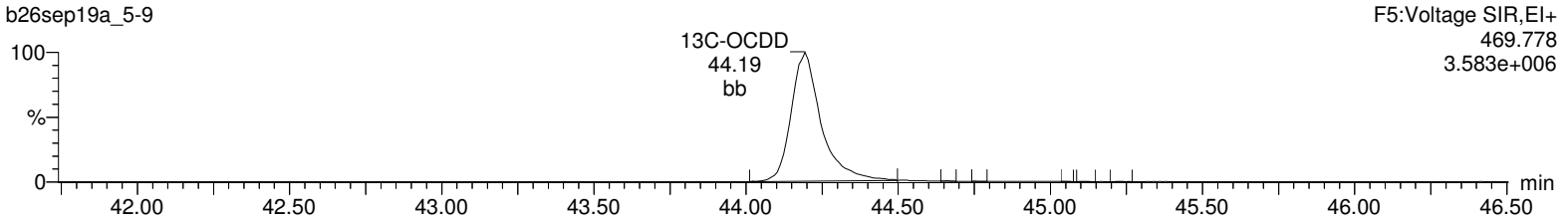
OCDF



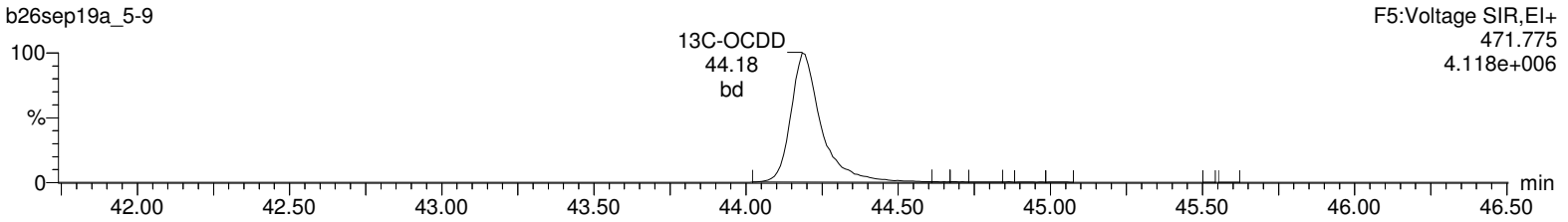
OCDF



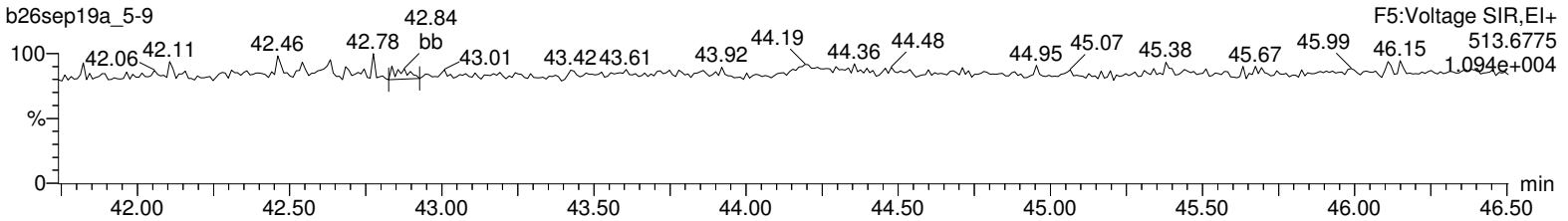
13C-OCDD



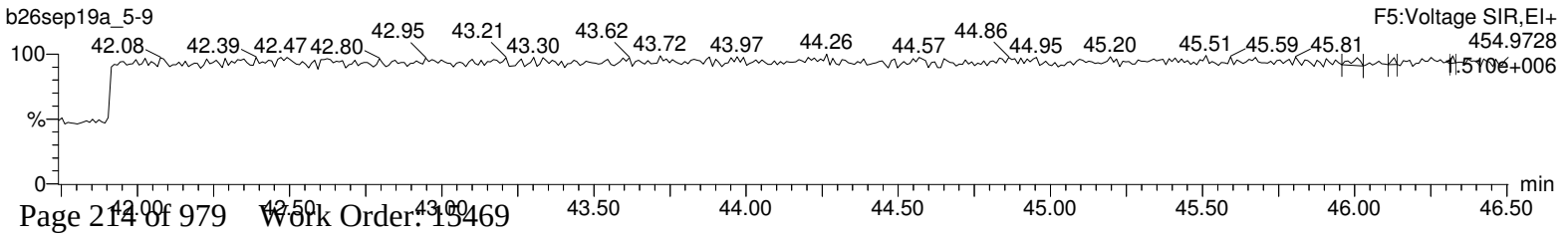
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469005**	**Date Collected:**	**08/28/2019 10:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**J6-SC1b-60to70-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 17:58**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.95 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	BJ	0.754	pg/g	0.172	0.928

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B The target analyte was detected in the associated blank.
J Value is estimated
K Estimated Maximum Possible Concentration
Q Quantitative Interference; value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-7, Date: 30-Sep-2019, Time: 17:58:15, ID: 15469005-2, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	2.78e3	3.92e3	6.70e3	16.32	1.002	0.71	NO	0.406	0.0926	4.60e4	3242	14.2	6.49e4	4587	14.1	db	bb
2	13C-2378-TCDF	8.33e5	1.09e6	1.92e6	16.29	1.064	0.77	NO	61.819	0.109	1.28e7	13831	926.7	1.68e7	7417	2262.9	bb	bb
3	13C-1234-TCDD	8.86e5	1.15e6	2.04e6	15.31	0.000	0.77	NO	100.000	0.106	1.67e7	8227	2032.2	2.17e7	5371	4034.0	db	db

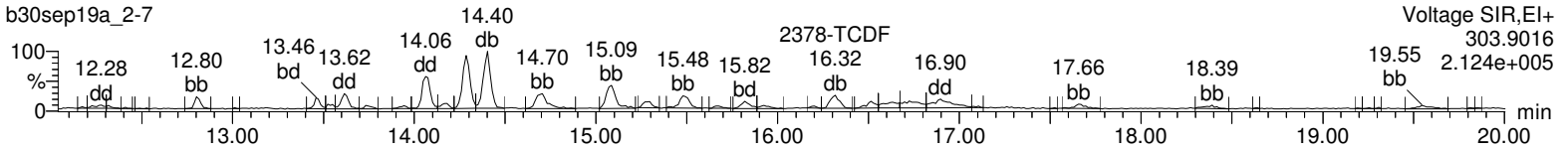
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

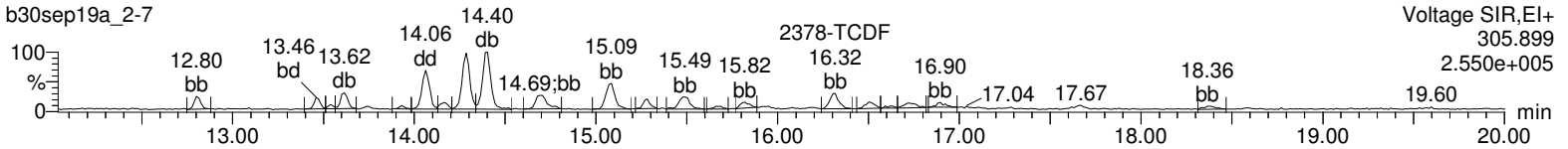
Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-7, Date: 30-Sep-2019, Time: 17:58:15, ID: 15469005-2, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

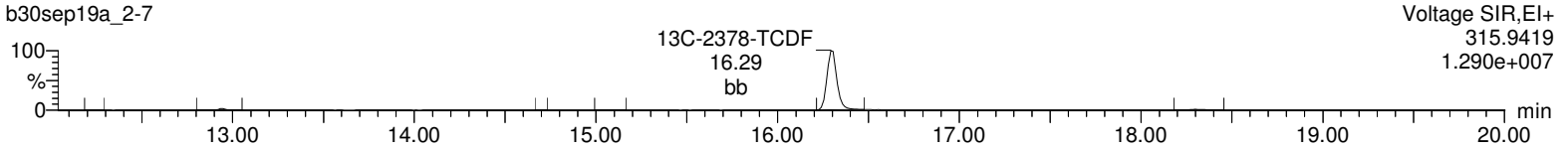
2378-TCDF



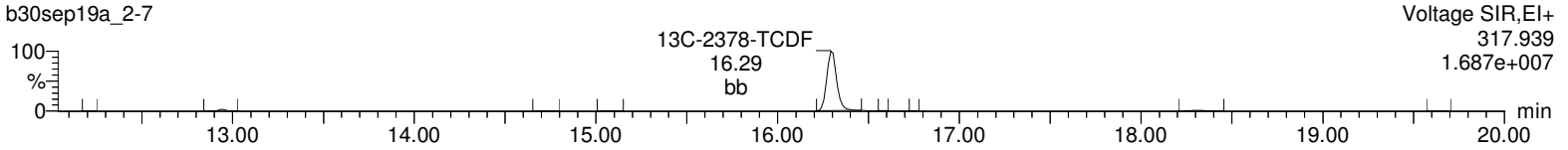
2378-TCDF



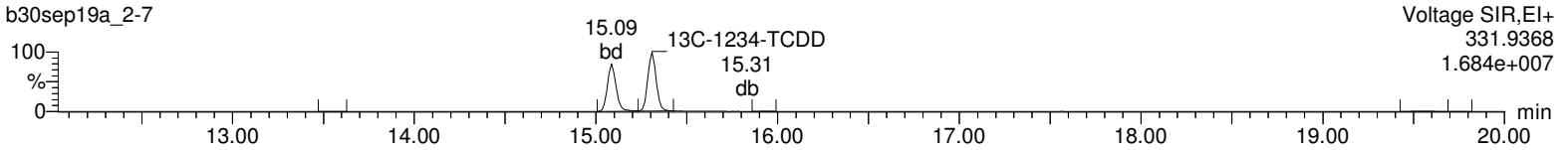
13C-2378-TCDF



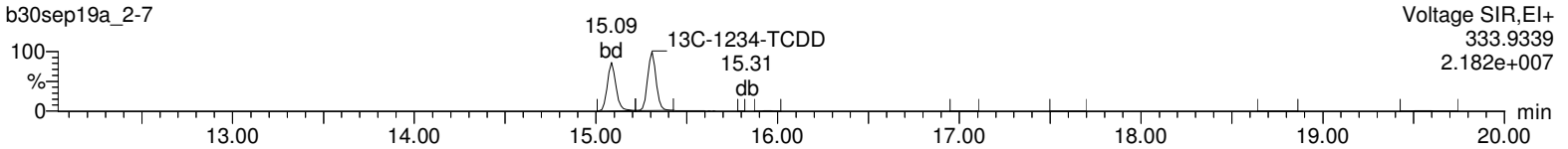
13C-2378-TCDF



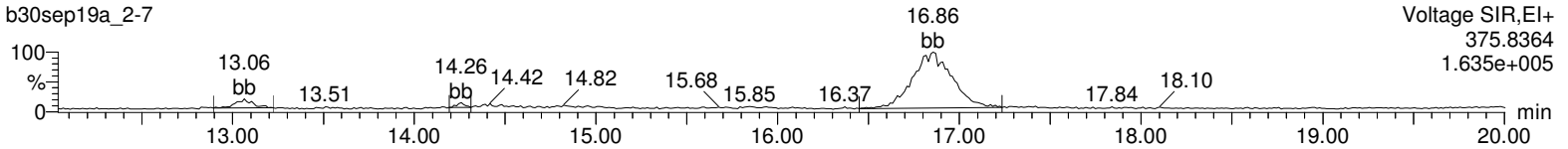
13C-1234-TCDD



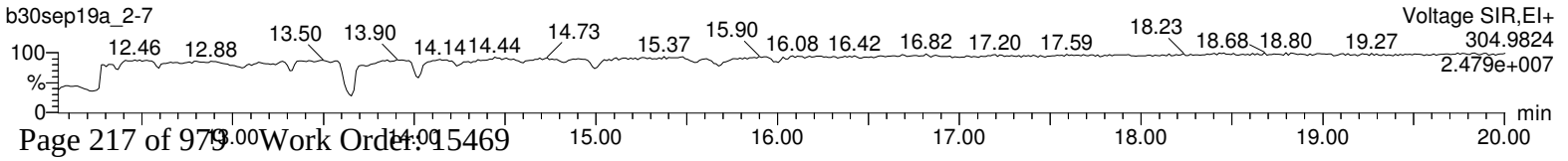
13C-1234-TCDD



HxDPE



Lock Mass F1



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469006**	**Date Collected:**	**08/28/2019 10:40**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31.2**
Client ID:	**J6-SC1b-70to80-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:05**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.39 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.092	pg/g	0.092	0.945
40321-76-4	1,2,3,7,8-PeCDD	U	0.0992	pg/g	0.0992	4.72
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.139	pg/g	0.139	4.72
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.148	pg/g	0.148	4.72
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.147	pg/g	0.147	4.72
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	0.941	pg/g	0.181	4.72
3268-87-9	1,2,3,4,6,7,8,9-OCDD		11.9	pg/g	0.285	9.45
51207-31-9	2,3,7,8-TCDF	BJ	0.367	pg/g	0.153	0.945
57117-41-6	1,2,3,7,8-PeCDF	U	0.13	pg/g	0.130	4.72
57117-31-4	2,3,4,7,8-PeCDF	U	0.108	pg/g	0.108	4.72
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.108	pg/g	0.108	4.72
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.112	pg/g	0.112	4.72
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.114	pg/g	0.114	4.72
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.152	pg/g	0.152	4.72
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.478	pg/g	0.164	4.72
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.225	pg/g	0.225	4.72
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	1.21	pg/g	0.244	9.45
41903-57-5	Total TeCDD	BJK	0.108	pg/g	0.0495	0.945
36088-22-9	Total PeCDD	U	0.0992	pg/g	0.0992	4.72
34465-46-8	Total HxCDD	BJK	0.414	pg/g	0.139	4.72
37871-00-4	Total HpCDD	J	2.14	pg/g	0.181	4.72
30402-14-3	Total TeCDF	BJ	0.586	pg/g	0.153	0.945
30402-15-4	Total PeCDF	BJ	0.253	pg/g	0.075	4.72
55684-94-1	Total HxCDF	BJK	0.608	pg/g	0.108	4.72
38998-75-3	Total HpCDF	BJ	1.67	pg/g	0.164	4.72
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0548	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.216	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		148	189	pg/g	78.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		169	189	pg/g	89.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		162	189	pg/g	85.6	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		134	189	pg/g	71.2	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		183	189	pg/g	96.9	(23%-140%)
13C-OCDD		384	378	pg/g	102	(17%-157%)
13C-2,3,7,8-TCDF		136	189	pg/g	72.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		135	189	pg/g	71.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		156	189	pg/g	82.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		145	189	pg/g	76.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		131	189	pg/g	69.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		139	189	pg/g	73.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		155	189	pg/g	81.9	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469006**	**Date Collected:**	**08/28/2019 10:40**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31.2**
Client ID:	**J6-SC1b-70to80-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:05**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.39 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		152	189	pg/g	80.4	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		181	189	pg/g	95.9	(26%-138%)
37Cl-2,3,7,8-TCDD		17.7	18.9	pg/g	93.7	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:54:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:54:13 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0487		921			793			
2	12378-PeCDD							NO		0.0525		1231			773			
3	123478-HxCDD							NO		0.0737		1437			998			
4	123678-HxCDD							NO		0.0782		1437			998			
5	123789-HxCDD							NO		0.0778		1437			998			
6	1234678-HpCDD	1.12e3	1.25e3	2.37e3	39.99	1.000	0.90	NO	0.498	0.0960	1.72e4	1094	15.7	1.56e4	860	18.1	bb	bb
7	OCDD	1.23e4	1.39e4	2.63e4	44.18	1.000	0.88	NO	6.306	0.151	9.86e4	932	105.8	1.17e5	972	120.6	bb	bb
8	2378-TCDF	6.47e2	8.17e2	1.46e3	30.26	0.999	0.79	NO	0.194	0.0810	5.29e3	1126	4.7	6.67e3	972	6.9	MM	MM
9	12378-PeCDF	1.27e2	1.08e2	2.36e2	33.26	1.000	1.17	YES	0.039	0.0689	3.13e3	1504	2.1	3.95e3	1540	2.6	bb	bb
10	23478-PeCDF							NO		0.0571		1504			1540			
11	123478-HxCDF	2.08e2	1.21e2	3.29e2	35.95	1.001	1.71	YES	0.050	0.0572	3.06e3	1125	2.7	2.65e3	1332	2.0	bd	MM
12	123678-HxCDF	1.36e2	9.41e1	2.30e2	36.06	1.001	1.44	YES	0.032	0.0594	2.84e3	1125	2.5	2.36e3	1332	1.8	db	MM
13	234678-HxCDF							NO		0.0603		1125			1332			
14	123789-HxCDF							NO		0.0802		1125			1332			
15	1234678-HpCDF	7.41e2	8.23e2	1.56e3	38.76	1.000	0.90	NO	0.253	0.0866	1.08e4	1073	10.1	9.07e3	1554	5.8	MM	bd
16	1234789-HpCDF							NO		0.119		1073			1554			
17	OCDF	1.35e3	1.63e3	2.98e3	44.46	1.007	0.83	NO	0.642	0.129	1.71e4	1077	15.9	1.58e4	726	21.8	bd	bb
18	13C-2378-TCDD	3.56e5	4.61e5	8.18e5	31.10	1.019	0.77	NO	78.527	0.105	4.30e6	2413	1782.1	5.61e6	1556	3605.2	bd	bd
19	13C-12378-PeCDD	3.83e5	2.46e5	6.30e5	34.05	1.115	1.56	NO	89.327	0.135	6.82e6	2058	3316.4	4.40e6	1388	3171.4	bb	bb
20	13C-123478-HxCDD	3.07e5	2.48e5	5.56e5	36.63	0.991	1.24	NO	85.630	0.225	4.89e6	3616	1352.0	3.96e6	3751	1054.5	bd	bd
21	13C-123678-HxCDD	3.42e5	2.77e5	6.19e5	36.71	0.993	1.23	NO	71.176	0.168	4.86e6	3616	1343.0	3.96e6	3751	1055.2	dd	dd
22	13C-1234678-HpCDD	2.55e5	2.49e5	5.04e5	39.98	1.082	1.03	NO	96.906	0.193	2.73e6	2949	924.9	2.62e6	2116	1240.1	bd	bd
23	13C-OCDD	4.25e5	4.87e5	9.12e5	44.16	1.195	0.87	NO	203.059	0.252	3.20e6	3138	1021.3	3.73e6	2589	1439.1	bd	bd
24	13C-2378-TCDF	3.68e5	4.78e5	8.46e5	30.30	0.992	0.77	NO	72.005	0.116	3.16e6	2652	1190.2	4.12e6	2264	1818.3	bb	bb
25	13C-12378-PeCDF	4.12e5	2.61e5	6.74e5	33.26	1.089	1.58	NO	71.203	0.458	7.44e6	11646	639.0	4.66e6	4015	1160.8	dd	bb
26	13C-23478-PeCDF	4.89e5	3.13e5	8.02e5	33.86	1.109	1.56	NO	82.627	0.446	8.36e6	11646	717.9	5.31e6	4015	1323.7	bb	bb
27	13C-123478-HxCDF	1.97e5	3.79e5	5.76e5	35.93	0.972	0.52	NO	76.747	0.267	3.23e6	3192	1012.8	6.08e6	6941	875.3	bd	bd
28	13C-123678-HxCDF	2.33e5	4.47e5	6.80e5	36.03	0.975	0.52	NO	69.553	0.205	3.36e6	3192	1053.5	6.34e6	6941	912.7	db	dd
29	13C-234678-HxCDF	2.09e5	4.01e5	6.09e5	36.51	0.988	0.52	NO	73.383	0.241	3.09e6	3192	966.8	5.83e6	6941	840.4	bd	bd
30	13C-123789-HxCDF	1.93e5	3.80e5	5.73e5	37.26	1.008	0.51	NO	81.853	0.286	2.43e6	3192	761.4	4.66e6	6941	671.1	bb	bd
31	13C-1234678-HpCDF	1.61e5	3.57e5	5.18e5	38.75	1.049	0.45	NO	80.408	0.202	1.98e6	3146	628.3	4.42e6	3429	1287.6	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:54:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:54:13 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.35e5	3.07e5	4.43e5	40.63	1.100	0.44	NO	95.894	0.282	1.37e6	3146	436.7	3.09e6	3429	900.1	bb	bb
33	13C-1234-TCDD	3.98e5	5.07e5	9.05e5	30.53	0.000	0.78	NO	100.000	0.121	3.59e6	2413	1488.3	4.53e6	1556	2909.9	bd	bb
34	13C-123789-HxCDD	4.52e5	3.70e5	8.22e5	36.95	0.000	1.22	NO	100.000	0.177	5.71e6	3616	1580.3	4.74e6	3751	1262.9	dd	dd
35	37Cl-2378-TCDD	9.13e4		9.13e4	31.13	1.019			9.369	0.0464	1.16e6	1633	709.9				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:54:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:54:13 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	2.22e2	1.91e2	4.13e2	31.20	1.16	YES	0.057	0.0262	3.48e3	921	3.8	2.62e3	0	0.0	MM	MM
2	Total-tetradioxins	2.16e2	3.06e2	5.22e2	27.78	0.71	NO	0.072	0.0487	1.97e3	921	2.1	3.09e3	793	3.9	MM	MM

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	6.47e1	9.61e1	1.61e2	32.98	0.67	YES	0.030	0.0525	1.92e3	1231	1.6	2.15e3	773	2.8	bb	bb
2	Total-pentadioxins	7.77e1	7.78e1	1.55e2	32.70	1.00	YES	0.029	0.0525	3.23e3	1231	2.6	2.21e3	773	2.9	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	2.83e2	2.63e2	5.46e2	35.41	1.07	NO	0.103	0.0765	5.03e3	1437	3.5	5.49e3	998	5.5	MM	bb
2	Total-hexadioxins	3.81e2	2.34e2	6.15e2	36.03	1.63	YES	0.116	0.0765	5.12e3	1437	3.6	4.31e3	998	4.3	MM	MM

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	1.12e3	1.25e3	2.37e3	39.99	0.90	NO	0.498	0.0960	1.72e4	1094	15.7	1.56e4	860	18.1	bb	bb
2	Total-heptadioxins	1.55e3	1.47e3	3.02e3	39.10	1.05	NO	0.634	0.0960	1.83e4	1094	16.8	2.01e4	860	23.4	bb	bb
3	Total-heptadioxins	2.56e2	7.41e1	3.30e2	38.74	3.45	YES	0.069	0.0960	3.46e3	1094	3.2	2.75e3	860	3.2	bb	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	2.06e2	3.09e2	5.15e2	31.82	0.67	NO	0.068	0.0810	4.58e3	1126	4.1	5.31e3	972	5.5	bb	MM
2	2378-TCDF	6.47e2	8.17e2	1.46e3	30.26	0.79	NO	0.194	0.0810	5.29e3	1126	4.7	6.67e3	972	6.9	MM	MM
3	Total-tetrafurans	3.86e2	4.92e2	8.78e2	29.42	0.78	NO	0.116	0.0810	4.17e3	1126	3.7	8.22e3	972	8.5	MM	bb
4	Total-tetrafurans	2.78e2	2.81e2	5.58e2	28.93	0.99	YES	0.074	0.0810	3.18e3	1126	2.8	2.94e3	972	3.0	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:54:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 11:54:13 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	5.72e2	3.57e2	9.29e2	31.83	1.60	NO	0.134	0.0397	9.77e3	892	11.0	7.81e3	1040	7.5	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDF	1.27e2	1.08e2	2.36e2	33.26	1.17	YES	0.039	0.0689	3.13e3	1504	2.1	3.95e3	1540	2.6	bb	bb
2	Total-pentafurans	1.04e2	5.72e1	1.61e2	33.05	1.81	YES	0.023	0.0625	2.68e3	1504	1.8	2.26e3	1540	1.5	bb	bb
3	Total-pentafurans	8.52e1	8.19e1	1.67e2	32.70	1.04	YES	0.024	0.0625	3.33e3	1504	2.2	3.33e3	1540	2.2	bb	bb

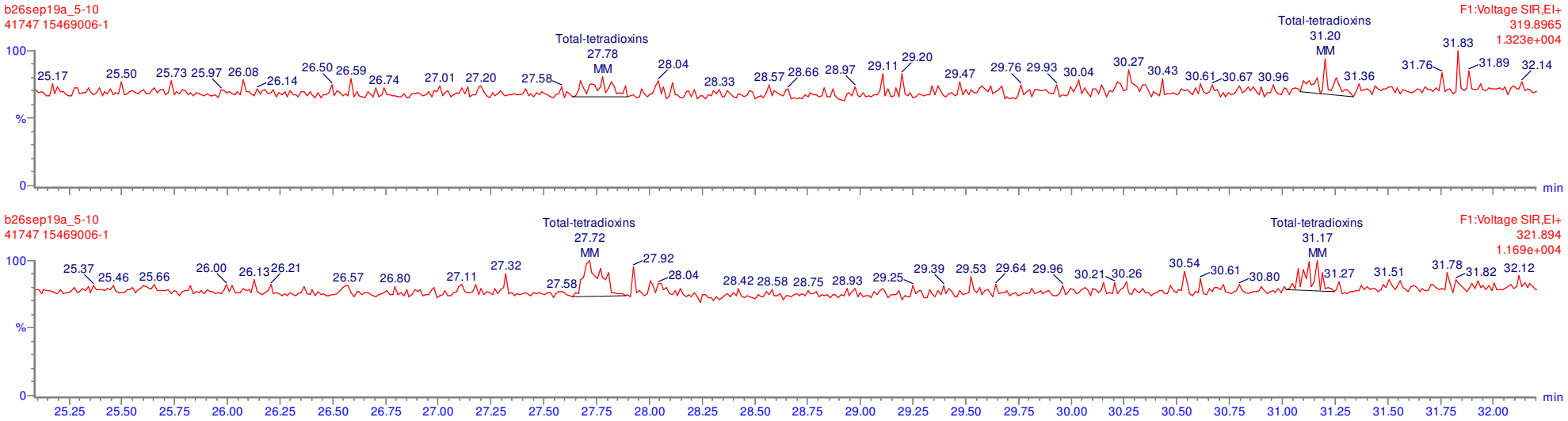
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDF	1.36e2	9.41e1	2.30e2	36.06	1.44	YES	0.032	0.0594	2.84e3	1125	2.5	2.36e3	1332	1.8	db	MM
2	123478-HxCDF	2.08e2	1.21e2	3.29e2	35.95	1.71	YES	0.050	0.0572	3.06e3	1125	2.7	2.65e3	1332	2.0	bd	MM
3	Total-hexafurans	8.15e2	5.07e2	1.32e3	35.55	1.61	YES	0.198	0.0638	1.52e4	1125	13.6	9.40e3	1332	7.1	bb	MM
4	Total-hexafurans	4.30e2	4.00e2	8.30e2	35.12	1.07	NO	0.124	0.0638	8.32e3	1125	7.4	6.85e3	1332	5.1	bb	MM
5	Total-hexafurans	1.10e2	1.05e2	2.15e2	35.01	1.04	YES	0.032	0.0638	3.63e3	1125	3.2	3.09e3	1332	2.3	bb	bd

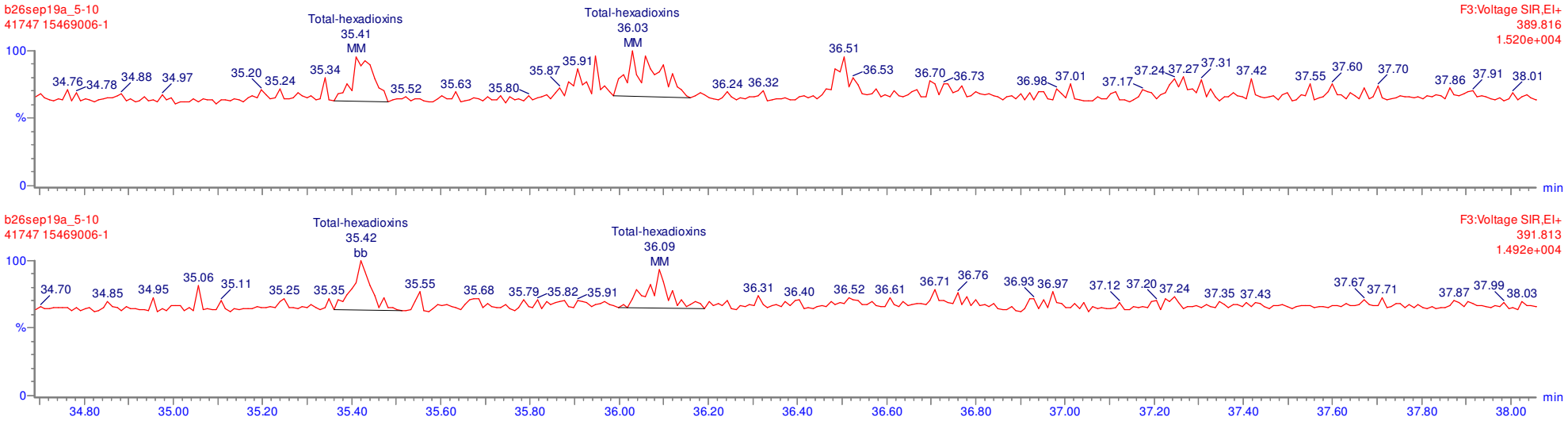
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	1.90e3	1.78e3	3.67e3	39.28	1.07	NO	0.632	0.102	2.27e4	1073	21.2	2.30e4	1554	14.8	bb	bb
2	1234678-HpCDF	7.41e2	8.23e2	1.56e3	38.76	0.90	NO	0.253	0.0866	1.08e4	1073	10.1	9.07e3	1554	5.8	MM	bd

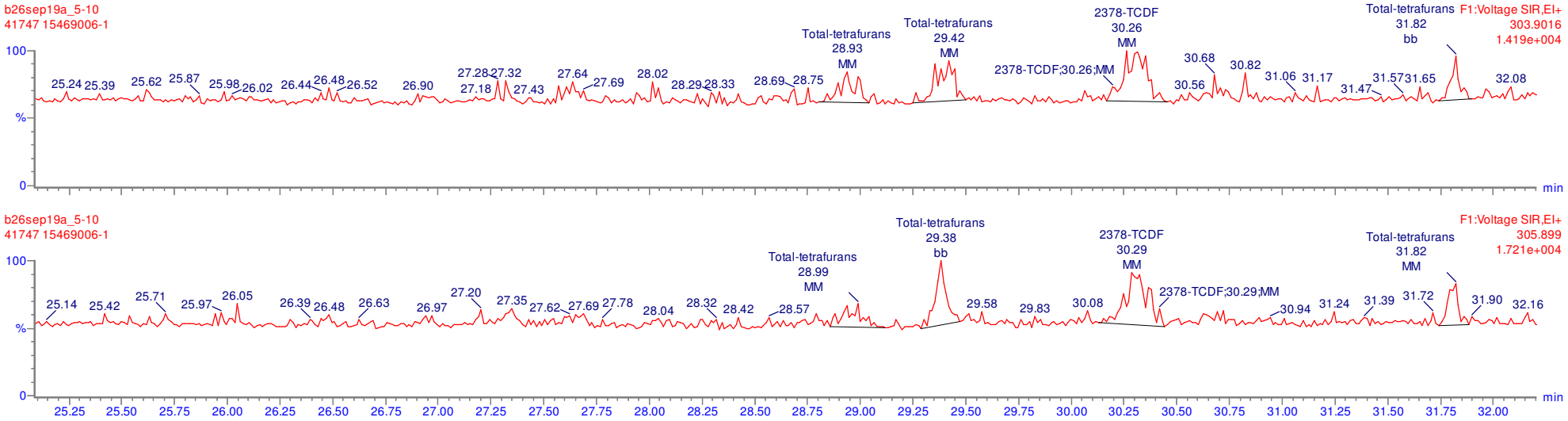
MANUAL INTEGRATION
METHOD 1613
HRP763_1



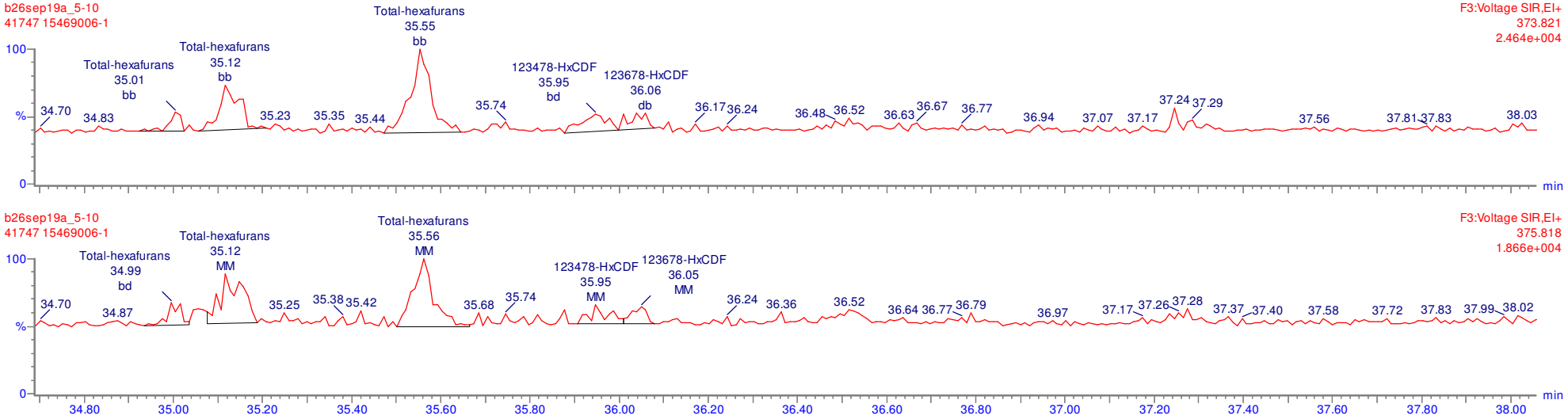
MANUAL INTEGRATION
METHOD 1613
HRP763_1



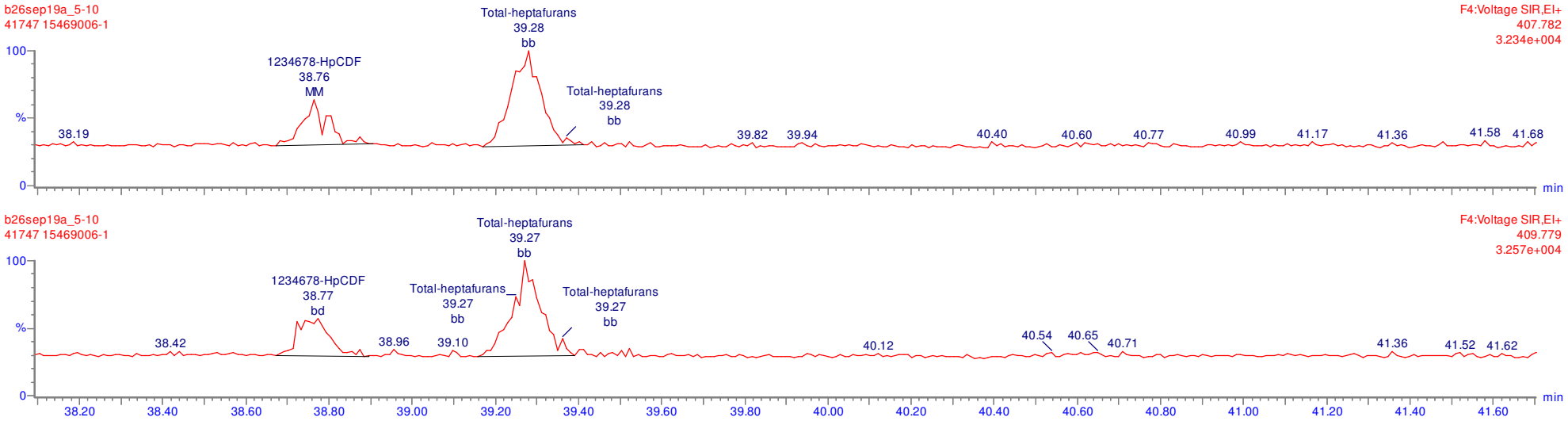
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



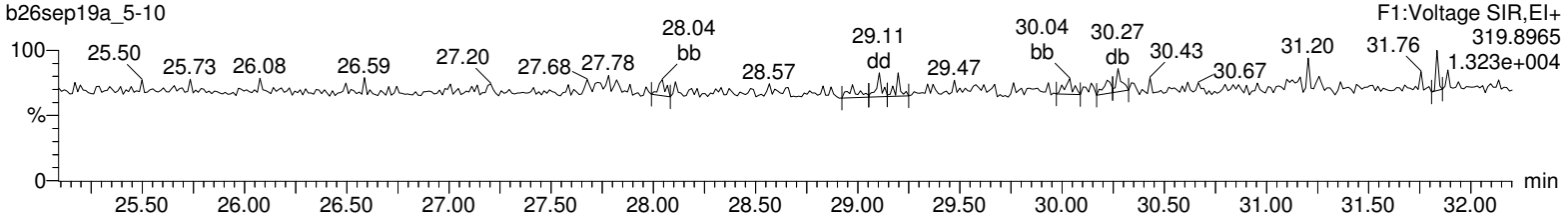
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

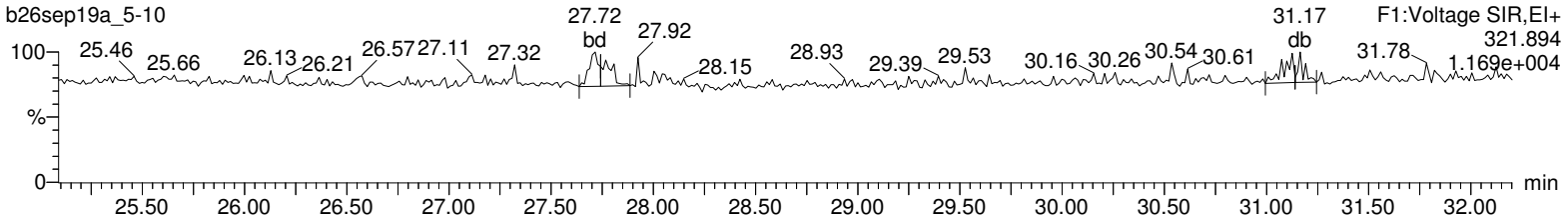
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

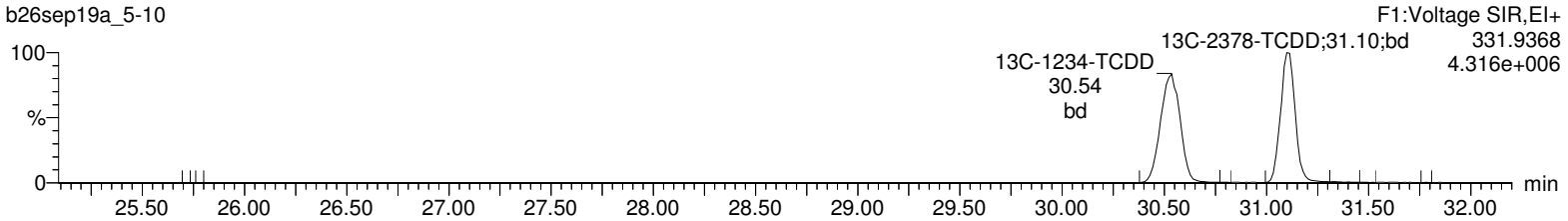
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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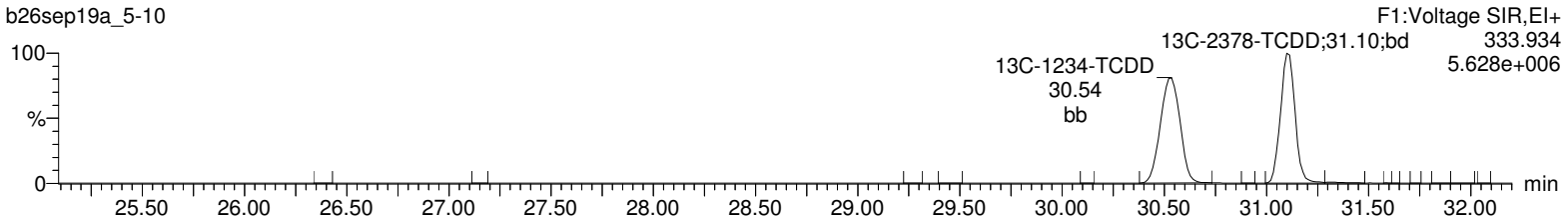

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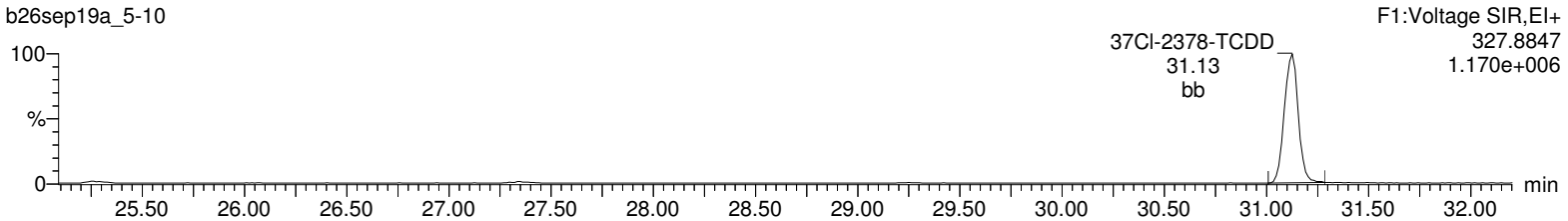
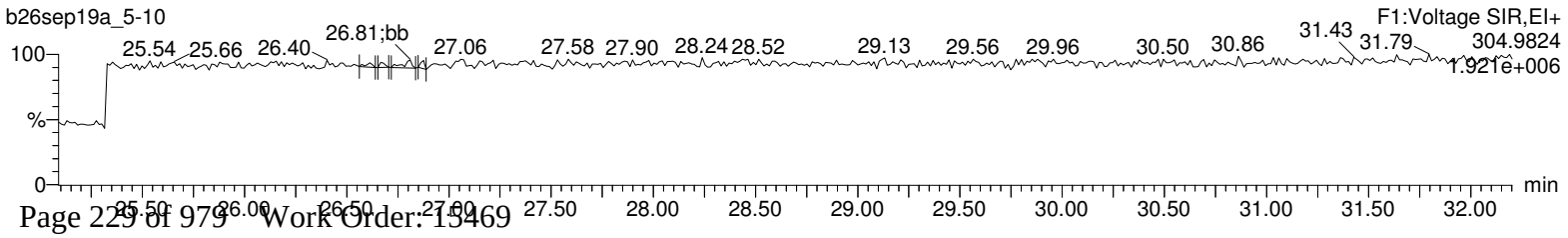


Lock Mass F1



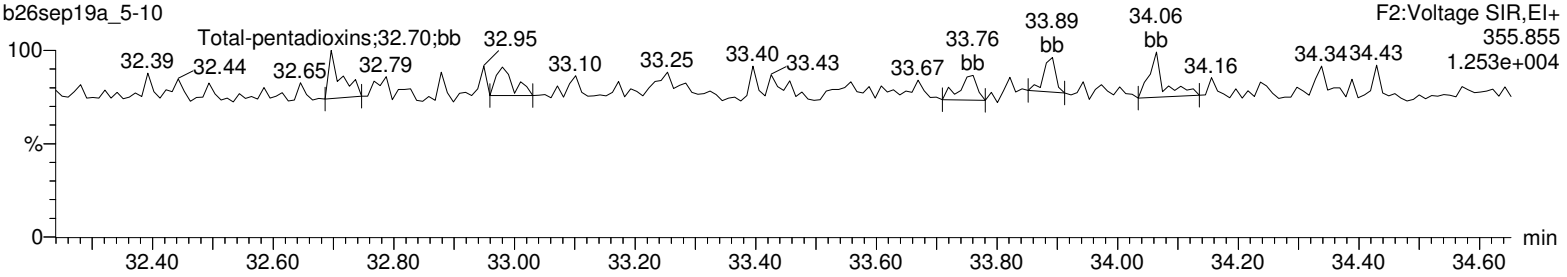
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

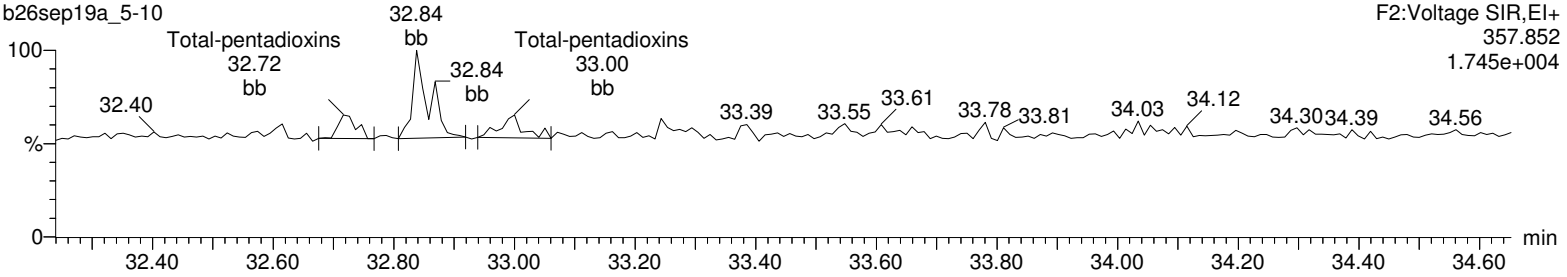
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentadioxins



Total-pentadioxins



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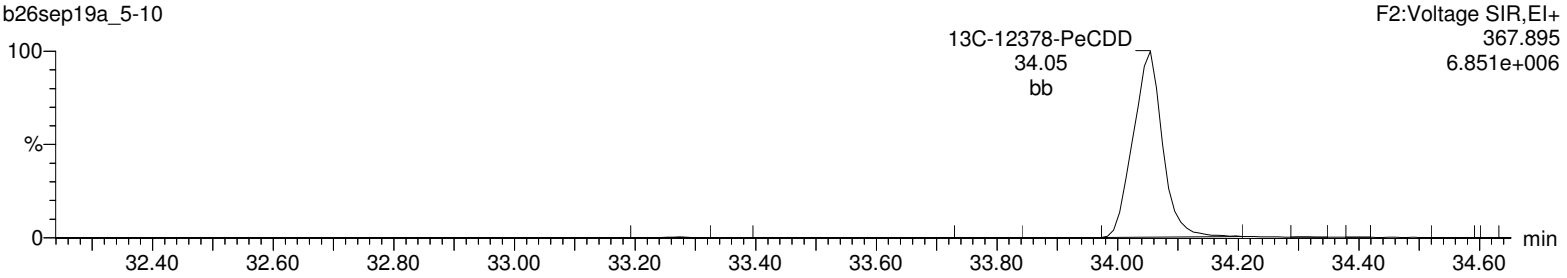

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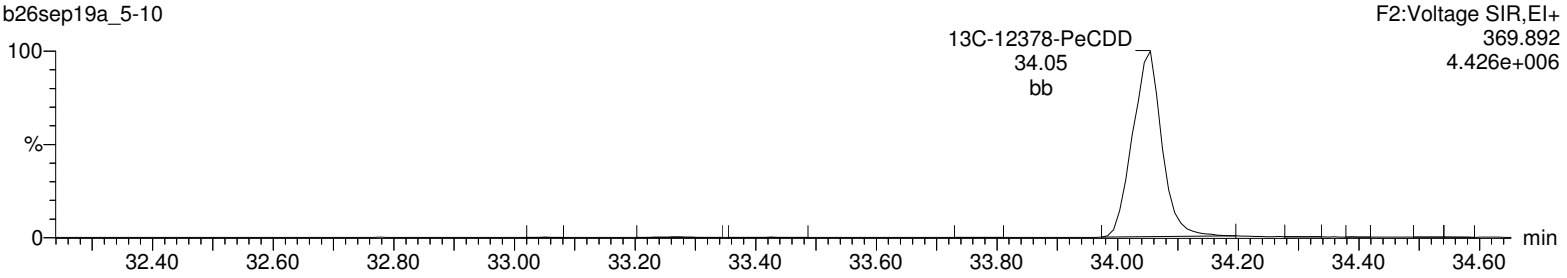
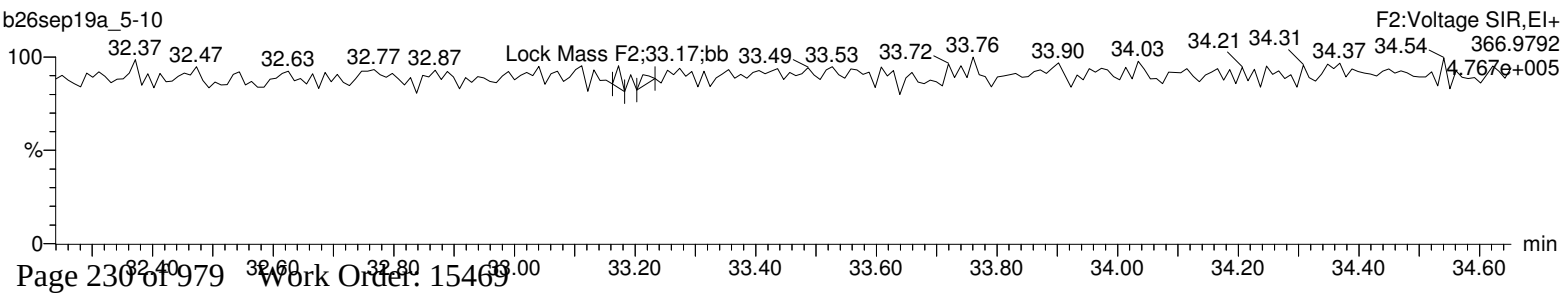


Lock Mass F2



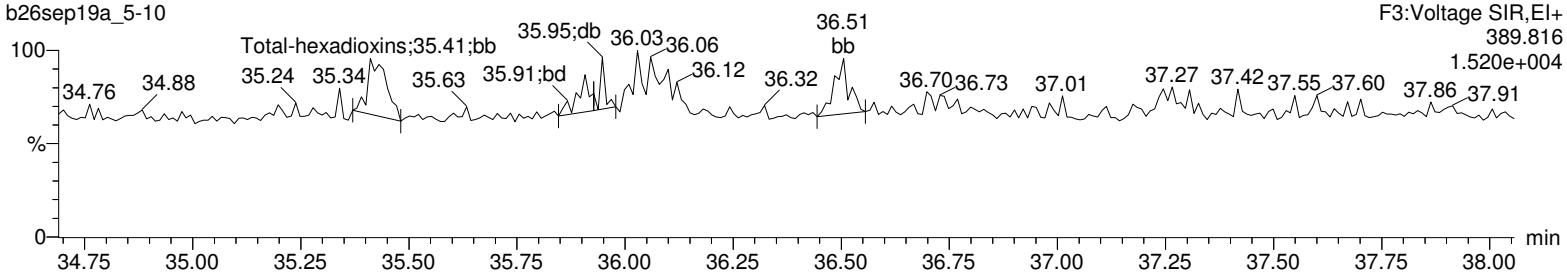
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

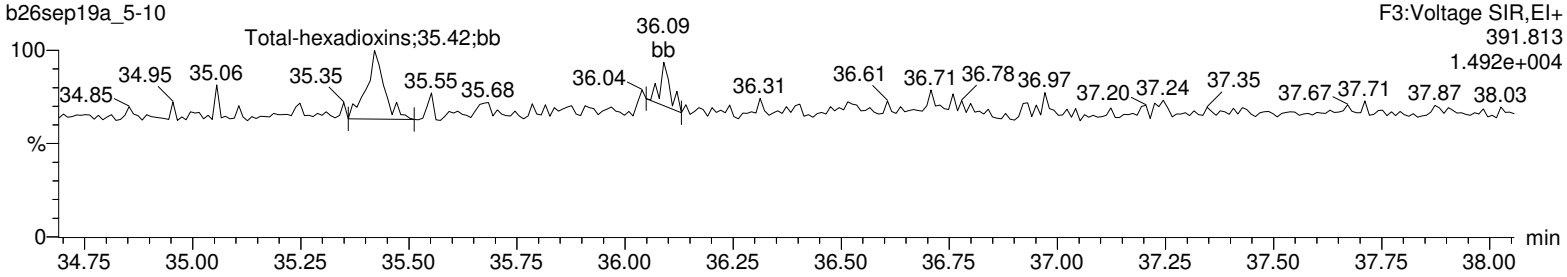
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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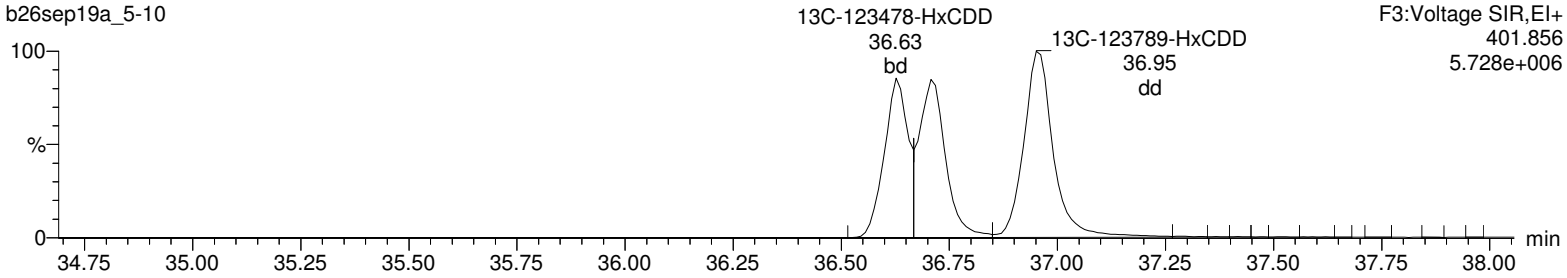

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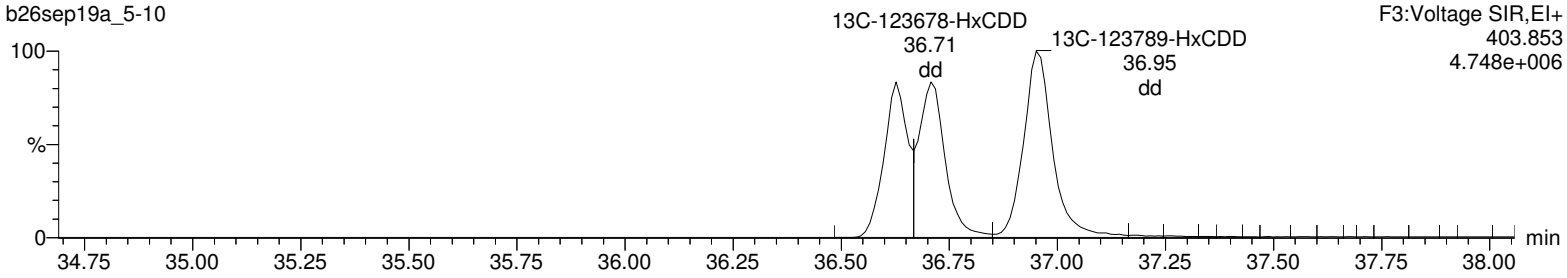
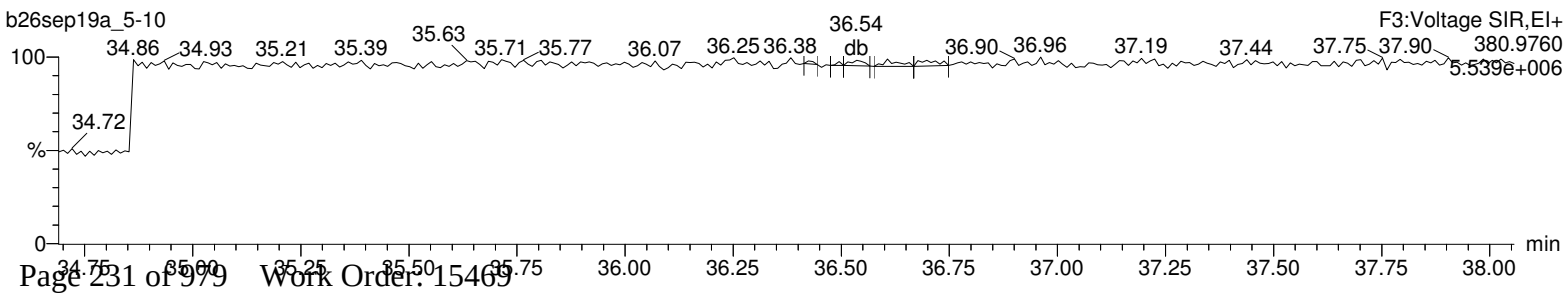


Lock Mass F3



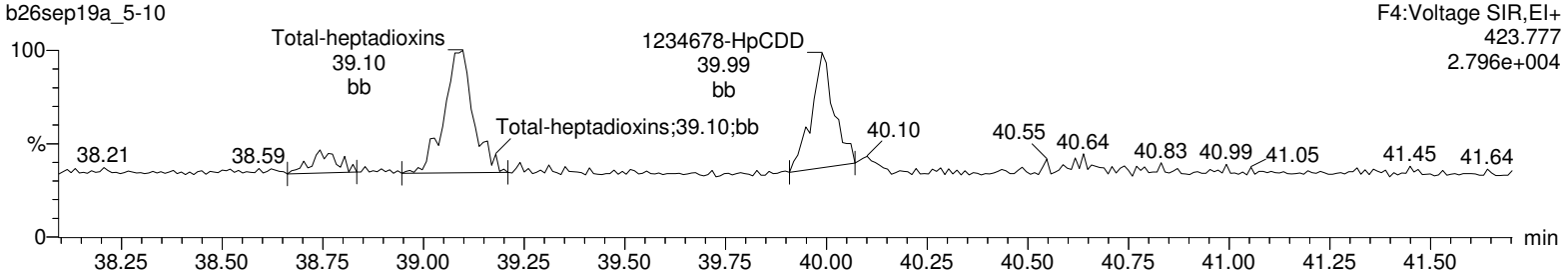
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

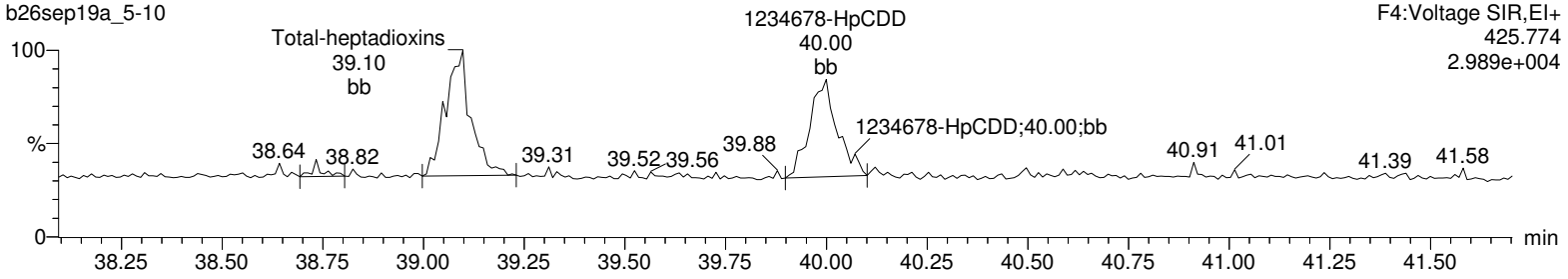
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

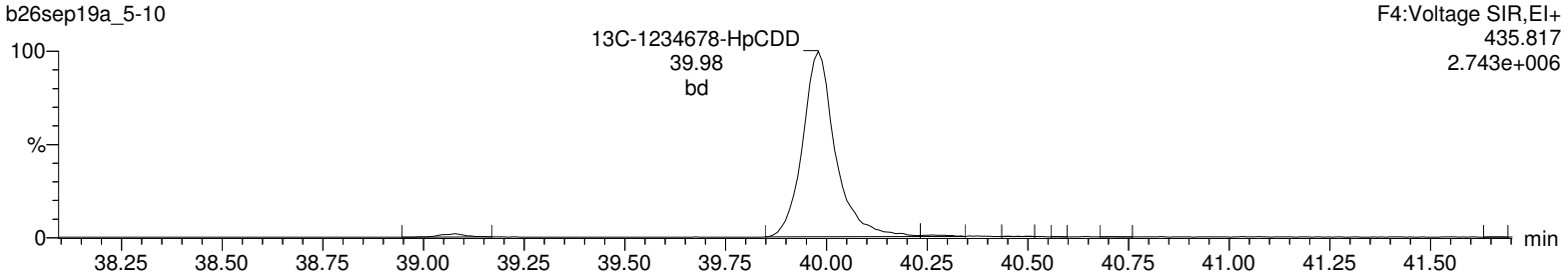
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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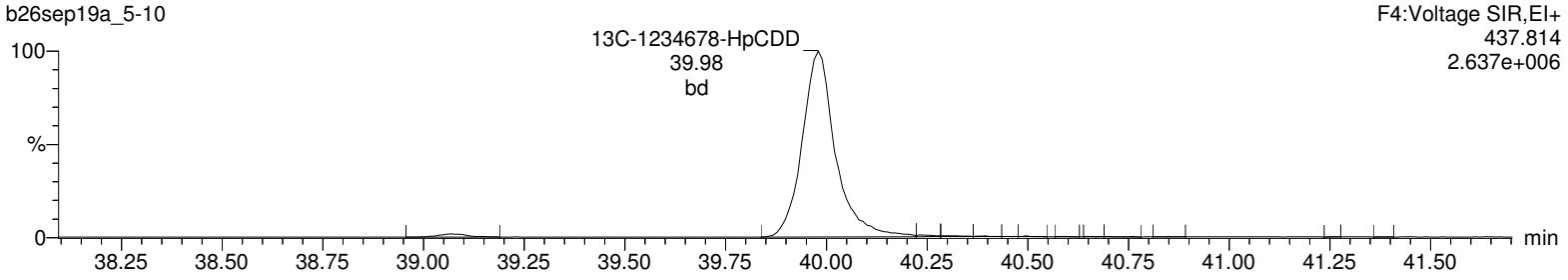
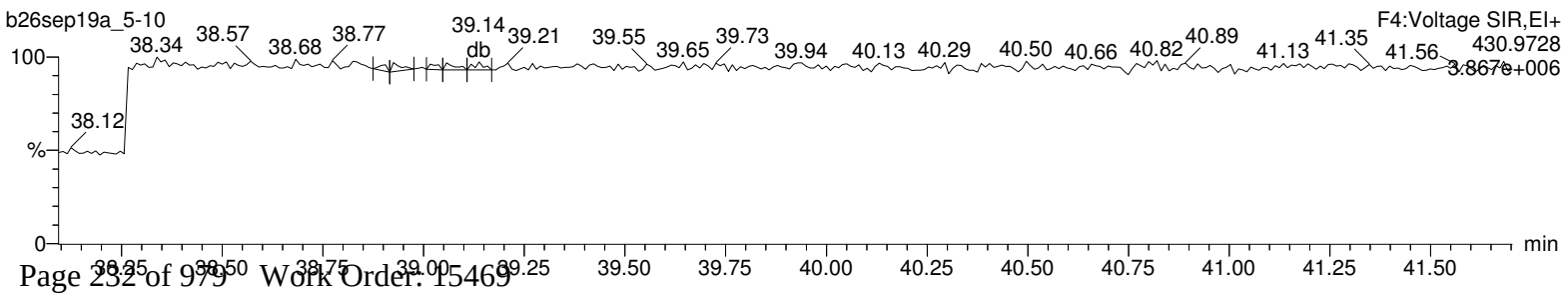


Lock Mass F4



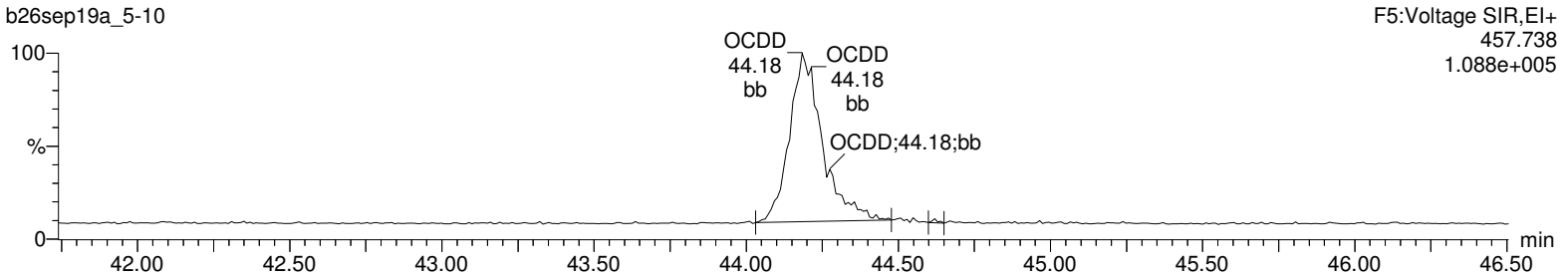
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDD



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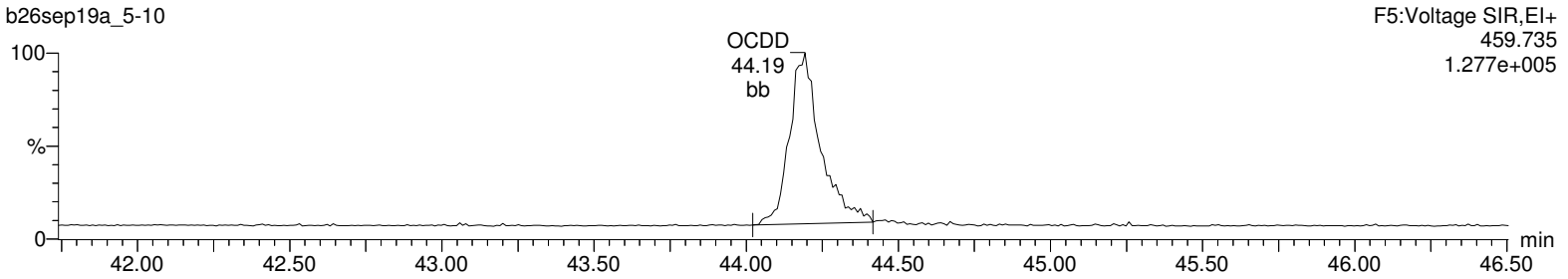

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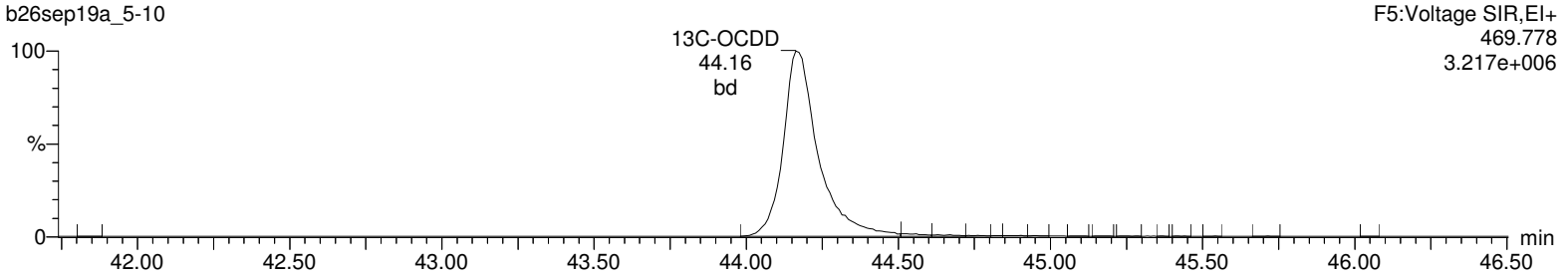

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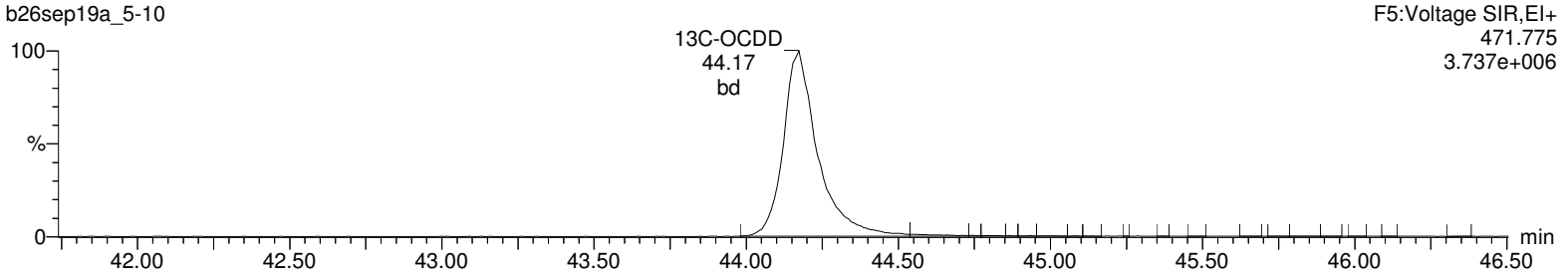

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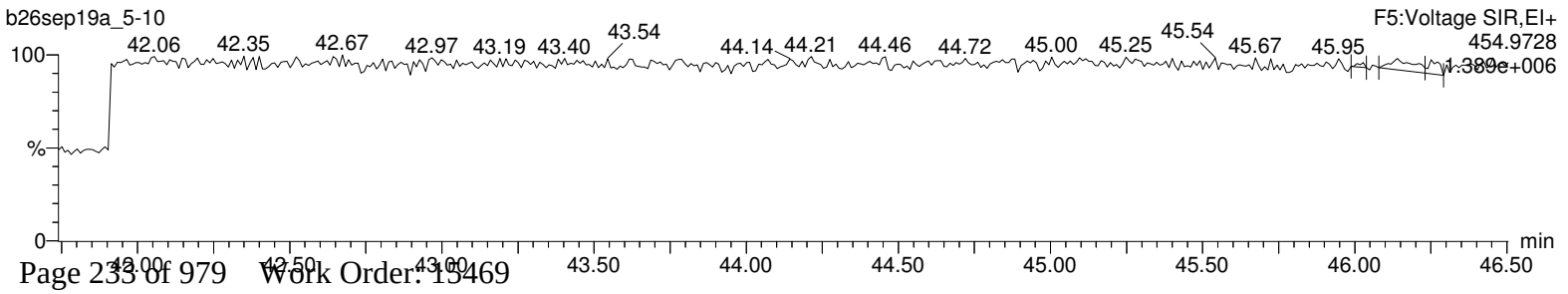


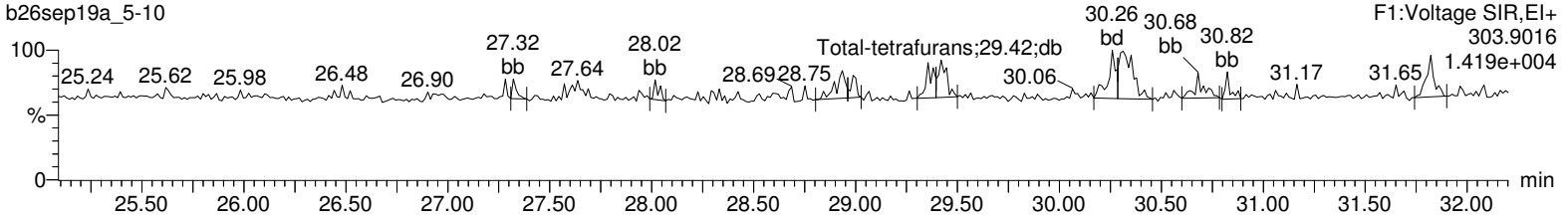
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

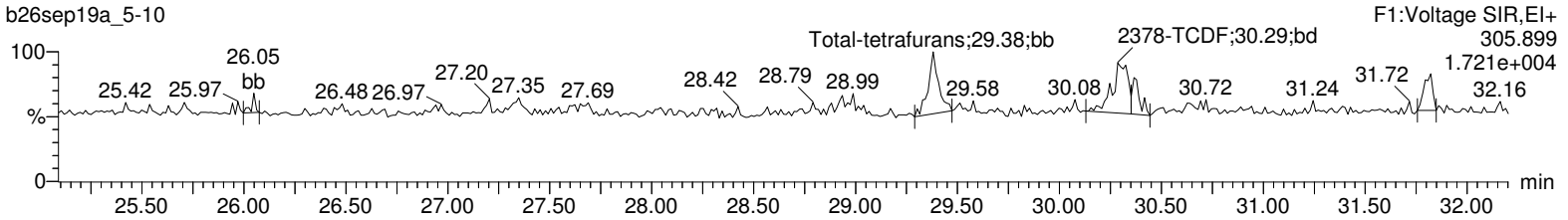
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-tetrafurans



Total-tetrafurans



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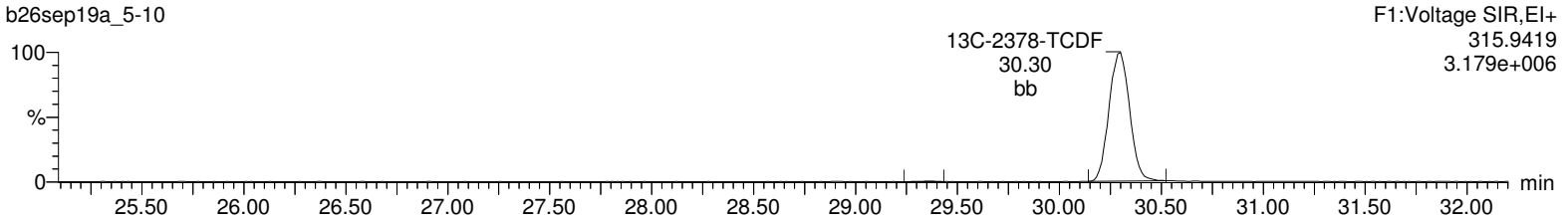

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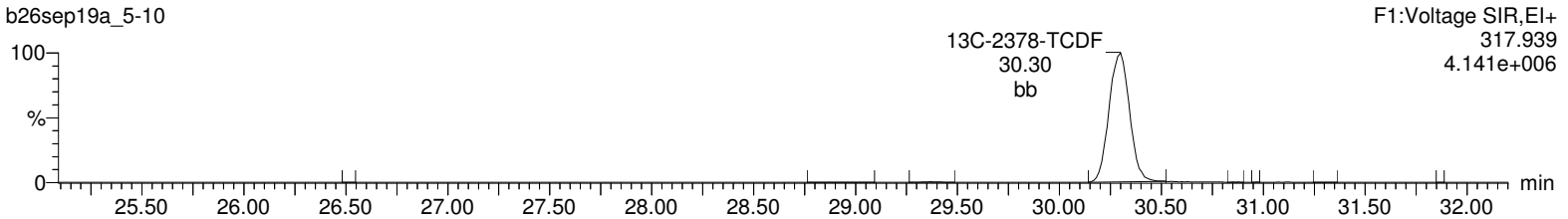

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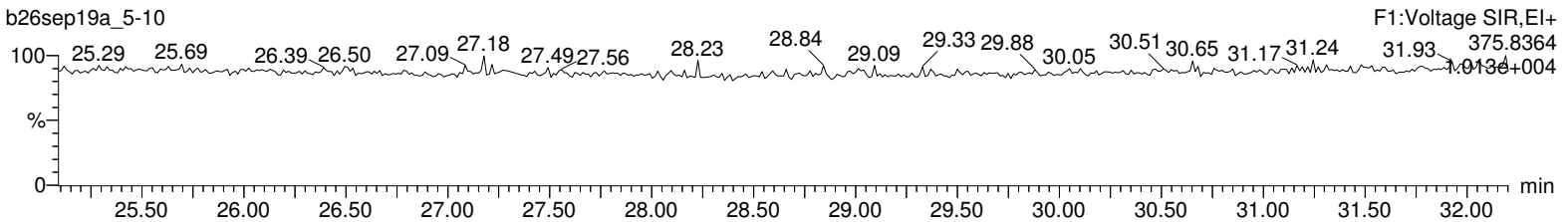
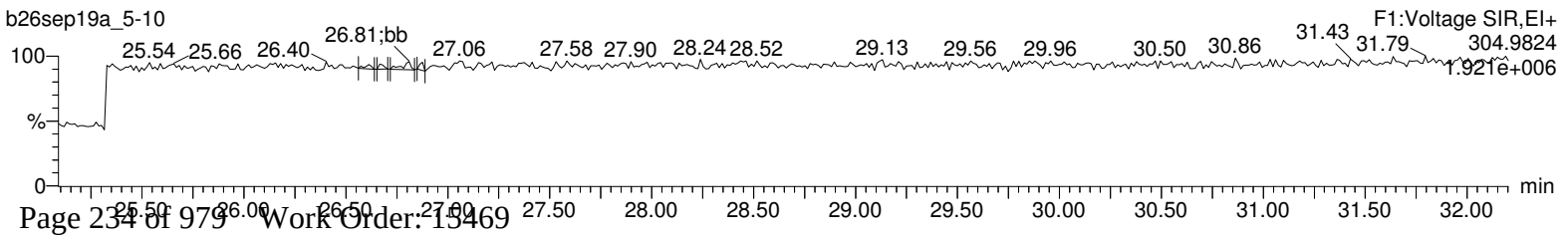


Lock Mass F1



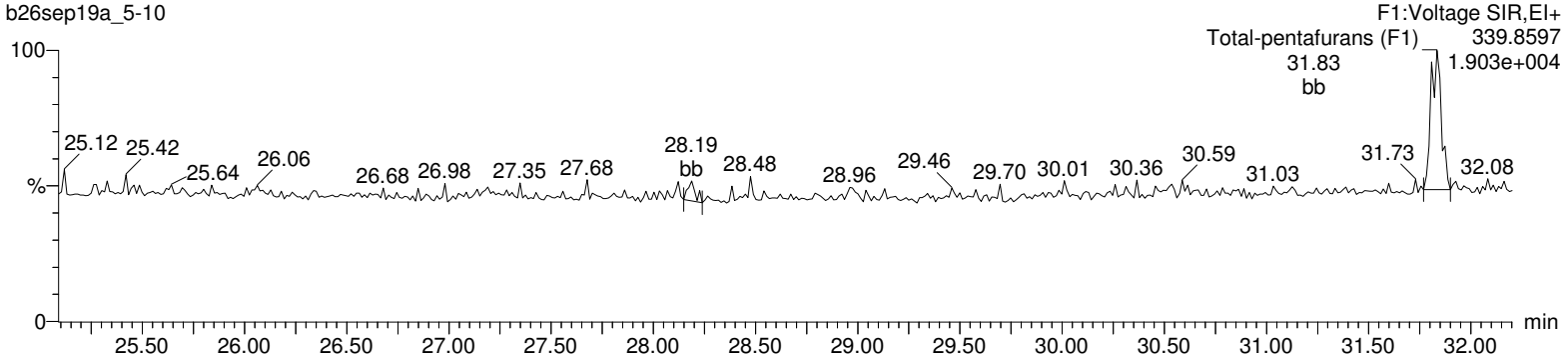
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

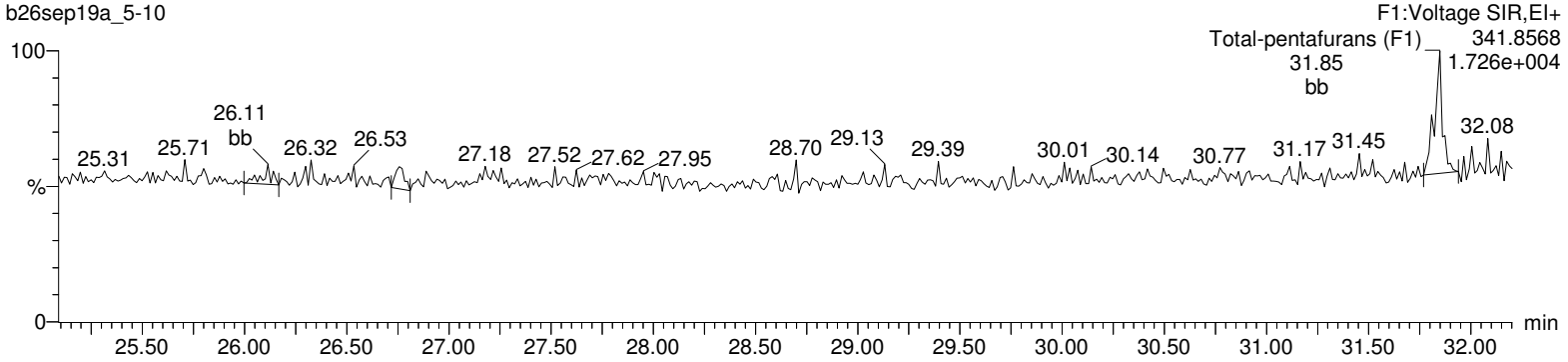
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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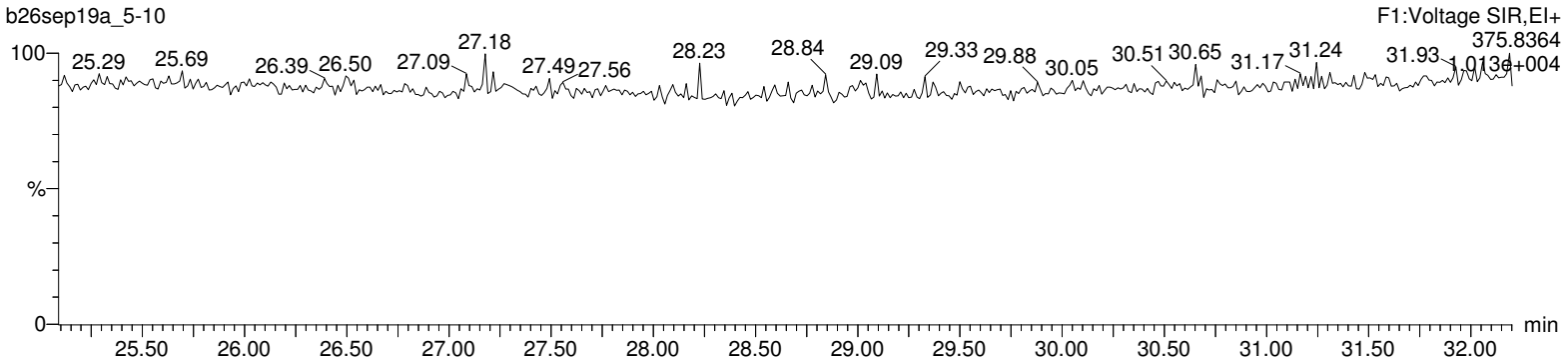
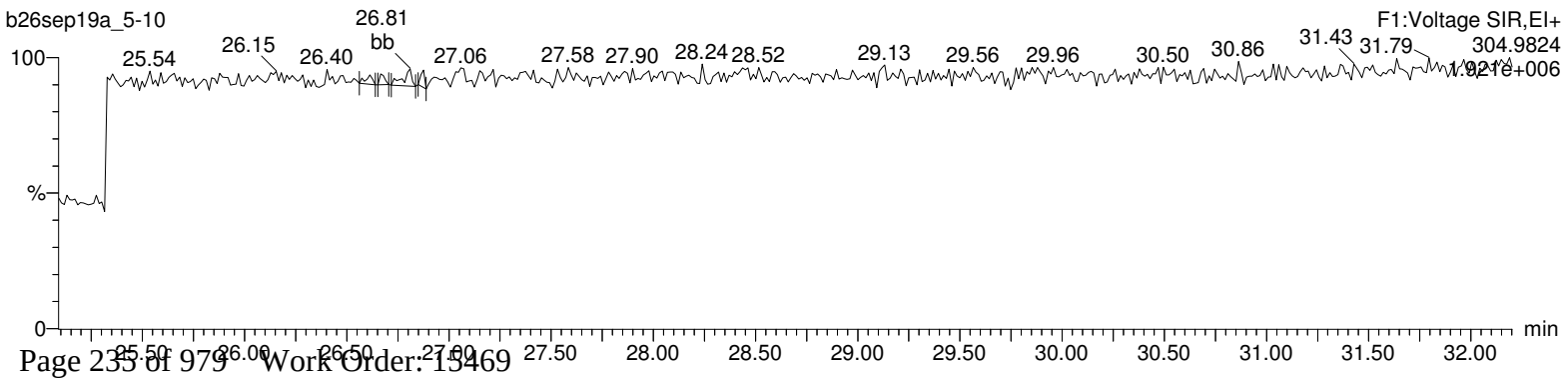


Lock Mass F1



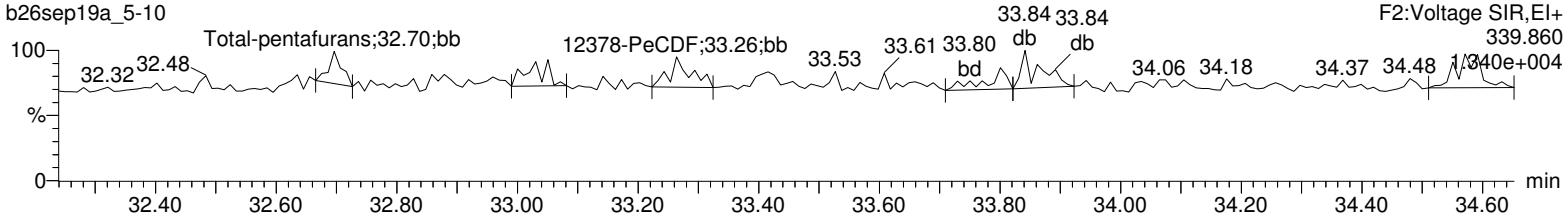
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

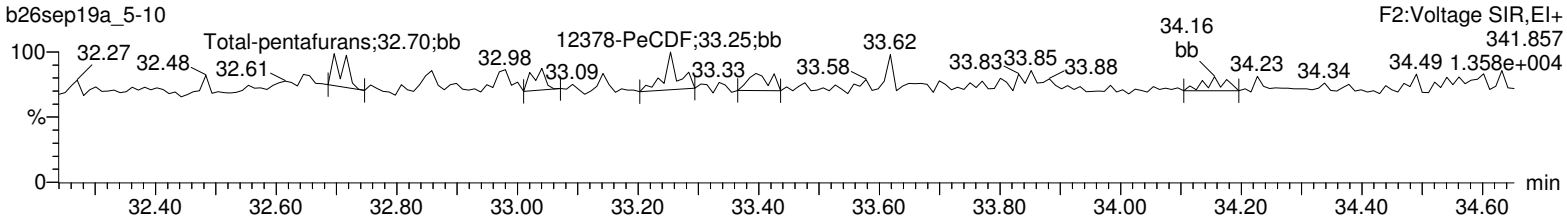
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

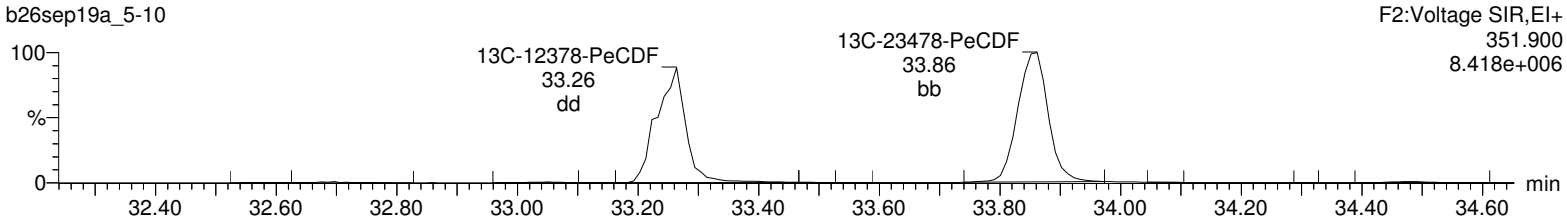
Total-pentafurans



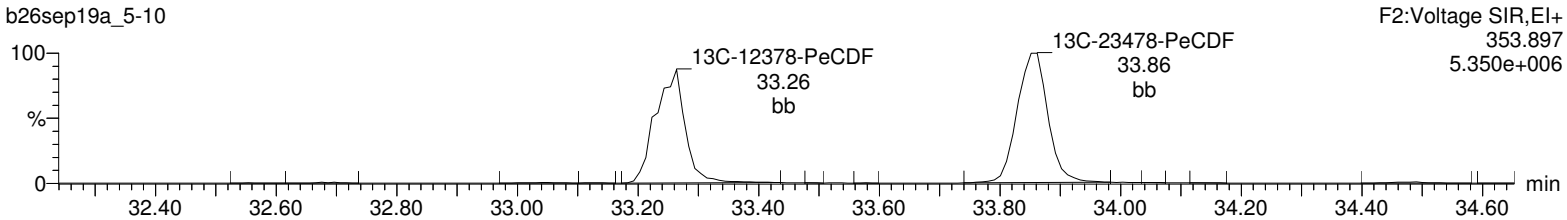
Total-pentafurans



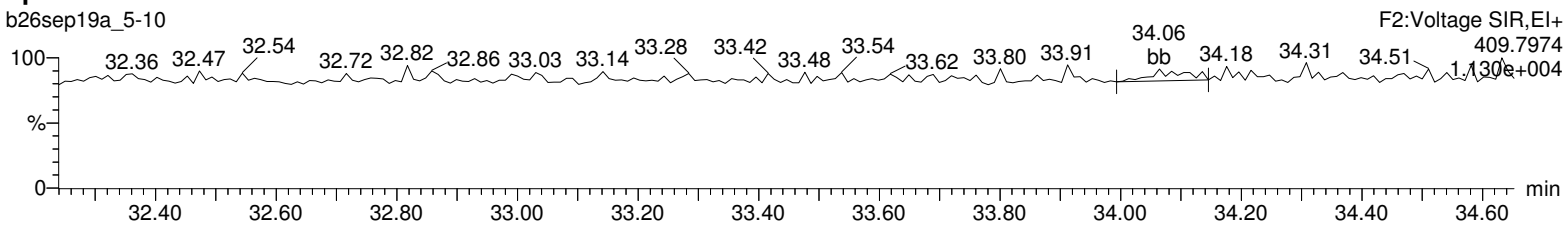
13C-12378-PeCDF



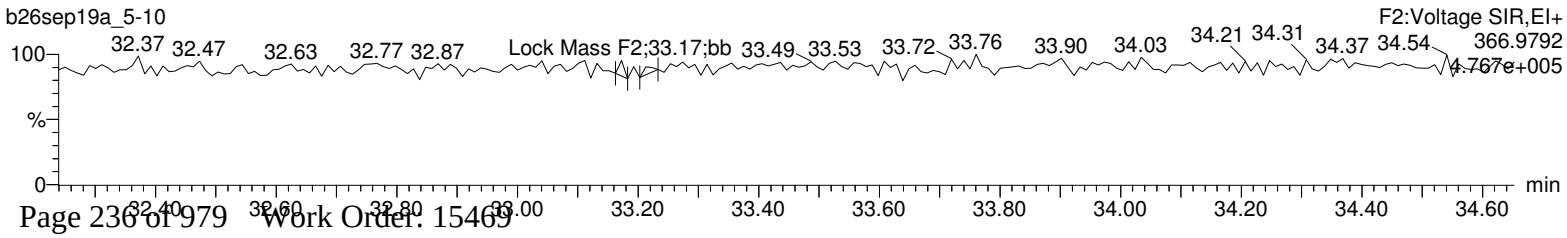
13C-12378-PeCDF



HpDPE



Lock Mass F2



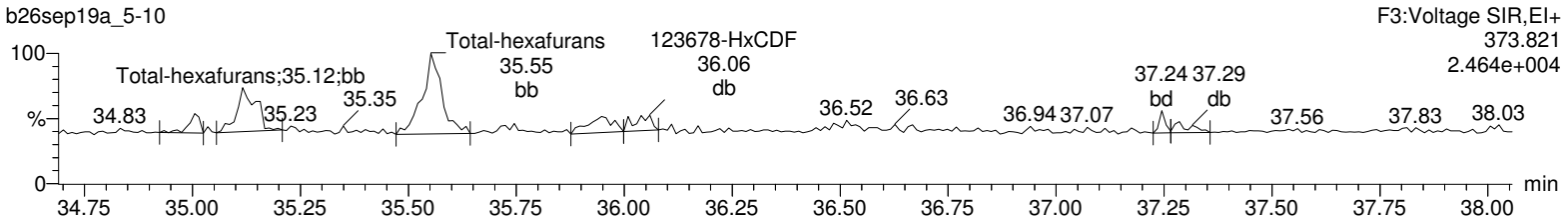
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

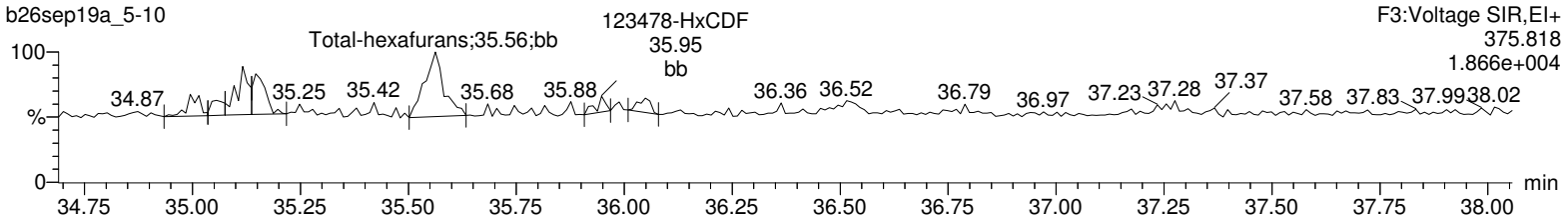
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

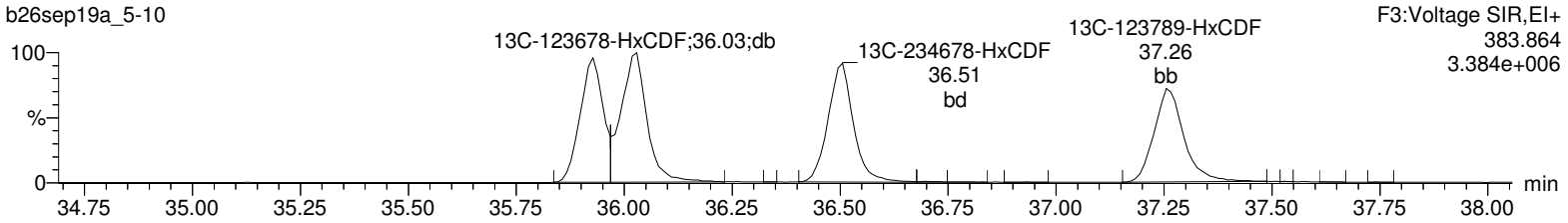
Total-hexafurans



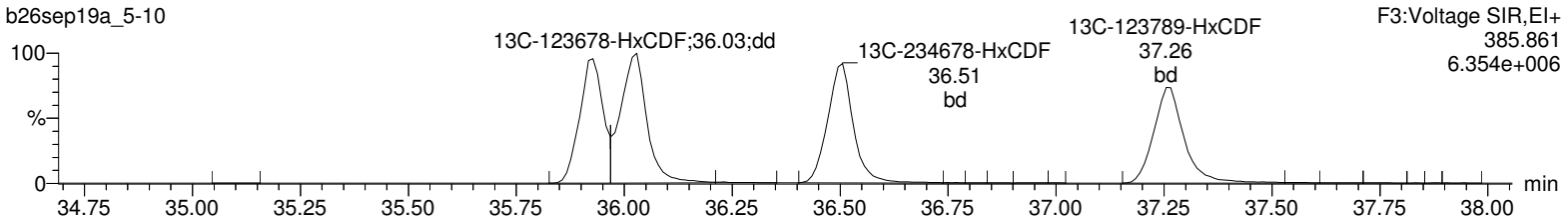
Total-hexafurans



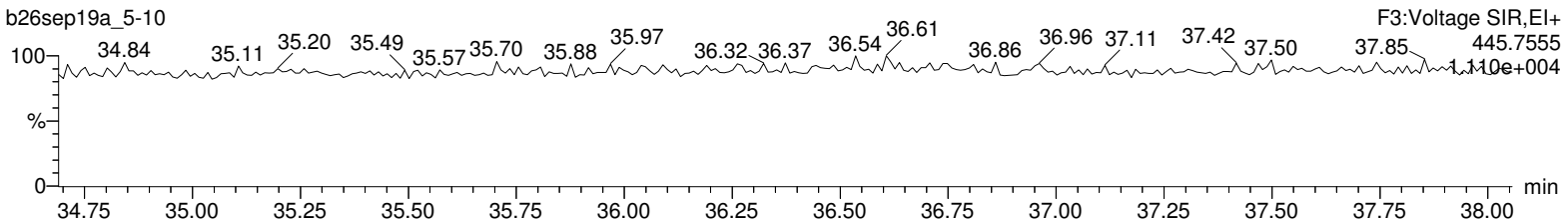
13C-123478-HxCDF



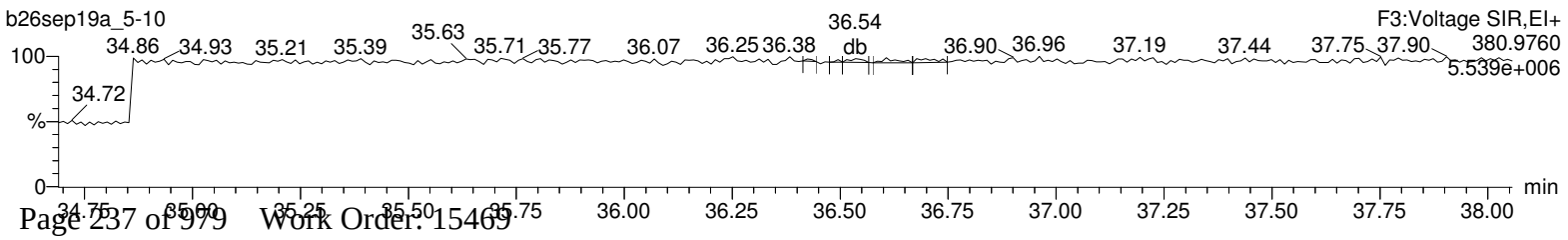
13C-123478-HxCDF



OcDPE



Lock Mass F3



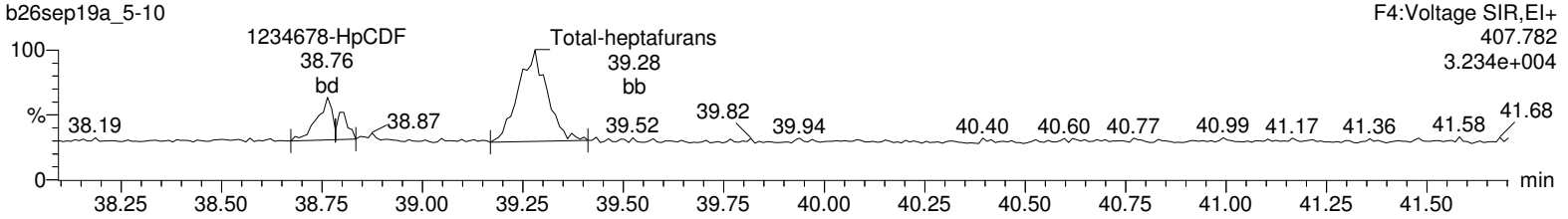
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

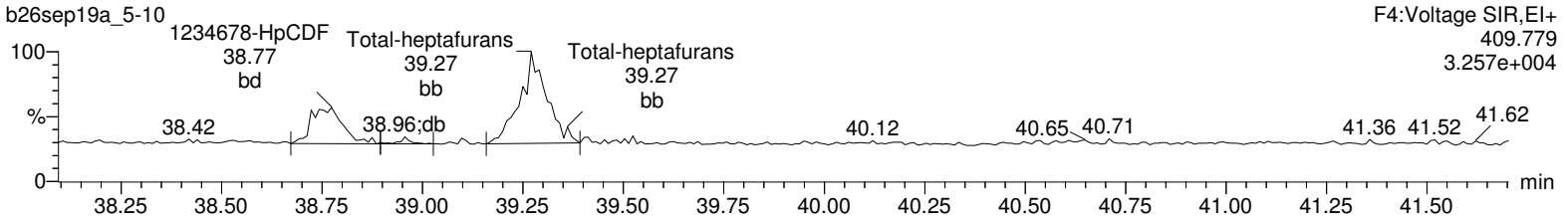
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

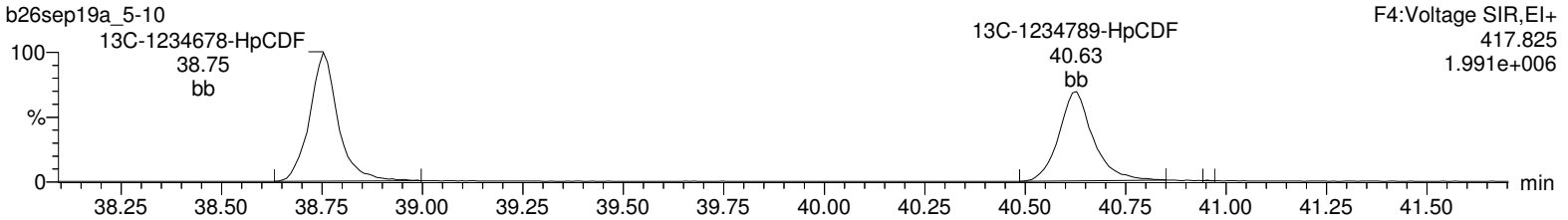
Total-heptafurans



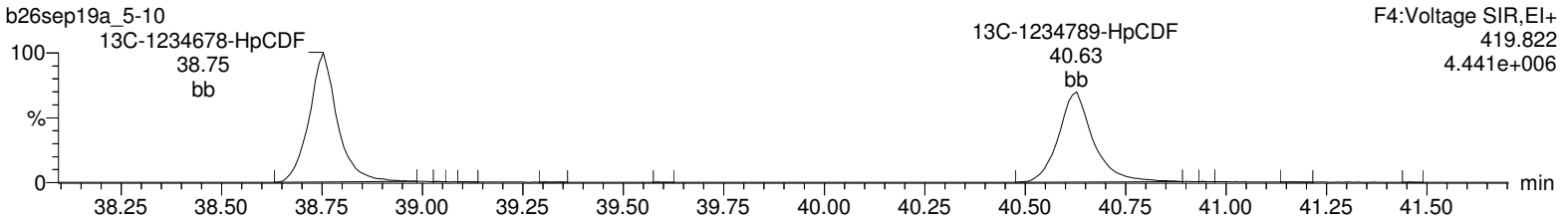
Total-heptafurans



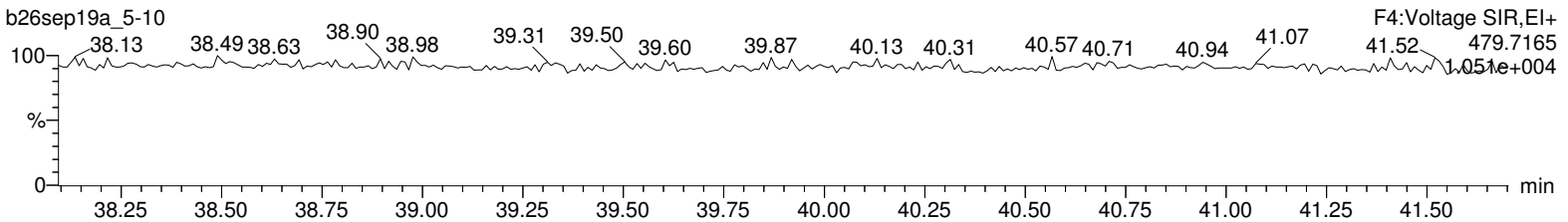
13C-1234678-HpCDF



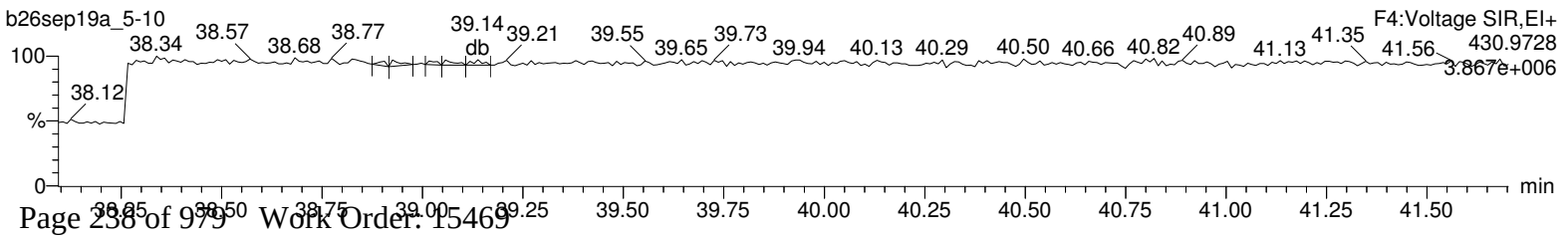
13C-1234678-HpCDF



NoDPE



Lock Mass F4



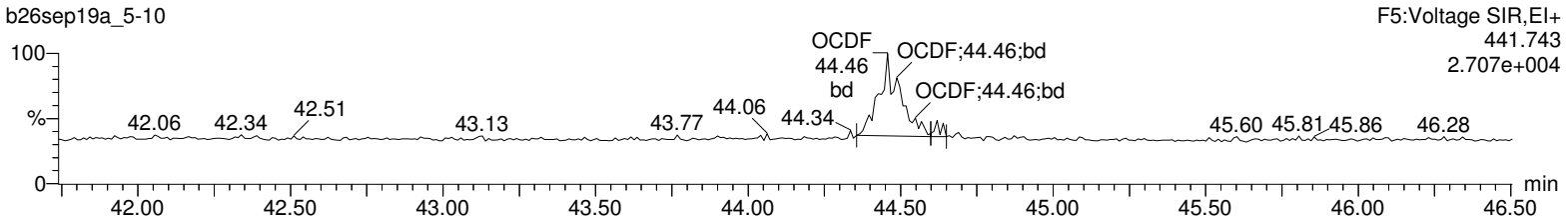
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

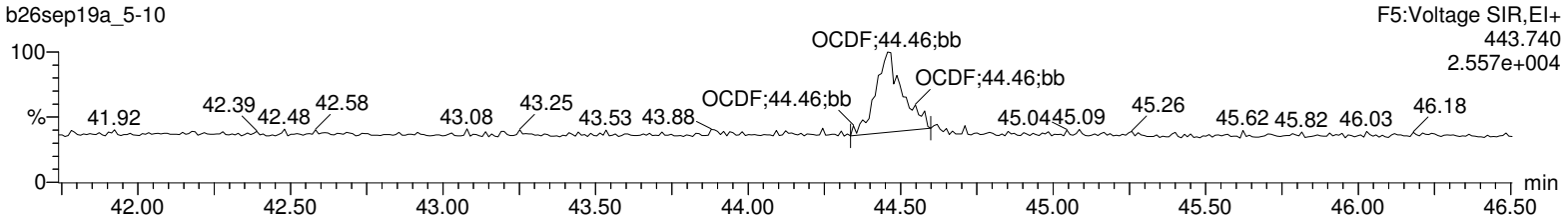
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-10, Date: 28-Sep-2019, Time: 07:05:33, ID: 15469006-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

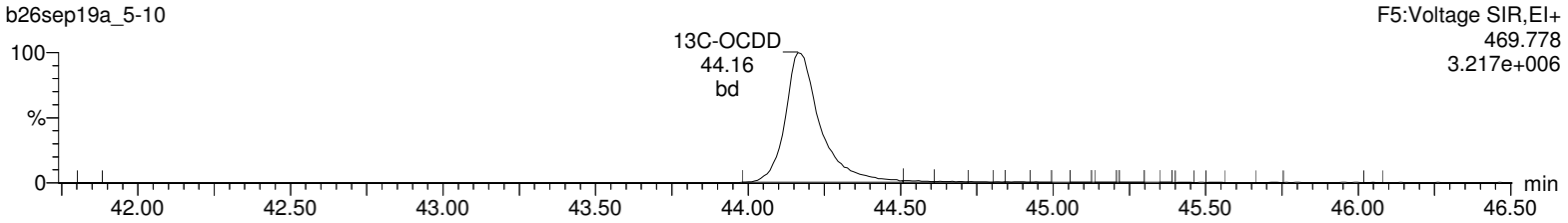
OCDF



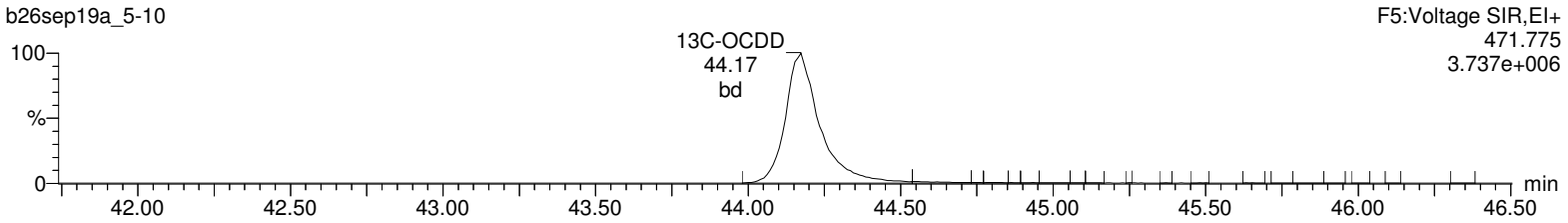
OCDF



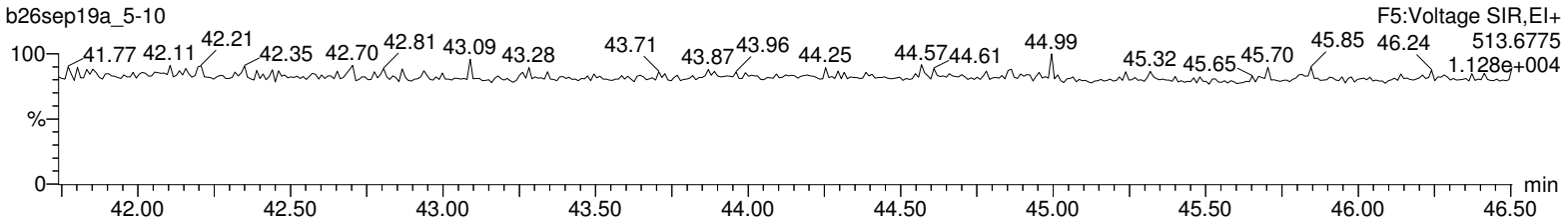
13C-OCDD



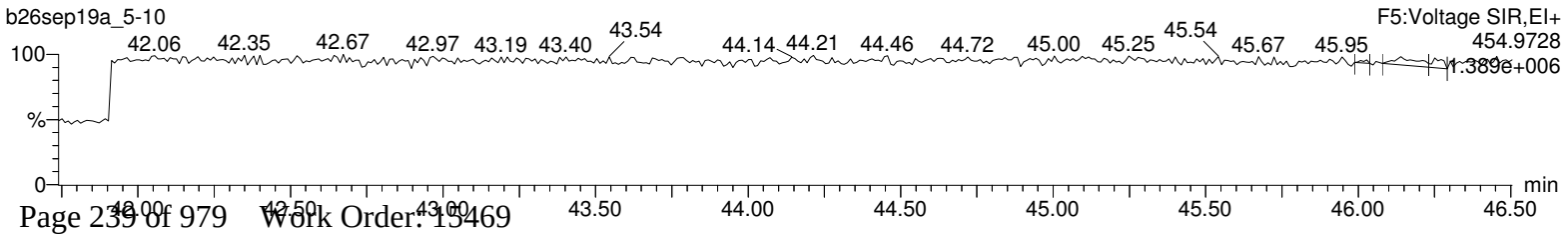
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469007**	**Date Collected:**	**08/28/2019 11:55**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**28.8**
Client ID:	**J6-SC1b-80to90-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:53**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.199	pg/g	0.199	0.965
40321-76-4	1,2,3,7,8-PeCDD	U	0.187	pg/g	0.187	4.82
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.233	pg/g	0.233	4.82
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.216	pg/g	0.216	4.82
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.23	pg/g	0.230	4.82
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	3.71	pg/g	0.438	4.82
3268-87-9	1,2,3,4,6,7,8,9-OCDD		37.7	pg/g	0.417	9.65
51207-31-9	2,3,7,8-TCDF	BJ	0.293	pg/g	0.278	0.965
57117-41-6	1,2,3,7,8-PeCDF	U	0.162	pg/g	0.162	4.82
57117-31-4	2,3,4,7,8-PeCDF	U	0.145	pg/g	0.145	4.82
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.139	pg/g	0.139	4.82
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.146	pg/g	0.146	4.82
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.154	pg/g	0.154	4.82
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.19	pg/g	0.190	4.82
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	1.24	pg/g	0.130	4.82
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.174	pg/g	0.174	4.82
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	3.74	pg/g	0.446	9.65
41903-57-5	Total TeCDD	U	0.199	pg/g	0.199	0.965
36088-22-9	Total PeCDD	U	0.187	pg/g	0.187	4.82
34465-46-8	Total HxCDD	BJ	1.02	pg/g	0.216	4.82
37871-00-4	Total HpCDD	J	7.11	pg/g	0.438	4.82
30402-14-3	Total TeCDF	BJ	0.604	pg/g	0.278	0.965
30402-15-4	Total PeCDF	BJK	0.612	pg/g	0.104	4.82
55684-94-1	Total HxCDF	BJK	1.45	pg/g	0.139	4.82
38998-75-3	Total HpCDF	J	4.62	pg/g	0.130	4.82
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0913	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.375	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		160	193	pg/g	83.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		184	193	pg/g	95.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		169	193	pg/g	87.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		146	193	pg/g	75.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		196	193	pg/g	102	(23%-140%)
13C-OCDD		404	386	pg/g	105	(17%-157%)
13C-2,3,7,8-TCDF		151	193	pg/g	78.5	(24%-169%)
13C-1,2,3,7,8-PeCDF		176	193	pg/g	91.1	(24%-185%)
13C-2,3,4,7,8-PeCDF		176	193	pg/g	91.0	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		158	193	pg/g	81.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		138	193	pg/g	71.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		147	193	pg/g	76.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		166	193	pg/g	85.8	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469007**	**Date Collected:**	**08/28/2019 11:55**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**28.8**
Client ID:	**J6-SC1b-80to90-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 07:53**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.56 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		164	193	pg/g	84.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		197	193	pg/g	102	(26%-138%)
37Cl-2,3,7,8-TCDD		18.9	19.3	pg/g	97.7	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:59:16 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:00:34 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.103		1710			1206			
2	12378-PeCDD	6.37e1	5.16e1	1.15e2	34.04	1.000	1.23	YES	0.029	0.0969	4.04e3	1626	2.5	2.13e3	1172	1.8	bb	bb
3	123478-HxCDD							NO		0.121		1421			1400			
4	123678-HxCDD	1.79e2	1.32e2	3.11e2	36.72	1.000	1.36	NO	0.077	0.112	3.48e3	1421	2.5	2.80e3	1400	2.0	bb	bb
5	123789-HxCDD							NO		0.119		1421			1400			
6	1234678-HpCDD	3.44e3	3.24e3	6.69e3	39.98	1.000	1.06	NO	1.925	0.227	4.18e4	2210	18.9	3.50e4	1394	25.1	bb	bd
7	OCDD	2.75e4	3.09e4	5.84e4	44.17	1.000	0.89	NO	19.548	0.216	2.24e5	947	236.0	2.64e5	1131	233.3	bd	bd
8	2378-TCDF	3.70e2	4.90e2	8.60e2	30.29	1.000	0.75	NO	0.152	0.144	5.78e3	1001	5.8	7.48e3	1952	3.8	MM	MM
9	12378-PeCDF	1.59e2	1.45e2	3.04e2	33.26	1.000	1.10	YES	0.057	0.0840	3.16e3	1541	2.1	3.24e3	1745	1.9	bb	bb
10	23478-PeCDF	1.49e2	6.42e1	2.13e2	33.86	1.000	2.32	YES	0.036	0.0750	2.86e3	1541	1.9	2.16e3	1745	1.2	bb	bb
11	123478-HxCDF	2.06e2	1.80e2	3.86e2	35.95	1.001	1.14	NO	0.080	0.0721	4.61e3	1257	3.7	2.83e3	1164	2.4	MM	MM
12	123678-HxCDF	1.73e2	9.26e1	2.66e2	36.03	1.000	1.87	YES	0.052	0.0757	4.79e3	1257	3.8	1.74e3	1164	1.5	MM	MM
13	234678-HxCDF							NO		0.0798		1257			1164			
14	123789-HxCDF							NO		0.0987		1257			1164			
15	1234678-HpCDF	1.52e3	1.38e3	2.90e3	38.76	1.000	1.10	NO	0.641	0.0675	2.30e4	776	29.7	1.95e4	777	25.1	bb	bb
16	1234789-HpCDF							NO		0.0904		776			777			
17	OCDF	2.83e3	3.61e3	6.44e3	44.46	1.007	0.78	NO	1.940	0.231	3.21e4	997	32.2	3.33e4	1477	22.6	bb	bd
18	13C-2378-TCDD	2.58e5	3.38e5	5.95e5	31.10	1.018	0.76	NO	83.139	0.196	3.45e6	3487	989.0	4.54e6	2154	2106.2	bb	bb
19	13C-12378-PeCDD	2.79e5	1.83e5	4.62e5	34.04	1.115	1.53	NO	95.337	0.228	5.13e6	2058	2494.3	3.38e6	2384	1419.2	bb	bb
20	13C-123478-HxCDD	2.26e5	1.69e5	3.95e5	36.63	0.991	1.34	NO	87.433	0.228	3.57e6	3254	1097.5	2.90e6	2434	1191.7	bd	bd
21	13C-123678-HxCDD	2.44e5	2.13e5	4.57e5	36.71	0.993	1.14	NO	75.543	0.170	3.78e6	3254	1161.6	3.08e6	2434	1266.7	dd	dd
22	13C-1234678-HpCDD	1.85e5	1.83e5	3.68e5	39.97	1.082	1.01	NO	101.645	0.292	2.11e6	2832	744.8	1.99e6	3018	660.8	bb	bd
23	13C-OCDD	3.04e5	3.49e5	6.54e5	44.16	1.195	0.87	NO	209.181	0.279	2.45e6	2339	1048.8	2.79e6	2475	1126.1	bb	bd
24	13C-2378-TCDF	2.72e5	3.62e5	6.34e5	30.30	0.992	0.75	NO	78.493	0.254	2.46e6	5268	467.3	3.26e6	2963	1101.7	bb	bb
25	13C-12378-PeCDF	3.64e5	2.29e5	5.93e5	33.25	1.089	1.59	NO	91.097	0.281	6.61e6	3716	1778.9	4.10e6	3612	1135.6	dd	bb
26	13C-23478-PeCDF	3.68e5	2.39e5	6.07e5	33.85	1.109	1.54	NO	90.986	0.273	6.83e6	3716	1839.0	4.44e6	3612	1230.1	bb	bb
27	13C-123478-HxCDF	1.45e5	2.81e5	4.26e5	35.92	0.972	0.52	NO	81.684	0.310	2.52e6	3895	647.2	4.73e6	5029	940.9	bd	bd
28	13C-123678-HxCDF	1.67e5	3.18e5	4.85e5	36.02	0.975	0.52	NO	71.330	0.238	2.61e6	3895	669.7	4.96e6	5029	986.1	db	db
29	13C-234678-HxCDF	1.52e5	2.89e5	4.41e5	36.49	0.988	0.52	NO	76.262	0.280	2.31e6	3895	593.3	4.51e6	5029	897.2	bb	bb
30	13C-123789-HxCDF	1.44e5	2.74e5	4.18e5	37.26	1.008	0.52	NO	85.802	0.332	1.99e6	3895	510.0	3.71e6	5029	737.4	bd	bd
31	13C-1234678-HpCDF	1.16e5	2.65e5	3.81e5	38.75	1.049	0.44	NO	84.915	0.232	1.47e6	2310	635.6	3.29e6	3439	956.3	bb	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:59:16 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:00:34 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	9.95e4	2.28e5	3.28e5	40.62	1.099	0.44	NO	101.994	0.324	1.06e6	2310	460.5	2.37e6	3439	690.6	bb	bd
33	13C-1234-TCDD	2.72e5	3.50e5	6.22e5	30.54	0.000	0.78	NO	100.000	0.226	2.73e6	3487	783.1	3.48e6	2154	1616.7	bb	bb
34	13C-123789-HxCDD	3.14e5	2.58e5	5.72e5	36.95	0.000	1.22	NO	100.000	0.180	4.34e6	3254	1333.4	3.56e6	2434	1462.6	dd	dd
35	37Cl-2378-TCDD	6.54e4		6.54e4	31.11	1.019			9.773	0.0455	8.73e5	1224	713.1				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:59:16 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:00:34 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	3.15e2	3.62e2	6.77e2	29.11	0.87	NO	0.128	0.103	3.67e3	1710	2.1	4.04e3	1206	3.4	MM	bb
2	Total-tetradioxins	4.01e2	4.67e2	8.67e2	27.75	0.86	NO	0.164	0.103	3.96e3	1710	2.3	6.29e3	1206	5.2	MM	bb
3	Total-tetradioxins	8.02e1	8.06e1	1.61e2	30.90	1.00	YES	0.030	0.103	2.15e3	1710	1.3	2.34e3	1206	1.9	bb	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	1.03e2	6.95e1	1.72e2	33.26	1.48	NO	0.044	0.0969	2.42e3	1626	1.5	1.96e3	1172	1.7	MM	bb
2	Total-pentadioxins	1.38e2	9.89e1	2.37e2	32.99	1.40	NO	0.060	0.0969	2.94e3	1626	1.8	1.54e3	1172	1.3	bb	bb
3	Total-pentadioxins	1.72e2	1.33e2	3.05e2	32.69	1.30	YES	0.078	0.0969	2.65e3	1626	1.6	2.91e3	1172	2.5	bb	MM
4	12378-PeCDD	6.37e1	5.16e1	1.15e2	34.04	1.23	YES	0.029	0.0969	4.04e3	1626	2.5	2.13e3	1172	1.8	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	4.15e2	3.53e2	7.68e2	36.08	1.18	NO	0.200	0.117	6.91e3	1421	4.9	9.32e3	1400	6.7	MM	bb
2	Total-hexadioxins	1.03e2	1.06e2	2.08e2	35.90	0.97	YES	0.054	0.117	2.28e3	1421	1.6	2.87e3	1400	2.1	bb	MM
3	Total-hexadioxins	6.80e2	5.87e2	1.27e3	35.42	1.16	NO	0.330	0.117	1.56e4	1421	11.0	1.08e4	1400	7.7	bb	MM
4	123678-HxCDD	1.79e2	1.32e2	3.11e2	36.72	1.36	NO	0.077	0.112	3.48e3	1421	2.5	2.80e3	1400	2.0	bb	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	3.44e3	3.24e3	6.69e3	39.98	1.06	NO	1.925	0.227	4.18e4	2210	18.9	3.50e4	1394	25.1	bb	bd
2	Total-heptadioxins	3.05e3	3.06e3	6.11e3	39.08	1.00	NO	1.758	0.227	4.01e4	2210	18.1	4.20e4	1394	30.1	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 11:59:16 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:00:34 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	3.70e2	4.90e2	8.60e2	30.29	0.75	NO	0.152	0.144	5.78e3	1001	5.8	7.48e3	1952	3.8	MM	MM
2	Total-tetrafurans	3.72e2	5.39e2	9.12e2	29.37	0.69	NO	0.161	0.144	2.94e3	1001	2.9	5.66e3	1952	2.9	MM	bb
3	Total-tetrafurans	5.83e1	5.61e1	1.14e2	27.95	1.04	YES	0.020	0.144	8.90e2	1001	0.9	1.97e3	1952	1.0	bb	bb
4	Total-tetrafurans	1.28e2	1.92e2	3.20e2	27.66	0.67	NO	0.056	0.144	2.40e3	1001	2.4	2.62e3	1952	1.3	bb	MM
5	Total-tetrafurans	5.46e1	8.95e1	1.44e2	27.35	0.61	YES	0.025	0.144	2.21e3	1001	2.2	2.24e3	1952	1.1	bb	bb
6	Total-tetrafurans	1.28e2	2.98e2	4.26e2	26.98	0.43	YES	0.075	0.144	2.63e3	1001	2.6	4.31e3	1952	2.2	bb	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	6.51e2	5.35e2	1.19e3	31.83	1.22	YES	0.210	0.0537	1.63e4	748	21.8	1.10e4	1474	7.5	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	1.49e2	6.42e1	2.13e2	33.86	2.32	YES	0.036	0.0750	2.86e3	1541	1.9	2.16e3	1745	1.2	bb	bb
2	12378-PeCDF	1.59e2	1.45e2	3.04e2	33.26	1.10	YES	0.057	0.0840	3.16e3	1541	2.1	3.24e3	1745	1.9	bb	bb
3	Total-pentafurans	3.85e2	2.19e2	6.04e2	32.69	1.76	NO	0.107	0.0793	6.25e3	1541	4.1	4.50e3	1745	2.6	db	MM
4	Total-pentafurans	1.16e2	1.07e2	2.23e2	32.63	1.09	YES	0.040	0.0793	2.82e3	1541	1.8	3.45e3	1745	2.0	bd	MM

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDF	1.73e2	9.26e1	2.66e2	36.03	1.87	YES	0.052	0.0757	4.79e3	1257	3.8	1.74e3	1164	1.5	MM	MM
2	123478-HxCDF	2.06e2	1.80e2	3.86e2	35.95	1.14	NO	0.080	0.0721	4.61e3	1257	3.7	2.83e3	1164	2.4	MM	MM
3	Total-hexafurans	1.13e3	9.44e2	2.08e3	35.55	1.20	NO	0.429	0.0810	1.85e4	1257	14.7	1.60e4	1164	13.8	bb	bb
4	Total-hexafurans	6.29e2	4.56e2	1.09e3	35.13	1.38	NO	0.224	0.0810	1.17e4	1257	9.3	7.19e3	1164	6.2	db	db
5	Total-hexafurans	2.18e2	2.59e2	4.77e2	34.99	0.84	YES	0.098	0.0810	4.01e3	1257	3.2	3.89e3	1164	3.3	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

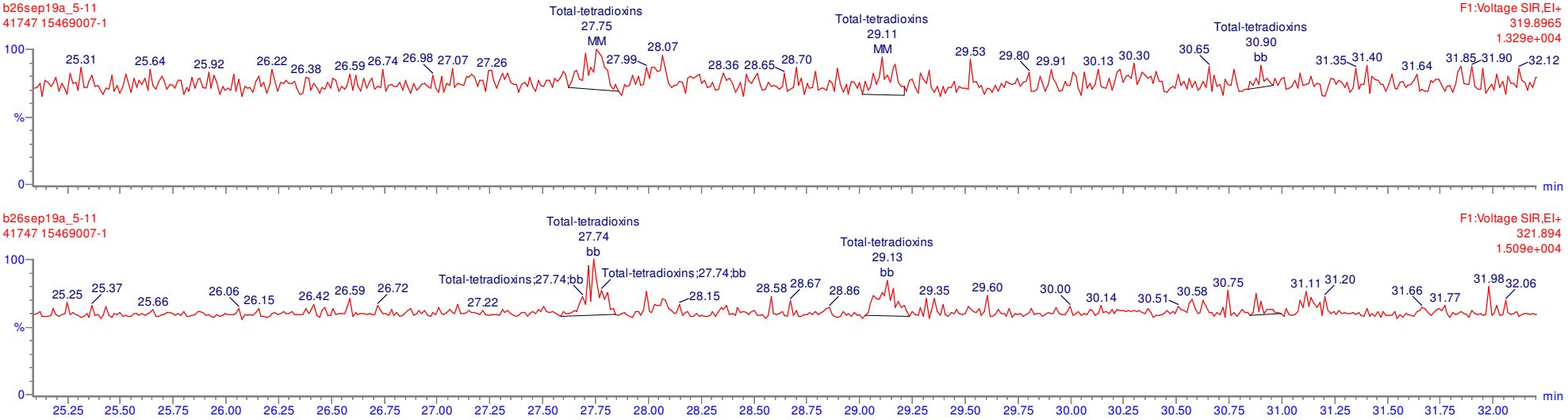
Last Altered: Tuesday, October 01, 2019 11:59:16 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:00:34 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

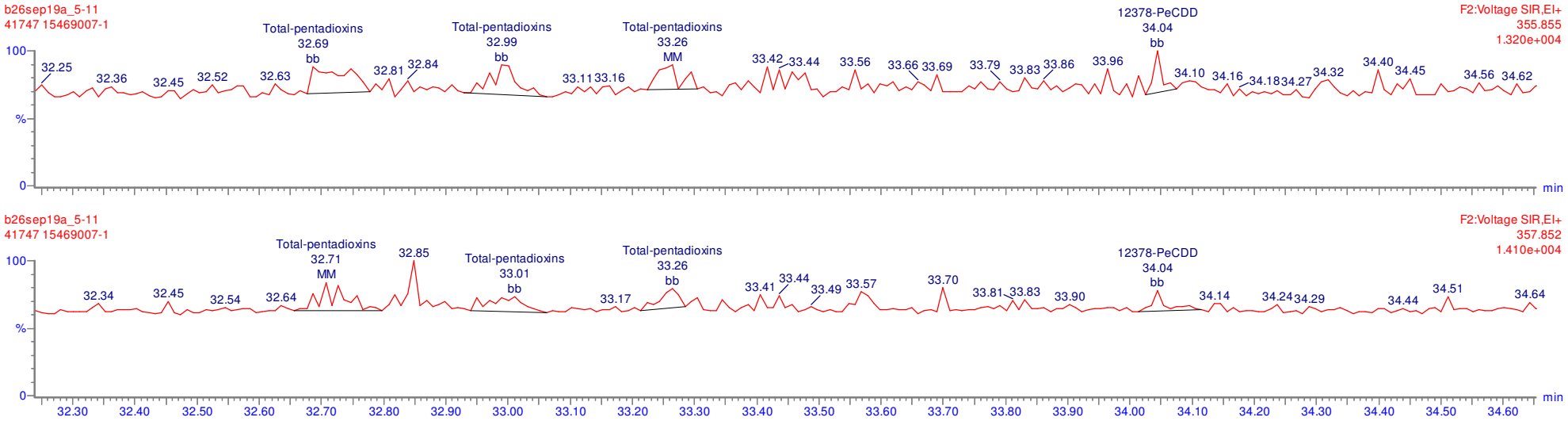
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	3.66e3	3.85e3	7.51e3	39.26	0.95	NO	1.753	0.0782	4.83e4	776	62.2	4.58e4	777	58.9	bb	bb
2	1234678-HpCDF	1.52e3	1.38e3	2.90e3	38.76	1.10	NO	0.641	0.0675	2.30e4	776	29.7	1.95e4	777	25.1	bb	bb

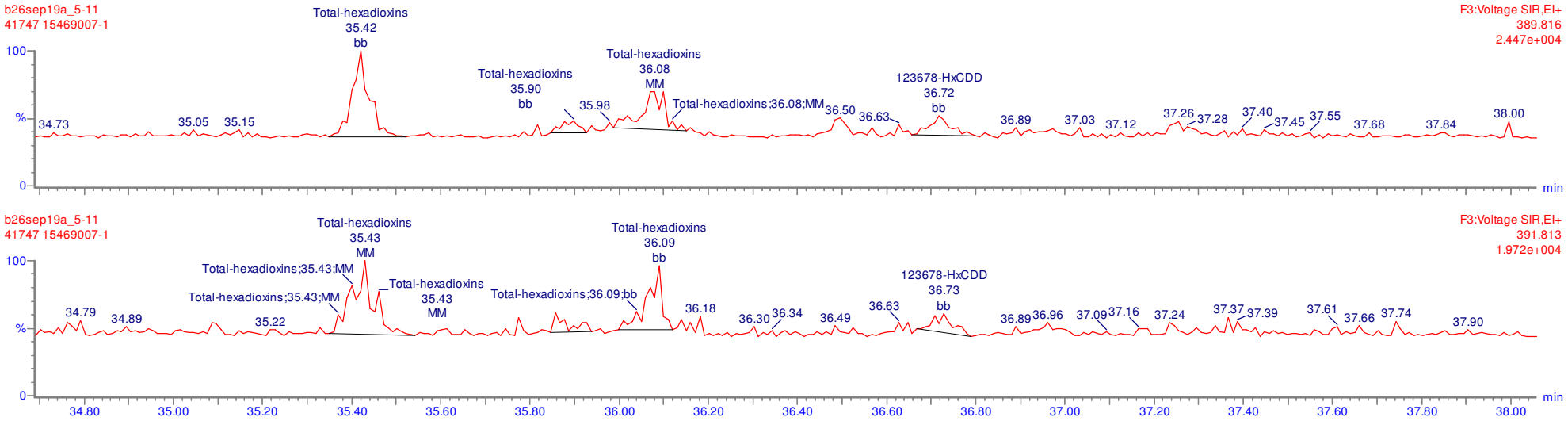
MANUAL INTEGRATION
METHOD 1613
HRP763_1



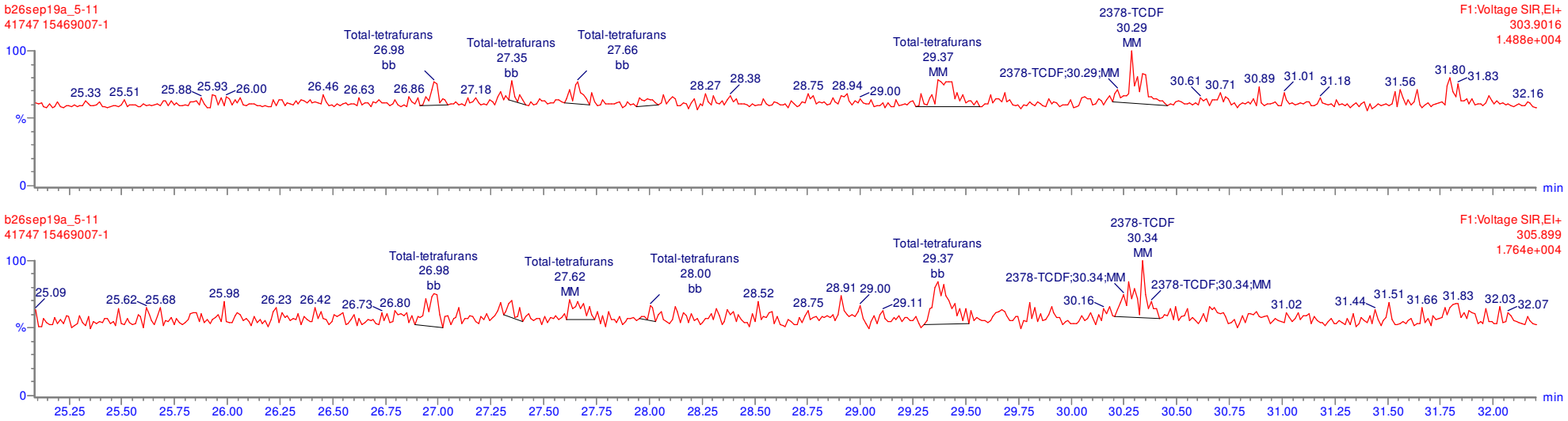
MANUAL INTEGRATION
METHOD 1613
HRP763_1



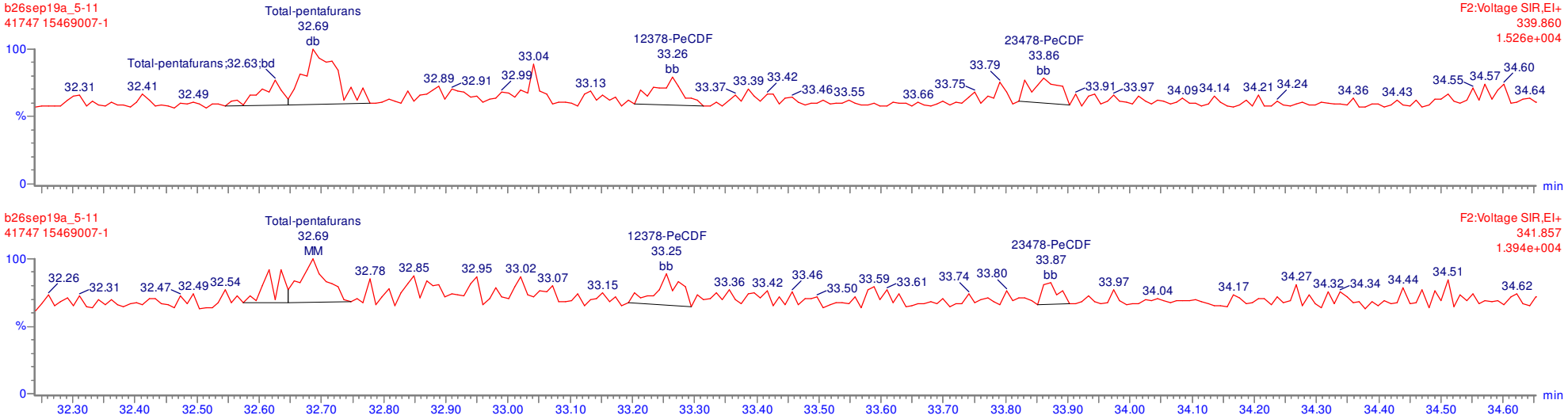
MANUAL INTEGRATION
METHOD 1613
HRP763_1



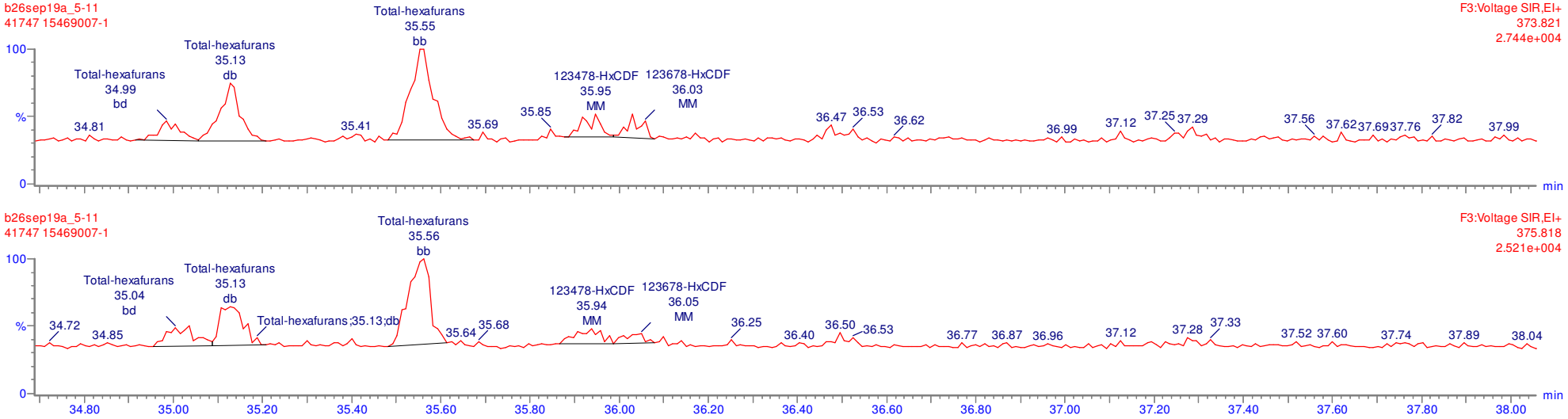
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



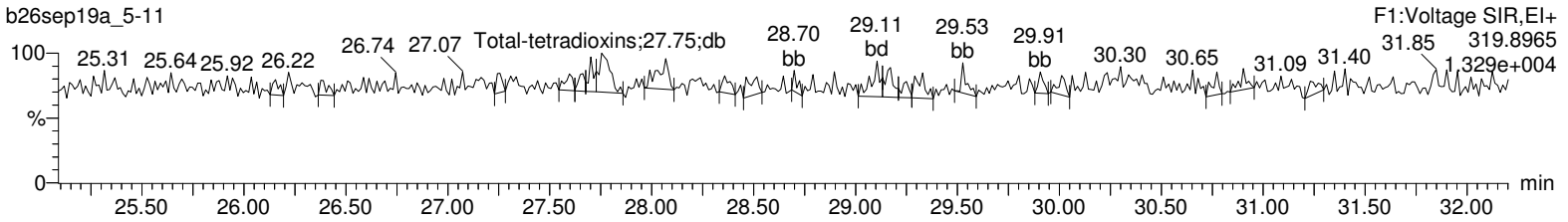
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

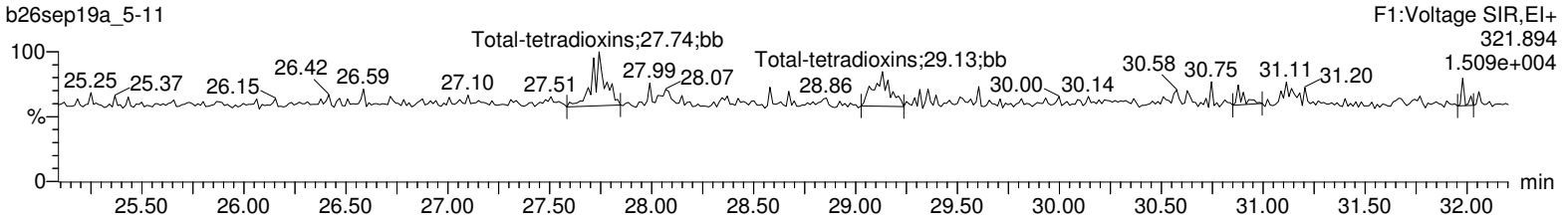
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

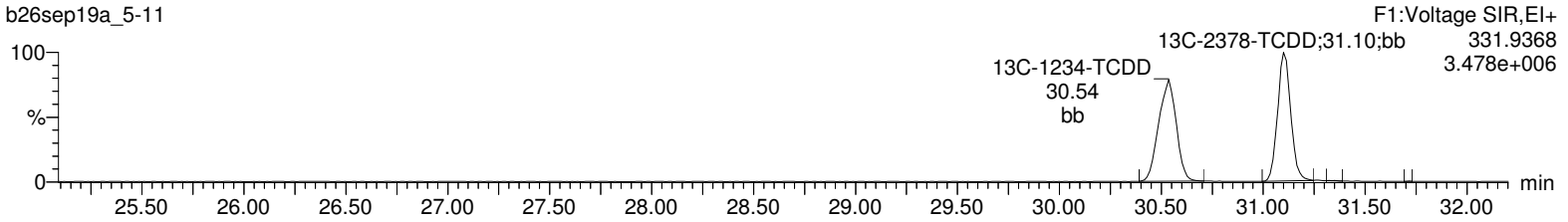
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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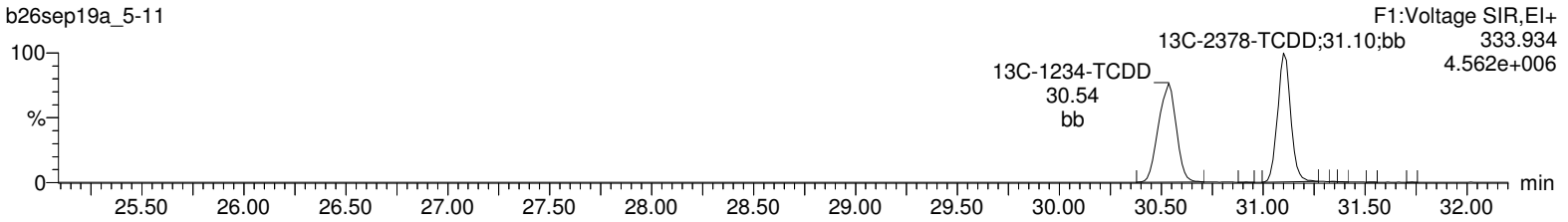
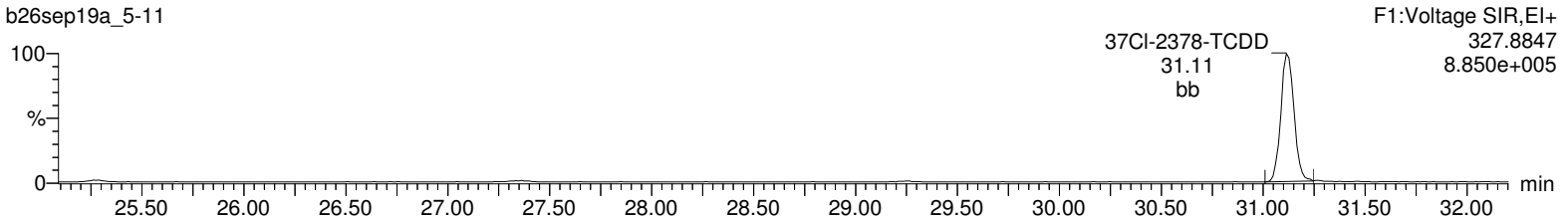
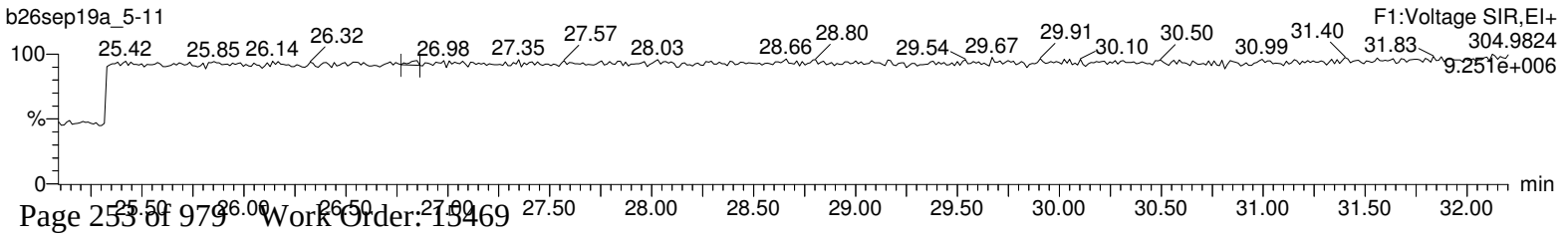


37Cl-2378-TCDD



Lock Mass F1



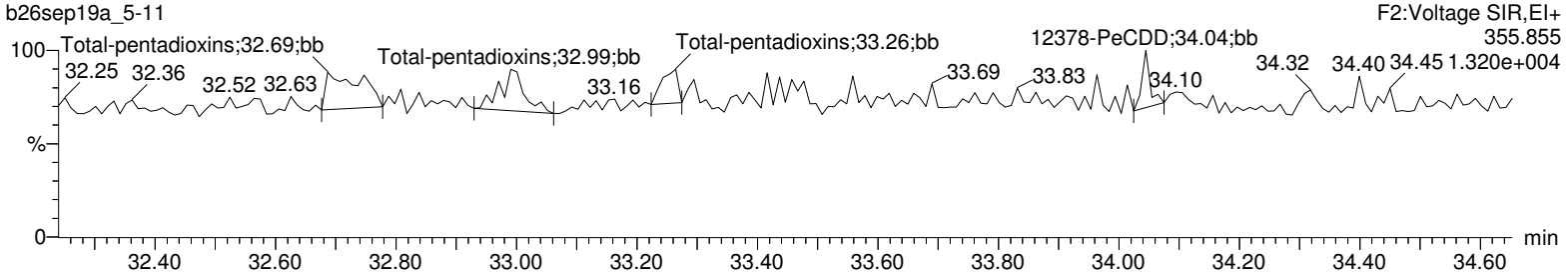
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

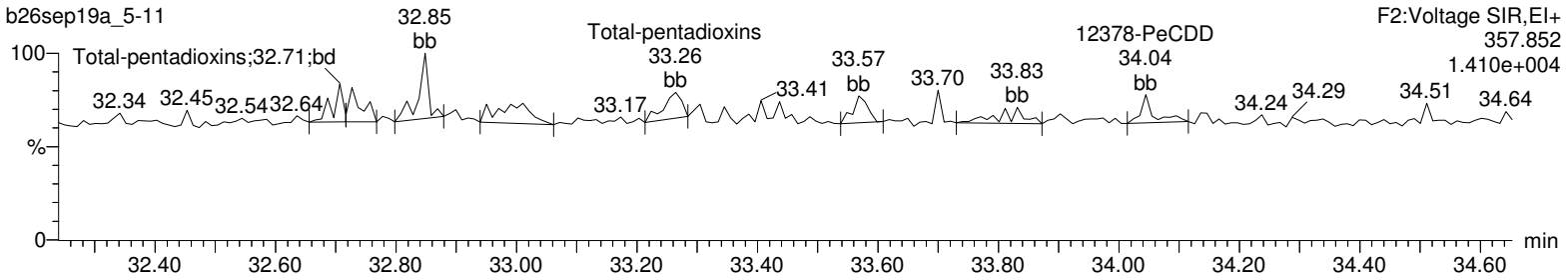
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

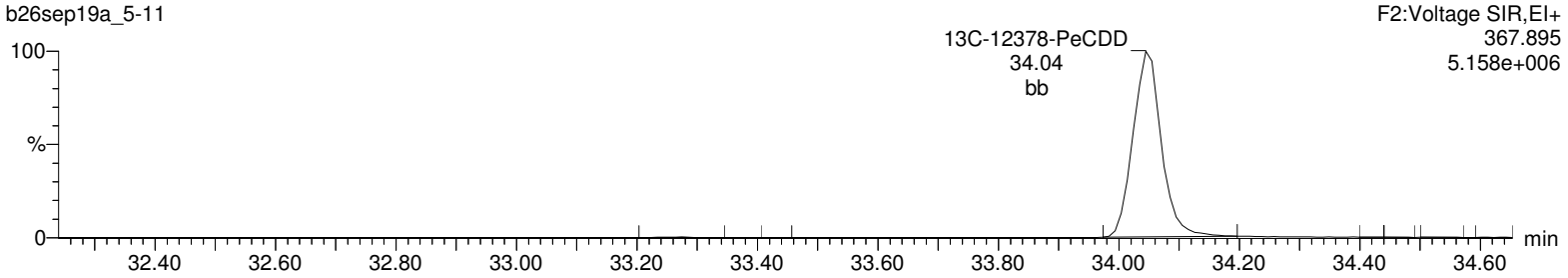
Total-pentadioxins



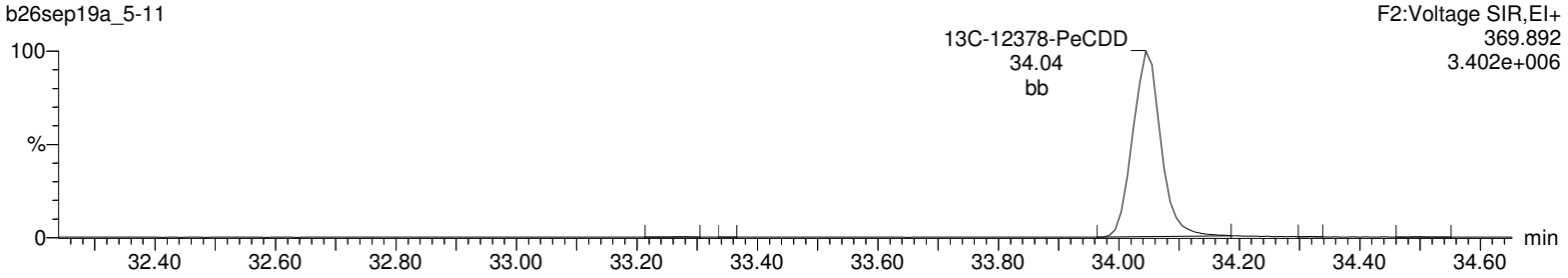
Total-pentadioxins



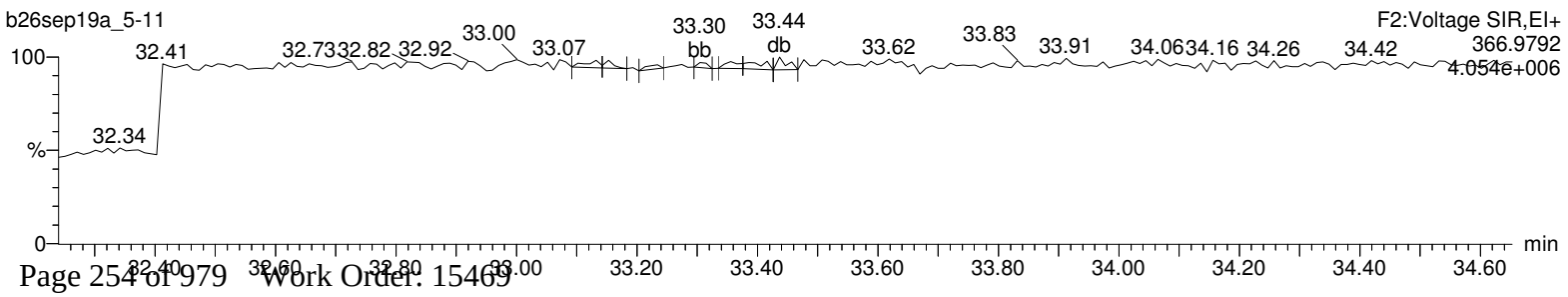
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



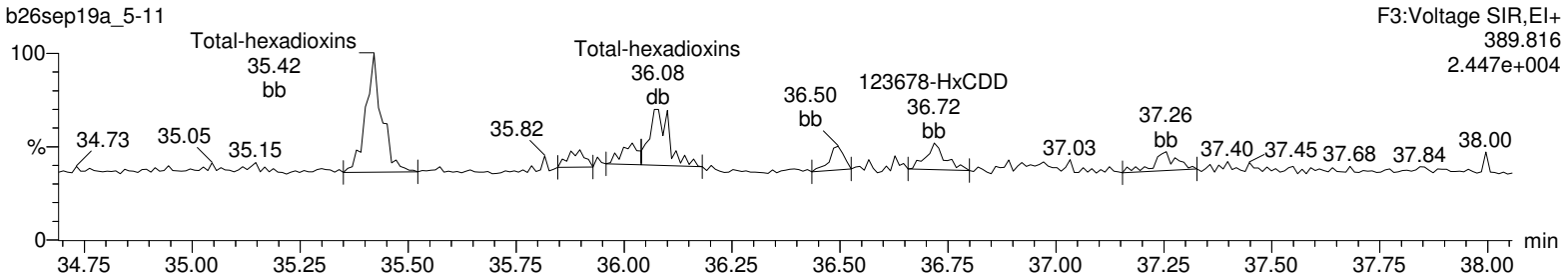
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

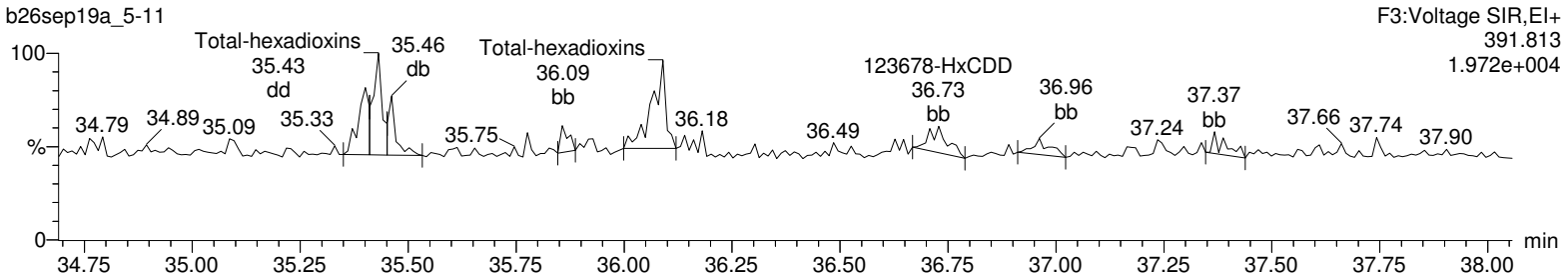
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

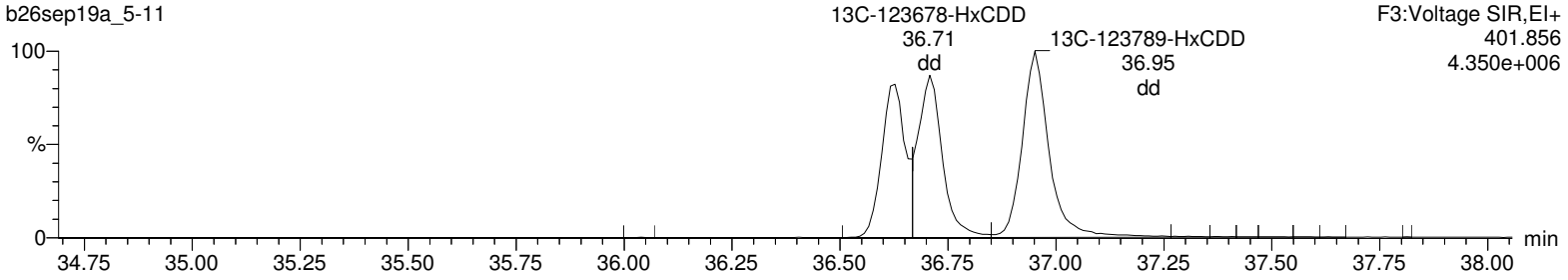
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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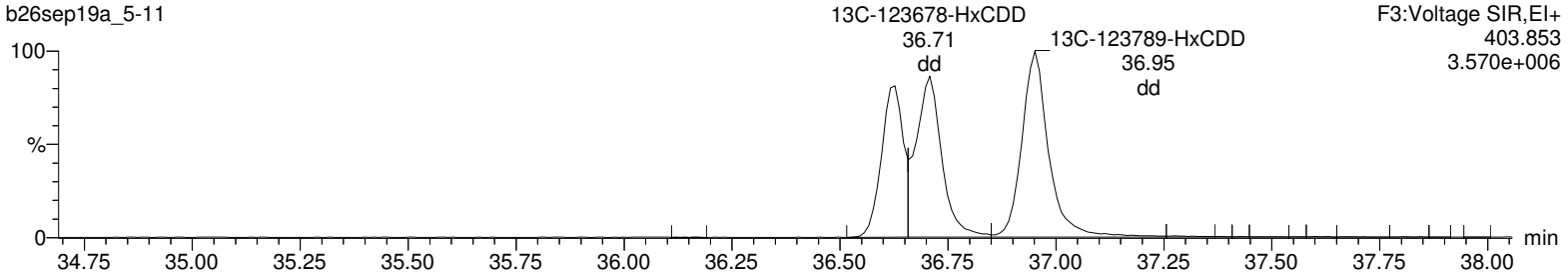
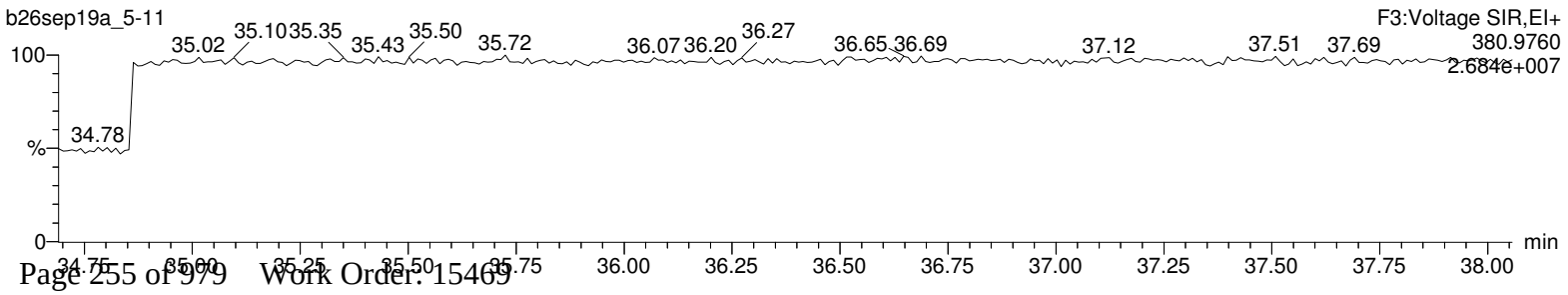


Lock Mass F3



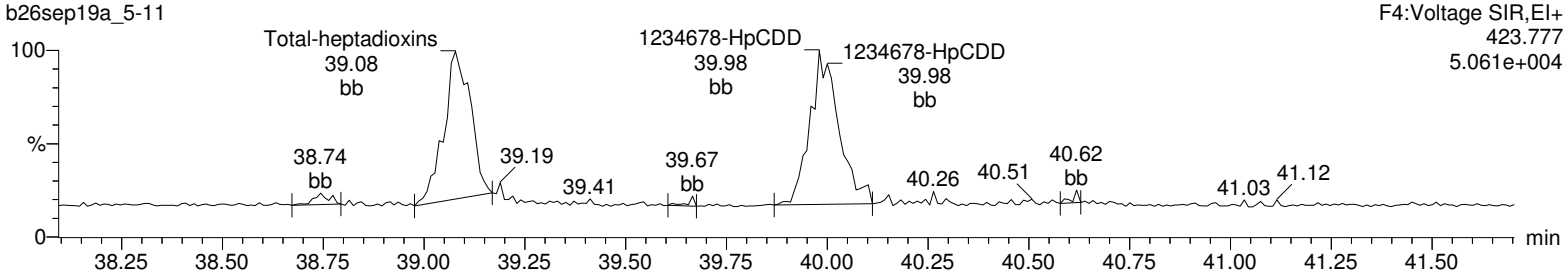
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

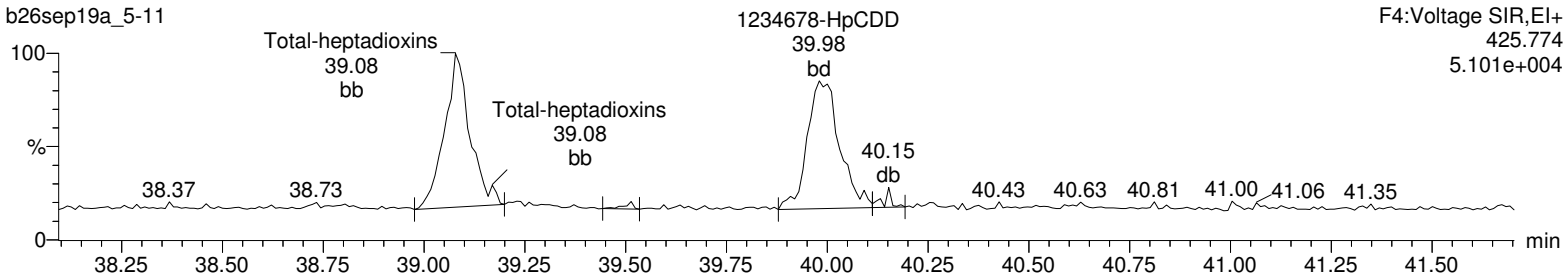
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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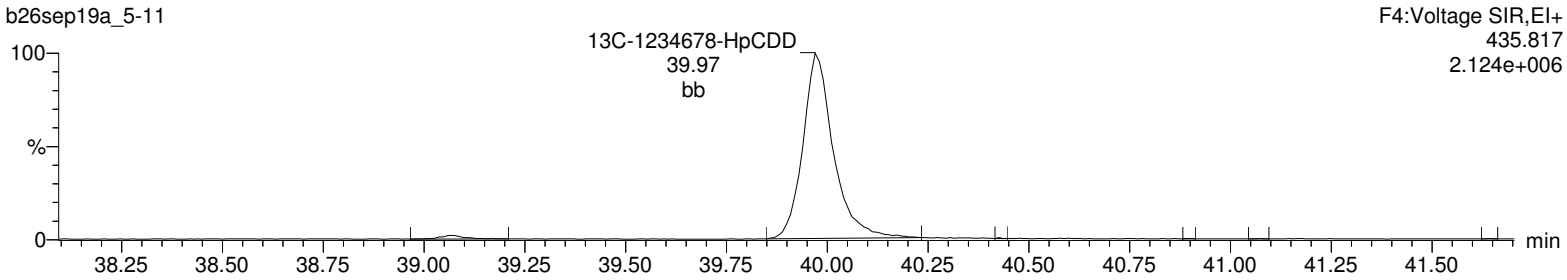

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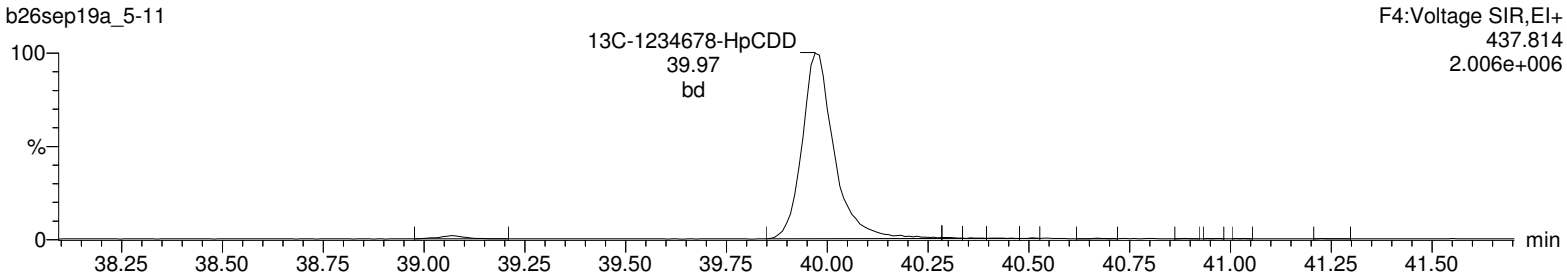

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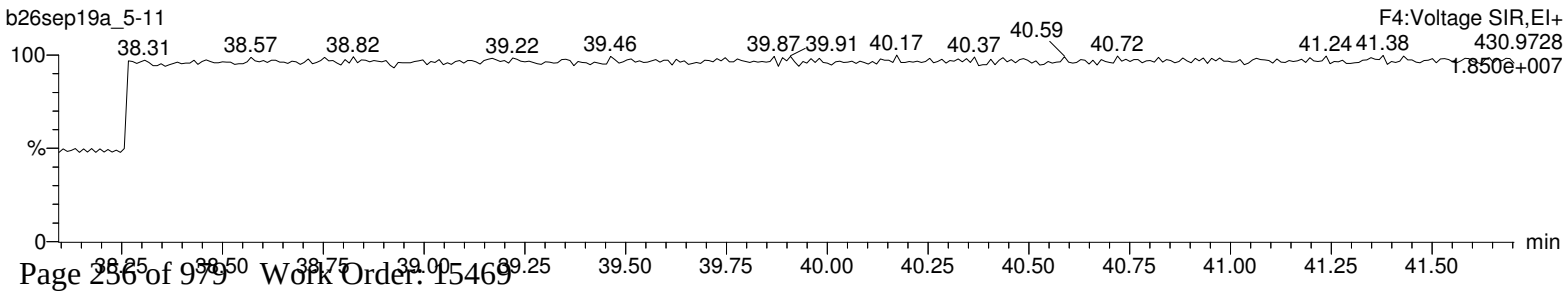

Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

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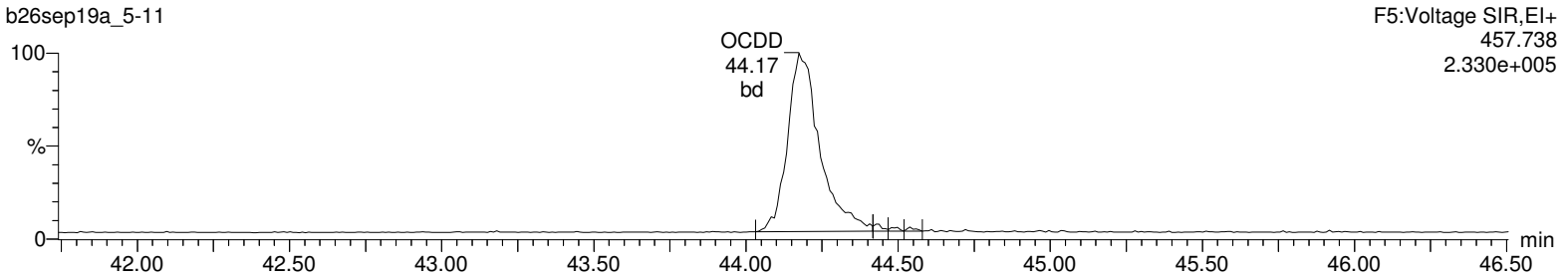

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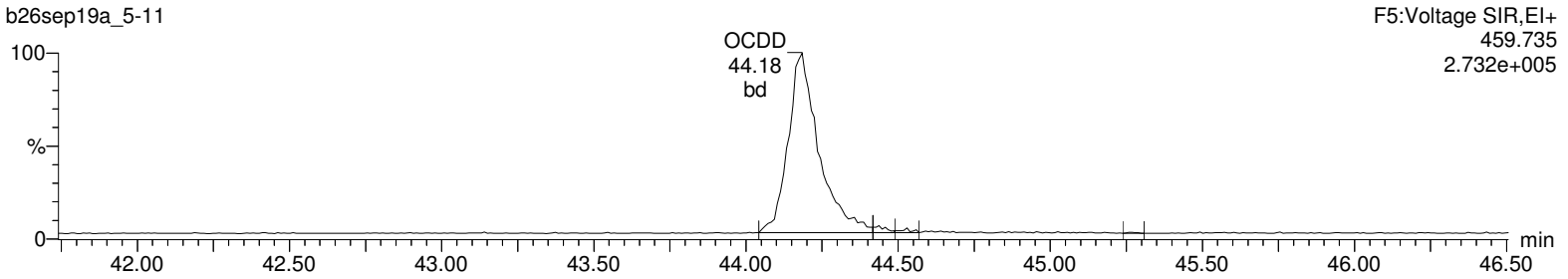

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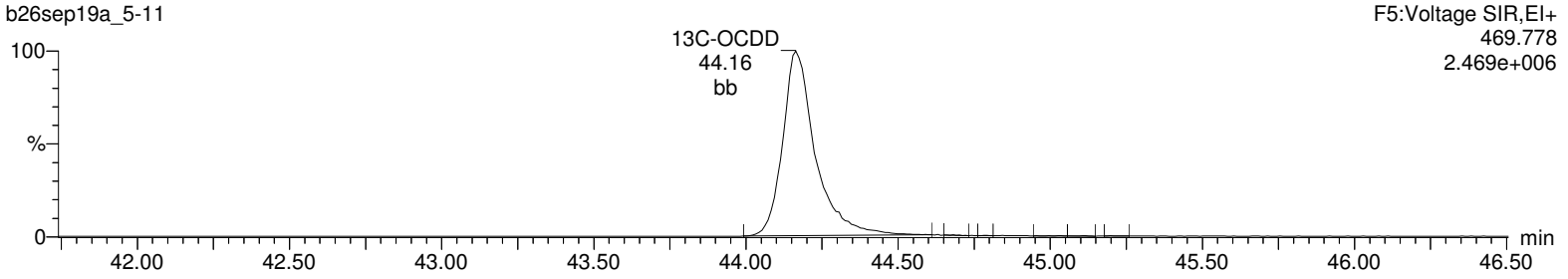

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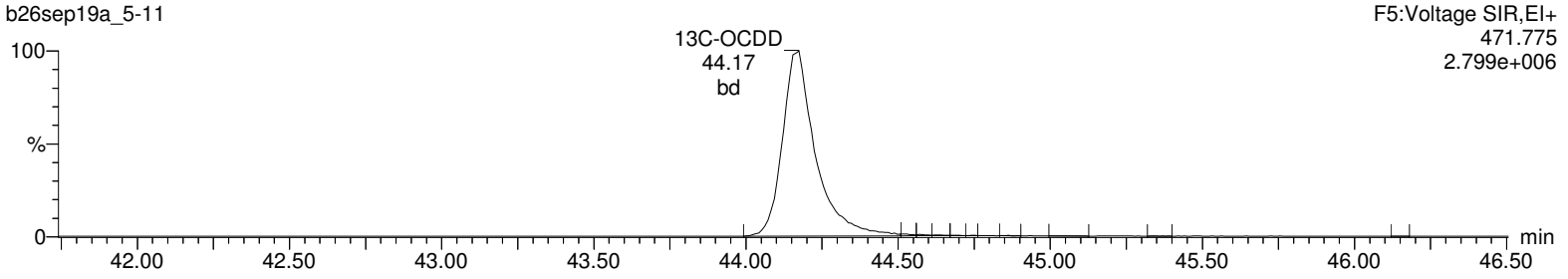
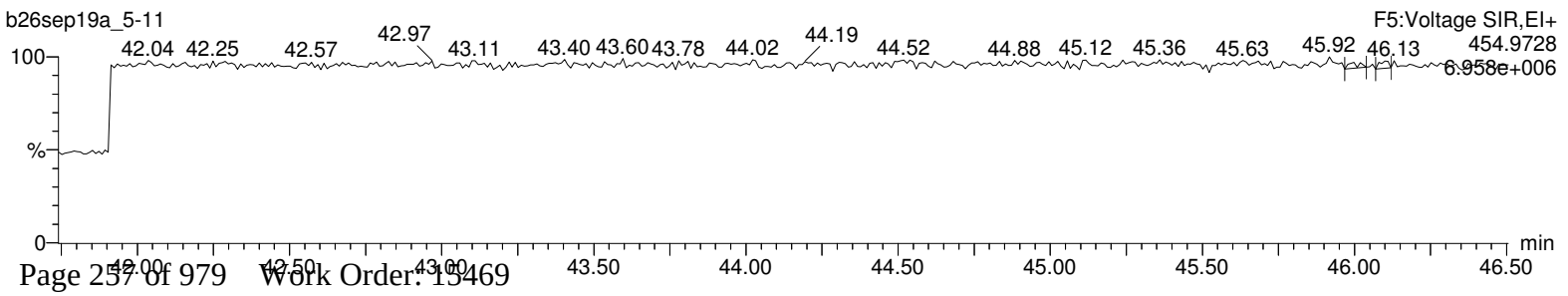


Lock Mass F5



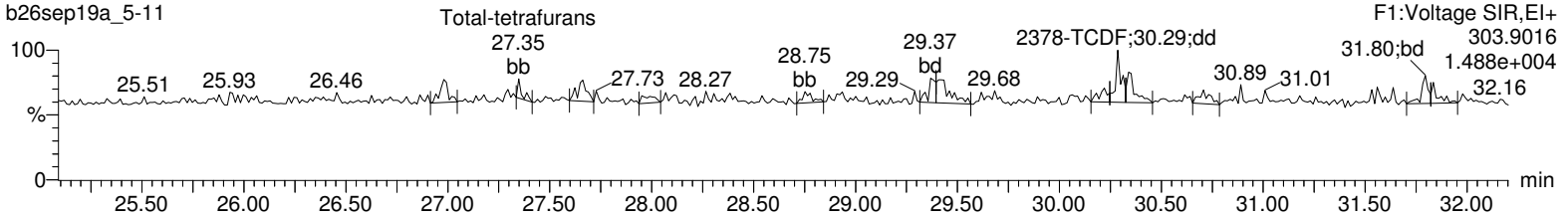
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

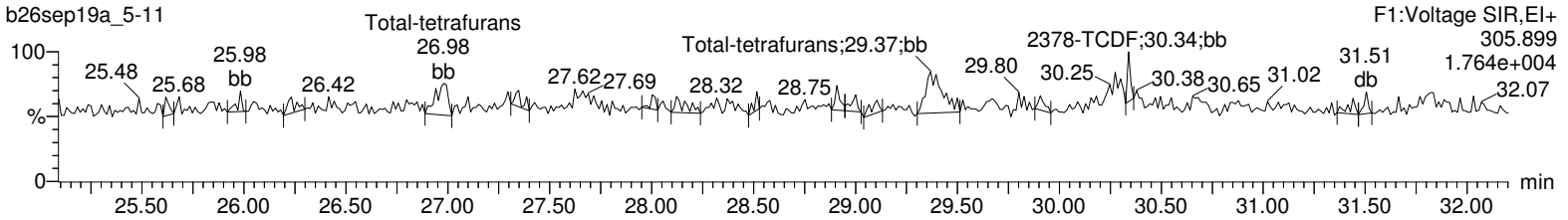
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-tetrafurans



Total-tetrafurans



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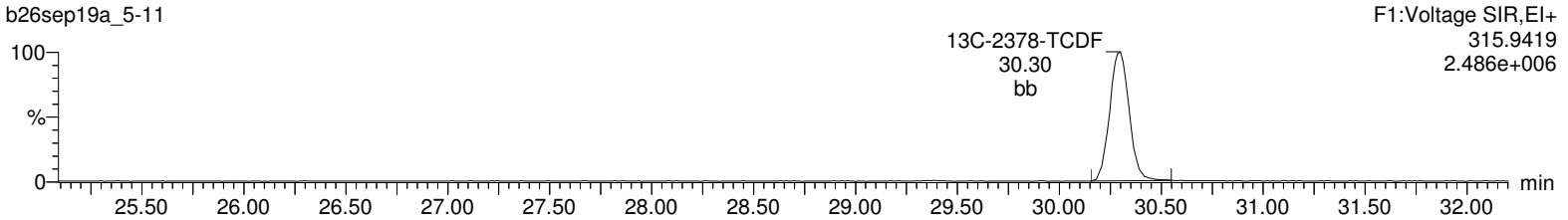

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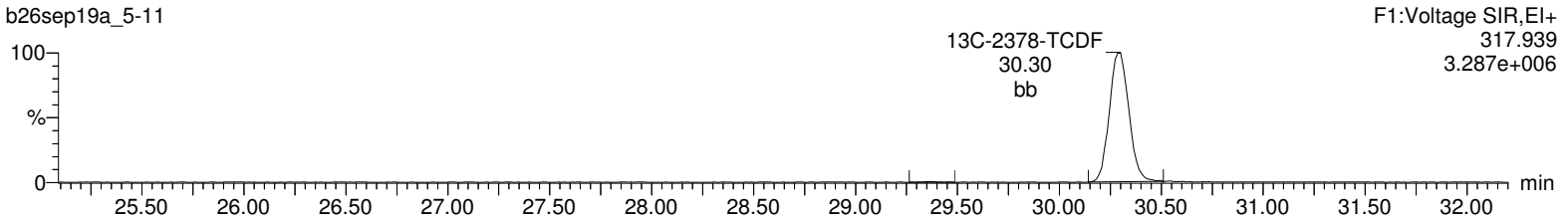
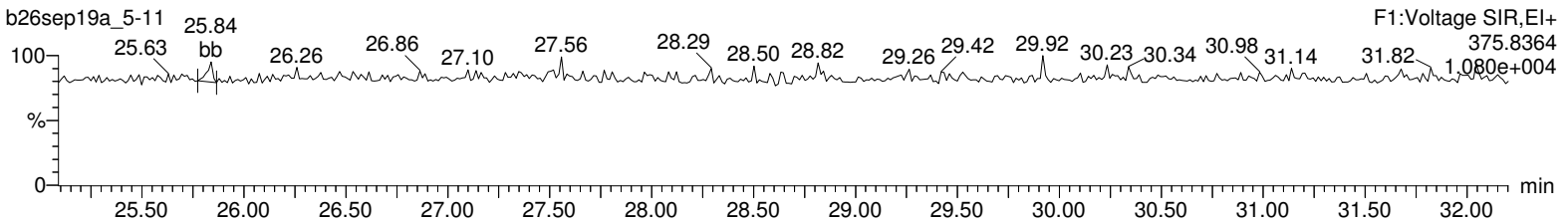
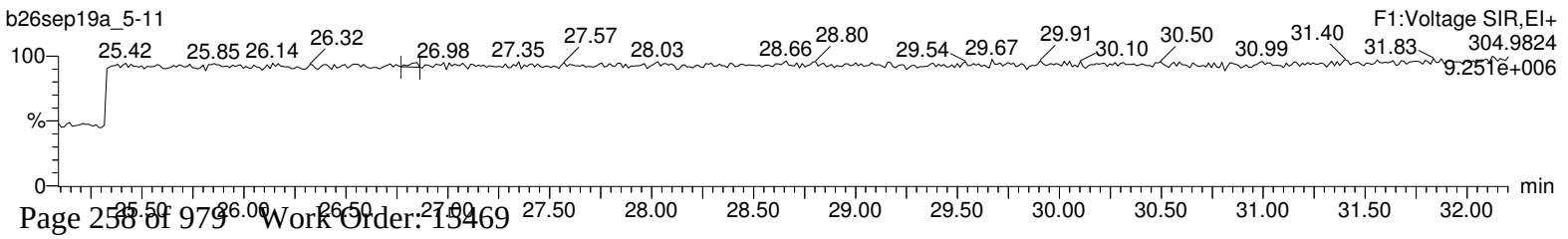


HxDPE



Lock Mass F1



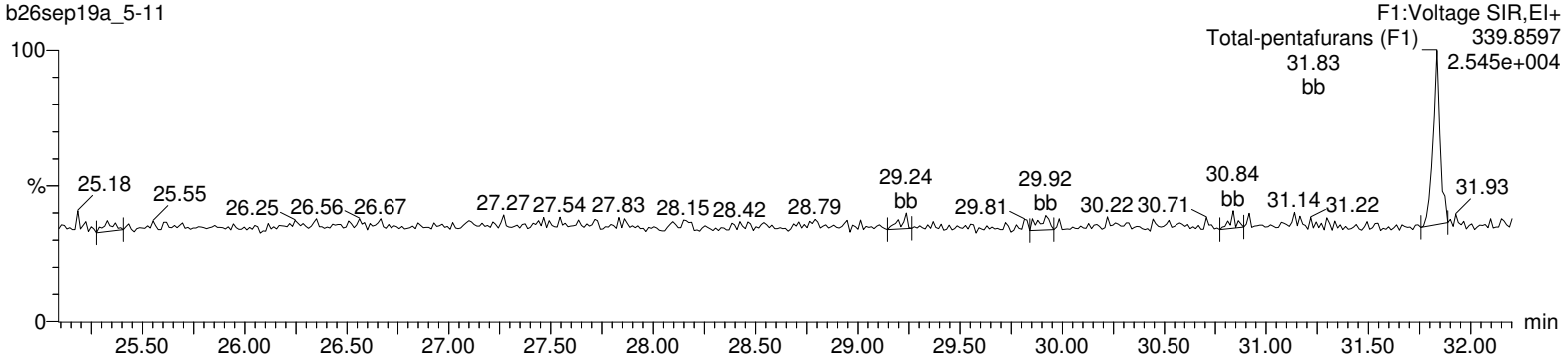
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

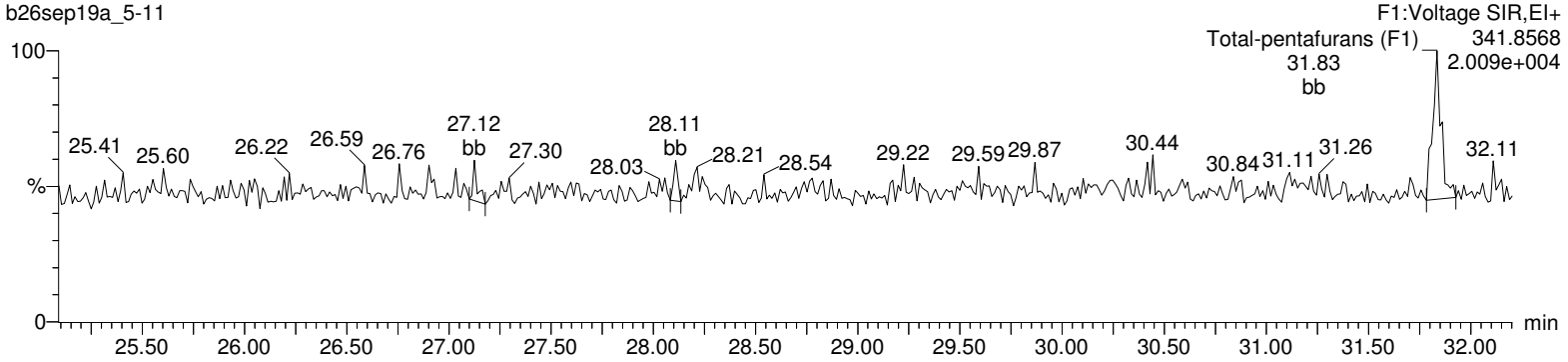
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

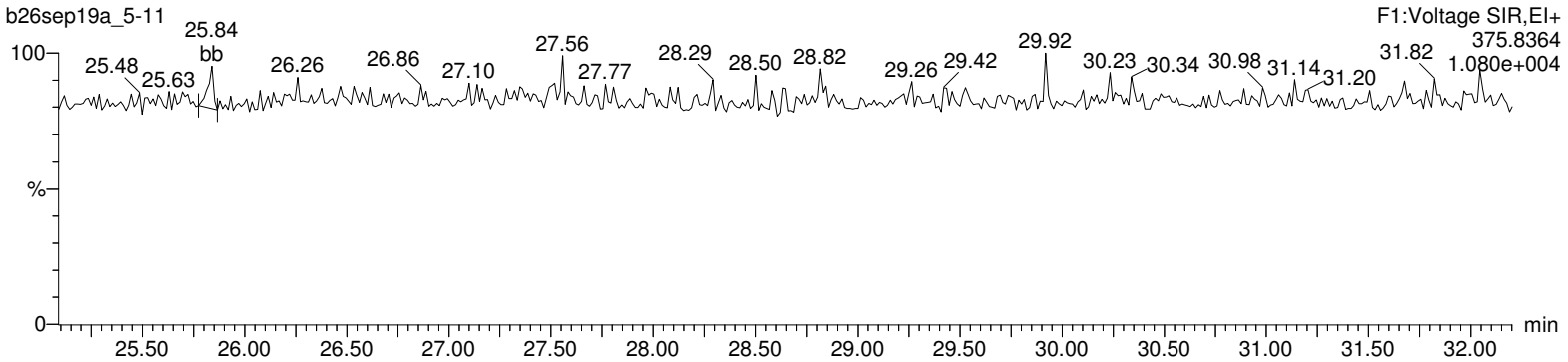
Total-pentafurans (F1)



Total-pentafurans (F1)



HxDPE



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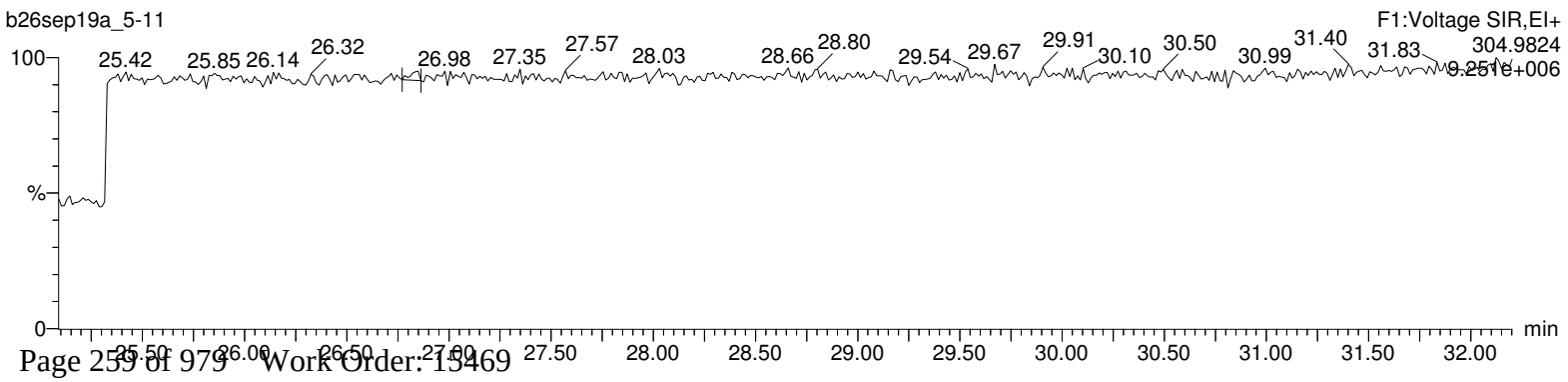


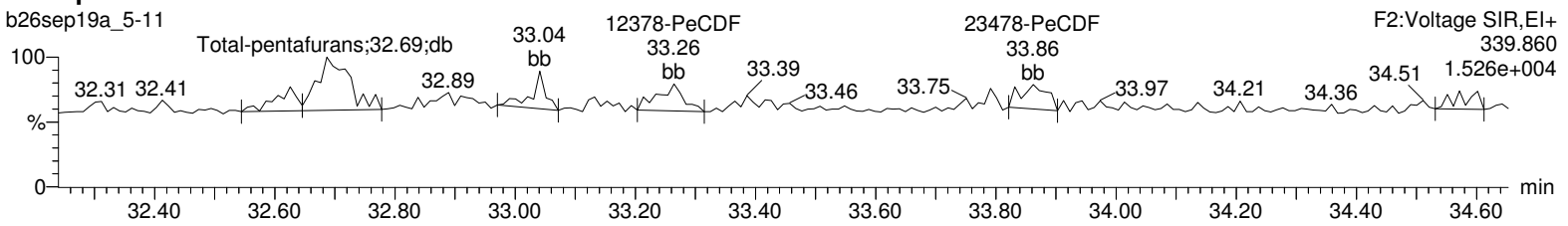
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

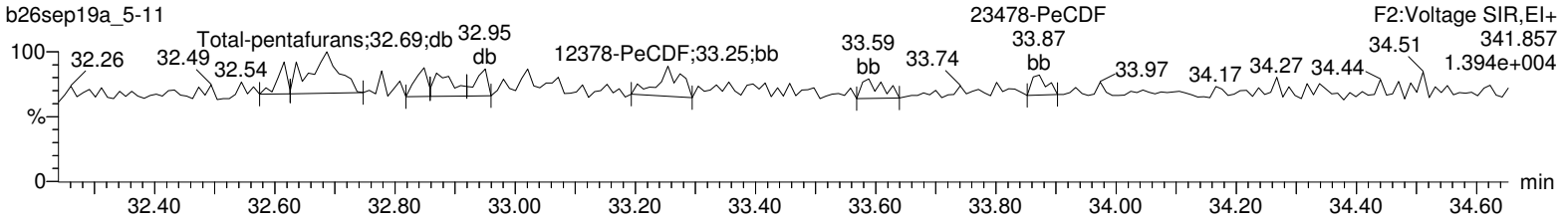
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

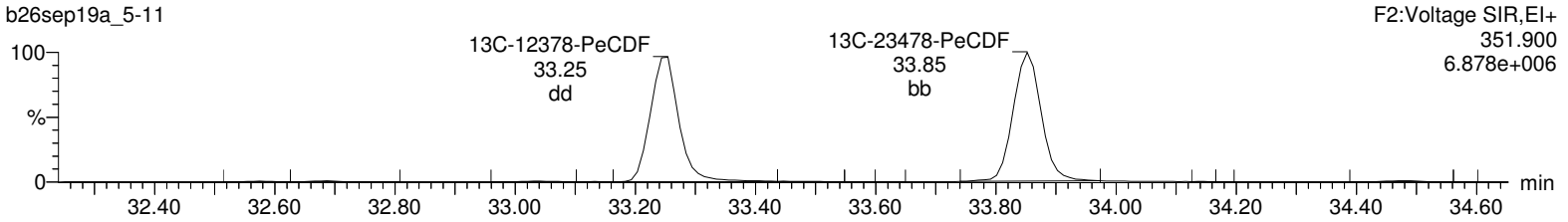
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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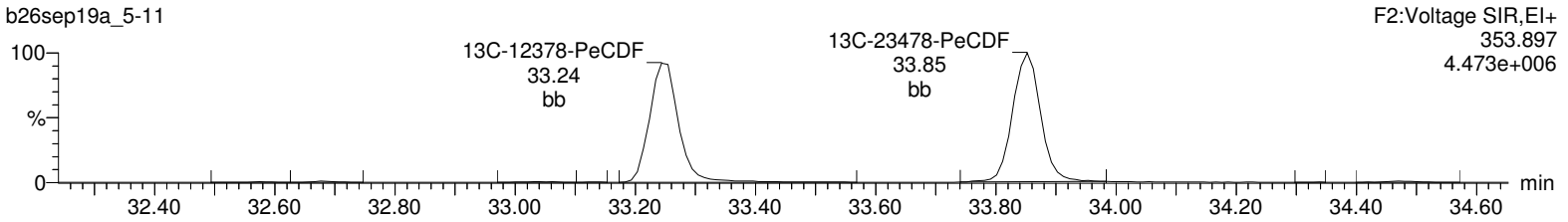
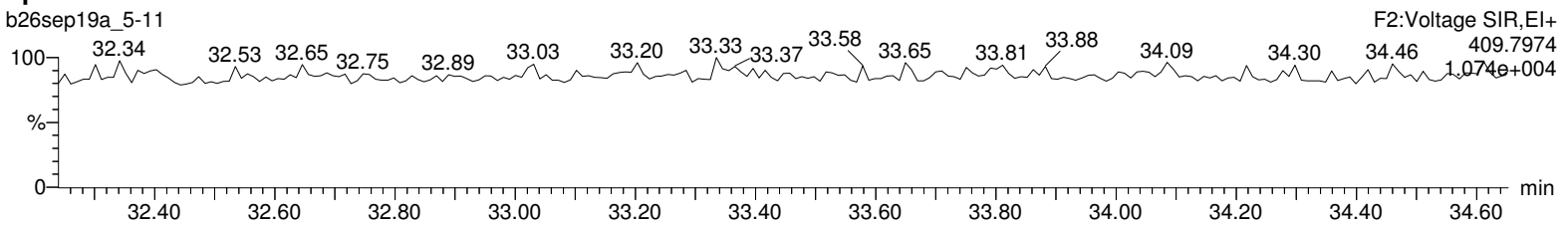
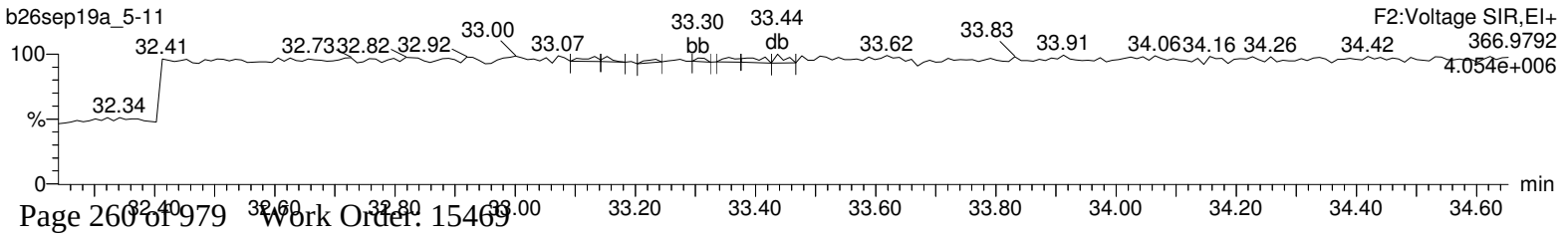


HpDPE



Lock Mass F2



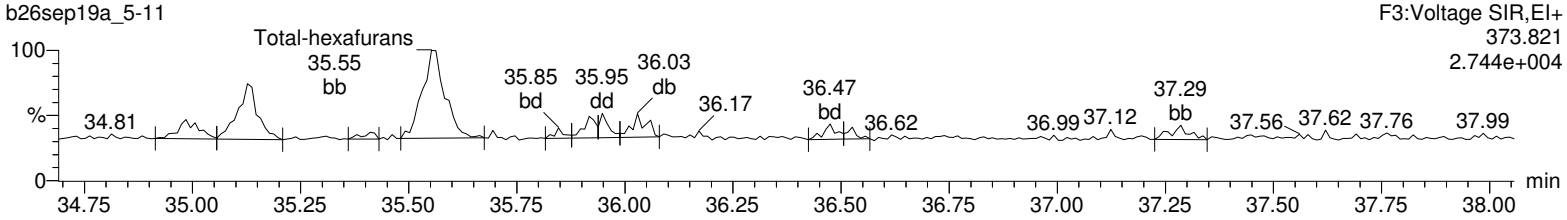
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

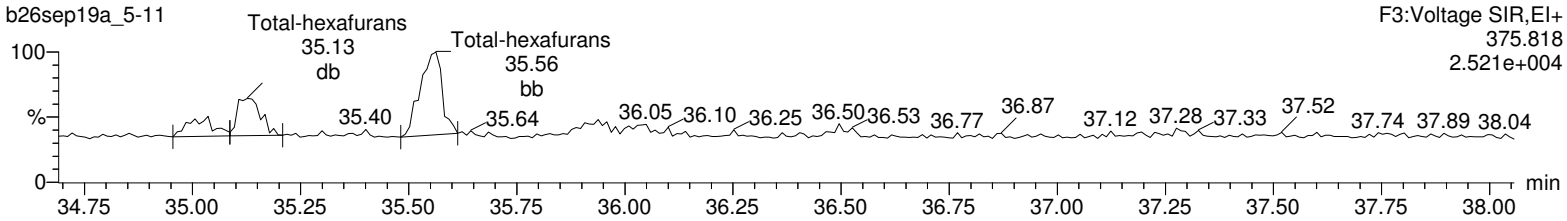
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexafurans



Total-hexafurans



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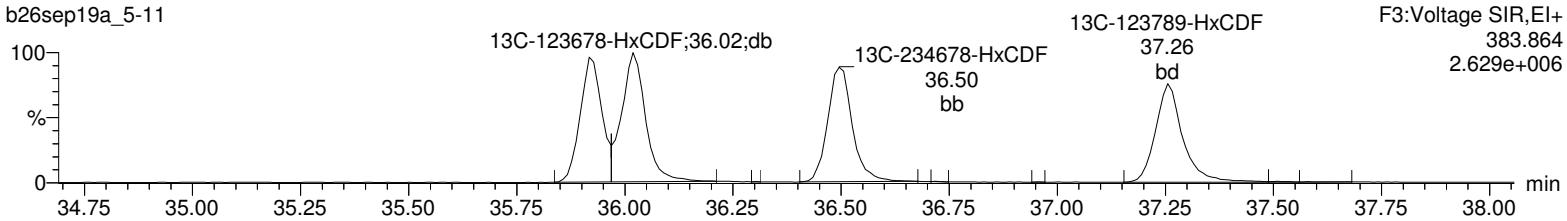

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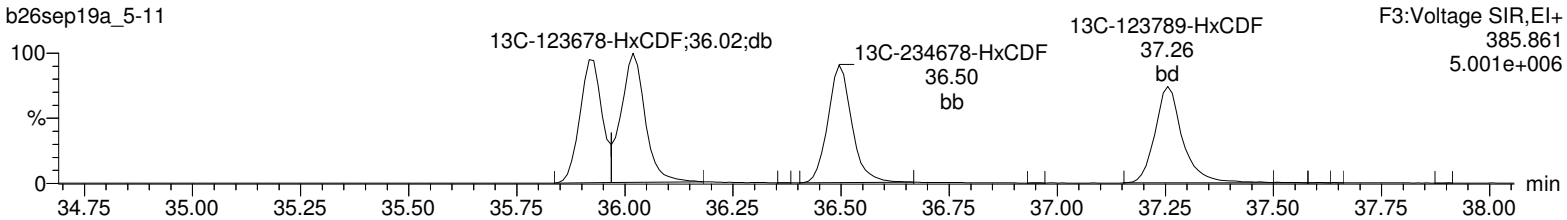

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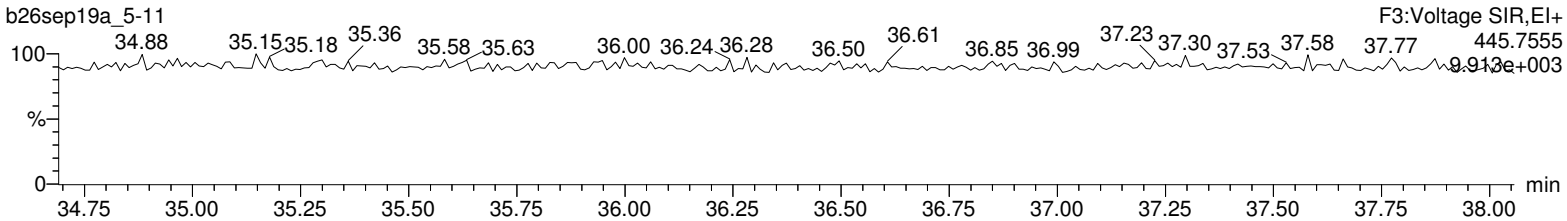
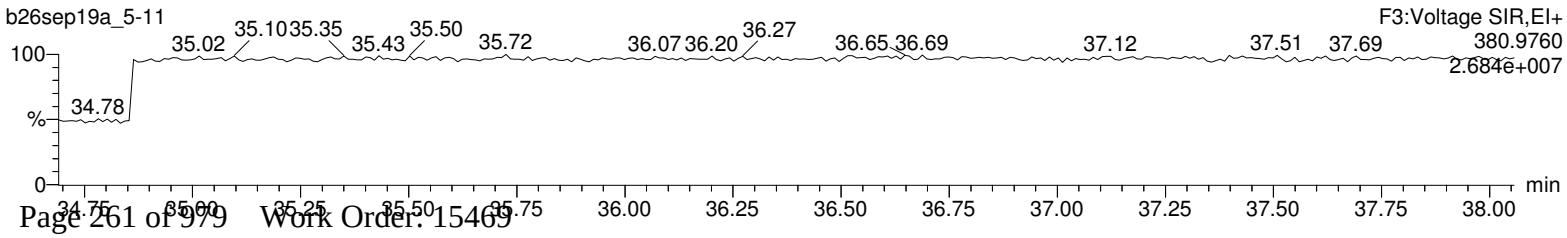


Lock Mass F3



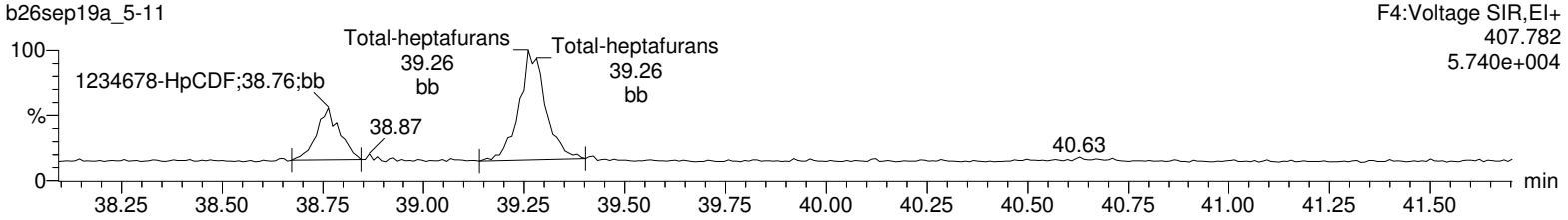
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

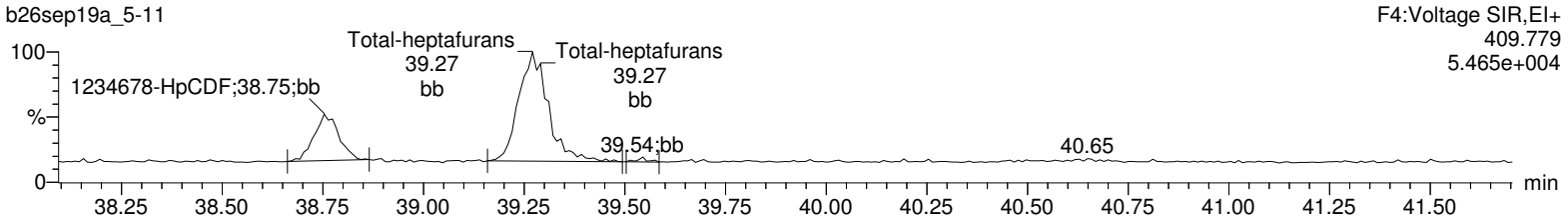
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptafurans



Total-heptafurans



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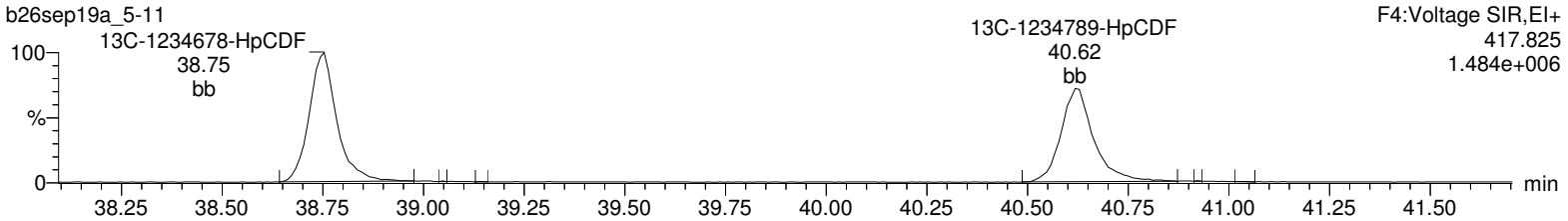

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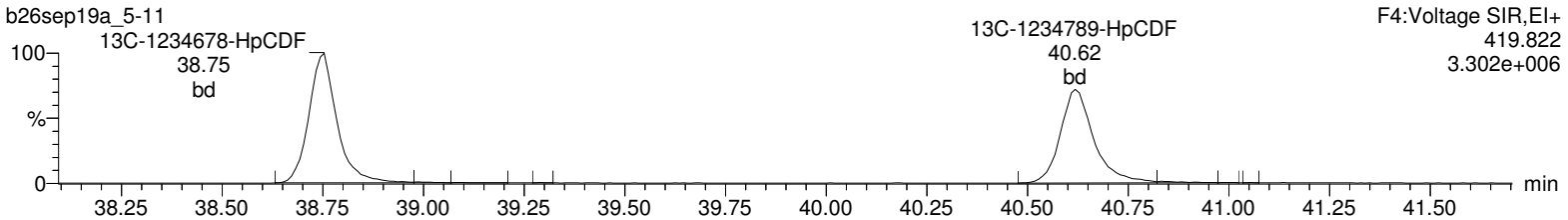

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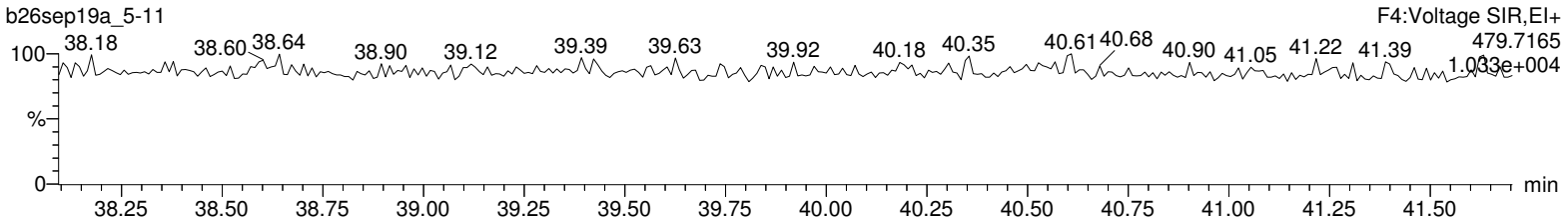
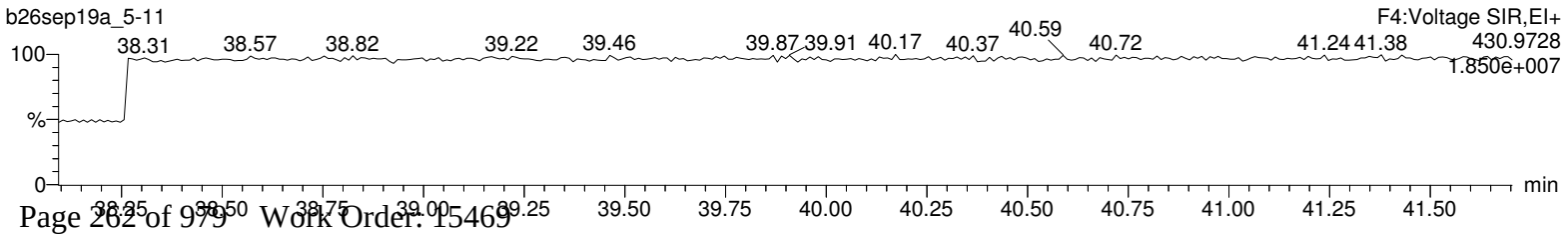


Lock Mass F4



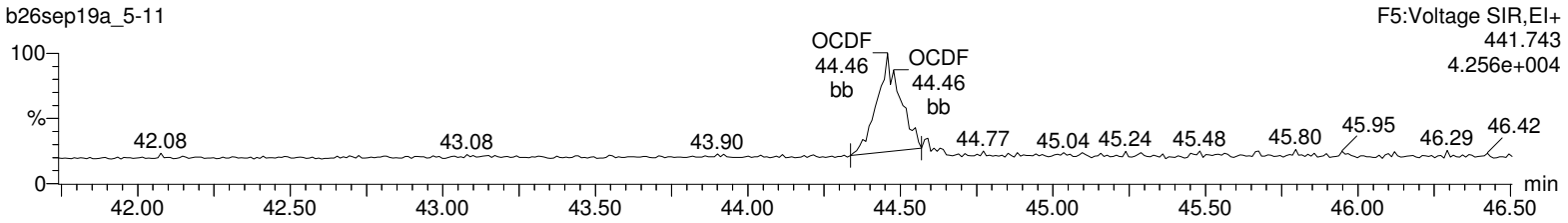
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-11, Date: 28-Sep-2019, Time: 07:53:58, ID: 15469007-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDF



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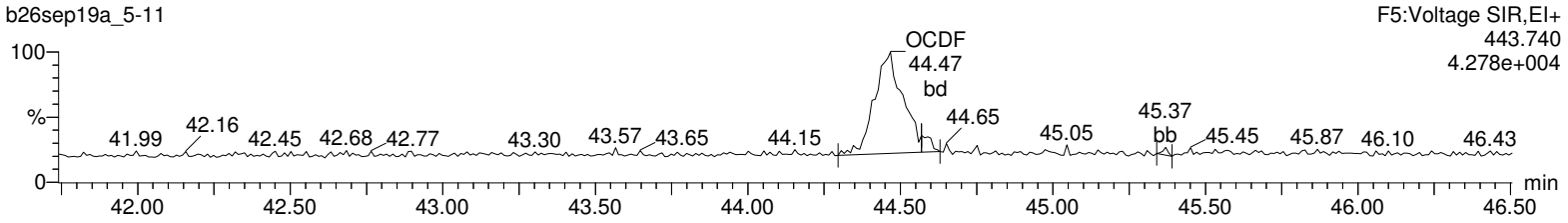

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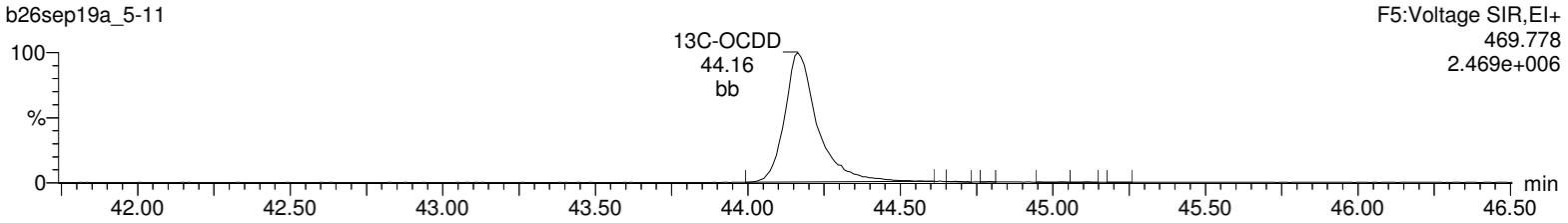

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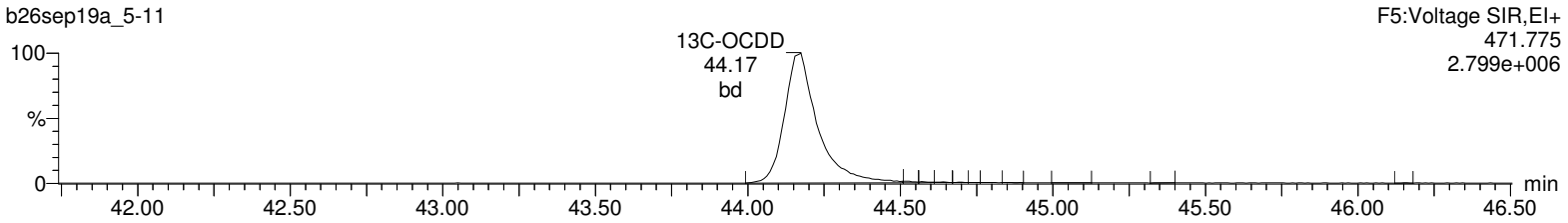

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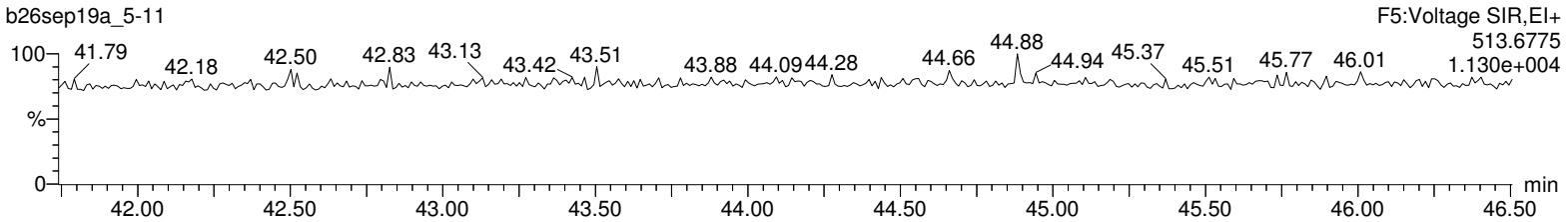
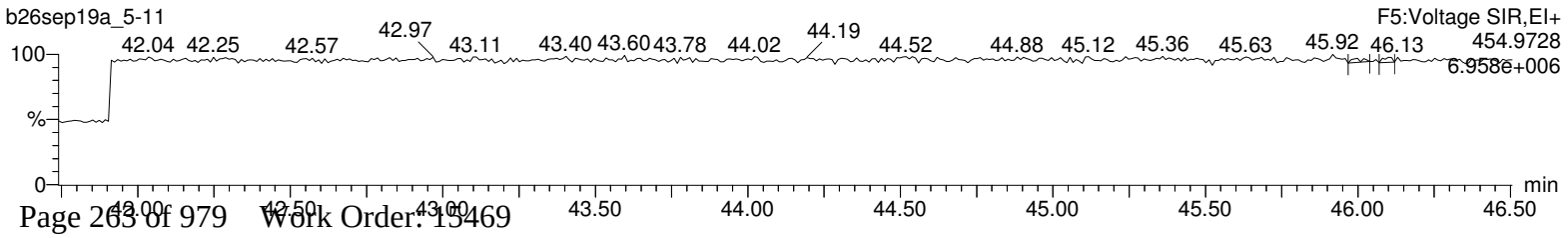


Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469008**	**Date Collected:**	**08/28/2019 12:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31**
Client ID:	**J6-SC1b-90to100-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 08:42**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.83 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.33	pg/g	0.330	0.977
40321-76-4	1,2,3,7,8-PeCDD	U	0.282	pg/g	0.282	4.89
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.282	pg/g	0.282	4.89
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.287	pg/g	0.287	4.89
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.291	pg/g	0.291	4.89
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.569	pg/g	0.569	4.89
3268-87-9	1,2,3,4,6,7,8,9-OCDD	U	0.833	pg/g	0.833	9.77
51207-31-9	2,3,7,8-TCDF	U	0.573	pg/g	0.573	0.977
57117-41-6	1,2,3,7,8-PeCDF	U	0.199	pg/g	0.199	4.89
57117-31-4	2,3,4,7,8-PeCDF	U	0.191	pg/g	0.191	4.89
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.213	pg/g	0.213	4.89
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.219	pg/g	0.219	4.89
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.227	pg/g	0.227	4.89
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.332	pg/g	0.332	4.89
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	0.297	pg/g	0.297	4.89
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.452	pg/g	0.452	4.89
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	1.14	pg/g	1.14	9.77
41903-57-5	Total TeCDD	U	0.33	pg/g	0.330	0.977
36088-22-9	Total PeCDD	U	0.282	pg/g	0.282	4.89
34465-46-8	Total HxCDD	U	0.282	pg/g	0.282	4.89
37871-00-4	Total HpCDD	U	0.569	pg/g	0.569	4.89
30402-14-3	Total TeCDF	U	0.573	pg/g	0.573	0.977
30402-15-4	Total PeCDF	U	0.191	pg/g	0.191	4.89
55684-94-1	Total HxCDF	U	0.213	pg/g	0.213	4.89
38998-75-3	Total HpCDF	U	0.297	pg/g	0.297	4.89
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.00	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.466	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		149	195	pg/g	76.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		173	195	pg/g	88.7	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		166	195	pg/g	85.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		160	195	pg/g	81.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		196	195	pg/g	100	(23%-140%)
13C-OCDD		395	391	pg/g	101	(17%-157%)
13C-2,3,7,8-TCDF		142	195	pg/g	72.8	(24%-169%)
13C-1,2,3,7,8-PeCDF		163	195	pg/g	83.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		162	195	pg/g	82.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		163	195	pg/g	83.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		151	195	pg/g	77.4	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		155	195	pg/g	79.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		160	195	pg/g	81.8	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469008**	**Date Collected:**	**08/28/2019 12:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**31**
Client ID:	**J6-SC1b-90to100-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 08:42**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.83 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		168	195	pg/g	85.8	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		195	195	pg/g	99.5	(26%-138%)
37Cl-2,3,7,8-TCDD		17.6	19.5	pg/g	90.2	(35%-197%)

Comments:

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 12:00:50 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:01:56 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.169		1459			745			
2	12378-PeCDD							NO		0.144		1225			616			
3	123478-HxCDD							NO		0.144		680			802			
4	123678-HxCDD							NO		0.147		680			802			
5	123789-HxCDD	6.11e1	5.85e1	1.20e2	36.95	1.006	1.04	YES	0.086	0.149	1.23e3	680	1.8	1.00e3	802	1.2	bb	bb
6	1234678-HpCDD	7.60e1	5.61e1	1.32e2	39.98	1.000	1.35	YES	0.108	0.291	1.22e3	792	1.5	2.00e3	878	2.3	bb	bb
7	OCDD	1.57e2	2.04e2	3.61e2	44.19	1.000	0.77	NO	0.350	0.426	3.58e3	731	4.9	4.74e3	735	6.5	MM	MM
8	2378-TCDF	1.25e2	1.02e2	2.27e2	30.34	1.000	1.23	YES	0.108	0.293	3.32e3	852	3.9	4.89e3	2091	2.3	bb	db
9	12378-PeCDF							NO		0.102		743			1168			
10	23478-PeCDF							NO		0.0976		743			1168			
11	123478-HxCDF							NO		0.109		799			748			
12	123678-HxCDF							NO		0.112		799			748			
13	234678-HxCDF							NO		0.116		799			748			
14	123789-HxCDF							NO		0.170		799			748			
15	1234678-HpCDF	6.70e1	7.59e1	1.43e2	38.73	0.999	0.88	YES	0.087	0.152	1.43e3	665	2.2	1.80e3	754	2.4	bd	bb
16	1234789-HpCDF							NO		0.231		665			754			
17	OCDF							NO		0.581		879			1345			
18	13C-2378-TCDD	9.44e4	1.25e5	2.19e5	31.13	1.018	0.76	NO	76.295	0.405	1.57e6	3407	462.2	2.07e6	2449	843.8	bb	bb
19	13C-12378-PeCDD	1.06e5	6.70e4	1.73e5	34.06	1.114	1.57	NO	88.681	0.350	2.29e6	1843	1243.1	1.50e6	1579	948.4	bd	bb
20	13C-123478-HxCDD	7.56e4	6.16e4	1.37e5	36.64	0.991	1.23	NO	85.061	0.497	1.52e6	2214	685.0	1.26e6	2927	429.4	bd	bd
21	13C-123678-HxCDD	9.75e4	7.94e4	1.77e5	36.72	0.993	1.23	NO	81.937	0.371	1.57e6	2214	710.5	1.33e6	2927	456.1	dd	dd
22	13C-1234678-HpCDD	6.57e4	6.43e4	1.30e5	39.99	1.082	1.02	NO	100.445	0.437	7.69e5	2145	358.6	7.91e5	1481	533.9	bd	bd
23	13C-OCDD	1.05e5	1.20e5	2.25e5	44.17	1.195	0.88	NO	201.980	0.562	8.81e5	1869	471.0	9.90e5	2155	459.4	bb	bd
24	13C-2378-TCDF	1.00e5	1.36e5	2.36e5	30.34	0.992	0.74	NO	72.755	0.511	1.19e6	5087	234.6	1.57e6	3243	483.9	bb	bd
25	13C-12378-PeCDF	1.34e5	8.40e4	2.18e5	33.26	1.088	1.60	NO	83.523	0.565	3.17e6	4780	663.6	2.07e6	2633	786.2	bd	bb
26	13C-23478-PeCDF	1.36e5	8.59e4	2.22e5	33.87	1.108	1.59	NO	82.899	0.550	3.09e6	4780	646.9	1.95e6	2633	741.8	bb	db
27	13C-123478-HxCDF	5.34e4	1.02e5	1.55e5	35.94	0.972	0.53	NO	83.171	0.519	1.08e6	2657	406.8	2.08e6	3543	586.9	bd	bd
28	13C-123678-HxCDF	6.40e4	1.24e5	1.88e5	36.04	0.975	0.52	NO	77.439	0.398	1.12e6	2657	421.2	2.09e6	3543	590.9	dd	dd
29	13C-234678-HxCDF	5.66e4	1.07e5	1.64e5	36.51	0.988	0.53	NO	79.262	0.468	1.02e6	2657	384.7	1.96e6	3543	553.7	bd	bd
30	13C-123789-HxCDF	4.88e4	9.36e4	1.42e5	37.28	1.008	0.52	NO	81.796	0.556	7.32e5	2657	275.6	1.40e6	3543	394.3	bd	bd
31	13C-1234678-HpCDF	4.26e4	9.49e4	1.37e5	38.76	1.049	0.45	NO	85.808	0.393	6.06e5	1885	321.5	1.32e6	2153	614.3	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 12:00:50 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:01:56 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	3.49e4	7.93e4	1.14e5	40.64	1.099	0.44	NO	99.521	0.549	3.83e5	1885	203.1	8.68e5	2153	402.9	bd	bd
33	13C-1234-TCDD	1.08e5	1.41e5	2.50e5	30.58	0.000	0.77	NO	100.000	0.466	1.36e6	3407	399.5	1.73e6	2449	707.7	bb	bb
34	13C-123789-HxCDD	1.13e5	9.13e4	2.04e5	36.96	0.000	1.24	NO	100.000	0.392	1.81e6	2214	818.6	1.46e6	2927	497.3	dd	dd
35	37Cl-2378-TCDD	2.43e4		2.43e4	31.14	1.018			9.023	0.0809	3.77e5	1093	344.7				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 12:00:50 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:01:56 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	6.11e1	5.85e1	1.20e2	36.95	1.04	YES	0.086	0.149	1.23e3	680	1.8	1.00e3	802	1.2	bb	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	7.60e1	5.61e1	1.32e2	39.98	1.35	YES	0.108	0.291	1.22e3	792	1.5	2.00e3	878	2.3	bb	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	2.02e2	2.90e2	4.92e2	29.42	0.70	NO	0.233	0.293	2.53e3	852	3.0	4.33e3	2091	2.1	bb	dd
2	Total-tetrafurans	9.67e1	5.81e1	1.55e2	28.96	1.66	YES	0.073	0.293	2.74e3	852	3.2	1.92e3	2091	0.9	bb	bb
3	2378-TCDF	1.25e2	1.02e2	2.27e2	30.34	1.23	YES	0.108	0.293	3.32e3	852	3.9	4.89e3	2091	2.3	bb	db

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	5.24e1	8.69e1	1.39e2	27.55	0.60	YES	0.067	0.108	7.45e2	534	1.4	3.28e3	1543	2.1	bb	bb
2	Total-pentafurans (F1)	6.32e1	6.42e1	1.27e2	27.26	0.98	YES	0.062	0.108	8.73e2	534	1.6	1.91e3	1543	1.2	bb	bb
3	Total-pentafurans (F1)	5.76e1	1.15e2	1.73e2	30.61	0.50	YES	0.084	0.108	1.46e3	534	2.7	1.87e3	1543	1.2	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 12:00:50 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:01:56 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

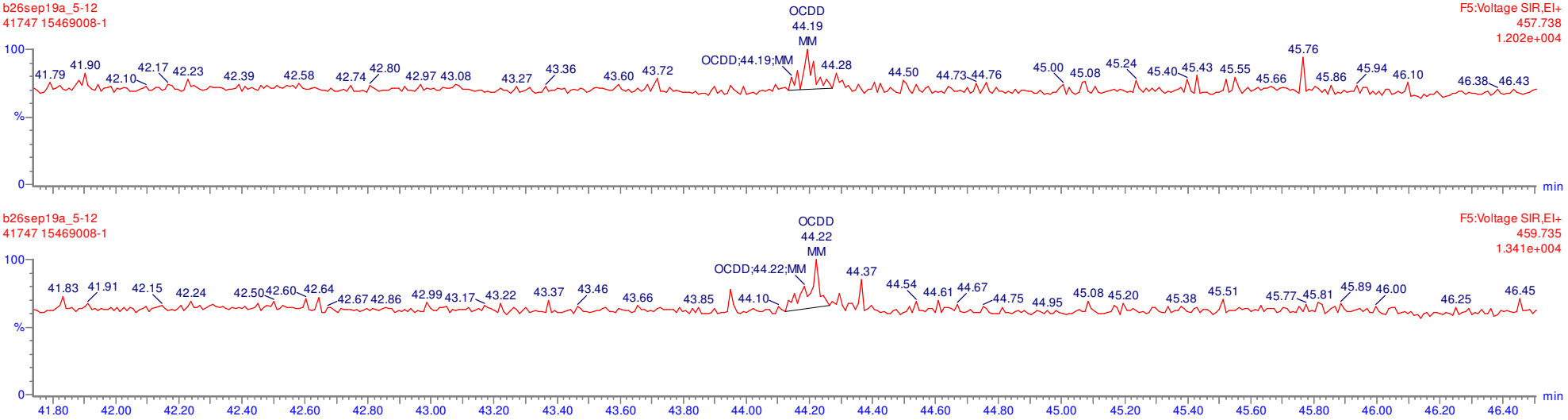
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	6.70e1	7.59e1	1.43e2	38.73	0.88	YES	0.087	0.152	1.43e3	665	2.2	1.80e3	754	2.4	bd	bb

MANUAL INTEGRATION
METHOD 1613
HRP763_1



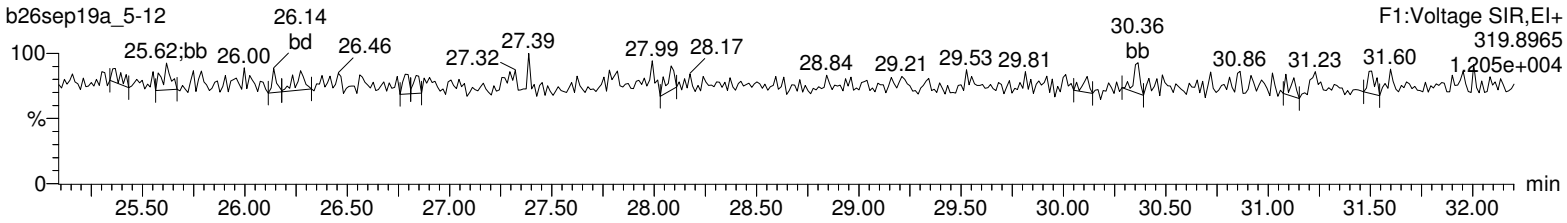
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

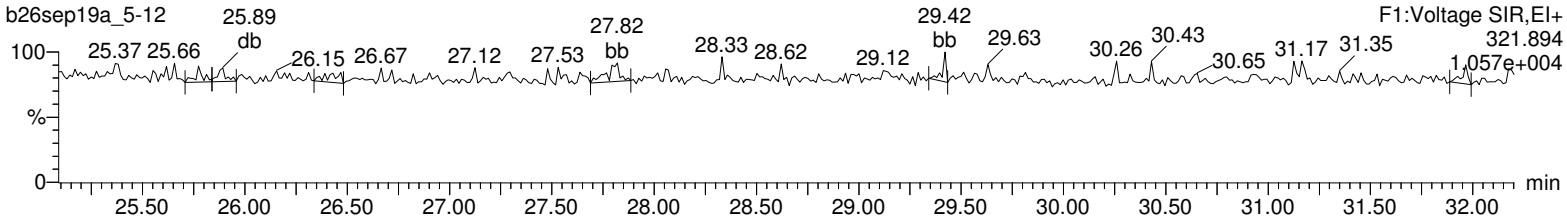
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

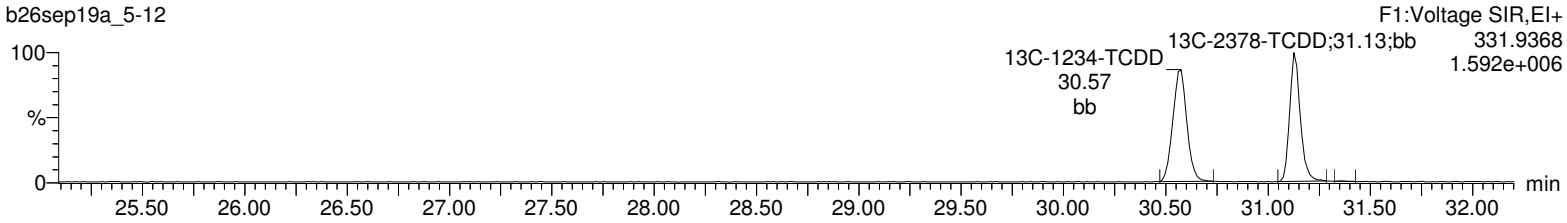
Total-tetradioxins



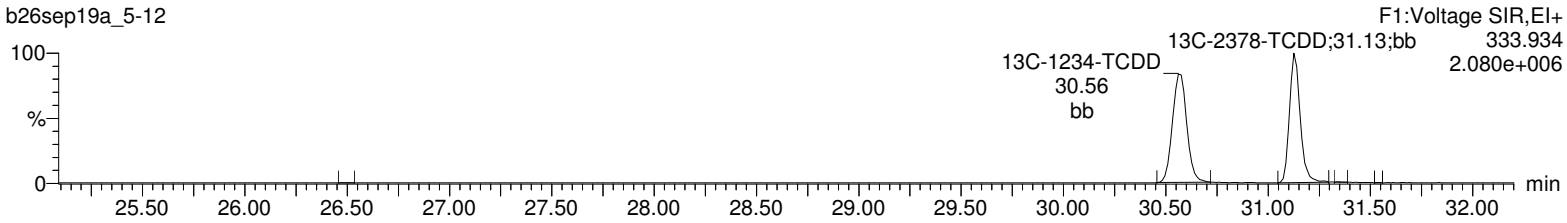
Total-tetradioxins



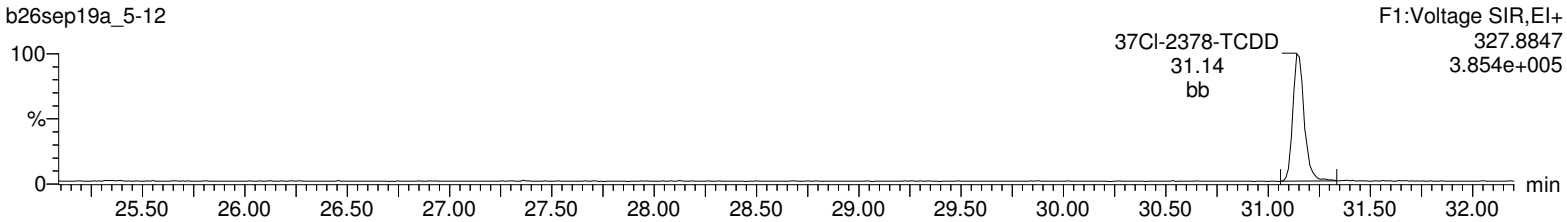
13C-2378-TCDD



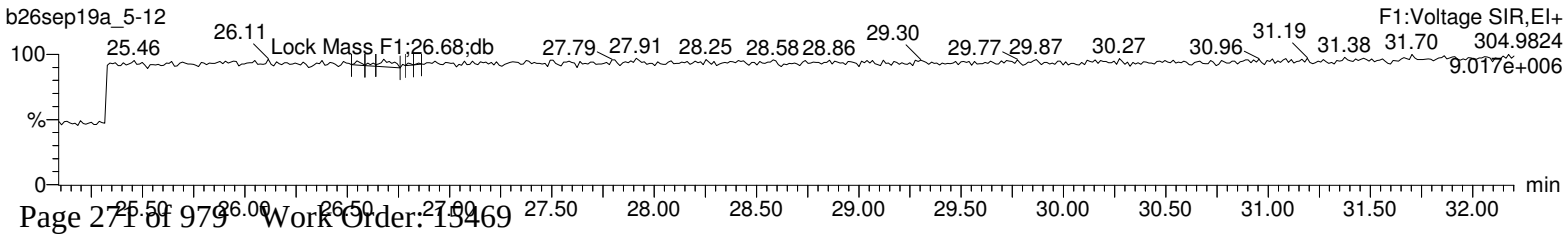
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



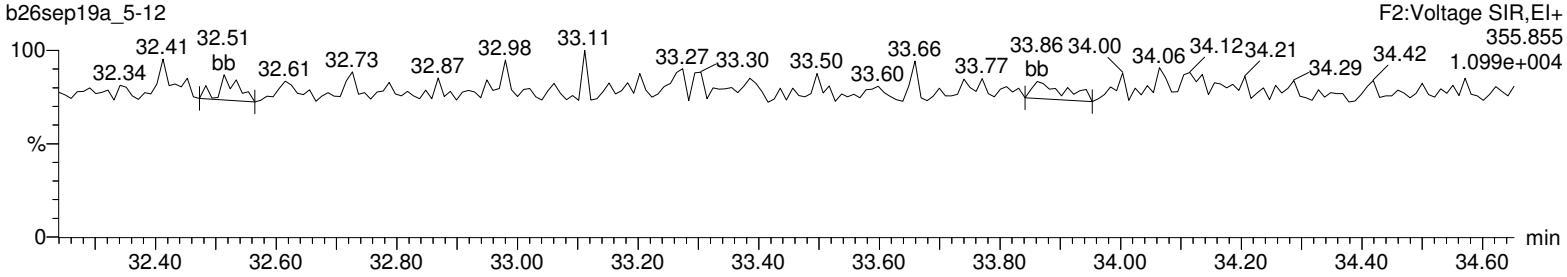
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

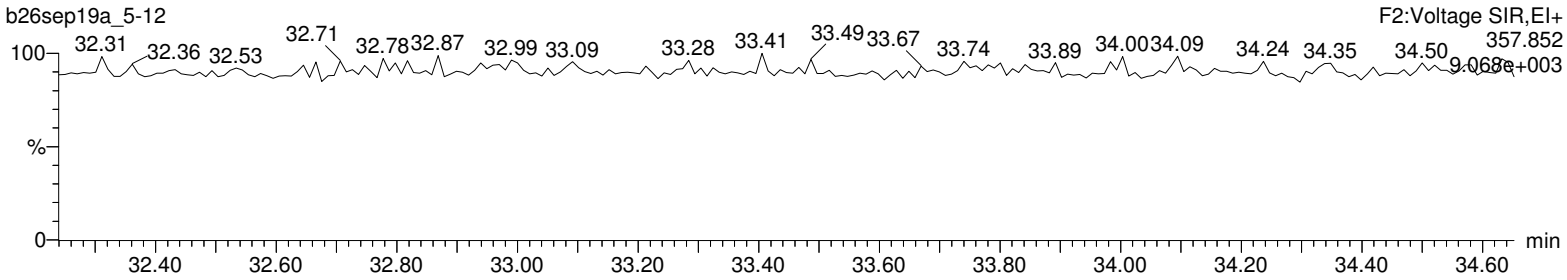
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

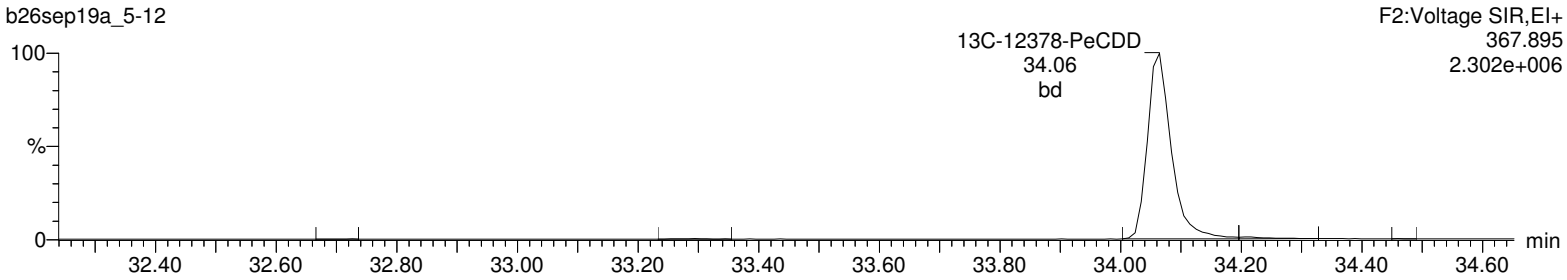
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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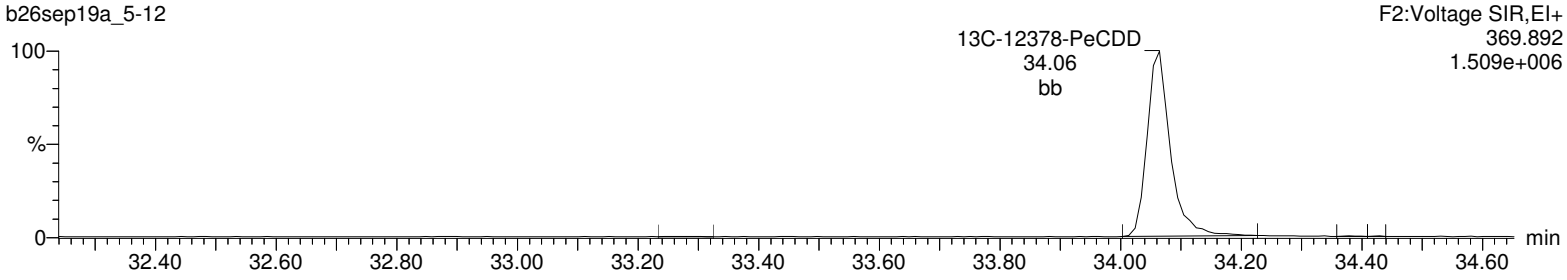
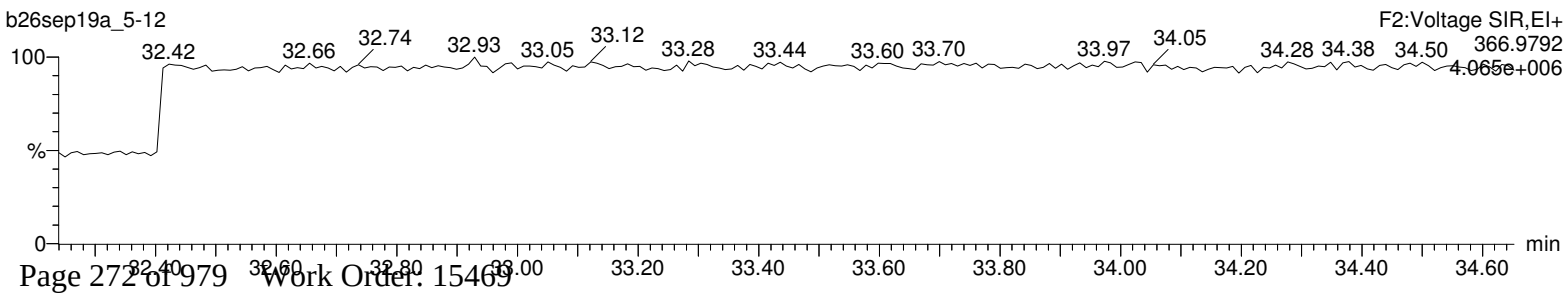


Lock Mass F2



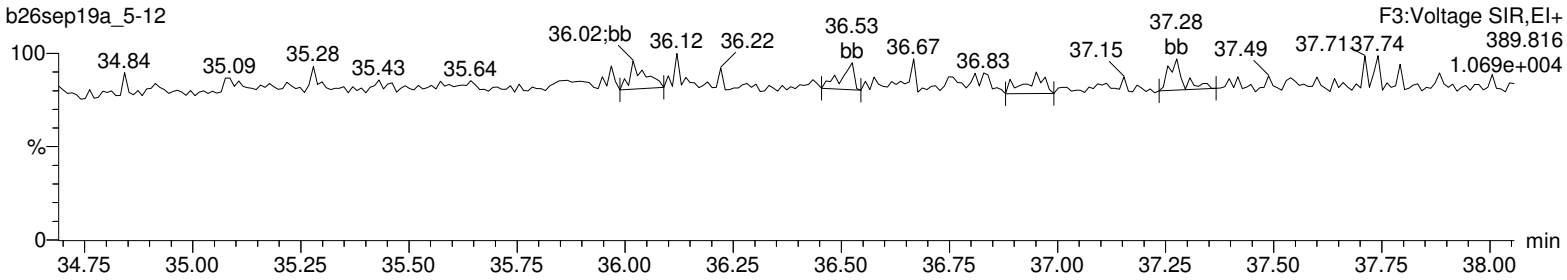
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

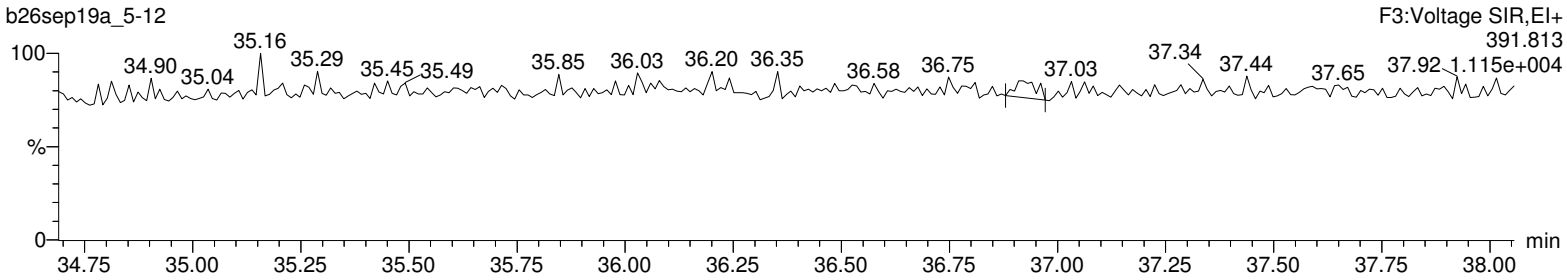
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

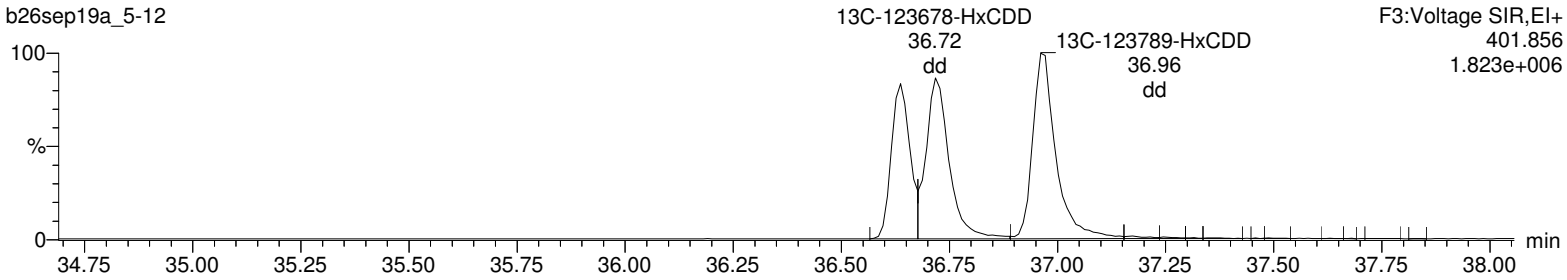
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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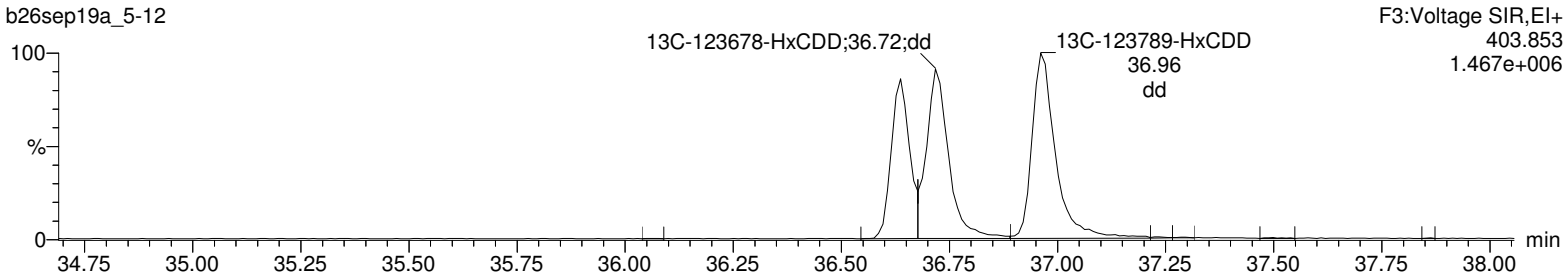
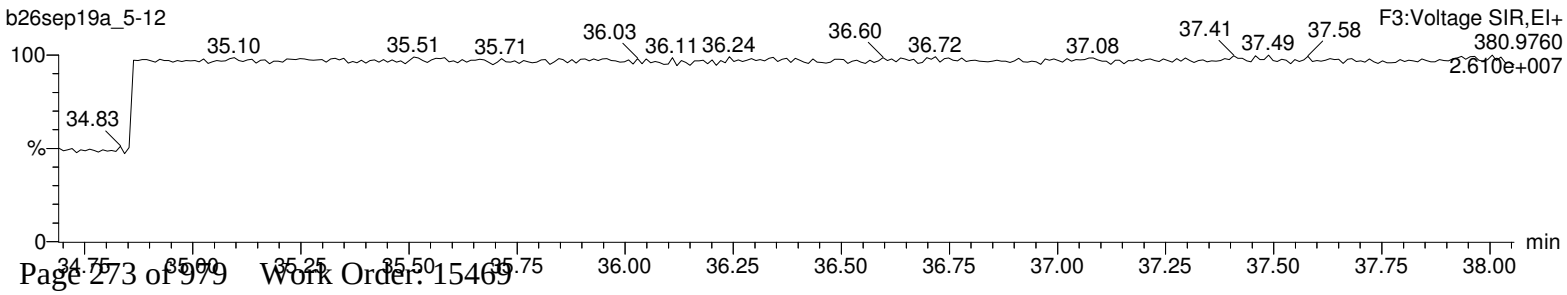


Lock Mass F3



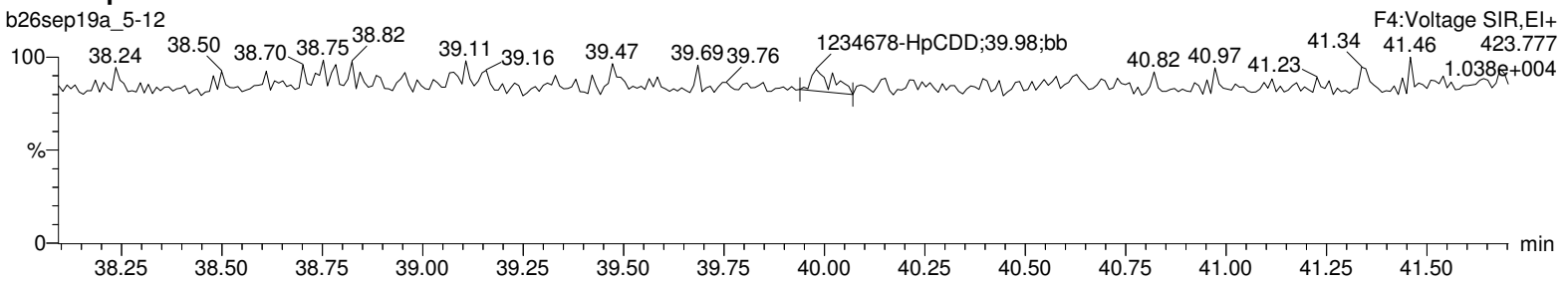
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

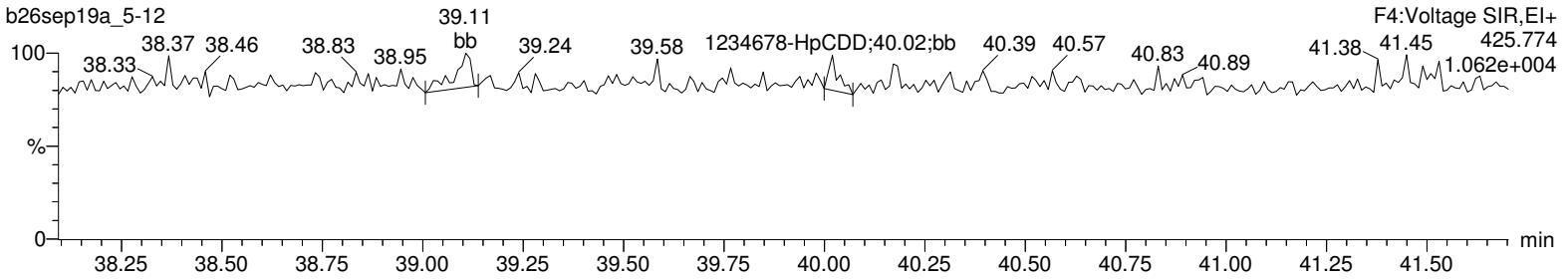
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

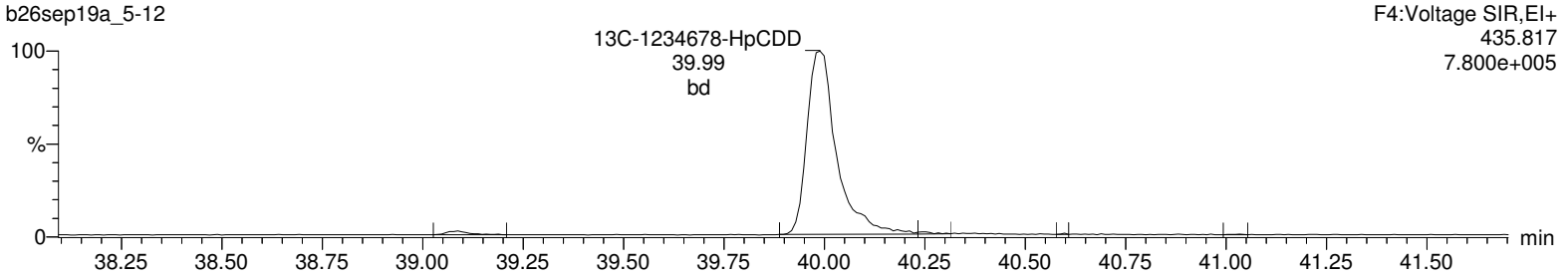
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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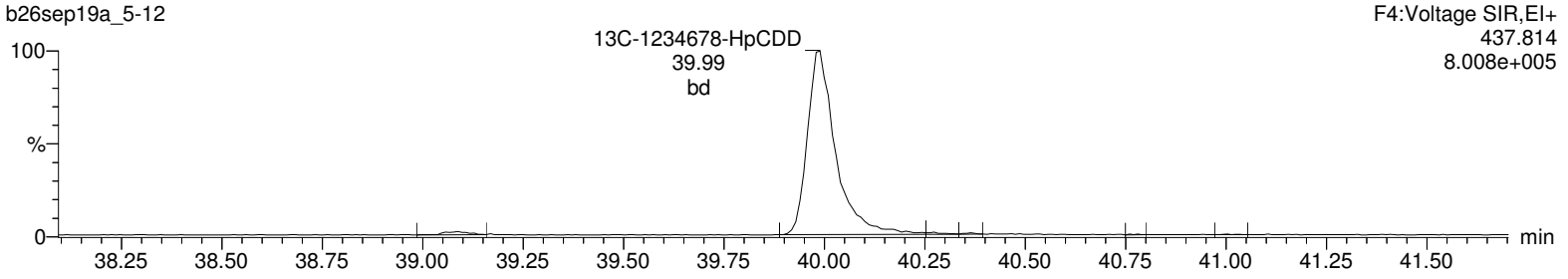
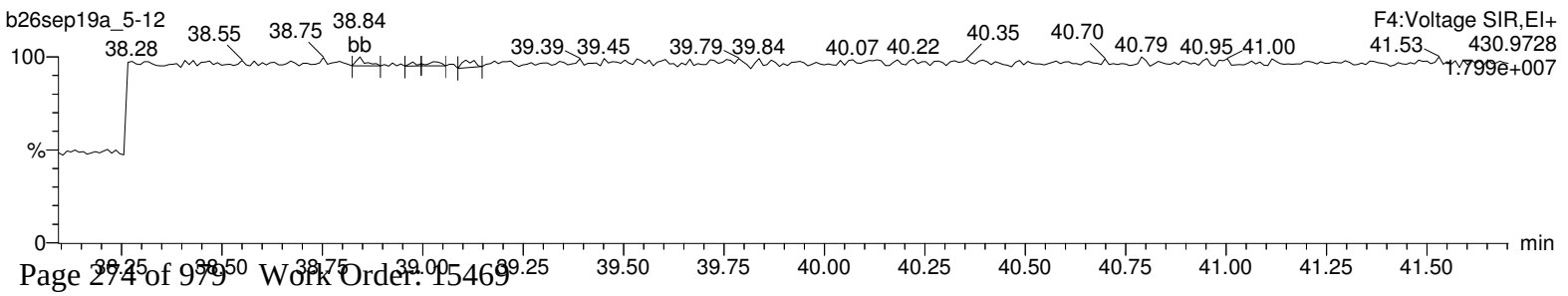


Lock Mass F4



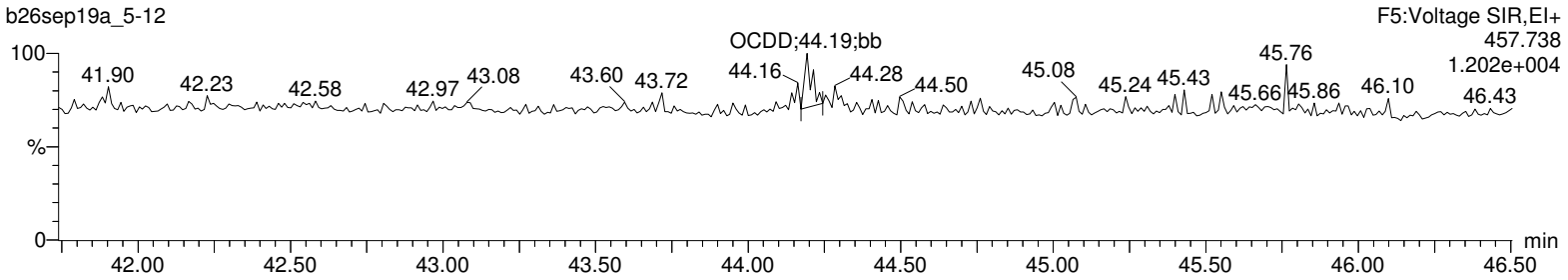
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

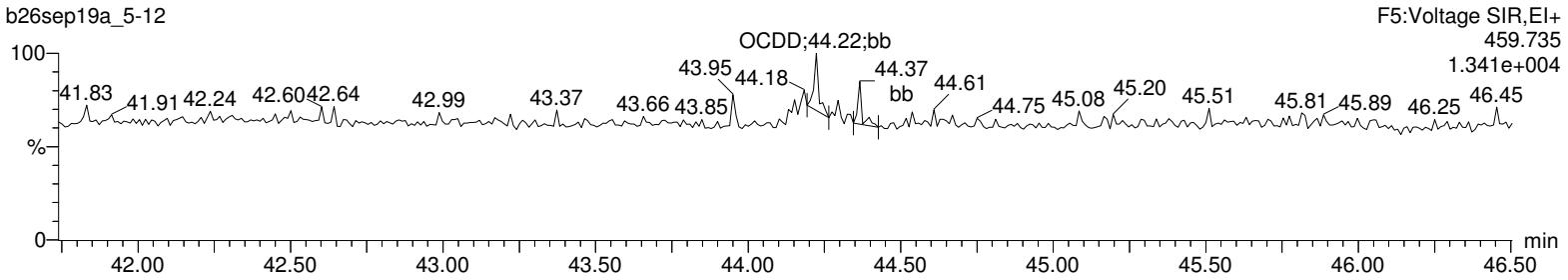
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDD



OCDD



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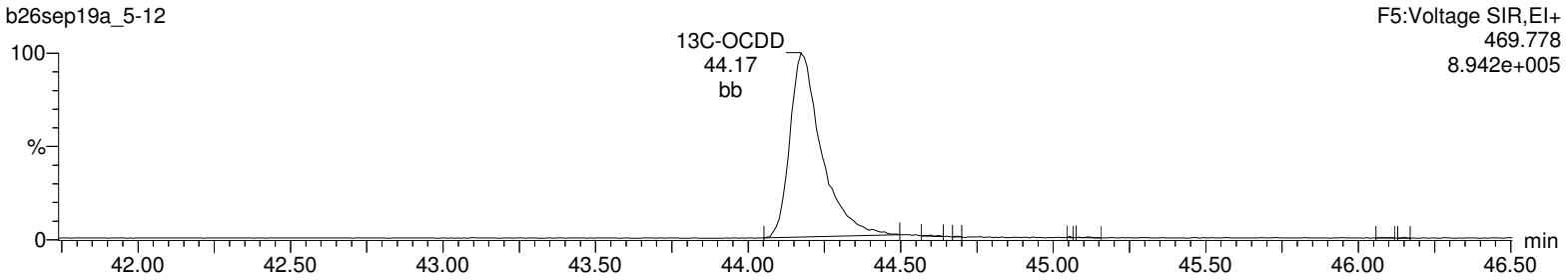

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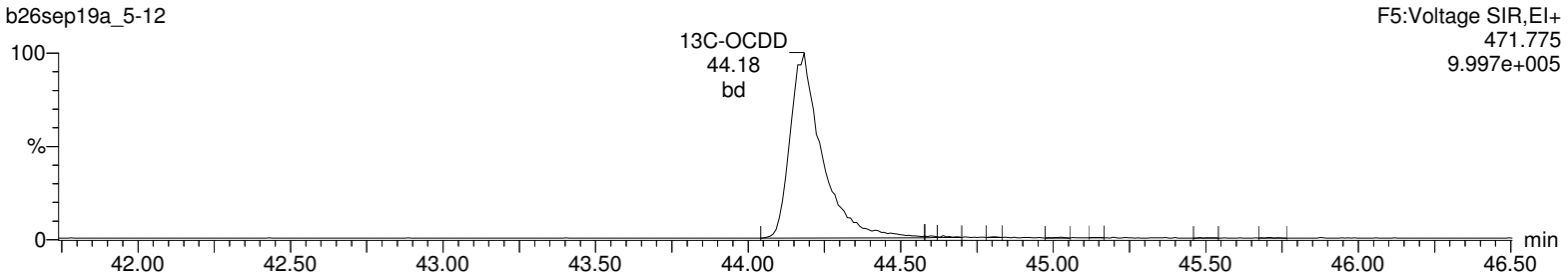
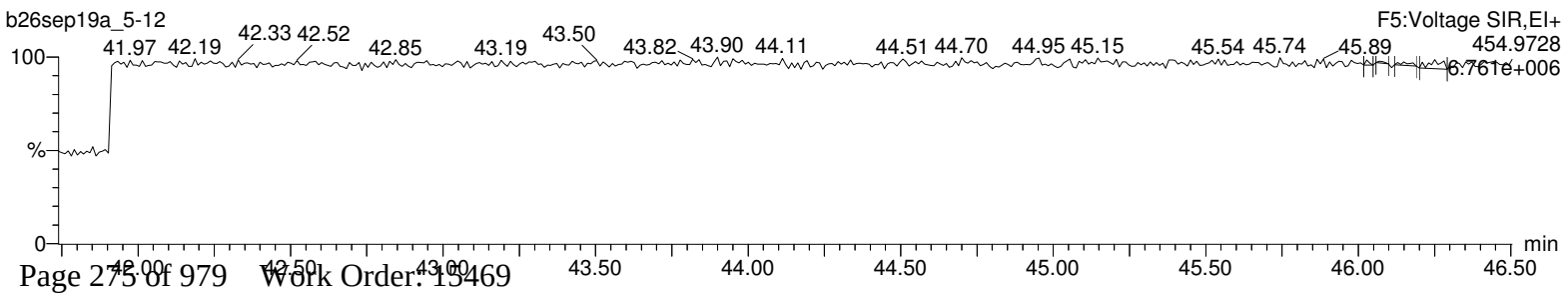


Lock Mass F5



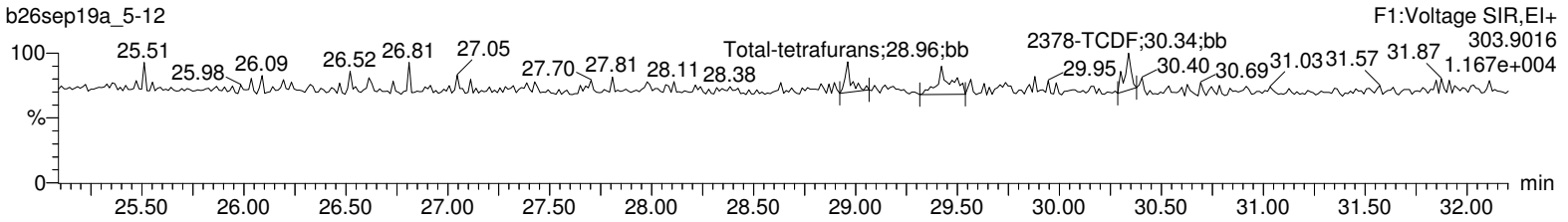
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

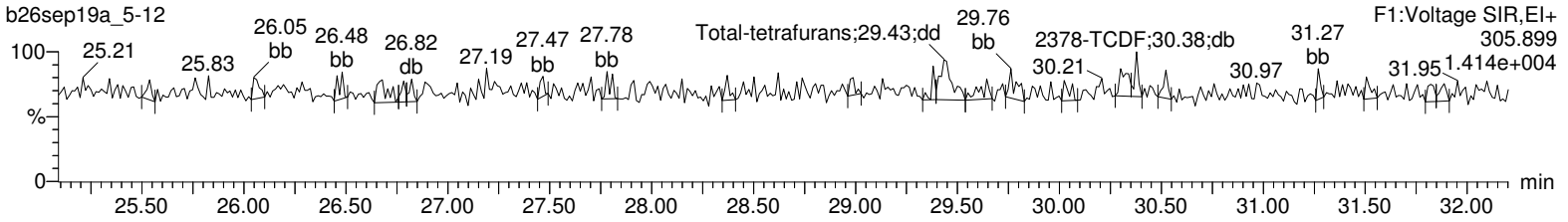
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

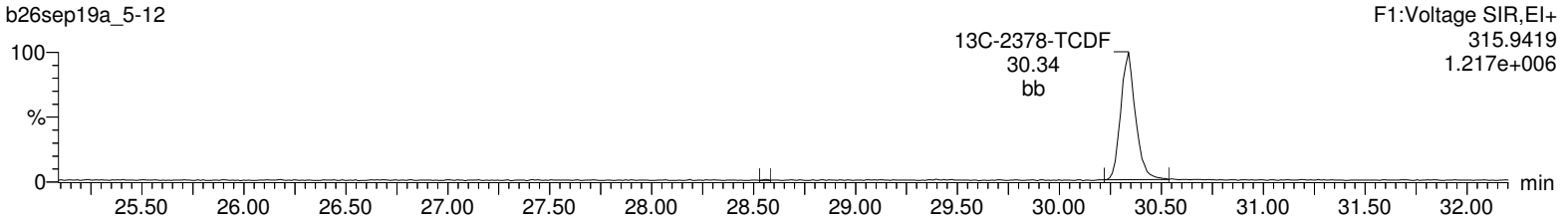
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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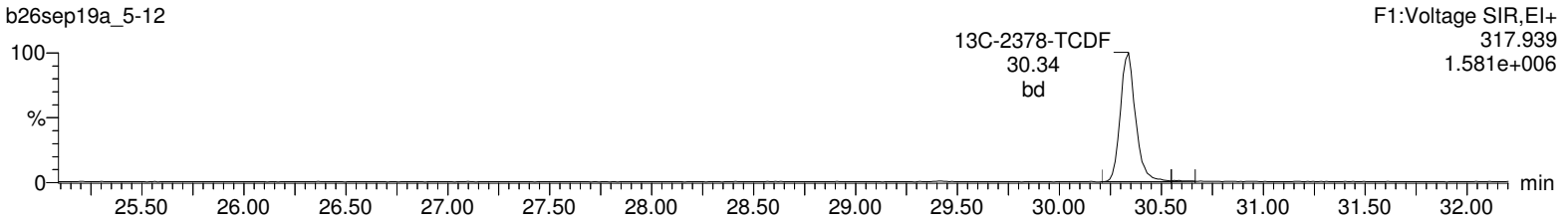
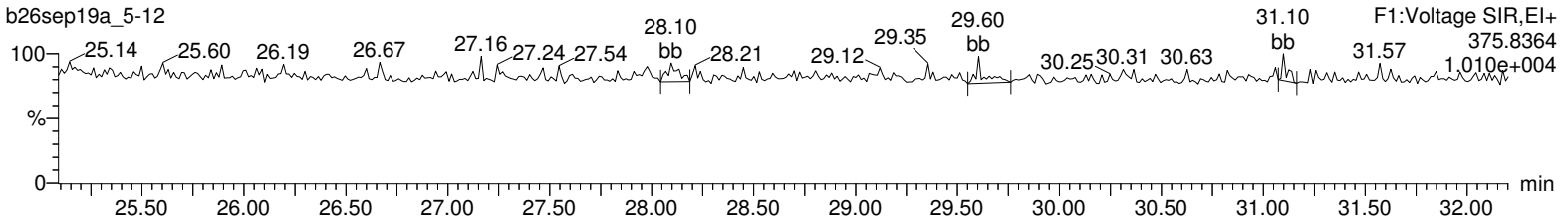
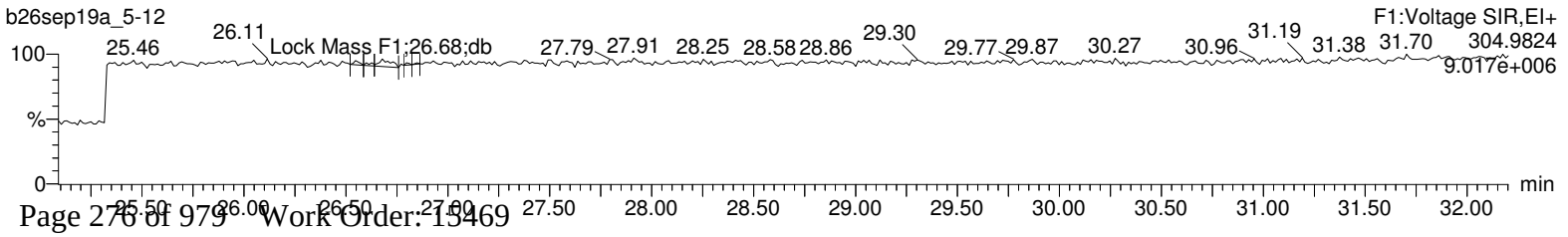


HxDPE



Lock Mass F1



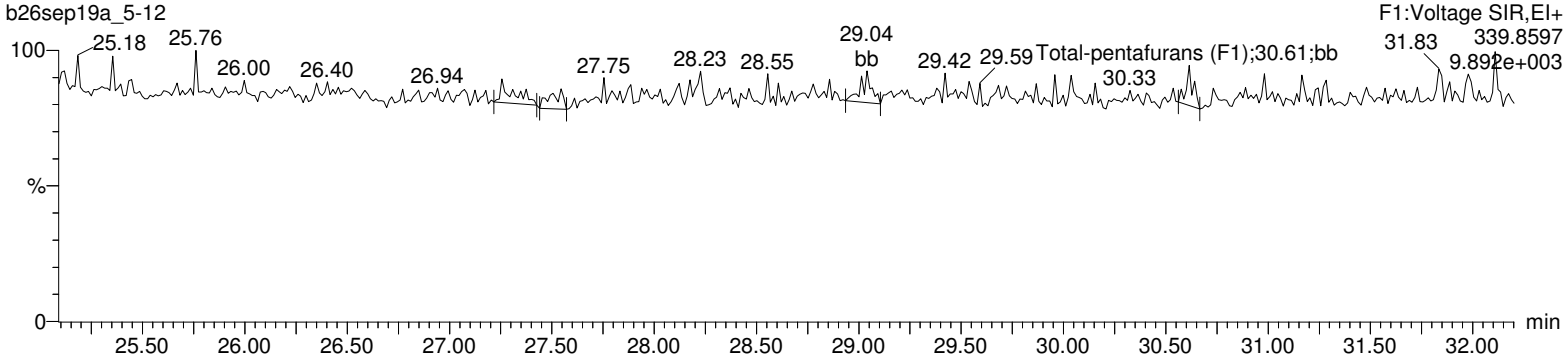
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

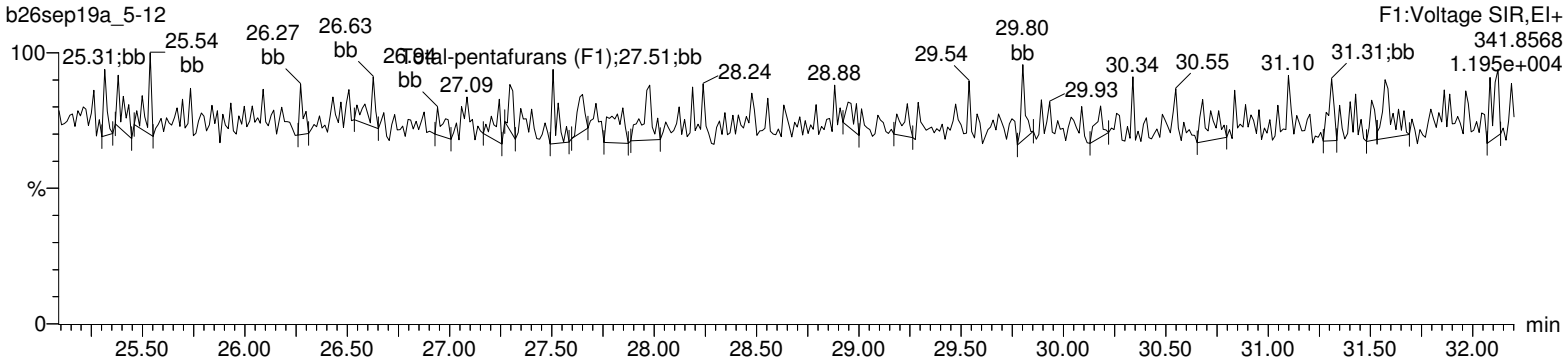
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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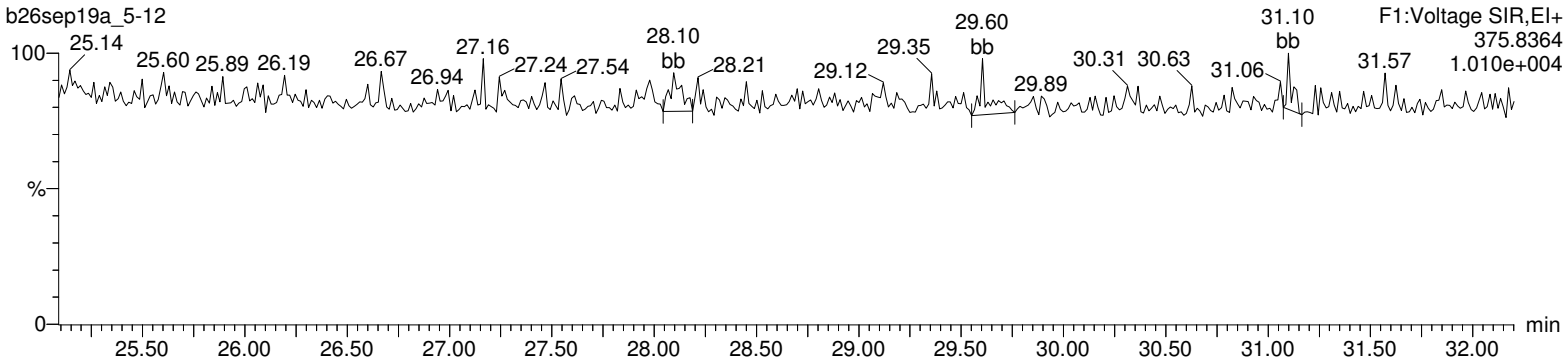
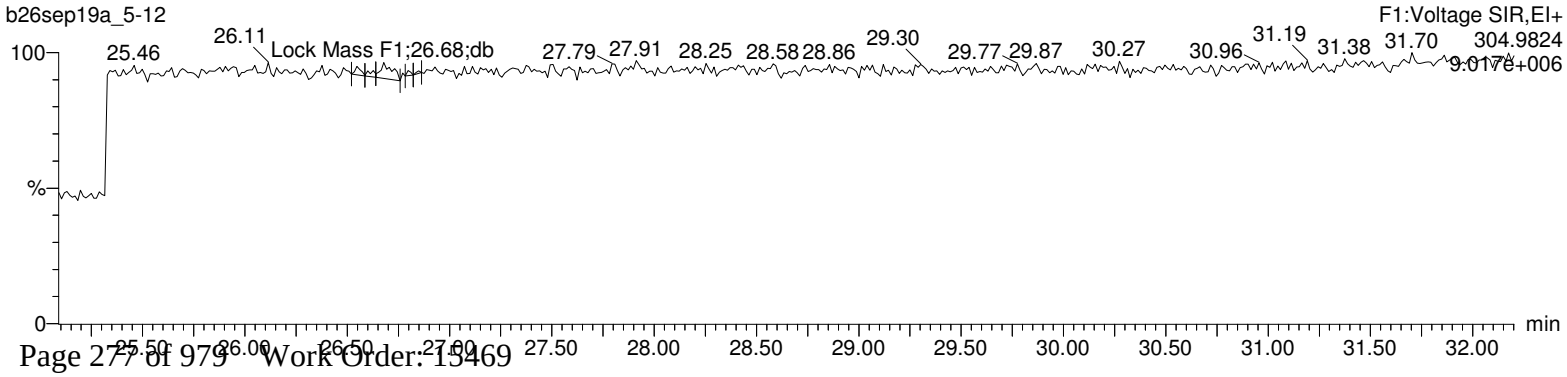


Lock Mass F1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
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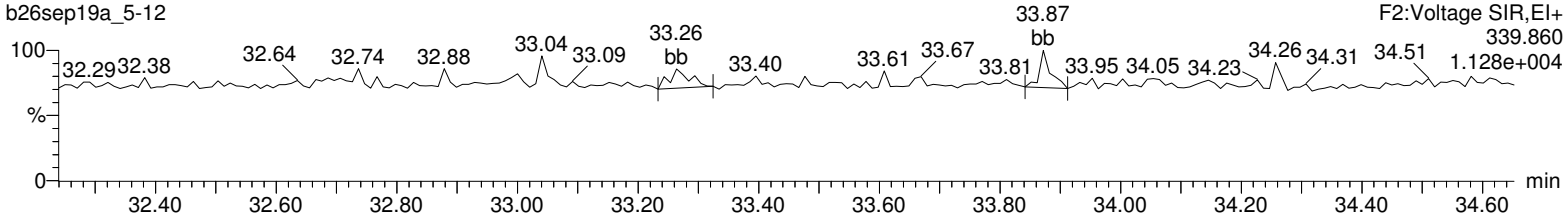
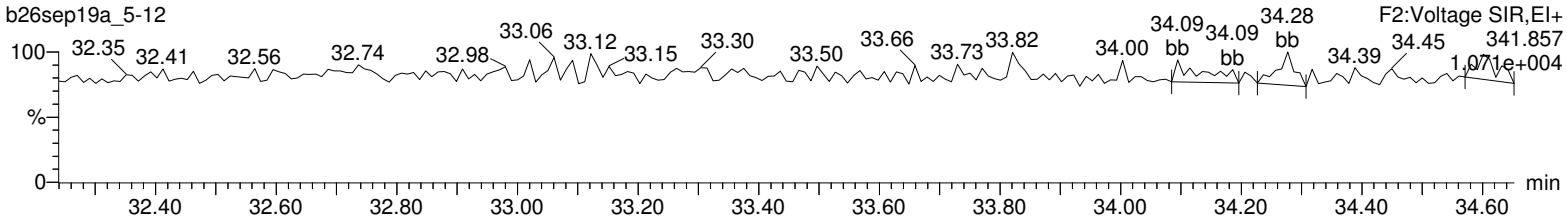
Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

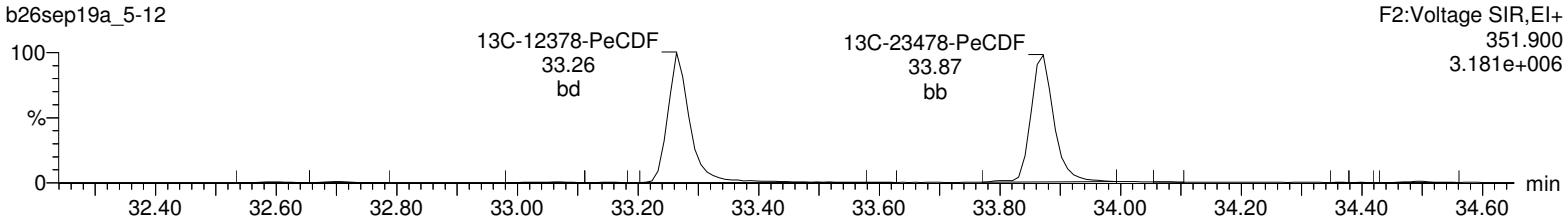
Total-pentafurans



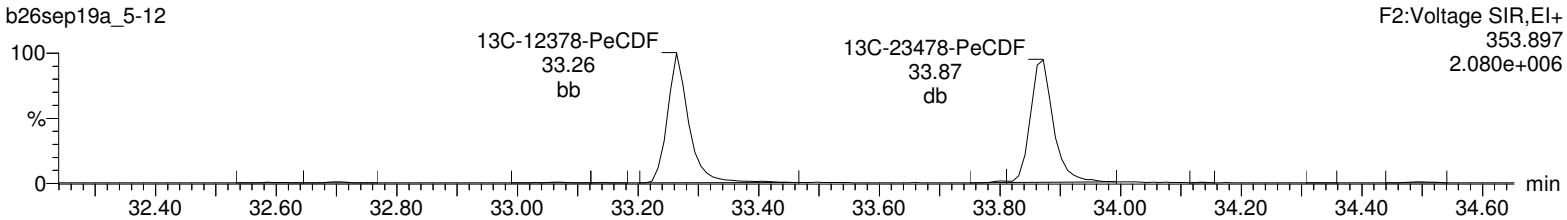
Total-pentafurans



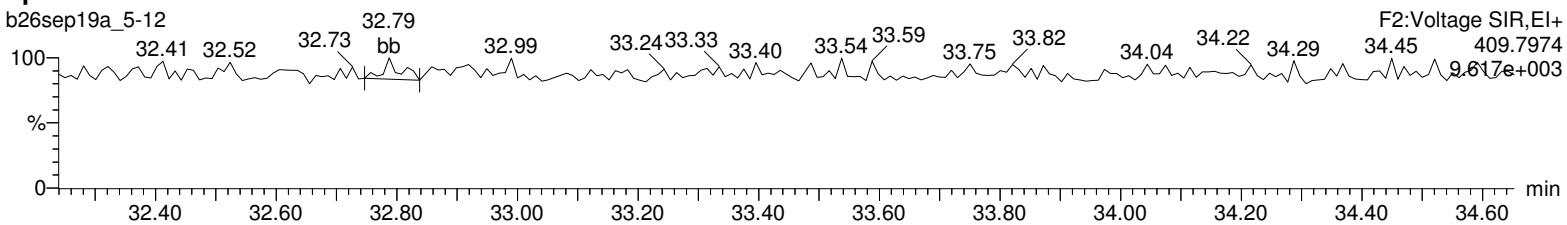
13C-12378-PeCDF



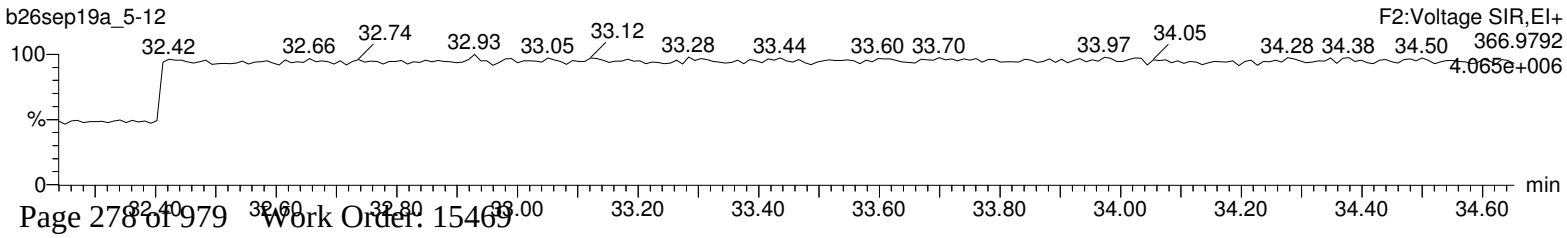
13C-12378-PeCDF



HpDPE



Lock Mass F2



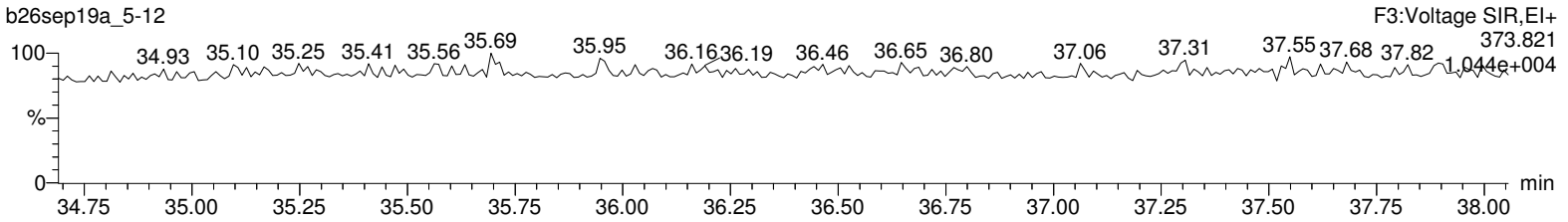
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

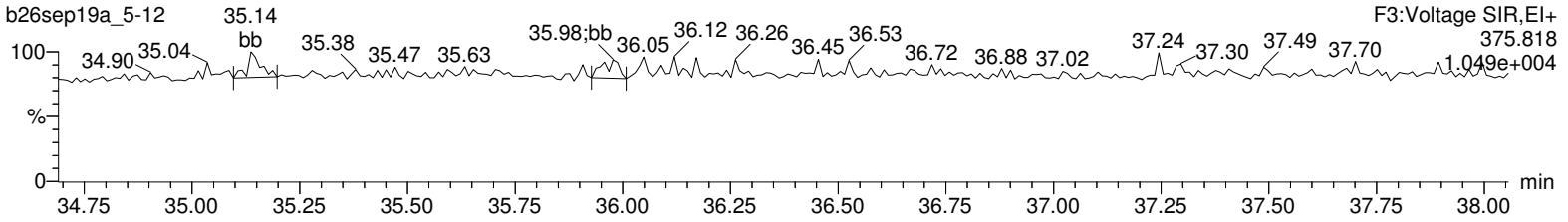
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

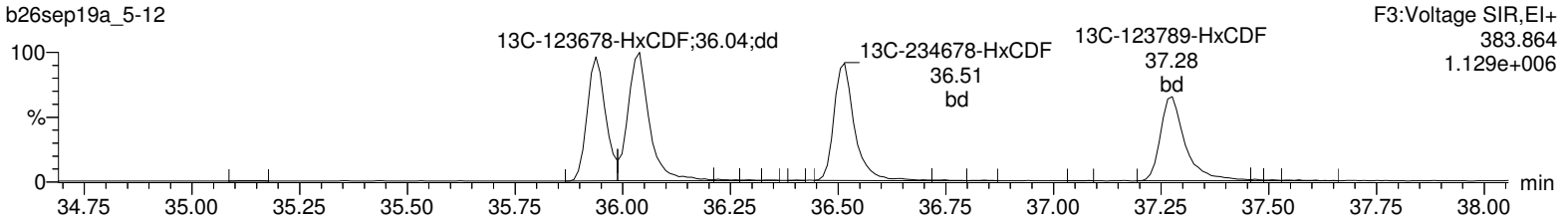
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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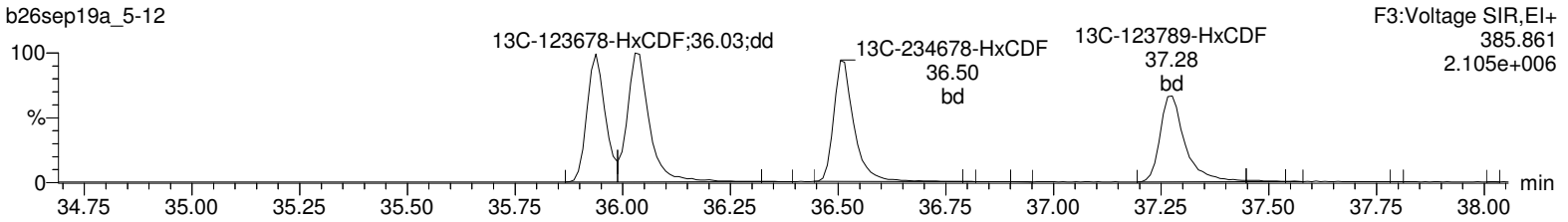
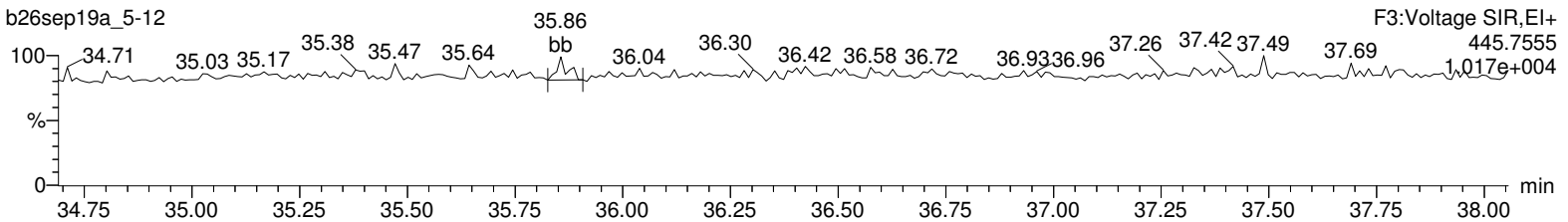
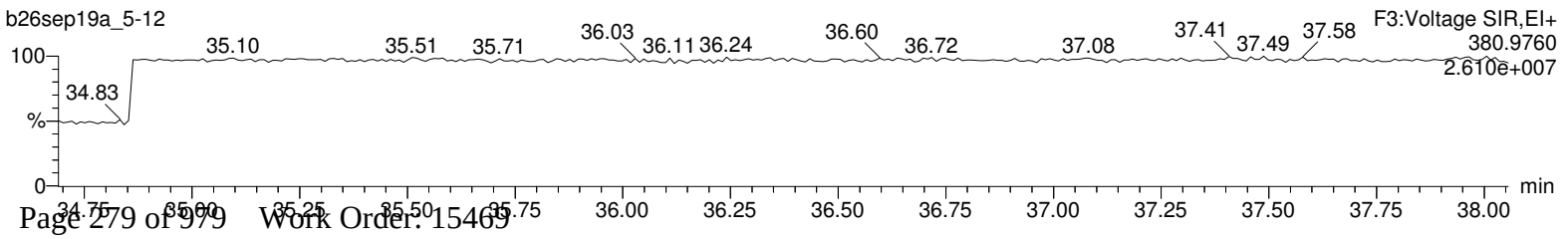


OcDPE



Lock Mass F3



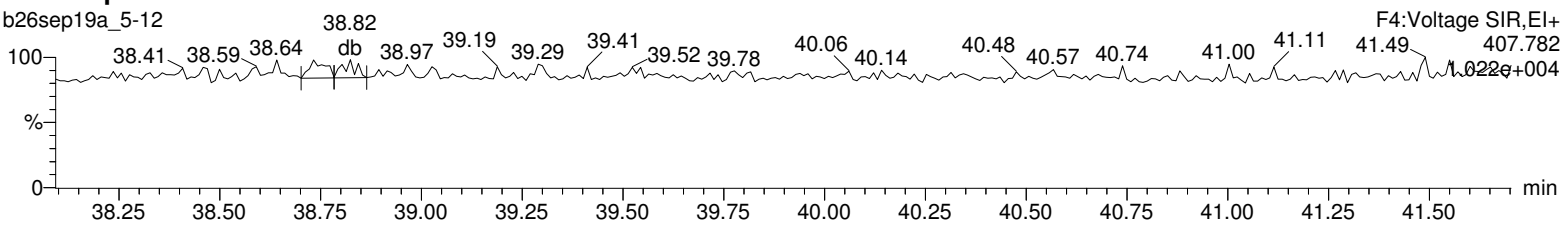
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

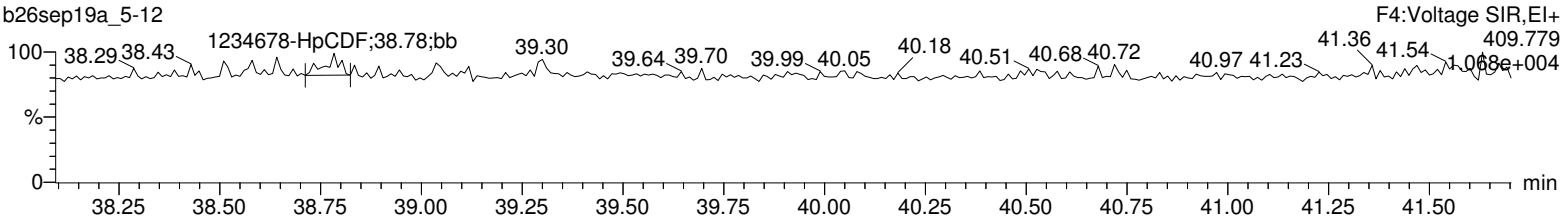
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

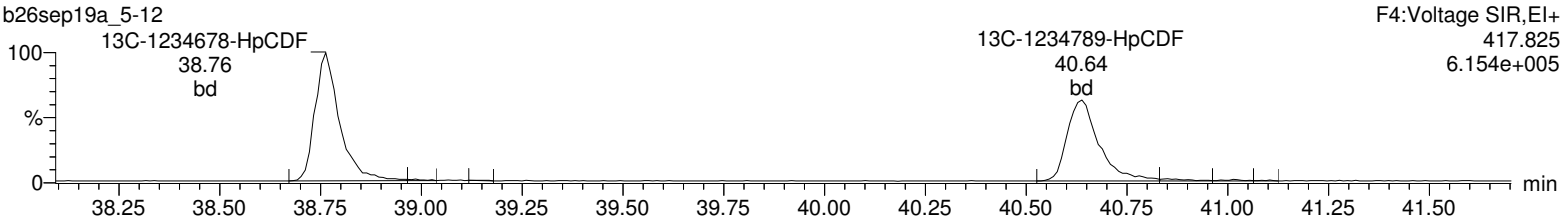
Total-heptafurans



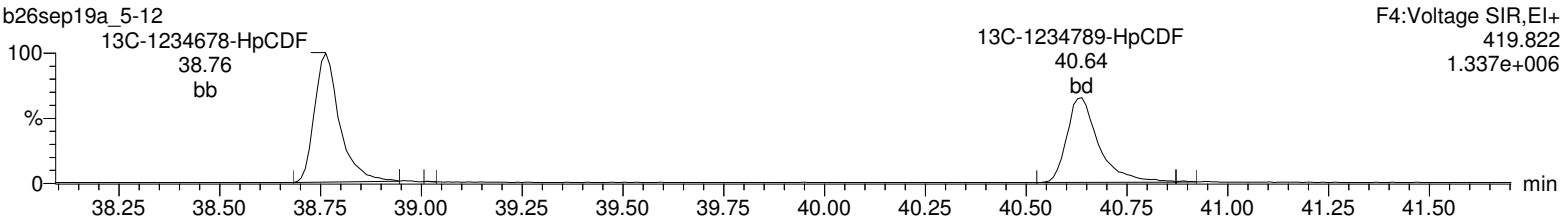
Total-heptafurans



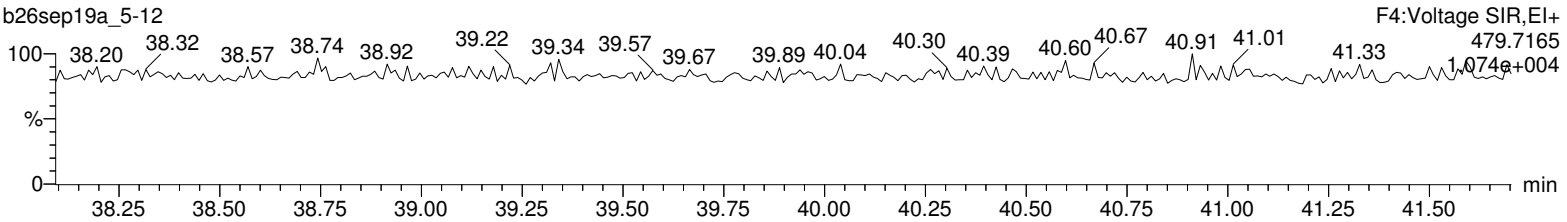
13C-1234678-HpCDF



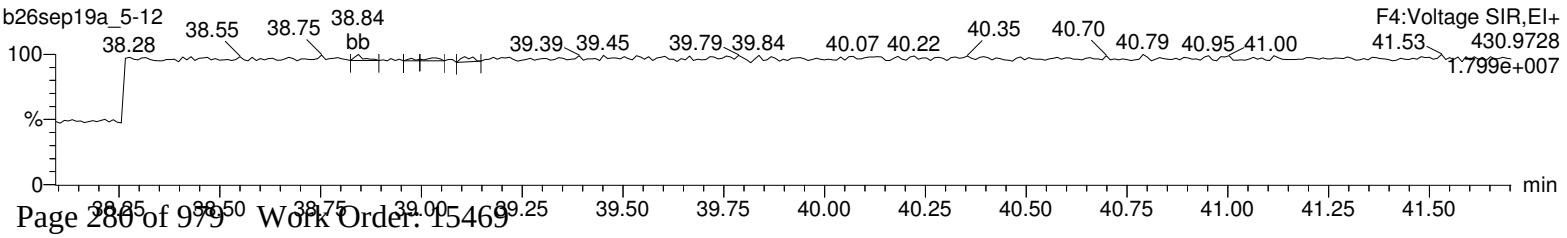
13C-1234678-HpCDF



NoDPE



Lock Mass F4



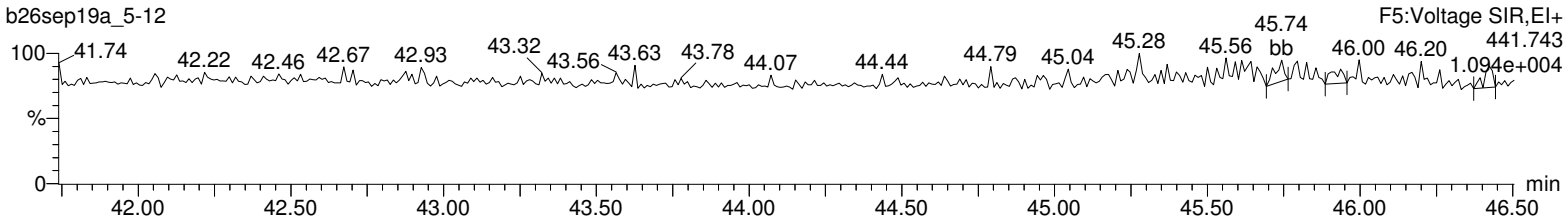
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

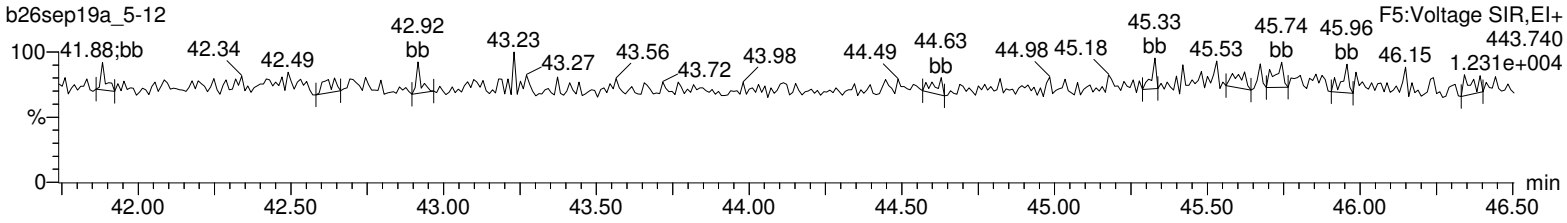
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-12, Date: 28-Sep-2019, Time: 08:42:25, ID: 15469008-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

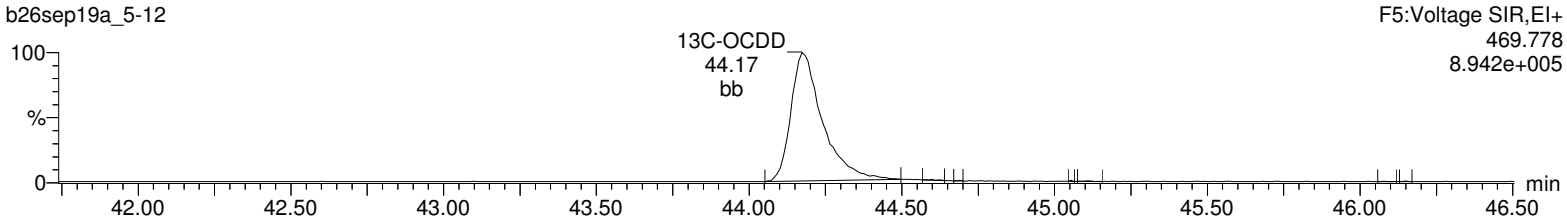
OCDF



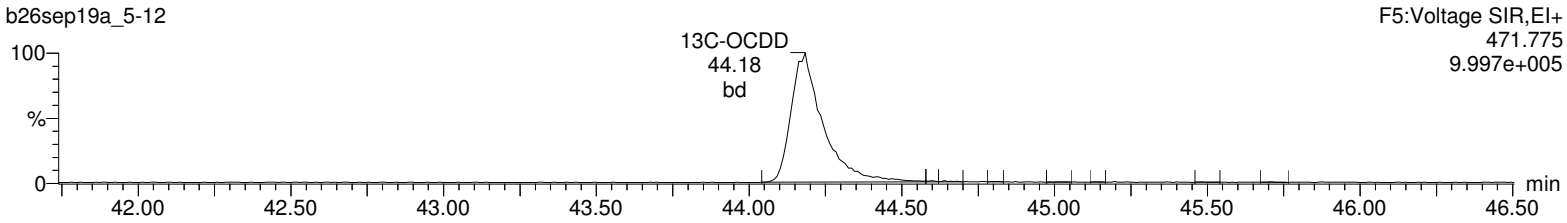
OCDF



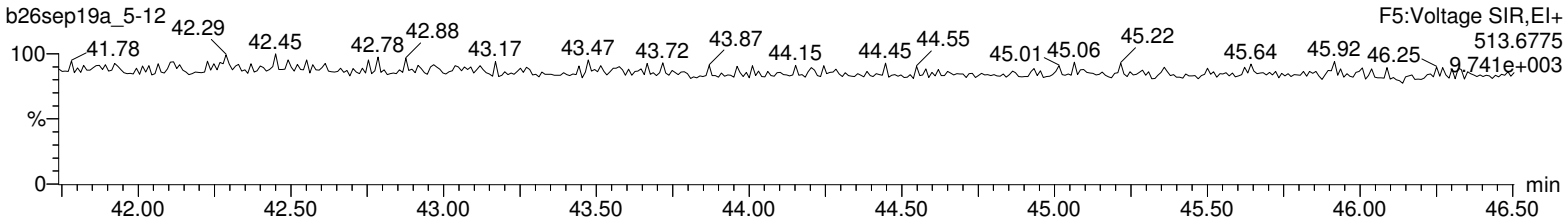
13C-OCDD



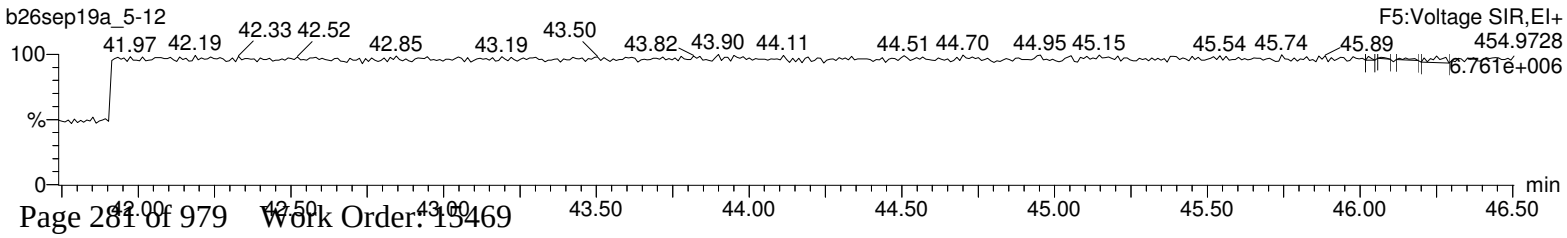
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469009**	**Date Collected:**	**08/28/2019 12:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**30.5**
Client ID:	**J6-SC1b-100to110-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 09:56**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.58 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0979	pg/g	0.0979	0.924
40321-76-4	1,2,3,7,8-PeCDD	U	0.114	pg/g	0.114	4.62
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.116	pg/g	0.116	4.62
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.112	pg/g	0.112	4.62
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.116	pg/g	0.116	4.62
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.246	pg/g	0.246	4.62
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	0.722	pg/g	0.578	9.24
51207-31-9	2,3,7,8-TCDF	BJ	0.301	pg/g	0.170	0.924
57117-41-6	1,2,3,7,8-PeCDF	U	0.0903	pg/g	0.0903	4.62
57117-31-4	2,3,4,7,8-PeCDF	U	0.0792	pg/g	0.0792	4.62
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.0901	pg/g	0.0901	4.62
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.0981	pg/g	0.0981	4.62
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0997	pg/g	0.0997	4.62
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.151	pg/g	0.151	4.62
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.111	pg/g	0.110	4.62
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.188	pg/g	0.188	4.62
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.495	pg/g	0.495	9.24
41903-57-5	Total TeCDD	U	0.0979	pg/g	0.0979	0.924
36088-22-9	Total PeCDD	U	0.114	pg/g	0.114	4.62
34465-46-8	Total HxCDD	U	0.112	pg/g	0.112	4.62
37871-00-4	Total HpCDD	U	0.246	pg/g	0.246	4.62
30402-14-3	Total TeCDF	BJ	0.519	pg/g	0.170	0.924
30402-15-4	Total PeCDF	U	0.0792	pg/g	0.0792	4.62
55684-94-1	Total HxCDF	U	0.0901	pg/g	0.0901	4.62
38998-75-3	Total HpCDF	BJ	0.111	pg/g	0.110	4.62
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0314	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.192	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		149	185	pg/g	80.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		141	185	pg/g	76.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		145	185	pg/g	78.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		158	185	pg/g	85.7	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		154	185	pg/g	83.2	(23%-140%)
13C-OCDD		229	369	pg/g	61.9	(17%-157%)
13C-2,3,7,8-TCDF		137	185	pg/g	73.9	(24%-169%)
13C-1,2,3,7,8-PeCDF		137	185	pg/g	74.3	(24%-185%)
13C-2,3,4,7,8-PeCDF		135	185	pg/g	73.3	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		153	185	pg/g	82.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		149	185	pg/g	80.7	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		147	185	pg/g	79.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		145	185	pg/g	78.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469009**	**Date Collected:**	**08/28/2019 12:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**30.5**
Client ID:	**J6-SC1b-100to110-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 09:56**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.58 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		151	185	pg/g	81.6	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		145	185	pg/g	78.4	(26%-138%)
37Cl-2,3,7,8-TCDD		16.9	18.5	pg/g	91.3	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:21:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:21:18 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.89e1	5.48e1	1.24e2	31.18	1.001	1.26	YES	0.013	0.0530	2.12e3	1540	1.4	2.39e3	1131	2.1	db	db
2	12378-PeCDD	6.92e1	5.59e1	1.25e2	34.08	1.000	1.24	YES	0.022	0.0618	2.28e3	1616	1.4	1.12e3	1043	1.1	bb	bb
3	123478-HxCDD							NO		0.0626		968			1027			
4	123678-HxCDD							NO		0.0609		968			1027			
5	123789-HxCDD							NO		0.0629		968			1027			
6	1234678-HpCDD	1.77e2	1.15e2	2.92e2	40.06	1.001	1.54	YES	0.080	0.133	3.51e3	988	3.6	2.07e3	959	2.2	bb	MM
7	OCDD	3.86e2	4.96e2	8.82e2	44.29	1.001	0.78	NO	0.391	0.313	4.02e3	947	4.2	7.54e3	1054	7.2	MM	MM
8	2378-TCDF	6.74e2	9.03e2	1.58e3	30.38	1.001	0.75	NO	0.163	0.0918	9.06e3	1103	8.2	1.23e4	2352	5.2	bb	MM
9	12378-PeCDF	1.75e2	2.30e2	4.06e2	33.29	1.001	0.76	YES	0.051	0.0489	3.13e3	1513	2.1	4.06e3	1470	2.8	bb	MM
10	23478-PeCDF	1.30e2	9.40e1	2.24e2	33.90	1.001	1.39	NO	0.026	0.0429	3.65e3	1513	2.4	3.50e3	1470	2.4	MM	bb
11	123478-HxCDF	1.11e2	1.44e2	2.55e2	35.97	1.000	0.77	YES	0.041	0.0488	2.56e3	1258	2.0	2.53e3	1008	2.5	MM	bd
12	123678-HxCDF	1.21e2	1.25e2	2.47e2	36.06	1.000	0.97	YES	0.033	0.0531	4.09e3	1258	3.2	3.64e3	1008	3.6	MM	dd
13	234678-HxCDF	1.87e2	1.61e2	3.48e2	36.54	1.000	1.16	NO	0.052	0.0540	3.14e3	1258	2.5	2.53e3	1008	2.5	MM	MM
14	123789-HxCDF	1.46e2	1.00e2	2.46e2	37.34	1.001	1.46	YES	0.047	0.0819	4.08e3	1258	3.2	4.48e3	1008	4.4	MM	bb
15	1234678-HpCDF	1.75e2	1.57e2	3.32e2	38.80	1.000	1.12	NO	0.060	0.0593	2.54e3	679	3.7	2.90e3	897	3.2	MM	MM
16	1234789-HpCDF	1.47e2	1.29e2	2.76e2	40.68	1.000	1.15	NO	0.070	0.102	2.09e3	679	3.1	2.34e3	897	2.6	MM	MM
17	OCDF	1.76e2	1.71e2	3.47e2	44.50	1.006	1.03	YES	0.138	0.268	2.36e3	723	3.3	3.01e3	1180	2.6	MM	MM
18	13C-2378-TCDD	4.53e5	5.92e5	1.05e6	31.14	1.018	0.77	NO	80.508	0.140	6.14e6	4846	1265.9	8.05e6	2813	2863.4	bd	bd
19	13C-12378-PeCDD	4.06e5	2.63e5	6.69e5	34.08	1.114	1.54	NO	76.150	0.135	7.68e6	2528	3037.7	4.91e6	2480	1979.0	bb	bb
20	13C-123478-HxCDD	2.51e5	2.03e5	4.54e5	36.66	0.991	1.24	NO	78.775	0.266	4.72e6	5079	928.8	3.86e6	2852	1352.9	bd	bd
21	13C-123678-HxCDD	3.66e5	2.96e5	6.62e5	36.75	0.993	1.24	NO	85.709	0.199	5.12e6	5079	1007.7	4.12e6	2852	1443.1	dd	dd
22	13C-1234678-HpCDD	1.97e5	1.88e5	3.85e5	40.02	1.082	1.05	NO	83.233	0.261	1.98e6	3288	603.5	1.93e6	2949	655.9	bd	bd
23	13C-OCDD	2.29e5	2.65e5	4.94e5	44.23	1.196	0.87	NO	123.862	0.368	1.62e6	4409	368.2	1.85e6	3167	585.3	bd	bd
24	13C-2378-TCDF	4.65e5	6.18e5	1.08e6	30.35	0.992	0.75	NO	73.930	0.186	4.53e6	7136	634.4	6.16e6	4396	1401.5	bb	bb
25	13C-12378-PeCDF	5.34e5	3.42e5	8.76e5	33.27	1.088	1.56	NO	74.300	0.249	1.02e7	6553	1561.0	6.58e6	5847	1126.0	bb	bb
26	13C-23478-PeCDF	5.42e5	3.45e5	8.87e5	33.88	1.108	1.57	NO	73.284	0.242	1.09e7	6553	1669.8	6.93e6	5847	1185.9	bb	bb
27	13C-123478-HxCDF	1.90e5	3.61e5	5.51e5	35.96	0.972	0.52	NO	82.700	0.291	3.52e6	3820	922.1	6.67e6	6200	1075.4	bd	bd
28	13C-123678-HxCDF	2.44e5	4.56e5	7.00e5	36.05	0.975	0.54	NO	80.651	0.223	3.54e6	3820	925.4	6.72e6	6200	1084.5	dd	db
29	13C-234678-HxCDF	1.96e5	3.90e5	5.86e5	36.54	0.988	0.50	NO	79.483	0.263	3.11e6	3820	813.5	6.07e6	6200	978.3	bb	bd
30	13C-123789-HxCDF	1.65e5	3.25e5	4.90e5	37.30	1.008	0.51	NO	78.743	0.312	2.19e6	3820	574.6	4.13e6	6200	666.8	bd	bd
31	13C-1234678-HpCDF	1.47e5	3.20e5	4.67e5	38.79	1.049	0.46	NO	81.560	0.277	1.75e6	4137	423.6	3.98e6	4045	983.5	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:21:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:21:18 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	9.90e4	2.23e5	3.22e5	40.67	1.099	0.44	NO	78.412	0.386	9.65e5	4137	233.2	2.14e6	4045	528.0	bd	bb
33	13C-1234-TCDD	4.93e5	6.35e5	1.13e6	30.59	0.000	0.78	NO	100.000	0.161	5.21e6	4846	1075.0	6.82e6	2813	2424.7	bb	bb
34	13C-123789-HxCDD	3.99e5	3.32e5	7.30e5	36.99	0.000	1.20	NO	100.000	0.210	5.15e6	5079	1014.3	4.16e6	2852	1457.7	dd	dd
35	37Cl-2378-TCDD	1.11e5		1.11e5	31.17	1.019			9.126	0.0267	1.54e6	1369	1123.3				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:21:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:21:18 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.89e1	5.48e1	1.24e2	31.18	1.26	YES	0.013	0.0530	2.12e3	1540	1.4	2.39e3	1131	2.1	db	db
2	Total-tetradioxins	1.23e2	8.21e1	2.05e2	31.07	1.50	YES	0.022	0.0530	2.14e3	1540	1.4	2.06e3	1131	1.8	dd	bd
3	Total-tetradioxins	1.87e2	1.24e2	3.11e2	30.35	1.51	YES	0.033	0.0530	2.02e3	1540	1.3	1.90e3	1131	1.7	bd	bb
4	Total-tetradioxins	5.10e1	5.69e1	1.08e2	28.51	0.90	YES	0.012	0.0530	1.60e3	1540	1.0	2.32e3	1131	2.1	bb	bb
5	Total-tetradioxins	1.97e2	2.57e2	4.54e2	27.79	0.77	NO	0.049	0.0530	2.99e3	1540	1.9	4.19e3	1131	3.7	bb	bd
6	Total-tetradioxins	1.13e2	5.17e1	1.64e2	25.93	2.18	YES	0.018	0.0530	2.11e3	1540	1.4	1.34e3	1131	1.2	bb	bb
7	Total-tetradioxins	6.91e1	9.28e1	1.62e2	25.37	0.74	NO	0.017	0.0530	2.66e3	1540	1.7	2.24e3	1131	2.0	bb	bb
8	Total-tetradioxins	5.61e1	5.49e1	1.11e2	31.70	1.02	YES	0.012	0.0530	1.84e3	1540	1.2	1.51e3	1131	1.3	bb	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	6.92e1	5.59e1	1.25e2	34.08	1.24	YES	0.022	0.0618	2.28e3	1616	1.4	1.12e3	1043	1.1	bb	bb
2	Total-pentadioxins	1.29e2	9.58e1	2.25e2	33.28	1.35	NO	0.040	0.0618	2.66e3	1616	1.6	4.03e3	1043	3.9	MM	bb
3	Total-pentadioxins	1.28e2	1.00e2	2.28e2	32.76	1.28	YES	0.040	0.0618	2.91e3	1616	1.8	3.53e3	1043	3.4	MM	MM

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	1.77e2	1.15e2	2.92e2	40.06	1.54	YES	0.080	0.133	3.51e3	988	3.6	2.07e3	959	2.2	bb	MM
2	Total-heptadioxins	1.35e2	1.32e2	2.67e2	39.15	1.02	NO	0.073	0.133	2.75e3	988	2.8	2.66e3	959	2.8	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:21:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:21:18 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	6.74e2	9.03e2	1.58e3	30.38	0.75	NO	0.163	0.0918	9.06e3	1103	8.2	1.23e4	2352	5.2	bb	MM
2	Total-tetrafurans	5.12e2	6.26e2	1.14e3	29.43	0.82	NO	0.118	0.0918	5.44e3	1103	4.9	7.25e3	2352	3.1	bb	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1																	

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	1.30e2	9.40e1	2.24e2	33.90	1.39	NO	0.026	0.0429	3.65e3	1513	2.4	3.50e3	1470	2.4	MM	bb
2	12378-PeCDF	1.75e2	2.30e2	4.06e2	33.29	0.76	YES	0.051	0.0489	3.13e3	1513	2.1	4.06e3	1470	2.8	bb	MM
3	Total-pentafurans	1.65e2	1.48e2	3.13e2	32.76	1.11	YES	0.038	0.0458	2.80e3	1513	1.8	2.72e3	1470	1.9	MM	MM
4	Total-pentafurans	8.59e1	8.32e1	1.69e2	32.62	1.03	YES	0.020	0.0458	4.34e3	1513	2.9	1.66e3	1470	1.1	MM	MM

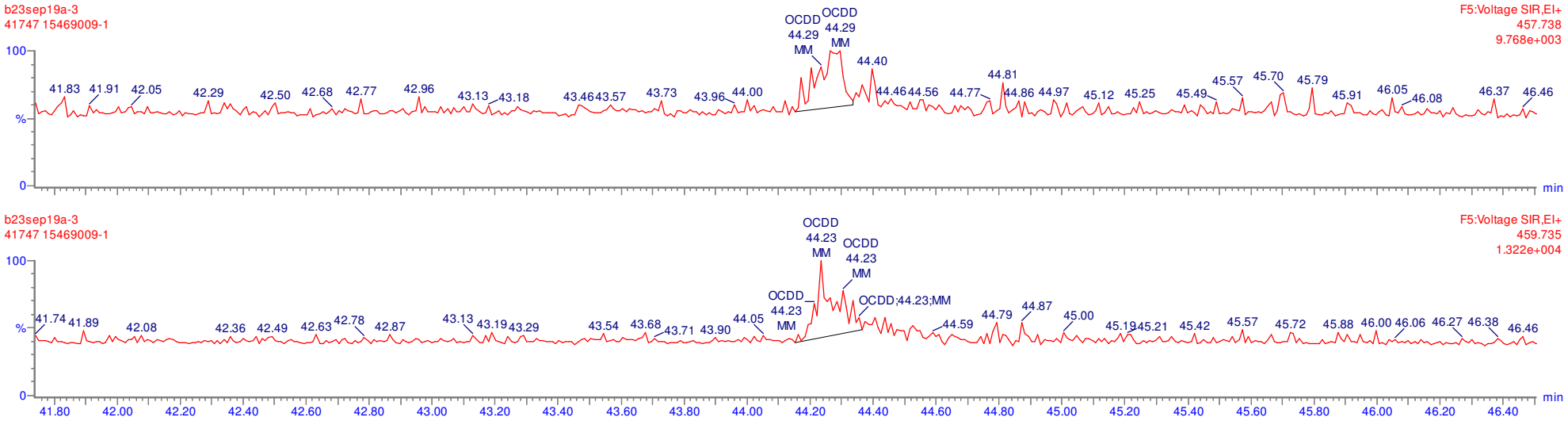
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	1.46e2	1.00e2	2.46e2	37.34	1.46	YES	0.047	0.0819	4.08e3	1258	3.2	4.48e3	1008	4.4	MM	bb
2	Total-hexafurans	9.31e1	8.52e1	1.78e2	36.11	1.09	NO	0.028	0.0581	3.19e3	1258	2.5	2.12e3	1008	2.1	MM	db
3	123678-HxCDF	1.21e2	1.25e2	2.47e2	36.06	0.97	YES	0.033	0.0531	4.09e3	1258	3.2	3.64e3	1008	3.6	MM	dd
4	123478-HxCDF	1.11e2	1.44e2	2.55e2	35.97	0.77	YES	0.041	0.0488	2.56e3	1258	2.0	2.53e3	1008	2.5	MM	bd
5	Total-hexafurans	6.33e1	5.81e1	1.21e2	35.05	1.09	NO	0.019	0.0581	1.82e3	1258	1.4	1.55e3	1008	1.5	MM	bb
6	234678-HxCDF	1.87e2	1.61e2	3.48e2	36.54	1.16	NO	0.052	0.0540	3.14e3	1258	2.5	2.53e3	1008	2.5	MM	MM

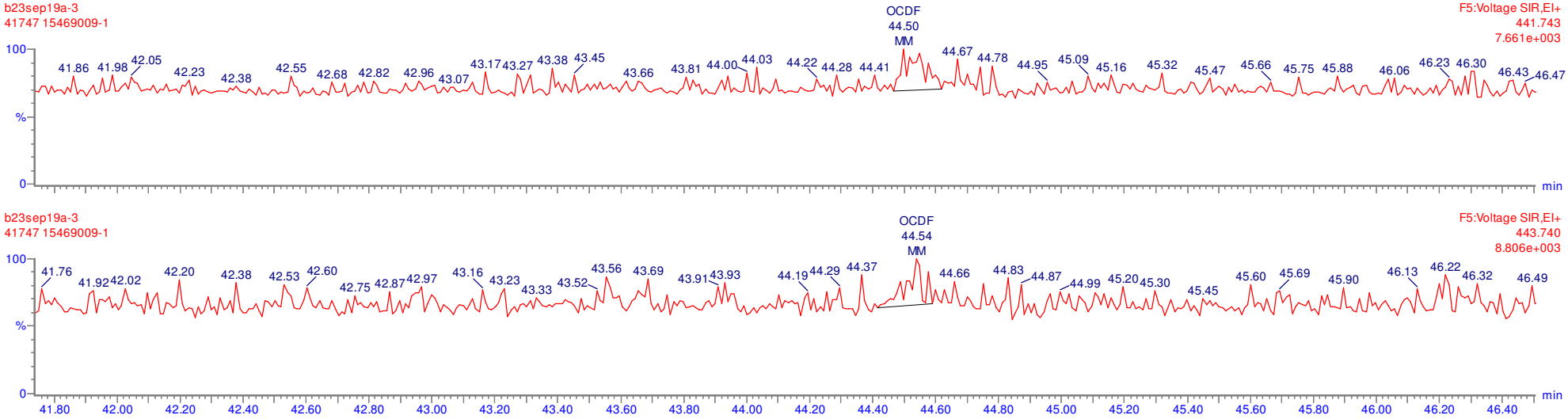
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	1.75e2	1.57e2	3.32e2	38.80	1.12	NO	0.060	0.0593	2.54e3	679	3.7	2.90e3	897	3.2	MM	MM
2	1234789-HpCDF	1.47e2	1.29e2	2.76e2	40.68	1.15	NO	0.070	0.102	2.09e3	679	3.1	2.34e3	897	2.6	MM	MM

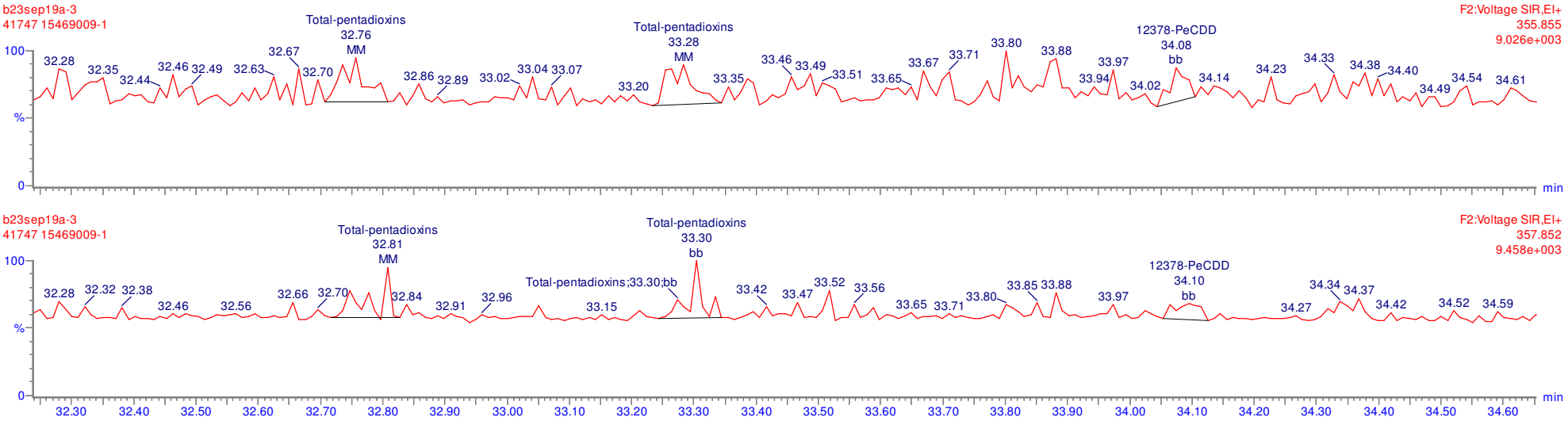
MANUAL INTEGRATION
METHOD 8290
HRP763_1



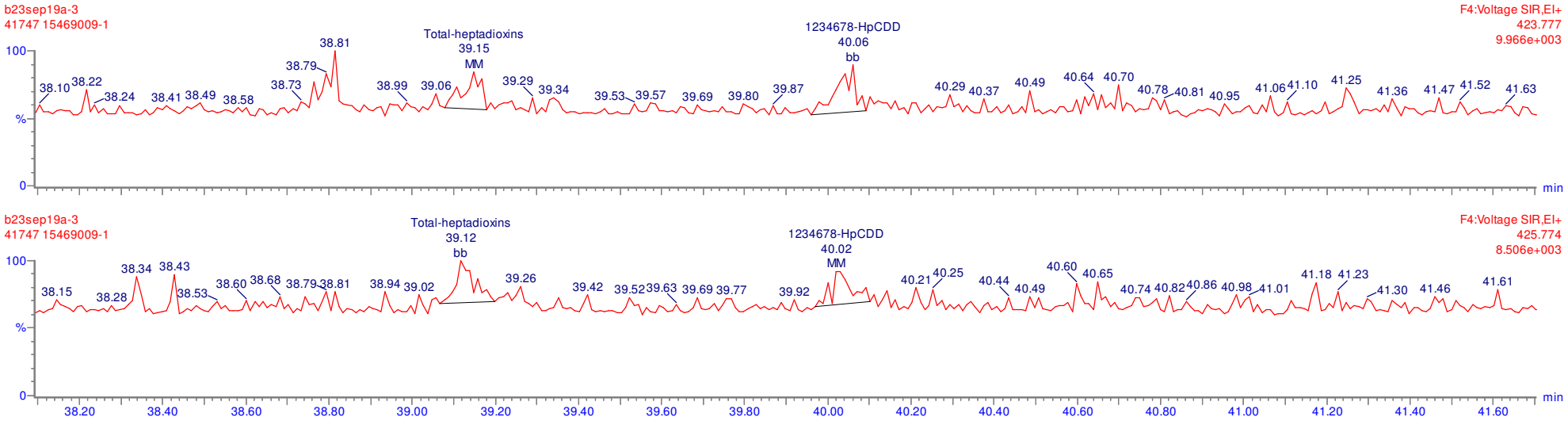
MANUAL INTEGRATION
METHOD 8290
HRP763_1



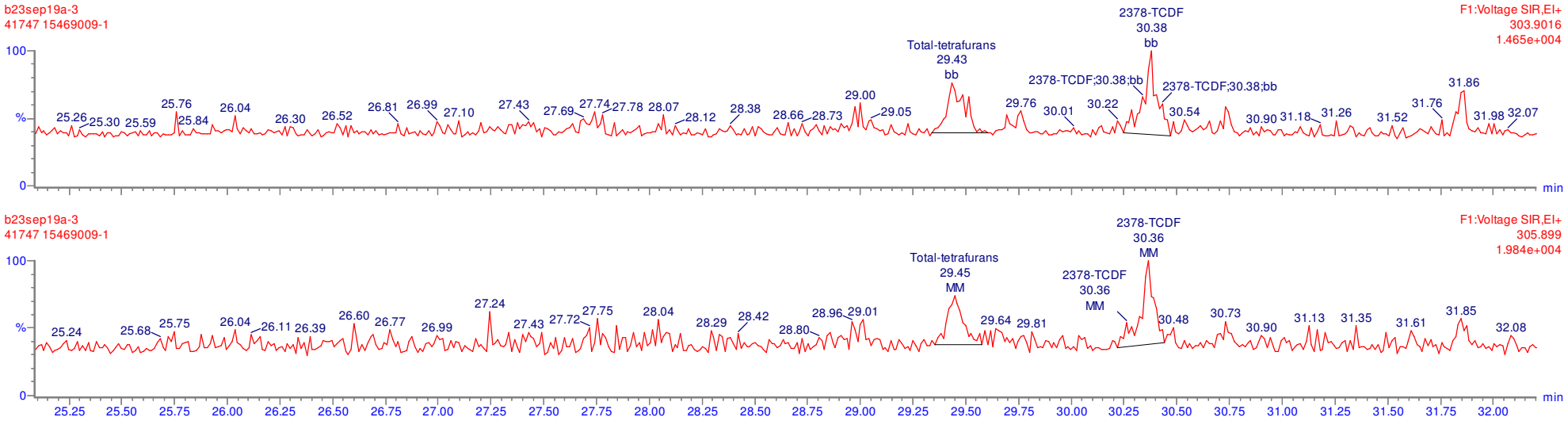
MANUAL INTEGRATION
METHOD 8290
HRP763_1



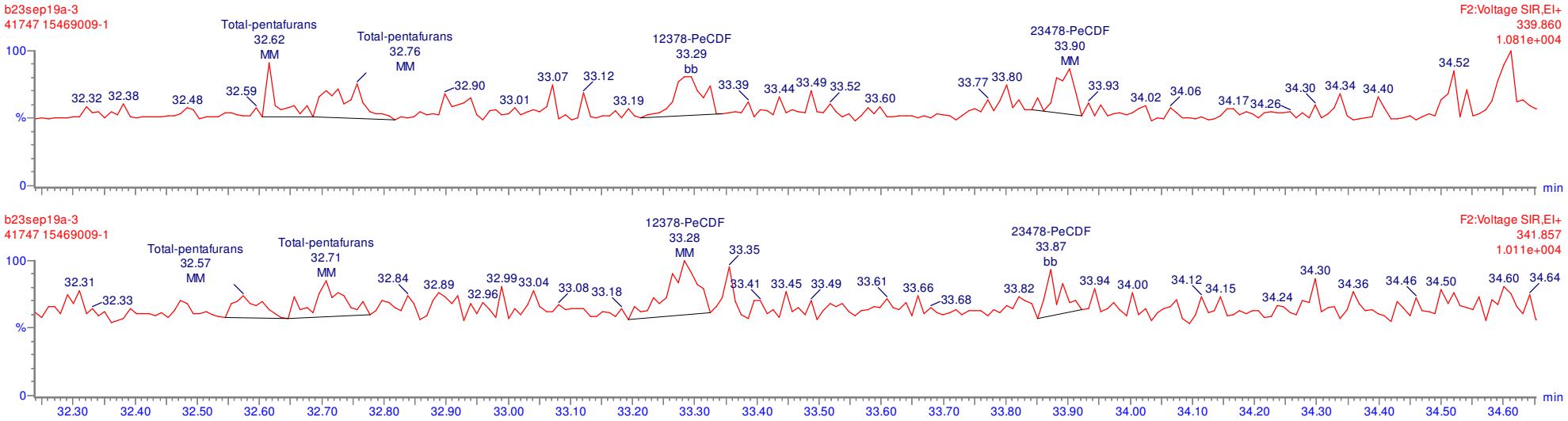
MANUAL INTEGRATION
METHOD 8290
HRP763_1



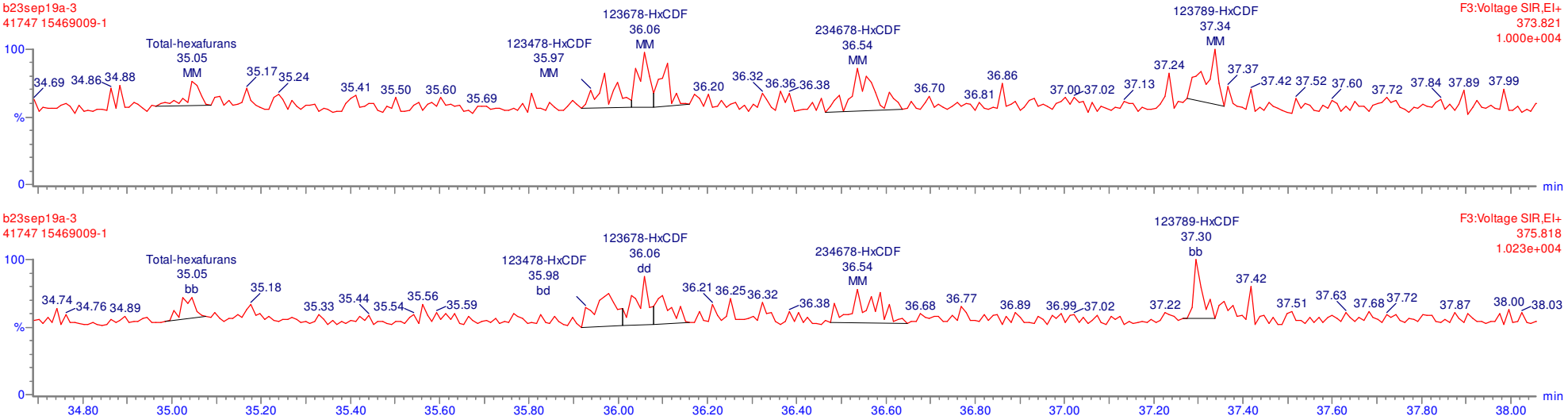
MANUAL INTEGRATION
METHOD 8290
HRP763_1



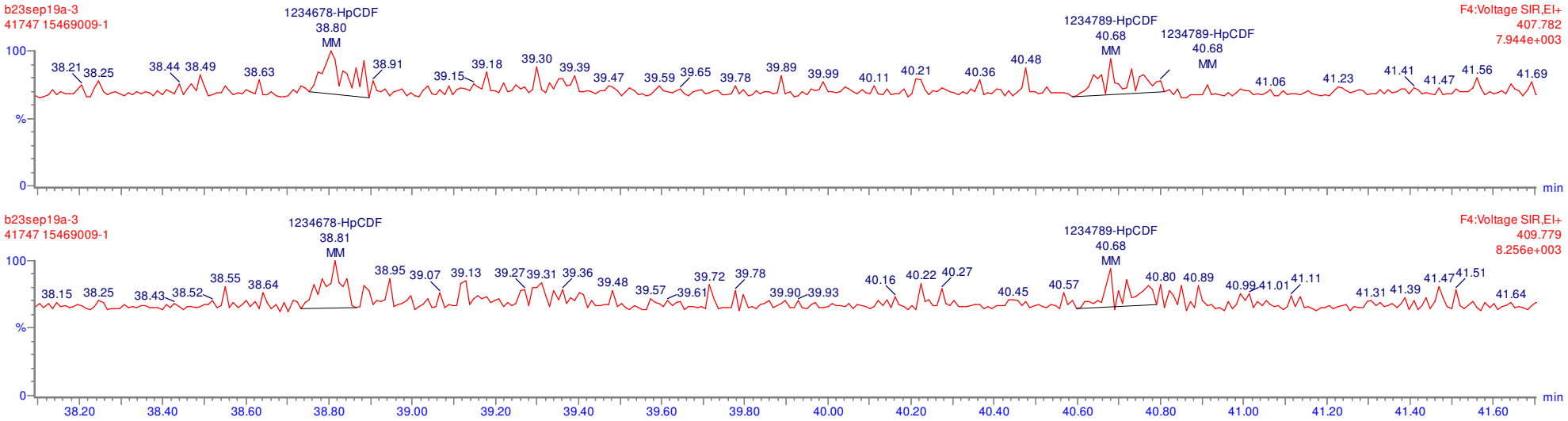
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

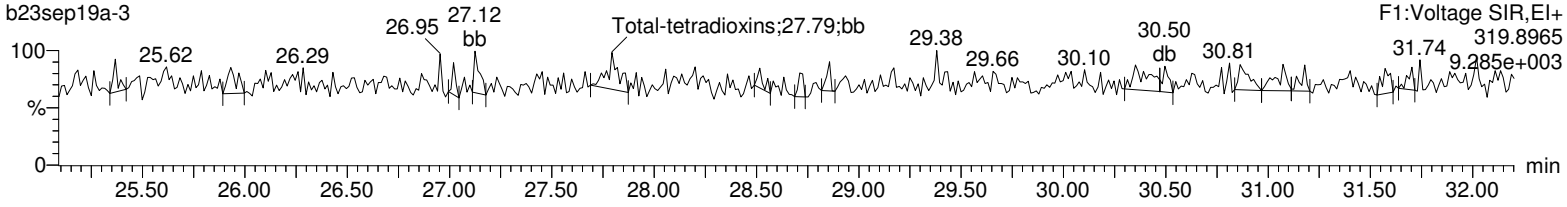
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

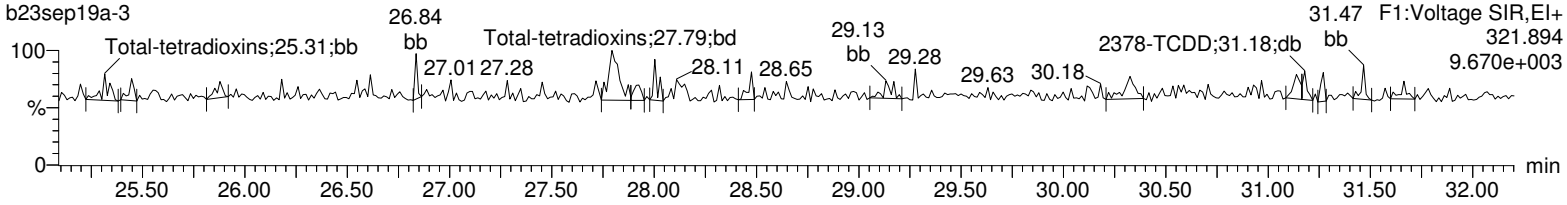
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

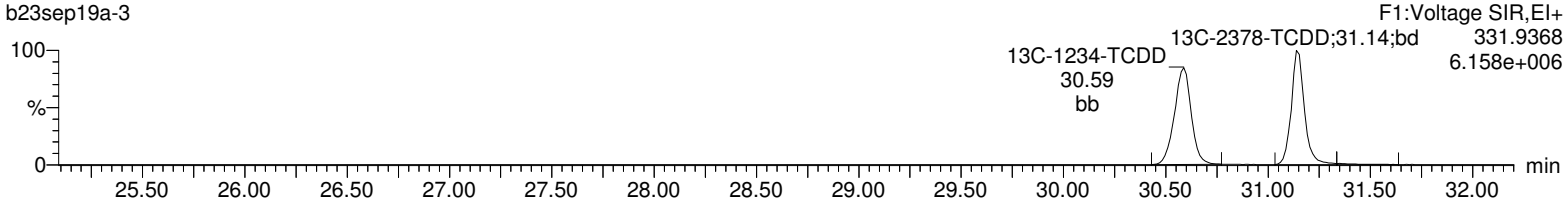
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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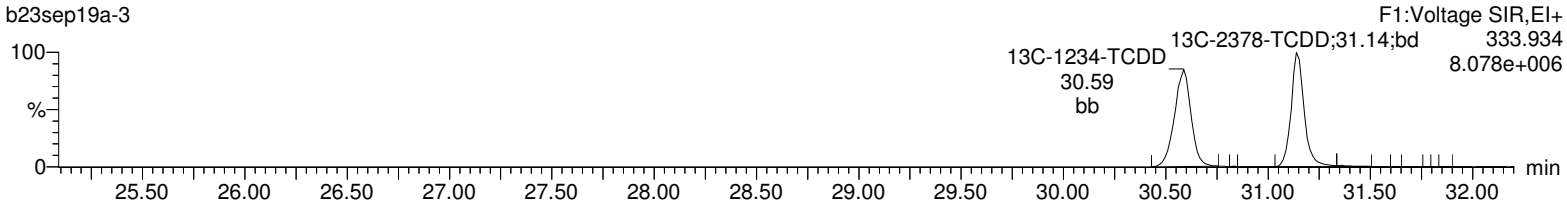
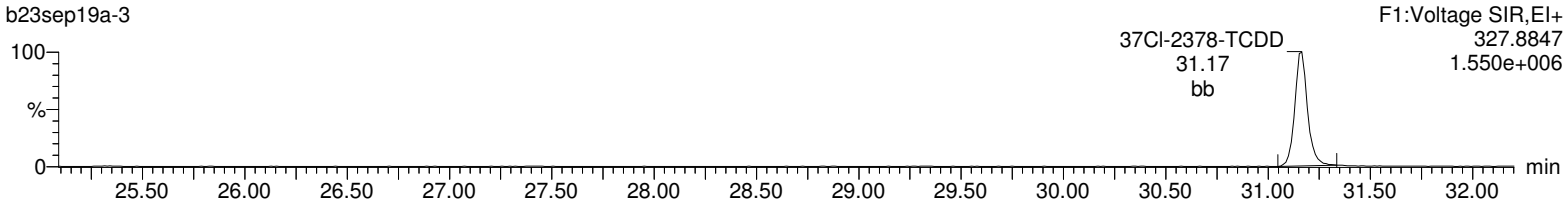
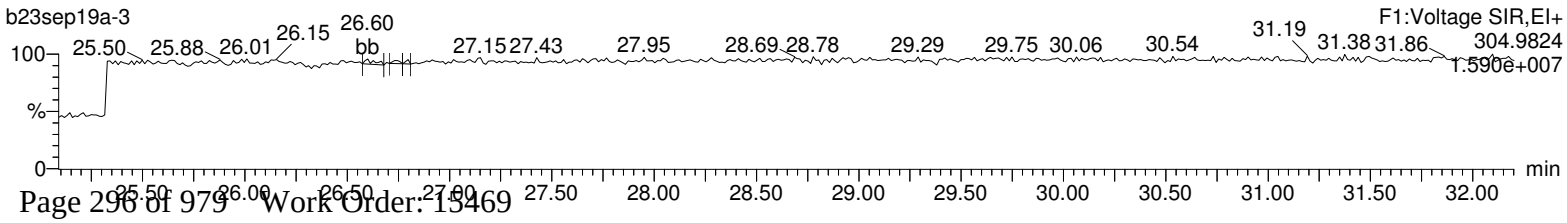


37Cl-2378-TCDD



Lock Mass F1



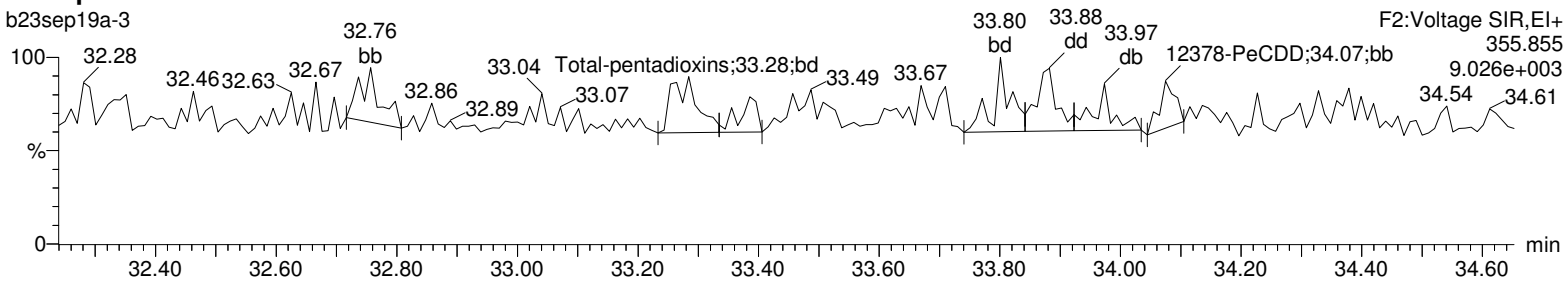
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

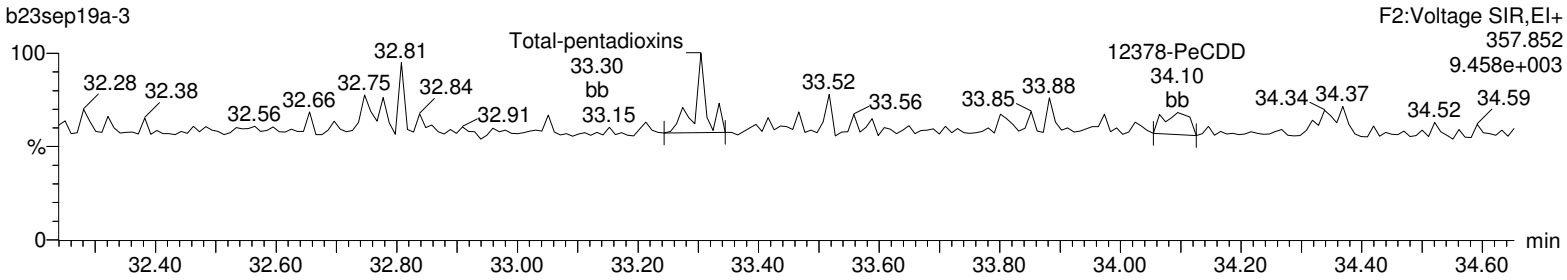
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

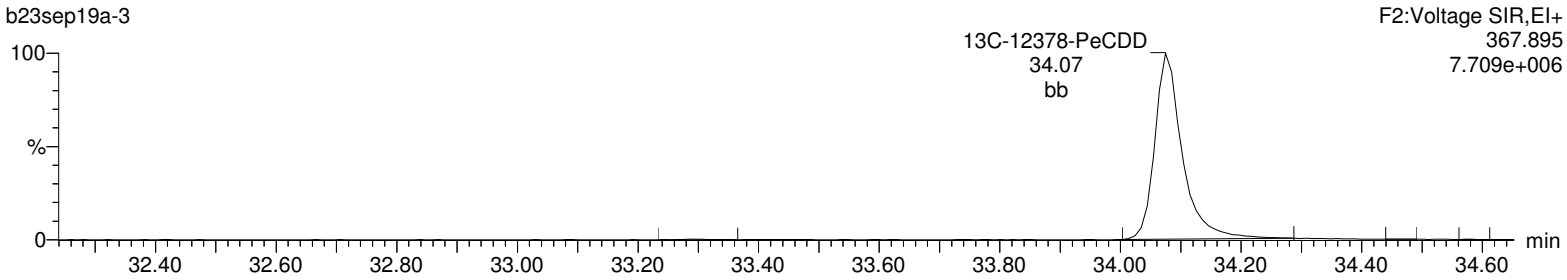
Total-pentadioxins



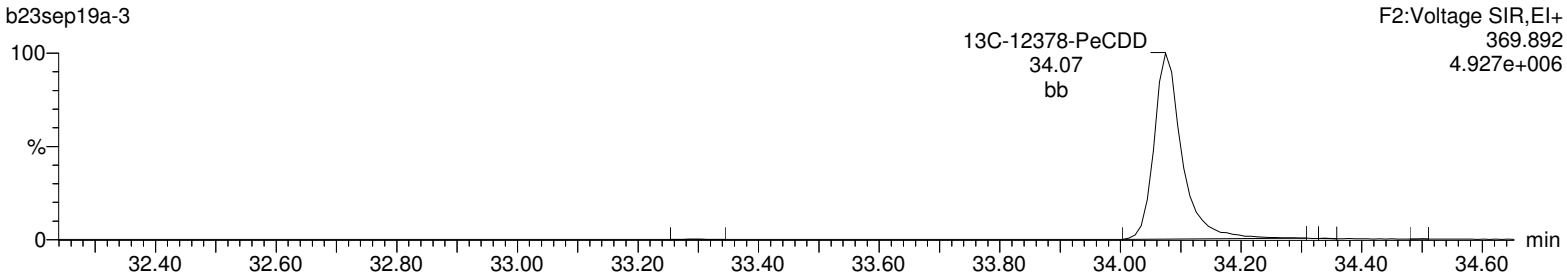
Total-pentadioxins



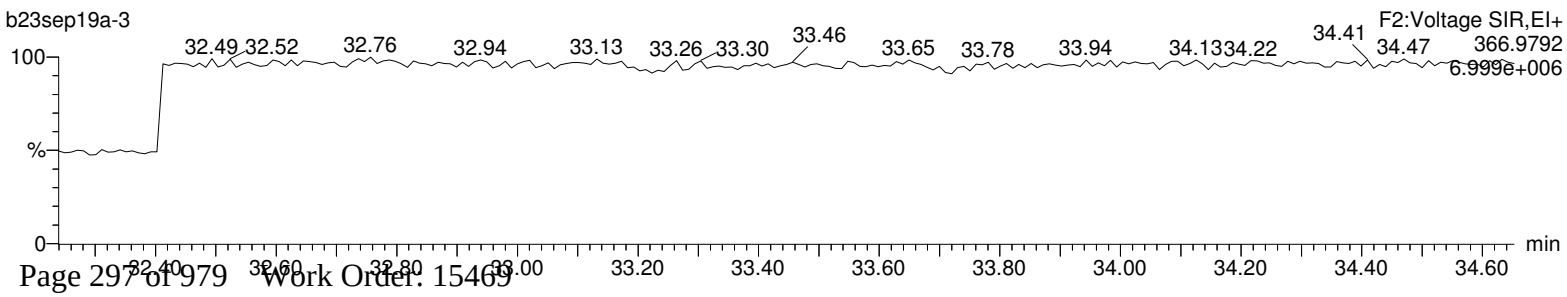
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



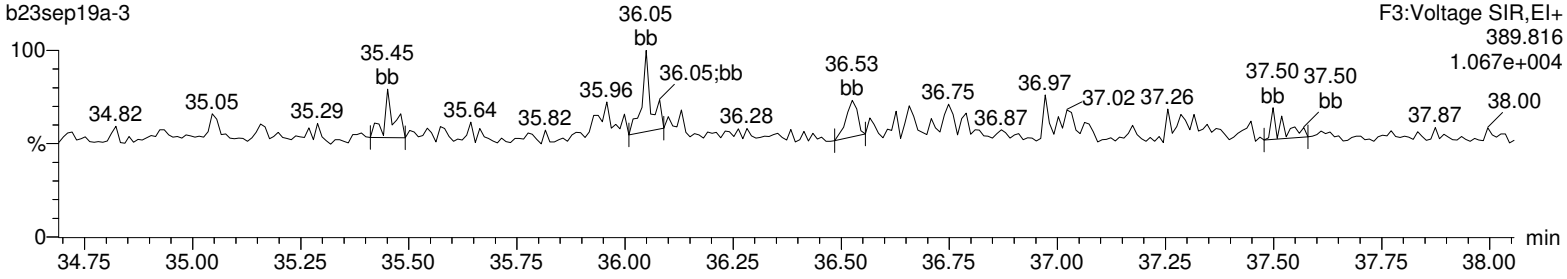
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

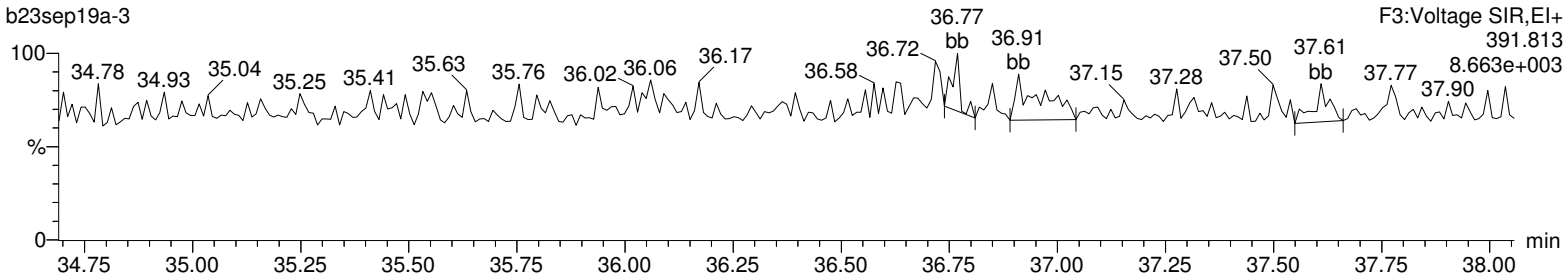
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

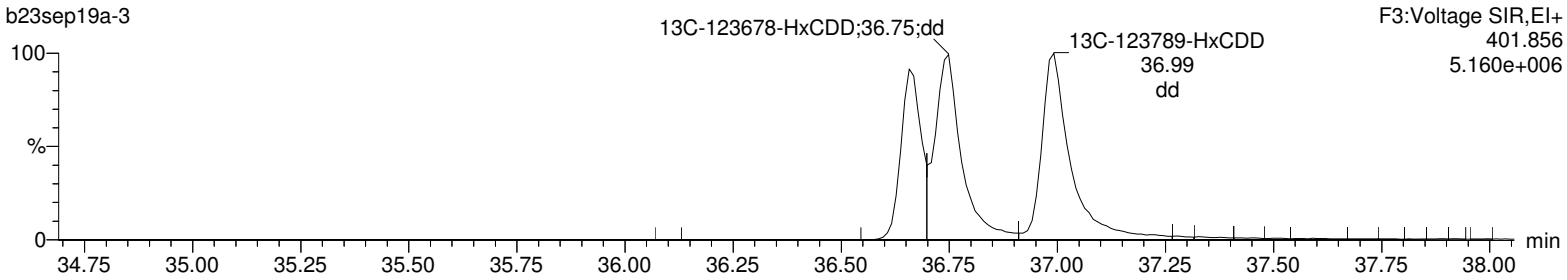
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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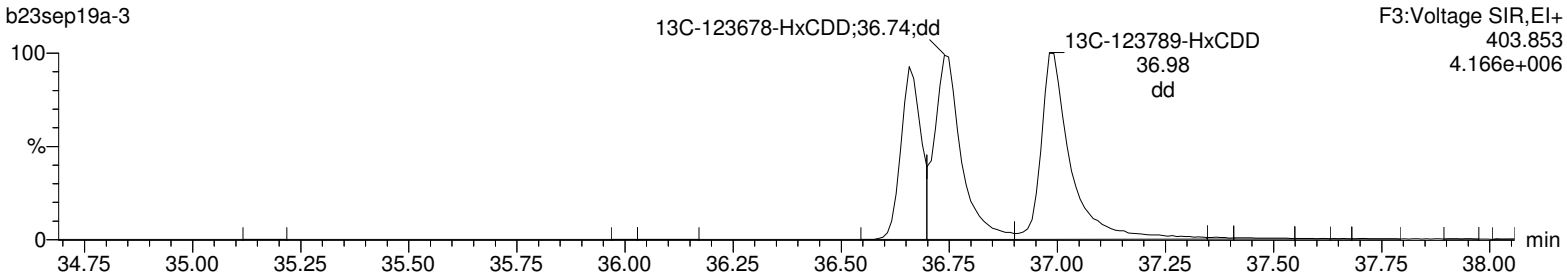
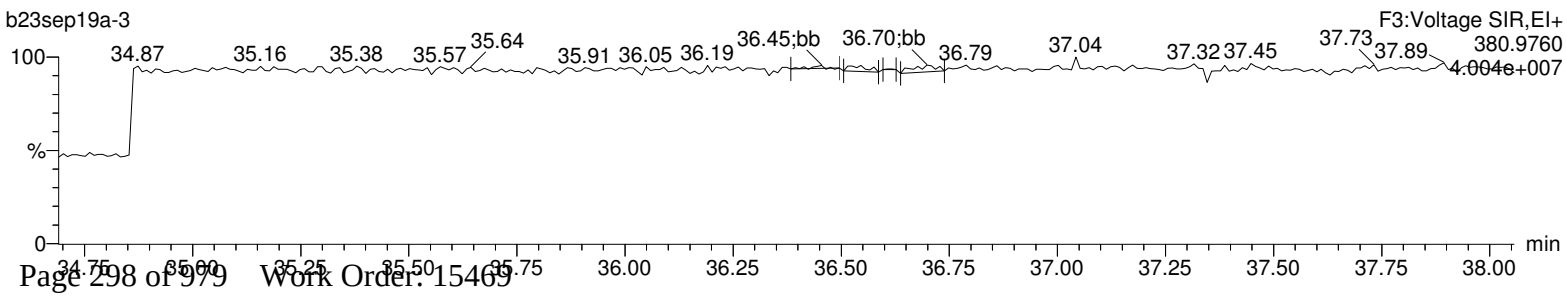


Lock Mass F3



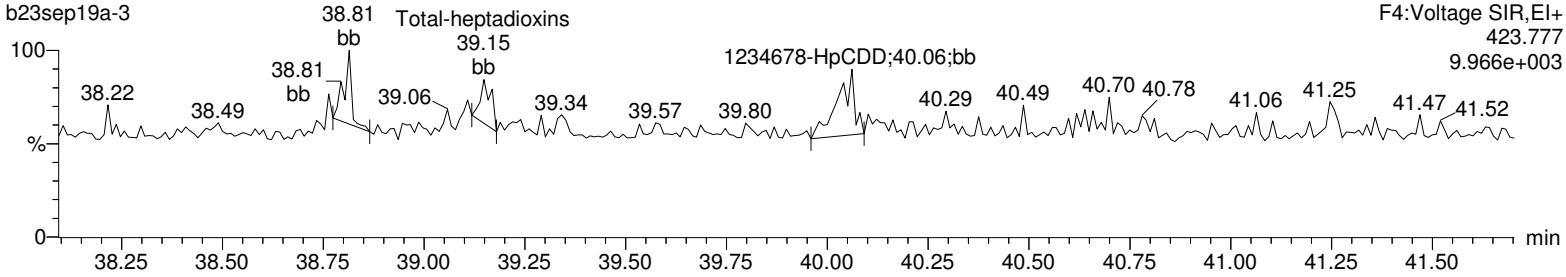
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

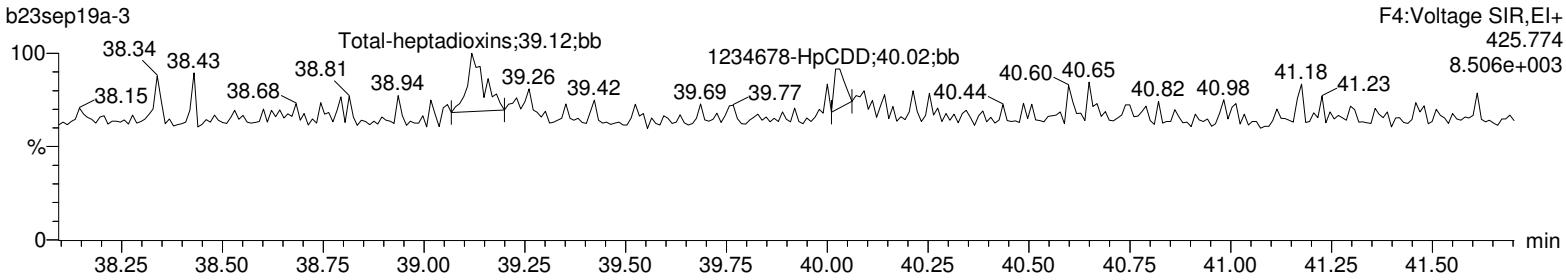
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

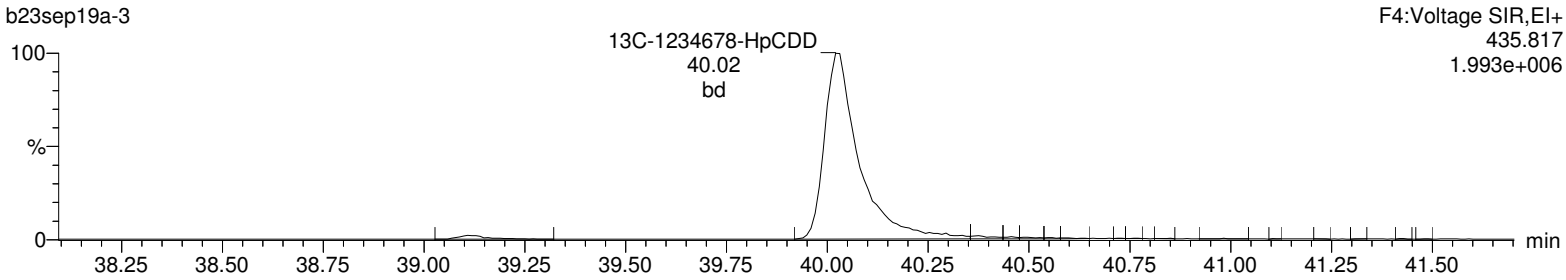
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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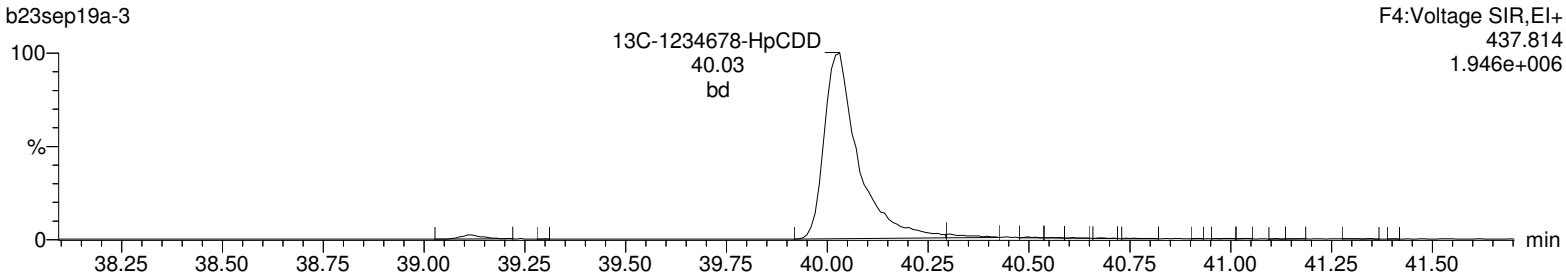
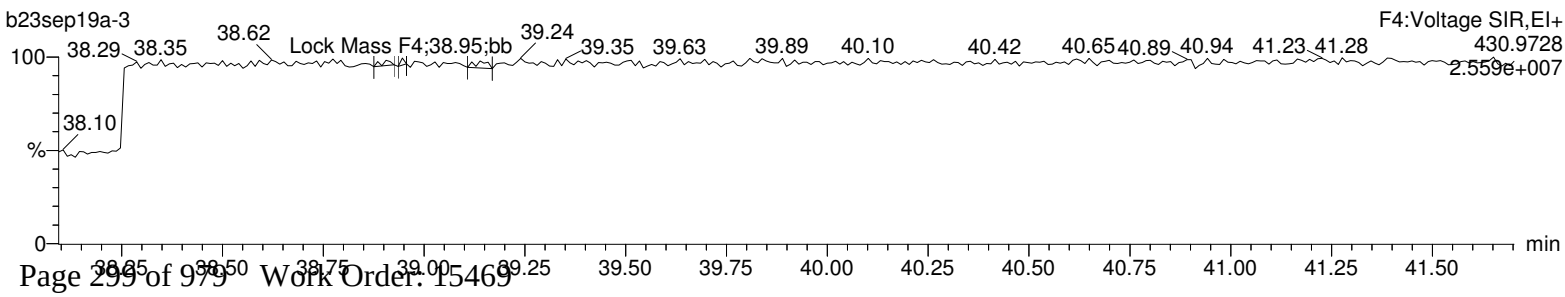


Lock Mass F4



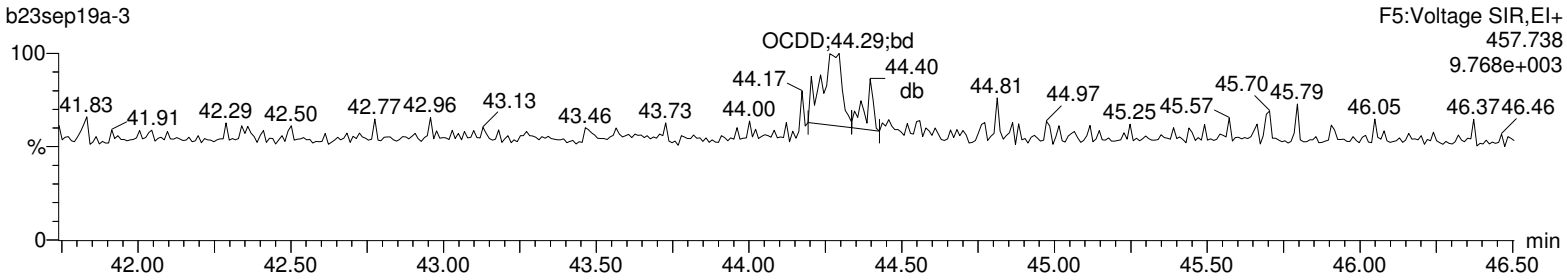
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

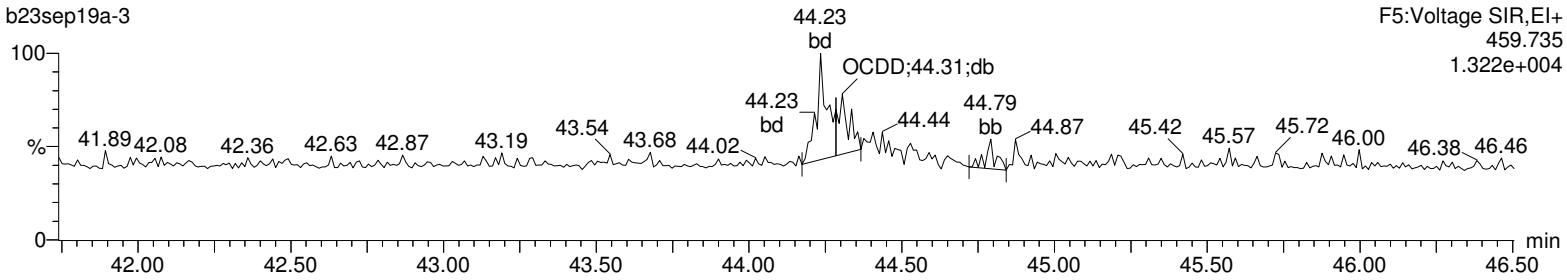
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

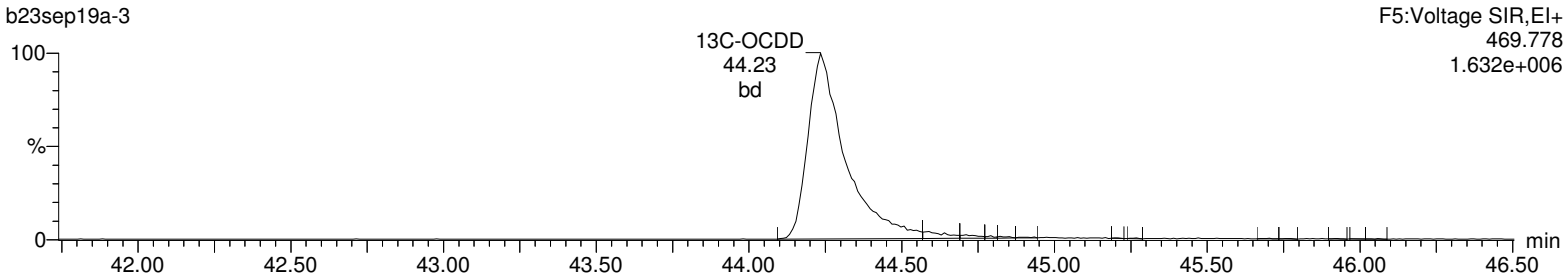
OCDD



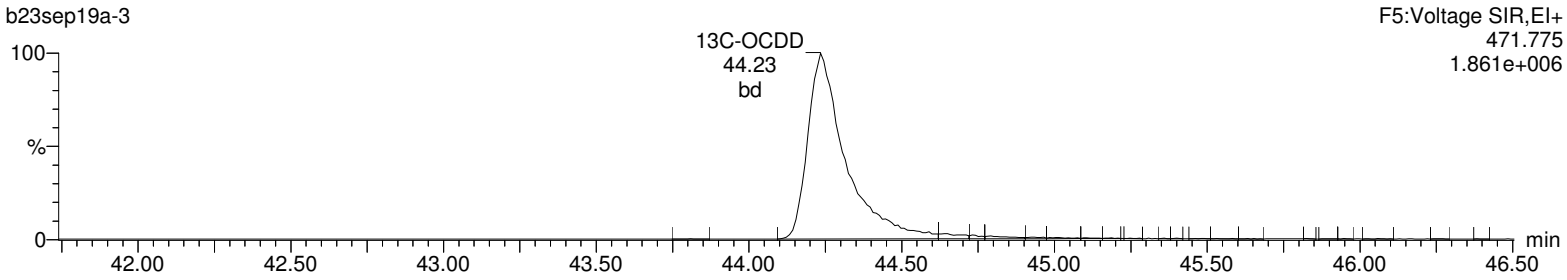
OCDD



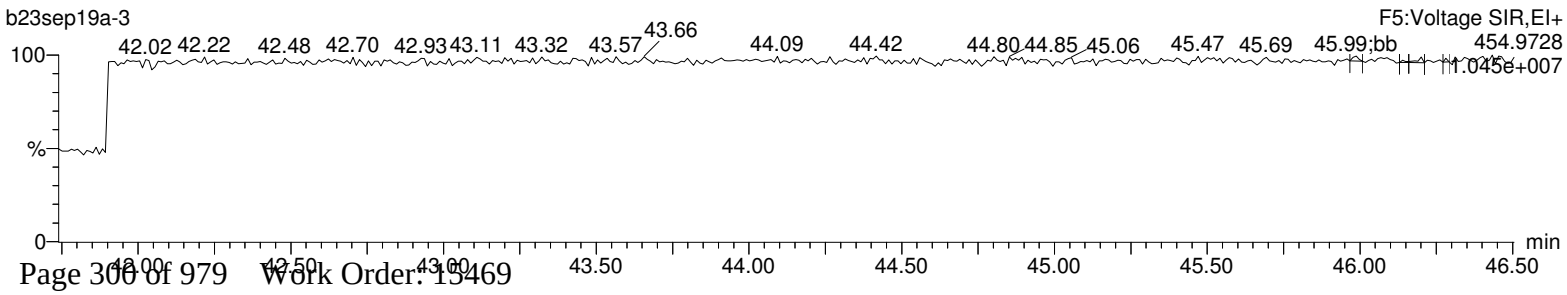
13C-OCDD



13C-OCDD



Lock Mass F5



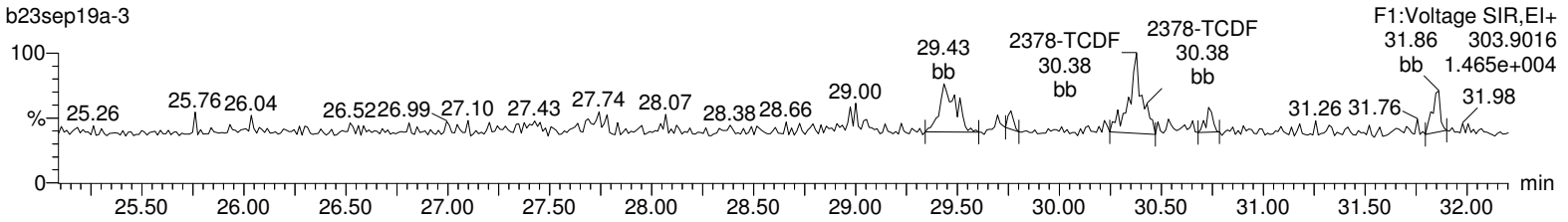
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

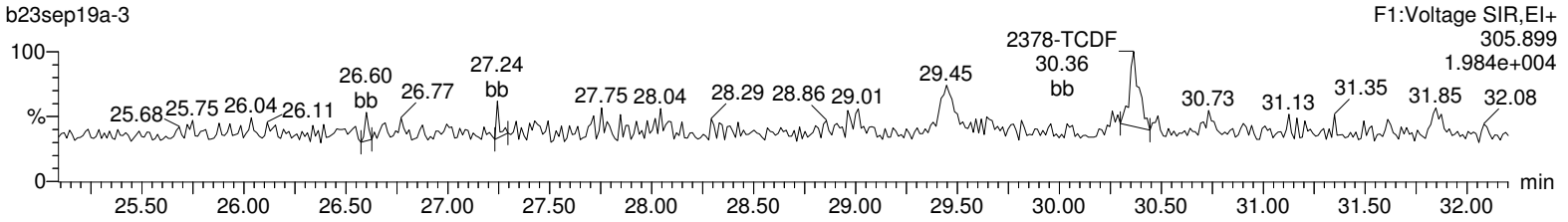
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

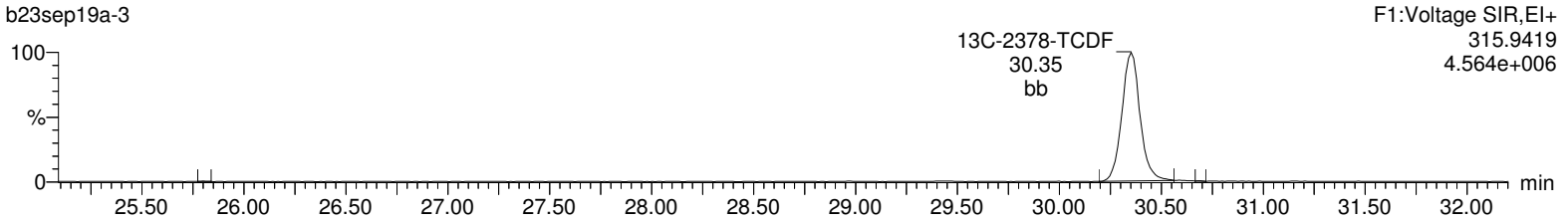
Total-tetrafurans



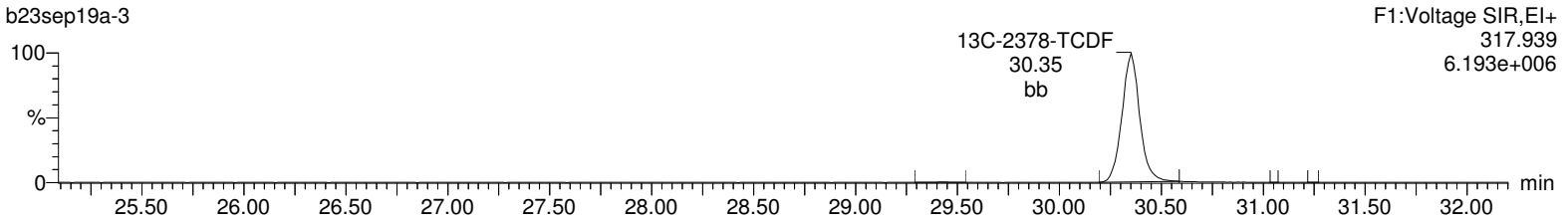
Total-tetrafurans



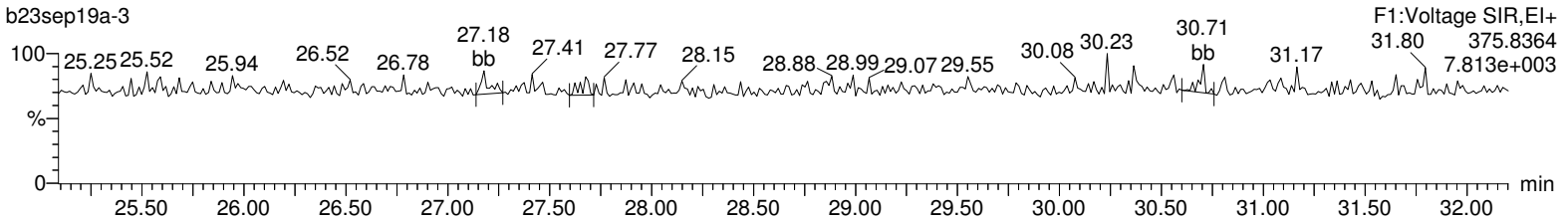
13C-2378-TCDF



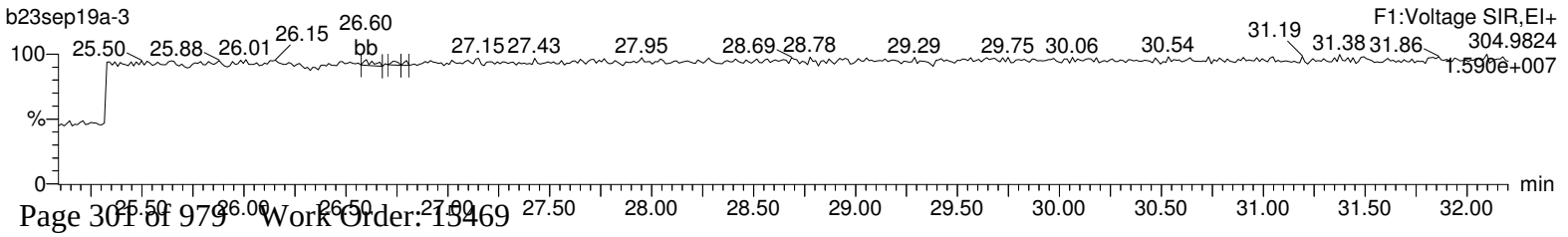
13C-2378-TCDF



HxDPE



Lock Mass F1



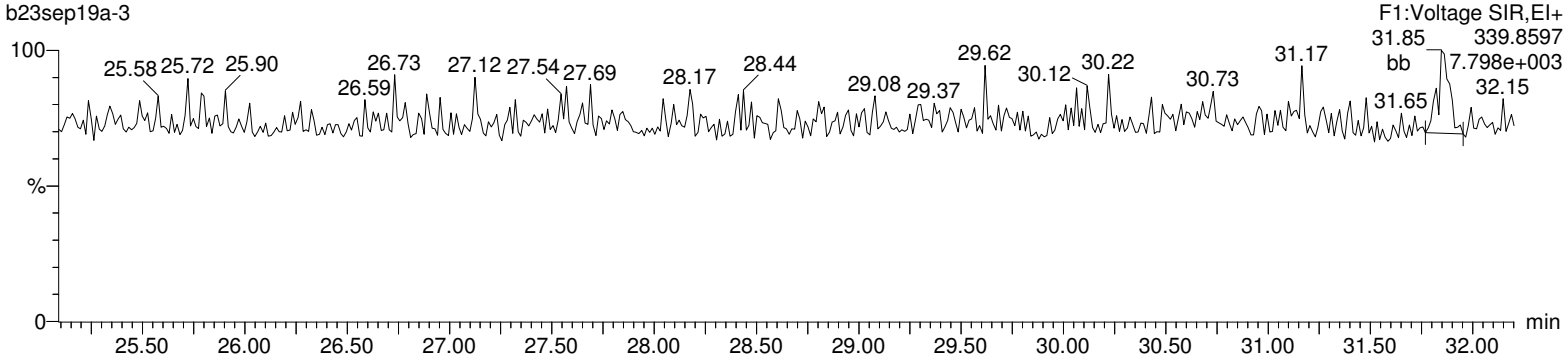
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

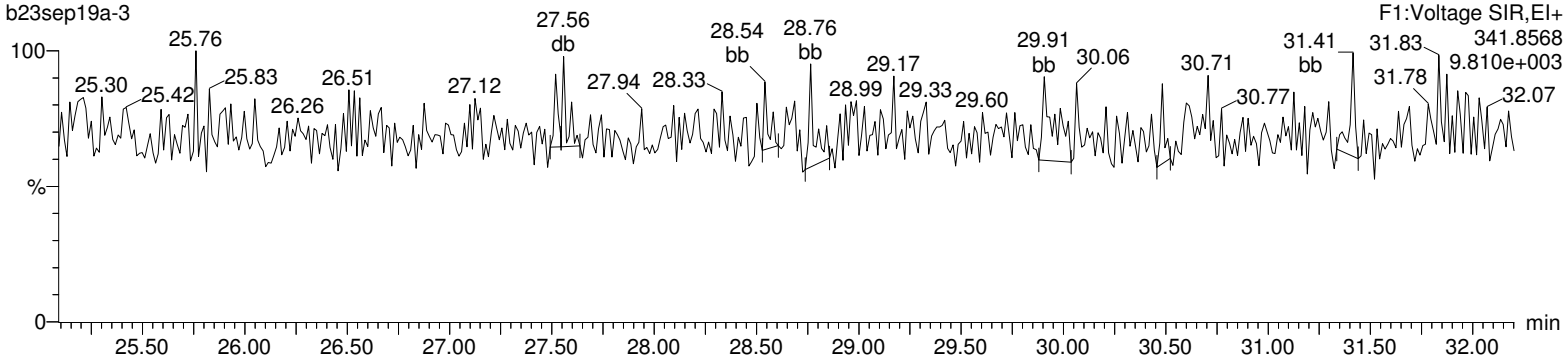
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

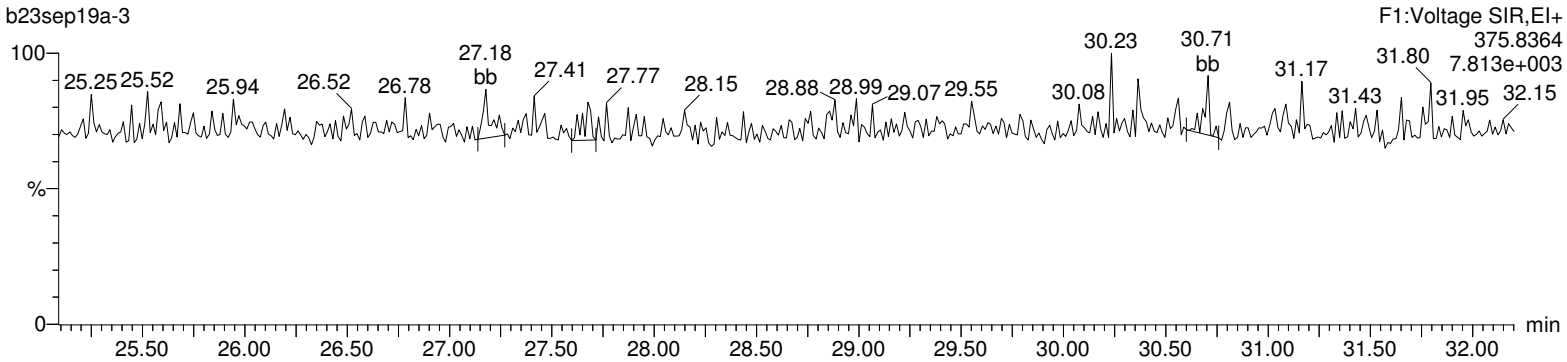
Total-pentafurans (F1)



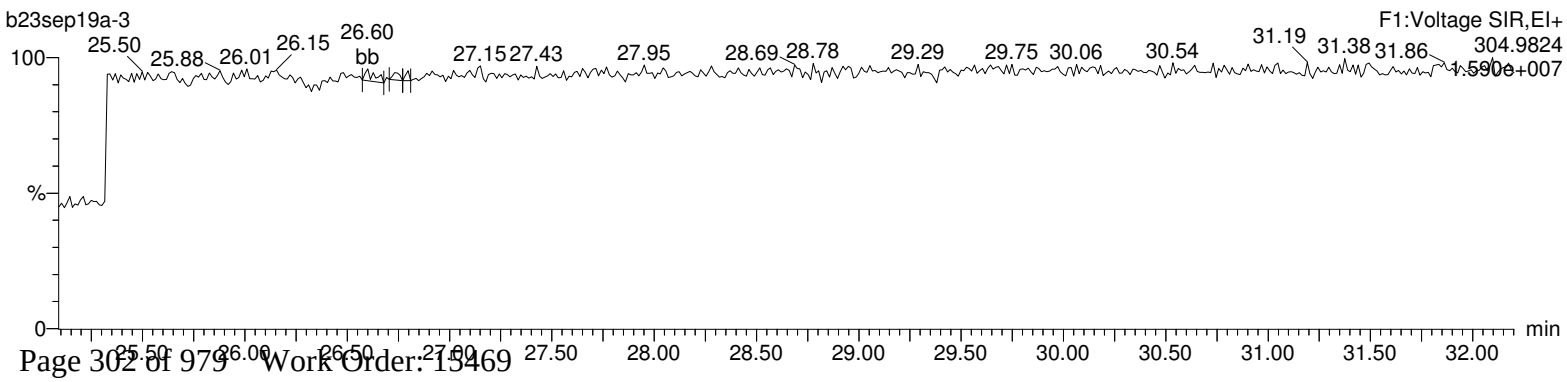
Total-pentafurans (F1)



HxDPE



Lock Mass F1



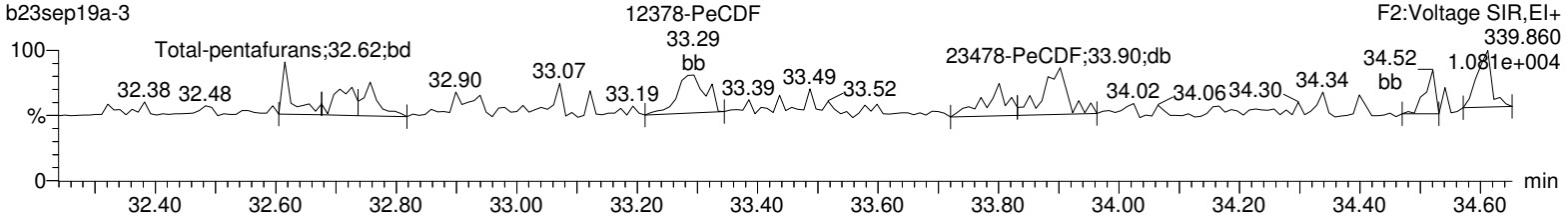
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

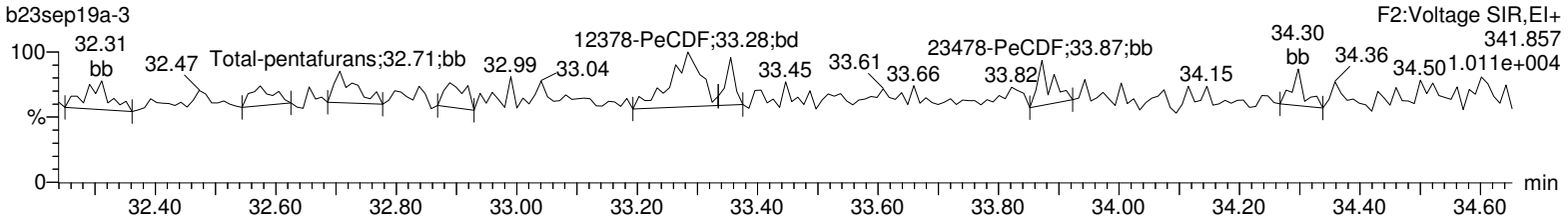
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

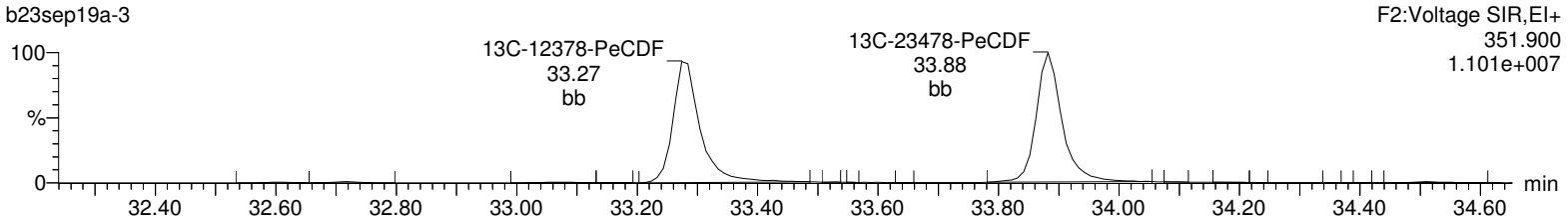
Total-pentafurans



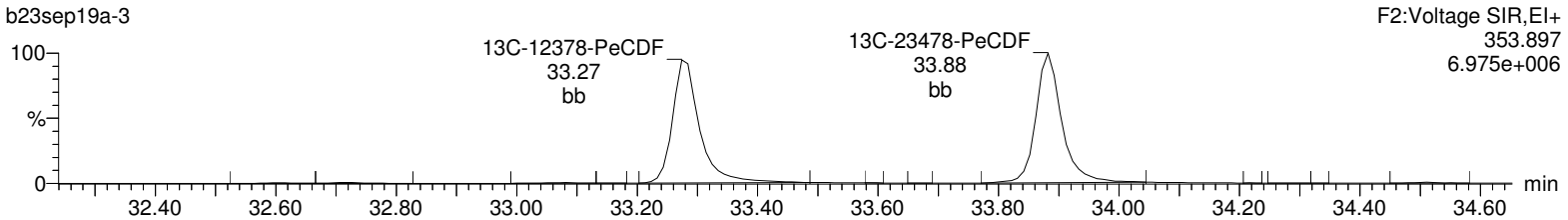
Total-pentafurans



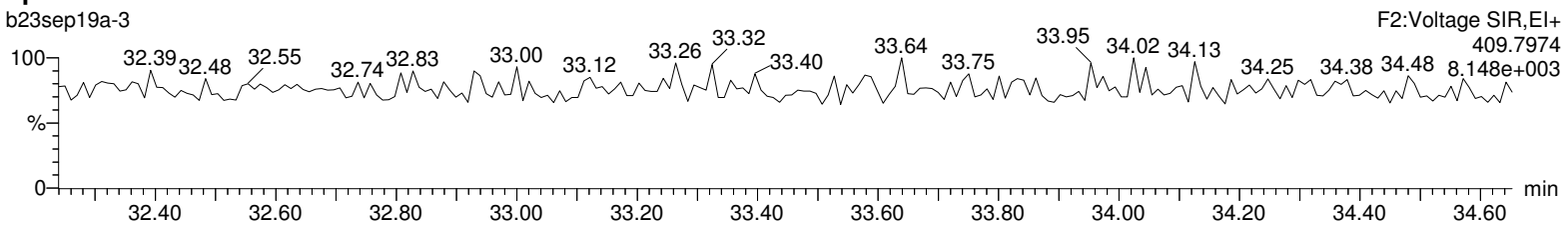
13C-12378-PeCDF



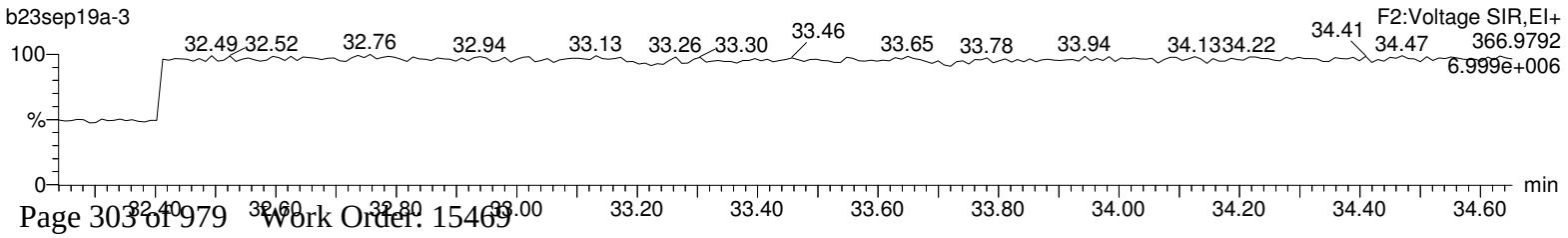
13C-12378-PeCDF



HpDPE



Lock Mass F2



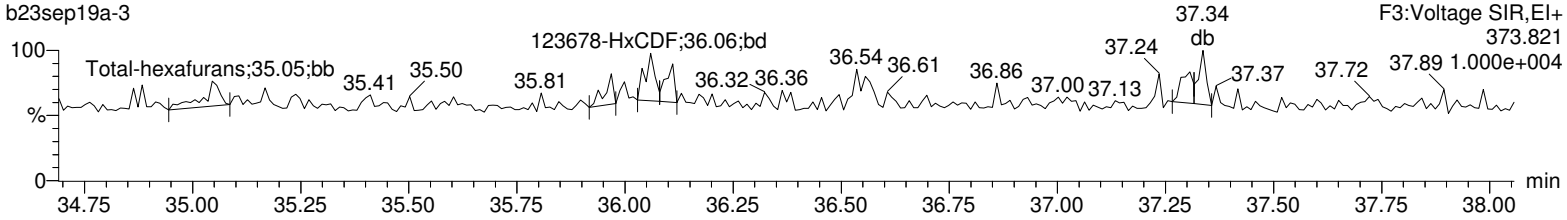
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

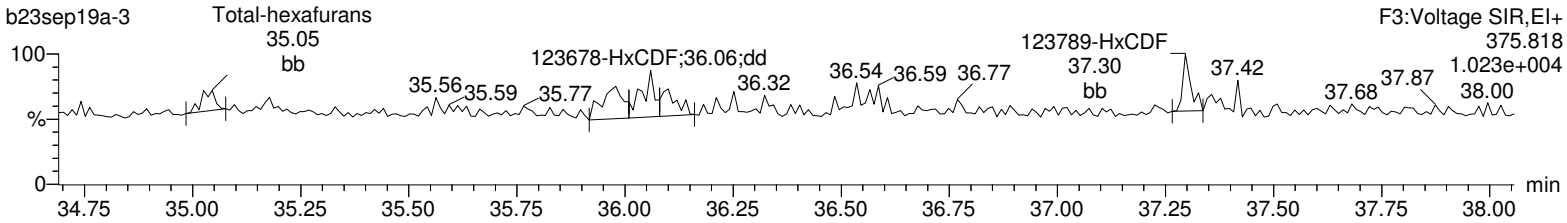
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

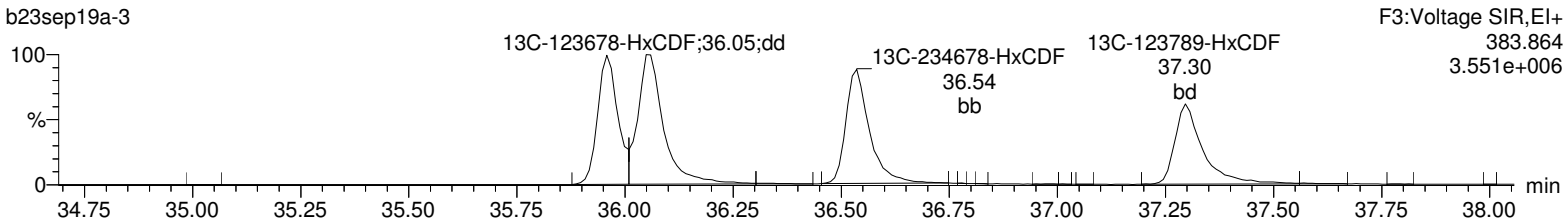
Total-hexafurans



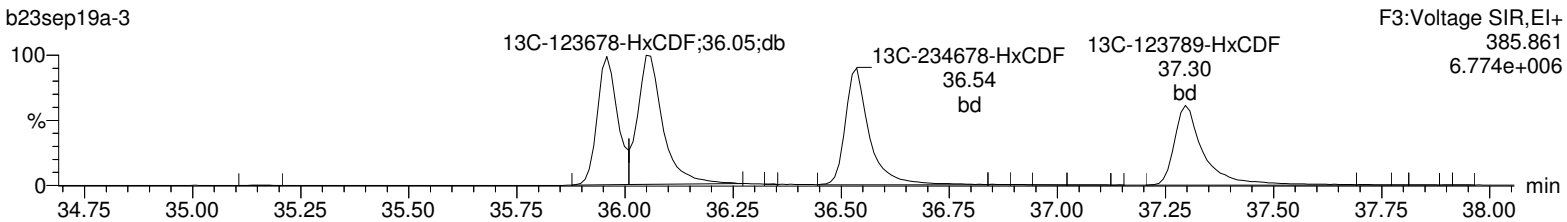
Total-hexafurans



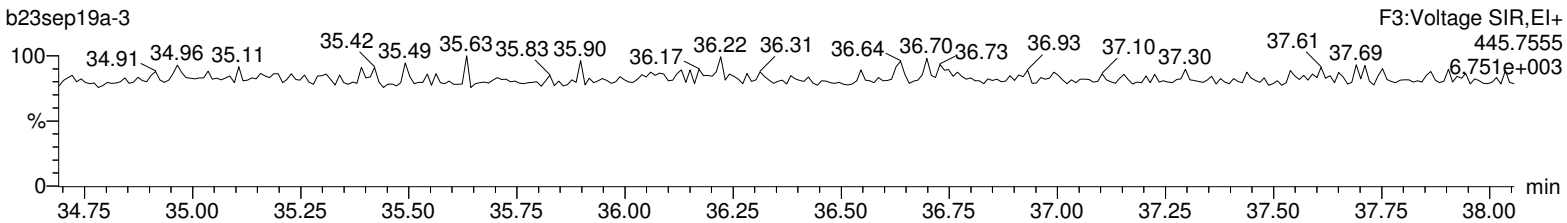
13C-123478-HxCDF



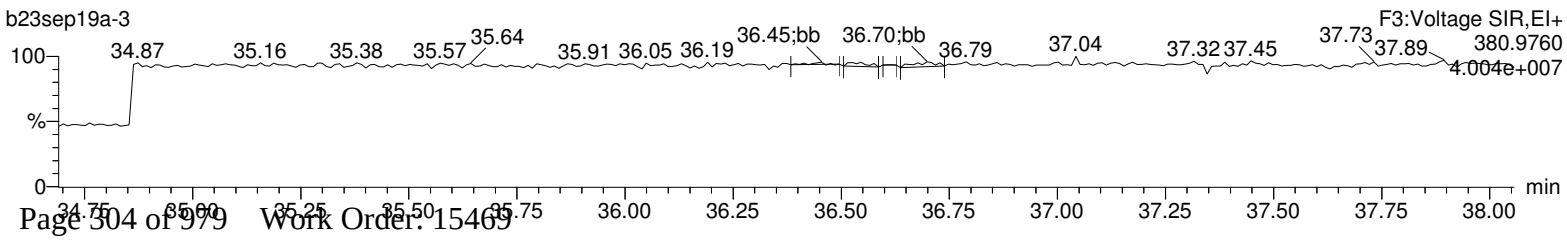
13C-123478-HxCDF



OcDPE



Lock Mass F3



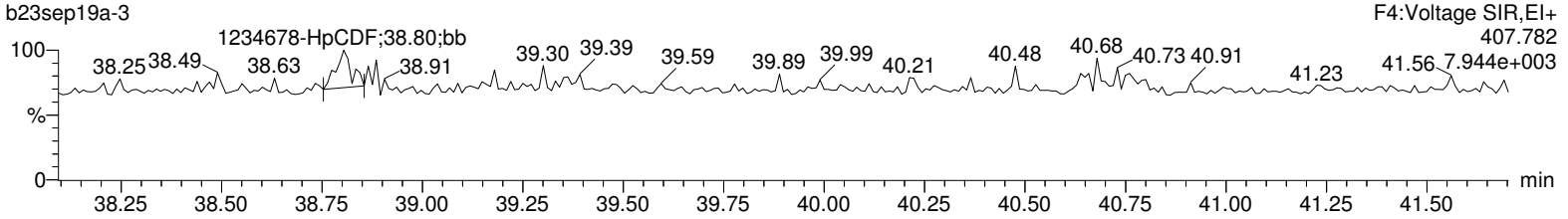
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

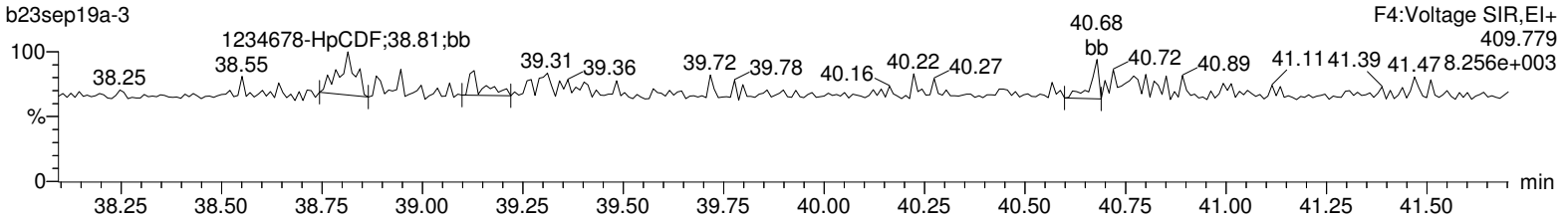
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

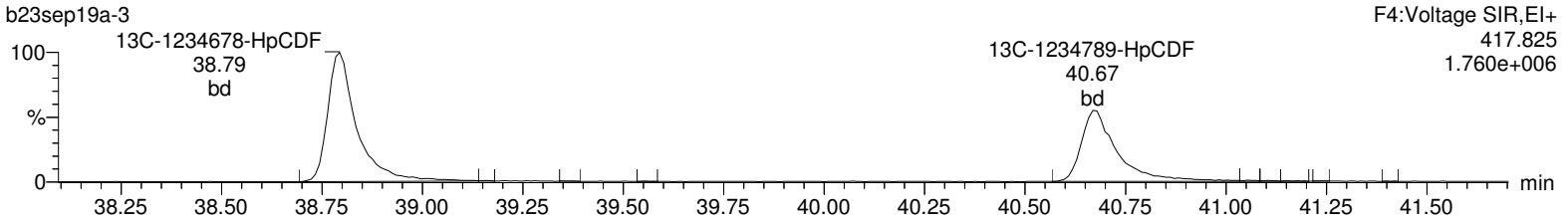
Total-heptafurans



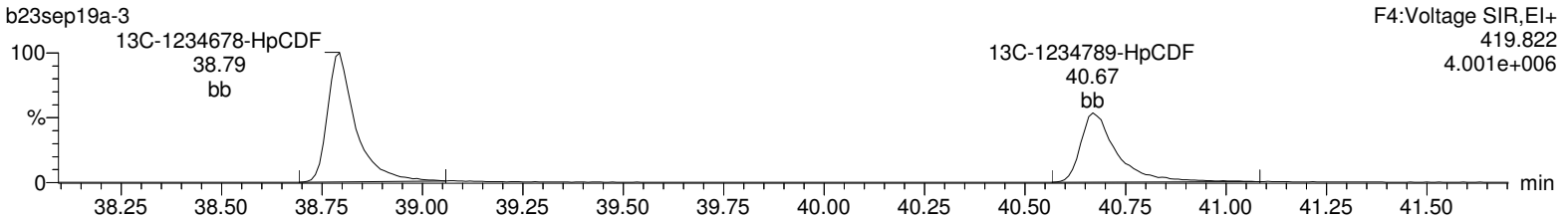
Total-heptafurans



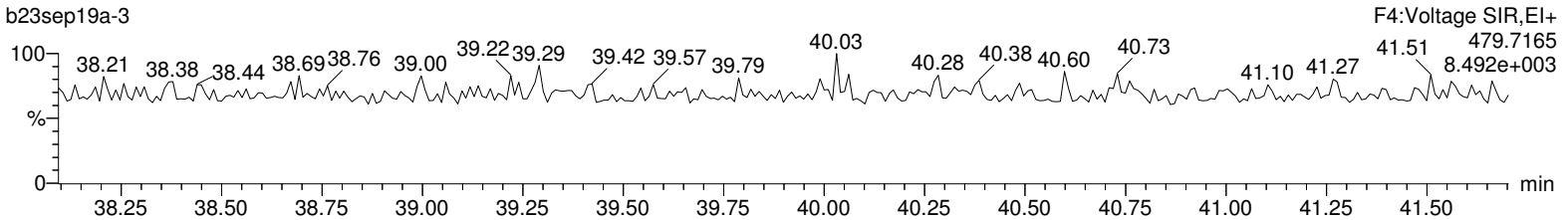
13C-1234678-HpCDF



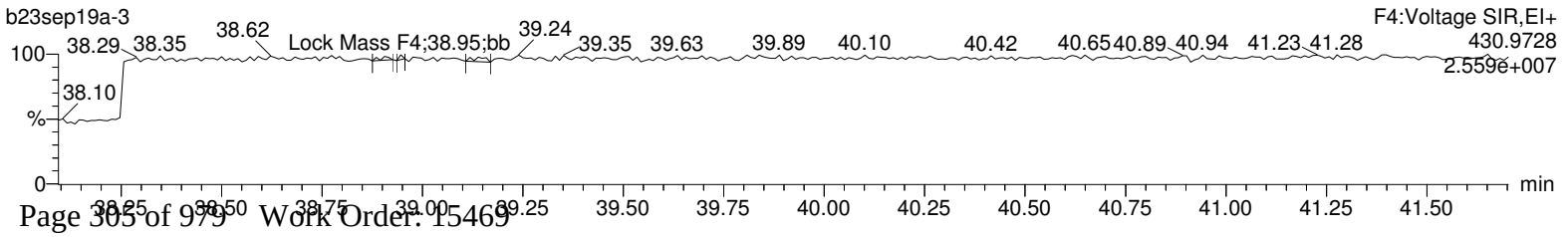
13C-1234678-HpCDF



NoDPE



Lock Mass F4



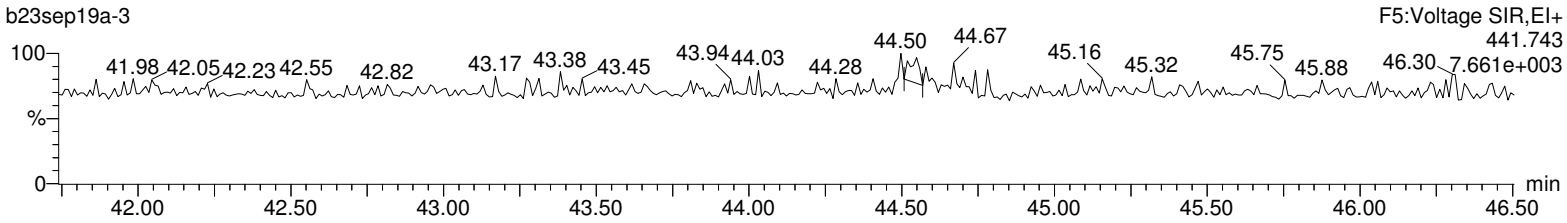
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

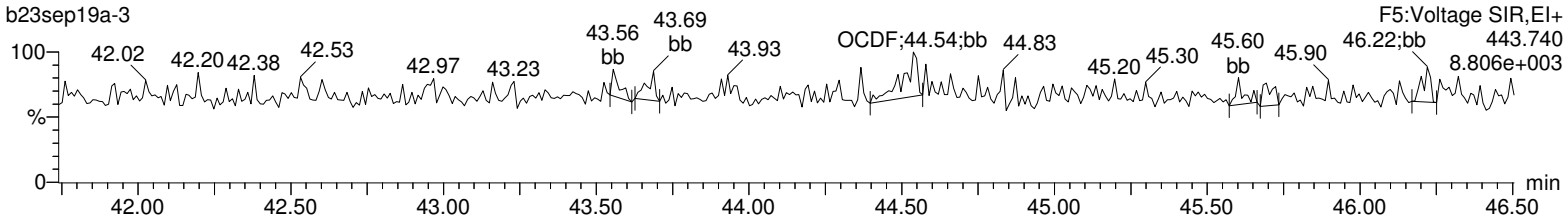
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-3, Date: 23-Sep-2019, Time: 09:56:06, ID: 15469009-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

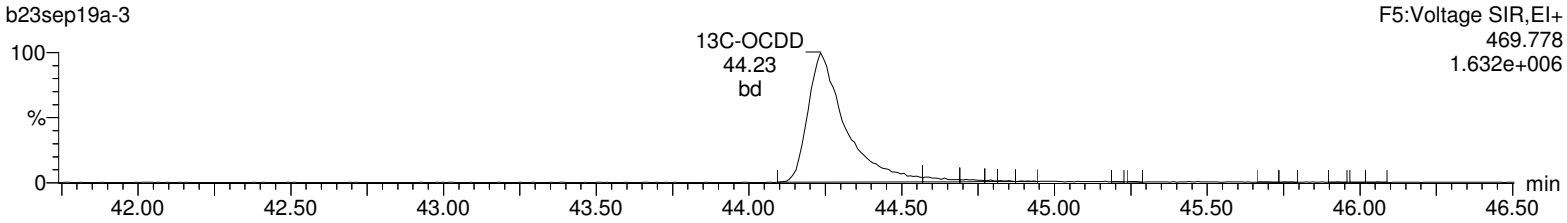
OCDF



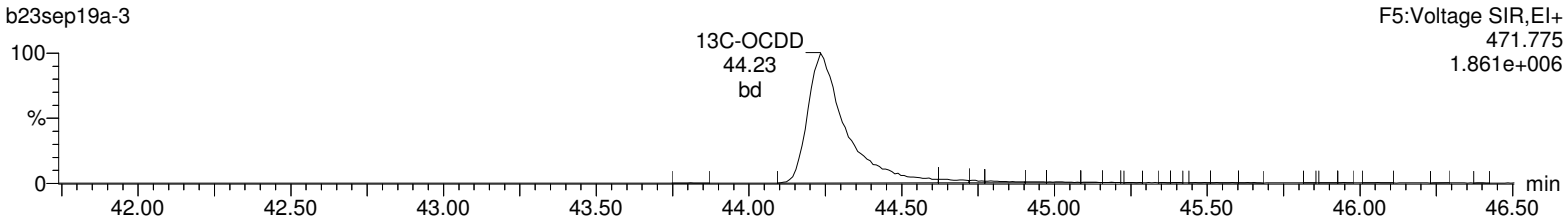
OCDF



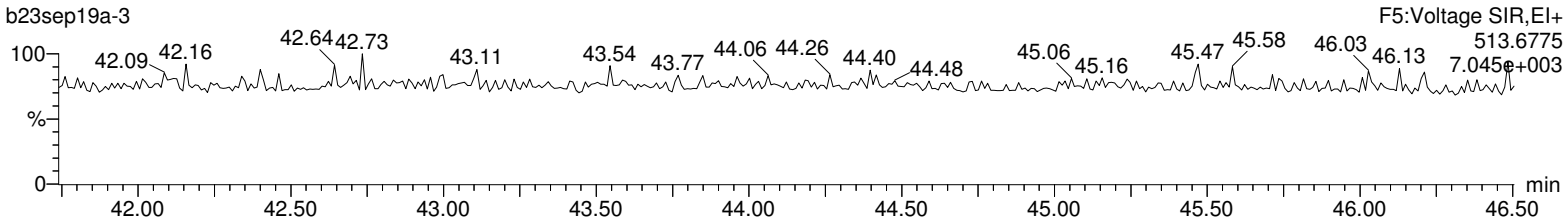
13C-OCDD



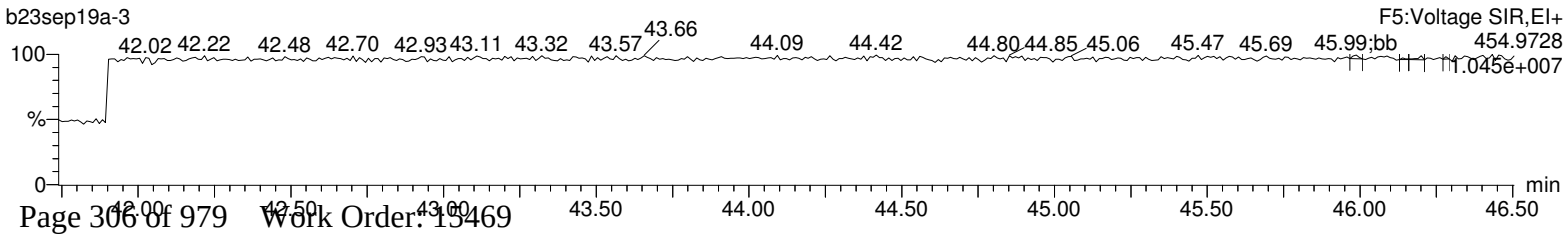
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469010**	**Date Collected:**	**08/28/2019 12:10**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.1**
Client ID:	**J6-SC1b-110to120-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 10:44**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.22 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0786	pg/g	0.0786	0.889
40321-76-4	1,2,3,7,8-PeCDD	U	0.0672	pg/g	0.0672	4.44
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.086	pg/g	0.086	4.44
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.0775	pg/g	0.0775	4.44
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.0827	pg/g	0.0827	4.44
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	0.203	pg/g	0.203	4.44
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	0.731	pg/g	0.327	8.89
51207-31-9	2,3,7,8-TCDF	BJ	0.245	pg/g	0.116	0.889
57117-41-6	1,2,3,7,8-PeCDF	U	0.0731	pg/g	0.0731	4.44
57117-31-4	2,3,4,7,8-PeCDF	U	0.0629	pg/g	0.0629	4.44
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.064	pg/g	0.064	4.44
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.0652	pg/g	0.0652	4.44
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0699	pg/g	0.0699	4.44
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.112	pg/g	0.112	4.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.0978	pg/g	0.0777	4.44
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.132	pg/g	0.132	4.44
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.368	pg/g	0.368	8.89
41903-57-5	Total TeCDD	U	0.0786	pg/g	0.0786	0.889
36088-22-9	Total PeCDD	U	0.0672	pg/g	0.0672	4.44
34465-46-8	Total HxCDD	U	0.0775	pg/g	0.0775	4.44
37871-00-4	Total HpCDD	U	0.203	pg/g	0.203	4.44
30402-14-3	Total TeCDF	BJ	0.478	pg/g	0.116	0.889
30402-15-4	Total PeCDF	U	0.0556	pg/g	0.0556	4.44
55684-94-1	Total HxCDF	U	0.064	pg/g	0.064	4.44
38998-75-3	Total HpCDF	BJ	0.0978	pg/g	0.0777	4.44
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0257	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.139	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		141	178	pg/g	79.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		131	178	pg/g	73.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		132	178	pg/g	74.4	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		142	178	pg/g	79.6	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		143	178	pg/g	80.2	(23%-140%)
13C-OCDD		220	356	pg/g	61.9	(17%-157%)
13C-2,3,7,8-TCDF		124	178	pg/g	69.9	(24%-169%)
13C-1,2,3,7,8-PeCDF		122	178	pg/g	68.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		123	178	pg/g	69.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		135	178	pg/g	75.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		140	178	pg/g	78.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		134	178	pg/g	75.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		132	178	pg/g	74.5	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469010**	**Date Collected:**	**08/28/2019 12:10**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.1**
Client ID:	**J6-SC1b-110to120-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 10:44**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.22 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		141	178	pg/g	79.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		134	178	pg/g	75.6	(26%-138%)
37Cl-2,3,7,8-TCDD		16.8	17.8	pg/g	94.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**

J **Value is estimated**

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:28:45 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:29:41 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0442		1889			1170			
2	12378-PeCDD	6.85e1	5.37e1	1.22e2	34.10	1.001	1.28	YES	0.015	0.0378	2.34e3	1321	1.8	1.64e3	822	2.0	bb	bb
3	123478-HxCDD							NO		0.0484		933			1053			
4	123678-HxCDD	5.30e1	6.82e1	1.21e2	36.77	1.001	0.78	YES	0.015	0.0436	1.61e3	933	1.7	1.63e3	1053	1.5	bb	bd
5	123789-HxCDD							NO		0.0465		933			1053			
6	1234678-HpCDD	2.54e2	2.31e2	4.84e2	40.09	1.002	1.10	NO	0.095	0.114	2.89e3	1050	2.7	3.55e3	1307	2.7	MM	MM
7	OCDD	6.18e2	7.37e2	1.35e3	44.26	1.001	0.84	NO	0.411	0.184	5.15e3	764	6.7	6.50e3	884	7.3	MM	MM
8	2378-TCDF	8.30e2	1.01e3	1.83e3	30.38	1.001	0.83	NO	0.138	0.0650	1.08e4	1199	9.0	1.66e4	2153	7.7	MM	MM
9	12378-PeCDF							NO		0.0411		1261			2102			
10	23478-PeCDF	8.13e1	6.06e1	1.42e2	33.88	1.000	1.34	NO	0.012	0.0354	3.53e3	1261	2.8	2.73e3	2102	1.3	bd	bb
11	123478-HxCDF	1.67e2	1.04e2	2.70e2	35.96	1.000	1.61	YES	0.032	0.0360	3.59e3	1115	3.2	2.68e3	1136	2.4	bd	bb
12	123678-HxCDF							NO		0.0367		1115			1136			
13	234678-HxCDF							NO		0.0393		1115			1136			
14	123789-HxCDF	1.46e2	1.37e2	2.83e2	37.31	1.000	1.07	NO	0.039	0.0628	3.48e3	1115	3.1	2.20e3	1136	1.9	bb	bb
15	1234678-HpCDF	2.27e2	2.09e2	4.36e2	38.81	1.001	1.09	NO	0.055	0.0437	3.38e3	924	3.7	4.31e3	708	6.1	MM	MM
16	1234789-HpCDF							NO		0.0742		924			708			
17	OCDF							NO		0.207		824			1239			
18	13C-2378-TCDD	6.48e5	8.58e5	1.51e6	31.14	1.018	0.76	NO	79.499	0.0993	8.36e6	4819	1734.3	1.11e7	3178	3483.2	bd	bd
19	13C-12378-PeCDD	5.74e5	3.68e5	9.42e5	34.08	1.114	1.56	NO	73.486	0.0888	1.01e7	2983	3400.8	6.61e6	1859	3558.8	bd	bd
20	13C-123478-HxCDD	3.59e5	2.68e5	6.27e5	36.67	0.991	1.34	NO	74.431	0.222	6.30e6	4562	1380.4	4.97e6	4768	1042.2	bd	bd
21	13C-123678-HxCDD	4.85e5	4.14e5	8.99e5	36.75	0.993	1.17	NO	79.628	0.165	6.94e6	4562	1520.4	5.66e6	4768	1187.0	dd	dd
22	13C-1234678-HpCDD	2.79e5	2.63e5	5.42e5	40.03	1.082	1.06	NO	80.170	0.241	2.82e6	4947	569.1	2.63e6	3192	823.9	bd	bd
23	13C-OCDD	3.39e5	3.83e5	7.22e5	44.24	1.196	0.88	NO	123.753	0.291	2.30e6	2940	780.8	2.61e6	5552	470.7	bd	bd
24	13C-2378-TCDF	6.48e5	8.45e5	1.49e6	30.35	0.992	0.77	NO	69.882	0.130	6.27e6	7251	865.0	8.25e6	4556	1810.5	bb	bb
25	13C-12378-PeCDF	7.20e5	4.66e5	1.19e6	33.28	1.088	1.55	NO	68.911	0.218	1.37e7	10290	1330.0	8.93e6	5650	1581.2	bb	bb
26	13C-23478-PeCDF	7.40e5	4.85e5	1.23e6	33.88	1.108	1.53	NO	69.433	0.212	1.48e7	10290	1435.2	9.54e6	5650	1688.6	bb	bd
27	13C-123478-HxCDF	2.53e5	4.85e5	7.38e5	35.96	0.972	0.52	NO	75.783	0.176	4.72e6	4353	1085.1	8.91e6	4212	2115.9	bd	bd
28	13C-123678-HxCDF	3.43e5	6.57e5	1.00e6	36.06	0.975	0.52	NO	78.794	0.135	4.99e6	4353	1147.3	9.52e6	4212	2260.3	db	db
29	13C-234678-HxCDF	2.82e5	5.34e5	8.16e5	36.54	0.988	0.53	NO	75.619	0.159	4.38e6	4353	1005.9	8.17e6	4212	1939.8	bd	bd
30	13C-123789-HxCDF	2.35e5	4.43e5	6.78e5	37.30	1.008	0.53	NO	74.537	0.189	2.92e6	4353	670.2	5.45e6	4212	1294.5	bd	bd
31	13C-1234678-HpCDF	2.07e5	4.56e5	6.63e5	38.79	1.049	0.45	NO	79.220	0.315	2.45e6	5406	453.2	5.35e6	7785	686.7	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:28:45 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:29:41 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.39e5	3.15e5	4.54e5	40.67	1.099	0.44	NO	75.629	0.440	1.37e6	5406	254.3	2.98e6	7785	383.2	bb	bd
33	13C-1234-TCDD	7.17e5	9.28e5	1.64e6	30.59	0.000	0.77	NO	100.000	0.114	7.63e6	4819	1582.8	9.81e6	3178	3087.2	bb	bb
34	13C-123789-HxCDD	5.88e5	4.80e5	1.07e6	36.99	0.000	1.23	NO	100.000	0.175	7.35e6	4562	1610.2	5.97e6	4768	1252.6	dd	dd
35	37Cl-2378-TCDD	1.67e5		1.67e5	31.17	1.019			9.445	0.0242	2.32e6	1826	1270.4				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:28:45 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:29:41 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	9.45e1	7.80e1	1.73e2	30.42	1.21	YES	0.013	0.0442	2.81e3	1889	1.5	1.64e3	1170	1.4	db	bb
2	Total-tetradioxins	2.00e2	1.05e2	3.05e2	28.10	1.91	YES	0.023	0.0442	3.28e3	1889	1.7	4.13e3	1170	3.5	bb	bb
3	Total-tetradioxins	2.38e2	2.10e2	4.48e2	27.82	1.13	YES	0.033	0.0442	3.24e3	1889	1.7	6.04e3	1170	5.2	bb	db

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	6.85e1	5.37e1	1.22e2	34.10	1.28	YES	0.015	0.0378	2.34e3	1321	1.8	1.64e3	822	2.0	bb	bb
2	Total-pentadioxins	6.10e1	6.12e1	1.22e2	33.91	1.00	YES	0.015	0.0378	2.09e3	1321	1.6	1.51e3	822	1.8	db	bb
3	Total-pentadioxins	1.39e2	7.01e1	2.09e2	33.29	1.98	YES	0.026	0.0378	4.26e3	1321	3.2	2.49e3	822	3.0	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDD	5.30e1	6.82e1	1.21e2	36.77	0.78	YES	0.015	0.0436	1.61e3	933	1.7	1.63e3	1053	1.5	bb	bd
2	Total-hexadioxins	1.34e2	9.25e1	2.26e2	36.08	1.45	YES	0.033	0.0458	2.80e3	933	3.0	2.35e3	1053	2.2	bb	bb
3	Total-hexadioxins	1.41e2	7.74e1	2.18e2	35.94	1.82	YES	0.032	0.0458	2.86e3	933	3.1	1.46e3	1053	1.4	bb	bd
4	Total-hexadioxins	5.04e1	6.61e1	1.17e2	35.46	0.76	YES	0.017	0.0458	2.17e3	933	2.3	1.44e3	1053	1.4	db	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	2.21e2	2.27e2	4.48e2	39.14	0.97	NO	0.088	0.114	3.53e3	1050	3.4	6.70e3	1307	5.1	MM	bb
2	1234678-HpCDD	2.54e2	2.31e2	4.84e2	40.09	1.10	NO	0.095	0.114	2.89e3	1050	2.7	3.55e3	1307	2.7	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 14:28:45 Eastern Standard Time
Printed: Tuesday, September 24, 2019 14:29:41 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	3.20e2	3.28e2	6.48e2	31.86	0.98	YES	0.049	0.0650	5.07e3	1199	4.2	5.93e3	2153	2.8	bd	MM
2	Total-tetrafurans	9.13e1	1.60e2	2.51e2	30.75	0.57	YES	0.019	0.0650	3.52e3	1199	2.9	2.44e3	2153	1.1	bb	bb
3	2378-TCDF	8.30e2	1.01e3	1.83e3	30.38	0.83	NO	0.138	0.0650	1.08e4	1199	9.0	1.66e4	2153	7.7	MM	MM
4	Total-tetrafurans	7.72e2	9.78e2	1.75e3	29.47	0.79	NO	0.131	0.0650	6.72e3	1199	5.6	1.10e4	2153	5.1	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	2.31e2	2.39e2	4.70e2	31.87	0.96	YES	0.042	0.0313	4.89e3	955	5.1	4.02e3	1805	2.2	bb	bb
2	Total-pentafurans (F1)	6.44e1	5.10e1	1.15e2	26.77	1.26	YES	0.010	0.0313	1.18e3	955	1.2	1.51e3	1805	0.8	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	8.13e1	6.06e1	1.42e2	33.88	1.34	NO	0.012	0.0354	3.53e3	1261	2.8	2.73e3	2102	1.3	bd	bb
2	Total-pentafurans	8.76e1	7.49e1	1.62e2	33.08	1.17	YES	0.014	0.0381	2.04e3	1261	1.6	2.62e3	2102	1.2	bb	bb

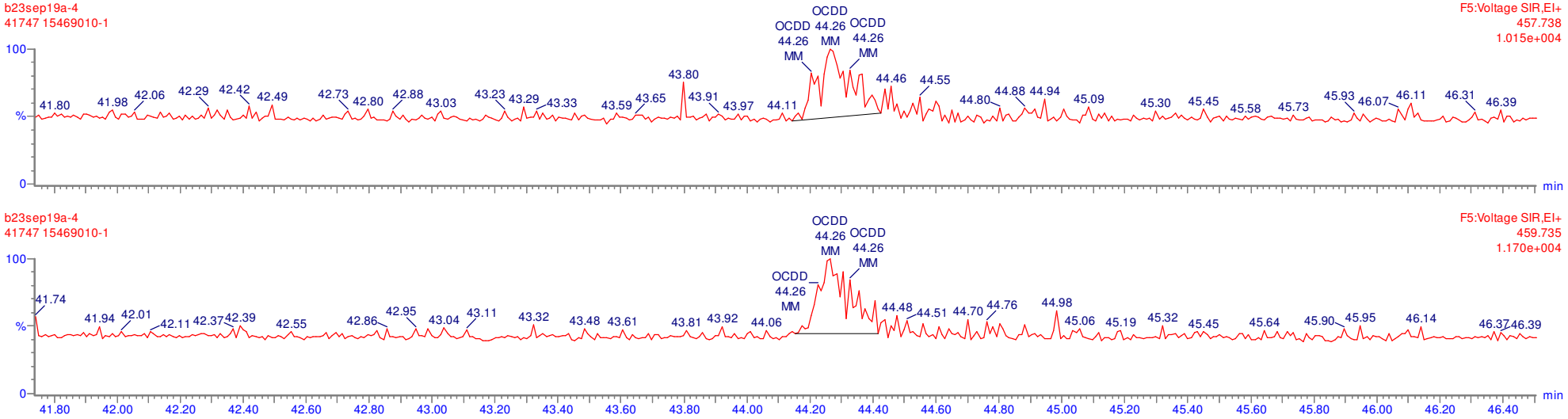
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	1.46e2	1.37e2	2.83e2	37.31	1.07	NO	0.039	0.0628	3.48e3	1115	3.1	2.20e3	1136	1.9	bb	bb
2	123478-HxCDF	1.67e2	1.04e2	2.70e2	35.96	1.61	YES	0.032	0.0360	3.59e3	1115	3.2	2.68e3	1136	2.4	bd	bb
3	Total-hexafurans	1.90e2	1.64e2	3.54e2	35.15	1.16	NO	0.040	0.0425	2.50e3	1115	2.2	5.13e3	1136	4.5	bb	MM

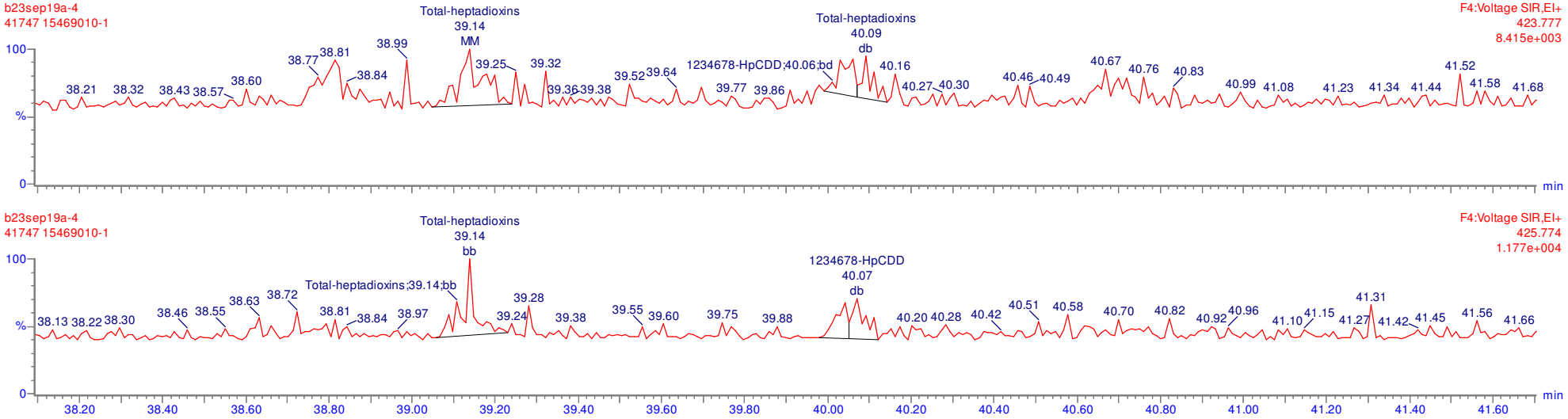
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	1.36e2	1.03e2	2.39e2	39.32	1.32	YES	0.035	0.0561	3.98e3	924	4.3	2.30e3	708	3.2	MM	bb
2	1234678-HpCDF	2.27e2	2.09e2	4.36e2	38.81	1.09	NO	0.055	0.0437	3.38e3	924	3.7	4.31e3	708	6.1	MM	MM

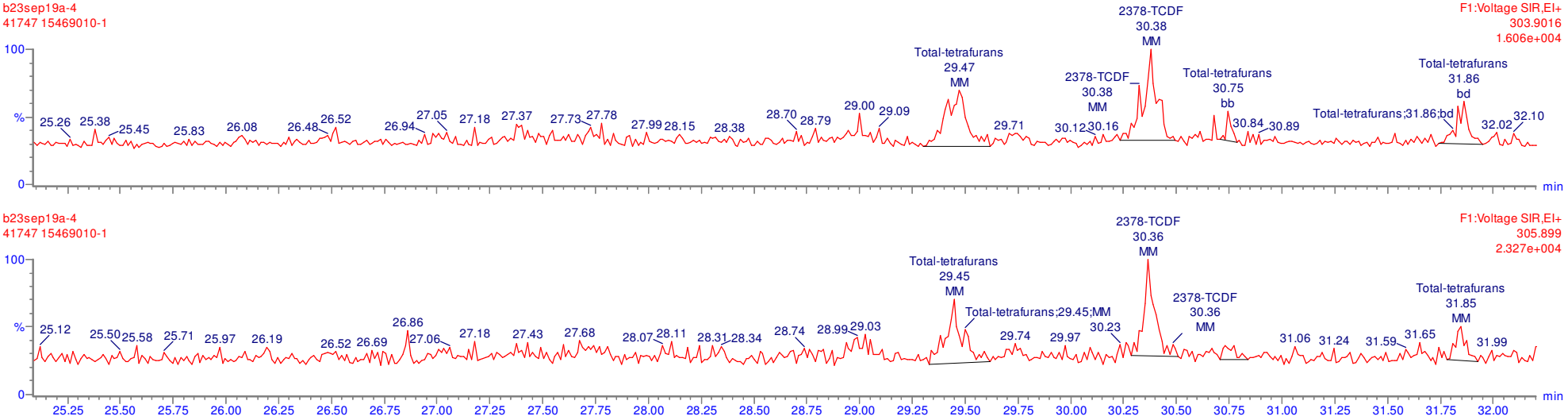
MANUAL INTEGRATION
METHOD 8290
HRP763_1



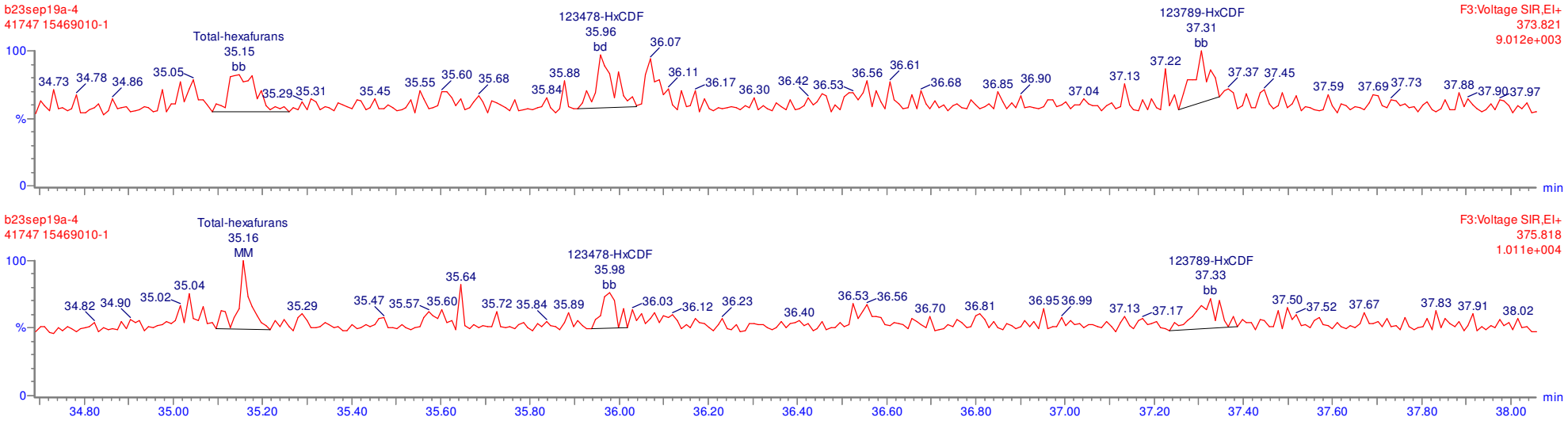
MANUAL INTEGRATION
METHOD 8290
HRP763_1



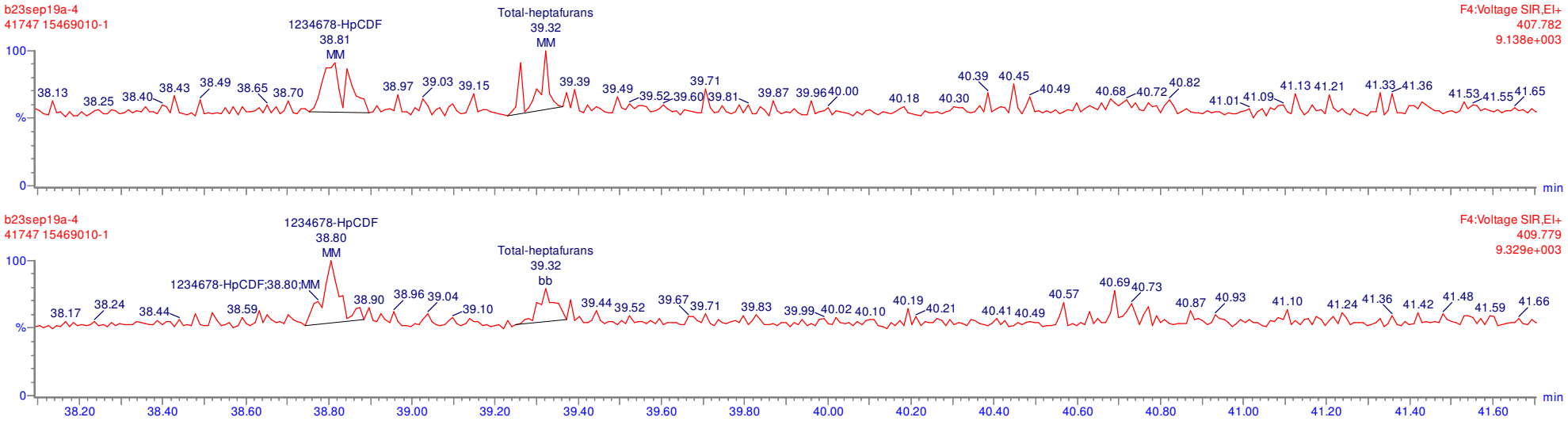
MANUAL INTEGRATION
METHOD 8290
HRP763_1



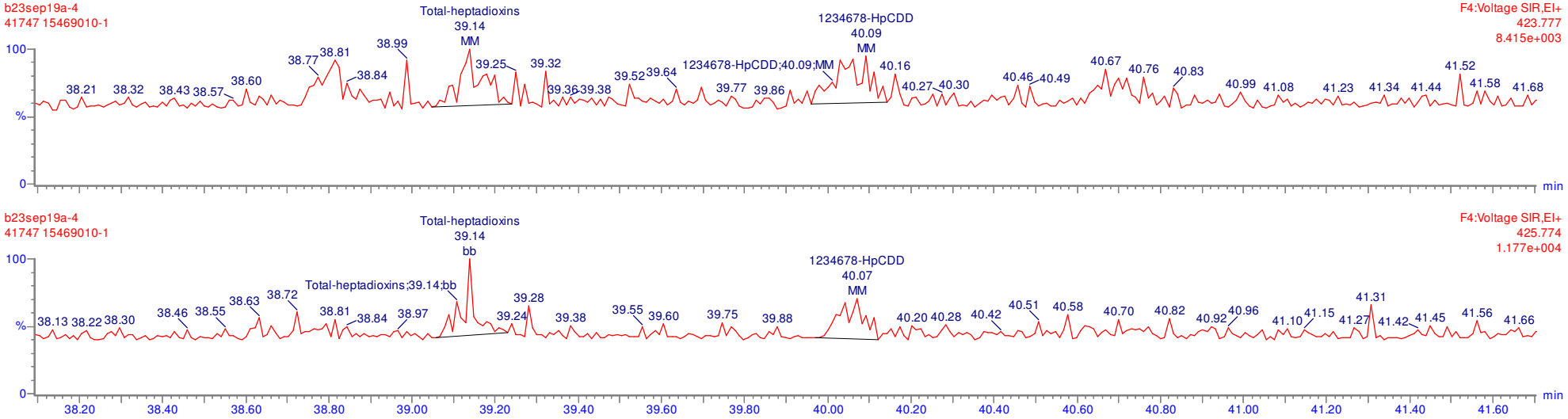
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



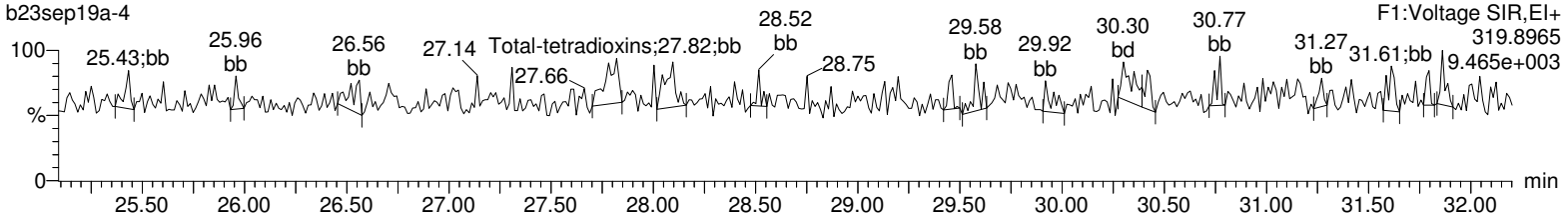
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

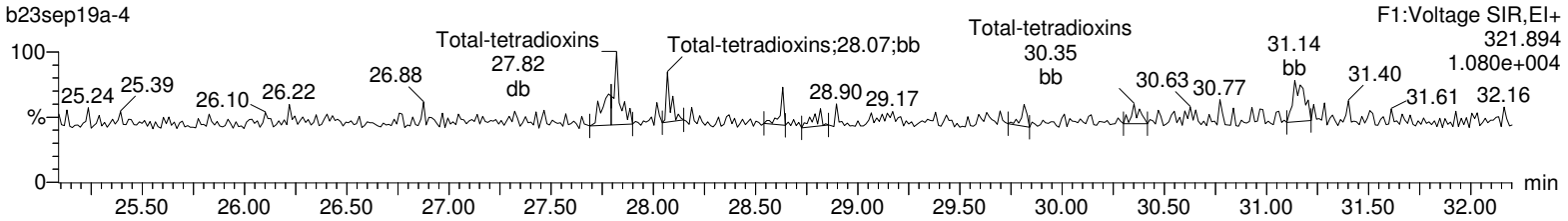
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

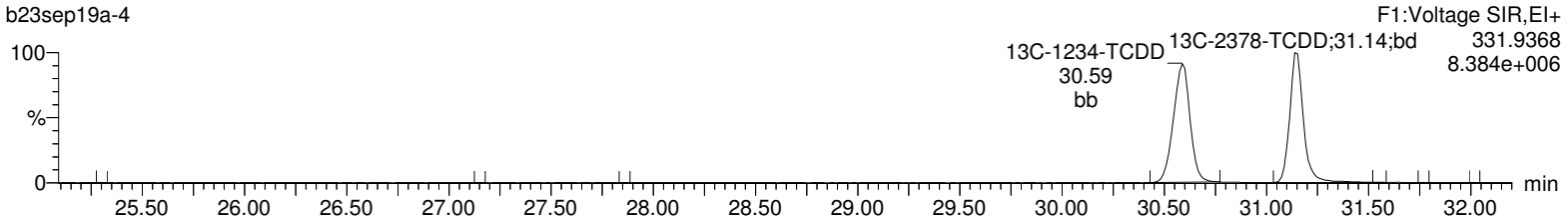
Total-tetradioxins



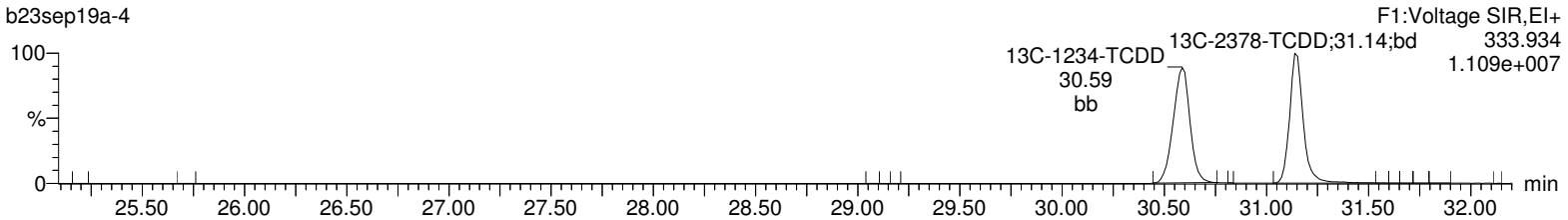
Total-tetradioxins



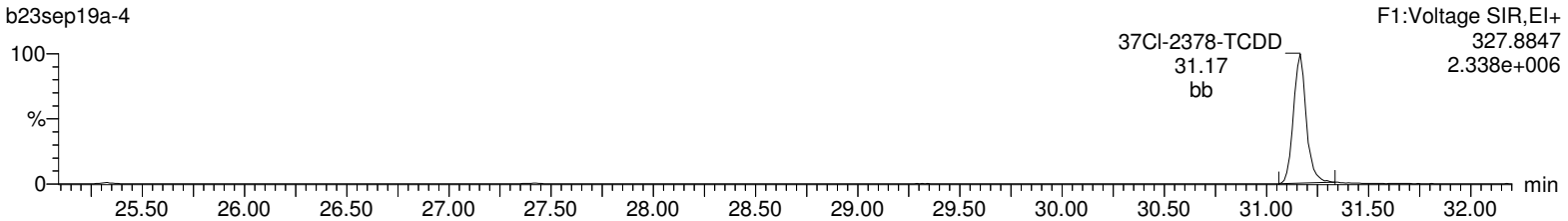
13C-2378-TCDD



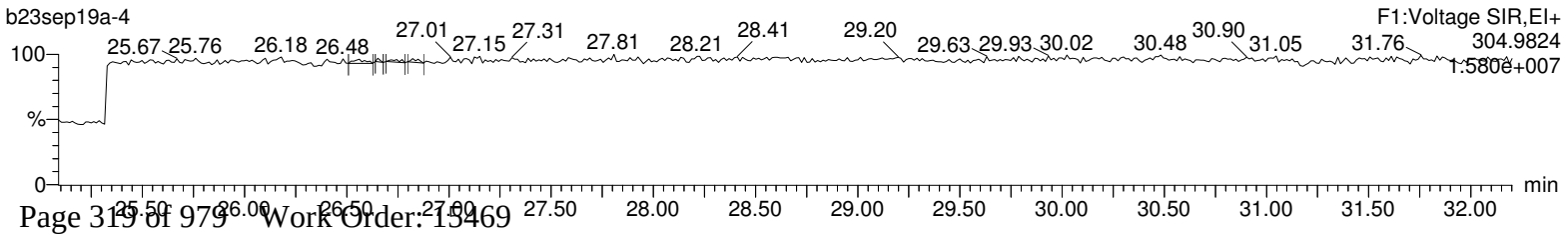
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



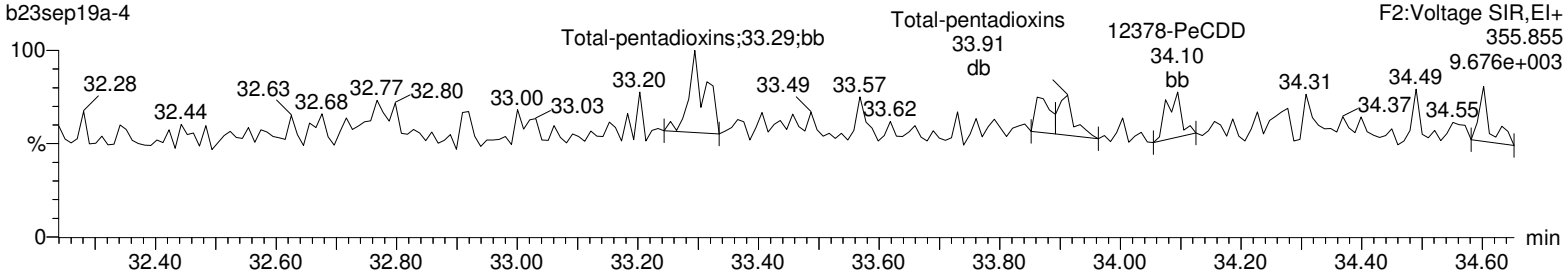
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

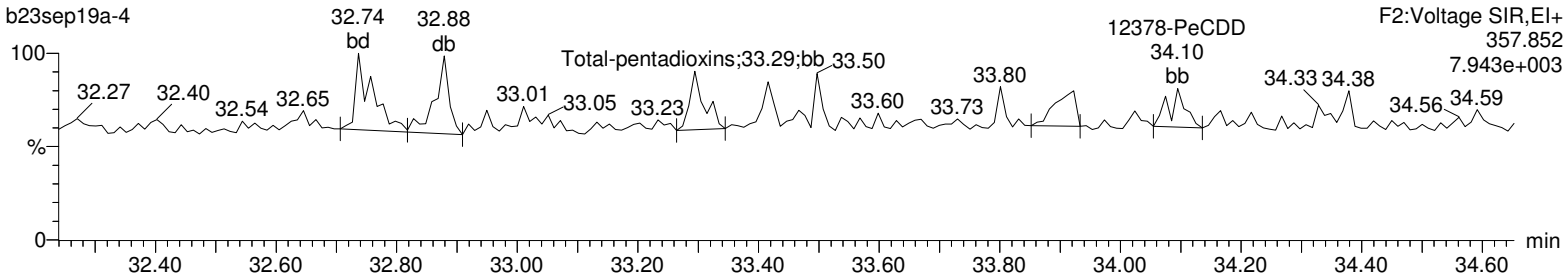
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

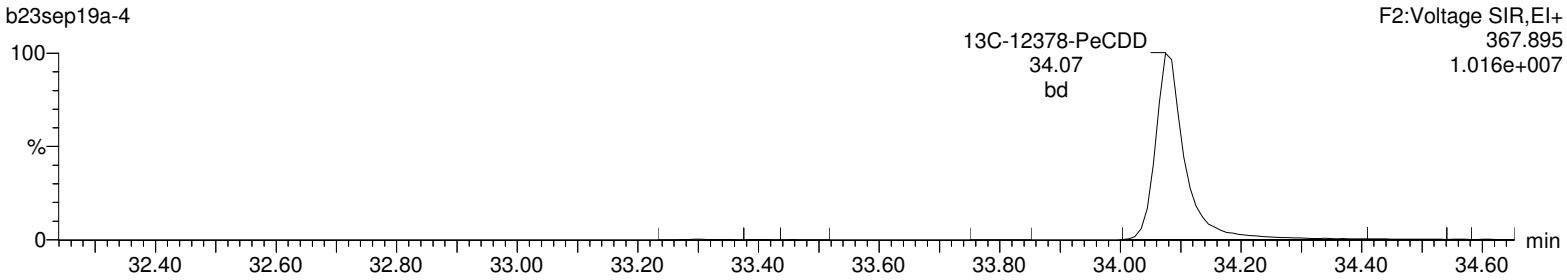
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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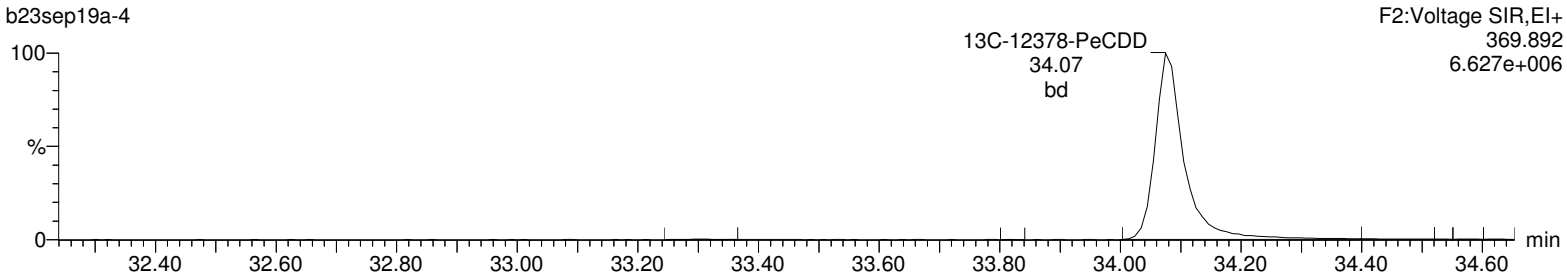
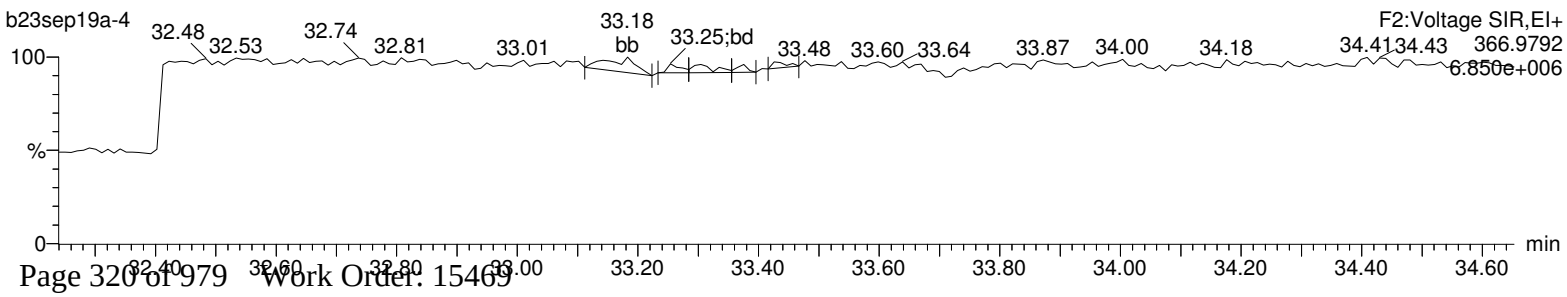


Lock Mass F2



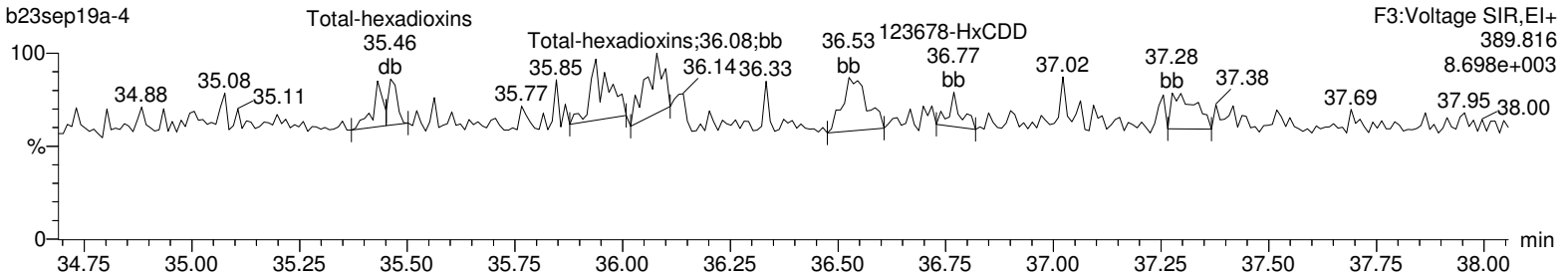
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

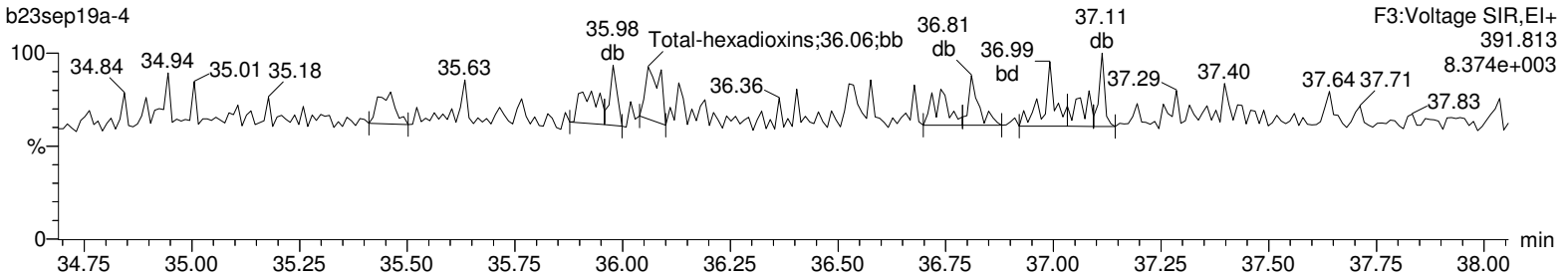
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

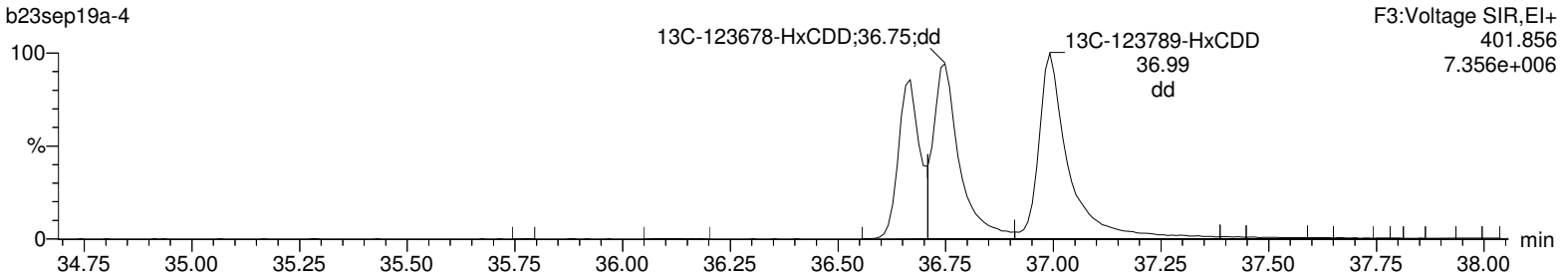
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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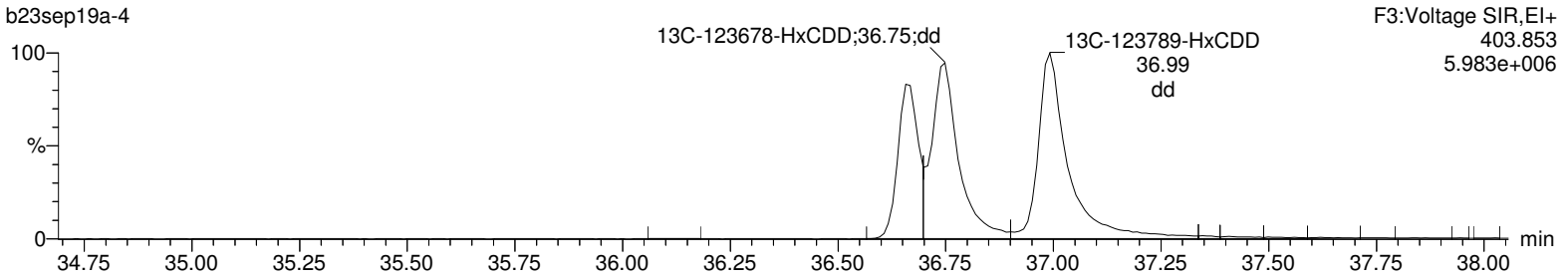
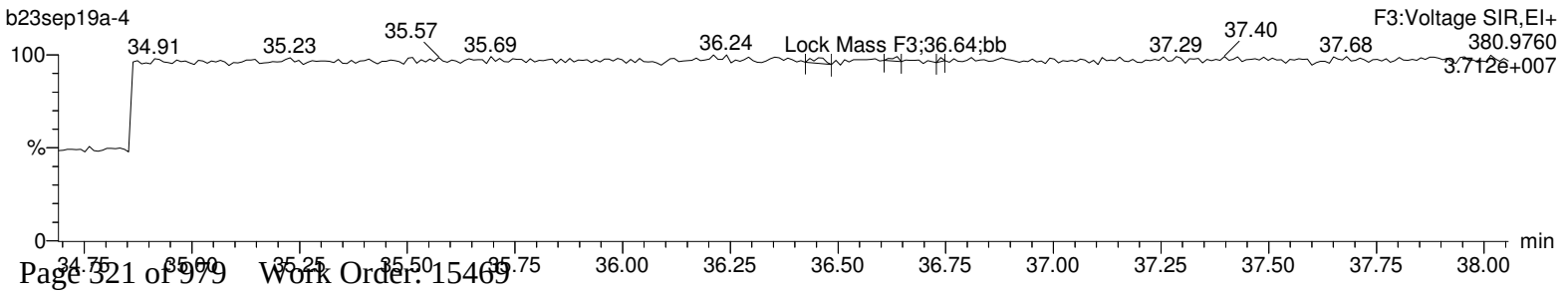


Lock Mass F3



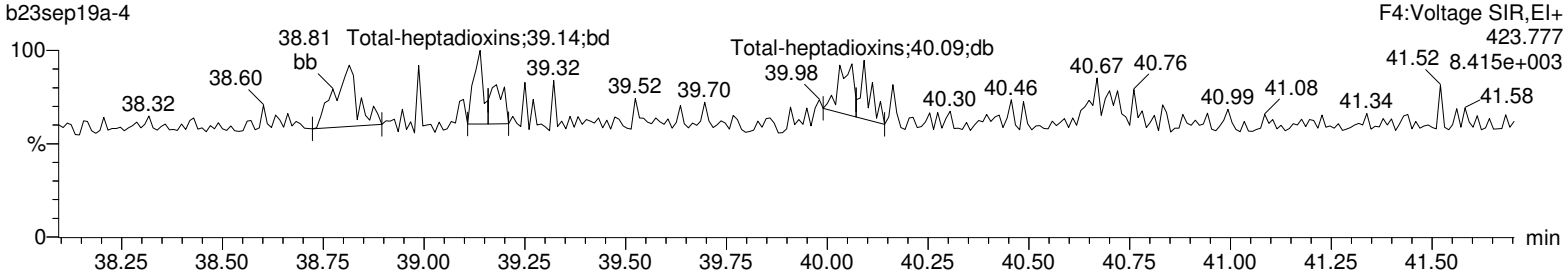
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

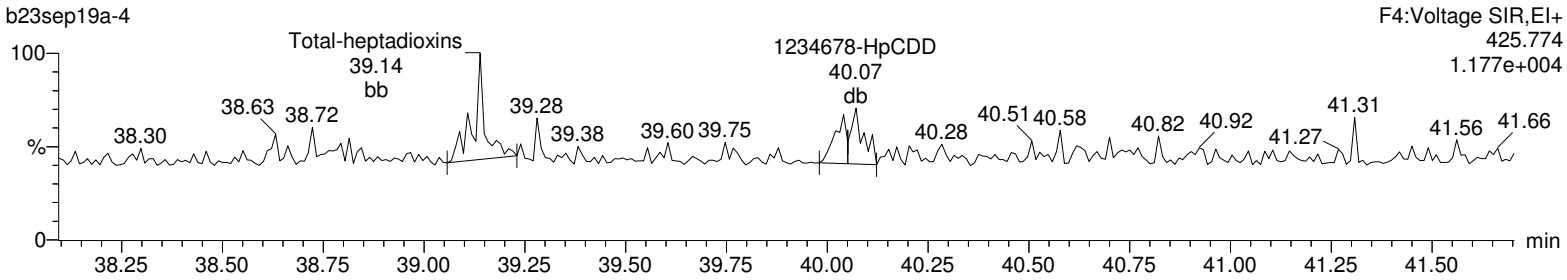
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

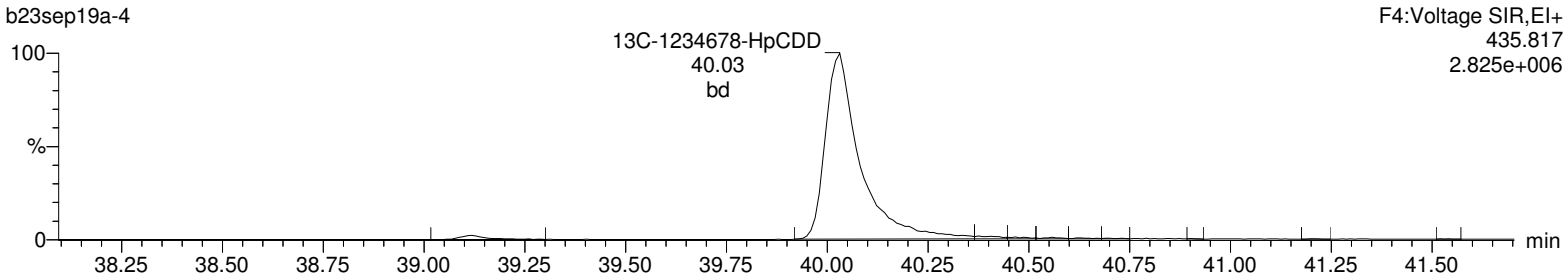
Total-heptadioxins



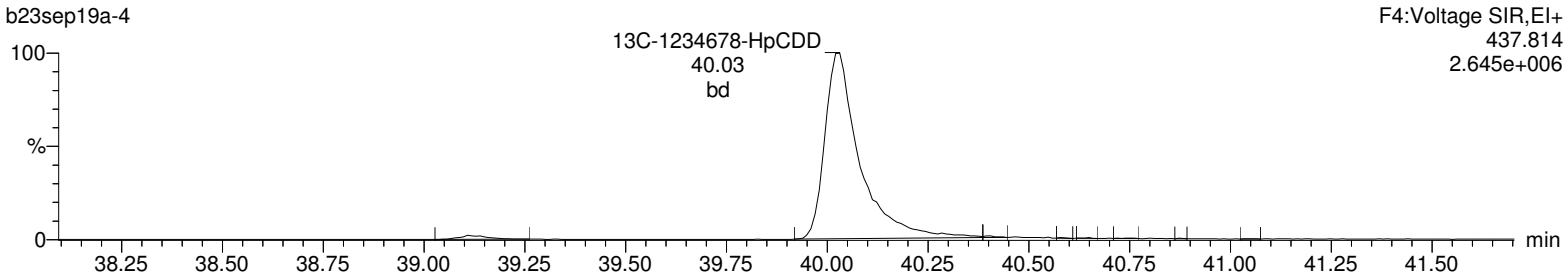
Total-heptadioxins



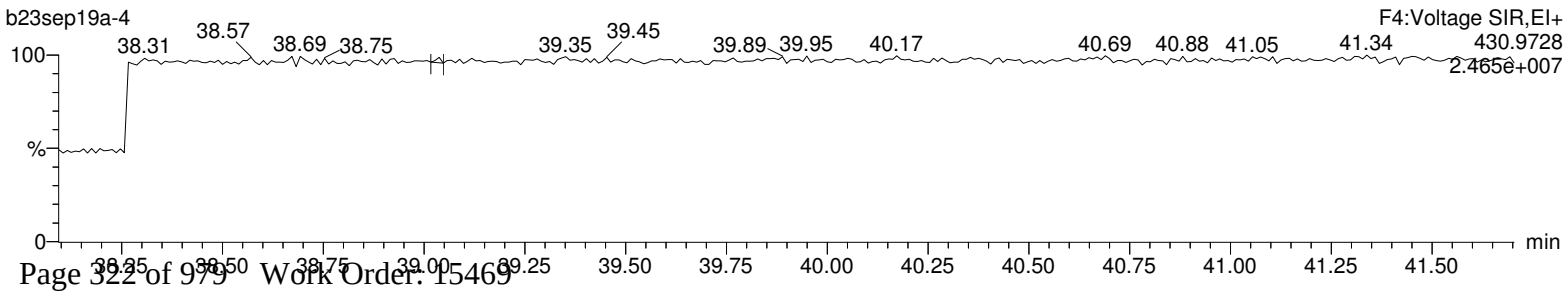
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



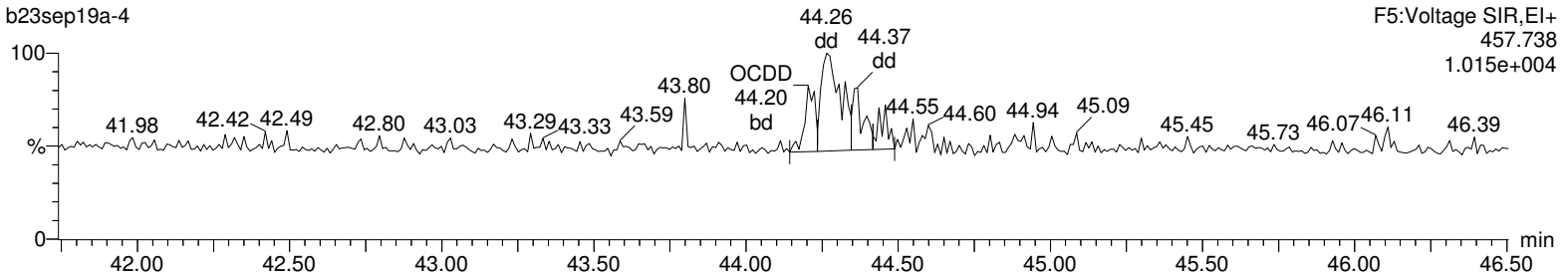
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDD



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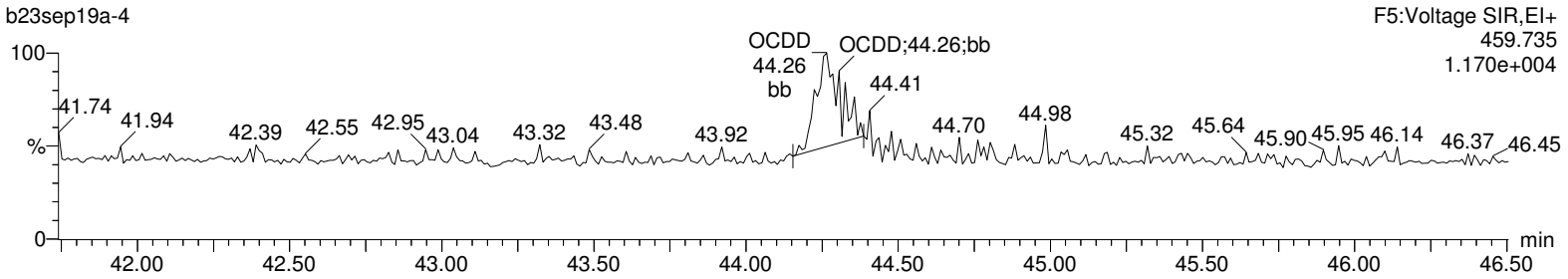
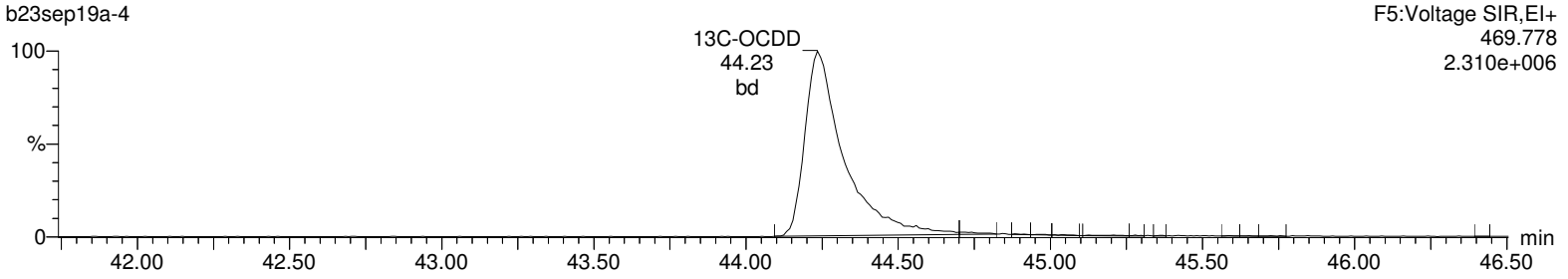


13C-OCDD



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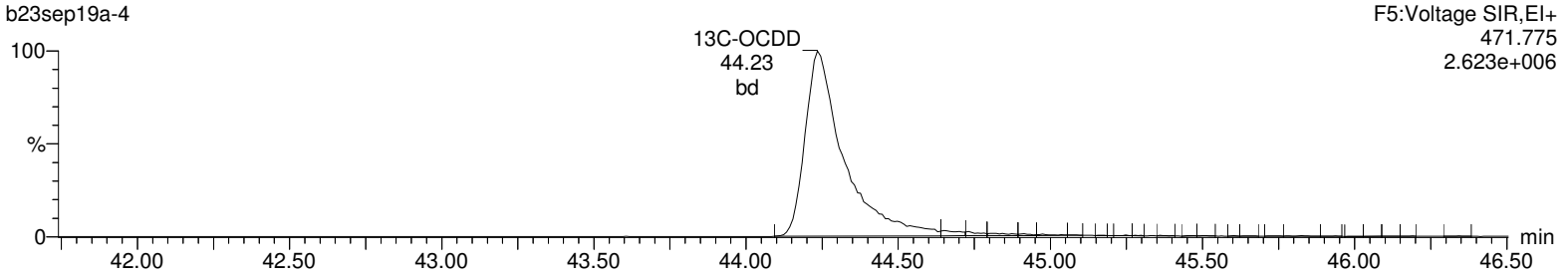
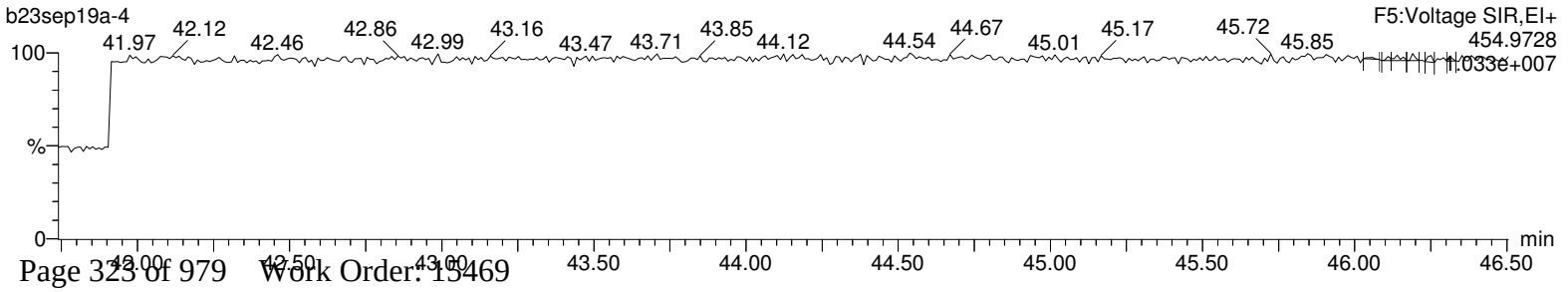


Lock Mass F5



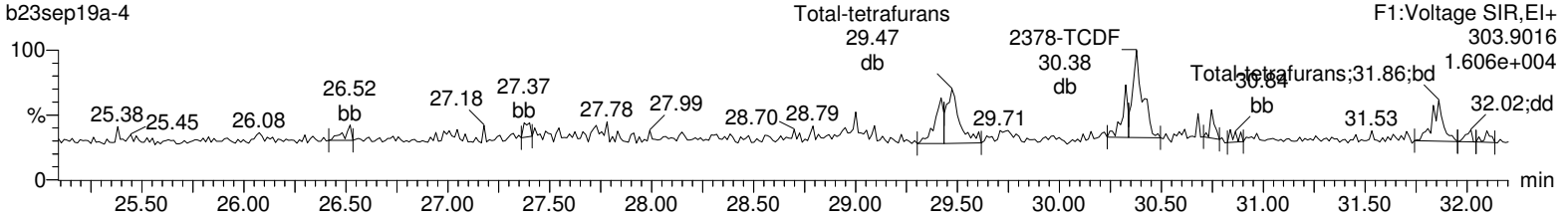
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

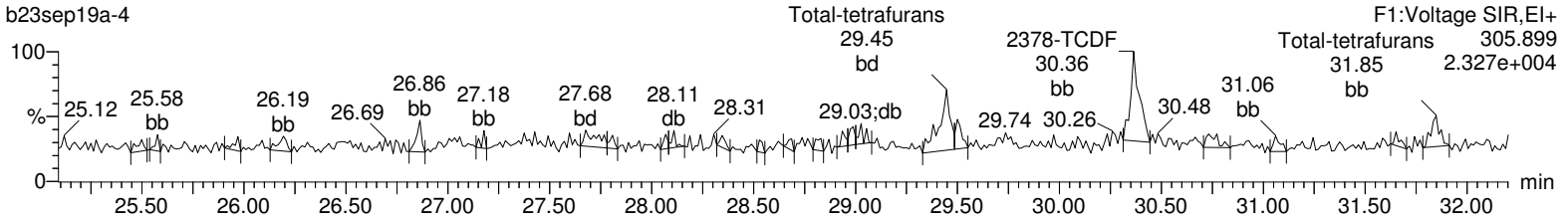
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

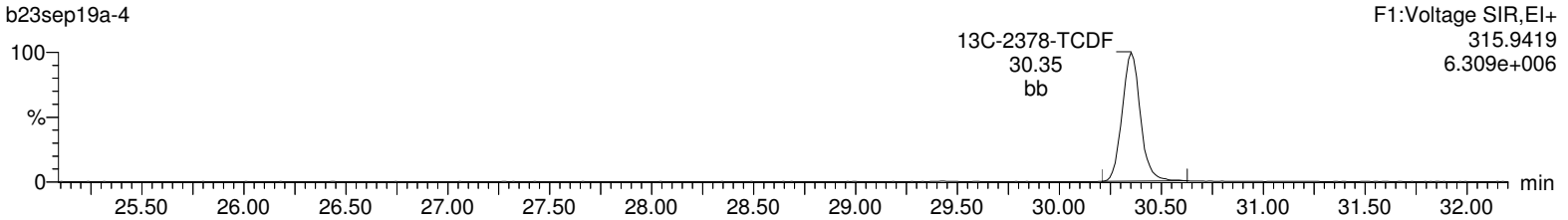
Total-tetrafurans



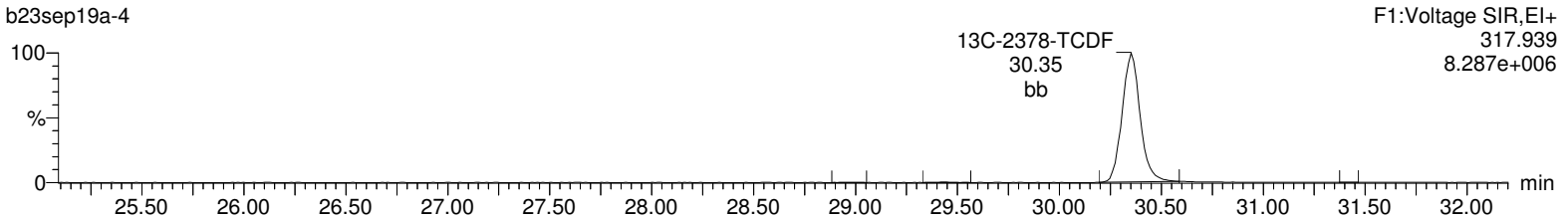
Total-tetrafurans



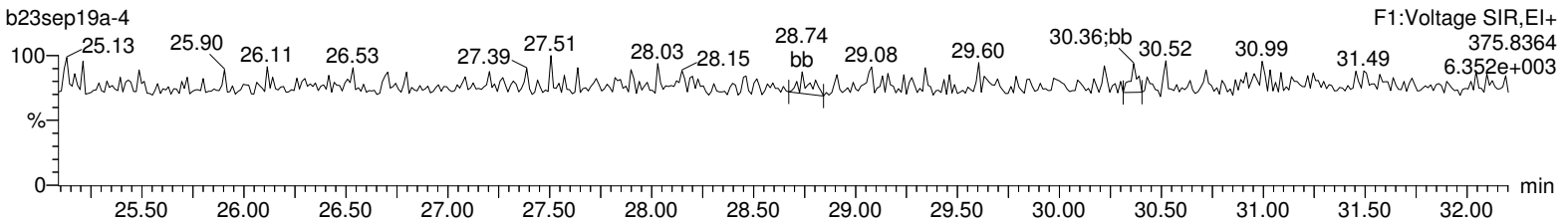
13C-2378-TCDF



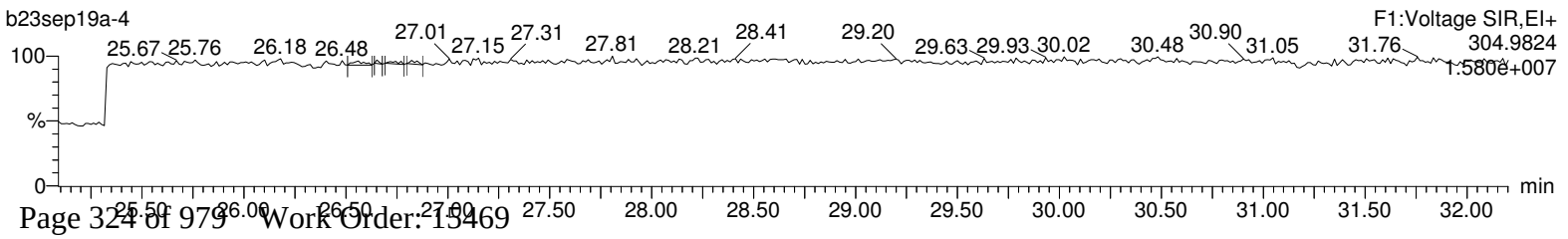
13C-2378-TCDF



HxDPE



Lock Mass F1



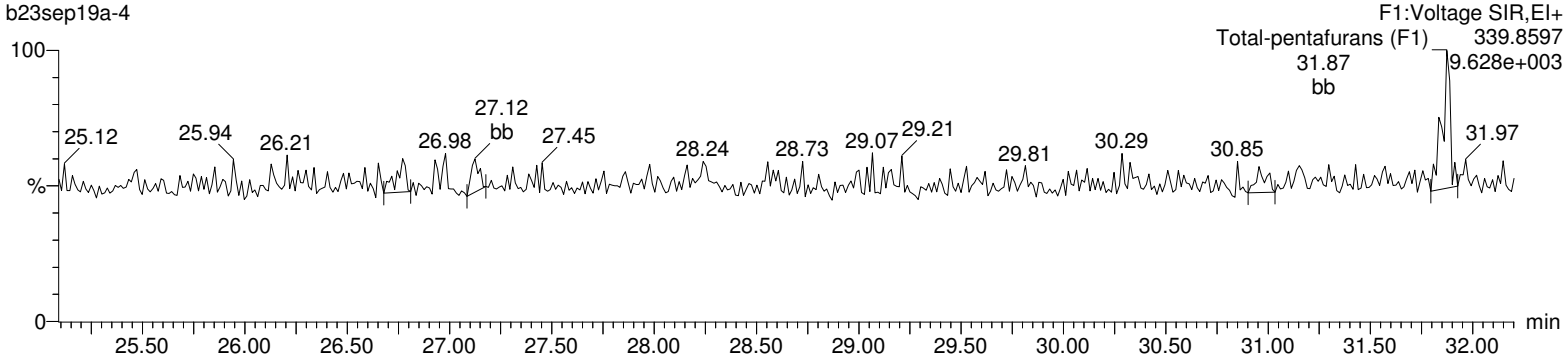
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

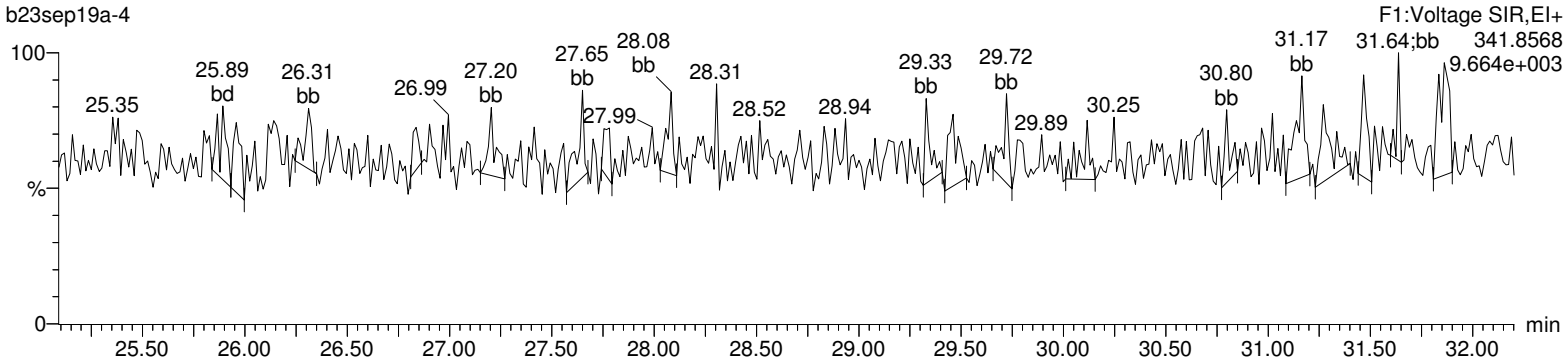
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

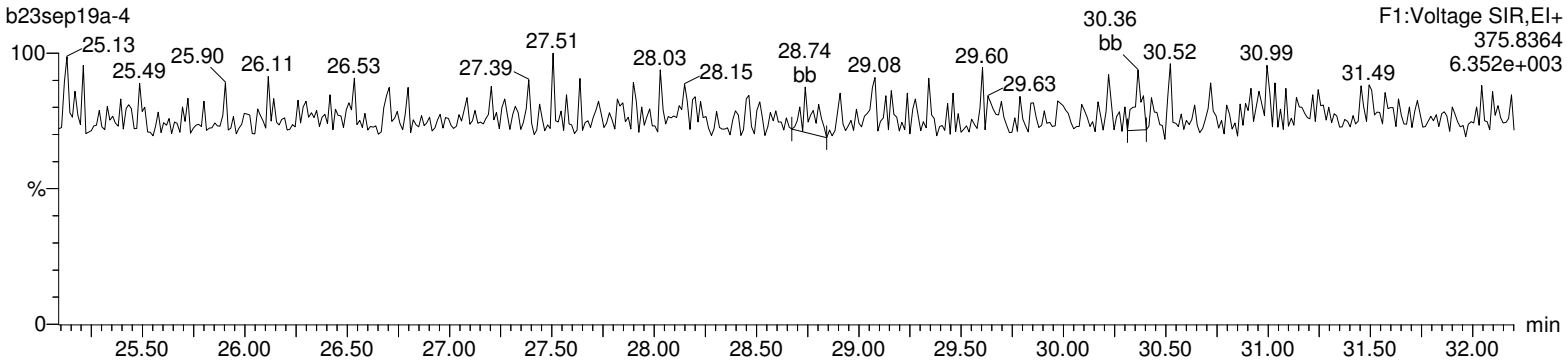
Total-pentafurans (F1)



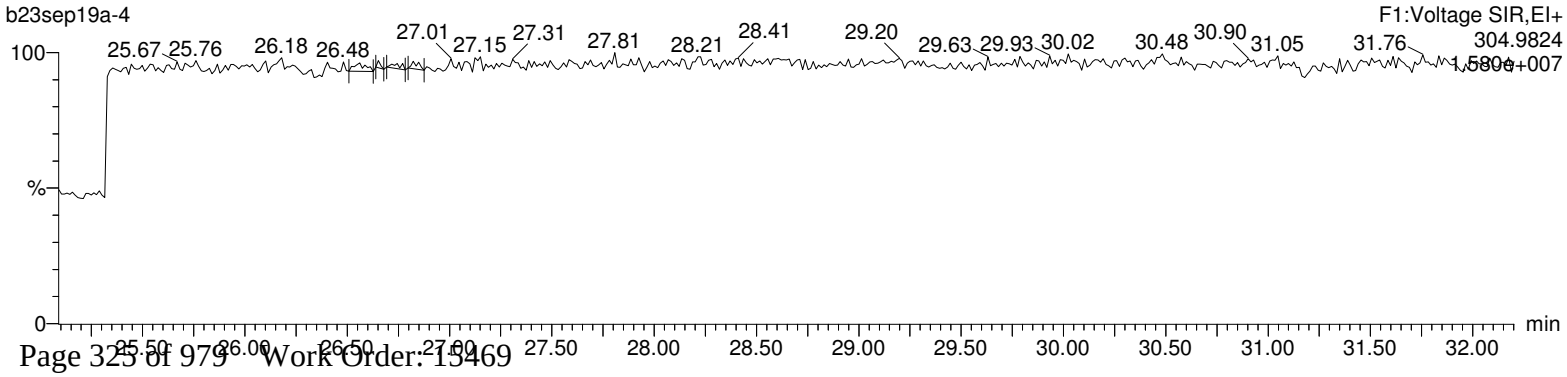
Total-pentafurans (F1)



HxDPE



Lock Mass F1



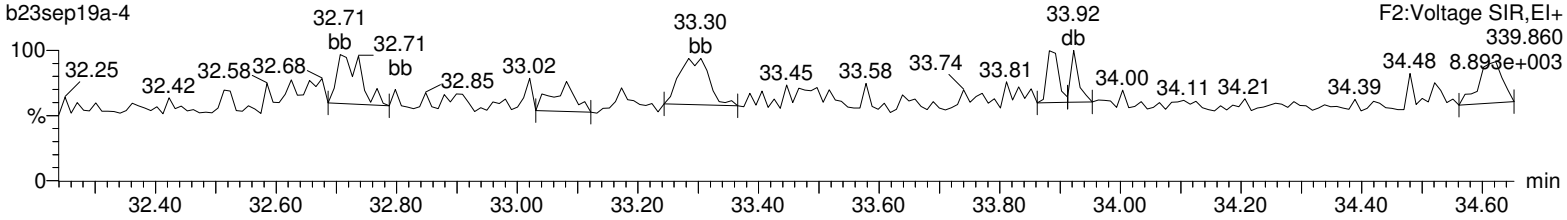
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

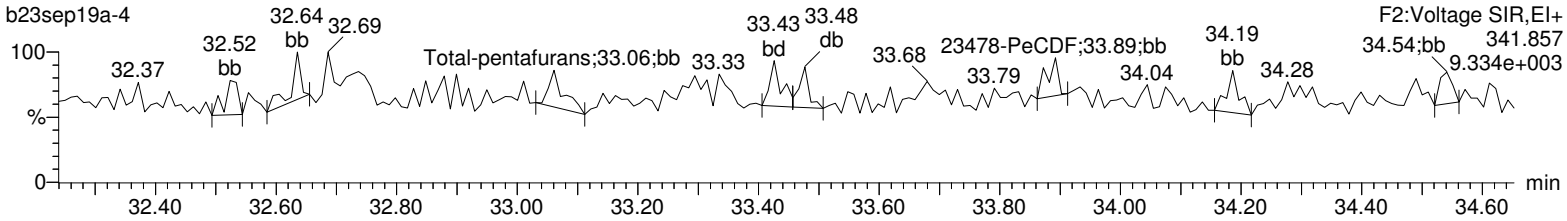
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

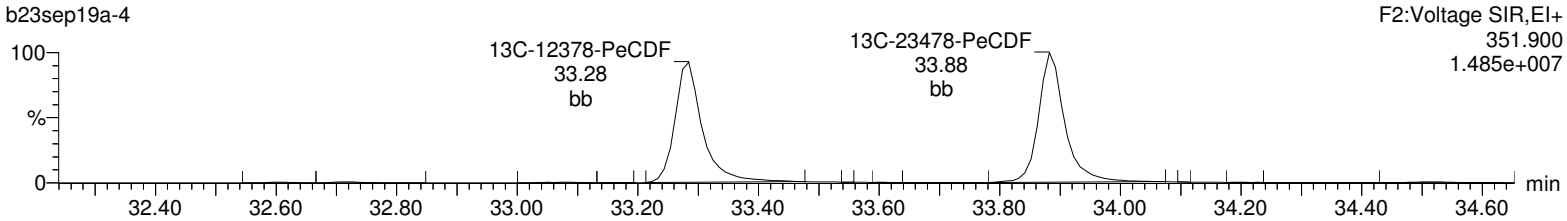
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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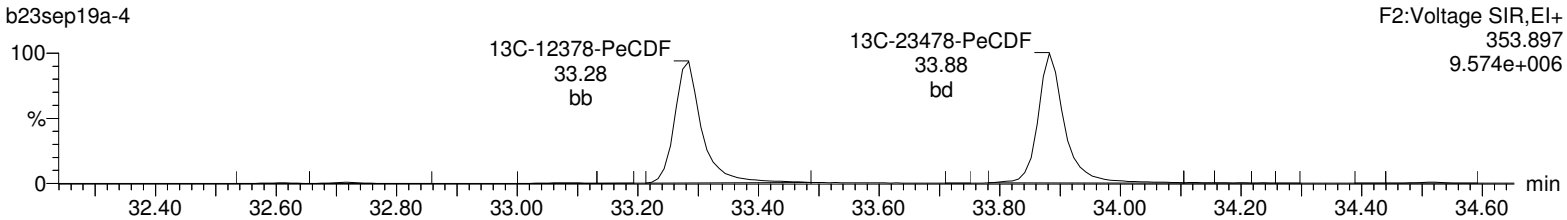
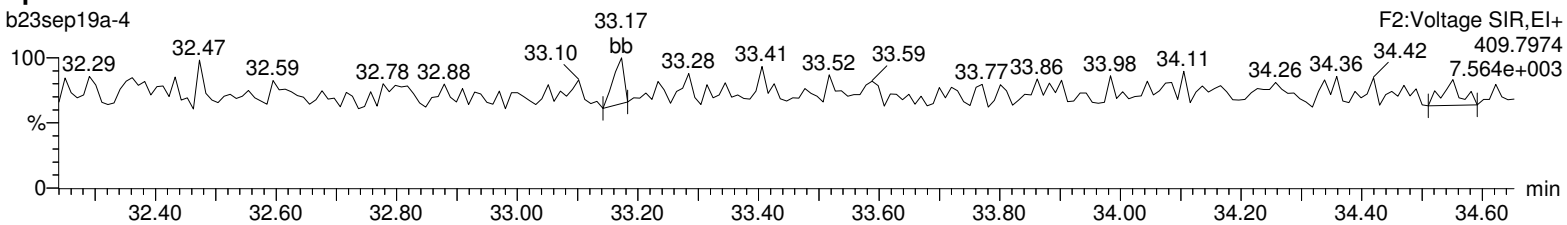
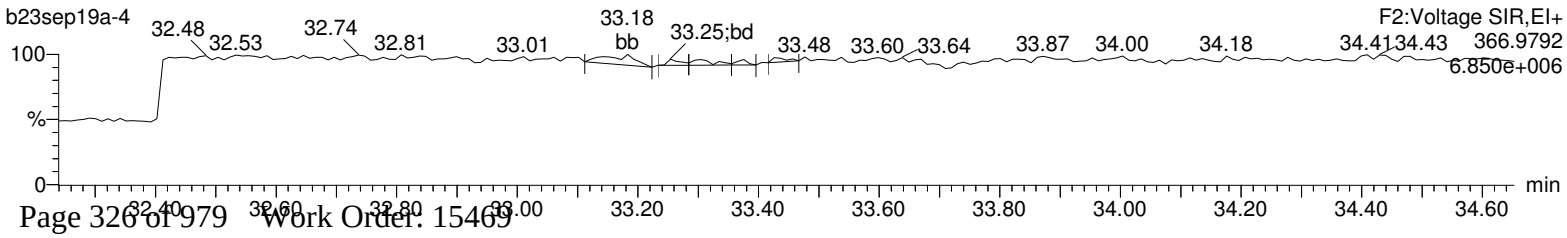


HpDPE



Lock Mass F2



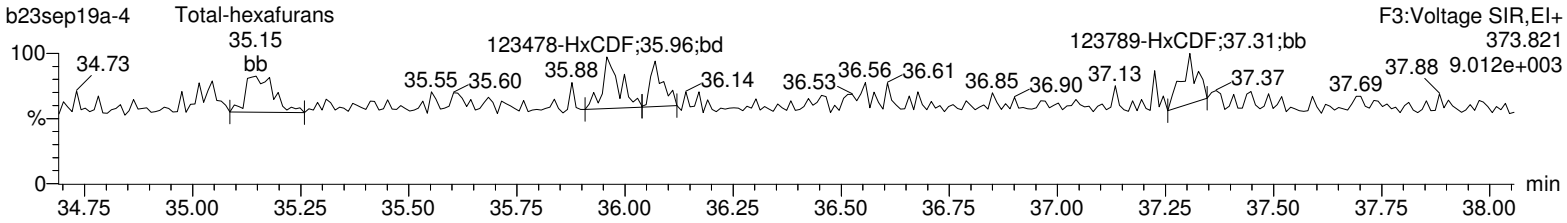
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

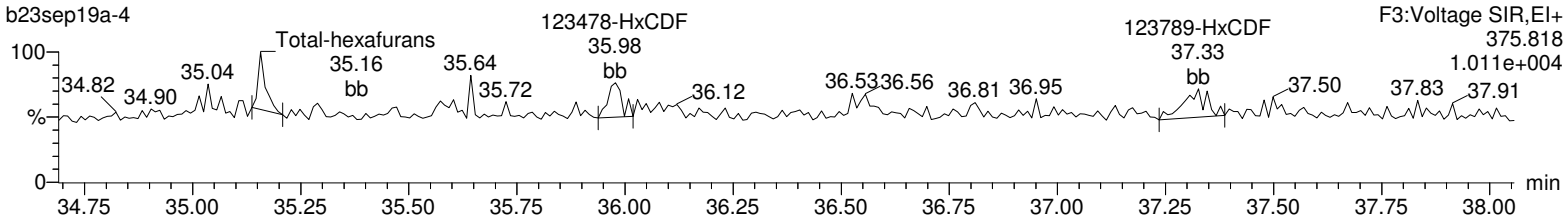
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

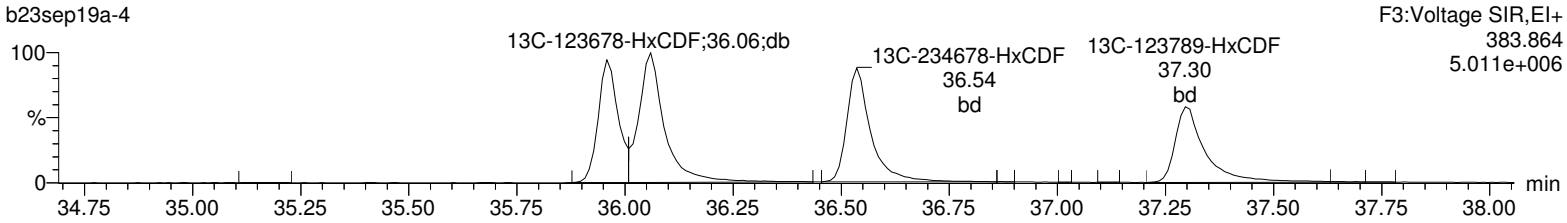
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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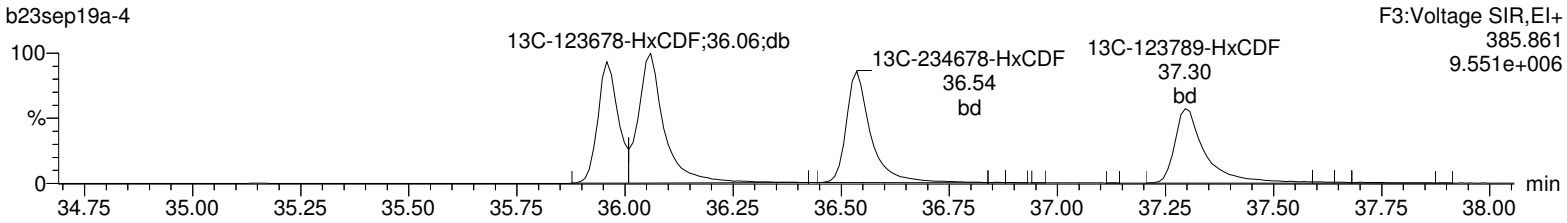
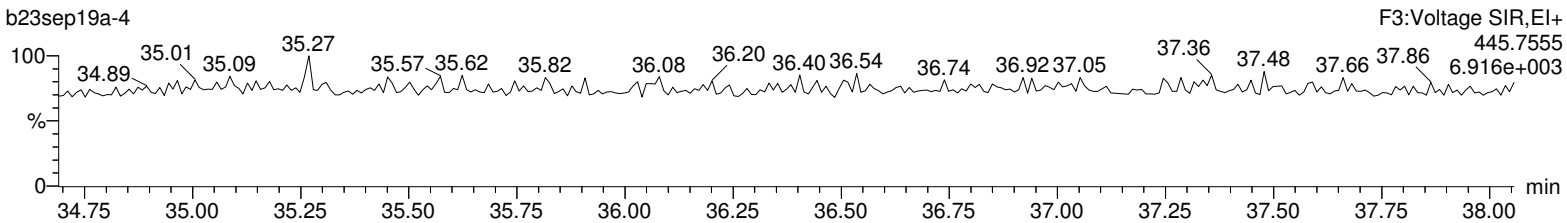
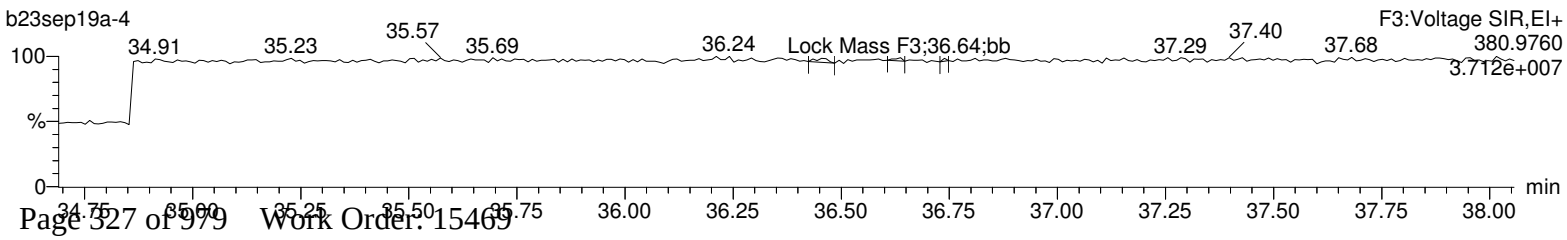


OcDPE



Lock Mass F3



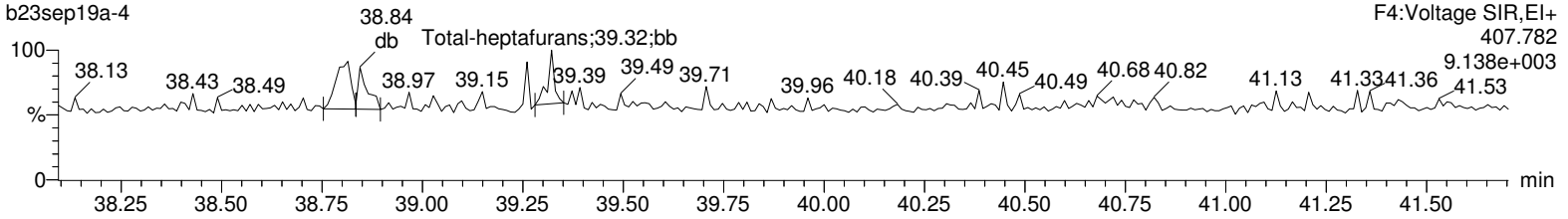
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

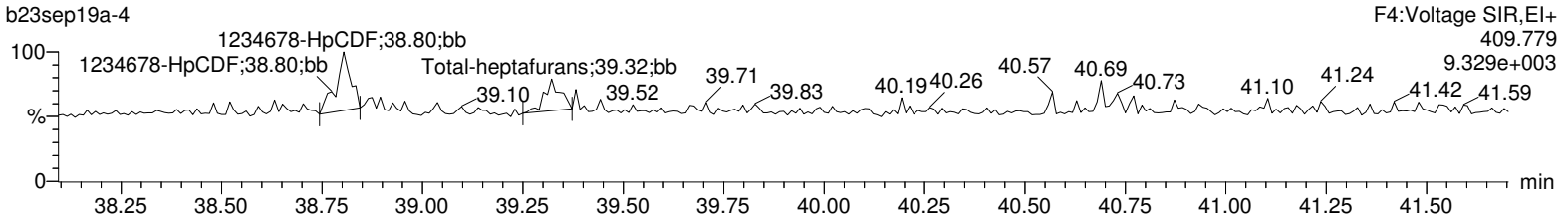
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptafurans



Total-heptafurans



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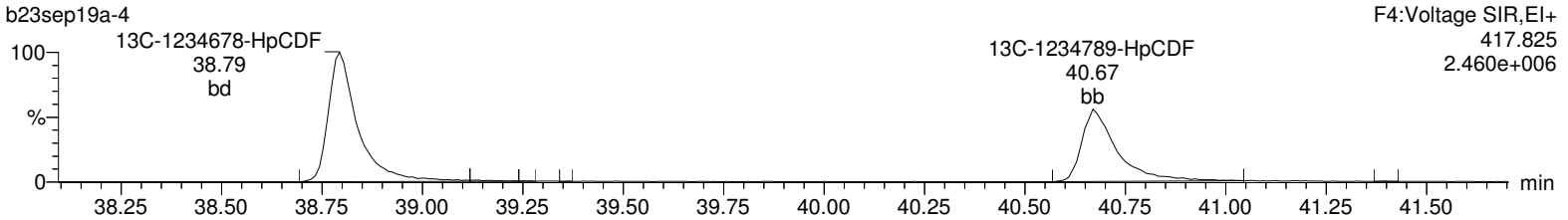

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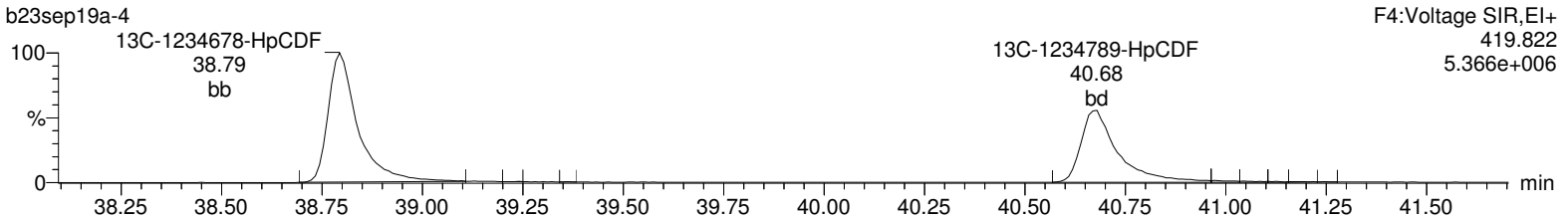

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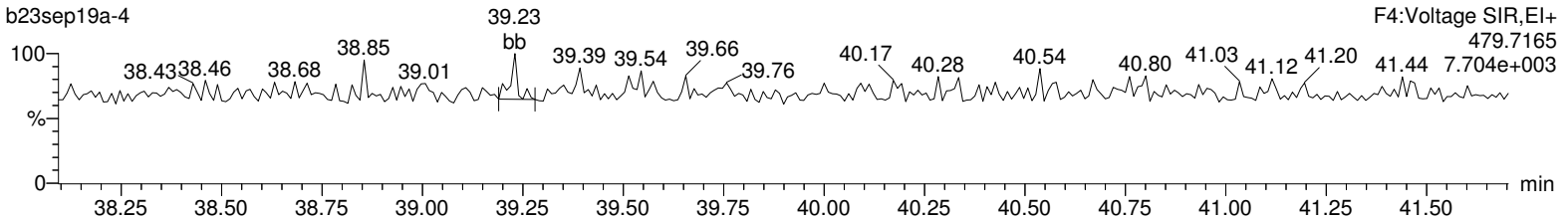
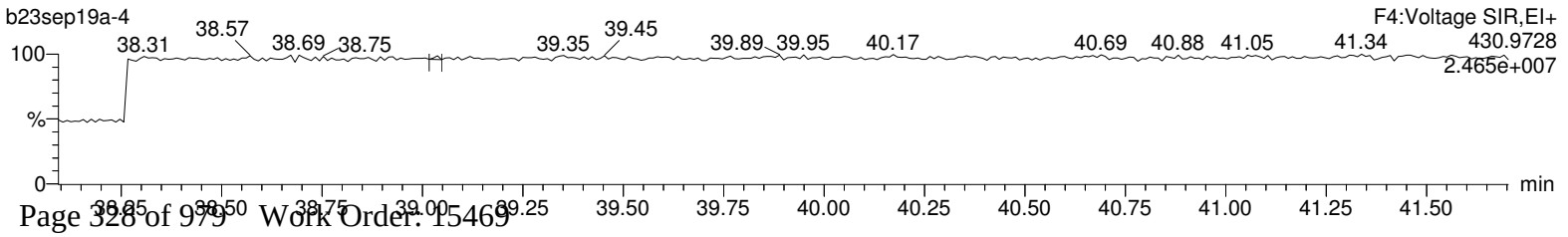


Lock Mass F4



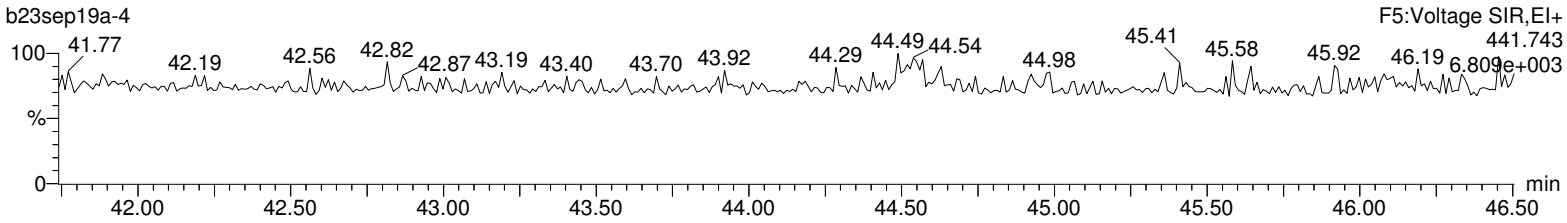
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

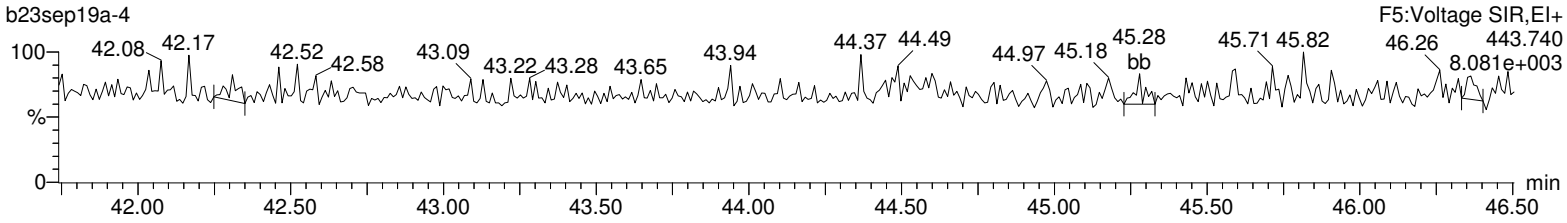
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-4, Date: 23-Sep-2019, Time: 10:44:31, ID: 15469010-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

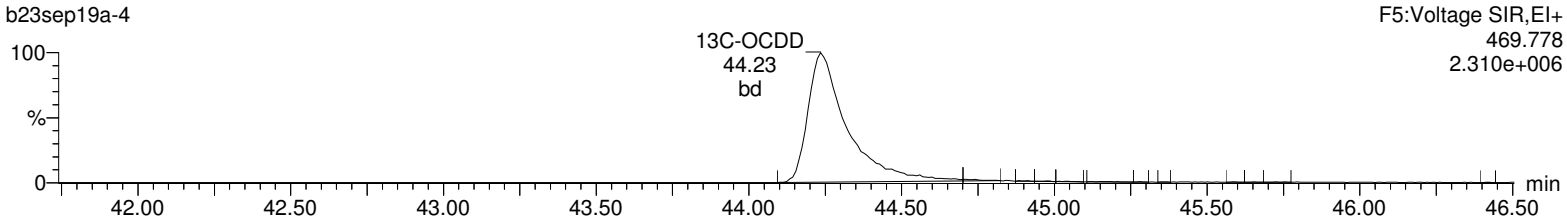
OCDF



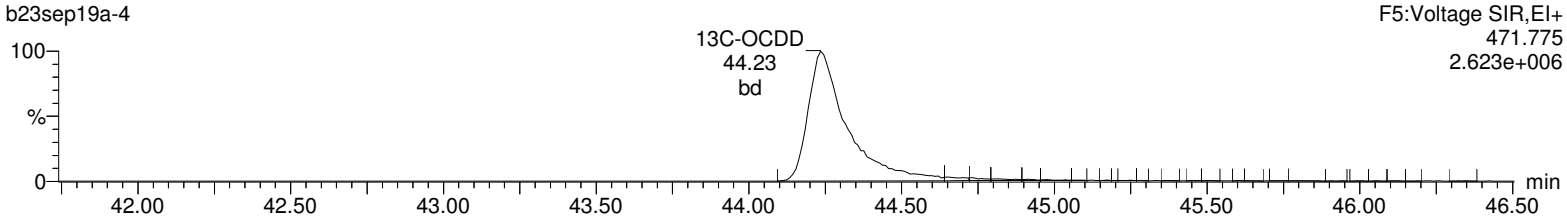
OCDF



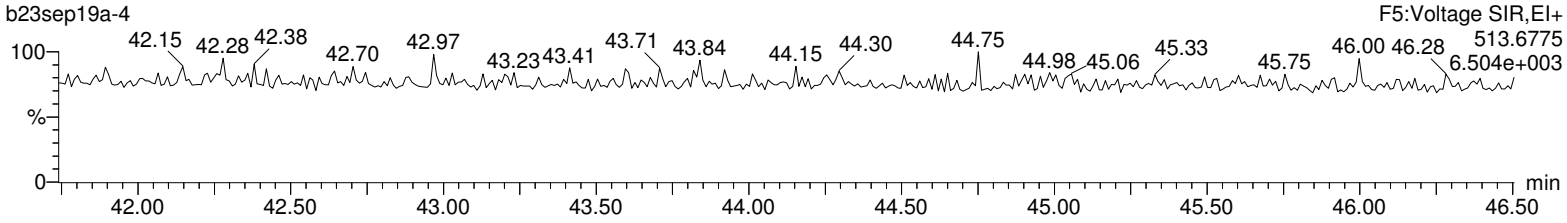
13C-OCDD



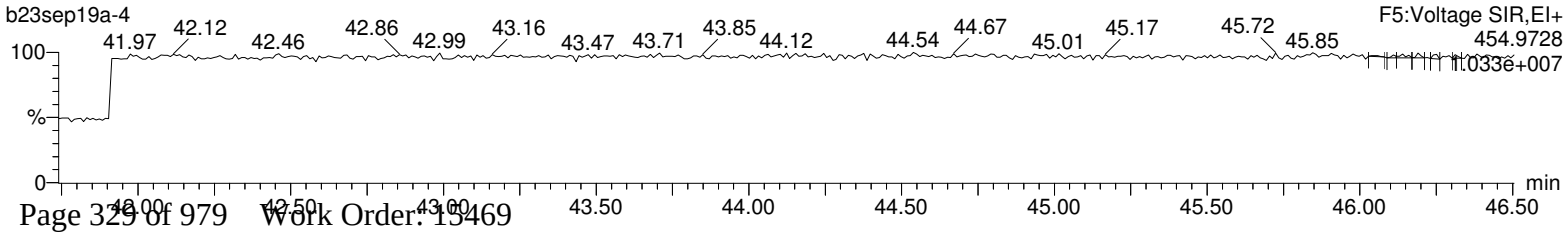
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469013**	**Date Collected:**	**08/28/2019 20:15**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**H3-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 11:32**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-5**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.47 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.761	pg/g	0.223	0.953
40321-76-4	1,2,3,7,8-PeCDD	JK	1.84	pg/g	0.236	4.77
39227-28-6	1,2,3,4,7,8-HxCDD	J	2.51	pg/g	0.471	4.77
57653-85-7	1,2,3,6,7,8-HxCDD		13.6	pg/g	0.460	4.77
19408-74-3	1,2,3,7,8,9-HxCDD		5.97	pg/g	0.475	4.77
35822-46-9	1,2,3,4,6,7,8-HpCDD		315	pg/g	1.13	4.77
3268-87-9	1,2,3,4,6,7,8,9-OCDD	E	3870	pg/g	2.35	9.53
51207-31-9	2,3,7,8-TCDF	B	1.66	pg/g	0.471	0.953
57117-41-6	1,2,3,7,8-PeCDF	J	1.95	pg/g	0.275	4.77
57117-31-4	2,3,4,7,8-PeCDF		10.7	pg/g	0.238	4.77
70648-26-9	1,2,3,4,7,8-HxCDF		10.4	pg/g	0.328	4.77
57117-44-9	1,2,3,6,7,8-HxCDF		11.6	pg/g	0.345	4.77
60851-34-5	2,3,4,6,7,8-HxCDF		11.2	pg/g	0.336	4.77
72918-21-9	1,2,3,7,8,9-HxCDF	J	2.32	pg/g	0.454	4.77
67562-39-4	1,2,3,4,6,7,8-HpCDF		230	pg/g	0.608	4.77
55673-89-7	1,2,3,4,7,8,9-HpCDF		8.92	pg/g	0.778	4.77
39001-02-0	1,2,3,4,6,7,8,9-OCDF		408	pg/g	1.03	9.53
41903-57-5	Total TeCDD	JK	24.5	pg/g	0.223	0.953
36088-22-9	Total PeCDD	JKQ	31.3	pg/g	0.236	4.77
34465-46-8	Total HxCDD	J	106	pg/g	0.460	4.77
37871-00-4	Total HpCDD		697	pg/g	1.13	4.77
30402-14-3	Total TeCDF	JK	69.5	pg/g	0.471	0.953
30402-15-4	Total PeCDF	JKQ	210	pg/g	0.130	4.77
55684-94-1	Total HxCDF	J	276	pg/g	0.328	4.77
38998-75-3	Total HpCDF	JK	621	pg/g	0.608	4.77
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		18.6	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		18.6	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		122	191	pg/g	64.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		121	191	pg/g	63.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		164	191	pg/g	86.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		148	191	pg/g	77.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		197	191	pg/g	103	(23%-140%)
13C-OCDD		412	381	pg/g	108	(17%-157%)
13C-2,3,7,8-TCDF		131	191	pg/g	68.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		115	191	pg/g	60.3	(24%-185%)
13C-2,3,4,7,8-PeCDF		112	191	pg/g	58.5	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		166	191	pg/g	87.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		135	191	pg/g	70.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		145	191	pg/g	76.3	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		126	191	pg/g	66.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469013**	**Date Collected:**	**08/28/2019 20:15**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**H3-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 11:32**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-5**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.47 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		177	191	pg/g	93.1	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		214	191	pg/g	112	(26%-138%)
37Cl-2,3,7,8-TCDD		13.6	19.1	pg/g	71.3	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
E **Value is estimated - Concentration of the target analyte exceeds the instrument calibration range**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.08e3	1.57e3	2.65e3	31.22	1.000	0.69	NO	0.399	0.117	1.77e4	2430	7.3	2.21e4	1950	11.3	MM	db
2	12378-PeCDD	2.32e3	1.78e3	4.10e3	34.14	1.000	1.30	YES	0.964	0.124	4.99e4	2100	23.8	4.17e4	1841	22.6	MM	MM
3	123478-HxCDD	2.62e3	2.22e3	4.83e3	36.75	1.000	1.18	NO	1.316	0.247	5.45e4	3756	14.5	4.16e4	2641	15.8	bd	bd
4	123678-HxCDD	1.66e4	1.33e4	2.99e4	36.84	1.000	1.25	NO	7.114	0.241	2.76e5	3756	73.6	2.30e5	2641	87.3	dd	dd
5	123789-HxCDD	6.81e3	5.24e3	1.20e4	37.09	1.007	1.30	NO	3.131	0.249	1.12e5	3756	29.7	9.86e4	2641	37.3	dd	db
6	1234678-HpCDD	3.02e5	2.88e5	5.90e5	40.12	1.000	1.05	NO	165.282	0.594	3.46e6	4813	718.6	3.29e6	4923	668.0	bb	bb
7	OCDD	2.93e6	3.40e6	6.34e6	44.39	1.000	0.86	NO	2028.624	1.23	2.26e7	5019	4509.6	2.54e7	6731	3766.5	bb	bd
8	2378-TCDF	2.97e3	4.01e3	6.98e3	30.50	1.001	0.74	NO	0.868	0.247	3.57e4	3212	11.1	4.13e4	5004	8.2	db	db
9	12378-PeCDF	3.47e3	2.45e3	5.92e3	33.33	1.001	1.42	NO	1.024	0.144	7.14e4	3910	18.3	4.89e4	2508	19.5	dd	dd
10	23478-PeCDF	2.13e4	1.34e4	3.47e4	33.94	1.000	1.58	NO	5.636	0.125	4.65e5	3910	119.0	2.98e5	2508	118.9	MM	db
11	123478-HxCDF	1.58e4	1.27e4	2.84e4	36.05	1.001	1.24	NO	5.448	0.172	2.80e5	2977	94.0	2.31e5	3082	74.8	dd	dd
12	123678-HxCDF	1.74e4	1.38e4	3.11e4	36.14	1.000	1.26	NO	6.064	0.181	2.90e5	2977	97.3	2.41e5	3082	78.1	dd	dd
13	234678-HxCDF	1.64e4	1.33e4	2.97e4	36.63	1.000	1.23	NO	5.892	0.176	2.67e5	2977	89.8	2.14e5	3082	69.6	bb	bb
14	123789-HxCDF	2.32e3	1.88e3	4.20e3	37.40	1.001	1.23	NO	1.216	0.238	4.96e4	2977	16.7	3.38e4	3082	11.0	bb	bb
15	1234678-HpCDF	3.08e5	2.98e5	6.06e5	38.90	1.000	1.04	NO	120.391	0.319	3.95e6	4329	912.6	3.75e6	3741	1002.7	bb	bd
16	1234789-HpCDF	1.12e4	9.75e3	2.09e4	40.76	1.000	1.15	NO	4.677	0.408	1.27e5	4329	29.3	1.06e5	3741	28.4	bd	bb
17	OCDF	3.54e5	3.90e5	7.44e5	44.66	1.007	0.91	NO	214.107	0.538	2.85e6	2293	1240.9	3.15e6	3435	916.1	bd	bb
18	13C-2378-TCDD	3.27e5	4.19e5	7.46e5	31.20	1.017	0.78	NO	64.196	0.114	4.60e6	3743	1229.2	5.89e6	2617	2250.9	bd	bd
19	13C-12378-PeCDD	3.05e5	1.95e5	5.00e5	34.13	1.112	1.56	NO	63.546	0.125	5.69e6	2074	2745.2	3.68e6	2634	1396.8	bd	bd
20	13C-123478-HxCDD	2.18e5	1.75e5	3.94e5	36.75	0.991	1.24	NO	86.096	0.234	3.85e6	4482	858.4	3.07e6	2417	1268.7	bd	bd
21	13C-123678-HxCDD	2.65e5	2.09e5	4.74e5	36.83	0.993	1.26	NO	77.433	0.174	4.19e6	4482	934.5	3.34e6	2417	1383.4	dd	dd
22	13C-1234678-HpCDD	1.91e5	1.87e5	3.78e5	40.11	1.082	1.02	NO	103.144	0.198	2.19e6	2395	915.5	2.12e6	2307	918.3	bb	bd
23	13C-OCDD	3.25e5	3.59e5	6.84e5	44.37	1.197	0.91	NO	216.090	0.268	2.49e6	1952	1273.7	2.75e6	3519	782.7	bd	bb
24	13C-2378-TCDF	3.90e5	5.11e5	9.01e5	30.47	0.993	0.76	NO	68.690	0.151	4.03e6	5899	682.4	5.39e6	3598	1497.4	bb	bb
25	13C-12378-PeCDF	3.90e5	2.47e5	6.37e5	33.31	1.086	1.58	NO	60.272	0.154	7.50e6	3973	1887.8	4.99e6	3826	1304.2	dd	bb
26	13C-23478-PeCDF	3.86e5	2.48e5	6.34e5	33.93	1.106	1.56	NO	58.501	0.151	8.08e6	3973	2032.5	5.14e6	3826	1344.7	bb	bb
27	13C-123478-HxCDF	1.57e5	3.03e5	4.60e5	36.03	0.972	0.52	NO	87.062	0.232	2.65e6	3629	730.4	5.15e6	4281	1202.7	bd	bd
28	13C-123678-HxCDF	1.66e5	3.21e5	4.87e5	36.13	0.975	0.52	NO	70.770	0.178	2.71e6	3629	745.8	5.17e6	4281	1207.4	db	dd
29	13C-234678-HxCDF	1.54e5	2.93e5	4.46e5	36.62	0.988	0.52	NO	76.273	0.209	2.62e6	3629	722.9	4.98e6	4281	1162.3	bb	bb
30	13C-123789-HxCDF	1.13e5	2.12e5	3.25e5	37.37	1.008	0.53	NO	65.980	0.248	2.08e6	3629	573.2	3.78e6	4281	884.1	bb	bb
31	13C-1234678-HpCDF	1.33e5	2.90e5	4.23e5	38.88	1.049	0.46	NO	93.071	0.189	1.67e6	2213	754.7	3.79e6	3342	1134.7	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.12e5	2.53e5	3.65e5	40.75	1.099	0.44	NO	112.143	0.264	1.23e6	2213	557.1	2.66e6	3342	796.8	bd	bd
33	13C-1234-TCDD	4.37e5	5.73e5	1.01e6	30.68	0.000	0.76	NO	100.000	0.132	5.22e6	3743	1394.5	6.80e6	2617	2599.2	bb	bb
34	13C-123789-HxCDD	3.18e5	2.61e5	5.79e5	37.07	0.000	1.22	NO	100.000	0.184	5.14e6	4482	1147.8	4.22e6	2417	1744.8	dd	dd
35	37Cl-2378-TCDD	7.75e4		7.75e4	31.23	1.018			7.128	0.0385	1.19e6	2002	595.9				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	2.31e4	2.90e4	5.21e4	27.92	0.80	NO	7.834	0.117	2.50e5	2430	102.9	3.27e5	1950	167.6	bd	bb
2	Total-tetradioxins	2.53e3	3.02e3	5.55e3	28.21	0.84	NO	0.836	0.117	2.64e4	2430	10.9	3.24e4	1950	16.6	db	bb
3	Total-tetradioxins	1.56e3	1.97e3	3.53e3	28.59	0.79	NO	0.531	0.117	1.59e4	2430	6.5	2.24e4	1950	11.5	bb	bb
4	Total-tetradioxins	1.41e3	1.62e3	3.02e3	29.54	0.87	NO	0.455	0.117	1.50e4	2430	6.2	1.58e4	1950	8.1	MM	MM
5	Total-tetradioxins	1.75e3	2.22e3	3.96e3	29.75	0.79	NO	0.597	0.117	1.84e4	2430	7.6	2.36e4	1950	12.1	MM	MM
6	Total-tetradioxins	5.26e2	6.50e2	1.18e3	29.92	0.81	NO	0.177	0.117	8.26e3	2430	3.4	9.02e3	1950	4.6	MM	db
7	Total-tetradioxins	7.39e2	1.08e3	1.82e3	30.19	0.68	NO	0.274	0.117	9.50e3	2430	3.9	1.21e4	1950	6.2	MM	bd
8	Total-tetradioxins	7.82e2	9.88e2	1.77e3	30.34	0.79	NO	0.266	0.117	9.06e3	2430	3.7	1.23e4	1950	6.3	MM	MM
9	Total-tetradioxins	7.28e2	7.33e2	1.46e3	30.68	0.99	YES	0.220	0.117	8.38e3	2430	3.4	9.15e3	1950	4.7	bb	MM
10	Total-tetradioxins	3.08e3	3.68e3	6.77e3	31.02	0.84	NO	1.018	0.117	3.29e4	2430	13.6	4.12e4	1950	21.1	MM	bd
11	2378-TCDD	1.08e3	1.57e3	2.65e3	31.22	0.69	NO	0.399	0.117	1.77e4	2430	7.3	2.21e4	1950	11.3	MM	db
12	Total-tetradioxins	7.95e2	9.67e2	1.76e3	31.44	0.82	NO	0.265	0.117	1.18e4	2430	4.8	1.09e4	1950	5.6	bb	MM
13	Total-tetradioxins	3.38e2	3.54e2	6.91e2	31.81	0.95	YES	0.104	0.117	5.80e3	2430	2.4	6.93e3	1950	3.6	bb	bb
14	Total-tetradioxins	4.23e2	4.42e2	8.65e2	29.30	0.96	YES	0.130	0.117	4.52e3	2430	1.9	5.56e3	1950	2.9	MM	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	1.25e4	8.17e3	2.07e4	32.83	1.53	NO	4.863	0.124	2.66e5	2100	126.9	1.73e5	1841	93.9	bb	MM
2	Total-pentadioxins	2.31e3	1.45e3	3.76e3	33.06	1.60	NO	0.885	0.124	5.63e4	2100	26.8	3.27e4	1841	17.8	bb	bb
3	Total-pentadioxins	1.17e4	7.64e3	1.93e4	33.34	1.53	NO	4.539	0.124	2.55e5	2100	121.6	1.56e5	1841	84.7	bd	bd
4	Total-pentadioxins	3.62e3	2.11e3	5.73e3	33.46	1.72	NO	1.348	0.124	7.30e4	2100	34.7	4.83e4	1841	26.2	dd	dd
5	Total-pentadioxins	1.91e3	1.41e3	3.31e3	33.51	1.35	NO	0.779	0.124	4.23e4	2100	20.1	2.99e4	1841	16.3	dd	dd
6	Total-pentadioxins	4.66e3	3.05e3	7.71e3	33.64	1.53	NO	1.814	0.124	7.44e4	2100	35.4	4.88e4	1841	26.5	db	db
7	Total-pentadioxins	6.79e2	5.03e2	1.18e3	33.85	1.35	NO	0.278	0.124	1.37e4	2100	6.5	1.06e4	1841	5.8	bb	bb
8	12378-PeCDD	2.32e3	1.78e3	4.10e3	34.14	1.30	YES	0.964	0.124	4.99e4	2100	23.8	4.17e4	1841	22.6	MM	MM
9	Total-pentadioxins	1.36e3	7.65e2	2.12e3	34.39	1.77	NO	0.499	0.124	2.17e4	2100	10.4	1.54e4	1841	8.4	bb	db
10	Total-pentadioxins	1.09e3	7.64e2	1.86e3	34.17	1.43	NO	0.437	0.124	3.10e4	2100	14.8	2.04e4	1841	11.1	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	4.03e4	3.16e4	7.19e4	35.52	1.28	NO	18.367	0.245	7.44e5	3756	198.0	5.83e5	2641	220.9	bd	bb
2	Total-hexadioxins	5.97e3	4.33e3	1.03e4	35.99	1.38	NO	2.634	0.245	9.93e4	3756	26.4	7.69e4	2641	29.1	bd	bd
3	Total-hexadioxins	4.88e4	3.92e4	8.80e4	36.19	1.24	NO	22.494	0.245	7.00e5	3756	186.3	5.90e5	2641	223.6	db	db
4	123478-HxCDD	2.62e3	2.22e3	4.83e3	36.75	1.18	NO	1.316	0.247	5.45e4	3756	14.5	4.16e4	2641	15.8	bd	bd
5	123678-HxCDD	1.66e4	1.33e4	2.99e4	36.84	1.25	NO	7.114	0.241	2.76e5	3756	73.6	2.30e5	2641	87.3	dd	dd
6	Total-hexadioxins	1.68e3	1.25e3	2.93e3	37.02	1.34	NO	0.748	0.245	3.20e4	3756	8.5	2.20e4	2641	8.3	dd	dd
7	123789-HxCDD	6.81e3	5.24e3	1.20e4	37.09	1.30	NO	3.131	0.249	1.12e5	3756	29.7	9.86e4	2641	37.3	dd	db
8	Total-hexadioxins	5.40e2	1.23e3	1.77e3	37.46	0.44	YES	0.453	0.245	1.00e4	3756	2.7	2.18e4	2641	8.3	MM	bd
9	Total-hexadioxins	1.48e3	6.47e2	2.13e3	37.60	2.29	YES	0.544	0.245	2.19e4	3756	5.8	1.12e4	2641	4.2	MM	db

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	3.65e5	3.51e5	7.16e5	39.22	1.04	NO	200.460	0.594	4.48e6	4813	930.2	4.38e6	4923	890.0	bb	bb
2	1234678-HpCDD	3.02e5	2.88e5	5.90e5	40.12	1.05	NO	165.282	0.594	3.46e6	4813	718.6	3.29e6	4923	668.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	2.68e3	2.78e3	5.47e3	26.23	0.96	YES	0.679	0.247	2.48e4	3212	7.7	3.16e4	5004	6.3	bb	db
2	Total-tetrafurans	7.31e3	9.49e3	1.68e4	26.65	0.77	NO	2.089	0.247	7.14e4	3212	22.2	9.81e4	5004	19.6	bb	bb
3	Total-tetrafurans	2.77e4	3.66e4	6.43e4	27.16	0.76	NO	7.993	0.247	3.79e5	3212	117.9	4.81e5	5004	96.1	bb	bd
4	Total-tetrafurans	2.56e3	5.18e3	7.74e3	27.44	0.49	YES	0.963	0.247	3.15e4	3212	9.8	5.20e4	5004	10.4	bd	dd
5	Total-tetrafurans	3.28e3	3.31e3	6.59e3	27.49	0.99	YES	0.819	0.247	3.13e4	3212	9.7	4.06e4	5004	8.1	db	dd
6	Total-tetrafurans	1.62e4	2.25e4	3.87e4	27.83	0.72	NO	4.811	0.247	1.56e5	3212	48.7	2.08e5	5004	41.6	bb	db
7	Total-tetrafurans	2.43e4	3.13e4	5.56e4	28.17	0.78	NO	6.913	0.247	2.39e5	3212	74.5	3.06e5	5004	61.1	bd	bd
8	Total-tetrafurans	2.59e3	3.55e3	6.14e3	28.48	0.73	NO	0.763	0.247	2.50e4	3212	7.8	3.57e4	5004	7.1	db	db
9	Total-tetrafurans	6.01e2	3.53e2	9.54e2	28.75	1.70	YES	0.119	0.247	6.74e3	3212	2.1	6.15e3	5004	1.2	bd	bd
10	Total-tetrafurans	1.50e4	1.96e4	3.46e4	29.09	0.76	NO	4.300	0.247	1.35e5	3212	42.1	1.76e5	5004	35.3	MM	MM
11	Total-tetrafurans	6.33e3	8.28e3	1.46e4	29.59	0.76	NO	1.815	0.247	5.10e4	3212	15.9	6.87e4	5004	13.7	bd	MM
12	Total-tetrafurans	8.81e2	1.47e3	2.35e3	29.84	0.60	YES	0.292	0.247	8.53e3	3212	2.7	1.42e4	5004	2.8	MM	dd
13	Total-tetrafurans	1.01e3	1.48e3	2.49e3	30.02	0.69	NO	0.310	0.247	1.09e4	3212	3.4	1.68e4	5004	3.4	dd	dd
14	Total-tetrafurans	2.64e3	3.10e3	5.74e3	30.36	0.85	NO	0.713	0.247	3.46e4	3212	10.8	3.96e4	5004	7.9	MM	dd
15	2378-TCDF	2.97e3	4.01e3	6.98e3	30.50	0.74	NO	0.868	0.247	3.57e4	3212	11.1	4.13e4	5004	8.2	db	db
16	Total-tetrafurans	2.45e3	3.97e3	6.42e3	30.84	0.62	YES	0.799	0.247	3.28e4	3212	10.2	4.79e4	5004	9.6	bd	bd
17	Total-tetrafurans	8.67e2	9.90e2	1.86e3	30.98	0.88	NO	0.231	0.247	1.12e4	3212	3.5	1.47e4	5004	2.9	db	db
18	Total-tetrafurans	8.75e2	1.29e3	2.17e3	31.65	0.68	NO	0.269	0.247	1.80e4	3212	5.6	2.73e4	5004	5.5	bd	bd
19	Total-tetrafurans	1.05e3	1.12e3	2.17e3	31.73	0.94	YES	0.269	0.247	2.17e4	3212	6.7	2.49e4	5004	5.0	db	db
20	Total-tetrafurans	2.28e3	2.60e3	4.88e3	31.94	0.88	NO	0.606	0.247	3.08e4	3212	9.6	3.78e4	5004	7.6	bb	bb
21	Total-tetrafurans	2.88e2	3.43e2	6.32e2	32.16	0.84	NO	0.079	0.247	7.45e3	3212	2.3	8.62e3	5004	1.7	bb	bb
22	Total-tetrafurans	7.99e2	1.76e3	2.56e3	30.27	0.45	YES	0.318	0.247	9.64e3	3212	3.0	1.98e4	5004	4.0	MM	dd
23	Total-tetrafurans	3.43e3	3.48e3	6.91e3	28.97	0.99	YES	0.859	0.247	3.29e4	3212	10.2	3.93e4	5004	7.8	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	2.51e5	1.64e5	4.16e5	31.93	1.53	NO	69.609	0.0682	5.37e6	1498	3584.5	3.54e6	1765	2006.5	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	9.72e3	6.80e3	1.65e4	32.71	1.43	NO	2.768	0.134	2.32e5	3910	59.2	1.52e5	2508	60.6	MM	MM
2	Total-pentafurans	7.20e4	4.55e4	1.17e5	32.80	1.58	NO	19.681	0.134	1.16e6	3910	295.6	7.25e5	2508	289.1	MM	MM
3	Total-pentafurans	5.23e2	2.32e1	5.46e2	32.92	22.55	YES	0.091	0.134	1.55e4	3910	4.0	4.10e3	2508	1.6	dd	MM
4	Total-pentafurans	9.07e2	4.02e2	1.31e3	32.97	2.26	YES	0.219	0.134	2.38e4	3910	6.1	1.82e4	2508	7.3	dd	bb
5	Total-pentafurans	2.80e4	1.74e4	4.53e4	33.10	1.61	NO	7.593	0.134	6.53e5	3910	167.1	4.23e5	2508	168.7	dd	bd
6	Total-pentafurans	2.13e3	1.30e3	3.43e3	33.21	1.63	NO	0.575	0.134	5.57e4	3910	14.3	3.17e4	2508	12.7	dd	dd
7	12378-PeCDF	3.47e3	2.45e3	5.92e3	33.33	1.42	NO	1.024	0.144	7.14e4	3910	18.3	4.89e4	2508	19.5	dd	dd
8	Total-pentafurans	8.83e3	5.86e3	1.47e4	33.49	1.51	NO	2.461	0.134	2.13e5	3910	54.5	1.20e5	2508	47.9	db	dd
9	Total-pentafurans	7.67e1	2.24e2	3.01e2	33.62	0.34	YES	0.050	0.134	3.41e3	3910	0.9	6.63e3	2508	2.6	bb	db
10	23478-PeCDF	2.13e4	1.34e4	3.47e4	33.94	1.58	NO	5.636	0.125	4.65e5	3910	119.0	2.98e5	2508	118.9	MM	db
11	Total-pentafurans	1.71e2	2.15e2	3.86e2	34.52	0.80	YES	0.065	0.134	5.33e3	3910	1.4	6.18e3	2508	2.5	dd	bb
12	Total-pentafurans	1.81e3	1.43e3	3.23e3	33.89	1.27	YES	0.541	0.134	5.17e4	3910	13.2	3.60e4	2508	14.4	MM	dd

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	3.72e4	2.95e4	6.67e4	35.11	1.26	NO	14.171	0.188	7.42e5	2977	249.2	5.54e5	3082	179.8	bd	bd
2	Total-hexafurans	1.21e5	9.79e4	2.19e5	35.24	1.23	NO	46.483	0.188	2.32e6	2977	780.4	1.89e6	3082	612.7	db	db
3	Total-hexafurans	1.45e3	1.27e3	2.72e3	35.50	1.14	NO	0.578	0.188	3.58e4	2977	12.0	3.28e4	3082	10.6	bb	bb
4	Total-hexafurans	1.62e5	1.30e5	2.92e5	35.65	1.25	NO	62.033	0.188	3.05e6	2977	1026.3	2.48e6	3082	805.1	bb	bb
5	Total-hexafurans	3.09e3	2.34e3	5.43e3	35.96	1.32	NO	1.153	0.188	7.10e4	2977	23.8	5.04e4	3082	16.4	bd	bd
6	123478-HxCDF	1.58e4	1.27e4	2.84e4	36.05	1.24	NO	5.448	0.172	2.80e5	2977	94.0	2.31e5	3082	74.8	dd	dd
7	123678-HxCDF	1.74e4	1.38e4	3.11e4	36.14	1.26	NO	6.064	0.181	2.90e5	2977	97.3	2.41e5	3082	78.1	dd	dd
8	Total-hexafurans	3.66e3	3.37e3	7.03e3	36.36	1.09	NO	1.493	0.188	6.23e4	2977	20.9	5.19e4	3082	16.8	db	db
9	234678-HxCDF	1.64e4	1.33e4	2.97e4	36.63	1.23	NO	5.892	0.176	2.67e5	2977	89.8	2.14e5	3082	69.6	bb	bb
10	123789-HxCDF	2.32e3	1.88e3	4.20e3	37.40	1.23	NO	1.216	0.238	4.96e4	2977	16.7	3.38e4	3082	11.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-5.qld

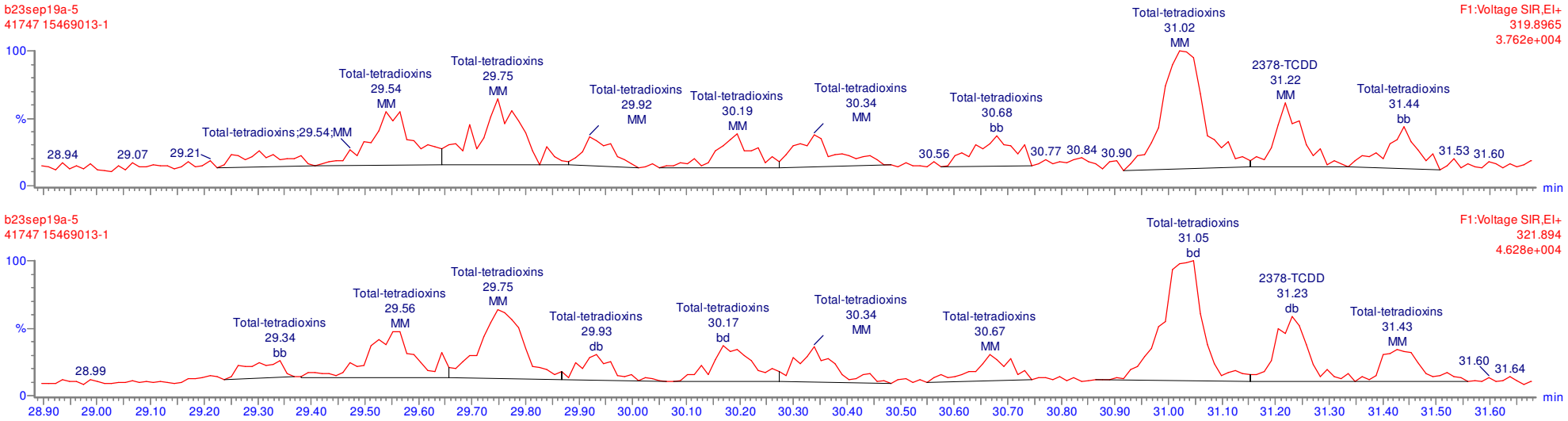
Last Altered: Tuesday, September 24, 2019 13:31:18 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:32:16 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

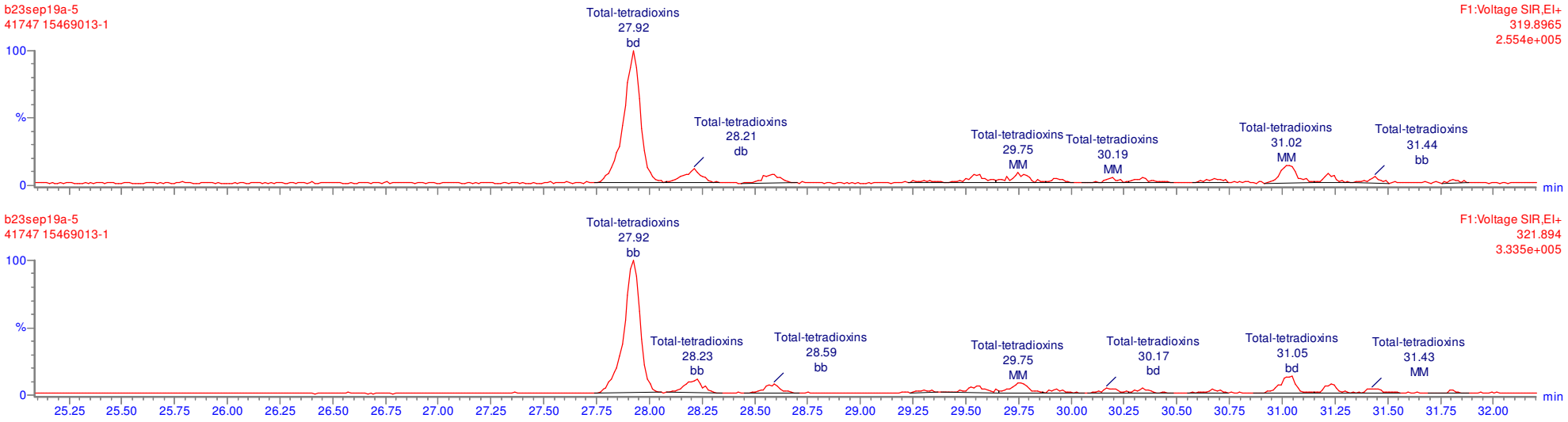
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	3.08e5	2.98e5	6.06e5	38.90	1.04	NO	120.391	0.319	3.95e6	4329	912.6	3.75e6	3741	1002.7	bb	bd
2	Total-heptafurans	9.14e2	1.49e3	2.40e3	39.21	0.62	YES	0.504	0.360	2.74e4	4329	6.3	2.76e4	3741	7.4	bb	db
3	Total-heptafurans	4.86e5	4.67e5	9.53e5	39.40	1.04	NO	200.298	0.360	6.23e6	4329	1438.7	6.03e6	3741	1613.3	bb	bb
4	1234789-HpCDF	1.12e4	9.75e3	2.09e4	40.76	1.15	NO	4.677	0.408	1.27e5	4329	29.3	1.06e5	3741	28.4	bd	bb

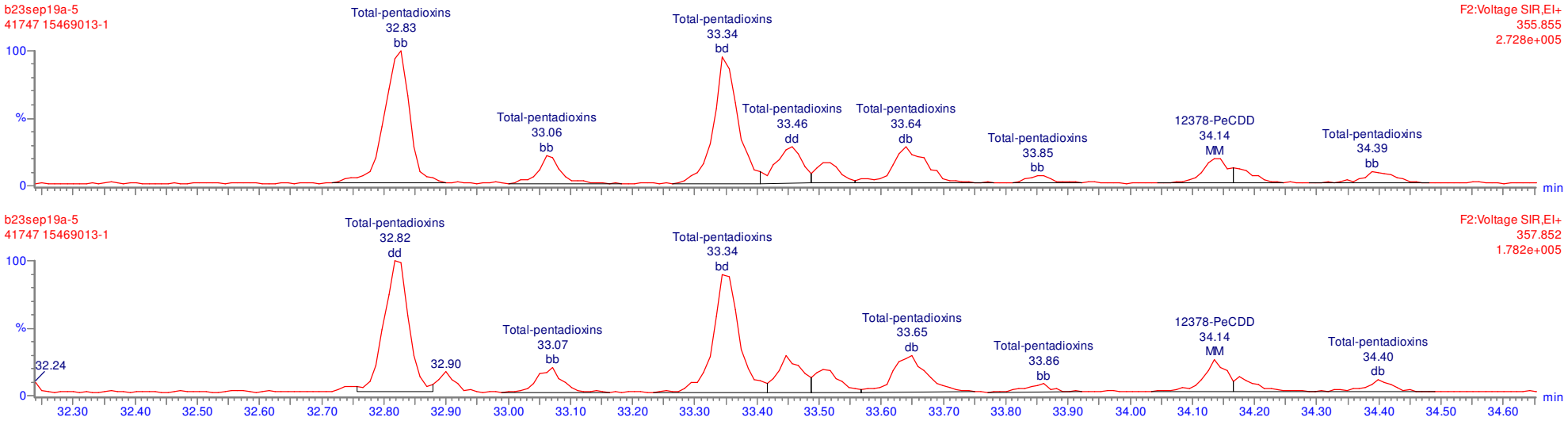
MANUAL INTEGRATION
METHOD 8290
HRP763_1



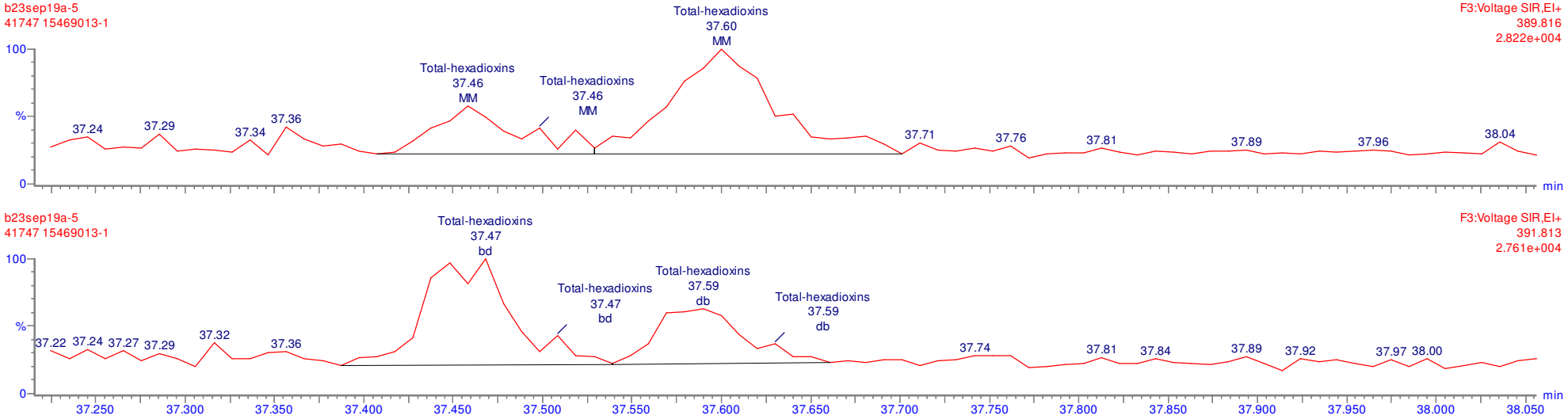
MANUAL INTEGRATION
METHOD 8290
HRP763_1



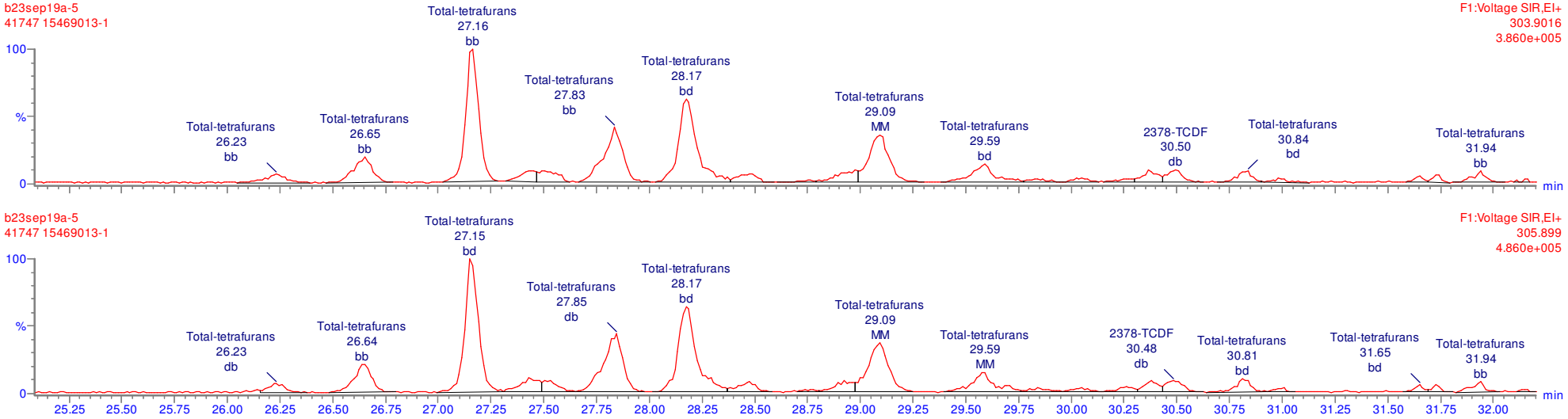
MANUAL INTEGRATION
METHOD 8290
HRP763_1



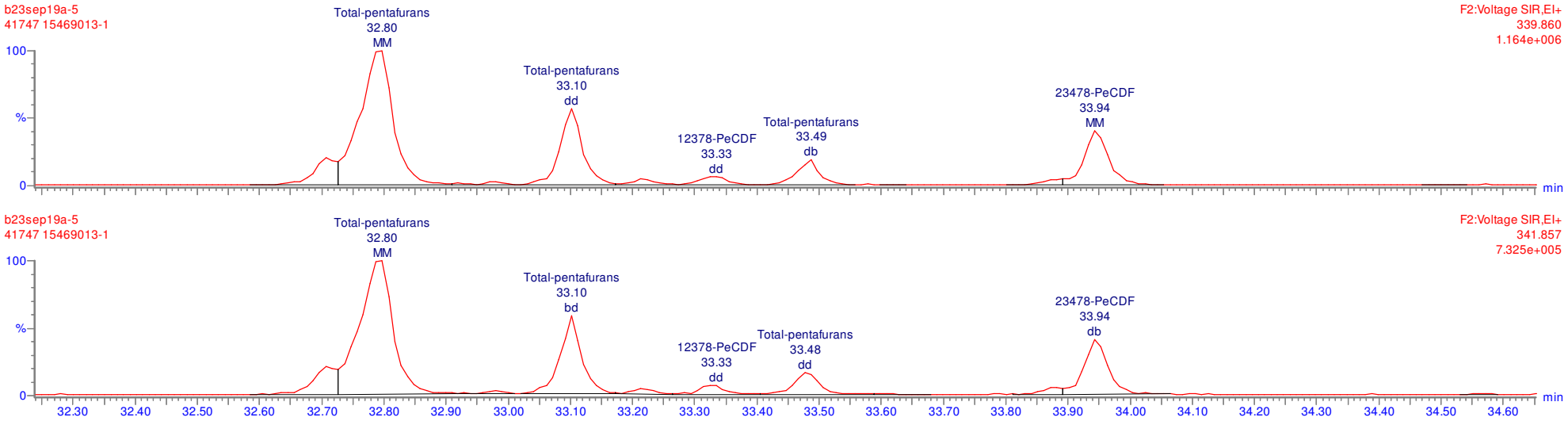
MANUAL INTEGRATION
METHOD 8290
HRP763_1



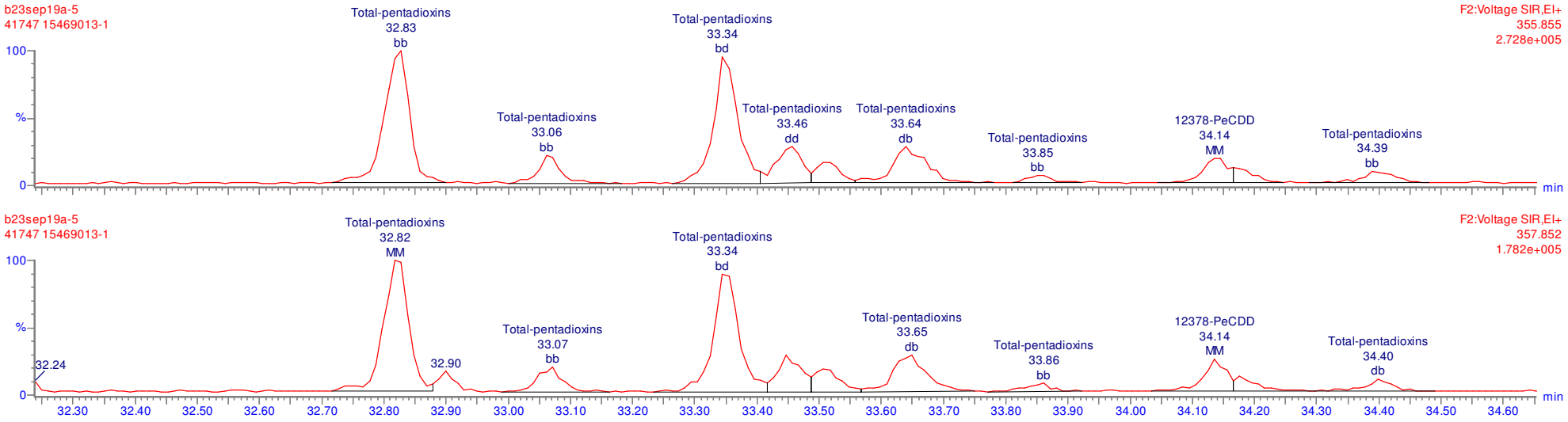
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



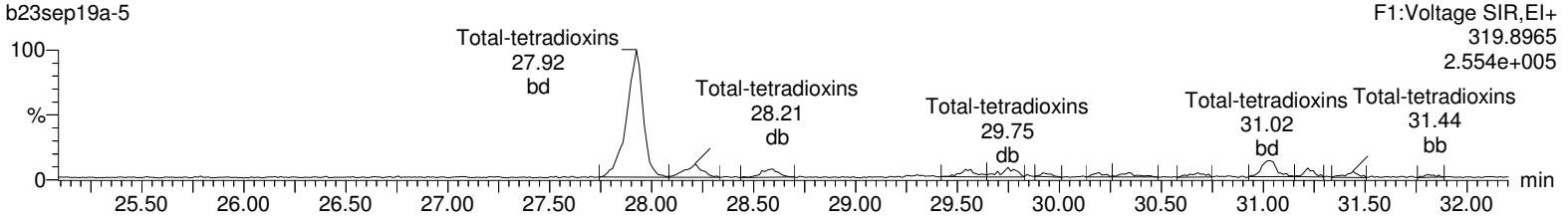
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

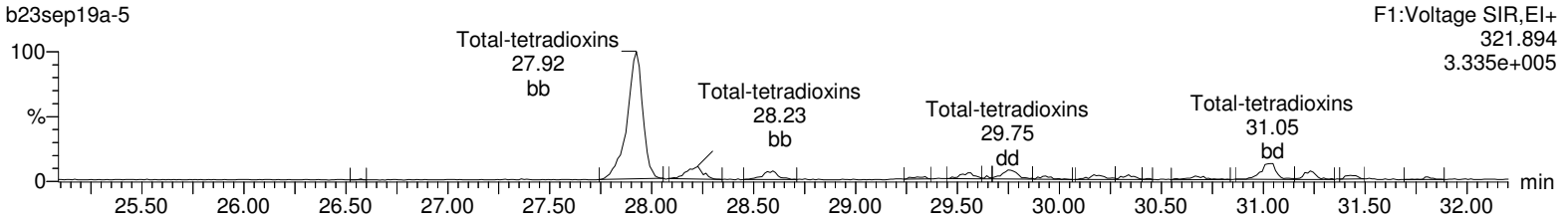
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

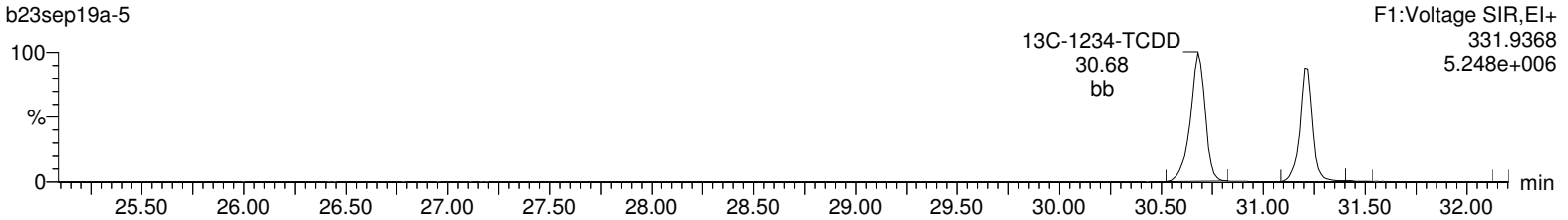
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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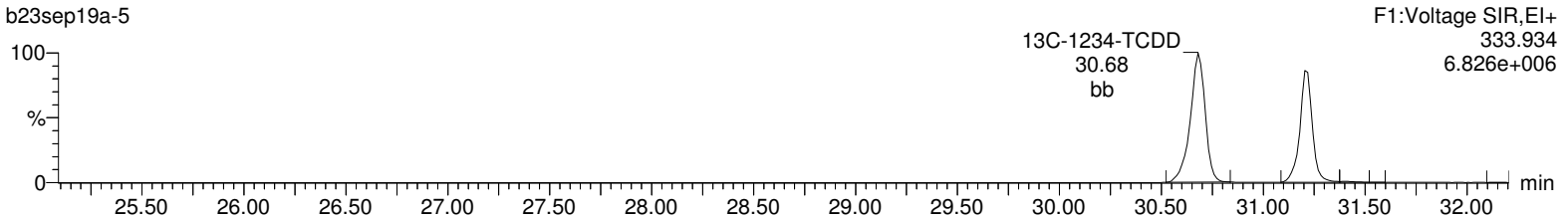
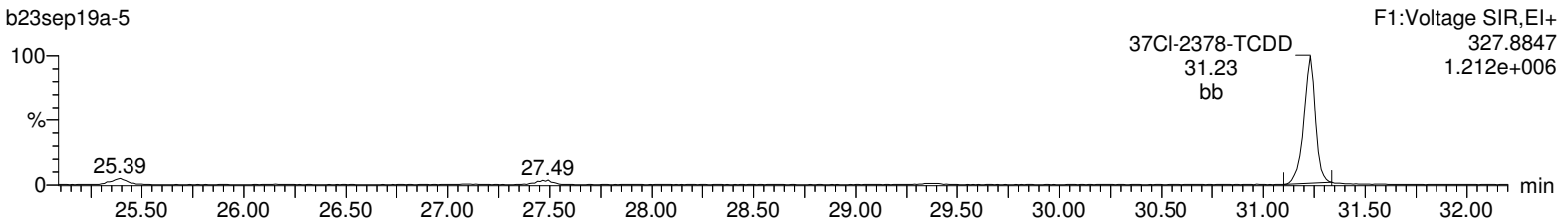
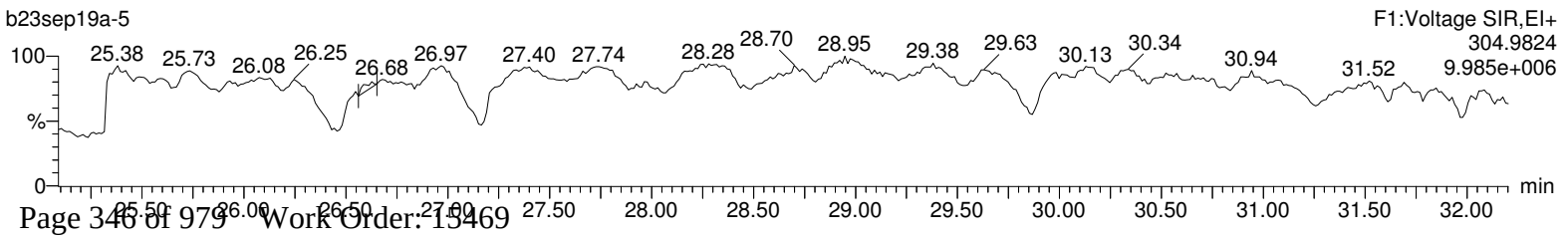


37Cl-2378-TCDD



Lock Mass F1



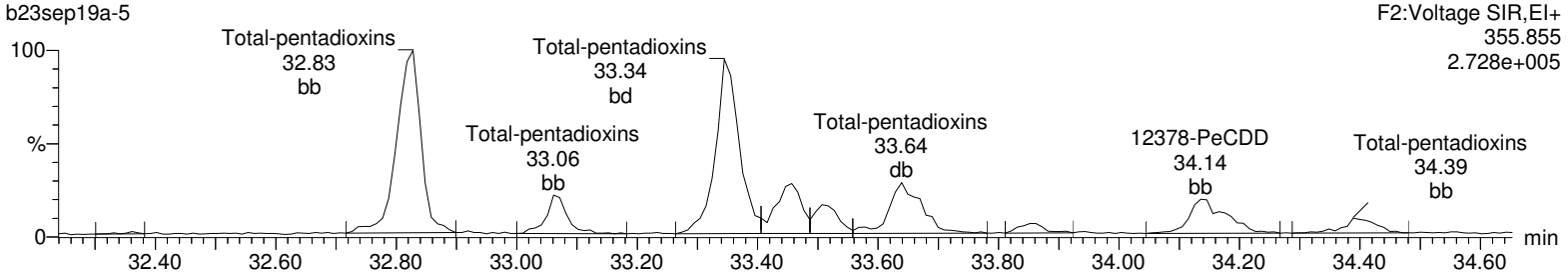
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

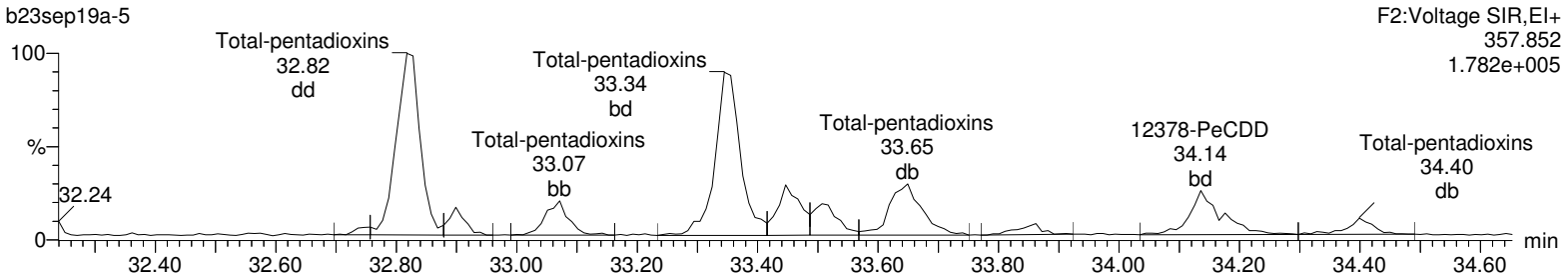
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

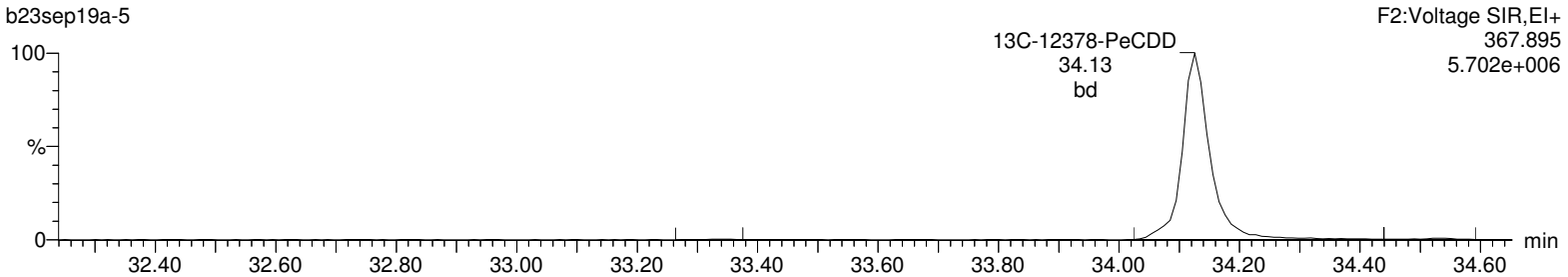
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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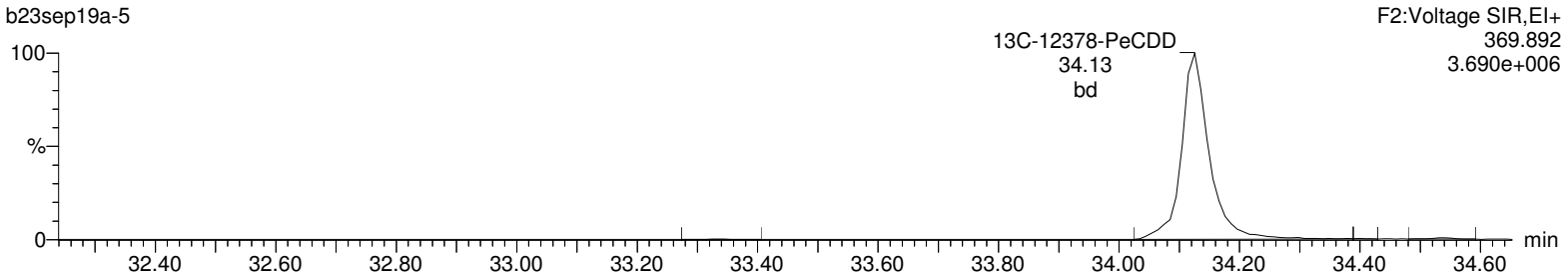
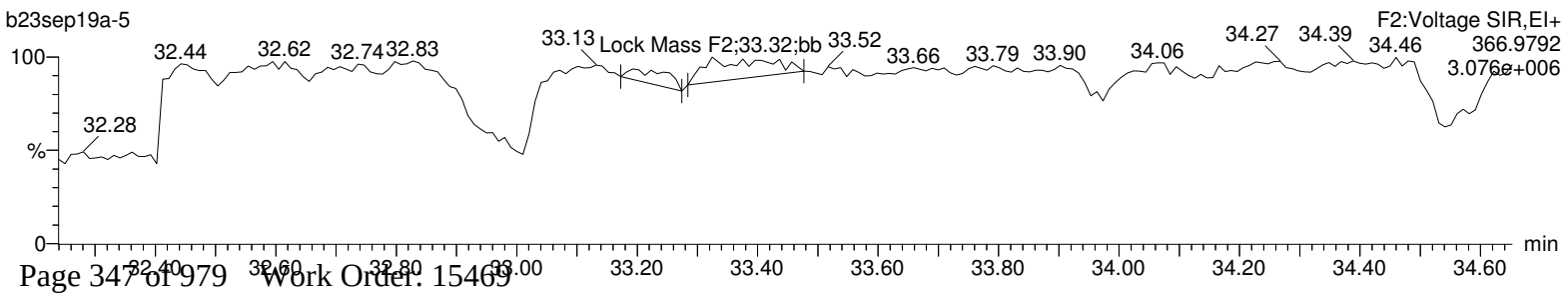


Lock Mass F2



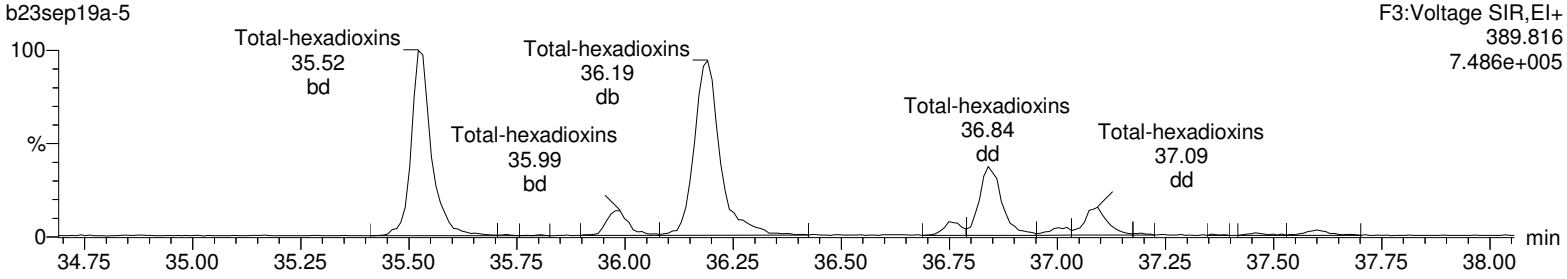
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

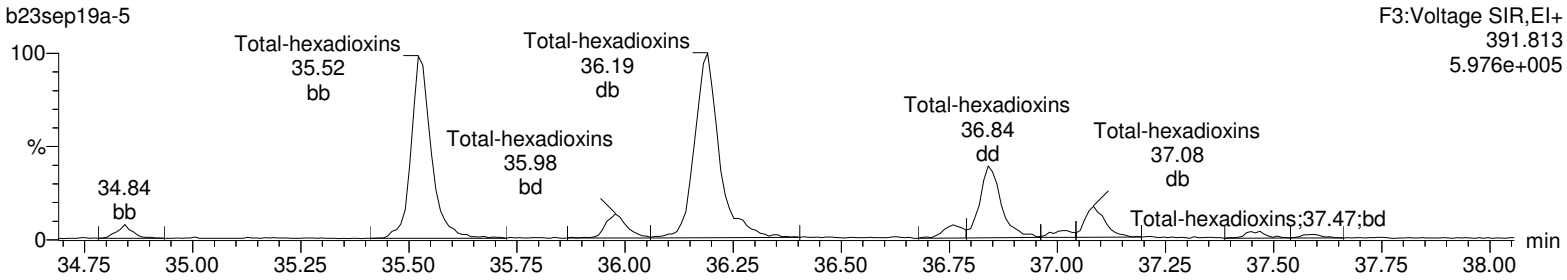
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

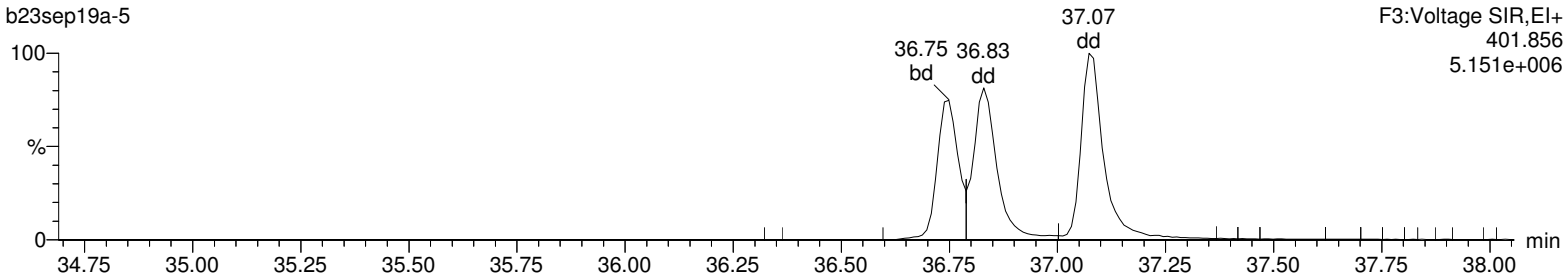
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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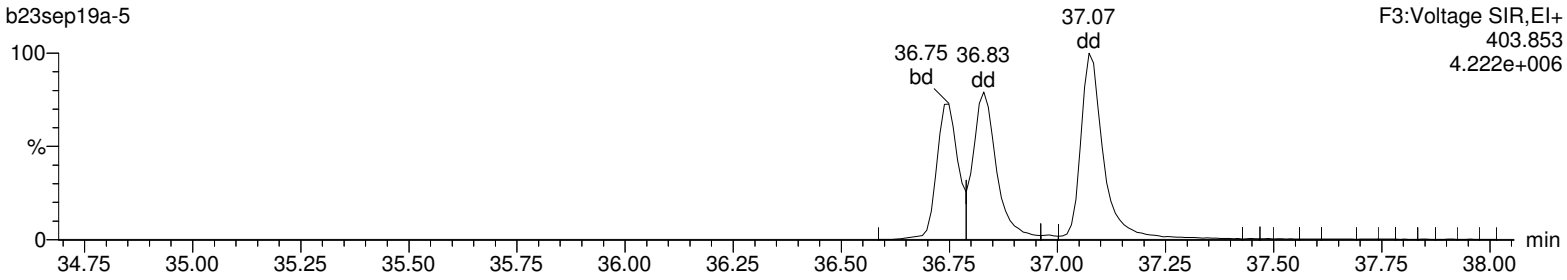
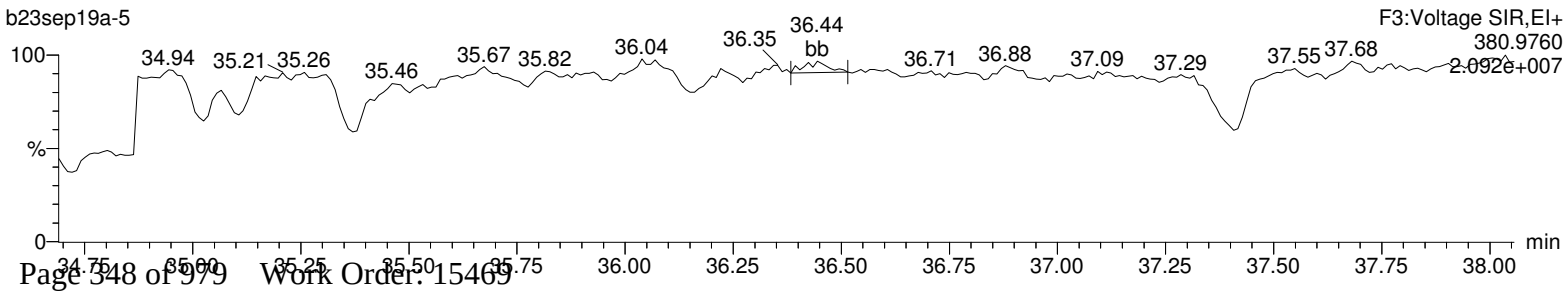


Lock Mass F3



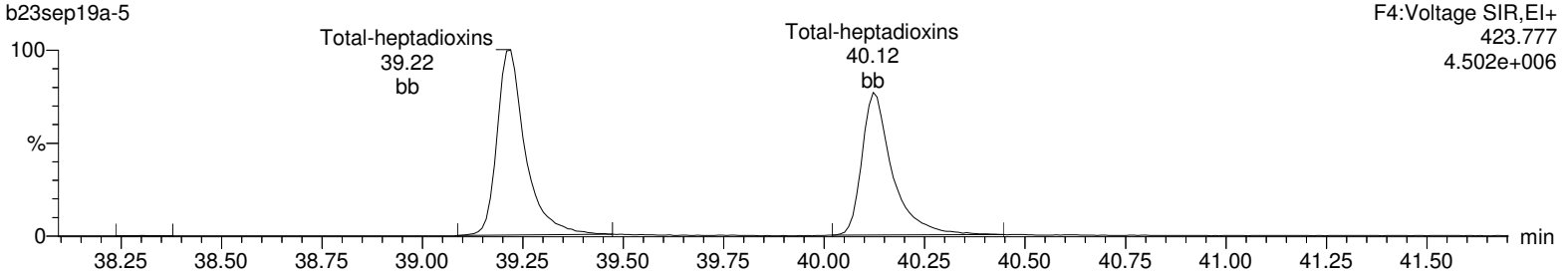
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

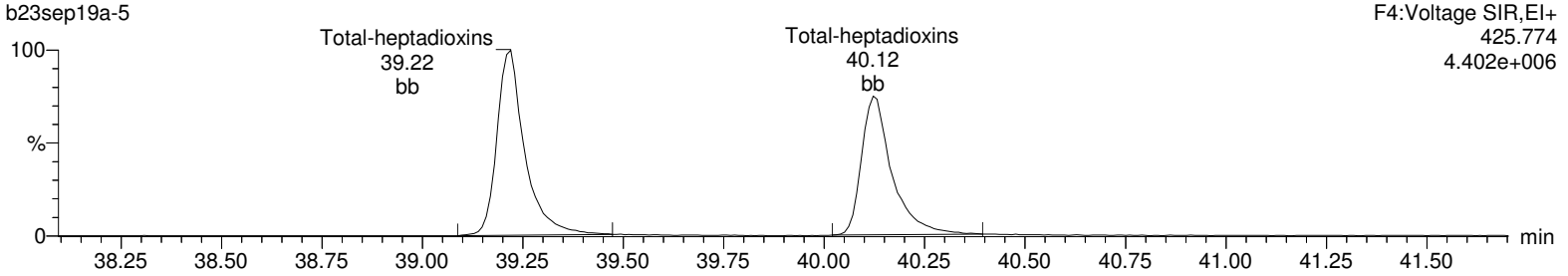
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

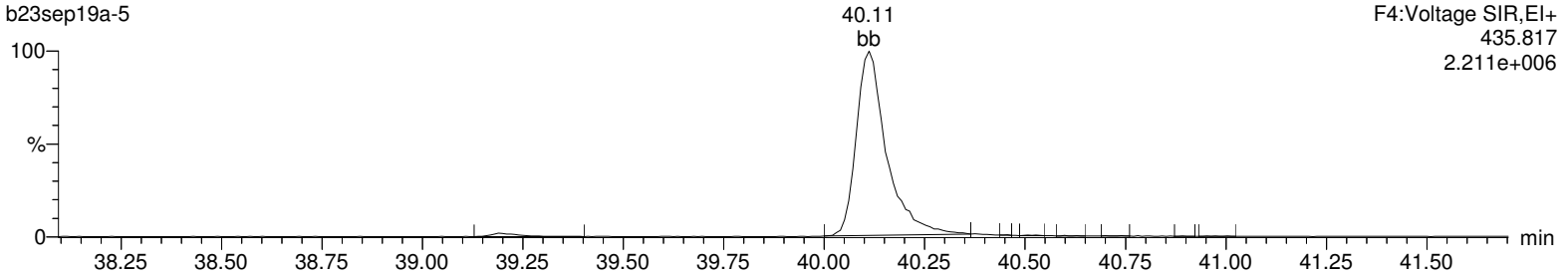
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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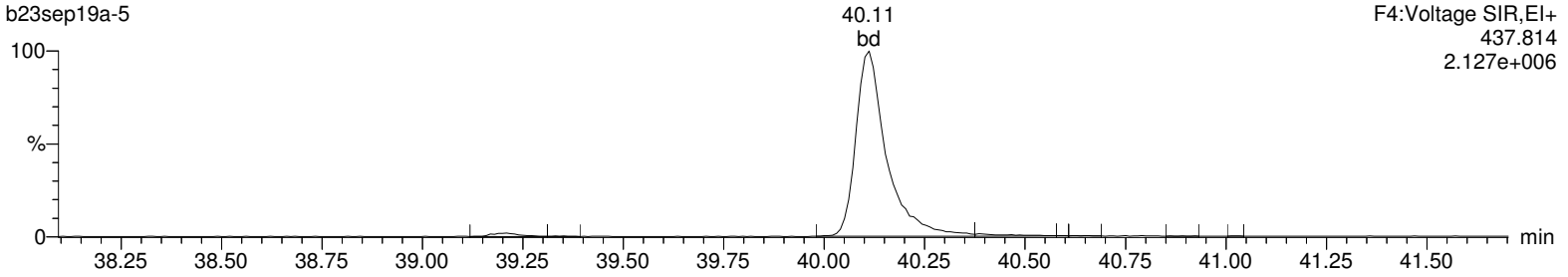
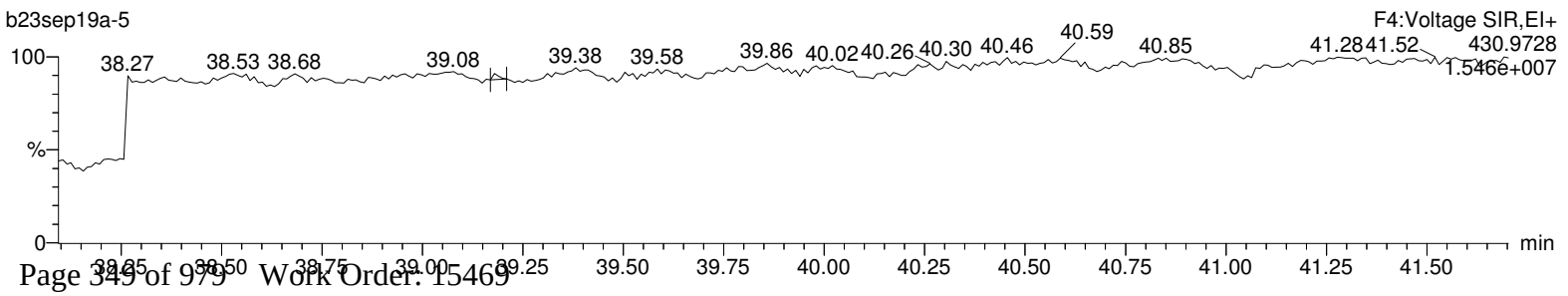


Lock Mass F4



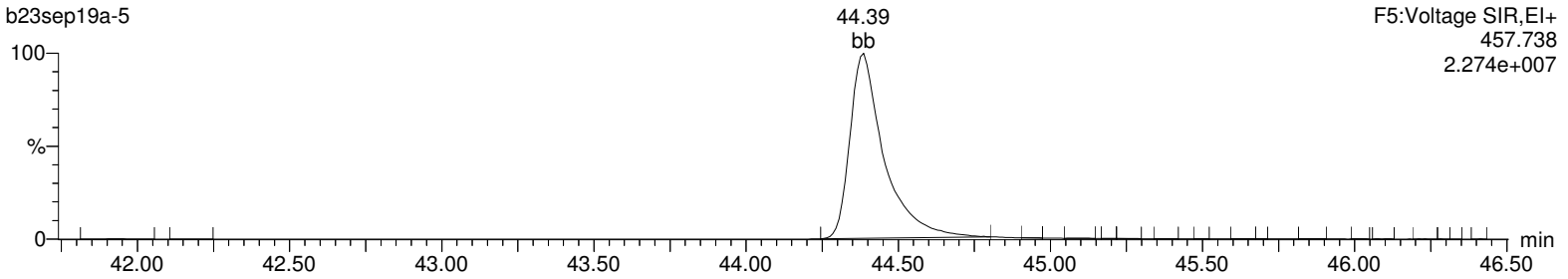
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

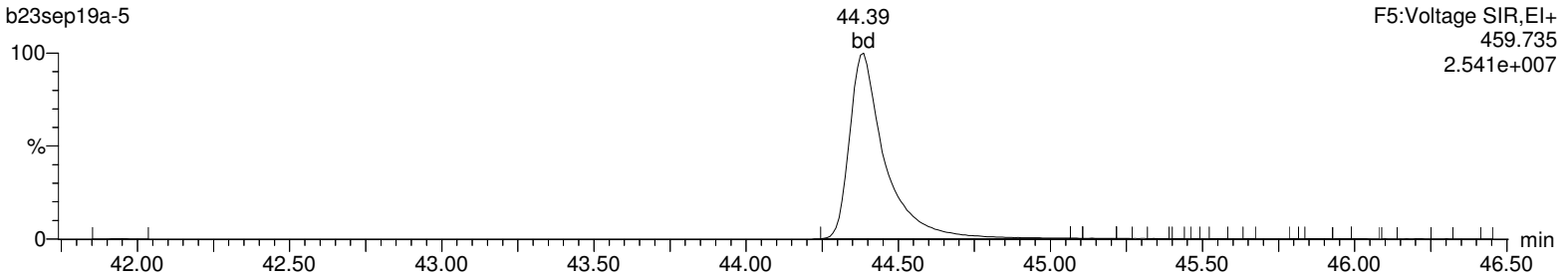
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

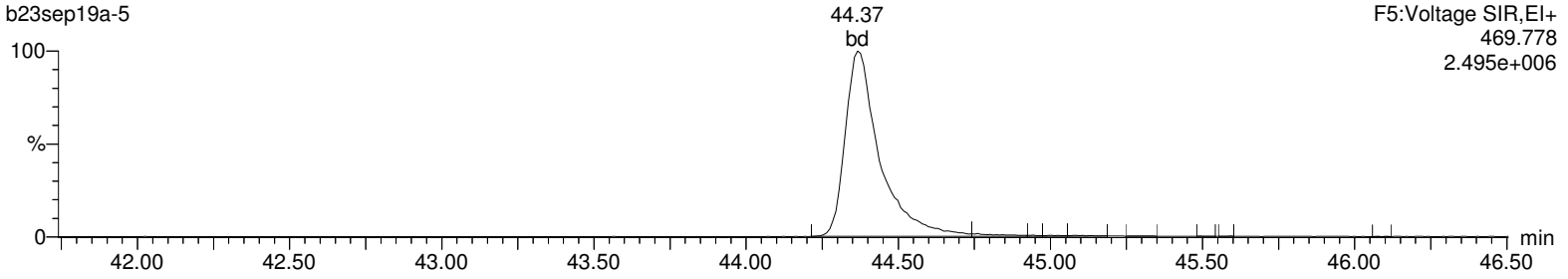
OCDD



OCDD



13C-OCDD



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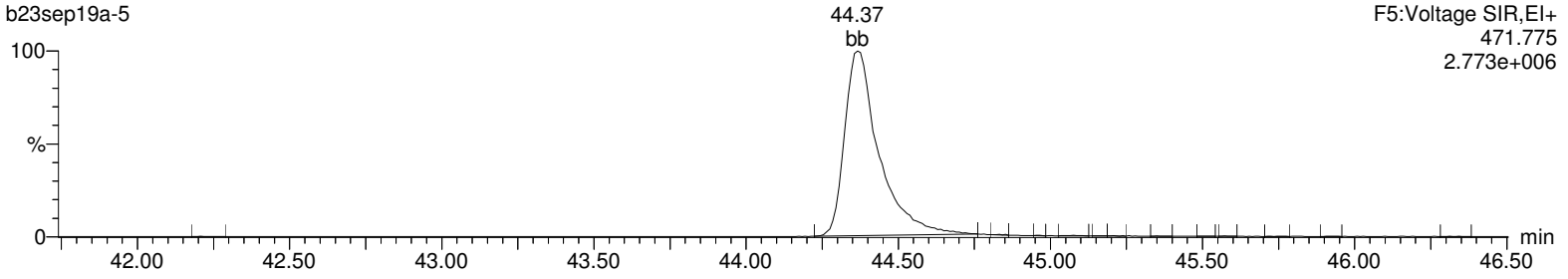
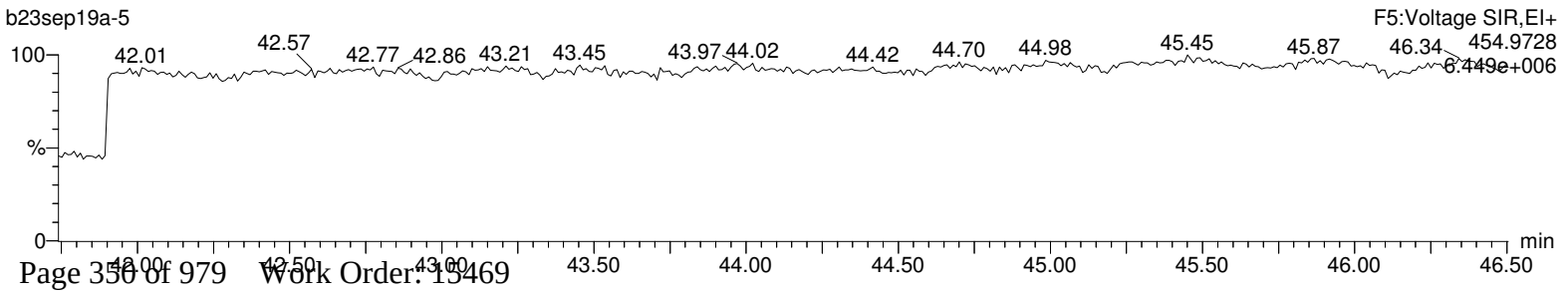


Lock Mass F5



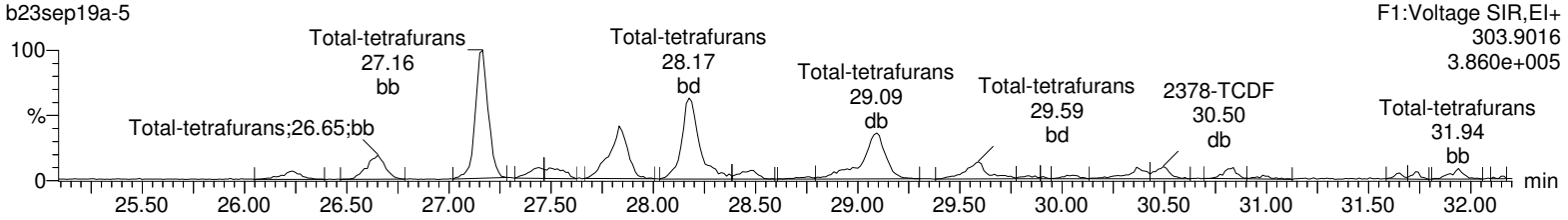
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

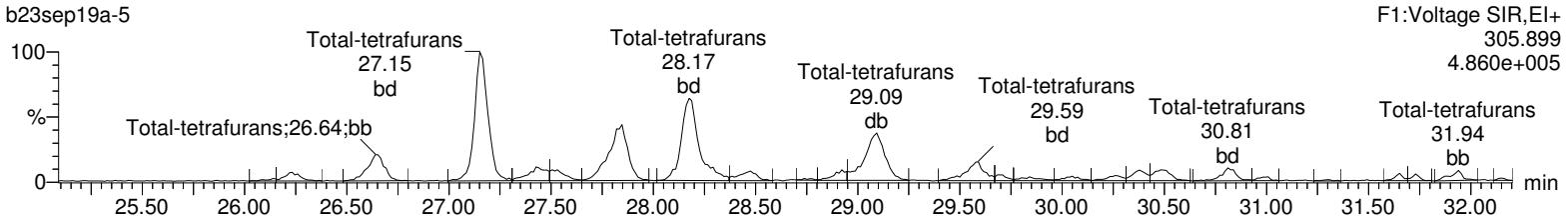
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

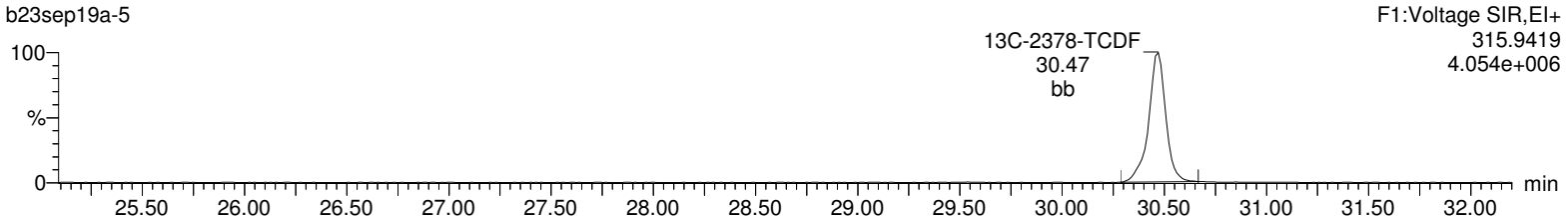
Total-tetrafurans



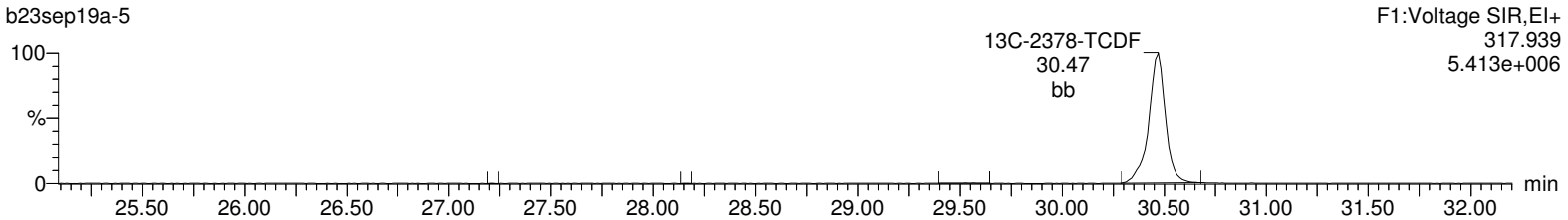
Total-tetrafurans



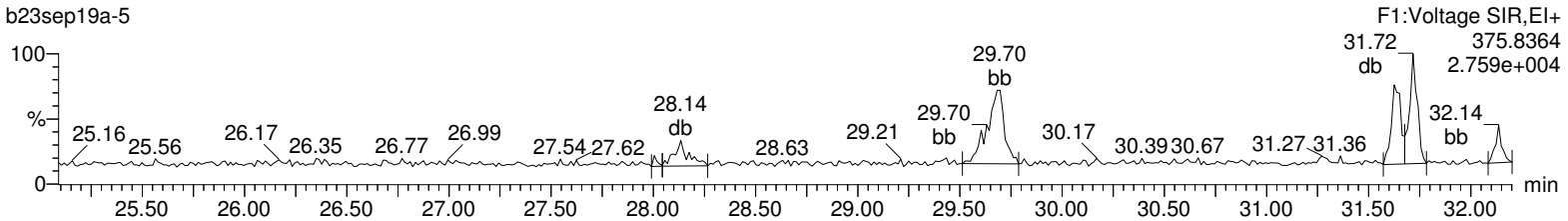
13C-2378-TCDF



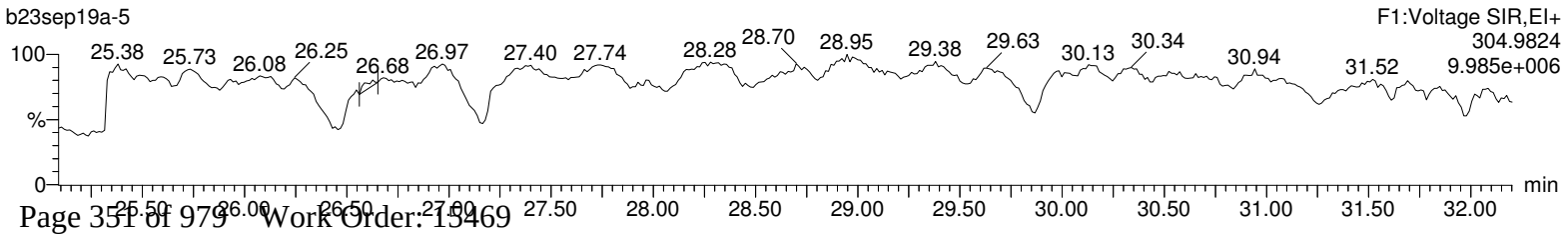
13C-2378-TCDF



HxDPE



Lock Mass F1



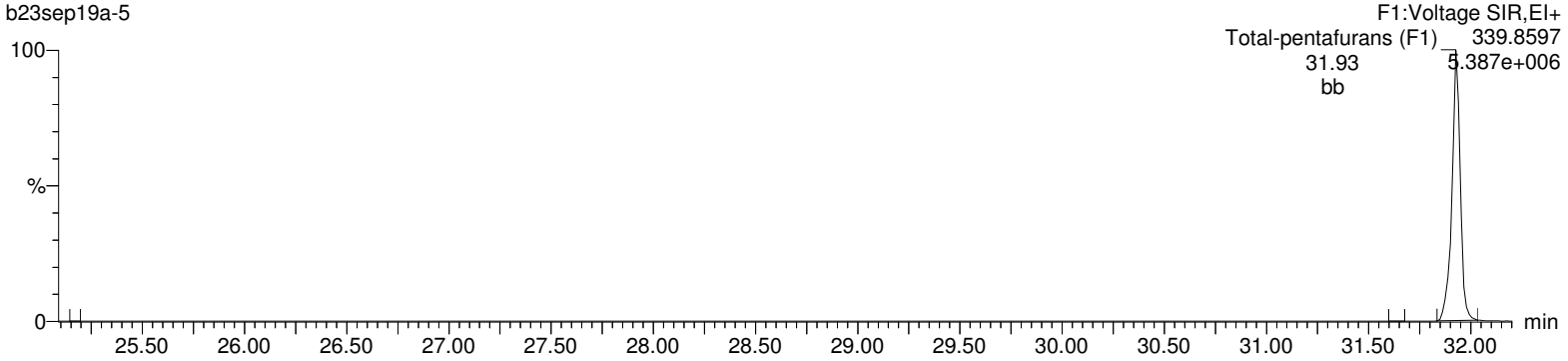
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

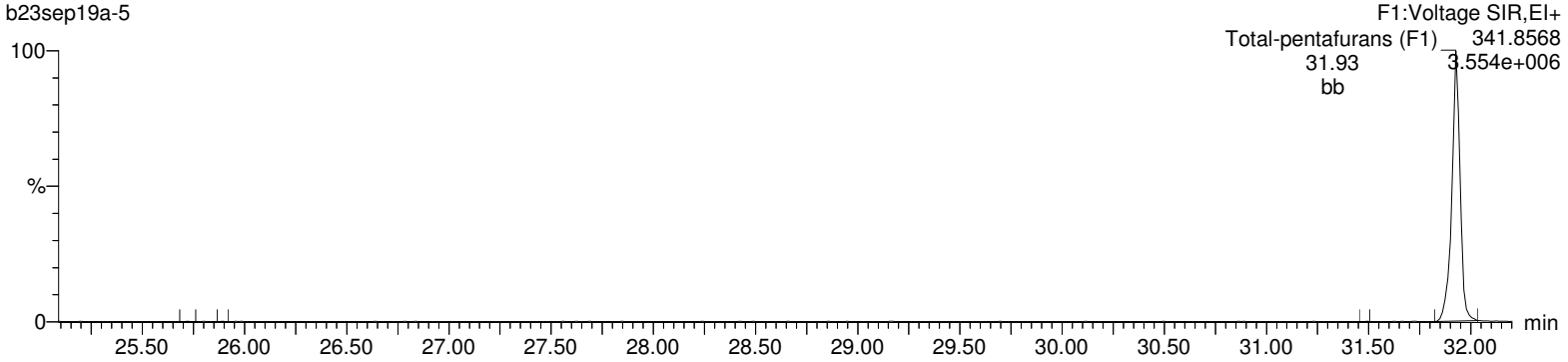
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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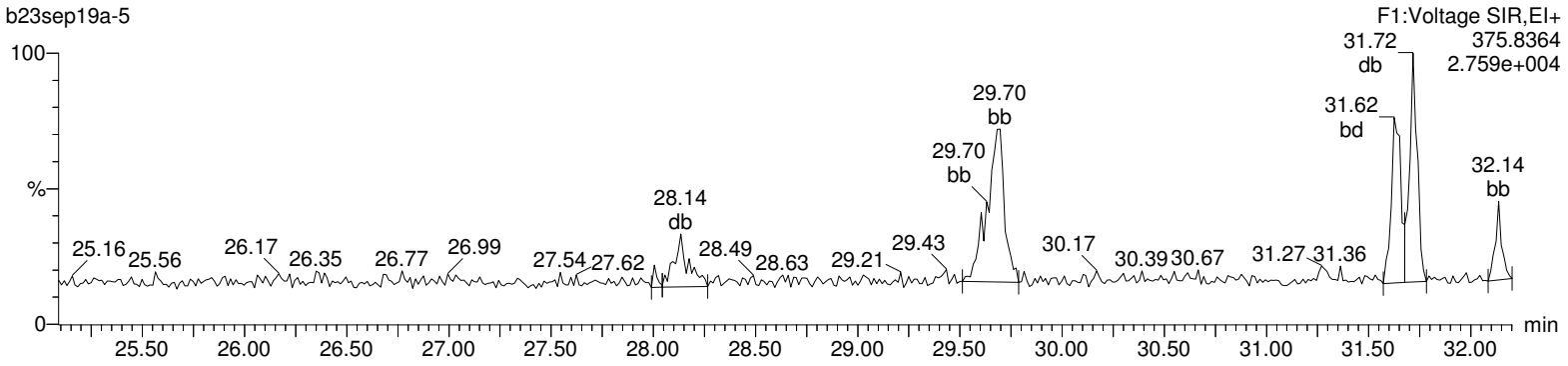
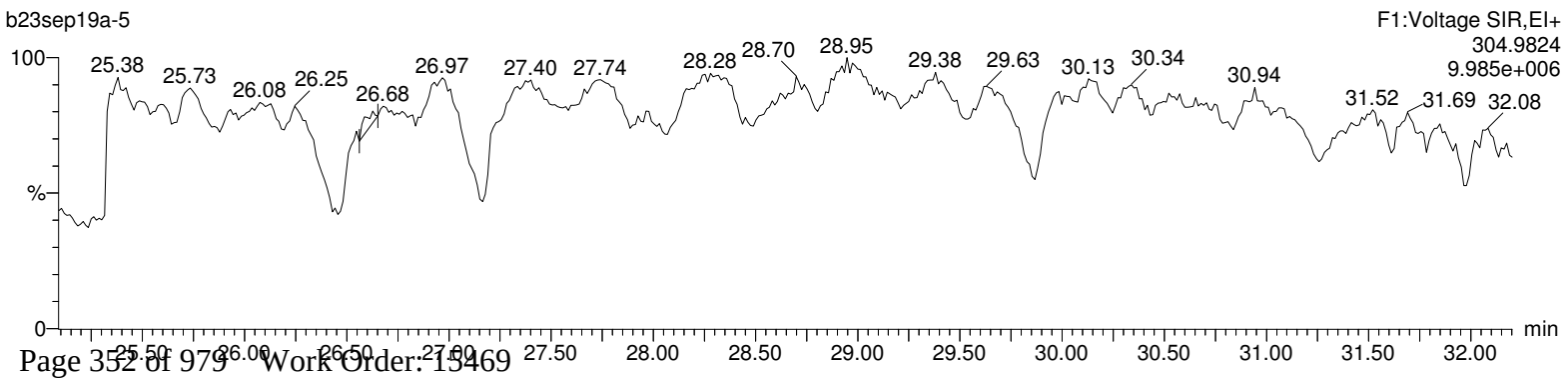


Lock Mass F1



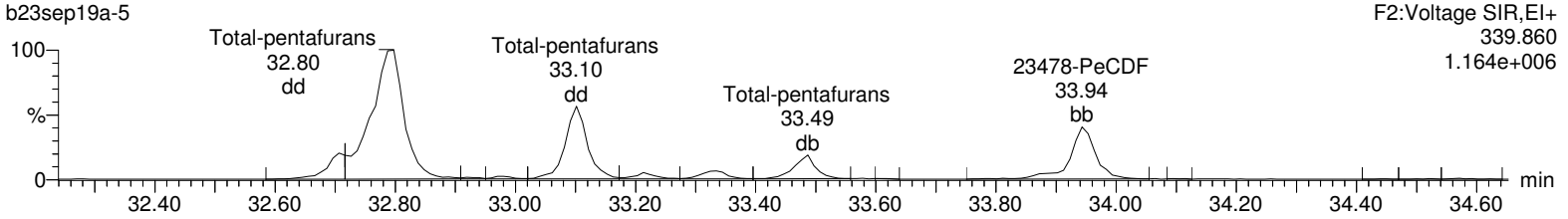
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

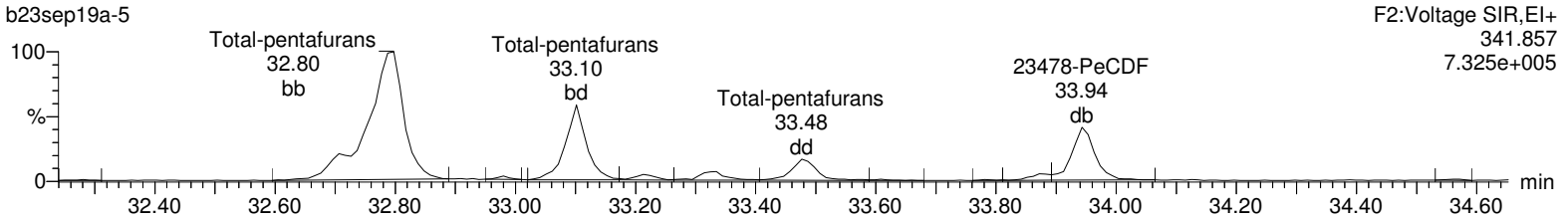
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

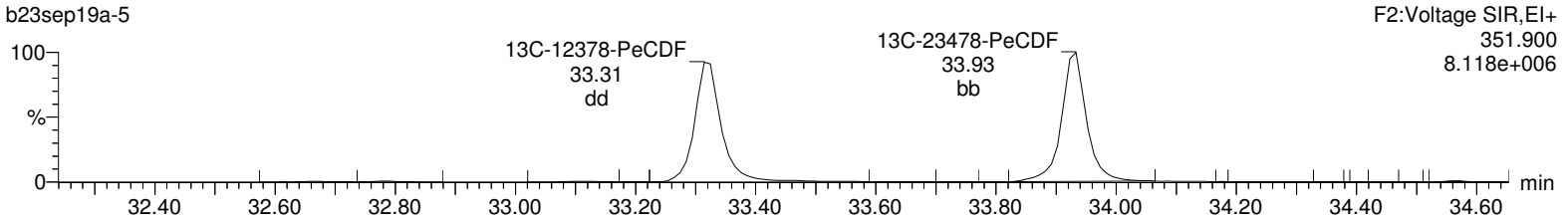
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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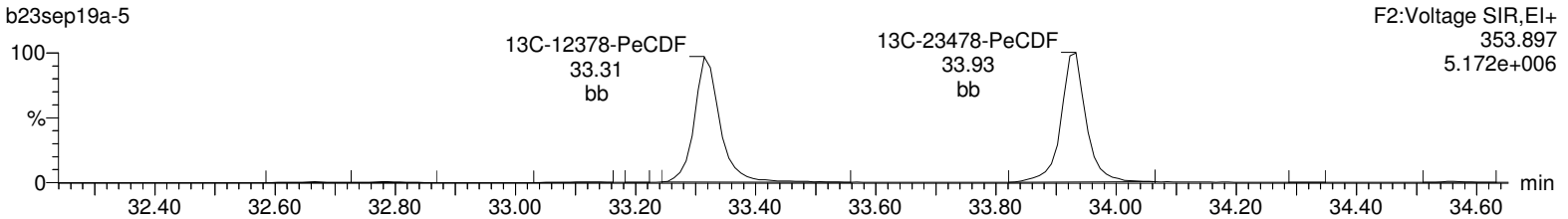
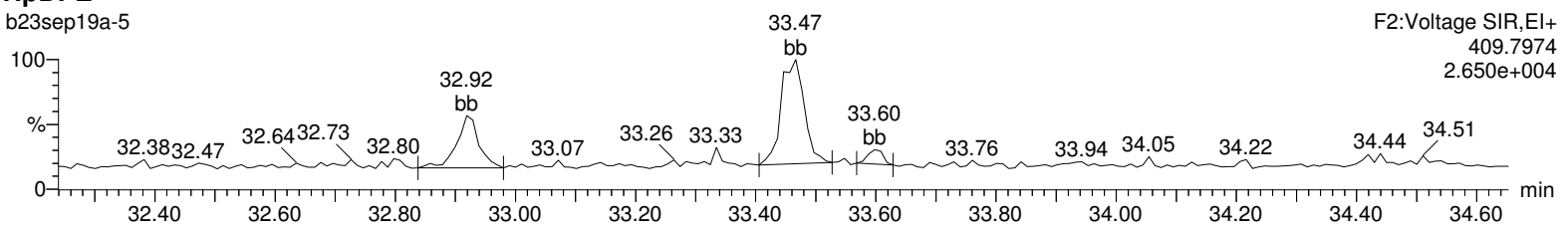
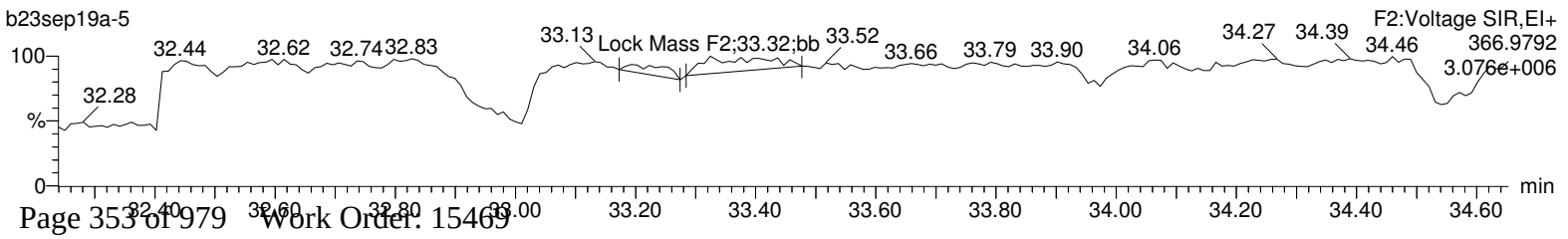


HpDPE



Lock Mass F2



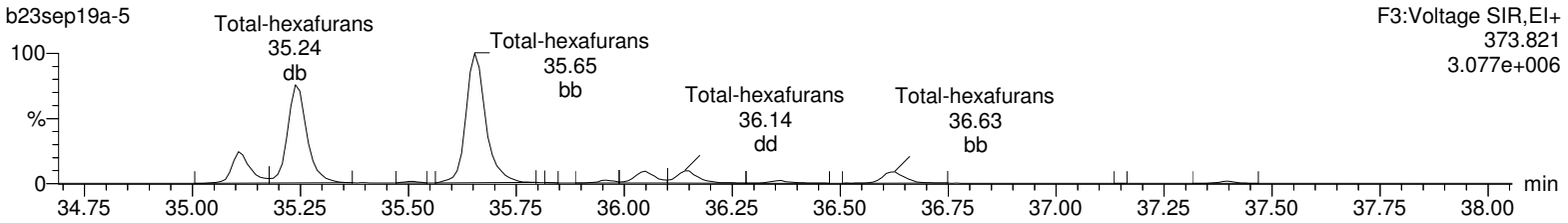
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

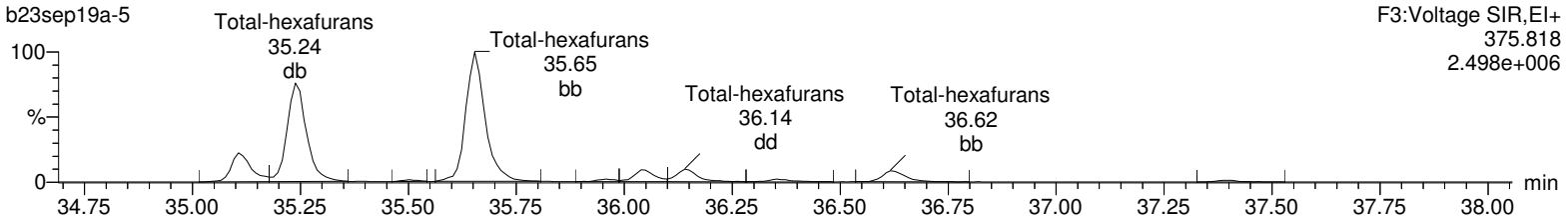
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

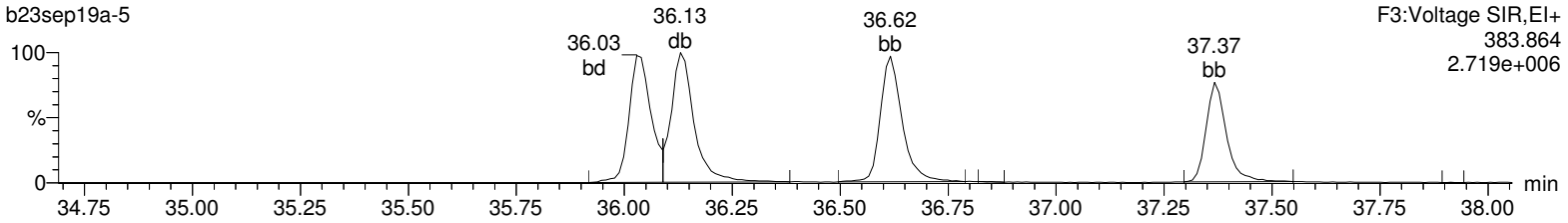
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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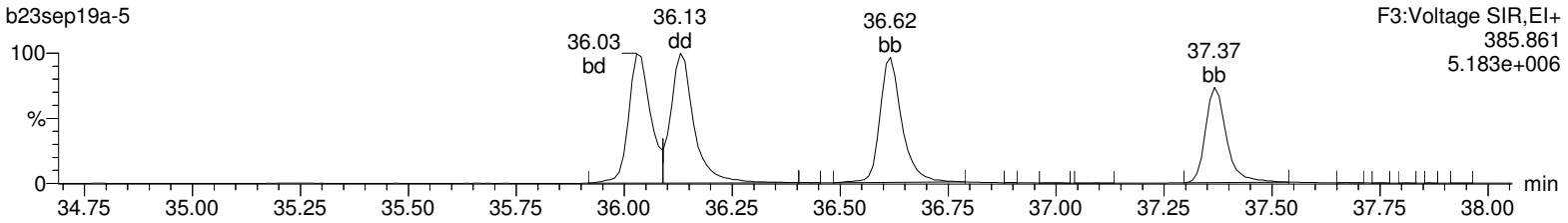

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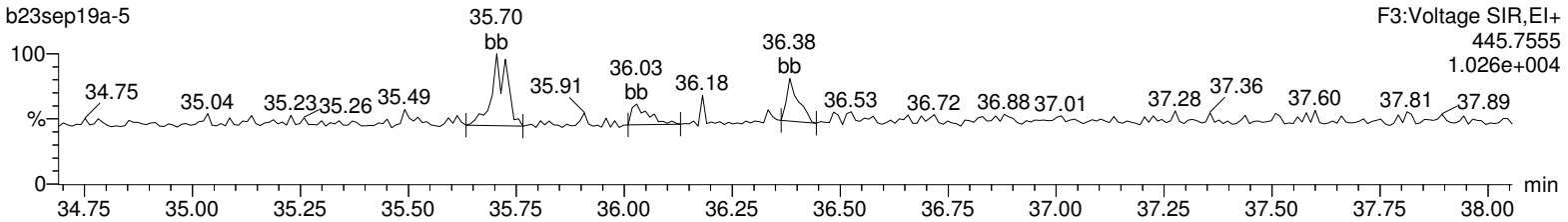
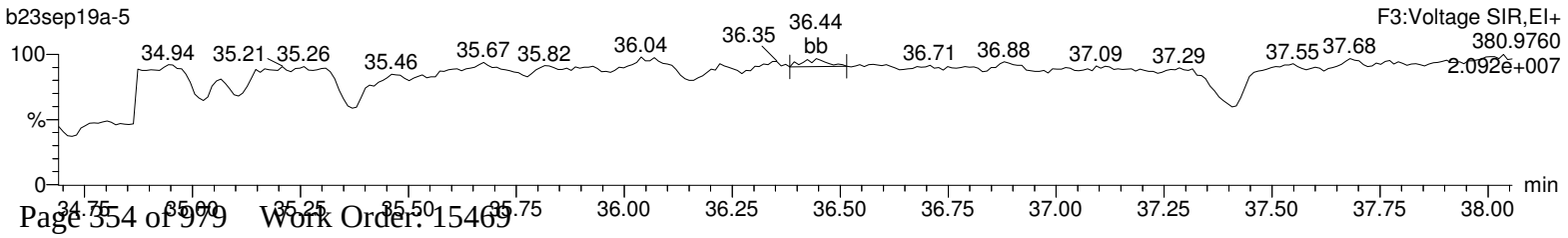


Lock Mass F3



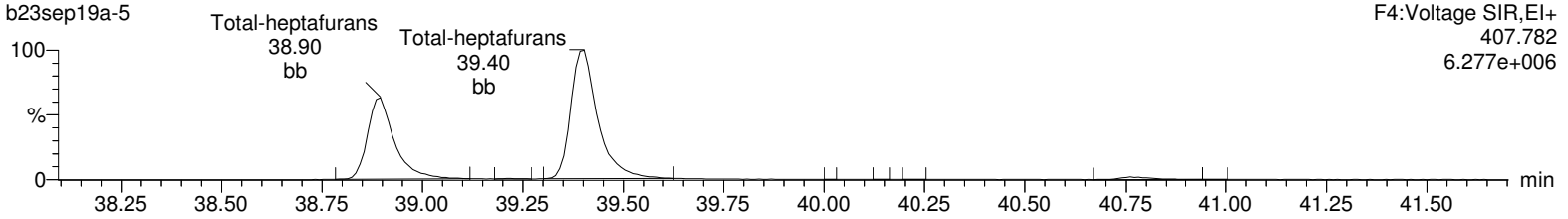
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

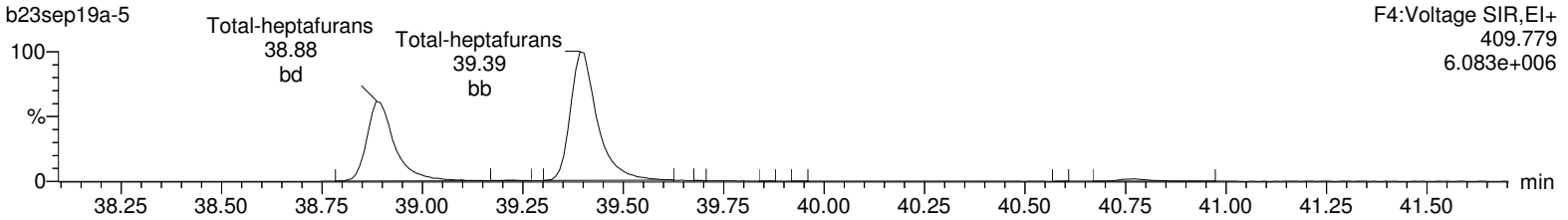
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

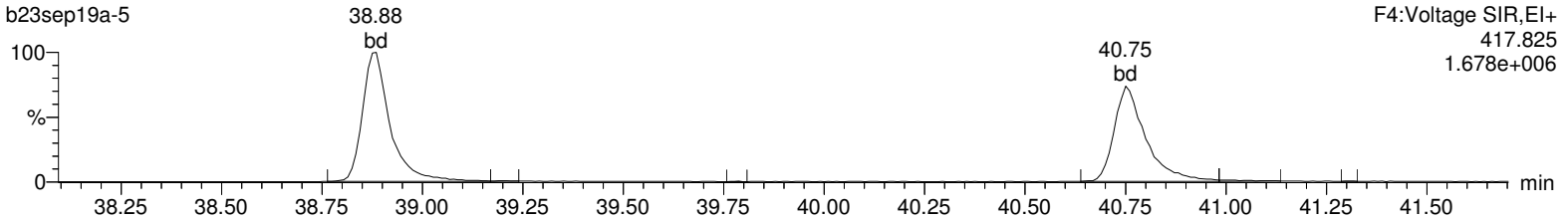
Total-heptafurans



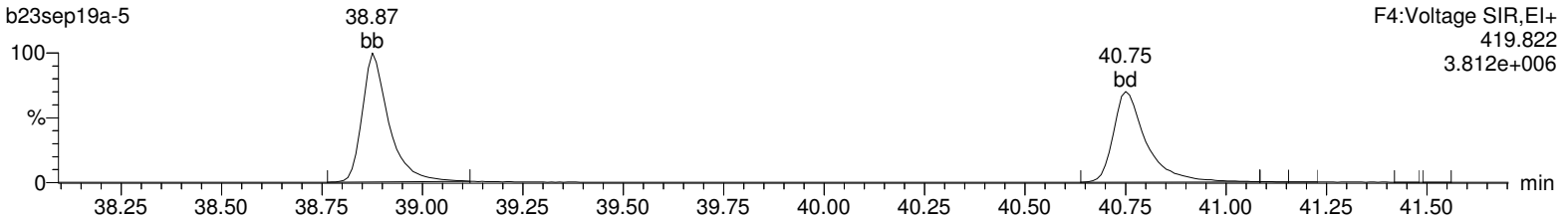
Total-heptafurans



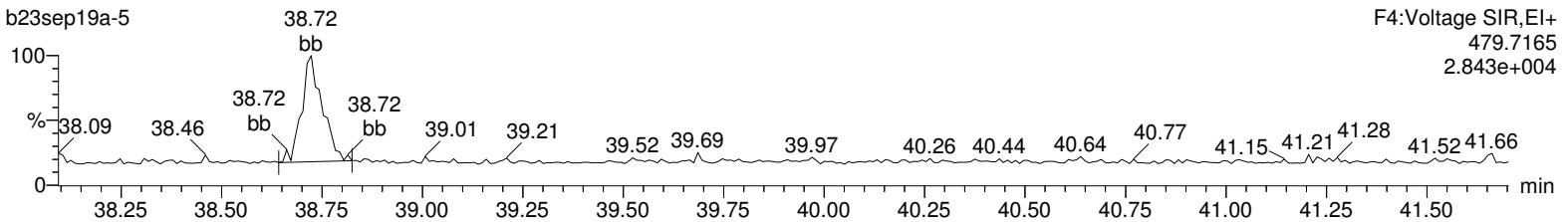
13C-1234678-HpCDF



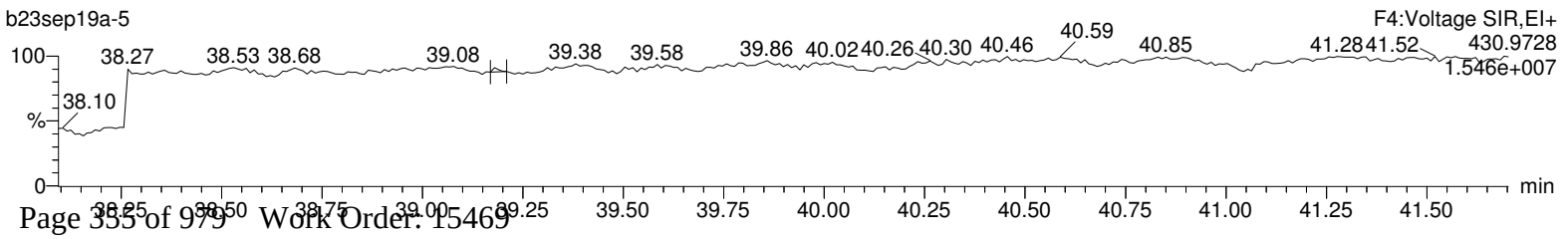
13C-1234678-HpCDF



NoDPE



Lock Mass F4



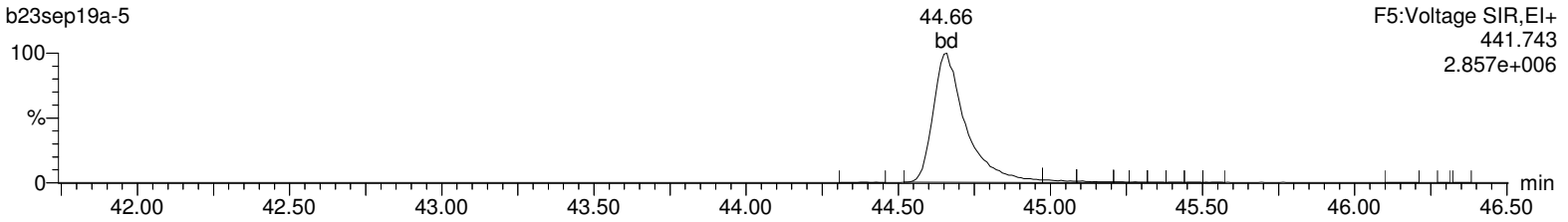
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

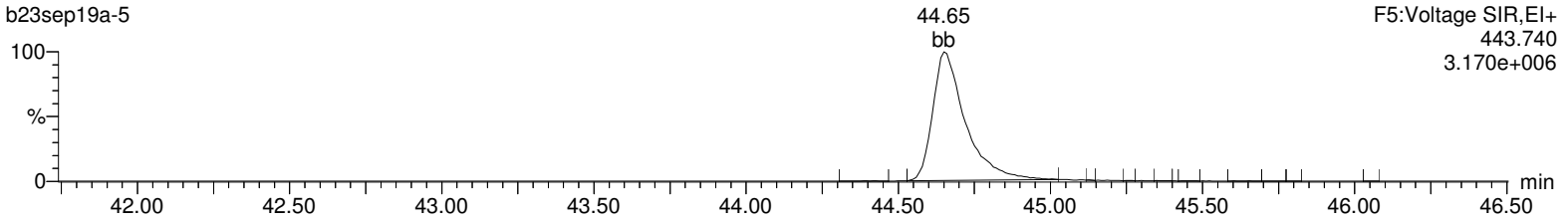
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-5, Date: 23-Sep-2019, Time: 11:32:58, ID: 15469013-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

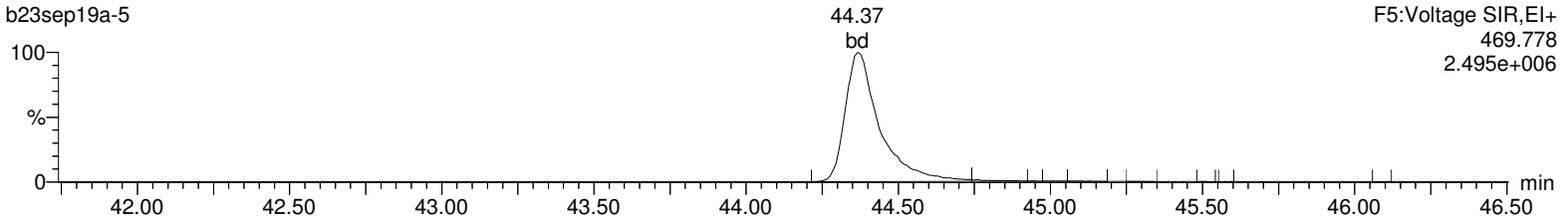
OCDF



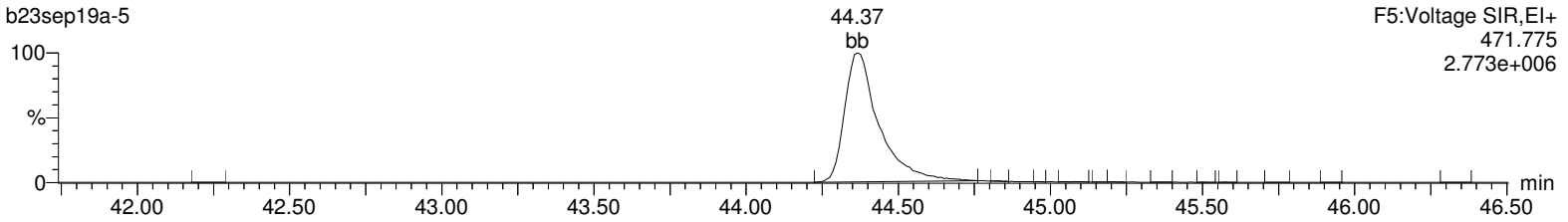
OCDF



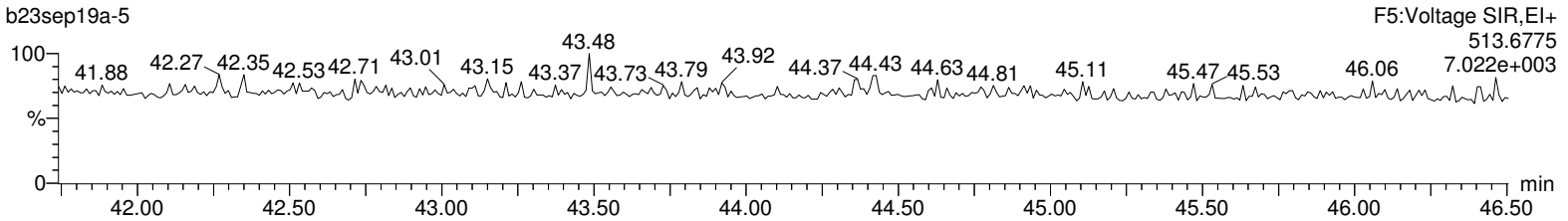
13C-OCDD



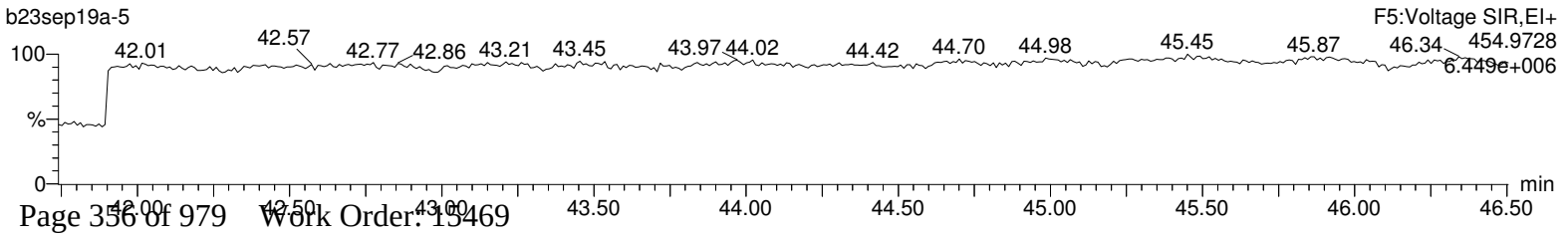
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469013**	**Date Collected:**	**08/28/2019 20:15**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**40**
Client ID:	**H3-SC1b-20to30-82819**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/25/2019 02:45**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A24SEP19A_3-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**17.47 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF	B	1.62	pg/g	0.557	0.953

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

B The target analyte was detected in the associated blank.
E Value is estimated - Concentration of the target analyte exceeds the instrument calibration range
J Value is estimated
K Estimated Maximum Possible Concentration
Q Quantitative Interference; value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\CF-A24SEP19A_3.qld

Last Altered: Wednesday, September 25, 2019 10:43:30 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:44:39 Eastern Standard Time

Name: A24SEP19A_3-4, Date: 25-Sep-2019, Time: 02:45:57, ID: 15469013-2, Description: 41747, Job: HMS1613_1S, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	1.76e3	2.23e3	3.99e3	16.51	1.002	0.79	NO	0.852	0.292	3.12e4	4189	7.4	3.90e4	5165	7.5	db	db
2	13C-2378-TCDF	2.32e5	2.98e5	5.31e5	16.49	1.063	0.78	NO	74.848	0.228	3.97e6	6414	618.5	5.09e6	4479	1135.4	bb	bd
3	13C-1234-TCDD	2.13e5	2.75e5	4.88e5	15.50	0.000	0.78	NO	100.000	0.236	4.31e6	4271	1009.6	5.53e6	3491	1582.7	bb	bb

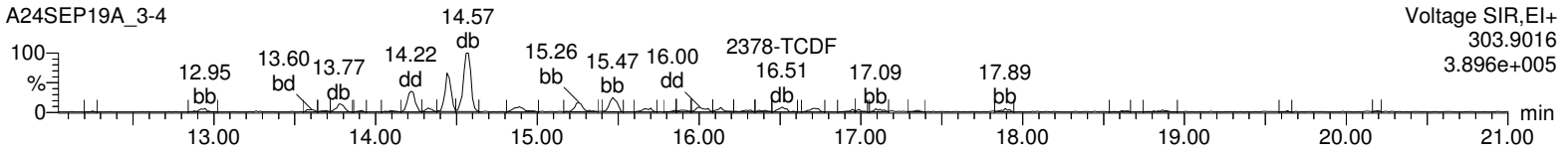
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\CF-A24SEP19A_3.qld

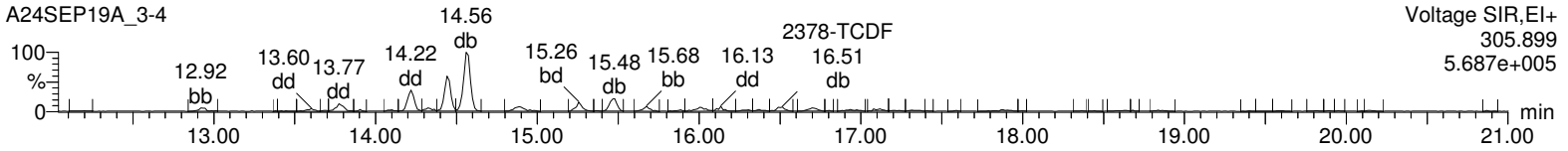
Last Altered: Wednesday, September 25, 2019 10:41:06 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:41:37 Eastern Standard Time

Name: A24SEP19A_3-4, Date: 25-Sep-2019, Time: 02:45:57, ID: 15469013-2, Description: 41747, Job: HMS1613_1S, Task: HRP750_3, User: MJC

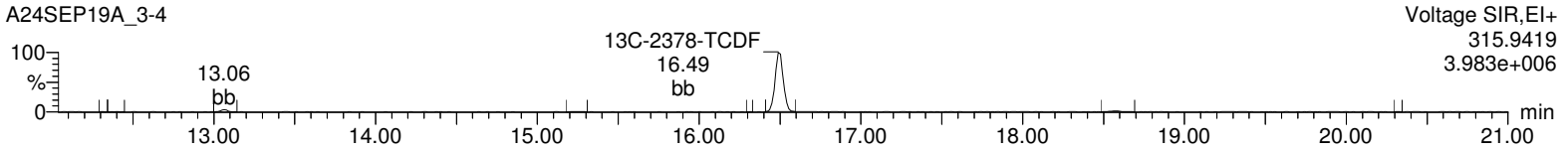
2378-TCDF



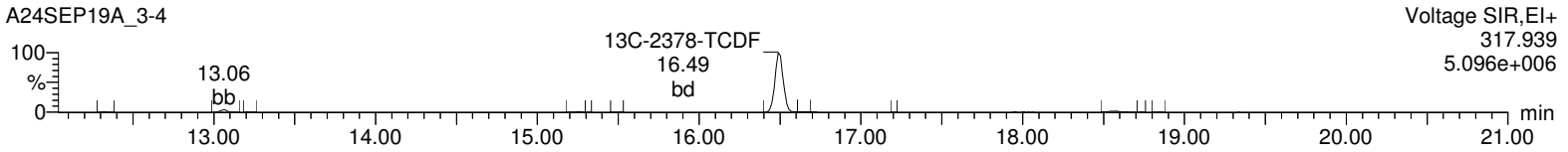
2378-TCDF



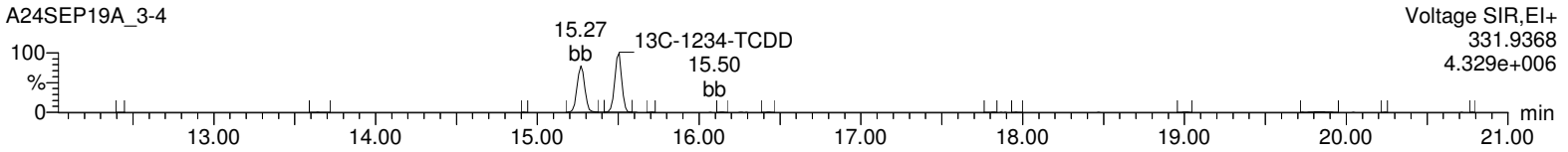
13C-2378-TCDF



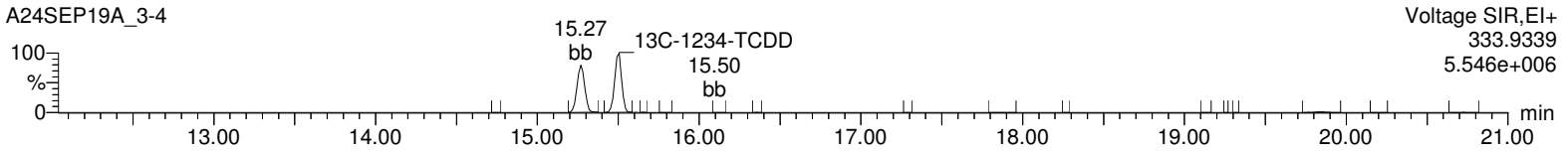
13C-2378-TCDF



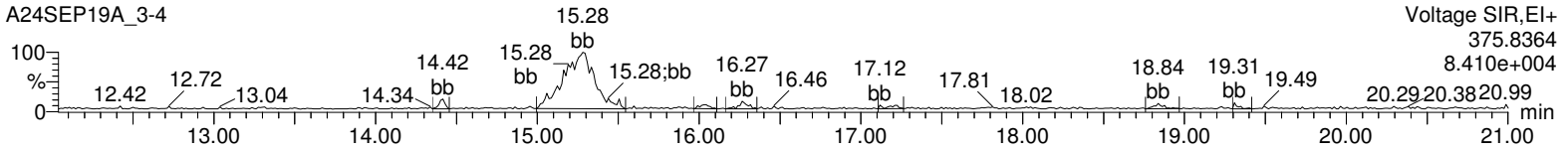
13C-1234-TCDD



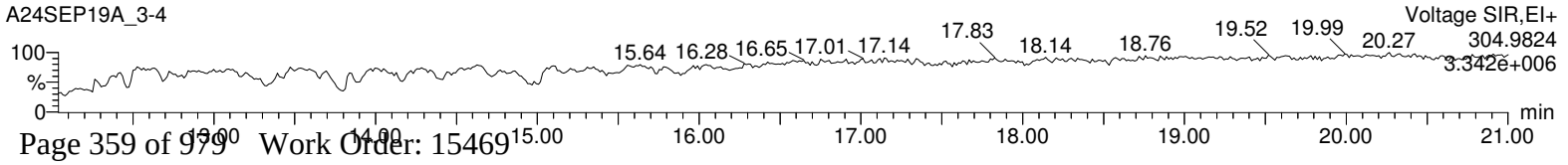
13C-1234-TCDD



HxDPE



Lock Mass F1



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469014**	**Date Collected:**	**08/29/2019 08:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.7**
Client ID:	**H3-SC1b-30to40-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 00:38**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-2**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.09 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.158	pg/g	0.158	0.969
40321-76-4	1,2,3,7,8-PeCDD	U	0.161	pg/g	0.161	4.84
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.225	pg/g	0.225	4.84
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.229	pg/g	0.229	4.84
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.233	pg/g	0.233	4.84
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	4.29	pg/g	0.372	4.84
3268-87-9	1,2,3,4,6,7,8,9-OCDD		52.6	pg/g	0.740	9.69
51207-31-9	2,3,7,8-TCDF	BJ	0.475	pg/g	0.347	0.969
57117-41-6	1,2,3,7,8-PeCDF	U	0.202	pg/g	0.202	4.84
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.378	pg/g	0.183	4.84
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.316	pg/g	0.181	4.84
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.649	pg/g	0.188	4.84
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.382	pg/g	0.188	4.84
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.242	pg/g	0.242	4.84
67562-39-4	1,2,3,4,6,7,8-HpCDF		10.8	pg/g	0.345	4.84
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.455	pg/g	0.455	4.84
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	6.35	pg/g	0.661	9.69
41903-57-5	Total TeCDD	BJK	0.262	pg/g	0.158	0.969
36088-22-9	Total PeCDD	JK	0.469	pg/g	0.161	4.84
34465-46-8	Total HxCDD	BJ	1.82	pg/g	0.225	4.84
37871-00-4	Total HpCDD	J	9.69	pg/g	0.372	4.84
30402-14-3	Total TeCDF	JK	2.51	pg/g	0.347	0.969
30402-15-4	Total PeCDF	JK	5.94	pg/g	0.105	4.84
55684-94-1	Total HxCDF	JK	8.96	pg/g	0.181	4.84
38998-75-3	Total HpCDF		18.7	pg/g	0.345	4.84
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.464	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.675	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		137	194	pg/g	70.7	(25%-164%)
13C-1,2,3,7,8-PeCDD		159	194	pg/g	82.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		143	194	pg/g	74.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		128	194	pg/g	65.8	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		163	194	pg/g	83.9	(23%-140%)
13C-OCDD		328	388	pg/g	84.7	(17%-157%)
13C-2,3,7,8-TCDF		126	194	pg/g	64.8	(24%-169%)
13C-1,2,3,7,8-PeCDF		150	194	pg/g	77.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		148	194	pg/g	76.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		130	194	pg/g	67.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		124	194	pg/g	64.1	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		127	194	pg/g	65.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		143	194	pg/g	73.9	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469014**	**Date Collected:**	**08/29/2019 08:25**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**26.7**
Client ID:	**H3-SC1b-30to40-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 00:38**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-2**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.09 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		138	194	pg/g	71.0	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		162	194	pg/g	83.6	(26%-138%)
37Cl-2,3,7,8-TCDD		18.0	19.4	pg/g	92.6	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0818		1246			679			
2	12378-PeCDD	9.22e1	6.23e1	1.54e2	34.04	1.000	1.48	NO	0.043	0.0833	3.33e3	1161	2.9	1.47e3	846	1.7	bb	bb
3	123478-HxCDD							NO		0.116		1204			1144			
4	123678-HxCDD	1.81e2	1.46e2	3.27e2	36.73	1.001	1.24	NO	0.089	0.118	4.45e3	1204	3.7	3.07e3	1144	2.7	MM	bb
5	123789-HxCDD							NO		0.120		1204			1144			
6	1234678-HpCDD	3.39e3	3.21e3	6.59e3	39.97	1.000	1.06	NO	2.214	0.192	4.45e4	1054	42.2	4.15e4	1232	33.7	bd	MM
7	OCDD	3.21e4	3.61e4	6.82e4	44.17	1.000	0.89	NO	27.172	0.382	2.35e5	1102	213.1	2.69e5	1714	157.1	bd	bd
8	2378-TCDF	5.08e2	6.97e2	1.21e3	30.31	1.001	0.73	NO	0.245	0.179	3.82e3	1255	3.0	7.45e3	1795	4.2	MM	MM
9	12378-PeCDF	2.06e2	8.24e1	2.89e2	33.24	1.000	2.50	YES	0.060	0.104	4.92e3	1115	4.4	1.41e3	2307	0.6	bb	MM
10	23478-PeCDF	5.58e2	4.57e2	1.02e3	33.86	1.001	1.22	YES	0.195	0.0942	9.12e3	1115	8.2	8.13e3	2307	3.5	bb	bb
11	123478-HxCDF	4.25e2	2.49e2	6.74e2	35.93	1.000	1.71	YES	0.163	0.0936	8.39e3	1133	7.4	5.94e3	1433	4.1	dd	MM
12	123678-HxCDF	9.07e2	6.89e2	1.60e3	36.02	1.000	1.32	NO	0.335	0.0971	1.49e4	1133	13.2	1.12e4	1433	7.8	MM	MM
13	234678-HxCDF	4.74e2	4.02e2	8.76e2	36.49	1.000	1.18	NO	0.197	0.0971	1.04e4	1133	9.2	6.50e3	1433	4.5	bb	bb
14	123789-HxCDF	1.65e2	1.24e2	2.88e2	37.28	1.001	1.33	NO	0.073	0.125	3.61e3	1133	3.2	2.42e3	1433	1.7	bb	bb
15	1234678-HpCDF	1.09e4	1.09e4	2.19e4	38.76	1.001	1.00	NO	5.553	0.178	1.27e5	2249	56.4	1.36e5	1020	133.5	bb	bb
16	1234789-HpCDF							NO		0.235		2249			1020			
17	OCDF	4.22e3	4.93e3	9.15e3	44.46	1.007	0.85	NO	3.278	0.341	3.84e4	1391	27.6	4.09e4	1406	29.1	bb	bd
18	13C-2378-TCDD	2.29e5	3.03e5	5.32e5	31.10	1.019	0.76	NO	70.740	0.187	2.85e6	3112	915.3	3.72e6	1991	1870.0	bd	bd
19	13C-12378-PeCDD	2.58e5	1.61e5	4.19e5	34.04	1.115	1.60	NO	82.243	0.297	4.36e6	3176	1373.7	2.78e6	2303	1208.0	bb	bb
20	13C-123478-HxCDD	1.92e5	1.55e5	3.47e5	36.62	0.991	1.24	NO	74.003	0.286	2.99e6	3985	749.3	2.39e6	2439	979.7	bd	bd
21	13C-123678-HxCDD	2.28e5	1.85e5	4.13e5	36.70	0.993	1.23	NO	65.842	0.214	3.10e6	3985	778.0	2.51e6	2439	1030.8	dd	dd
22	13C-1234678-HpCDD	1.61e5	1.54e5	3.15e5	39.96	1.082	1.05	NO	83.896	0.291	1.61e6	2823	570.2	1.56e6	2424	644.2	bd	bd
23	13C-OCDD	2.57e5	2.93e5	5.49e5	44.15	1.195	0.88	NO	169.383	0.411	1.89e6	3199	589.5	2.04e6	3182	639.6	bd	bd
24	13C-2378-TCDF	2.38e5	3.12e5	5.50e5	30.29	0.992	0.76	NO	64.822	0.210	2.07e6	4142	498.9	2.69e6	2339	1149.0	bb	bb
25	13C-12378-PeCDF	3.22e5	2.08e5	5.31e5	33.24	1.089	1.55	NO	77.648	0.296	5.49e6	4142	1325.2	3.47e6	3199	1086.1	dd	dd
26	13C-23478-PeCDF	3.27e5	2.10e5	5.37e5	33.84	1.109	1.56	NO	76.573	0.289	5.69e6	4142	1374.1	3.65e6	3199	1140.9	bb	bb
27	13C-123478-HxCDF	1.23e5	2.41e5	3.64e5	35.92	0.972	0.51	NO	67.183	0.294	2.04e6	3526	579.9	3.88e6	4114	942.1	bd	bd
28	13C-123678-HxCDF	1.56e5	2.96e5	4.52e5	36.01	0.975	0.53	NO	64.057	0.226	2.17e6	3526	615.1	4.26e6	4114	1035.7	db	db
29	13C-234678-HxCDF	1.32e5	2.61e5	3.93e5	36.49	0.988	0.51	NO	65.535	0.266	1.97e6	3526	558.0	3.72e6	4114	903.3	bb	bd
30	13C-123789-HxCDF	1.26e5	2.48e5	3.74e5	37.24	1.008	0.51	NO	73.919	0.315	1.63e6	3526	461.8	3.03e6	4114	736.0	bb	bd
31	13C-1234678-HpCDF	1.02e5	2.28e5	3.30e5	38.74	1.049	0.45	NO	70.993	0.296	1.19e6	3205	372.4	2.61e6	3394	770.0	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	8.46e4	1.94e5	2.79e5	40.61	1.099	0.44	NO	83.579	0.413	8.61e5	3205	268.7	1.89e6	3394	556.0	bd	bb
33	13C-1234-TCDD	2.85e5	3.68e5	6.53e5	30.52	0.000	0.78	NO	100.000	0.215	2.59e6	3112	832.0	3.31e6	1991	1661.5	bb	bb
34	13C-123789-HxCDD	3.27e5	2.67e5	5.94e5	36.94	0.000	1.23	NO	100.000	0.226	3.92e6	3985	982.7	3.21e6	2439	1317.1	dd	dd
35	37Cl-2378-TCDD	6.52e4		6.52e4	31.11	1.019			9.265	0.0373	8.18e5	952	859.1				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	2.41e2	1.96e2	4.36e2	28.03	1.23	YES	0.092	0.0818	2.95e3	1246	2.4	2.45e3	679	3.6	MM	MM
2	Total-tetradioxins	3.31e2	3.09e2	6.40e2	27.68	1.07	YES	0.135	0.0818	4.01e3	1246	3.2	3.37e3	679	5.0	MM	db

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	9.22e1	6.23e1	1.54e2	34.04	1.48	NO	0.043	0.0833	3.33e3	1161	2.9	1.47e3	846	1.7	bb	bb
2	Total-pentadioxins	2.42e2	1.37e2	3.79e2	33.27	1.76	NO	0.106	0.0833	4.62e3	1161	4.0	2.63e3	846	3.1	bb	MM
3	Total-pentadioxins	3.10e2	1.72e2	4.82e2	32.72	1.80	YES	0.136	0.0833	7.87e3	1161	6.8	4.45e3	846	5.3	bb	bb
4	Total-pentadioxins	8.86e1	6.47e1	1.53e2	32.99	1.37	NO	0.043	0.0833	1.53e3	1161	1.3	1.14e3	846	1.3	MM	MM

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123678-HxCDD	1.81e2	1.46e2	3.27e2	36.73	1.24	NO	0.089	0.118	4.45e3	1204	3.7	3.07e3	1144	2.7	MM	bb
2	Total-hexadioxins	9.35e2	8.06e2	1.74e3	36.09	1.16	NO	0.508	0.118	1.29e4	1204	10.7	1.16e4	1144	10.1	MM	MM
3	Total-hexadioxins	8.58e2	6.11e2	1.47e3	35.41	1.41	NO	0.429	0.118	1.45e4	1204	12.0	1.03e4	1144	9.0	bb	MM
4	Total-hexadioxins	2.19e2	1.16e2	3.35e2	35.91	1.90	YES	0.098	0.118	2.52e3	1204	2.1	2.94e3	1144	2.6	MM	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	1.67e2	1.65e2	3.32e2	40.16	1.01	NO	0.111	0.192	4.30e3	1054	4.1	3.45e3	1232	2.8	db	MM
2	1234678-HpCDD	3.39e3	3.21e3	6.59e3	39.97	1.06	NO	2.214	0.192	4.45e4	1054	42.2	4.15e4	1232	33.7	bd	MM
3	Total-heptadioxins	4.31e3	3.98e3	8.29e3	39.08	1.08	NO	2.785	0.192	5.14e4	1054	48.8	4.90e4	1232	39.8	bd	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.10e2	5.81e2	1.09e3	29.41	0.88	NO	0.222	0.179	7.35e3	1255	5.9	4.96e3	1795	2.8	bb	MM
2	Total-tetrafurans	3.08e2	3.49e2	6.57e2	28.88	0.88	NO	0.134	0.179	3.98e3	1255	3.2	4.85e3	1795	2.7	MM	bb
3	Total-tetrafurans	4.57e2	7.48e2	1.20e3	28.00	0.61	YES	0.245	0.179	6.06e3	1255	4.8	7.97e3	1795	4.4	bb	bb
4	Total-tetrafurans	4.83e2	4.71e2	9.54e2	27.61	1.03	YES	0.194	0.179	5.21e3	1255	4.1	4.48e3	1795	2.5	bb	MM
5	Total-tetrafurans	8.98e2	1.00e3	1.90e3	26.97	0.89	YES	0.387	0.179	1.02e4	1255	8.1	1.08e4	1795	6.0	bb	bd
6	Total-tetrafurans	2.22e2	3.30e2	5.52e2	26.44	0.67	NO	0.112	0.179	3.71e3	1255	3.0	3.49e3	1795	1.9	MM	MM
7	Total-tetrafurans	2.25e2	2.90e2	5.15e2	31.82	0.77	NO	0.105	0.179	3.72e3	1255	3.0	3.62e3	1795	2.0	bb	MM
8	Total-tetrafurans	1.68e2	1.90e2	3.57e2	29.67	0.88	NO	0.073	0.179	3.24e3	1255	2.6	1.81e3	1795	1.0	MM	MM
9	Total-tetrafurans	1.30e2	1.49e2	2.80e2	26.05	0.87	NO	0.057	0.179	1.78e3	1255	1.4	3.81e3	1795	2.1	MM	MM
10	2378-TCDF	5.08e2	6.97e2	1.21e3	30.31	0.73	NO	0.245	0.179	3.82e3	1255	3.0	7.45e3	1795	4.2	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	6.47e3	4.61e3	1.11e4	31.83	1.40	NO	2.210	0.0544	1.04e5	728	143.5	7.89e4	1150	68.6	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	5.50e2	3.78e2	9.28e2	33.00	1.45	NO	0.185	0.0991	9.87e3	1115	8.8	5.58e3	2307	2.4	MM	bb
2	Total-pentafurans	2.17e3	1.14e3	3.30e3	32.70	1.91	YES	0.659	0.0991	2.69e4	1115	24.1	1.64e4	2307	7.1	bb	MM
3	23478-PeCDF	5.58e2	4.57e2	1.02e3	33.86	1.22	YES	0.195	0.0942	9.12e3	1115	8.2	8.13e3	2307	3.5	bb	bb
4	Total-pentafurans	2.21e2	2.65e2	4.86e2	33.42	0.84	YES	0.097	0.0991	4.37e3	1115	3.9	4.22e3	2307	1.8	bb	MM
5	12378-PeCDF	2.06e2	8.24e1	2.89e2	33.24	2.50	YES	0.060	0.104	4.92e3	1115	4.4	1.41e3	2307	0.6	bb	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

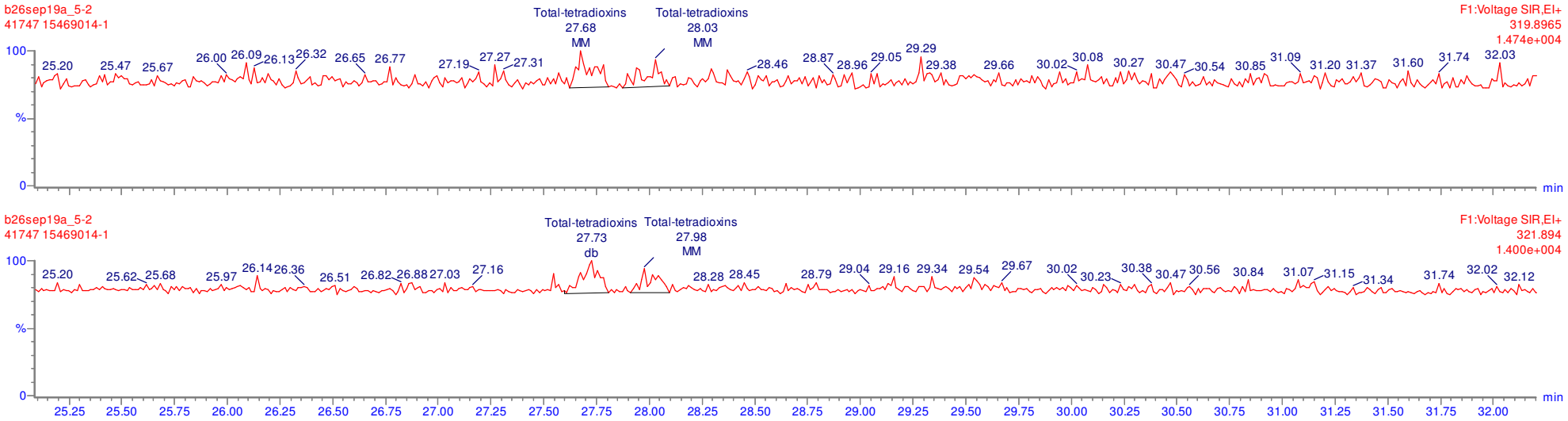
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123478-HxCDF	4.25e2	2.49e2	6.74e2	35.93	1.71	YES	0.163	0.0936	8.39e3	1133	7.4	5.94e3	1433	4.1	dd	MM
2	Total-hexafurans	3.98e3	3.31e3	7.29e3	35.54	1.20	NO	1.681	0.102	7.20e4	1133	63.5	5.31e4	1433	37.1	bb	bb
3	Total-hexafurans	3.93e3	3.21e3	7.15e3	35.12	1.22	NO	1.649	0.102	6.62e4	1133	58.5	4.81e4	1433	33.6	dd	db
4	Total-hexafurans	1.45e3	1.14e3	2.59e3	34.99	1.28	NO	0.597	0.102	2.82e4	1133	24.9	1.99e4	1433	13.9	bd	bd
5	123789-HxCDF	1.65e2	1.24e2	2.88e2	37.28	1.33	NO	0.073	0.125	3.61e3	1133	3.2	2.42e3	1433	1.7	bb	bb
6	234678-HxCDF	4.74e2	4.02e2	8.76e2	36.49	1.18	NO	0.197	0.0971	1.04e4	1133	9.2	6.50e3	1433	4.5	bb	bb
7	123678-HxCDF	9.07e2	6.89e2	1.60e3	36.02	1.32	NO	0.335	0.0971	1.49e4	1133	13.2	1.12e4	1433	7.8	MM	MM

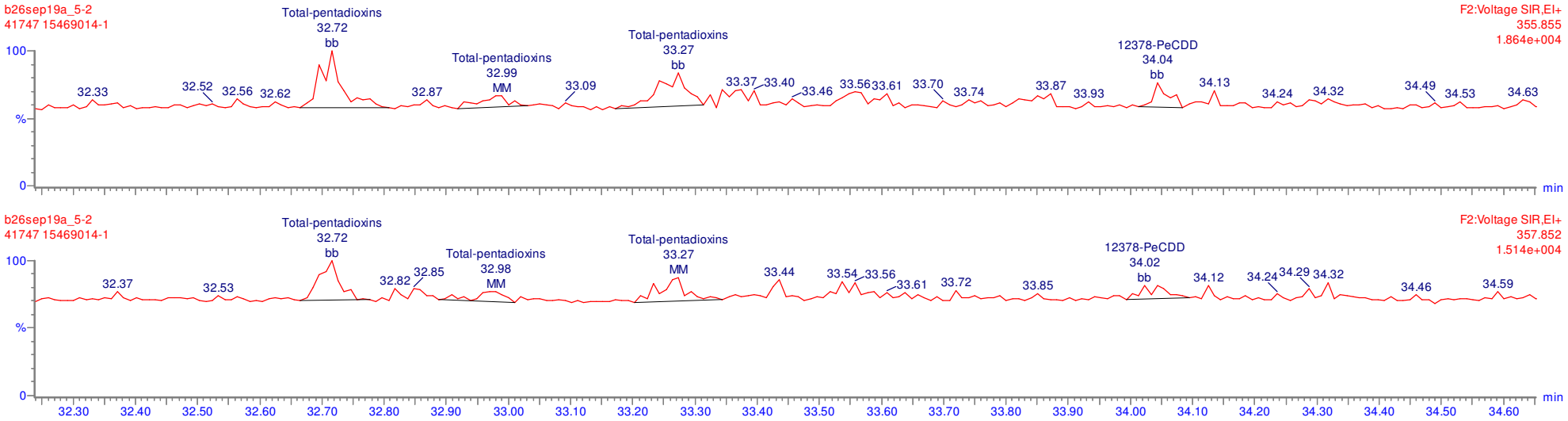
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	7.72e3	7.45e3	1.52e4	39.27	1.04	NO	4.120	0.204	8.44e4	2249	37.5	9.21e4	1020	90.3	bb	bb
2	1234678-HpCDF	1.09e4	1.09e4	2.19e4	38.76	1.00	NO	5.553	0.178	1.27e5	2249	56.4	1.36e5	1020	133.5	bb	bb

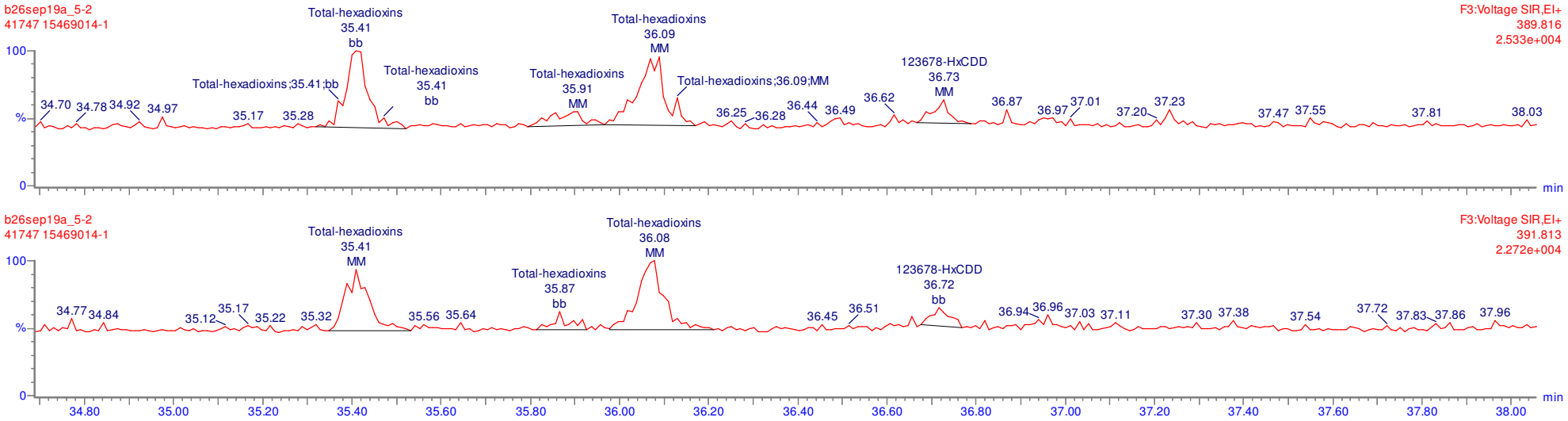
MANUAL INTEGRATION
METHOD 1613
HRP763_1



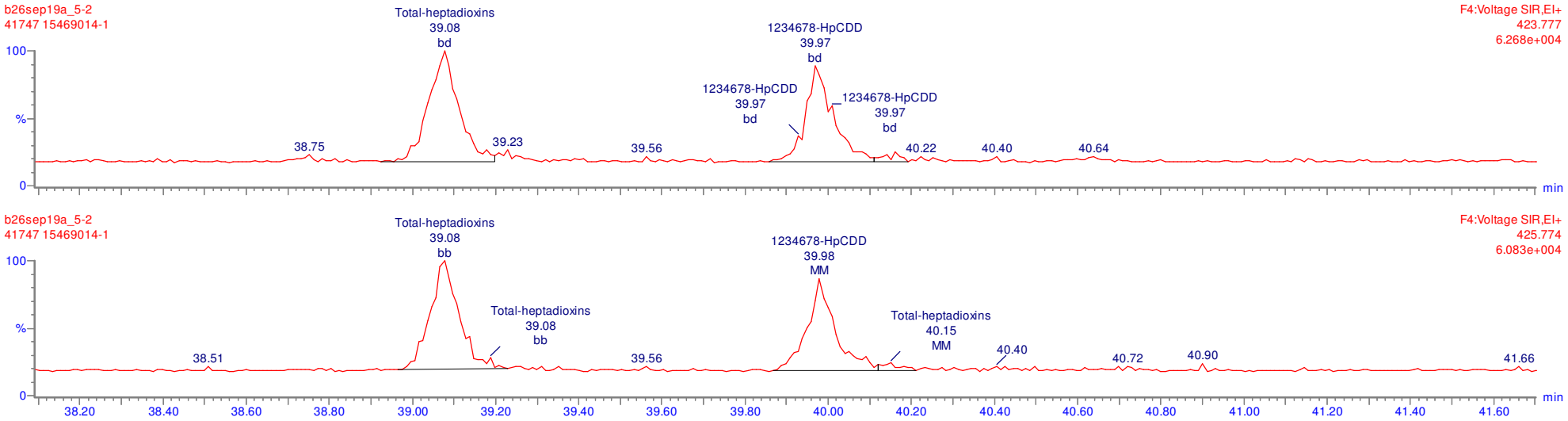
MANUAL INTEGRATION
METHOD 1613
HRP763_1



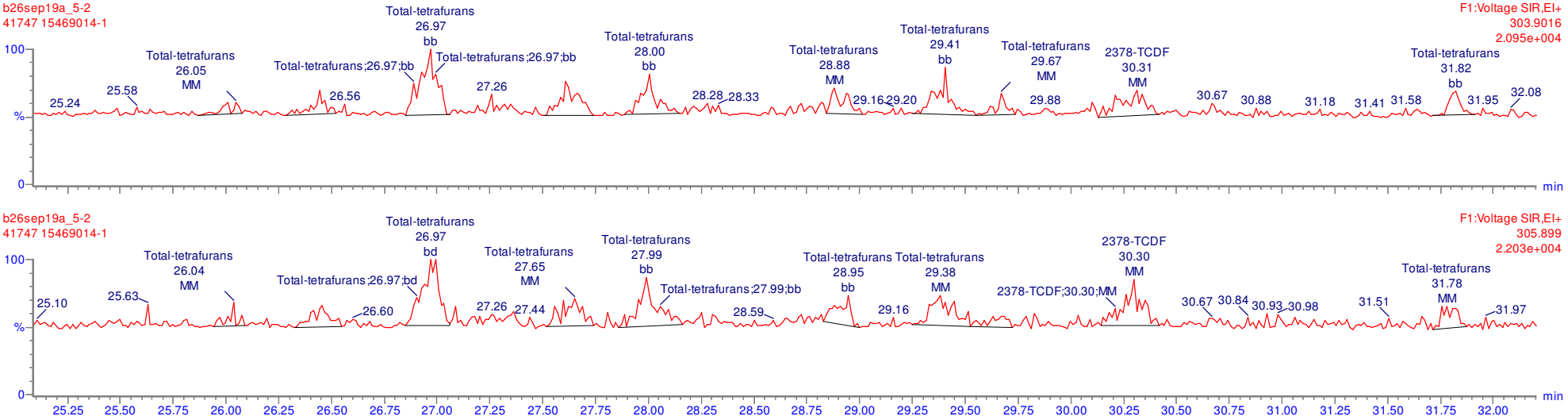
MANUAL INTEGRATION
METHOD 1613
HRP763_1



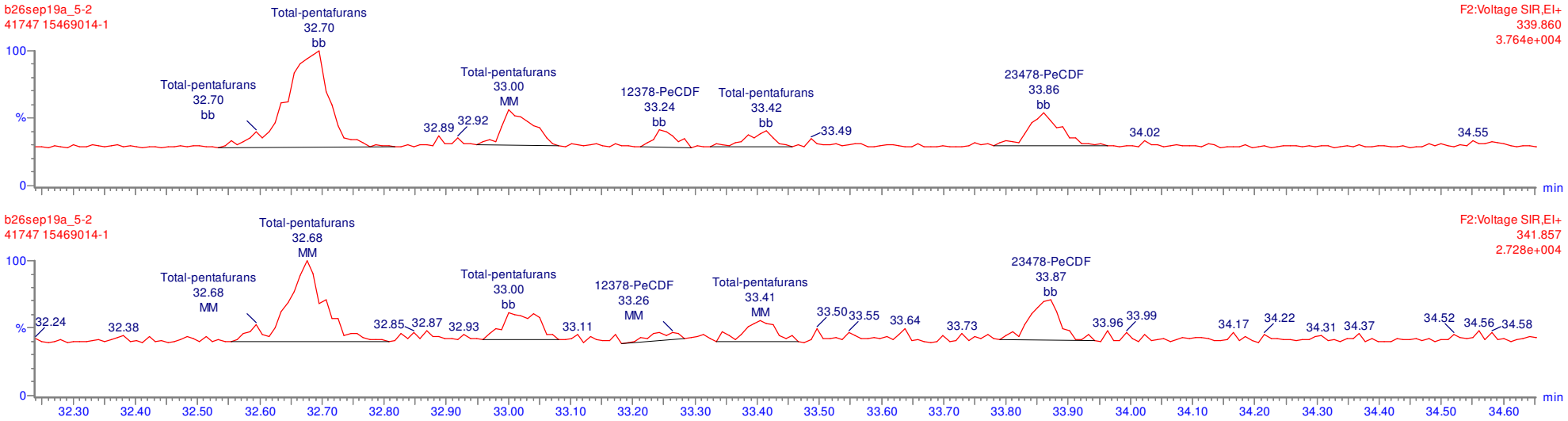
MANUAL INTEGRATION
METHOD 1613
HRP763_1



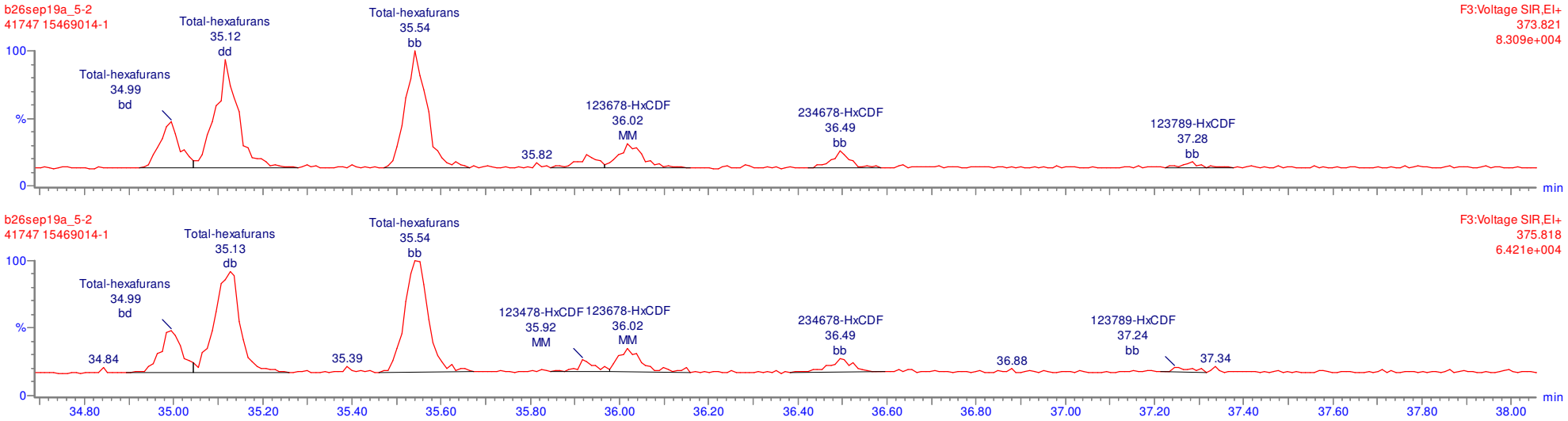
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

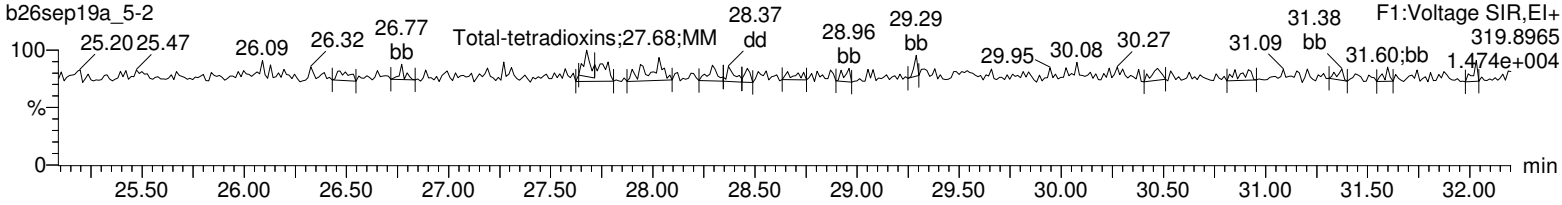
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

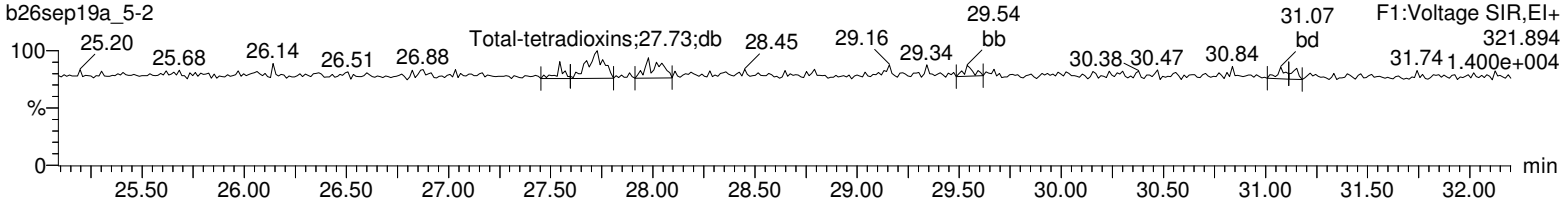
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

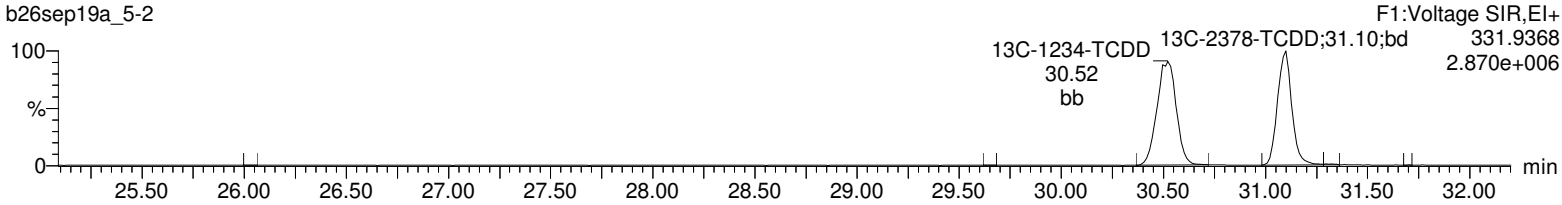
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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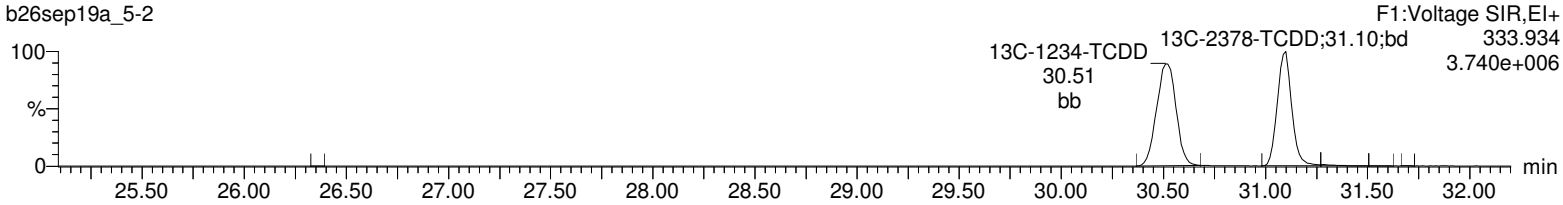
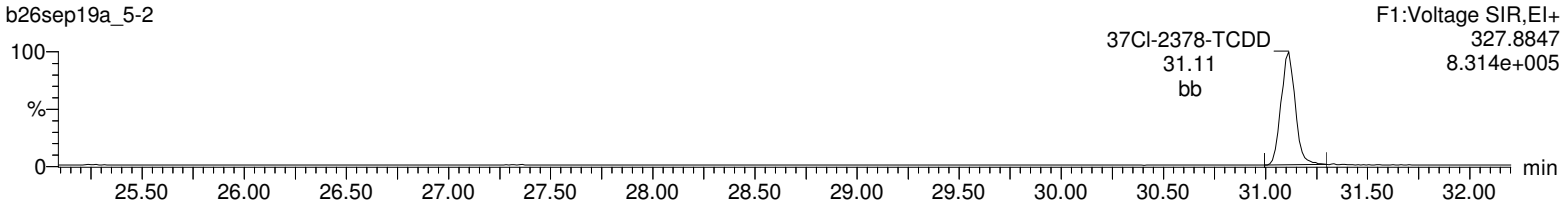
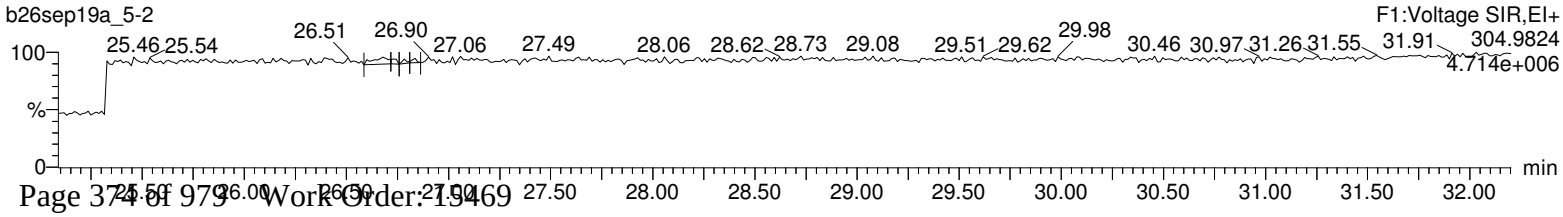


37Cl-2378-TCDD



Lock Mass F1



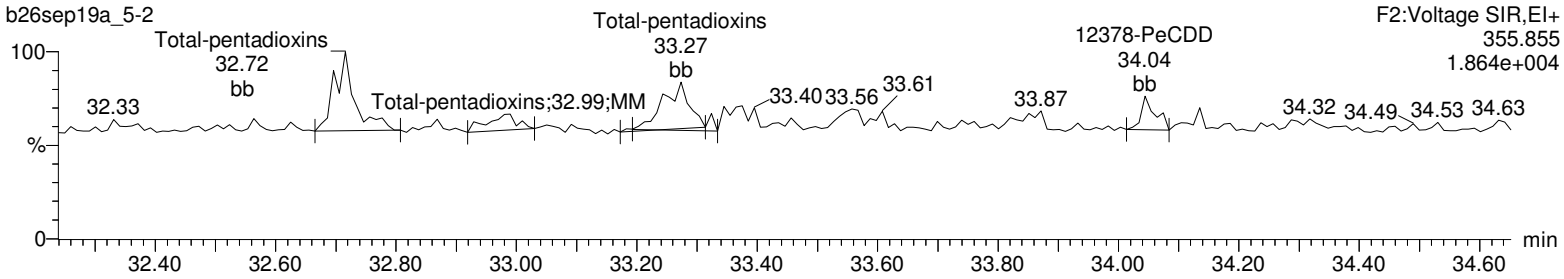
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

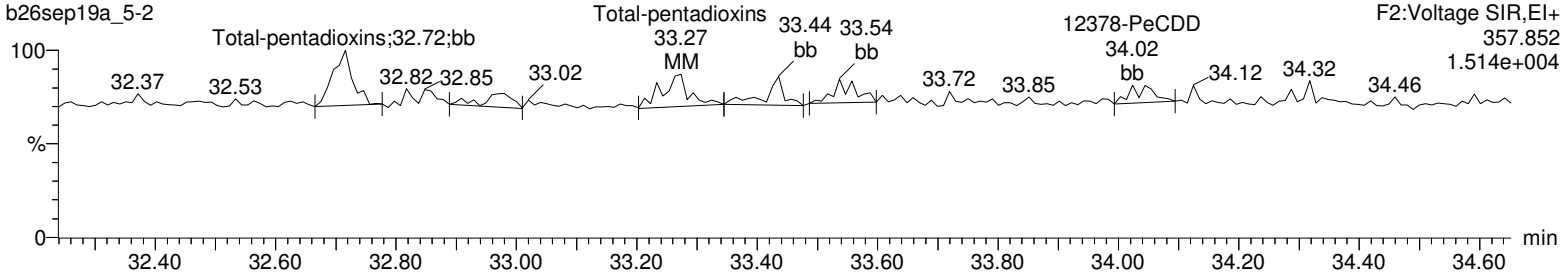
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

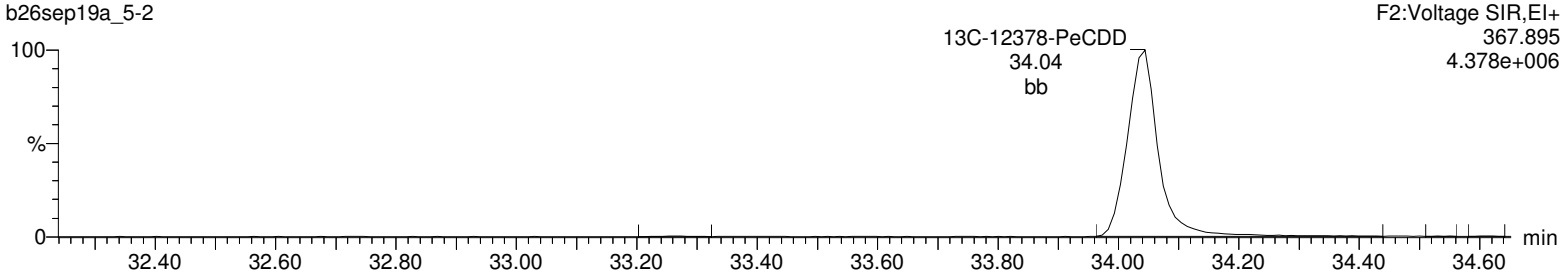
Total-pentadioxins



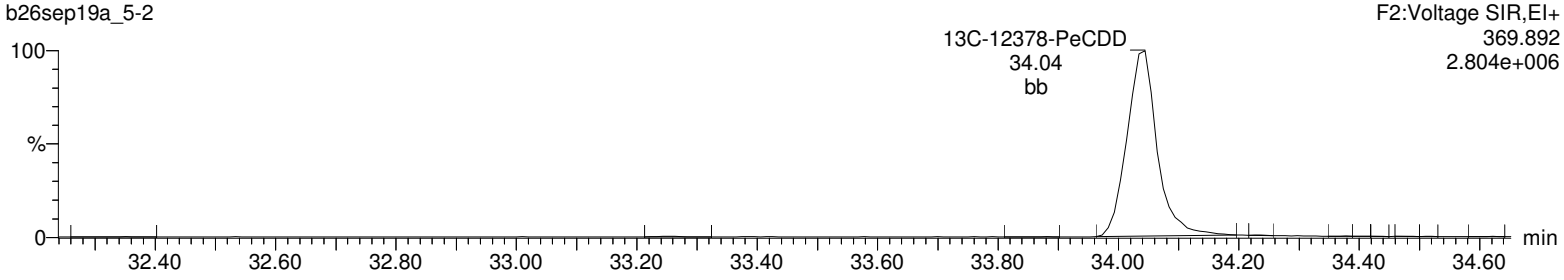
Total-pentadioxins



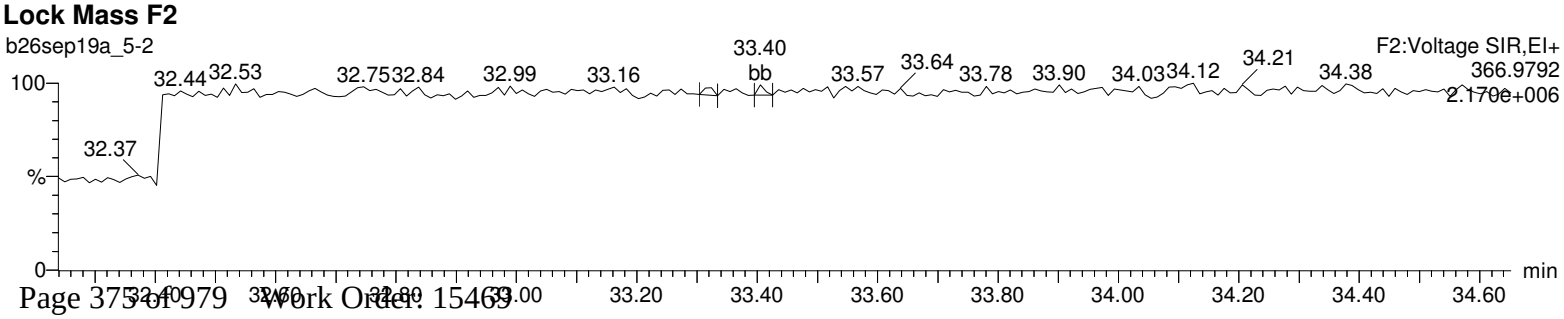
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



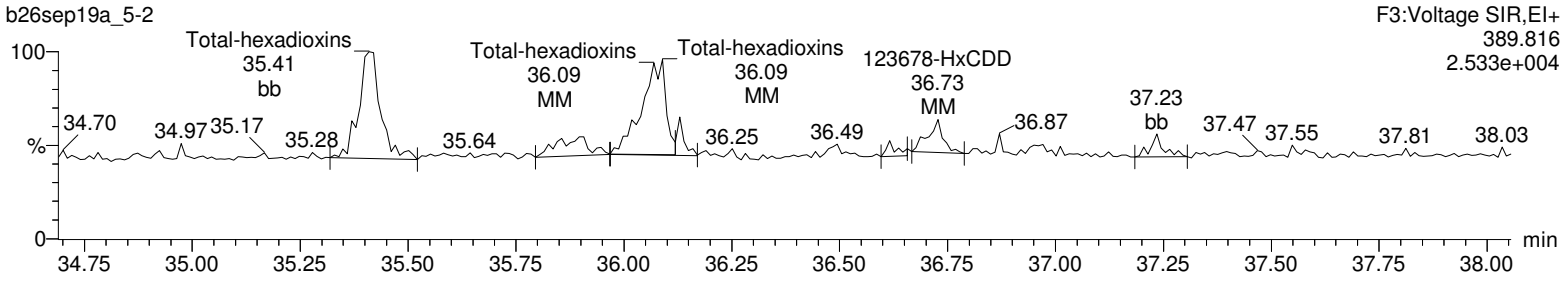
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

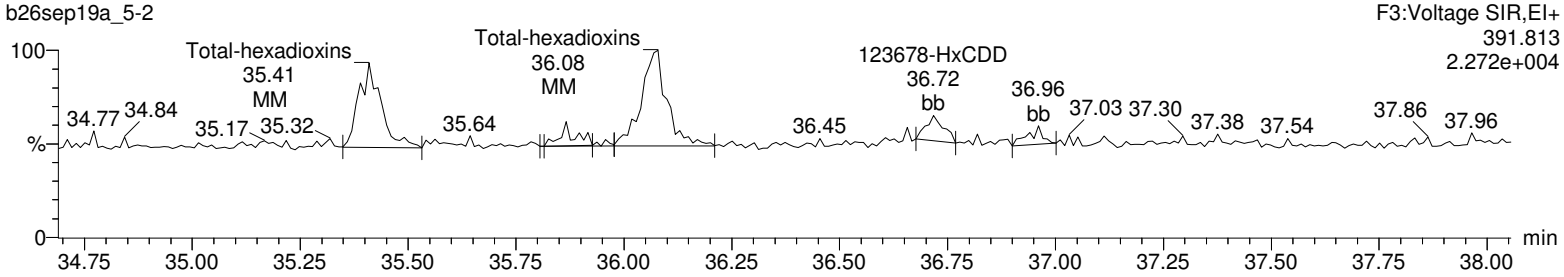
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

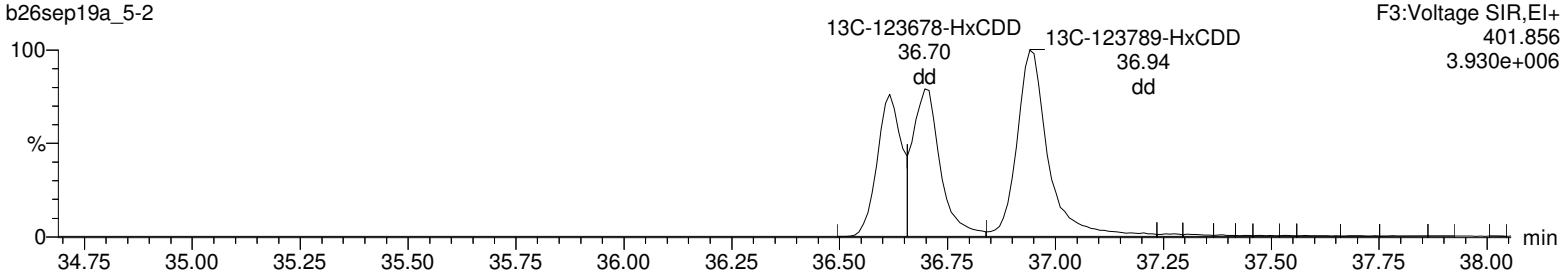
Total-hexadioxins



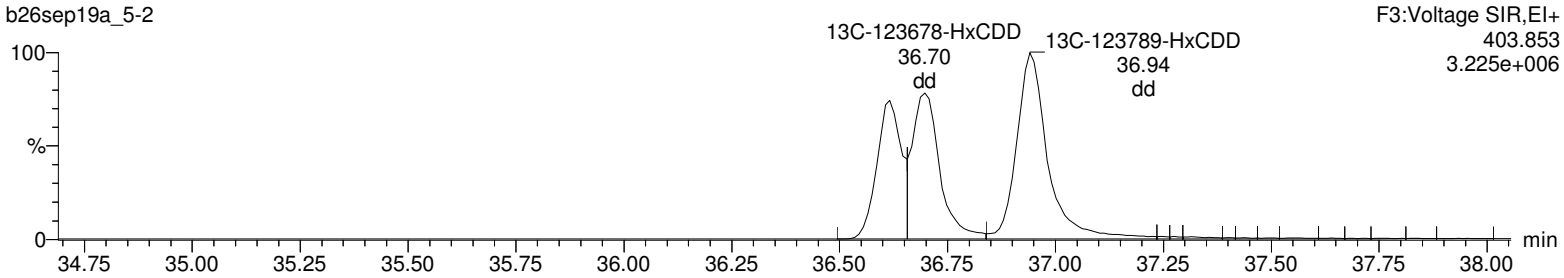
Total-hexadioxins



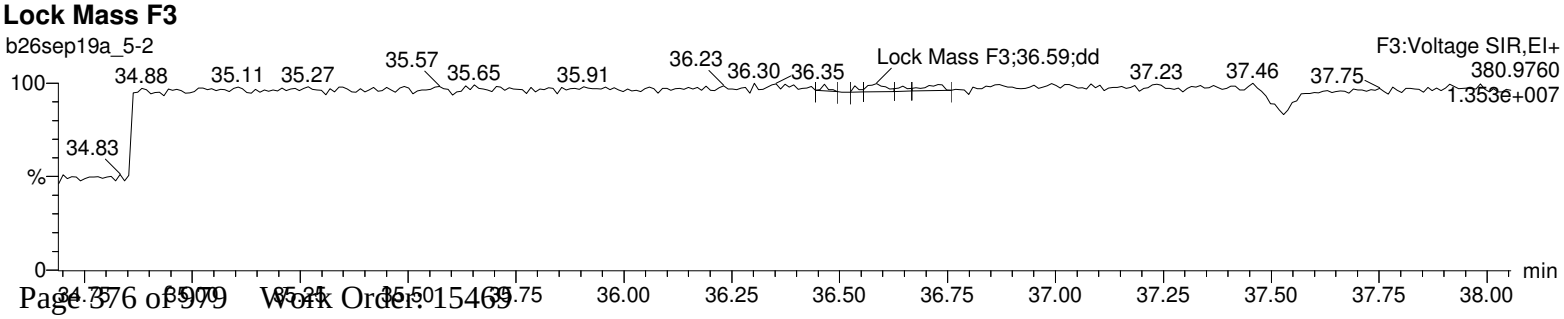
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



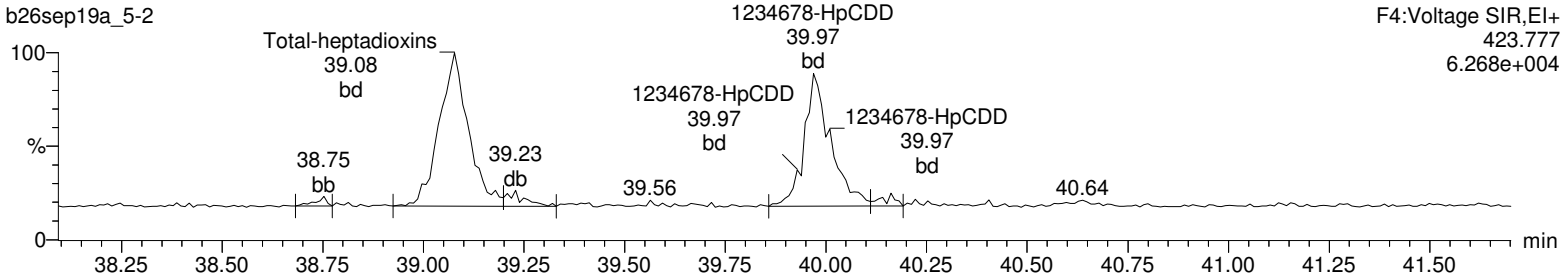
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

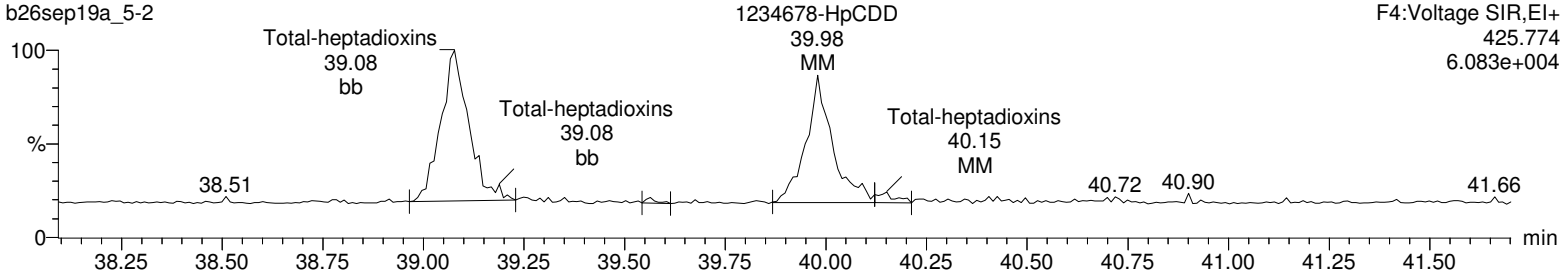
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

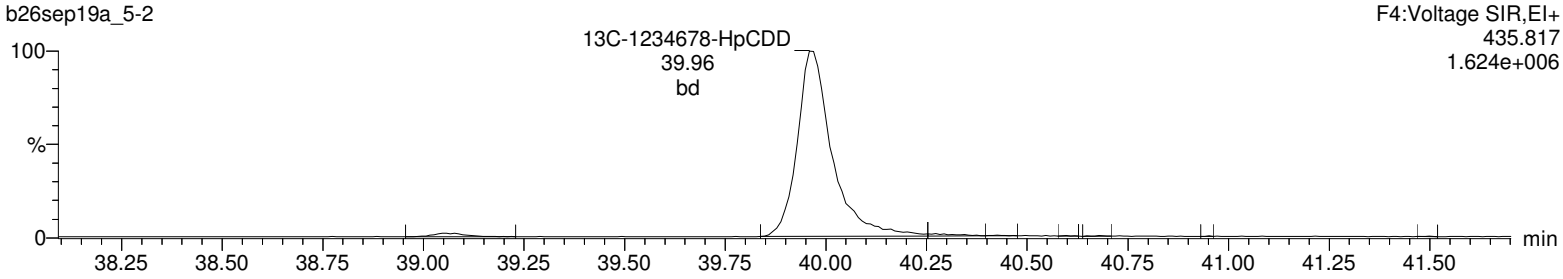
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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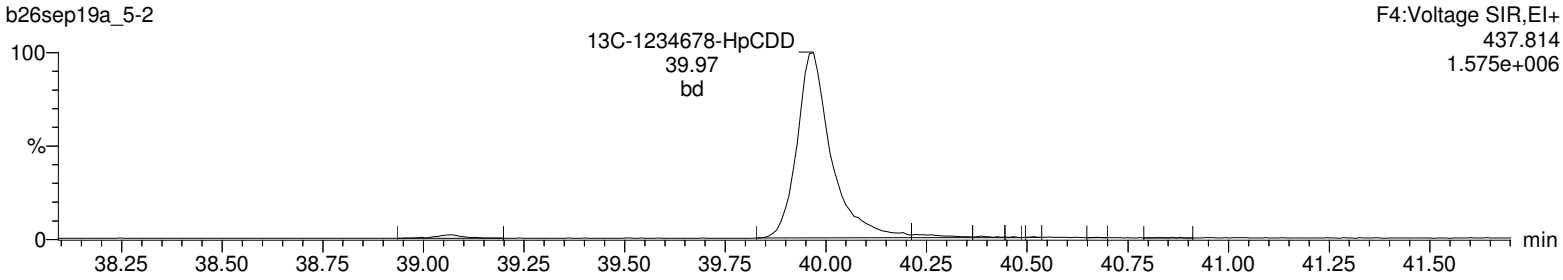
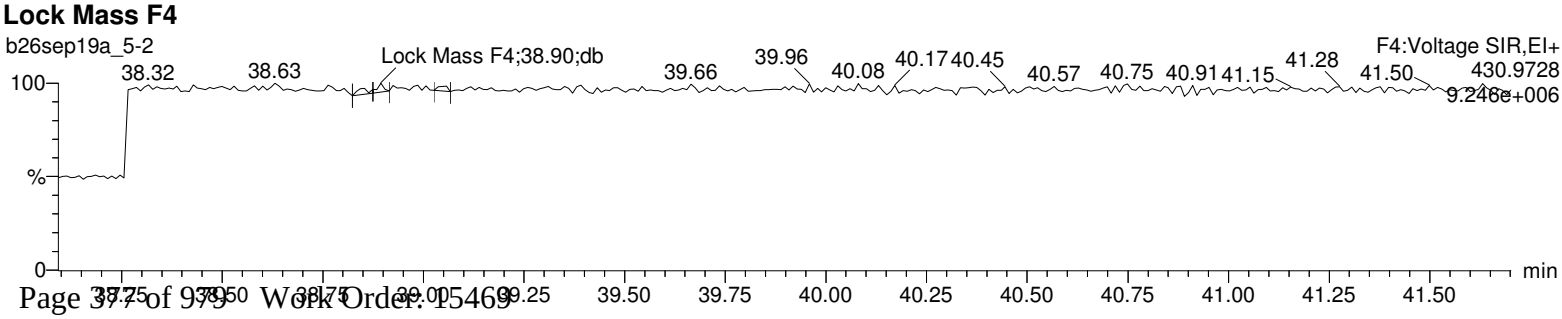


Lock Mass F4



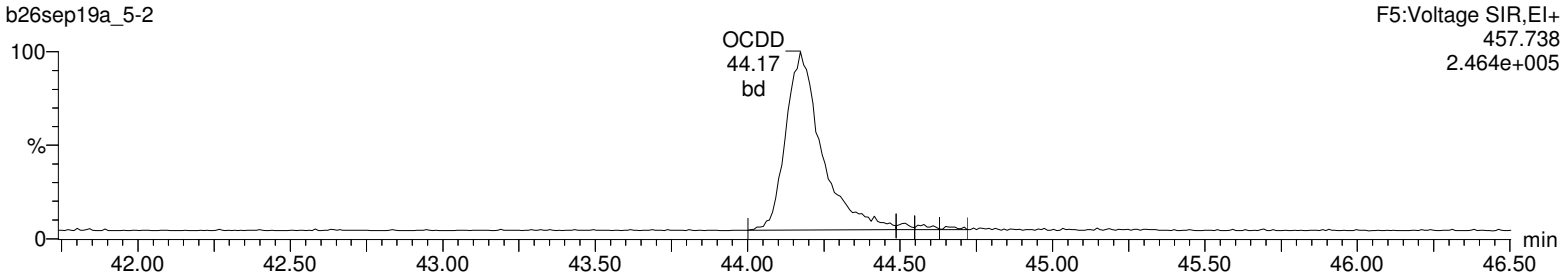
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

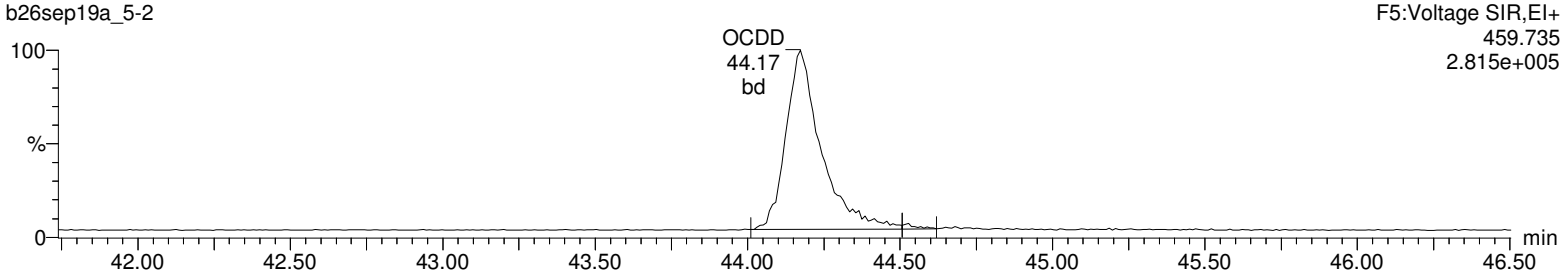
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

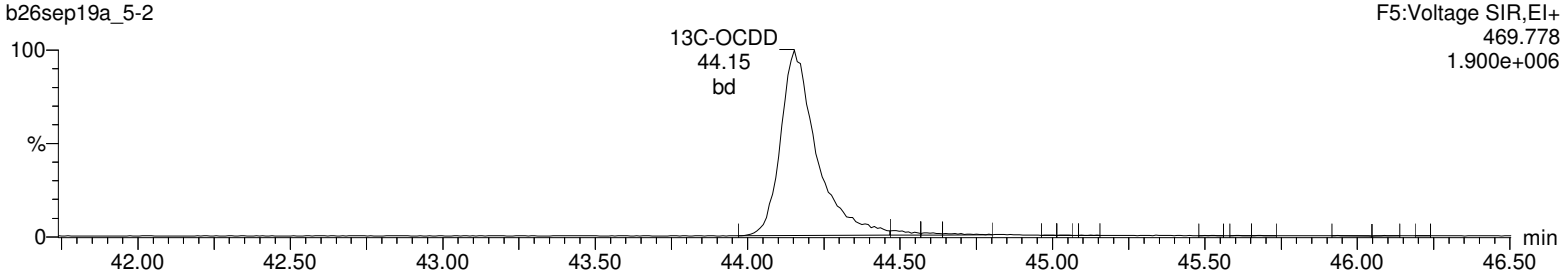
OCDD



OCDD



13C-OCDD



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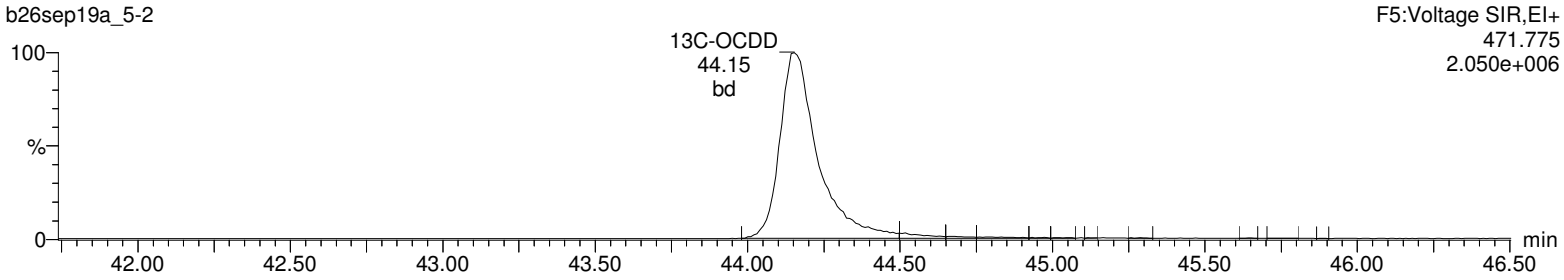
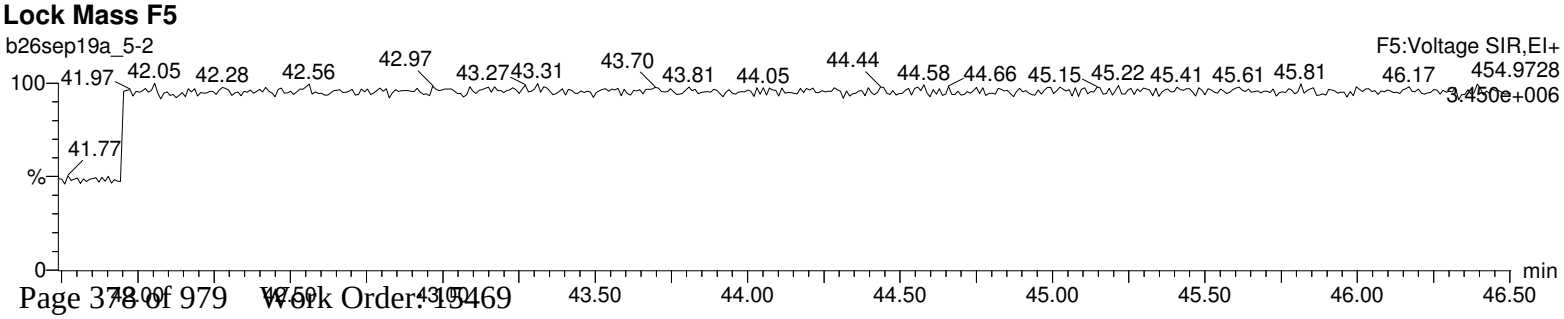


Lock Mass F5



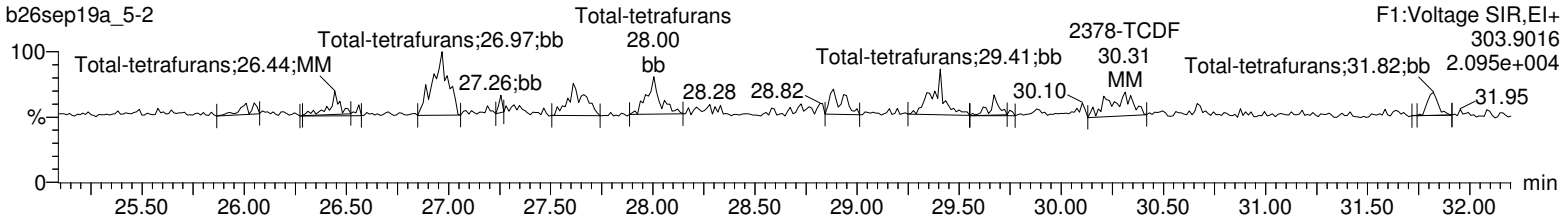
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

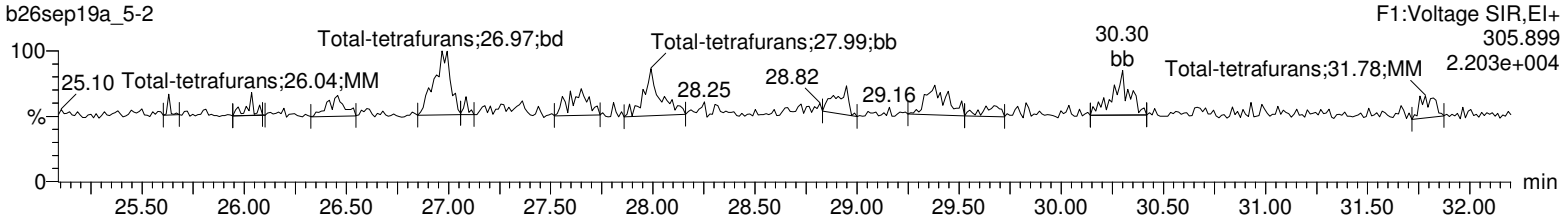
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

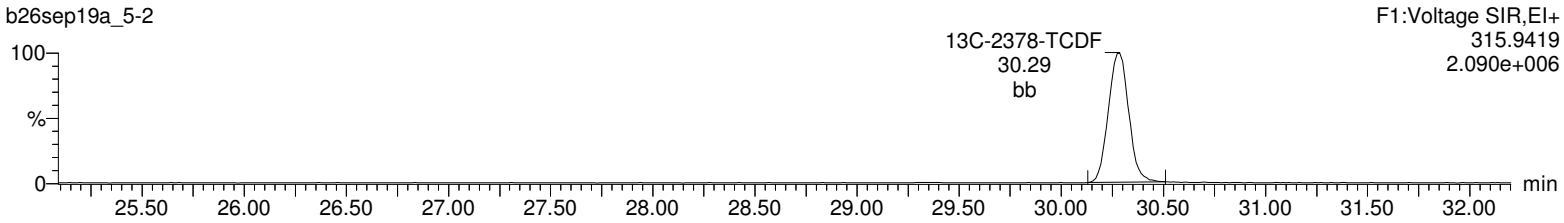
Total-tetrafurans



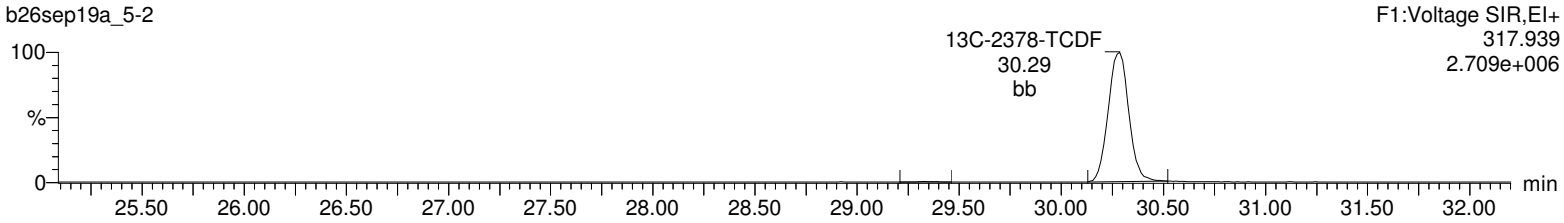
Total-tetrafurans



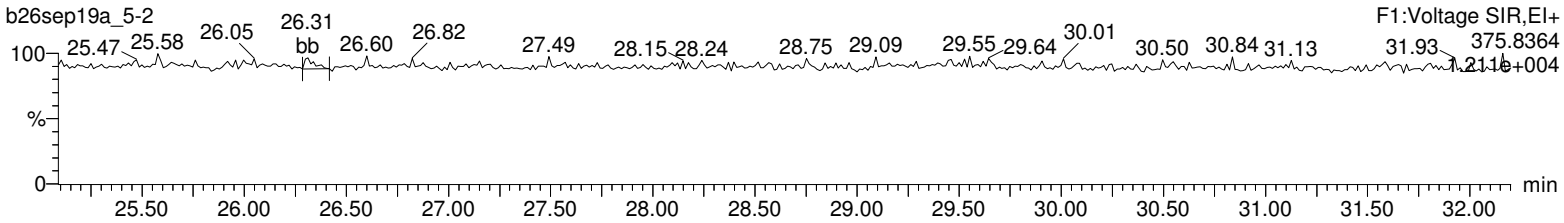
13C-2378-TCDF



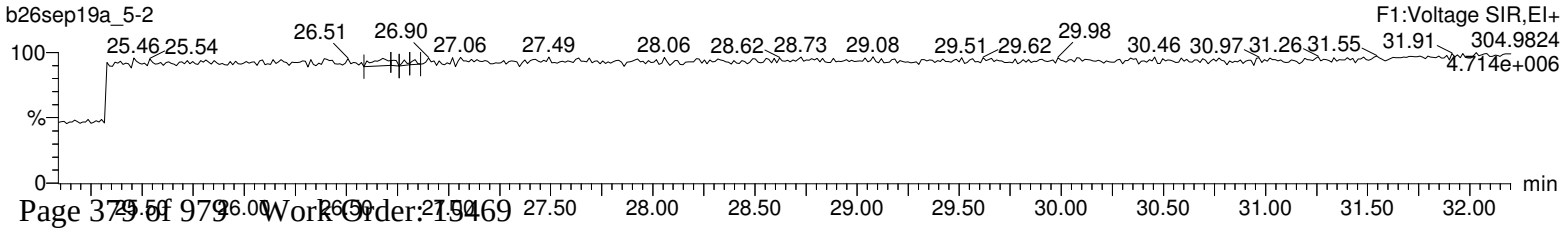
13C-2378-TCDF



HxDPE



Lock Mass F1



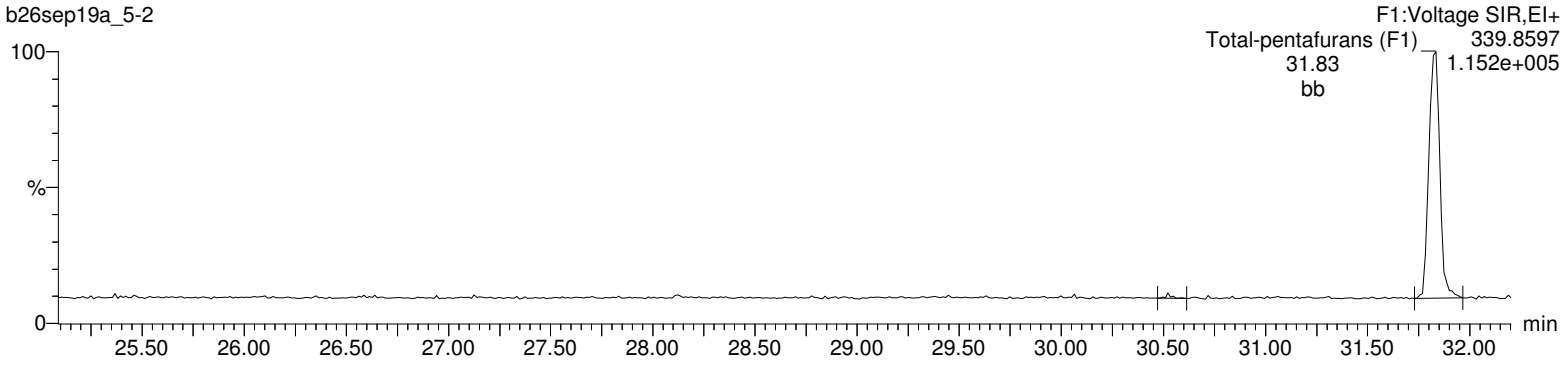
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

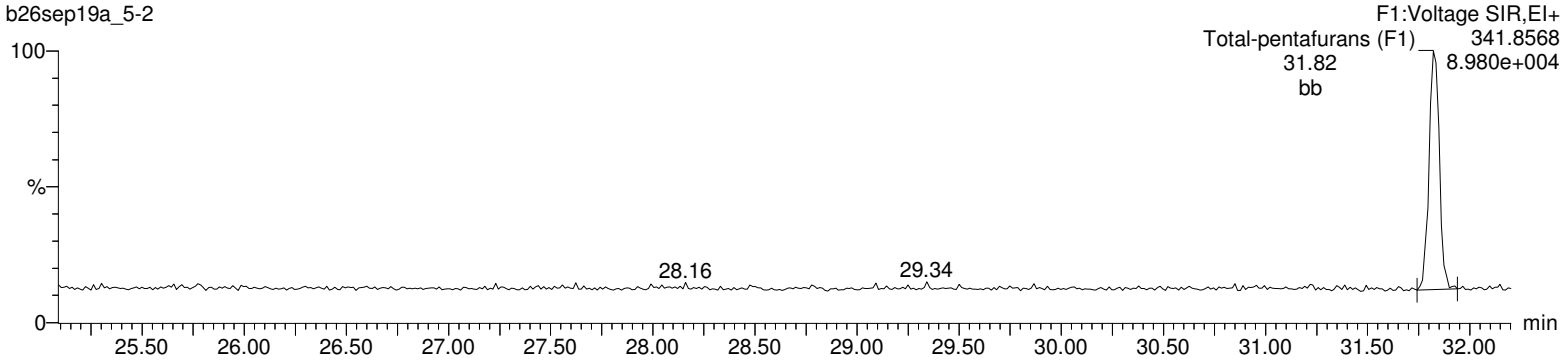
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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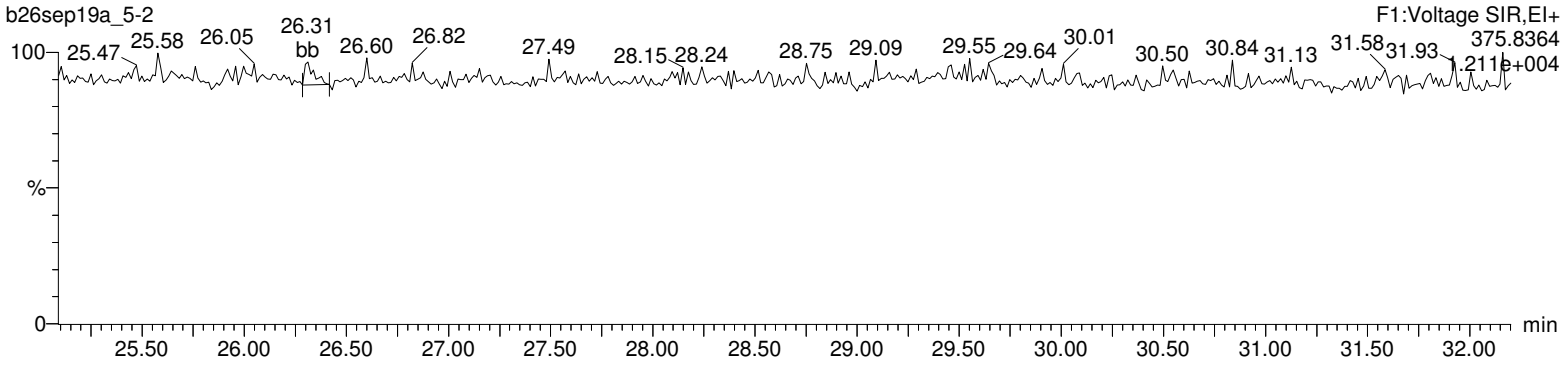
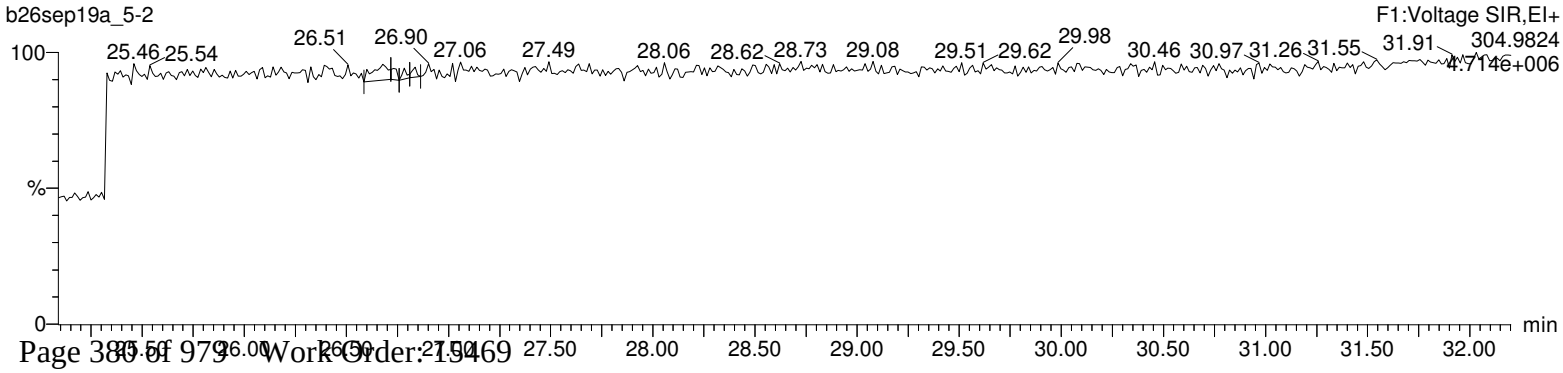


Lock Mass F1



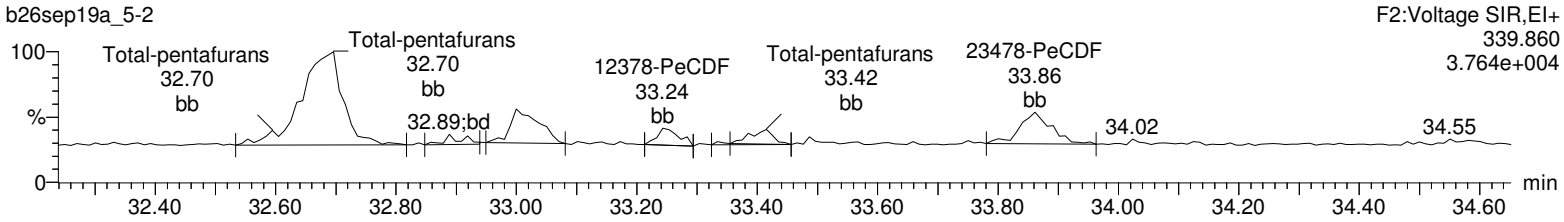
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

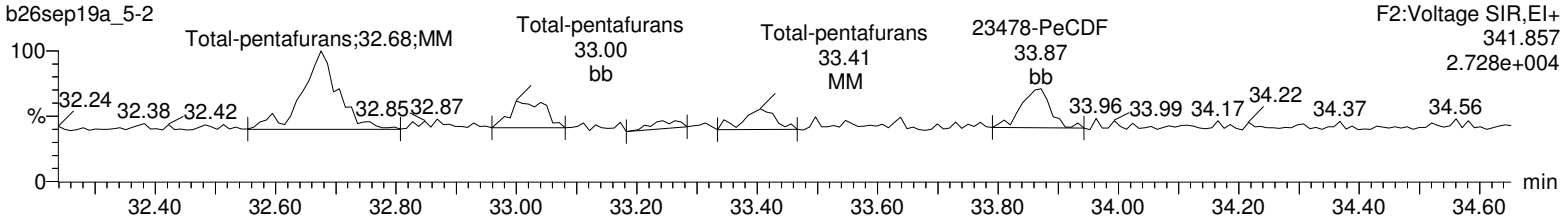
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

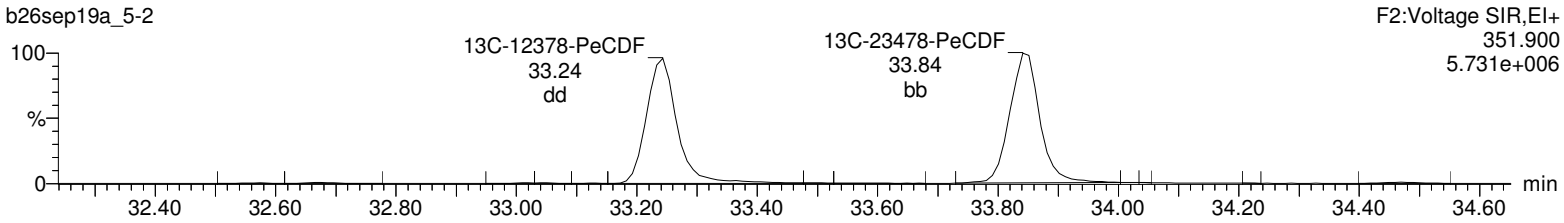
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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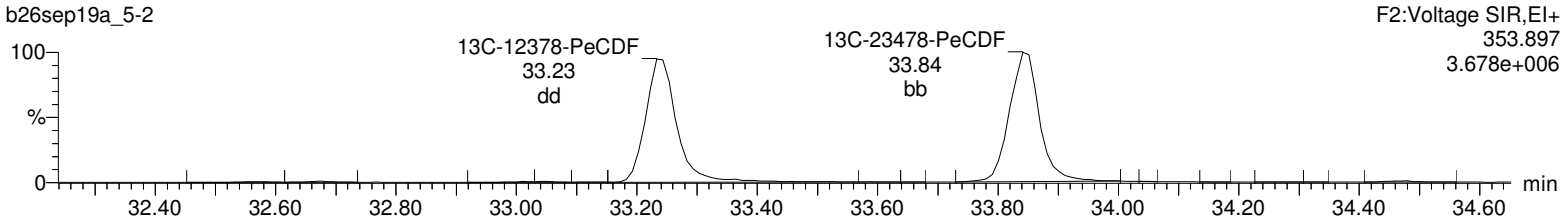
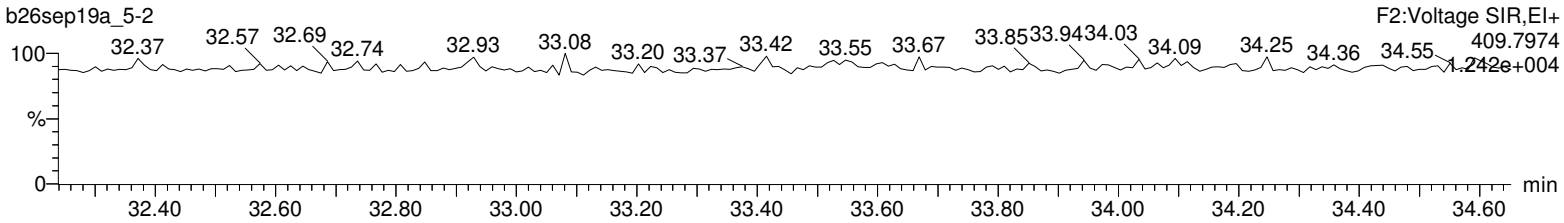
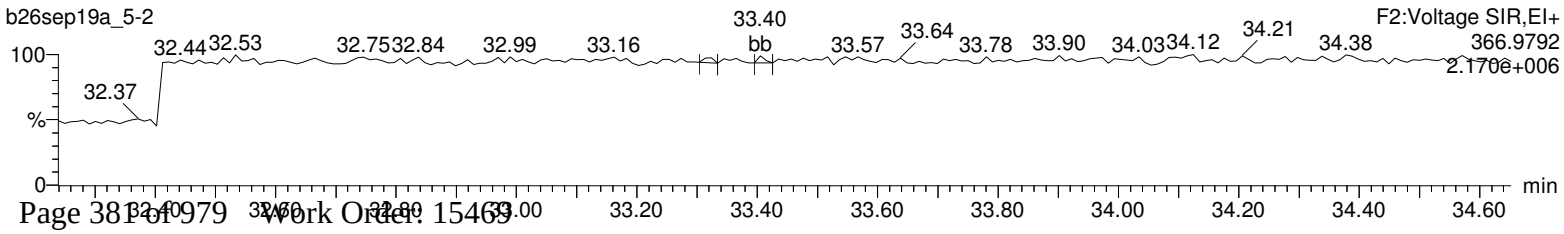


HpDPE



Lock Mass F2



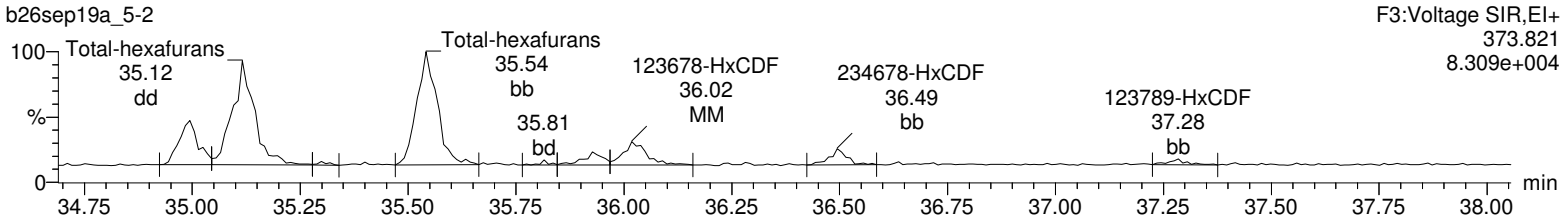
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

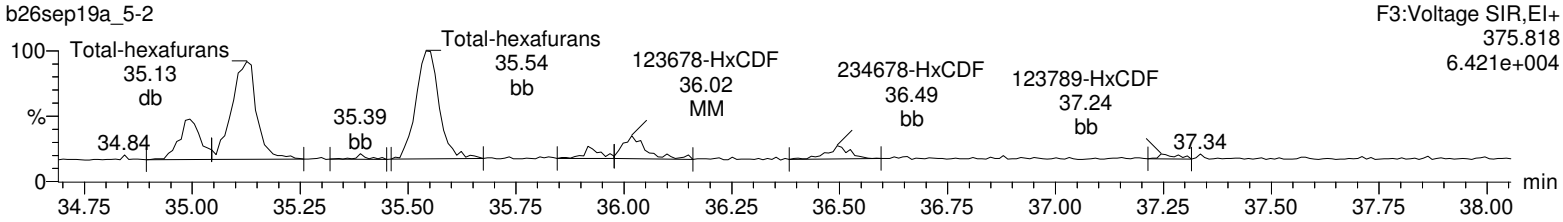
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

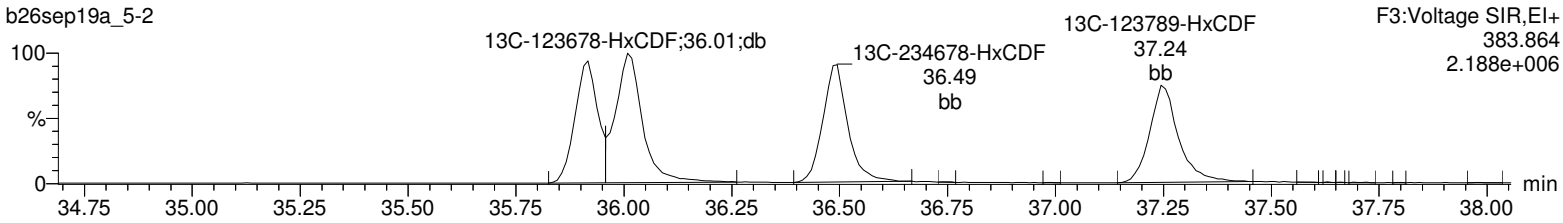
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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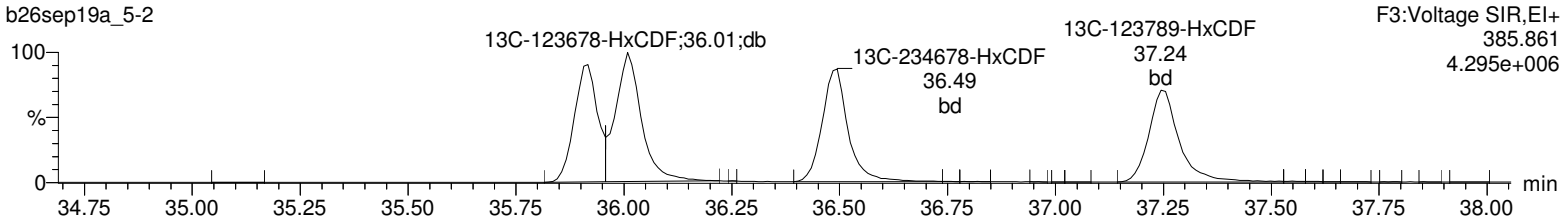

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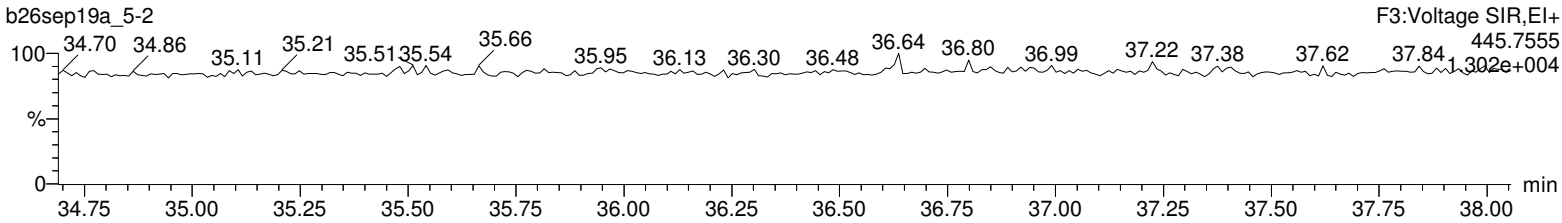
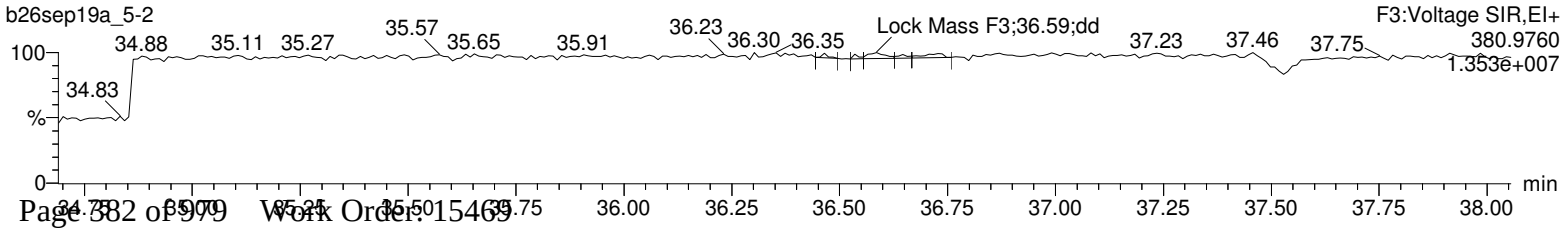


Lock Mass F3



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
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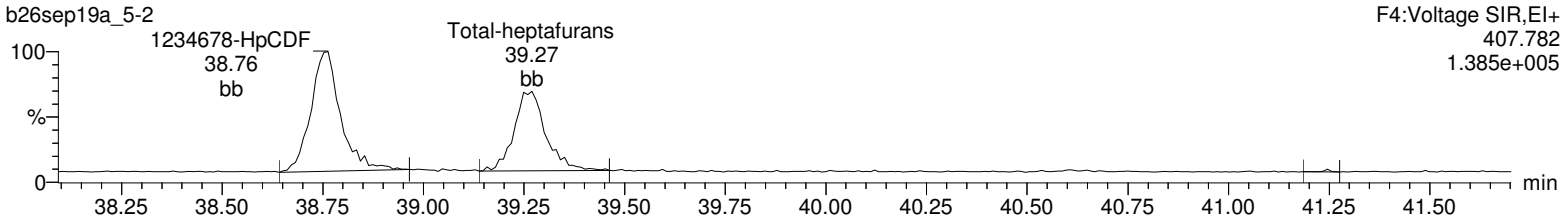
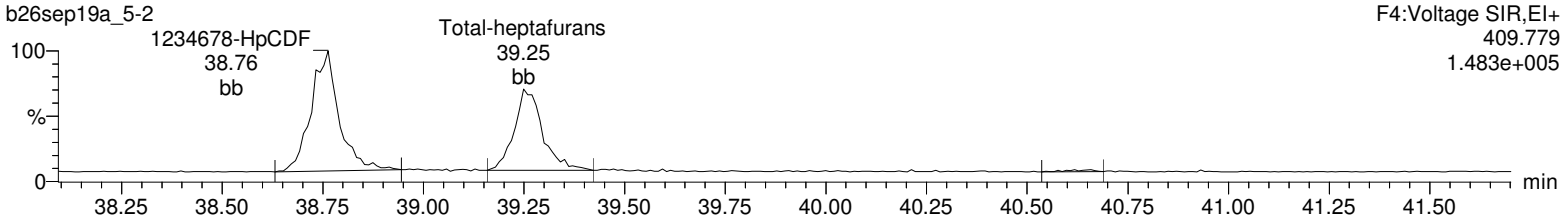
Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

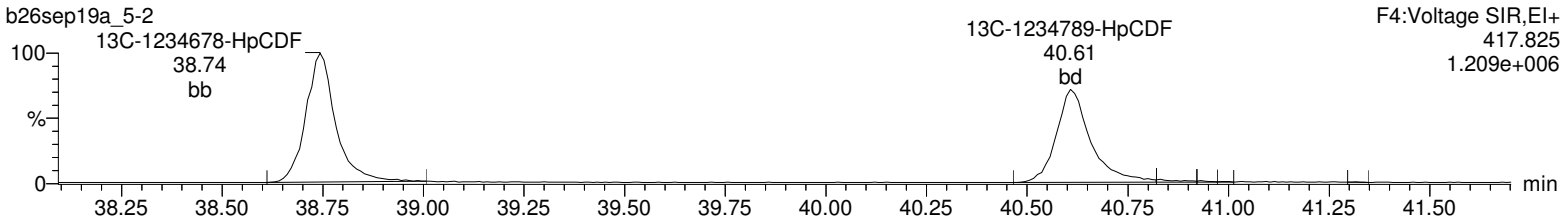
Total-heptafurans



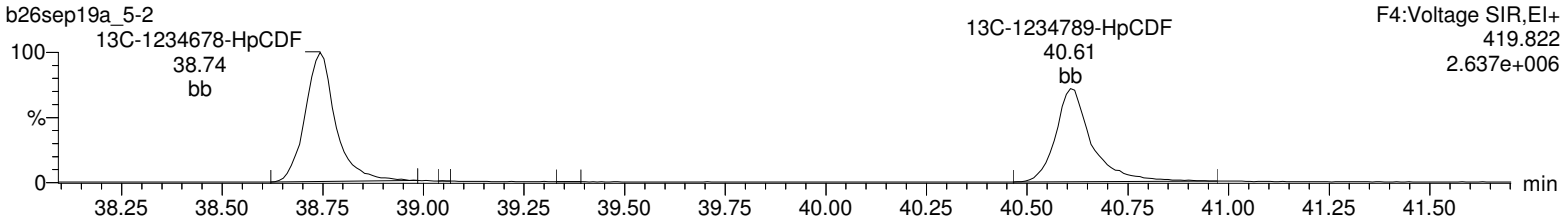
Total-heptafurans



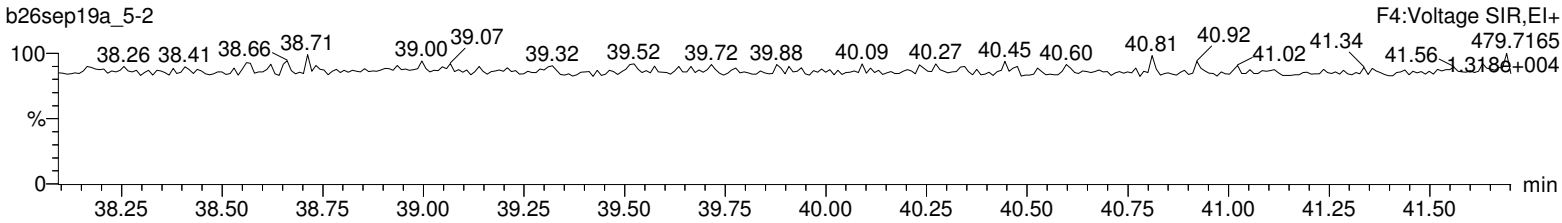
13C-1234678-HpCDF



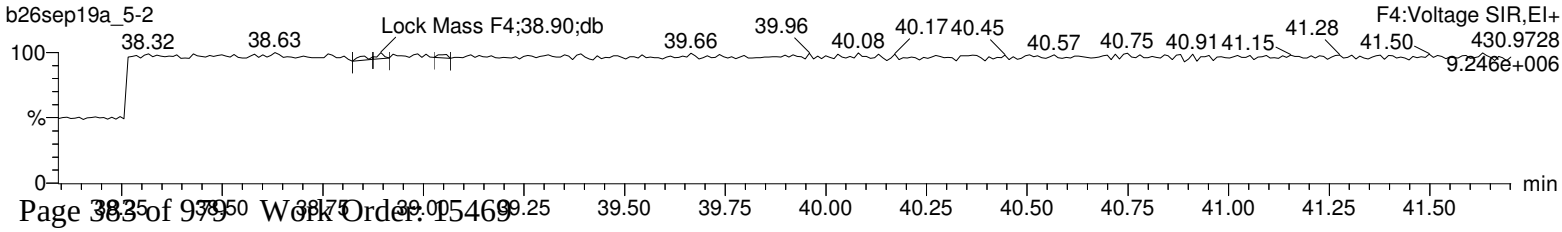
13C-1234678-HpCDF



NoDPE



Lock Mass F4



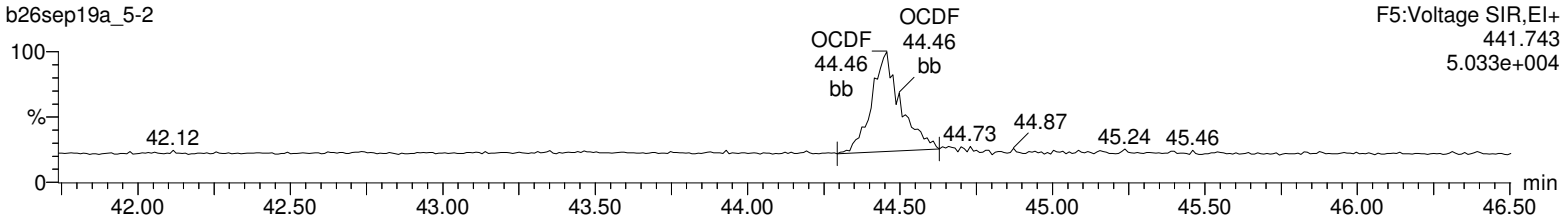
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

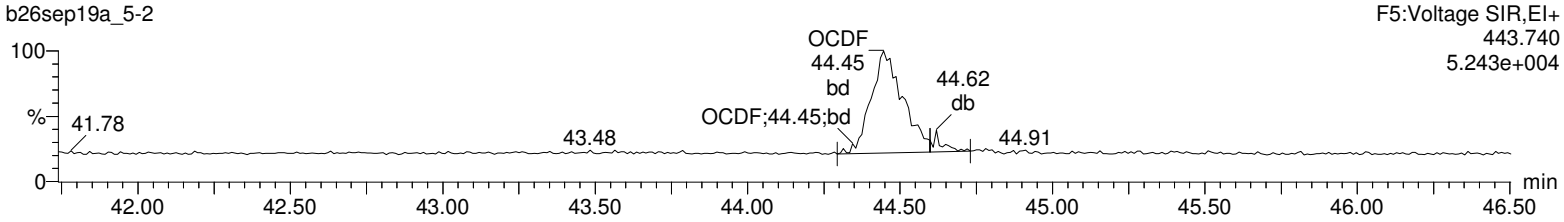
Last Altered: Tuesday, October 01, 2019 09:43:02 Eastern Standard Time
Printed: Tuesday, October 01, 2019 09:43:29 Eastern Standard Time

Name: b26sep19a_5-2, Date: 28-Sep-2019, Time: 00:38:09, ID: 15469014-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

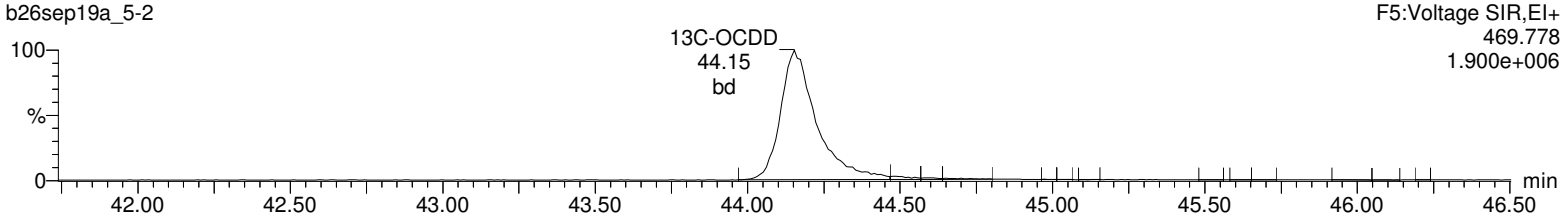
OCDF



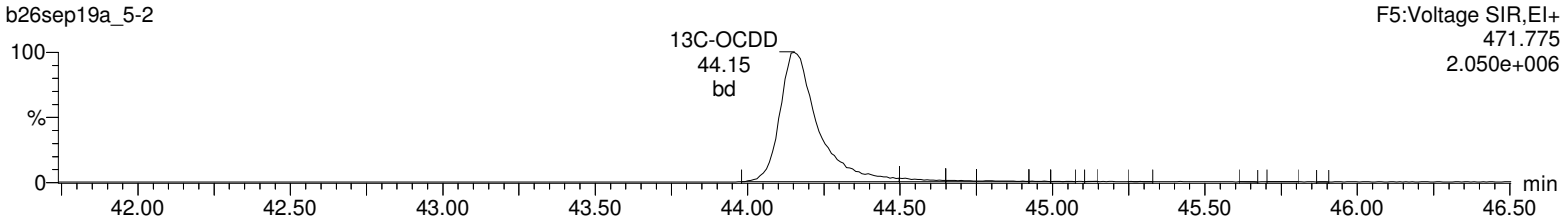
OCDF



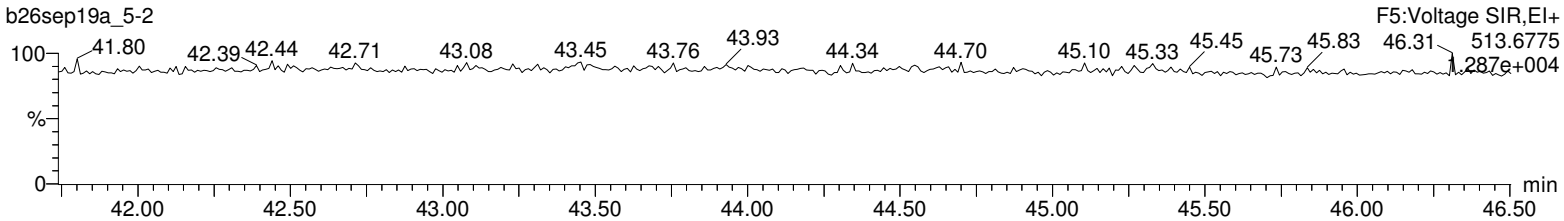
13C-OCDD



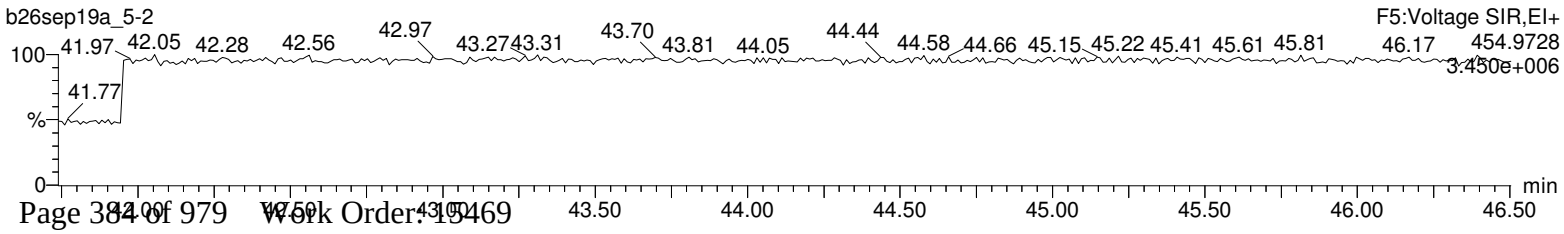
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469015**	**Date Collected:**	**08/29/2019 08:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**25.9**
Client ID:	**H3-SC1b-40to50-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:09**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.46 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0962	pg/g	0.0962	0.934
40321-76-4	1,2,3,7,8-PeCDD	JK	0.325	pg/g	0.108	4.67
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.261	pg/g	0.132	4.67
57653-85-7	1,2,3,6,7,8-HxCDD	J	2.08	pg/g	0.134	4.67
19408-74-3	1,2,3,7,8,9-HxCDD	BJ	0.859	pg/g	0.136	4.67
35822-46-9	1,2,3,4,6,7,8-HpCDD		34.2	pg/g	0.325	4.67
3268-87-9	1,2,3,4,6,7,8,9-OCDD		559	pg/g	1.00	9.34
51207-31-9	2,3,7,8-TCDF	BJ	0.803	pg/g	0.166	0.934
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.562	pg/g	0.0831	4.67
57117-31-4	2,3,4,7,8-PeCDF	J	2.10	pg/g	0.0739	4.67
70648-26-9	1,2,3,4,7,8-HxCDF	J	1.72	pg/g	0.132	4.67
57117-44-9	1,2,3,6,7,8-HxCDF		6.08	pg/g	0.141	4.67
60851-34-5	2,3,4,6,7,8-HxCDF	J	2.88	pg/g	0.136	4.67
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.527	pg/g	0.173	4.67
67562-39-4	1,2,3,4,6,7,8-HpCDF		94.2	pg/g	0.218	4.67
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	1.18	pg/g	0.310	4.67
39001-02-0	1,2,3,4,6,7,8,9-OCDF		45.4	pg/g	0.349	9.34
41903-57-5	Total TeCDD	JK	1.61	pg/g	0.0962	0.934
36088-22-9	Total PeCDD	JKQ	4.90	pg/g	0.108	4.67
34465-46-8	Total HxCDD	J	17.4	pg/g	0.132	4.67
37871-00-4	Total HpCDD		87.7	pg/g	0.325	4.67
30402-14-3	Total TeCDF	JK	14.9	pg/g	0.166	0.934
30402-15-4	Total PeCDF	JKQ	50.2	pg/g	0.0457	4.67
55684-94-1	Total HxCDF	J	75.2	pg/g	0.132	4.67
38998-75-3	Total HpCDF	J	170	pg/g	0.218	4.67
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		3.97	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		4.02	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		131	187	pg/g	70.4	(25%-164%)
13C-1,2,3,7,8-PeCDD		115	187	pg/g	61.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		154	187	pg/g	82.7	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		137	187	pg/g	73.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		186	187	pg/g	99.9	(23%-140%)
13C-OCDD		347	373	pg/g	93.0	(17%-157%)
13C-2,3,7,8-TCDF		134	187	pg/g	72.0	(24%-169%)
13C-1,2,3,7,8-PeCDF		108	187	pg/g	57.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		110	187	pg/g	58.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		148	187	pg/g	79.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		131	187	pg/g	70.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		136	187	pg/g	72.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		136	187	pg/g	72.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469015**	**Date Collected:**	**08/29/2019 08:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**25.9**
Client ID:	**H3-SC1b-40to50-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:09**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-7**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**14.46 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		163	187	pg/g	87.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		187	187	pg/g	100	(26%-138%)
37Cl-2,3,7,8-TCDD		15.4	18.7	pg/g	82.7	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
Printed: Monday, September 30, 2019 08:36:11 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.87e2	6.38e2	1.02e3	31.18	1.000	0.61	YES	0.071	0.0515	4.15e3	2337	1.8	1.15e4	1899	6.0	MM	MM
2	12378-PeCDD	7.61e2	6.50e2	1.41e3	34.10	1.000	1.17	YES	0.174	0.0576	1.77e4	1938	9.1	1.74e4	1946	9.0	bd	MM
3	123478-HxCDD	5.82e2	4.51e2	1.03e3	36.70	1.000	1.29	NO	0.140	0.0707	1.28e4	1778	7.2	1.33e4	2012	6.6	bd	bd
4	123678-HxCDD	5.25e3	4.01e3	9.25e3	36.78	1.000	1.31	NO	1.114	0.0716	9.05e4	1778	50.9	7.30e4	2012	36.3	dd	dd
5	123789-HxCDD	1.98e3	1.54e3	3.52e3	37.03	1.007	1.28	NO	0.460	0.0727	3.73e4	1778	21.0	2.62e4	2012	13.0	db	db
6	1234678-HpCDD	6.79e4	6.43e4	1.32e5	40.06	1.000	1.06	NO	18.322	0.174	8.25e5	2951	279.5	7.77e5	2690	288.9	bd	bd
7	OCDD	7.77e5	9.03e5	1.68e6	44.28	1.000	0.86	NO	299.508	0.538	5.98e6	3724	1605.3	6.74e6	5321	1265.9	bb	bd
8	2378-TCDF	3.33e3	3.81e3	7.14e3	30.43	1.002	0.88	NO	0.430	0.0888	2.18e4	3250	6.7	2.95e4	2710	10.9	dd	db
9	12378-PeCDF	2.02e3	1.26e3	3.28e3	33.29	1.000	1.60	NO	0.301	0.0445	4.18e4	2390	17.5	2.90e4	1803	16.1	bb	bb
10	23478-PeCDF	8.33e3	5.40e3	1.37e4	33.91	1.001	1.54	NO	1.127	0.0396	1.80e5	2390	75.3	1.02e5	1803	56.5	db	MM
11	123478-HxCDF	4.92e3	4.24e3	9.16e3	35.98	1.000	1.16	NO	0.921	0.0708	9.29e4	2462	37.7	7.52e4	2647	28.4	MM	dd
12	123678-HxCDF	1.92e4	1.54e4	3.45e4	36.08	1.000	1.24	NO	3.258	0.0756	3.11e5	2462	126.4	2.56e5	2647	96.9	db	dd
13	234678-HxCDF	8.77e3	6.71e3	1.55e4	36.57	1.000	1.31	NO	1.540	0.0729	1.38e5	2462	55.9	1.22e5	2647	45.9	bb	bb
14	123789-HxCDF	1.19e3	1.05e3	2.24e3	37.35	1.001	1.14	NO	0.282	0.0928	2.06e4	2462	8.4	1.99e4	2647	7.5	bb	bb
15	1234678-HpCDF	2.54e5	2.43e5	4.97e5	38.82	1.000	1.04	NO	50.480	0.117	3.38e6	3138	1075.8	3.20e6	2830	1132.1	bb	bb
16	1234789-HpCDF	2.60e3	2.66e3	5.26e3	40.69	1.000	0.98	NO	0.632	0.166	3.45e4	3138	11.0	2.83e4	2830	10.0	bb	bb
17	OCDF	7.16e4	8.03e4	1.52e5	44.56	1.007	0.89	NO	24.340	0.187	5.84e5	1436	407.0	6.44e5	2061	312.6	bb	bb
18	13C-2378-TCDD	6.98e5	9.14e5	1.61e6	31.17	1.018	0.76	NO	70.421	0.0649	1.00e7	4245	2356.6	1.32e7	2381	5545.7	bb	bb
19	13C-12378-PeCDD	5.78e5	3.74e5	9.51e5	34.08	1.113	1.55	NO	61.394	0.0823	1.20e7	3775	3189.3	7.82e6	1907	4099.8	bb	bb
20	13C-123478-HxCDD	4.36e5	3.52e5	7.89e5	36.69	0.991	1.24	NO	82.661	0.146	7.95e6	4281	1857.0	6.30e6	4027	1564.3	bd	bd
21	13C-123678-HxCDD	5.17e5	4.21e5	9.38e5	36.77	0.993	1.23	NO	73.403	0.109	8.25e6	4281	1927.2	6.74e6	4027	1674.4	dd	dd
22	13C-1234678-HpCDD	3.91e5	3.74e5	7.64e5	40.05	1.082	1.05	NO	99.858	0.145	4.39e6	3252	1351.4	4.27e6	3373	1265.1	bd	bd
23	13C-OCDD	5.74e5	6.54e5	1.23e6	44.26	1.196	0.88	NO	185.953	0.229	4.30e6	4073	1054.9	4.81e6	4930	975.6	bd	bd
24	13C-2378-TCDF	8.06e5	1.05e6	1.86e6	30.38	0.992	0.76	NO	72.023	0.0878	8.14e6	6120	1330.4	1.07e7	3992	2676.5	bb	bb
25	13C-12378-PeCDF	7.25e5	4.76e5	1.20e6	33.28	1.087	1.52	NO	57.749	0.0963	1.57e7	5299	2954.3	1.00e7	3633	2753.3	bb	dd
26	13C-23478-PeCDF	7.66e5	4.90e5	1.26e6	33.89	1.107	1.56	NO	58.817	0.0939	1.66e7	5299	3135.5	1.05e7	3633	2900.7	bb	bb
27	13C-123478-HxCDF	3.03e5	5.74e5	8.76e5	35.98	0.972	0.53	NO	79.477	0.140	5.49e6	4703	1167.0	1.03e7	4486	2293.4	bd	bd
28	13C-123678-HxCDF	3.52e5	6.54e5	1.01e6	36.07	0.974	0.54	NO	70.017	0.107	5.61e6	4703	1193.8	1.06e7	4486	2368.5	dd	db
29	13C-234678-HxCDF	3.08e5	5.81e5	8.89e5	36.56	0.987	0.53	NO	72.822	0.126	5.37e6	4703	1141.1	1.02e7	4486	2272.0	bb	bb
30	13C-123789-HxCDF	2.60e5	4.88e5	7.49e5	37.32	1.008	0.53	NO	72.718	0.150	4.51e6	4703	957.9	8.47e6	4486	1888.6	bb	bb
31	13C-1234678-HpCDF	2.57e5	5.69e5	8.26e5	38.81	1.048	0.45	NO	87.173	0.141	3.34e6	3806	876.9	7.45e6	4173	1786.1	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
Printed: Monday, September 30, 2019 08:36:11 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.11e5	4.68e5	6.80e5	40.69	1.099	0.45	NO	100.089	0.197	2.28e6	3806	599.8	5.00e6	4173	1198.1	bb	bb
33	13C-1234-TCDD	8.68e5	1.12e6	1.99e6	30.61	0.000	0.77	NO	100.000	0.0747	9.67e6	4245	2277.7	1.26e7	2381	5277.2	bb	bb
34	13C-123789-HxCDD	6.66e5	5.43e5	1.21e6	37.02	0.000	1.23	NO	100.000	0.115	9.94e6	4281	2321.5	8.11e6	4027	2013.7	dd	dd
35	37Cl-2378-TCDD	1.77e5		1.77e5	31.18	1.018			8.267	0.0205	2.51e6	1961	1282.8				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
Printed: Monday, September 30, 2019 08:36:11 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	2.56e3	3.01e3	5.57e3	27.85	0.85	NO	0.388	0.0515	2.33e4	2337	10.0	3.19e4	1899	16.8	MM	bd
2	Total-tetradioxins	9.21e2	1.23e3	2.15e3	28.11	0.75	NO	0.150	0.0515	1.13e4	2337	4.8	1.55e4	1899	8.1	MM	db
3	Total-tetradioxins	7.65e2	8.36e2	1.60e3	28.50	0.91	YES	0.111	0.0515	9.95e3	2337	4.3	1.18e4	1899	6.2	bb	db
4	Total-tetradioxins	7.91e2	8.91e2	1.68e3	29.25	0.89	YES	0.117	0.0515	8.64e3	2337	3.7	9.08e3	1899	4.8	bd	MM
5	Total-tetradioxins	6.62e2	6.03e2	1.27e3	29.41	1.10	YES	0.088	0.0515	5.57e3	2337	2.4	9.45e3	1899	5.0	dd	bd
6	Total-tetradioxins	7.14e2	8.18e2	1.53e3	29.67	0.87	NO	0.107	0.0515	7.19e3	2337	3.1	1.02e4	1899	5.4	dd	MM
7	Total-tetradioxins	3.39e2	3.46e2	6.85e2	29.87	0.98	YES	0.048	0.0515	6.56e3	2337	2.8	3.59e3	1899	1.9	db	MM
8	Total-tetradioxins	4.43e2	4.94e2	9.37e2	30.61	0.90	YES	0.065	0.0515	4.26e3	2337	1.8	5.11e3	1899	2.7	MM	MM
9	Total-tetradioxins	3.67e2	4.29e2	7.95e2	30.93	0.86	NO	0.055	0.0515	5.39e3	2337	2.3	5.55e3	1899	2.9	bb	bb
10	Total-tetradioxins	3.41e2	2.86e2	6.27e2	31.40	1.19	YES	0.044	0.0515	5.17e3	2337	2.2	4.17e3	1899	2.2	MM	bb
11	Total-tetradioxins	1.36e2	2.13e2	3.49e2	31.78	0.64	YES	0.024	0.0515	4.99e3	2337	2.1	3.73e3	1899	2.0	bb	bb
12	Total-tetradioxins	2.48e2	9.78e1	3.46e2	30.35	2.54	YES	0.024	0.0515	2.27e3	2337	1.0	2.21e3	1899	1.2	MM	db
13	Total-tetradioxins	3.27e2	4.66e2	7.93e2	30.06	0.70	NO	0.055	0.0515	3.51e3	2337	1.5	6.30e3	1899	3.3	MM	MM
14	2378-TCDD	3.87e2	6.38e2	1.02e3	31.18	0.61	YES	0.071	0.0515	4.15e3	2337	1.8	1.15e4	1899	6.0	MM	MM
15	Total-tetradioxins	1.76e2	3.88e2	5.64e2	30.25	0.45	YES	0.039	0.0515	4.17e3	2337	1.8	4.78e3	1899	2.5	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
Printed: Monday, September 30, 2019 08:36:11 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	4.33e3	2.61e3	6.94e3	32.78	1.66	NO	0.858	0.0576	8.19e4	1938	42.2	5.19e4	1946	26.7	bd	bd
2	Total-pentadioxins	5.34e1	2.95e2	3.49e2	32.88	0.18	YES	0.043	0.0576	2.25e3	1938	1.2	7.12e3	1946	3.7	db	dd
3	Total-pentadioxins	8.08e2	6.08e2	1.42e3	33.03	1.33	NO	0.175	0.0576	1.65e4	1938	8.5	1.22e4	1946	6.3	bb	db
4	Total-pentadioxins	2.38e3	1.73e3	4.11e3	33.31	1.38	NO	0.508	0.0576	4.87e4	1938	25.1	3.82e4	1946	19.7	bd	bd
5	Total-pentadioxins	1.01e3	7.65e2	1.78e3	33.42	1.32	NO	0.220	0.0576	2.70e4	1938	13.9	1.85e4	1946	9.5	dd	dd
6	Total-pentadioxins	8.83e2	5.88e2	1.47e3	33.47	1.50	NO	0.182	0.0576	2.02e4	1938	10.4	1.28e4	1946	6.6	dd	dd
7	Total-pentadioxins	1.65e3	1.17e3	2.82e3	33.62	1.42	NO	0.349	0.0576	3.05e4	1938	15.7	1.74e4	1946	8.9	db	db
8	Total-pentadioxins	2.13e2	1.98e2	4.12e2	33.81	1.08	YES	0.051	0.0576	7.98e3	1938	4.1	5.44e3	1946	2.8	bb	bb
9	12378-PeCDD	7.61e2	6.50e2	1.41e3	34.10	1.17	YES	0.174	0.0576	1.77e4	1938	9.1	1.74e4	1946	9.0	bd	MM
10	Total-pentadioxins	3.45e2	2.37e2	5.82e2	34.14	1.45	NO	0.072	0.0576	9.20e3	1938	4.7	6.55e3	1946	3.4	db	MM
11	Total-pentadioxins	4.30e2	2.73e2	7.03e2	34.36	1.58	NO	0.087	0.0576	9.41e3	1938	4.9	6.86e3	1946	3.5	bb	db
12	Total-pentadioxins	7.61e1	5.08e1	1.27e2	34.52	1.50	NO	0.016	0.0576	2.55e3	1938	1.3	1.85e3	1946	0.9	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	1.41e4	1.10e4	2.52e4	35.47	1.28	NO	3.230	0.0716	2.89e5	1778	162.5	2.12e5	2012	105.3	bd	bd
2	Total-hexadioxins	6.84e1	1.36e2	2.04e2	35.65	0.51	YES	0.026	0.0716	5.38e3	1778	3.0	4.11e3	2012	2.0	db	db
3	Total-hexadioxins	2.06e3	1.60e3	3.66e3	35.93	1.29	NO	0.470	0.0716	3.92e4	1778	22.1	2.81e4	2012	13.9	bd	MM
4	Total-hexadioxins	1.72e4	1.32e4	3.04e4	36.13	1.31	NO	3.899	0.0716	2.55e5	1778	143.7	1.94e5	2012	96.5	db	db
5	123478-HxCDD	5.82e2	4.51e2	1.03e3	36.70	1.29	NO	0.140	0.0707	1.28e4	1778	7.2	1.33e4	2012	6.6	bd	bd
6	123678-HxCDD	5.25e3	4.01e3	9.25e3	36.78	1.31	NO	1.114	0.0716	9.05e4	1778	50.9	7.30e4	2012	36.3	dd	dd
7	Total-hexadioxins	2.64e2	2.74e2	5.38e2	36.95	0.96	YES	0.069	0.0716	5.99e3	1778	3.4	7.48e3	2012	3.7	dd	dd
8	123789-HxCDD	1.98e3	1.54e3	3.52e3	37.03	1.28	NO	0.460	0.0727	3.73e4	1778	21.0	2.62e4	2012	13.0	db	db
9	Total-hexadioxins	4.15e2	1.11e3	1.53e3	37.42	0.37	YES	0.196	0.0716	7.48e3	1778	4.2	1.97e4	2012	9.8	bd	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
Printed: Monday, September 30, 2019 08:36:11 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	1.05e5	1.02e5	2.07e5	39.15	1.03	NO	28.635	0.174	1.40e6	2951	472.9	1.42e6	2690	528.0	bb	bd
2	Total-heptadioxins	3.05e2	4.00e2	7.04e2	39.74	0.76	YES	0.098	0.174	7.09e3	2951	2.4	5.98e3	2690	2.2	bb	bb
3	1234678-HpCDD	6.79e4	6.43e4	1.32e5	40.06	1.06	NO	18.322	0.174	8.25e5	2951	279.5	7.77e5	2690	288.9	bd	bd
4	Total-heptadioxins	6.10e2	2.51e2	8.61e2	40.29	2.43	YES	0.119	0.174	1.35e4	2951	4.6	1.03e4	2690	3.8	db	db

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.45e3	2.00e3	3.45e3	26.13	0.73	NO	0.207	0.0888	1.56e4	3250	4.8	1.89e4	2710	7.0	MM	bb
2	Total-tetrafurans	3.88e3	4.56e3	8.44e3	26.56	0.85	NO	0.508	0.0888	4.12e4	3250	12.7	4.50e4	2710	16.6	bd	bb
3	Total-tetrafurans	1.40e4	1.84e4	3.23e4	27.07	0.76	NO	1.947	0.0888	1.84e5	3250	56.5	2.50e5	2710	92.1	bd	bb
4	Total-tetrafurans	2.95e3	3.36e3	6.31e3	27.40	0.88	NO	0.380	0.0888	1.97e4	3250	6.1	2.43e4	2710	9.0	MM	bd
5	Total-tetrafurans	7.16e3	9.02e3	1.62e4	27.75	0.79	NO	0.974	0.0888	7.33e4	3250	22.6	8.85e4	2710	32.6	dd	db
6	Total-tetrafurans	9.82e3	1.30e4	2.28e4	28.10	0.76	NO	1.371	0.0888	1.01e5	3250	31.1	1.30e5	2710	47.9	dd	bd
7	Total-tetrafurans	1.20e3	1.62e3	2.82e3	28.36	0.74	NO	0.170	0.0888	1.43e4	3250	4.4	1.67e4	2710	6.2	db	db
8	Total-tetrafurans	3.36e2	3.77e2	7.13e2	28.66	0.89	YES	0.043	0.0888	4.52e3	3250	1.4	5.88e3	2710	2.2	MM	MM
9	Total-tetrafurans	8.15e2	1.09e3	1.90e3	28.83	0.75	NO	0.115	0.0888	1.13e4	3250	3.5	1.28e4	2710	4.7	dd	dd
10	Total-tetrafurans	5.38e3	7.52e3	1.29e4	29.00	0.72	NO	0.776	0.0888	4.79e4	3250	14.7	6.91e4	2710	25.5	db	db
11	Total-tetrafurans	3.27e3	4.09e3	7.35e3	29.49	0.80	NO	0.442	0.0888	3.00e4	3250	9.2	3.94e4	2710	14.6	bd	bd
12	Total-tetrafurans	9.49e2	1.14e3	2.08e3	29.64	0.84	NO	0.125	0.0888	1.60e4	3250	4.9	1.46e4	2710	5.4	dd	MM
13	Total-tetrafurans	8.08e2	7.03e2	1.51e3	29.76	1.15	YES	0.091	0.0888	1.23e4	3250	3.8	9.89e3	2710	3.7	dd	dd
14	Total-tetrafurans	7.19e2	6.50e2	1.37e3	29.92	1.11	YES	0.082	0.0888	7.52e3	3250	2.3	1.14e4	2710	4.2	MM	dd
15	Total-tetrafurans	2.46e2	4.38e2	6.85e2	30.13	0.56	YES	0.041	0.0888	4.34e3	3250	1.3	6.93e3	2710	2.6	dd	dd
16	2378-TCDF	3.33e3	3.81e3	7.14e3	30.43	0.88	NO	0.430	0.0888	2.18e4	3250	6.7	2.95e4	2710	10.9	dd	db
17	Total-tetrafurans	6.55e1	6.99e1	1.35e2	30.54	0.94	YES	0.008	0.0888	3.02e3	3250	0.9	2.63e3	2710	1.0	dd	bb
18	Total-tetrafurans	1.16e3	1.47e3	2.63e3	30.75	0.79	NO	0.158	0.0888	1.28e4	3250	4.0	1.79e4	2710	6.6	dd	MM
19	Total-tetrafurans	5.22e2	6.29e2	1.15e3	30.94	0.83	NO	0.069	0.0888	7.15e3	3250	2.2	8.55e3	2710	3.2	db	MM
20	Total-tetrafurans	7.35e2	1.01e3	1.75e3	31.64	0.73	NO	0.105	0.0888	1.65e4	3250	5.1	1.81e4	2710	6.7	bd	bd
21	Total-tetrafurans	7.09e2	7.43e2	1.45e3	31.72	0.96	YES	0.087	0.0888	1.41e4	3250	4.3	1.88e4	2710	6.9	dd	db
22	Total-tetrafurans	1.55e3	1.80e3	3.35e3	31.90	0.86	NO	0.202	0.0888	1.95e4	3250	6.0	2.21e4	2710	8.1	db	MM
23	Total-tetrafurans	1.61e2	2.40e2	4.01e2	32.15	0.67	NO	0.024	0.0888	4.06e3	3250	1.2	5.34e3	2710	2.0	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
Printed: Monday, September 30, 2019 08:36:11 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.33e5	8.63e4	2.20e5	31.89	1.54	NO	19.021	0.0245	2.82e6	824	3426.5	1.79e6	1621	1103.7	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	2.97e4	1.93e4	4.90e4	32.75	1.53	NO	4.244	0.0420	4.43e5	2390	185.5	2.82e5	1803	156.2	bb	bd
2	Total-pentafurans	6.11e2	6.93e2	1.30e3	32.91	0.88	YES	0.113	0.0420	1.23e4	2390	5.2	9.45e3	1803	5.2	MM	MM
3	Total-pentafurans	9.63e3	6.36e3	1.60e4	33.06	1.51	NO	1.385	0.0420	2.27e5	2390	95.0	1.41e5	1803	78.2	dd	bd
4	Total-pentafurans	5.45e2	3.07e2	8.52e2	33.18	1.78	NO	0.074	0.0420	1.28e4	2390	5.4	9.64e3	1803	5.3	db	MM
5	12378-PeCDF	2.02e3	1.26e3	3.28e3	33.29	1.60	NO	0.301	0.0445	4.18e4	2390	17.5	2.90e4	1803	16.1	bb	bb
6	Total-pentafurans	3.87e3	2.50e3	6.36e3	33.46	1.55	NO	0.551	0.0420	8.77e4	2390	36.7	5.84e4	1803	32.4	bb	bb
7	Total-pentafurans	5.88e2	3.37e2	9.26e2	33.83	1.74	NO	0.080	0.0420	1.36e4	2390	5.7	1.01e4	1803	5.6	bd	MM
8	23478-PeCDF	8.33e3	5.40e3	1.37e4	33.91	1.54	NO	1.127	0.0396	1.80e5	2390	75.3	1.02e5	1803	56.5	db	MM

HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	2.88e4	2.25e4	5.13e4	35.06	1.28	NO	5.319	0.0772	6.22e5	2462	252.7	5.08e5	2647	191.8	bd	bd
2	Total-hexafurans	7.43e4	6.02e4	1.34e5	35.18	1.23	NO	13.946	0.0772	1.43e6	2462	580.2	1.12e6	2647	422.3	db	db
3	Total-hexafurans	6.88e2	6.24e2	1.31e3	35.46	1.10	NO	0.136	0.0772	1.65e4	2462	6.7	1.68e4	2647	6.4	bb	bb
4	Total-hexafurans	7.94e4	6.29e4	1.42e5	35.60	1.26	NO	14.759	0.0772	1.62e6	2462	658.0	1.26e6	2647	474.9	bb	bb
5	Total-hexafurans	5.91e2	5.21e2	1.11e3	35.90	1.13	NO	0.115	0.0772	1.38e4	2462	5.6	1.07e4	2647	4.0	MM	bd
6	123478-HxCDF	4.92e3	4.24e3	9.16e3	35.98	1.16	NO	0.921	0.0708	9.29e4	2462	37.7	7.52e4	2647	28.4	MM	dd
7	123678-HxCDF	1.92e4	1.54e4	3.45e4	36.08	1.24	NO	3.258	0.0756	3.11e5	2462	126.4	2.56e5	2647	96.9	db	dd
8	Total-hexafurans	1.80e2	2.80e2	4.60e2	36.30	0.64	YES	0.048	0.0772	6.25e3	2462	2.5	6.40e3	2647	2.4	bb	db
9	234678-HxCDF	8.77e3	6.71e3	1.55e4	36.57	1.31	NO	1.540	0.0729	1.38e5	2462	55.9	1.22e5	2647	45.9	bb	bb
10	123789-HxCDF	1.19e3	1.05e3	2.24e3	37.35	1.14	NO	0.282	0.0928	2.06e4	2462	8.4	1.99e4	2647	7.5	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Monday, September 30, 2019 08:34:56 Eastern Standard Time
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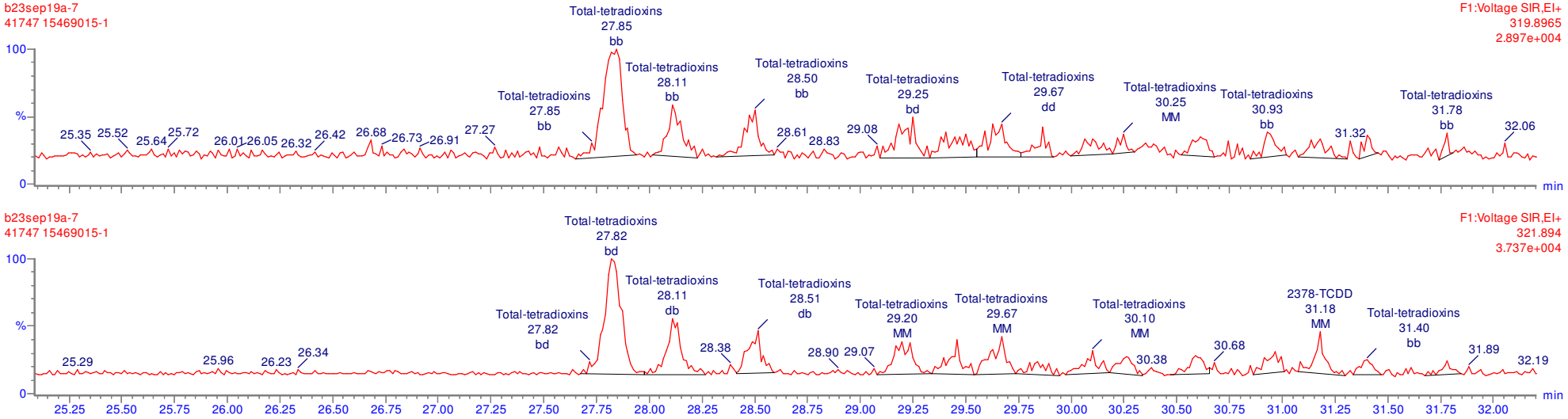
Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

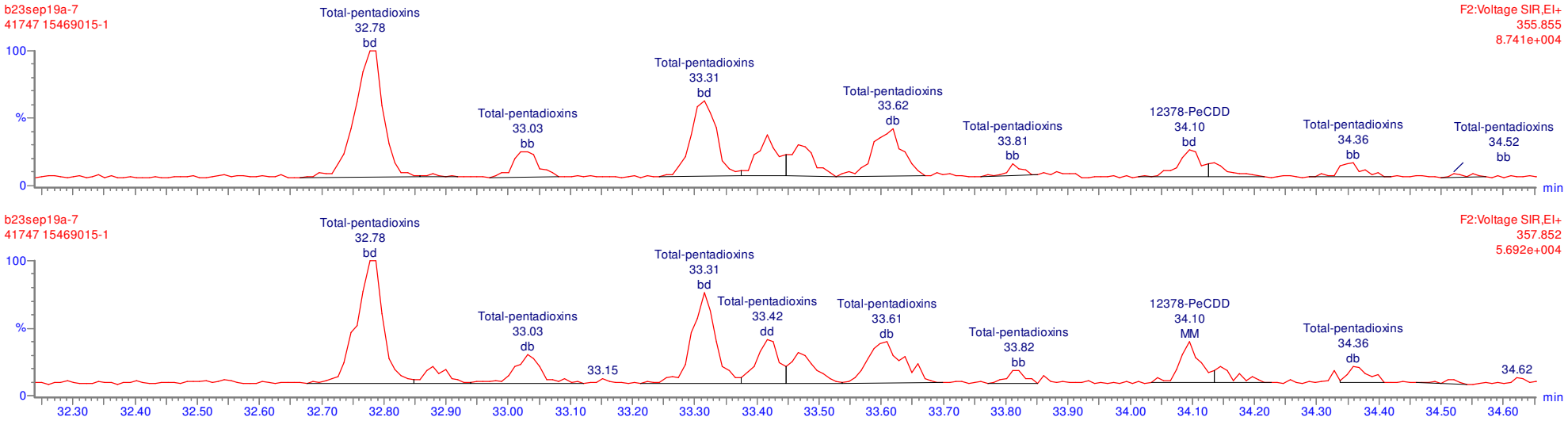
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	2.54e5	2.43e5	4.97e5	38.82	1.04	NO	50.480	0.117	3.38e6	3138	1075.8	3.20e6	2830	1132.1	bb	bb
2	Total-heptafurans	2.10e2	3.61e2	5.71e2	39.12	0.58	YES	0.063	0.139	9.94e3	3138	3.2	8.97e3	2830	3.2	bd	bb
3	Total-heptafurans	1.85e5	1.77e5	3.62e5	39.33	1.04	NO	39.726	0.139	2.48e6	3138	789.6	2.35e6	2830	829.1	bd	bb
4	1234789-HpCDF	2.60e3	2.66e3	5.26e3	40.69	0.98	NO	0.632	0.166	3.45e4	3138	11.0	2.83e4	2830	10.0	bb	bb

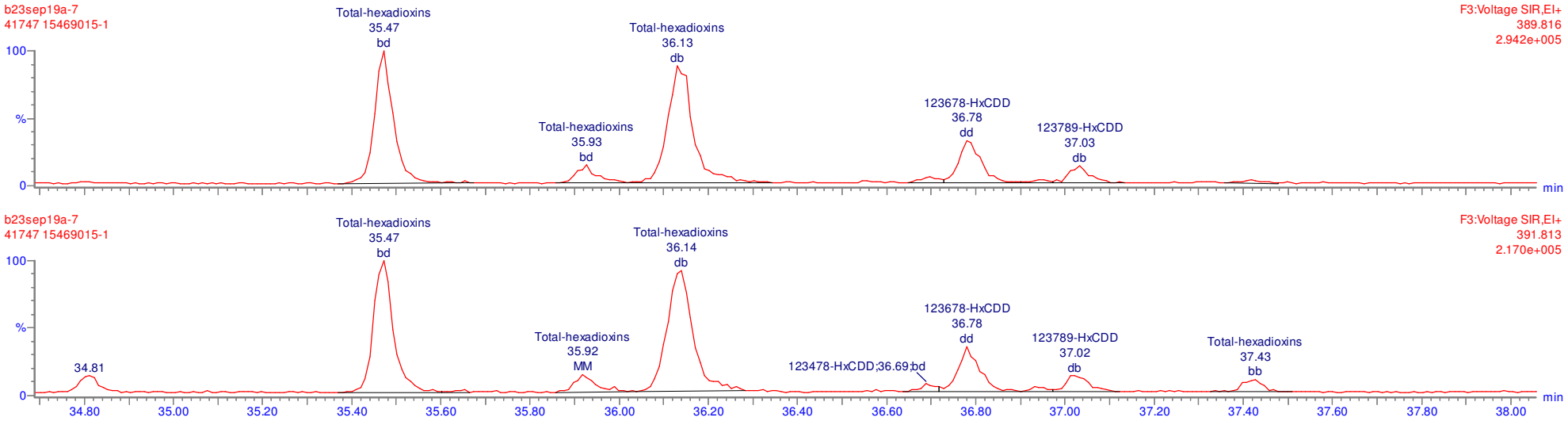
MANUAL INTEGRATION
METHOD 8290
HRP763_1



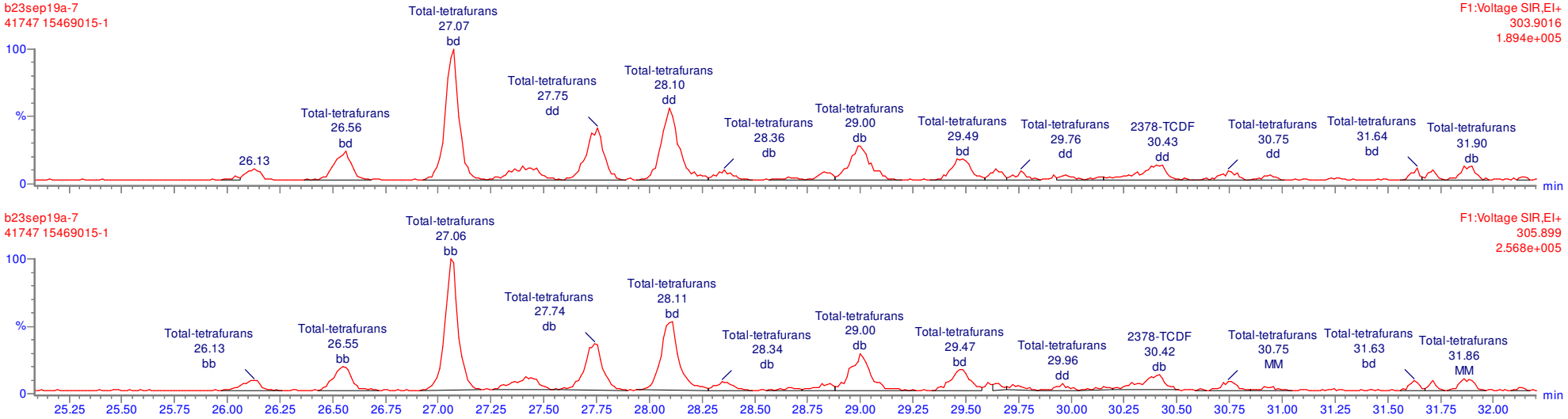
MANUAL INTEGRATION
METHOD 8290
HRP763_1



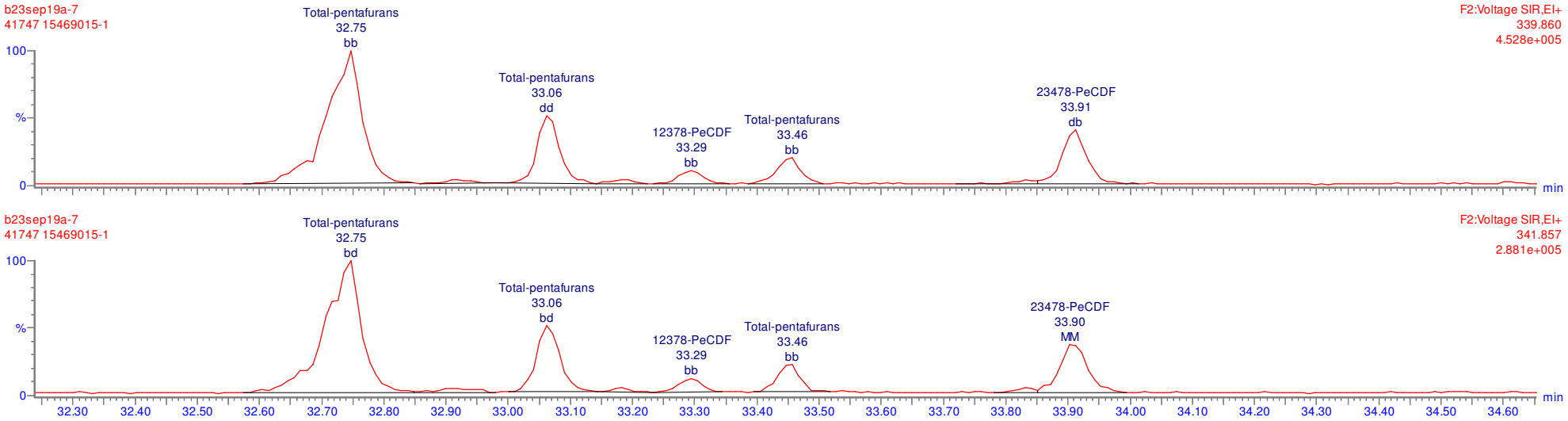
MANUAL INTEGRATION
METHOD 8290
HRP763_1



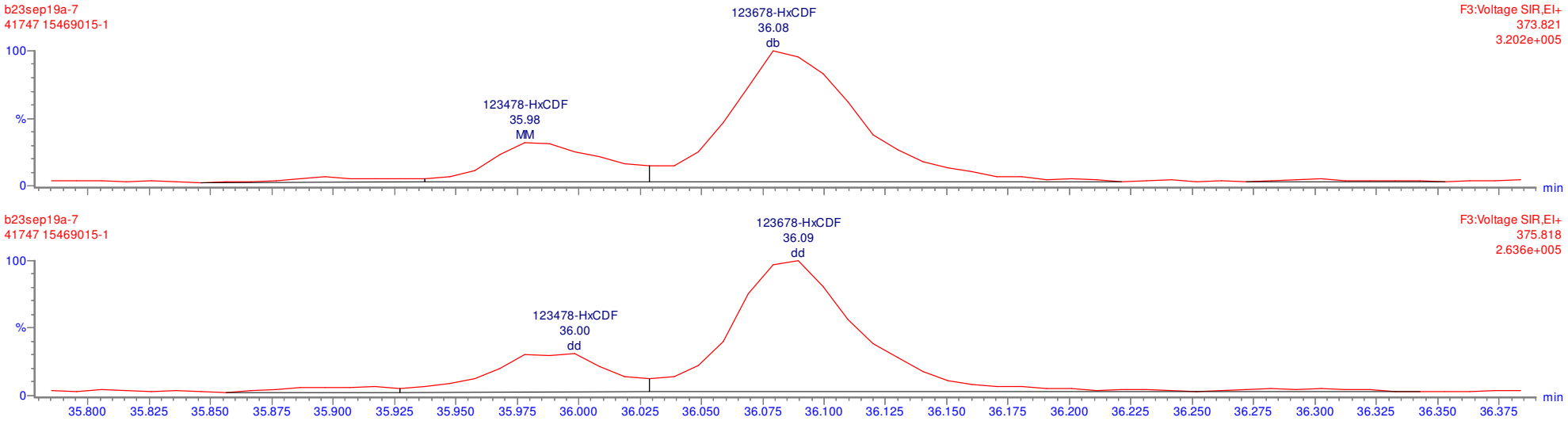
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



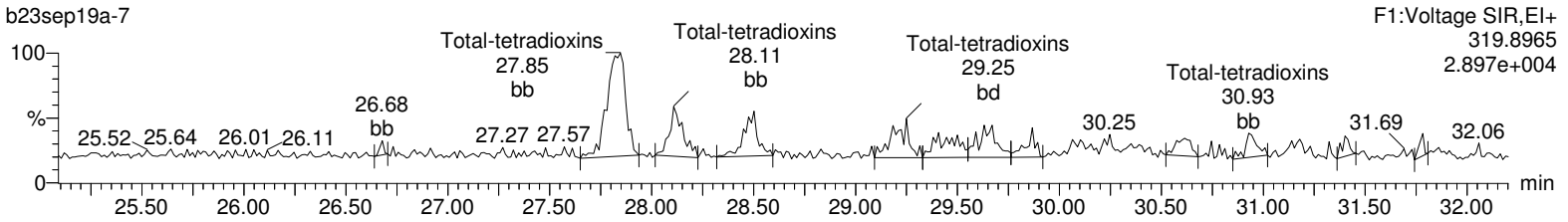
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

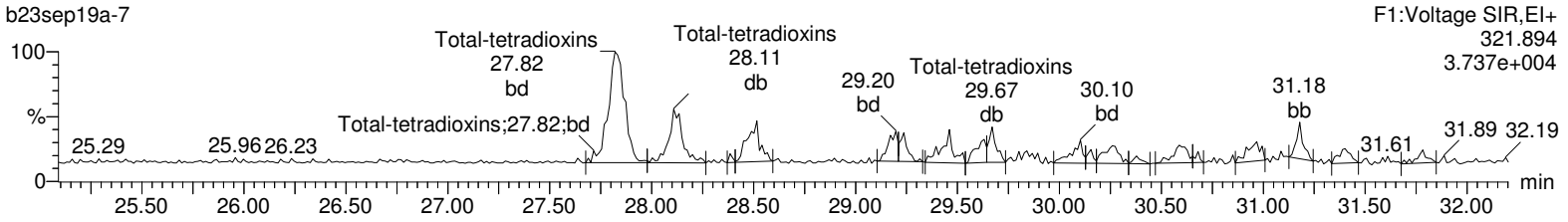
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

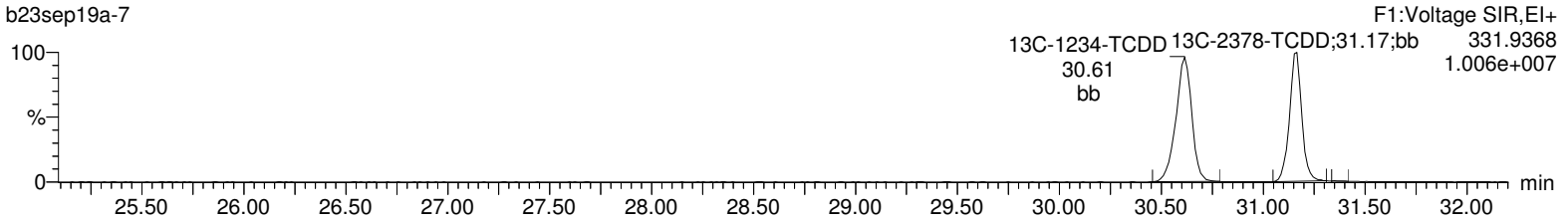
Total-tetradioxins



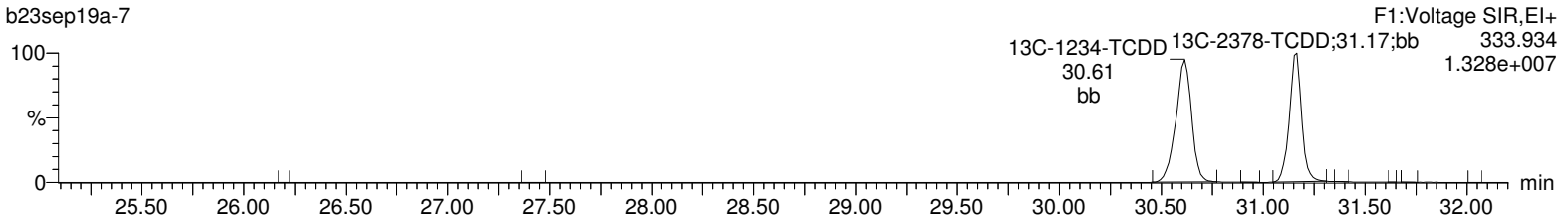
Total-tetradioxins



13C-2378-TCDD



13C-2378-TCDD



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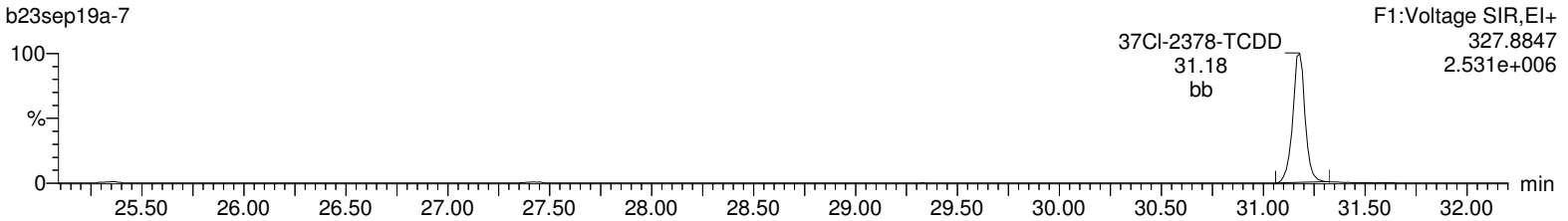
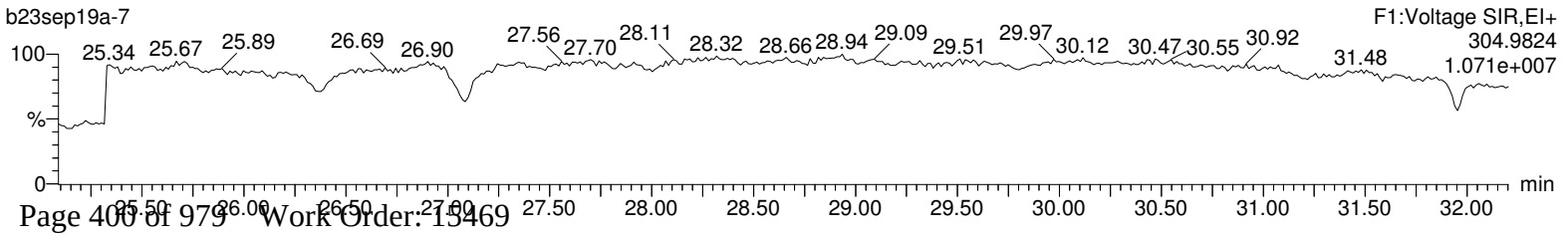


Lock Mass F1



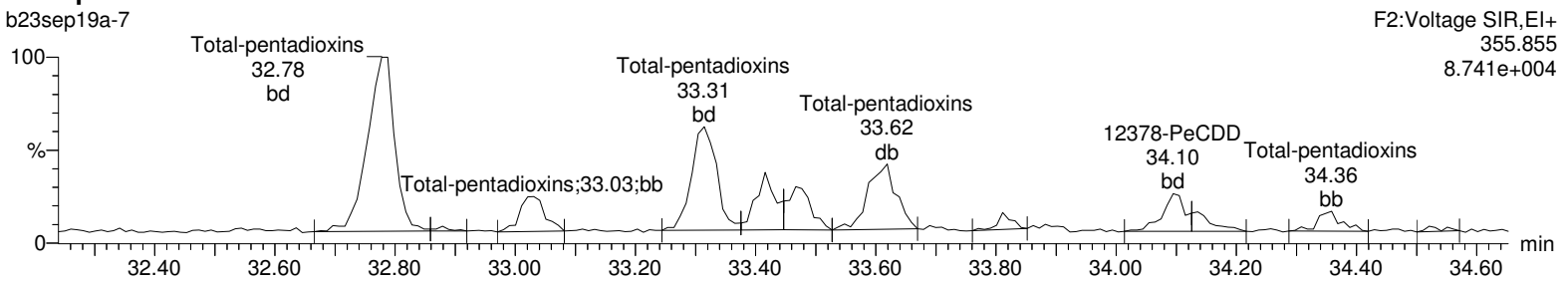
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

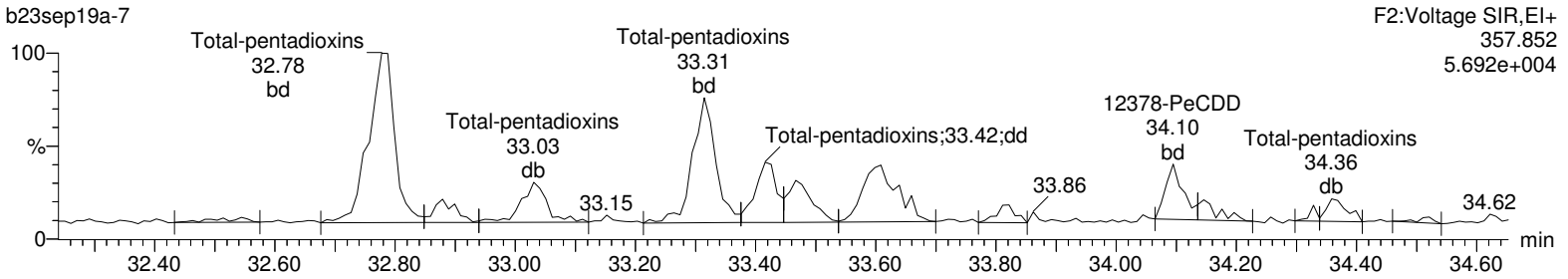
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

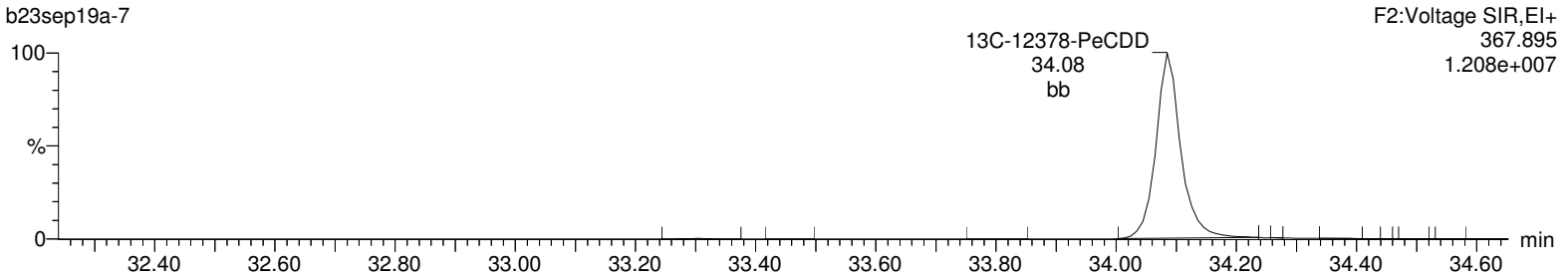
Total-pentadioxins



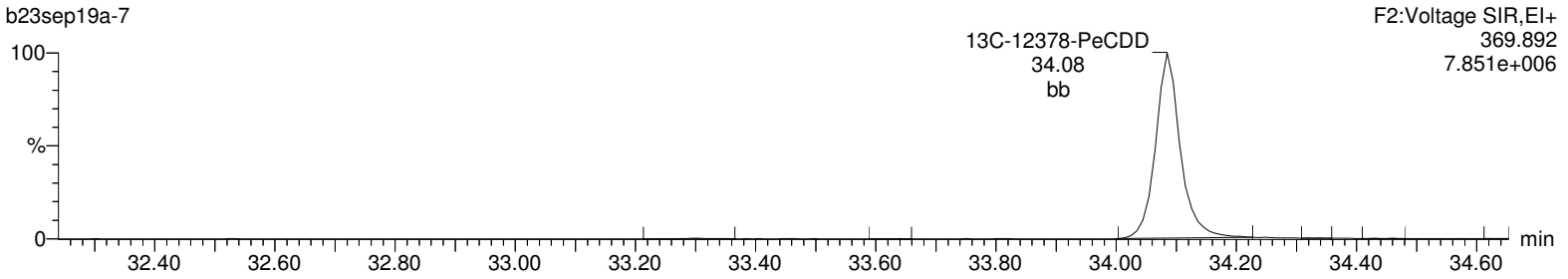
Total-pentadioxins



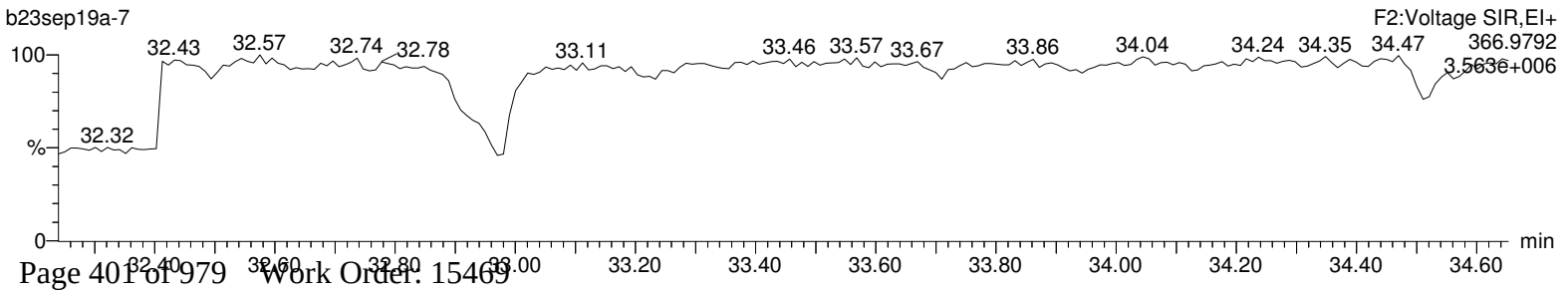
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



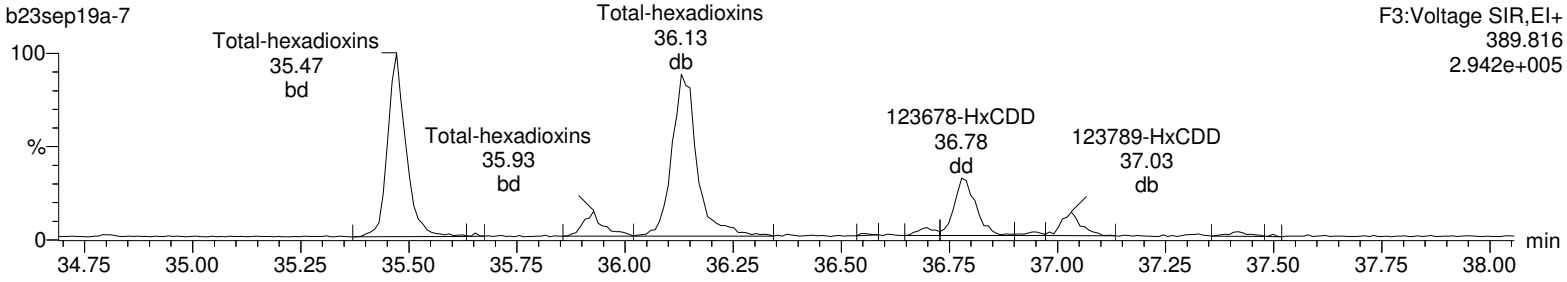
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

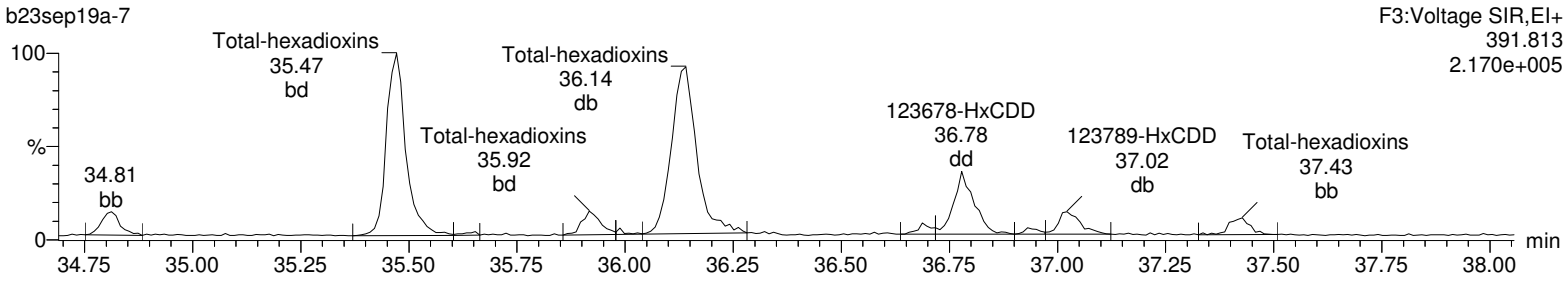
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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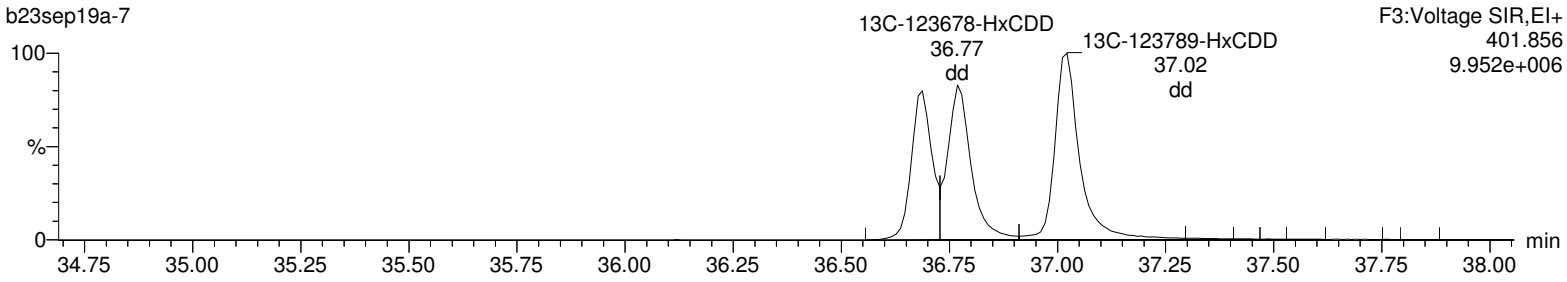

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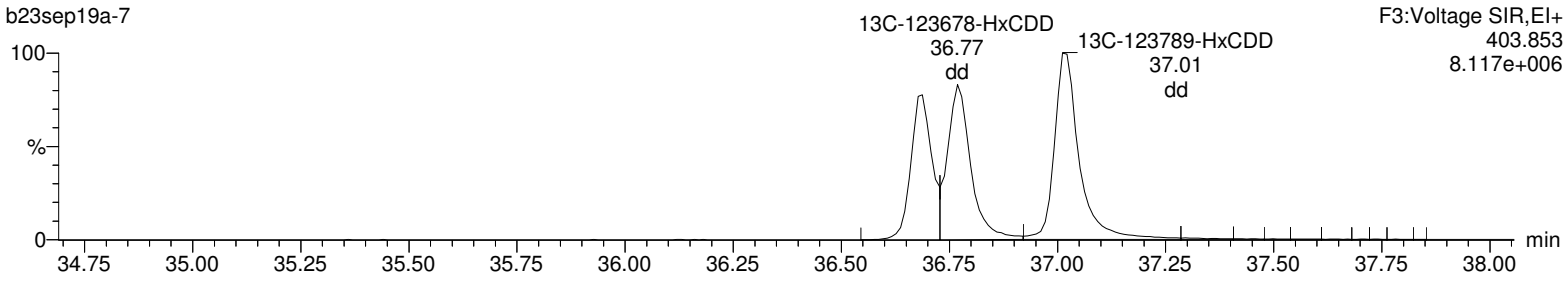
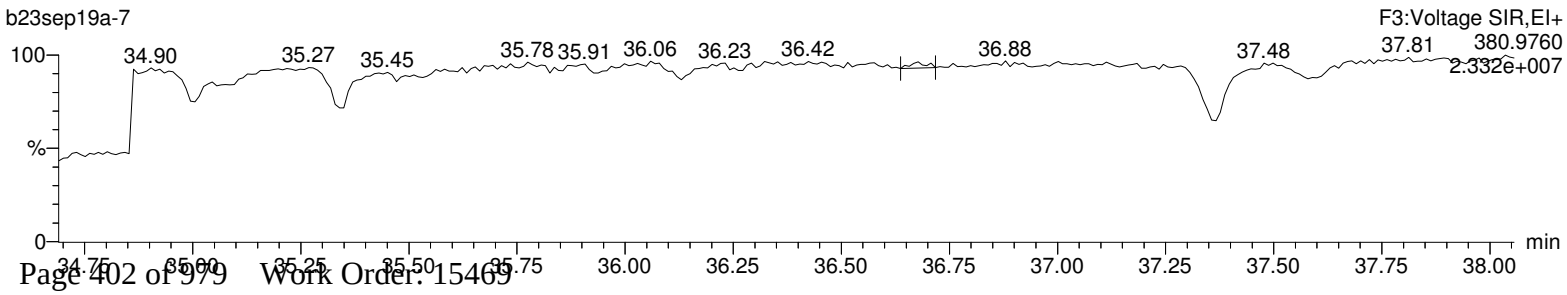


Lock Mass F3



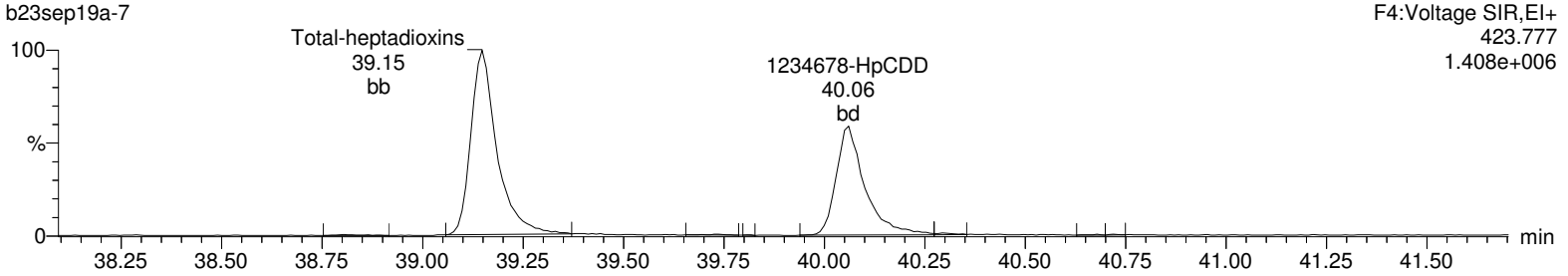
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

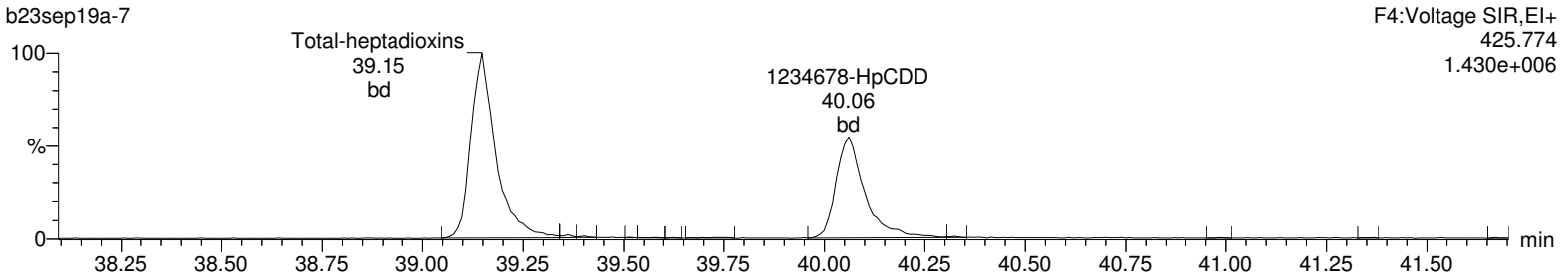
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

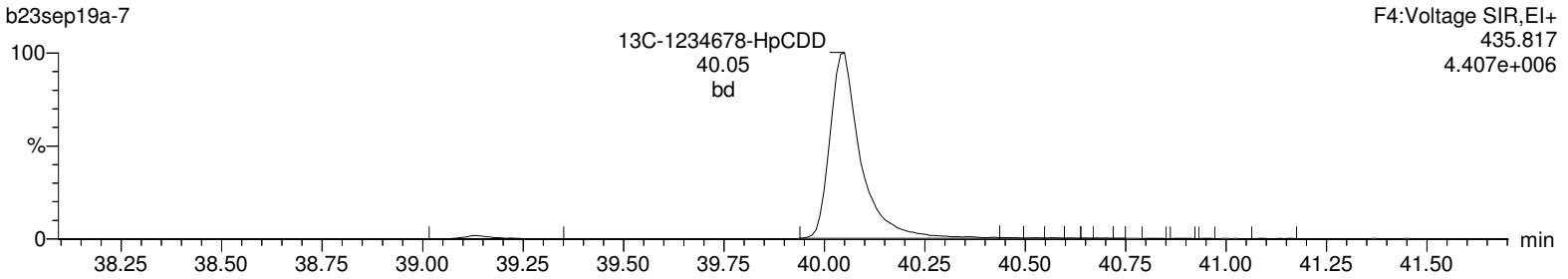
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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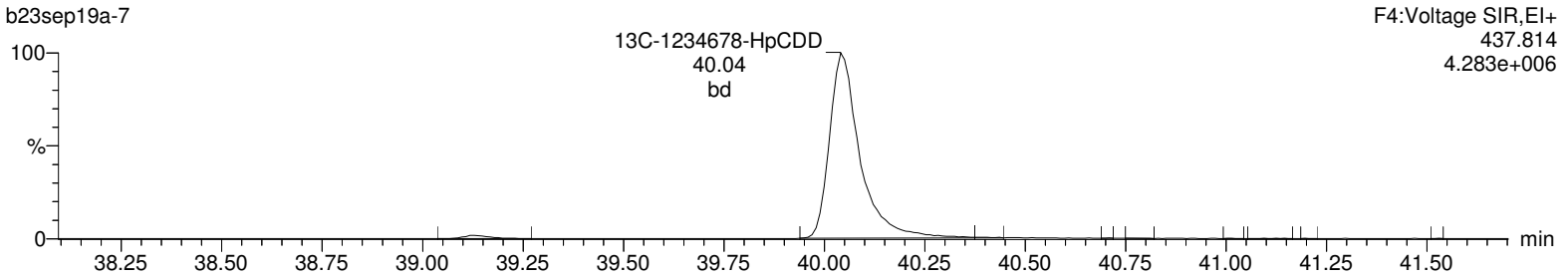
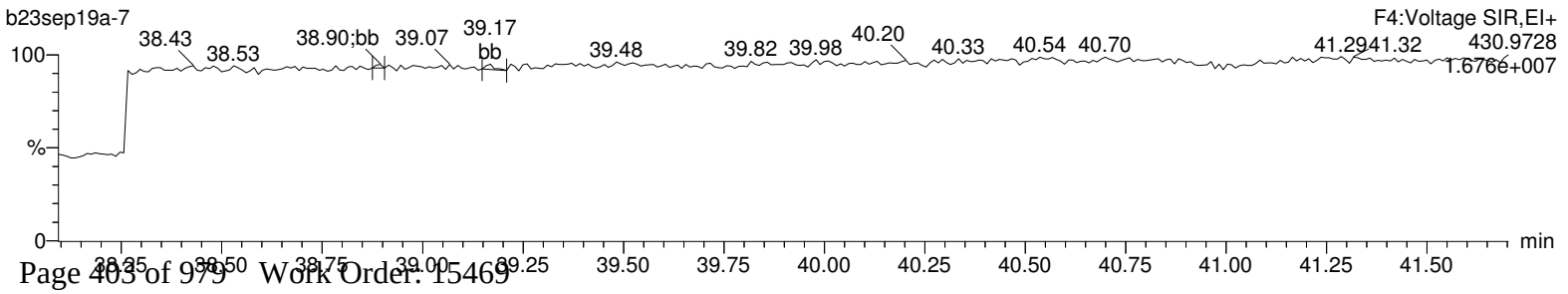


Lock Mass F4



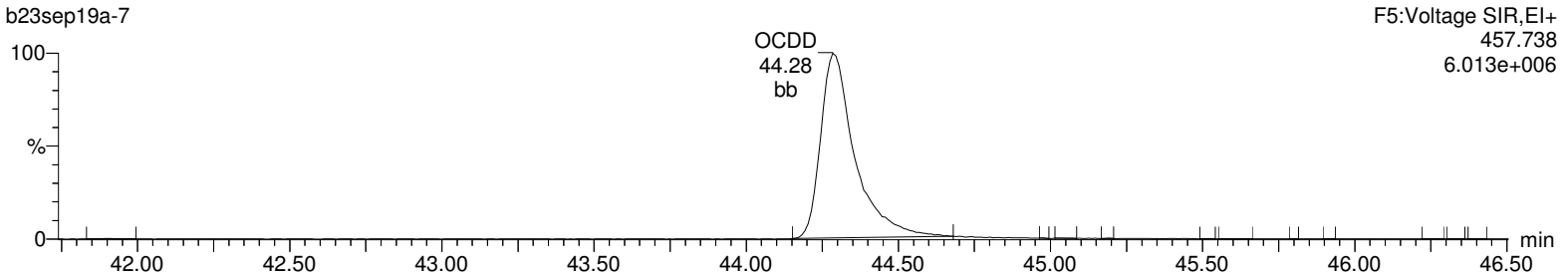
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

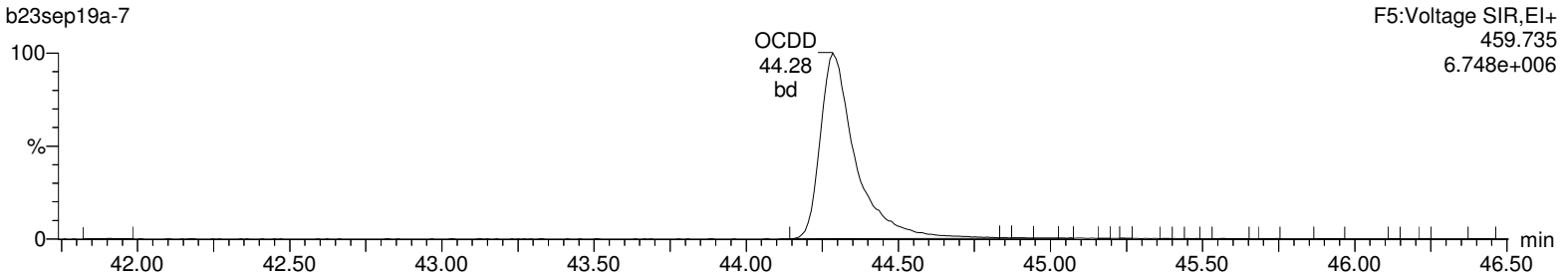
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

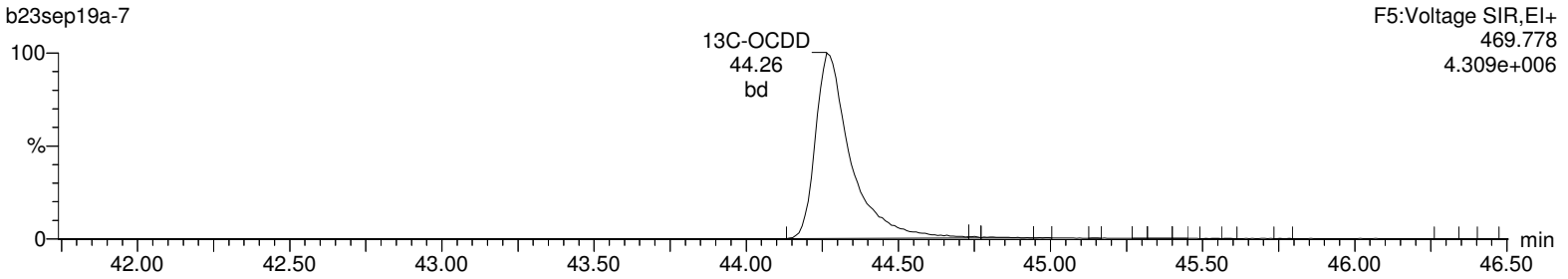
OCDD



OCDD



13C-OCDD



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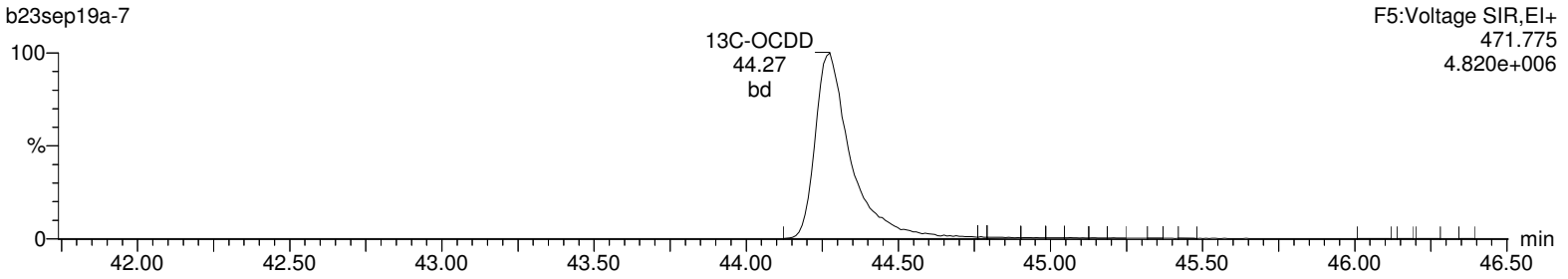
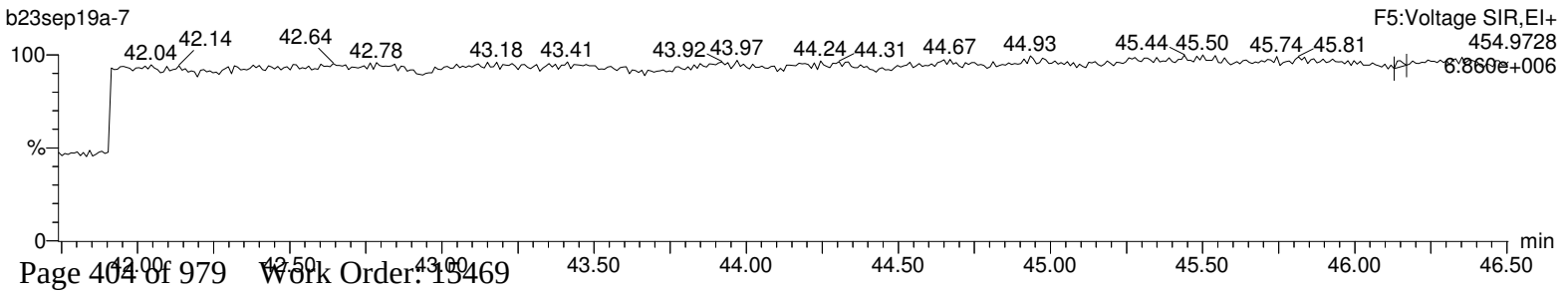


Lock Mass F5



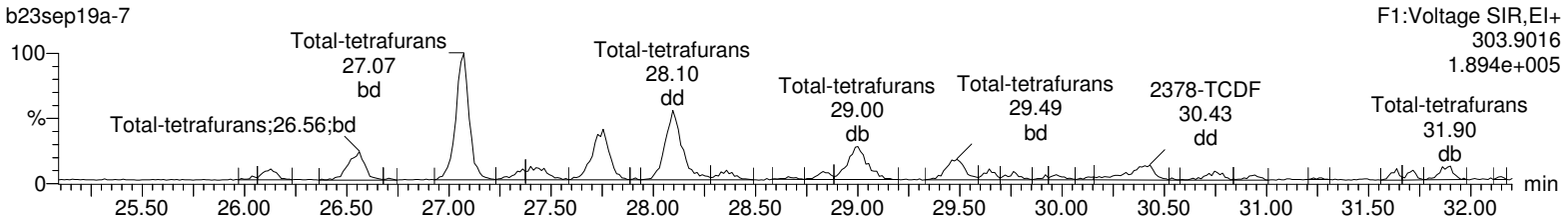
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

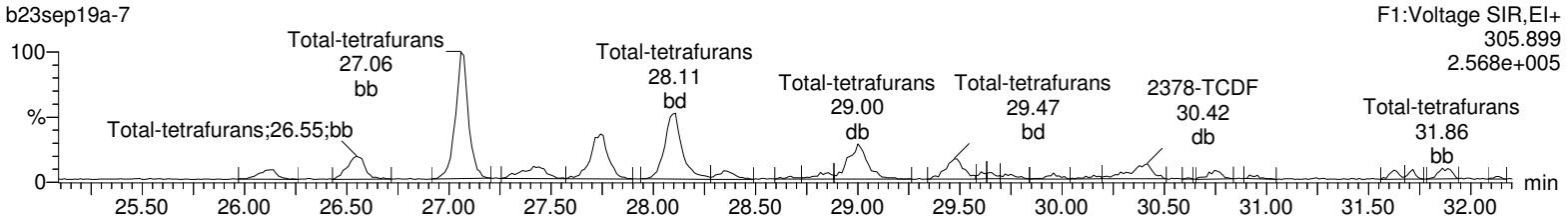
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

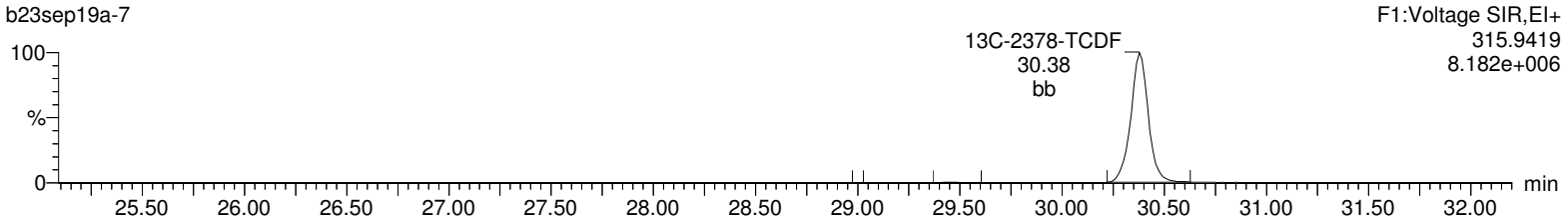
Total-tetrafurans



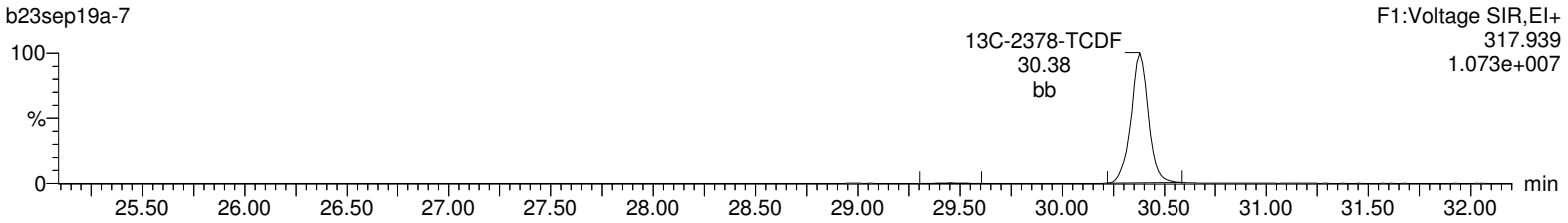
Total-tetrafurans



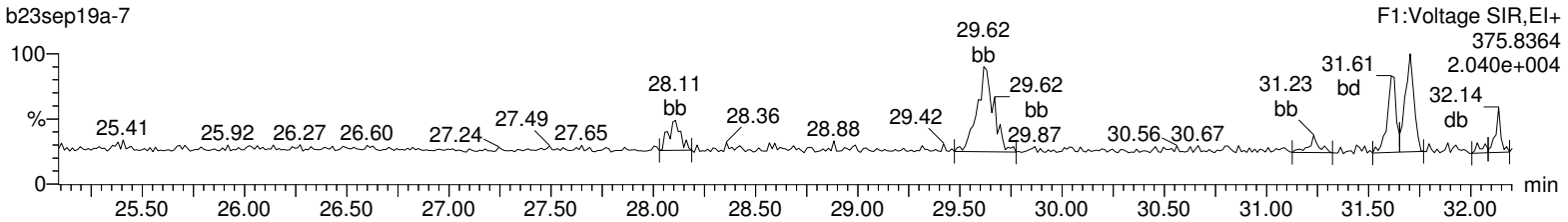
13C-2378-TCDF



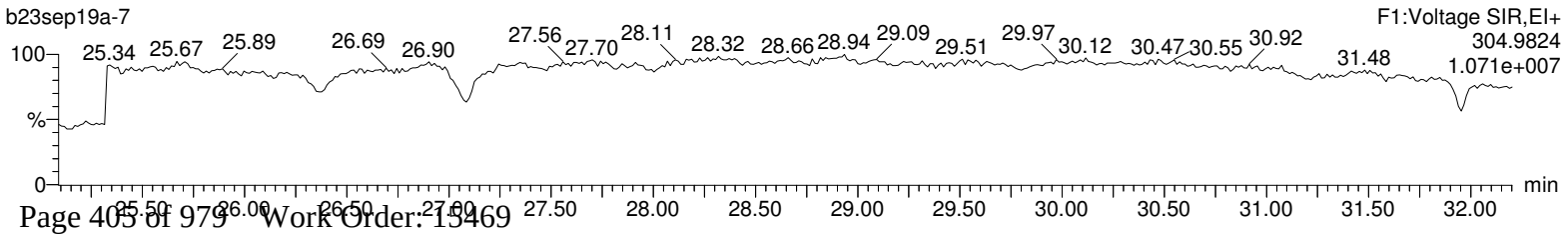
13C-2378-TCDF



HxDPE



Lock Mass F1



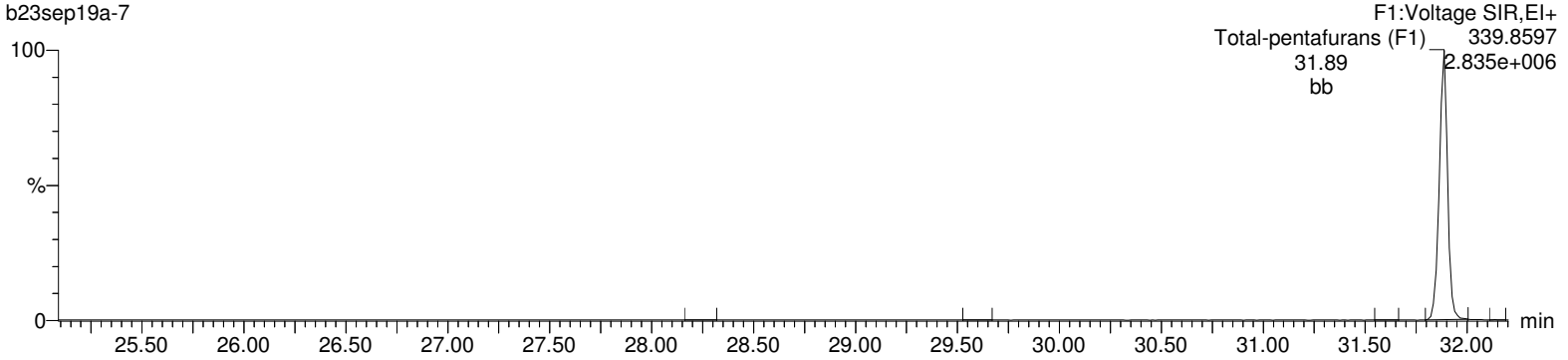
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

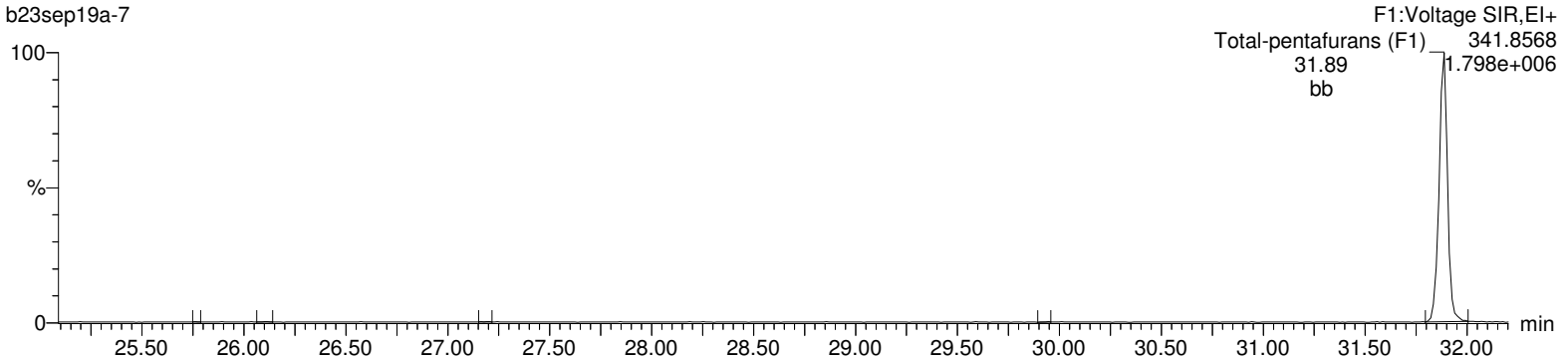
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

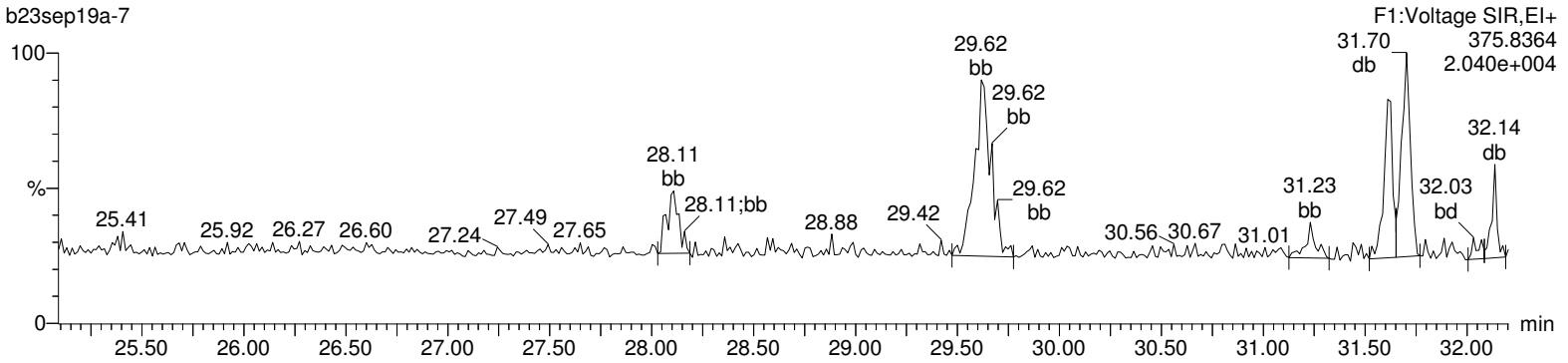
Total-pentafurans (F1)



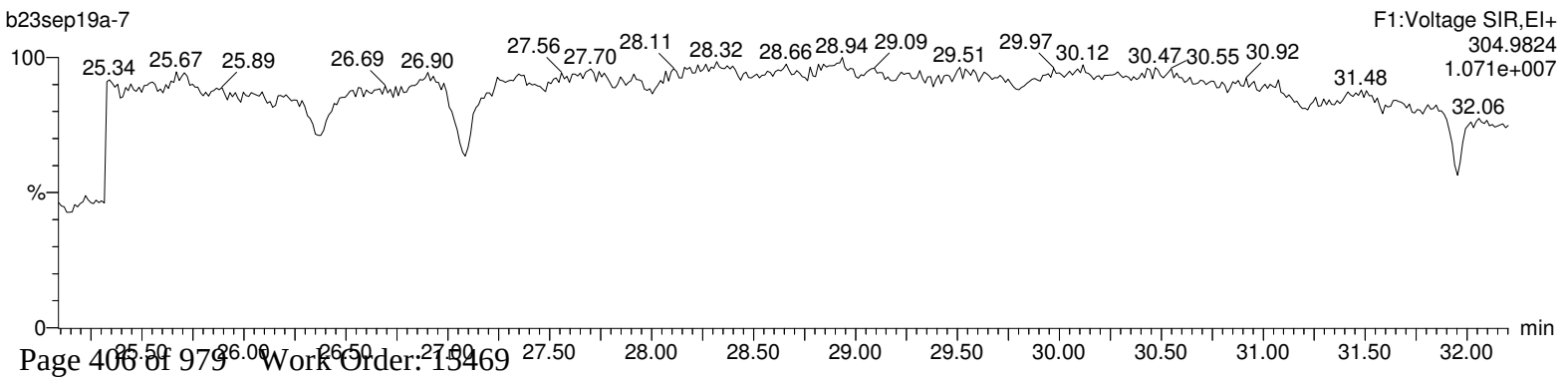
Total-pentafurans (F1)



HxDPE



Lock Mass F1



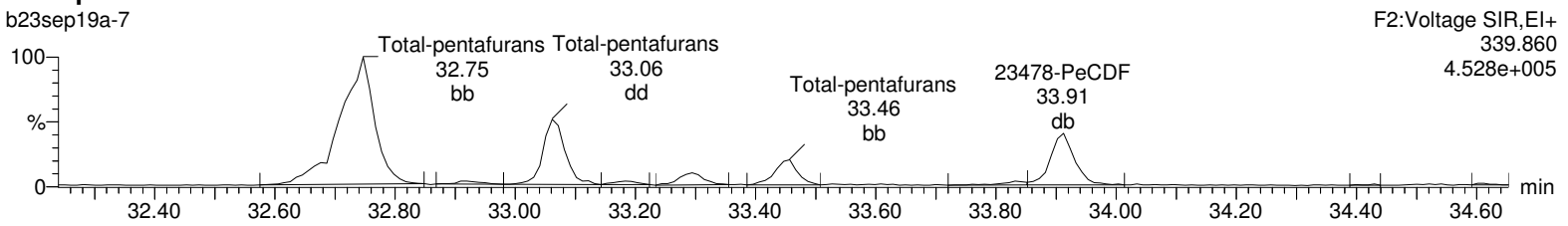
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

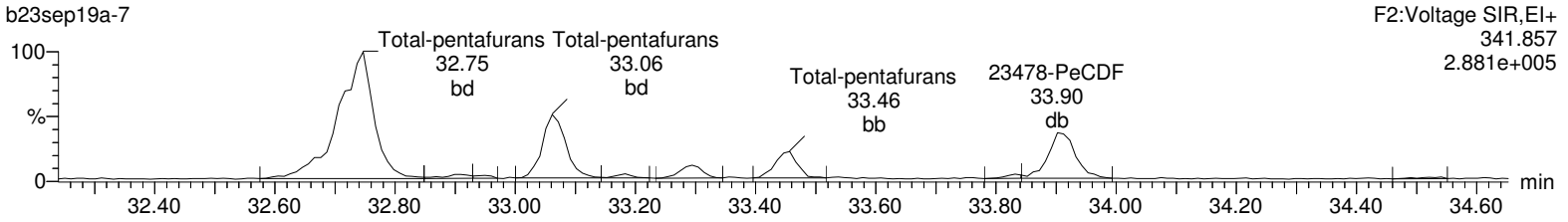
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

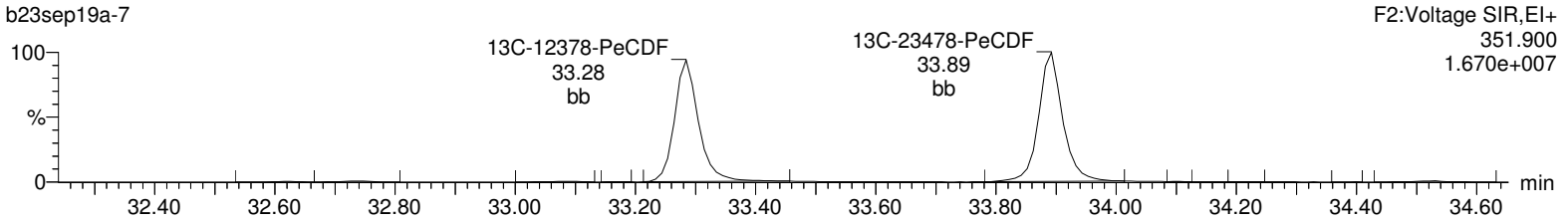
Total-pentafurans



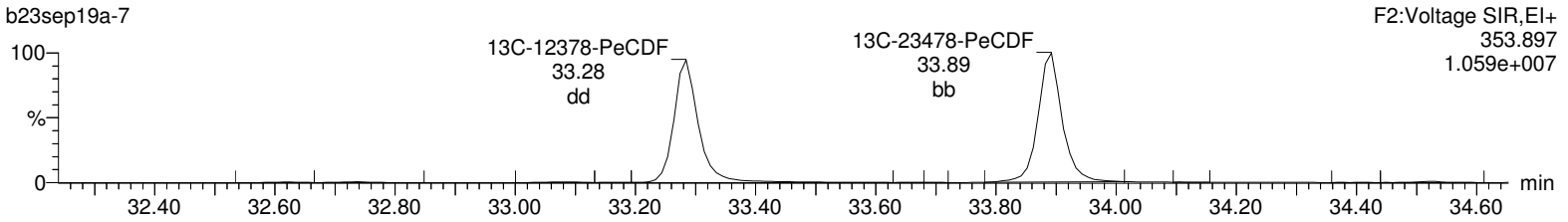
Total-pentafurans



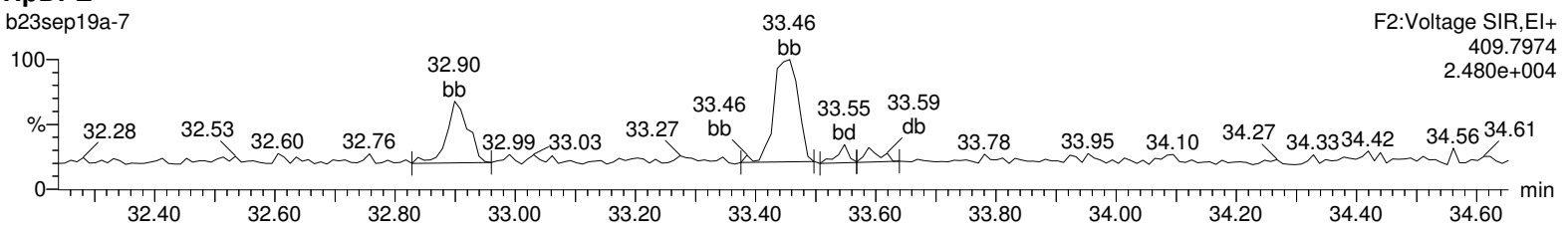
13C-12378-PeCDF



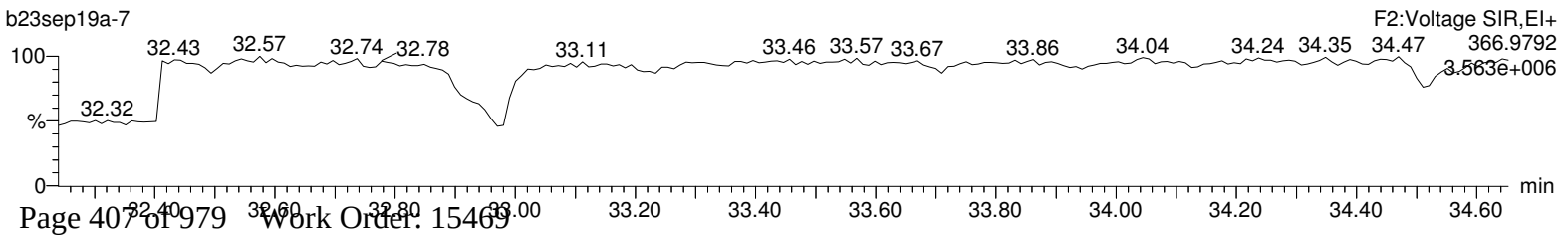
13C-12378-PeCDF



HpDPE



Lock Mass F2



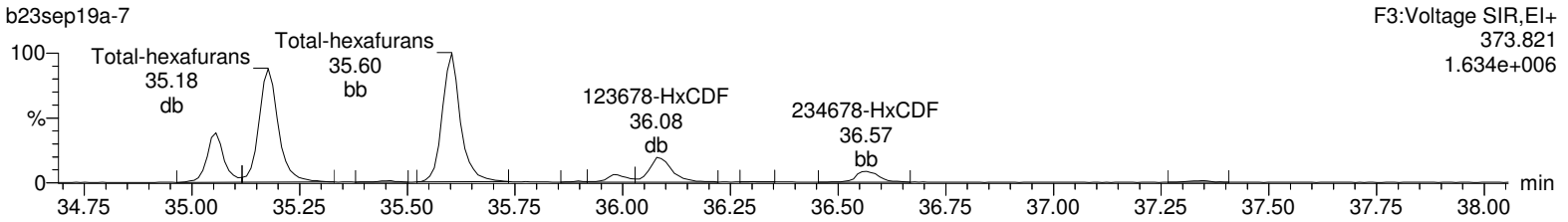
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

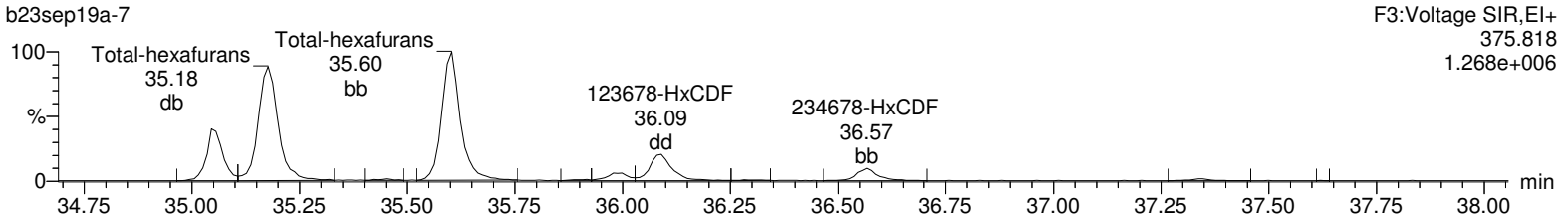
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

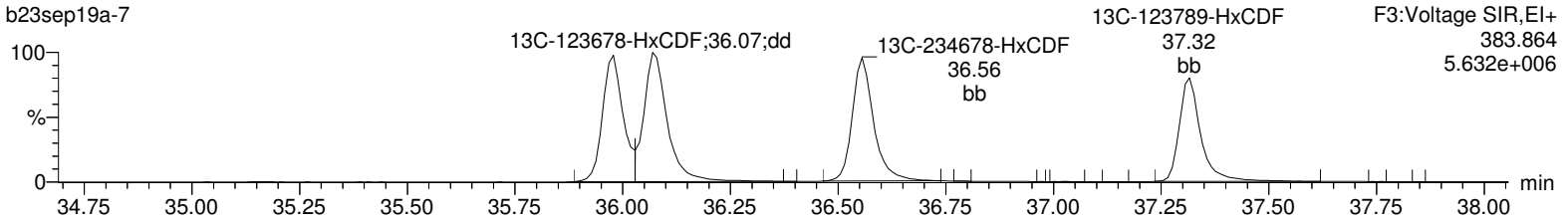
Total-hexafurans



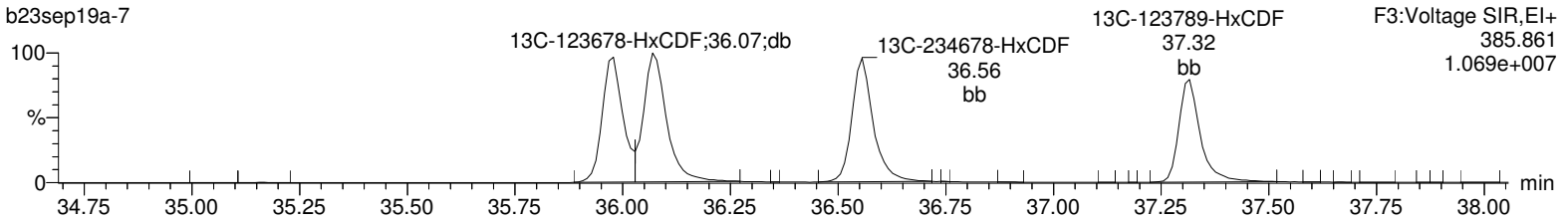
Total-hexafurans



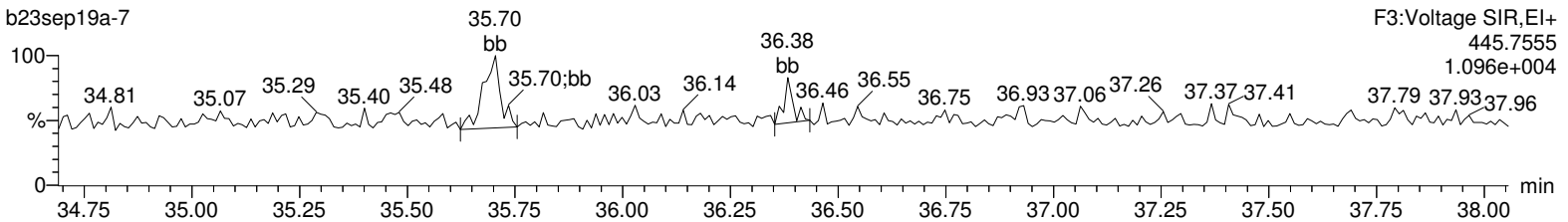
13C-123478-HxCDF



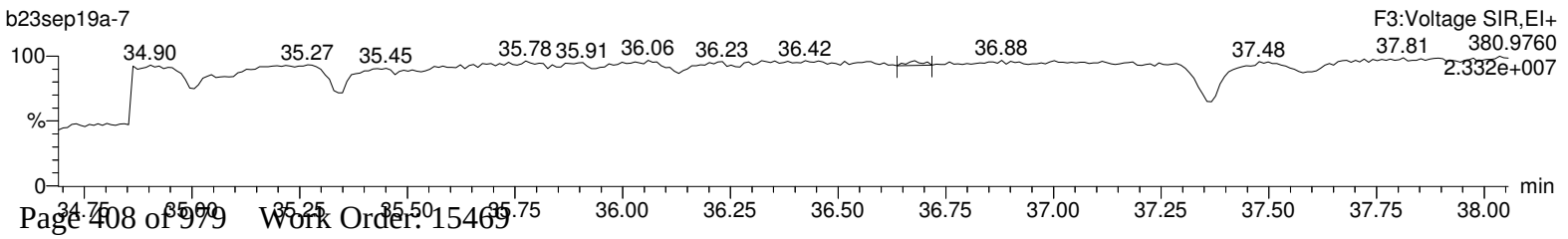
13C-123478-HxCDF



OcDPE



Lock Mass F3



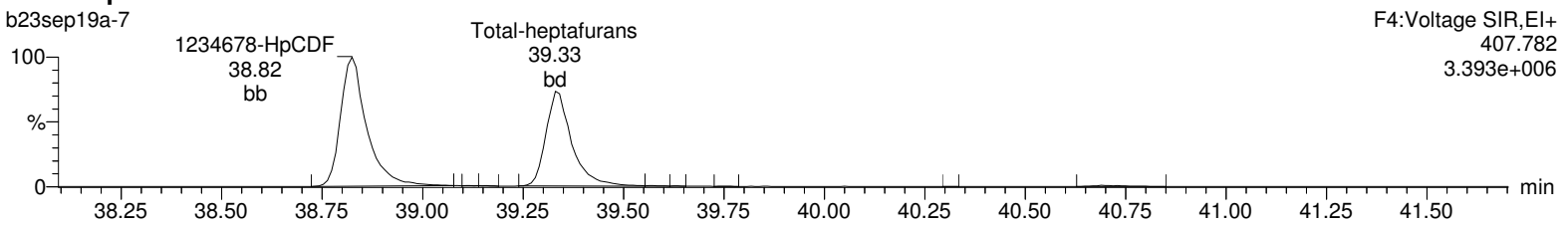
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

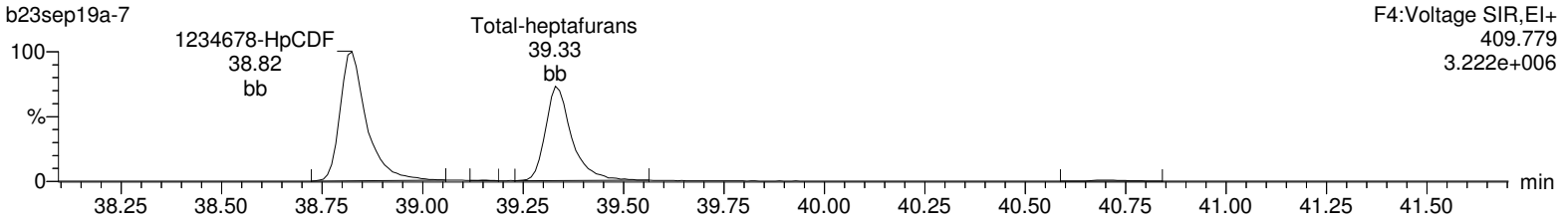
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

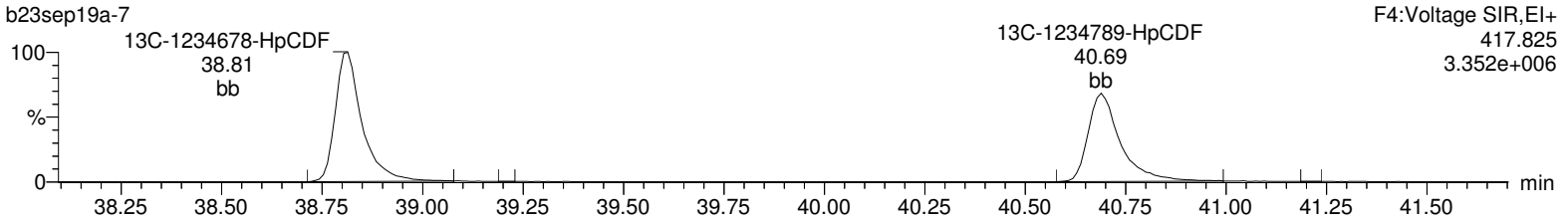
Total-heptafurans



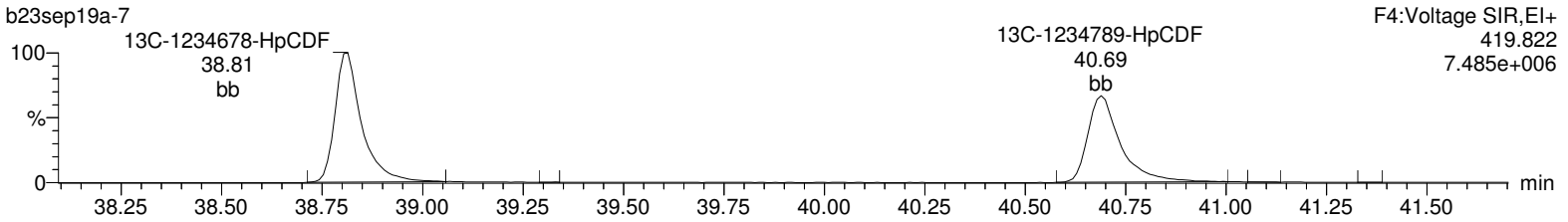
Total-heptafurans



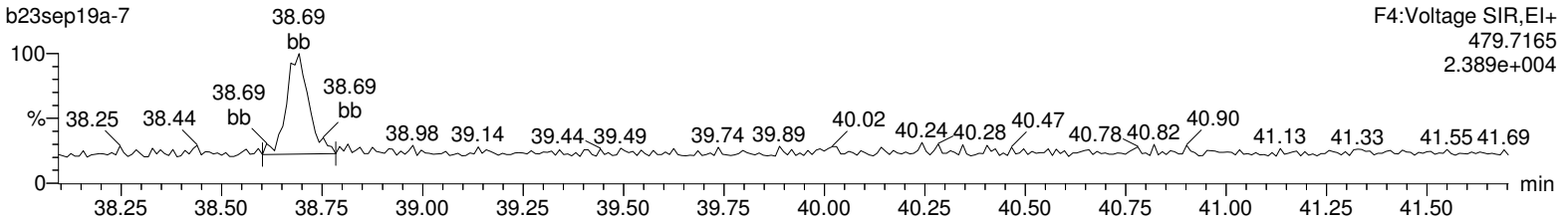
13C-1234678-HpCDF



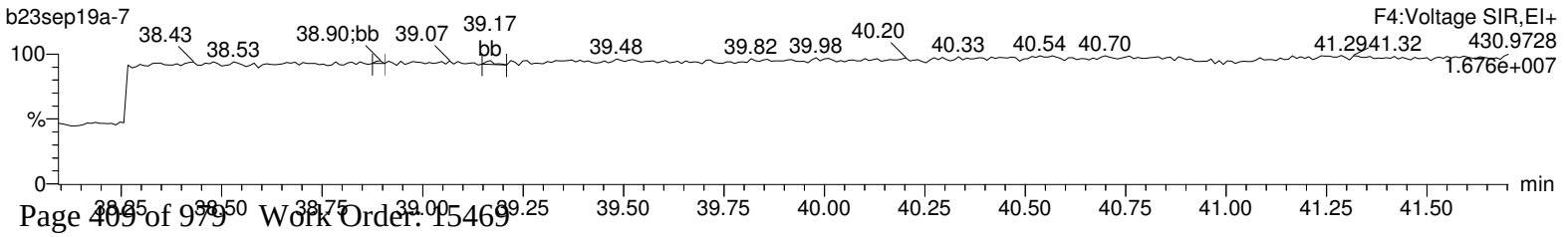
13C-1234678-HpCDF



NoDPE



Lock Mass F4



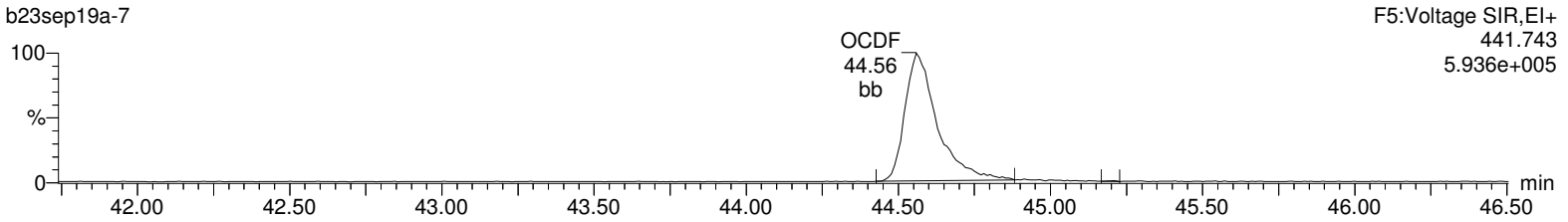
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

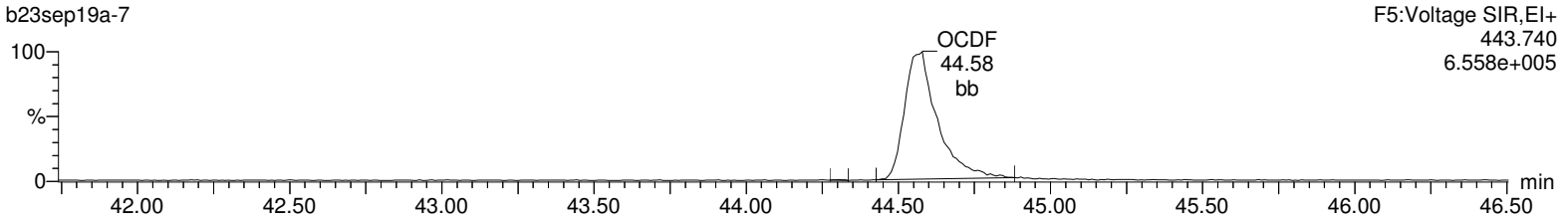
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-7, Date: 23-Sep-2019, Time: 13:09:50, ID: 15469015-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

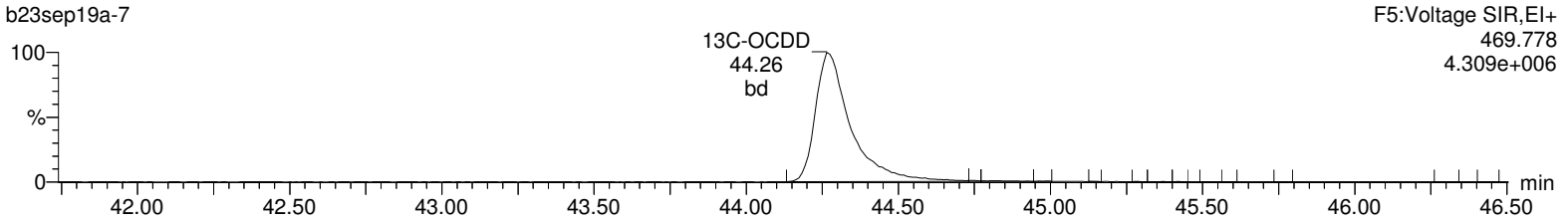
OCDF



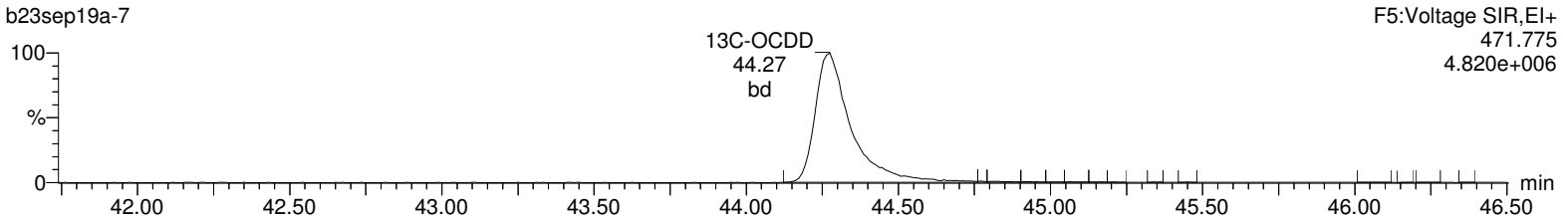
OCDF



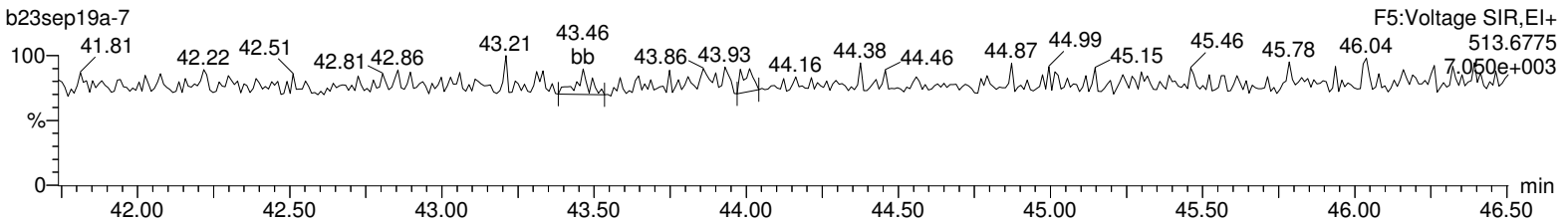
13C-OCDD



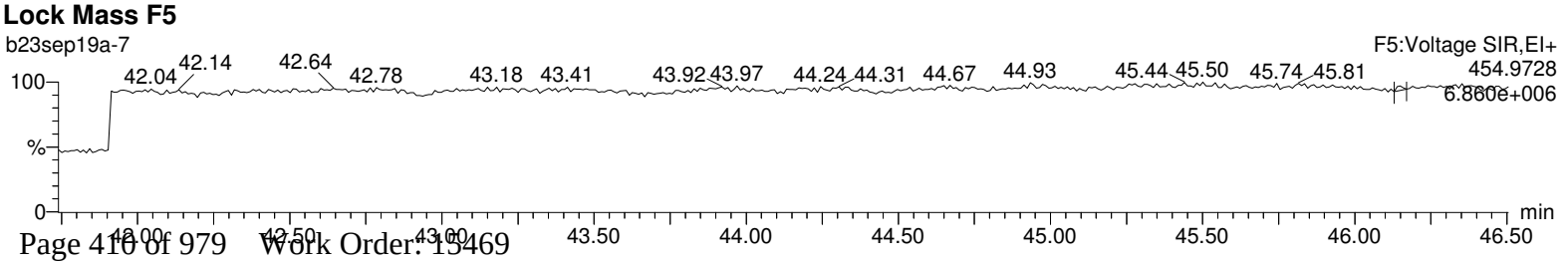
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469016**	**Date Collected:**	**08/29/2019 08:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**29.8**
Client ID:	**H3-SC1b-50to60-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:58**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0716	pg/g	0.0716	0.927
40321-76-4	1,2,3,7,8-PeCDD	U	0.0736	pg/g	0.0736	4.64
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.0979	pg/g	0.0979	4.64
57653-85-7	1,2,3,6,7,8-HxCDD	BJK	0.217	pg/g	0.095	4.64
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.0985	pg/g	0.0985	4.64
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	1.96	pg/g	0.200	4.64
3268-87-9	1,2,3,4,6,7,8,9-OCDD		24.9	pg/g	0.363	9.27
51207-31-9	2,3,7,8-TCDF	BJ	0.282	pg/g	0.131	0.927
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.113	pg/g	0.0671	4.64
57117-31-4	2,3,4,7,8-PeCDF	BJ	0.213	pg/g	0.0593	4.64
70648-26-9	1,2,3,4,7,8-HxCDF	BJ	0.202	pg/g	0.064	4.64
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.655	pg/g	0.0666	4.64
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.319	pg/g	0.0686	4.64
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.089	pg/g	0.089	4.64
67562-39-4	1,2,3,4,6,7,8-HpCDF		10.3	pg/g	0.110	4.64
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.174	pg/g	0.174	4.64
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	3.05	pg/g	0.265	9.27
41903-57-5	Total TeCDD	BJK	0.167	pg/g	0.0716	0.927
36088-22-9	Total PeCDD	JK	0.395	pg/g	0.0736	4.64
34465-46-8	Total HxCDD	BJK	1.60	pg/g	0.095	4.64
37871-00-4	Total HpCDD	J	4.94	pg/g	0.200	4.64
30402-14-3	Total TeCDF	JK	2.07	pg/g	0.131	0.927
30402-15-4	Total PeCDF	JK	6.06	pg/g	0.0428	4.64
55684-94-1	Total HxCDF	J	8.49	pg/g	0.064	4.64
38998-75-3	Total HpCDF		16.7	pg/g	0.110	4.64
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.366	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.454	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		136	185	pg/g	73.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		126	185	pg/g	68.0	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		152	185	pg/g	81.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		132	185	pg/g	71.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		167	185	pg/g	89.9	(23%-140%)
13C-OCDD		283	371	pg/g	76.3	(17%-157%)
13C-2,3,7,8-TCDF		127	185	pg/g	68.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		117	185	pg/g	62.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		118	185	pg/g	63.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		145	185	pg/g	78.1	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		128	185	pg/g	69.3	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		132	185	pg/g	71.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		142	185	pg/g	76.7	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469016**	**Date Collected:**	**08/29/2019 08:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**29.8**
Client ID:	**H3-SC1b-50to60-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 13:58**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-8**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**15.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		151	185	pg/g	81.5	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		163	185	pg/g	88.1	(26%-138%)
37Cl-2,3,7,8-TCDD		16.3	18.5	pg/g	88.0	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:05:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:05:54 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.23e1	3.12e2	4.04e2	31.15	1.000	0.30	YES	0.025	0.0386	2.24e3	2252	1.0	3.33e3	1294	2.6	bb	bb
2	12378-PeCDD	1.55e2	1.55e2	3.10e2	34.08	1.000	1.00	YES	0.032	0.0397	4.18e3	1785	2.3	2.92e3	1338	2.2	bd	MM
3	123478-HxCDD							NO		0.0528		1430			1731			
4	123678-HxCDD	6.58e2	4.59e2	1.12e3	36.75	1.000	1.43	YES	0.117	0.0512	1.01e4	1430	7.0	7.63e3	1731	4.4	db	bb
5	123789-HxCDD	1.60e2	1.88e2	3.48e2	37.01	1.007	0.85	YES	0.039	0.0531	3.26e3	1430	2.3	3.55e3	1731	2.0	bb	MM
6	1234678-HpCDD	4.23e3	3.88e3	8.11e3	40.03	1.000	1.09	NO	1.056	0.108	5.23e4	2001	26.1	4.67e4	1723	27.1	bb	bb
7	OCDD	3.41e4	3.91e4	7.32e4	44.24	1.000	0.87	NO	13.427	0.196	2.64e5	1577	167.2	2.96e5	1535	193.2	bd	bd
8	2378-TCDF	1.16e3	1.44e3	2.60e3	30.37	1.000	0.80	NO	0.152	0.0705	1.41e4	2179	6.5	1.51e4	2614	5.8	MM	bb
9	12378-PeCDF	4.70e2	3.13e2	7.82e2	33.28	1.000	1.50	NO	0.061	0.0362	1.04e4	1597	6.5	7.66e3	2193	3.5	bb	bb
10	23478-PeCDF	9.90e2	6.46e2	1.64e3	33.90	1.001	1.53	NO	0.115	0.0320	2.36e4	1597	14.8	1.05e4	2193	4.8	db	bb
11	123478-HxCDF	6.85e2	5.70e2	1.25e3	35.98	1.001	1.20	NO	0.109	0.0345	1.31e4	1584	8.3	1.01e4	1350	7.4	bd	bd
12	123678-HxCDF	2.45e3	1.93e3	4.38e3	36.07	1.000	1.26	NO	0.353	0.0359	3.61e4	1584	22.8	3.62e4	1350	26.8	dd	db
13	234678-HxCDF	1.04e3	9.54e2	2.00e3	36.55	1.000	1.09	NO	0.172	0.0370	2.50e4	1584	15.8	1.80e4	1350	13.4	MM	bb
14	123789-HxCDF	6.53e1	1.32e2	1.97e2	37.30	1.000	0.49	YES	0.020	0.0480	2.53e3	1584	1.6	4.48e3	1350	3.3	bd	bd
15	1234678-HpCDF	3.10e4	2.97e4	6.06e4	38.81	1.000	1.04	NO	5.567	0.0595	4.56e5	1897	240.4	3.84e5	1520	252.9	bb	bb
16	1234789-HpCDF	1.99e2	1.91e2	3.89e2	40.68	1.000	1.04	NO	0.045	0.0940	4.28e3	1897	2.3	4.05e3	1520	2.7	bb	dd
17	OCDF	4.58e3	5.40e3	9.98e3	44.54	1.007	0.85	NO	1.647	0.143	4.05e4	1008	40.2	4.32e4	1519	28.4	bb	bb
18	13C-2378-TCDD	7.93e5	1.02e6	1.82e6	31.14	1.018	0.77	NO	73.229	0.0737	1.12e7	5155	2181.7	1.47e7	2721	5421.2	bd	bb
19	13C-12378-PeCDD	7.00e5	4.43e5	1.14e6	34.08	1.114	1.58	NO	68.040	0.0670	1.42e7	2477	5726.9	9.11e6	2372	3840.1	bd	bb
20	13C-123478-HxCDD	5.10e5	4.13e5	9.23e5	36.66	0.991	1.23	NO	81.785	0.119	8.87e6	4211	2105.2	7.28e6	3429	2123.9	bd	bd
21	13C-123678-HxCDD	5.96e5	4.84e5	1.08e6	36.75	0.993	1.23	NO	71.429	0.0889	9.63e6	4211	2287.5	7.84e6	3429	2285.9	dd	dd
22	13C-1234678-HpCDD	4.14e5	4.00e5	8.14e5	40.02	1.082	1.03	NO	89.854	0.218	4.62e6	5610	823.7	4.47e6	5632	794.3	bd	bd
23	13C-OCDD	5.54e5	6.39e5	1.19e6	44.24	1.196	0.87	NO	152.610	0.154	4.04e6	3500	1152.9	4.57e6	3320	1375.4	bd	bd
24	13C-2378-TCDF	8.26e5	1.09e6	1.91e6	30.35	0.992	0.76	NO	68.300	0.0959	8.22e6	6999	1175.1	1.08e7	4569	2367.4	bb	bb
25	13C-12378-PeCDF	8.66e5	5.52e5	1.42e6	33.27	1.088	1.57	NO	62.898	0.0976	1.76e7	5666	3109.5	1.15e7	3806	3011.7	bb	bb
26	13C-23478-PeCDF	8.96e5	5.71e5	1.47e6	33.88	1.108	1.57	NO	63.426	0.0951	1.86e7	5666	3288.5	1.20e7	3806	3140.1	bb	bb
27	13C-123478-HxCDF	3.49e5	6.70e5	1.02e6	35.96	0.972	0.52	NO	78.094	0.190	6.41e6	7102	901.9	1.20e7	6963	1725.3	bd	bd
28	13C-123678-HxCDF	4.07e5	7.70e5	1.18e6	36.06	0.975	0.53	NO	69.262	0.146	6.70e6	7102	943.0	1.26e7	6963	1813.6	db	db
29	13C-234678-HxCDF	3.54e5	6.73e5	1.03e6	36.54	0.988	0.53	NO	71.065	0.171	6.04e6	7102	850.3	1.14e7	6963	1631.3	bb	bb
30	13C-123789-HxCDF	3.22e5	6.12e5	9.34e5	37.30	1.008	0.53	NO	76.684	0.203	4.95e6	7102	697.6	9.28e6	6963	1332.7	bd	bd
31	13C-1234678-HpCDF	2.78e5	6.37e5	9.14e5	38.79	1.049	0.44	NO	81.537	0.154	3.66e6	4368	837.3	8.16e6	5482	1488.6	bb	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:05:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:05:54 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.22e5	4.86e5	7.08e5	40.67	1.099	0.46	NO	88.095	0.216	2.32e6	4368	531.7	5.12e6	5482	933.7	bd	bb
33	13C-1234-TCDD	9.32e5	1.22e6	2.16e6	30.59	0.000	0.76	NO	100.000	0.0848	1.00e7	5155	1946.2	1.33e7	2721	4880.8	bb	bb
34	13C-123789-HxCDD	7.90e5	6.41e5	1.43e6	36.99	0.000	1.23	NO	100.000	0.0939	1.12e7	4211	2666.1	9.18e6	3429	2677.1	dd	dd
35	37Cl-2378-TCDD	2.04e5		2.04e5	31.15	1.018			8.804	0.0121	2.89e6	1212	2382.2				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:05:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:05:54 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	7.62e2	6.92e2	1.45e3	27.82	1.10	YES	0.090	0.0386	7.69e3	2252	3.4	1.08e4	1294	8.3	MM	bb
2	Total-tetradioxins	3.09e2	3.62e2	6.71e2	28.11	0.85	NO	0.041	0.0386	3.95e3	2252	1.8	4.96e3	1294	3.8	MM	MM
3	Total-tetradioxins	6.28e1	8.09e1	1.44e2	28.71	0.78	NO	0.009	0.0386	2.09e3	2252	0.9	2.27e3	1294	1.8	bb	bb
4	Total-tetradioxins	8.10e1	1.51e2	2.32e2	29.57	0.54	YES	0.014	0.0386	2.51e3	2252	1.1	2.09e3	1294	1.6	db	bb
5	Total-tetradioxins	6.17e1	7.21e1	1.34e2	30.34	0.86	NO	0.008	0.0386	3.59e3	2252	1.6	1.87e3	1294	1.4	bd	bb
6	Total-tetradioxins	7.85e1	1.11e2	1.90e2	30.60	0.71	NO	0.012	0.0386	2.55e3	2252	1.1	2.02e3	1294	1.6	bb	db
7	Total-tetradioxins	1.84e2	1.35e2	3.18e2	30.89	1.36	YES	0.020	0.0386	2.79e3	2252	1.2	1.98e3	1294	1.5	bb	bb
8	2378-TCDD	9.23e1	3.12e2	4.04e2	31.15	0.30	YES	0.025	0.0386	2.24e3	2252	1.0	3.33e3	1294	2.6	bb	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	6.48e2	2.73e2	9.21e2	32.75	2.37	YES	0.095	0.0397	1.54e4	1785	8.6	5.50e3	1338	4.1	bb	bb
2	Total-pentadioxins	4.53e2	2.53e2	7.07e2	33.30	1.79	YES	0.073	0.0397	1.01e4	1785	5.7	5.75e3	1338	4.3	MM	bd
3	Total-pentadioxins	2.26e2	2.08e2	4.35e2	33.59	1.09	YES	0.045	0.0397	5.47e3	1785	3.1	4.11e3	1338	3.1	MM	MM
4	12378-PeCDD	1.55e2	1.55e2	3.10e2	34.08	1.00	YES	0.032	0.0397	4.18e3	1785	2.3	2.92e3	1338	2.2	bd	MM
5	Total-pentadioxins	2.74e2	2.26e2	5.00e2	33.40	1.21	YES	0.051	0.0397	3.22e3	1785	1.8	3.50e3	1338	2.6	MM	MM
6	Total-pentadioxins	1.48e2	9.05e1	2.38e2	33.89	1.63	NO	0.025	0.0397	3.14e3	1785	1.8	2.00e3	1338	1.5	MM	MM

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	1.18e3	1.01e3	2.19e3	35.45	1.16	NO	0.242	0.0522	2.44e4	1430	17.0	1.71e4	1731	9.9	bb	bb
2	Total-hexadioxins	4.81e2	3.45e2	8.26e2	35.98	1.40	NO	0.091	0.0522	5.80e3	1430	4.1	5.42e3	1731	3.1	MM	MM
3	Total-hexadioxins	2.12e3	1.62e3	3.75e3	36.11	1.31	NO	0.415	0.0522	3.05e4	1430	21.4	2.36e4	1731	13.6	MM	bb
4	123678-HxCDD	6.58e2	4.59e2	1.12e3	36.75	1.43	YES	0.117	0.0512	1.01e4	1430	7.0	7.63e3	1731	4.4	db	bb
5	123789-HxCDD	1.60e2	1.88e2	3.48e2	37.01	0.85	YES	0.039	0.0531	3.26e3	1430	2.3	3.55e3	1731	2.0	bb	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:05:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:05:54 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	6.15e3	6.21e3	1.24e4	39.12	0.99	NO	1.609	0.108	8.75e4	2001	43.7	8.67e4	1723	50.3	bd	bb
2	1234678-HpCDD	4.23e3	3.88e3	8.11e3	40.03	1.09	NO	1.056	0.108	5.23e4	2001	26.1	4.67e4	1723	27.1	bb	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	3.05e2	3.60e2	6.65e2	26.11	0.85	NO	0.039	0.0705	3.64e3	2179	1.7	4.04e3	2614	1.5	MM	MM
2	Total-tetrafurans	3.39e2	8.80e2	1.22e3	26.50	0.39	YES	0.071	0.0705	8.42e3	2179	3.9	8.94e3	2614	3.4	bd	MM
3	Total-tetrafurans	2.31e3	2.95e3	5.26e3	27.02	0.78	NO	0.308	0.0705	2.71e4	2179	12.4	2.64e4	2614	10.1	bb	MM
4	Total-tetrafurans	4.52e2	1.25e3	1.70e3	27.69	0.36	YES	0.100	0.0705	1.04e4	2179	4.8	1.25e4	2614	4.8	bd	MM
5	Total-tetrafurans	1.15e3	1.51e3	2.66e3	28.07	0.76	NO	0.156	0.0705	1.32e4	2179	6.0	1.41e4	2614	5.4	MM	bb
6	Total-tetrafurans	8.87e2	1.00e3	1.89e3	28.95	0.88	NO	0.111	0.0705	8.87e3	2179	4.1	1.01e4	2614	3.9	bb	bb
7	Total-tetrafurans	1.04e3	1.39e3	2.43e3	29.45	0.75	NO	0.142	0.0705	1.06e4	2179	4.9	1.37e4	2614	5.2	bb	bb
8	2378-TCDF	1.16e3	1.44e3	2.60e3	30.37	0.80	NO	0.152	0.0705	1.41e4	2179	6.5	1.51e4	2614	5.8	MM	bb
9	Total-tetrafurans	5.23e2	7.96e2	1.32e3	31.85	0.66	NO	0.077	0.0705	8.65e3	2179	4.0	1.11e4	2614	4.3	bb	bb
10	Total-tetrafurans	6.10e2	7.08e2	1.32e3	27.37	0.86	NO	0.077	0.0705	5.93e3	2179	2.7	6.17e3	2614	2.4	MM	MM
11	Total-tetrafurans	3.44e2	4.93e2	8.37e2	30.72	0.70	NO	0.049	0.0705	2.95e3	2179	1.4	5.09e3	2614	1.9	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.95e4	1.27e4	3.22e4	31.86	1.54	NO	2.374	0.0231	3.88e5	980	395.8	2.51e5	1594	157.5	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	4.13e3	2.43e3	6.56e3	32.73	1.70	NO	0.484	0.0340	5.65e4	1597	35.4	3.29e4	2193	15.0	bb	bb
2	Total-pentafurans	1.37e2	2.02e2	3.38e2	32.90	0.68	YES	0.025	0.0340	4.47e3	1597	2.8	5.44e3	2193	2.5	bb	bb
3	Total-pentafurans	1.27e3	8.02e2	2.07e3	33.05	1.59	NO	0.153	0.0340	2.80e4	1597	17.5	1.63e4	2193	7.4	bb	bb
4	12378-PeCDF	4.70e2	3.13e2	7.82e2	33.28	1.50	NO	0.061	0.0362	1.04e4	1597	6.5	7.66e3	2193	3.5	bb	bb
5	Total-pentafurans	5.98e2	4.92e2	1.09e3	33.45	1.22	YES	0.080	0.0340	9.82e3	1597	6.2	7.51e3	2193	3.4	bb	bb
6	23478-PeCDF	9.90e2	6.46e2	1.64e3	33.90	1.53	NO	0.115	0.0320	2.36e4	1597	14.8	1.05e4	2193	4.8	db	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:05:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:05:54 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

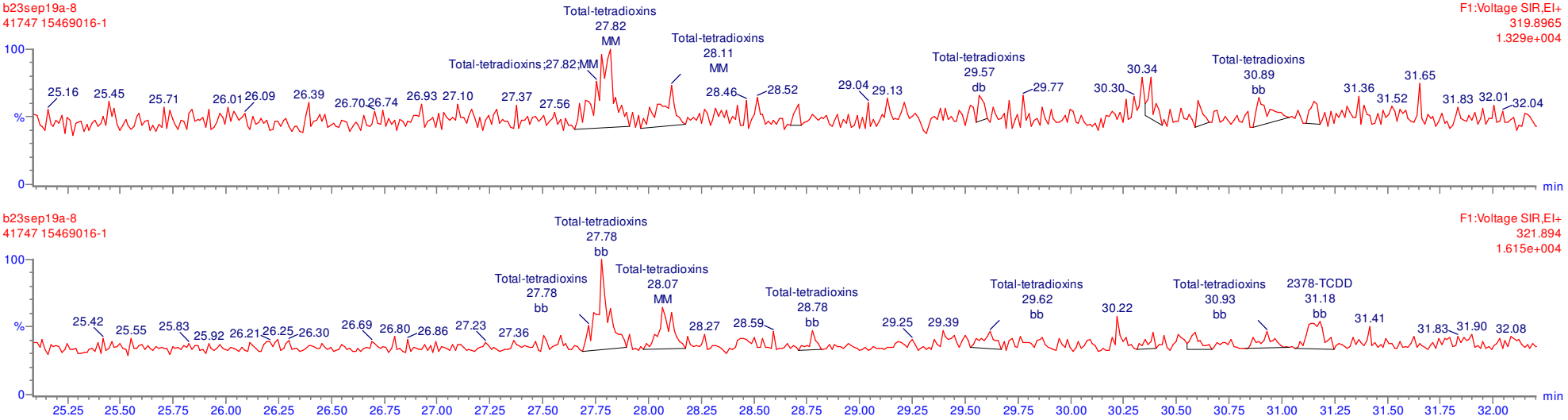
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	4.93e3	3.94e3	8.87e3	35.04	1.25	NO	0.779	0.0385	1.01e5	1584	63.8	8.31e4	1350	61.6	bd	bd
2	Total-hexafurans	1.09e4	8.96e3	1.98e4	35.16	1.22	NO	1.743	0.0385	2.25e5	1584	141.9	1.66e5	1350	123.2	dd	db
3	Total-hexafurans	9.02e3	7.17e3	1.62e4	35.58	1.26	NO	1.422	0.0385	1.71e5	1584	108.2	1.39e5	1350	103.3	bb	bd
4	123478-HxCDF	6.85e2	5.70e2	1.25e3	35.98	1.20	NO	0.109	0.0345	1.31e4	1584	8.3	1.01e4	1350	7.4	bd	bd
5	123678-HxCDF	2.45e3	1.93e3	4.38e3	36.07	1.26	NO	0.353	0.0359	3.61e4	1584	22.8	3.62e4	1350	26.8	dd	db
6	234678-HxCDF	1.04e3	9.54e2	2.00e3	36.55	1.09	NO	0.172	0.0370	2.50e4	1584	15.8	1.80e4	1350	13.4	MM	bb
7	123789-HxCDF	6.53e1	1.32e2	1.97e2	37.30	0.49	YES	0.020	0.0480	2.53e3	1584	1.6	4.48e3	1350	3.3	bd	bd
8	Total-hexafurans	1.06e2	8.94e1	1.95e2	37.33	1.18	NO	0.017	0.0385	3.93e3	1584	2.5	3.61e3	1350	2.7	db	db

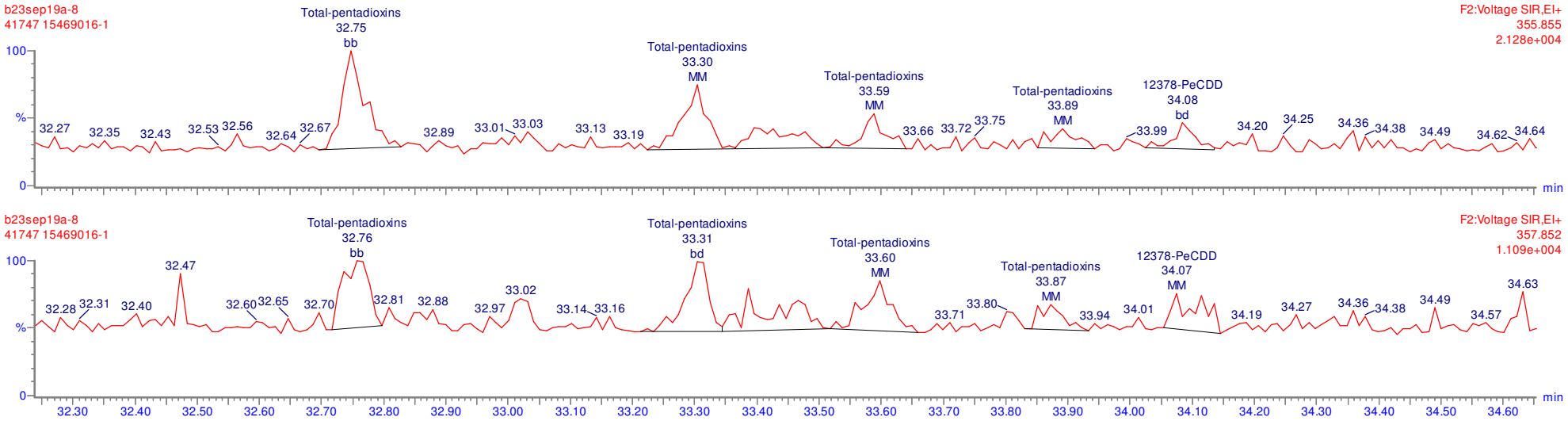
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	3.10e4	2.97e4	6.06e4	38.81	1.04	NO	5.567	0.0595	4.56e5	1897	240.4	3.84e5	1520	252.9	bb	bb
2	Total-heptafurans	1.79e4	1.60e4	3.39e4	39.31	1.12	NO	3.453	0.0747	2.16e5	1897	114.1	1.95e5	1520	128.4	bb	bb
3	1234789-HpCDF	1.99e2	1.91e2	3.89e2	40.68	1.04	NO	0.045	0.0940	4.28e3	1897	2.3	4.05e3	1520	2.7	bb	dd

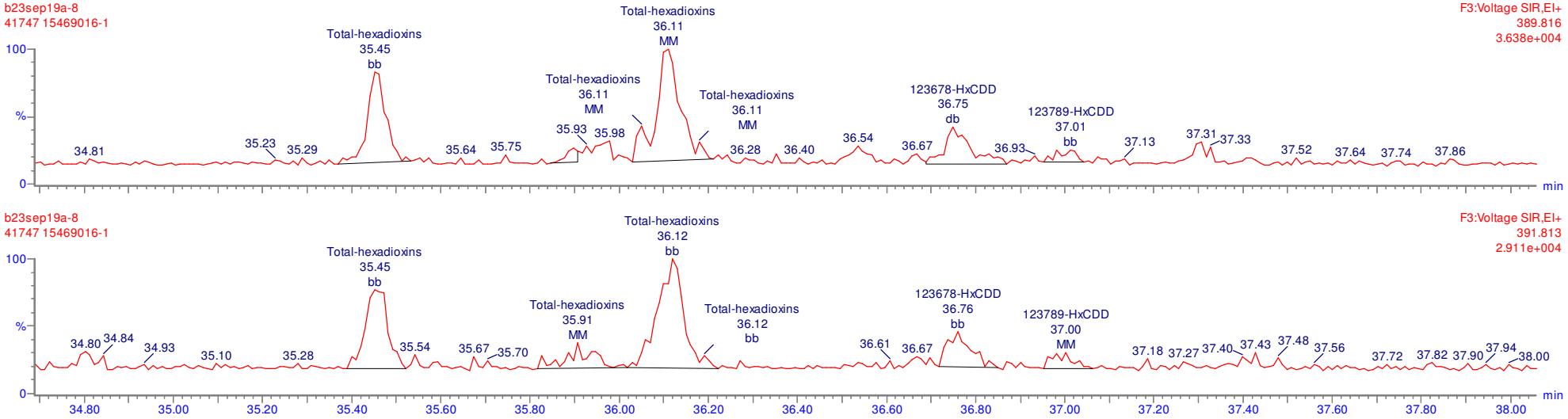
MANUAL INTEGRATION
METHOD 8290
HRP763_1



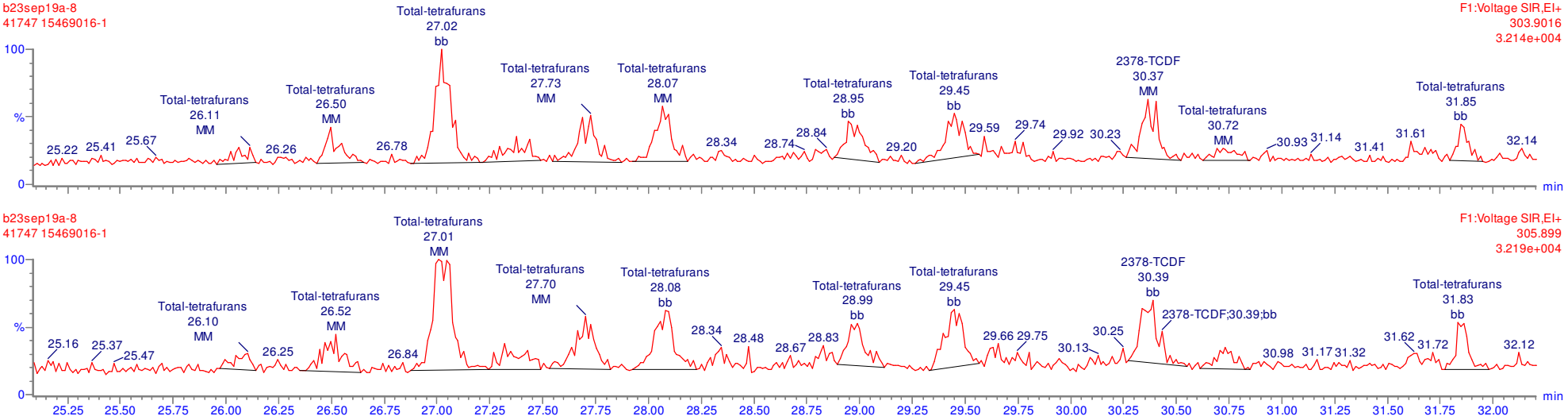
MANUAL INTEGRATION
METHOD 8290
HRP763_1



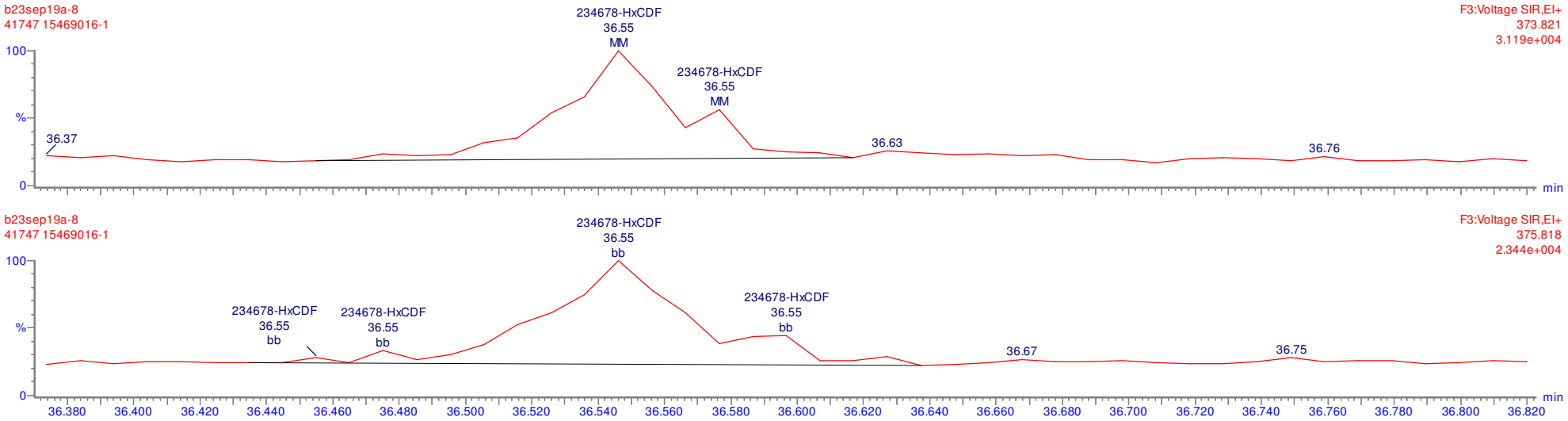
MANUAL INTEGRATION
METHOD 8290
HRP763_1



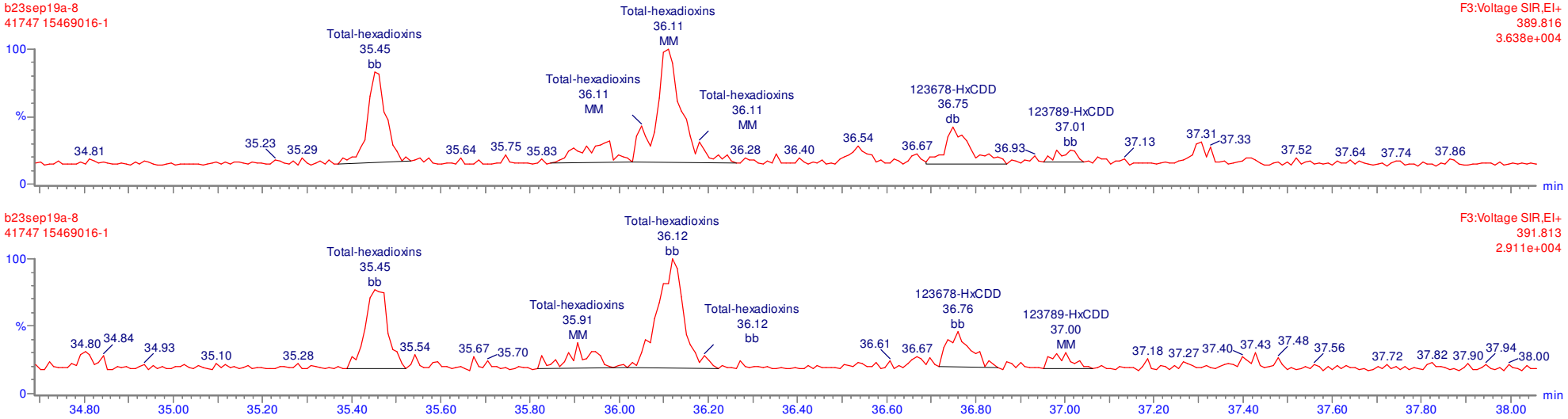
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



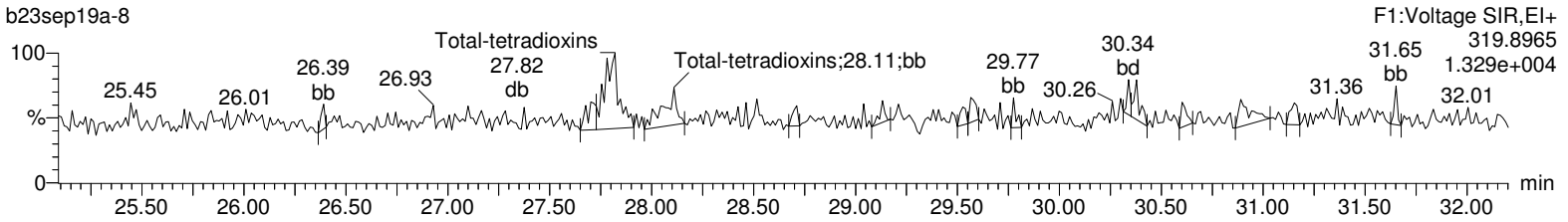
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

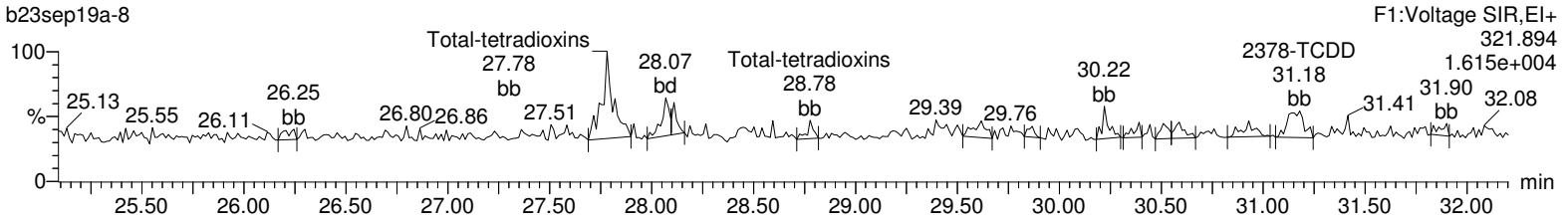
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

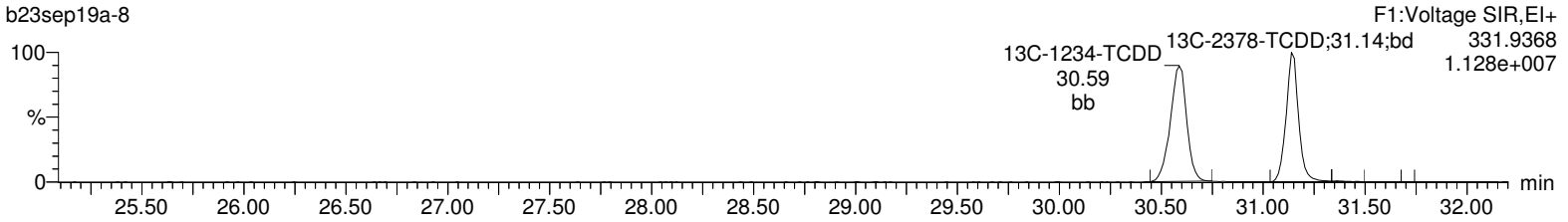
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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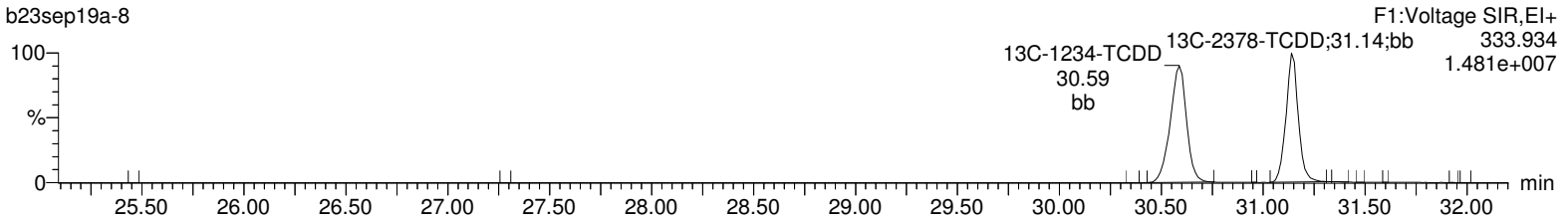
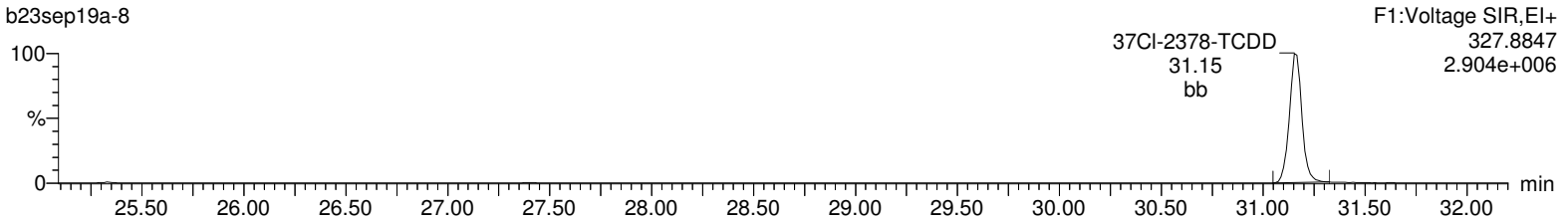
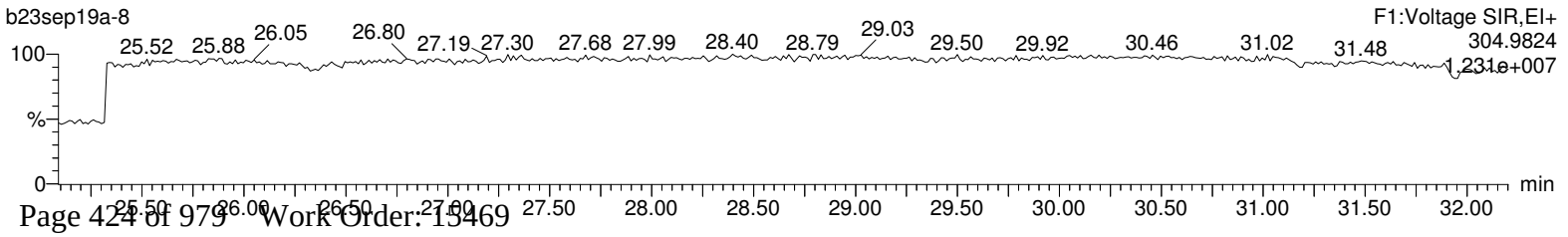


37Cl-2378-TCDD



Lock Mass F1



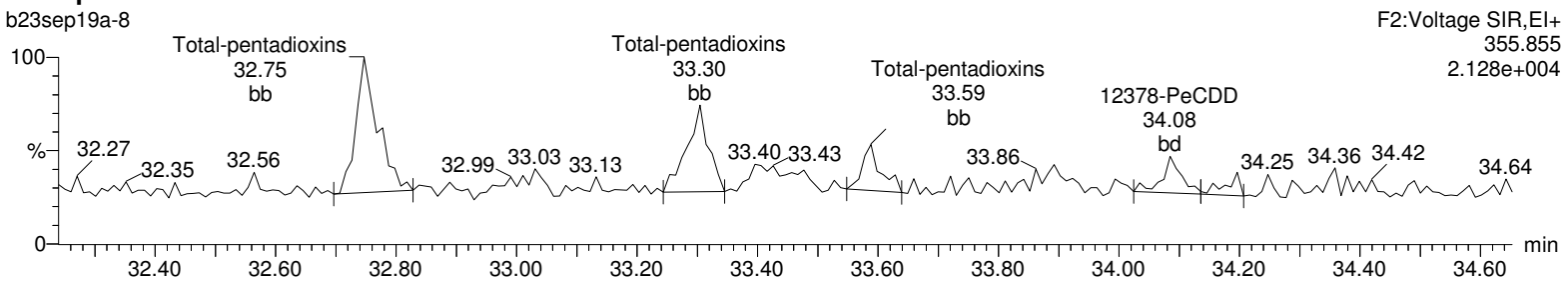
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

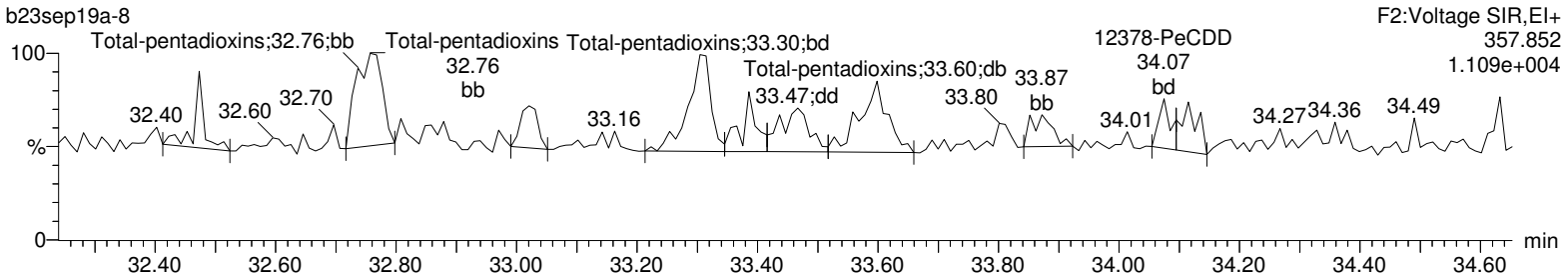
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

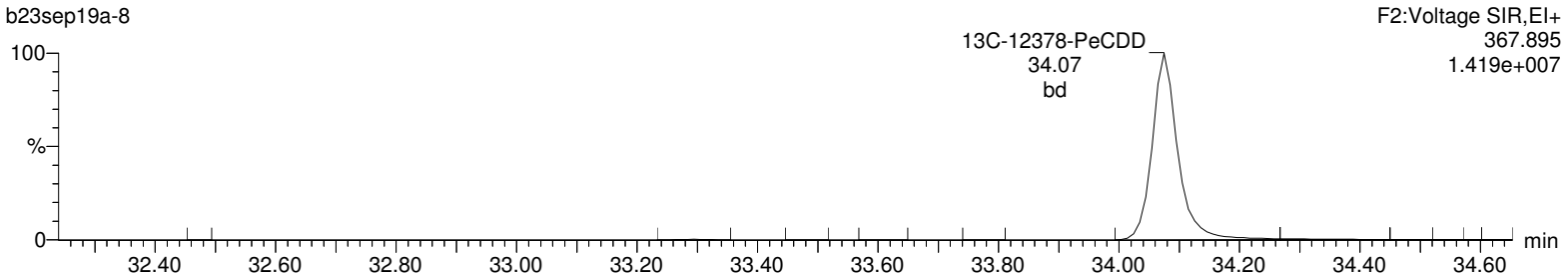
Total-pentadioxins



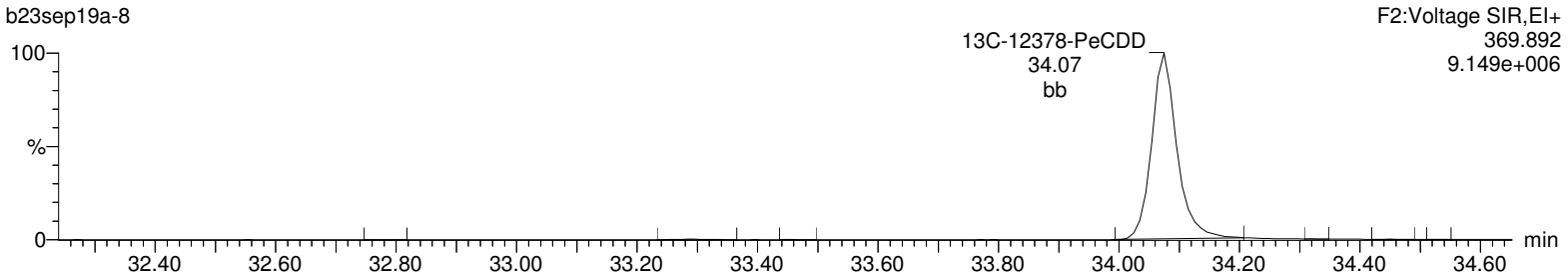
Total-pentadioxins



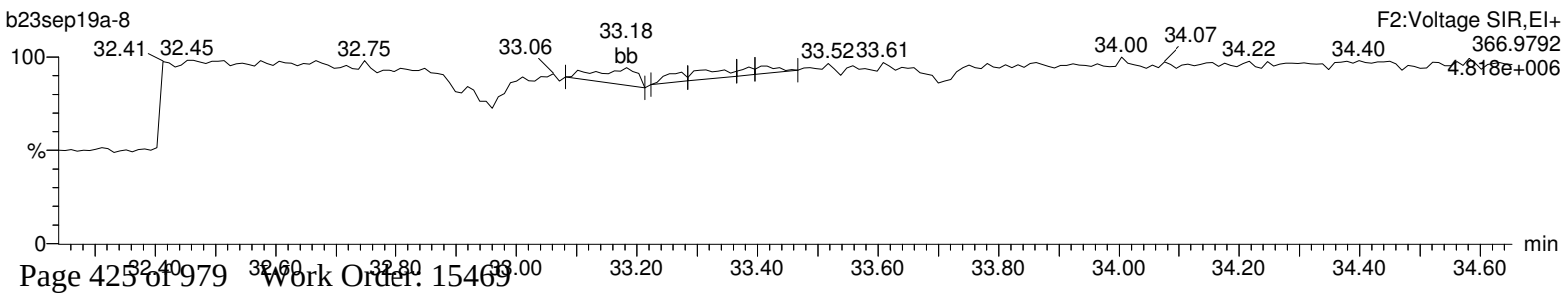
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



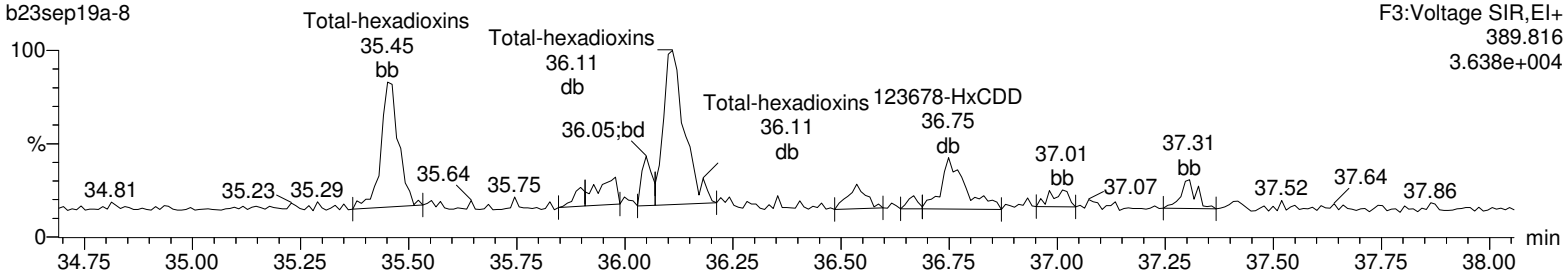
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

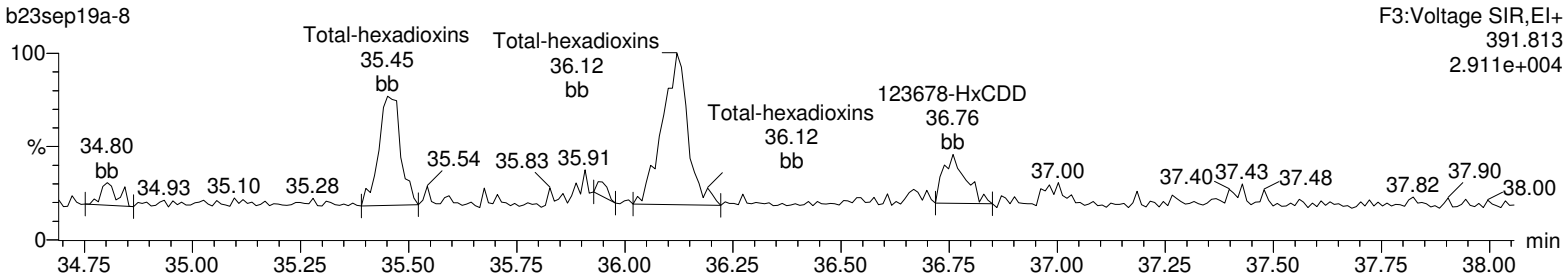
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

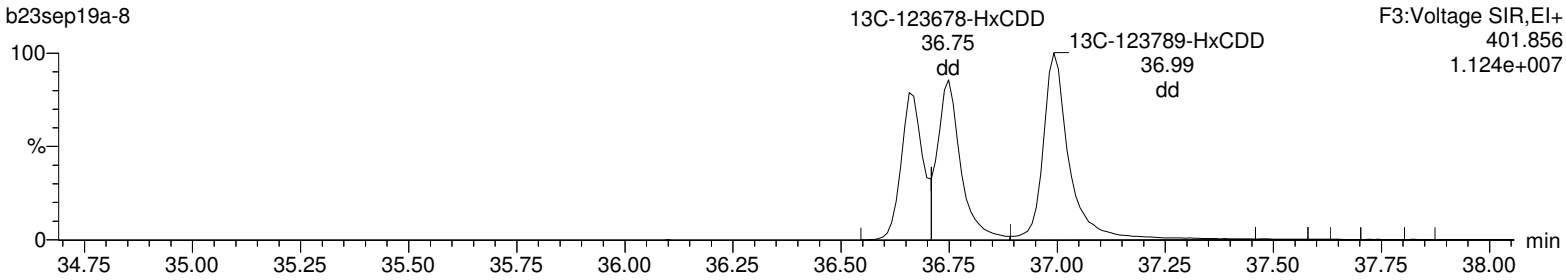
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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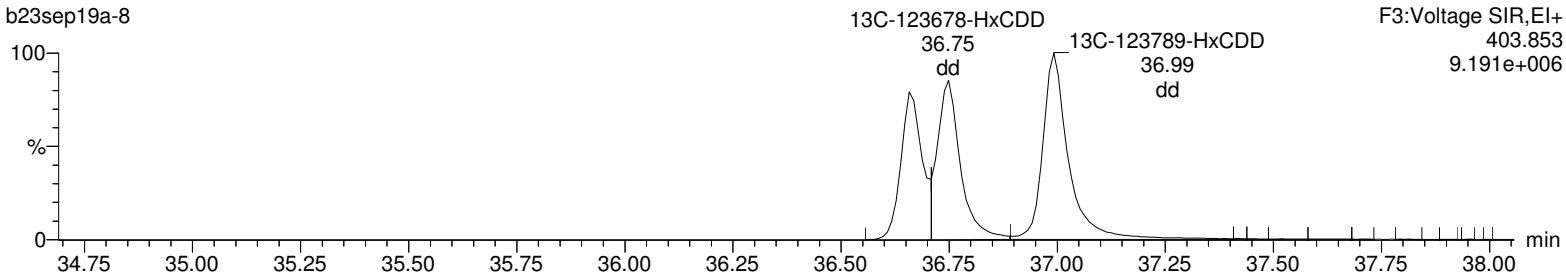
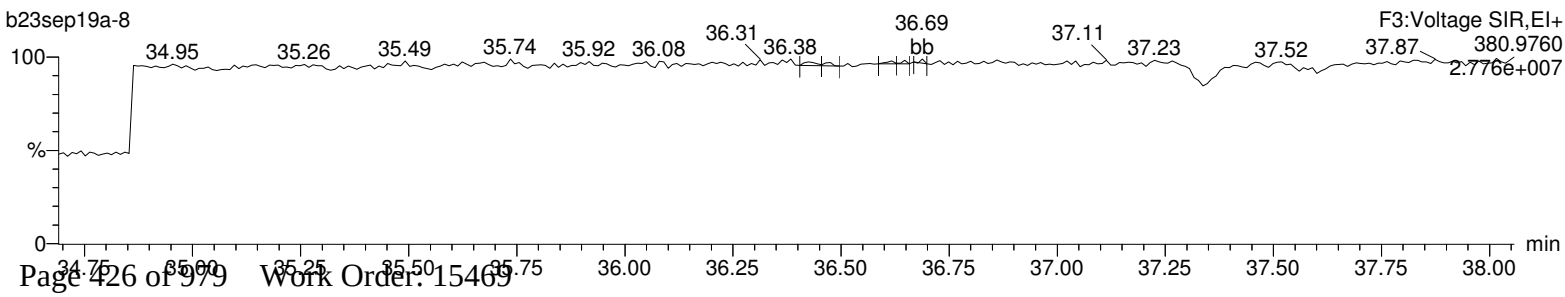


Lock Mass F3



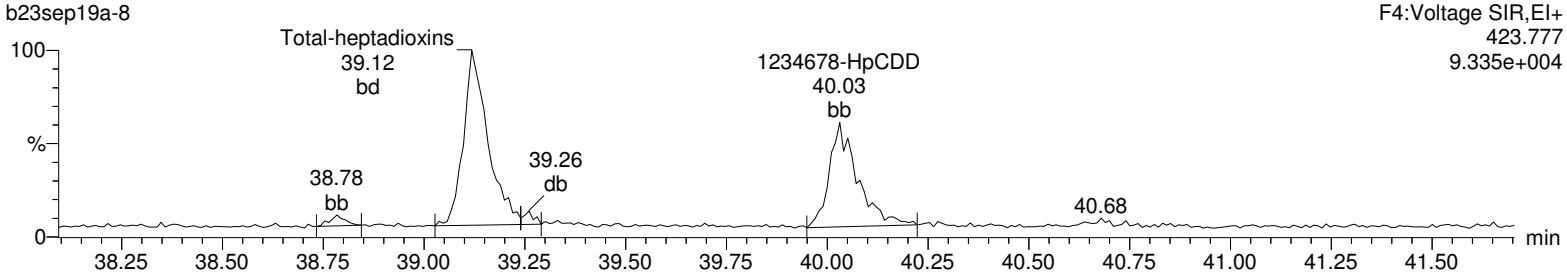
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

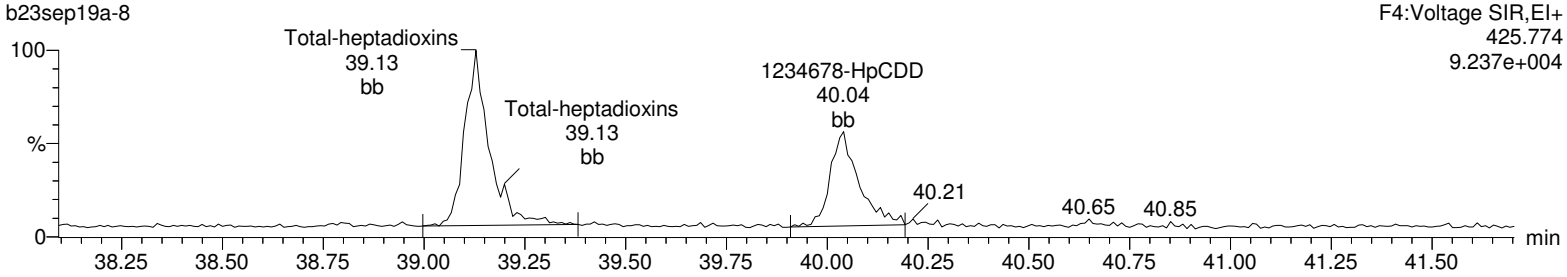
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

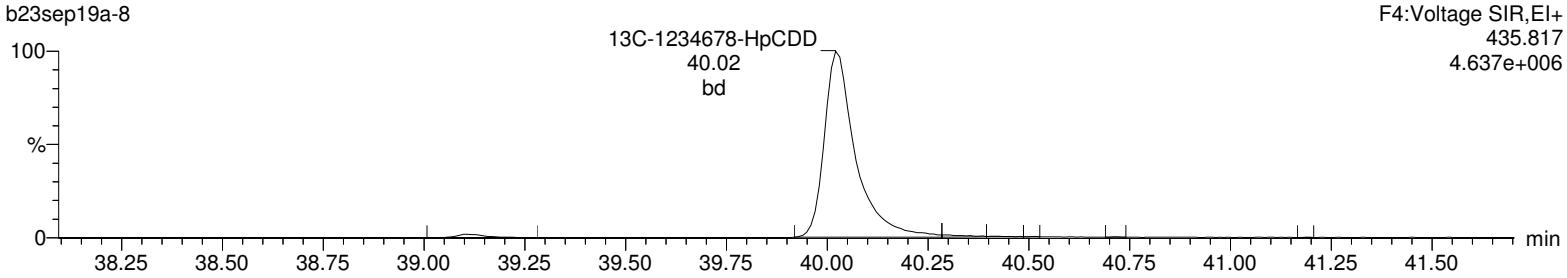
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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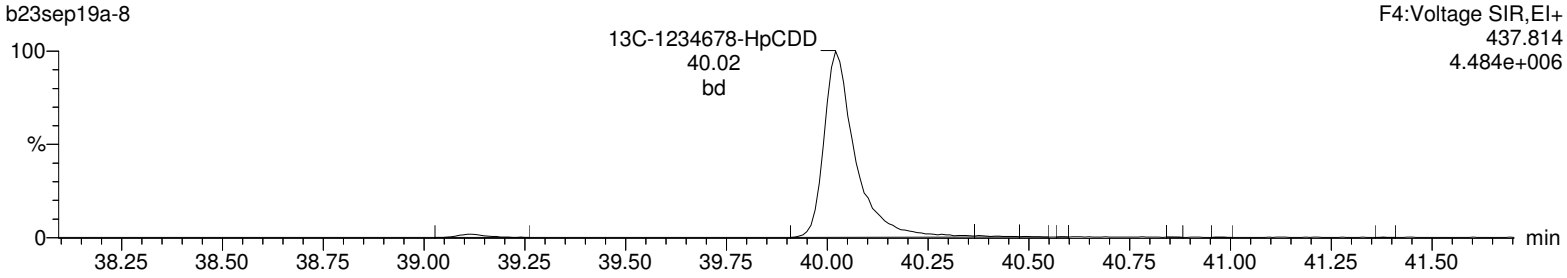
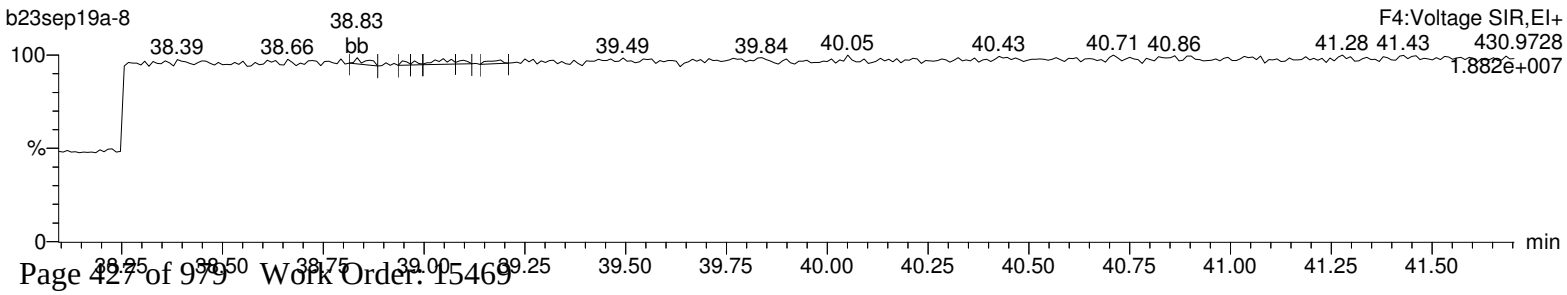


Lock Mass F4



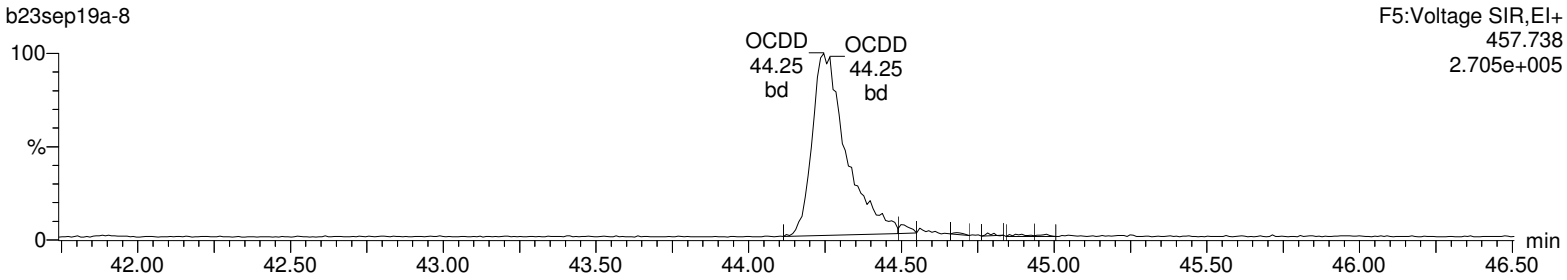
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

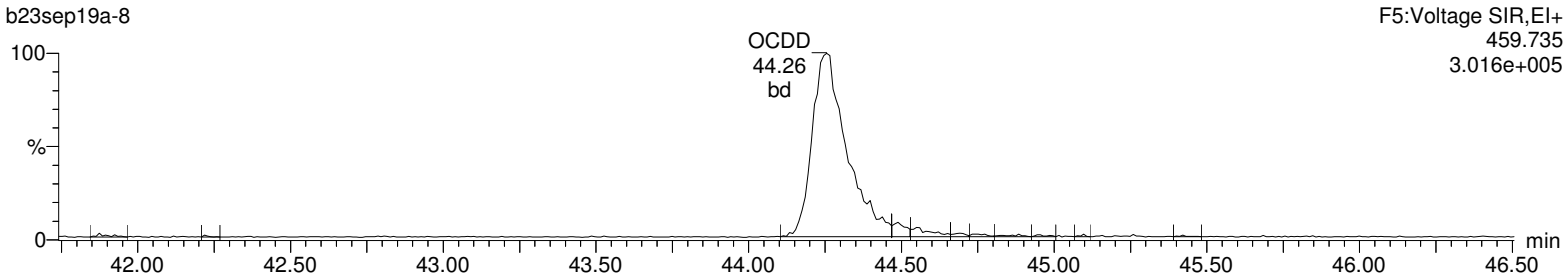
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

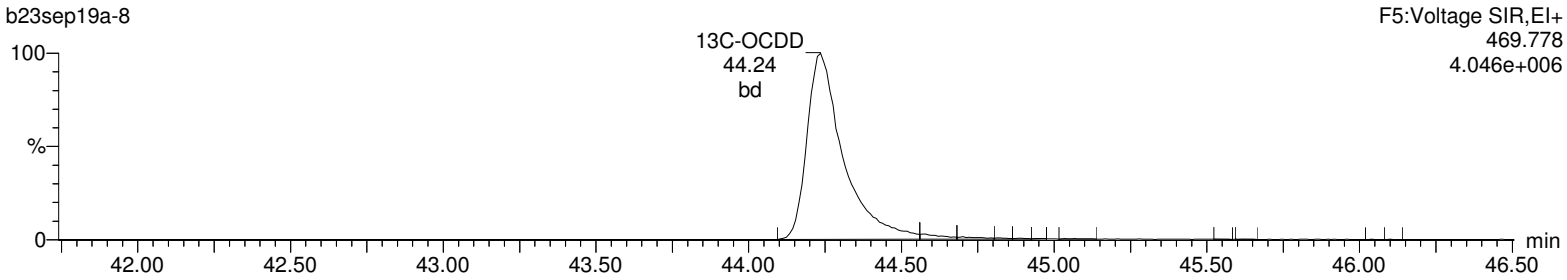
OCDD



OCDD



13C-OCDD



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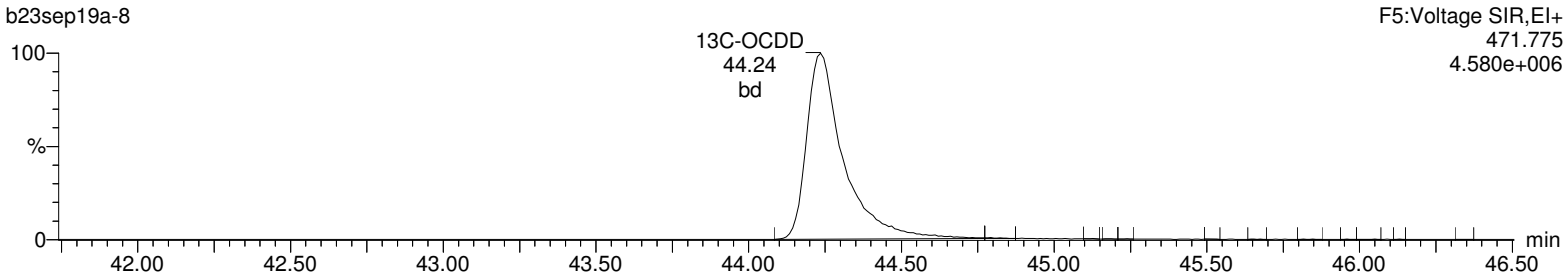
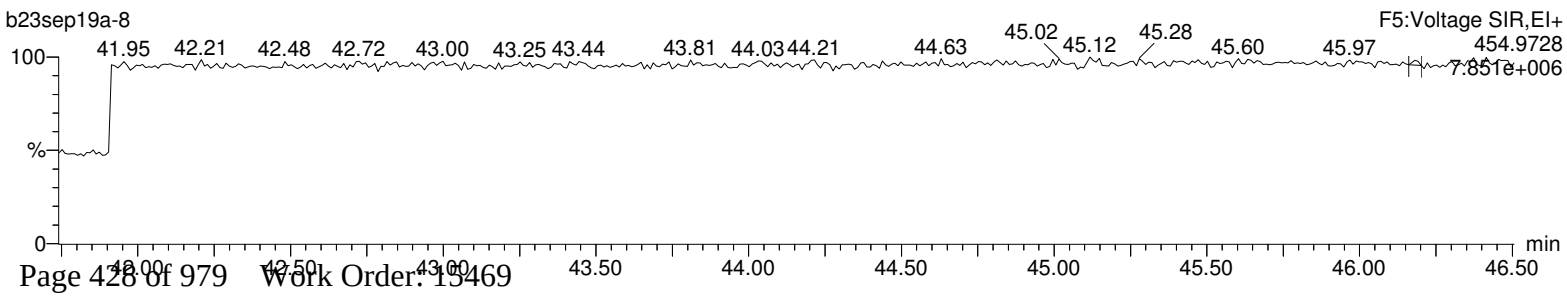


Lock Mass F5



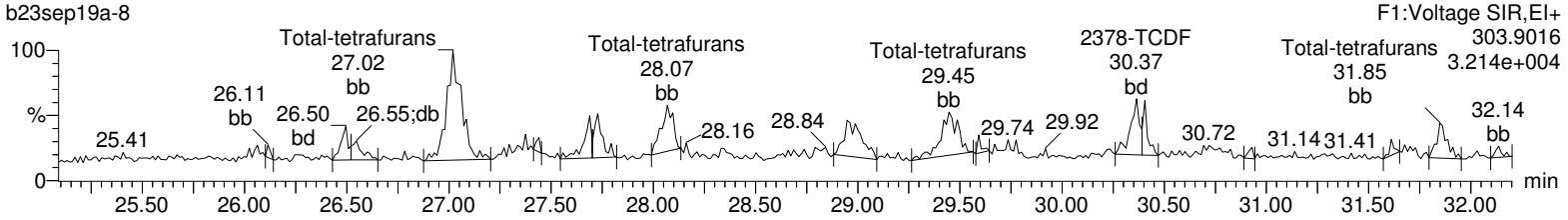
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

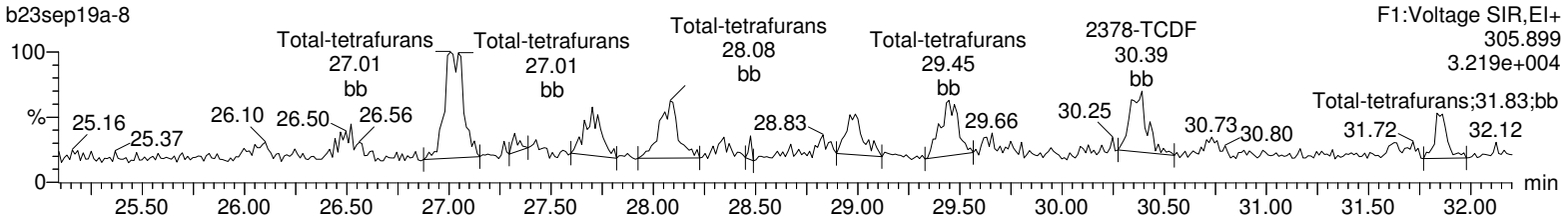
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

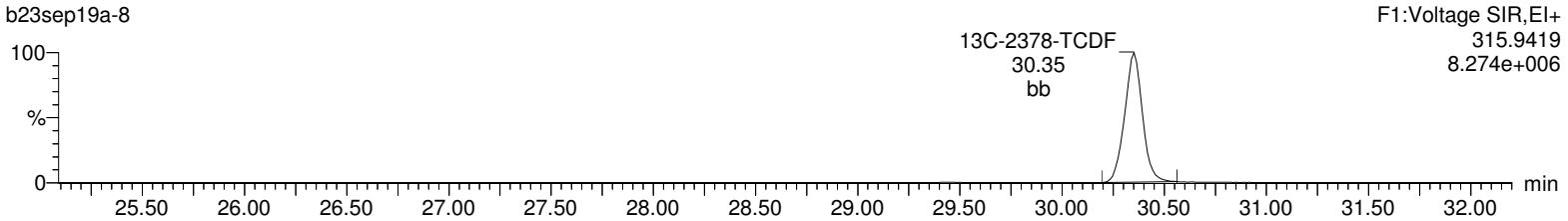
Total-tetrafurans



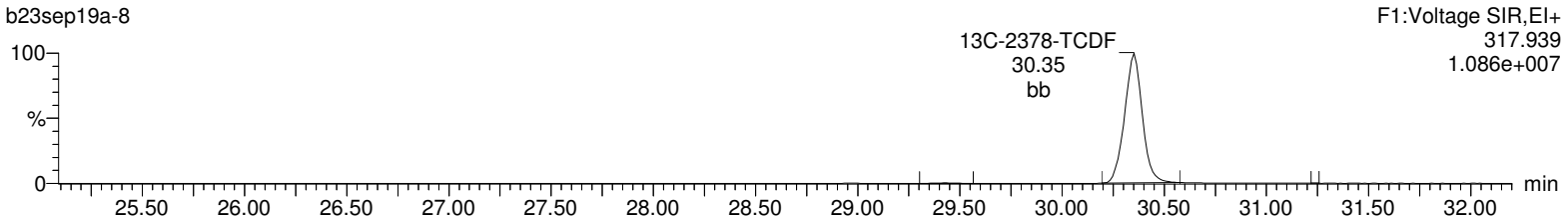
Total-tetrafurans



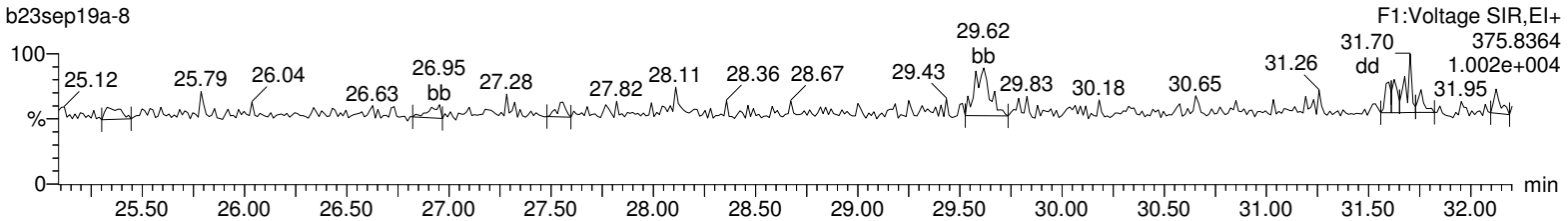
13C-2378-TCDF



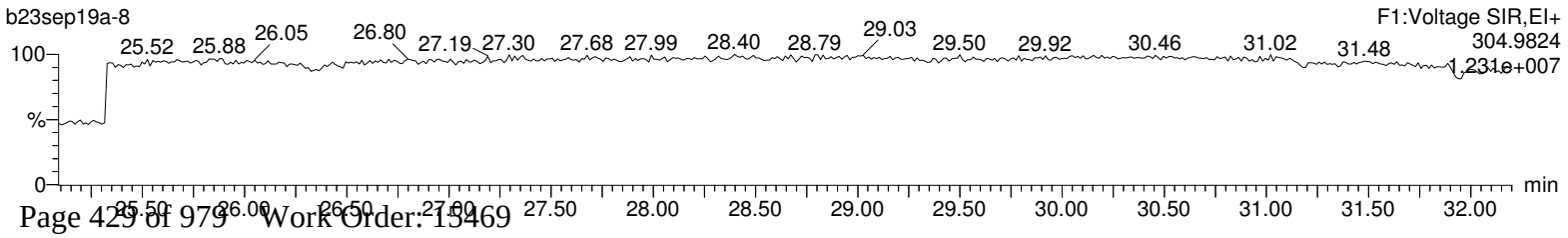
13C-2378-TCDF



HxDPE



Lock Mass F1



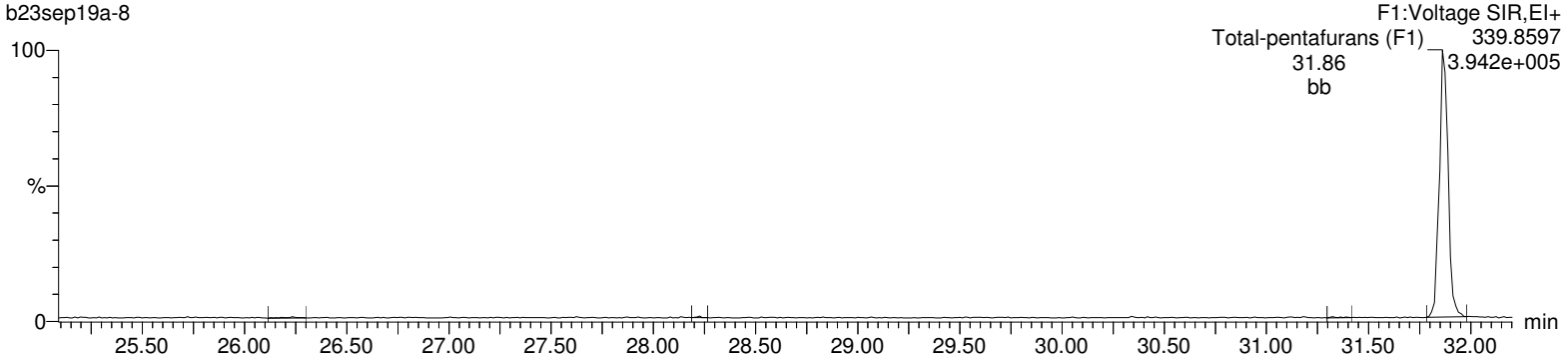
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

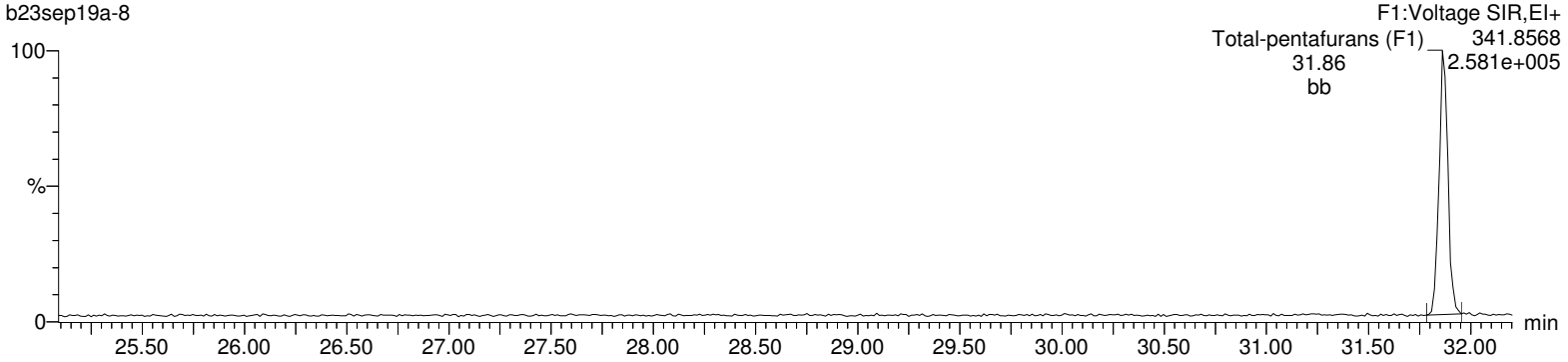
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

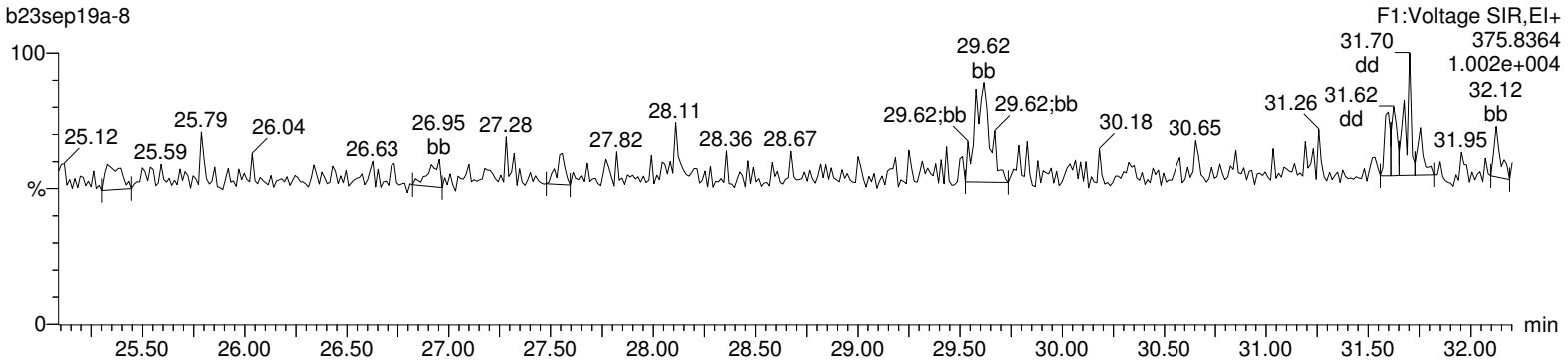
Total-pentafurans (F1)



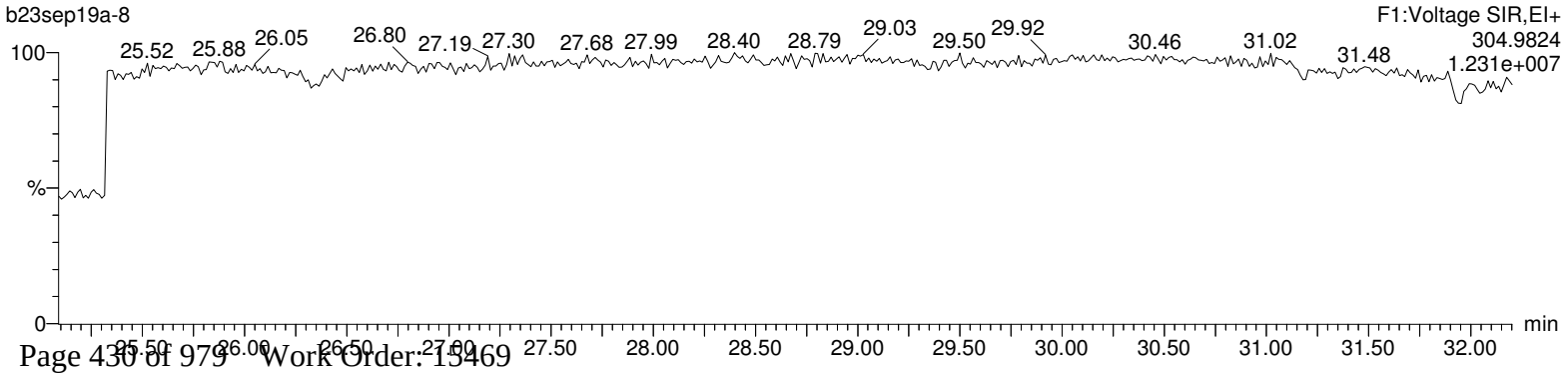
Total-pentafurans (F1)



HxDPE



Lock Mass F1



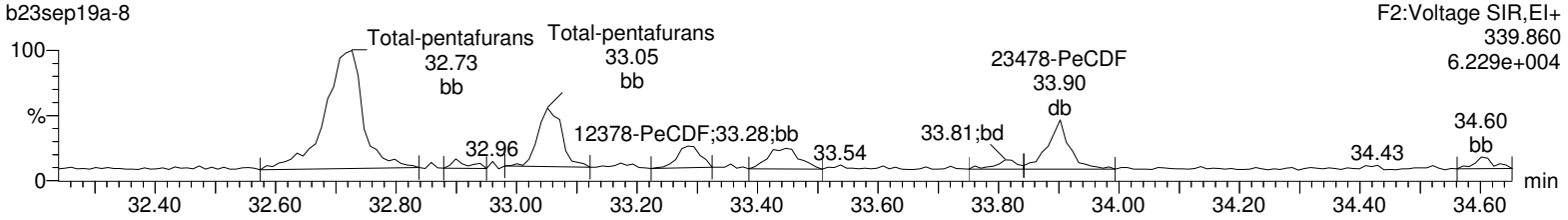
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

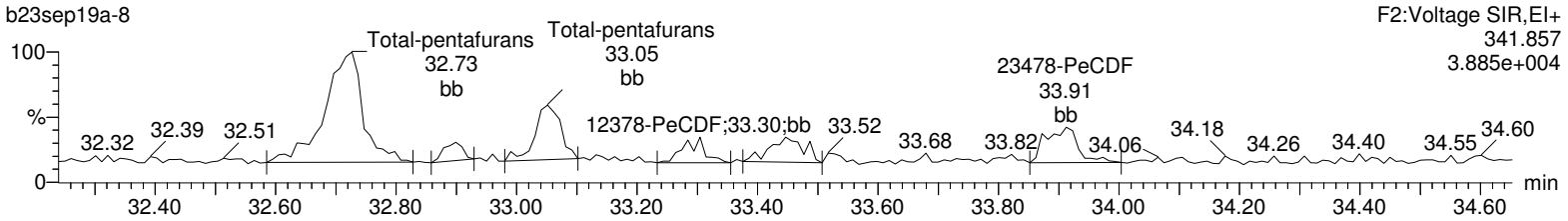
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

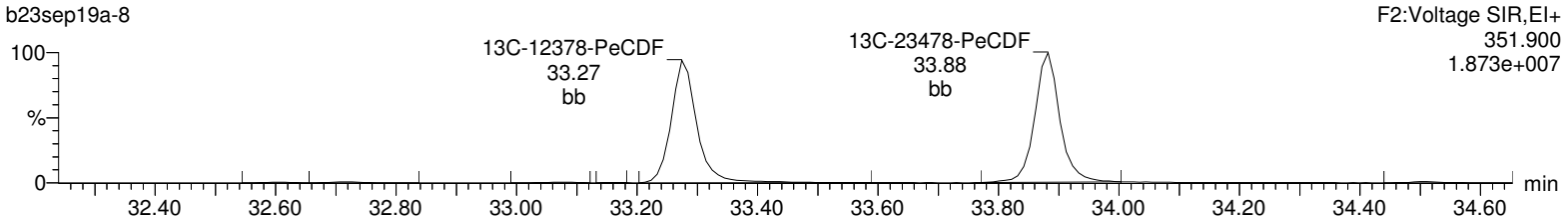
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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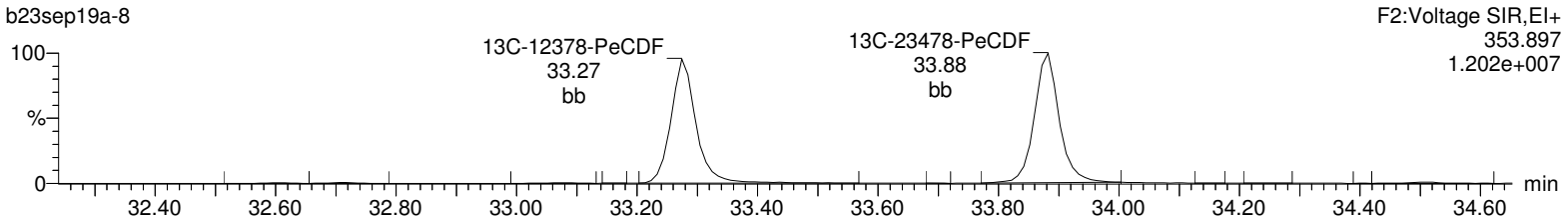

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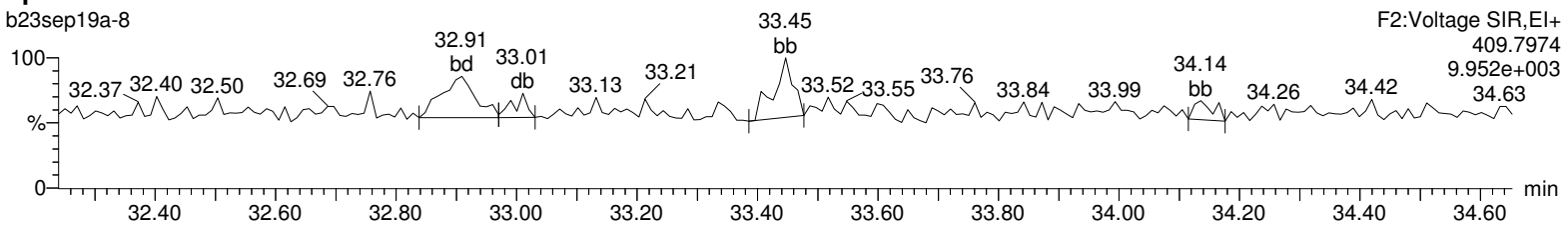
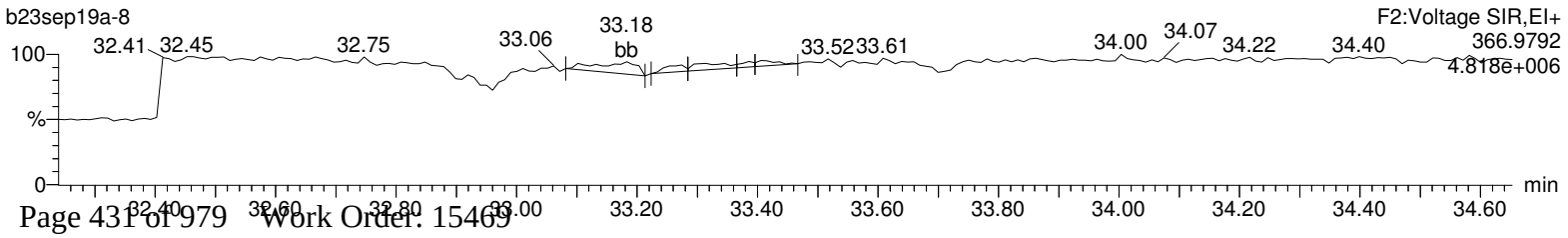


Lock Mass F2



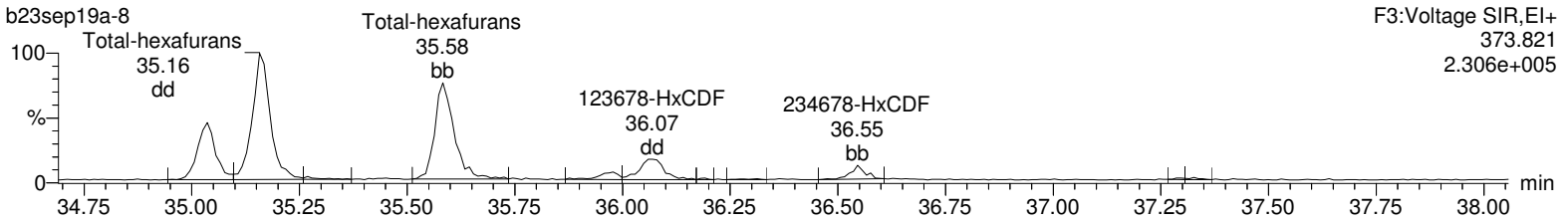
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

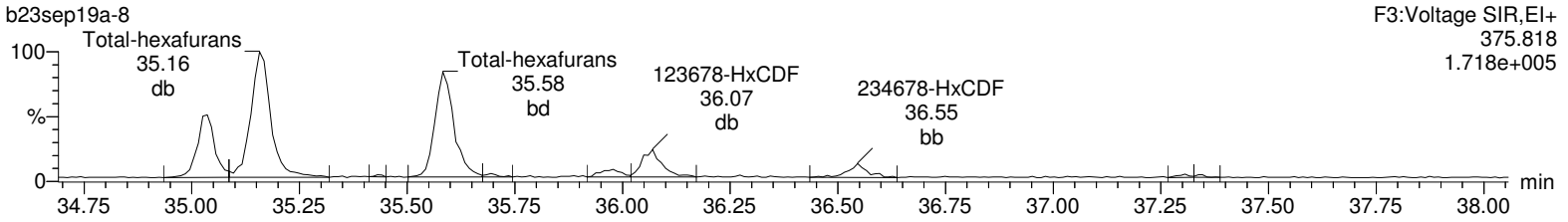
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

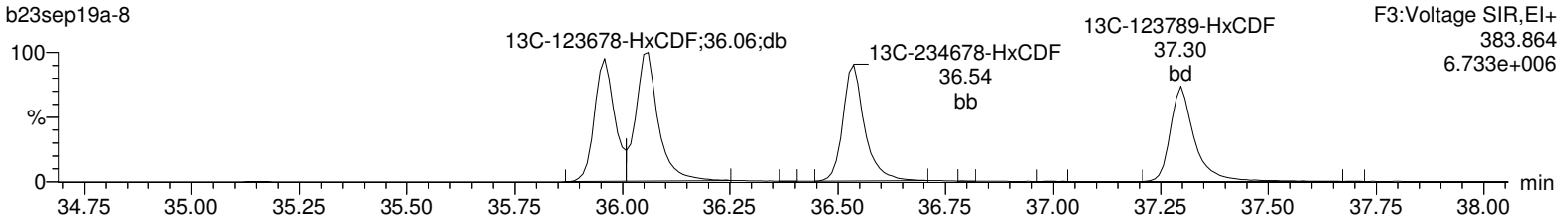
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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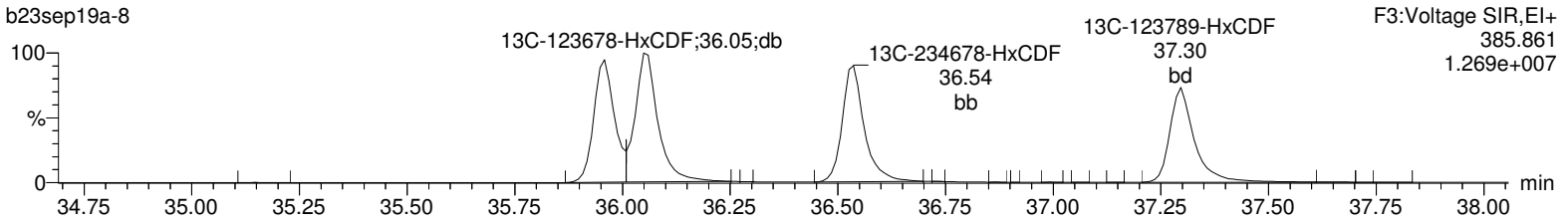

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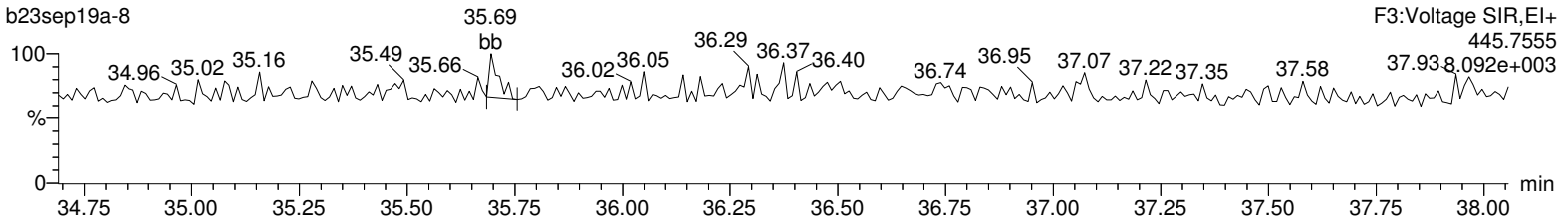
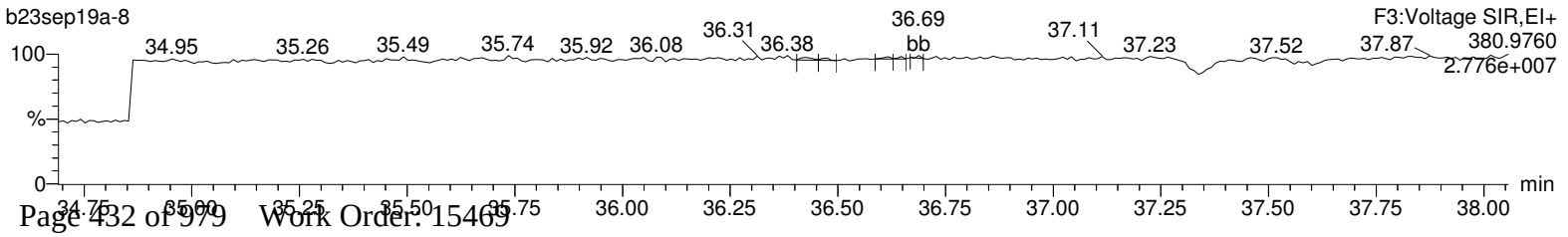


Lock Mass F3



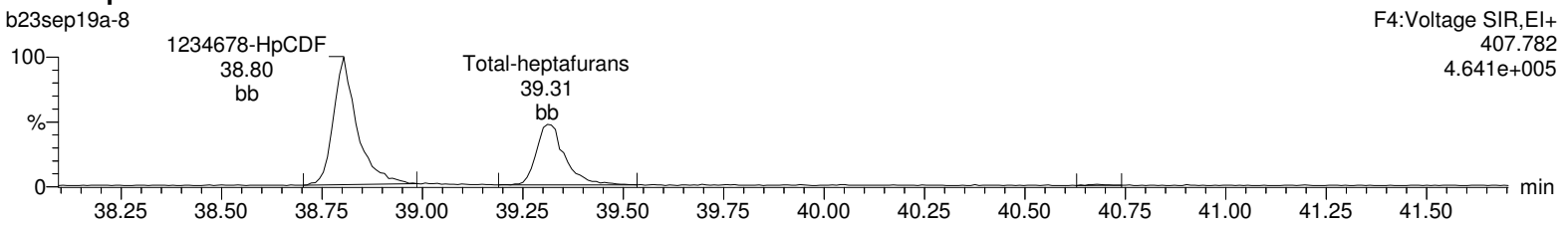
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

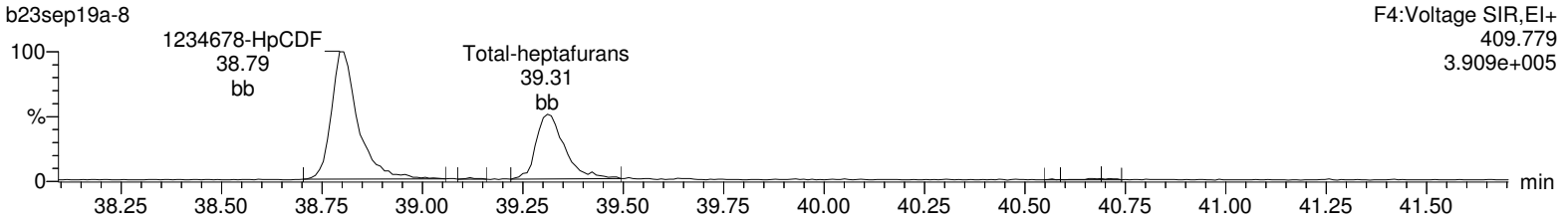
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

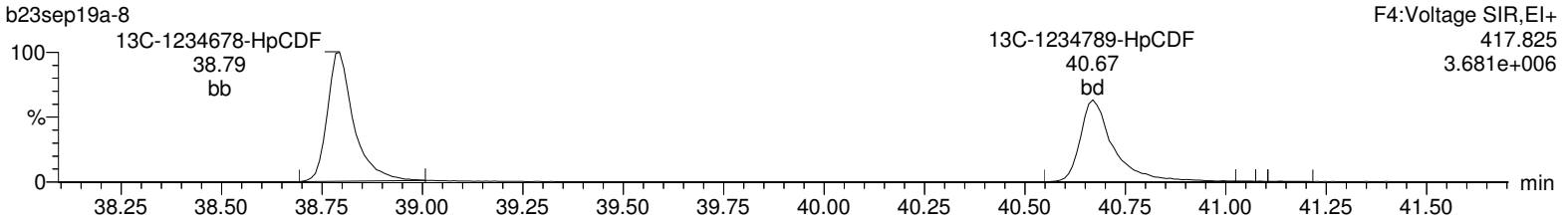
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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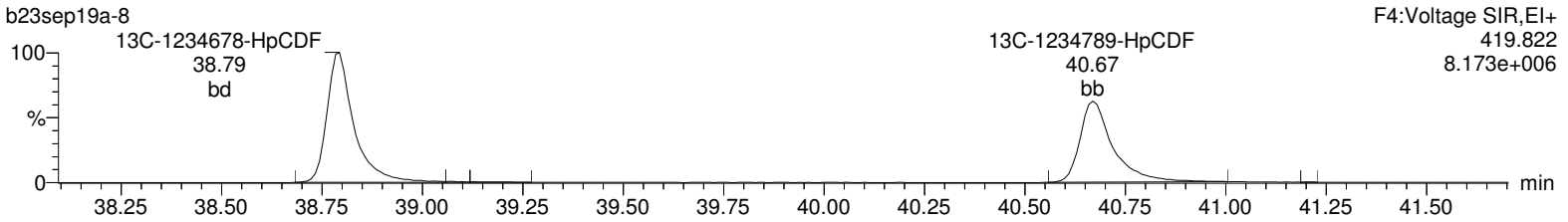
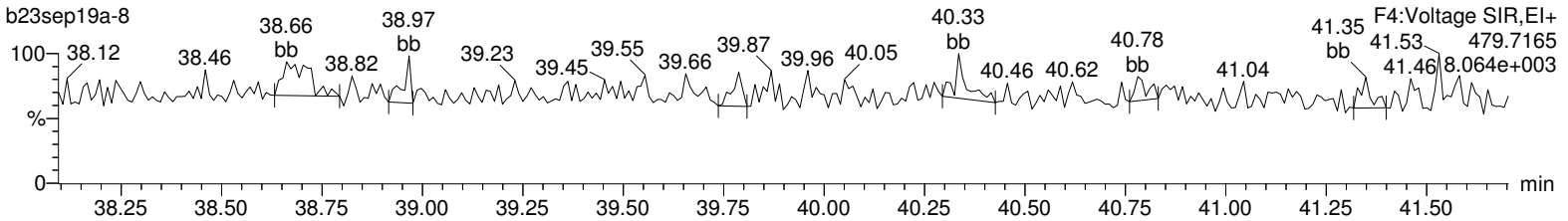
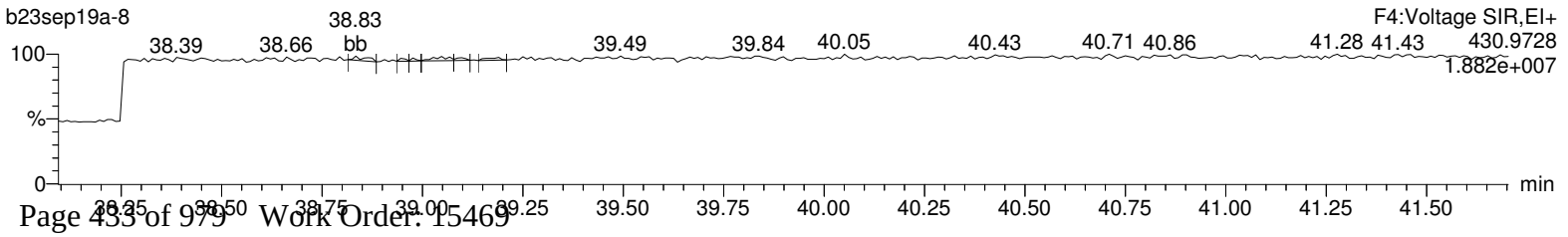


NoDPE



Lock Mass F4



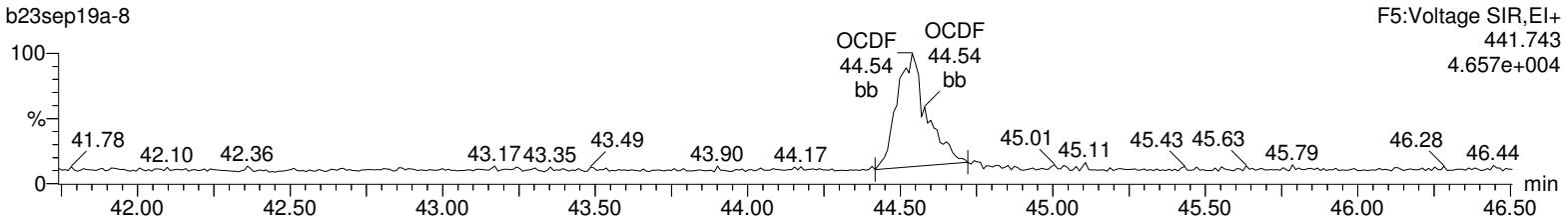
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

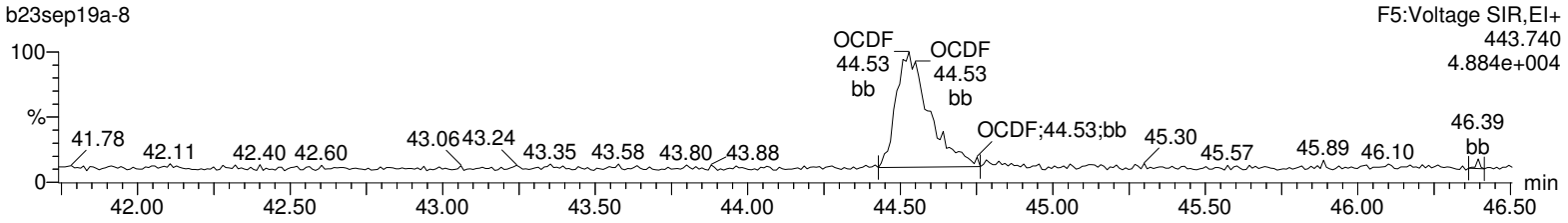
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-8, Date: 23-Sep-2019, Time: 13:58:15, ID: 15469016-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

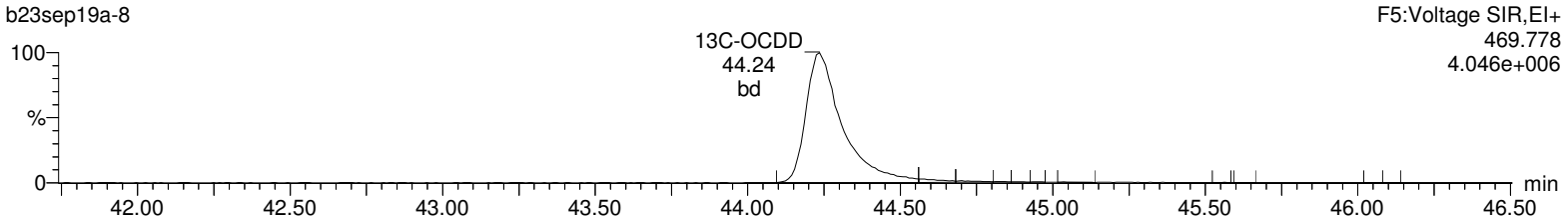
OCDF



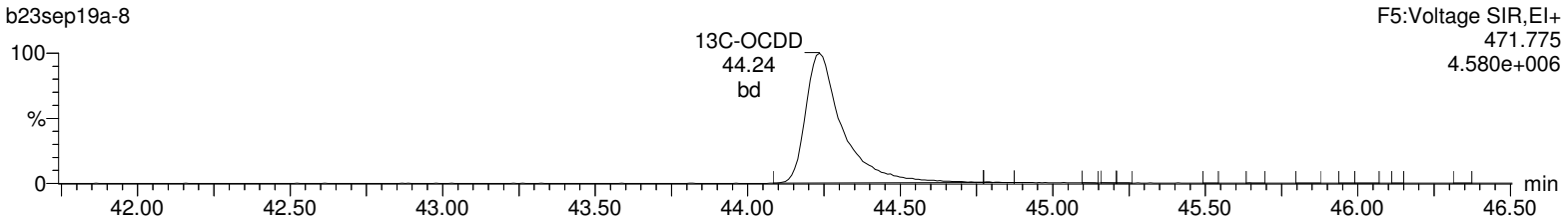
OCDF



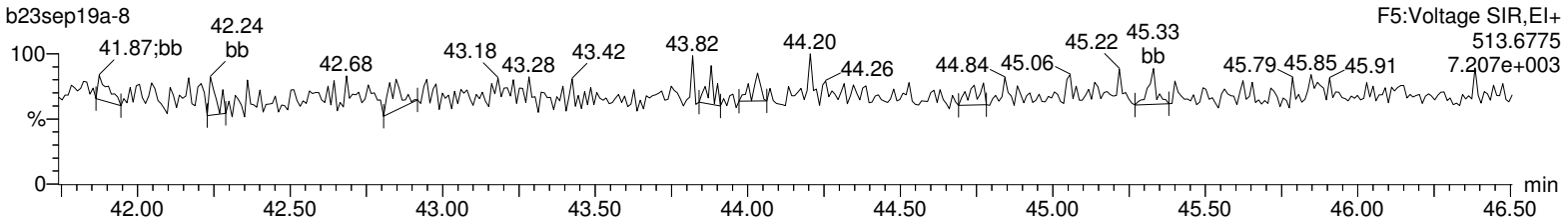
13C-OCDD



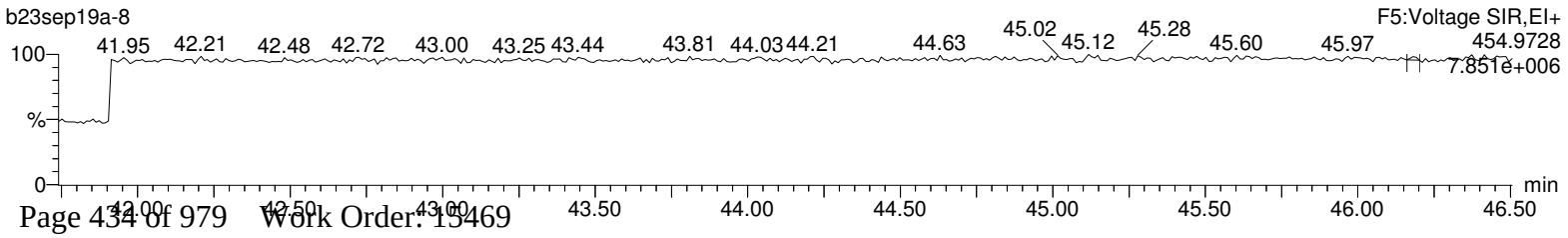
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469017**	**Date Collected:**	**08/29/2019 09:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.1**
Client ID:	**H3-SC1b-60to70-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 14:46**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.48 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0733	pg/g	0.0733	0.949
40321-76-4	1,2,3,7,8-PeCDD	J	0.271	pg/g	0.108	4.75
39227-28-6	1,2,3,4,7,8-HxCDD	JK	0.178	pg/g	0.118	4.75
57653-85-7	1,2,3,6,7,8-HxCDD	J	1.22	pg/g	0.118	4.75
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.509	pg/g	0.120	4.75
35822-46-9	1,2,3,4,6,7,8-HpCDD		24.1	pg/g	0.321	4.75
3268-87-9	1,2,3,4,6,7,8,9-OCDD		373	pg/g	0.944	9.49
51207-31-9	2,3,7,8-TCDF	BJK	0.389	pg/g	0.143	0.949
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.253	pg/g	0.0706	4.75
57117-31-4	2,3,4,7,8-PeCDF	J	1.13	pg/g	0.0632	4.75
70648-26-9	1,2,3,4,7,8-HxCDF	BJ	0.862	pg/g	0.0883	4.75
57117-44-9	1,2,3,6,7,8-HxCDF	J	2.16	pg/g	0.0966	4.75
60851-34-5	2,3,4,6,7,8-HxCDF	J	1.41	pg/g	0.0987	4.75
72918-21-9	1,2,3,7,8,9-HxCDF	BJK	0.247	pg/g	0.119	4.75
67562-39-4	1,2,3,4,6,7,8-HpCDF		43.6	pg/g	0.183	4.75
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.592	pg/g	0.281	4.75
39001-02-0	1,2,3,4,6,7,8,9-OCDF		28.6	pg/g	0.380	9.49
41903-57-5	Total TeCDD	BJK	0.625	pg/g	0.0733	0.949
36088-22-9	Total PeCDD	JKQ	2.73	pg/g	0.108	4.75
34465-46-8	Total HxCDD	JK	11.3	pg/g	0.118	4.75
37871-00-4	Total HpCDD		62.6	pg/g	0.321	4.75
30402-14-3	Total TeCDF	JK	8.61	pg/g	0.143	0.949
30402-15-4	Total PeCDF	JKQ	28.7	pg/g	0.0454	4.75
55684-94-1	Total HxCDF	JK	35.8	pg/g	0.0883	4.75
38998-75-3	Total HpCDF	J	81.3	pg/g	0.183	4.75
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		2.12	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		2.16	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		131	190	pg/g	69.2	(25%-164%)
13C-1,2,3,7,8-PeCDD		121	190	pg/g	63.9	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		143	190	pg/g	75.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		132	190	pg/g	69.5	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		163	190	pg/g	85.8	(23%-140%)
13C-OCDD		283	380	pg/g	74.6	(17%-157%)
13C-2,3,7,8-TCDF		125	190	pg/g	65.7	(24%-169%)
13C-1,2,3,7,8-PeCDF		114	190	pg/g	59.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		115	190	pg/g	60.4	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		139	190	pg/g	73.4	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		124	190	pg/g	65.6	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		129	190	pg/g	68.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		129	190	pg/g	68.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469017**	**Date Collected:**	**08/29/2019 09:00**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.1**
Client ID:	**H3-SC1b-60to70-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 14:46**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-9**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.48 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		147	190	pg/g	77.3	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		164	190	pg/g	86.3	(26%-138%)
37Cl-2,3,7,8-TCDD		15.5	19.0	pg/g	81.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:14:48 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:16:06 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.64e2	4.53e2	6.16e2	31.18	1.001	0.36	YES	0.038	0.0386	4.64e3	1989	2.3	6.24e3	1477	4.2	db	bb
2	12378-PeCDD	8.29e2	5.45e2	1.37e3	34.07	1.000	1.52	NO	0.143	0.0570	1.21e4	2682	4.5	7.99e3	1546	5.2	bb	bb
3	123478-HxCDD							NO		0.0619		1844			1845			
4	123678-HxCDD	3.10e3	2.86e3	5.96e3	36.78	1.001	1.08	NO	0.619	0.0620	6.12e4	1844	33.2	5.09e4	1845	27.6	MM	dd
5	123789-HxCDD	1.13e3	1.20e3	2.33e3	37.01	1.007	0.94	YES	0.268	0.0634	2.18e4	1844	11.8	2.07e4	1845	11.2	dd	db
6	1234678-HpCDD	4.95e4	4.66e4	9.61e4	40.05	1.000	1.06	NO	12.671	0.169	5.58e5	2407	232.0	5.35e5	3423	156.3	bd	bd
7	OCDD	5.11e5	5.73e5	1.08e6	44.25	1.000	0.89	NO	196.687	0.497	3.71e6	3875	957.7	4.21e6	3993	1054.8	bd	bd
8	2378-TCDF	1.29e3	2.24e3	3.54e3	30.36	1.000	0.58	YES	0.205	0.0754	1.47e4	2501	5.9	2.42e4	2692	9.0	db	MM
9	12378-PeCDF	9.22e2	8.00e2	1.72e3	33.28	1.000	1.15	YES	0.133	0.0372	1.78e4	1540	11.5	1.82e4	2480	7.3	bb	bb
10	23478-PeCDF	5.07e3	3.42e3	8.49e3	33.90	1.001	1.48	NO	0.595	0.0333	1.11e5	1540	72.2	6.51e4	2480	26.2	db	db
11	123478-HxCDF	2.79e3	2.32e3	5.11e3	35.98	1.000	1.20	NO	0.454	0.0465	5.76e4	2037	28.3	4.31e4	1845	23.4	dd	MM
12	123678-HxCDF	7.80e3	6.04e3	1.38e4	36.08	1.000	1.29	NO	1.138	0.0509	1.39e5	2037	68.0	9.83e4	1845	53.3	dd	db
13	234678-HxCDF	4.74e3	3.82e3	8.55e3	36.57	1.001	1.24	NO	0.744	0.0520	7.78e4	2037	38.2	6.18e4	1845	33.5	bb	bb
14	123789-HxCDF	7.20e2	4.67e2	1.19e3	37.34	1.001	1.54	YES	0.130	0.0628	1.20e4	2037	5.9	9.40e3	1845	5.1	bb	bb
15	1234678-HpCDF	1.26e5	1.19e5	2.45e5	38.80	1.000	1.05	NO	22.953	0.0965	1.62e6	2748	589.9	1.56e6	2692	578.6	bb	bd
16	1234789-HpCDF	1.35e3	1.39e3	2.75e3	40.68	1.000	0.97	NO	0.312	0.148	1.70e4	2748	6.2	1.83e4	2692	6.8	MM	bb
17	OCDF	4.44e4	4.78e4	9.22e4	44.53	1.006	0.93	NO	15.044	0.200	3.60e5	1649	218.3	3.74e5	1875	199.4	bd	bd
18	13C-2378-TCDD	7.89e5	1.02e6	1.81e6	31.15	1.018	0.78	NO	69.189	0.0659	1.10e7	4681	2352.8	1.42e7	2833	5005.6	bd	bb
19	13C-12378-PeCDD	6.80e5	4.51e5	1.13e6	34.08	1.114	1.51	NO	63.949	0.0520	1.31e7	2532	5183.1	8.44e6	1484	5689.1	bb	bd
20	13C-123478-HxCDD	4.84e5	3.92e5	8.77e5	36.68	0.991	1.23	NO	75.061	0.165	8.81e6	5174	1702.7	7.13e6	6058	1177.5	bd	bd
21	13C-123678-HxCDD	6.01e5	4.86e5	1.09e6	36.76	0.993	1.24	NO	69.498	0.123	9.28e6	5174	1794.0	7.53e6	6058	1242.6	dd	dd
22	13C-1234678-HpCDD	4.04e5	3.99e5	8.03e5	40.03	1.082	1.01	NO	85.755	0.116	4.59e6	3369	1363.1	4.41e6	2956	1490.6	bd	bd
23	13C-OCDD	5.65e5	6.41e5	1.21e6	44.24	1.195	0.88	NO	149.184	0.138	4.06e6	3095	1313.3	4.67e6	3388	1377.0	bd	bd
24	13C-2378-TCDF	8.38e5	1.10e6	1.94e6	30.35	0.992	0.76	NO	65.682	0.0837	8.36e6	6573	1271.5	1.08e7	4204	2578.5	bb	bb
25	13C-12378-PeCDF	8.64e5	5.57e5	1.42e6	33.28	1.088	1.55	NO	59.901	0.123	1.81e7	7858	2303.5	1.17e7	4900	2380.0	db	dd
26	13C-23478-PeCDF	8.94e5	5.76e5	1.47e6	33.88	1.107	1.55	NO	60.353	0.120	1.89e7	7858	2404.6	1.21e7	4900	2477.1	bb	bb
27	13C-123478-HxCDF	3.41e5	6.51e5	9.91e5	35.97	0.972	0.52	NO	73.443	0.132	6.33e6	5208	1214.7	1.19e7	5170	2298.3	bd	bd
28	13C-123678-HxCDF	3.96e5	7.58e5	1.15e6	36.07	0.975	0.52	NO	65.570	0.101	6.21e6	5208	1191.9	1.19e7	5170	2306.2	db	db
29	13C-234678-HxCDF	3.54e5	6.63e5	1.02e6	36.54	0.987	0.53	NO	68.050	0.119	5.75e6	5208	1104.8	1.09e7	5170	2102.9	bd	bb
30	13C-123789-HxCDF	2.98e5	5.58e5	8.56e5	37.31	1.008	0.53	NO	67.951	0.142	5.06e6	5208	972.0	9.56e6	5170	1848.4	bd	bb
31	13C-1234678-HpCDF	2.74e5	6.23e5	8.97e5	38.79	1.048	0.44	NO	77.285	0.157	3.62e6	4802	753.3	7.93e6	5813	1363.7	bb	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:14:48 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:16:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.20e5	4.97e5	7.17e5	40.68	1.099	0.44	NO	86.267	0.220	2.29e6	4802	477.7	5.15e6	5813	886.5	bd	bd
33	13C-1234-TCDD	9.87e5	1.28e6	2.27e6	30.60	0.000	0.77	NO	100.000	0.0758	1.08e7	4681	2301.1	1.40e7	2833	4950.3	bb	bb
34	13C-123789-HxCDD	8.20e5	6.60e5	1.48e6	37.01	0.000	1.24	NO	100.000	0.130	1.19e7	5174	2305.0	9.74e6	6058	1608.0	dd	dd
35	37Cl-2378-TCDD	1.99e5		1.99e5	31.17	1.018			8.148	0.0163	2.81e6	1738	1615.0				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:14:48 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:16:06 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.12e3	1.56e3	2.69e3	27.79	0.72	NO	0.167	0.0386	1.20e4	1989	6.0	2.04e4	1477	13.8	bb	MM
2	Total-tetradioxins	5.43e2	7.53e2	1.30e3	28.12	0.72	NO	0.081	0.0386	5.30e3	1989	2.7	9.11e3	1477	6.2	MM	bb
3	Total-tetradioxins	6.49e2	6.51e2	1.30e3	28.46	1.00	YES	0.081	0.0386	9.16e3	1989	4.6	7.27e3	1477	4.9	MM	MM
4	Total-tetradioxins	7.29e1	2.54e2	3.27e2	29.12	0.29	YES	0.020	0.0386	3.83e3	1989	1.9	4.70e3	1477	3.2	bd	bb
5	Total-tetradioxins	6.55e1	3.78e2	4.43e2	29.37	0.17	YES	0.028	0.0386	2.75e3	1989	1.4	4.87e3	1477	3.3	bd	bd
6	Total-tetradioxins	3.55e2	5.61e2	9.16e2	29.60	0.63	YES	0.057	0.0386	3.24e3	1989	1.6	5.24e3	1477	3.5	MM	db
7	Total-tetradioxins	8.92e1	1.80e2	2.69e2	30.05	0.50	YES	0.017	0.0386	2.95e3	1989	1.5	2.79e3	1477	1.9	bd	bb
8	2378-TCDD	1.64e2	4.53e2	6.16e2	31.18	0.36	YES	0.038	0.0386	4.64e3	1989	2.3	6.24e3	1477	4.2	db	bb
9	Total-tetradioxins	9.48e1	5.72e1	1.52e2	31.78	1.66	YES	0.009	0.0386	1.93e3	1989	1.0	1.97e3	1477	1.3	bd	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	2.64e3	1.84e3	4.47e3	32.77	1.43	NO	0.465	0.0570	4.68e4	2682	17.5	4.32e4	1546	28.0	bb	bd
2	Total-pentadioxins	5.24e2	4.78e2	1.00e3	33.02	1.10	YES	0.104	0.0570	1.35e4	2682	5.0	1.25e4	1546	8.1	bb	MM
3	Total-pentadioxins	1.58e3	8.67e2	2.45e3	33.31	1.82	YES	0.255	0.0570	3.22e4	2682	12.0	1.77e4	1546	11.4	bd	MM
4	Total-pentadioxins	6.93e2	4.75e2	1.17e3	33.43	1.46	NO	0.122	0.0570	1.46e4	2682	5.4	9.59e3	1546	6.2	dd	dd
5	Total-pentadioxins	5.30e2	3.15e2	8.46e2	33.47	1.68	NO	0.088	0.0570	1.33e4	2682	5.0	7.72e3	1546	5.0	dd	db
6	Total-pentadioxins	1.12e3	7.43e2	1.86e3	33.61	1.50	NO	0.193	0.0570	1.63e4	2682	6.1	1.54e4	1546	9.9	db	bb
7	12378-PeCDD	8.29e2	5.45e2	1.37e3	34.07	1.52	NO	0.143	0.0570	1.21e4	2682	4.5	7.99e3	1546	5.2	bb	bb
8	Total-pentadioxins	3.95e2	2.36e2	6.31e2	34.36	1.67	NO	0.066	0.0570	6.65e3	2682	2.5	5.16e3	1546	3.3	bb	bb
9	Total-pentadioxins	7.56e1	1.46e2	2.22e2	33.82	0.52	YES	0.023	0.0570	3.12e3	2682	1.2	5.61e3	1546	3.6	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:14:48 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:16:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	6.56e1	1.16e3	1.22e3	34.72	0.06	YES	0.138	0.0623	2.75e3	1844	1.5	2.68e4	1845	14.5	bb	bb
2	Total-hexadioxins	1.10e4	8.87e3	1.99e4	35.46	1.24	NO	2.242	0.0623	2.07e5	1844	112.5	1.70e5	1845	92.2	bb	bb
3	Total-hexadioxins	1.63e3	1.11e3	2.73e3	35.91	1.47	YES	0.309	0.0623	2.73e4	1844	14.8	2.25e4	1845	12.2	bd	bb
4	Total-hexadioxins	1.15e4	9.17e3	2.07e4	36.13	1.26	NO	2.338	0.0623	1.64e5	1844	88.7	1.51e5	1845	82.0	dd	bb
5	123678-HxCDD	3.10e3	2.86e3	5.96e3	36.78	1.08	NO	0.619	0.0620	6.12e4	1844	33.2	5.09e4	1845	27.6	MM	dd
6	Total-hexadioxins	3.51e2	2.13e2	5.64e2	36.94	1.65	YES	0.064	0.0623	8.95e3	1844	4.9	6.68e3	1845	3.6	dd	dd
7	123789-HxCDD	1.13e3	1.20e3	2.33e3	37.01	0.94	YES	0.268	0.0634	2.18e4	1844	11.8	2.07e4	1845	11.2	dd	db
8	Total-hexadioxins	1.98e2	8.27e2	1.03e3	37.42	0.24	YES	0.116	0.0623	6.12e3	1844	3.3	1.54e4	1845	8.3	bb	bb
9	Total-hexadioxins	6.92e2	4.08e2	1.10e3	36.73	1.69	YES	0.124	0.0623	1.54e4	1844	8.4	9.59e3	1845	5.2	MM	MM

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	7.78e4	7.61e4	1.54e5	39.14	1.02	NO	20.288	0.169	1.03e6	2407	429.7	9.74e5	3423	284.7	bb	bb
2	1234678-HpCDD	4.95e4	4.66e4	9.61e4	40.05	1.06	NO	12.671	0.169	5.58e5	2407	232.0	5.35e5	3423	156.3	bd	bd
3	Total-heptadioxins	2.76e2	1.79e2	4.55e2	40.29	1.55	YES	0.060	0.169	8.10e3	2407	3.4	6.75e3	3423	2.0	db	db

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:14:48 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:16:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.15e3	1.24e3	2.39e3	26.09	0.93	YES	0.138	0.0754	1.12e4	2501	4.5	1.25e4	2692	4.6	MM	bb
2	Total-tetrafurans	2.14e3	3.09e3	5.23e3	26.52	0.69	NO	0.302	0.0754	2.70e4	2501	10.8	3.21e4	2692	11.9	bb	bb
3	Total-tetrafurans	1.04e4	1.25e4	2.29e4	27.02	0.84	NO	1.323	0.0754	1.12e5	2501	44.8	1.36e5	2692	50.5	bb	bb
4	Total-tetrafurans	1.49e3	2.00e3	3.49e3	27.40	0.74	NO	0.202	0.0754	9.79e3	2501	3.9	1.34e4	2692	5.0	MM	MM
5	Total-tetrafurans	4.07e3	4.89e3	8.96e3	27.72	0.83	NO	0.518	0.0754	3.70e4	2501	14.8	4.97e4	2692	18.5	bb	bb
6	Total-tetrafurans	5.50e3	7.16e3	1.27e4	28.07	0.77	NO	0.733	0.0754	5.64e4	2501	22.6	7.92e4	2692	29.4	MM	bd
7	Total-tetrafurans	5.55e2	5.95e2	1.15e3	28.36	0.93	YES	0.067	0.0754	7.19e3	2501	2.9	7.54e3	2692	2.8	MM	db
8	Total-tetrafurans	4.17e2	6.54e2	1.07e3	28.83	0.64	YES	0.062	0.0754	7.83e3	2501	3.1	9.22e3	2692	3.4	bd	bd
9	Total-tetrafurans	2.99e3	4.17e3	7.16e3	28.95	0.72	NO	0.414	0.0754	2.69e4	2501	10.7	3.83e4	2692	14.2	db	db
10	Total-tetrafurans	1.95e3	2.45e3	4.40e3	29.45	0.79	NO	0.254	0.0754	2.24e4	2501	9.0	2.59e4	2692	9.6	MM	bd
11	Total-tetrafurans	1.36e3	2.14e3	3.50e3	29.64	0.63	YES	0.203	0.0754	1.46e4	2501	5.9	1.74e4	2692	6.5	MM	db
12	Total-tetrafurans	2.92e2	4.01e2	6.93e2	29.95	0.73	NO	0.040	0.0754	3.61e3	2501	1.4	6.39e3	2692	2.4	MM	bb
13	Total-tetrafurans	2.68e2	4.95e2	7.63e2	30.30	0.54	YES	0.044	0.0754	4.82e3	2501	1.9	8.56e3	2692	3.2	MM	MM
14	2378-TCDF	1.29e3	2.24e3	3.54e3	30.36	0.58	YES	0.205	0.0754	1.47e4	2501	5.9	2.42e4	2692	9.0	db	MM
15	Total-tetrafurans	4.36e2	4.45e2	8.81e2	30.72	0.98	YES	0.051	0.0754	6.72e3	2501	2.7	7.38e3	2692	2.7	bb	bb
16	Total-tetrafurans	1.18e2	1.92e2	3.10e2	31.23	0.61	YES	0.018	0.0754	2.95e3	2501	1.2	3.53e3	2692	1.3	bd	bb
17	Total-tetrafurans	1.01e3	1.19e3	2.19e3	31.64	0.85	NO	0.127	0.0754	2.12e4	2501	8.5	2.32e4	2692	8.6	bd	bd
18	Total-tetrafurans	5.10e2	6.74e2	1.18e3	31.70	0.76	NO	0.068	0.0754	1.19e4	2501	4.8	1.52e4	2692	5.7	db	db
19	Total-tetrafurans	9.18e2	1.08e3	2.00e3	31.87	0.85	NO	0.116	0.0754	1.28e4	2501	5.1	1.41e4	2692	5.2	bb	bb
20	Total-tetrafurans	1.69e2	4.71e2	6.40e2	32.14	0.36	YES	0.037	0.0754	5.37e3	2501	2.1	8.14e3	2692	3.0	bb	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	9.00e4	5.77e4	1.48e5	31.87	1.56	NO	10.874	0.0239	2.04e6	959	2130.5	1.27e6	1774	713.6	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 15:14:48 Eastern Standard Time
Printed: Tuesday, September 24, 2019 15:16:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	1.92e4	1.20e4	3.11e4	32.74	1.60	NO	2.290	0.0352	2.66e5	1540	172.7	1.61e5	2480	65.0	bb	bb
2	Total-pentafurans	4.92e2	4.09e2	9.01e2	32.91	1.20	YES	0.066	0.0352	1.32e4	1540	8.5	9.28e3	2480	3.7	bb	bb
3	Total-pentafurans	6.25e3	4.01e3	1.03e4	33.06	1.56	NO	0.756	0.0352	1.41e5	1540	91.5	8.64e4	2480	34.9	bd	bd
4	Total-pentafurans	2.19e2	1.37e2	3.57e2	33.18	1.60	NO	0.026	0.0352	1.02e4	1540	6.6	5.00e3	2480	2.0	db	db
5	12378-PeCDF	9.22e2	8.00e2	1.72e3	33.28	1.15	YES	0.133	0.0372	1.78e4	1540	11.5	1.82e4	2480	7.3	bb	bb
6	Total-pentafurans	3.12e3	2.11e3	5.24e3	33.46	1.48	NO	0.385	0.0352	6.65e4	1540	43.2	4.42e4	2480	17.8	bb	bb
7	Total-pentafurans	3.82e2	2.11e2	5.93e2	33.83	1.81	YES	0.044	0.0352	9.08e3	1540	5.9	5.95e3	2480	2.4	bd	bd
8	23478-PeCDF	5.07e3	3.42e3	8.49e3	33.90	1.48	NO	0.595	0.0333	1.11e5	1540	72.2	6.51e4	2480	26.2	db	db
9	Total-pentafurans	2.36e2	2.21e2	4.57e2	34.51	1.07	YES	0.034	0.0352	6.65e3	1540	4.3	6.65e3	2480	2.7	bd	bb

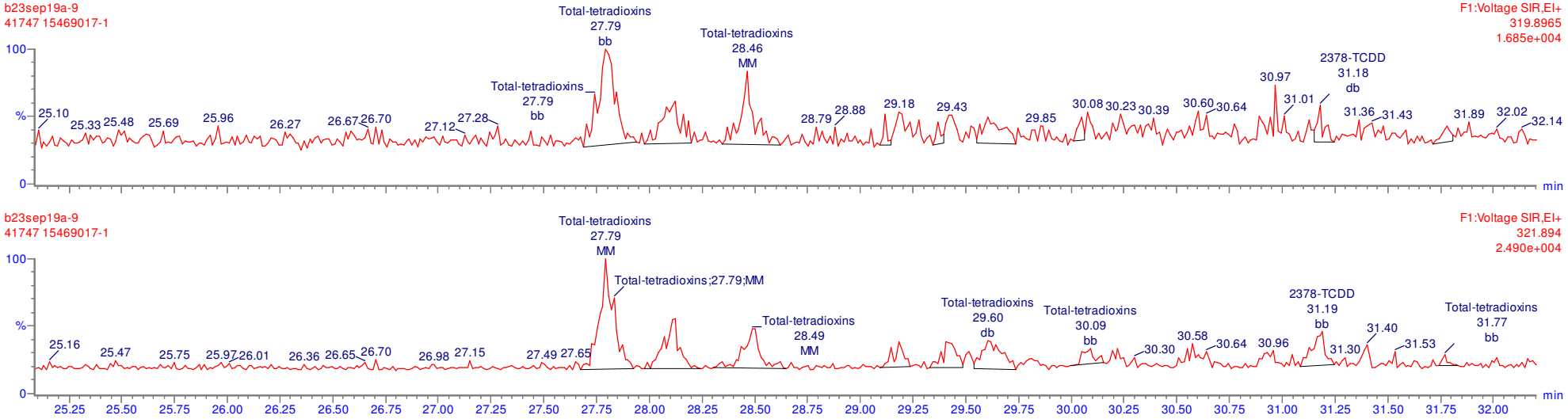
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	1.55e4	1.28e4	2.83e4	35.04	1.21	NO	2.569	0.0525	3.30e5	2037	162.2	2.87e5	1845	155.5	bd	bd
2	Total-hexafurans	4.36e4	3.39e4	7.75e4	35.17	1.29	NO	7.043	0.0525	8.33e5	2037	409.1	6.07e5	1845	328.8	db	db
3	Total-hexafurans	6.34e2	4.65e2	1.10e3	35.45	1.36	NO	0.100	0.0525	1.44e4	2037	7.1	1.44e4	1845	7.8	MM	bb
4	Total-hexafurans	4.09e4	3.18e4	7.27e4	35.59	1.29	NO	6.603	0.0525	7.86e5	2037	385.8	6.25e5	1845	338.5	bd	bb
5	Total-hexafurans	4.14e2	3.78e2	7.93e2	35.91	1.09	NO	0.072	0.0525	8.98e3	2037	4.4	9.50e3	1845	5.2	bd	MM
6	123478-HxCDF	2.79e3	2.32e3	5.11e3	35.98	1.20	NO	0.454	0.0465	5.76e4	2037	28.3	4.31e4	1845	23.4	dd	MM
7	123678-HxCDF	7.80e3	6.04e3	1.38e4	36.08	1.29	NO	1.138	0.0509	1.39e5	2037	68.0	9.83e4	1845	53.3	dd	db
8	Total-hexafurans	3.42e2	2.33e2	5.75e2	36.31	1.47	YES	0.052	0.0525	7.08e3	2037	3.5	4.00e3	1845	2.2	dd	MM
9	Total-hexafurans	2.05e2	1.16e2	3.21e2	36.38	1.77	YES	0.029	0.0525	4.65e3	2037	2.3	3.13e3	1845	1.7	db	MM
10	234678-HxCDF	4.74e3	3.82e3	8.55e3	36.57	1.24	NO	0.744	0.0520	7.78e4	2037	38.2	6.18e4	1845	33.5	bb	bb
11	123789-HxCDF	7.20e2	4.67e2	1.19e3	37.34	1.54	YES	0.130	0.0628	1.20e4	2037	5.9	9.40e3	1845	5.1	bb	bb

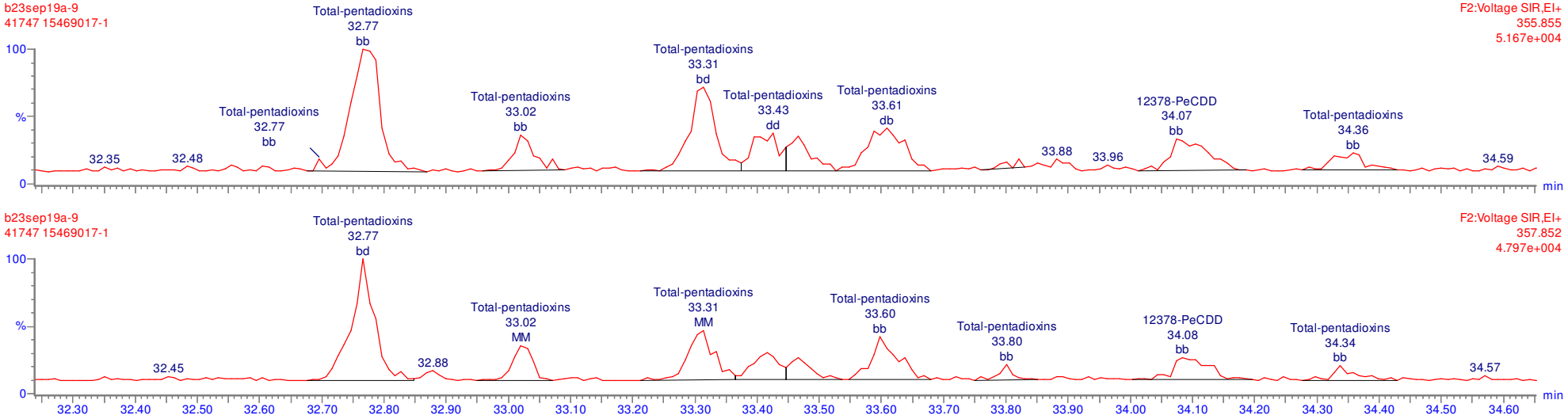
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	1.26e5	1.19e5	2.45e5	38.80	1.05	NO	22.953	0.0965	1.62e6	2748	589.9	1.56e6	2692	578.6	bb	bd
2	Total-heptafurans	1.16e2	1.85e2	3.01e2	39.14	0.63	YES	0.031	0.120	6.82e3	2748	2.5	6.37e3	2692	2.4	bb	bb
3	Total-heptafurans	9.66e4	9.40e4	1.91e5	39.32	1.03	NO	19.537	0.120	1.25e6	2748	456.4	1.24e6	2692	459.5	bb	bd
4	1234789-HpCDF	1.35e3	1.39e3	2.75e3	40.68	0.97	NO	0.312	0.148	1.70e4	2748	6.2	1.83e4	2692	6.8	MM	bb

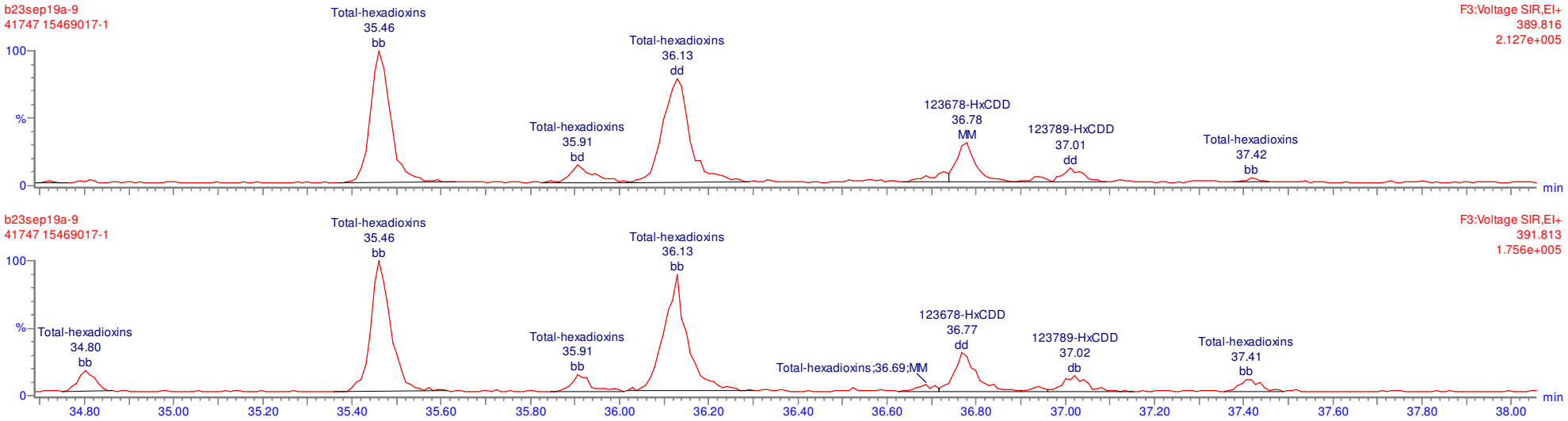
MANUAL INTEGRATION
METHOD 8290
HRP763_1



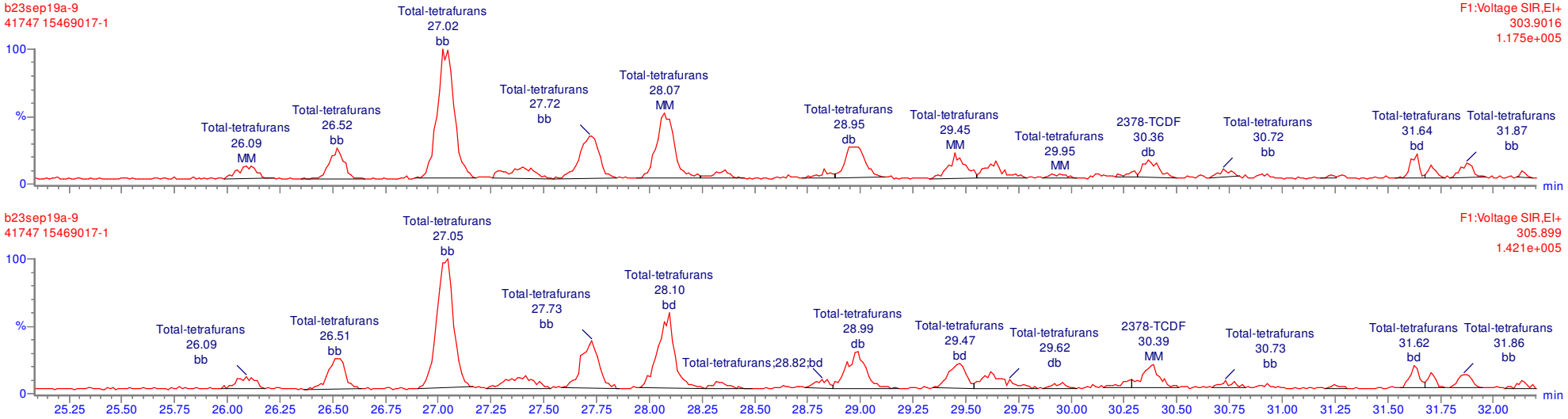
MANUAL INTEGRATION
METHOD 8290
HRP763_1



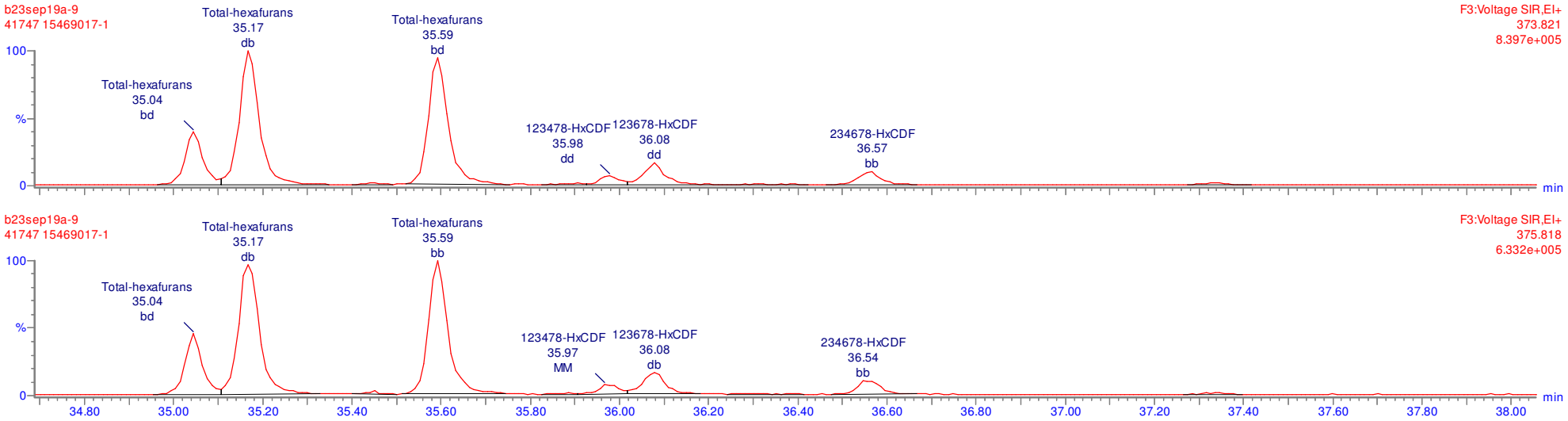
MANUAL INTEGRATION
METHOD 8290
HRP763_1



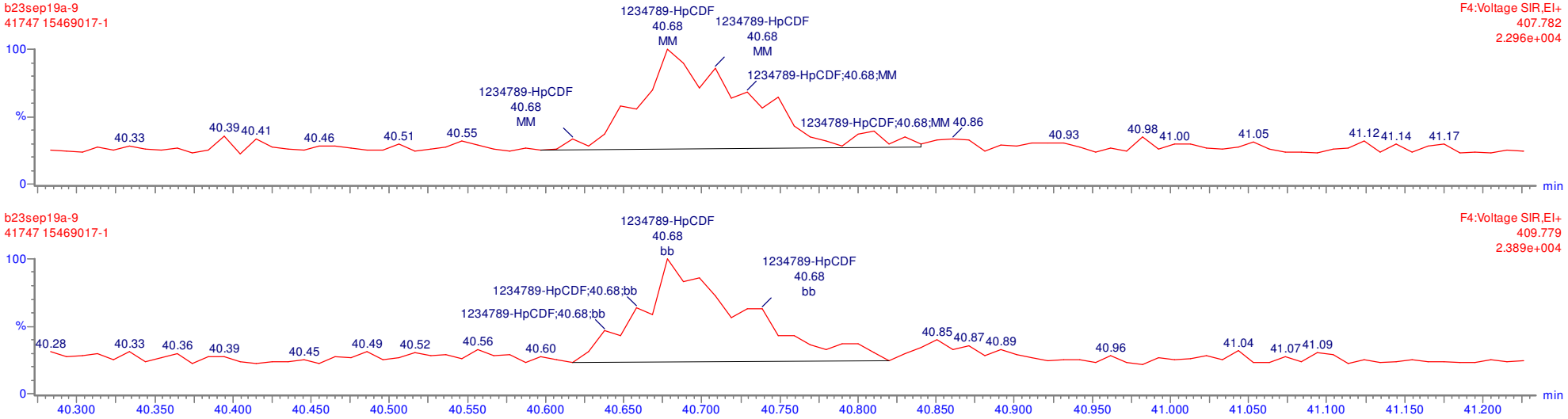
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



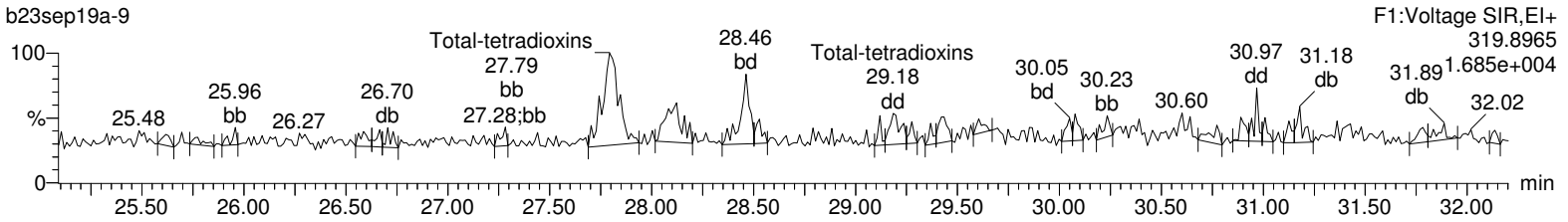
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

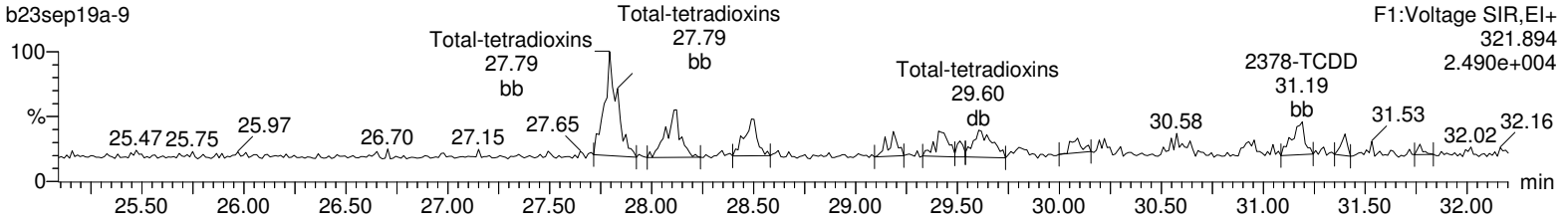
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-tetradioxins



Total-tetradioxins



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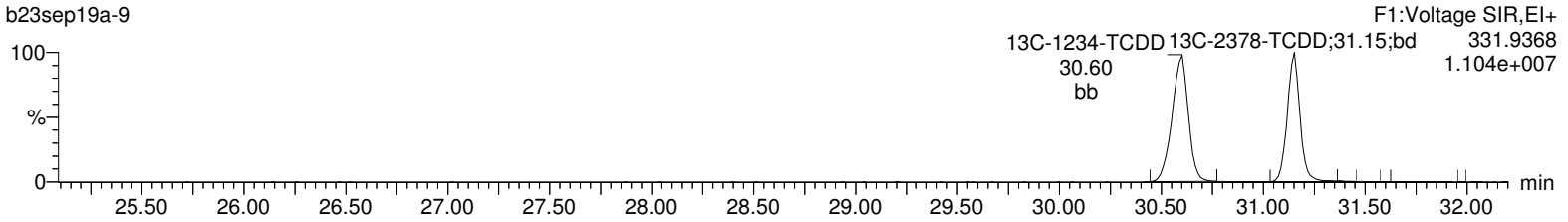

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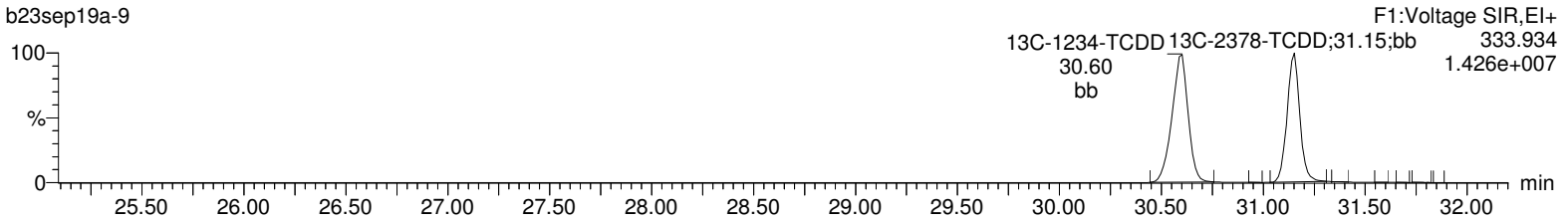

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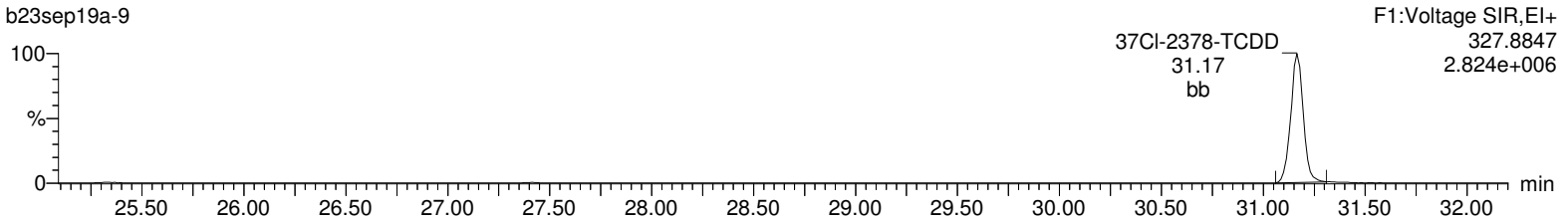
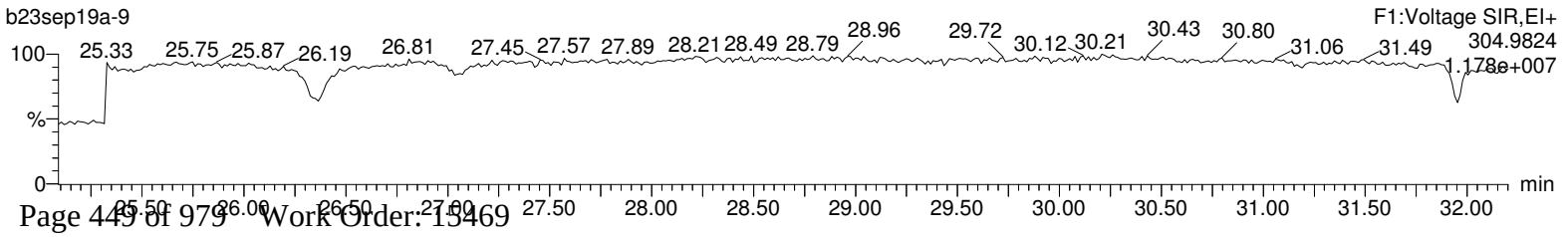


Lock Mass F1



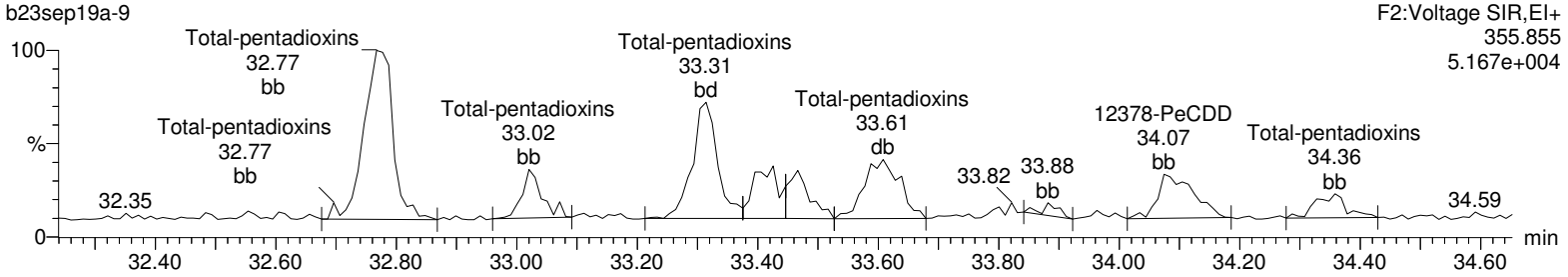
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

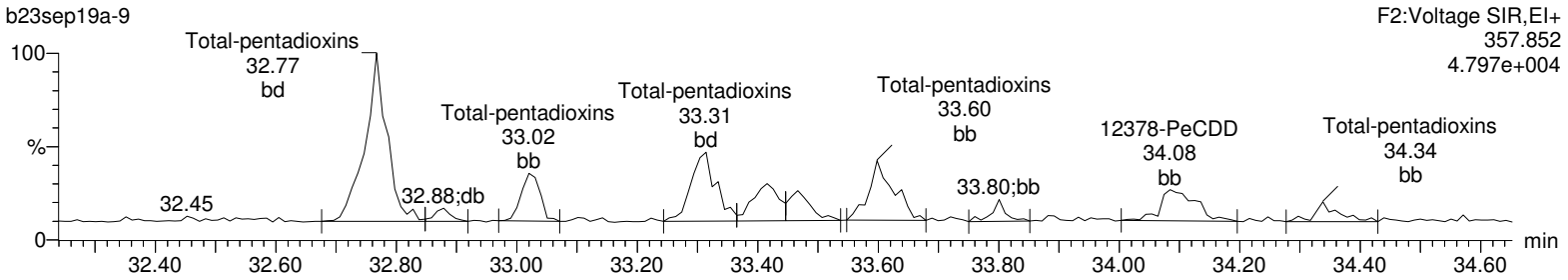
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

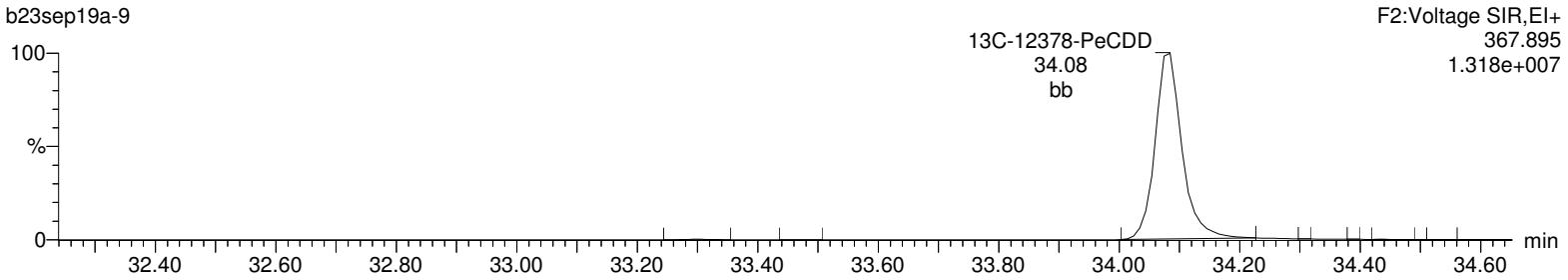
Total-pentadioxins



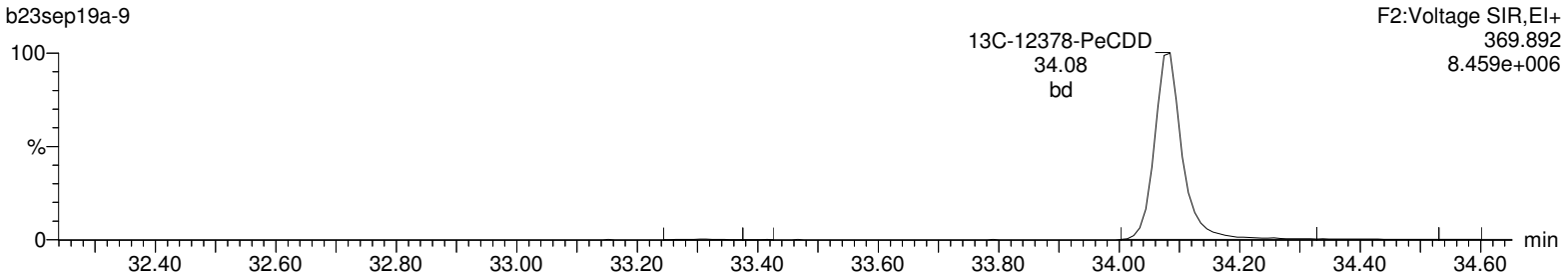
Total-pentadioxins



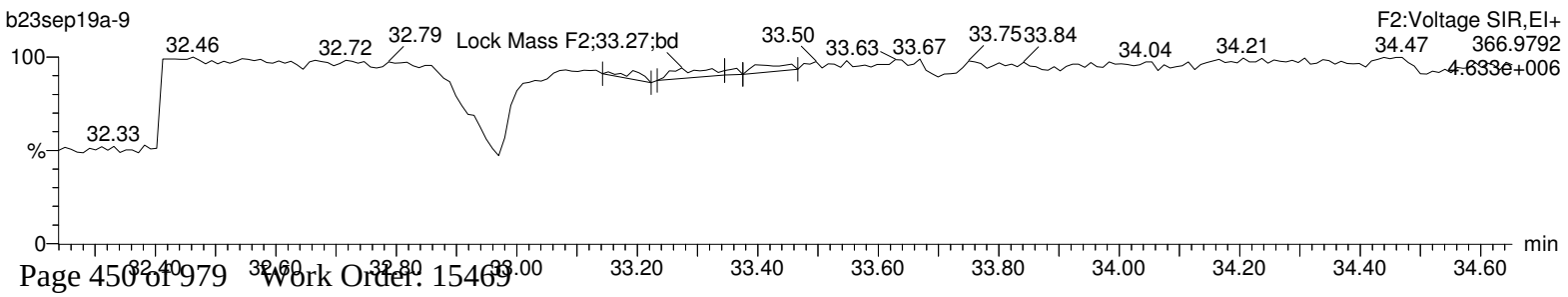
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



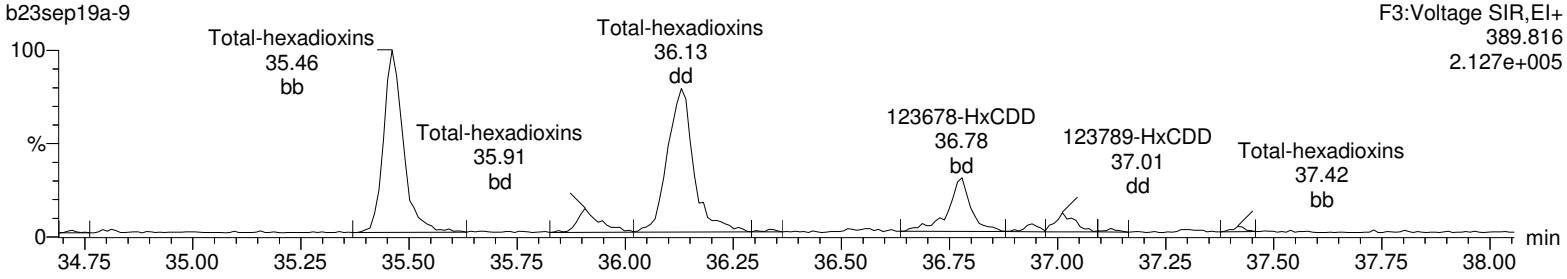
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

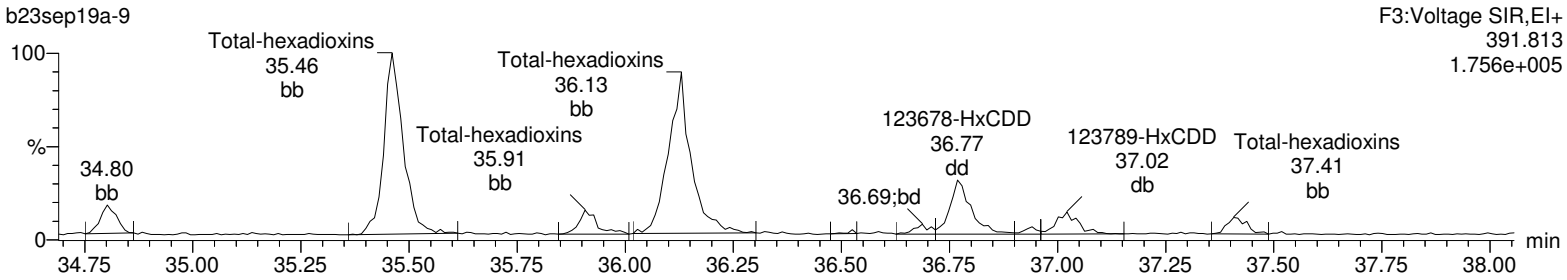
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

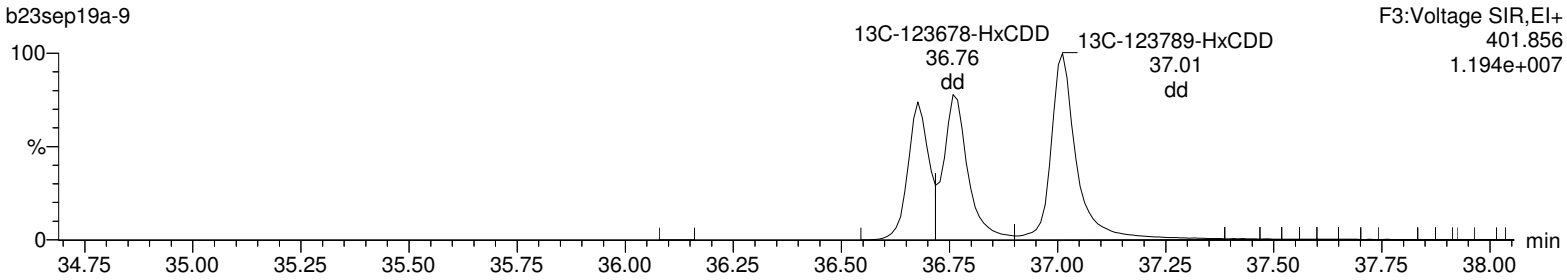
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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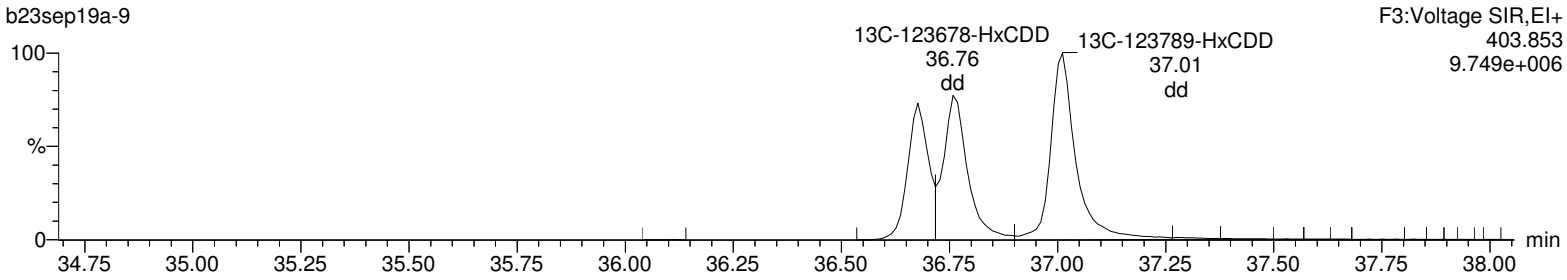
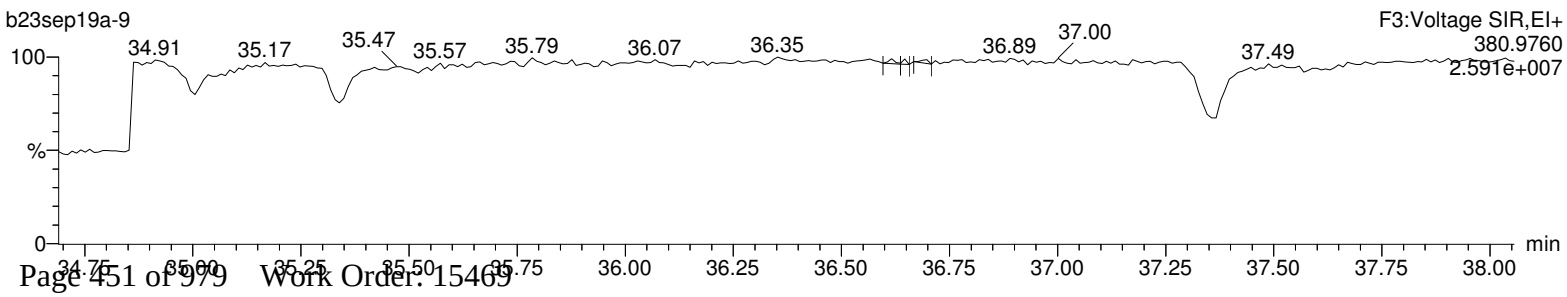


Lock Mass F3



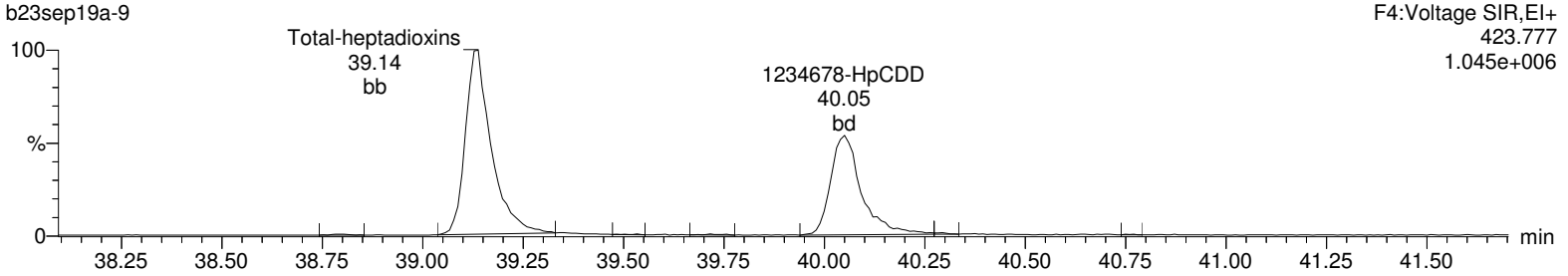
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

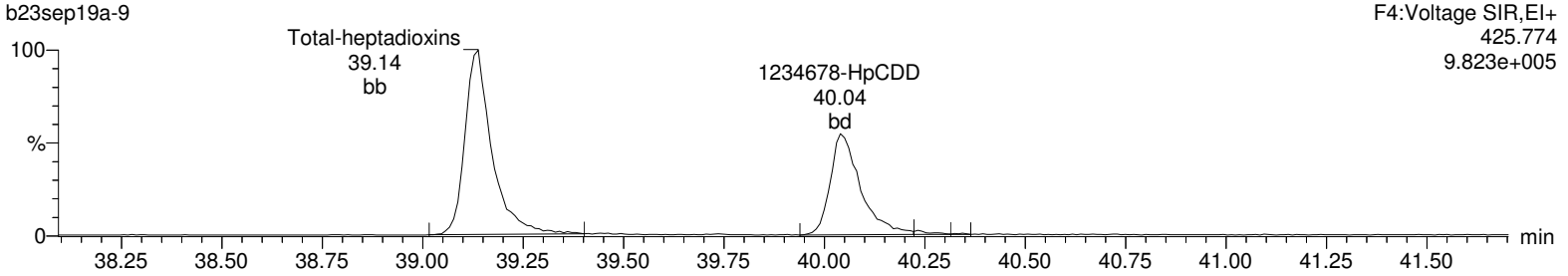
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

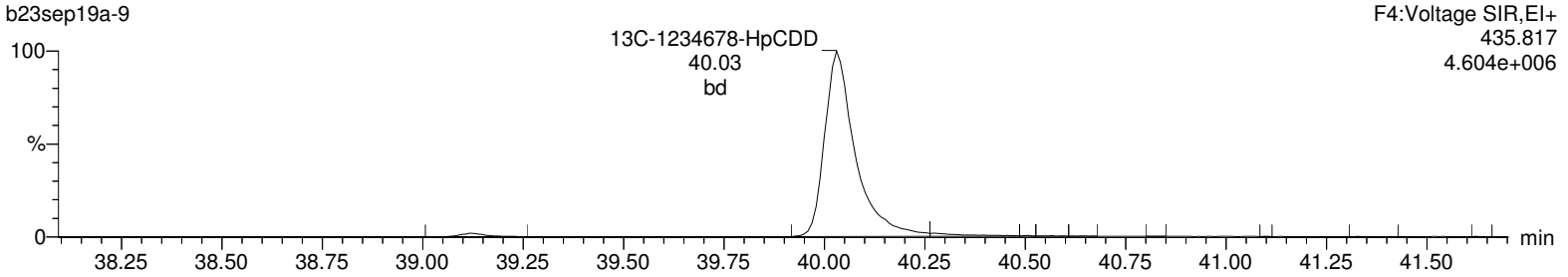
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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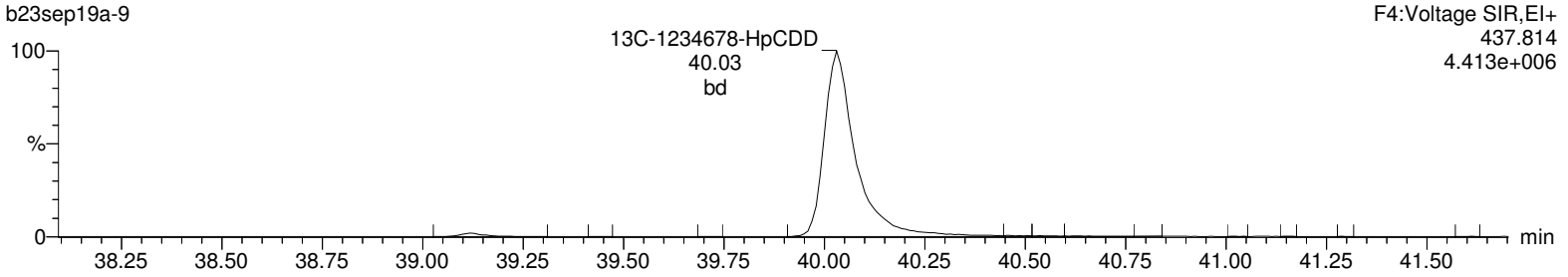
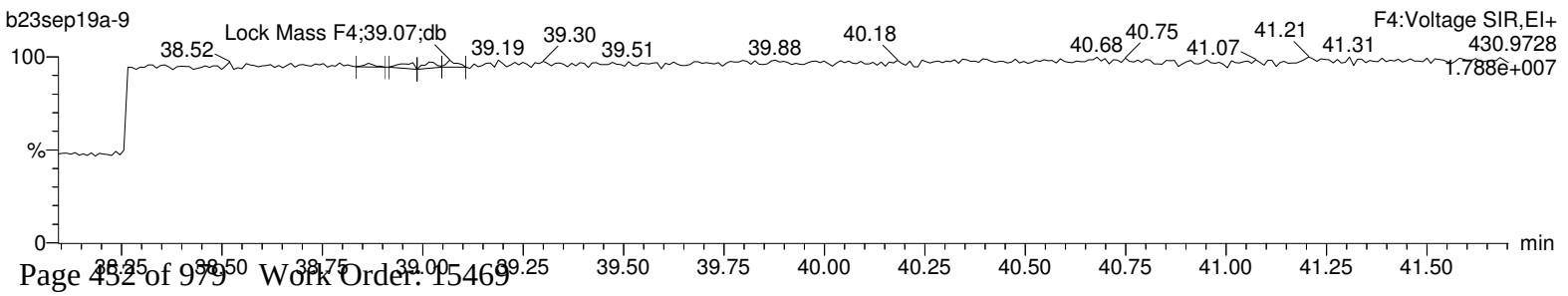


Lock Mass F4



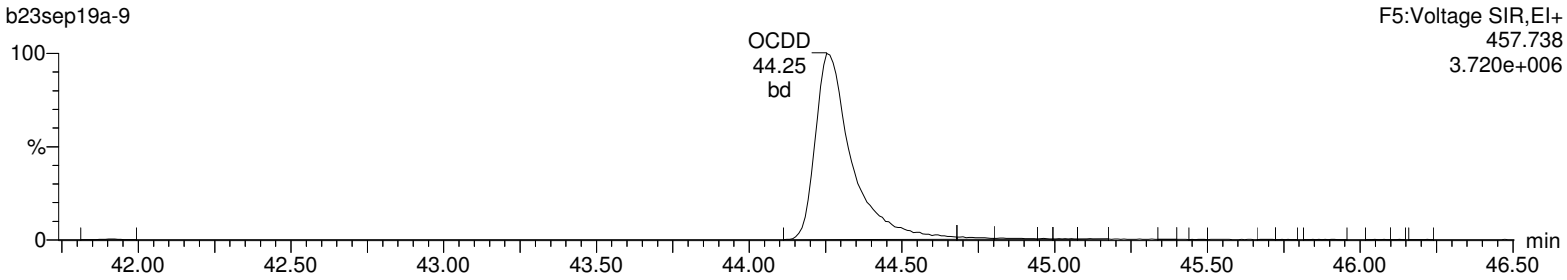
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

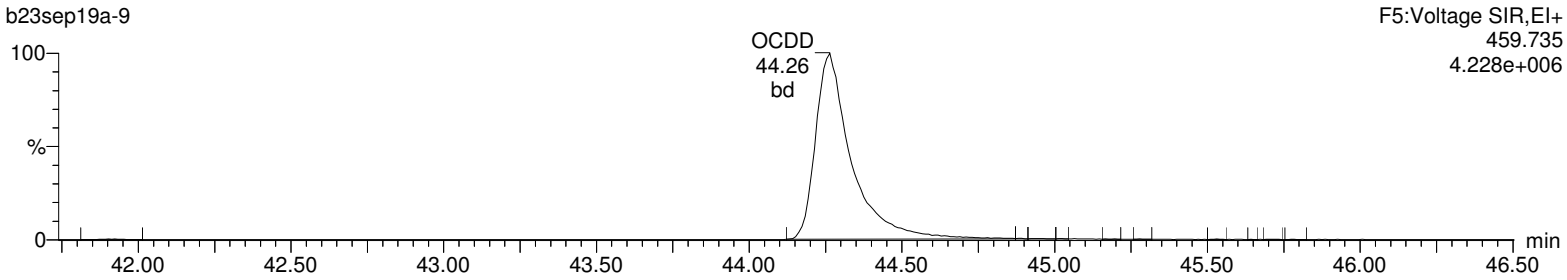
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDD



OCDD



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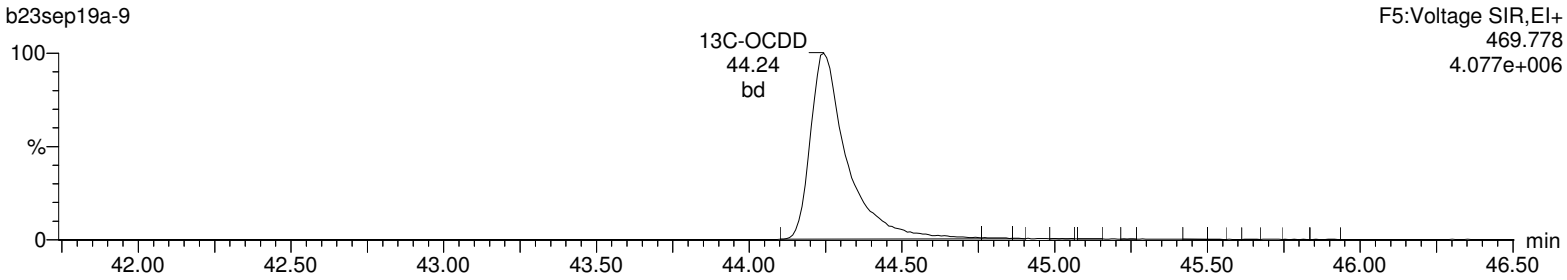

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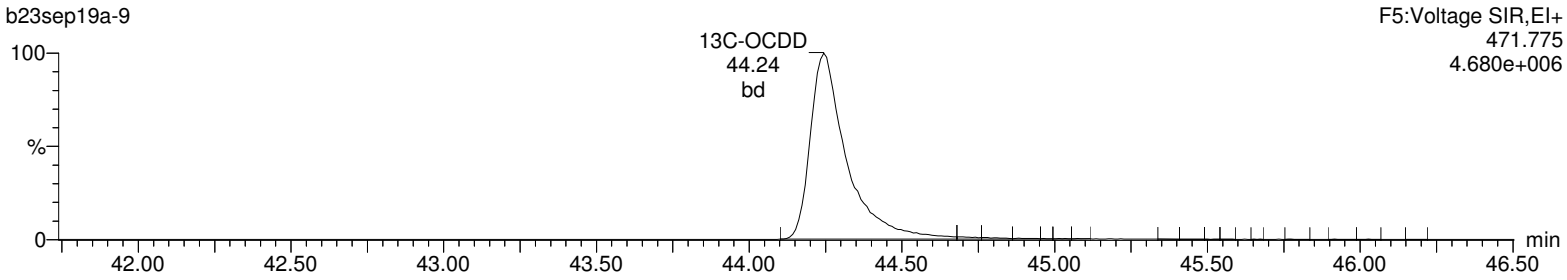
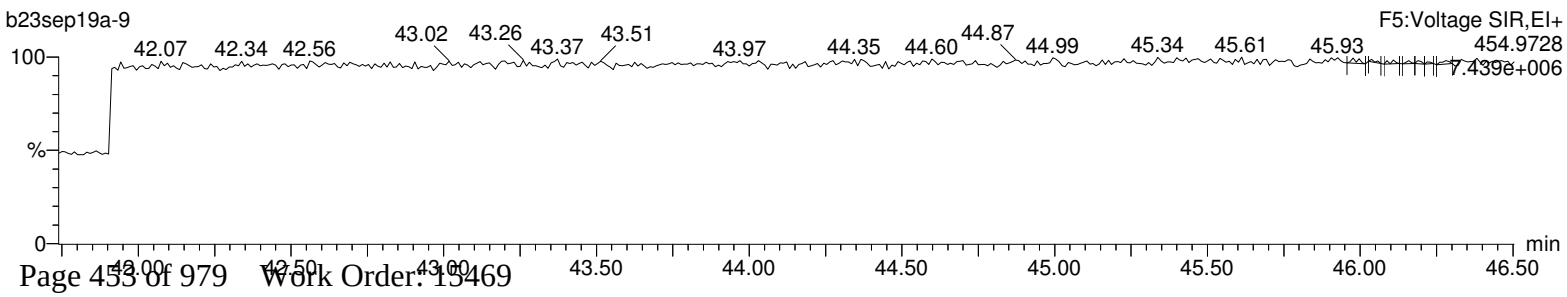


Lock Mass F5



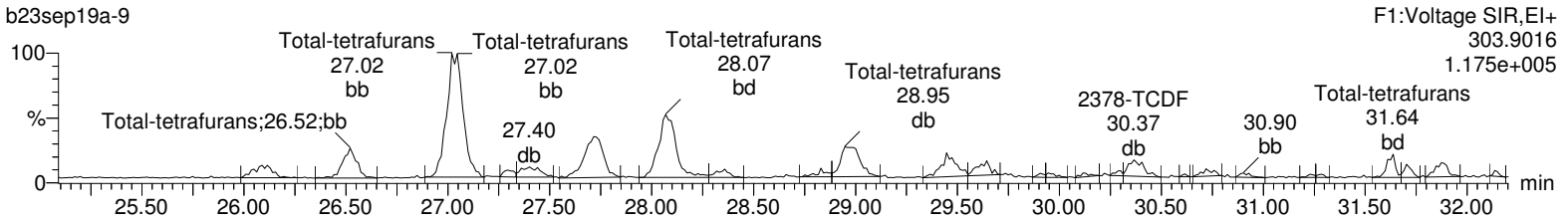
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

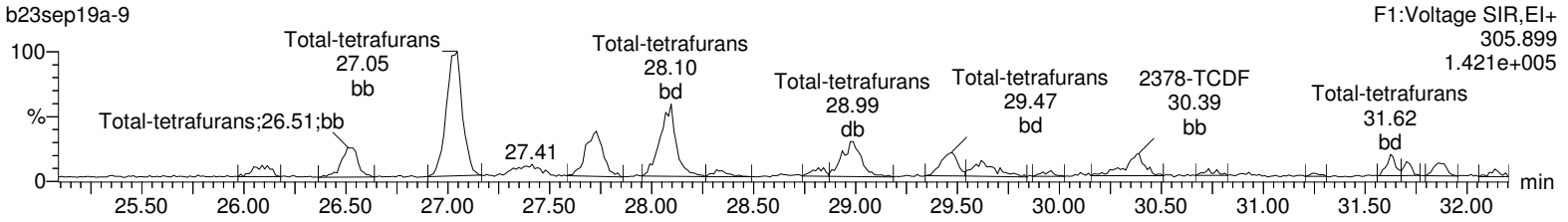
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

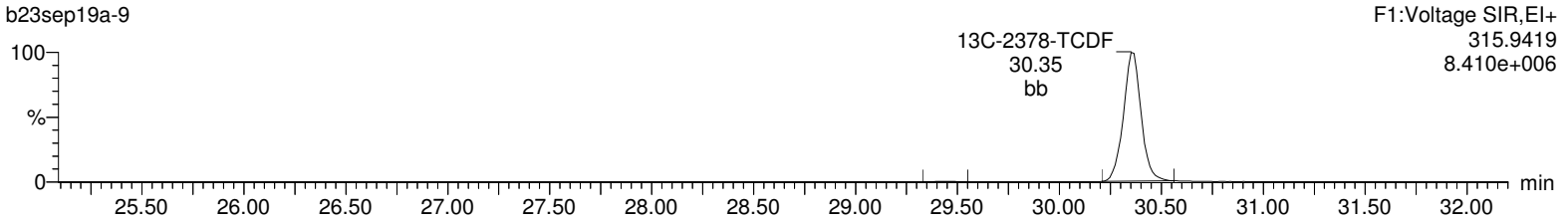
Total-tetrafurans



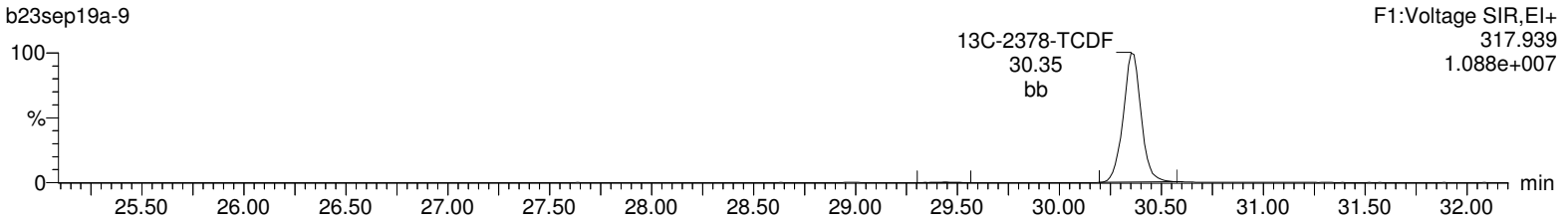
Total-tetrafurans



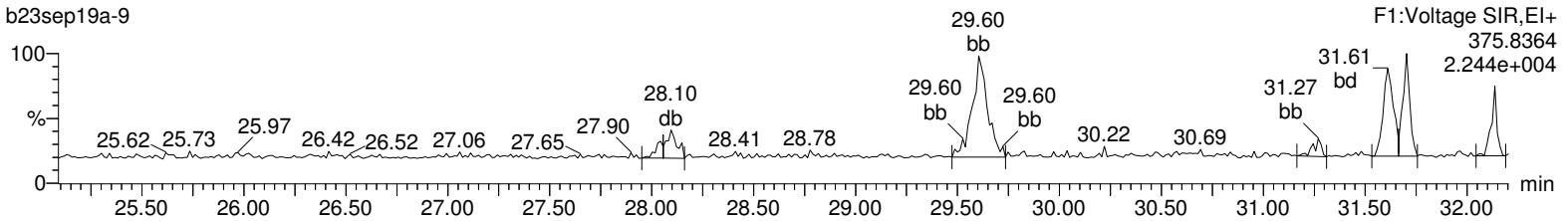
13C-2378-TCDF



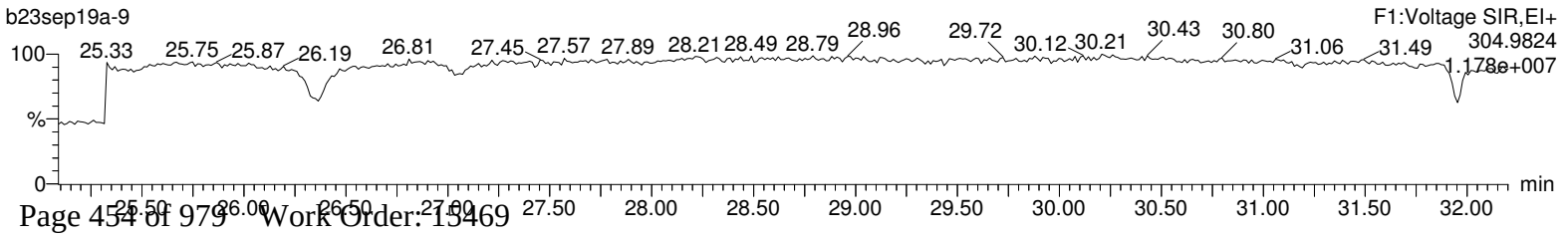
13C-2378-TCDF



HxDPE



Lock Mass F1



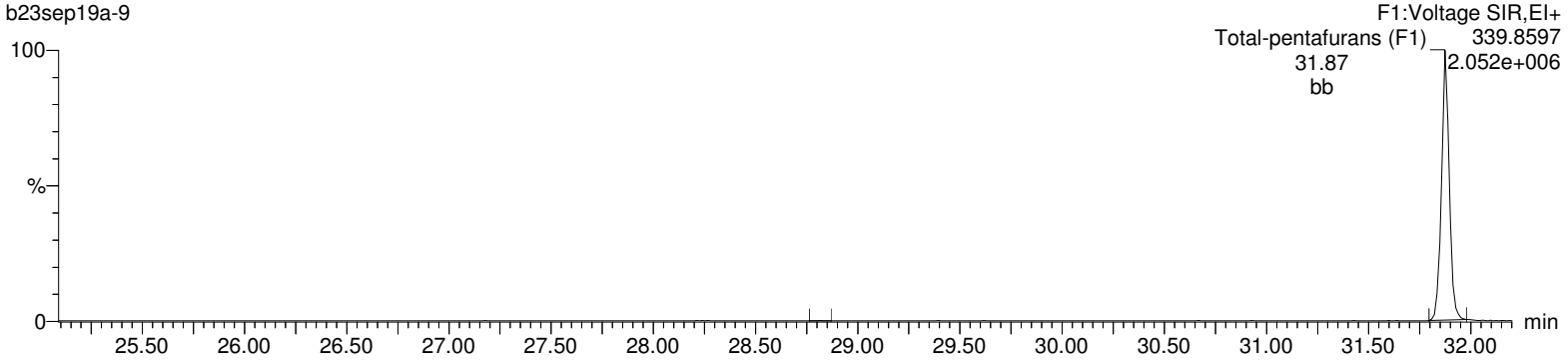
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

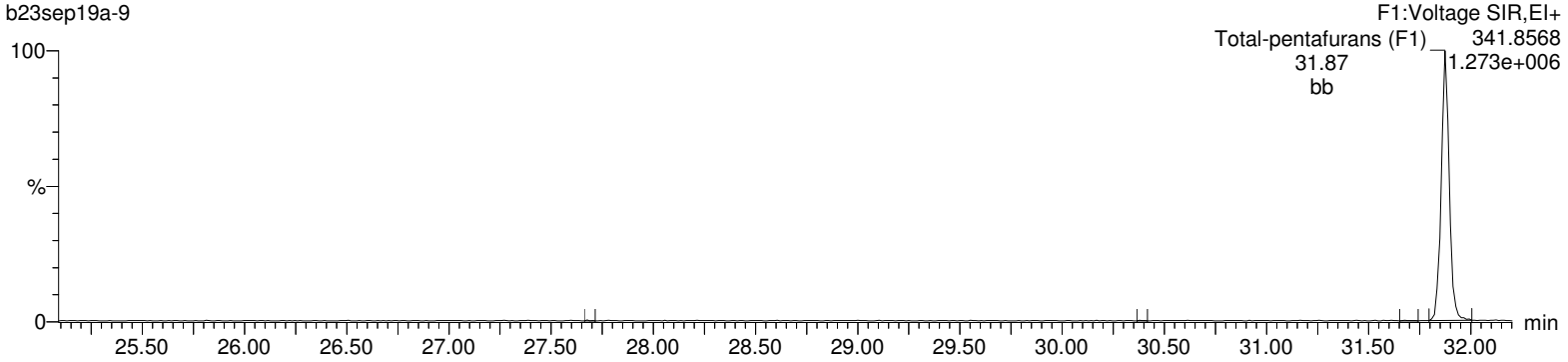
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

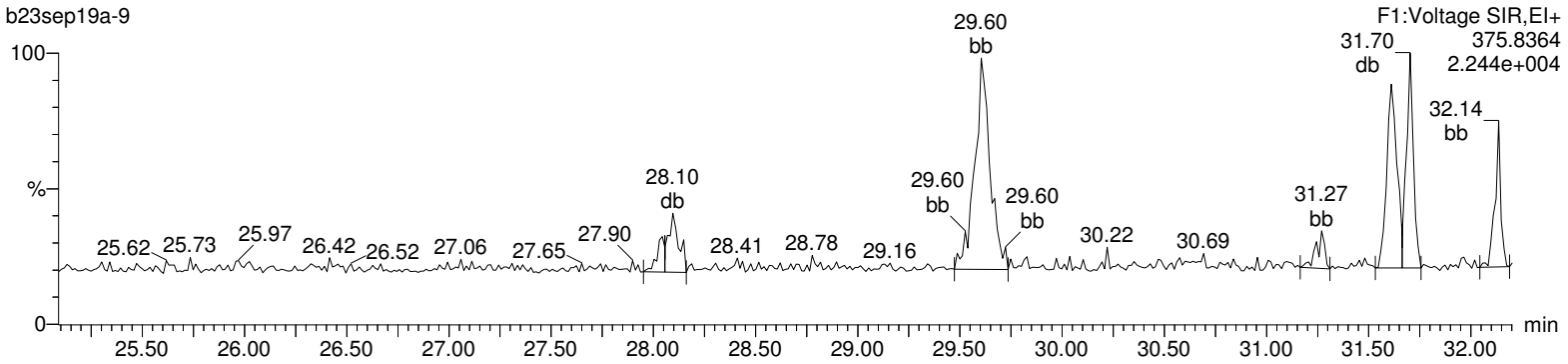
Total-pentafurans (F1)



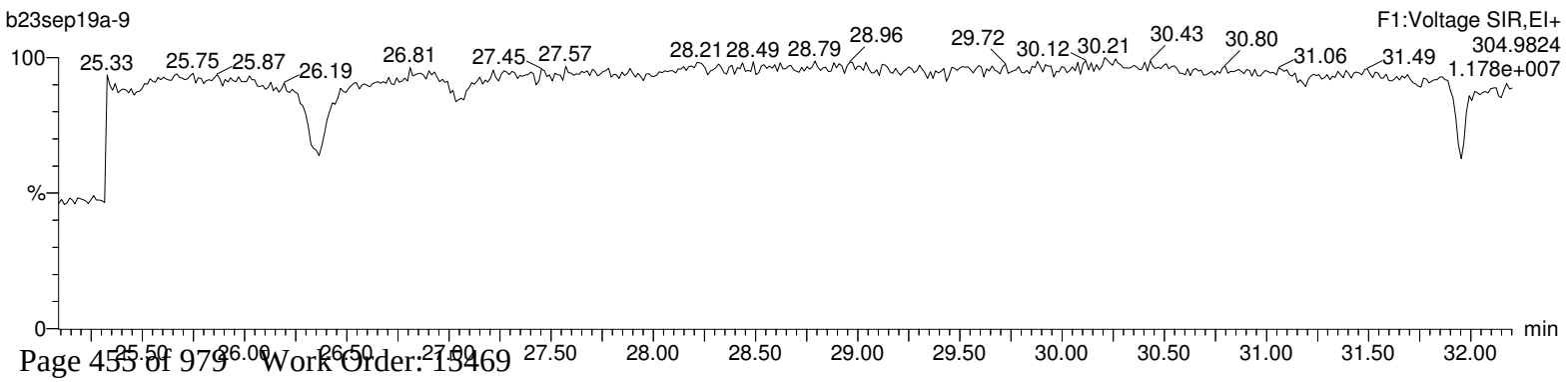
Total-pentafurans (F1)



HxDPE



Lock Mass F1



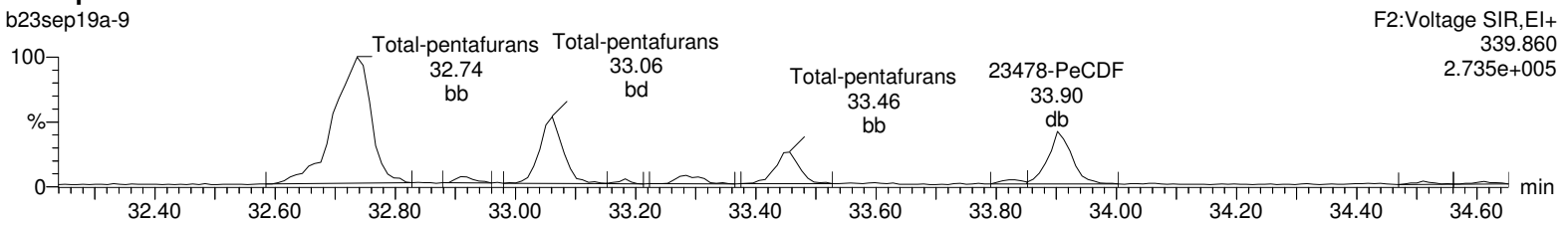
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

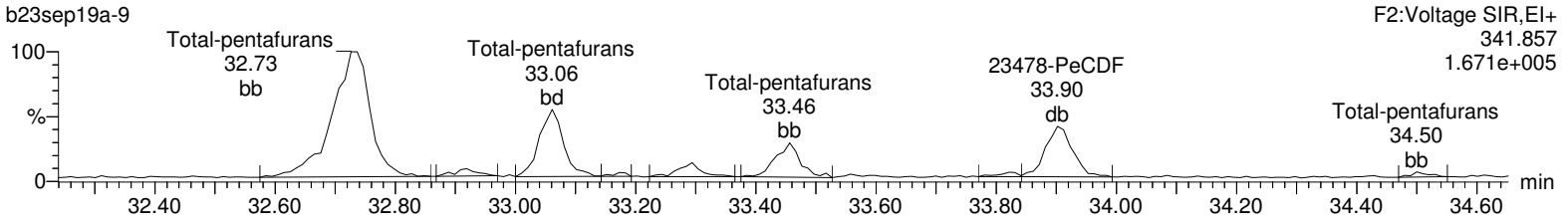
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

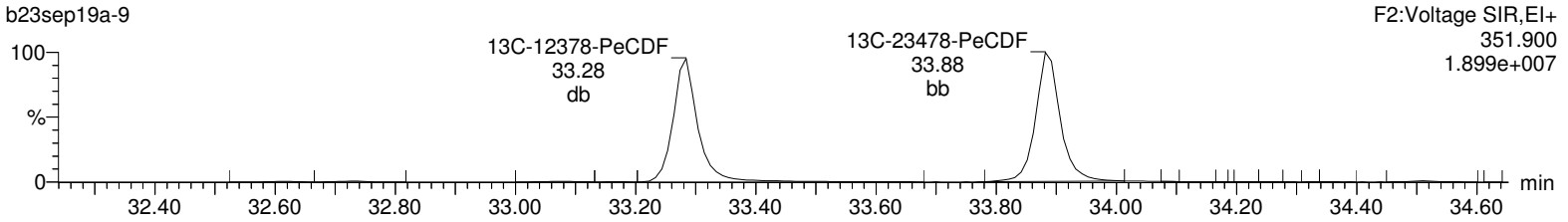
Total-pentafurans



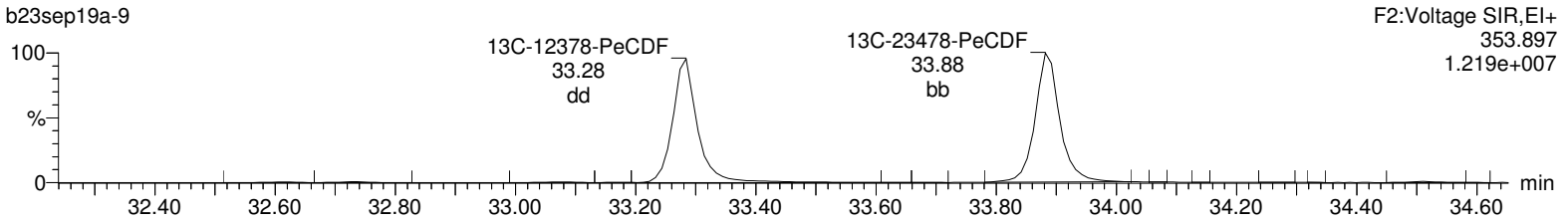
Total-pentafurans



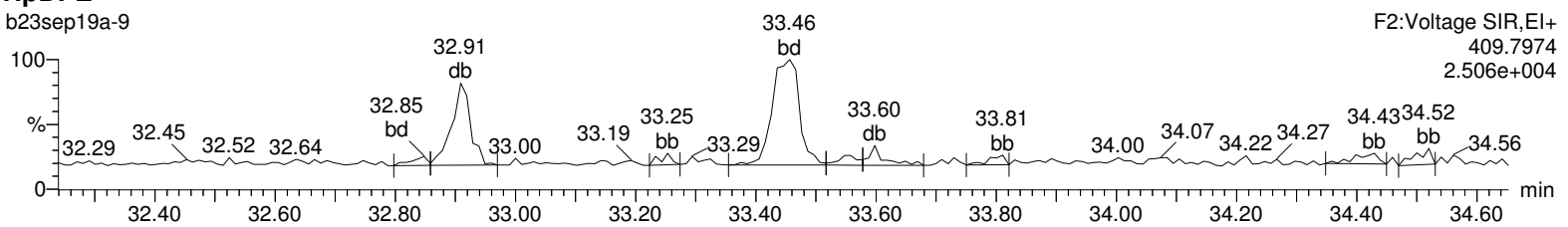
13C-12378-PeCDF



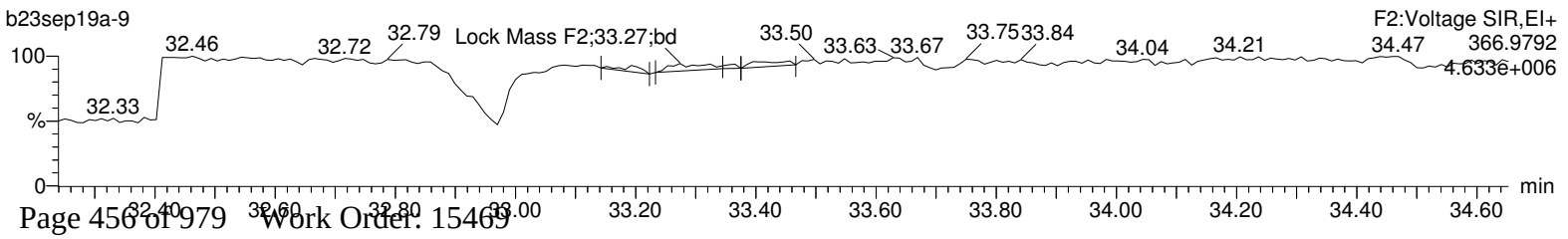
13C-12378-PeCDF



HpDPE



Lock Mass F2



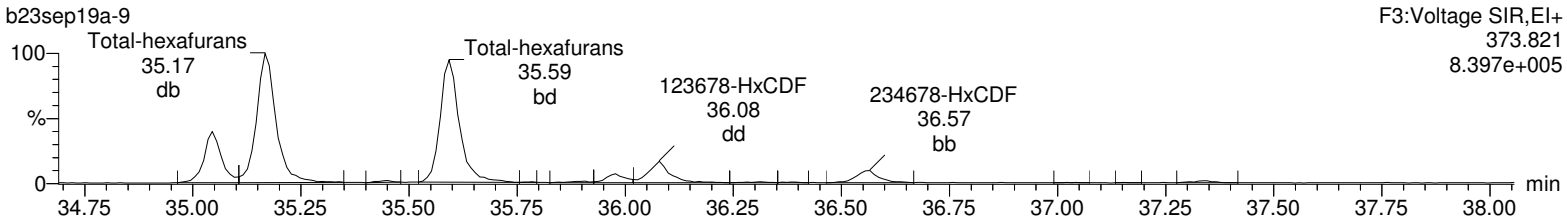
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

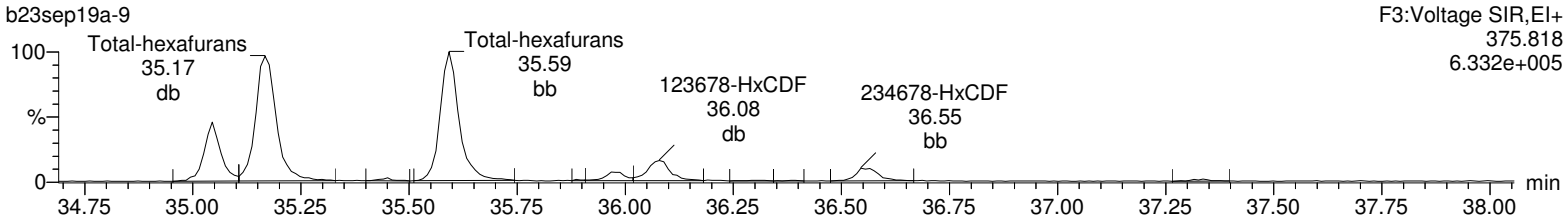
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

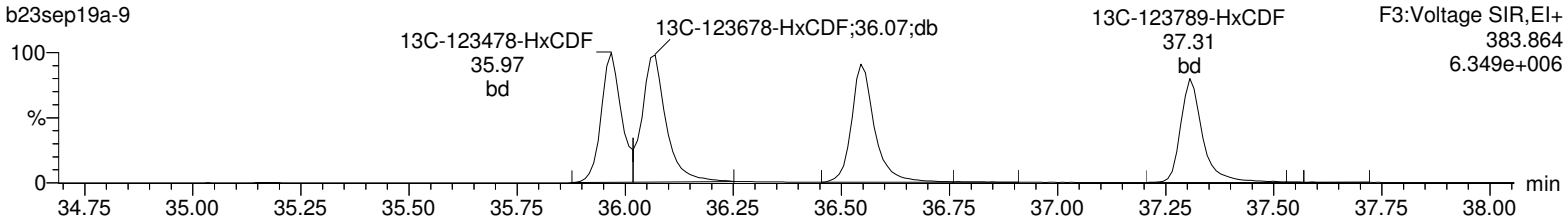
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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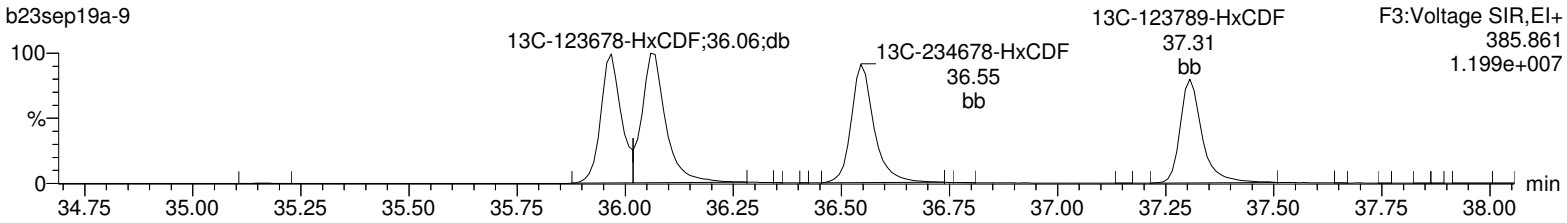

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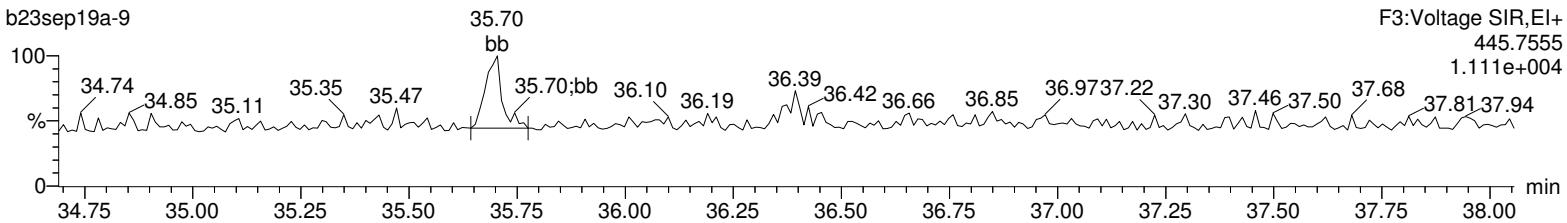
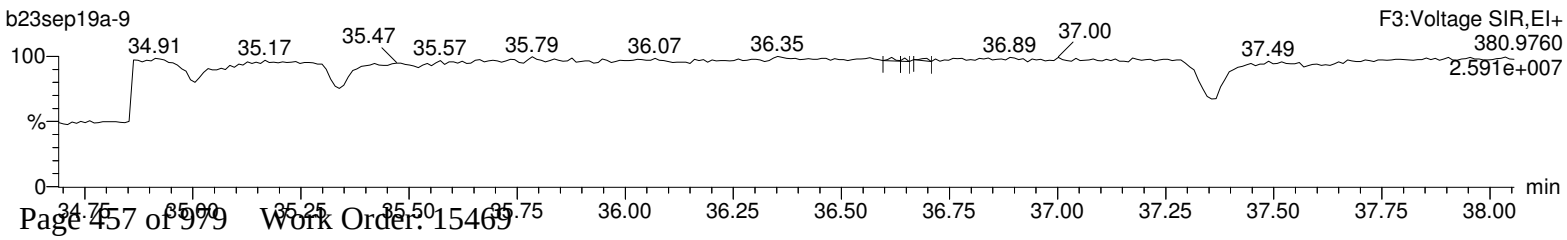


Lock Mass F3



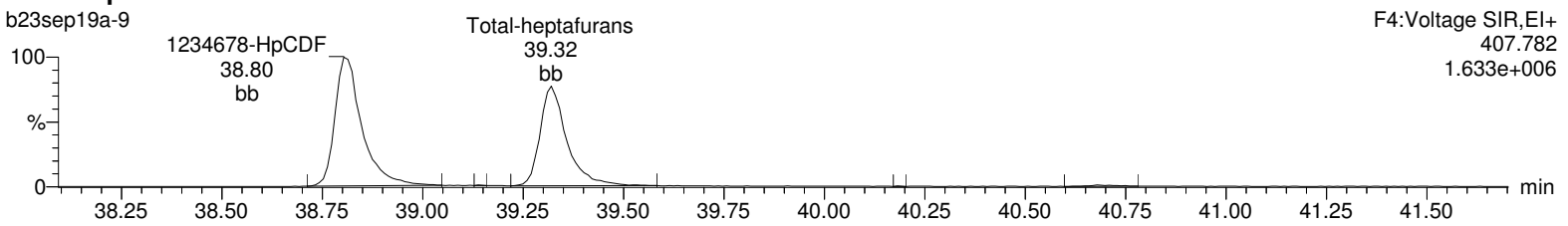
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

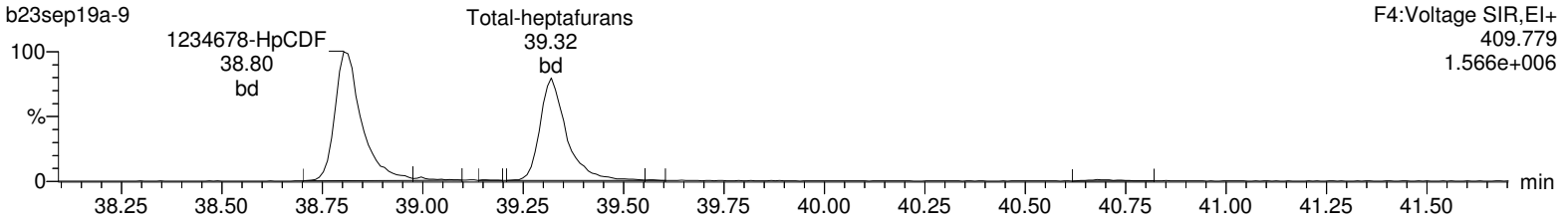
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

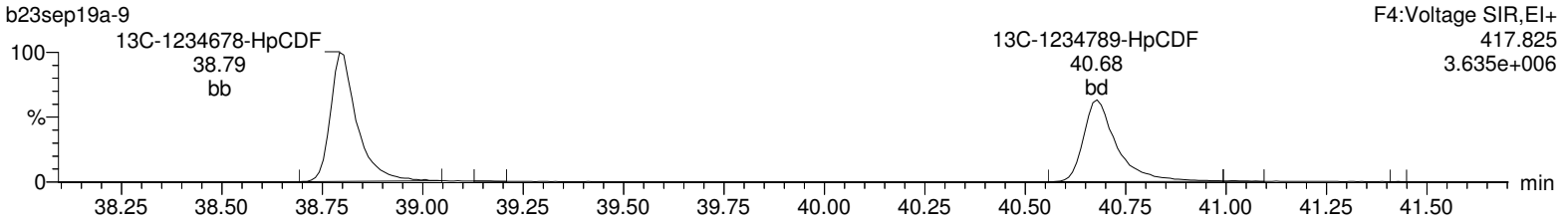
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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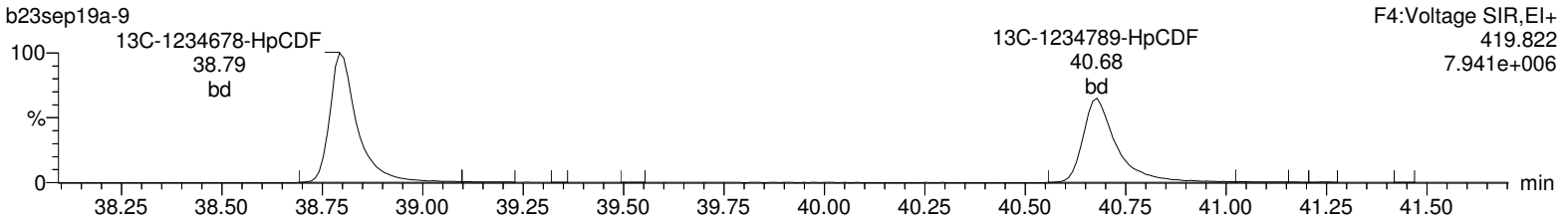
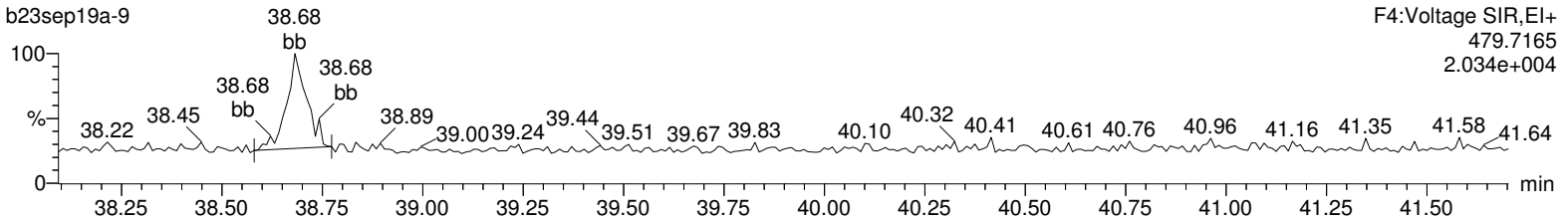
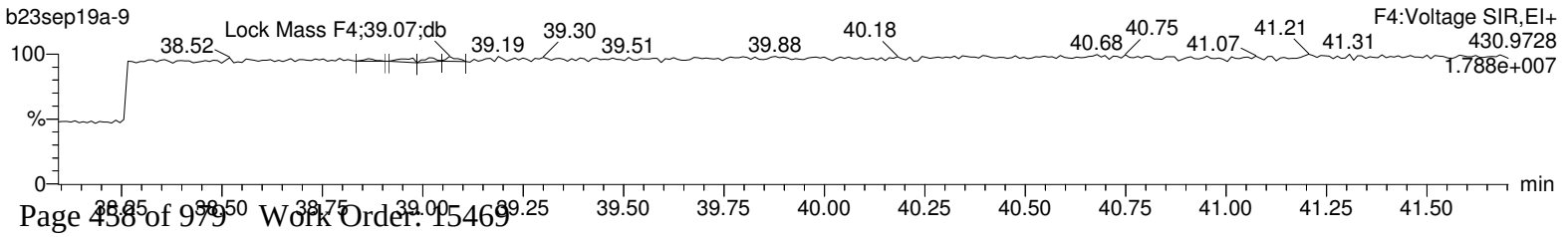


NoDPE



Lock Mass F4



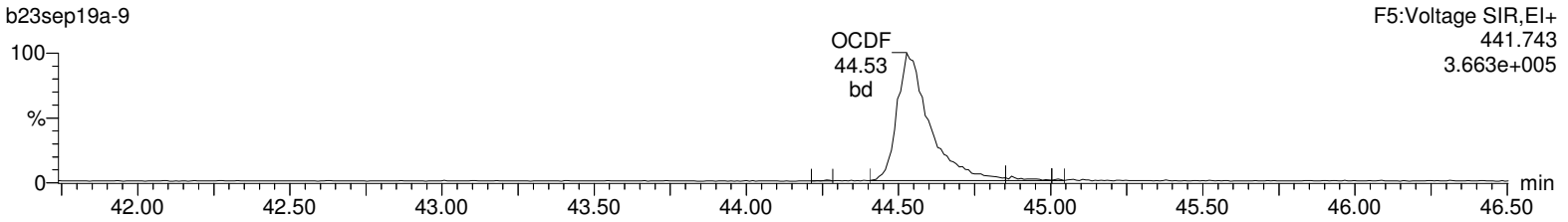
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

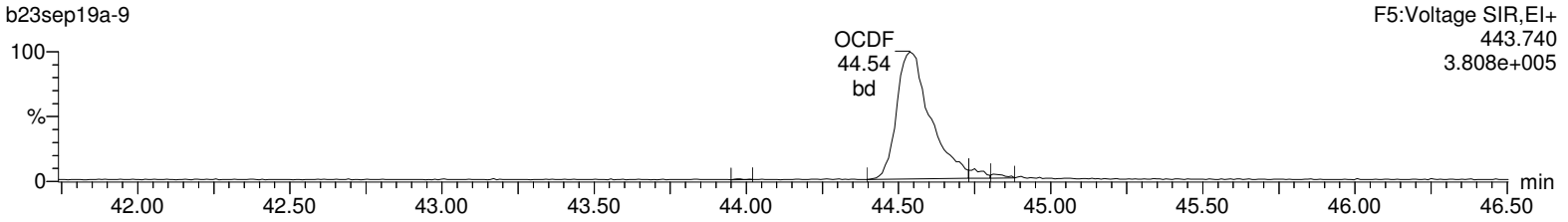
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-9, Date: 23-Sep-2019, Time: 14:46:41, ID: 15469017-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

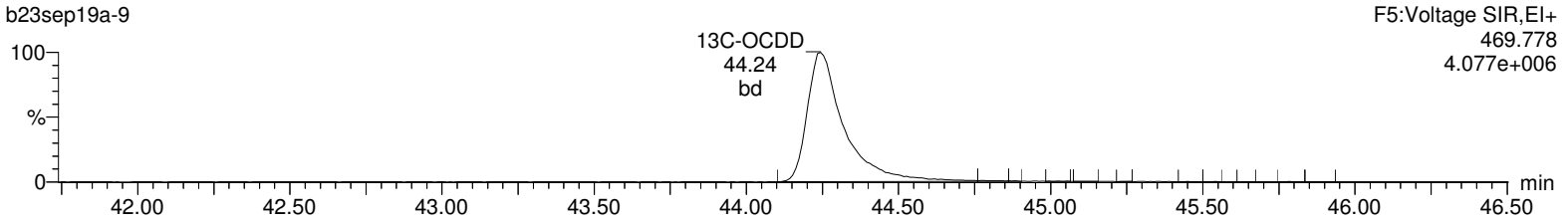
OCDF



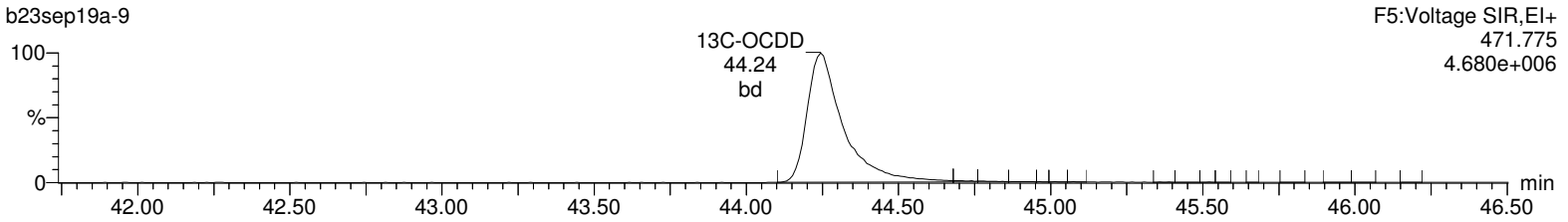
OCDF



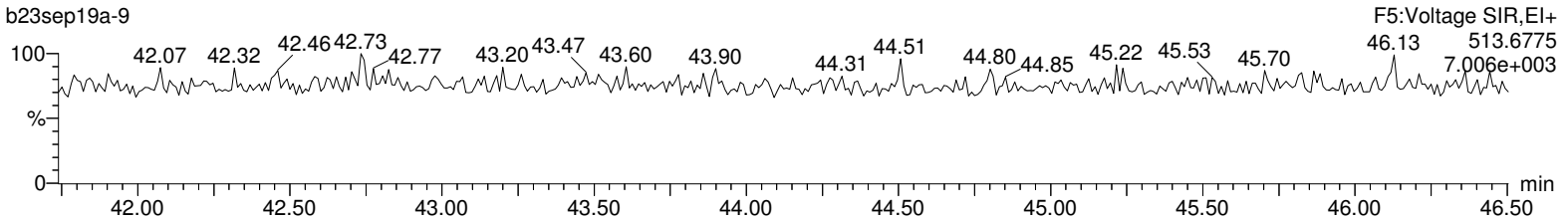
13C-OCDD



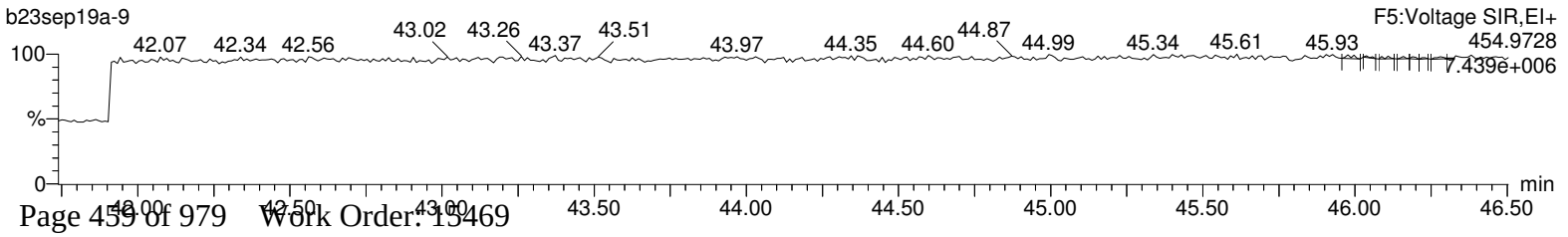
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469018**	**Date Collected:**	**08/29/2019 09:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**48.9**
Client ID:	**H3-SC1b-70to80-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 15:35**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**20.11 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0882	pg/g	0.0882	0.974
40321-76-4	1,2,3,7,8-PeCDD	JK	0.234	pg/g	0.169	4.87
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.163	pg/g	0.163	4.87
57653-85-7	1,2,3,6,7,8-HxCDD	BJK	0.386	pg/g	0.163	4.87
19408-74-3	1,2,3,7,8,9-HxCDD	BJK	0.456	pg/g	0.167	4.87
35822-46-9	1,2,3,4,6,7,8-HpCDD		5.54	pg/g	0.208	4.87
3268-87-9	1,2,3,4,6,7,8,9-OCDD		57.1	pg/g	0.580	9.74
51207-31-9	2,3,7,8-TCDF	BJK	0.732	pg/g	0.155	0.974
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.335	pg/g	0.191	4.87
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.614	pg/g	0.163	4.87
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.563	pg/g	0.115	4.87
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.802	pg/g	0.123	4.87
60851-34-5	2,3,4,6,7,8-HxCDF	BJ	0.540	pg/g	0.116	4.87
72918-21-9	1,2,3,7,8,9-HxCDF	QU	0.163	pg/g	0.163	4.87
67562-39-4	1,2,3,4,6,7,8-HpCDF		9.08	pg/g	0.130	4.87
55673-89-7	1,2,3,4,7,8,9-HpCDF	BJ	0.356	pg/g	0.182	4.87
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	5.78	pg/g	0.358	9.74
41903-57-5	Total TeCDD	JK	2.35	pg/g	0.0882	0.974
36088-22-9	Total PeCDD	JKQ	2.47	pg/g	0.169	4.87
34465-46-8	Total HxCDD	JK	5.20	pg/g	0.163	4.87
37871-00-4	Total HpCDD		14.0	pg/g	0.208	4.87
30402-14-3	Total TeCDF	JK	9.53	pg/g	0.155	0.974
30402-15-4	Total PeCDF	JKQ	9.93	pg/g	0.0508	4.87
55684-94-1	Total HxCDF	JKQ	9.91	pg/g	0.115	4.87
38998-75-3	Total HpCDF	J	17.3	pg/g	0.130	4.87
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.944	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		1.00	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		127	195	pg/g	65.4	(25%-164%)
13C-1,2,3,7,8-PeCDD		109	195	pg/g	56.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		165	195	pg/g	85.0	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		142	195	pg/g	73.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		185	195	pg/g	95.1	(23%-140%)
13C-OCDD		349	390	pg/g	89.6	(17%-157%)
13C-2,3,7,8-TCDF		131	195	pg/g	67.1	(24%-169%)
13C-1,2,3,7,8-PeCDF		107	195	pg/g	54.7	(24%-185%)
13C-2,3,4,7,8-PeCDF		105	195	pg/g	53.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		157	195	pg/g	80.5	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		128	195	pg/g	65.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		144	195	pg/g	74.1	(28%-136%)
13C-1,2,3,7,8,9-HxCDF	Q	115	195	pg/g	59.0	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469018**	**Date Collected:**	**08/29/2019 09:05**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**48.9**
Client ID:	**H3-SC1b-70to80-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 15:35**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-10**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**20.11 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		166	195	pg/g	85.4	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		192	195	pg/g	98.8	(26%-138%)
37Cl-2,3,7,8-TCDD		13.9	19.5	pg/g	71.3	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
J **Value is estimated**
K **Estimated Maximum Possible Concentration**
Q **Quantitative Interference; value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-10.qld

Last Altered: Tuesday, September 24, 2019 13:55:15 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:55:42 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.20e2	2.86e2	5.06e2	31.22	1.000	0.77	NO	0.036	0.0453	4.01e3	2129	1.9	6.21e3	1543	4.0	bb	bb
2	12378-PeCDD	5.27e2	4.06e2	9.34e2	34.15	1.000	1.30	YES	0.120	0.0866	1.15e4	3247	3.6	7.40e3	1809	4.1	MM	MM
3	123478-HxCDD	1.79e2	2.43e2	4.21e2	36.79	1.001	0.74	YES	0.060	0.0835	3.71e3	2099	1.8	5.74e3	2097	2.7	MM	bd
4	123678-HxCDD	7.33e2	7.85e2	1.52e3	36.86	1.001	0.93	YES	0.198	0.0838	1.40e4	2099	6.7	1.26e4	2097	6.0	bb	dd
5	123789-HxCDD	8.24e2	8.53e2	1.68e3	37.10	1.007	0.97	YES	0.234	0.0856	1.57e4	2099	7.5	1.41e4	2097	6.7	MM	db
6	1234678-HpCDD	9.51e3	8.64e3	1.82e4	40.13	1.000	1.10	NO	2.846	0.107	1.10e5	1595	69.0	1.09e5	1589	68.6	bb	bb
7	OCDD	7.11e4	7.60e4	1.47e5	44.40	1.000	0.93	NO	29.304	0.298	5.48e5	1913	286.4	6.20e5	2775	223.5	bd	bb
8	2378-TCDF	2.41e3	3.69e3	6.10e3	30.44	1.000	0.65	YES	0.376	0.0797	2.09e4	2533	8.3	3.48e4	2707	12.9	MM	MM
9	12378-PeCDF	9.92e2	8.73e2	1.86e3	33.33	1.000	1.14	YES	0.172	0.0981	2.76e4	6247	4.4	1.75e4	2183	8.0	MM	bd
10	23478-PeCDF	2.40e3	1.28e3	3.68e3	33.94	1.000	1.88	YES	0.315	0.0835	5.06e4	6247	8.1	2.74e4	2183	12.5	db	db
11	123478-HxCDF	1.62e3	1.08e3	2.70e3	36.05	1.000	1.49	YES	0.289	0.0592	3.01e4	2091	14.4	1.99e4	1736	11.5	dd	dd
12	123678-HxCDF	2.19e3	1.63e3	3.82e3	36.14	1.000	1.34	NO	0.412	0.0634	4.36e4	2091	20.9	2.65e4	1736	15.3	db	db
13	234678-HxCDF	1.41e3	1.22e3	2.63e3	36.63	1.000	1.15	NO	0.277	0.0597	2.08e4	2091	9.9	2.10e4	1736	12.1	bb	MM
14	123789-HxCDF	2.47e2	2.05e2	4.51e2	37.39	1.000	1.21	NO	0.075	0.0837	4.63e3	2091	2.2	3.75e3	1736	2.2	MM	bb
15	1234678-HpCDF	2.13e4	2.04e4	4.17e4	38.90	1.000	1.05	NO	4.664	0.0669	2.85e5	1476	193.2	2.77e5	1634	169.4	bb	bb
16	1234789-HpCDF	6.56e2	7.42e2	1.40e3	40.78	1.000	0.88	NO	0.183	0.0936	7.77e3	1476	5.3	7.91e3	1634	4.8	bb	MM
17	OCDF	7.90e3	8.68e3	1.66e4	44.68	1.007	0.91	NO	2.970	0.184	7.69e4	1402	54.8	7.65e4	1820	42.0	bd	bb
18	13C-2378-TCDD	6.86e5	8.84e5	1.57e6	31.20	1.018	0.78	NO	65.445	0.0600	9.93e6	4124	2407.9	1.30e7	2111	6169.4	bd	bb
19	13C-12378-PeCDD	5.53e5	3.59e5	9.12e5	34.14	1.113	1.54	NO	56.187	0.0637	1.04e7	2120	4909.4	6.72e6	2355	2853.1	bb	bb
20	13C-123478-HxCDD	4.16e5	3.36e5	7.52e5	36.75	0.991	1.24	NO	84.950	0.0953	7.44e6	2165	3438.6	5.99e6	3658	1638.1	bd	bd
21	13C-123678-HxCDD	4.78e5	3.89e5	8.67e5	36.84	0.993	1.23	NO	73.099	0.0712	7.79e6	2165	3598.3	6.41e6	3658	1752.6	dd	dd
22	13C-1234678-HpCDD	3.38e5	3.37e5	6.76e5	40.12	1.082	1.00	NO	95.117	0.127	3.95e6	3136	1259.8	3.88e6	3076	1260.7	bb	bd
23	13C-OCDD	5.19e5	5.80e5	1.10e6	44.39	1.197	0.90	NO	179.212	0.132	4.07e6	2993	1360.3	4.47e6	2574	1735.4	bd	bd
24	13C-2378-TCDF	7.90e5	1.03e6	1.82e6	30.44	0.993	0.77	NO	67.098	0.0753	8.01e6	5456	1467.2	1.03e7	3366	3046.0	bb	bb
25	13C-12378-PeCDF	7.27e5	4.65e5	1.19e6	33.32	1.087	1.57	NO	54.701	0.147	1.44e7	7509	1922.8	9.11e6	6315	1442.4	bd	bb
26	13C-23478-PeCDF	7.32e5	4.72e5	1.20e6	33.93	1.106	1.55	NO	53.841	0.143	1.58e7	7509	2103.9	1.02e7	6315	1615.8	bb	bb
27	13C-123478-HxCDF	2.83e5	5.41e5	8.24e5	36.04	0.972	0.52	NO	80.549	0.141	4.89e6	4133	1184.1	9.26e6	5848	1584.3	bd	bd
28	13C-123678-HxCDF	3.02e5	5.77e5	8.79e5	36.13	0.974	0.52	NO	65.921	0.109	4.92e6	4133	1190.8	9.47e6	5848	1618.9	db	db
29	13C-234678-HxCDF	2.92e5	5.48e5	8.40e5	36.62	0.987	0.53	NO	74.117	0.128	4.94e6	4133	1194.0	9.23e6	5848	1578.9	bb	bb
30	13C-123789-HxCDF	1.96e5	3.68e5	5.64e5	37.38	1.008	0.53	NO	58.965	0.151	3.73e6	4133	902.6	6.93e6	5848	1185.1	bb	bb
31	13C-1234678-HpCDF	2.36e5	5.15e5	7.51e5	38.88	1.048	0.46	NO	85.378	0.111	3.07e6	3122	983.1	6.60e6	3612	1827.2	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-10.qld

Last Altered: Tuesday, September 24, 2019 13:55:15 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:55:42 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.96e5	4.26e5	6.23e5	40.76	1.099	0.46	NO	98.797	0.155	2.13e6	3122	683.7	4.64e6	3612	1284.1	bd	bb
33	13C-1234-TCDD	9.04e5	1.18e6	2.08e6	30.67	0.000	0.77	NO	100.000	0.0691	9.79e6	4124	2372.9	1.27e7	2111	5996.8	bb	bb
34	13C-123789-HxCDD	6.23e5	5.00e5	1.12e6	37.09	0.000	1.25	NO	100.000	0.0752	1.07e7	2165	4958.7	8.76e6	3658	2394.4	dd	dd
35	37Cl-2378-TCDD	1.60e5		1.60e5	31.22	1.018			7.128	0.0145	2.39e6	1405	1703.6				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-10.qld

Last Altered: Tuesday, September 24, 2019 13:55:15 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:55:42 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	2.69e2	3.33e2	6.02e2	31.81	0.81	NO	0.043	0.0453	5.64e3	2129	2.7	5.58e3	1543	3.6	bb	bd
2	2378-TCDD	2.20e2	2.86e2	5.06e2	31.22	0.77	NO	0.036	0.0453	4.01e3	2129	1.9	6.21e3	1543	4.0	bb	bb
3	Total-tetradioxins	3.59e2	3.63e2	7.22e2	31.02	0.99	YES	0.052	0.0453	6.99e3	2129	3.3	3.92e3	1543	2.5	bb	bb
4	Total-tetradioxins	3.99e2	5.63e2	9.62e2	30.68	0.71	NO	0.069	0.0453	4.44e3	2129	2.1	5.69e3	1543	3.7	MM	bb
5	Total-tetradioxins	2.64e2	4.82e2	7.45e2	30.27	0.55	YES	0.053	0.0453	3.94e3	2129	1.8	7.66e3	1543	5.0	MM	bb
6	Total-tetradioxins	1.88e2	1.91e2	3.79e2	29.89	0.98	YES	0.027	0.0453	5.10e3	2129	2.4	2.98e3	1543	1.9	MM	bb
7	Total-tetradioxins	6.31e2	8.26e2	1.46e3	29.50	0.76	NO	0.104	0.0453	6.30e3	2129	3.0	1.02e4	1543	6.6	bb	MM
8	Total-tetradioxins	1.36e3	1.41e3	2.76e3	29.28	0.96	YES	0.198	0.0453	1.14e4	2129	5.4	1.55e4	1543	10.0	MM	bb
9	Total-tetradioxins	5.44e2	5.37e2	1.08e3	28.55	1.01	YES	0.077	0.0453	6.59e3	2129	3.1	7.83e3	1543	5.1	bb	bb
10	Total-tetradioxins	1.96e3	2.47e3	4.43e3	28.16	0.79	NO	0.317	0.0453	2.22e4	2129	10.4	2.74e4	1543	17.7	bd	db
11	Total-tetradioxins	2.21e3	2.74e3	4.95e3	27.87	0.81	NO	0.354	0.0453	2.59e4	2129	12.1	3.25e4	1543	21.0	MM	bd
12	Total-tetradioxins	4.45e2	4.01e2	8.46e2	31.44	1.11	YES	0.061	0.0453	5.19e3	2129	2.4	5.13e3	1543	3.3	MM	bb
13	Total-tetradioxins	6.98e2	7.51e2	1.45e3	29.74	0.93	YES	0.104	0.0453	7.60e3	2129	3.6	6.97e3	1543	4.5	MM	MM

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDD	5.27e2	4.06e2	9.34e2	34.15	1.30	YES	0.120	0.0866	1.15e4	3247	3.6	7.40e3	1809	4.1	MM	MM
2	Total-pentadioxins	3.05e2	2.42e2	5.47e2	33.84	1.26	YES	0.071	0.0866	1.00e4	3247	3.1	5.84e3	1809	3.2	bb	bb
3	Total-pentadioxins	6.37e2	5.51e2	1.19e3	33.65	1.16	YES	0.153	0.0866	1.12e4	3247	3.4	8.76e3	1809	4.8	MM	bb
4	Total-pentadioxins	5.79e2	3.53e2	9.32e2	33.51	1.64	NO	0.120	0.0866	1.34e4	3247	4.1	7.48e3	1809	4.1	db	db
5	Total-pentadioxins	5.35e2	4.19e2	9.54e2	33.45	1.28	YES	0.123	0.0866	1.32e4	3247	4.1	1.13e4	1809	6.3	dd	dd
6	Total-pentadioxins	1.16e3	5.78e2	1.73e3	33.35	2.00	YES	0.223	0.0866	2.05e4	3247	6.3	1.49e4	1809	8.3	bd	bd
7	Total-pentadioxins	7.56e2	5.37e2	1.29e3	33.06	1.41	NO	0.167	0.0866	1.47e4	3247	4.5	1.35e4	1809	7.5	bb	bb
8	Total-pentadioxins	1.61e3	1.18e3	2.79e3	32.84	1.36	NO	0.360	0.0866	3.60e4	3247	11.1	2.53e4	1809	14.0	bb	bb
9	Total-pentadioxins	8.61e1	1.11e2	1.97e2	34.11	0.78	YES	0.025	0.0866	2.45e3	3247	0.8	3.62e3	1809	2.0	MM	MM
10	Total-pentadioxins	1.18e2	1.47e2	2.65e2	34.20	0.80	YES	0.034	0.0866	4.71e3	3247	1.4	3.10e3	1809	1.7	MM	MM
11	Total-pentadioxins	3.28e2	2.85e2	6.13e2	34.41	1.15	YES	0.079	0.0866	5.58e3	3247	1.7	5.76e3	1809	3.2	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-10.qld

Last Altered: Tuesday, September 24, 2019 13:55:15 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:55:42 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	8.24e2	8.53e2	1.68e3	37.10	0.97	YES	0.234	0.0856	1.57e4	2099	7.5	1.41e4	2097	6.7	MM	db
2	123678-HxCDD	7.33e2	7.85e2	1.52e3	36.86	0.93	YES	0.198	0.0838	1.40e4	2099	6.7	1.26e4	2097	6.0	bb	dd
3	Total-hexadioxins	3.92e3	2.84e3	6.76e3	36.19	1.38	NO	0.926	0.0842	5.01e4	2099	23.9	4.29e4	2097	20.5	db	bb
4	Total-hexadioxins	1.47e3	1.02e3	2.49e3	35.98	1.43	YES	0.341	0.0842	2.27e4	2099	10.8	2.07e4	2097	9.9	bd	bb
5	Total-hexadioxins	3.99e3	3.10e3	7.09e3	35.52	1.29	NO	0.970	0.0842	7.72e4	2099	36.8	5.72e4	2097	27.3	bb	bb
6	Total-hexadioxins	5.67e2	8.64e3	9.21e3	34.85	0.07	YES	1.261	0.0842	9.96e3	2099	4.7	1.78e5	2097	84.8	bb	bb
7	Total-hexadioxins	1.31e3	4.38e3	5.69e3	37.47	0.30	YES	0.779	0.0842	2.75e4	2099	13.1	8.93e4	2097	42.6	db	bb
8	123478-HxCDD	1.79e2	2.43e2	4.21e2	36.79	0.74	YES	0.060	0.0835	3.71e3	2099	1.8	5.74e3	2097	2.7	MM	bd
9	Total-hexadioxins	2.15e2	3.15e2	5.30e2	37.01	0.68	YES	0.073	0.0842	4.75e3	2099	2.3	6.40e3	2097	3.1	MM	dd

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDD	9.51e3	8.64e3	1.82e4	40.13	1.10	NO	2.846	0.107	1.10e5	1595	69.0	1.09e5	1589	68.6	bb	bb
2	Total-heptadioxins	5.89e1	1.06e2	1.65e2	39.41	0.56	YES	0.026	0.107	3.20e3	1595	2.0	3.91e3	1589	2.5	db	db
3	Total-heptadioxins	1.39e4	1.37e4	2.76e4	39.22	1.02	NO	4.329	0.107	1.82e5	1595	114.3	1.68e5	1589	105.5	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-10.qld

Last Altered: Tuesday, September 24, 2019 13:55:15 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:55:42 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	5.99e2	1.10e3	1.70e3	30.01	0.54	YES	0.105	0.0797	5.90e3	2533	2.3	9.77e3	2707	3.6	bb	dd
2	Total-tetrafurans	1.03e3	1.18e3	2.21e3	29.81	0.88	NO	0.137	0.0797	1.67e4	2533	6.6	1.35e4	2707	5.0	bb	dd
3	Total-tetrafurans	2.99e3	4.24e3	7.23e3	29.53	0.71	NO	0.446	0.0797	2.80e4	2533	11.1	3.56e4	2707	13.2	bb	bd
4	Total-tetrafurans	3.79e3	4.61e3	8.40e3	29.05	0.82	NO	0.518	0.0797	3.79e4	2533	14.9	4.72e4	2707	17.5	db	db
5	Total-tetrafurans	1.43e3	1.62e3	3.05e3	28.90	0.88	NO	0.188	0.0797	1.60e4	2533	6.3	1.96e4	2707	7.3	dd	dd
6	Total-tetrafurans	6.52e2	9.07e2	1.56e3	28.73	0.72	NO	0.096	0.0797	8.68e3	2533	3.4	1.24e4	2707	4.6	bd	bd
7	Total-tetrafurans	1.09e3	1.27e3	2.36e3	28.41	0.86	NO	0.146	0.0797	1.03e4	2533	4.1	1.51e4	2707	5.6	db	db
8	Total-tetrafurans	6.33e2	7.26e2	1.36e3	28.24	0.87	NO	0.084	0.0797	1.15e4	2533	4.5	1.19e4	2707	4.4	dd	dd
9	Total-tetrafurans	2.29e3	3.10e3	5.39e3	28.13	0.74	NO	0.332	0.0797	2.72e4	2533	10.8	3.45e4	2707	12.7	bd	bd
10	Total-tetrafurans	3.48e3	4.89e3	8.37e3	27.81	0.71	NO	0.516	0.0797	3.20e4	2533	12.6	4.82e4	2707	17.8	bb	db
11	Total-tetrafurans	4.25e3	5.50e3	9.75e3	27.48	0.77	NO	0.601	0.0797	3.54e4	2533	14.0	4.34e4	2707	16.0	bb	bd
12	Total-tetrafurans	5.72e3	7.26e3	1.30e4	27.12	0.79	NO	0.800	0.0797	9.82e4	2533	38.8	1.08e5	2707	39.9	bb	bb
13	Total-tetrafurans	1.41e3	1.89e3	3.30e3	26.72	0.74	NO	0.204	0.0797	4.41e4	2533	17.4	5.44e4	2707	20.1	bb	bb
14	Total-tetrafurans	6.89e2	7.18e2	1.41e3	31.90	0.96	YES	0.087	0.0797	1.12e4	2533	4.4	1.67e4	2707	6.2	dd	db
15	Total-tetrafurans	2.26e2	9.29e1	3.19e2	31.72	2.44	YES	0.020	0.0797	3.60e3	2533	1.4	3.79e3	2707	1.4	bd	bb
16	Total-tetrafurans	2.07e2	3.32e2	5.39e2	30.97	0.62	YES	0.033	0.0797	3.89e3	2533	1.5	5.48e3	2707	2.0	bb	db
17	Total-tetrafurans	1.68e3	2.53e3	4.21e3	30.81	0.67	NO	0.260	0.0797	2.15e4	2533	8.5	2.89e4	2707	10.7	bb	dd
18	2378-TCDF	2.41e3	3.69e3	6.10e3	30.44	0.65	YES	0.376	0.0797	2.09e4	2533	8.3	3.48e4	2707	12.9	MM	MM
19	Total-tetrafurans	5.76e2	1.10e3	1.67e3	30.22	0.53	YES	0.103	0.0797	6.62e3	2533	2.6	1.24e4	2707	4.6	bd	dd
20	Total-tetrafurans	5.23e2	7.62e2	1.28e3	30.31	0.69	NO	0.079	0.0797	8.08e3	2533	3.2	1.52e4	2707	5.6	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.74e4	1.10e4	2.84e4	31.93	1.59	NO	2.523	0.0261	3.42e5	927	368.9	2.33e5	1507	154.9	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a-10.qld

Last Altered: Tuesday, September 24, 2019 13:55:15 Eastern Standard Time
Printed: Tuesday, September 24, 2019 13:55:42 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	23478-PeCDF	2.40e3	1.28e3	3.68e3	33.94	1.88	YES	0.315	0.0835	5.06e4	6247	8.1	2.74e4	2183	12.5	db	db
2	Total-pentafurans	8.17e2	5.35e2	1.35e3	33.88	1.53	NO	0.120	0.0905	1.81e4	6247	2.9	1.22e4	2183	5.6	bd	bd
3	Total-pentafurans	1.40e3	8.89e2	2.28e3	33.48	1.57	NO	0.203	0.0905	2.71e4	6247	4.3	1.74e4	2183	8.0	bb	db
4	12378-PeCDF	9.92e2	8.73e2	1.86e3	33.33	1.14	YES	0.172	0.0981	2.76e4	6247	4.4	1.75e4	2183	8.0	MM	bd
5	Total-pentafurans	3.24e2	2.24e2	5.48e2	33.21	1.44	NO	0.049	0.0905	8.61e3	6247	1.4	4.72e3	2183	2.2	dd	MM
6	Total-pentafurans	2.69e3	1.80e3	4.49e3	33.10	1.50	NO	0.398	0.0905	6.19e4	6247	9.9	3.90e4	2183	17.9	bd	db
7	Total-pentafurans	2.97e2	1.72e2	4.69e2	32.99	1.73	NO	0.042	0.0905	8.49e3	6247	1.4	5.18e3	2183	2.4	db	bd
8	Total-pentafurans	7.14e3	4.40e3	1.15e4	32.80	1.62	NO	1.025	0.0905	1.10e5	6247	17.6	6.62e4	2183	30.3	dd	db
9	Total-pentafurans	2.50e3	1.36e3	3.86e3	32.72	1.84	YES	0.343	0.0905	4.86e4	6247	7.8	2.89e4	2183	13.2	bd	bd

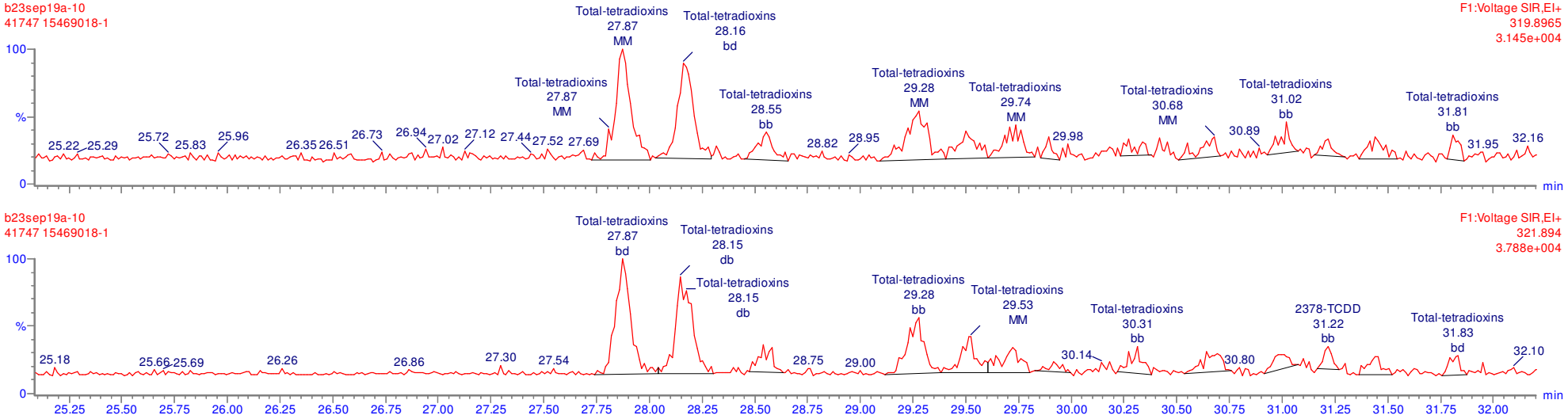
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	2.47e2	2.05e2	4.51e2	37.39	1.21	NO	0.075	0.0837	4.63e3	2091	2.2	3.75e3	1736	2.2	MM	bb
2	234678-HxCDF	1.41e3	1.22e3	2.63e3	36.63	1.15	NO	0.277	0.0597	2.08e4	2091	9.9	2.10e4	1736	12.1	bb	MM
3	123678-HxCDF	2.19e3	1.63e3	3.82e3	36.14	1.34	NO	0.412	0.0634	4.36e4	2091	20.9	2.65e4	1736	15.3	db	db
4	123478-HxCDF	1.62e3	1.08e3	2.70e3	36.05	1.49	YES	0.289	0.0592	3.01e4	2091	14.4	1.99e4	1736	11.5	dd	dd
5	Total-hexafurans	5.91e2	4.29e2	1.02e3	35.97	1.38	NO	0.120	0.0649	1.09e4	2091	5.2	9.31e3	1736	5.4	bd	bd
6	Total-hexafurans	8.03e3	6.68e3	1.47e4	35.65	1.20	NO	1.728	0.0649	1.62e5	2091	77.4	1.20e5	1736	69.2	bb	bb
7	Total-hexafurans	2.25e2	2.30e2	4.54e2	35.50	0.98	YES	0.053	0.0649	8.32e3	2091	4.0	4.85e3	1736	2.8	MM	bb
8	Total-hexafurans	7.65e3	6.47e3	1.41e4	35.28	1.18	NO	1.659	0.0649	1.43e5	2091	68.5	1.05e5	1736	60.6	db	db
9	Total-hexafurans	2.94e3	2.19e3	5.12e3	35.14	1.35	NO	0.602	0.0649	5.26e4	2091	25.1	4.13e4	1736	23.8	bd	bd

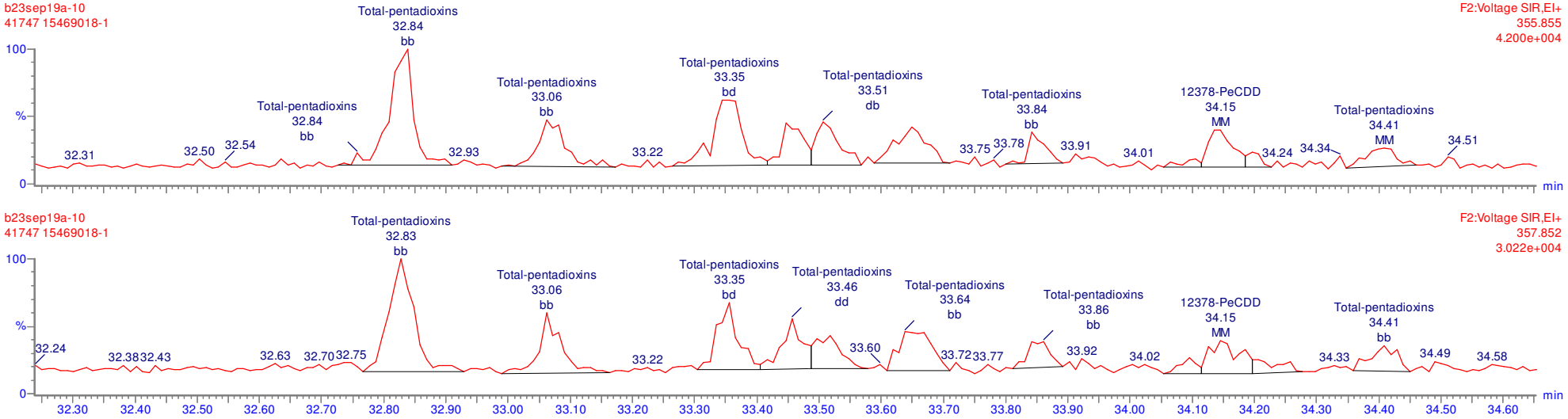
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234789-HpCDF	6.56e2	7.42e2	1.40e3	40.78	0.88	NO	0.183	0.0936	7.77e3	1476	5.3	7.91e3	1634	4.8	bb	MM
2	Total-heptafurans	1.66e4	1.67e4	3.33e4	39.41	0.99	NO	4.010	0.0791	2.13e5	1476	144.3	2.06e5	1634	126.3	bb	bb
3	1234678-HpCDF	2.13e4	2.04e4	4.17e4	38.90	1.05	NO	4.664	0.0669	2.85e5	1476	193.2	2.77e5	1634	169.4	bb	bb

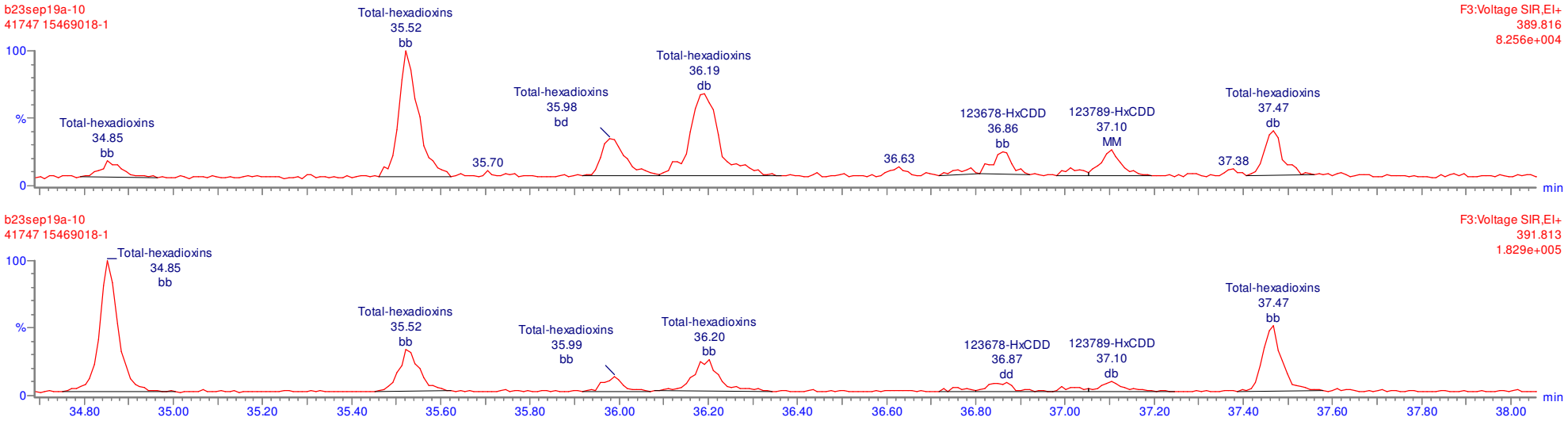
MANUAL INTEGRATION
METHOD 8290
HRP763_1



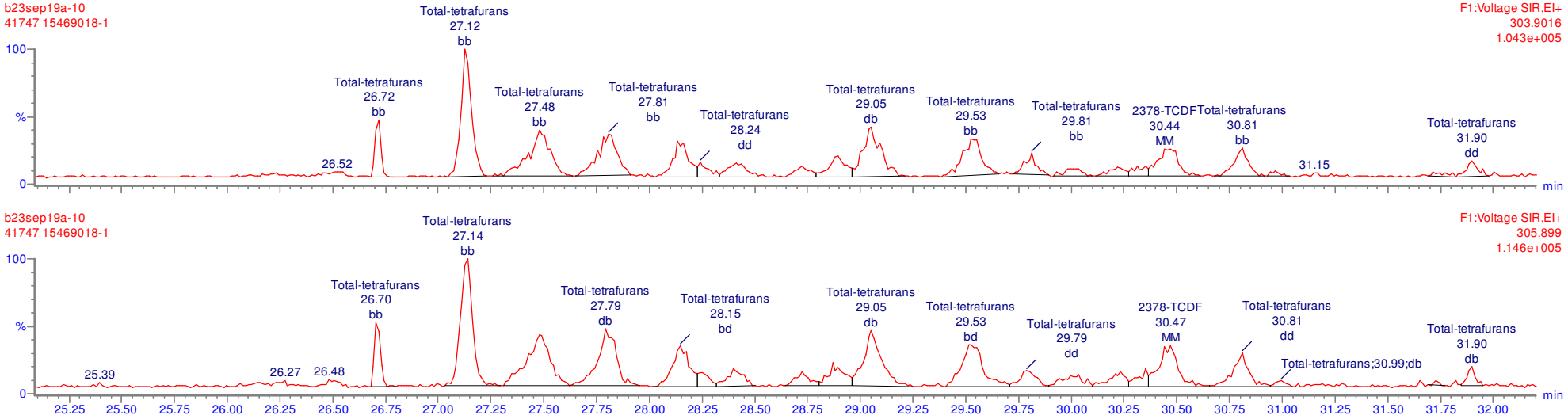
MANUAL INTEGRATION
METHOD 8290
HRP763_1



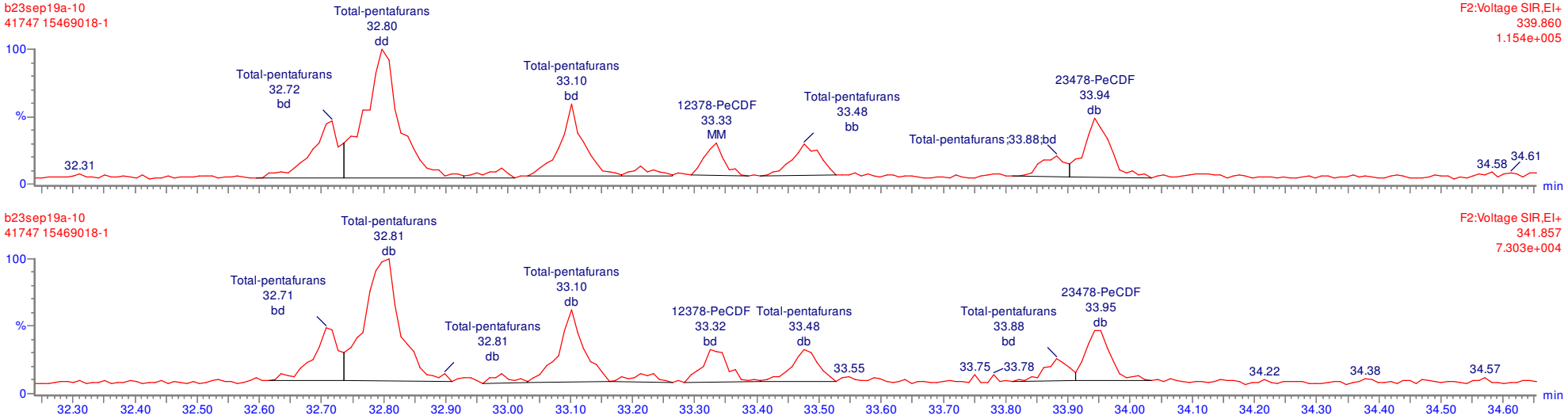
MANUAL INTEGRATION
METHOD 8290
HRP763_1



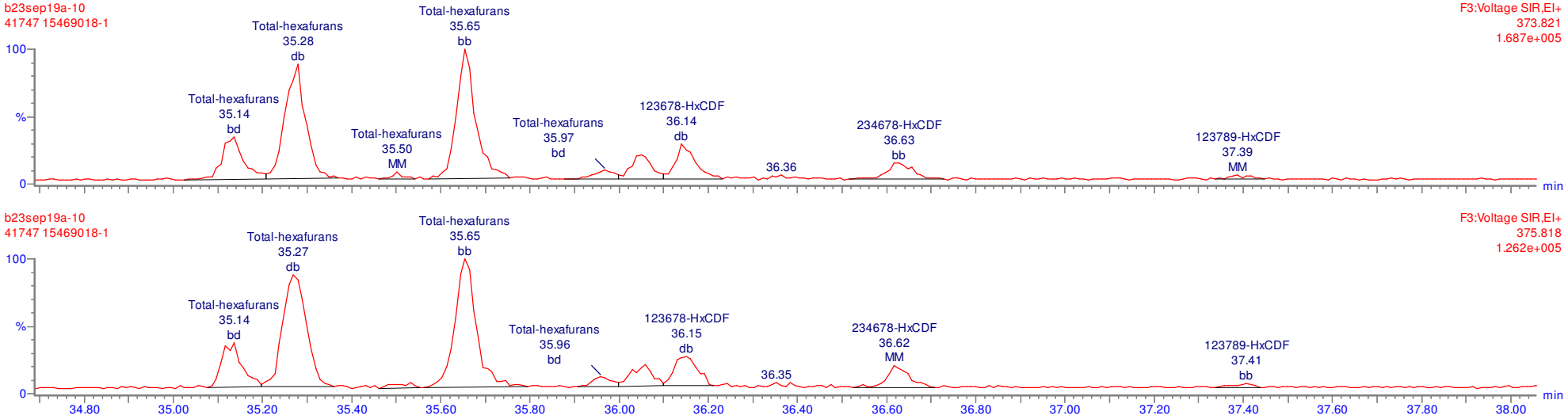
MANUAL INTEGRATION
METHOD 8290
HRP763_1



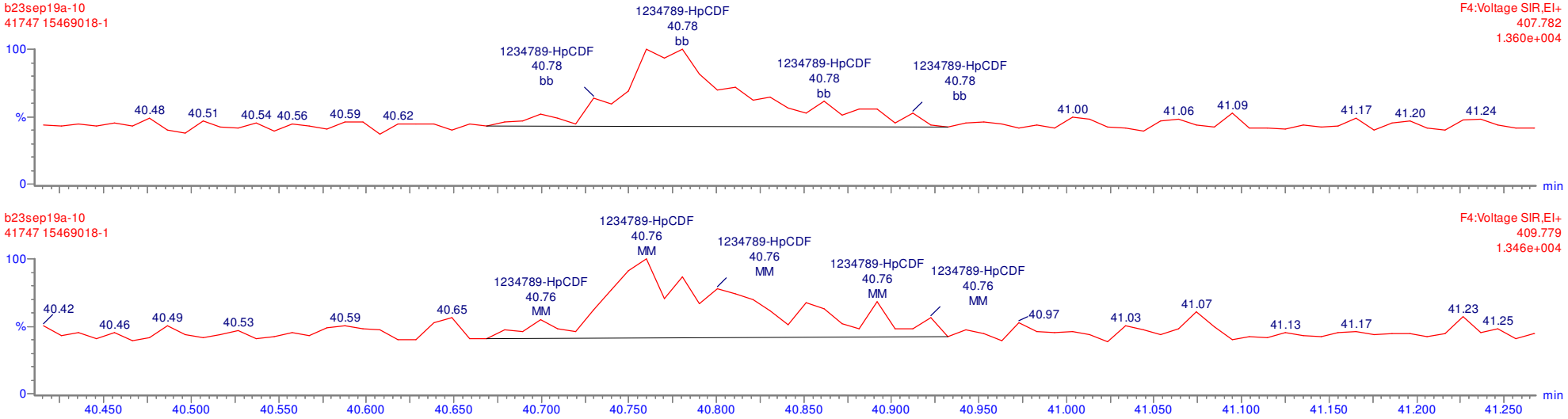
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



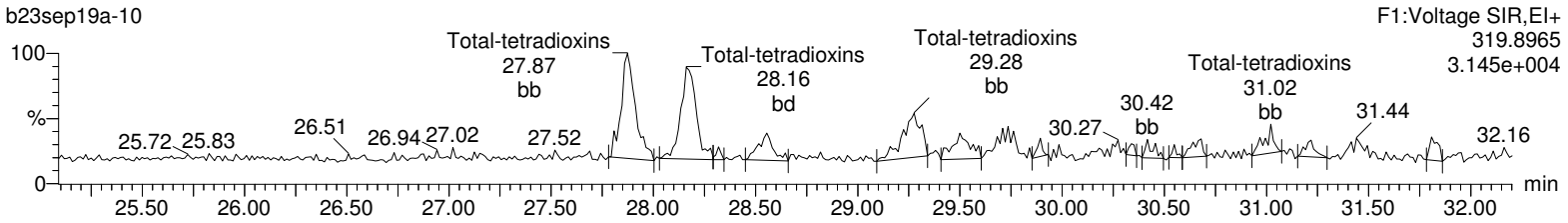
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

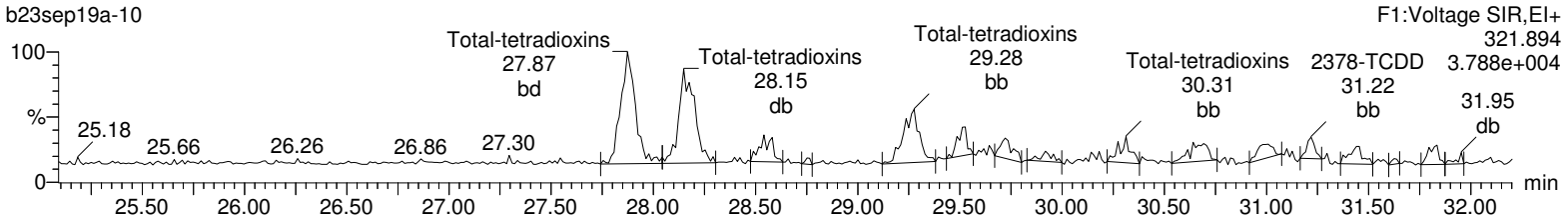
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

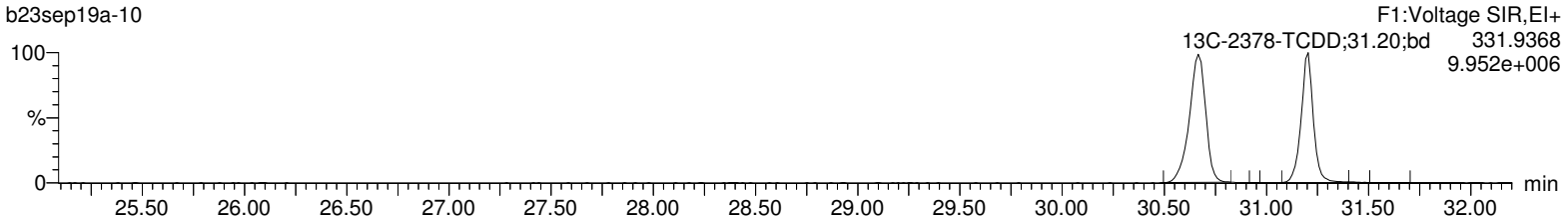
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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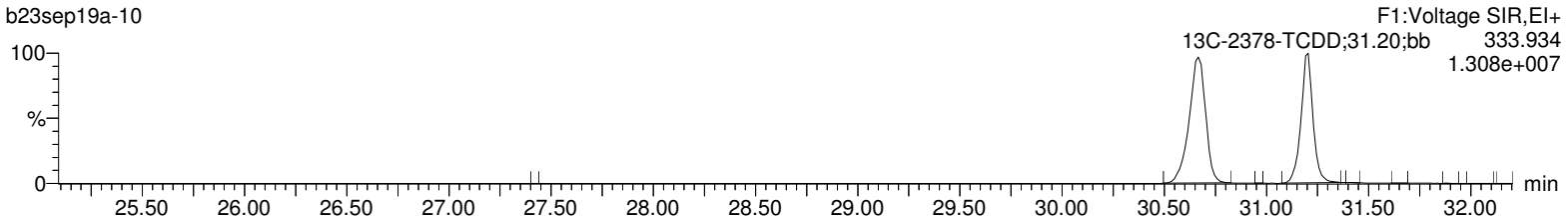
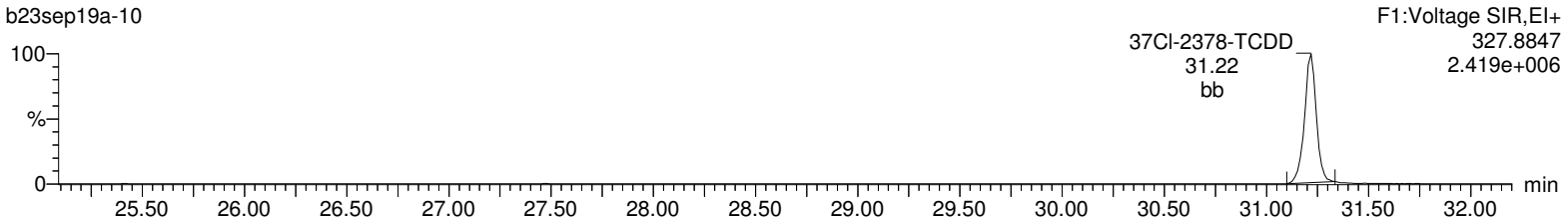
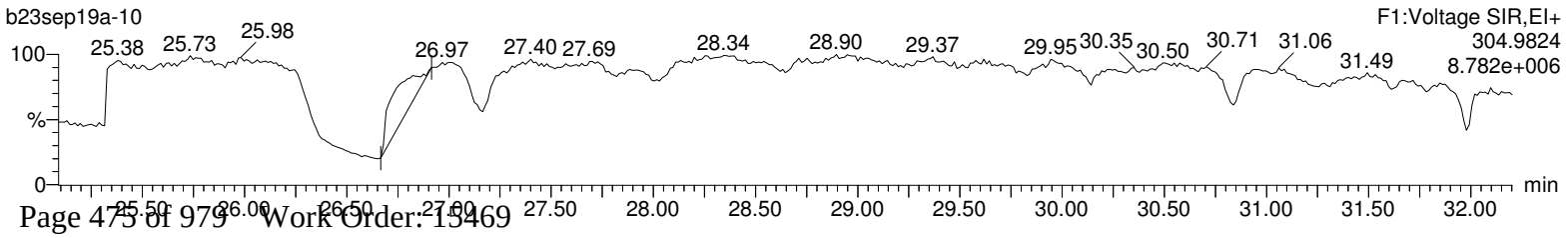


37Cl-2378-TCDD



Lock Mass F1



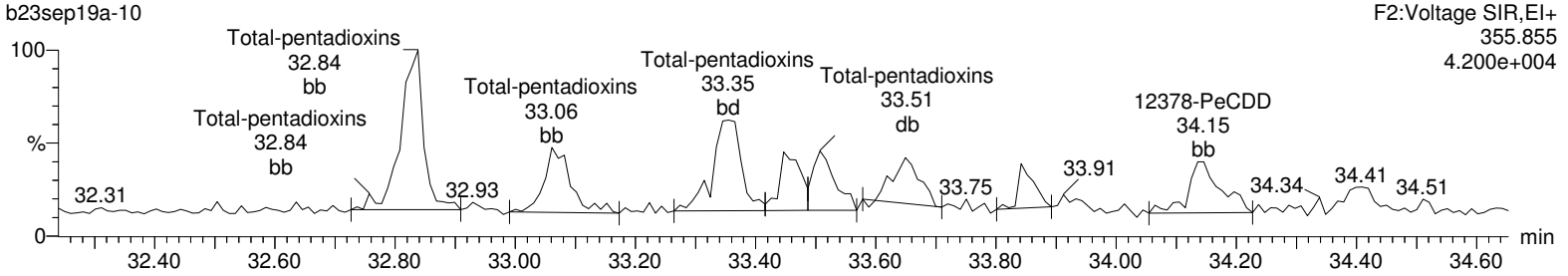
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

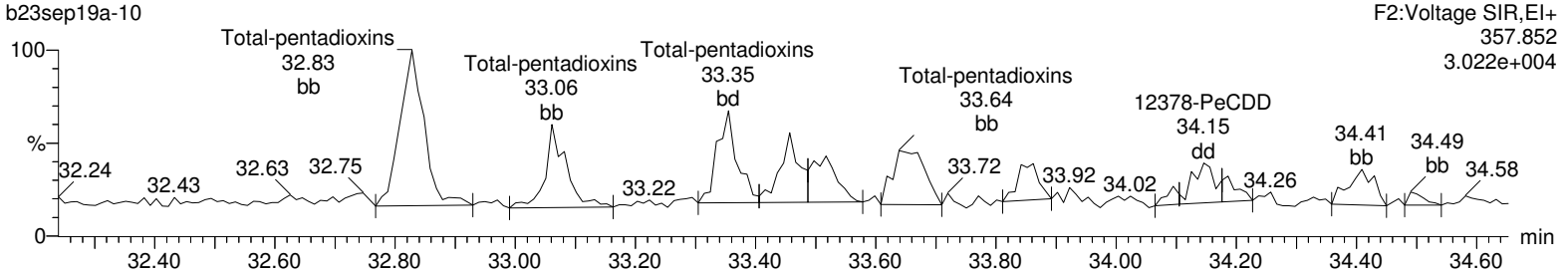
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

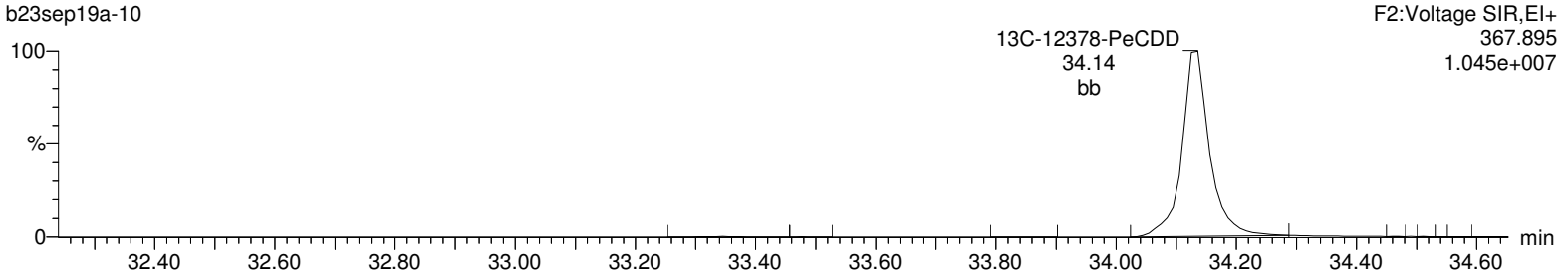
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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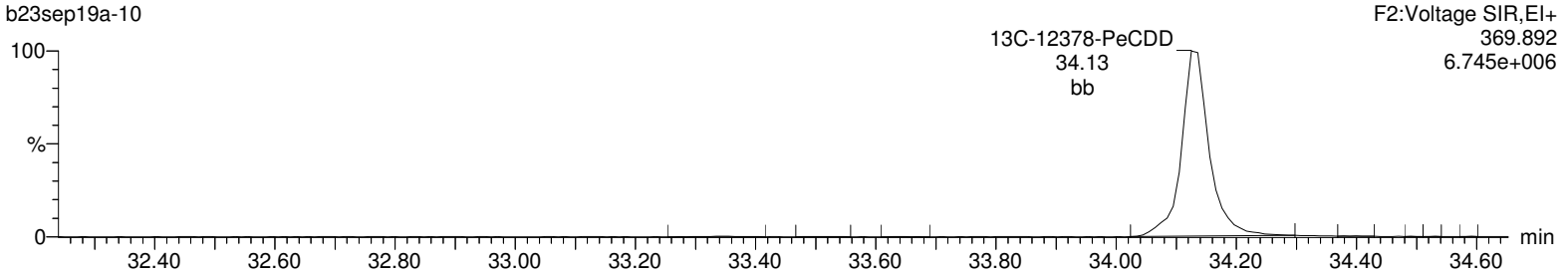

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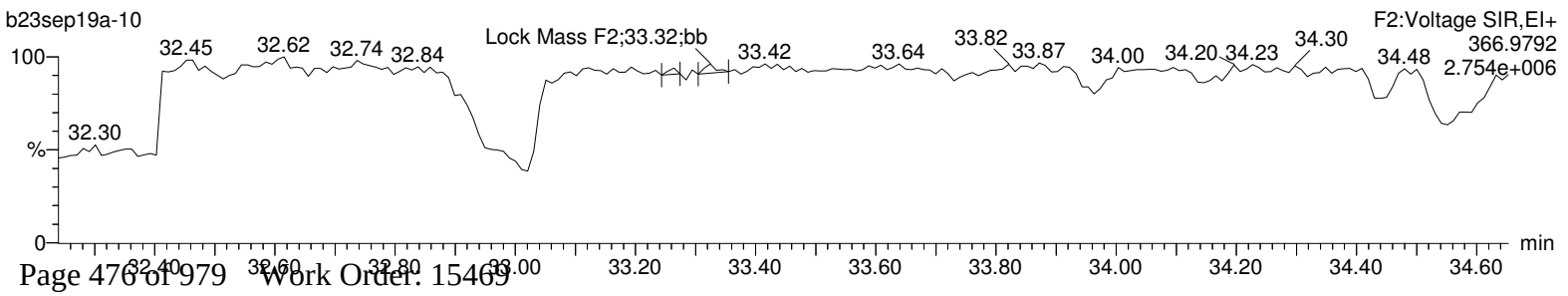


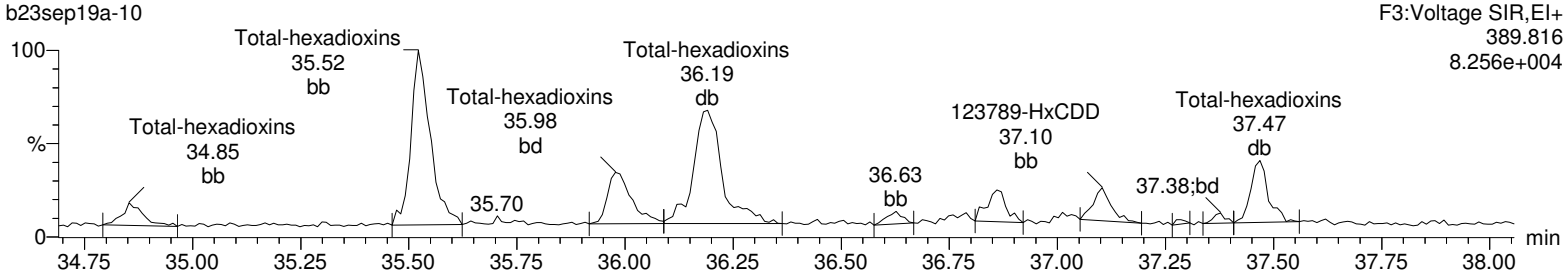
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

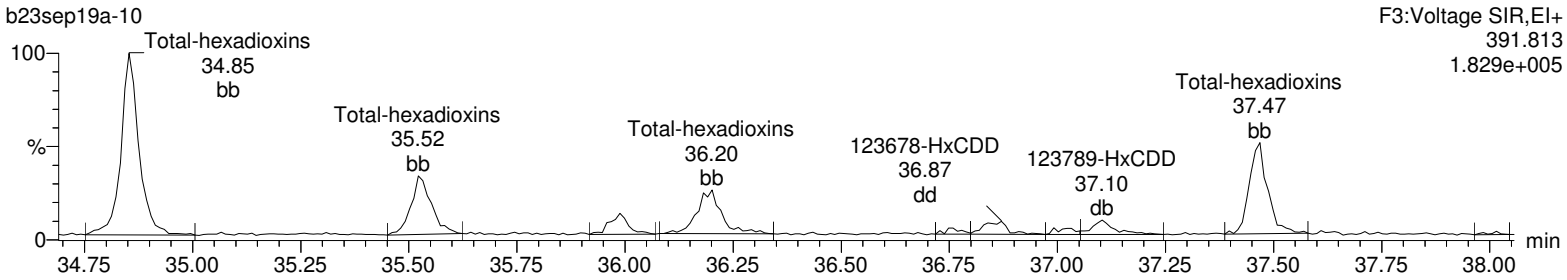
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

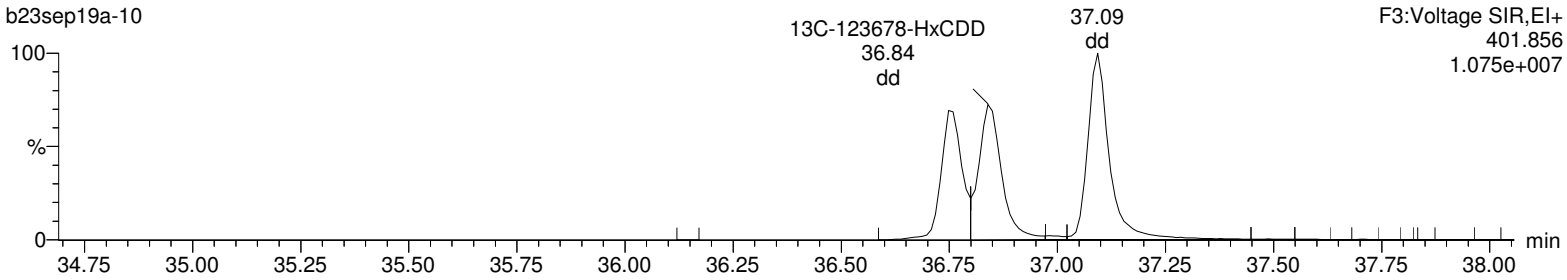
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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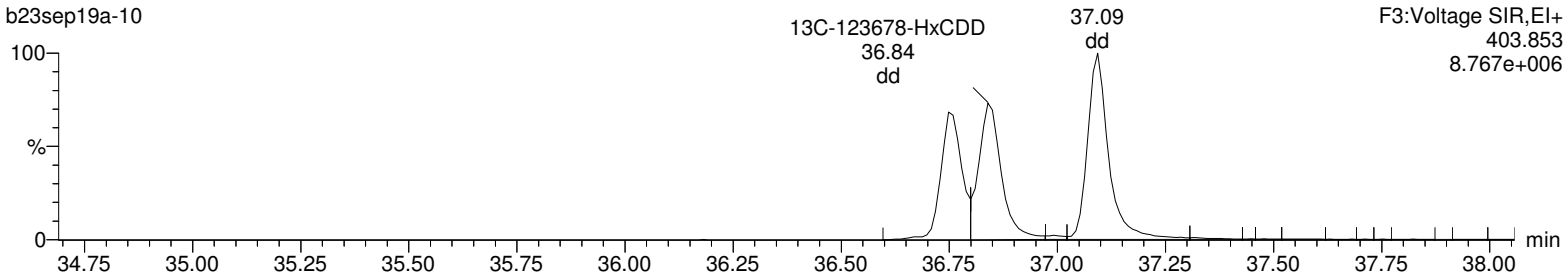
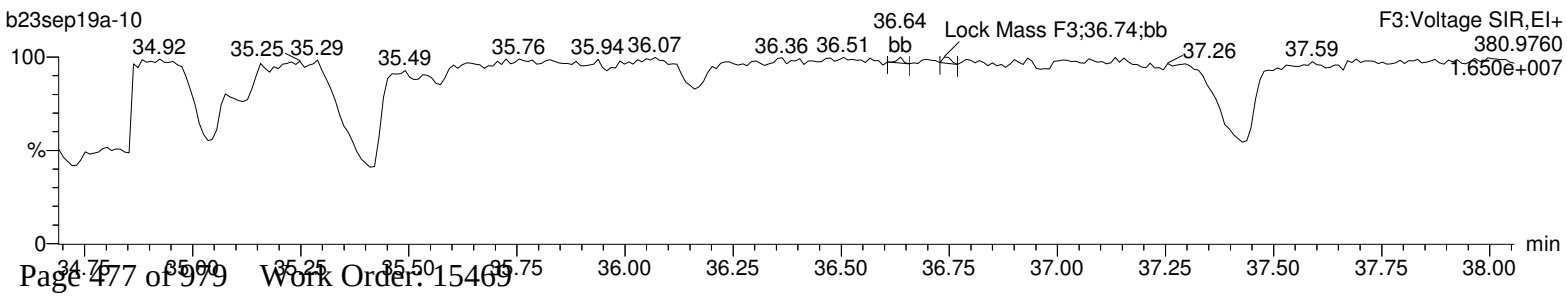


Lock Mass F3



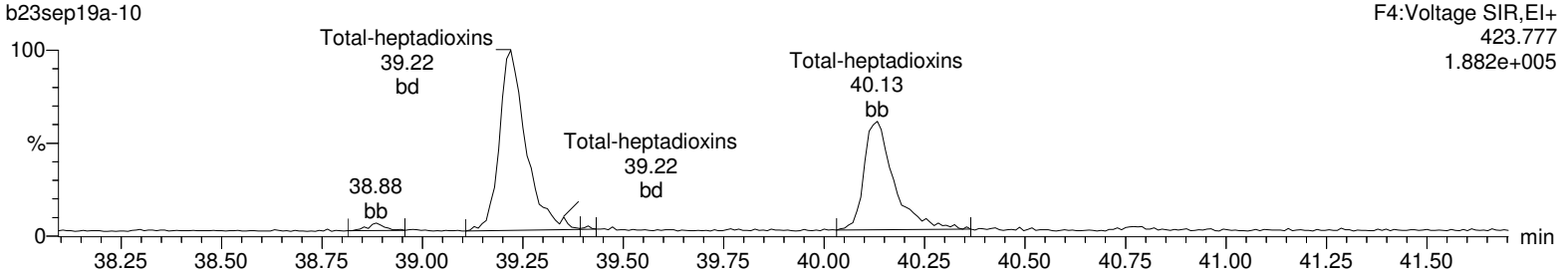
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

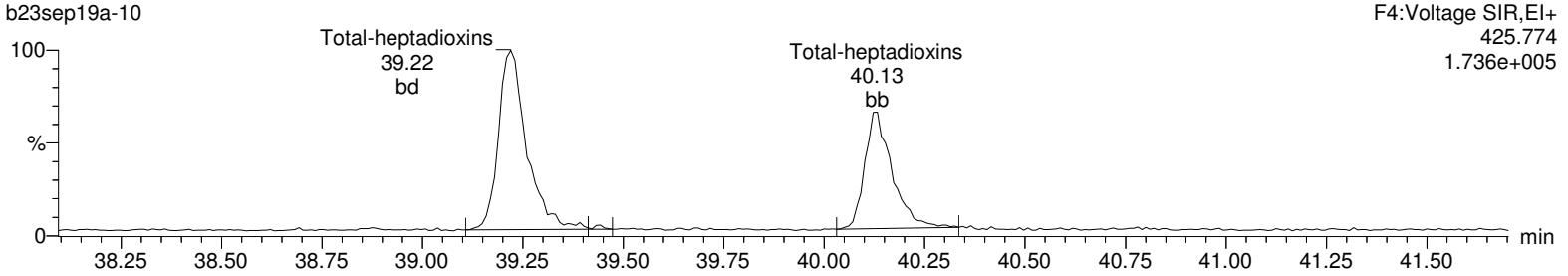
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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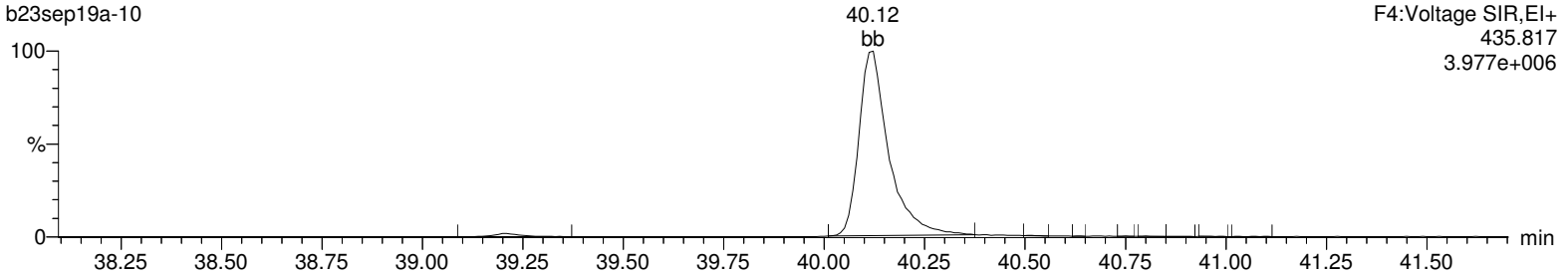

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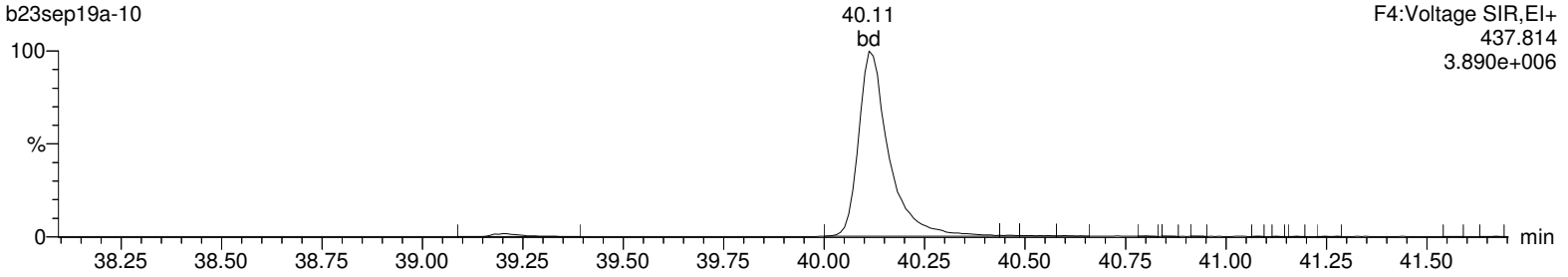
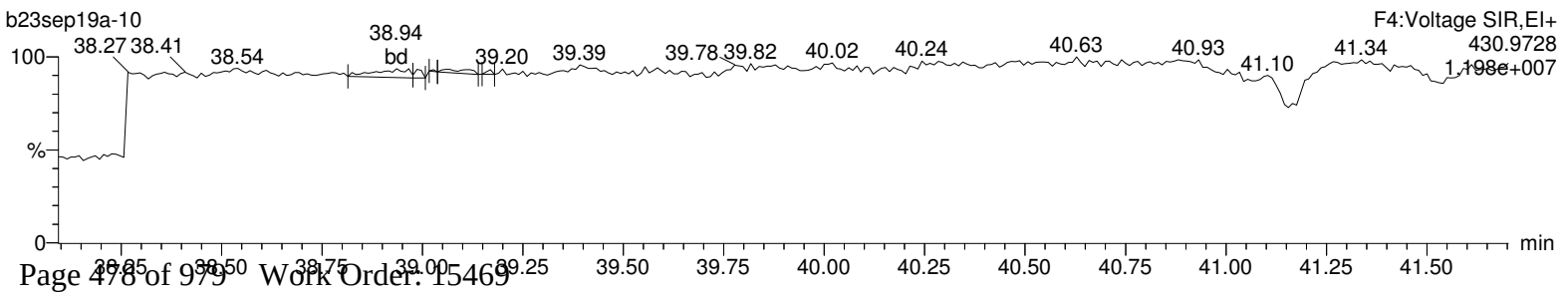


Lock Mass F4



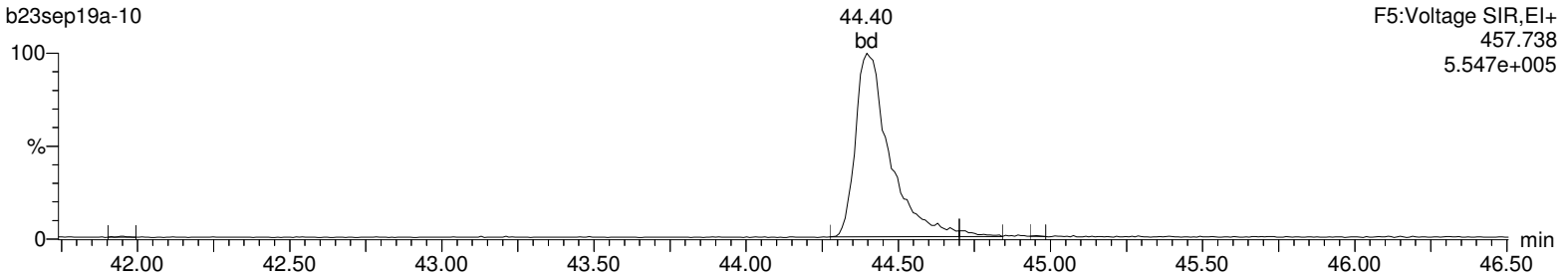
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDD



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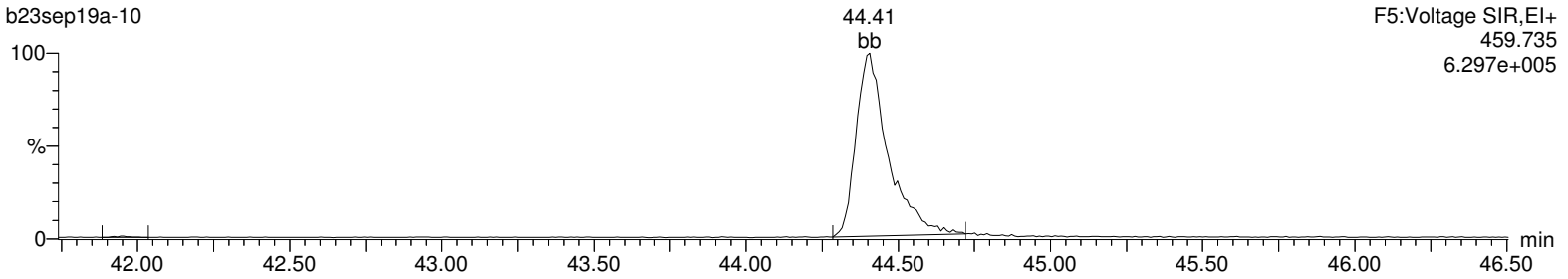

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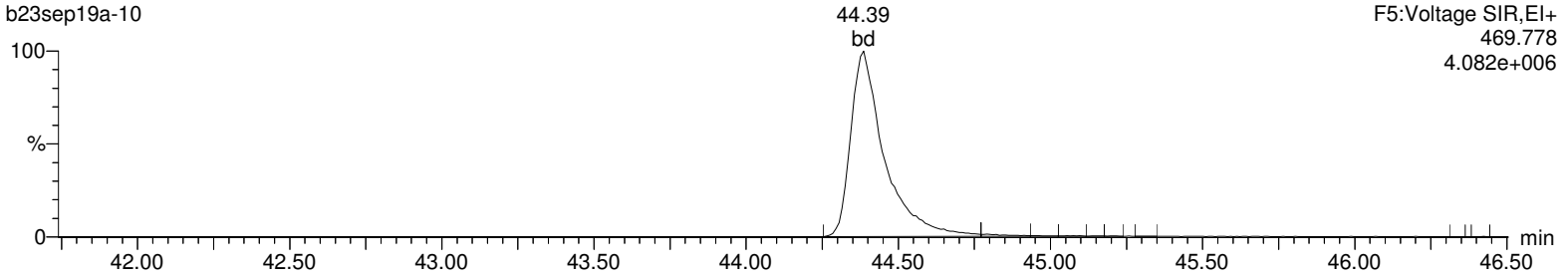

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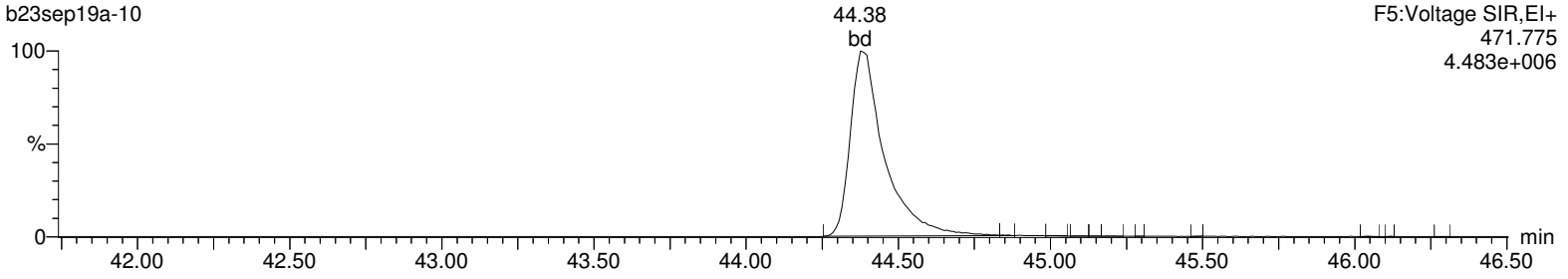
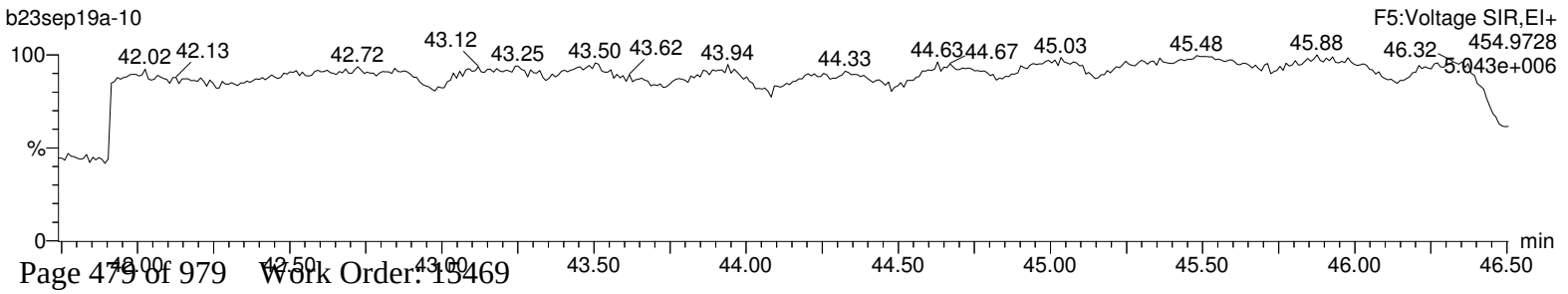


Lock Mass F5



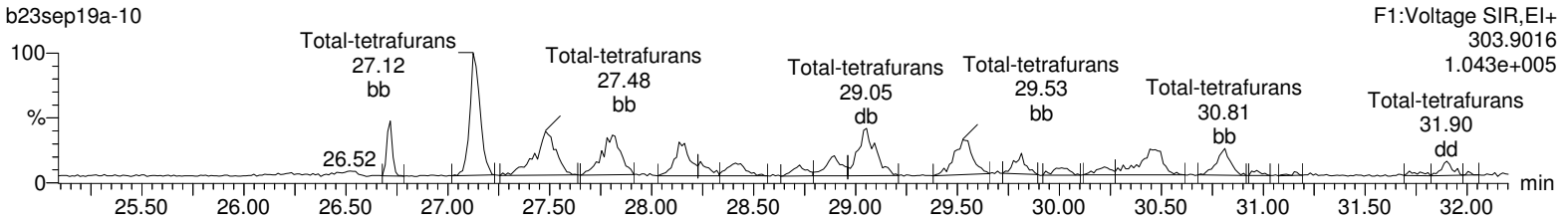
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

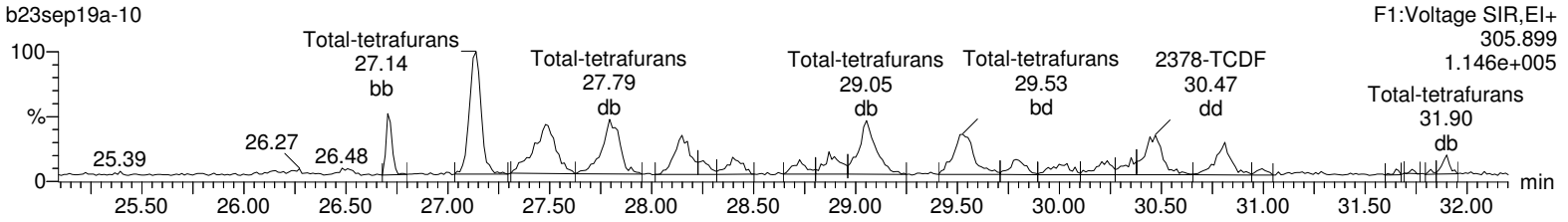
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

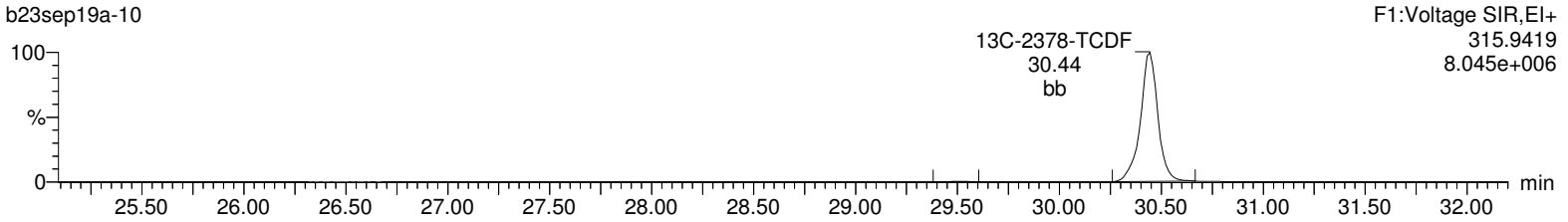
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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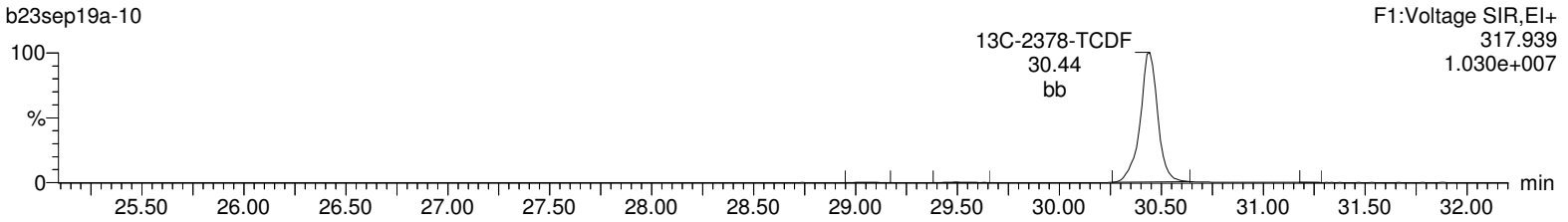

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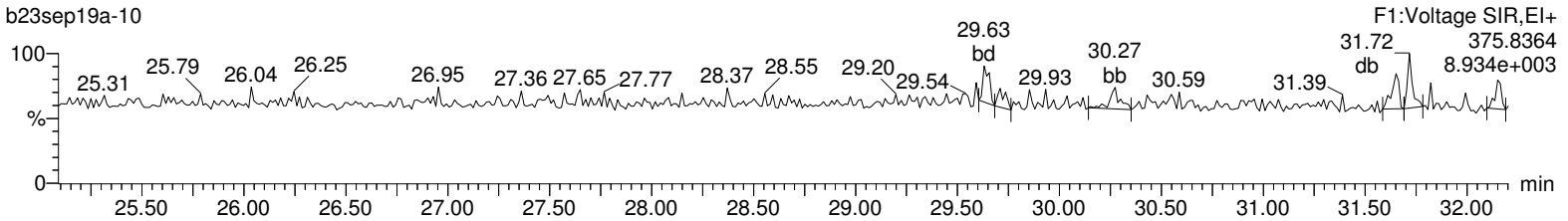
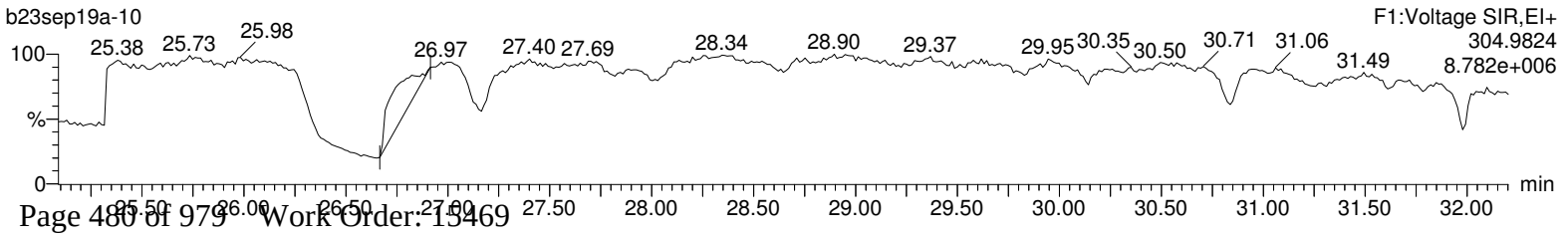


Lock Mass F1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
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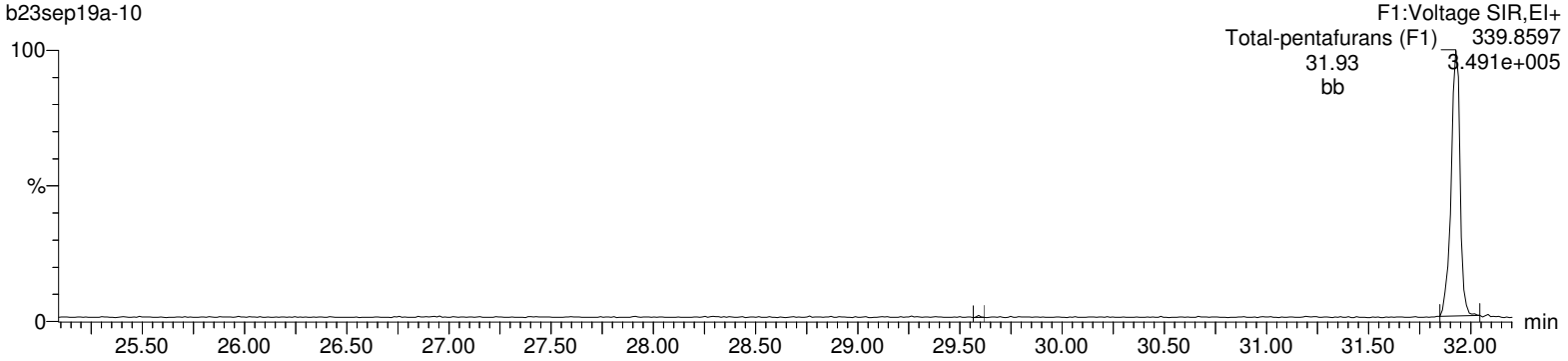
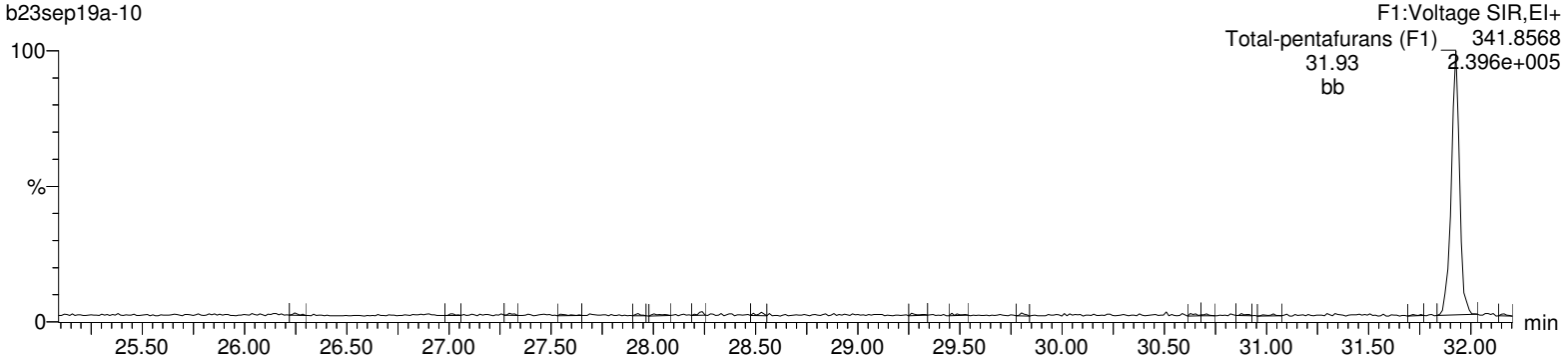
Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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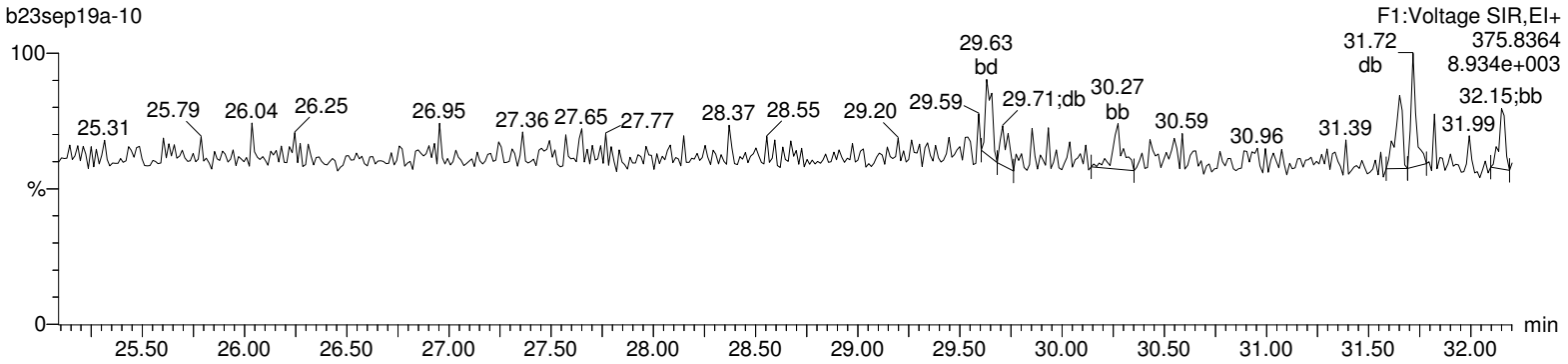
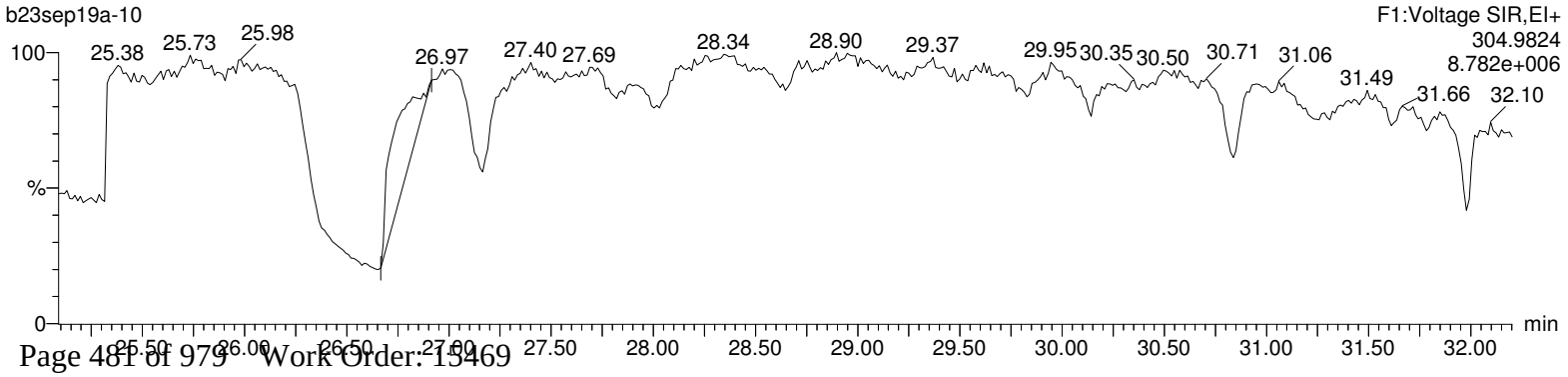


Lock Mass F1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
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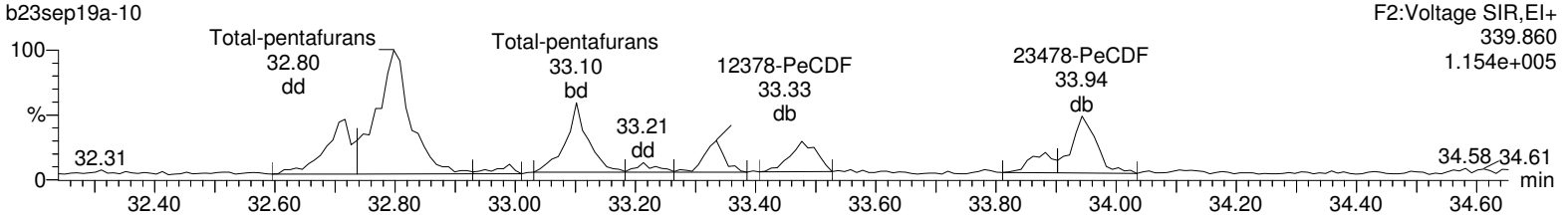
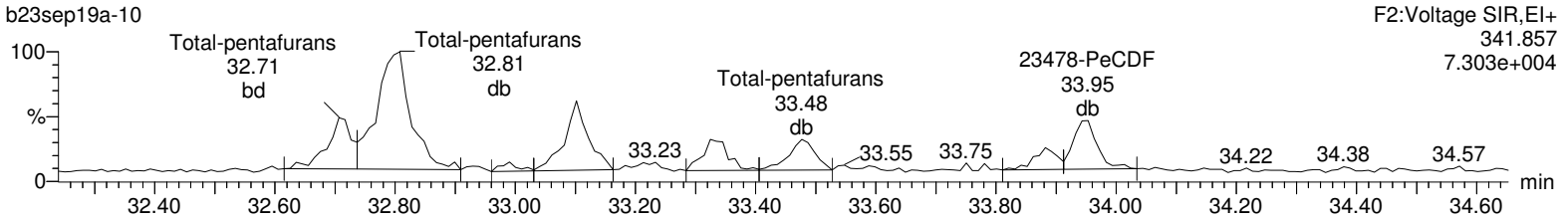
Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

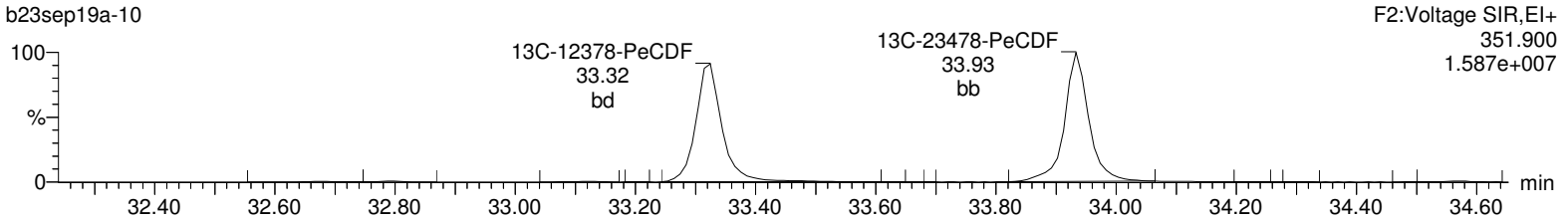
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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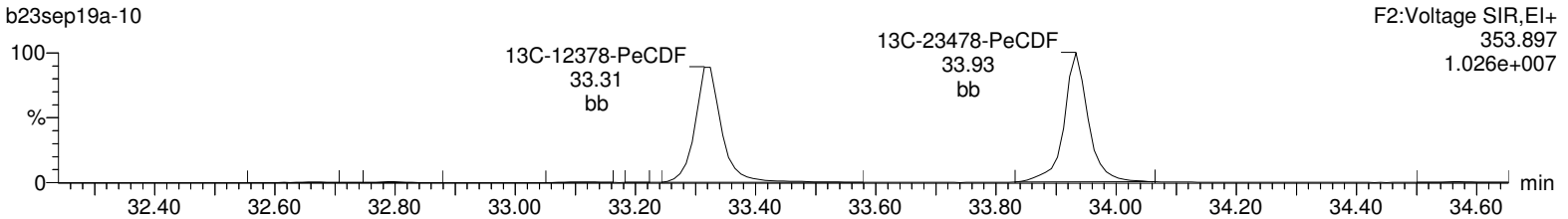
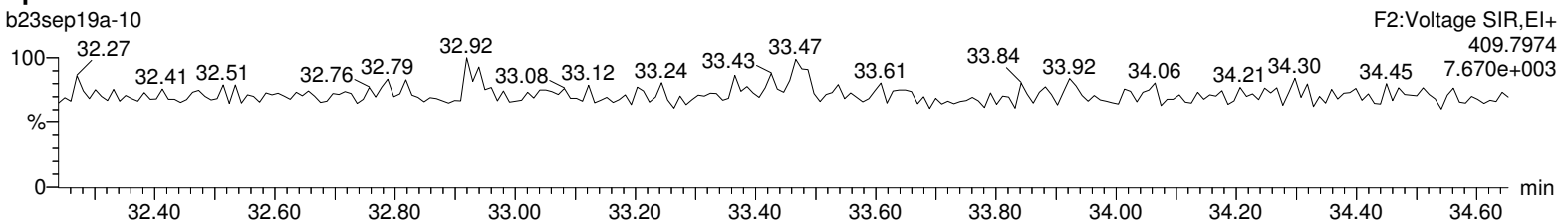
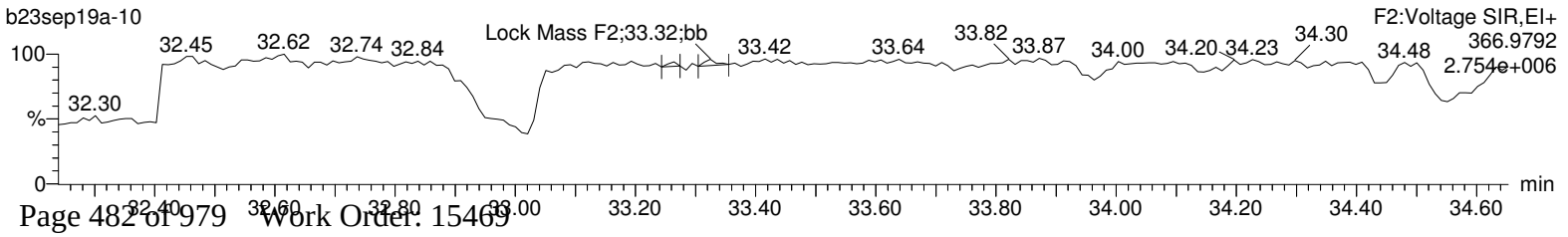


HpDPE



Lock Mass F2



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
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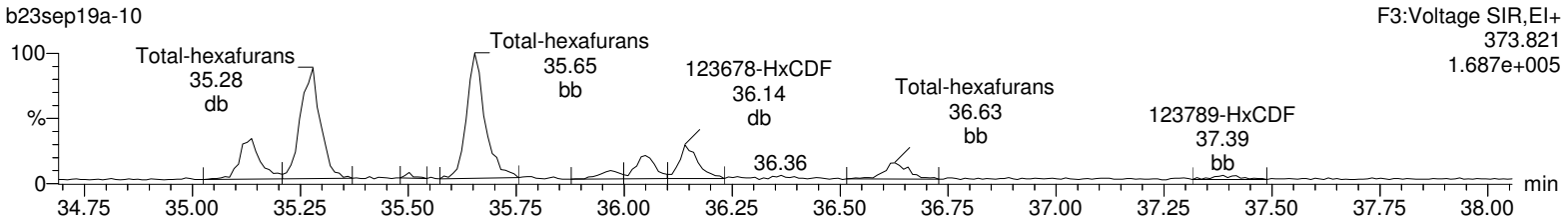
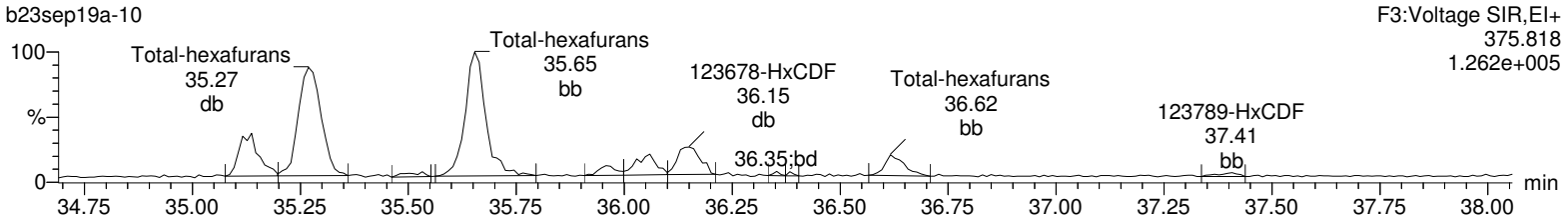
Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexafurans



Total-hexafurans



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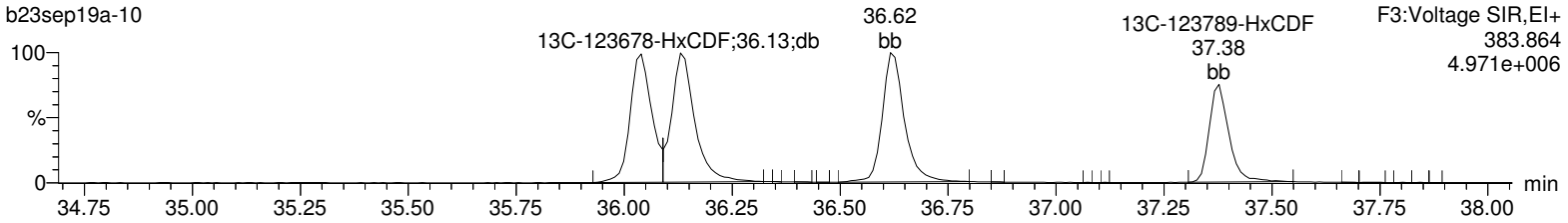

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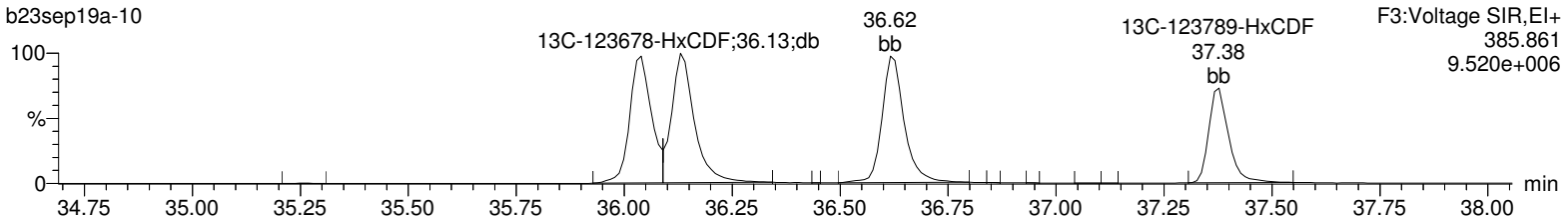

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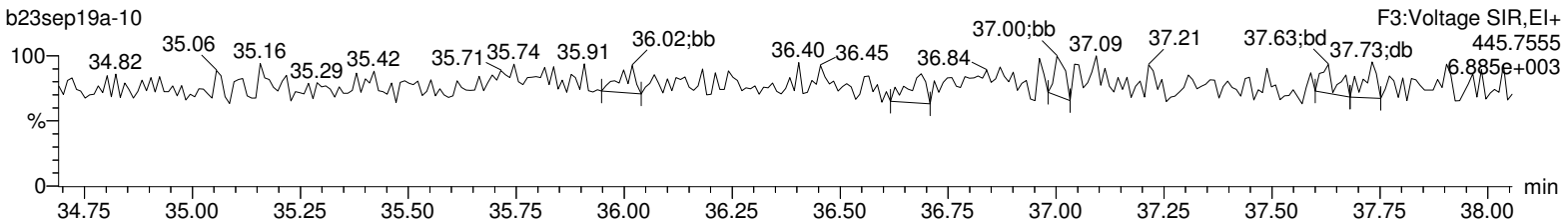
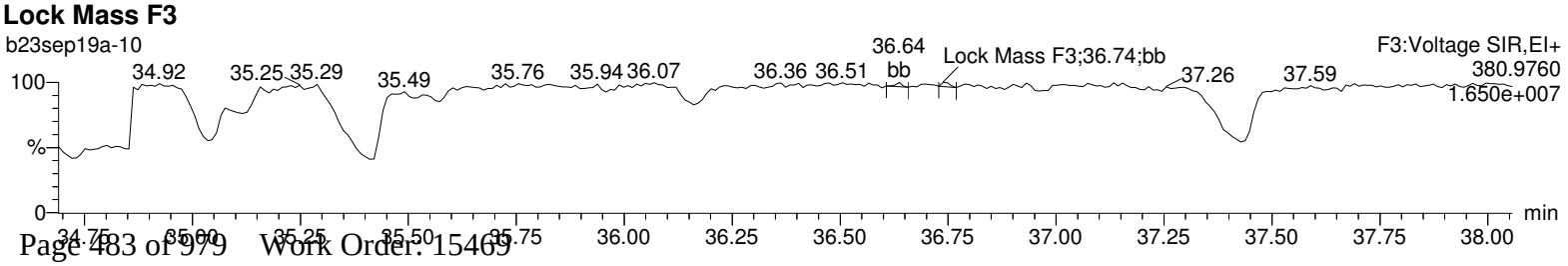


Lock Mass F3



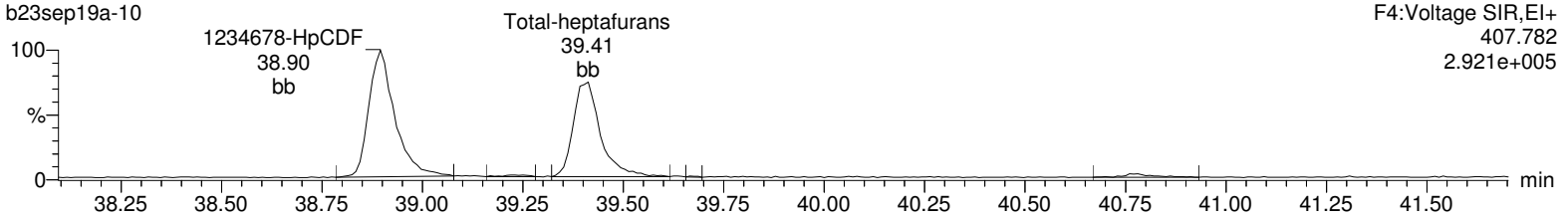
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptafurans



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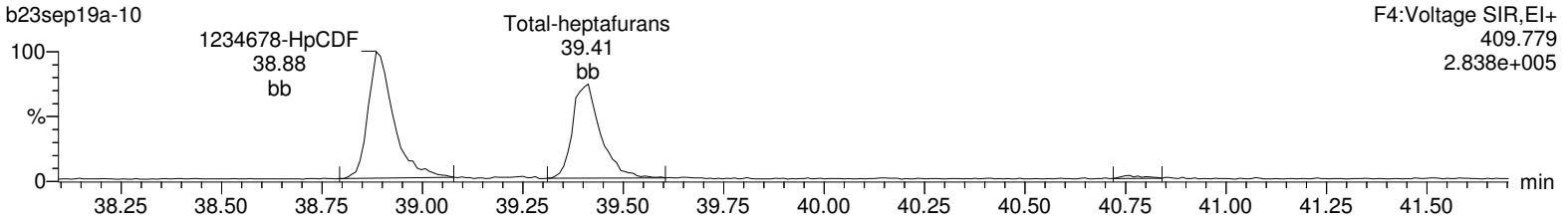

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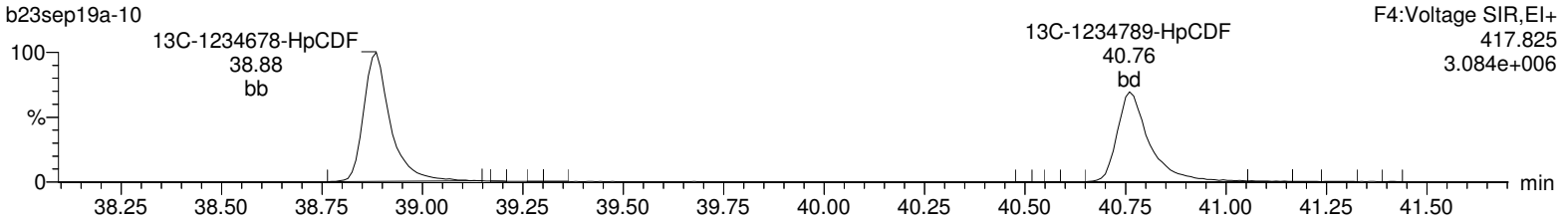

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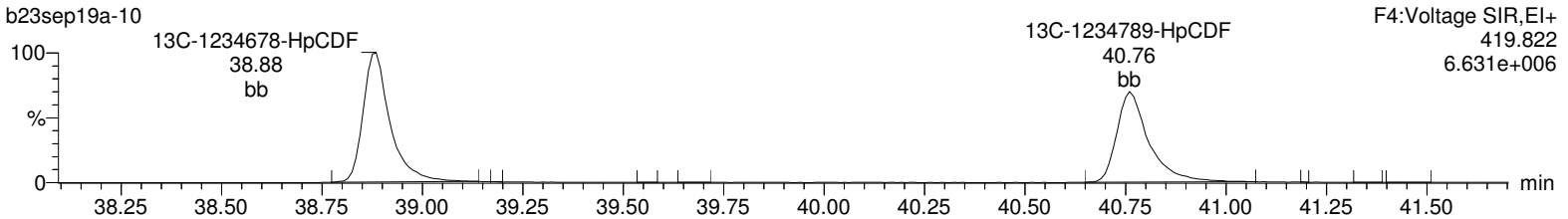
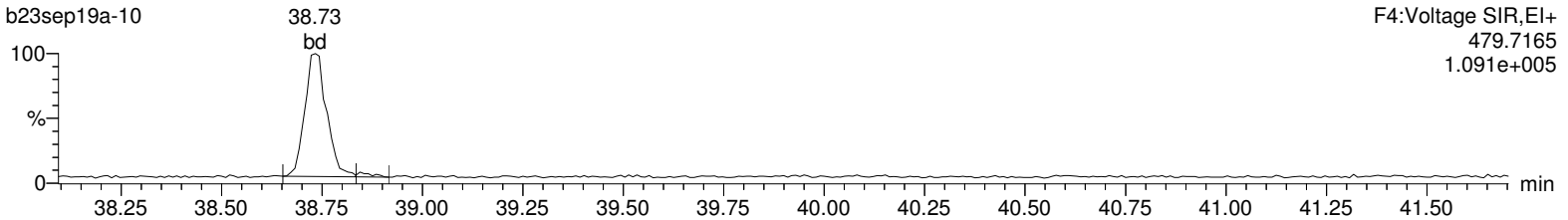
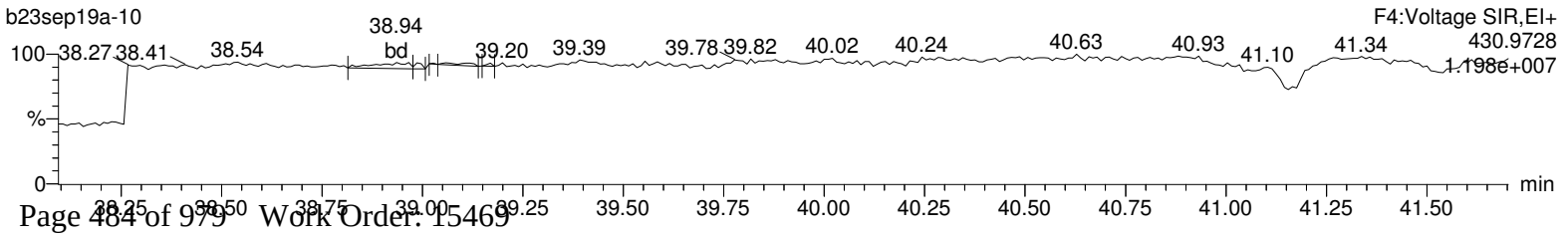


NoDPE



Lock Mass F4



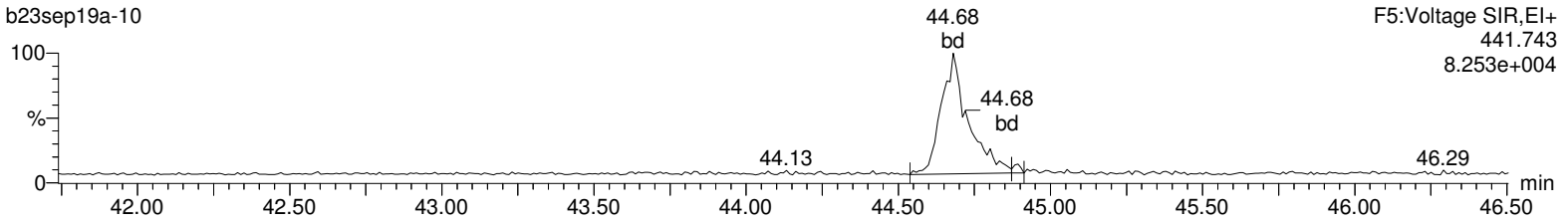
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

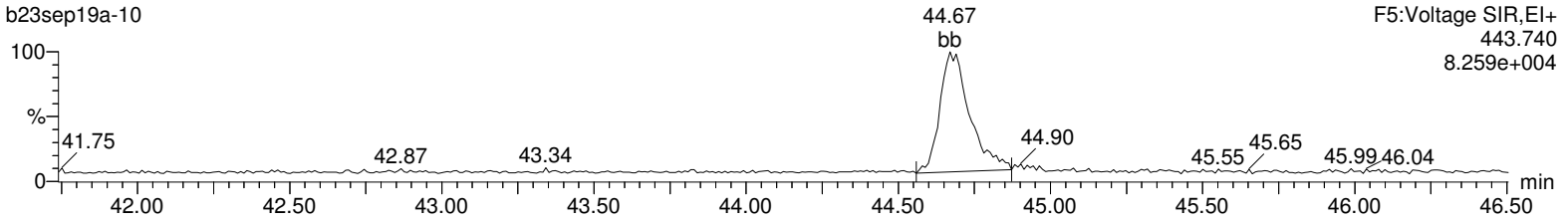
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-10, Date: 23-Sep-2019, Time: 15:35:07, ID: 15469018-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

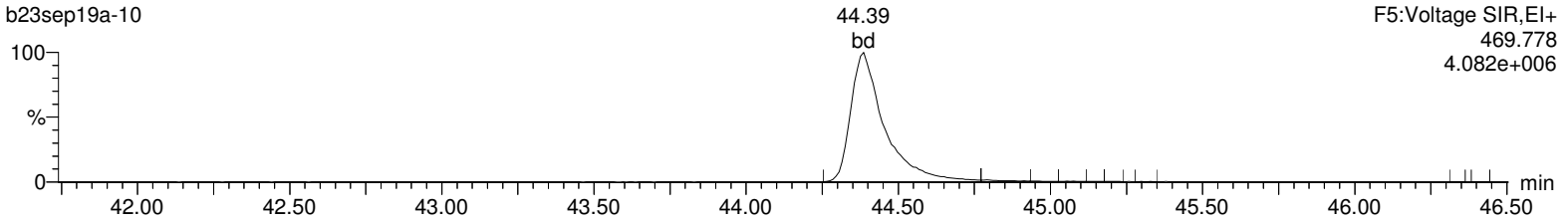
OCDF



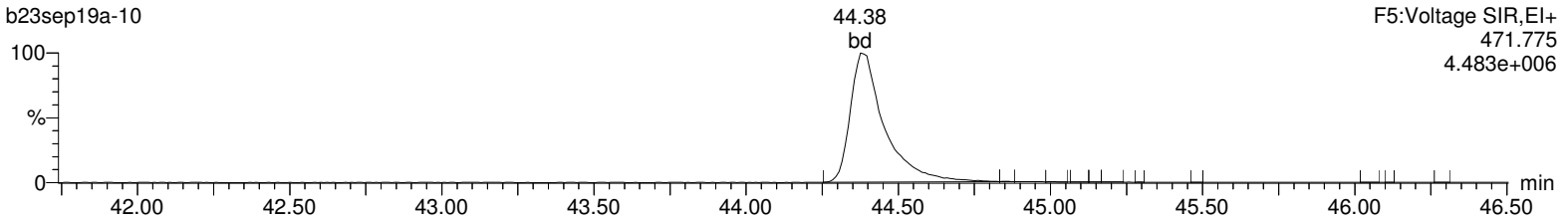
OCDF



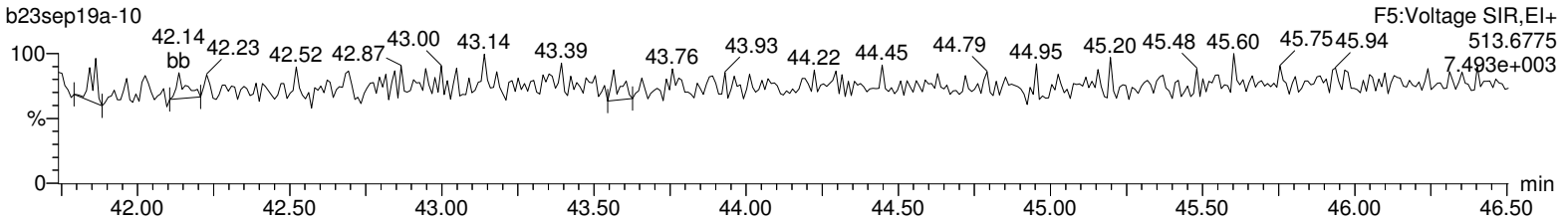
13C-OCDD



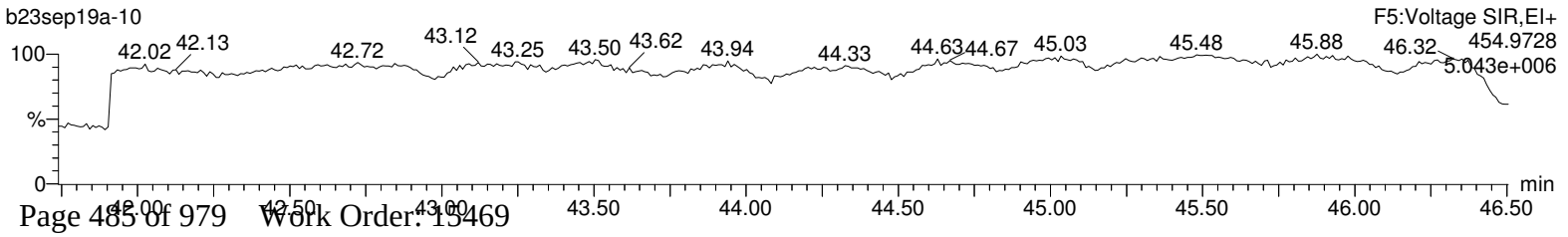
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469019**	**Date Collected:**	**08/29/2019 09:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**43.1**
Client ID:	**H3-SC1b-80to90-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 16:23**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.65 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0673	pg/g	0.0673	0.943
40321-76-4	1,2,3,7,8-PeCDD	U	0.109	pg/g	0.109	4.71
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.126	pg/g	0.126	4.71
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.131	pg/g	0.131	4.71
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.132	pg/g	0.132	4.71
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	1.04	pg/g	0.140	4.71
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	8.95	pg/g	0.341	9.43
51207-31-9	2,3,7,8-TCDF	BJ	0.413	pg/g	0.106	0.943
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.117	pg/g	0.083	4.71
57117-31-4	2,3,4,7,8-PeCDF	BJK	0.111	pg/g	0.0717	4.71
70648-26-9	1,2,3,4,7,8-HxCDF	BJK	0.141	pg/g	0.0698	4.71
57117-44-9	1,2,3,6,7,8-HxCDF	BJK	0.100	pg/g	0.0713	4.71
60851-34-5	2,3,4,6,7,8-HxCDF	BJK	0.083	pg/g	0.0753	4.71
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0975	pg/g	0.0975	4.71
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.685	pg/g	0.0734	4.71
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.115	pg/g	0.115	4.71
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	0.368	pg/g	0.275	9.43
41903-57-5	Total TeCDD	BJ	0.571	pg/g	0.0673	0.943
36088-22-9	Total PeCDD	JK	0.287	pg/g	0.109	4.71
34465-46-8	Total HxCDD	BJK	1.00	pg/g	0.126	4.71
37871-00-4	Total HpCDD	J	2.61	pg/g	0.140	4.71
30402-14-3	Total TeCDF	JK	1.90	pg/g	0.106	0.943
30402-15-4	Total PeCDF	BJK	0.824	pg/g	0.0455	4.71
55684-94-1	Total HxCDF	BJK	0.892	pg/g	0.0698	4.71
38998-75-3	Total HpCDF	BJ	1.19	pg/g	0.0734	4.71
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.131	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.244	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		135	189	pg/g	71.7	(25%-164%)
13C-1,2,3,7,8-PeCDD		117	189	pg/g	62.3	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		152	189	pg/g	80.5	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		145	189	pg/g	77.1	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		179	189	pg/g	94.6	(23%-140%)
13C-OCDD		313	377	pg/g	82.9	(17%-157%)
13C-2,3,7,8-TCDF		133	189	pg/g	70.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		107	189	pg/g	56.8	(24%-185%)
13C-2,3,4,7,8-PeCDF		111	189	pg/g	58.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		147	189	pg/g	78.2	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		138	189	pg/g	72.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		139	189	pg/g	73.7	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		142	189	pg/g	75.2	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469019**	**Date Collected:**	**08/29/2019 09:30**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**43.1**
Client ID:	**H3-SC1b-80to90-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 16:23**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-11**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**18.65 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		159	189	pg/g	84.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		176	189	pg/g	93.4	(26%-138%)
37Cl-2,3,7,8-TCDD		16.0	18.9	pg/g	84.8	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 16:17:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 16:17:15 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	7.83e1	4.29e2	5.08e2	31.15	1.000	0.18	YES	0.030	0.0357	2.46e3	1748	1.4	1.09e4	1808	6.0	bb	bb
2	12378-PeCDD	3.16e2	2.34e2	5.51e2	34.08	1.000	1.35	NO	0.058	0.0577	6.22e3	2131	2.9	4.93e3	2355	2.1	bd	MM
3	123478-HxCDD							NO		0.0670		1938			2225			
4	123678-HxCDD	1.09e2	2.10e2	3.18e2	36.78	1.001	0.52	YES	0.032	0.0696	4.39e3	1938	2.3	7.53e3	2225	3.4	MM	db
5	123789-HxCDD	4.18e2	2.28e2	6.46e2	37.02	1.007	1.83	YES	0.073	0.0699	6.75e3	1938	3.5	4.92e3	2225	2.2	db	bb
6	1234678-HpCDD	2.06e3	2.23e3	4.28e3	40.05	1.001	0.92	NO	0.553	0.0744	2.65e4	1186	22.3	2.68e4	1429	18.7	bd	bb
7	OCDD	1.28e4	1.41e4	2.69e4	44.28	1.001	0.90	NO	4.747	0.181	1.13e5	1741	64.7	1.11e5	1248	88.9	bd	bb
8	2378-TCDF	1.81e3	2.28e3	4.09e3	30.36	1.000	0.79	NO	0.219	0.0563	1.75e4	1956	9.0	2.28e4	2234	10.2	bb	bb
9	12378-PeCDF	4.60e2	3.00e2	7.60e2	33.29	1.001	1.53	NO	0.062	0.0440	1.35e4	2050	6.6	8.12e3	2549	3.2	bd	bb
10	23478-PeCDF	4.47e2	3.73e2	8.20e2	33.89	1.000	1.20	YES	0.059	0.0380	7.37e3	2050	3.6	8.99e3	2549	3.5	db	db
11	123478-HxCDF	5.23e2	3.06e2	8.29e2	35.98	1.001	1.71	YES	0.075	0.0370	9.45e3	1816	5.2	5.57e3	1313	4.2	MM	dd
12	123678-HxCDF	3.24e2	3.39e2	6.63e2	36.07	1.000	0.96	YES	0.053	0.0378	5.70e3	1816	3.1	6.70e3	1313	5.1	MM	MM
13	234678-HxCDF	3.35e2	1.70e2	5.05e2	36.56	1.000	1.97	YES	0.044	0.0399	6.56e3	1816	3.6	3.90e3	1313	3.0	MM	bb
14	123789-HxCDF	1.71e2	1.32e2	3.03e2	37.31	1.000	1.29	NO	0.032	0.0517	4.43e3	1816	2.4	4.50e3	1313	3.4	bb	bb
15	1234678-HpCDF	1.91e3	1.99e3	3.90e3	38.81	1.001	0.96	NO	0.363	0.0389	2.72e4	1250	21.7	2.57e4	1004	25.6	bb	bb
16	1234789-HpCDF							NO		0.0611		1250			1004			
17	OCDF	5.45e2	6.84e2	1.23e3	44.54	1.007	0.80	NO	0.195	0.146	6.89e3	1195	5.8	6.86e3	1489	4.6	MM	MM
18	13C-2378-TCDD	8.16e5	1.07e6	1.89e6	31.15	1.018	0.76	NO	71.679	0.0612	1.21e7	4500	2681.9	1.57e7	2424	6468.5	bb	bb
19	13C-12378-PeCDD	6.73e5	4.38e5	1.11e6	34.08	1.114	1.53	NO	62.273	0.101	1.38e7	2679	5168.2	9.06e6	5028	1801.5	bb	bb
20	13C-123478-HxCDD	4.80e5	3.89e5	8.70e5	36.67	0.991	1.23	NO	80.450	0.112	9.20e6	3886	2366.2	7.40e6	3553	2083.2	bd	bd
21	13C-123678-HxCDD	6.16e5	5.01e5	1.12e6	36.76	0.993	1.23	NO	77.103	0.0835	9.32e6	3886	2397.9	7.67e6	3553	2159.5	dd	dd
22	13C-1234678-HpCDD	4.17e5	4.04e5	8.21e5	40.03	1.082	1.03	NO	94.648	0.121	4.73e6	3804	1242.5	4.57e6	2652	1723.5	bd	bd
23	13C-OCDD	5.82e5	6.59e5	1.24e6	44.24	1.196	0.88	NO	165.890	0.124	4.24e6	2860	1483.7	4.77e6	2871	1661.7	bd	bd
24	13C-2378-TCDF	9.05e5	1.19e6	2.09e6	30.35	0.992	0.76	NO	70.307	0.0775	9.03e6	6590	1369.6	1.19e7	3303	3599.5	bb	bb
25	13C-12378-PeCDF	8.22e5	5.38e5	1.36e6	33.27	1.087	1.53	NO	56.817	0.0909	1.74e7	5640	3083.2	1.14e7	3709	3070.6	bb	bb
26	13C-23478-PeCDF	8.76e5	5.64e5	1.44e6	33.88	1.107	1.55	NO	58.636	0.0886	1.89e7	5640	3356.4	1.23e7	3709	3325.4	bb	bb
27	13C-123478-HxCDF	3.33e5	6.44e5	9.76e5	35.96	0.972	0.52	NO	78.153	0.101	6.36e6	3705	1716.1	1.23e7	4079	3023.7	bd	bd
28	13C-123678-HxCDF	4.11e5	7.76e5	1.19e6	36.06	0.975	0.53	NO	72.909	0.0777	6.80e6	3705	1836.0	1.27e7	4079	3125.7	db	db
29	13C-234678-HxCDF	3.53e5	6.67e5	1.02e6	36.55	0.988	0.53	NO	73.673	0.0914	6.00e6	3705	1618.6	1.13e7	4079	2759.4	bb	bb
30	13C-123789-HxCDF	3.04e5	5.74e5	8.78e5	37.31	1.008	0.53	NO	75.248	0.108	4.93e6	3705	1331.2	9.31e6	4079	2283.7	bb	bb
31	13C-1234678-HpCDF	2.81e5	6.23e5	9.04e5	38.79	1.048	0.45	NO	84.172	0.123	3.78e6	3281	1152.0	8.26e6	4854	1701.3	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 16:17:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 16:17:15 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.26e5	4.92e5	7.18e5	40.68	1.099	0.46	NO	93.350	0.172	2.36e6	3281	720.6	5.23e6	4854	1077.4	bb	bb
33	13C-1234-TCDD	9.93e5	1.30e6	2.29e6	30.60	0.000	0.77	NO	100.000	0.0704	1.07e7	4500	2368.8	1.38e7	2424	5697.6	bb	bb
34	13C-123789-HxCDD	7.54e5	6.15e5	1.37e6	37.00	0.000	1.23	NO	100.000	0.0883	1.16e7	3886	2986.2	9.46e6	3553	2662.3	dd	dd
35	37Cl-2378-TCDD	2.09e5		2.09e5	31.17	1.018			8.478	0.0191	3.00e6	2021	1485.1				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 16:17:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 16:17:15 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	9.67e2	1.13e3	2.09e3	27.78	0.86	NO	0.124	0.0357	9.16e3	1748	5.2	1.60e4	1808	8.8	bb	MM
2	Total-tetradioxins	5.03e2	6.80e2	1.18e3	28.11	0.74	NO	0.070	0.0357	9.48e3	1748	5.4	7.27e3	1808	4.0	MM	MM
3	Total-tetradioxins	2.21e2	2.29e2	4.50e2	28.50	0.97	YES	0.027	0.0357	3.21e3	1748	1.8	3.54e3	1808	2.0	MM	MM
4	Total-tetradioxins	7.64e2	1.07e3	1.83e3	29.18	0.71	NO	0.109	0.0357	1.03e4	1748	5.9	8.96e3	1808	5.0	MM	MM
5	Total-tetradioxins	3.59e2	3.34e2	6.93e2	30.61	1.07	YES	0.041	0.0357	7.32e3	1748	4.2	3.97e3	1808	2.2	MM	bb
6	2378-TCDD	7.83e1	4.29e2	5.08e2	31.15	0.18	YES	0.030	0.0357	2.46e3	1748	1.4	1.09e4	1808	6.0	bb	bb
7	Total-tetradioxins	1.14e2	1.21e2	2.35e2	31.35	0.94	YES	0.014	0.0357	3.23e3	1748	1.8	2.44e3	1808	1.4	db	bb
8	Total-tetradioxins	8.94e1	5.59e1	1.45e2	31.65	1.60	YES	0.009	0.0357	2.89e3	1748	1.7	1.57e3	1808	0.9	bd	bd
9	Total-tetradioxins	7.17e1	5.93e1	1.31e2	31.69	1.21	YES	0.008	0.0357	2.04e3	1748	1.2	2.51e3	1808	1.4	dd	dd
10	Total-tetradioxins	9.11e1	9.54e1	1.87e2	31.80	0.95	YES	0.011	0.0357	1.96e3	1748	1.1	3.89e3	1808	2.2	db	db

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	7.35e1	9.53e1	1.69e2	32.30	0.77	YES	0.018	0.0577	3.01e3	2131	1.4	2.53e3	2355	1.1	bb	bb
2	Total-pentadioxins	4.37e2	3.83e2	8.20e2	32.76	1.14	YES	0.087	0.0577	7.70e3	2131	3.6	7.43e3	2355	3.2	bd	bb
3	Total-pentadioxins	7.13e1	3.47e2	4.18e2	32.84	0.21	YES	0.044	0.0577	2.79e3	2131	1.3	1.27e4	2355	5.4	db	bb
4	Total-pentadioxins	3.24e2	2.86e2	6.10e2	33.02	1.13	YES	0.065	0.0577	8.31e3	2131	3.9	7.45e3	2355	3.2	MM	bd
5	Total-pentadioxins	5.03e2	2.60e2	7.63e2	33.31	1.94	YES	0.081	0.0577	1.01e4	2131	4.7	4.64e3	2355	2.0	bd	bd
6	Total-pentadioxins	8.19e1	1.11e2	1.93e2	33.39	0.74	YES	0.020	0.0577	2.37e3	2131	1.1	3.38e3	2355	1.4	dd	dd
7	Total-pentadioxins	2.47e2	2.58e2	5.06e2	33.47	0.96	YES	0.054	0.0577	5.14e3	2131	2.4	5.69e3	2355	2.4	MM	MM
8	Total-pentadioxins	3.07e2	1.72e2	4.79e2	33.60	1.79	YES	0.051	0.0577	8.23e3	2131	3.9	3.81e3	2355	1.6	MM	MM
9	Total-pentadioxins	1.57e2	1.07e2	2.64e2	33.90	1.46	NO	0.028	0.0577	2.68e3	2131	1.3	3.35e3	2355	1.4	MM	MM
10	12378-PeCDD	3.16e2	2.34e2	5.51e2	34.08	1.35	NO	0.058	0.0577	6.22e3	2131	2.9	4.93e3	2355	2.1	bd	MM
11	Total-pentadioxins	7.04e1	6.09e1	1.31e2	34.22	1.16	YES	0.014	0.0577	3.31e3	2131	1.6	1.89e3	2355	0.8	dd	bb
12	Total-pentadioxins	5.34e1	4.30e1	9.63e1	34.30	1.24	YES	0.010	0.0577	1.62e3	2131	0.8	1.06e3	2355	0.5	dd	MM
13	Total-pentadioxins	1.24e2	1.51e2	2.75e2	34.37	0.82	YES	0.029	0.0577	2.69e3	2131	1.3	3.45e3	2355	1.5	db	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 16:17:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 16:17:15 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	1.97e2	2.10e3	2.30e3	34.79	0.09	YES	0.257	0.0687	6.44e3	1938	3.3	4.35e4	2225	19.6	bb	bb
2	Total-hexadioxins	1.33e3	9.10e2	2.24e3	35.46	1.46	YES	0.250	0.0687	2.51e4	1938	12.9	1.77e4	2225	8.0	bb	bb
3	Total-hexadioxins	7.47e2	3.41e2	1.09e3	35.94	2.19	YES	0.121	0.0687	7.30e3	1938	3.8	5.79e3	2225	2.6	MM	bd
4	Total-hexadioxins	3.60e2	6.66e1	4.26e2	36.05	5.40	YES	0.048	0.0687	9.46e3	1938	4.9	3.37e3	2225	1.5	dd	dd
5	Total-hexadioxins	7.67e2	6.67e2	1.43e3	36.10	1.15	NO	0.160	0.0687	1.32e4	1938	6.8	1.20e4	2225	5.4	MM	dd
6	Total-hexadioxins	1.48e2	9.31e1	2.41e2	36.20	1.59	YES	0.027	0.0687	4.24e3	1938	2.2	2.62e3	2225	1.2	MM	db
7	Total-hexadioxins	3.88e2	1.37e2	5.26e2	36.54	2.82	YES	0.059	0.0687	1.04e4	1938	5.4	3.58e3	2225	1.6	bb	bb
8	123678-HxCDD	1.09e2	2.10e2	3.18e2	36.78	0.52	YES	0.032	0.0696	4.39e3	1938	2.3	7.53e3	2225	3.4	MM	db
9	123789-HxCDD	4.18e2	2.28e2	6.46e2	37.02	1.83	YES	0.073	0.0699	6.75e3	1938	3.5	4.92e3	2225	2.2	db	bb
10	Total-hexadioxins	3.48e2	1.08e3	1.43e3	37.41	0.32	YES	0.160	0.0687	7.30e3	1938	3.8	2.14e4	2225	9.6	db	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	3.26e3	3.18e3	6.44e3	39.14	1.03	NO	0.832	0.0744	4.08e4	1186	34.4	4.39e4	1429	30.7	bb	bd
2	1234678-HpCDD	2.06e3	2.23e3	4.28e3	40.05	0.92	NO	0.553	0.0744	2.65e4	1186	22.3	2.68e4	1429	18.7	bd	bb
3	Total-heptadioxins	3.19e2	1.82e2	5.01e2	40.65	1.75	YES	0.065	0.0744	4.05e3	1186	3.4	3.30e3	1429	2.3	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 16:17:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 16:17:15 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	3.28e2	6.61e2	9.89e2	26.09	0.50	YES	0.053	0.0563	6.67e3	1956	3.4	6.70e3	2234	3.0	bb	MM
2	Total-tetrafurans	1.03e3	1.41e3	2.44e3	27.03	0.73	NO	0.131	0.0563	1.25e4	1956	6.4	1.64e4	2234	7.3	bb	bb
3	Total-tetrafurans	9.01e2	1.25e3	2.15e3	27.41	0.72	NO	0.115	0.0563	7.62e3	1956	3.9	1.12e4	2234	5.0	bb	MM
4	Total-tetrafurans	8.34e2	9.88e2	1.82e3	27.72	0.84	NO	0.098	0.0563	7.86e3	1956	4.0	9.52e3	2234	4.3	MM	MM
5	Total-tetrafurans	2.96e2	4.70e2	7.66e2	28.36	0.63	YES	0.041	0.0563	5.77e3	1956	3.0	7.30e3	2234	3.3	bb	bb
6	Total-tetrafurans	3.43e2	2.33e2	5.75e2	28.63	1.47	YES	0.031	0.0563	4.78e3	1956	2.4	4.80e3	2234	2.1	MM	MM
7	Total-tetrafurans	8.69e2	1.02e3	1.88e3	29.00	0.86	NO	0.101	0.0563	9.78e3	1956	5.0	9.76e3	2234	4.4	MM	bb
8	Total-tetrafurans	1.57e3	2.03e3	3.61e3	29.46	0.77	NO	0.193	0.0563	1.62e4	1956	8.3	2.56e4	2234	11.5	bb	bb
9	2378-TCDF	1.81e3	2.28e3	4.09e3	30.36	0.79	NO	0.219	0.0563	1.75e4	1956	9.0	2.28e4	2234	10.2	bb	bb
10	Total-tetrafurans	6.43e2	6.62e2	1.30e3	30.76	0.97	YES	0.070	0.0563	8.42e3	1956	4.3	9.06e3	2234	4.1	MM	MM
11	Total-tetrafurans	8.33e2	6.94e2	1.53e3	31.86	1.20	YES	0.082	0.0563	1.66e4	1956	8.5	1.55e4	2234	6.9	bd	bb
12	Total-tetrafurans	2.12e2	4.24e2	6.36e2	26.51	0.50	YES	0.034	0.0563	2.85e3	1956	1.5	4.69e3	2234	2.1	MM	MM
13	Total-tetrafurans	1.75e2	3.17e2	4.92e2	28.83	0.55	YES	0.026	0.0563	2.85e3	1956	1.5	3.74e3	2234	1.7	MM	MM
14	Total-tetrafurans	4.74e2	3.91e2	8.65e2	29.72	1.21	YES	0.046	0.0563	4.75e3	1956	2.4	7.08e3	2234	3.2	MM	MM
15	Total-tetrafurans	5.29e2	6.99e2	1.23e3	28.15	0.76	NO	0.066	0.0563	4.54e3	1956	2.3	5.98e3	2234	2.7	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.54e3	9.64e2	2.50e3	31.87	1.59	NO	0.190	0.0241	2.93e4	1075	27.3	1.78e4	1639	10.8	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Tuesday, September 24, 2019 16:17:02 Eastern Standard Time
Printed: Tuesday, September 24, 2019 16:17:15 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	4.42e2	1.49e2	5.90e2	32.65	2.97	YES	0.045	0.0409	1.02e4	2050	5.0	3.74e3	2549	1.5	bd	bd
2	Total-pentafurans	1.00e3	6.61e2	1.66e3	32.73	1.51	NO	0.126	0.0409	1.83e4	2050	8.9	1.32e4	2549	5.2	db	dd
3	Total-pentafurans	3.16e2	1.99e2	5.15e2	33.06	1.59	NO	0.039	0.0409	7.77e3	2050	3.8	3.21e3	2549	1.3	bb	MM
4	Total-pentafurans	7.83e1	8.07e1	1.59e2	33.18	0.97	YES	0.012	0.0409	2.21e3	2050	1.1	3.60e3	2549	1.4	bb	bb
5	12378-PeCDF	4.60e2	3.00e2	7.60e2	33.29	1.53	NO	0.062	0.0440	1.35e4	2050	6.6	8.12e3	2549	3.2	bd	bb
6	Total-pentafurans	3.76e2	3.00e2	6.76e2	33.43	1.25	YES	0.051	0.0409	5.99e3	2050	2.9	4.27e3	2549	1.7	MM	MM
7	Total-pentafurans	1.95e2	1.37e2	3.31e2	33.82	1.43	NO	0.025	0.0409	7.19e3	2050	3.5	4.01e3	2549	1.6	bd	bd
8	23478-PeCDF	4.47e2	3.73e2	8.20e2	33.89	1.20	YES	0.059	0.0380	7.37e3	2050	3.6	8.99e3	2549	3.5	db	db
9	Total-pentafurans	1.51e2	6.88e1	2.20e2	34.61	2.19	YES	0.017	0.0409	4.33e3	2050	2.1	2.04e3	2549	0.8	bb	bb
10	Total-pentafurans	2.22e2	3.47e2	5.69e2	32.92	0.64	YES	0.043	0.0409	3.51e3	2050	1.7	4.44e3	2549	1.7	MM	MM

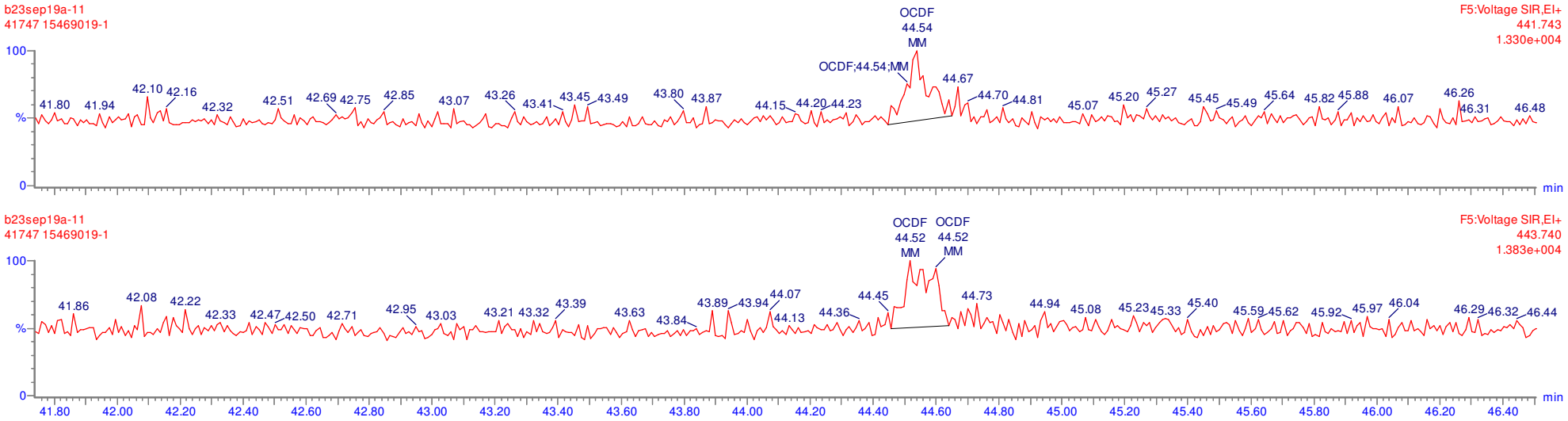
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	2.68e2	2.92e2	5.61e2	35.05	0.92	YES	0.050	0.0410	6.05e3	1816	3.3	5.55e3	1313	4.2	bd	bd
2	Total-hexafurans	1.05e3	8.28e2	1.87e3	35.17	1.26	NO	0.169	0.0410	2.06e4	1816	11.4	1.64e4	1313	12.5	db	db
3	Total-hexafurans	5.33e2	3.78e2	9.11e2	35.58	1.41	NO	0.082	0.0410	1.40e4	1816	7.7	1.05e4	1313	8.0	bb	bb
4	123478-HxCDF	5.23e2	3.06e2	8.29e2	35.98	1.71	YES	0.075	0.0370	9.45e3	1816	5.2	5.57e3	1313	4.2	MM	dd
5	234678-HxCDF	3.35e2	1.70e2	5.05e2	36.56	1.97	YES	0.044	0.0399	6.56e3	1816	3.6	3.90e3	1313	3.0	MM	bb
6	123789-HxCDF	1.71e2	1.32e2	3.03e2	37.31	1.29	NO	0.032	0.0517	4.43e3	1816	2.4	4.50e3	1313	3.4	bb	bb
7	123678-HxCDF	3.24e2	3.39e2	6.63e2	36.07	0.96	YES	0.053	0.0378	5.70e3	1816	3.1	6.70e3	1313	5.1	MM	MM
8	Total-hexafurans	1.66e2	1.30e2	2.95e2	35.91	1.28	NO	0.027	0.0410	4.29e3	1816	2.4	2.80e3	1313	2.1	MM	MM

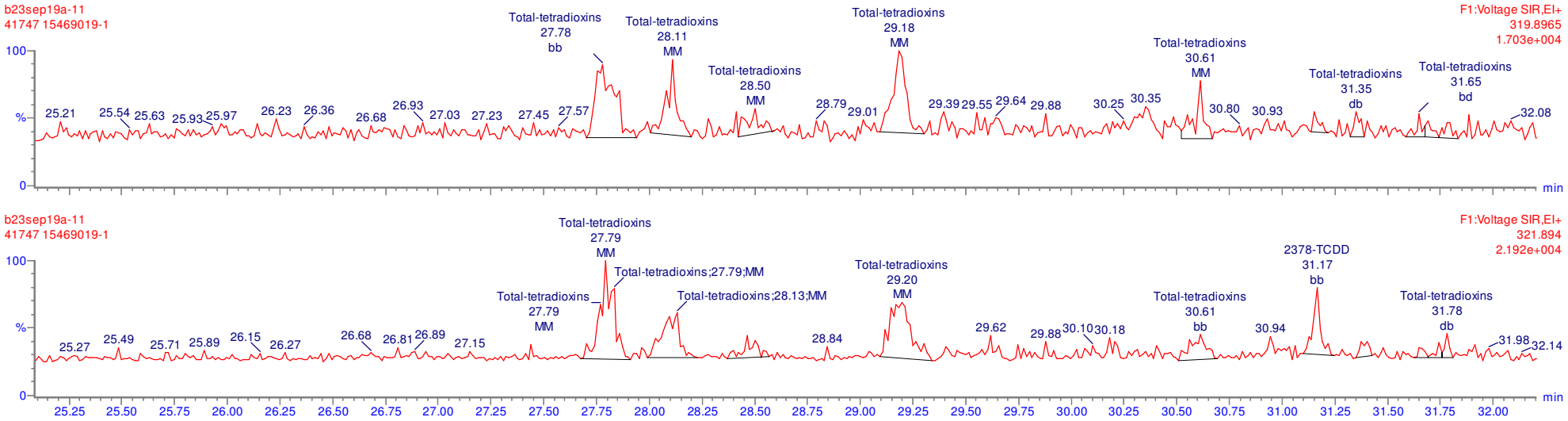
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	1.91e3	1.99e3	3.90e3	38.81	0.96	NO	0.363	0.0389	2.72e4	1250	21.7	2.57e4	1004	25.6	bb	bb
2	Total-heptafurans	1.40e3	1.20e3	2.61e3	39.32	1.16	NO	0.266	0.0488	1.84e4	1250	14.7	1.57e4	1004	15.6	bb	MM

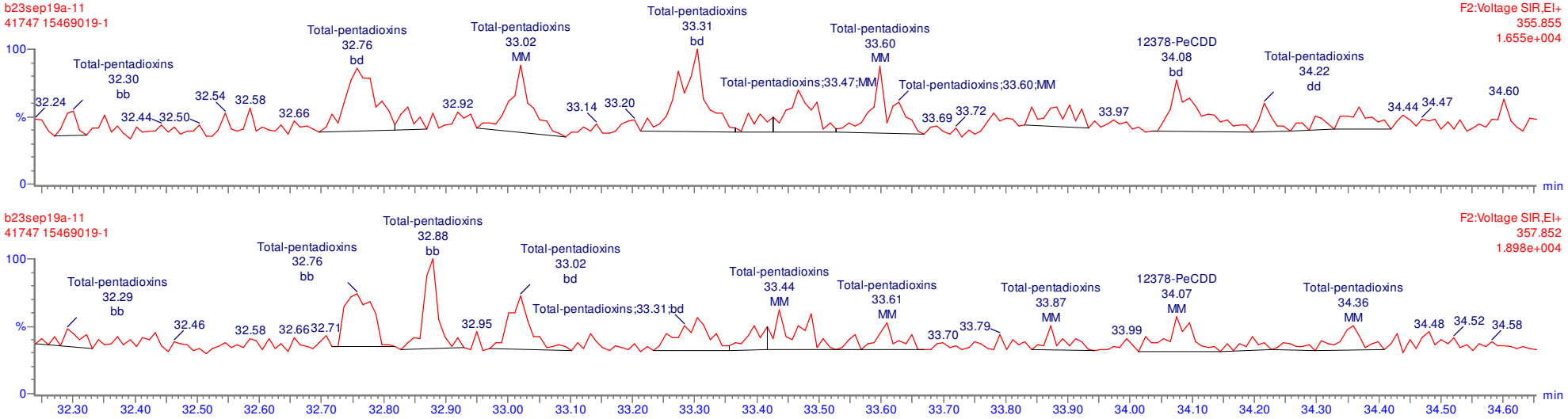
MANUAL INTEGRATION
METHOD 8290
HRP763_1



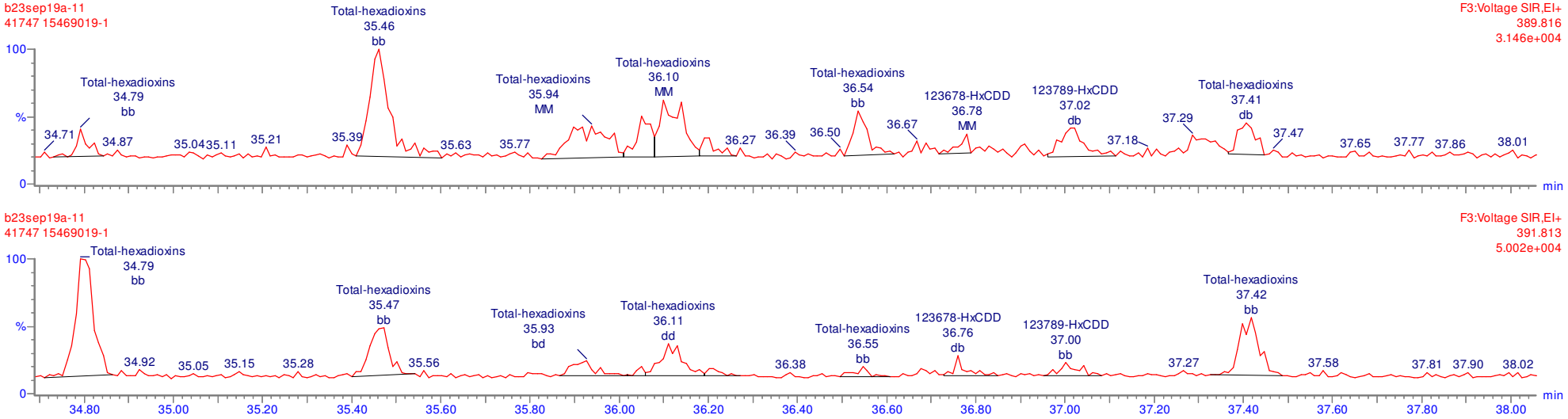
MANUAL INTEGRATION
METHOD 8290
HRP763_1



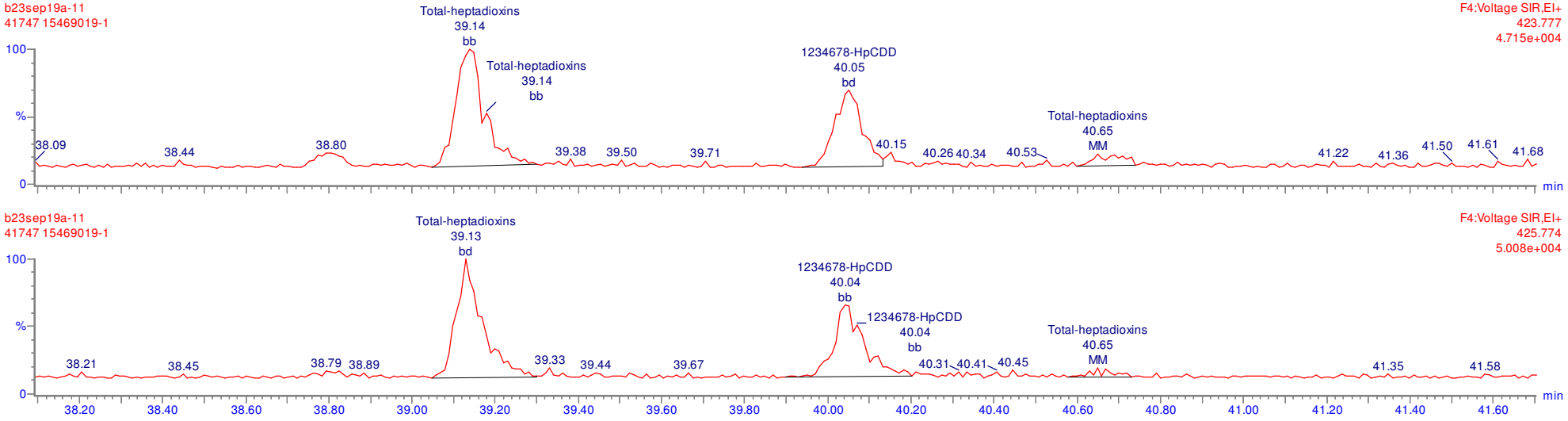
MANUAL INTEGRATION
METHOD 8290
HRP763_1



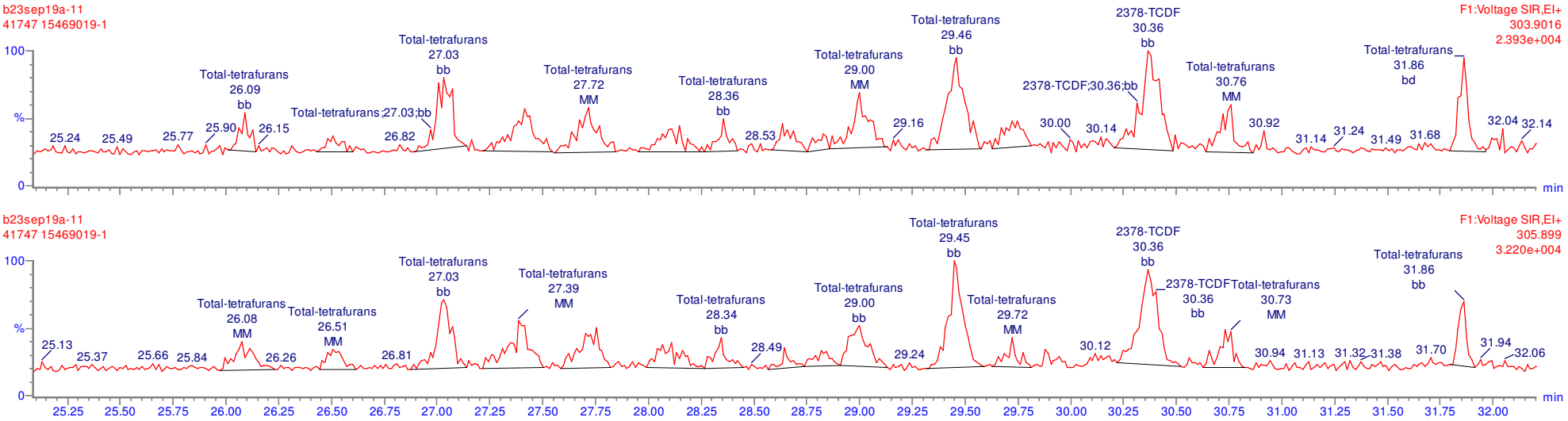
MANUAL INTEGRATION
METHOD 8290
HRP763_1



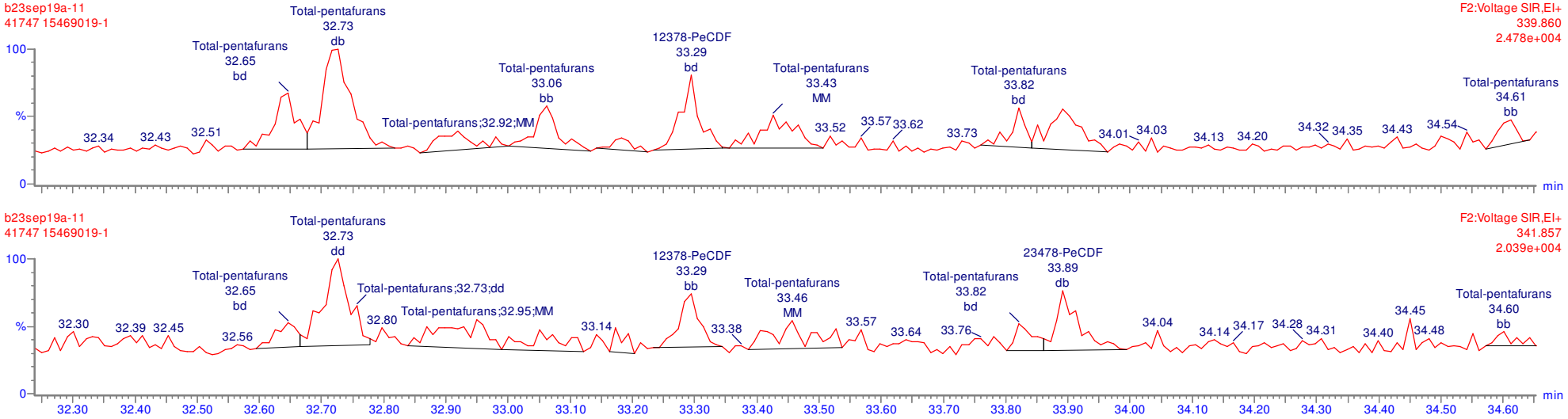
MANUAL INTEGRATION
METHOD 8290
HRP763_1



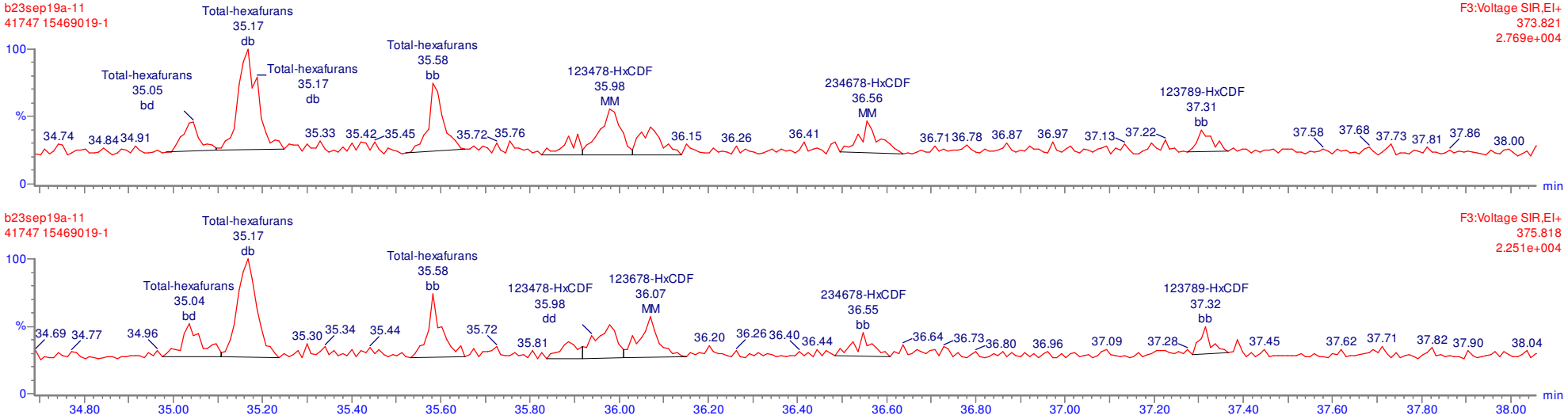
MANUAL INTEGRATION
METHOD 8290
HRP763_1



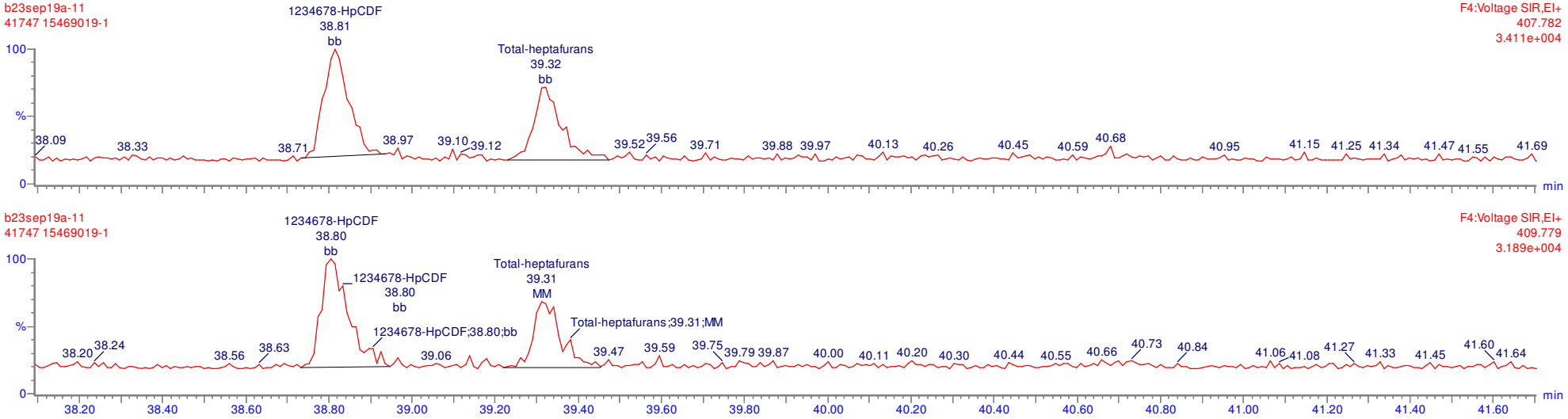
MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



MANUAL INTEGRATION
METHOD 8290
HRP763_1



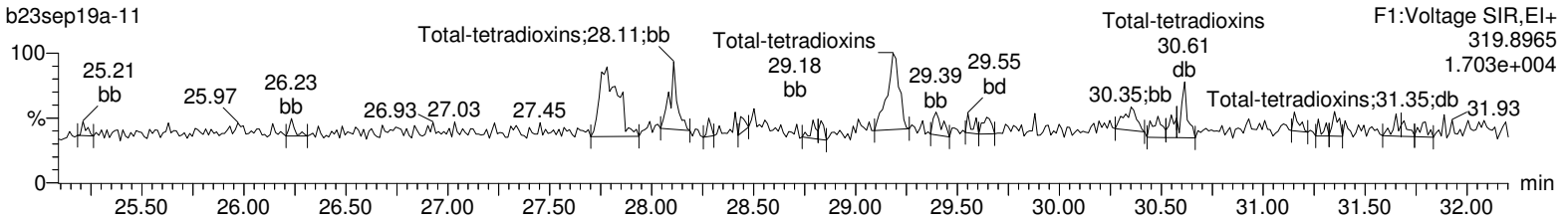
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

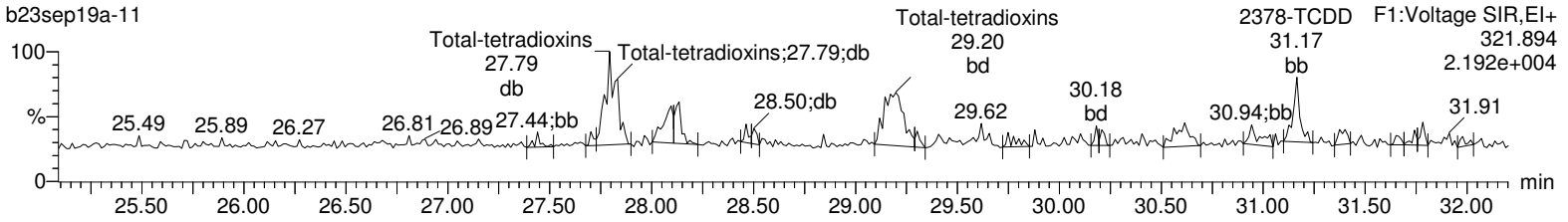
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

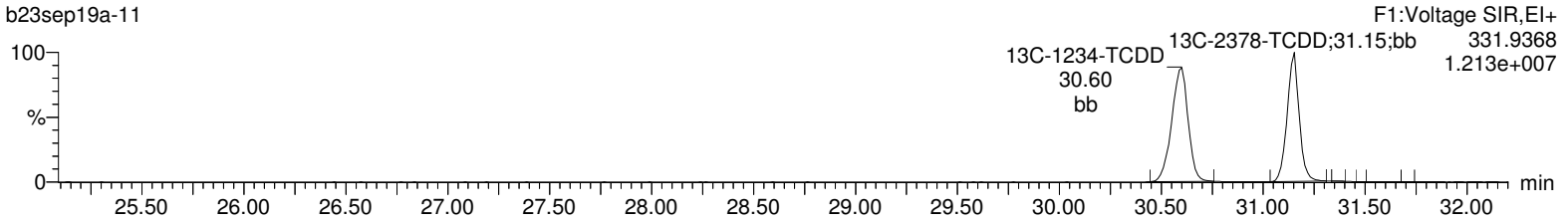
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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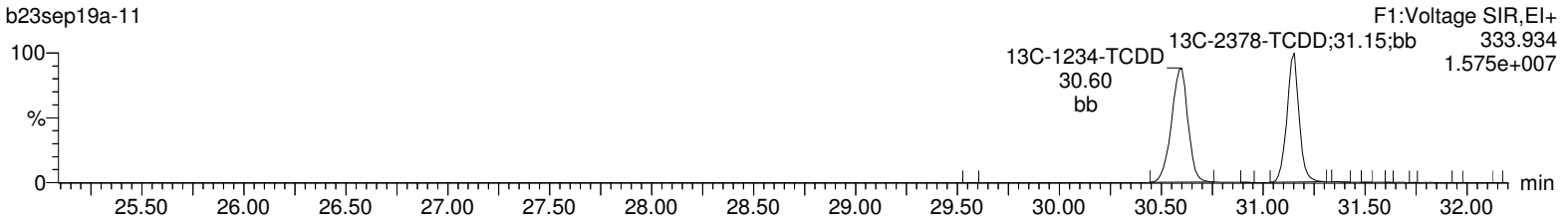
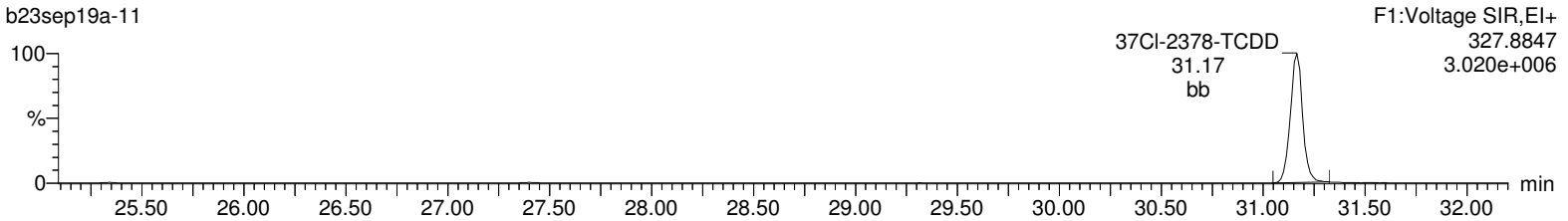
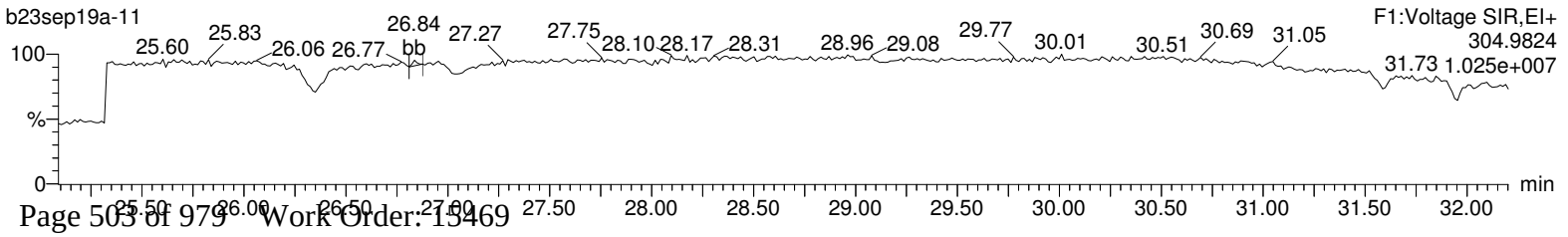


37Cl-2378-TCDD



Lock Mass F1



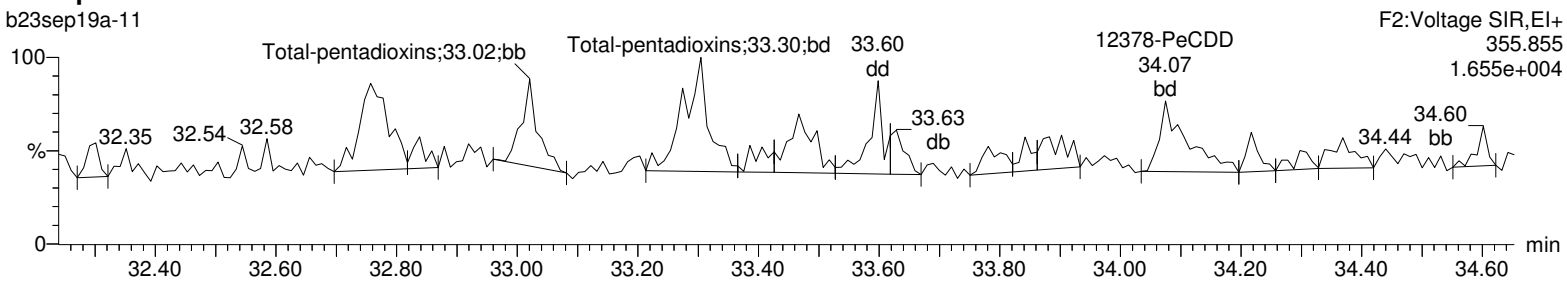
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

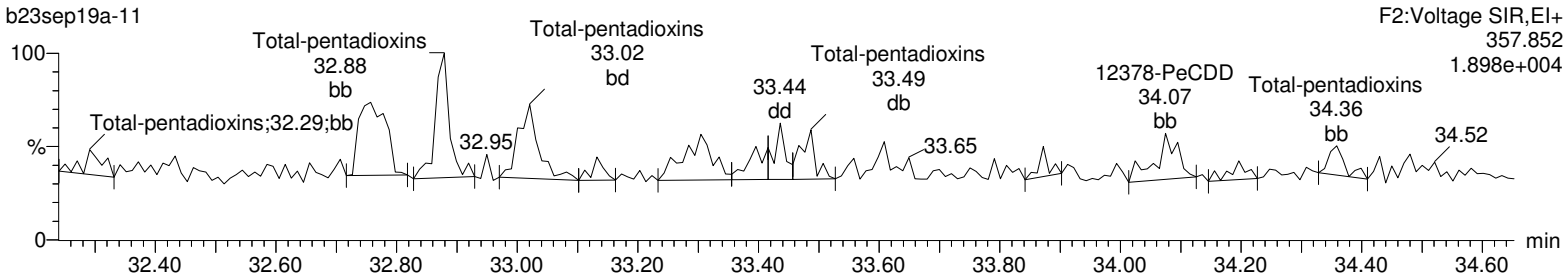
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

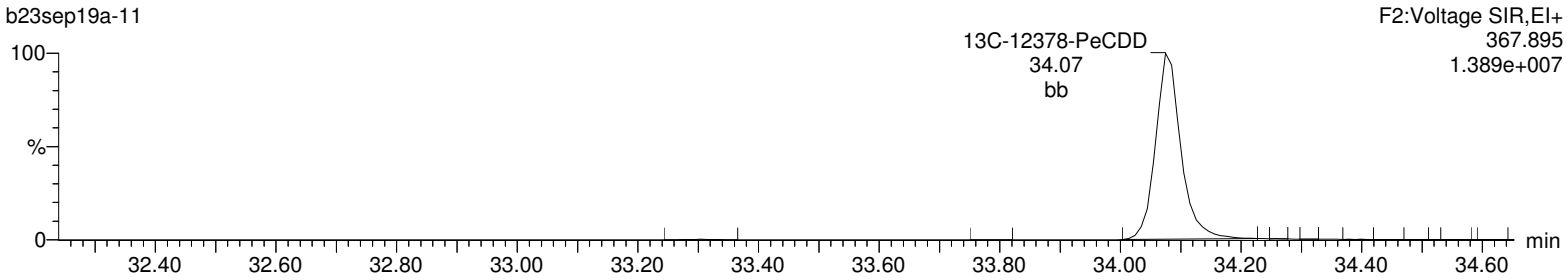
Total-pentadioxins



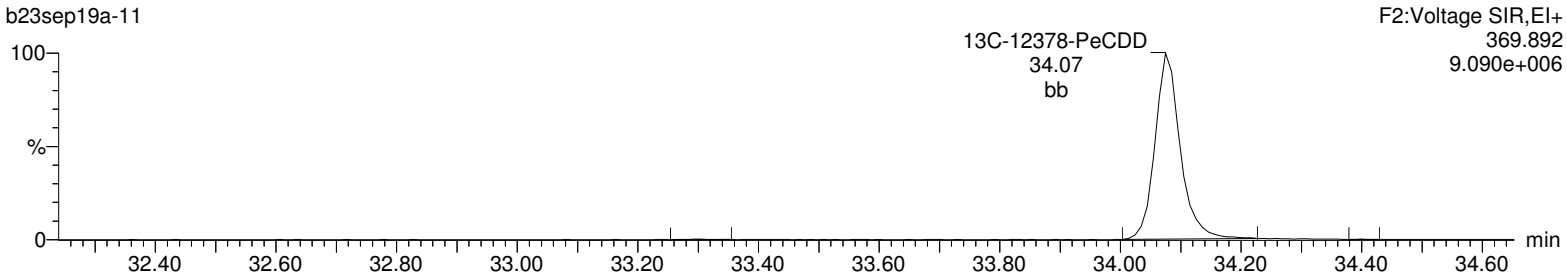
Total-pentadioxins



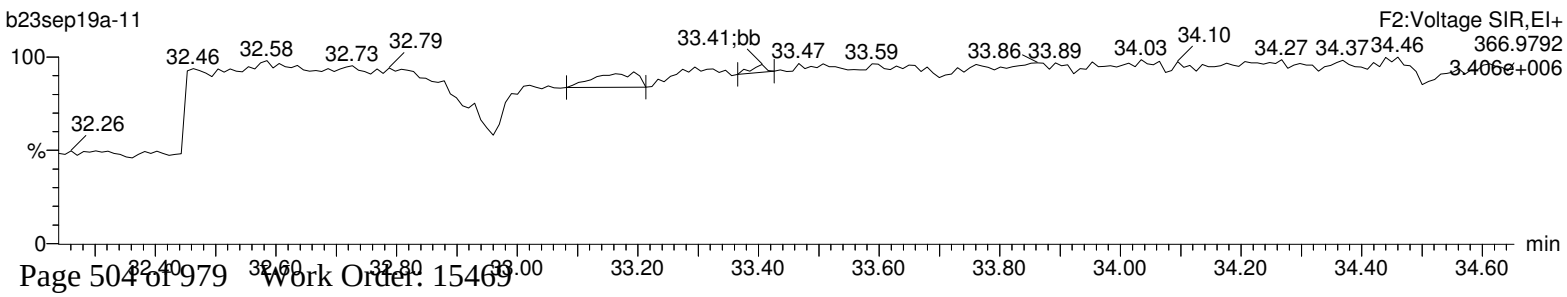
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



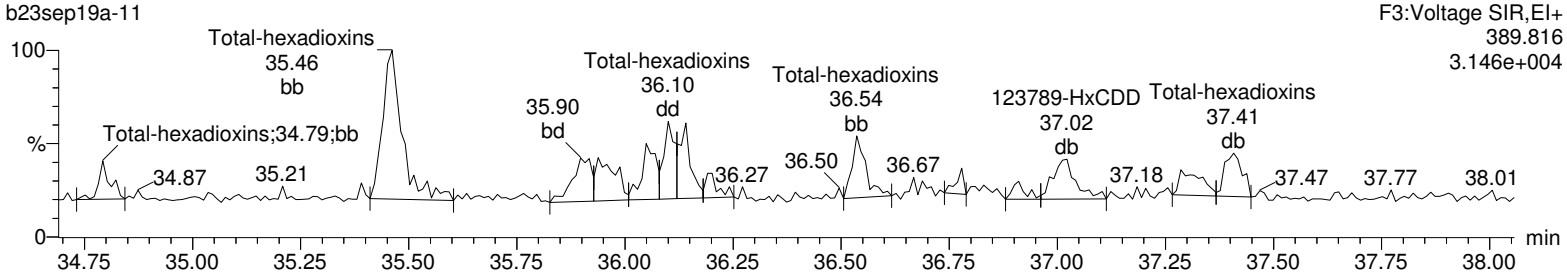
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

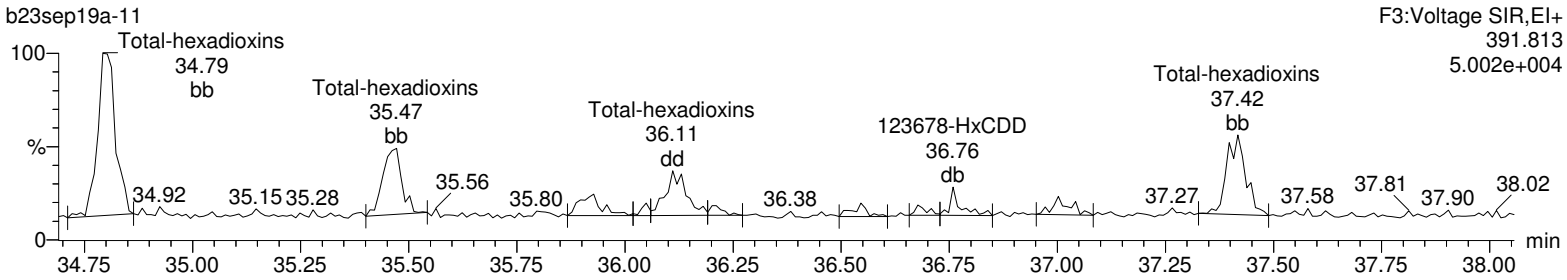
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

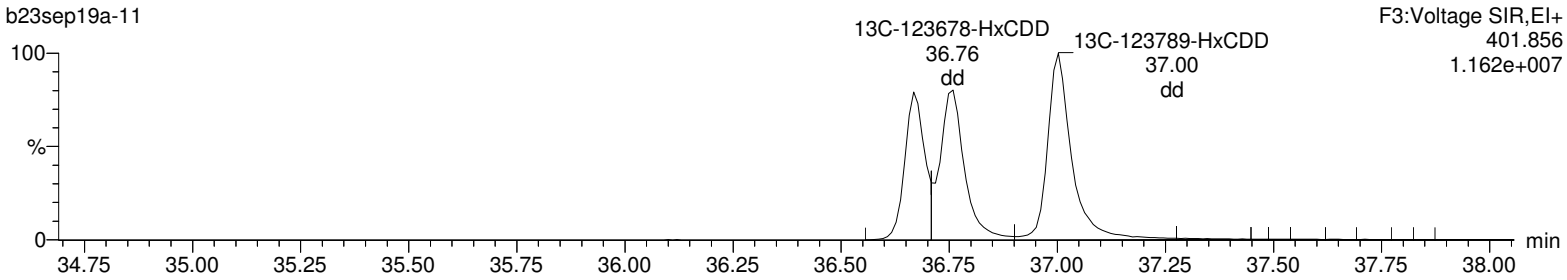
Total-hexadioxins



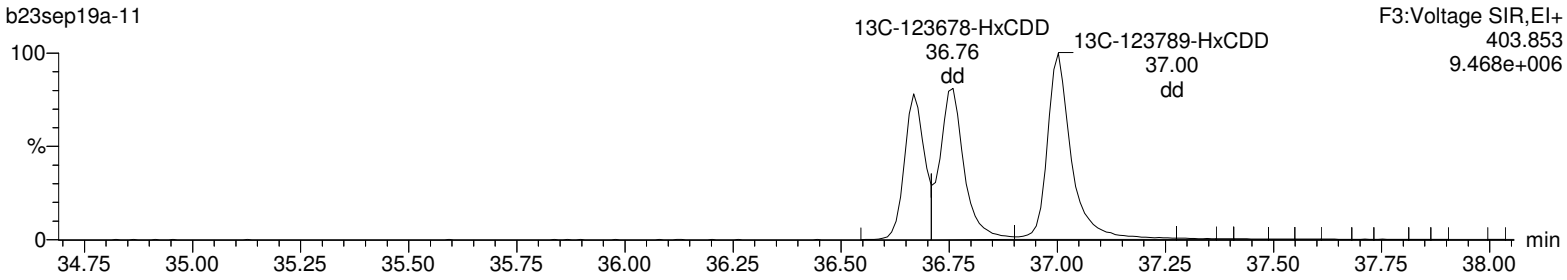
Total-hexadioxins



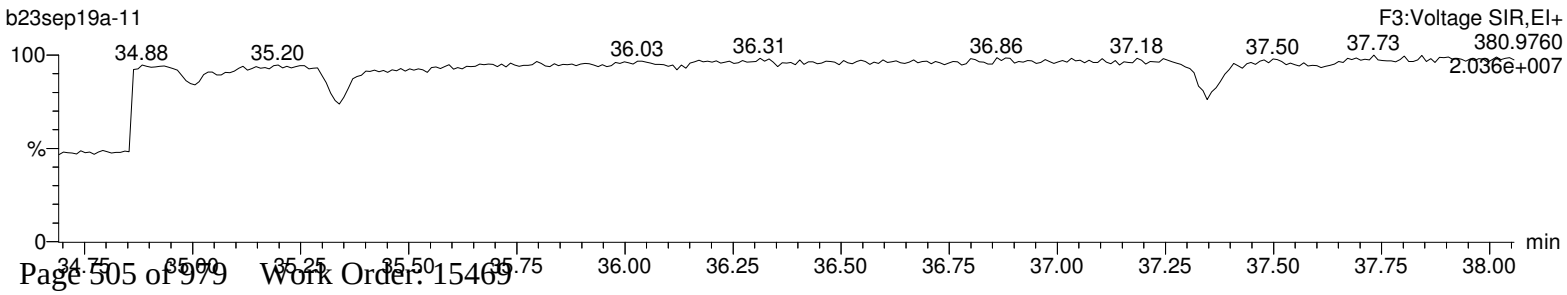
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



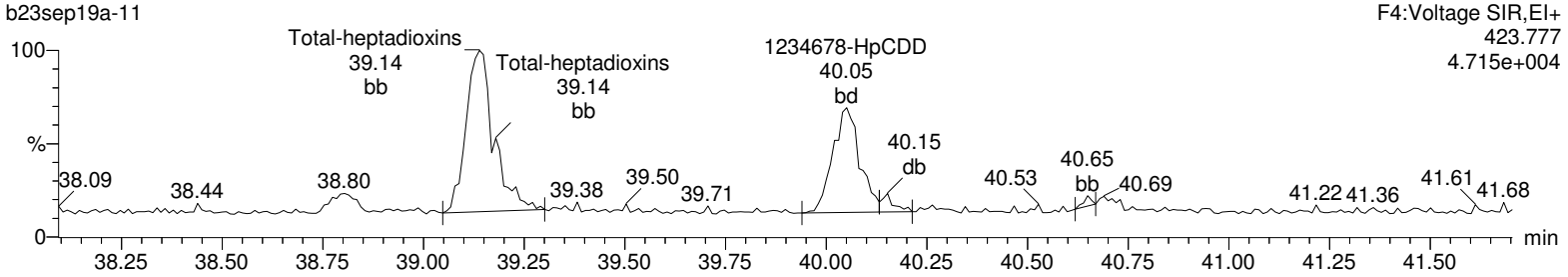
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

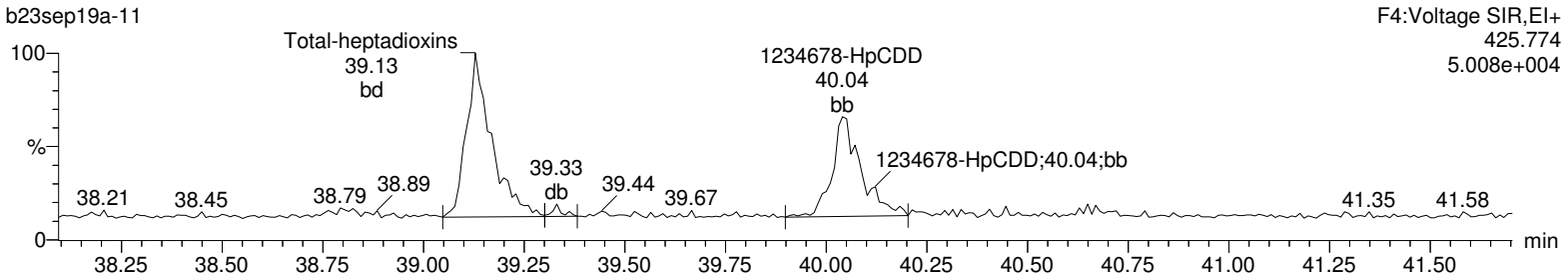
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

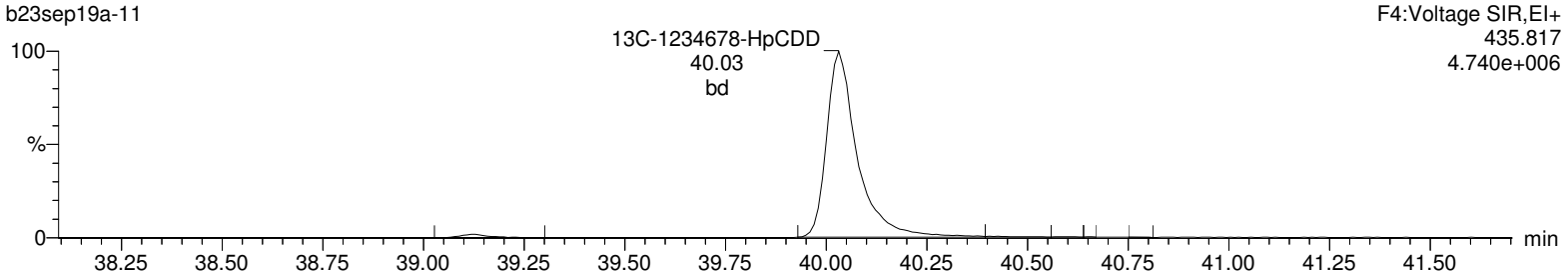
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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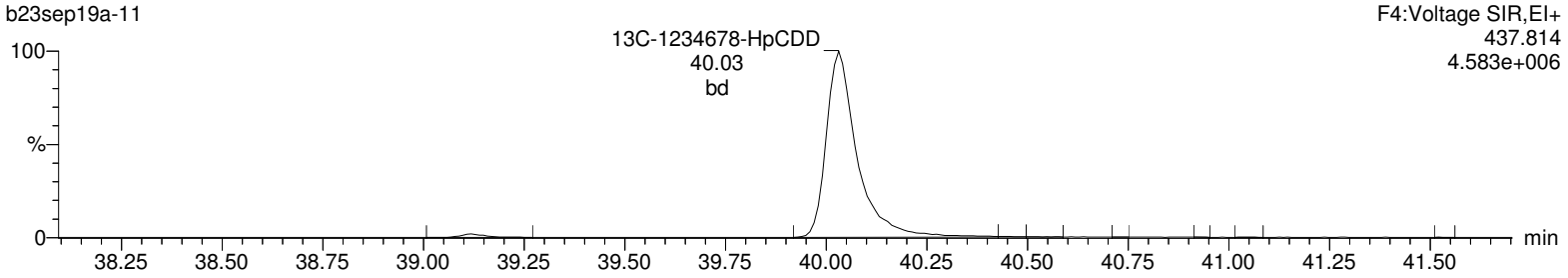
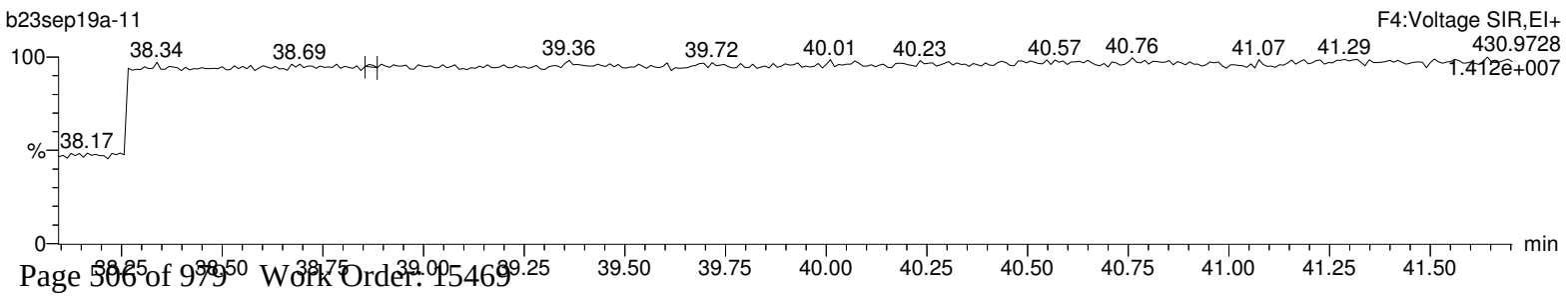


Lock Mass F4



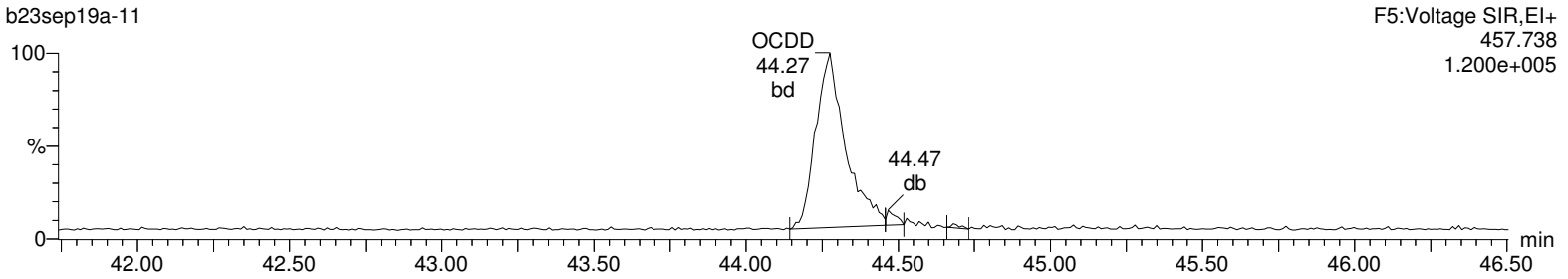
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

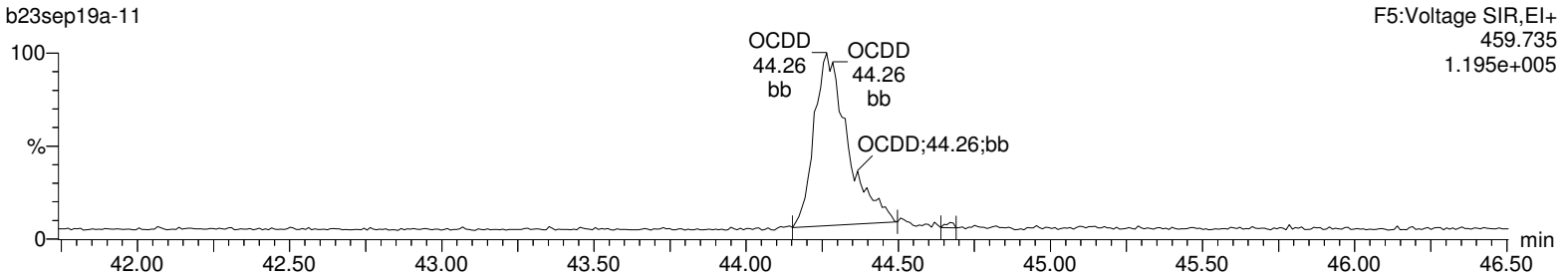
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

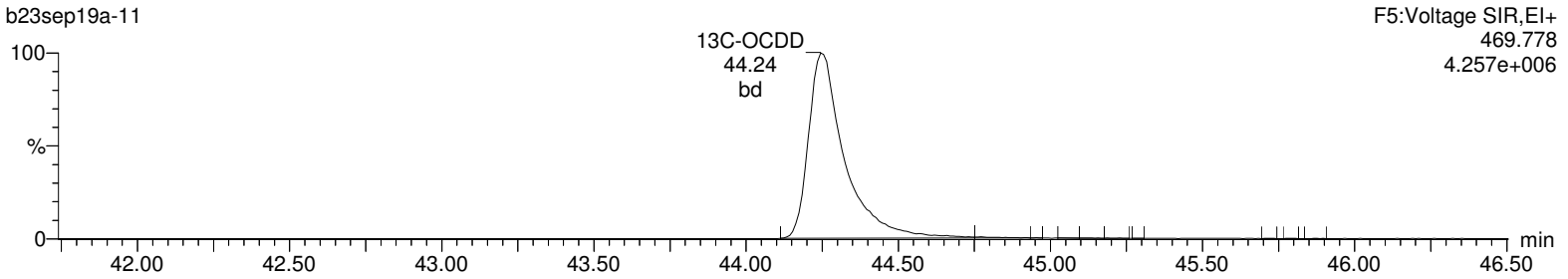
OCDD



OCDD



13C-OCDD



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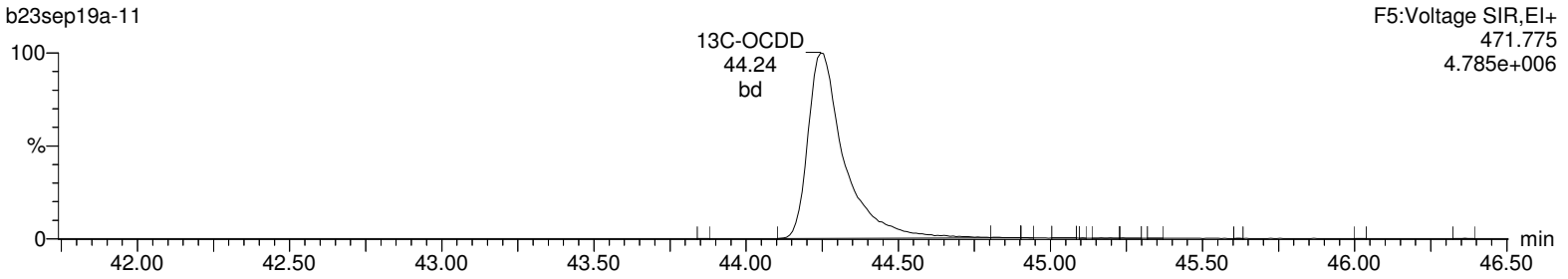
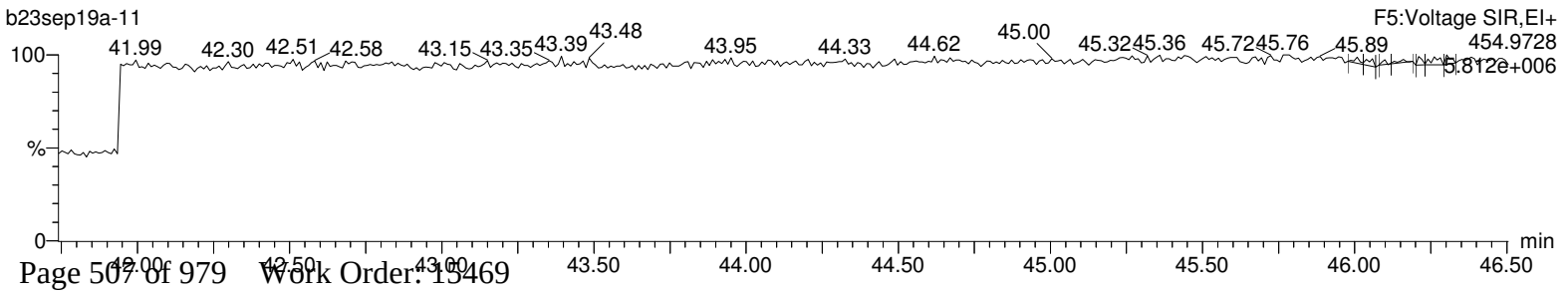


Lock Mass F5



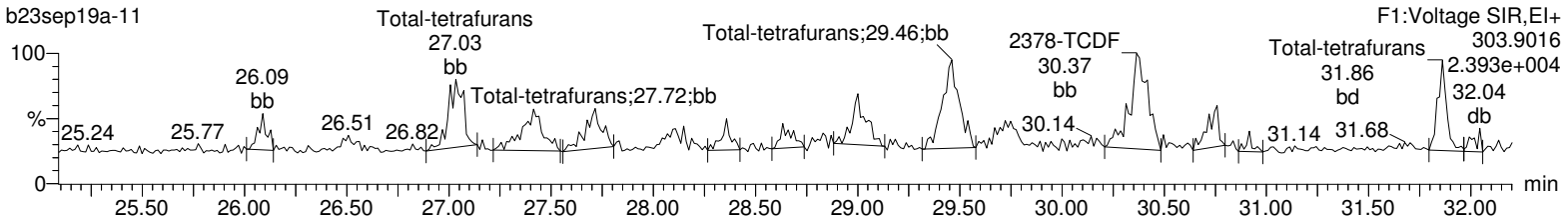
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

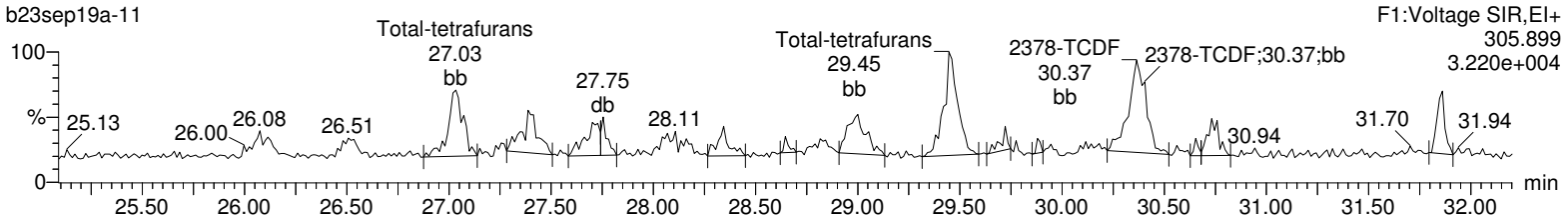
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

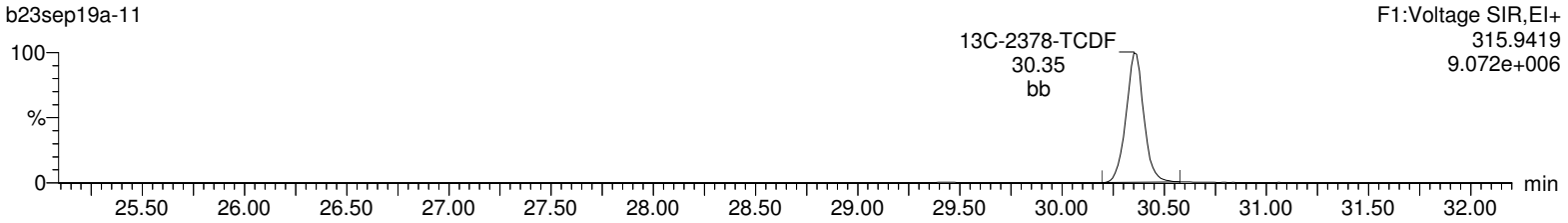
Total-tetrafurans



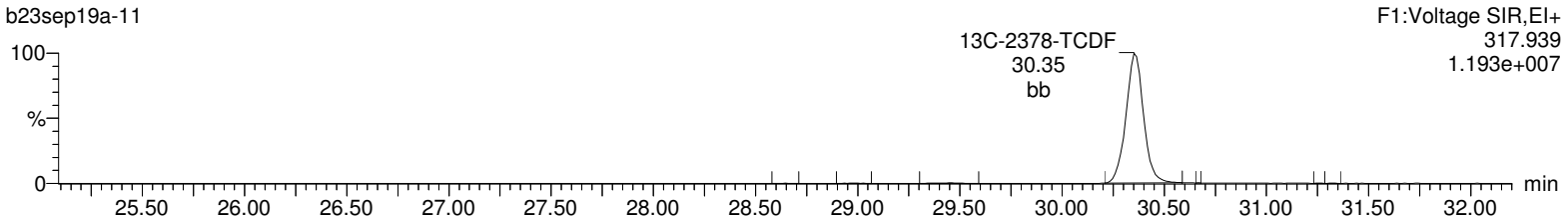
Total-tetrafurans



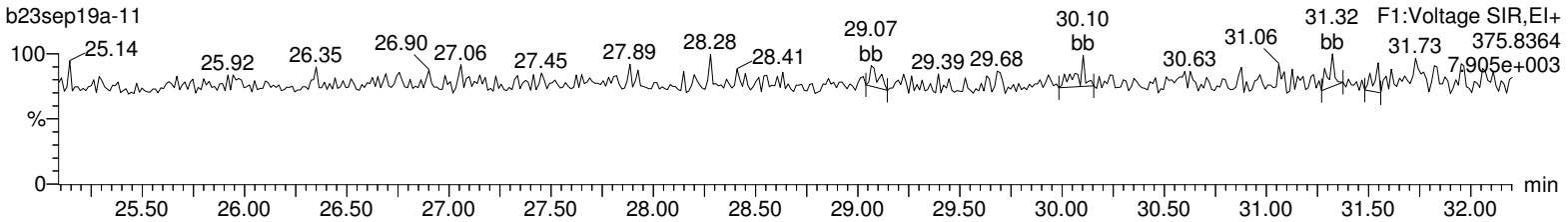
13C-2378-TCDF



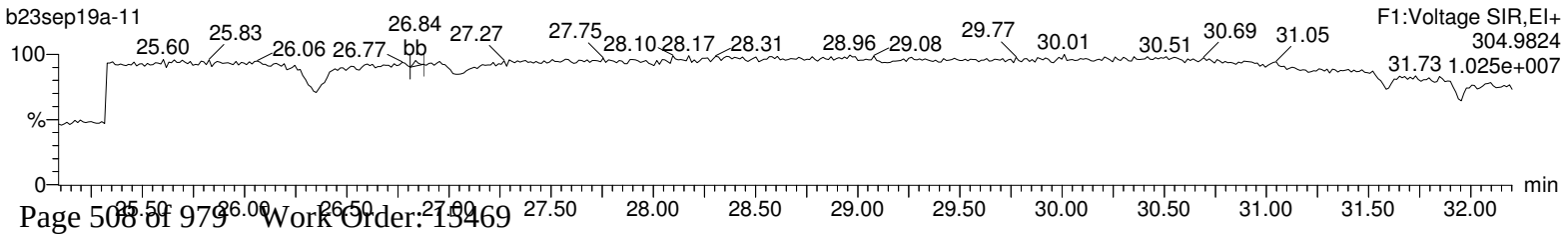
13C-2378-TCDF



HxDPE



Lock Mass F1



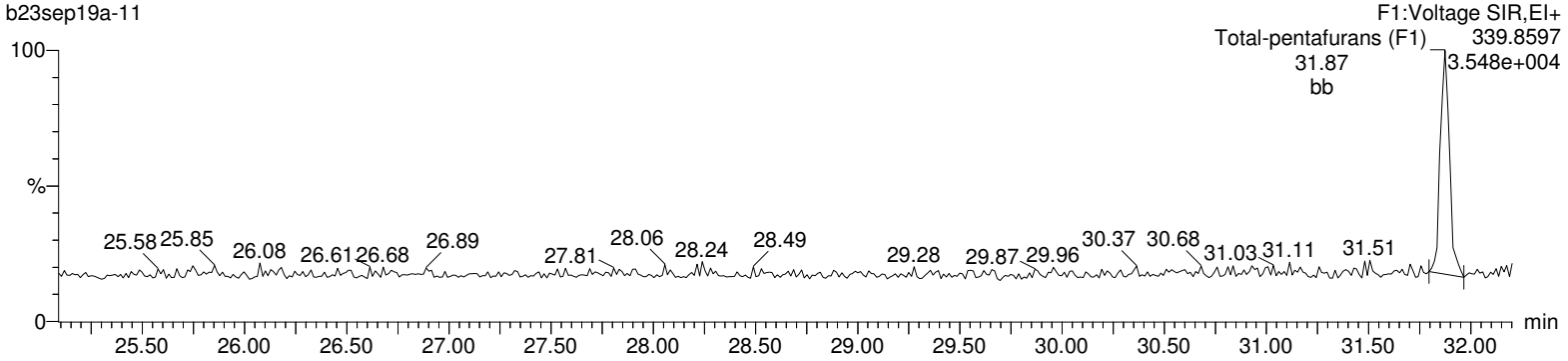
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

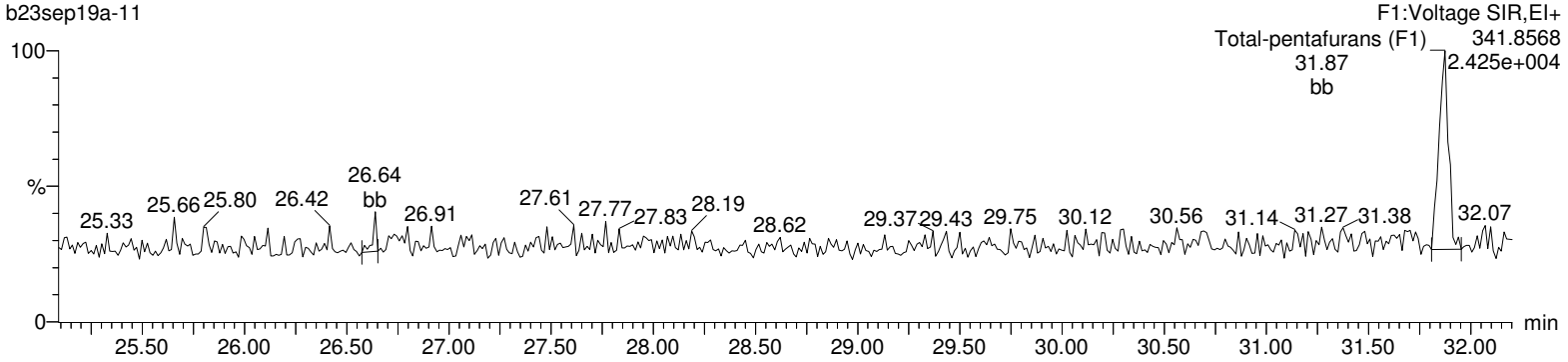
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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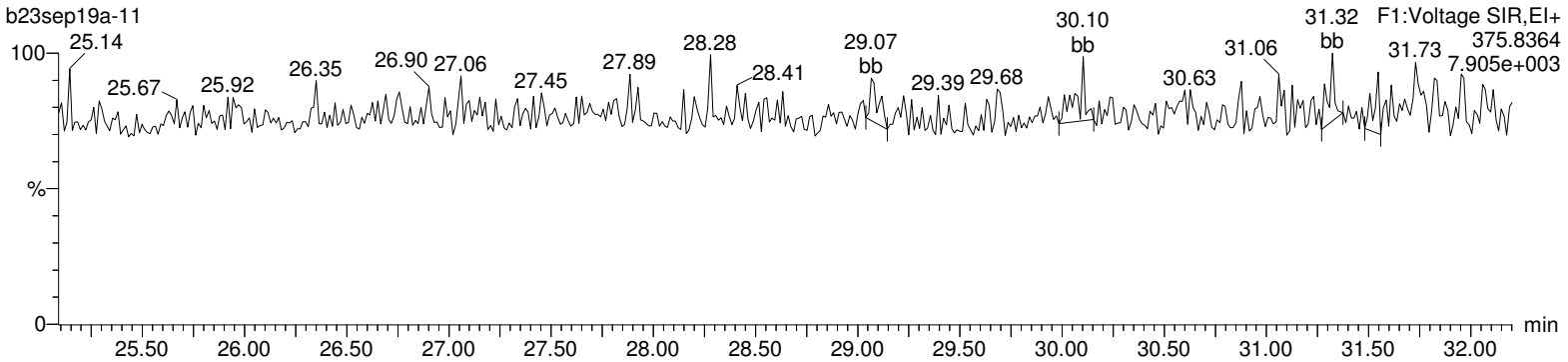
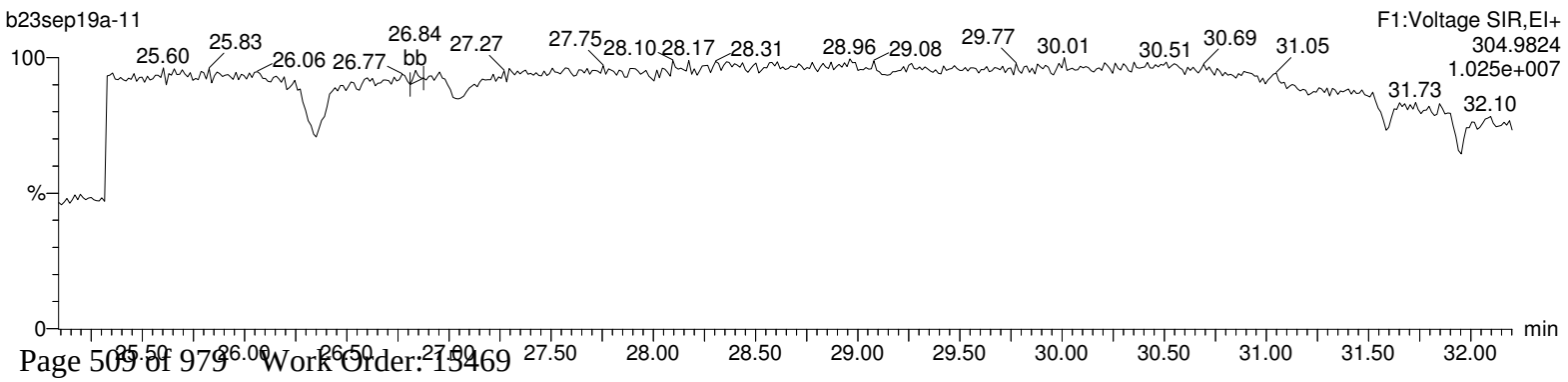


Lock Mass F1



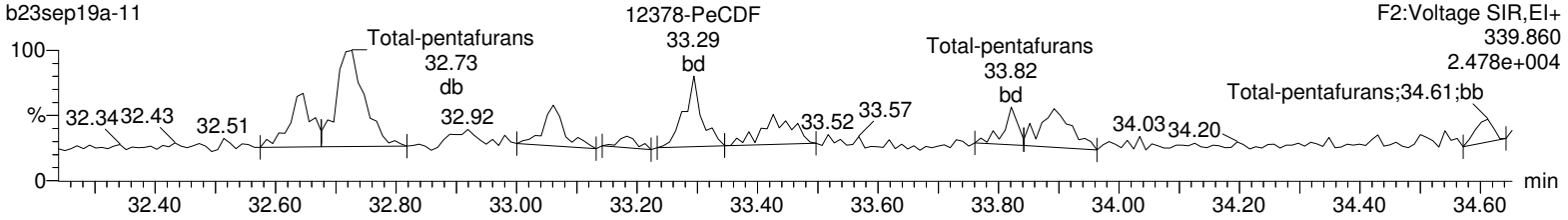
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

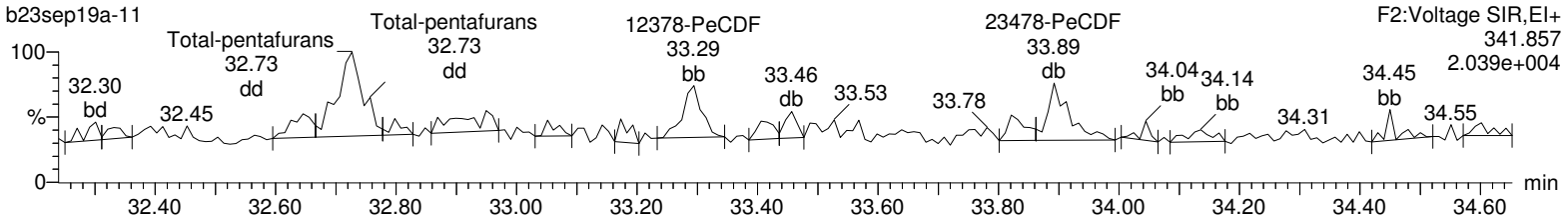
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

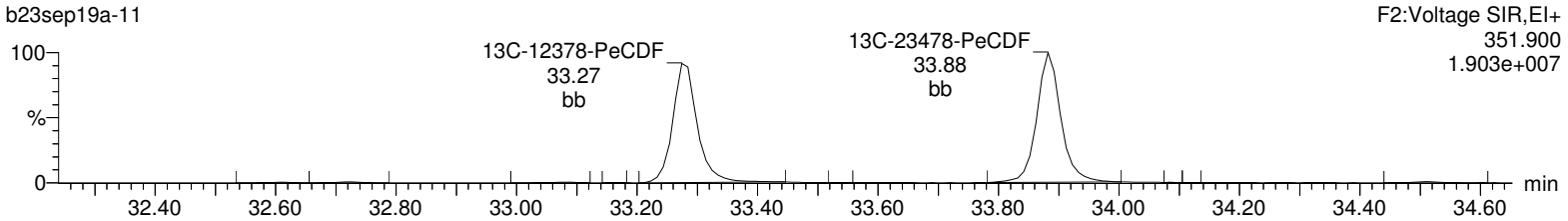
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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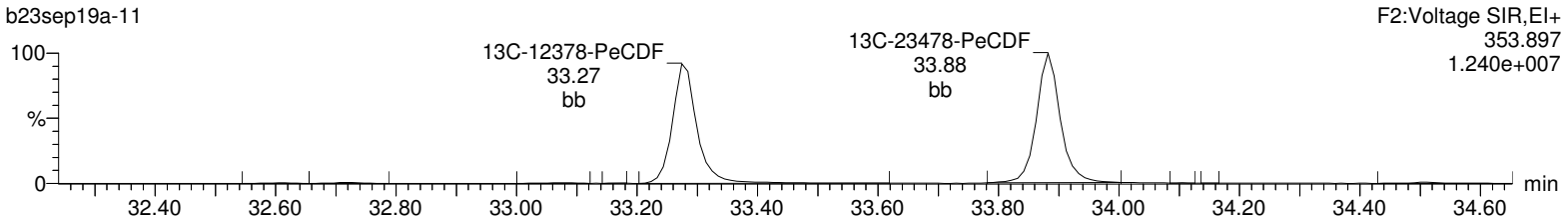
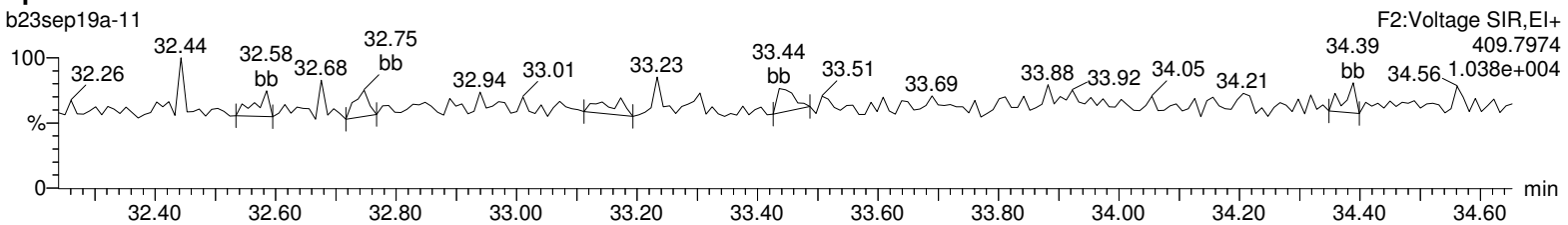
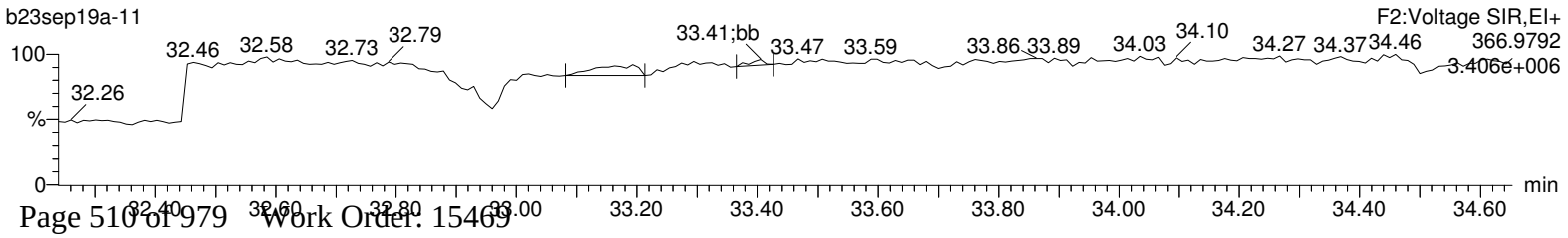


HpDPE



Lock Mass F2



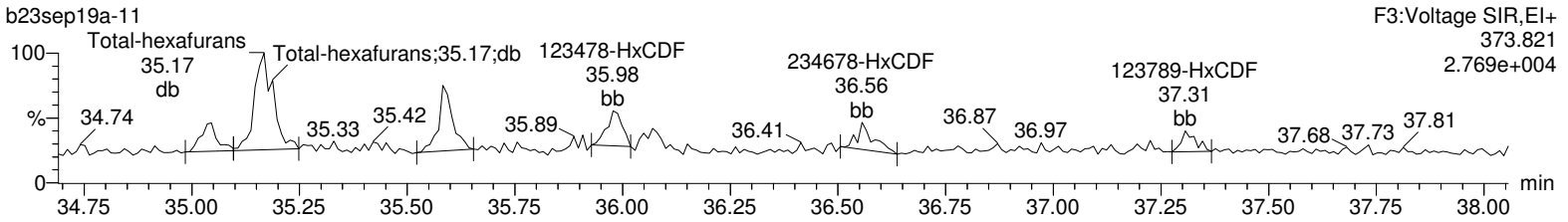
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

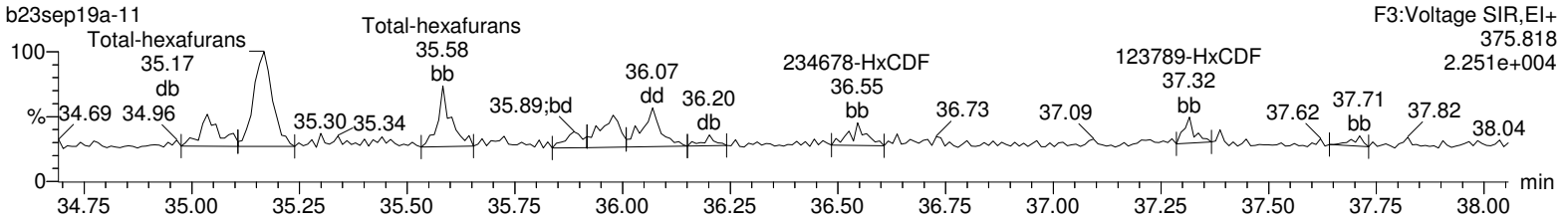
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

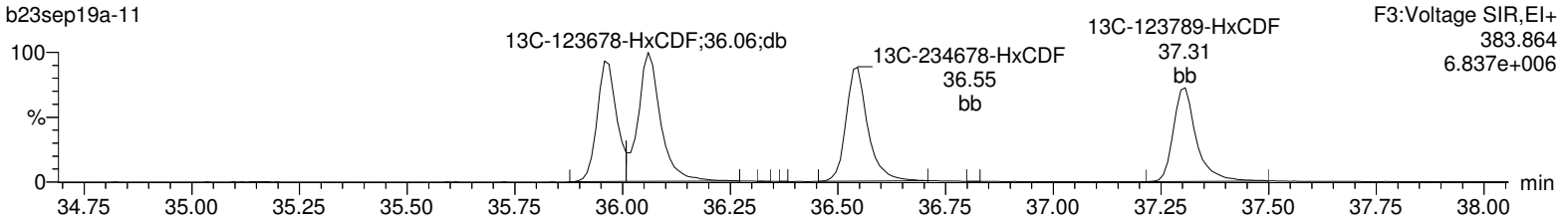
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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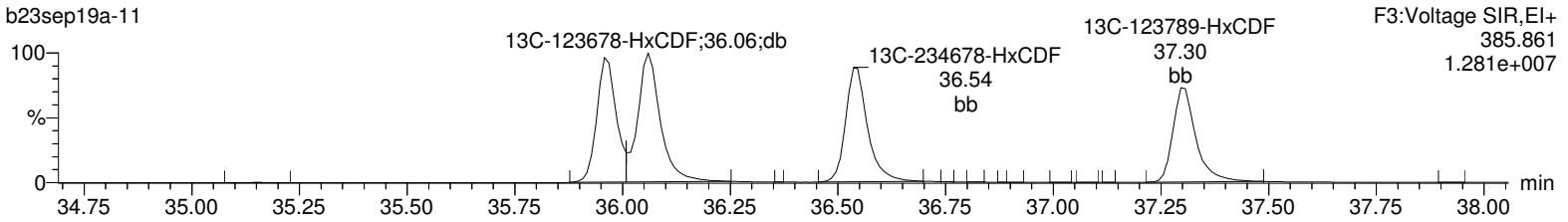

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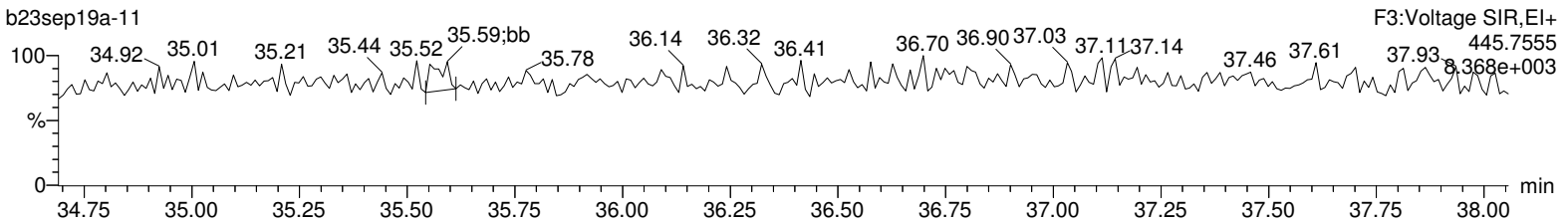
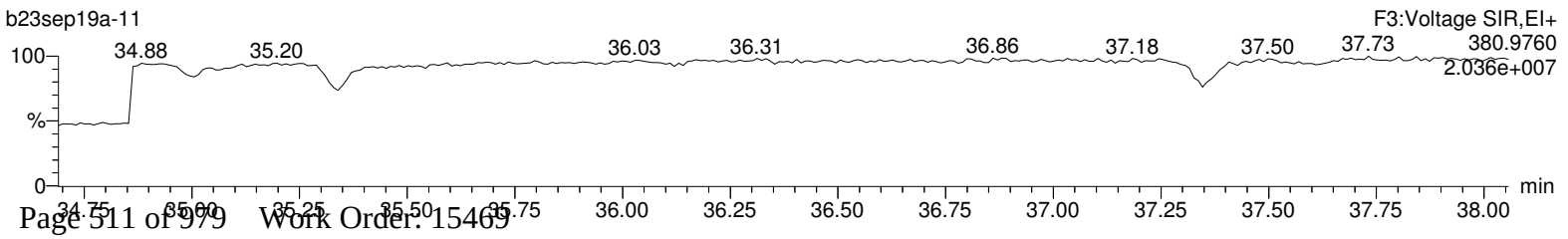


Lock Mass F3



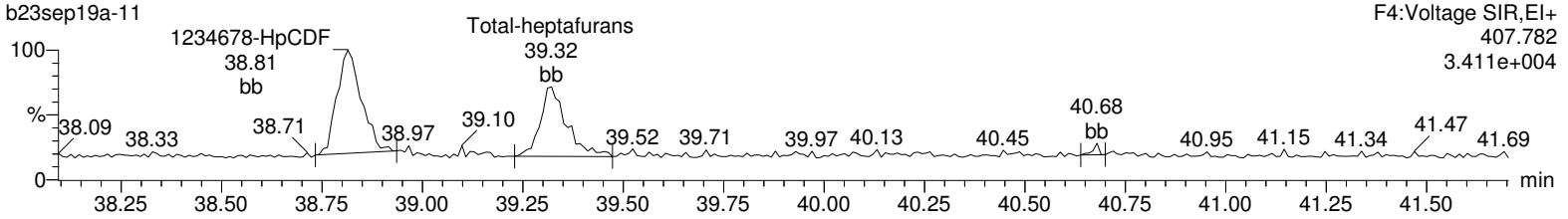
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

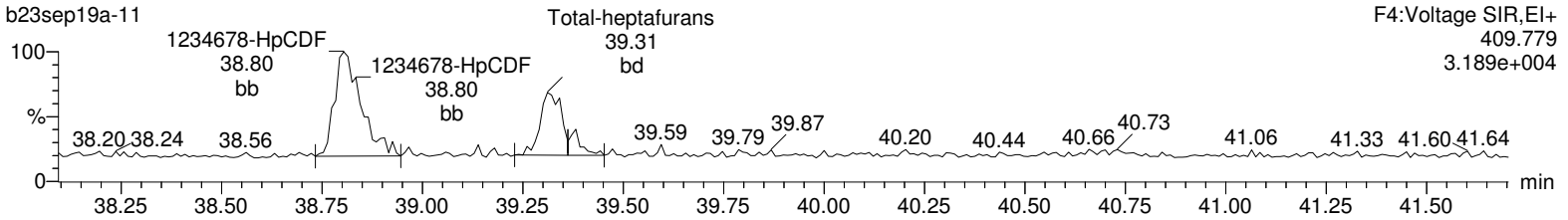
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

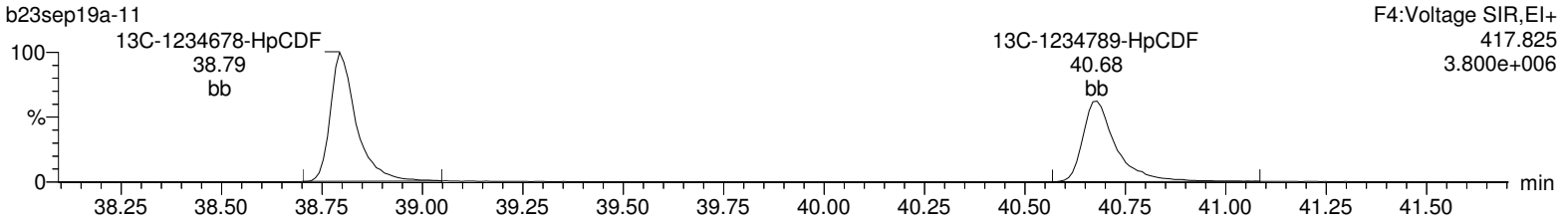
Total-heptafurans



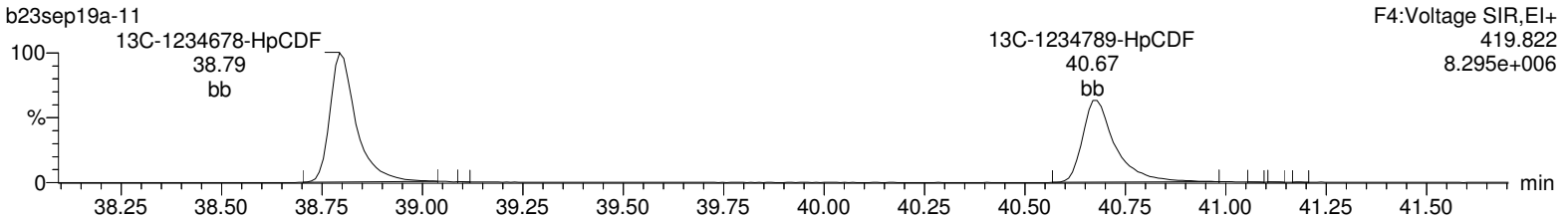
Total-heptafurans



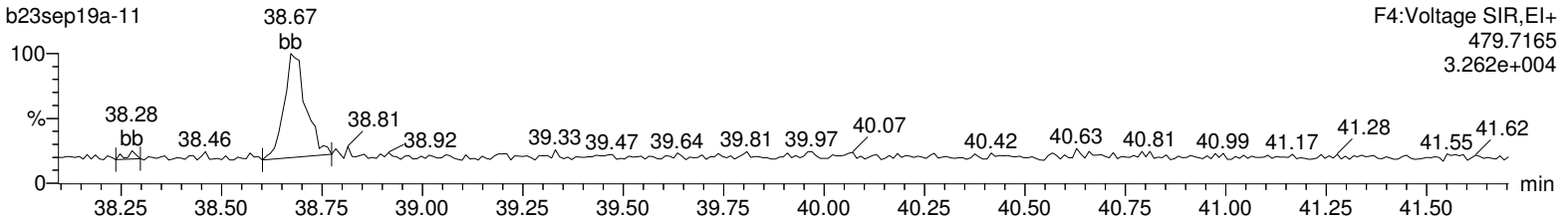
13C-1234678-HpCDF



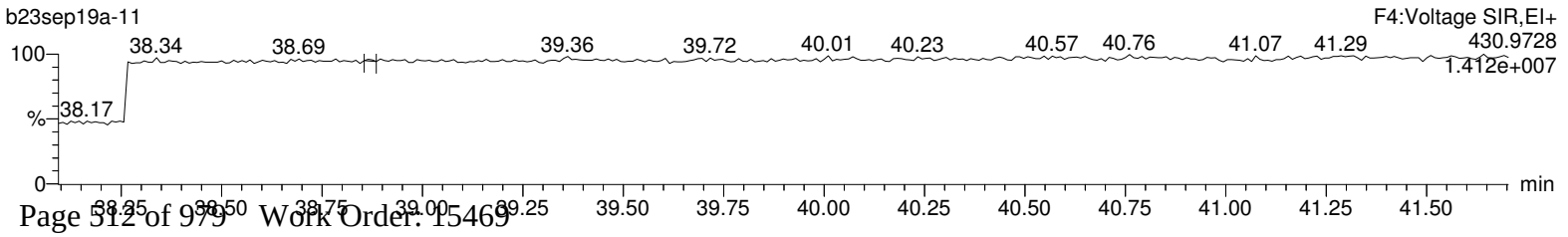
13C-1234678-HpCDF



NoDPE



Lock Mass F4



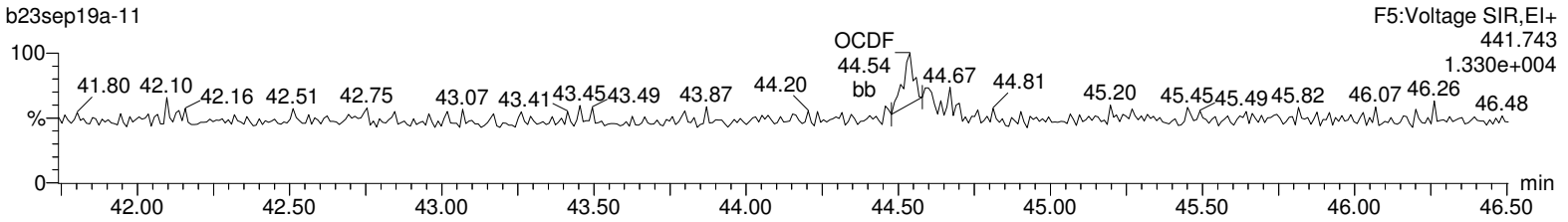
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

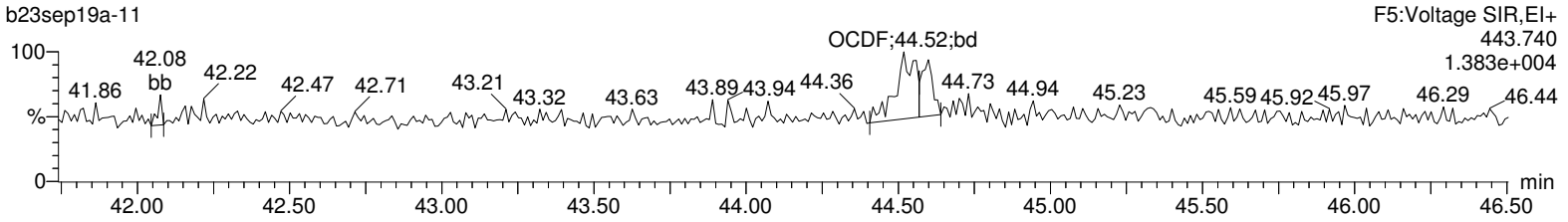
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-11, Date: 23-Sep-2019, Time: 16:23:32, ID: 15469019-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

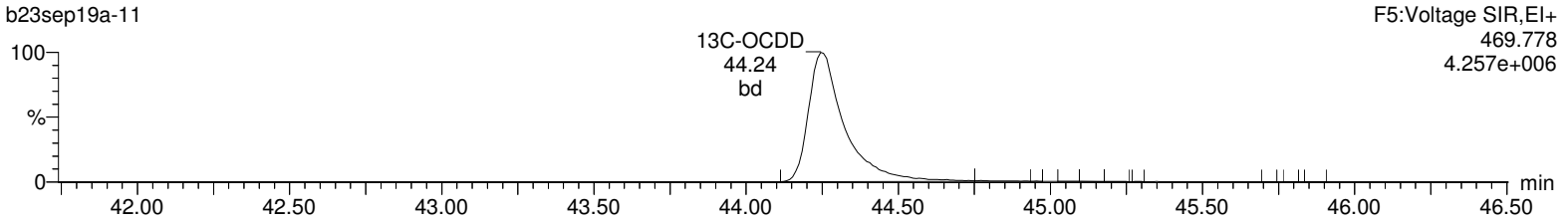
OCDF



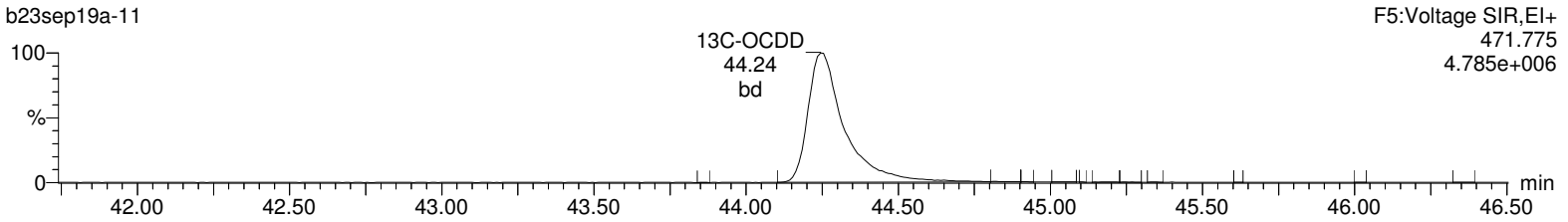
OCDF



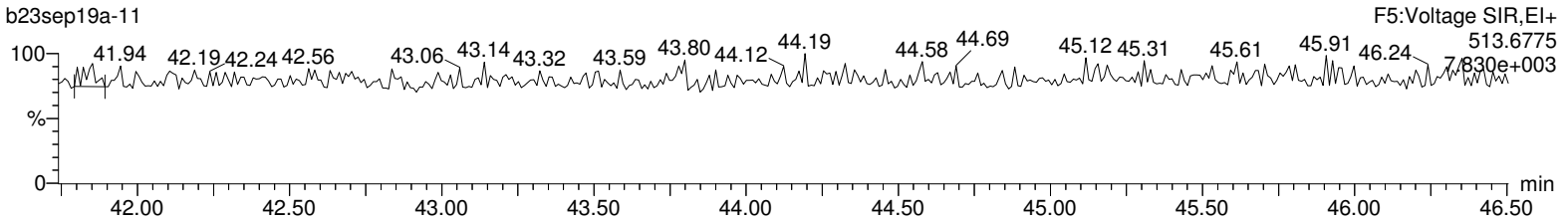
13C-OCDD



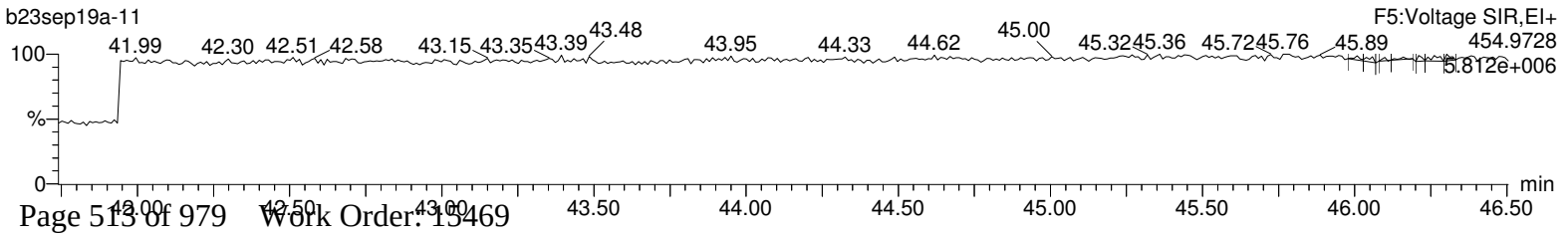
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469020**	**Date Collected:**	**08/29/2019 09:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.6**
Client ID:	**H3-SC1b-90to100-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 17:11**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.91 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0459	pg/g	0.0459	0.933
40321-76-4	1,2,3,7,8-PeCDD	U	0.0664	pg/g	0.0664	4.66
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.104	pg/g	0.104	4.66
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.102	pg/g	0.102	4.66
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.105	pg/g	0.105	4.66
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJK	0.496	pg/g	0.150	4.66
3268-87-9	1,2,3,4,6,7,8,9-OCDD	BJ	3.59	pg/g	0.276	9.33
51207-31-9	2,3,7,8-TCDF	BJ	0.405	pg/g	0.119	0.933
57117-41-6	1,2,3,7,8-PeCDF	BJ	0.097	pg/g	0.0638	4.66
57117-31-4	2,3,4,7,8-PeCDF	U	0.0567	pg/g	0.0567	4.66
70648-26-9	1,2,3,4,7,8-HxCDF	BJ	0.0485	pg/g	0.0405	4.66
57117-44-9	1,2,3,6,7,8-HxCDF	U	0.0429	pg/g	0.0429	4.66
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0448	pg/g	0.0448	4.66
72918-21-9	1,2,3,7,8,9-HxCDF	BJ	0.0653	pg/g	0.061	4.66
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.127	pg/g	0.0543	4.66
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0852	pg/g	0.0852	4.66
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	0.214	pg/g	0.214	9.33
41903-57-5	Total TeCDD	BJK	0.367	pg/g	0.0459	0.933
36088-22-9	Total PeCDD	JK	0.0746	pg/g	0.0664	4.66
34465-46-8	Total HxCDD	BJK	0.636	pg/g	0.102	4.66
37871-00-4	Total HpCDD	BJK	1.23	pg/g	0.150	4.66
30402-14-3	Total TeCDF	BJK	0.854	pg/g	0.119	0.933
30402-15-4	Total PeCDF	BJK	0.356	pg/g	0.0311	4.66
55684-94-1	Total HxCDF	BJ	0.201	pg/g	0.0405	4.66
38998-75-3	Total HpCDF	BJ	0.127	pg/g	0.0543	4.66
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0621	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.147	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	187	pg/g	80.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		134	187	pg/g	71.8	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		166	187	pg/g	88.8	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		150	187	pg/g	80.2	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		178	187	pg/g	95.2	(23%-140%)
13C-OCDD		297	373	pg/g	79.7	(17%-157%)
13C-2,3,7,8-TCDF		142	187	pg/g	76.4	(24%-169%)
13C-1,2,3,7,8-PeCDF		126	187	pg/g	67.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		127	187	pg/g	68.1	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		158	187	pg/g	84.8	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		145	187	pg/g	77.8	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		147	187	pg/g	78.6	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		156	187	pg/g	83.5	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469020**	**Date Collected:**	**08/29/2019 09:35**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**36.6**
Client ID:	**H3-SC1b-90to100-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 17:11**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-12**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.91 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		162	187	pg/g	87.0	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		173	187	pg/g	92.9	(26%-138%)
37Cl-2,3,7,8-TCDD		16.9	18.7	pg/g	90.6	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:32:35 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:34:03 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD							NO		0.0246		1685			1250			
2	12378-PeCDD	1.69e2	1.42e2	3.11e2	34.08	1.001	1.19	YES	0.026	0.0356	5.10e3	1758	2.9	4.69e3	1821	2.6	bd	MM
3	123478-HxCDD							NO		0.0558		1861			2253			
4	123678-HxCDD	1.46e2	7.36e1	2.20e2	36.74	1.000	1.98	YES	0.018	0.0547	4.24e3	1861	2.3	2.96e3	2253	1.3	MM	MM
5	123789-HxCDD	1.67e2	1.03e2	2.70e2	37.00	1.007	1.63	YES	0.025	0.0565	3.70e3	1861	2.0	2.02e3	2253	0.9	bb	bb
6	1234678-HpCDD	1.10e3	1.31e3	2.41e3	40.02	1.000	0.84	YES	0.266	0.0805	1.35e4	1560	8.7	1.59e4	1674	9.5	bd	bd
7	OCDD	5.66e3	6.56e3	1.22e4	44.26	1.000	0.86	NO	1.927	0.148	4.71e4	1128	41.8	5.95e4	1654	35.9	bd	bb
8	2378-TCDF	2.07e3	2.82e3	4.89e3	30.36	1.001	0.73	NO	0.217	0.0638	2.00e4	2562	7.8	2.70e4	3227	8.4	db	MM
9	12378-PeCDF	5.33e2	3.09e2	8.42e2	33.27	1.000	1.72	NO	0.052	0.0342	1.18e4	2420	4.9	6.13e3	2322	2.6	bd	MM
10	23478-PeCDF	3.25e2	2.48e2	5.72e2	33.87	1.000	1.31	YES	0.032	0.0304	6.11e3	2420	2.5	4.76e3	2322	2.1	db	MM
11	123478-HxCDF	1.95e2	1.70e2	3.66e2	35.96	1.000	1.15	NO	0.026	0.0217	4.27e3	1219	3.5	3.74e3	1104	3.4	MM	MM
12	123678-HxCDF	1.48e2	1.34e2	2.82e2	36.04	1.000	1.10	NO	0.018	0.0230	2.43e3	1219	2.0	4.23e3	1104	3.8	MM	MM
13	234678-HxCDF							NO		0.0240		1219			1104			
14	123789-HxCDF	2.34e2	1.89e2	4.22e2	37.32	1.001	1.24	NO	0.035	0.0327	4.22e3	1219	3.5	4.74e3	1104	4.3	bb	MM
15	1234678-HpCDF	4.68e2	4.19e2	8.87e2	38.80	1.001	1.12	NO	0.068	0.0291	7.53e3	1121	6.7	5.22e3	870	6.0	MM	MM
16	1234789-HpCDF							NO		0.0457		1121			870			
17	OCDF	1.37e2	6.80e1	2.05e2	44.54	1.007	2.01	YES	0.029	0.115	1.92e3	1047	1.8	2.38e3	1341	1.8	bb	bb
18	13C-2378-TCDD	1.02e6	1.33e6	2.35e6	31.14	1.018	0.76	NO	80.258	0.0569	1.45e7	4591	3158.9	1.87e7	2330	8010.2	bb	bb
19	13C-12378-PeCDD	8.65e5	5.56e5	1.42e6	34.06	1.114	1.56	NO	71.771	0.0565	1.80e7	2532	7111.8	1.19e7	2119	5595.4	bb	bb
20	13C-123478-HxCDD	6.16e5	5.00e5	1.12e6	36.66	0.991	1.23	NO	88.791	0.115	1.09e7	3506	3106.9	8.81e6	4849	1817.4	bd	bd
21	13C-123678-HxCDD	7.47e5	6.04e5	1.35e6	36.74	0.993	1.24	NO	80.200	0.0860	1.17e7	3506	3348.3	9.69e6	4849	1997.6	dd	dd
22	13C-1234678-HpCDD	4.92e5	4.68e5	9.61e5	40.02	1.082	1.05	NO	95.210	0.136	5.45e6	4361	1250.0	5.30e6	3554	1490.3	bd	bb
23	13C-OCDD	6.44e5	7.43e5	1.39e6	44.23	1.196	0.87	NO	159.341	0.132	4.76e6	3334	1428.6	5.37e6	3304	1625.2	bd	bd
24	13C-2378-TCDF	1.09e6	1.43e6	2.52e6	30.34	0.992	0.76	NO	76.360	0.0713	1.10e7	6109	1800.0	1.42e7	3671	3873.1	bb	bb
25	13C-12378-PeCDF	1.10e6	6.95e5	1.79e6	33.26	1.088	1.58	NO	67.513	0.0903	2.34e7	5576	4189.2	1.51e7	4391	3439.1	bd	bb
26	13C-23478-PeCDF	1.13e6	7.25e5	1.86e6	33.87	1.108	1.56	NO	68.091	0.0880	2.45e7	5576	4391.4	1.58e7	4391	3592.1	bb	bb
27	13C-123478-HxCDF	4.24e5	8.09e5	1.23e6	35.95	0.972	0.53	NO	84.810	0.155	8.13e6	5899	1378.7	1.55e7	7063	2195.9	bd	bd
28	13C-123678-HxCDF	5.18e5	9.55e5	1.47e6	36.05	0.975	0.54	NO	77.757	0.119	8.43e6	5899	1429.9	1.59e7	7063	2253.6	dd	db
29	13C-234678-HxCDF	4.42e5	8.24e5	1.27e6	36.53	0.988	0.54	NO	78.619	0.140	7.48e6	5899	1267.5	1.41e7	7063	2002.0	bd	bb
30	13C-123789-HxCDF	3.97e5	7.37e5	1.13e6	37.29	1.008	0.54	NO	83.544	0.166	5.85e6	5899	991.6	1.08e7	7063	1532.0	bd	bb
31	13C-1234678-HpCDF	3.39e5	7.48e5	1.09e6	38.78	1.049	0.45	NO	86.979	0.146	4.48e6	4114	1089.0	9.65e6	6370	1515.2	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:32:35 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:34:03 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.57e5	5.75e5	8.31e5	40.66	1.099	0.45	NO	92.883	0.203	2.74e6	4114	665.8	6.05e6	6370	949.0	bb	bb
33	13C-1234-TCDD	1.11e6	1.44e6	2.54e6	30.58	0.000	0.77	NO	100.000	0.0655	1.15e7	4591	2502.4	1.50e7	2330	6458.9	bb	bb
34	13C-123789-HxCDD	8.75e5	7.19e5	1.59e6	36.98	0.000	1.22	NO	100.000	0.0909	1.26e7	3506	3597.8	1.04e7	4849	2142.8	dd	dd
35	37Cl-2378-TCDD	2.48e5		2.48e5	31.15	1.019			9.059	0.0130	3.48e6	1476	2357.4				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:32:35 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:34:03 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	9.95e2	1.00e3	1.99e3	27.78	1.00	YES	0.095	0.0246	9.28e3	1685	5.5	1.03e4	1250	8.2	MM	MM
2	Total-tetradioxins	5.17e2	4.82e2	9.99e2	28.14	1.07	YES	0.048	0.0246	6.27e3	1685	3.7	6.88e3	1250	5.5	bb	MM
3	Total-tetradioxins	4.87e2	6.47e2	1.13e3	29.17	0.75	NO	0.054	0.0246	5.24e3	1685	3.1	6.40e3	1250	5.1	MM	MM

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	3.95e2	2.18e2	6.13e2	32.75	1.82	YES	0.051	0.0356	7.18e3	1758	4.1	3.52e3	1821	1.9	bb	bd
2	Total-pentadioxins	2.62e2	2.21e2	4.82e2	33.01	1.18	YES	0.040	0.0356	8.83e3	1758	5.0	4.99e3	1821	2.7	MM	MM
3	Total-pentadioxins	4.21e2	1.94e2	6.15e2	33.29	2.17	YES	0.051	0.0356	8.21e3	1758	4.7	3.51e3	1821	1.9	bb	MM
4	Total-pentadioxins	2.19e2	1.43e2	3.62e2	33.42	1.52	NO	0.030	0.0356	4.60e3	1758	2.6	2.41e3	1821	1.3	bb	MM
5	Total-pentadioxins	1.45e2	1.16e2	2.61e2	33.60	1.24	YES	0.022	0.0356	5.17e3	1758	2.9	5.67e3	1821	3.1	MM	bb
6	Total-pentadioxins	6.48e1	5.41e1	1.19e2	33.80	1.20	YES	0.010	0.0356	2.64e3	1758	1.5	1.48e3	1821	0.8	bd	bd
7	Total-pentadioxins	2.10e2	9.05e1	3.01e2	33.87	2.33	YES	0.025	0.0356	3.78e3	1758	2.2	1.87e3	1821	1.0	db	db
8	12378-PeCDD	1.69e2	1.42e2	3.11e2	34.08	1.19	YES	0.026	0.0356	5.10e3	1758	2.9	4.69e3	1821	2.6	bd	MM
9	Total-pentadioxins	8.44e1	7.73e1	1.62e2	34.34	1.09	YES	0.013	0.0356	3.27e3	1758	1.9	2.52e3	1821	1.4	bb	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	7.25e2	7.92e2	1.52e3	35.45	0.91	YES	0.136	0.0556	1.35e4	1861	7.2	1.88e4	2253	8.4	bb	bb
2	Total-hexadioxins	5.75e2	3.37e2	9.12e2	35.94	1.71	YES	0.082	0.0556	8.09e3	1861	4.3	5.98e3	2253	2.7	MM	MM
3	Total-hexadioxins	7.79e2	5.89e2	1.37e3	36.06	1.32	NO	0.123	0.0556	8.75e3	1861	4.7	6.02e3	2253	2.7	MM	MM
4	Total-hexadioxins	3.08e2	1.34e2	4.42e2	36.51	2.31	YES	0.040	0.0556	7.28e3	1861	3.9	2.49e3	2253	1.1	bb	MM
5	123678-HxCDD	1.46e2	7.36e1	2.20e2	36.74	1.98	YES	0.018	0.0547	4.24e3	1861	2.3	2.96e3	2253	1.3	MM	MM
6	123789-HxCDD	1.67e2	1.03e2	2.70e2	37.00	1.63	YES	0.025	0.0565	3.70e3	1861	2.0	2.02e3	2253	0.9	bb	bb
7	Total-hexadioxins	2.64e2	7.12e1	3.36e2	37.32	3.71	YES	0.030	0.0556	4.22e3	1861	2.3	1.79e3	2253	0.8	MM	MM
8	Total-hexadioxins	2.58e2	6.95e2	9.53e2	37.41	0.37	YES	0.086	0.0556	4.45e3	1861	2.4	1.48e4	2253	6.6	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:32:35 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:34:03 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	5.04e2	1.62e2	6.66e2	38.78	3.11	YES	0.073	0.0805	8.89e3	1560	5.7	2.24e3	1674	1.3	bb	MM
2	Total-heptadioxins	1.73e3	1.82e3	3.55e3	39.14	0.95	NO	0.392	0.0805	2.13e4	1560	13.7	2.25e4	1674	13.4	bb	MM
3	1234678-HpCDD	1.10e3	1.31e3	2.41e3	40.02	0.84	YES	0.266	0.0805	1.35e4	1560	8.7	1.59e4	1674	9.5	bd	bd
4	Total-heptadioxins	1.06e2	8.34e1	1.89e2	40.12	1.27	YES	0.021	0.0805	4.08e3	1560	2.6	2.88e3	1674	1.7	db	db

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	2.34e2	4.04e2	6.38e2	26.05	0.58	YES	0.028	0.0638	5.25e3	2562	2.1	4.88e3	3227	1.5	bb	MM
2	Total-tetrafurans	5.26e2	5.94e2	1.12e3	27.05	0.88	NO	0.050	0.0638	5.85e3	2562	2.3	6.50e3	3227	2.0	bb	bb
3	Total-tetrafurans	5.96e2	6.44e2	1.24e3	27.39	0.93	YES	0.055	0.0638	6.45e3	2562	2.5	8.21e3	3227	2.5	MM	bb
4	Total-tetrafurans	5.52e2	7.44e2	1.30e3	27.70	0.74	NO	0.058	0.0638	4.78e3	2562	1.9	7.59e3	3227	2.4	bb	db
5	Total-tetrafurans	2.84e2	4.67e2	7.50e2	28.03	0.61	YES	0.033	0.0638	4.20e3	2562	1.6	4.97e3	3227	1.5	bb	MM
6	Total-tetrafurans	6.81e2	8.93e2	1.57e3	28.98	0.76	NO	0.070	0.0638	6.04e3	2562	2.4	8.91e3	3227	2.8	bb	MM
7	Total-tetrafurans	1.40e3	1.90e3	3.30e3	29.43	0.74	NO	0.147	0.0638	1.58e4	2562	6.2	2.05e4	3227	6.4	bb	bb
8	Total-tetrafurans	1.80e2	3.90e2	5.70e2	29.72	0.46	YES	0.025	0.0638	3.89e3	2562	1.5	4.86e3	3227	1.5	bd	MM
9	Total-tetrafurans	2.22e2	2.50e2	4.72e2	30.14	0.89	YES	0.021	0.0638	3.78e3	2562	1.5	3.88e3	3227	1.2	bd	MM
10	2378-TCDF	2.07e3	2.82e3	4.89e3	30.36	0.73	NO	0.217	0.0638	2.00e4	2562	7.8	2.70e4	3227	8.4	db	MM
11	Total-tetrafurans	2.54e2	4.48e2	7.01e2	30.72	0.57	YES	0.031	0.0638	4.99e3	2562	1.9	6.09e3	3227	1.9	MM	bb
12	Total-tetrafurans	1.13e3	9.93e2	2.13e3	31.83	1.14	YES	0.094	0.0638	1.85e4	2562	7.2	1.81e4	3227	5.6	bb	bd
13	Total-tetrafurans	2.95e2	3.89e2	6.83e2	28.32	0.76	NO	0.030	0.0638	4.02e3	2562	1.6	5.08e3	3227	1.6	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	8.05e2	3.96e2	1.20e3	31.85	2.03	YES	0.070	0.0167	1.21e4	916	13.2	8.31e3	1545	5.4	bb	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:32:35 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:34:03 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	2.34e2	2.19e2	4.54e2	32.63	1.07	YES	0.026	0.0322	5.22e3	2420	2.2	5.10e3	2322	2.2	bd	MM
2	Total-pentafurans	6.90e2	4.94e2	1.18e3	32.71	1.40	NO	0.069	0.0322	1.53e4	2420	6.3	8.11e3	2322	3.5	db	MM
3	Total-pentafurans	1.27e2	1.71e2	2.98e2	32.89	0.74	YES	0.017	0.0322	3.10e3	2420	1.3	5.12e3	2322	2.2	MM	MM
4	Total-pentafurans	2.07e2	2.02e2	4.09e2	33.02	1.02	YES	0.024	0.0322	4.32e3	2420	1.8	3.62e3	2322	1.6	dd	MM
5	12378-PeCDF	5.33e2	3.09e2	8.42e2	33.27	1.72	NO	0.052	0.0342	1.18e4	2420	4.9	6.13e3	2322	2.6	bd	MM
6	23478-PeCDF	3.25e2	2.48e2	5.72e2	33.87	1.31	YES	0.032	0.0304	6.11e3	2420	2.5	4.76e3	2322	2.1	db	MM

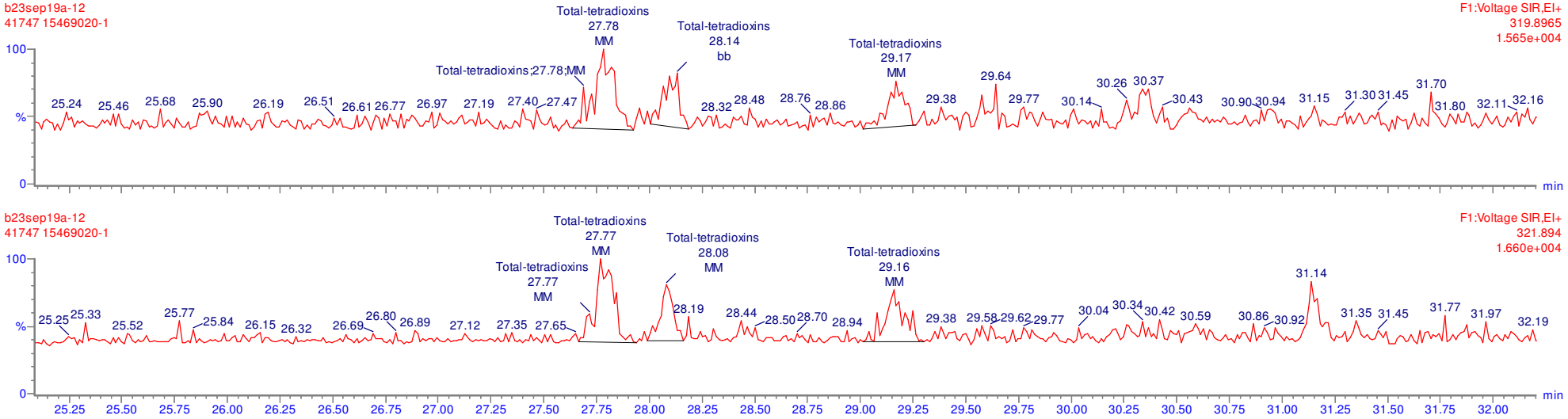
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	3.43e2	3.13e2	6.55e2	35.16	1.10	NO	0.047	0.0250	8.30e3	1219	6.8	5.62e3	1104	5.1	bb	MM
2	123478-HxCDF	1.95e2	1.70e2	3.66e2	35.96	1.15	NO	0.026	0.0217	4.27e3	1219	3.5	3.74e3	1104	3.4	MM	MM
3	123789-HxCDF	2.34e2	1.89e2	4.22e2	37.32	1.24	NO	0.035	0.0327	4.22e3	1219	3.5	4.74e3	1104	4.3	bb	MM
4	Total-hexafurans	1.49e2	7.77e1	2.27e2	35.57	1.92	YES	0.016	0.0250	3.05e3	1219	2.5	1.44e3	1104	1.3	MM	MM
5	123678-HxCDF	1.48e2	1.34e2	2.82e2	36.04	1.10	NO	0.018	0.0230	2.43e3	1219	2.0	4.23e3	1104	3.8	MM	MM

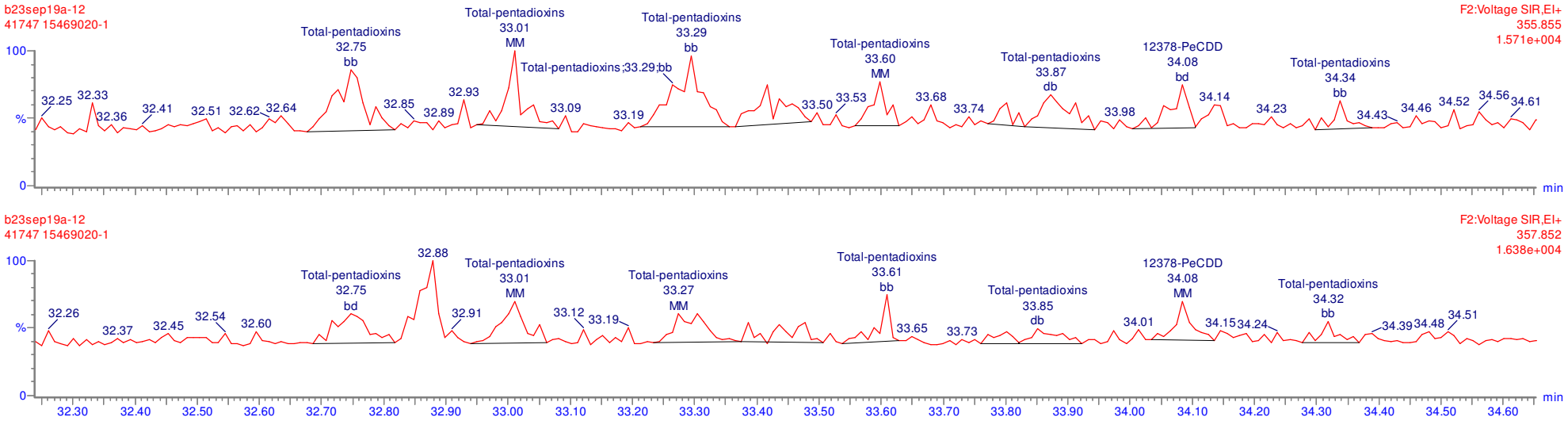
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	4.68e2	4.19e2	8.87e2	38.80	1.12	NO	0.068	0.0291	7.53e3	1121	6.7	5.22e3	870	6.0	MM	MM
2	Total-heptafurans	2.06e2	1.51e2	3.57e2	39.29	1.36	YES	0.031	0.0364	4.03e3	1121	3.6	3.10e3	870	3.6	MM	bb

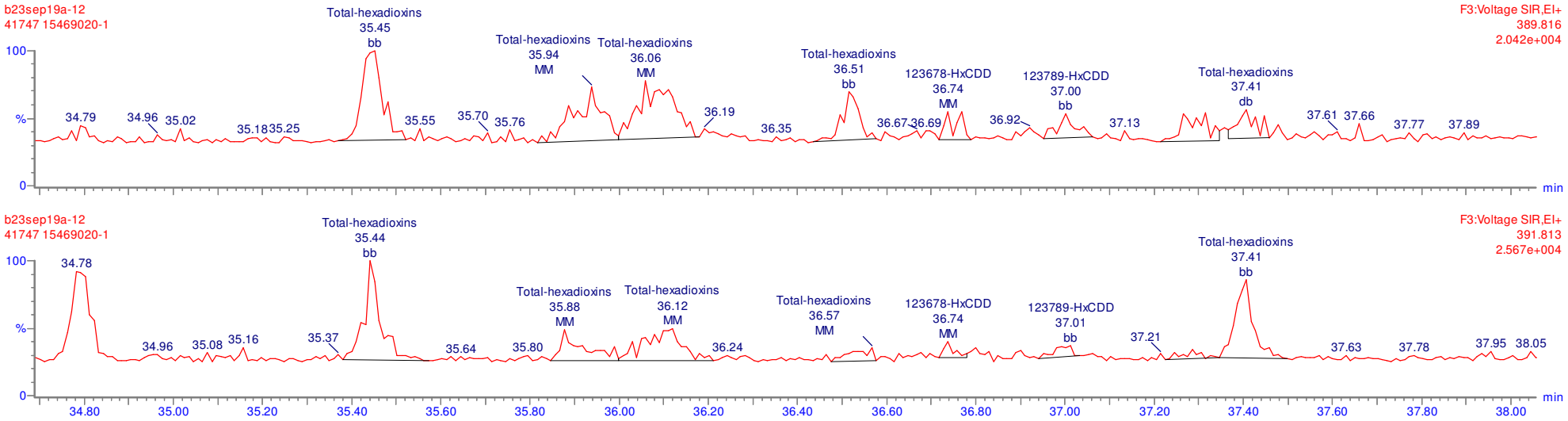
MANUAL INTEGRATION
METHOD 1613
HRP763_1



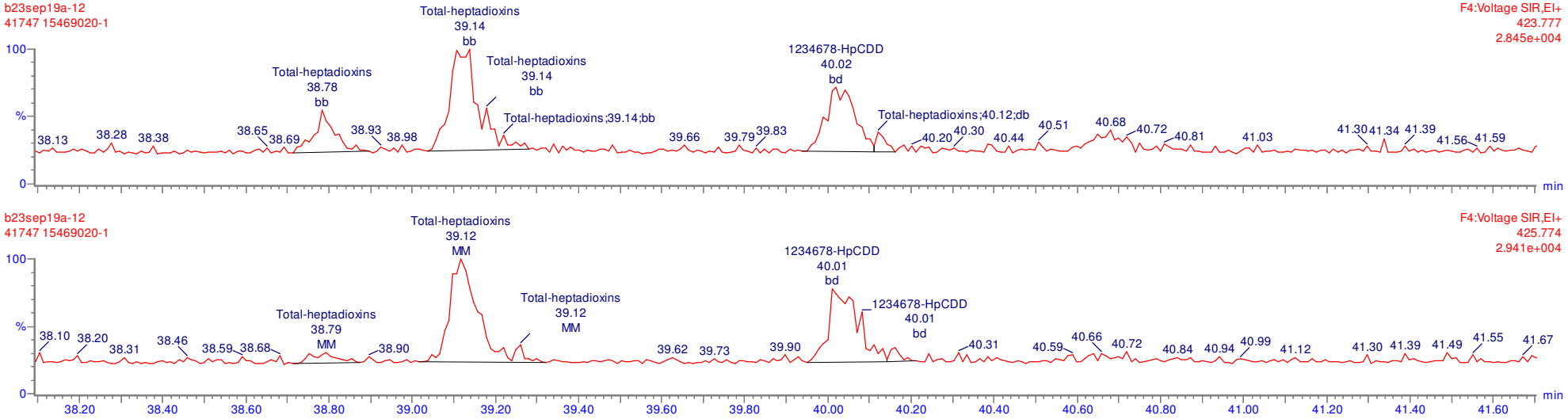
MANUAL INTEGRATION
METHOD 1613
HRP763_1



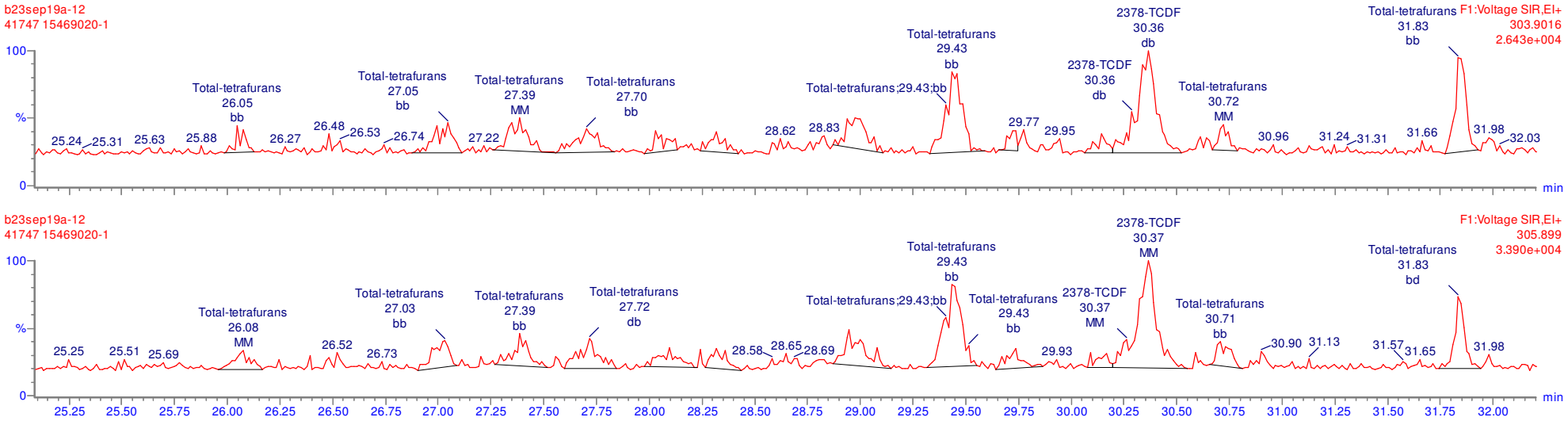
MANUAL INTEGRATION
METHOD 1613
HRP763_1



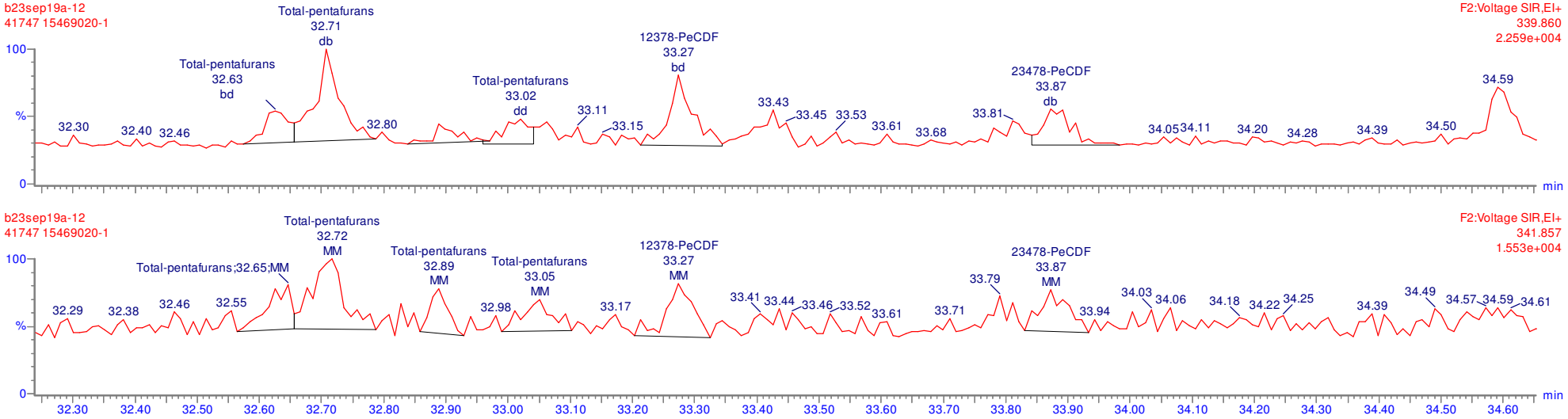
MANUAL INTEGRATION
METHOD 1613
HRP763_1



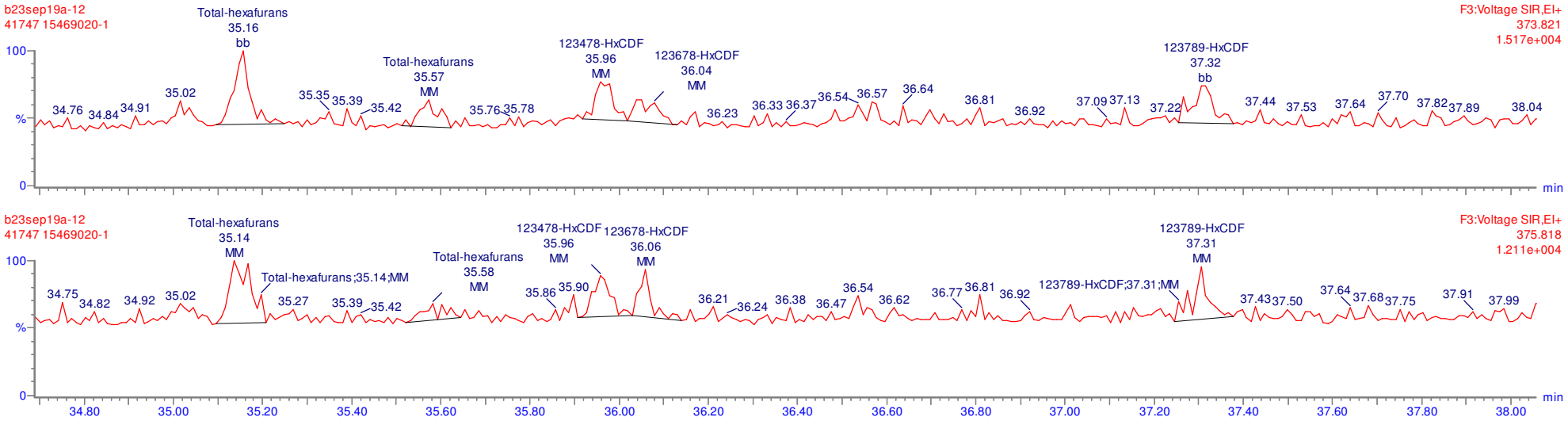
MANUAL INTEGRATION
METHOD 1613
HRP763_1



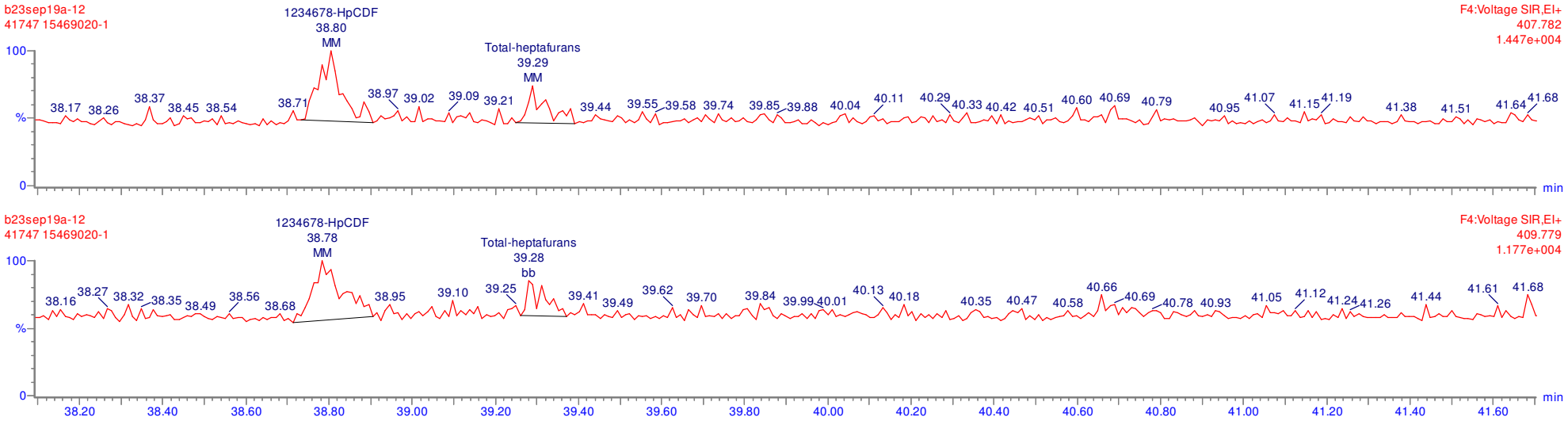
MANUAL INTEGRATION
METHOD 1613
HRP763_1



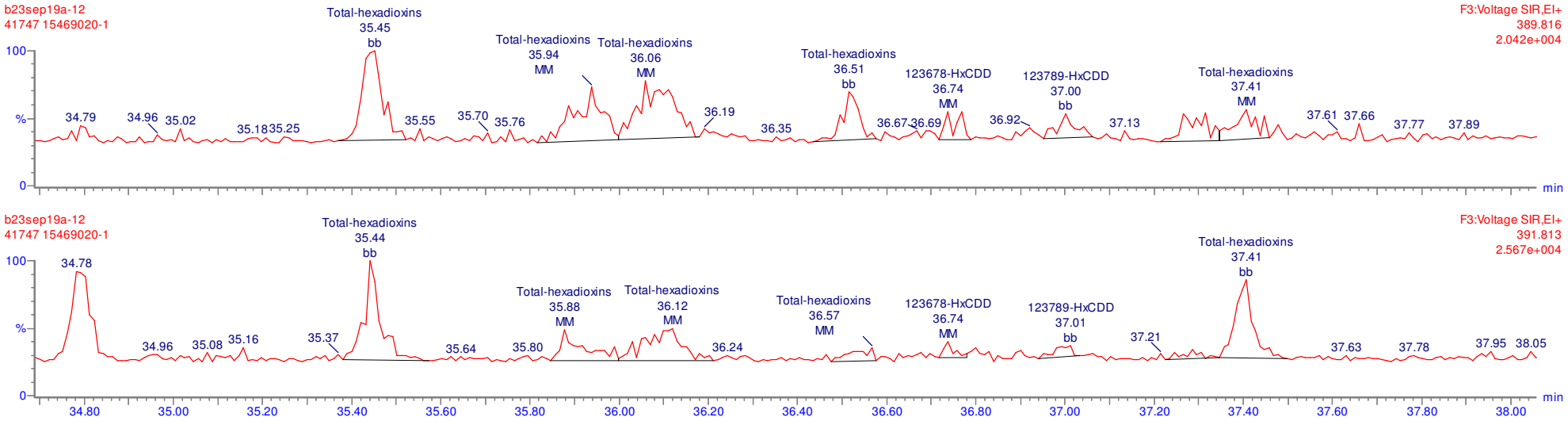
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



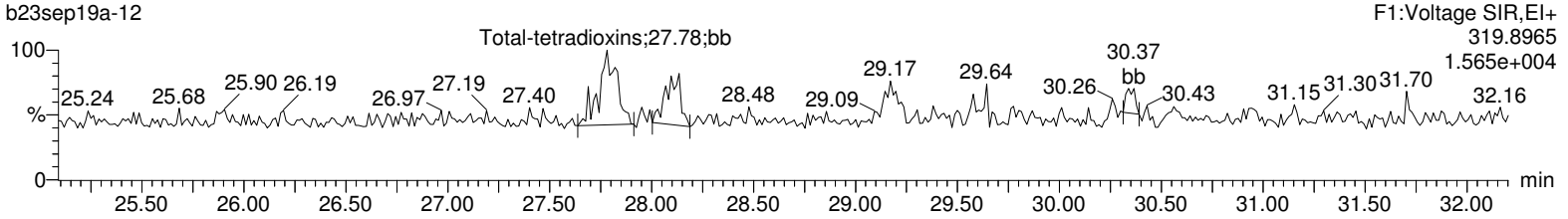
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

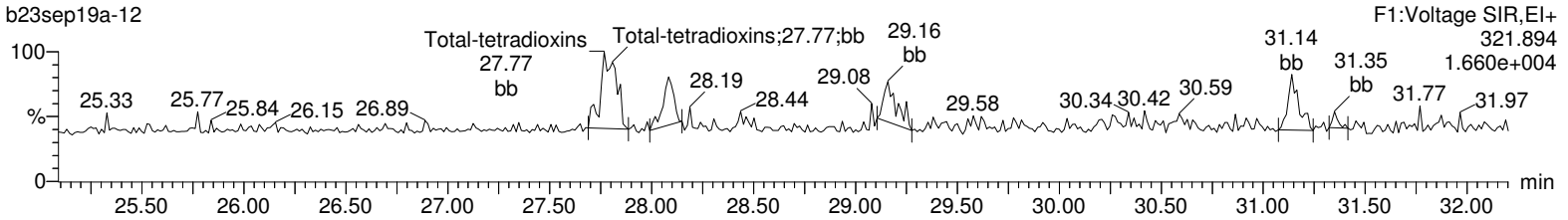
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

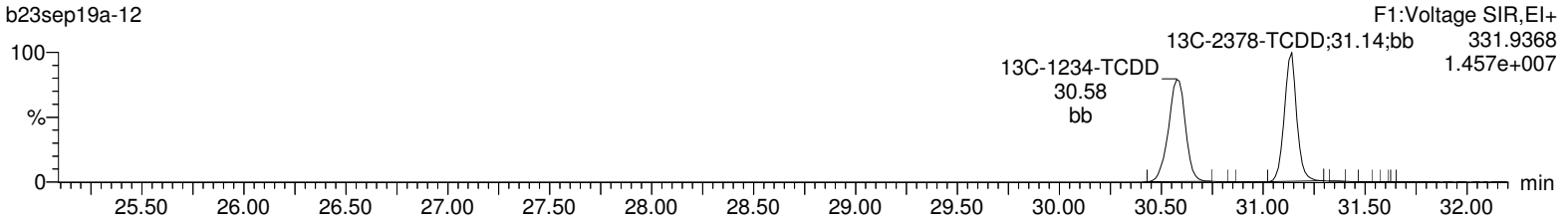
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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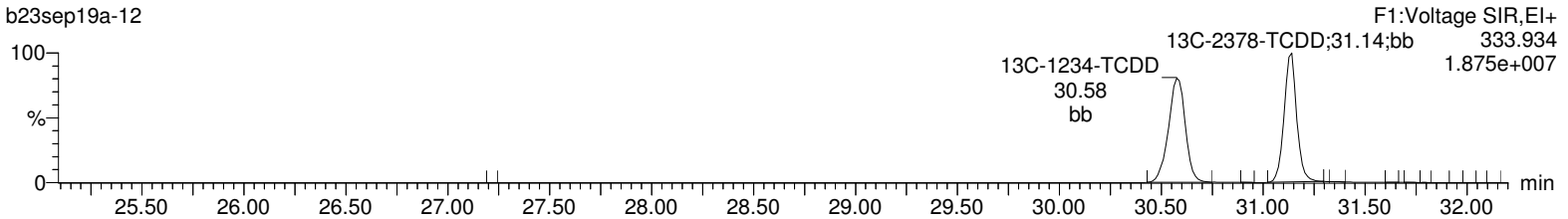
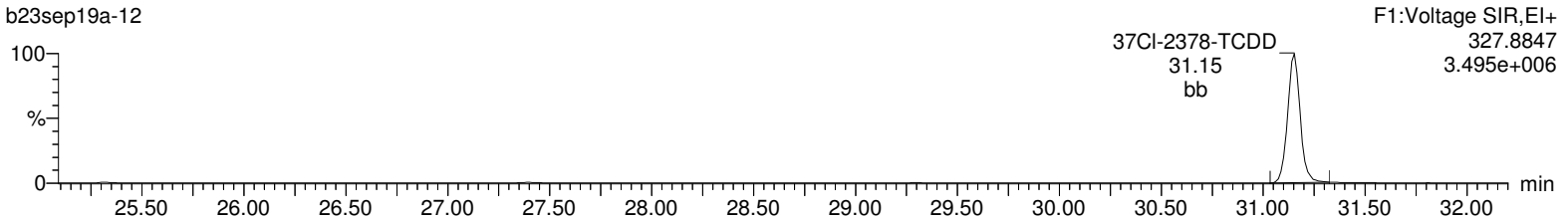
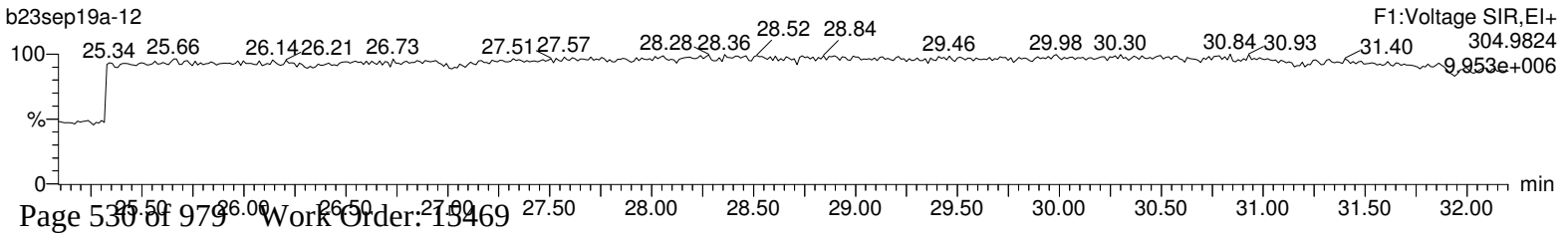


37Cl-2378-TCDD



Lock Mass F1



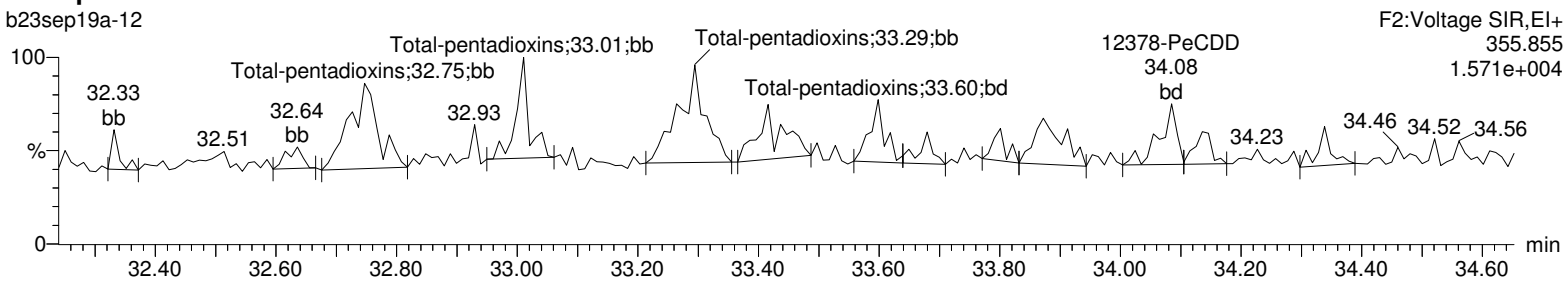
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

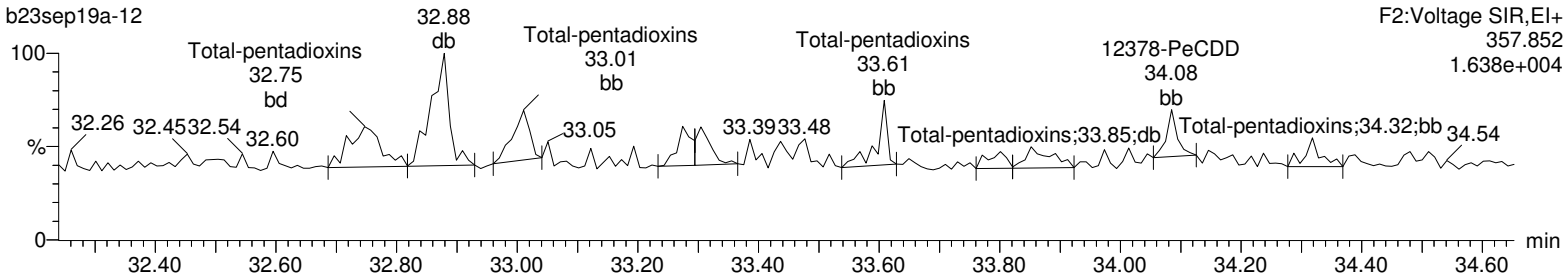
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

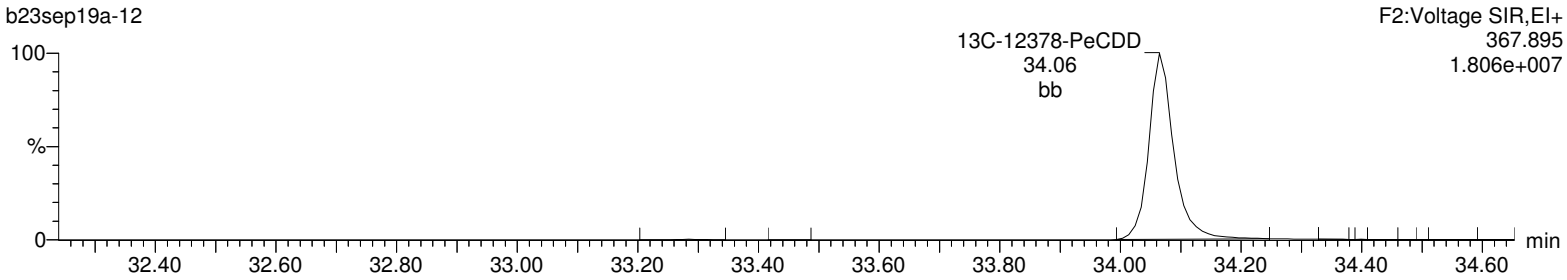
Total-pentadioxins



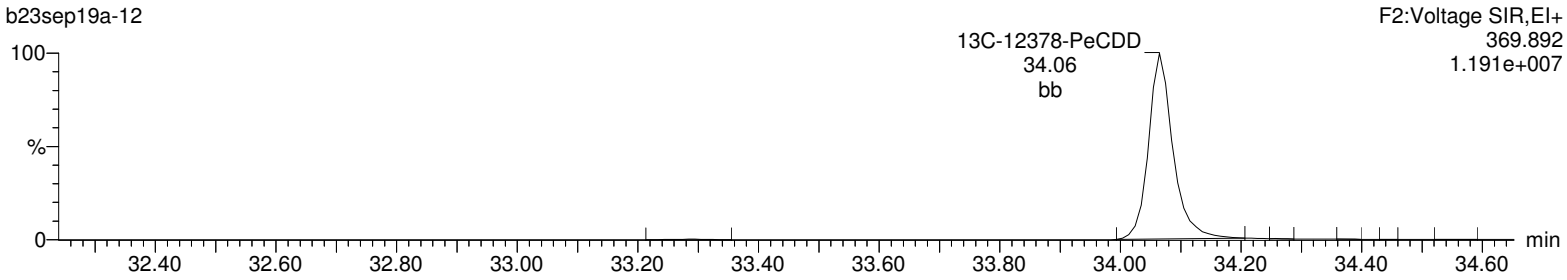
Total-pentadioxins



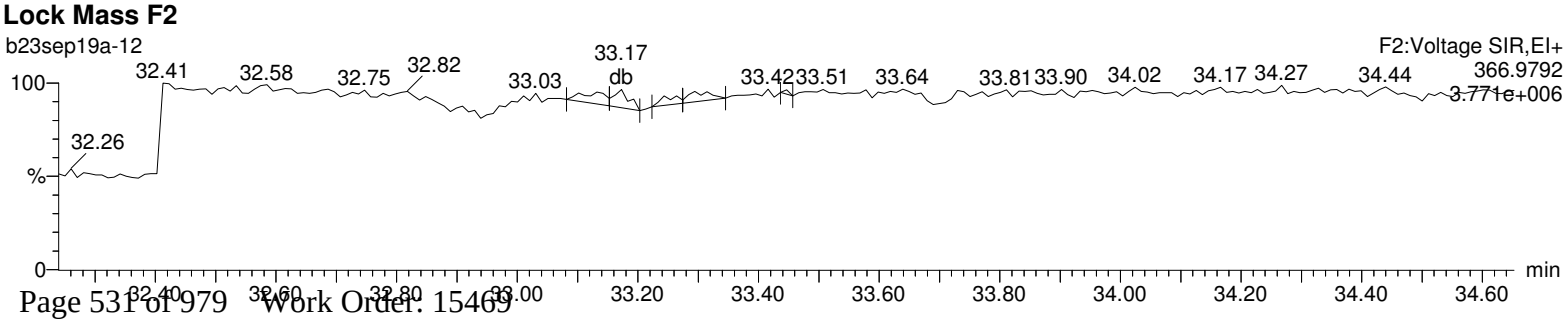
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



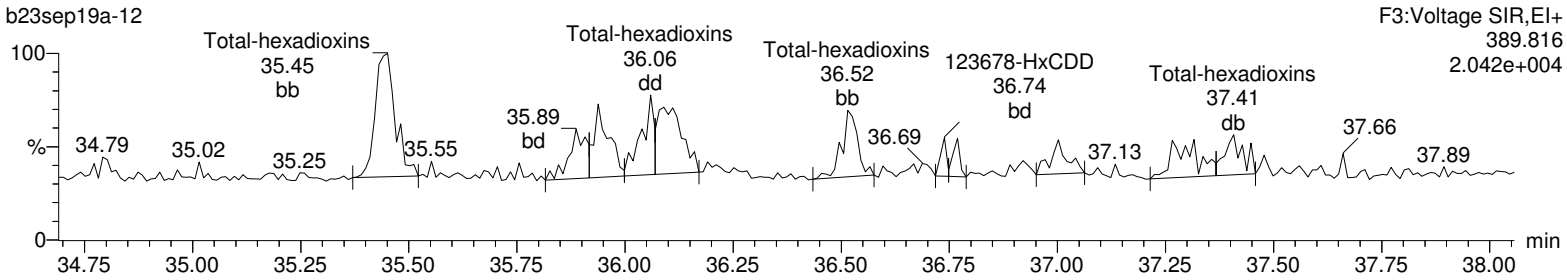
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

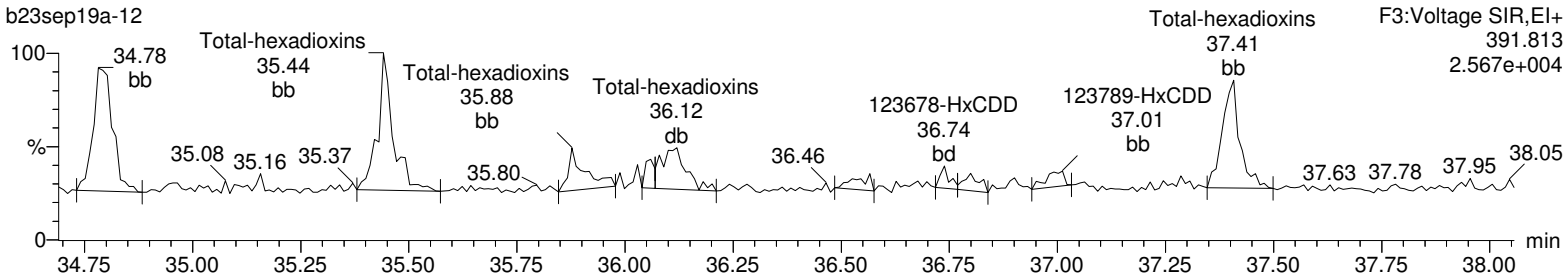
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

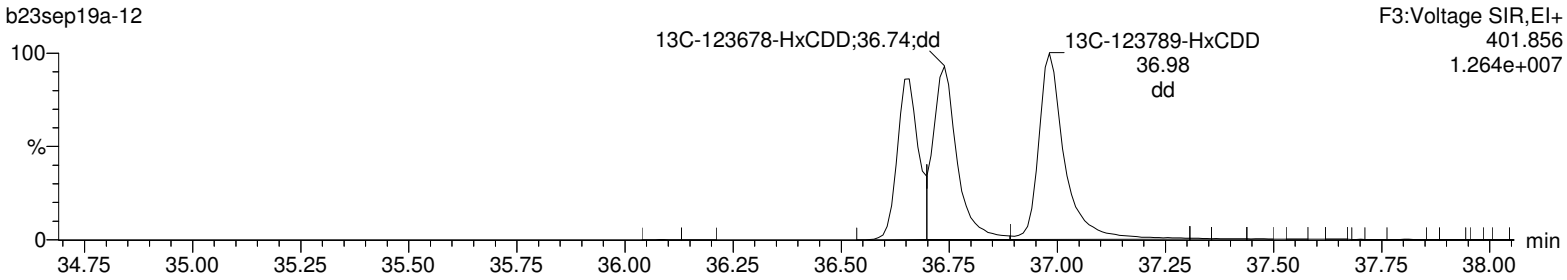
Total-hexadioxins



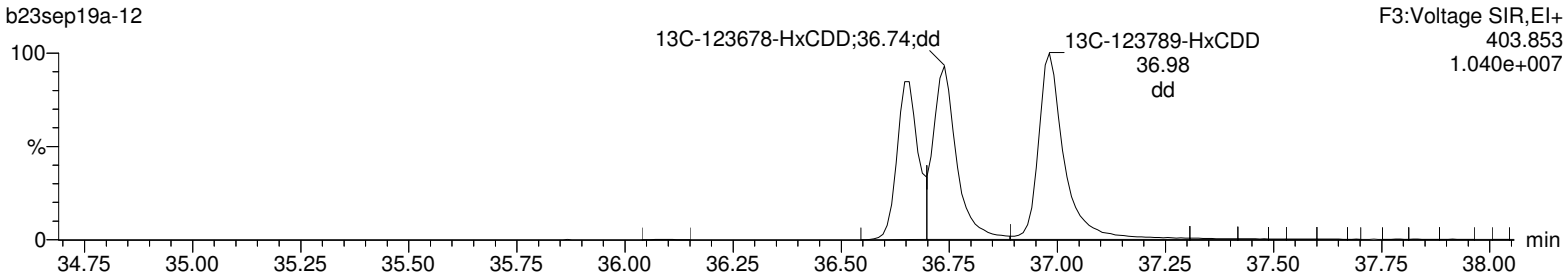
Total-hexadioxins



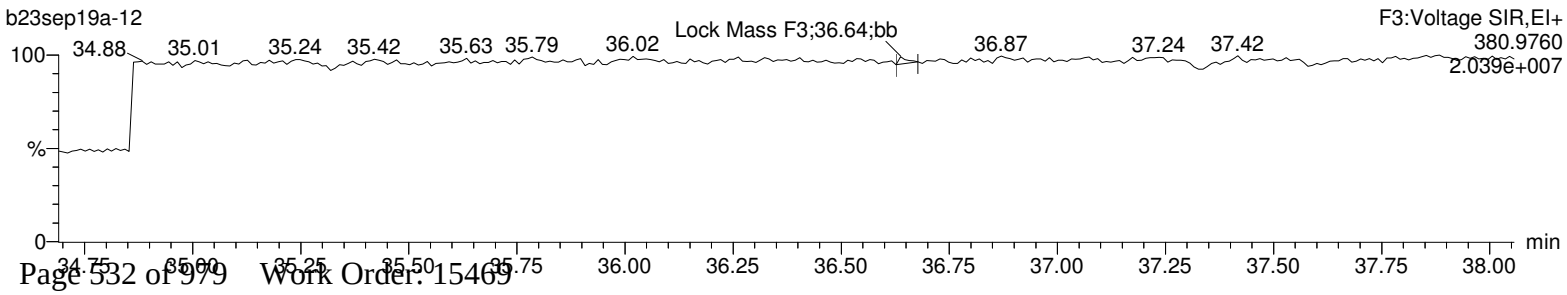
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



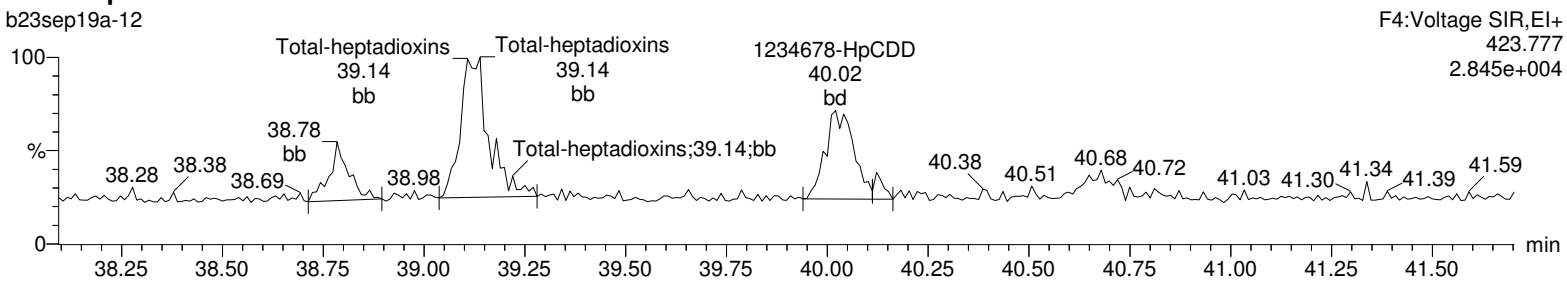
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

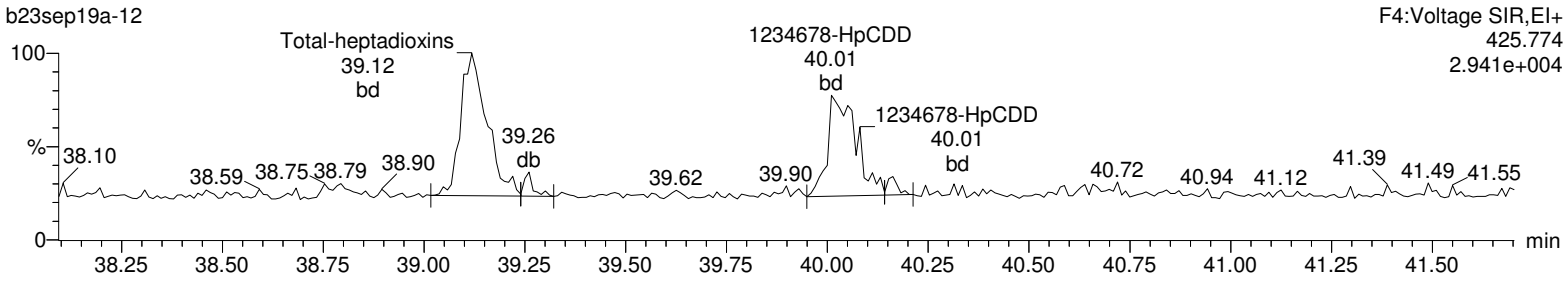
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

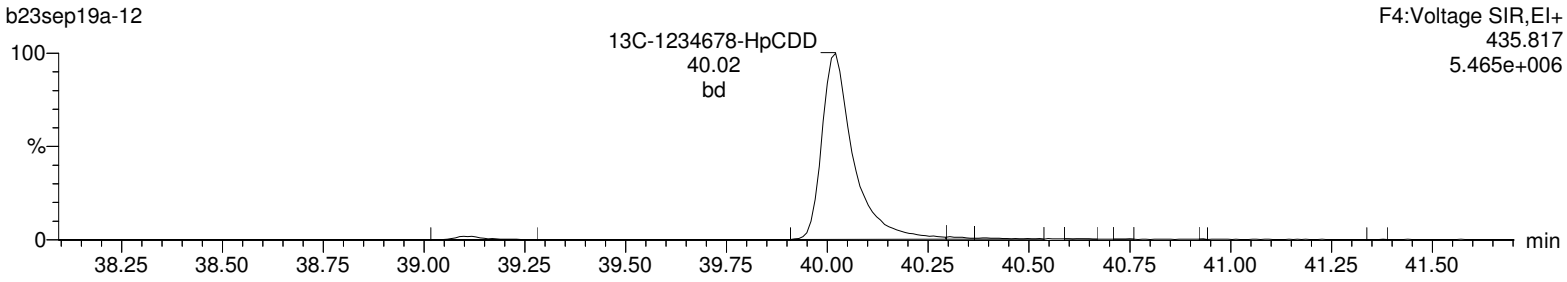
Total-heptadioxins



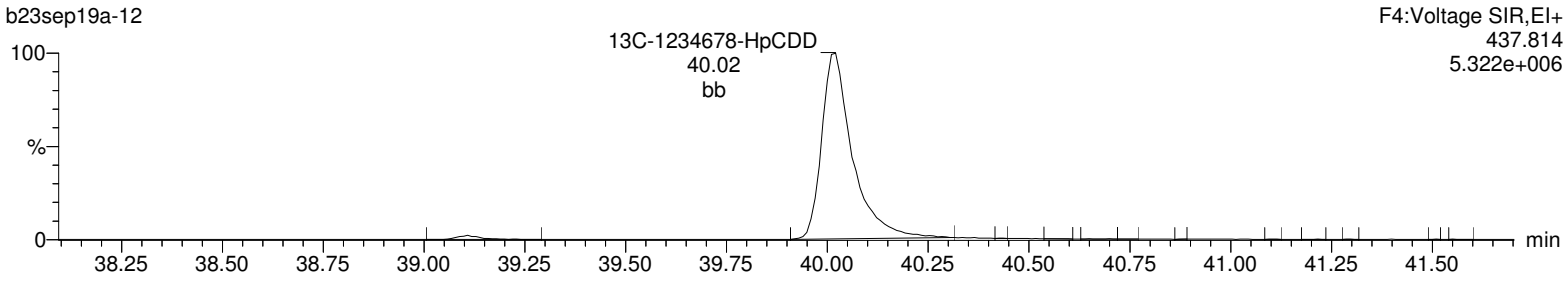
Total-heptadioxins



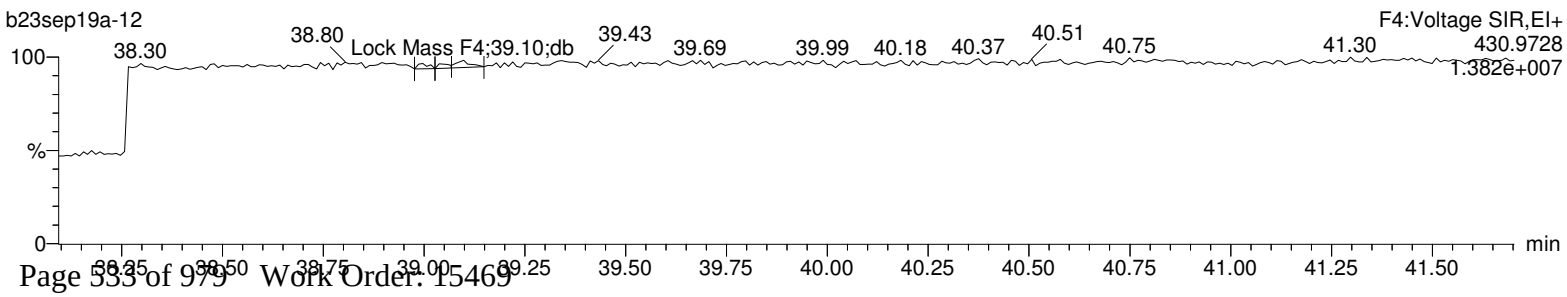
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



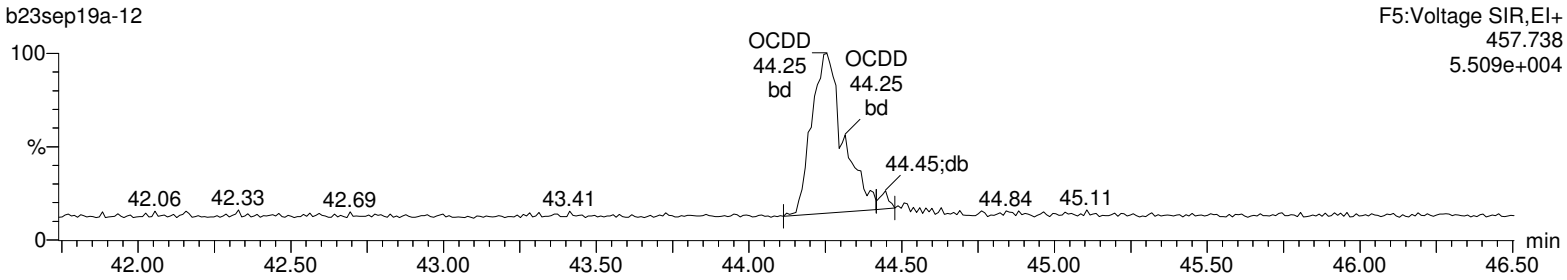
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

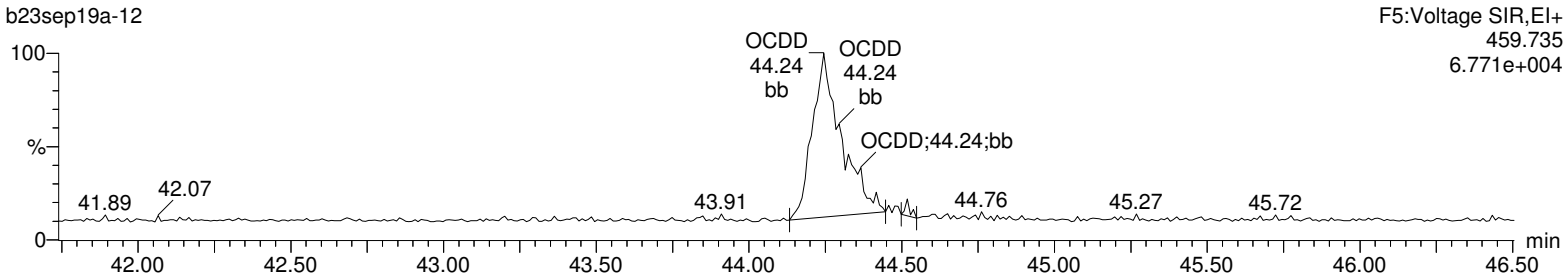
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

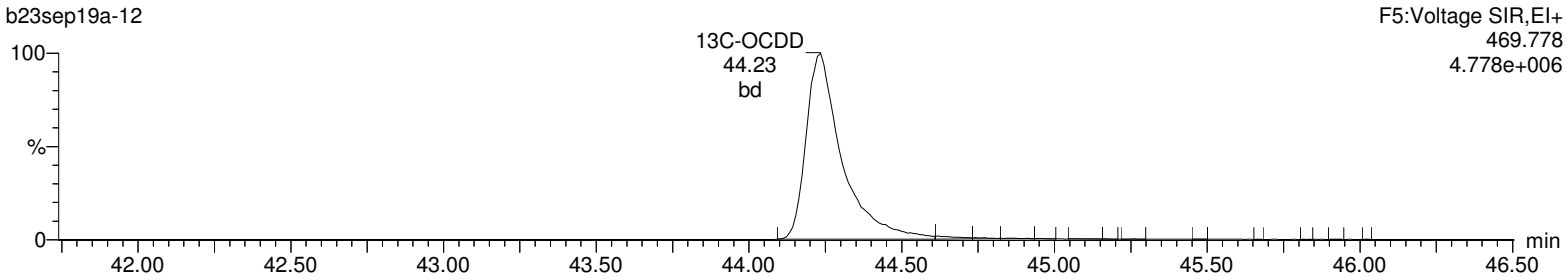
OCDD



OCDD



13C-OCDD



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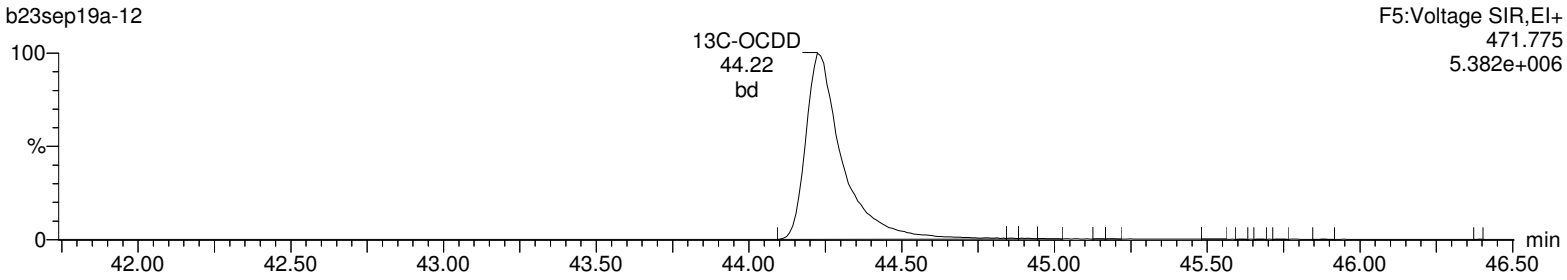
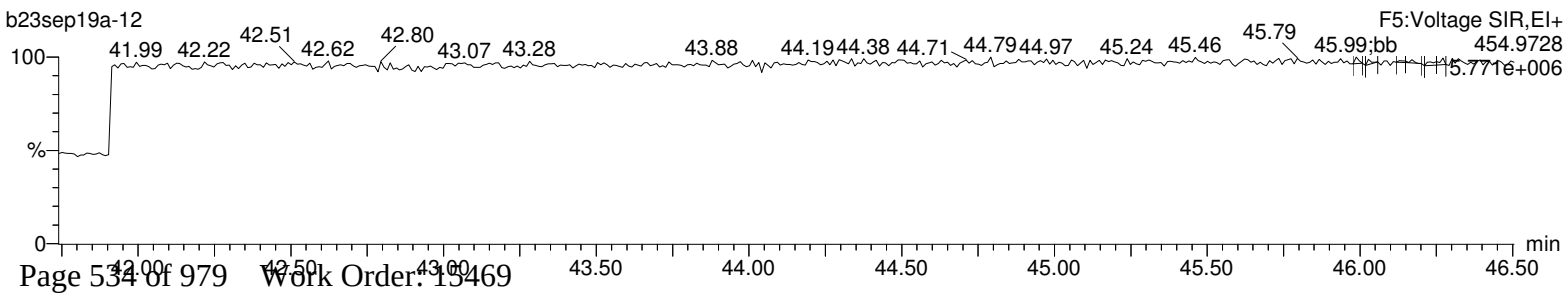


Lock Mass F5



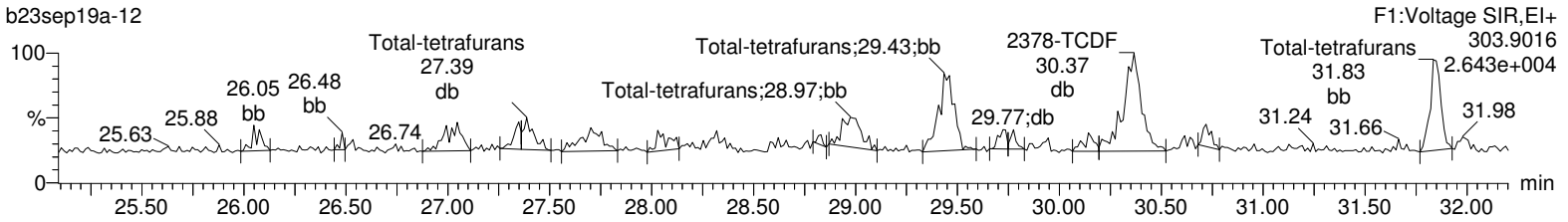
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

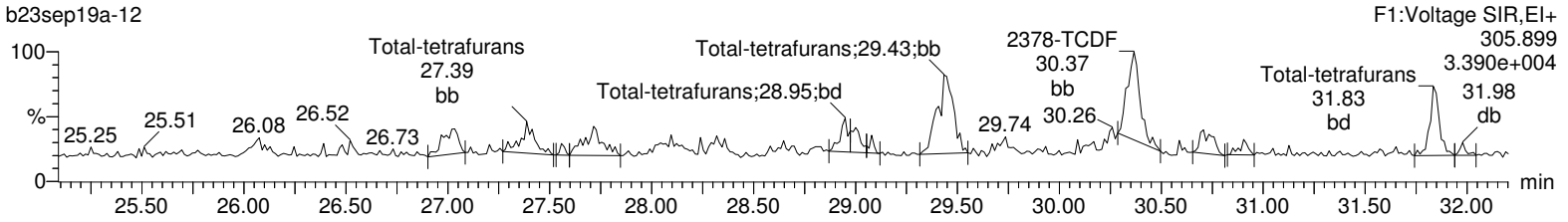
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

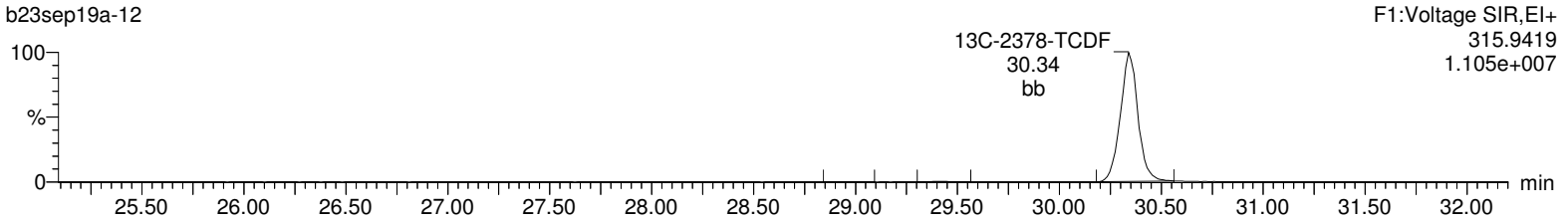
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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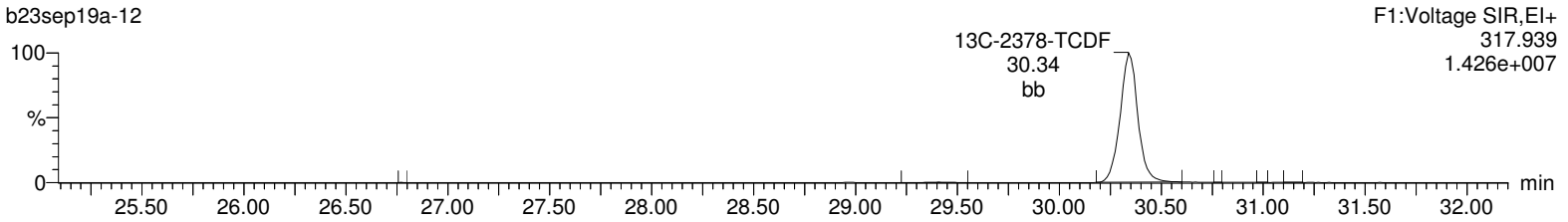
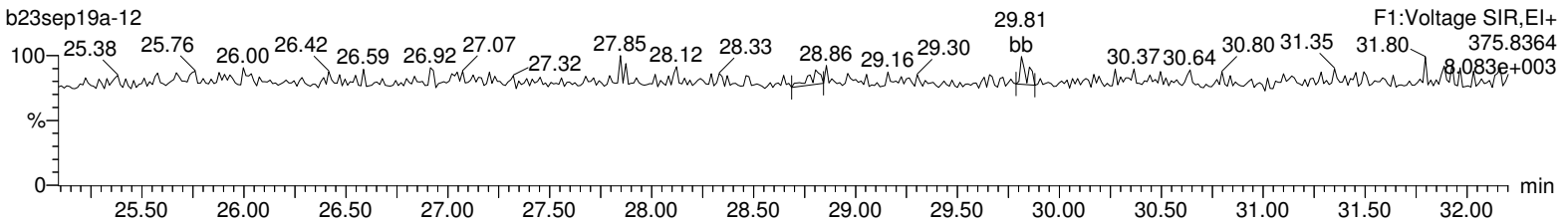
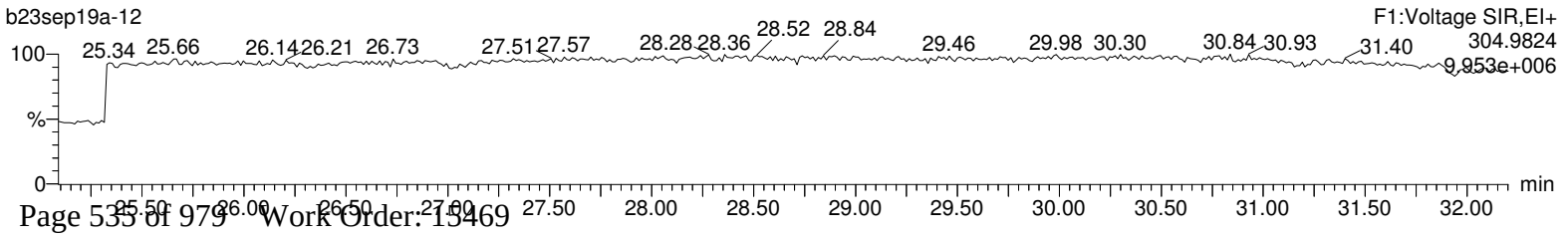


HxDPE



Lock Mass F1



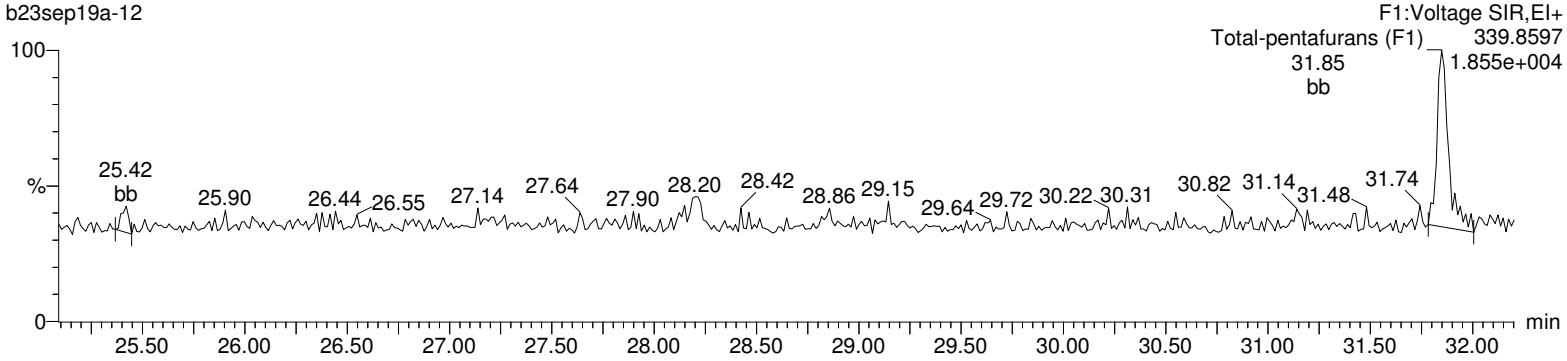
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

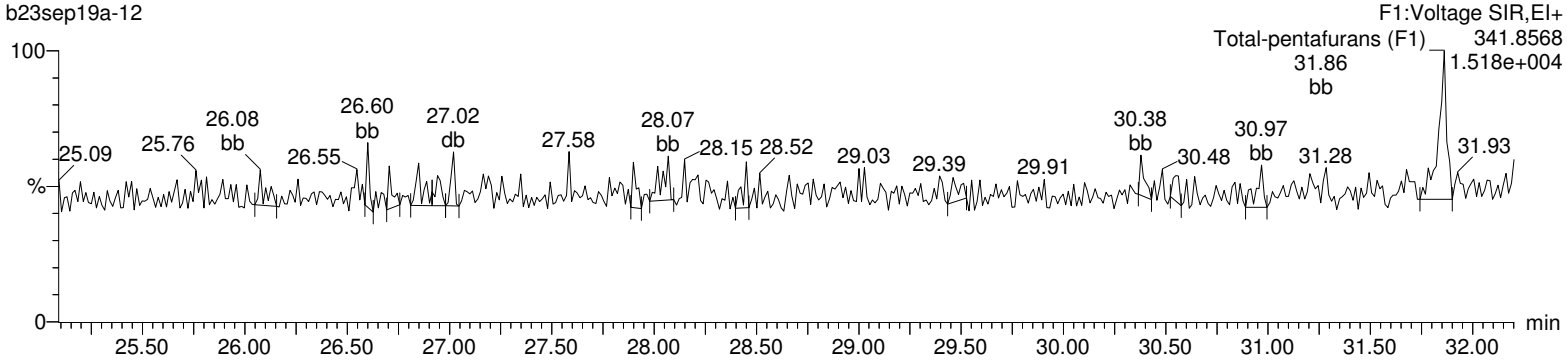
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

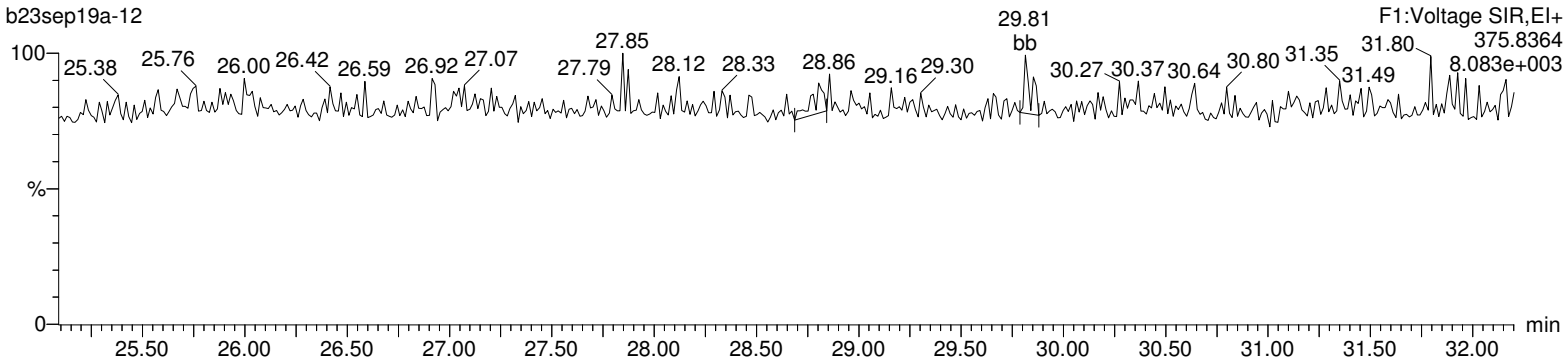
Total-pentafurans (F1)



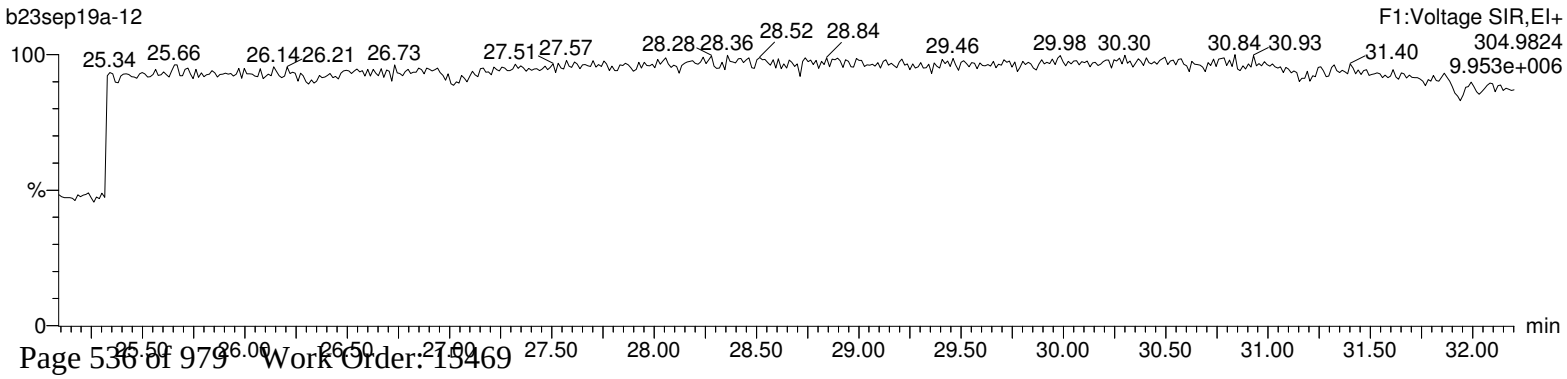
Total-pentafurans (F1)



HxDPE



Lock Mass F1



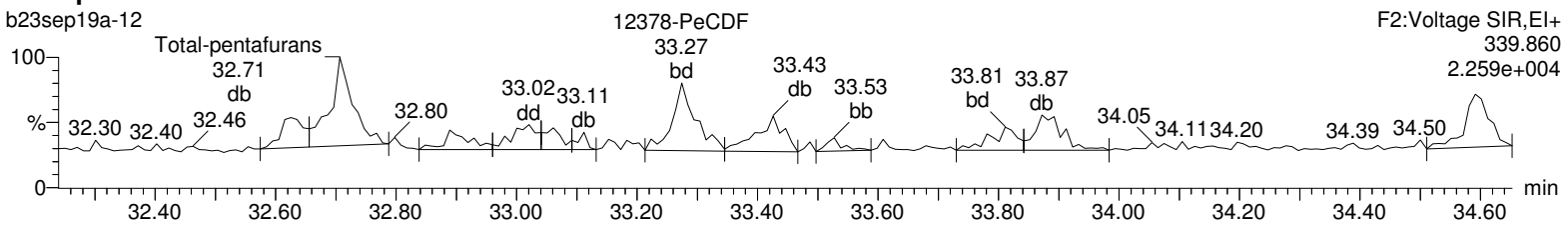
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

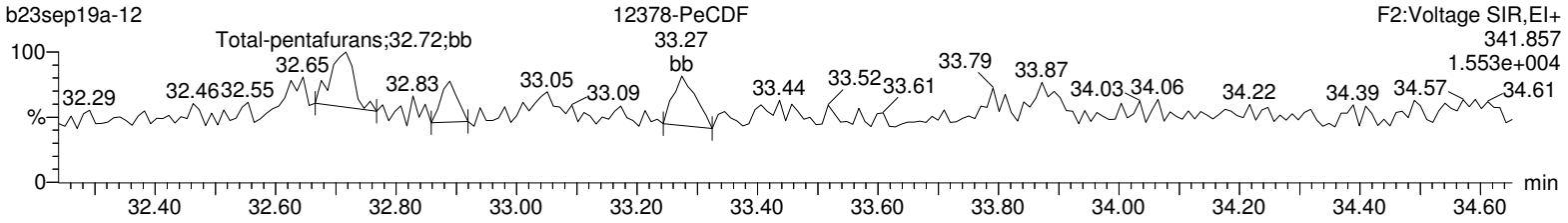
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

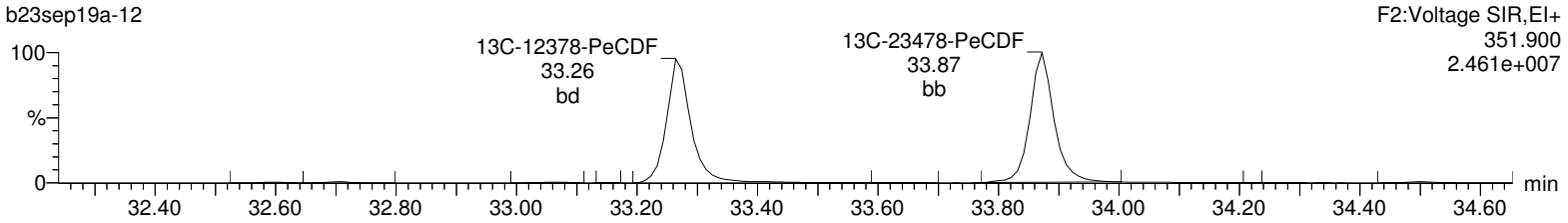
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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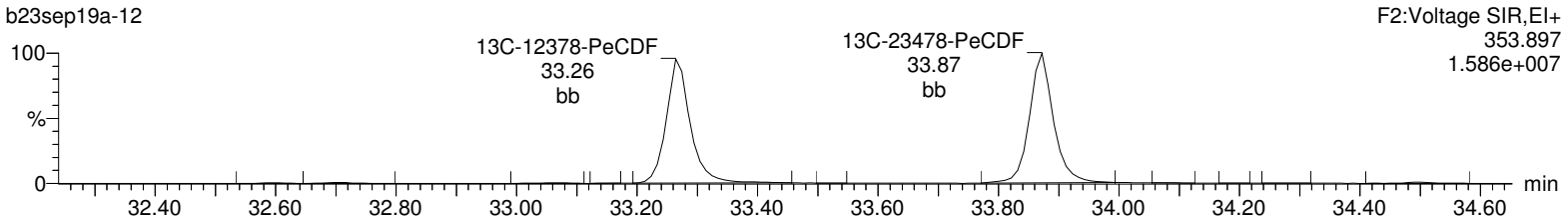
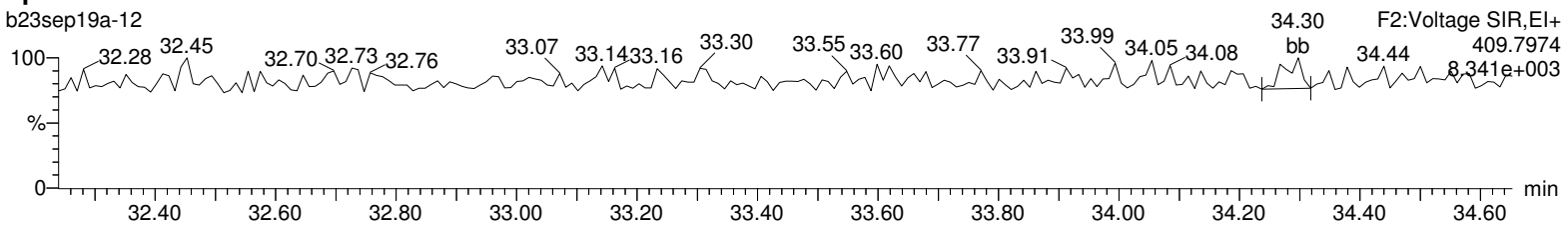
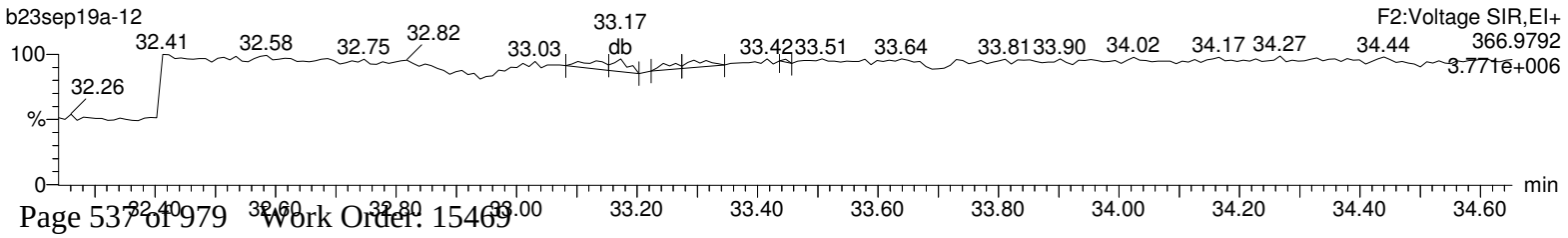


HpDPE



Lock Mass F2



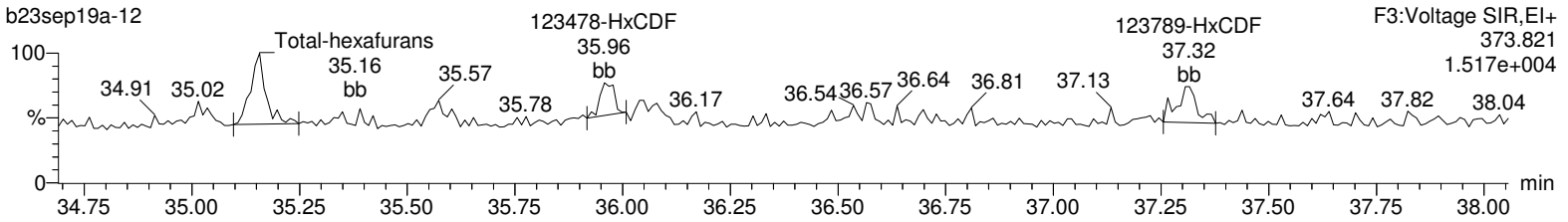
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

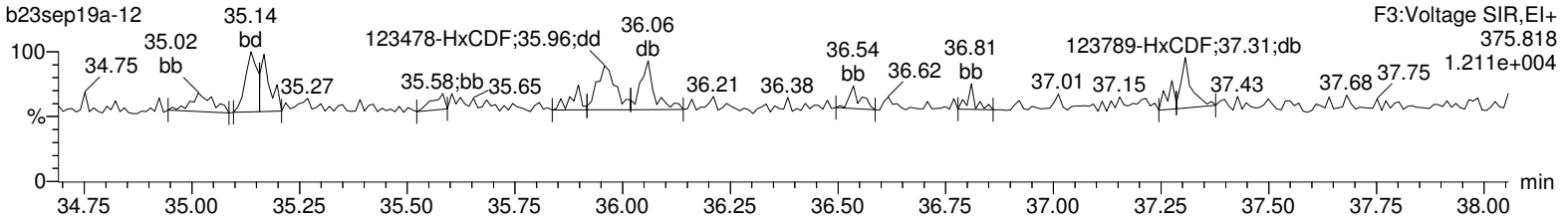
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

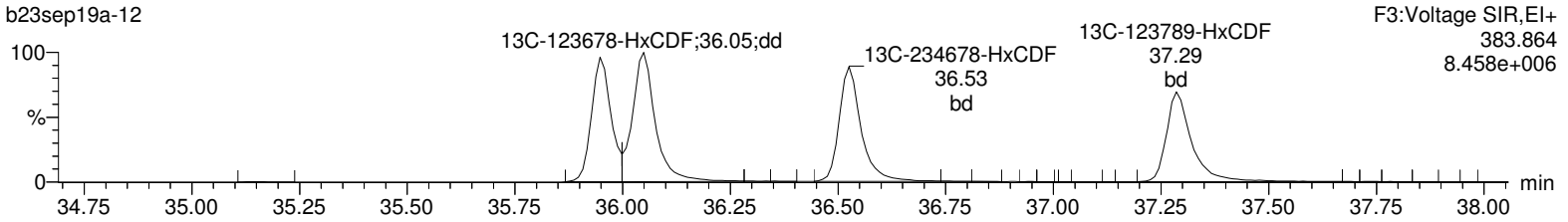
Total-hexafurans



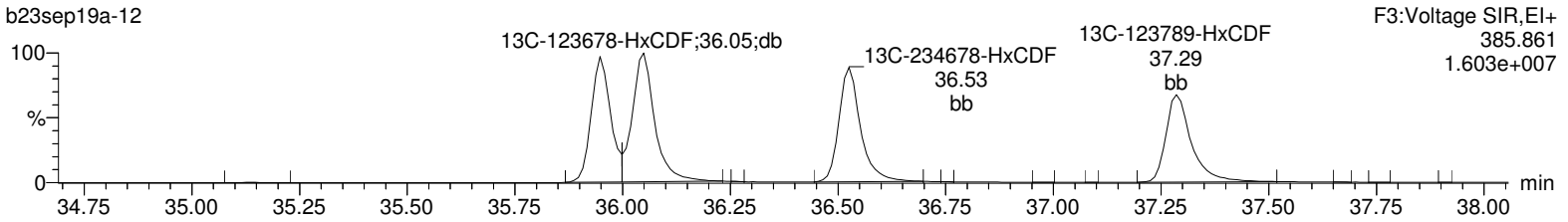
Total-hexafurans



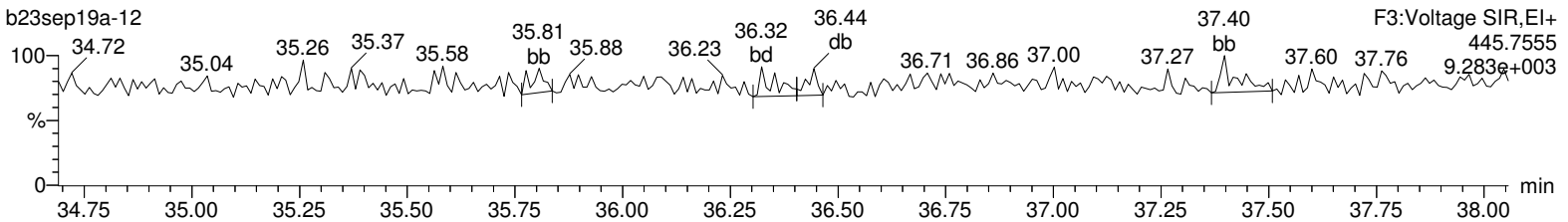
13C-123478-HxCDF



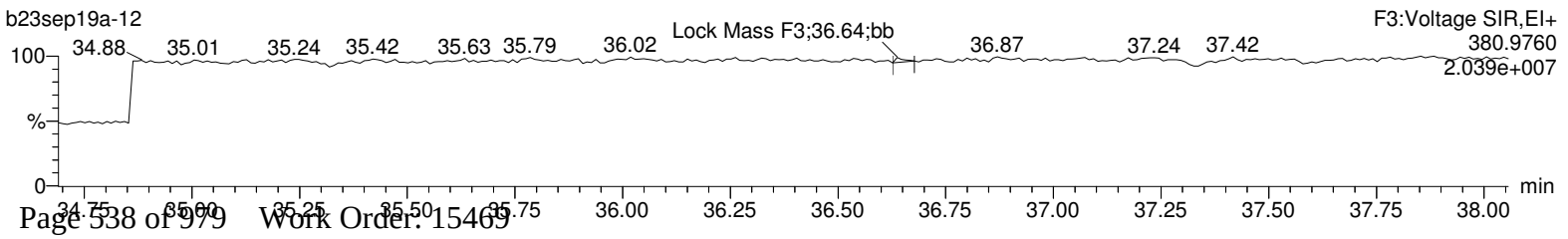
13C-123478-HxCDF



OcDPE



Lock Mass F3



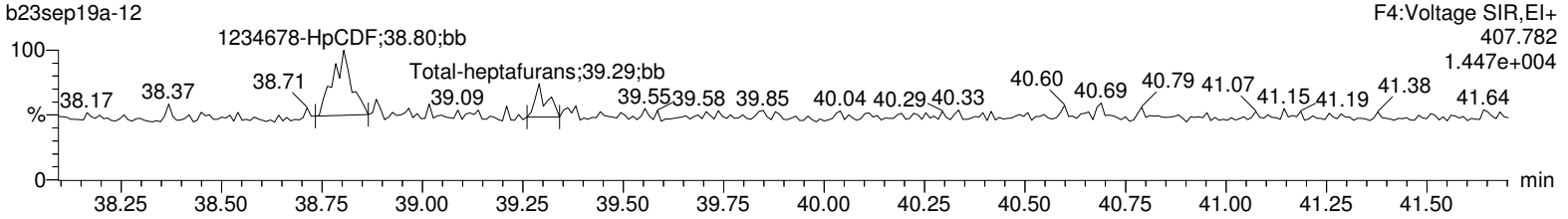
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

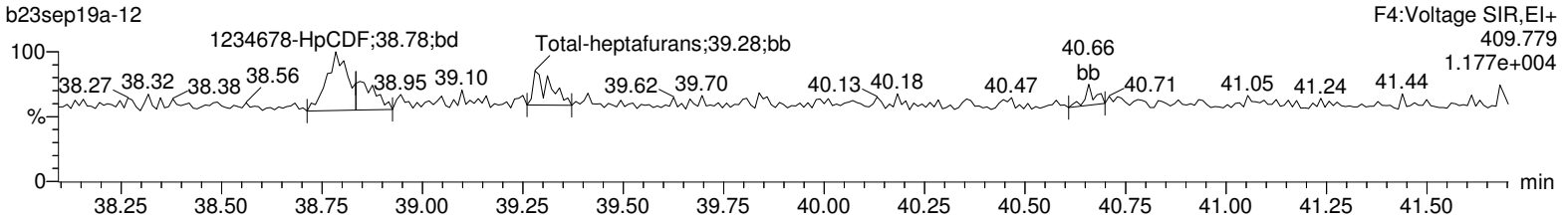
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

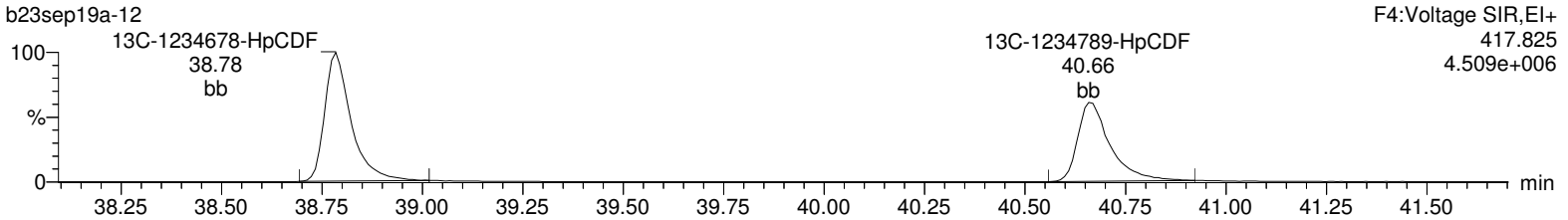
Total-heptafurans



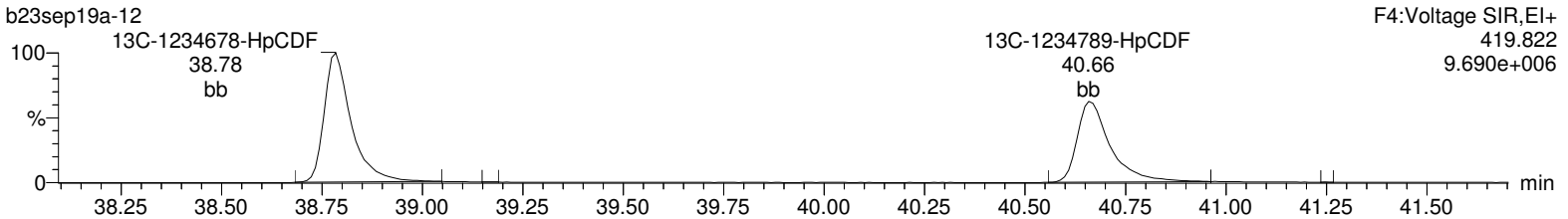
Total-heptafurans



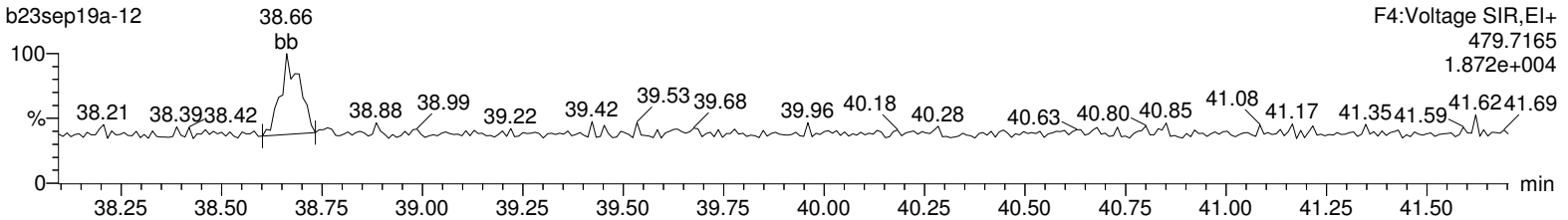
13C-1234678-HpCDF



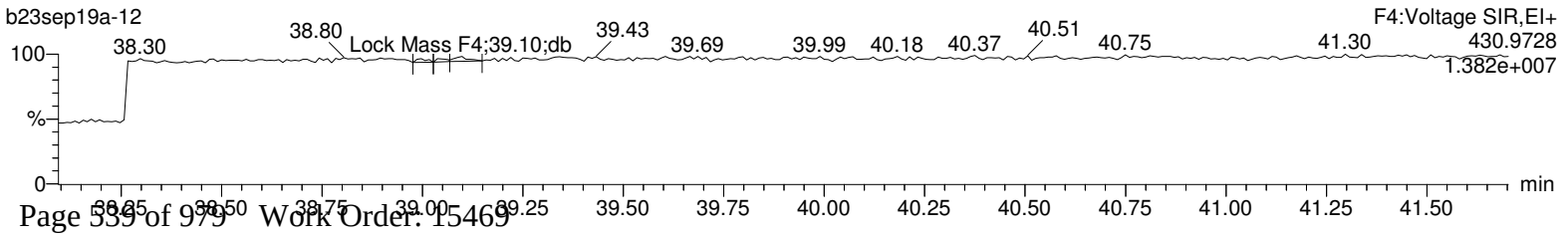
13C-1234678-HpCDF



NoDPE



Lock Mass F4



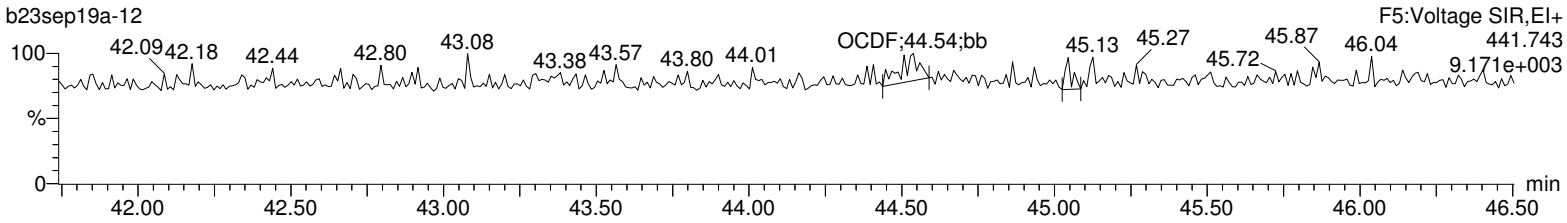
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

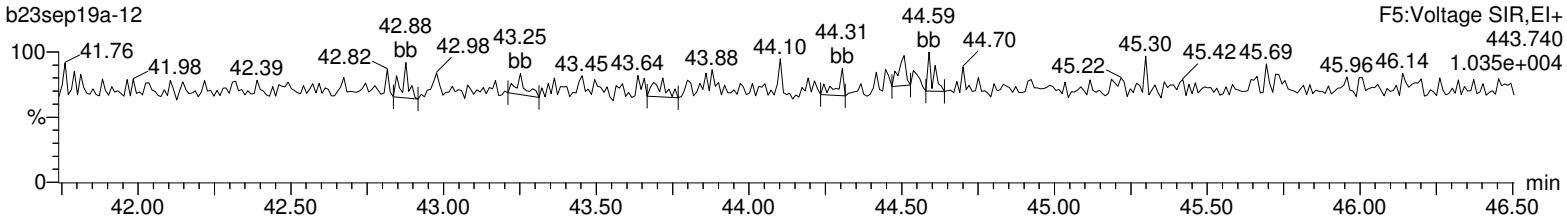
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-12, Date: 23-Sep-2019, Time: 17:11:58, ID: 15469020-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDF



OCDF



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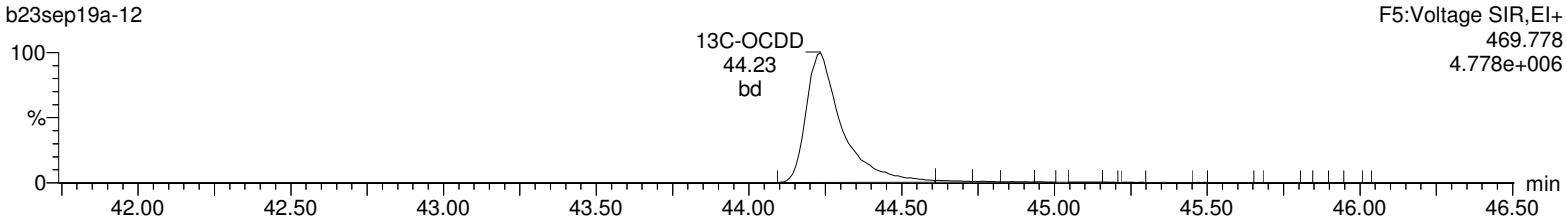

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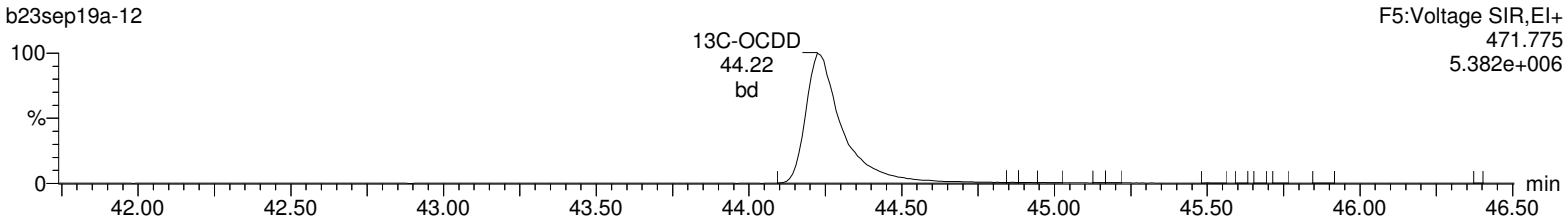
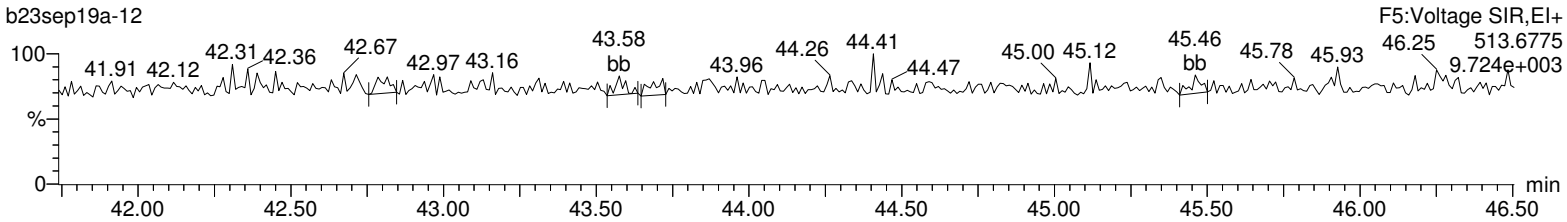
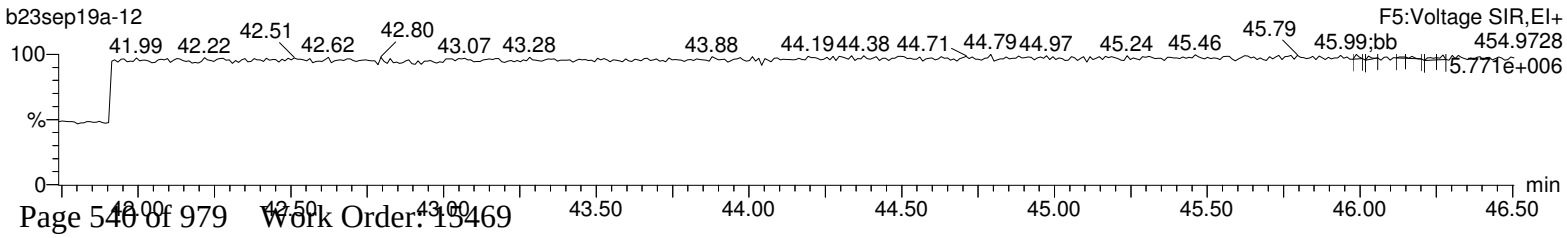


DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469021**	**Date Collected:**	**08/29/2019 09:50**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**35**
Client ID:	**H3-SC1b-100to110-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 18:00**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-13**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0634	pg/g	0.0634	0.940
40321-76-4	1,2,3,7,8-PeCDD	U	0.0741	pg/g	0.0741	4.70
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.0784	pg/g	0.0784	4.70
57653-85-7	1,2,3,6,7,8-HxCDD	U	0.0765	pg/g	0.0765	4.70
19408-74-3	1,2,3,7,8,9-HxCDD	U	0.079	pg/g	0.079	4.70
35822-46-9	1,2,3,4,6,7,8-HpCDD	BJ	1.03	pg/g	0.142	4.70
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	9.18	pg/g	0.376	9.40
51207-31-9	2,3,7,8-TCDF	BJ	0.352	pg/g	0.0833	0.940
57117-41-6	1,2,3,7,8-PeCDF	BJK	0.0545	pg/g	0.0449	4.70
57117-31-4	2,3,4,7,8-PeCDF	U	0.0408	pg/g	0.0408	4.70
70648-26-9	1,2,3,4,7,8-HxCDF	U	0.0446	pg/g	0.0446	4.70
57117-44-9	1,2,3,6,7,8-HxCDF	BJ	0.047	pg/g	0.0451	4.70
60851-34-5	2,3,4,6,7,8-HxCDF	U	0.0464	pg/g	0.0464	4.70
72918-21-9	1,2,3,7,8,9-HxCDF	U	0.0692	pg/g	0.0692	4.70
67562-39-4	1,2,3,4,6,7,8-HpCDF	BJ	0.416	pg/g	0.0489	4.70
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	0.0829	pg/g	0.0829	4.70
39001-02-0	1,2,3,4,6,7,8,9-OCDF	BJ	0.323	pg/g	0.222	9.40
41903-57-5	Total TeCDD	BJ	0.284	pg/g	0.0634	0.940
36088-22-9	Total PeCDD	JK	0.299	pg/g	0.0741	4.70
34465-46-8	Total HxCDD	BJK	0.980	pg/g	0.0765	4.70
37871-00-4	Total HpCDD	J	2.73	pg/g	0.142	4.70
30402-14-3	Total TeCDF	BJK	0.893	pg/g	0.0833	0.940
30402-15-4	Total PeCDF	BJK	0.367	pg/g	0.0301	4.70
55684-94-1	Total HxCDF	BJK	0.451	pg/g	0.0446	4.70
38998-75-3	Total HpCDF	BJ	0.782	pg/g	0.0489	4.70
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.0588	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.154	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	188	pg/g	79.8	(25%-164%)
13C-1,2,3,7,8-PeCDD		140	188	pg/g	74.7	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		157	188	pg/g	83.3	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		147	188	pg/g	78.0	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		168	188	pg/g	89.4	(23%-140%)
13C-OCDD		263	376	pg/g	70.0	(17%-157%)
13C-2,3,7,8-TCDF		137	188	pg/g	72.6	(24%-169%)
13C-1,2,3,7,8-PeCDF		132	188	pg/g	70.2	(24%-185%)
13C-2,3,4,7,8-PeCDF		134	188	pg/g	71.1	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		150	188	pg/g	79.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		143	188	pg/g	75.9	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		142	188	pg/g	75.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		151	188	pg/g	80.3	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**15469021**	**Date Collected:**	**08/29/2019 09:50**	**Matrix:**	**SOIL**
Client Sample:	**1613B Soil**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**35**
Client ID:	**H3-SC1b-100to110-82919**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/23/2019 18:00**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a-13**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**16.36 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		157	188	pg/g	83.7	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		161	188	pg/g	85.4	(26%-138%)
37Cl-2,3,7,8-TCDD		17.0	18.8	pg/g	90.5	(35%-197%)

Comments:

B **The target analyte was detected in the associated blank.**
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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:45:16 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:47:00 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.69e2	3.34e2	5.03e2	31.15	1.000	0.51	YES	0.026	0.0337	2.19e3	2150	1.0	7.13e3	1395	5.1	MM	MM
2	12378-PeCDD	2.16e2	1.82e2	3.98e2	34.09	1.001	1.19	YES	0.034	0.0394	3.65e3	1788	2.0	3.72e3	1751	2.1	MM	MM
3	123478-HxCDD							NO		0.0417		1612			1378			
4	123678-HxCDD	2.07e2	1.76e2	3.83e2	36.74	1.000	1.17	NO	0.033	0.0407	4.07e3	1612	2.5	3.23e3	1378	2.3	MM	MM
5	123789-HxCDD	1.79e2	1.74e2	3.53e2	36.98	1.007	1.03	YES	0.034	0.0420	5.35e3	1612	3.3	5.10e3	1378	3.7	bb	MM
6	1234678-HpCDD	2.34e3	2.31e3	4.64e3	40.03	1.000	1.01	NO	0.546	0.0757	2.89e4	1264	22.8	2.85e4	1482	19.3	bb	bb
7	OCDD	1.27e4	1.45e4	2.72e4	44.24	1.000	0.88	NO	4.883	0.200	9.10e4	1502	60.6	1.13e5	1683	66.9	bd	bd
8	2378-TCDF	1.53e3	2.15e3	3.68e3	30.38	1.001	0.71	NO	0.187	0.0443	1.71e4	1096	15.6	2.24e4	2321	9.6	MM	bb
9	12378-PeCDF	2.10e2	2.37e2	4.47e2	33.28	1.000	0.89	YES	0.029	0.0239	5.35e3	1330	4.0	6.01e3	1822	3.3	bb	bb
10	23478-PeCDF	1.65e2	1.47e2	3.12e2	33.88	1.000	1.12	YES	0.018	0.0217	4.45e3	1330	3.3	3.67e3	1822	2.0	MM	bb
11	123478-HxCDF	1.49e2	1.25e2	2.74e2	35.97	1.000	1.19	NO	0.021	0.0237	4.65e3	1218	3.8	3.13e3	1115	2.8	bb	MM
12	123678-HxCDF	2.11e2	1.69e2	3.80e2	36.09	1.001	1.25	NO	0.025	0.0240	3.11e3	1218	2.6	3.64e3	1115	3.3	bb	bb
13	234678-HxCDF	1.32e2	1.15e2	2.47e2	36.53	1.000	1.15	NO	0.018	0.0247	2.92e3	1218	2.4	3.07e3	1115	2.8	MM	MM
14	123789-HxCDF	1.88e2	1.24e2	3.12e2	37.30	1.000	1.52	YES	0.027	0.0368	4.52e3	1218	3.7	1.36e3	1115	1.2	bb	bb
15	1234678-HpCDF	1.36e3	1.39e3	2.75e3	38.80	1.001	0.97	NO	0.221	0.0260	2.39e4	811	29.4	2.23e4	886	25.1	bb	bb
16	1234789-HpCDF							NO		0.0441		811			886			
17	OCDF	5.10e2	5.55e2	1.07e3	44.55	1.007	0.92	NO	0.172	0.118	6.10e3	875	7.0	5.23e3	1207	4.3	MM	MM
18	13C-2378-TCDD	9.31e5	1.22e6	2.15e6	31.14	1.018	0.76	NO	79.824	0.0577	1.28e7	4168	3069.3	1.67e7	2353	7103.3	bd	bd
19	13C-12378-PeCDD	8.24e5	5.37e5	1.36e6	34.08	1.114	1.53	NO	74.707	0.0651	1.60e7	3327	4810.3	1.04e7	1653	6264.5	bb	bb
20	13C-123478-HxCDD	5.78e5	4.69e5	1.05e6	36.66	0.991	1.23	NO	83.313	0.134	1.06e7	4179	2539.4	8.40e6	5213	1611.8	bd	bd
21	13C-123678-HxCDD	7.23e5	5.91e5	1.31e6	36.74	0.993	1.22	NO	78.040	0.0998	1.14e7	4179	2733.8	9.43e6	5213	1809.8	dd	dd
22	13C-1234678-HpCDD	4.61e5	4.40e5	9.01e5	40.02	1.082	1.05	NO	89.367	0.120	4.92e6	3413	1440.9	4.89e6	3340	1463.2	bd	bd
23	13C-OCDD	5.70e5	6.48e5	1.22e6	44.22	1.196	0.88	NO	140.021	0.158	4.07e6	3977	1023.9	4.58e6	3699	1236.8	bd	bd
24	13C-2378-TCDF	9.52e5	1.26e6	2.21e6	30.35	0.992	0.76	NO	72.648	0.0682	9.33e6	5525	1688.1	1.19e7	3184	3751.9	bb	bd
25	13C-12378-PeCDF	1.04e6	6.79e5	1.72e6	33.27	1.088	1.53	NO	70.167	0.167	2.19e7	9715	2258.8	1.40e7	7415	1882.8	bb	dd
26	13C-23478-PeCDF	1.09e6	6.98e5	1.79e6	33.87	1.107	1.56	NO	71.126	0.162	2.28e7	9715	2346.7	1.48e7	7415	1990.3	bb	bb
27	13C-123478-HxCDF	3.98e5	7.62e5	1.16e6	35.96	0.972	0.52	NO	79.872	0.160	7.46e6	7034	1060.0	1.42e7	5993	2377.0	bd	bd
28	13C-123678-HxCDF	4.98e5	9.39e5	1.44e6	36.05	0.975	0.53	NO	75.913	0.123	7.97e6	7034	1133.6	1.50e7	5993	2507.8	db	db
29	13C-234678-HxCDF	4.20e5	7.94e5	1.21e6	36.53	0.988	0.53	NO	75.510	0.145	7.24e6	7034	1029.6	1.37e7	5993	2291.6	bb	bb
30	13C-123789-HxCDF	3.76e5	7.14e5	1.09e6	37.29	1.008	0.53	NO	80.342	0.172	5.14e6	7034	730.7	9.72e6	5993	1622.1	bd	bd
31	13C-1234678-HpCDF	3.24e5	7.21e5	1.04e6	38.78	1.049	0.45	NO	83.702	0.128	4.24e6	3564	1188.9	9.34e6	5363	1741.2	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:45:16 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:47:00 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.36e5	5.28e5	7.64e5	40.67	1.100	0.45	NO	85.421	0.179	2.42e6	3564	679.5	5.23e6	5363	975.2	bd	bd
33	13C-1234-TCDD	1.02e6	1.32e6	2.34e6	30.59	0.000	0.77	NO	100.000	0.0664	1.07e7	4168	2567.6	1.39e7	2353	5907.8	bb	bb
34	13C-123789-HxCDD	8.81e5	7.11e5	1.59e6	36.98	0.000	1.24	NO	100.000	0.106	1.23e7	4179	2946.3	1.01e7	5213	1932.2	dd	dd
35	37Cl-2378-TCDD	2.28e5		2.28e5	31.15	1.018			9.045	0.0151	3.21e6	1602	2002.6				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:45:16 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:47:00 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.18e3	1.72e3	2.90e3	29.15	0.69	NO	0.151	0.0337	1.13e4	2150	5.3	1.90e4	1395	13.6	bb	bb
2	2378-TCDD	1.69e2	3.34e2	5.03e2	31.15	0.51	YES	0.026	0.0337	2.19e3	2150	1.0	7.13e3	1395	5.1	MM	MM
3	Total-tetradioxins	1.15e2	1.36e2	2.50e2	28.49	0.85	NO	0.013	0.0337	2.58e3	2150	1.2	3.14e3	1395	2.2	MM	bb
4	Total-tetradioxins	4.45e2	5.87e2	1.03e3	27.81	0.76	NO	0.054	0.0337	4.72e3	2150	2.2	8.25e3	1395	5.9	MM	MM

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	4.67e2	2.22e2	6.89e2	32.75	2.11	YES	0.059	0.0394	7.09e3	1788	4.0	4.44e3	1751	2.5	bb	bb
2	Total-pentadioxins	4.23e2	2.31e2	6.55e2	33.01	1.83	YES	0.057	0.0394	9.90e3	1788	5.5	5.00e3	1751	2.9	bb	MM
3	Total-pentadioxins	2.16e2	6.82e1	2.84e2	33.87	3.16	YES	0.025	0.0394	5.10e3	1788	2.9	2.00e3	1751	1.1	MM	MM
4	Total-pentadioxins	2.99e2	2.03e2	5.02e2	33.28	1.47	NO	0.043	0.0394	4.99e3	1788	2.8	4.54e3	1751	2.6	MM	MM
5	Total-pentadioxins	6.45e1	4.34e1	1.08e2	33.80	1.49	NO	0.009	0.0394	1.71e3	1788	1.0	9.93e2	1751	0.6	MM	MM
6	12378-PeCDD	2.16e2	1.82e2	3.98e2	34.09	1.19	YES	0.034	0.0394	3.65e3	1788	2.0	3.72e3	1751	2.1	MM	MM
7	Total-pentadioxins	2.80e2	1.58e2	4.39e2	33.62	1.77	NO	0.038	0.0394	5.45e3	1788	3.0	3.37e3	1751	1.9	MM	MM
8	Total-pentadioxins	2.74e2	1.94e2	4.68e2	33.46	1.41	NO	0.040	0.0394	4.16e3	1788	2.3	4.45e3	1751	2.5	MM	MM

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexadioxins	1.58e3	1.44e3	3.02e3	35.45	1.09	NO	0.284	0.0413	2.72e4	1612	16.9	3.12e4	1378	22.7	bb	bb
2	Total-hexadioxins	5.21e2	2.17e2	7.38e2	35.91	2.40	YES	0.069	0.0413	6.08e3	1612	3.8	4.68e3	1378	3.4	bd	MM
3	Total-hexadioxins	1.07e3	7.20e2	1.79e3	36.10	1.49	YES	0.168	0.0413	1.60e4	1612	9.9	1.27e4	1378	9.2	MM	bb
4	123678-HxCDD	2.07e2	1.76e2	3.83e2	36.74	1.17	NO	0.033	0.0407	4.07e3	1612	2.5	3.23e3	1378	2.3	MM	MM
5	123789-HxCDD	1.79e2	1.74e2	3.53e2	36.98	1.03	YES	0.034	0.0420	5.35e3	1612	3.3	5.10e3	1378	3.7	bb	MM
6	Total-hexadioxins	4.08e2	1.06e3	1.46e3	37.42	0.39	YES	0.137	0.0413	8.17e3	1612	5.1	1.94e4	1378	14.1	db	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:45:16 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:47:00 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	3.00e2	1.25e2	4.26e2	38.79	2.40	YES	0.050	0.0757	6.06e3	1264	4.8	2.91e3	1482	2.0	bb	bb
2	Total-heptadioxins	4.09e3	3.60e3	7.69e3	39.13	1.14	NO	0.904	0.0757	5.72e4	1264	45.2	4.58e4	1482	30.9	bb	MM
3	1234678-HpCDD	2.34e3	2.31e3	4.64e3	40.03	1.01	NO	0.546	0.0757	2.89e4	1264	22.8	2.85e4	1482	19.3	bb	bb
4	Total-heptadioxins	1.51e2	1.25e2	2.76e2	40.64	1.20	YES	0.033	0.0757	3.02e3	1264	2.4	2.59e3	1482	1.8	MM	bb

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	1.51e2	1.75e2	3.26e2	26.05	0.87	NO	0.017	0.0443	2.99e3	1096	2.7	4.16e3	2321	1.8	bb	bb
2	Total-tetrafurans	2.80e2	1.49e2	4.29e2	27.40	1.88	YES	0.022	0.0443	3.98e3	1096	3.6	3.67e3	2321	1.6	bb	bd
3	Total-tetrafurans	2.91e2	2.90e2	5.81e2	27.72	1.00	YES	0.029	0.0443	4.28e3	1096	3.9	3.97e3	2321	1.7	MM	bb
4	Total-tetrafurans	4.37e2	6.45e2	1.08e3	29.00	0.68	NO	0.055	0.0443	5.10e3	1096	4.7	8.79e3	2321	3.8	MM	bb
5	Total-tetrafurans	1.50e3	1.73e3	3.23e3	29.47	0.87	NO	0.164	0.0443	1.36e4	1096	12.4	1.56e4	2321	6.7	MM	MM
6	Total-tetrafurans	4.23e2	2.32e2	6.55e2	29.75	1.82	YES	0.033	0.0443	5.84e3	1096	5.3	2.93e3	2321	1.3	MM	MM
7	2378-TCDF	1.53e3	2.15e3	3.68e3	30.38	0.71	NO	0.187	0.0443	1.71e4	1096	15.6	2.24e4	2321	9.6	MM	bb
8	Total-tetrafurans	6.73e2	6.95e2	1.37e3	31.83	0.97	YES	0.069	0.0443	1.41e4	1096	12.8	1.19e4	2321	5.1	bb	bb
9	Total-tetrafurans	4.64e2	4.92e2	9.56e2	27.01	0.94	YES	0.049	0.0443	4.02e3	1096	3.7	5.42e3	2321	2.3	MM	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	1.18e3	7.42e2	1.92e3	31.86	1.59	NO	0.117	0.0160	2.25e4	840	26.8	1.23e4	1373	8.9	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans	1.31e2	1.58e2	2.89e2	32.63	0.83	YES	0.018	0.0227	2.83e3	1330	2.1	5.01e3	1822	2.8	bd	bd
2	Total-pentafurans	4.46e2	3.66e2	8.12e2	32.72	1.22	YES	0.049	0.0227	1.01e4	1330	7.6	8.25e3	1822	4.5	db	db
3	Total-pentafurans	2.29e2	2.28e2	4.56e2	33.05	1.00	YES	0.028	0.0227	4.75e3	1330	3.6	4.16e3	1822	2.3	bb	MM
4	12378-PeCDF	2.10e2	2.37e2	4.47e2	33.28	0.89	YES	0.029	0.0239	5.35e3	1330	4.0	6.01e3	1822	3.3	bb	bb
5	Total-pentafurans	1.11e2	1.13e2	2.25e2	33.43	0.98	YES	0.014	0.0227	2.95e3	1330	2.2	3.21e3	1822	1.8	MM	bb
6	23478-PeCDF	1.65e2	1.47e2	3.12e2	33.88	1.12	YES	0.018	0.0217	4.45e3	1330	3.3	3.67e3	1822	2.0	MM	bb

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

Last Altered: Wednesday, September 25, 2019 10:45:16 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:47:00 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

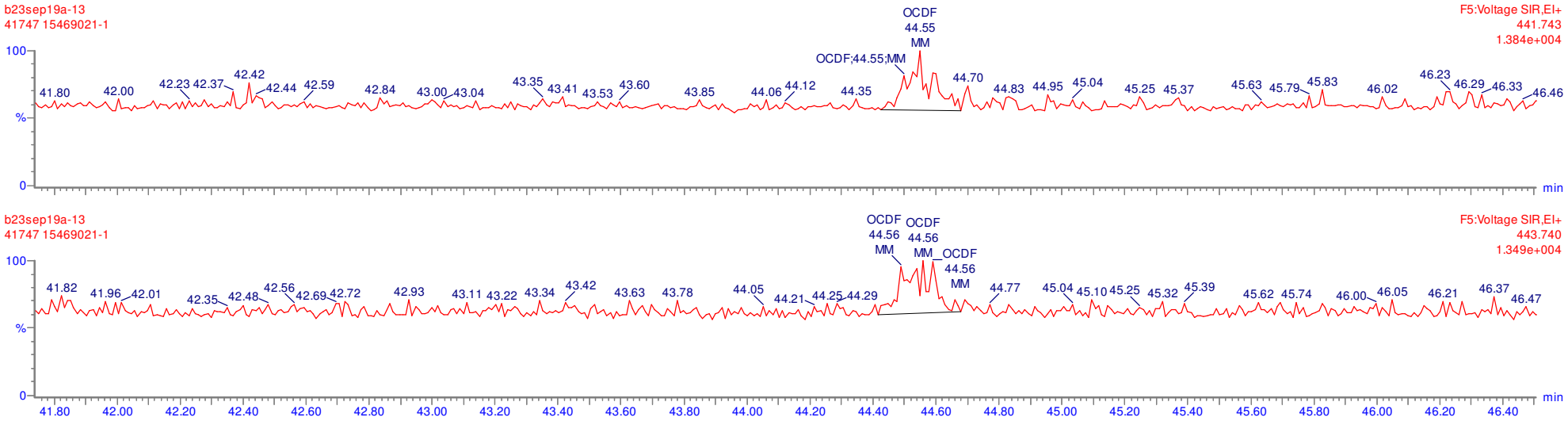
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-hexafurans	2.75e2	2.29e2	5.03e2	35.03	1.20	NO	0.038	0.0268	6.82e3	1218	5.6	3.91e3	1115	3.5	bd	bd
2	Total-hexafurans	8.04e2	5.53e2	1.36e3	35.16	1.45	YES	0.101	0.0268	1.58e4	1218	13.0	1.15e4	1115	10.4	db	db
3	Total-hexafurans	5.49e2	4.70e2	1.02e3	35.58	1.17	NO	0.076	0.0268	1.33e4	1218	10.9	9.92e3	1115	8.9	MM	bb
4	123478-HxCDF	1.49e2	1.25e2	2.74e2	35.97	1.19	NO	0.021	0.0237	4.65e3	1218	3.8	3.13e3	1115	2.8	bb	MM
5	123678-HxCDF	2.11e2	1.69e2	3.80e2	36.09	1.25	NO	0.025	0.0240	3.11e3	1218	2.6	3.64e3	1115	3.3	bb	bb
6	123789-HxCDF	1.88e2	1.24e2	3.12e2	37.30	1.52	YES	0.027	0.0368	4.52e3	1218	3.7	1.36e3	1115	1.2	bb	bb
7	234678-HxCDF	1.32e2	1.15e2	2.47e2	36.53	1.15	NO	0.018	0.0247	2.92e3	1218	2.4	3.07e3	1115	2.8	MM	MM

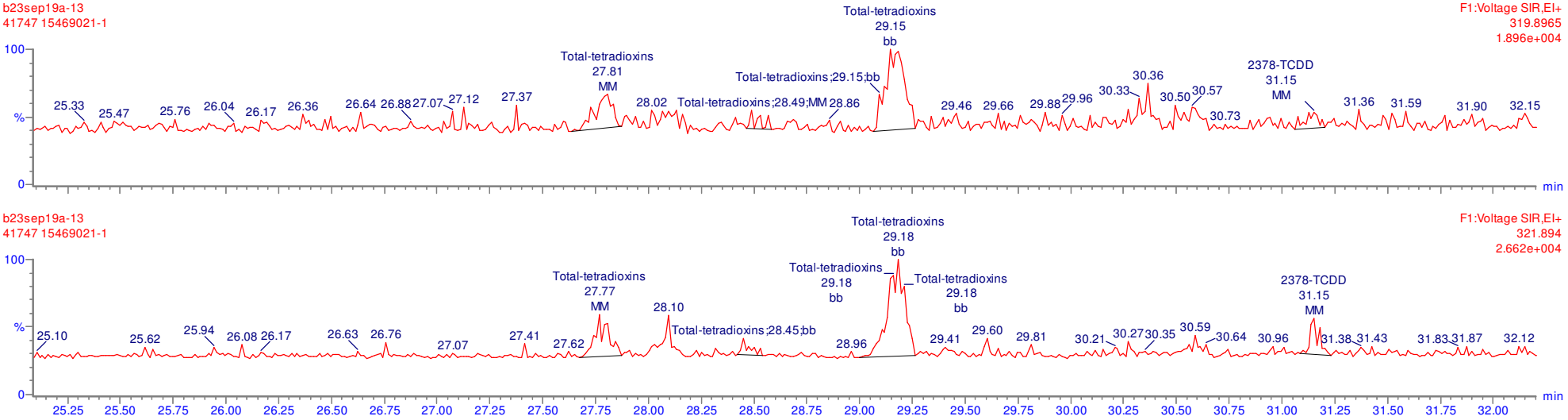
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	1234678-HpCDF	1.36e3	1.39e3	2.75e3	38.80	0.97	NO	0.221	0.0260	2.39e4	811	29.4	2.23e4	886	25.1	bb	bb
2	Total-heptafurans	1.06e3	1.07e3	2.13e3	39.31	0.99	NO	0.195	0.0337	1.41e4	811	17.4	1.65e4	886	18.7	bb	bb

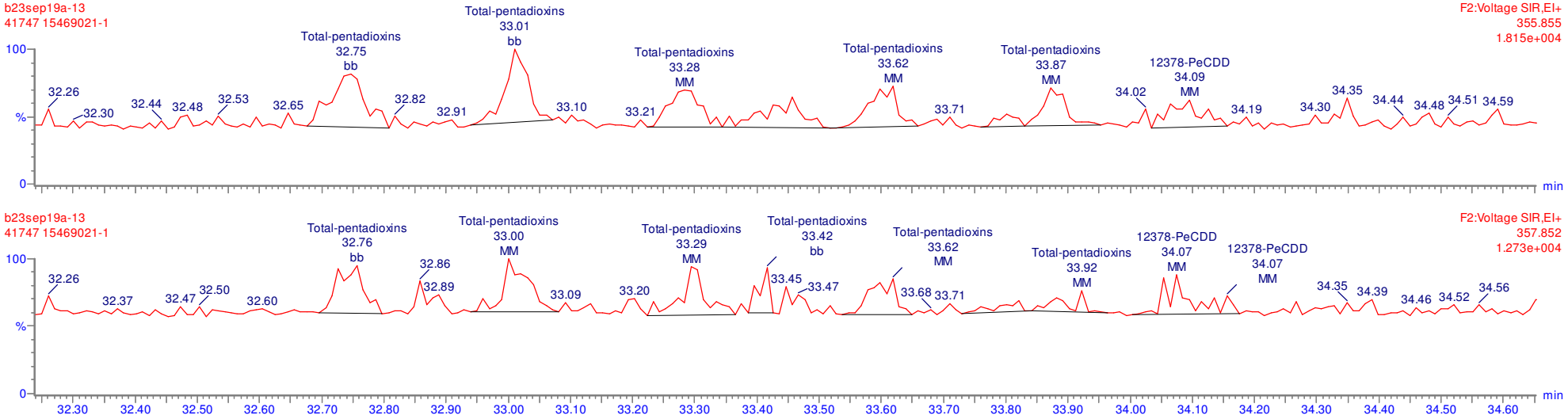
MANUAL INTEGRATION
METHOD 1613
HRP763_1



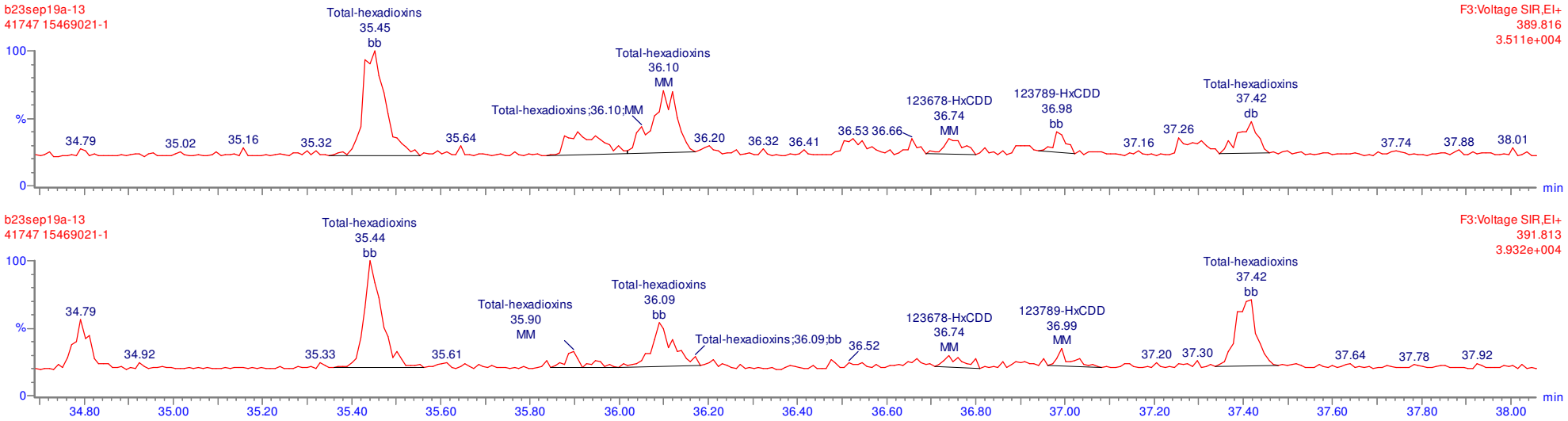
MANUAL INTEGRATION
METHOD 1613
HRP763_1



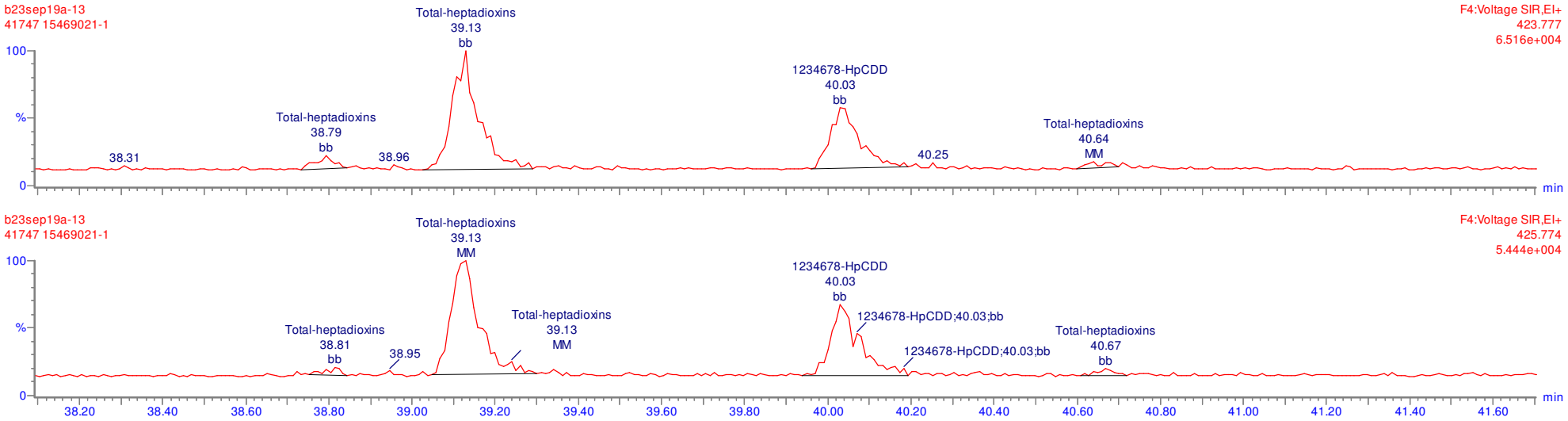
MANUAL INTEGRATION
METHOD 1613
HRP763_1



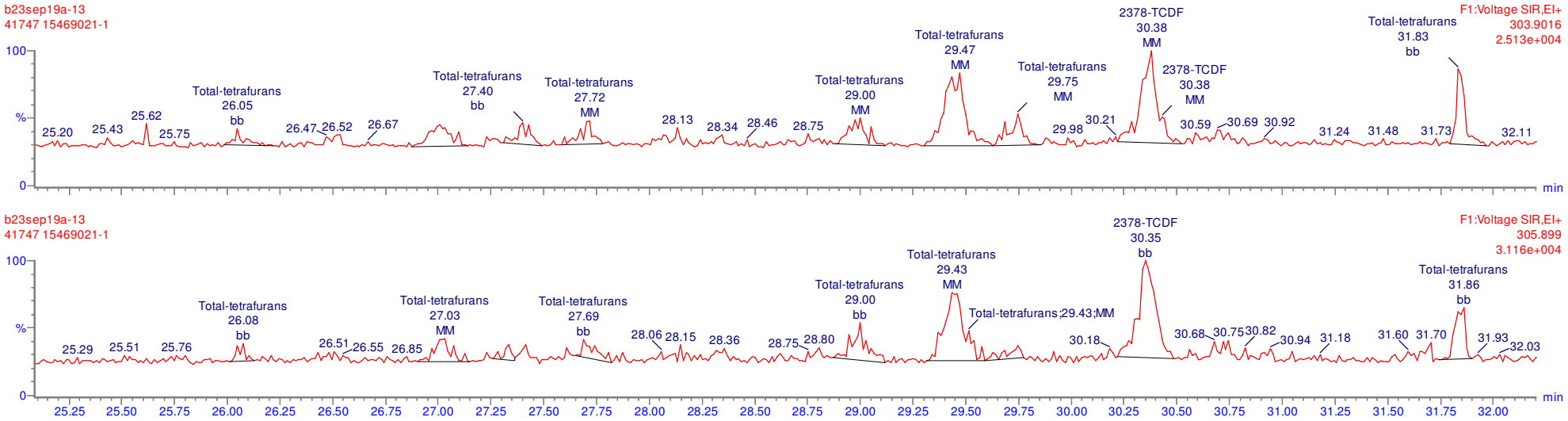
MANUAL INTEGRATION
METHOD 1613
HRP763_1



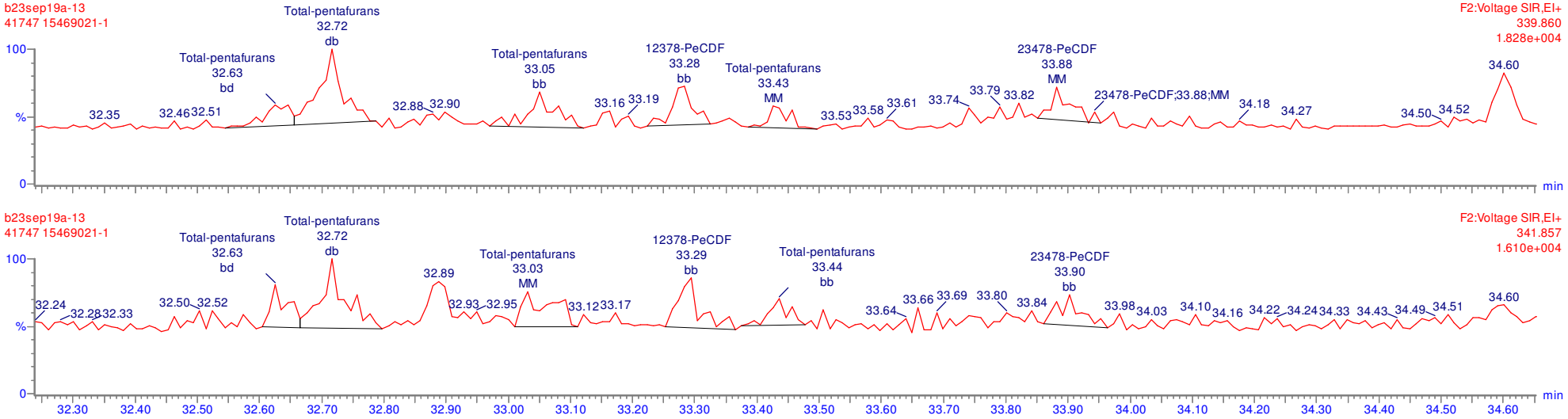
MANUAL INTEGRATION
METHOD 1613
HRP763_1



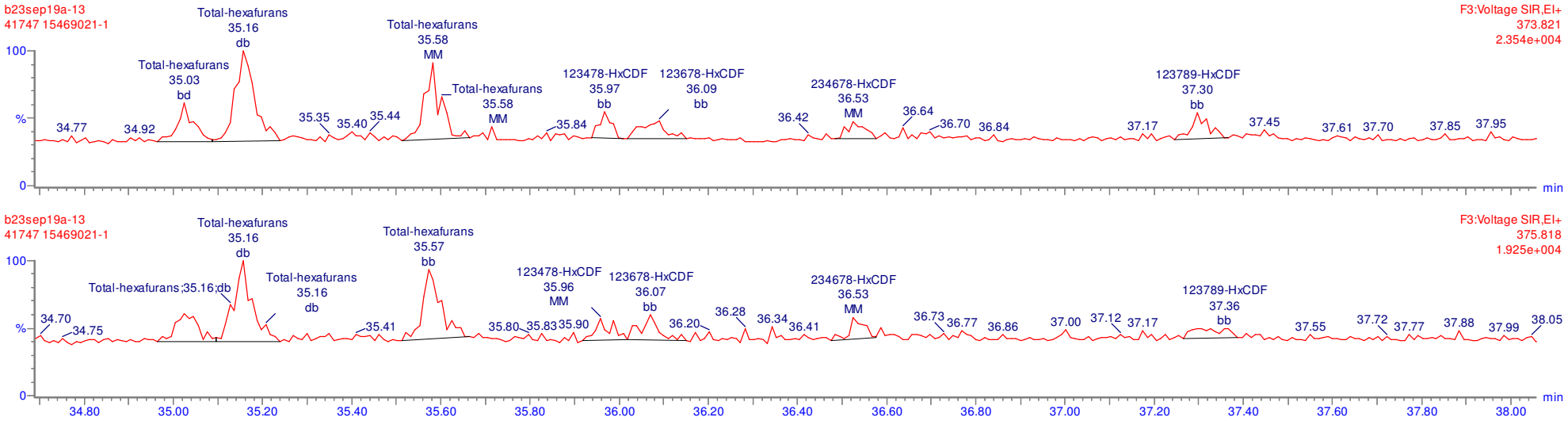
MANUAL INTEGRATION
METHOD 1613
HRP763_1



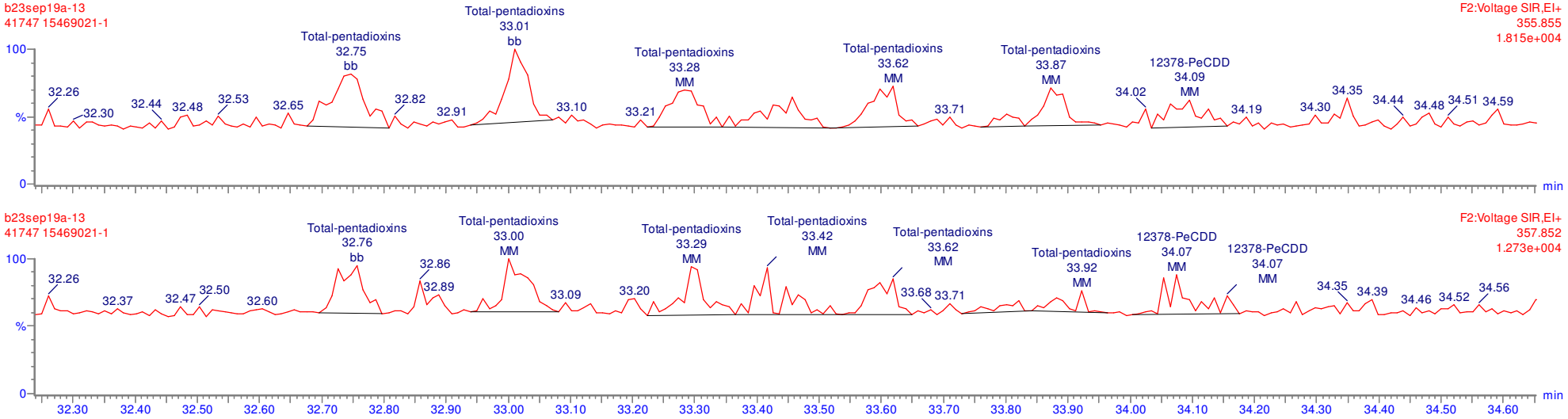
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



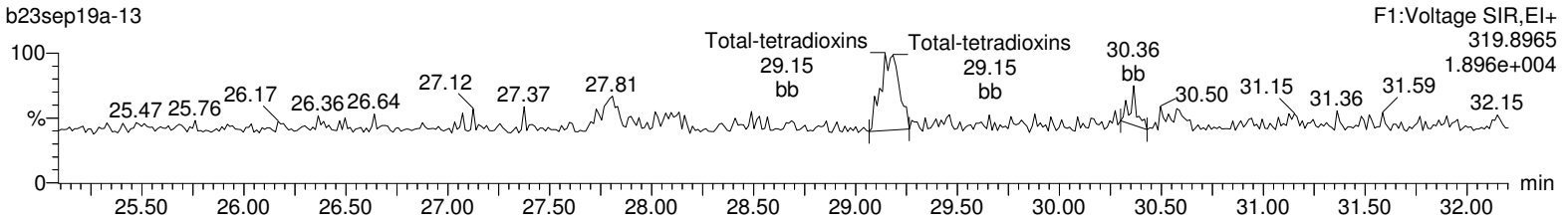
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

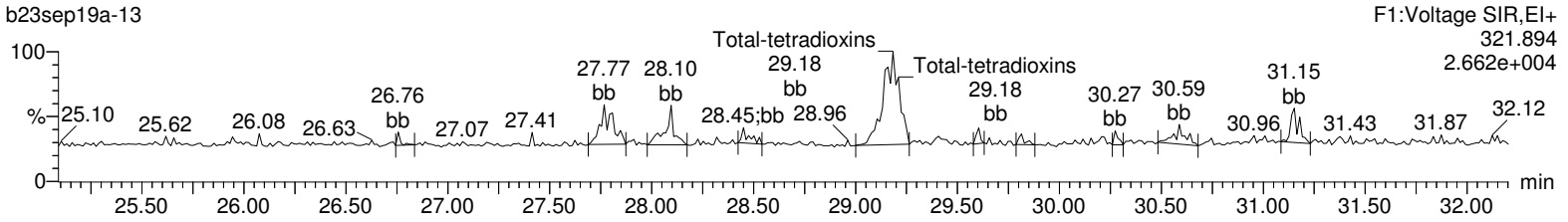
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

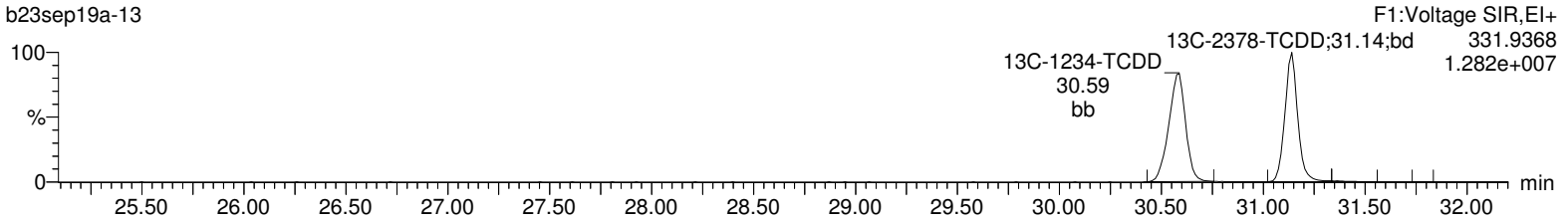
Total-tetradioxins



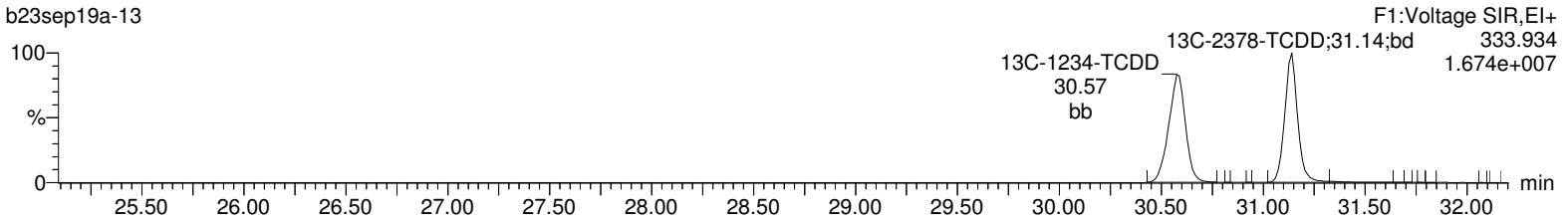
Total-tetradioxins



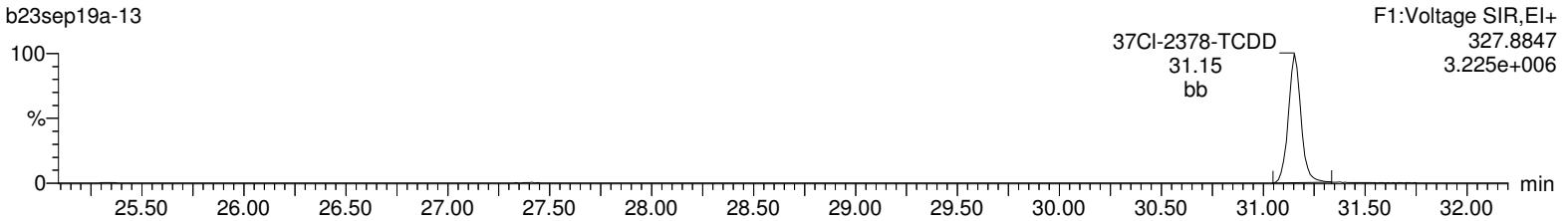
13C-2378-TCDD



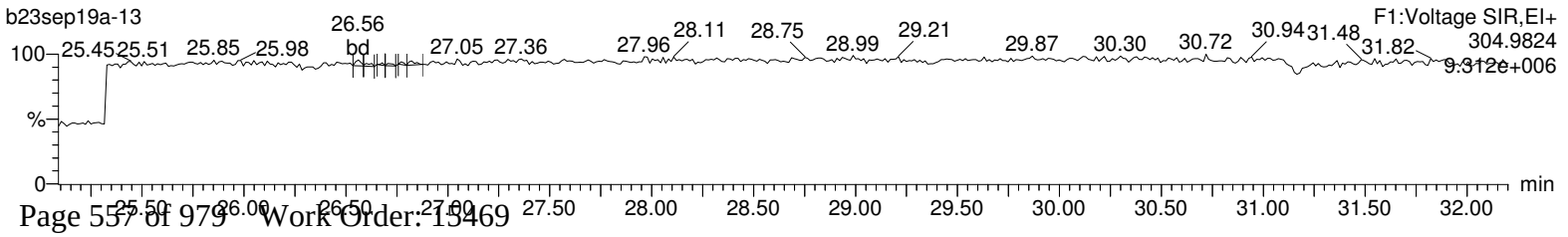
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



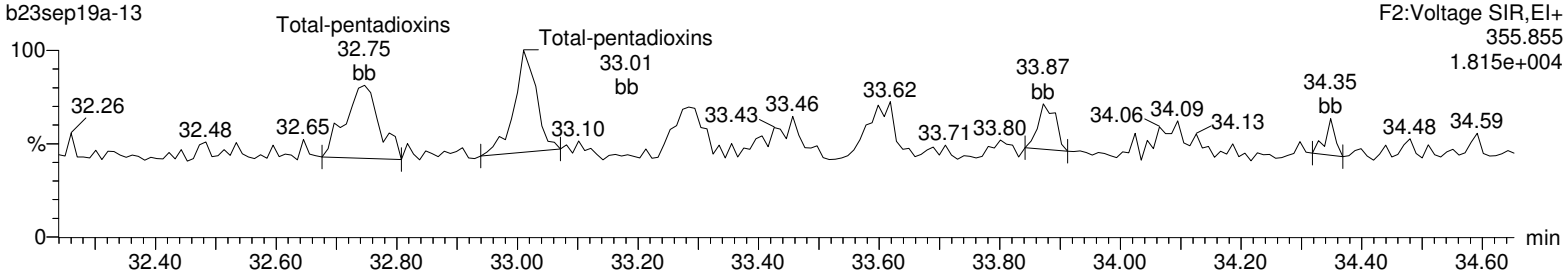
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

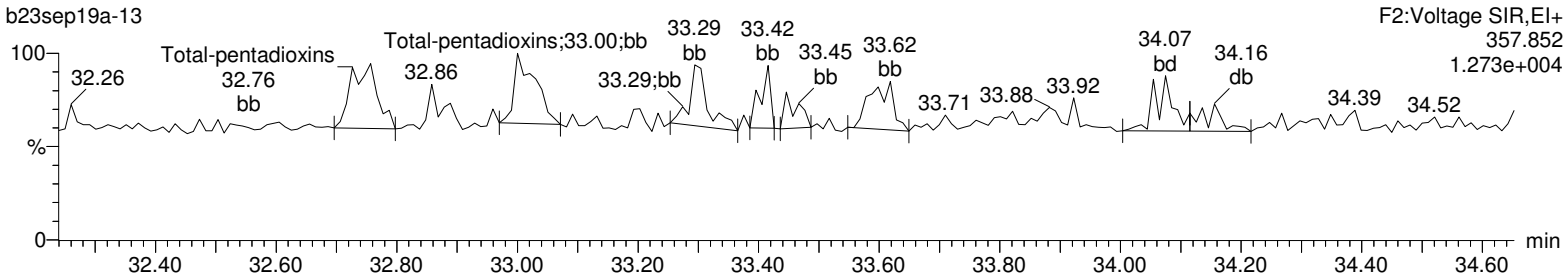
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

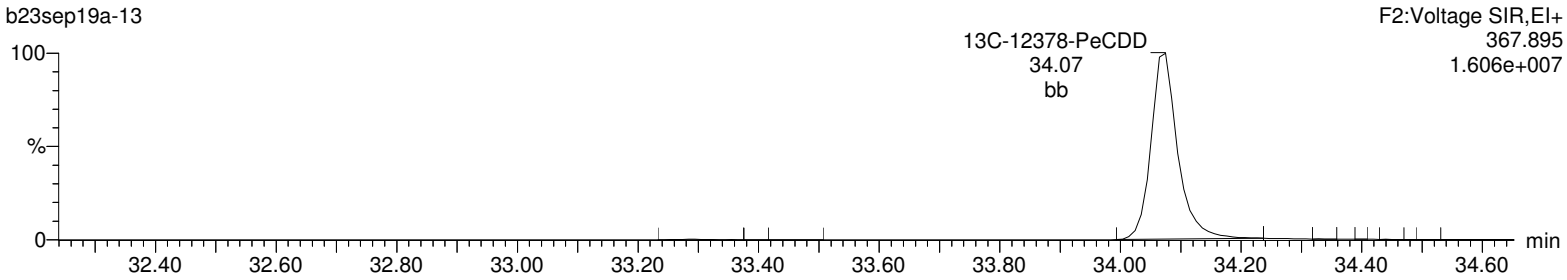
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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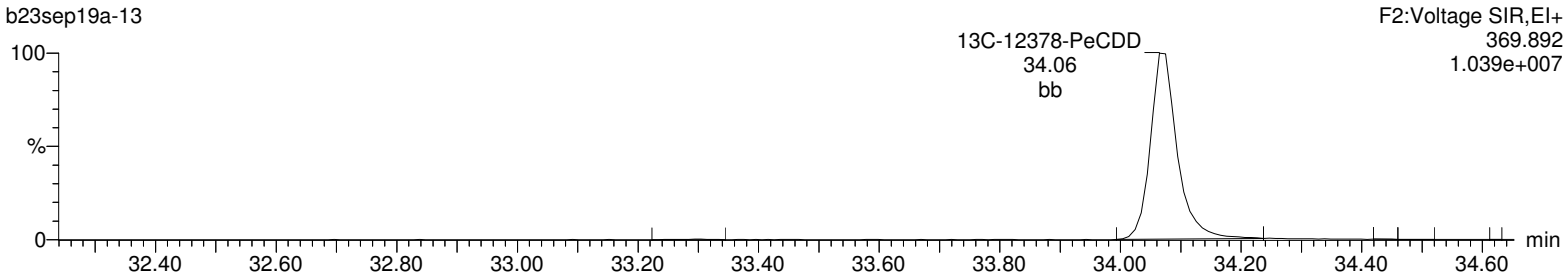
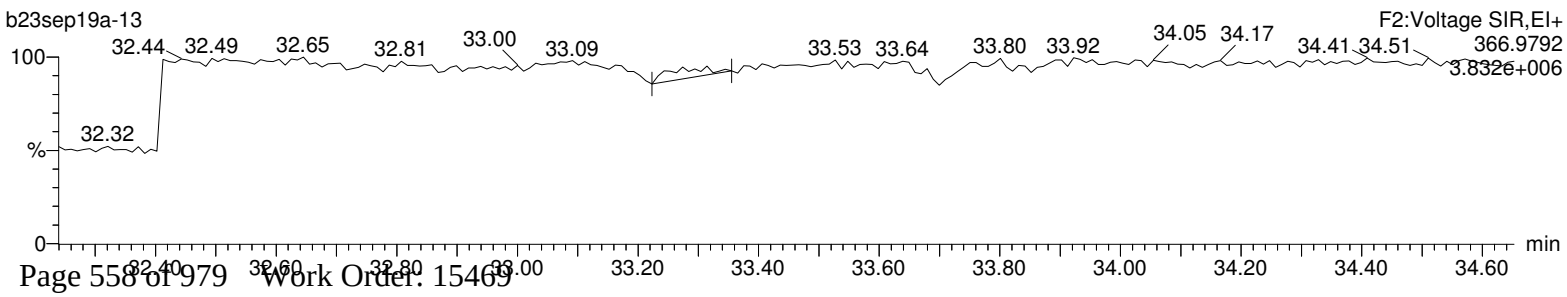


Lock Mass F2



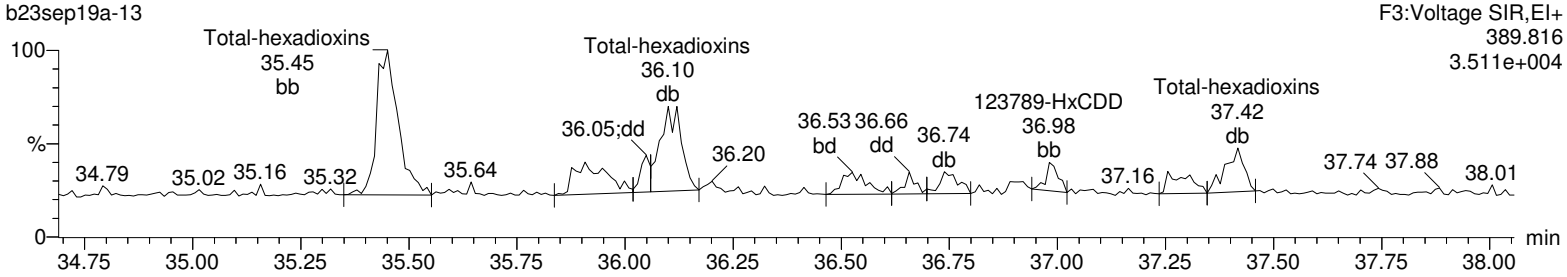
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

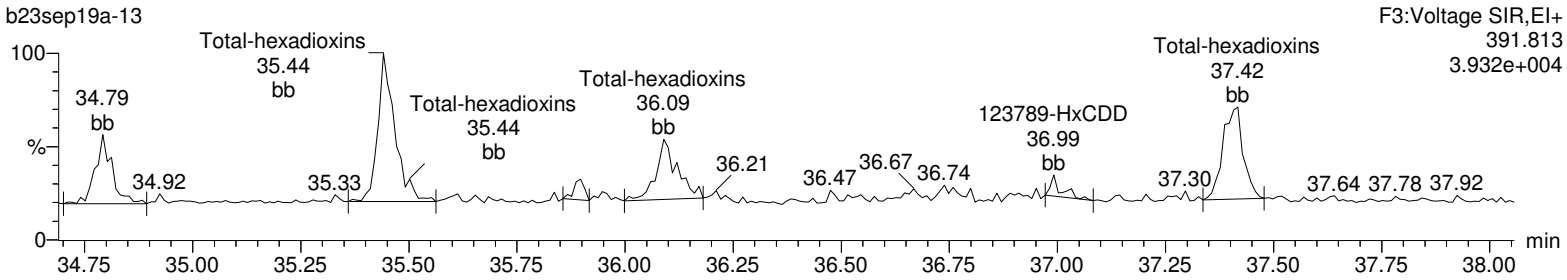
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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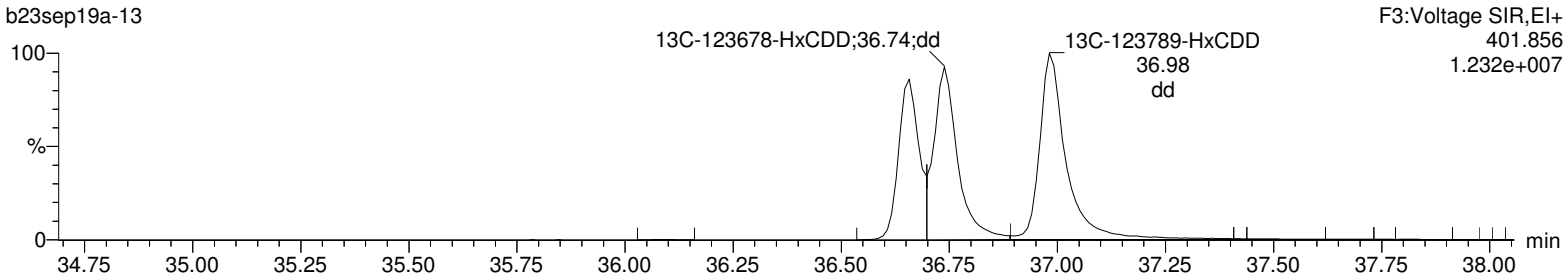

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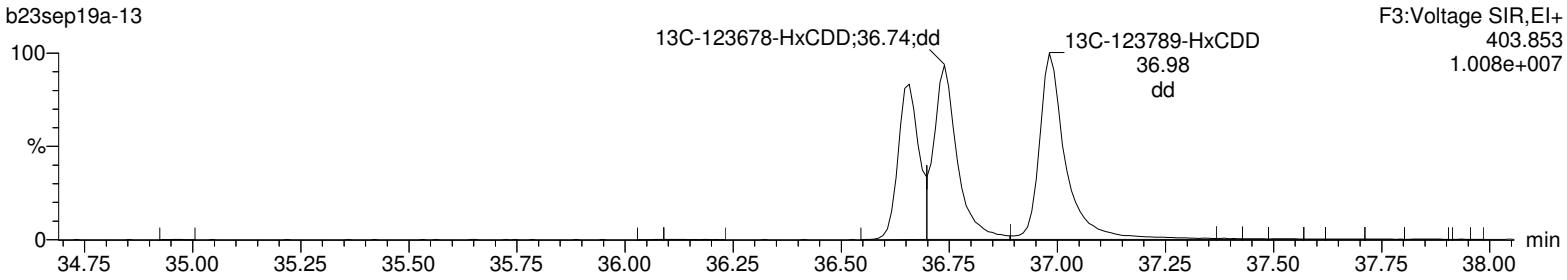
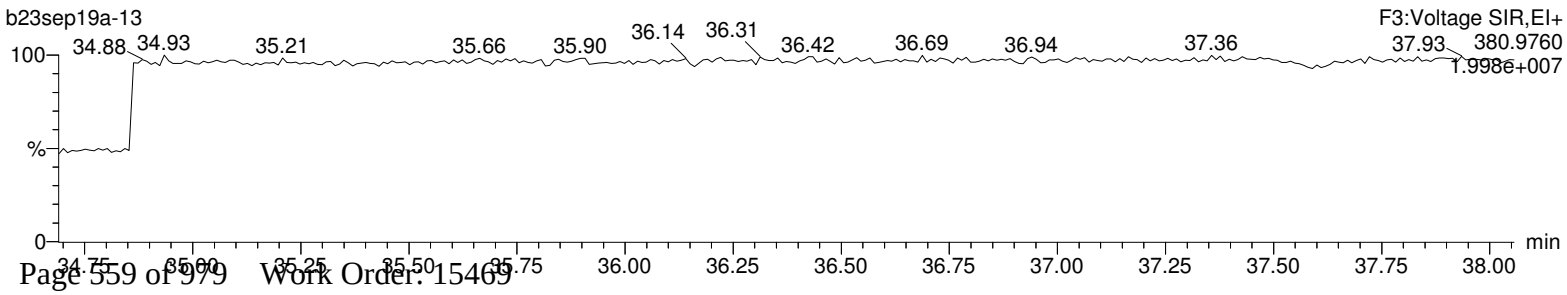


Lock Mass F3



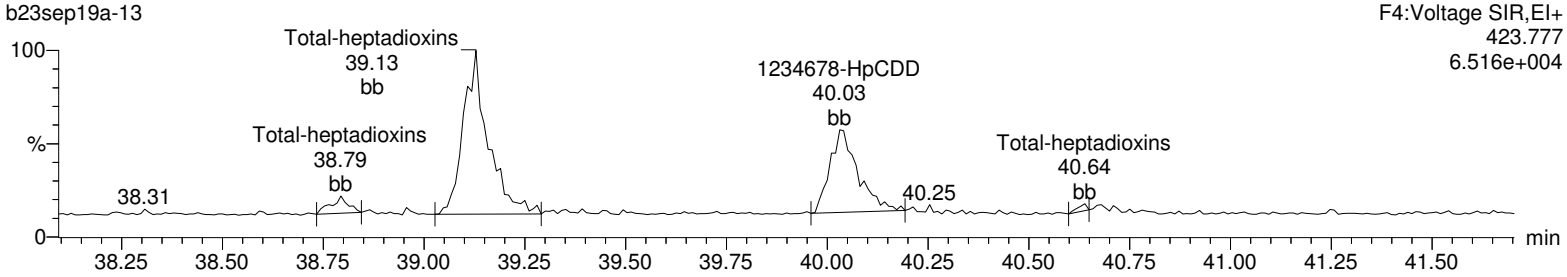
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

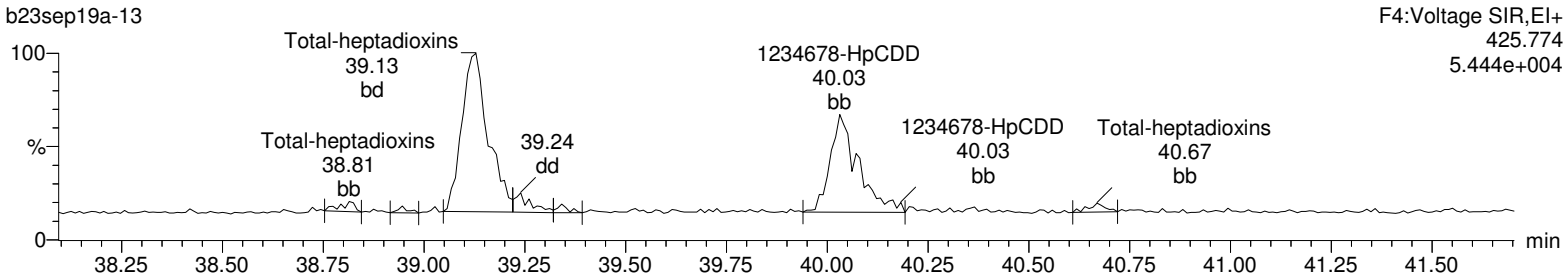
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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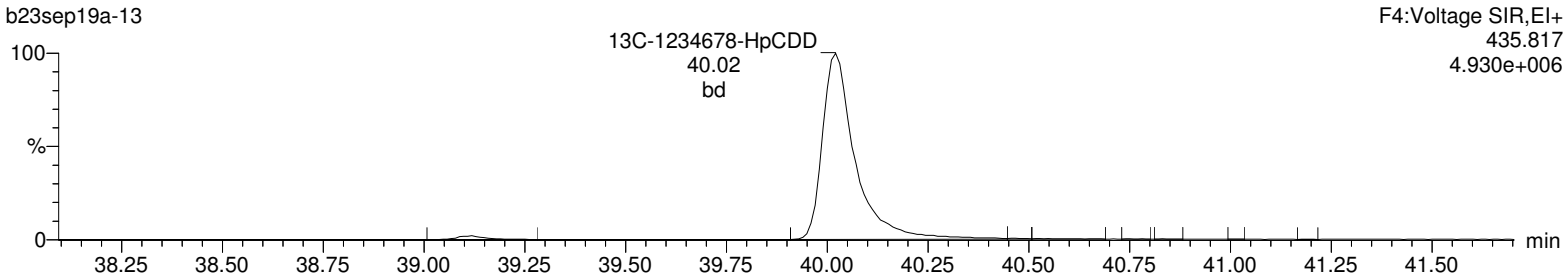

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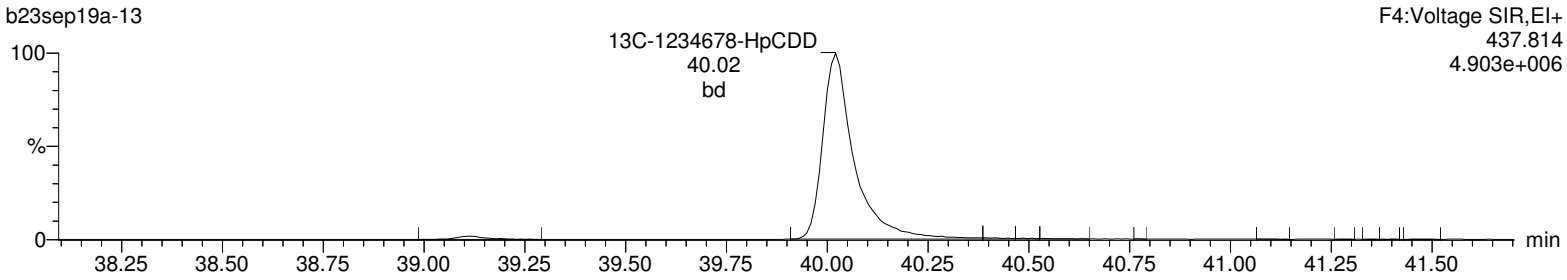
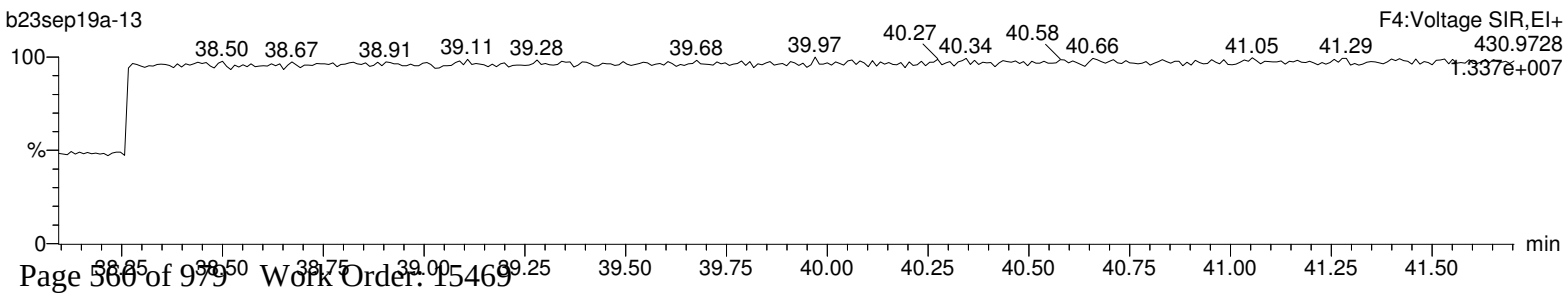


Lock Mass F4



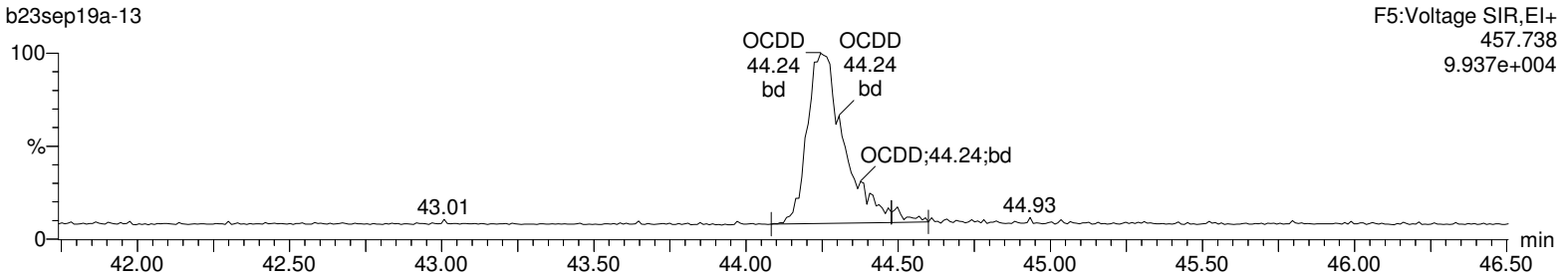
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

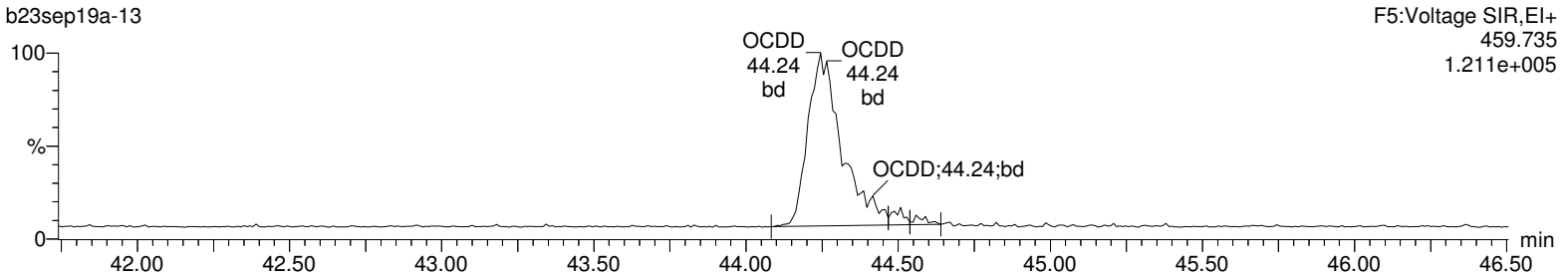
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

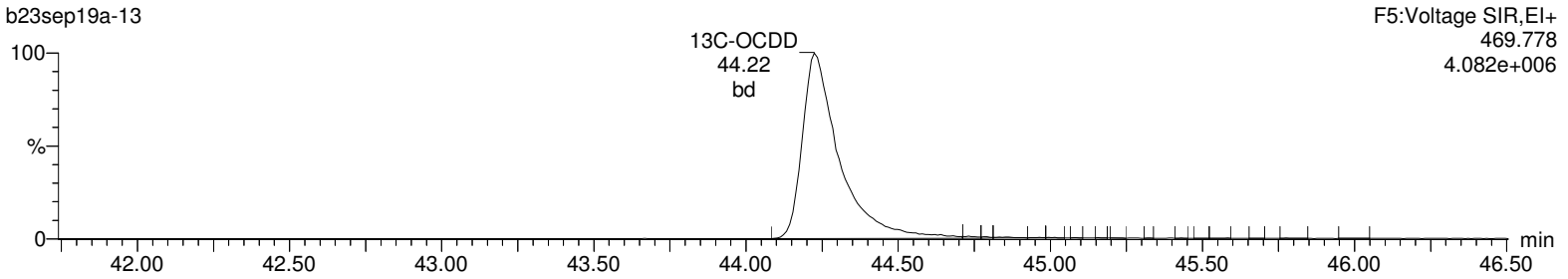
OCDD



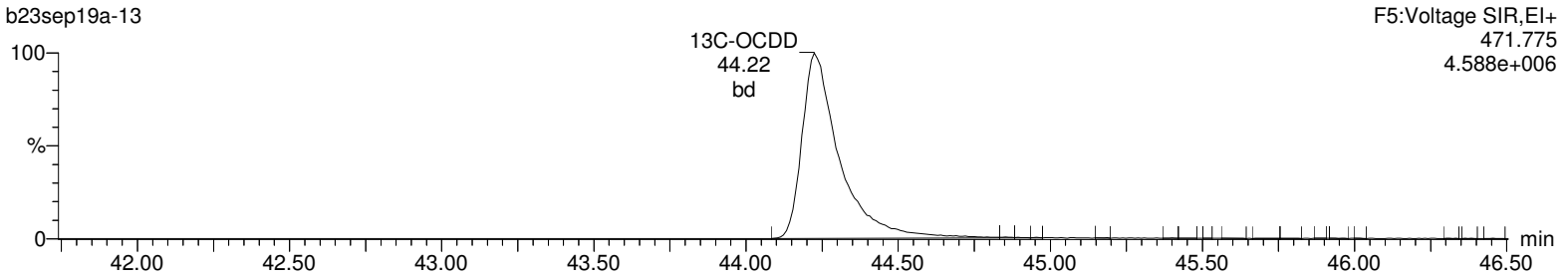
OCDD



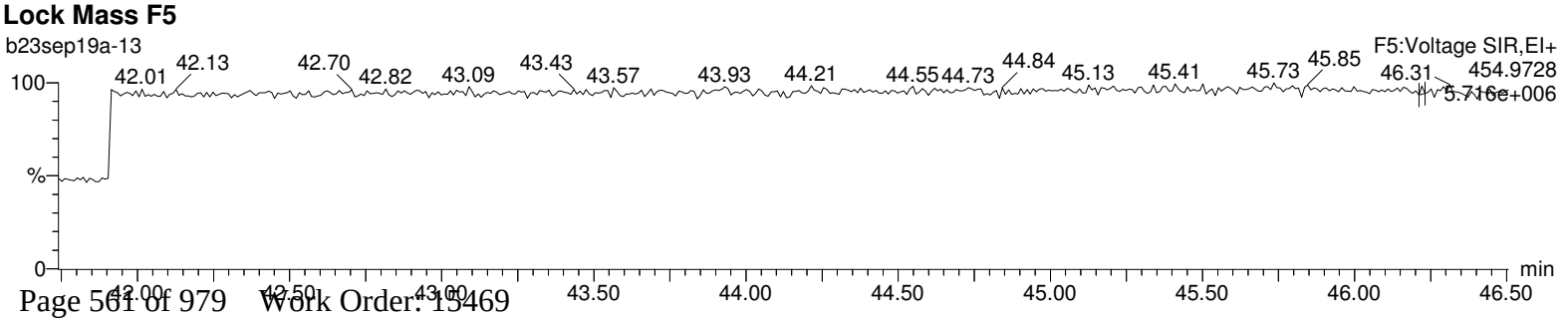
13C-OCDD



13C-OCDD



Lock Mass F5



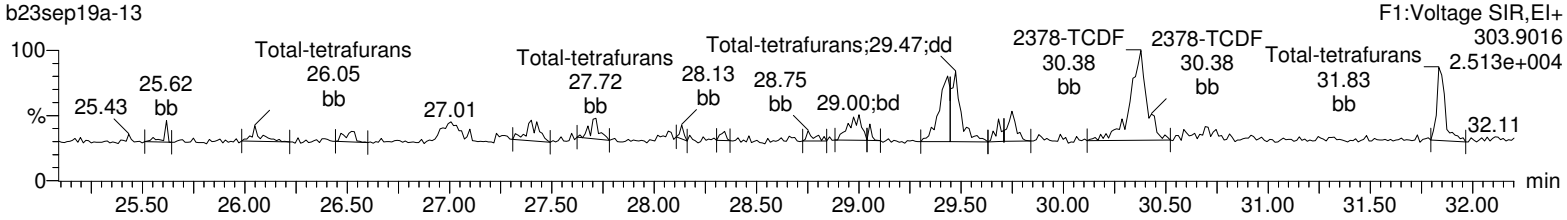
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

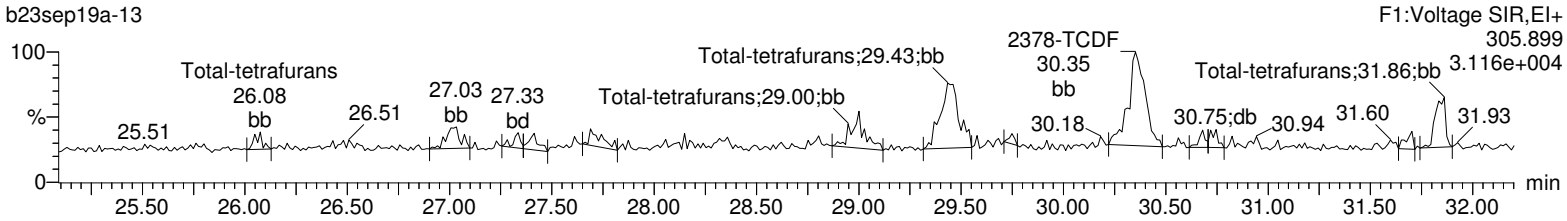
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

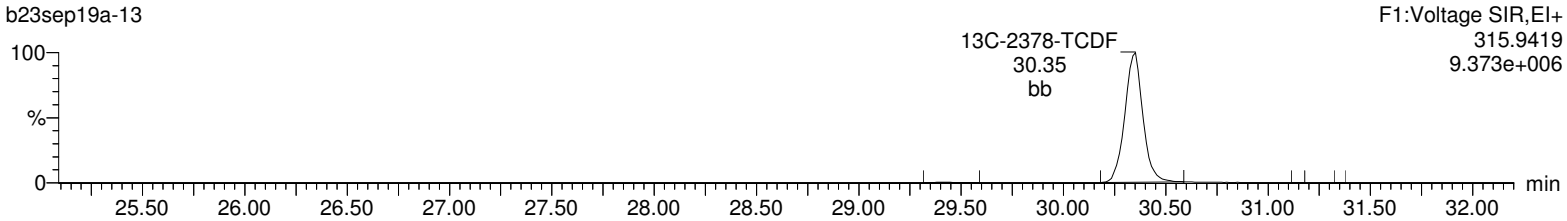
Total-tetrafurans



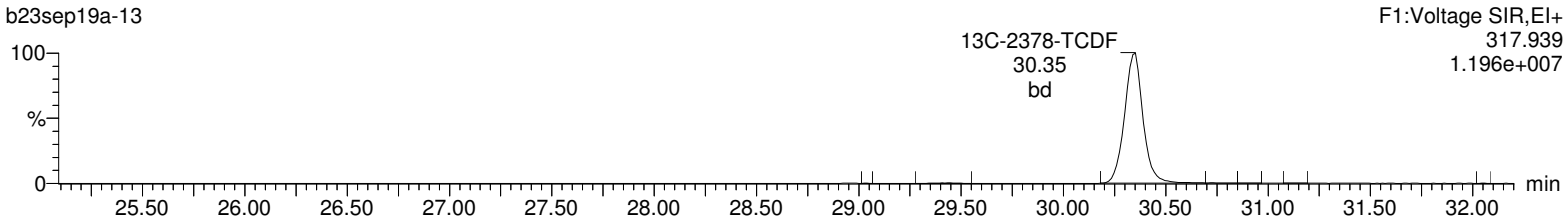
Total-tetrafurans



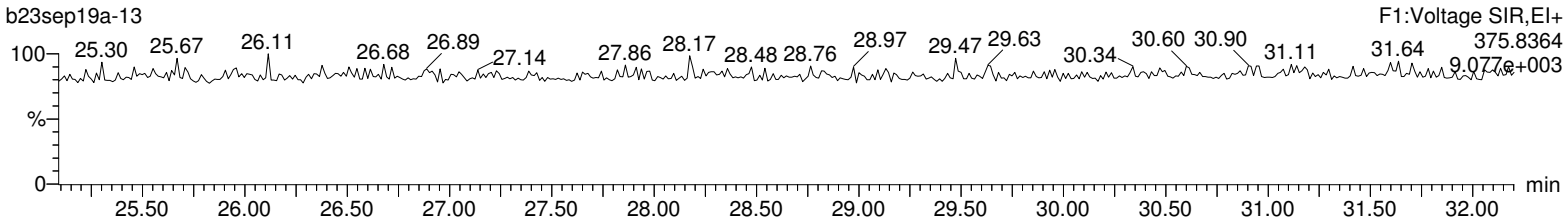
13C-2378-TCDF



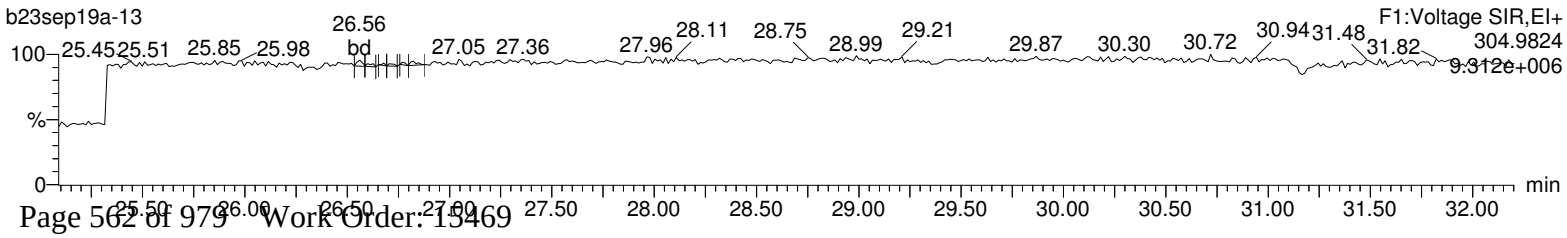
13C-2378-TCDF



HxDPE



Lock Mass F1



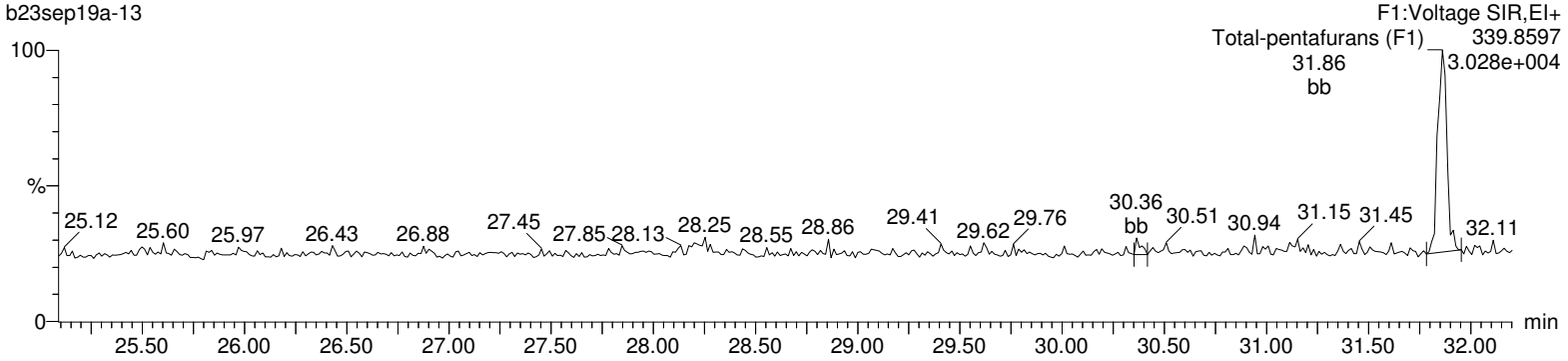
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

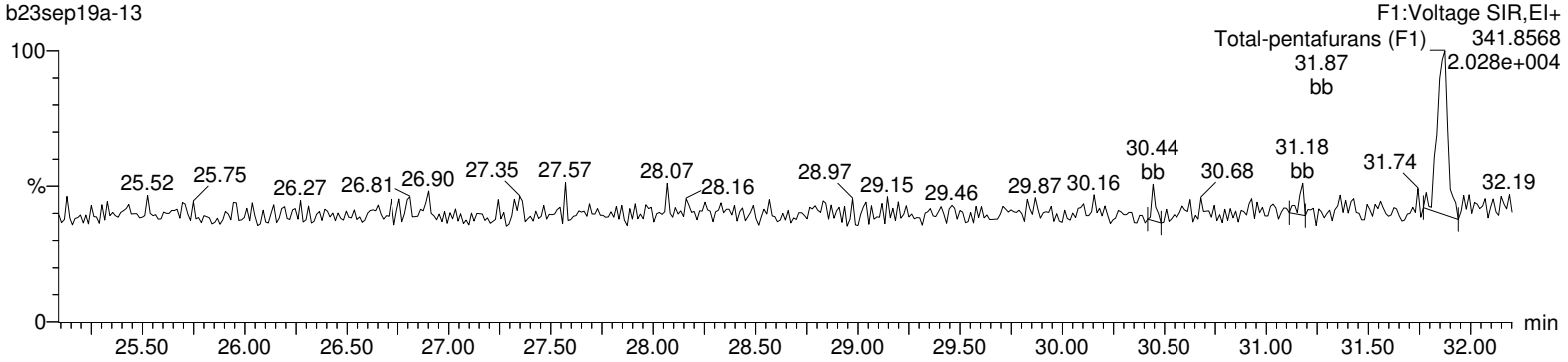
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

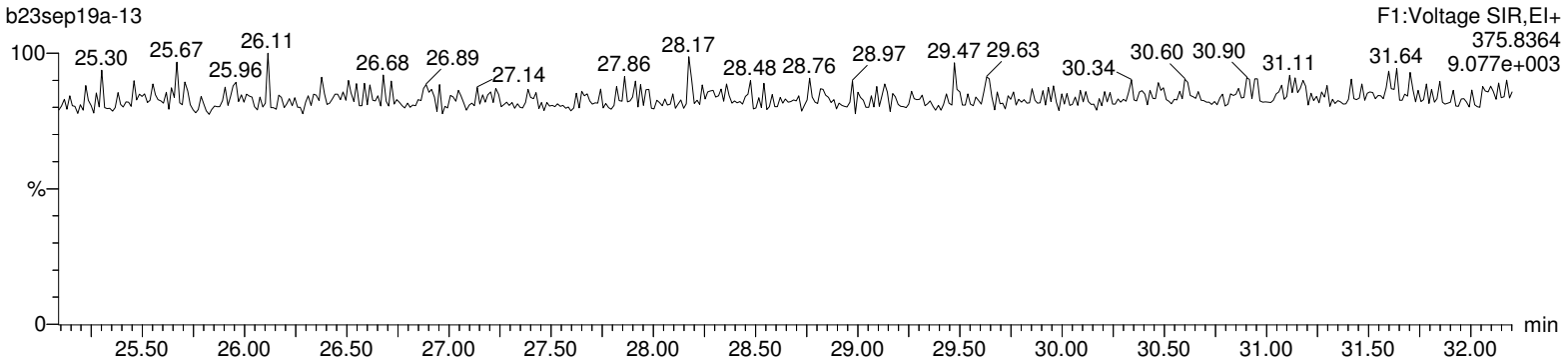
Total-pentafurans (F1)



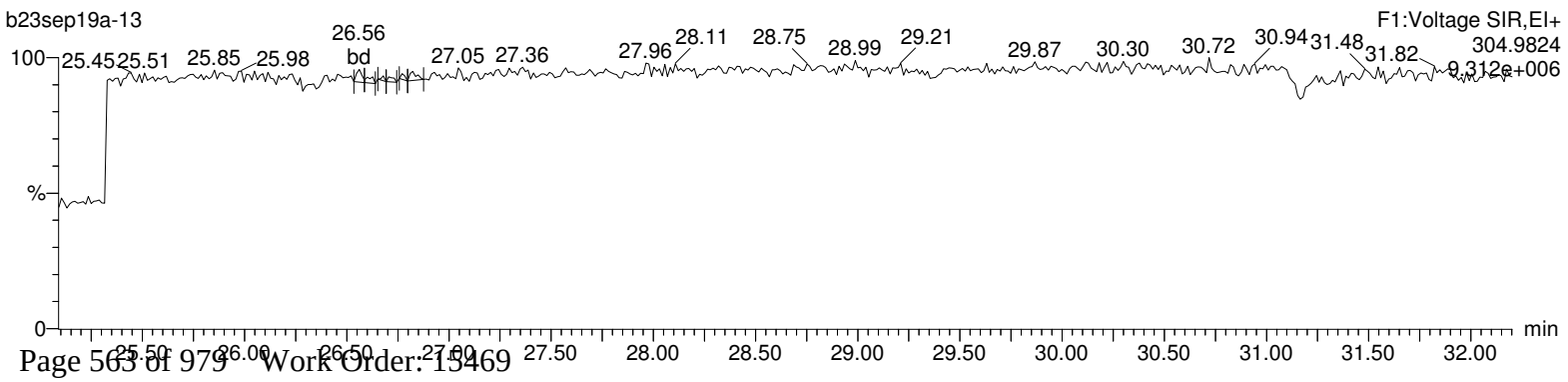
Total-pentafurans (F1)



HxDPE



Lock Mass F1



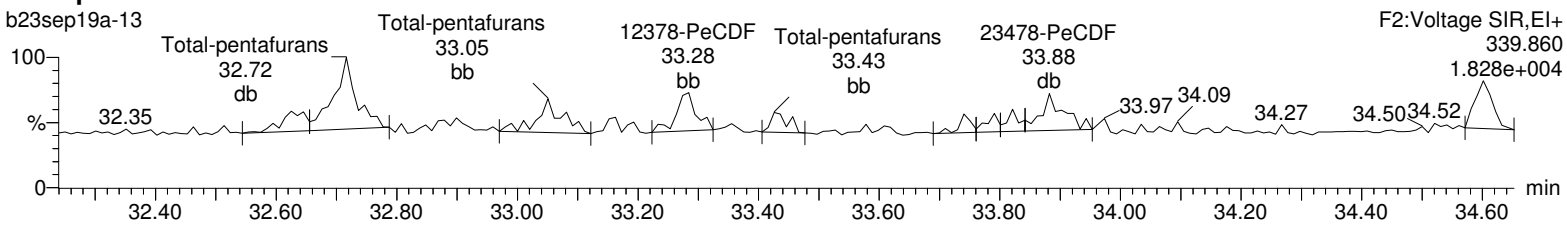
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

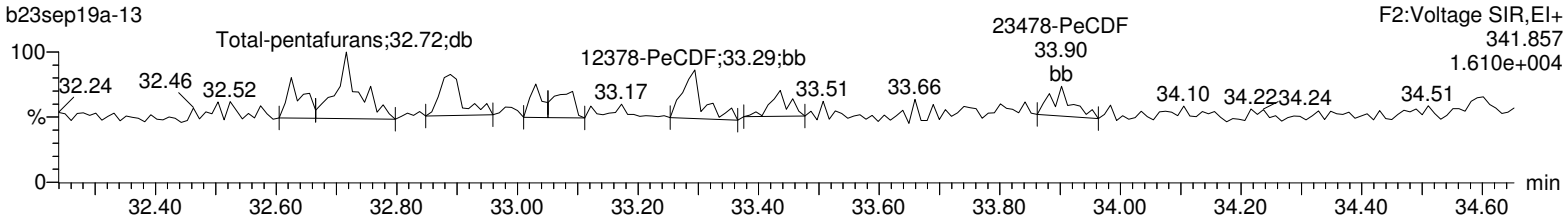
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

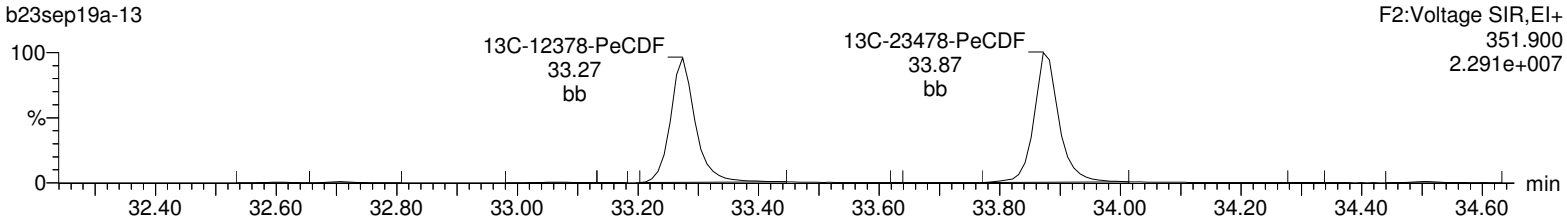
Total-pentafurans



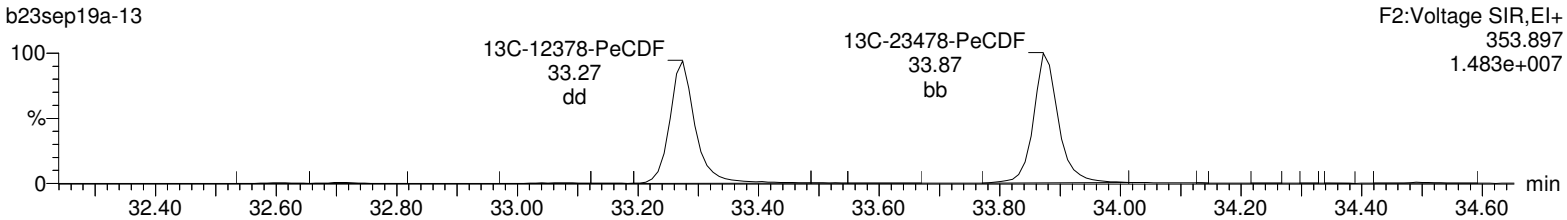
Total-pentafurans



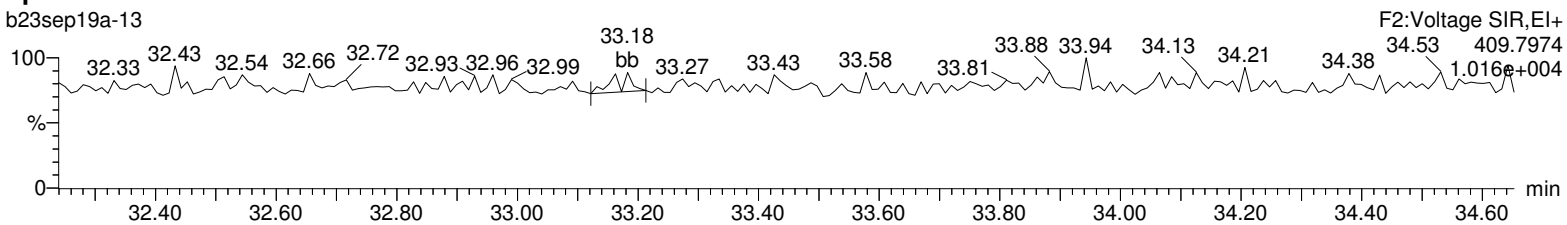
13C-12378-PeCDF



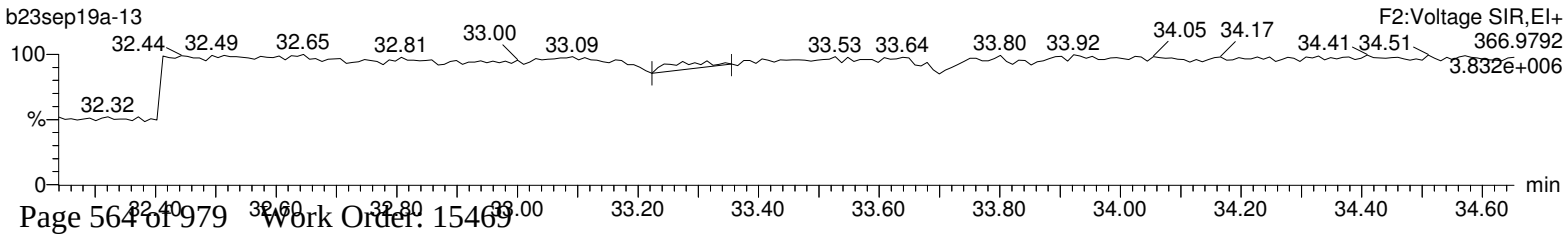
13C-12378-PeCDF



HpDPE



Lock Mass F2



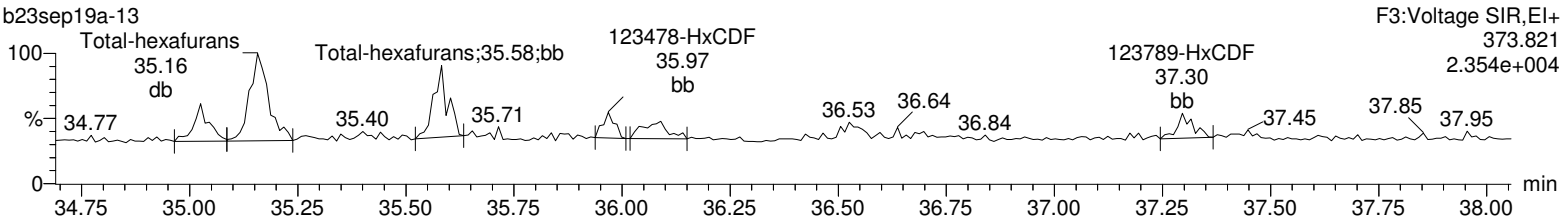
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

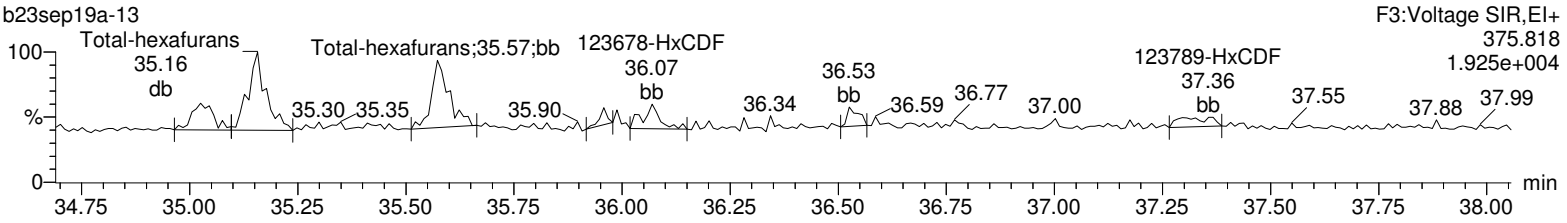
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

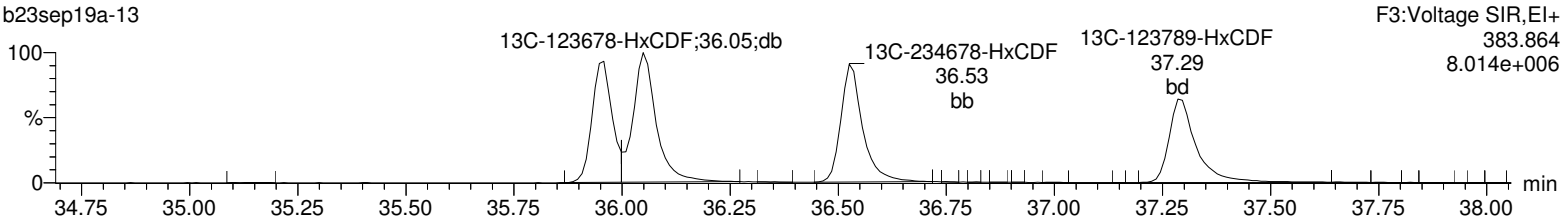
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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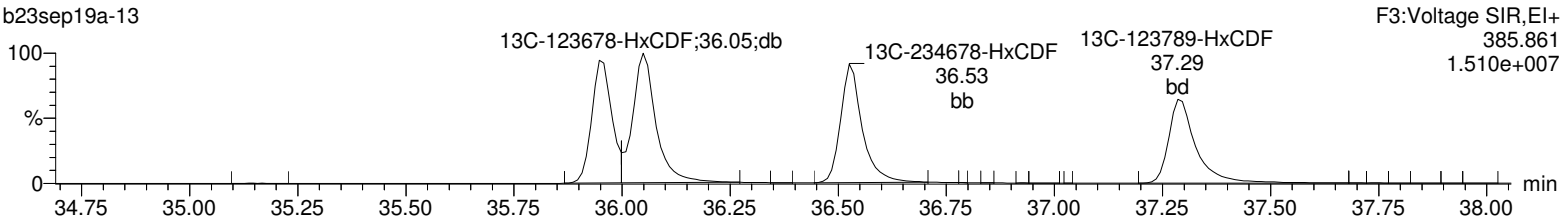
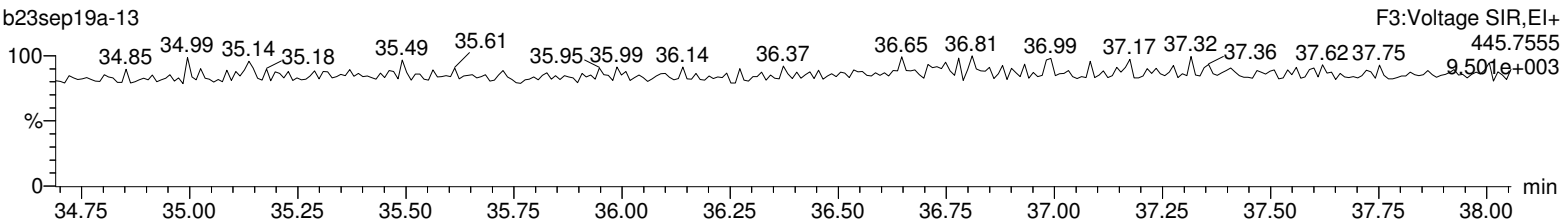
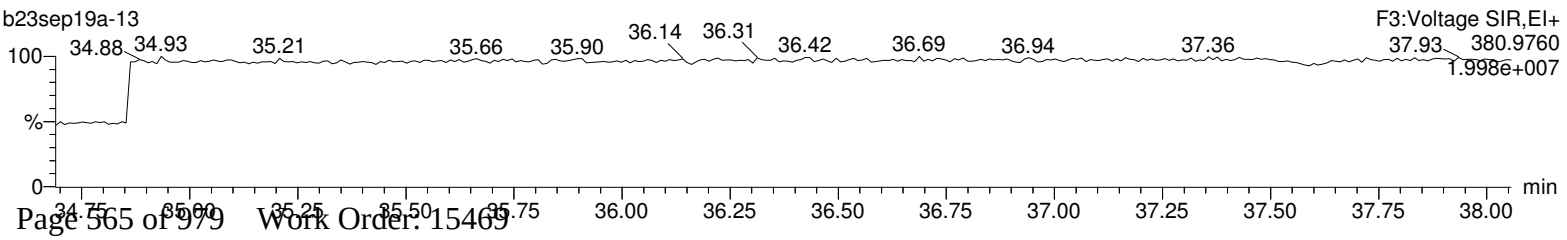


OcDPE



Lock Mass F3



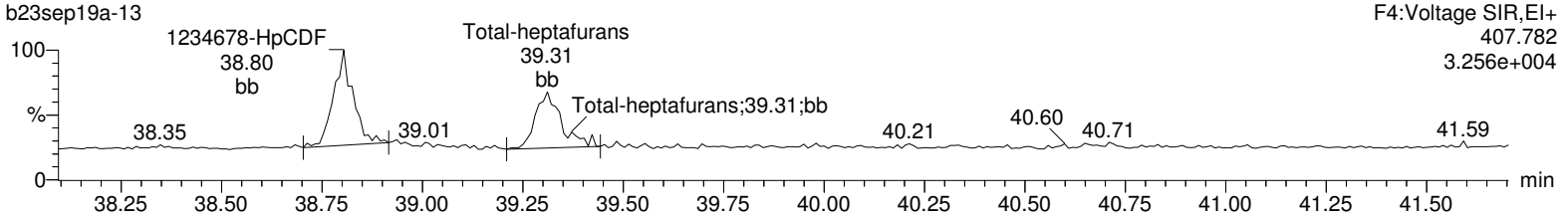
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

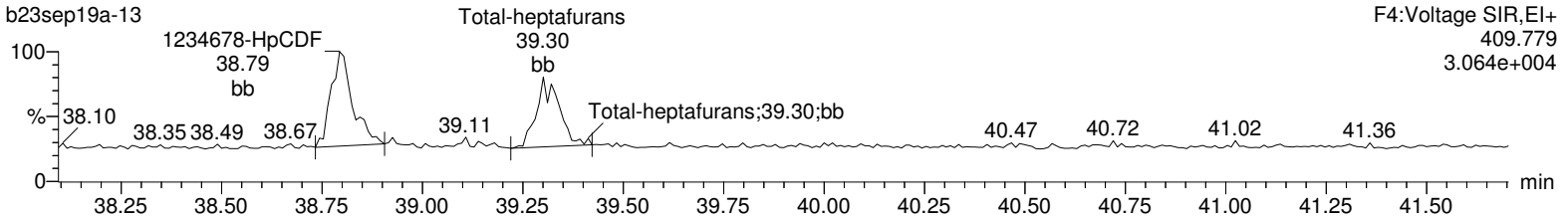
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

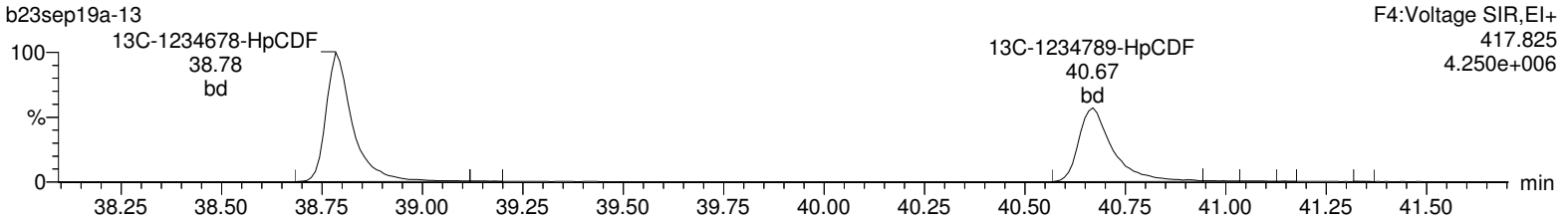
Total-heptafurans



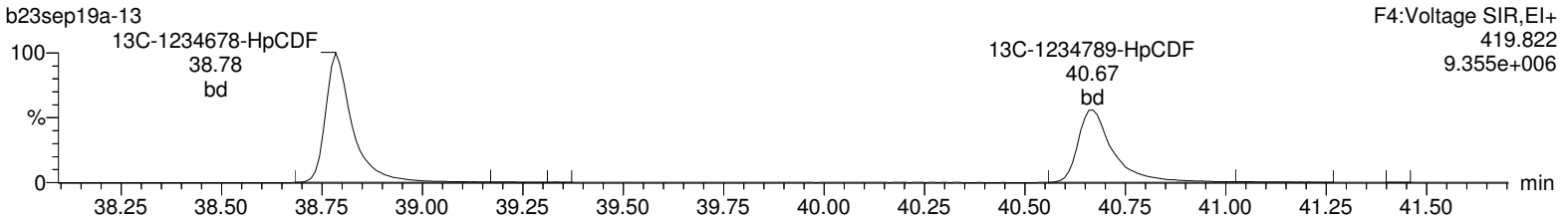
Total-heptafurans



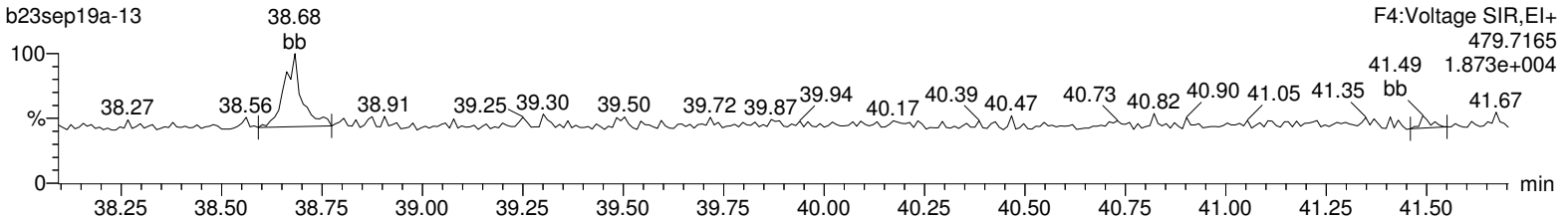
13C-1234678-HpCDF



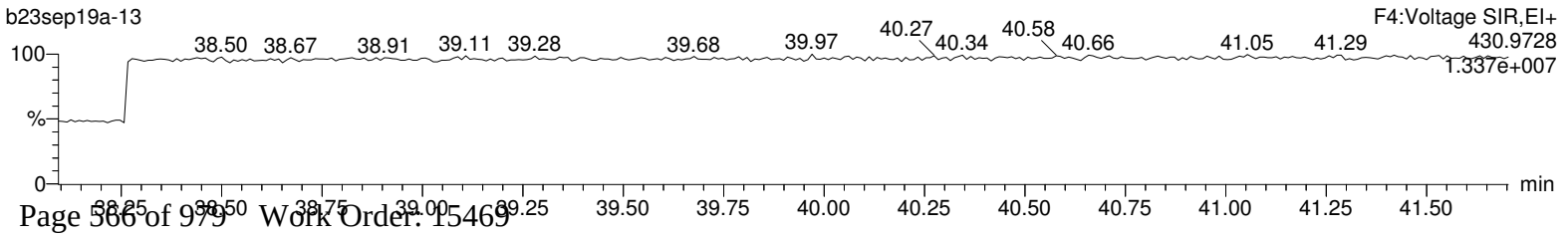
13C-1234678-HpCDF



NoDPE



Lock Mass F4



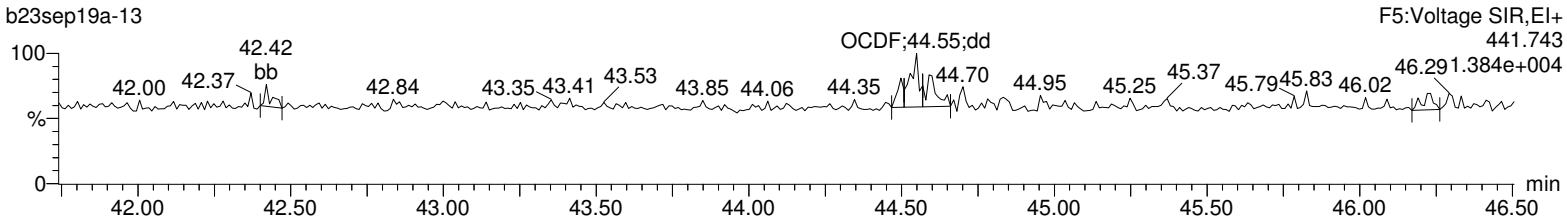
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a.qld

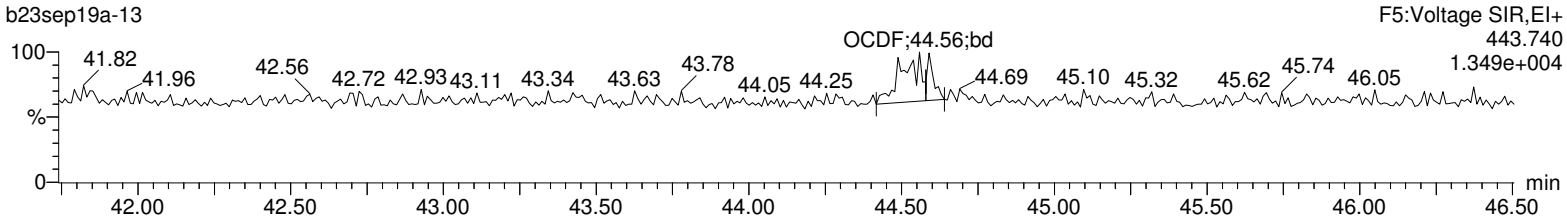
Last Altered: Tuesday, September 24, 2019 08:07:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:11:06 Eastern Standard Time

Name: b23sep19a-13, Date: 23-Sep-2019, Time: 18:00:24, ID: 15469021-1, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

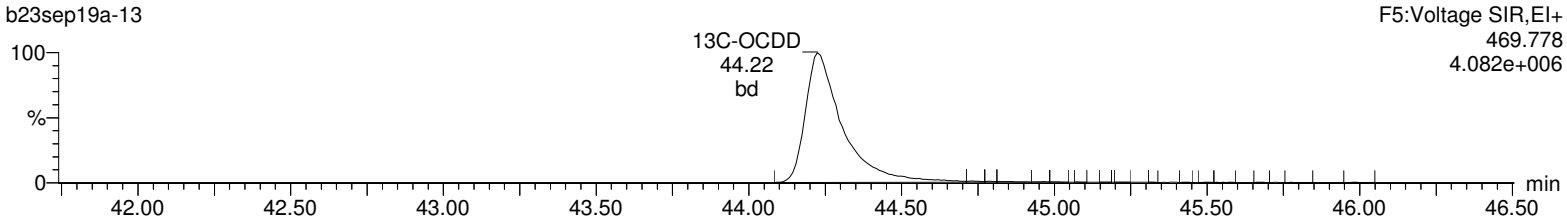
OCDF



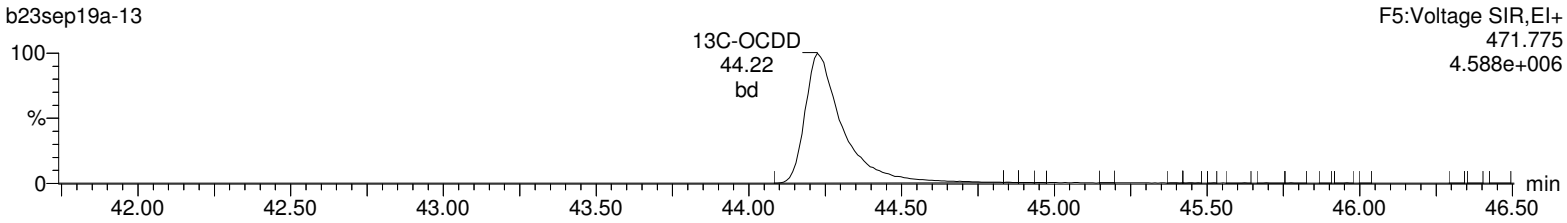
OCDF



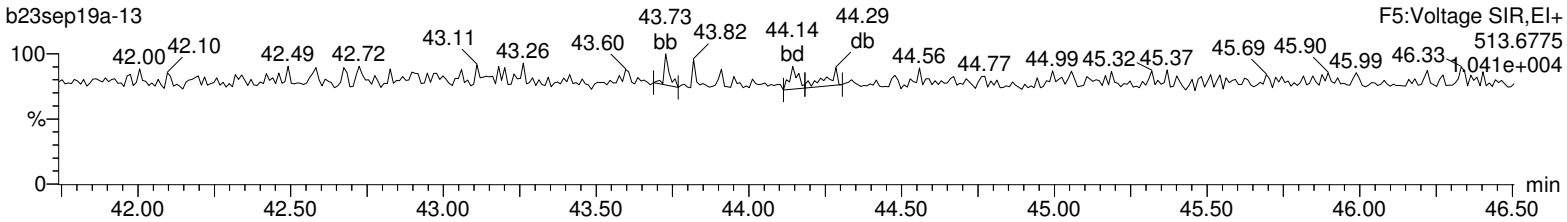
13C-OCDD



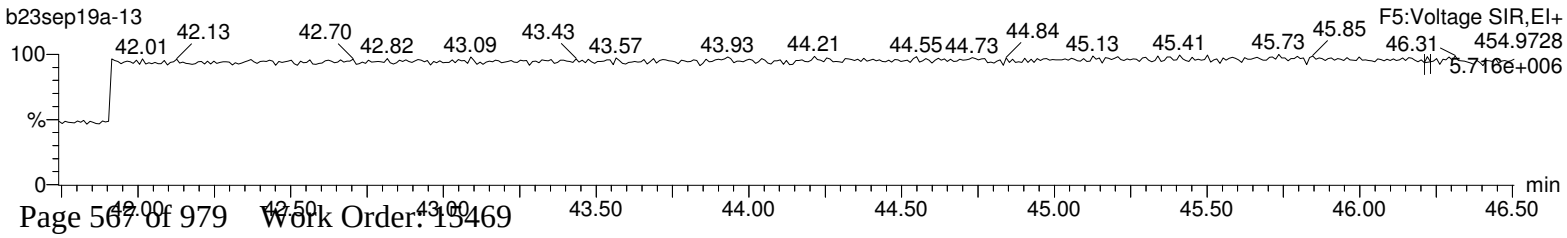
13C-OCDD



DeDPE



Lock Mass F5



Quality Control Raw Data

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024792**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**				
Client ID:	**MB for batch 41745**			**Prep Basis:**	**As Received**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/24/2019 10:23**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a_3-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	0.0684	pg/g	0.0684	1.00
40321-76-4	1,2,3,7,8-PeCDD	U	0.0744	pg/g	0.0744	5.00
39227-28-6	1,2,3,4,7,8-HxCDD	U	0.102	pg/g	0.102	5.00
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.104	pg/g	0.0958	5.00
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.132	pg/g	0.100	5.00
35822-46-9	1,2,3,4,6,7,8-HpCDD	J	0.192	pg/g	0.155	5.00
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.614	pg/g	0.276	10.0
51207-31-9	2,3,7,8-TCDF	J	0.188	pg/g	0.120	1.00
57117-41-6	1,2,3,7,8-PeCDF	JK	0.118	pg/g	0.073	5.00
57117-31-4	2,3,4,7,8-PeCDF	J	0.080	pg/g	0.0664	5.00
70648-26-9	1,2,3,4,7,8-HxCDF	JK	0.138	pg/g	0.0672	5.00
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.112	pg/g	0.0688	5.00
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.132	pg/g	0.0724	5.00
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.188	pg/g	0.111	5.00
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.160	pg/g	0.0756	5.00
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	0.178	pg/g	0.129	5.00
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.426	pg/g	0.350	10.0
41903-57-5	Total TeCDD	J	0.106	pg/g	0.0684	1.00
36088-22-9	Total PeCDD	U	0.0744	pg/g	0.0744	5.00
34465-46-8	Total HxCDD	J	0.236	pg/g	0.0958	5.00
37871-00-4	Total HpCDD	J	0.192	pg/g	0.155	5.00
30402-14-3	Total TeCDF	J	0.188	pg/g	0.120	1.00
30402-15-4	Total PeCDF	JK	0.198	pg/g	0.0564	5.00
55684-94-1	Total HxCDF	JK	0.570	pg/g	0.0672	5.00
38998-75-3	Total HpCDF	J	0.338	pg/g	0.0756	5.00
3333-30-2	TEQ WHO2005 ND=0 with EMPCs		0.133	pg/g		
3333-30-3	TEQ WHO2005 ND=0.5 with EMPCs		0.209	pg/g		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		169	200	pg/g	84.5	(25%-164%)
13C-1,2,3,7,8-PeCDD		152	200	pg/g	76.2	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		152	200	pg/g	76.1	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		165	200	pg/g	82.4	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		169	200	pg/g	84.5	(23%-140%)
13C-OCDD		263	400	pg/g	65.7	(17%-157%)
13C-2,3,7,8-TCDF		149	200	pg/g	74.4	(24%-169%)
13C-1,2,3,7,8-PeCDF		150	200	pg/g	74.9	(24%-185%)
13C-2,3,4,7,8-PeCDF		146	200	pg/g	72.8	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		161	200	pg/g	80.7	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		157	200	pg/g	78.5	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		153	200	pg/g	76.4	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		158	200	pg/g	79.2	(29%-147%)

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024792**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**				
Client ID:	**MB for batch 41745**			**Prep Basis:**	**As Received**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/24/2019 10:23**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a_3-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,6,7,8-HpCDF		168	200	pg/g	84.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		162	200	pg/g	80.8	(26%-138%)
37Cl-2,3,7,8-TCDD		18.7	20.0	pg/g	93.7	(35%-197%)

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 **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 12:03:05 Eastern Standard Time
Printed: Tuesday, September 24, 2019 12:04:34 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.71e1	3.41e2	4.09e2	31.14	1.000	0.20	YES	0.025	0.0342	2.32e3	1664	1.4	4.99e3	1241	4.0	db	bb
2	12378-PeCDD	2.68e2	7.63e1	3.44e2	34.10	1.001	3.51	YES	0.037	0.0372	4.09e3	1441	2.8	2.62e3	1100	2.4	MM	bb
3	123478-HxCDD	1.72e2	1.24e2	2.96e2	36.66	1.000	1.39	NO	0.043	0.0508	6.56e3	1386	4.7	3.61e3	1127	3.2	dd	bd
4	123678-HxCDD	2.84e2	2.09e2	4.94e2	36.75	1.000	1.36	NO	0.052	0.0479	4.22e3	1386	3.0	4.87e3	1127	4.3	db	dd
5	123789-HxCDD	2.92e2	2.32e2	5.24e2	36.99	1.007	1.26	NO	0.066	0.0501	6.90e3	1386	5.0	5.23e3	1127	4.6	bb	bd
6	1234678-HpCDD	3.22e2	2.73e2	5.95e2	40.07	1.001	1.18	NO	0.096	0.0774	4.67e3	1007	4.6	5.29e3	885	6.0	MM	bd
7	OCDD	5.69e2	6.63e2	1.23e3	44.22	1.000	0.86	NO	0.307	0.138	5.02e3	665	7.6	4.93e3	764	6.5	MM	MM
8	2378-TCDF	6.74e2	8.40e2	1.51e3	30.40	1.002	0.80	NO	0.094	0.0598	7.96e3	1385	5.7	1.26e4	2342	5.4	MM	MM
9	12378-PeCDF	5.35e2	2.51e2	7.86e2	33.28	1.000	2.13	YES	0.059	0.0365	1.15e4	1865	6.1	6.78e3	1786	3.8	bb	MM
10	23478-PeCDF	3.39e2	2.25e2	5.64e2	33.90	1.001	1.51	NO	0.040	0.0332	8.07e3	1865	4.3	5.85e3	1786	3.3	bb	MM
11	123478-HxCDF	3.39e2	3.70e2	7.08e2	35.96	1.000	0.92	YES	0.069	0.0336	6.10e3	1240	4.9	5.26e3	1163	4.5	bd	dd
12	123678-HxCDF	3.80e2	3.00e2	6.80e2	36.05	1.000	1.27	NO	0.056	0.0344	6.54e3	1240	5.3	6.54e3	1163	5.6	db	db
13	234678-HxCDF	3.89e2	3.21e2	7.10e2	36.56	1.001	1.21	NO	0.066	0.0362	6.68e3	1240	5.4	7.67e3	1163	6.6	MM	bb
14	123789-HxCDF	4.50e2	3.76e2	8.26e2	37.31	1.000	1.20	NO	0.094	0.0555	7.49e3	1240	6.0	8.02e3	1163	6.9	bb	bb
15	1234678-HpCDF	4.01e2	3.65e2	7.65e2	38.79	1.000	1.10	NO	0.080	0.0378	7.26e3	785	9.2	6.13e3	924	6.6	MM	MM
16	1234789-HpCDF	3.27e2	2.82e2	6.09e2	40.66	1.000	1.16	NO	0.089	0.0643	5.65e3	785	7.2	4.06e3	924	4.4	MM	MM
17	OCDF	4.24e2	5.28e2	9.52e2	44.55	1.007	0.80	NO	0.213	0.175	7.64e3	803	9.5	6.83e3	1220	5.6	MM	bd
18	13C-2378-TCDD	7.80e5	1.03e6	1.81e6	31.14	1.018	0.76	NO	84.539	0.0772	1.03e7	4040	2542.0	1.36e7	2986	4561.2	bb	bd
19	13C-12378-PeCDD	6.58e5	4.46e5	1.10e6	34.07	1.114	1.48	NO	76.207	0.0832	1.20e7	3299	3627.2	7.87e6	1830	4299.4	bb	bd
20	13C-123478-HxCDD	4.04e5	3.32e5	7.36e5	36.66	0.991	1.22	NO	76.141	0.242	7.28e6	5760	1263.6	6.01e6	5542	1084.6	bd	bd
21	13C-123678-HxCDD	5.89e5	4.78e5	1.07e6	36.74	0.993	1.23	NO	82.427	0.181	8.18e6	5760	1420.2	6.71e6	5542	1210.8	dd	dd
22	13C-1234678-HpCDD	3.36e5	3.19e5	6.55e5	40.02	1.082	1.05	NO	84.525	0.227	3.32e6	3977	835.0	3.15e6	4504	699.4	bd	bd
23	13C-OCDD	4.17e5	4.62e5	8.79e5	44.22	1.196	0.90	NO	131.471	0.231	2.69e6	3475	775.3	3.09e6	3973	777.3	bd	bd
24	13C-2378-TCDF	7.81e5	1.01e6	1.80e6	30.34	0.992	0.77	NO	74.351	0.109	7.59e6	6842	1108.7	9.90e6	4399	2250.9	bb	bb
25	13C-12378-PeCDF	8.97e5	5.60e5	1.46e6	33.27	1.088	1.60	NO	74.934	0.104	1.69e7	3862	4383.4	1.10e7	4765	2311.0	bd	bb
26	13C-23478-PeCDF	8.87e5	5.65e5	1.45e6	33.88	1.108	1.57	NO	72.779	0.102	1.73e7	3862	4484.0	1.11e7	4765	2337.3	bb	bb
27	13C-123478-HxCDF	3.10e5	5.91e5	9.01e5	35.96	0.972	0.52	NO	80.656	0.282	5.41e6	5909	916.0	1.04e7	9274	1117.2	bd	bd
28	13C-123678-HxCDF	4.04e5	7.38e5	1.14e6	36.05	0.975	0.55	NO	78.469	0.216	5.85e6	5909	989.7	1.13e7	9274	1217.3	db	db
29	13C-234678-HxCDF	3.27e5	6.18e5	9.45e5	36.54	0.988	0.53	NO	76.403	0.254	5.08e6	5909	859.1	9.47e6	9274	1021.5	bb	bb
30	13C-123789-HxCDF	2.82e5	5.44e5	8.26e5	37.30	1.008	0.52	NO	79.191	0.302	3.47e6	5909	587.9	6.58e6	9274	709.8	bd	bd
31	13C-1234678-HpCDF	2.49e5	5.59e5	8.08e5	38.78	1.048	0.44	NO	84.172	0.206	2.92e6	4191	696.1	6.64e6	5338	1243.2	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 12:03:05 Eastern Standard Time
Printed: Tuesday, September 24, 2019 12:04:34 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.69e5	3.86e5	5.56e5	40.67	1.099	0.44	NO	80.783	0.287	1.65e6	4191	393.6	3.63e6	5338	680.7	bd	bd
33	13C-1234-TCDD	8.10e5	1.05e6	1.86e6	30.57	0.000	0.77	NO	100.000	0.0888	8.62e6	4040	2132.5	1.11e7	2986	3715.6	bb	bb
34	13C-123789-HxCDD	6.76e5	5.48e5	1.22e6	36.99	0.000	1.23	NO	100.000	0.191	8.16e6	5760	1416.8	6.79e6	5542	1224.9	dd	dd
35	37Cl-2378-TCDD	1.87e5		1.87e5	31.15	1.019			9.367	0.0177	2.50e6	1506	1660.6				bb	

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 12:03:05 Eastern Standard Time
Printed: Tuesday, September 24, 2019 12:04:34 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetradioxins	1.22e2	5.09e1	1.73e2	30.16	2.41	YES	0.011	0.0342	3.61e3	1664	2.2	1.67e3	1241	1.3	bb	bb
2	Total-tetradioxins	2.58e2	6.53e1	3.24e2	28.10	3.96	YES	0.020	0.0342	4.38e3	1664	2.6	1.96e3	1241	1.6	bb	db
3	Total-tetradioxins	5.37e1	9.02e1	1.44e2	27.92	0.60	YES	0.009	0.0342	2.88e3	1664	1.7	3.39e3	1241	2.7	bb	db
4	Total-tetradioxins	3.66e2	4.94e2	8.60e2	27.81	0.74	NO	0.053	0.0342	4.28e3	1664	2.6	6.81e3	1241	5.5	bb	bd
5	Total-tetradioxins	7.00e1	5.23e1	1.22e2	31.90	1.34	YES	0.008	0.0342	2.33e3	1664	1.4	1.34e3	1241	1.1	bb	bb
6	2378-TCDD	6.71e1	3.41e2	4.09e2	31.14	0.20	YES	0.025	0.0342	2.32e3	1664	1.4	4.99e3	1241	4.0	db	bb
7	Total-tetradioxins	8.69e1	9.94e1	1.86e2	30.94	0.87	NO	0.012	0.0342	2.35e3	1664	1.4	1.83e3	1241	1.5	bb	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentadioxins	1.60e2	1.29e2	2.88e2	32.77	1.24	YES	0.031	0.0372	3.58e3	1441	2.5	4.05e3	1100	3.7	bb	bd
2	12378-PeCDD	2.68e2	7.63e1	3.44e2	34.10	3.51	YES	0.037	0.0372	4.09e3	1441	2.8	2.62e3	1100	2.4	MM	bb

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDD	2.92e2	2.32e2	5.24e2	36.99	1.26	NO	0.066	0.0501	6.90e3	1386	5.0	5.23e3	1127	4.6	bb	bd
2	123678-HxCDD	2.84e2	2.09e2	4.94e2	36.75	1.36	NO	0.052	0.0479	4.22e3	1386	3.0	4.87e3	1127	4.3	db	dd
3	123478-HxCDD	1.72e2	1.24e2	2.96e2	36.66	1.39	NO	0.043	0.0508	6.56e3	1386	4.7	3.61e3	1127	3.2	dd	bd
4	Total-hexadioxins	1.94e2	6.19e1	2.56e2	36.54	3.14	YES	0.032	0.0493	3.45e3	1386	2.5	2.91e3	1127	2.6	bd	bb
5	Total-hexadioxins	2.51e2	6.76e1	3.19e2	35.98	3.72	YES	0.039	0.0493	3.96e3	1386	2.9	1.85e3	1127	1.6	dd	db
6	Total-hexadioxins	5.44e1	8.74e1	1.42e2	35.89	0.62	YES	0.017	0.0493	1.93e3	1386	1.4	2.17e3	1127	1.9	bd	bd

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 12:03:05 Eastern Standard Time
Printed: Tuesday, September 24, 2019 12:04:34 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptadioxins	1.65e2	1.32e2	2.98e2	39.11	1.25	YES	0.048	0.0774	3.89e3	1007	3.9	2.13e3	885	2.4	MM	bd
2	Total-heptadioxins	2.09e2	6.69e1	2.76e2	38.78	3.13	YES	0.045	0.0774	4.25e3	1007	4.2	1.58e3	885	1.8	bb	bb
3	Total-heptadioxins	5.65e1	8.86e1	1.45e2	40.14	0.64	YES	0.023	0.0774	1.50e3	1007	1.5	2.72e3	885	3.1	db	db
4	1234678-HpCDD	3.22e2	2.73e2	5.95e2	40.07	1.18	NO	0.096	0.0774	4.67e3	1007	4.6	5.29e3	885	6.0	MM	bd
5	Total-heptadioxins	5.21e1	5.31e1	1.05e2	39.22	0.98	NO	0.017	0.0774	2.40e3	1007	2.4	1.76e3	885	2.0	db	db

TF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-tetrafurans	4.37e2	3.94e2	8.31e2	29.47	1.11	YES	0.052	0.0598	4.71e3	1385	3.4	5.38e3	2342	2.3	MM	bb
2	Total-tetrafurans	1.98e2	2.85e2	4.83e2	27.43	0.70	NO	0.030	0.0598	3.52e3	1385	2.5	5.65e3	2342	2.4	MM	MM
3	Total-tetrafurans	1.99e2	1.60e2	3.60e2	31.83	1.24	YES	0.022	0.0598	3.78e3	1385	2.7	3.99e3	2342	1.7	bb	bb
4	Total-tetrafurans	1.43e2	2.64e2	4.07e2	30.73	0.54	YES	0.025	0.0598	2.51e3	1385	1.8	4.54e3	2342	1.9	bb	bb
5	2378-TCDF	6.74e2	8.40e2	1.51e3	30.40	0.80	NO	0.094	0.0598	7.96e3	1385	5.7	1.26e4	2342	5.4	MM	MM
6	Total-tetrafurans	3.05e2	1.98e2	5.02e2	29.76	1.54	YES	0.031	0.0598	4.64e3	1385	3.4	2.82e3	2342	1.2	bb	MM

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-pentafurans (F1)	8.66e1	9.97e1	1.86e2	29.16	0.87	YES	0.014	0.0282	1.02e3	1062	1.0	2.15e3	1891	1.1	bb	bd
2	Total-pentafurans (F1)	9.37e1	1.38e2	2.31e2	28.96	0.68	YES	0.017	0.0282	1.82e3	1062	1.7	2.96e3	1891	1.6	bb	db
3	Total-pentafurans (F1)	2.88e2	2.96e2	5.84e2	31.86	0.97	YES	0.043	0.0282	5.06e3	1062	4.8	4.42e3	1891	2.3	bb	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	12378-PeCDF	5.35e2	2.51e2	7.86e2	33.28	2.13	YES	0.059	0.0365	1.15e4	1865	6.1	6.78e3	1786	3.8	bb	MM
2	23478-PeCDF	3.39e2	2.25e2	5.64e2	33.90	1.51	NO	0.040	0.0332	8.07e3	1865	4.3	5.85e3	1786	3.3	bb	MM
3	Total-pentafurans	2.12e2	2.36e2	4.48e2	32.70	0.90	YES	0.033	0.0348	4.05e3	1865	2.2	5.79e3	1786	3.2	MM	MM

Quantify Totals Report MassLynx 4.1
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 12:03:05 Eastern Standard Time
Printed: Tuesday, September 24, 2019 12:04:34 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

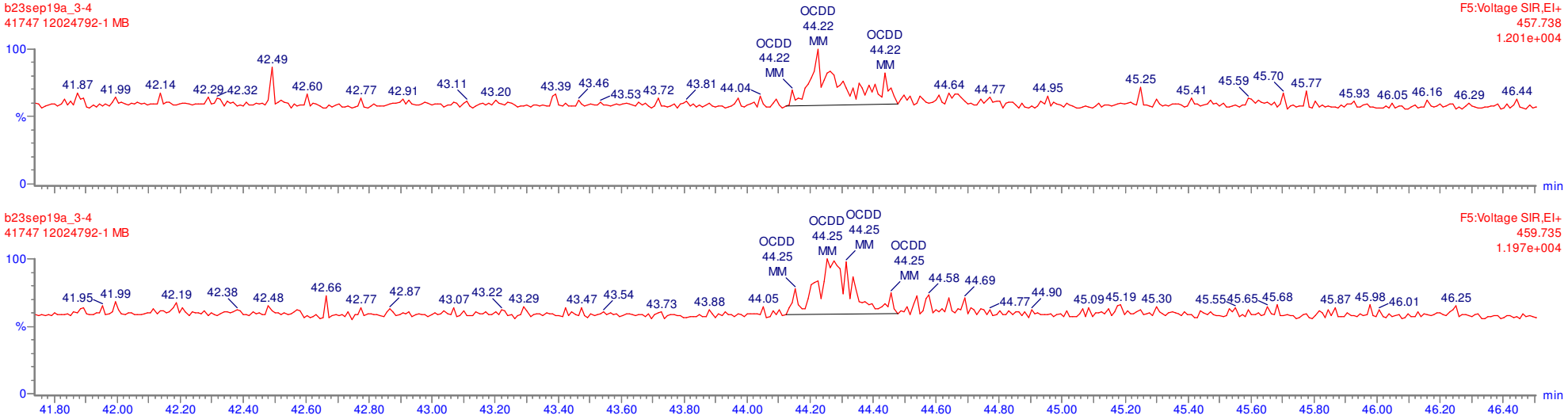
HF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	123789-HxCDF	4.50e2	3.76e2	8.26e2	37.31	1.20	NO	0.094	0.0555	7.49e3	1240	6.0	8.02e3	1163	6.9	bb	bb
2	234678-HxCDF	3.89e2	3.21e2	7.10e2	36.56	1.21	NO	0.066	0.0362	6.68e3	1240	5.4	7.67e3	1163	6.6	MM	bb
3	123678-HxCDF	3.80e2	3.00e2	6.80e2	36.05	1.27	NO	0.056	0.0344	6.54e3	1240	5.3	6.54e3	1163	5.6	db	db
4	123478-HxCDF	3.39e2	3.70e2	7.08e2	35.96	0.92	YES	0.069	0.0336	6.10e3	1240	4.9	5.26e3	1163	4.5	bd	dd
5	Total-hexafurans	1.39e2	9.21e1	2.31e2	35.16	1.51	YES	0.022	0.0391	3.10e3	1240	2.5	1.67e3	1163	1.4	MM	bb

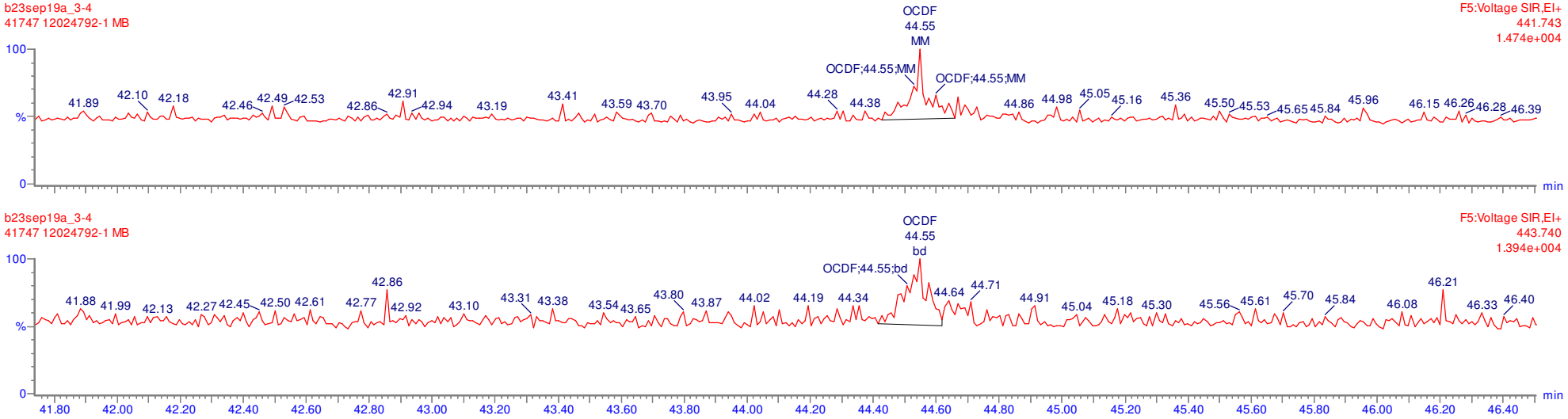
HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	Total-heptafurans	6.62e1	5.65e1	1.23e2	40.77	1.17	NO	0.015	0.0487	1.54e3	785	2.0	1.59e3	924	1.7	MM	MM
2	1234789-HpCDF	3.27e2	2.82e2	6.09e2	40.66	1.16	NO	0.089	0.0643	5.65e3	785	7.2	4.06e3	924	4.4	MM	MM
3	1234678-HpCDF	4.01e2	3.65e2	7.65e2	38.79	1.10	NO	0.080	0.0378	7.26e3	785	9.2	6.13e3	924	6.6	MM	MM

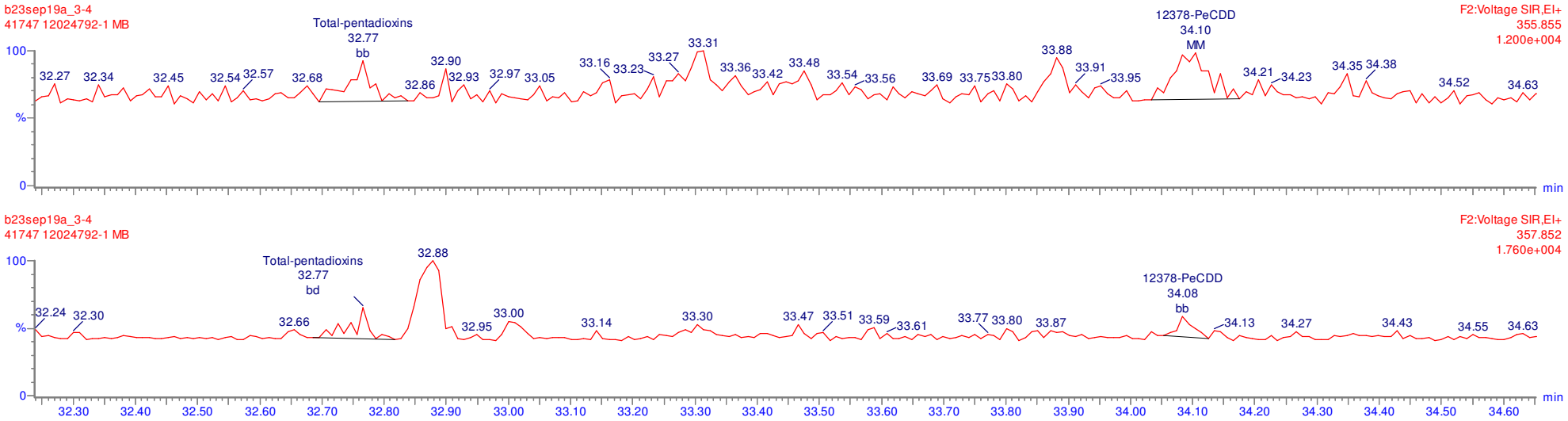
MANUAL INTEGRATION
METHOD 1613
HRP763_1



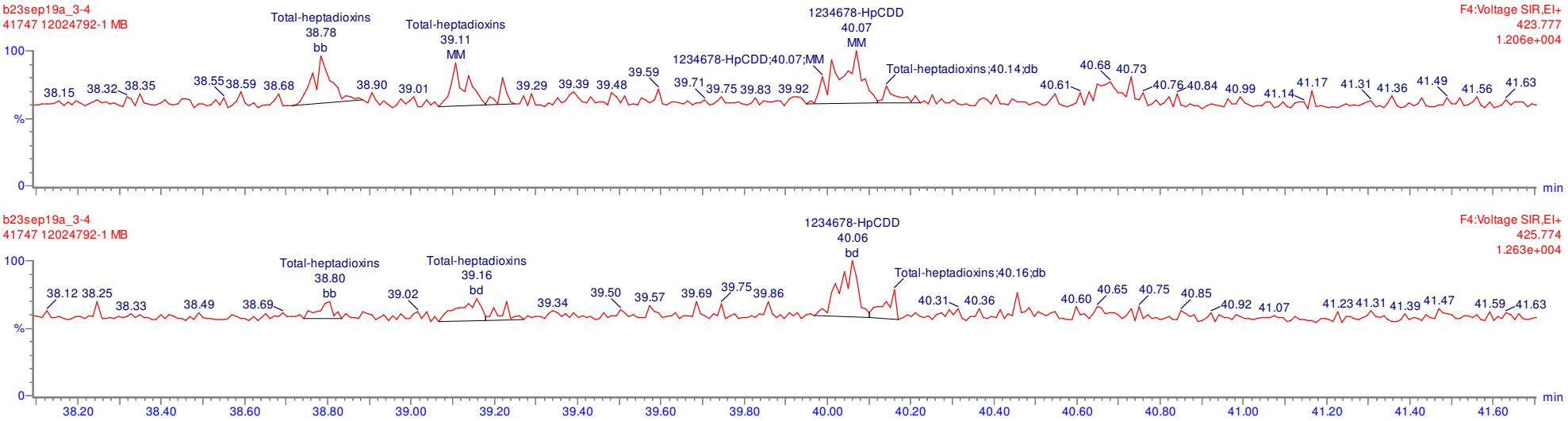
MANUAL INTEGRATION
METHOD 1613
HRP763_1



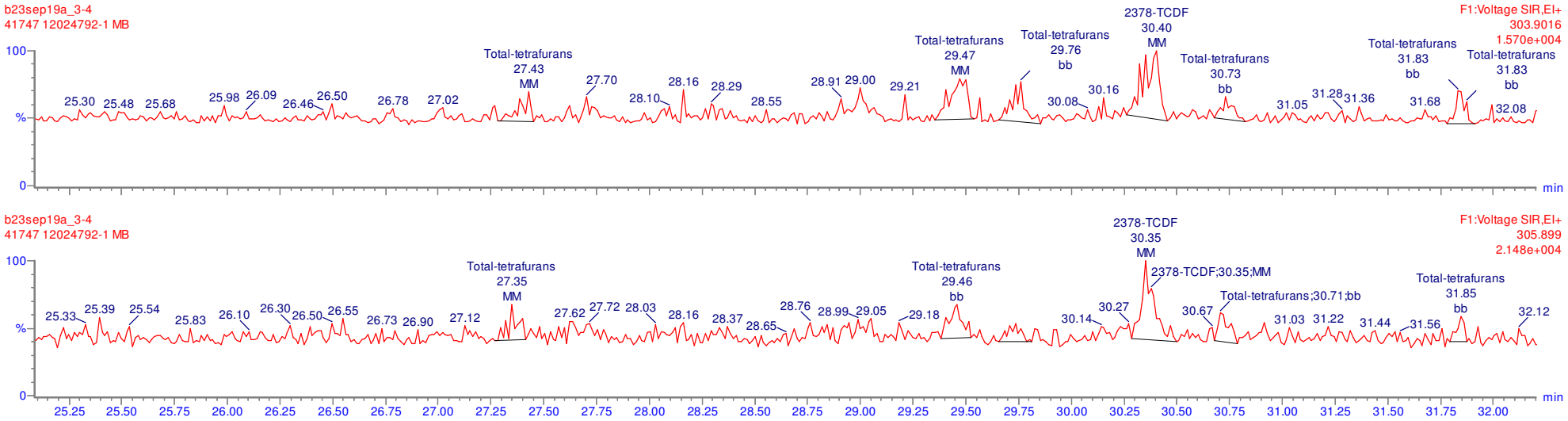
MANUAL INTEGRATION
METHOD 1613
HRP763_1



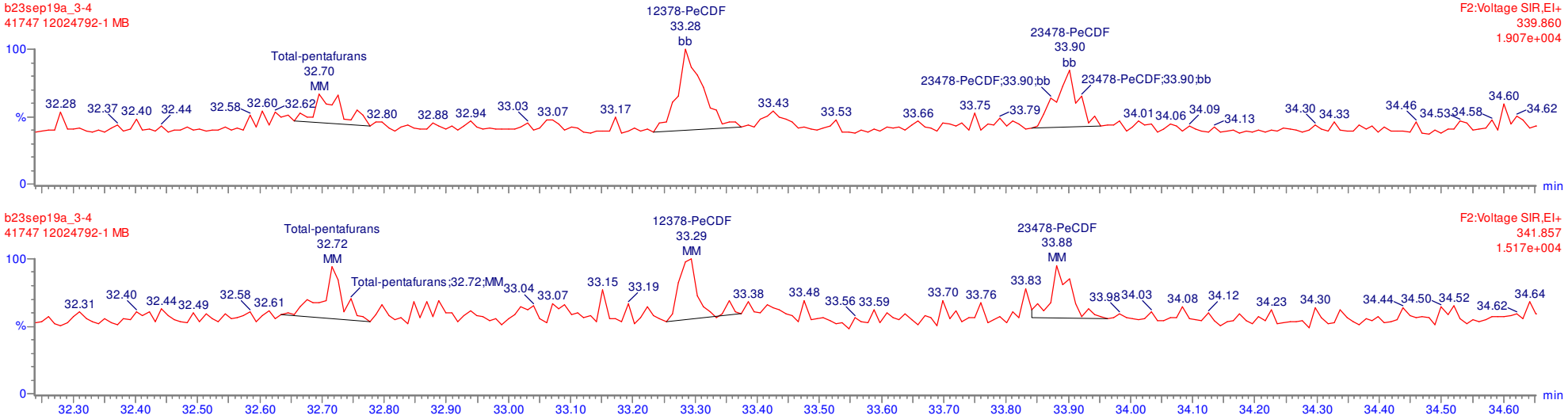
MANUAL INTEGRATION
METHOD 1613
HRP763_1



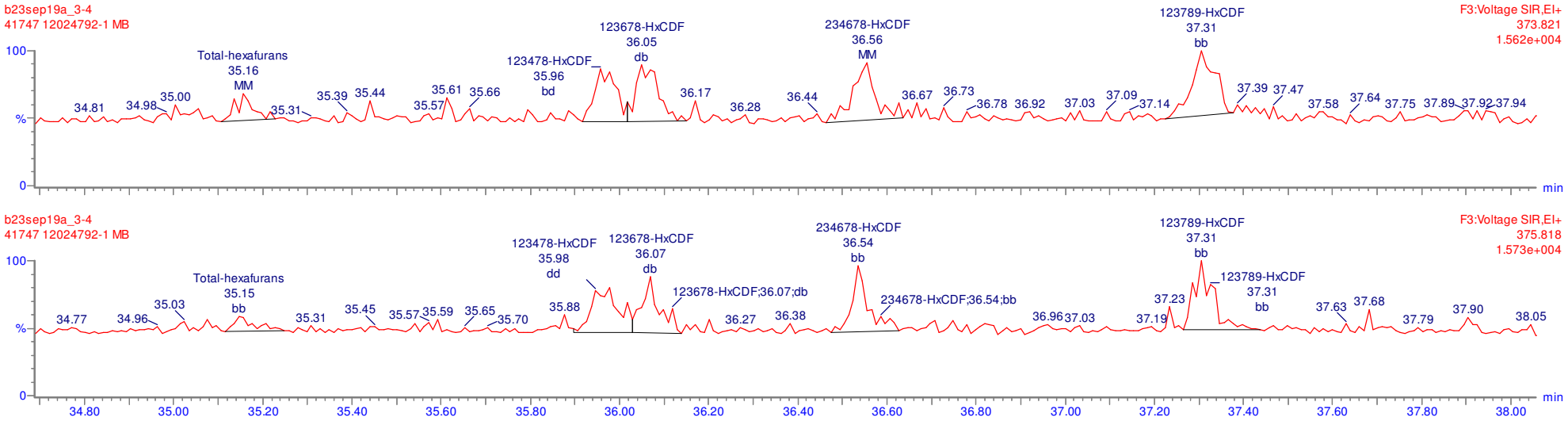
MANUAL INTEGRATION
METHOD 1613
HRP763_1



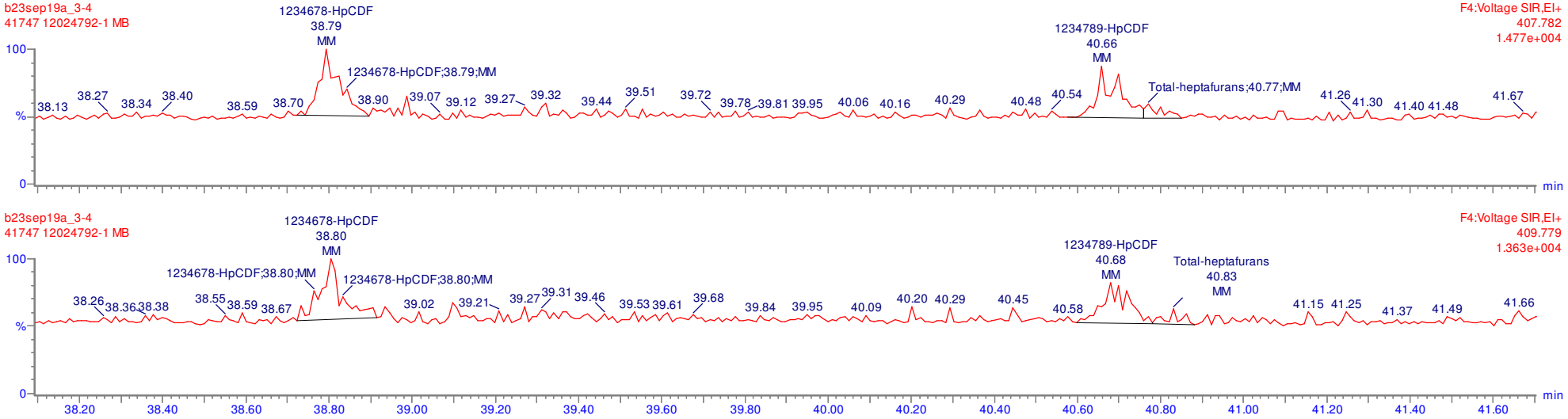
MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



MANUAL INTEGRATION
METHOD 1613
HRP763_1



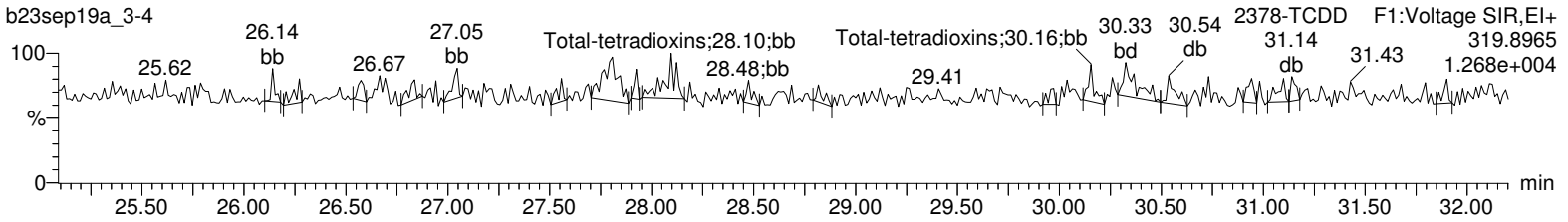
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

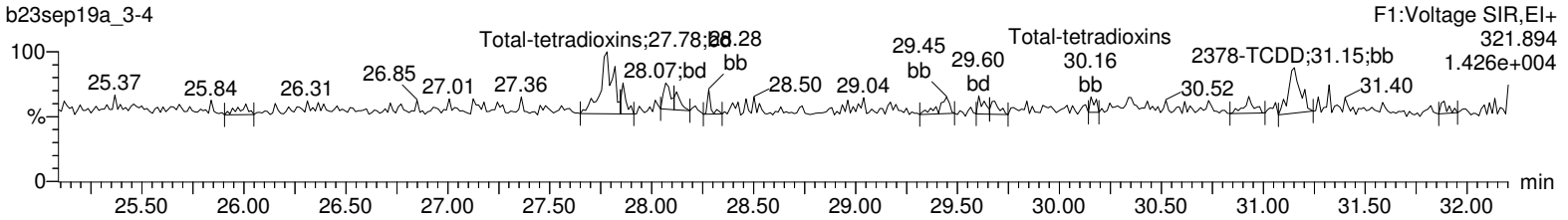
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

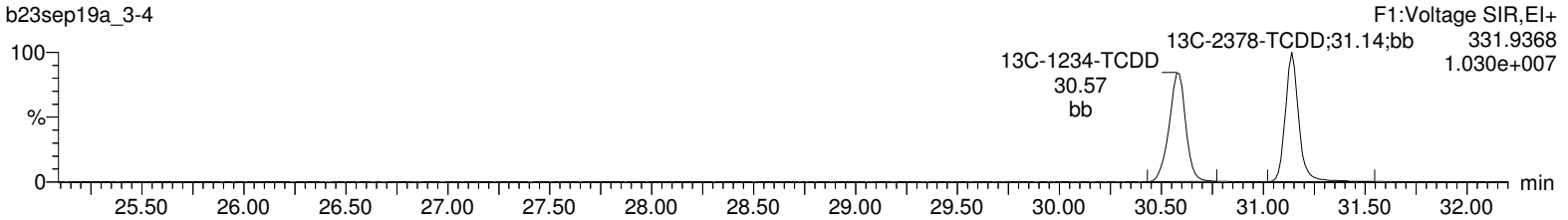
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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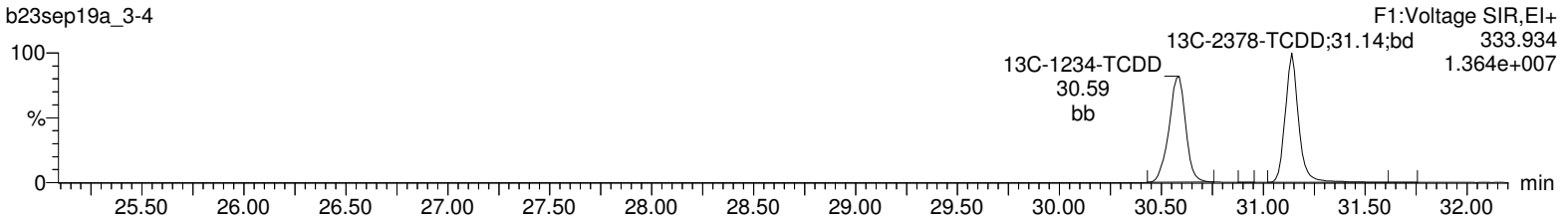

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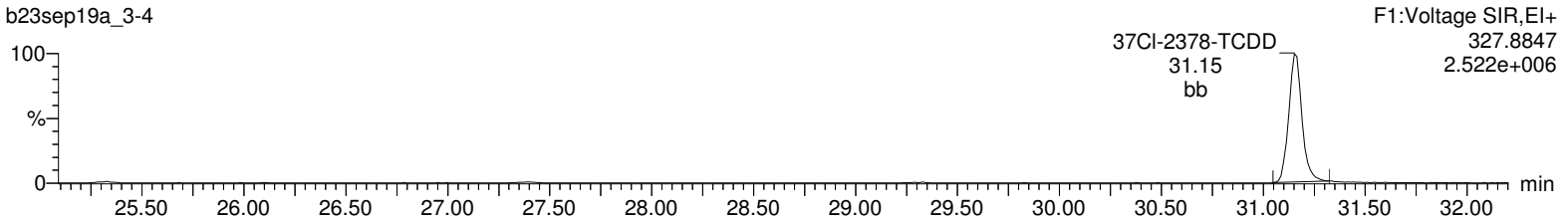
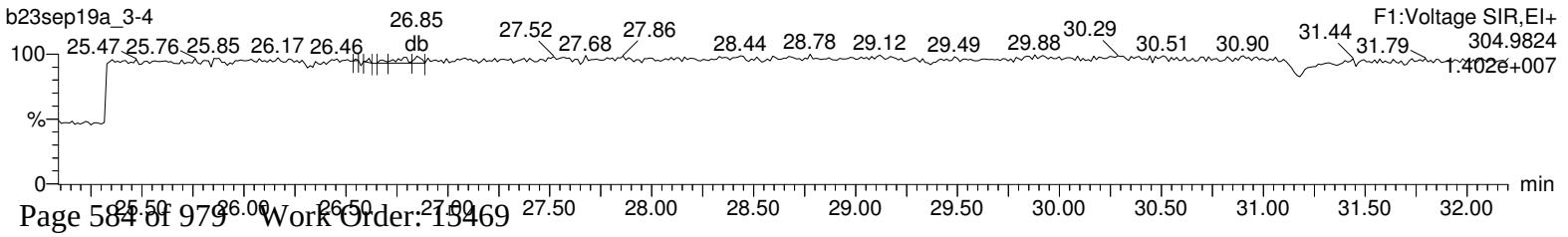


Lock Mass F1



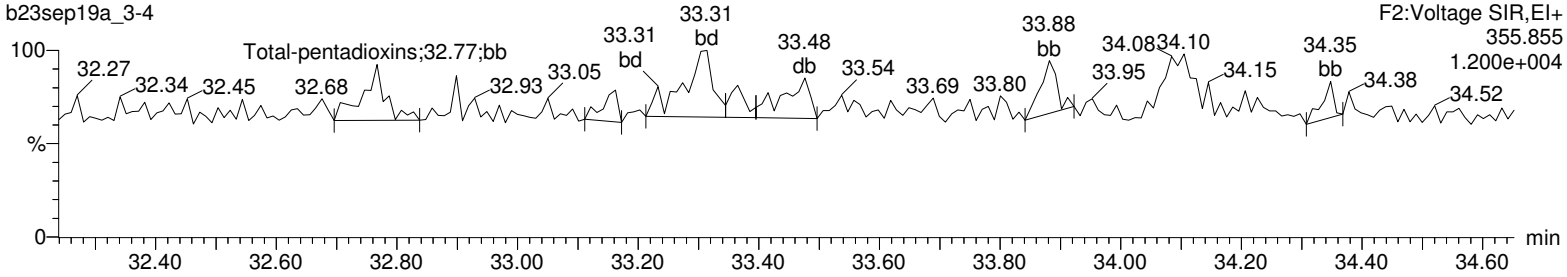
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

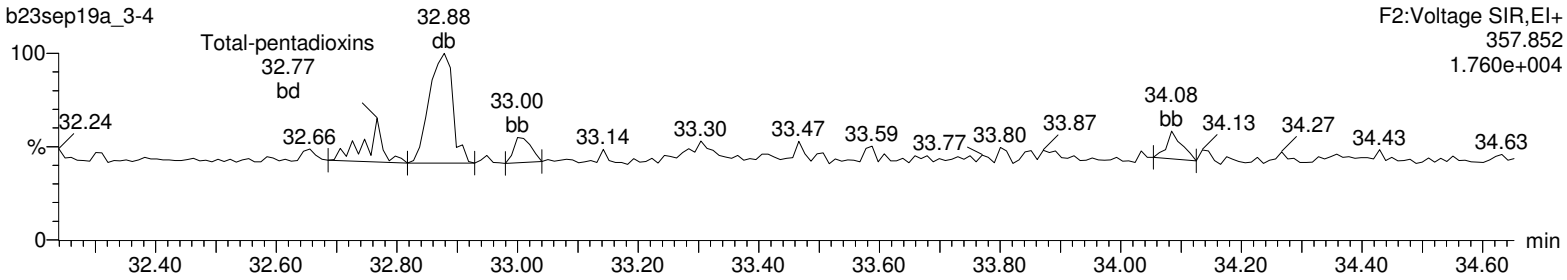
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentadioxins



Total-pentadioxins



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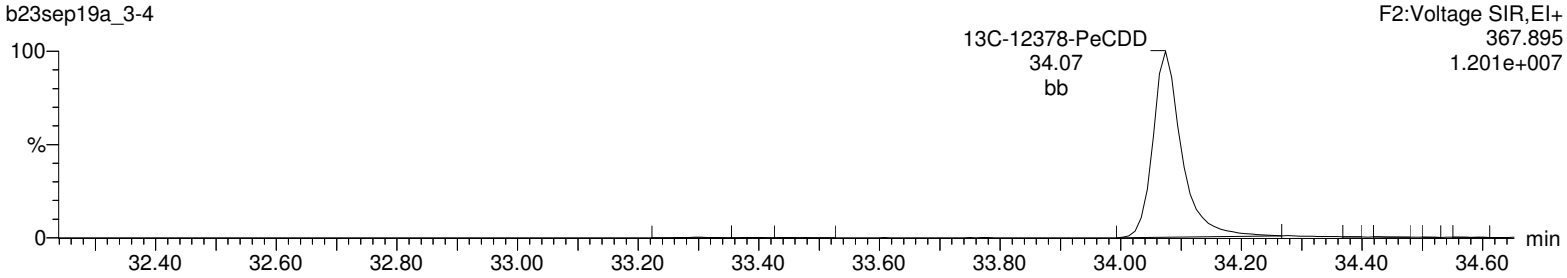

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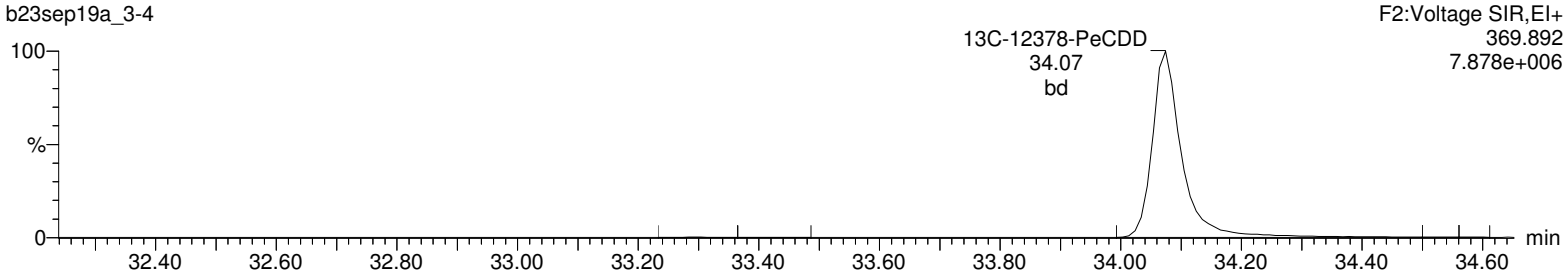
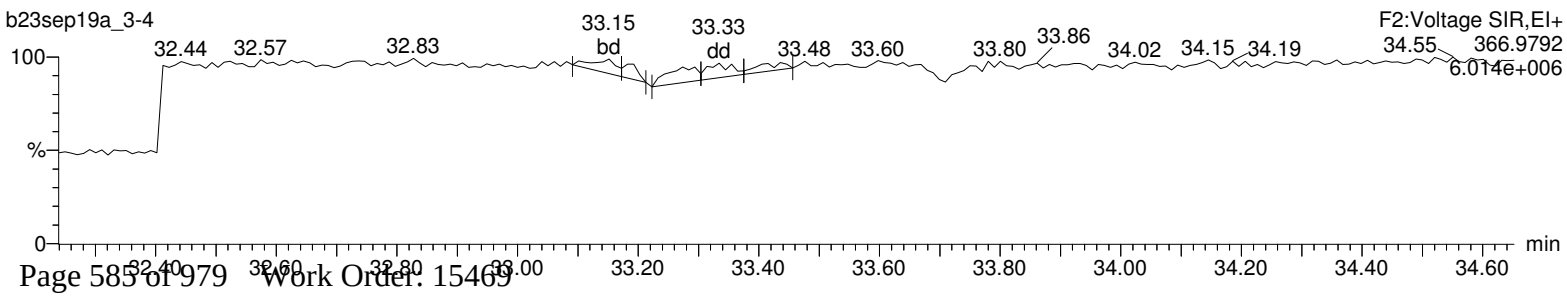


Lock Mass F2



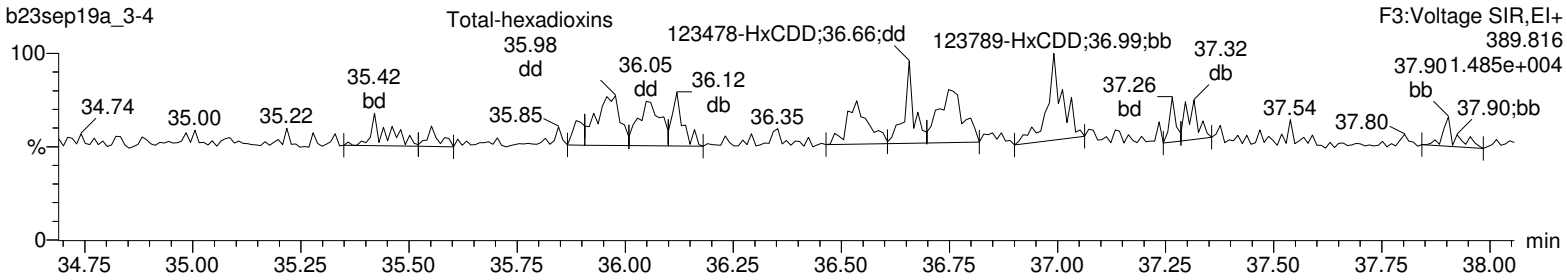
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

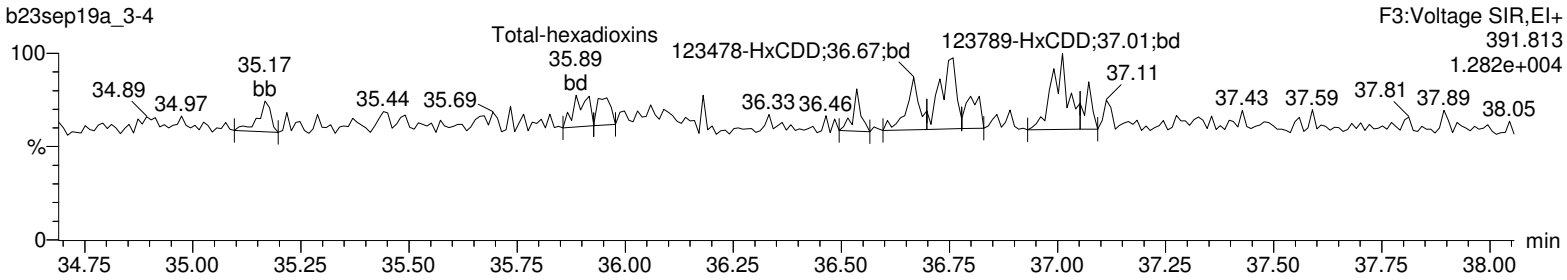
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

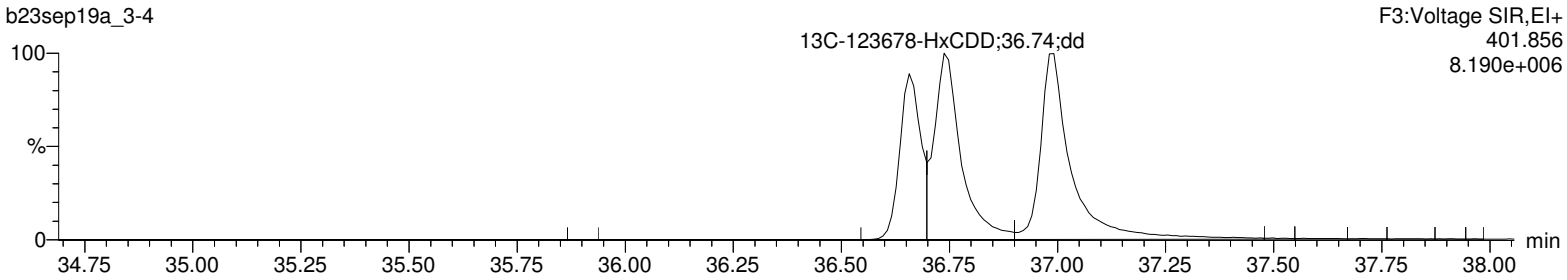
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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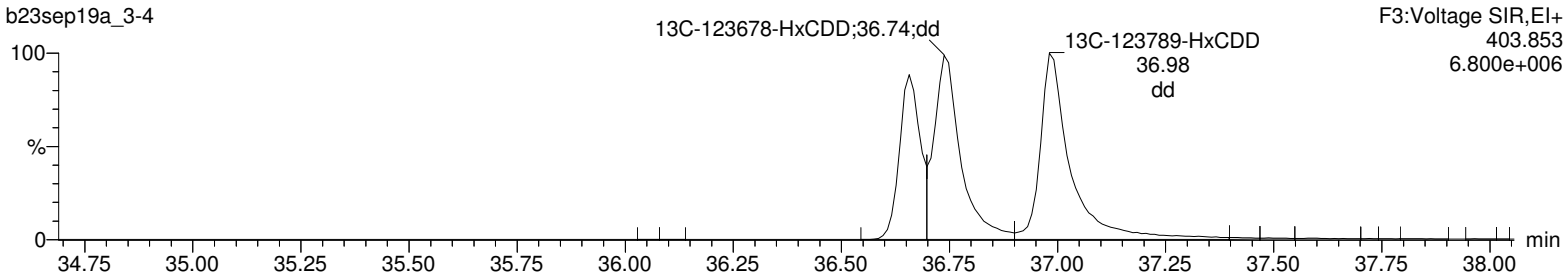
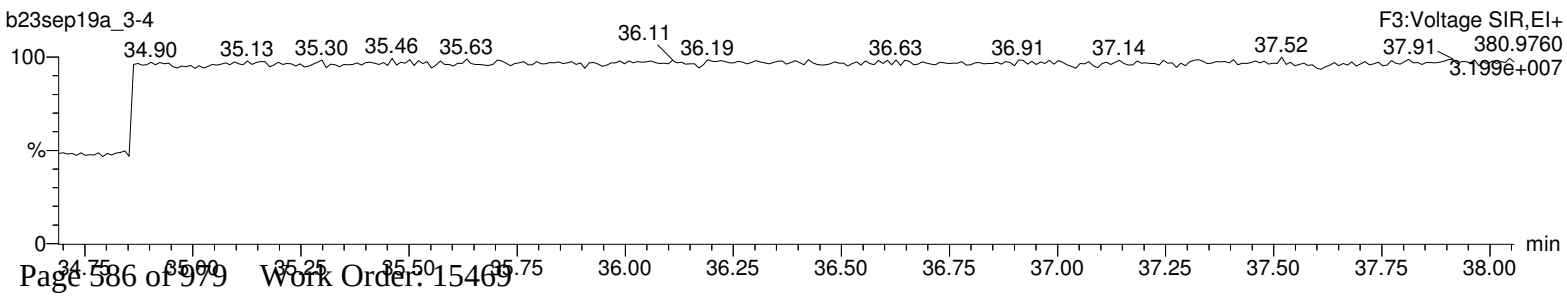


Lock Mass F3



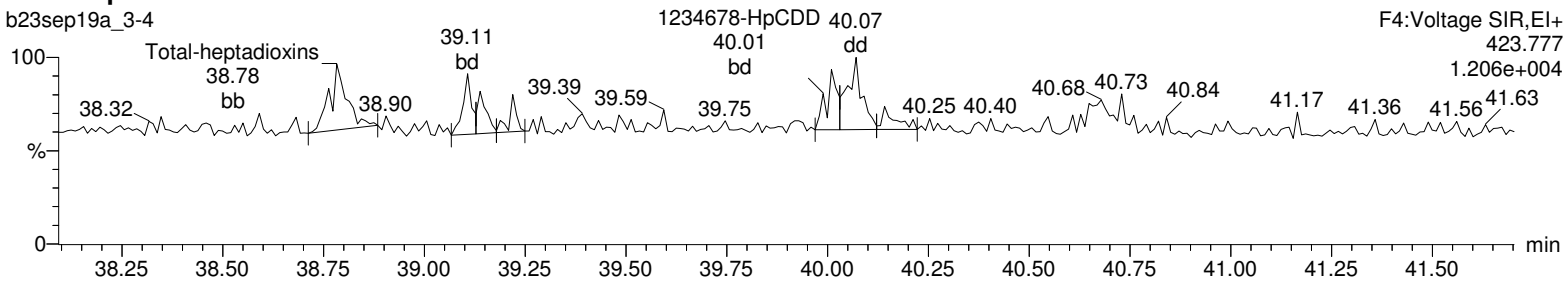
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

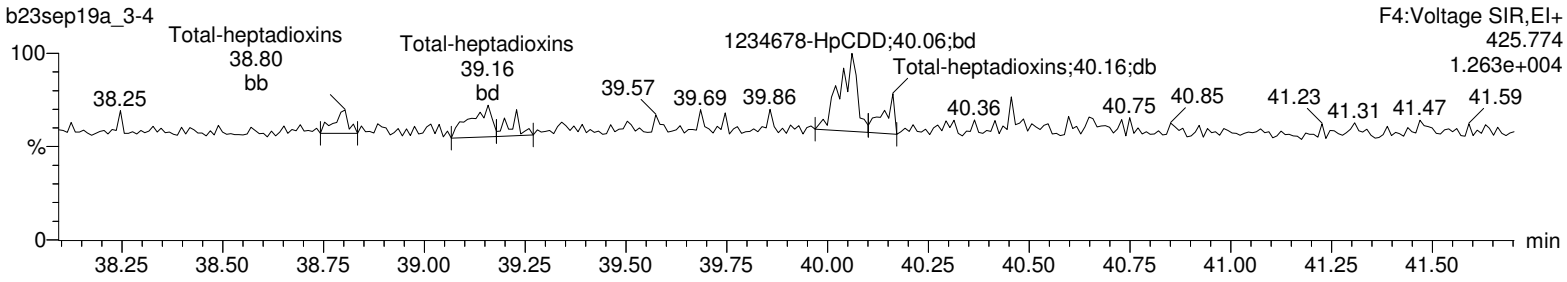
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

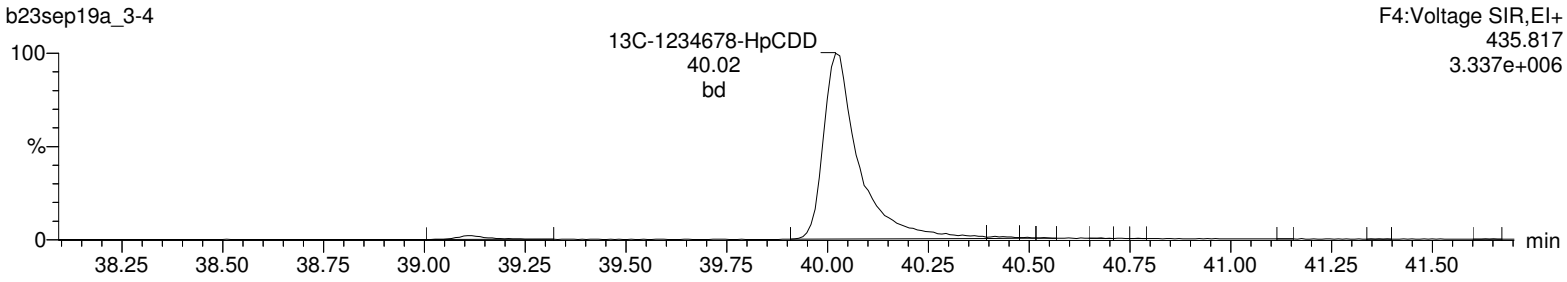
Total-heptadioxins



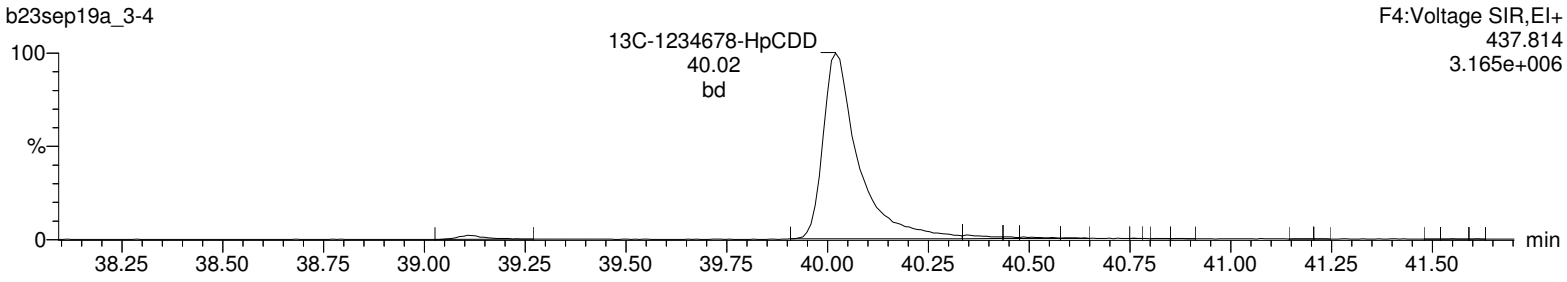
Total-heptadioxins



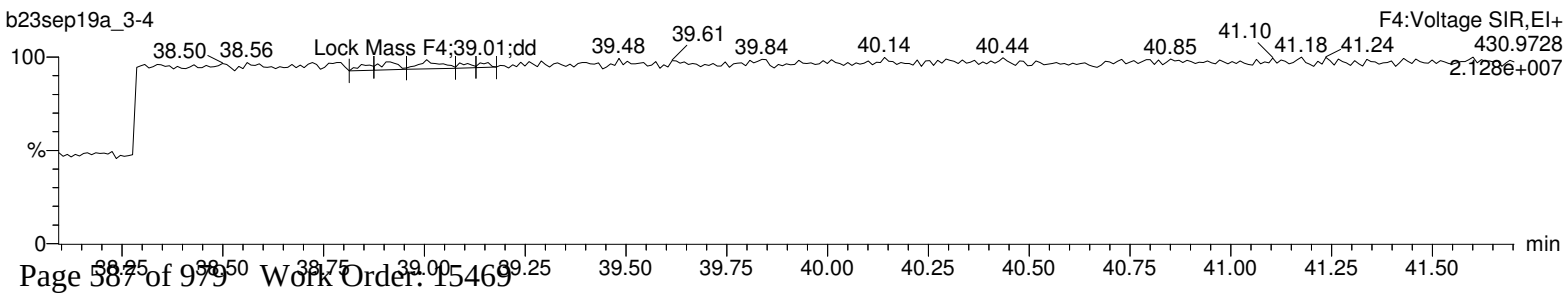
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
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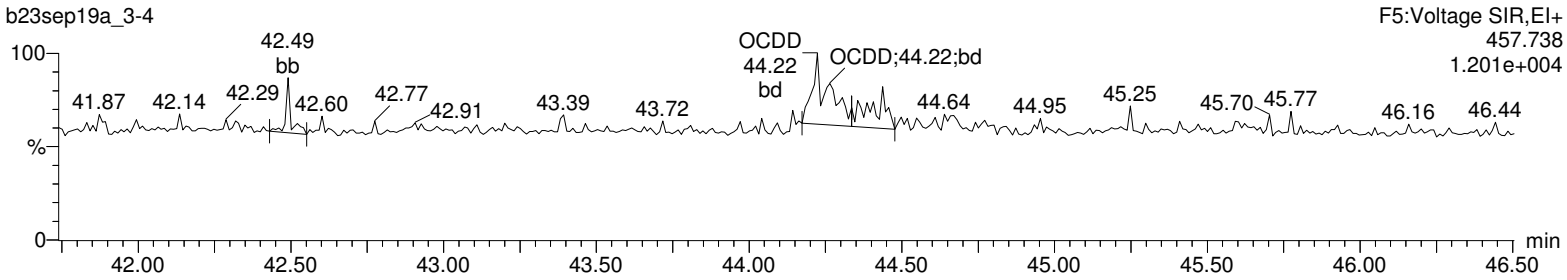
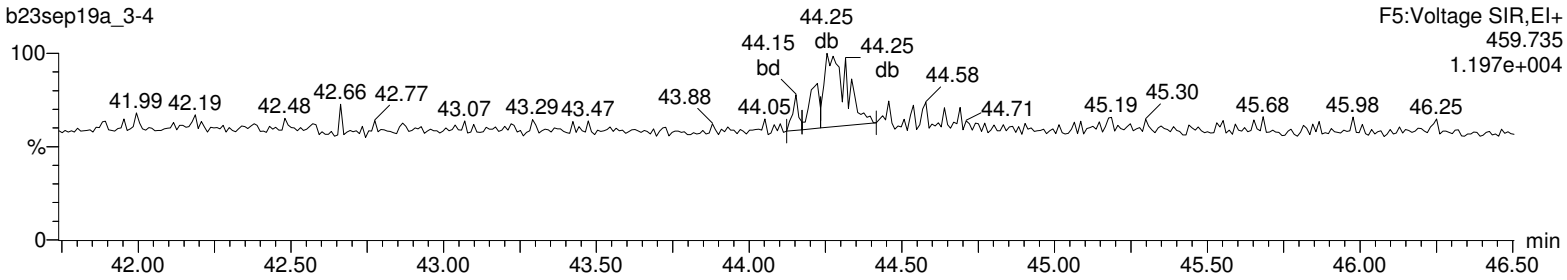
Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

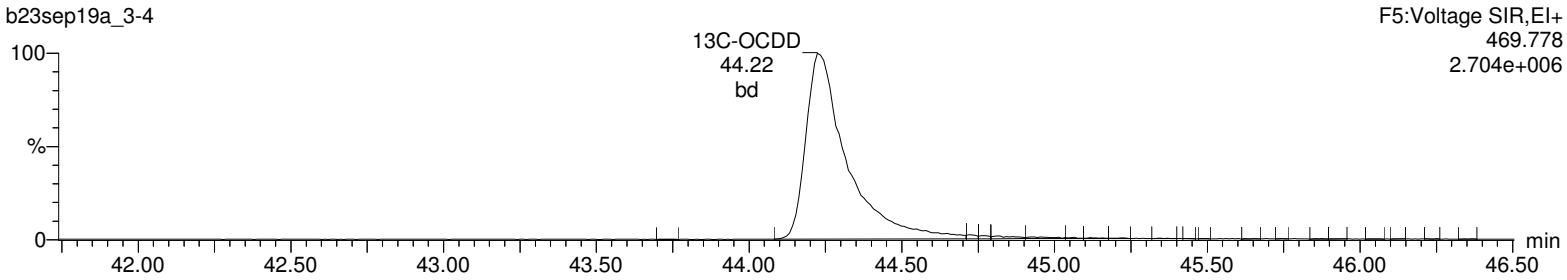
OCDD



OCDD



13C-OCDD



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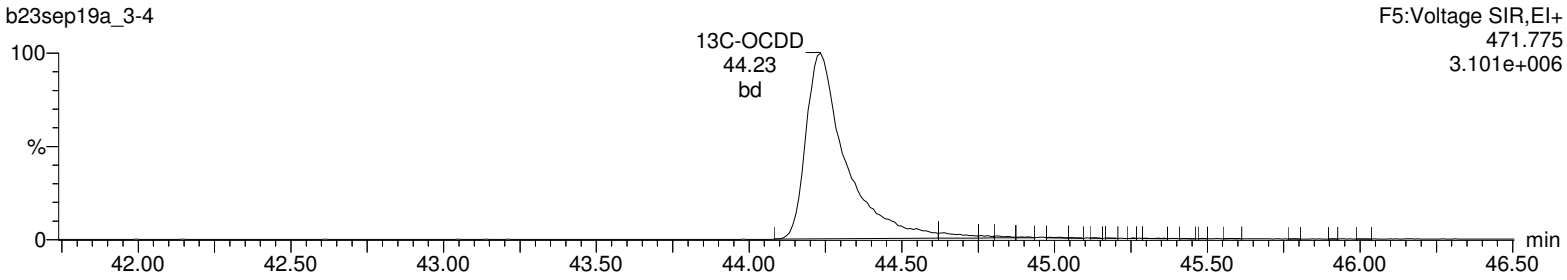
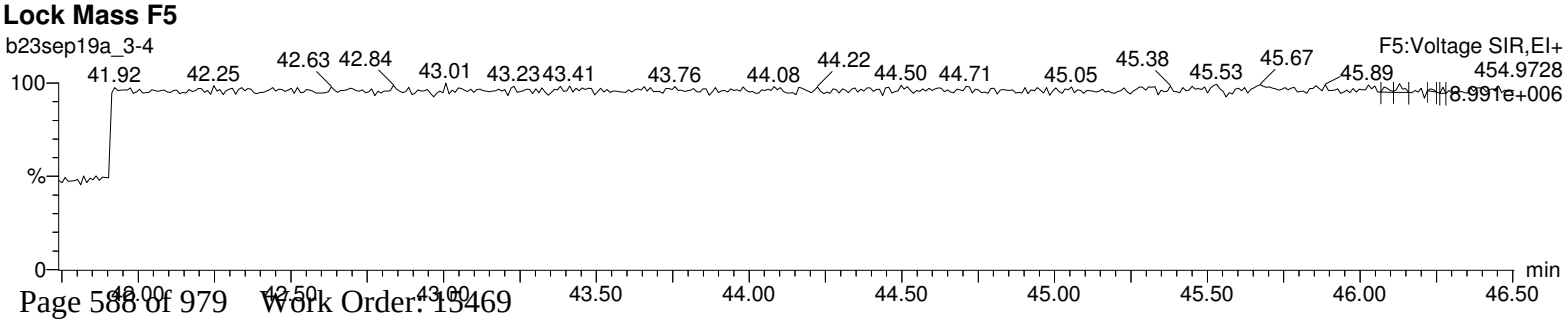


Lock Mass F5



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
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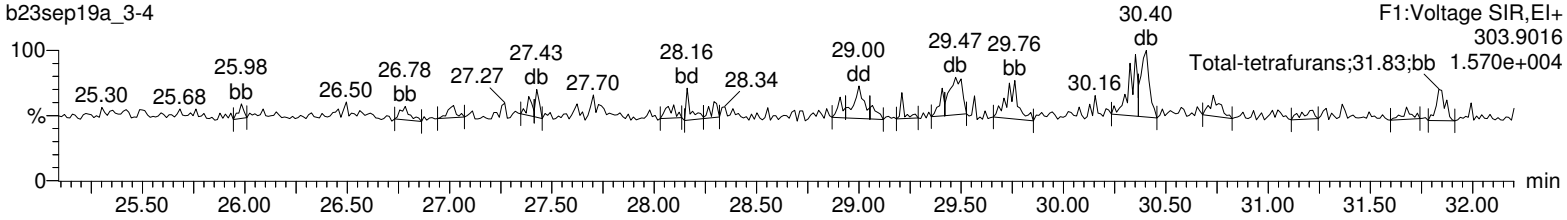
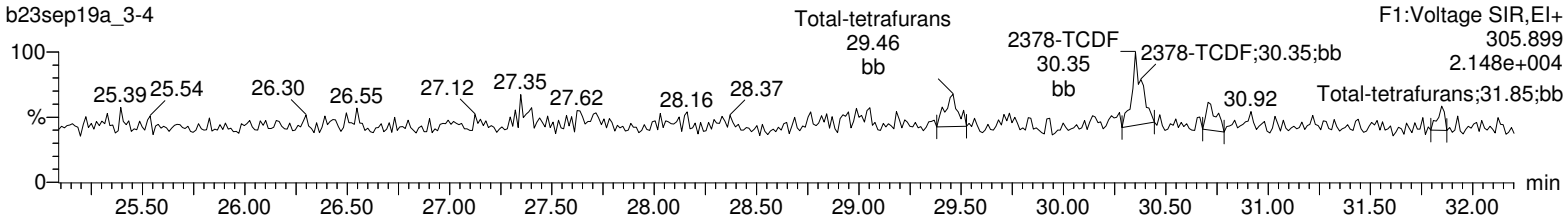
Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

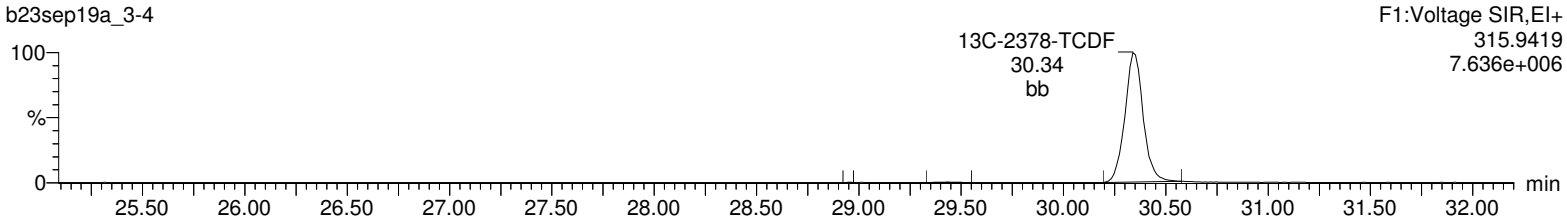
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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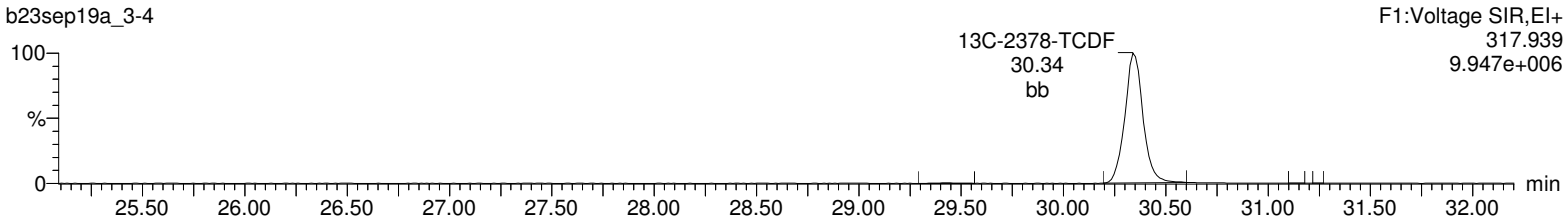
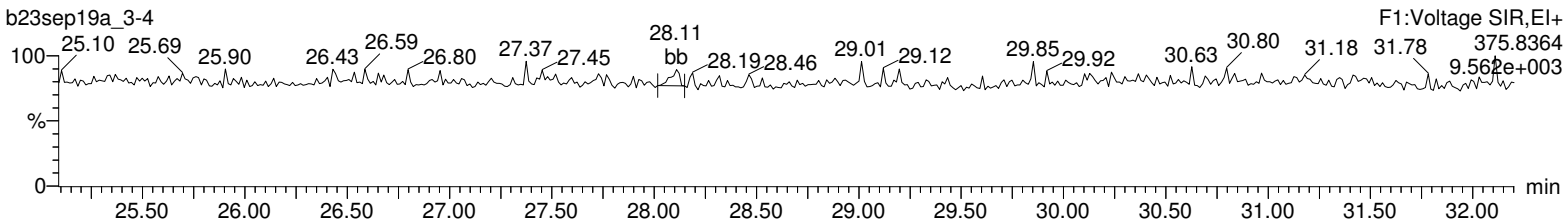
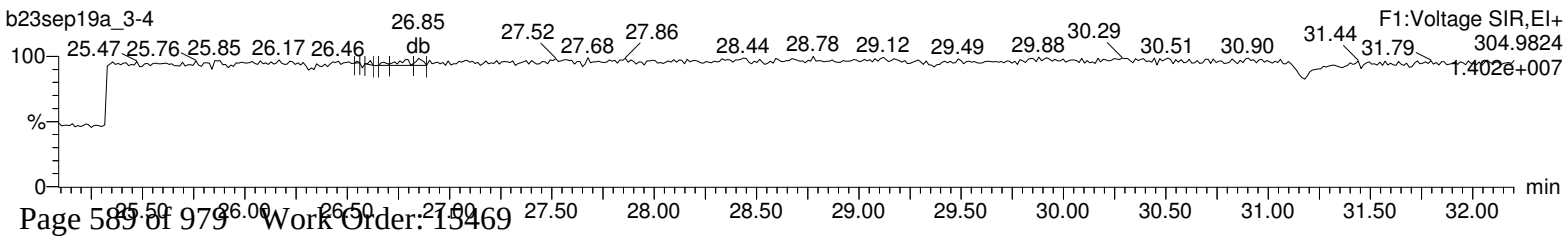


HxDPE



Lock Mass F1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
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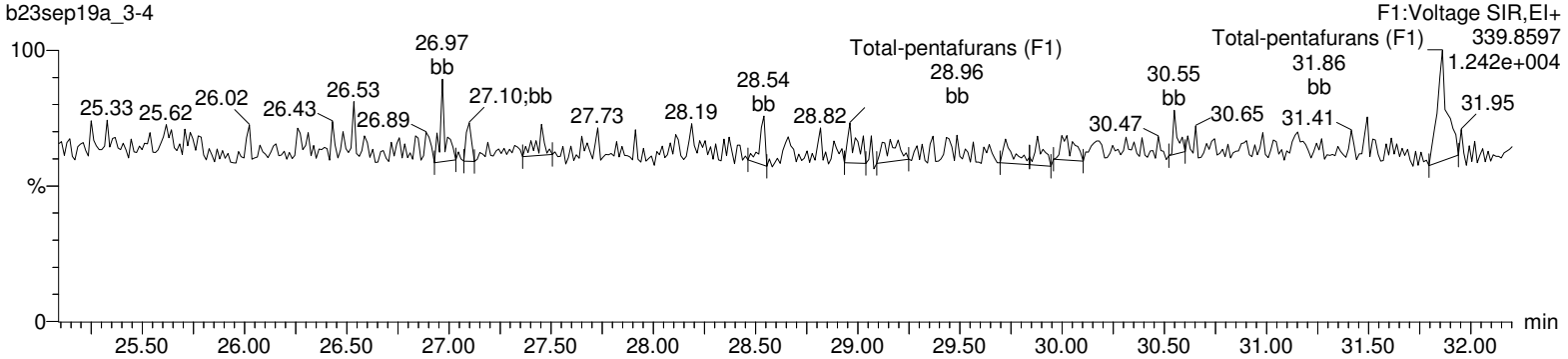
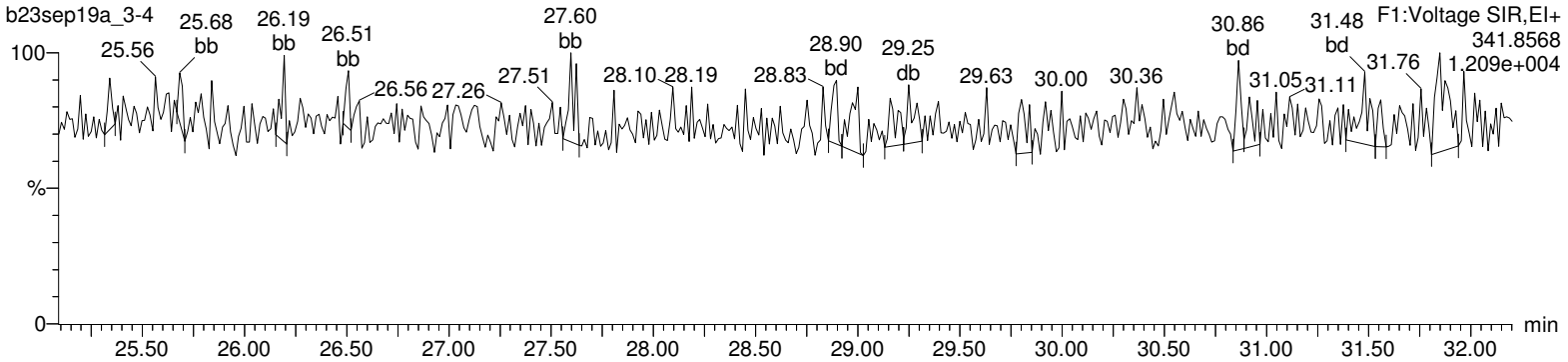
Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

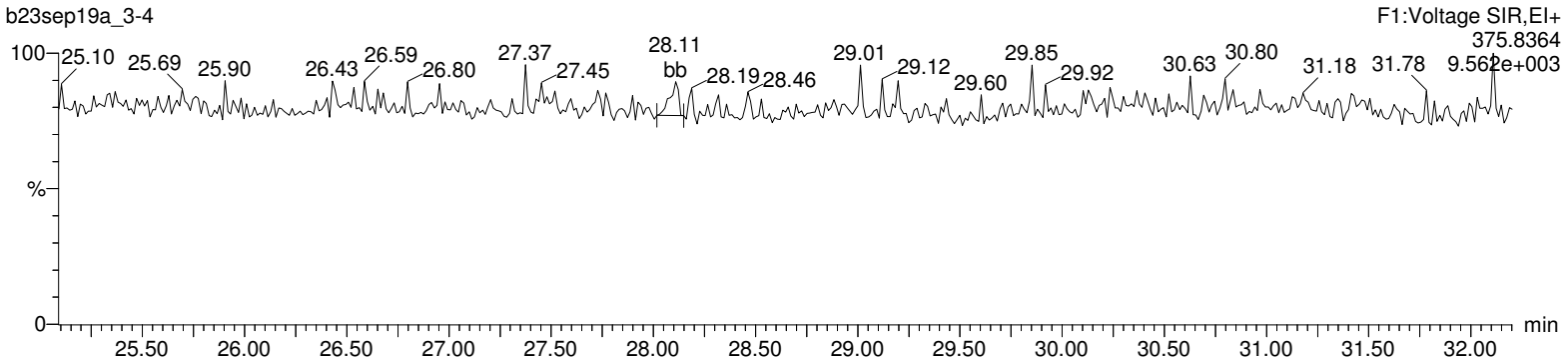
Total-pentafurans (F1)



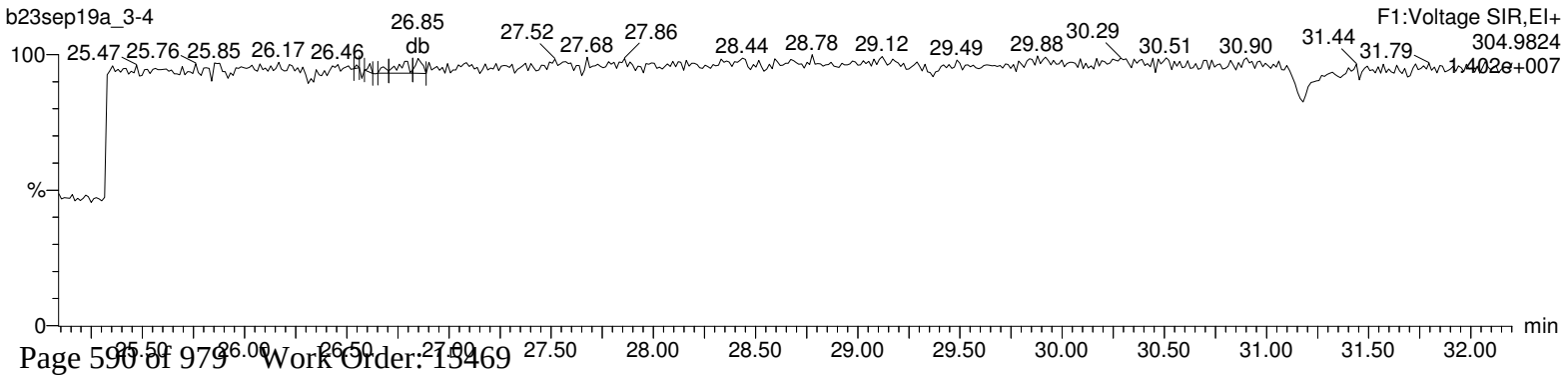
Total-pentafurans (F1)



HxDPE



Lock Mass F1



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
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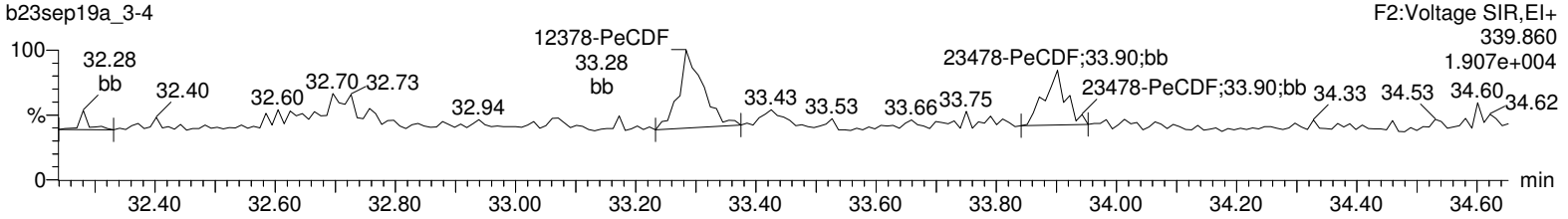
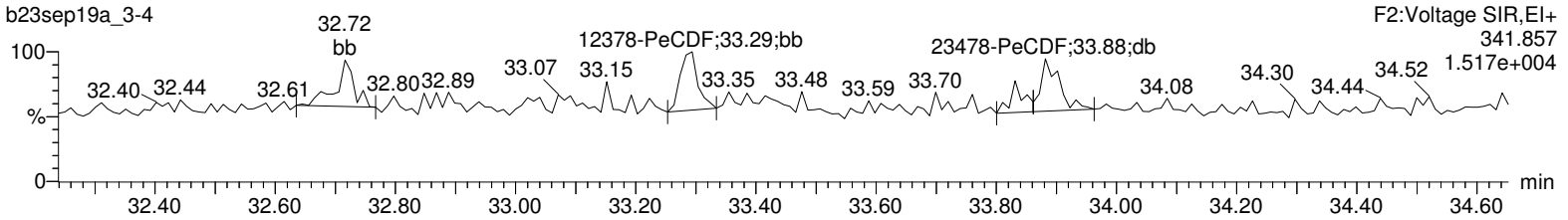
Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

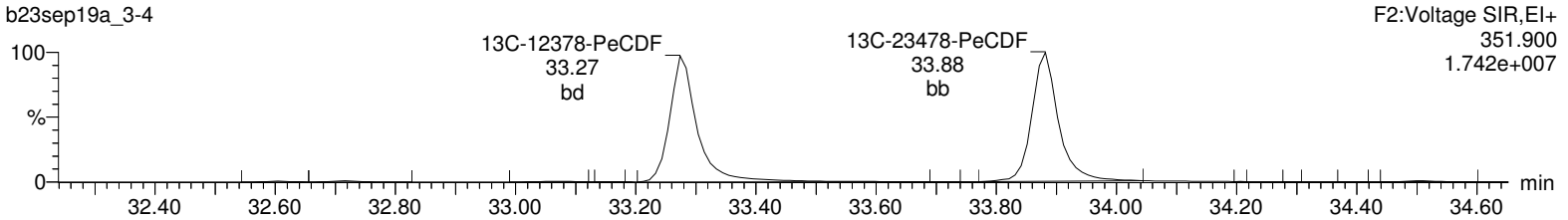
Total-pentafurans



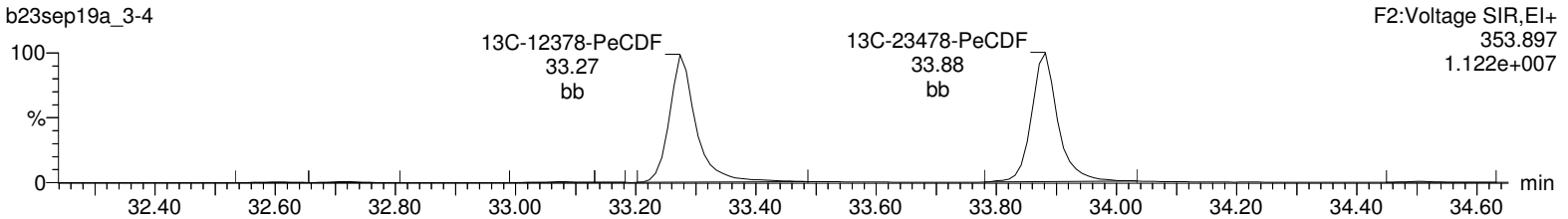
Total-pentafurans



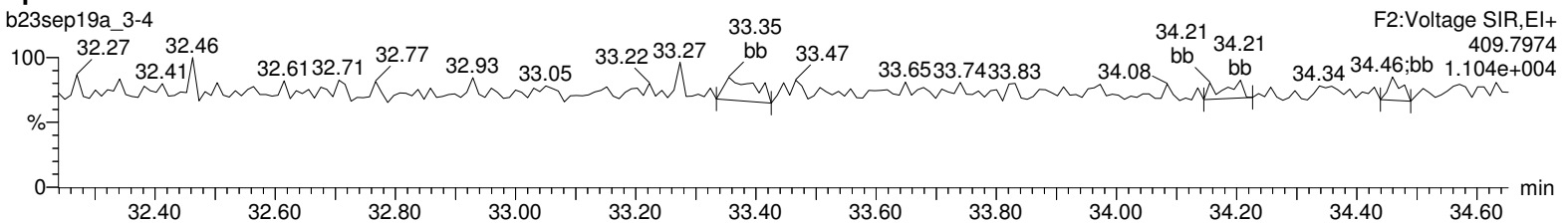
13C-12378-PeCDF



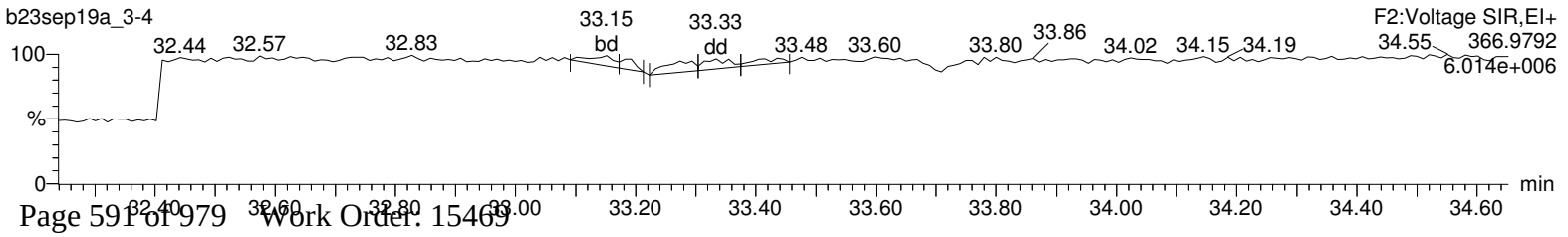
13C-12378-PeCDF



HpDPE



Lock Mass F2



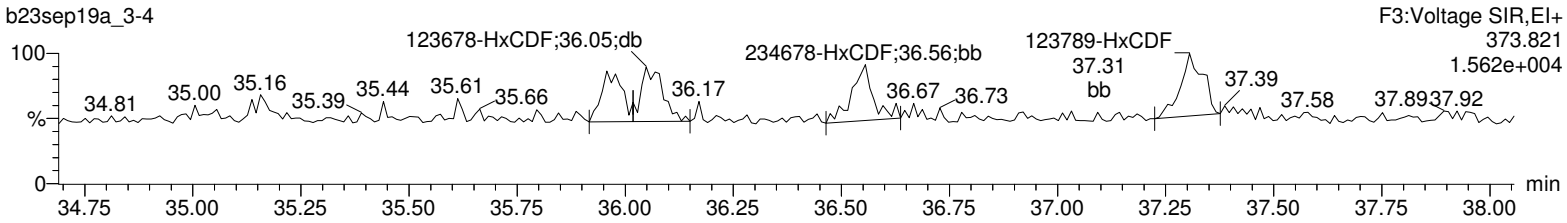
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

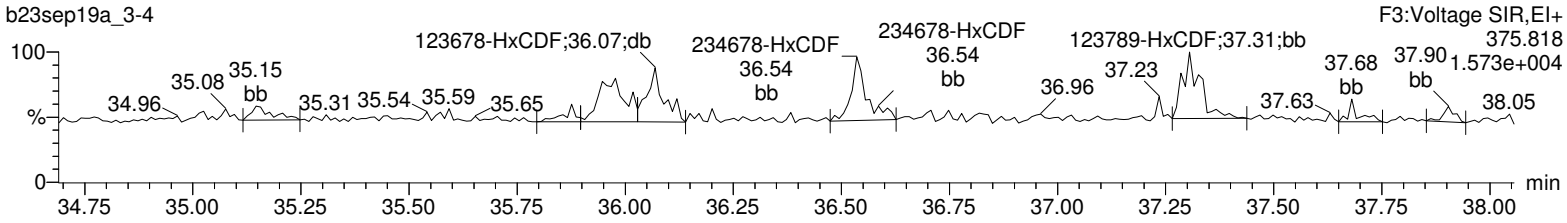
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

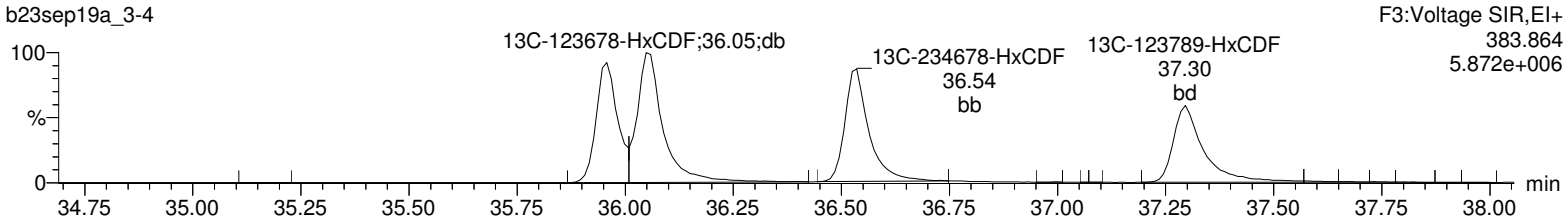
Total-hexafurans



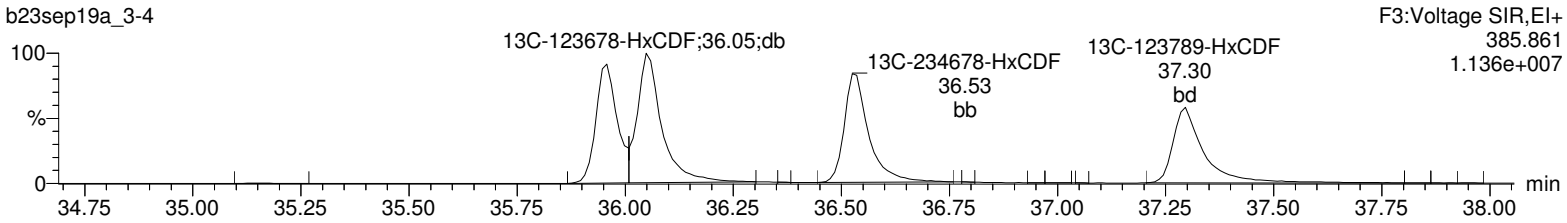
Total-hexafurans



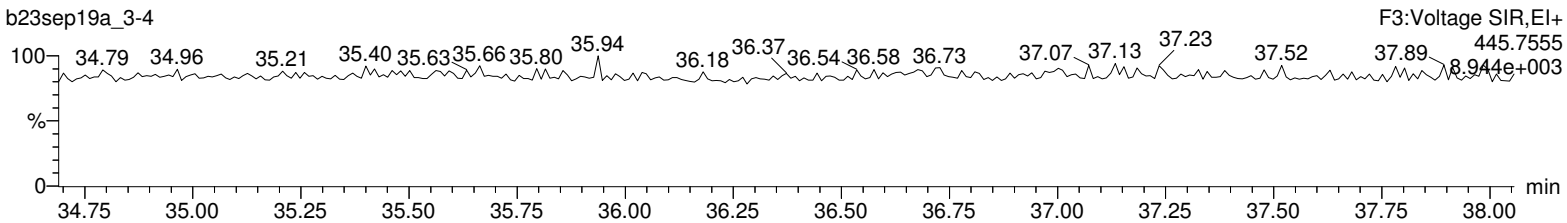
13C-123478-HxCDF



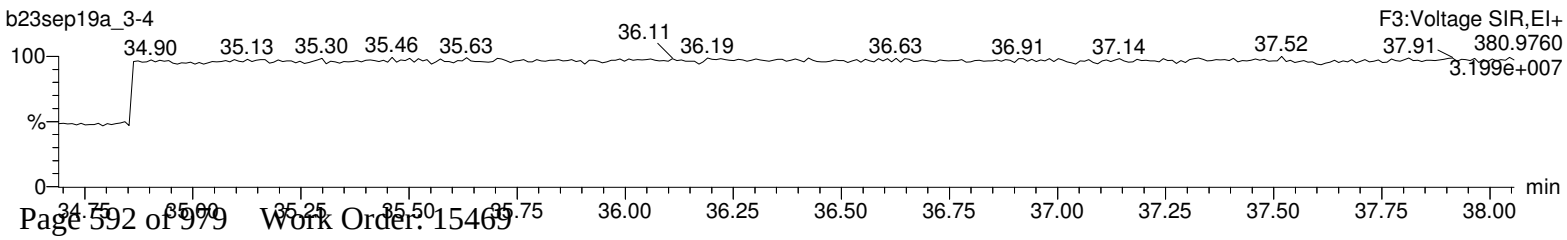
13C-123478-HxCDF



OcDPE



Lock Mass F3



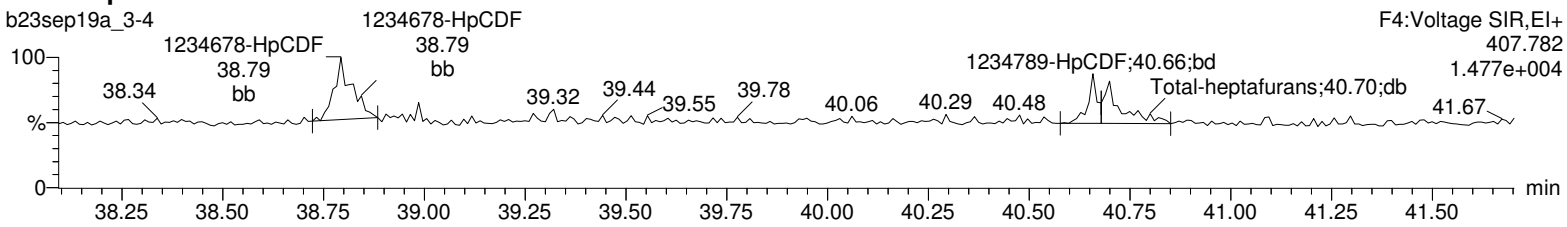
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

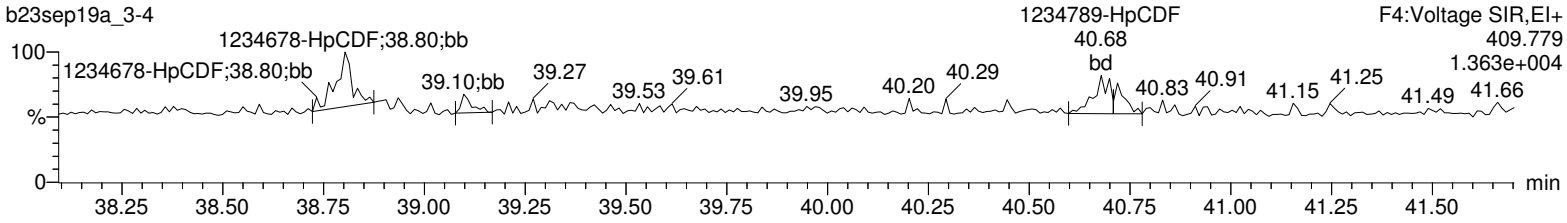
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

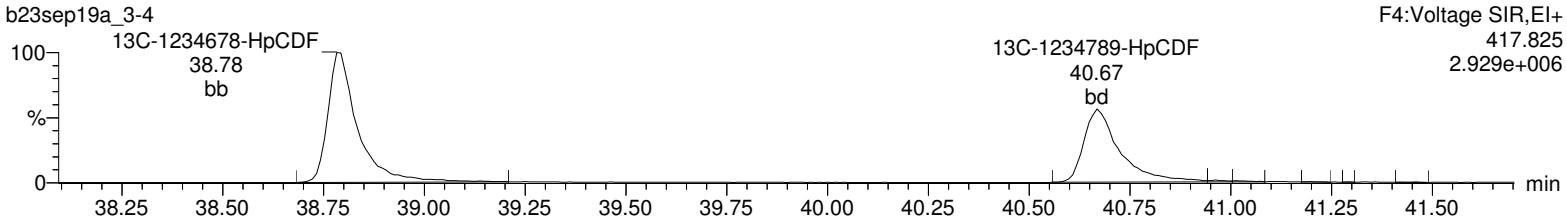
Total-heptafurans



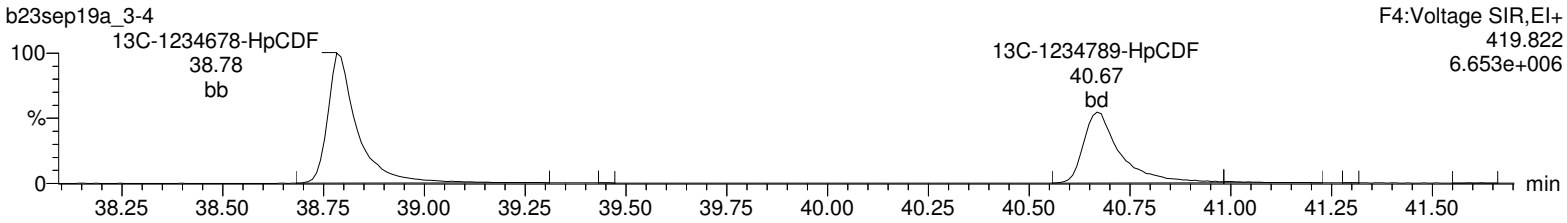
Total-heptafurans



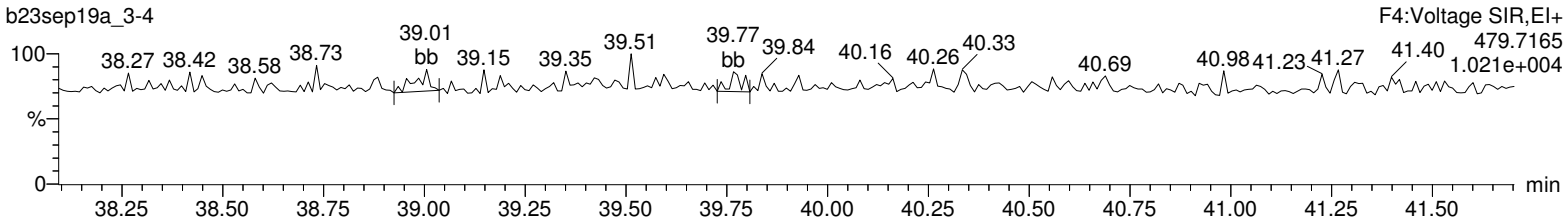
13C-1234678-HpCDF



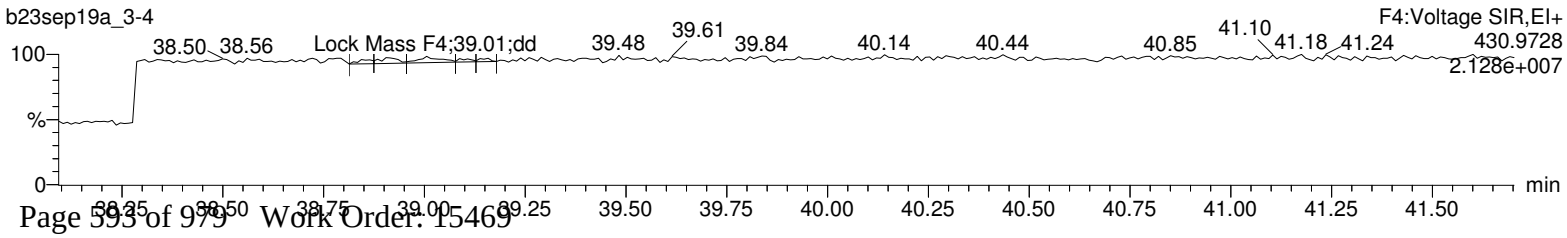
13C-1234678-HpCDF



NoDPE



Lock Mass F4



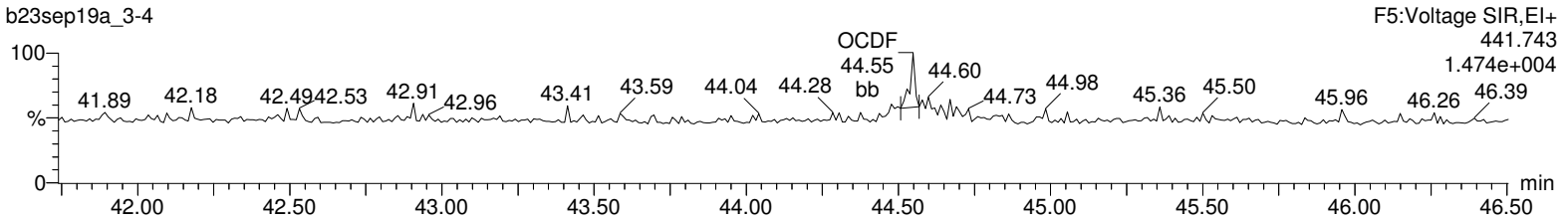
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

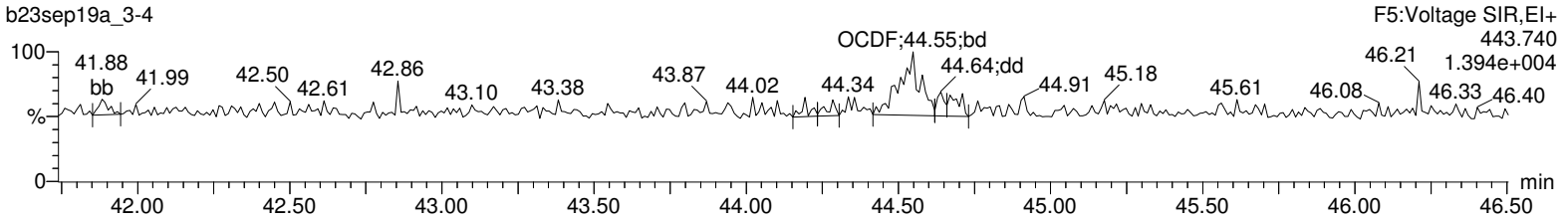
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-4, Date: 24-Sep-2019, Time: 10:23:54, ID: 12024792-1 MB, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

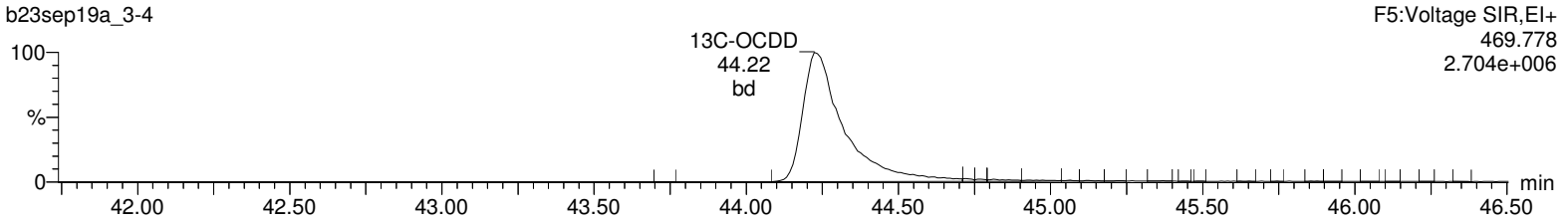
OCDF



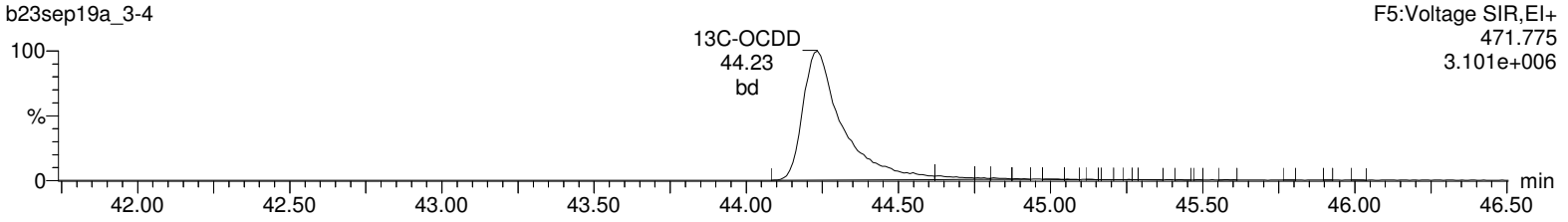
OCDF



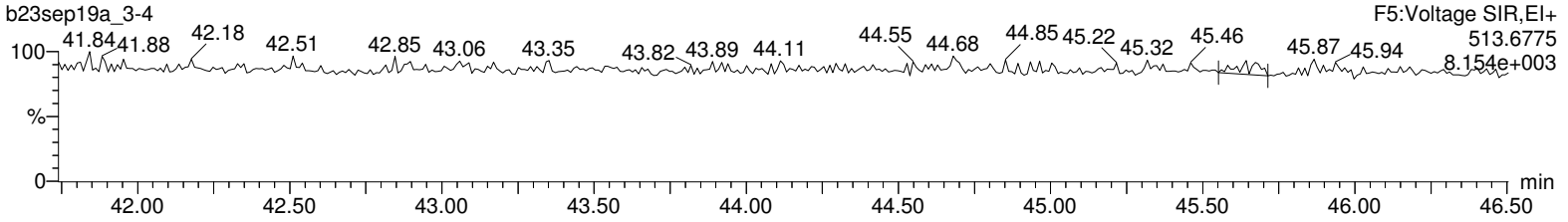
13C-OCDD



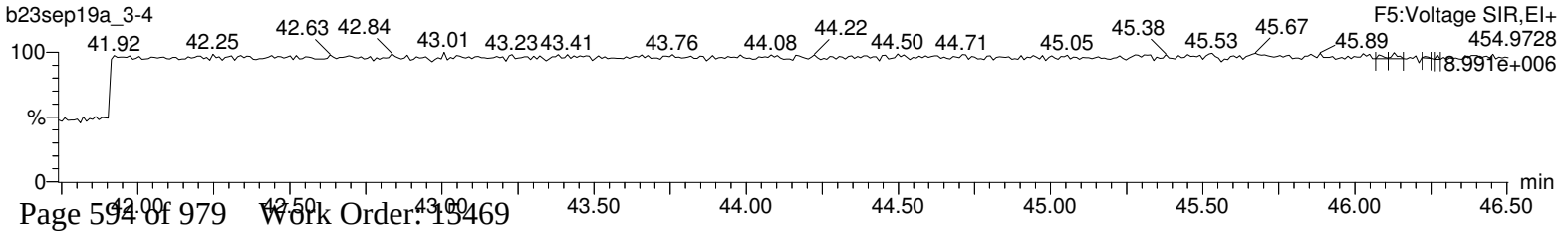
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024793**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**				
Client ID:	**LCS for batch 41745**			**Prep Basis:**	**As Received**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/21/2019 22:43**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b21sep19a_2-1**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		18.1	pg/g	0.082	1.00
40321-76-4	1,2,3,7,8-PeCDD		99.8	pg/g	0.166	5.00
39227-28-6	1,2,3,4,7,8-HxCDD		97.2	pg/g	0.340	5.00
57653-85-7	1,2,3,6,7,8-HxCDD		102	pg/g	0.332	5.00
19408-74-3	1,2,3,7,8,9-HxCDD		106	pg/g	0.342	5.00
35822-46-9	1,2,3,4,6,7,8-HpCDD		102	pg/g	0.526	5.00
3268-87-9	1,2,3,4,6,7,8,9-OCDD		201	pg/g	1.48	10.0
51207-31-9	2,3,7,8-TCDF		20.9	pg/g	0.131	1.00
57117-41-6	1,2,3,7,8-PeCDF		106	pg/g	0.159	5.00
57117-31-4	2,3,4,7,8-PeCDF		107	pg/g	0.148	5.00
70648-26-9	1,2,3,4,7,8-HxCDF		105	pg/g	0.368	5.00
57117-44-9	1,2,3,6,7,8-HxCDF		112	pg/g	0.392	5.00
60851-34-5	2,3,4,6,7,8-HxCDF		109	pg/g	0.406	5.00
72918-21-9	1,2,3,7,8,9-HxCDF		107	pg/g	0.654	5.00
67562-39-4	1,2,3,4,6,7,8-HpCDF		110	pg/g	0.450	5.00
55673-89-7	1,2,3,4,7,8,9-HpCDF		106	pg/g	0.796	5.00
39001-02-0	1,2,3,4,6,7,8,9-OCDF		204	pg/g	1.11	10.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		155	200	pg/g	77.4	(20%-175%)
13C-1,2,3,7,8-PeCDD		144	200	pg/g	72.2	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		147	200	pg/g	73.5	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		160	200	pg/g	80.0	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		150	200	pg/g	74.9	(22%-166%)
13C-OCDD		226	400	pg/g	56.6	(13%-199%)
13C-2,3,7,8-TCDF		133	200	pg/g	66.7	(22%-152%)
13C-1,2,3,7,8-PeCDF		140	200	pg/g	70.1	(21%-192%)
13C-2,3,4,7,8-PeCDF		133	200	pg/g	66.5	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		150	200	pg/g	75.0	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		145	200	pg/g	72.4	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		141	200	pg/g	70.7	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		141	200	pg/g	70.7	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		140	200	pg/g	70.0	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		140	200	pg/g	69.8	(20%-186%)
37Cl-2,3,7,8-TCDD		18.9	20.0	pg/g	94.4	(31%-191%)

Comments:

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 09:19:59 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.43e4	5.97e4	1.04e5	31.15	1.000	0.74	NO	9.031	0.0410	6.84e5	1387	493.4	8.30e5	1253	662.8	bb	dd
2	12378-PeCDD	2.10e5	1.37e5	3.46e5	34.08	1.000	1.54	NO	49.883	0.0831	3.94e6	2478	1590.1	2.59e6	2116	1226.2	bd	bd
3	123478-HxCDD	1.39e5	1.13e5	2.52e5	36.67	1.001	1.24	NO	48.581	0.170	2.64e6	4118	642.1	2.11e6	2549	826.8	dd	bd
4	123678-HxCDD	2.03e5	1.62e5	3.65e5	36.75	1.000	1.25	NO	50.910	0.166	2.93e6	4118	711.9	2.26e6	2549	886.1	dd	dd
5	123789-HxCDD	1.80e5	1.42e5	3.22e5	36.99	1.007	1.27	NO	53.026	0.171	2.37e6	4118	576.7	1.90e6	2549	745.5	dd	dd
6	1234678-HpCDD	1.11e5	1.08e5	2.19e5	40.02	1.000	1.03	NO	50.995	0.263	1.20e6	2561	469.0	1.17e6	2195	531.2	bd	bd
7	OCDD	1.28e5	1.45e5	2.73e5	44.23	1.000	0.88	NO	100.736	0.740	9.02e5	1680	536.6	1.00e6	3905	256.1	bd	bd
8	2378-TCDF	5.23e4	6.51e4	1.17e5	30.36	1.001	0.80	NO	10.446	0.0654	5.24e5	1459	359.4	6.57e5	1466	448.1	bb	bb
9	12378-PeCDF	3.12e5	2.00e5	5.11e5	33.27	1.000	1.56	NO	52.914	0.0795	6.41e6	2509	2553.7	4.20e6	3732	1124.7	bd	bd
10	23478-PeCDF	3.28e5	2.13e5	5.41e5	33.88	1.000	1.54	NO	53.722	0.0740	7.01e6	2509	2793.7	4.50e6	3732	1205.2	bd	bd
11	123478-HxCDF	2.16e5	1.74e5	3.90e5	35.96	1.000	1.24	NO	52.391	0.184	4.16e6	5643	736.5	3.35e6	4648	721.1	bd	bd
12	123678-HxCDF	2.72e5	2.17e5	4.88e5	36.06	1.000	1.25	NO	56.099	0.196	4.09e6	5643	724.3	3.27e6	4648	704.0	dd	db
13	234678-HxCDF	2.35e5	1.86e5	4.21e5	36.53	1.000	1.26	NO	54.362	0.203	3.82e6	5643	677.6	3.03e6	4648	651.1	bd	bd
14	123789-HxCDF	1.84e5	1.46e5	3.30e5	37.29	1.000	1.25	NO	53.734	0.327	2.42e6	5643	428.4	1.94e6	4648	416.8	bd	bd
15	1234678-HpCDF	1.73e5	1.71e5	3.44e5	38.79	1.000	1.01	NO	54.849	0.225	2.15e6	3123	686.9	2.04e6	3905	523.3	bb	bb
16	1234789-HpCDF	1.27e5	1.18e5	2.45e5	40.67	1.000	1.08	NO	53.110	0.398	1.28e6	3123	410.9	1.22e6	3905	311.4	bd	bb
17	OCDF	1.47e5	1.60e5	3.07e5	44.52	1.007	0.92	NO	101.893	0.553	1.02e6	1609	632.5	1.18e6	3031	390.2	bd	bd
18	13C-2378-TCDD	5.63e5	7.31e5	1.29e6	31.14	1.018	0.77	NO	77.401	0.0719	7.87e6	3130	2513.5	1.03e7	2171	4763.7	bd	bd
19	13C-12378-PeCDD	4.89e5	3.28e5	8.17e5	34.06	1.114	1.49	NO	72.190	0.0924	9.73e6	2962	3286.8	6.33e6	1648	3843.2	bb	bd
20	13C-123478-HxCDD	3.07e5	2.49e5	5.56e5	36.65	0.991	1.23	NO	73.469	0.203	5.79e6	5098	1135.6	4.74e6	3052	1551.8	bd	bd
21	13C-123678-HxCDD	4.45e5	3.66e5	8.11e5	36.74	0.993	1.22	NO	79.958	0.152	6.23e6	5098	1222.7	5.10e6	3052	1670.6	dd	dd
22	13C-1234678-HpCDD	2.29e5	2.26e5	4.55e5	40.01	1.082	1.02	NO	74.873	0.230	2.42e6	4272	565.6	2.42e6	3137	770.0	bd	bd
23	13C-OCDD	2.77e5	3.16e5	5.93e5	44.22	1.196	0.88	NO	113.200	0.290	1.93e6	3422	563.7	2.20e6	4619	477.1	bd	bd
24	13C-2378-TCDF	5.41e5	7.18e5	1.26e6	30.34	0.992	0.75	NO	66.727	0.101	5.38e6	4666	1152.7	7.21e6	3753	1921.9	bd	bd
25	13C-12378-PeCDF	6.42e5	4.23e5	1.06e6	33.27	1.088	1.52	NO	70.084	0.163	1.30e7	4847	2688.6	8.29e6	6084	1363.2	bb	bb
26	13C-23478-PeCDF	6.31e5	4.05e5	1.04e6	33.87	1.108	1.56	NO	66.459	0.159	1.32e7	4847	2725.4	8.57e6	6084	1407.9	bb	bb
27	13C-123478-HxCDF	2.25e5	4.31e5	6.56e5	35.95	0.972	0.52	NO	75.004	0.291	4.21e6	5027	837.6	7.92e6	8450	937.0	bd	bd
28	13C-123678-HxCDF	2.78e5	5.48e5	8.26e5	36.05	0.975	0.51	NO	72.435	0.223	4.20e6	5027	834.9	8.11e6	8450	960.2	db	dd
29	13C-234678-HxCDF	2.39e5	4.46e5	6.85e5	36.53	0.988	0.54	NO	70.702	0.263	3.91e6	5027	778.7	7.22e6	8450	854.6	bd	bb
30	13C-123789-HxCDF	2.01e5	3.77e5	5.78e5	37.28	1.008	0.53	NO	70.742	0.312	2.58e6	5027	512.6	4.80e6	8450	568.3	dd	bd
31	13C-1234678-HpCDF	1.63e5	3.64e5	5.27e5	38.78	1.049	0.45	NO	70.006	0.188	2.03e6	2931	691.0	4.46e6	4571	975.0	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Tuesday, September 24, 2019 09:19:59 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.16e5	2.61e5	3.76e5	40.66	1.099	0.44	NO	69.819	0.263	1.11e6	2931	377.8	2.57e6	4571	562.8	bd	bd
33	13C-1234-TCDD	6.35e5	8.18e5	1.45e6	30.58	0.000	0.78	NO	100.000	0.0828	7.00e6	3130	2235.4	8.96e6	2171	4127.1	bb	bb
34	13C-123789-HxCDD	5.22e5	4.38e5	9.59e5	36.98	0.000	1.19	NO	100.000	0.160	6.91e6	5098	1354.8	5.67e6	3052	1857.8	dd	dd
35	37Cl-2378-TCDD	1.48e5		1.48e5	31.15	1.019			9.442	0.0209	2.19e6	1441	1519.7				bb	

Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

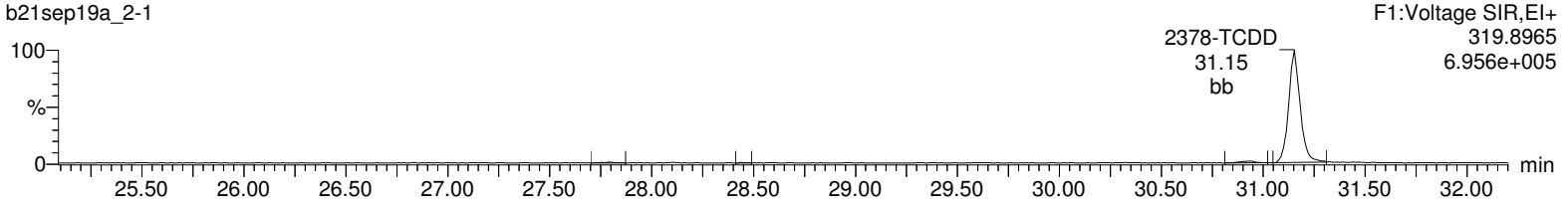
Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

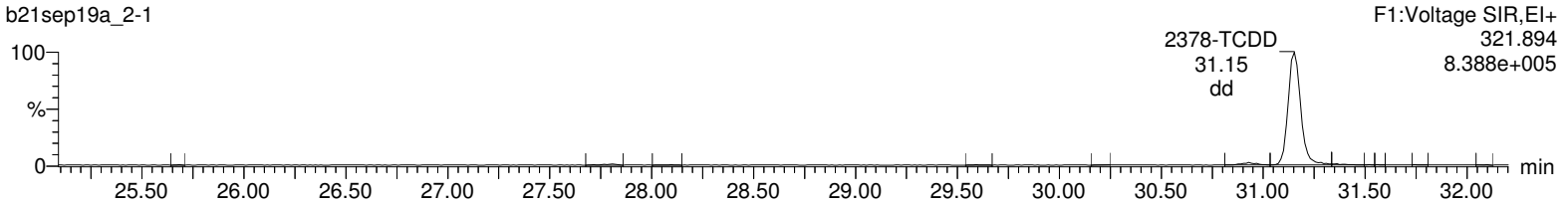
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

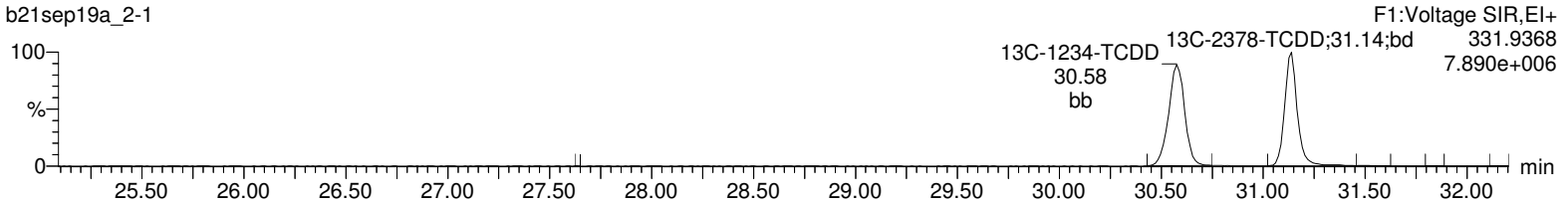
Total-tetradioxins



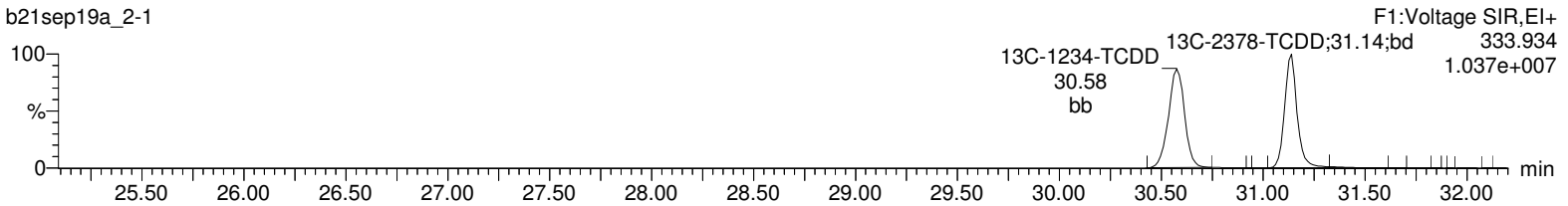
Total-tetradioxins



13C-2378-TCDD



13C-2378-TCDD



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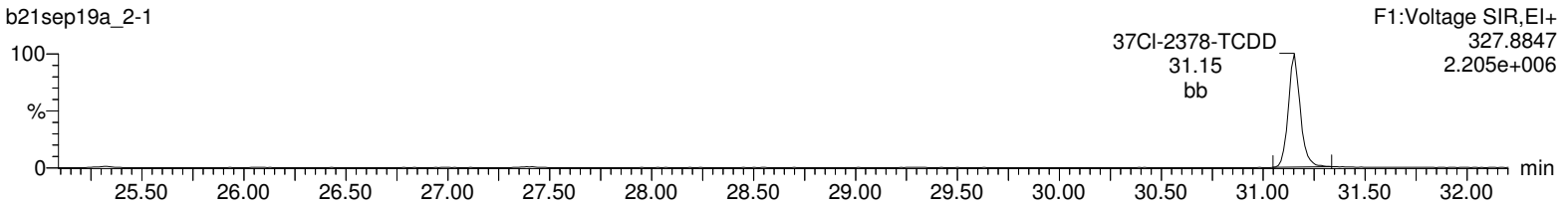
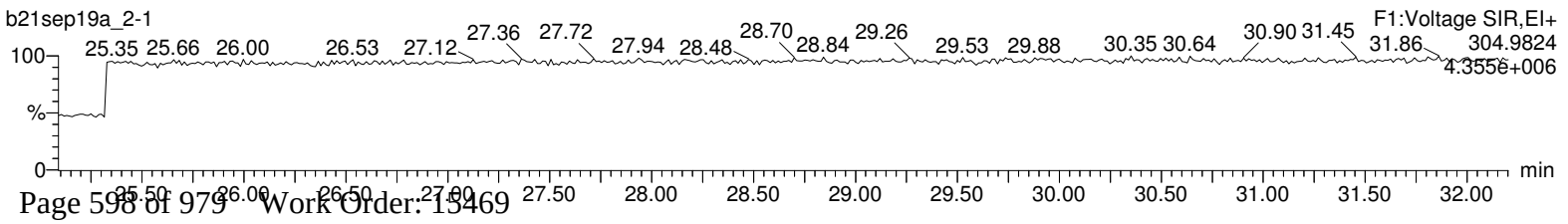


Lock Mass F1



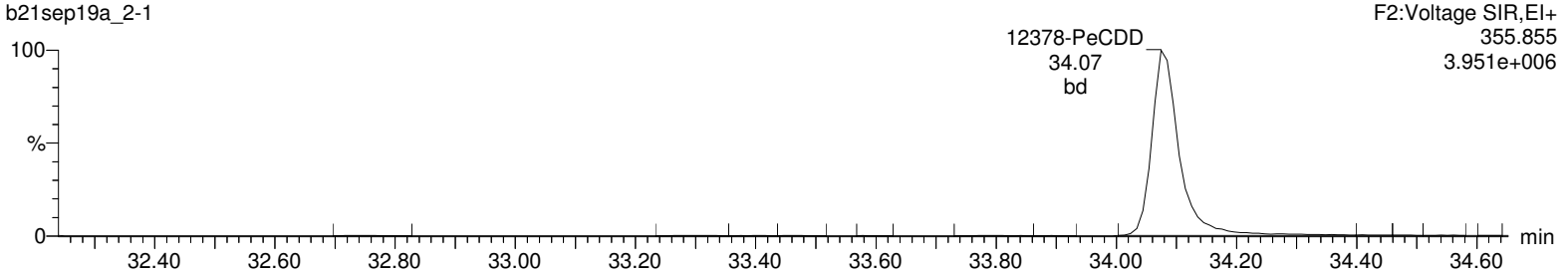
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

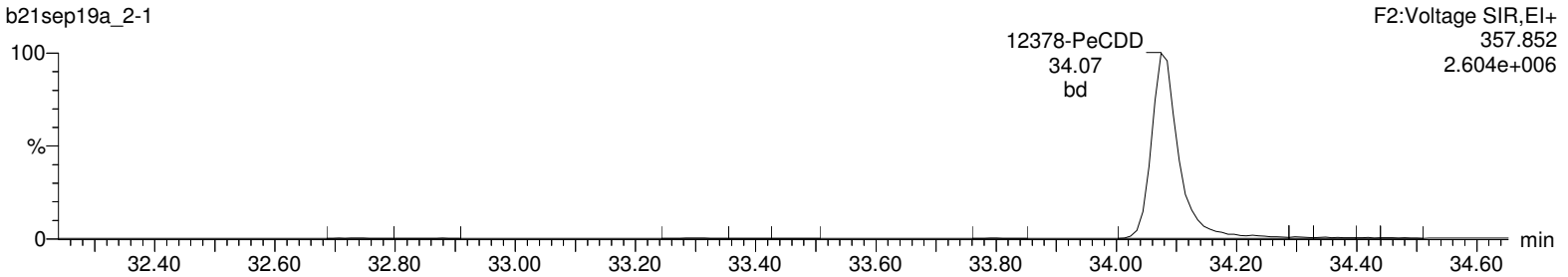
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

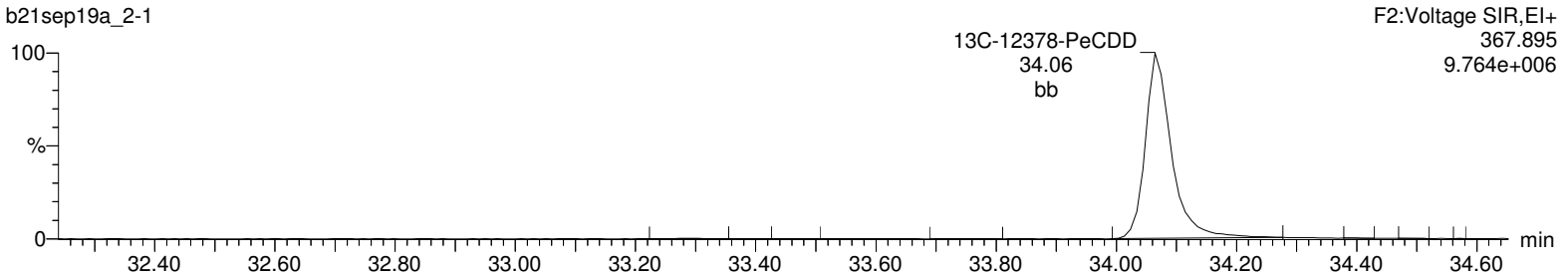
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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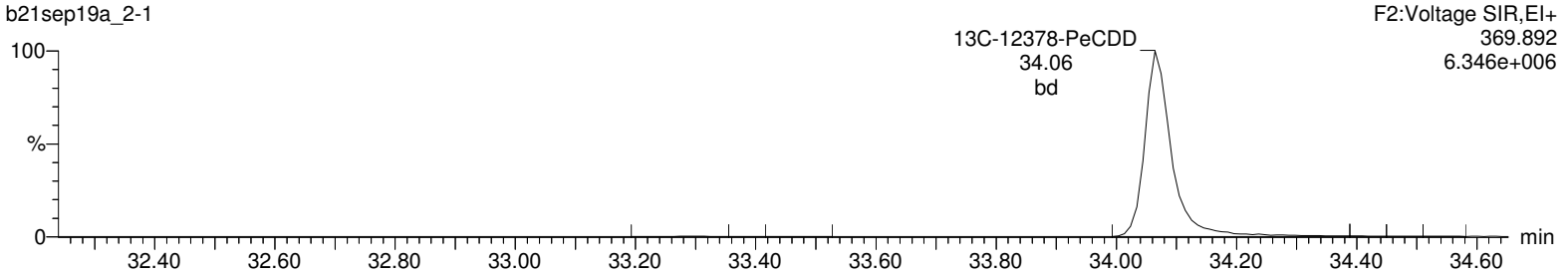
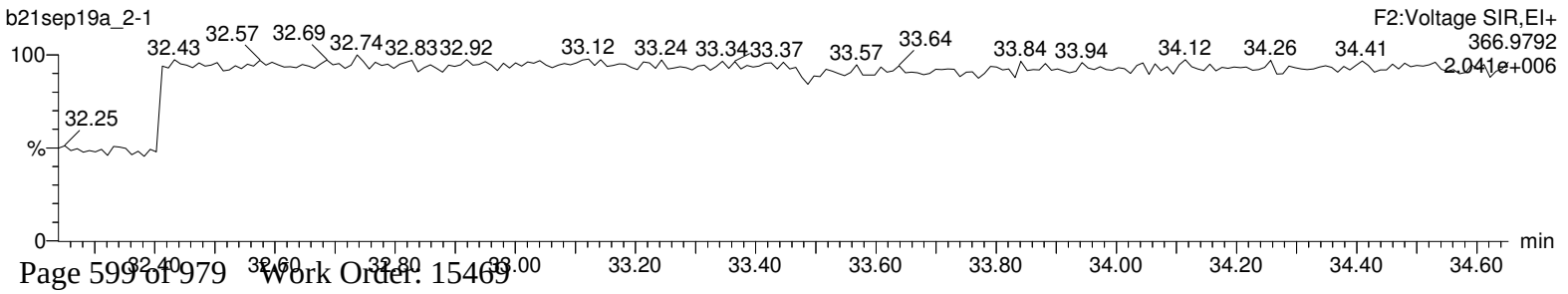


Lock Mass F2



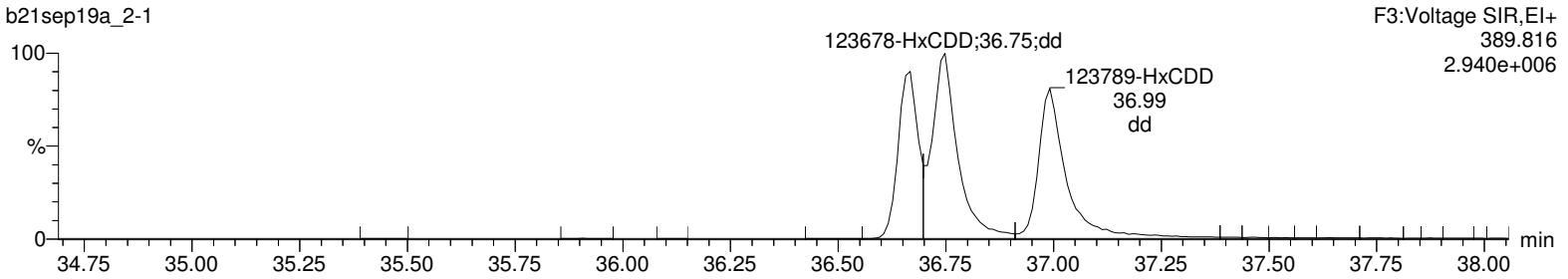
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

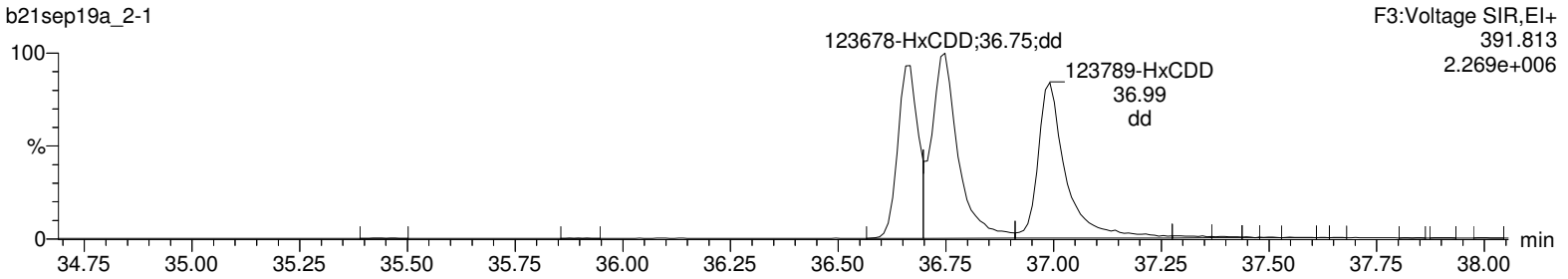
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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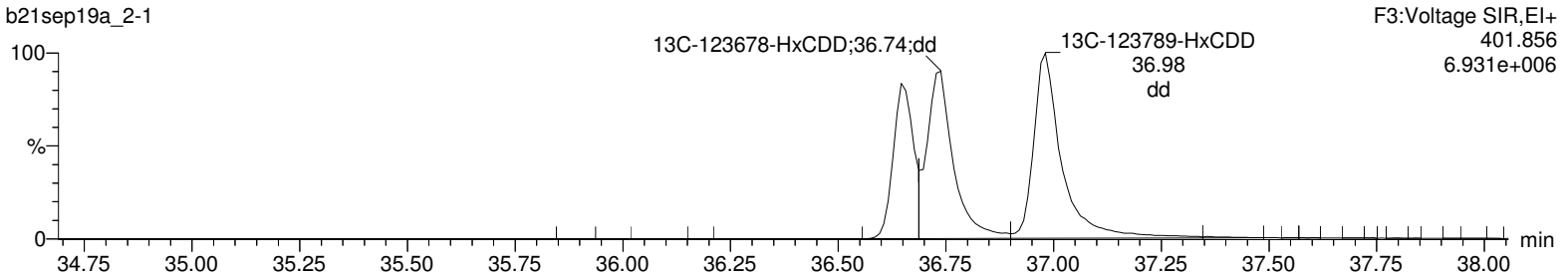

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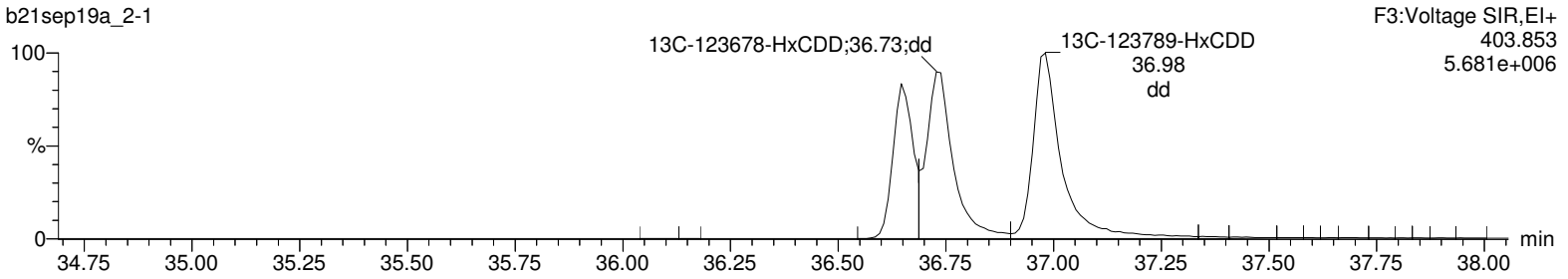
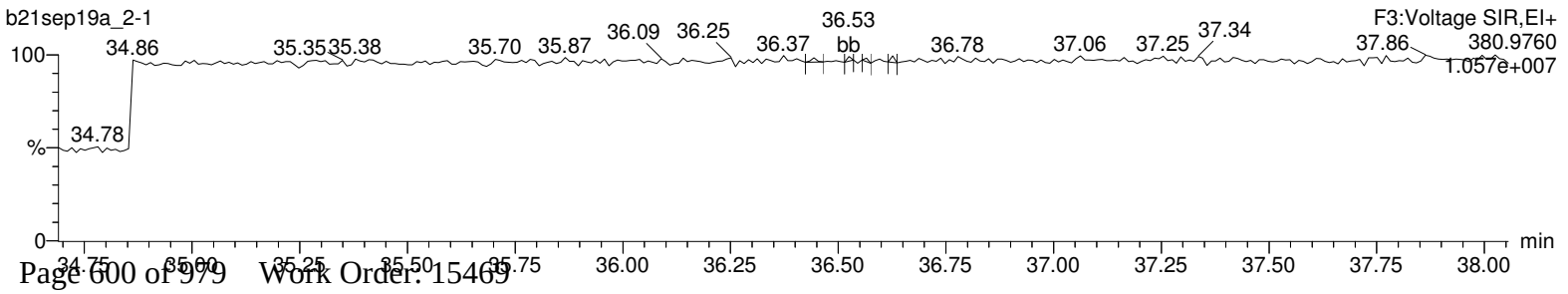


Lock Mass F3



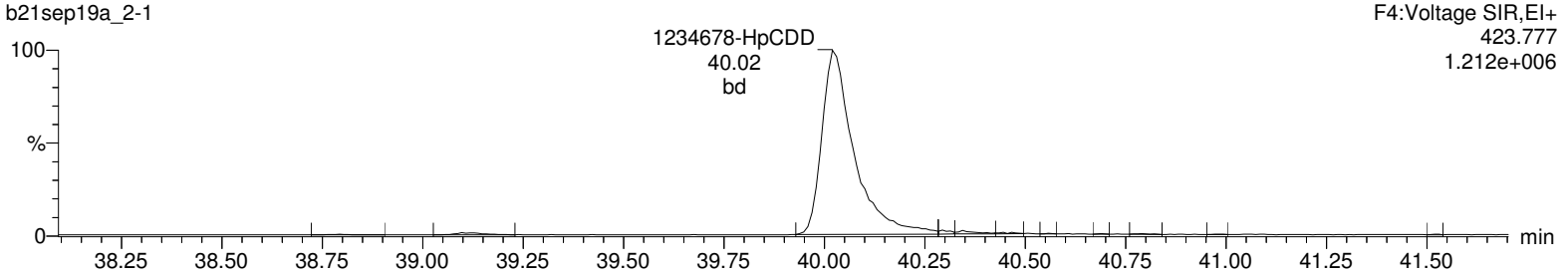
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

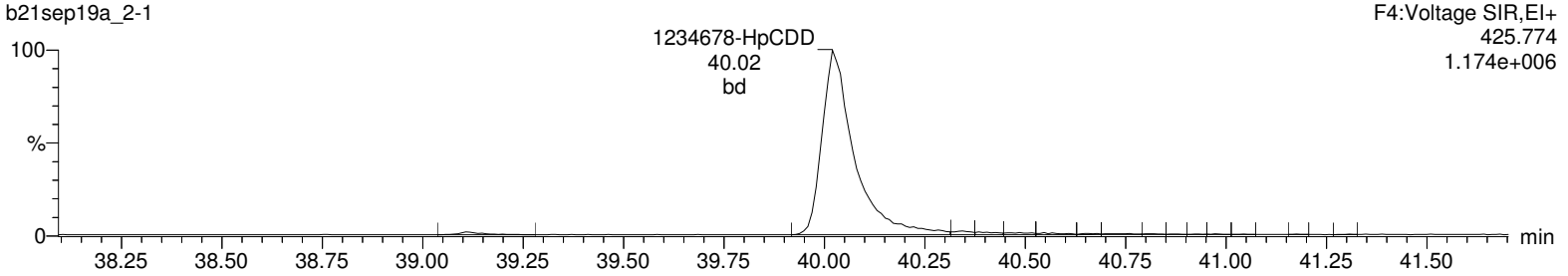
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

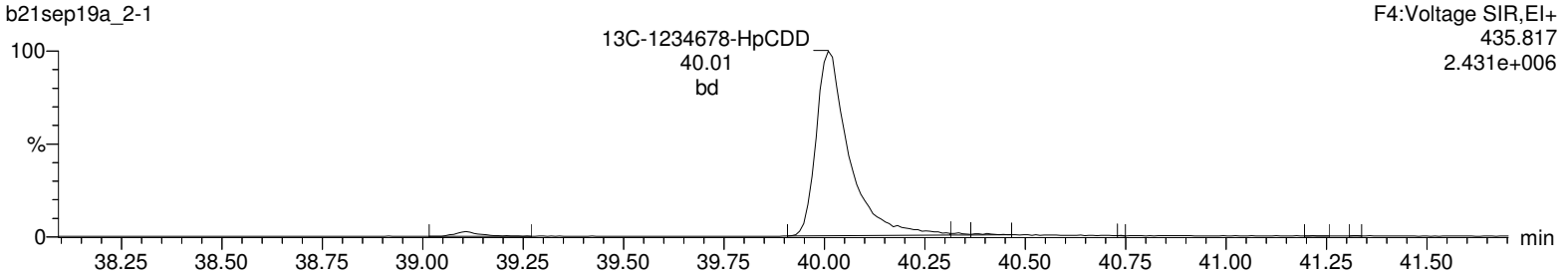
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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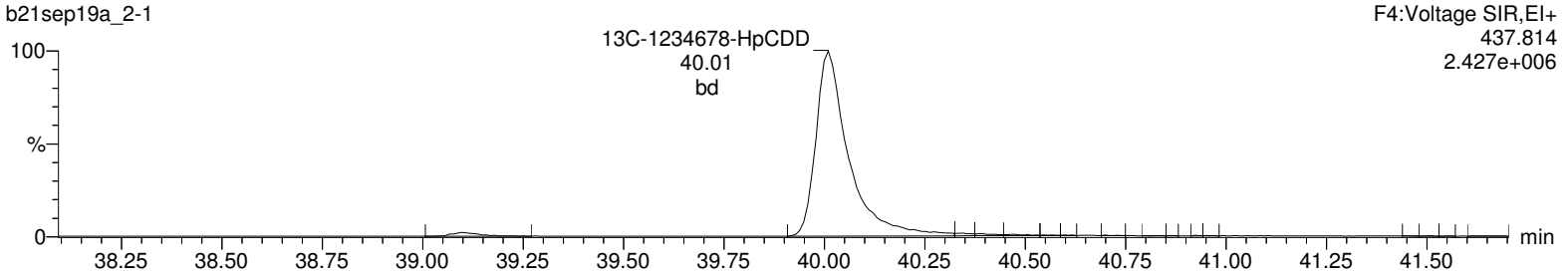
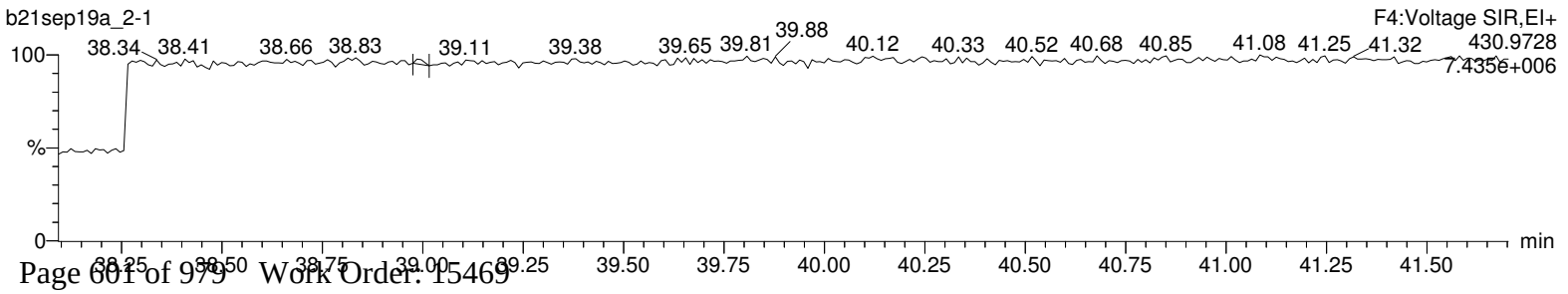


Lock Mass F4



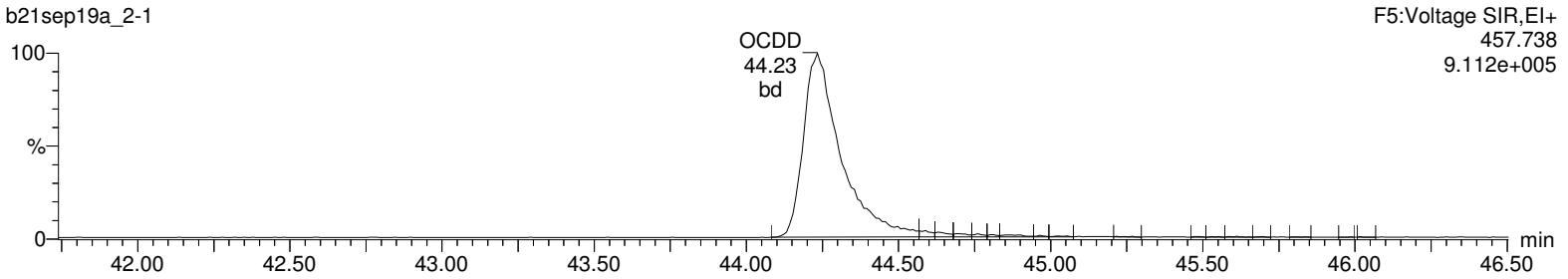
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

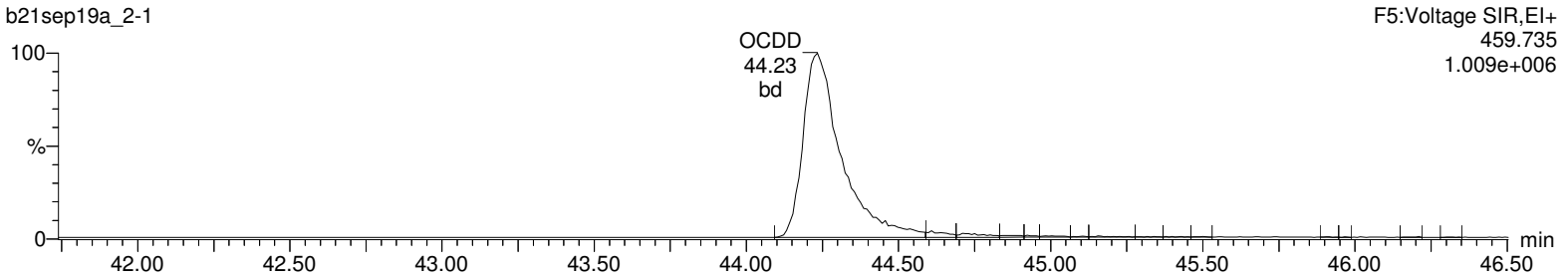
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

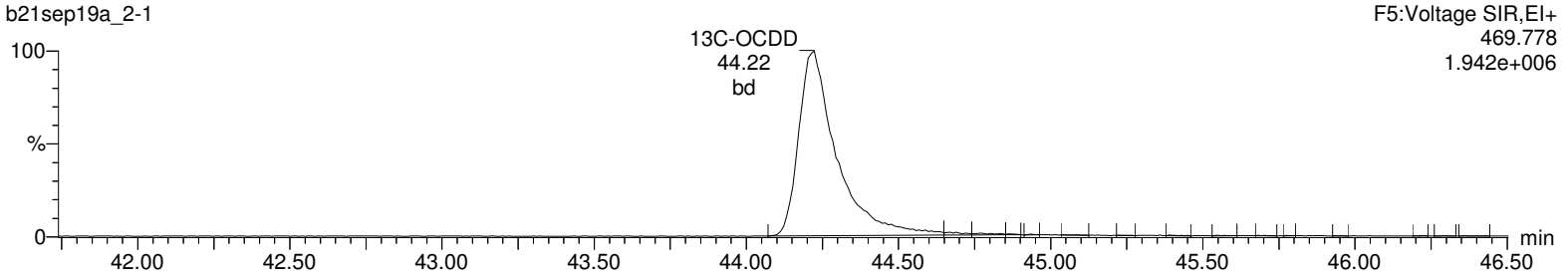
OCDD



OCDD



13C-OCDD



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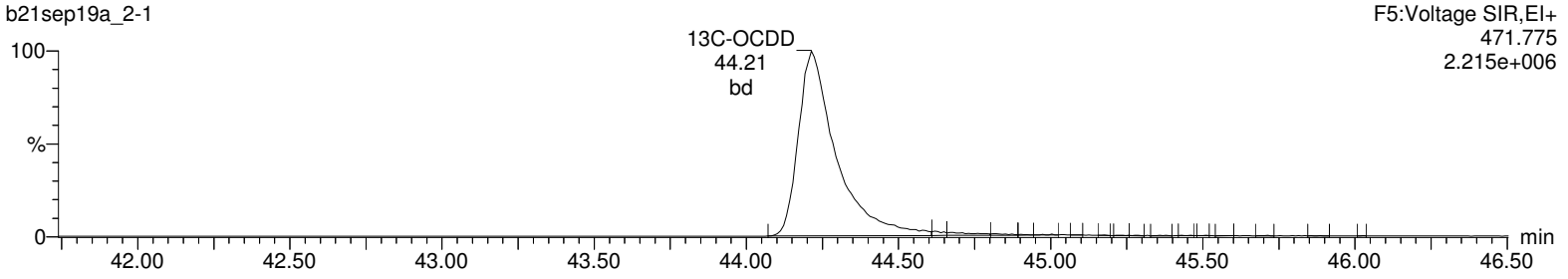
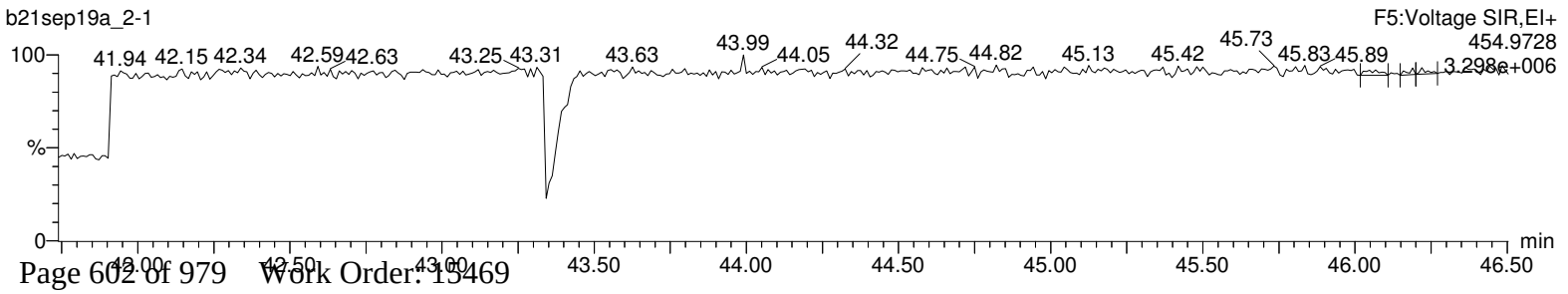


Lock Mass F5



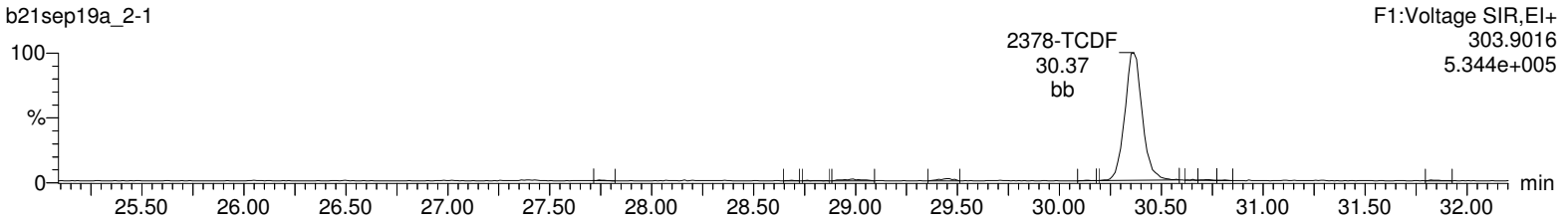
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

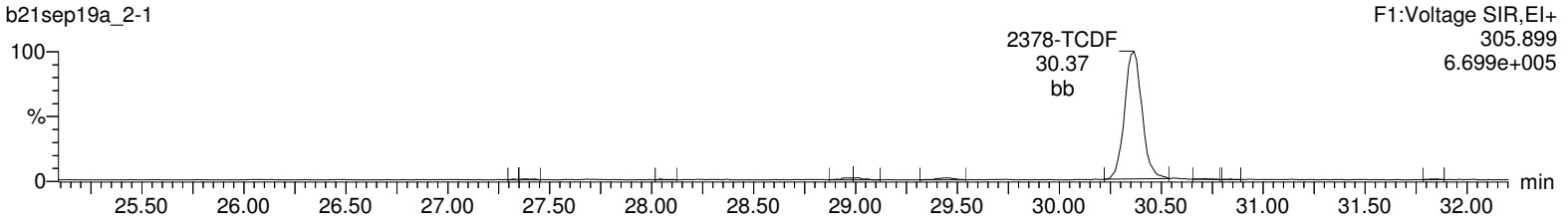
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

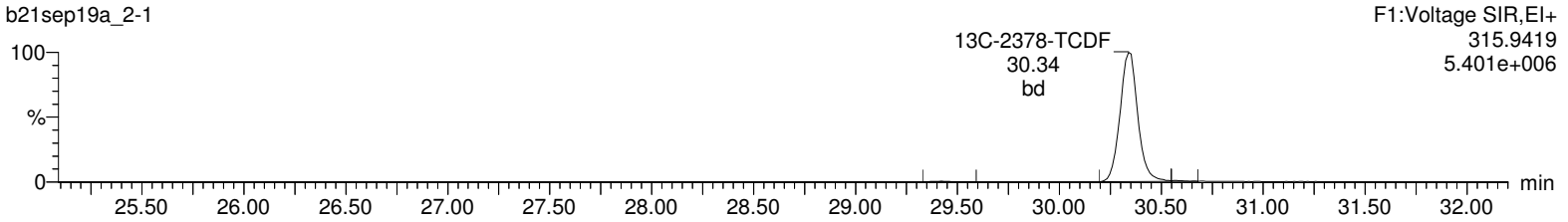
Total-tetrafurans



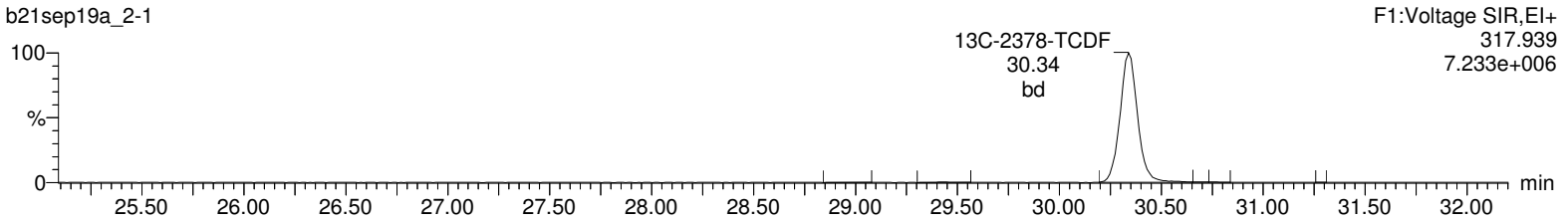
Total-tetrafurans



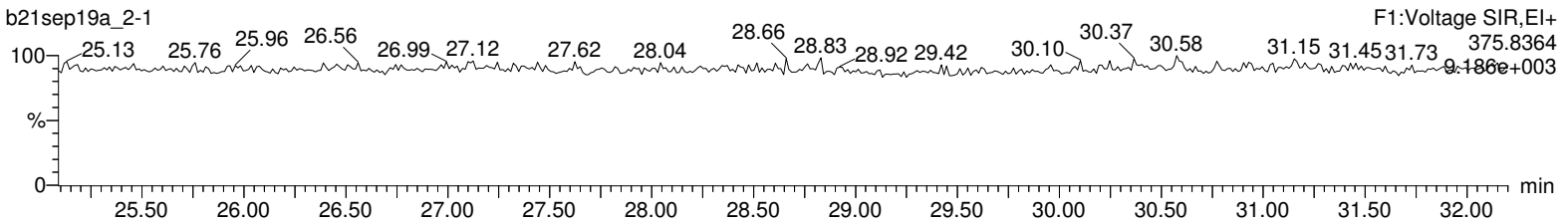
13C-2378-TCDF



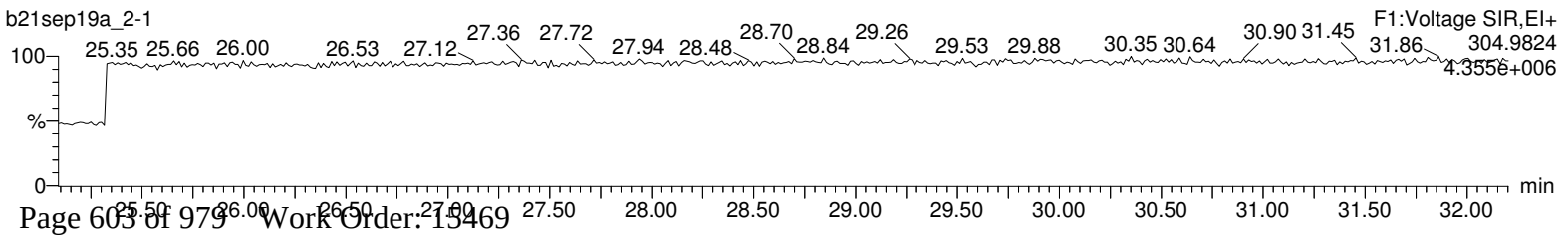
13C-2378-TCDF



HxDPE



Lock Mass F1



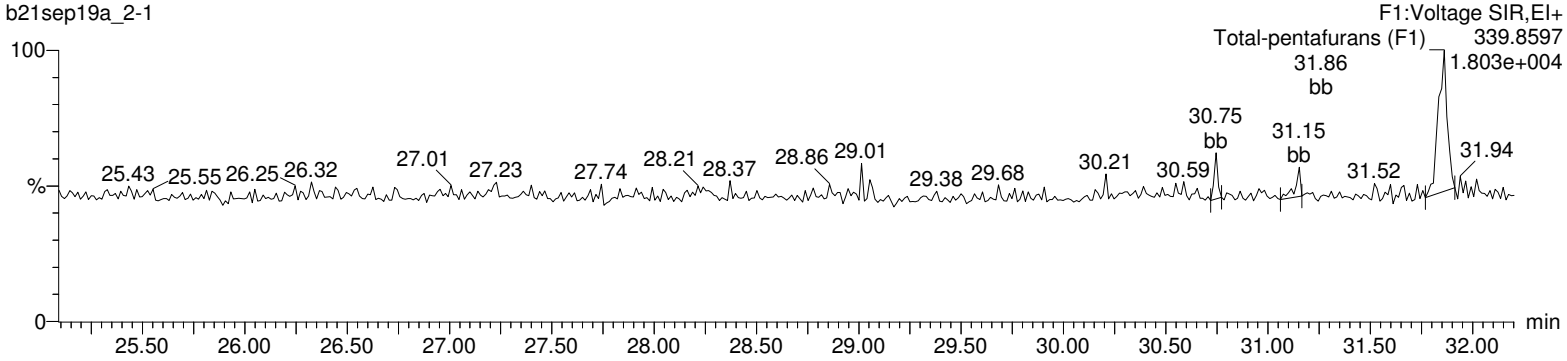
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

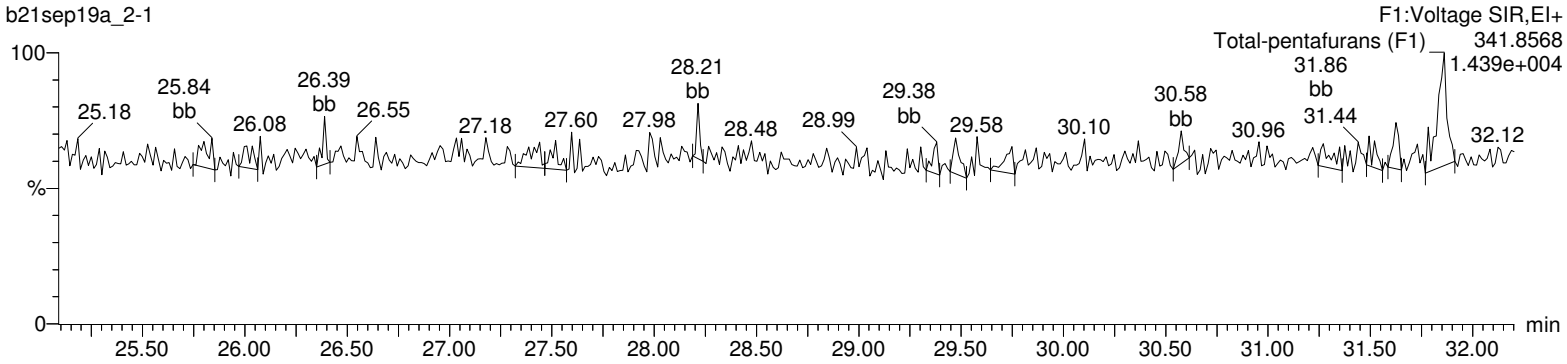
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

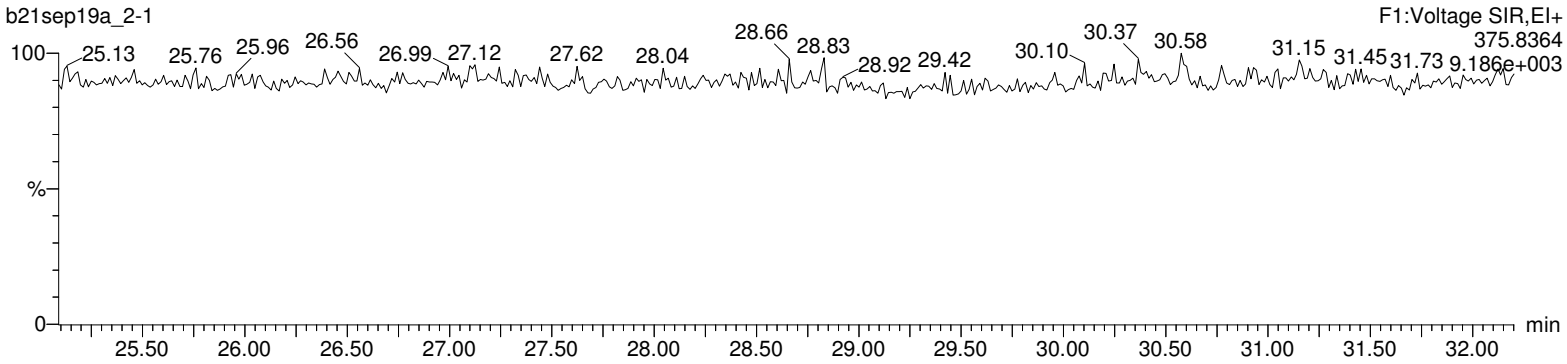
Total-pentafurans (F1)



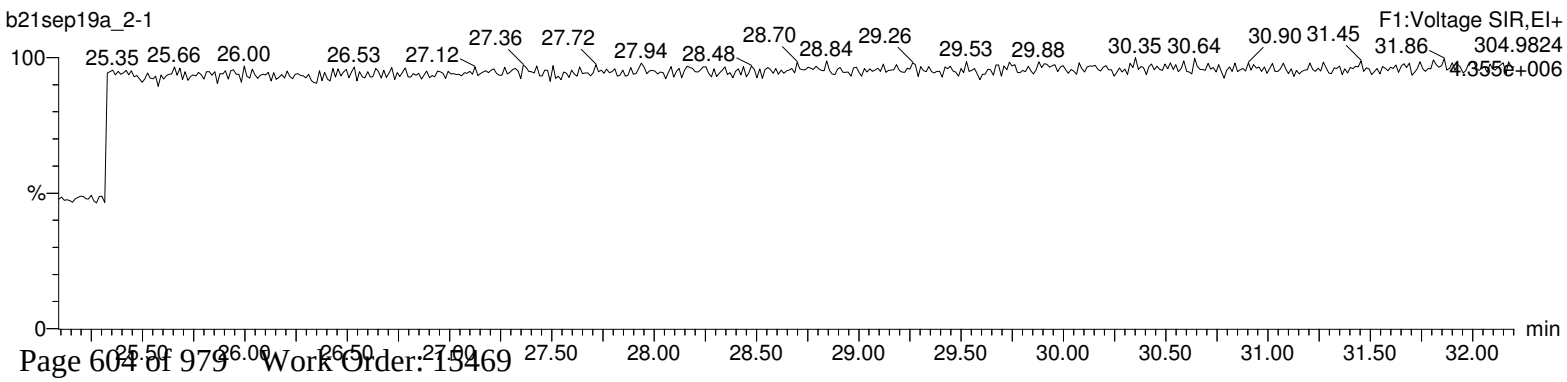
Total-pentafurans (F1)



HxDPE



Lock Mass F1



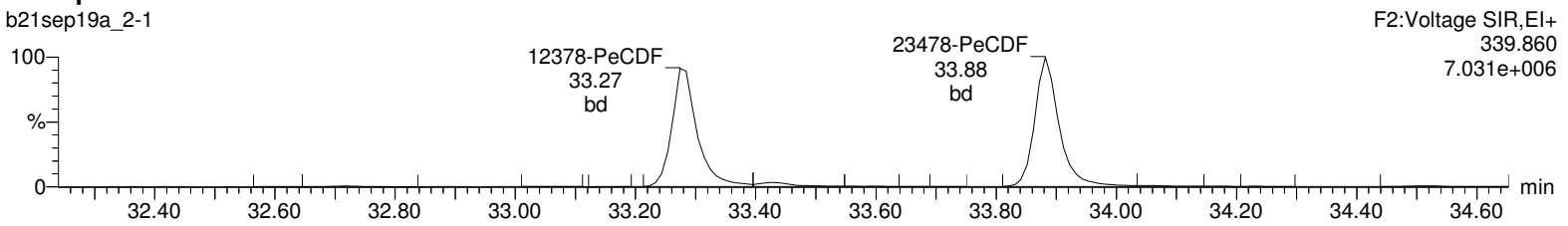
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

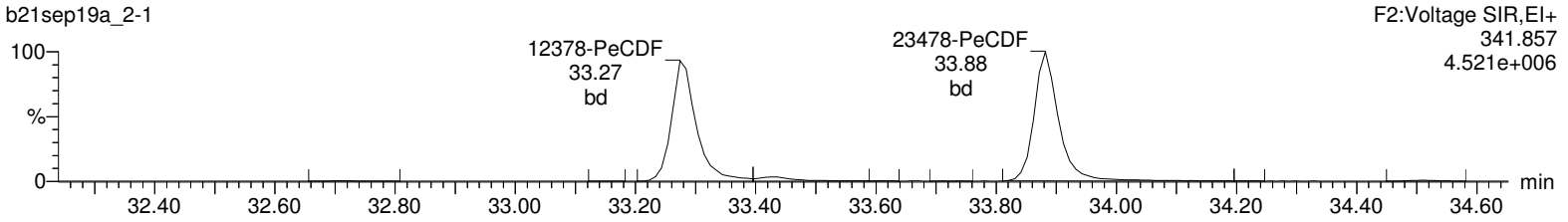
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

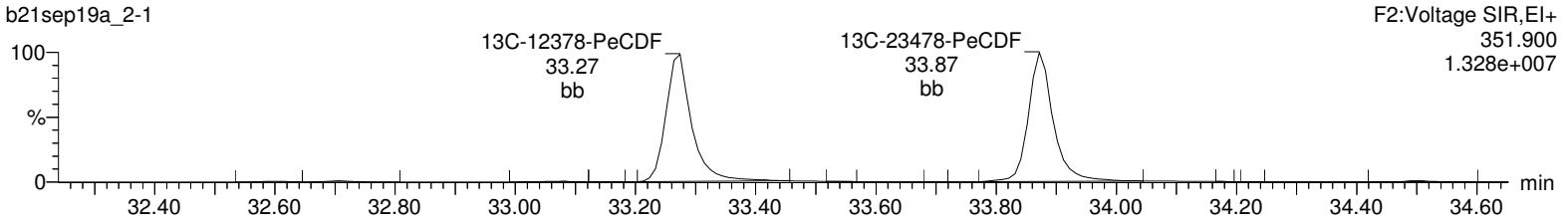
Total-pentafurans



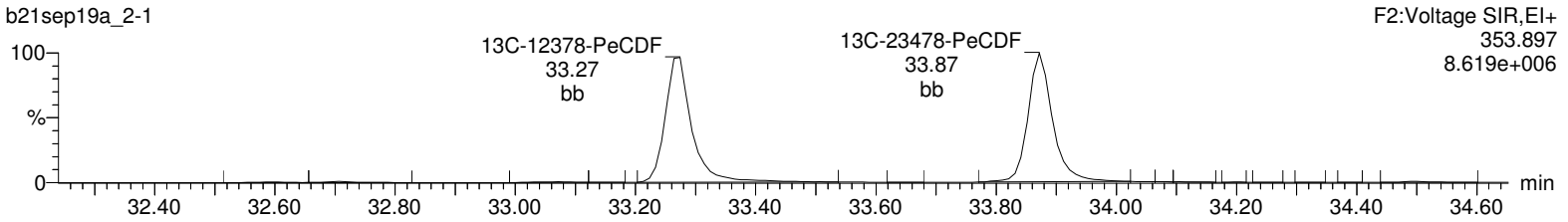
Total-pentafurans



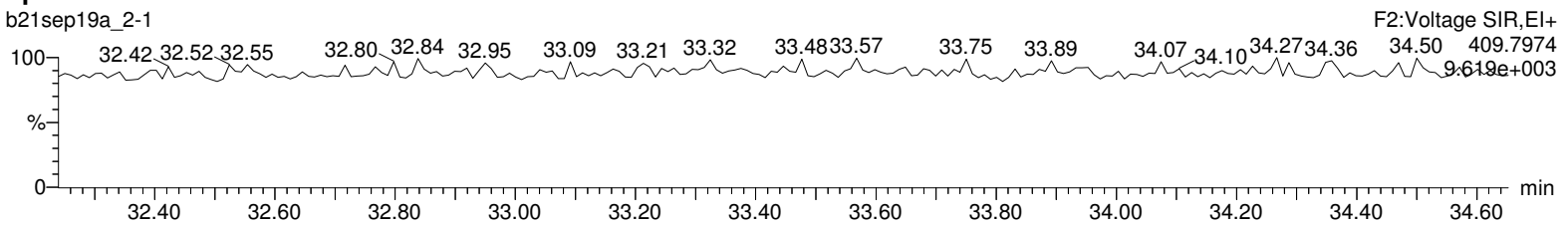
13C-12378-PeCDF



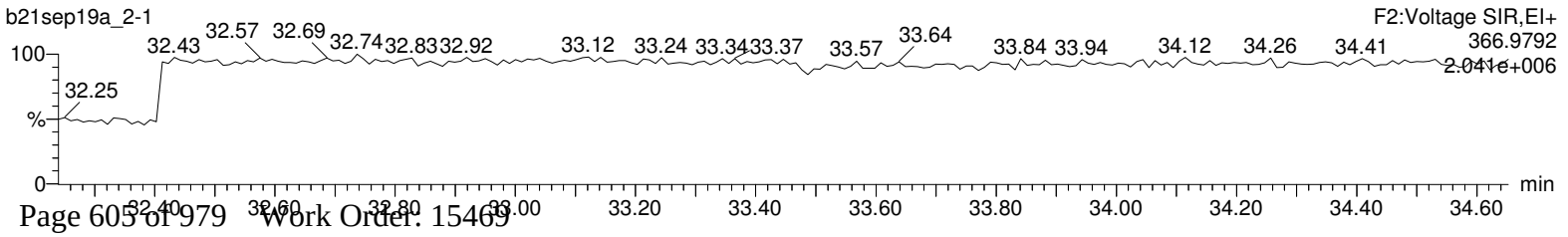
13C-12378-PeCDF



HpDPE



Lock Mass F2



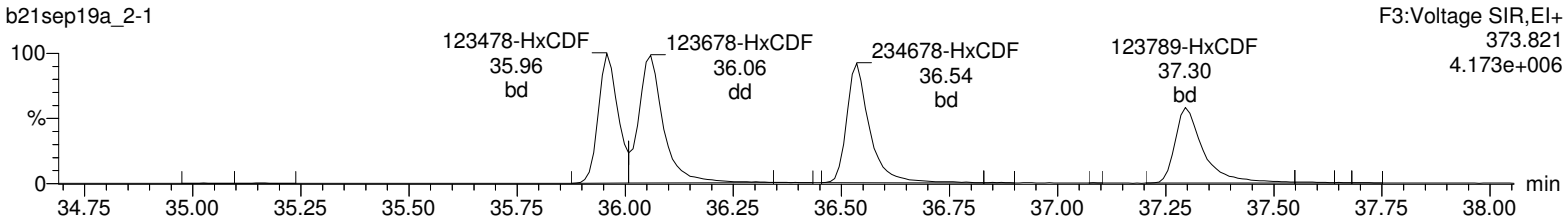
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

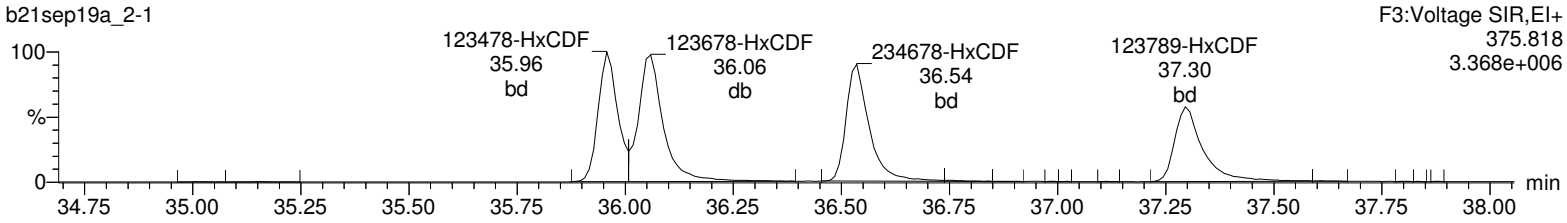
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

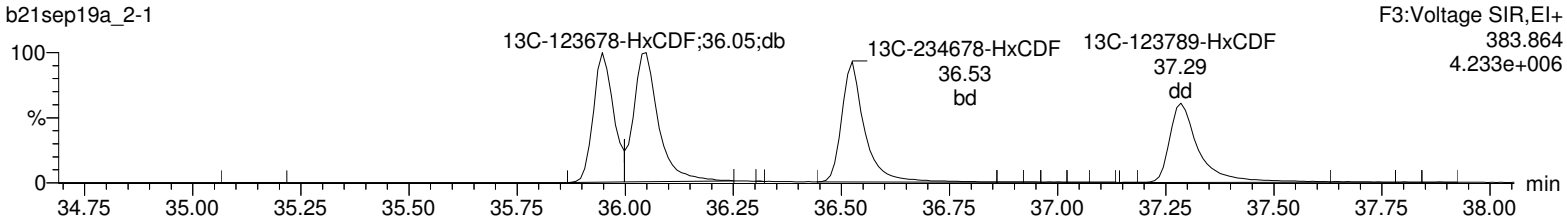
Total-hexafurans



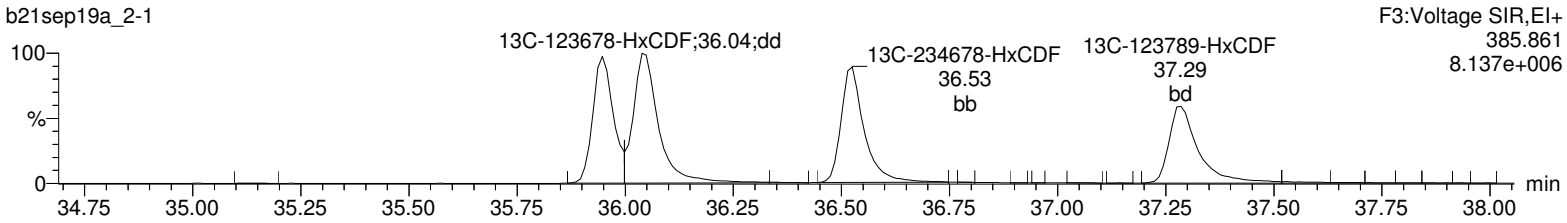
Total-hexafurans



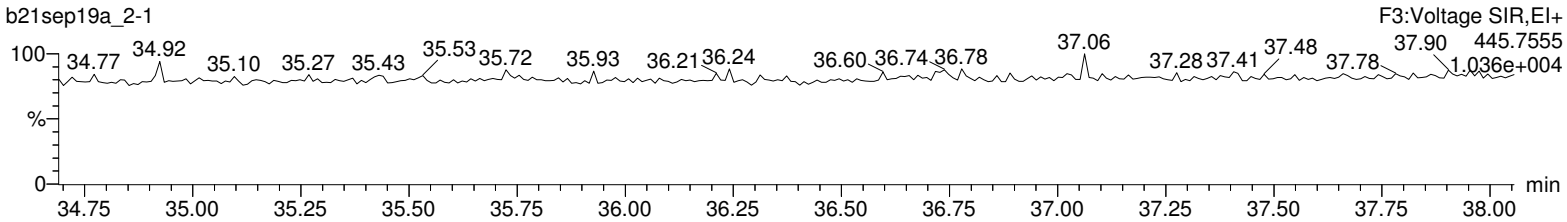
13C-123478-HxCDF



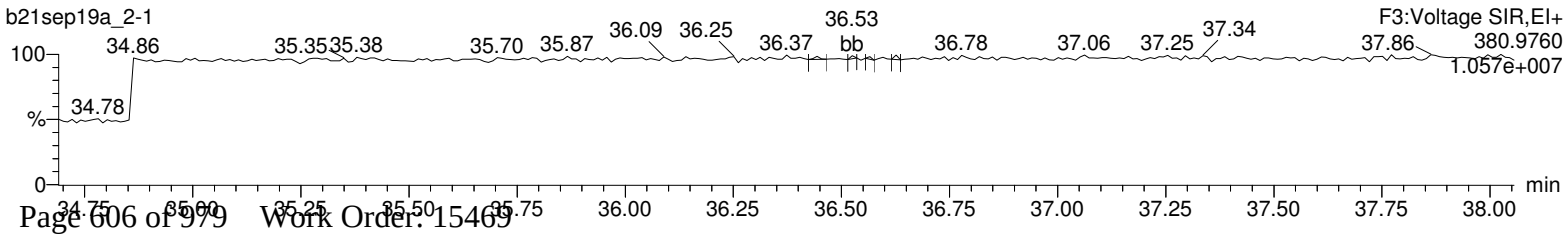
13C-123478-HxCDF



OcDPE



Lock Mass F3



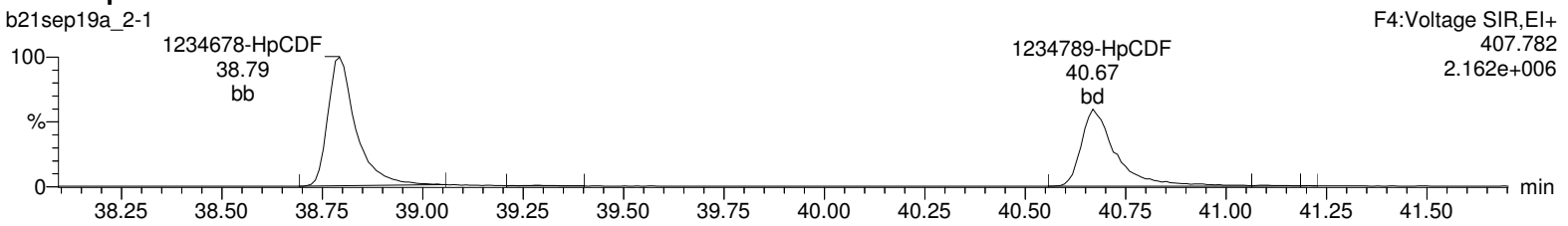
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

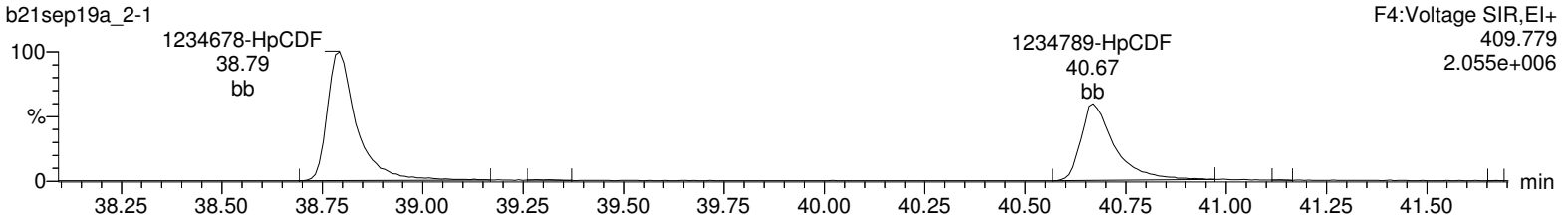
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

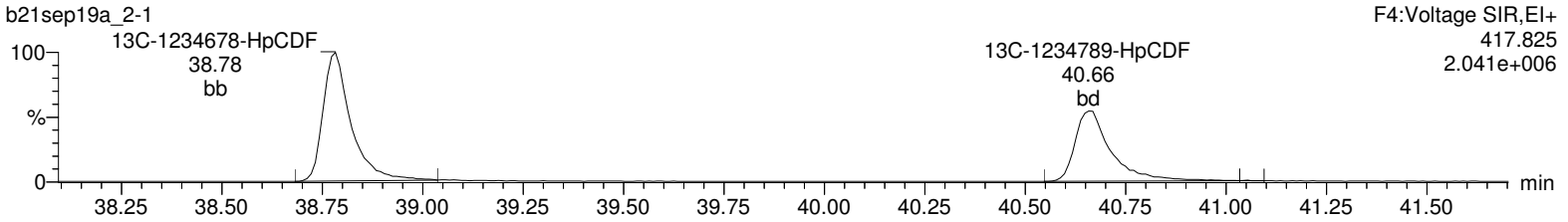
Total-heptafurans



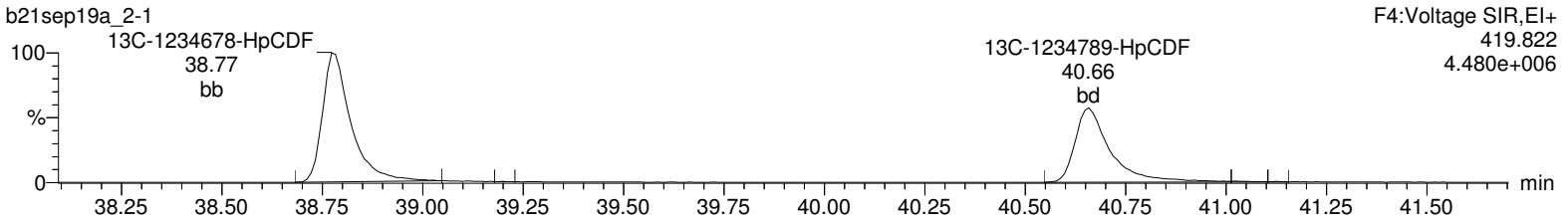
Total-heptafurans



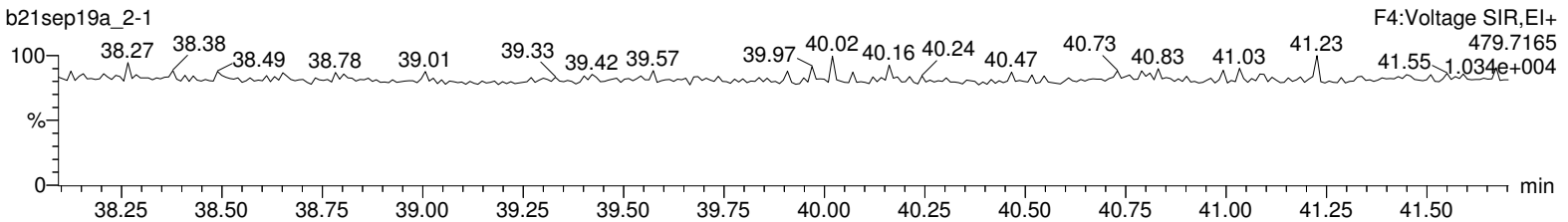
13C-1234678-HpCDF



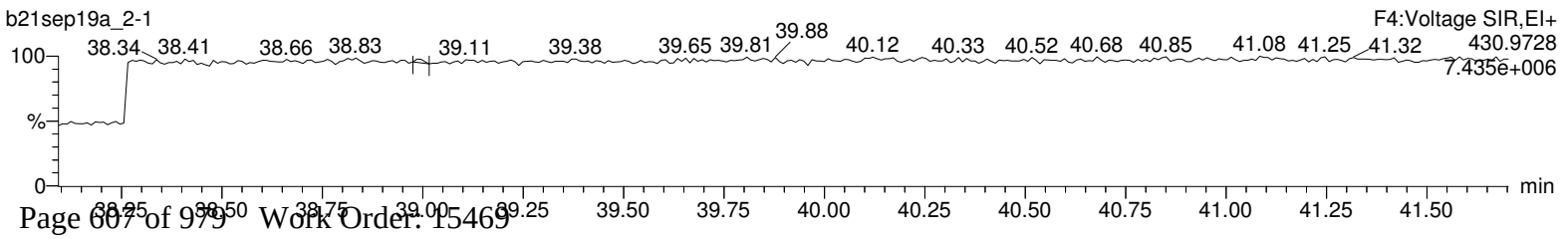
13C-1234678-HpCDF



NoDPE



Lock Mass F4



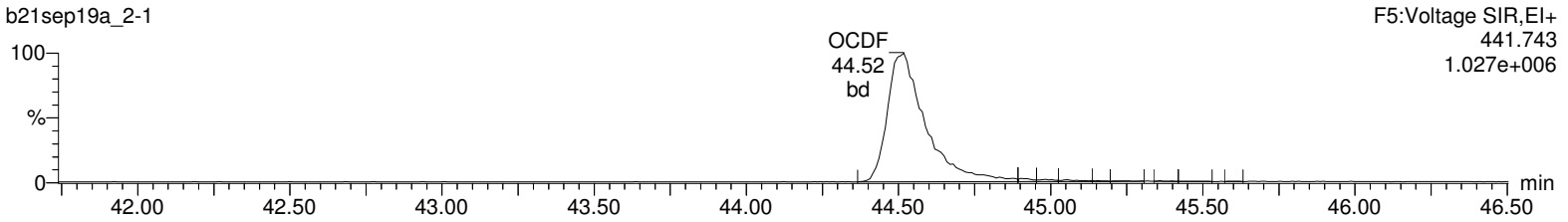
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b21sep19a_2.qld

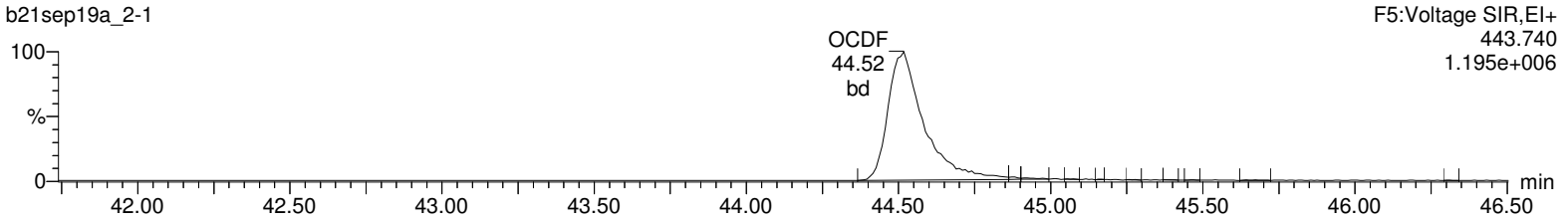
Last Altered: Monday, September 23, 2019 08:46:09 Eastern Standard Time
Printed: Monday, September 23, 2019 08:49:35 Eastern Standard Time

Name: b21sep19a_2-1, Date: 21-Sep-2019, Time: 22:43:45, ID: 12024793-1 LCS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

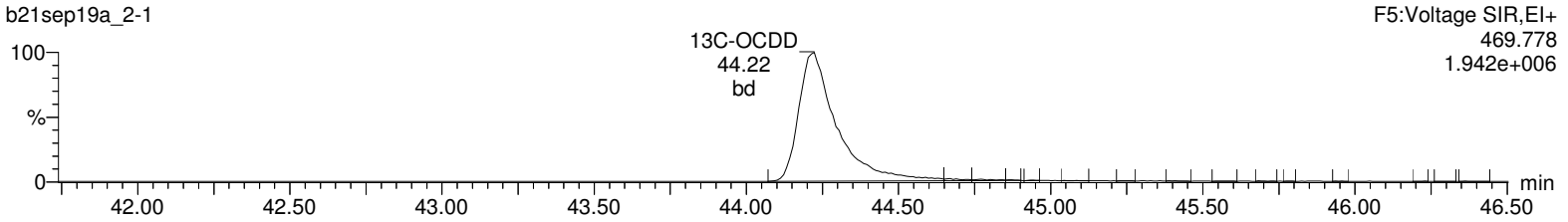
OCDF



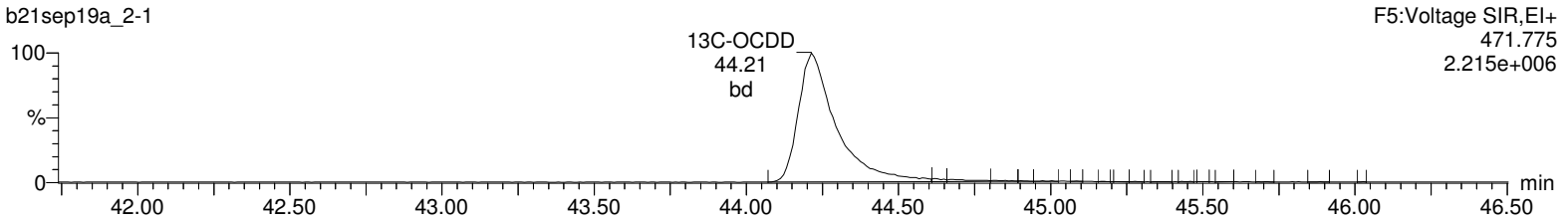
OCDF



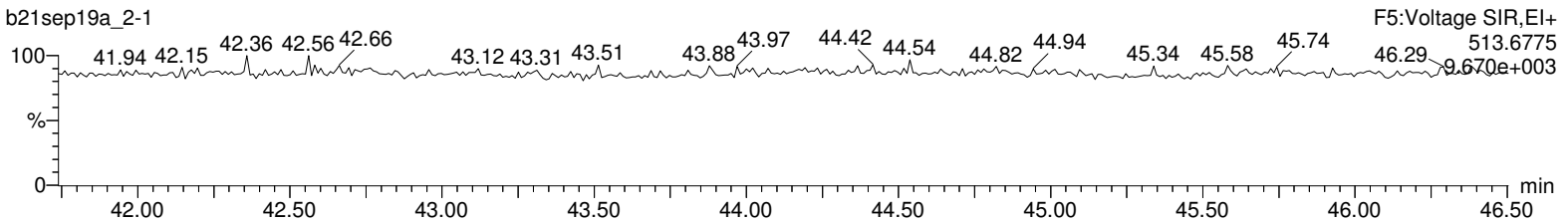
13C-OCDD



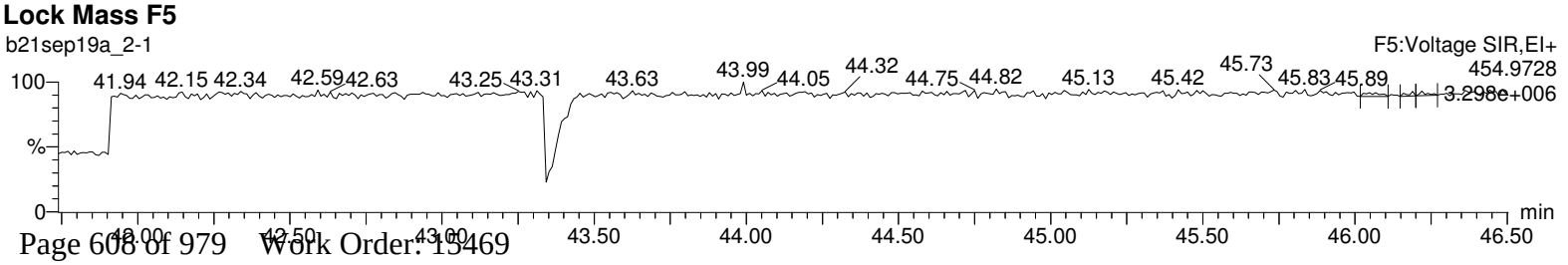
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024794**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**				
Client ID:	**LCSD for batch 41745**			**Prep Basis:**	**As Received**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/24/2019 09:35**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b23sep19a_3-3**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		17.7	pg/g	0.0818	1.00
40321-76-4	1,2,3,7,8-PeCDD		102	pg/g	0.132	5.00
39227-28-6	1,2,3,4,7,8-HxCDD		99.1	pg/g	0.246	5.00
57653-85-7	1,2,3,6,7,8-HxCDD		106	pg/g	0.246	5.00
19408-74-3	1,2,3,7,8,9-HxCDD		108	pg/g	0.252	5.00
35822-46-9	1,2,3,4,6,7,8-HpCDD		107	pg/g	0.402	5.00
3268-87-9	1,2,3,4,6,7,8,9-OCDD		207	pg/g	0.916	10.0
51207-31-9	2,3,7,8-TCDF		21.5	pg/g	0.110	1.00
57117-41-6	1,2,3,7,8-PeCDF		108	pg/g	0.163	5.00
57117-31-4	2,3,4,7,8-PeCDF		110	pg/g	0.142	5.00
70648-26-9	1,2,3,4,7,8-HxCDF		109	pg/g	0.244	5.00
57117-44-9	1,2,3,6,7,8-HxCDF		118	pg/g	0.258	5.00
60851-34-5	2,3,4,6,7,8-HxCDF		115	pg/g	0.266	5.00
72918-21-9	1,2,3,7,8,9-HxCDF		112	pg/g	0.406	5.00
67562-39-4	1,2,3,4,6,7,8-HpCDF		111	pg/g	0.350	5.00
55673-89-7	1,2,3,4,7,8,9-HpCDF		110	pg/g	0.590	5.00
39001-02-0	1,2,3,4,6,7,8,9-OCDF		212	pg/g	0.992	10.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		165	200	pg/g	82.4	(20%-175%)
13C-1,2,3,7,8-PeCDD		152	200	pg/g	76.1	(21%-227%)
13C-1,2,3,4,7,8-HxCDD		158	200	pg/g	78.9	(21%-193%)
13C-1,2,3,6,7,8-HxCDD		172	200	pg/g	86.1	(25%-163%)
13C-1,2,3,4,6,7,8-HpCDD		173	200	pg/g	86.7	(22%-166%)
13C-OCDD		272	400	pg/g	68.1	(13%-199%)
13C-2,3,7,8-TCDF		149	200	pg/g	74.7	(22%-152%)
13C-1,2,3,7,8-PeCDF		150	200	pg/g	75.2	(21%-192%)
13C-2,3,4,7,8-PeCDF		145	200	pg/g	72.5	(13%-328%)
13C-1,2,3,4,7,8-HxCDF		166	200	pg/g	83.1	(19%-202%)
13C-1,2,3,6,7,8-HxCDF		163	200	pg/g	81.3	(21%-159%)
13C-2,3,4,6,7,8-HxCDF		159	200	pg/g	79.3	(22%-176%)
13C-1,2,3,7,8,9-HxCDF		162	200	pg/g	80.8	(17%-205%)
13C-1,2,3,4,6,7,8-HpCDF		172	200	pg/g	86.0	(21%-158%)
13C-1,2,3,4,7,8,9-HpCDF		167	200	pg/g	83.7	(20%-186%)
37Cl-2,3,7,8-TCDD		18.7	20.0	pg/g	93.4	(31%-191%)

Comments:

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:51:18 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.15e4	8.10e4	1.43e5	31.15	1.000	0.76	NO	8.871	0.0409	8.98e5	2047	438.7	1.15e6	1389	828.0	bb	bb
2	12378-PeCDD	2.91e5	1.96e5	4.87e5	34.07	1.000	1.48	NO	50.868	0.0659	5.54e6	2250	2462.1	3.73e6	2583	1443.4	bb	bb
3	123478-HxCDD	1.94e5	1.56e5	3.50e5	36.66	1.000	1.25	NO	49.572	0.123	3.62e6	3281	1102.7	2.92e6	3322	878.4	dd	bd
4	123678-HxCDD	2.88e5	2.29e5	5.17e5	36.75	1.001	1.26	NO	52.783	0.123	3.87e6	3281	1179.8	3.12e6	3322	938.2	dd	dd
5	123789-HxCDD	2.47e5	1.99e5	4.45e5	36.99	1.007	1.24	NO	53.930	0.126	3.15e6	3281	959.7	2.55e6	3322	766.9	dd	dd
6	1234678-HpCDD	1.70e5	1.66e5	3.35e5	40.03	1.001	1.03	NO	53.284	0.201	1.71e6	2836	602.6	1.68e6	2510	668.7	bd	bd
7	OCDD	2.01e5	2.26e5	4.27e5	44.23	1.000	0.89	NO	103.515	0.458	1.36e6	2881	470.8	1.53e6	2083	733.5	bd	bd
8	2378-TCDF	7.68e4	9.99e4	1.77e5	30.36	1.001	0.77	NO	10.725	0.0548	7.85e5	1502	522.4	9.89e5	2146	461.0	bb	bb
9	12378-PeCDF	4.50e5	2.83e5	7.33e5	33.27	1.000	1.59	NO	53.977	0.0813	8.83e6	3748	2355.6	5.66e6	4583	1235.7	bd	bd
10	23478-PeCDF	4.85e5	3.09e5	7.94e5	33.88	1.000	1.57	NO	55.236	0.0709	1.01e7	3748	2699.0	6.48e6	4583	1414.6	bb	bb
11	123478-HxCDF	3.16e5	2.54e5	5.70e5	35.96	1.000	1.25	NO	54.518	0.122	5.88e6	4591	1281.3	4.67e6	4705	992.4	bd	bd
12	123678-HxCDF	4.07e5	3.21e5	7.28e5	36.06	1.001	1.27	NO	58.863	0.129	5.96e6	4591	1299.0	4.69e6	4705	997.8	db	db
13	234678-HxCDF	3.55e5	2.78e5	6.33e5	36.53	1.000	1.28	NO	57.578	0.133	5.73e6	4591	1248.8	4.57e6	4705	971.2	bd	bd
14	123789-HxCDF	2.78e5	2.20e5	4.98e5	37.30	1.000	1.27	NO	56.066	0.203	3.59e6	4591	781.1	2.89e6	4705	613.1	bd	bd
15	1234678-HpCDF	2.74e5	2.66e5	5.40e5	38.79	1.000	1.03	NO	55.318	0.175	3.29e6	4873	675.5	3.17e6	3286	963.7	bd	bd
16	1234789-HpCDF	1.96e5	1.88e5	3.84e5	40.68	1.001	1.04	NO	54.874	0.295	1.87e6	4873	383.9	1.78e6	3286	540.7	bb	bd
17	OCDF	2.30e5	2.58e5	4.88e5	44.52	1.007	0.89	NO	106.229	0.496	1.66e6	2968	559.2	1.84e6	3014	609.2	bd	bd
18	13C-2378-TCDD	7.84e5	1.02e6	1.80e6	31.14	1.018	0.77	NO	82.423	0.0836	1.03e7	5159	1988.4	1.32e7	2725	4844.8	bd	bd
19	13C-12378-PeCDD	6.77e5	4.50e5	1.13e6	34.06	1.114	1.50	NO	76.053	0.0936	1.30e7	3527	3673.7	8.40e6	2452	3425.5	bb	bd
20	13C-123478-HxCDD	4.17e5	3.39e5	7.56e5	36.65	0.991	1.23	NO	78.894	0.198	7.92e6	4118	1923.0	6.36e6	5494	1156.9	bd	bd
21	13C-123678-HxCDD	6.08e5	4.98e5	1.11e6	36.73	0.993	1.22	NO	86.109	0.148	8.33e6	4118	2022.3	6.76e6	5494	1230.7	dd	dd
22	13C-1234678-HpCDD	3.37e5	3.30e5	6.67e5	40.01	1.082	1.02	NO	86.712	0.189	3.55e6	3544	1002.8	3.40e6	3812	891.6	bd	bb
23	13C-OCDD	4.26e5	4.77e5	9.03e5	44.21	1.196	0.89	NO	136.138	0.269	2.80e6	4798	582.8	3.20e6	4210	759.6	bd	bd
24	13C-2378-TCDF	7.99e5	1.05e6	1.85e6	30.34	0.992	0.76	NO	74.708	0.104	8.07e6	7159	1127.4	1.05e7	3935	2657.2	bb	bb
25	13C-12378-PeCDF	9.14e5	5.83e5	1.50e6	33.26	1.088	1.57	NO	75.237	0.163	1.72e7	6846	2515.1	1.11e7	7155	1546.0	dd	db
26	13C-23478-PeCDF	9.02e5	5.78e5	1.48e6	33.87	1.108	1.56	NO	72.507	0.159	1.84e7	6846	2690.4	1.15e7	7155	1605.3	bb	bb
27	13C-123478-HxCDF	3.18e5	6.03e5	9.21e5	35.95	0.972	0.53	NO	83.121	0.269	5.79e6	5449	1062.1	1.10e7	9604	1142.4	bd	bd
28	13C-123678-HxCDF	4.13e5	7.60e5	1.17e6	36.04	0.975	0.54	NO	81.275	0.206	6.02e6	5449	1104.5	1.16e7	9604	1207.5	db	db
29	13C-234678-HxCDF	3.39e5	6.33e5	9.72e5	36.53	0.988	0.54	NO	79.270	0.243	5.38e6	5449	987.1	1.02e7	9604	1063.9	bd	bb
30	13C-123789-HxCDF	2.87e5	5.49e5	8.35e5	37.29	1.008	0.52	NO	80.756	0.288	3.71e6	5449	680.0	7.00e6	9604	729.0	bd	bd
31	13C-1234678-HpCDF	2.54e5	5.65e5	8.19e5	38.78	1.049	0.45	NO	86.019	0.167	3.03e6	3055	992.5	6.76e6	4964	1361.4	bd	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:51:18 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.72e5	3.98e5	5.71e5	40.66	1.099	0.43	NO	83.673	0.233	1.70e6	3055	556.9	3.74e6	4964	753.0	bd	bd
33	13C-1234-TCDD	8.24e5	1.08e6	1.90e6	30.57	0.000	0.76	NO	100.000	0.0962	8.88e6	5159	1720.3	1.19e7	2725	4352.0	bb	bb
34	13C-123789-HxCDD	6.66e5	5.49e5	1.21e6	36.98	0.000	1.21	NO	100.000	0.157	8.41e6	4118	2043.0	6.86e6	5494	1247.8	dd	dd
35	37Cl-2378-TCDD	1.91e5		1.91e5	31.15	1.019			9.344	0.0199	2.70e6	1753	1541.4				bb	

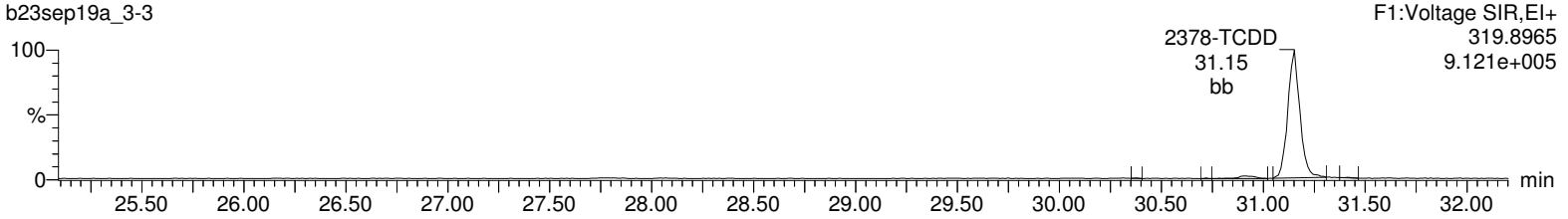
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

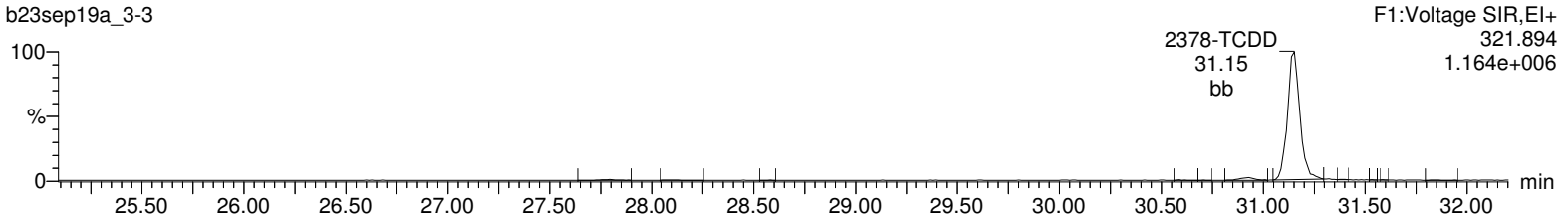
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

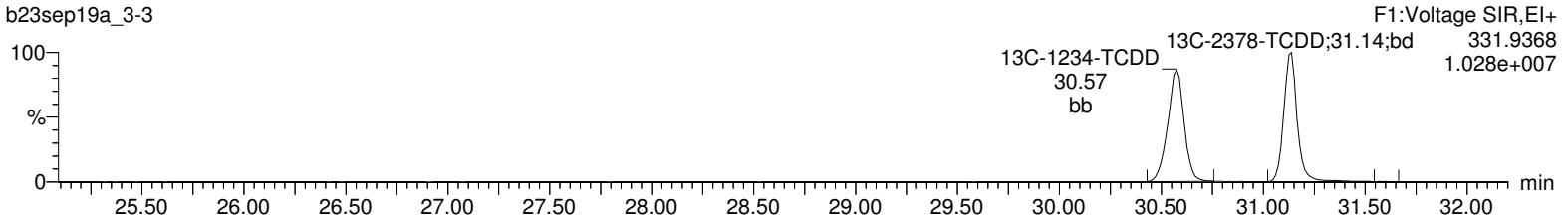
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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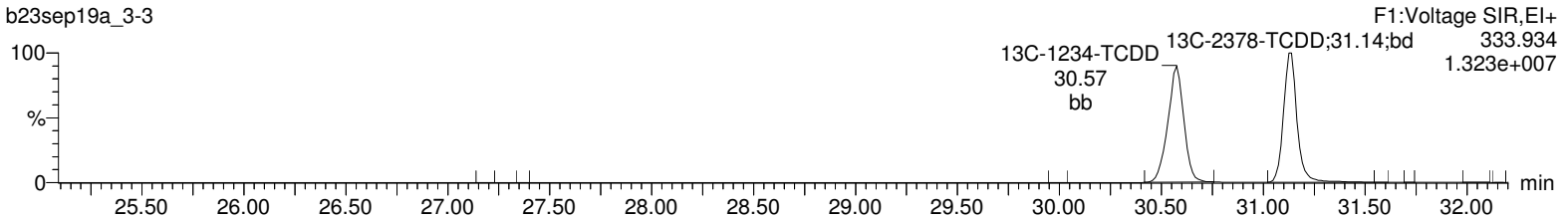
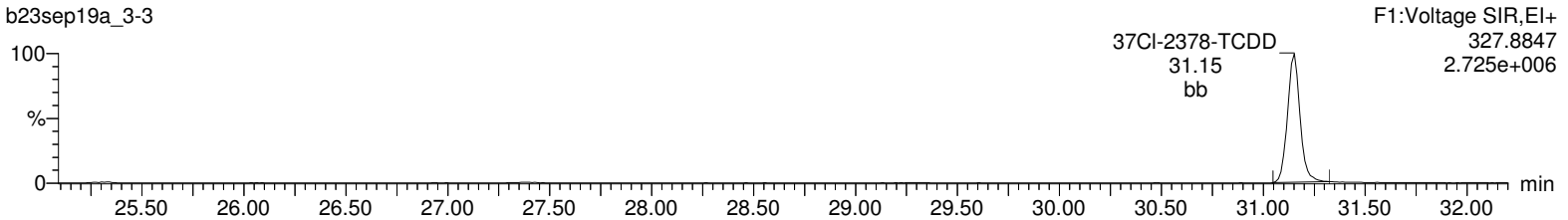
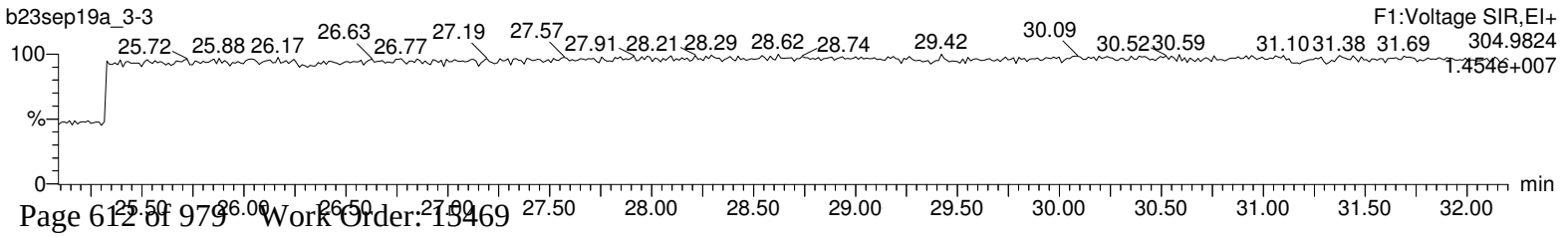


37Cl-2378-TCDD



Lock Mass F1



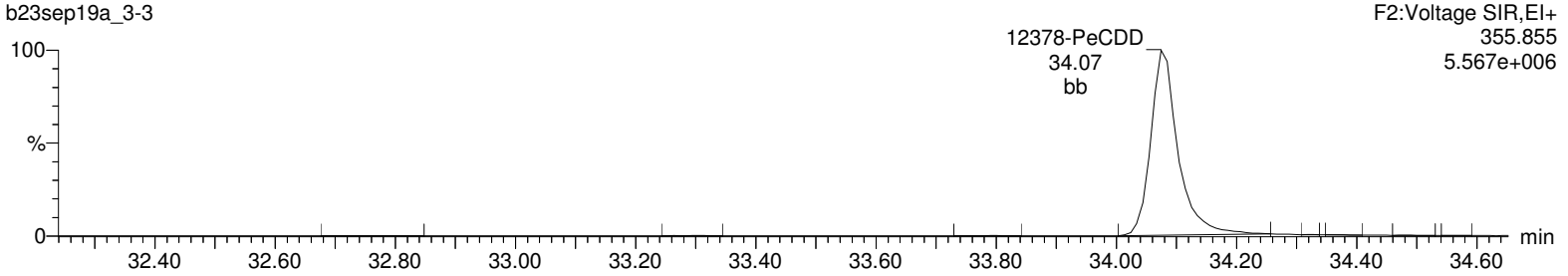
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

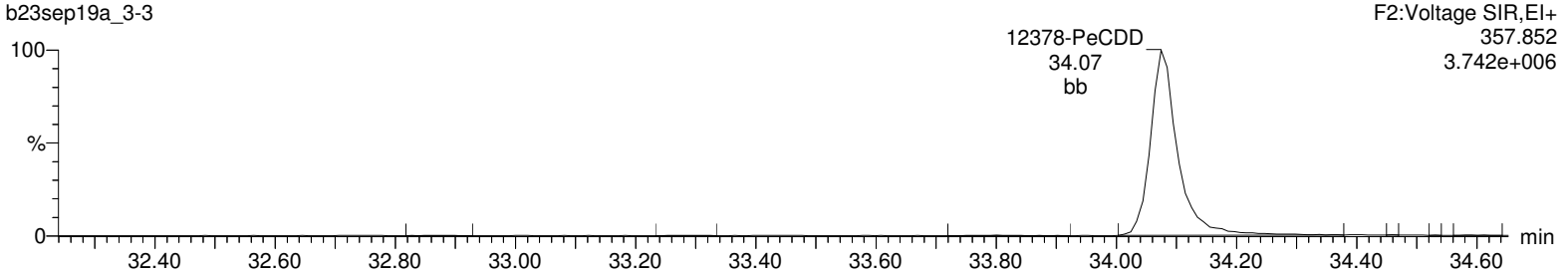
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

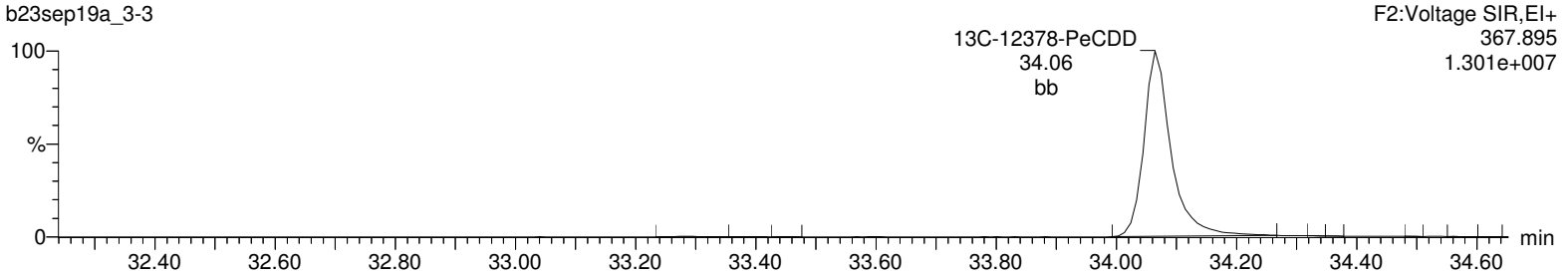
Total-pentadioxins



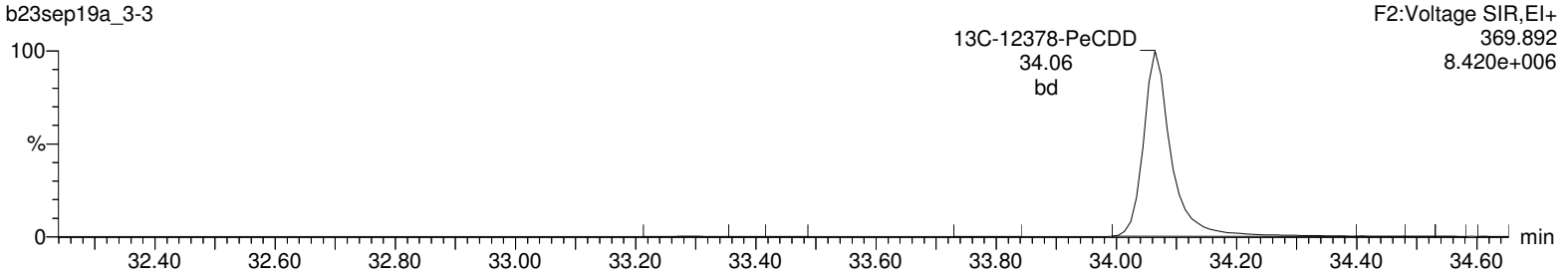
Total-pentadioxins



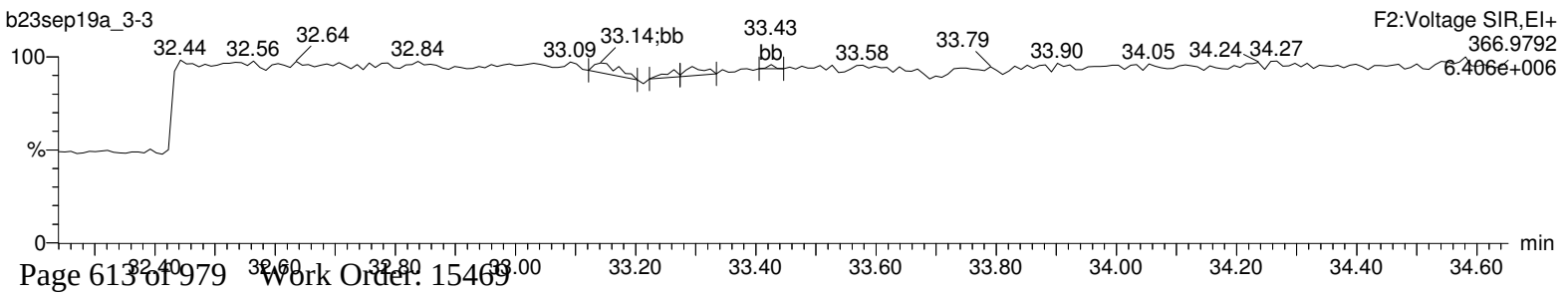
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



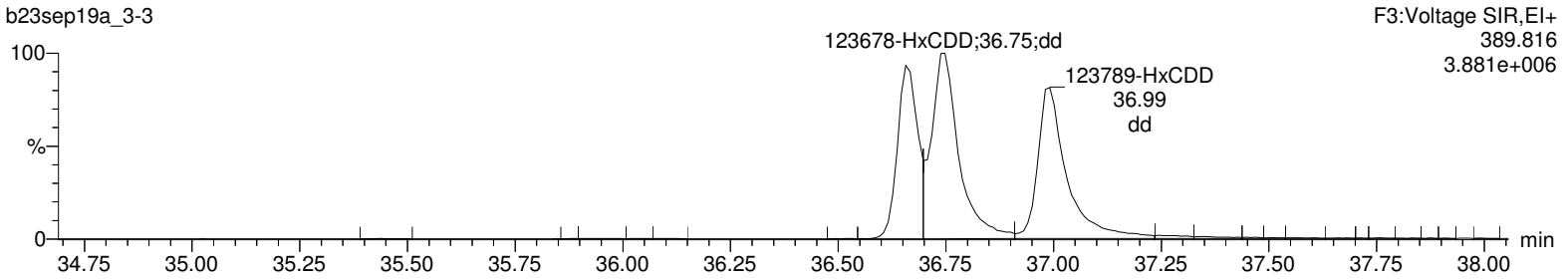
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

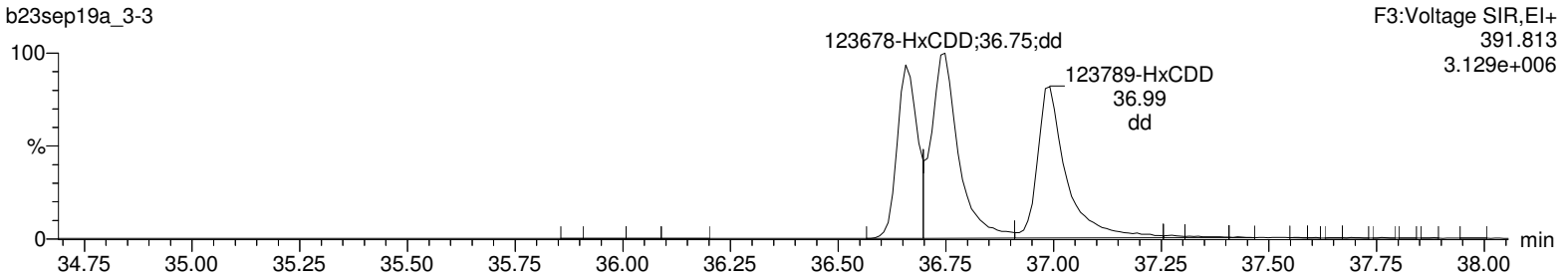
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexadioxins



Total-hexadioxins



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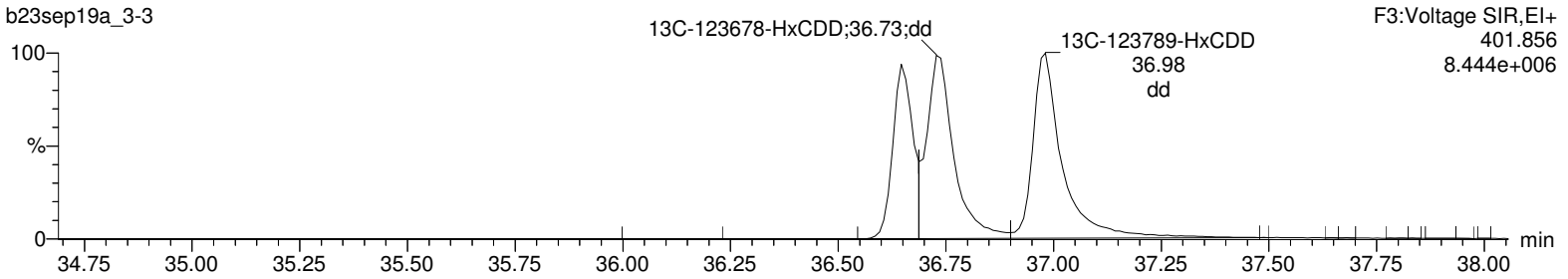

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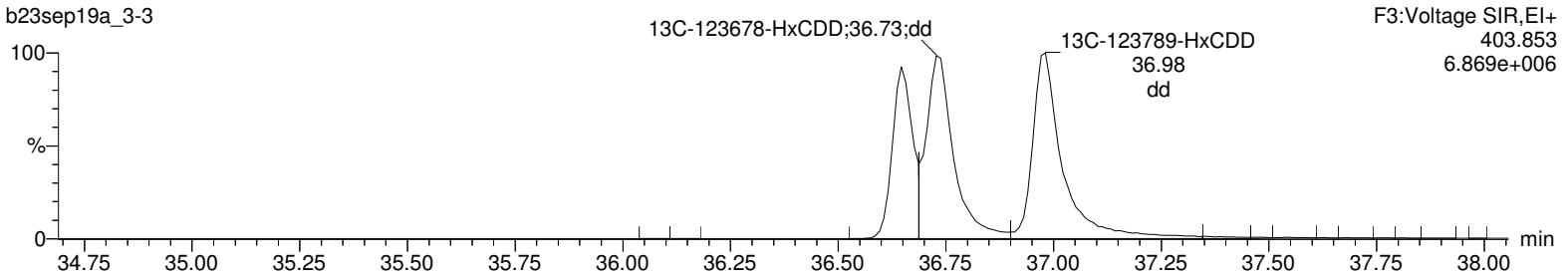
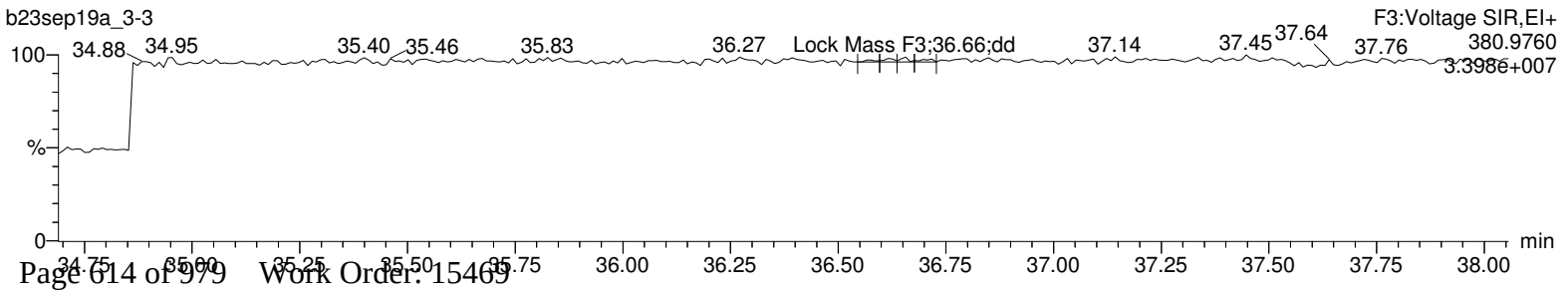


Lock Mass F3



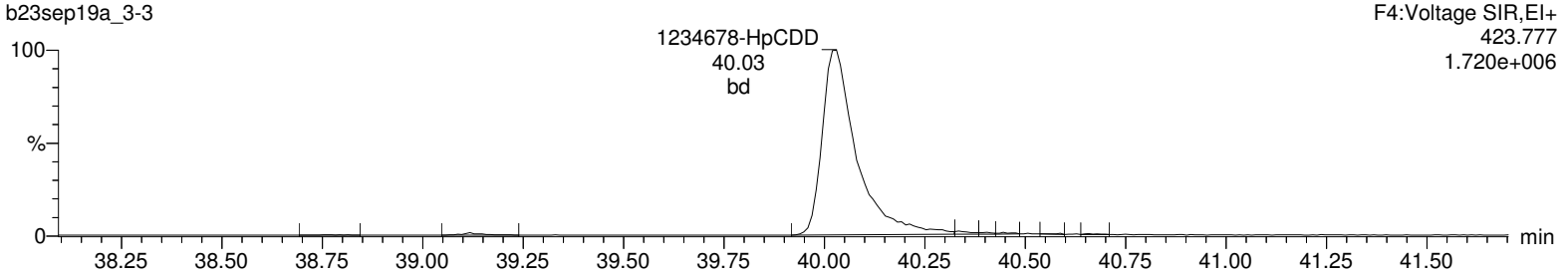
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

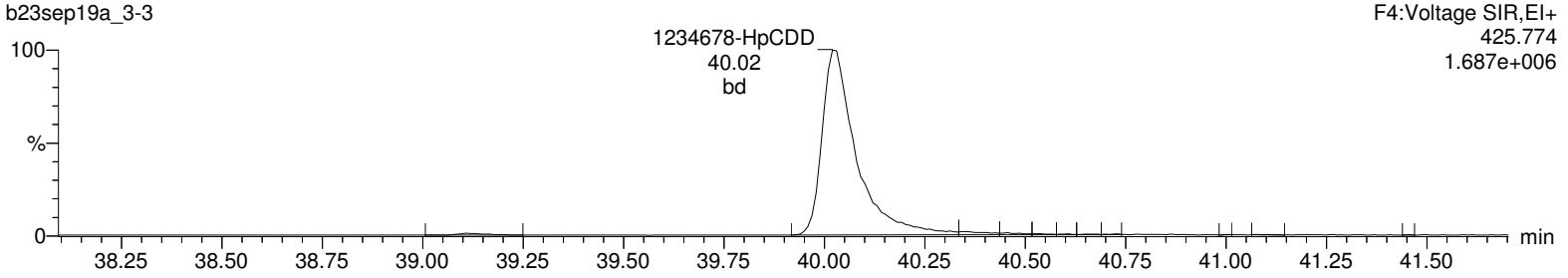
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

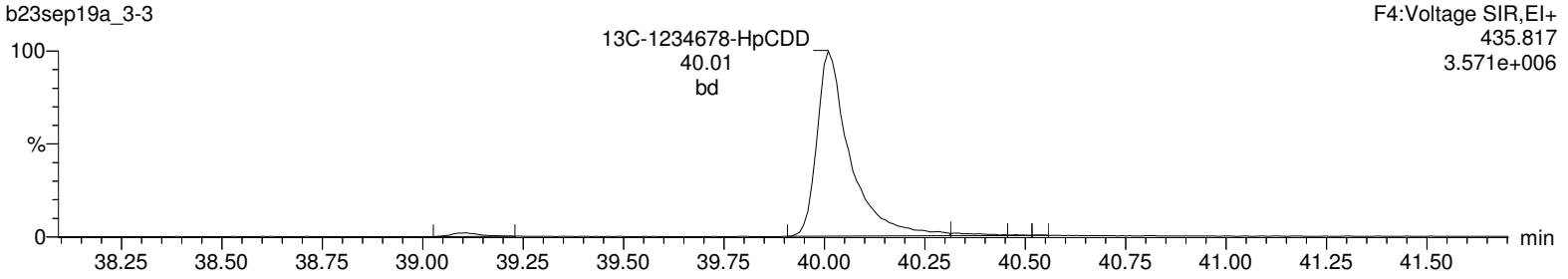
Total-heptadioxins



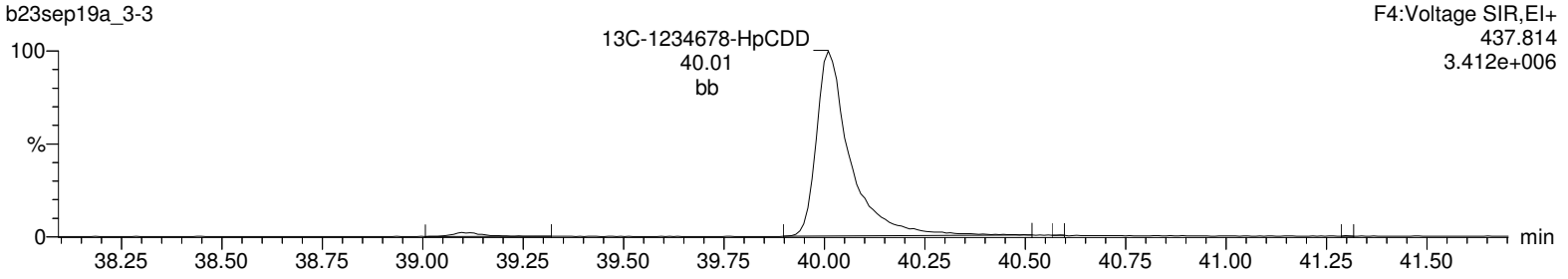
Total-heptadioxins



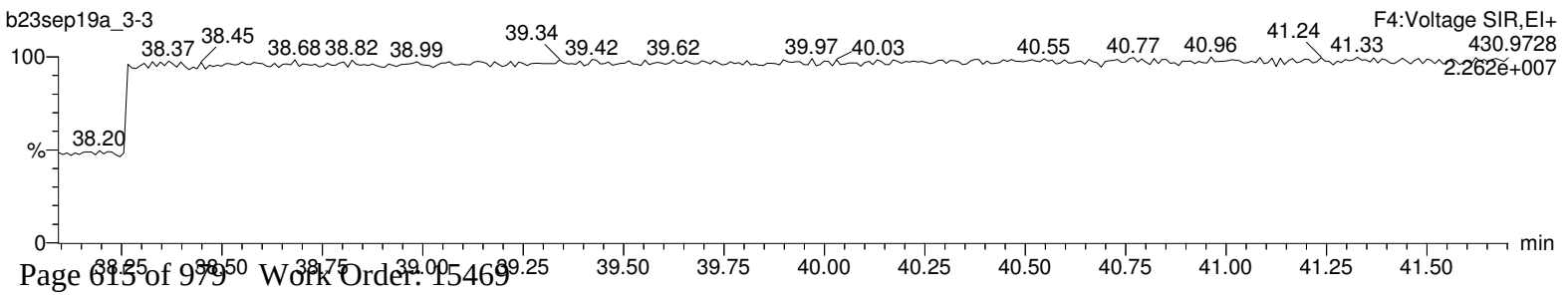
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



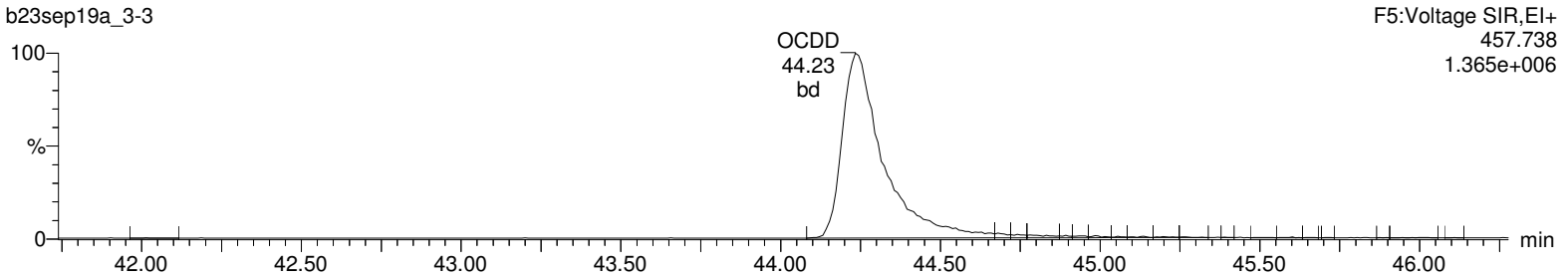
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

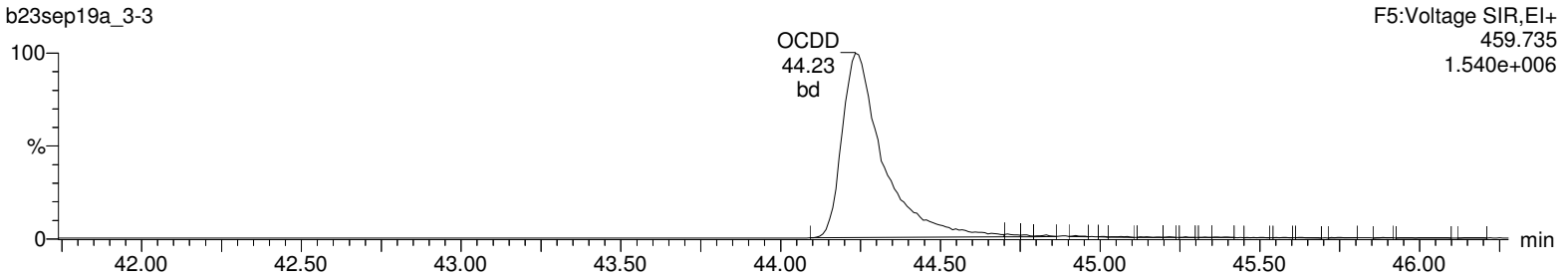
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

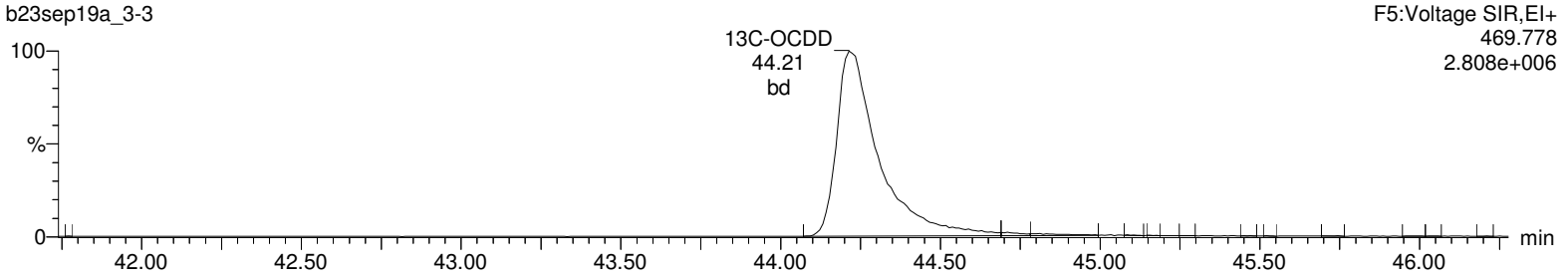
OCDD



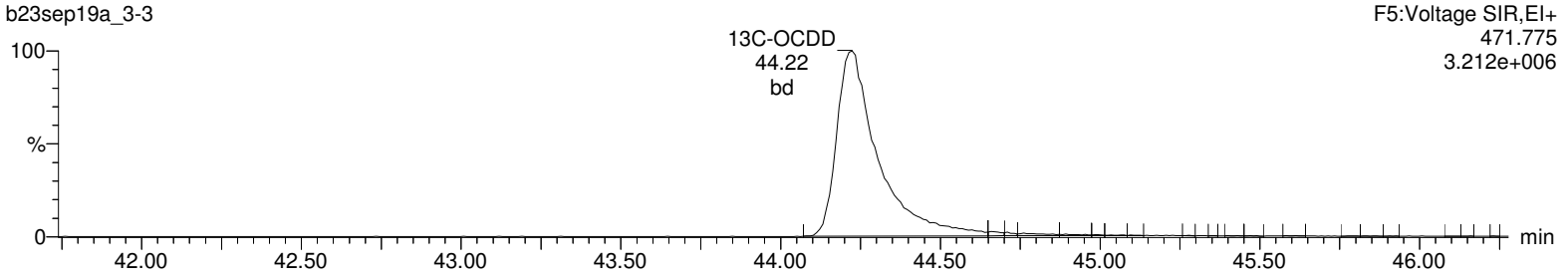
OCDD



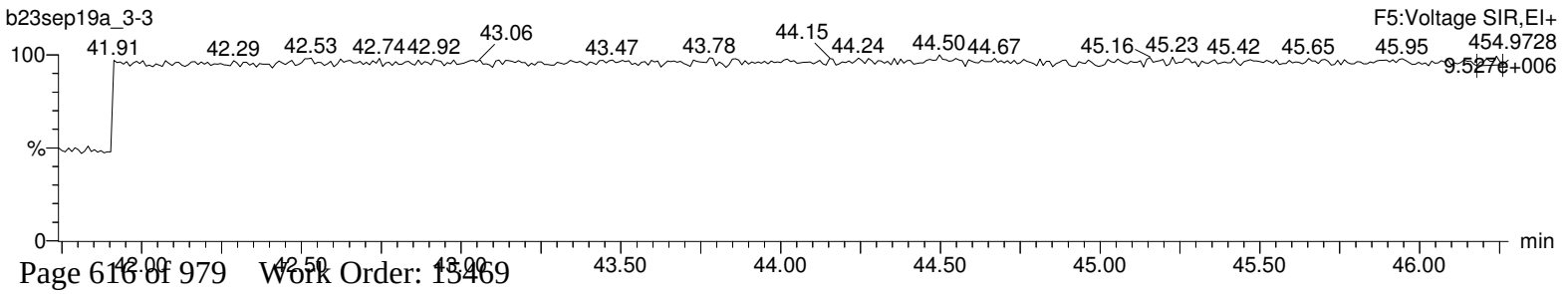
13C-OCDD



13C-OCDD



Lock Mass F5



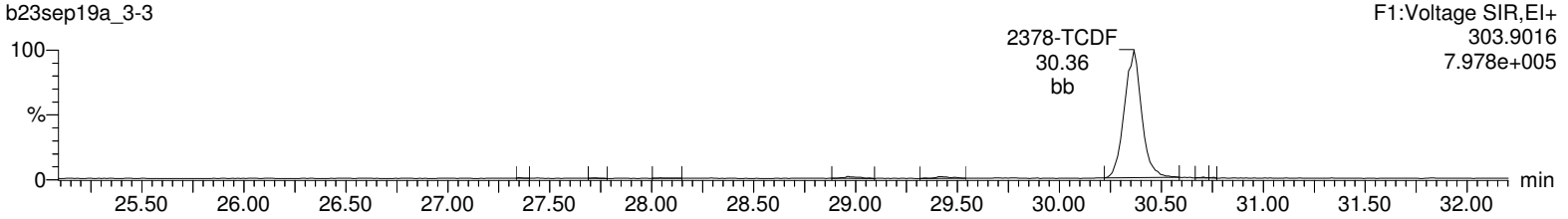
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

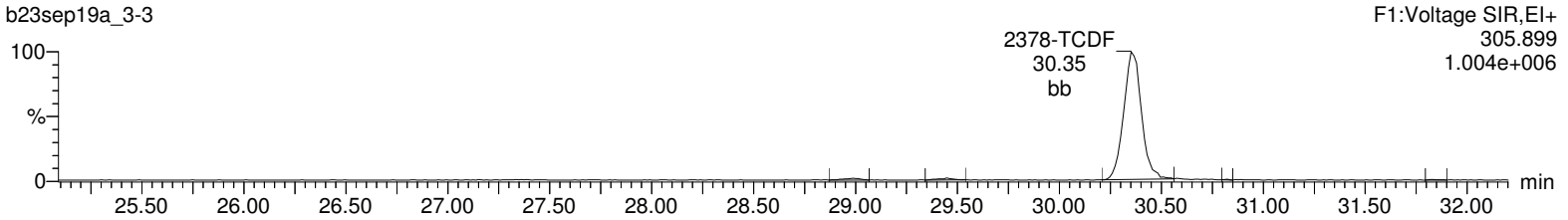
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

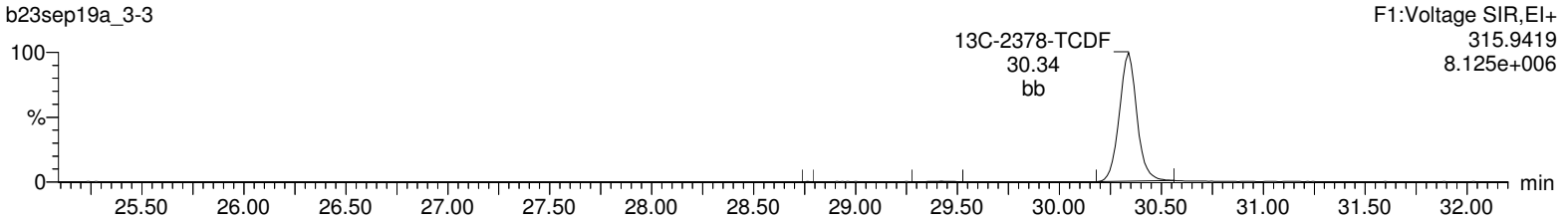
Total-tetrafurans



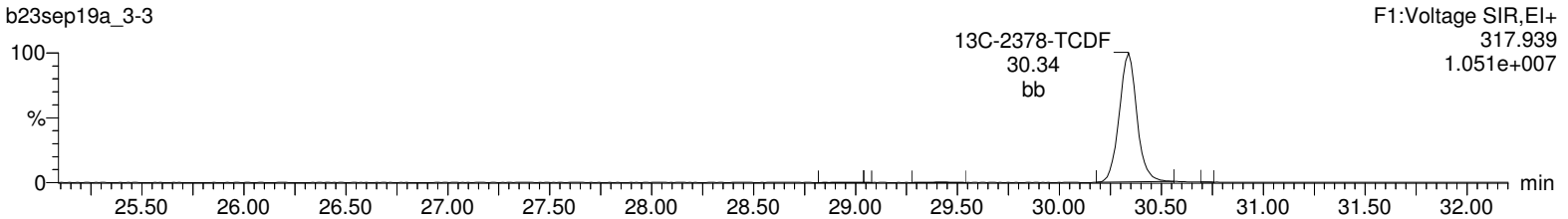
Total-tetrafurans



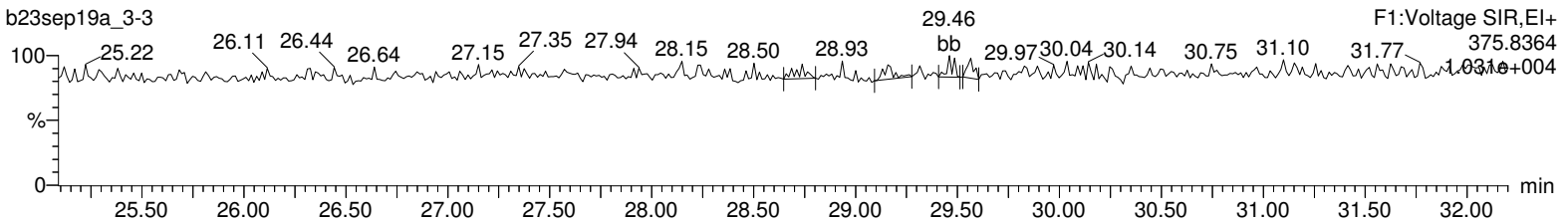
13C-2378-TCDF



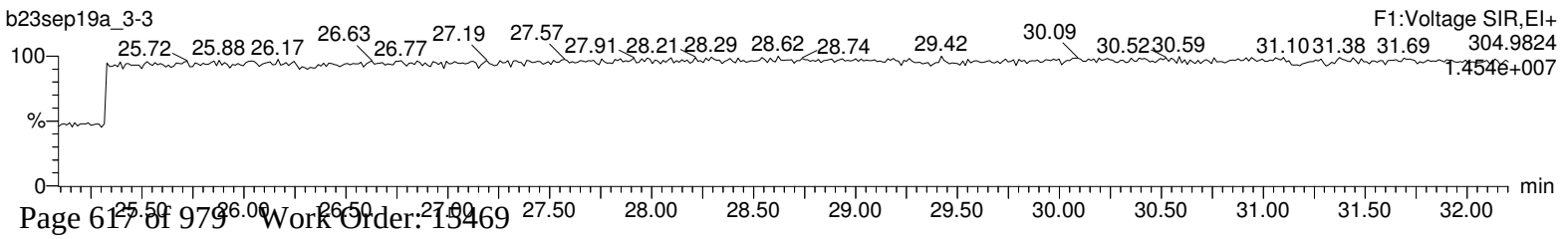
13C-2378-TCDF



HxDPE



Lock Mass F1



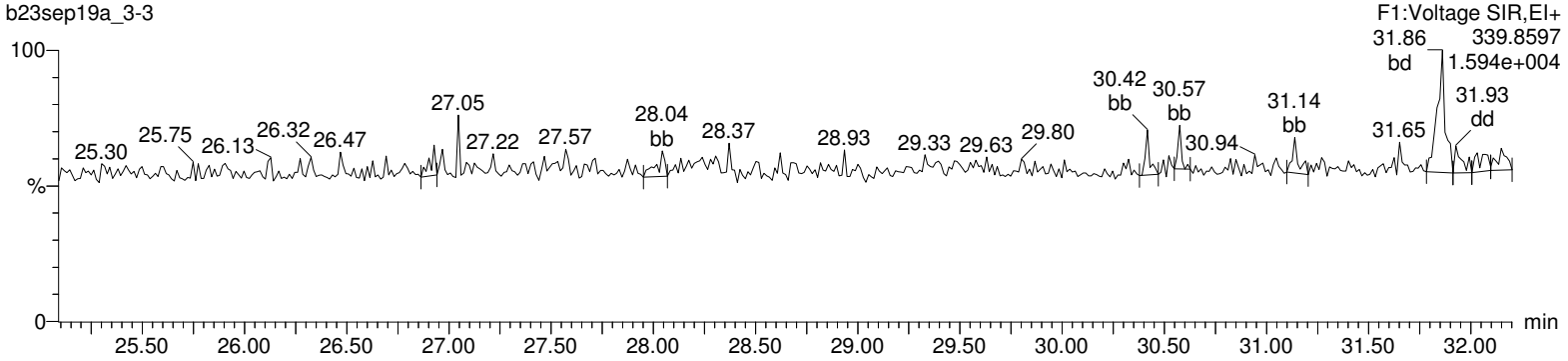
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

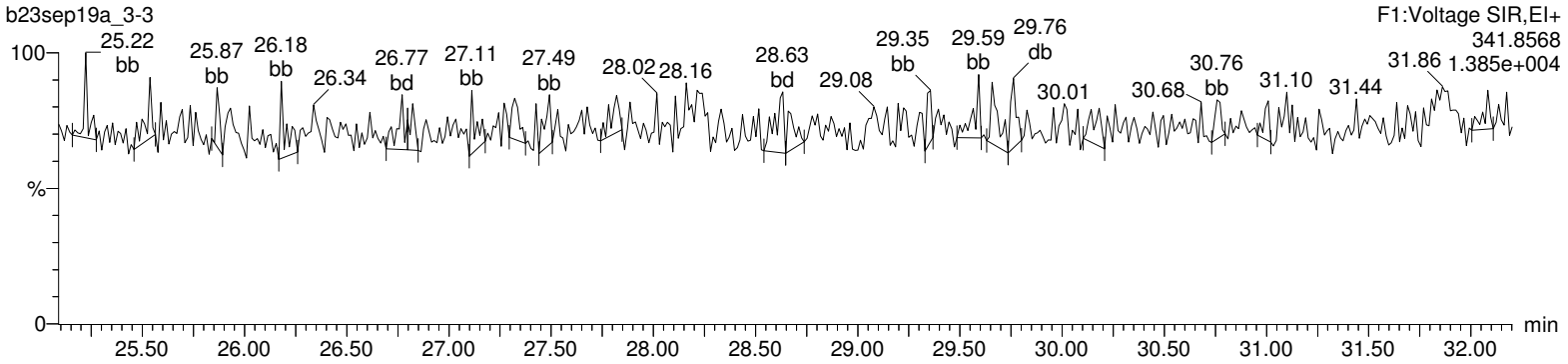
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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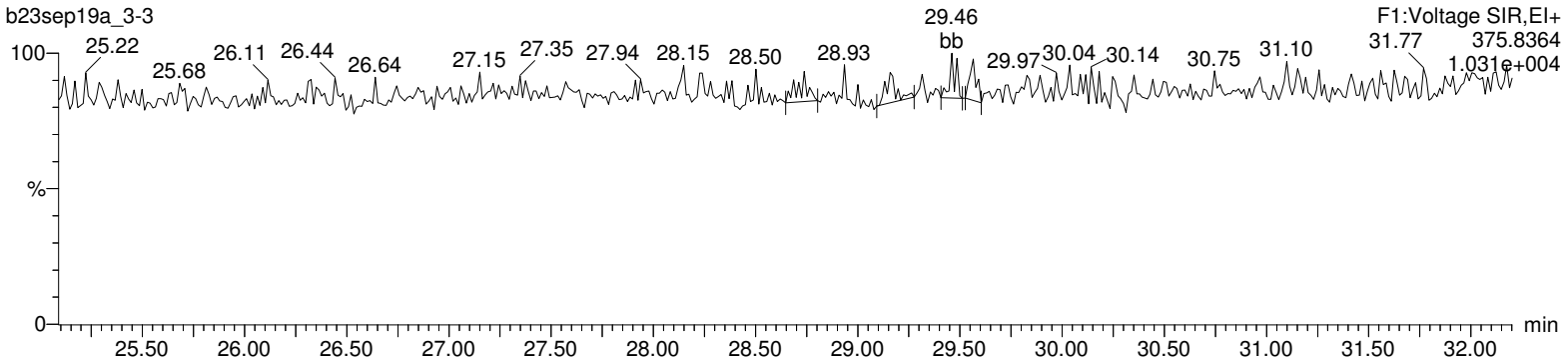
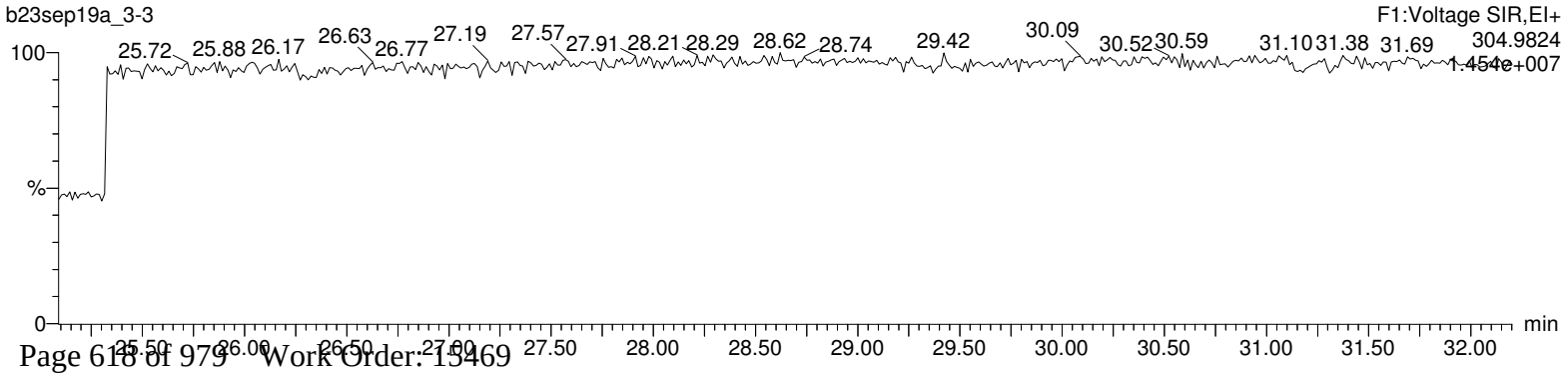


Lock Mass F1



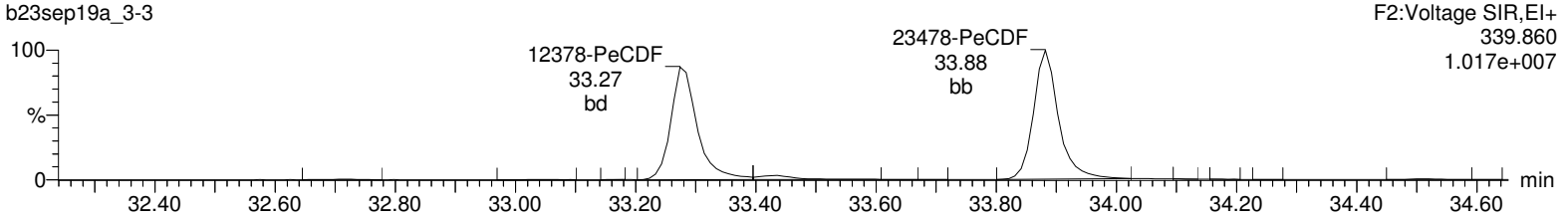
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

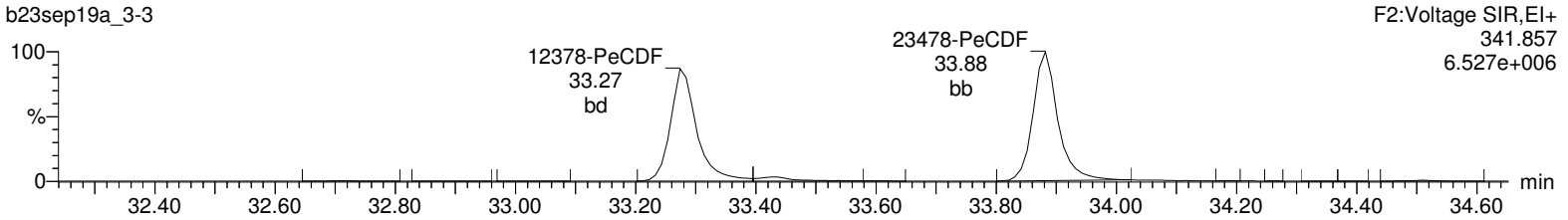
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

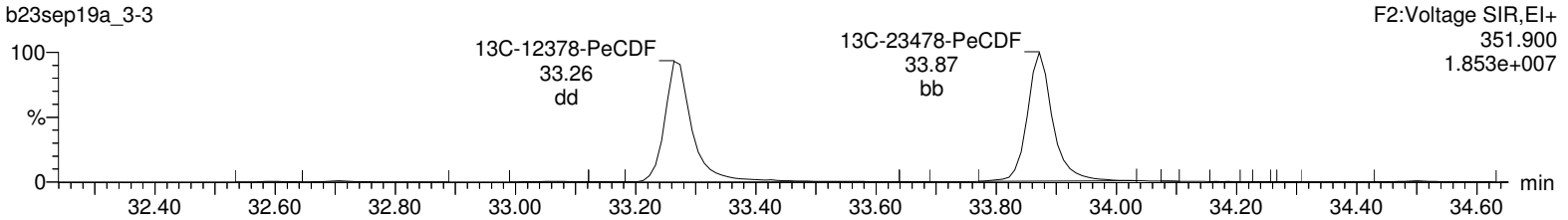
Total-pentafurans



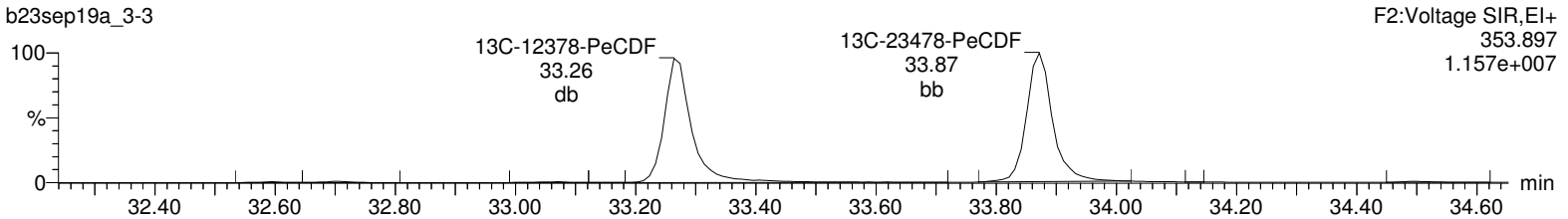
Total-pentafurans



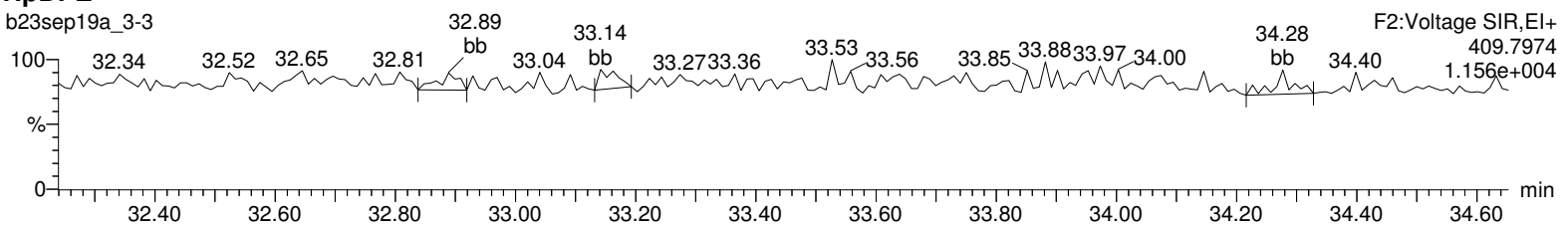
13C-12378-PeCDF



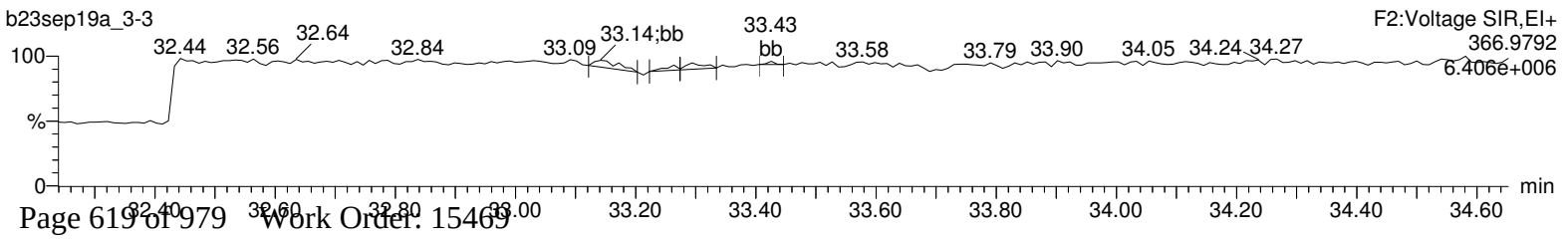
13C-12378-PeCDF



HpDPE



Lock Mass F2



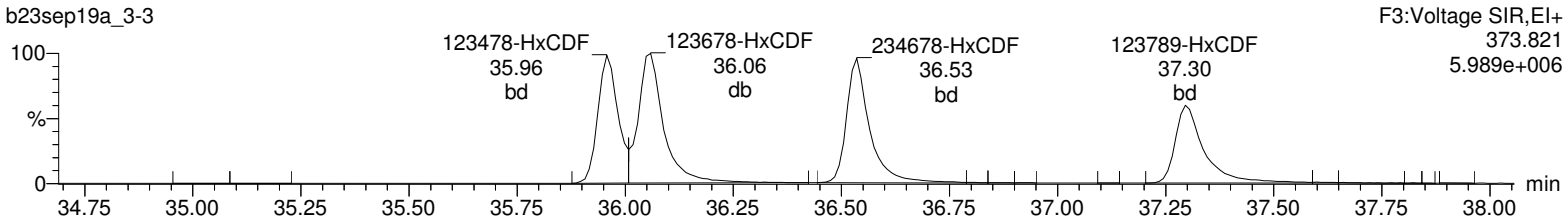
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

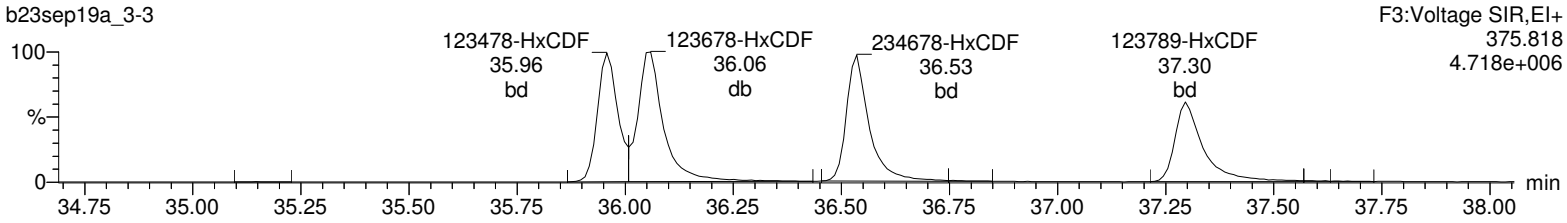
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

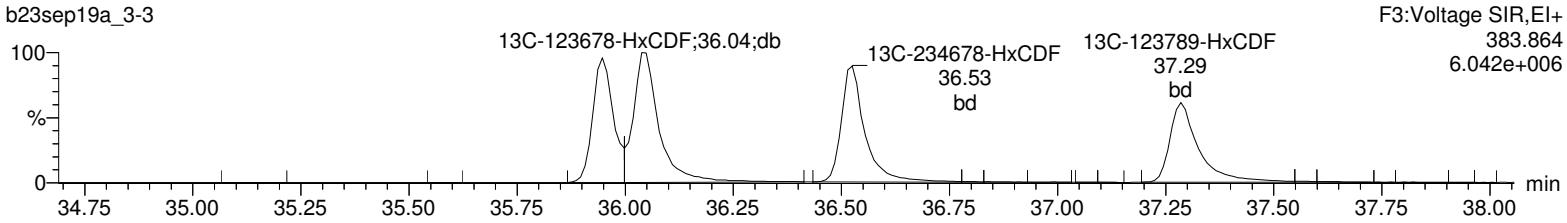
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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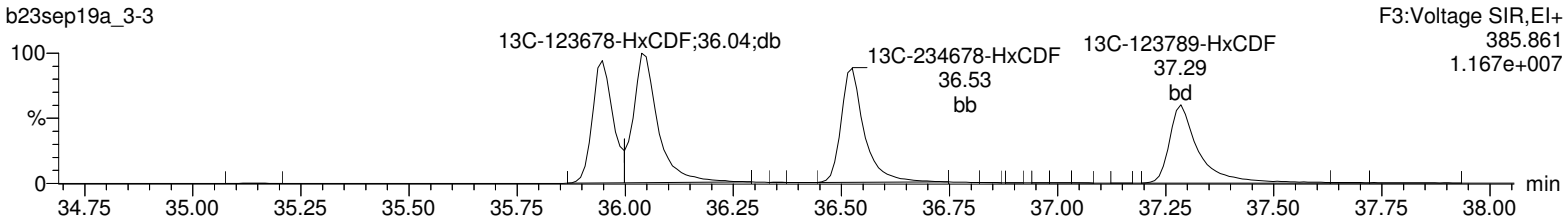
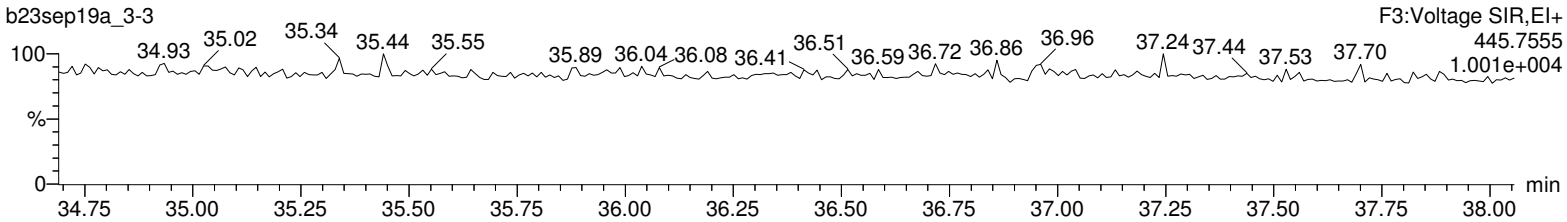
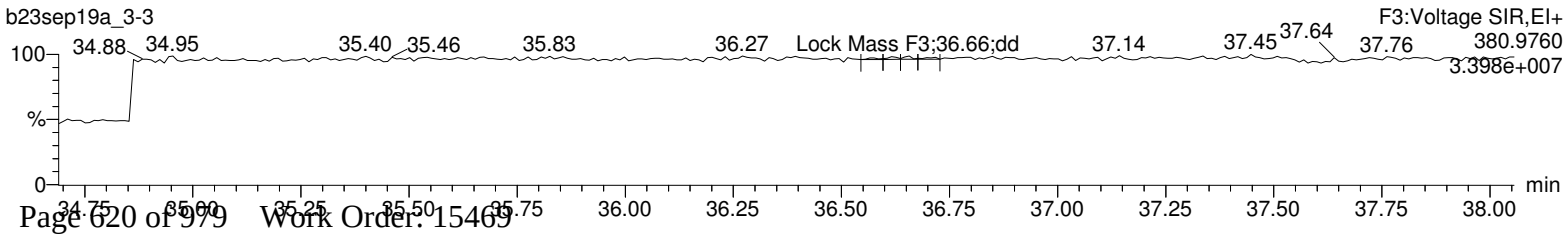


OcDPE



Lock Mass F3



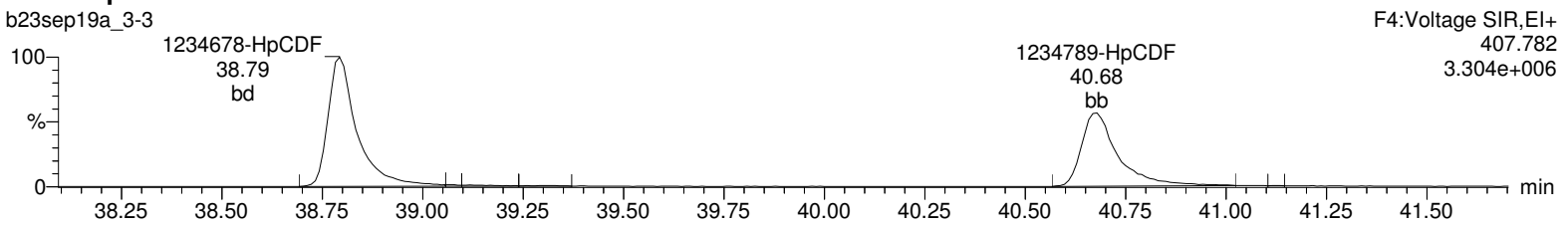
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

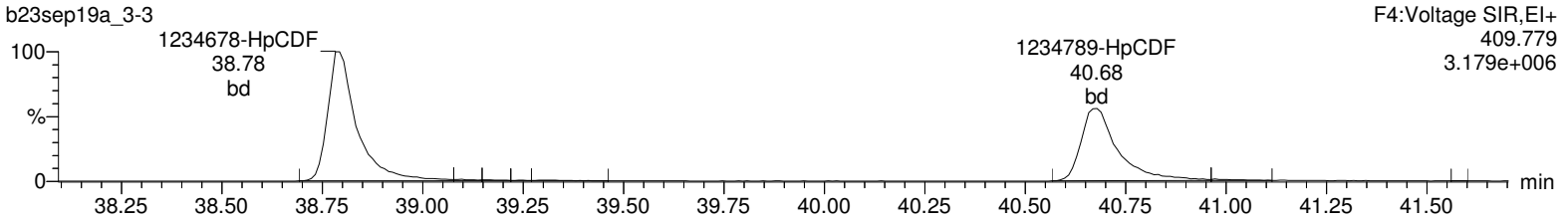
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

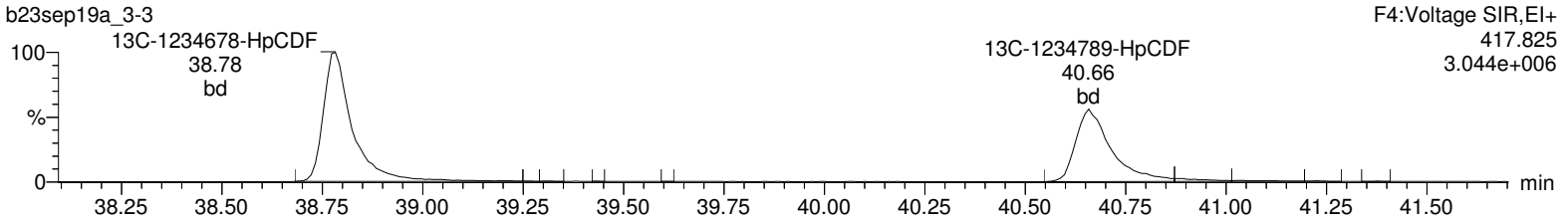
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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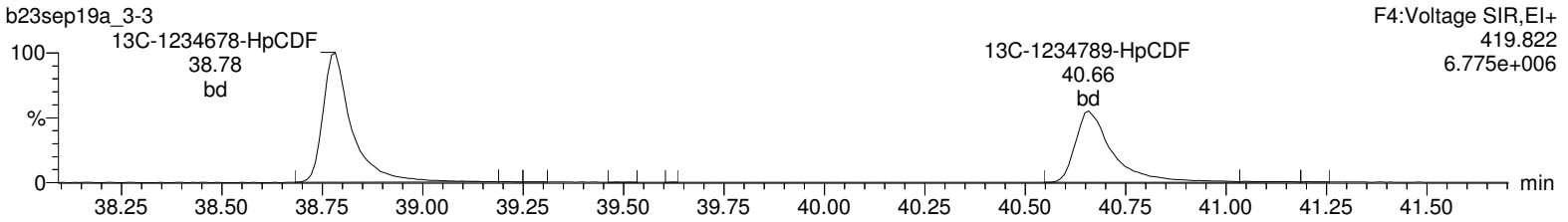
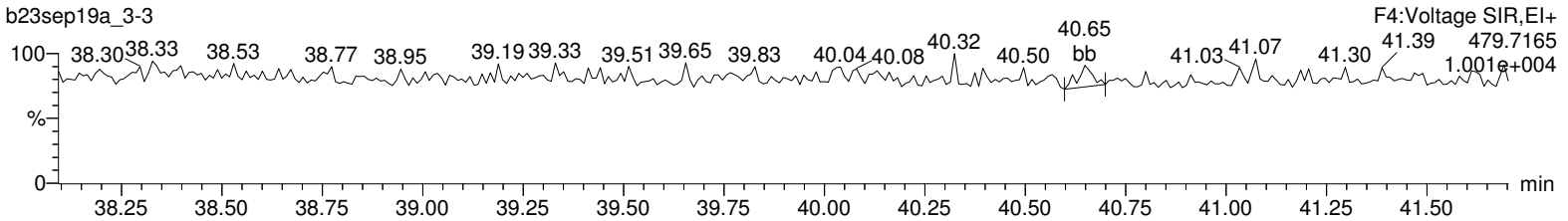
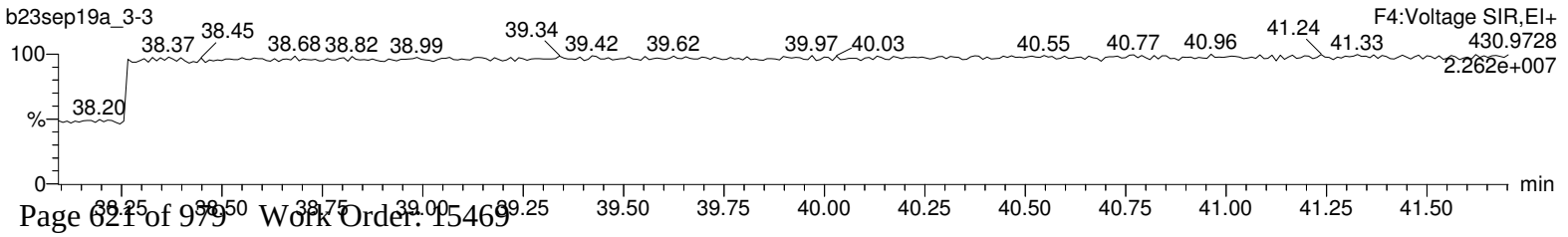


NoDPE



Lock Mass F4



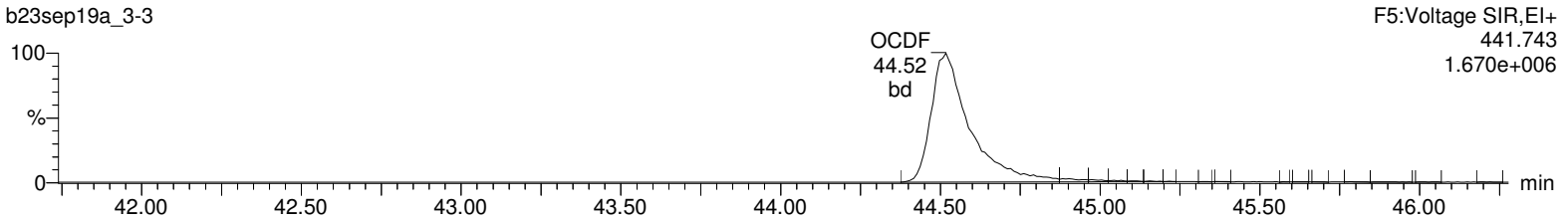
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b23sep19a_3(1-4).qld

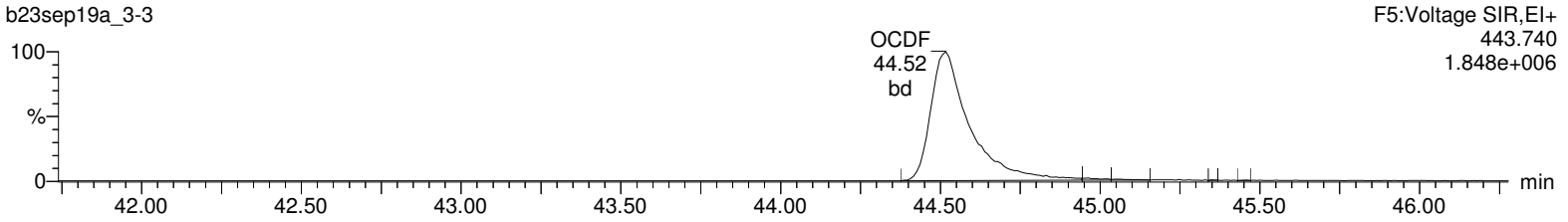
Last Altered: Tuesday, September 24, 2019 11:39:51 Eastern Standard Time
Printed: Tuesday, September 24, 2019 11:45:06 Eastern Standard Time

Name: b23sep19a_3-3, Date: 24-Sep-2019, Time: 09:35:37, ID: 12024794-1 LCSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

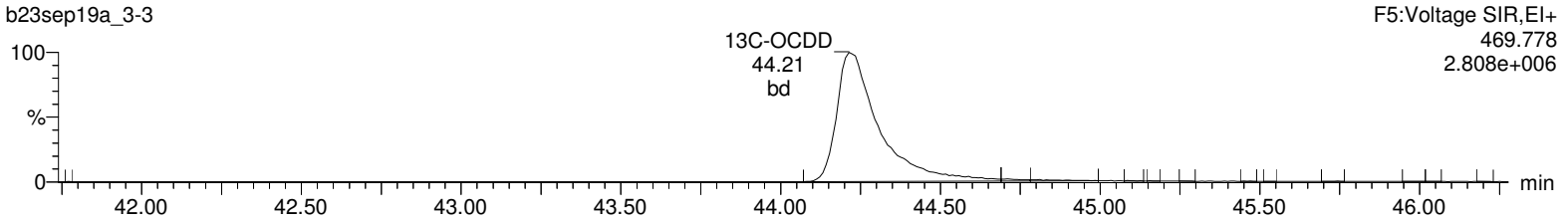
OCDF



OCDF



13C-OCDD



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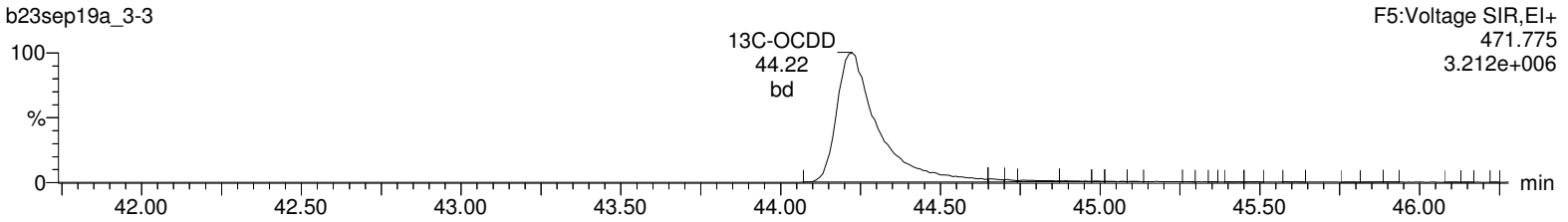
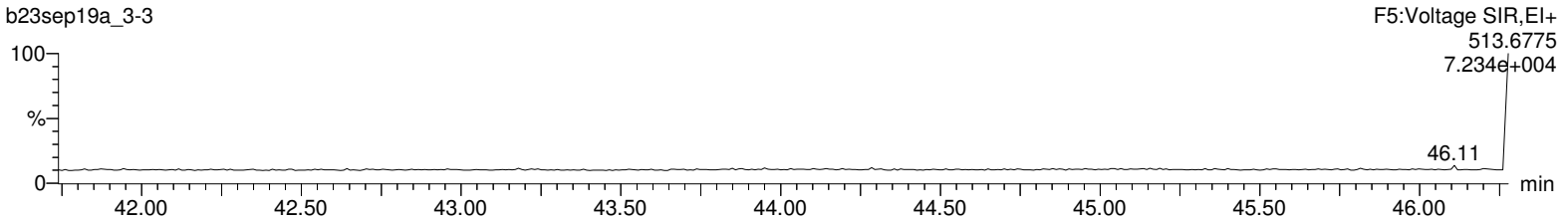
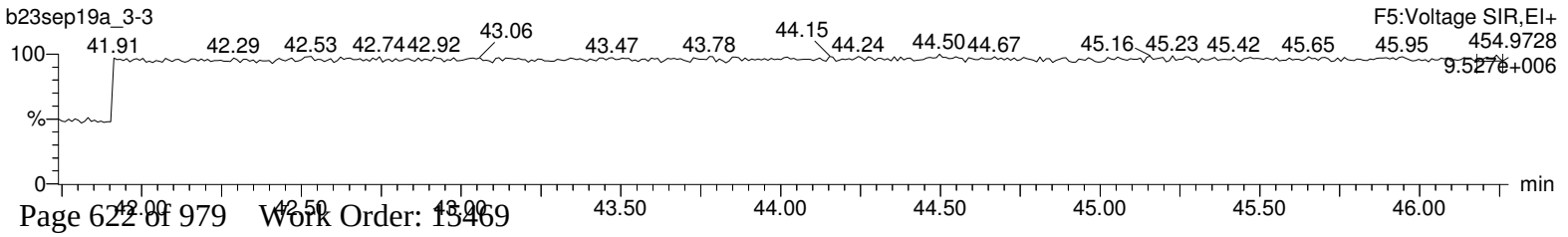


DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024795**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819(15469001MS)**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 02:14**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.09 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		19.9	pg/g	0.207	0.993
40321-76-4	1,2,3,7,8-PeCDD		104	pg/g	0.437	4.97
39227-28-6	1,2,3,4,7,8-HxCDD		102	pg/g	0.719	4.97
57653-85-7	1,2,3,6,7,8-HxCDD		122	pg/g	0.721	4.97
19408-74-3	1,2,3,7,8,9-HxCDD		119	pg/g	0.739	4.97
35822-46-9	1,2,3,4,6,7,8-HpCDD		487	pg/g	1.48	4.97
3268-87-9	1,2,3,4,6,7,8,9-OCDD	E	5860	pg/g	1.77	9.93
51207-31-9	2,3,7,8-TCDF		23.7	pg/g	0.505	0.993
57117-41-6	1,2,3,7,8-PeCDF		105	pg/g	0.342	4.97
57117-31-4	2,3,4,7,8-PeCDF		109	pg/g	0.302	4.97
70648-26-9	1,2,3,4,7,8-HxCDF		108	pg/g	0.447	4.97
57117-44-9	1,2,3,6,7,8-HxCDF		118	pg/g	0.477	4.97
60851-34-5	2,3,4,6,7,8-HxCDF		113	pg/g	0.483	4.97
72918-21-9	1,2,3,7,8,9-HxCDF		105	pg/g	0.473	4.97
67562-39-4	1,2,3,4,6,7,8-HpCDF		184	pg/g	0.397	4.97
55673-89-7	1,2,3,4,7,8,9-HpCDF		110	pg/g	0.614	4.97
39001-02-0	1,2,3,4,6,7,8,9-OCDF		470	pg/g	0.697	9.93

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		153	199	pg/g	77.1	(25%-164%)
13C-1,2,3,7,8-PeCDD		170	199	pg/g	85.4	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		181	199	pg/g	91.2	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		138	199	pg/g	69.6	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		182	199	pg/g	91.4	(23%-140%)
13C-OCDD		416	397	pg/g	105	(17%-157%)
13C-2,3,7,8-TCDF		142	199	pg/g	71.3	(24%-169%)
13C-1,2,3,7,8-PeCDF		158	199	pg/g	79.6	(24%-185%)
13C-2,3,4,7,8-PeCDF		159	199	pg/g	79.9	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		155	199	pg/g	78.3	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		139	199	pg/g	70.0	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		145	199	pg/g	72.8	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		159	199	pg/g	80.1	(29%-147%)
13C-1,2,3,4,6,7,8-HpCDF		167	199	pg/g	83.9	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		181	199	pg/g	91.0	(26%-138%)
37Cl-2,3,7,8-TCDD		17.8	19.9	pg/g	89.8	(35%-197%)

Comments:

E Value is estimated - Concentration of the target analyte exceeds the instrument calibration range

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 09:34:26 Eastern Standard Time
Printed: Friday, October 04, 2019 10:14:52 Eastern Standard Time

Method: Untitled 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	3.00e4	3.94e4	6.94e4	31.11	1.000	0.76	NO	10.033	0.104	3.87e5	1747	221.2	5.01e5	2046	244.7	bd	dd
2	12378-PeCDD	1.57e5	1.01e5	2.58e5	34.05	1.000	1.55	NO	52.148	0.220	2.90e6	4304	674.1	1.89e6	3818	496.3	bb	bb
3	123478-HxCDD	1.40e5	1.14e5	2.54e5	36.65	1.000	1.24	NO	51.152	0.362	2.13e6	4872	437.0	1.66e6	5472	303.3	bd	bd
4	123678-HxCDD	1.62e5	1.32e5	2.94e5	36.74	1.000	1.23	NO	61.188	0.363	2.39e6	4872	490.1	1.92e6	5472	351.5	dd	dd
5	123789-HxCDD	1.56e5	1.31e5	2.87e5	36.98	1.007	1.18	NO	60.135	0.372	2.37e6	4872	486.7	1.93e6	5472	353.1	db	dd
6	1234678-HpCDD	5.06e5	4.84e5	9.90e5	39.99	1.000	1.04	NO	245.318	0.743	5.88e6	7386	796.3	5.67e6	5991	947.1	bb	bb
7	OCDD	5.34e6	6.04e6	1.14e7	44.19	1.000	0.88	NO	2947.422	0.891	4.45e7	5013	8880.8	5.03e7	6070	8290.9	bb	bb
8	2378-TCDF	3.75e4	4.89e4	8.64e4	30.30	1.000	0.77	NO	11.932	0.254	3.43e5	2939	116.6	4.33e5	3824	113.3	db	bb
9	12378-PeCDF	2.14e5	1.37e5	3.51e5	33.25	1.000	1.55	NO	53.018	0.172	3.98e6	2724	1460.3	2.59e6	5674	456.0	bd	bd
10	23478-PeCDF	2.44e5	1.57e5	4.00e5	33.86	1.000	1.56	NO	54.833	0.152	4.60e6	2724	1689.4	2.91e6	5674	512.3	bb	bb
11	123478-HxCDF	1.79e5	1.45e5	3.24e5	35.94	1.000	1.23	NO	54.116	0.225	2.91e6	4788	607.6	2.35e6	4039	582.4	bd	bd
12	123678-HxCDF	2.15e5	1.70e5	3.85e5	36.03	1.000	1.27	NO	59.456	0.240	2.97e6	4788	620.6	2.41e6	4039	596.8	dd	db
13	234678-HxCDF	1.94e5	1.54e5	3.48e5	36.51	1.000	1.26	NO	56.669	0.243	2.80e6	4788	584.8	2.24e6	4039	554.7	bb	bb
14	123789-HxCDF	1.57e5	1.27e5	2.84e5	37.28	1.001	1.23	NO	53.018	0.238	2.79e6	4788	583.4	2.27e6	4039	561.4	bb	bb
15	1234678-HpCDF	2.71e5	2.65e5	5.37e5	38.75	1.000	1.02	NO	92.690	0.200	3.45e6	3297	1047.6	3.35e6	2696	1243.5	bb	bb
16	1234789-HpCDF	1.29e5	1.27e5	2.57e5	40.63	1.000	1.02	NO	55.460	0.309	1.38e6	3297	417.8	1.35e6	2696	502.3	bd	bd
17	OCDF	4.78e5	5.38e5	1.02e6	44.47	1.006	0.89	NO	236.420	0.351	3.89e6	2236	1737.9	4.38e6	2623	1671.7	bd	bd
18	13C-2378-TCDD	3.34e5	4.43e5	7.77e5	31.10	1.018	0.75	NO	77.056	0.150	4.42e6	3101	1426.2	5.77e6	2588	2230.4	bb	bd
19	13C-12378-PeCDD	3.53e5	2.30e5	5.83e5	34.04	1.115	1.53	NO	85.402	0.108	6.56e6	1288	5095.5	4.27e6	1484	2875.9	bb	bb
20	13C-123478-HxCDD	2.94e5	2.38e5	5.32e5	36.64	0.991	1.24	NO	91.199	0.182	4.23e6	2525	1675.5	3.42e6	3654	936.8	bd	bd
21	13C-123678-HxCDD	3.01e5	2.42e5	5.44e5	36.72	0.993	1.24	NO	69.630	0.136	4.46e6	2525	1766.1	3.65e6	3654	999.1	dd	dd
22	13C-1234678-HpCDD	2.17e5	2.11e5	4.27e5	39.98	1.081	1.03	NO	91.420	0.253	2.42e6	3570	678.1	2.41e6	3311	726.6	bd	bb
23	13C-OCDD	3.91e5	4.54e5	8.45e5	44.18	1.195	0.86	NO	209.552	0.189	3.15e6	2427	1297.7	3.69e6	1998	1844.1	bb	bd
24	13C-2378-TCDF	3.53e5	4.58e5	8.11e5	30.30	0.992	0.77	NO	71.332	0.127	3.24e6	3359	965.9	4.22e6	2054	2055.6	bb	bb
25	13C-12378-PeCDF	4.48e5	2.81e5	7.29e5	33.24	1.089	1.59	NO	79.616	0.274	8.27e6	5164	1601.1	5.29e6	4269	1239.6	dd	bb
26	13C-23478-PeCDF	4.58e5	2.93e5	7.51e5	33.85	1.109	1.56	NO	79.943	0.267	8.68e6	5164	1681.6	5.45e6	4269	1277.5	bb	bb
27	13C-123478-HxCDF	1.80e5	3.47e5	5.27e5	35.93	0.972	0.52	NO	78.257	0.237	2.96e6	4461	662.3	5.59e6	4808	1162.8	bd	bd
28	13C-123678-HxCDF	2.11e5	4.03e5	6.14e5	36.02	0.974	0.52	NO	70.006	0.182	3.00e6	4461	673.1	5.89e6	4808	1224.2	db	db
29	13C-234678-HxCDF	1.86e5	3.57e5	5.43e5	36.51	0.987	0.52	NO	72.771	0.214	2.75e6	4461	617.4	5.30e6	4808	1102.7	bb	bb
30	13C-123789-HxCDF	1.74e5	3.29e5	5.04e5	37.26	1.008	0.53	NO	80.109	0.254	3.03e6	4461	678.5	5.71e6	4808	1188.6	bb	bb
31	13C-1234678-HpCDF	1.47e5	3.39e5	4.86e5	38.74	1.048	0.44	NO	83.948	0.188	1.91e6	2422	787.0	4.22e6	3920	1076.2	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Friday, October 04, 2019 09:34:26 Eastern Standard Time
Printed: Friday, October 04, 2019 10:14:52 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.16e5	2.62e5	3.77e5	40.62	1.099	0.44	NO	90.998	0.263	1.21e6	2422	500.7	2.65e6	3920	675.5	bb	bb
33	13C-1234-TCDD	3.85e5	4.91e5	8.76e5	30.53	0.000	0.78	NO	100.000	0.173	3.62e6	3101	1166.2	4.67e6	2588	1804.0	bd	bb
34	13C-123789-HxCDD	4.05e5	3.34e5	7.39e5	36.97	0.000	1.22	NO	100.000	0.144	5.89e6	2525	2331.8	4.85e6	3654	1328.2	dd	dd
35	37Cl-2378-TCDD	8.47e4		8.47e4	31.11	1.019			8.983	0.0308	1.11e6	1090	1019.6				bb	

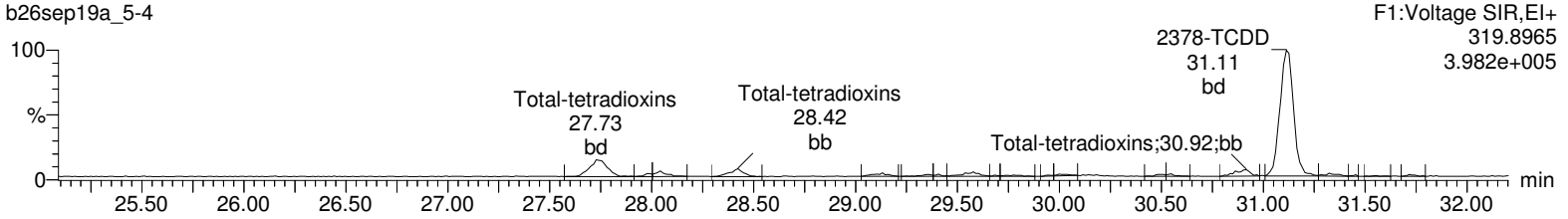
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

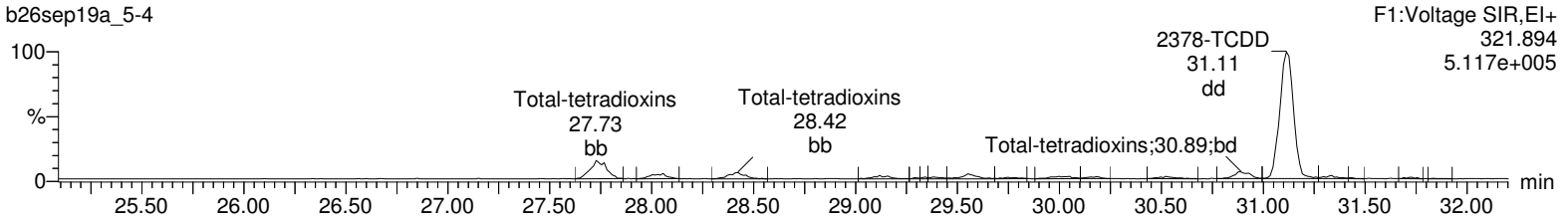
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

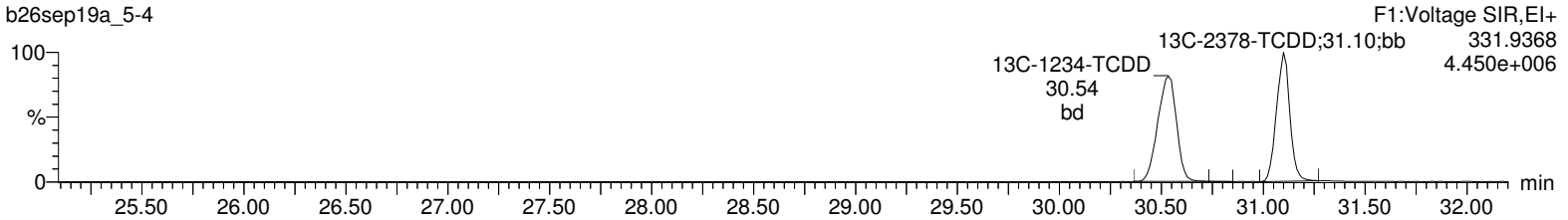
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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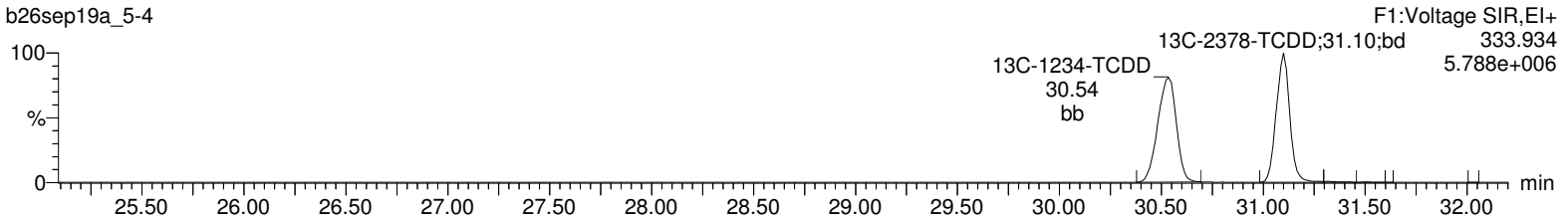

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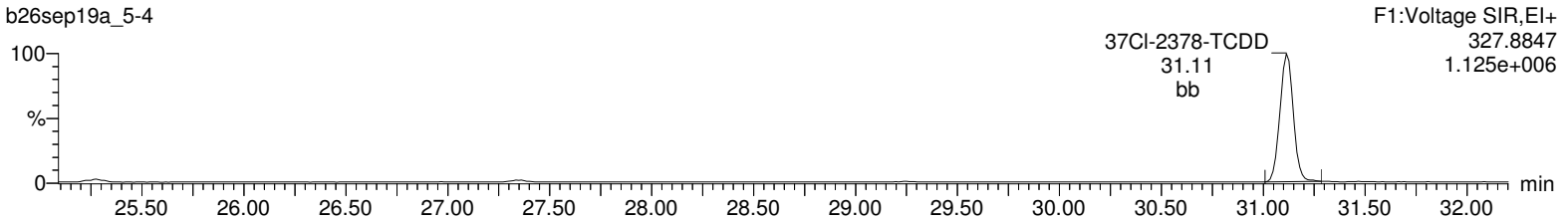
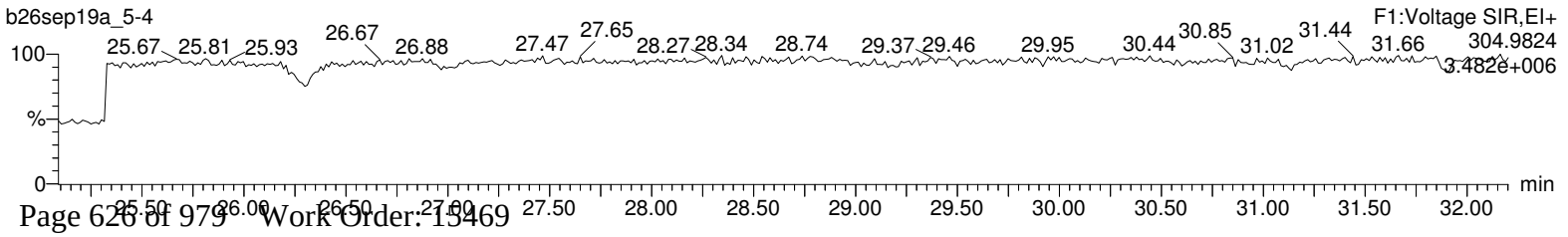


Lock Mass F1



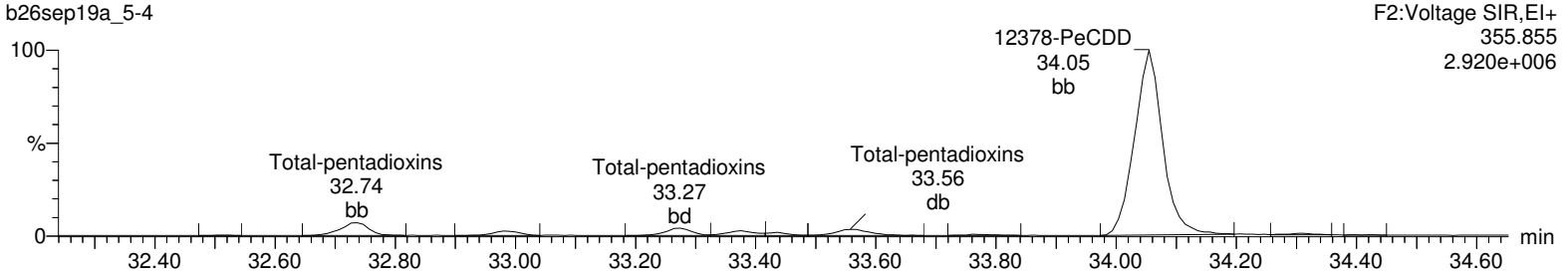
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

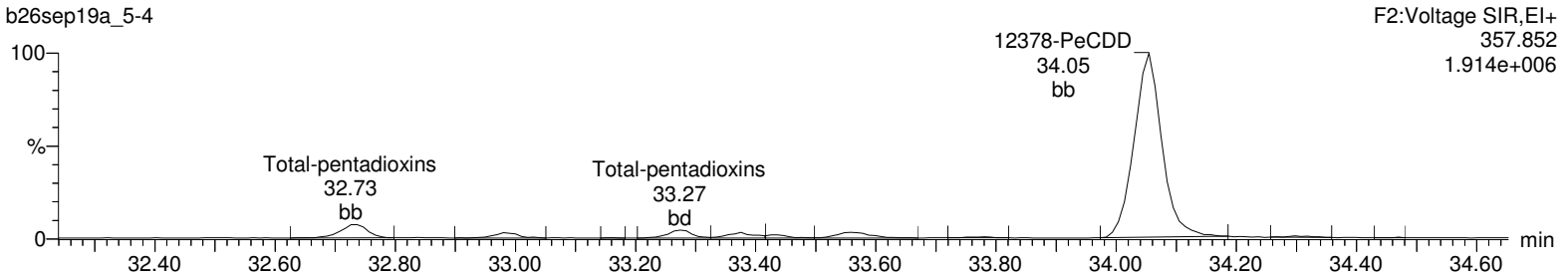
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentadioxins



Total-pentadioxins



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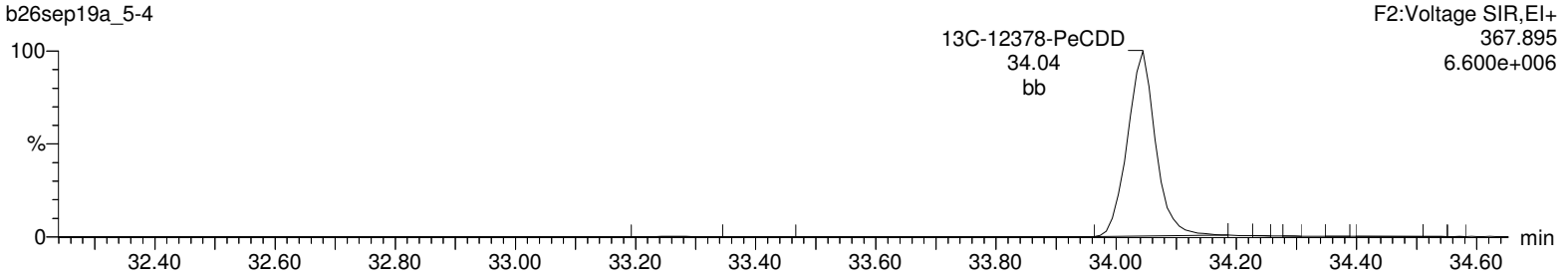

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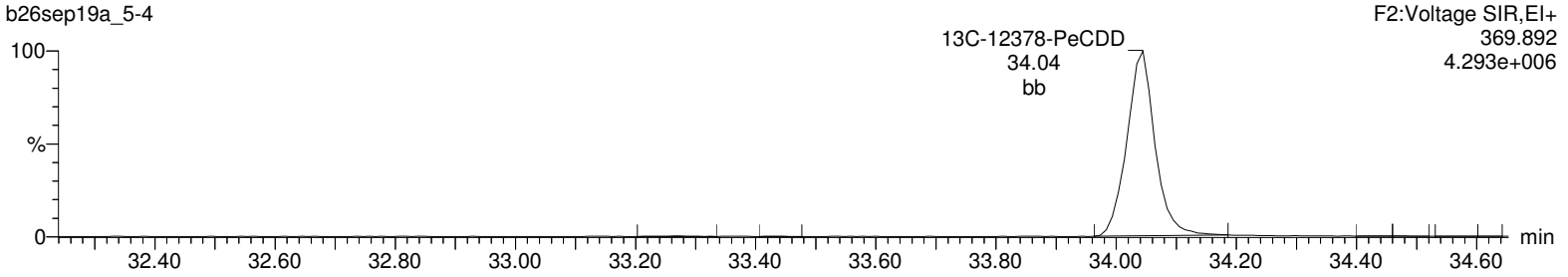

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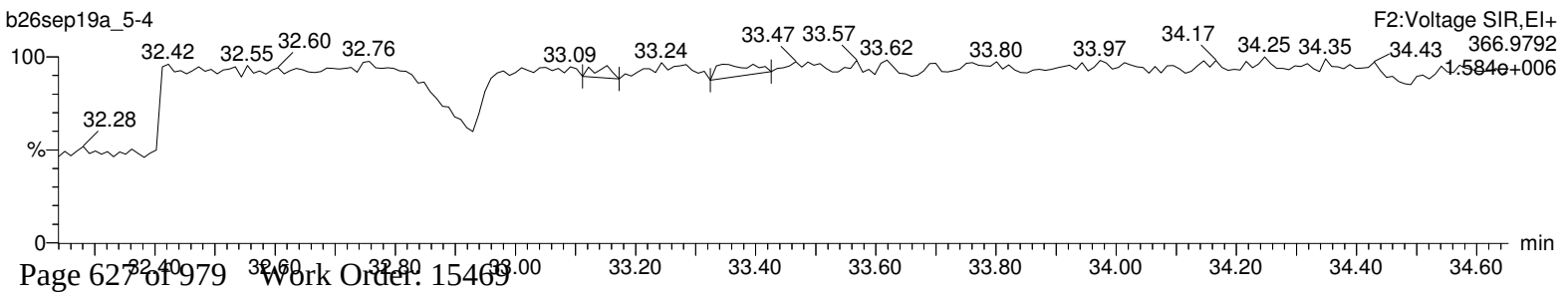

Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

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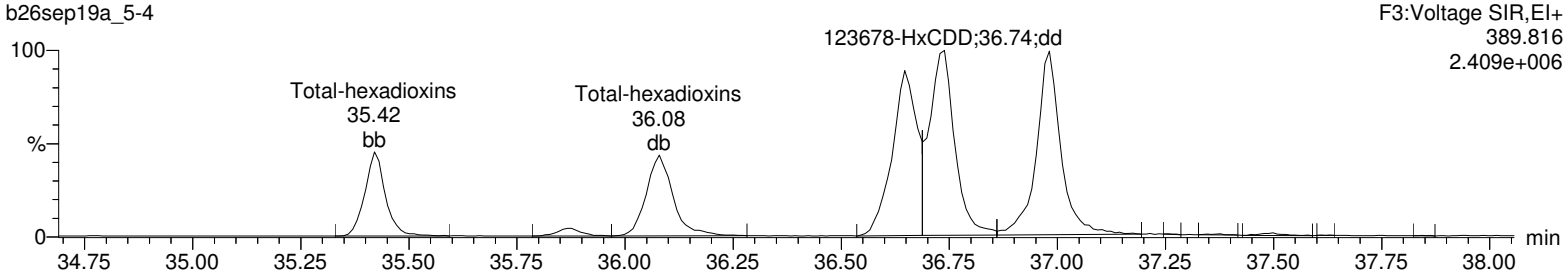
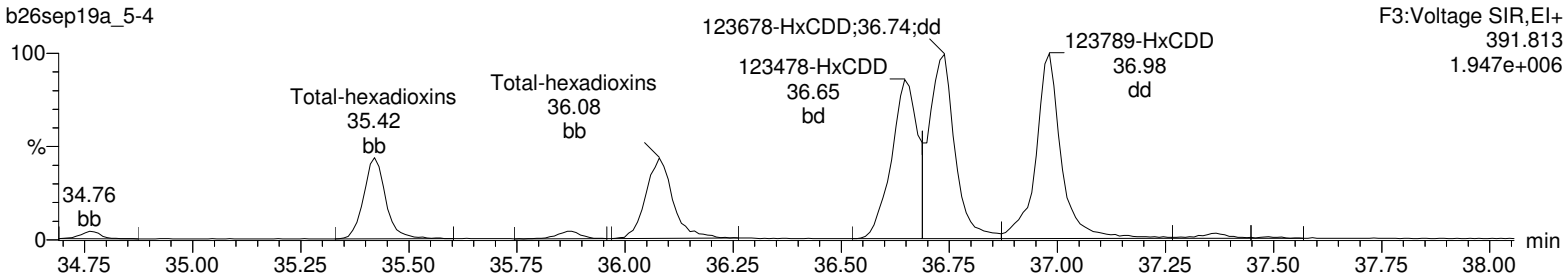
Total-hexadioxins



Total-hexadioxins



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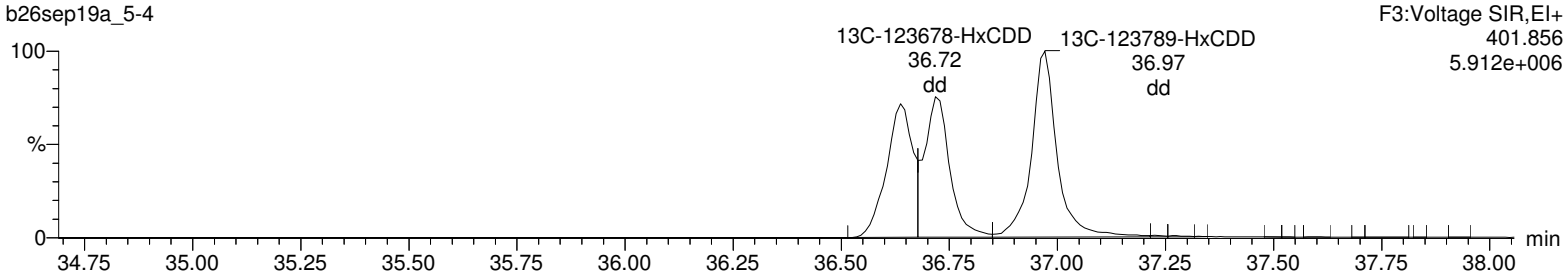

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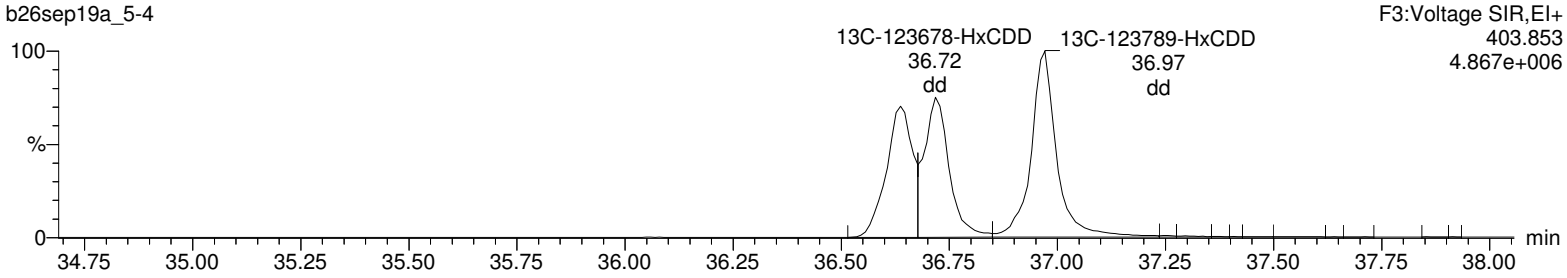

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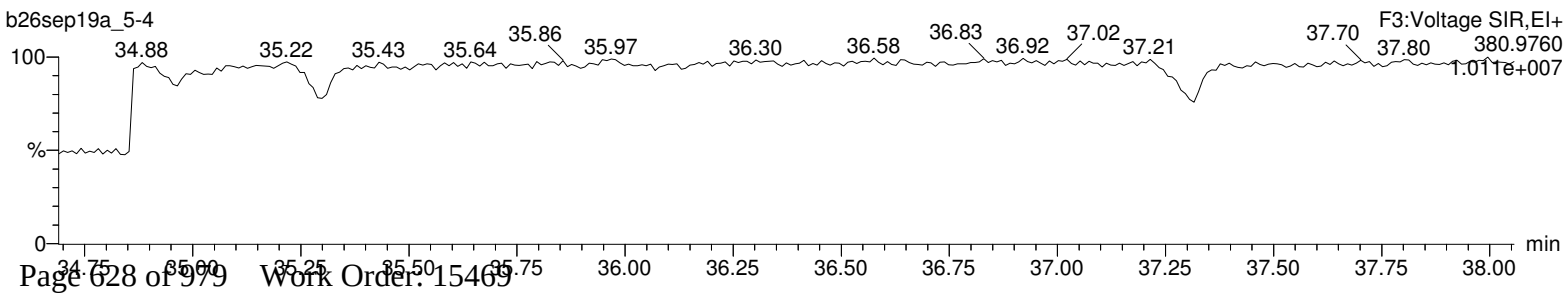


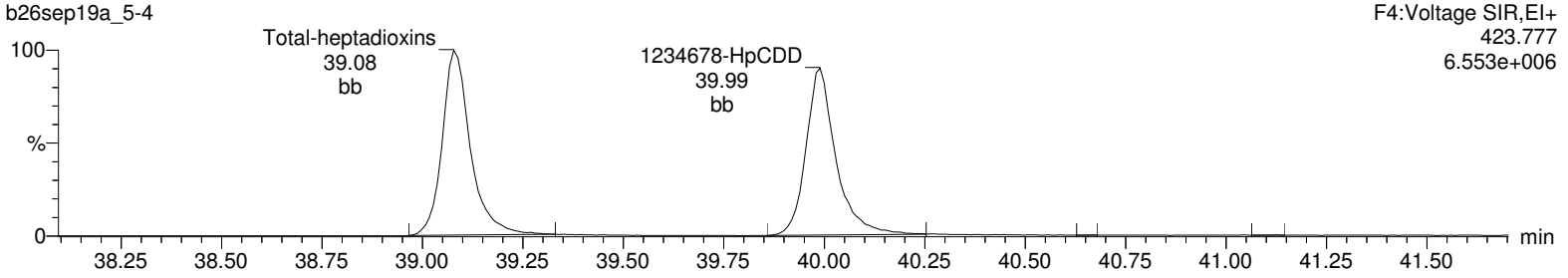
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

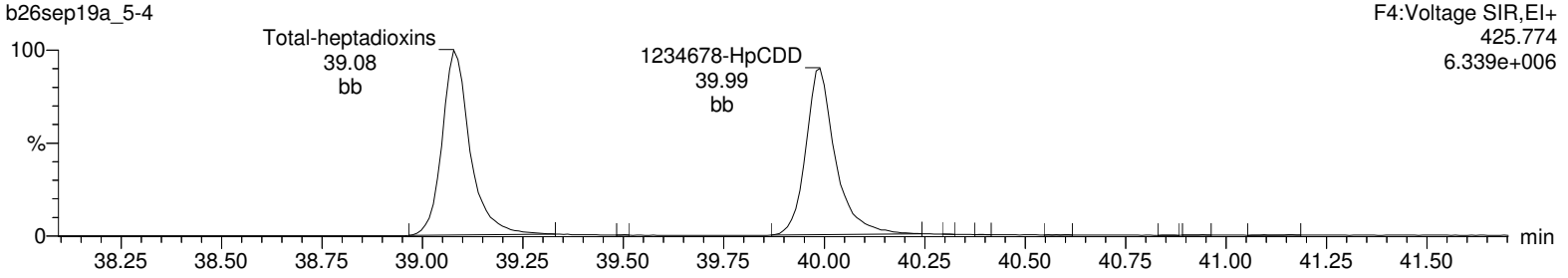
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-heptadioxins



Total-heptadioxins



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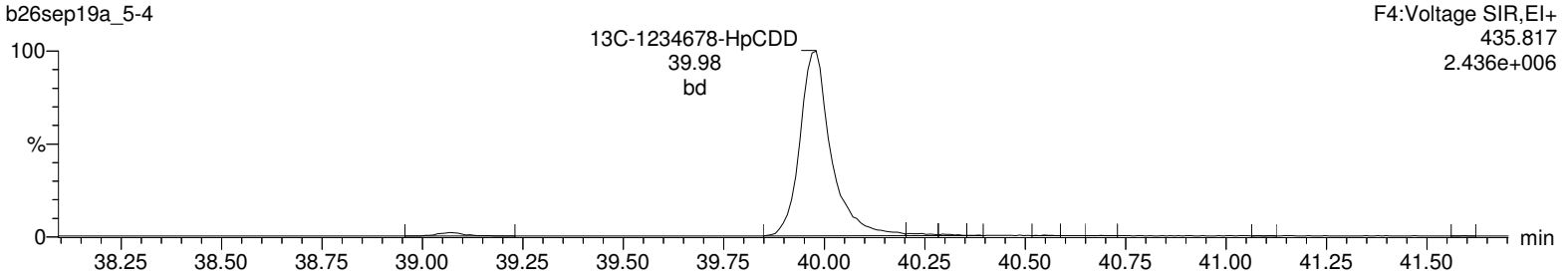

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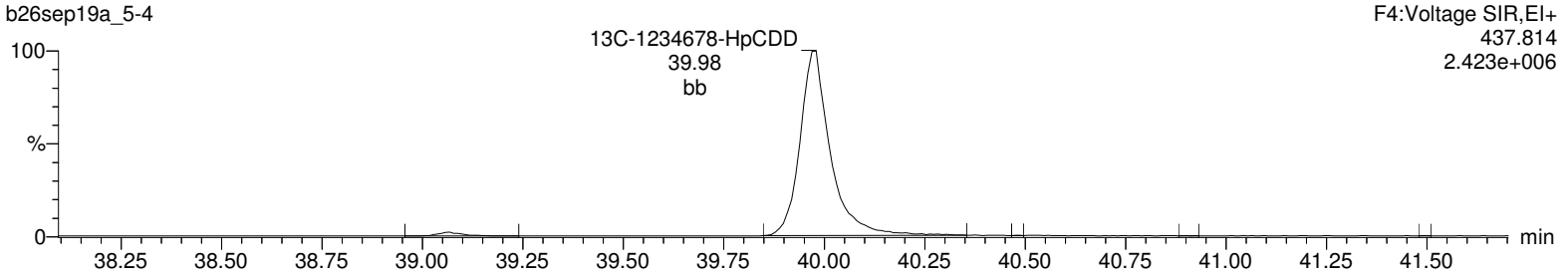
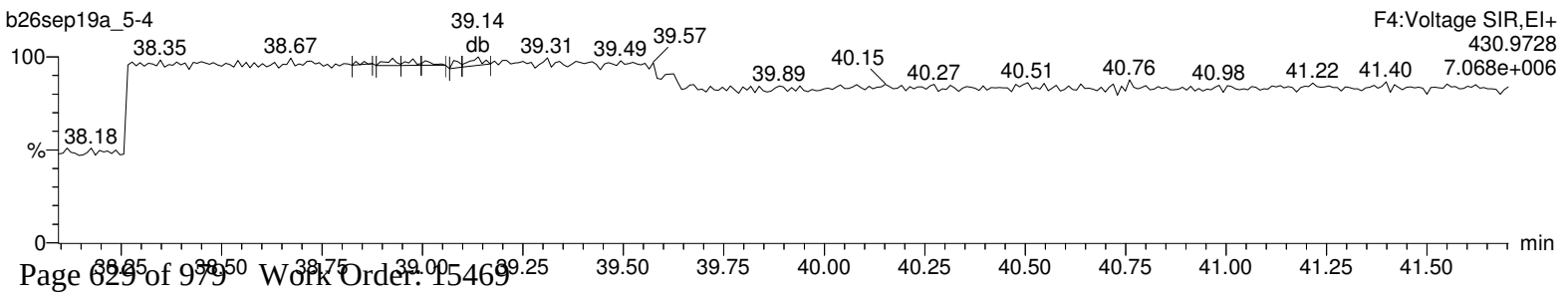


Lock Mass F4



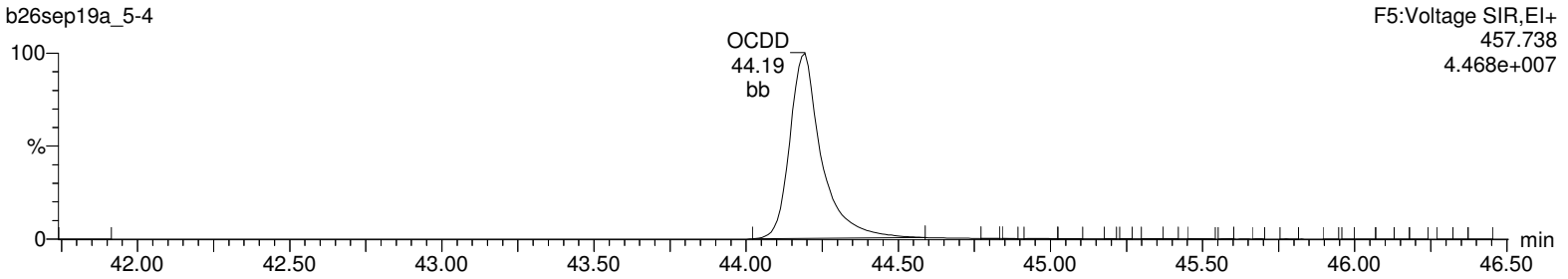
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

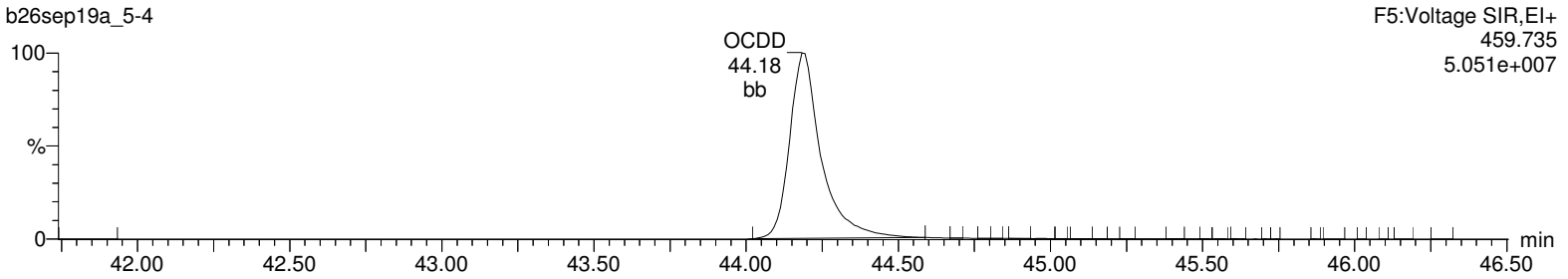
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

OCDD



OCDD



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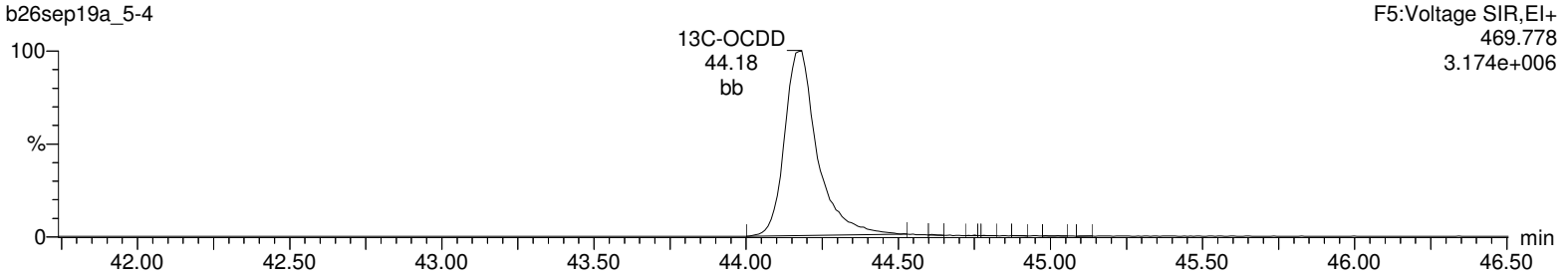

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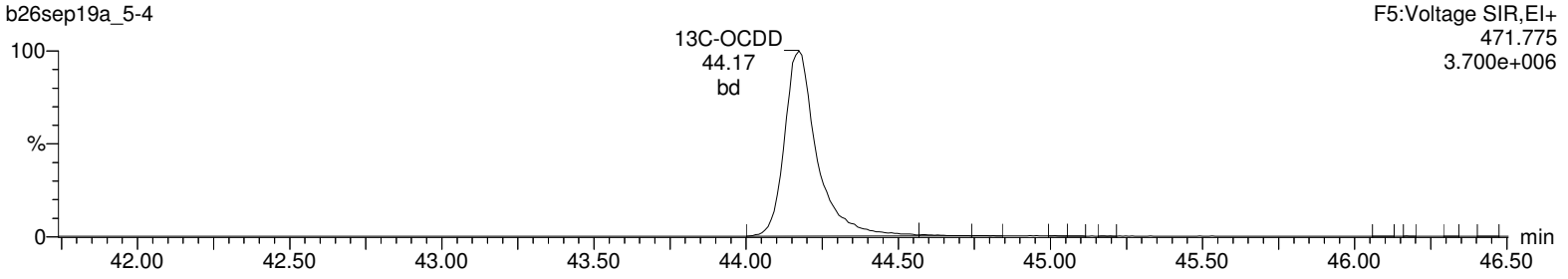
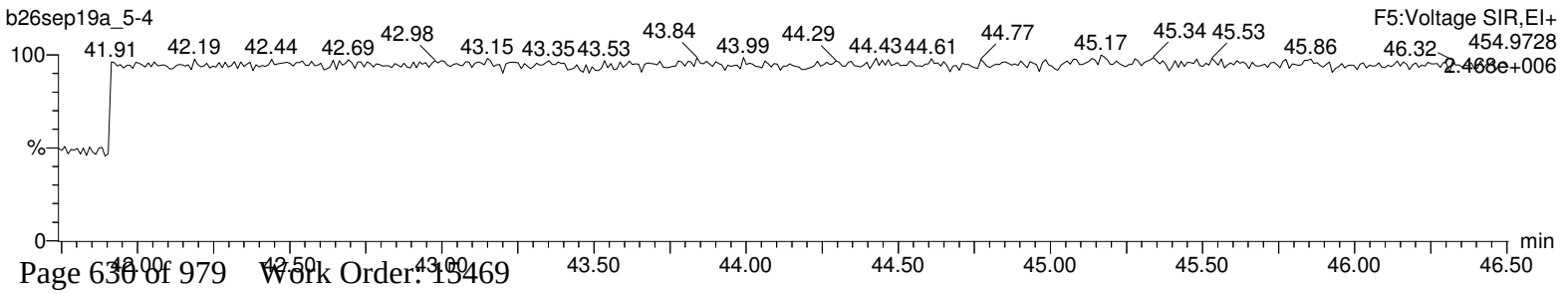


Lock Mass F5



Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
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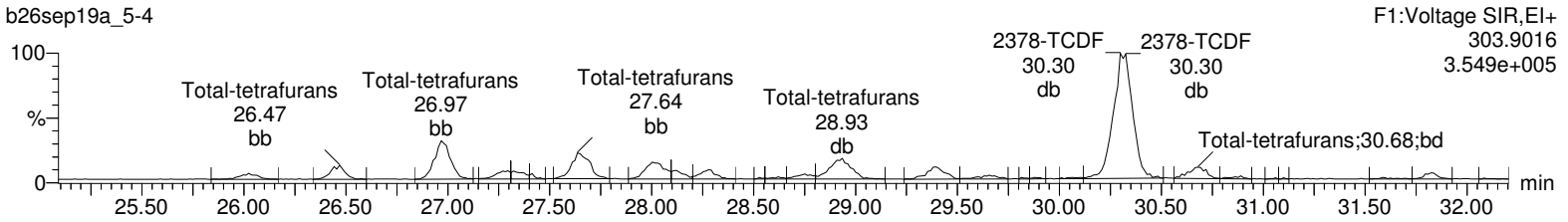
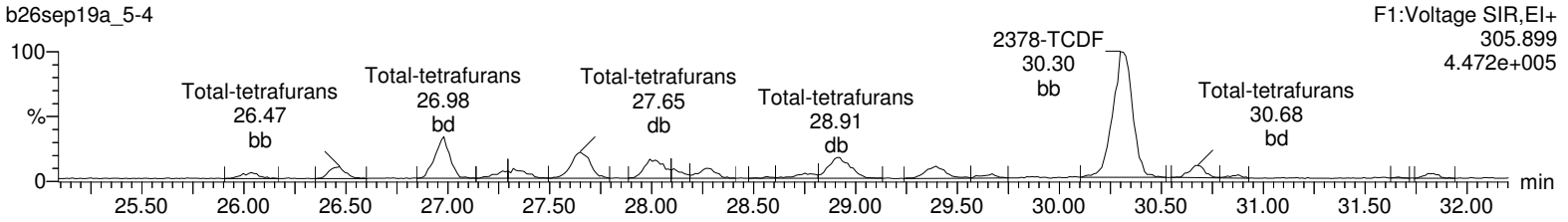
Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

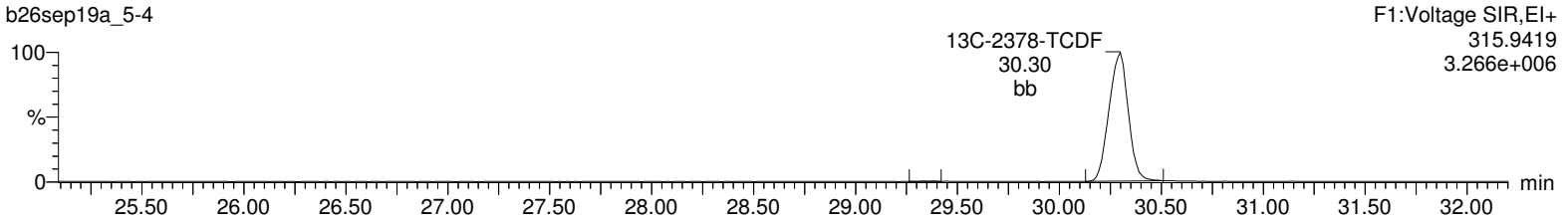
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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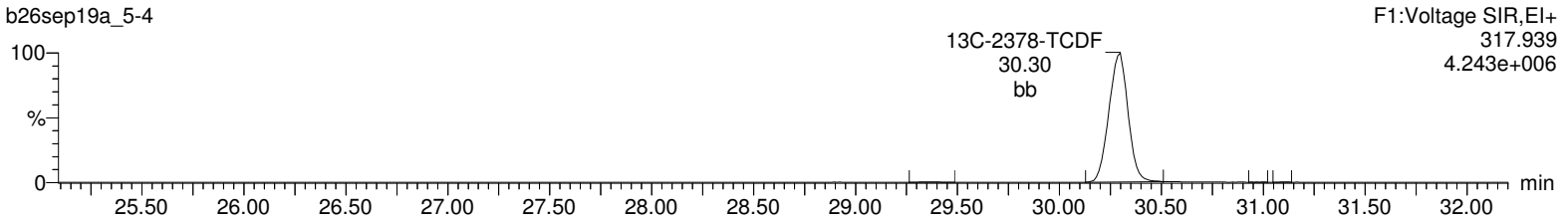

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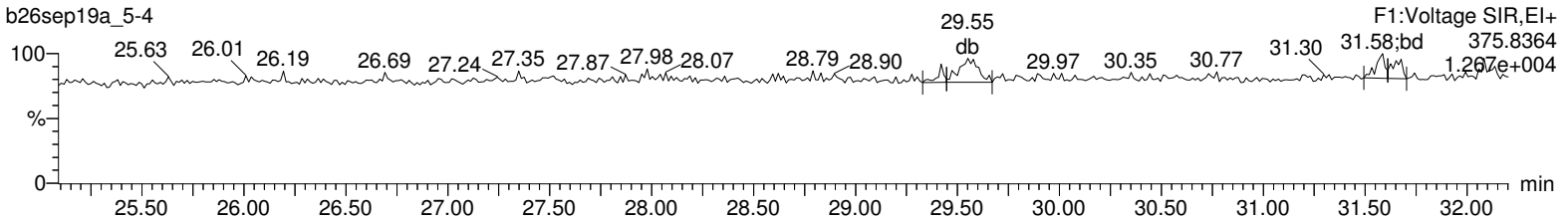

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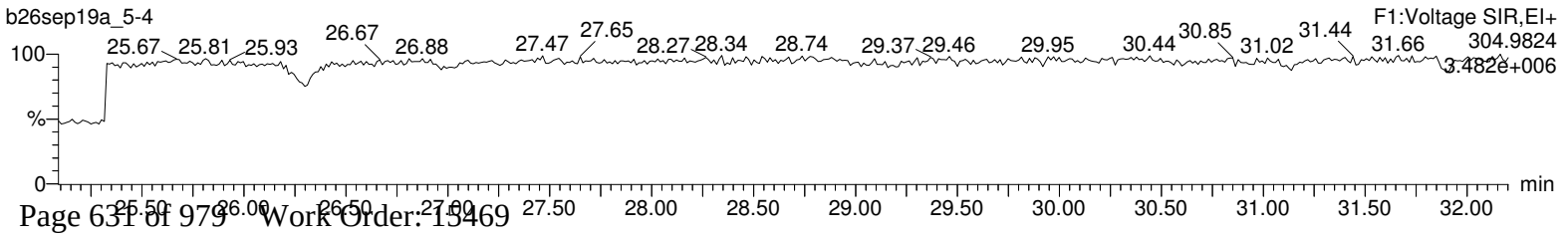

Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
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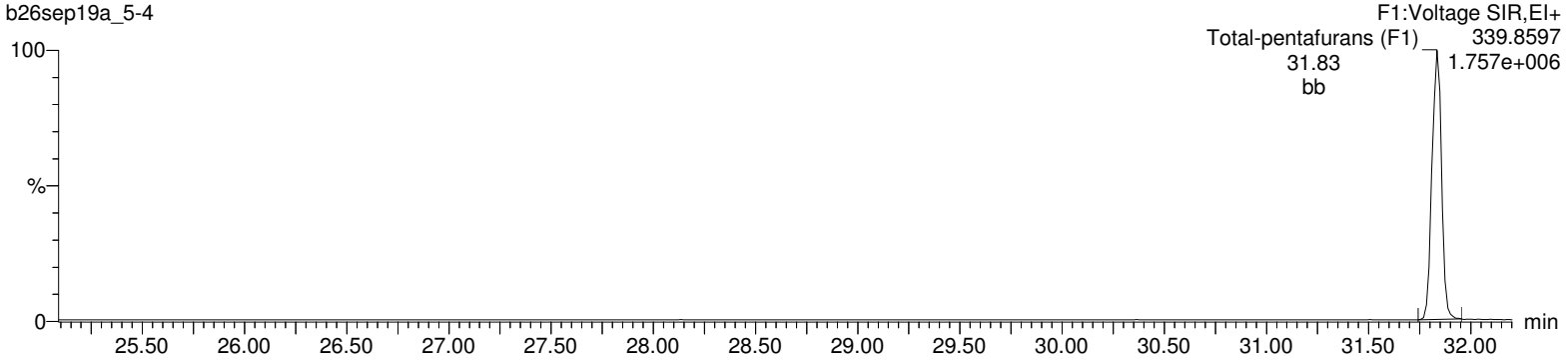
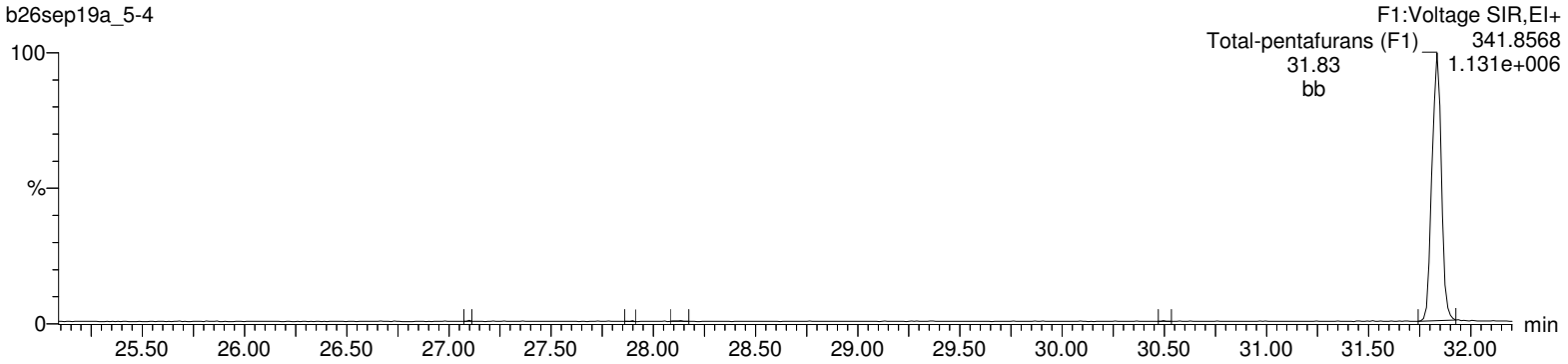
Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-pentafurans (F1)



Total-pentafurans (F1)



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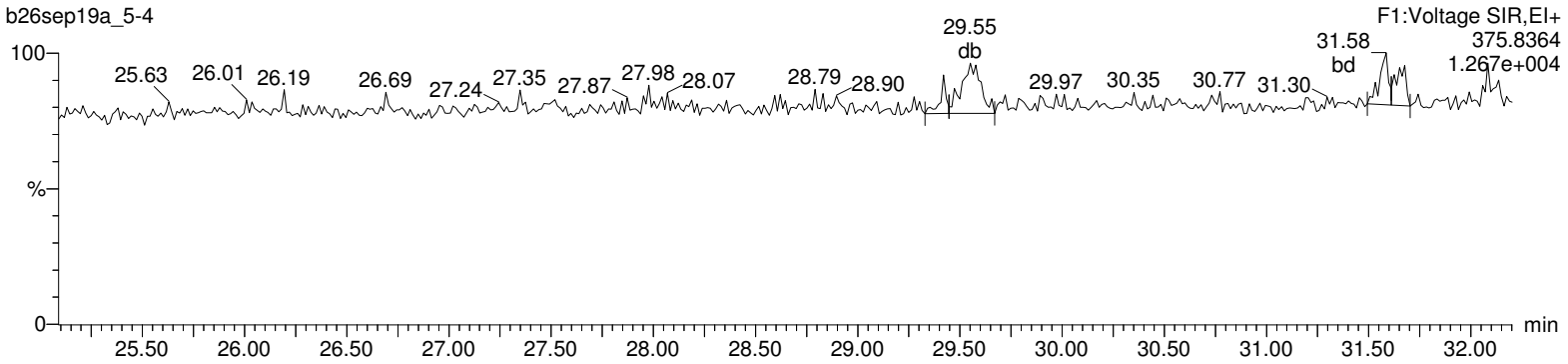

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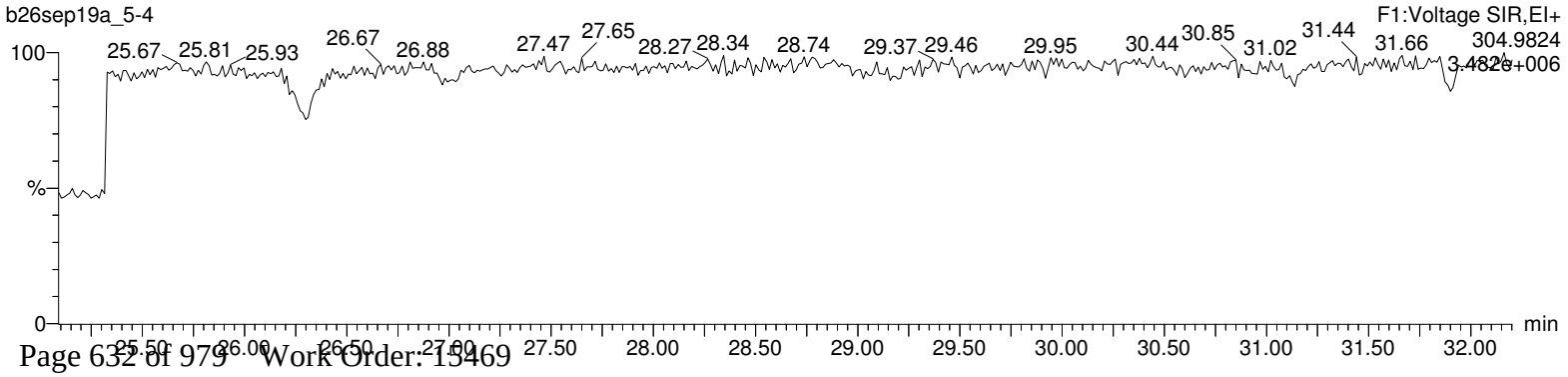

Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
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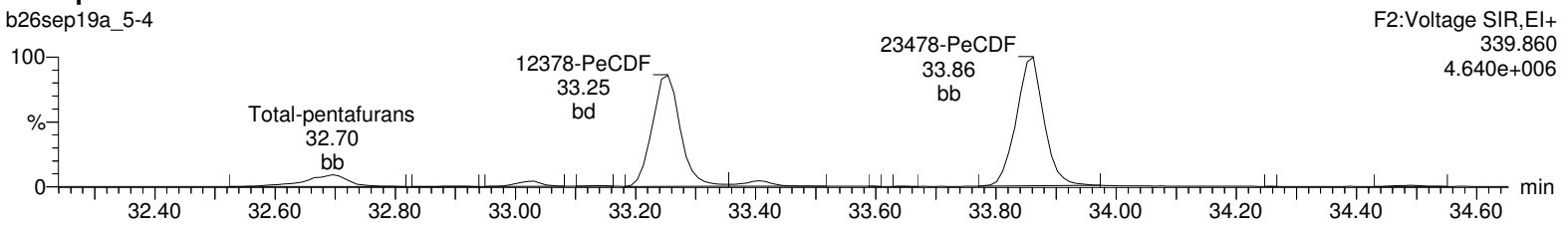
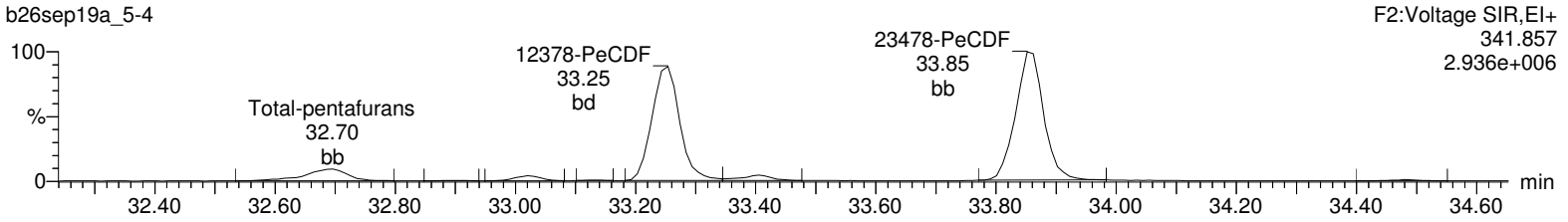
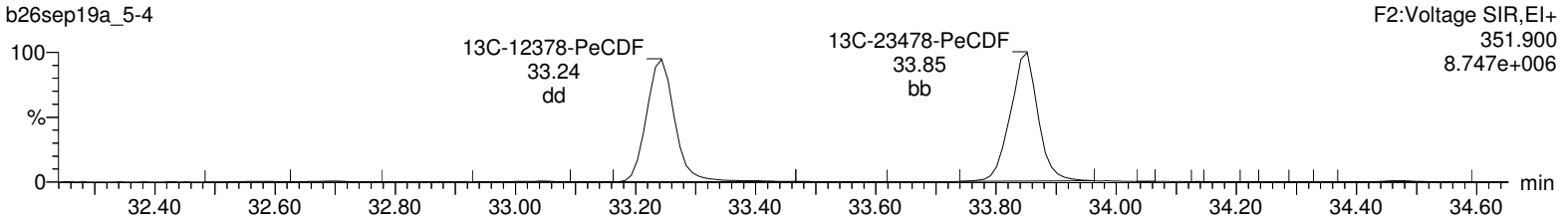
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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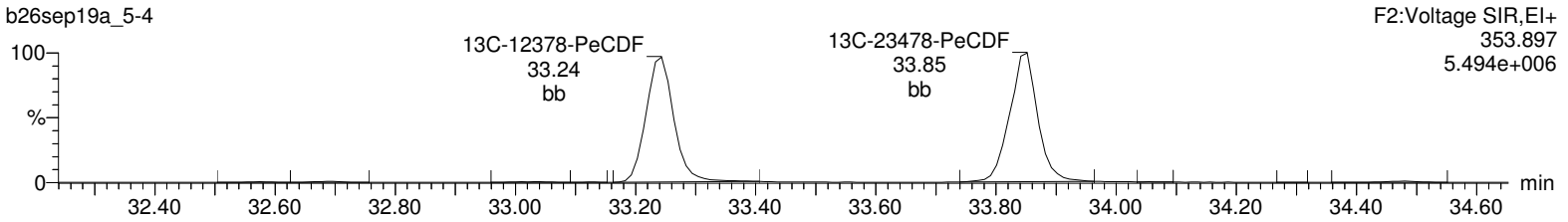

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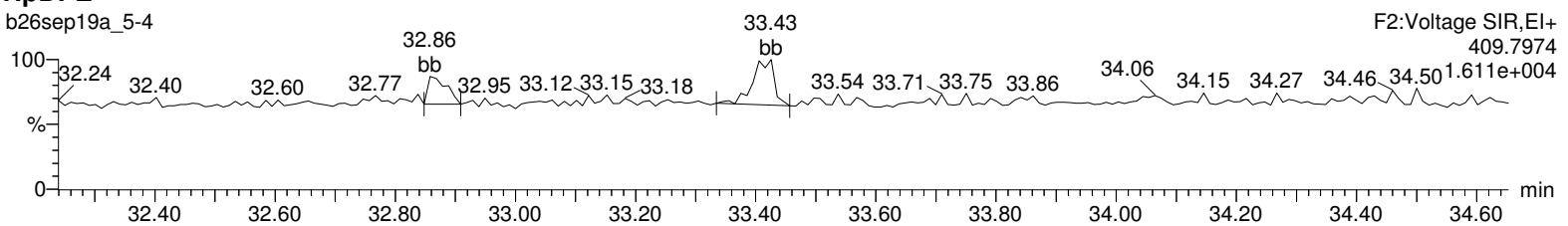
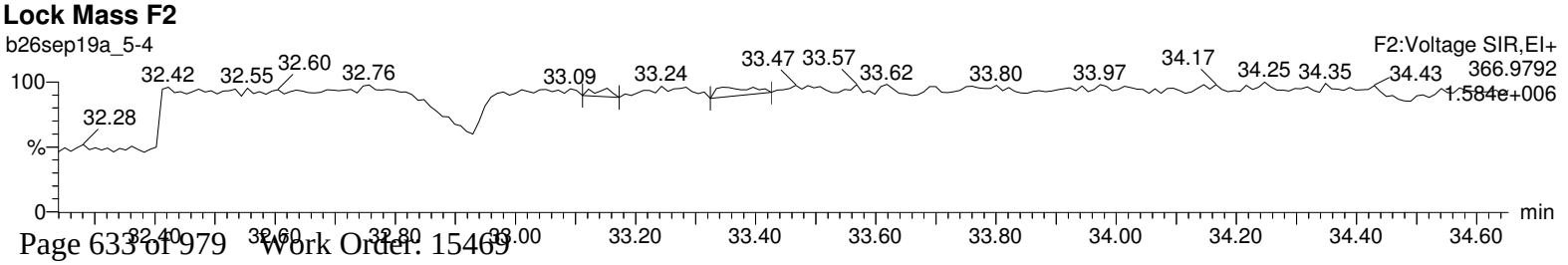


Lock Mass F2



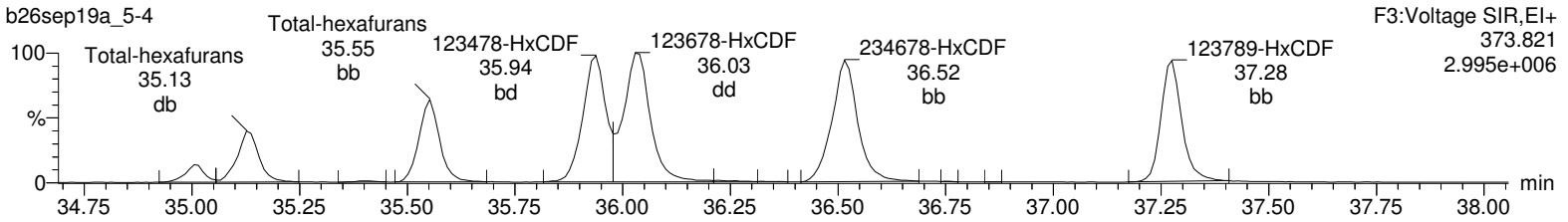
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

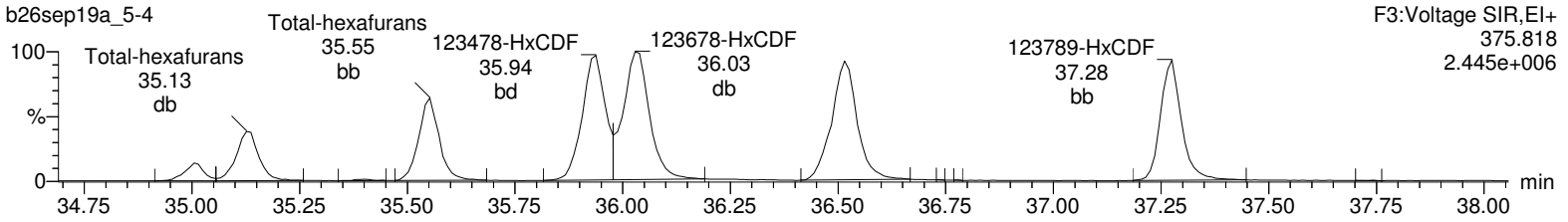
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

Total-hexafurans



Total-hexafurans



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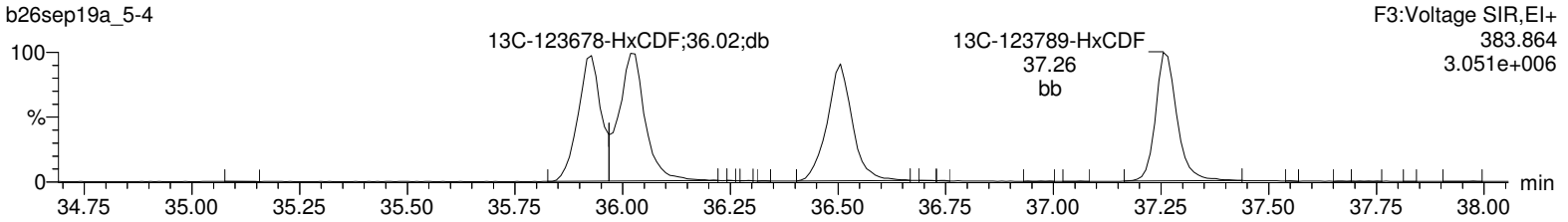

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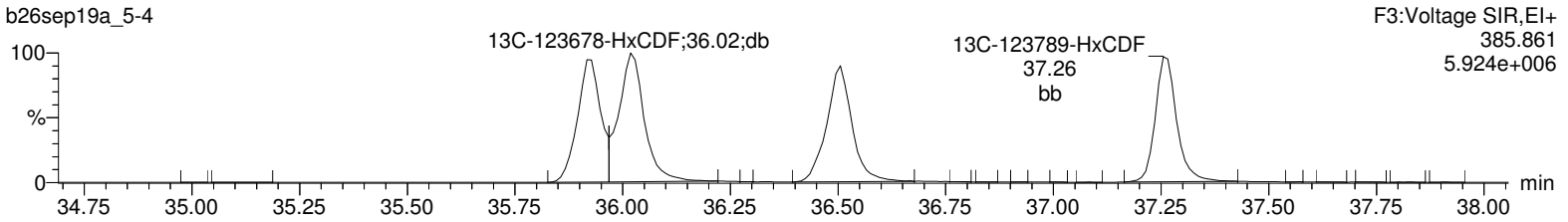

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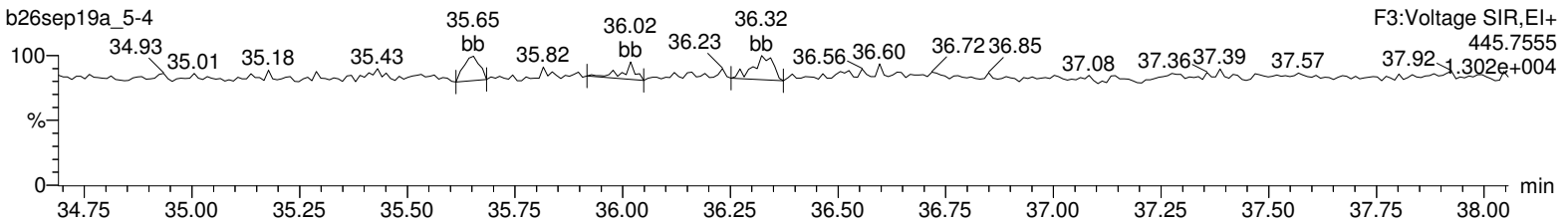
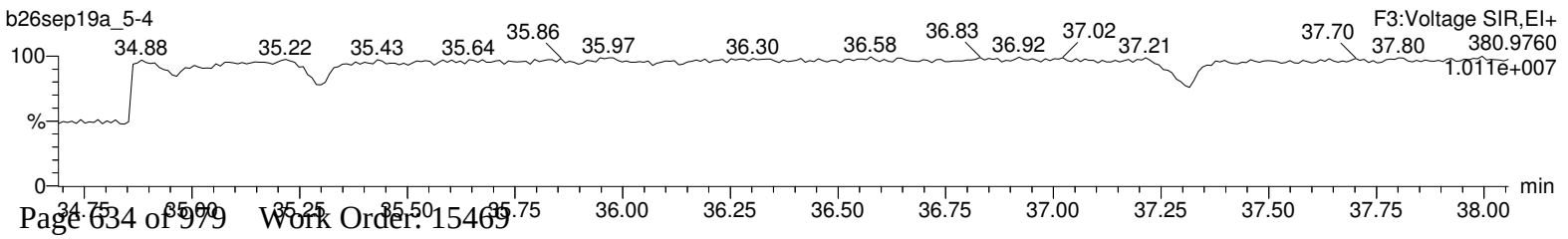


Lock Mass F3



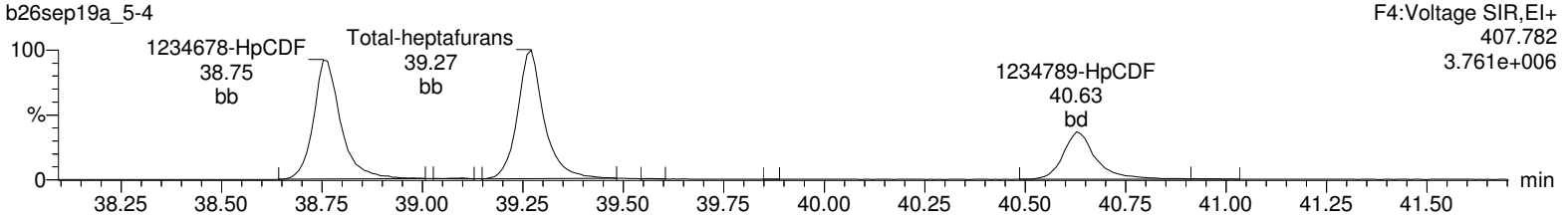
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

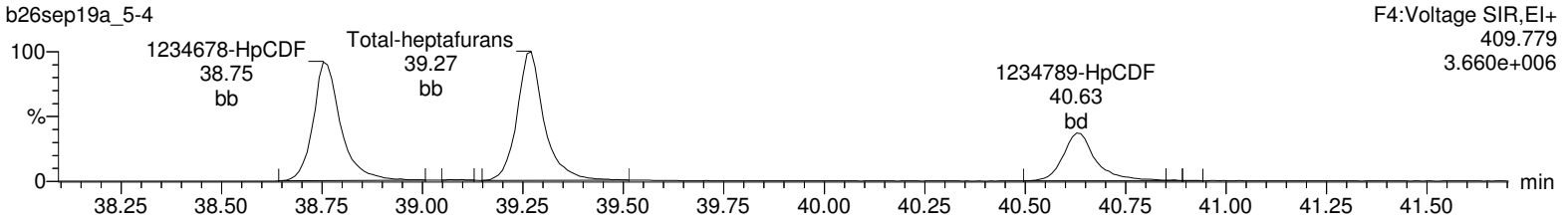
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

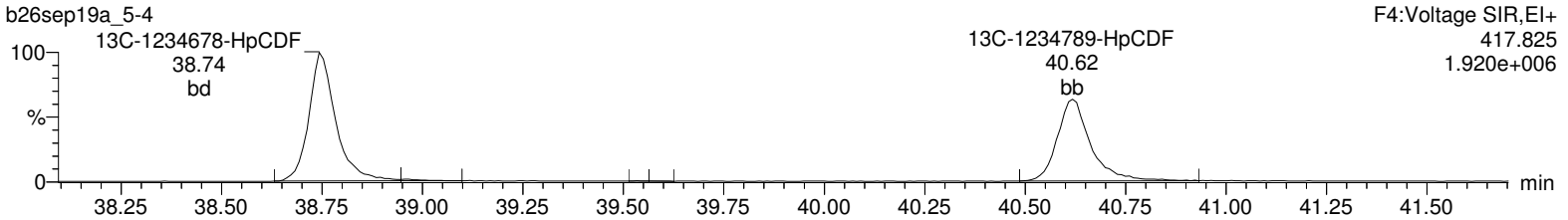
Total-heptafurans



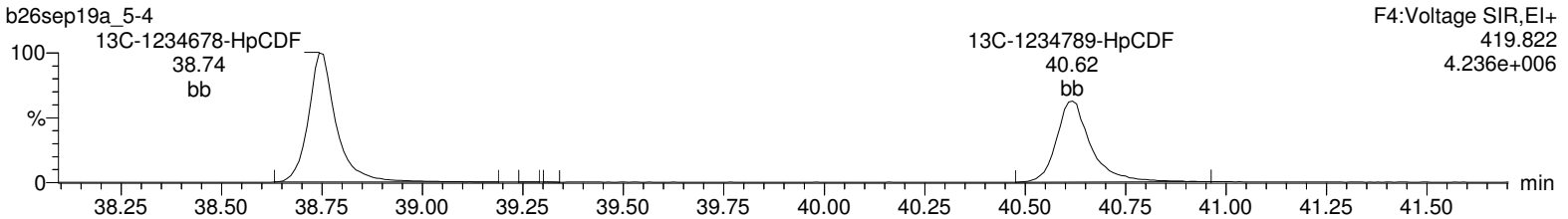
Total-heptafurans



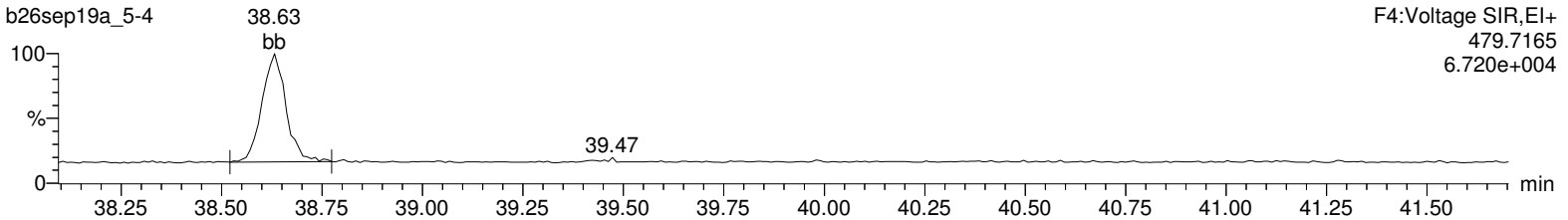
13C-1234678-HpCDF



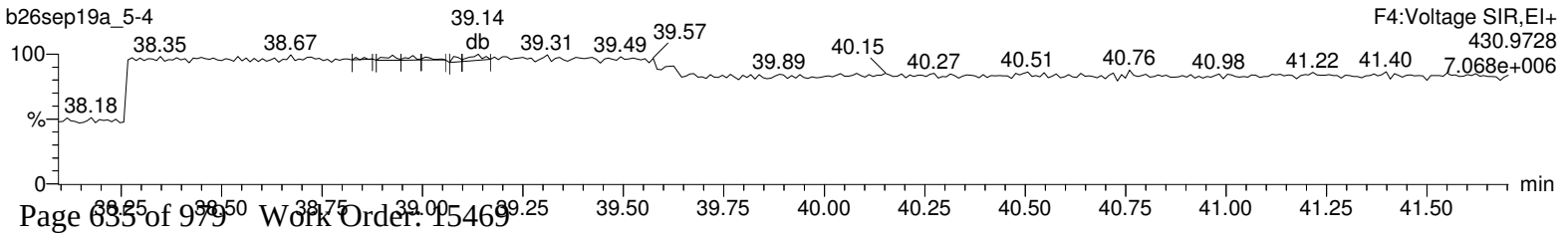
13C-1234678-HpCDF



NoDPE



Lock Mass F4



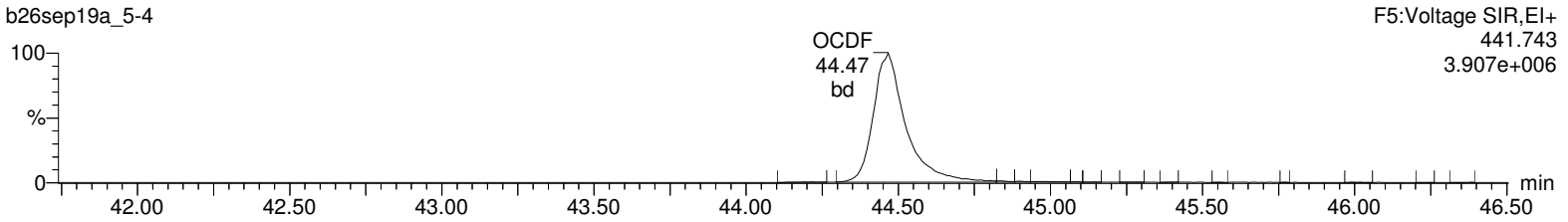
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

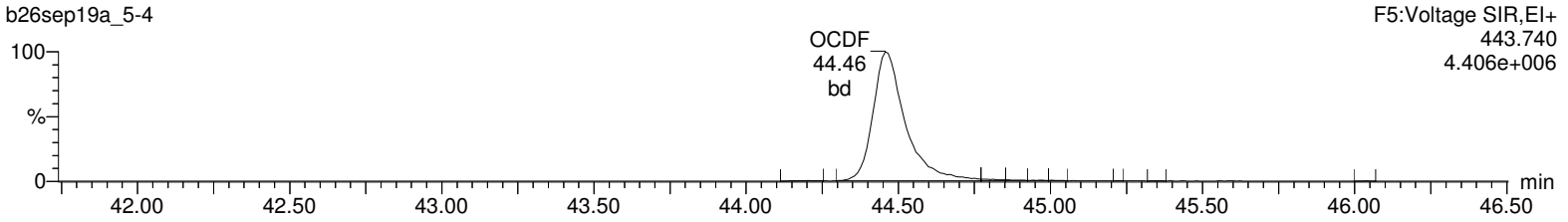
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-4, Date: 28-Sep-2019, Time: 02:14:59, ID: 12024795-1 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

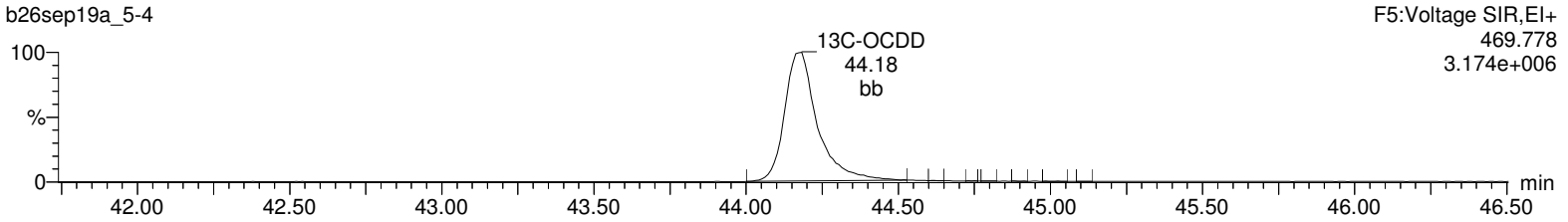
OCDF



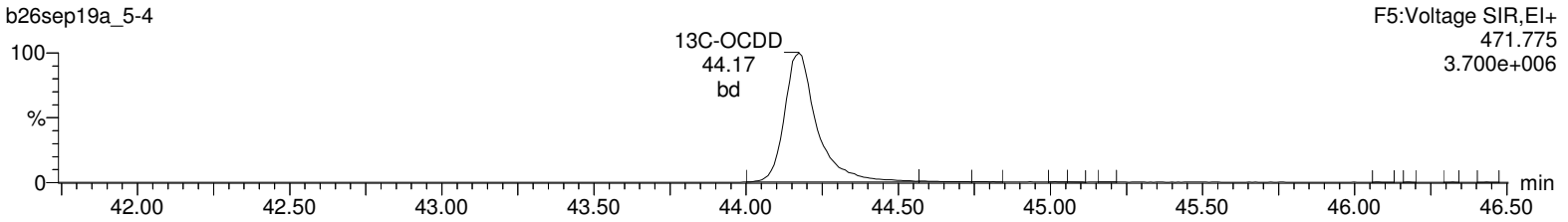
OCDF



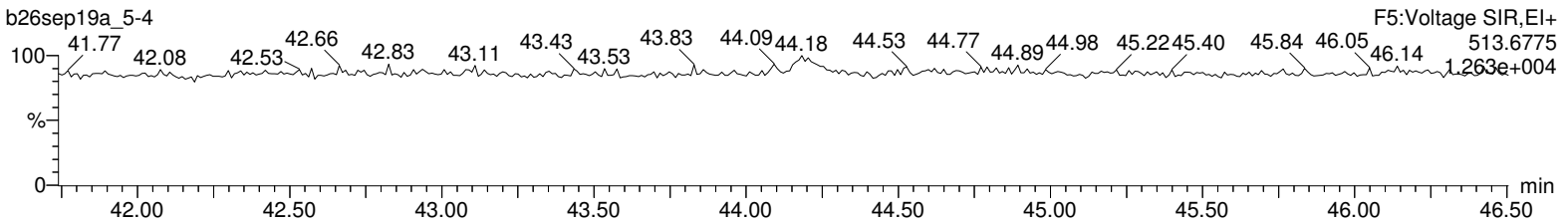
13C-OCDD



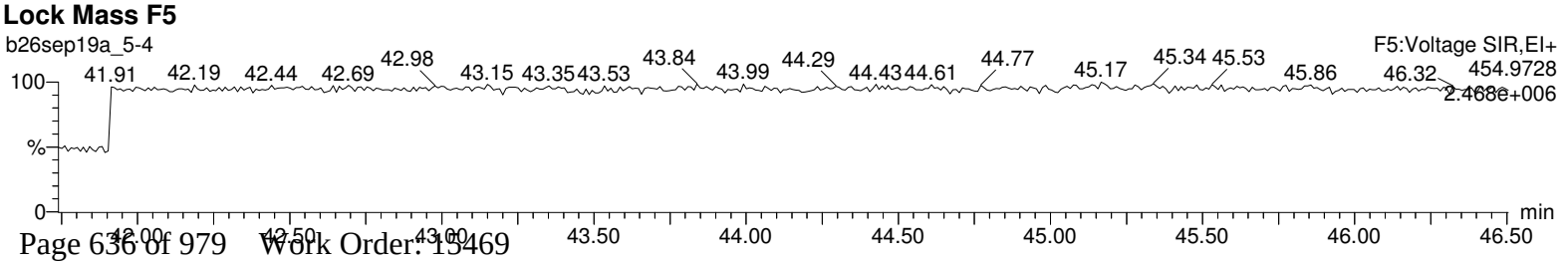
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024795**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819(15469001MS)**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 16:53**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-4**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.09 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF		24.4	pg/g	0.236	0.993

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

E **Value is estimated - Concentration of the target analyte exceeds the instrument calibration range**

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

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-4, Date: 30-Sep-2019, Time: 16:53:30, ID: 12024795-2 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	7.72e4	9.82e4	1.75e5	16.31	1.001	0.79	NO	12.295	0.119	1.25e6	4146	302.4	1.57e6	4521	347.7	dd	dd
2	13C-2378-TCDF	7.18e5	9.42e5	1.66e6	16.29	1.065	0.76	NO	60.252	0.119	1.10e7	12985	845.3	1.44e7	7115	2025.3	bb	bb
3	13C-1234-TCDD	7.81e5	1.03e6	1.81e6	15.30	0.000	0.76	NO	100.000	0.121	1.43e7	7818	1833.7	1.88e7	5577	3375.6	db	db

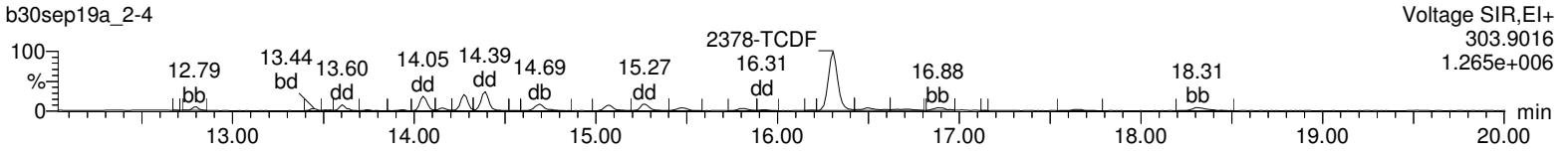
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

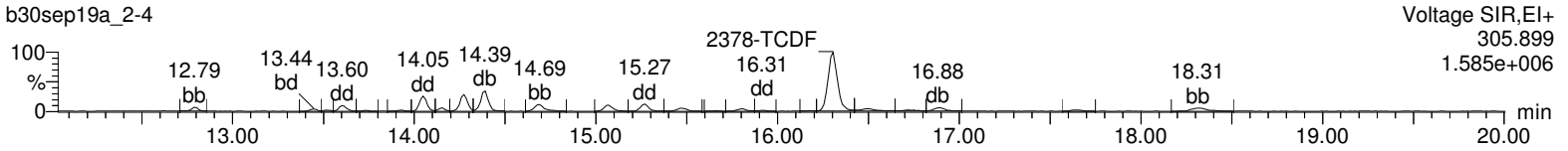
Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-4, Date: 30-Sep-2019, Time: 16:53:30, ID: 12024795-2 MS, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

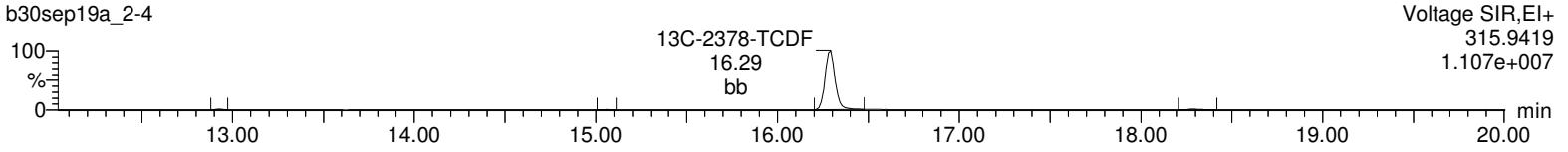
2378-TCDF



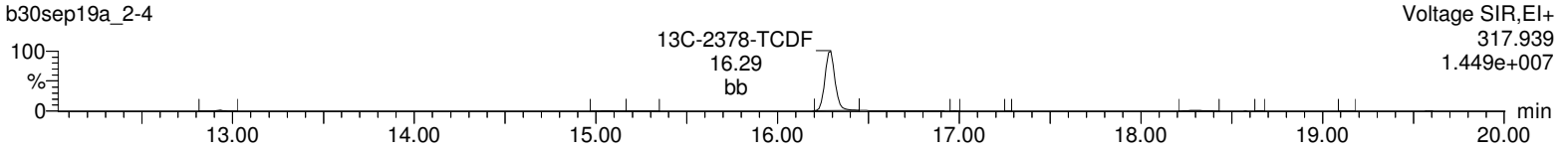
2378-TCDF



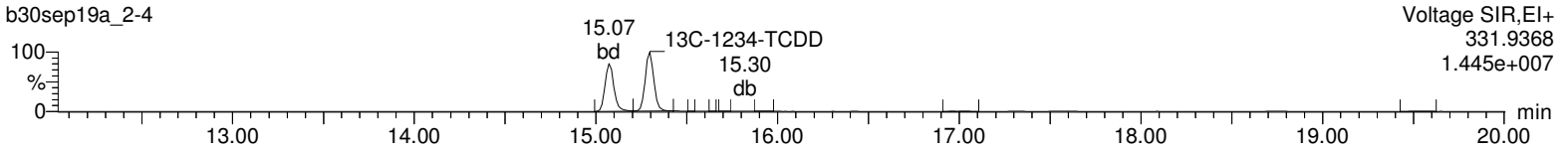
13C-2378-TCDF



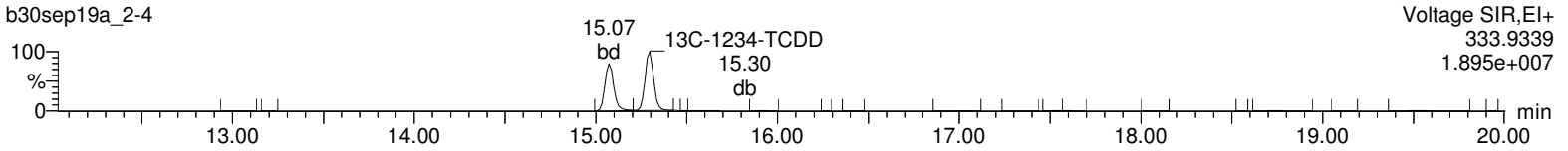
13C-2378-TCDF



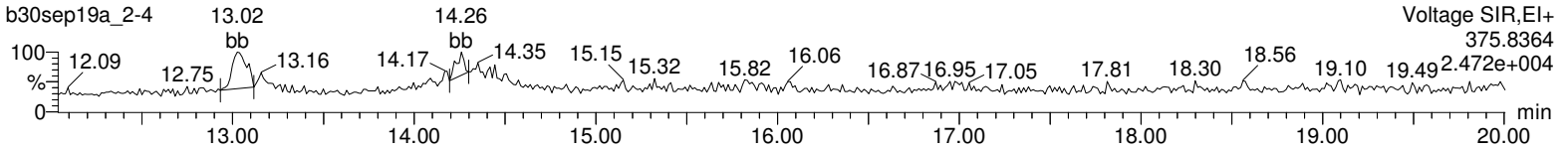
13C-1234-TCDD



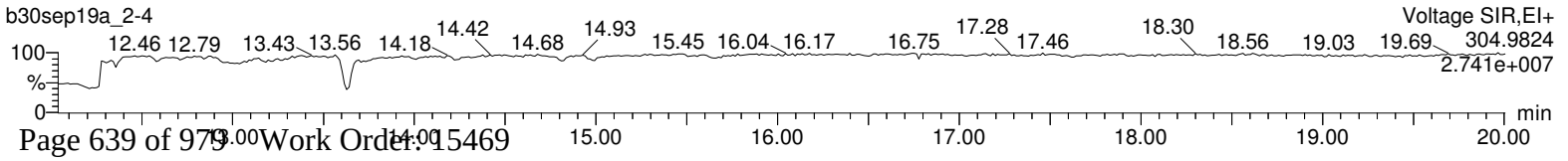
13C-1234-TCDD



HxDPE



Lock Mass F1



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024796**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819(15469001MSD**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/28/2019 03:03**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b26sep19a_5-5**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.1 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		18.9	pg/g	0.212	0.993
40321-76-4	1,2,3,7,8-PeCDD		102	pg/g	0.340	4.96
39227-28-6	1,2,3,4,7,8-HxCDD		97.1	pg/g	0.540	4.96
57653-85-7	1,2,3,6,7,8-HxCDD		107	pg/g	0.554	4.96
19408-74-3	1,2,3,7,8,9-HxCDD		110	pg/g	0.560	4.96
35822-46-9	1,2,3,4,6,7,8-HpCDD		202	pg/g	0.826	4.96
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1640	pg/g	1.65	9.93
51207-31-9	2,3,7,8-TCDF		21.5	pg/g	0.385	0.993
57117-41-6	1,2,3,7,8-PeCDF		103	pg/g	0.332	4.96
57117-31-4	2,3,4,7,8-PeCDF		104	pg/g	0.300	4.96
70648-26-9	1,2,3,4,7,8-HxCDF		109	pg/g	0.429	4.96
57117-44-9	1,2,3,6,7,8-HxCDF		105	pg/g	0.447	4.96
60851-34-5	2,3,4,6,7,8-HxCDF		109	pg/g	0.453	4.96
72918-21-9	1,2,3,7,8,9-HxCDF		105	pg/g	0.540	4.96
67562-39-4	1,2,3,4,6,7,8-HpCDF		123	pg/g	0.542	4.96
55673-89-7	1,2,3,4,7,8,9-HpCDF		103	pg/g	0.741	4.96
39001-02-0	1,2,3,4,6,7,8,9-OCDF		267	pg/g	0.610	9.93

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		162	199	pg/g	81.3	(25%-164%)
13C-1,2,3,7,8-PeCDD		186	199	pg/g	93.5	(25%-181%)
13C-1,2,3,4,7,8-HxCDD		175	199	pg/g	87.9	(32%-141%)
13C-1,2,3,6,7,8-HxCDD		151	199	pg/g	75.9	(28%-130%)
13C-1,2,3,4,6,7,8-HpCDD		199	199	pg/g	100	(23%-140%)
13C-OCDD		425	397	pg/g	107	(17%-157%)
13C-2,3,7,8-TCDF		150	199	pg/g	75.5	(24%-169%)
13C-1,2,3,7,8-PeCDF		170	199	pg/g	85.5	(24%-185%)
13C-2,3,4,7,8-PeCDF		172	199	pg/g	86.6	(21%-178%)
13C-1,2,3,4,7,8-HxCDF		157	199	pg/g	78.9	(26%-152%)
13C-1,2,3,6,7,8-HxCDF		143	199	pg/g	72.2	(26%-123%)
13C-2,3,4,6,7,8-HxCDF		148	199	pg/g	74.5	(28%-136%)
13C-1,2,3,7,8,9-HxCDF		170	199	pg/g	85.9	(29%-147%)
13C-1,2,3,4,6,7,8-HpCDF		167	199	pg/g	84.2	(28%-143%)
13C-1,2,3,4,7,8,9-HpCDF		204	199	pg/g	103	(26%-138%)
37Cl-2,3,7,8-TCDD		19.1	19.9	pg/g	96.3	(35%-197%)

Comments:

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

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:03:13 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.53e4	3.35e4	5.88e4	31.11	1.000	0.75	NO	9.536	0.107	3.39e5	1911	177.2	4.51e5	1310	344.6	dd	bb
2	12378-PeCDD	1.42e5	9.22e4	2.34e5	34.05	1.000	1.54	NO	51.157	0.171	2.62e6	3231	809.6	1.69e6	2328	724.3	bd	bd
3	123478-HxCDD	1.16e5	9.38e4	2.10e5	36.63	1.000	1.24	NO	48.878	0.272	1.88e6	3856	486.4	1.49e6	3626	411.4	bd	bd
4	123678-HxCDD	1.40e5	1.14e5	2.54e5	36.72	1.000	1.23	NO	53.949	0.279	1.98e6	3856	513.1	1.64e6	3626	452.8	dd	dd
5	123789-HxCDD	1.34e5	1.11e5	2.45e5	36.96	1.007	1.21	NO	55.549	0.282	1.82e6	3856	472.3	1.51e6	3626	415.3	dd	dd
6	1234678-HpCDD	2.03e5	2.02e5	4.05e5	39.98	1.000	1.00	NO	101.682	0.416	2.25e6	4062	554.8	2.21e6	3347	661.2	bb	bd
7	OCDD	1.38e6	1.55e6	2.94e6	44.17	1.000	0.89	NO	828.322	0.830	1.10e7	5304	2066.5	1.23e7	4110	2994.5	bb	bb
8	2378-TCDF	3.11e4	3.91e4	7.02e4	30.30	1.000	0.80	NO	10.845	0.194	2.72e5	2071	131.6	3.45e5	2480	139.1	bd	bd
9	12378-PeCDF	1.89e5	1.22e5	3.11e5	33.25	1.000	1.56	NO	51.777	0.167	3.50e6	4018	871.3	2.26e6	3396	666.7	dd	bd
10	23478-PeCDF	2.10e5	1.39e5	3.49e5	33.85	1.000	1.51	NO	52.209	0.151	3.81e6	4018	947.5	2.51e6	3396	740.5	bb	bb
11	123478-HxCDF	1.64e5	1.34e5	2.99e5	35.93	1.000	1.22	NO	55.109	0.216	2.58e6	4191	614.5	2.13e6	3621	588.4	bd	bd
12	123678-HxCDF	1.77e5	1.41e5	3.18e5	36.03	1.000	1.25	NO	53.057	0.225	2.71e6	4191	646.8	2.16e6	3621	596.9	dd	db
13	234678-HxCDF	1.72e5	1.38e5	3.10e5	36.51	1.000	1.25	NO	54.929	0.228	2.61e6	4191	622.0	2.09e6	3621	577.5	bb	bb
14	123789-HxCDF	1.52e5	1.22e5	2.74e5	37.26	1.000	1.25	NO	53.105	0.272	2.15e6	4191	513.7	1.71e6	3621	473.2	bd	bb
15	1234678-HpCDF	1.64e5	1.58e5	3.22e5	38.75	1.000	1.04	NO	61.797	0.273	2.00e6	3723	538.5	2.04e6	3260	625.8	bb	bb
16	1234789-HpCDF	1.22e5	1.21e5	2.42e5	40.63	1.000	1.01	NO	51.620	0.373	1.27e6	3723	341.9	1.25e6	3260	383.3	bb	bb
17	OCDF	2.43e5	2.88e5	5.31e5	44.45	1.007	0.85	NO	134.682	0.307	1.97e6	2117	928.4	2.24e6	1753	1277.3	bb	bd
18	13C-2378-TCDD	3.00e5	3.92e5	6.92e5	31.10	1.019	0.76	NO	81.329	0.177	3.67e6	3185	1152.0	4.92e6	2250	2185.7	bb	bd
19	13C-12378-PeCDD	3.27e5	2.12e5	5.39e5	34.04	1.115	1.55	NO	93.499	0.279	5.81e6	3887	1494.3	3.75e6	1909	1966.5	bd	bd
20	13C-123478-HxCDD	2.54e5	2.06e5	4.60e5	36.62	0.991	1.23	NO	87.884	0.200	4.07e6	3074	1322.6	3.20e6	2617	1224.6	bd	bd
21	13C-123678-HxCDD	2.94e5	2.38e5	5.32e5	36.71	0.993	1.24	NO	75.883	0.149	4.19e6	3074	1363.2	3.40e6	2617	1299.2	dd	dd
22	13C-1234678-HpCDD	2.13e5	2.08e5	4.22e5	39.97	1.082	1.02	NO	100.406	0.215	2.39e6	1988	1200.0	2.23e6	2920	763.6	bb	bd
23	13C-OCDD	3.65e5	4.11e5	7.76e5	44.15	1.195	0.89	NO	214.019	0.239	2.92e6	2245	1300.1	3.34e6	2463	1356.5	bd	bb
24	13C-2378-TCDF	3.14e5	4.12e5	7.25e5	30.29	0.992	0.76	NO	75.480	0.162	2.85e6	2997	949.6	3.67e6	2610	1406.7	bb	bb
25	13C-12378-PeCDF	4.05e5	2.56e5	6.61e5	33.24	1.089	1.58	NO	85.498	0.237	7.49e6	3257	2299.8	4.84e6	3348	1445.7	dd	dd
26	13C-23478-PeCDF	4.21e5	2.66e5	6.87e5	33.84	1.109	1.58	NO	86.604	0.231	7.72e6	3257	2371.7	4.92e6	3348	1469.4	bb	bb
27	13C-123478-HxCDF	1.62e5	3.15e5	4.78e5	35.92	0.972	0.51	NO	78.902	0.222	2.71e6	3325	814.7	5.25e6	3989	1317.2	bd	bd
28	13C-123678-HxCDF	1.97e5	3.72e5	5.69e5	36.02	0.975	0.53	NO	72.158	0.171	2.86e6	3325	860.1	5.44e6	3989	1364.9	dd	db
29	13C-234678-HxCDF	1.71e5	3.28e5	4.99e5	36.49	0.988	0.52	NO	74.462	0.201	2.61e6	3325	783.4	4.95e6	3989	1241.2	bb	bb
30	13C-123789-HxCDF	1.66e5	3.19e5	4.85e5	37.24	1.008	0.52	NO	85.850	0.238	2.31e6	3325	694.5	4.41e6	3989	1106.7	bd	bd
31	13C-1234678-HpCDF	1.36e5	3.02e5	4.38e5	38.74	1.048	0.45	NO	84.210	0.197	1.66e6	2603	638.4	3.77e6	2968	1271.2	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\1613-b26sep19a_5.qld

Last Altered: Tuesday, October 01, 2019 09:57:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 10:03:13 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.18e5	2.65e5	3.83e5	40.62	1.099	0.45	NO	102.710	0.275	1.18e6	2603	452.2	2.76e6	2968	929.3	bb	bd
33	13C-1234-TCDD	3.22e5	4.18e5	7.40e5	30.52	0.000	0.77	NO	100.000	0.204	2.90e6	3185	909.5	3.86e6	2250	1715.3	bb	bb
34	13C-123789-HxCDD	3.66e5	2.97e5	6.64e5	36.95	0.000	1.23	NO	100.000	0.158	4.97e6	3074	1617.9	3.92e6	2617	1499.7	dd	dd
35	37Cl-2378-TCDD	7.67e4		7.67e4	31.11	1.019			9.634	0.0387	1.02e6	1110	920.5				bb	

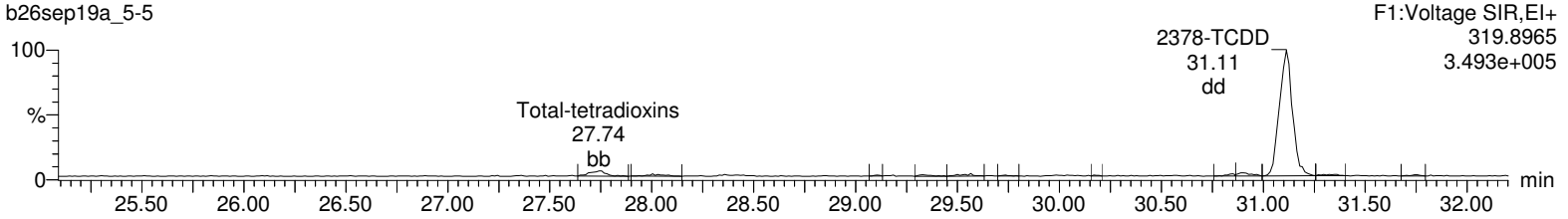
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

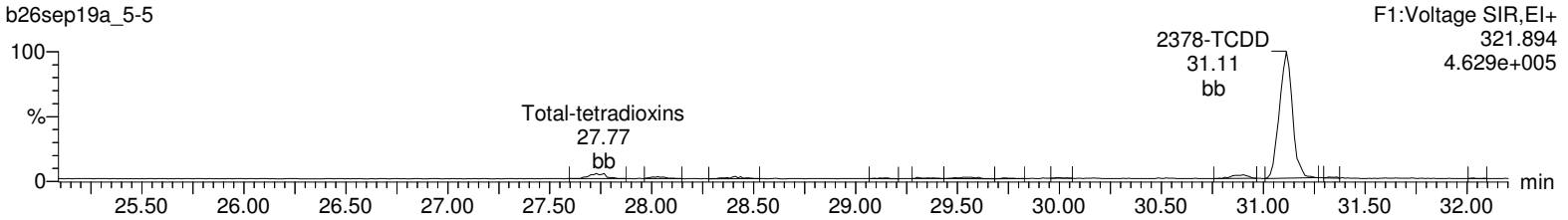
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

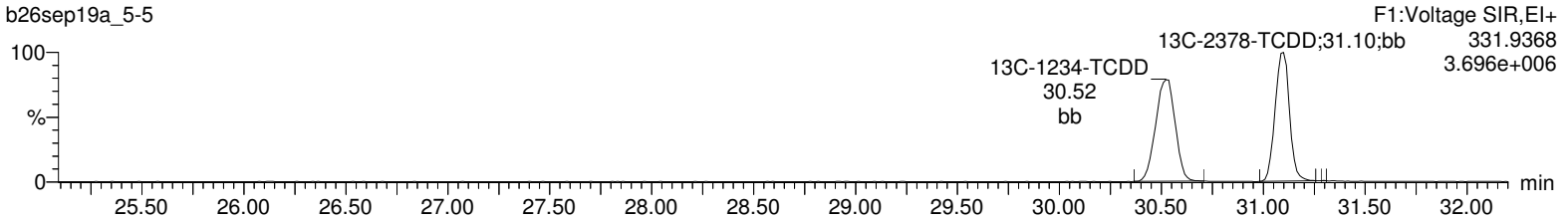
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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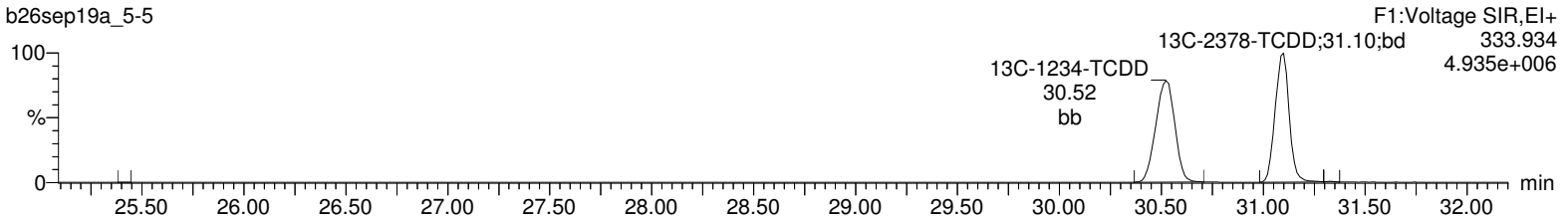
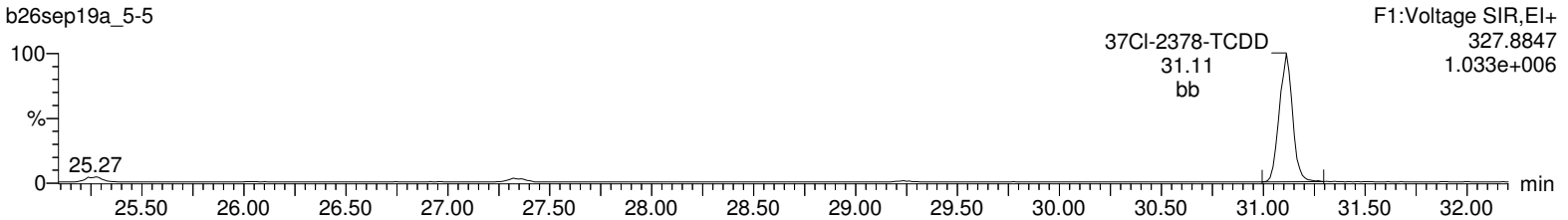
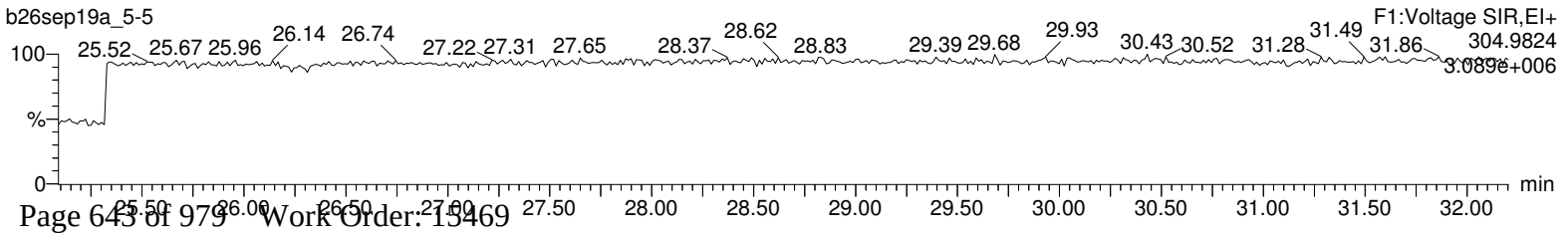


37Cl-2378-TCDD



Lock Mass F1



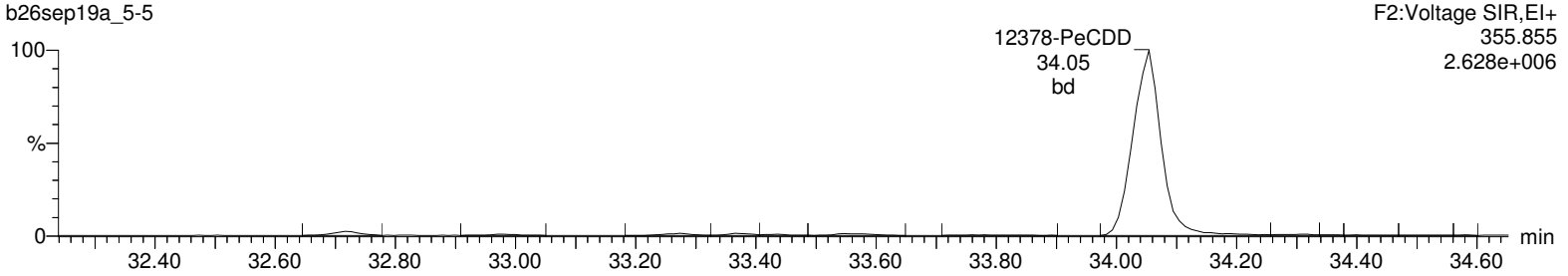
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

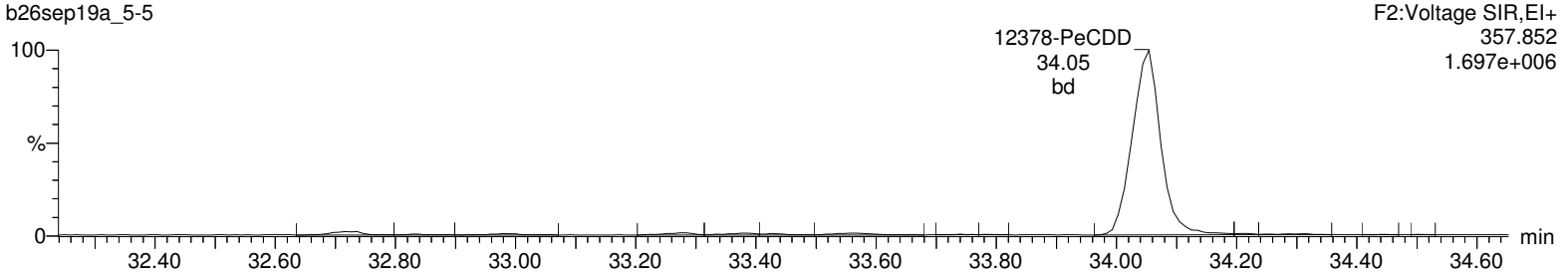
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

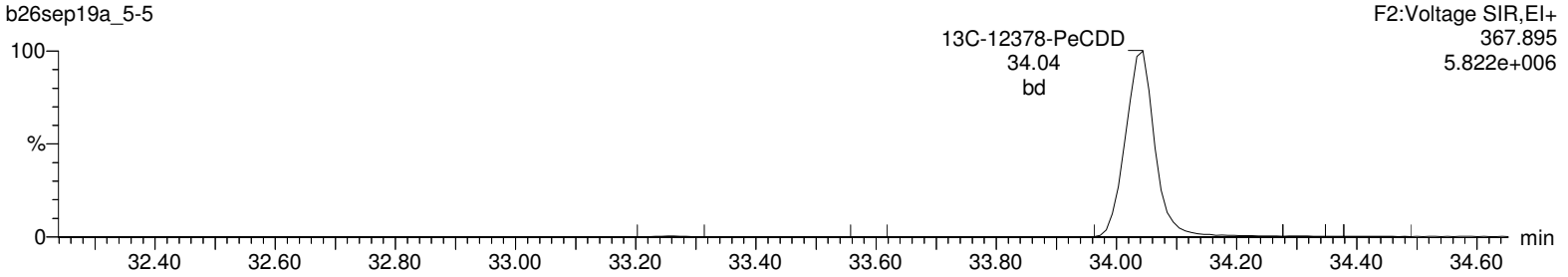
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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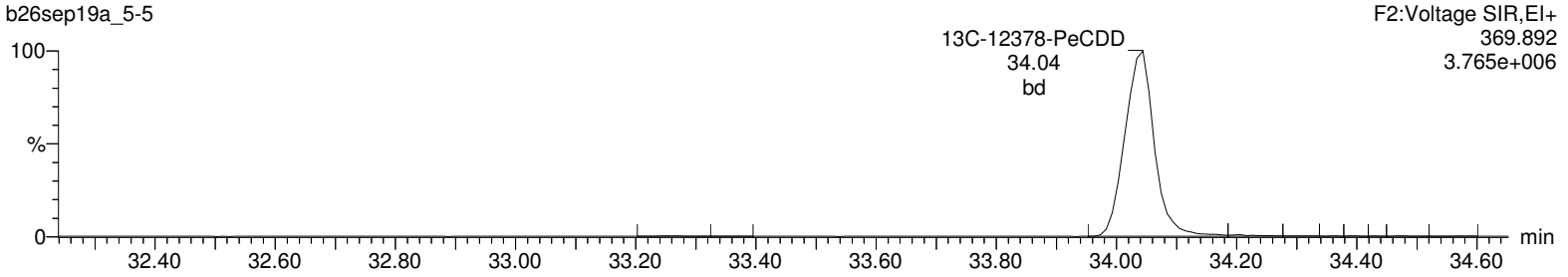
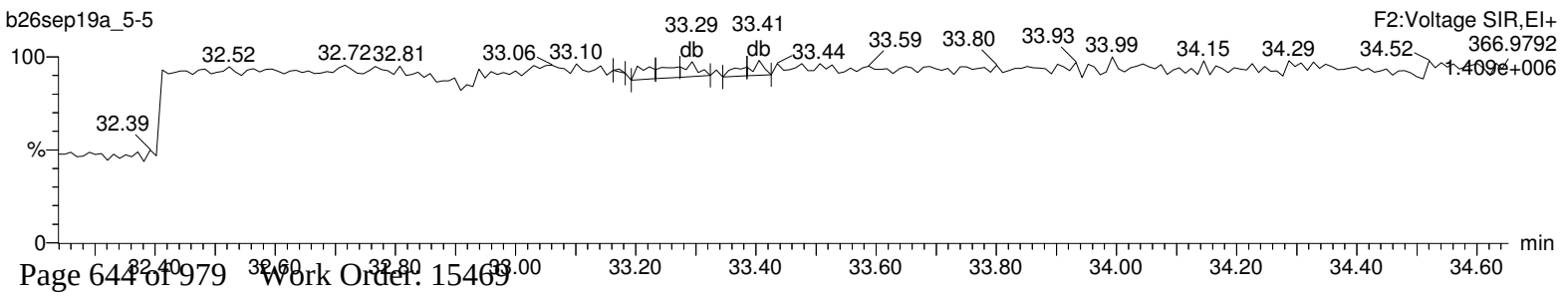


Lock Mass F2



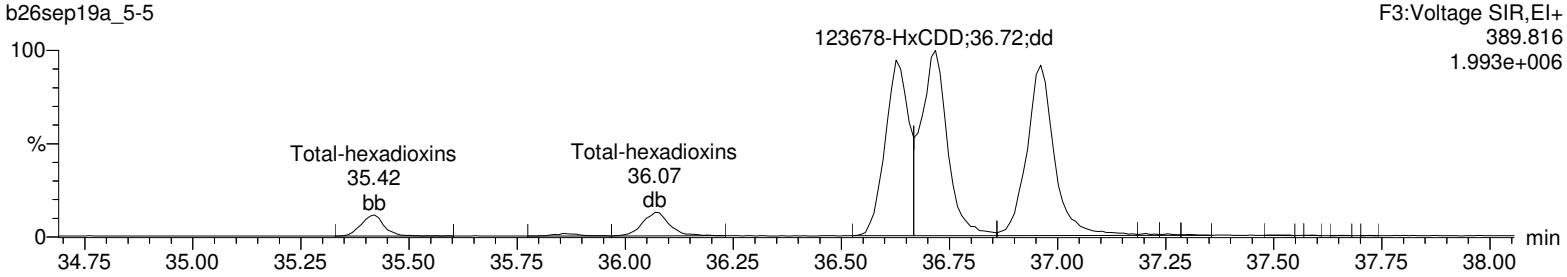
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

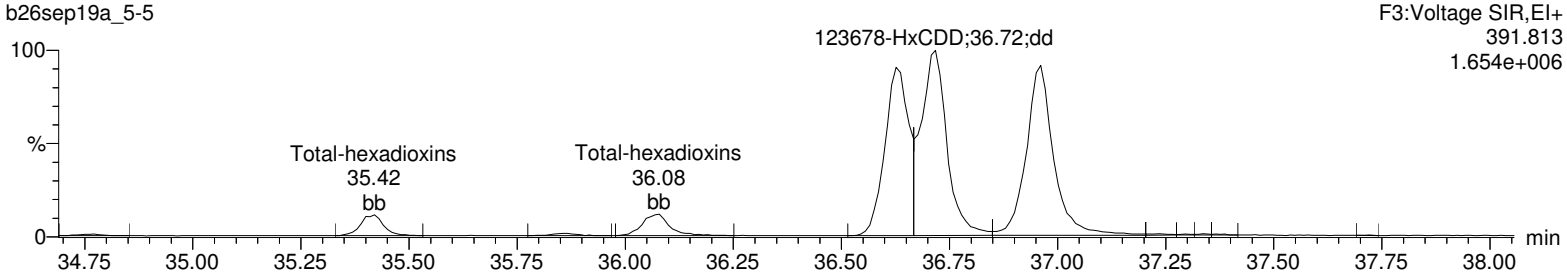
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

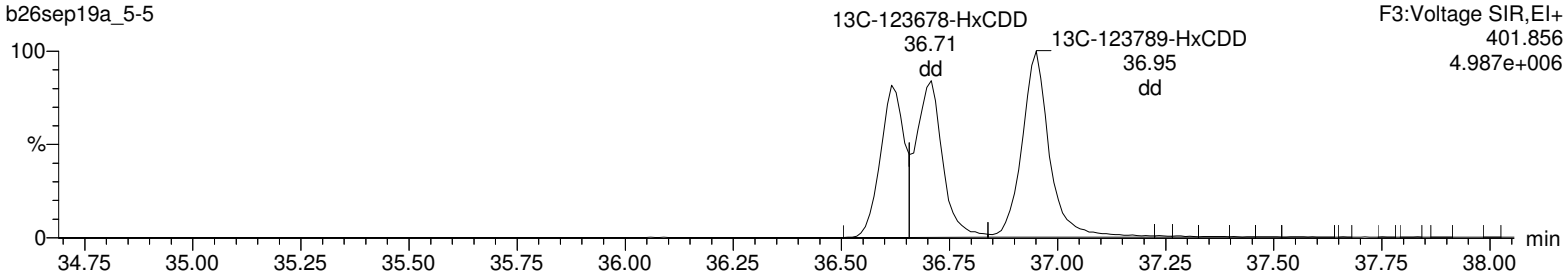
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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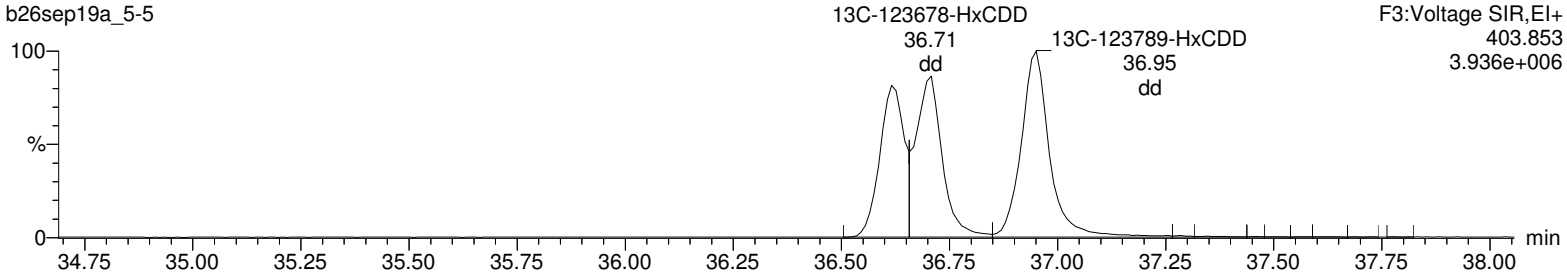
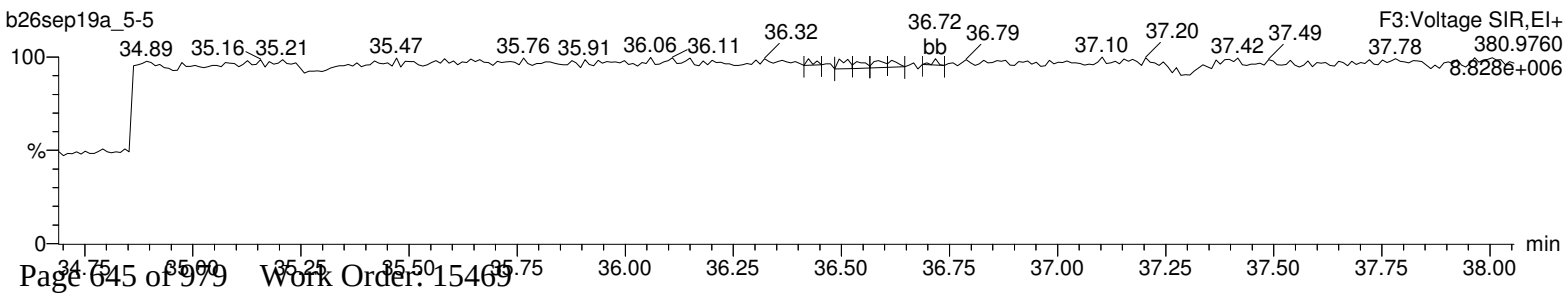


Lock Mass F3



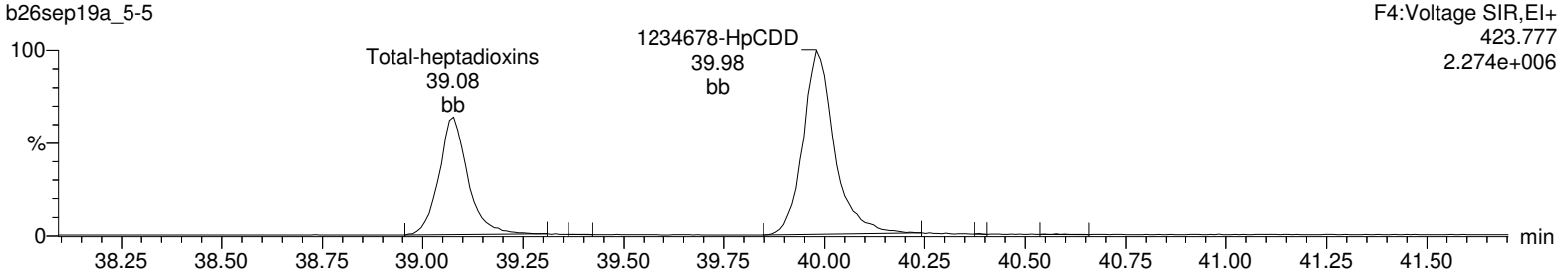
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

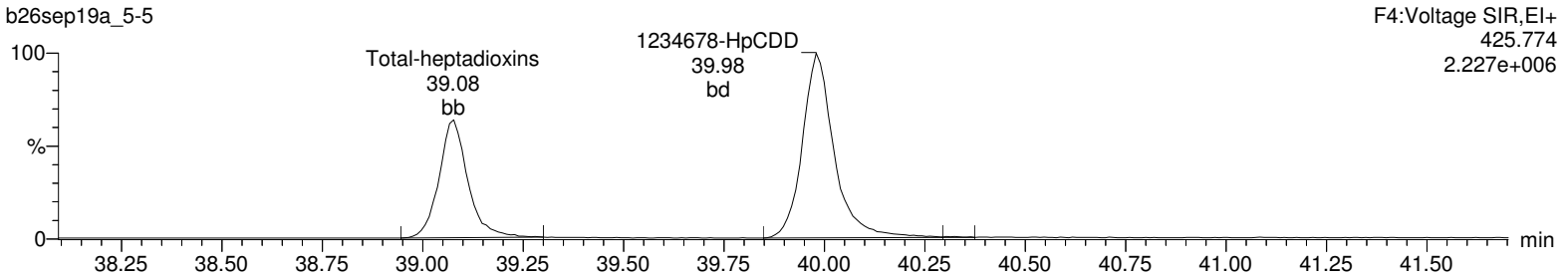
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

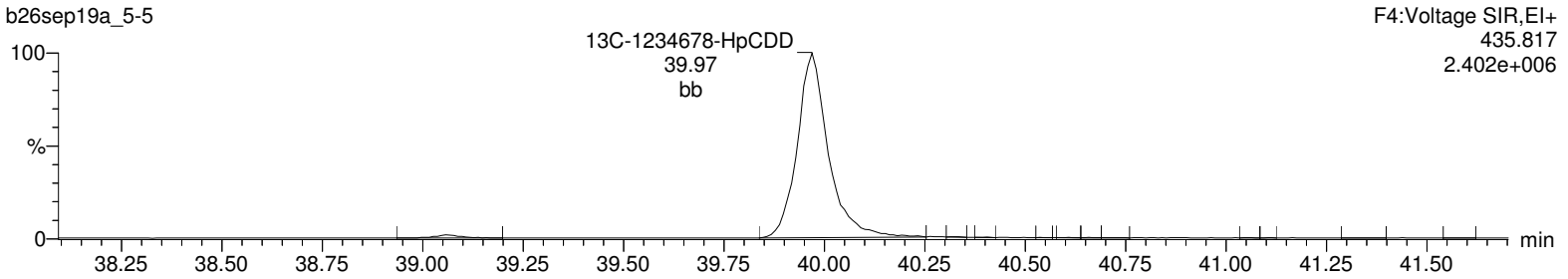
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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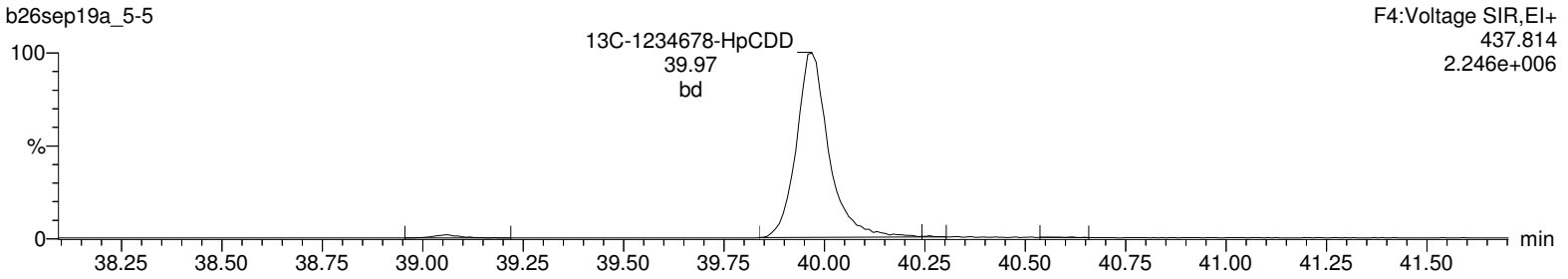
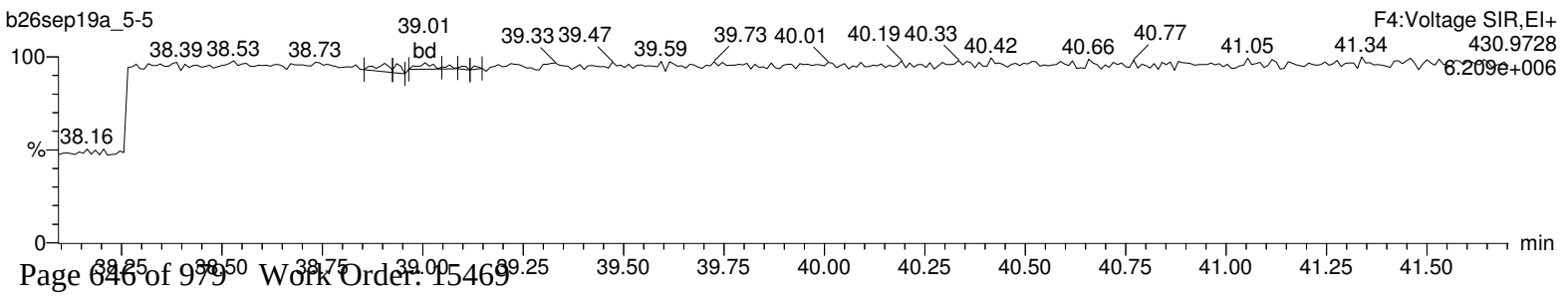


Lock Mass F4



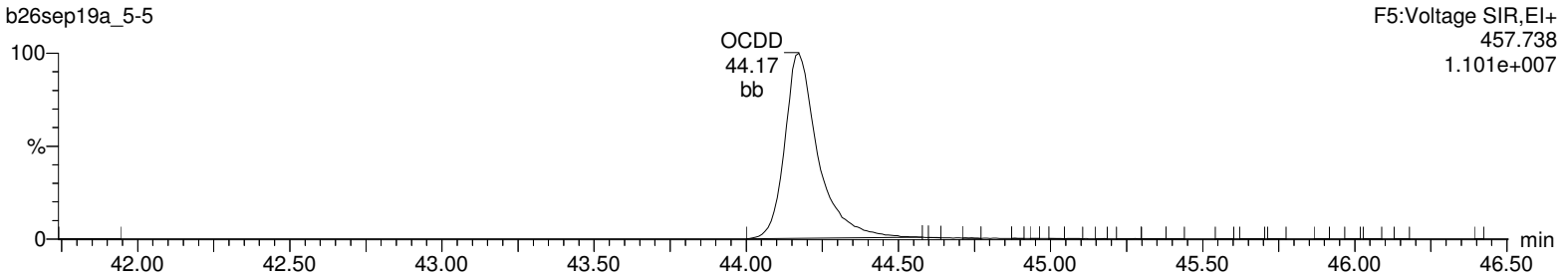
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

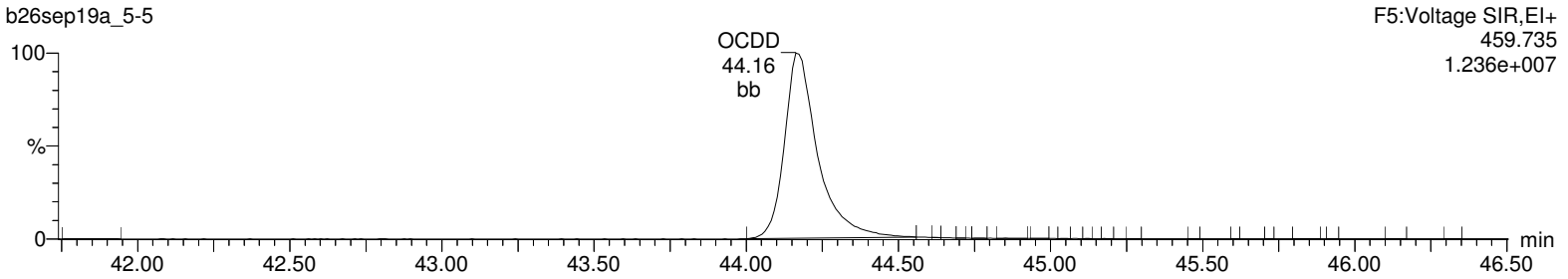
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

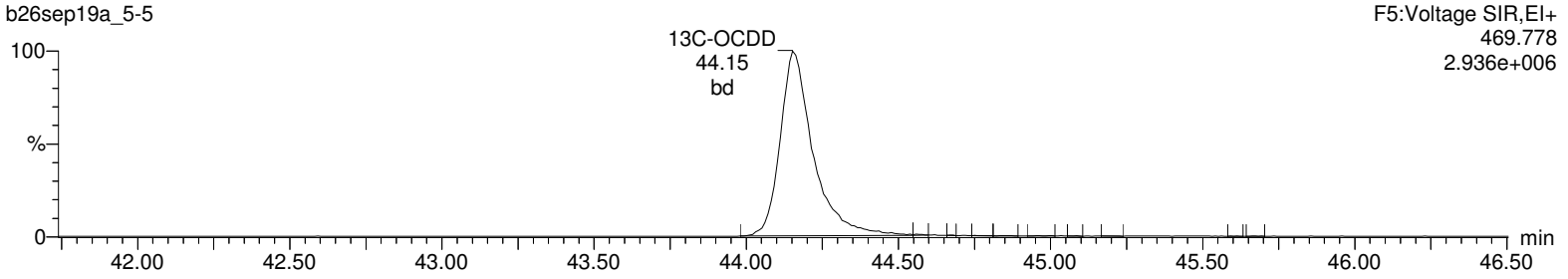
OCDD



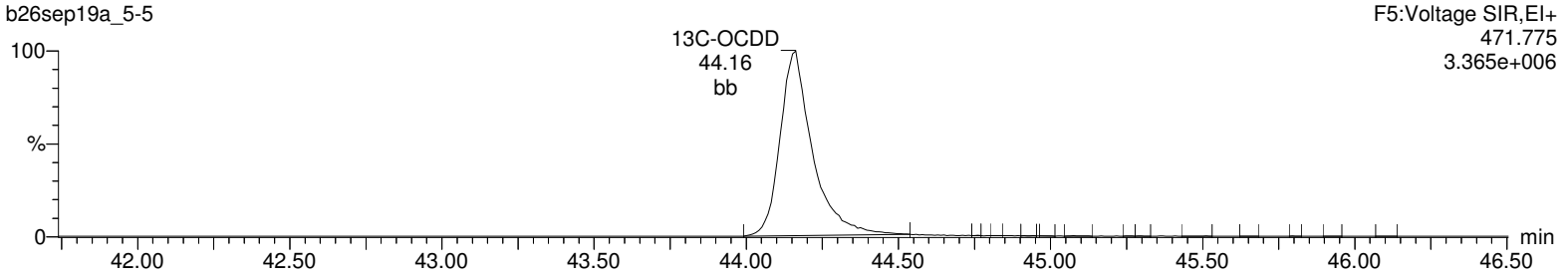
OCDD



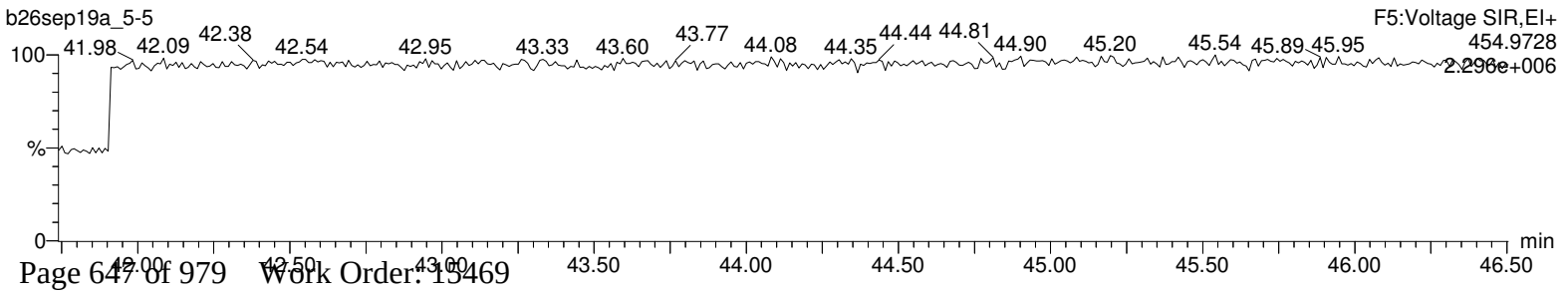
13C-OCDD



13C-OCDD



Lock Mass F5



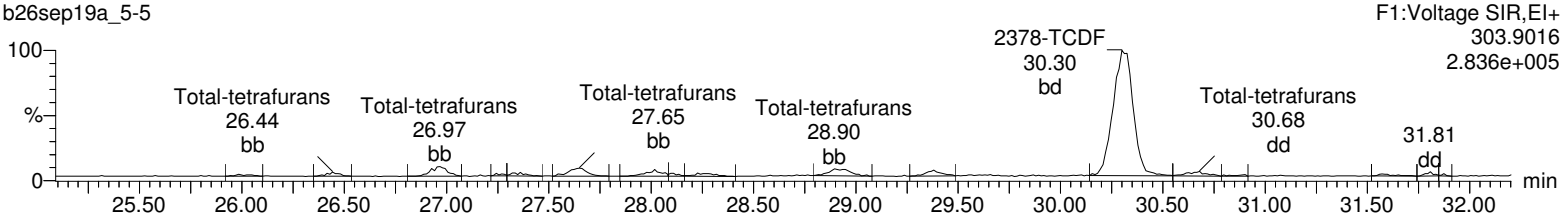
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

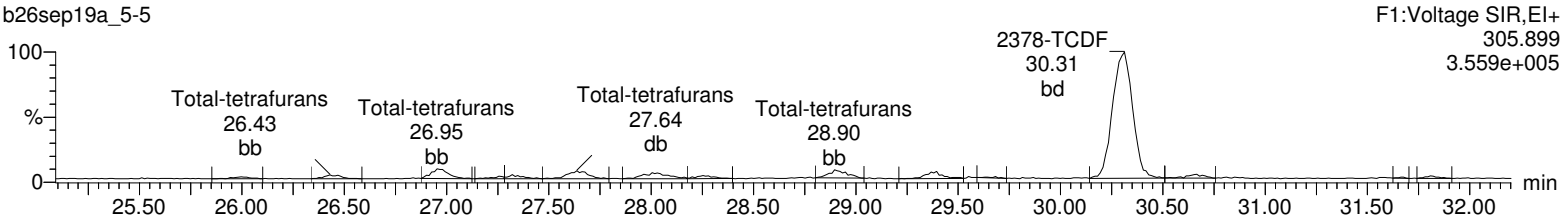
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

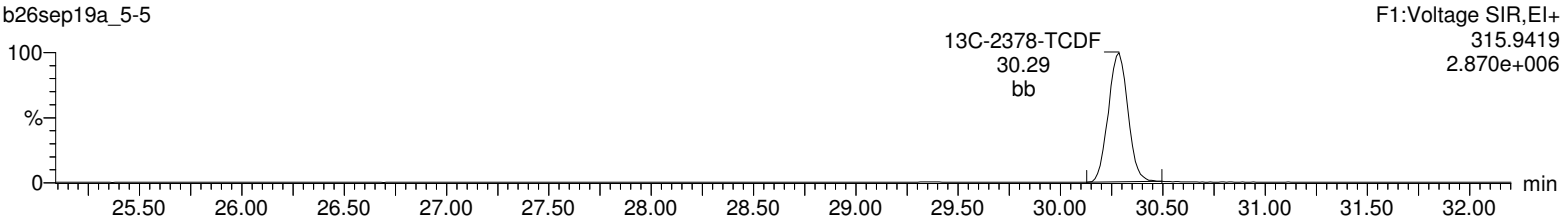
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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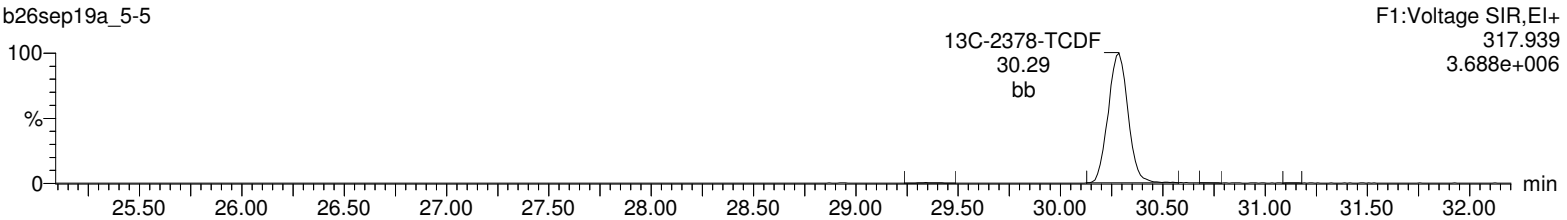
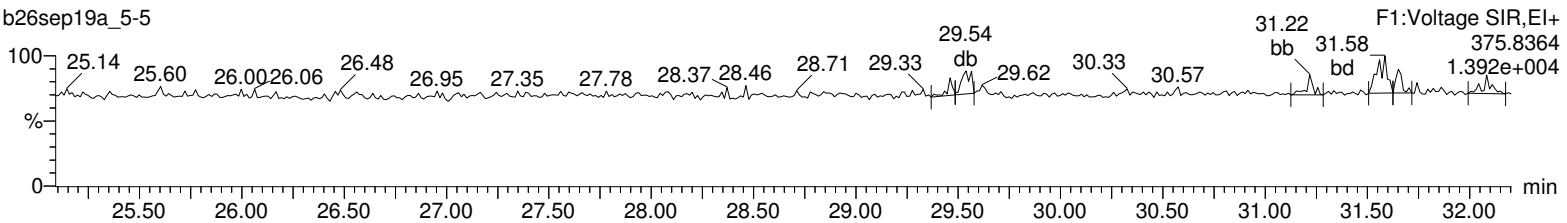
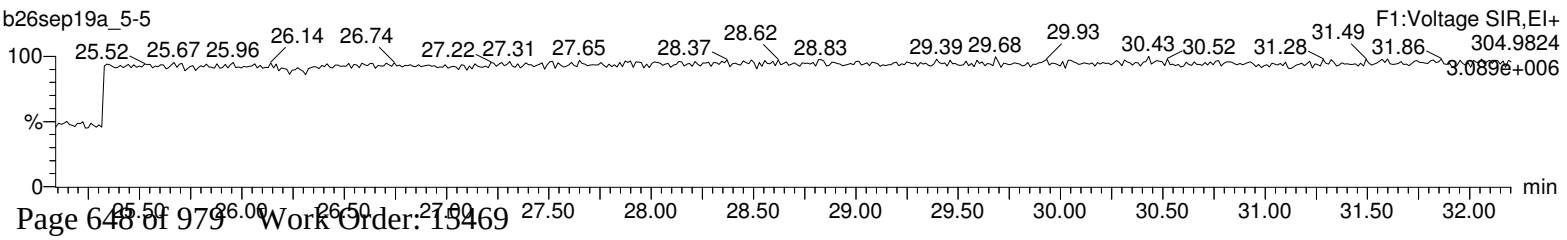


HxDPE



Lock Mass F1



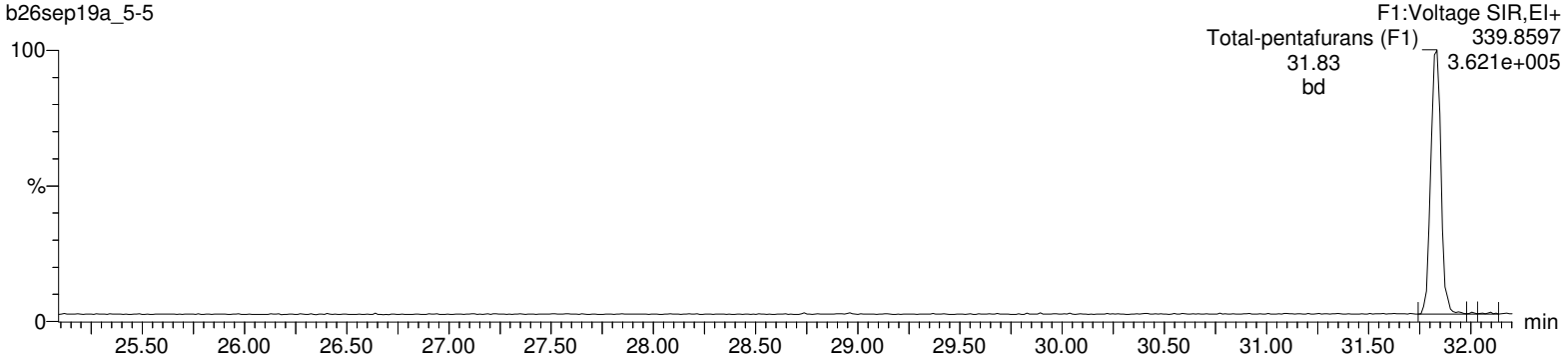
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

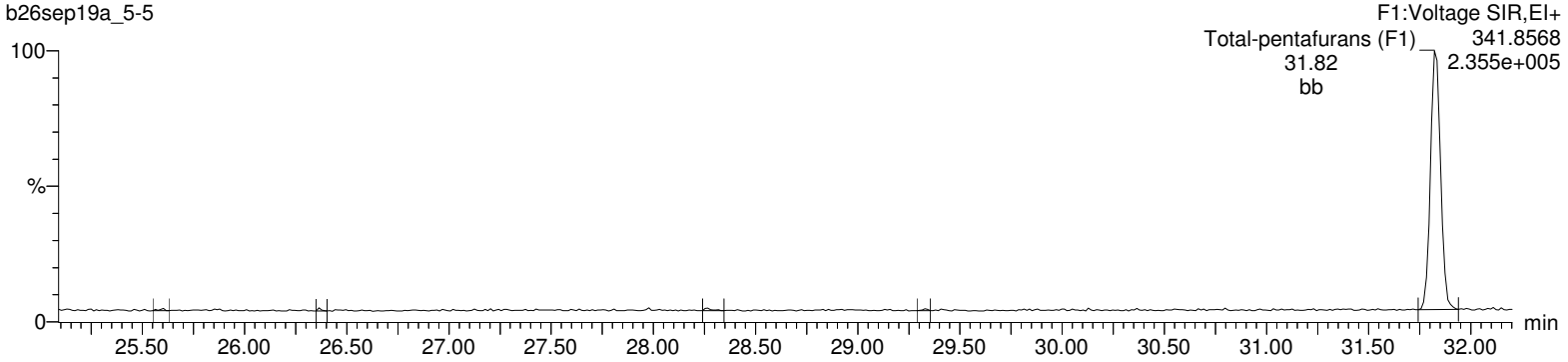
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

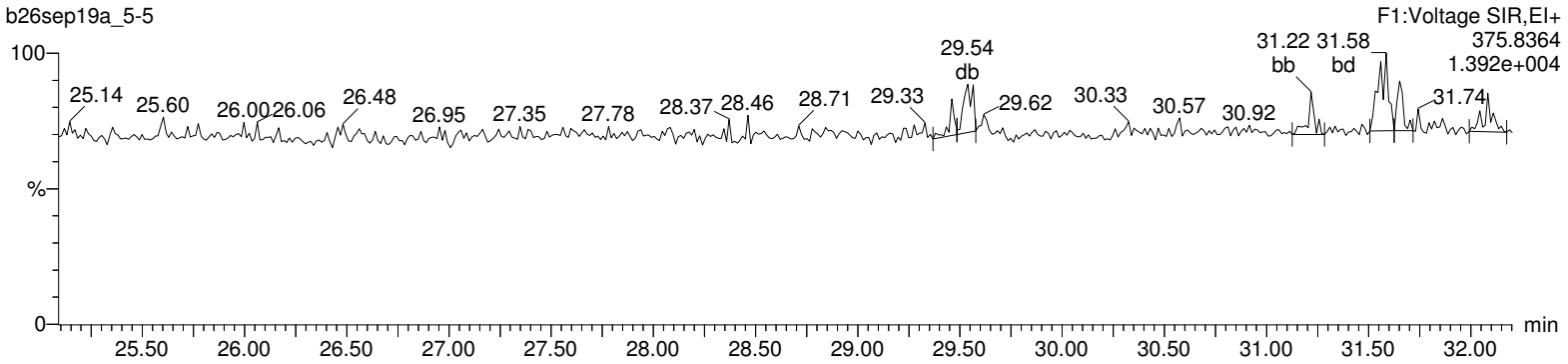
Total-pentafurans (F1)



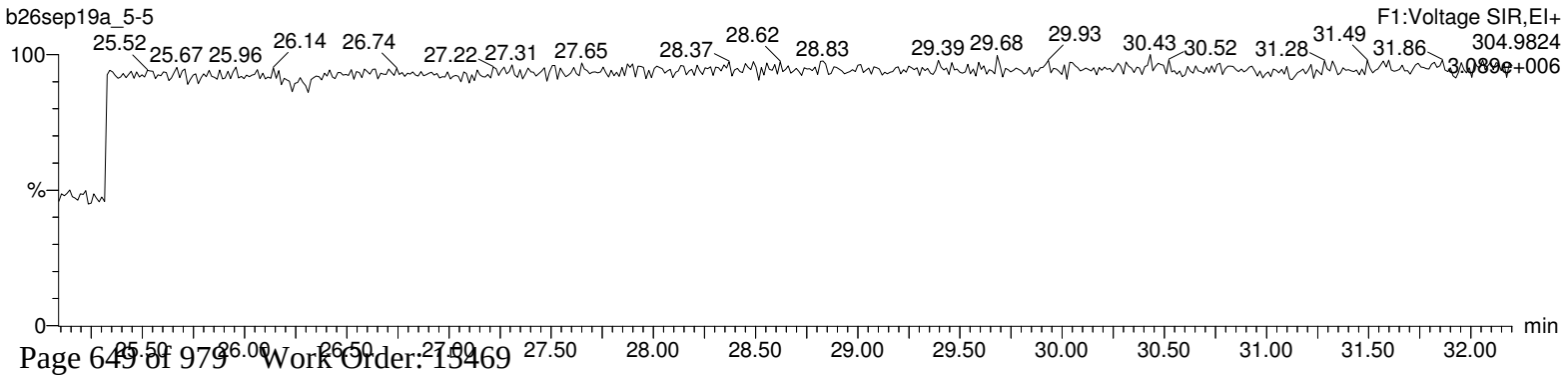
Total-pentafurans (F1)



HxDPE



Lock Mass F1



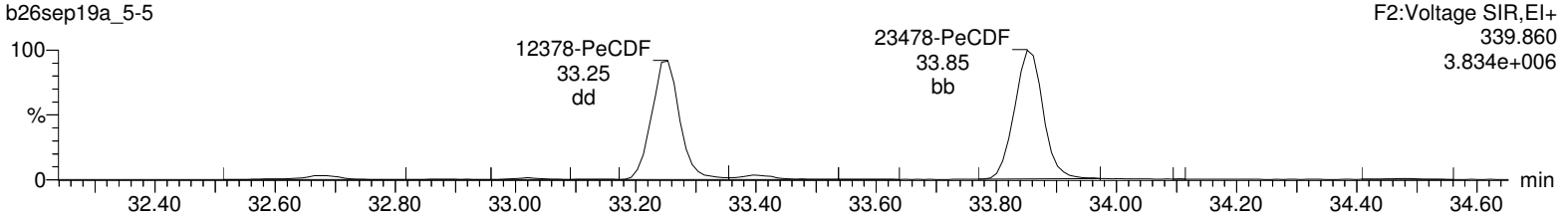
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

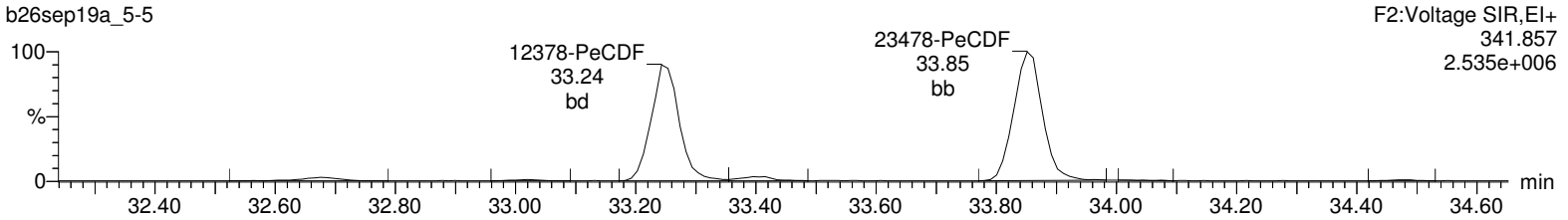
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

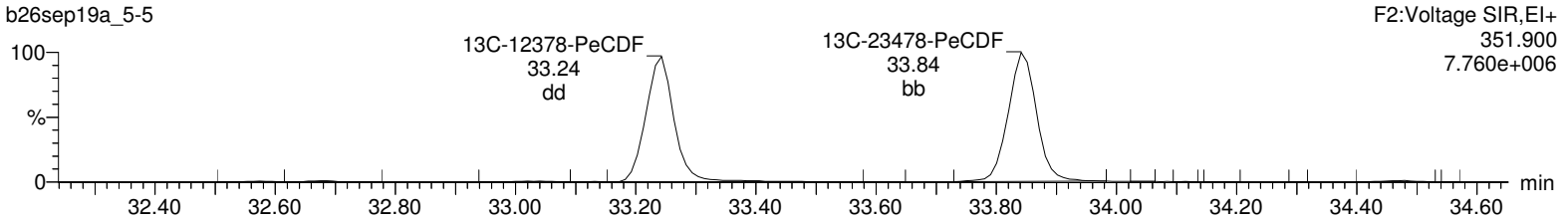
Total-pentafurans



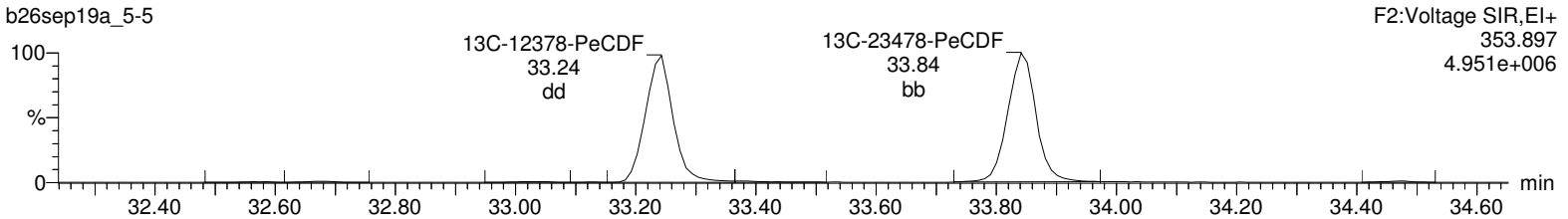
Total-pentafurans



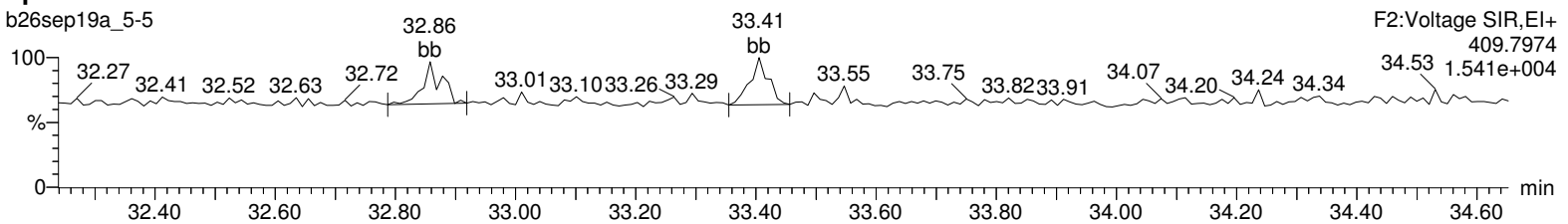
13C-12378-PeCDF



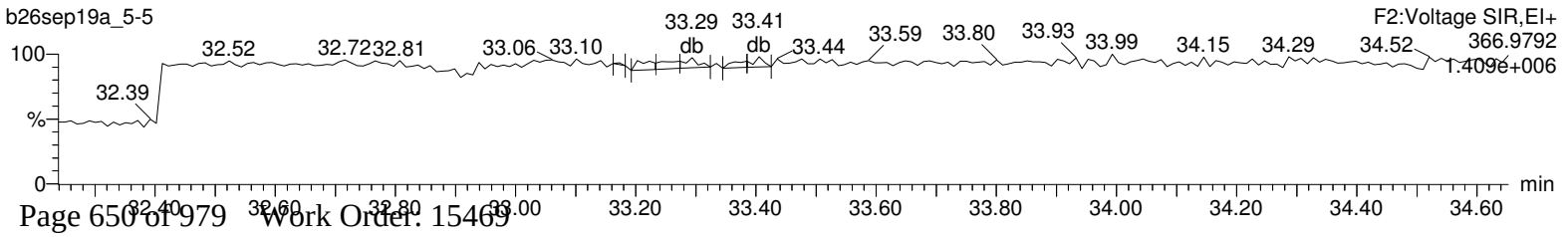
13C-12378-PeCDF



HpDPE



Lock Mass F2



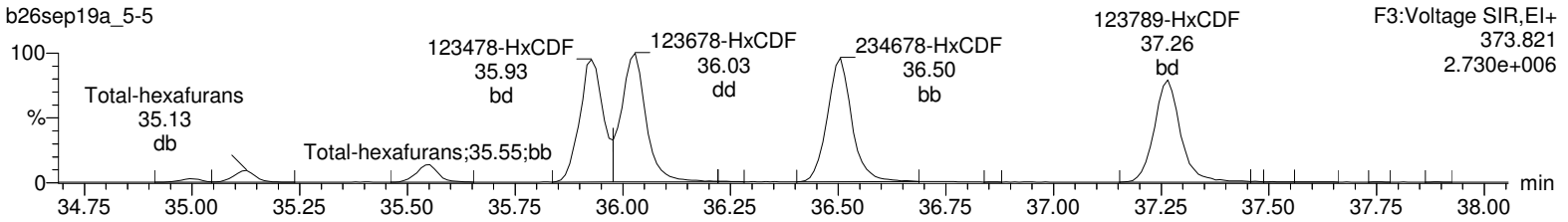
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

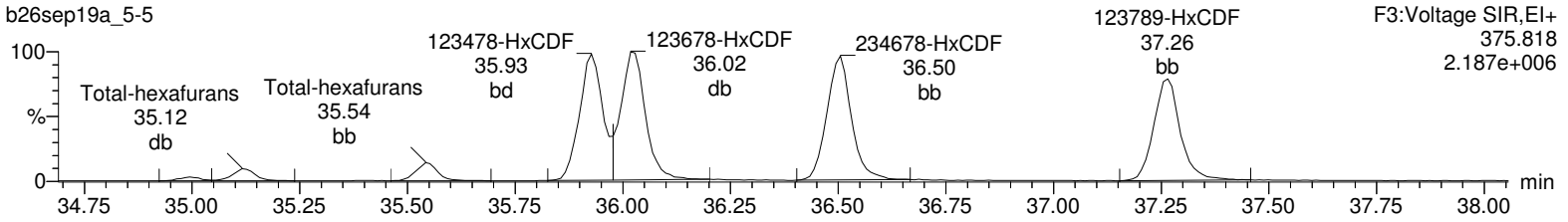
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

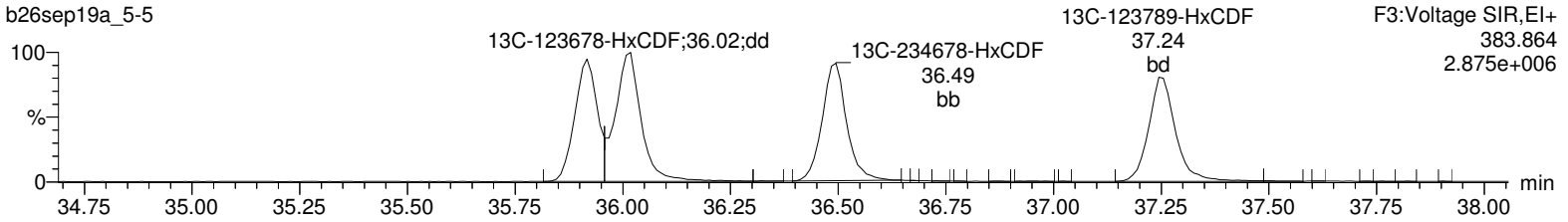
Total-hexafurans



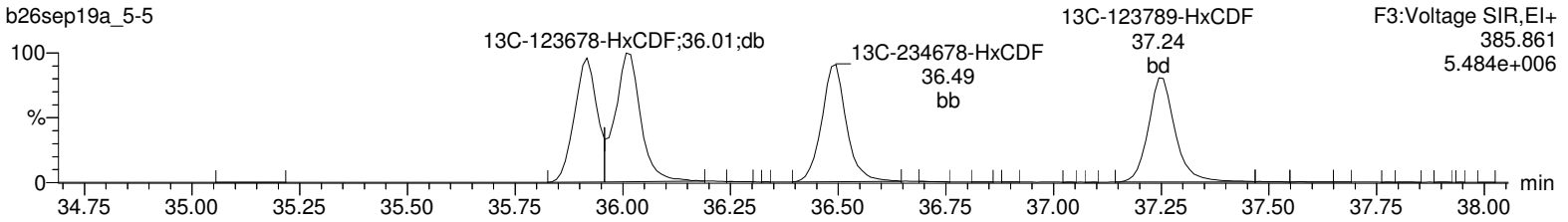
Total-hexafurans



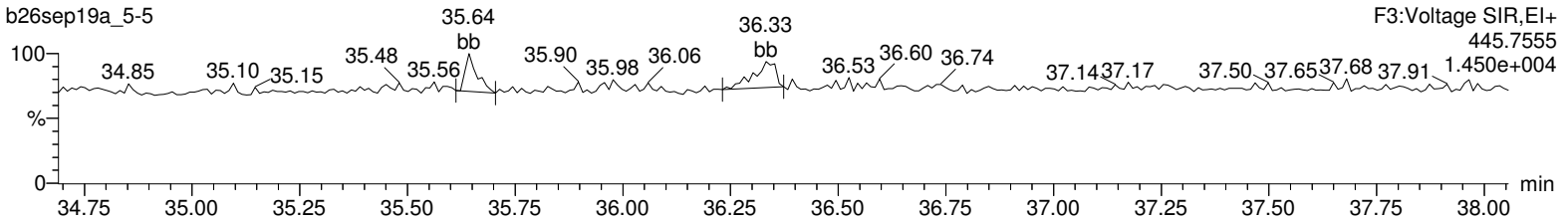
13C-123478-HxCDF



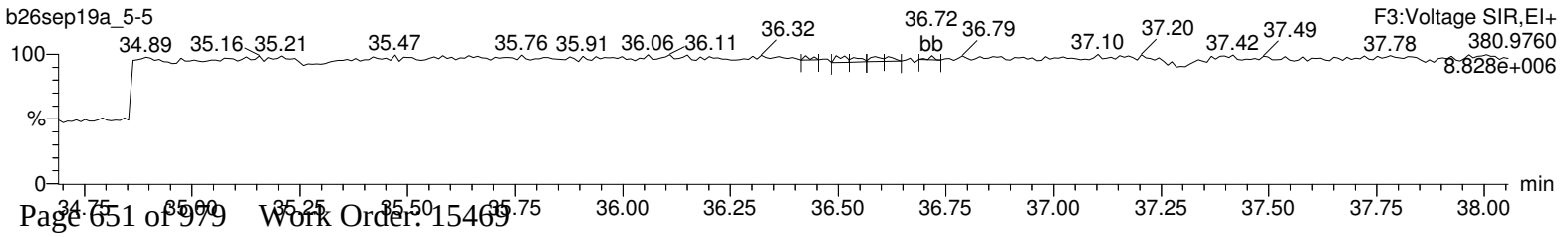
13C-123478-HxCDF



OcDPE



Lock Mass F3



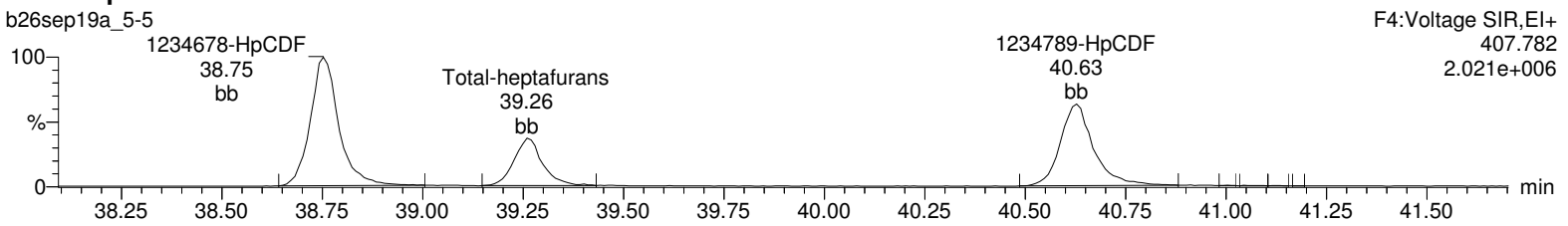
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

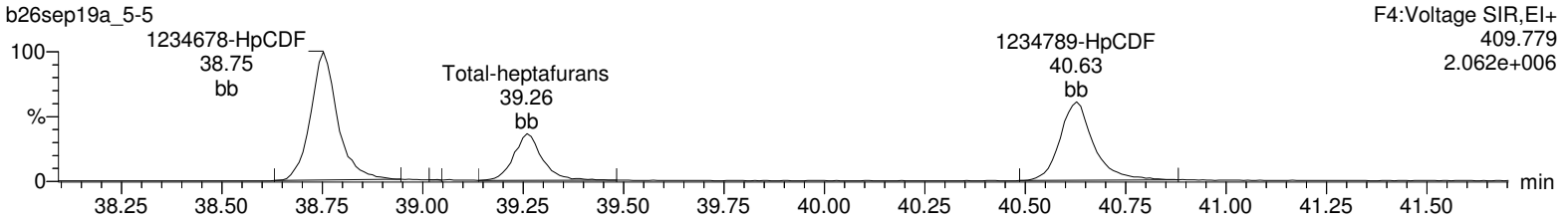
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

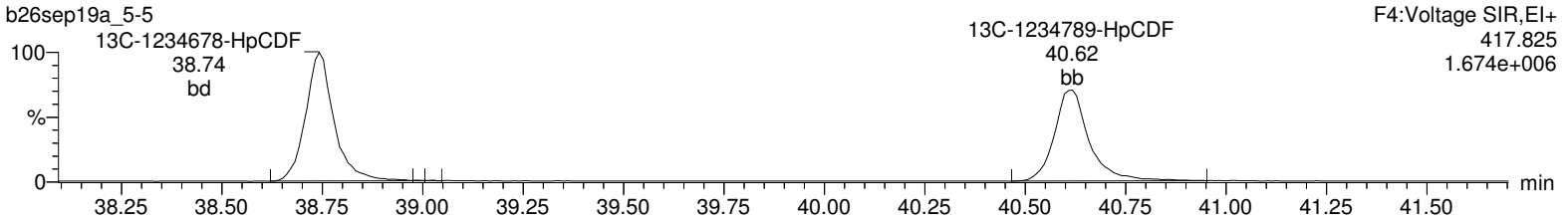
Total-heptafurans



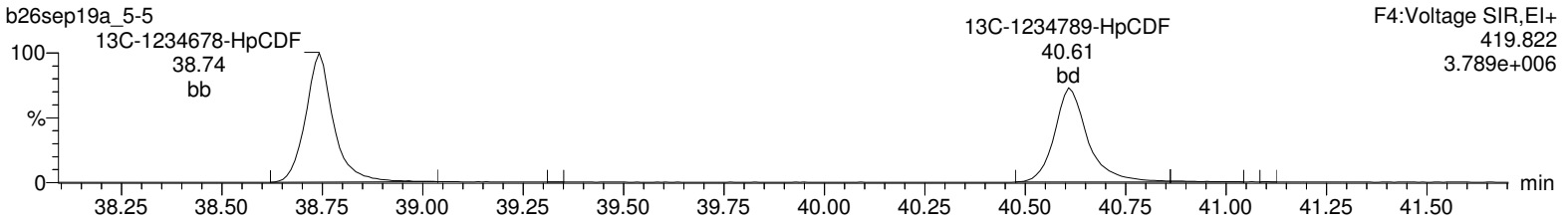
Total-heptafurans



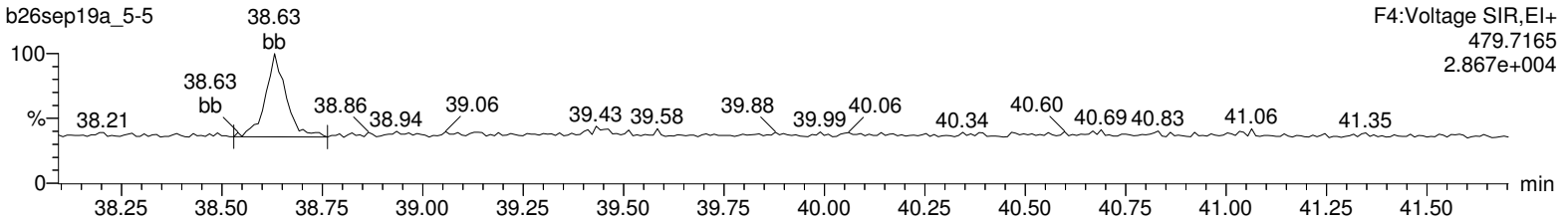
13C-1234678-HpCDF



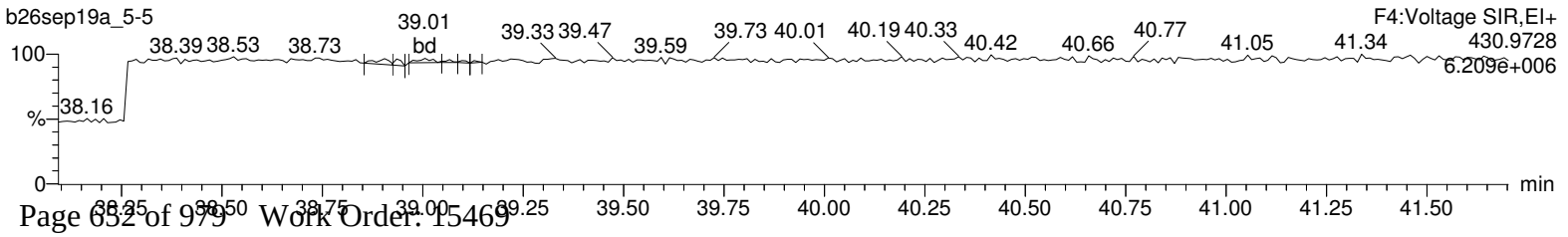
13C-1234678-HpCDF



NoDPE



Lock Mass F4



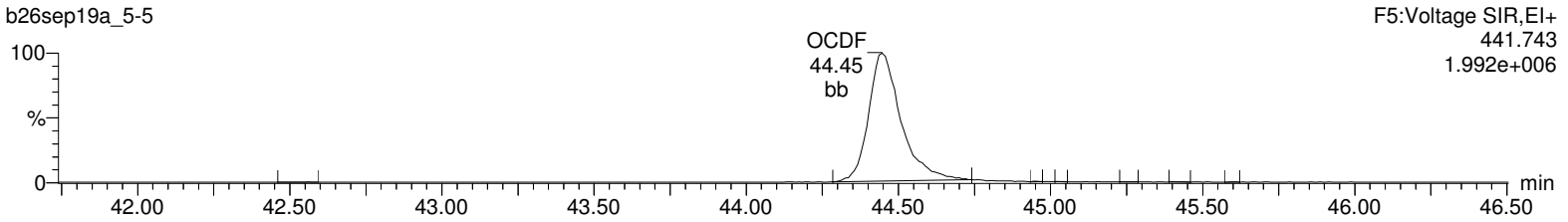
Quantify Sample Report **MassLynx 4.1**
Method 1613 Quantification Report

Dataset: Untitled

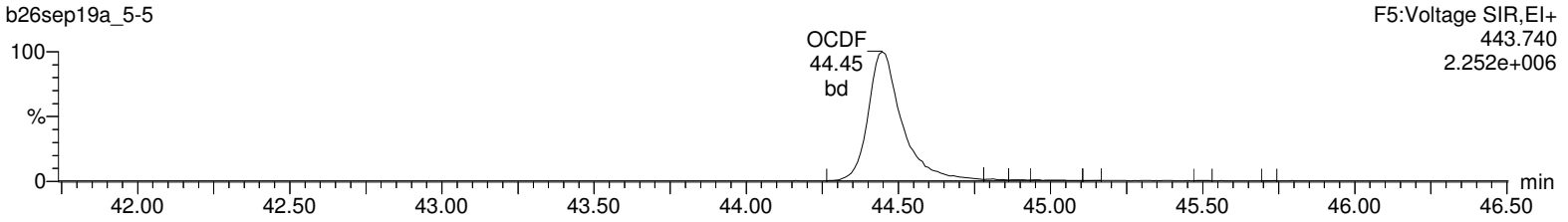
Last Altered: Monday, September 30, 2019 09:28:56 Eastern Standard Time
Printed: Monday, September 30, 2019 09:29:22 Eastern Standard Time

Name: b26sep19a_5-5, Date: 28-Sep-2019, Time: 03:03:25, ID: 12024796-1 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_1, User: MLS

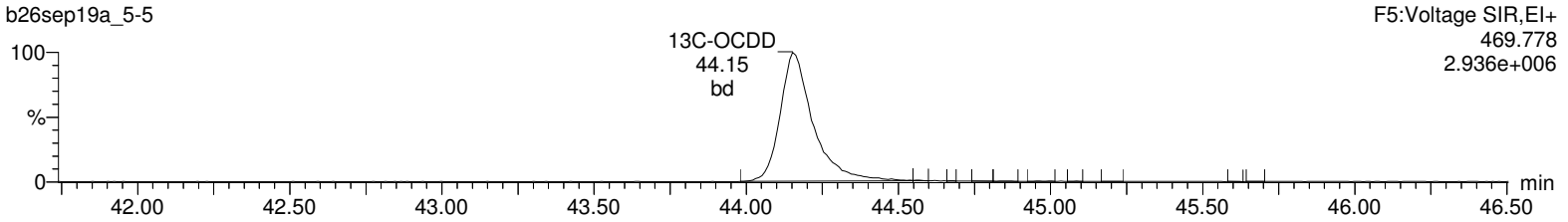
OCDF



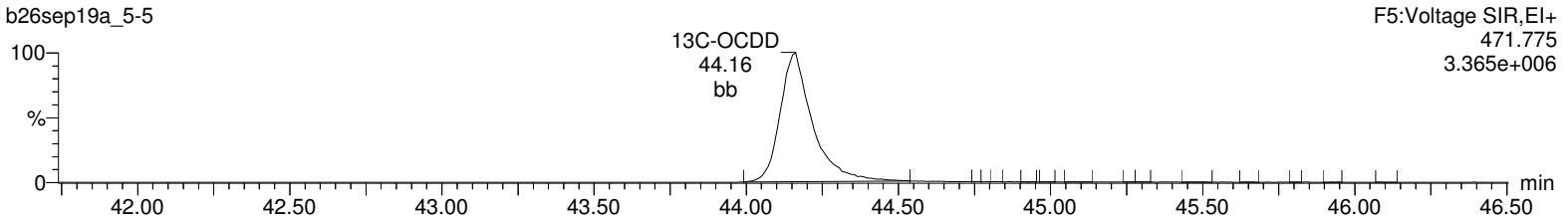
OCDF



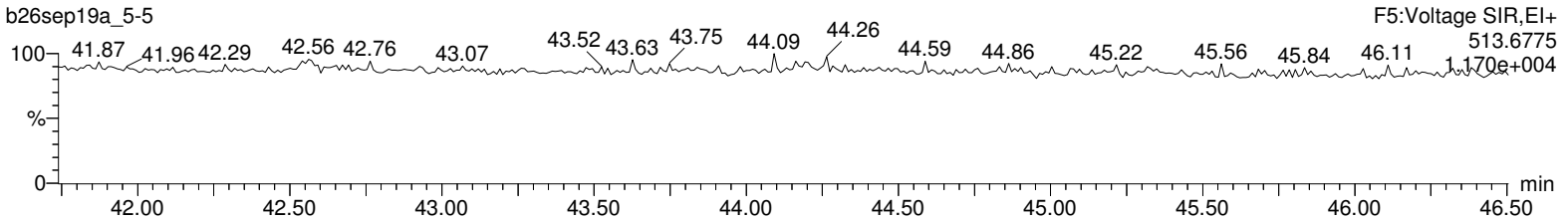
13C-OCDD



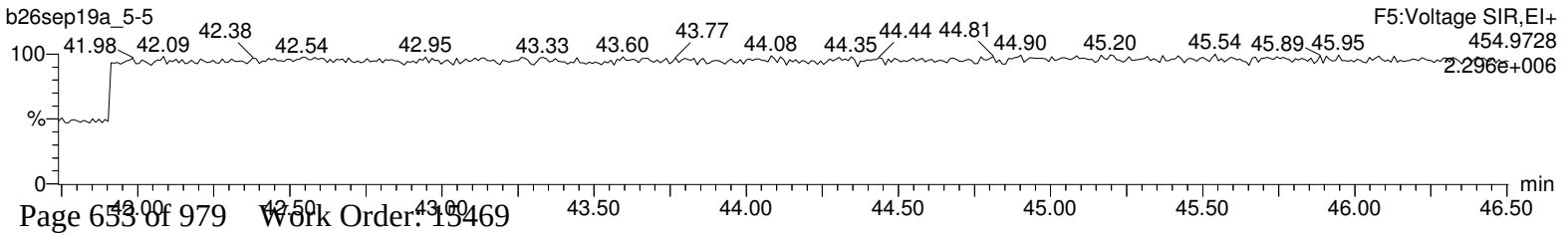
13C-OCDD



DeDPE



Lock Mass F5



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**2006-00115_2**	**Client:**	**PGWG001**	**Project:**	**PGWG00119**
Lab Sample ID:	**12024796**	**Date Collected:**	**08/28/2019 09:20**	**Matrix:**	**SOIL**
Client Sample:	**QC for batch 41745**	**Date Received:**	**08/30/2019 09:55**	**%Moisture:**	**47.3**
Client ID:	**J6-SC1b-20to30-82819(15469001MSD**			**Prep Basis:**	**Dry Weight**
Batch ID:	**41747**	**Method:**	**EPA Method 1613B**		
Run Date:	**09/30/2019 17:15**	**Analyst:**	**MLS**	**Instrument:**	**HRP763**
Data File:	**b30sep19a_2-5**			**Dilution:**	**1**
Prep Batch:	**41745**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**16-SEP-19**	**Prep Aliquot:**	**19.1 g**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF		22.6	pg/g	0.182	0.993

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

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

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-5, Date: 30-Sep-2019, Time: 17:15:04, ID: 12024796-2 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	7.85e4	1.05e5	1.84e5	16.29	1.001	0.74	NO	11.396	0.0915	1.31e6	3221	405.3	1.74e6	4929	353.7	bb	bd
2	13C-2378-TCDF	8.15e5	1.06e6	1.88e6	16.28	1.065	0.77	NO	63.188	0.104	1.35e7	11829	1140.4	1.74e7	7341	2375.2	bb	bb
3	13C-1234-TCDD	8.54e5	1.10e6	1.95e6	15.28	0.000	0.78	NO	100.000	0.115	1.59e7	8390	1895.3	2.03e7	5532	3676.9	db	db

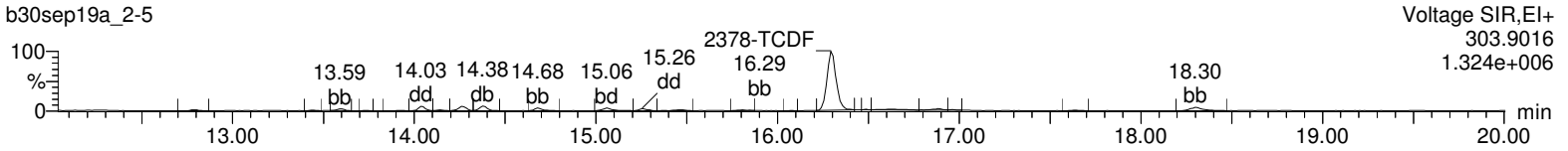
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\cf-b30sep19a_2.qld

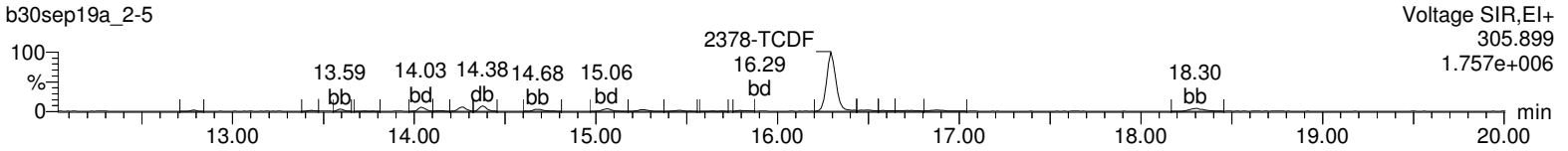
Last Altered: Tuesday, October 01, 2019 08:11:07 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:45:02 Eastern Standard Time

Name: b30sep19a_2-5, Date: 30-Sep-2019, Time: 17:15:04, ID: 12024796-2 MSD, Description: 41747, Job: HMS1613_1S, Task: HRP763_2, User: MLS

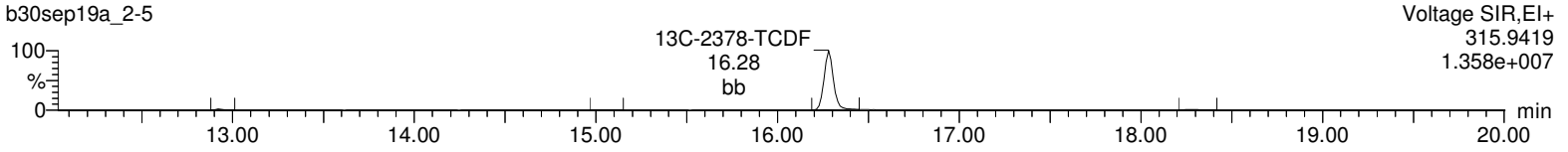
2378-TCDF



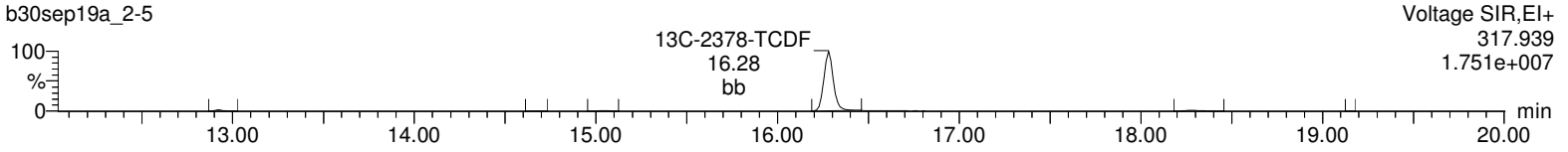
2378-TCDF



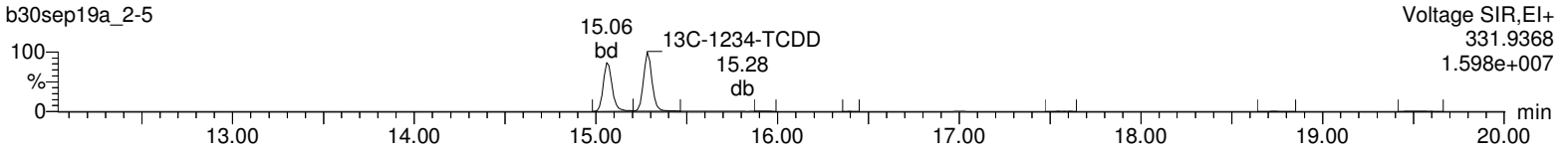
13C-2378-TCDF



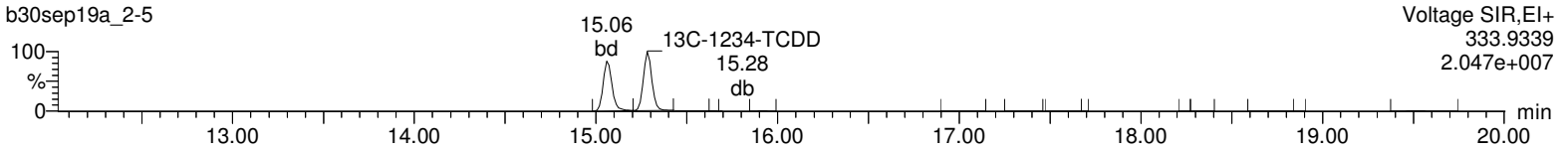
13C-2378-TCDF



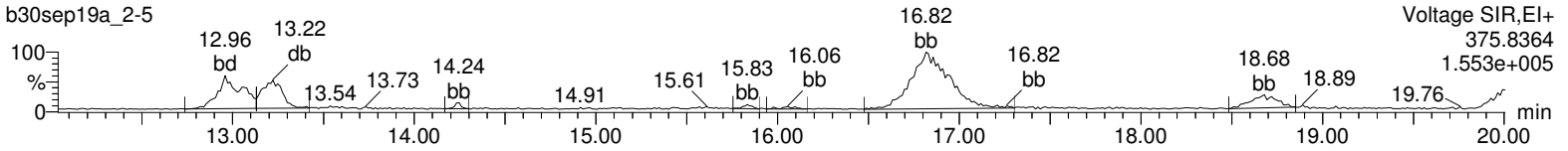
13C-1234-TCDD



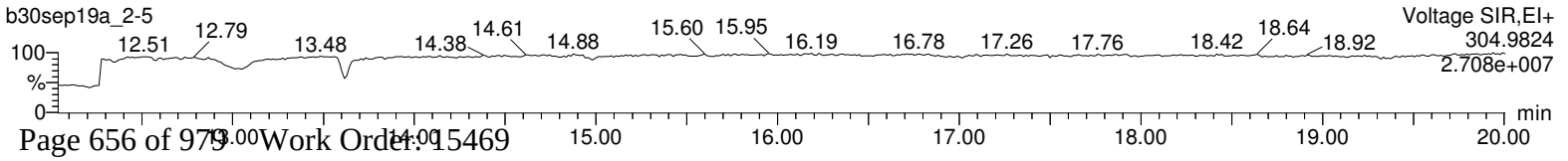
13C-1234-TCDD



HxDPE



Lock Mass F1



Logbooks

Moisture LogBook

Batch: 41666
Analyst: JXS1
Date/Time: 03-SEP-2019
Procedure Code DRY WEIGHT
Procedure Description Dry Weight-Percent Moisture
Lab Sop: CF-OA-E-020

Sample St	Sample Id	Rpd(%)
DUP	12024712	**.855**

Sample ID	Instrument	Start Time	Run Time (Hours)	Container Wt (g)	Initial Wt	Final Wt (g)	Net Initial Wt (g)	Net Final Wt (g)	Moisture (%)	Solids (%)	Equivalent Wt (g)
12024712	B1	03-SEP-19 14:59	19.5	1.07	10.89	6.31	9.82	5.24	46.64	53.36	18.74
15468001	B1	03-SEP-19 14:59	19.5	1.08	10.37	6	9.29	4.92	47.04	52.96	18.88
15468002	B1	03-SEP-19 14:59	19.5	1.07	10.13	6.08	9.06	5.01	44.702	55.298	18.08
15468003	B1	03-SEP-19 14:59	19.5	1.07	10.84	6.32	9.77	5.25	46.264	53.736	18.61
15468004	B1	03-SEP-19 14:59	19.5	1.07	10.24	6.12	9.17	5.05	44.929	55.071	18.16
15468005	B1	03-SEP-19 14:59	19.5	1.07	10.13	5.99	9.06	4.92	45.695	54.305	18.41
15468006	B1	03-SEP-19 14:59	19.5	1.06	10.64	6.41	9.58	5.35	44.154	55.846	17.91
15468007	B1	03-SEP-19 14:59	19.5	1.09	10.33	6.1	9.24	5.01	45.779	54.221	18.44
15468008	B1	03-SEP-19 14:59	19.5	1.09	11.23	6.75	10.14	5.66	44.181	55.819	17.92
15468009	B1	03-SEP-19 14:59	19.5	1.08	9.61	5.42	8.53	4.34	49.121	50.879	19.65
15468010	B1	03-SEP-19 14:59	19.5	1.06	9.8	5.72	8.74	4.66	46.682	53.318	18.76
15468011	B1	03-SEP-19 14:59	19.5	1.07	11.28	6.64	10.21	5.57	45.446	54.554	18.33
15468012	B1	03-SEP-19 14:59	19.5	1.09	10.17	6.1	9.08	5.01	44.824	55.176	18.12
15468013	B1	03-SEP-19 14:59	19.5	1.07	12.25	7.31	11.18	6.24	44.186	55.814	17.92
15468014	B1	03-SEP-19 14:59	19.5	1.08	10.17	7.03	9.09	5.95	34.543	65.457	15.28
15468015	B1	03-SEP-19 14:59	19.5	1.07	11.05	8.71	9.98	7.64	23.447	76.553	13.06
15469021	B1	03-SEP-19 14:59	19.5	1.06	10.32	7.08	9.26	6.02	34.989	65.011	15.38
15469022	B1	03-SEP-19 14:59	19.5	1.07	10.68	5.85	9.61	4.78	50.26	49.74	20.1
15469023	B1	03-SEP-19 14:59	19.5	1.08	11.09	6.37	10.01	5.29	47.153	52.847	18.92

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

Moisture LogBook

Batch: 41668
Analyst: JXS1
Date/Time: 03-SEP-2019
Procedure Code DRY WEIGHT
Procedure Description Dry Weight-Percent Moisture
Lab Sop: CF-OA-E-020

Sample St	Sample Id	Rpd(%)
DUP	12024711	**3.736**

Sample ID	Instrument	Start Time	Run Time (Hours)	Container Wt (g)	Initial Wt	Final Wt (g)	Net Initial Wt (g)	Net Final Wt (g)	Moisture (%)	Solids (%)	Equivalent Wt (g)
12024711	B1	03-SEP-19 14:19	20	1.07	10.75	6.18	9.68	4.93	49.07	50.93	19.63
15469001	B1	03-SEP-19 14:19	20	1.09	9.7	5.63	8.61	4.54	47.271	52.729	18.96
15469002	B1	03-SEP-19 14:19	20	1.07	10.78	6.33	9.71	5.28	45.623	54.377	18.39
15469003	B1	03-SEP-19 14:19	20	1.07	9.71	5.85	8.64	4.79	44.56	55.44	18.04
15469004	B1	03-SEP-19 14:19	20	1.07	10.29	6.38	9.22	5.33	42.191	57.809	17.3
15469005	B1	03-SEP-19 14:19	20	1.05	9.83	6.31	8.78	5.27	39.977	60.023	16.66
15469006	B1	03-SEP-19 14:19	20	1.07	9.11	6.59	8.04	5.53	31.219	68.781	14.54
15469007	B1	03-SEP-19 14:19	20	1.07	10.62	7.85	9.55	6.8	28.796	71.204	14.04
15469008	B1	03-SEP-19 14:19	20	1.07	9.26	6.72	8.19	5.65	31.013	68.987	14.5
15469009	B1	03-SEP-19 14:19	20	1.07	10.48	7.61	9.41	6.54	30.499	69.501	14.39
15469010	B1	03-SEP-19 14:19	20	1.1	10.42	7.97	9.32	6.89	26.073	73.927	13.53
15469011	B1	03-SEP-19 14:19	20	1.07	11.87	6.62	10.8	5.56	48.519	51.481	19.42
15469012	B1	03-SEP-19 14:19	20	1.06	10.42	5.79	9.36	4.75	49.252	50.748	19.71
15469013	B1	03-SEP-19 14:19	20	1.06	10.92	6.96	9.86	5.92	39.959	60.041	16.66
15469014	B1	03-SEP-19 14:19	20	1.08	10.84	8.21	9.76	7.15	26.742	73.258	13.65
15469015	B1	03-SEP-19 14:19	20	1.05	10.85	8.3	9.8	7.26	25.918	74.082	13.5
15469016	B1	03-SEP-19 14:19	20	1.08	9.64	7.08	8.56	6.01	29.79	70.21	14.24
15469017	B1	03-SEP-19 14:19	20	1.08	9.95	6.74	8.87	5.67	36.077	63.923	15.64
15469018	B1	03-SEP-19 14:19	20	1.09	11.45	6.37	10.36	5.29	48.938	51.062	19.58
15469019	B1	03-SEP-19 14:19	20	1.06	10.17	6.22	9.11	5.18	43.139	56.861	17.59
15469020	B1	03-SEP-19 14:19	20	1.07	9.57	6.45	8.5	5.39	36.588	63.412	15.77

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

Prep Logbook

3540C Solid Extraction for Method 1613B

Batch ID: 41745 **Verified by:** _____

Analyst: Andrea Scarpello

Method: SW846 3540C

Lab SOP: CF-OA-E-002 REV# 15

Instrument: Ohaus Scout Pro 400

Sample ID	Start Run Date	Aliquot (g)	ES Amount (uL)	ES Serial#	MX Amount (uL)	MX Serial#	Decanted? (Y/N)
12024792 MB	16-SEP-2019 17:30	10	40	WD190912-01 .05 ng/uL			N
12024793 LCS	16-SEP-2019 17:30	10	40	WD190912-01 .05 ng/uL	40	WD190913-01 .005 ng/uL	N
12024794 LCSD	16-SEP-2019 17:30	10	40	WD190912-01 .05 ng/uL	40	WD190913-01 .005 ng/uL	N
15469001	16-SEP-2019 17:30	19.2	40	WD190912-01 .05 ng/uL			N
12024795 MS (15469001)	16-SEP-2019 17:30	19.09	40	WD190912-01 .05 ng/uL	40	WD190913-01 .005 ng/uL	N
12024796 MSD (15469001)	16-SEP-2019 17:30	19.1	40	WD190912-01 .05 ng/uL	40	WD190913-01 .005 ng/uL	N
15469002	16-SEP-2019 17:30	19.04	40	WD190912-01 .05 ng/uL			N
15469003	16-SEP-2019 17:30	18.56	40	WD190912-01 .05 ng/uL			N
15469004	16-SEP-2019 17:30	18.77	40	WD190912-01 .05 ng/uL			N
15469005	16-SEP-2019 17:30	17.95	40	WD190912-01 .05 ng/uL			N
15469006	16-SEP-2019 17:30	15.39	40	WD190912-01 .05 ng/uL			N
15469007	16-SEP-2019 17:30	14.56	40	WD190912-01 .05 ng/uL			N
15469008	16-SEP-2019 17:30	14.83	40	WD190912-01 .05 ng/uL			N
15469009	16-SEP-2019 17:30	15.58	40	WD190912-01 .05 ng/uL			N
15469010	16-SEP-2019 17:30	15.22	40	WD190912-01 .05 ng/uL			N
15469013	16-SEP-2019 17:30	17.47	40	WD190912-01 .05 ng/uL			N
15469014	16-SEP-2019 17:30	14.09	40	WD190912-01 .05 ng/uL			N
15469015	16-SEP-2019 17:30	14.46	40	WD190912-01 .05 ng/uL			N
15469016	16-SEP-2019 17:30	15.36	40	WD190912-01 .05 ng/uL			N
15469017	16-SEP-2019 17:30	16.48	40	WD190916-01 .05 ng/uL			N
15469018	16-SEP-2019 17:30	20.11	40	WD190916-01 .05 ng/uL			N
15469019	16-SEP-2019 17:30	18.65	40	WD190916-01 .05 ng/uL			N
15469020	16-SEP-2019 17:30	16.91	40	WD190916-01 .05 ng/uL			N
15469021	16-SEP-2019 17:30	16.36	40	WD190916-01 .05 ng/uL			N

Prep Logbook

Batch ID: 41745 **Verified by:** _____
Analyst: Andrea Scarpello
Method: SW846 3540C

Lab SOP: CF-OA-E-002 REV# 15
Instrument: Ohaus Scout Pro 400

Sample ID	Start Run Date	Aliquot (g)	ES Amount (uL)	ES Serial#	MX Amount (uL)	MX Serial#	Decanted? (Y/N)
15512001	16-SEP-2019 17:30	17.14	40	WD190916-01 .05 ng/uL			N

Type	Sample Id	Description	Serial Number	Spike Amt	Units
REAGENT		Baked Ottowa Sand	1145404	25	g
REAGENT		Silica Gel	1148251-A	5	g
REAGENT		Toluene	1148538-A	350	mL
REAGENT		Acetone	1149084-A.1	1	mL
REAGENT		Teflon boiling chips	1149444-A.6	10	each
REAGENT		Thimbles	1150078-A.7	1	each
REAGENT		Thimbles	1150080-A.8	1	each
REAGENT		Purified tridecane	1150161-C	500	uL

Comments:

WO# 15469 - NO SRM per client
Finish Date/Time: 17-SEP-19 11:30:00
Final Volume: 20 uL

Prep Logbook

Cleanup Procedure for Solids

Batch ID: **41746** **Verified by:** _____

Analyst: **Mike Medwedeff**

Lab SOP:

Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliqout Analyzed (percent)	CS Amount (uL)	CS Serial#
12024792 MB	17-SEP-2019 12:00	AB Silica Florisil	70	100	20	WD190909-03 .01 ng/uL
12024793 LCS	17-SEP-2019 12:00	AB Silica Florisil	52	100	20	WD190909-03 .01 ng/uL
12024794 LCSD	17-SEP-2019 12:00	AB Silica Florisil	48	100	20	WD190909-03 .01 ng/uL
15469001	17-SEP-2019 12:00	AB Silica Florisil	44	100	20	WD190909-03 .01 ng/uL
12024795 MS (15469001)	17-SEP-2019 12:00	AB Silica Florisil	91	100	20	WD190909-03 .01 ng/uL
12024796 MSD (15469001)	17-SEP-2019 12:00	AB Silica Florisil	111	100	20	WD190909-03 .01 ng/uL
15469002	17-SEP-2019 12:00	AB Silica Florisil	125	100	20	WD190909-03 .01 ng/uL
15469003	17-SEP-2019 12:00	AB Silica Florisil	85	100	20	WD190909-03 .01 ng/uL
15469004	17-SEP-2019 12:00	AB Silica Florisil	132	100	20	WD190909-03 .01 ng/uL
15469005	17-SEP-2019 12:00	AB Silica Florisil	172	100	20	WD190909-03 .01 ng/uL
15469006	17-SEP-2019 12:00	AB Silica Florisil	37	100	20	WD190909-03 .01 ng/uL
15469007	17-SEP-2019 12:00	AB Silica Florisil	94	100	20	WD190909-03 .01 ng/uL
15469008	17-SEP-2019 12:00	AB Silica Florisil	46	100	20	WD190909-03 .01 ng/uL
15469009	17-SEP-2019 12:00	AB Silica Florisil	26	100	20	WD190909-03 .01 ng/uL
15469010	17-SEP-2019 12:00	AB Silica Florisil	75	100	20	WD190909-03 .01 ng/uL
15469013	17-SEP-2019 12:00	AB Silica Florisil	180	100	20	WD190909-03 .01 ng/uL
15469014	17-SEP-2019 12:00	AB Silica Florisil	47	100	20	WD190909-03 .01 ng/uL
15469015	17-SEP-2019 12:00	AB Silica Florisil	148	100	20	WD190909-03 .01 ng/uL
15469016	17-SEP-2019 12:00	AB Silica Florisil	27	100	20	WD190909-03 .01 ng/uL
15469017	17-SEP-2019 12:00	AB Silica Florisil	2	100	20	WD190909-03 .01 ng/uL
15469018	17-SEP-2019 12:00	AB Silica Florisil	11	100	20	WD190909-03 .01 ng/uL
15469019	17-SEP-2019 12:00	AB Silica Florisil	161	100	20	WD190909-03 .01 ng/uL
15469020	17-SEP-2019 12:00	AB Silica Florisil	115	100	20	WD190909-03 .01 ng/uL
15469021	17-SEP-2019 12:00	AB Silica Florisil	23	100	20	WD190909-03 .01 ng/uL

Prep Logbook

Batch ID: **41746** **Verified by:** _____
Analyst: **Mike Medwedeff**

Lab SOP:
Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Train	Aliqout Analyzed (percent)	CS Amount (uL)	CS Serial#
15512001	17-SEP-2019 12:00	AB Silica Florisil	25	100	20	WD190909-03 .01 ng/uL

Type	Sample Id	Description	Serial Number	Spike Amt	Units
REAGENT		Base silica	1146652-C	3	g
REAGENT		Acid silica	1146654	7	g
REAGENT		Silica Gel	1148251-A	2	g
REAGENT			1149114	2	g
REAGENT		Activated Florisil	1149228	1	g
REAGENT		Glass Wool	1149474-A.5	1	each
REAGENT		Hexane	1149674-A.15	150	mL
REAGENT		Hexane	1149676-A.16	150	mL
REAGENT		Hexane	1149678-A.17	150	mL
REAGENT		Methylene Chloride	1149790-A	100	mL

Comments:

Prep Logbook

Method 1613B HRMS Solid Analysis

Batch ID: 41747 **Verified by:** _____

Analyst: Mary Showalter Matt Cash

Method: EPA Method 1613B

Lab SOP: CF-OA-E-002 REV# 15

Instrument: Waters Autospec Premier High-Resolution GC/MS

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/g)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
12024793 LCS	21-SEP-2019 22:43	20	2	1	Internal	1	19-SEP-2019
15469009	23-SEP-2019 09:56	20	1.2837	1	Internal	1	19-SEP-2019
15469010	23-SEP-2019 10:44	20	1.31406	1	Internal	1	19-SEP-2019
15469013	23-SEP-2019 11:32	20	1.14482	1	Internal	1	19-SEP-2019
15469015	23-SEP-2019 13:09	20	1.38313	1	Internal	1	19-SEP-2019
15469016	23-SEP-2019 13:58	20	1.30208	1	Internal	1	19-SEP-2019
15469017	23-SEP-2019 14:46	20	1.21359	1	Internal	1	19-SEP-2019
15469018	23-SEP-2019 15:35	20	0.99453	1	Internal	1	19-SEP-2019
15469019	23-SEP-2019 16:23	20	1.07239	1	Internal	1	19-SEP-2019
15469020	23-SEP-2019 17:11	20	1.18273	1	Internal	1	19-SEP-2019
15469021	23-SEP-2019 18:00	20	1.22249	1	Internal	1	19-SEP-2019
15512001	23-SEP-2019 18:48	20	1.16686	1	Internal	1	19-SEP-2019
12024794 LCSD	24-SEP-2019 09:35	20	2	1	Internal	1	19-SEP-2019
12024792 MB	24-SEP-2019 10:23	20	2	1	Internal	1	19-SEP-2019
15469014	28-SEP-2019 00:38	20	1.41945	1	Internal	1	19-SEP-2019
15469001	28-SEP-2019 01:26	20	1.04167	1	Internal	1	19-SEP-2019
12024795 MS (15469001)	28-SEP-2019 02:14	20	1.04767	1	Internal	1	19-SEP-2019
12024796 MSD (15469001)	28-SEP-2019 03:03	20	1.04712	1	Internal	1	19-SEP-2019
15469002	28-SEP-2019 03:51	20	1.05042	1	Internal	1	19-SEP-2019
15469003	28-SEP-2019 04:40	20	1.07759	1	Internal	1	19-SEP-2019
15469004	28-SEP-2019 05:28	20	1.06553	1	Internal	1	19-SEP-2019
15469005	28-SEP-2019 06:17	20	1.11421	1	Internal	1	19-SEP-

Prep Logbook

Batch ID: 41747 **Verified by:** _____
Analyst: Mary Showalter Matt Cash
Method: EPA Method 1613B

Lab SOP: CF-OA-E-002 REV# 15
Instrument: Waters Autospec Premier High-Resolution GC/MS

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/g)	Dilution	Dilution Type	Injection Volume (uL)	Vial Prep Date
		2019					
15469006	28-SEP-2019 07:05	20	1.29955	1	Internal	1	19-SEP-2019
15469007	28-SEP-2019 07:53	20	1.37363	1	Internal	1	19-SEP-2019
15469008	28-SEP-2019 08:42	20	1.34862	1	Internal	1	19-SEP-2019
15469001 - 2	30-SEP-2019 16:31	20	1.04167	1	Internal	1	19-SEP-2019
12024795 - 2 MS (15469001)	30-SEP-2019 16:53	20	1.04767	1	Internal	1	19-SEP-2019
12024796 - 2 MSD (15469001)	30-SEP-2019 17:15	20	1.04712	1	Internal	1	19-SEP-2019
15469004 - 2	30-SEP-2019 17:36	20	1.06553	1	Internal	1	19-SEP-2019
15469005 - 2	30-SEP-2019 17:58	20	1.11421	1	Internal	1	19-SEP-2019
15469013 - 2	25-SEP-2019 02:45	20	1.14482	1	Internal	1	19-SEP-2019

Type	Sample Id	Description	Serial Number	Spike Amt	Units
REAGENT		8290 Injection Standard	WD190913-05.2	20	uL
REAGENT		8290 Injection Standard	WD190919-05.1	20	uL

Comments:

Initial Calibration Data

Runlog Information

CF ICAL

SBS 21MAY19

	Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
•	A16MAY19B-1	HRP750_3	16-MAY-2019 16:05	A16MAY19B	Matt Cash		CS3WT 1613CS3 UD190313-03.1 CPSXD	1 uL
•	A16MAY19B-2	HRP750_3	16-MAY-2019 16:27	A16MAY19B	Matt Cash		CPM225 WD181211-04 ISCCV	1 uL
•	A16MAY19B-3	HRP750_3	16-MAY-2019 16:50	A16MAY19B	Matt Cash		SB DIBLK2I	1 uL
•	A16MAY19B-4	HRP750_3	16-MAY-2019 17:12	A16MAY19B	Matt Cash		CS0.5 UD190207-01	1 uL
•	A16MAY19B-5	HRP750_3	16-MAY-2019 17:35	A16MAY19B	Matt Cash		CS1 UD190207-02 CS141	1 uL
•	A16MAY19B-6	HRP750_3	16-MAY-2019 17:57	A16MAY19B	Matt Cash		CS2 UD190207-03 CS241	1 uL
•	A16MAY19B-7	HRP750_3	16-MAY-2019 18:20	A16MAY19B	Matt Cash		CS3 UD190207-04 CS3JG	1 uL
•	A16MAY19B-8	HRP750_3	16-MAY-2019 18:43	A16MAY19B	Matt Cash		CS4 UD190207-05 CS43Z	1 uL
•	A16MAY19B-9	HRP750_3	16-MAY-2019 19:05	A16MAY19B	Matt Cash		CS5 UD190207-06 CS541	1 uL
•	A16MAY19B-10	HRP750_3	16-MAY-2019 19:28	A16MAY19B	Matt Cash		SB DIBLK2J	1 uL
•	A16MAY19B-11	HRP750_3	16-MAY-2019 19:50	A16MAY19B	Matt Cash		CPM225 WD181211-04 ISCCW	1 uL
•	A16MAY19B-12	HRP750_3	16-MAY-2019 20:13	A16MAY19B	Matt Cash		CS3WT 1613CS3 UD190313-03.1 CPSXE	1 uL

PFKPN Inst: HRP750_3 Anal: MJC

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: 225TCDF.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, May 16, 2019 16:05:14 Eastern Standard Time

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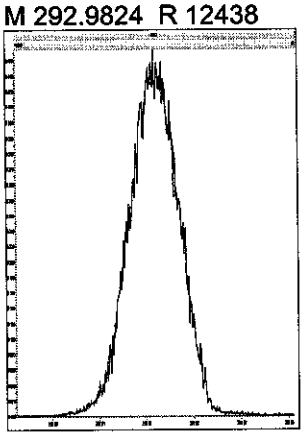

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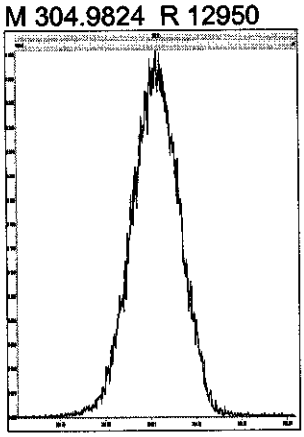

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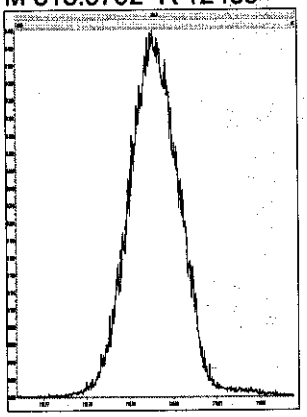

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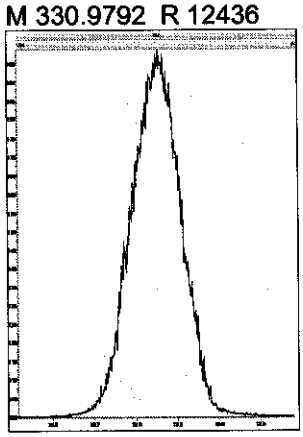

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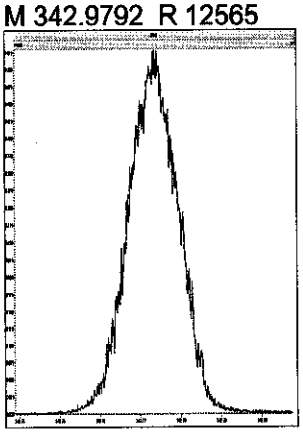

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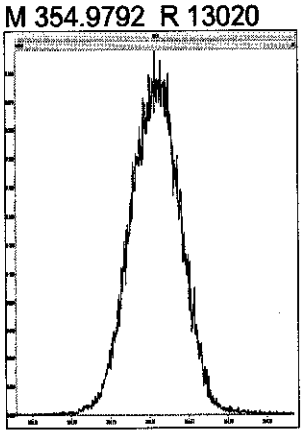

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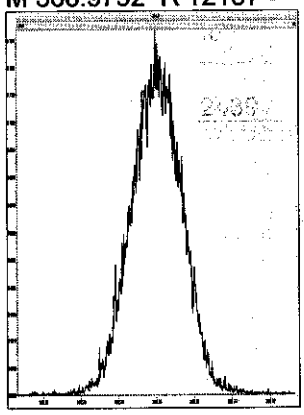

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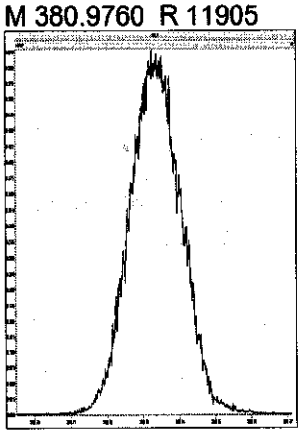

PFKPO Inst: HRP750-3 Anal: MJC

Resolution Check Report **MassLynx 4.1**

Printed: Thursday, May 16, 2019 20:37:29 Eastern Standard Time

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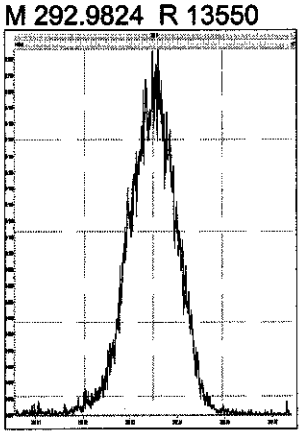

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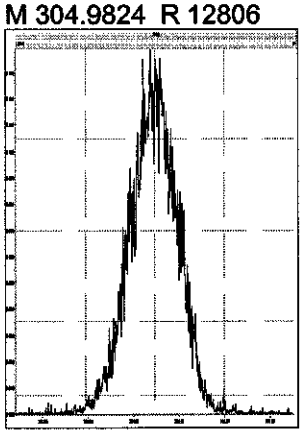

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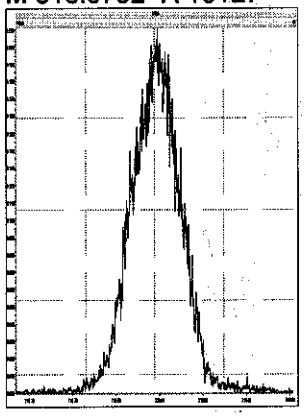

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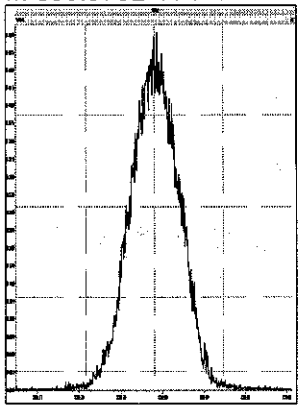

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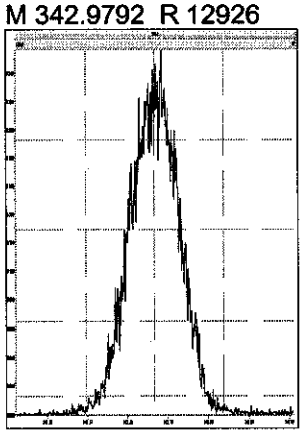

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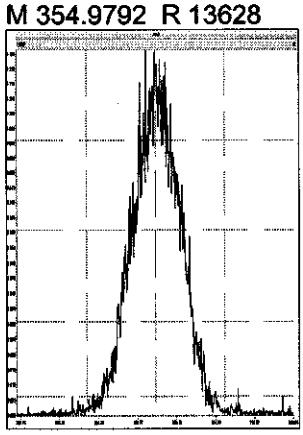

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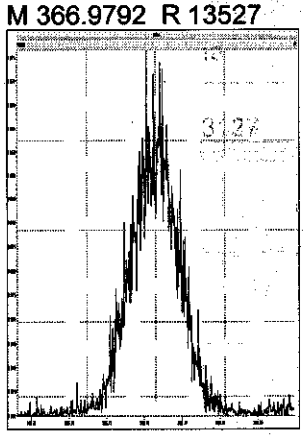
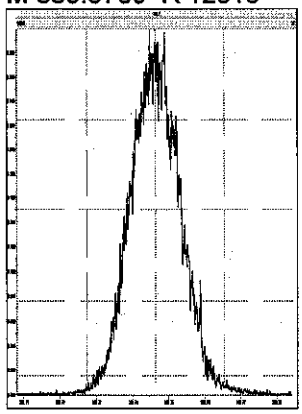
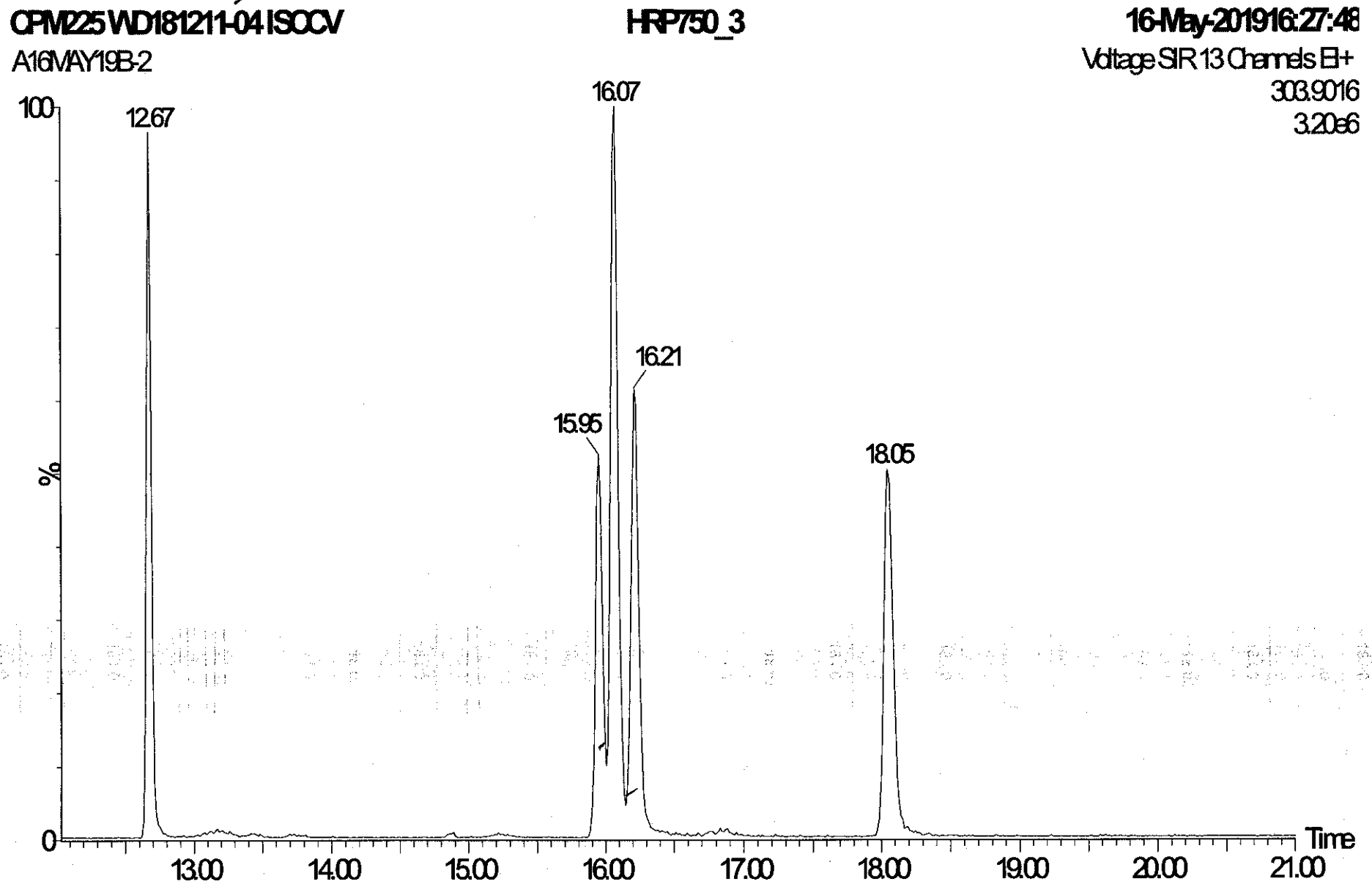


M 380.9760 R 12919



COLUMN CHECK (19% & 7%)
METHOD DXCF

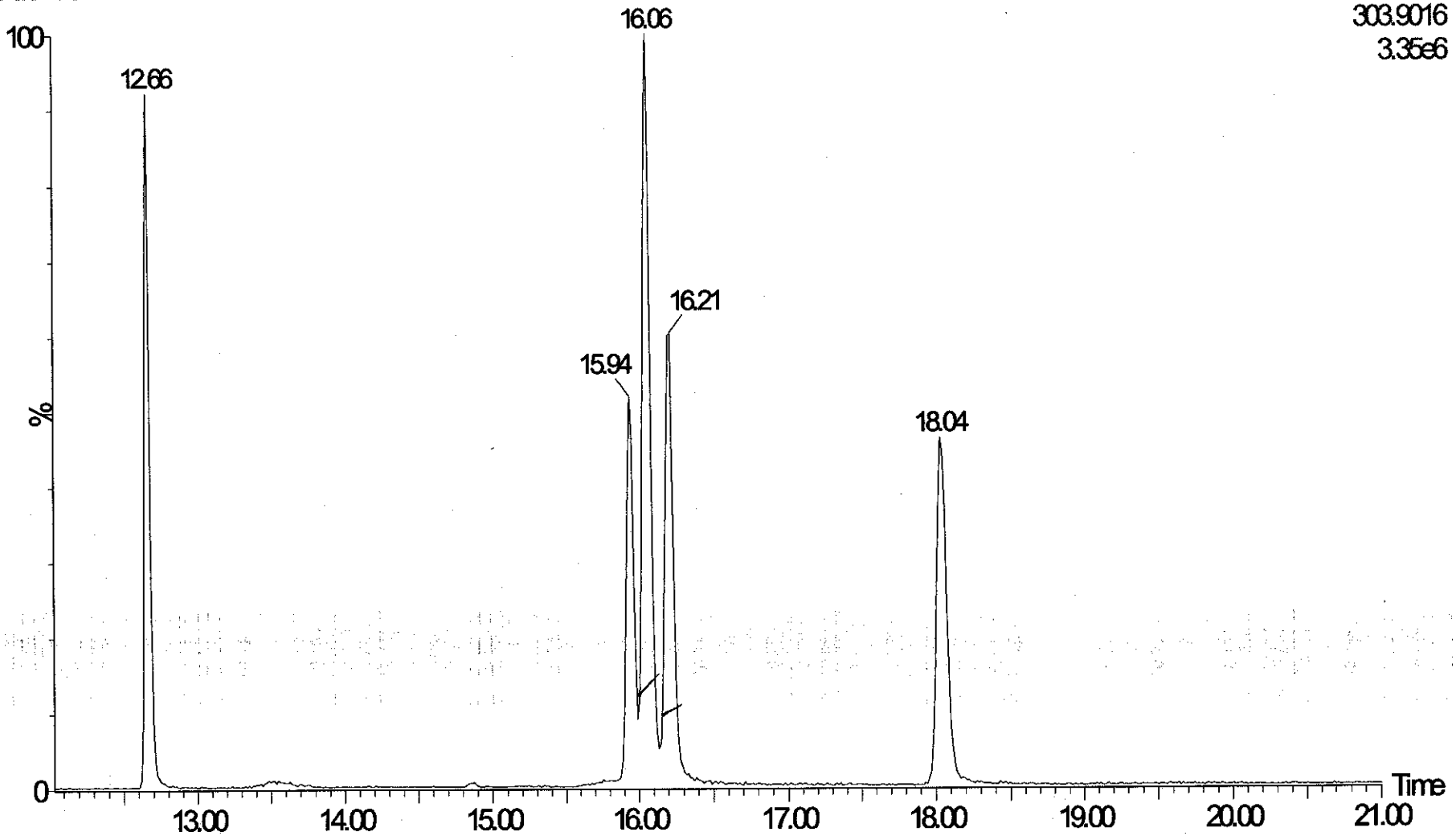


COLUMN CHECK (17% & 8%)
METHOD DXCF

CPM225 WD181211-04 ISCCW **HRP750_3** **16-May-201919:50:37**

A16MAY19B-11

Voltage SIR 13 Channels ES+
303.9016
3.35e6



Quantify Compound Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

21MAY19

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 19 Feb 2019 16:29:34
Calibration: 17 May 2019 08:41:16

CS0.5 RRF = $\frac{(8.6923)(100)}{(3.9814)(0.25)} = 0.873$

Compound name: 2378-TCDF
Response Factor: 0.88344
RRF SD: 0.0273798, Relative SD: 3.09923
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: RF

RRF SD = $\sqrt{\frac{0.003852}{5}} = \frac{0.02774}{0.883} \times 100 = 3.14$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M	Inst ID
A16MAY19B-4	CS0.5 UD190207-01	0.250	16.06	0.25	0.873	0.883	bb	HRP750_3
A16MAY19B-5	CS1 UD190207-02 CS141	0.500	16.07	0.48	0.842	0.883	bb	HRP750_3
A16MAY19B-6	CS2 UD190207-03 CS241	2.000	16.06	1.96	0.866	0.883	bb	HRP750_3
A16MAY19B-7	CS3 UD190207-04 CS3JG	10.000	16.06	10.28	0.908	0.883	bd	HRP750_3
A16MAY19B-8	CS4 UD190207-05 CS43Z	40.000	16.07	40.61	0.897	0.883	bb	HRP750_3
A16MAY19B-9	CS5 UD190207-06 CS541	200.000	16.06	206.81	0.914	0.883	bb	HRP750_3

Compound name: 13C-2378-TCDF
Response Factor: 1.45345
RRF SD: 0.00572167, Relative SD: 0.393661
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M	Inst ID
A16MAY19B-4	CS0.5 UD190207-01	100.000	16.04	99.53	1.447	1.453	bb	HRP750_3
A16MAY19B-5	CS1 UD190207-02 CS141	100.000	16.04	99.71	1.449	1.453	bb	HRP750_3
A16MAY19B-6	CS2 UD190207-03 CS241	100.000	16.04	99.84	1.451	1.453	bb	HRP750_3
A16MAY19B-7	CS3 UD190207-04 CS3JG	100.000	16.04	100.14	1.455	1.453	bb	HRP750_3
A16MAY19B-8	CS4 UD190207-05 CS43Z	100.000	16.04	100.63	1.463	1.453	bb	HRP750_3
A16MAY19B-9	CS5 UD190207-06 CS541	100.000	16.04	100.16	1.456	1.453	bb	HRP750_3

Compound name: 13C-1234-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M	Inst ID
A16MAY19B-4	CS0.5 UD190207-01	100.000	15.10	100.00	1.000	1.000	db	HRP750_3
A16MAY19B-5	CS1 UD190207-02 CS141	100.000	15.10	100.00	1.000	1.000	db	HRP750_3
A16MAY19B-6	CS2 UD190207-03 CS241	100.000	15.08	100.00	1.000	1.000	db	HRP750_3
A16MAY19B-7	CS3 UD190207-04 CS3JG	100.000	15.08	100.00	1.000	1.000	bb	HRP750_3
A16MAY19B-8	CS4 UD190207-05 CS43Z	100.000	15.08	100.00	1.000	1.000	bb	HRP750_3
A16MAY19B-9	CS5 UD190207-06 CS541	100.000	15.08	100.00	1.000	1.000	db	HRP750_3

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

21MAY19

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 19 Feb 2019 16:29:34
Calibration: 17 May 2019 08:41:16

Name: A16MAY19B-4, Date: 16-May-2019, Time: 17:12:56, ID: CS0.5 UD190207-01, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	3.63e3	5.06e3	8.69e3	16.06	1.00	0.72	NO	0.247	0.873	0.883	3.099	0.0236	6.87e4	2422	28.3	7.39e4	2903	25.4	bb	bb
2	13C-2378-TCDF	1.73e6	2.25e6	3.98e6	16.04	1.06	0.77	NO	99.529	1.447	1.453	0.394	0.103	2.77e7	14000	1981.7	3.62e7	10901	3318.2	bb	bb
3	13C-1234-TCDD	1.23e6	1.52e6	2.75e6	15.10	0.00	0.81	NO	100.000	1.000	1.000	0.000	0.0858	2.23e7	8281	2697.9	2.78e7	6033	4600.1	db	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

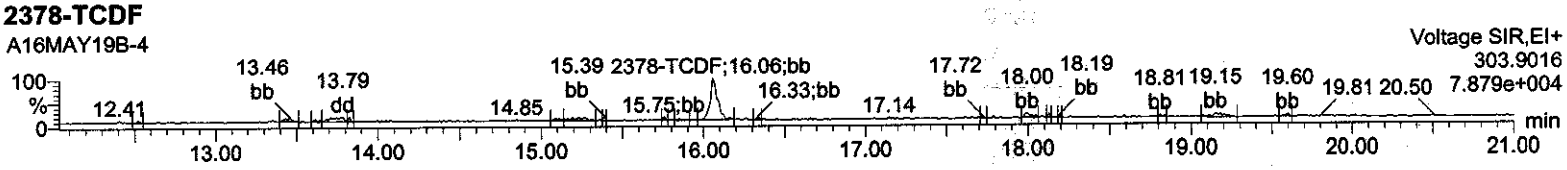
Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:47:57 Eastern Standard Time

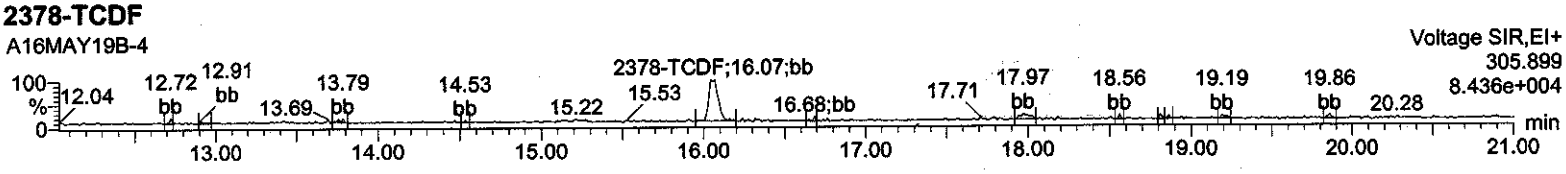
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 19 Feb 2019 16:29:34
Calibration: 17 May 2019 08:41:16

Name: A16MAY19B-4, Date: 16-May-2019, Time: 17:12:56, ID: CS0.5 UD190207-01, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

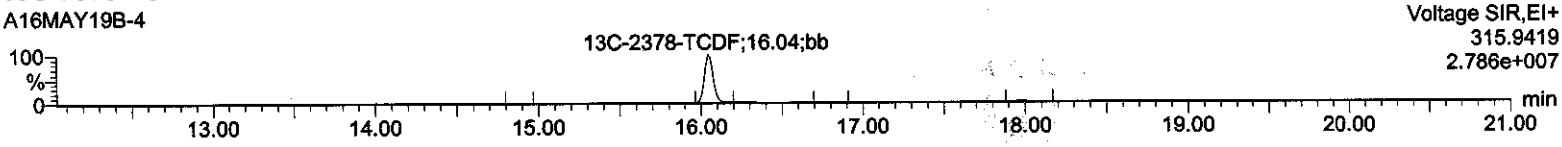
2378-TCDF
A16MAY19B-4



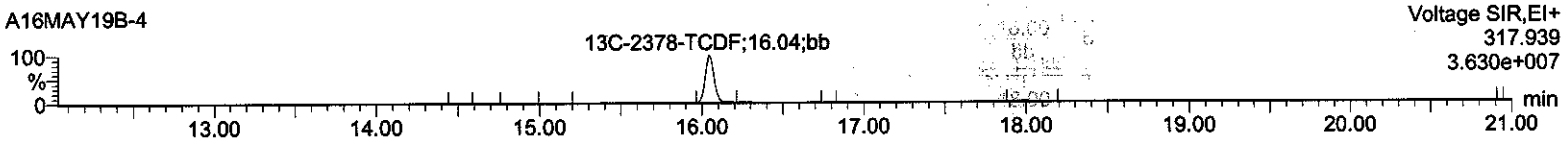
2378-TCDF
A16MAY19B-4



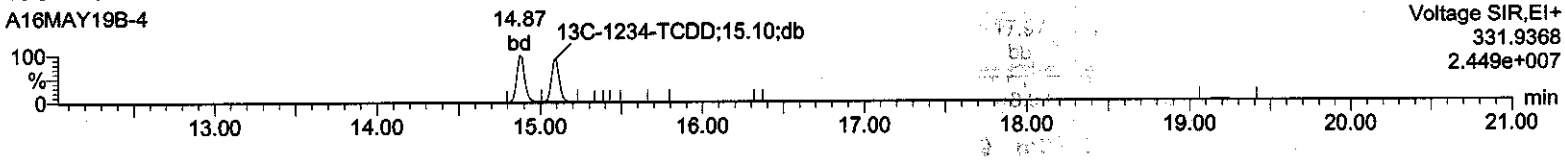
13C-2378-TCDF
A16MAY19B-4



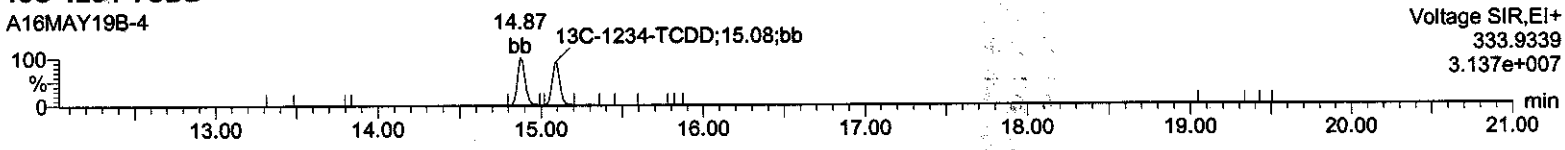
13C-2378-TCDF
A16MAY19B-4



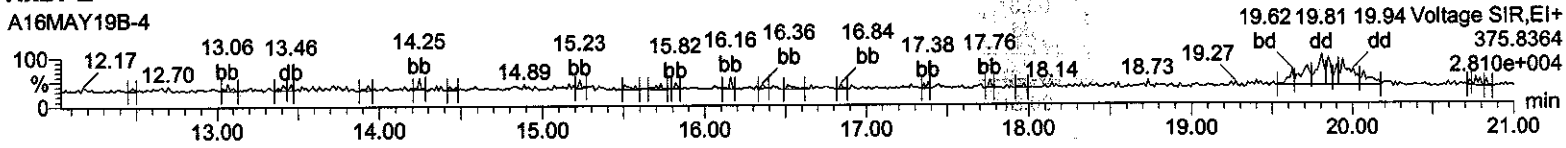
13C-1234-TCDD
A16MAY19B-4



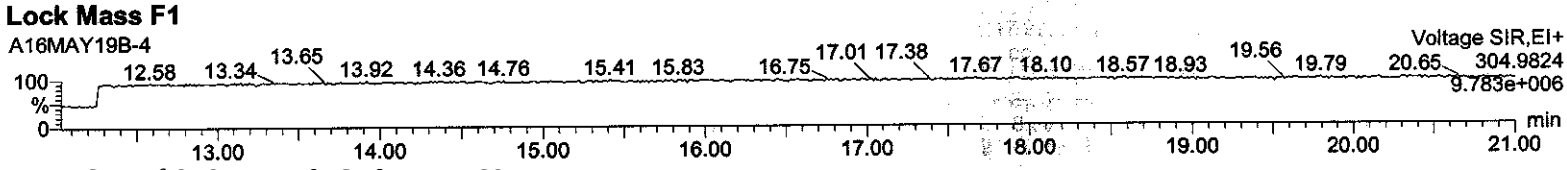
13C-1234-TCDD
A16MAY19B-4



HxDPE
A16MAY19B-4



Lock Mass F1
A16MAY19B-4



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

21MAY19

Name: A16MAY19B-5, Date: 16-May-2019, Time: 17:35:27, ID: CS1 UD190207-02 CS141, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	7.37e3	9.41e3	1.68e4	16.07	1.00	0.78	NO	0.477	0.842	0.883	3.099	0.0282	1.25e5	3010	41.6	1.42e5	3096	45.8	bb	bb
2	13C-2378-TCDF	1.73e6	2.25e6	3.98e6	16.04	1.06	0.77	NO	99.705	1.449	1.453	0.394	0.106	2.67e7	13315	2003.7	3.51e7	11795	2975.0	bb	bb
3	13C-1234-TCDD	1.22e6	1.53e6	2.75e6	15.10	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.0895	2.18e7	7783	2797.9	2.81e7	6873	4090.5	db	bb

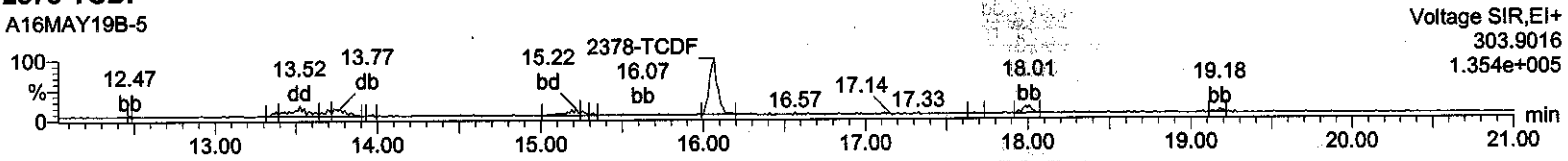
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

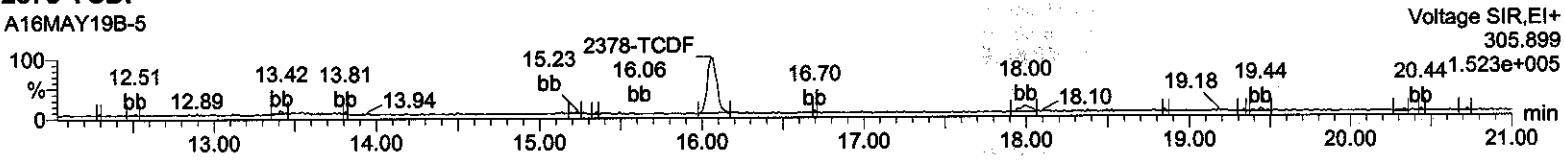
Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:47:57 Eastern Standard Time

Name: A16MAY19B-5, Date: 16-May-2019, Time: 17:35:27, ID: CS1 UD190207-02 CS141, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

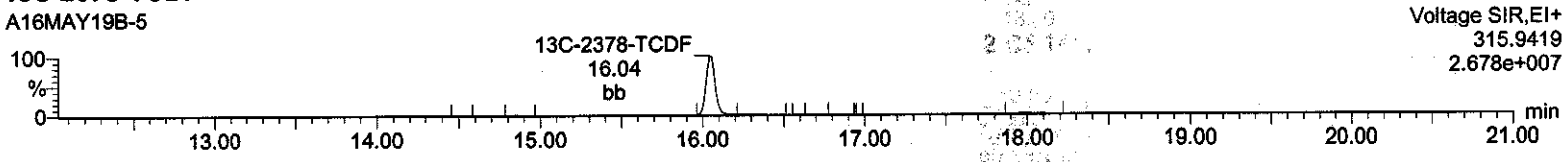
2378-TCDF



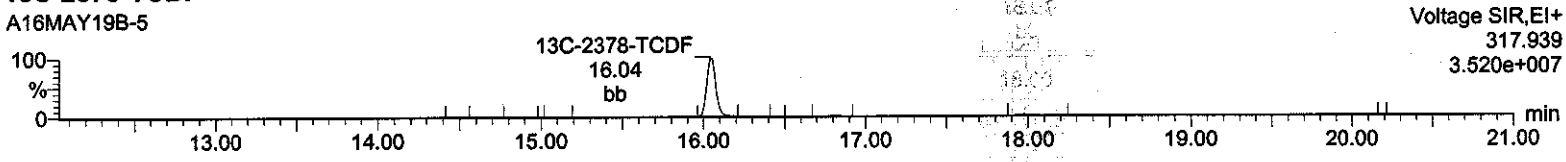
2378-TCDF



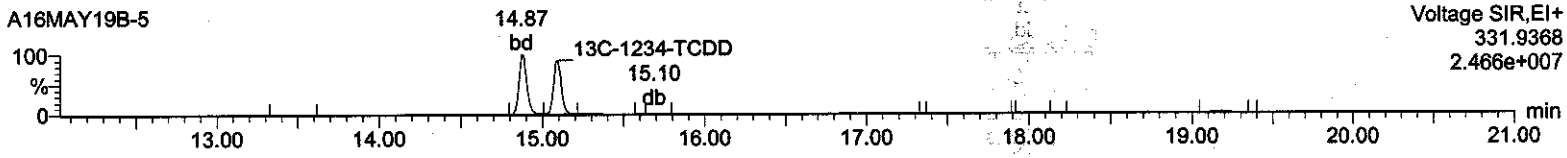
13C-2378-TCDF



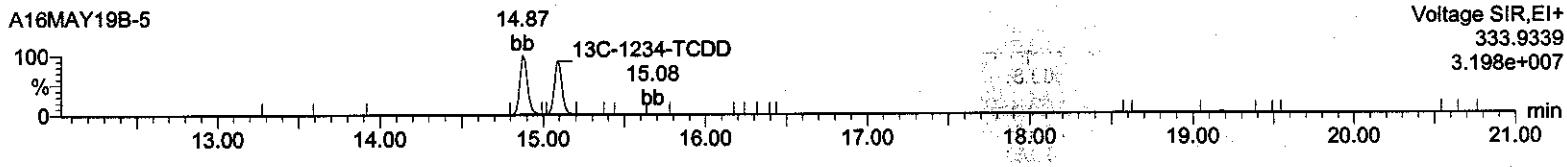
13C-2378-TCDF



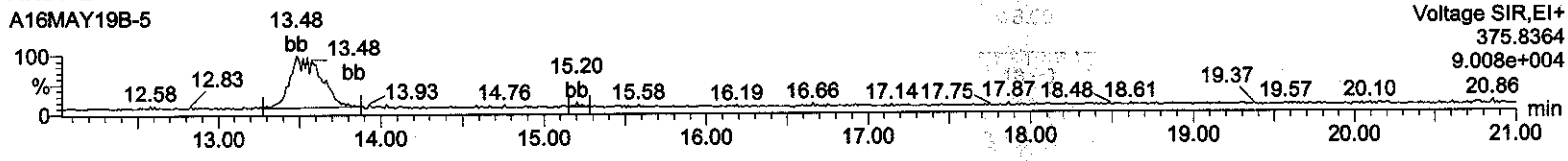
13C-1234-TCDD



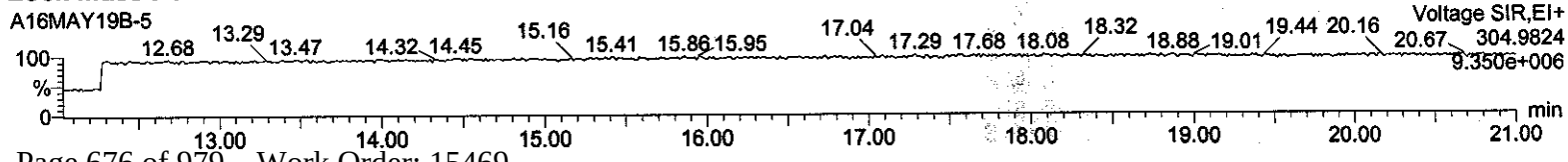
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

21MAY19

Name: A16MAY19B-6, Date: 16-May-2019, Time: 17:57:59, ID: CS2 UD190207-03 CS241, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	3.06e4	3.82e4	6.88e4	16.06	1.00	0.80	NO	1.962	0.866	0.883	3.099	0.0306	5.05e5	3224	156.7	6.09e5	3435	177.4	bb	bb
2	13C-2378-TCDF	1.73e6	2.24e6	3.97e6	16.04	1.06	0.77	NO	99.843	1.451	1.453	0.394	0.0962	2.68e7	12726	2107.4	3.45e7	10866	3178.4	bb	bb
3	13C-1234-TCDD	1.21e6	1.52e6	2.73e6	15.08	0.00	0.79	NO	100.000	1.000	1.000	0.000	0.0955	2.24e7	8804	2545.8	2.86e7	7315	3908.4	db	bb

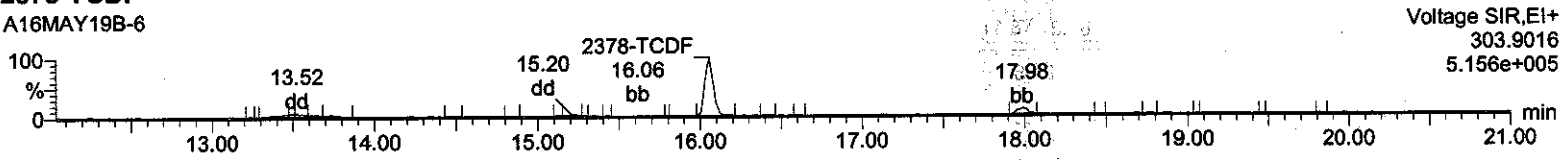
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

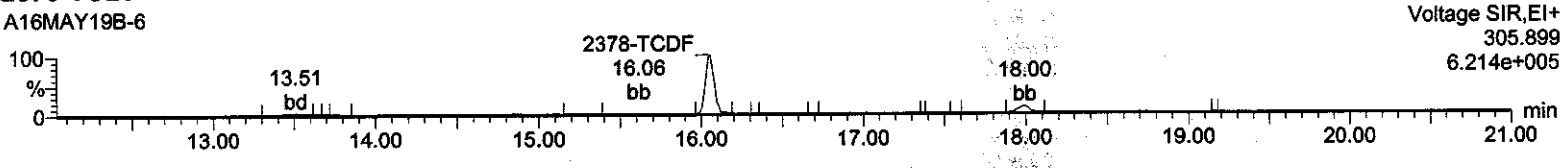
Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:47:57 Eastern Standard Time

Name: A16MAY19B-6, Date: 16-May-2019, Time: 17:57:59, ID: CS2 UD190207-03 CS241, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

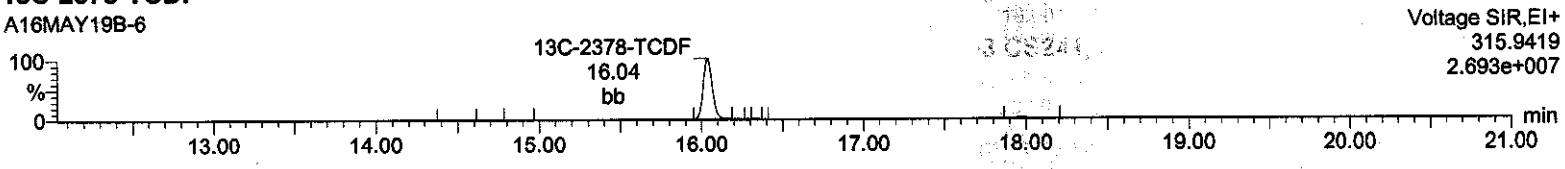
2378-TCDF



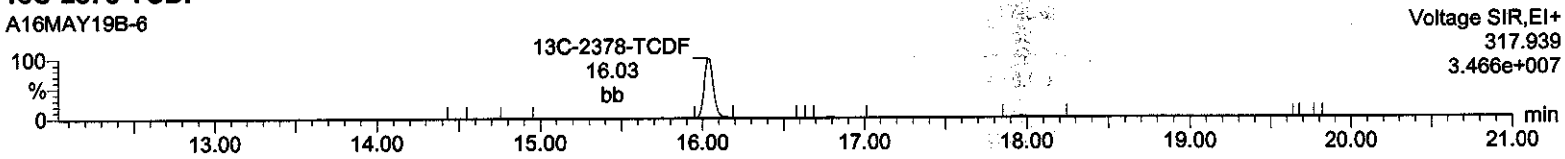
2378-TCDF



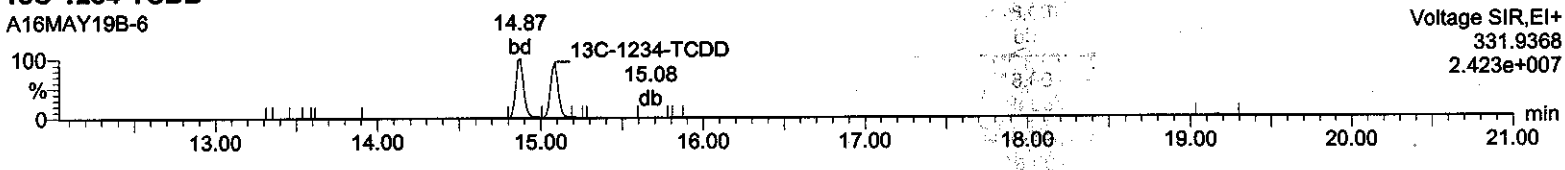
13C-2378-TCDF



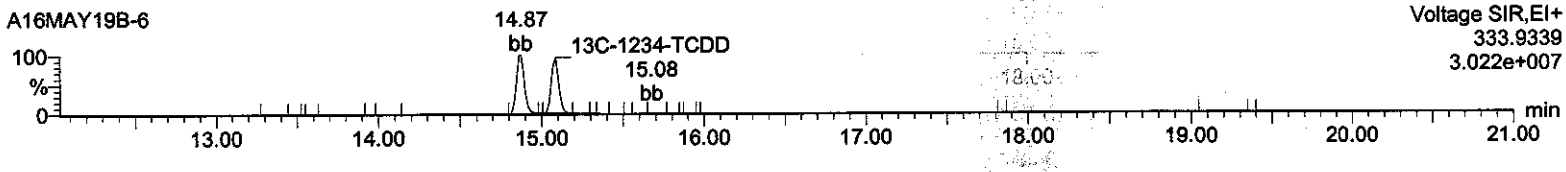
13C-2378-TCDF



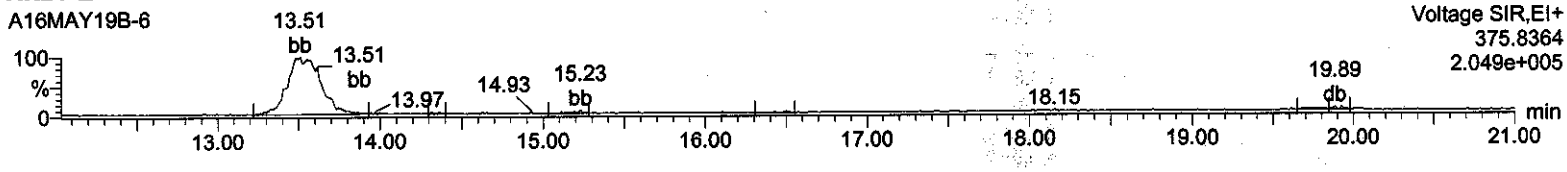
13C-1234-TCDD



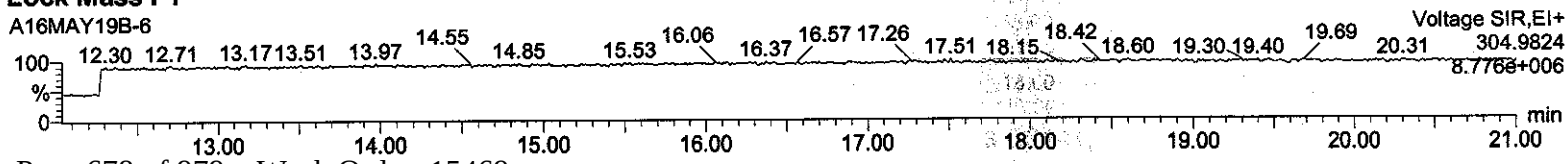
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

21MAY19

Name: A16MAY19B-7, Date: 16-May-2019, Time: 18:20:31, ID: CS3 UD190207-04 CS3JG, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	1.55e5	2.02e5	3.57e5	16.06	1.00	0.77	NO	10.276	0.908	0.883	3.099	0.0399	2.49e6	4506	553.0	3.25e6	4223	769.5	bd	bb
2	13C-2378-TCDF	1.71e6	2.22e6	3.93e6	16.04	1.06	0.77	NO	100.136	1.455	1.453	0.394	0.0995	2.70e7	12530	2151.8	3.46e7	11865	2916.0	bb	bb
3	13C-1234-TCDD	1.19e6	1.51e6	2.70e6	15.08	0.00	0.79	NO	100.000	1.000	1.000	0.000	0.104	2.24e7	8905	2510.9	2.82e7	8691	3246.1	bb	db

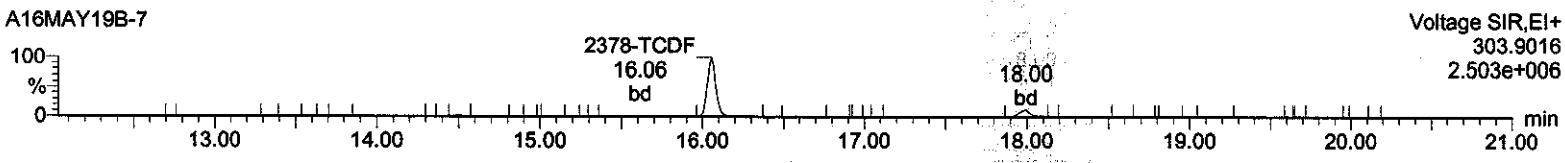
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

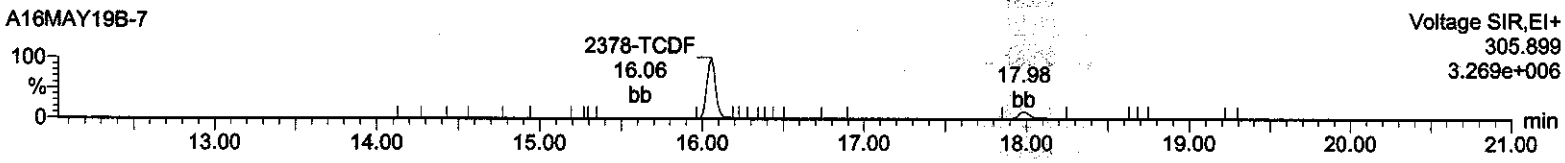
Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:47:57 Eastern Standard Time

Name: A16MAY19B-7, Date: 16-May-2019, Time: 18:20:31, ID: CS3 UD190207-04 CS3JG, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

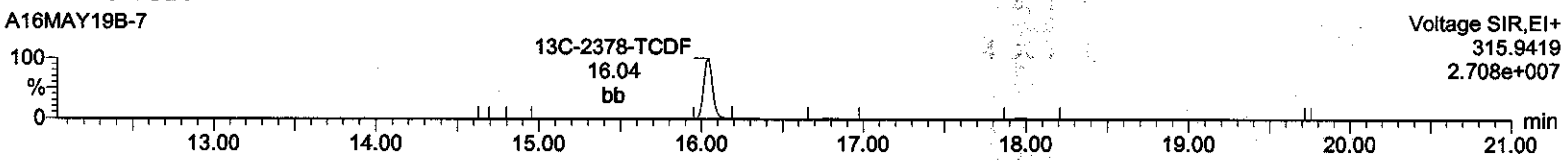
2378-TCDF



2378-TCDF



13C-2378-TCDF



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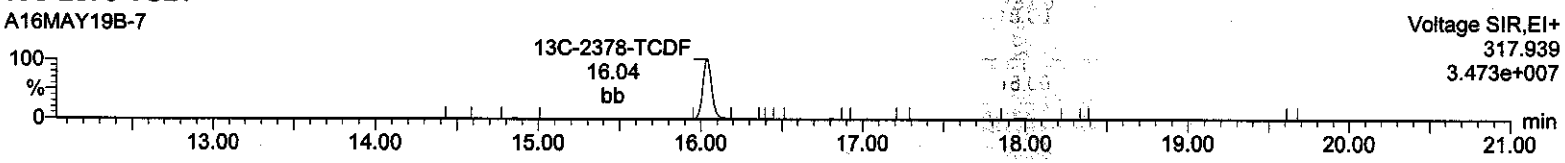
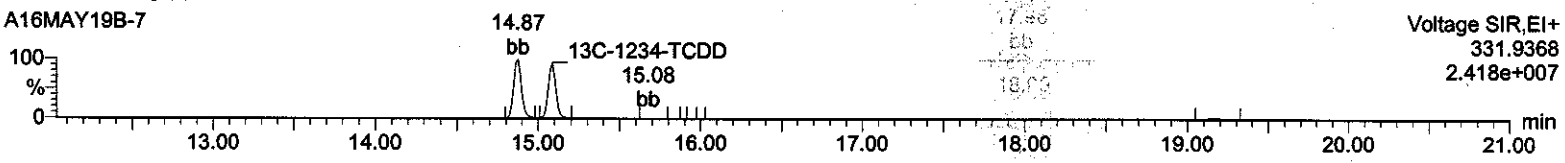
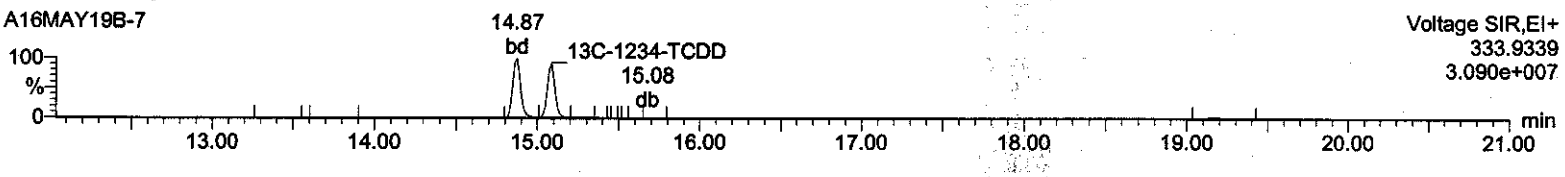


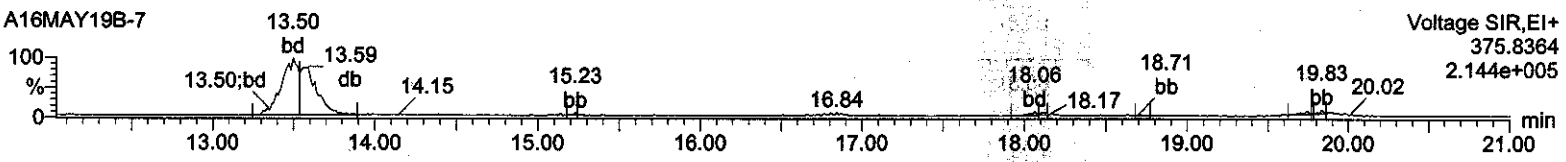
13C-1234-TCDD



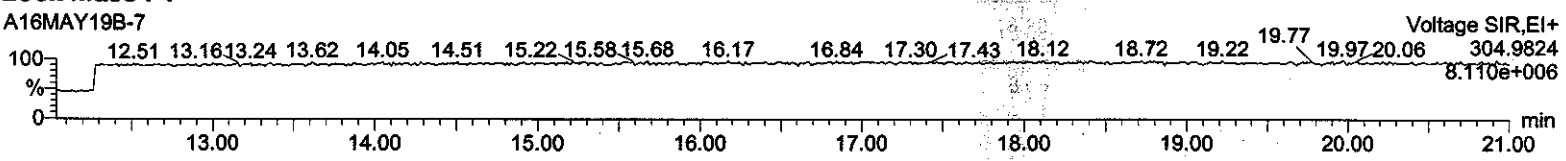
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

22MAY19

Name: A16MAY19B-8, Date: 16-May-2019, Time: 18:43:02, ID: CS4 UD190207-05 CS43Z, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	6.16e5	8.04e5	1.42e6	16.07	1.00	0.77	NO	40.610	0.897	0.883	3.099	0.0577	1.02e7	6211	1649.4	1.30e7	6385	2033.9	bb	bb
2	13C-2378-TCDF	1.73e6	2.23e6	3.96e6	16.04	1.06	0.78	NO	100.631	1.463	1.453	0.394	0.0978	2.70e7	13333	2024.5	3.54e7	10092	3504.2	bb	bb
3	13C-1234-TCDD	1.19e6	1.52e6	2.71e6	15.08	0.00	0.78	NO	100.000	1.000	1.000	0.000	0.0899	2.17e7	8584	2527.7	2.84e7	6225	4564.3	bb	bb

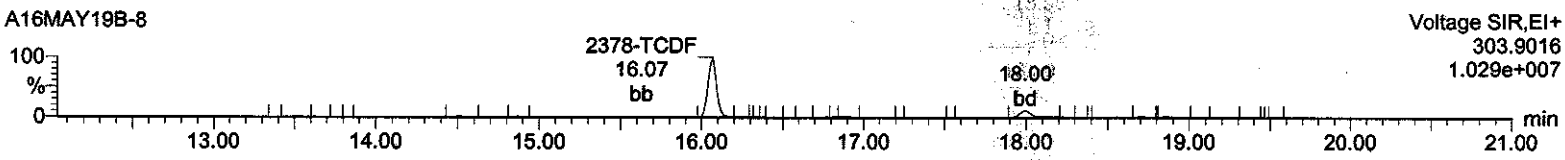
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

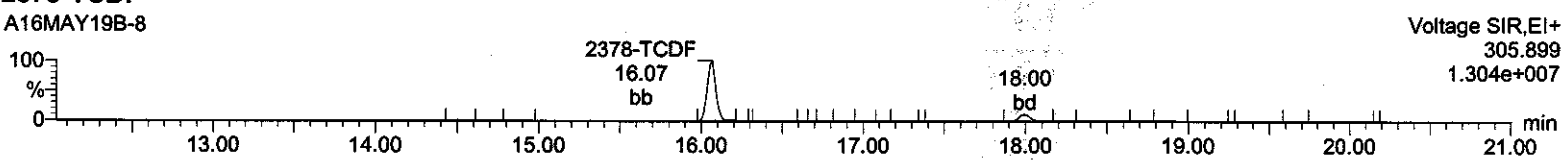
Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:47:57 Eastern Standard Time

Name: A16MAY19B-8, Date: 16-May-2019, Time: 18:43:02, ID: CS4 UD190207-05 CS43Z, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

2378-TCDF



2378-TCDF



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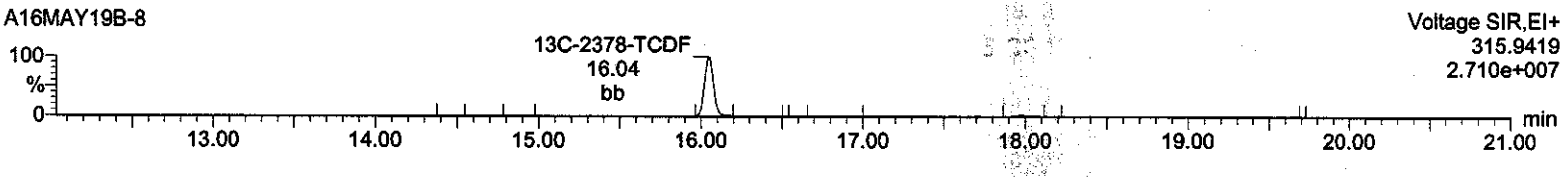
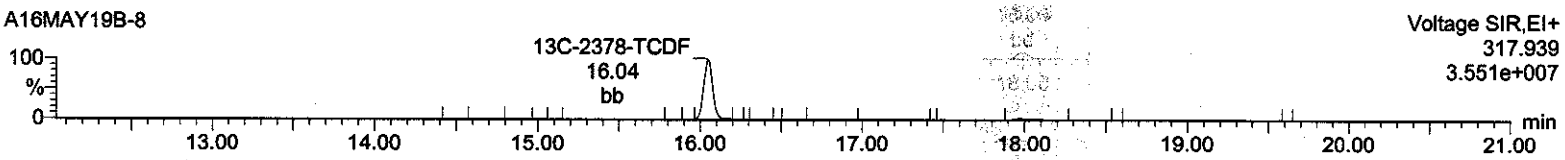
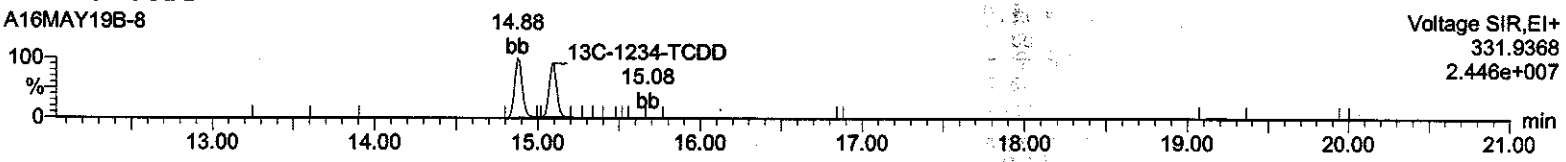


13C-2378-TCDF



13C-1234-TCDD



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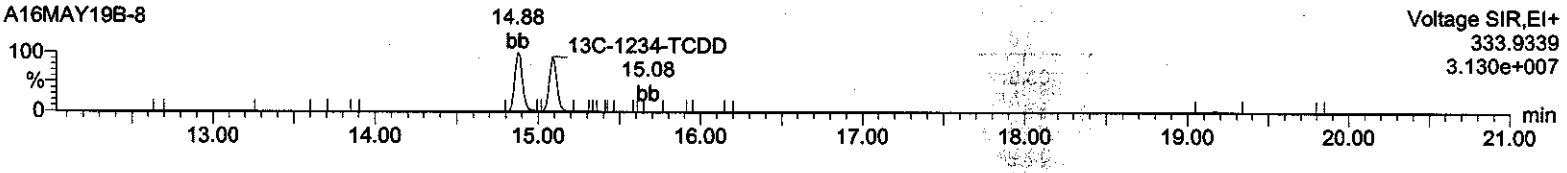
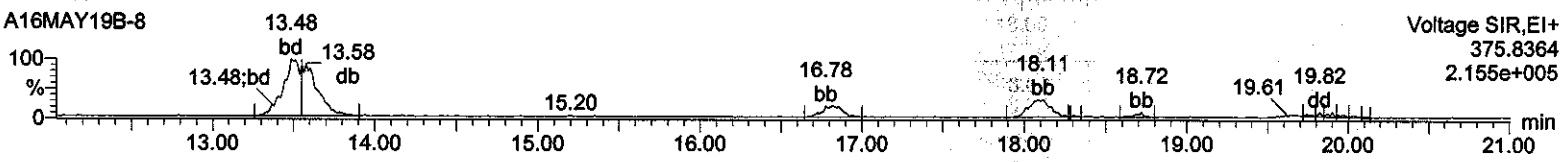
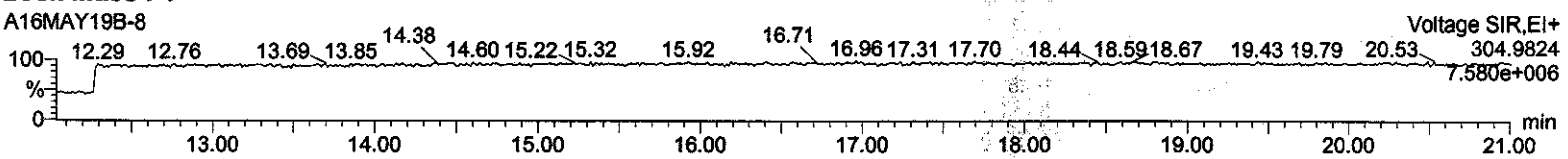


HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:53:06 Eastern Standard Time

21 May 19

Name: A16MAY19B-9, Date: 16-May-2019, Time: 19:05:33, ID: CS5 UD190207-06 CS541, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	3.09e6	4.02e6	7.11e6	16.06	1.00	0.77	NO	206.812	0.914	0.883	3.099	0.0836	5.15e7	8822	5843.0	6.75e7	10223	6601.0	bb	bb
2	13C-2378-TCDF	1.69e6	2.20e6	3.89e6	16.04	1.06	0.77	NO	100.156	1.456	1.453	0.394	0.0824	2.80e7	10833	2587.5	3.63e7	9675	3753.6	bb	bb
3	13C-1234-TCDD	1.19e6	1.49e6	2.67e6	15.08	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.0818	2.28e7	7579	3011.7	2.85e7	6443	4421.1	db	bb

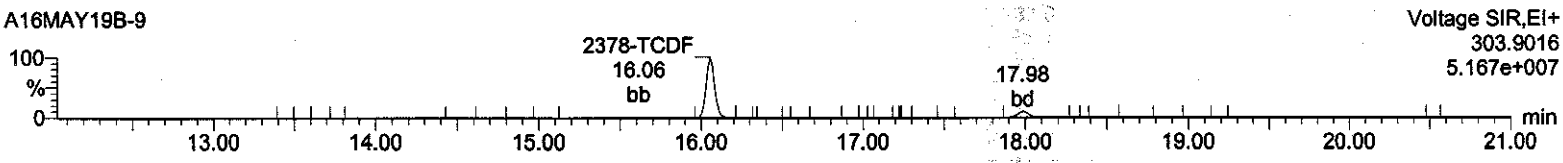
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\CF-A16MAY19B.qld

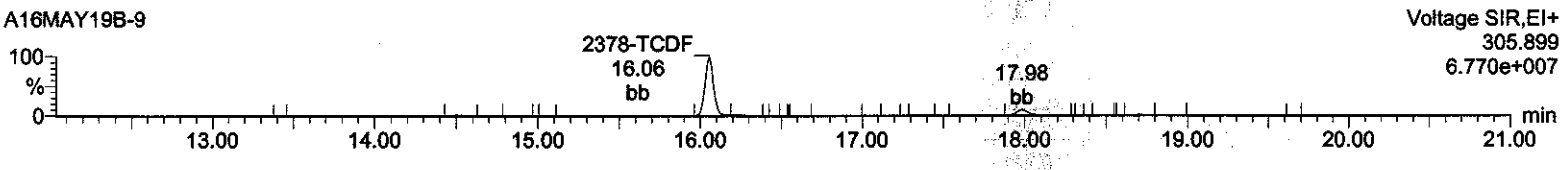
Last Altered: Friday, May 17, 2019 08:41:16 Eastern Standard Time
Printed: Friday, May 17, 2019 08:47:57 Eastern Standard Time

Name: A16MAY19B-9, Date: 16-May-2019, Time: 19:05:33, ID: CS5 UD190207-06 CS541, Job: A16MAY19B, User: MJC, Task: HRP750_3, Description:

2378-TCDF



2378-TCDF



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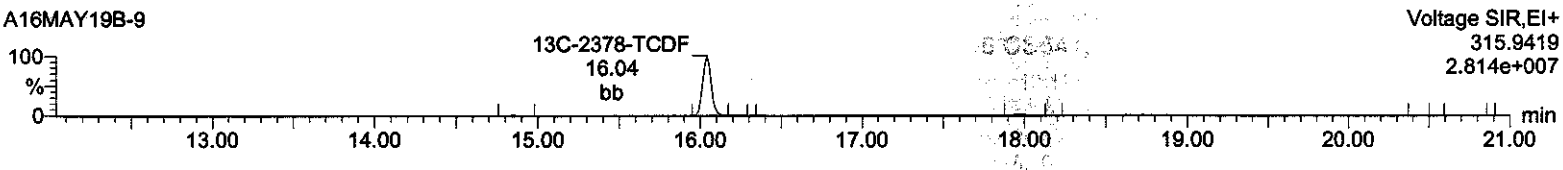

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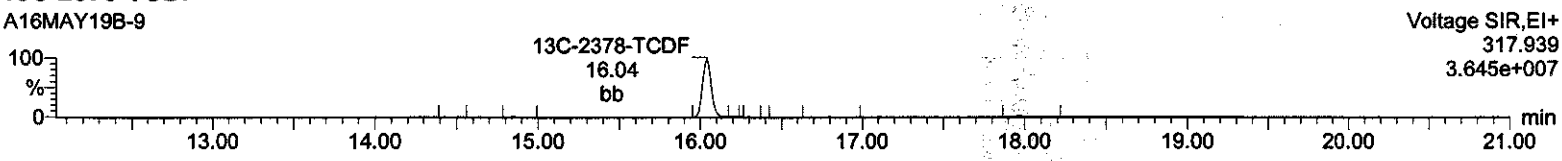

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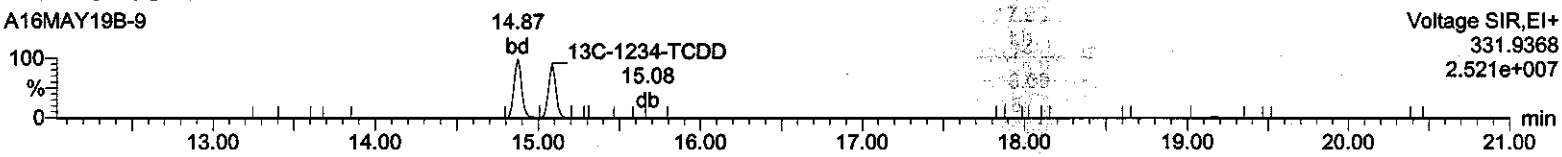

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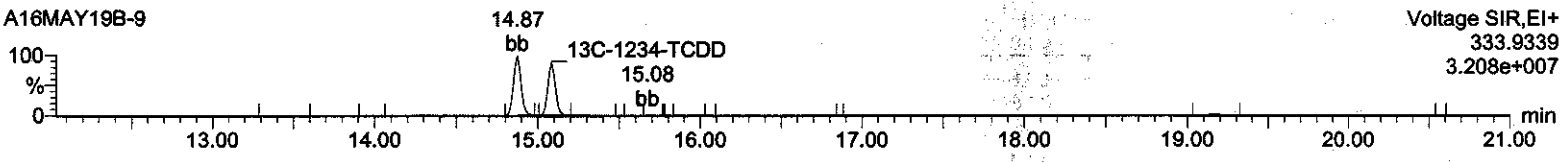
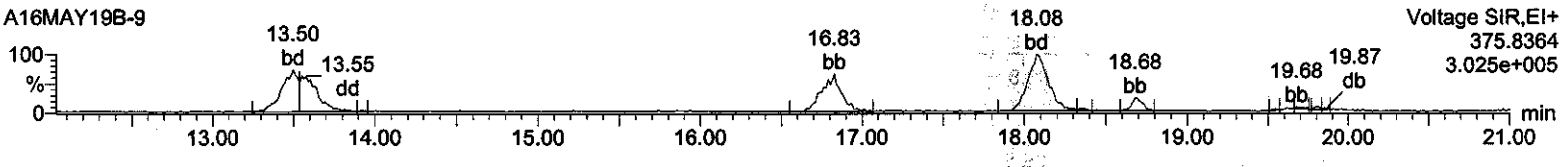
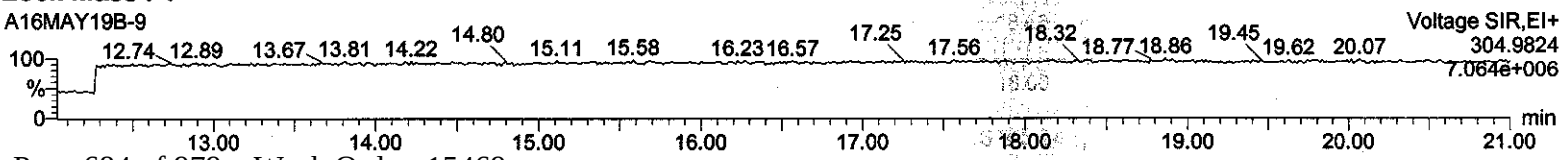


HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\CF-A16MAY19B-12.qld

Last Altered: Friday, May 17, 2019 09:17:00 Eastern Standard Time
Printed: Friday, May 17, 2019 09:17:33 Eastern Standard Time

21MAY19

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 19 Feb 2019 16:29:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-A16MAY19.cdb 17 May 2019 08:41:16

Name: A16MAY19B-12, Date: 16-May-2019, Time: 20:13:09, ID: CS3WT 1613CS3 UD190313-03.1 CPSXE, Description: , Job: A16MAY19B, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	1.94e5	2.62e5	4.57e5	16.06	1.002	0.74	NO	10.521	0.0287	0.929	0.883	5.2	3.24e6	3956	818.5	4.33e6	3930	1102.3	bb	bd
2	13C-2378-TCDF	2.16e6	2.75e6	4.91e6	16.03	1.064	0.79	NO	92.783	0.0586	1.349	1.453	-7.2	3.43e7	9655	3551.3	4.41e7	9196	4792.3	bb	bb
3	13C-1234-TCDD	1.62e6	2.03e6	3.64e6	15.07	0.000	0.80	NO	100.000	0.0607	1.000	1.000	0.0	2.94e7	7009	4200.4	3.72e7	6406	5806.1	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

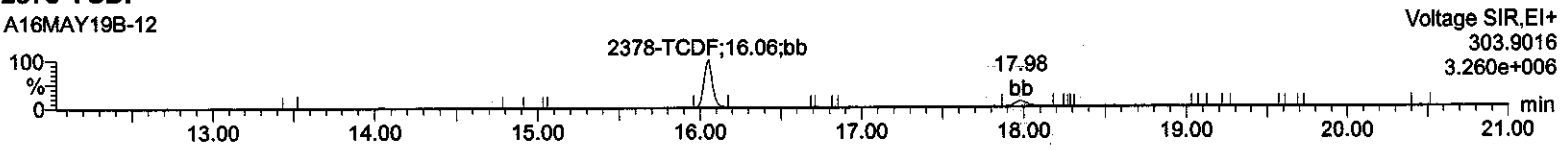
Dataset: C:\MassLynx\Default.pro\CCAL Results\CF-A16MAY19B-12.qld

Last Altered: Friday, May 17, 2019 09:17:00 Eastern Standard Time
Printed: Friday, May 17, 2019 09:17:33 Eastern Standard Time

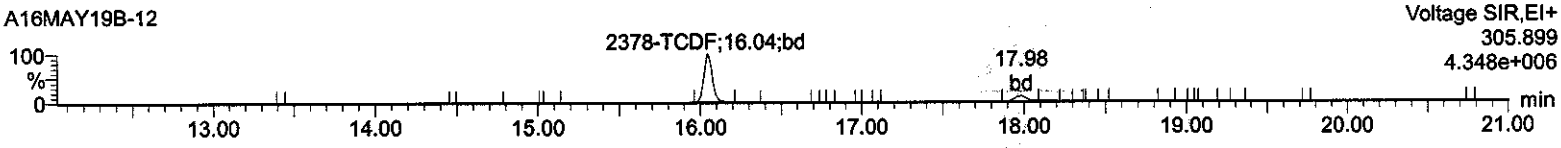
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 19 Feb 2019 16:29:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-A16MAY19.cdb 17 May 2019 08:41:16

Name: A16MAY19B-12, Date: 16-May-2019, Time: 20:13:09, ID: CS3WT 1613CS3 UD190313-03.1 CPSXE, Description: , Job: A16MAY19B, Task: HRP750_3, User: MJC

2378-TCDF
A16MAY19B-12



2378-TCDF
A16MAY19B-12



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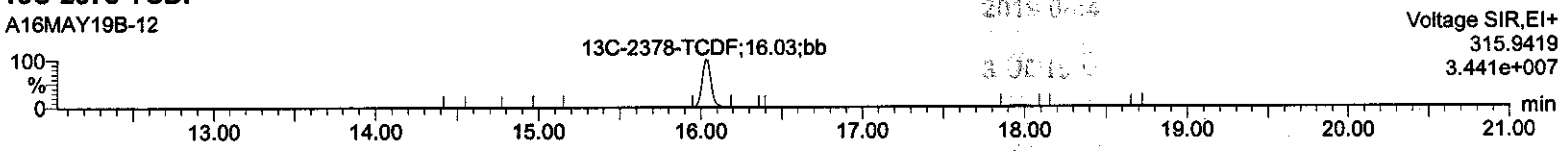
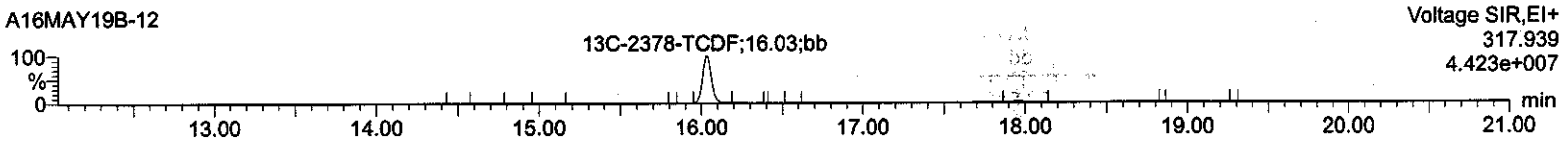
A16MAY19B-12



13C-2378-TCDF
A16MAY19B-12



13C-1234-TCDD
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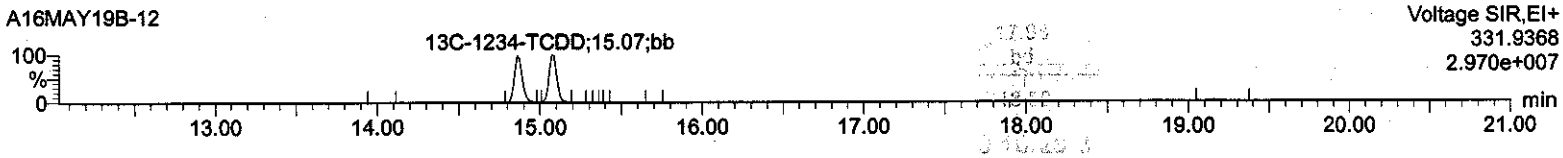
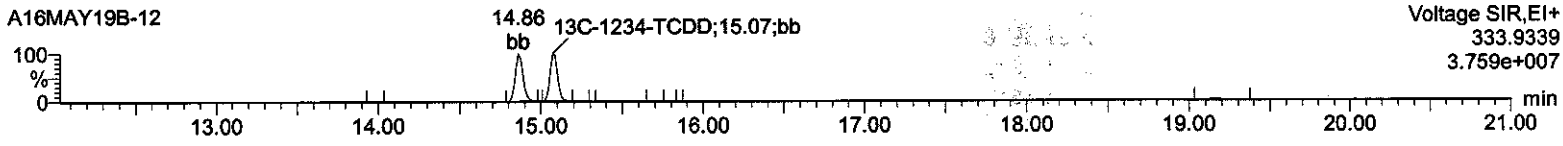


13C-1234-TCDD
A16MAY19B-12



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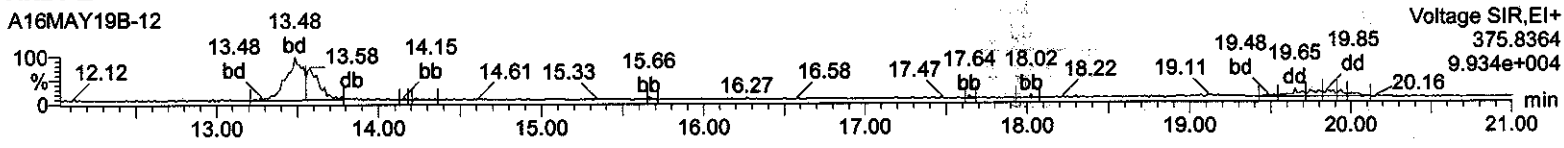
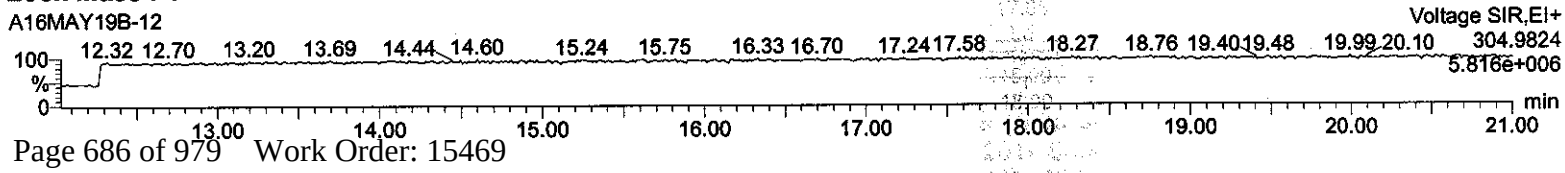


Lock Mass F1
A16MAY19B-12



Runlog Information

1613 ICAL

888
26Aug19

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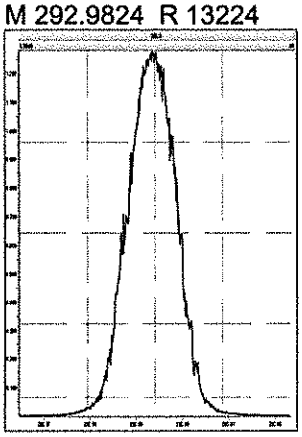
•	b23aug19a-2	HRP763_1	23-AUG-2019 09:04	b23aug19a	Mary Showalter		SB	1 uL
•	b23aug19a-3	HRP763_1	23-AUG-2019 09:52	b23aug19a	Mary Showalter		CS0.5 UD190207-01	1 uL
•	b23aug19a-4	HRP763_1	23-AUG-2019 10:41	b23aug19a	Mary Showalter		CS1 UD190207-02	1 uL
•	b23aug19a-5	HRP763_1	23-AUG-2019 11:29	b23aug19a	Mary Showalter		CS2 UD190207-03	1 uL
•	b23aug19a-6	HRP763_1	23-AUG-2019 12:18	b23aug19a	Mary Showalter		CS3 UD190207-04	1 uL
•	b23aug19a-7	HRP763_1	23-AUG-2019 13:06	b23aug19a	Mary Showalter		CS4 UD190207-05	1 uL
•	b23aug19a-8	HRP763_1	23-AUG-2019 13:54	b23aug19a	Mary Showalter		CS5 UD190207-06	1 uL
•	b23aug19a-9	HRP763_1	23-AUG-2019 14:43	b23aug19a	Mary Showalter		SB	1 uL
•	b23aug19a-10	HRP763_1	23-AUG-2019 15:31	b23aug19a	Mary Showalter		CS3WT UD190705-01.2	1 uL

File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, August 23, 2019 08:14:42 Eastern Standard Time

M 292.9824 R 13224



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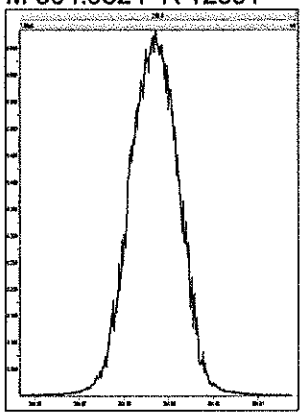
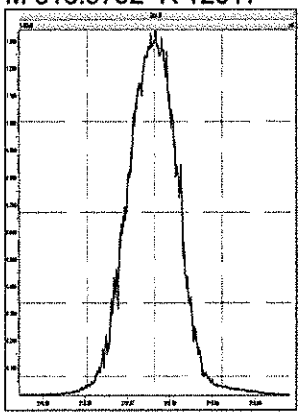
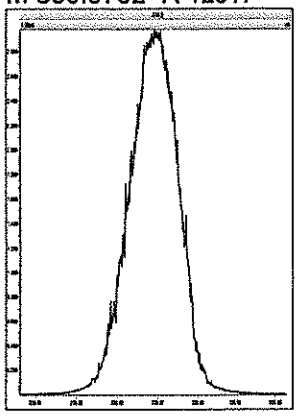


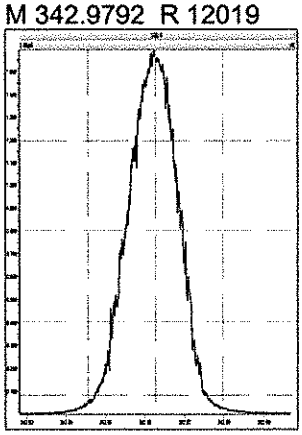
M 318.9792 R 12017



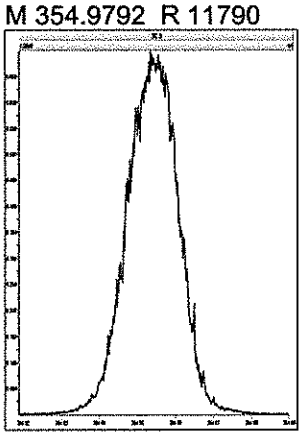
M 330.9792 R 12317



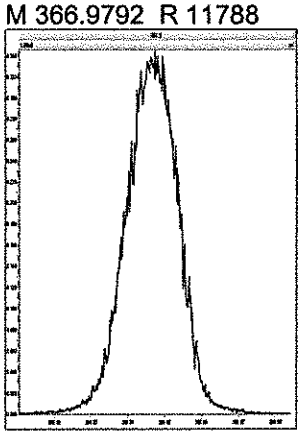
M 342.9792 R 12019



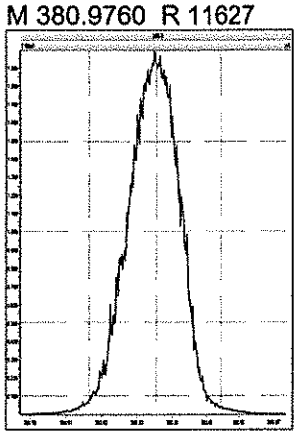
M 354.9792 R 11790



M 366.9792 R 11788



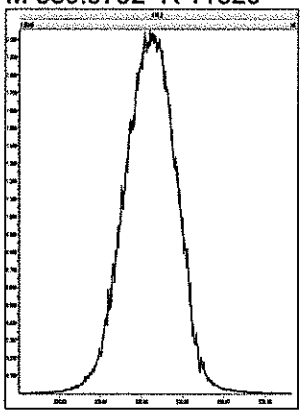
M 380.9760 R 11627



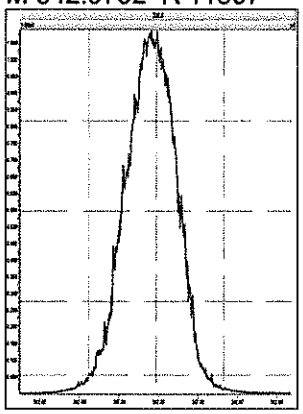
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Friday, August 23, 2019 08:15:05 Eastern Standard Time

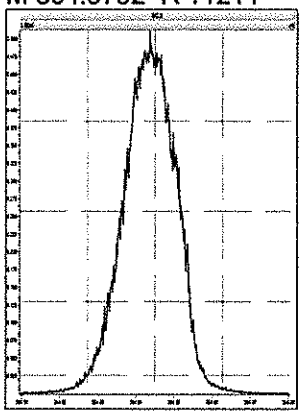
M 330.9792 R 11520



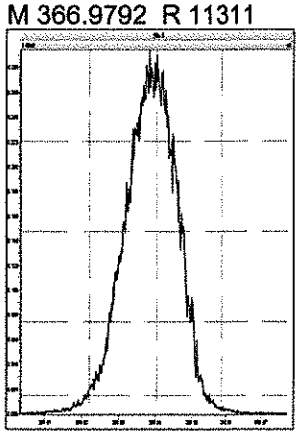
M 342.9792 R 11907



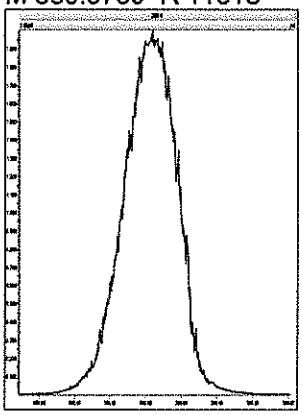
M 354.9792 R 11211



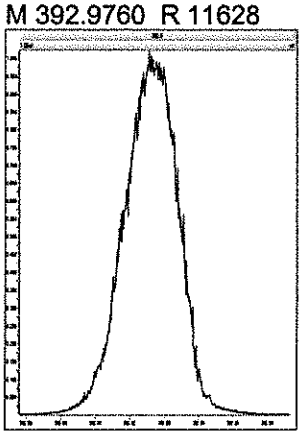
M 366.9792 R 11311



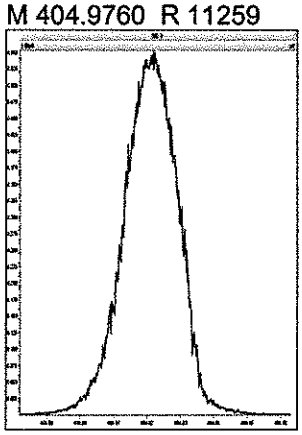
M 380.9760 R 11518



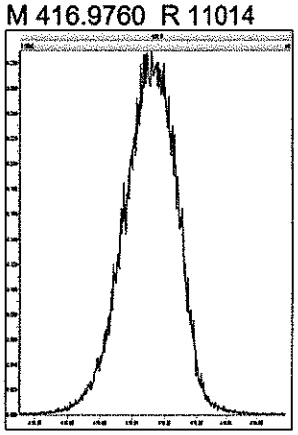
M 392.9760 R 11628



M 404.9760 R 11259



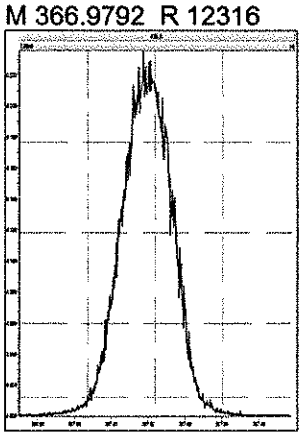
M 416.9760 R 11014



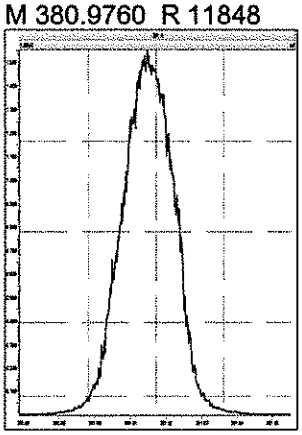
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Friday, August 23, 2019 08:15:28 Eastern Standard Time

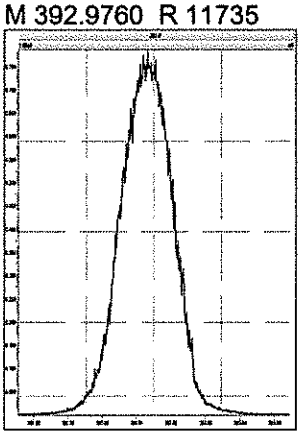
M 366.9792 R 12316



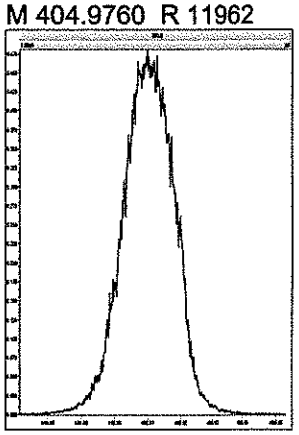
M 380.9760 R 11848



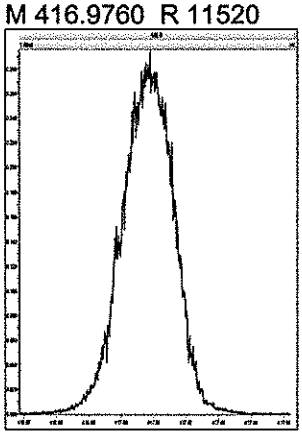
M 392.9760 R 11735



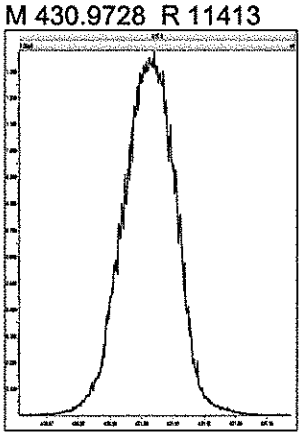
M 404.9760 R 11962



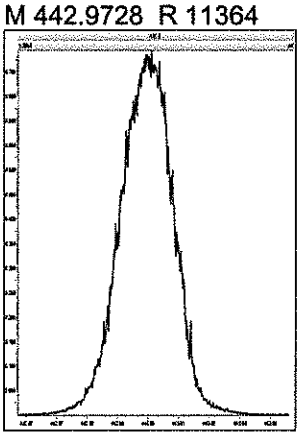
M 416.9760 R 11520



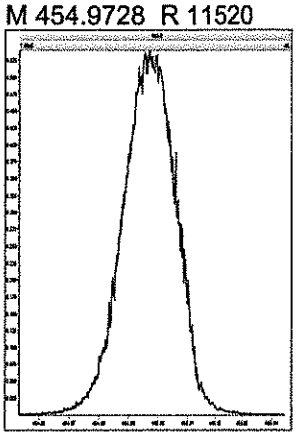
M 430.9728 R 11413



M 442.9728 R 11364



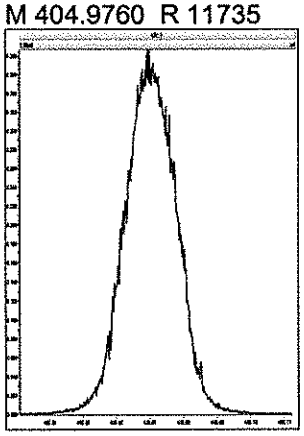
M 454.9728 R 11520



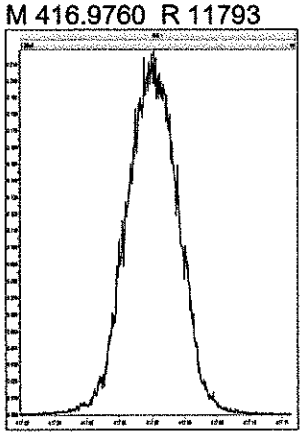
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Friday, August 23, 2019 08:15:48 Eastern Standard Time

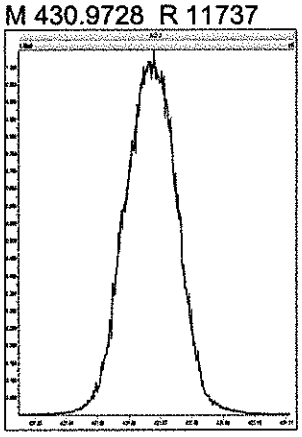
M 404.9760 R 11735



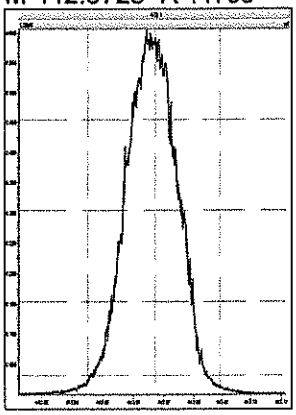
M 416.9760 R 11793



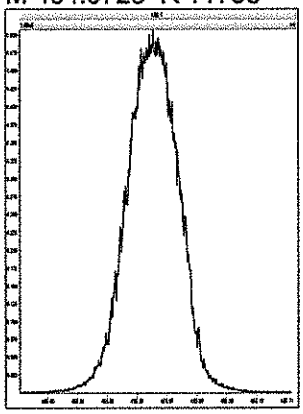
M 430.9728 R 11737



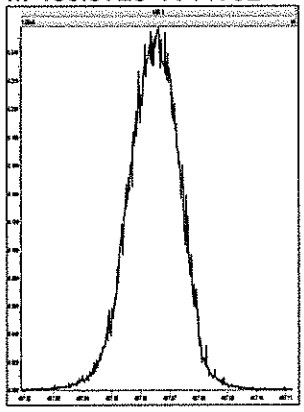
M 442.9728 R 11735



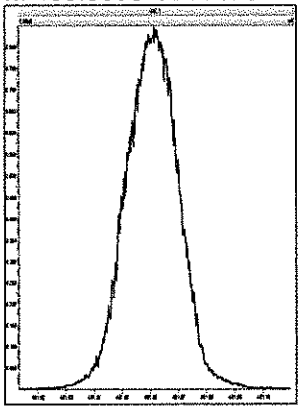
M 454.9728 R 11793



M 466.9728 R 11792



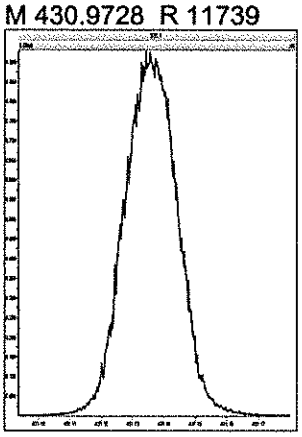
M 480.9696 R 11470



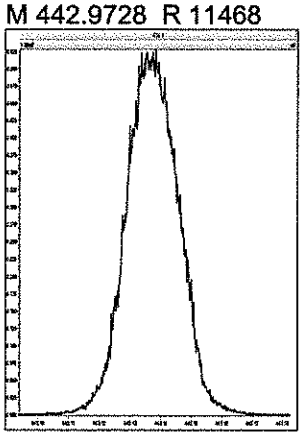
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Friday, August 23, 2019 08:16:11 Eastern Standard Time

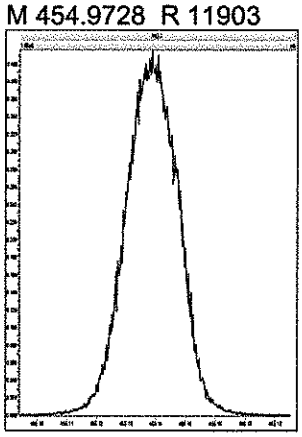
M 430.9728 R 11739



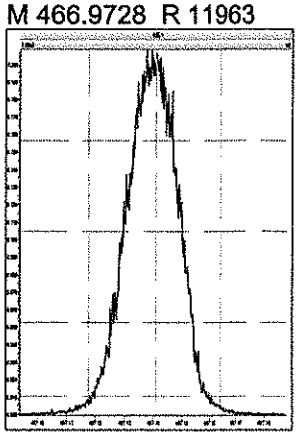
M 442.9728 R 11468



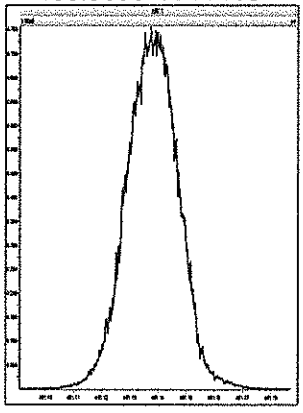
M 454.9728 R 11903



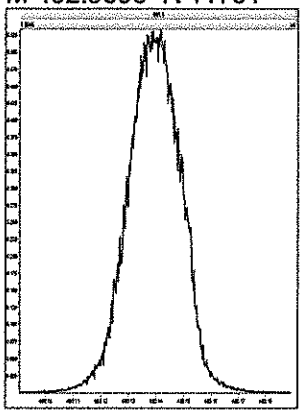
M 466.9728 R 11963



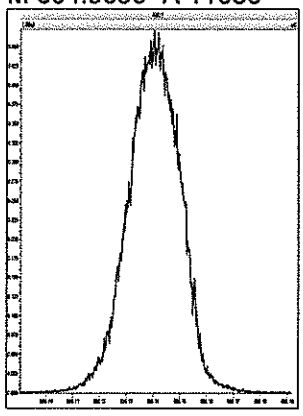
M 480.9696 R 11416



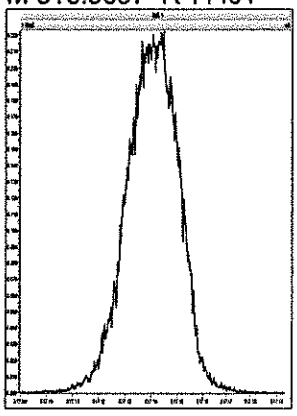
M 492.9696 R 11791



M 504.9696 R 11683

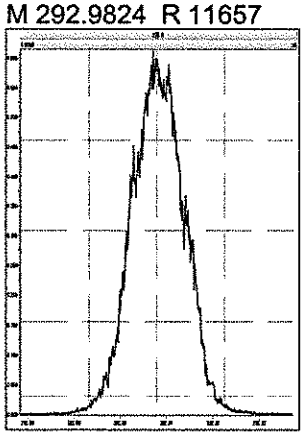


M 516.9697 R 11464

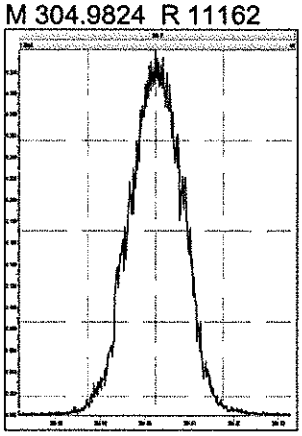


Printed: Friday, August 23, 2019 16:28:23 Eastern Standard Time

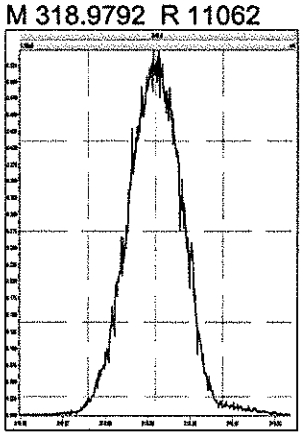
M 292.9824 R 11657



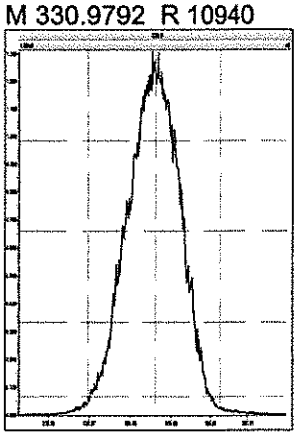
M 304.9824 R 11162



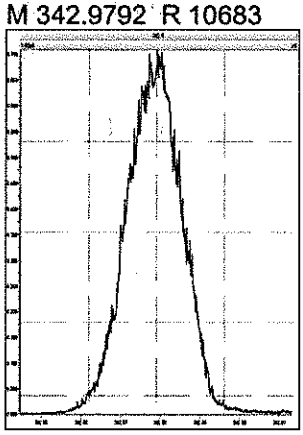
M 318.9792 R 11062



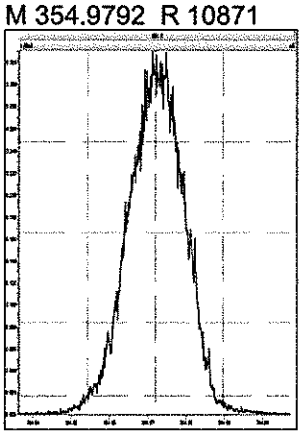
M 330.9792 R 10940



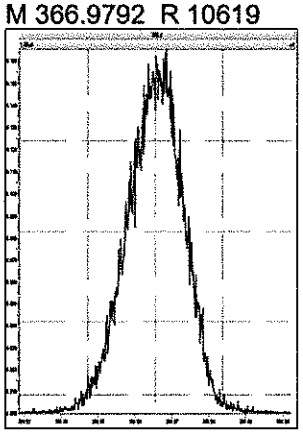
M 342.9792 R 10683



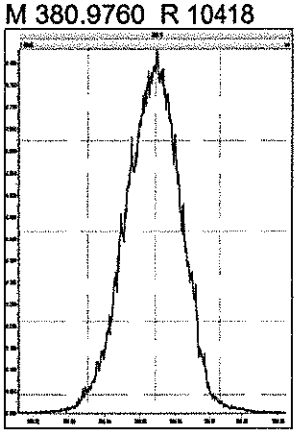
M 354.9792 R 10871



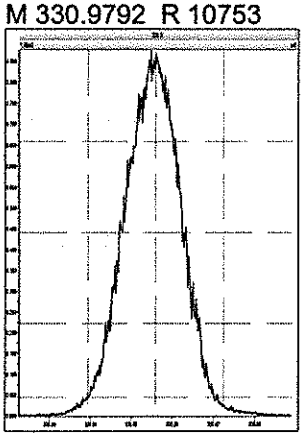
M 366.9792 R 10619



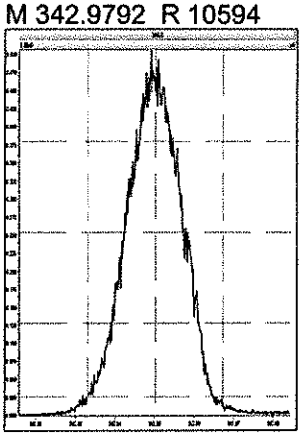
M 380.9760 R 10418



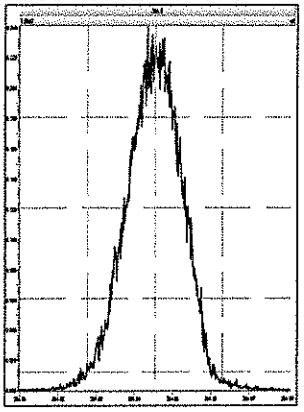
M 330.9792 R 10753



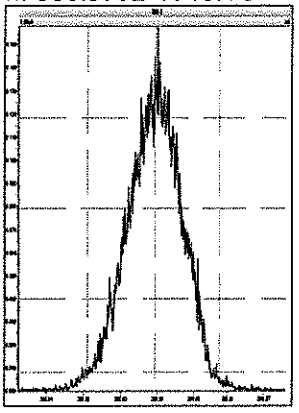
M 342.9792 R 10594



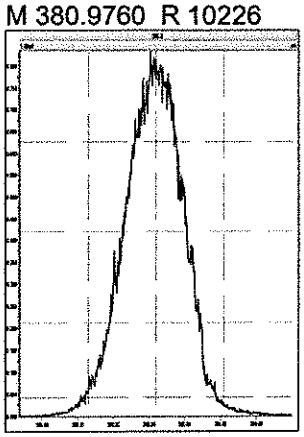
M 354.9792 R 10754



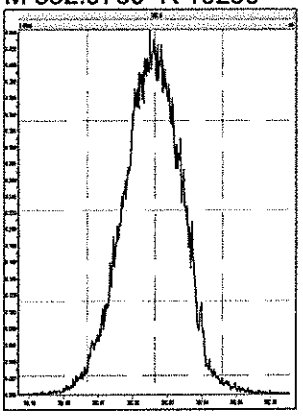
M 366.9792 R 10775



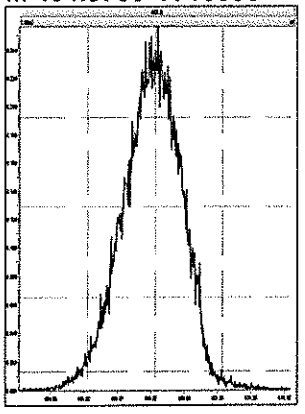
M 380.9760 R 10226



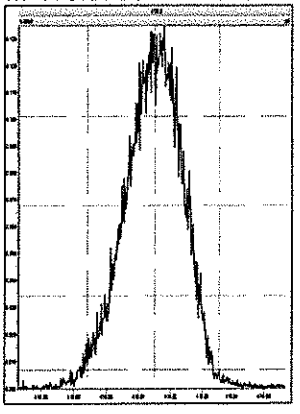
M 392.9760 R 10290



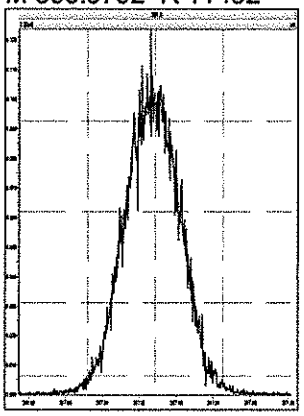
M 404.9760 R 10683



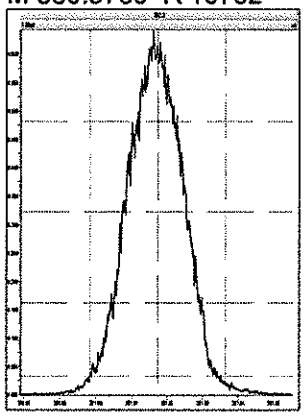
M 416.9760 R 10310



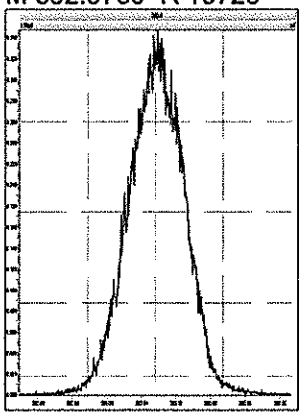
M 366.9792 R 11482



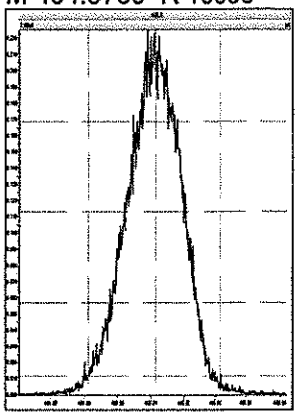
M 380.9760 R 10752



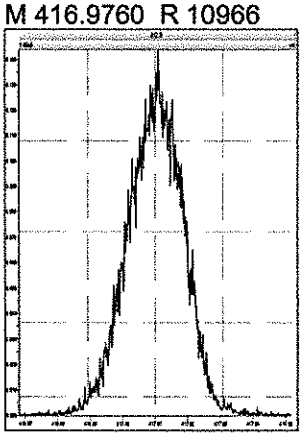
M 392.9760 R 10729



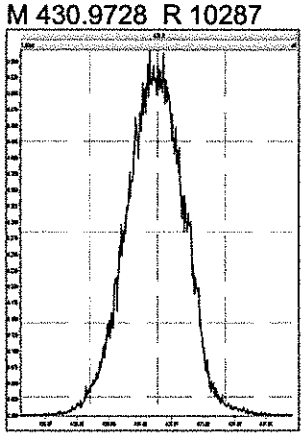
M 404.9760 R 10990



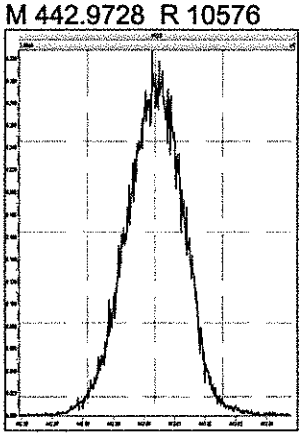
M 416.9760 R 10966



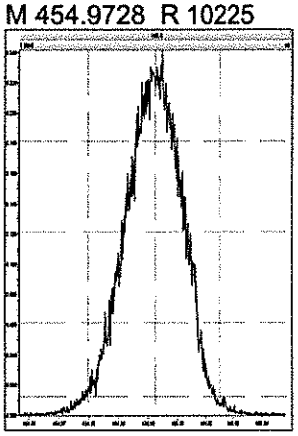
M 430.9728 R 10287



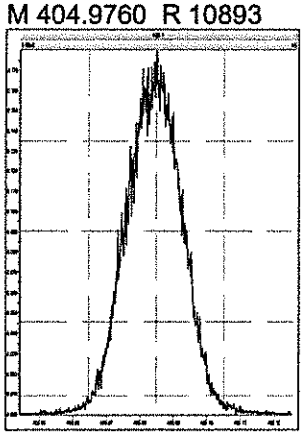
M 442.9728 R 10576



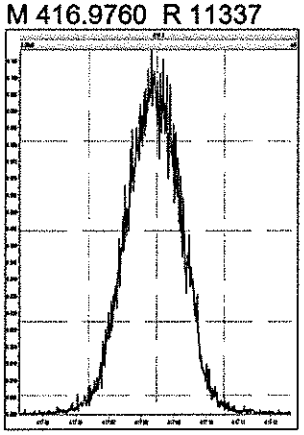
M 454.9728 R 10225



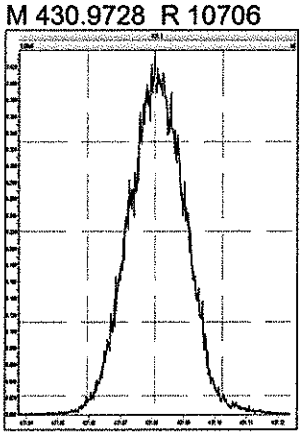
M 404.9760 R 10893



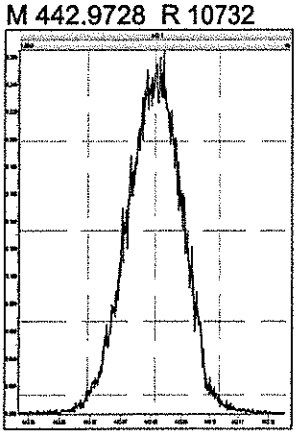
M 416.9760 R 11337



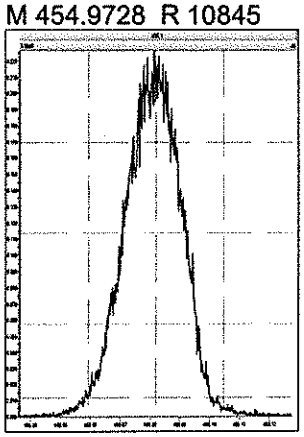
M 430.9728 R 10706



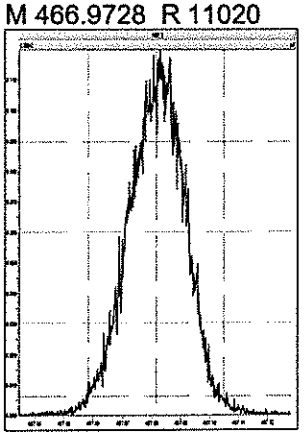
M 442.9728 R 10732



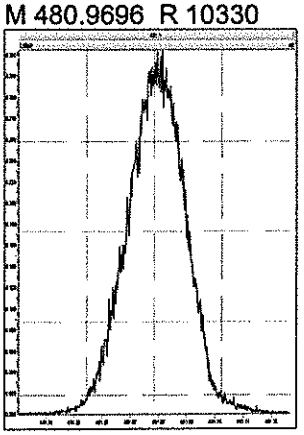
M 454.9728 R 10845



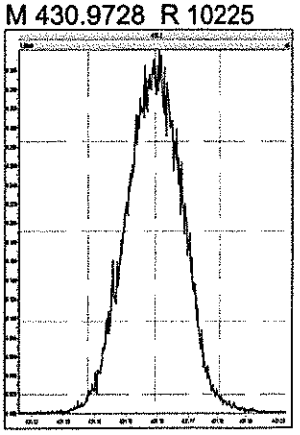
M 466.9728 R 11020



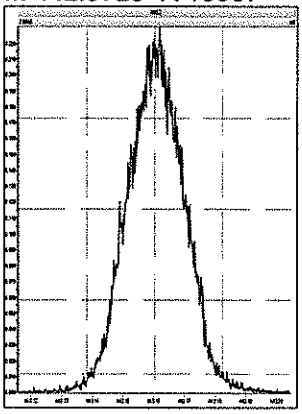
M 480.9696 R 10330



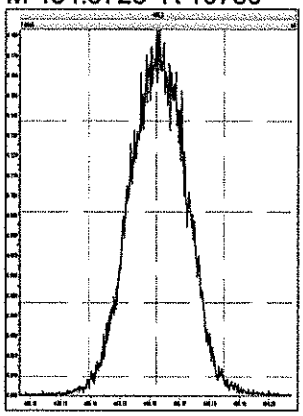
M 430.9728 R 10225



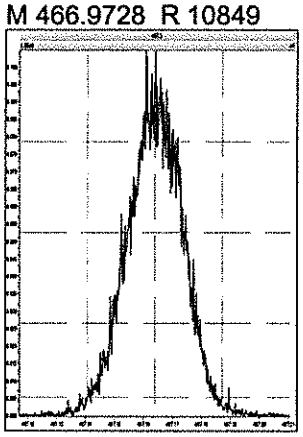
M 442.9728 R 10967



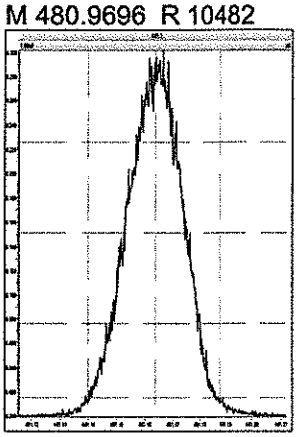
M 454.9728 R 10785



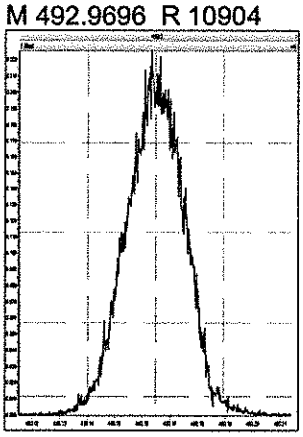
M 466.9728 R 10849



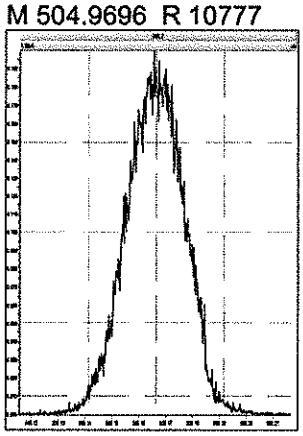
M 480.9696 R 10482



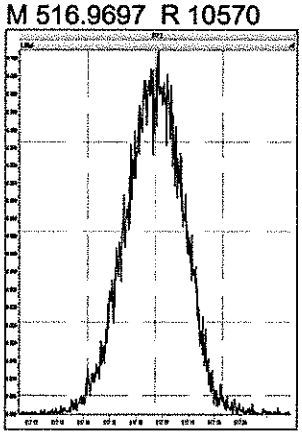
M 492.9696 R 10904



M 504.9696 R 10777



M 516.9697 R 10570



COLUMN CHECK (2378-TCDD 13%)

CS3WT UD190705-01.2

b23aug19a-1

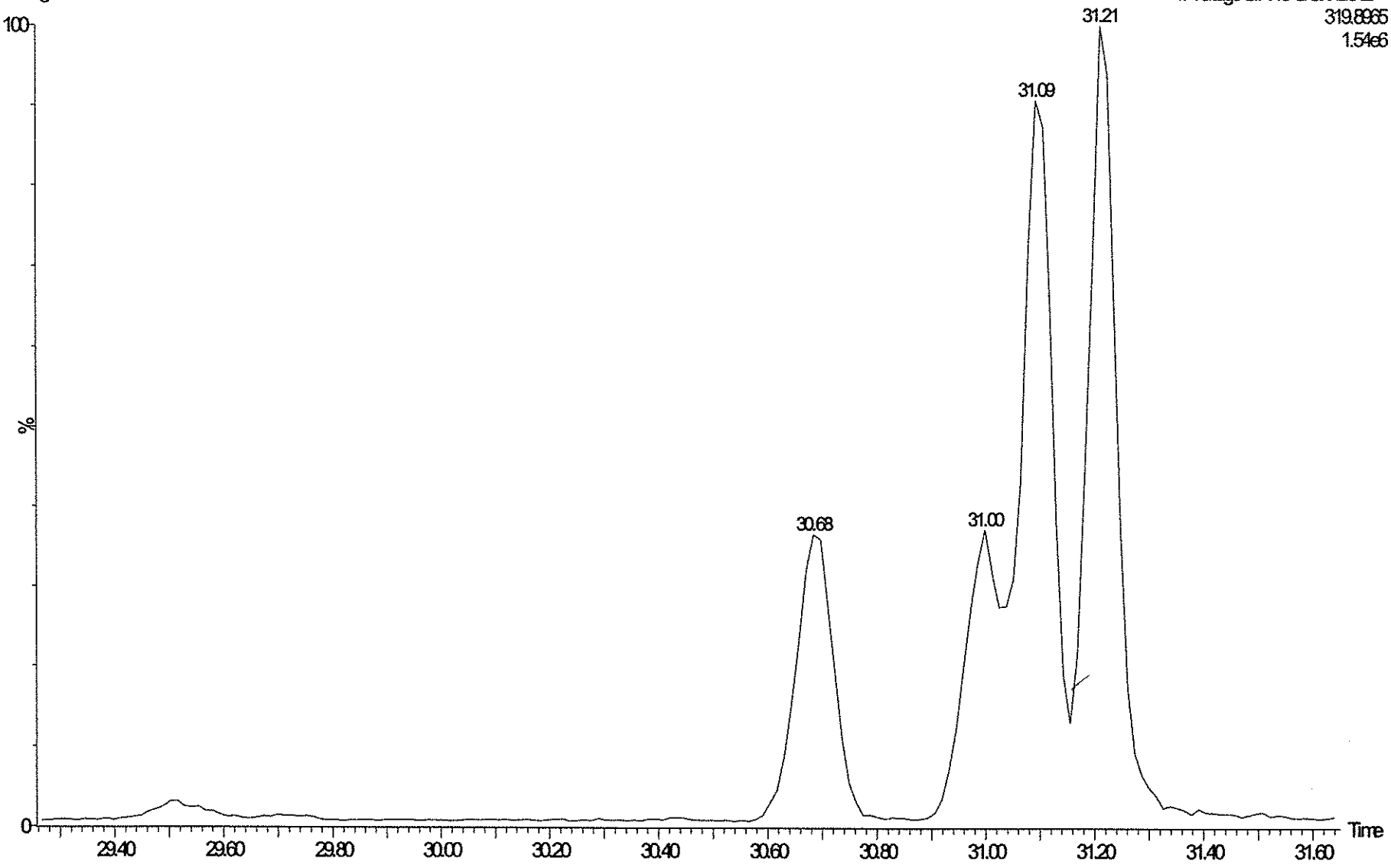
HRP763_1

23-Aug-201908:16:33

1: Voltage SIR 13 Channels EI+

319.8965

1.54e6



COLUMN CHECK (2378-TCDD 18%)

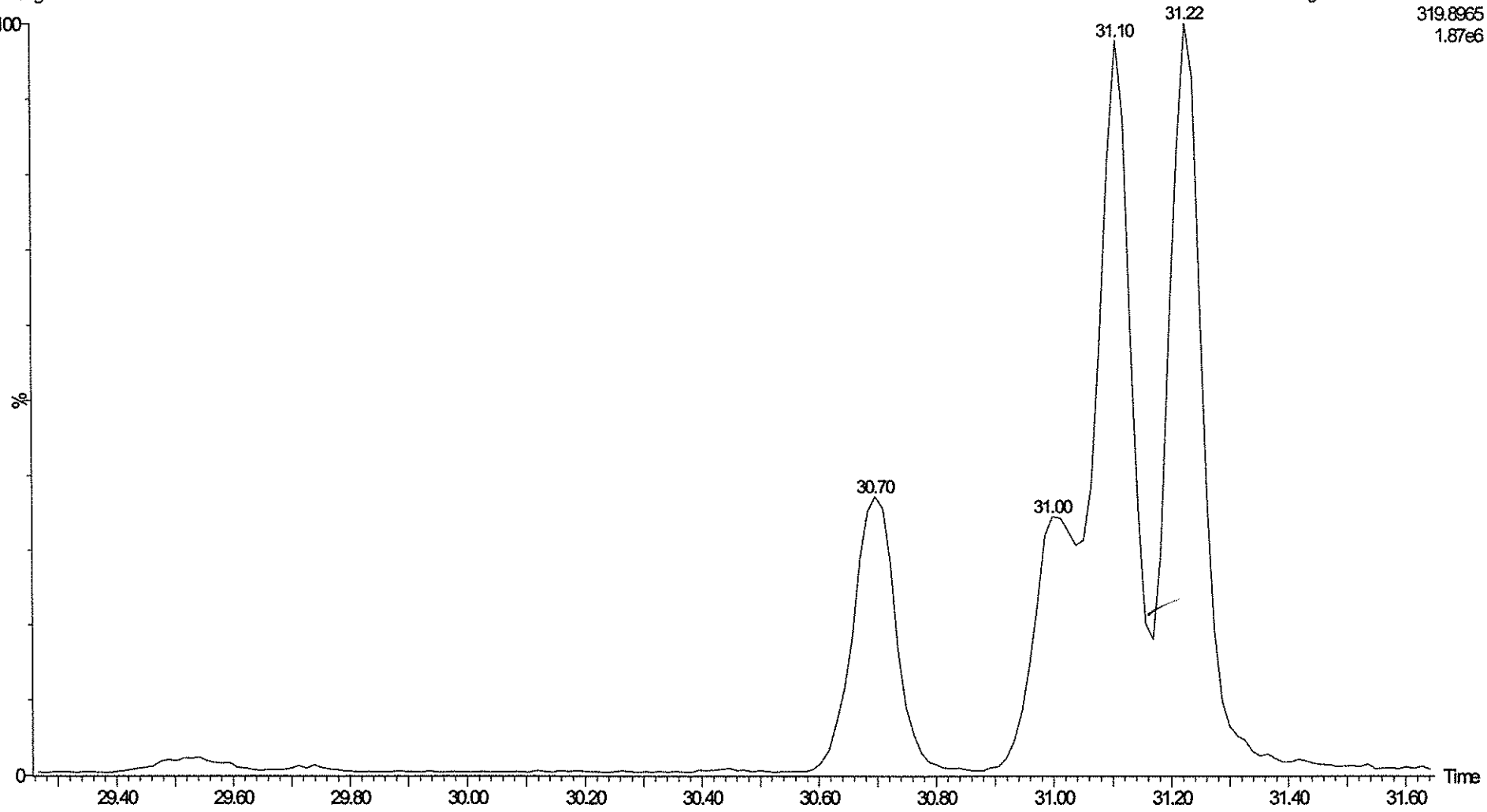
CS3WT UD190705-01.2 **HRP763_1** **23-Aug-201915:31:49**

b23aug19a-10

1: Voltage SIR 13 Channels EI+

319.8965

1.87e6



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23aug19a-1.qld

Last Altered: Friday, August 23, 2019 09:07:49 Eastern Standard Time
Printed: Friday, August 23, 2019 09:09:49 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_b26jul19.mdb 29 Jul 2019 08:36:25
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b11feb19b.cdb 12 Feb 2019 08:55:31

Name: b23aug19a-1, Date: 23-Aug-2019, Time: 08:16:33, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

	Name	RT
1	First TCDF	26.16
2	Last TCDF	31.89
3	First PeCDF	31.89
4	Last PeCDF	34.56
5	First HxCDF	35.09
6	Last HxCDF	37.37
7	First HpCDF	38.88
8	Last HpCDF	40.77
9	OCDF	44.66
10	First TCDD	27.89
11	2378-TCDD	31.21
12	Last TCDD	31.81
13	First PeCDD	32.79
14	Last PeCDD	34.39
15	First HxCDD	35.50
16	Last HxCDD	37.06
17	First HpCDD	39.20
18	Last HpCDD	40.12
19	OCDD	44.38

Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

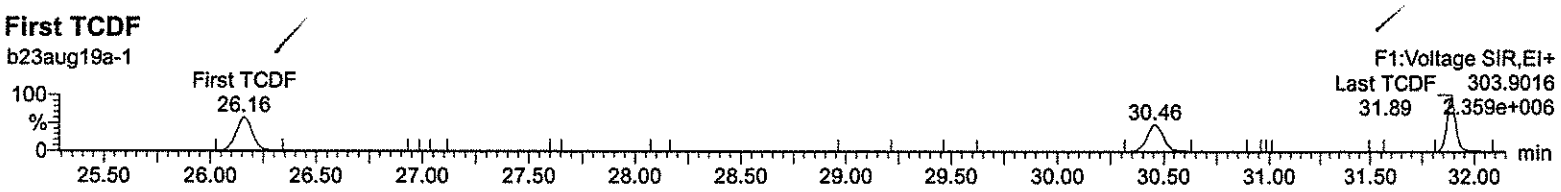
Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23aug19a-1.qld

Last Altered: Friday, August 23, 2019 09:07:49 Eastern Standard Time
Printed: Friday, August 23, 2019 09:09:49 Eastern Standard Time

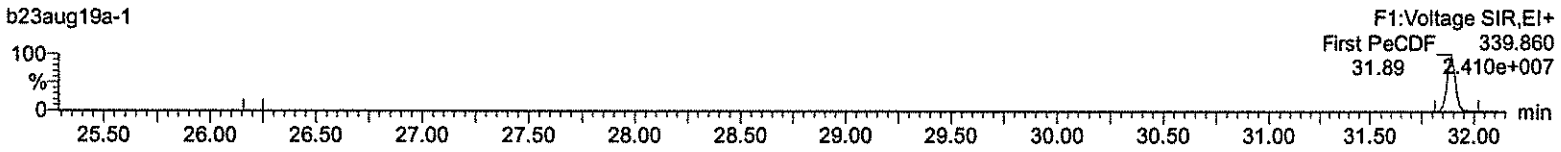
Method: C:\MassLynx\Default.pro\Methdb\WDM_b26jul19.mdb 29 Jul 2019 08:36:25
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b11feb19b.cdb 12 Feb 2019 08:55:31

Name: b23aug19a-1, Date: 23-Aug-2019, Time: 08:16:33, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

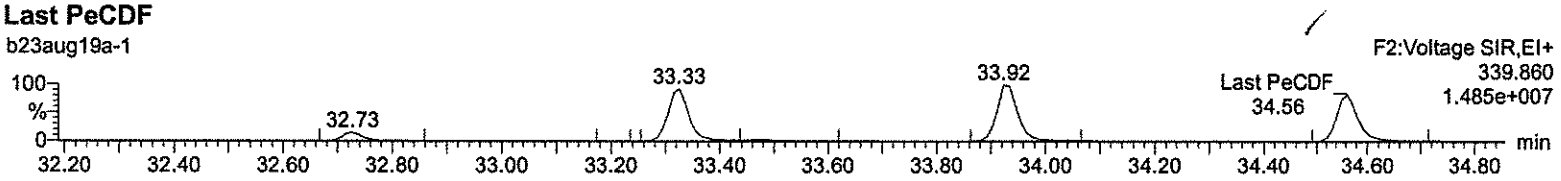
First TCDF



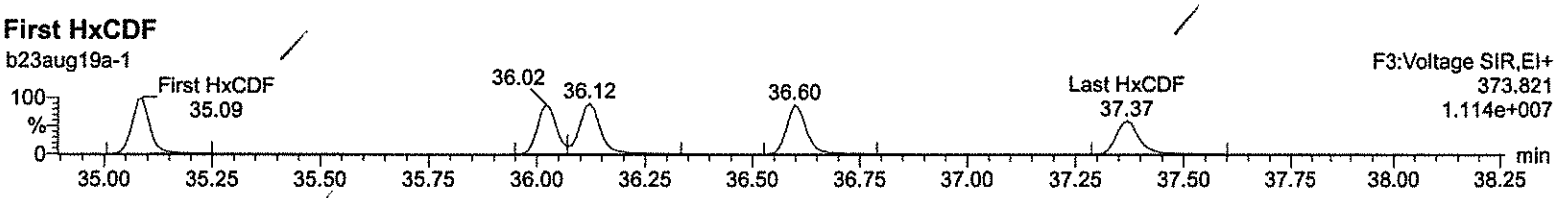
First PeCDF



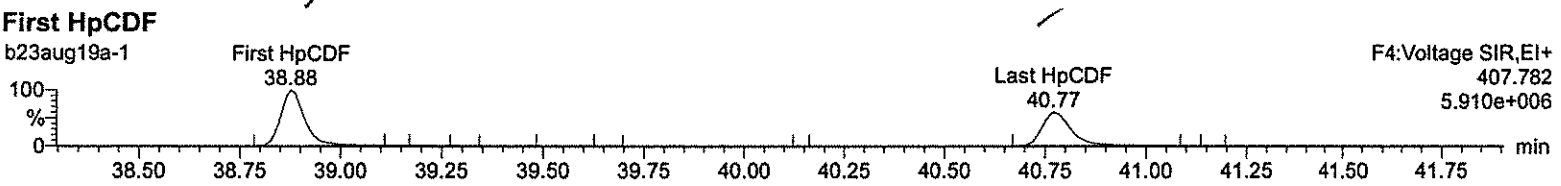
Last PeCDF



First HxCDF



First HpCDF



OCDF



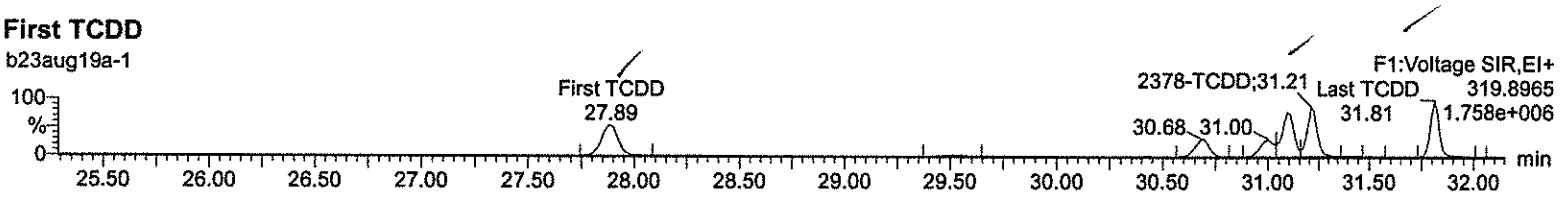
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23aug19a-1.qld

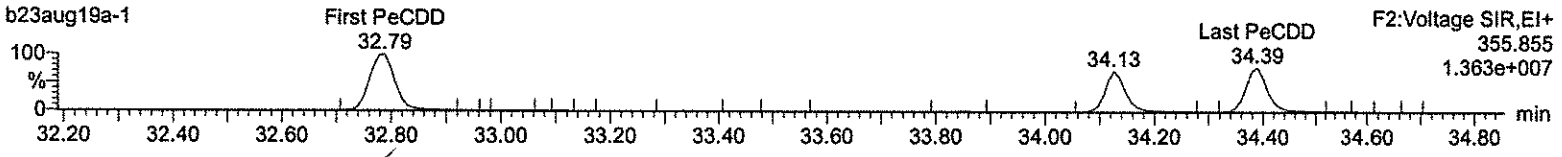
Last Altered: Friday, August 23, 2019 09:07:49 Eastern Standard Time
Printed: Friday, August 23, 2019 09:09:49 Eastern Standard Time

Name: b23aug19a-1, Date: 23-Aug-2019, Time: 08:16:33, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

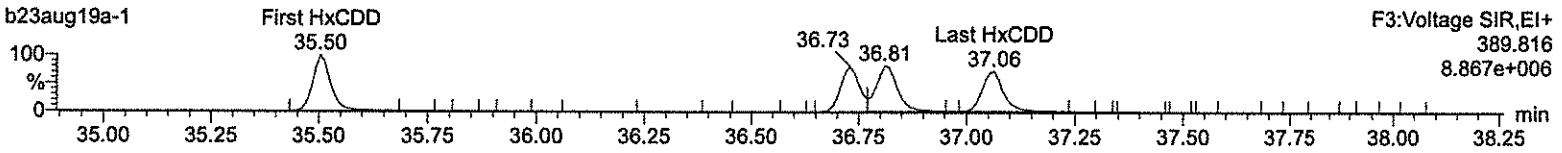
First TCDD



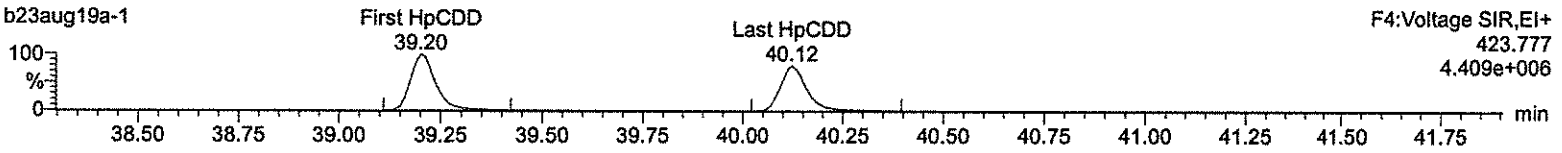
First PeCDD



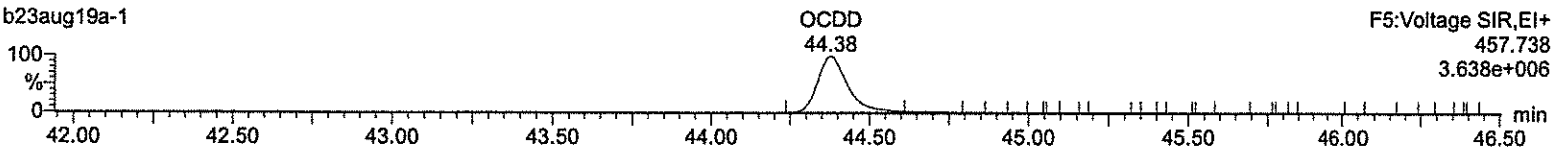
First HxCDD



First HpCDD



OCDD



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23aug19a-10.qld

Last Altered: Monday, August 26, 2019 09:13:12 Eastern Standard Time
Printed: Monday, August 26, 2019 09:13:53 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_b26jul19.mdb 29 Jul 2019 08:36:25
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

	Name	RT
1	First TCDF	26.17
2	Last TCDF	31.89
3	First PeCDF	31.90
4	Last PeCDF	34.57
5	First HxCDF	35.10
6	Last HxCDF	37.38
7	First HpCDF	38.89
8	Last HpCDF	40.78
9	OCDF	44.67
10	First TCDD	27.89
11	2378-TCDD	31.22
12	Last TCDD	31.82
13	First PeCDD	32.79
14	Last PeCDD	34.40
15	First HxCDD	35.51
16	Last HxCDD	37.06
17	First HpCDD	39.22
18	Last HpCDD	40.13
19	OCDD	44.39

Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

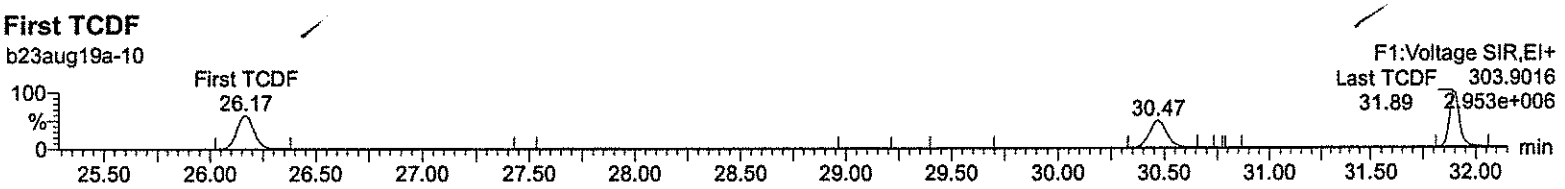
Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23aug19a-10.qld

Last Altered: Monday, August 26, 2019 09:13:12 Eastern Standard Time
Printed: Monday, August 26, 2019 09:13:53 Eastern Standard Time

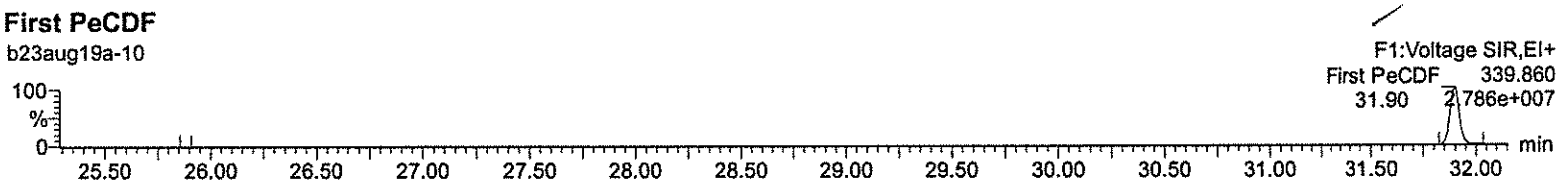
Method: C:\MassLynx\Default.pro\Methdb\WDM_b26jul19.mdb 29 Jul 2019 08:36:25
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

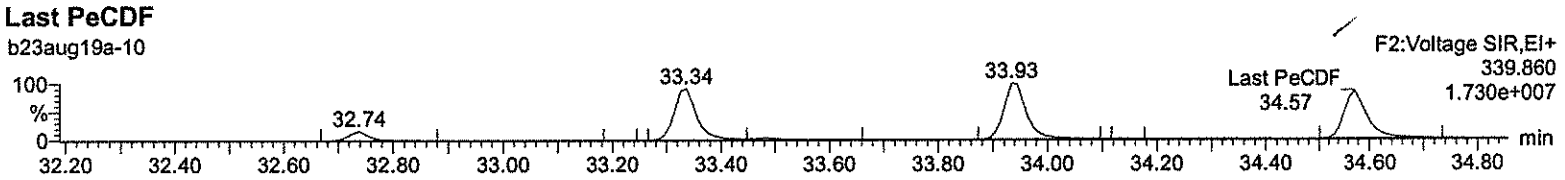
First TCDF



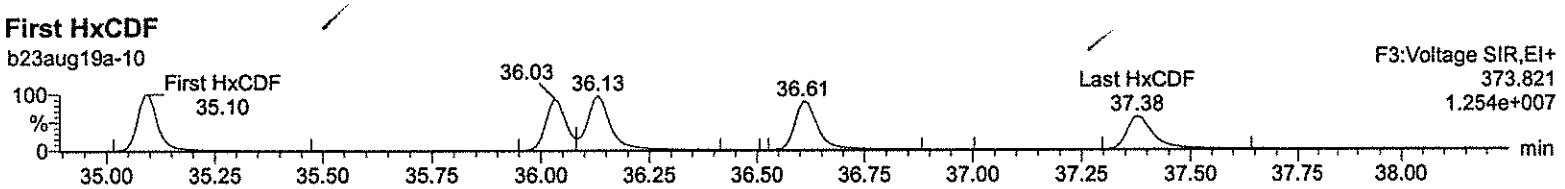
First PeCDF



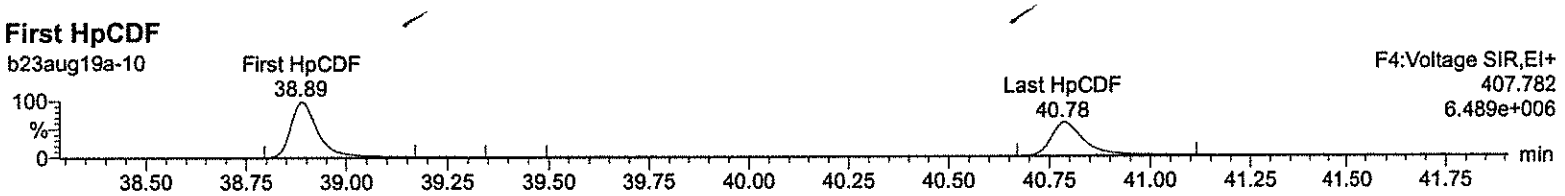
Last PeCDF



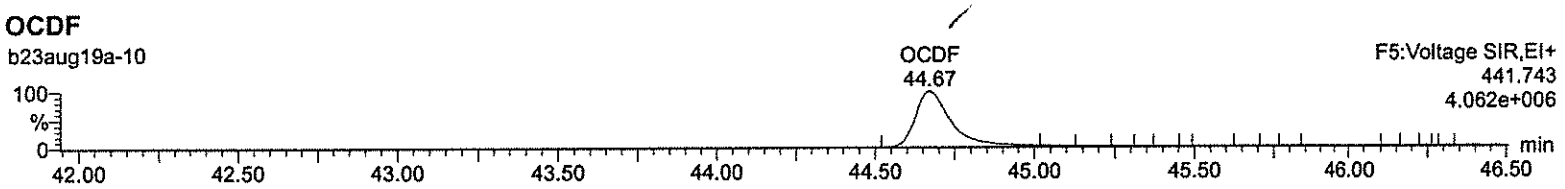
First HxCDF



First HpCDF



OCDF



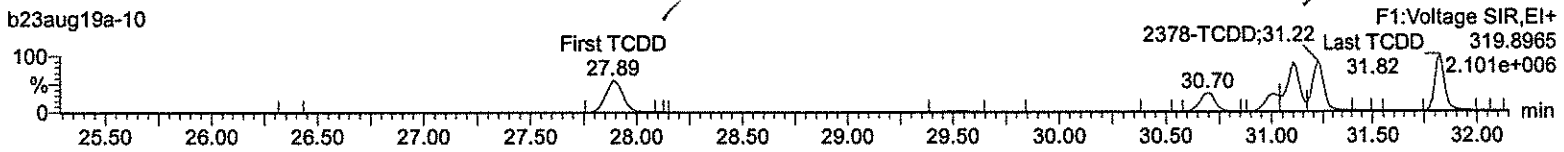
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23aug19a-10.qld

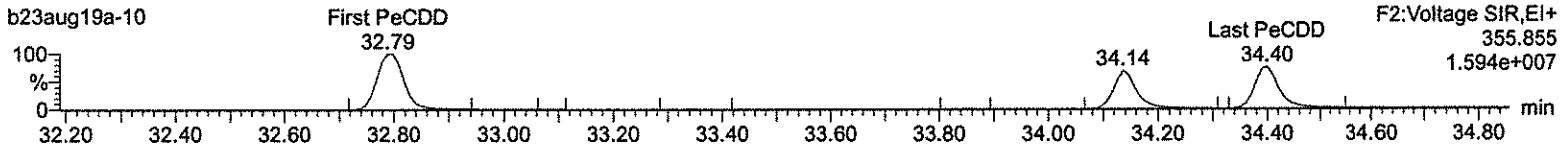
Last Altered: Monday, August 26, 2019 09:13:12 Eastern Standard Time
Printed: Monday, August 26, 2019 09:13:53 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

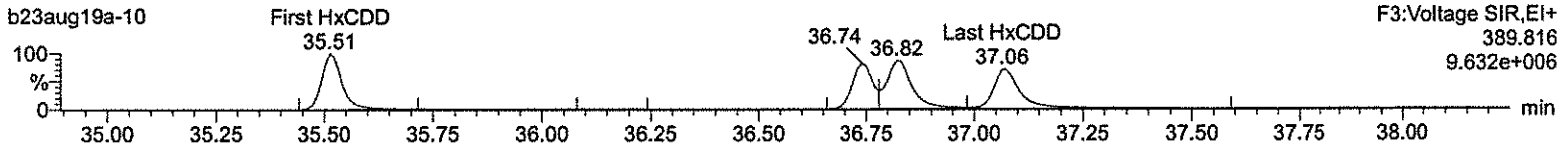
First TCDD



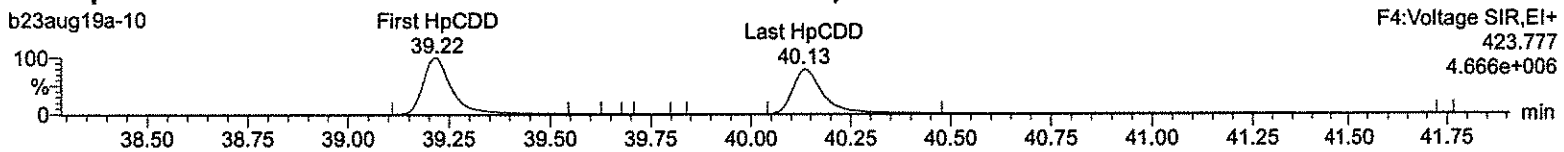
First PeCDD



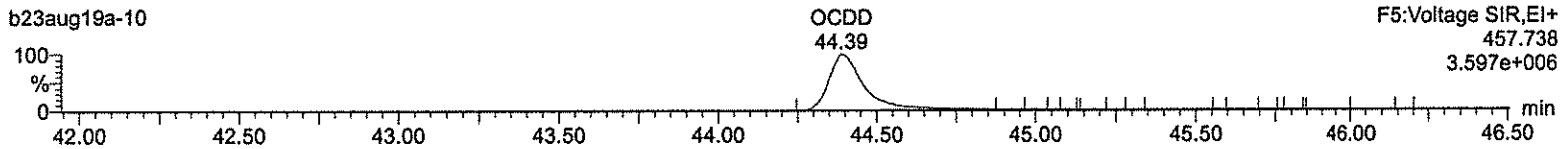
First HxCDD



First HpCDD



OCDD



Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b26jul19.mdb 29 Jul 2019 08:44:01
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Date: 23-Aug-2019, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

	Name	ICAL RRF
1	2378-TCDD	0.891
2	12378-PeCDD	0.850
3	123478-HxCDD	0.934
4	123678-HxCDD	0.885
5	123789-HxCDD	0.887
6	1234678-HpCDD	0.944
7	OCDD	0.914
8	2378-TCDF	0.893
9	12378-PeCDF	0.908
10	23478-PeCDF	0.971
11	123478-HxCDF	1.135
12	123678-HxCDF	1.054
13	234678-HxCDF	1.130
14	123789-HxCDF	1.063
15	1234678-HpCDF	1.191
16	1234789-HpCDF	1.227
17	OCDF	1.017
18	13C-2378-TCDD	1.151
19	13C-12378-PeCDD	0.779
20	13C-123478-HxCDD	0.789
21	13C-123678-HxCDD	1.057
22	13C-1234678-HpCDD	0.633
23	13C-OCDD	0.546
24	13C-2378-TCDF	1.299
25	13C-12378-PeCDF	1.046
26	13C-23478-PeCDF	1.073
27	13C-123478-HxCDF	0.912
28	13C-123678-HxCDF	1.188
29	13C-234678-HxCDF	1.010
30	13C-123789-HxCDF	0.852
31	13C-1234678-HpCDF	0.784
32	13C-1234789-HpCDF	0.562
33	13C-1234-TCDD	1.000
34	13C-123789-HxCDD	1.000
35	37Cl-2378-TCDD	1.077

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b26jul19.mdb 29 Jul 2019 08:44:01
Calibration: 26 Aug 2019 08:59:46

Compound name: 2378-TCDD
Response Factor: 0.890538
RRF SD: 0.034657, Relative SD: 3.89169
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
b23aug19a-3	CS0.5 UD190207-01	0.250	31.19	0.25	0.902	0.891	bb
b23aug19a-4	CS1 UD190207-02	0.500	31.22	0.47	0.843	0.891	bb
b23aug19a-5	CS2 UD190207-03	2.000	31.21	1.95	0.866	0.891	bb
b23aug19a-6	CS3 UD190207-04	10.000	31.23	9.85	0.877	0.891	bb
b23aug19a-7	CS4 UD190207-05	40.000	31.22	41.23	0.918	0.891	bb
b23aug19a-8	CS5 UD190207-06	200.000	31.22	210.35	0.937	0.891	bb

Compound name: 12378-PeCDD
Response Factor: 0.850237
RRF SD: 0.0306871, Relative SD: 3.60925
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
b23aug19a-3	CS0.5 UD190207-01	1.250	34.14	1.22	0.829	0.850	bb
b23aug19a-4	CS1 UD190207-02	2.500	34.14	2.39	0.814	0.850	bd
b23aug19a-5	CS2 UD190207-03	10.000	34.13	9.71	0.826	0.850	bb
b23aug19a-6	CS3 UD190207-04	50.000	34.15	52.10	0.886	0.850	bb
b23aug19a-7	CS4 UD190207-05	200.000	34.14	206.42	0.878	0.850	bb
b23aug19a-8	CS5 UD190207-06	1000.000	34.13	1021.79	0.869	0.850	bb

Compound name: 123478-HxCDD
Response Factor: 0.933532
RRF SD: 0.0215901, Relative SD: 2.31274
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
b23aug19a-3	CS0.5 UD190207-01	1.250	36.73	1.24	0.923	0.934	bd
b23aug19a-4	CS1 UD190207-02	2.500	36.73	2.47	0.922	0.934	dd
b23aug19a-5	CS2 UD190207-03	10.000	36.73	9.75	0.910	0.934	dd
b23aug19a-6	CS3 UD190207-04	50.000	36.75	52.08	0.972	0.934	dd
b23aug19a-7	CS4 UD190207-05	200.000	36.74	200.19	0.934	0.934	bd
b23aug19a-8	CS5 UD190207-06	1000.000	36.73	1005.91	0.939	0.934	dd

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
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Compound name: 123678-HxCDD
Response Factor: 0.8853
RRF SD: 0.0533909, Relative SD: 6.03082
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
b23aug19a-3	CS0.5 UD190207-01	1.250	36.82	1.15	0.815	0.885	db
b23aug19a-4	CS1 UD190207-02	2.500	36.82	2.32	0.822	0.885	dd
b23aug19a-5	CS2 UD190207-03	10.000	36.81	10.19	0.902	0.885	dd
b23aug19a-6	CS3 UD190207-04	50.000	36.83	51.10	0.905	0.885	dd
b23aug19a-7	CS4 UD190207-05	200.000	36.82	211.49	0.936	0.885	dd
b23aug19a-8	CS5 UD190207-06	1000.000	36.82	1051.87	0.931	0.885	dd

Compound name: 123789-HxCDD
Response Factor: 0.887197
RRF SD: 0.0691294, Relative SD: 7.79188
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	1.250	37.06	1.15	0.814	0.887	bd
b23aug19a-4	CS1 UD190207-02	2.500	37.06	2.24	0.796	0.887	dd
b23aug19a-5	CS2 UD190207-03	10.000	37.05	9.92	0.880	0.887	dd
b23aug19a-6	CS3 UD190207-04	50.000	37.07	53.56	0.950	0.887	dd
b23aug19a-7	CS4 UD190207-05	200.000	37.06	214.97	0.954	0.887	dd
b23aug19a-8	CS5 UD190207-06	1000.000	37.06	1047.07	0.929	0.887	dd

Compound name: 1234678-HpCDD
Response Factor: 0.94413
RRF SD: 0.0631021, Relative SD: 6.68362
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
b23aug19a-3	CS0.5 UD190207-01	1.250	40.12	1.21	0.917	0.944	bd
b23aug19a-4	CS1 UD190207-02	2.500	40.13	2.22	0.837	0.944	bb
b23aug19a-5	CS2 UD190207-03	10.000	40.12	9.87	0.932	0.944	bd
b23aug19a-6	CS3 UD190207-04	50.000	40.13	51.98	0.982	0.944	bd
b23aug19a-7	CS4 UD190207-05	200.000	40.13	213.18	1.006	0.944	bb
b23aug19a-8	CS5 UD190207-06	1000.000	40.12	1049.90	0.991	0.944	bb

Compound name: OCDD
Response Factor: 0.913867
RRF SD: 0.0655944, Relative SD: 7.17768
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
b23aug19a-3	CS0.5 UD190207-01	2.500	44.38	2.36	0.864	0.914	bd
b23aug19a-4	CS1 UD190207-02	5.000	44.38	4.56	0.833	0.914	bd
b23aug19a-5	CS2 UD190207-03	20.000	44.39	19.15	0.875	0.914	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
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BB 26 Aug 19

Compound name: OCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-6	CS3 UD190207-04	100.000	44.40	103.47	0.946	0.914	bd
b23aug19a-7	CS4 UD190207-05	400.000	44.39	423.48	0.968	0.914	bd
b23aug19a-8	CS5 UD190207-06	2000.000	44.39	2184.46	0.998	0.914	bd

Compound name: 2378-TCDF
Response Factor: 0.892793
RRF SD: 0.0435518, Relative SD: 4.87815
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
b23aug19a-3	CS0.5 UD190207-01	0.250	30.46	0.24	0.865	0.893	bb
b23aug19a-4	CS1 UD190207-02	0.500	30.46	0.47	0.840	0.893	bd
b23aug19a-5	CS2 UD190207-03	2.000	30.46	1.92	0.858	0.893	bb
b23aug19a-6	CS3 UD190207-04	10.000	30.47	10.28	0.918	0.893	bd
b23aug19a-7	CS4 UD190207-05	40.000	30.47	41.97	0.937	0.893	bd
b23aug19a-8	CS5 UD190207-06	200.000	30.46	210.34	0.939	0.893	bb

12378 PeF CS0.5 RRF = $\frac{(2.62e4)(100)}{(2.307e4)(1.25)} = 0.9085$

Compound name: 12378-PeCDF
Response Factor: 0.907858
RRF SD: 0.03704, Relative SD: 4.07993
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

RRF SD = $\sqrt{\frac{0.006838}{5}} = \frac{0.037}{0.908} \times 100 = 4.073$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	1.250	33.33	1.25	0.908	0.908	bd
b23aug19a-4	CS1 UD190207-02	2.500	33.33	2.36	0.858	0.908	bd
b23aug19a-5	CS2 UD190207-03	10.000	33.33	9.71	0.881	0.908	bd
b23aug19a-6	CS3 UD190207-04	50.000	33.34	49.77	0.904	0.908	bd
b23aug19a-7	CS4 UD190207-05	200.000	33.33	206.18	0.936	0.908	bd
b23aug19a-8	CS5 UD190207-06	1000.000	33.33	1058.41	0.961	0.908	bd

Compound name: 23478-PeCDF
Response Factor: 0.971351
RRF SD: 0.0400461, Relative SD: 4.12272
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
b23aug19a-3	CS0.5 UD190207-01	1.250	33.93	1.16	0.905	0.971	bd
b23aug19a-4	CS1 UD190207-02	2.500	33.93	2.45	0.951	0.971	bb
b23aug19a-5	CS2 UD190207-03	10.000	33.92	9.94	0.965	0.971	bb
b23aug19a-6	CS3 UD190207-04	50.000	33.94	51.25	0.996	0.971	bb
b23aug19a-7	CS4 UD190207-05	200.000	33.93	205.07	0.996	0.971	bb
b23aug19a-8	CS5 UD190207-06	1000.000	33.93	1045.41	1.015	0.971	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
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Compound name: 123478-HxCDF
Response Factor: 1.135
RRF SD: 0.0303809, Relative SD: 2.67673
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
b23aug19a-3	CS0.5 UD190207-01	1.250	36.03	1.24	1.123	1.135	bd
b23aug19a-4	CS1 UD190207-02	2.500	36.03	2.45	1.114	1.135	bd
b23aug19a-5	CS2 UD190207-03	10.000	36.02	9.70	1.101	1.135	bd
b23aug19a-6	CS3 UD190207-04	50.000	36.04	52.29	1.187	1.135	bd
b23aug19a-7	CS4 UD190207-05	200.000	36.03	200.28	1.137	1.135	bd
b23aug19a-8	CS5 UD190207-06	1000.000	36.02	1011.84	1.148	1.135	bd

Compound name: 123678-HxCDF
Response Factor: 1.0542
RRF SD: 0.0656659, Relative SD: 6.229
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
b23aug19a-3	CS0.5 UD190207-01	1.250	36.12	1.20	1.010	1.054	dd
b23aug19a-4	CS1 UD190207-02	2.500	36.12	2.25	0.949	1.054	dd
b23aug19a-5	CS2 UD190207-03	10.000	36.12	10.46	1.102	1.054	dd
b23aug19a-6	CS3 UD190207-04	50.000	36.13	50.18	1.058	1.054	db
b23aug19a-7	CS4 UD190207-05	200.000	36.12	204.44	1.078	1.054	db
b23aug19a-8	CS5 UD190207-06	1000.000	36.12	1070.79	1.129	1.054	db

Compound name: 234678-HxCDF
Response Factor: 1.1302
RRF SD: 0.0525623, Relative SD: 4.6507
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	1.250	36.61	1.23	1.111	1.130	bd
b23aug19a-4	CS1 UD190207-02	2.500	36.60	2.32	1.047	1.130	bb
b23aug19a-5	CS2 UD190207-03	10.000	36.60	9.92	1.121	1.130	bd
b23aug19a-6	CS3 UD190207-04	50.000	36.62	49.89	1.128	1.130	bd
b23aug19a-7	CS4 UD190207-05	200.000	36.61	209.62	1.185	1.130	bb
b23aug19a-8	CS5 UD190207-06	1000.000	36.61	1052.53	1.190	1.130	bd

Compound name: 123789-HxCDF
Response Factor: 1.06272
RRF SD: 0.0367175, Relative SD: 3.45505
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	1.250	37.37	1.26	1.073	1.063	bb
b23aug19a-4	CS1 UD190207-02	2.500	37.37	2.36	1.002	1.063	bd
b23aug19a-5	CS2 UD190207-03	10.000	37.37	9.76	1.037	1.063	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Compound name: 123789-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-6	CS3 UD190207-04	50.000	37.38	51.45	1.094	1.063	bd
b23aug19a-7	CS4 UD190207-05	200.000	37.37	206.63	1.098	1.063	bb
b23aug19a-8	CS5 UD190207-06	1000.000	37.37	1009.61	1.073	1.063	bb

Compound name: 1234678-HpCDF
Response Factor: 1.19097
RRF SD: 0.0700563, Relative SD: 5.8823
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	1.250	38.89	1.18	1.122	1.191	bb
b23aug19a-4	CS1 UD190207-02	2.500	38.89	2.33	1.111	1.191	bd
b23aug19a-5	CS2 UD190207-03	10.000	38.88	9.72	1.158	1.191	bb
b23aug19a-6	CS3 UD190207-04	50.000	38.90	53.61	1.277	1.191	bd
b23aug19a-7	CS4 UD190207-05	200.000	38.89	209.31	1.246	1.191	bb
b23aug19a-8	CS5 UD190207-06	1000.000	38.88	1034.78	1.232	1.191	bb

Compound name: 1234789-HpCDF
Response Factor: 1.22659
RRF SD: 0.0568718, Relative SD: 4.63656
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	1.250	40.78	1.20	1.174	1.227	bb
b23aug19a-4	CS1 UD190207-02	2.500	40.78	2.34	1.149	1.227	bb
b23aug19a-5	CS2 UD190207-03	10.000	40.78	9.89	1.213	1.227	bd
b23aug19a-6	CS3 UD190207-04	50.000	40.79	51.89	1.273	1.227	bb
b23aug19a-7	CS4 UD190207-05	200.000	40.78	209.78	1.287	1.227	bd
b23aug19a-8	CS5 UD190207-06	1000.000	40.78	1030.59	1.264	1.227	bb

Compound name: OCDF
Response Factor: 1.0166
RRF SD: 0.110997, Relative SD: 10.9185
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
b23aug19a-3	CS0.5 UD190207-01	2.500	44.67	2.20	0.893	1.017	bb
b23aug19a-4	CS1 UD190207-02	5.000	44.66	4.44	0.903	1.017	bd
b23aug19a-5	CS2 UD190207-03	20.000	44.67	19.18	0.975	1.017	bd
b23aug19a-6	CS3 UD190207-04	100.000	44.67	103.36	1.051	1.017	bb
b23aug19a-7	CS4 UD190207-05	400.000	44.67	441.08	1.121	1.017	bd
b23aug19a-8	CS5 UD190207-06	2000.000	44.66	2275.66	1.157	1.017	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
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Compound name: 13C-2378-TCDD
Response Factor: 1.15103
RRF SD: 0.0317627, Relative SD: 2.75951
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	31.21	100.21	1.153	1.151	bb
b23aug19a-4	CS1 UD190207-02	100.000	31.19	97.89	1.127	1.151	bb
b23aug19a-5	CS2 UD190207-03	100.000	31.19	96.07	1.106	1.151	bb
b23aug19a-6	CS3 UD190207-04	100.000	31.21	100.32	1.155	1.151	bd
b23aug19a-7	CS4 UD190207-05	100.000	31.21	101.57	1.169	1.151	bb
b23aug19a-8	CS5 UD190207-06	100.000	31.19	103.94	1.196	1.151	bd

Compound name: 13C-12378-PeCDD
Response Factor: 0.779032
RRF SD: 0.0451103, Relative SD: 5.79056
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	34.12	97.17	0.757	0.779	bb
b23aug19a-4	CS1 UD190207-02	100.000	34.12	96.24	0.750	0.779	bb
b23aug19a-5	CS2 UD190207-03	100.000	34.12	95.99	0.748	0.779	bd
b23aug19a-6	CS3 UD190207-04	100.000	34.13	97.62	0.760	0.779	bb
b23aug19a-7	CS4 UD190207-05	100.000	34.13	102.07	0.795	0.779	bb
b23aug19a-8	CS5 UD190207-06	100.000	34.12	110.93	0.864	0.779	bd

Compound name: 13C-123478-HxCDD
Response Factor: 0.789146
RRF SD: 0.0230377, Relative SD: 2.91933
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	36.72	96.93	0.765	0.789	bd
b23aug19a-4	CS1 UD190207-02	100.000	36.72	97.50	0.769	0.789	bd
b23aug19a-5	CS2 UD190207-03	100.000	36.72	100.09	0.790	0.789	bd
b23aug19a-6	CS3 UD190207-04	100.000	36.73	98.89	0.780	0.789	bd
b23aug19a-7	CS4 UD190207-05	100.000	36.73	104.71	0.826	0.789	bd
b23aug19a-8	CS5 UD190207-06	100.000	36.72	101.88	0.804	0.789	bd

Compound name: 13C-123678-HxCDD
Response Factor: 1.05705
RRF SD: 0.0261483, Relative SD: 2.47371
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	36.81	100.37	1.061	1.057	dd
b23aug19a-4	CS1 UD190207-02	100.000	36.81	100.85	1.066	1.057	dd
b23aug19a-5	CS2 UD190207-03	100.000	36.80	97.01	1.025	1.057	dd

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Compound name: 13C-123678-HxCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-6	CS3 UD190207-04	100.000	36.82	102.02	1.078	1.057	dd
b23aug19a-7	CS4 UD190207-05	100.000	36.81	96.99	1.025	1.057	dd
b23aug19a-8	CS5 UD190207-06	100.000	36.81	102.77	1.086	1.057	dd

Compound name: 13C-1234678-HpCDD
Response Factor: 0.632972
RRF SD: 0.0158094, Relative SD: 2.49764
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	40.11	101.64	0.643	0.633	bb
b23aug19a-4	CS1 UD190207-02	100.000	40.11	100.46	0.636	0.633	bd
b23aug19a-5	CS2 UD190207-03	100.000	40.11	99.73	0.631	0.633	bd
b23aug19a-6	CS3 UD190207-04	100.000	40.12	99.48	0.630	0.633	bd
b23aug19a-7	CS4 UD190207-05	100.000	40.12	95.66	0.606	0.633	bb
b23aug19a-8	CS5 UD190207-06	100.000	40.11	103.02	0.652	0.633	bd

Compound name: 13C-OCDD
Response Factor: 0.54613
RRF SD: 0.0247309, Relative SD: 4.52838
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	200.000	44.38	200.23	0.547	0.546	bd
b23aug19a-4	CS1 UD190207-02	200.000	44.37	195.52	0.534	0.546	bd
b23aug19a-5	CS2 UD190207-03	200.000	44.37	197.23	0.539	0.546	bd
b23aug19a-6	CS3 UD190207-04	200.000	44.38	194.41	0.531	0.546	bd
b23aug19a-7	CS4 UD190207-05	200.000	44.37	194.65	0.532	0.546	bd
b23aug19a-8	CS5 UD190207-06	200.000	44.37	217.96	0.595	0.546	bd

Compound name: 13C-2378-TCDF
Response Factor: 1.29878
RRF SD: 0.0241748, Relative SD: 1.86134
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	30.45	101.43	1.317	1.299	bb
b23aug19a-4	CS1 UD190207-02	100.000	30.43	99.99	1.299	1.299	bb
b23aug19a-5	CS2 UD190207-03	100.000	30.43	97.14	1.262	1.299	bb
b23aug19a-6	CS3 UD190207-04	100.000	30.45	98.43	1.278	1.299	bb
b23aug19a-7	CS4 UD190207-05	100.000	30.45	101.28	1.315	1.299	bb
b23aug19a-8	CS5 UD190207-06	100.000	30.43	101.72	1.321	1.299	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Compound name: 13C-12378-PeCDF
Response Factor: 1.04567
RRF SD: 0.0373412, Relative SD: 3.57105
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	33.32	96.83	1.013	1.046	bb
b23aug19a-4	CS1 UD190207-02	100.000	33.32	99.90	1.045	1.046	bb
b23aug19a-5	CS2 UD190207-03	100.000	33.32	95.79	1.002	1.046	bd
b23aug19a-6	CS3 UD190207-04	100.000	33.33	99.84	1.044	1.046	dd
b23aug19a-7	CS4 UD190207-05	100.000	33.32	101.97	1.066	1.046	bb
b23aug19a-8	CS5 UD190207-06	100.000	33.32	105.66	1.105	1.046	bb

Compound name: 13C-23478-PeCDF
Response Factor: 1.07299
RRF SD: 0.0563764, Relative SD: 5.25416
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	33.92	99.90	1.072	1.073	bb
b23aug19a-4	CS1 UD190207-02	100.000	33.92	96.46	1.035	1.073	bb
b23aug19a-5	CS2 UD190207-03	100.000	33.91	94.54	1.014	1.073	bb
b23aug19a-6	CS3 UD190207-04	100.000	33.93	97.18	1.043	1.073	bb
b23aug19a-7	CS4 UD190207-05	100.000	33.92	103.06	1.106	1.073	bb
b23aug19a-8	CS5 UD190207-06	100.000	33.92	108.86	1.168	1.073	bb

Compound name: 13C-123478-HxCDF
Response Factor: 0.91204
RRF SD: 0.0114133, Relative SD: 1.25141
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	36.02	100.06	0.913	0.912	bd
b23aug19a-4	CS1 UD190207-02	100.000	36.01	100.57	0.917	0.912	bd
b23aug19a-5	CS2 UD190207-03	100.000	36.01	99.19	0.905	0.912	bd
b23aug19a-6	CS3 UD190207-04	100.000	36.02	98.14	0.895	0.912	bd
b23aug19a-7	CS4 UD190207-05	100.000	36.02	100.21	0.914	0.912	bd
b23aug19a-8	CS5 UD190207-06	100.000	36.01	101.83	0.929	0.912	bd

Compound name: 13C-123678-HxCDF
Response Factor: 1.18836
RRF SD: 0.0401003, Relative SD: 3.37442
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	36.11	97.76	1.162	1.188	db
b23aug19a-4	CS1 UD190207-02	100.000	36.11	104.34	1.240	1.188	db
b23aug19a-5	CS2 UD190207-03	100.000	36.11	96.10	1.142	1.188	db

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-6	CS3 UD190207-04	100.000	36.12	103.26	1.227	1.188	dd
b23aug19a-7	CS4 UD190207-05	100.000	36.11	97.51	1.159	1.188	db
b23aug19a-8	CS5 UD190207-06	100.000	36.11	101.03	1.201	1.188	db

Compound name: 13C-234678-HxCDF
Response Factor: 1.00999
RRF SD: 0.0307478, Relative SD: 3.04437
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	36.60	96.34	0.973	1.010	bb
b23aug19a-4	CS1 UD190207-02	100.000	36.59	102.69	1.037	1.010	bd
b23aug19a-5	CS2 UD190207-03	100.000	36.59	97.15	0.981	1.010	bb
b23aug19a-6	CS3 UD190207-04	100.000	36.61	103.86	1.049	1.010	dd
b23aug19a-7	CS4 UD190207-05	100.000	36.60	98.82	0.998	1.010	bb
b23aug19a-8	CS5 UD190207-06	100.000	36.59	101.14	1.022	1.010	bd

Compound name: 13C-123789-HxCDF
Response Factor: 0.851559
RRF SD: 0.0135394, Relative SD: 1.58995
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	37.36	99.39	0.846	0.852	bd
b23aug19a-4	CS1 UD190207-02	100.000	37.36	99.19	0.845	0.852	bd
b23aug19a-5	CS2 UD190207-03	100.000	37.36	98.42	0.838	0.852	bd
b23aug19a-6	CS3 UD190207-04	100.000	37.37	101.05	0.861	0.852	bd
b23aug19a-7	CS4 UD190207-05	100.000	37.36	99.22	0.845	0.852	bd
b23aug19a-8	CS5 UD190207-06	100.000	37.36	102.72	0.875	0.852	bd

Compound name: 13C-1234678-HpCDF
Response Factor: 0.783921
RRF SD: 0.01923, Relative SD: 2.45306
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	38.88	102.29	0.802	0.784	bd
b23aug19a-4	CS1 UD190207-02	100.000	38.87	100.32	0.786	0.784	bb
b23aug19a-5	CS2 UD190207-03	100.000	38.87	100.76	0.790	0.784	bd
b23aug19a-6	CS3 UD190207-04	100.000	38.89	97.77	0.766	0.784	bb
b23aug19a-7	CS4 UD190207-05	100.000	38.88	96.39	0.756	0.784	bd
b23aug19a-8	CS5 UD190207-06	100.000	38.87	102.48	0.803	0.784	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Compound name: 13C-1234789-HpCDF
Response Factor: 0.561587
RRF SD: 0.0203258, Relative SD: 3.61935
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	40.77	102.24	0.574	0.562	bb
b23aug19a-4	CS1 UD190207-02	100.000	40.77	98.76	0.555	0.562	bb
b23aug19a-5	CS2 UD190207-03	100.000	40.76	96.79	0.544	0.562	bb
b23aug19a-6	CS3 UD190207-04	100.000	40.77	97.42	0.547	0.562	bb
b23aug19a-7	CS4 UD190207-05	100.000	40.77	98.48	0.553	0.562	bd
b23aug19a-8	CS5 UD190207-06	100.000	40.76	106.30	0.597	0.562	bb

Compound name: 13C-1234-TCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	30.67	100.00	1.000	1.000	bb
b23aug19a-4	CS1 UD190207-02	100.000	30.67	100.00	1.000	1.000	bb
b23aug19a-5	CS2 UD190207-03	100.000	30.67	100.00	1.000	1.000	bb
b23aug19a-6	CS3 UD190207-04	100.000	30.68	100.00	1.000	1.000	bb
b23aug19a-7	CS4 UD190207-05	100.000	30.67	100.00	1.000	1.000	bb
b23aug19a-8	CS5 UD190207-06	100.000	30.67	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD
Response Factor: 1
RRF SD: 7.02167e-017, Relative SD: 7.02167e-015
Response type: Internal Std (Ref 34), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	100.000	37.05	100.00	1.000	1.000	dd
b23aug19a-4	CS1 UD190207-02	100.000	37.05	100.00	1.000	1.000	dd
b23aug19a-5	CS2 UD190207-03	100.000	37.04	100.00	1.000	1.000	dd
b23aug19a-6	CS3 UD190207-04	100.000	37.06	100.00	1.000	1.000	dd
b23aug19a-7	CS4 UD190207-05	100.000	37.05	100.00	1.000	1.000	dd
b23aug19a-8	CS5 UD190207-06	100.000	37.05	100.00	1.000	1.000	dd

Compound name: 37Cl-2378-TCDD
Response Factor: 1.07655
RRF SD: 0.0614964, Relative SD: 5.71235
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-3	CS0.5 UD190207-01	0.250	31.22	0.25	1.067	1.077	bd
b23aug19a-4	CS1 UD190207-02	0.500	31.22	0.47	1.002	1.077	bd
b23aug19a-5	CS2 UD190207-03	2.000	31.22	1.89	1.015	1.077	bb

Quantify Compound Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Compound name: 37Cl-2378-TCDD

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
b23aug19a-6	CS3 UD190207-04	10.000	31.23	10.14	1.091	1.077	bb
b23aug19a-7	CS4 UD190207-05	40.000	31.22	41.68	1.122	1.077	bb
b23aug19a-8	CS5 UD190207-06	200.000	31.21	215.80	1.162	1.077	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

28 Aug 19

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b26jul19.mdb 29 Jul 2019 08:44:01
Calibration: 26 Aug 2019 08:59:46

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.51e3	3.42e3	5.93e3	31.19	1.000	0.73	NO	0.253	0.902	0.891	3.89	0.0274	3.59e4	2535	14.2	5.79e4	1269	45.6	bb	bb
2	12378-PeCDD	1.08e4	7.07e3	1.79e4	34.14	1.001	1.53	NO	1.219	0.829	0.850	3.61	0.0276	2.23e5	1872	119.0	1.50e5	1264	118.3	bb	bb
3	123478-HxCDD	9.08e3	7.04e3	1.61e4	36.73	1.000	1.29	NO	1.236	0.923	0.934	2.31	0.0352	1.69e5	1828	92.4	1.25e5	1774	70.7	bd	dd
4	123678-HxCDD	1.08e4	8.90e3	1.97e4	36.82	1.000	1.22	NO	1.151	0.815	0.885	6.03	0.0353	1.78e5	1828	97.2	1.57e5	1774	88.3	db	dd
5	123789-HxCDD	9.24e3	7.71e3	1.69e4	37.06	1.007	1.20	NO	1.147	0.814	0.887	7.79	0.0360	1.43e5	1828	78.0	1.13e5	1774	63.9	bd	db
6	1234678-HpCDD	6.91e3	6.55e3	1.35e4	40.12	1.000	1.05	NO	1.214	0.917	0.944	6.68	0.0533	9.36e4	1345	69.6	8.18e4	1382	59.2	bd	bd
7	OCDD	1.04e4	1.11e4	2.15e4	44.38	1.000	0.94	NO	2.362	0.864	0.914	7.18	0.101	9.36e4	1322	70.8	9.80e4	1534	63.9	bd	bd
8	2378-TCDF	2.71e3	3.79e3	6.50e3	30.46	1.000	0.72	NO	0.242	0.865	0.893	4.88	0.0314	3.33e4	1099	30.3	4.63e4	2418	19.1	bb	bb
9	12378-PeCDF	1.61e4	1.01e4	2.62e4	33.33	1.000	1.60	NO	1.250	0.908	0.908	4.08	0.0255	3.22e5	2120	151.6	2.34e5	2316	101.2	bd	bb
10	23478-PeCDF	1.69e4	1.08e4	2.77e4	33.93	1.000	1.57	NO	1.164	0.905	0.971	4.12	0.0233	3.64e5	2120	171.7	2.39e5	2316	103.2	bd	bb
11	123478-HxCDF	1.26e4	1.08e4	2.34e4	36.03	1.000	1.17	NO	1.236	1.123	1.135	2.68	0.0324	2.30e5	2466	93.4	2.09e5	2170	96.6	bd	bd
12	123678-HxCDF	1.50e4	1.18e4	2.68e4	36.12	1.000	1.27	NO	1.198	1.010	1.054	6.23	0.0310	2.54e5	2466	102.9	2.08e5	2170	95.9	dd	dd
13	234678-HxCDF	1.36e4	1.10e4	2.47e4	36.61	1.000	1.24	NO	1.229	1.111	1.130	4.65	0.0342	2.23e5	2466	90.4	1.90e5	2170	87.6	bd	bd
14	123789-HxCDF	1.13e4	9.43e3	2.07e4	37.37	1.000	1.20	NO	1.262	1.073	1.063	3.46	0.0495	1.72e5	2466	69.8	1.48e5	2170	68.3	bb	bd
15	1234678-HpCDF	1.05e4	1.00e4	2.05e4	38.89	1.000	1.04	NO	1.177	1.122	1.191	5.88	0.0452	1.43e5	2107	67.7	1.33e5	1966	67.8	bb	bd
16	1234789-HpCDF	7.55e3	7.83e3	1.54e4	40.78	1.000	0.96	NO	1.196	1.174	1.227	4.64	0.0727	8.60e4	2107	40.8	8.70e4	1966	44.2	bb	bb
17	OCDF	1.08e4	1.15e4	2.23e4	44.67	1.007	0.93	NO	2.197	0.893	1.017	10.92	0.139	9.06e4	2272	39.9	9.47e4	2135	44.3	bb	bb
18	13C-2378-TCDD	1.13e6	1.50e6	2.63e6	31.21	1.018	0.75	NO	100.208	1.153	1.151	2.76	0.0786	1.68e7	6615	2537.4	2.20e7	3158	6971.1	bb	bd
19	13C-12378-PeCDD	1.05e6	6.78e5	1.73e6	34.12	1.112	1.55	NO	97.165	0.757	0.779	5.79	0.115	2.03e7	6665	3046.8	1.33e7	3043	4368.2	bb	bb
20	13C-123478-HxCDD	7.72e5	6.24e5	1.40e6	36.72	0.991	1.24	NO	96.933	0.765	0.789	2.92	0.166	1.52e7	5640	2687.4	1.21e7	8014	1514.3	bd	bd
21	13C-123678-HxCDD	1.07e6	8.65e5	1.94e6	36.81	0.993	1.24	NO	100.366	1.061	1.057	2.47	0.124	1.59e7	5640	2823.0	1.29e7	8014	1610.4	dd	dd
22	13C-1234678-HpCDD	5.93e5	5.82e5	1.17e6	40.11	1.083	1.02	NO	101.644	0.643	0.633	2.50	0.165	6.83e6	5079	1345.0	6.50e6	5835	1114.0	bb	bd
23	13C-OCDD	9.39e5	1.06e6	2.00e6	44.38	1.198	0.89	NO	200.233	0.547	0.546	4.53	0.209	7.31e6	5078	1440.1	8.29e6	6825	1214.0	bd	bd
24	13C-2378-TCDF	1.29e6	1.72e6	3.00e6	30.45	0.993	0.75	NO	101.434	1.317	1.299	1.86	0.125	1.35e7	11121	1210.2	1.75e7	6427	2715.6	bb	bd
25	13C-12378-PeCDF	1.41e6	8.97e5	2.31e6	33.32	1.086	1.57	NO	96.830	1.013	1.046	3.57	0.127	2.93e7	7757	3778.4	1.88e7	6589	2852.5	bb	bb
26	13C-23478-PeCDF	1.51e6	9.31e5	2.44e6	33.92	1.106	1.63	NO	99.900	1.072	1.073	5.25	0.124	3.04e7	7757	3913.6	1.94e7	6589	2948.8	bb	bb
27	13C-123478-HxCDF	5.86e5	1.08e6	1.67e6	36.02	0.972	0.54	NO	100.057	0.913	0.912	1.25	0.236	1.11e7	6806	1627.2	2.09e7	15688	1333.9	bd	bd
28	13C-123678-HxCDF	7.16e5	1.40e6	2.12e6	36.11	0.975	0.51	NO	97.765	1.162	1.188	3.37	0.181	1.20e7	6806	1757.4	2.29e7	15688	1458.8	db	db
29	13C-234678-HxCDF	6.26e5	1.15e6	1.78e6	36.60	0.988	0.54	NO	96.340	0.973	1.010	3.04	0.213	1.06e7	6806	1555.4	2.00e7	15688	1275.3	bb	bb
30	13C-123789-HxCDF	5.47e5	9.97e5	1.54e6	37.36	1.008	0.55	NO	99.389	0.846	0.852	1.59	0.253	7.80e6	6806	1146.2	1.49e7	15688	949.1	bd	bb
31	13C-1234678-HpCDF	4.56e5	1.01e6	1.46e6	38.88	1.049	0.45	NO	102.289	0.802	0.784	2.45	0.188	5.90e6	6465	912.7	1.29e7	8892	1452.1	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	3.24e5	7.24e5	1.05e6	40.77	1.100	0.45	NO	102.244	0.574	0.562	3.62	0.262	3.53e6	6465	545.6	7.85e6	8892	883.4	bb	bb
33	13C-1234-TCDD	9.95e5	1.29e6	2.28e6	30.67	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.0905	1.18e7	6615	1780.5	1.51e7	3158	4779.0	bb	bb
34	13C-123789-HxCDD	1.01e6	8.18e5	1.82e6	37.05	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.131	1.44e7	5640	2555.3	1.18e7	8014	1467.9	dd	dd
35	37Cl-2378-TCDD	6.09e3		6.09e3	31.22	1.018			0.248	1.067	1.077	5.71	0.0178	8.72e4	2065	42.2				bd	

Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

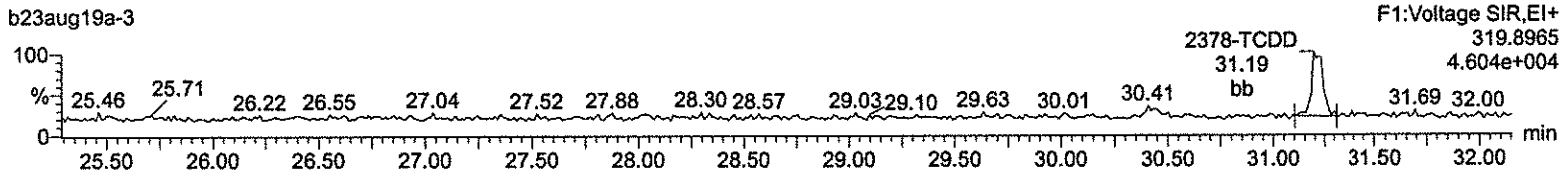
Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

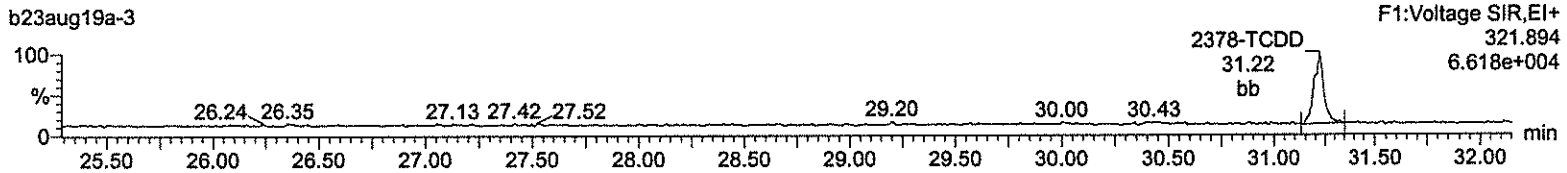
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b26jul19.mdb 29 Jul 2019 08:44:01
Calibration: 26 Aug 2019 08:59:46

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

Total-tetradioxins



Total-tetradioxins



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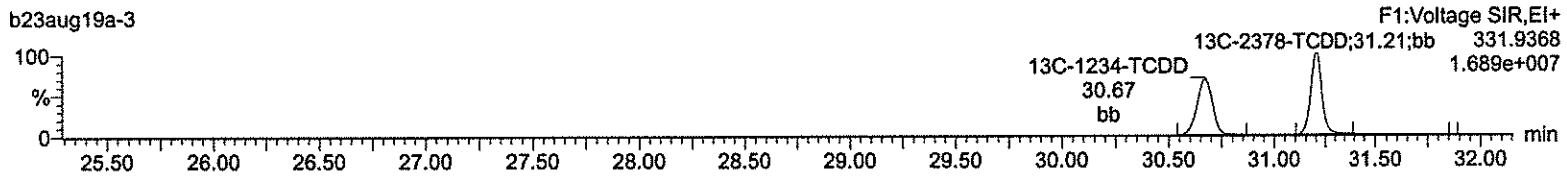

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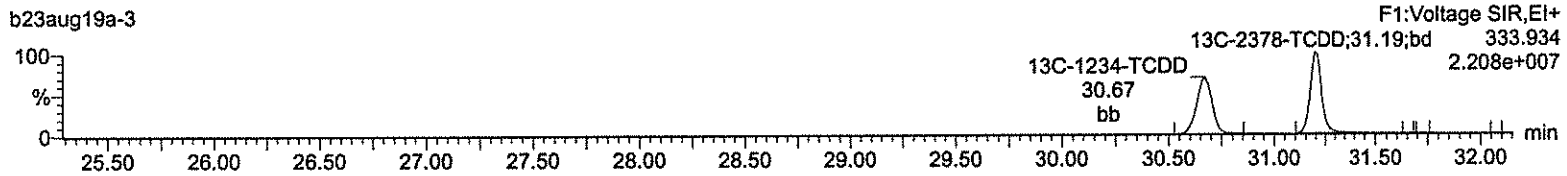
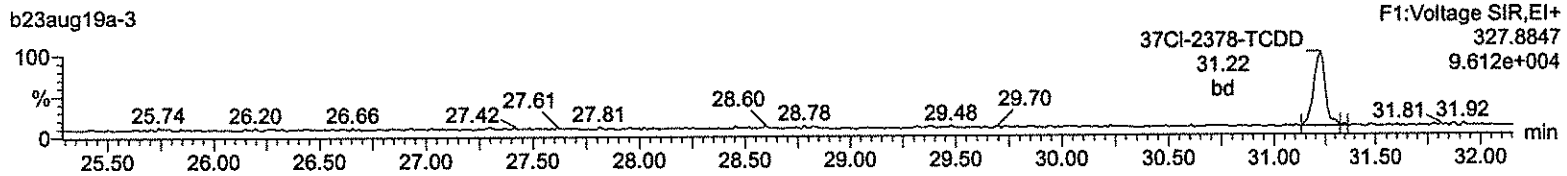
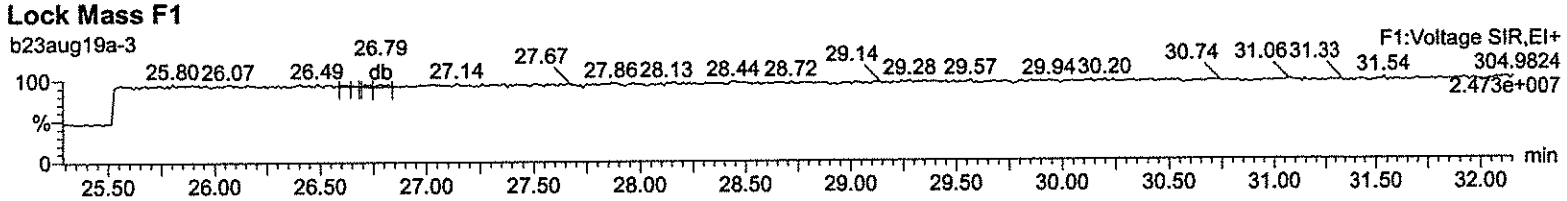


37Cl-2378-TCDD



Lock Mass F1



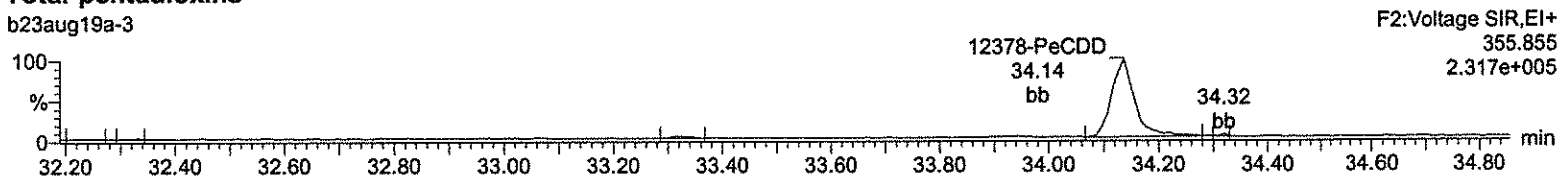
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

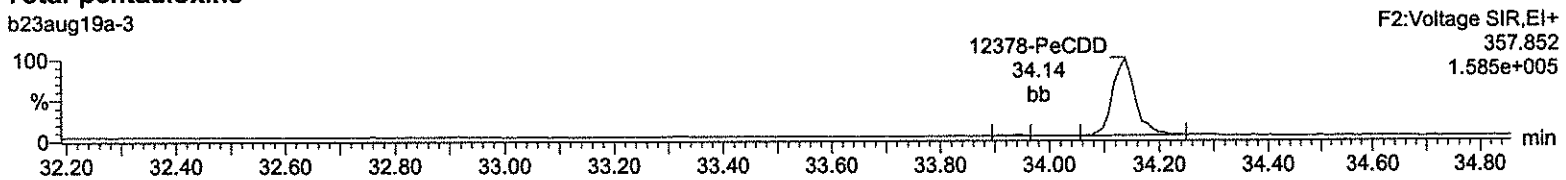
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

Total-pentadioxins



Total-pentadioxins



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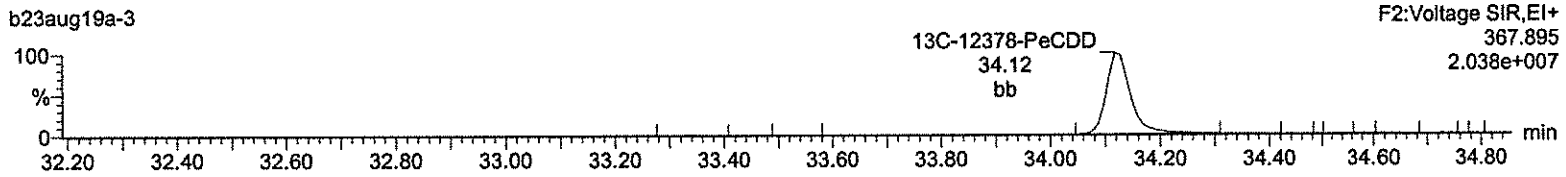

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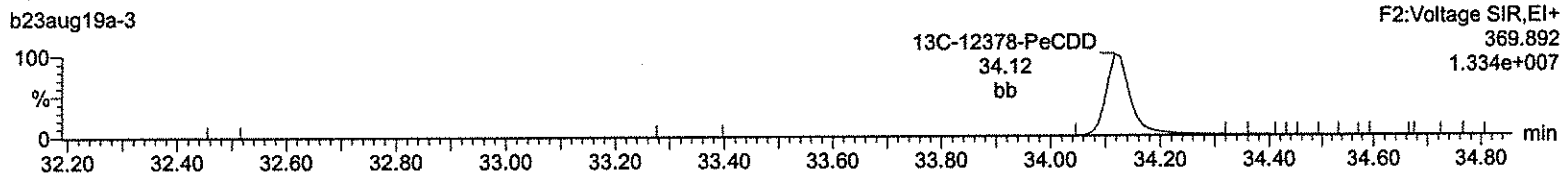
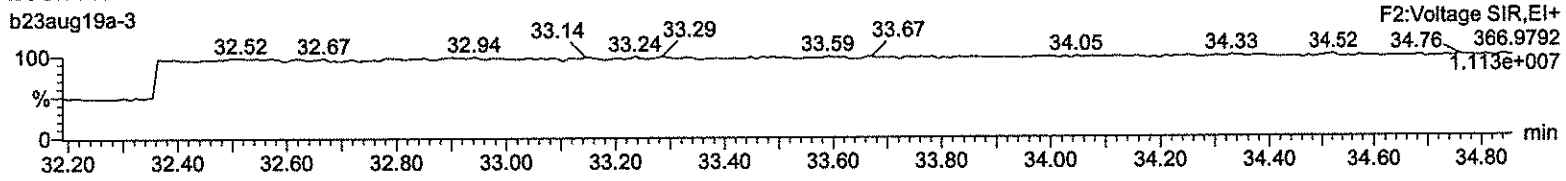


Lock Mass F2



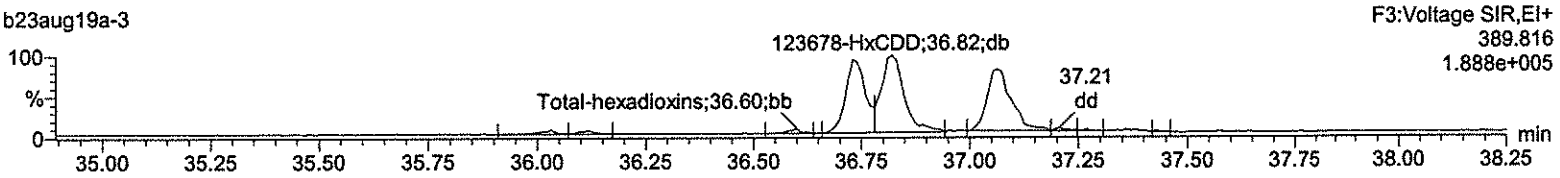
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

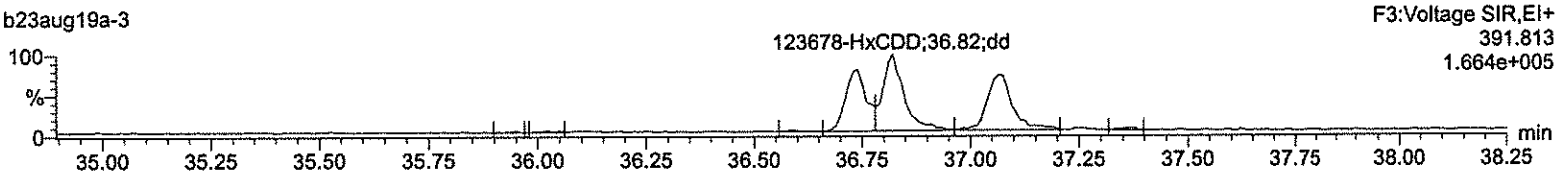
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

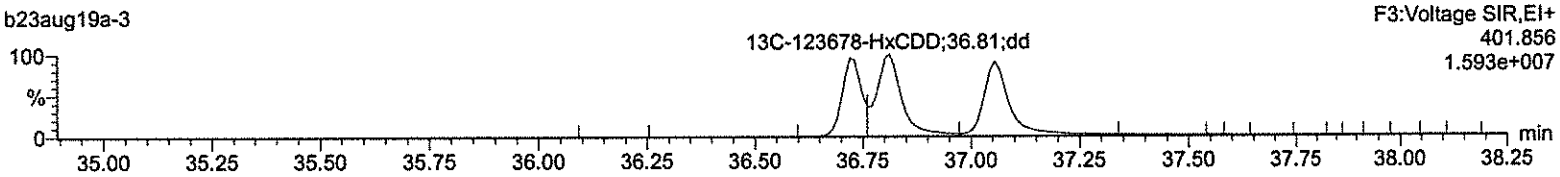
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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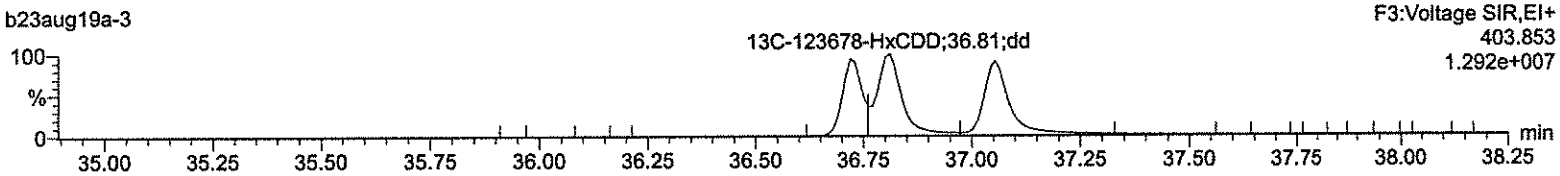
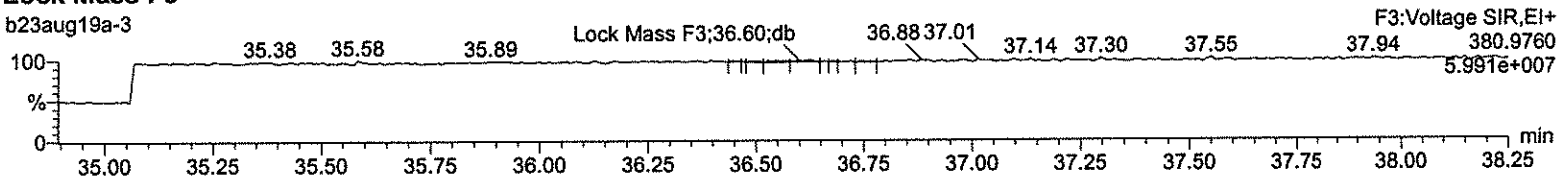


Lock Mass F3



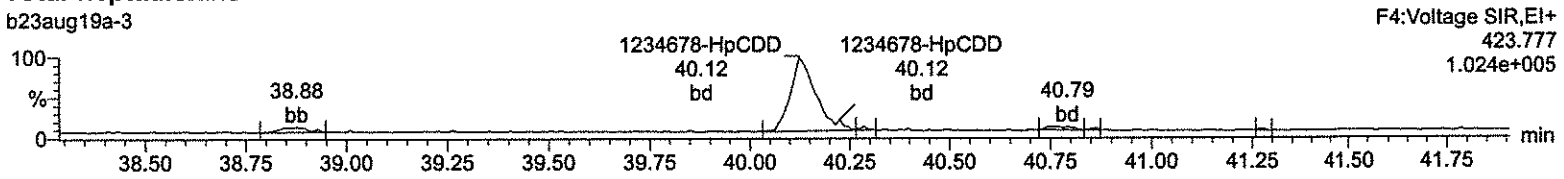
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

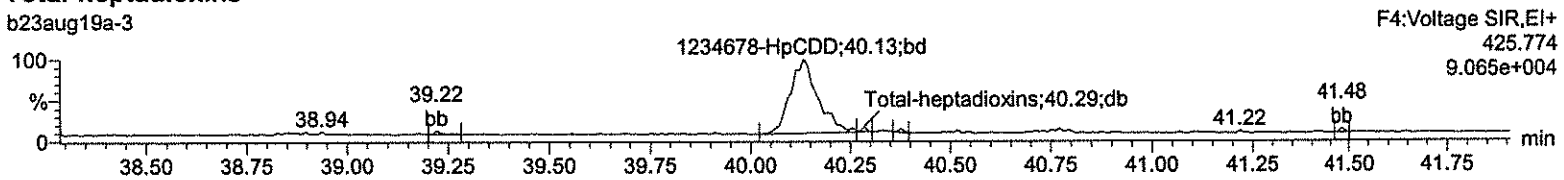
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

Total-heptadioxins



Total-heptadioxins



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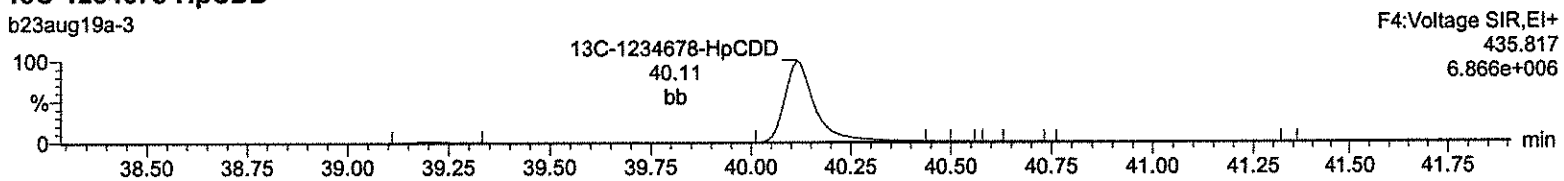
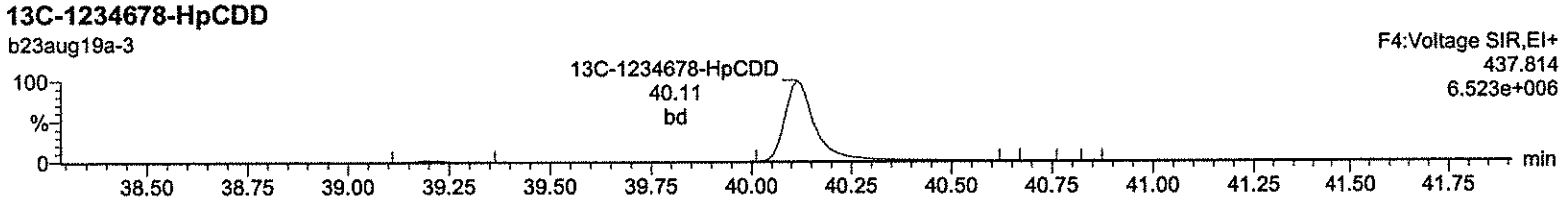
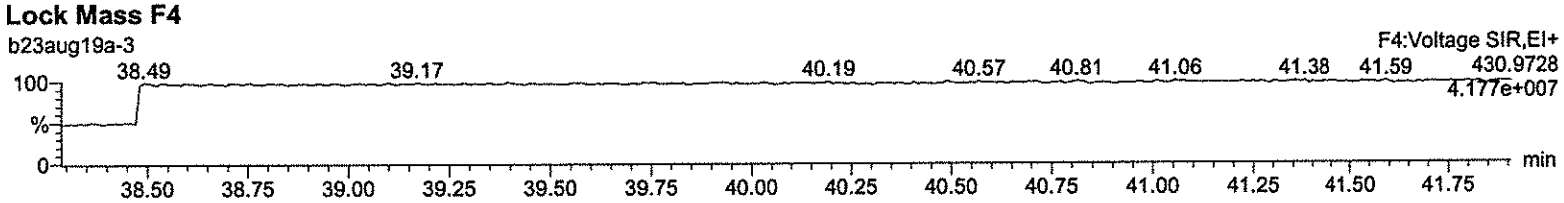


13C-1234678-HpCDD



Lock Mass F4



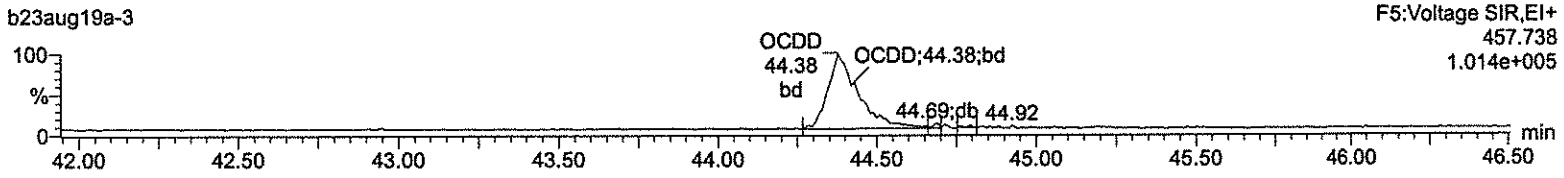
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

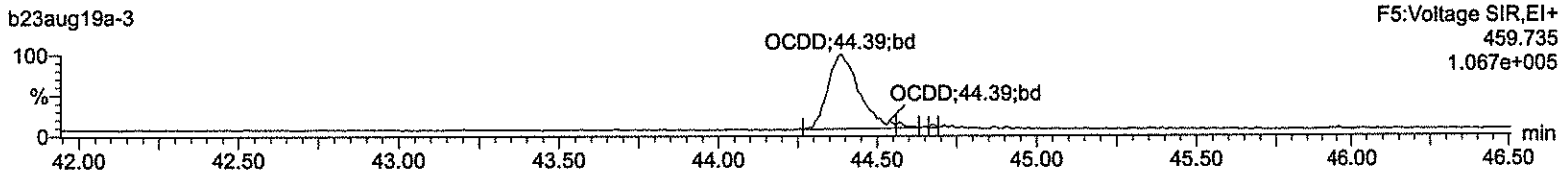
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

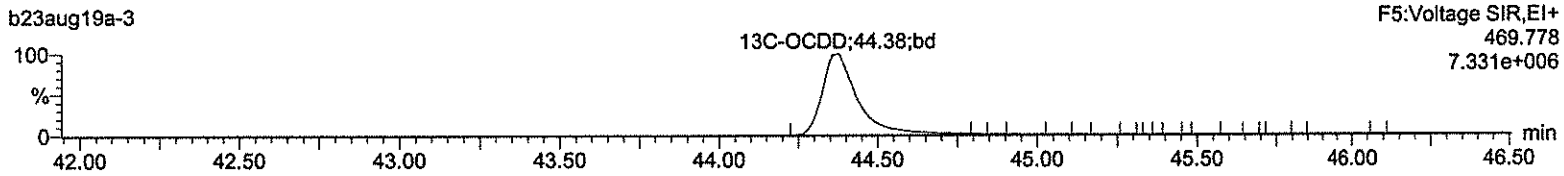
OCDD



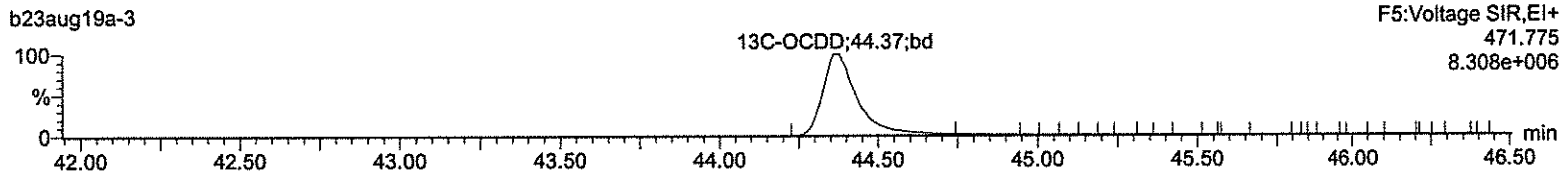
OCDD



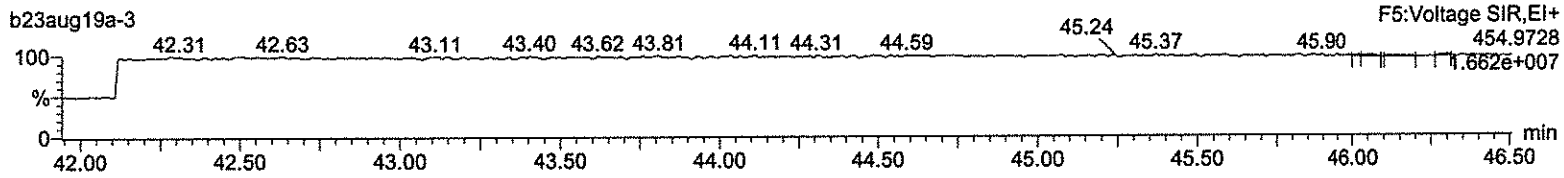
13C-OCDD



13C-OCDD



Lock Mass F5



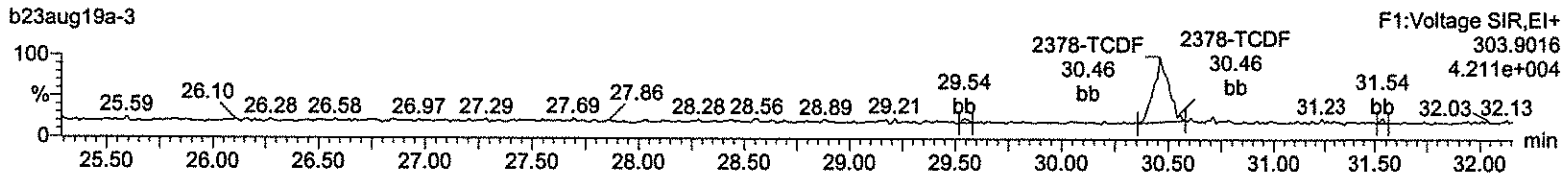
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

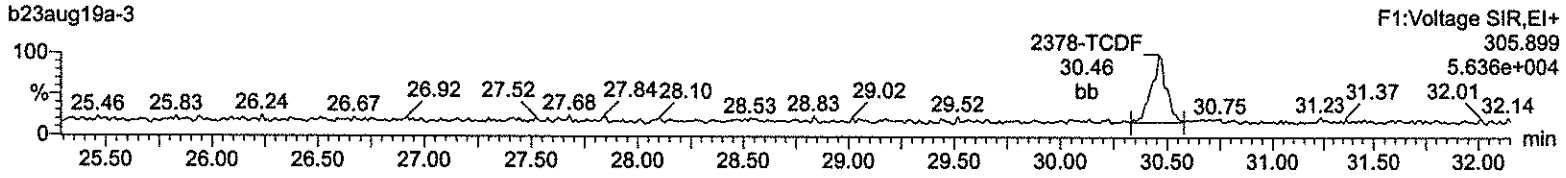
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

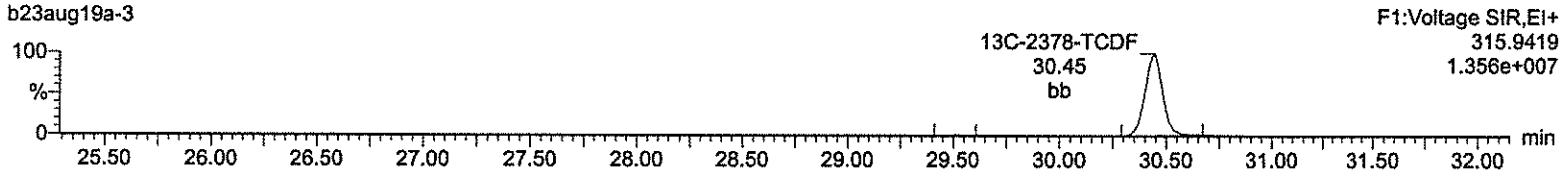
Total-tetrafurans



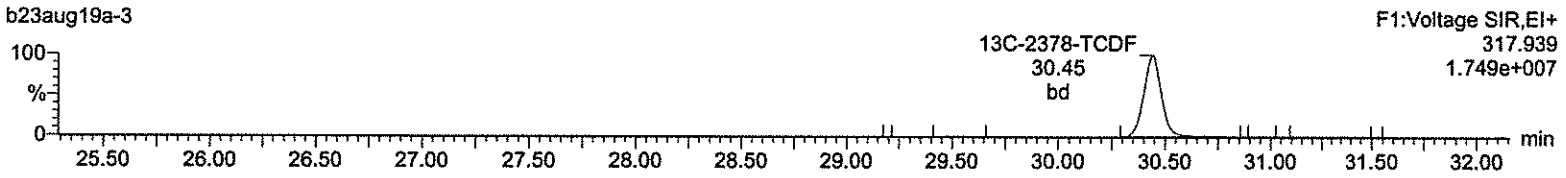
Total-tetrafurans



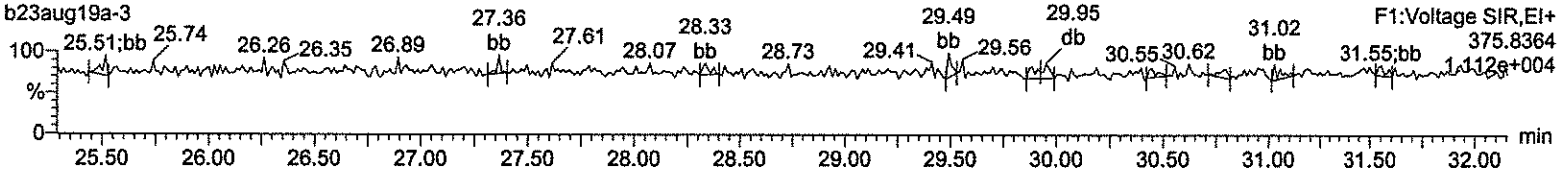
13C-2378-TCDF



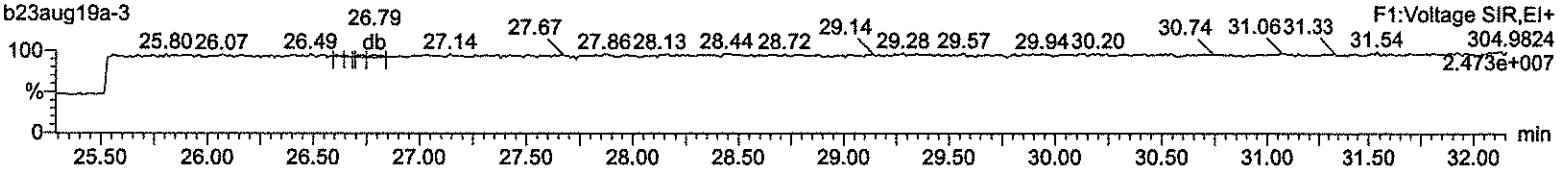
13C-2378-TCDF



HxDPE



Lock Mass F1



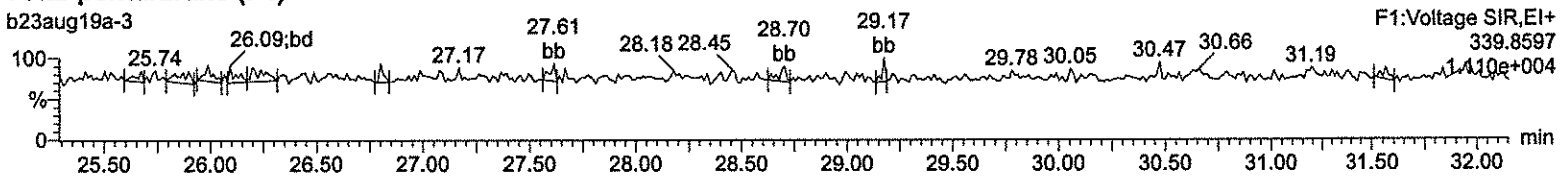
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

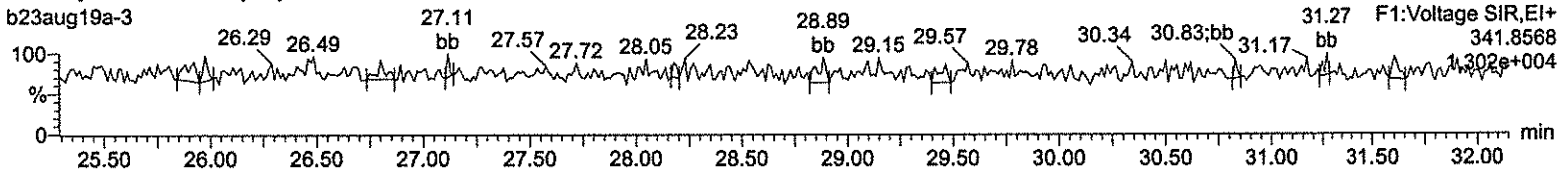
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

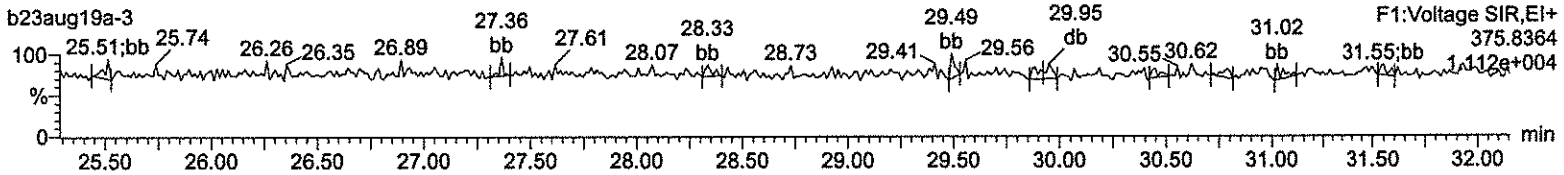
Total-pentafurans (F1)



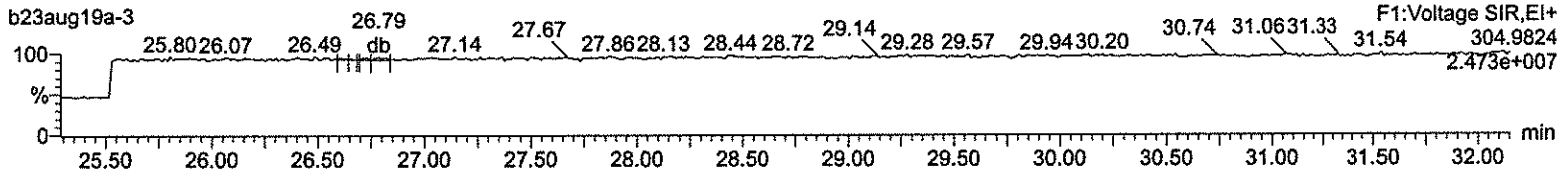
Total-pentafurans (F1)



HxDPE



Lock Mass F1



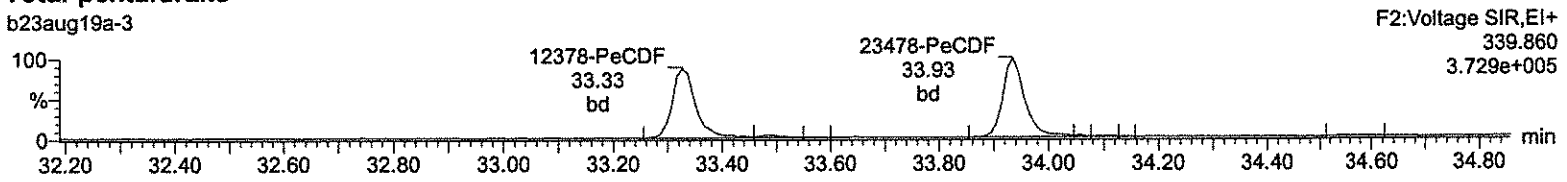
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

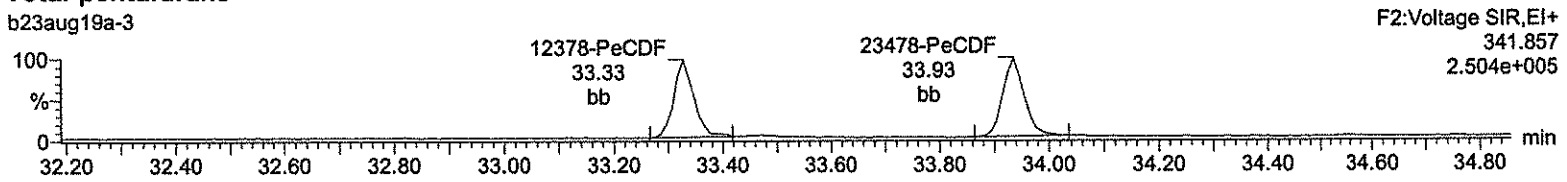
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

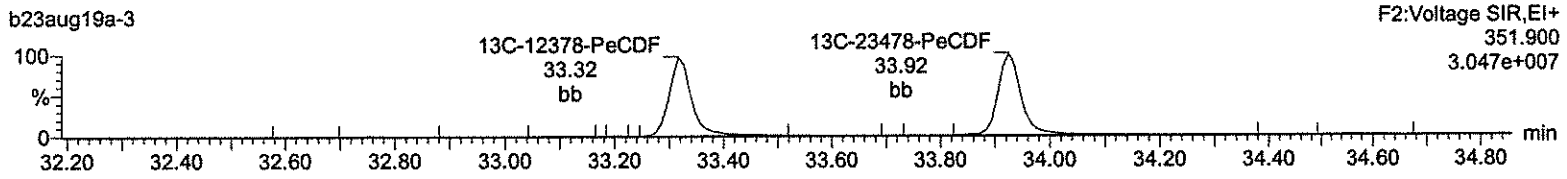
Total-pentafurans



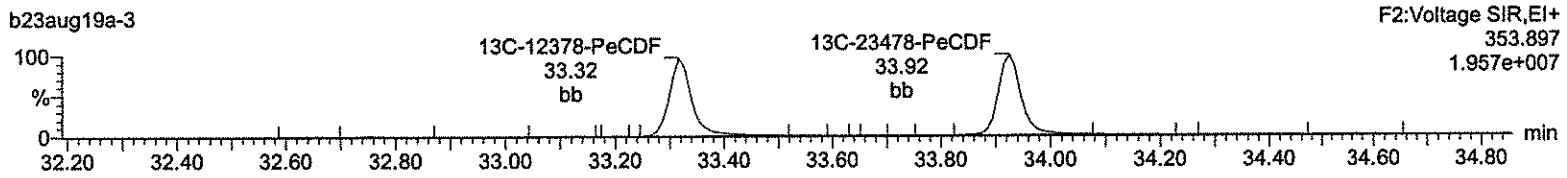
Total-pentafurans



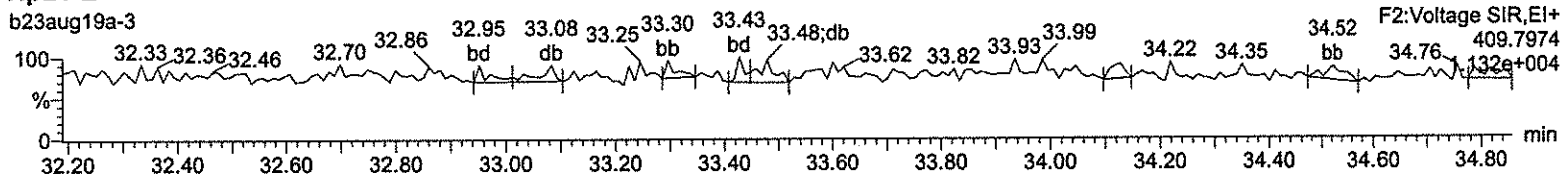
13C-12378-PeCDF



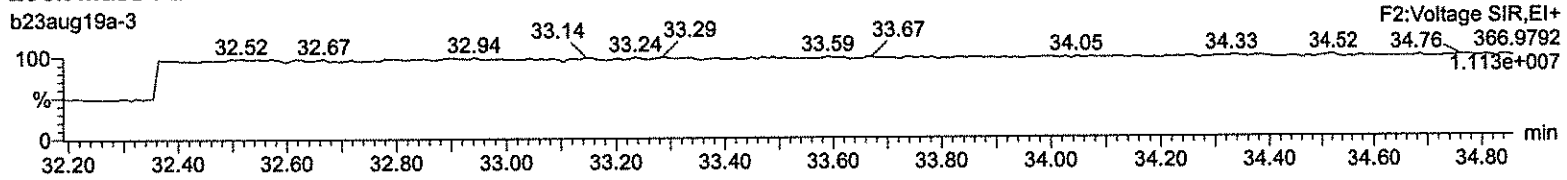
13C-12378-PeCDF



HpDPE



Lock Mass F2



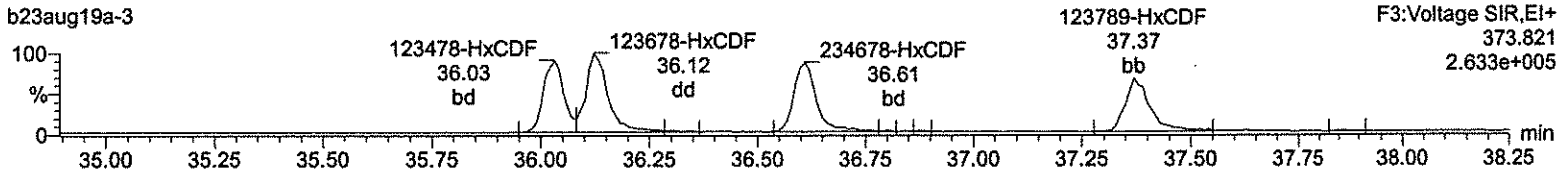
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

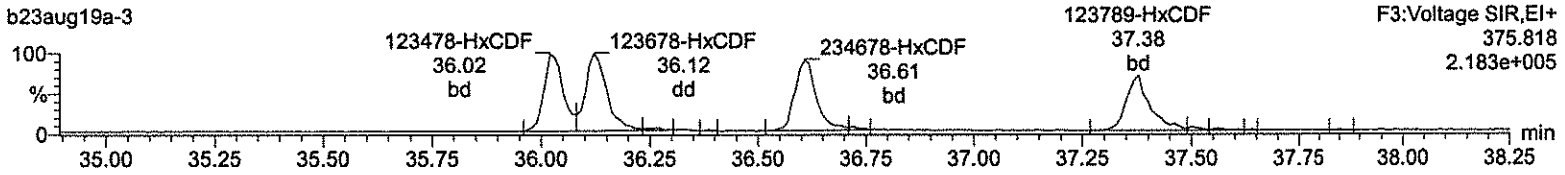
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

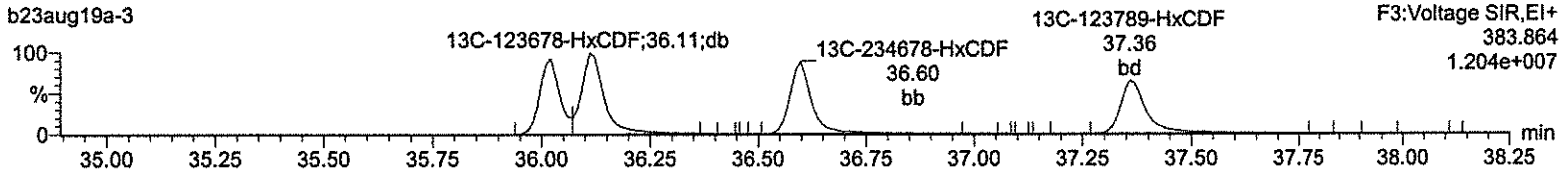
Total-hexafurans



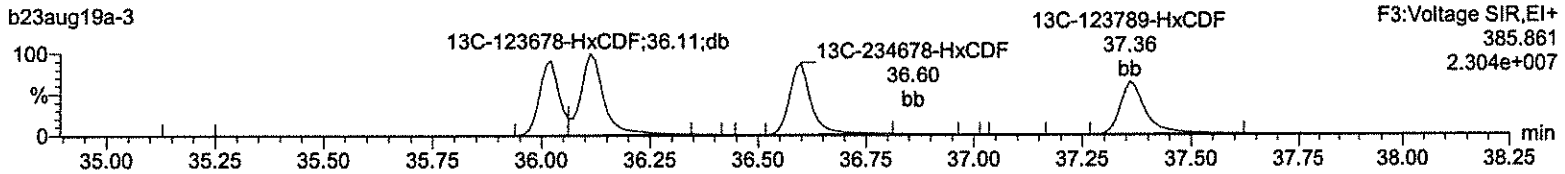
Total-hexafurans



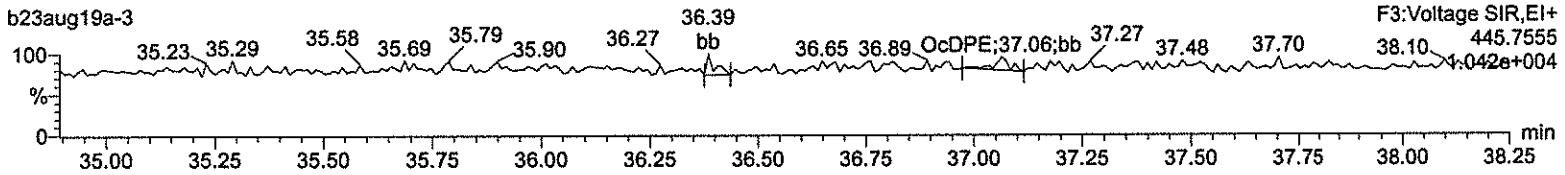
13C-123478-HxCDF



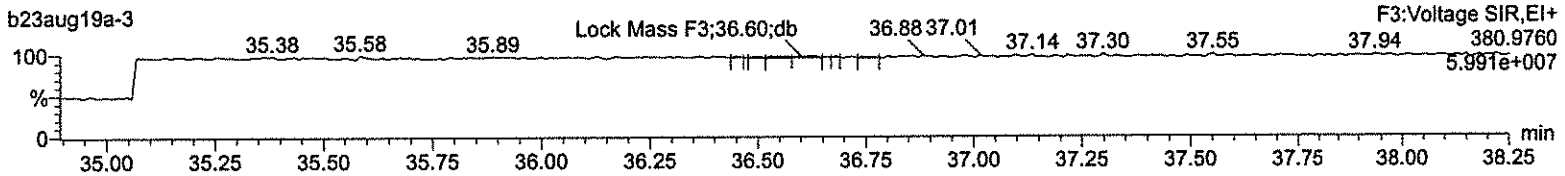
13C-123478-HxCDF



OcDPE



Lock Mass F3



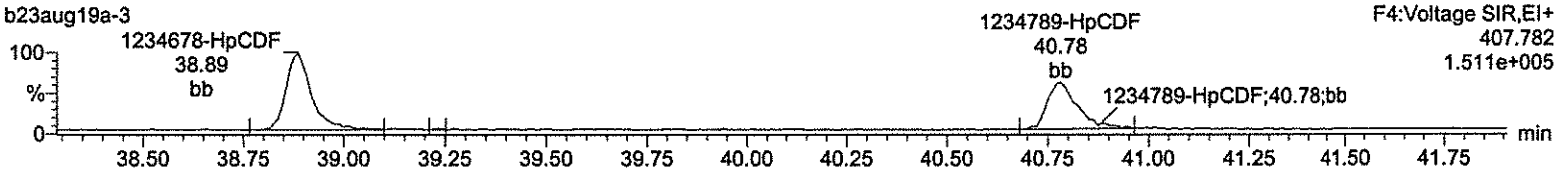
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

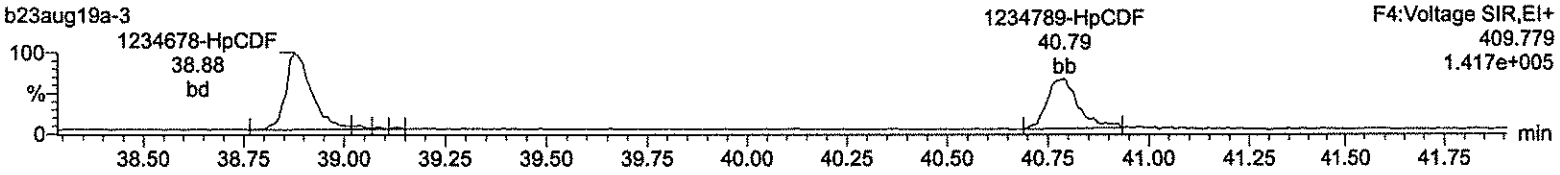
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

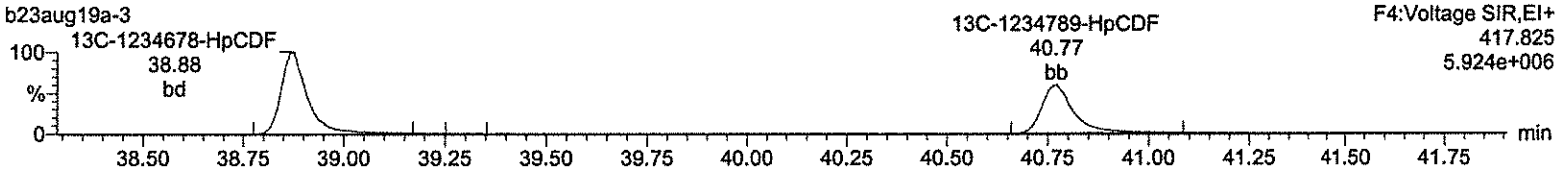
Total-heptafurans



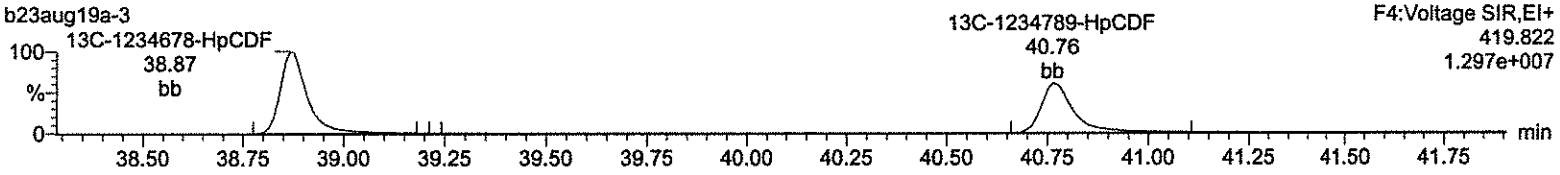
Total-heptafurans



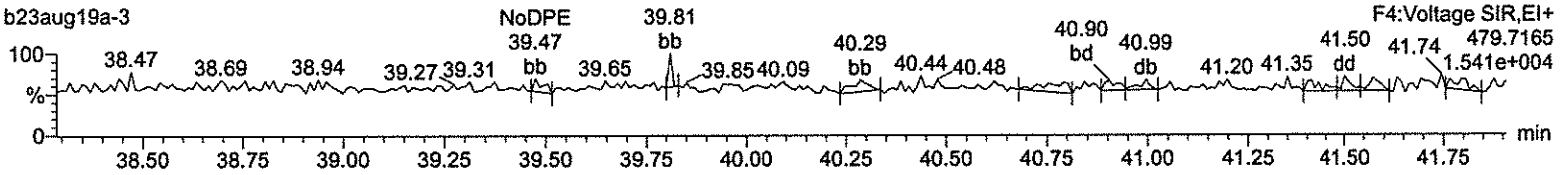
13C-1234678-HpCDF



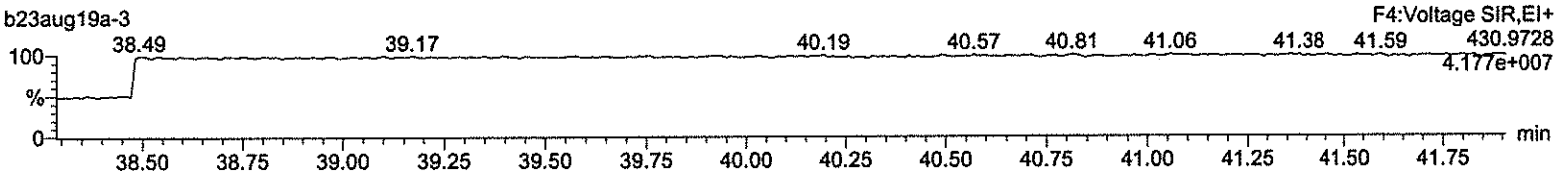
13C-1234678-HpCDF



NoDPE



Lock Mass F4



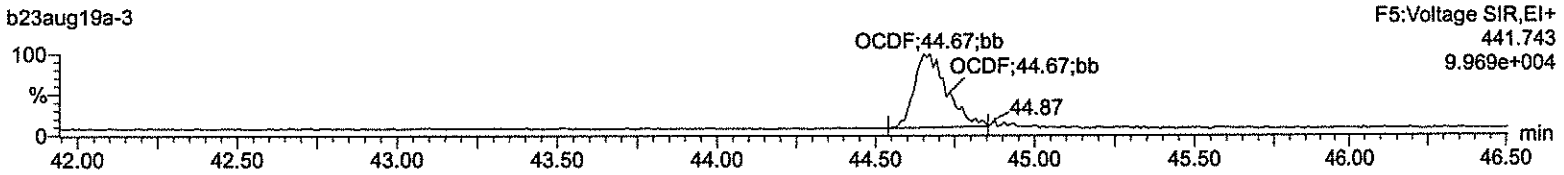
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

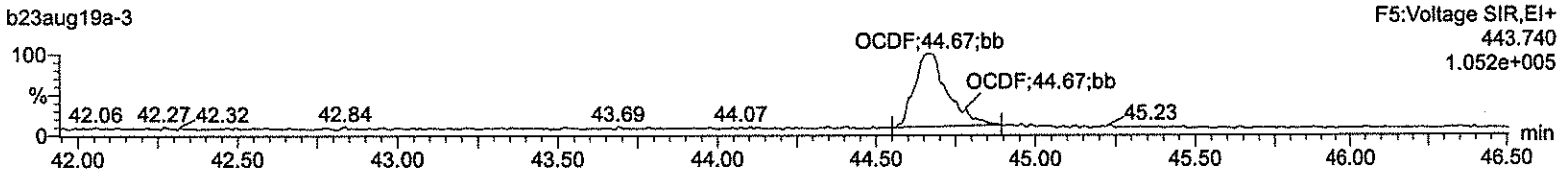
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-3, Date: 23-Aug-2019, Time: 09:52:40, ID: CS0.5 UD190207-01

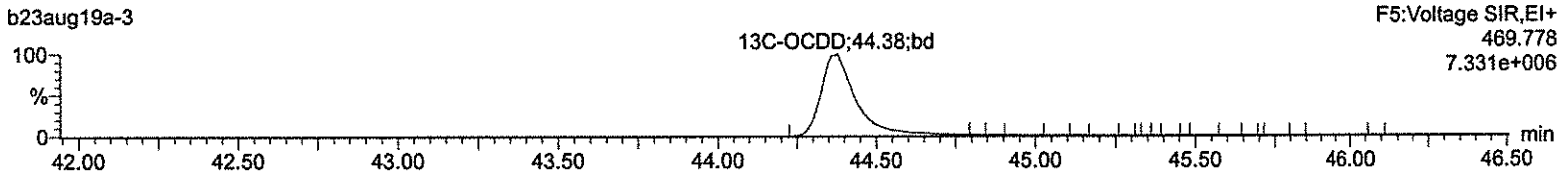
OCDF



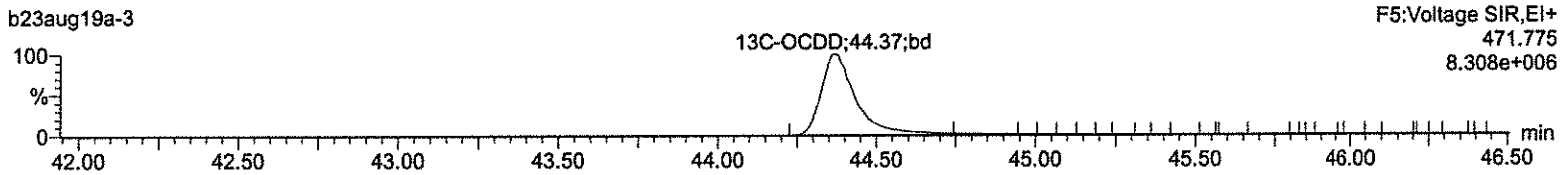
OCDF



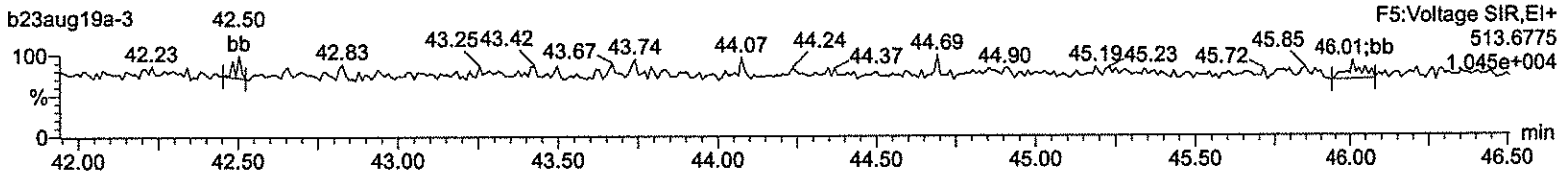
13C-OCDD



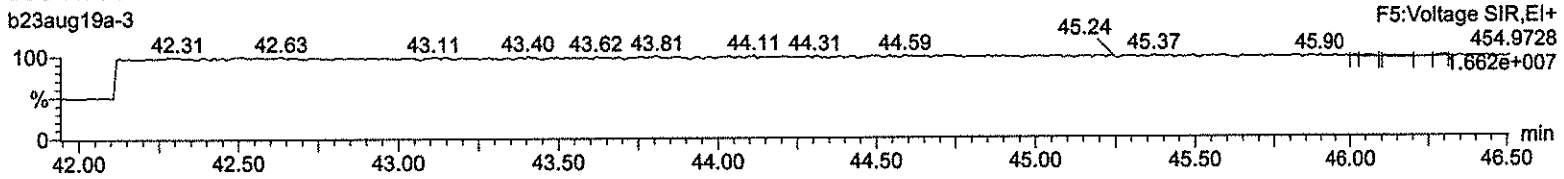
13C-OCDD



DeDPE



Lock Mass F5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

26Aug19

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.47e3	6.24e3	1.07e4	31.22	1.001	0.72	NO	0.473	0.843	0.891	3.89	0.0262	7.55e4	2311	32.7	9.33e4	1276	73.1	bb	bb
2	12378-PeCDD	2.06e4	1.38e4	3.44e4	34.14	1.001	1.49	NO	2.394	0.814	0.850	3.61	0.0342	4.03e5	2551	158.0	2.76e5	1271	217.0	bd	bb
3	123478-HxCDD	1.82e4	1.34e4	3.17e4	36.73	1.000	1.36	NO	2.469	0.922	0.934	2.31	0.0577	3.18e5	2957	107.6	2.58e5	2712	95.0	dd	bd
4	123678-HxCDD	2.15e4	1.76e4	3.91e4	36.82	1.000	1.22	NO	2.321	0.822	0.885	6.03	0.0567	3.22e5	2957	108.8	2.77e5	2712	102.1	dd	db
5	123789-HxCDD	1.91e4	1.35e4	3.26e4	37.06	1.007	1.42	NO	2.243	0.796	0.887	7.79	0.0583	2.88e5	2957	97.5	2.10e5	2712	77.4	dd	bb
6	1234678-HpCDD	1.19e4	1.18e4	2.37e4	40.13	1.001	1.01	NO	2.216	0.837	0.944	6.68	0.0779	1.42e5	1881	75.3	1.44e5	1801	80.1	bb	bb
7	OCDD	1.87e4	2.10e4	3.97e4	44.38	1.000	0.89	NO	4.559	0.833	0.914	7.18	0.0983	1.63e5	1252	130.1	1.81e5	1501	120.5	bd	bb
8	2378-TCDF	5.38e3	6.91e3	1.23e4	30.46	1.001	0.78	NO	0.470	0.840	0.893	4.88	0.0357	6.72e4	1178	57.0	7.17e4	2725	26.3	bd	bb
9	12378-PeCDF	3.04e4	2.01e4	5.05e4	33.33	1.000	1.52	NO	2.361	0.858	0.908	4.08	0.0261	6.36e5	1960	324.8	4.66e5	2521	185.0	bd	bd
10	23478-PeCDF	3.32e4	2.23e4	5.55e4	33.93	1.000	1.49	NO	2.448	0.951	0.971	4.12	0.0234	6.92e5	1960	352.9	4.68e5	2521	185.7	bb	bd
11	123478-HxCDF	2.49e4	2.06e4	4.56e4	36.03	1.001	1.21	NO	2.454	1.114	1.135	2.68	0.0352	4.65e5	2593	179.5	3.84e5	2430	157.9	bd	bd
12	123678-HxCDF	2.87e4	2.38e4	5.25e4	36.12	1.000	1.20	NO	2.249	0.949	1.054	6.23	0.0333	4.78e5	2593	184.4	4.01e5	2430	165.1	dd	dd
13	234678-HxCDF	2.58e4	2.27e4	4.85e4	36.60	1.000	1.13	NO	2.317	1.047	1.130	4.65	0.0366	4.61e5	2593	177.8	3.73e5	2430	153.6	bb	bd
14	123789-HxCDF	2.10e4	1.67e4	3.78e4	37.37	1.000	1.26	NO	2.357	1.002	1.063	3.46	0.0571	3.01e5	2593	116.1	2.60e5	2430	107.2	bd	bd
15	1234678-HpCDF	1.99e4	1.90e4	3.90e4	38.89	1.001	1.05	NO	2.332	1.111	1.191	5.88	0.0512	2.80e5	2112	132.8	2.53e5	2164	117.1	bd	bb
16	1234789-HpCDF	1.45e4	1.39e4	2.84e4	40.78	1.000	1.05	NO	2.342	1.149	1.227	4.64	0.0803	1.63e5	2112	77.1	1.60e5	2164	74.0	bb	bb
17	OCDF	2.09e4	2.21e4	4.30e4	44.66	1.007	0.94	NO	4.439	0.903	1.017	10.92	0.115	1.72e5	1252	137.1	2.06e5	2321	88.9	bd	bd
18	13C-2378-TCDD	1.13e6	1.41e6	2.54e6	31.19	1.017	0.80	NO	97.888	1.127	1.151	2.76	0.0820	1.71e7	6848	2501.0	2.19e7	3601	6082.0	bb	bb
19	13C-12378-PeCDD	1.03e6	6.64e5	1.69e6	34.12	1.112	1.54	NO	96.235	0.750	0.779	5.79	0.103	1.99e7	6161	3233.3	1.31e7	2722	4828.1	bb	bb
20	13C-123478-HxCDD	7.60e5	6.14e5	1.37e6	36.72	0.991	1.24	NO	97.497	0.769	0.789	2.92	0.127	1.46e7	5568	2616.3	1.19e7	4340	2730.6	bd	bd
21	13C-123678-HxCDD	1.05e6	8.49e5	1.90e6	36.81	0.993	1.24	NO	100.853	1.066	1.057	2.47	0.0949	1.56e7	5568	2807.2	1.28e7	4340	2944.5	dd	dd
22	13C-1234678-HpCDD	5.79e5	5.56e5	1.13e6	40.11	1.083	1.04	NO	100.464	0.636	0.633	2.50	0.197	6.39e6	5728	1115.7	6.15e6	6573	935.3	bd	bd
23	13C-OCDD	8.93e5	1.01e6	1.91e6	44.37	1.197	0.88	NO	195.518	0.534	0.546	4.53	0.212	7.18e6	5041	1424.7	7.99e6	6383	1252.3	bd	bd
24	13C-2378-TCDF	1.25e6	1.68e6	2.93e6	30.43	0.992	0.74	NO	99.994	1.299	1.299	1.86	0.133	1.31e7	11161	1171.3	1.68e7	7915	2128.2	bb	bb
25	13C-12378-PeCDF	1.44e6	9.15e5	2.36e6	33.32	1.086	1.57	NO	99.904	1.045	1.046	3.57	0.173	2.89e7	11456	2524.7	1.84e7	8619	2130.2	bb	bd
26	13C-23478-PeCDF	1.42e6	9.11e5	2.33e6	33.92	1.106	1.56	NO	96.462	1.035	1.073	5.25	0.169	3.01e7	11456	2627.0	1.91e7	8619	2211.6	bb	bb
27	13C-123478-HxCDF	5.55e5	1.08e6	1.64e6	36.01	0.972	0.51	NO	100.571	0.917	0.912	1.25	0.214	1.07e7	7785	1371.0	2.07e7	11527	1795.8	bd	bd
28	13C-123678-HxCDF	7.36e5	1.48e6	2.21e6	36.11	0.975	0.50	NO	104.343	1.240	1.188	3.37	0.165	1.19e7	7785	1526.6	2.28e7	11527	1974.5	db	dd
29	13C-234678-HxCDF	6.15e5	1.24e6	1.85e6	36.59	0.987	0.50	NO	102.695	1.037	1.010	3.04	0.194	1.01e7	7785	1295.9	1.95e7	11527	1693.0	bd	dd
30	13C-123789-HxCDF	5.35e5	9.73e5	1.51e6	37.36	1.008	0.55	NO	99.193	0.845	0.852	1.59	0.230	7.34e6	7785	942.5	1.38e7	11527	1195.6	bd	bb
31	13C-1234678-HpCDF	4.40e5	9.63e5	1.40e6	38.87	1.049	0.46	NO	100.318	0.786	0.784	2.45	0.176	5.50e6	7221	762.0	1.23e7	6400	1917.9	bb	bb
32	13C-1234789-HpCDF	3.04e5	6.86e5	9.90e5	40.77	1.100	0.44	NO	98.764	0.555	0.562	3.62	0.246	3.34e6	7221	462.0	7.47e6	6400	1166.5	bb	bb
33	13C-1234-TCDD	9.86e5	1.27e6	2.25e6	30.67	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.0944	1.21e7	6848	1767.8	1.55e7	3601	4295.8	bb	bb
34	13C-123789-HxCDD	9.84e5	8.00e5	1.78e6	37.05	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.100	1.36e7	5568	2446.0	1.10e7	4340	2532.8	dd	dd
35	37Cl-2378-TCDD	1.13e4		1.13e4	31.22	1.018			0.465	1.002	1.077	5.71	0.0183	1.80e5	2178	82.6				bd	

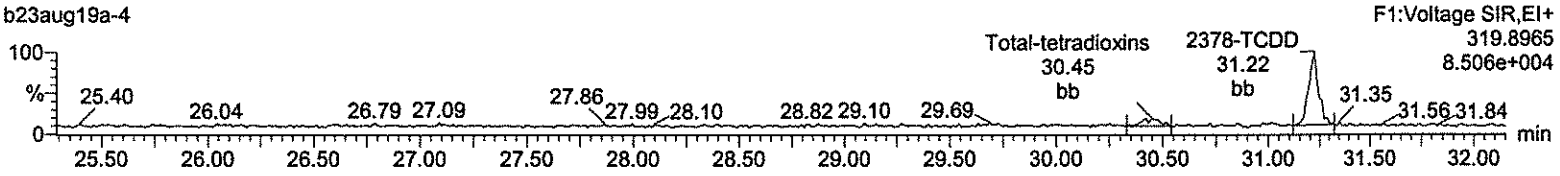
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

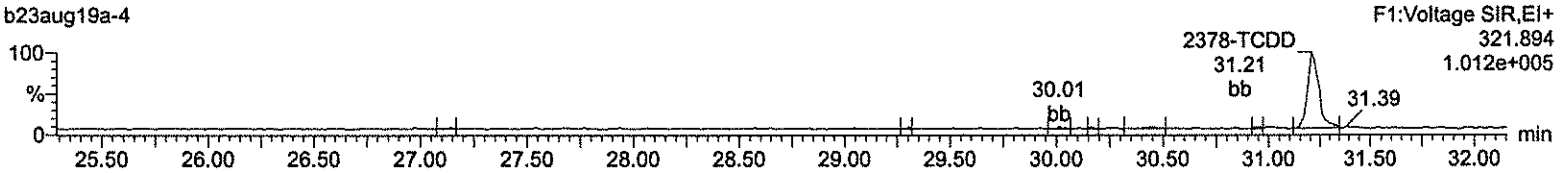
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

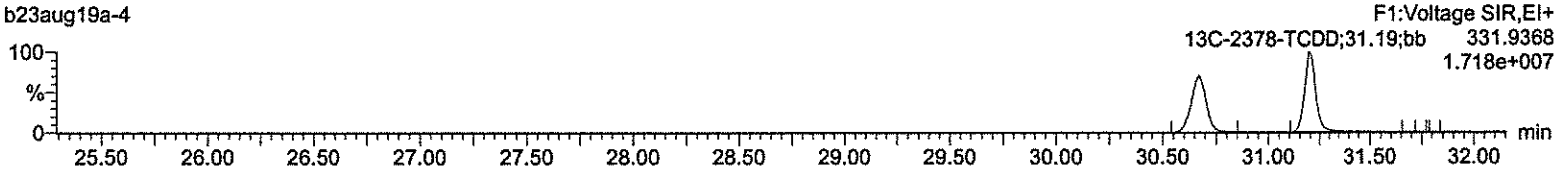
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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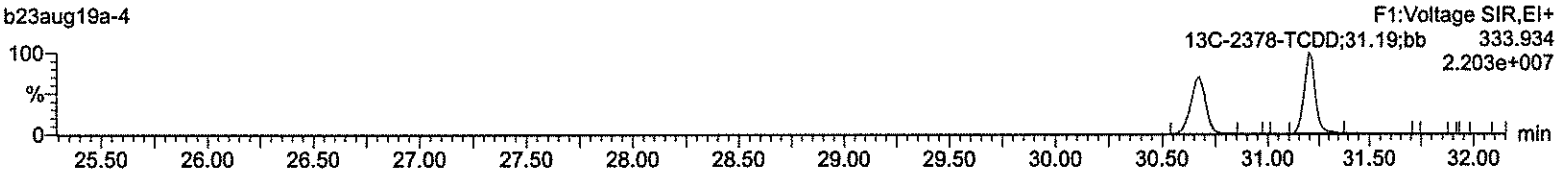
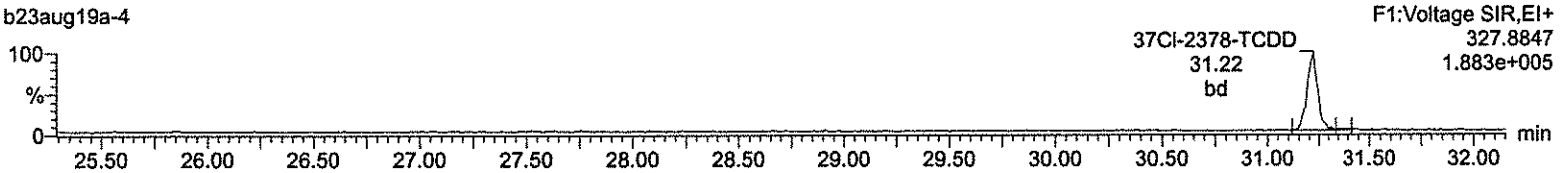
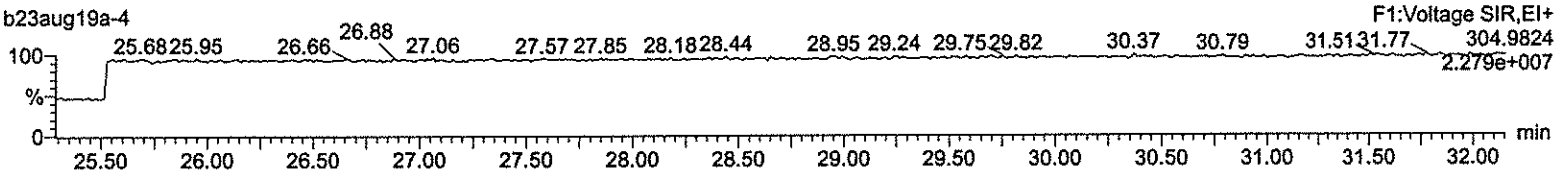


37Cl-2378-TCDD



Lock Mass F1



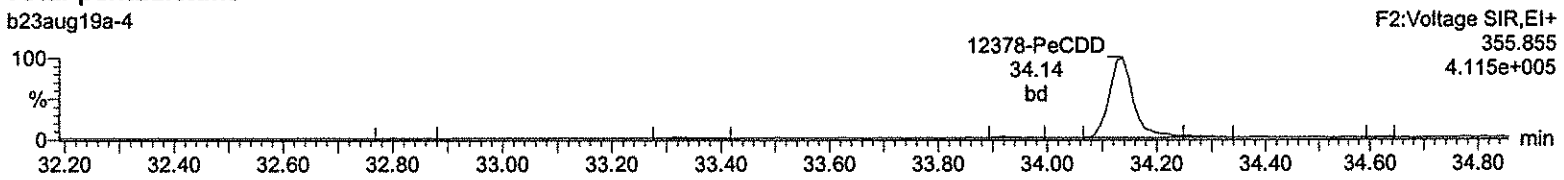
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

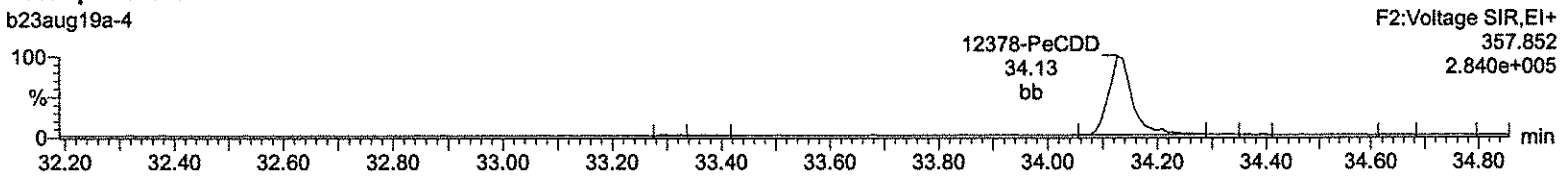
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

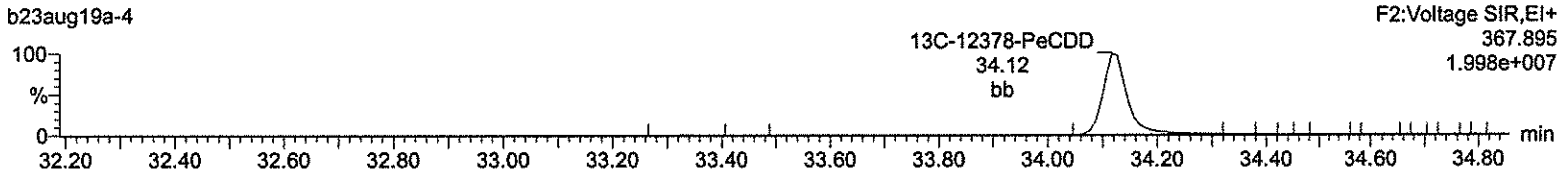
Total-pentadioxins



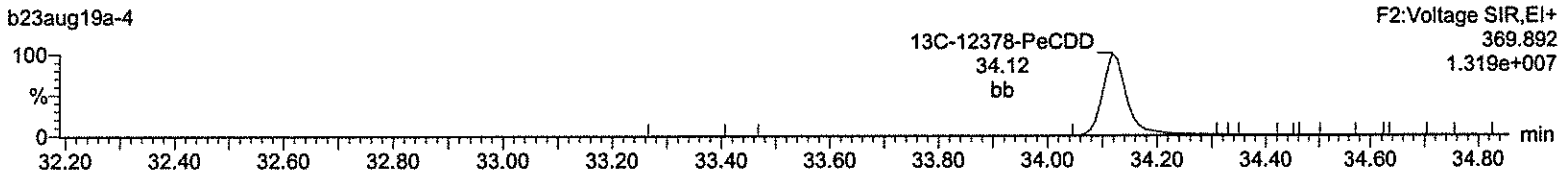
Total-pentadioxins



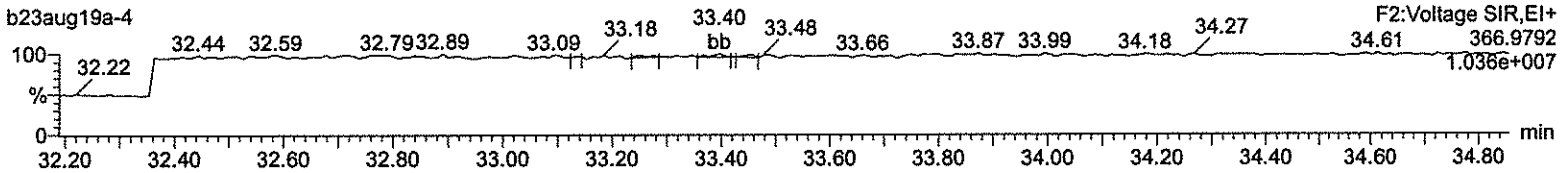
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



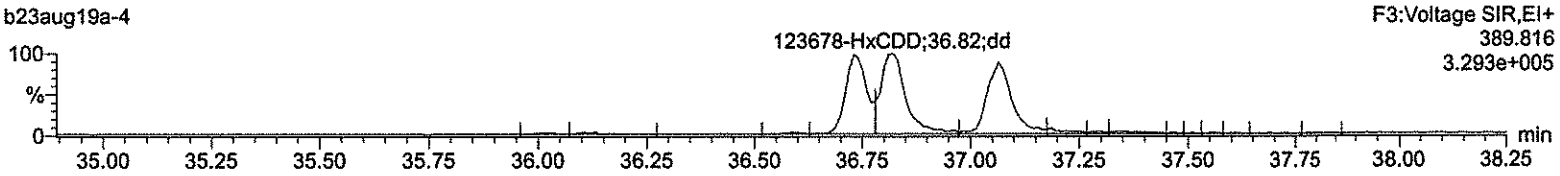
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

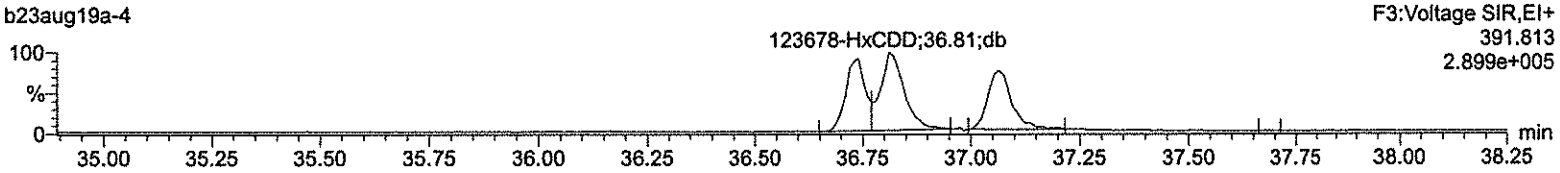
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

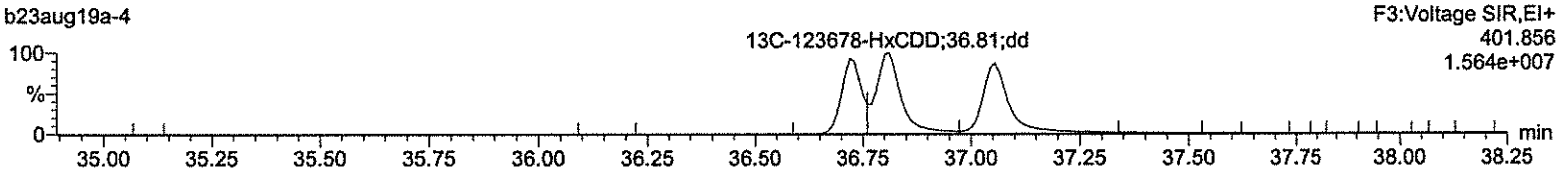
Total-hexadioxins



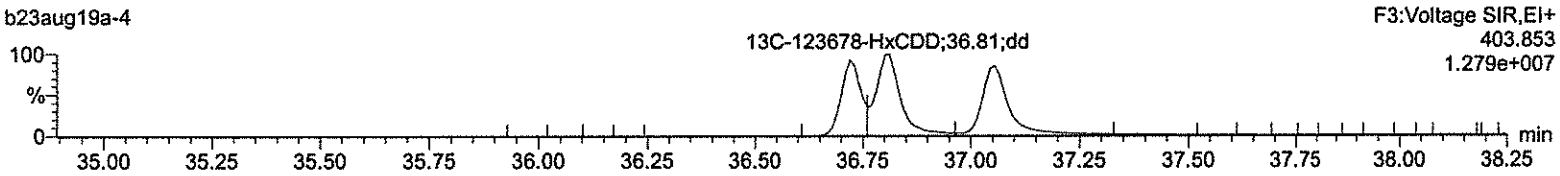
Total-hexadioxins



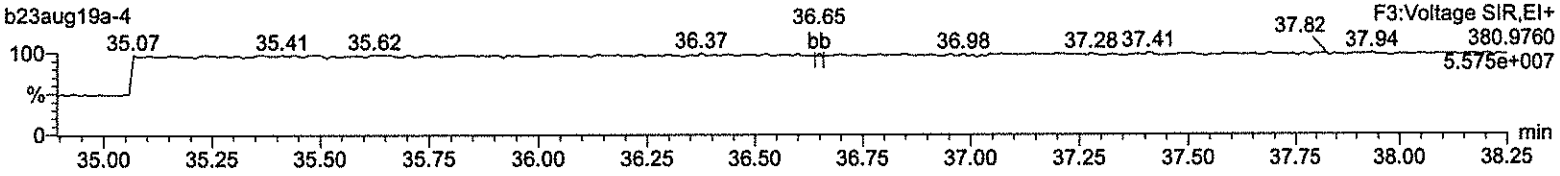
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



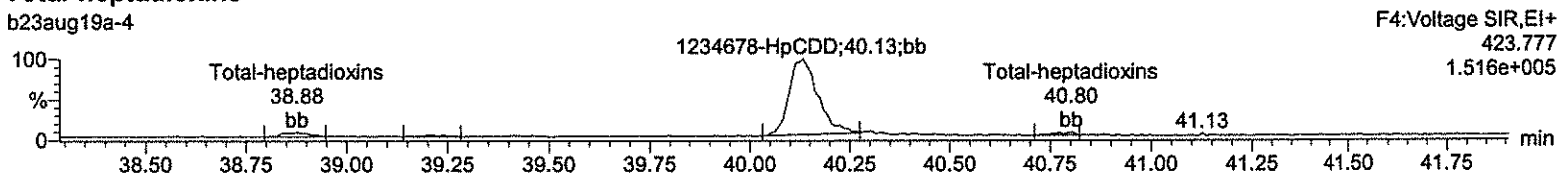
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

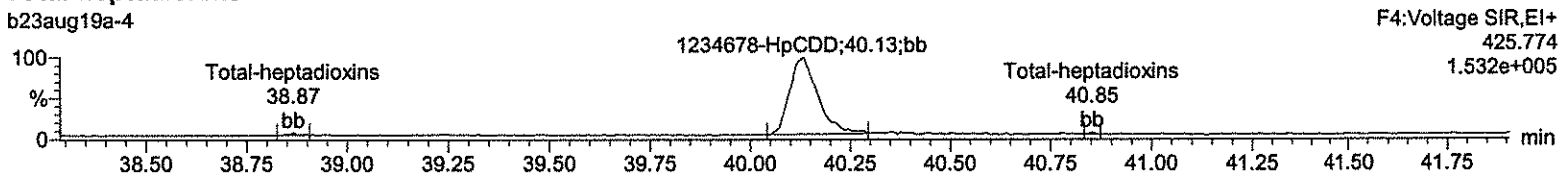
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

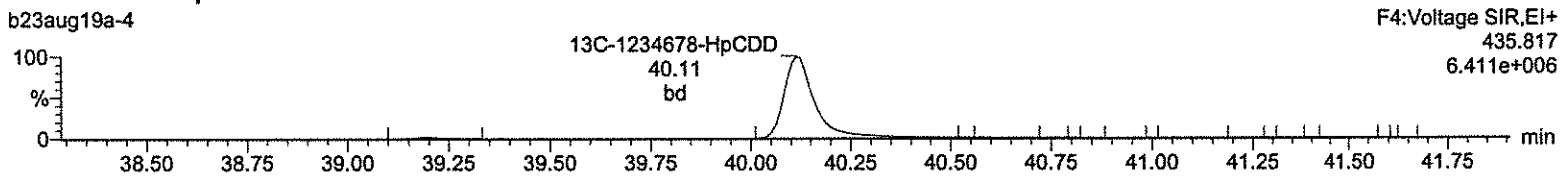
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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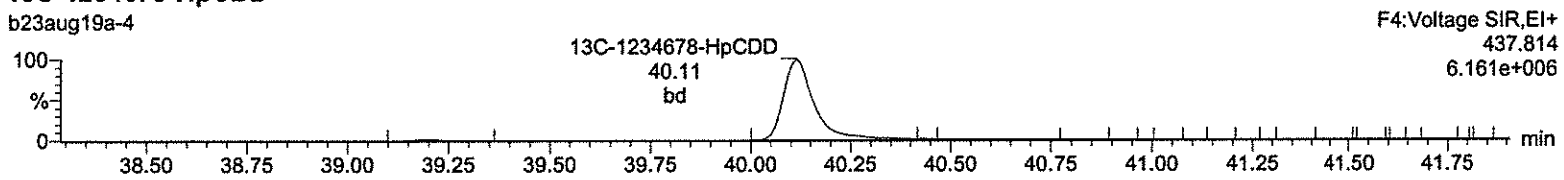
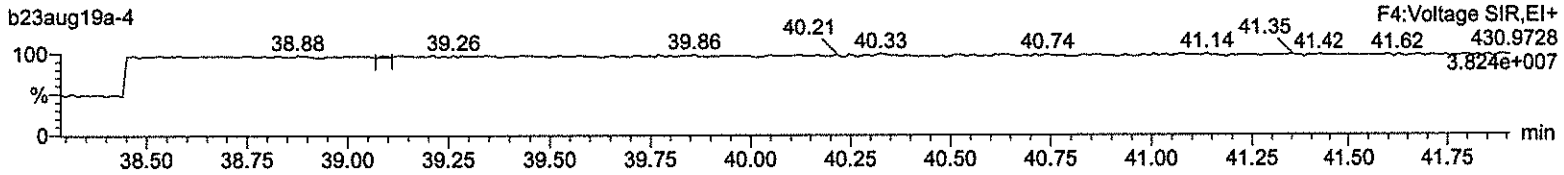


Lock Mass F4



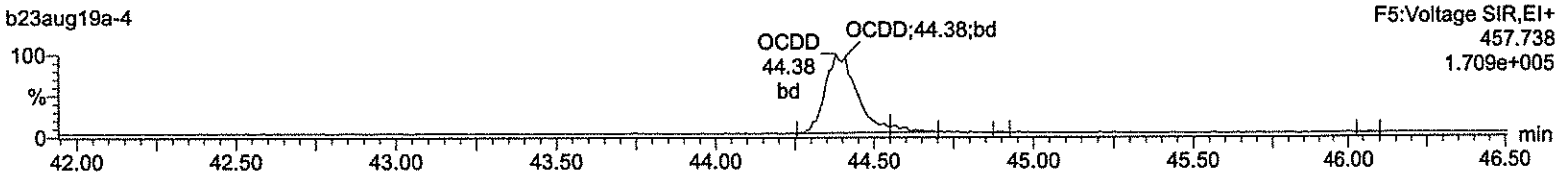
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

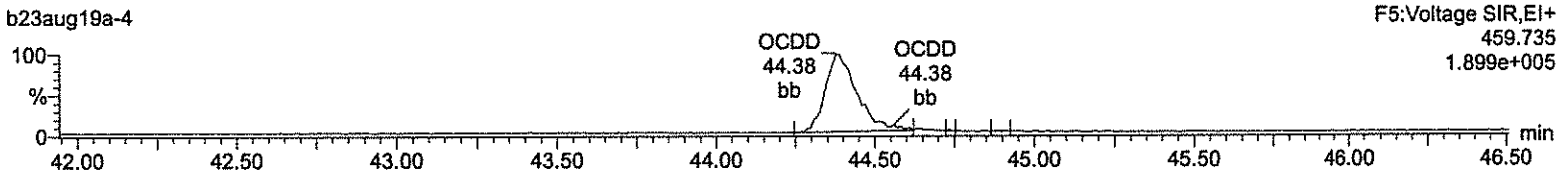
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

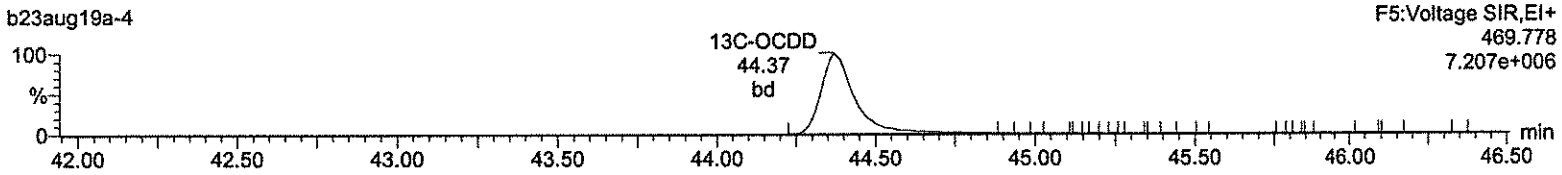
OCDD



OCDD



13C-OCDD



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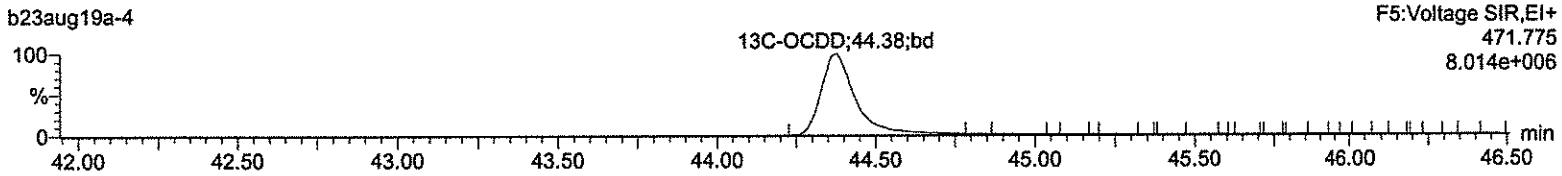
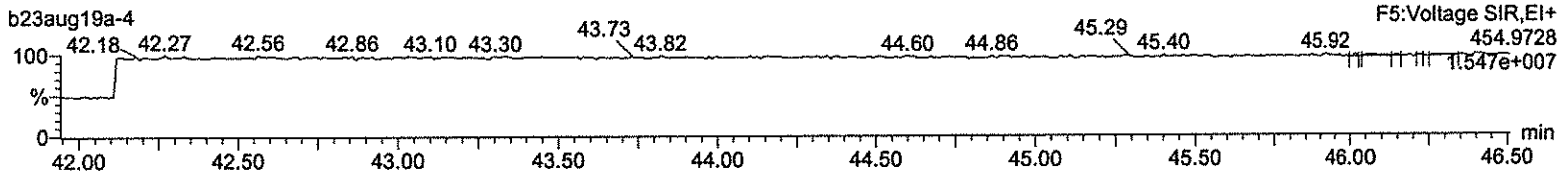


Lock Mass F5



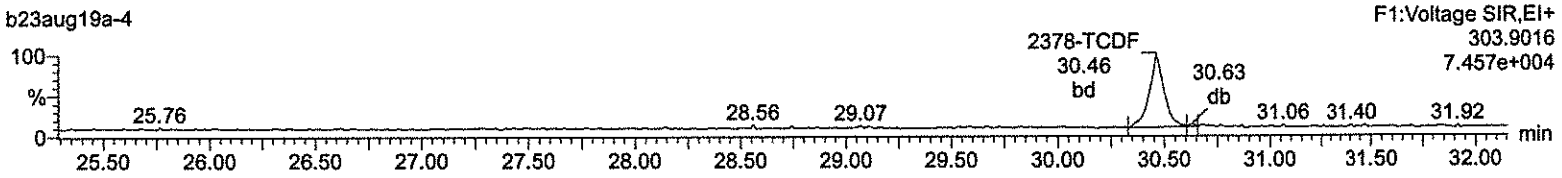
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

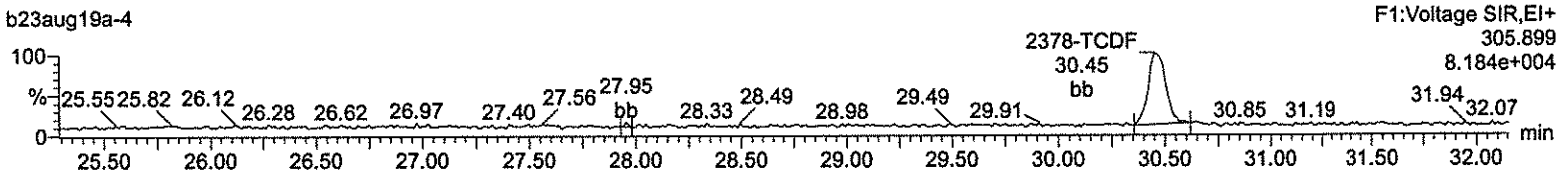
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

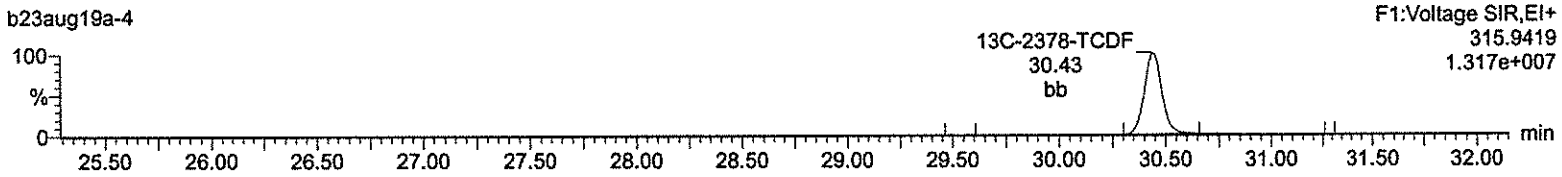
Total-tetrafurans



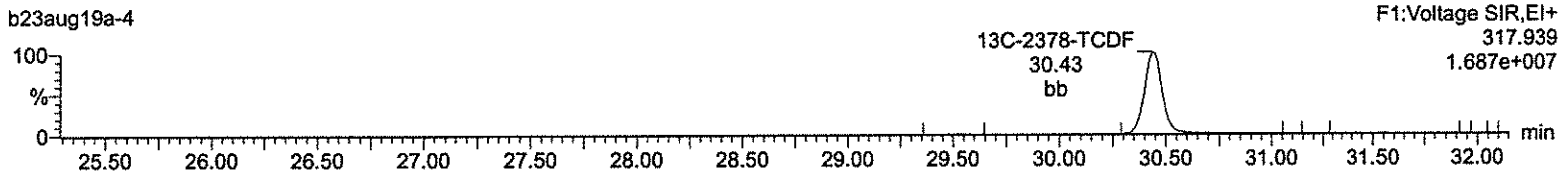
Total-tetrafurans



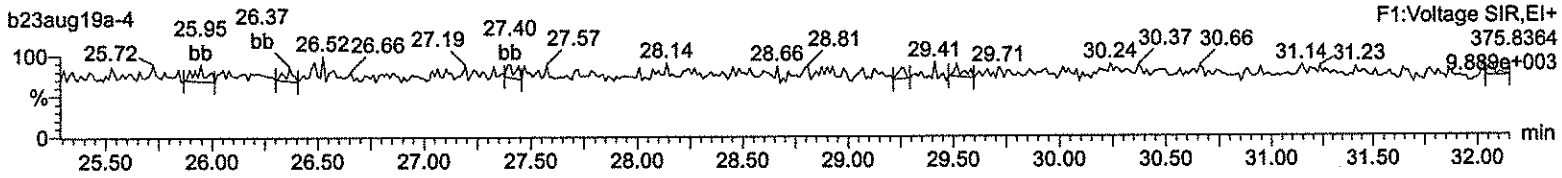
13C-2378-TCDF



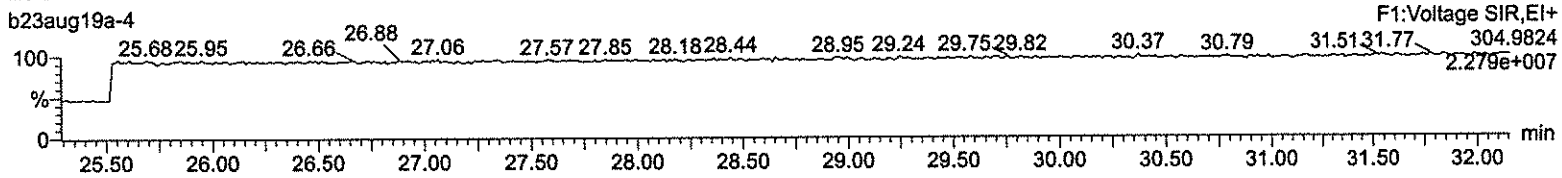
13C-2378-TCDF



HxDPE



Lock Mass F1



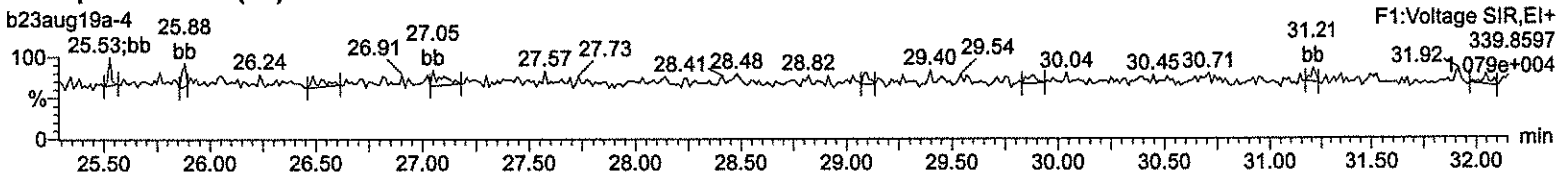
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

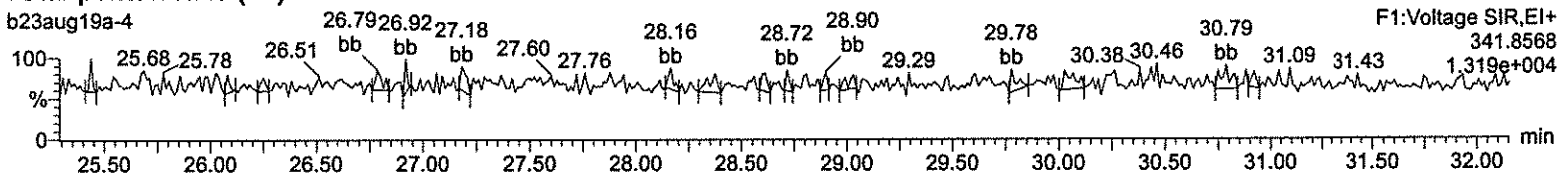
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

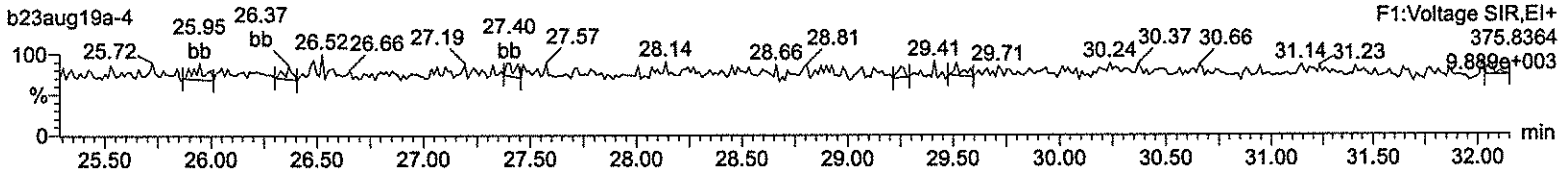
Total-pentafurans (F1)



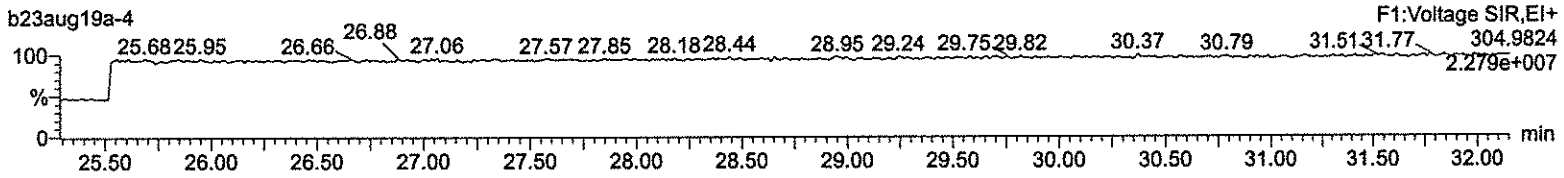
Total-pentafurans (F1)



HxDPE



Lock Mass F1



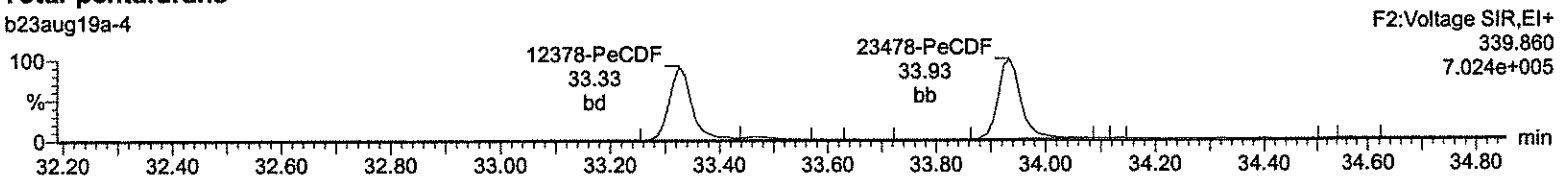
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

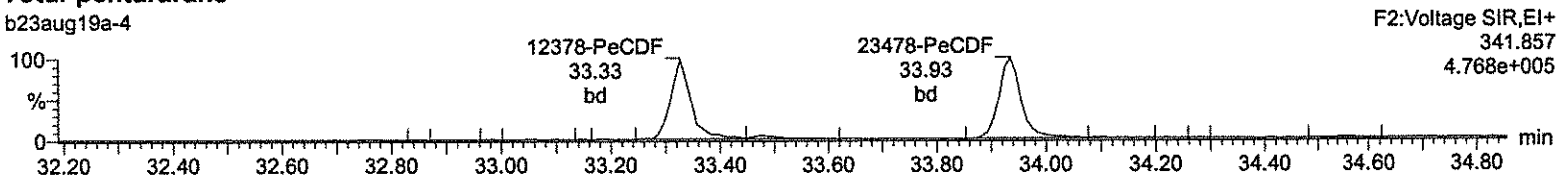
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

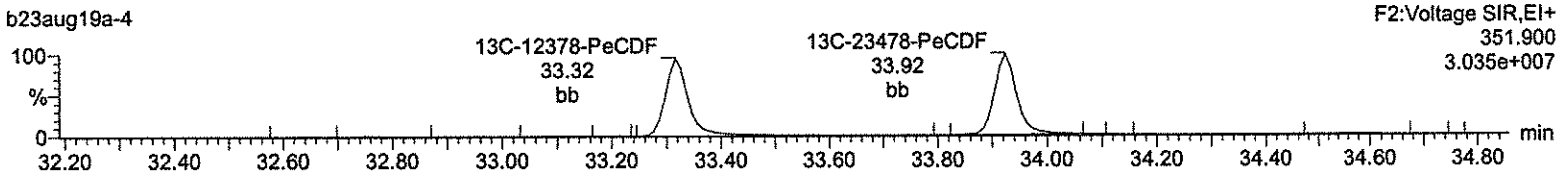
Total-pentafurans



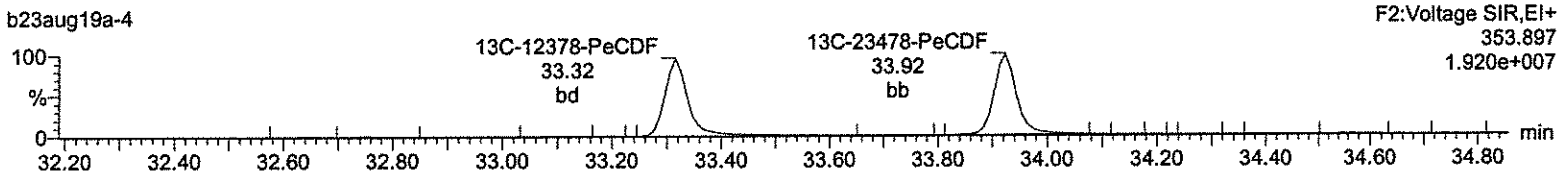
Total-pentafurans



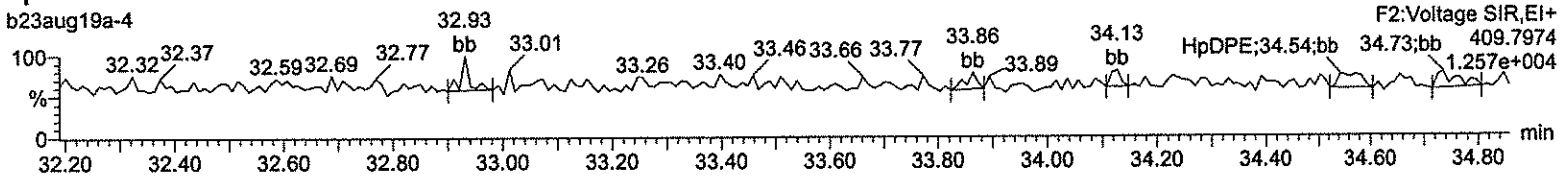
13C-12378-PeCDF



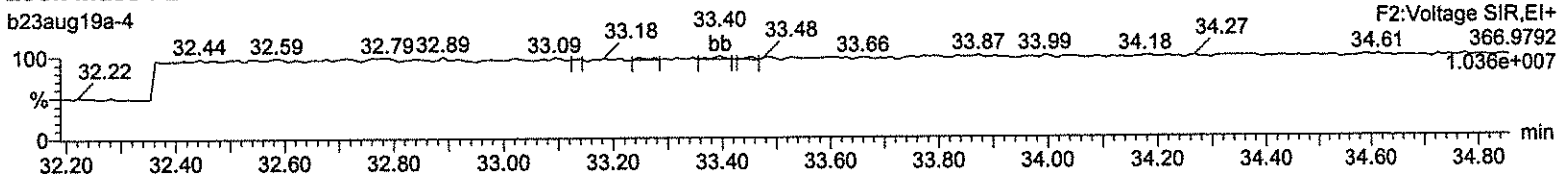
13C-12378-PeCDF



HpDPE



Lock Mass F2



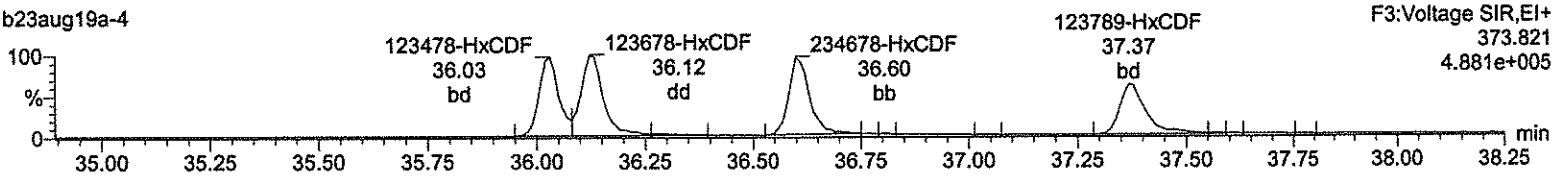
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

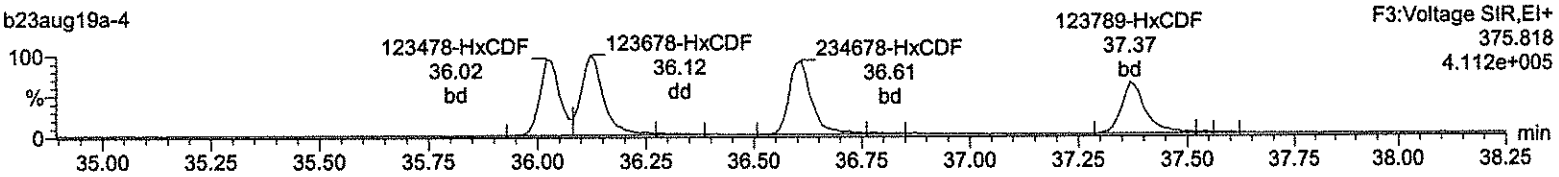
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

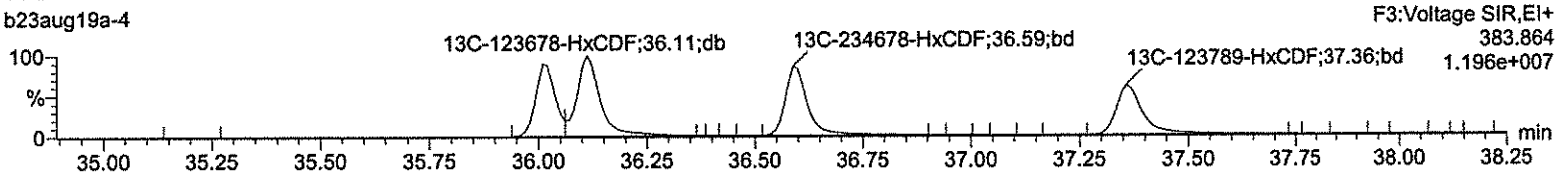
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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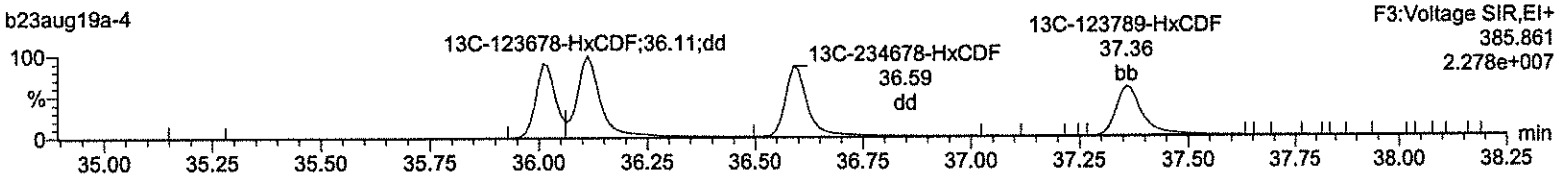
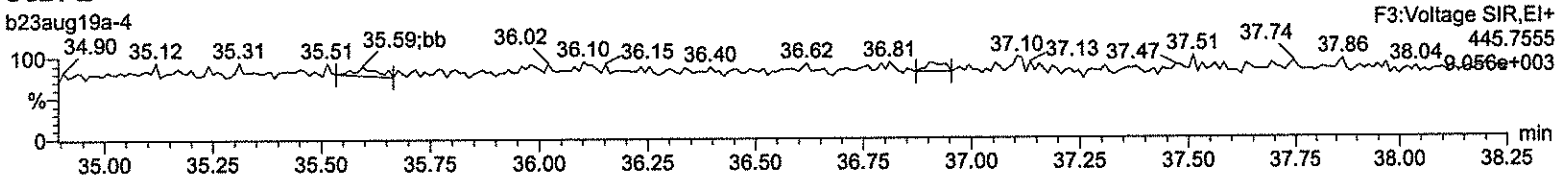
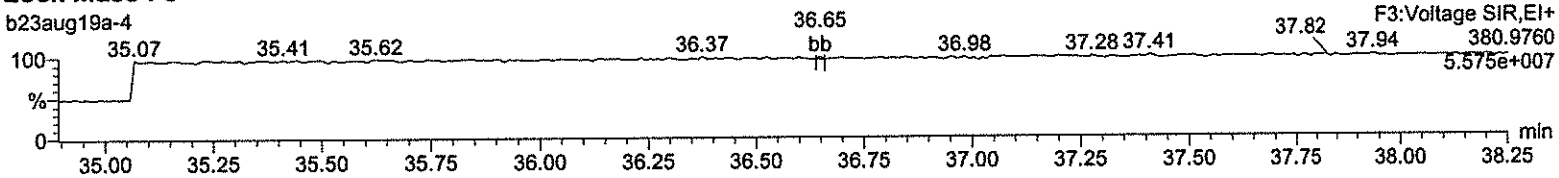


OcDPE



Lock Mass F3



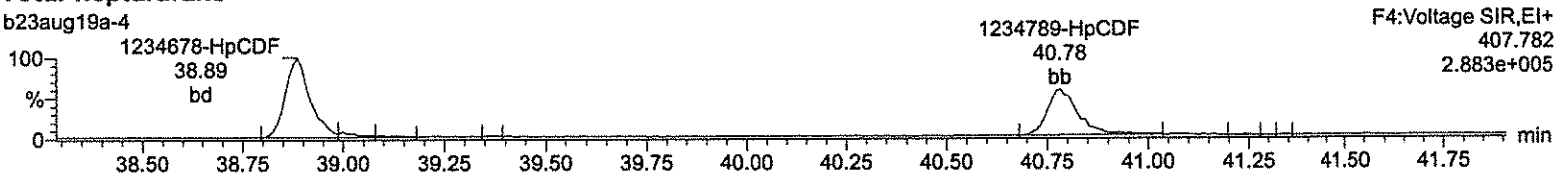
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

Total-heptafurans



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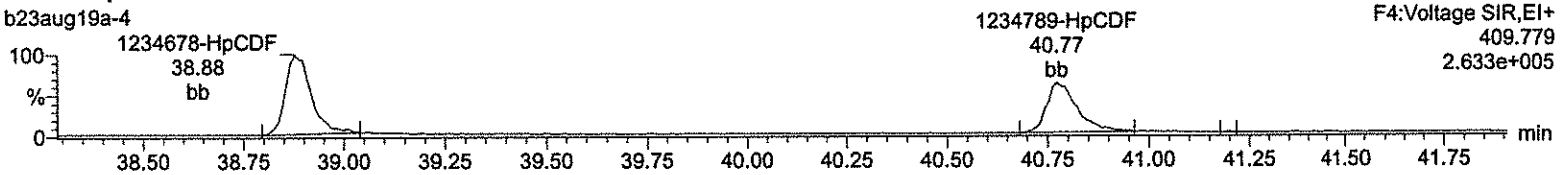
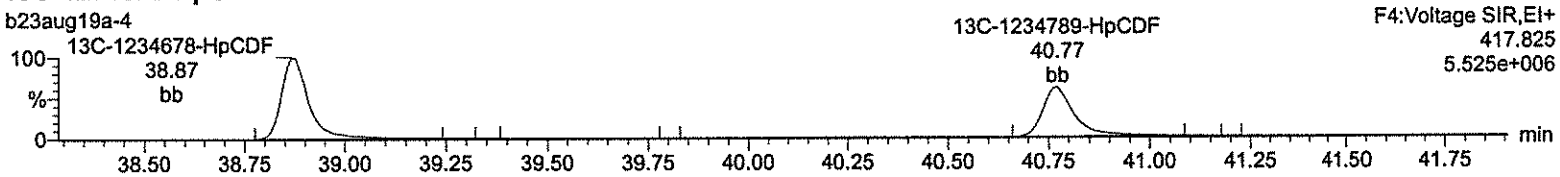
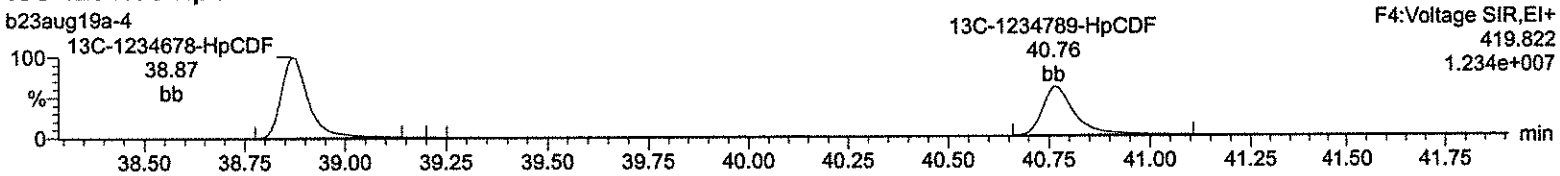


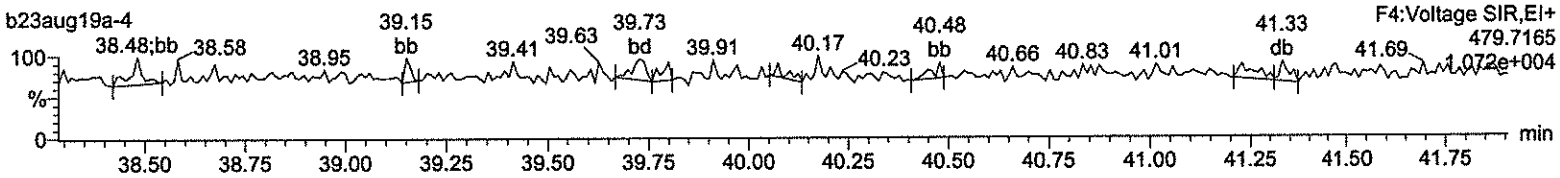
13C-1234678-HpCDF



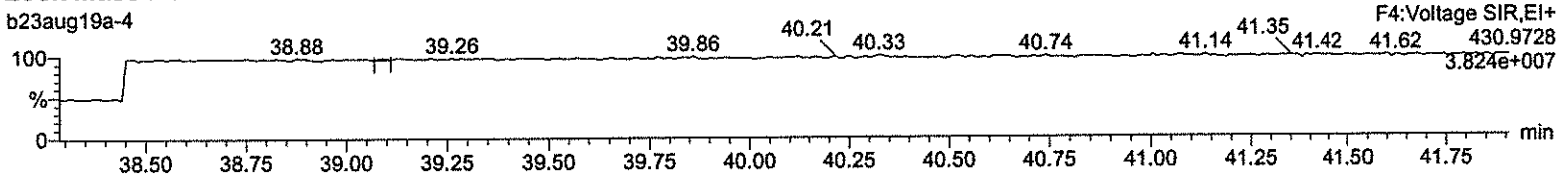
13C-1234678-HpCDF



NoDPE



Lock Mass F4



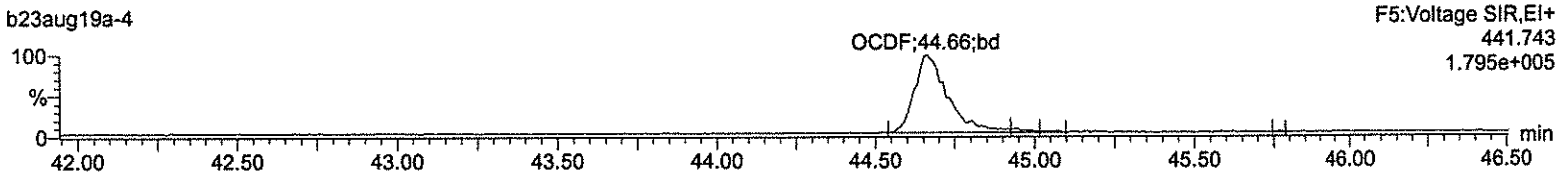
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

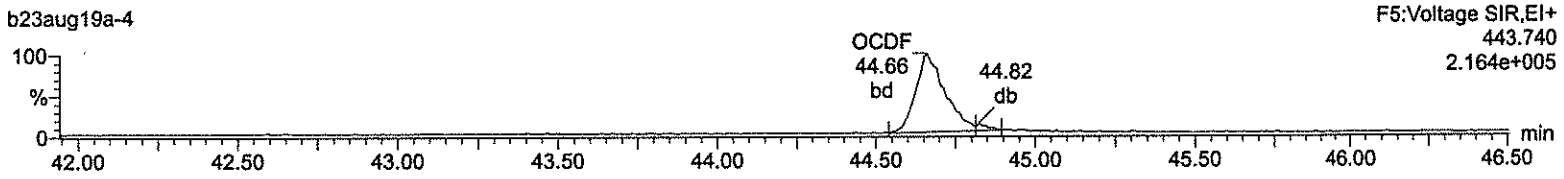
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-4, Date: 23-Aug-2019, Time: 10:41:07, ID: CS1 UD190207-02

OCDF



OCDF



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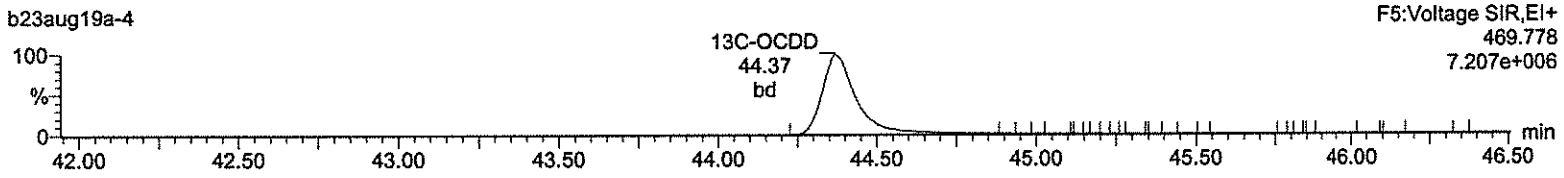

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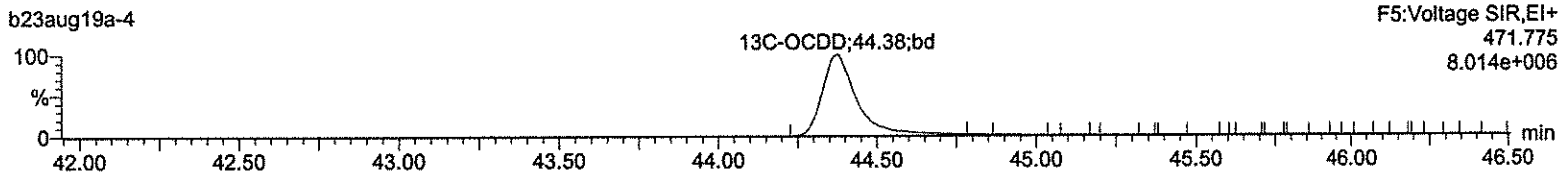
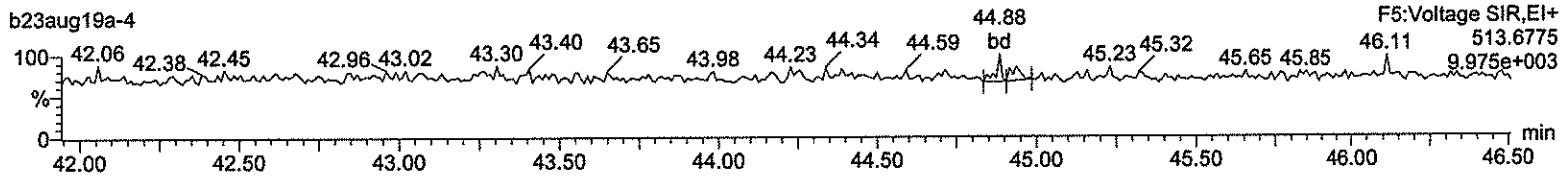
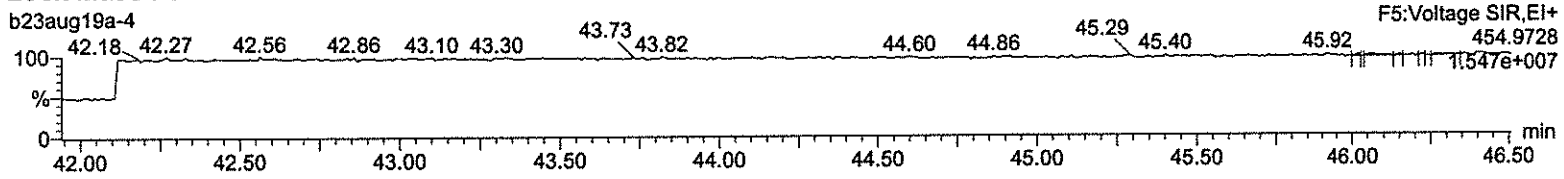


DeDPE



Lock Mass F5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

26Aug19

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.64e4	2.05e4	3.69e4	31.21	1.000	0.80	NO	1.946	0.866	0.891	3.89	0.0314	2.58e5	2547	101.2	3.27e5	1356	241.4	bb	bb
2	12378-PeCDD	7.15e4	4.73e4	1.19e5	34.13	1.000	1.51	NO	9.712	0.826	0.850	3.61	0.0489	1.45e6	3303	440.4	9.73e5	1463	664.6	bb	bb
3	123478-HxCDD	6.14e4	4.93e4	1.11e5	36.73	1.000	1.25	NO	9.747	0.910	0.934	2.31	0.0772	1.16e6	3205	363.5	9.26e5	3373	274.6	dd	bd
4	123678-HxCDD	7.84e4	6.40e4	1.42e5	36.81	1.000	1.22	NO	10.190	0.902	0.885	6.03	0.0749	1.19e6	3205	372.8	9.71e5	3373	287.8	dd	dd
5	123789-HxCDD	6.95e4	5.35e4	1.23e5	37.05	1.007	1.30	NO	9.924	0.880	0.887	7.79	0.0776	1.08e6	3205	338.0	8.15e5	3373	241.5	dd	db
6	1234678-HpCDD	4.58e4	4.48e4	9.06e4	40.12	1.000	1.02	NO	9.870	0.932	0.944	6.68	0.111	5.69e5	2594	219.3	5.57e5	2223	250.5	bd	bd
7	OCDD	7.07e4	7.44e4	1.45e5	44.39	1.000	0.95	NO	19.150	0.875	0.914	7.18	0.164	5.71e5	2002	285.4	6.46e5	1976	327.1	bb	bb
8	2378-TCDF	1.82e4	2.35e4	4.17e4	30.46	1.001	0.77	NO	1.923	0.858	0.893	4.88	0.0417	2.10e5	1387	151.2	2.65e5	2514	105.4	bb	bb
9	12378-PeCDF	1.03e5	6.71e4	1.70e5	33.33	1.000	1.53	NO	9.706	0.881	0.908	4.08	0.0479	2.19e6	3272	668.7	1.40e6	3430	408.0	bd	bd
10	23478-PeCDF	1.14e5	7.45e4	1.88e5	33.92	1.000	1.53	NO	9.937	0.965	0.971	4.12	0.0412	2.47e6	3272	754.3	1.60e6	3430	466.6	bb	bd
11	123478-HxCDF	8.54e4	6.81e4	1.53e5	36.02	1.000	1.25	NO	9.704	1.101	1.135	2.68	0.0555	1.67e6	3932	424.9	1.34e6	2867	468.6	bd	bd
12	123678-HxCDF	1.08e5	8.60e4	1.94e5	36.12	1.000	1.25	NO	10.456	1.102	1.054	6.23	0.0570	1.80e6	3932	457.8	1.45e6	2867	504.5	dd	dd
13	234678-HxCDF	9.25e4	7.69e4	1.69e5	36.60	1.000	1.20	NO	9.917	1.121	1.130	4.65	0.0583	1.58e6	3932	401.0	1.28e6	2867	447.0	bd	bd
14	123789-HxCDF	7.41e4	5.98e4	1.34e5	37.37	1.000	1.24	NO	9.761	1.037	1.063	3.46	0.0881	1.10e6	3932	281.0	8.87e5	2867	309.4	bb	bd
15	1234678-HpCDF	7.11e4	6.97e4	1.41e5	38.88	1.000	1.02	NO	9.721	1.158	1.191	5.88	0.0927	1.01e6	3744	269.1	9.57e5	3196	299.5	bb	bb
16	1234789-HpCDF	5.10e4	5.05e4	1.02e5	40.78	1.000	1.01	NO	9.890	1.213	1.227	4.64	0.152	6.04e5	3744	161.2	5.76e5	3196	180.3	bd	bd
17	OCDF	7.60e4	8.57e4	1.62e5	44.67	1.007	0.89	NO	19.185	0.975	1.017	10.92	0.185	6.34e5	2192	289.2	7.25e5	2798	259.1	bd	bd
18	13C-2378-TCDD	9.10e5	1.22e6	2.13e6	31.19	1.017	0.75	NO	96.068	1.106	1.151	2.76	0.0956	1.49e7	6933	2155.2	1.95e7	3857	5043.8	bb	bd
19	13C-12378-PeCDD	8.95e5	5.43e5	1.44e6	34.12	1.112	1.65	NO	95.986	0.748	0.779	5.79	0.128	1.78e7	4453	4006.1	1.12e7	5354	2096.0	bd	bb
20	13C-123478-HxCDD	6.76e5	5.41e5	1.22e6	36.72	0.991	1.25	NO	100.087	0.790	0.789	2.92	0.187	1.27e7	5472	2317.2	1.00e7	7507	1332.5	bd	bd
21	13C-123678-HxCDD	8.70e5	7.09e5	1.58e6	36.80	0.993	1.23	NO	97.006	1.025	1.057	2.47	0.139	1.37e7	5472	2496.3	1.12e7	7507	1497.1	dd	dd
22	13C-1234678-HpCDD	4.91e5	4.81e5	9.72e5	40.11	1.083	1.02	NO	99.729	0.631	0.633	2.50	0.244	5.82e6	6906	842.2	5.53e6	6734	821.7	bd	bd
23	13C-OCDD	7.75e5	8.83e5	1.66e6	44.37	1.198	0.88	NO	197.226	0.539	0.546	4.53	0.244	6.21e6	5650	1098.5	7.02e6	6110	1149.7	bd	bd
24	13C-2378-TCDF	1.05e6	1.38e6	2.43e6	30.43	0.992	0.76	NO	97.139	1.262	1.299	1.86	0.139	1.13e7	11807	959.0	1.47e7	5921	2485.2	bb	bb
25	13C-12378-PeCDF	1.20e6	7.30e5	1.93e6	33.32	1.086	1.64	NO	95.789	1.002	1.046	3.57	0.175	2.40e7	10706	2237.2	1.50e7	7237	2069.6	bd	bb
26	13C-23478-PeCDF	1.19e6	7.61e5	1.95e6	33.91	1.106	1.57	NO	94.543	1.014	1.073	5.25	0.170	2.56e7	10706	2388.1	1.65e7	7237	2277.3	bb	bb
27	13C-123478-HxCDF	4.78e5	9.15e5	1.39e6	36.01	0.972	0.52	NO	99.190	0.905	0.912	1.25	0.265	9.27e6	9372	988.9	1.77e7	11972	1476.1	bd	bd
28	13C-123678-HxCDF	6.05e5	1.15e6	1.76e6	36.11	0.975	0.52	NO	96.097	1.142	1.188	3.37	0.204	9.74e6	9372	1039.1	1.85e7	11972	1546.6	db	db
29	13C-234678-HxCDF	5.13e5	9.98e5	1.51e6	36.59	0.988	0.51	NO	97.153	0.981	1.010	3.04	0.240	8.76e6	9372	934.3	1.68e7	11972	1405.6	bb	bd
30	13C-123789-HxCDF	4.47e5	8.44e5	1.29e6	37.36	1.008	0.53	NO	98.423	0.838	0.852	1.59	0.284	6.29e6	9372	670.9	1.17e7	11972	979.3	bd	bd
31	13C-1234678-HpCDF	3.88e5	8.28e5	1.22e6	38.87	1.049	0.47	NO	100.757	0.790	0.784	2.45	0.219	5.02e6	6746	743.6	1.09e7	8391	1300.2	bd	bb
32	13C-1234789-HpCDF	2.62e5	5.75e5	8.37e5	40.76	1.100	0.46	NO	96.787	0.544	0.562	3.62	0.306	2.92e6	6746	433.3	6.52e6	8391	776.5	bb	bb
33	13C-1234-TCDD	8.40e5	1.08e6	1.92e6	30.67	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.110	1.07e7	6933	1544.7	1.37e7	3857	3561.2	bb	bb
34	13C-123789-HxCDD	8.44e5	6.96e5	1.54e6	37.04	0.000	1.21	NO	100.000	1.000	1.000	0.00	0.147	1.21e7	5472	2208.5	9.96e6	7507	1326.2	dd	dd
35	37Cl-2378-TCDD	3.91e4		3.91e4	31.22	1.018			1.887	1.015	1.077	5.71	0.0208	6.10e5	2199	277.3				bb	

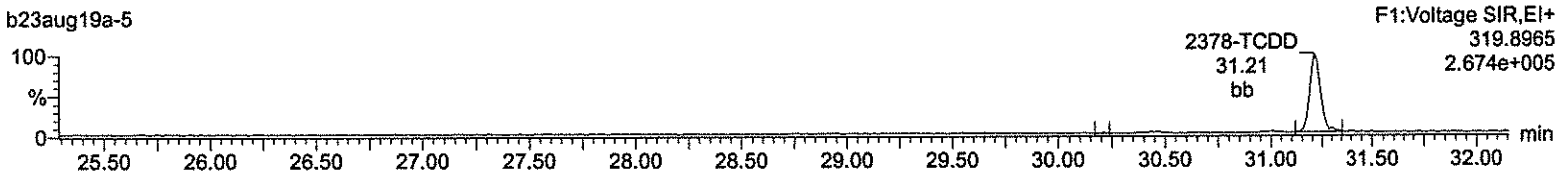
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

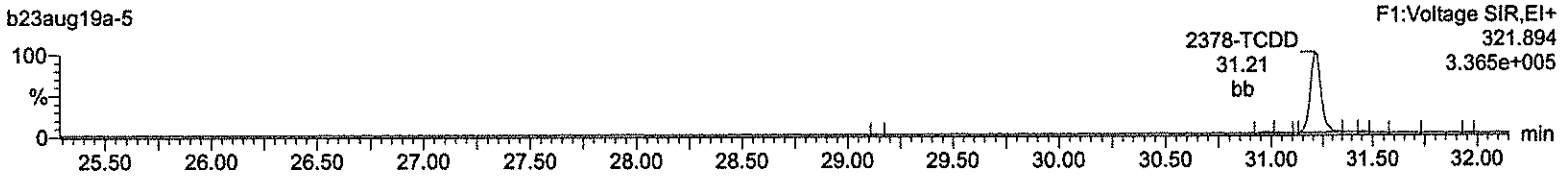
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

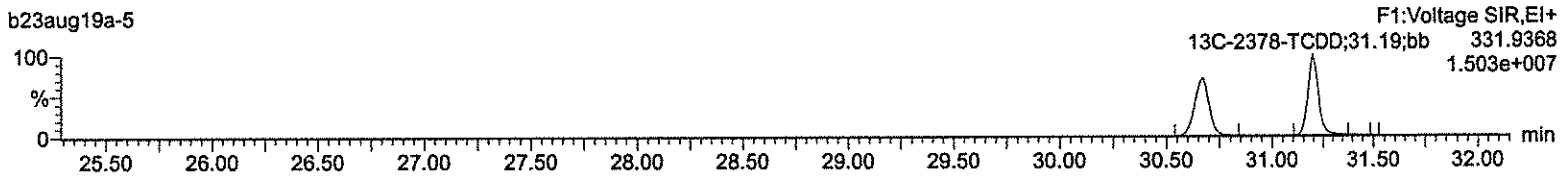
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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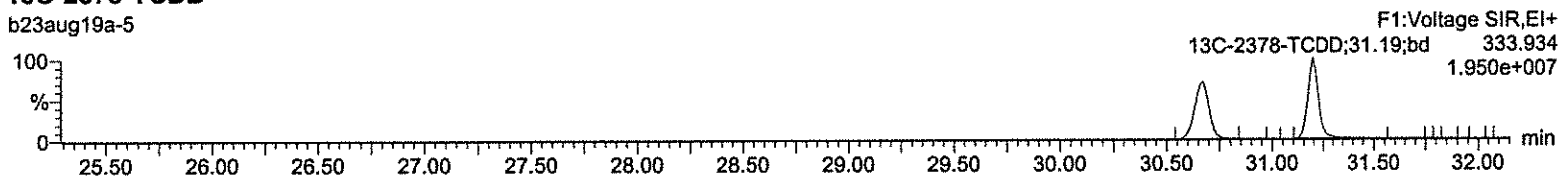

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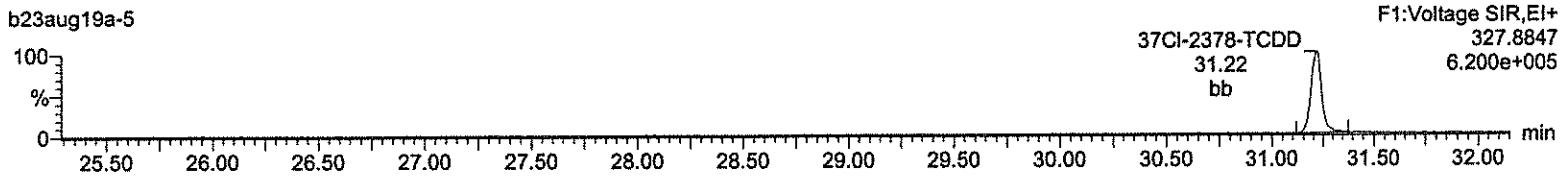
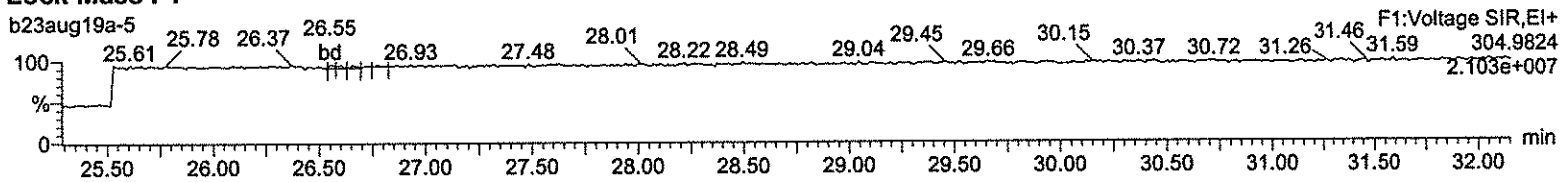


Lock Mass F1



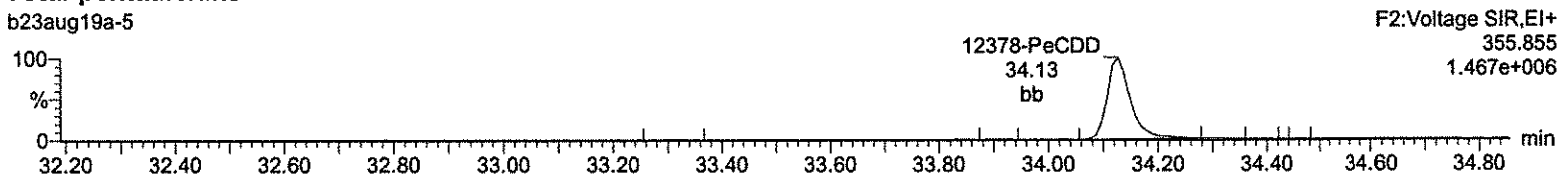
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

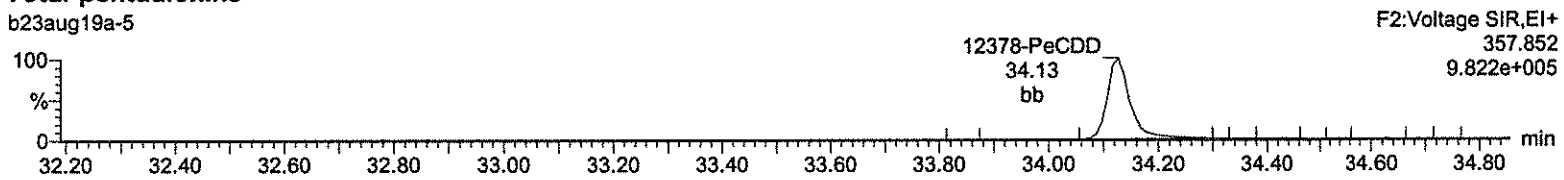
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

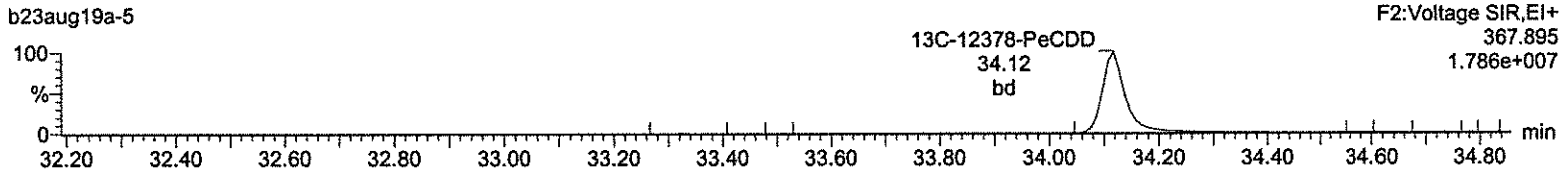
Total-pentadioxins



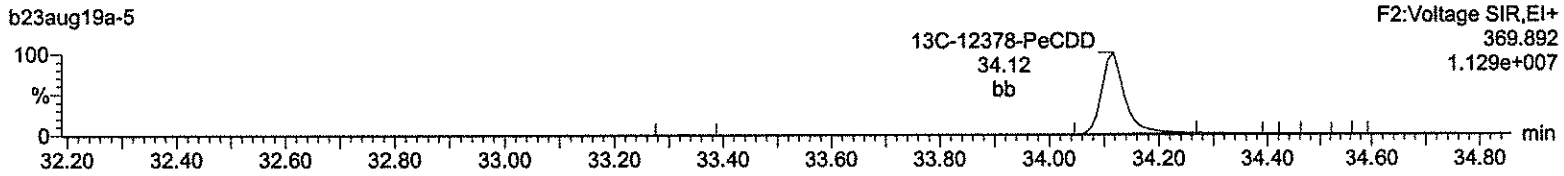
Total-pentadioxins



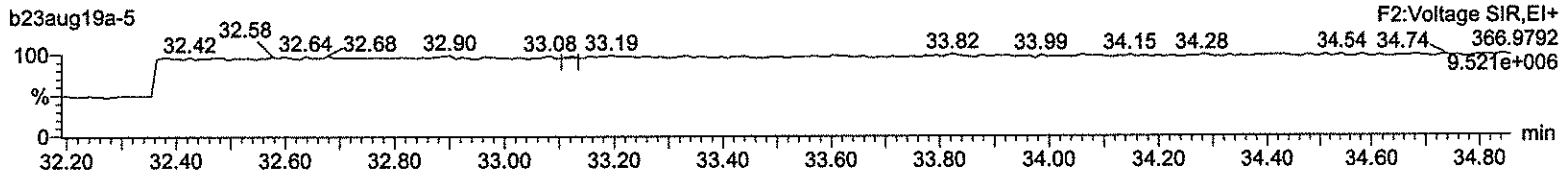
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



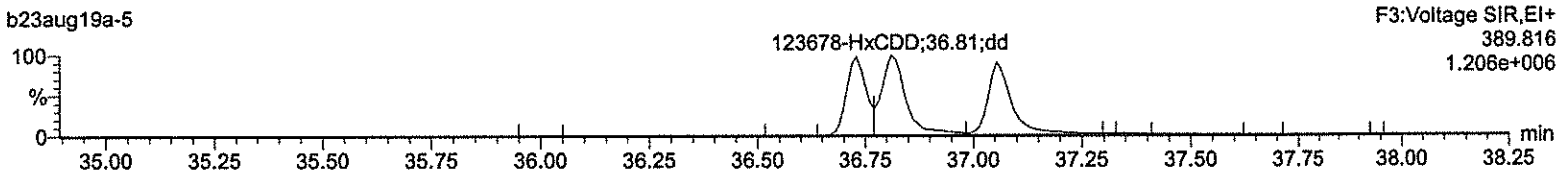
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

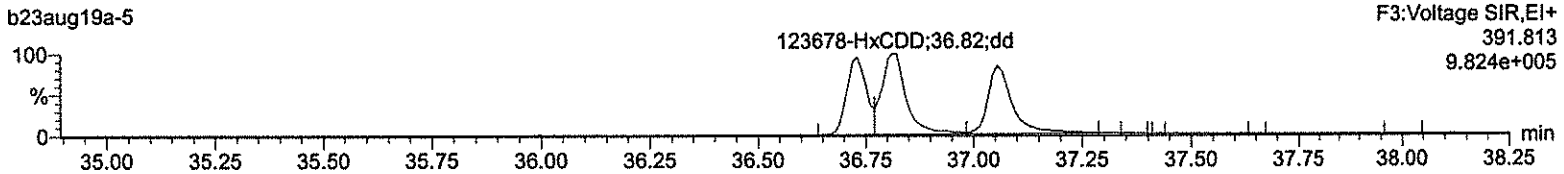
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

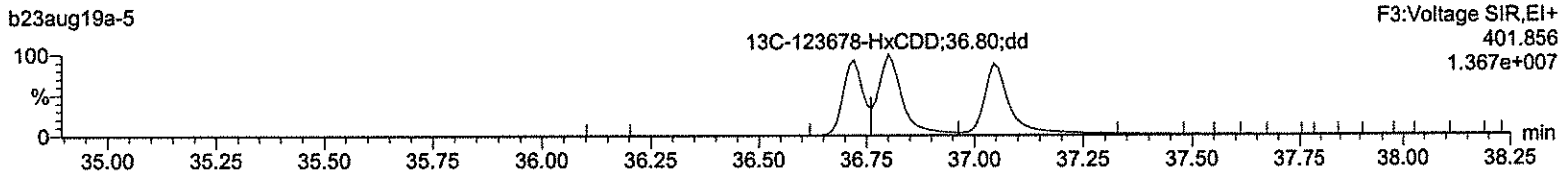
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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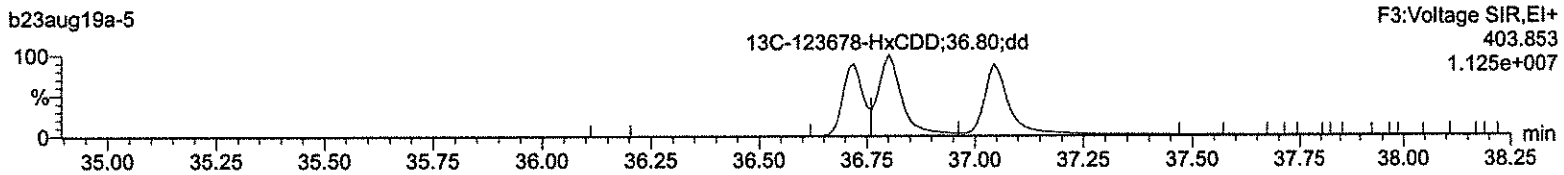
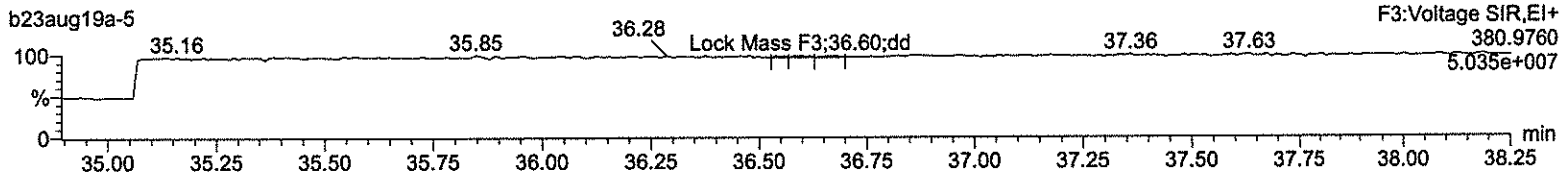


Lock Mass F3



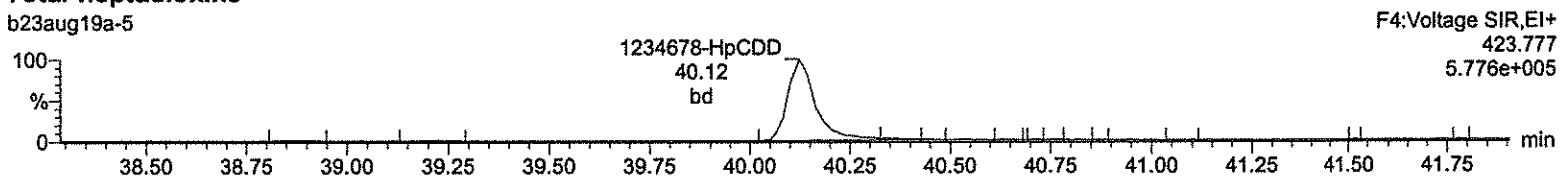
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

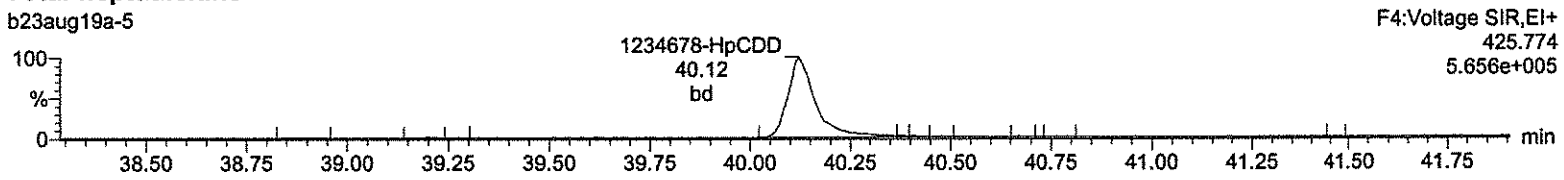
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

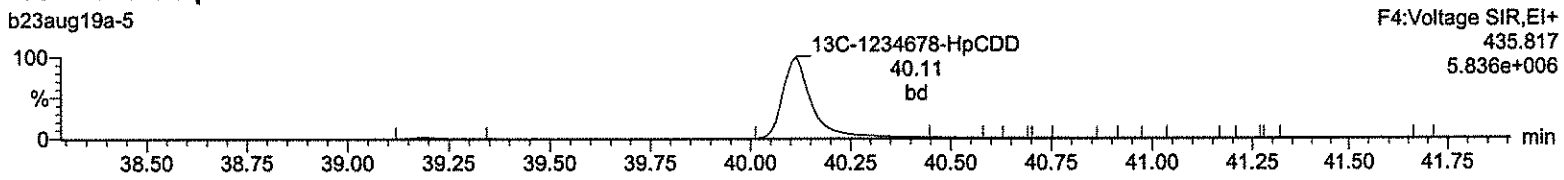
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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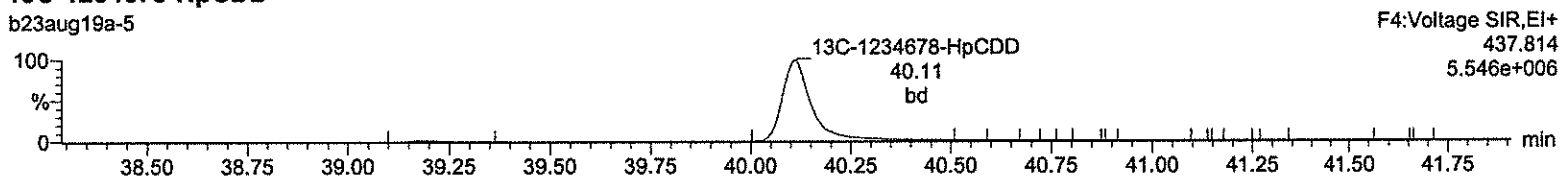
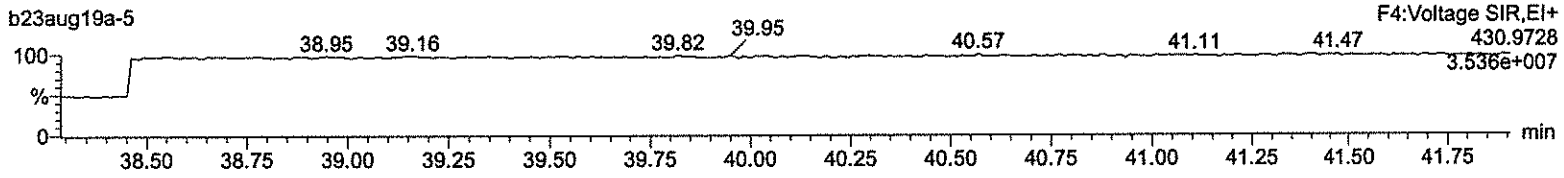


Lock Mass F4



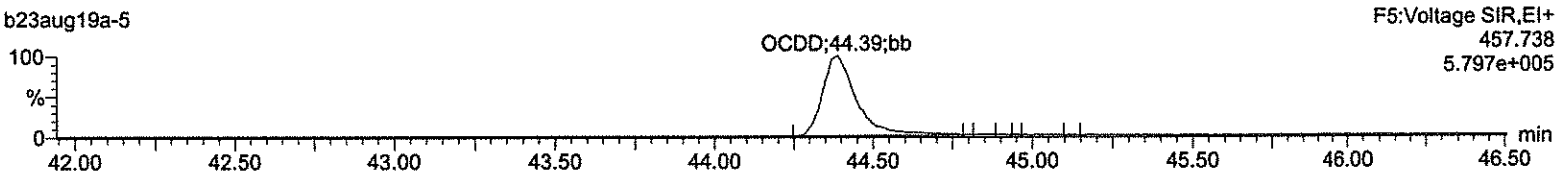
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

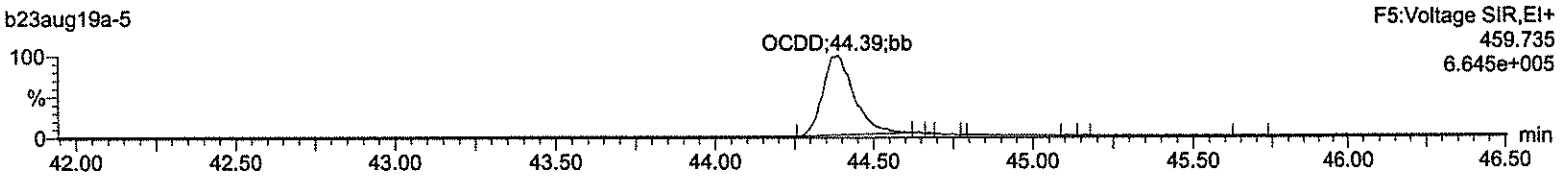
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

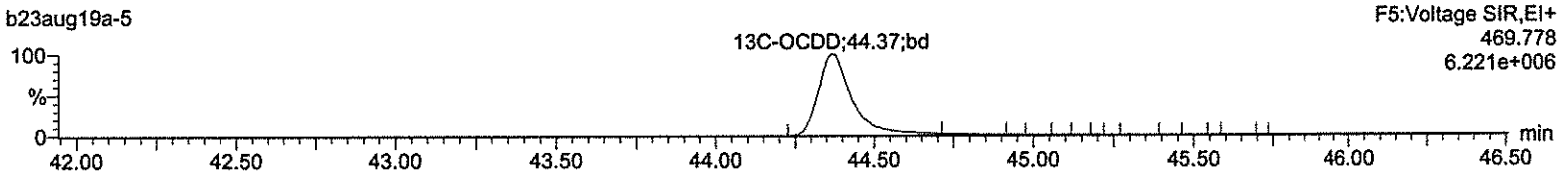
OCDD



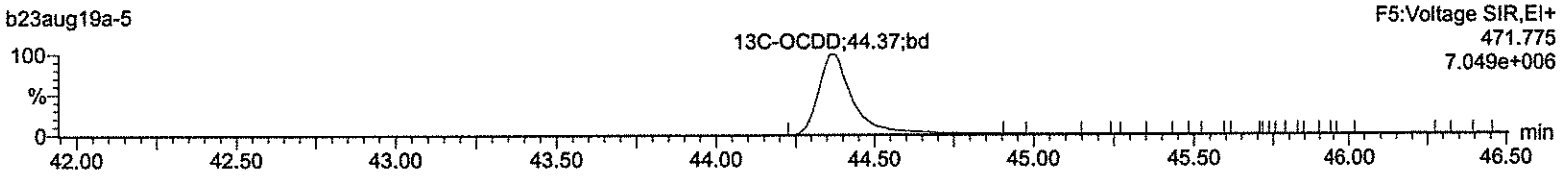
OCDD



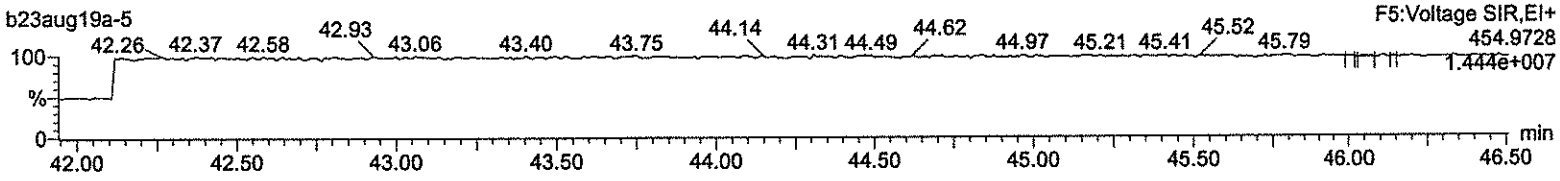
13C-OCDD



13C-OCDD



Lock Mass F5



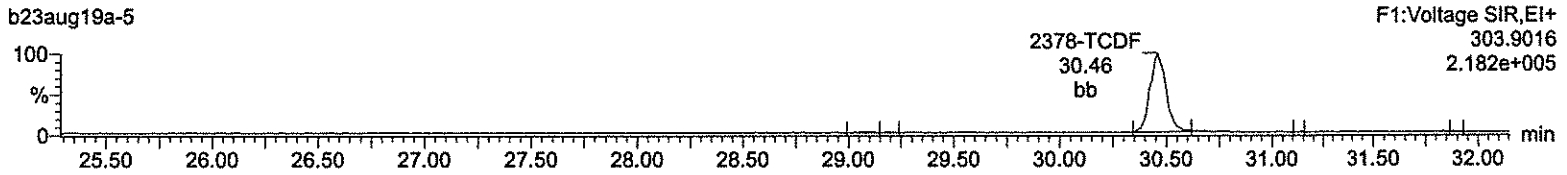
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

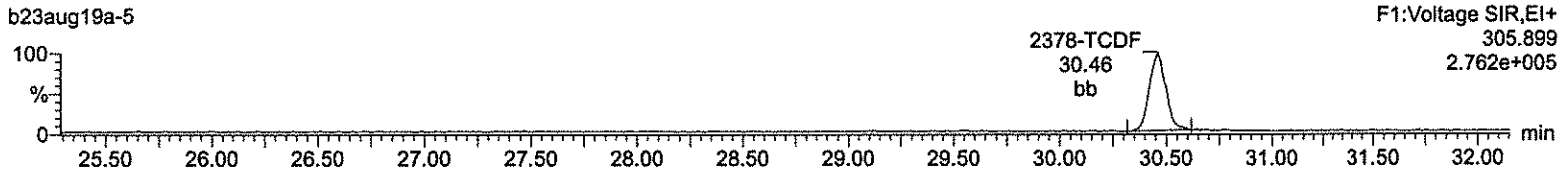
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

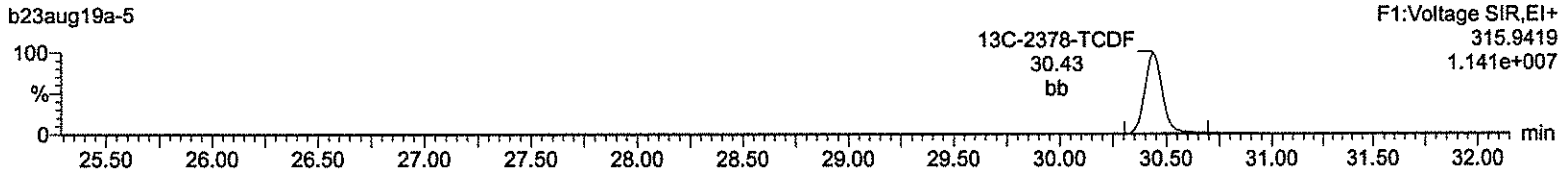
Total-tetrafurans



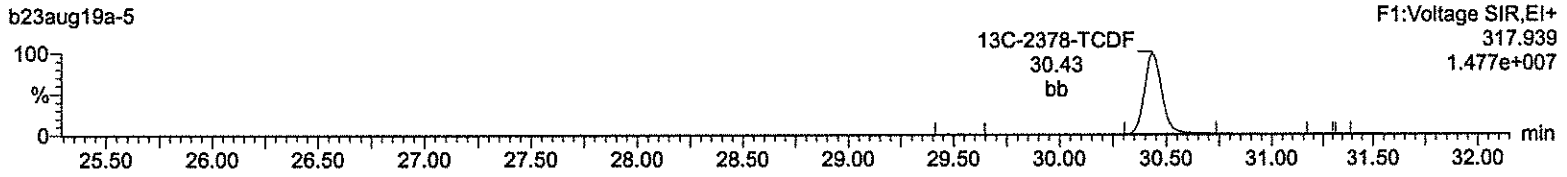
Total-tetrafurans



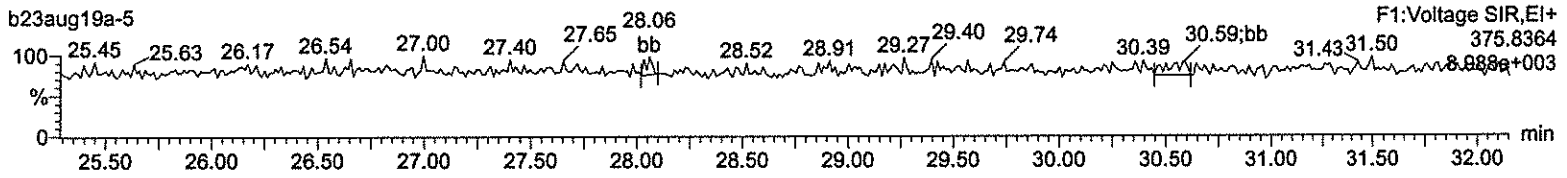
13C-2378-TCDF



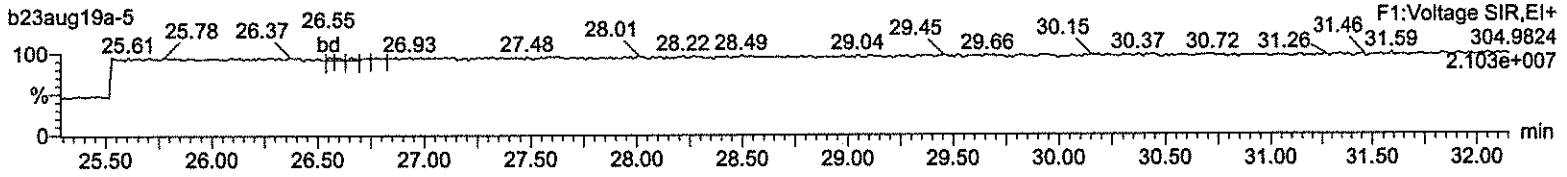
13C-2378-TCDF



HxDPE



Lock Mass F1



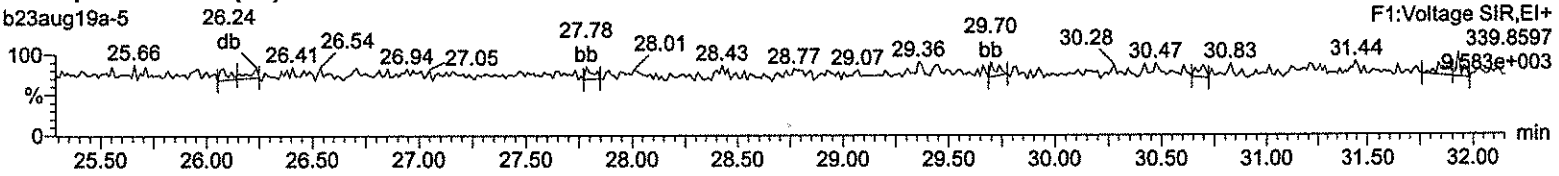
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

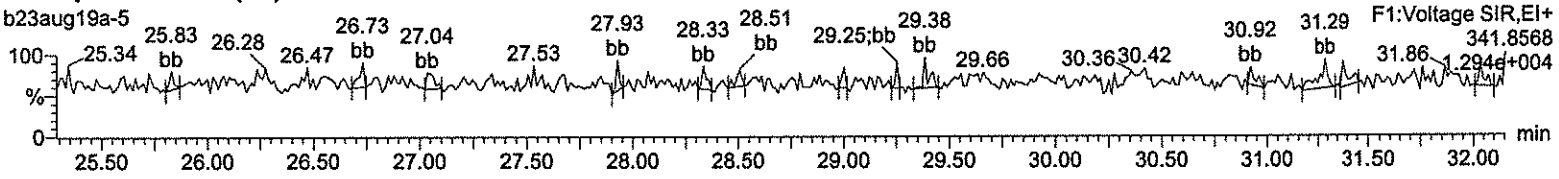
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

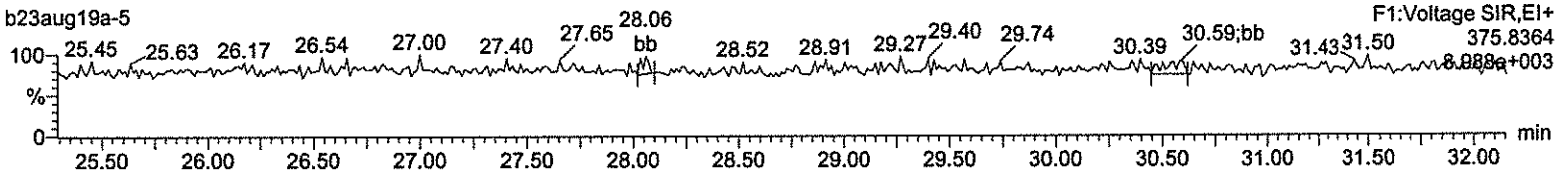
Total-pentafurans (F1)



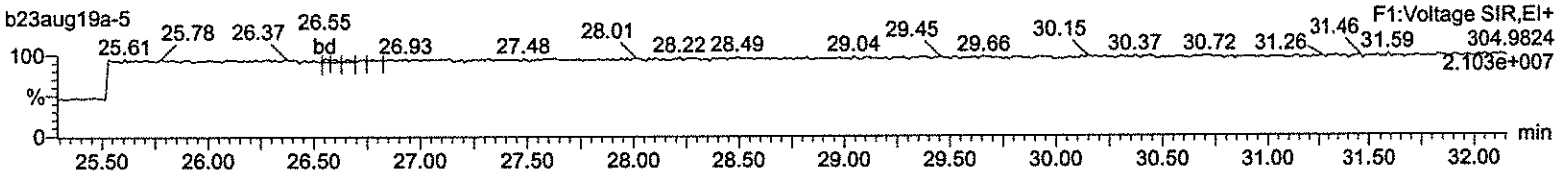
Total-pentafurans (F1)



HxDPE



Lock Mass F1



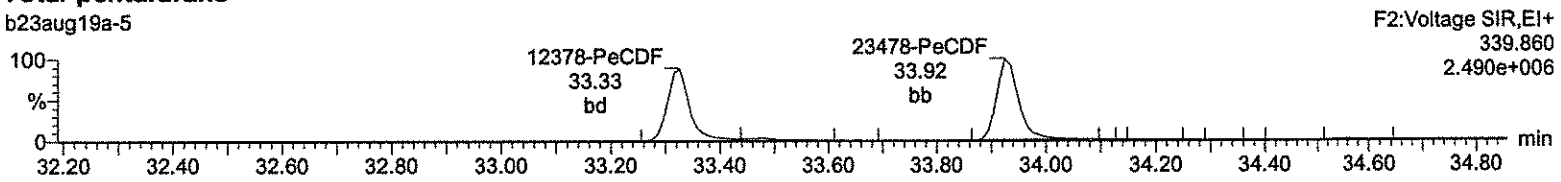
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

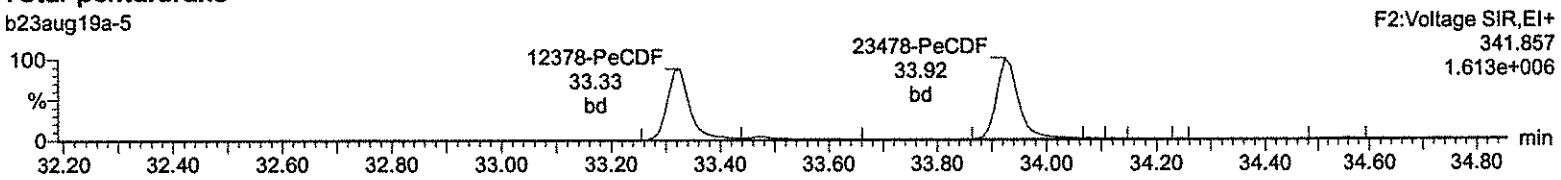
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

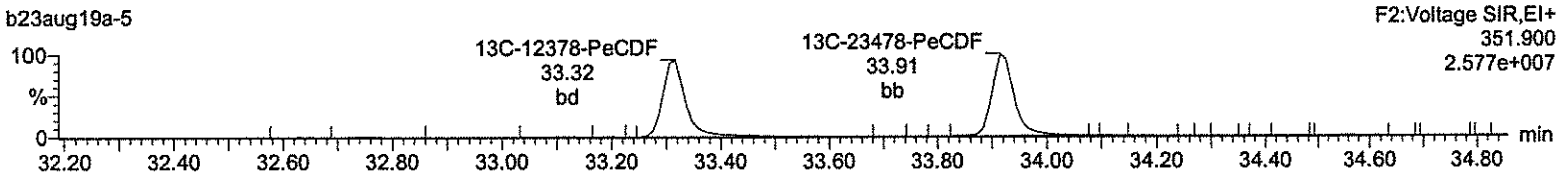
Total-pentafurans



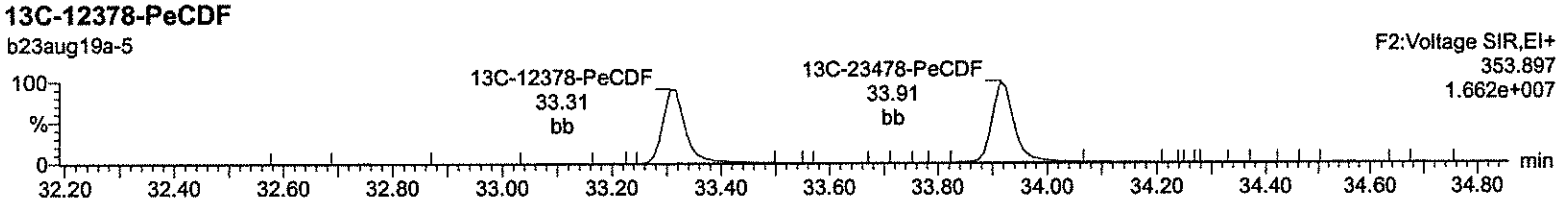
Total-pentafurans



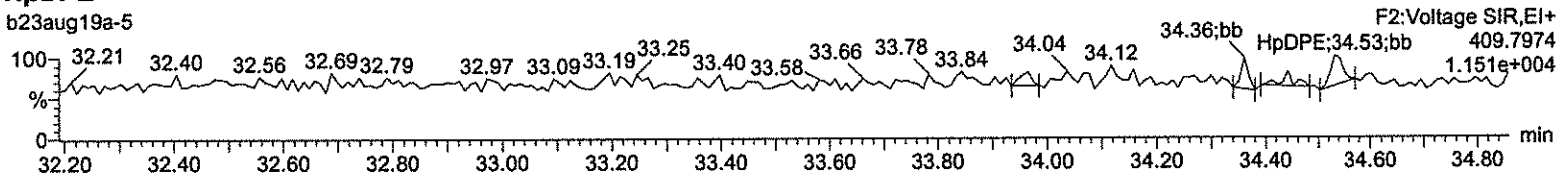
13C-12378-PeCDF



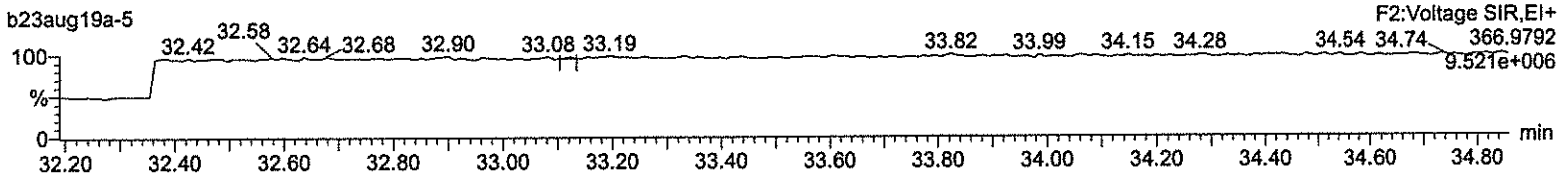
13C-12378-PeCDF



HpDPE



Lock Mass F2



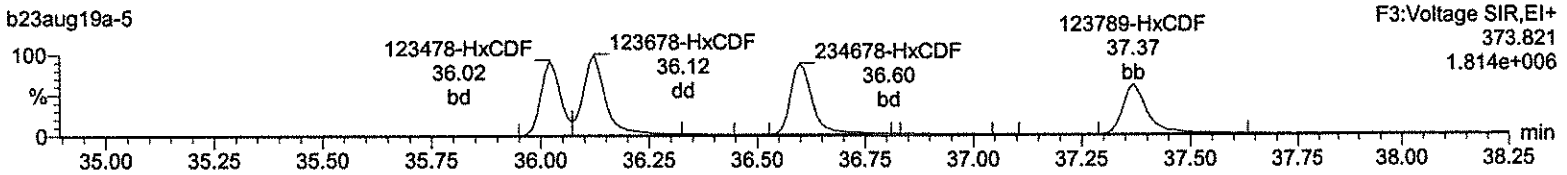
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

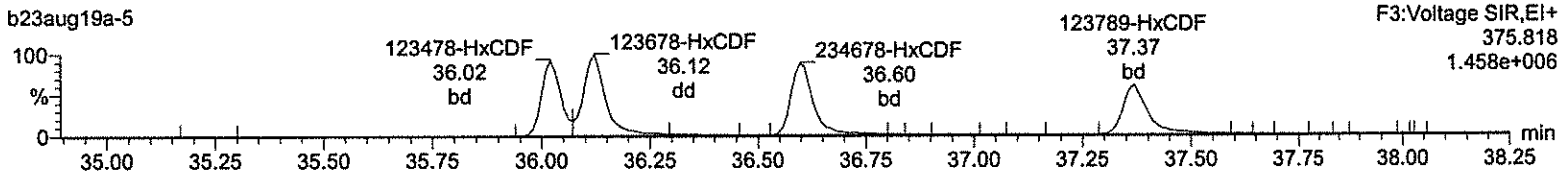
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

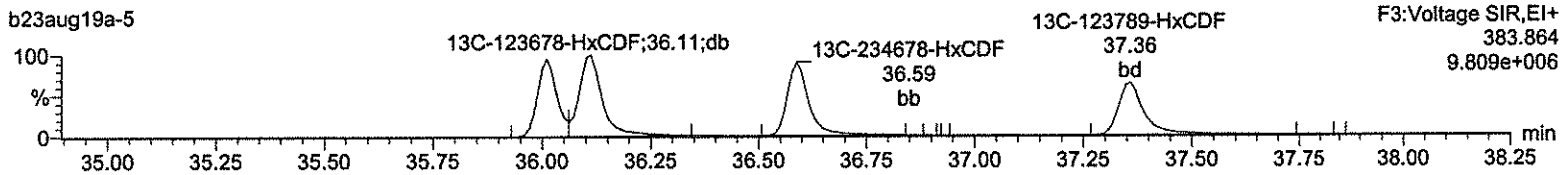
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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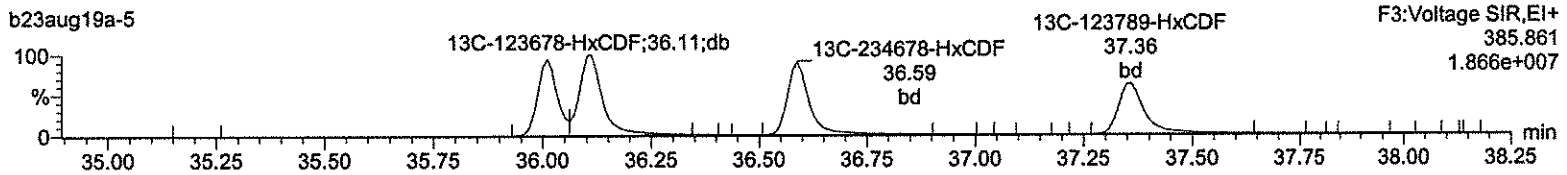
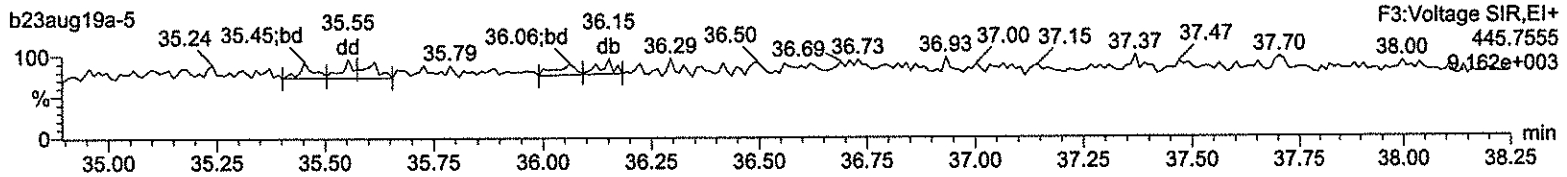
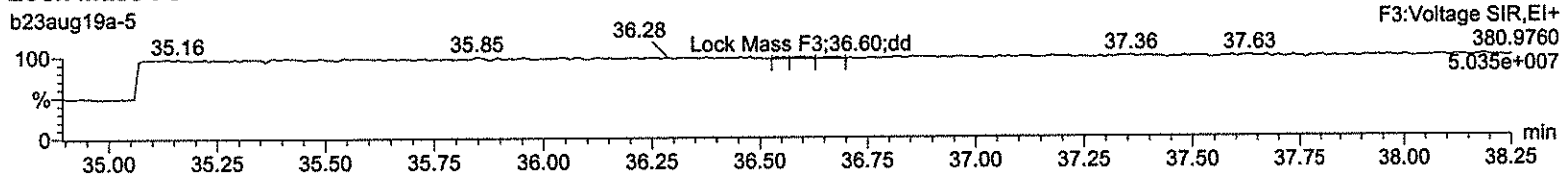


OcDPE



Lock Mass F3



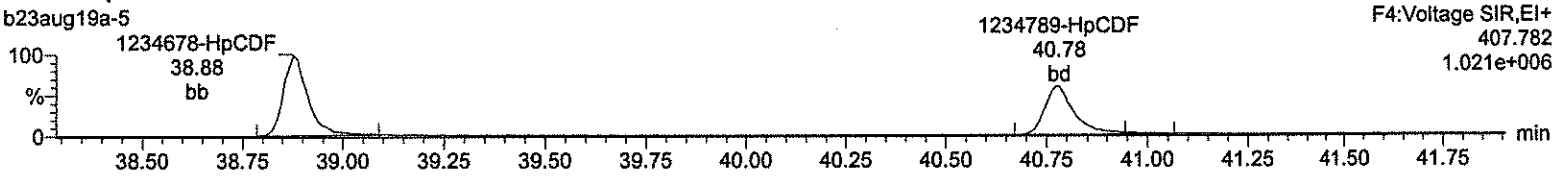
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

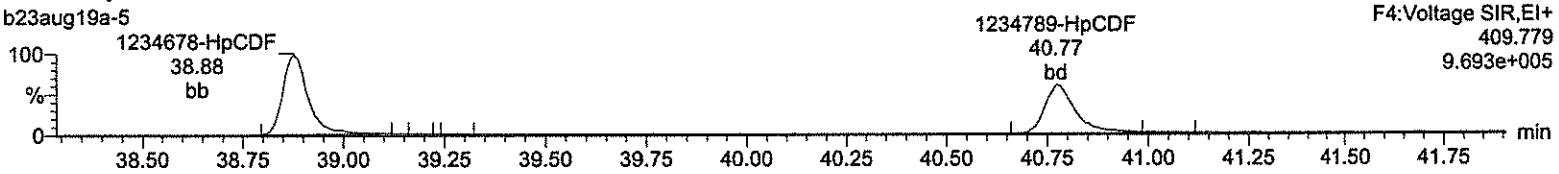
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

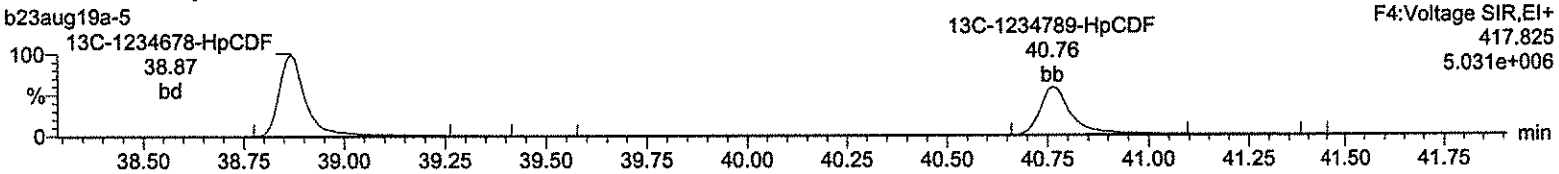
Total-heptafurans



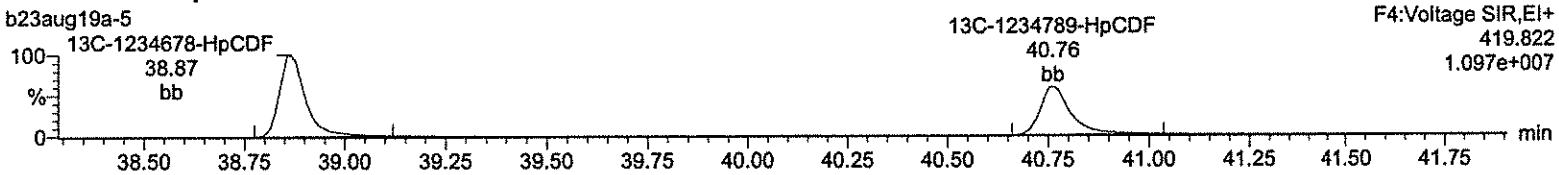
Total-heptafurans



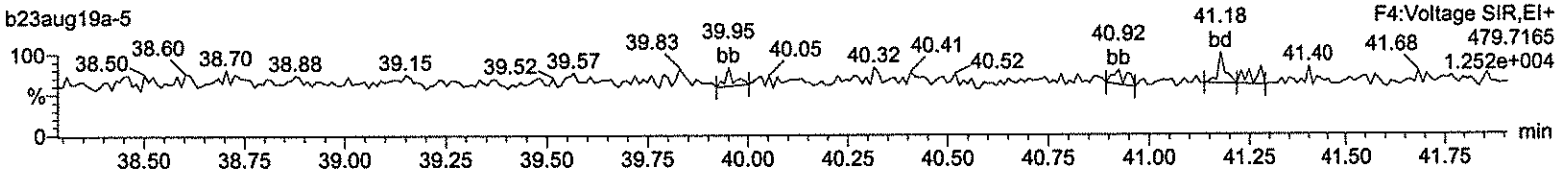
13C-1234678-HpCDF



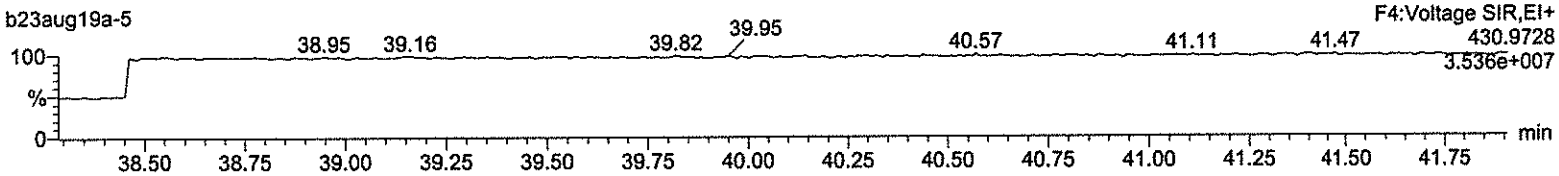
13C-1234678-HpCDF



NoDPE



Lock Mass F4



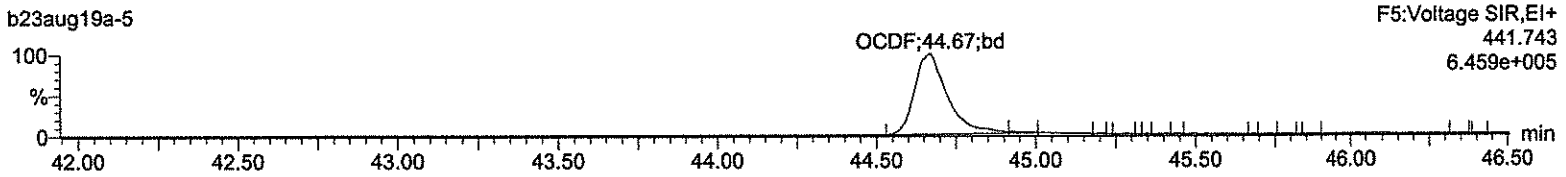
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

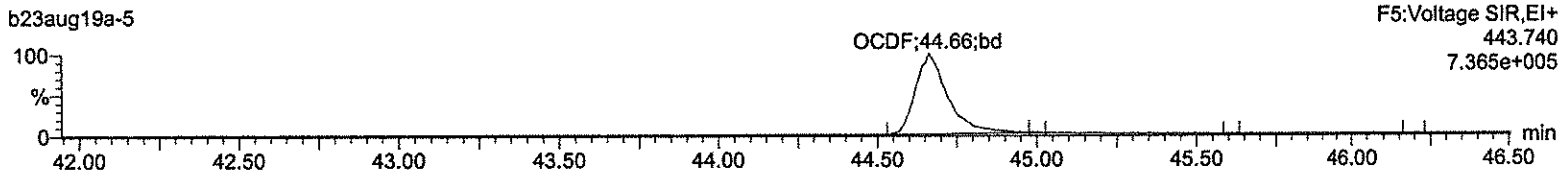
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-5, Date: 23-Aug-2019, Time: 11:29:34, ID: CS2 UD190207-03

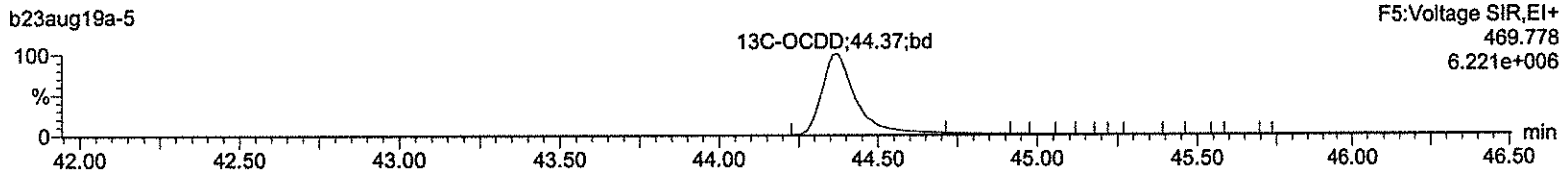
OCDF



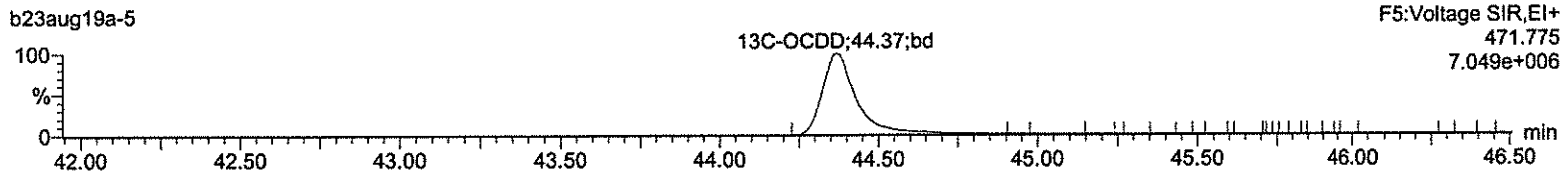
OCDF



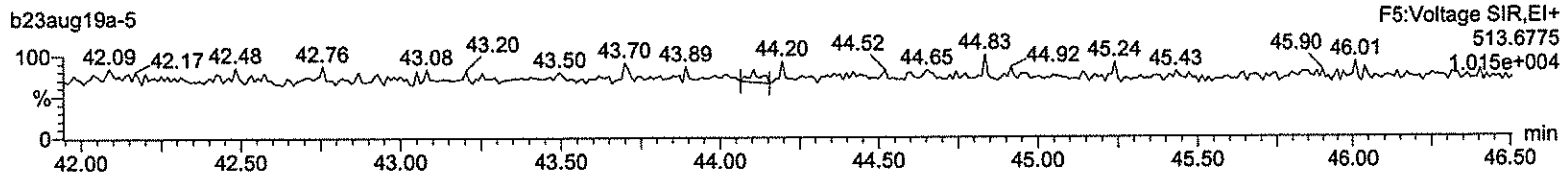
13C-OCDD



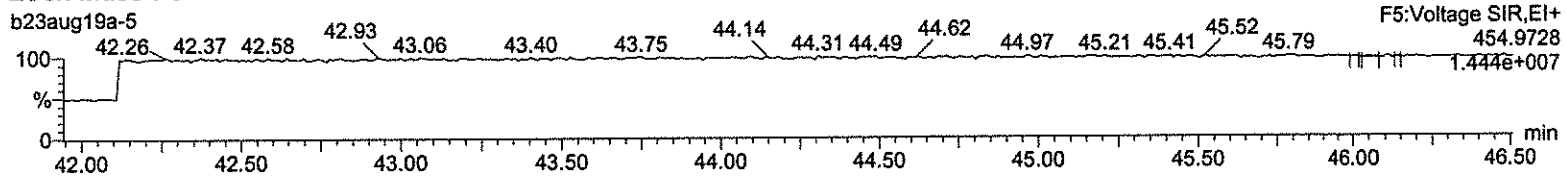
13C-OCDD



DeDPE



Lock Mass F5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

23Aug19

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.03e5	1.33e5	2.36e5	31.23	1.001	0.78	NO	9.850	0.877	0.891	3.89	0.0279	1.58e6	2327	678.2	2.03e6	1656	1226.4	bb	bb
2	12378-PeCDD	4.69e5	3.17e5	7.86e5	34.15	1.001	1.48	NO	52.105	0.886	0.850	3.61	0.0581	9.24e6	4464	2070.4	6.00e6	2316	2589.7	bb	bd
3	123478-HxCDD	4.15e5	3.11e5	7.26e5	36.75	1.001	1.33	NO	52.080	0.972	0.934	2.31	0.102	7.52e6	6626	1134.5	5.98e6	4322	1384.0	dd	bd
4	123678-HxCDD	5.05e5	4.29e5	9.34e5	36.83	1.000	1.18	NO	51.102	0.905	0.885	6.03	0.102	7.96e6	6626	1200.7	6.39e6	4322	1479.0	dd	dd
5	123789-HxCDD	4.67e5	3.78e5	8.46e5	37.07	1.007	1.23	NO	53.561	0.950	0.887	7.79	0.104	6.72e6	6626	1014.6	5.40e6	4322	1248.6	dd	dd
6	1234678-HpCDD	3.00e5	2.92e5	5.92e5	40.13	1.000	1.03	NO	51.982	0.982	0.944	6.68	0.176	3.41e6	4611	739.7	3.31e6	4424	748.5	bd	bd
7	OCDD	4.46e5	5.15e5	9.61e5	44.40	1.000	0.87	NO	103.473	0.946	0.914	7.18	0.239	3.59e6	3295	1089.8	4.01e6	3648	1098.4	bd	bd
8	2378-TCDF	1.20e5	1.54e5	2.74e5	30.47	1.001	0.78	NO	10.283	0.918	0.893	4.88	0.0460	1.25e6	1788	698.2	1.64e6	3259	502.5	bd	bb
9	12378-PeCDF	6.68e5	4.33e5	1.10e6	33.34	1.000	1.54	NO	49.775	0.904	0.908	4.08	0.0695	1.45e7	6830	2123.6	9.33e6	5341	1746.2	bd	bd
10	23478-PeCDF	7.32e5	4.79e5	1.21e6	33.94	1.000	1.53	NO	51.246	0.996	0.971	4.12	0.0620	1.53e7	6830	2237.2	1.01e7	5341	1883.5	bb	bb
11	123478-HxCDF	5.59e5	4.58e5	1.02e6	36.04	1.001	1.22	NO	52.291	1.187	1.135	2.68	0.147	1.04e7	12270	845.7	8.43e6	9096	926.7	bd	bd
12	123678-HxCDF	6.84e5	5.58e5	1.24e6	36.13	1.000	1.23	NO	50.179	1.058	1.054	6.23	0.141	1.12e7	12270	916.6	9.08e6	9096	998.6	db	dd
13	234678-HxCDF	6.21e5	5.12e5	1.13e6	36.62	1.000	1.21	NO	49.891	1.128	1.130	4.65	0.153	1.03e7	12270	841.5	8.53e6	9096	938.2	bd	bd
14	123789-HxCDF	4.93e5	4.08e5	9.01e5	37.38	1.000	1.21	NO	51.454	1.094	1.063	3.46	0.219	6.88e6	12270	560.5	5.62e6	9096	618.2	bd	bd
15	1234678-HpCDF	4.73e5	4.64e5	9.37e5	38.90	1.000	1.02	NO	53.609	1.277	1.191	5.88	0.155	6.39e6	7958	803.1	6.17e6	6565	940.0	bd	bb
16	1234789-HpCDF	3.42e5	3.25e5	6.67e5	40.79	1.000	1.05	NO	51.894	1.273	1.227	4.64	0.266	3.65e6	7958	459.1	3.47e6	6565	527.8	bb	bb
17	OCDF	5.01e5	5.67e5	1.07e6	44.67	1.007	0.88	NO	103.360	1.051	1.017	10.92	0.260	3.97e6	5044	786.5	4.45e6	3333	1334.1	bb	bd
18	13C-2378-TCDD	1.17e6	1.52e6	2.69e6	31.21	1.017	0.77	NO	100.321	1.155	1.151	2.76	0.0817	1.74e7	6647	2621.1	2.27e7	3846	5905.5	bd	bd
19	13C-12378-PeCDD	1.07e6	7.00e5	1.77e6	34.13	1.112	1.54	NO	97.619	0.760	0.779	5.79	0.0938	2.08e7	4176	4980.1	1.37e7	3982	3451.9	bb	bb
20	13C-123478-HxCDD	8.29e5	6.65e5	1.49e6	36.73	0.991	1.25	NO	98.892	0.780	0.789	2.92	0.150	1.59e7	7180	2217.2	1.27e7	5363	2376.1	bd	bd
21	13C-123678-HxCDD	1.14e6	9.23e5	2.06e6	36.82	0.993	1.24	NO	102.018	1.078	1.057	2.47	0.112	1.67e7	7180	2329.9	1.36e7	5363	2528.5	dd	dd
22	13C-1234678-HpCDD	6.12e5	5.94e5	1.21e6	40.12	1.083	1.03	NO	99.479	0.630	0.633	2.50	0.157	6.89e6	5511	1249.3	6.59e6	4984	1322.8	bd	bd
23	13C-OCDD	9.48e5	1.08e6	2.03e6	44.38	1.197	0.87	NO	194.414	0.531	0.546	4.53	0.197	7.40e6	5231	1414.6	8.35e6	6140	1359.4	bd	bd
24	13C-2378-TCDF	1.29e6	1.69e6	2.98e6	30.45	0.992	0.77	NO	98.428	1.278	1.299	1.86	0.116	1.33e7	10479	1273.1	1.73e7	6364	2717.9	bb	bb
25	13C-12378-PeCDF	1.49e6	9.51e5	2.44e6	33.33	1.086	1.56	NO	99.844	1.044	1.046	3.57	0.139	2.94e7	10607	2772.7	1.90e7	5649	3357.7	dd	bb
26	13C-23478-PeCDF	1.49e6	9.47e5	2.43e6	33.93	1.106	1.57	NO	97.180	1.043	1.073	5.25	0.136	3.08e7	10607	2908.5	1.97e7	5649	3486.2	bb	bb
27	13C-123478-HxCDF	5.89e5	1.12e6	1.71e6	36.02	0.972	0.52	NO	98.141	0.895	0.912	1.25	0.178	1.10e7	8091	1356.2	2.09e7	9031	2316.1	bd	bd
28	13C-123678-HxCDF	8.13e5	1.54e6	2.35e6	36.12	0.975	0.53	NO	103.255	1.227	1.188	3.37	0.136	1.24e7	8091	1534.3	2.42e7	9031	2676.1	dd	dd
29	13C-234678-HxCDF	6.92e5	1.32e6	2.01e6	36.61	0.988	0.53	NO	103.856	1.049	1.010	3.04	0.160	1.07e7	8091	1317.5	2.01e7	9031	2229.9	dd	dd
30	13C-123789-HxCDF	5.61e5	1.09e6	1.65e6	37.37	1.008	0.52	NO	101.051	0.861	0.852	1.59	0.190	7.82e6	8091	967.1	1.52e7	9031	1683.1	bd	bd
31	13C-1234678-HpCDF	4.52e5	1.02e6	1.47e6	38.89	1.049	0.45	NO	97.770	0.766	0.784	2.45	0.212	6.06e6	6534	927.8	1.34e7	11020	1217.1	bb	bb
32	13C-1234789-HpCDF	3.21e5	7.26e5	1.05e6	40.77	1.100	0.44	NO	97.422	0.547	0.562	3.62	0.296	3.42e6	6534	522.9	7.67e6	11020	696.4	bb	bb
33	13C-1234-TCDD	1.02e6	1.32e6	2.33e6	30.68	0.000	0.77	NO	100.000	1.000	1.000	0.00	0.0940	1.22e7	6647	1831.7	1.57e7	3846	4083.7	bb	bb
34	13C-123789-HxCDD	1.06e6	8.56e5	1.91e6	37.06	0.000	1.24	NO	100.000	1.000	1.000	0.00	0.119	1.46e7	7180	2034.8	1.19e7	5363	2224.0	dd	dd
35	37Cl-2378-TCDD	2.55e5		2.55e5	31.23	1.018			10.139	1.091	1.077	5.71	0.0211	3.85e6	2536	1518.8				bb	

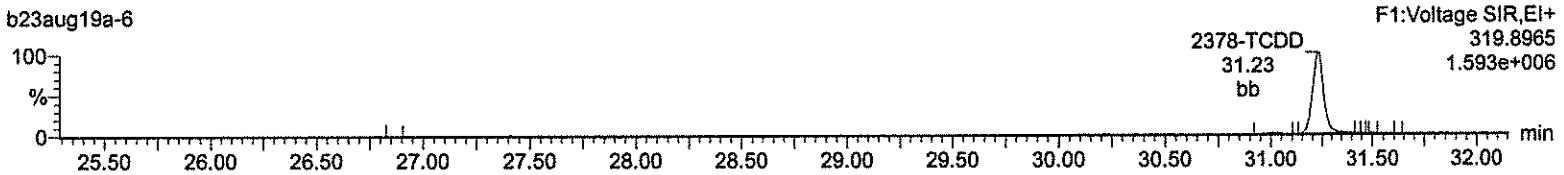
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

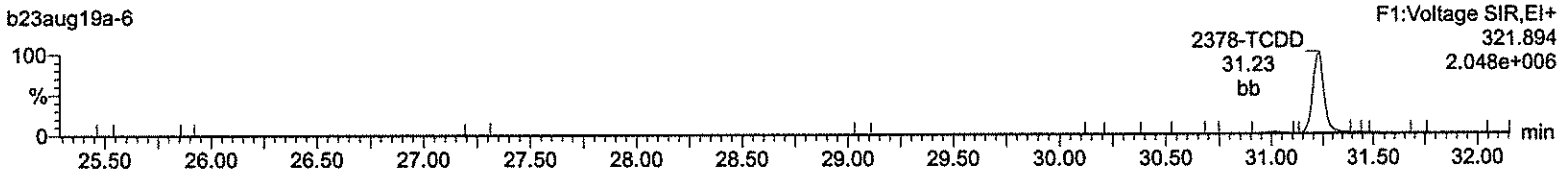
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

Total-tetradioxins



Total-tetradioxins



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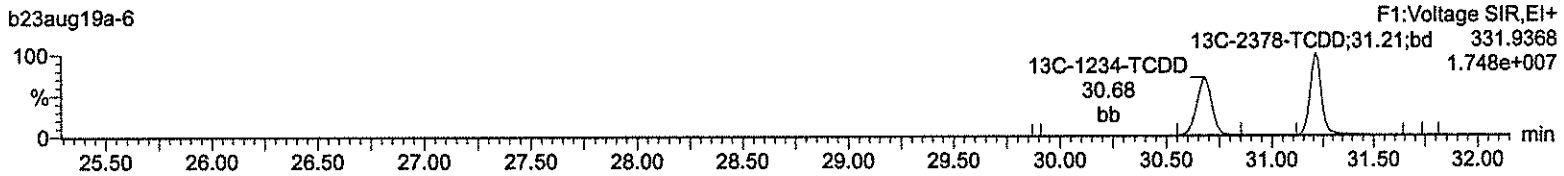

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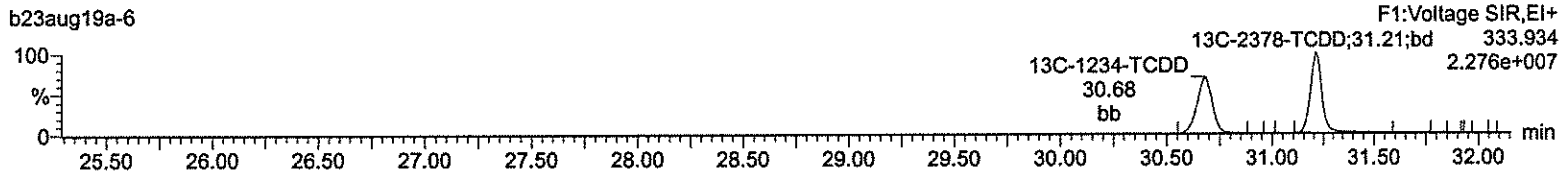
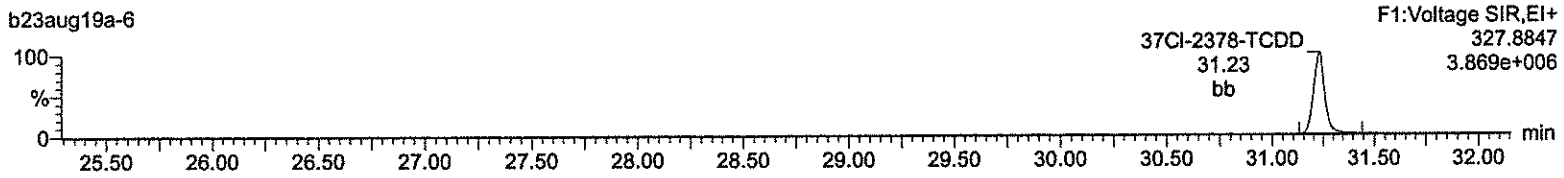
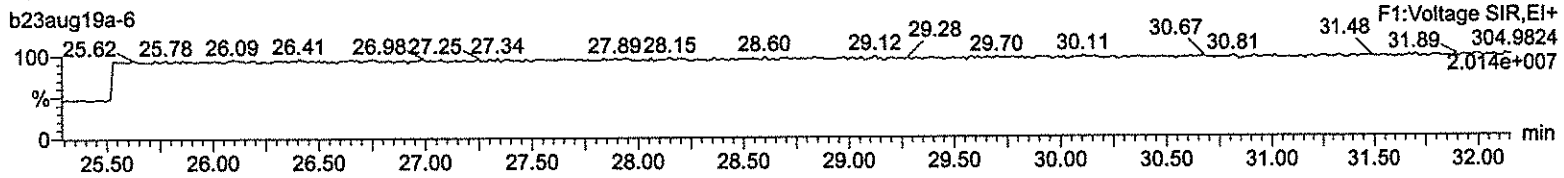


37Cl-2378-TCDD



Lock Mass F1



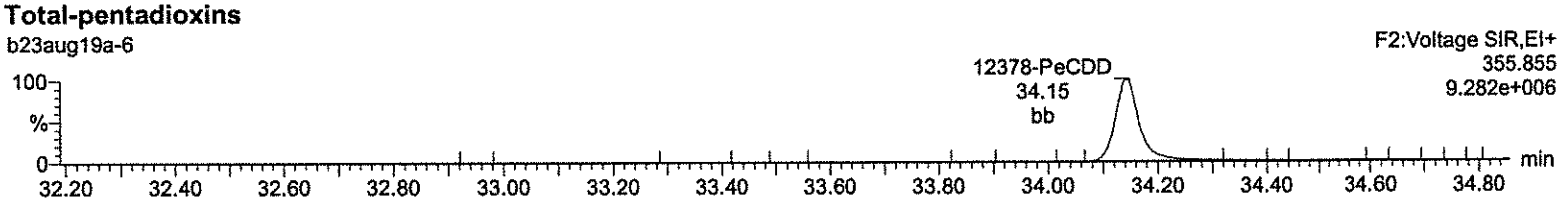
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

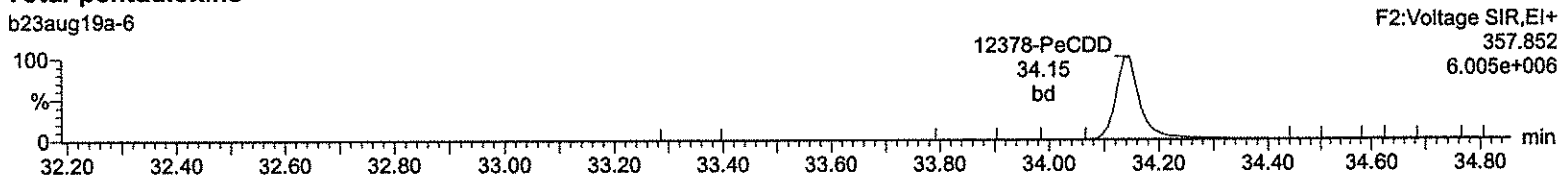
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

Total-pentadioxins



Total-pentadioxins



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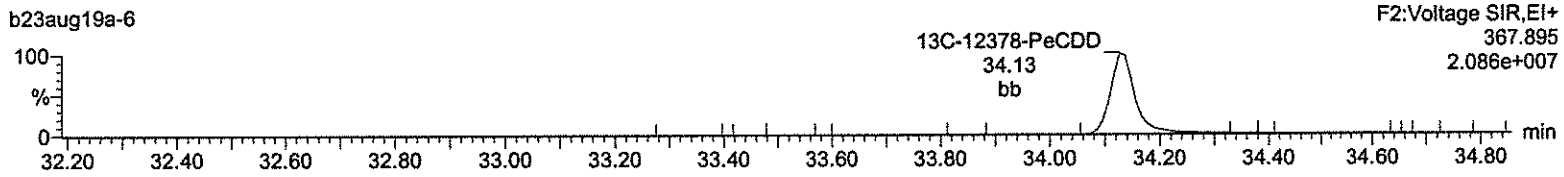

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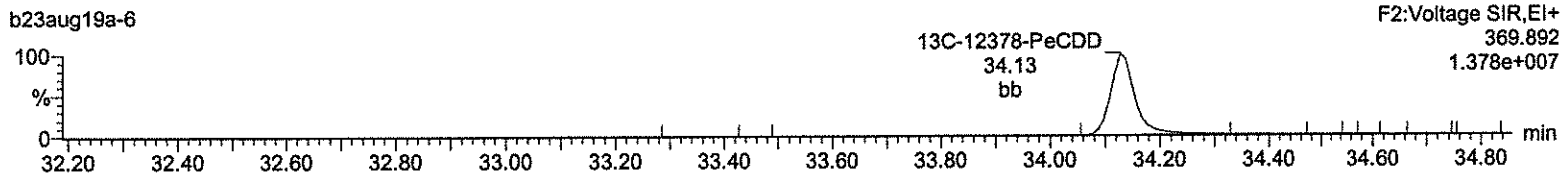
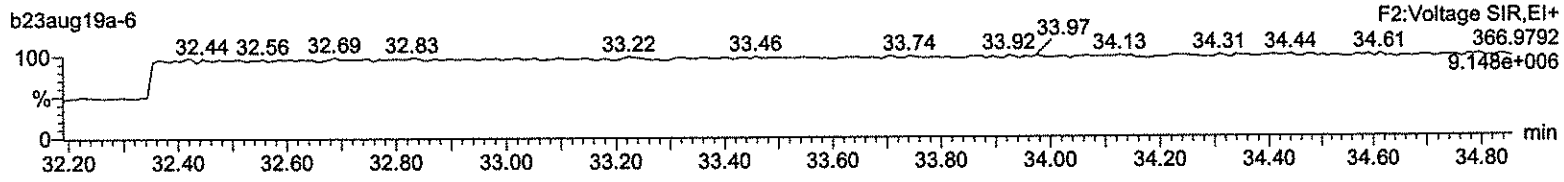


Lock Mass F2



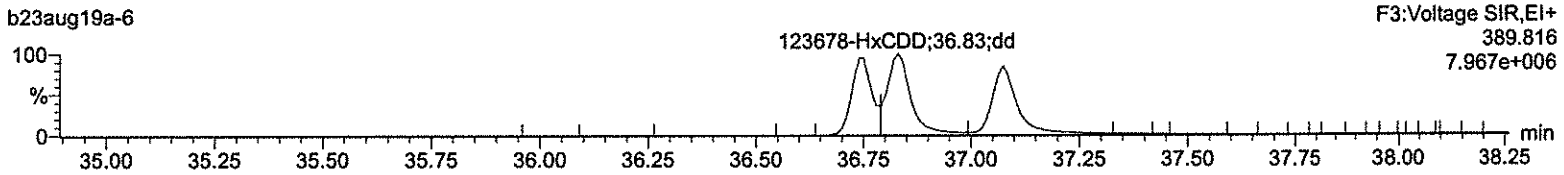
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

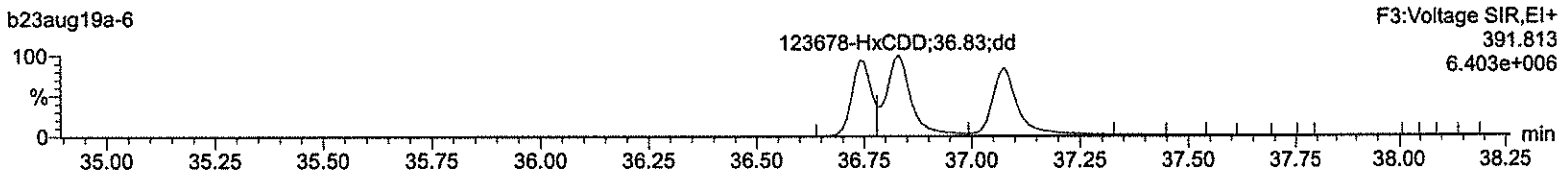
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

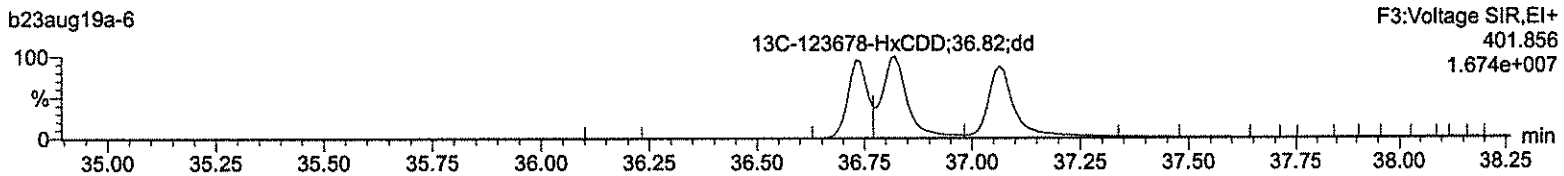
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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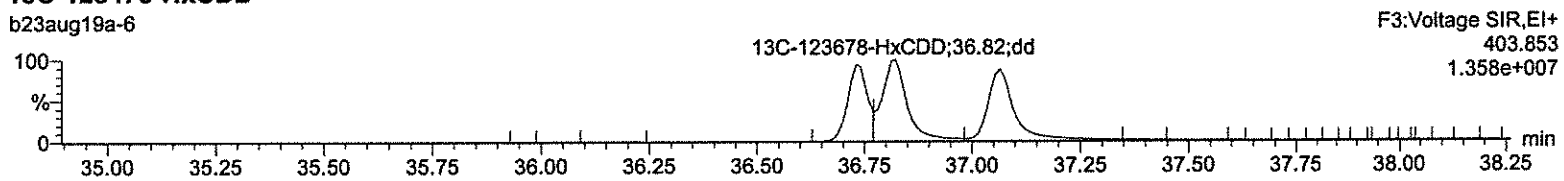
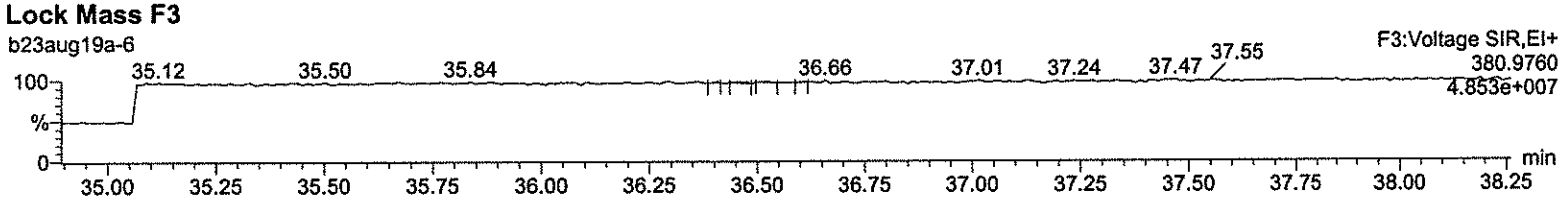


Lock Mass F3



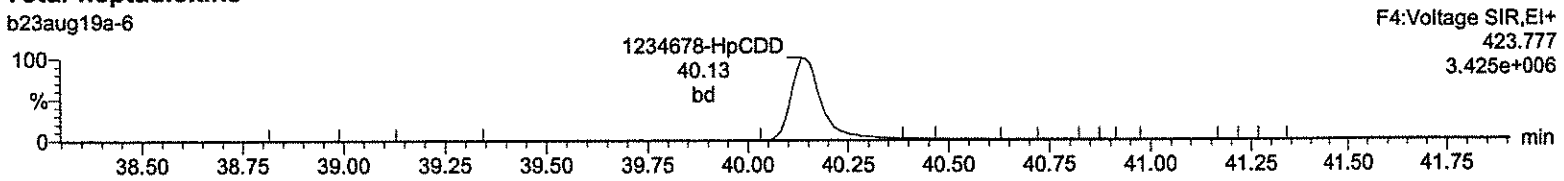
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

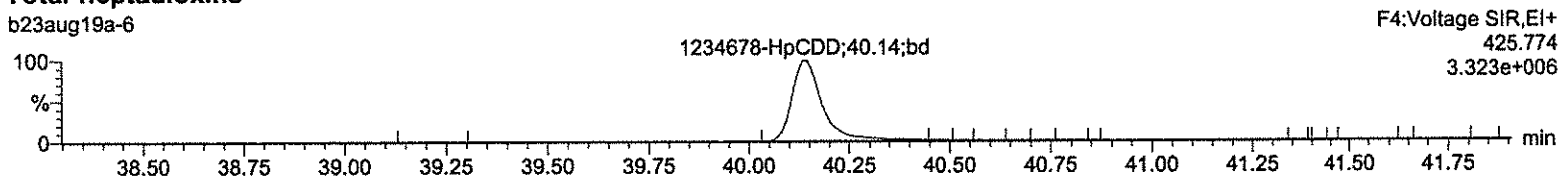
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

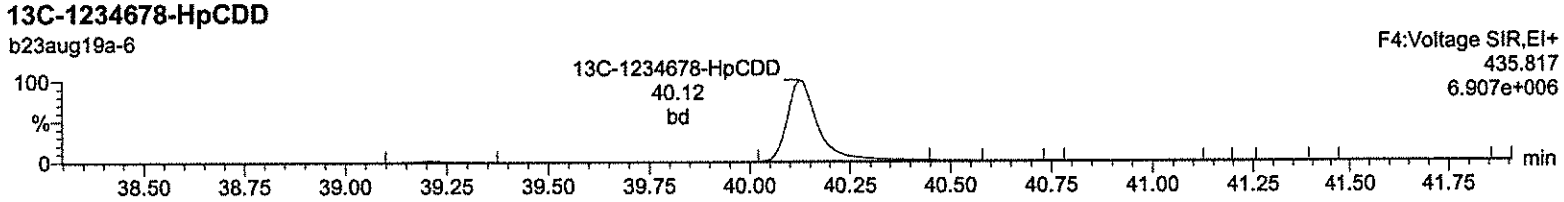
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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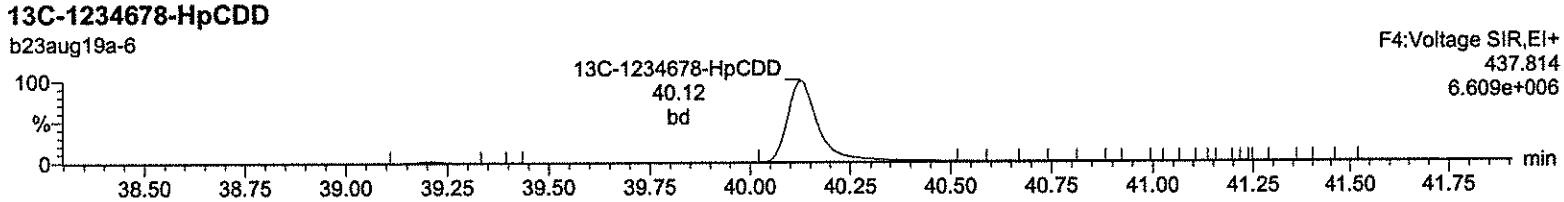
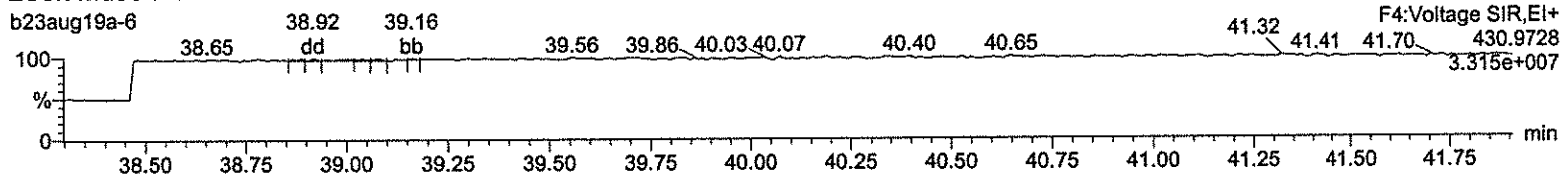


Lock Mass F4



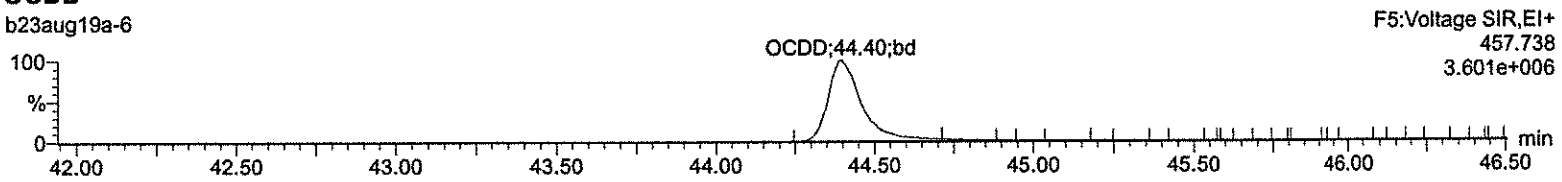
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

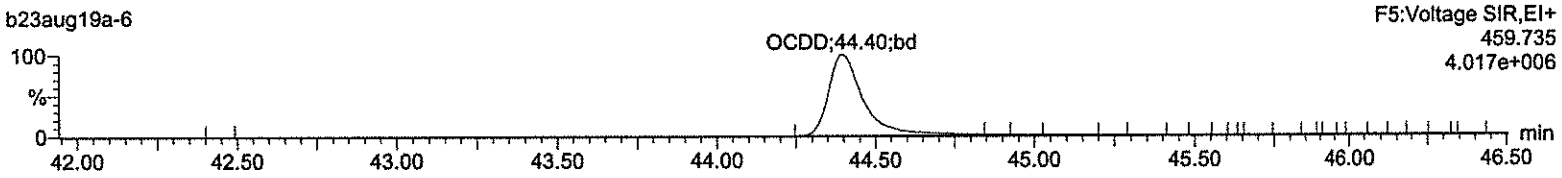
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

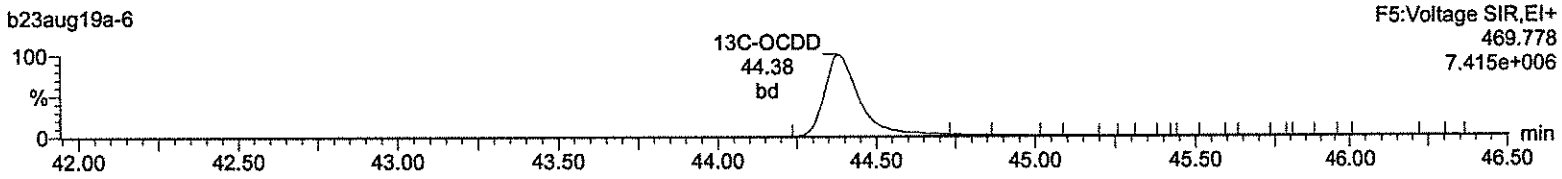
OCDD



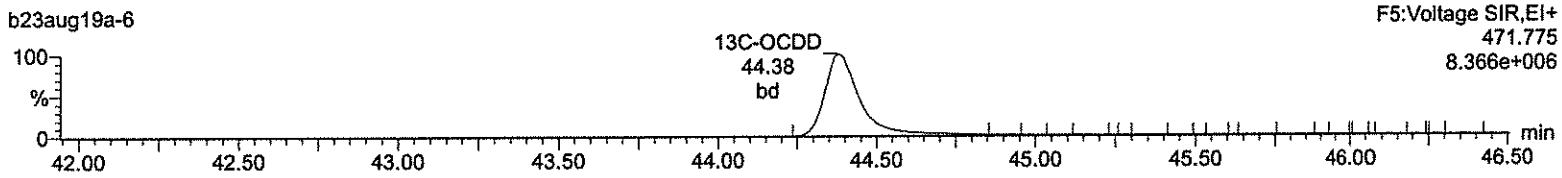
OCDD



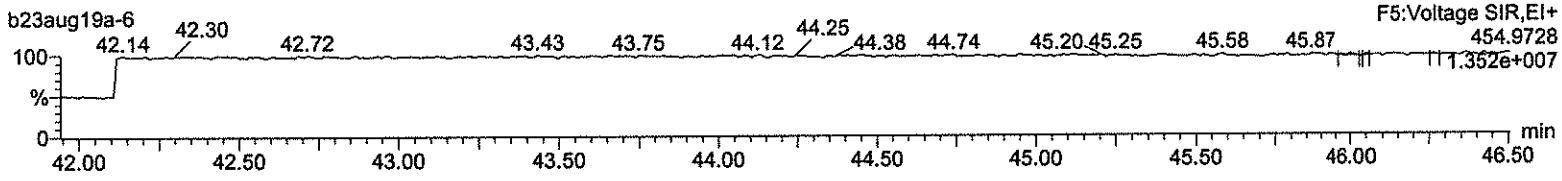
13C-OCDD



13C-OCDD



Lock Mass F5



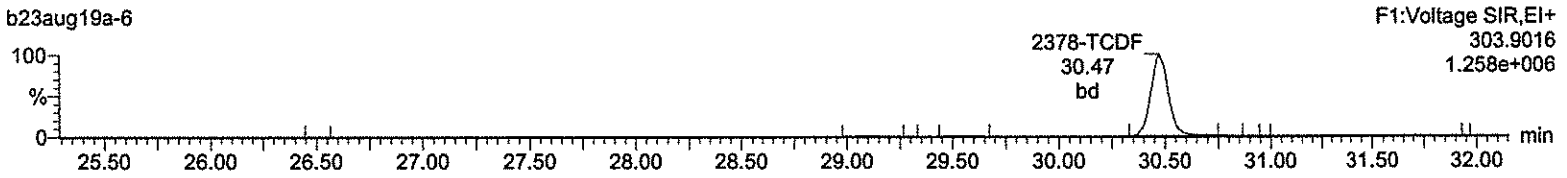
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

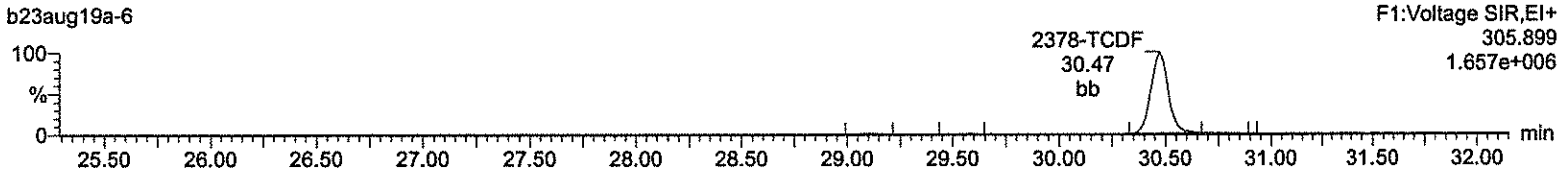
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

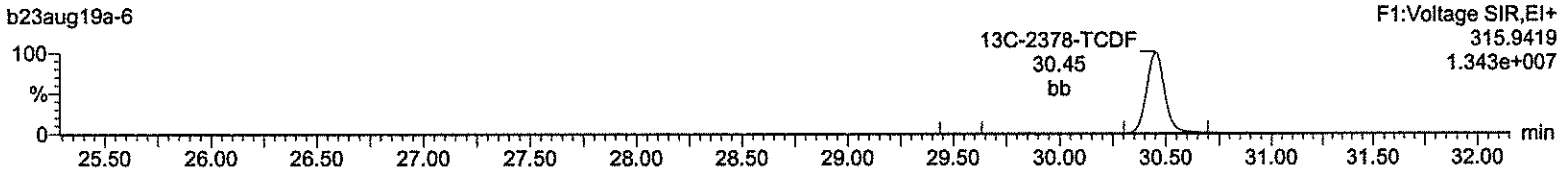
Total-tetrafurans



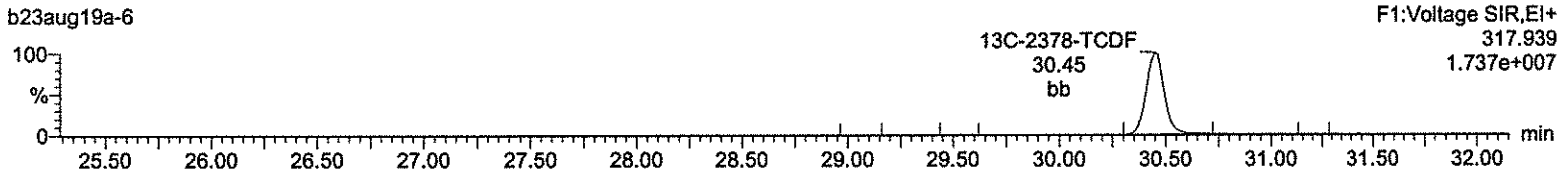
Total-tetrafurans



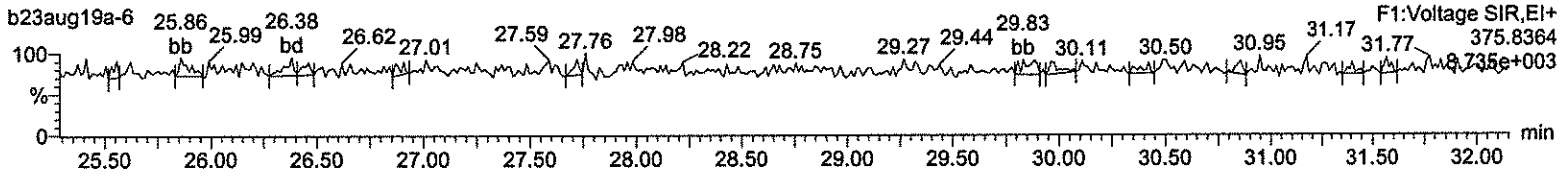
13C-2378-TCDF



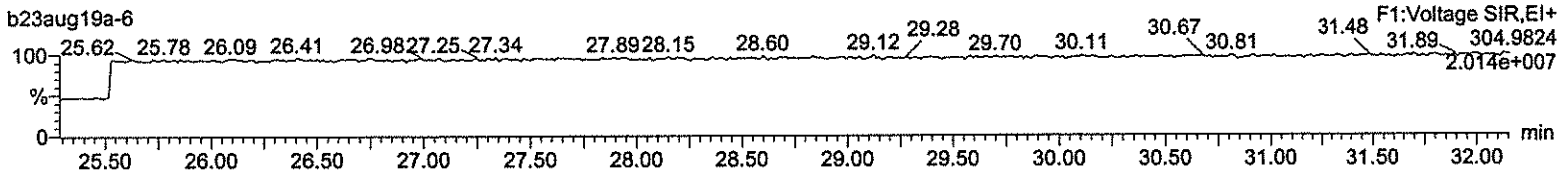
13C-2378-TCDF



HxDPE



Lock Mass F1



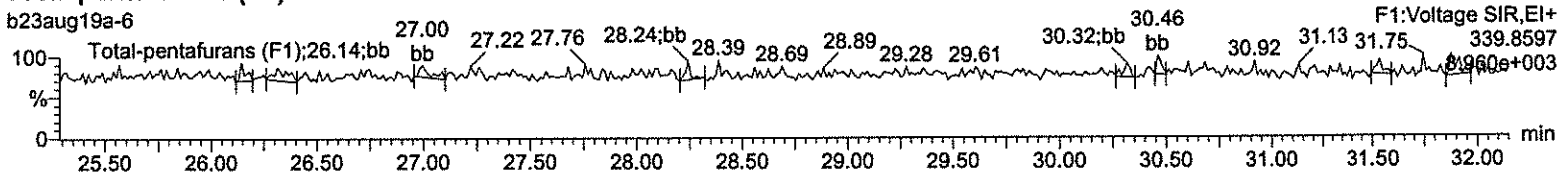
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

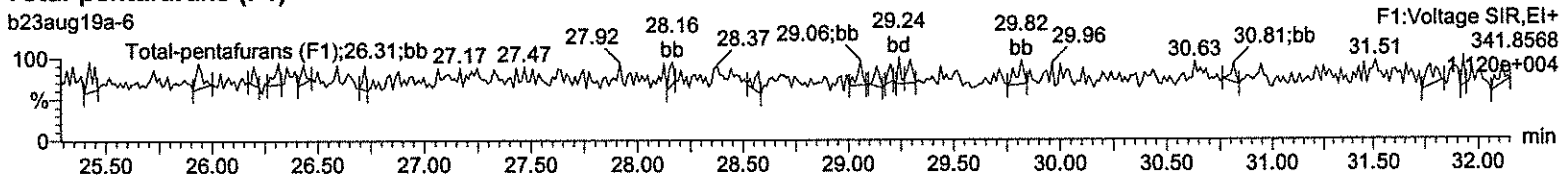
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

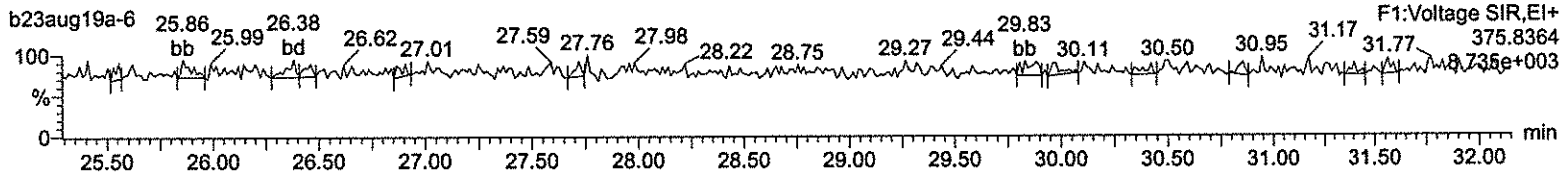
Total-pentafurans (F1)



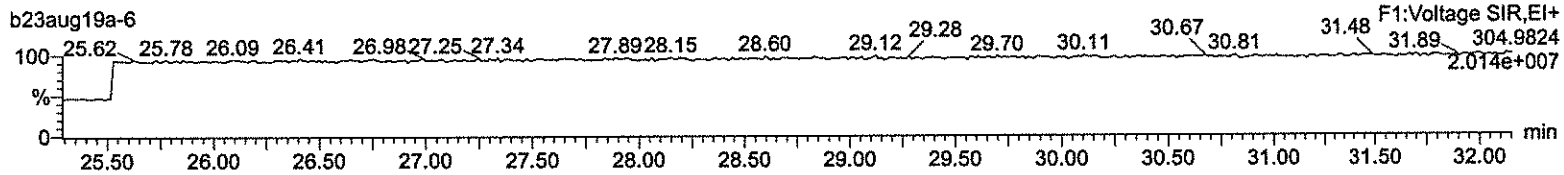
Total-pentafurans (F1)



HxDPE



Lock Mass F1



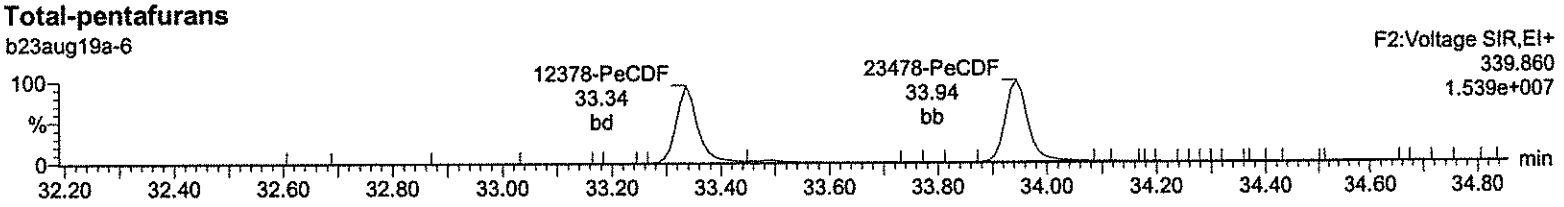
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

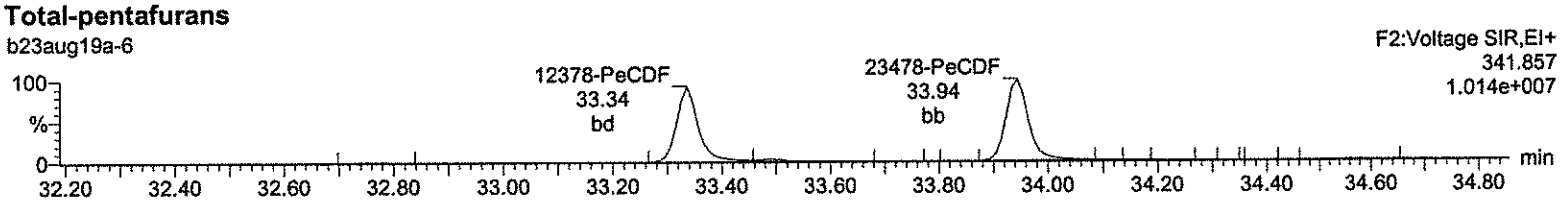
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

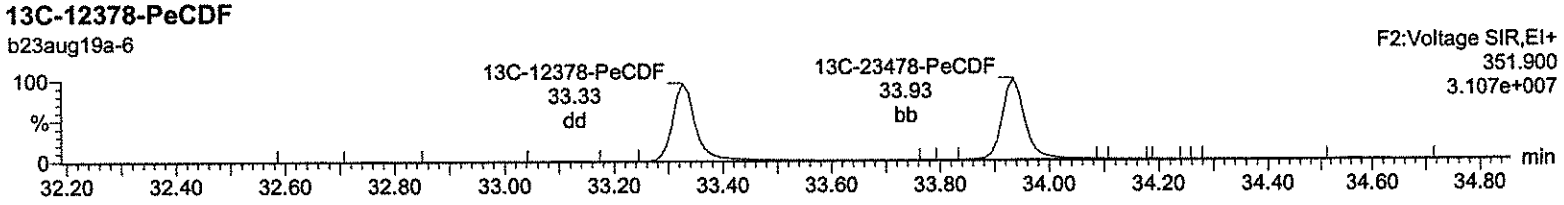
Total-pentafurans



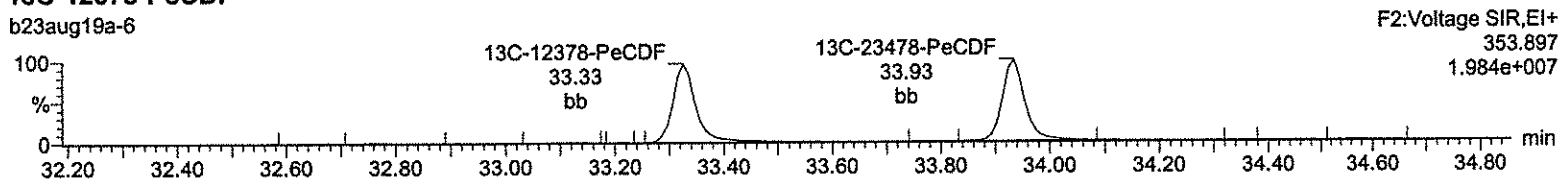
Total-pentafurans



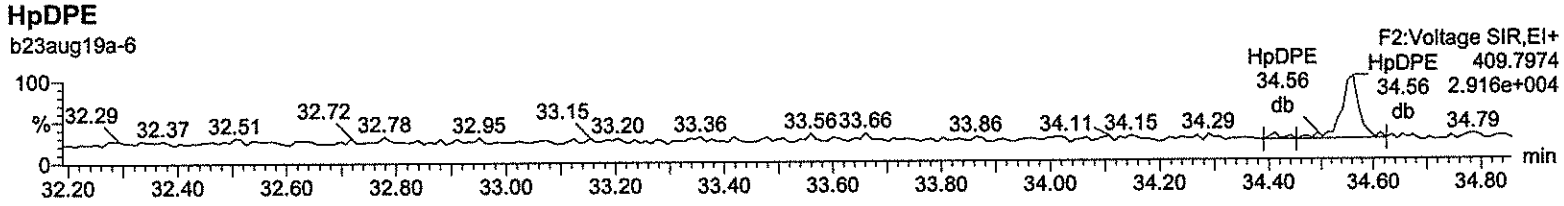
13C-12378-PeCDF



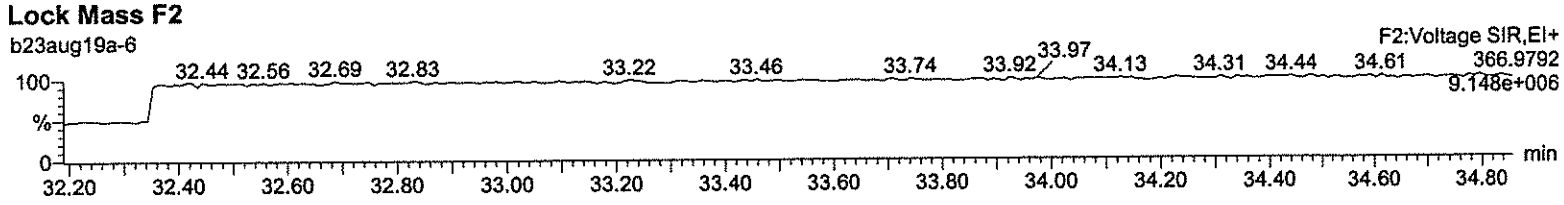
13C-12378-PeCDF



HpDPE



Lock Mass F2



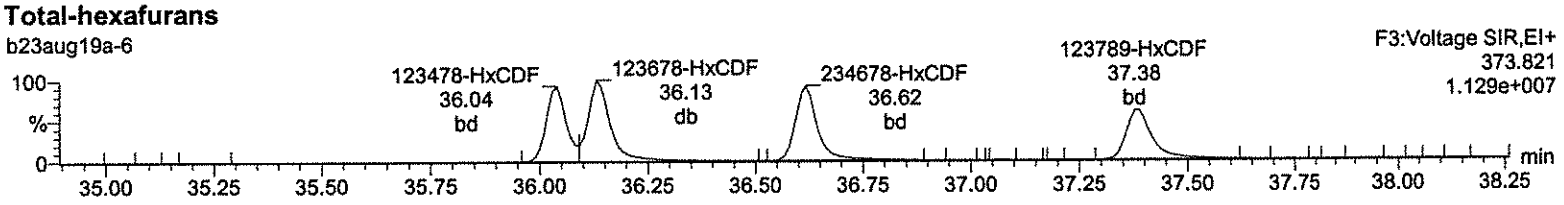
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

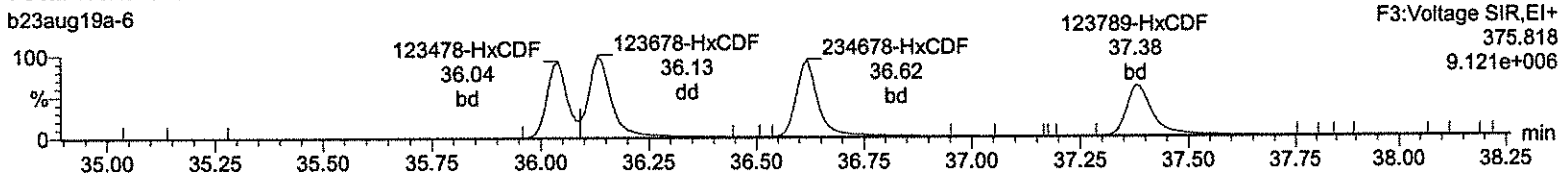
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

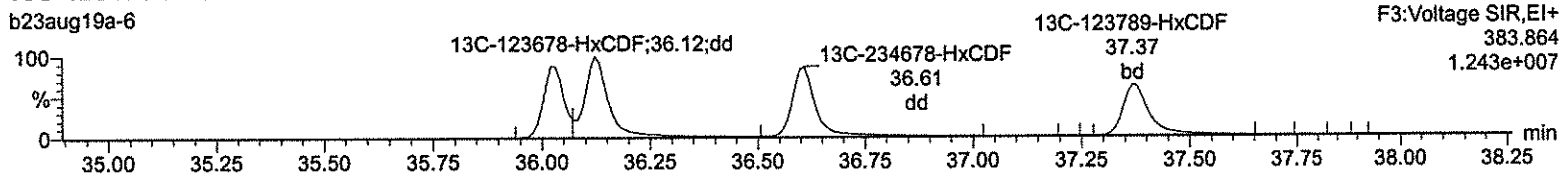
Total-hexafurans



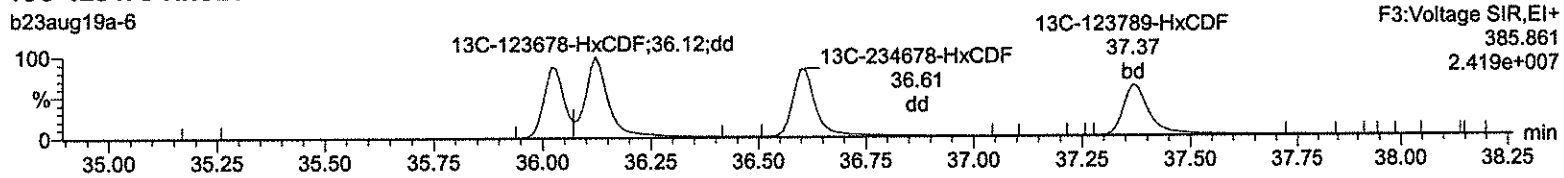
Total-hexafurans



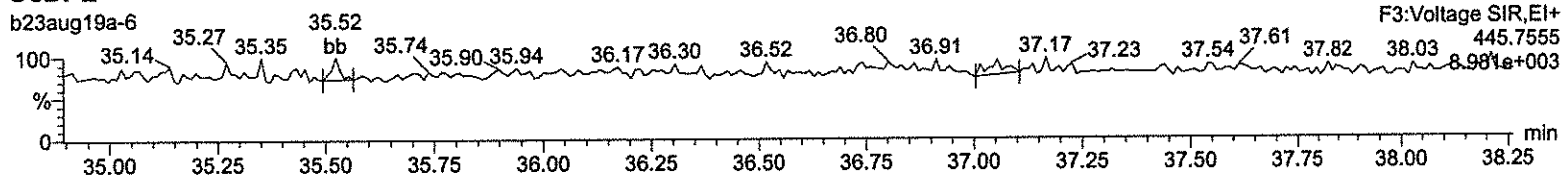
13C-123478-HxCDF



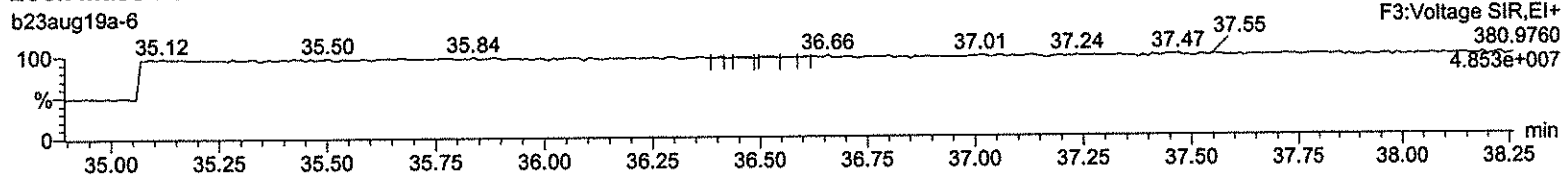
13C-123478-HxCDF



OcDPE



Lock Mass F3



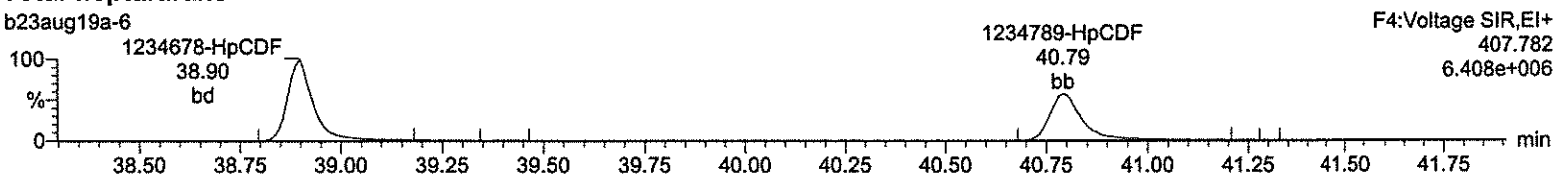
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

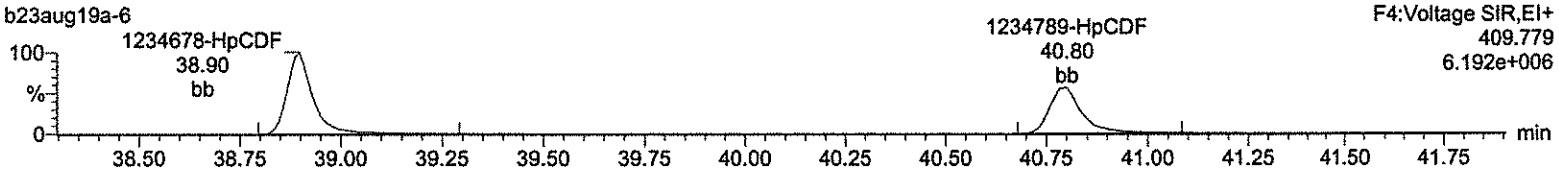
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

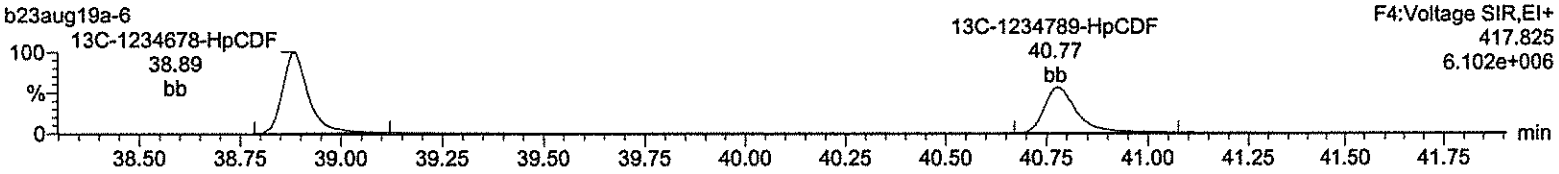
Total-heptafurans



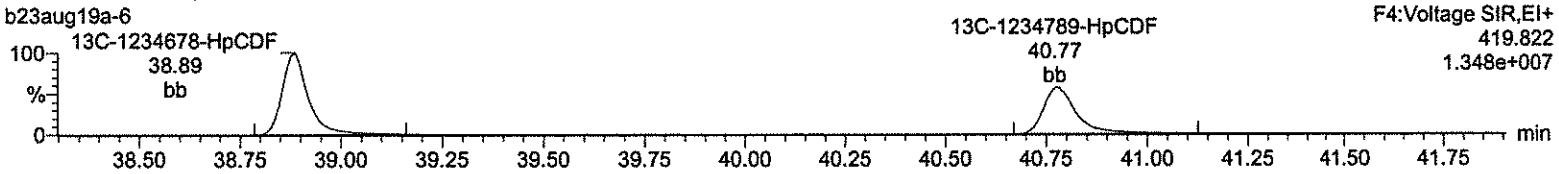
Total-heptafurans



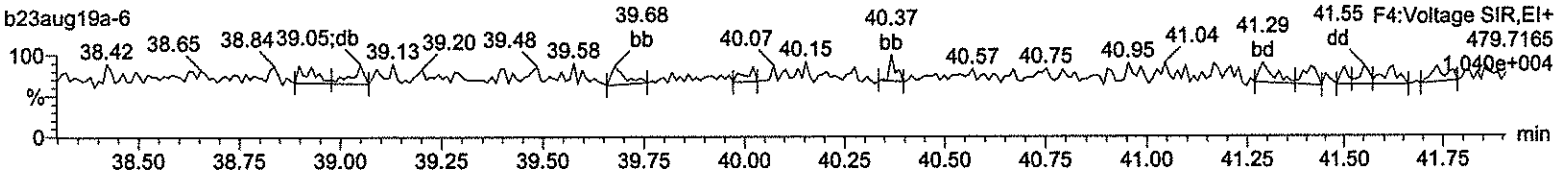
13C-1234678-HpCDF



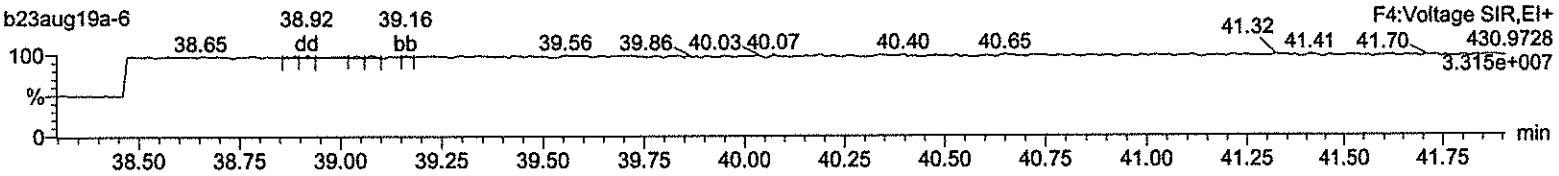
13C-1234678-HpCDF



NoDPE



Lock Mass F4



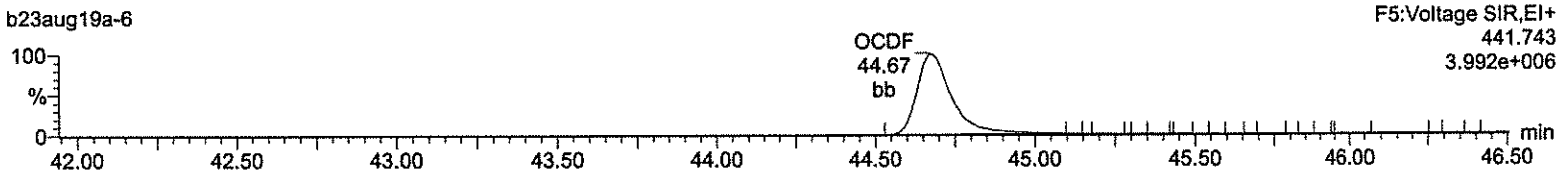
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

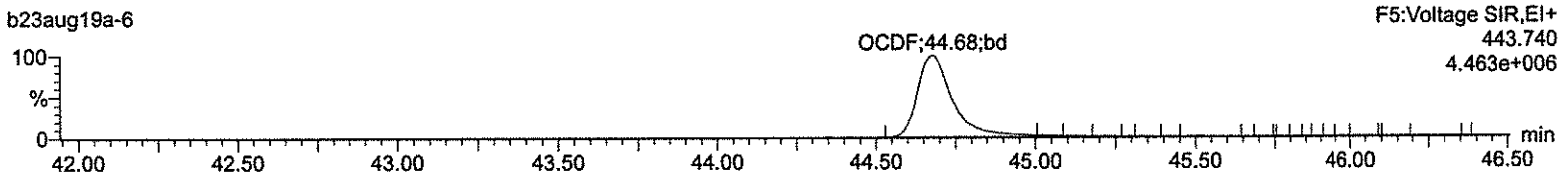
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-6, Date: 23-Aug-2019, Time: 12:18:01, ID: CS3 UD190207-04

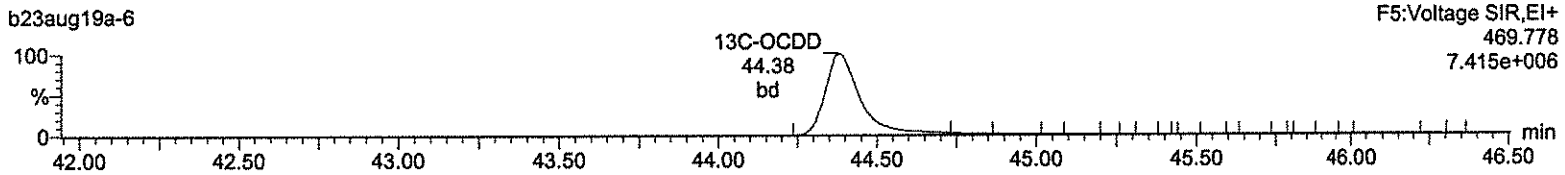
OCDF



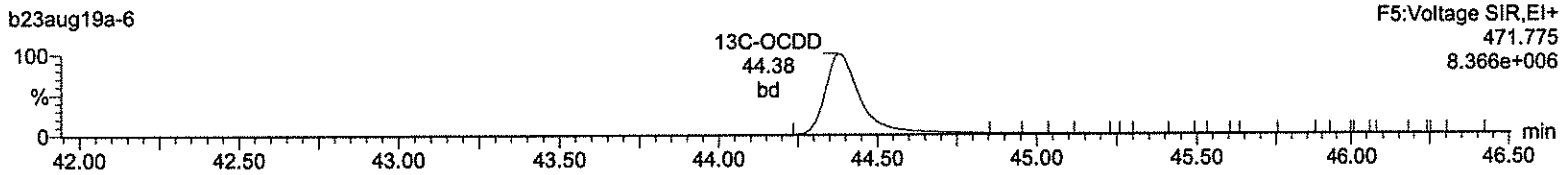
OCDF



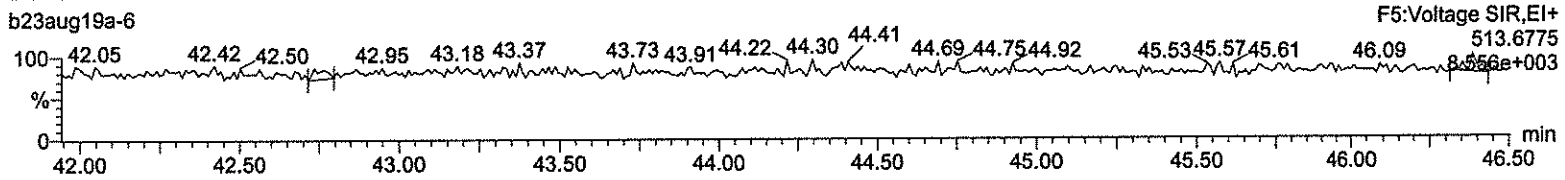
13C-OCDD



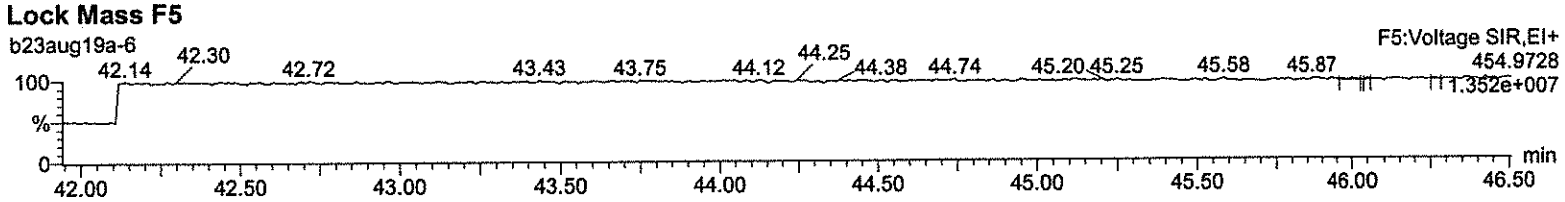
13C-OCDD



DeDPE



Lock Mass F5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

26Aug19

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.61e5	6.14e5	1.08e6	31.22	1.000	0.75	NO	41.227	0.918	0.891	3.89	0.0355	7.25e6	2830	2562.0	9.50e6	2744	3462.1	bb	bb
2	12378-PeCDD	2.11e6	1.38e6	3.50e6	34.14	1.000	1.53	NO	206.417	0.878	0.850	3.61	0.0668	4.39e7	4858	9037.1	2.85e7	4415	6449.2	bb	bb
3	123478-HxCDD	1.88e6	1.52e6	3.40e6	36.74	1.000	1.23	NO	200.187	0.934	0.934	2.31	0.130	3.42e7	10399	3287.3	2.72e7	5386	5056.2	bd	bd
4	123678-HxCDD	2.34e6	1.88e6	4.22e6	36.82	1.000	1.24	NO	211.493	0.936	0.885	6.03	0.126	3.77e7	10399	3629.2	3.05e7	5386	5665.4	dd	dd
5	123789-HxCDD	2.15e6	1.73e6	3.88e6	37.06	1.007	1.24	NO	214.966	0.954	0.887	7.79	0.131	3.17e7	10399	3048.4	2.57e7	5386	4780.5	dd	dd
6	1234678-HpCDD	1.35e6	1.33e6	2.68e6	40.13	1.000	1.01	NO	213.180	1.006	0.944	6.68	0.214	1.66e7	6364	2604.6	1.59e7	6602	2405.1	bb	bd
7	OCDD	2.13e6	2.39e6	4.53e6	44.39	1.000	0.89	NO	423.482	0.968	0.914	7.18	0.353	1.72e7	6237	2764.0	1.92e7	5759	3336.5	bd	bd
8	2378-TCDF	5.43e5	6.92e5	1.23e6	30.47	1.001	0.78	NO	41.965	0.937	0.893	4.88	0.0493	5.51e6	2429	2266.4	7.13e6	3415	2086.3	bd	bb
9	12378-PeCDF	3.03e6	1.97e6	5.00e6	33.33	1.000	1.54	NO	206.181	0.936	0.908	4.08	0.119	6.67e7	12543	5316.1	4.33e7	11358	3812.5	bd	bd
10	23478-PeCDF	3.34e6	2.18e6	5.52e6	33.93	1.000	1.54	NO	205.069	0.996	0.971	4.12	0.102	7.34e7	12543	5853.2	4.71e7	11358	4146.7	bb	bb
11	123478-HxCDF	2.52e6	2.05e6	4.57e6	36.03	1.000	1.23	NO	200.280	1.137	1.135	2.68	0.175	4.74e7	17214	2755.1	3.83e7	12256	3128.5	bd	bd
12	123678-HxCDF	3.04e6	2.46e6	5.49e6	36.12	1.000	1.23	NO	204.436	1.078	1.054	6.23	0.170	5.01e7	17214	2908.1	4.06e7	12256	3316.0	db	db
13	234678-HxCDF	2.87e6	2.34e6	5.20e6	36.61	1.000	1.23	NO	209.621	1.185	1.130	4.65	0.179	4.79e7	17214	2783.8	3.88e7	12256	3165.6	bb	bd
14	123789-HxCDF	2.26e6	1.83e6	4.08e6	37.37	1.000	1.24	NO	206.634	1.098	1.063	3.46	0.257	3.33e7	17214	1935.4	2.74e7	12256	2236.7	bb	bb
15	1234678-HpCDF	2.07e6	2.07e6	4.14e6	38.89	1.000	1.00	NO	209.312	1.246	1.191	5.88	0.211	2.74e7	11436	2392.5	2.67e7	10103	2640.0	bb	bd
16	1234789-HpCDF	1.57e6	1.56e6	3.13e6	40.78	1.000	1.01	NO	209.780	1.287	1.227	4.64	0.342	1.73e7	11436	1511.8	1.68e7	10103	1667.7	bd	bb
17	OCDF	2.48e6	2.77e6	5.24e6	44.67	1.007	0.89	NO	441.082	1.121	1.017	10.92	0.386	1.96e7	5620	3484.4	2.19e7	8976	2437.9	bd	bd
18	13C-2378-TCDD	1.26e6	1.67e6	2.93e6	31.21	1.018	0.76	NO	101.573	1.169	1.151	2.76	0.0776	1.90e7	6721	2828.8	2.48e7	3690	6710.4	bb	bd
19	13C-12378-PeCDD	1.21e6	7.81e5	1.99e6	34.13	1.113	1.55	NO	102.068	0.795	0.779	5.79	0.0932	2.48e7	4232	5858.5	1.58e7	4233	3724.7	bb	bb
20	13C-123478-HxCDD	1.01e6	8.11e5	1.82e6	36.73	0.991	1.24	NO	104.708	0.826	0.789	2.92	0.118	1.79e7	6515	2754.6	1.42e7	5446	2599.9	bd	bd
21	13C-123678-HxCDD	1.24e6	1.01e6	2.26e6	36.81	0.993	1.23	NO	96.992	1.025	1.057	2.47	0.0884	1.95e7	6515	2997.2	1.61e7	5446	2957.7	dd	dd
22	13C-1234678-HpCDD	6.69e5	6.64e5	1.33e6	40.12	1.083	1.01	NO	95.663	0.606	0.633	2.50	0.135	8.03e6	5583	1439.1	7.69e6	5351	1436.6	bb	bd
23	13C-OCDD	1.10e6	1.24e6	2.34e6	44.37	1.197	0.89	NO	194.652	0.532	0.546	4.53	0.168	8.74e6	5957	1467.7	9.87e6	5761	1712.6	bd	bd
24	13C-2378-TCDF	1.45e6	1.85e6	3.30e6	30.45	0.993	0.78	NO	101.282	1.315	1.299	1.86	0.113	1.46e7	10213	1427.1	1.89e7	6879	2746.1	bb	bb
25	13C-12378-PeCDF	1.61e6	1.06e6	2.67e6	33.32	1.086	1.51	NO	101.970	1.066	1.046	3.57	0.155	3.34e7	10860	3075.6	2.20e7	8062	2727.1	bb	dd
26	13C-23478-PeCDF	1.69e6	1.08e6	2.77e6	33.92	1.106	1.57	NO	103.059	1.106	1.073	5.25	0.151	3.68e7	10860	3384.8	2.35e7	8062	2915.1	bb	bb
27	13C-123478-HxCDF	6.87e5	1.32e6	2.01e6	36.02	0.972	0.52	NO	100.212	0.914	0.912	1.25	0.206	1.27e7	10609	1193.2	2.40e7	13423	1788.6	bd	bd
28	13C-123678-HxCDF	8.76e5	1.67e6	2.55e6	36.11	0.975	0.52	NO	97.513	1.159	1.188	3.37	0.158	1.41e7	10609	1332.6	2.74e7	13423	2043.0	db	db
29	13C-234678-HxCDF	7.56e5	1.44e6	2.20e6	36.60	0.988	0.52	NO	98.816	0.998	1.010	3.04	0.186	1.25e7	10609	1178.4	2.37e7	13423	1768.5	bb	bb
30	13C-123789-HxCDF	6.53e5	1.21e6	1.86e6	37.36	1.008	0.54	NO	99.220	0.845	0.852	1.59	0.220	9.47e6	10609	892.9	1.80e7	13423	1344.1	bd	bb
31	13C-1234678-HpCDF	5.19e5	1.14e6	1.66e6	38.88	1.049	0.45	NO	96.387	0.756	0.784	2.45	0.149	6.70e6	6238	1074.9	1.48e7	8713	1702.5	bd	bb
32	13C-1234789-HpCDF	3.77e5	8.40e5	1.22e6	40.77	1.100	0.45	NO	98.485	0.553	0.562	3.62	0.208	3.98e6	6238	638.4	8.97e6	8713	1030.1	bd	bd
33	13C-1234-TCDD	1.10e6	1.41e6	2.51e6	30.67	0.000	0.78	NO	100.000	1.000	1.000	0.00	0.0893	1.28e7	6721	1900.5	1.67e7	3690	4534.7	bb	bb
34	13C-123789-HxCDD	1.21e6	9.88e5	2.20e6	37.05	0.000	1.23	NO	100.000	1.000	1.000	0.00	0.0934	1.76e7	6515	2707.5	1.43e7	5446	2627.4	dd	dd
35	37Cl-2378-TCDD	1.12e6		1.12e6	31.22	1.018			41.679	1.122	1.077	5.71	0.0208	1.77e7	2614	6758.4				bb	

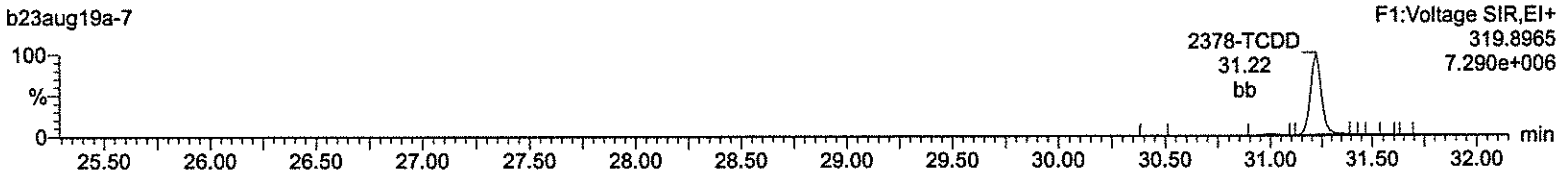
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

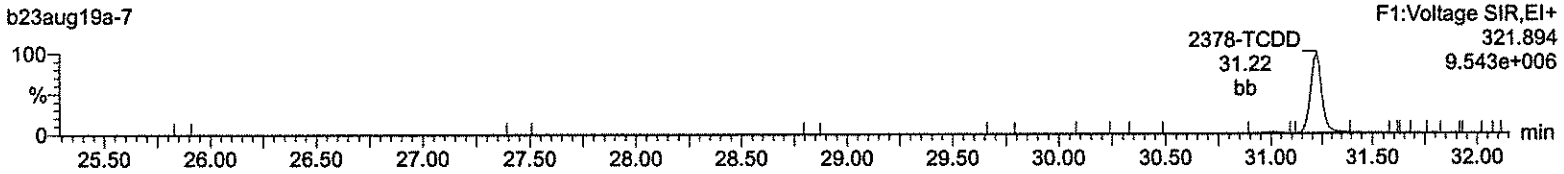
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

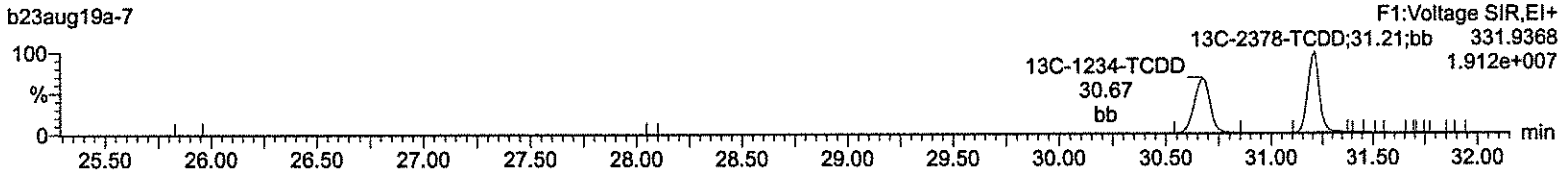
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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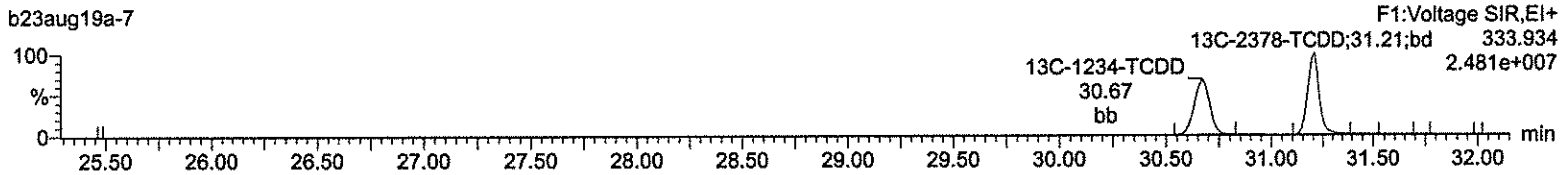
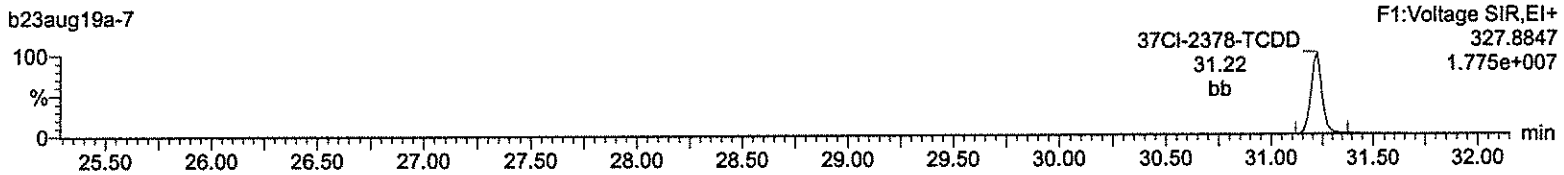
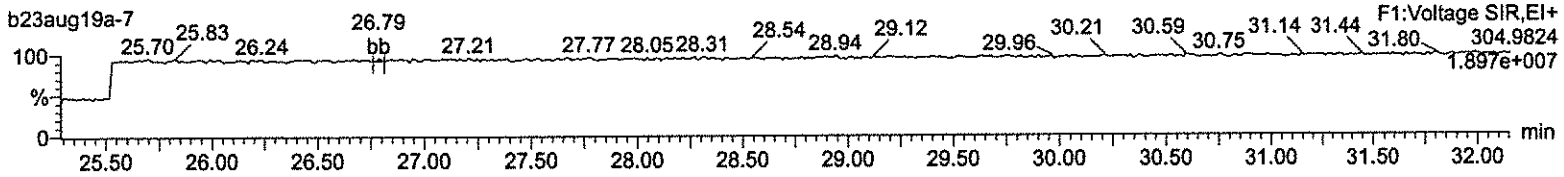


37Cl-2378-TCDD



Lock Mass F1



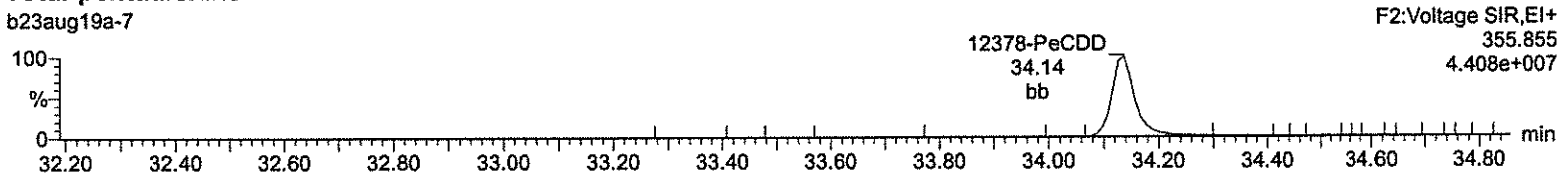
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

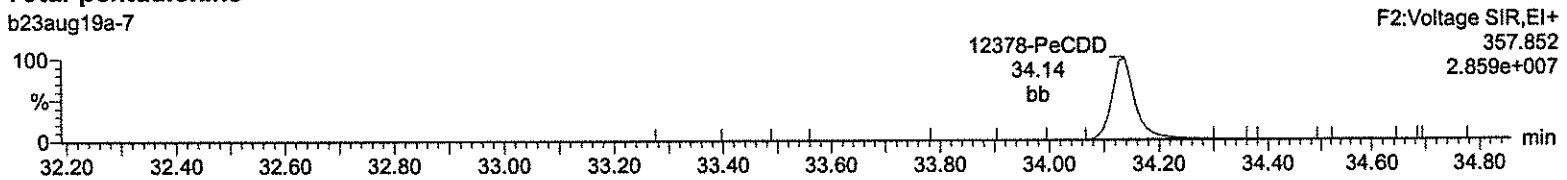
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

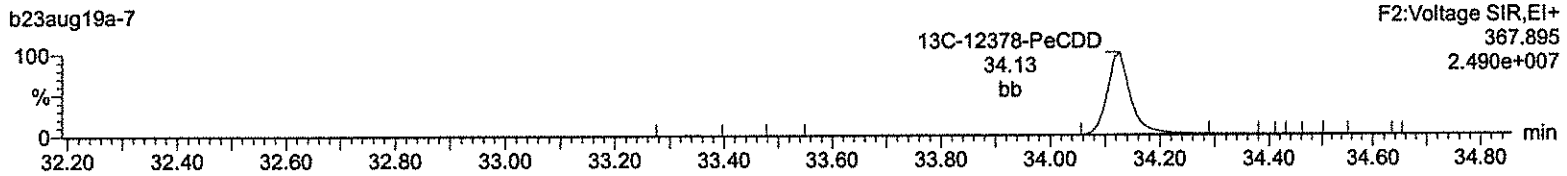
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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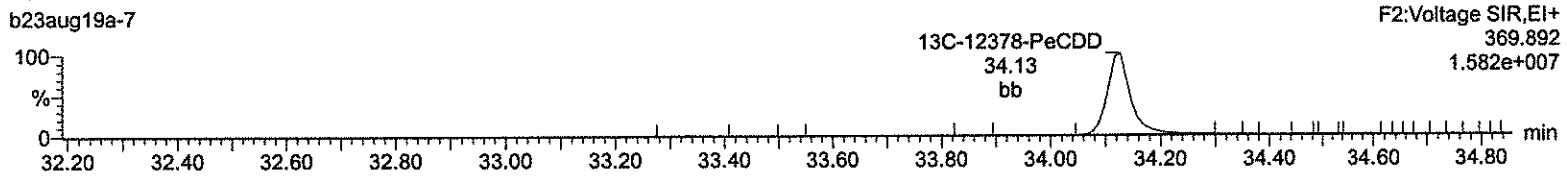
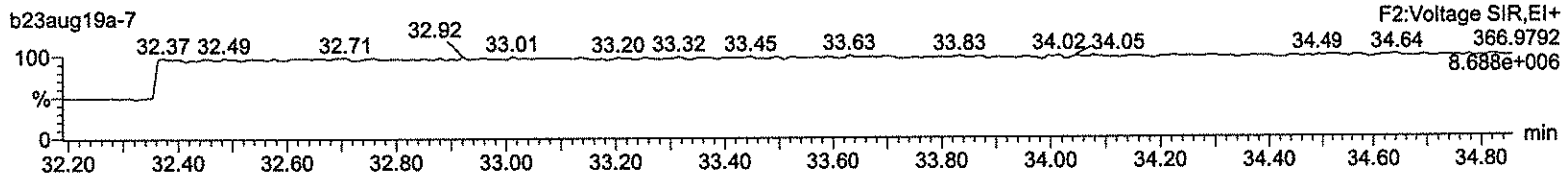


Lock Mass F2



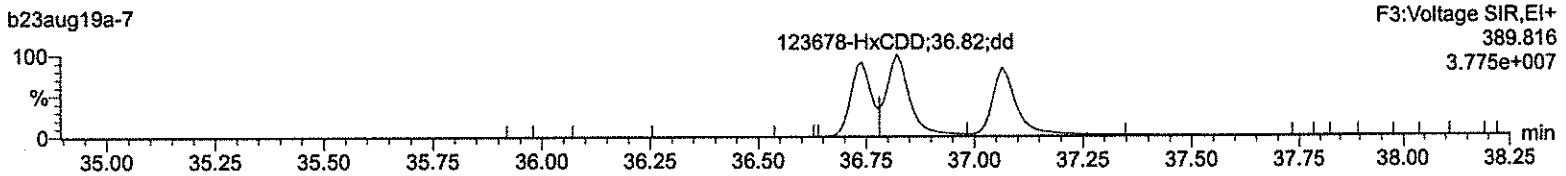
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

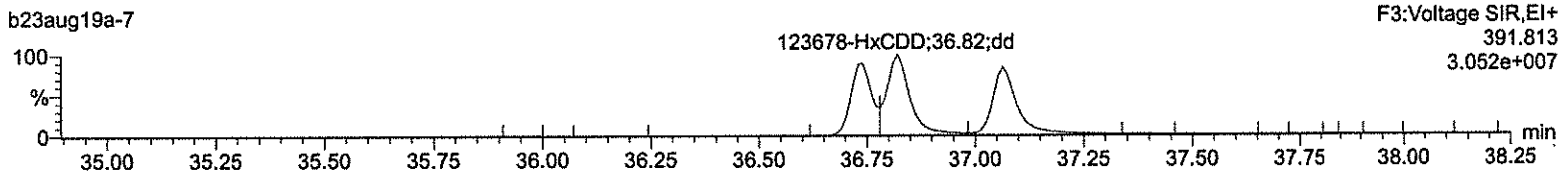
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

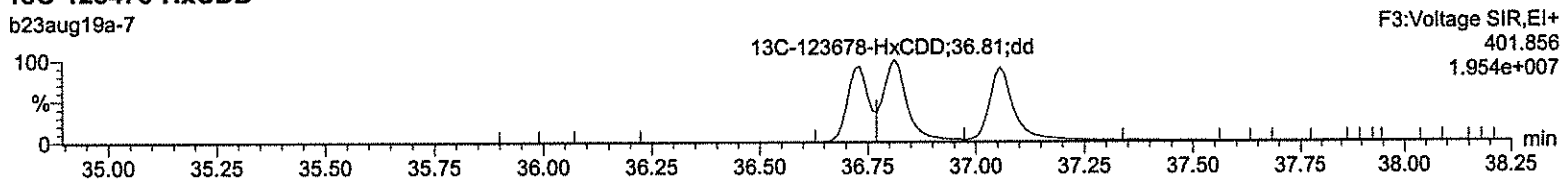
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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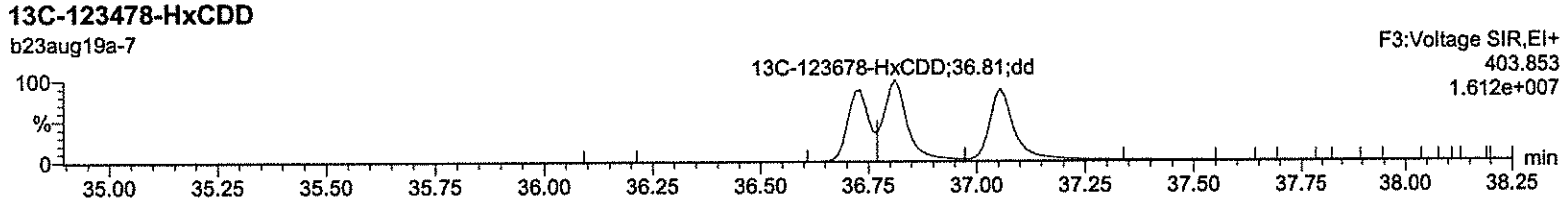
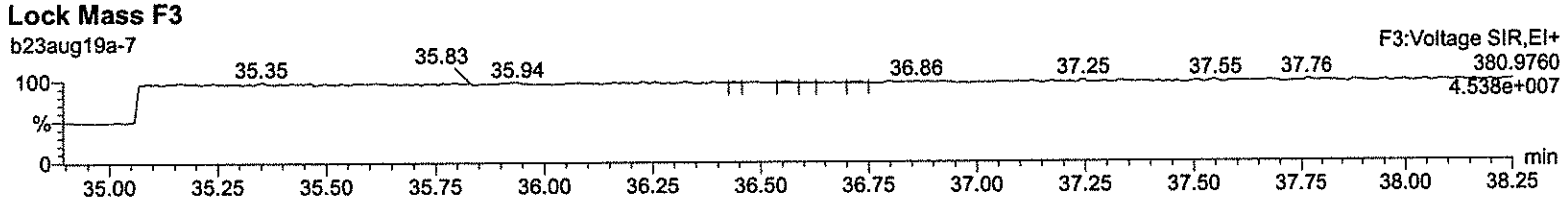


Lock Mass F3



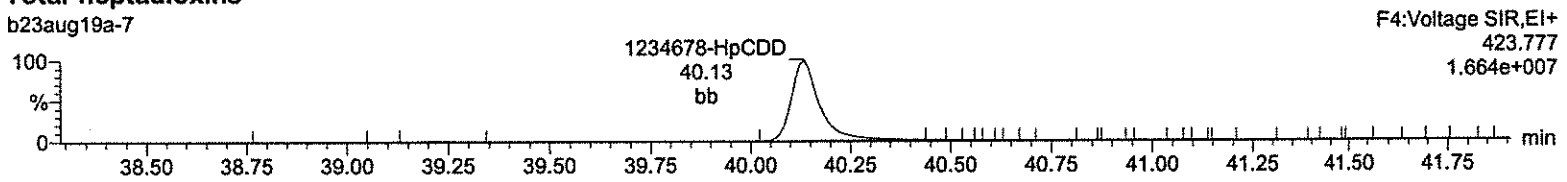
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

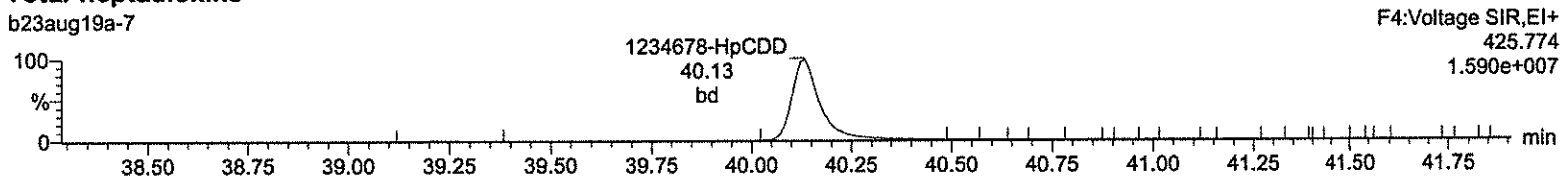
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

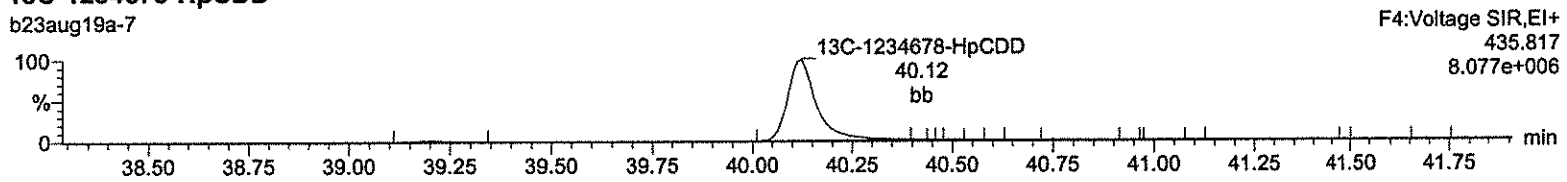
Total-heptadioxins



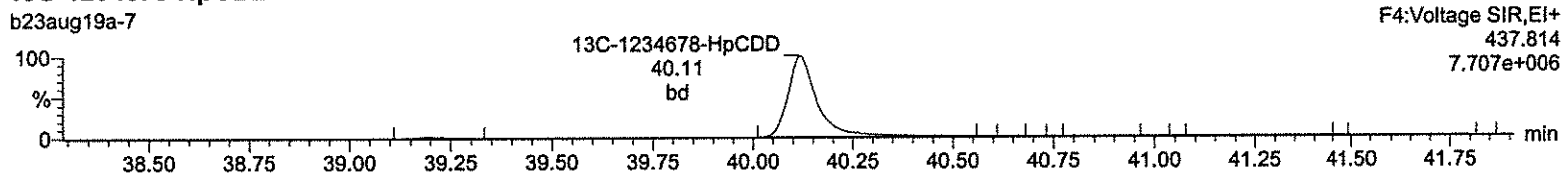
Total-heptadioxins



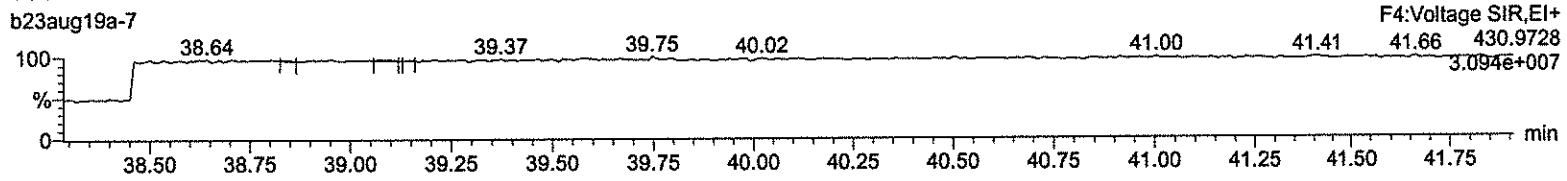
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



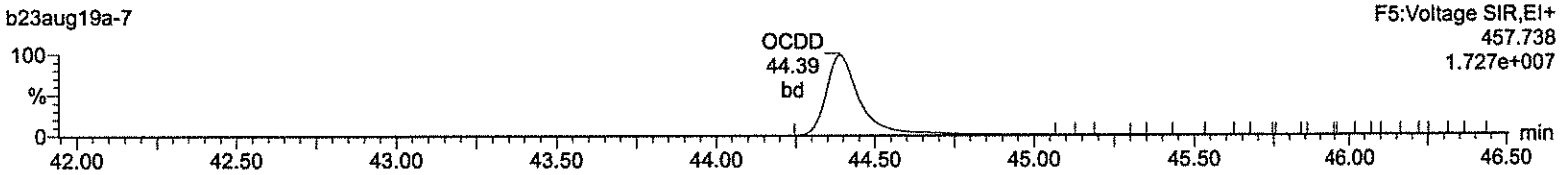
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

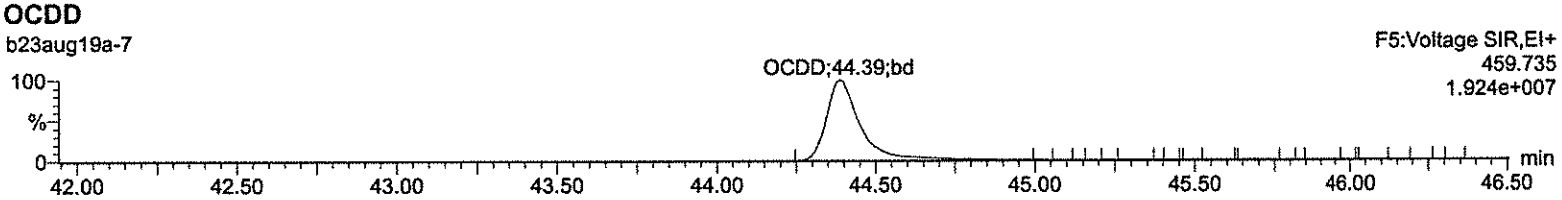
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

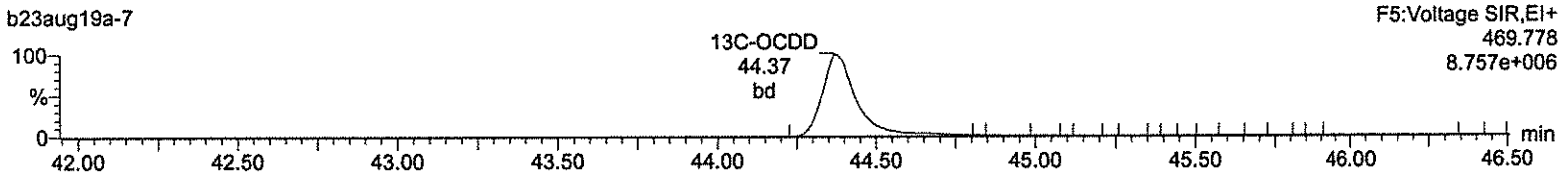
OCDD



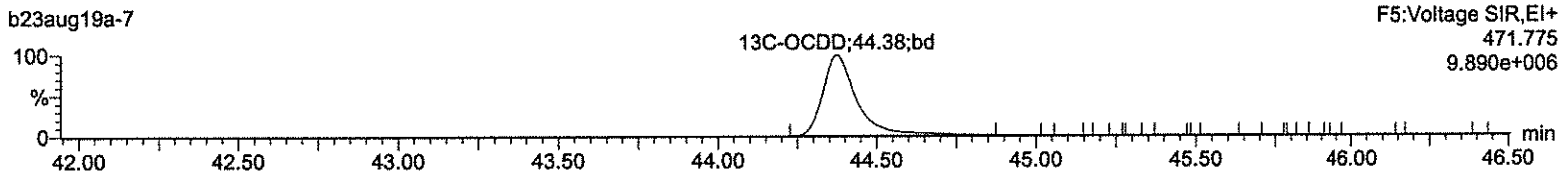
OCDD



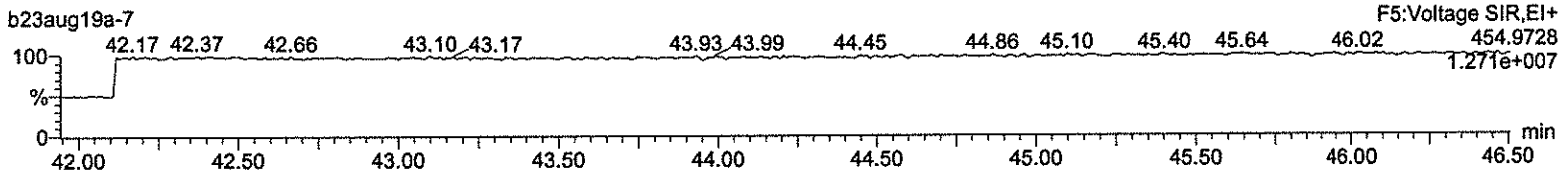
13C-OCDD



13C-OCDD



Lock Mass F5



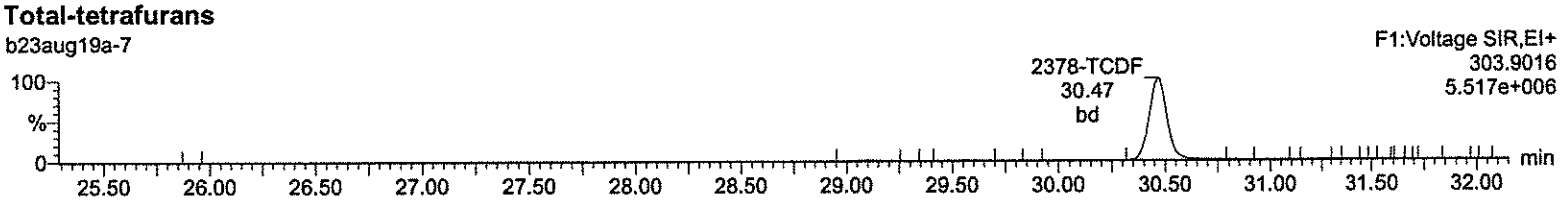
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

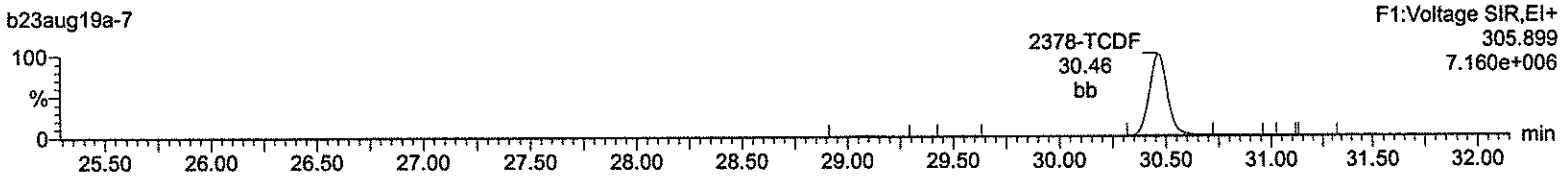
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

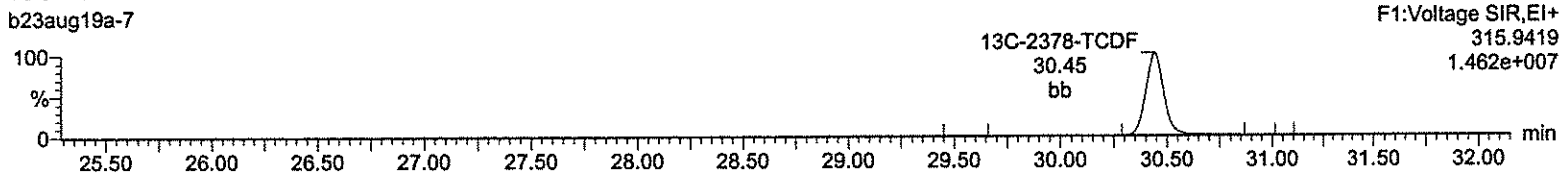
Total-tetrafurans



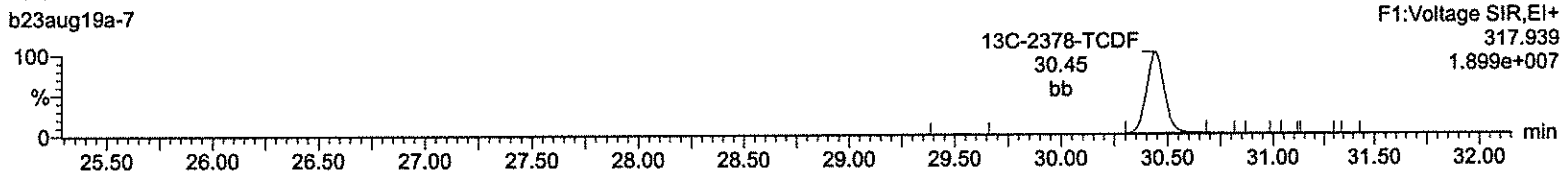
Total-tetrafurans



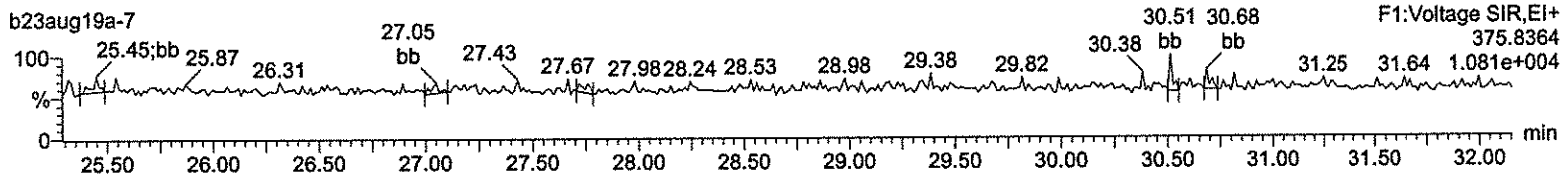
13C-2378-TCDF



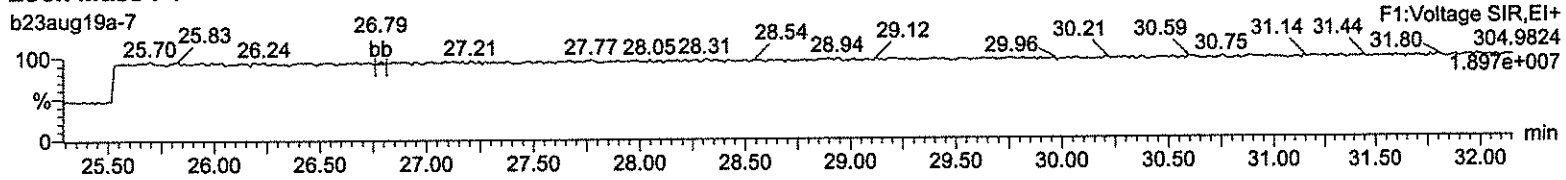
13C-2378-TCDF



HxDPE



Lock Mass F1



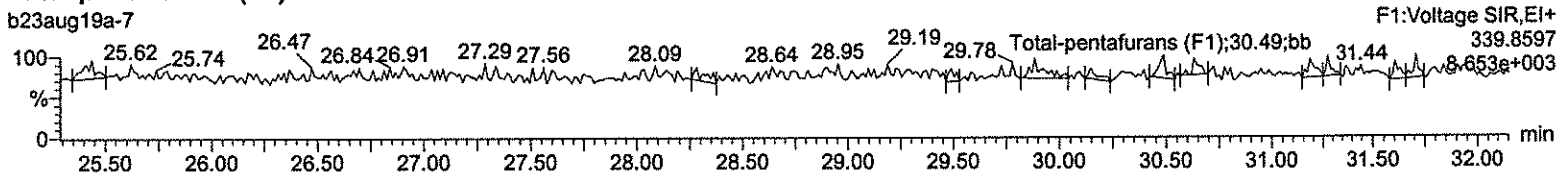
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

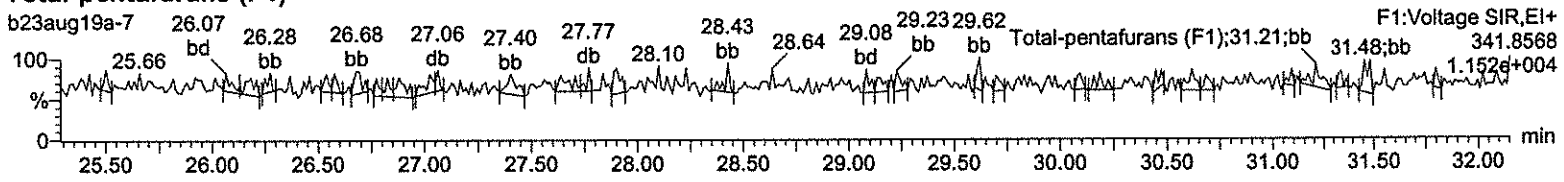
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

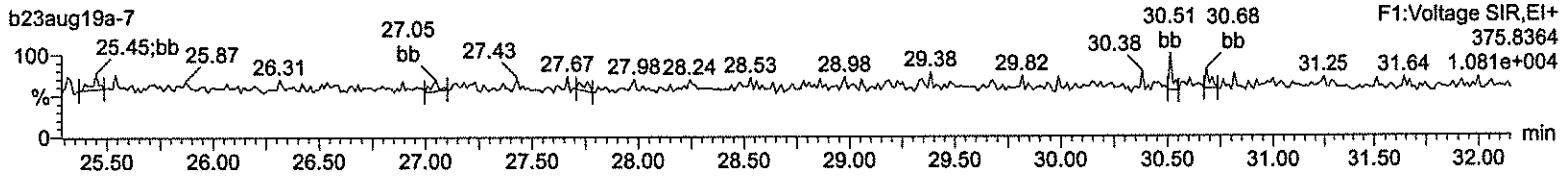
Total-pentafurans (F1)



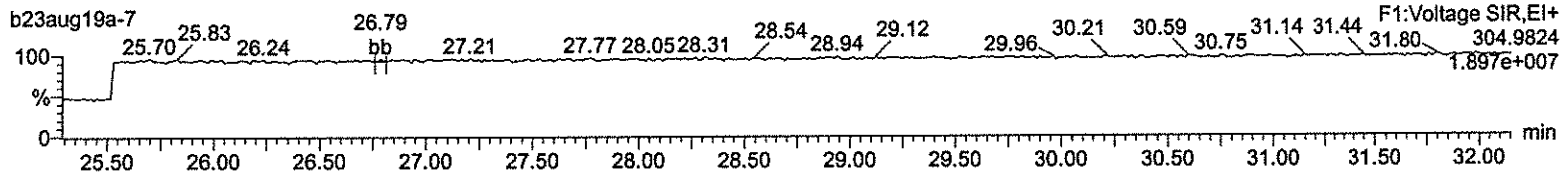
Total-pentafurans (F1)



HxDPE



Lock Mass F1



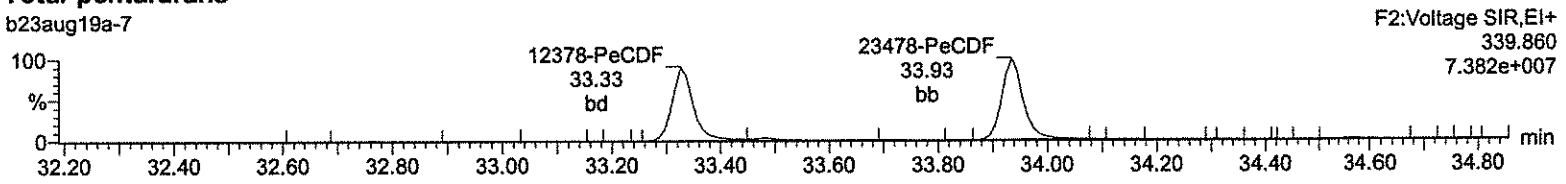
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

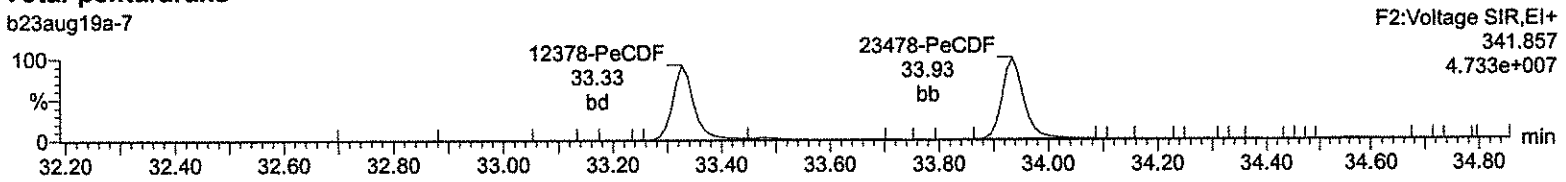
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

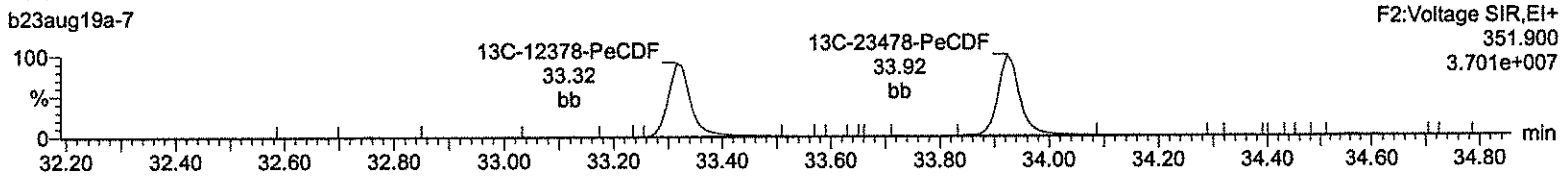
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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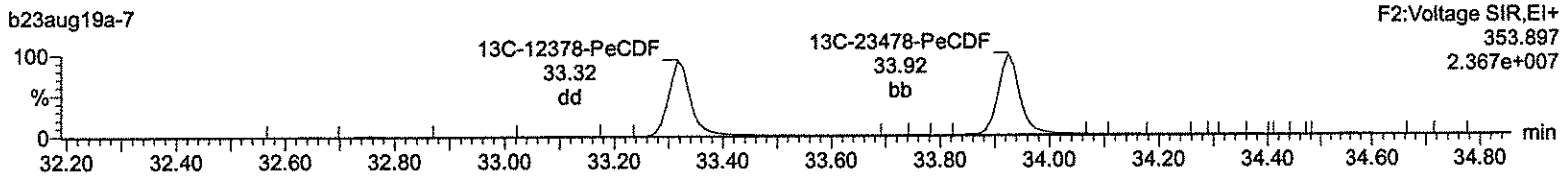
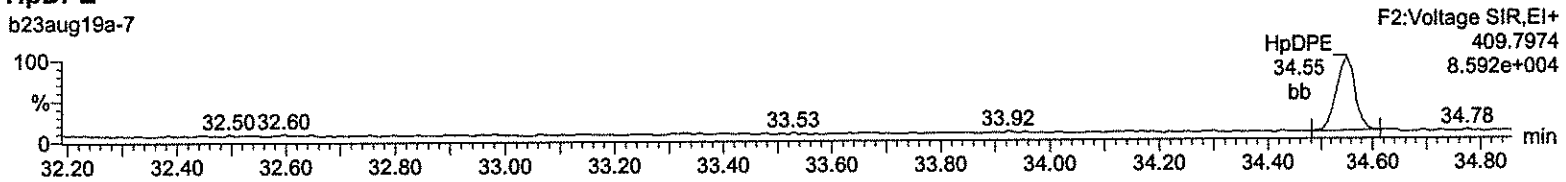
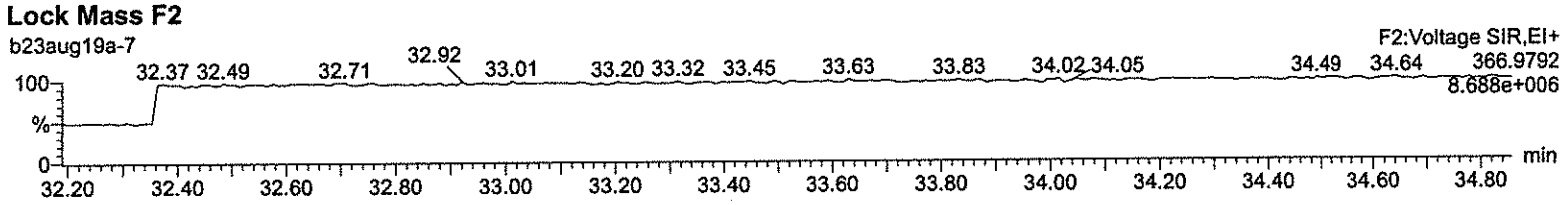


HpDPE



Lock Mass F2



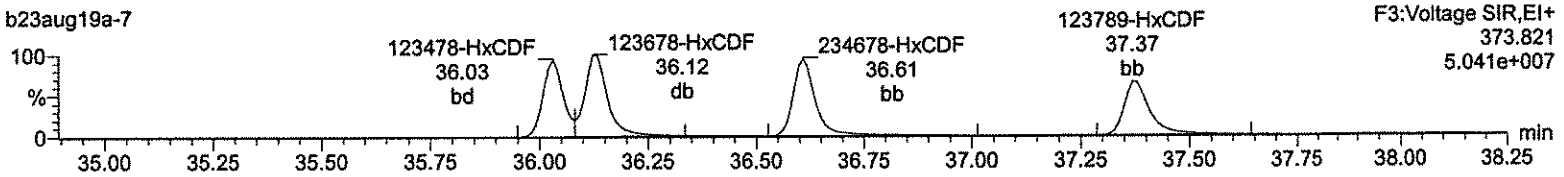
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

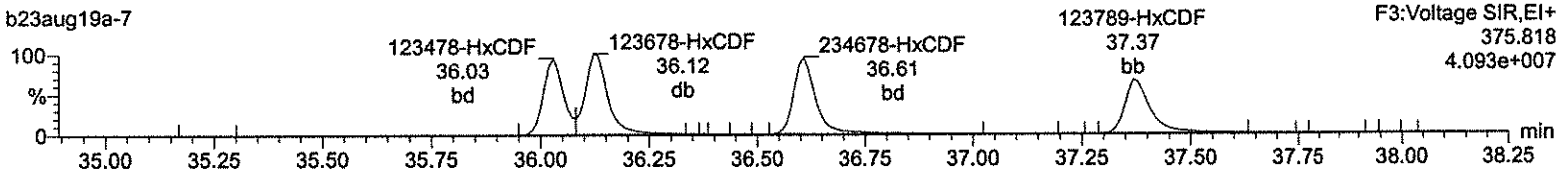
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

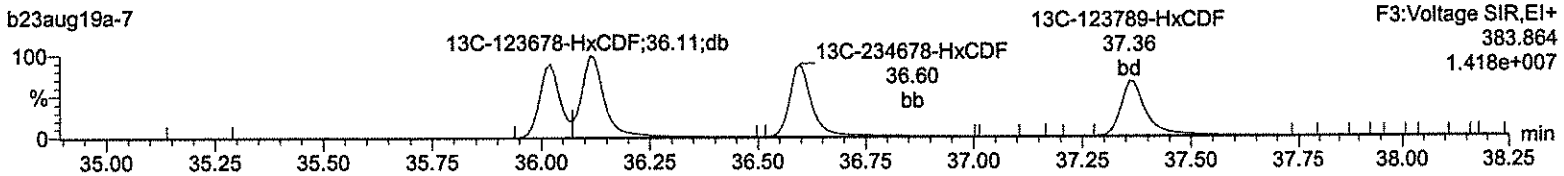
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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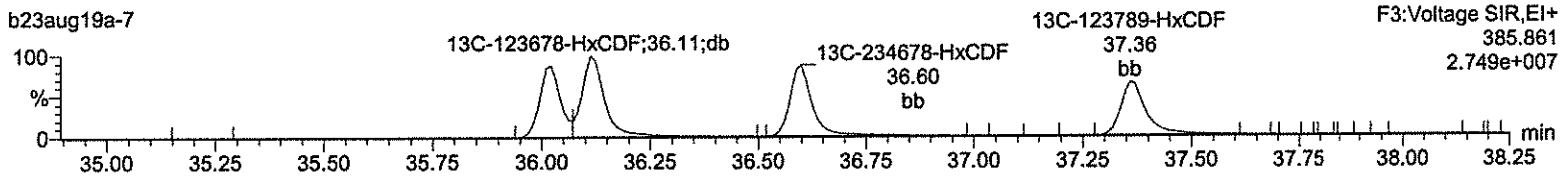
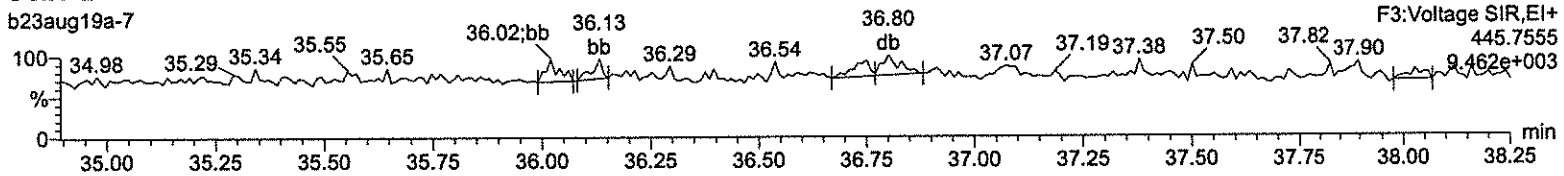
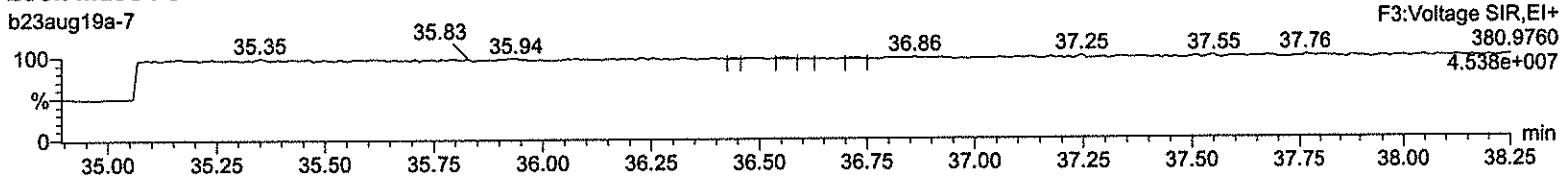


OcDPE



Lock Mass F3



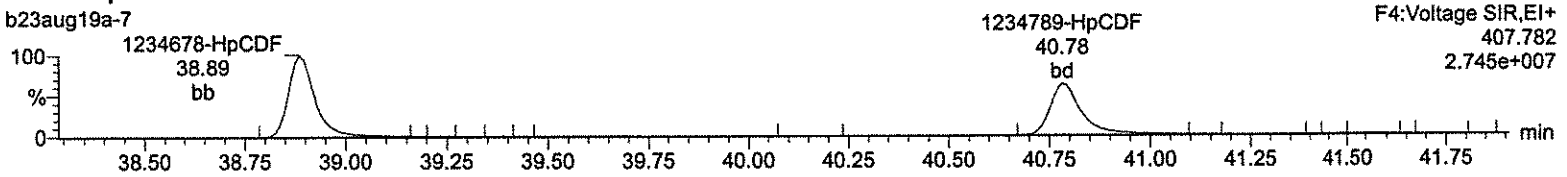
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

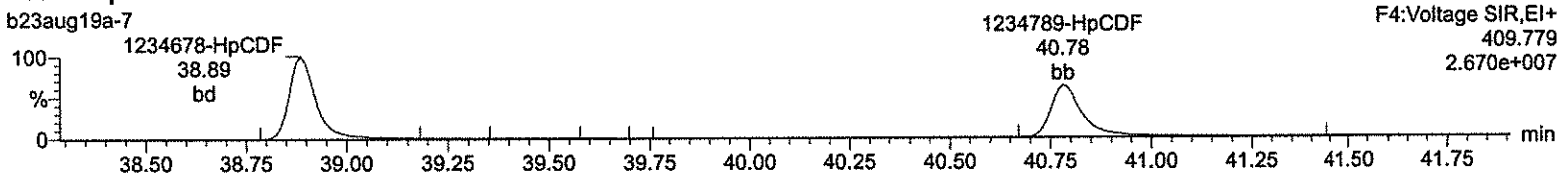
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

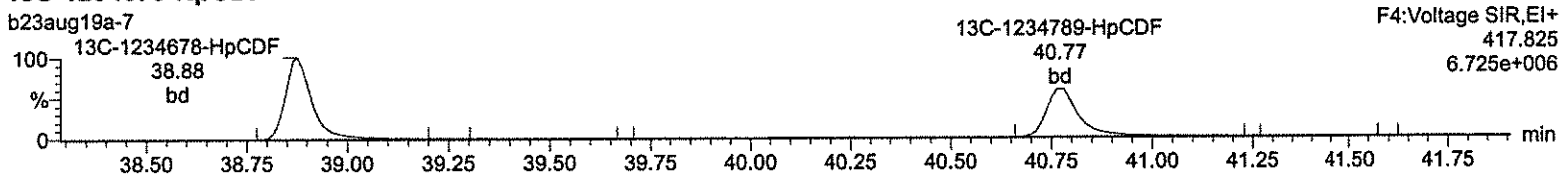
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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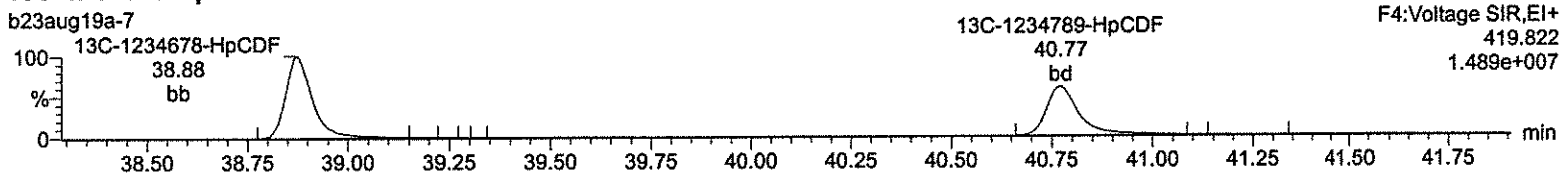
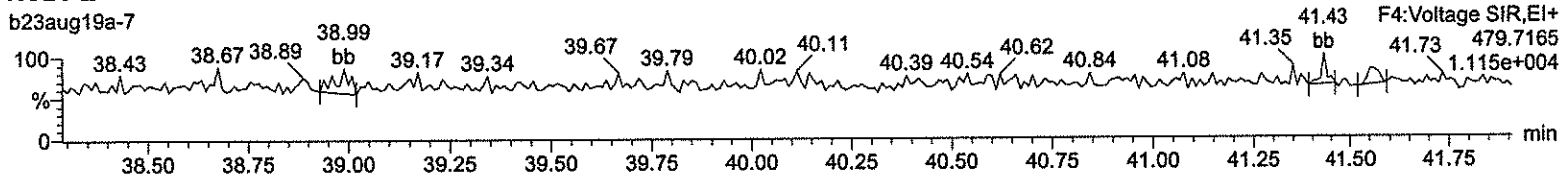
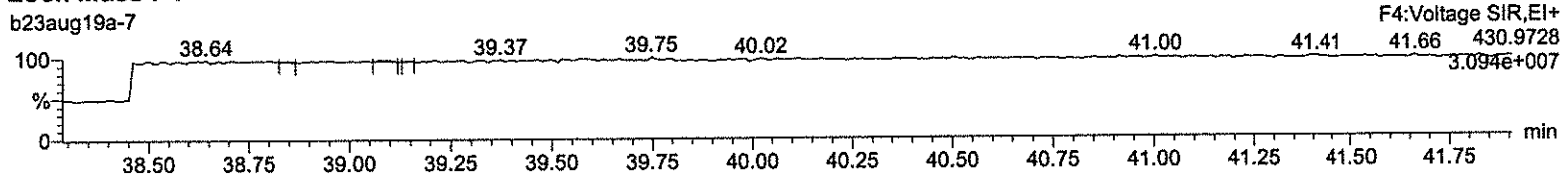


NoDPE



Lock Mass F4



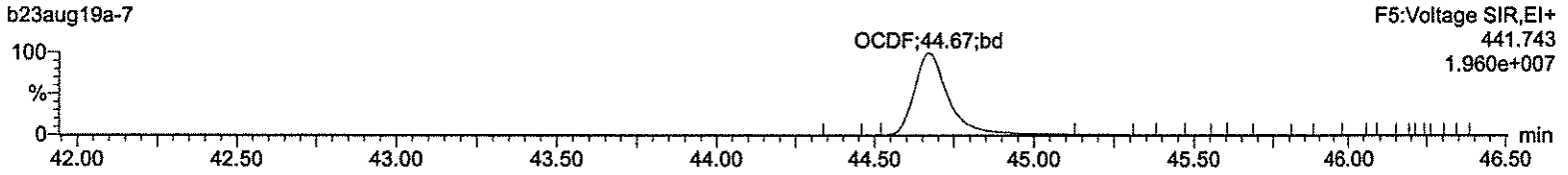
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

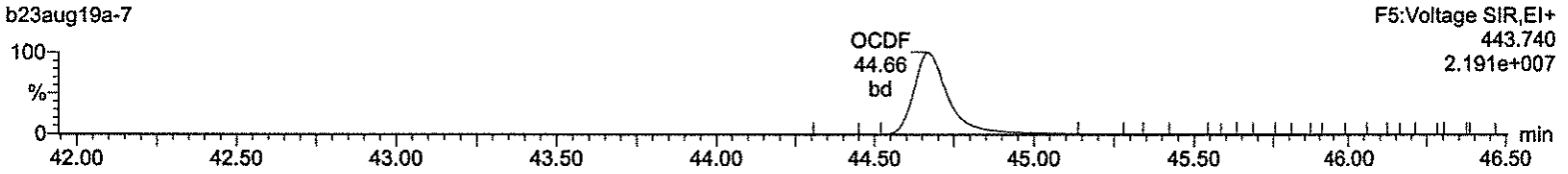
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-7, Date: 23-Aug-2019, Time: 13:06:27, ID: CS4 UD190207-05

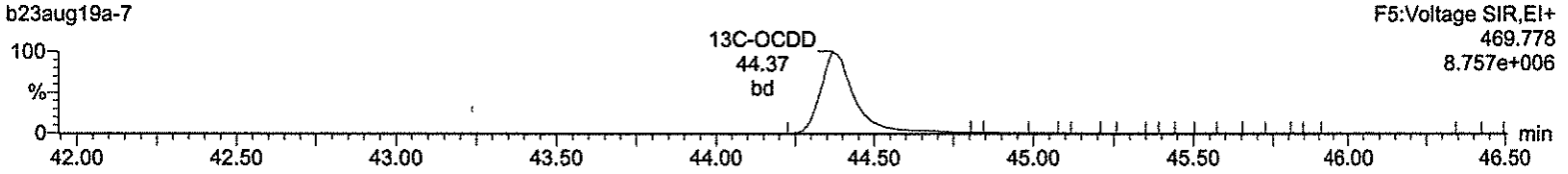
OCDF



OCDF



13C-OCDD



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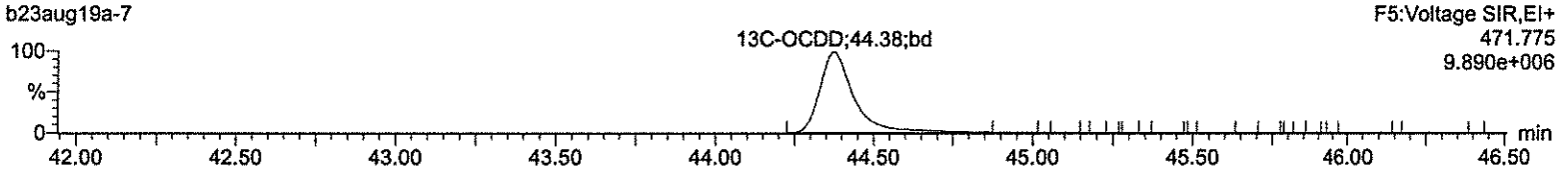
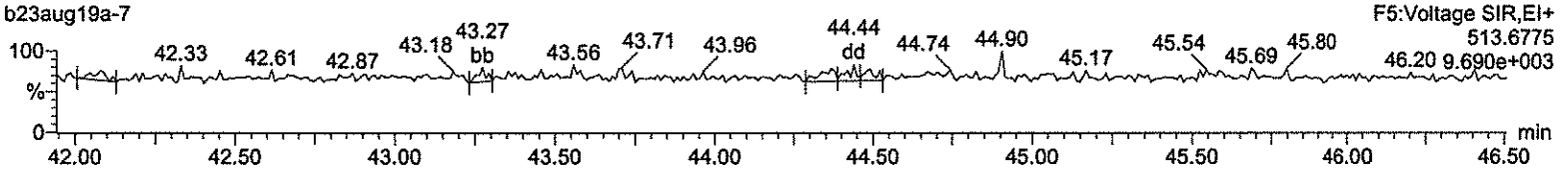
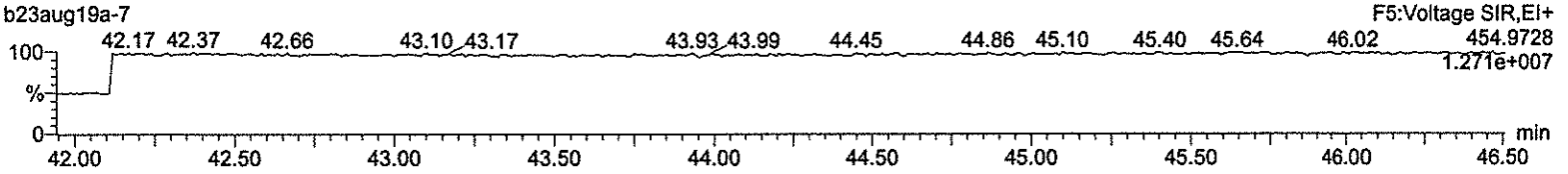


DeDPE



Lock Mass F5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

26Aug19

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06, Job: b23aug19a, User: MLS, Task: HRP763_1, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	2.74e6	3.57e6	6.31e6	31.22	1.001	0.77	NO	210.348	0.937	0.891	3.89	0.0376	4.17e7	3085	13516.1	5.42e7	3750	14440.8	bb	bb
2	12378-PeCDD	1.28e7	8.34e6	2.12e7	34.13	1.000	1.54	NO	1021.793	0.869	0.850	3.61	0.0775	2.69e8	6915	38897.4	1.76e8	5886	29970.3	bb	bb
3	123478-HxCDD	1.05e7	8.45e6	1.89e7	36.73	1.000	1.24	NO	1005.906	0.939	0.934	2.31	0.209	2.06e8	16871	12200.8	1.66e8	13277	12486.4	dd	bd
4	123678-HxCDD	1.41e7	1.13e7	2.53e7	36.82	1.000	1.25	NO	1051.872	0.931	0.885	6.03	0.204	2.14e8	16871	12711.1	1.73e8	13277	13029.9	dd	dd
5	123789-HxCDD	1.21e7	9.84e6	2.20e7	37.06	1.007	1.23	NO	1047.074	0.929	0.887	7.79	0.210	1.82e8	16871	10768.1	1.46e8	13277	11001.0	dd	dd
6	1234678-HpCDD	8.26e6	7.93e6	1.62e7	40.12	1.000	1.04	NO	1049.901	0.991	0.944	6.68	0.417	9.86e7	14715	6701.2	9.49e7	15736	6030.7	bb	bb
7	OCDD	1.40e7	1.58e7	2.98e7	44.39	1.000	0.89	NO	2184.458	0.998	0.914	7.18	0.657	1.13e8	13152	8559.3	1.26e8	15922	7883.9	bd	bd
8	2378-TCDF	3.06e6	3.94e6	6.99e6	30.46	1.001	0.78	NO	210.344	0.939	0.893	4.88	0.0656	3.25e7	3995	8138.0	4.24e7	5063	8366.5	bb	bb
9	12378-PeCDF	1.81e7	1.18e7	2.99e7	33.33	1.000	1.54	NO	1058.412	0.961	0.908	4.08	0.0371	4.02e8	2194	183203.5	2.58e8	6570	39302.9	bd	bd
10	23478-PeCDF	2.02e7	1.32e7	3.34e7	33.93	1.000	1.54	NO	1045.414	1.015	0.971	4.12	0.0308	4.49e8	2194	204778.3	2.86e8	6570	43534.5	bb	bb
11	123478-HxCDF	1.47e7	1.20e7	2.67e7	36.02	1.000	1.23	NO	1011.843	1.148	1.135	2.68	0.214	2.80e8	5987	46777.0	2.31e8	37309	6186.7	bd	bd
12	123678-HxCDF	1.88e7	1.52e7	3.39e7	36.12	1.000	1.24	NO	1070.790	1.129	1.054	6.23	0.203	3.20e8	5987	53403.9	2.59e8	37309	6935.5	db	db
13	234678-HxCDF	1.68e7	1.36e7	3.04e7	36.61	1.001	1.24	NO	1052.534	1.190	1.130	4.65	0.230	2.76e8	5987	46106.7	2.25e8	37309	6030.5	bd	bd
14	123789-HxCDF	1.30e7	1.05e7	2.35e7	37.37	1.000	1.24	NO	1009.608	1.073	1.063	3.46	0.321	1.93e8	5987	32212.6	1.56e8	37309	4189.2	bb	bb
15	1234678-HpCDF	1.25e7	1.23e7	2.48e7	38.88	1.000	1.02	NO	1034.777	1.232	1.191	5.88	0.333	1.69e8	25327	6675.4	1.66e8	18485	8993.9	bb	bb
16	1234789-HpCDF	9.57e6	9.33e6	1.89e7	40.78	1.000	1.03	NO	1030.589	1.264	1.227	4.64	0.531	1.07e8	25327	4226.1	1.04e8	18485	5644.0	bb	bb
17	OCDF	1.63e7	1.82e7	3.45e7	44.66	1.007	0.90	NO	2275.660	1.157	1.017	10.92	0.470	1.39e8	8523	16360.7	1.55e8	14641	10584.3	bb	bb
18	13C-2378-TCDD	1.49e6	1.88e6	3.37e6	31.19	1.017	0.79	NO	103.942	1.196	1.151	2.76	0.0685	2.26e7	6508	3469.6	2.87e7	4118	6969.3	bd	bb
19	13C-12378-PeCDD	1.50e6	9.39e5	2.43e6	34.12	1.112	1.59	NO	110.926	0.864	0.779	5.79	0.0919	2.98e7	5018	5943.4	1.94e7	4639	4174.3	bd	bb
20	13C-123478-HxCDD	1.11e6	9.00e5	2.01e6	36.72	0.991	1.24	NO	101.883	0.804	0.789	2.92	0.103	2.14e7	6309	3394.6	1.71e7	5687	3005.6	bd	bd
21	13C-123678-HxCDD	1.50e6	1.22e6	2.72e6	36.81	0.993	1.23	NO	102.766	1.086	1.057	2.47	0.0766	2.31e7	6309	3658.7	1.87e7	5687	3293.2	dd	dd
22	13C-1234678-HpCDD	8.29e5	8.04e5	1.63e6	40.11	1.083	1.03	NO	103.020	0.652	0.633	2.50	0.103	9.81e6	5543	1768.9	9.33e6	4068	2292.4	bd	bd
23	13C-OCDD	1.44e6	1.55e6	2.98e6	44.37	1.197	0.93	NO	217.958	0.595	0.546	4.53	0.120	1.17e7	4218	2766.2	1.31e7	5470	2401.1	bd	bd
24	13C-2378-TCDF	1.61e6	2.11e6	3.72e6	30.43	0.992	0.77	NO	101.723	1.321	1.299	1.86	0.103	1.68e7	11677	1436.7	2.19e7	6438	3399.7	bb	bb
25	13C-12378-PeCDF	1.90e6	1.21e6	3.11e6	33.32	1.086	1.56	NO	105.663	1.105	1.046	3.57	0.0801	3.96e7	3774	10503.3	2.56e7	7516	3401.3	bb	bb
26	13C-23478-PeCDF	2.01e6	1.28e6	3.29e6	33.92	1.106	1.56	NO	108.855	1.168	1.073	5.25	0.0780	4.47e7	3774	11842.3	2.83e7	7516	3768.0	bb	bb
27	13C-123478-HxCDF	7.96e5	1.53e6	2.33e6	36.01	0.972	0.52	NO	101.829	0.929	0.912	1.25	0.139	1.52e7	8458	1798.8	2.92e7	10350	2820.5	bd	bd
28	13C-123678-HxCDF	1.04e6	1.96e6	3.01e6	36.11	0.975	0.53	NO	101.027	1.201	1.188	3.37	0.107	1.76e7	8458	2076.3	3.33e7	10350	3218.9	db	db
29	13C-234678-HxCDF	8.84e5	1.67e6	2.56e6	36.59	0.987	0.53	NO	101.141	1.022	1.010	3.04	0.126	1.44e7	8458	1700.2	2.75e7	10350	2660.7	bd	bd
30	13C-123789-HxCDF	7.52e5	1.44e6	2.19e6	37.36	1.008	0.52	NO	102.723	0.875	0.852	1.59	0.149	1.09e7	8458	1287.5	2.08e7	10350	2011.9	bd	bd
31	13C-1234678-HpCDF	6.08e5	1.40e6	2.01e6	38.87	1.049	0.43	NO	102.479	0.803	0.784	2.45	0.153	8.35e6	7622	1095.6	1.86e7	10195	1829.3	bb	bb
32	13C-1234789-HpCDF	4.56e5	1.04e6	1.50e6	40.76	1.100	0.44	NO	106.299	0.597	0.562	3.62	0.214	5.13e6	7622	672.5	1.13e7	10195	1105.0	bb	bd
33	13C-1234-TCDD	1.22e6	1.60e6	2.82e6	30.67	0.000	0.76	NO	100.000	1.000	1.000	0.00	0.0788	1.46e7	6508	2242.9	1.91e7	4118	4634.6	bb	bd
34	13C-123789-HxCDD	1.38e6	1.13e6	2.50e6	37.05	0.000	1.22	NO	100.000	1.000	1.000	0.00	0.0810	2.04e7	6309	3226.1	1.63e7	5687	2872.3	dd	dd
35	37Cl-2378-TCDD	6.55e6		6.55e6	31.21	1.018			215.804	1.162	1.077	5.71	0.0162	9.97e7	2350	42417.6				bb	

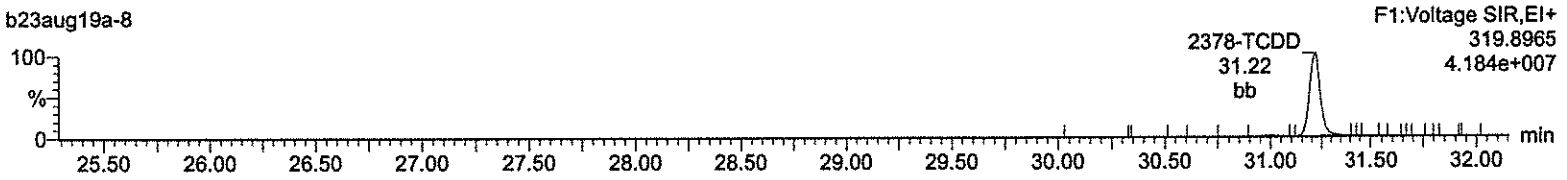
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

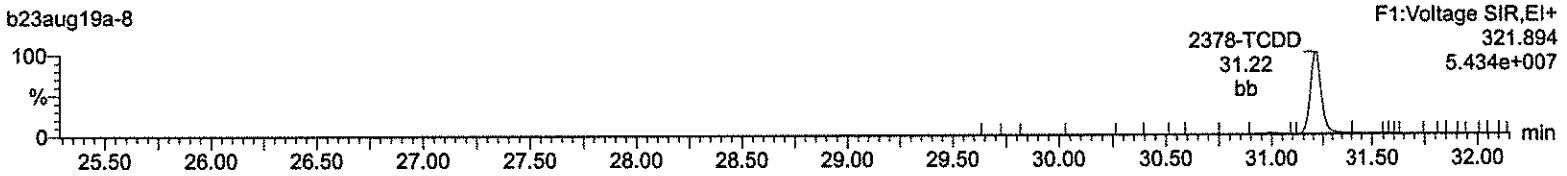
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

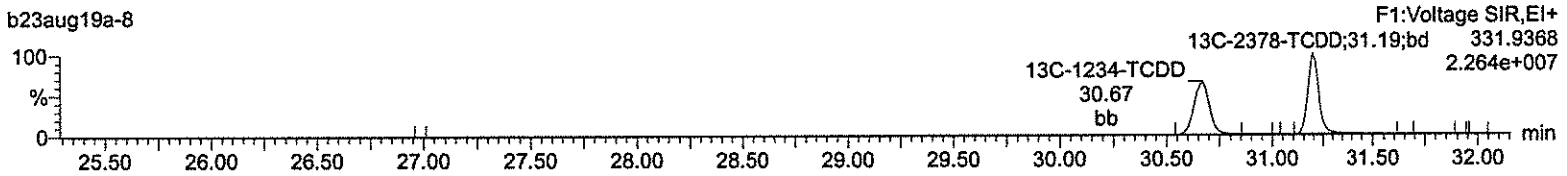
Total-tetradioxins



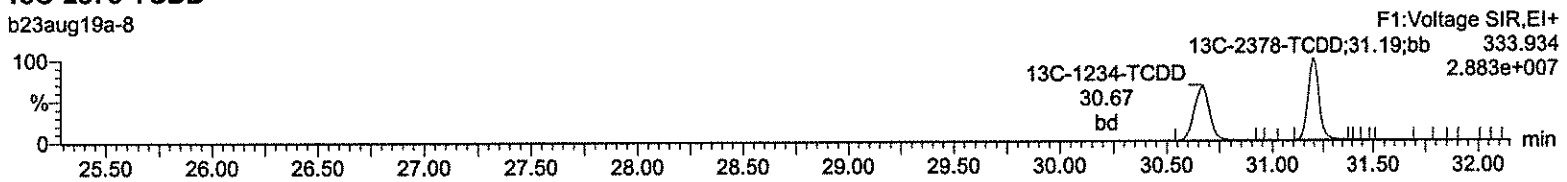
Total-tetradioxins



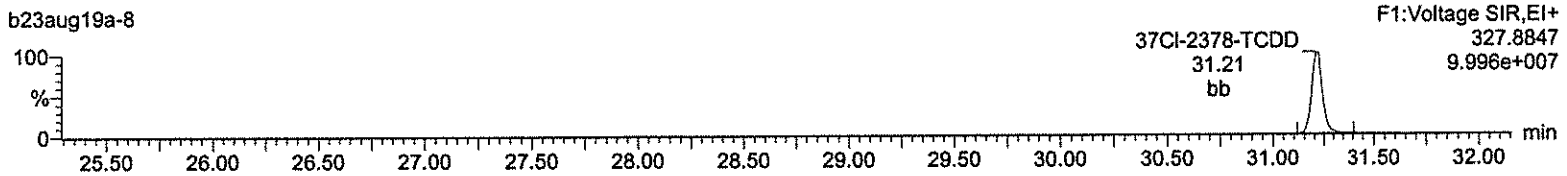
13C-2378-TCDD



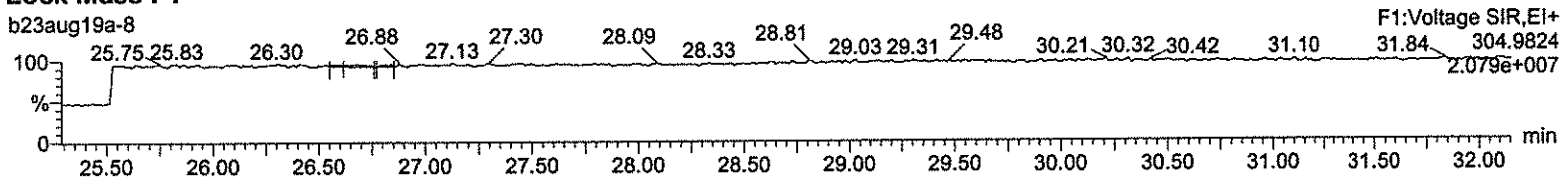
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



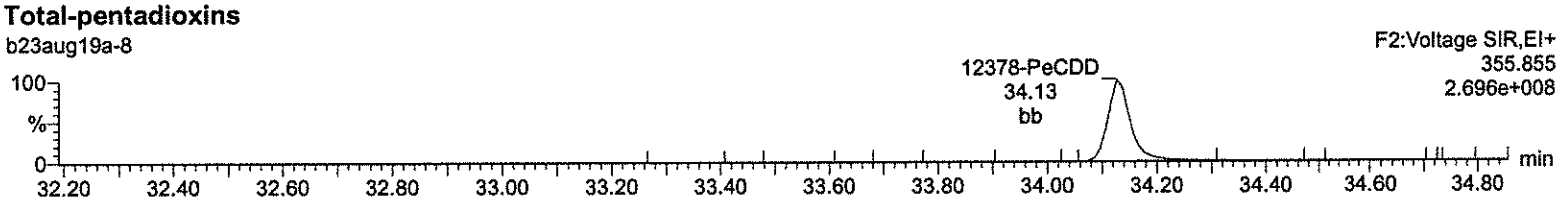
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

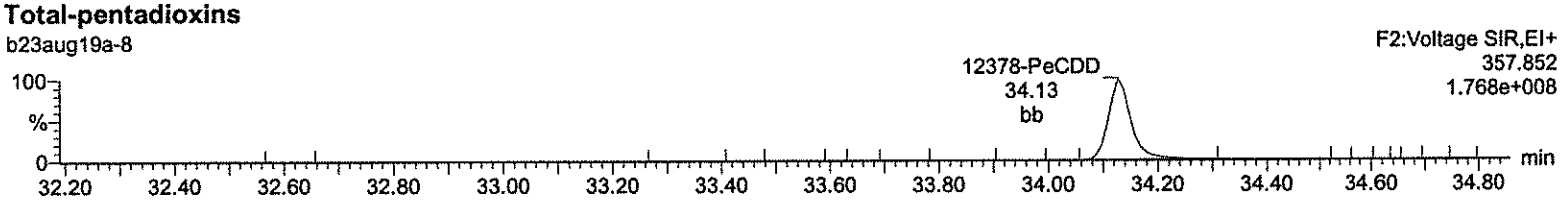
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

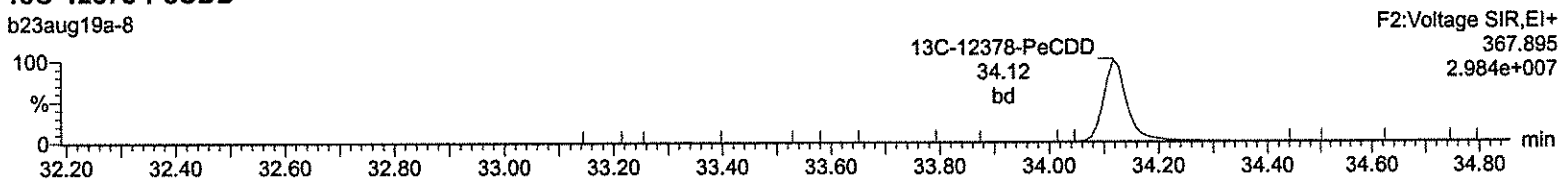
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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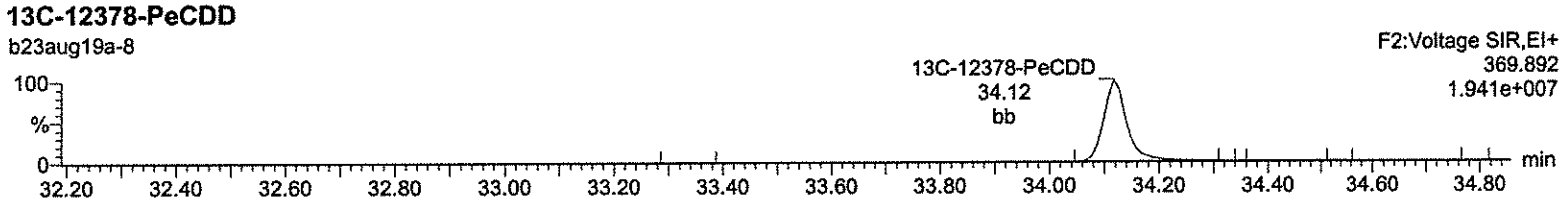
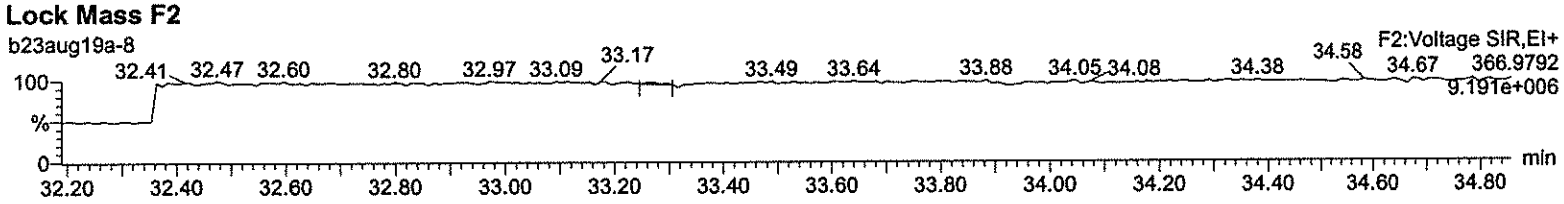


Lock Mass F2



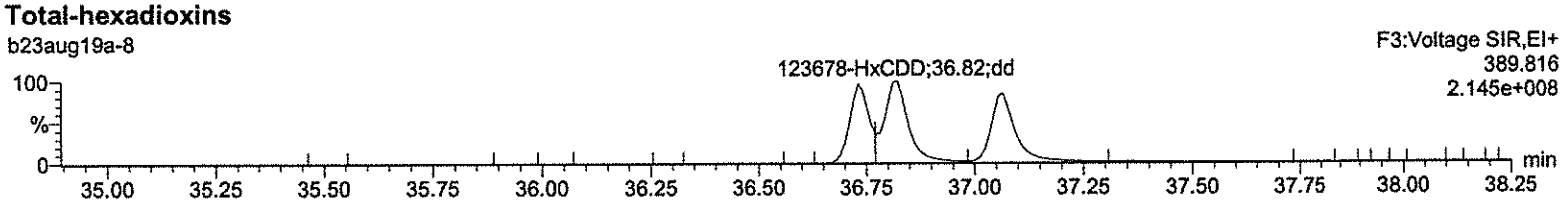
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

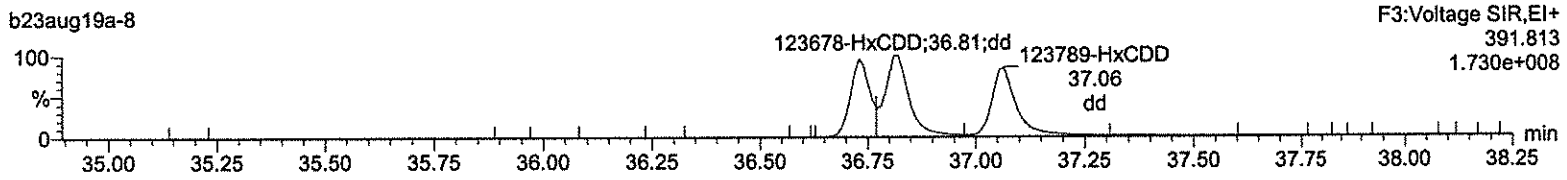
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

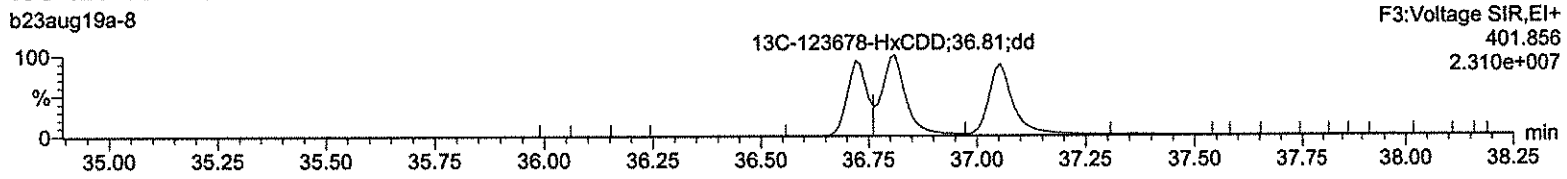
Total-hexadioxins



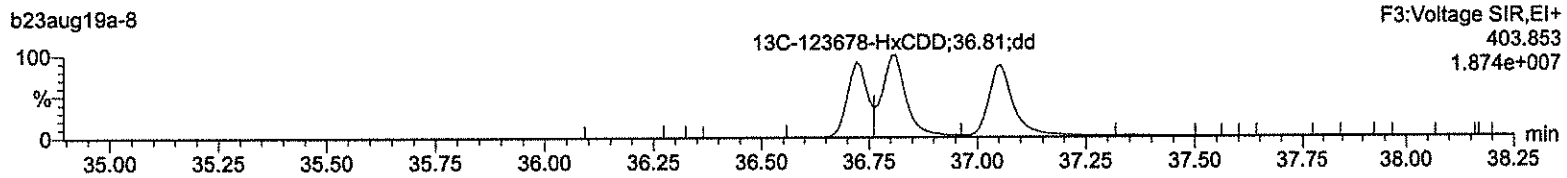
Total-hexadioxins



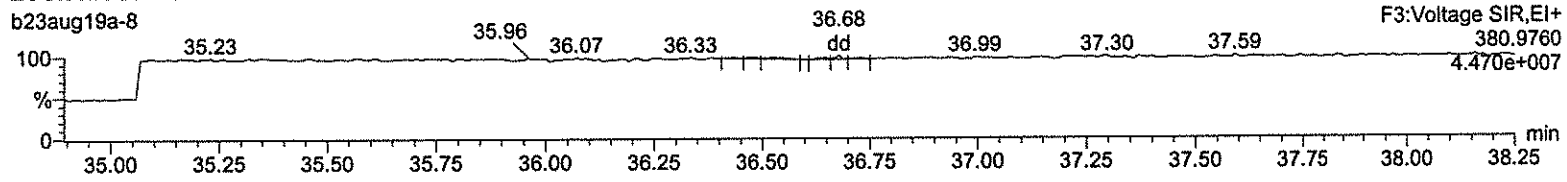
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



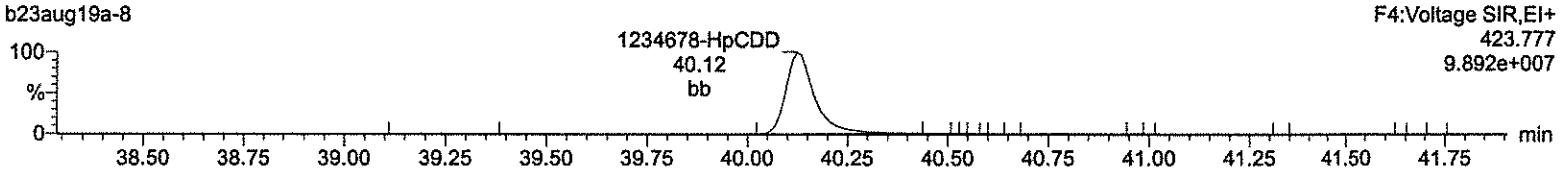
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

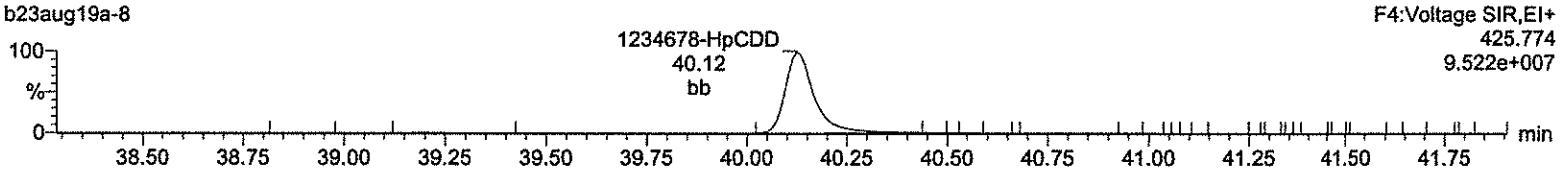
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

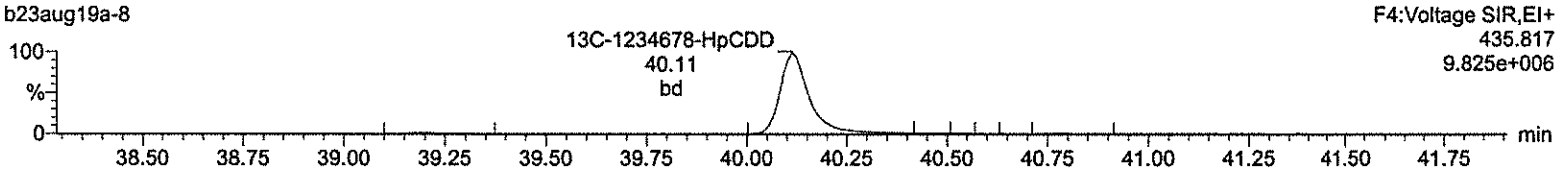
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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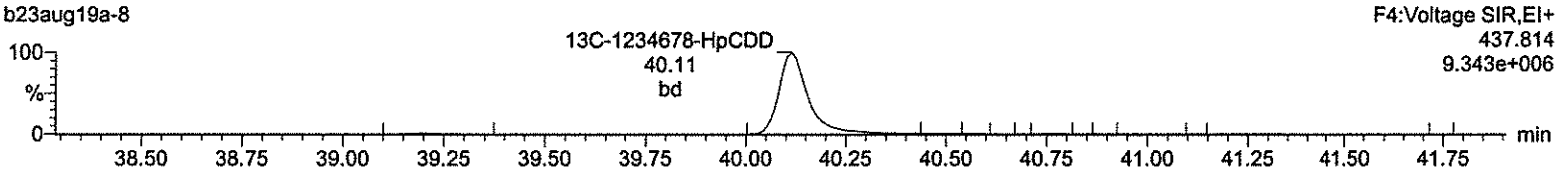
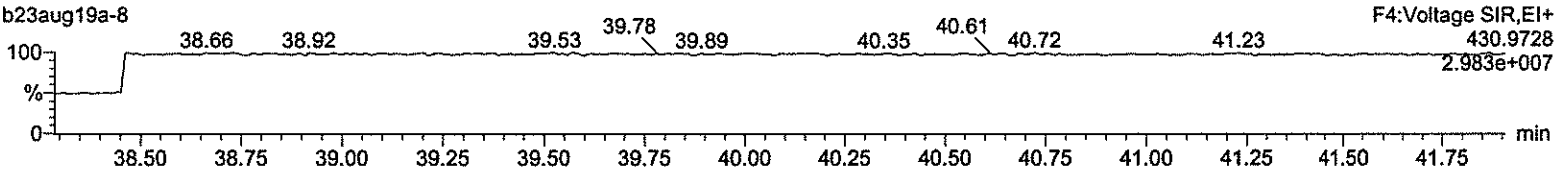


Lock Mass F4



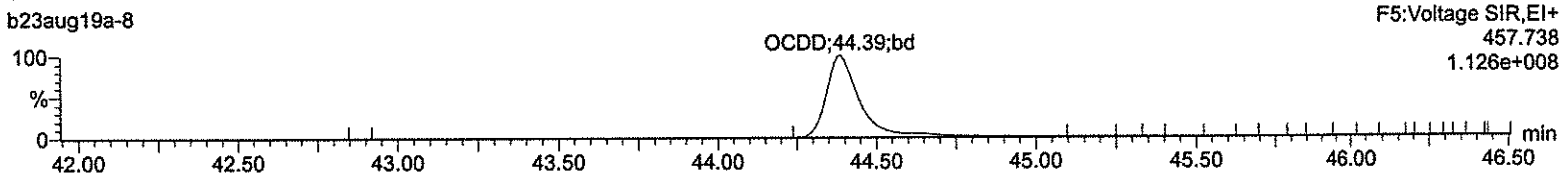
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

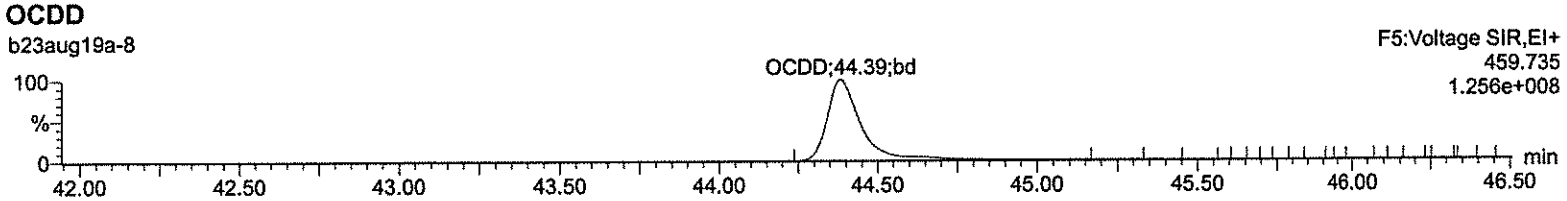
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

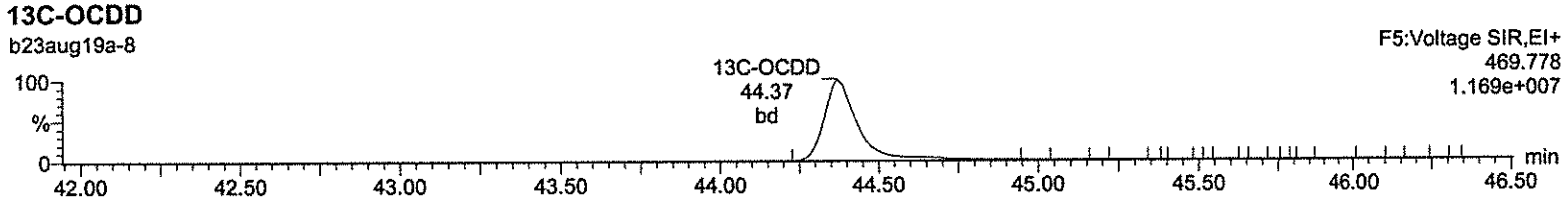
OCDD



OCDD



13C-OCDD



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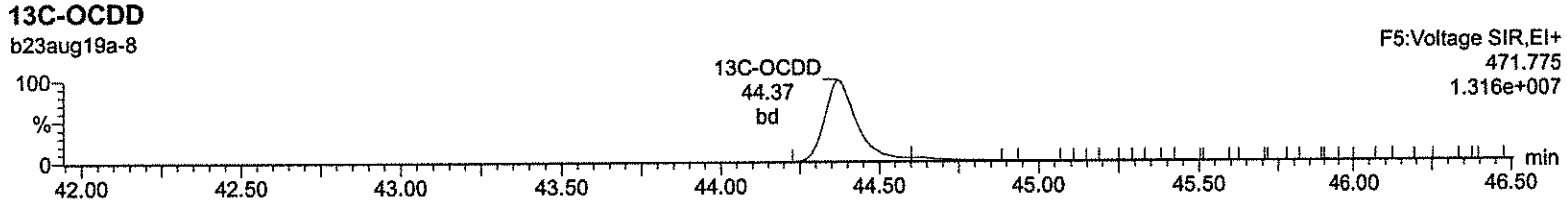
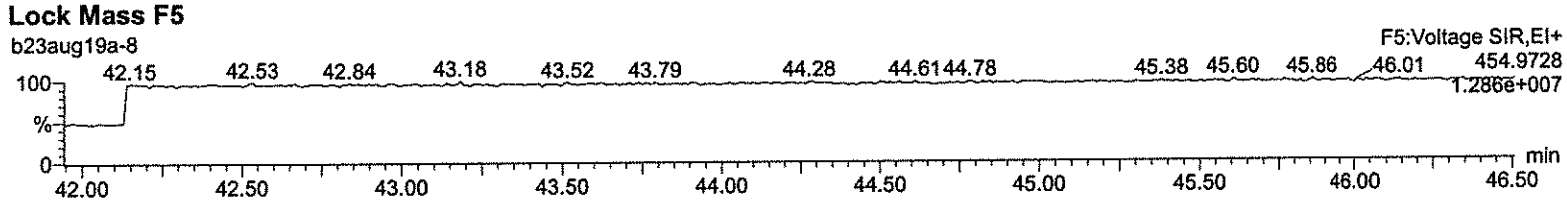


Lock Mass F5



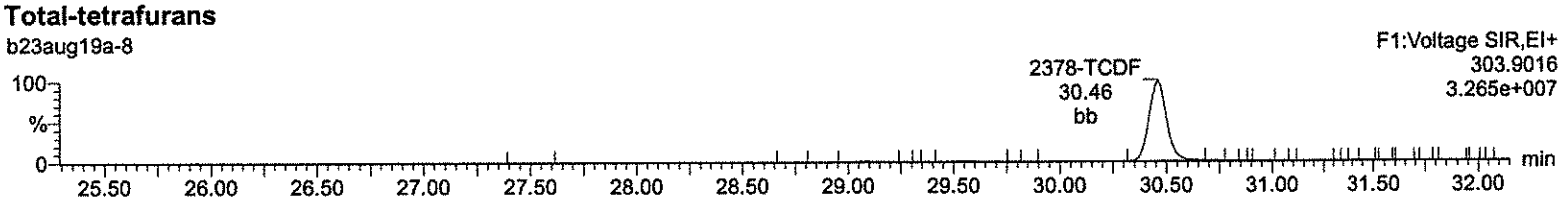
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

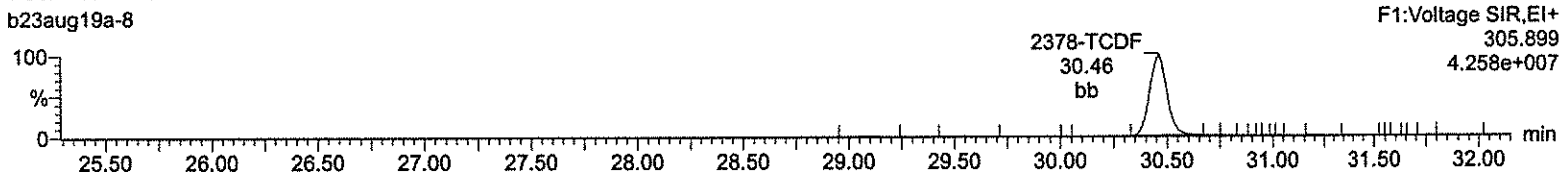
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

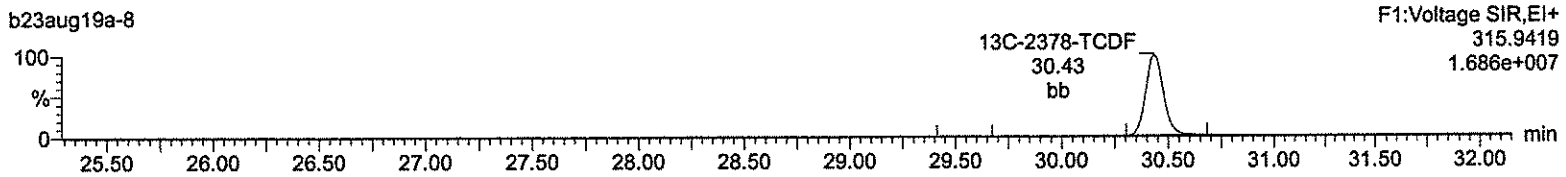
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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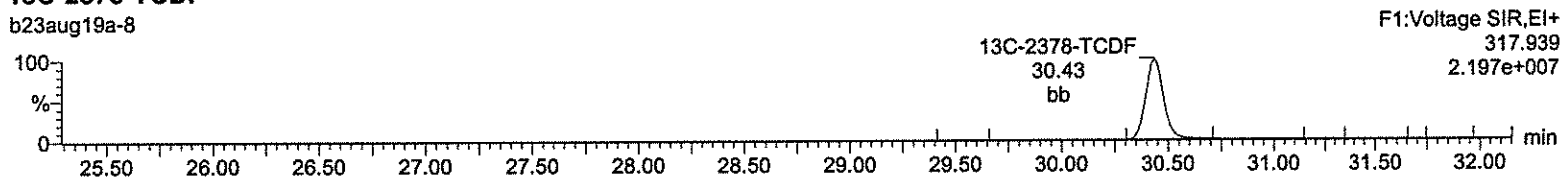
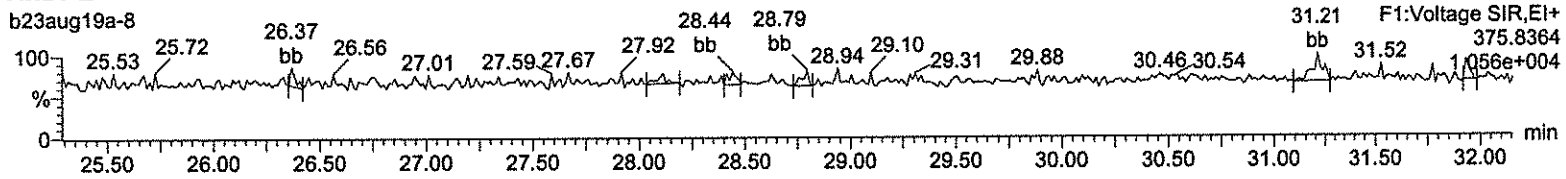
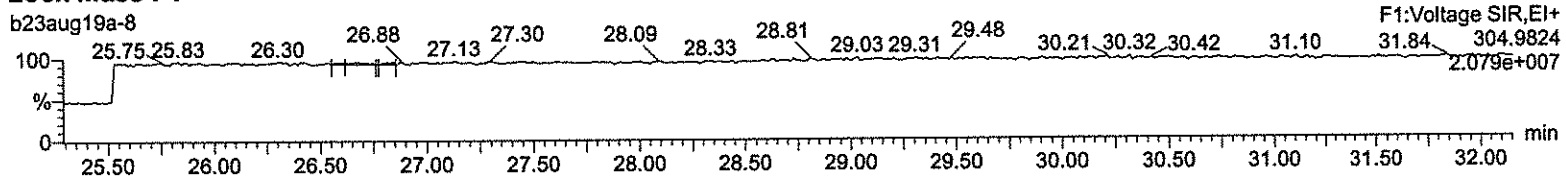


HxDPE



Lock Mass F1



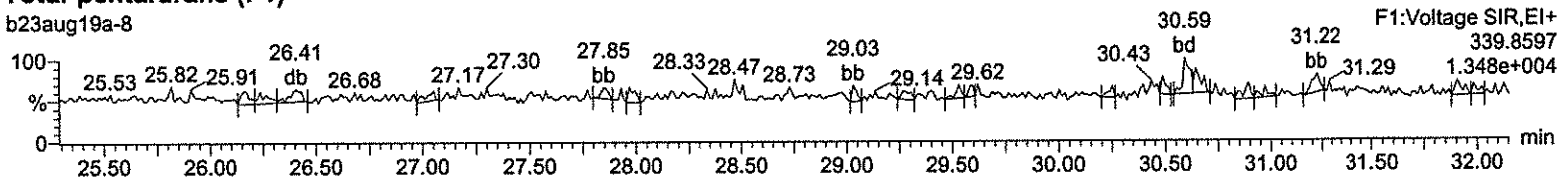
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

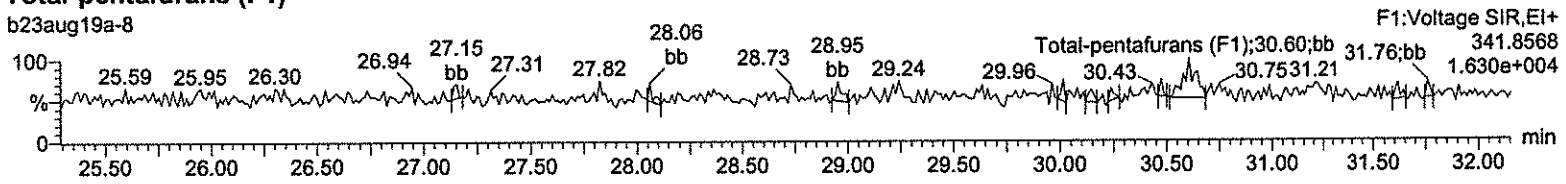
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

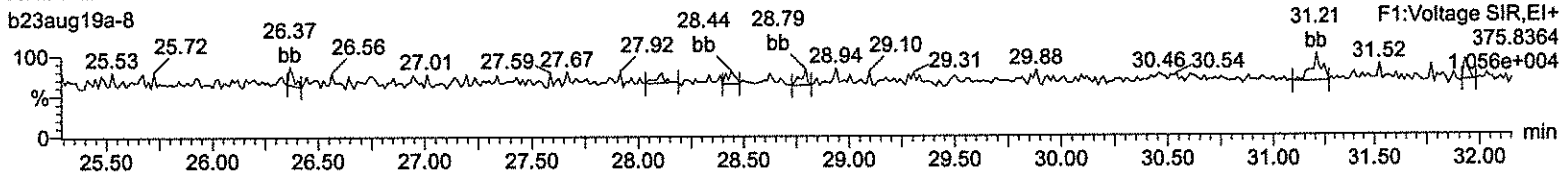
Total-pentafurans (F1)



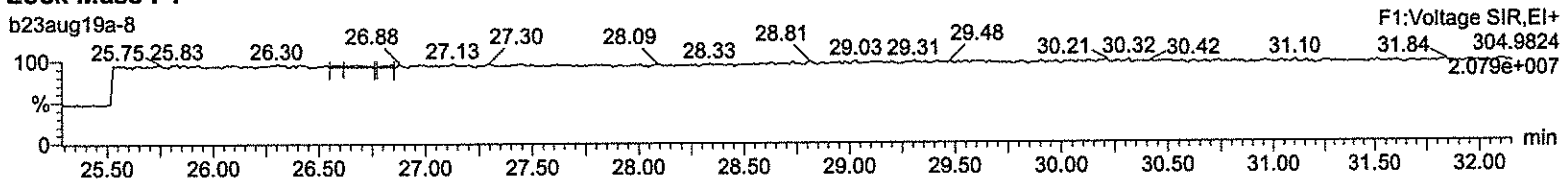
Total-pentafurans (F1)



HxDPE



Lock Mass F1



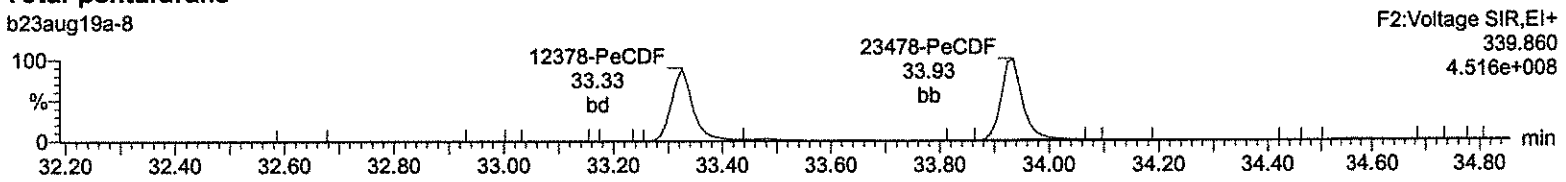
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

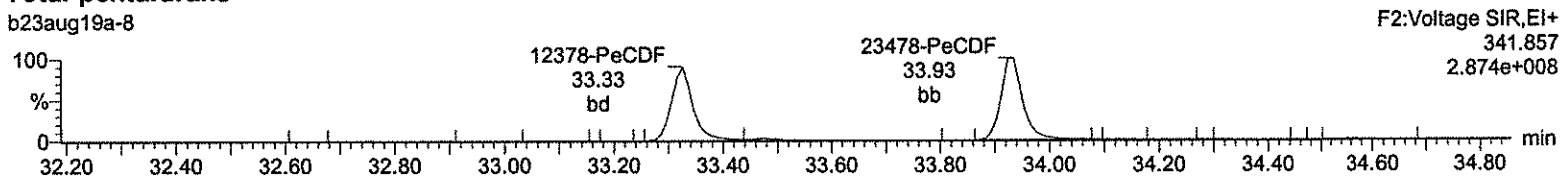
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

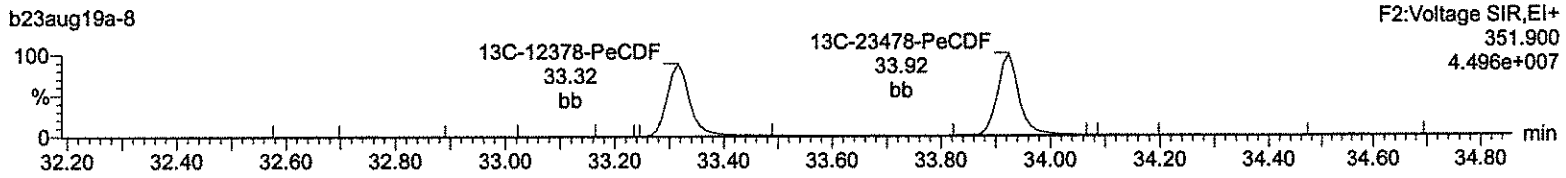
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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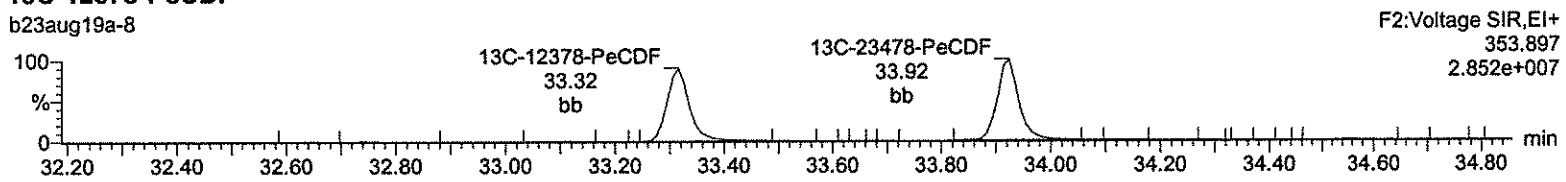
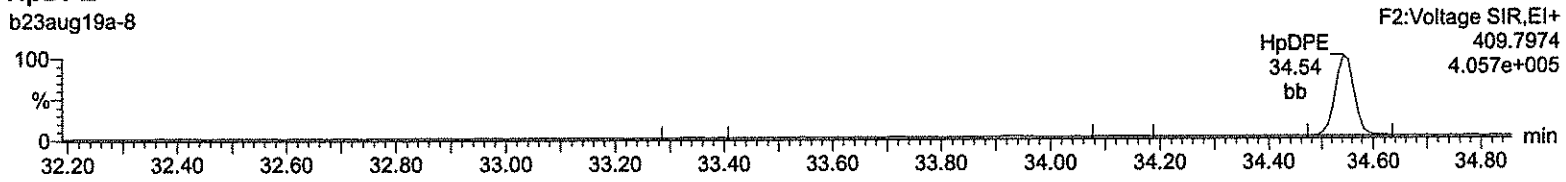
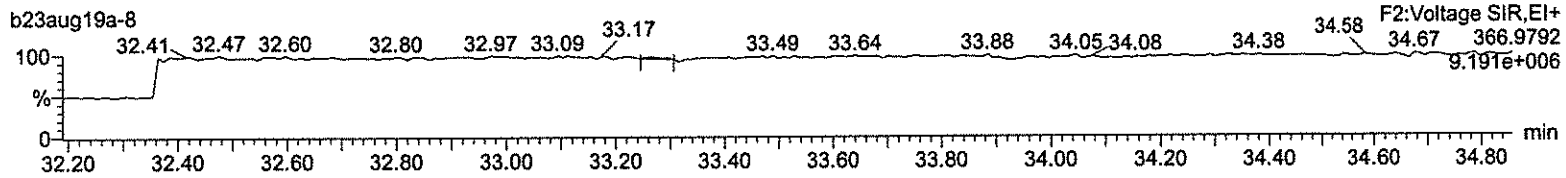


HpDPE



Lock Mass F2



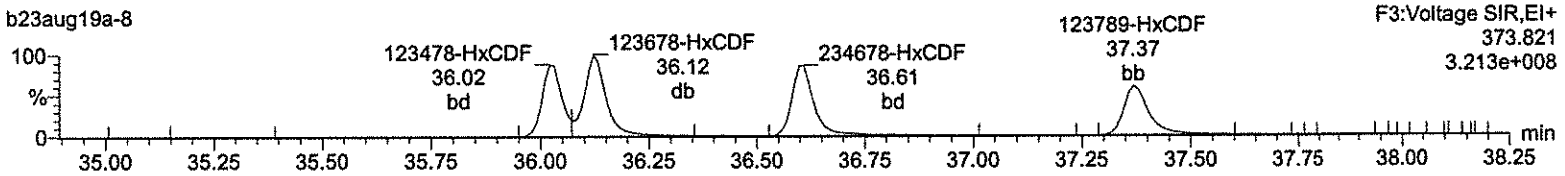
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

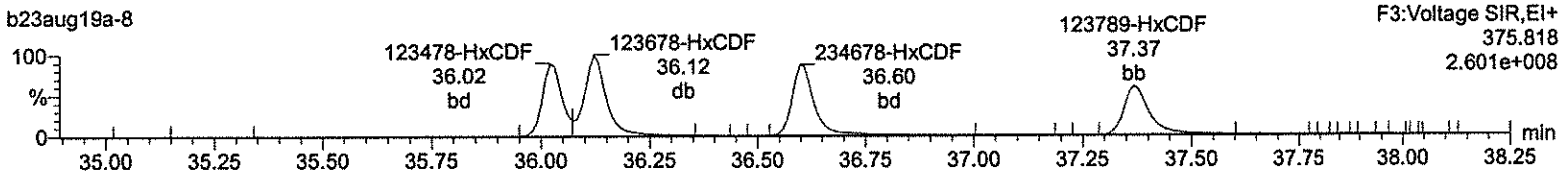
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

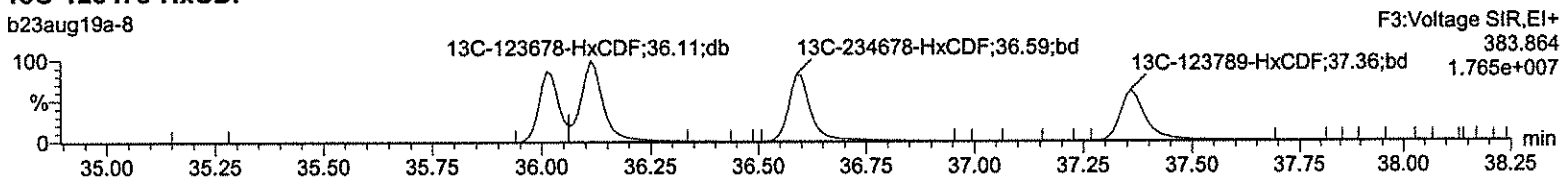
Total-hexafurans



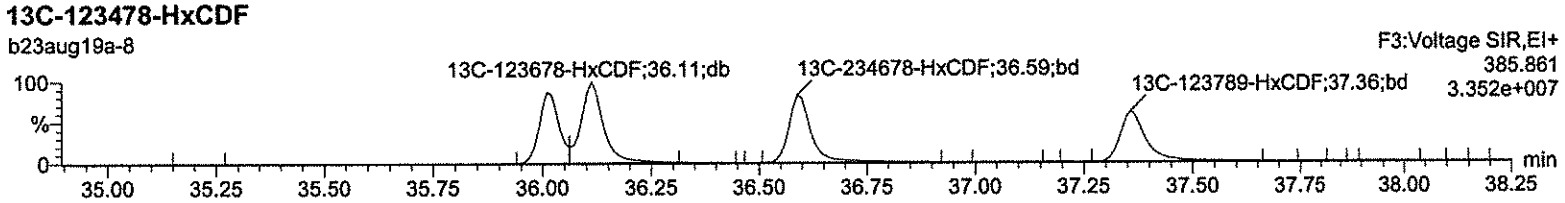
Total-hexafurans



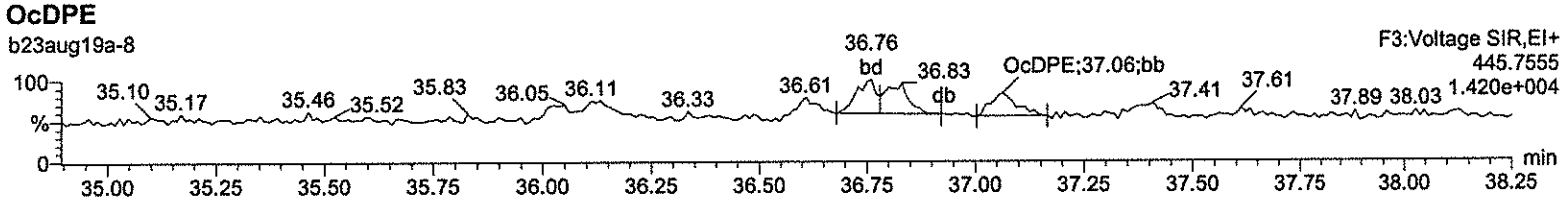
13C-123478-HxCDF



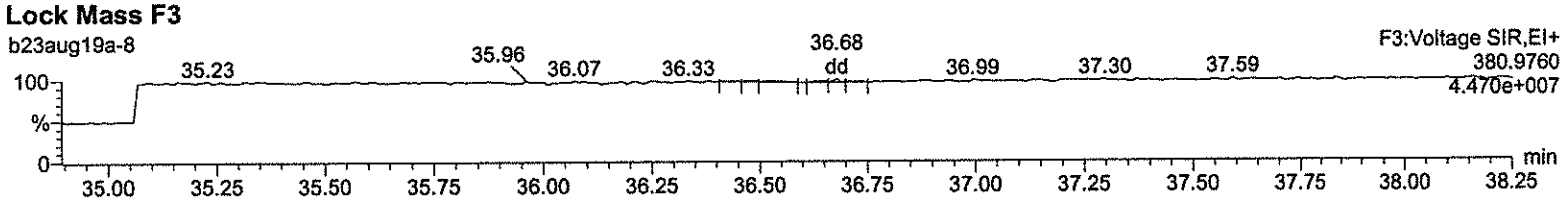
13C-123478-HxCDF



OcDPE



Lock Mass F3



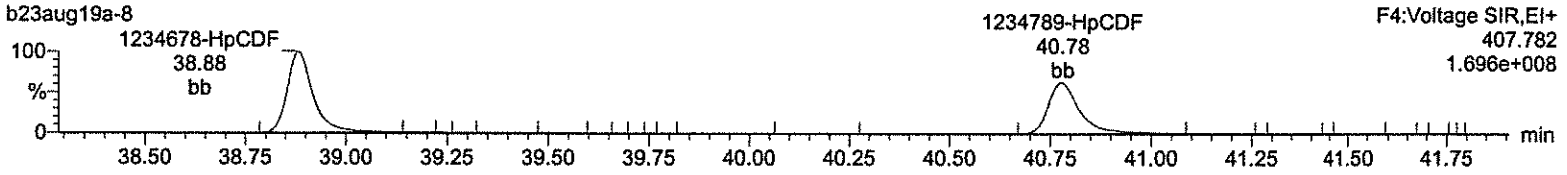
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

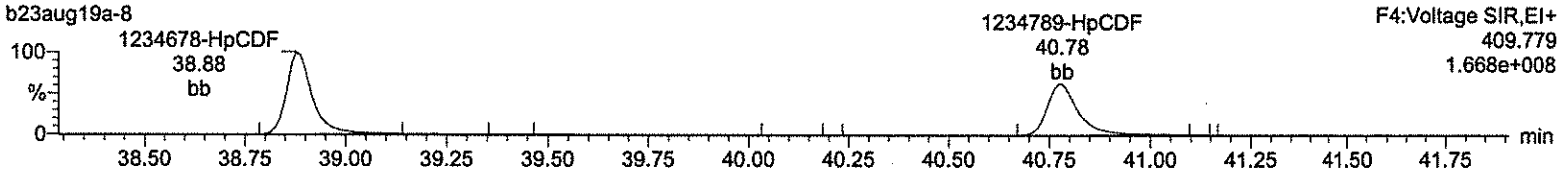
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

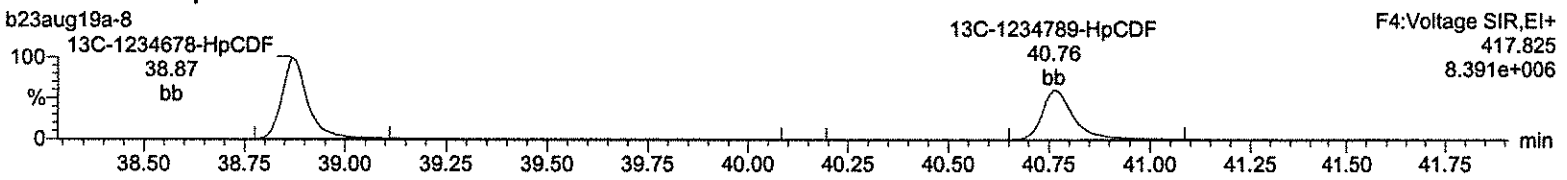
Total-heptafurans



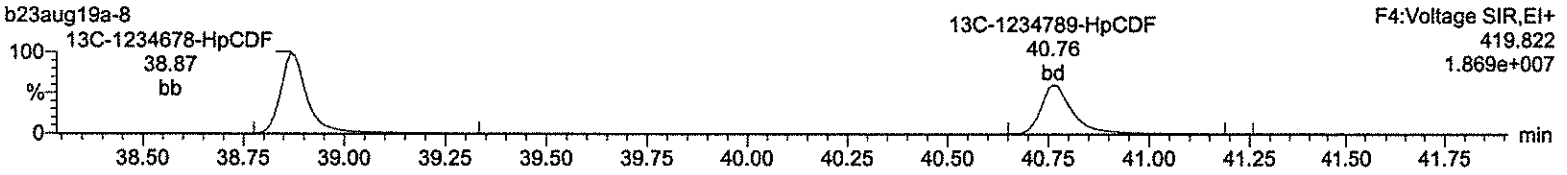
Total-heptafurans



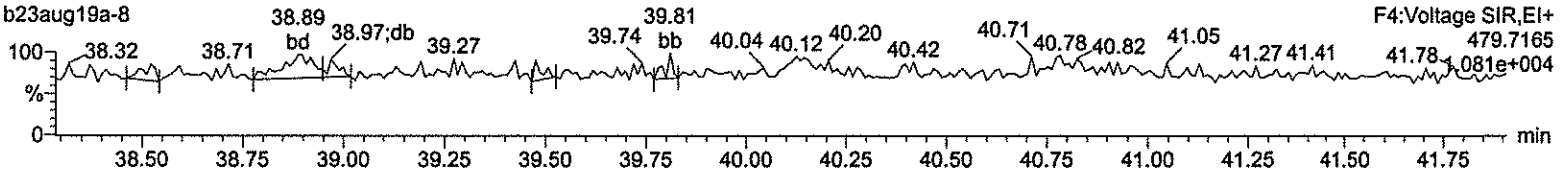
13C-1234678-HpCDF



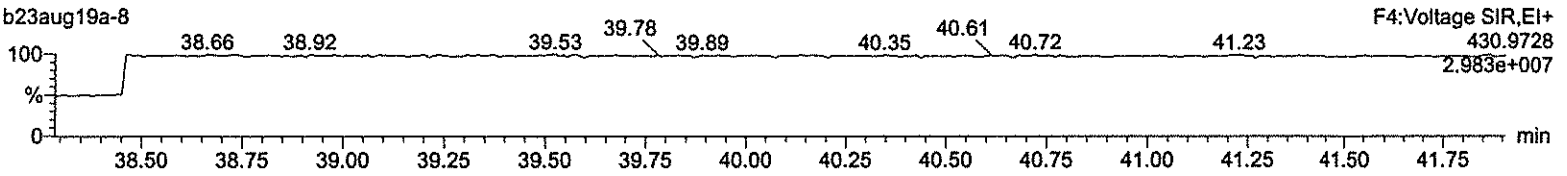
13C-1234678-HpCDF



NoDPE



Lock Mass F4



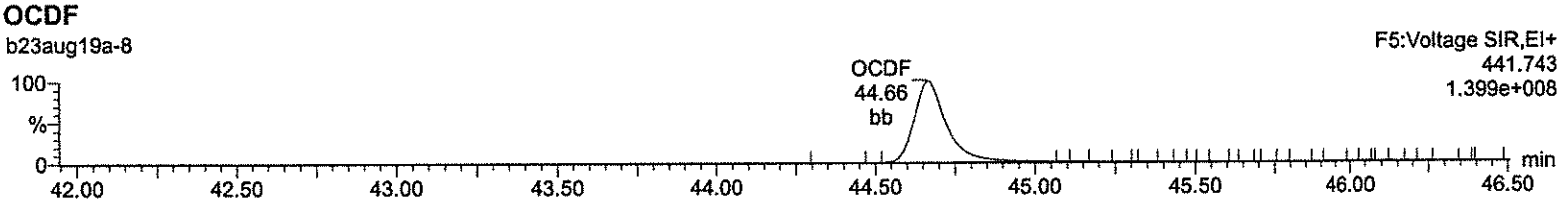
Quantify Sample Report **MassLynx 4.1**
Method 1613 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\1613-b23aug19a.qld

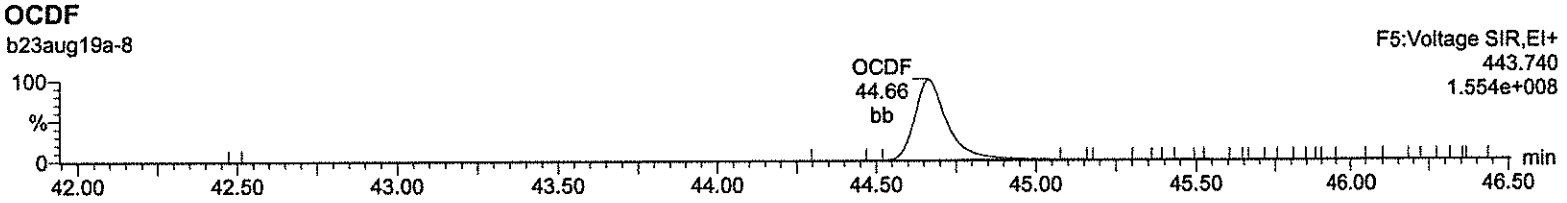
Last Altered: Monday, August 26, 2019 08:59:46 Eastern Standard Time
Printed: Monday, August 26, 2019 09:03:04 Eastern Standard Time

Name: b23aug19a-8, Date: 23-Aug-2019, Time: 13:54:55, ID: CS5 UD190207-06

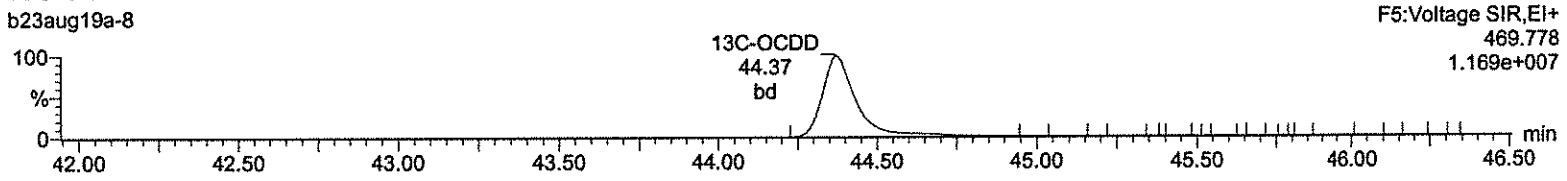
OCDF



OCDF



13C-OCDD



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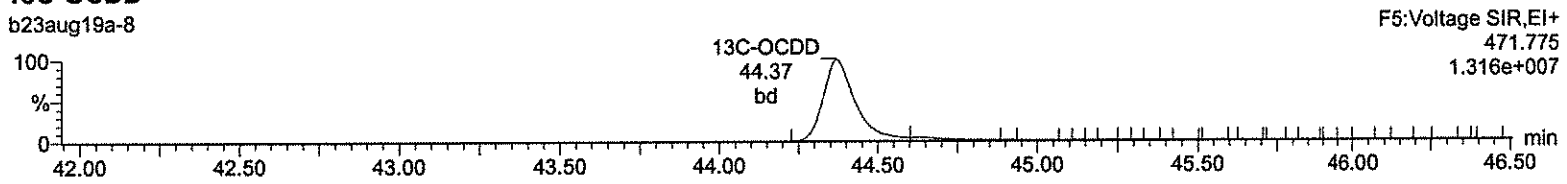
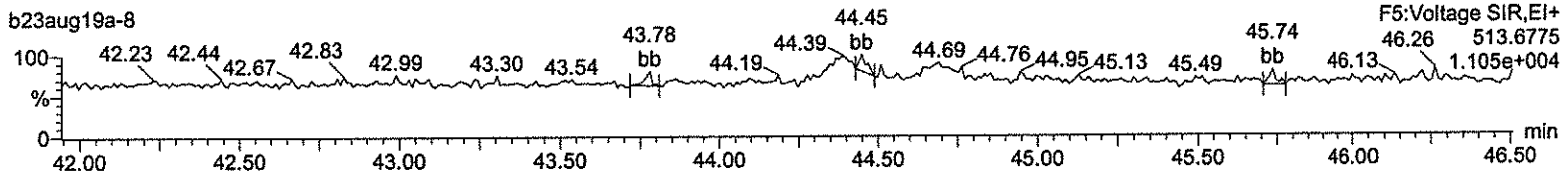
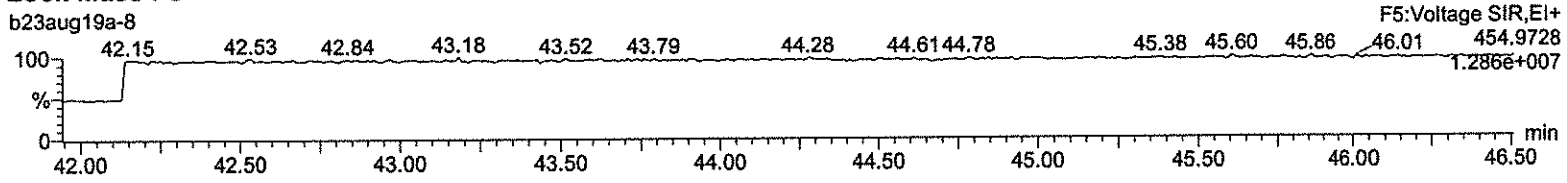


DeDPE



Lock Mass F5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

26Aug19

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b26jul19.mdb 29 Jul 2019 08:44:01
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	1.27e5	1.64e5	2.91e5	31.22	1.000	0.78	NO	10.791	0.0366	0.961	0.891	7.9	1.85e6	2932	632.4	2.45e6	3065	799.2	dd	db
2	12378-PeCDD	5.29e5	3.43e5	8.72e5	34.14	1.000	1.54	NO	51.121	0.0819	0.869	0.850	2.2	1.09e7	5729	1907.4	7.20e6	5621	1281.2	bb	bb
3	123478-HxCDD	4.23e5	3.43e5	7.66e5	36.74	1.000	1.23	NO	49.477	0.140	0.924	0.934	-1.0	7.88e6	8837	891.4	6.45e6	7196	896.0	bd	bd
4	123678-HxCDD	5.68e5	4.56e5	1.02e6	36.82	1.000	1.24	NO	52.296	0.139	0.926	0.885	4.6	8.28e6	8837	937.0	6.76e6	7196	938.8	dd	dd
5	123789-HxCDD	5.13e5	4.05e5	9.18e5	37.06	1.007	1.27	NO	53.482	0.142	0.949	0.887	7.0	6.80e6	8837	769.4	5.56e6	7196	772.9	db	dd
6	1234678-HpCDD	3.22e5	3.13e5	6.35e5	40.13	1.000	1.03	NO	51.133	0.275	0.966	0.944	2.3	3.71e6	7186	516.8	3.55e6	8062	440.5	bb	bd
7	OCDD	4.61e5	5.24e5	9.85e5	44.39	1.000	0.88	NO	100.674	0.283	0.920	0.914	0.7	3.58e6	3275	1092.7	4.11e6	4882	842.0	bb	bd
8	2378-TCDF	1.36e5	1.82e5	3.18e5	30.47	1.001	0.75	NO	10.261	0.0462	0.916	0.893	2.6	1.43e6	3003	475.5	1.91e6	3003	634.6	bb	bd
9	12378-PeCDF	7.68e5	4.96e5	1.26e6	33.34	1.000	1.55	NO	50.282	0.0976	0.913	0.908	0.6	1.57e7	11225	1400.7	1.00e7	8196	1219.9	bd	bd
10	23478-PeCDF	8.36e5	5.46e5	1.38e6	33.93	1.000	1.53	NO	50.813	0.0887	0.987	0.971	1.6	1.72e7	11225	1531.4	1.13e7	8196	1382.9	bb	bb
11	123478-HxCDF	6.12e5	4.97e5	1.11e6	36.03	1.000	1.23	NO	50.293	0.172	1.142	1.135	0.6	1.16e7	13443	861.1	9.37e6	14372	651.9	bd	bd
12	123678-HxCDF	7.84e5	6.19e5	1.40e6	36.13	1.000	1.27	NO	53.777	0.168	1.134	1.054	7.6	1.23e7	13443	913.2	9.91e6	14372	689.5	dd	db
13	234678-HxCDF	6.84e5	5.61e5	1.24e6	36.61	1.000	1.22	NO	53.116	0.185	1.201	1.130	6.2	1.09e7	13443	811.1	8.85e6	14372	615.8	bd	bb
14	123789-HxCDF	5.26e5	4.45e5	9.71e5	37.38	1.000	1.18	NO	52.700	0.262	1.120	1.063	5.4	7.43e6	13443	552.4	6.10e6	14372	424.6	bb	bb
15	1234678-HpCDF	4.99e5	5.04e5	1.00e6	38.89	1.000	0.99	NO	51.991	0.131	1.238	1.191	4.0	6.45e6	6403	1007.8	6.37e6	6557	971.9	bb	bd
16	1234789-HpCDF	3.65e5	3.54e5	7.19e5	40.78	1.000	1.03	NO	51.555	0.227	1.265	1.227	3.1	3.84e6	6403	599.4	3.79e6	6557	578.4	bb	bb
17	OCDF	5.32e5	6.06e5	1.14e6	44.67	1.007	0.88	NO	104.575	0.268	1.063	1.017	4.6	4.05e6	4019	1008.3	4.53e6	4584	988.1	bd	bd
18	13C-2378-TCDD	1.32e6	1.71e6	3.03e6	31.21	1.018	0.78	NO	96.856	0.0678	1.115	1.151	-3.1	2.01e7	6434	3122.3	2.58e7	3463	7443.3	bb	bb
19	13C-12378-PeCDD	1.22e6	7.88e5	2.01e6	34.13	1.113	1.54	NO	94.803	0.0829	0.739	0.779	-5.2	2.47e7	2364	10460.7	1.59e7	5823	2722.8	bb	bb
20	13C-123478-HxCDD	9.16e5	7.42e5	1.66e6	36.73	0.991	1.24	NO	100.924	0.144	0.796	0.789	0.9	1.69e7	5322	3175.9	1.36e7	7419	1837.4	bd	bd
21	13C-123678-HxCDD	1.22e6	9.90e5	2.21e6	36.81	0.993	1.23	NO	100.511	0.108	1.062	1.057	0.5	1.80e7	5322	3391.3	1.48e7	7419	1999.8	dd	dd
22	13C-1234678-HpCDD	6.61e5	6.54e5	1.32e6	40.12	1.083	1.01	NO	99.816	0.197	0.632	0.633	-0.2	7.37e6	7966	925.1	6.97e6	5950	1172.2	bd	bd
23	13C-OCDD	1.00e6	1.14e6	2.14e6	44.38	1.198	0.88	NO	188.387	0.177	0.514	0.546	-5.8	7.38e6	5445	1354.4	8.49e6	5351	1587.3	bd	bd
24	13C-2378-TCDF	1.51e6	1.96e6	3.47e6	30.45	0.993	0.77	NO	98.422	0.0930	1.278	1.299	-1.6	1.58e7	9639	1640.2	2.04e7	5672	3597.4	bb	bb
25	13C-12378-PeCDF	1.69e6	1.08e6	2.77e6	33.33	1.087	1.56	NO	97.465	0.146	1.019	1.046	-2.5	3.34e7	10000	3343.6	2.13e7	9426	2256.1	bd	bb
26	13C-23478-PeCDF	1.70e6	1.10e6	2.80e6	33.92	1.106	1.55	NO	96.033	0.143	1.030	1.073	-4.0	3.42e7	10000	3423.9	2.25e7	9426	2382.8	bb	bb
27	13C-123478-HxCDF	6.65e5	1.28e6	1.94e6	36.02	0.972	0.52	NO	102.340	0.232	0.933	0.912	2.3	1.22e7	12632	965.4	2.37e7	10977	2158.5	bd	bd
28	13C-123678-HxCDF	8.53e5	1.62e6	2.48e6	36.12	0.975	0.53	NO	100.073	0.178	1.189	1.188	0.1	1.35e7	12632	1070.0	2.57e7	10977	2345.1	db	db
29	13C-234678-HxCDF	7.29e5	1.34e6	2.07e6	36.60	0.988	0.54	NO	98.630	0.209	0.996	1.010	-1.4	1.17e7	12632	928.1	2.25e7	10977	2048.0	bb	bb
30	13C-123789-HxCDF	5.93e5	1.14e6	1.73e6	37.37	1.008	0.52	NO	97.766	0.248	0.833	0.852	-2.2	8.55e6	12632	677.1	1.61e7	10977	1470.6	bb	bb
31	13C-1234678-HpCDF	4.98e5	1.12e6	1.62e6	38.88	1.049	0.44	NO	99.279	0.193	0.778	0.784	-0.7	6.38e6	8026	794.7	1.43e7	8871	1608.6	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

L #	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	3.52e5	7.86e5	1.14e6	40.77	1.100	0.45	NO	97.298	0.269	0.546	0.562	-2.7	3.60e6	8026	449.1	8.20e6	8871	924.5	bb	bb
33	13C-1234-TCDD	1.19e6	1.53e6	2.72e6	30.67	0.000	0.77	NO	100.000	0.0780	1.000	1.000	0.0	1.38e7	6434	2151.2	1.78e7	3463	5149.6	bb	bb
34	13C-123789-HxCDD	1.14e6	9.41e5	2.08e6	37.05	0.000	1.21	NO	100.000	0.114	1.000	1.000	0.0	1.53e7	5322	2876.0	1.26e7	7419	1693.7	dd	dd
35	37Cl-2378-TCDD	2.83e5		2.83e5	31.22	1.018			9.667	0.0182	1.041	1.077	-3.3	4.23e6	2485	1702.2				bb	

Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

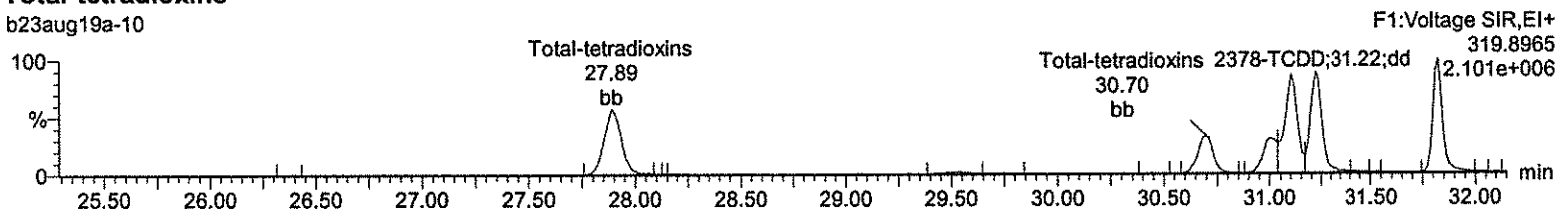
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

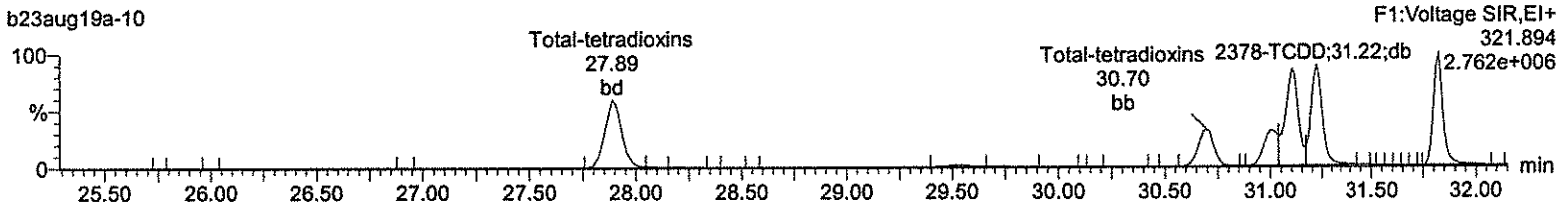
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b26jul19.mdb 29 Jul 2019 08:44:01
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

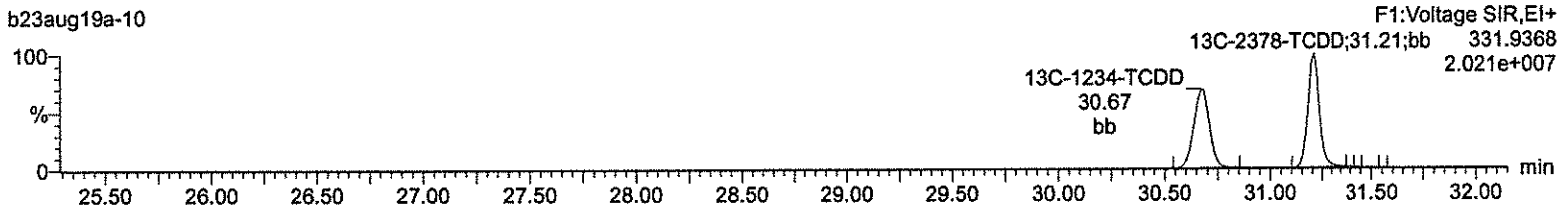
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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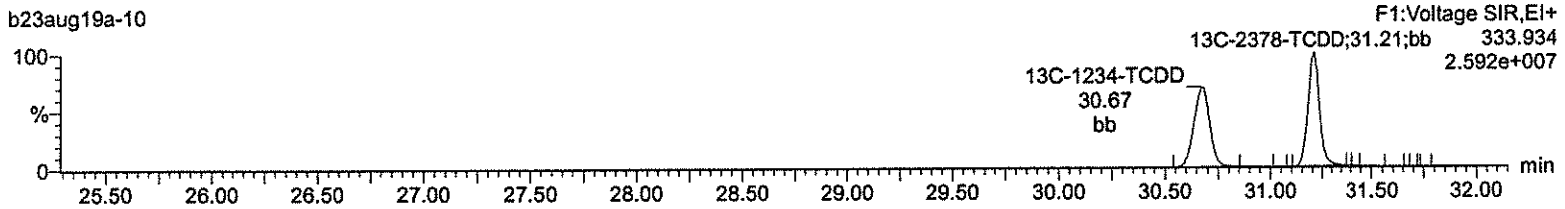
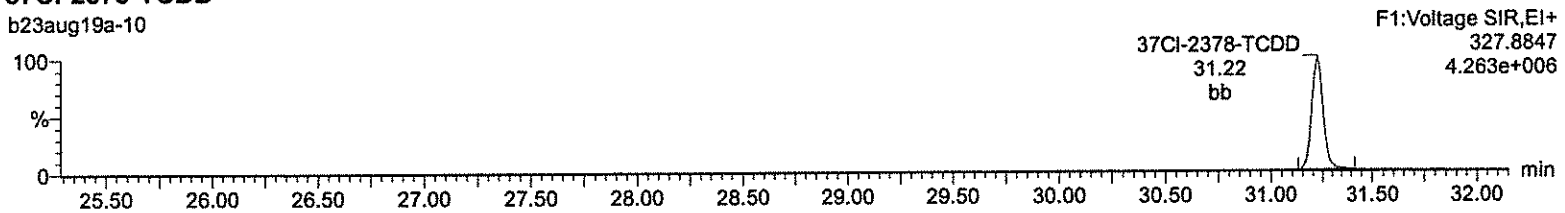
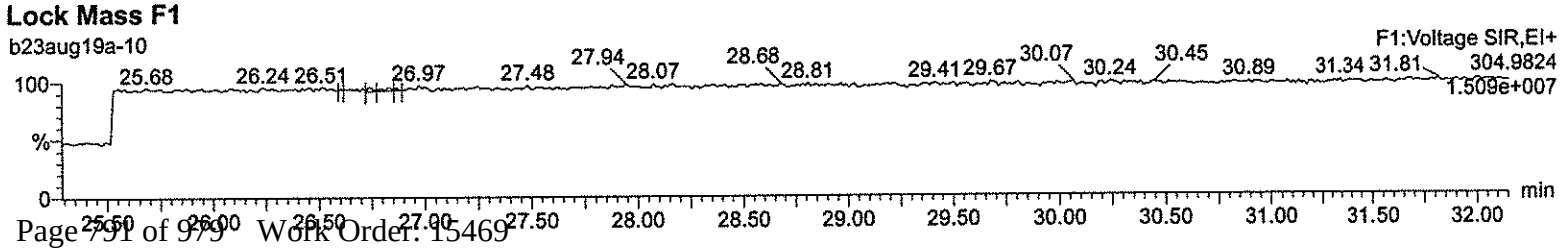


37Cl-2378-TCDD



Lock Mass F1



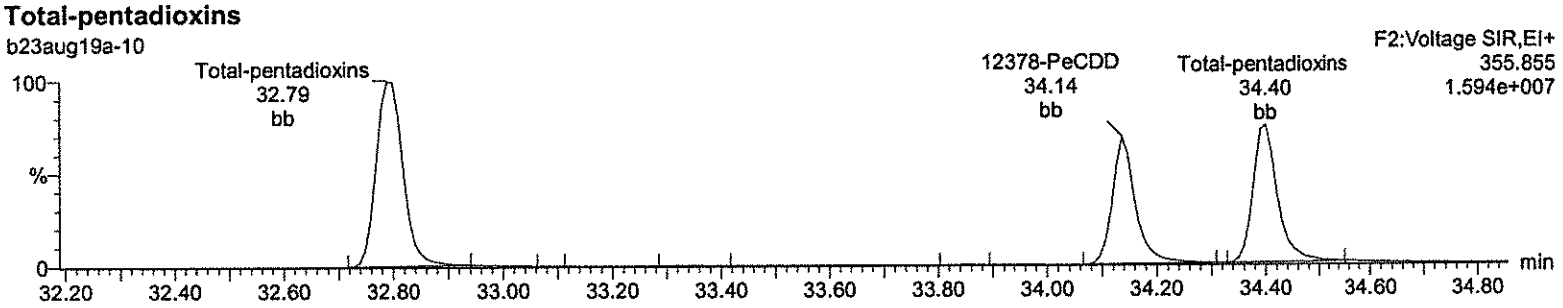
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

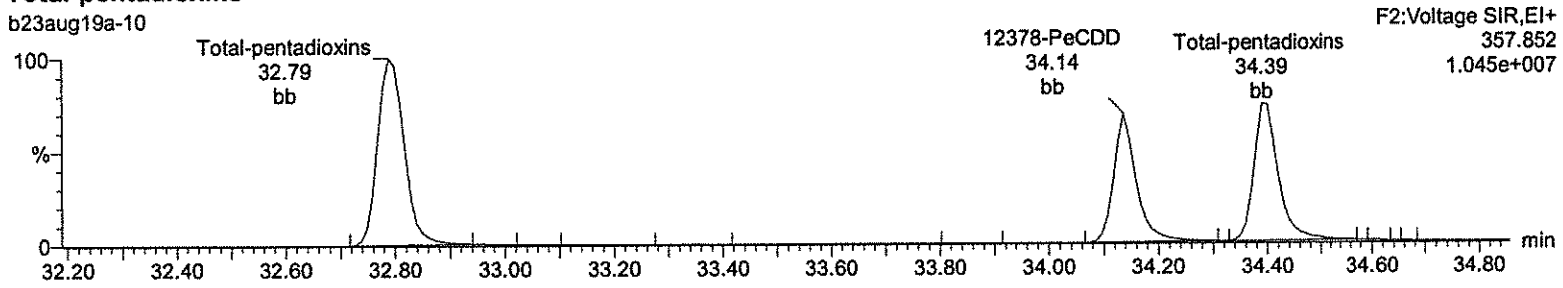
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

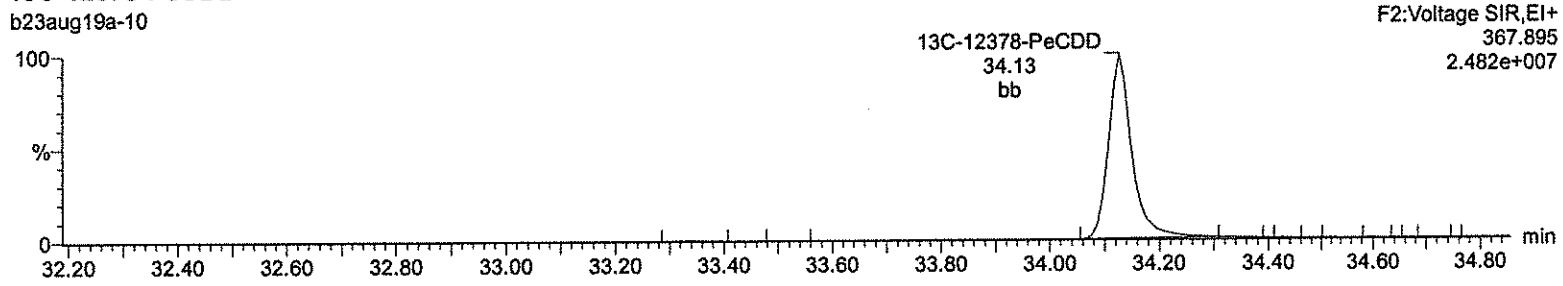
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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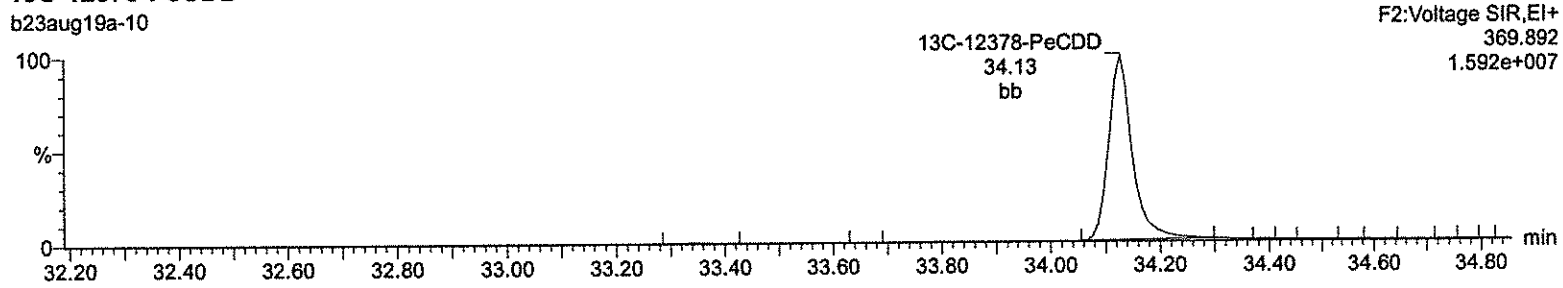
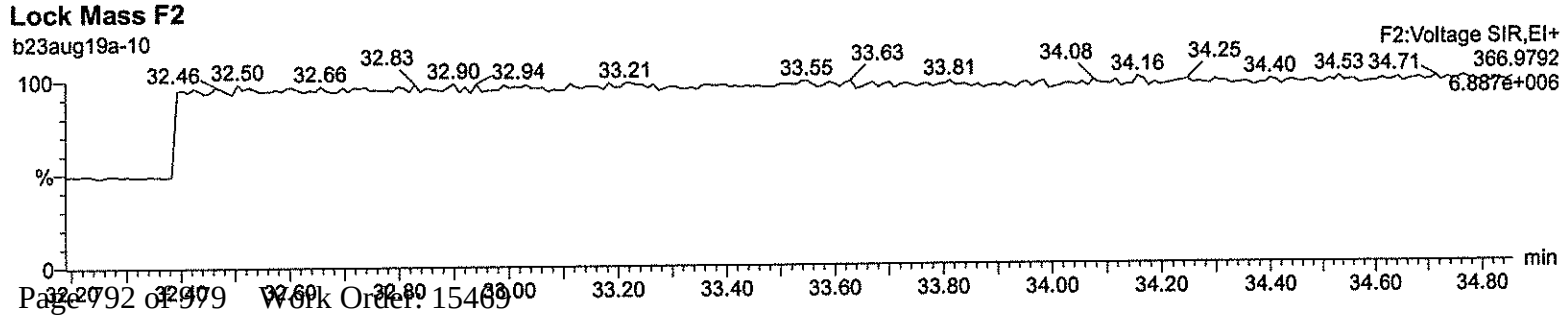


Lock Mass F2



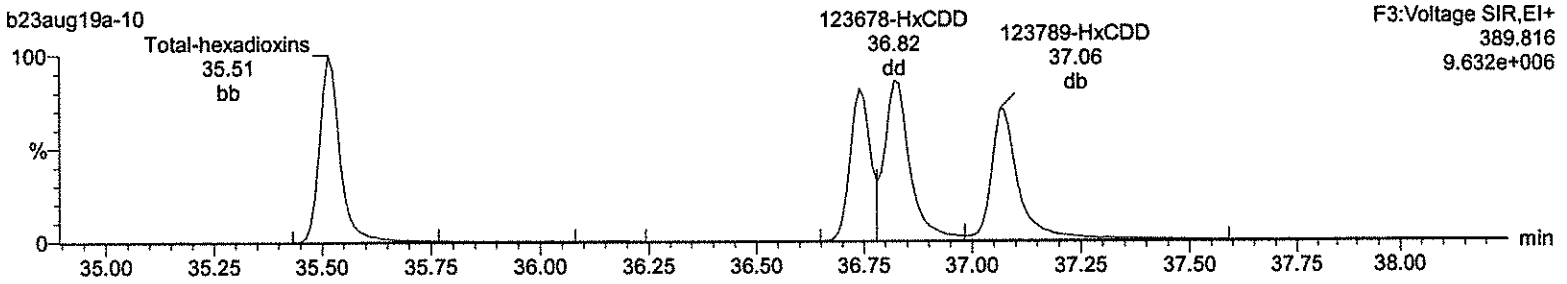
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

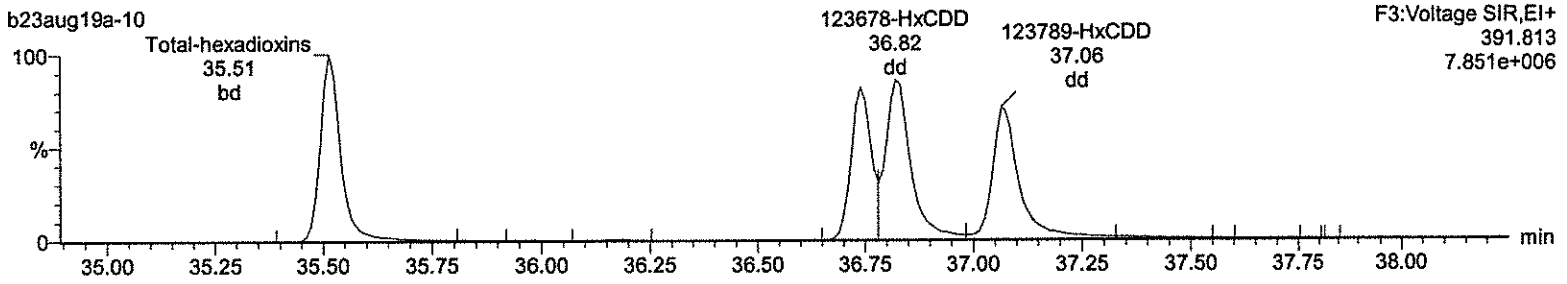
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

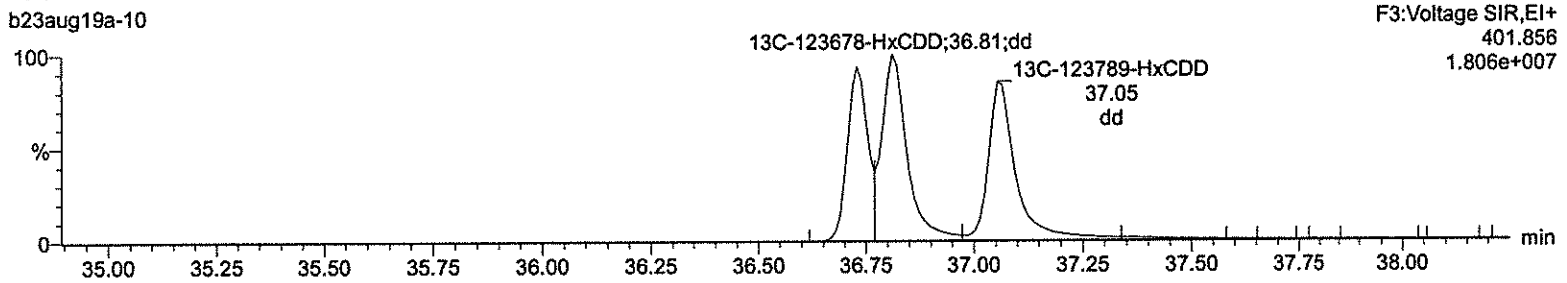
Total-hexadioxins



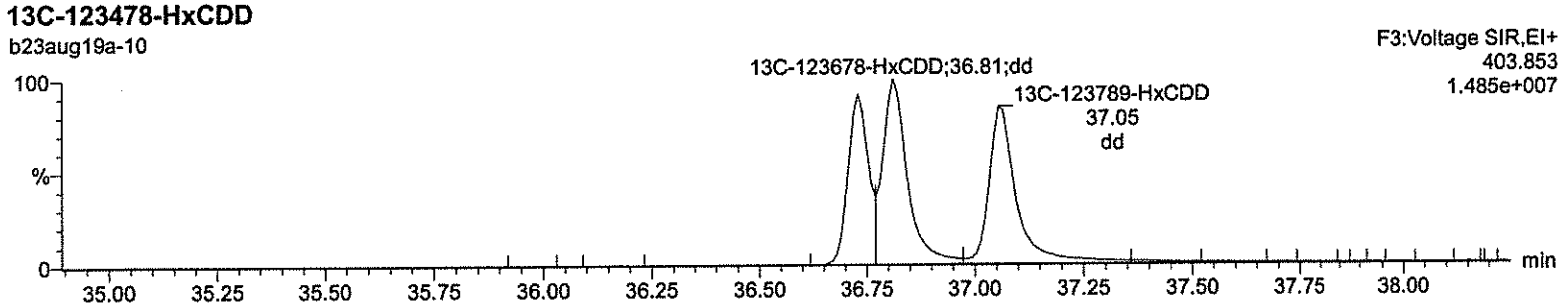
Total-hexadioxins



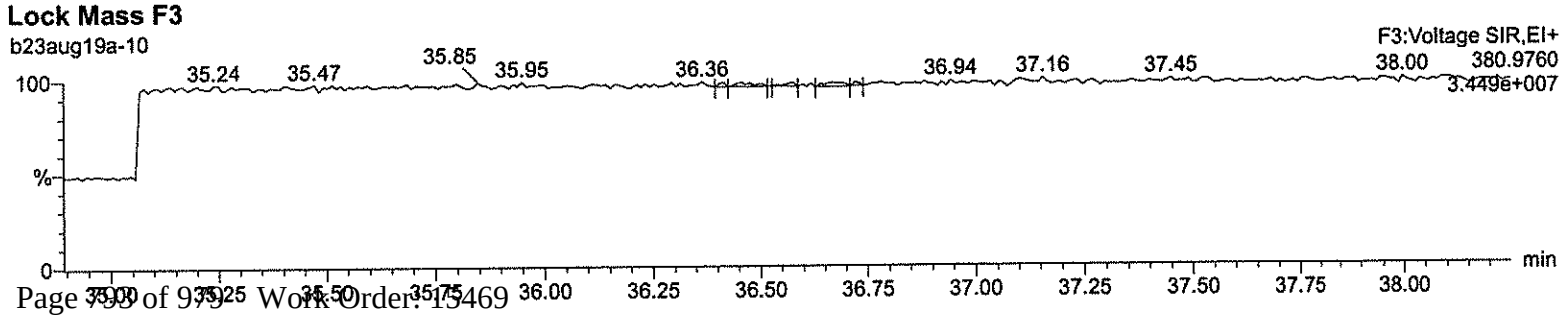
13C-123478-HxCDD



13C-123478-HxCDD



Lock Mass F3



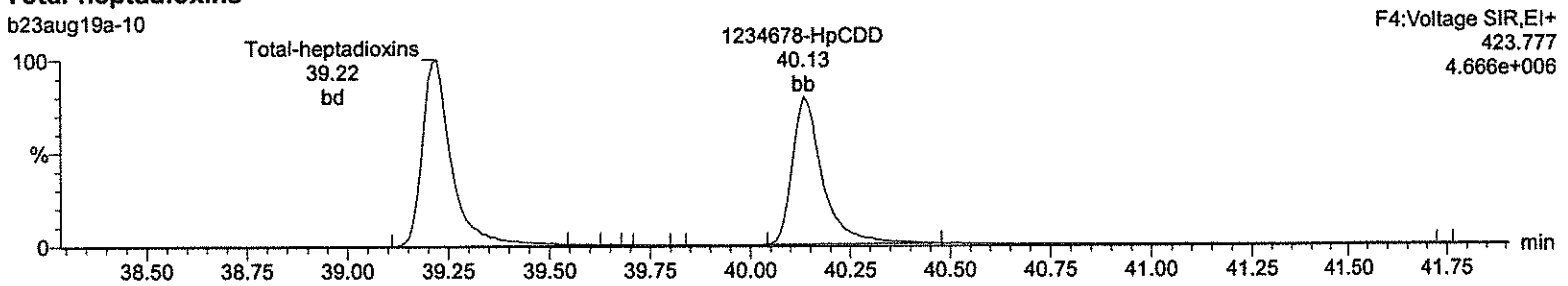
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

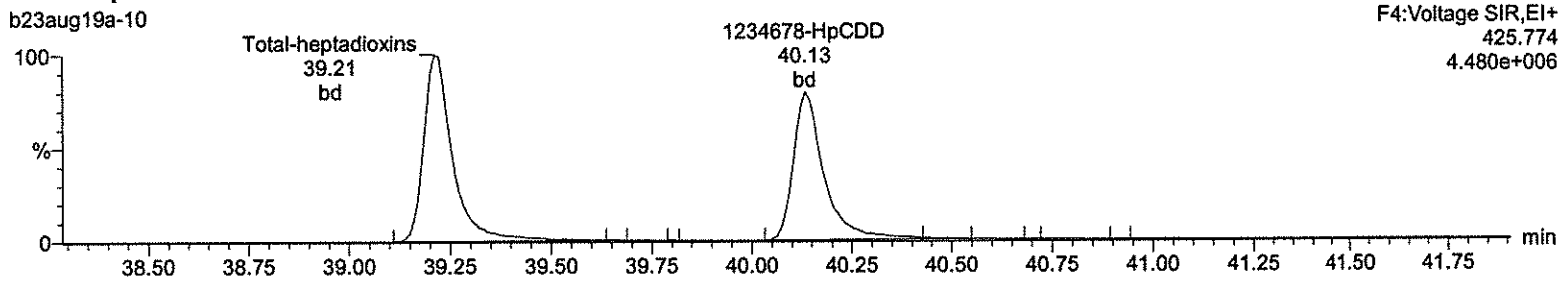
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

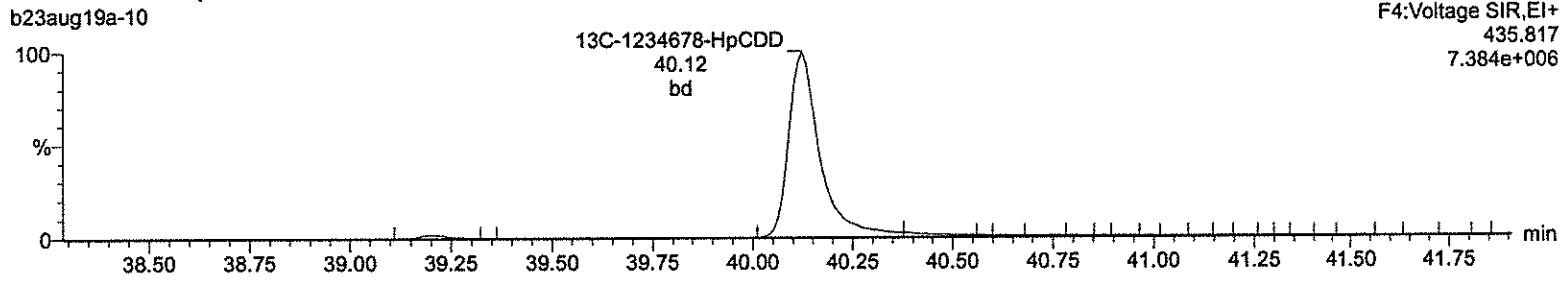
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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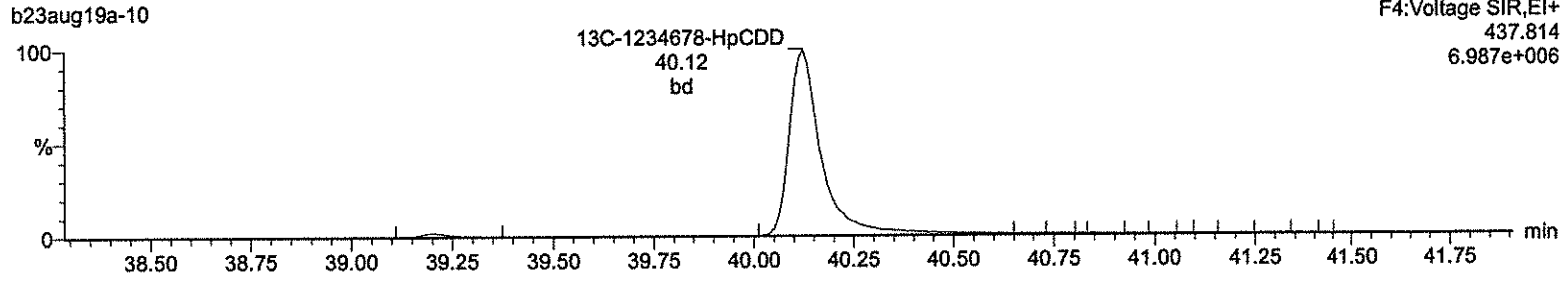
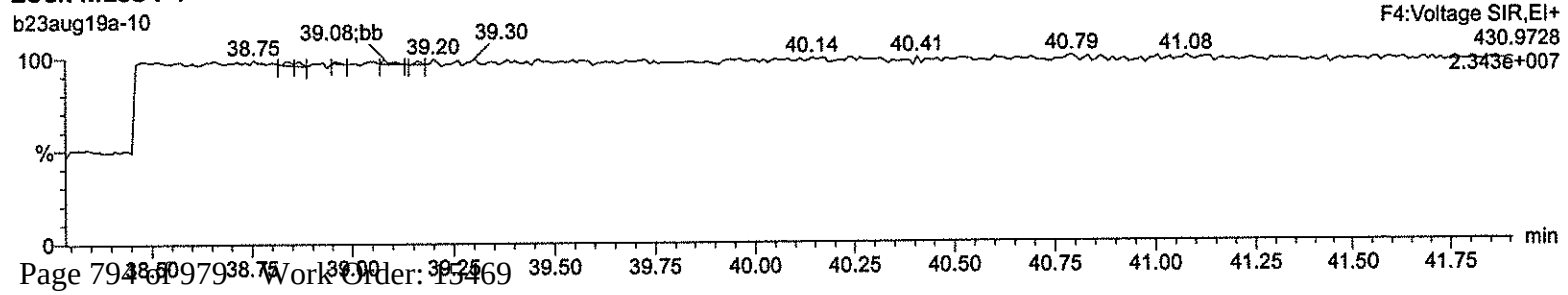


Lock Mass F4



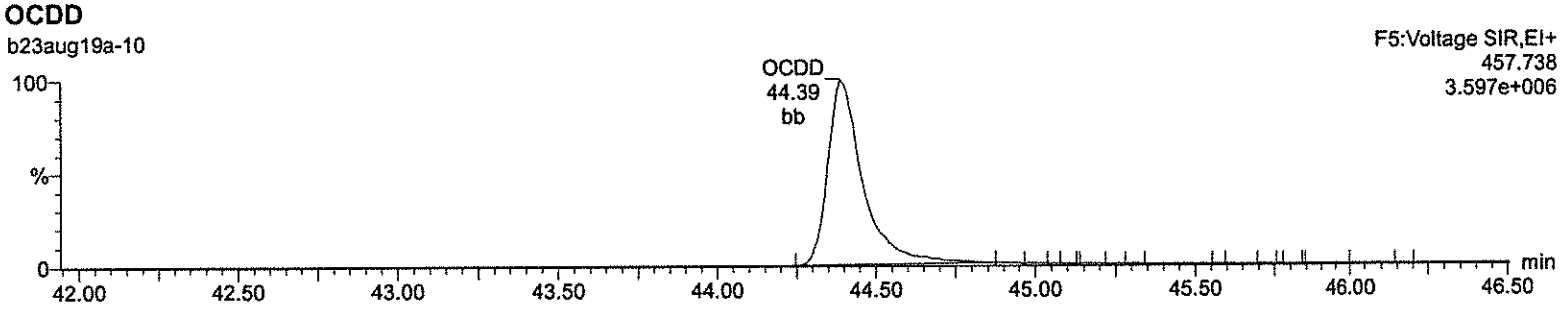
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

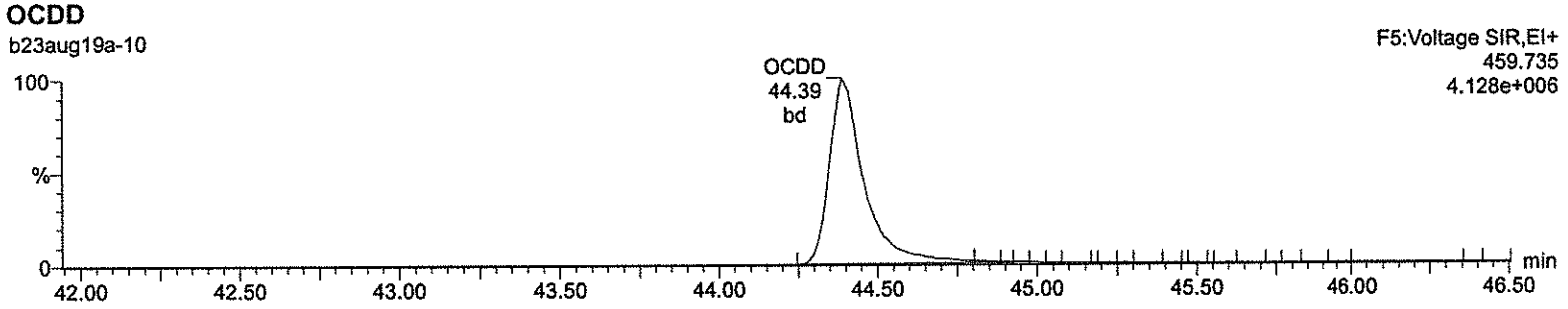
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

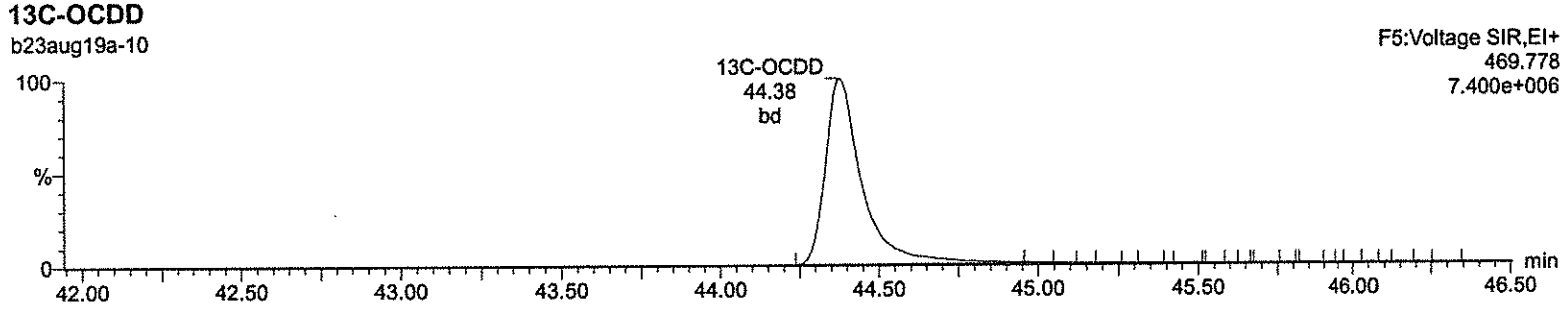
OCDD



OCDD



13C-OCDD



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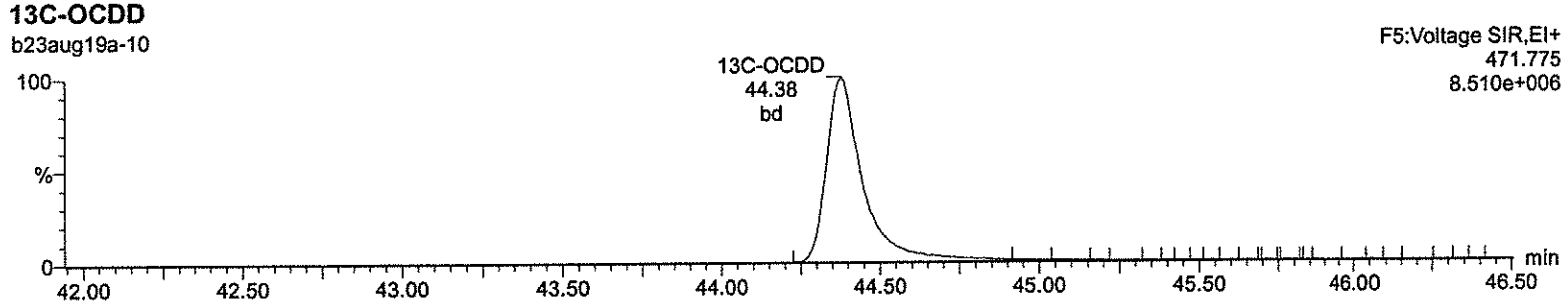
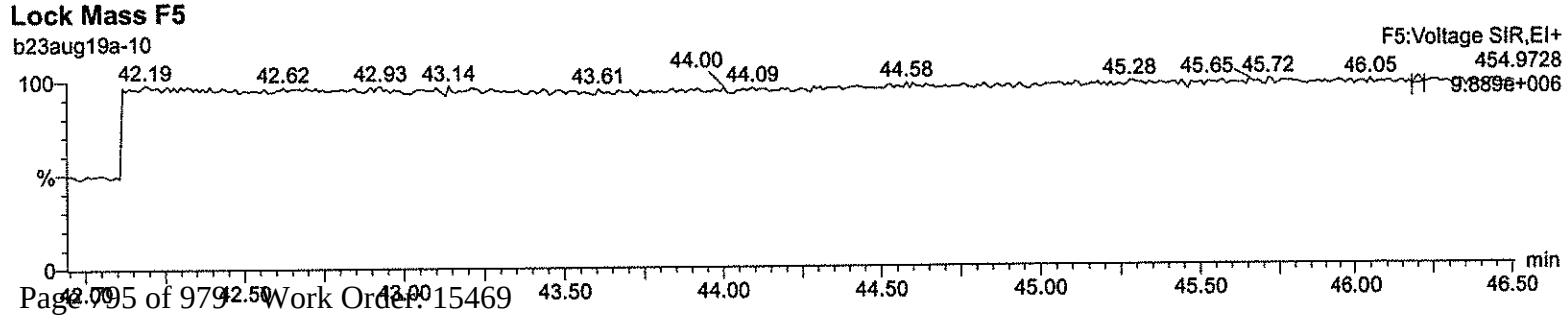


Lock Mass F5



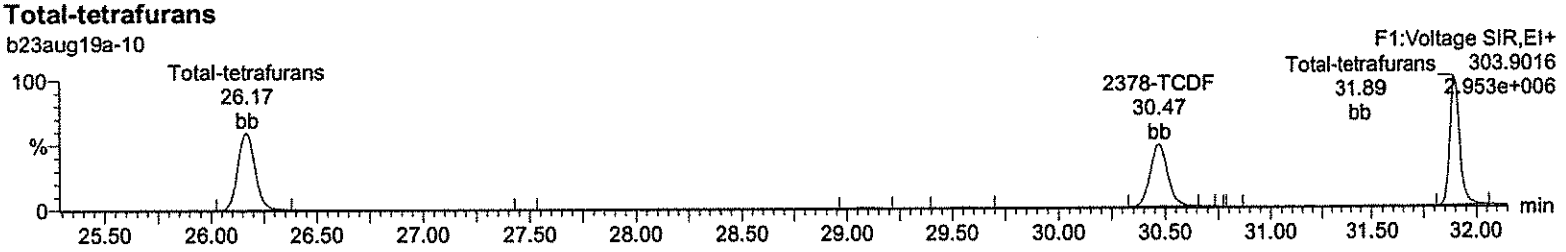
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

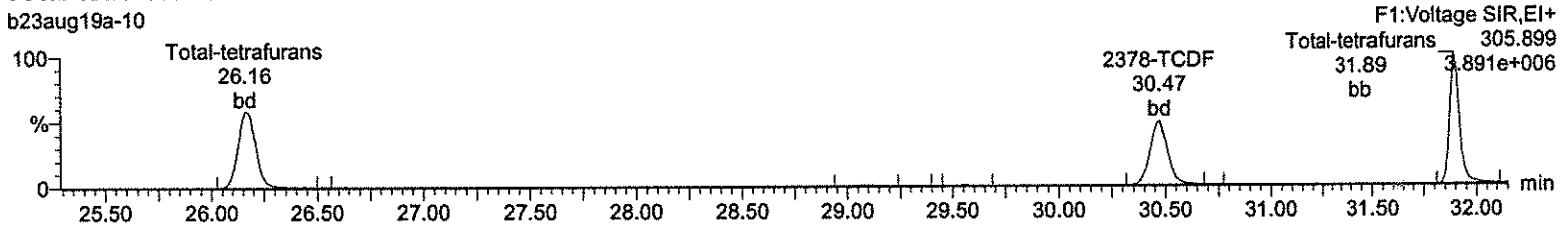
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

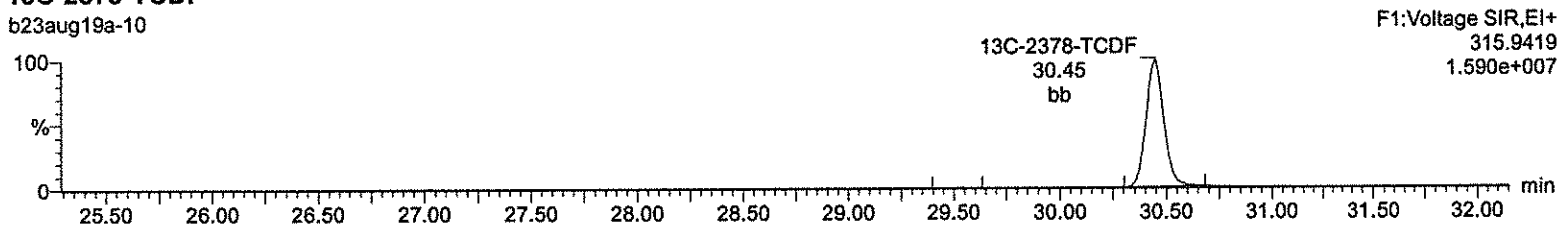
Total-tetrafurans



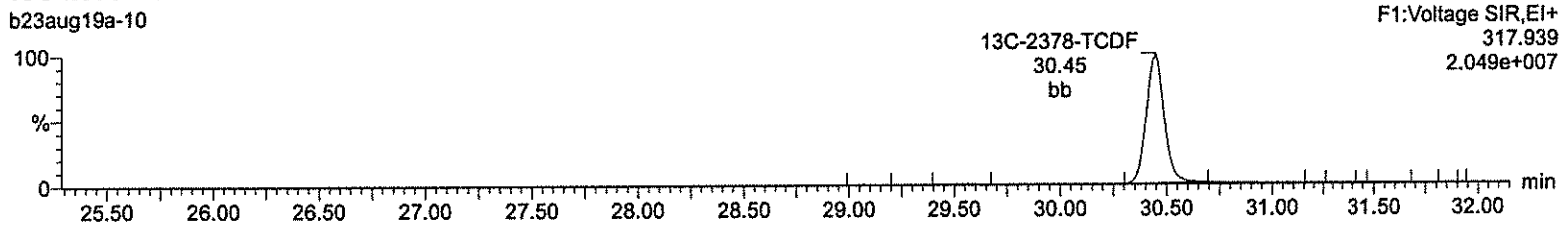
Total-tetrafurans



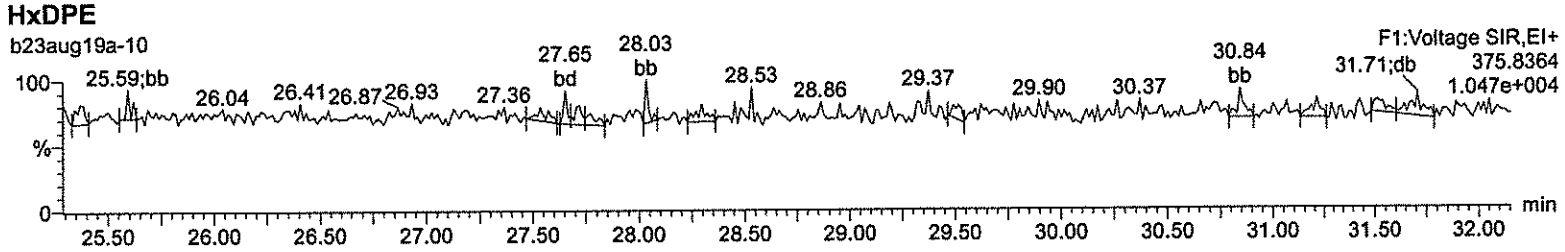
13C-2378-TCDF



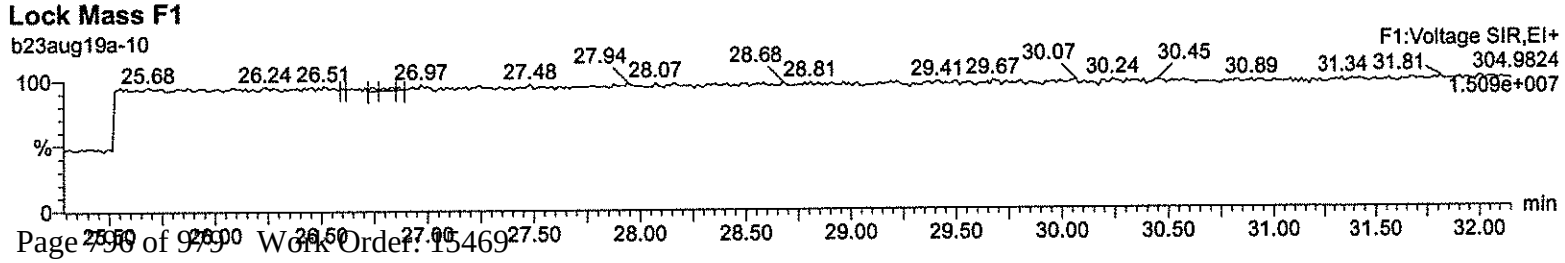
13C-2378-TCDF



HxDPE



Lock Mass F1



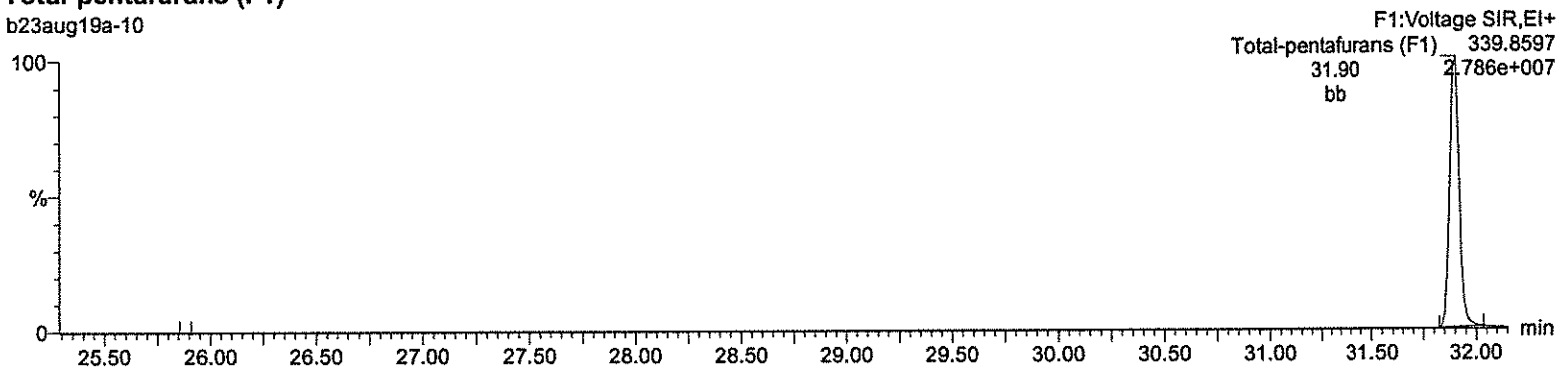
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

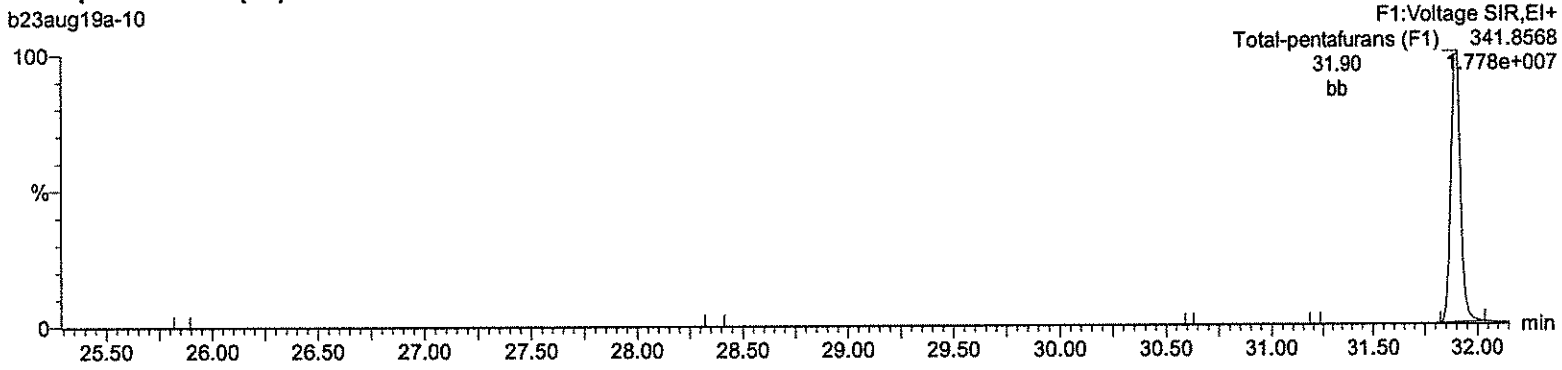
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

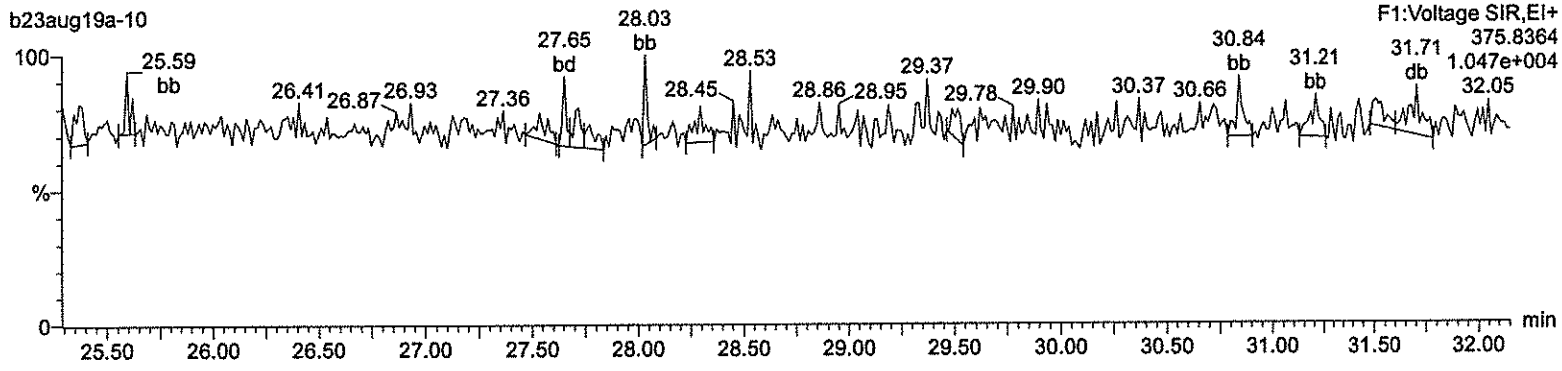
Total-pentafurans (F1)



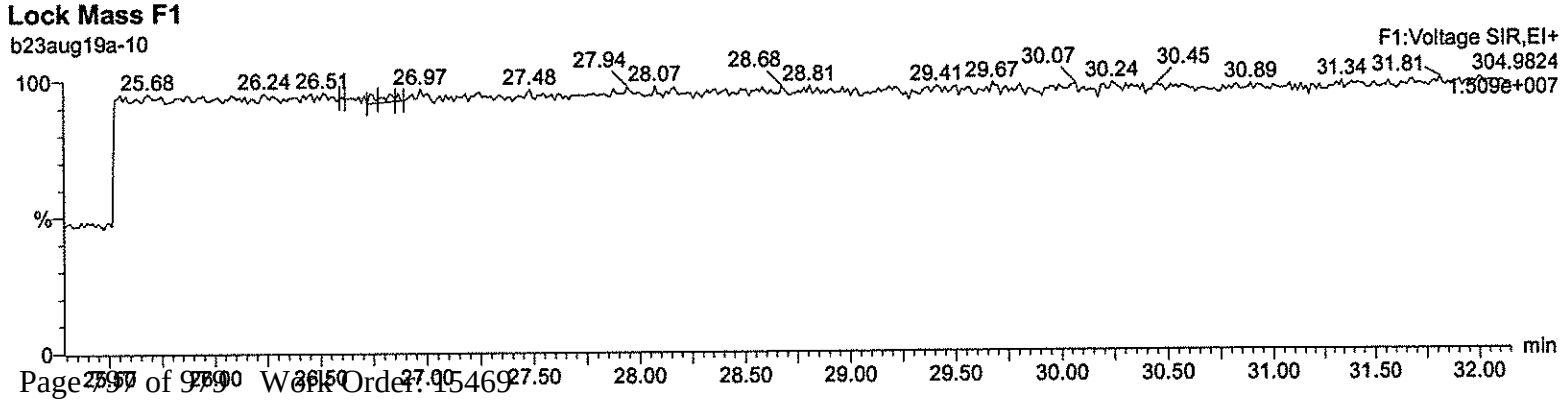
Total-pentafurans (F1)



HxDPE



Lock Mass F1



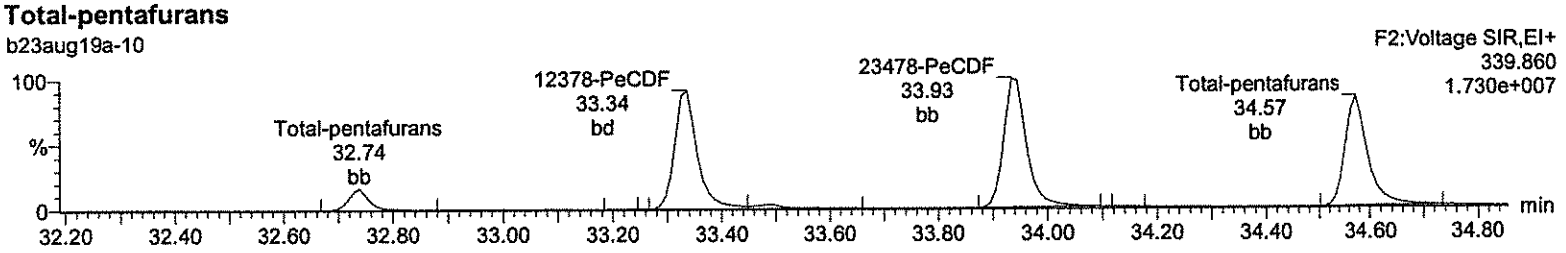
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

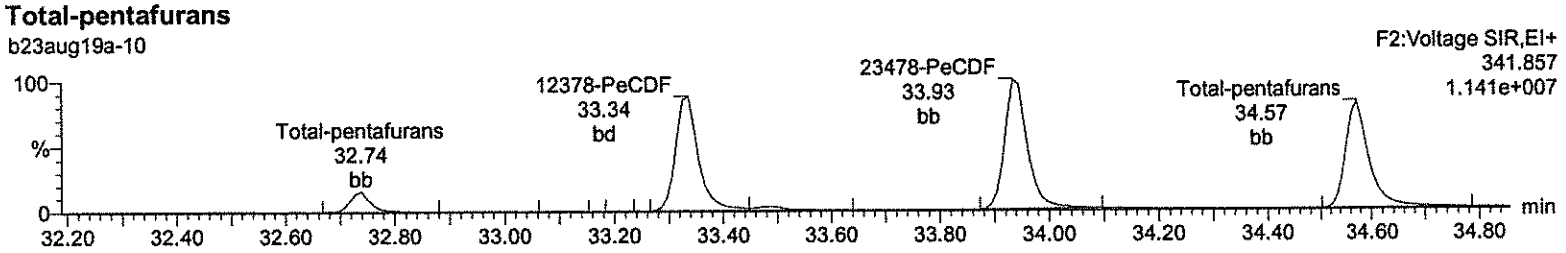
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

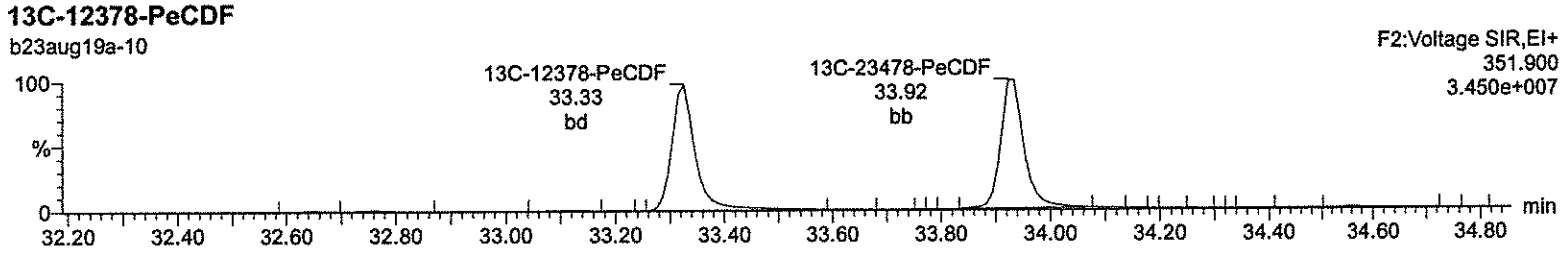
Total-pentafurans



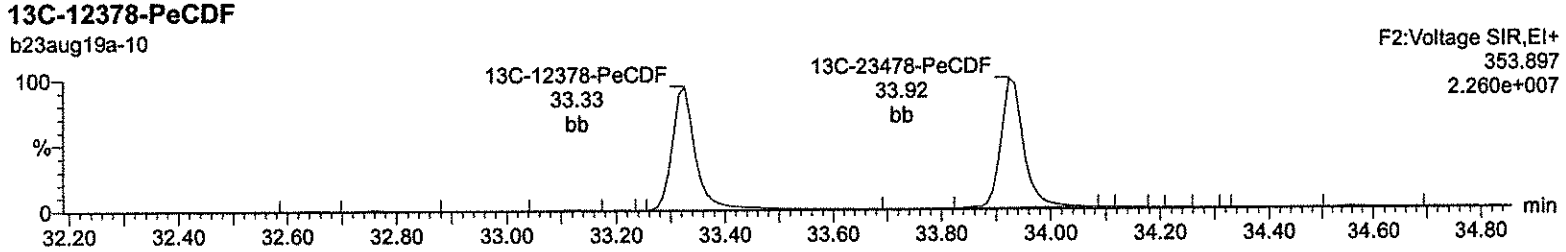
Total-pentafurans



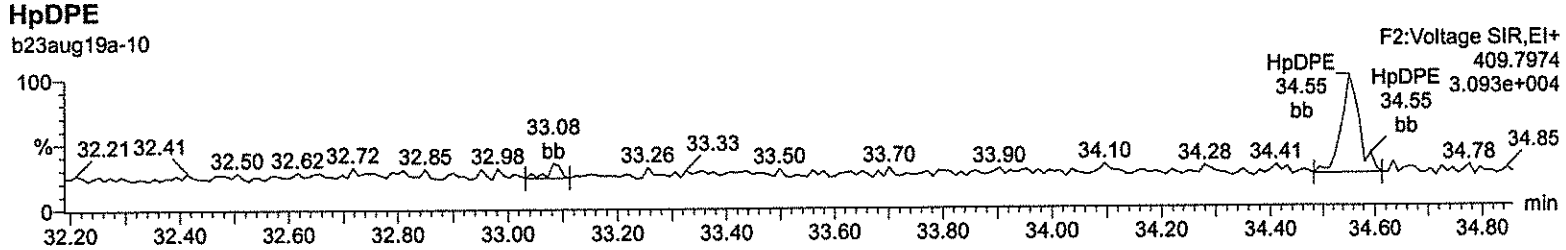
13C-12378-PeCDF



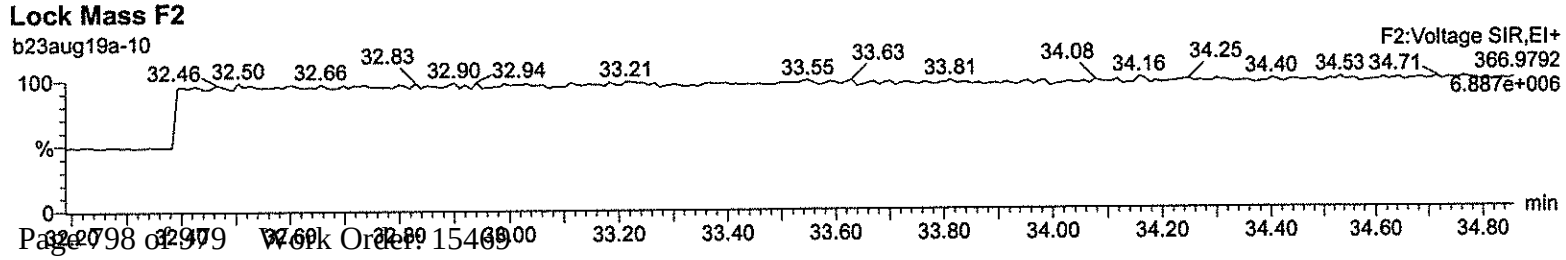
13C-12378-PeCDF



HpDPE



Lock Mass F2



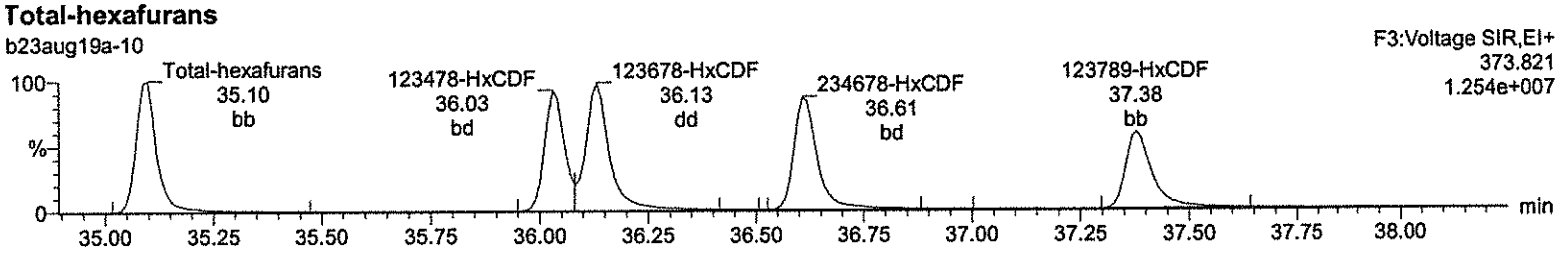
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

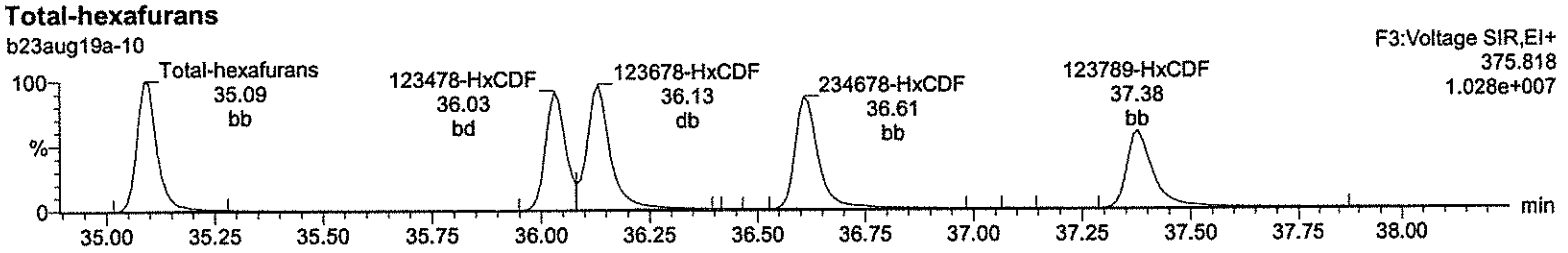
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

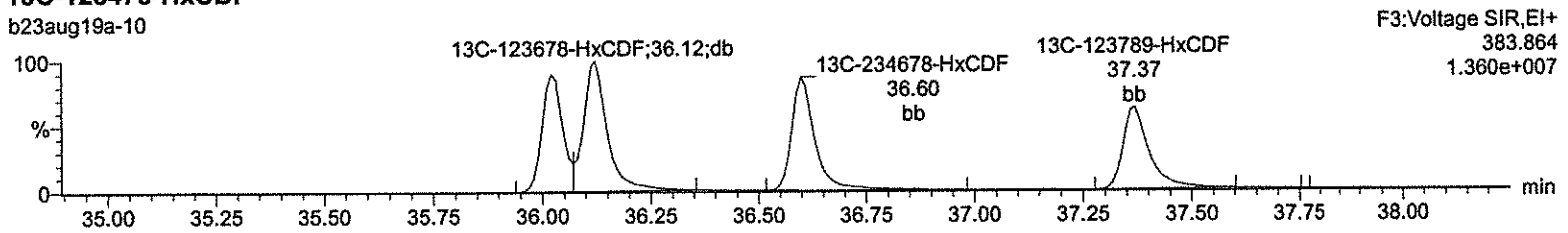
Total-hexafurans



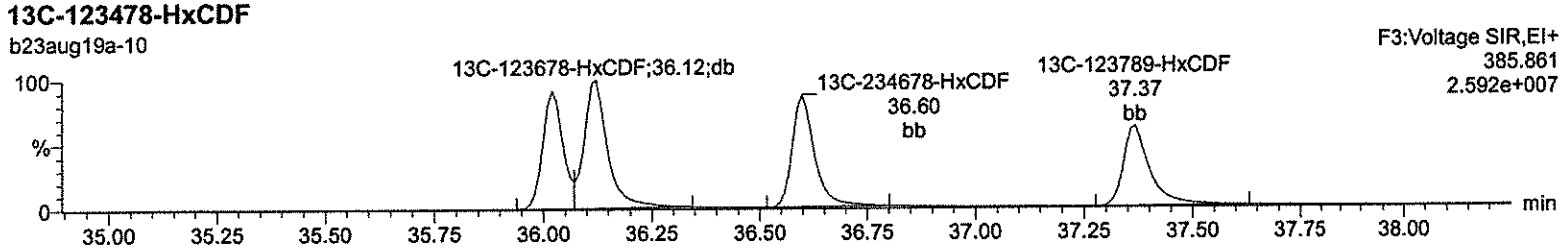
Total-hexafurans



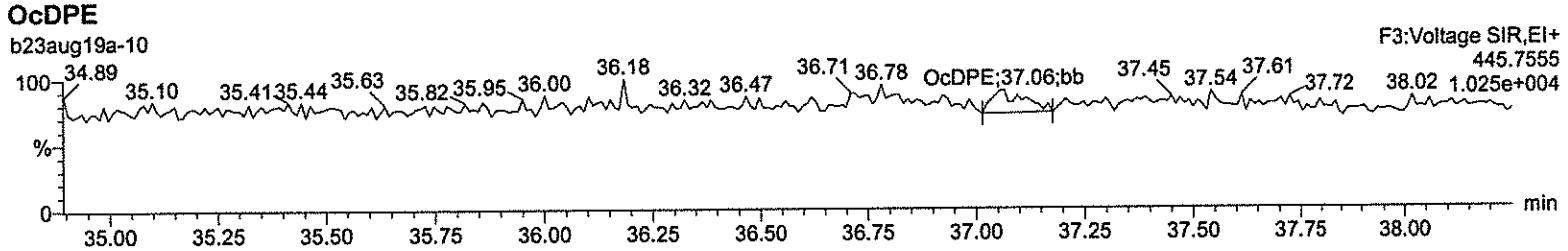
13C-123478-HxCDF



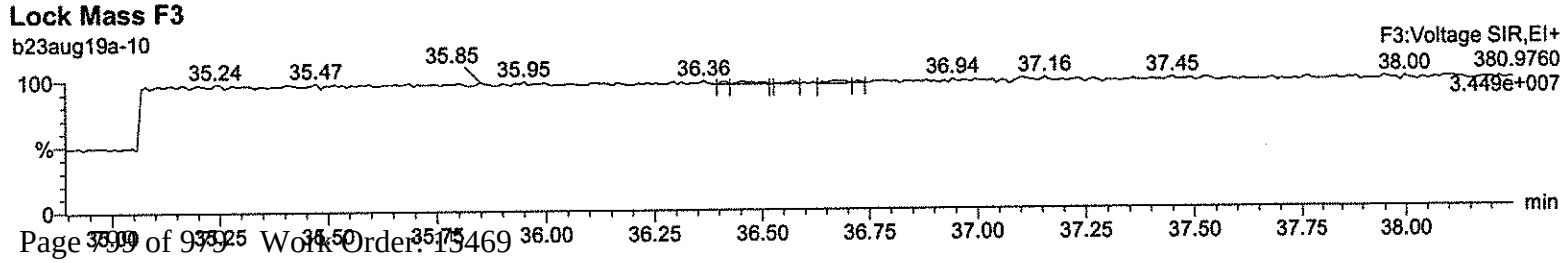
13C-123478-HxCDF



OcDPE



Lock Mass F3



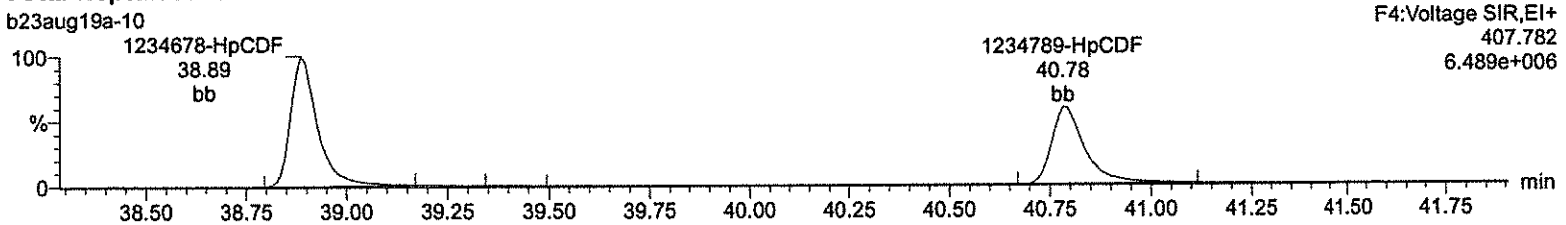
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

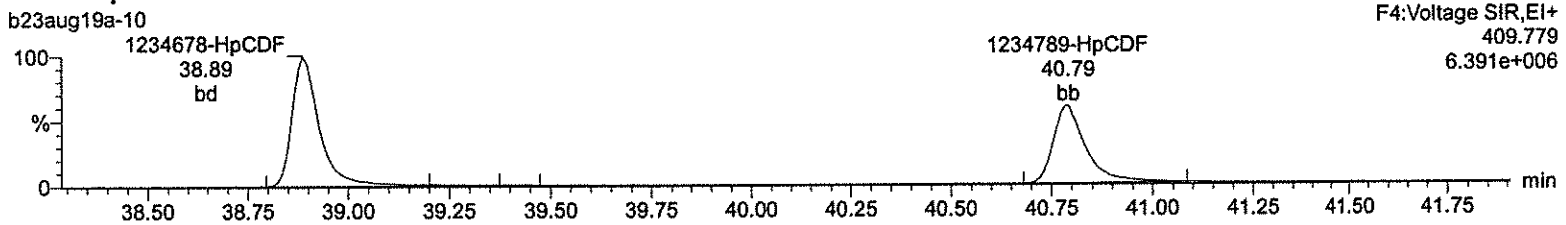
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

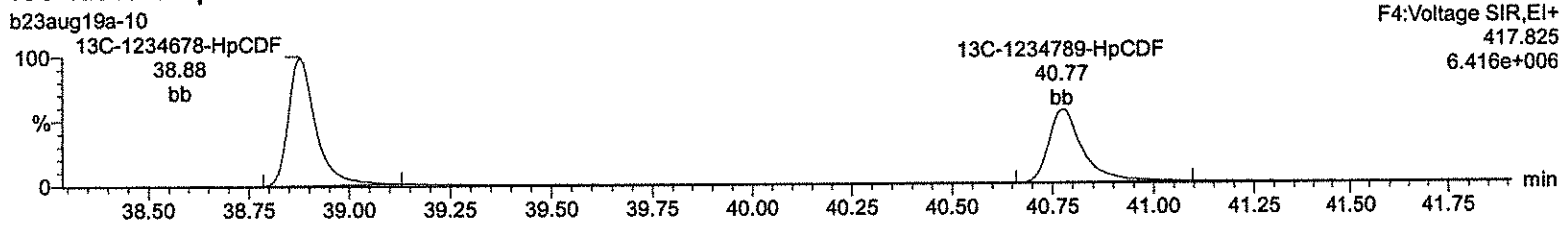
Total-heptafurans



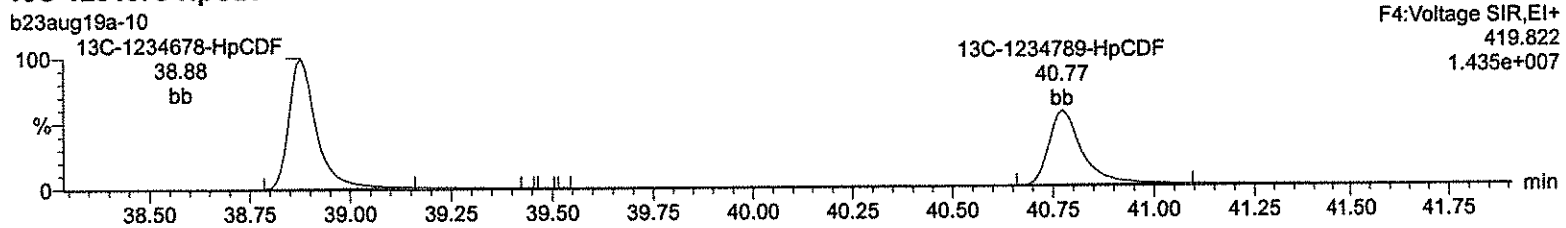
Total-heptafurans



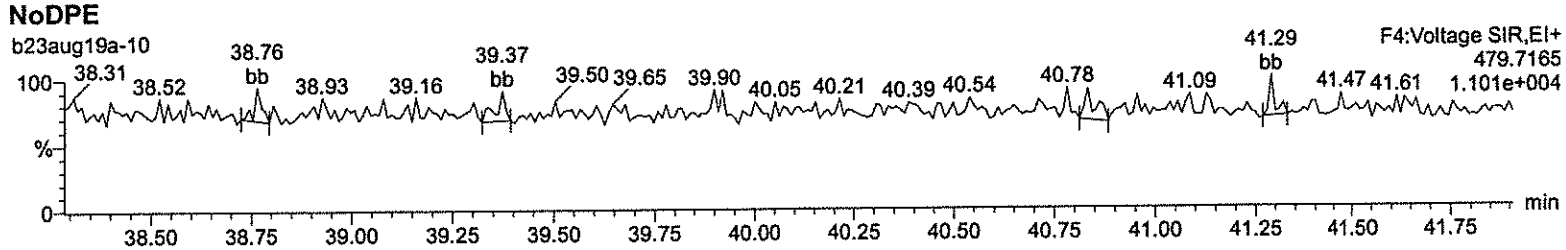
13C-1234678-HpCDF



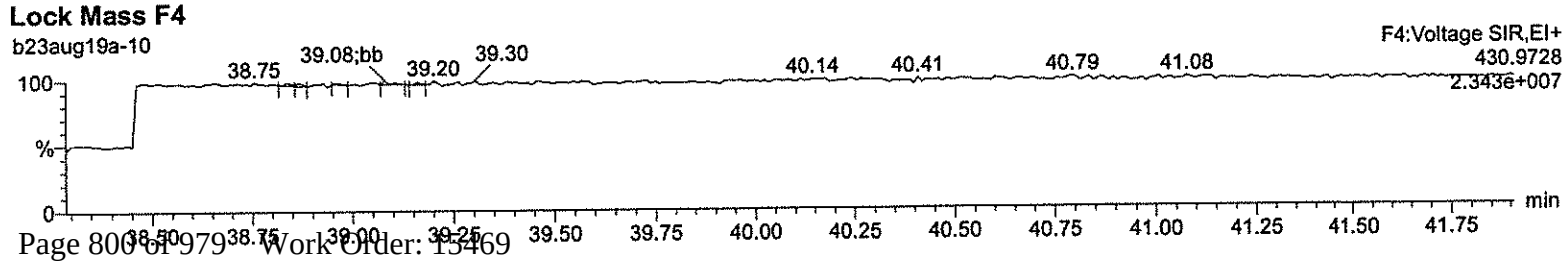
13C-1234678-HpCDF



NoDPE



Lock Mass F4



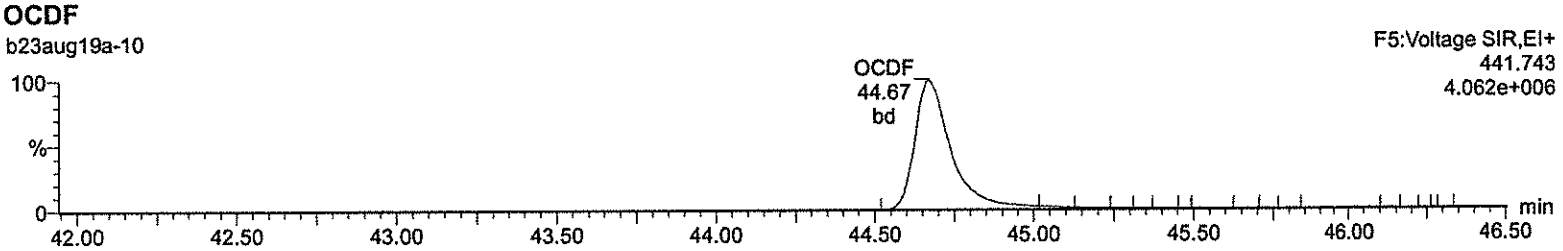
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23aug19a-10.qld

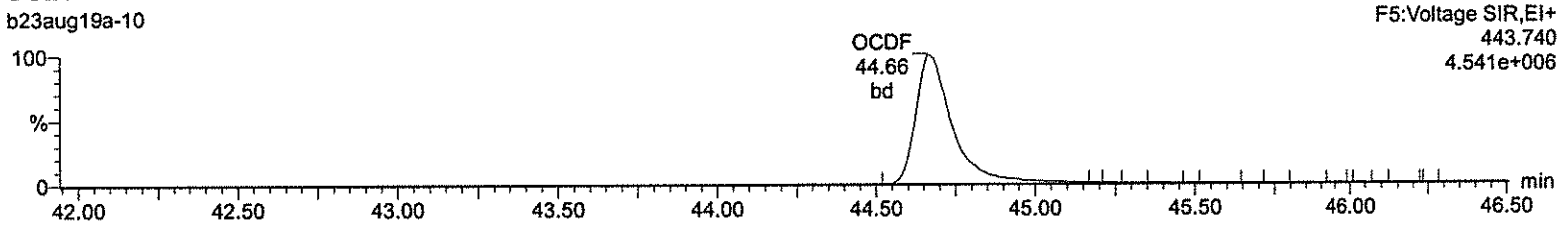
Last Altered: Monday, August 26, 2019 09:09:42 Eastern Standard Time
Printed: Monday, August 26, 2019 09:10:38 Eastern Standard Time

Name: b23aug19a-10, Date: 23-Aug-2019, Time: 15:31:49, ID: CS3WT UD190705-01.2, Description: , Job: b23aug19a, Task: HRP763_1, User: MLS

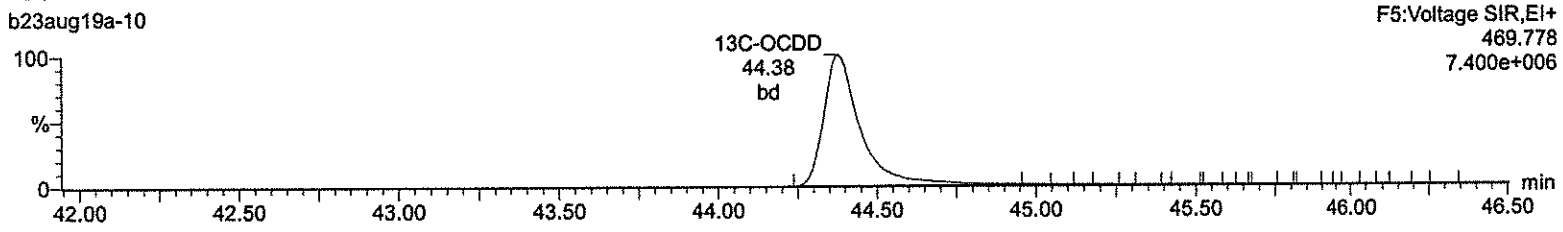
OCDF



OCDF



13C-OCDD



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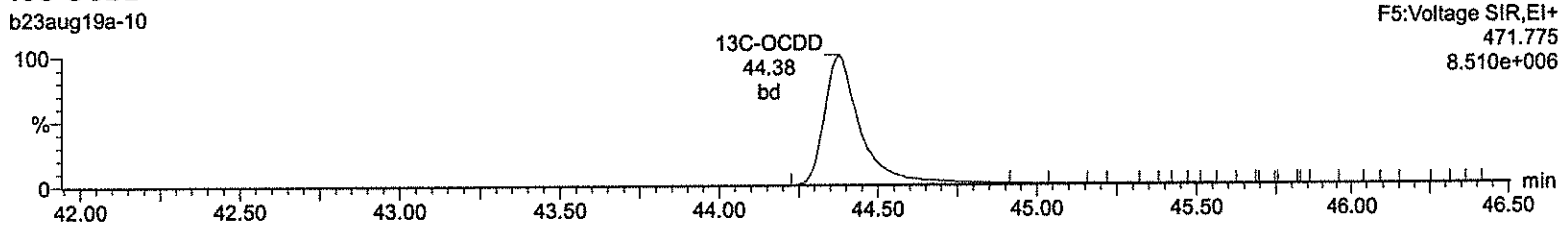
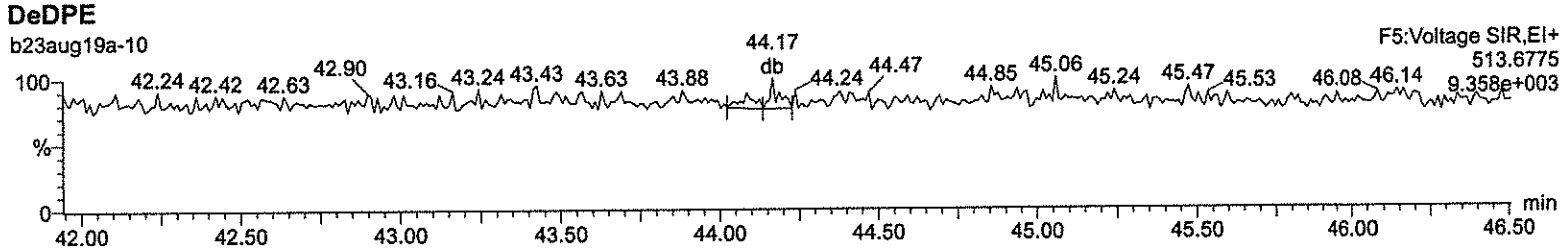
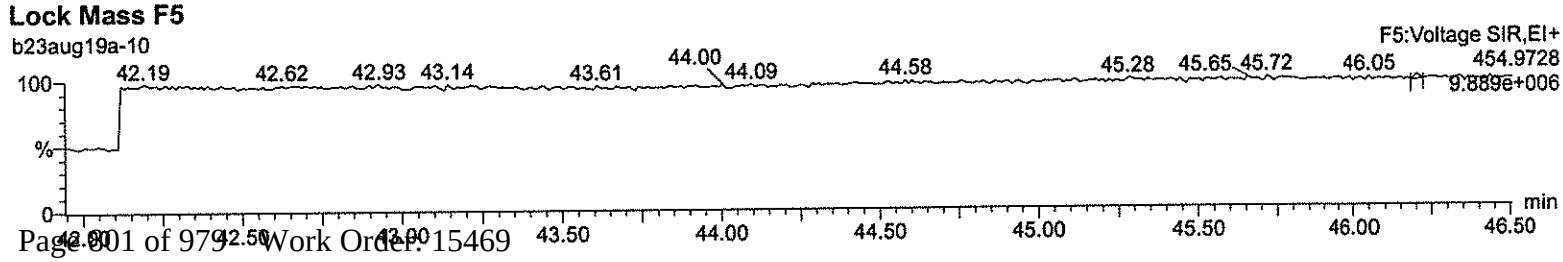


DeDPE



Lock Mass F5



Runlog Information

CF ICAL

03DEC18

	Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
•	b30nov18a-1	HRP763_2	30-NOV-2018 10:15	b30nov18a	Chris Presnell		CS3WT 1613CS3 UD180517-09.4 CPSTX	1 uL
•	b30nov18a-2	HRP763_2	30-NOV-2018 10:37	b30nov18a	Chris Presnell		CPM225 WD180621-01 ISCC2	1 uL
•	b30nov18a-3	HRP763_2	30-NOV-2018 11:00	b30nov18a	Chris Presnell		SB	1 uL
•	b30nov18a-4	HRP763_2	30-NOV-2018 11:23	b30nov18a	Chris Presnell		CS0.5 UD170815-01	1 uL
•	b30nov18a-5	HRP763_2	30-NOV-2018 11:46	b30nov18a	Chris Presnell		CS1 UD170815-02 CS13V	1 uL
•	b30nov18a-6	HRP763_2	30-NOV-2018 12:10	b30nov18a	Chris Presnell		CS2 UD170815-03 CS23V	1 uL
•	b30nov18a-7	HRP763_2	30-NOV-2018 12:33	b30nov18a	Chris Presnell		CS3 UD170815-04 CS3HV	1 uL
•	b30nov18a-8	HRP763_2	30-NOV-2018 12:56	b30nov18a	Chris Presnell		CS4 UD170815-05 CS43T	1 uL
•	b30nov18a-9	HRP763_2	30-NOV-2018 13:19	b30nov18a	Chris Presnell		CS5 UD170815-06 CS53V	1 uL
•	b30nov18a-10	HRP763_2	30-NOV-2018 13:42	b30nov18a	Chris Presnell		SB	1 uL
•	b30nov18a-11	HRP763_2	30-NOV-2018 14:05	b30nov18a	Chris Presnell		CPM225 WD180621-01 ISCC3	1 uL
•	b30nov18a-12	HRP763_2	30-NOV-2018 14:28	b30nov18a	Chris Presnell		CS3WT 1613CS3 UD180517-09.4 CPSTY	1 uL

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: 225TCDF.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, November 30, 2018 10:14:36 Eastern Standard Time

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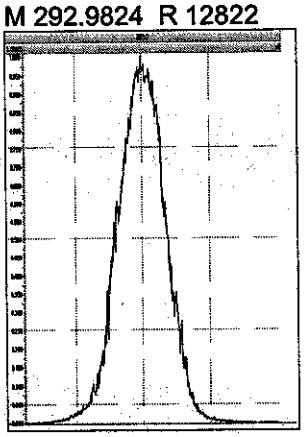
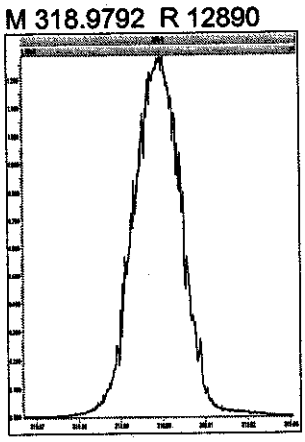
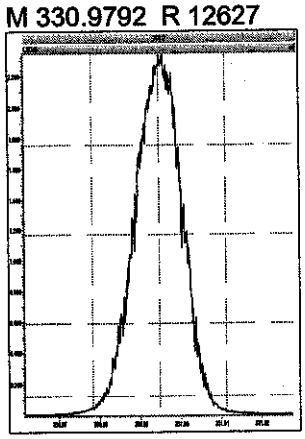


M 304.9824 R 12885

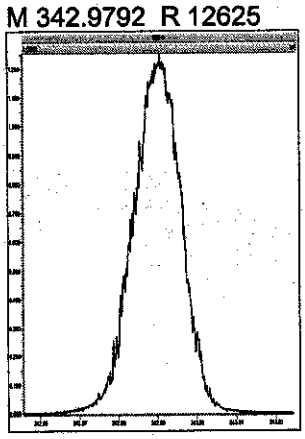
M 318.9792 R 12890



M 330.9792 R 12627



M 342.9792 R 12625



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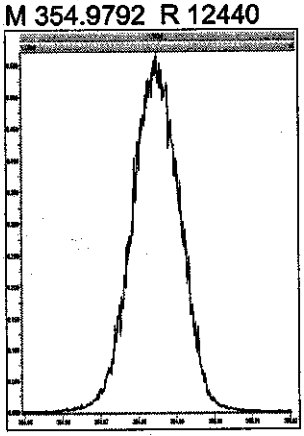
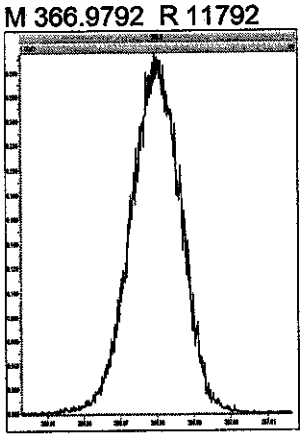
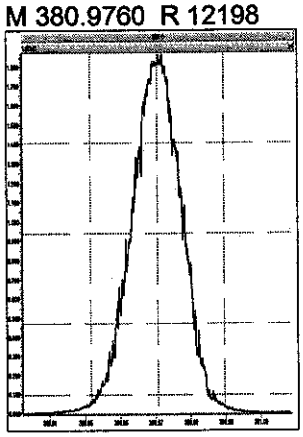


M 366.9792 R 11792



M 380.9760 R 12198



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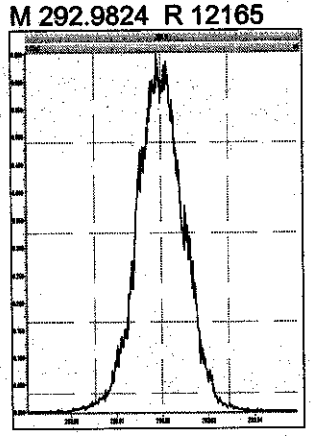
M 292.9824 R 12165



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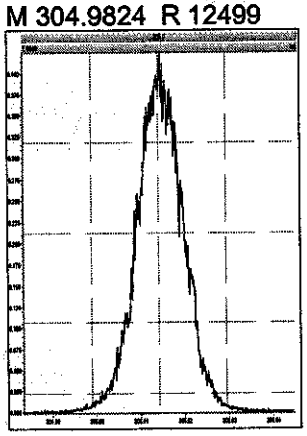
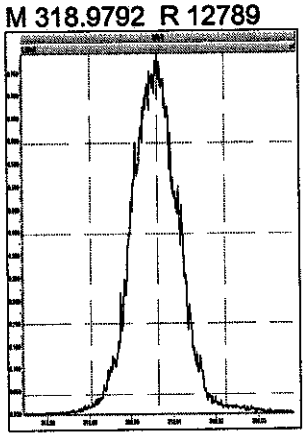
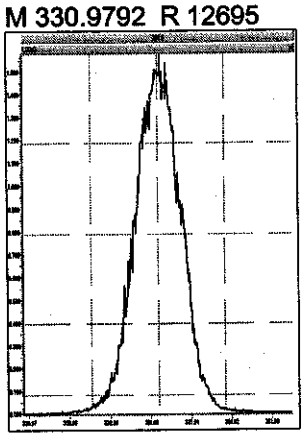


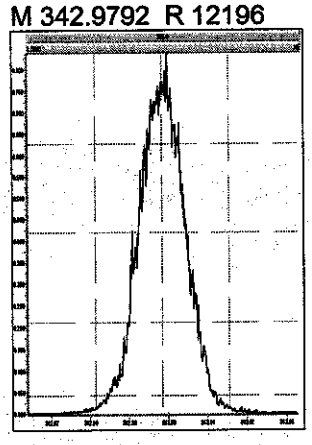
M 318.9792 R 12789



M 330.9792 R 12695



M 342.9792 R 12196



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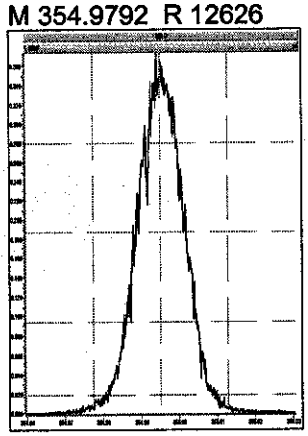

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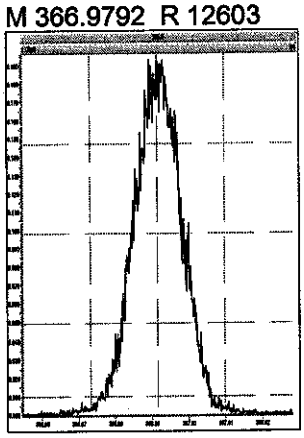
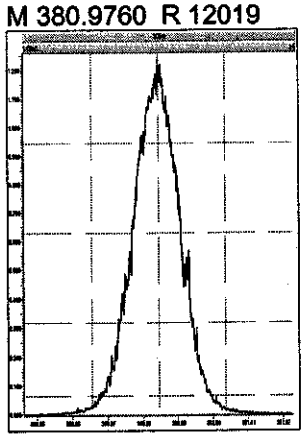


M 380.9760 R 12019

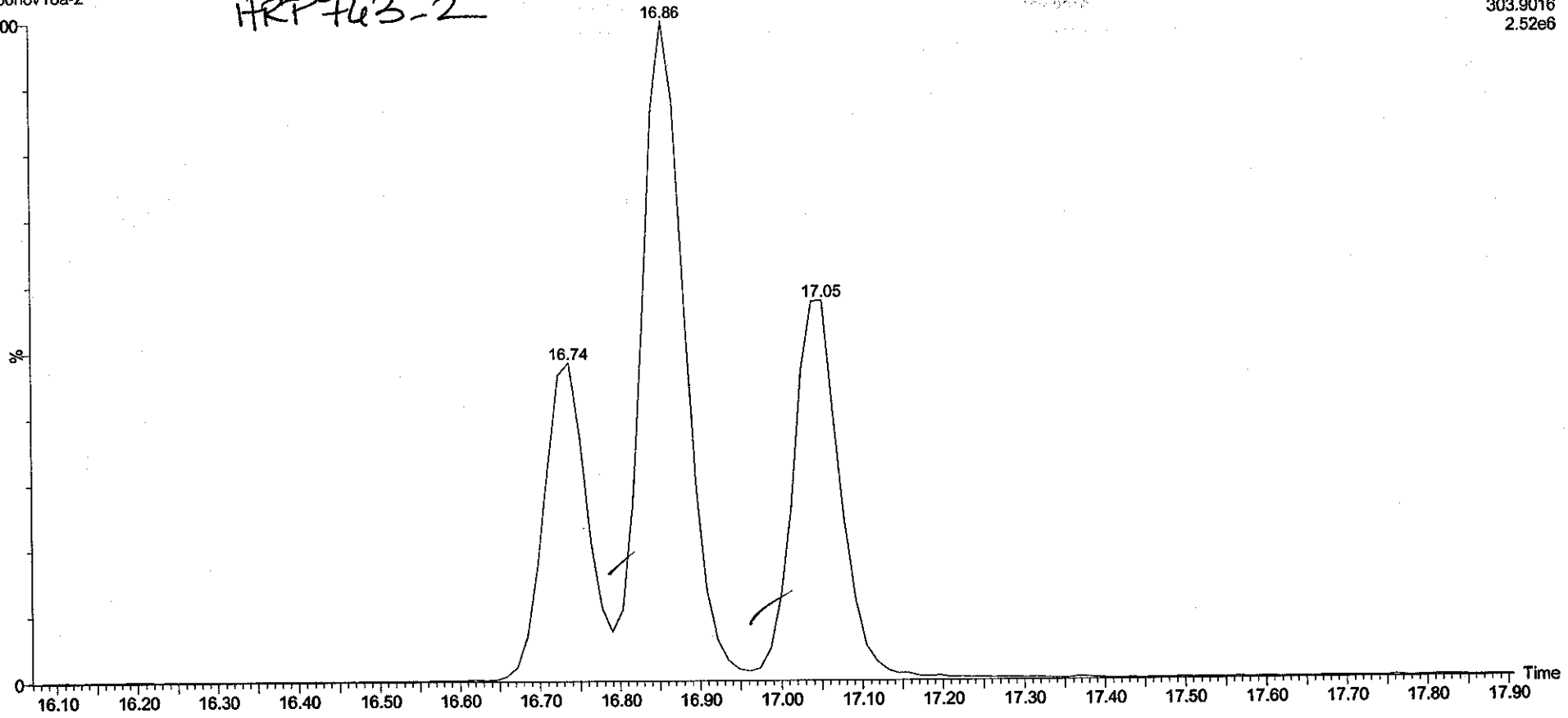


COLUMN CHECK (15% & 3%)
METHOD DXCF

ISCC2
HRP763-2

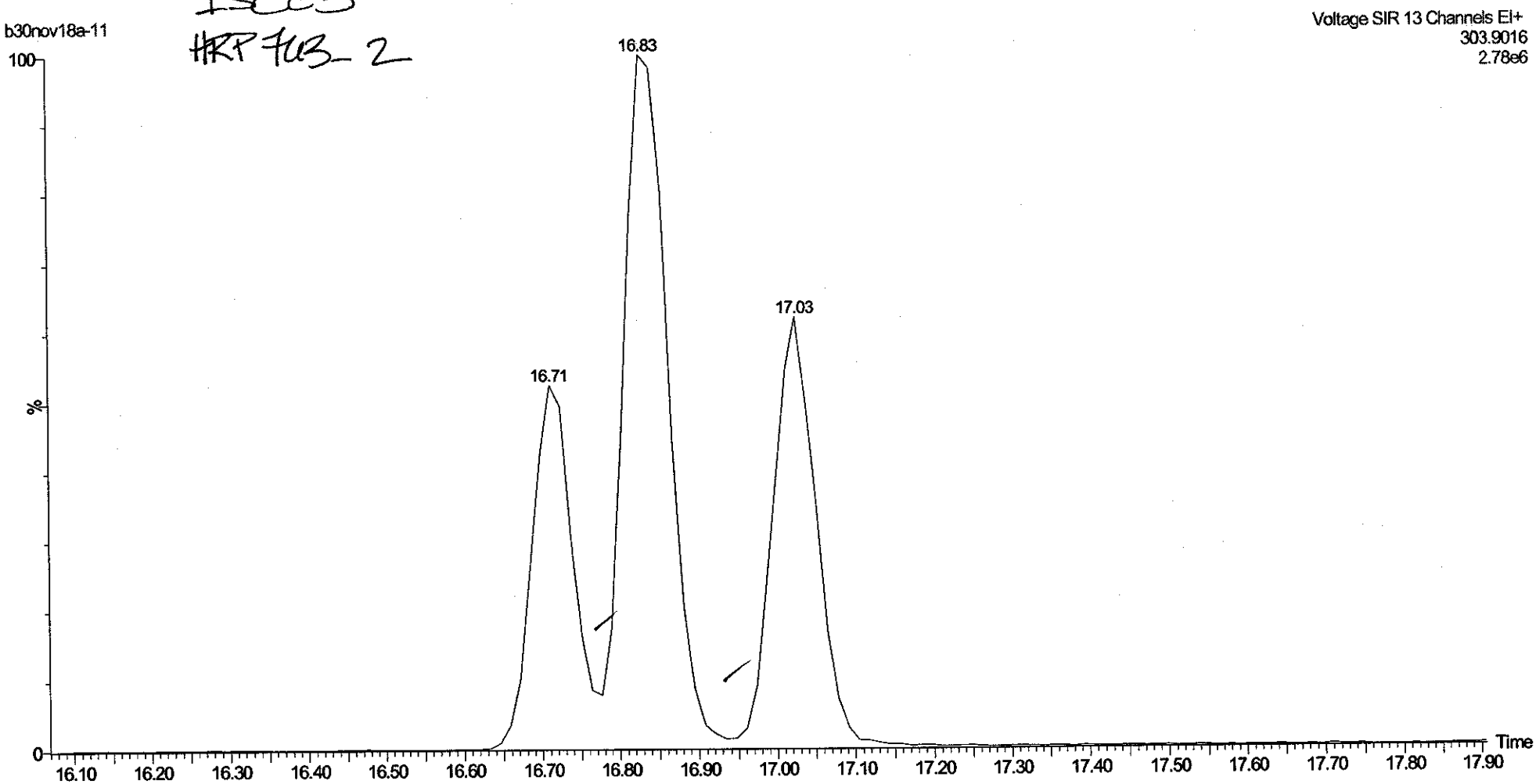
b30nov18a-2

Voltage SIR 13 Channels EI+
303.9016
2.52e6



COLUMN CHECK (15% & 3%)
METHOD DXCF

ISCC3
HRP 103_2



Quantify Compound Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

98 03 DEC 18

Method: C:\MassLynx\Default.pro\Methdb\CFA_225TCDF.mdb 27 Nov 2018 16:19:37
Calibration: 03 Dec 2018 09:17:30

CS0.5 RRF = $\frac{(4.8213)(100)}{(2.4044)(0.25)} = 0.803$

Compound name: 2378-TCDF
Response Factor: 0.858927
RRF SD: 0.0531274, Relative SD: 6.18532
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: RF

RRF SD = $\sqrt{\frac{0.014097}{5}} = 0.0531$ $\frac{0.0531}{0.859} \times 100 = 6.18$

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M	M2	Task
b30nov18a-4	CS0.5 UD170815-01	0.250	16.84	0.23	0.802	0.859	bb	bb	HRP763_2
b30nov18a-5	CS1 UD170815-02 CS13V	0.500	16.84	0.47	0.802	0.859	db	bb	HRP763_2
b30nov18a-6	CS2 UD170815-03 CS23V	2.000	16.86	1.95	0.838	0.859	db	bb	HRP763_2
b30nov18a-7	CS3 UD170815-04 CS3HV	10.000	16.84	10.20	0.876	0.859	bb	bb	HRP763_2
b30nov18a-8	CS4 UD170815-05 CS43T	40.000	16.84	42.58	0.914	0.859	bb	bb	HRP763_2
b30nov18a-9	CS5 UD170815-06 CS53V	200.000	16.84	214.43	0.921	0.859	bb	bb	HRP763_2

Compound name: 13C-2378-TCDF
Response Factor: 1.52522
RRF SD: 0.0140691, Relative SD: 0.92243
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M	M2	Task
b30nov18a-4	CS0.5 UD170815-01	100.000	16.83	99.46	1.517	1.525	bb	bb	HRP763_2
b30nov18a-5	CS1 UD170815-02 CS13V	100.000	16.83	99.58	1.519	1.525	bb	bb	HRP763_2
b30nov18a-6	CS2 UD170815-03 CS23V	100.000	16.84	99.89	1.524	1.525	bb	bb	HRP763_2
b30nov18a-7	CS3 UD170815-04 CS3HV	100.000	16.82	100.84	1.538	1.525	bb	bb	HRP763_2
b30nov18a-8	CS4 UD170815-05 CS43T	100.000	16.82	98.89	1.508	1.525	bb	bb	HRP763_2
b30nov18a-9	CS5 UD170815-06 CS53V	100.000	16.83	101.35	1.546	1.525	bb	bb	HRP763_2

Compound name: 13C-1234-TCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M	M2	Task
b30nov18a-4	CS0.5 UD170815-01	100.000	15.77	100.00	1.000	1.000	bb	bb	HRP763_2
b30nov18a-5	CS1 UD170815-02 CS13V	100.000	15.77	100.00	1.000	1.000	bb	bb	HRP763_2
b30nov18a-6	CS2 UD170815-03 CS23V	100.000	15.78	100.00	1.000	1.000	bb	bb	HRP763_2
b30nov18a-7	CS3 UD170815-04 CS3HV	100.000	15.75	100.00	1.000	1.000	bb	bb	HRP763_2
b30nov18a-8	CS4 UD170815-05 CS43T	100.000	15.75	100.00	1.000	1.000	bb	bb	HRP763_2
b30nov18a-9	CS5 UD170815-06 CS53V	100.000	15.77	100.00	1.000	1.000	bb	bb	HRP763_2

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

30NOV18

Method: C:\MassLynx\Default.pro\Methdb\CFA_225TCDF.mdb 27 Nov 2018 16:19:37
Calibration: 03 Dec 2018 09:17:30

Name: b30nov18a-4, Date: 30-Nov-2018, Time: 11:23:53, ID: CS0.5 UD170815-01, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	2.07e3	2.75e3	4.82e3	16.84	1.00	0.75	NO	0.233	0.802	0.859	6.185	0.0430	3.27e4	1458	22.4	3.75e4	3036	12.4	bb	bb
2	13C-2378-TCDF	1.04e6	1.36e6	2.40e6	16.83	1.07	0.77	NO	99.457	1.517	1.525	0.922	0.116	1.59e7	10892	1455.6	2.07e7	6418	3218.9	bb	bb
3	13C-1234-TCDD	7.02e5	8.82e5	1.58e6	15.77	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.0832	1.30e7	4824	2692.0	1.62e7	3305	4913.0	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

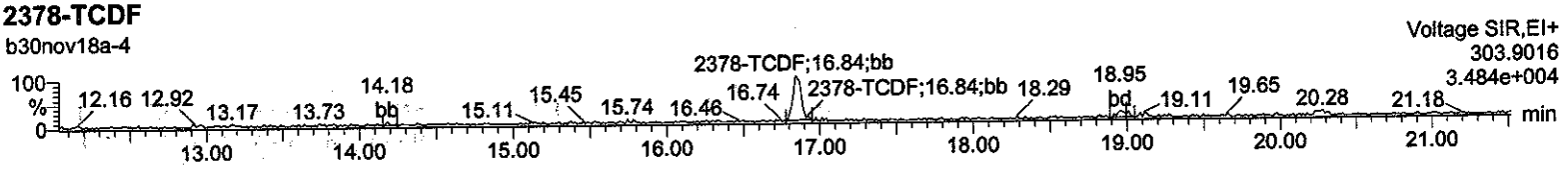
Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 09:19:04 Eastern Standard Time

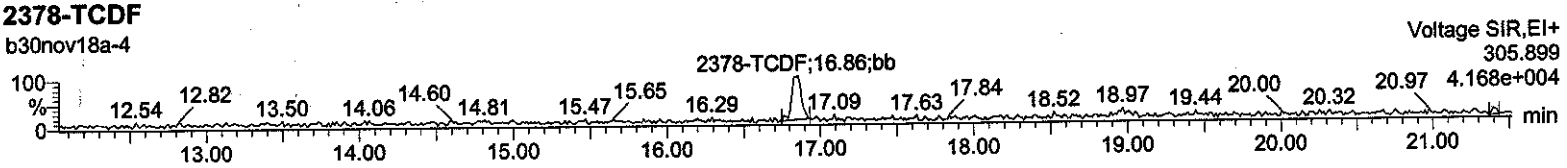
Method: C:\MassLynx\Default.pro\Methdb\CFA_225TCDF.mdb 27 Nov 2018 16:19:37
Calibration: 03 Dec 2018 09:17:30

Name: b30nov18a-4, Date: 30-Nov-2018, Time: 11:23:53, ID: CS0.5 UD170815-01, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

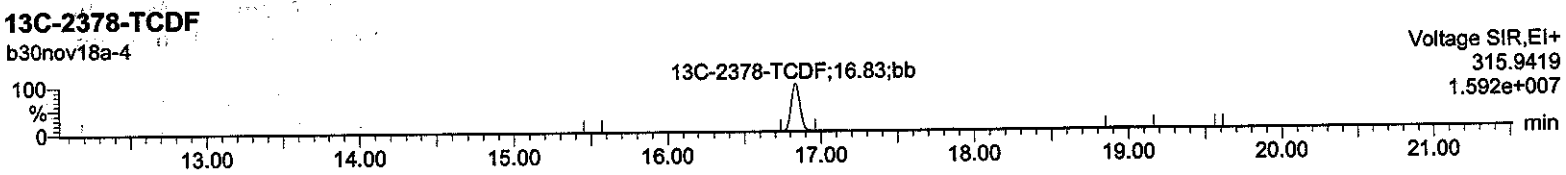
2378-TCDF



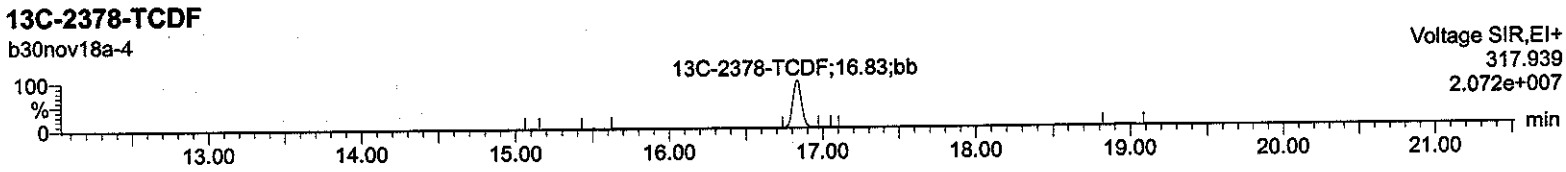
2378-TCDF



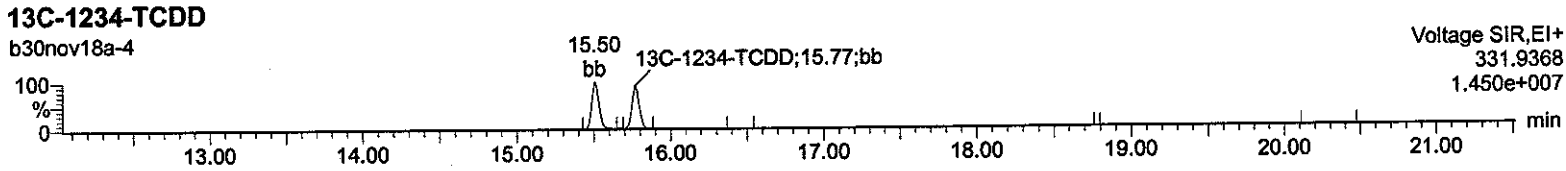
13C-2378-TCDF



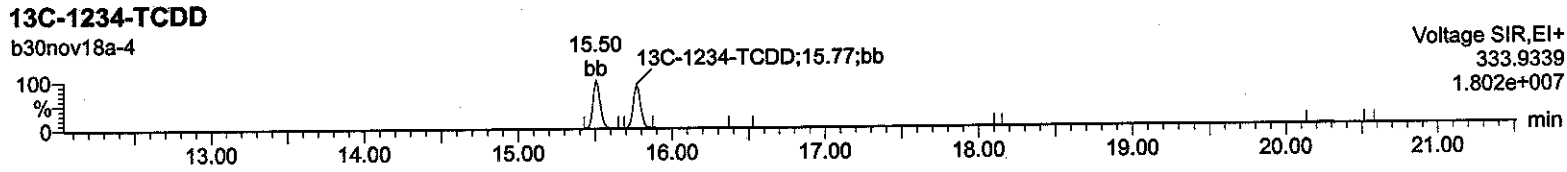
13C-2378-TCDF



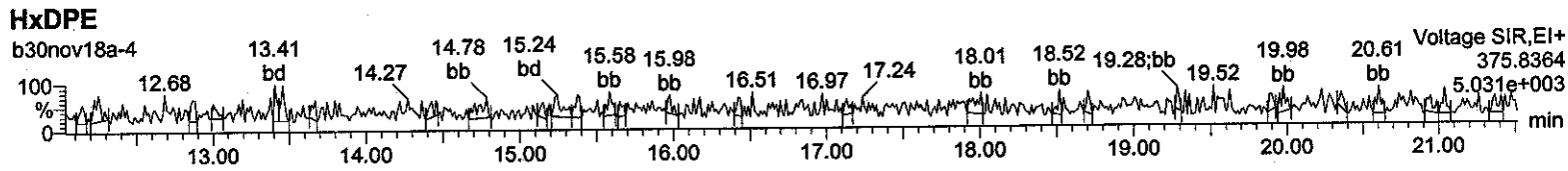
13C-1234-TCDD



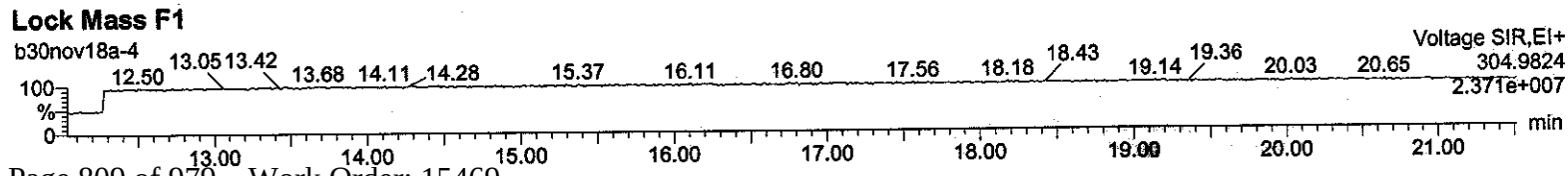
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

03DEC18

Name: b30nov18a-5, Date: 30-Nov-2018, Time: 11:46:59, ID: CS1 UD170815-02 CS13V, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	4.27e3	5.74e3	1.00e4	16.84	1.00	0.74	NO	0.467	0.802	0.859	6.185	0.0407	6.89e4	1667	41.4	9.40e4	2987	31.5	db	bb
2	13C-2378-TCDF	1.09e6	1.41e6	2.50e6	16.83	1.07	0.78	NO	99.579	1.519	1.525	0.922	0.129	1.75e7	12140	1437.9	2.25e7	7833	2869.7	bb	bb
3	13C-1234-TCDD	7.33e5	9.11e5	1.64e6	15.77	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.0920	1.36e7	5876	2309.7	1.70e7	3461	4904.9	bb	bb

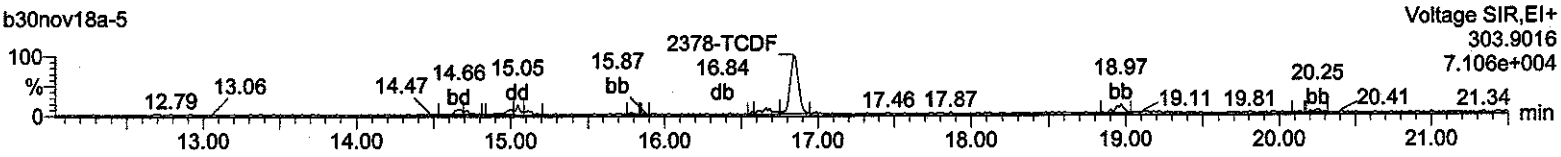
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

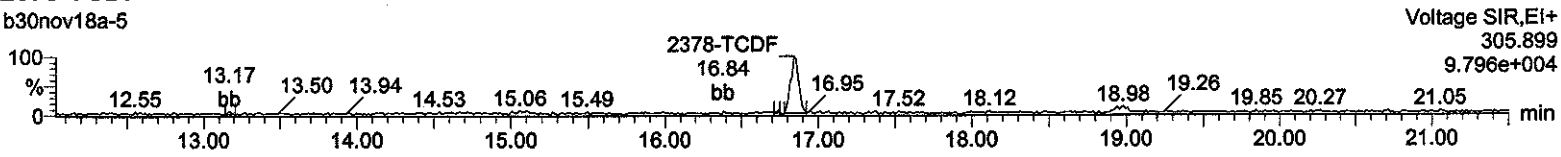
Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 09:19:04 Eastern Standard Time

Name: b30nov18a-5, Date: 30-Nov-2018, Time: 11:46:59, ID: CS1 UD170815-02 CS13V, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

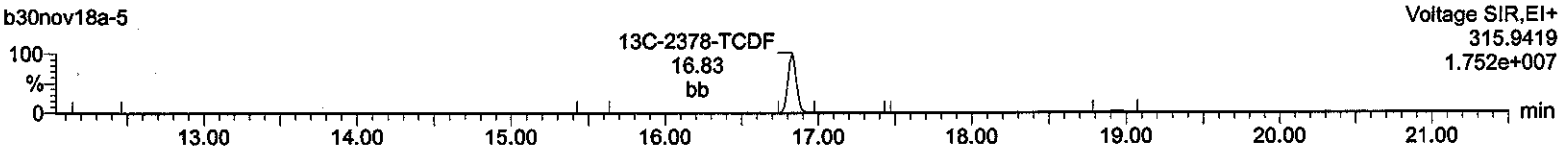
2378-TCDF



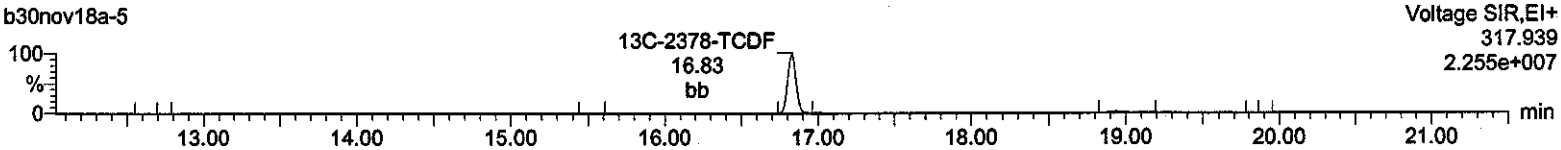
2378-TCDF



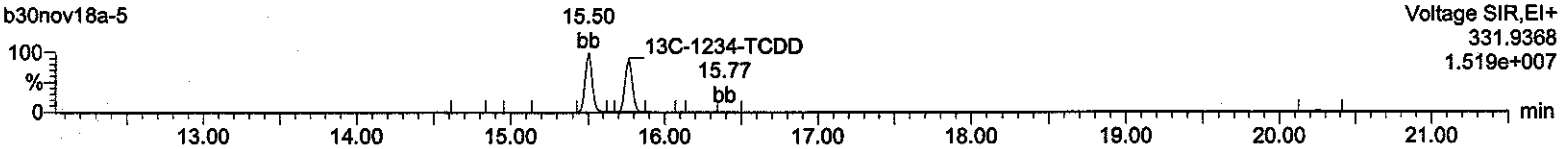
13C-2378-TCDF



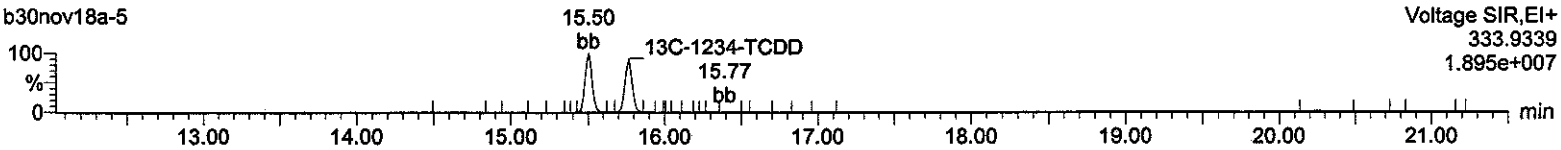
13C-2378-TCDF



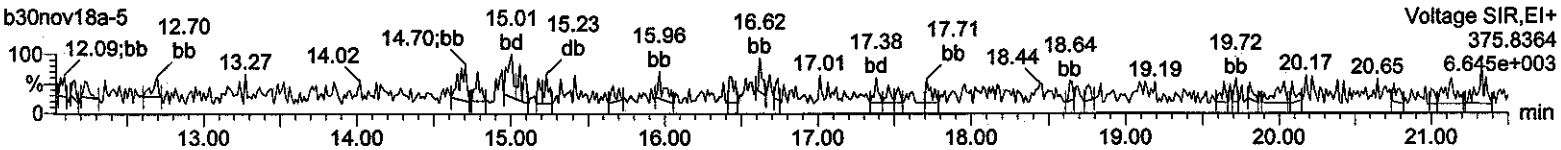
13C-1234-TCDD



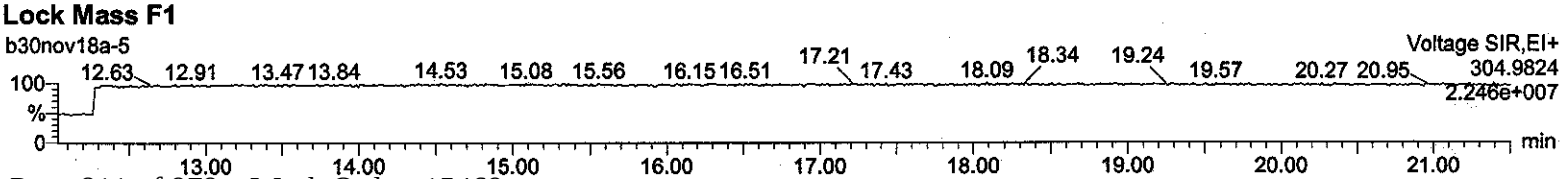
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

Name: b30nov18a-6, Date: 30-Nov-2018, Time: 12:10:02, ID: CS2 UD170815-03 CS23V, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	2.17e4	2.85e4	5.01e4	16.86	1.00	0.76	NO	1.950	0.838	0.859	6.185	0.0381	3.77e5	1988	189.5	4.92e5	3265	150.8	db	bb
2	13C-2378-TCDF	1.31e6	1.69e6	2.99e6	16.84	1.07	0.78	NO	99.890	1.524	1.525	0.922	0.105	2.10e7	11735	1790.1	2.70e7	6924	3904.3	bb	bb
3	13C-1234-TCDD	8.75e5	1.09e6	1.96e6	15.78	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.0809	1.56e7	5370	2913.3	1.93e7	4104	4699.5	bb	bb

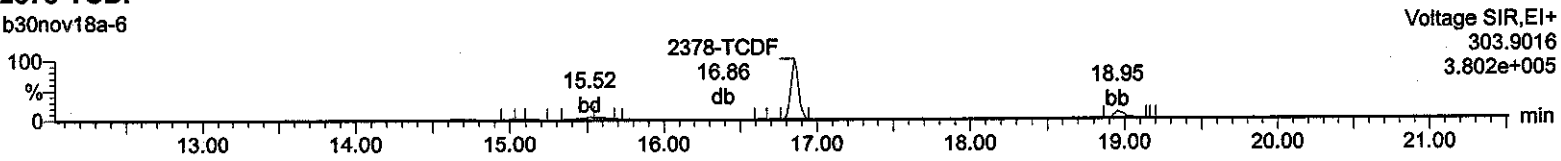
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

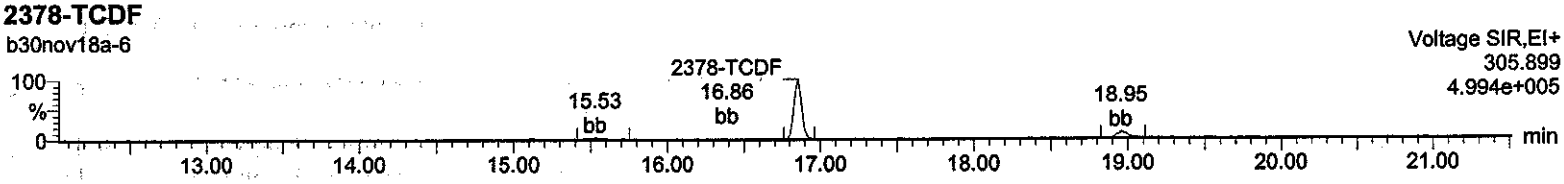
Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 09:19:04 Eastern Standard Time

Name: b30nov18a-6, Date: 30-Nov-2018, Time: 12:10:02, ID: CS2 UD170815-03 CS23V, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

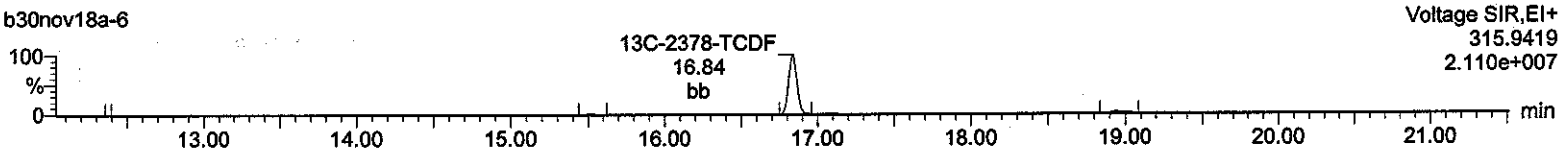
2378-TCDF



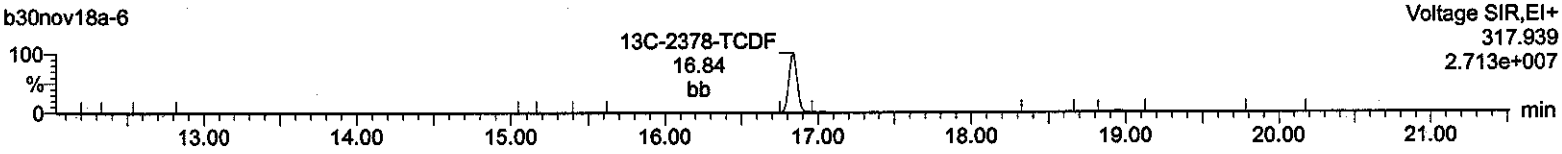
2378-TCDF



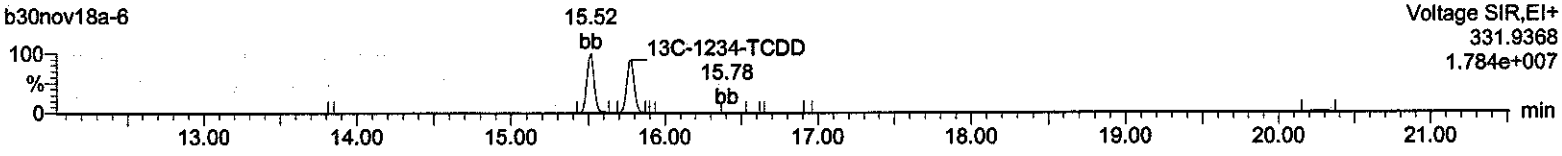
13C-2378-TCDF



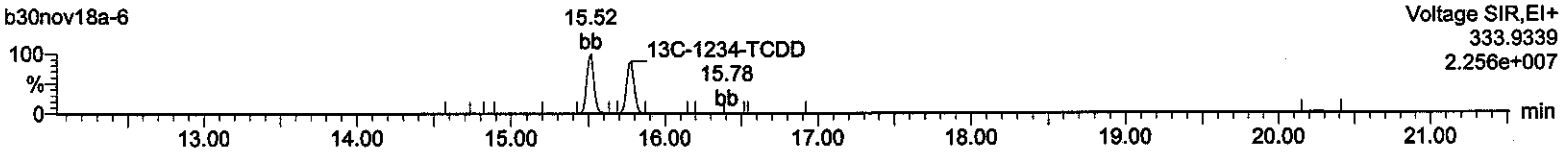
13C-2378-TCDF



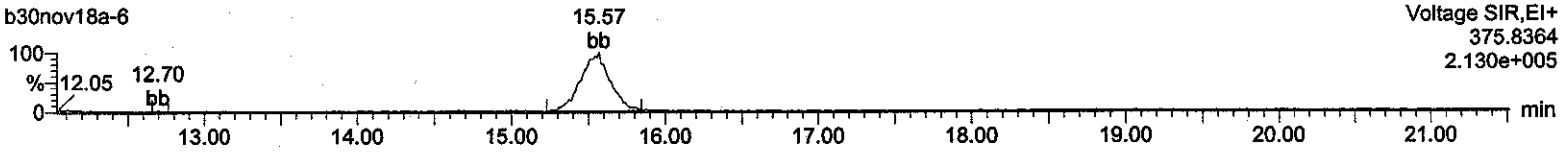
13C-1234-TCDD



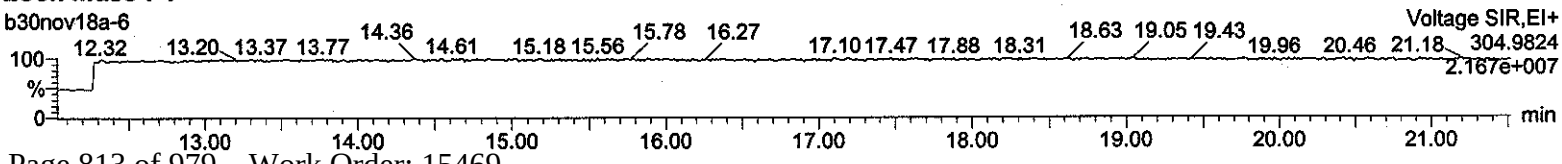
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

Name: b30nov18a-7, Date: 30-Nov-2018, Time: 12:33:07, ID: CS3 UD170815-04 CS3HV, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	9.96e4	1.30e5	2.29e5	16.84	1.00	0.77	NO	10.204	0.876	0.859	6.185	0.0497	1.56e6	2471	632.6	2.07e6	3430	603.2	bb	bb
2	13C-2378-TCDF	1.14e6	1.48e6	2.62e6	16.82	1.07	0.77	NO	100.836	1.538	1.525	0.922	0.130	1.80e7	12541	1434.2	2.39e7	7197	3320.1	bb	bb
3	13C-1234-TCDD	7.54e5	9.48e5	1.70e6	15.75	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.109	1.32e7	5983	2209.2	1.69e7	4897	3457.5	bb	bb

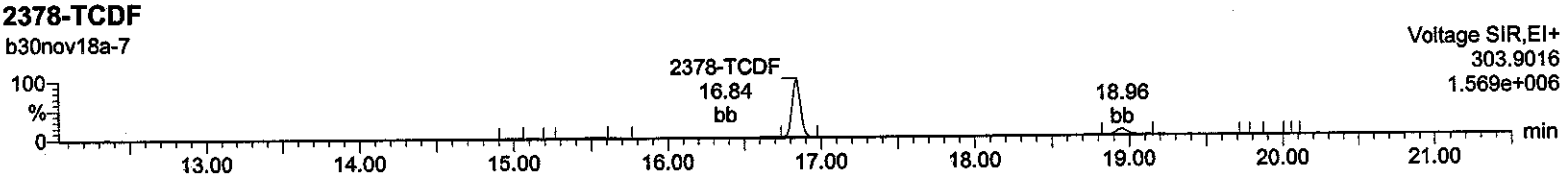
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

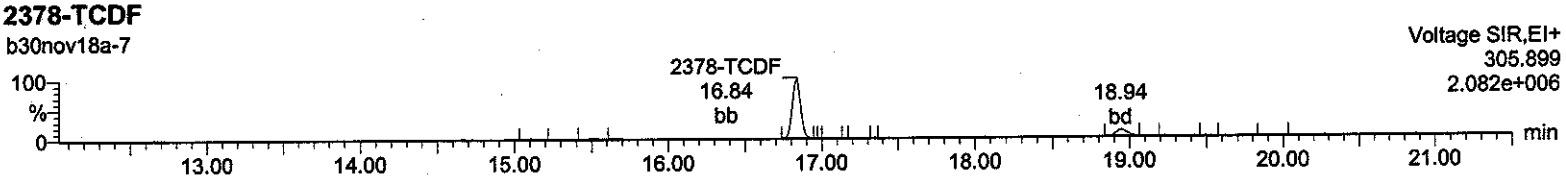
Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 09:19:04 Eastern Standard Time

Name: b30nov18a-7, Date: 30-Nov-2018, Time: 12:33:07, ID: CS3 UD170815-04 CS3HV, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

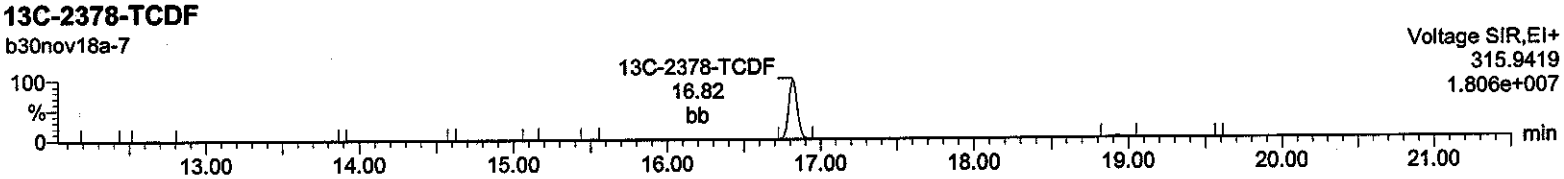
2378-TCDF



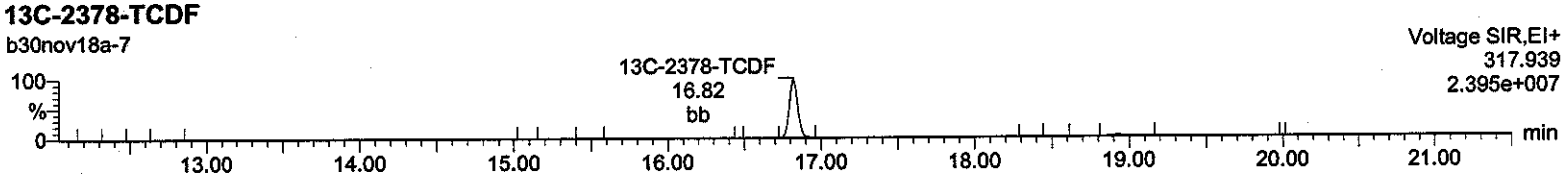
2378-TCDF



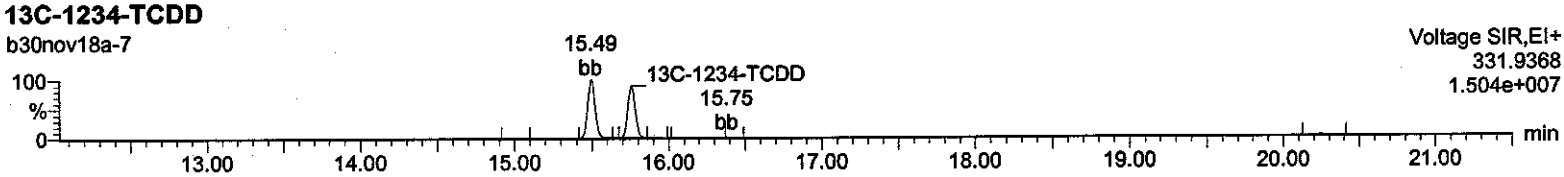
13C-2378-TCDF



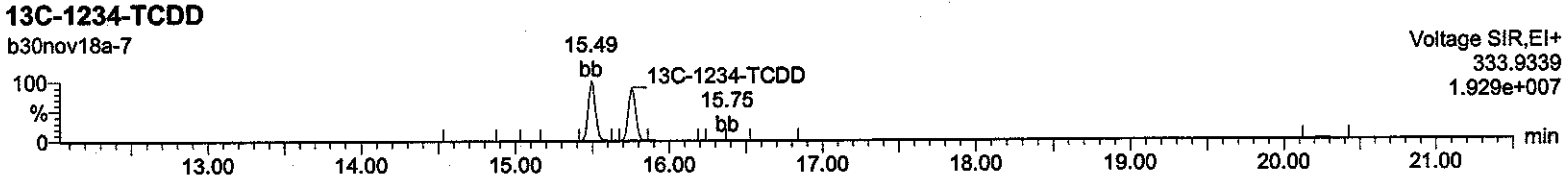
13C-2378-TCDF



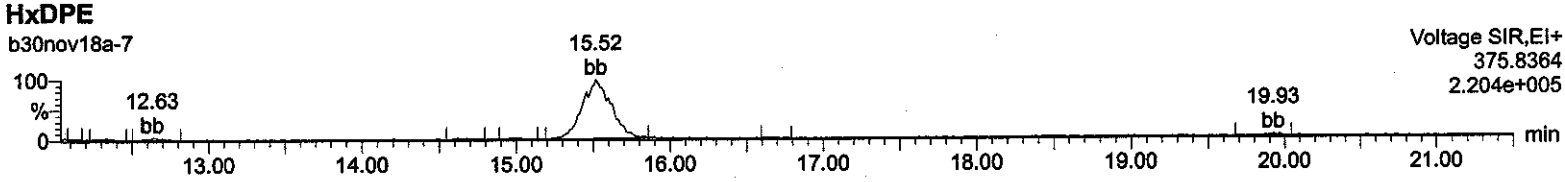
13C-1234-TCDD



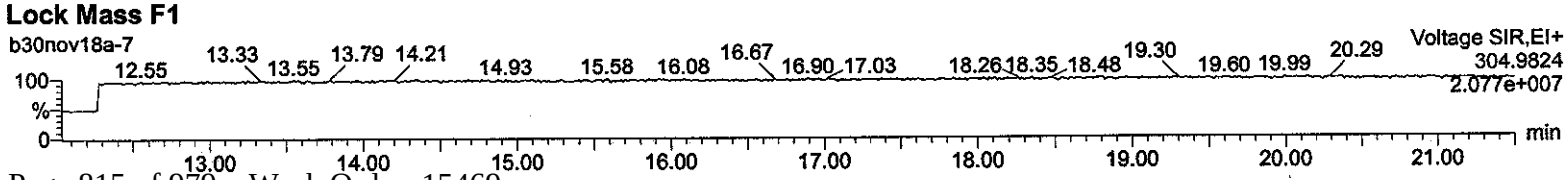
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

Name: b30nov18a-8, Date: 30-Nov-2018, Time: 12:56:11, ID: CS4 UD170815-05 CS43T, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	6.43e5	8.47e5	1.49e6	16.84	1.00	0.76	NO	42.581	0.914	0.859	6.185	0.0460	9.93e6	3537	2806.1	1.34e7	5032	2653.3	bb	bb
2	13C-2378-TCDF	1.78e6	2.30e6	4.07e6	16.82	1.07	0.77	NO	98.885	1.508	1.525	0.922	0.0786	2.84e7	11961	2372.8	3.65e7	7095	5141.2	bb	bb
3	13C-1234-TCDD	1.20e6	1.50e6	2.70e6	15.75	0.00	0.80	NO	100.000	1.000	1.000	0.000	0.0559	2.11e7	5030	4201.0	2.65e7	3861	6875.8	bb	bb

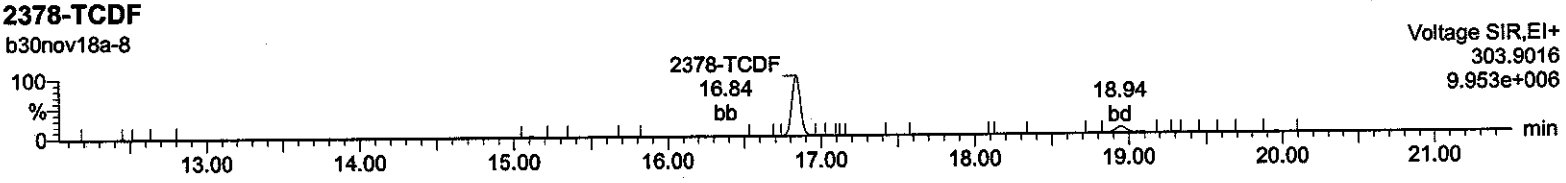
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

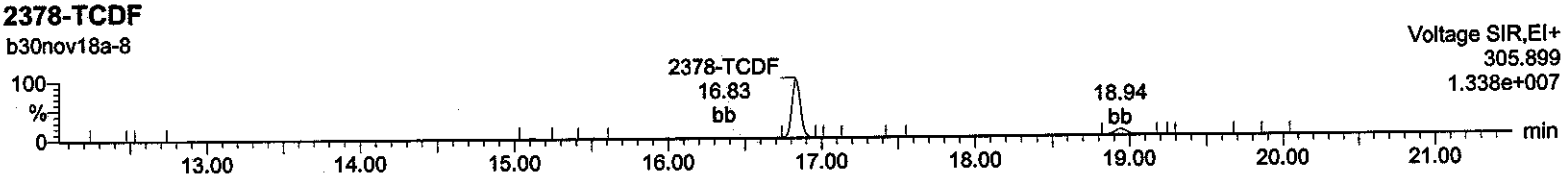
Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 09:19:04 Eastern Standard Time

Name: b30nov18a-8, Date: 30-Nov-2018, Time: 12:56:11, ID: CS4 UD170815-05 CS43T, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

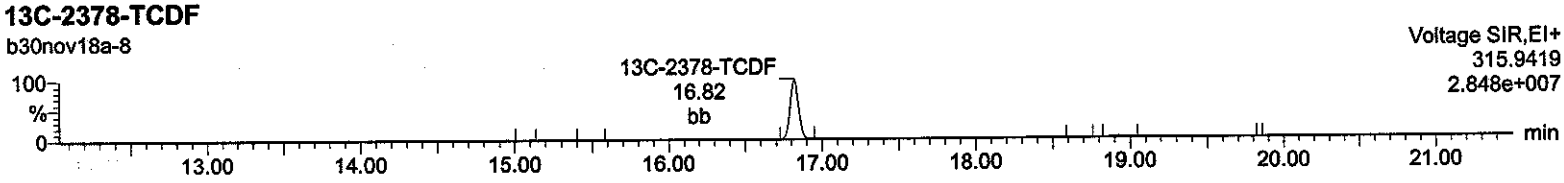
2378-TCDF



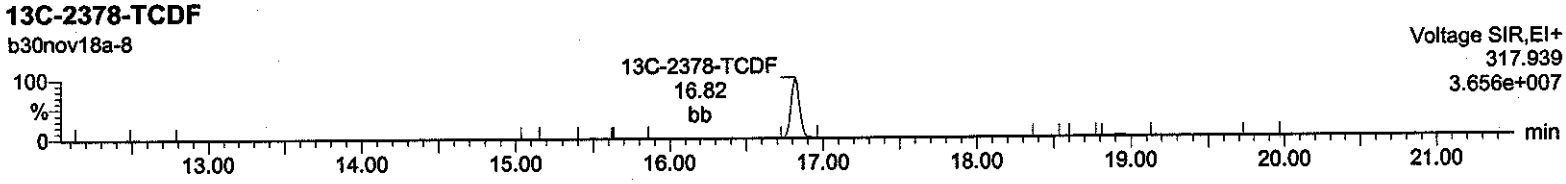
2378-TCDF



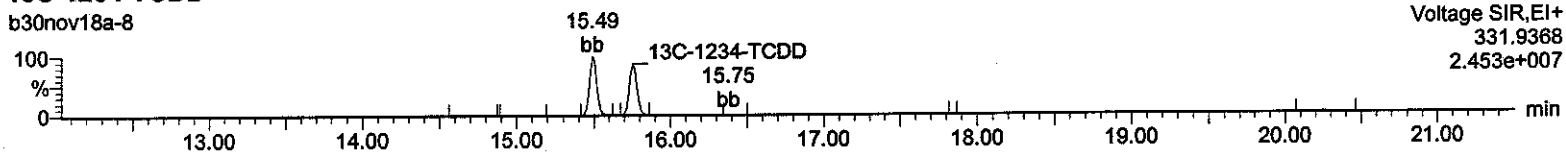
13C-2378-TCDF



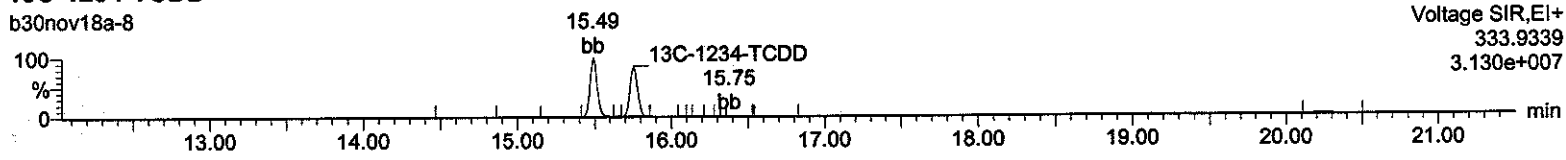
13C-2378-TCDF



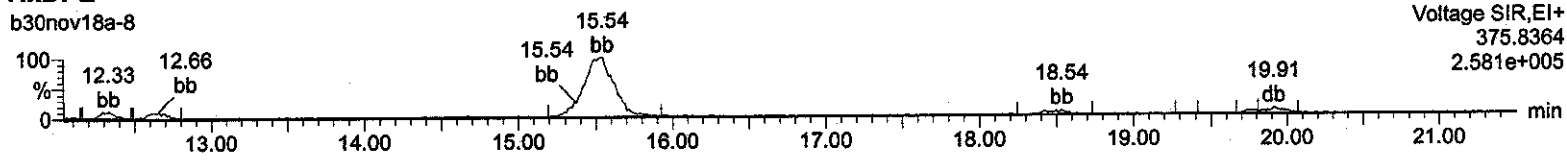
13C-1234-TCDD



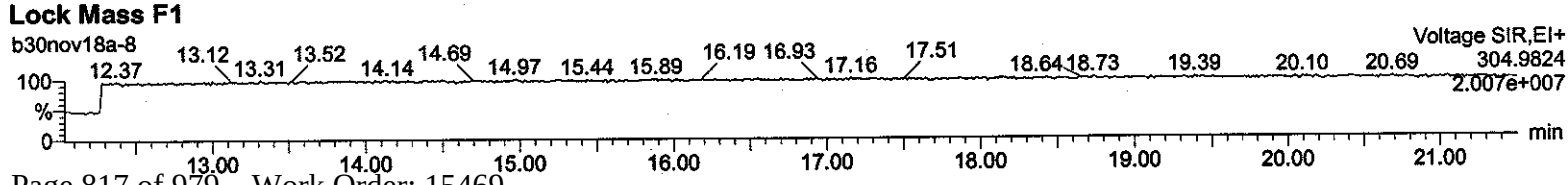
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 10:10:36 Eastern Standard Time

Name: b30nov18a-9, Date: 30-Nov-2018, Time: 13:19:15, ID: CS5 UD170815-06 CS53V, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	Mean	RSD	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	2.15e6	2.83e6	4.98e6	16.84	1.00	0.76	NO	214.428	0.921	0.859	6.185	0.116	3.48e7	7191	4844.3	4.55e7	7187	6333.1	bb	bb
2	13C-2378-TCDF	1.17e6	1.53e6	2.71e6	16.83	1.07	0.76	NO	101.352	1.546	1.525	0.922	0.113	1.87e7	11532	1625.2	2.45e7	6454	3801.1	bb	bb
3	13C-1234-TCDD	7.81e5	9.70e5	1.75e6	15.77	0.00	0.81	NO	100.000	1.000	1.000	0.000	0.0878	1.40e7	5474	2556.8	1.76e7	3707	4752.7	bb	bb

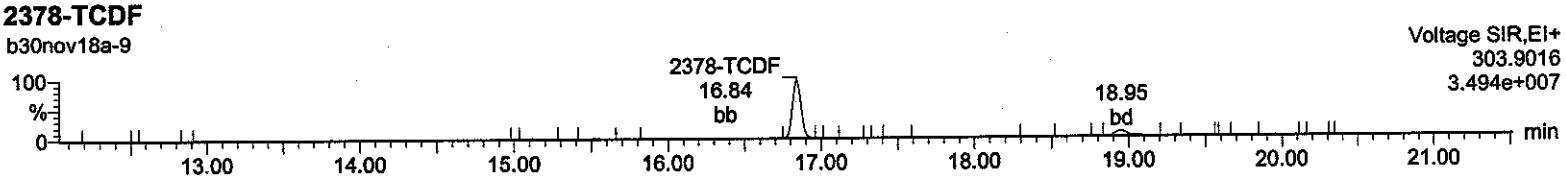
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF Confirmation ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL results\cf-b30nov18a.qld

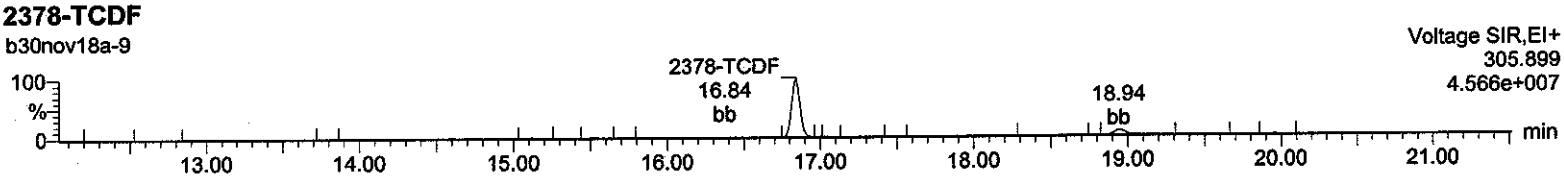
Last Altered: Monday, December 03, 2018 09:17:30 Eastern Standard Time
Printed: Monday, December 03, 2018 09:19:04 Eastern Standard Time

Name: b30nov18a-9, Date: 30-Nov-2018, Time: 13:19:15, ID: CS5 UD170815-06 CS53V, Job: b30nov18a, User: CLP, Task: HRP763_2, Description:

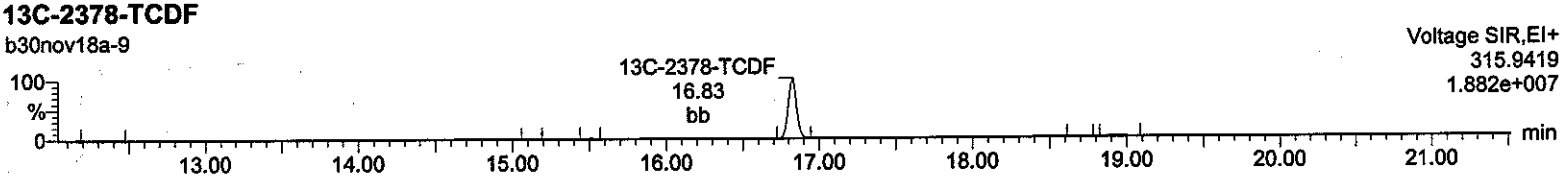
2378-TCDF



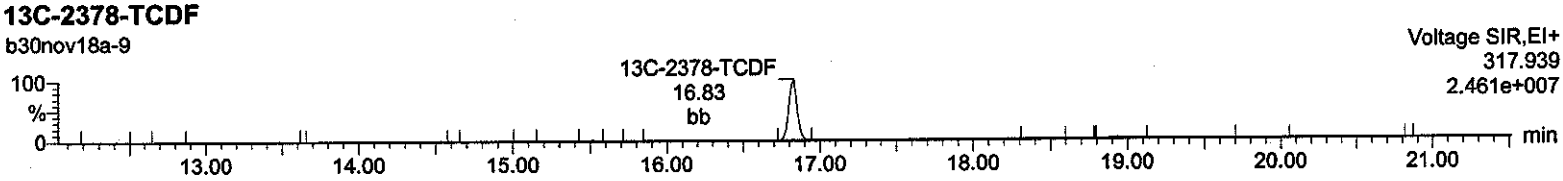
2378-TCDF



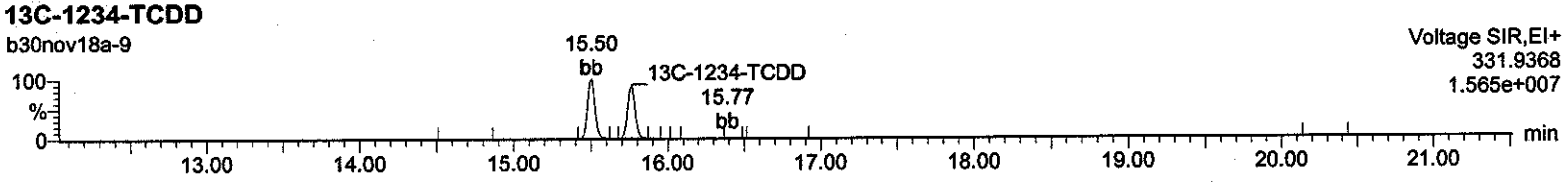
13C-2378-TCDF



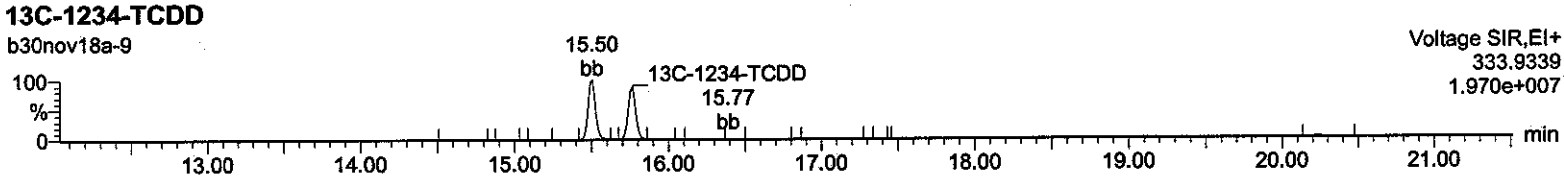
13C-2378-TCDF



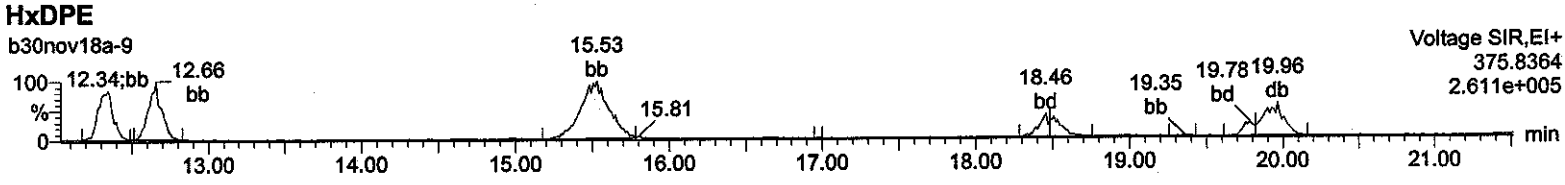
13C-1234-TCDD



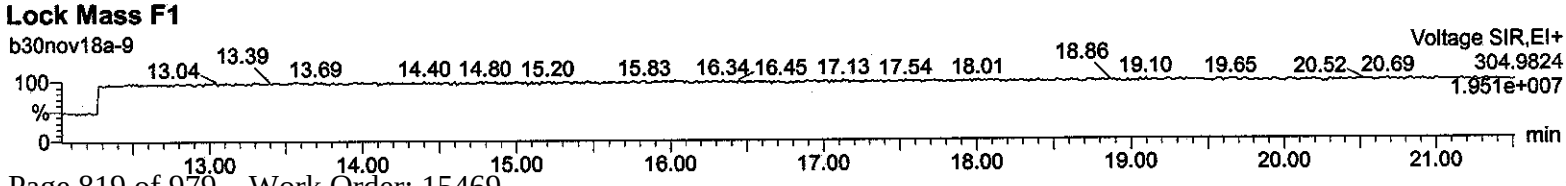
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30nov18a-12.qld

Last Altered: Monday, December 03, 2018 10:19:05 Eastern Standard Time
Printed: Monday, December 03, 2018 10:20:38 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 27 Nov 2018 16:19:37
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30nov18a-12, Date: 30-Nov-2018, Time: 14:28:28, ID: CS3WT 1613CS3 UD180517-09.4 CPSTY, Description: , Job: b30nov18a, Task: HRP763_2, User: CLP

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	1.20e5	1.57e5	2.77e5	16.84	1.001	0.77	NO	10.547	0.0383	0.906	0.859	5.5	1.91e6	2260	846.8	2.55e6	2998	851.7	bb	bb
2	13C-2378-TCDF	1.34e6	1.72e6	3.06e6	16.83	1.067	0.78	NO	93.965	0.0782	1.433	1.525	-6.0	2.10e7	10513	1994.2	2.65e7	5060	5246.8	bb	bb
3	13C-1234-TCDD	9.48e5	1.18e6	2.13e6	15.77	0.000	0.80	NO	100.000	0.0589	1.000	1.000	0.0	1.74e7	4211	4136.4	2.15e7	3480	6164.5	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30nov18a-12.qld

Last Altered: Monday, December 03, 2018 10:19:05 Eastern Standard Time
Printed: Monday, December 03, 2018 10:20:38 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 27 Nov 2018 16:19:37
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30nov18a-12, Date: 30-Nov-2018, Time: 14:28:28, ID: CS3WT 1613CS3 UD180517-09.4 CPSTY, Description: ,
Job: b30nov18a, Task: HRP763_2, User: CLP

2378-TCDF
b30nov18a-12
Voltage SIR,EI+ 303.9016 1.923e+006
2378-TCDF;16.84;bb
18.94 bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

2378-TCDF
b30nov18a-12
Voltage SIR,EI+ 305.899 2.566e+006
2378-TCDF;16.84;bb
18.94 bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

13C-2378-TCDF
b30nov18a-12
Voltage SIR,EI+ 315.9419 2.106e+007
13C-2378-TCDF;16.83;bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

13C-2378-TCDF
b30nov18a-12
Voltage SIR,EI+ 317.939 2.663e+007
13C-2378-TCDF;16.83;bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

13C-1234-TCDD
b30nov18a-12
Voltage SIR,EI+ 331.9368 1.750e+007
13C-1234-TCDD;15.77;bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

13C-1234-TCDD
b30nov18a-12
Voltage SIR,EI+ 333.9339 2.193e+007
15.50 bb
13C-1234-TCDD;15.77;bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

HxDPE
b30nov18a-12
Voltage SIR,EI+ 375.8364 5.764e+003
12.44 12.83 bb 13.21 bb 13.41 13.75 14.67 db 14.88 bb 15.32 bb 15.91 16.41 bb 16.74 17.18 17.80 bb 18.59 bb 19.33 bb 19.48 19.96 bd 20.66 bb
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

Lock Mass F1
b30nov18a-12
Voltage SIR,EI+ 304.9824 1.756e+007
12.62 13.13 13.46 14.09 14.38 14.56 15.44 15.70 15.98 16.32 16.92 17.76 18.10 18.61 18.77 19.45 19.82 20.24 21.03
100 % 0 min
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

Continuing Calibration Data

Runlog Information

	Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
•	A24SEP19A-1	HRP750_3	24-SEP-2019 10:11	A24SEP19A	Matt Cash		CS3WT 1613CS3 UD190313-03.4 CPS2A	1 uL
•	A24SEP19A-2	HRP750_3	24-SEP-2019 10:34	A24SEP19A	Matt Cash		CPM225 WD190612-04 ISCD5	1 uL
•	A24SEP19A-3	HRP750_3	24-SEP-2019 10:56	HRSM_DXN_S	Matt Cash	41796	12024843-2 MB DBLK4O	1 uL
	Includes 12024942-1 SB DIBLK38 Batch 41633 and 12024944-1 SB DIBLK39 Batch 41596 - Inst ID should be HRP750_3 for sequence							
•	A24SEP19A-4	HRP750_3	24-SEP-2019 11:19	HRSM_DXN_S	Matt Cash	41796	15418005-4 PDB9W9	1 uL
•	A24SEP19A-5	HRP750_3	24-SEP-2019 11:41	HRSM_DXN_S	Matt Cash	41796	15418006-4 PDB9X0	1 uL
•	A24SEP19A-6	HRP750_3	24-SEP-2019 12:04	HRSM_DXN_S	Matt Cash	41796	15418010-4 PDB9X4	1 uL
•	A24SEP19A-7	HRP750_3	24-SEP-2019 12:26	HRSM_DXN_S	Matt Cash	41796	15418013-4 PDB9X7	1 uL
•	A24SEP19A-8	HRP750_3	24-SEP-2019 12:49	HRSM_DXN_S	Matt Cash	41796	15418014-4 PDB9X8	1 uL
•	A24SEP19A-9	HRP750_3	24-SEP-2019 13:11	HRSM_DXN_S	Matt Cash	41796	15418015-4 PDB9X9	1 uL
•	A24SEP19A-10	HRP750_3	24-SEP-2019 13:34	HRSM_DXN_S	Matt Cash	41796	15418017-4 PDB9Y1	1 uL

•	A24SEP19A-11	HRP750_3	24-SEP-2019 13:56	HRSM_DXN_S	Matt Cash	41796	15418020-4 PDB9Y4	1 uL
•	A24SEP19A-12	HRP750_3	24-SEP-2019 14:19	HRSM_DXN_S	Matt Cash	41796	15419001-4 PDB9Y5	1 uL
•	A24SEP19A-13	HRP750_3	24-SEP-2019 14:41	HRSM_DXN_S	Matt Cash	41796	15419002-4 PDB9Y6	1 uL
•	A24SEP19A-14	HRP750_3	24-SEP-2019 15:04	HRSM_DXN_S	Matt Cash	41796	15419003-4 PDB9Y7	1 uL
•	A24SEP19A-15	HRP750_3	24-SEP-2019 15:26	HRSM_DXN_S	Matt Cash	41796	15419005-4 PDB9Y9	1 uL
•	A24SEP19A-16	HRP750_3	24-SEP-2019 15:49	HRSM_DXN_S	Matt Cash	41796	15419006-4 PDB9Z0	1 uL
•	A24SEP19A-17	HRP750_3	24-SEP-2019 16:11	HRSM_DXN_S	Matt Cash	41796	15419008-4 PDB9Z2	1 uL
•	A24SEP19A-18	HRP750_3	24-SEP-2019 16:34	HRSM_DXN_S	Matt Cash	41796	15419009-4 PDB9Z3	1 uL
•	A24SEP19A-19	HRP750_3	24-SEP-2019 16:57	HRSM_DXN_S	Matt Cash	41596	15410006-3 PDB9Q4	1 uL
•	A24SEP19A-20	HRP750_3	24-SEP-2019 17:19	HRSM_DXN_S	Matt Cash	41596	15410008-3 PDB9Q6	1 uL
•	A24SEP19A-21	HRP750_3	24-SEP-2019 17:42	HRSM_DXN_S	Matt Cash	41596	15410007-3 PDB9Q5	1 uL
•	A24SEP19A-22	HRP750_3	24-SEP-2019	HRSM_DXN_S	Matt Cash	41596	15410009-3 PDB9Q7	1 uL

			18:04					
•	A24SEP19A-23	HRP750_3	24-SEP-2019 18:27	HRSM_DXN_S	Matt Cash	41633	15419021-2 PDBAB5	1 uL
•	A24SEP19A-24	HRP750_3	24-SEP-2019 18:49	A24SEP19A	Matt Cash		CPM225 WD190612-04 ISCD6	1 uL
•	A24SEP19A-25	HRP750_3	24-SEP-2019 19:12	A24SEP19A	Matt Cash		CS3WT 1613CS3 UD190313-03.4 CPS2B	1 uL
•	A24SEP19A_2-1	HRP750_3	24-SEP-2019 19:36	HRSM_DXN_S	Matt Cash	41636	12024676-2 MB DBLK4L	1 uL
	Includes 12024951-1 SB DIBLK3A Batch 41596, 12024986-1 SB DIBLK3C 41671, 12024987-1 SB DIBLK3D 41827							
•	A24SEP19A_2-2	HRP750_3	24-SEP-2019 19:58	HRSM_DXN_S	Matt Cash	41636	15420004-3 PDBA08	1 uL
•	A24SEP19A_2-3	HRP750_3	24-SEP-2019 20:21	HRSM_DXN_S	Matt Cash	41636	15420005-3 PDBA09	1 uL
•	A24SEP19A_2-4	HRP750_3	24-SEP-2019 20:44	HRSM_DXN_S	Matt Cash	41636	15420006-3 PDBA10	1 uL
•	A24SEP19A_2-5	HRP750_3	24-SEP-2019 21:06	HRSM_DXN_S	Matt Cash	41636	15420008-3 PDBA12	1 uL
•	A24SEP19A_2-6	HRP750_3	24-SEP-2019 21:29	HRSM_DXN_S	Matt Cash	41636	15420013-3 PDBA17	1 uL
•	A24SEP19A_2-7	HRP750_3	24-SEP-2019 21:51	HRSM_DXN_S	Matt Cash	41636	15420014-3 PDBA18	1 uL
•	A24SEP19A_2-8	HRP750_3	24-SEP-2019 22:14	HRSM_DXN_S	Matt Cash	41636	15420011-3 PDBA15	1 uL
•	A24SEP19A_2-9	HRP750_3	24-SEP-2019 22:36	HRSM_DXN_S	Matt Cash	41827	15457002-2 PX2H96	1 uL
•	A24SEP19A_2-10	HRP750_3	24-SEP-2019 22:59	HRSM_DXN_S	Matt Cash	41596	15410017-3 PDB9W1	1 uL
•	A24SEP19A_2-11	HRP750_3	24-SEP-2019 23:21	HRSM_DXN_S	Matt Cash	41596	15410012-3 PDB9T5	1 uL

•	A24SEP19A_2-12	HRP750_3	24-SEP-2019 23:44	HRSM_DXN_S	Matt Cash	41616	15418011-3 PDB9X5	1 uL
•	A24SEP19A_2-13	HRP750_3	25-SEP-2019 00:06	HRSM_DXN_S	Matt Cash	41630	15419007-3 PDB9Z1	1 uL
•	A24SEP19A_2-14	HRP750_3	25-SEP-2019 00:29	HRSM_DXN_S	Matt Cash	41671	15420001-3 PDBA05	1 uL
•	A24SEP19A_2-15	HRP750_3	25-SEP-2019 00:51	A24SEP19A_2	Matt Cash		CPM225 WD190612-04 ISCD7	1 uL
•	A24SEP19A_2-16	HRP750_3	25-SEP-2019 01:14	A24SEP19A_2	Matt Cash		CS3WT 1613CS3 UD190313-03.4 CPS2C	1 uL
•	A24SEP19A_3-1	HRP750_3	25-SEP-2019 01:38	A24SEP19A_3	Matt Cash		SB	1 uL
•	A24SEP19A_3-2	HRP750_3	25-SEP-2019 02:00	HMS1613_1S	Matt Cash	41467	15382001-2	1 uL
•	A24SEP19A_3-3	HRP750_3	25-SEP-2019 02:23	HMS1613HS	Matt Cash	41517	15236001-2	1 uL
•	A24SEP19A_3-4	HRP750_3	25-SEP-2019 02:45	HMS1613_1S	Matt Cash	41747	15469013-2	1 uL
•	A24SEP19A_3-5	HRP750_3	25-SEP-2019 03:08	HMS1613_1S	Matt Cash	41761	15471001-2	1 uL
•	A24SEP19A_3-6	HRP750_3	25-SEP-2019 03:31	HMS1613_1S	Matt Cash	41761	12024813-2 MS	1 uL
•	A24SEP19A_3-7	HRP750_3	25-SEP-2019 03:53	HMS1613_1S	Matt Cash	41761	12024814-2 MSD	1 uL
•	A24SEP19A_3-8	HRP750_3	25-SEP-2019 04:16	HMS1613_1S	Matt Cash	41761	15471003-2	1 uL
•	A24SEP19A_3-9	HRP750_3	25-SEP-2019 04:38	HMS1613_1S	Matt Cash	41761	15471004-2	1 uL
•	A24SEP19A_3-10	HRP750_3	25-SEP-2019 05:01	A24SEP19A_3	Matt Cash		CS3WT 1613CS3 UD190313-03.4	1 uL

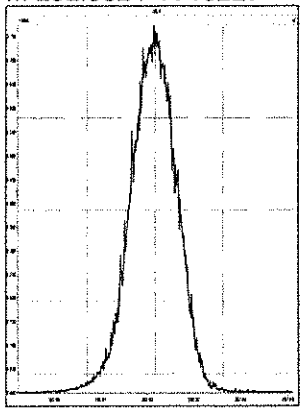
PFKSW Inst: HRP750-3 / Anal: MJC

Experiment Calibration Report **MassLynx 4.1**

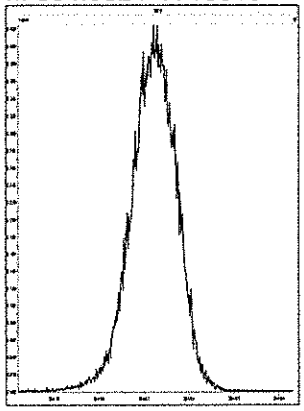
File: Experiment: 225TCDF.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, September 24, 2019 10:11:07 Eastern Standard Time

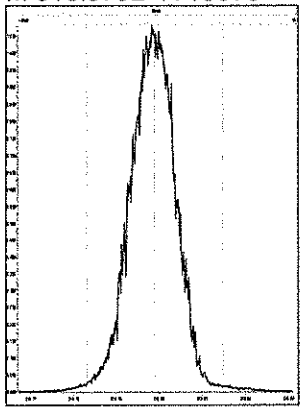
M 292.9824 R 13227



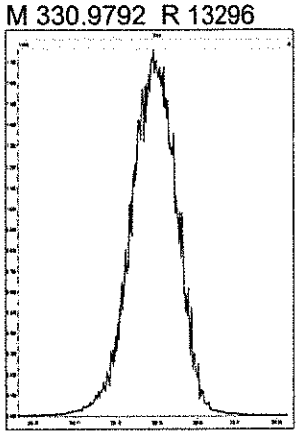
M 304.9824 R 13018



M 318.9792 R 13370



M 330.9792 R 13296



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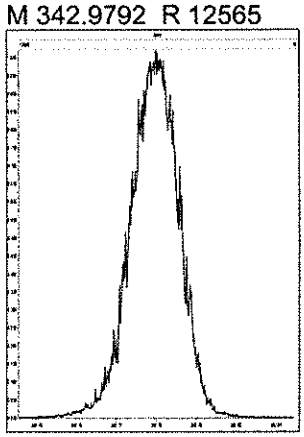
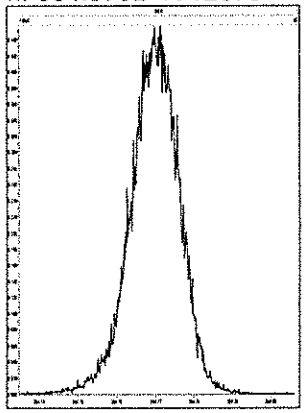


M 354.9792 R 12376



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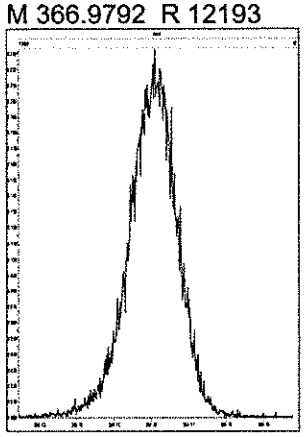
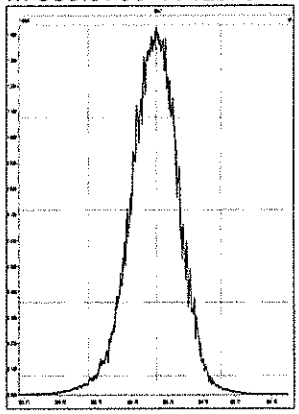


M 380.9760 R 12078

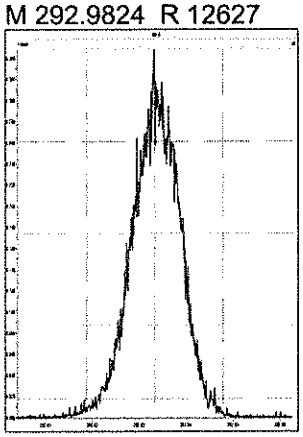


PFKSX Inst: HRP750-3 Anal: mgc

Resolution Check Report **MassLynx 4.1**

Printed: Tuesday, September 24, 2019 19:36:40 Eastern Standard Time

M 292.9824 R 12627



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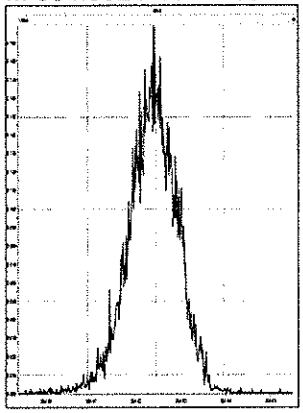
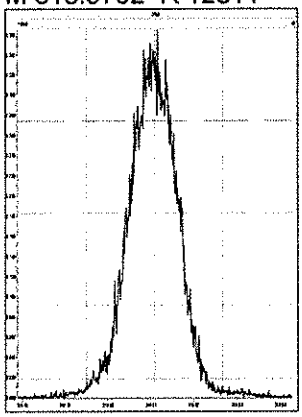
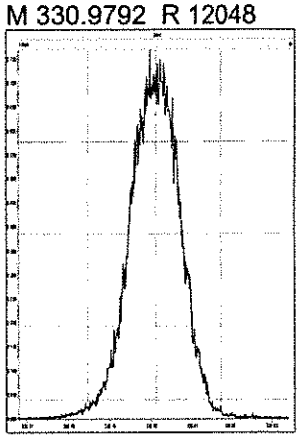


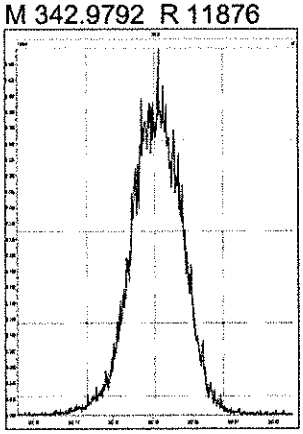
M 318.9792 R 12811



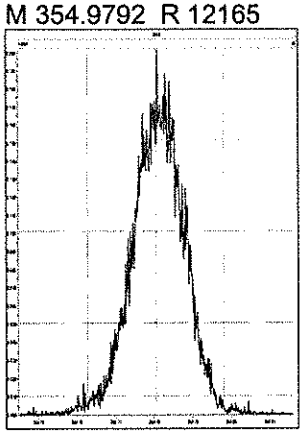
M 330.9792 R 12048



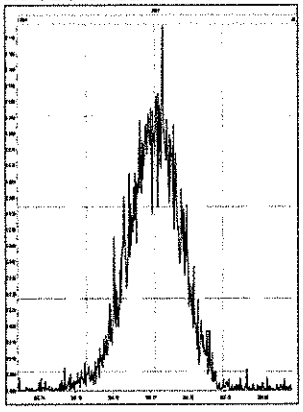
M 342.9792 R 11876



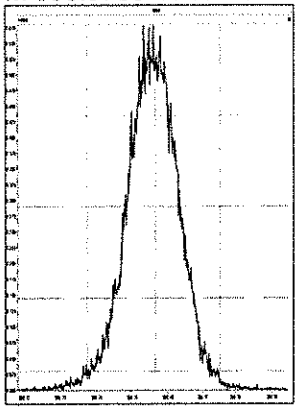
M 354.9792 R 12165



M 366.9792 R 11711



M 380.9760 R 11416

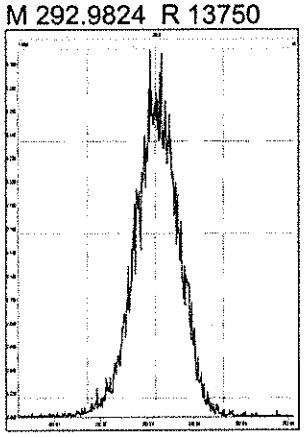


PFKSY Inst: HRP750-3 Anal: WJC

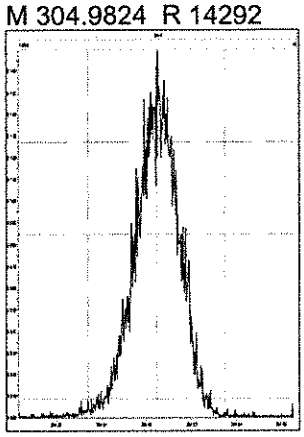
Resolution Check Report **MassLynx 4.1**

Printed: Wednesday, September 25, 2019 01:38:37 Eastern Standard Time

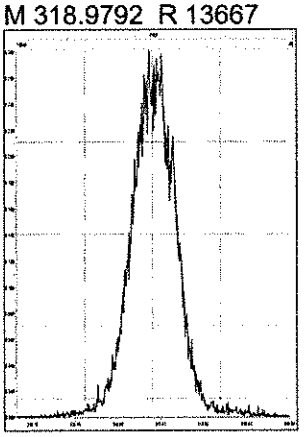
M 292.9824 R 13750



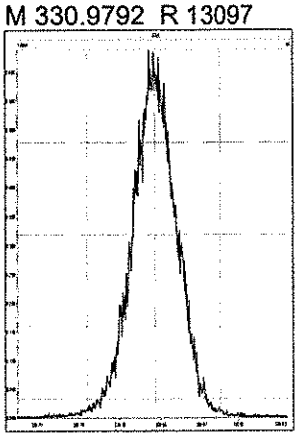
M 304.9824 R 14292



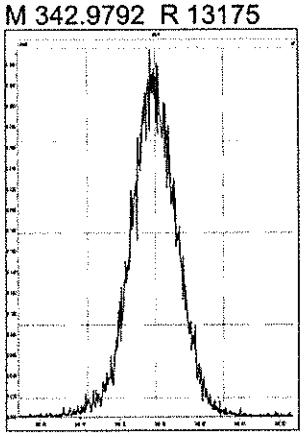
M 318.9792 R 13667



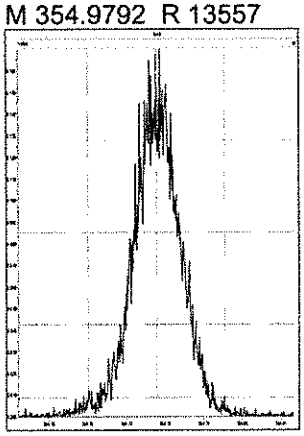
M 330.9792 R 13097



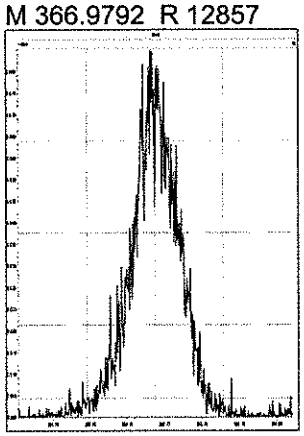
M 342.9792 R 13175



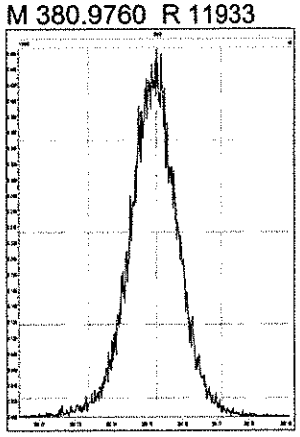
M 354.9792 R 13557



M 366.9792 R 12857

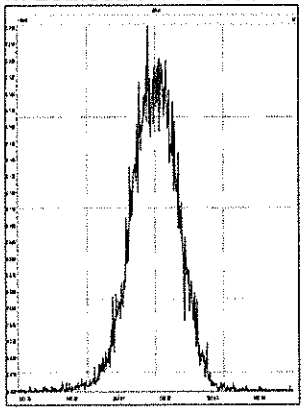


M 380.9760 R 11933

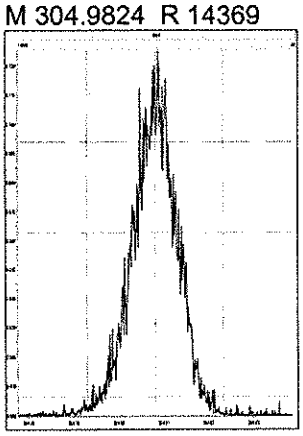


Printed: Wednesday, September 25, 2019 05:25:25 Eastern Standard Time

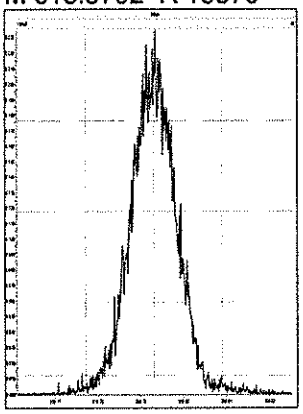
M 292.9824 R 13196



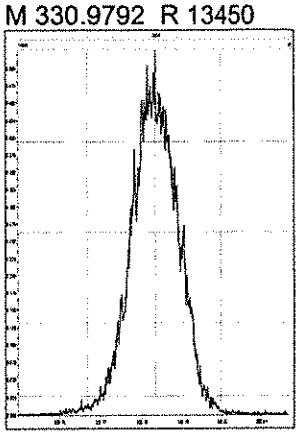
M 304.9824 R 14369



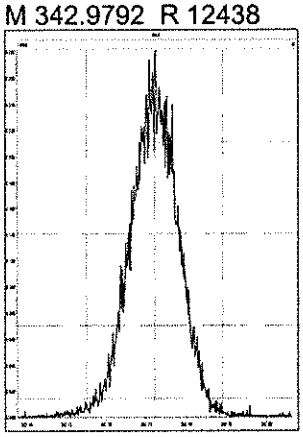
M 318.9792 R 13370



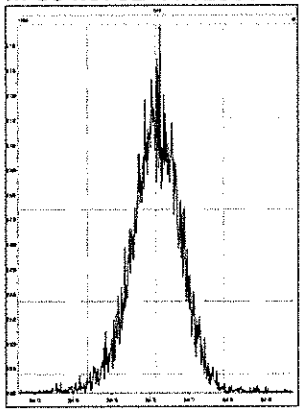
M 330.9792 R 13450



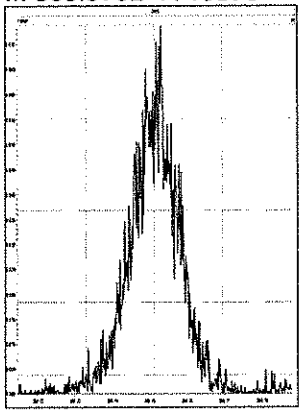
M 342.9792 R 12438



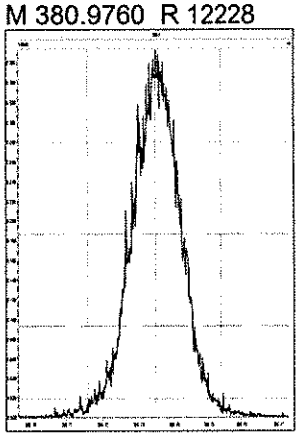
M 354.9792 R 12530



M 366.9792 R 13378



M 380.9760 R 12228

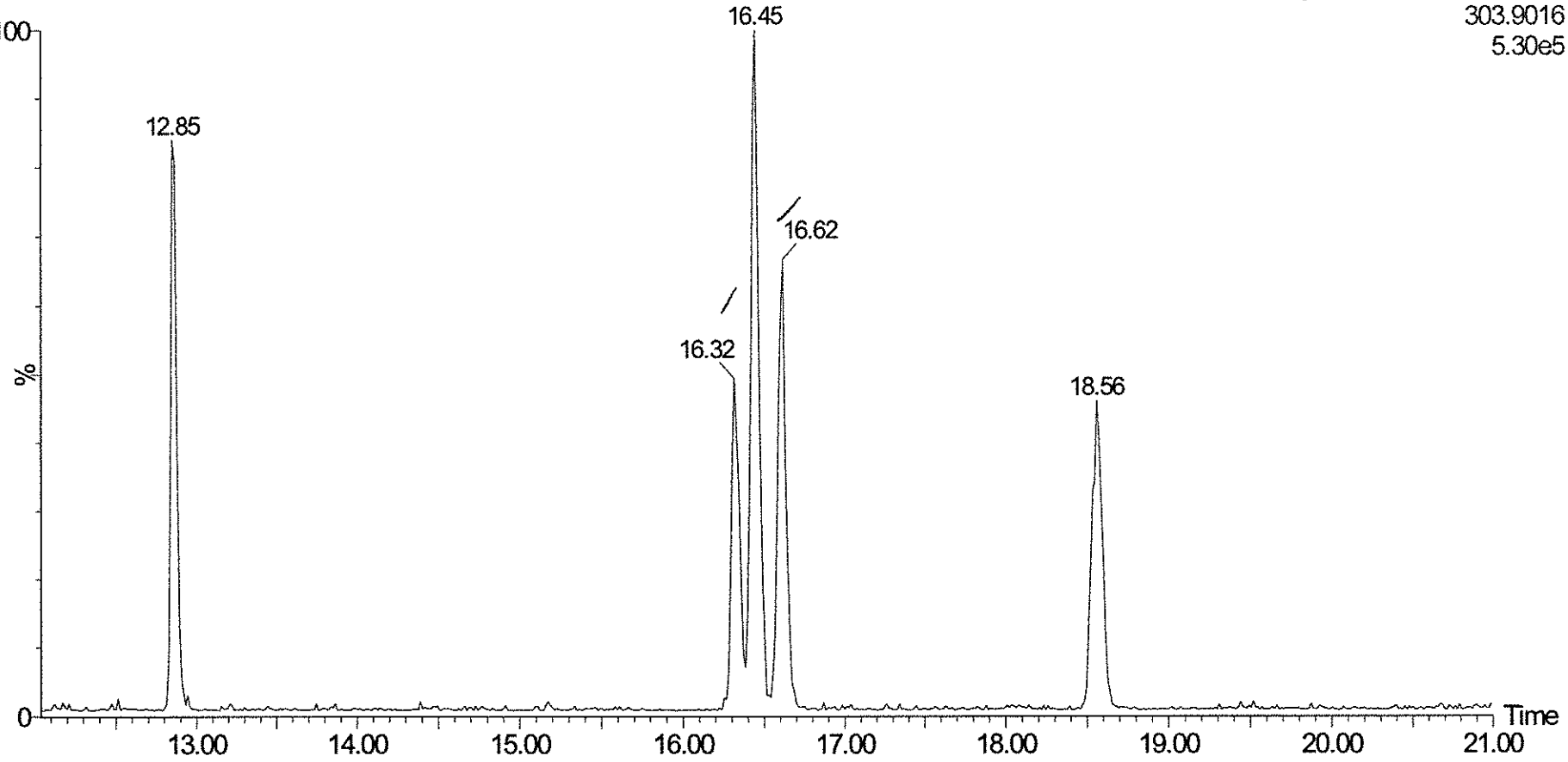


COLUMN CHECK (12% & 3%)
METHOD DXCF

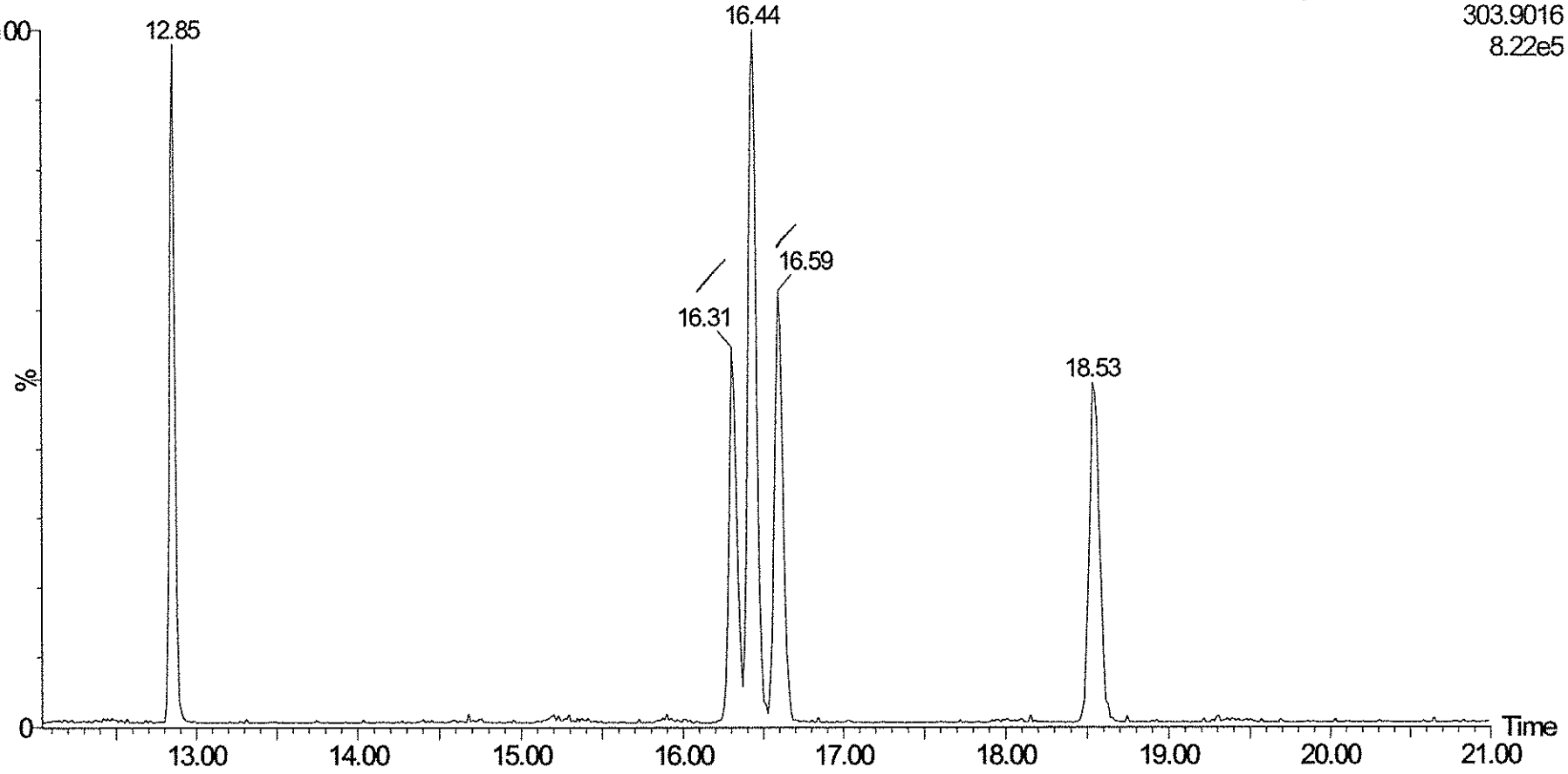
CPM225 WD190612-04 ISCD5 **HRP750_3** **24-Sep-201910:34:03**

A24SEP19A-2

Voltage SIR 13 Channels EI+
303.9016
5.30e5



COLUMN CHECK (9% & 2%)
METHOD DXCF
CPM225 WD190612-04 ISCD6 **HRP750_3** **24-Sep-201918:49:50**
A24SEP19A-24
Voltage SIR 13 Channels EI+
303.9016
8.22e5

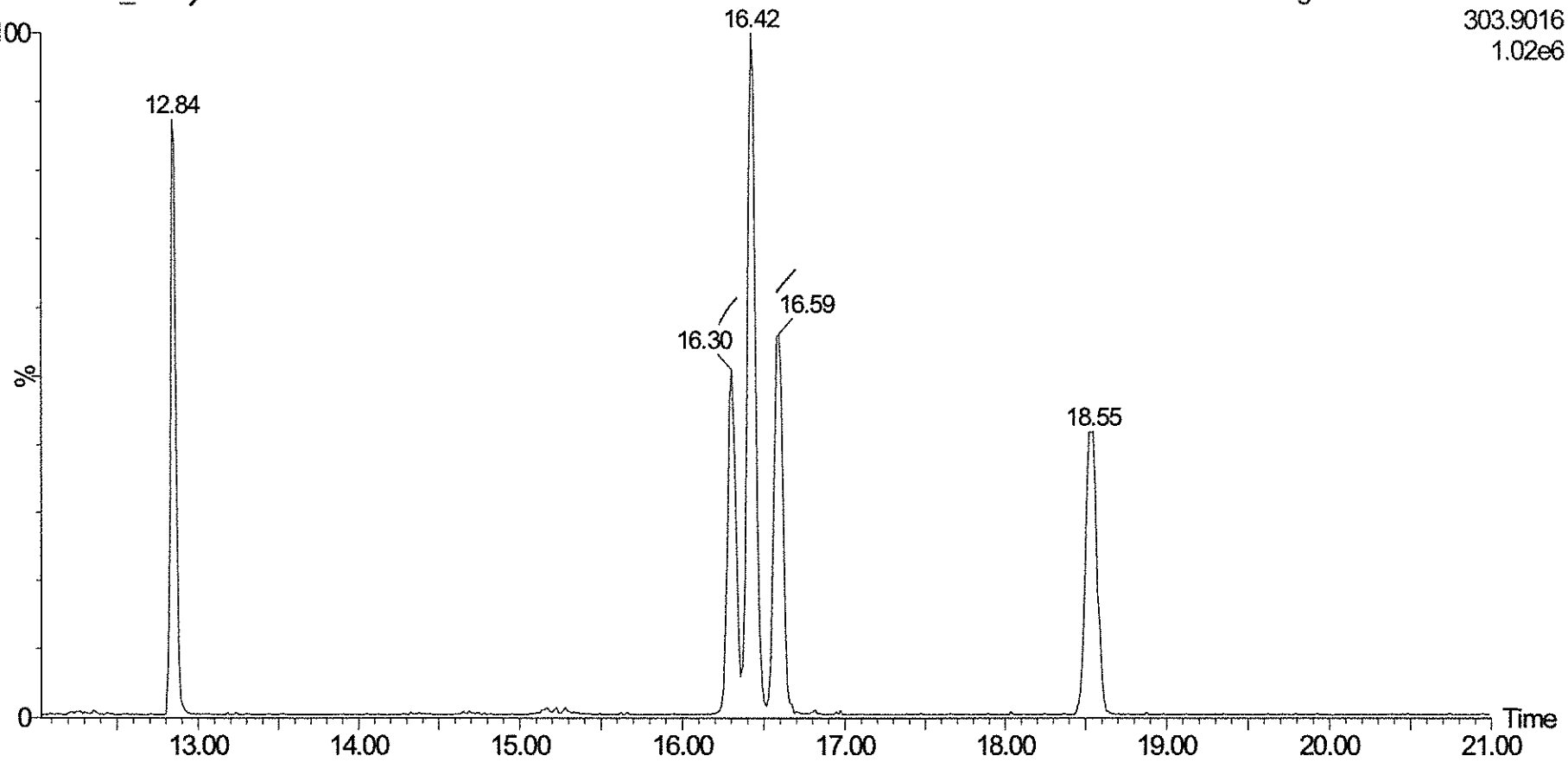


COLUMN CHECK (11% & 2%)
METHOD DXCF

CPM225 WD190612-04 ISCD7 **HRP750_3** **25-Sep-201900:51:49**

A24SEP19A_2-15

Voltage SIR 13 Channels EI+
303.9016
1.02e6



Quantify Sample Summary Report **MassLynx 4.1**
Method DLM Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM_CF-A24SEP19A-2.qld

Last Altered: Wednesday, September 25, 2019 08:21:24 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:21:55 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A23SEP19_225TCDF.mdb 24 Sep 2019 08:23:57
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

m 9/25/19

Name: A24SEP19A-2, Date: 24-Sep-2019, Time: 10:34:03, ID: CPM225 WD190612-04 ISCD5, Description: , Job: A24SEP19A, Task: HRP750_3, User: MJC

	Name	RT
1	First TCDF	12.85
2	Last TCDF	18.56

Quantify Sample Report **MassLynx 4.1**
Method DLM Window Defining Report

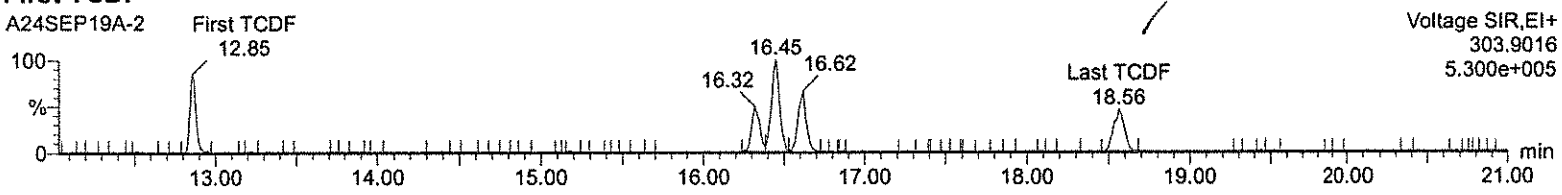
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM_CF-A24SEP19A-2.qld

Last Altered: Wednesday, September 25, 2019 08:21:24 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:21:55 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A23SEP19_225TCDF.mdb 24 Sep 2019 08:23:57
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A-2, Date: 24-Sep-2019, Time: 10:34:03, ID: CPM225 WD190612-04 ISCD5, Description: , Job: A24SEP19A, Task: HRP750_3, User: MJC

First TCDF



Quantify Sample Summary Report **MassLynx 4.1**
Method DLM Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM_CF-A24SEP19A-24.qld

Last Altered: Wednesday, September 25, 2019 08:23:07 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:23:33 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A23SEP19_225TCDF.mdb 24 Sep 2019 08:23:57
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

9/25/19

Name: A24SEP19A-24, Date: 24-Sep-2019, Time: 18:49:50, ID: CPM225 WD190612-04 ISCD6, Description: , Job: A24SEP19A, Task: HRP750_3, User: MJC

	Name	RT
1	First TCDF	12.85
2	Last TCDF	18.53

Quantify Sample Report **MassLynx 4.1**
Method DLM Window Defining Report

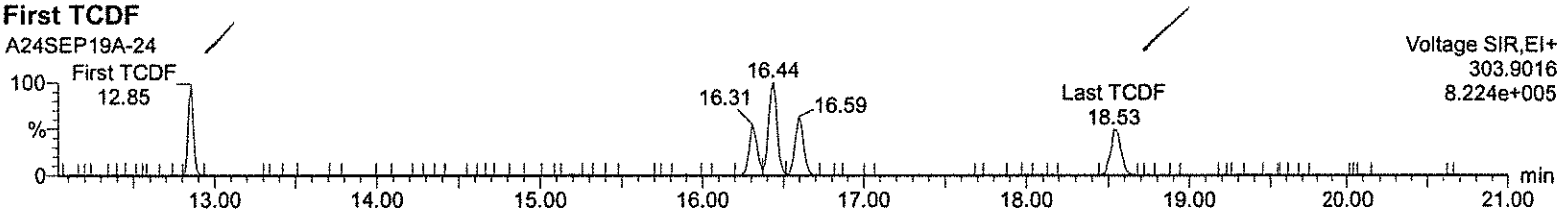
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM_CF-A24SEP19A-24.qld

Last Altered: Wednesday, September 25, 2019 08:23:07 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:23:33 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_A23SEP19_225TCDF.mdb 24 Sep 2019 08:23:57
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A-24, Date: 24-Sep-2019, Time: 18:49:50, ID: CPM225 WD190612-04 ISCD6, Description: , Job: A24SEP19A, Task: HRP750_3, User: MJC

First TCDF



Quantify Sample Summary Report **MassLynx 4.1**
Method DLM Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\WDM_CF-A24SEP19A_2-15.qld

Last Altered: Wednesday, September 25, 2019 09:41:49 Eastern Standard Time
Printed: Wednesday, September 25, 2019 09:50:52 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A23SEP19_225TCDF.mdb 24 Sep 2019 08:23:57
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

9/25/19

Name: A24SEP19A_2-15, Date: 25-Sep-2019, Time: 00:51:49, ID: CPM225 WD190612-04 ISCD7, Description: , Job: A24SEP19A_2, Task: HRP750_3, User: MJC

Work Order: 15469

	Name	RT
1	First TCDF	12.84
2	Last TCDF	18.55

Quantify Sample Report **MassLynx 4.1**
Method DLM Window Defining Report

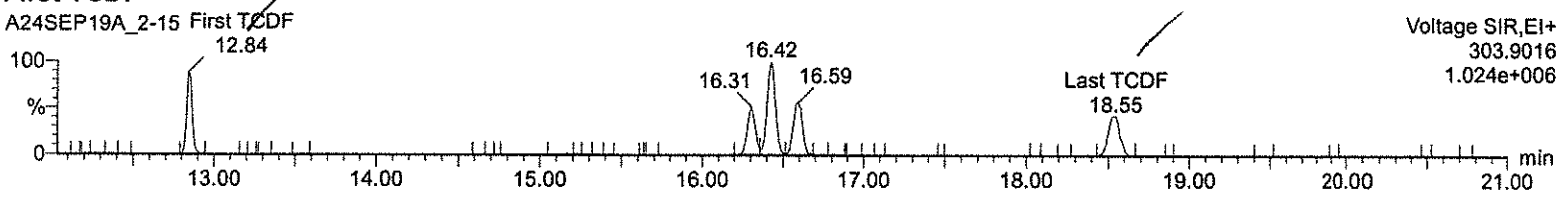
Dataset: C:\MassLynx\Default.pro\WDM Results\WDM_CF-A24SEP19A_2-15.qld

Last Altered: Wednesday, September 25, 2019 09:41:49 Eastern Standard Time
Printed: Wednesday, September 25, 2019 09:50:52 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_A23SEP19_225TCDF.mdb 24 Sep 2019 08:23:57
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A_2-15, Date: 25-Sep-2019, Time: 00:51:49, ID: CPM225 WD190612-04 ISCD7, Description: ,
Job: A24SEP19A_2, Task: HRP750_3, User: MJC

First TCDF



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\CF_DLM-A24SEP19A-1.qld

Last Altered: Wednesday, September 25, 2019 08:24:34 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:25:17 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_HRSM_225TCDF.mdb 23 Sep 2019 15:31:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

mw 9/25/19

Name: A24SEP19A-1, Date: 24-Sep-2019, Time: 10:11:56, ID: CS3WT 1613CS3 UD190313-03.4 CPS2A, Description: , Job: A24SEP19A, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	2.62e4	3.16e4	5.78e4	16.46	1.002	0.83	NO	10.092	0.248	0.894	0.885	0.9	4.29e5	3936	109.0	4.97e5	3516	141.3	bb	bb
2	13C-2378-TCDF	2.82e5	3.66e5	6.47e5	16.44	1.065	0.77	NO	77.575	0.278	1.129	1.455	-22.4	4.43e6	9241	479.4	5.72e6	4836	1181.9	bb	bb
3	13C-1234-TCDD	2.47e5	3.27e5	5.74e5	15.43	0.000	0.76	NO	100.000	0.209	1.000	1.000	0.0	4.49e6	4116	1089.9	5.84e6	3144	1856.1	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

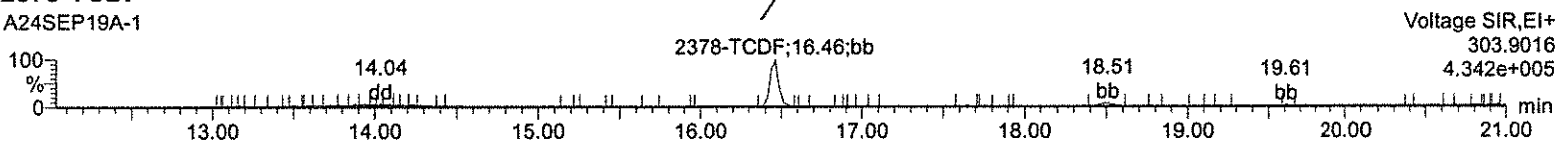
Dataset: C:\MassLynx\Default.pro\CCAL Results\CF_DLM-A24SEP19A-1.qld

Last Altered: Wednesday, September 25, 2019 08:24:34 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:25:17 Eastern Standard Time

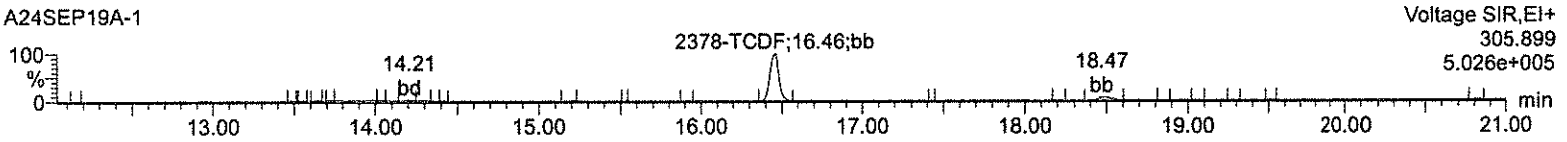
Method: C:\MassLynx\Default.pro\Methdb\CFA_HRSM_225TCDF.mdb 23 Sep 2019 15:31:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A-1, Date: 24-Sep-2019, Time: 10:11:56, ID: CS3WT 1613CS3 UD190313-03.4 CPS2A, Description: ,
Job: A24SEP19A, Task: HRP750_3, User: MJC

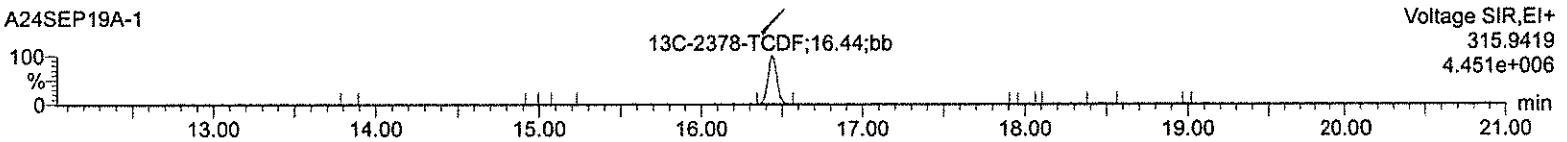
2378-TCDF



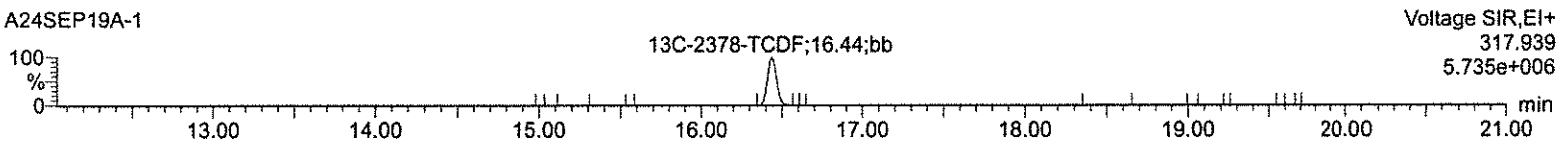
2378-TCDF



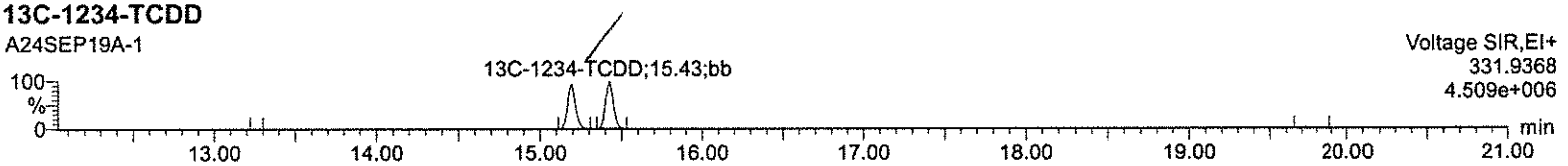
13C-2378-TCDF



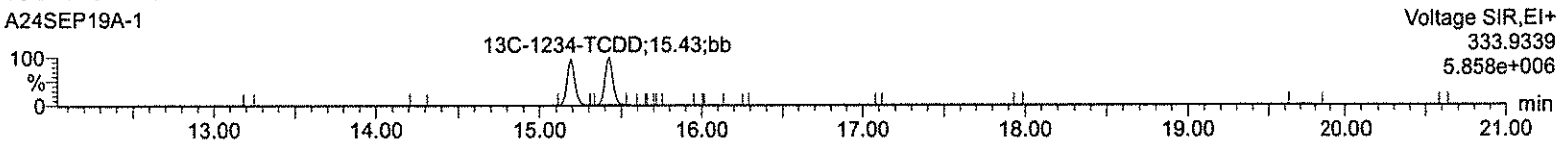
13C-2378-TCDF



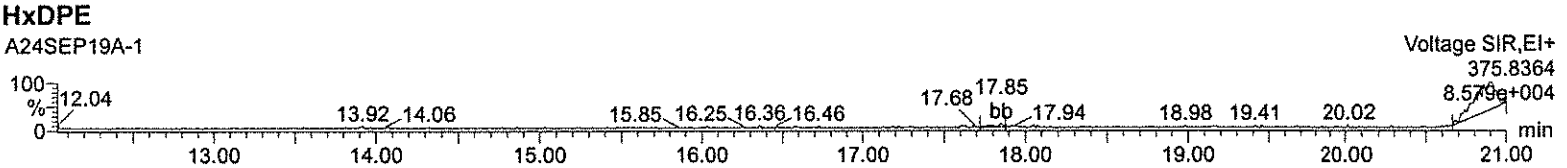
13C-1234-TCDD



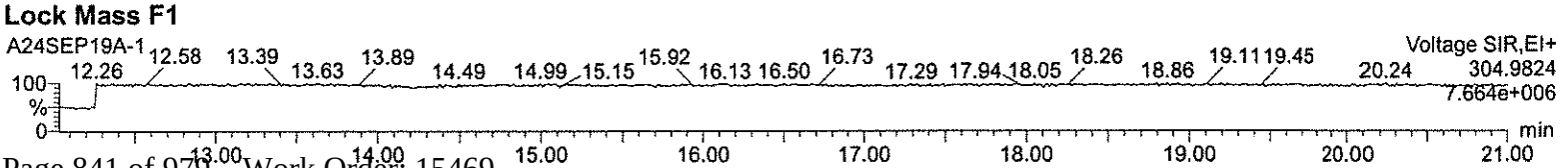
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\CF_DLM-A24SEP19A-25.qld

Last Altered: Wednesday, September 25, 2019 08:28:28 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:29:02 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_HRSM_225TCDF.mdb 23 Sep 2019 15:31:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

9/25/19

Name: A24SEP19A-25, Date: 24-Sep-2019, Time: 10:12:22, ID: CS3WT 1613CS3 UD190313-03.4 CPS2B, Description: , Job: A24SEP19A, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	4.77e4	6.25e4	1.10e5	16.45	1.002	0.76	NO	10.295	0.0770	0.912	0.885	3.0	8.01e5	1613	496.9	1.05e6	2907	361.5	bb	bb
2	13C-2378-TCDF	5.28e5	6.80e5	1.21e6	16.42	1.066	0.78	NO	84.262	0.158	1.226	1.455	-15.7	8.69e6	8517	1020.0	1.12e7	5655	1975.4	bb	bb
3	13C-1234-TCDD	4.32e5	5.54e5	9.86e5	15.41	0.000	0.78	NO	100.000	0.123	1.000	1.000	0.0	8.10e6	4668	1735.3	1.04e7	2886	3619.4	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

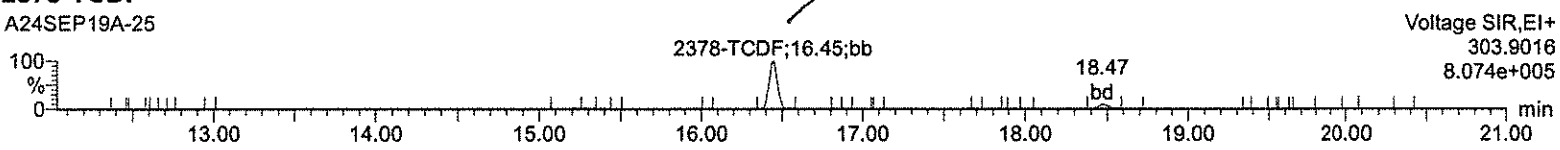
Dataset: C:\MassLynx\Default.pro\CCAL Results\CF_DLM-A24SEP19A-25.qld

Last Altered: Wednesday, September 25, 2019 08:28:28 Eastern Standard Time
Printed: Wednesday, September 25, 2019 08:29:02 Eastern Standard Time

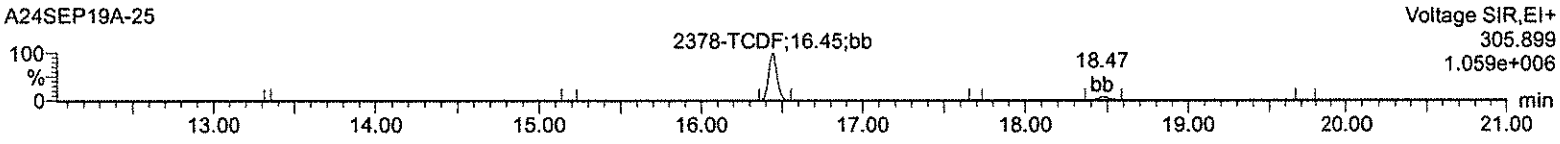
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_HRSM_225TCDF.mdb 23 Sep 2019 15:31:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A-25, Date: 24-Sep-2019, Time: 19:12:22, ID: CS3WT 1613CS3 UD190313-03.4 CPS2B, Description: ,
Job: A24SEP19A, Task: HRP750_3, User: MJC

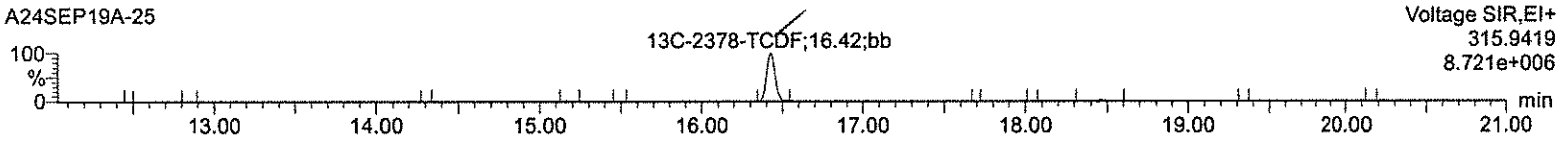
2378-TCDF



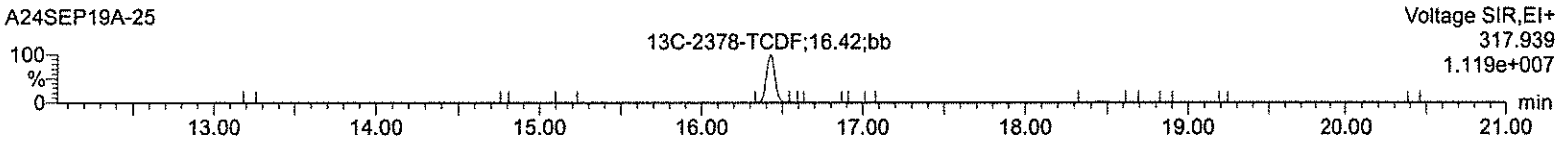
2378-TCDF



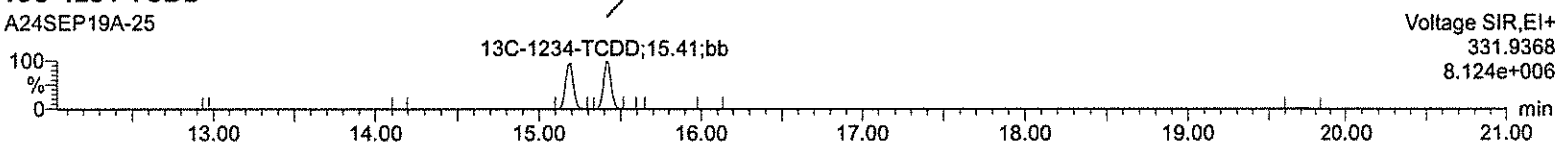
13C-2378-TCDF



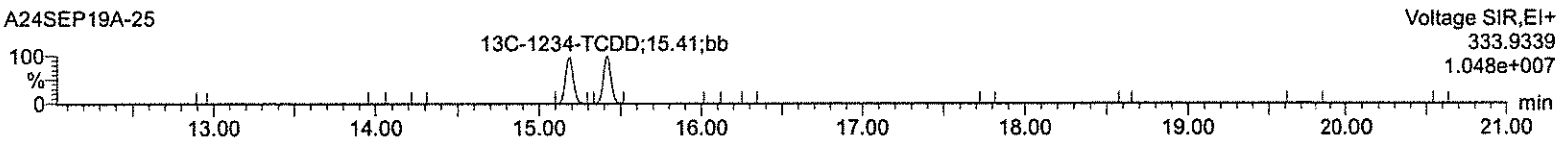
13C-2378-TCDF



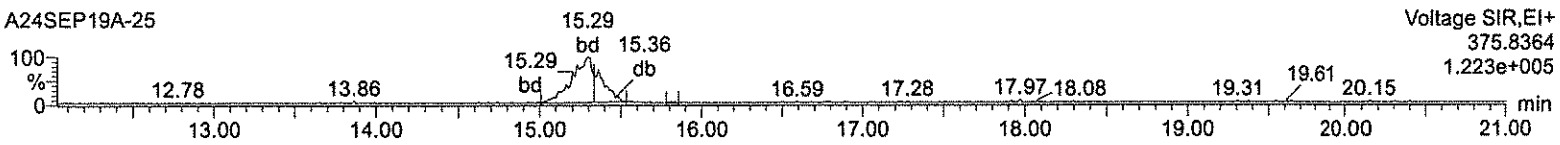
13C-1234-TCDD



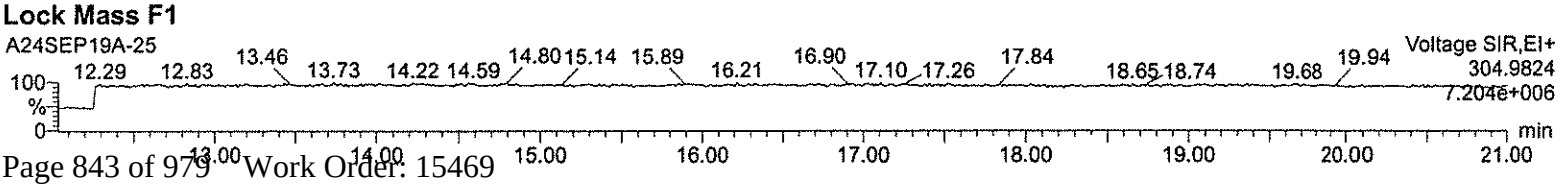
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\CF_DLM-A24SEP19A_2-16.qld

Last Altered: Wednesday, September 25, 2019 09:43:17 Eastern Standard Time
Printed: Wednesday, September 25, 2019 09:44:06 Eastern Standard Time

9/25/19

Method: C:\MassLynx\Default.pro\Methdb\CFA_HRSM_225TCDF.mdb 23 Sep 2019 15:31:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A_2-16, Date: 25-Sep-2019, Time: 01:14:21, ID: CS3WT 1613CS3 UD190313-03.4 CPS2C, Description: , Job: A24SEP19A_2, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	5.86e4	7.94e4	1.38e5	16.44	1.001	0.74	NO	10.594	0.0826	0.938	0.885	5.9	1.01e6	2626	385.4	1.35e6	3372	400.0	bd	bd
2	13C-2378-TCDF	6.47e5	8.25e5	1.47e6	16.42	1.066	0.78	NO	87.399	0.112	1.271	1.455	-12.6	1.08e7	6618	1633.3	1.37e7	5678	2419.8	bb	bb
3	13C-1234-TCDD	5.10e5	6.48e5	1.16e6	15.41	0.000	0.79	NO	100.000	0.0925	1.000	1.000	0.0	9.96e6	4297	2317.8	1.24e7	2678	4648.8	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

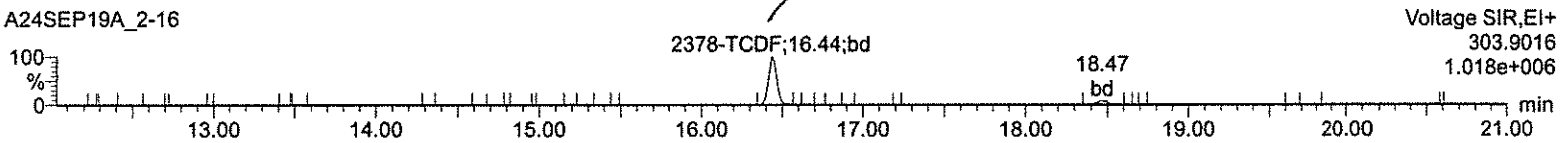
Dataset: C:\MassLynx\Default.pro\CCAL Results\CF_DLM-A24SEP19A_2-16.qld

Last Altered: Wednesday, September 25, 2019 09:43:17 Eastern Standard Time
Printed: Wednesday, September 25, 2019 09:44:06 Eastern Standard Time

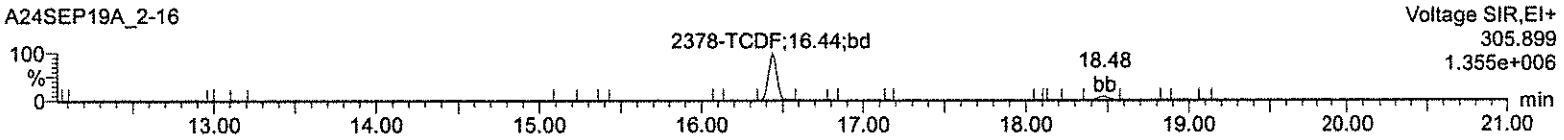
Method: C:\MassLynx\Default.pro\Methdb\CFA_HRSM_225TCDF.mdb 23 Sep 2019 15:31:34
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-DLM-A16MAY19.cdb 17 May 2019 08:59:48

Name: A24SEP19A_2-16, Date: 25-Sep-2019, Time: 01:14:21, ID: CS3WT 1613CS3 UD190313-03.4 CPS2C, Description: ,
Job: A24SEP19A_2, Task: HRP750_3, User: MJC

2378-TCDF



2378-TCDF



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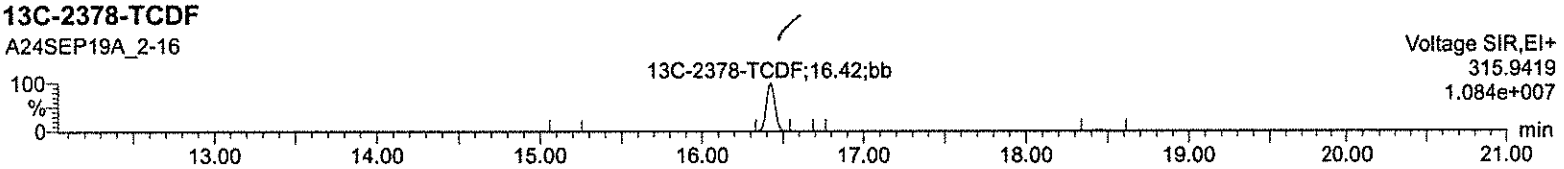
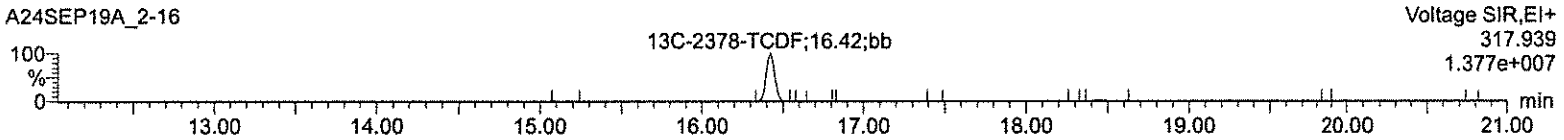
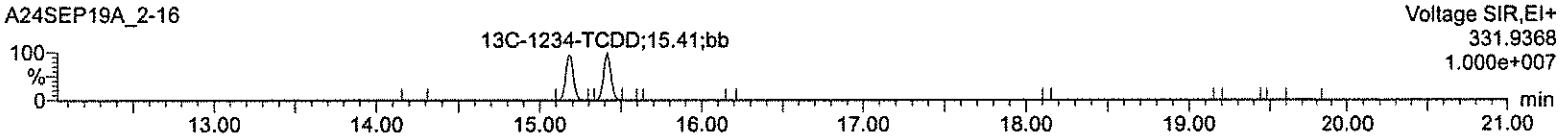


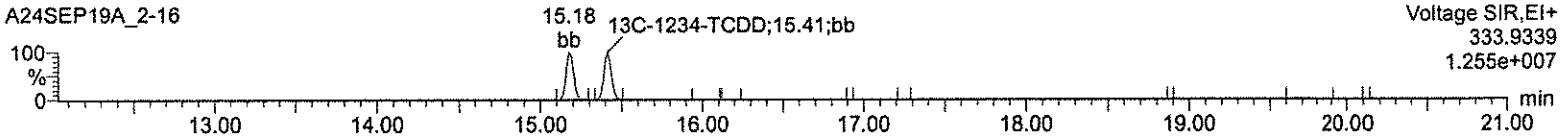
13C-2378-TCDF



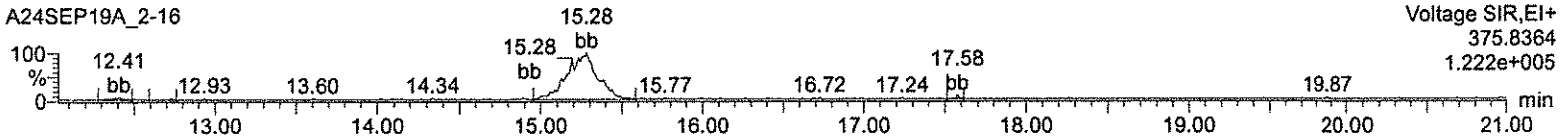
13C-1234-TCDD



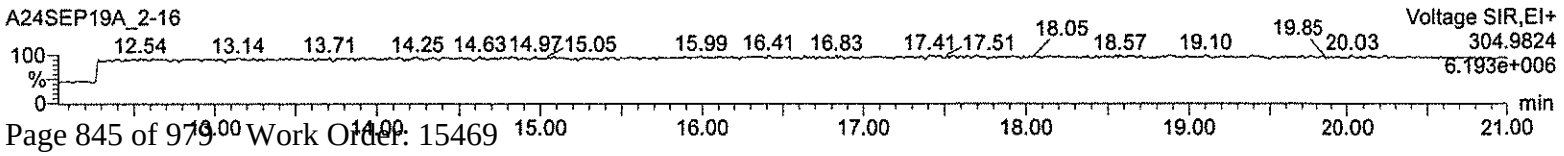
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\CF-A24SEP19A_2-16.qld

Last Altered: Wednesday, September 25, 2019 10:37:39 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:38:03 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_225TCDF.mdb 30 Jul 2019 14:05:29
Calibration: C:\MassLynx\Default.pro\Curvedb\CF-A16MAY19.cdb 17 May 2019 08:41:16

9/25/19

Name: A24SEP19A_2-16, Date: 25-Sep-2019, Time: 01:14:21, ID: CS3WT 1613CS3 UD190313-03.4 CPS2C, Description: , Job: A24SEP19A_2, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	5.86e4	7.94e4	1.38e5	16.44	1.001	0.74	NO	10.618	0.0690	0.938	0.883	6.2	1.01e6	2626	385.4	1.35e6	3372	400.0	bd	bd
2	13C-2378-TCDF	6.47e5	8.25e5	1.47e6	16.42	1.066	0.78	NO	87.481	0.112	1.271	1.453	-12.5	1.08e7	6618	1633.3	1.37e7	5678	2419.8	bb	bb
3	13C-1234-TCDD	5.10e5	6.48e5	1.16e6	15.41	0.000	0.79	NO	100.000	0.0925	1.000	1.000	0.0	9.96e6	4297	2317.8	1.24e7	2678	4648.8	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

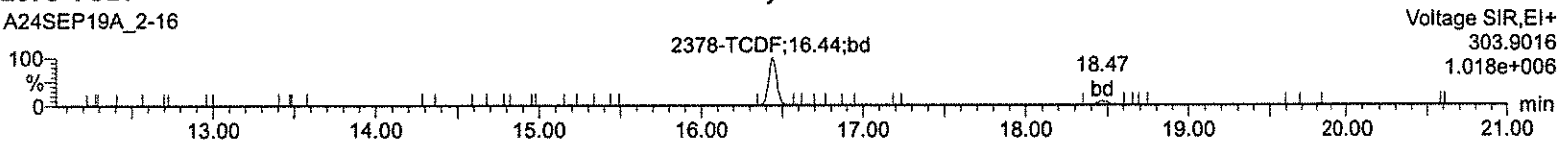
Dataset: C:\MassLynx\Default.pro\CCAL Results\CF-A24SEP19A_2-16.qld

Last Altered: Wednesday, September 25, 2019 10:37:39 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:38:03 Eastern Standard Time

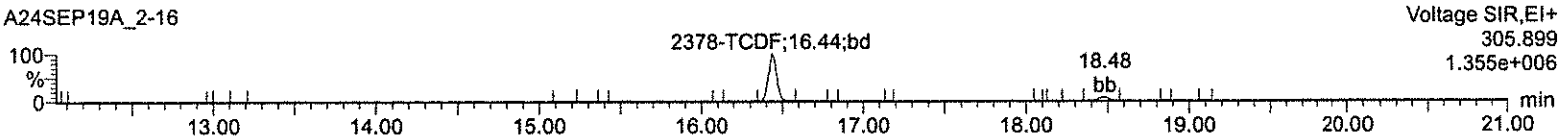
Method: C:\MassLynx\Default.pro\Methdb\CFA_225TCDF.mdb 30 Jul 2019 14:05:29
Calibration: C:\MassLynx\Default.pro\Curvedb\CF-A16MAY19.cdb 17 May 2019 08:41:16

Name: A24SEP19A_2-16, Date: 25-Sep-2019, Time: 01:14:21, ID: CS3WT 1613CS3 UD190313-03.4 CPS2C, Description: , Job: A24SEP19A_2, Task: HRP750_3, User: MJC

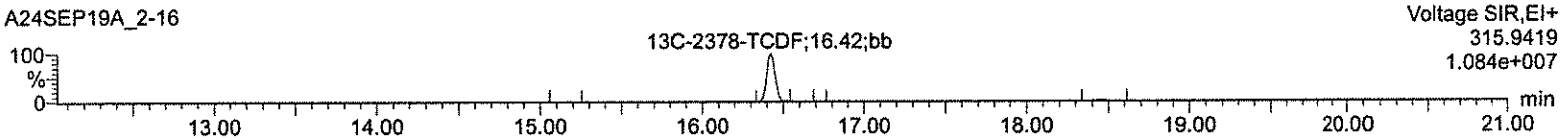
2378-TCDF



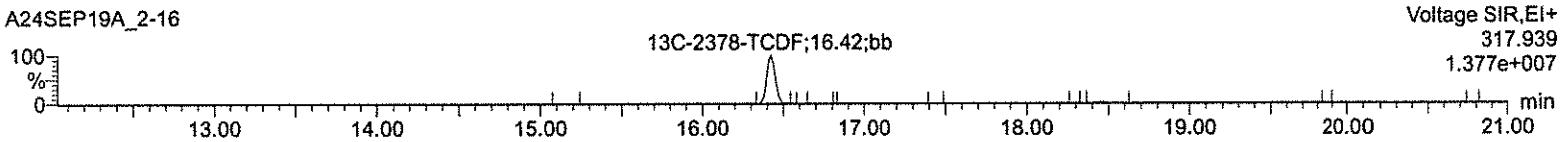
2378-TCDF



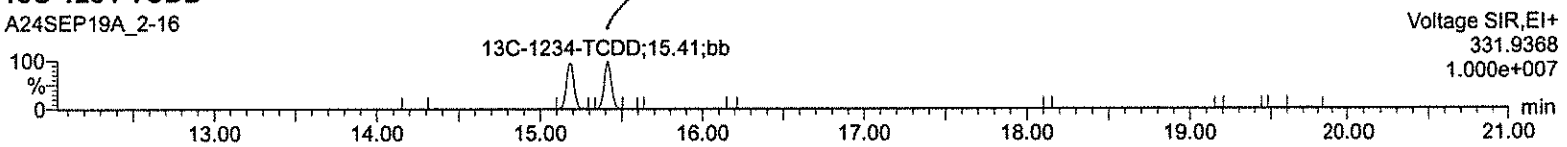
13C-2378-TCDF



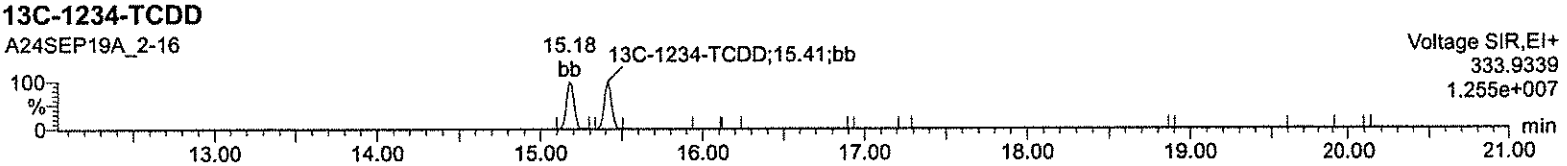
13C-2378-TCDF



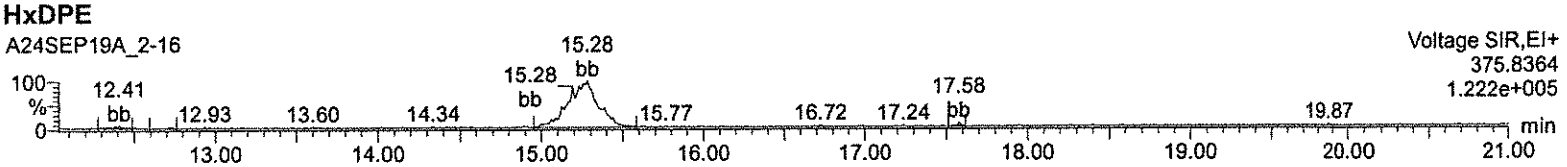
13C-1234-TCDD



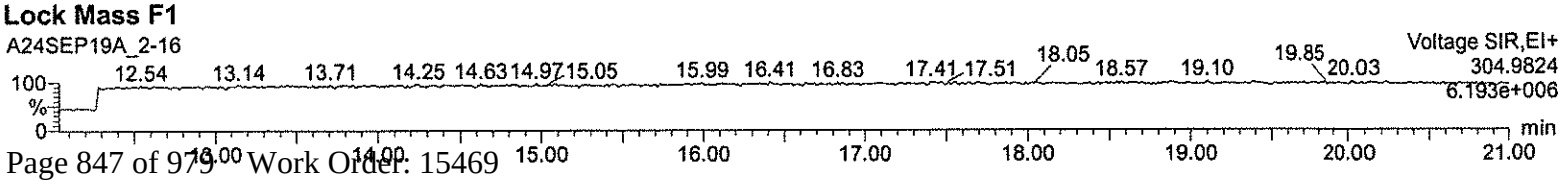
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\CF-A24SEP19A_3-10.qld

Last Altered: Wednesday, September 25, 2019 10:39:41 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:40:15 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 25 Sep 2019 10:36:36
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-A16MAY19.cdb 17 May 2019 08:41:16

9/25/19

Name: A24SEP19A_3-10, Date: 25-Sep-2019, Time: 05:01:07, ID: CS3WT 1613CS3 UD190313-03.4, Description: , Job: A24SEP19A_3, Task: HRP750_3, User: MJC

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	5.10e4	6.70e4	1.18e5	16.44	1.001	0.76	NO	10.403	0.0732	0.919	0.883	4.0	8.30e5	2870	289.4	1.15e6	2612	440.2	bb	bb
2	13C-2378-TCDF	5.64e5	7.20e5	1.28e6	16.42	1.066	0.78	NO	85.688	0.145	1.245	1.453	-14.3	9.31e6	7716	1206.7	1.20e7	6248	1918.2	bb	bb
3	13C-1234-TCDD	4.54e5	5.77e5	1.03e6	15.40	0.000	0.79	NO	100.000	0.121	1.000	1.000	-0.0	8.75e6	4489	1948.0	1.06e7	3537	3000.5	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

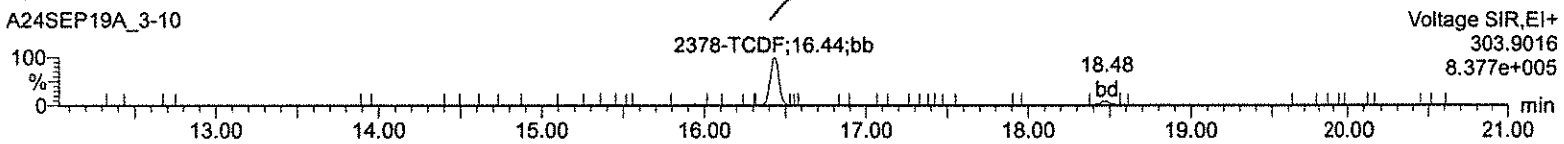
Dataset: C:\MassLynx\Default.pro\CCAL Results\CF-A24SEP19A_3-10.qld

Last Altered: Wednesday, September 25, 2019 10:39:41 Eastern Standard Time
Printed: Wednesday, September 25, 2019 10:40:15 Eastern Standard Time

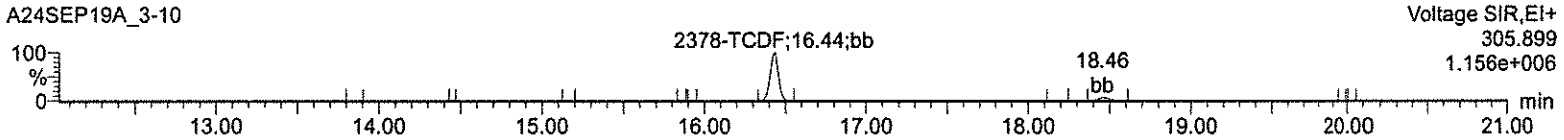
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 25 Sep 2019 10:36:36
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-A16MAY19.cdb 17 May 2019 08:41:16

Name: A24SEP19A_3-10, Date: 25-Sep-2019, Time: 05:01:07, ID: CS3WT 1613CS3 UD190313-03.4, Description: ,
Job: A24SEP19A_3, Task: HRP750_3, User: MJC

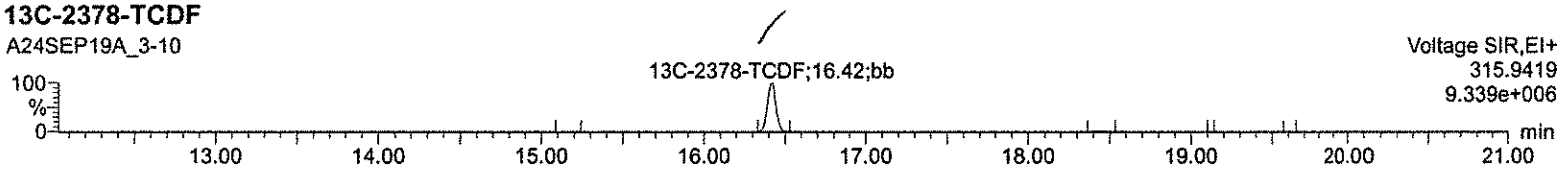
2378-TCDF



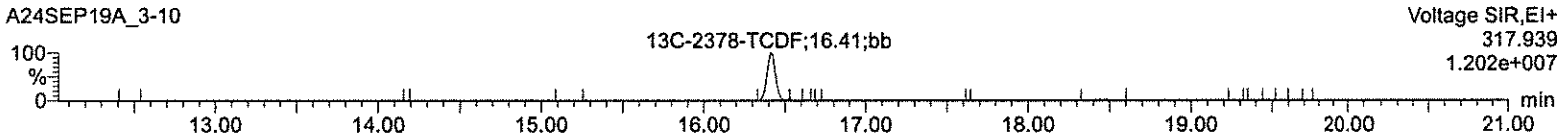
2378-TCDF



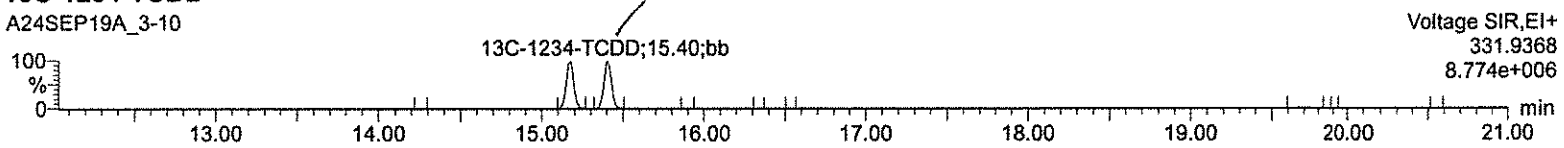
13C-2378-TCDF



13C-2378-TCDF



13C-1234-TCDD



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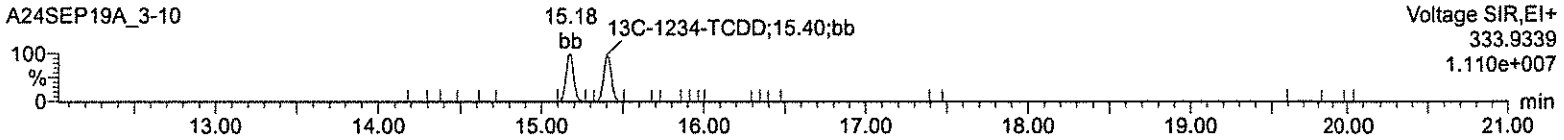
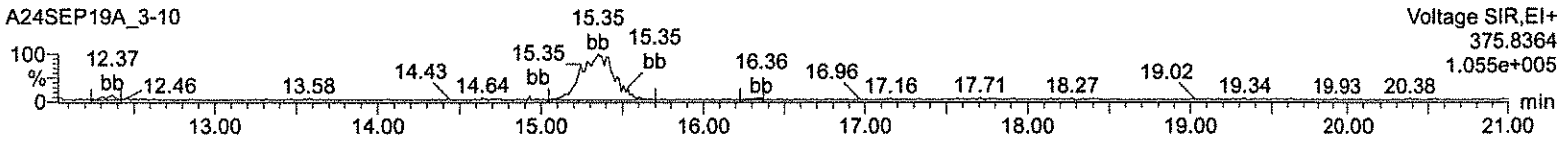
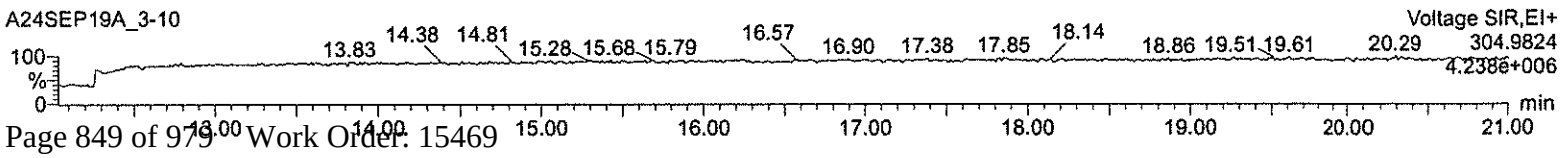


HxDPE



Lock Mass F1



RUN LOG

Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
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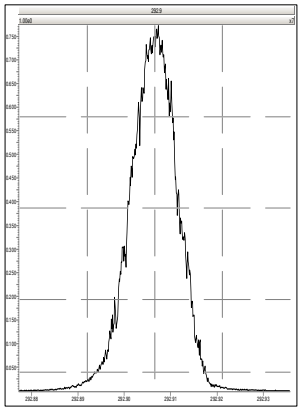
b21sep19a-2	21-SEP-2019 12:54:23	Mary Showalter	12024816-1 LCS		1 uL	dioxin_db5ms	10K
b21sep19a-3	21-SEP-2019 13:42:50	Mary Showalter	12024817-1 LCSD		1 uL	dioxin_db5ms	10K
b21sep19a-4	21-SEP-2019 14:31:15	Mary Showalter	12024815-1 MB		1 uL	dioxin_db5ms	10K
b21sep19a-5	21-SEP-2019 15:19:42	Mary Showalter	15424001-1	41764	1 uL	dioxin_db5ms	10K
b21sep19a-6	21-SEP-2019 16:08:08	Mary Showalter	15424002-1	41764	1 uL	dioxin_db5ms	10K
b21sep19a-7	21-SEP-2019 16:56:32	Mary Showalter	15424003-1	41764	1 uL	dioxin_db5ms	10K
b21sep19a-8	21-SEP-2019 17:44:58	Mary Showalter	15472006-1	41765	1 uL	dioxin_db5ms	10K
b21sep19a-9	21-SEP-2019 18:33:25	Mary Showalter	15473010-1	41765	1 uL	dioxin_db5ms	10K
b21sep19a-10	21-SEP-2019 19:21:50	Mary Showalter	15479011-1	41765	1 uL	dioxin_db5ms	10K
b21sep19a-11	21-SEP-2019 20:10:15	Mary Showalter	15479015-1	41765	1 uL	dioxin_db5ms	10K
b21sep19a-12	21-SEP-2019 20:58:41	Mary Showalter	15479016-1	41765	1 uL	dioxin_db5ms	10K
b21sep19a-13	21-SEP-2019 21:47:06	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

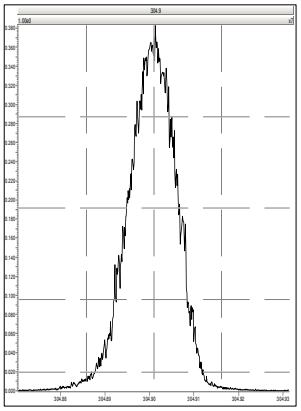
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Saturday, September 21, 2019 12:04:34 Eastern Standard Time

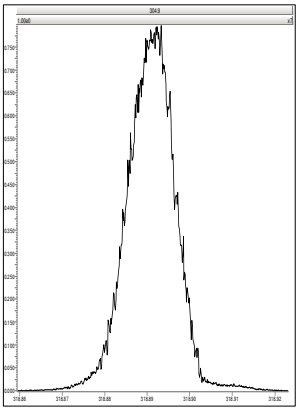
M 292.9824 R 12312



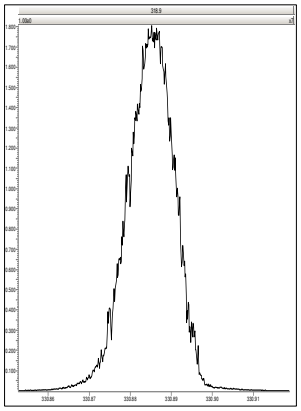
M 304.9824 R 12501



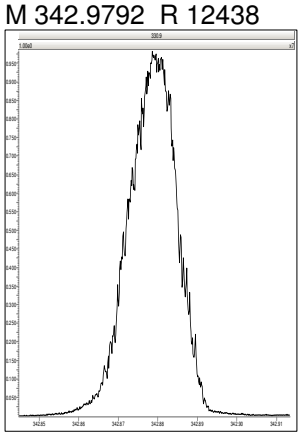
M 318.9792 R 12819



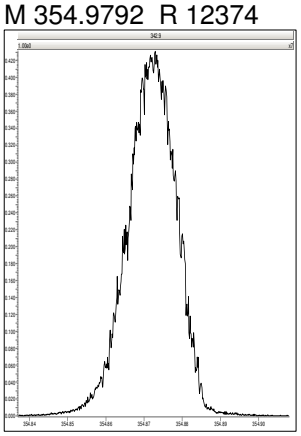
M 330.9792 R 12687



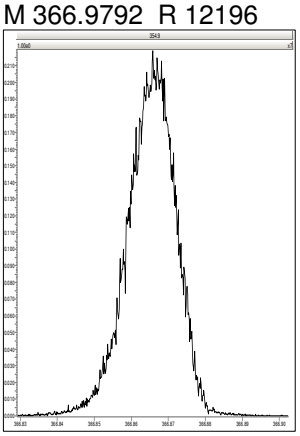
M 342.9792 R 12438



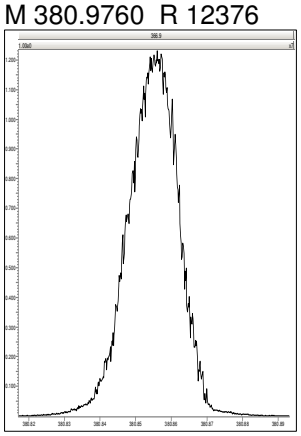
M 354.9792 R 12374



M 366.9792 R 12196



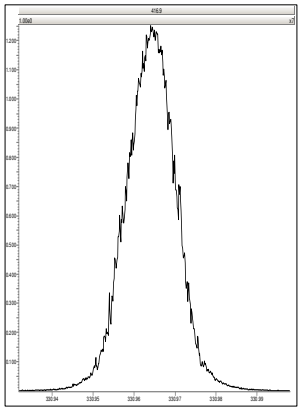
M 380.9760 R 12376



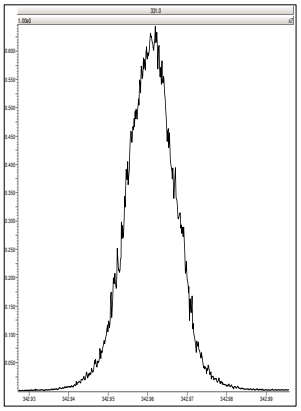
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Saturday, September 21, 2019 12:05:01 Eastern Standard Time

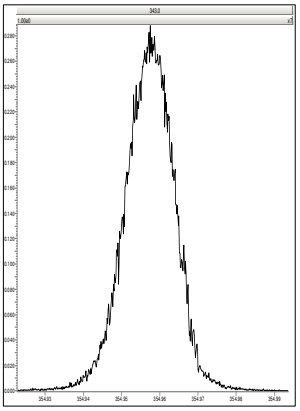
M 330.9792 R 11415



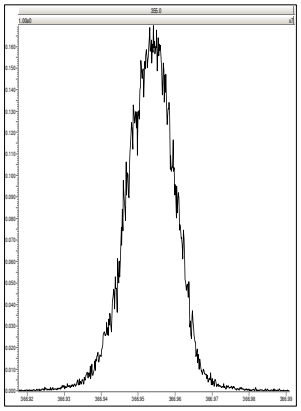
M 342.9792 R 11471



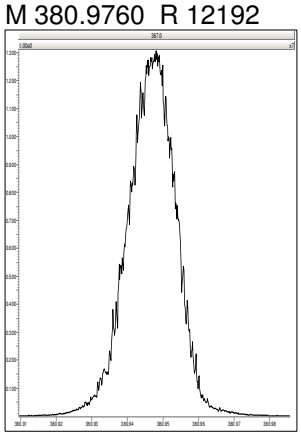
M 354.9792 R 12078



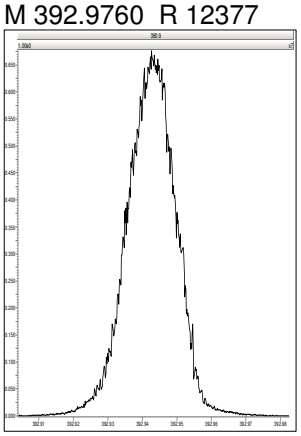
M 366.9792 R 12437



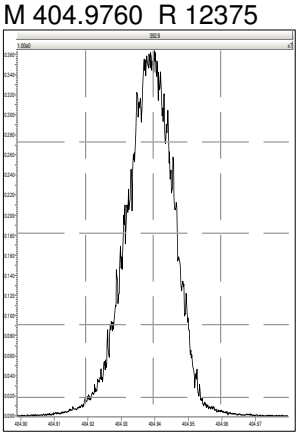
M 380.9760 R 12192



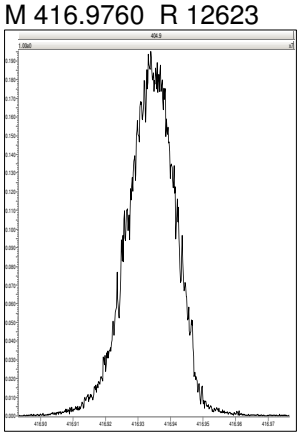
M 392.9760 R 12377



M 404.9760 R 12375



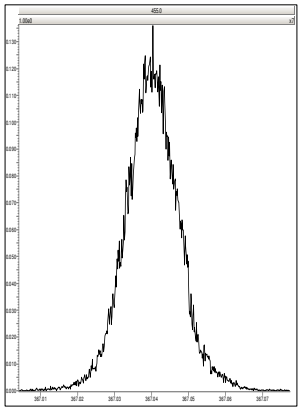
M 416.9760 R 12623



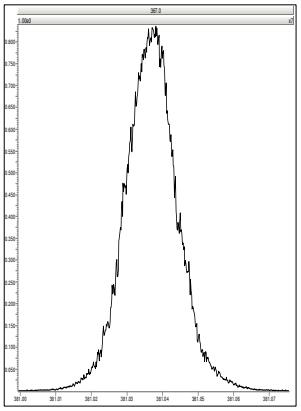
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Saturday, September 21, 2019 12:05:28 Eastern Standard Time

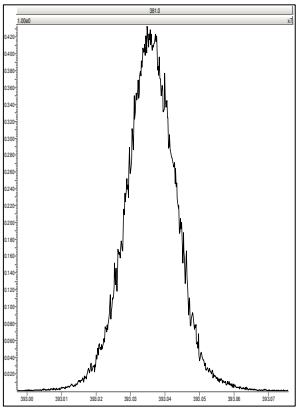
M 366.9792 R 10685



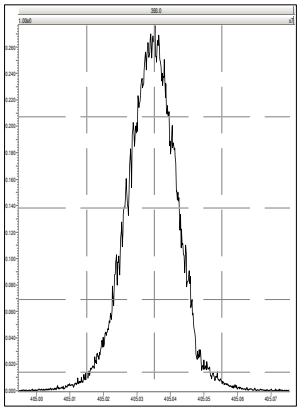
M 380.9760 R 10776



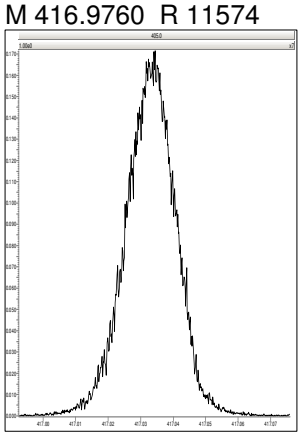
M 392.9760 R 10916



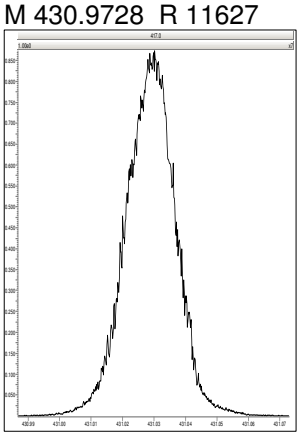
M 404.9760 R 11263



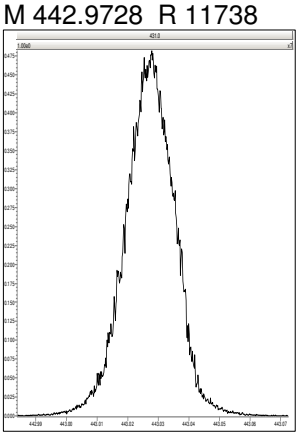
M 416.9760 R 11574



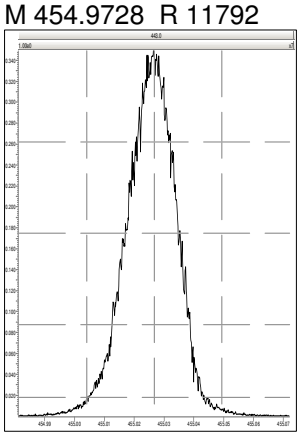
M 430.9728 R 11627



M 442.9728 R 11738



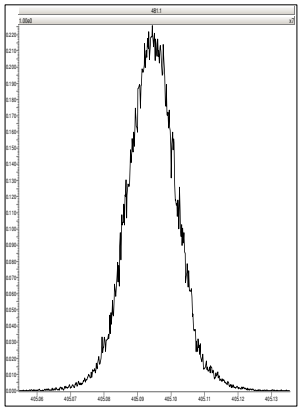
M 454.9728 R 11792



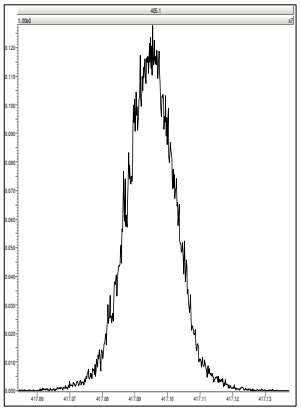
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Saturday, September 21, 2019 12:05:56 Eastern Standard Time

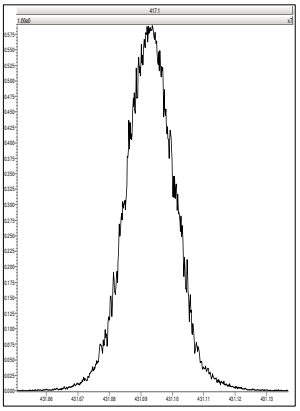
M 404.9760 R 11159



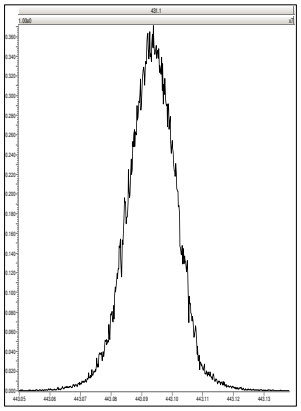
M 416.9760 R 12197



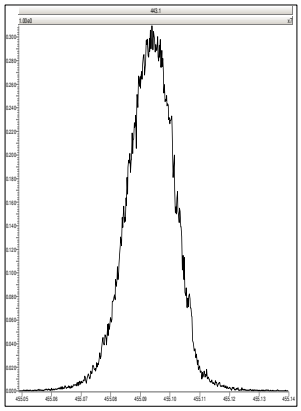
M 430.9728 R 11468



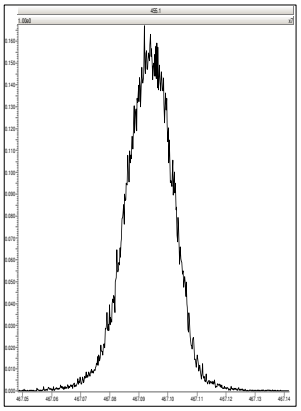
M 442.9728 R 12135



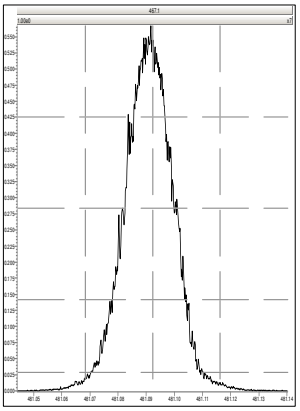
M 454.9728 R 12137



M 466.9728 R 12255



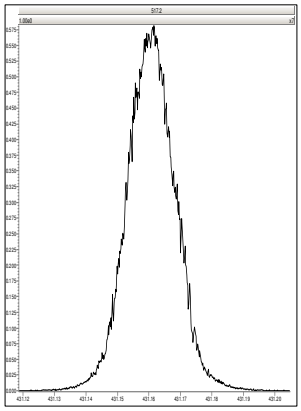
M 480.9696 R 12254



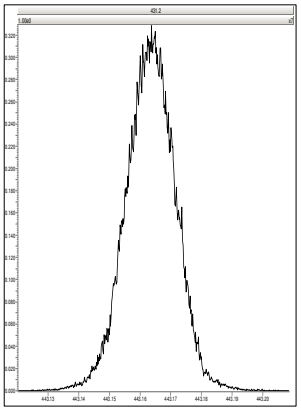
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Saturday, September 21, 2019 12:06:23 Eastern Standard Time

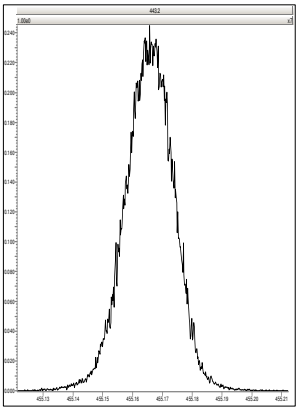
M 430.9728 R 12257



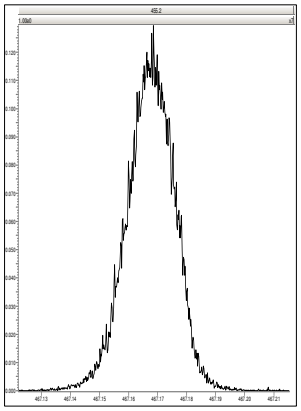
M 442.9728 R 12020



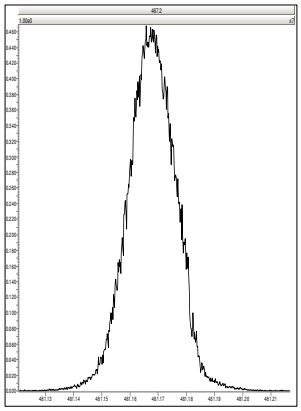
M 454.9728 R 12019



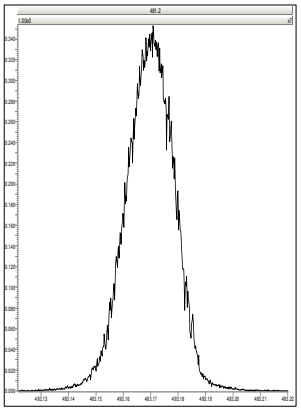
M 466.9728 R 12436



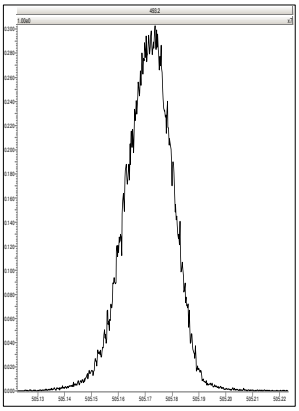
M 480.9696 R 12623



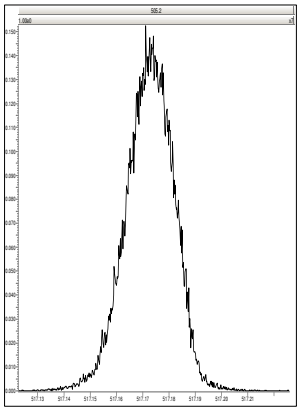
M 492.9696 R 12195



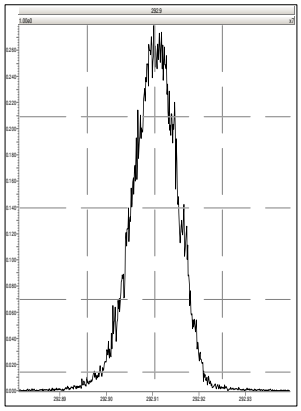
M 504.9696 R 12498



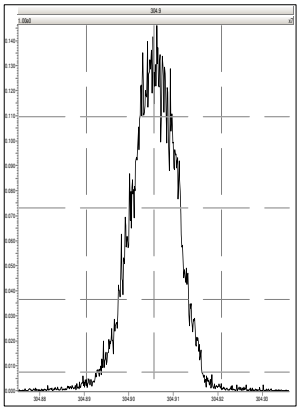
M 516.9697 R 12320



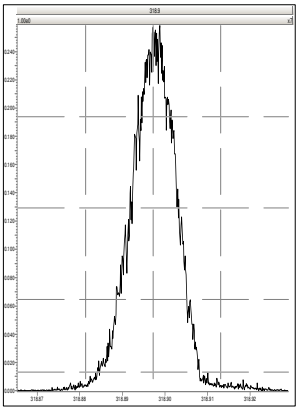
M 292.9824 R 12969



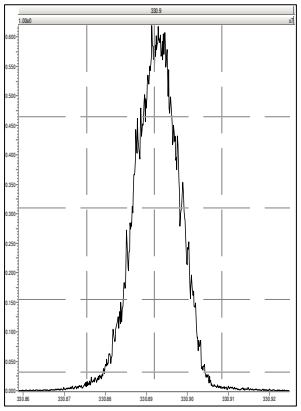
M 304.9824 R 13106



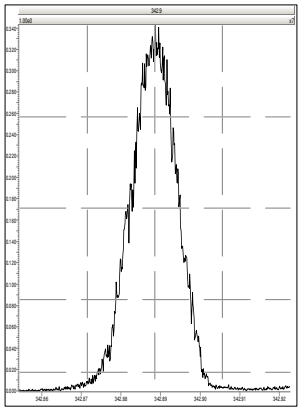
M 318.9792 R 13586



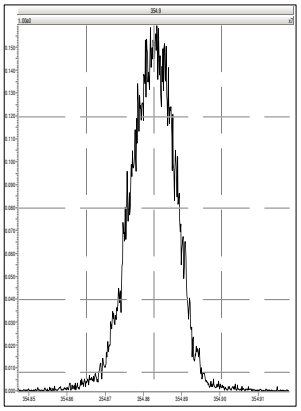
M 330.9792 R 13297



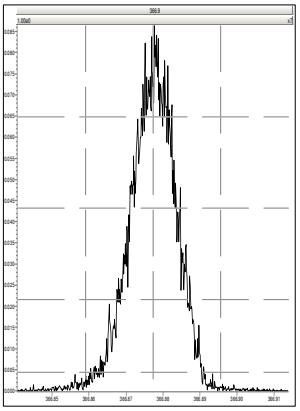
M 342.9792 R 13405



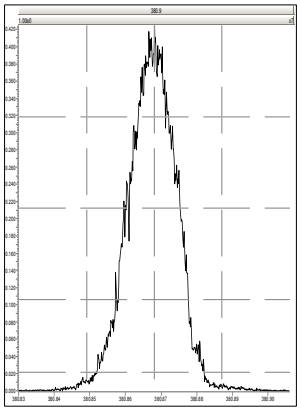
M 354.9792 R 13213



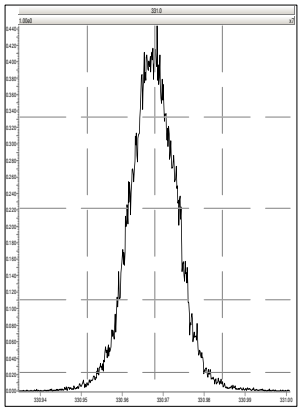
M 366.9792 R 13446



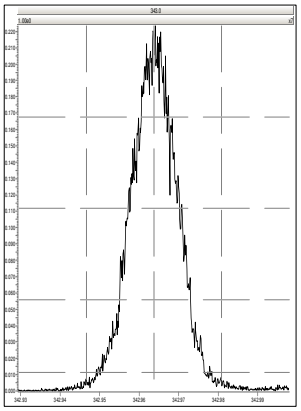
M 380.9760 R 12661



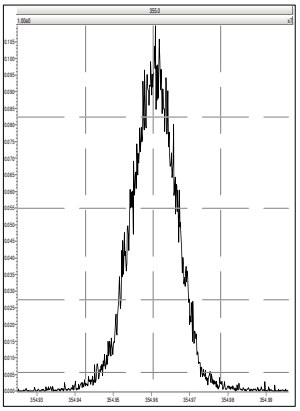
M 330.9792 R 12378



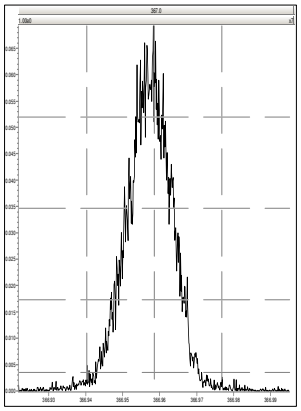
M 342.9792 R 12695



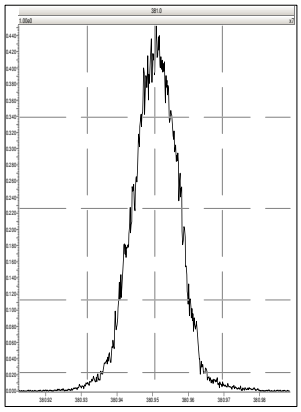
M 354.9792 R 13488



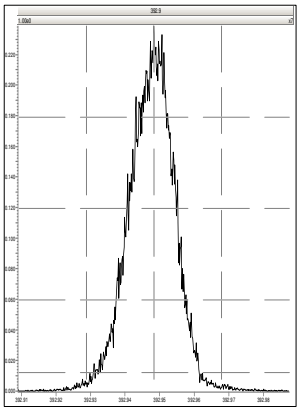
M 366.9792 R 13335



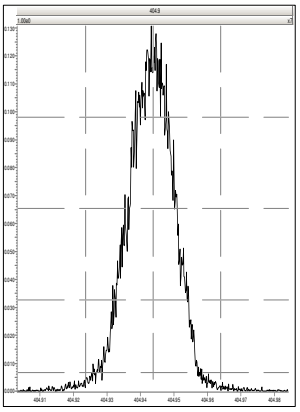
M 380.9760 R 13406



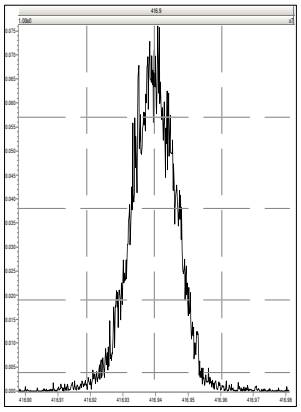
M 392.9760 R 13378



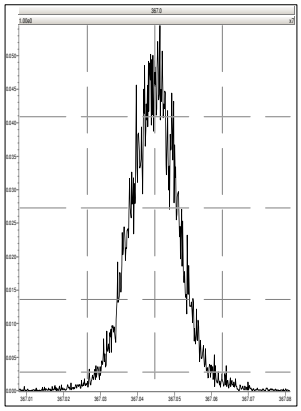
M 404.9760 R 13721



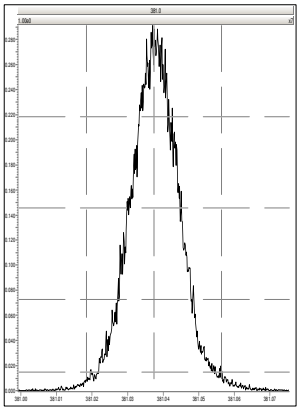
M 416.9760 R 13727



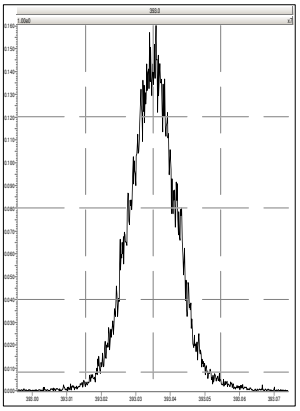
M 366.9792 R 12965



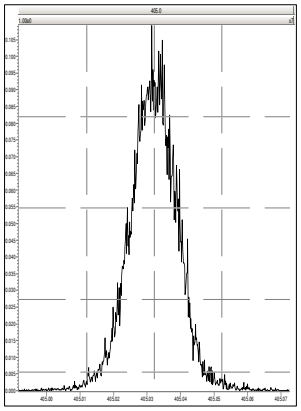
M 380.9760 R 11494



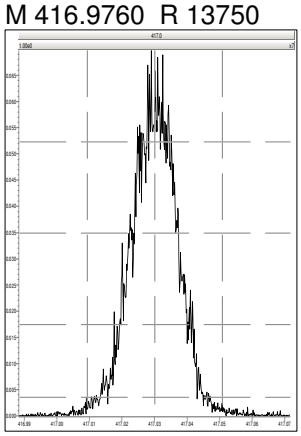
M 392.9760 R 12501



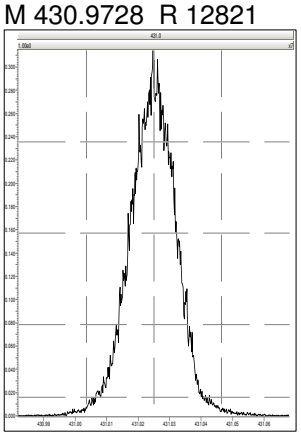
M 404.9760 R 13404



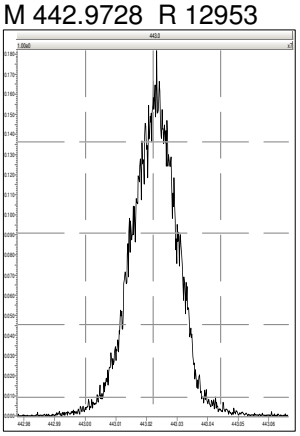
M 416.9760 R 13750



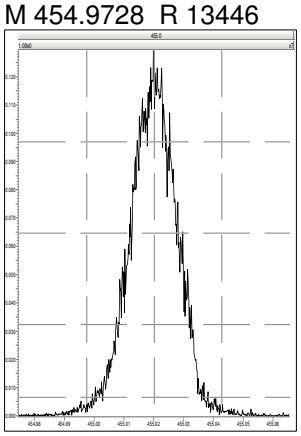
M 430.9728 R 12821



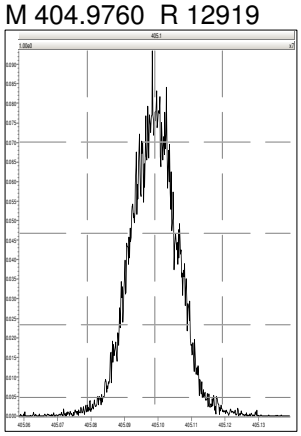
M 442.9728 R 12953



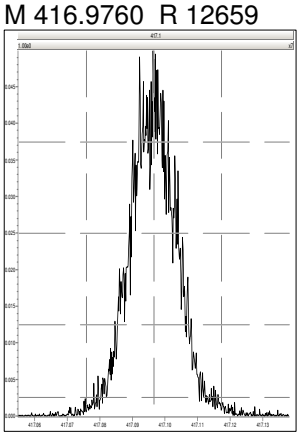
M 454.9728 R 13446



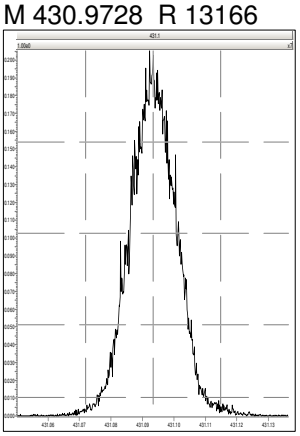
M 404.9760 R 12919



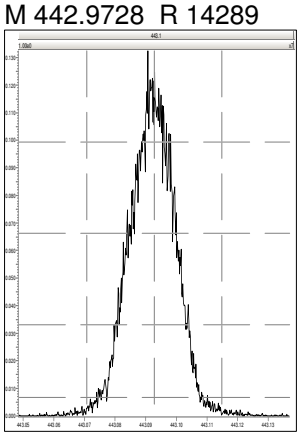
M 416.9760 R 12659



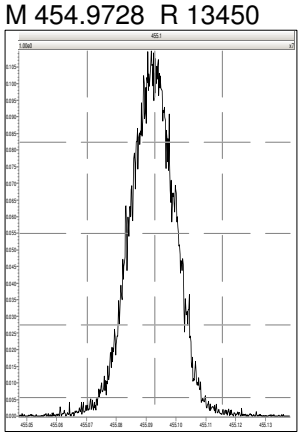
M 430.9728 R 13166



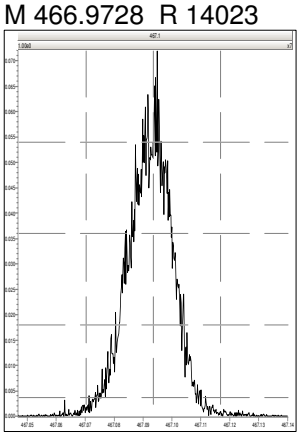
M 442.9728 R 14289



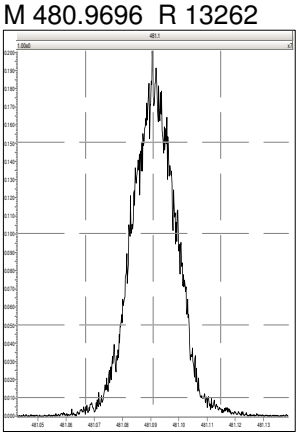
M 454.9728 R 13450



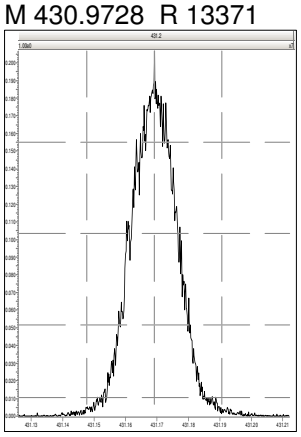
M 466.9728 R 14023



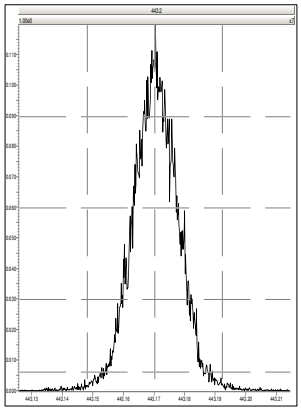
M 480.9696 R 13262



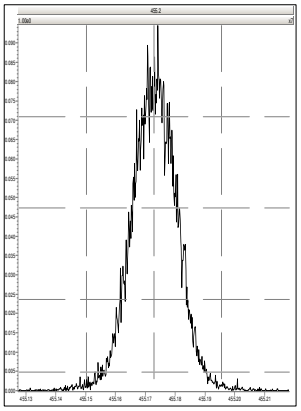
M 430.9728 R 13371



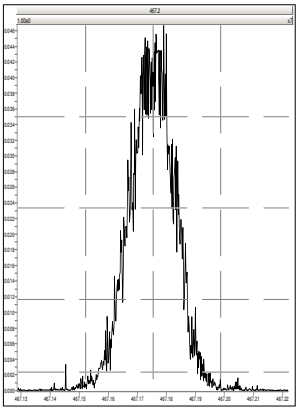
M 442.9728 R 13566



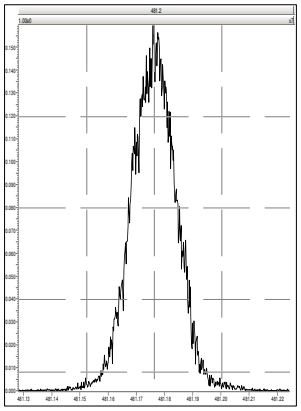
M 454.9728 R 13368



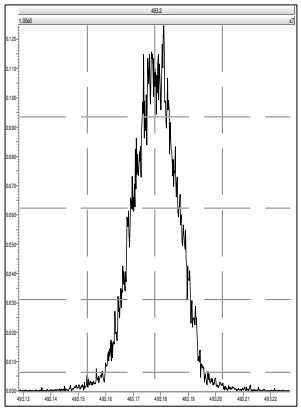
M 466.9728 R 13715



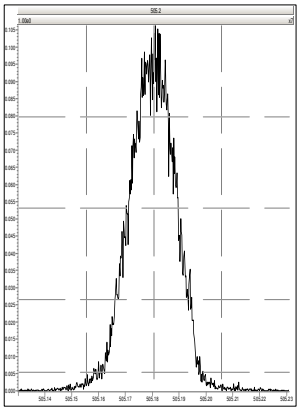
M 480.9696 R 13851



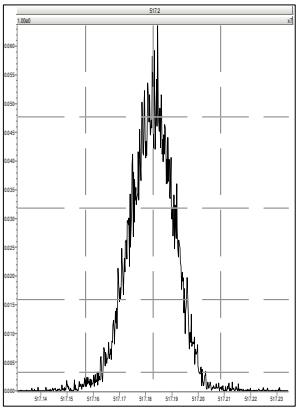
M 492.9696 R 13930



M 504.9696 R 13774



M 516.9697 R 13552



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b21sep19a-13.qld

Last Altered: Monday, September 23, 2019 08:39:18 Eastern Standard Time
Printed: Monday, September 23, 2019 08:42:37 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

	Name	RT
1	First TCDF	26.08
2	Last TCDF	31.85
3	First PeCDF	31.85
4	Last PeCDF	34.52
5	First HxCDF	35.03
6	Last HxCDF	37.31
7	First HpCDF	38.80
8	Last HpCDF	40.68
9	OCDF	44.51
10	First TCDD	27.79
11	2378-TCDD	31.17
12	Last TCDD	31.78
13	First PeCDD	32.76
14	Last PeCDD	34.34
15	First HxCDD	35.45
16	Last HxCDD	37.00
17	First HpCDD	39.12
18	Last HpCDD	40.03
19	OCDD	44.24

Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

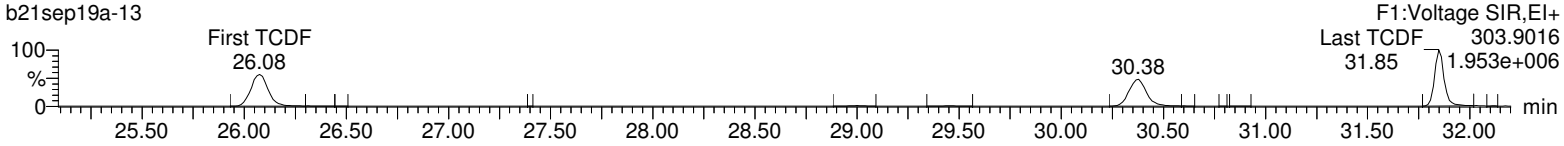
Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b21sep19a-13.qld

Last Altered: Monday, September 23, 2019 08:39:18 Eastern Standard Time
Printed: Monday, September 23, 2019 08:42:37 Eastern Standard Time

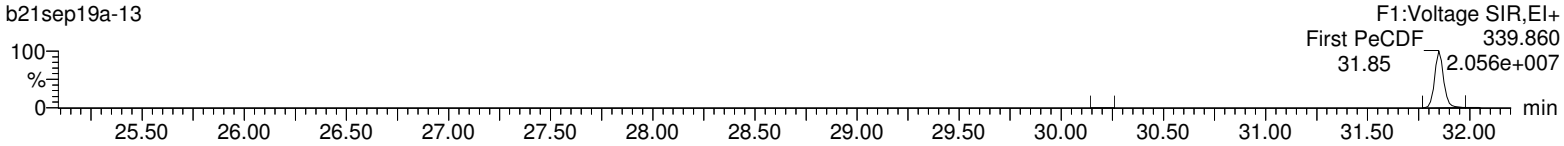
Method: C:\MassLynx\DEFAULT.PRO\MethDB\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

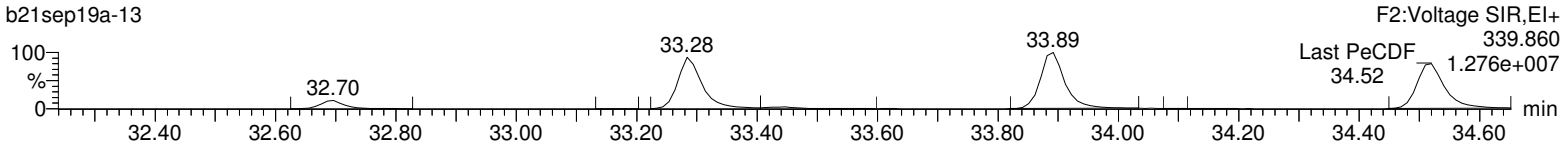
First TCDF



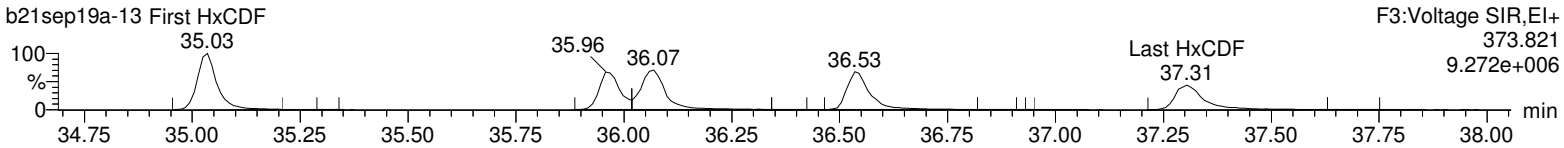
First PeCDF



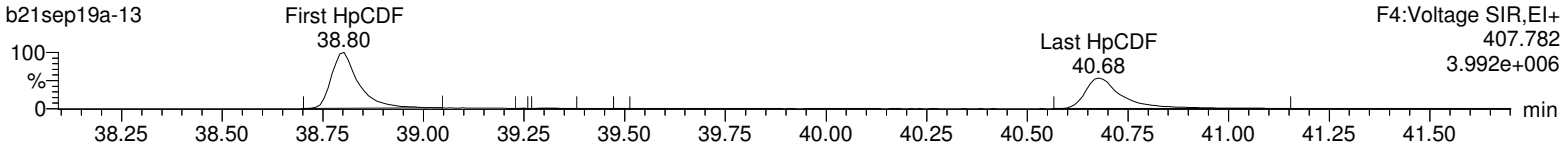
Last PeCDF



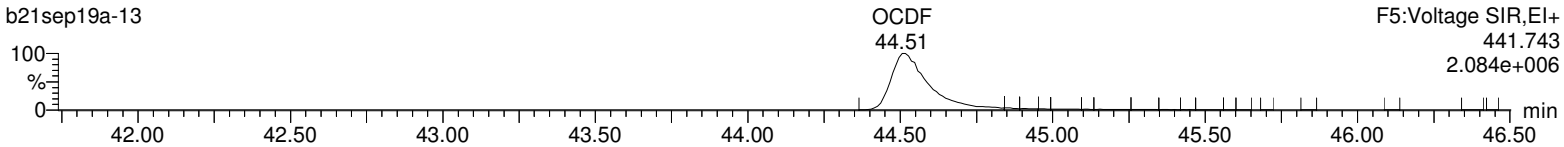
First HxCDF



First HpCDF



OCDF



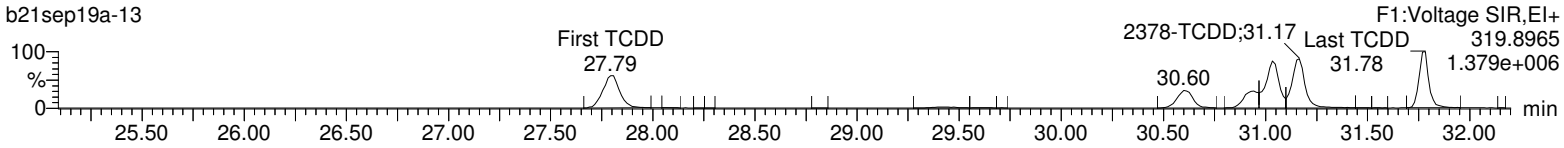
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b21sep19a-13.qld

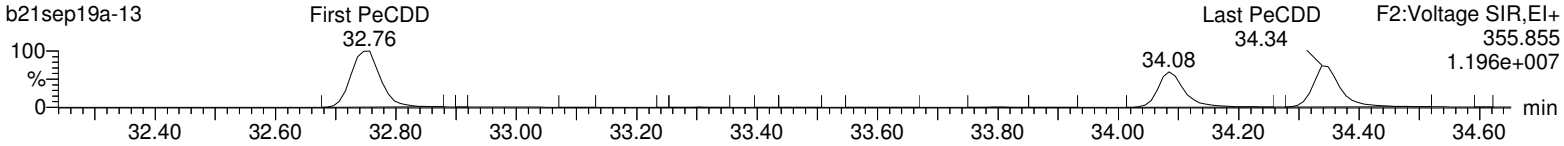
Last Altered: Monday, September 23, 2019 08:39:18 Eastern Standard Time
Printed: Monday, September 23, 2019 08:42:37 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

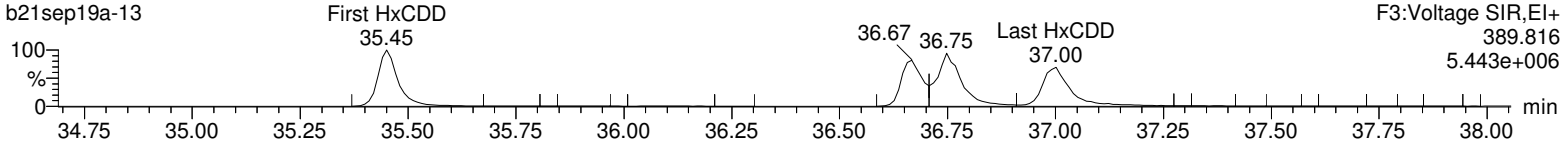
First TCDD



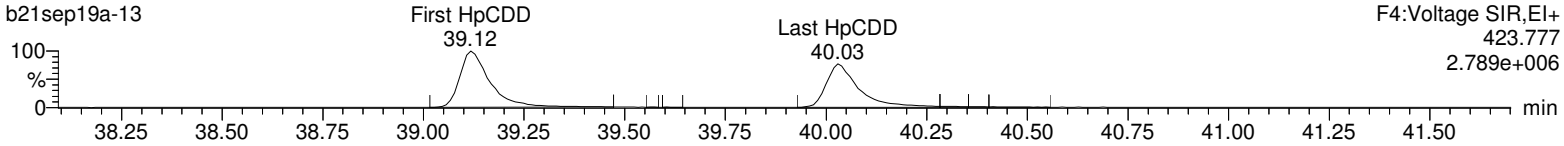
First PeCDD



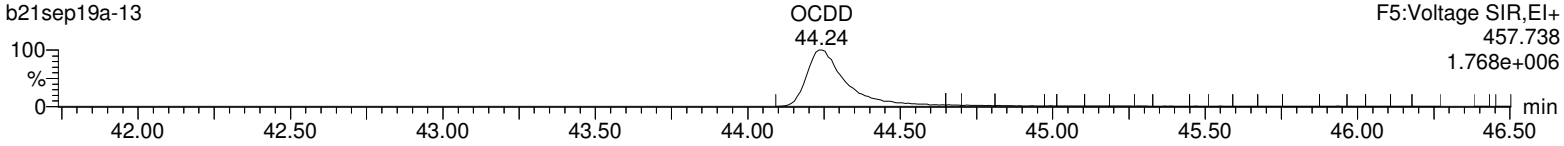
First HxCDD



First HpCDD



OCDD

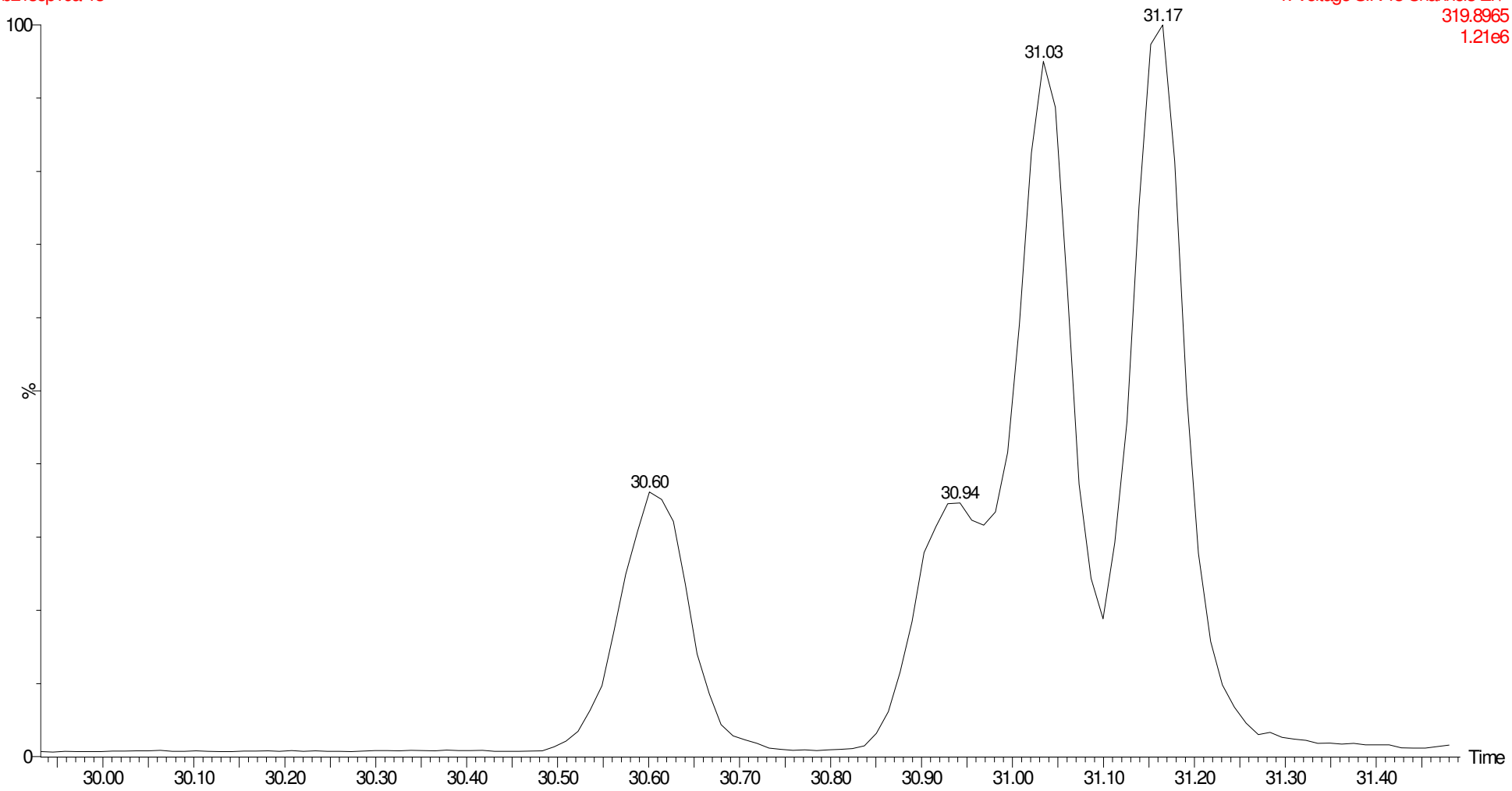


COLUMN CHECK (2378-TCDD 19%)

CS3WT UD190902-02.1 **HRP763_1** **21-Sep-201921:47:06**

b21sep19a-13

1: Voltage SIR 13 Channels EI+
319.8965
1.21e6



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	8.82e4	1.11e5	1.99e5	31.17	1.001	0.79	NO	10.008	0.0344	0.891	0.891	0.1	1.20e6	1486	806.3	1.58e6	2399	660.0	dd	db
2	12378-PeCDD	3.84e5	2.50e5	6.34e5	34.08	1.000	1.54	NO	48.010	0.0998	0.816	0.850	-4.0	7.53e6	5122	1470.3	4.93e6	5564	886.2	bb	bb
3	123478-HxCDD	2.46e5	2.01e5	4.46e5	36.67	1.000	1.22	NO	47.300	0.120	0.883	0.934	-5.4	4.43e6	4466	991.5	3.45e6	3958	872.0	bd	bd
4	123678-HxCDD	3.35e5	2.75e5	6.10e5	36.75	1.000	1.22	NO	50.121	0.119	0.887	0.885	0.2	5.14e6	4466	1149.9	4.28e6	3958	1081.9	dd	dd
5	123789-HxCDD	2.90e5	2.34e5	5.24e5	37.00	1.007	1.24	NO	49.560	0.122	0.879	0.887	-0.9	3.77e6	4466	844.9	3.11e6	3958	786.7	dd	dd
6	1234678-HpCDD	1.99e5	1.94e5	3.93e5	40.03	1.000	1.03	NO	50.913	0.350	0.961	0.944	1.8	2.14e6	6083	351.8	2.04e6	5088	400.9	bd	bd
7	OCDD	2.67e5	3.07e5	5.74e5	44.24	1.000	0.87	NO	97.921	0.563	0.895	0.914	-2.1	1.76e6	5494	320.1	2.06e6	2952	697.4	bd	bd
8	2378-TCDF	9.21e4	1.18e5	2.10e5	30.38	1.001	0.78	NO	10.105	0.0417	0.902	0.893	1.1	9.33e5	1497	623.2	1.22e6	1934	630.8	bd	bb
9	12378-PeCDF	5.46e5	3.49e5	8.95e5	33.28	1.000	1.56	NO	51.472	0.0921	0.935	0.908	2.9	1.17e7	7930	1473.6	7.62e6	5230	1456.9	bd	bd
10	23478-PeCDF	5.98e5	3.81e5	9.79e5	33.89	1.000	1.57	NO	50.952	0.0820	0.990	0.971	1.9	1.27e7	7930	1601.1	8.23e6	5230	1573.2	bb	bb
11	123478-HxCDF	3.43e5	2.79e5	6.23e5	35.96	1.000	1.23	NO	51.749	0.171	1.175	1.135	3.5	6.21e6	7258	855.1	4.87e6	8570	567.7	bd	bd
12	123678-HxCDF	4.30e5	3.52e5	7.82e5	36.07	1.001	1.22	NO	52.376	0.184	1.104	1.054	4.8	6.49e6	7258	894.2	5.52e6	8570	644.5	dd	dd
13	234678-HxCDF	3.81e5	3.06e5	6.87e5	36.53	1.000	1.25	NO	53.709	0.186	1.214	1.130	7.4	6.24e6	7258	859.6	5.14e6	8570	600.2	bd	bd
14	123789-HxCDF	3.13e5	2.51e5	5.65e5	37.31	1.001	1.25	NO	52.497	0.295	1.116	1.063	5.0	4.05e6	7258	557.5	3.19e6	8570	372.5	bd	bd
15	1234678-HpCDF	3.15e5	3.14e5	6.29e5	38.80	1.000	1.00	NO	52.626	0.155	1.254	1.191	5.3	3.96e6	4454	890.1	3.86e6	4184	923.7	bb	bd
16	1234789-HpCDF	2.28e5	2.17e5	4.45e5	40.68	1.000	1.05	NO	53.302	0.260	1.308	1.227	6.6	2.16e6	4454	486.0	2.10e6	4184	501.3	bb	bd
17	OCDF	2.97e5	3.34e5	6.31e5	44.51	1.006	0.89	NO	96.734	0.379	0.983	1.017	-3.3	2.07e6	2606	796.3	2.32e6	3719	624.8	bd	bd
18	13C-2378-TCDD	9.48e5	1.29e6	2.24e6	31.14	1.018	0.74	NO	99.694	0.0697	1.148	1.151	-0.3	1.35e7	3711	3625.1	1.77e7	3139	5640.8	bb	bd
19	13C-12378-PeCDD	9.40e5	6.14e5	1.55e6	34.07	1.114	1.53	NO	102.341	0.111	0.797	0.779	2.3	1.90e7	3398	5601.9	1.24e7	3969	3123.4	bb	bb
20	13C-123478-HxCDD	5.51e5	4.59e5	1.01e6	36.66	0.991	1.20	NO	98.459	0.137	0.777	0.789	-1.5	1.03e7	3978	2579.5	8.37e6	3576	2342.0	bd	bd
21	13C-123678-HxCDD	7.61e5	6.14e5	1.37e6	36.75	0.993	1.24	NO	99.987	0.103	1.057	1.057	-0.0	1.11e7	3978	2786.3	8.86e6	3576	2478.9	dd	dd
22	13C-1234678-HpCDD	4.21e5	3.97e5	8.18e5	40.02	1.082	1.06	NO	99.345	0.202	0.629	0.633	-0.7	4.35e6	3868	1125.3	4.21e6	5033	835.9	bd	bb
23	13C-OCDD	6.09e5	6.75e5	1.28e6	44.22	1.196	0.90	NO	180.759	0.273	0.494	0.546	-9.6	3.89e6	4209	924.8	4.44e6	6194	716.9	bd	bd
24	13C-2378-TCDF	1.00e6	1.33e6	2.33e6	30.34	0.992	0.75	NO	91.979	0.0733	1.195	1.299	-8.0	9.92e6	4781	2074.2	1.32e7	3347	3932.5	bb	bb
25	13C-12378-PeCDF	1.16e6	7.53e5	1.91e6	33.27	1.088	1.54	NO	93.935	0.157	0.982	1.046	-6.1	2.39e7	8998	2655.1	1.56e7	5056	3084.2	bb	bb
26	13C-23478-PeCDF	1.20e6	7.78e5	1.98e6	33.88	1.108	1.54	NO	94.625	0.153	1.015	1.073	-5.4	2.51e7	8998	2785.8	1.62e7	5056	3197.3	bb	bb
27	13C-123478-HxCDF	3.57e5	7.03e5	1.06e6	35.96	0.972	0.51	NO	89.376	0.227	0.815	0.912	-10.6	6.89e6	6520	1056.1	1.45e7	7919	1831.5	bd	bd
28	13C-123678-HxCDF	4.91e5	9.25e5	1.42e6	36.05	0.975	0.53	NO	91.661	0.174	1.089	1.188	-8.3	7.06e6	6520	1082.3	1.35e7	7919	1698.6	dd	db
29	13C-234678-HxCDF	3.91e5	7.40e5	1.13e6	36.52	0.987	0.53	NO	86.140	0.205	0.870	1.010	-13.9	6.50e6	6520	996.8	1.25e7	7919	1576.5	bb	bb
30	13C-123789-HxCDF	3.47e5	6.65e5	1.01e6	37.28	1.008	0.52	NO	91.386	0.243	0.778	0.852	-8.6	4.33e6	6520	663.7	8.24e6	7919	1040.4	bd	bd
31	13C-1234678-HpCDF	3.15e5	6.89e5	1.00e6	38.79	1.049	0.46	NO	98.433	0.197	0.772	0.784	-1.6	3.68e6	4158	884.7	8.58e6	6596	1300.5	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.11e5	4.70e5	6.81e5	40.67	1.099	0.45	NO	93.194	0.275	0.523	0.562	-6.8	2.09e6	4158	502.9	4.53e6	6596	686.4	bb	bb
33	13C-1234-TCDD	8.51e5	1.10e6	1.95e6	30.59	0.000	0.77	NO	100.000	0.0803	1.000	1.000	0.0	9.31e6	3711	2509.3	1.23e7	3139	3909.6	bb	bb
34	13C-123789-HxCDD	7.21e5	5.79e5	1.30e6	36.99	0.000	1.25	NO	100.000	0.108	1.000	1.000	0.0	9.66e6	3978	2429.4	7.62e6	3576	2130.8	dd	dd
35	37Cl-2378-TCDD	2.00e5		2.00e5	31.15	1.018			9.550	0.0184	1.028	1.077	-4.5	2.87e6	1692	1698.8				bb	

Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

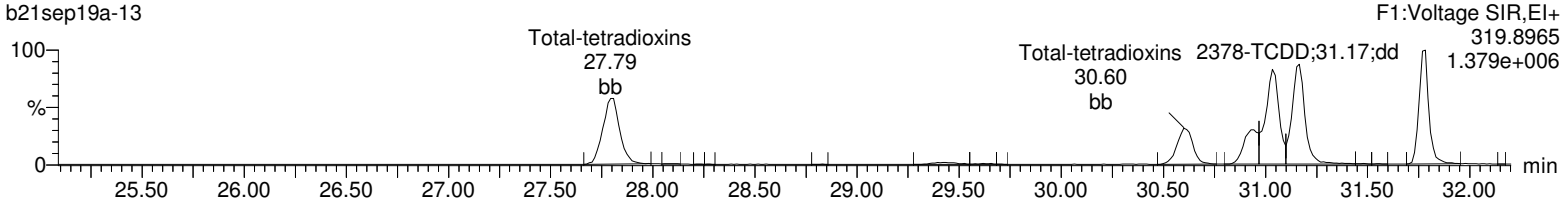
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

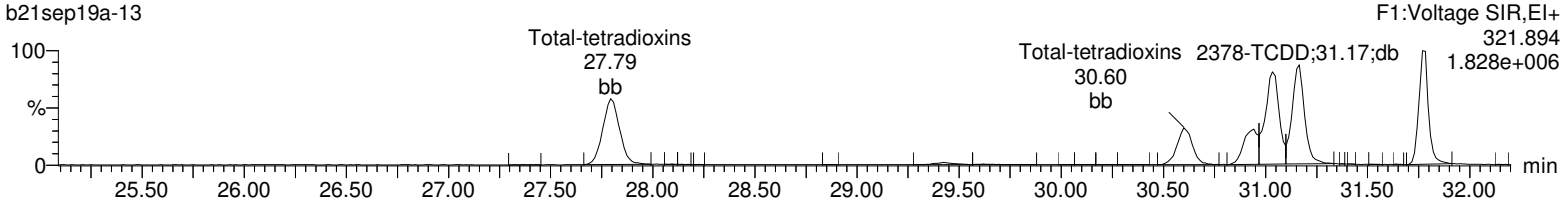
Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

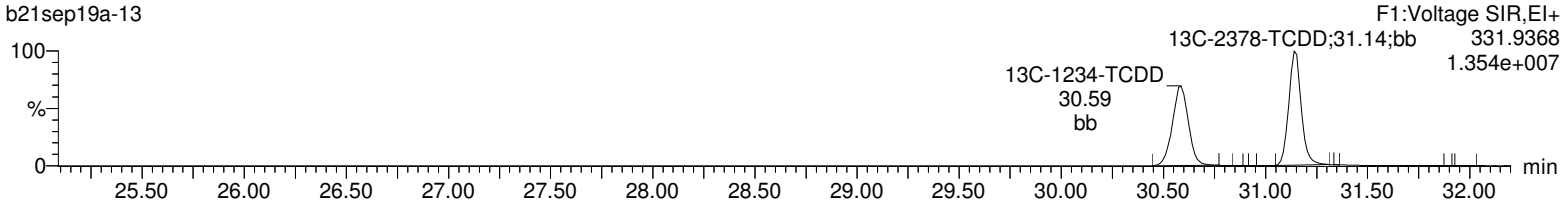
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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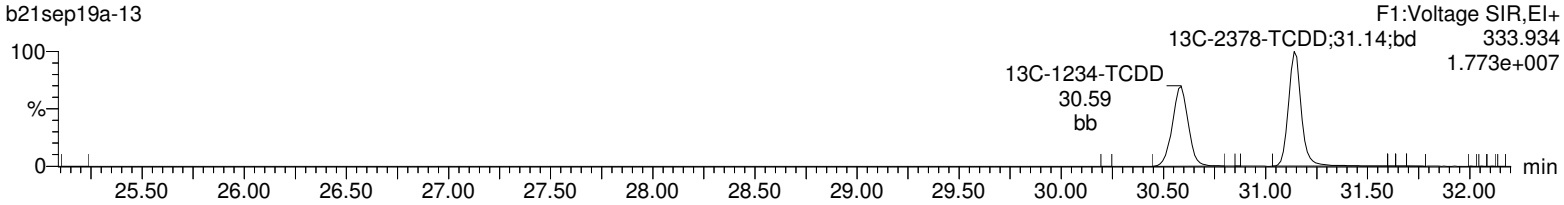
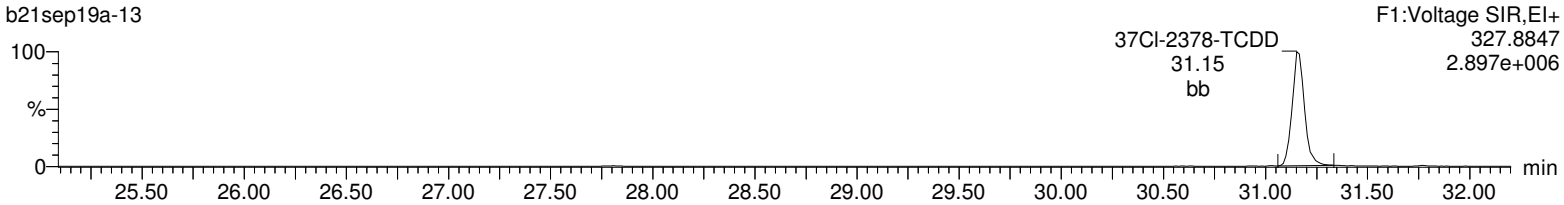
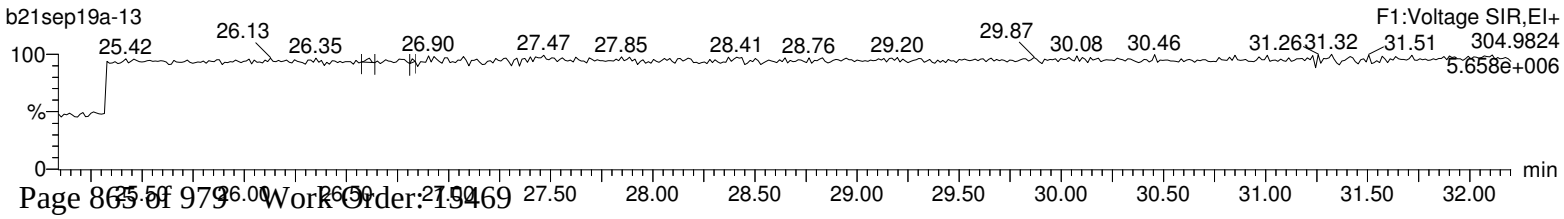


37Cl-2378-TCDD



Lock Mass F1



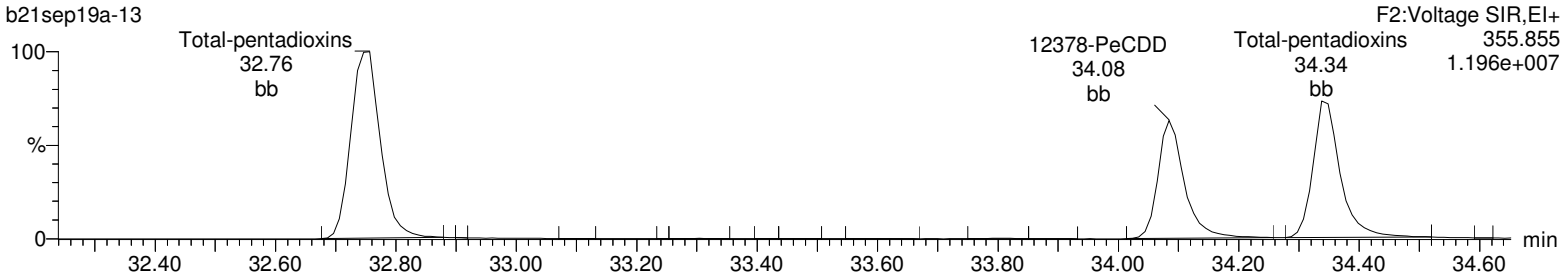
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

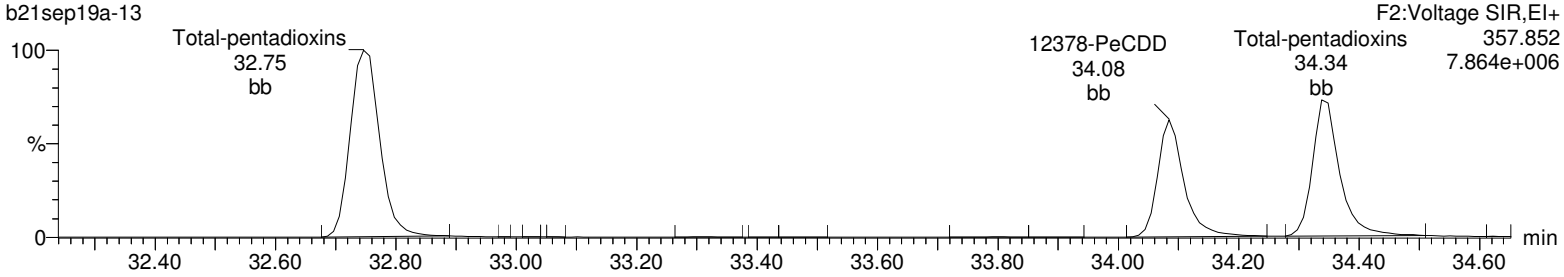
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

Total-pentadioxins



Total-pentadioxins



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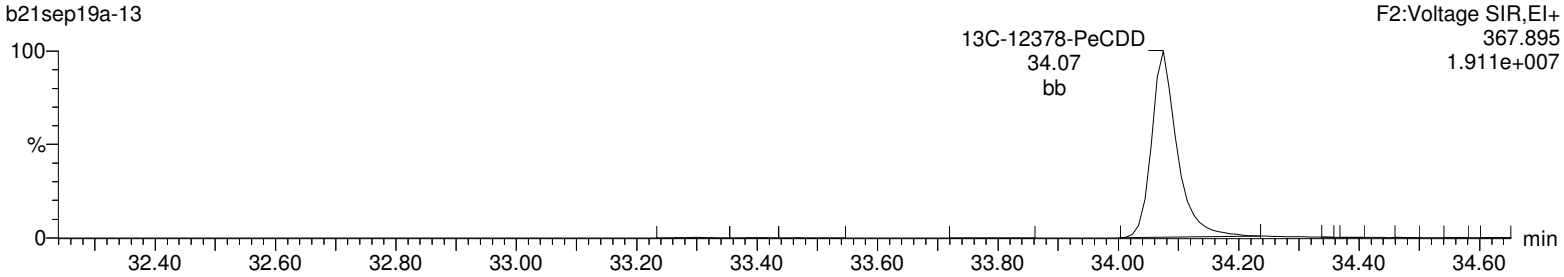

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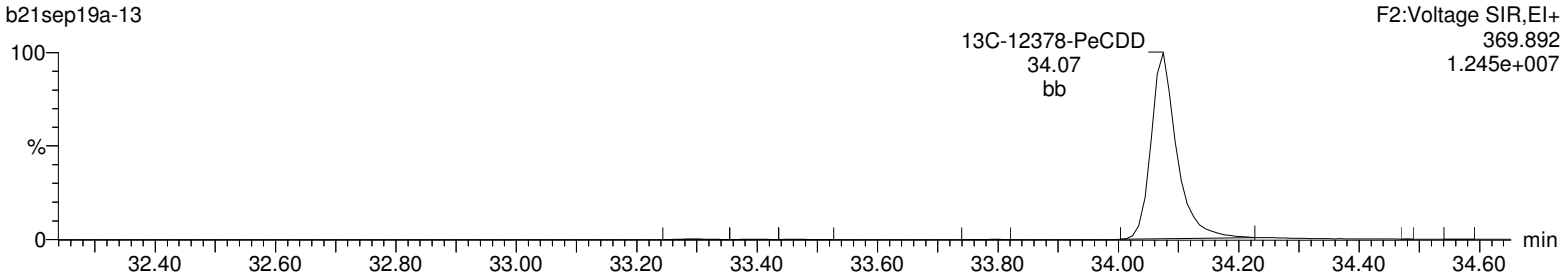
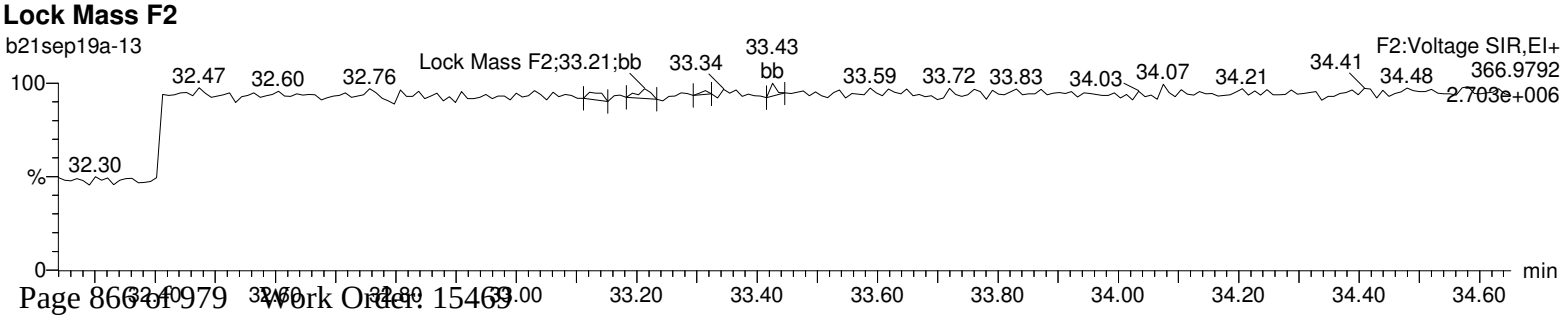


Lock Mass F2



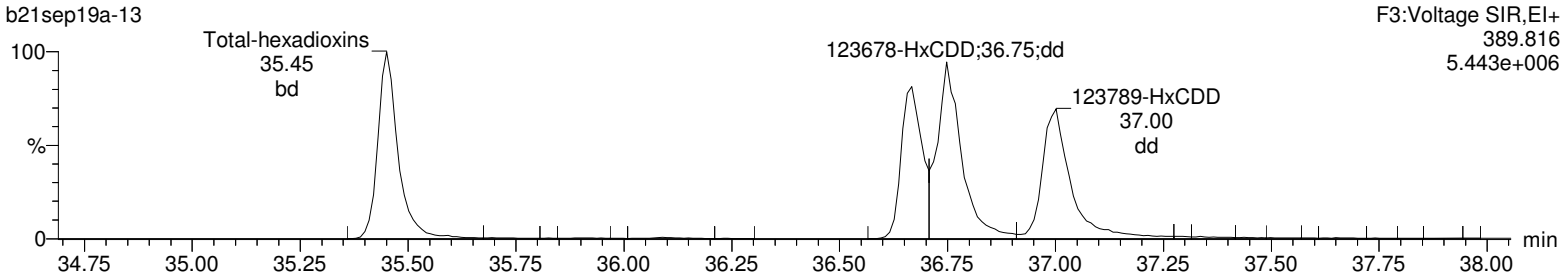
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

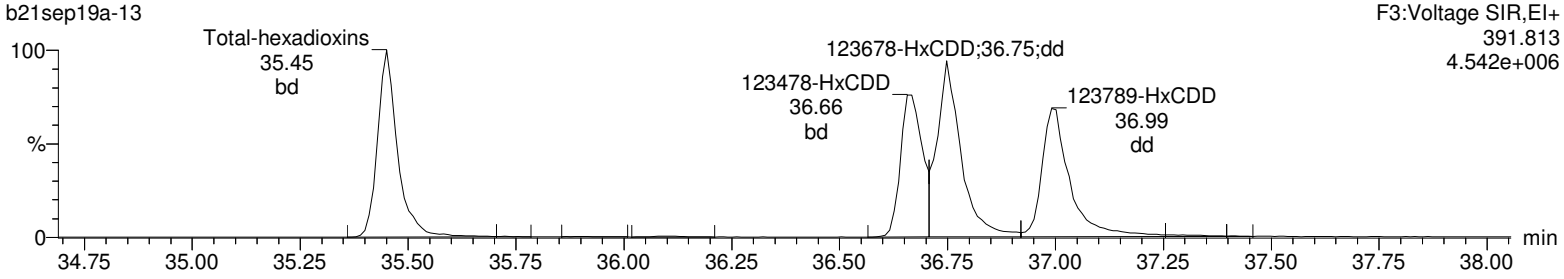
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

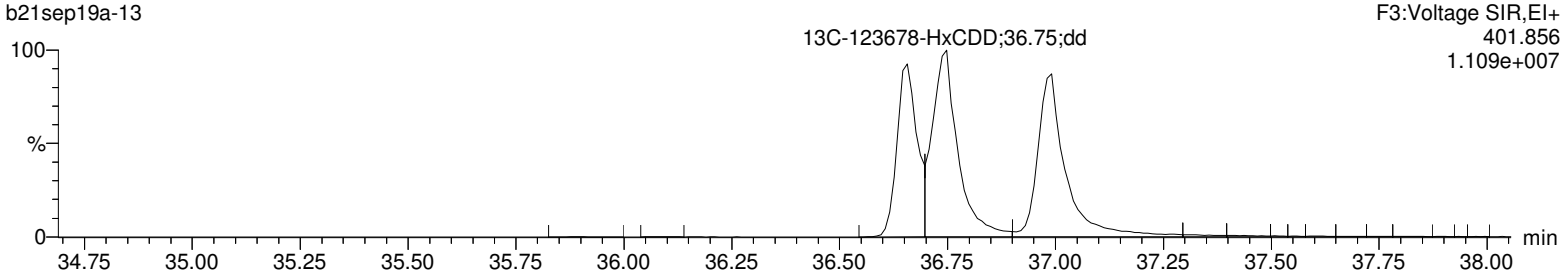
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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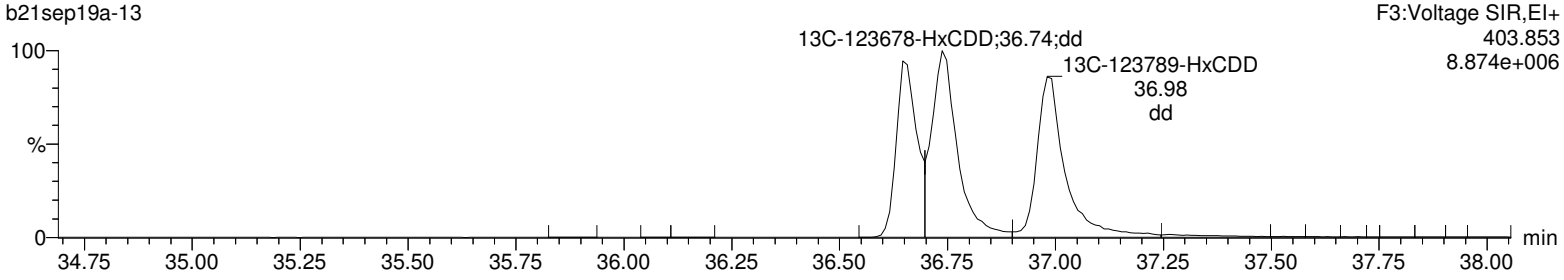
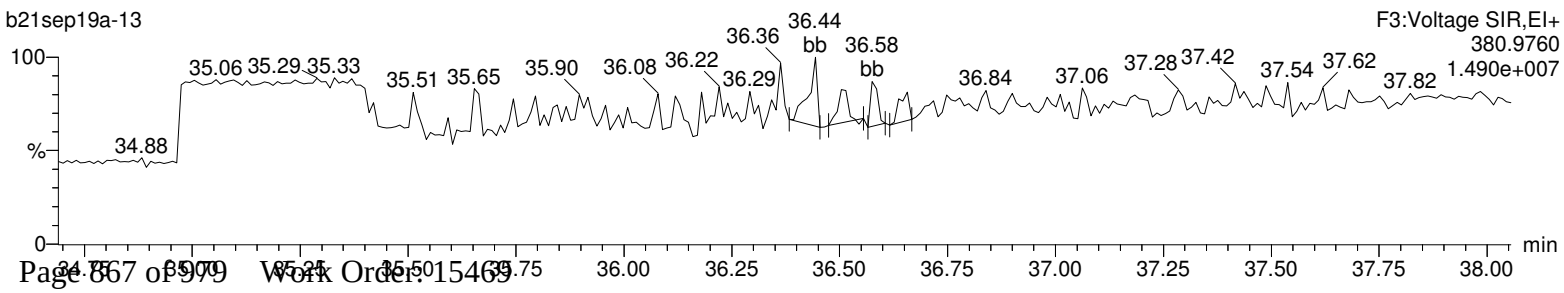


Lock Mass F3



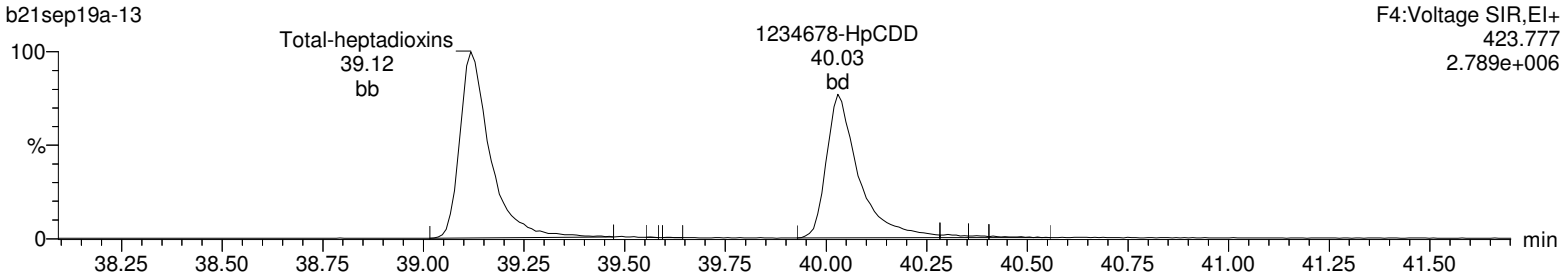
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

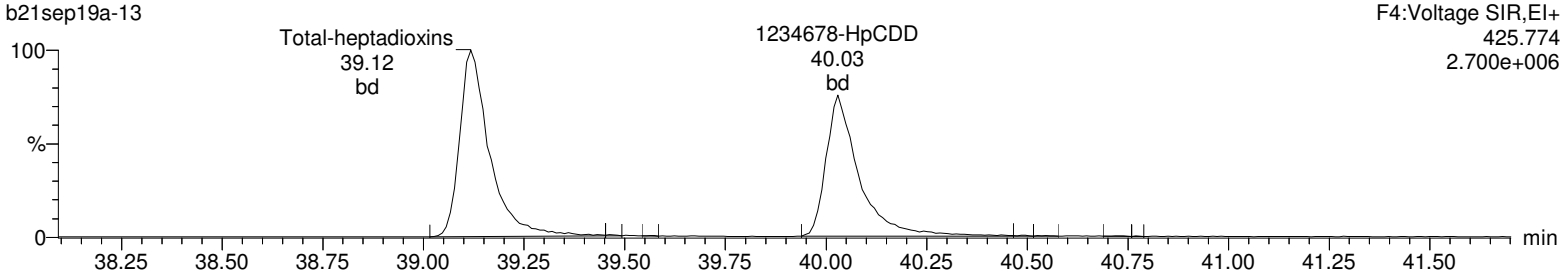
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

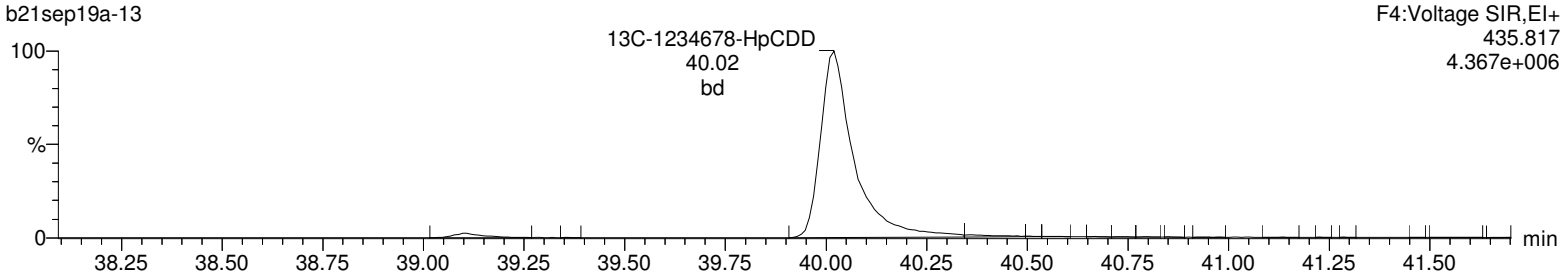
Total-heptadioxins



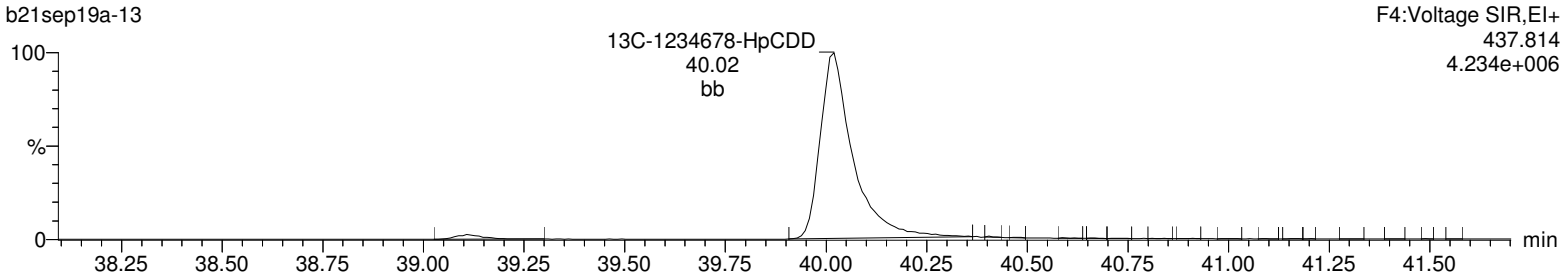
Total-heptadioxins



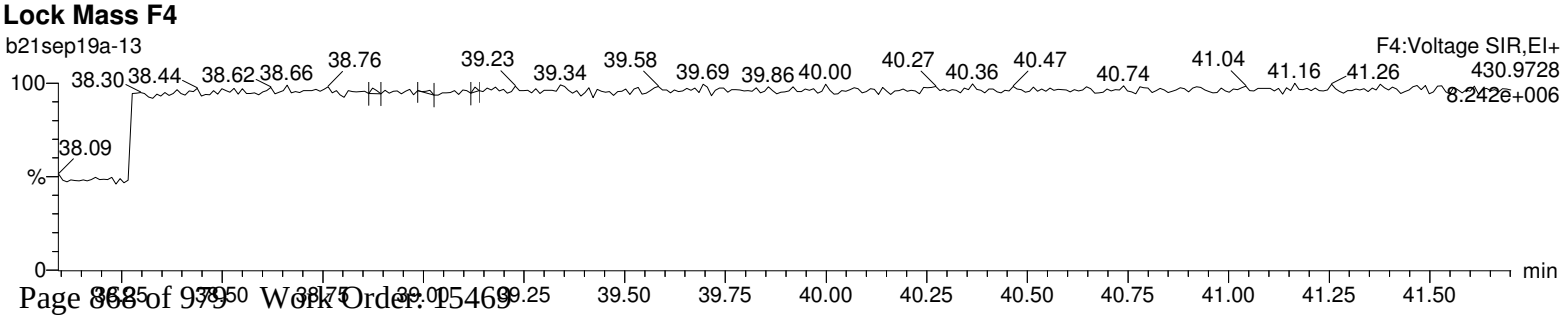
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



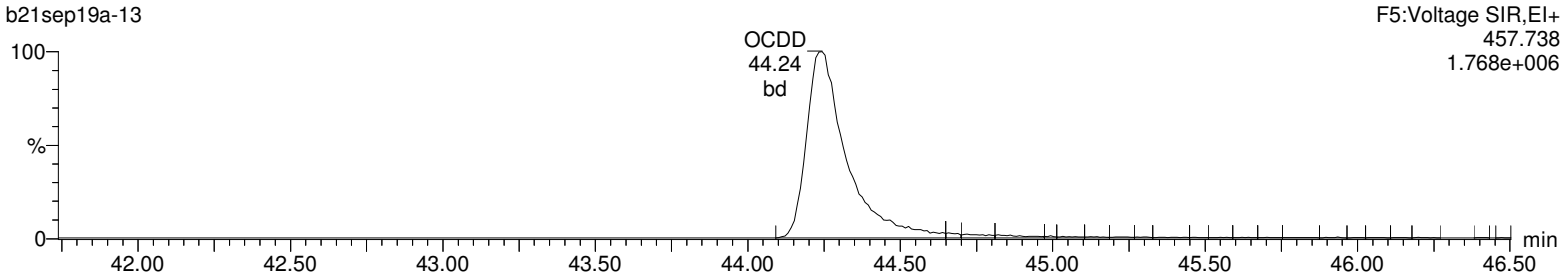
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

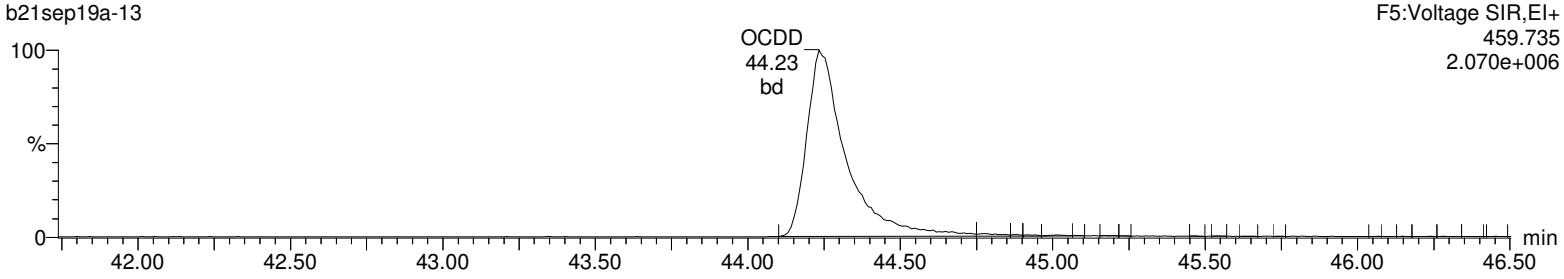
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

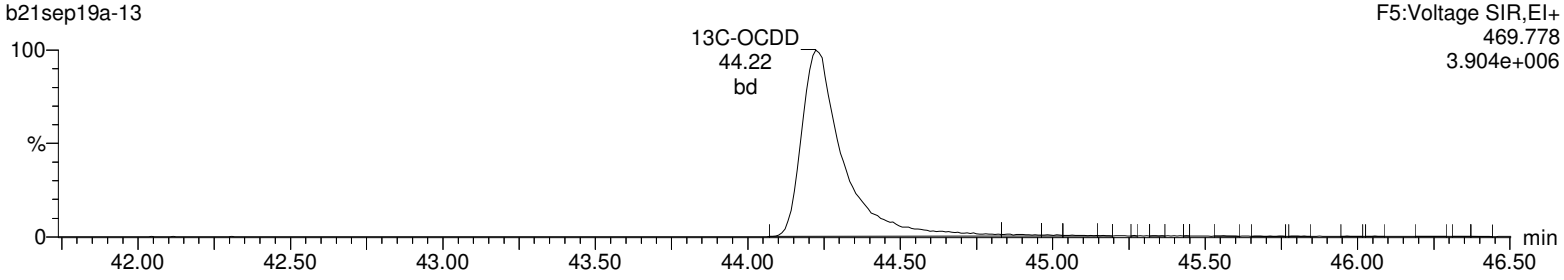
OCDD



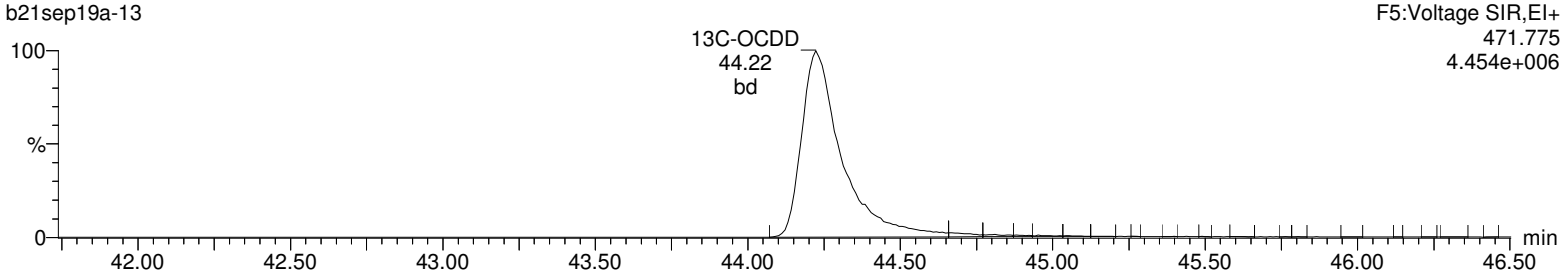
OCDD



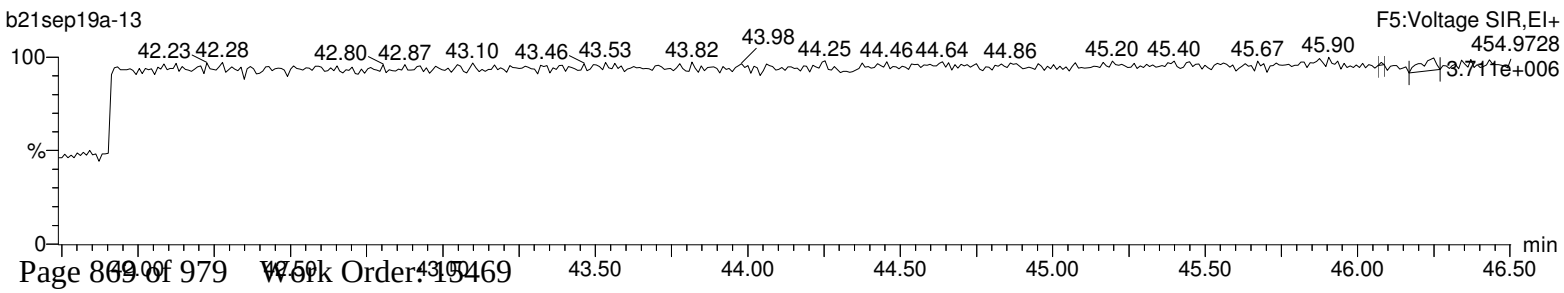
13C-OCDD



13C-OCDD



Lock Mass F5



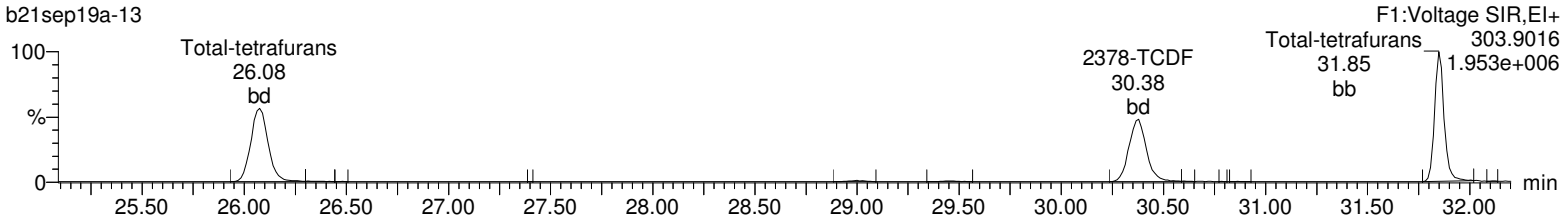
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

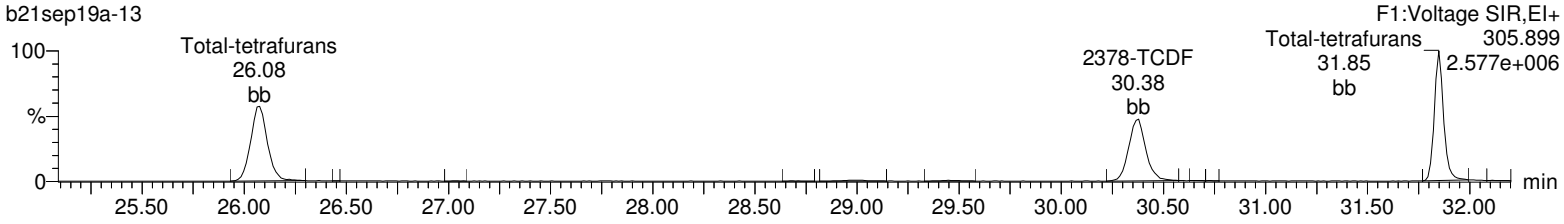
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

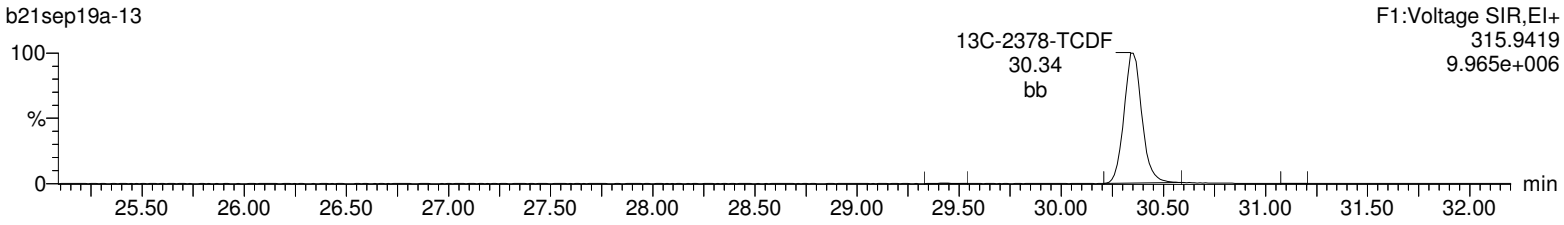
Total-tetrafurans



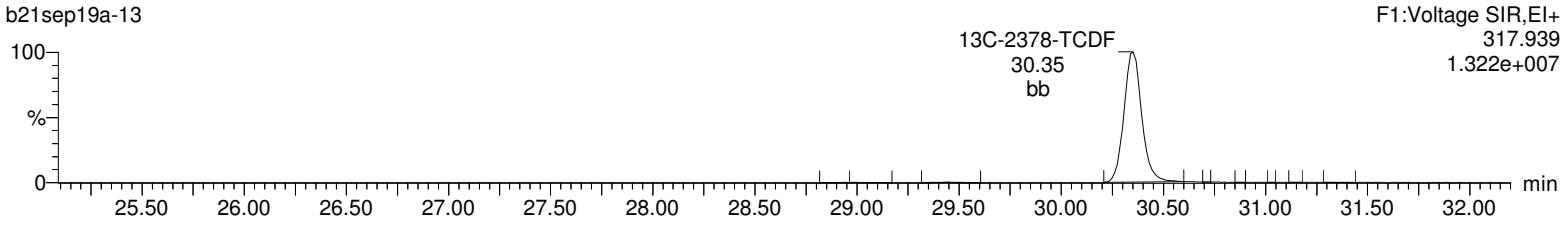
Total-tetrafurans



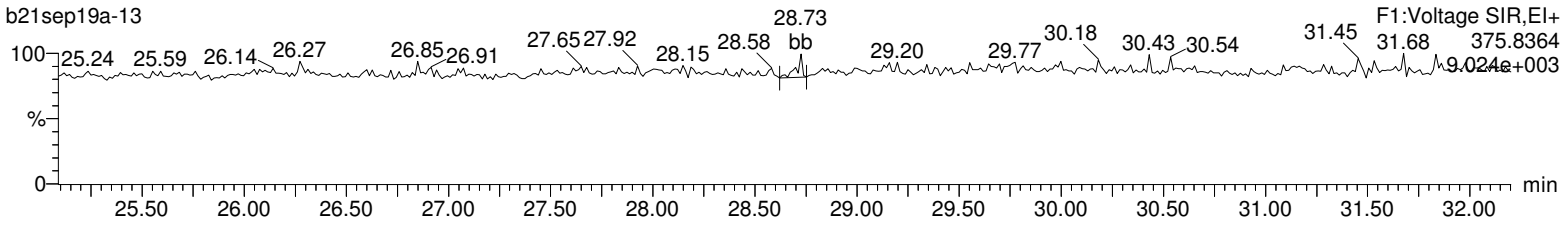
13C-2378-TCDF



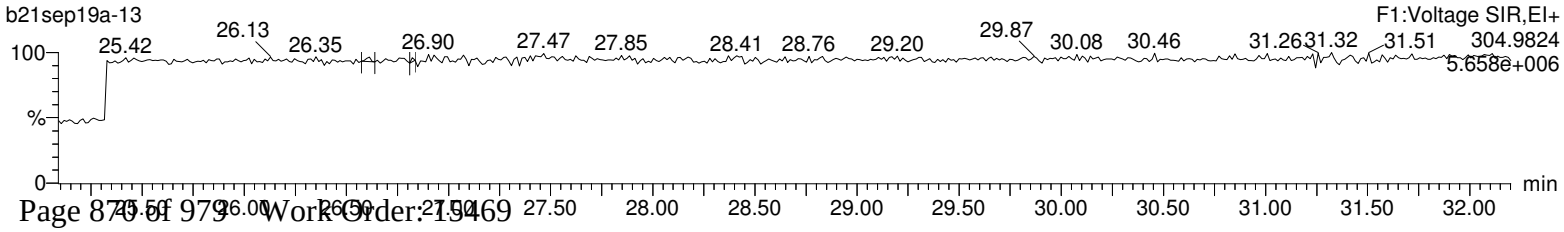
13C-2378-TCDF



HxDPE



Lock Mass F1



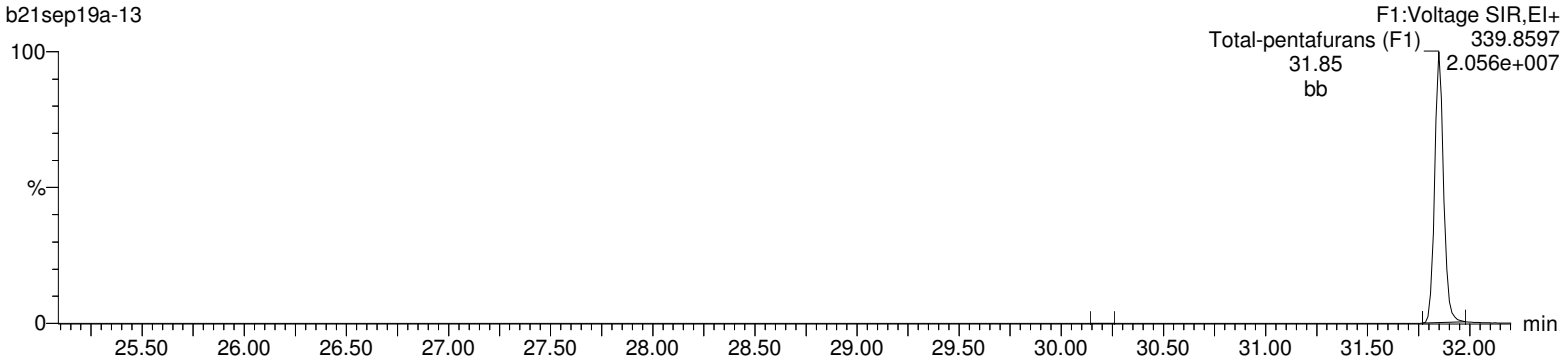
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

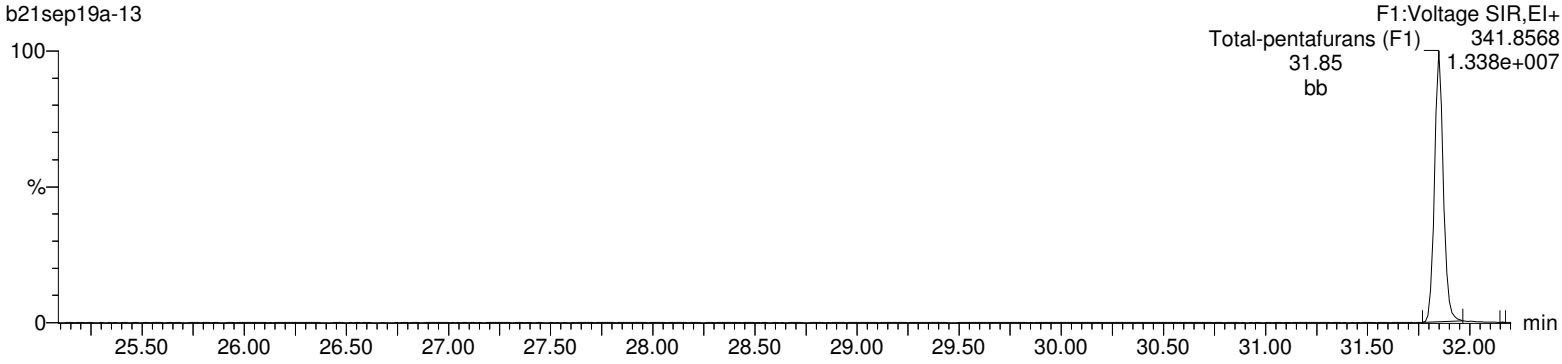
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

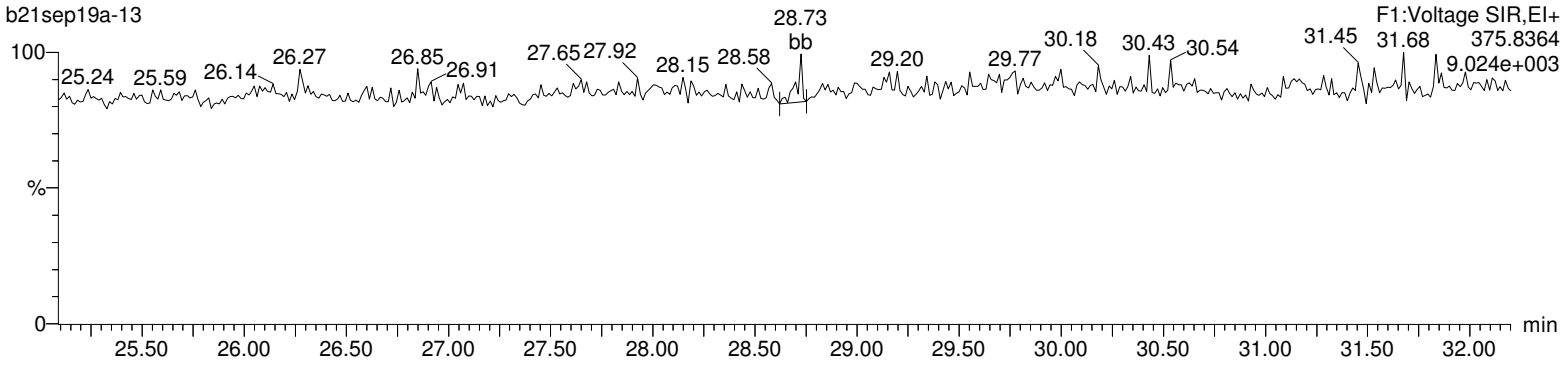
Total-pentafurans (F1)



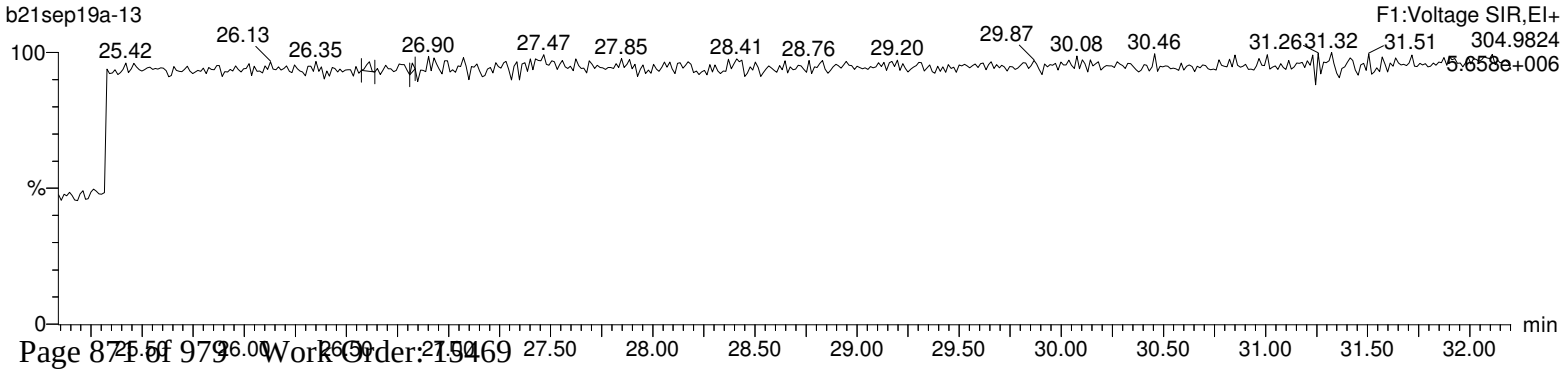
Total-pentafurans (F1)



HxDPE



Lock Mass F1



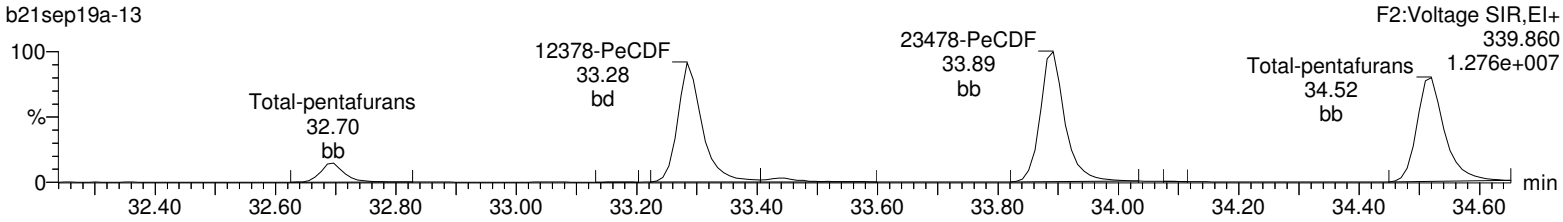
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

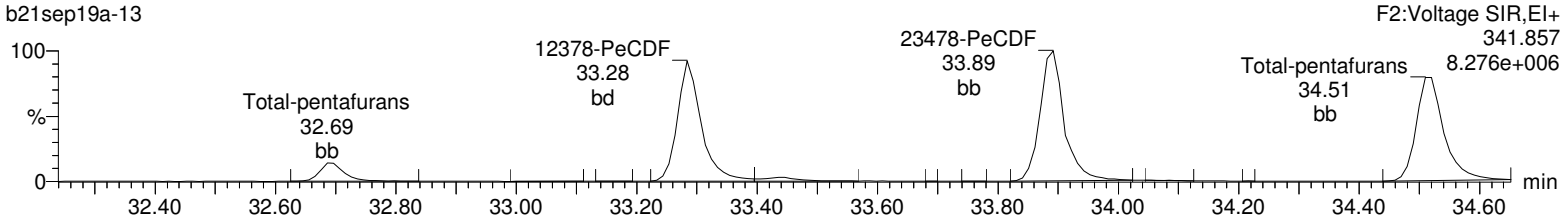
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

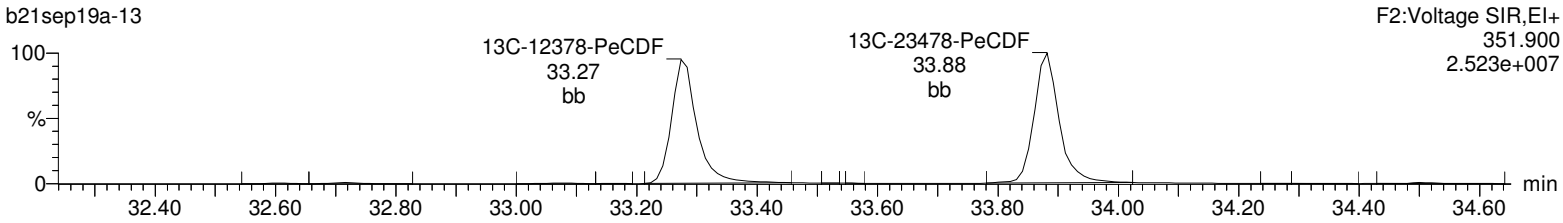
Total-pentafurans



Total-pentafurans



13C-12378-PeCDF



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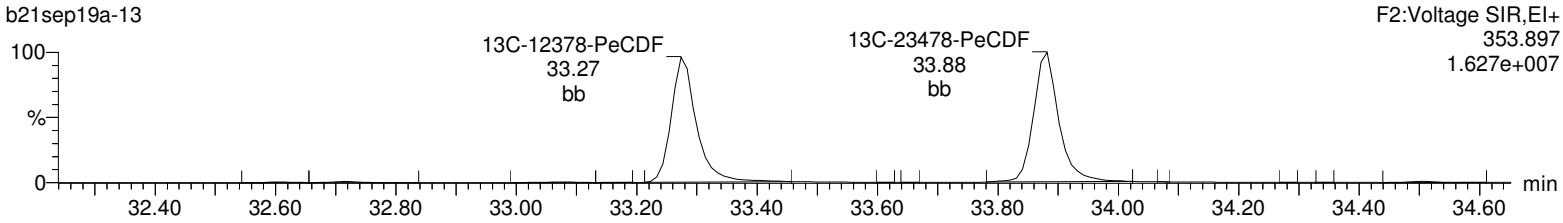
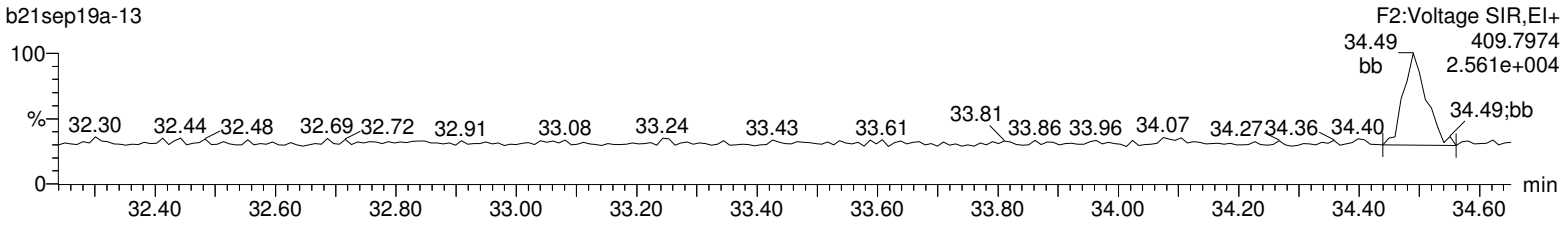
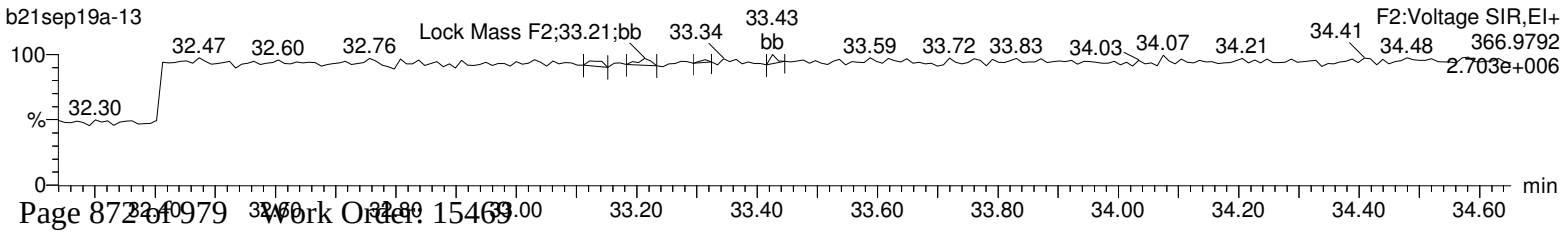


HpDPE



Lock Mass F2



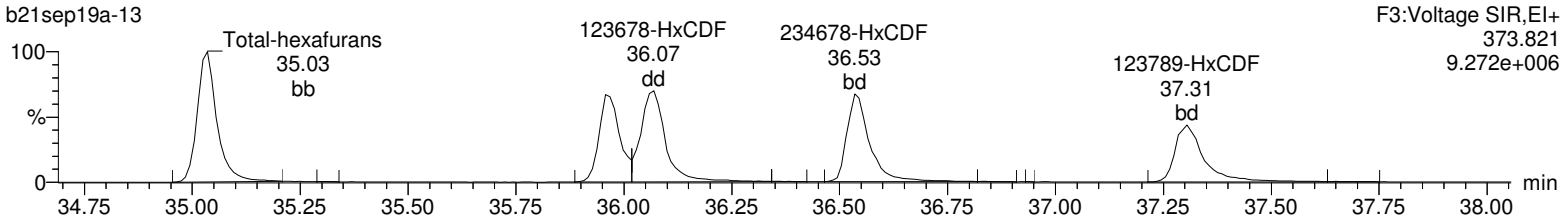
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

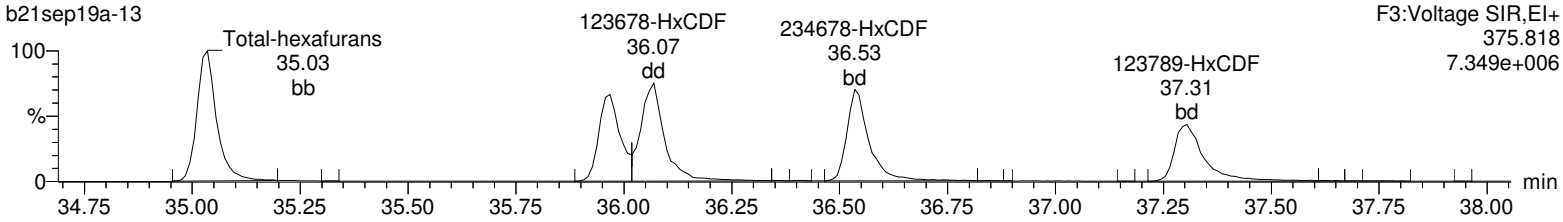
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

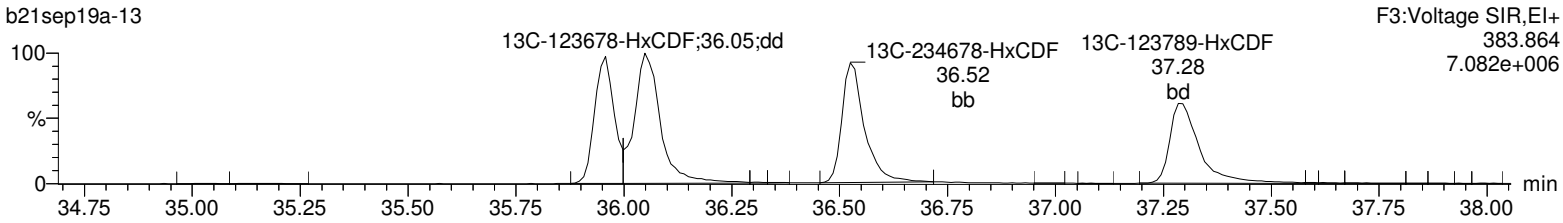
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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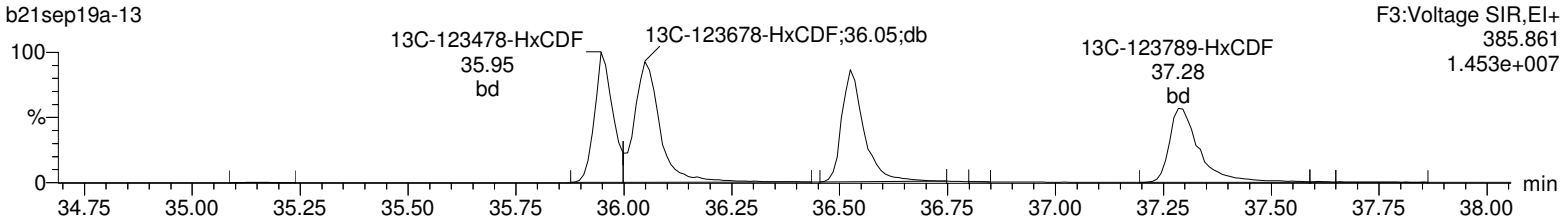
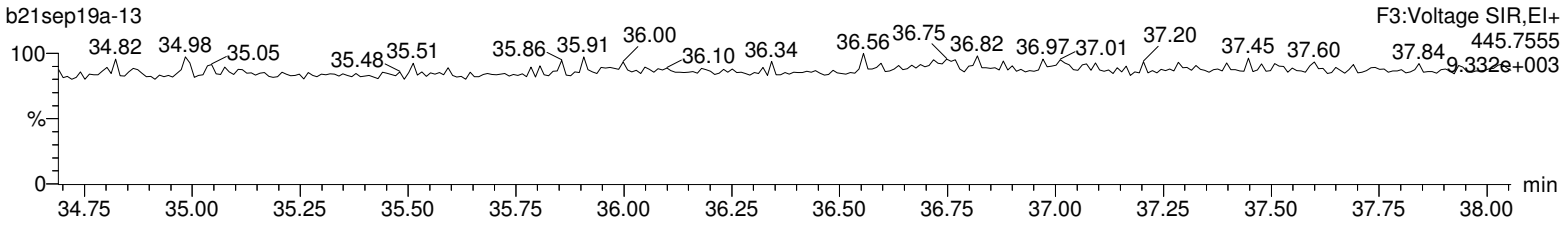
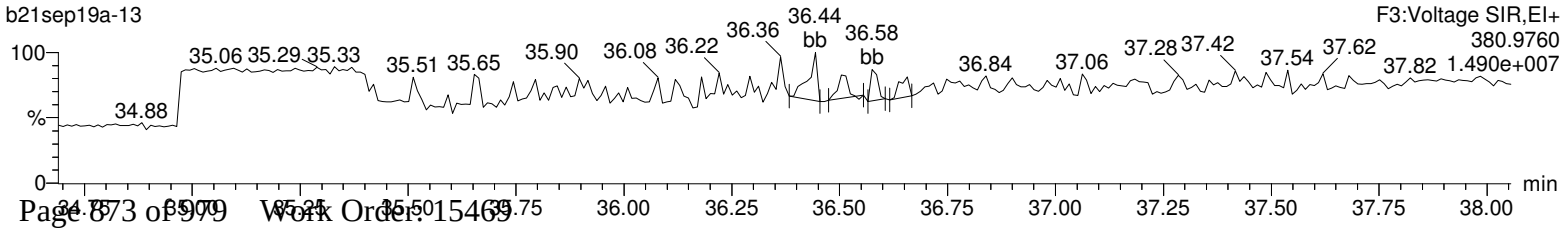


OcDPE



Lock Mass F3



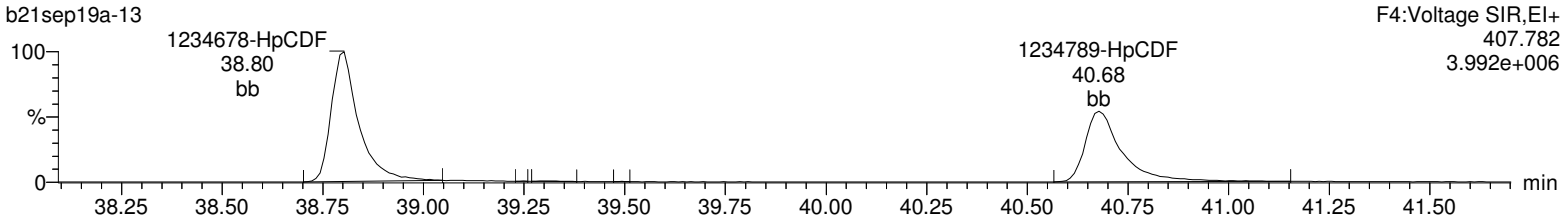
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

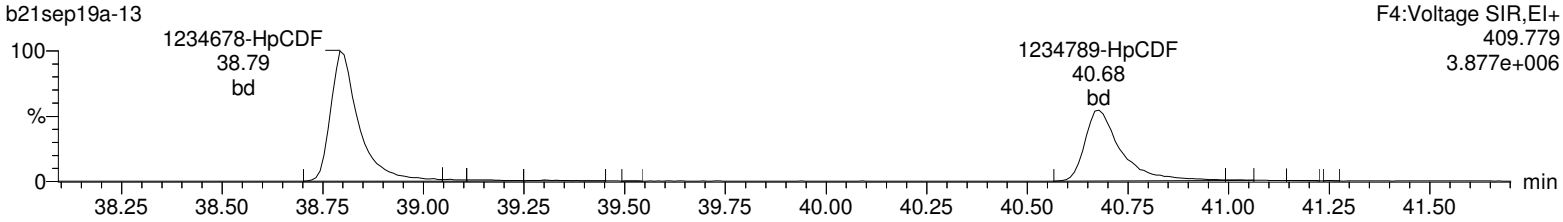
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

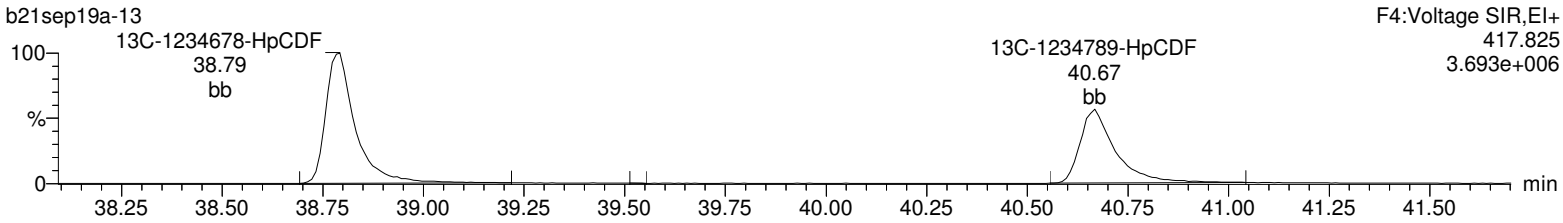
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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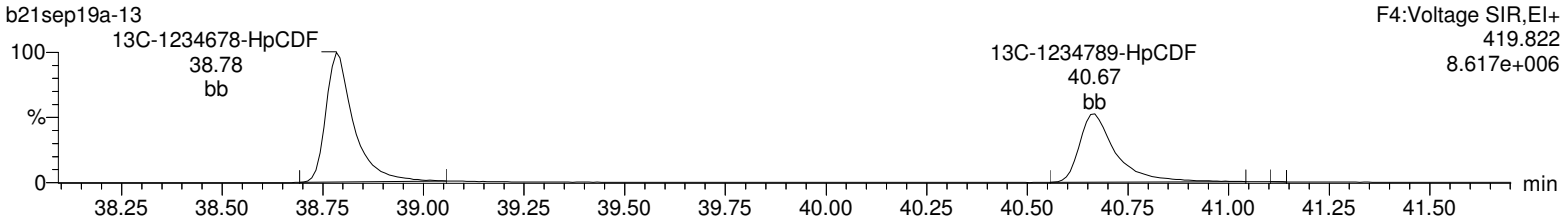

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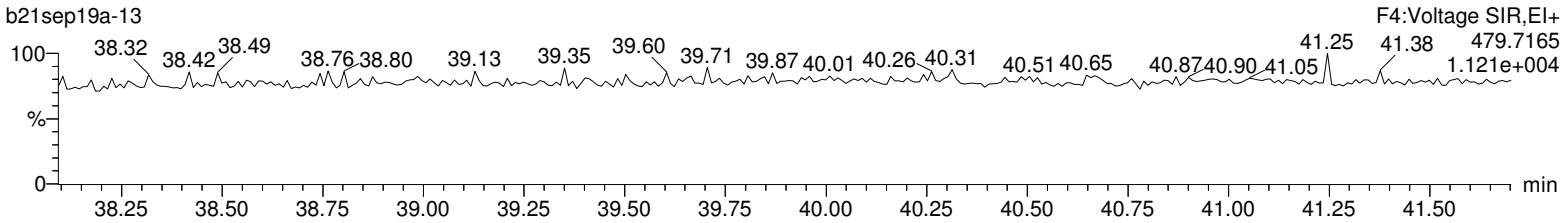
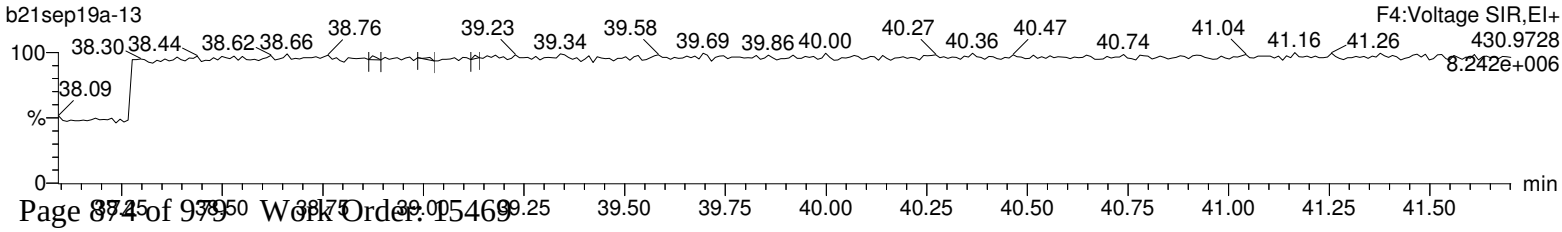


Lock Mass F4



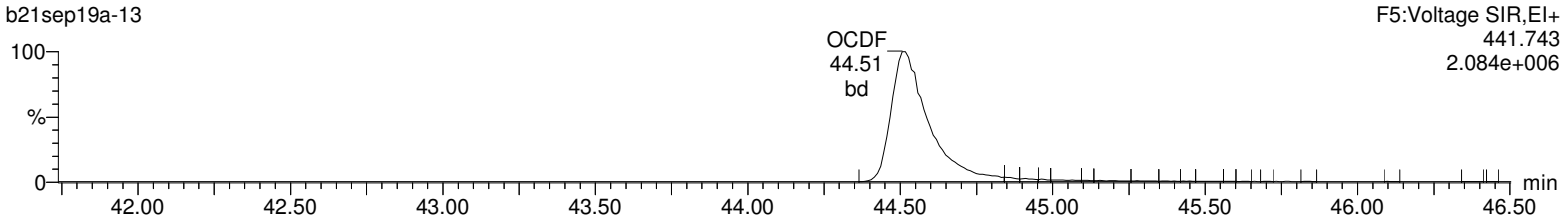
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b21sep19a-13.qld

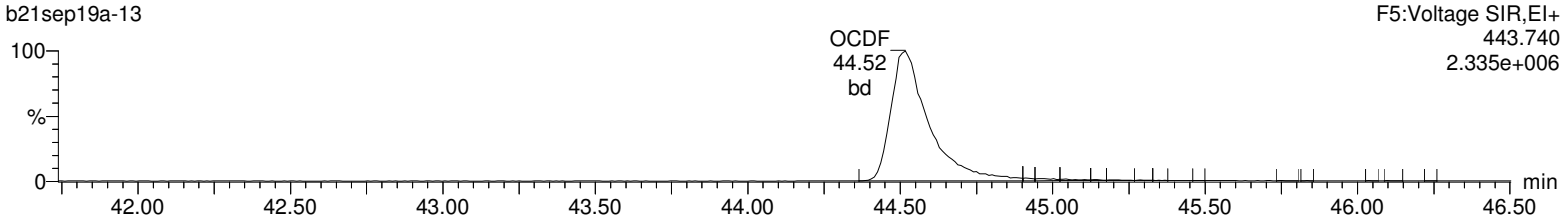
Last Altered: Monday, September 23, 2019 08:36:51 Eastern Standard Time
Printed: Monday, September 23, 2019 08:37:16 Eastern Standard Time

Name: b21sep19a-13, Date: 21-Sep-2019, Time: 21:47:06, ID: CS3WT UD190902-02.1, Description: , Job: b21sep19a, Task: HRP763_1, User: MLS

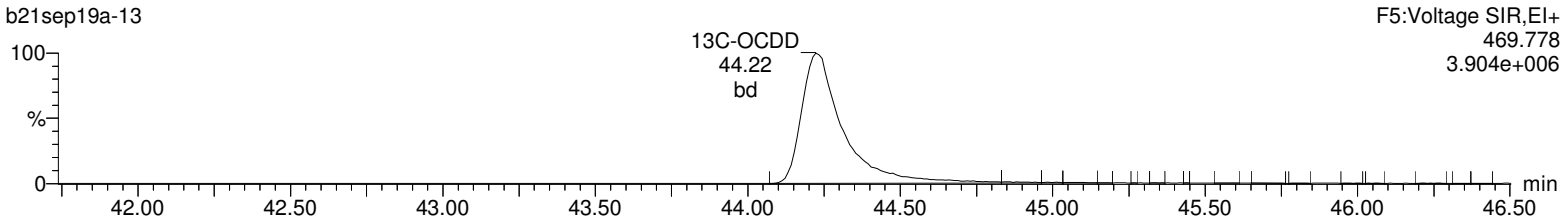
OCDF



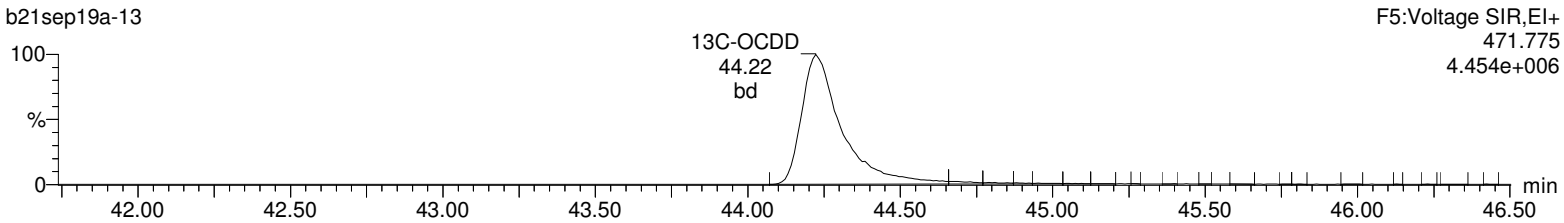
OCDF



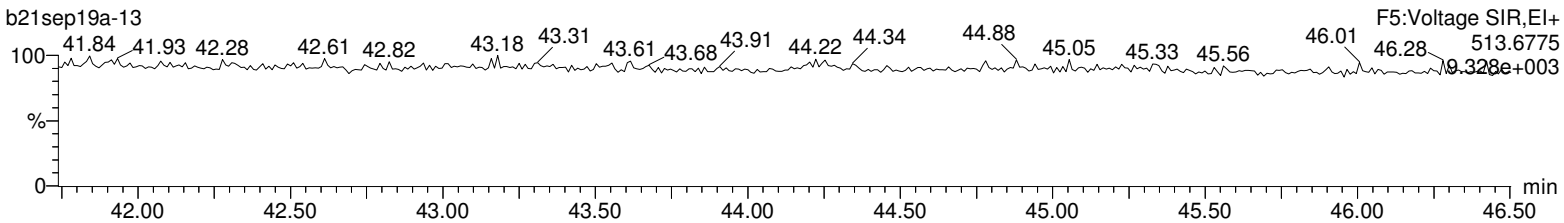
13C-OCDD



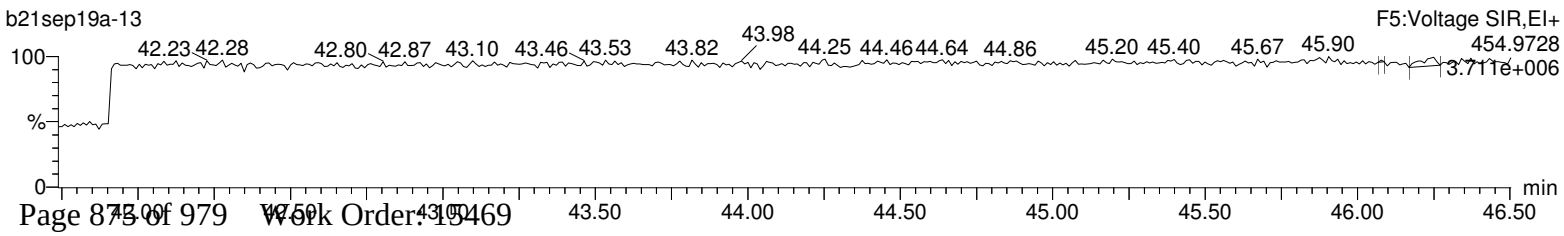
13C-OCDD



DeDPE



Lock Mass F5



RUN LOG

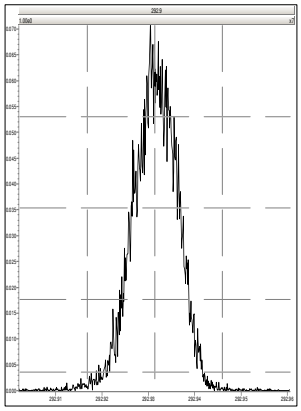
Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
b21sep19a_2-1	21-SEP-2019 22:43:45	Mary Showalter	12024793-1 LCS	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-2	21-SEP-2019 23:31:29	Mary Showalter	12024794-1 LCSD	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-3	22-SEP-2019 00:19:55	Mary Showalter	12024792-1 MB	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-4	22-SEP-2019 01:08:22	Mary Showalter	15469001-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-5	22-SEP-2019 01:56:48	Mary Showalter	12024795-1 MS	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-6	22-SEP-2019 02:45:13	Mary Showalter	12024796-1 MSD	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-7	22-SEP-2019 03:33:39	Mary Showalter	15469002-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-8	22-SEP-2019 04:22:04	Mary Showalter	15469003-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-9	22-SEP-2019 05:10:29	Mary Showalter	15469004-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-10	22-SEP-2019 05:58:56	Mary Showalter	15469005-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-11	22-SEP-2019 06:47:21	Mary Showalter	15469006-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-12	22-SEP-2019 07:35:49	Mary Showalter	15469007-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-13	22-SEP-2019 08:24:14	Mary Showalter	15469008-1	41747	1 uL	dioxin_db5ms	10K
b21sep19a_2-14	22-SEP-2019 09:12:39	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

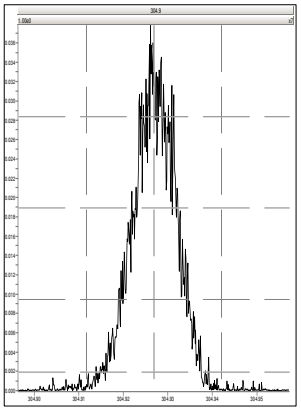
Ending CCAL targeted interference peak in function 1. RR

Printed: Sunday, September 22, 2019 10:09:09 Eastern Standard Time

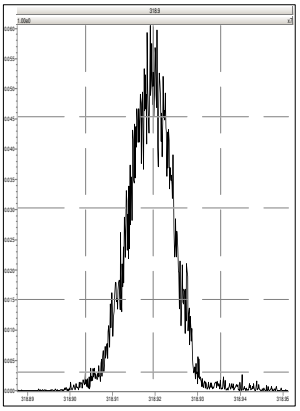
M 292.9824 R 14085



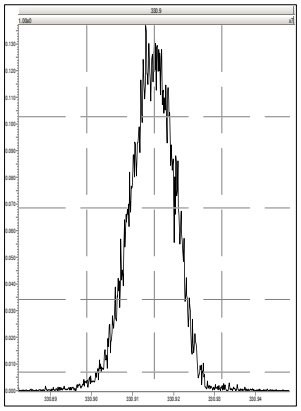
M 304.9824 R 14462



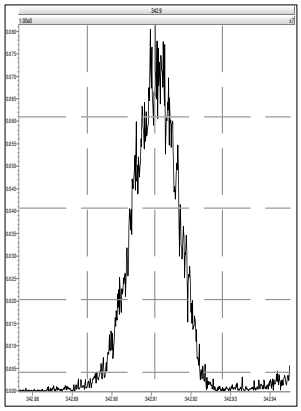
M 318.9792 R 14102



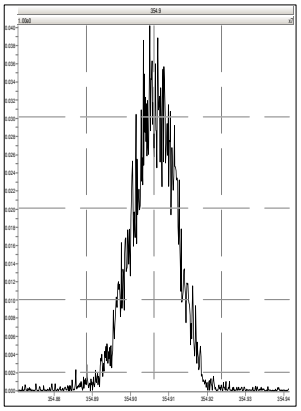
M 330.9792 R 13774



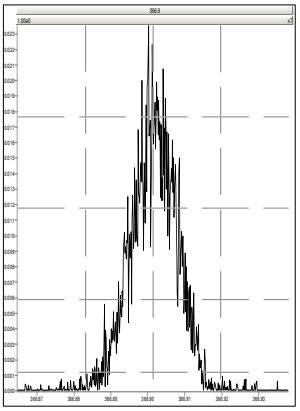
M 342.9792 R 13862



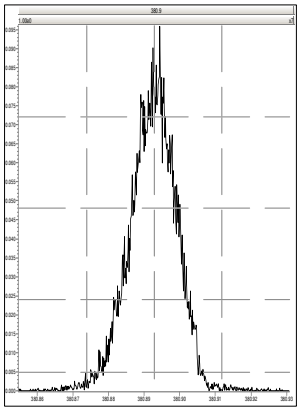
M 354.9792 R 13561



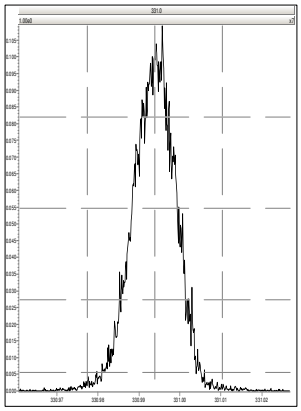
M 366.9792 R 14800



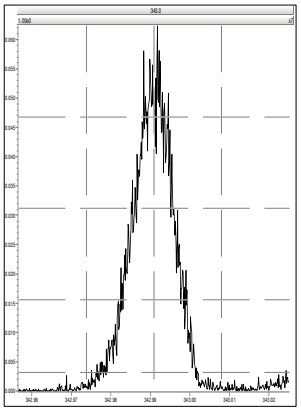
M 380.9760 R 13208



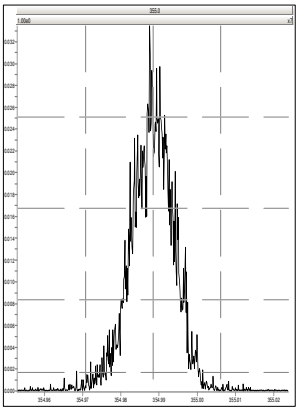
M 330.9792 R 14145



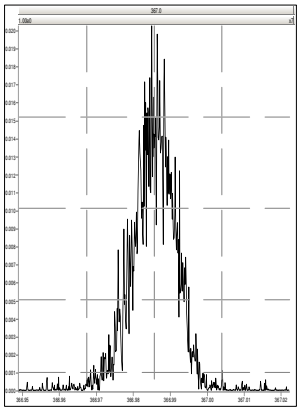
M 342.9792 R 14226



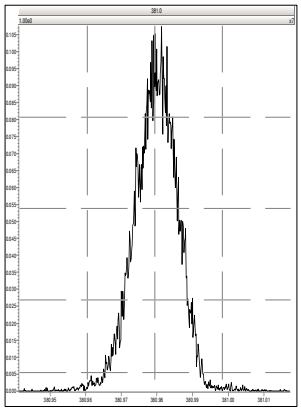
M 354.9792 R 14995



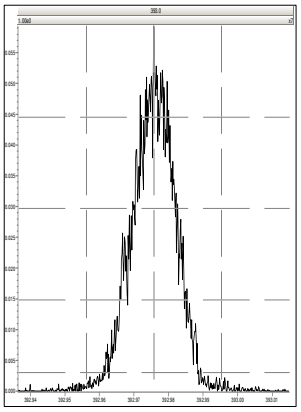
M 366.9792 R 15725



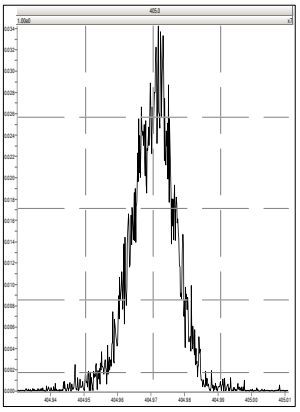
M 380.9760 R 14718



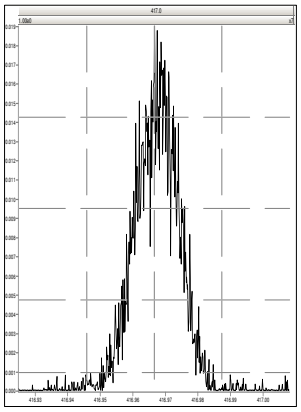
M 392.9760 R 15432



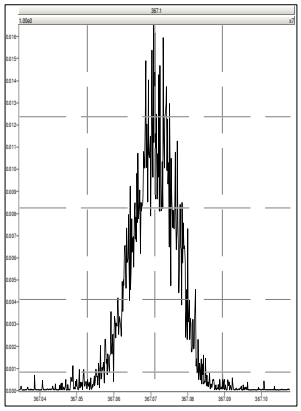
M 404.9760 R 14205



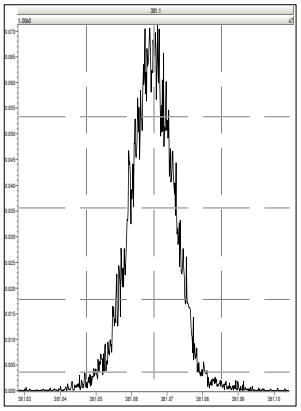
M 416.9760 R 16185



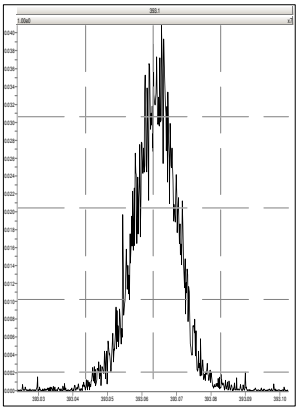
M 366.9792 R 17702



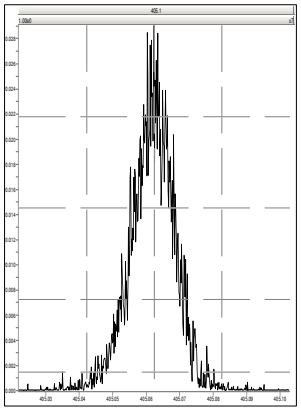
M 380.9760 R 13481



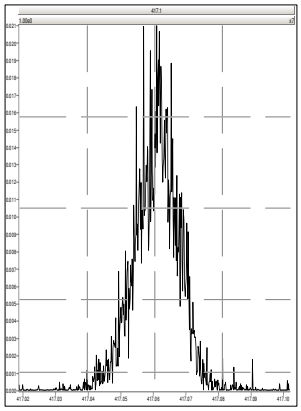
M 392.9760 R 14552



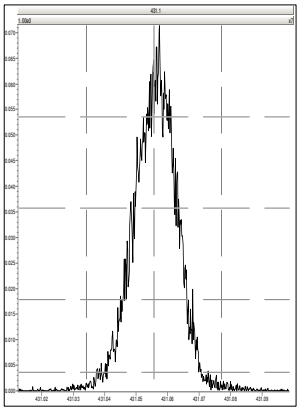
M 404.9760 R 15105



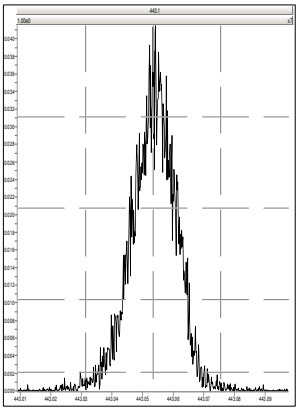
M 416.9760 R 16036



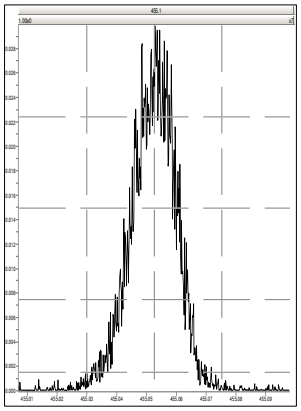
M 430.9728 R 14245



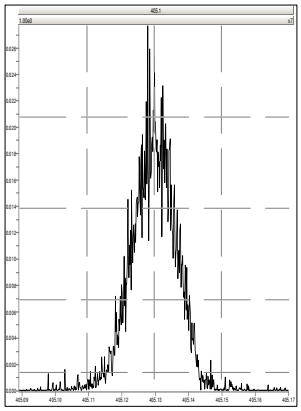
M 442.9728 R 14582



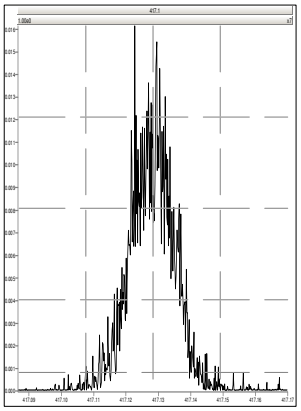
M 454.9728 R 14211



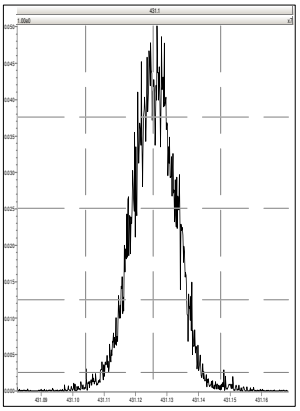
M 404.9760 R 15116



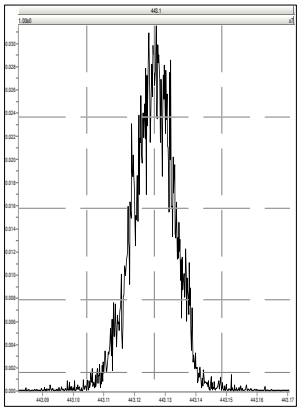
M 416.9760 R 14905



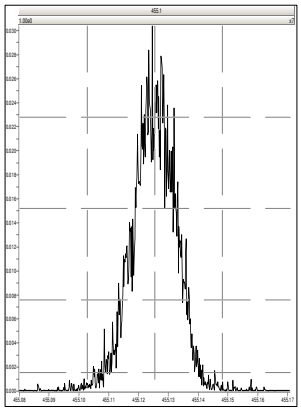
M 430.9728 R 14005



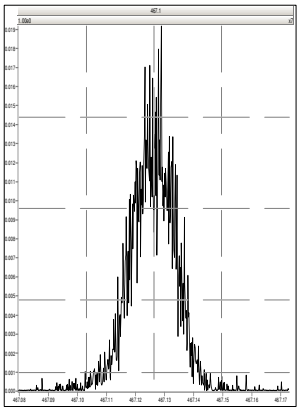
M 442.9728 R 14668



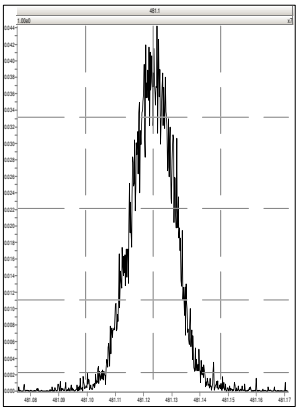
M 454.9728 R 14507



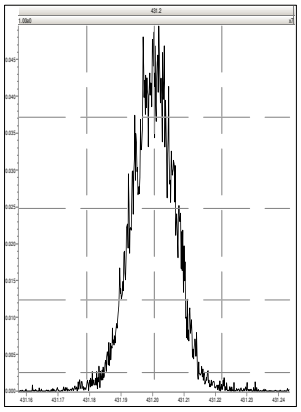
M 466.9728 R 15634



M 480.9696 R 14010

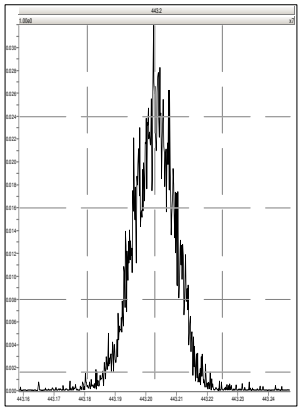


M 430.9728 R 14492

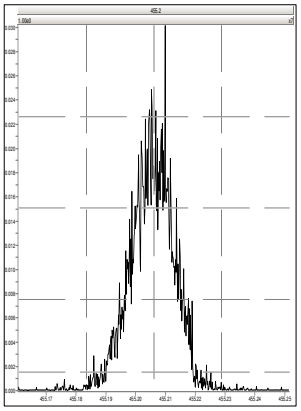


Printed: Sunday, September 22, 2019 10:09:09 Eastern Standard Time

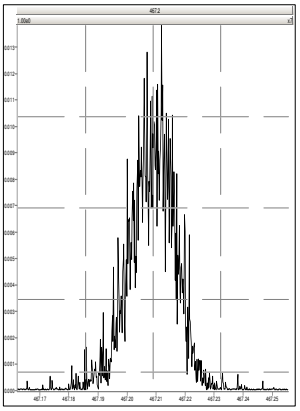
M 442.9728 R 15015



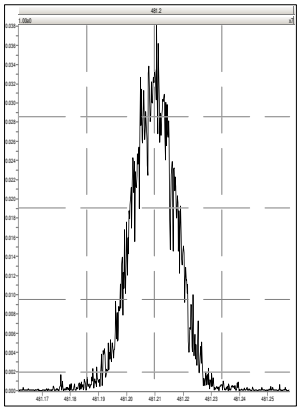
M 454.9728 R 14699



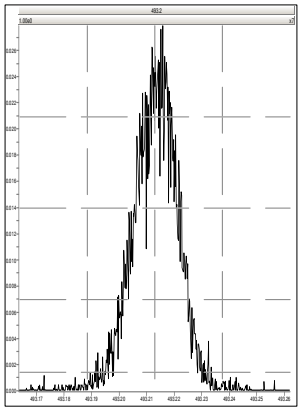
M 466.9728 R 15625



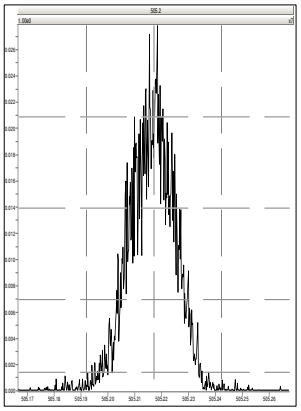
M 480.9696 R 13889



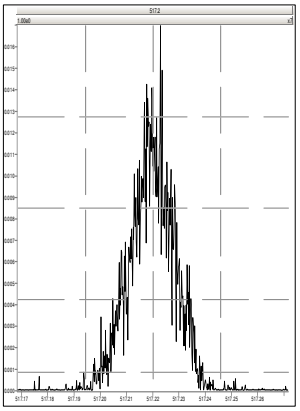
M 492.9696 R 14619



M 504.9696 R 13368



M 516.9697 R 15387



RUN LOG

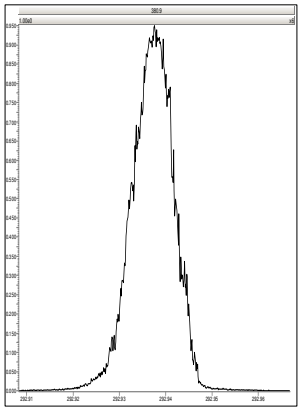
Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
b23sep19a-1	23-SEP-2019 08:19:48	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K
b23sep19a-2	23-SEP-2019 09:08:23	Mary Showalter	SB		1 uL	dioxin_db5ms	10K
b23sep19a-3	23-SEP-2019 09:56:06	Mary Showalter	15469009-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-4	23-SEP-2019 10:44:31	Mary Showalter	15469010-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-5	23-SEP-2019 11:32:58	Mary Showalter	15469013-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-6	23-SEP-2019 12:21:25	Mary Showalter	15469014-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-7	23-SEP-2019 13:09:50	Mary Showalter	15469015-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-8	23-SEP-2019 13:58:15	Mary Showalter	15469016-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-9	23-SEP-2019 14:46:41	Mary Showalter	15469017-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-10	23-SEP-2019 15:35:07	Mary Showalter	15469018-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-11	23-SEP-2019 16:23:32	Mary Showalter	15469019-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-12	23-SEP-2019 17:11:58	Mary Showalter	15469020-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-13	23-SEP-2019 18:00:24	Mary Showalter	15469021-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-14	23-SEP-2019 18:48:50	Mary Showalter	15512001-1	41747	1 uL	dioxin_db5ms	10K
b23sep19a-15	23-SEP-2019 19:37:14	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

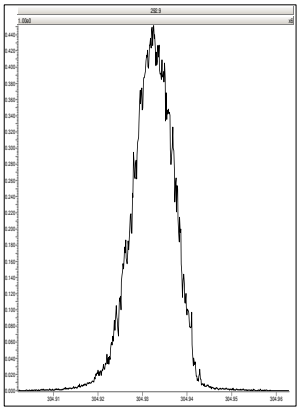
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, September 23, 2019 08:13:47 Eastern Standard Time

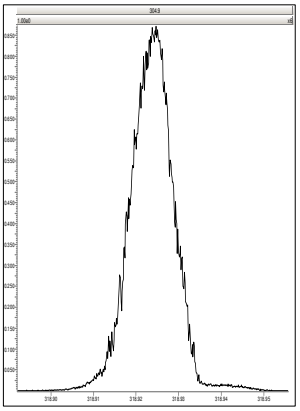
M 292.9824 R 14202



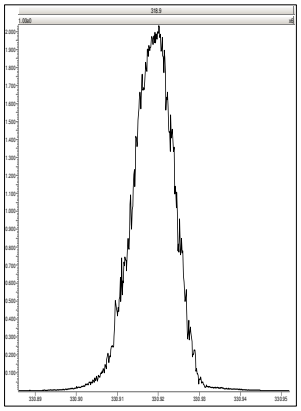
M 304.9824 R 14370



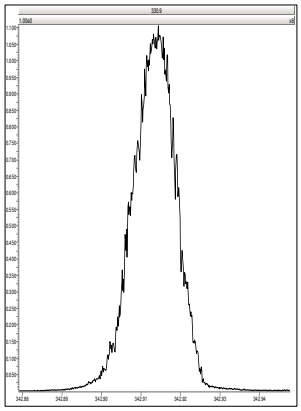
M 318.9792 R 14451



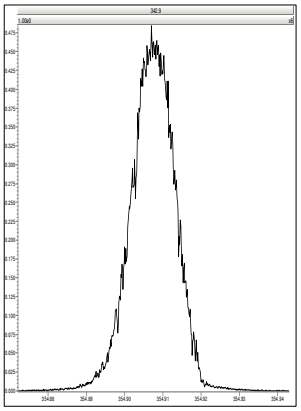
M 330.9792 R 14043



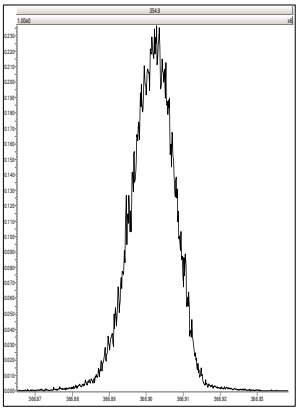
M 342.9792 R 13738



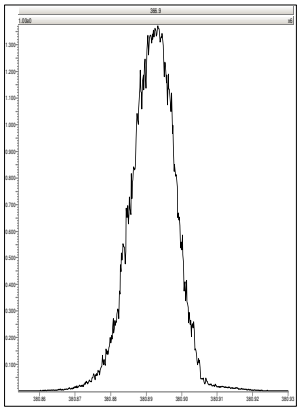
M 354.9792 R 13368



M 366.9792 R 13584



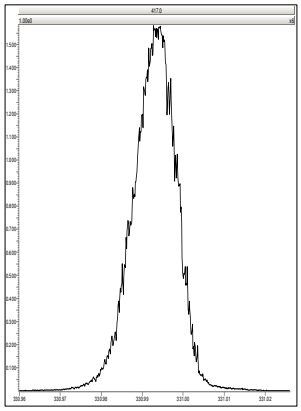
M 380.9760 R 13441



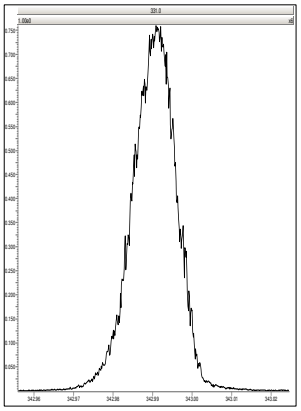
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, September 23, 2019 08:16:49 Eastern Standard Time

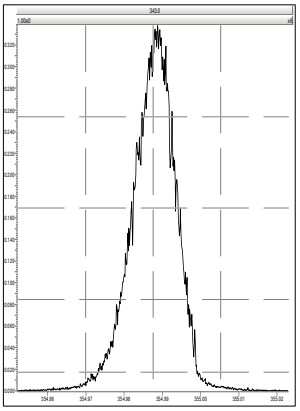
M 330.9792 R 13656



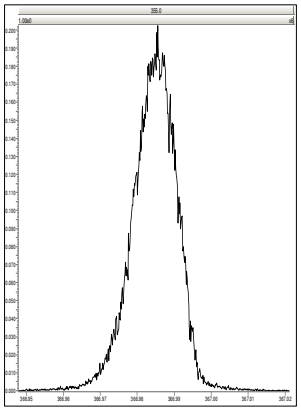
M 342.9792 R 13156



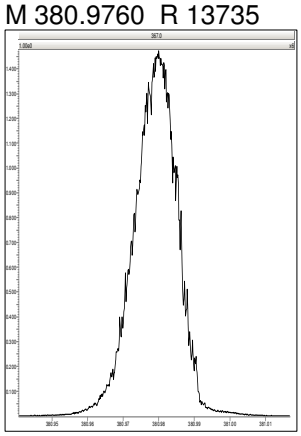
M 354.9792 R 13732



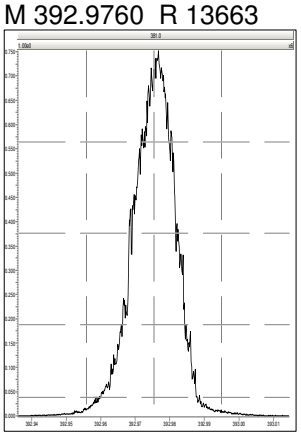
M 366.9792 R 13587



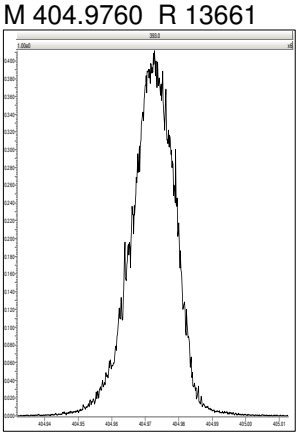
M 380.9760 R 13735



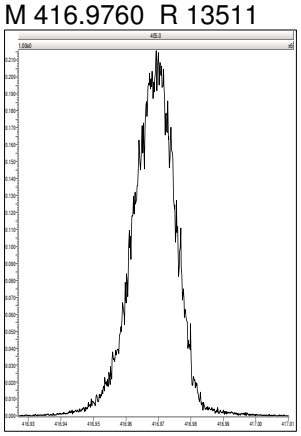
M 392.9760 R 13663



M 404.9760 R 13661



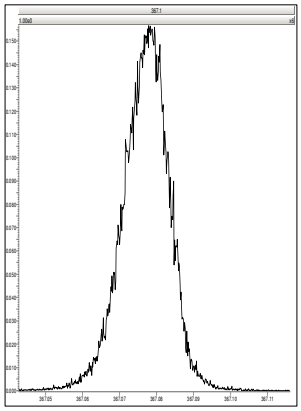
M 416.9760 R 13511



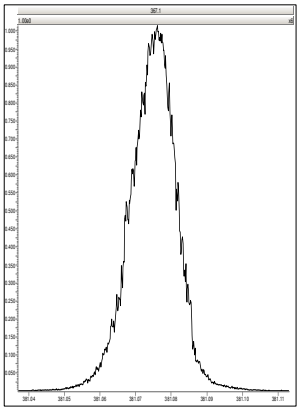
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, September 23, 2019 08:17:25 Eastern Standard Time

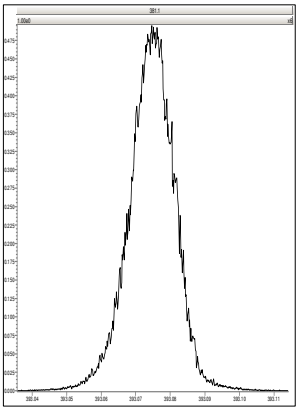
M 366.9792 R 12951



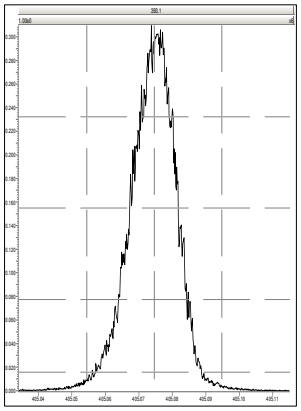
M 380.9760 R 12378



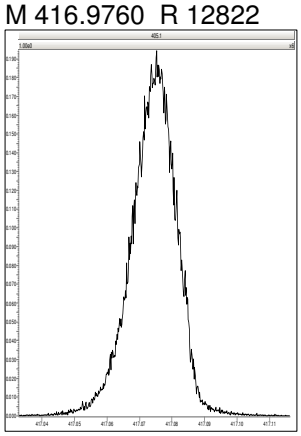
M 392.9760 R 12755



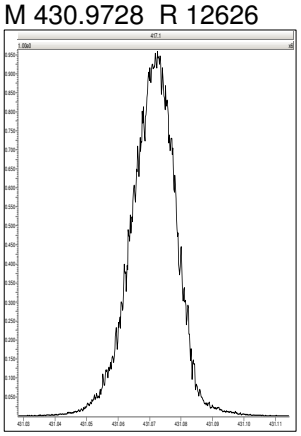
M 404.9760 R 12561



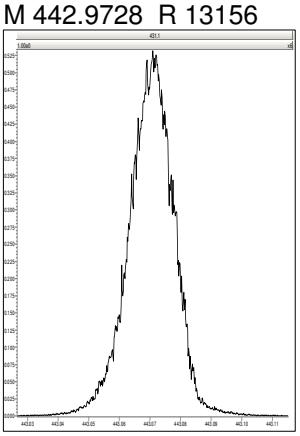
M 416.9760 R 12822



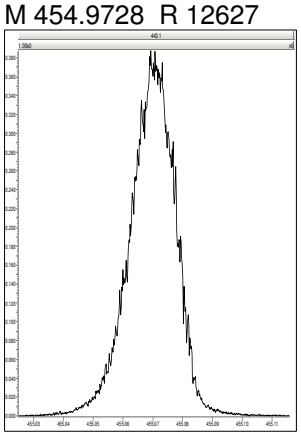
M 430.9728 R 12626



M 442.9728 R 13156



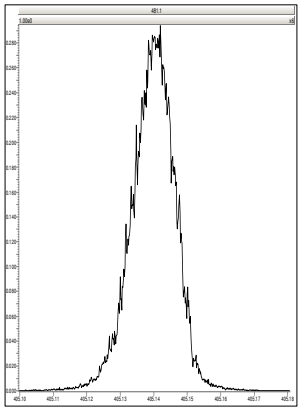
M 454.9728 R 12627



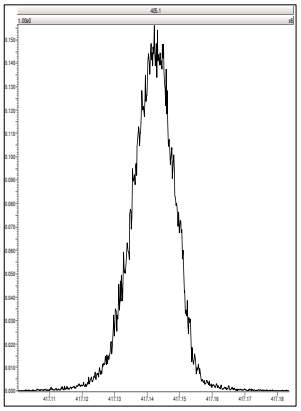
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, September 23, 2019 08:18:36 Eastern Standard Time

M 404.9760 R 13441



M 416.9760 R 13585



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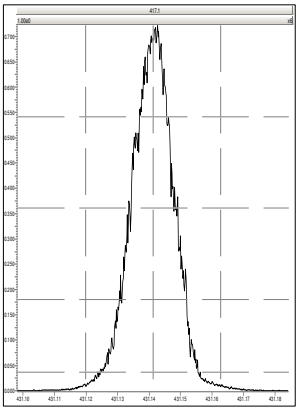

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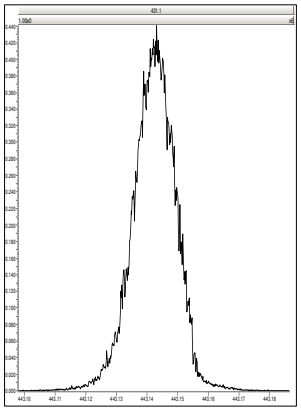

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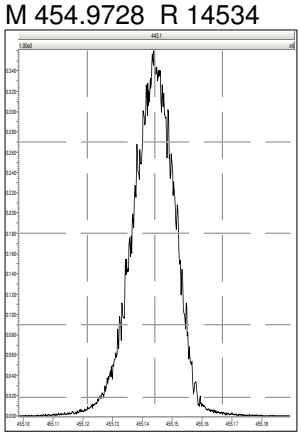
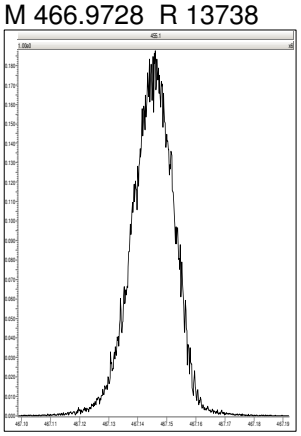


M 466.9728 R 13738



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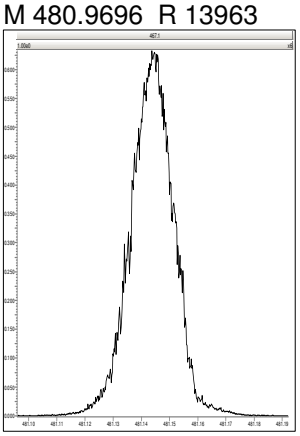

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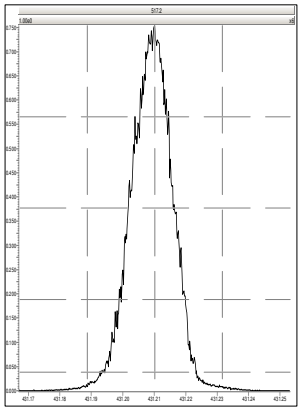

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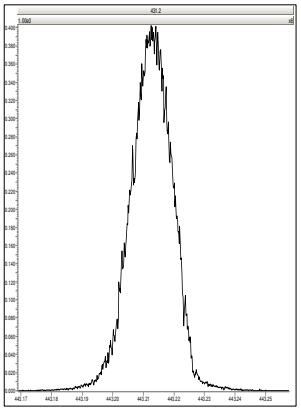

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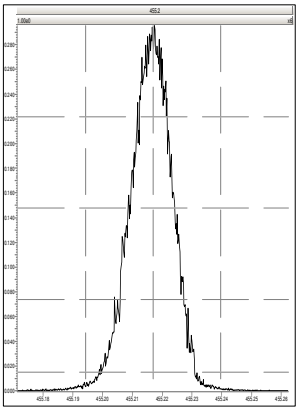

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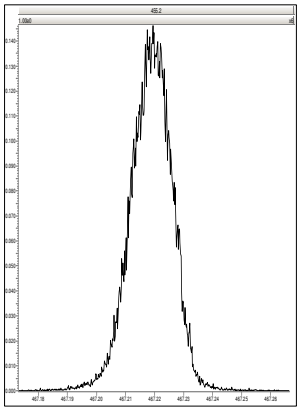

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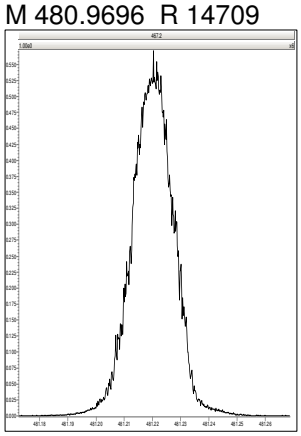

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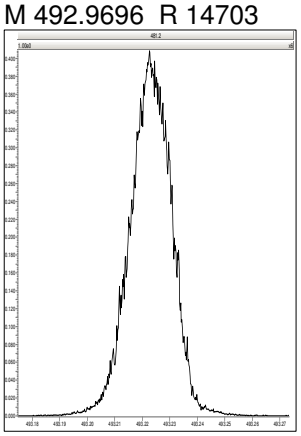

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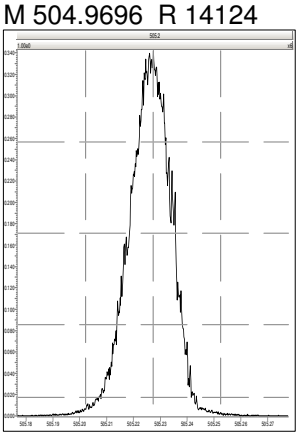

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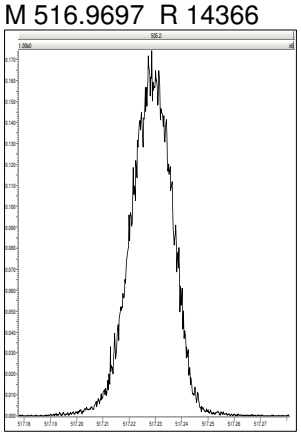

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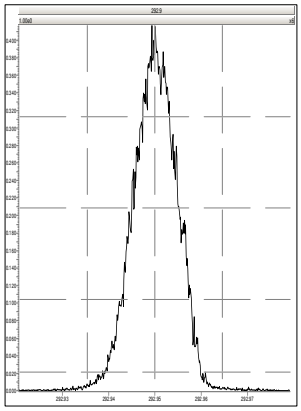
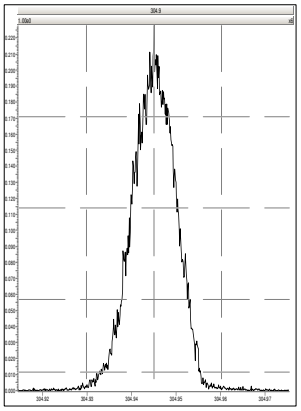


M 304.9824 R 13968



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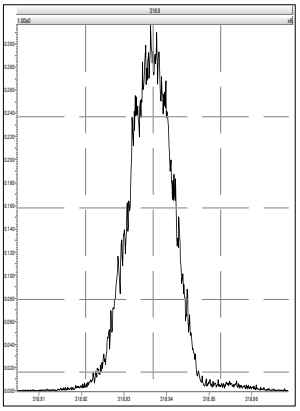

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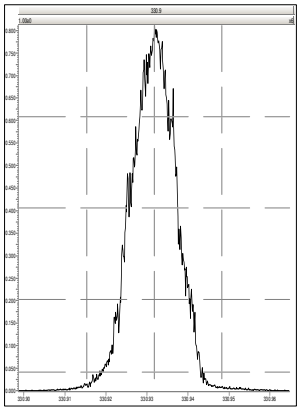

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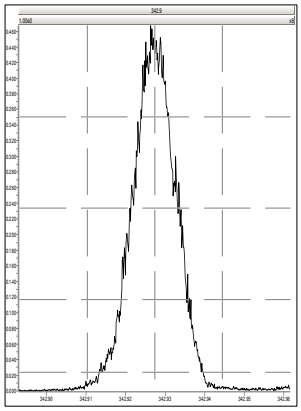

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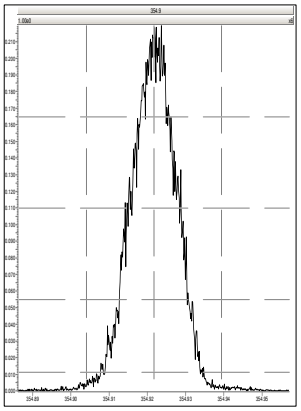

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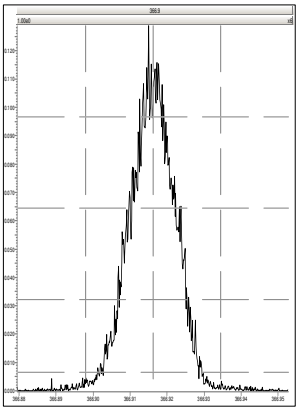

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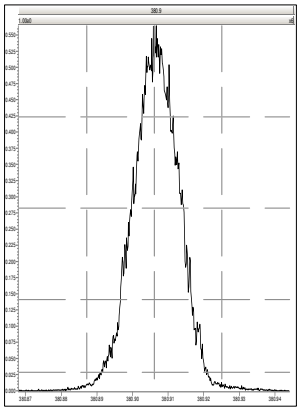

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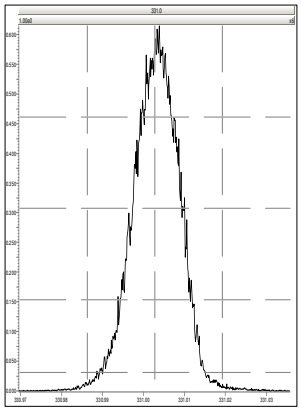

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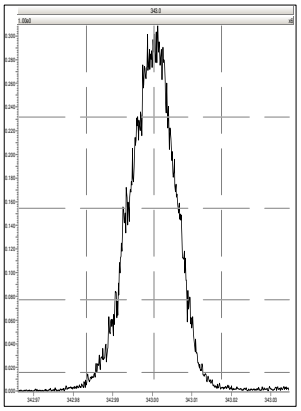

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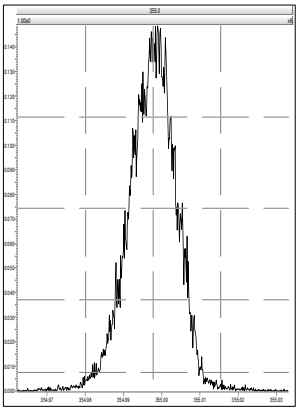

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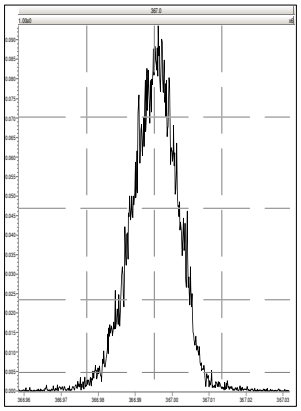

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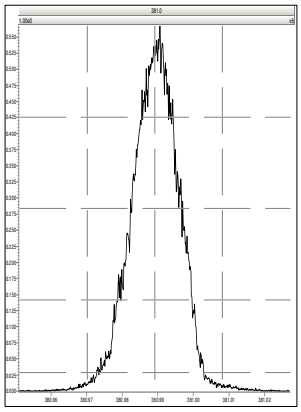

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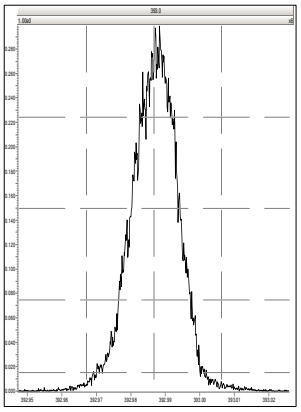

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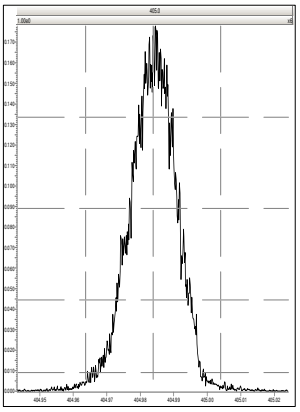

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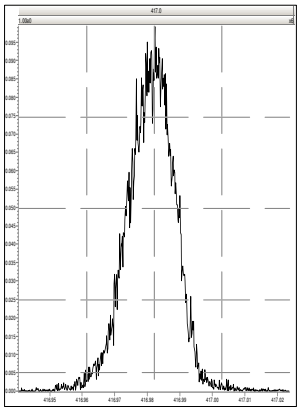

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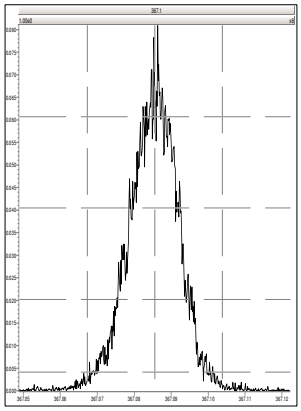

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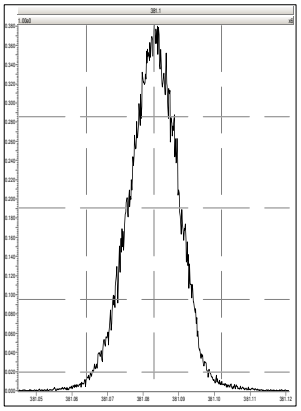

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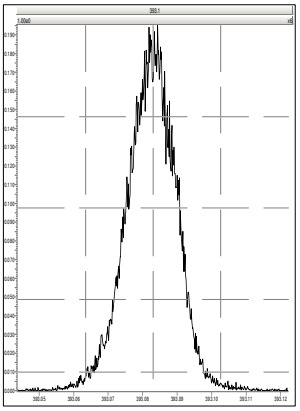

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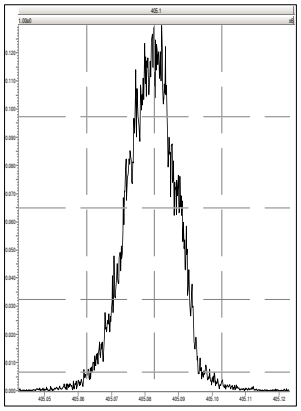

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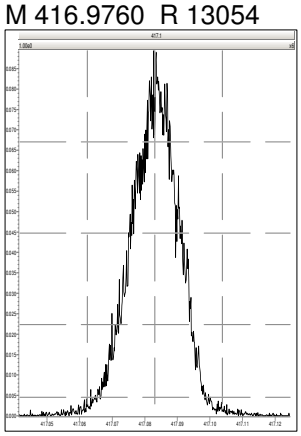
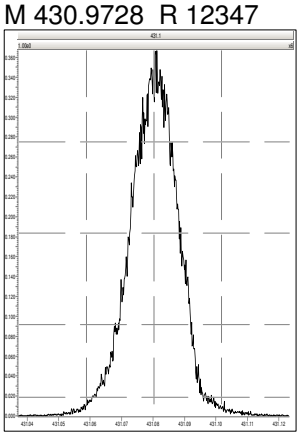


M 430.9728 R 12347



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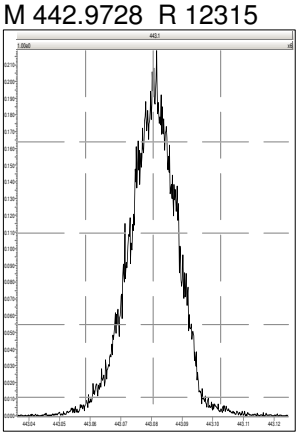

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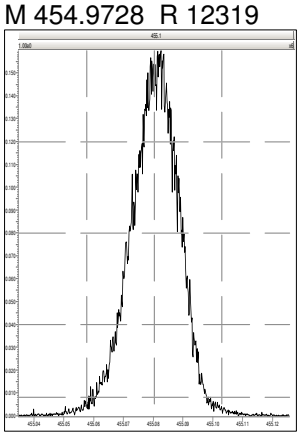

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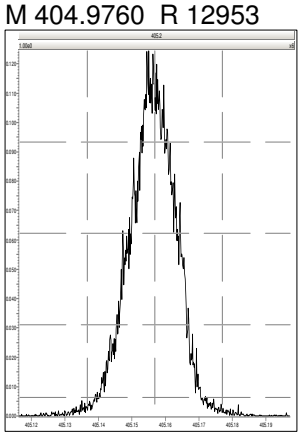

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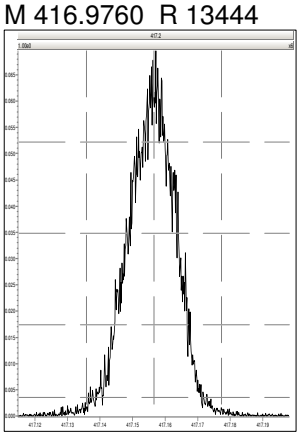

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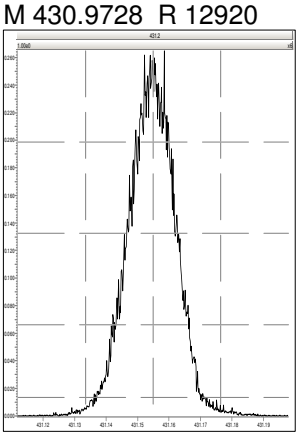

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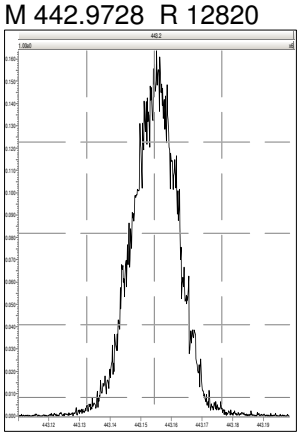

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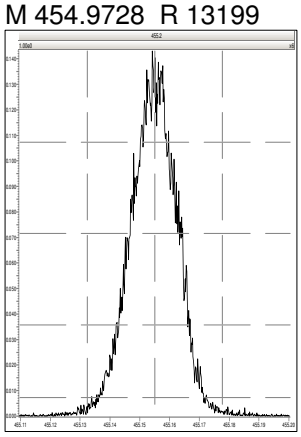

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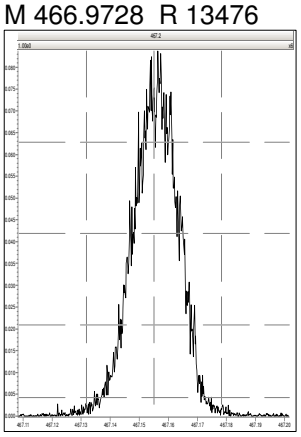

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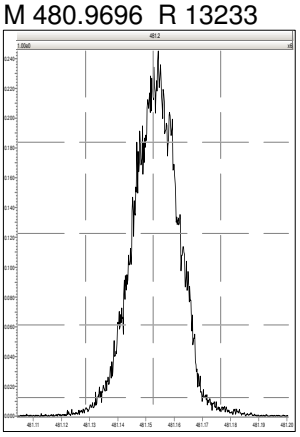

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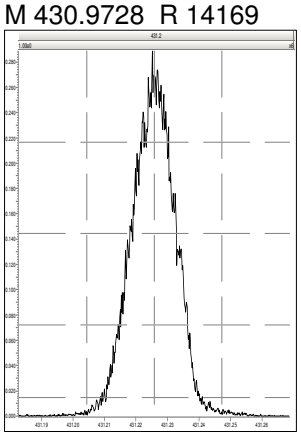

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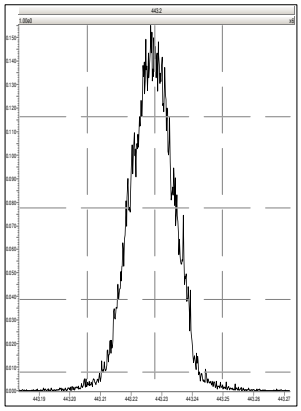

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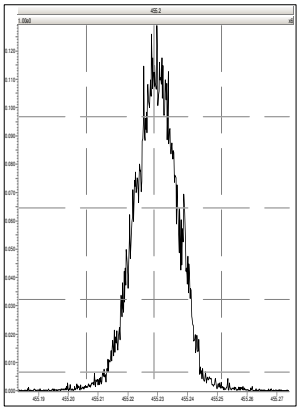

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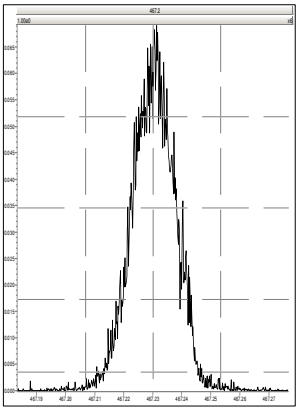

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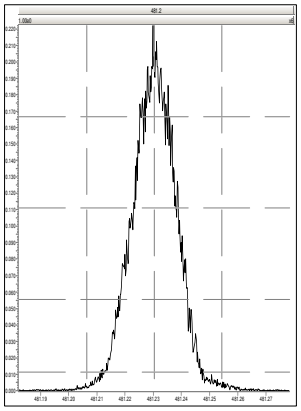

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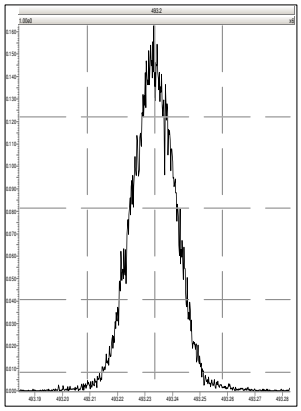

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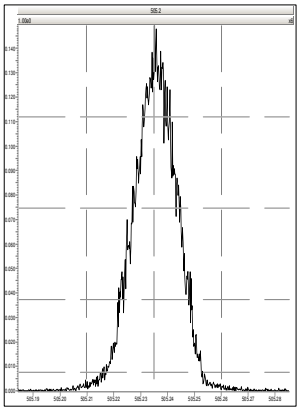

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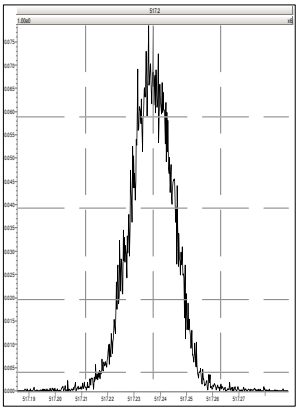


Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23sep19a-1.qld

Last Altered: Monday, September 23, 2019 09:10:27 Eastern Standard Time
Printed: Monday, September 23, 2019 09:11:23 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

	Name	RT
1	First TCDF	26.06
2	Last TCDF	31.85
3	First PeCDF	31.85
4	Last PeCDF	34.51
5	First HxCDF	35.03
6	Last HxCDF	37.31
7	First HpCDF	38.79
8	Last HpCDF	40.68
9	OCDF	44.52
10	First TCDD	27.79
11	2378-TCDD	31.15
12	Last TCDD	31.77
13	First PeCDD	32.75
14	Last PeCDD	34.34
15	First HxCDD	35.45
16	Last HxCDD	36.99
17	First HpCDD	39.12
18	Last HpCDD	40.03
19	OCDD	44.24

Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

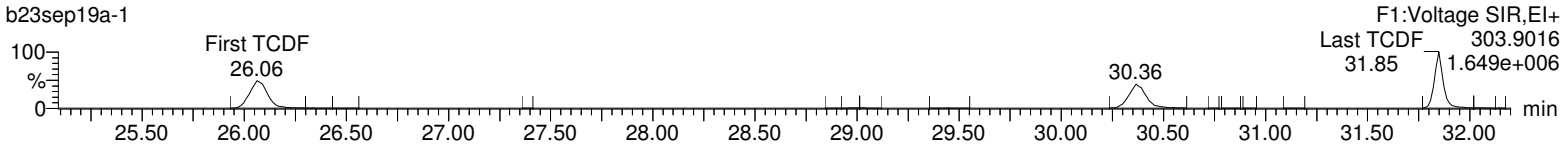
Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23sep19a-1.qld

Last Altered: Monday, September 23, 2019 09:10:27 Eastern Standard Time
Printed: Monday, September 23, 2019 09:11:23 Eastern Standard Time

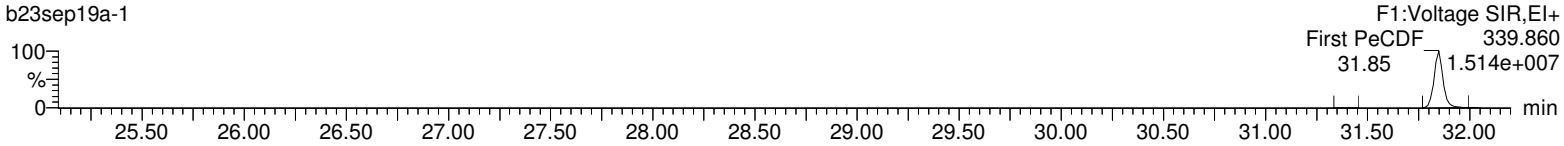
Method: C:\MassLynx\Default.pro\Methdb\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

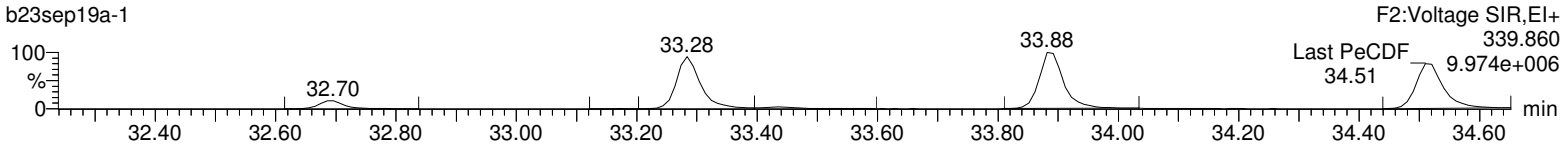
First TCDF



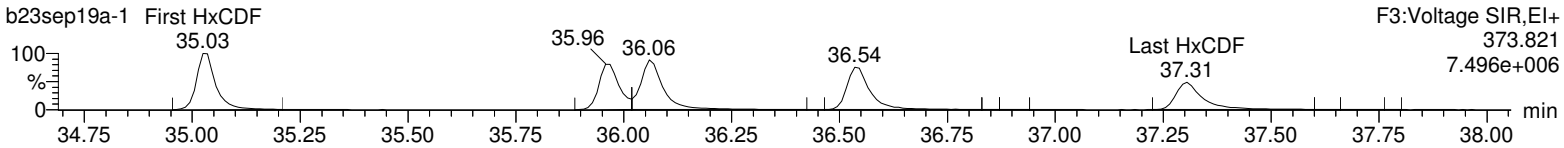
First PeCDF



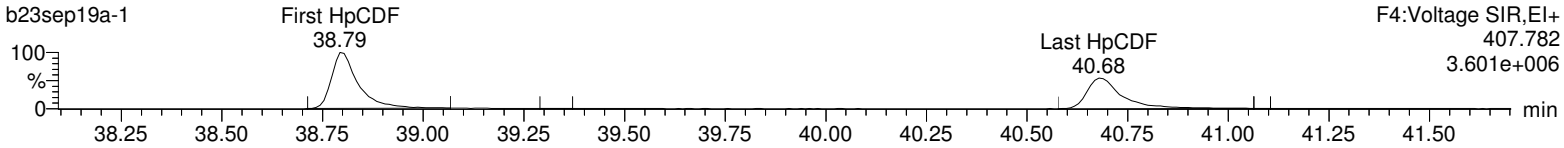
Last PeCDF



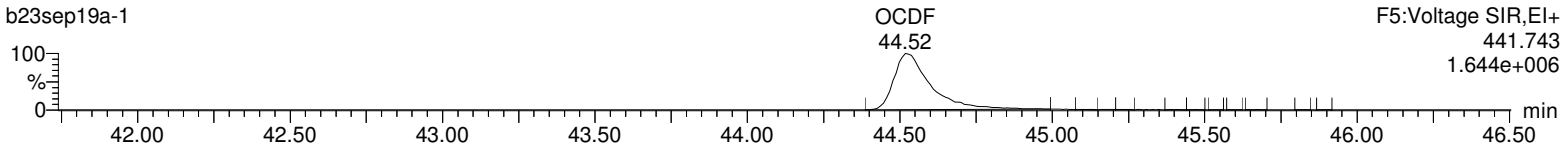
First HxCDF



First HpCDF



OCDF



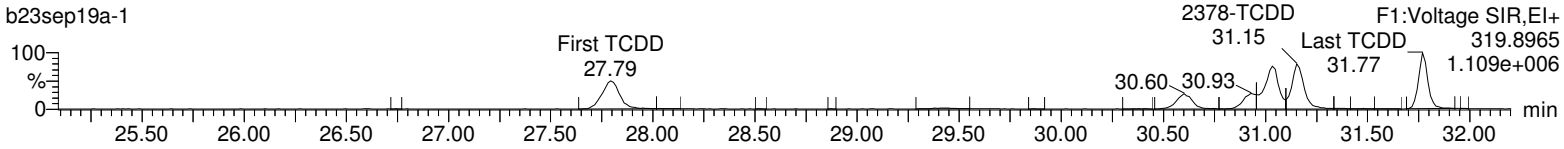
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23sep19a-1.qld

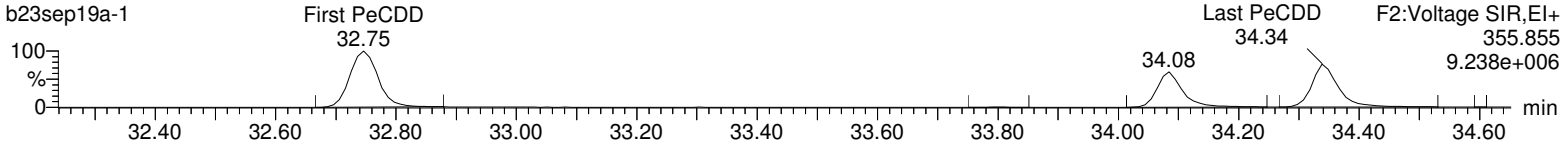
Last Altered: Monday, September 23, 2019 09:10:27 Eastern Standard Time
Printed: Monday, September 23, 2019 09:11:23 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

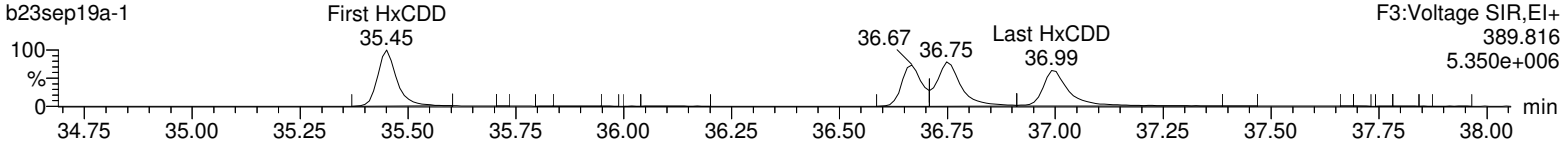
First TCDD



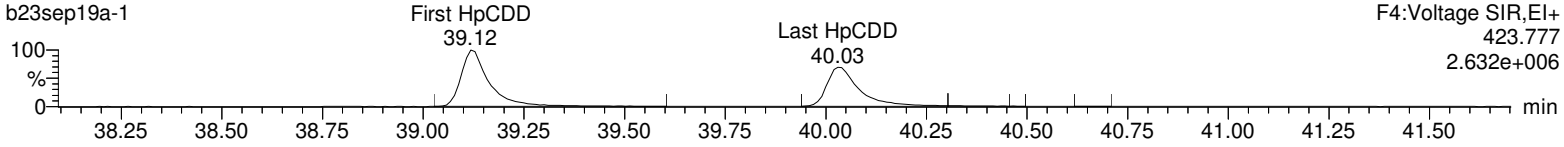
First PeCDD



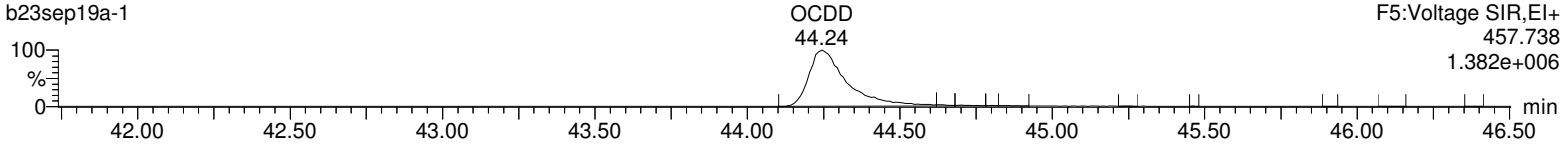
First HxCDD



First HpCDD



OCDD

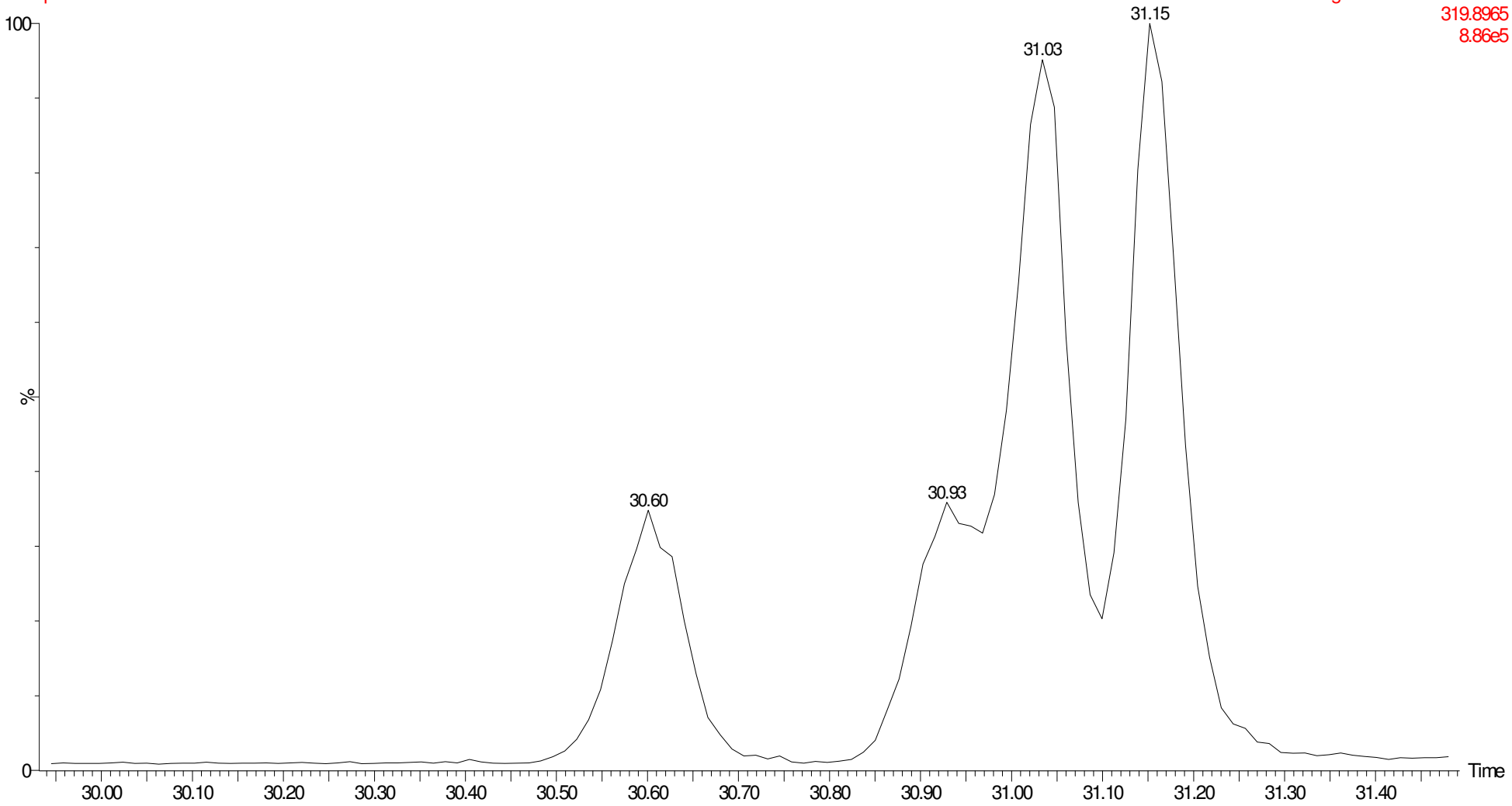


COLUMN CHECK (2378-TCDD 20%)

CS3WT UD190902-02.1 **HRP763_1** **23-Sep-201908:19:48**

b23sep19a-1

1: Voltage SIR 13 Channels EI+
319.8965
8.86e5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	6.14e4	8.39e4	1.45e5	31.15	1.000	0.73	NO	10.351	0.0580	0.922	0.891	3.5	8.77e5	2300	381.3	1.16e6	2339	497.0	dd	dd
2	12378-PeCDD	2.84e5	1.83e5	4.67e5	34.08	1.000	1.56	NO	48.195	0.165	0.820	0.850	-3.6	5.81e6	8346	695.6	3.77e6	4469	844.0	bb	bb
3	123478-HxCDD	2.07e5	1.68e5	3.75e5	36.67	1.000	1.23	NO	48.449	0.143	0.905	0.934	-3.1	3.91e6	4959	787.5	3.19e6	3376	945.1	bd	bd
4	123678-HxCDD	2.73e5	2.19e5	4.92e5	36.75	1.000	1.25	NO	51.056	0.141	0.904	0.885	2.1	4.20e6	4959	847.4	3.42e6	3376	1013.1	dd	dd
5	123789-HxCDD	2.44e5	1.92e5	4.36e5	36.99	1.007	1.27	NO	51.172	0.145	0.908	0.887	2.3	3.40e6	4959	684.6	2.73e6	3376	808.3	dd	dd
6	1234678-HpCDD	1.71e5	1.62e5	3.33e5	40.03	1.000	1.06	NO	51.600	0.277	0.974	0.944	3.2	1.81e6	3840	471.5	1.74e6	3708	469.3	bd	bd
7	OCDD	2.00e5	2.27e5	4.27e5	44.24	1.000	0.88	NO	100.590	0.536	0.919	0.914	0.6	1.37e6	2592	529.8	1.57e6	3659	430.4	bd	bd
8	2378-TCDF	6.81e4	8.71e4	1.55e5	30.36	1.000	0.78	NO	10.160	0.0759	0.907	0.893	1.6	7.03e5	1640	428.5	8.67e5	2988	290.1	bb	bb
9	12378-PeCDF	4.29e5	2.72e5	7.00e5	33.28	1.000	1.58	NO	54.222	0.110	0.985	0.908	8.4	9.20e6	6191	1486.8	5.83e6	5851	996.2	dd	bd
10	23478-PeCDF	4.69e5	3.00e5	7.69e5	33.88	1.000	1.57	NO	53.038	0.101	1.030	0.971	6.1	9.92e6	6191	1602.9	6.45e6	5851	1101.7	bb	bb
11	123478-HxCDF	3.30e5	2.63e5	5.93e5	35.96	1.000	1.26	NO	55.039	0.146	1.249	1.135	10.1	6.03e6	6145	980.9	4.86e6	6352	765.6	bd	bd
12	123678-HxCDF	4.00e5	3.09e5	7.09e5	36.06	1.000	1.29	NO	54.386	0.152	1.147	1.054	8.8	6.63e6	6145	1078.5	5.26e6	6352	827.8	db	db
13	234678-HxCDF	3.44e5	2.71e5	6.16e5	36.54	1.000	1.27	NO	54.536	0.169	1.233	1.130	9.1	5.63e6	6145	916.9	4.57e6	6352	719.9	bd	bb
14	123789-HxCDF	2.66e5	2.08e5	4.73e5	37.31	1.000	1.28	NO	53.475	0.264	1.137	1.063	7.0	3.63e6	6145	591.0	2.84e6	6352	447.6	bd	bb
15	1234678-HpCDF	2.77e5	2.73e5	5.51e5	38.79	1.000	1.01	NO	54.549	0.162	1.299	1.191	9.1	3.58e6	3929	911.5	3.49e6	4497	775.8	bb	bd
16	1234789-HpCDF	1.97e5	1.85e5	3.82e5	40.68	1.000	1.07	NO	53.169	0.293	1.304	1.227	6.3	1.95e6	3929	495.8	1.90e6	4497	421.9	bd	bb
17	OCDF	2.27e5	2.54e5	4.81e5	44.52	1.006	0.89	NO	101.890	0.383	1.036	1.017	1.9	1.63e6	2409	677.4	1.86e6	2558	728.4	bb	bd
18	13C-2378-TCDD	6.80e5	8.96e5	1.58e6	31.14	1.018	0.76	NO	99.180	0.116	1.142	1.151	-0.8	9.69e6	5933	1632.9	1.30e7	2262	5731.4	bb	bb
19	13C-12378-PeCDD	6.82e5	4.58e5	1.14e6	34.07	1.114	1.49	NO	105.991	0.103	0.826	0.779	6.0	1.37e7	2699	5068.8	8.74e6	2230	3918.3	bb	bd
20	13C-123478-HxCDD	4.58e5	3.72e5	8.30e5	36.66	0.991	1.23	NO	102.631	0.207	0.810	0.789	2.6	8.59e6	4656	1844.7	6.84e6	4491	1522.9	bd	bd
21	13C-123678-HxCDD	6.03e5	4.87e5	1.09e6	36.74	0.993	1.24	NO	100.638	0.155	1.064	1.057	0.6	9.22e6	4656	1981.0	7.43e6	4491	1655.3	dd	dd
22	13C-1234678-HpCDD	3.51e5	3.33e5	6.83e5	40.02	1.082	1.05	NO	105.425	0.211	0.667	0.633	5.4	3.70e6	4190	882.0	3.54e6	3299	1071.8	bd	bd
23	13C-OCDD	4.38e5	4.91e5	9.30e5	44.23	1.196	0.89	NO	166.200	0.220	0.454	0.546	-16.9	3.01e6	3423	880.0	3.43e6	3316	1035.7	bd	bd
24	13C-2378-TCDF	7.39e5	9.72e5	1.71e6	30.35	0.992	0.76	NO	95.403	0.166	1.239	1.299	-4.6	7.38e6	8243	895.4	9.59e6	4922	1948.9	bb	bb
25	13C-12378-PeCDF	8.66e5	5.57e5	1.42e6	33.27	1.088	1.55	NO	98.533	0.155	1.030	1.046	-1.5	1.83e7	4581	3997.2	1.19e7	5319	2239.9	bb	bb
26	13C-23478-PeCDF	9.12e5	5.81e5	1.49e6	33.88	1.108	1.57	NO	100.745	0.151	1.081	1.073	0.7	1.88e7	4581	4106.1	1.22e7	5319	2288.4	bb	bb
27	13C-123478-HxCDF	3.27e5	6.22e5	9.49e5	35.95	0.972	0.53	NO	101.611	0.260	0.927	0.912	1.6	6.50e6	4924	1319.3	1.23e7	8365	1464.4	bd	bd
28	13C-123678-HxCDF	4.36e5	8.00e5	1.24e6	36.05	0.975	0.55	NO	101.583	0.200	1.207	1.188	1.6	6.87e6	4924	1395.9	1.32e7	8365	1575.8	dd	db
29	13C-234678-HxCDF	3.55e5	6.44e5	9.99e5	36.53	0.988	0.55	NO	96.558	0.235	0.975	1.010	-3.4	5.80e6	4924	1178.9	1.10e7	8365	1309.8	dd	bb
30	13C-123789-HxCDF	2.86e5	5.47e5	8.33e5	37.30	1.008	0.52	NO	95.488	0.279	0.813	0.852	-4.5	3.83e6	4924	777.2	7.22e6	8365	862.7	bd	bd
31	13C-1234678-HpCDF	2.62e5	5.85e5	8.48e5	38.78	1.049	0.45	NO	105.557	0.172	0.827	0.784	5.6	3.37e6	3040	1110.3	7.52e6	4491	1674.1	bb	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	1.78e5	4.07e5	5.85e5	40.67	1.100	0.44	NO	101.718	0.239	0.571	0.562	1.7	1.79e6	3040	587.2	4.02e6	4491	895.2	bd	bd
33	13C-1234-TCDD	6.02e5	7.79e5	1.38e6	30.59	0.000	0.77	NO	100.000	0.134	1.000	1.000	0.0	6.67e6	5933	1124.0	8.45e6	2262	3735.7	bb	bb
34	13C-123789-HxCDD	5.66e5	4.59e5	1.02e6	36.98	0.000	1.23	NO	100.000	0.163	1.000	1.000	0.0	7.73e6	4656	1660.1	6.33e6	4491	1410.7	dd	dd
35	37Cl-2378-TCDD	1.42e5		1.42e5	31.15	1.018			9.518	0.0257	1.025	1.077	-4.8	2.08e6	1694	1227.0				bb	

Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

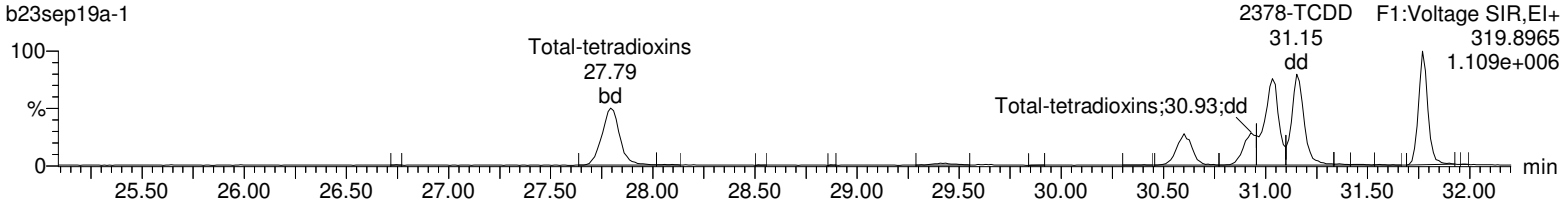
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

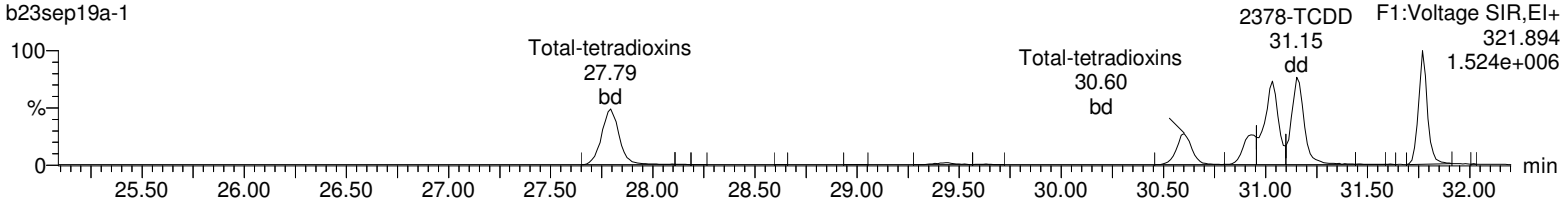
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

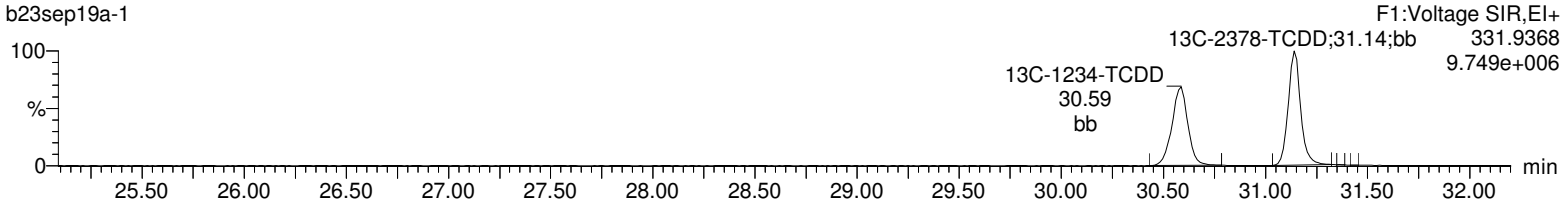
Total-tetradioxins



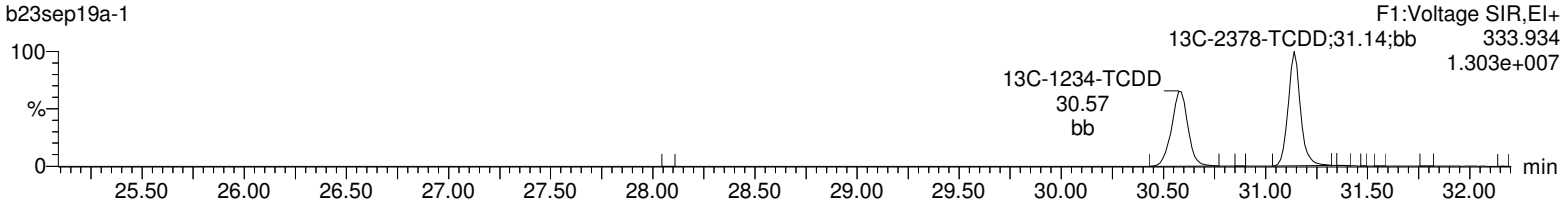
Total-tetradioxins



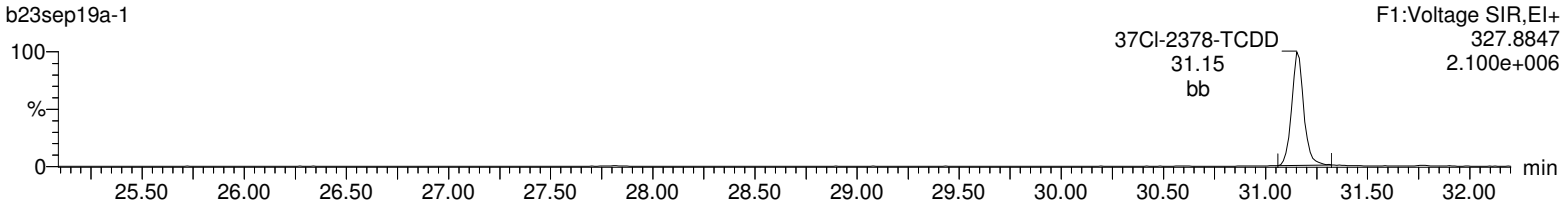
13C-2378-TCDD



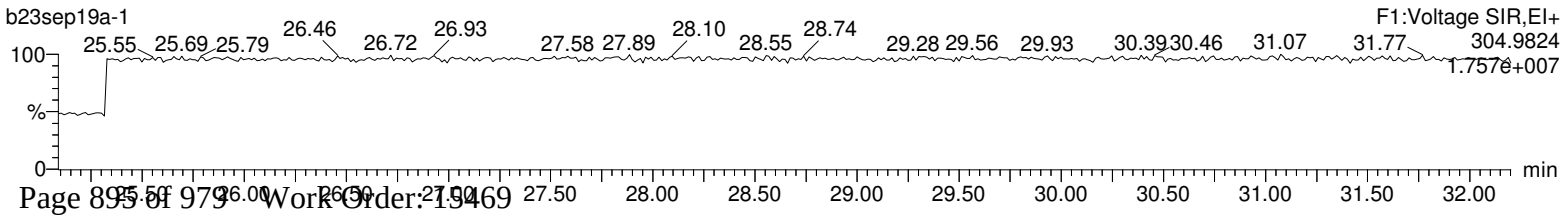
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



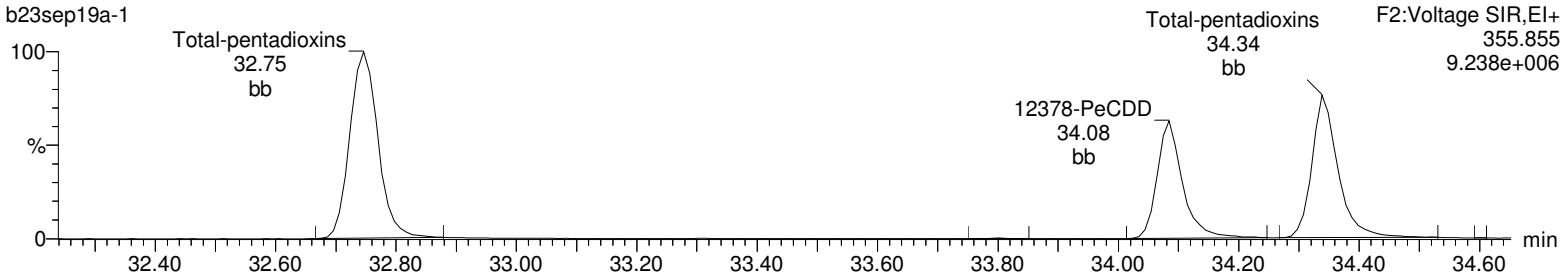
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

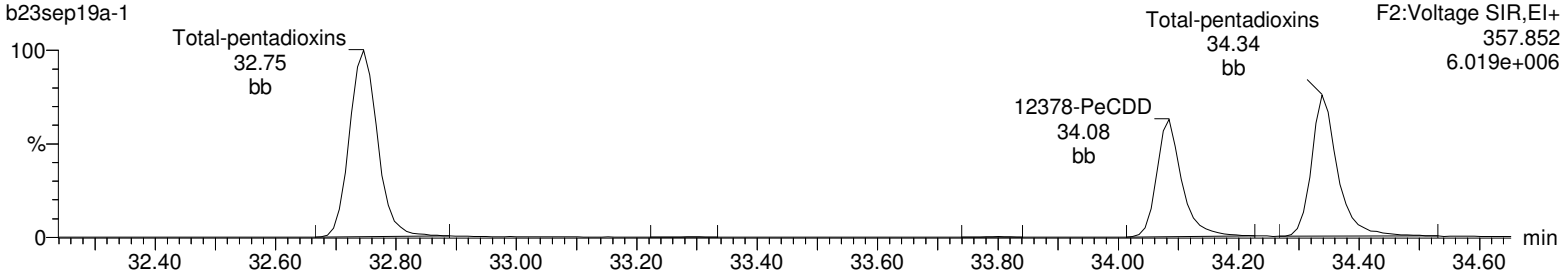
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

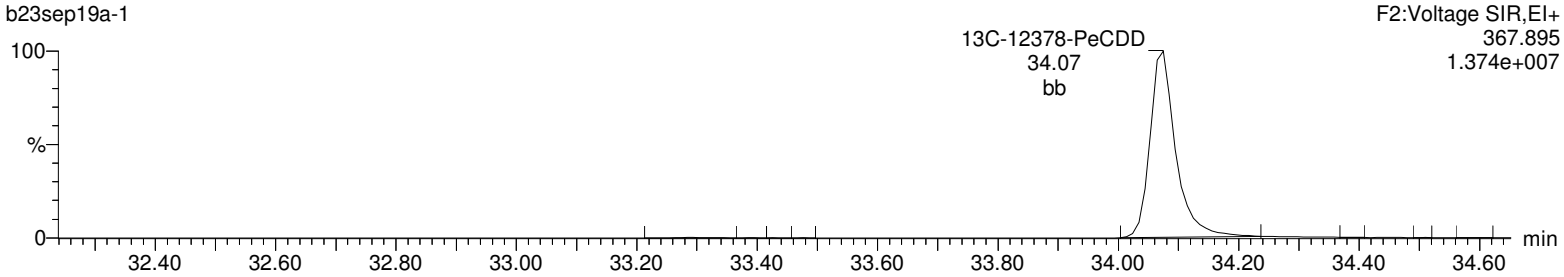
Total-pentadioxins



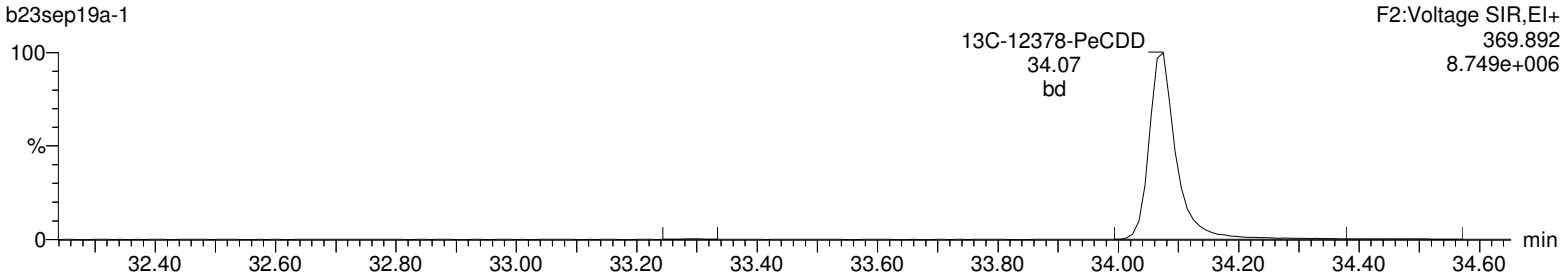
Total-pentadioxins



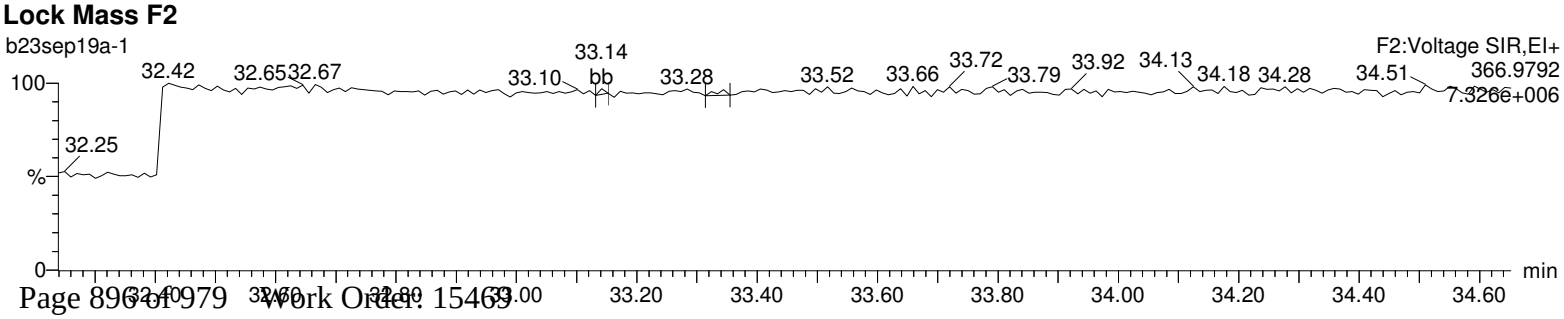
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



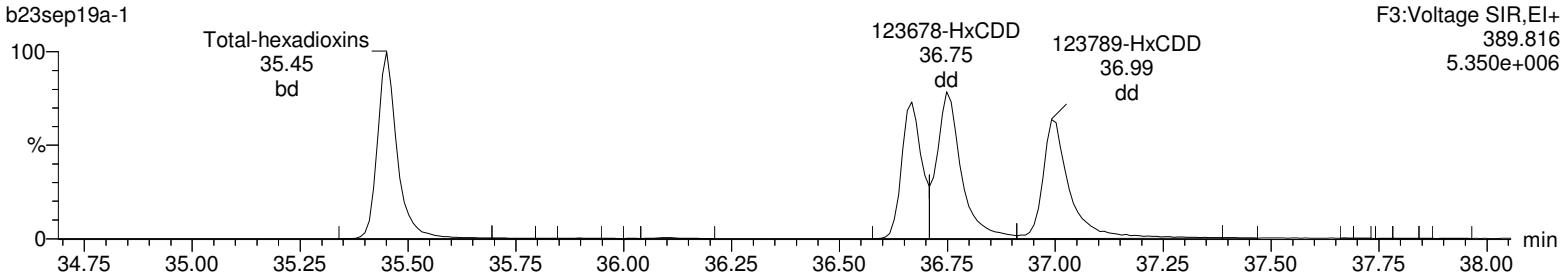
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

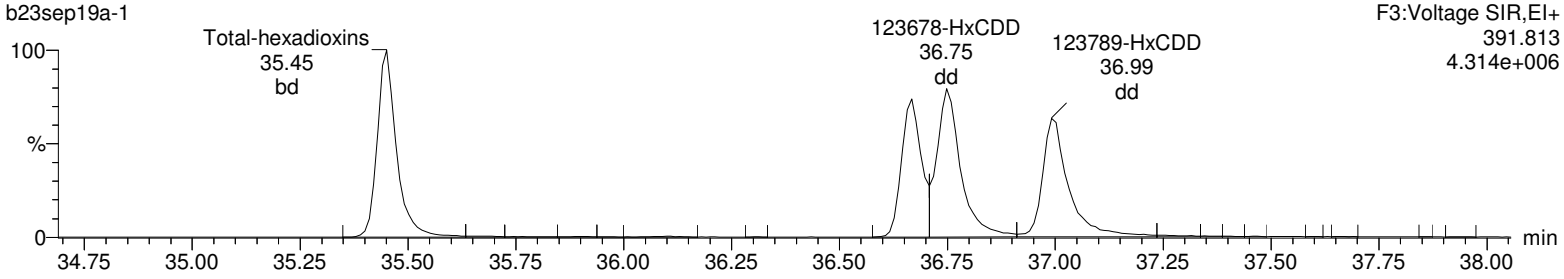
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

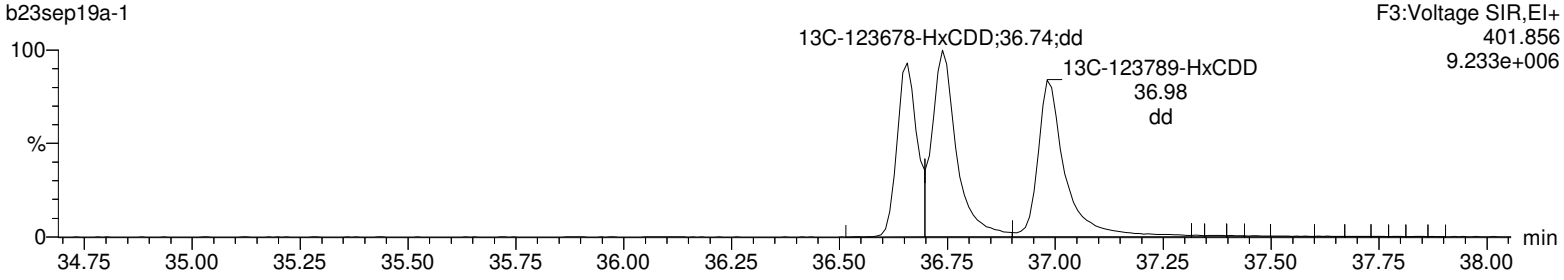
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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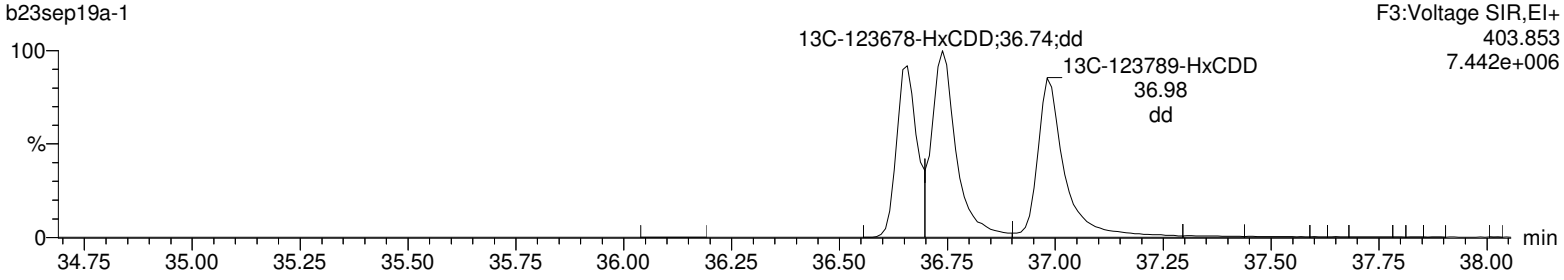
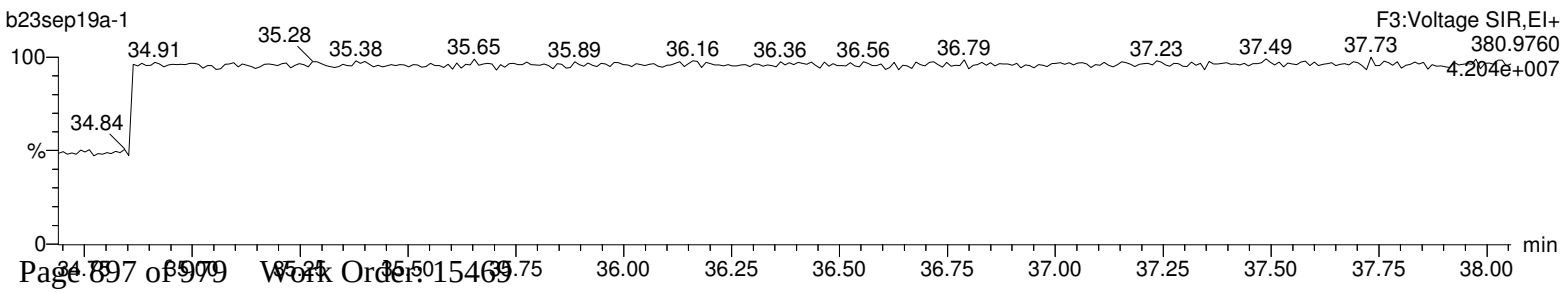


Lock Mass F3



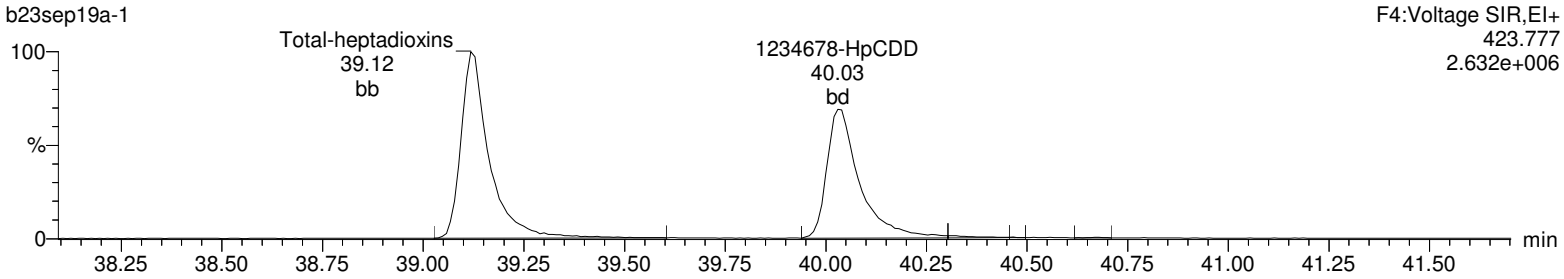
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

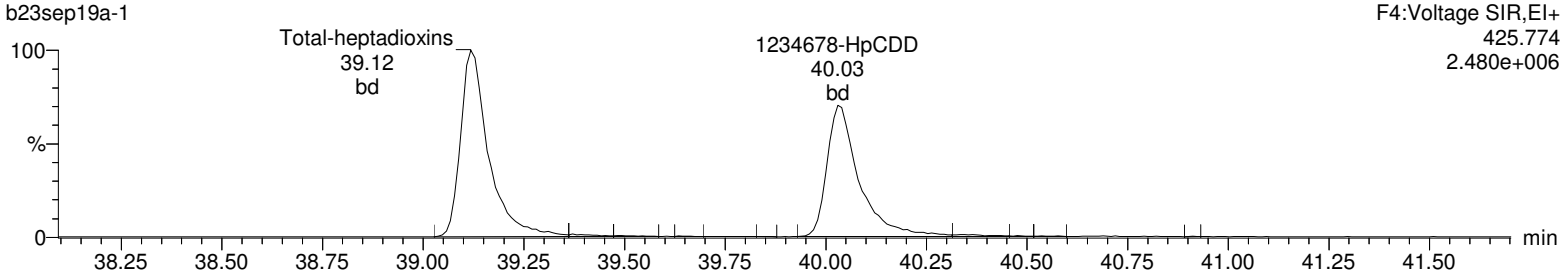
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

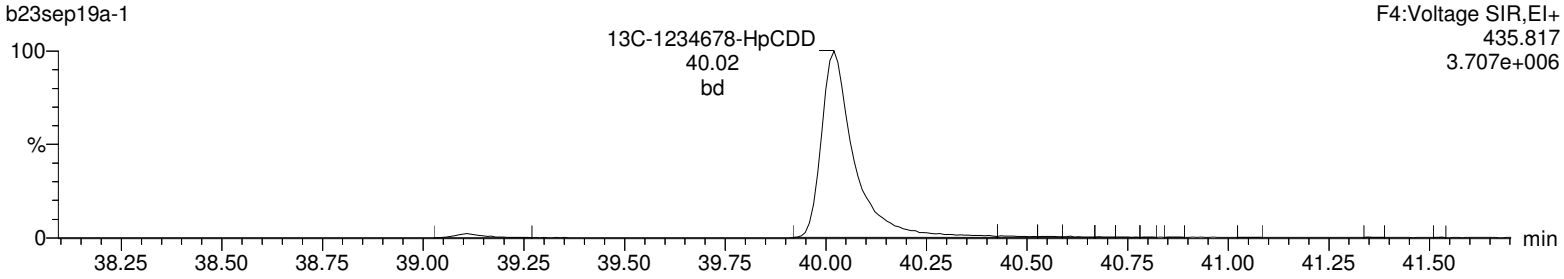
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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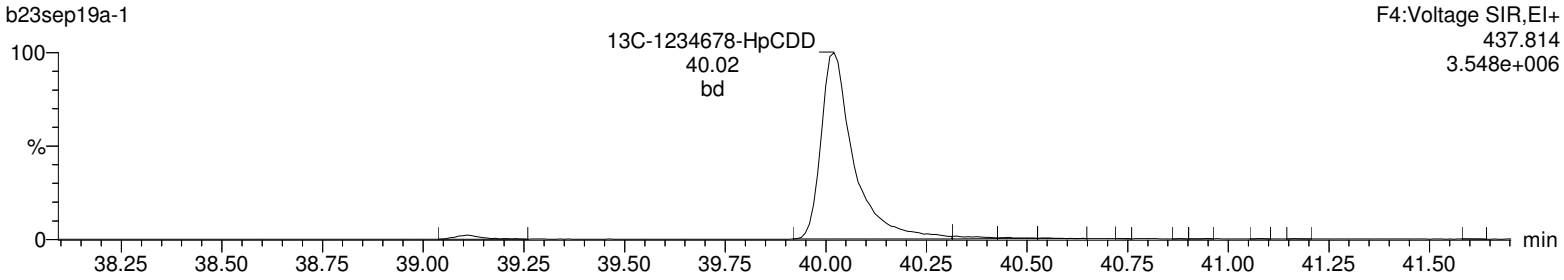
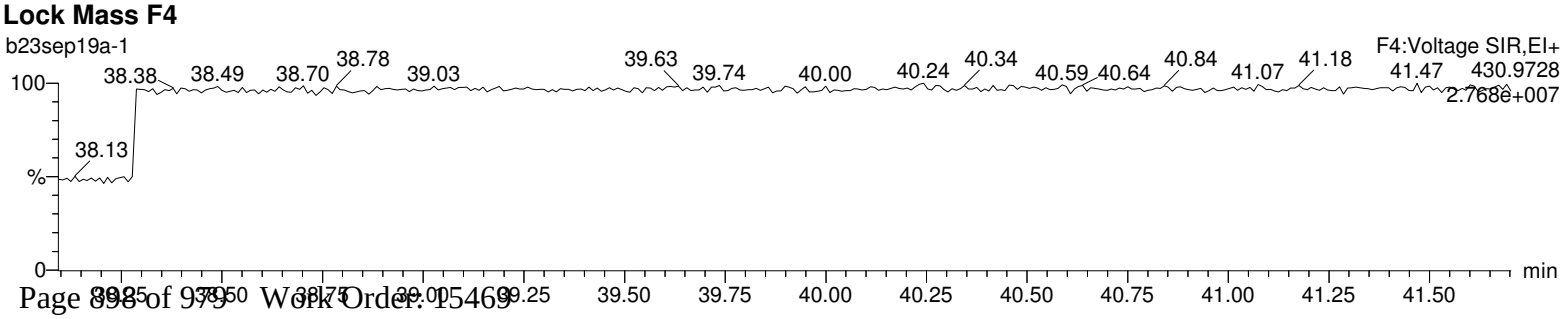


Lock Mass F4



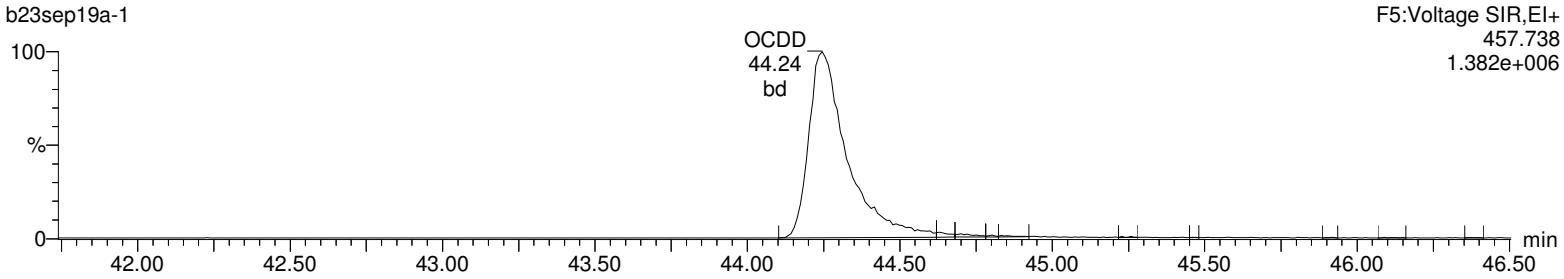
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

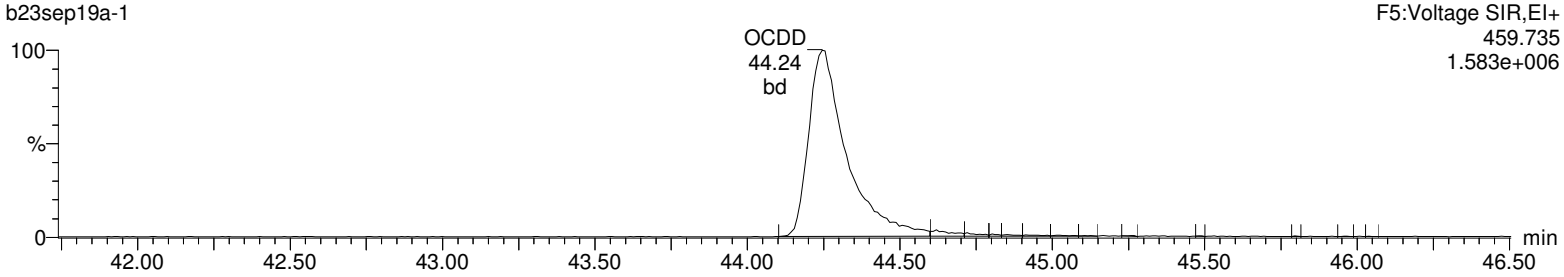
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

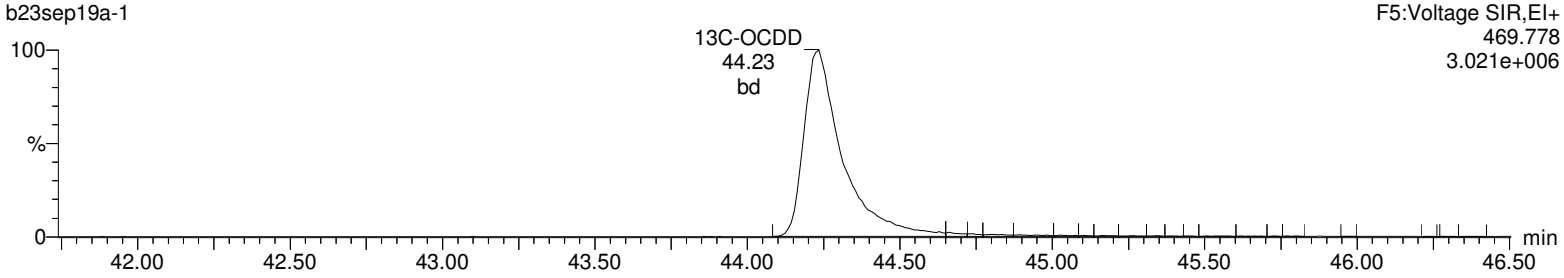
OCDD



OCDD



13C-OCDD



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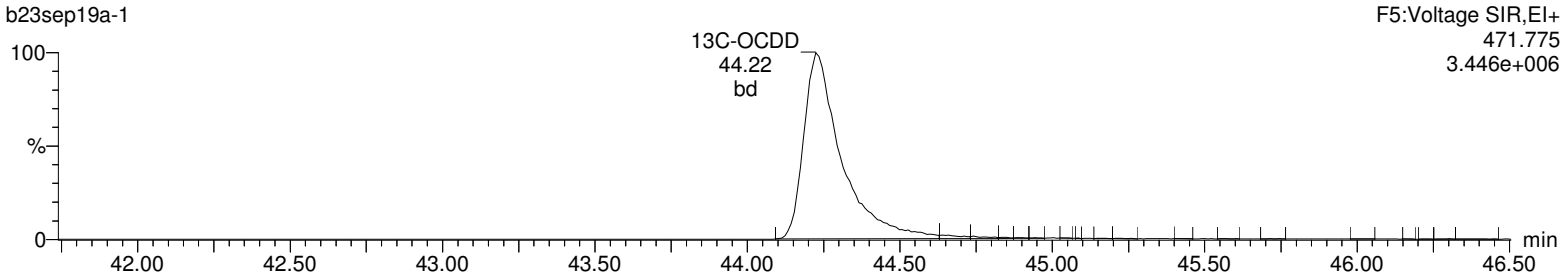
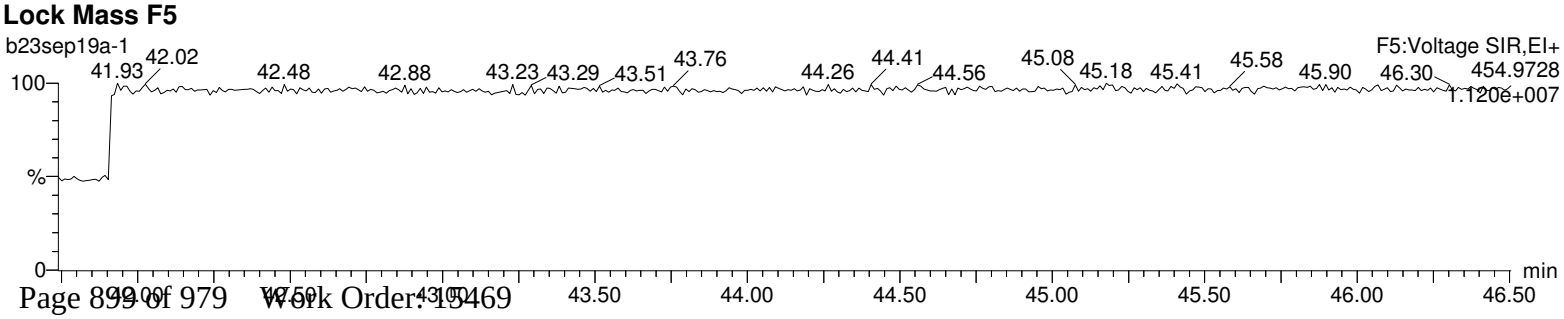


Lock Mass F5



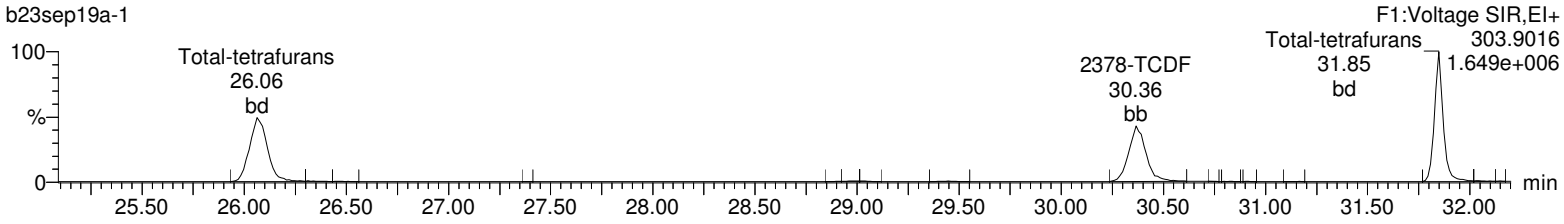
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

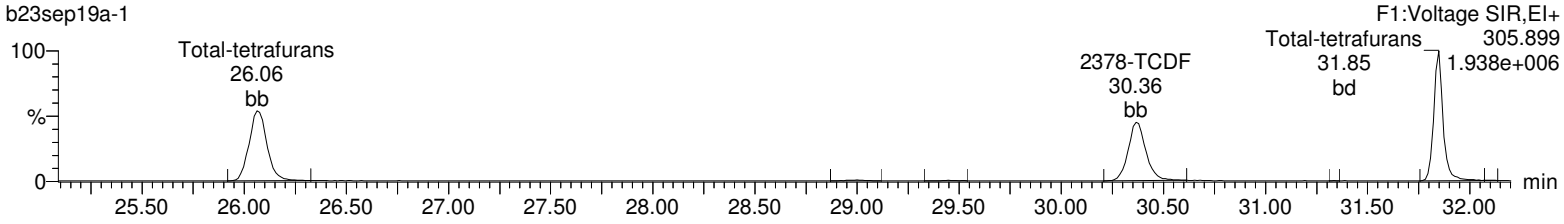
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

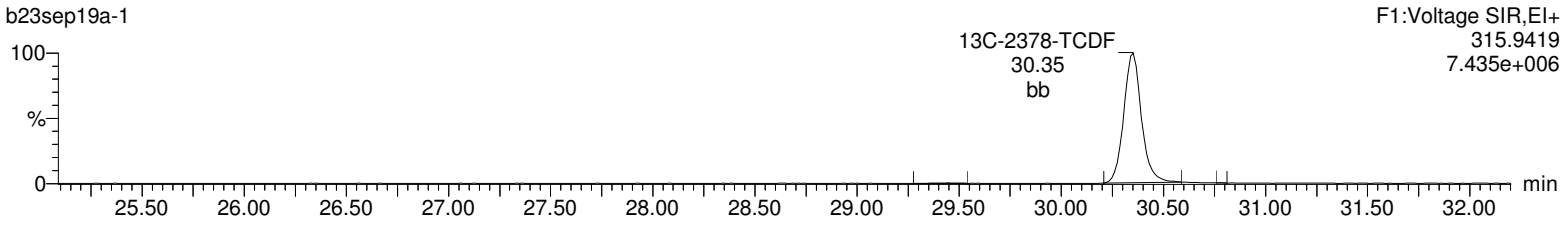
Total-tetrafurans



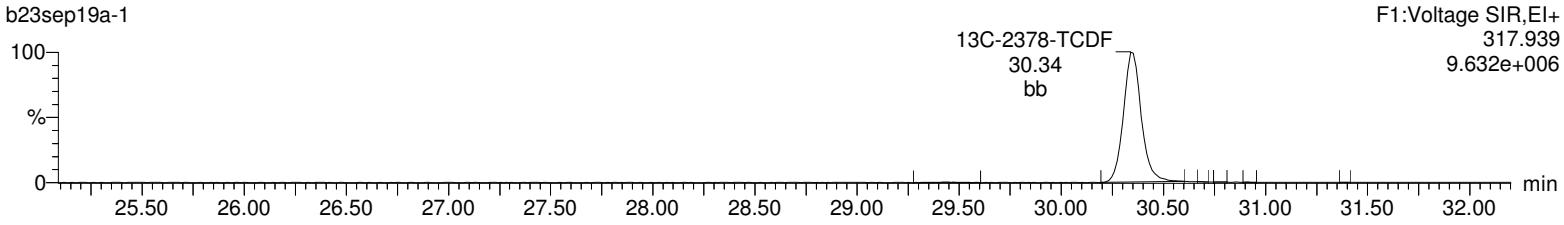
Total-tetrafurans



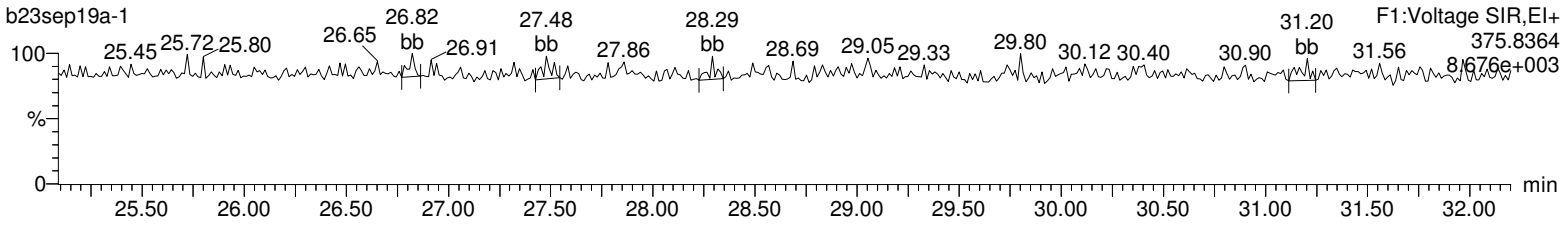
13C-2378-TCDF



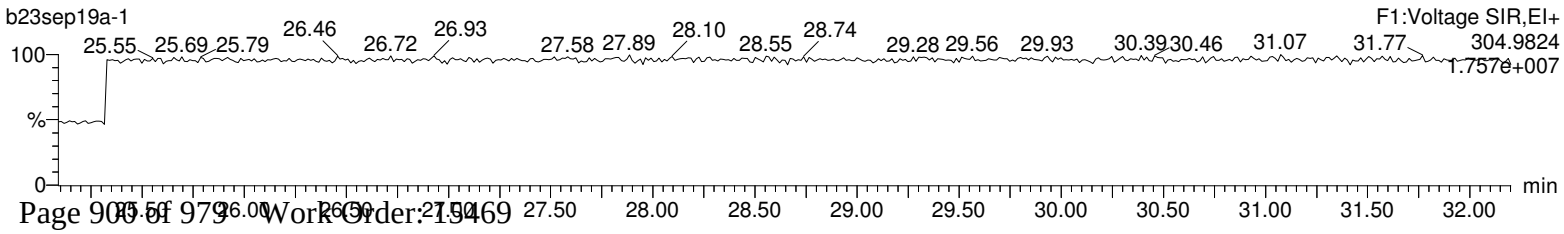
13C-2378-TCDF



HxDPE



Lock Mass F1



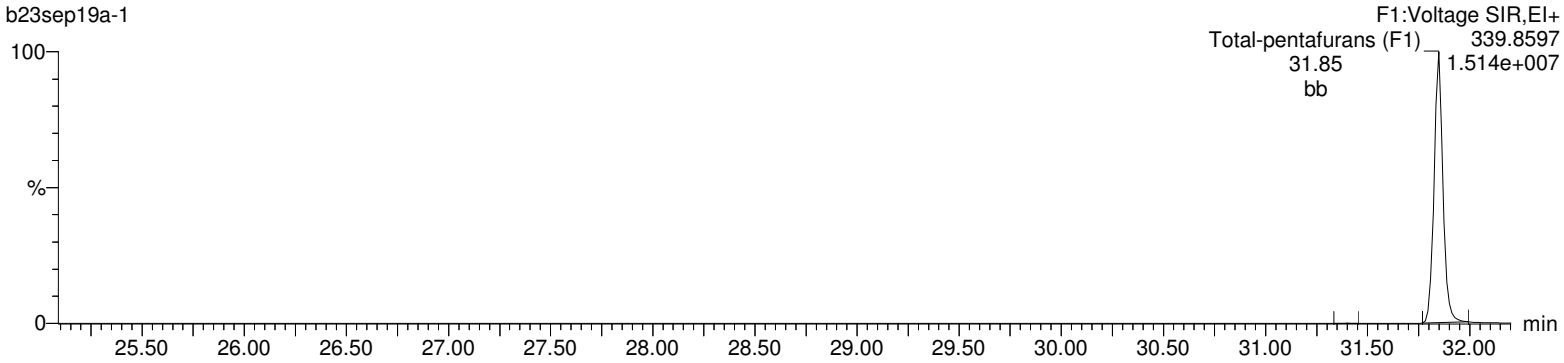
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

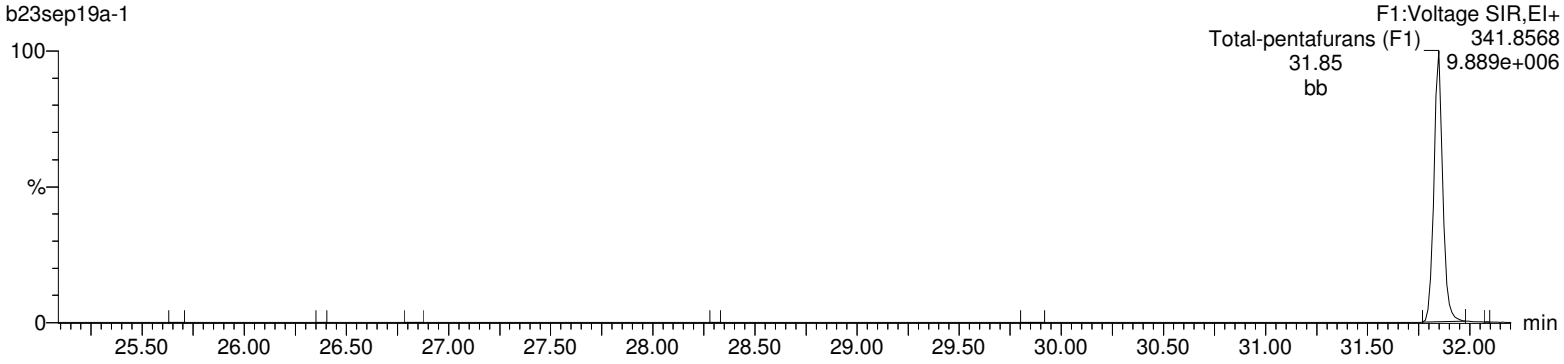
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

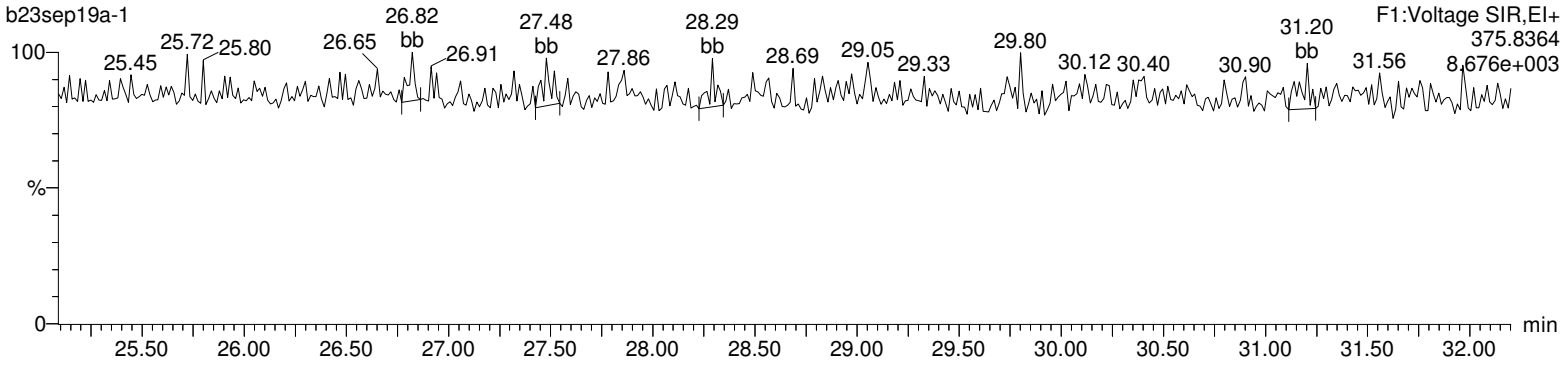
Total-pentafurans (F1)



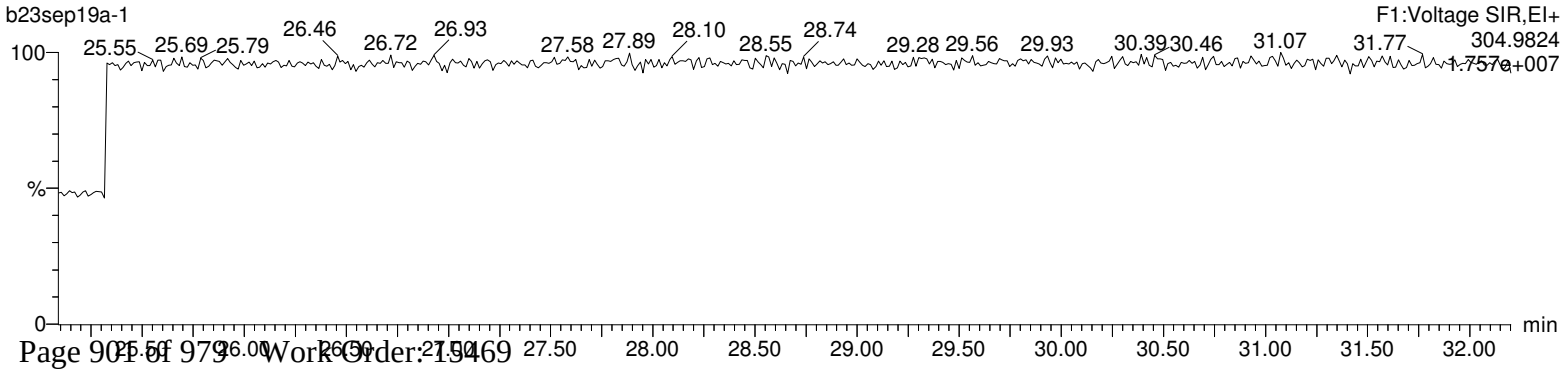
Total-pentafurans (F1)



HxDPE



Lock Mass F1



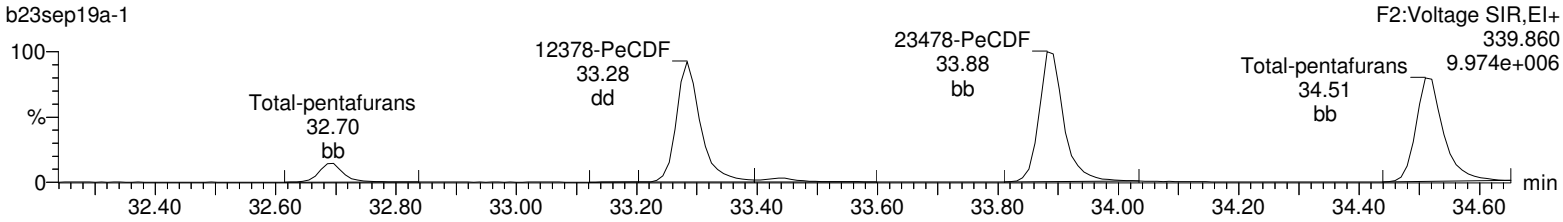
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

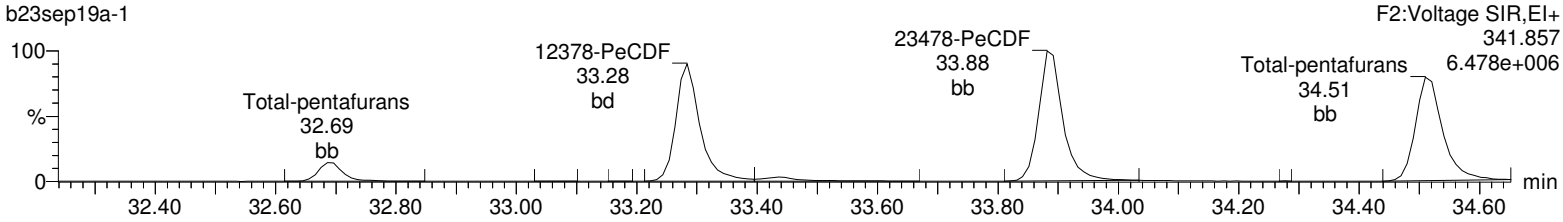
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

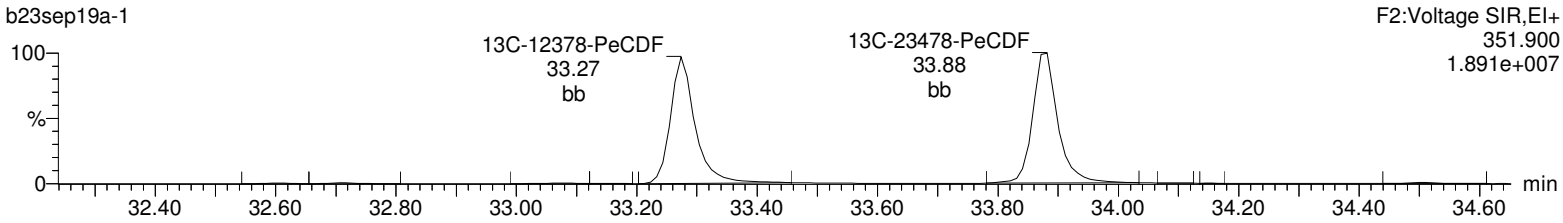
Total-pentafurans



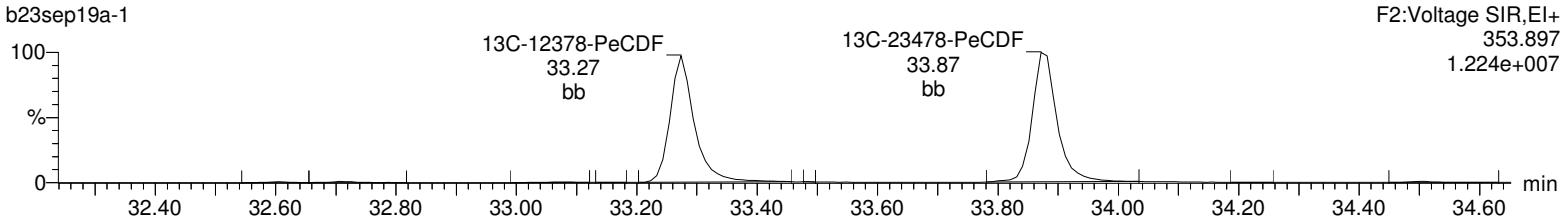
Total-pentafurans



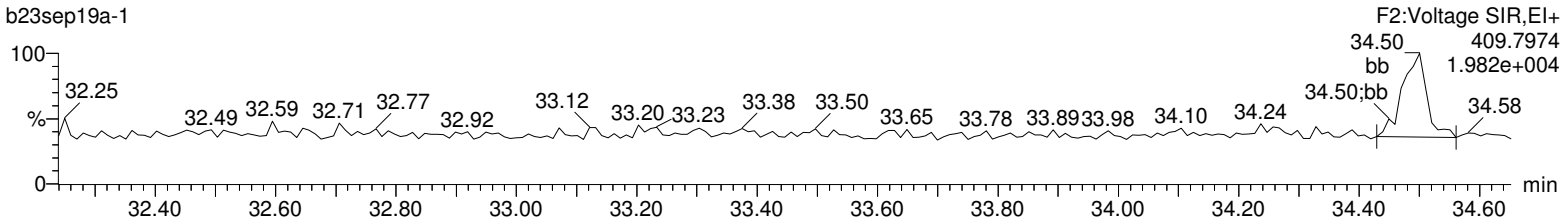
13C-12378-PeCDF



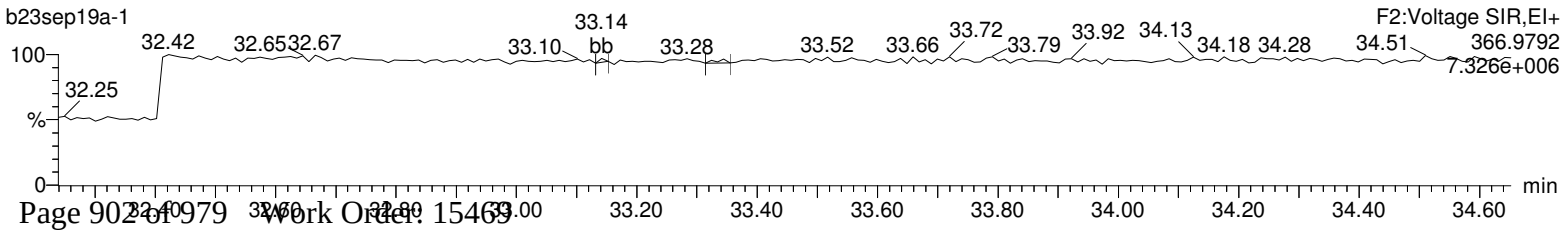
13C-12378-PeCDF



HpDPE



Lock Mass F2



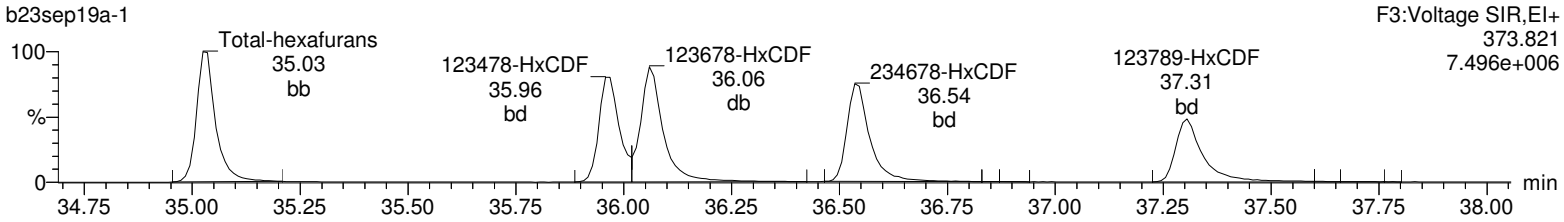
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

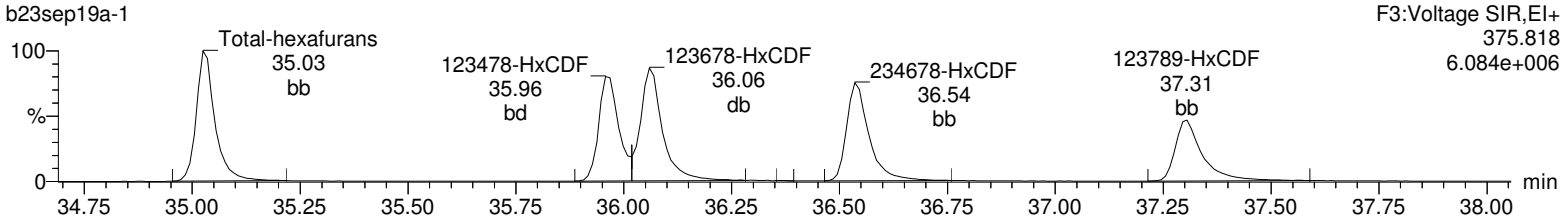
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

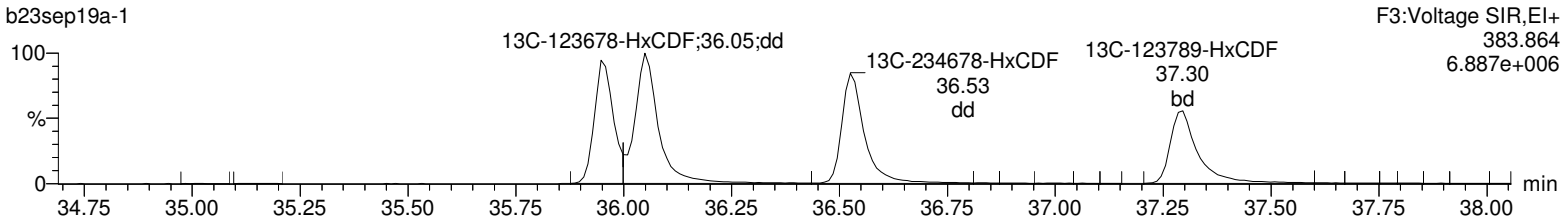
Total-hexafurans



Total-hexafurans



13C-123478-HxCDF



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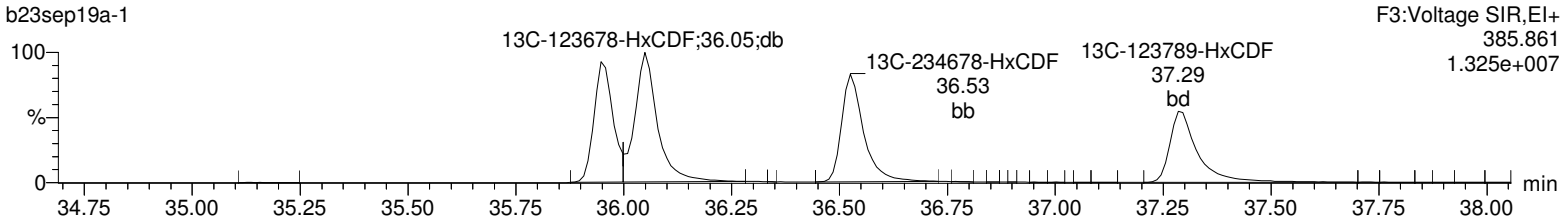

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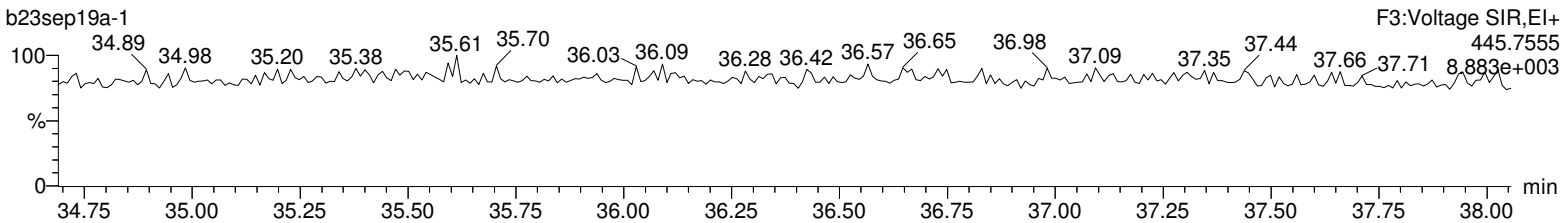
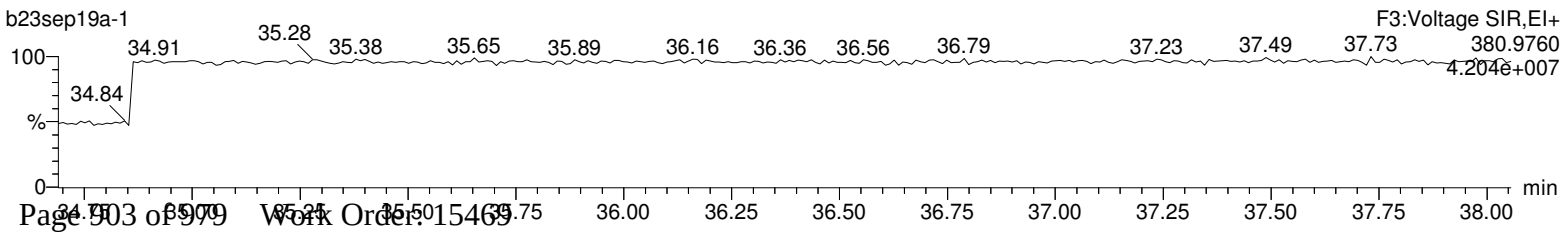


Lock Mass F3



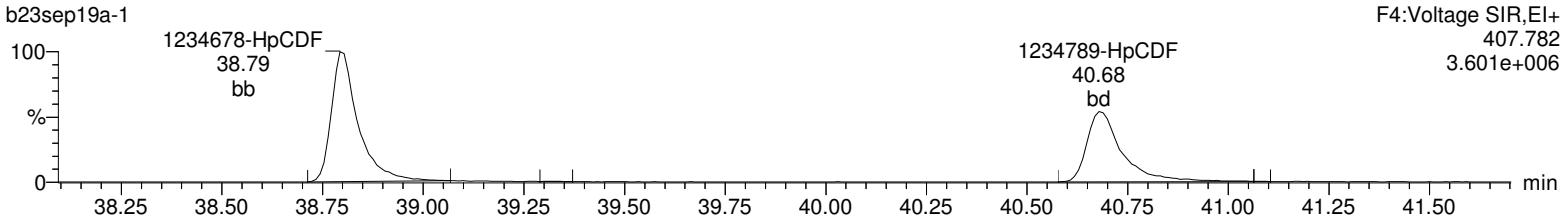
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

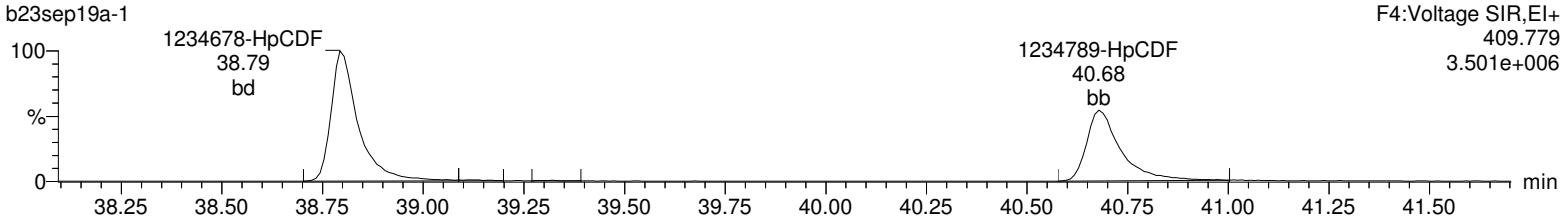
Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

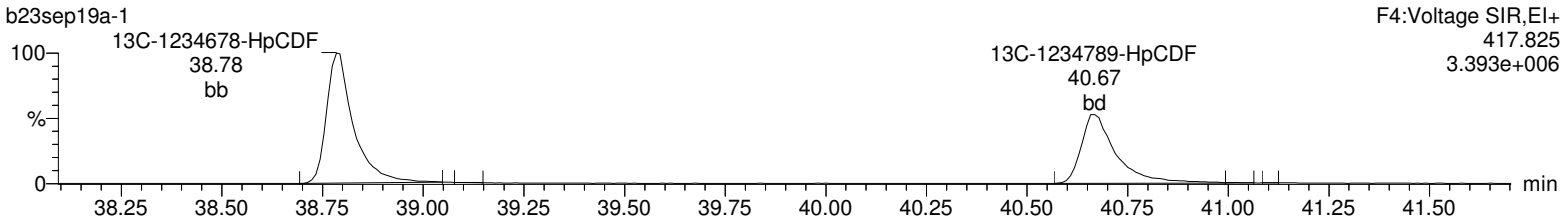
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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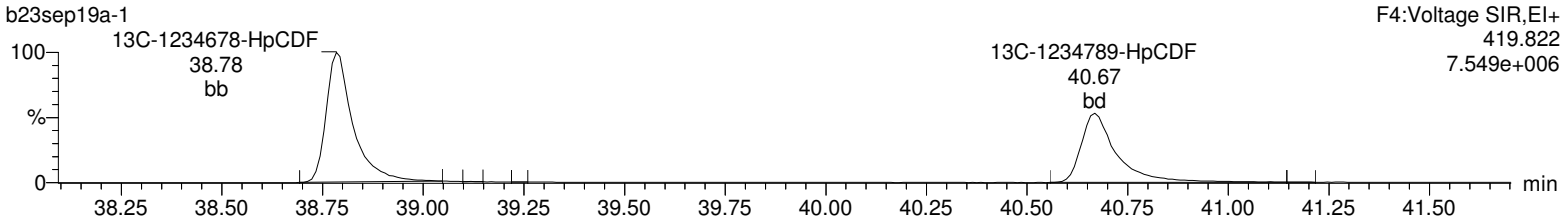

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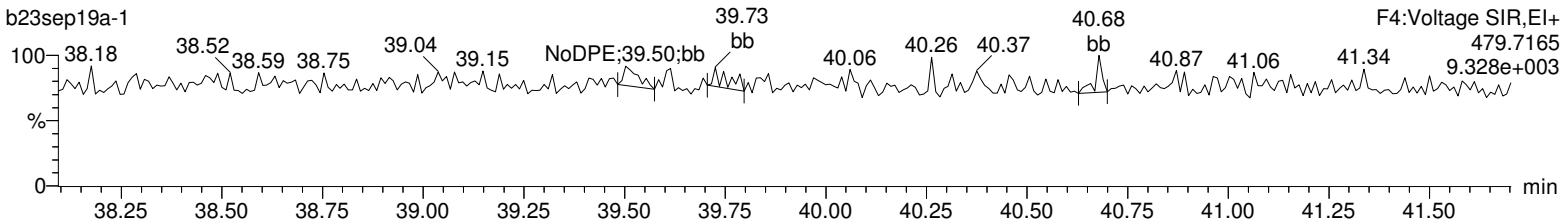
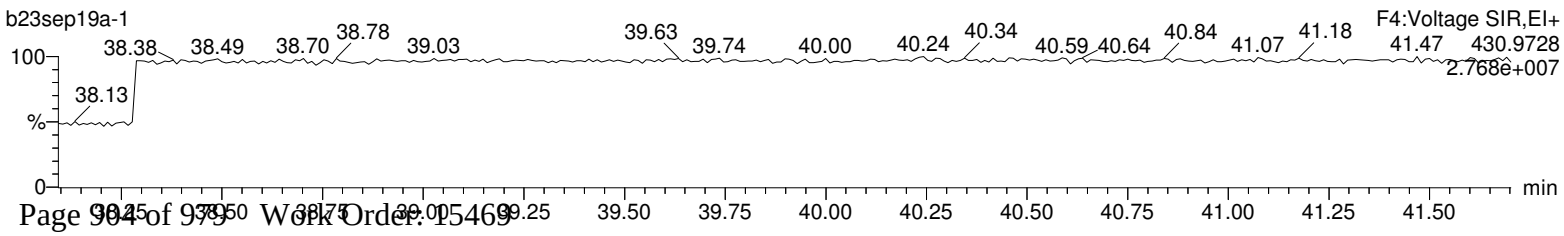


Lock Mass F4



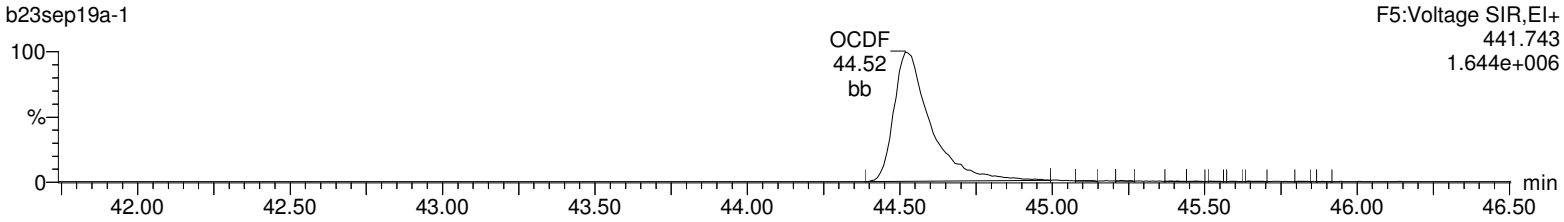
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a-1.qld

Last Altered: Monday, September 23, 2019 09:07:37 Eastern Standard Time
Printed: Monday, September 23, 2019 09:09:24 Eastern Standard Time

Name: b23sep19a-1, Date: 23-Sep-2019, Time: 08:19:48, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a, Task: HRP763_1, User: MLS

OCDF



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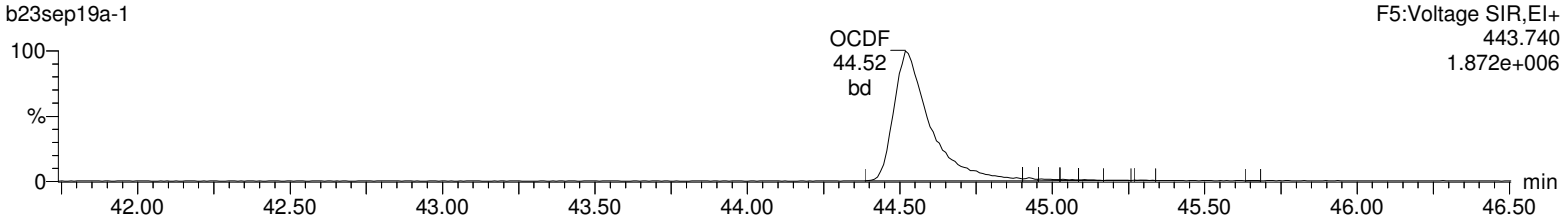
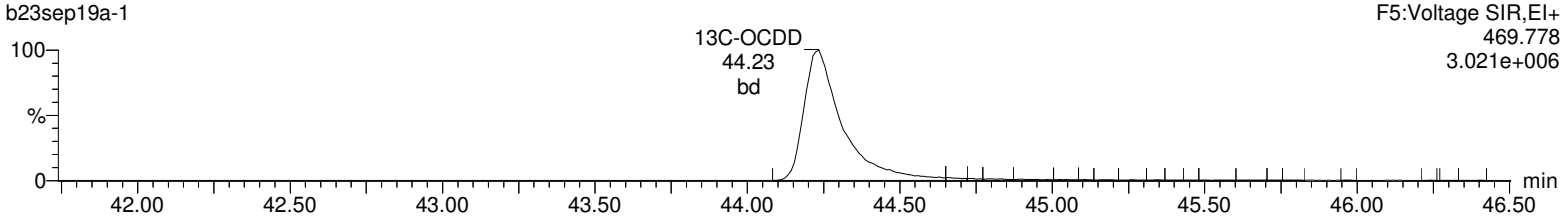
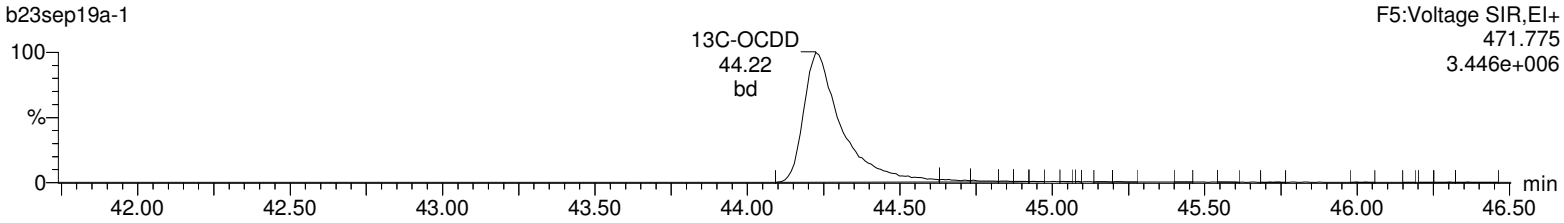


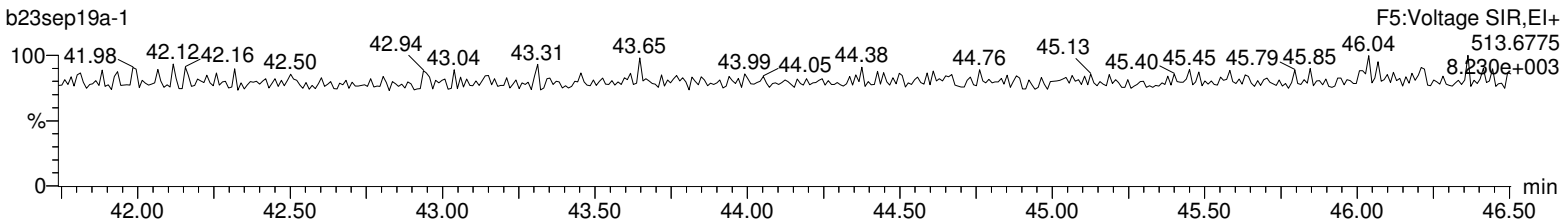
13C-OCDD



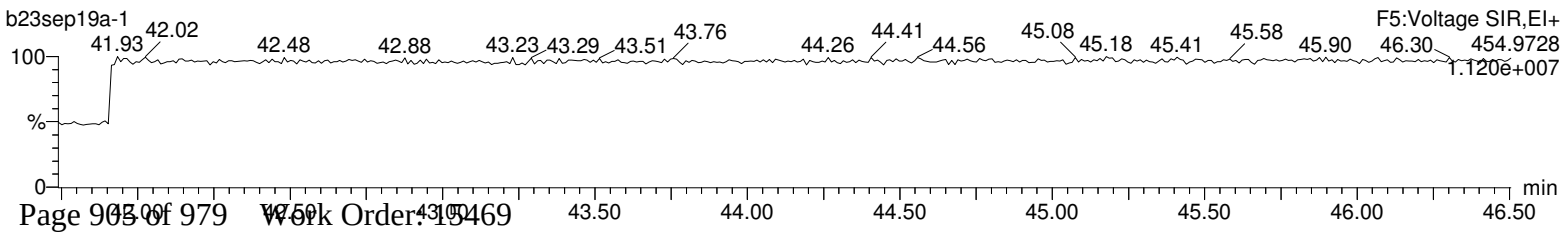
13C-OCDD



DeDPE



Lock Mass F5



RUN LOG

Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
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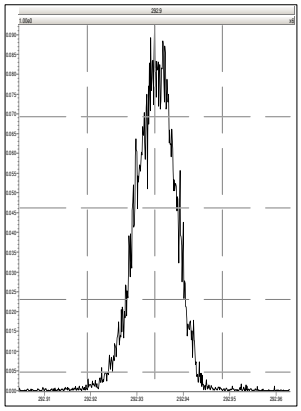
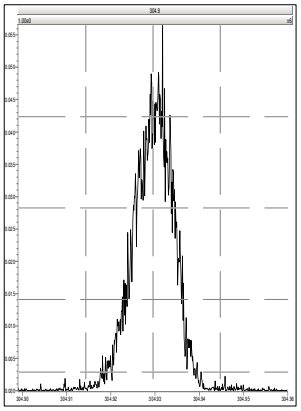
b23sep19a_2-2	23-SEP-2019 21:21:40	Mary Showalter	12024812-1 LCSD	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-3	23-SEP-2019 22:10:04	Mary Showalter	12024810-1 MB	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-4	23-SEP-2019 22:58:31	Mary Showalter	15471001-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-5	23-SEP-2019 23:46:55	Mary Showalter	12024813-1 MS	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-6	24-SEP-2019 00:35:22	Mary Showalter	12024814-1 MSD	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-7	24-SEP-2019 01:23:48	Mary Showalter	15471002-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-8	24-SEP-2019 02:12:15	Mary Showalter	15471003-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-9	24-SEP-2019 03:00:41	Mary Showalter	15471004-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-10	24-SEP-2019 03:49:07	Mary Showalter	15471005-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-11	24-SEP-2019 04:37:32	Mary Showalter	15471006-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-12	24-SEP-2019 05:25:58	Mary Showalter	15471007-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-13	24-SEP-2019 06:14:26	Mary Showalter	15471008-1	41761	1 uL	dioxin_db5ms	10K
b23sep19a_2-14	24-SEP-2019 07:02:50	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

Printed: Tuesday, September 24, 2019 07:59:21 Eastern Standard Time

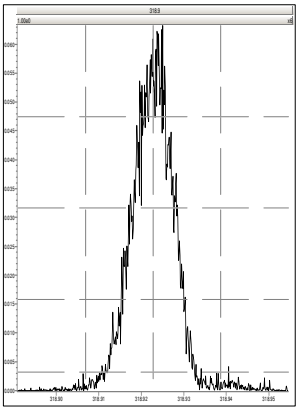
M 292.9824 R 15745



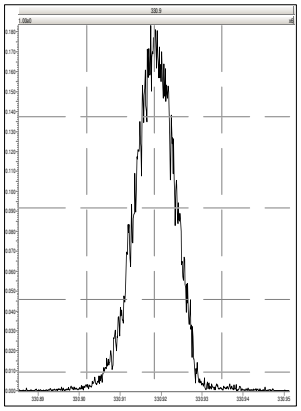
M 304.9824 R 15625



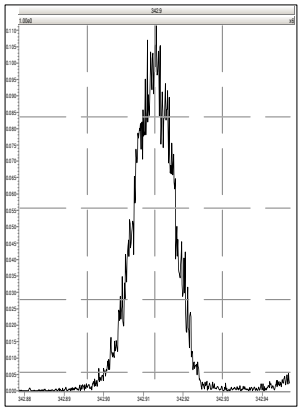
M 318.9792 R 14755



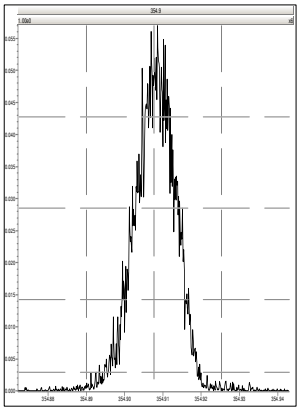
M 330.9792 R 15015



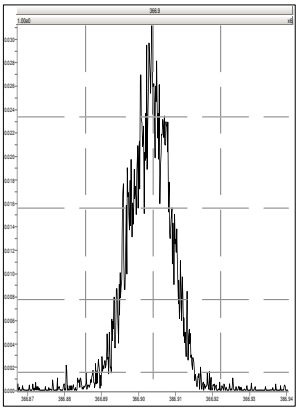
M 342.9792 R 14542



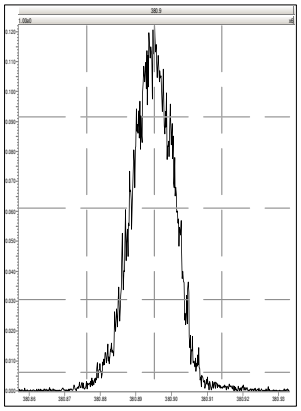
M 354.9792 R 15342



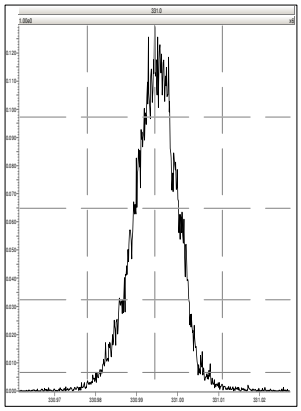
M 366.9792 R 15331



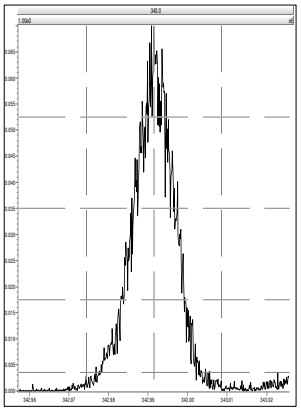
M 380.9760 R 14340



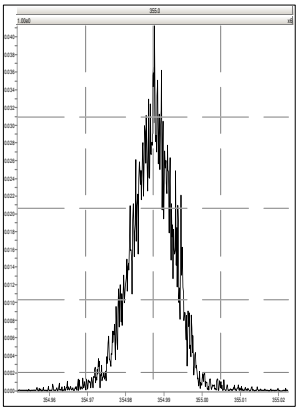
M 330.9792 R 13631



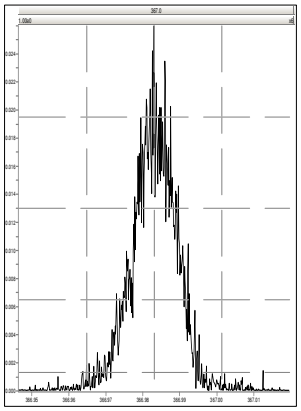
M 342.9792 R 14204



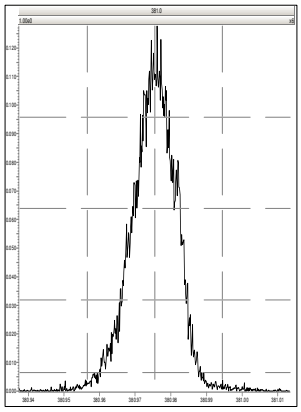
M 354.9792 R 14462



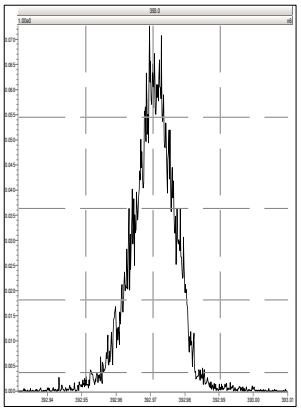
M 366.9792 R 14931



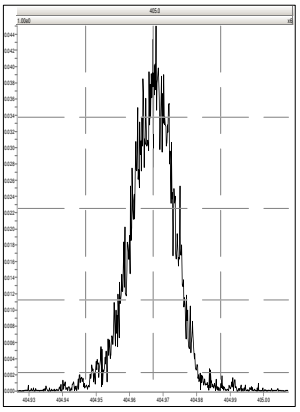
M 380.9760 R 13812



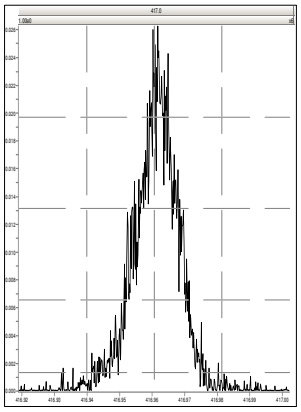
M 392.9760 R 14579



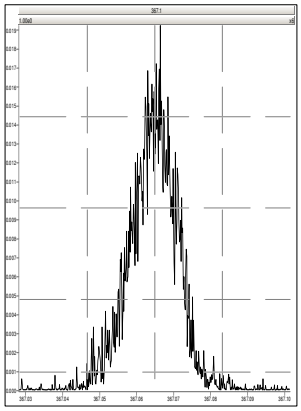
M 404.9760 R 14971



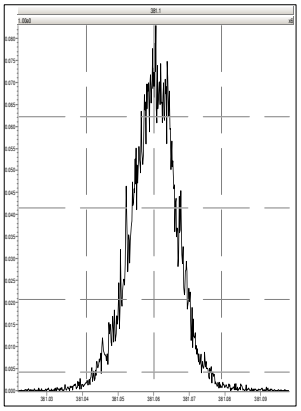
M 416.9760 R 14970



M 366.9792 R 13813



M 380.9760 R 12548



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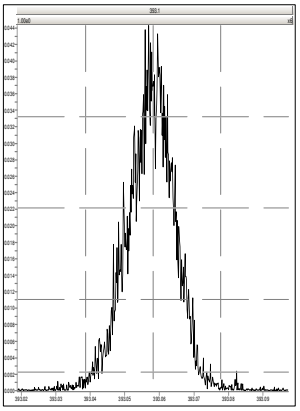
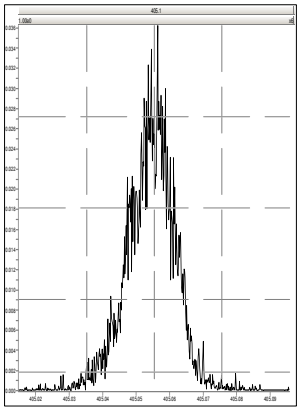
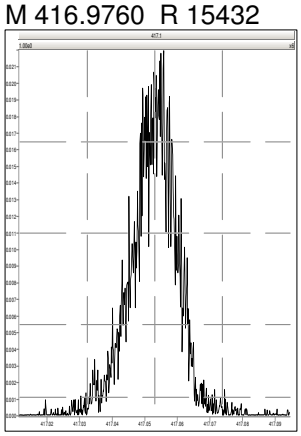


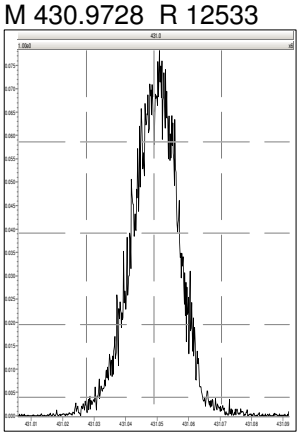
M 404.9760 R 13227



M 416.9760 R 15432



M 430.9728 R 12533



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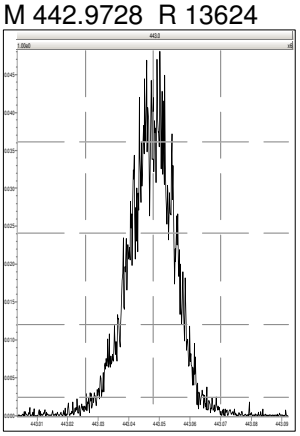
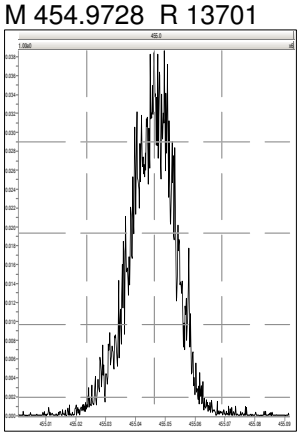
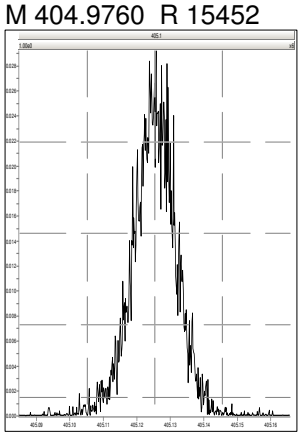


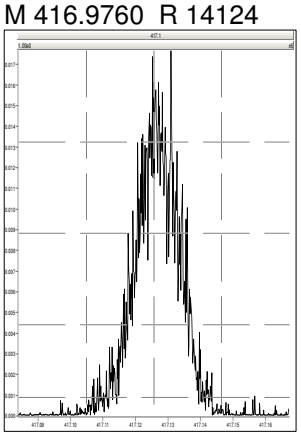
M 454.9728 R 13701



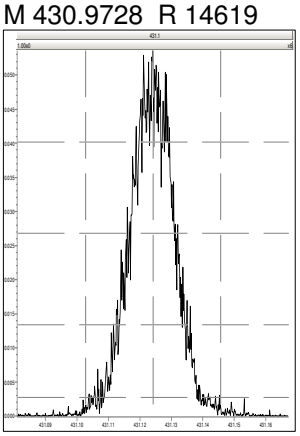
M 404.9760 R 15452



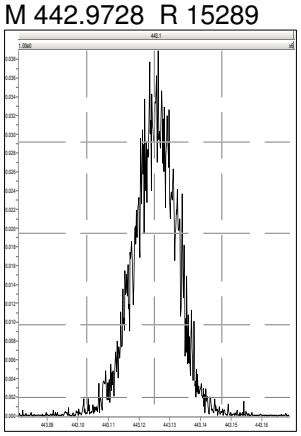
M 416.9760 R 14124



M 430.9728 R 14619



M 442.9728 R 15289



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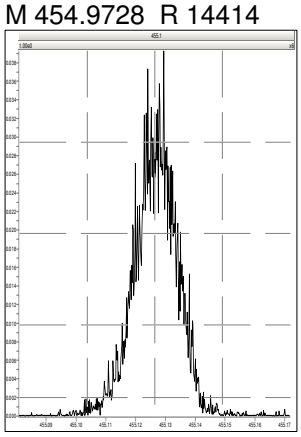
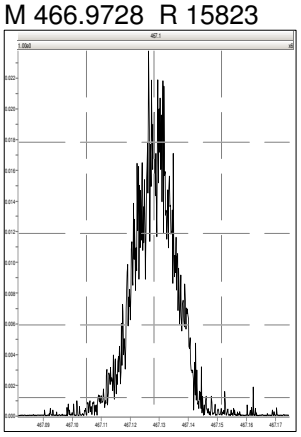
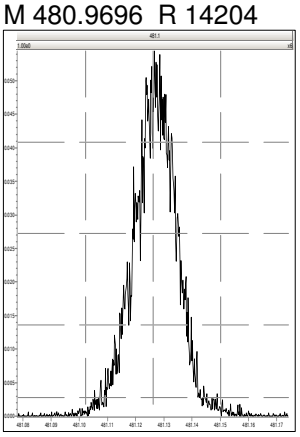


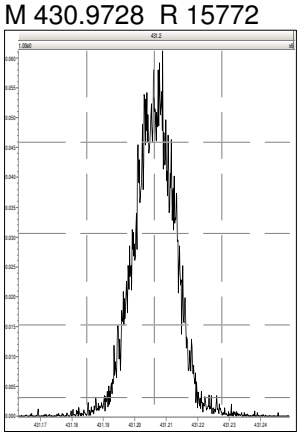
M 466.9728 R 15823



M 480.9696 R 14204



M 430.9728 R 15772



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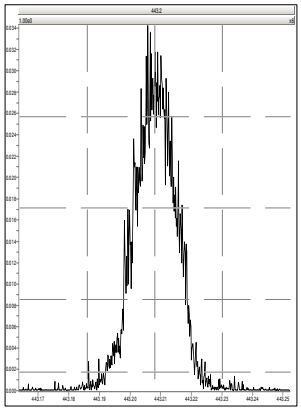

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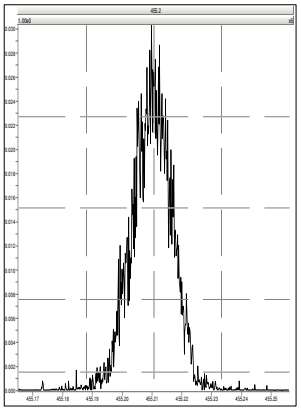

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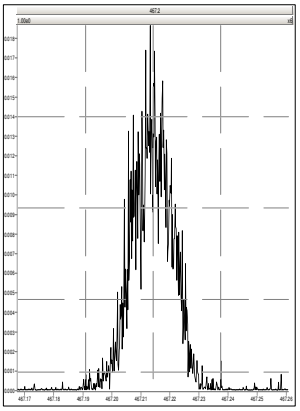

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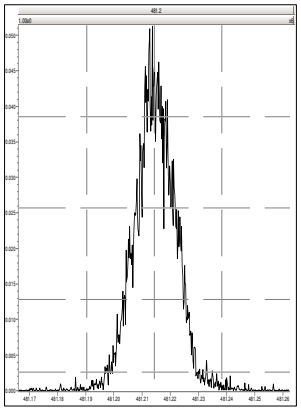

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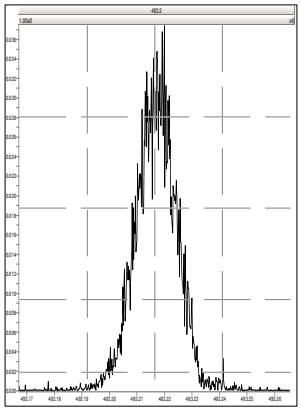

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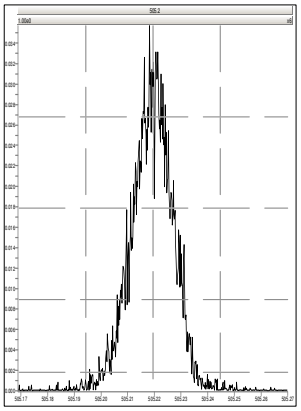
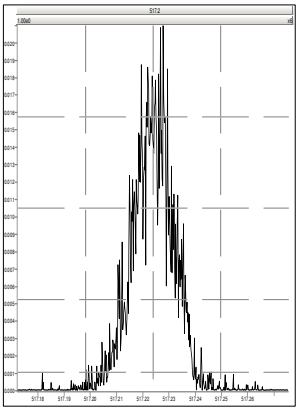


M 516.9697 R 15342



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23sep19a_2-14.qld

Last Altered: Tuesday, September 24, 2019 08:17:06 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:17:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

	Name	RT
1	First TCDF	26.06
2	Last TCDF	31.85
3	First PeCDF	31.85
4	Last PeCDF	34.51
5	First HxCDF	35.03
6	Last HxCDF	37.31
7	First HpCDF	38.79
8	Last HpCDF	40.68
9	OCDF	44.52
10	First TCDD	27.78
11	2378-TCDD	31.15
12	Last TCDD	31.77
13	First PeCDD	32.75
14	Last PeCDD	34.34
15	First HxCDD	35.45
16	Last HxCDD	36.99
17	First HpCDD	39.12
18	Last HpCDD	40.03
19	OCDD	44.24

Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

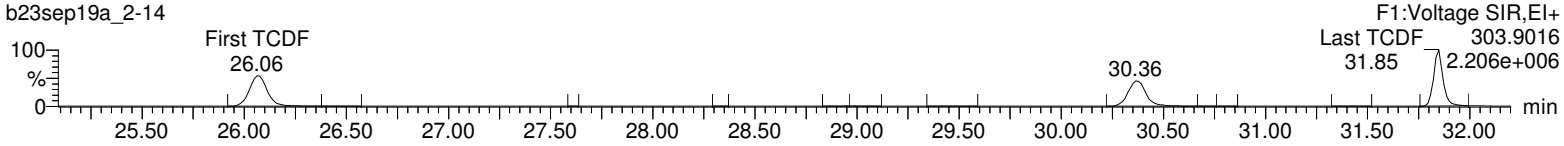
Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23sep19a_2-14.qld

Last Altered: Tuesday, September 24, 2019 08:17:06 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:17:35 Eastern Standard Time

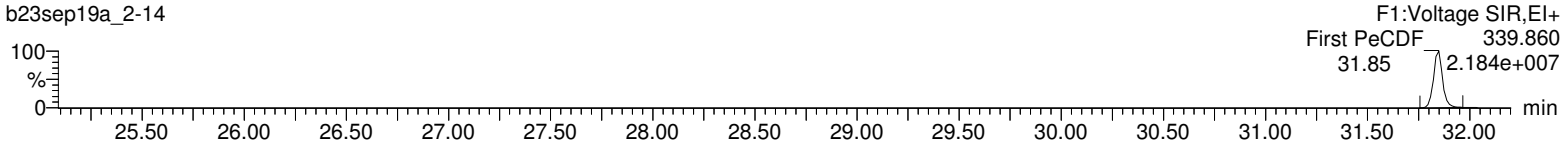
Method: C:\MassLynx\Default.pro\Methdb\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

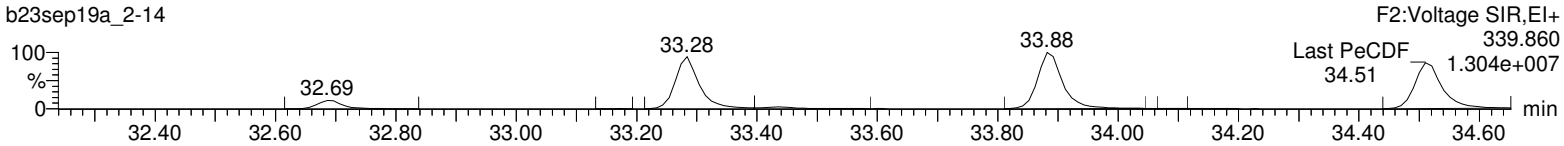
First TCDF



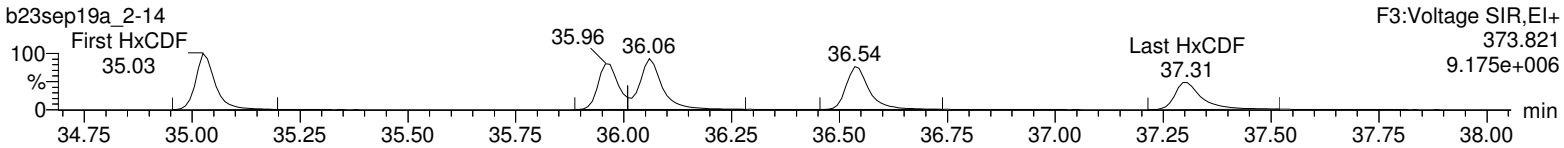
First PeCDF



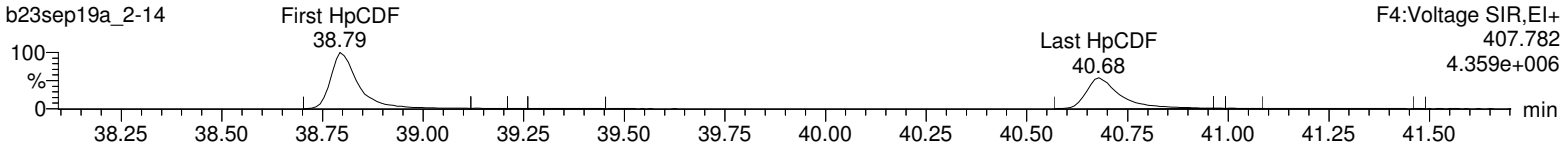
Last PeCDF



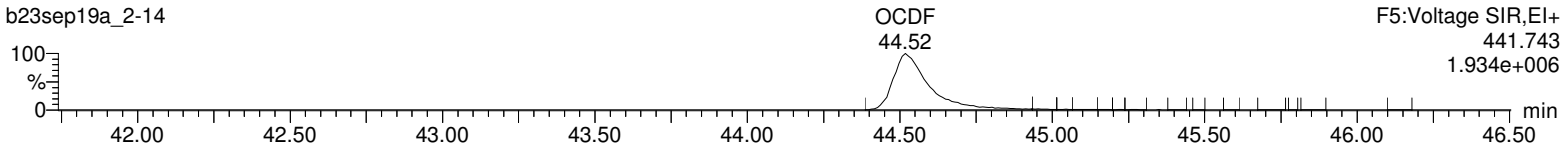
First HxCDF



First HpCDF



OCDF



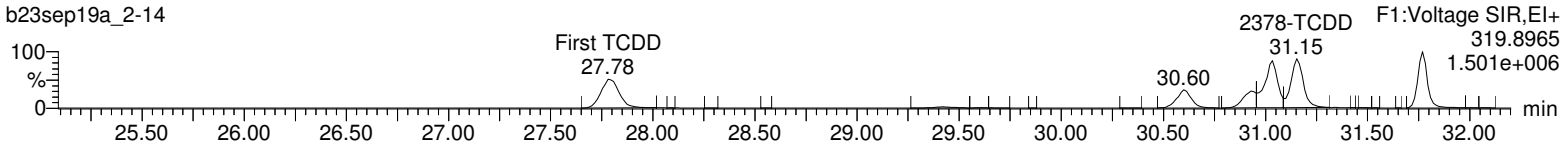
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b23sep19a_2-14.qld

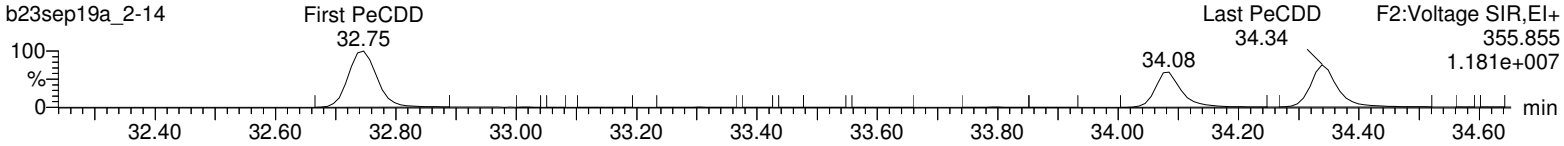
Last Altered: Tuesday, September 24, 2019 08:17:06 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:17:35 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

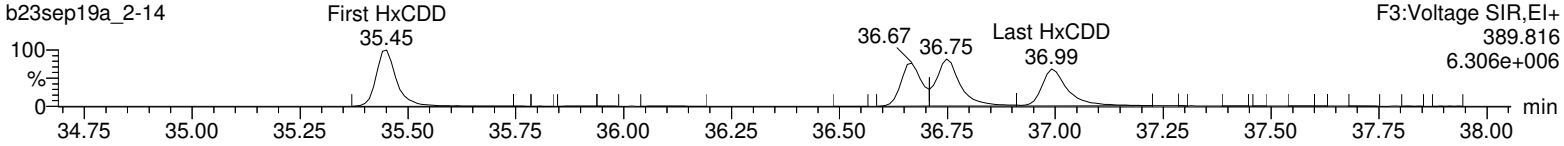
First TCDD



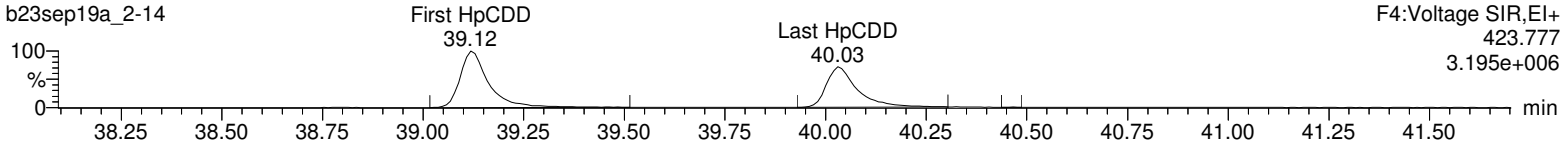
First PeCDD



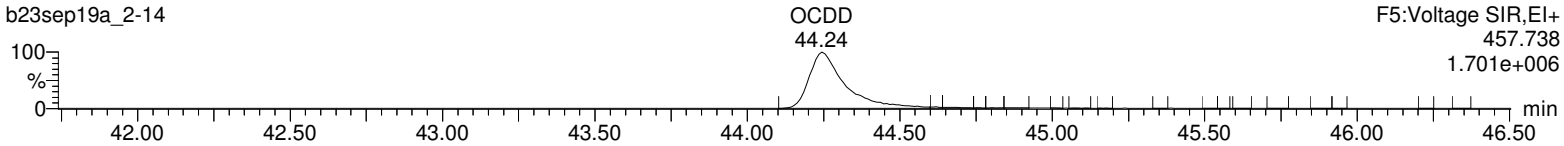
First HxCDD



First HpCDD



OCDD

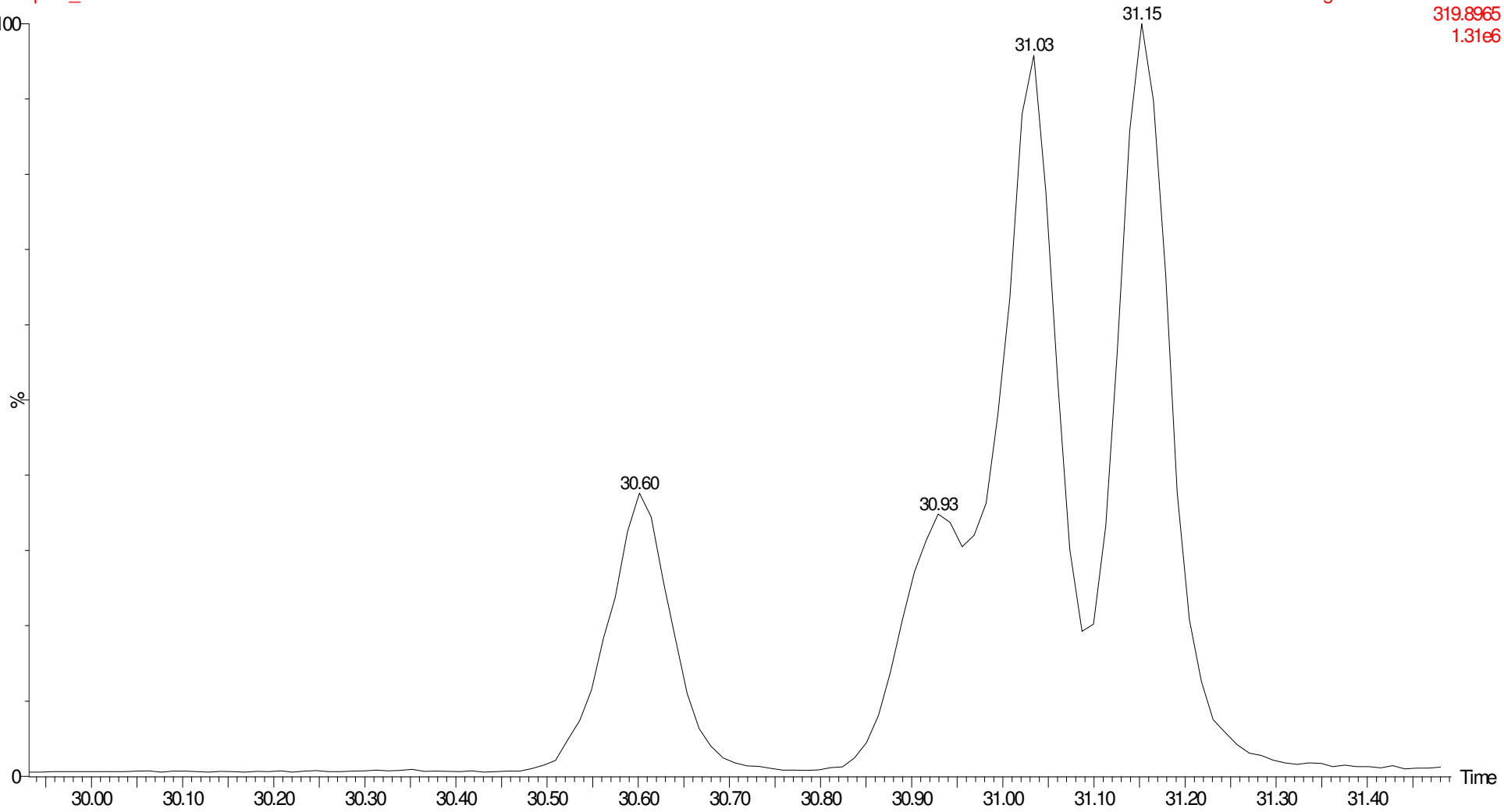


COLUMN CHECK (2378-TCDD 19%)

CS3WT UD190902-02.1 **HRP763_1** **24-Sep-201907:02:50**

b23sep19a_2-14

1: Voltage SIR 13 Channels EI+
319.8965
1.31e6



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	9.19e4	1.26e5	2.18e5	31.15	1.000	0.73	NO	10.315	0.0309	0.919	0.891	3.1	1.30e6	1832	707.2	1.71e6	1912	895.7	db	dd
2	12378-PeCDD	3.78e5	2.40e5	6.19e5	34.08	1.001	1.57	NO	48.406	0.0816	0.823	0.850	-3.2	7.36e6	4502	1635.2	4.69e6	3629	1291.2	bb	bb
3	123478-HxCDD	2.64e5	2.17e5	4.81e5	36.67	1.000	1.22	NO	47.472	0.172	0.886	0.934	-5.1	4.83e6	6069	795.5	3.89e6	6432	604.7	dd	bd
4	123678-HxCDD	3.41e5	2.76e5	6.17e5	36.75	1.000	1.24	NO	50.159	0.164	0.888	0.885	0.3	5.31e6	6069	874.7	4.38e6	6432	680.9	dd	dd
5	123789-HxCDD	3.07e5	2.46e5	5.53e5	36.99	1.007	1.25	NO	50.401	0.171	0.894	0.887	0.8	4.19e6	6069	691.1	3.48e6	6432	540.5	dd	dd
6	1234678-HpCDD	2.03e5	1.95e5	3.98e5	40.03	1.000	1.04	NO	50.057	0.206	0.945	0.944	0.1	2.28e6	3625	629.0	2.13e6	3459	617.0	bb	bd
7	OCDD	2.31e5	2.61e5	4.92e5	44.24	1.000	0.89	NO	98.165	0.512	0.897	0.914	-1.8	1.69e6	4843	349.2	1.88e6	2471	759.2	bd	bd
8	2378-TCDF	1.01e5	1.29e5	2.30e5	30.36	1.001	0.79	NO	10.317	0.0420	0.921	0.893	3.2	9.99e5	1913	521.9	1.24e6	1838	674.6	bd	bb
9	12378-PeCDF	5.58e5	3.57e5	9.14e5	33.28	1.000	1.56	NO	53.208	0.0847	0.966	0.908	6.4	1.20e7	8060	1492.0	7.55e6	4286	1761.7	bd	bd
10	23478-PeCDF	6.20e5	3.94e5	1.01e6	33.88	1.000	1.57	NO	53.103	0.0788	1.032	0.971	6.2	1.30e7	8060	1611.0	8.40e6	4286	1959.3	bb	bb
11	123478-HxCDF	3.99e5	3.17e5	7.16e5	35.96	1.000	1.26	NO	51.671	0.129	1.173	1.135	3.3	7.47e6	6575	1135.9	6.00e6	7138	841.2	bd	bd
12	123678-HxCDF	5.03e5	4.05e5	9.08e5	36.06	1.000	1.24	NO	55.326	0.133	1.166	1.054	10.7	8.28e6	6575	1258.8	6.40e6	7138	896.0	db	dd
13	234678-HxCDF	4.29e5	3.41e5	7.70e5	36.54	1.000	1.26	NO	53.410	0.144	1.207	1.130	6.8	7.00e6	6575	1064.7	5.57e6	7138	779.9	bb	bb
14	123789-HxCDF	3.21e5	2.59e5	5.80e5	37.31	1.001	1.24	NO	52.740	0.234	1.121	1.063	5.5	4.40e6	6575	669.4	3.56e6	7138	498.3	bb	bb
15	1234678-HpCDF	3.49e5	3.24e5	6.74e5	38.79	1.000	1.08	NO	53.670	0.122	1.278	1.191	7.3	4.35e6	3550	1225.4	4.07e6	4174	975.8	bd	bb
16	1234789-HpCDF	2.33e5	2.23e5	4.56e5	40.68	1.000	1.05	NO	53.173	0.217	1.304	1.227	6.3	2.38e6	3550	669.7	2.17e6	4174	518.9	bd	bb
17	OCDF	2.60e5	2.93e5	5.53e5	44.52	1.006	0.89	NO	99.315	0.412	1.010	1.017	-0.7	1.92e6	3732	515.4	2.08e6	2816	739.5	bd	bd
18	13C-2378-TCDD	1.01e6	1.37e6	2.37e6	31.14	1.018	0.74	NO	100.351	0.0668	1.155	1.151	0.4	1.44e7	3434	4199.7	1.88e7	3286	5722.2	bb	bd
19	13C-12378-PeCDD	9.06e5	5.97e5	1.50e6	34.06	1.114	1.52	NO	93.914	0.0676	0.732	0.779	-6.1	1.77e7	2581	6847.8	1.18e7	2024	5846.4	bb	bb
20	13C-123478-HxCDD	5.99e5	4.87e5	1.09e6	36.66	0.991	1.23	NO	105.691	0.198	0.834	0.789	5.7	1.07e7	5858	1830.6	8.79e6	5284	1663.2	bd	bd
21	13C-123678-HxCDD	7.63e5	6.26e5	1.39e6	36.74	0.993	1.22	NO	100.954	0.148	1.067	1.057	1.0	1.18e7	5858	2018.2	9.75e6	5284	1845.4	dd	dd
22	13C-1234678-HpCDD	4.28e5	4.14e5	8.42e5	40.02	1.082	1.03	NO	102.173	0.134	0.647	0.633	2.2	4.62e6	3206	1440.3	4.35e6	2835	1532.7	bd	bd
23	13C-OCDD	5.14e5	5.82e5	1.10e6	44.23	1.196	0.88	NO	154.093	0.152	0.421	0.546	-23.0	3.67e6	2663	1376.7	4.11e6	3250	1263.1	bd	bd
24	13C-2378-TCDF	1.08e6	1.41e6	2.50e6	30.34	0.992	0.77	NO	93.652	0.0472	1.216	1.299	-6.3	1.09e7	2805	3873.9	1.44e7	2558	5647.9	bb	bb
25	13C-12378-PeCDF	1.13e6	7.58e5	1.89e6	33.27	1.088	1.50	NO	88.110	0.147	0.921	1.046	-11.9	2.41e7	8354	2879.1	1.59e7	5128	3092.5	bb	bb
26	13C-23478-PeCDF	1.19e6	7.75e5	1.97e6	33.87	1.107	1.54	NO	89.219	0.144	0.957	1.073	-10.8	2.44e7	8354	2923.2	1.63e7	5128	3181.6	bb	bb
27	13C-123478-HxCDF	4.18e5	8.02e5	1.22e6	35.95	0.972	0.52	NO	102.781	0.175	0.937	0.912	2.8	8.03e6	4480	1793.5	1.57e7	6867	2281.0	bd	bd
28	13C-123678-HxCDF	5.44e5	1.01e6	1.56e6	36.05	0.975	0.54	NO	100.614	0.134	1.196	1.188	0.6	8.57e6	4480	1913.0	1.61e7	6867	2350.0	db	db
29	13C-234678-HxCDF	4.33e5	8.43e5	1.28e6	36.53	0.988	0.51	NO	96.997	0.158	0.980	1.010	-3.0	7.17e6	4480	1600.7	1.35e7	6867	1965.5	bb	bd
30	13C-123789-HxCDF	3.65e5	6.70e5	1.03e6	37.29	1.008	0.55	NO	93.325	0.187	0.795	0.852	-6.7	4.86e6	4480	1085.2	9.15e6	6867	1332.8	bd	bb
31	13C-1234678-HpCDF	3.35e5	7.19e5	1.05e6	38.78	1.049	0.47	NO	103.240	0.209	0.809	0.784	3.2	4.22e6	5693	741.8	9.33e6	5977	1560.5	bd	bb

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.11e5	4.88e5	6.99e5	40.67	1.100	0.43	NO	95.596	0.292	0.537	0.562	-4.4	2.19e6	5693	384.6	4.86e6	5977	813.0	bb	bd
33	13C-1234-TCDD	8.94e5	1.16e6	2.05e6	30.59	0.000	0.77	NO	100.000	0.0768	1.000	1.000	-0.0	9.51e6	3434	2768.8	1.24e7	3286	3761.7	bb	bb
34	13C-123789-HxCDD	7.12e5	5.90e5	1.30e6	36.98	0.000	1.21	NO	100.000	0.156	1.000	1.000	0.0	9.73e6	5858	1660.9	7.89e6	5284	1492.6	dd	dd
35	37Cl-2378-TCDD	2.07e5		2.07e5	31.15	1.018			9.361	0.0136	1.008	1.077	-6.4	3.03e6	1283	2359.0				bb	

Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

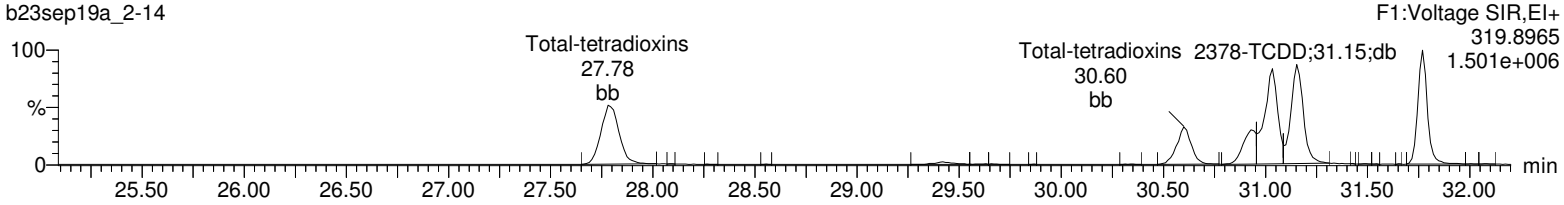
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

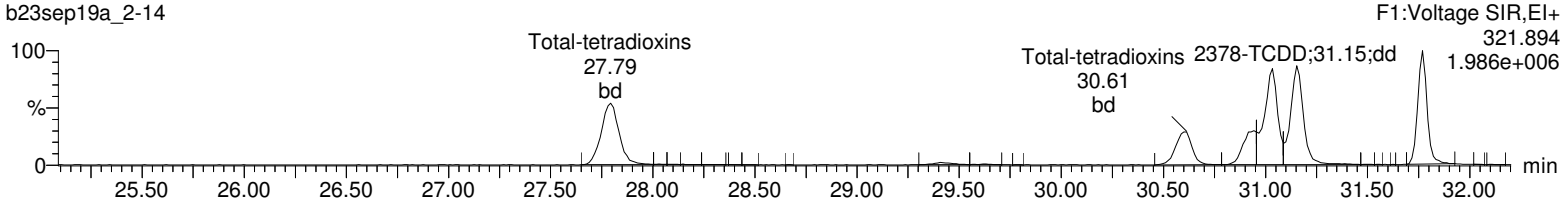
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

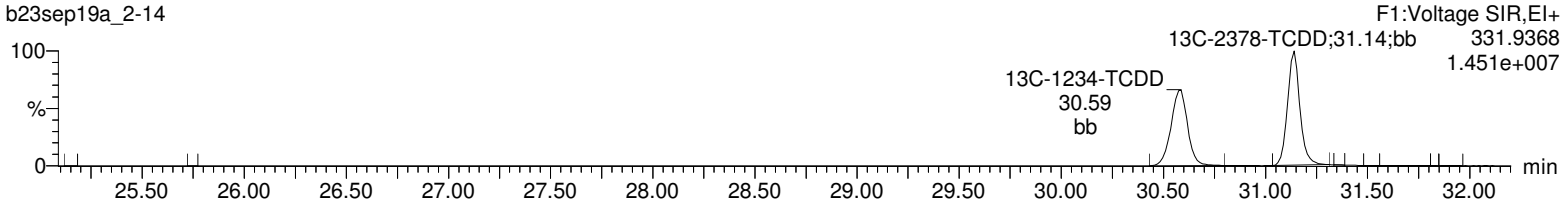
Total-tetradioxins



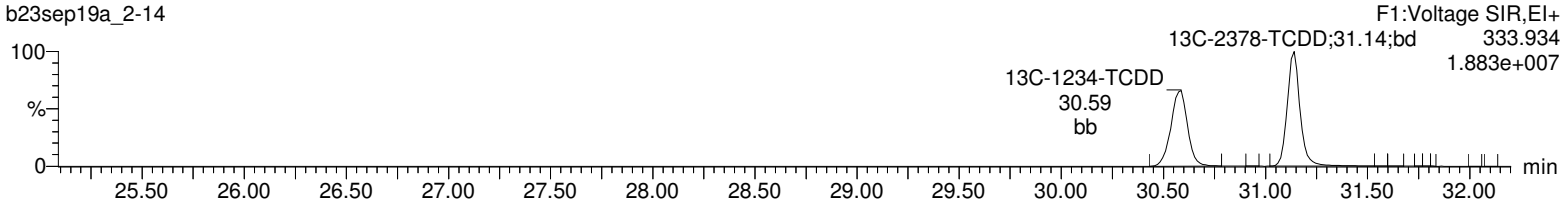
Total-tetradioxins



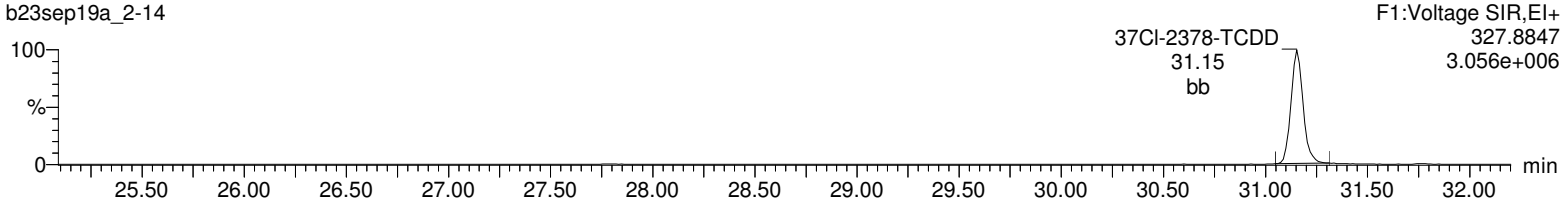
13C-2378-TCDD



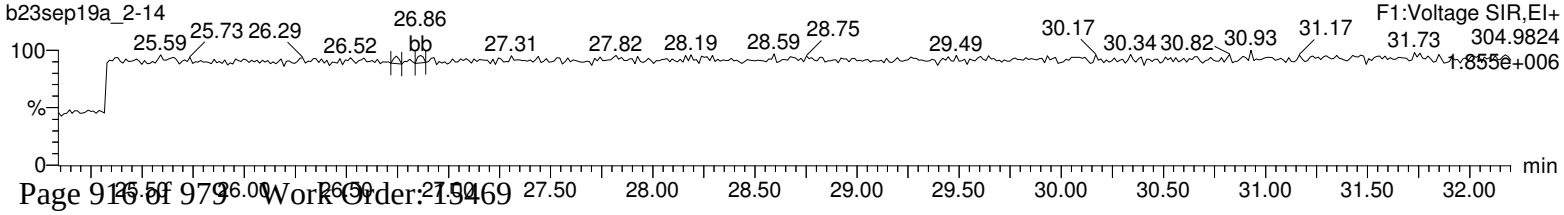
13C-2378-TCDD



37Cl-2378-TCDD



Lock Mass F1



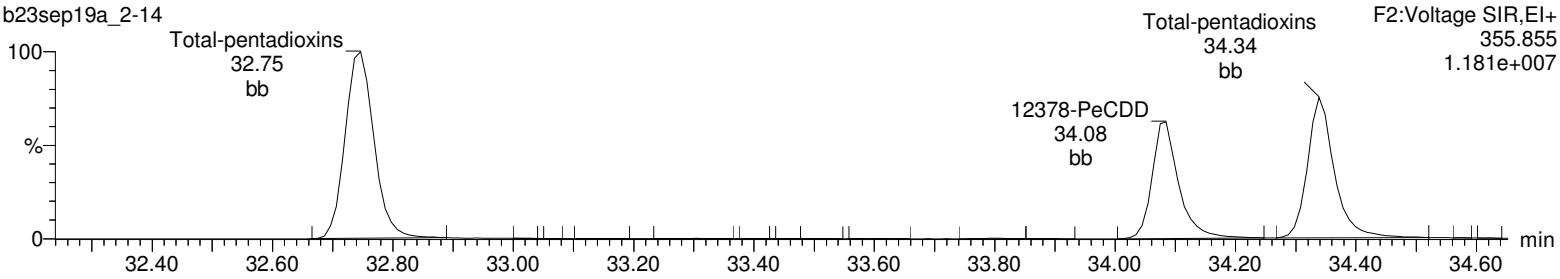
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

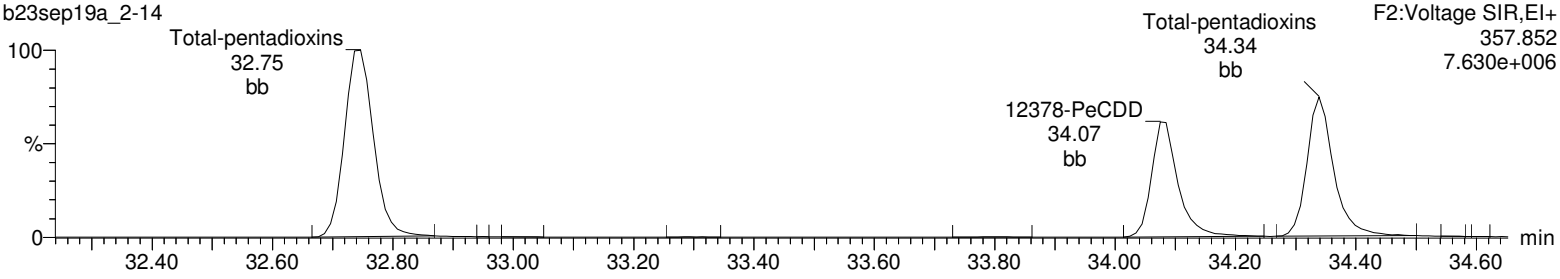
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

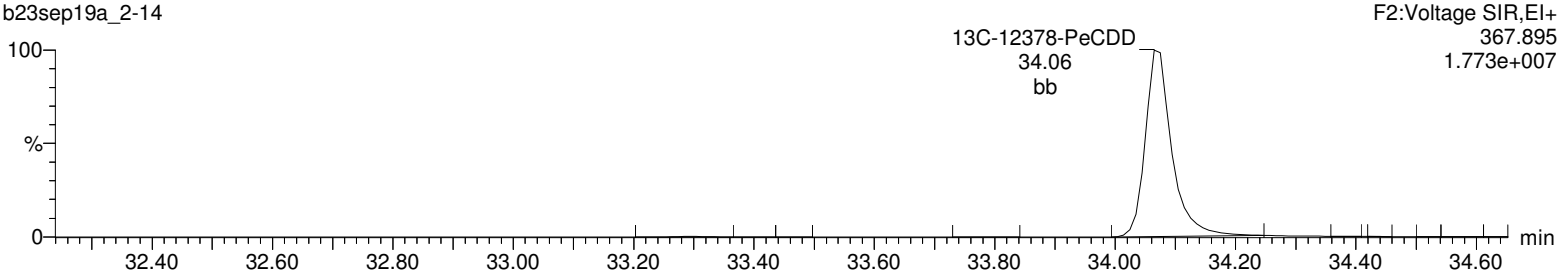
Total-pentadioxins



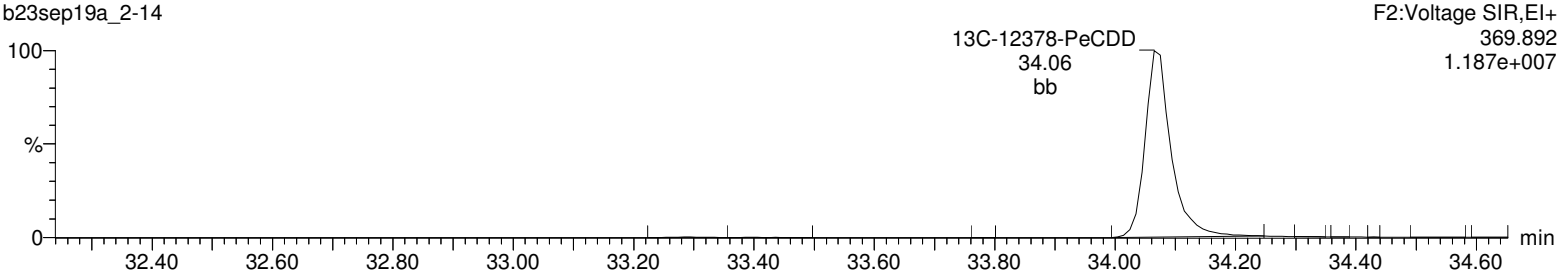
Total-pentadioxins



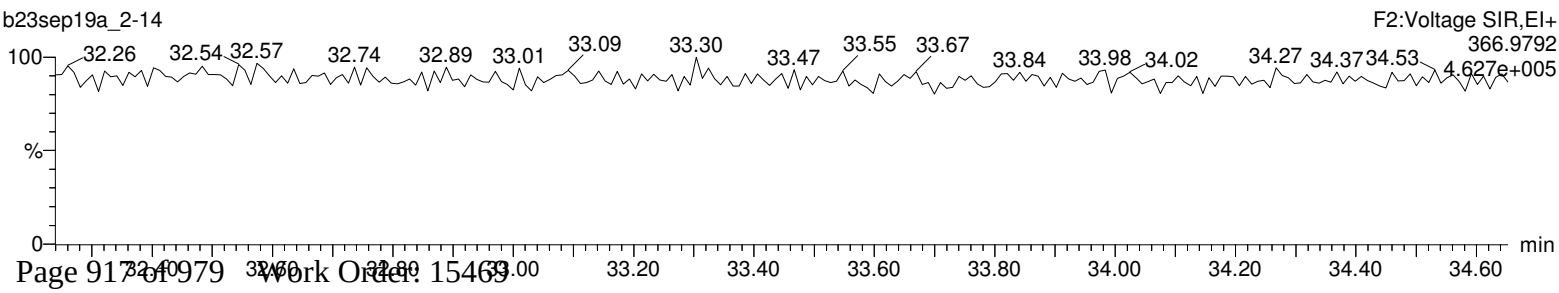
13C-12378-PeCDD



13C-12378-PeCDD



Lock Mass F2



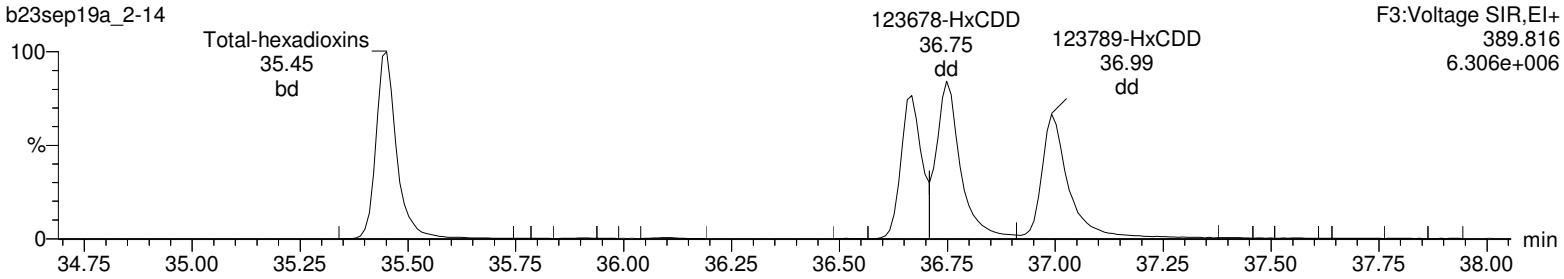
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

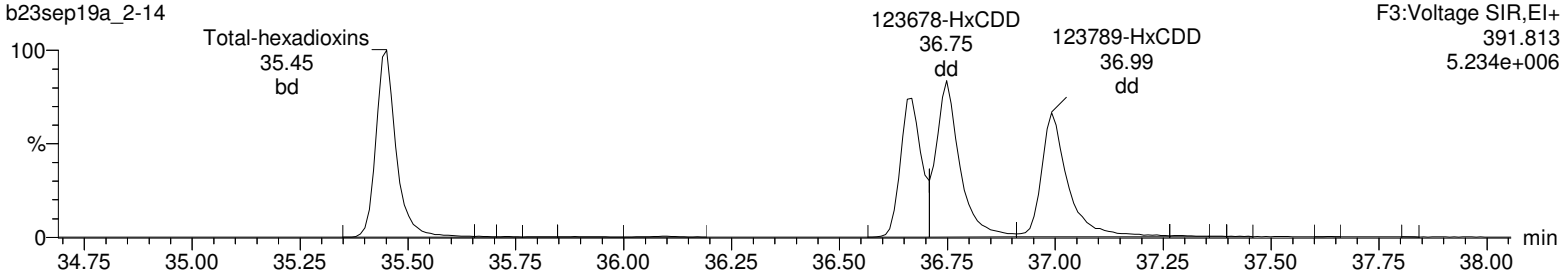
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

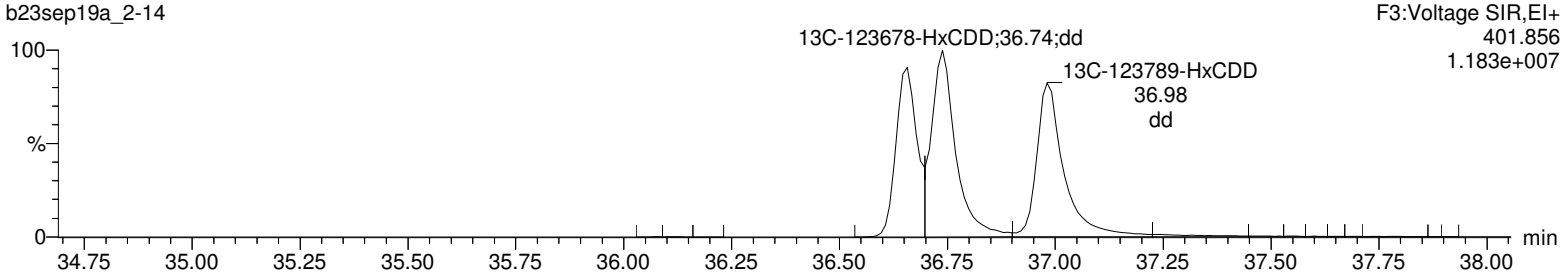
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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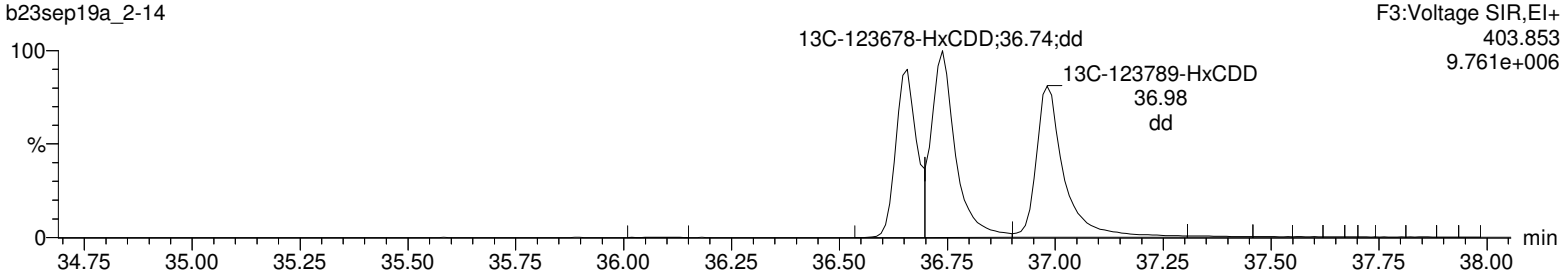
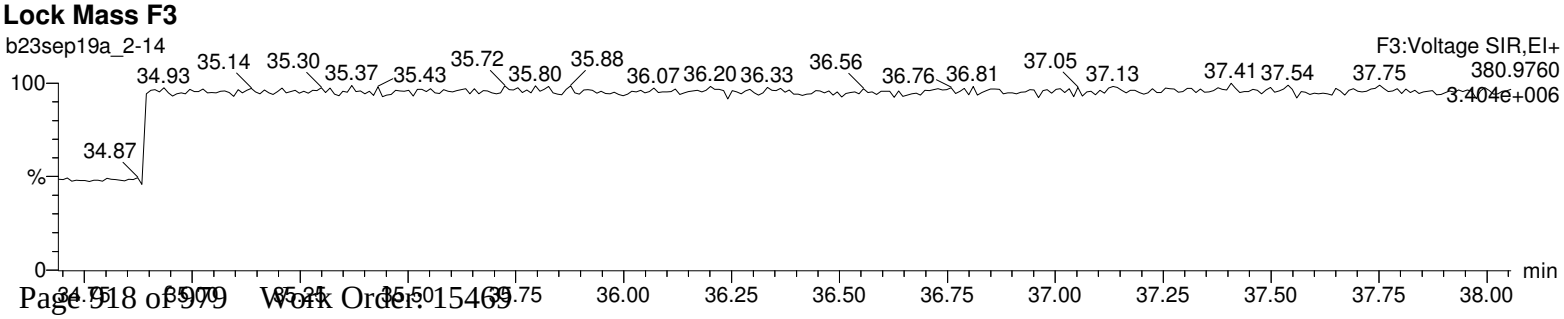


Lock Mass F3



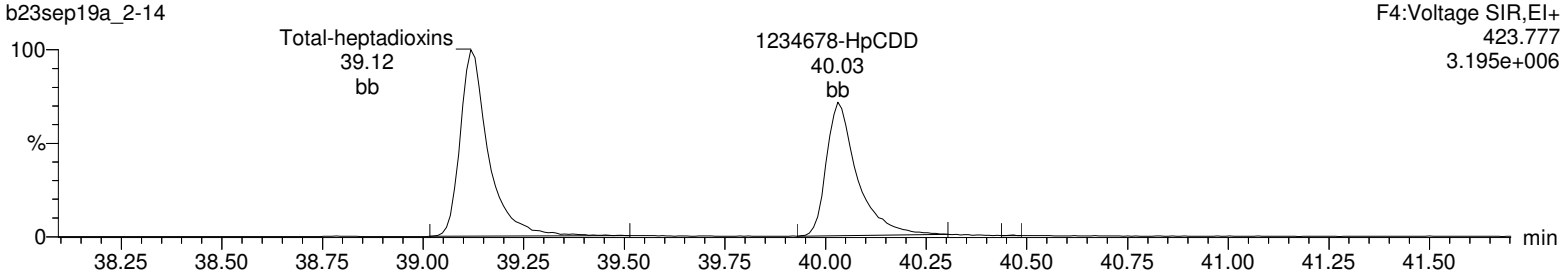
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

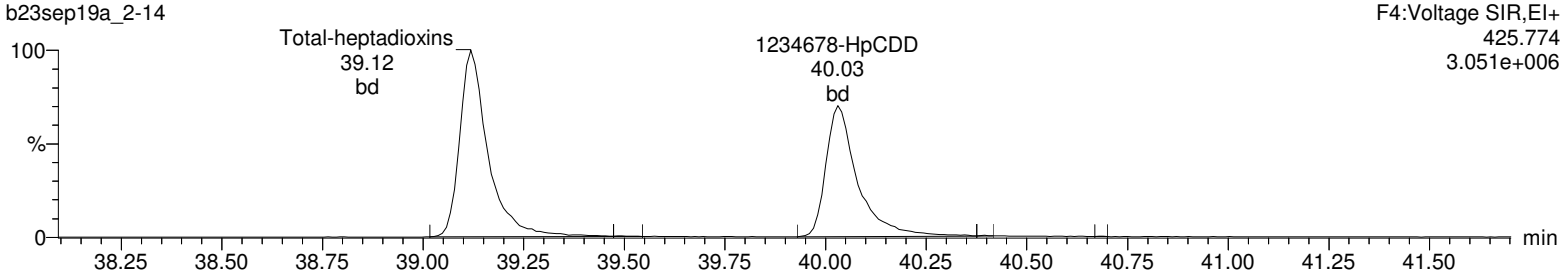
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

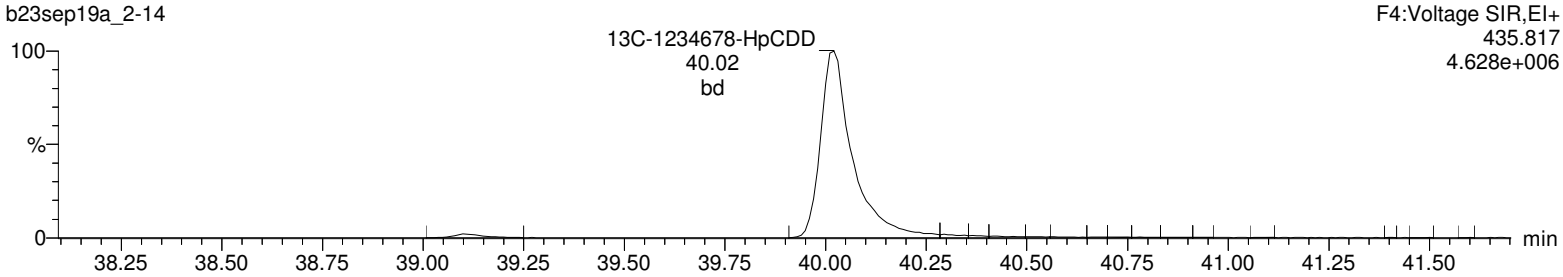
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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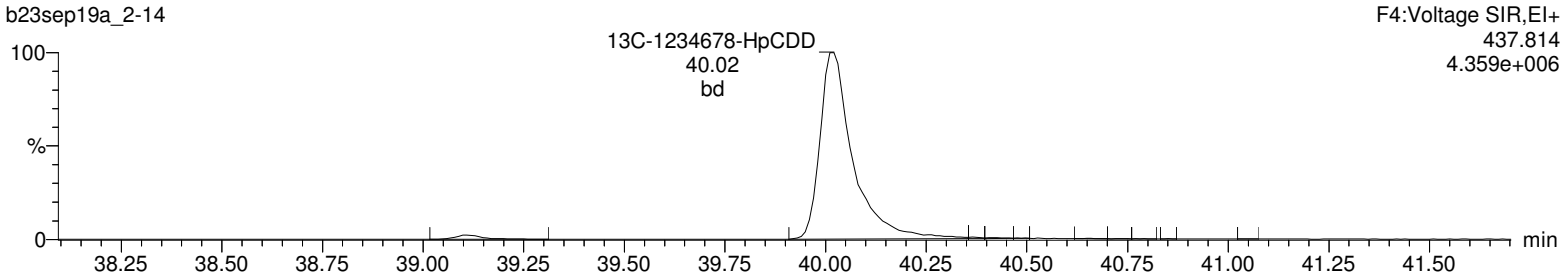

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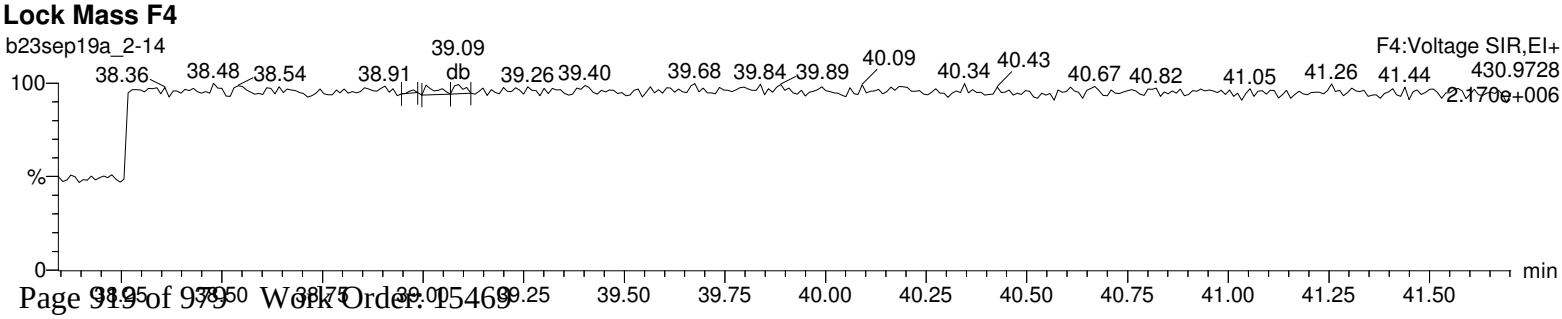


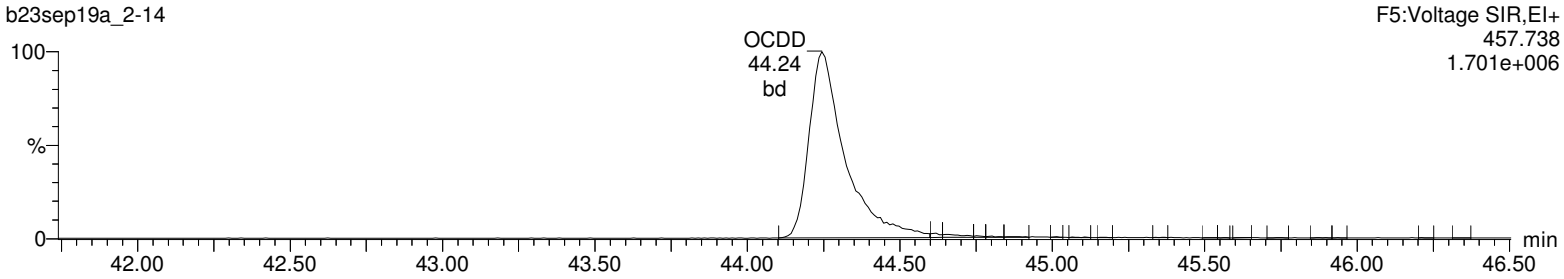
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

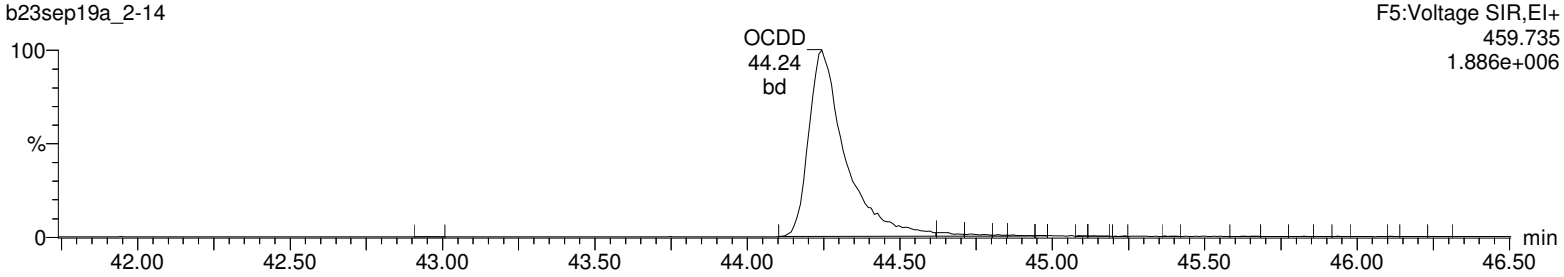
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

OCDD



OCDD



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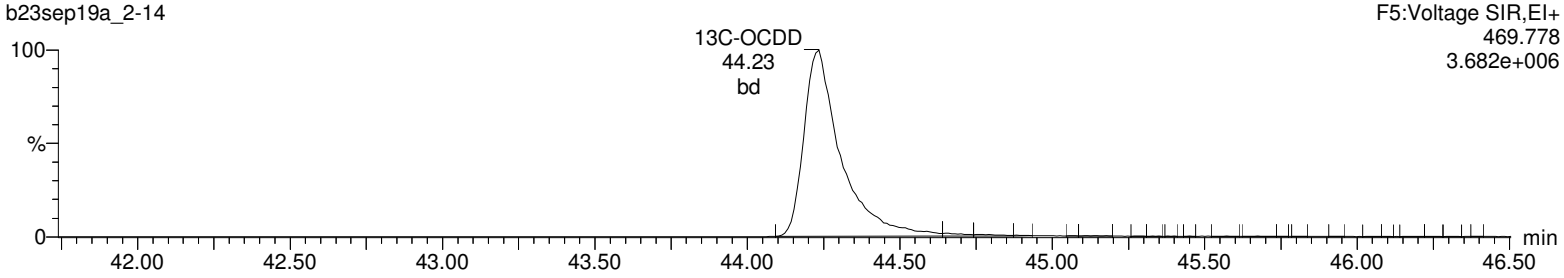

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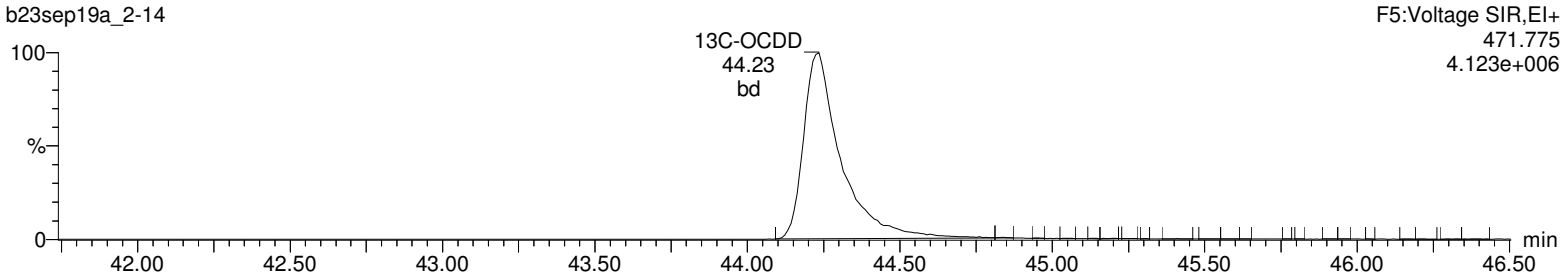
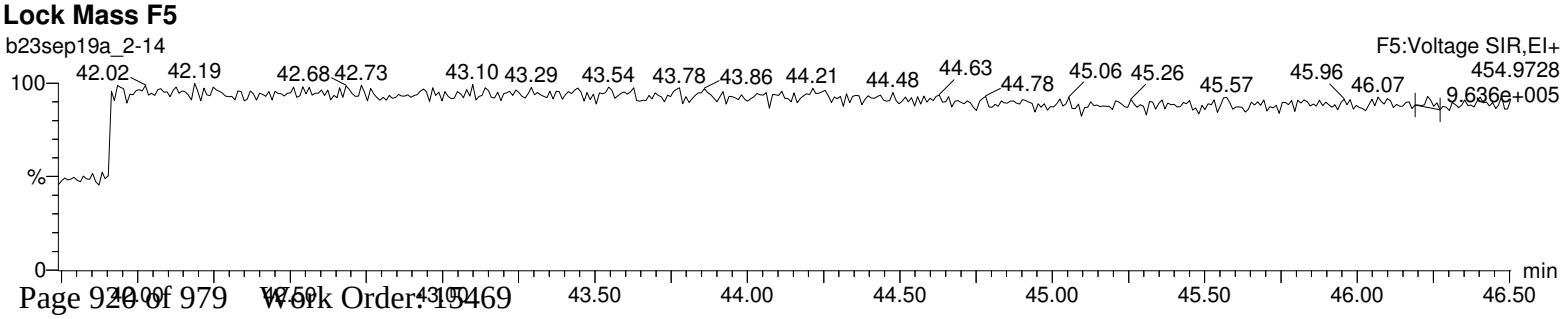


Lock Mass F5



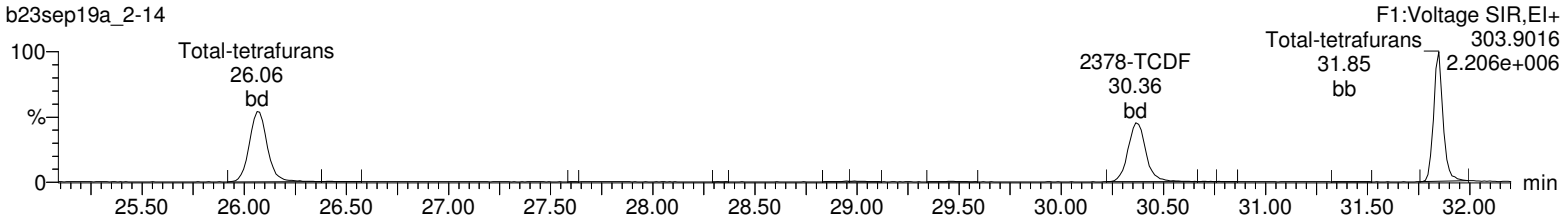
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

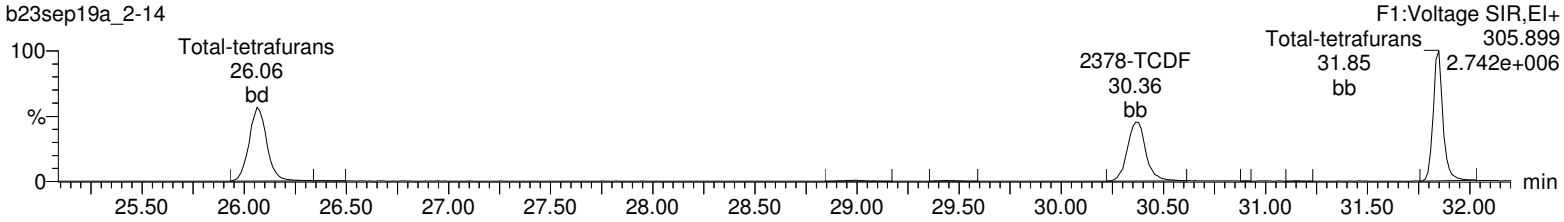
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

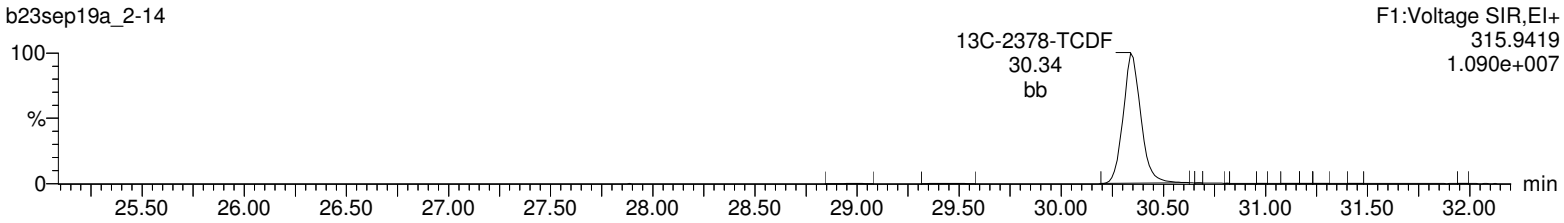
Total-tetrafurans



Total-tetrafurans



13C-2378-TCDF



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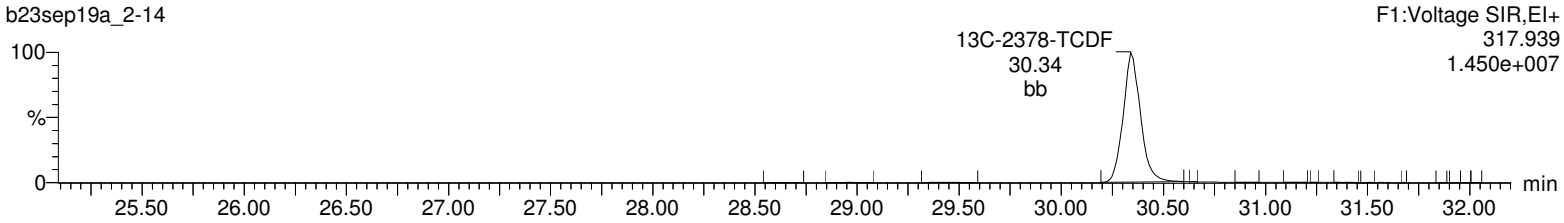
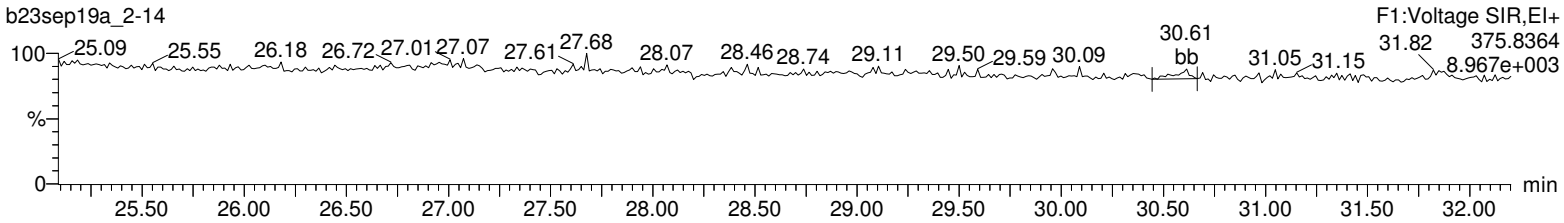
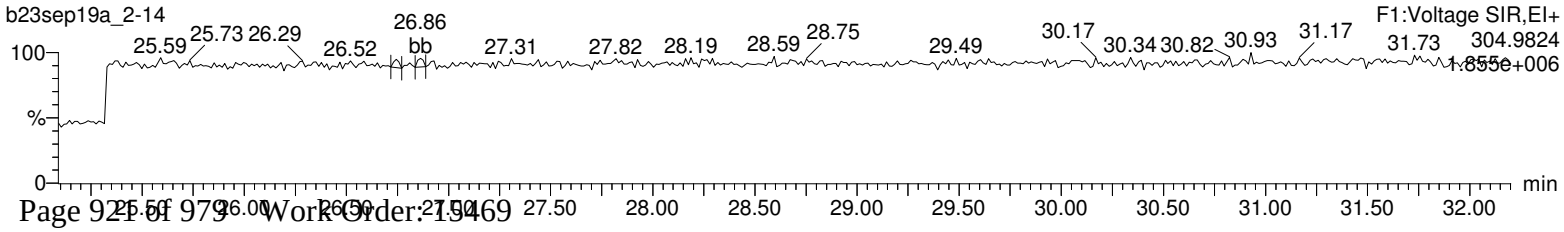


HxDPE



Lock Mass F1



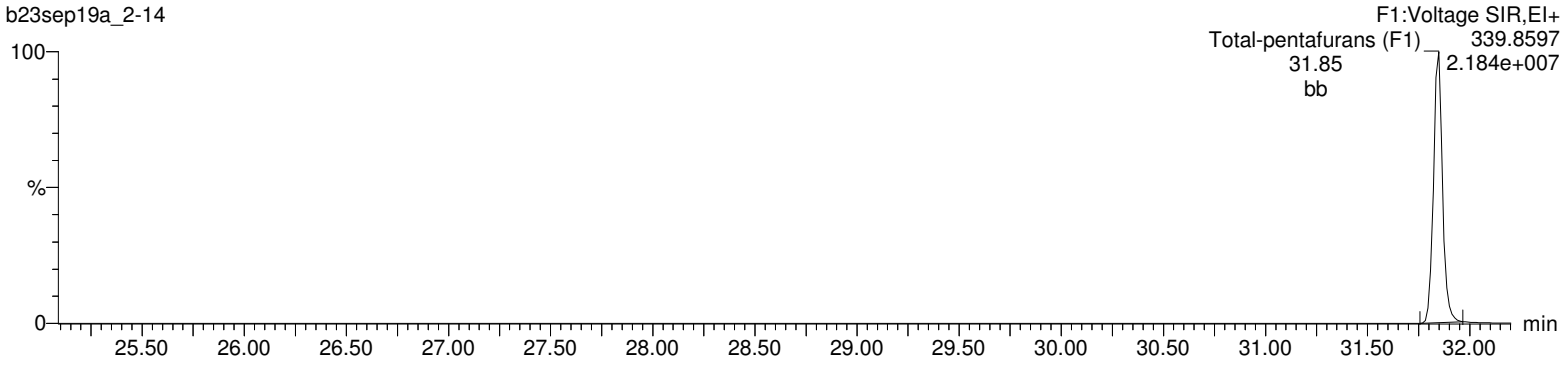
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

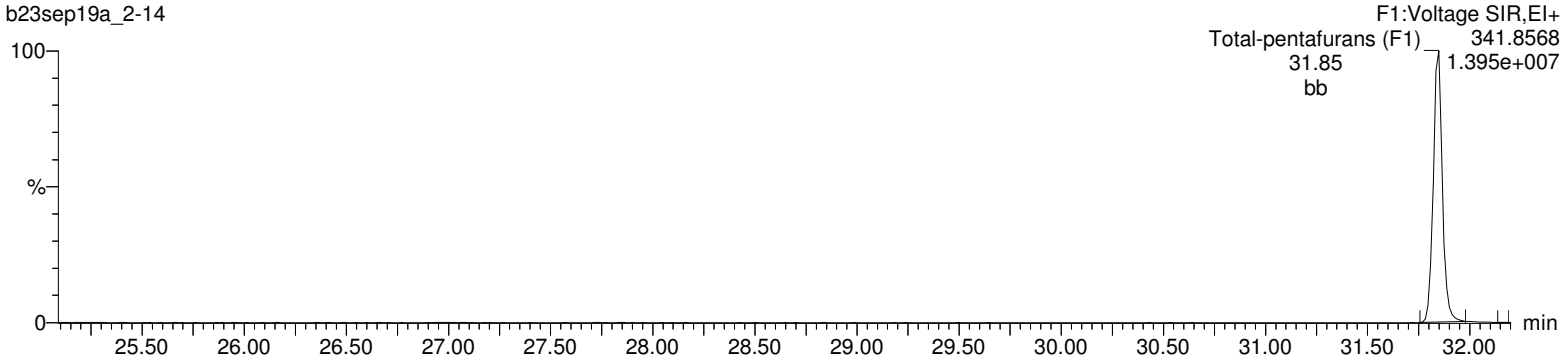
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

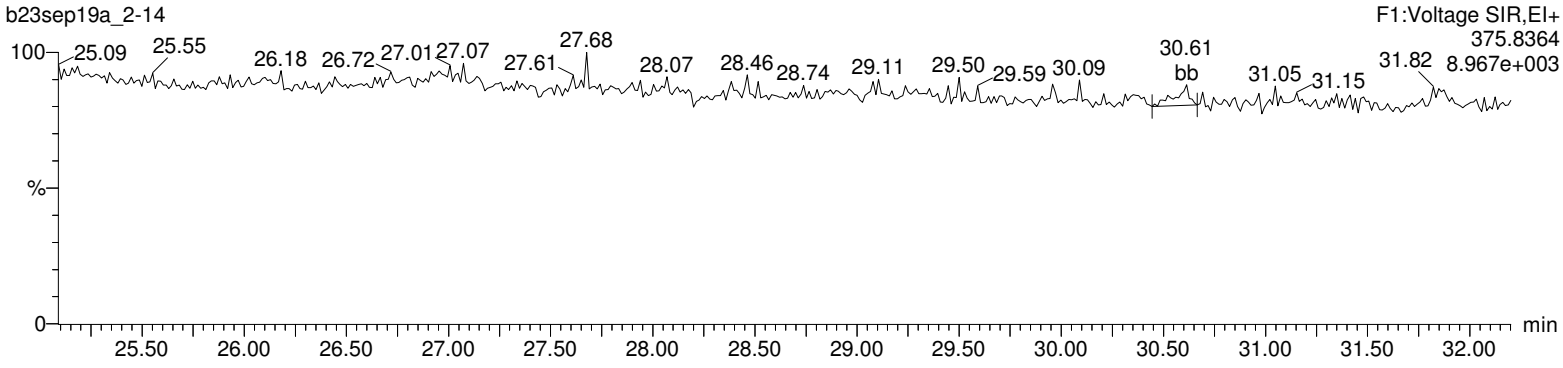
Total-pentafurans (F1)



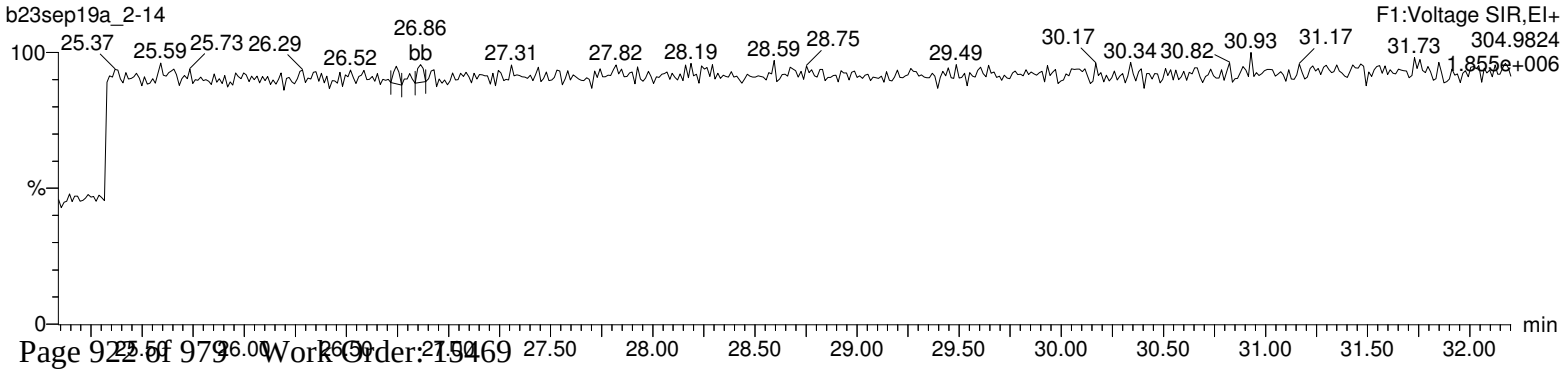
Total-pentafurans (F1)



HxDPE



Lock Mass F1



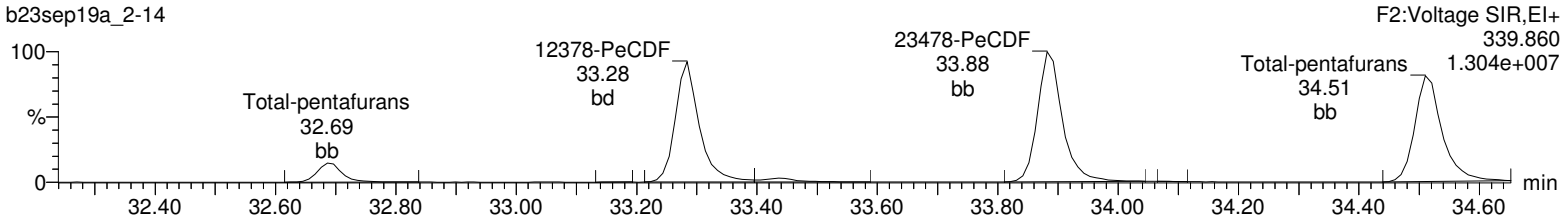
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

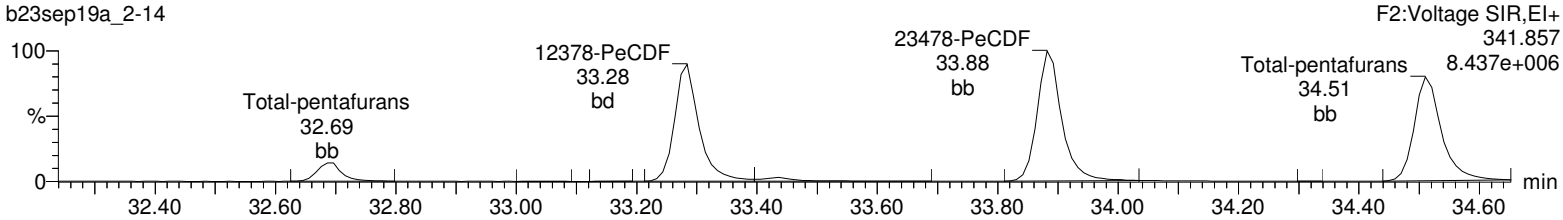
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

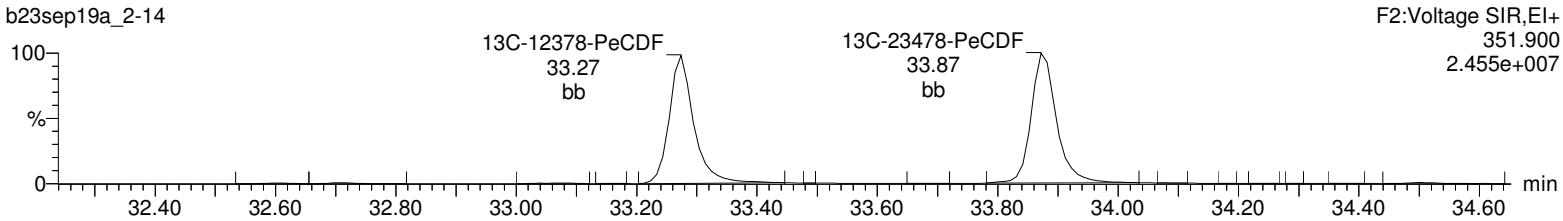
Total-pentafurans



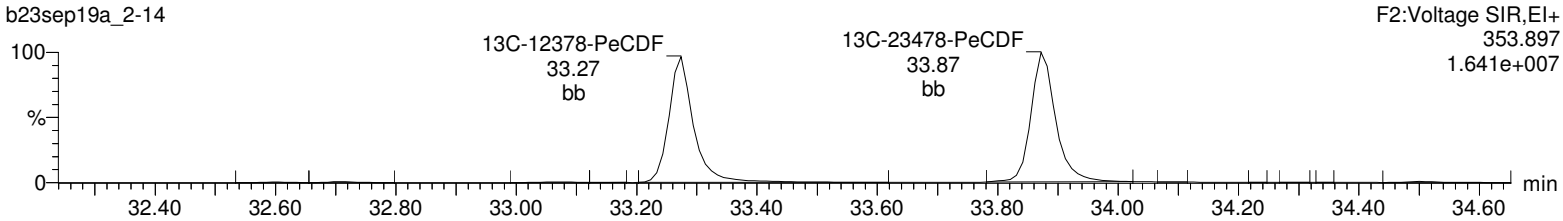
Total-pentafurans



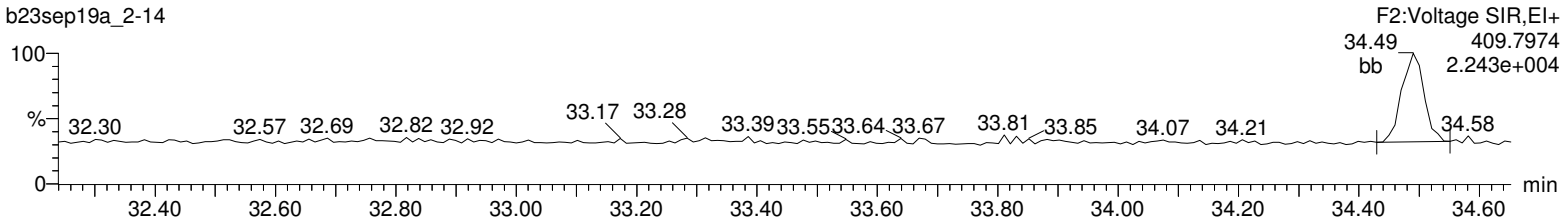
13C-12378-PeCDF



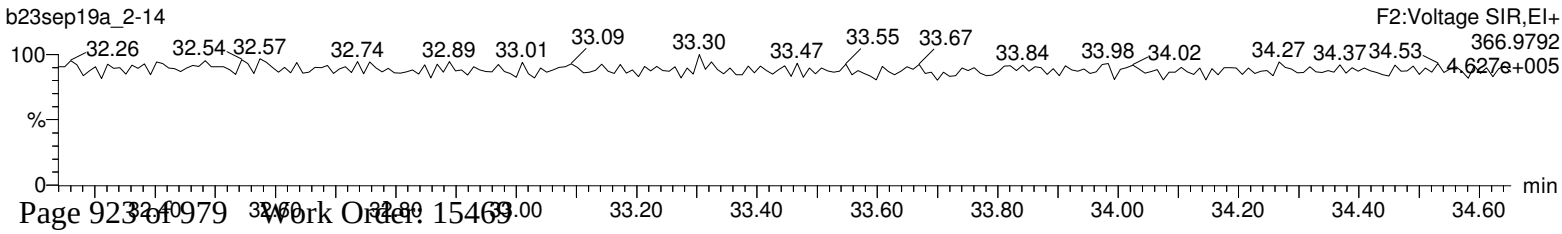
13C-12378-PeCDF



HpDPE



Lock Mass F2



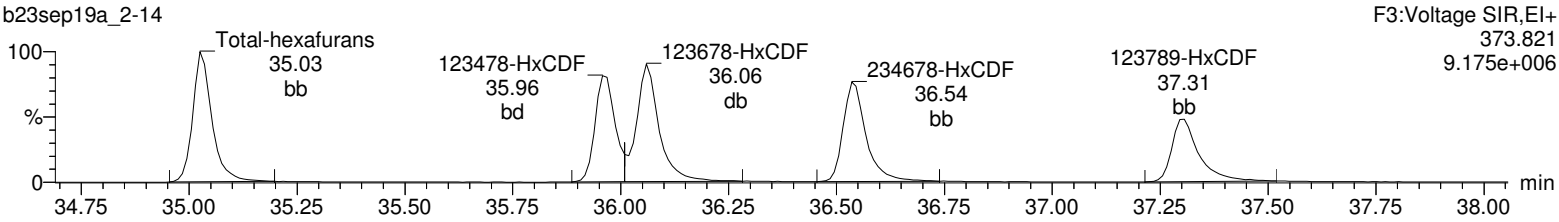
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

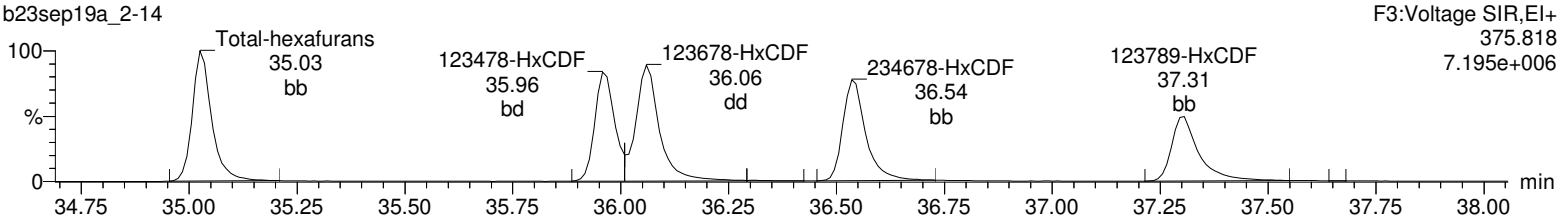
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

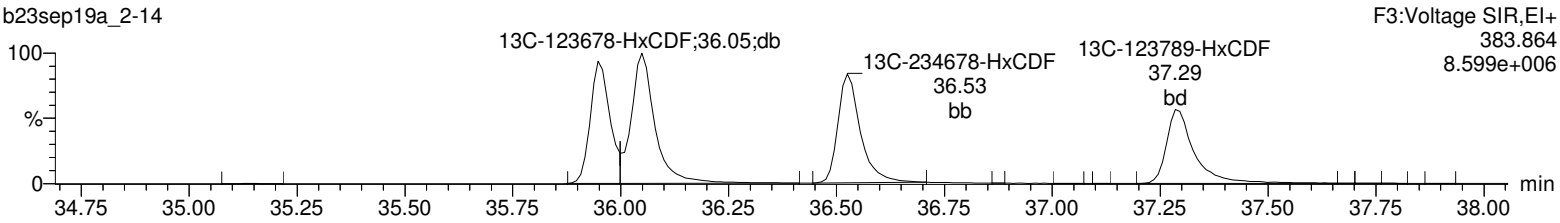
Total-hexafurans



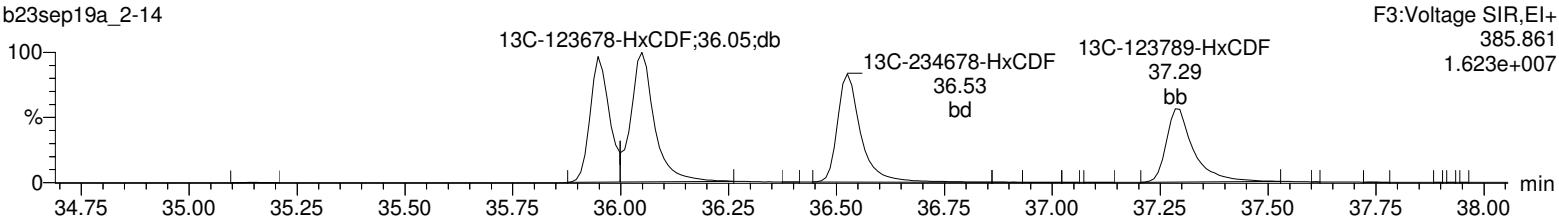
Total-hexafurans



13C-123478-HxCDF



13C-123478-HxCDF



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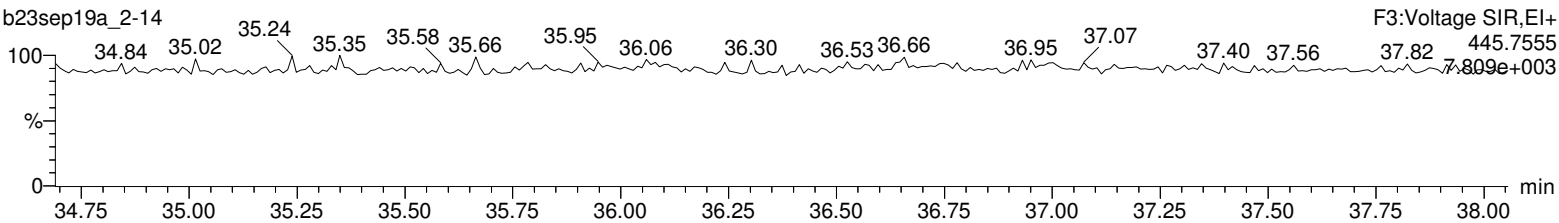
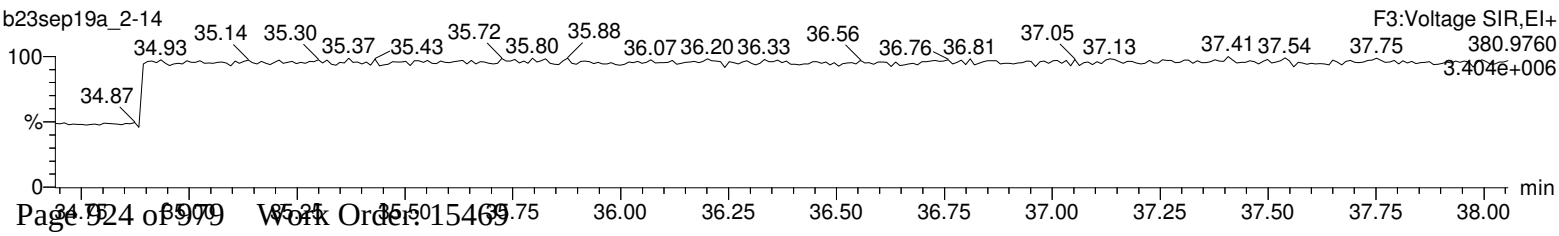


Lock Mass F3



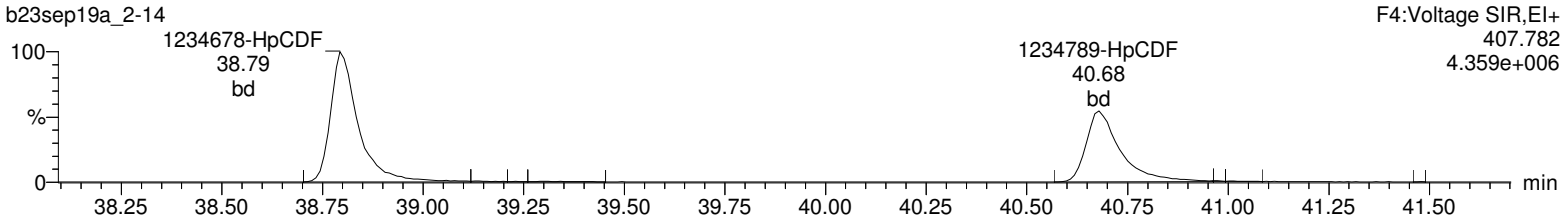
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

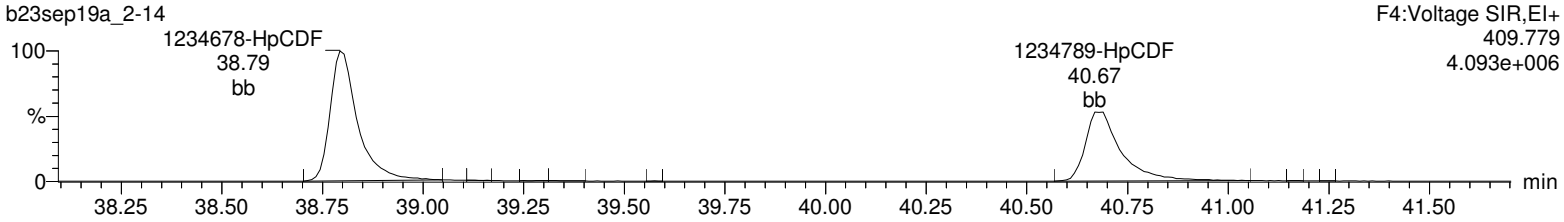
Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

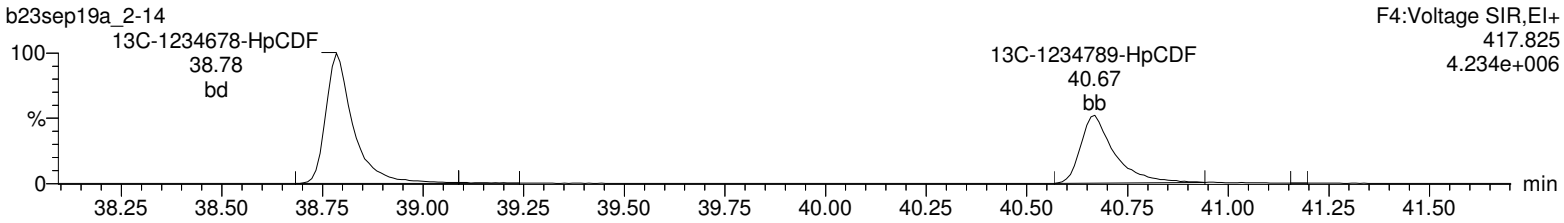
Total-heptafurans



Total-heptafurans



13C-1234678-HpCDF



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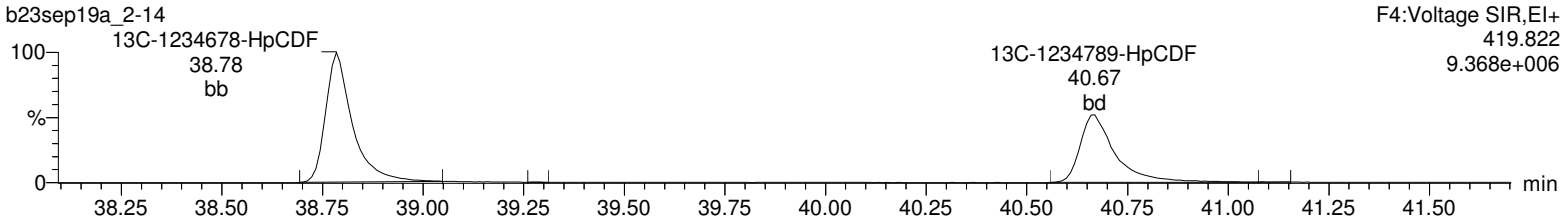

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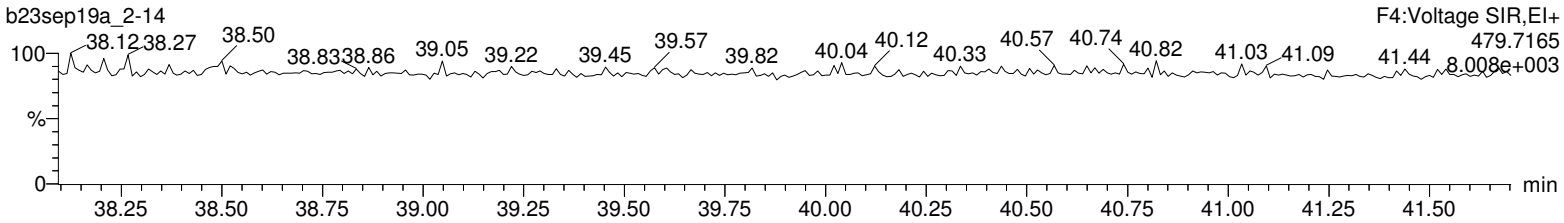
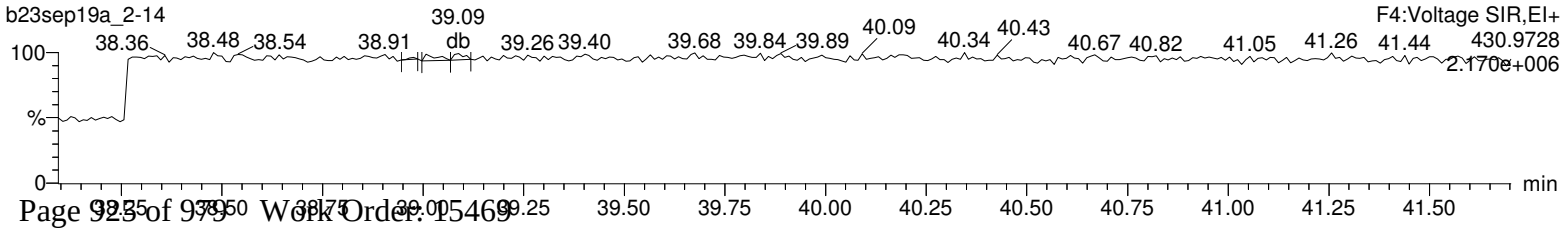


Lock Mass F4



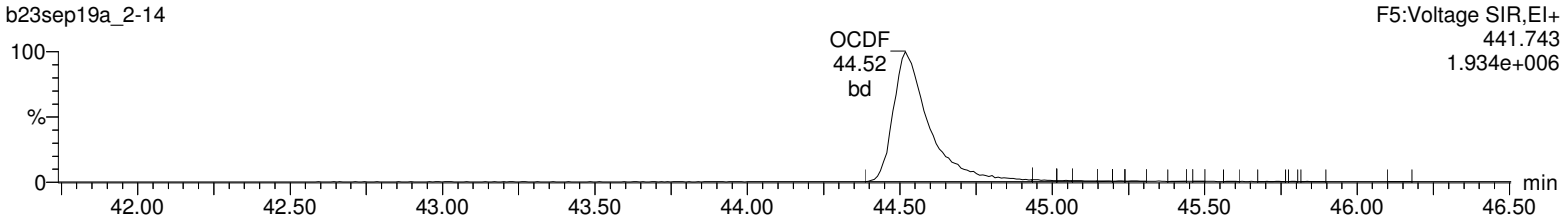
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b23sep19a_2-14.qld

Last Altered: Tuesday, September 24, 2019 08:11:39 Eastern Standard Time
Printed: Tuesday, September 24, 2019 08:12:45 Eastern Standard Time

Name: b23sep19a_2-14, Date: 24-Sep-2019, Time: 07:02:50, ID: CS3WT UD190902-02.1, Description: , Job: b23sep19a_2, Task: HRP763_1, User: MLS

OCDF



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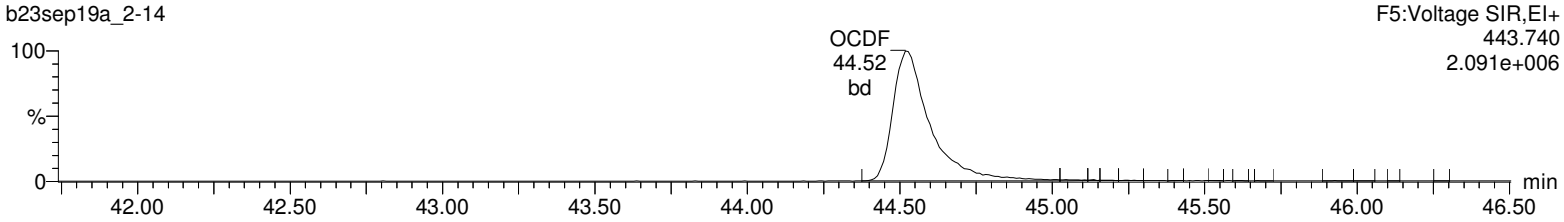

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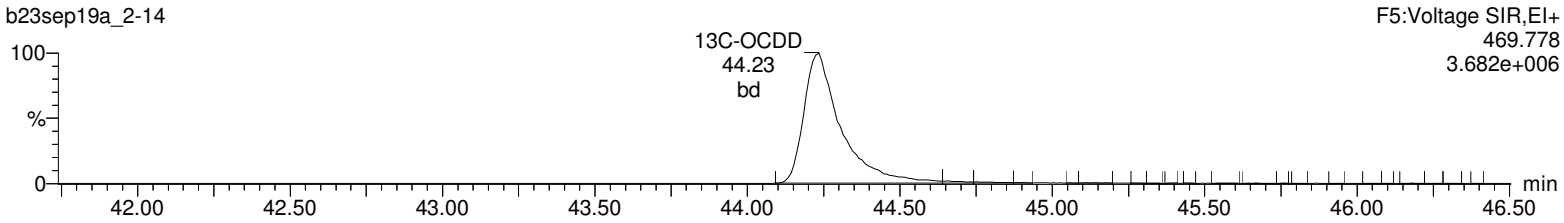
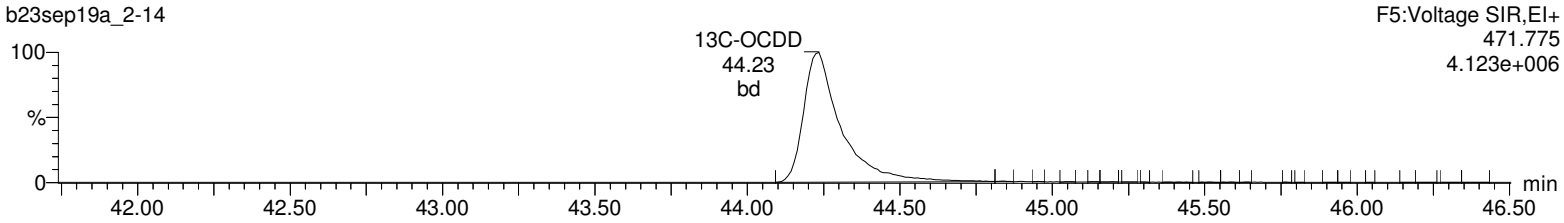
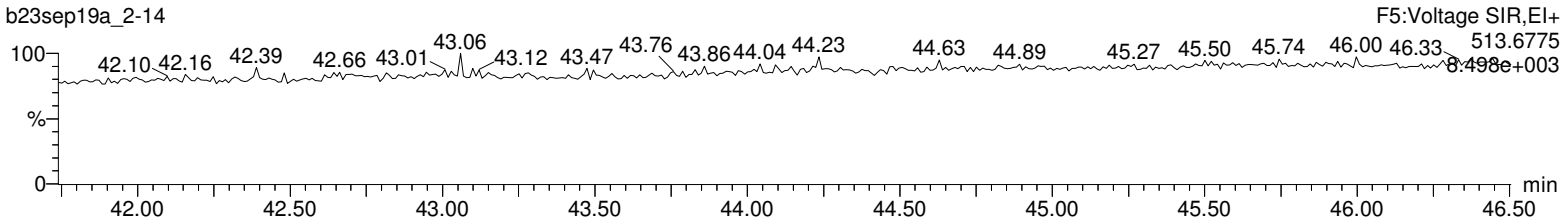


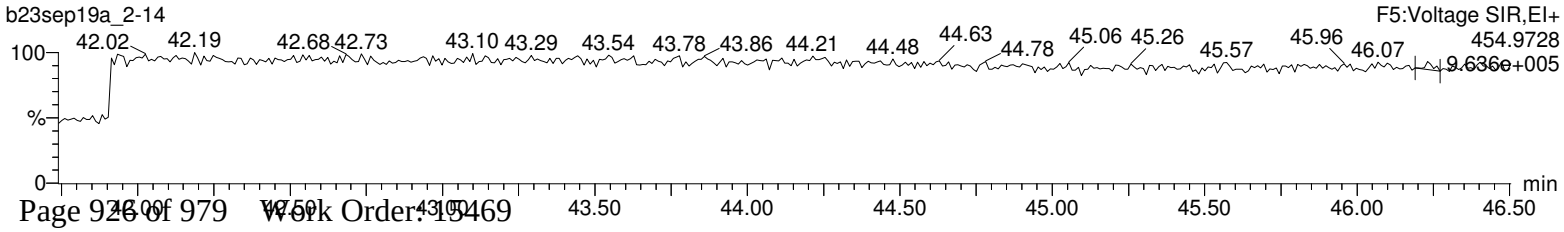
13C-OCDD



DeDPE



Lock Mass F5



RUN LOG

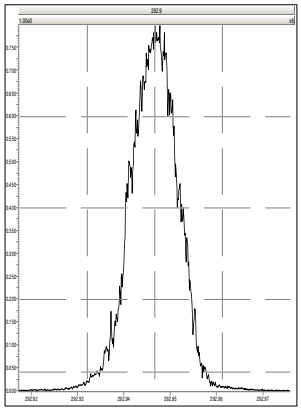
Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
b23sep19a_3-1	24-SEP-2019 07:59:26	Mary Showalter	12024828-1 LCS	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-2	24-SEP-2019 08:47:09	Mary Showalter	12024829-1 LCSD	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-3	24-SEP-2019 09:35:37	Mary Showalter	12024794-1 LCSD	41747	1 uL	dioxin_db5ms	10K
b23sep19a_3-4	24-SEP-2019 10:23:54	Mary Showalter	12024792-1 MB	41747	1 uL	dioxin_db5ms	10K
b23sep19a_3-5	24-SEP-2019 11:20:34	Mary Showalter	12024827-1 MB	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-6	24-SEP-2019 12:08:20	Mary Showalter	15470004-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-7	24-SEP-2019 12:56:45	Mary Showalter	15470005-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-8	24-SEP-2019 13:45:12	Mary Showalter	15470006-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-9	24-SEP-2019 14:33:37	Mary Showalter	15470007-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-10	24-SEP-2019 15:22:02	Mary Showalter	15470008-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-11	24-SEP-2019 16:10:29	Mary Showalter	15470009-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-12	24-SEP-2019 16:58:55	Mary Showalter	15470010-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-13	24-SEP-2019 17:47:21	Mary Showalter	15470012-1	41778	1 uL	dioxin_db5ms	10K
b23sep19a_3-14	24-SEP-2019 18:35:46	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

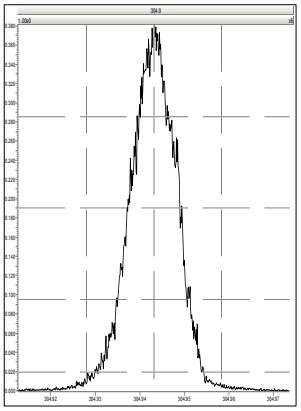
Ending CCAL fails 1613 (1234678 HpCDF @ 55.28). Stopped instrument to do inlet maintenance and clean the inner source. RR sequence 4 and 5

Printed: Tuesday, September 24, 2019 19:32:17 Eastern Standard Time

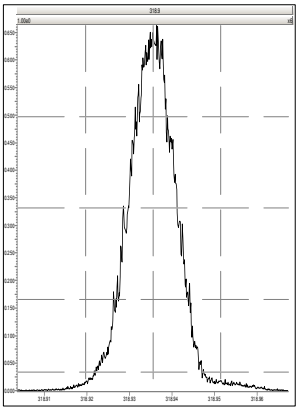
M 292.9824 R 13023



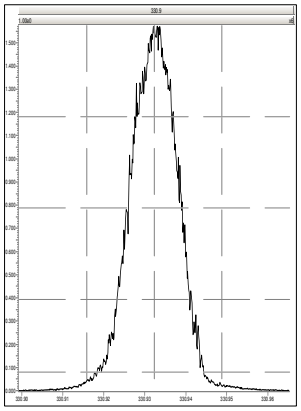
M 304.9824 R 12567



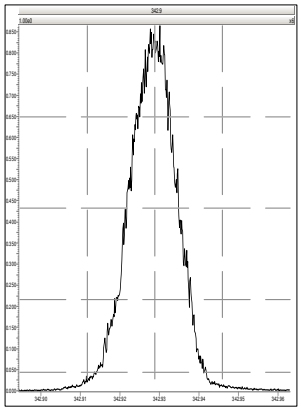
M 318.9792 R 12563



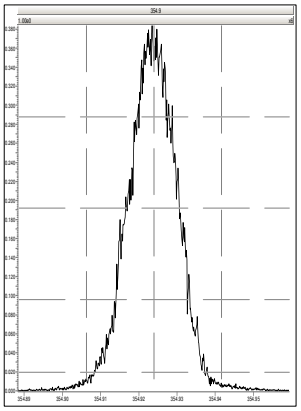
M 330.9792 R 12626



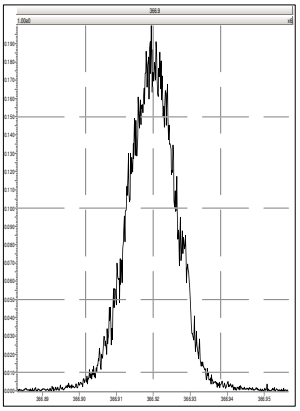
M 342.9792 R 12504



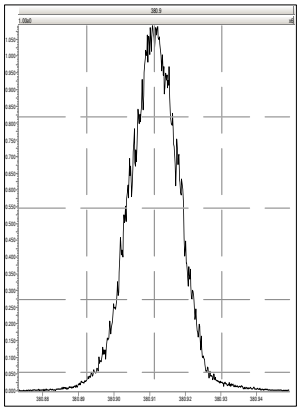
M 354.9792 R 12316



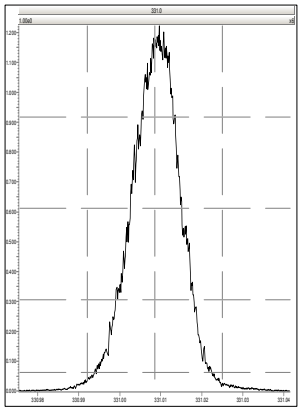
M 366.9792 R 12165



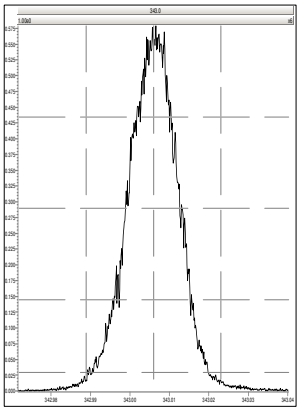
M 380.9760 R 12026



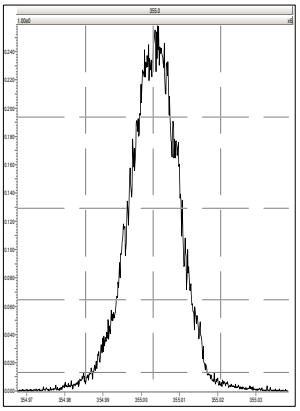
M 330.9792 R 11775



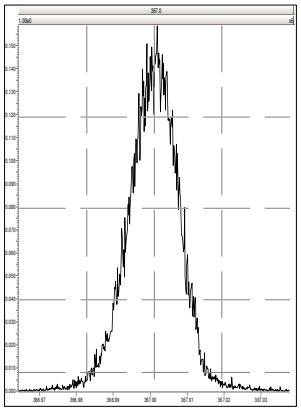
M 342.9792 R 11520



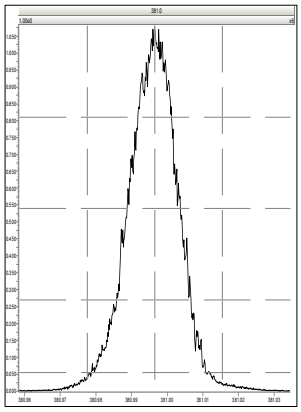
M 354.9792 R 11792



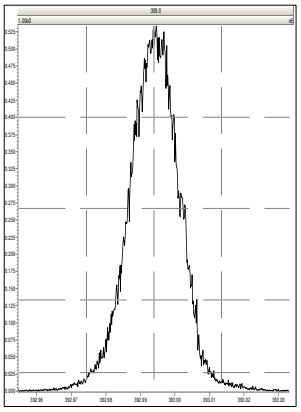
M 366.9792 R 11629



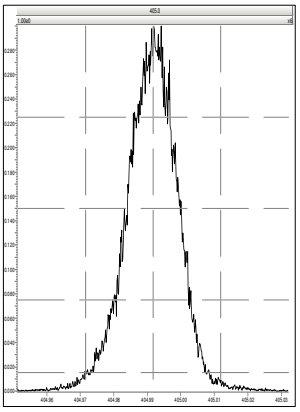
M 380.9760 R 11764



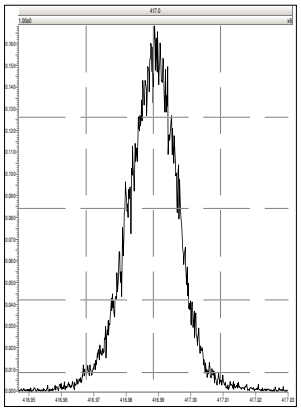
M 392.9760 R 11657



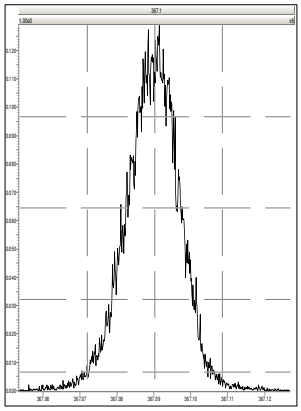
M 404.9760 R 11495



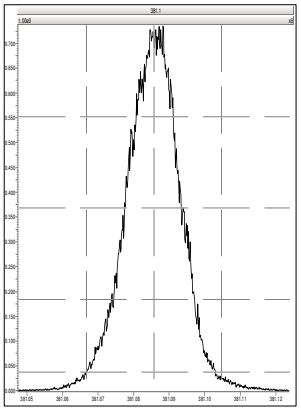
M 416.9760 R 10894



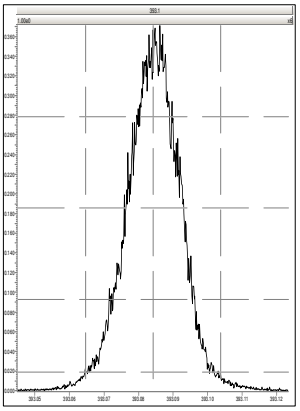
M 366.9792 R 11287



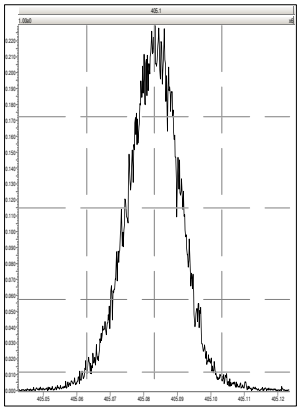
M 380.9760 R 10416



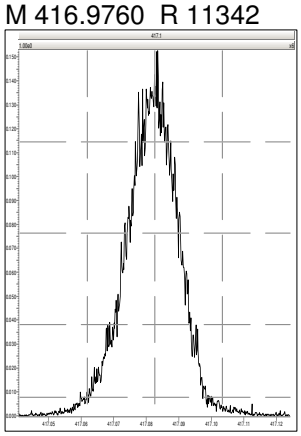
M 392.9760 R 10642



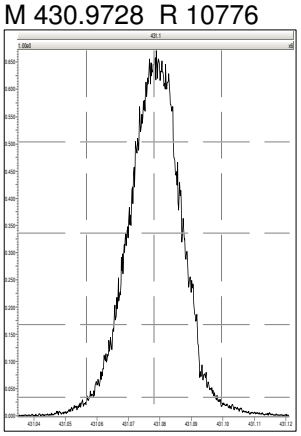
M 404.9760 R 10717



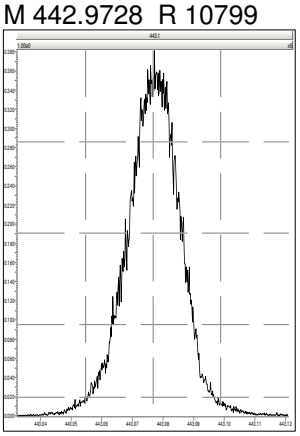
M 416.9760 R 11342



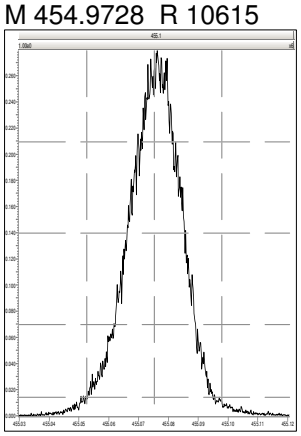
M 430.9728 R 10776



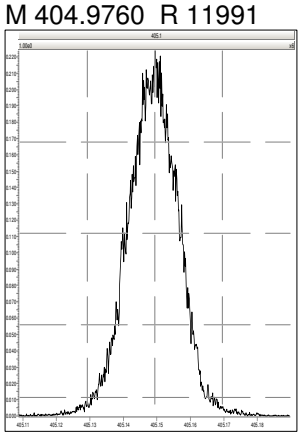
M 442.9728 R 10799



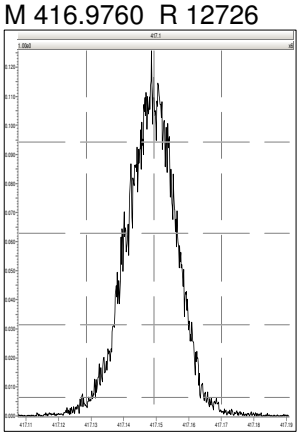
M 454.9728 R 10615



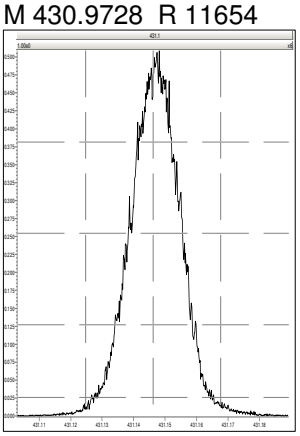
M 404.9760 R 11991



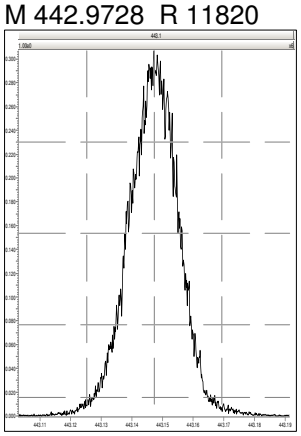
M 416.9760 R 12726



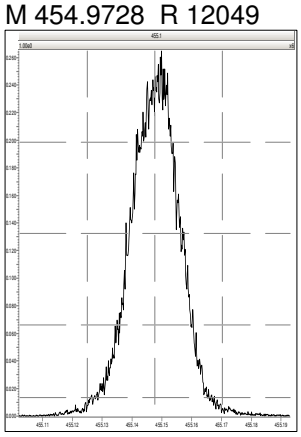
M 430.9728 R 11654



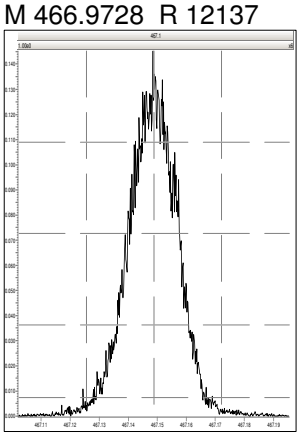
M 442.9728 R 11820



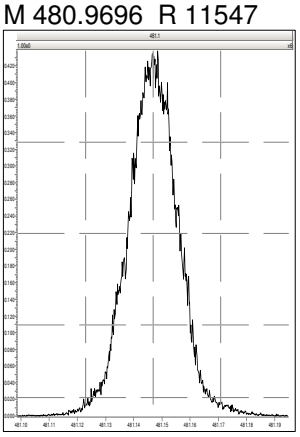
M 454.9728 R 12049



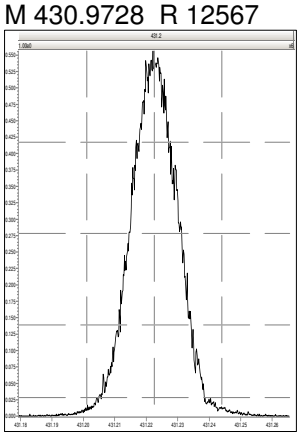
M 466.9728 R 12137



M 480.9696 R 11547



M 430.9728 R 12567



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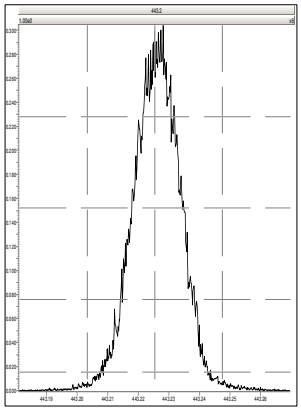
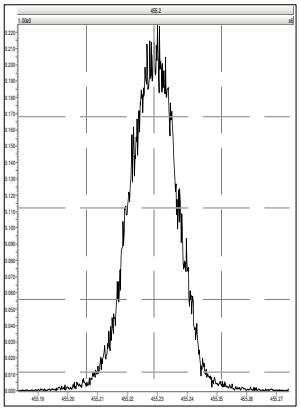
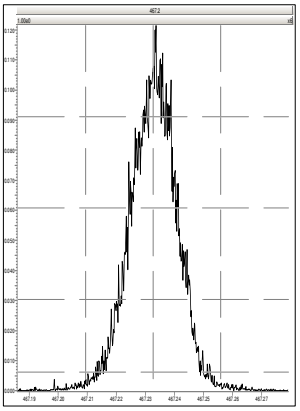
M 442.9728 R 12577



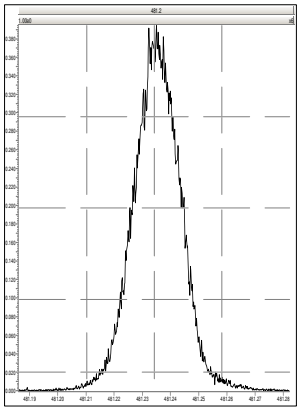
M 454.9728 R 12987



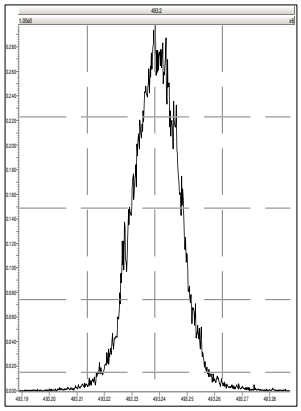
M 466.9728 R 13199



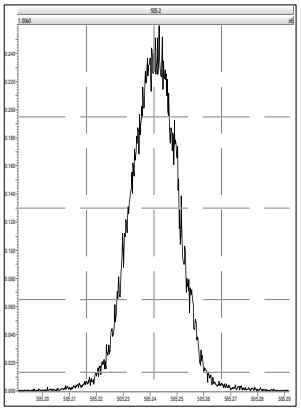
M 480.9696 R 12658



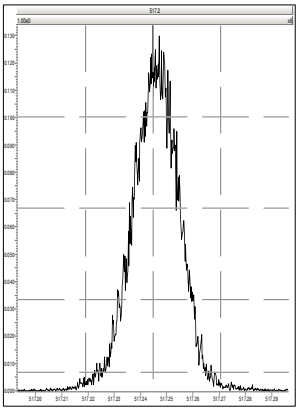
M 492.9696 R 12442



M 504.9696 R 12627



M 516.9697 R 13199



RUN LOG

Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
b26sep19a_4-1	27-SEP-2019 12:24:44	Mary Showalter	SB		1 uL	dioxin_db5ms	10K
b26sep19a_4-2	27-SEP-2019 13:12:39	Mary Showalter	15503006-1	41820	1 uL	dioxin_db5ms	10K
b26sep19a_4-3	27-SEP-2019 14:01:04	Mary Showalter	15526001-1	41820	1 uL	dioxin_db5ms	10K
b26sep19a_4-4	27-SEP-2019 14:49:29	Mary Showalter	15477001-1	41788	1 uL	dioxin_db5ms	10K
b26sep19a_4-5	27-SEP-2019 15:37:56	Mary Showalter	15477002-1	41788	1 uL	dioxin_db5ms	10K
b26sep19a_4-6	27-SEP-2019 16:26:22	Mary Showalter	15477003-1	41788	1 uL	dioxin_db5ms	10K
b26sep19a_4-7	27-SEP-2019 17:14:48	Mary Showalter	15477004-1	41788	1 uL	dioxin_db5ms	10K
b26sep19a_4-8	27-SEP-2019 18:03:13	Mary Showalter	15470013-1	41778	1 uL	dioxin_db5ms	10K
b26sep19a_4-9	27-SEP-2019 18:51:39	Mary Showalter	15470014-1	41778	1 uL	dioxin_db5ms	10K
b26sep19a_4-10	27-SEP-2019 19:40:06	Mary Showalter	15471009-1	41761	1 uL	dioxin_db5ms	10K
b26sep19a_4-11	27-SEP-2019 20:28:30	Mary Showalter	15471012-1	41761	1 uL	dioxin_db5ms	10K
b26sep19a_4-12	27-SEP-2019 21:16:57	Mary Showalter	15471013-1	41761	1 uL	dioxin_db5ms	10K
b26sep19a_4-13	27-SEP-2019 22:05:22	Mary Showalter	15471016-1	41761	1 uL	dioxin_db5ms	10K
b26sep19a_4-14	27-SEP-2019 22:53:48	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

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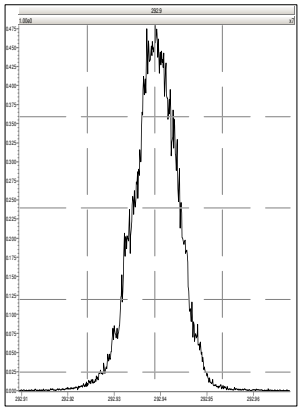
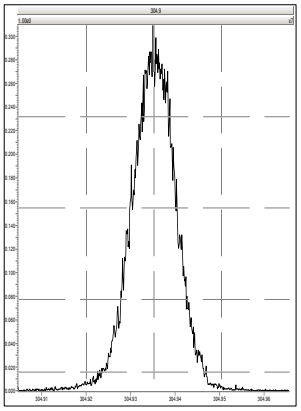
M 292.9824 R 12922



M 304.9824 R 13444



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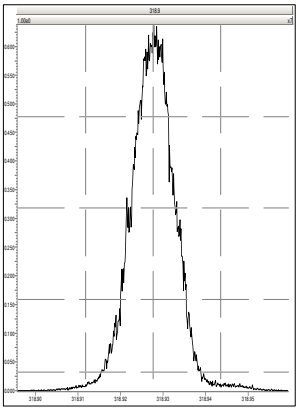

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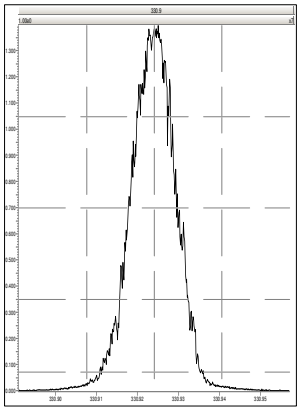

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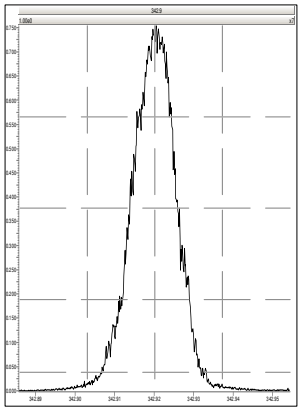

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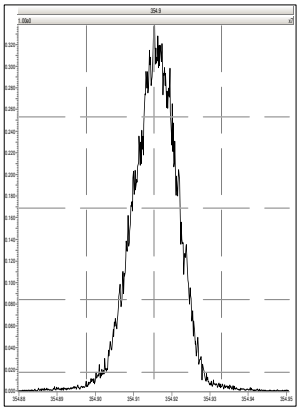

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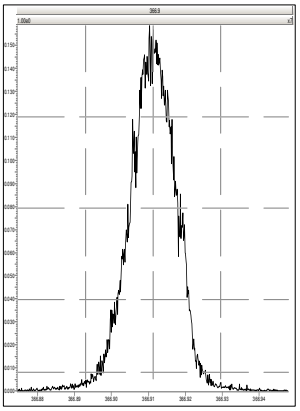

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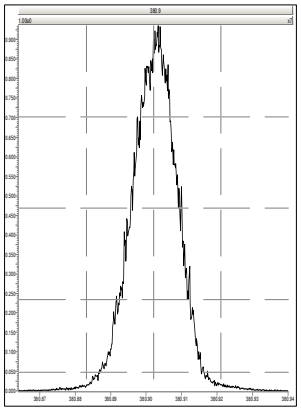

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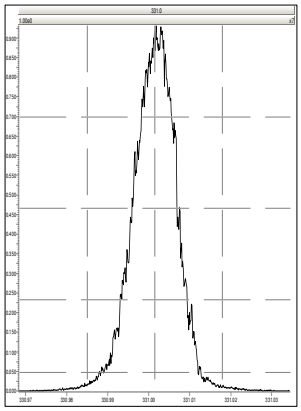

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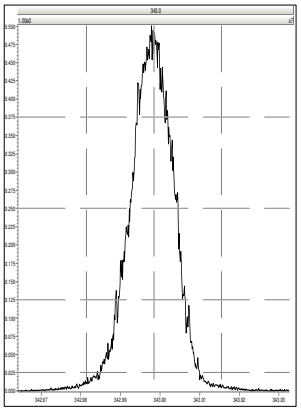

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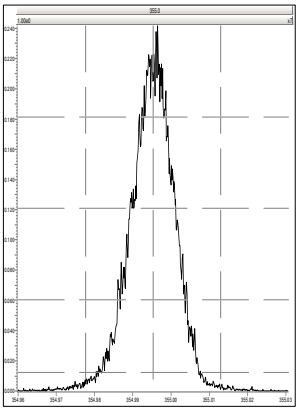

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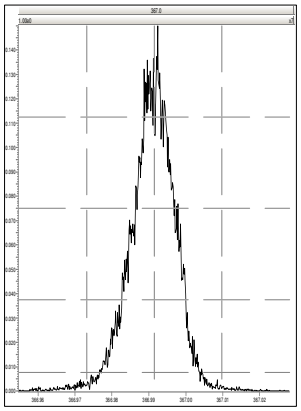

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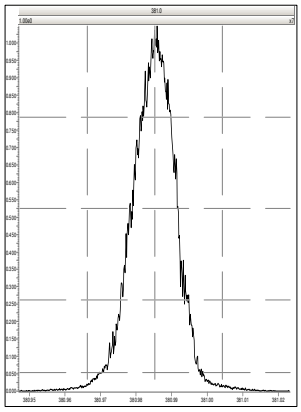
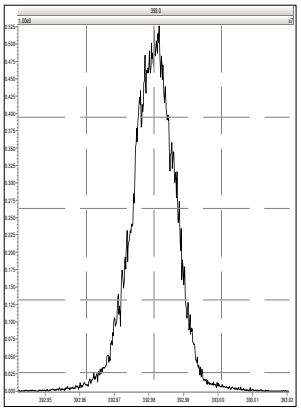
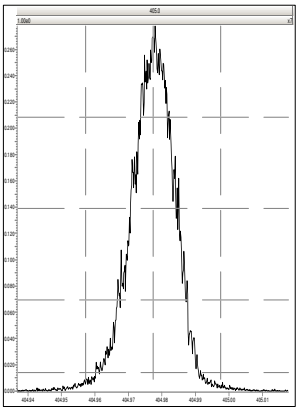


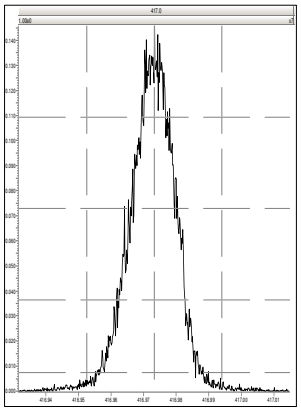
M 392.9760 R 13477



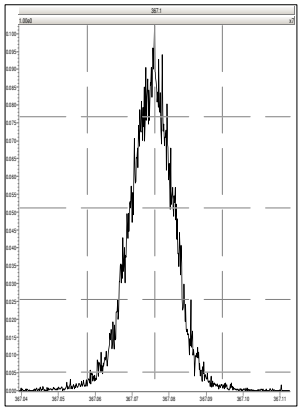
M 404.9760 R 13340



M 416.9760 R 14164



M 366.9792 R 12987



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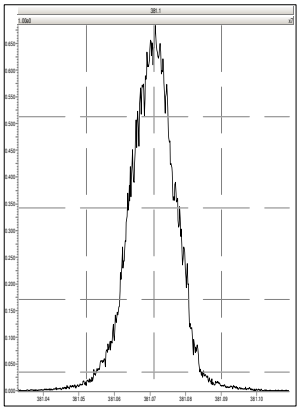

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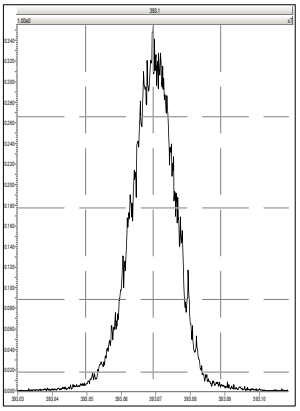

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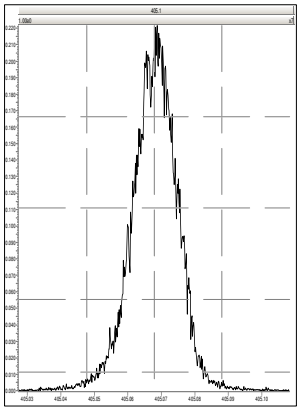

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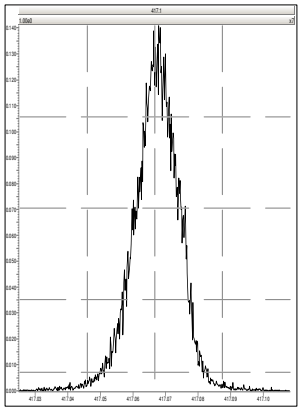
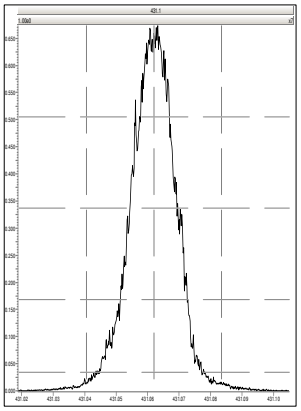
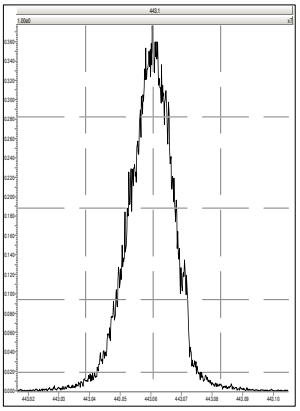


M 430.9728 R 12991



M 442.9728 R 13262



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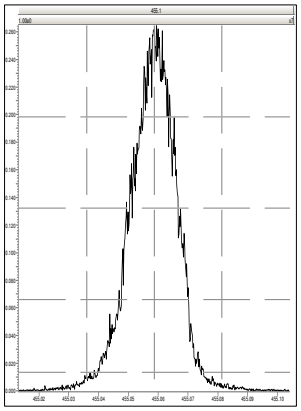

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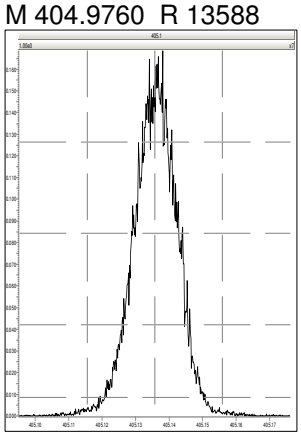

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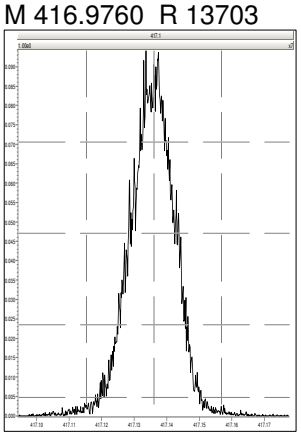
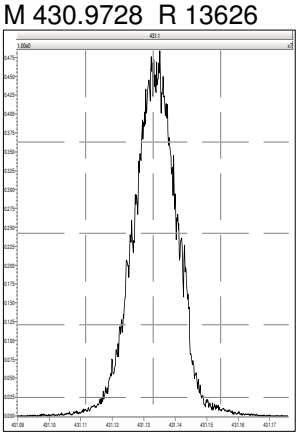


M 430.9728 R 13626



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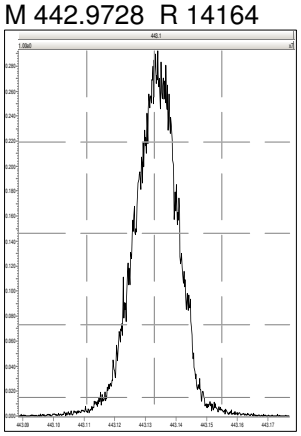

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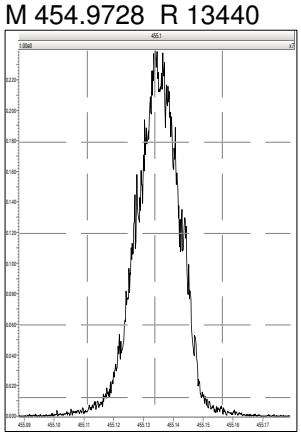

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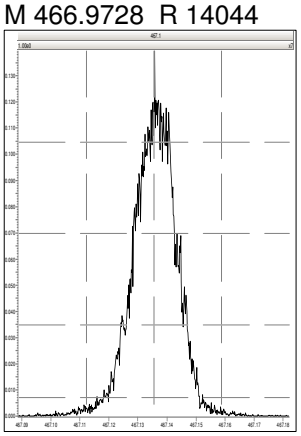

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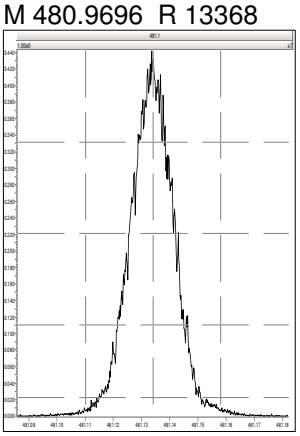

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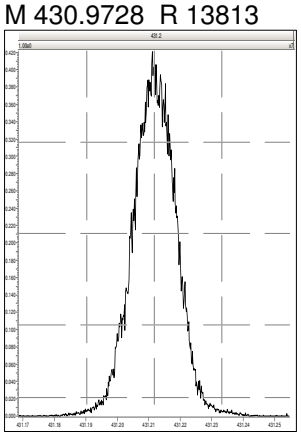

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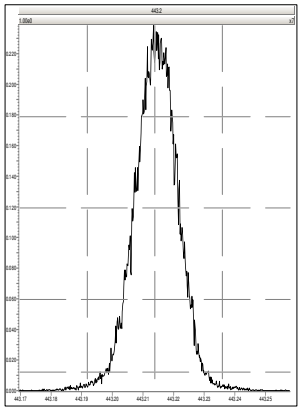

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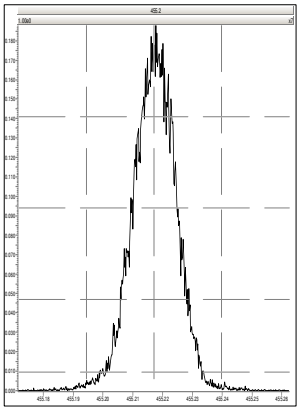

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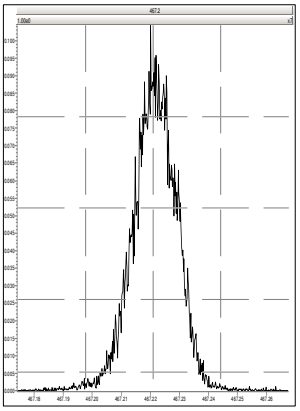

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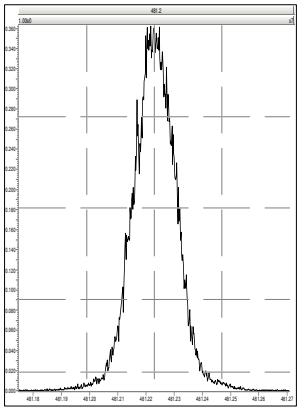

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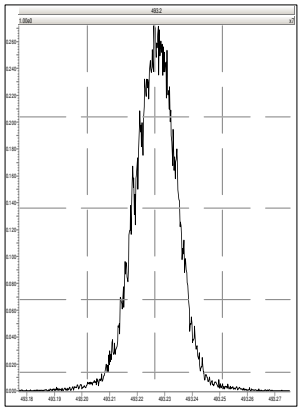

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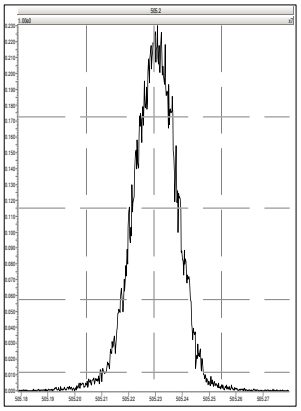

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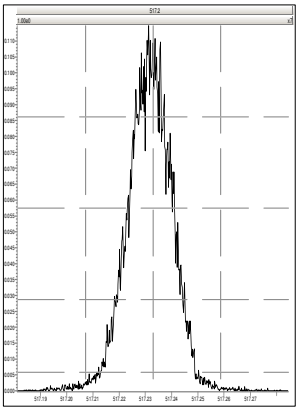

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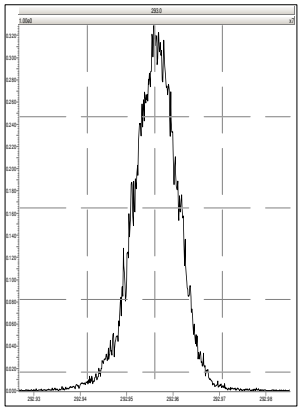
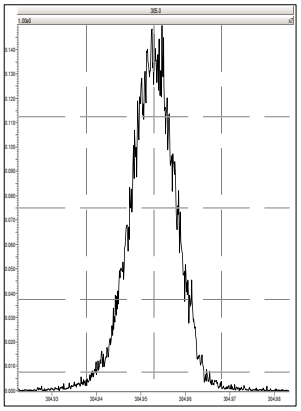
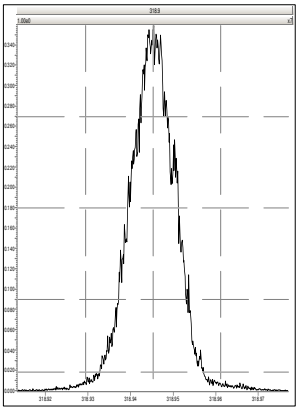


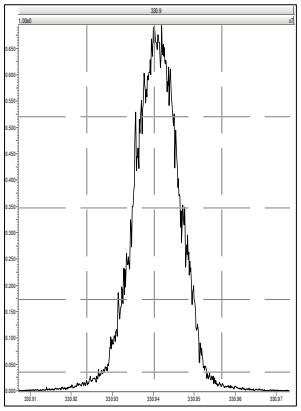
M 304.9824 R 12594



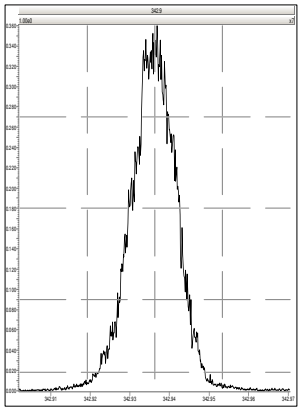
M 318.9792 R 13020



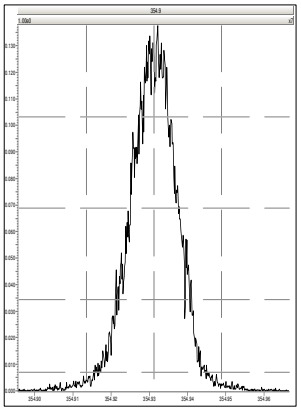
M 330.9792 R 13337



M 342.9792 R 12926



M 354.9792 R 13058



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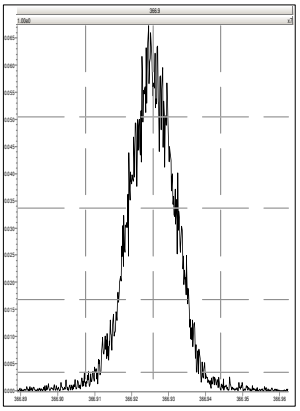
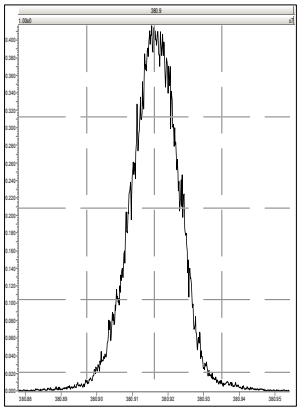


M 380.9760 R 12265



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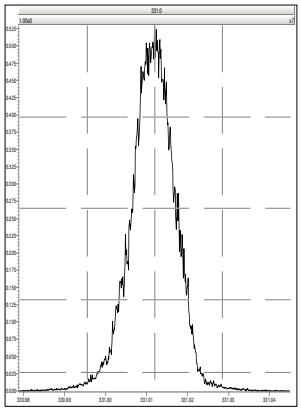
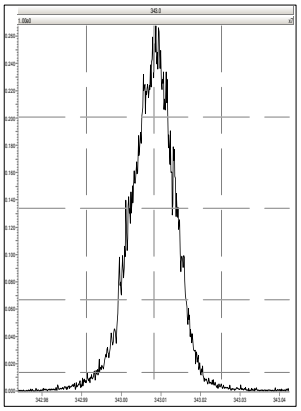
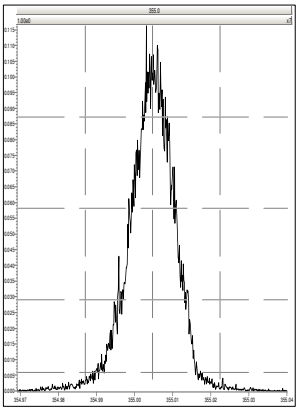


M 342.9792 R 13227



M 354.9792 R 13374



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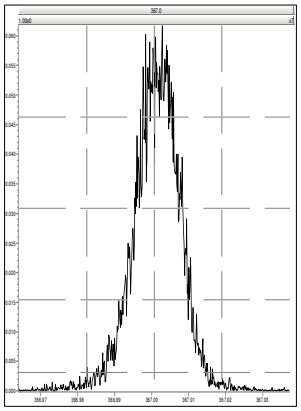
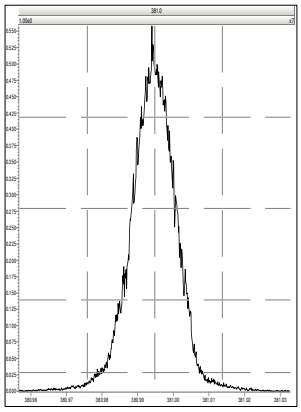


M 380.9760 R 12988



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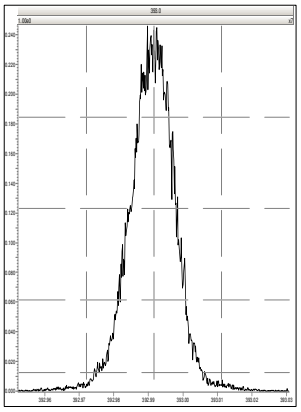
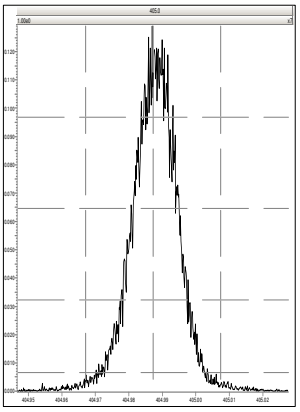
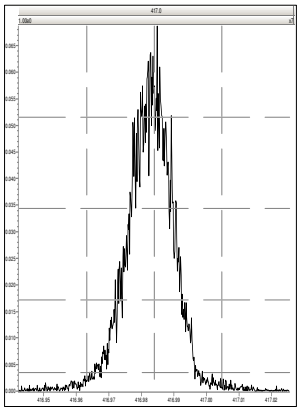


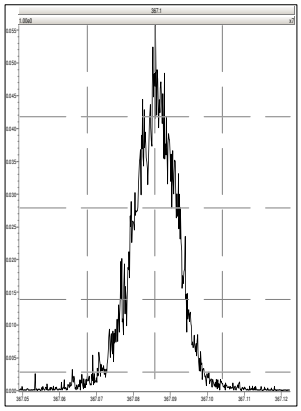
M 404.9760 R 13440



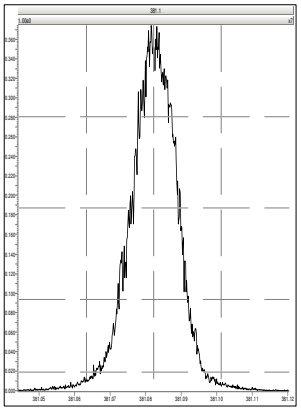
M 416.9760 R 14023



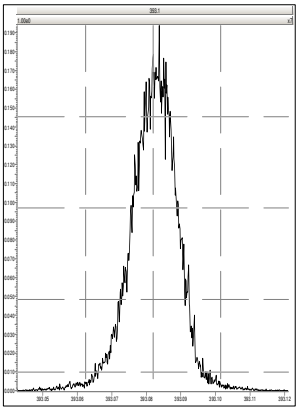
M 366.9792 R 13742



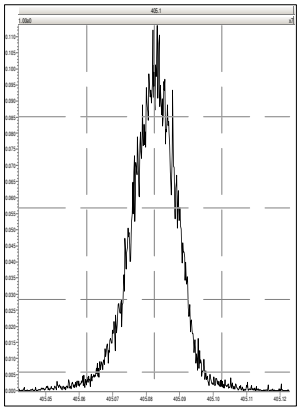
M 380.9760 R 12469



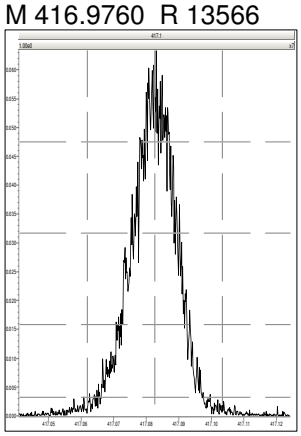
M 392.9760 R 13021



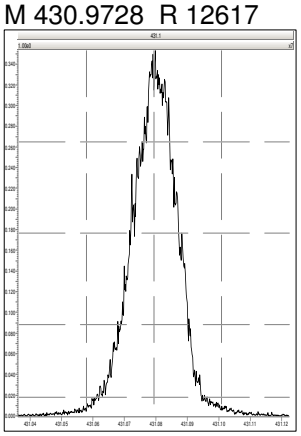
M 404.9760 R 13023



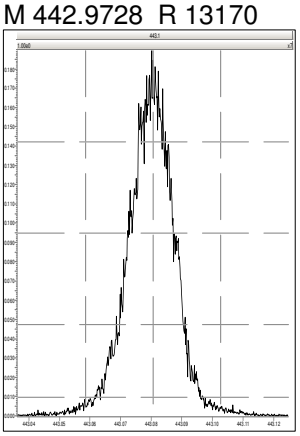
M 416.9760 R 13566



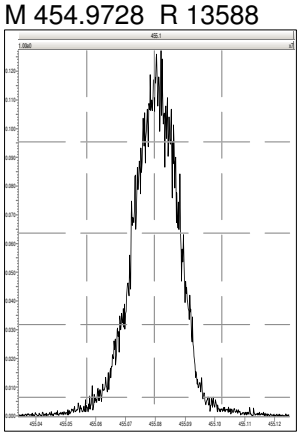
M 430.9728 R 12617



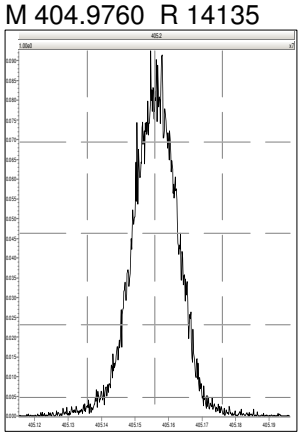
M 442.9728 R 13170



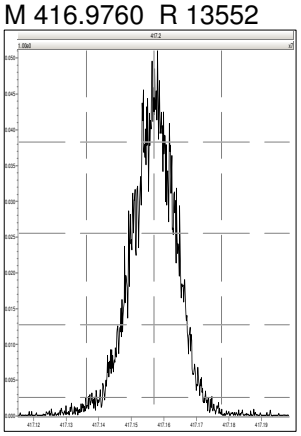
M 454.9728 R 13588



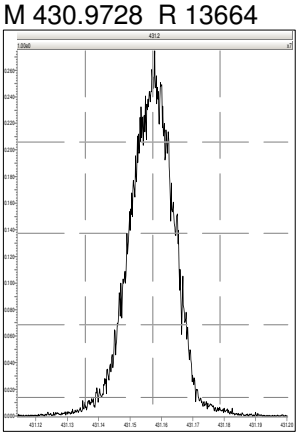
M 404.9760 R 14135



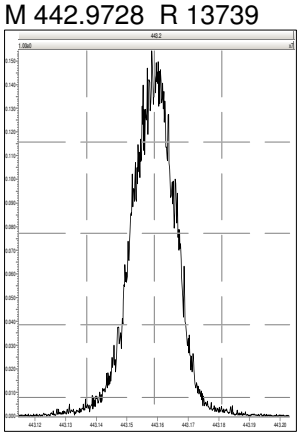
M 416.9760 R 13552



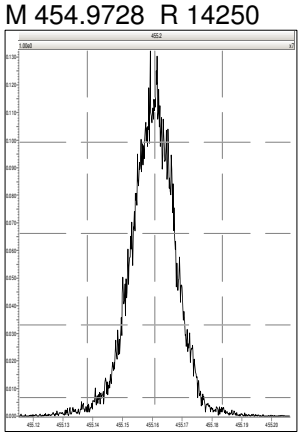
M 430.9728 R 13664



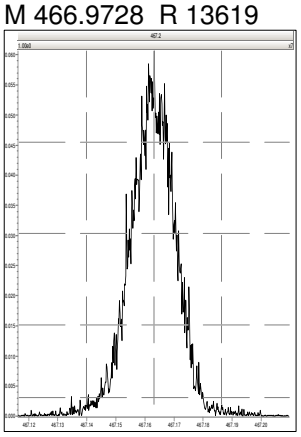
M 442.9728 R 13739



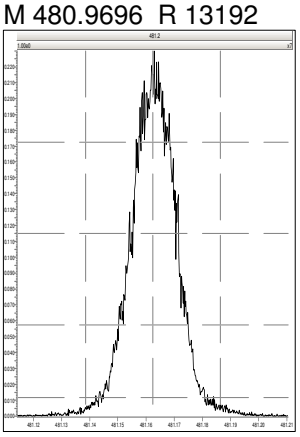
M 454.9728 R 14250



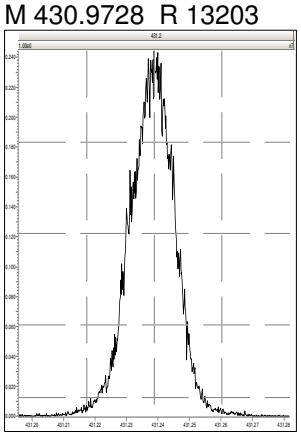
M 466.9728 R 13619



M 480.9696 R 13192

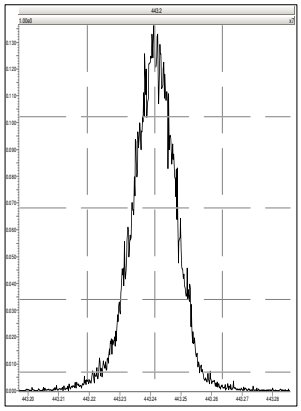


M 430.9728 R 13203

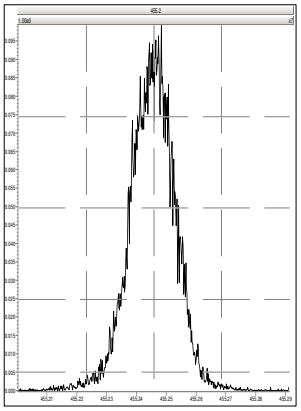


Printed: Friday, September 27, 2019 23:50:19 Eastern Standard Time

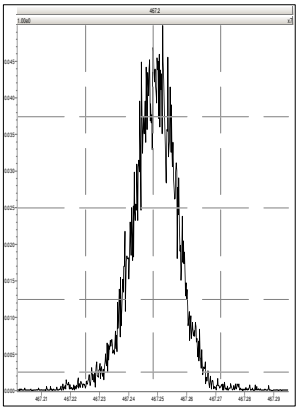
M 442.9728 R 13476



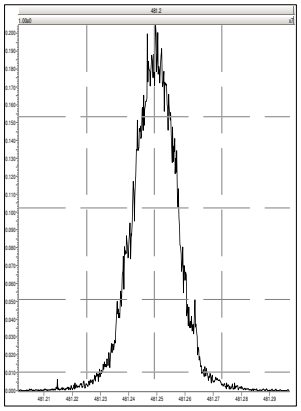
M 454.9728 R 13966



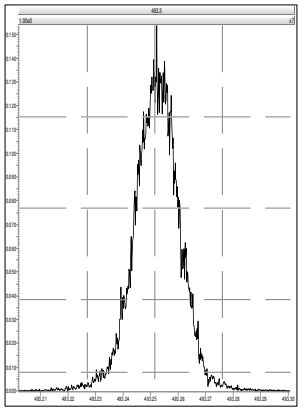
M 466.9728 R 13812



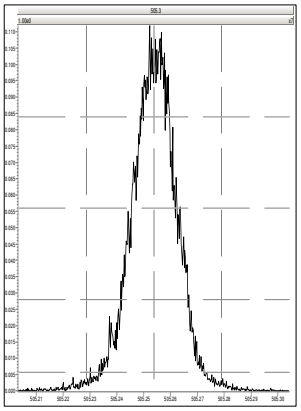
M 480.9696 R 13157



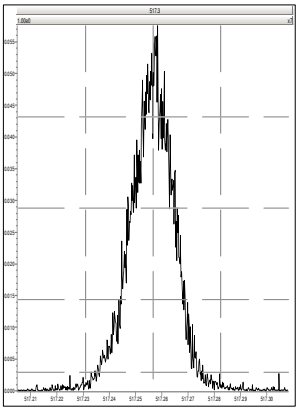
M 492.9696 R 13192



M 504.9696 R 13337



M 516.9697 R 13196



Quantify Sample Summary Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b26sep19a_4-14.qld

Last Altered: Monday, September 30, 2019 09:12:42 Eastern Standard Time
Printed: Monday, September 30, 2019 09:15:18 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

	Name	RT
1	First TCDF	26.01
2	Last TCDF	31.81
3	First PeCDF	31.81
4	Last PeCDF	34.48
5	First HxCDF	34.99
6	Last HxCDF	37.27
7	First HpCDF	38.75
8	Last HpCDF	40.63
9	OCDF	44.45
10	First TCDD	27.74
11	2378-TCDD	31.11
12	Last TCDD	31.73
13	First PeCDD	32.71
14	Last PeCDD	34.31
15	First HxCDD	35.41
16	Last HxCDD	36.95
17	First HpCDD	39.07
18	Last HpCDD	39.98
19	OCDD	44.17

Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

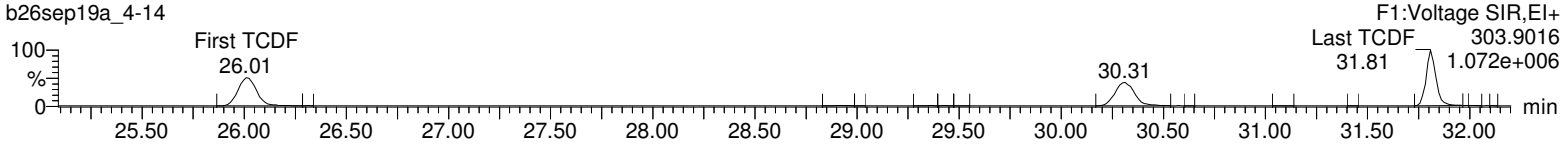
Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b26sep19a_4-14.qld

Last Altered: Monday, September 30, 2019 09:12:42 Eastern Standard Time
Printed: Monday, September 30, 2019 09:15:18 Eastern Standard Time

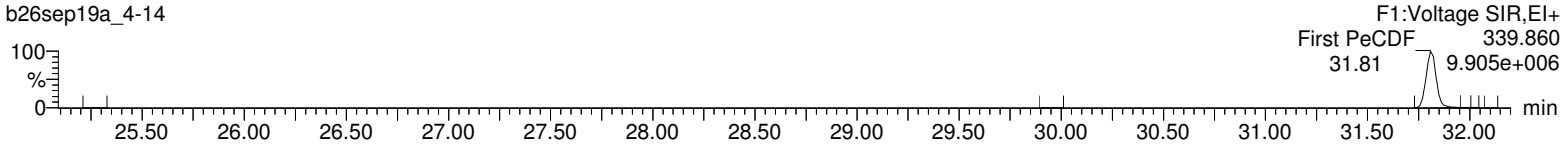
Method: C:\MassLynx\Default.pro\Methdb\WDM_b19sep19.mdb 19 Sep 2019 13:43:10
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

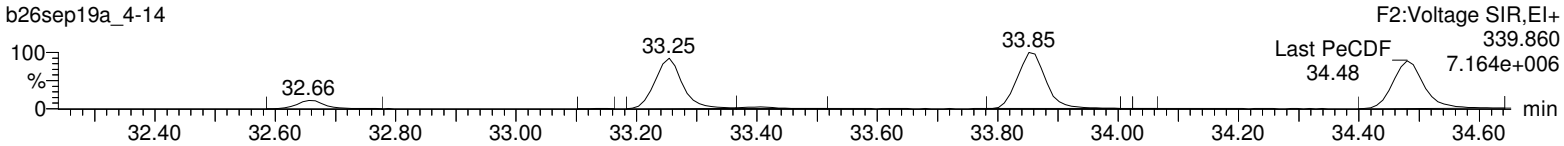
First TCDF



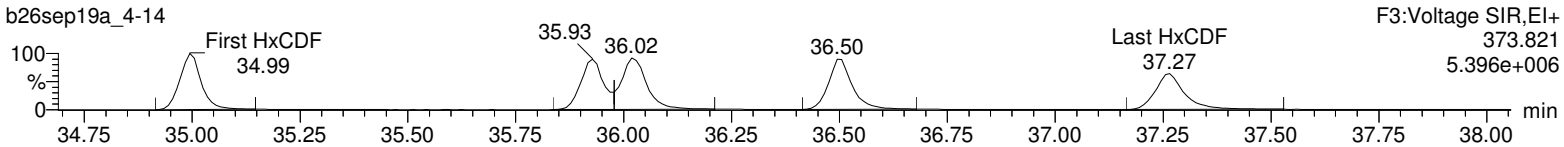
First PeCDF



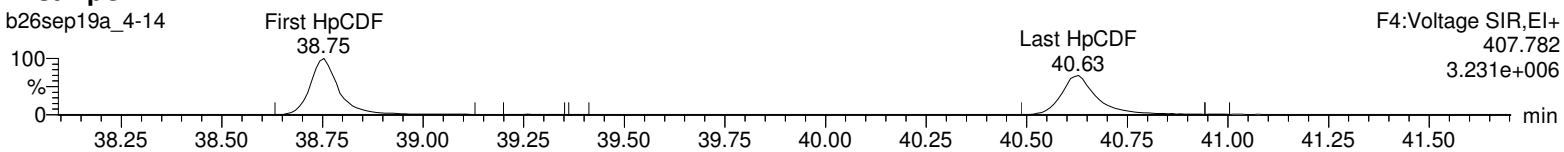
Last PeCDF



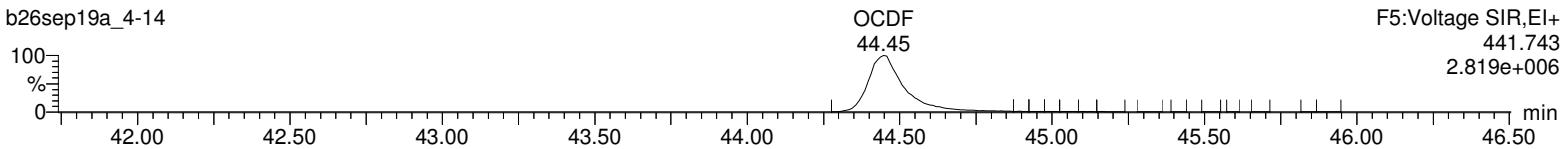
First HxCDF



First HpCDF



OCDF



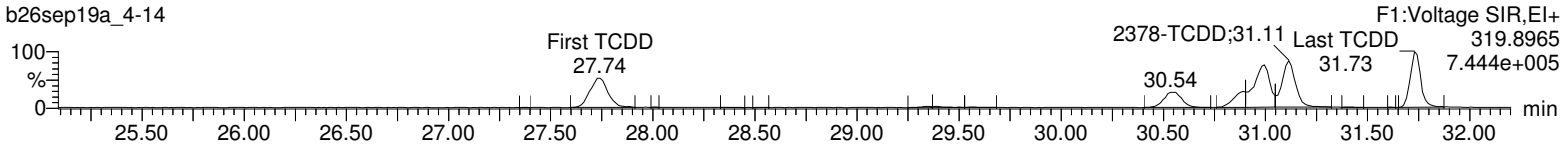
Quantify Sample Report **MassLynx 4.1**
Method Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b26sep19a_4-14.qld

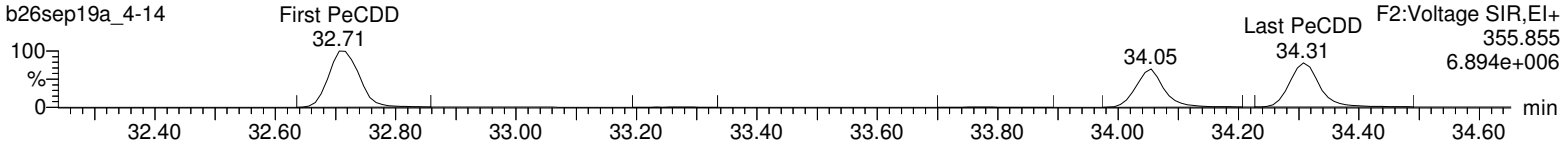
Last Altered: Monday, September 30, 2019 09:12:42 Eastern Standard Time
Printed: Monday, September 30, 2019 09:15:18 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

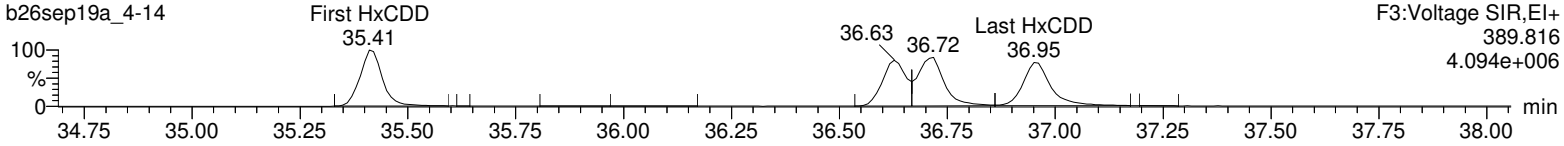
First TCDD



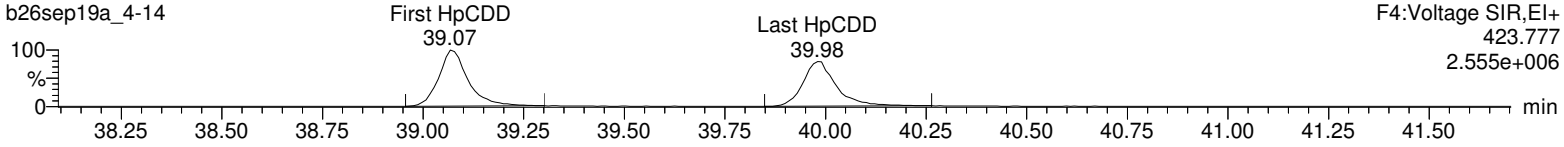
First PeCDD



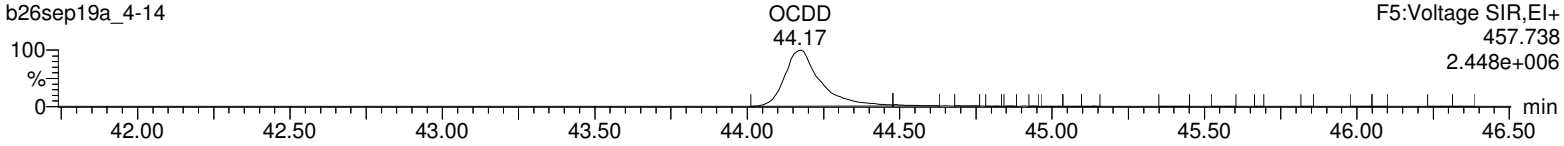
First HxCDD



First HpCDD



OCDD

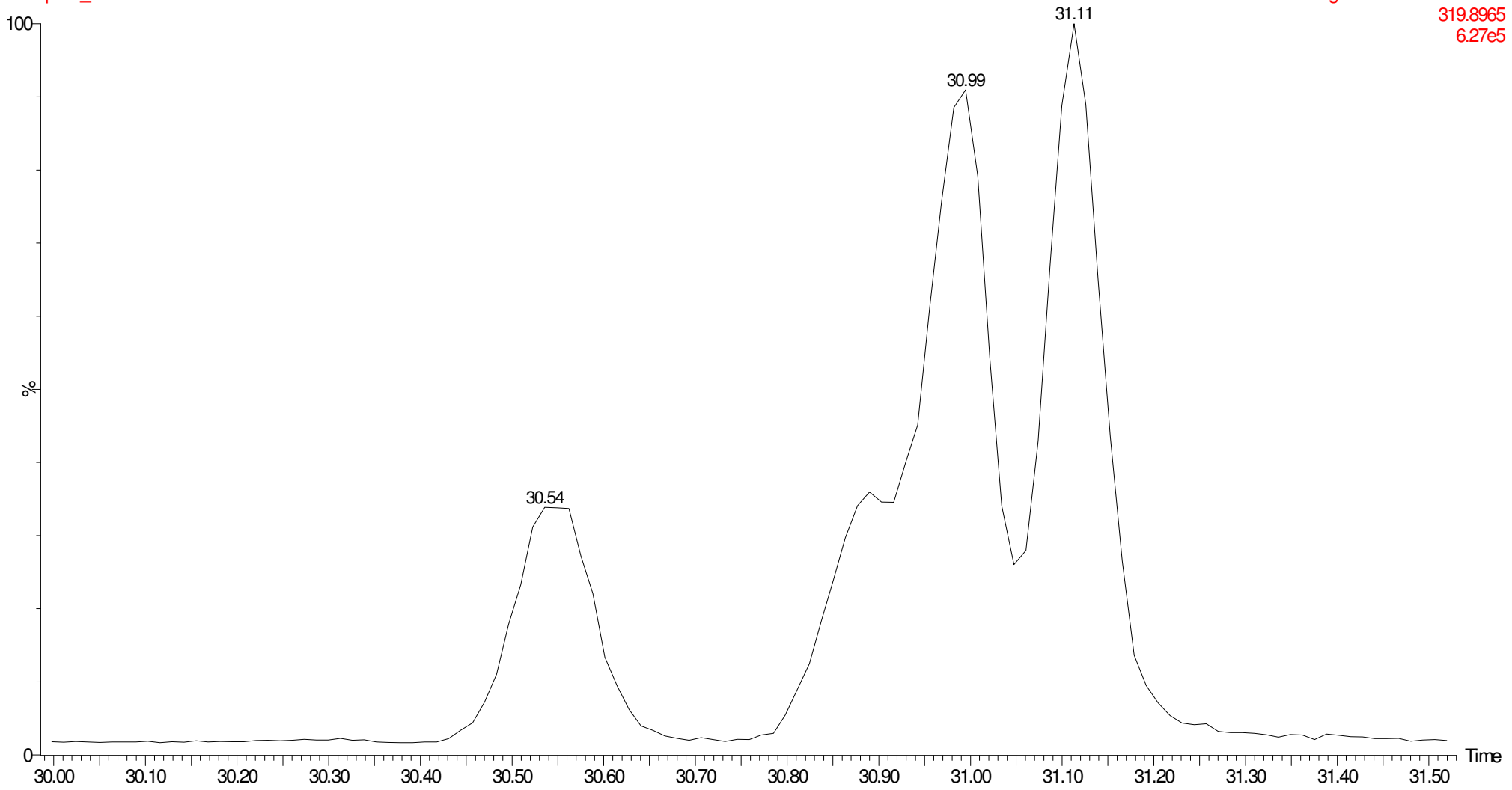


COLUMN CHECK (2378-TCDD 24%)

CS3WT UD190902-02.1 **HRP763_1** **27-Sep-201922:53:48**

b26sep19a_4-14

1: Voltage SIR 13 Channels EI+
319.8965
6.27e5



Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDD	4.69e4	6.22e4	1.09e5	31.11	1.000	0.75	NO	10.185	0.0723	0.907	0.891	1.9	6.11e5	2053	297.6	7.59e5	1803	420.8	db	dd
2	12378-PeCDD	2.49e5	1.65e5	4.14e5	34.05	1.000	1.51	NO	49.553	0.119	0.843	0.850	-0.9	4.67e6	3850	1212.7	3.01e6	3374	892.4	bb	bb
3	123478-HxCDD	2.08e5	1.71e5	3.79e5	36.63	1.000	1.21	NO	47.595	0.180	0.889	0.934	-4.8	3.33e6	3964	838.9	2.77e6	5260	526.1	bd	bd
4	123678-HxCDD	2.51e5	2.05e5	4.55e5	36.72	1.001	1.23	NO	50.892	0.176	0.901	0.885	1.8	3.53e6	3964	890.8	2.95e6	5260	561.6	dd	dd
5	123789-HxCDD	2.39e5	1.96e5	4.35e5	36.95	1.007	1.22	NO	52.671	0.182	0.935	0.887	5.3	3.17e6	3964	798.4	2.59e6	5260	491.7	dd	dd
6	1234678-HpCDD	1.92e5	1.82e5	3.74e5	39.98	1.000	1.05	NO	49.533	0.192	0.935	0.944	-0.9	2.01e6	3161	635.0	1.93e6	2731	707.6	bb	bb
7	OCDD	3.29e5	3.80e5	7.09e5	44.17	1.000	0.87	NO	97.724	0.261	0.893	0.914	-2.3	2.43e6	2338	1038.4	2.81e6	3177	884.8	bd	bd
8	2378-TCDF	4.92e4	6.54e4	1.15e5	30.31	1.001	0.75	NO	10.088	0.0734	0.901	0.893	0.9	4.46e5	1097	406.7	6.17e5	1920	321.5	bb	bd
9	12378-PeCDF	3.39e5	2.18e5	5.57e5	33.25	1.000	1.55	NO	49.750	0.101	0.903	0.908	-0.5	6.40e6	3357	1907.8	4.10e6	4822	851.2	bd	bd
10	23478-PeCDF	3.88e5	2.48e5	6.36e5	33.85	1.000	1.56	NO	50.940	0.0911	0.990	0.971	1.9	7.12e6	3357	2122.5	4.55e6	4822	943.0	bb	bb
11	123478-HxCDF	2.94e5	2.25e5	5.19e5	35.93	1.000	1.30	NO	51.249	0.164	1.163	1.135	2.5	4.80e6	5198	924.1	3.94e6	6284	627.3	bd	bd
12	123678-HxCDF	3.28e5	2.75e5	6.03e5	36.02	1.000	1.19	NO	51.102	0.165	1.077	1.054	2.2	4.94e6	5198	950.3	3.97e6	6284	631.9	db	db
13	234678-HxCDF	3.09e5	2.50e5	5.59e5	36.50	1.000	1.23	NO	51.477	0.172	1.164	1.130	3.0	4.79e6	5198	921.1	3.79e6	6284	602.3	bb	bb
14	123789-HxCDF	2.69e5	2.17e5	4.87e5	37.27	1.001	1.24	NO	50.730	0.240	1.078	1.063	1.5	3.44e6	5198	661.8	2.69e6	6284	428.0	bb	bb
15	1234678-HpCDF	2.65e5	2.56e5	5.21e5	38.75	1.000	1.03	NO	50.710	0.170	1.208	1.191	1.4	3.22e6	4225	761.4	3.16e6	4238	745.3	bb	bb
16	1234789-HpCDF	2.27e5	2.18e5	4.45e5	40.63	1.000	1.04	NO	49.918	0.239	1.225	1.227	-0.2	2.24e6	4225	529.4	2.16e6	4238	510.2	bd	bb
17	OCDF	3.85e5	4.30e5	8.15e5	44.45	1.007	0.90	NO	100.987	0.237	1.027	1.017	1.0	2.80e6	3224	869.7	3.16e6	2356	1340.0	bd	bd
18	13C-2378-TCDD	5.20e5	6.83e5	1.20e6	31.10	1.019	0.76	NO	103.650	0.120	1.193	1.151	3.7	6.48e6	3575	1811.6	8.54e6	1748	4883.2	bb	bd
19	13C-12378-PeCDD	5.97e5	3.86e5	9.83e5	34.04	1.115	1.54	NO	125.096	0.204	0.975	0.779	25.1	1.08e7	3191	3396.3	6.87e6	2930	2344.4	bb	bb
20	13C-123478-HxCDD	4.70e5	3.83e5	8.53e5	36.62	0.991	1.23	NO	104.109	0.240	0.822	0.789	4.1	7.55e6	5956	1267.0	6.09e6	4298	1417.7	bd	bd
21	13C-123678-HxCDD	5.58e5	4.52e5	1.01e6	36.70	0.993	1.23	NO	91.999	0.179	0.972	1.057	-8.0	8.17e6	5956	1371.3	6.81e6	4298	1584.9	dd	dd
22	13C-1234678-HpCDD	4.07e5	3.93e5	8.00e5	39.97	1.082	1.04	NO	121.753	0.214	0.771	0.633	21.8	4.14e6	3776	1095.7	3.97e6	3545	1121.2	bd	bd
23	13C-OCDD	7.44e5	8.43e5	1.59e6	44.15	1.195	0.88	NO	279.809	0.249	0.764	0.546	39.9	5.42e6	3464	1565.9	6.11e6	3903	1566.3	bd	bd
24	13C-2378-TCDF	5.54e5	7.18e5	1.27e6	30.29	0.992	0.77	NO	97.137	0.191	1.262	1.299	-2.9	5.01e6	5158	971.8	6.58e6	4368	1506.6	bb	bb
25	13C-12378-PeCDF	7.50e5	4.83e5	1.23e6	33.24	1.089	1.55	NO	116.881	0.366	1.222	1.046	16.9	1.36e7	6207	2187.5	8.92e6	8517	1046.8	bd	db
26	13C-23478-PeCDF	7.81e5	5.04e5	1.29e6	33.84	1.109	1.55	NO	118.742	0.357	1.274	1.073	18.7	1.40e7	6207	2262.9	9.11e6	8517	1069.3	bb	bb
27	13C-123478-HxCDF	3.05e5	5.88e5	8.93e5	35.92	0.972	0.52	NO	94.262	0.220	0.860	0.912	-5.7	5.26e6	4388	1199.6	1.02e7	6464	1578.5	bd	bd
28	13C-123678-HxCDF	3.87e5	7.32e5	1.12e6	36.01	0.975	0.53	NO	90.653	0.169	1.077	1.188	-9.3	5.69e6	4388	1297.4	1.09e7	6464	1679.6	db	db
29	13C-234678-HxCDF	3.26e5	6.35e5	9.61e5	36.49	0.988	0.51	NO	91.633	0.198	0.925	1.010	-8.4	5.01e6	4388	1142.7	9.61e6	6464	1485.9	bb	bd
30	13C-123789-HxCDF	3.04e5	5.99e5	9.03e5	37.25	1.008	0.51	NO	102.049	0.235	0.869	0.852	2.0	3.80e6	4388	865.8	7.35e6	6464	1137.7	bb	bd
31	13C-1234678-HpCDF	2.59e5	6.03e5	8.62e5	38.74	1.049	0.43	NO	105.903	0.190	0.830	0.784	5.9	3.13e6	3299	949.9	7.17e6	4777	1501.1	bb	bd

Quantify Sample Summary Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
32	13C-1234789-HpCDF	2.22e5	5.05e5	7.27e5	40.61	1.099	0.44	NO	124.702	0.265	0.700	0.562	24.7	2.20e6	3299	667.8	4.91e6	4777	1026.9	bb	bd
33	13C-1234-TCDD	4.43e5	5.66e5	1.01e6	30.52	0.000	0.78	NO	100.000	0.138	1.000	1.000	0.0	4.22e6	3575	1180.8	5.47e6	1748	3128.1	bb	bb
34	13C-123789-HxCDD	5.75e5	4.64e5	1.04e6	36.94	0.000	1.24	NO	100.000	0.189	1.000	1.000	0.0	7.49e6	5956	1258.2	6.16e6	4298	1434.0	dd	dd
35	37Cl-2378-TCDD	1.05e5		1.05e5	31.11	1.019			9.702	0.0335	1.045	1.077	-3.0	1.41e6	1387	1018.1				bb	

Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

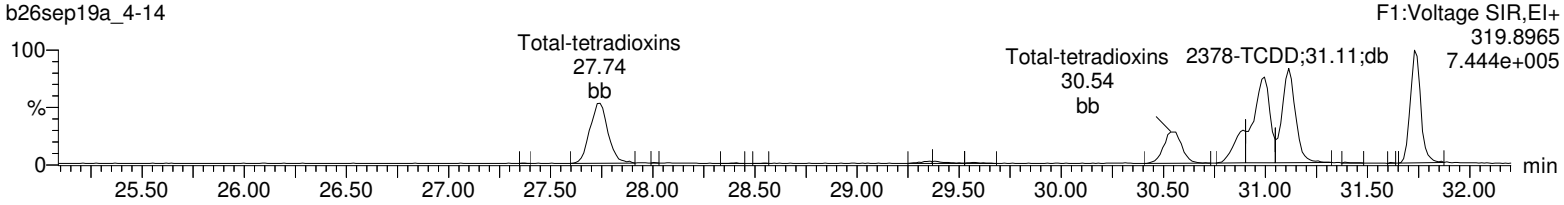
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

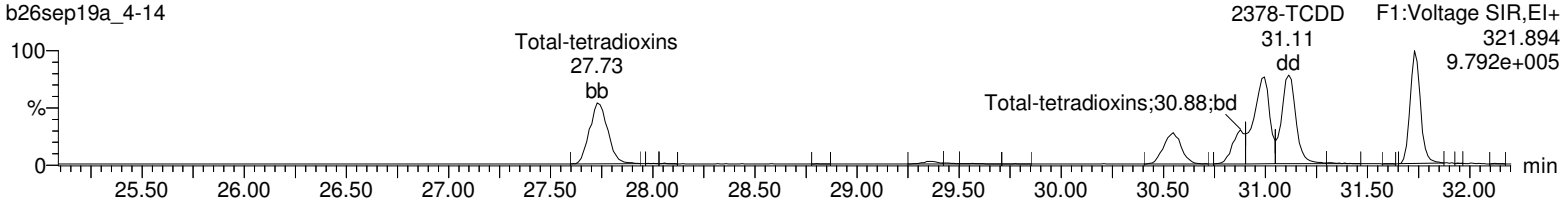
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_1613_b19sep19.mdb 19 Sep 2019 12:45:24
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b23aug19a.cdb 26 Aug 2019 08:59:46

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

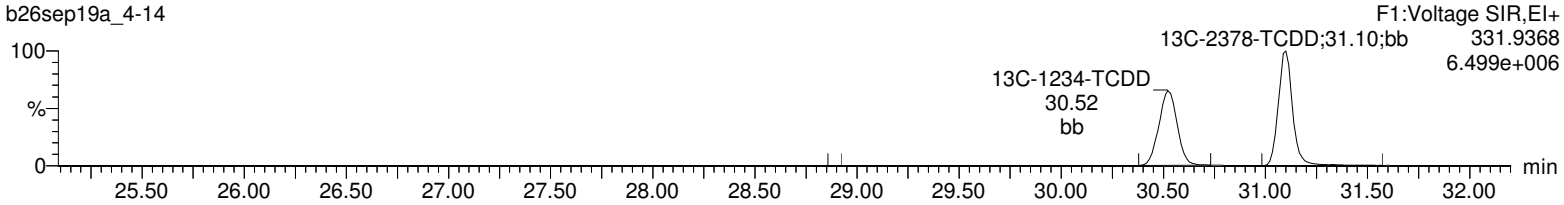
Total-tetradioxins



Total-tetradioxins



13C-2378-TCDD



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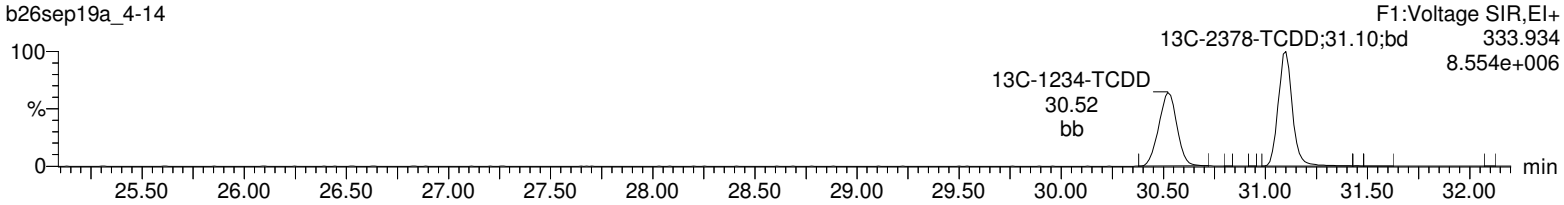
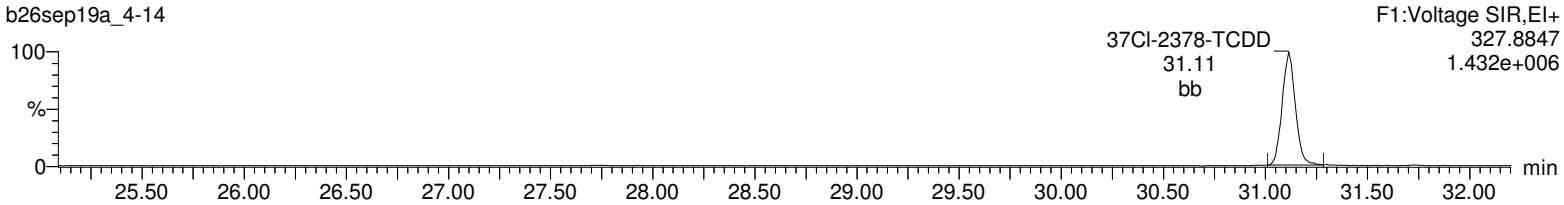
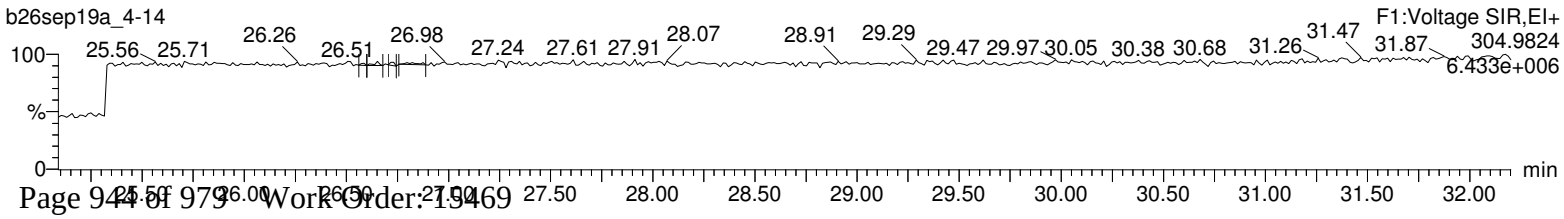


37Cl-2378-TCDD



Lock Mass F1



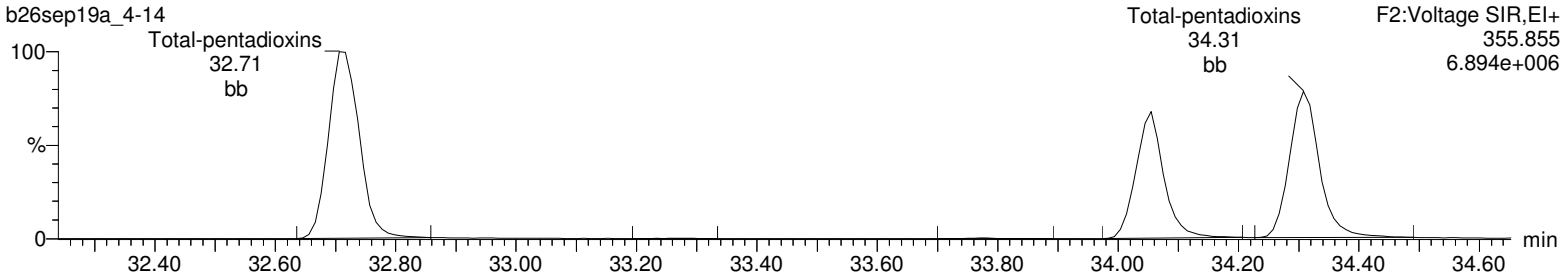
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

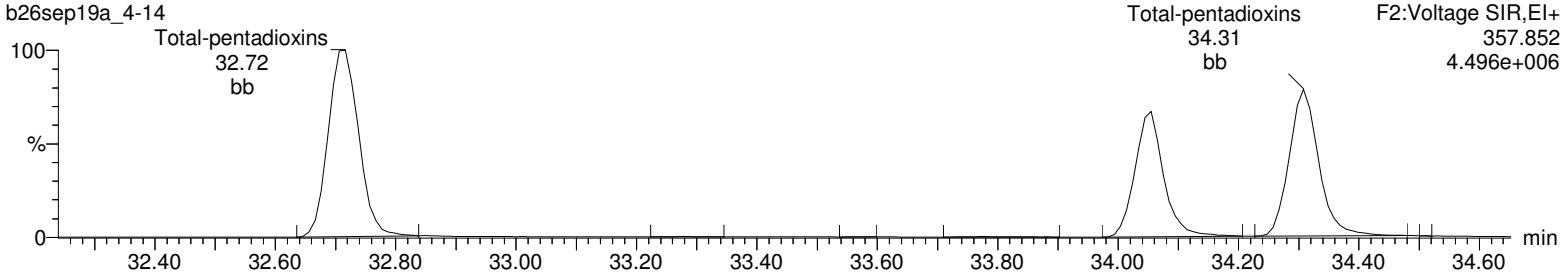
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

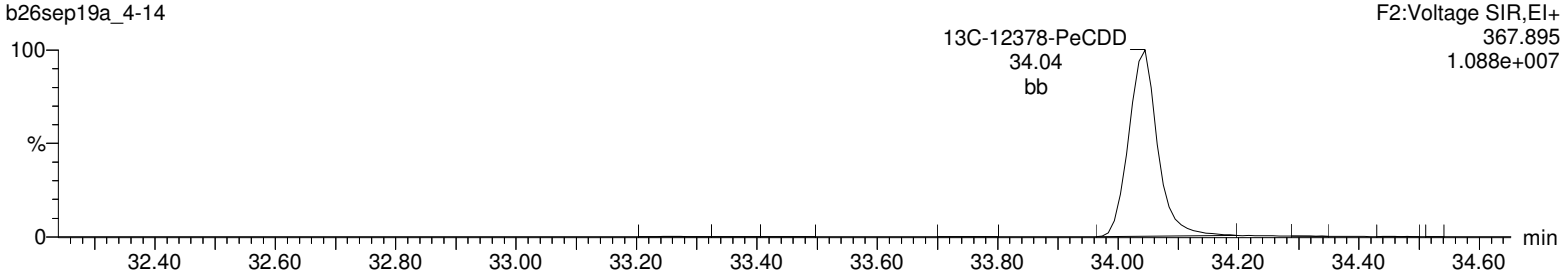
Total-pentadioxins



Total-pentadioxins



13C-12378-PeCDD



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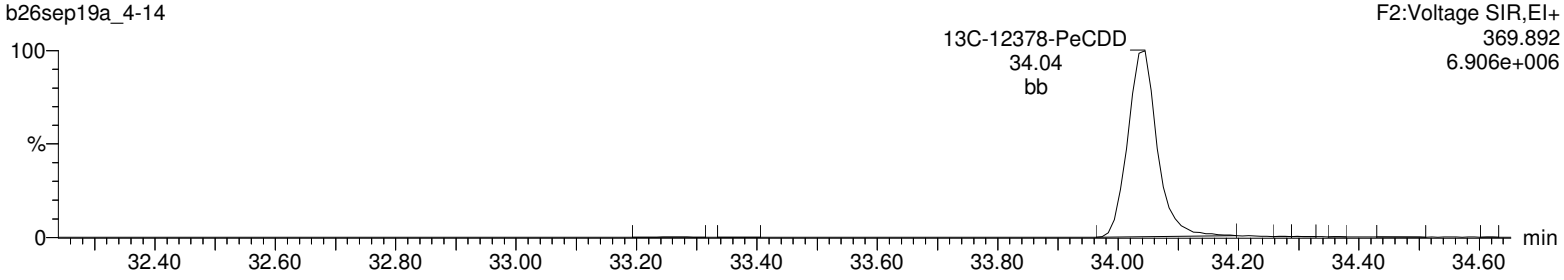
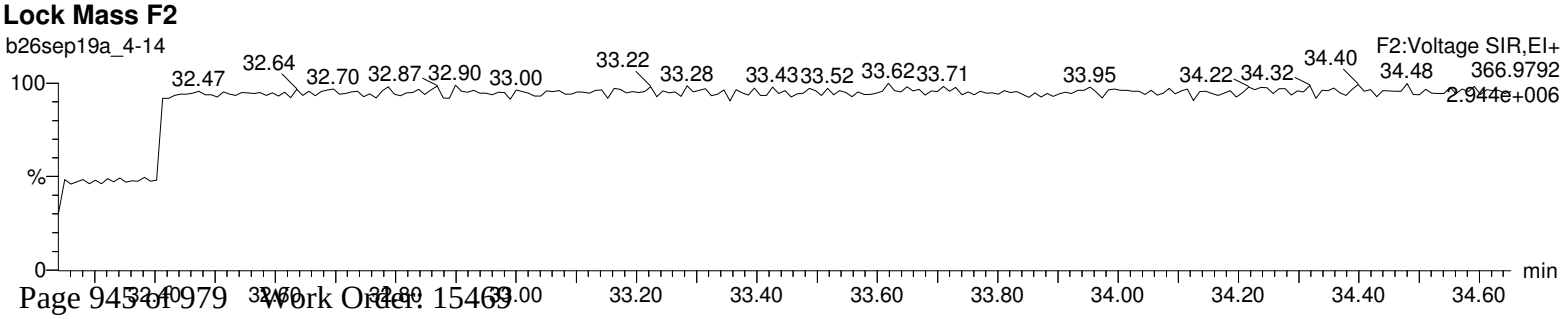


Lock Mass F2



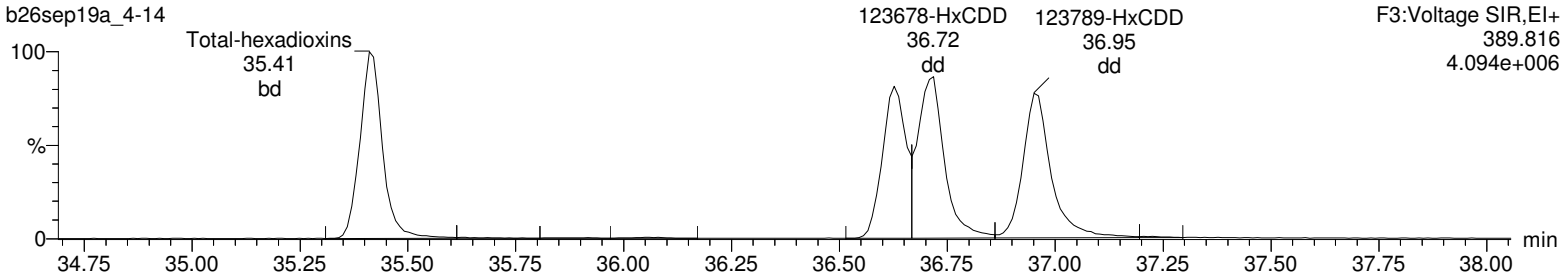
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

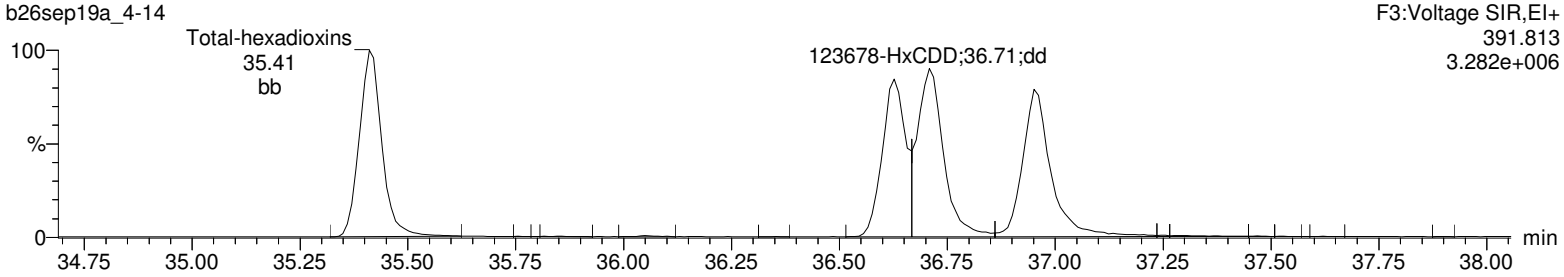
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

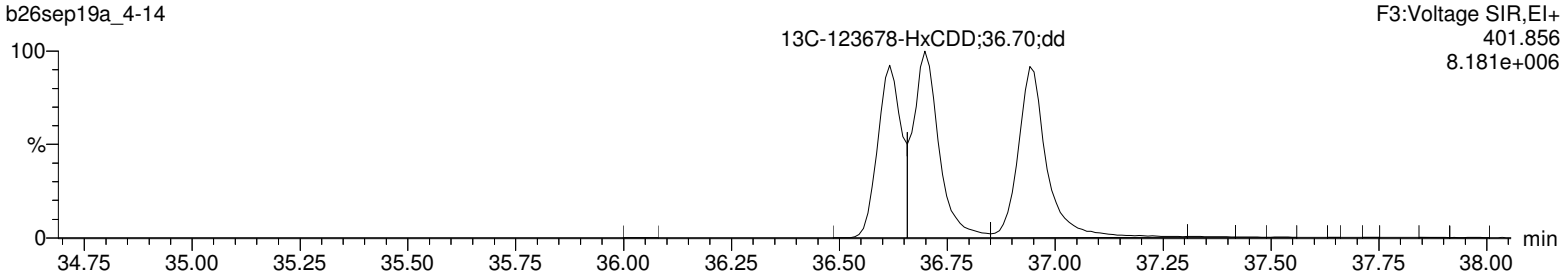
Total-hexadioxins



Total-hexadioxins



13C-123478-HxCDD



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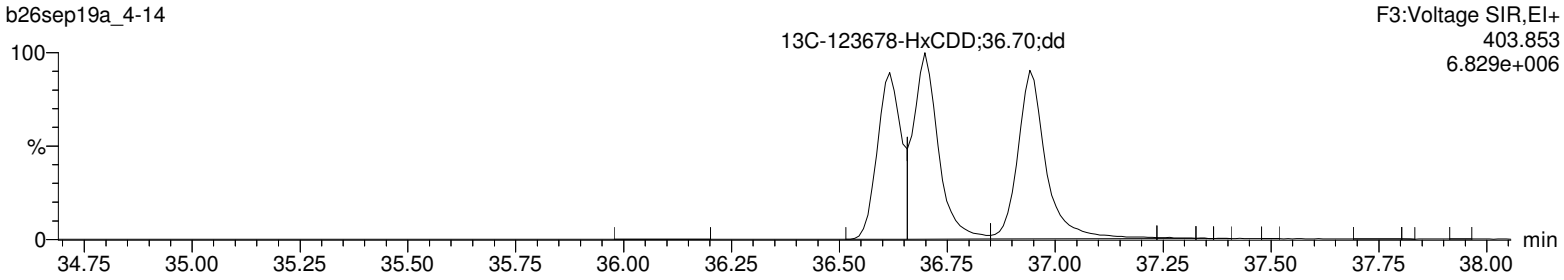
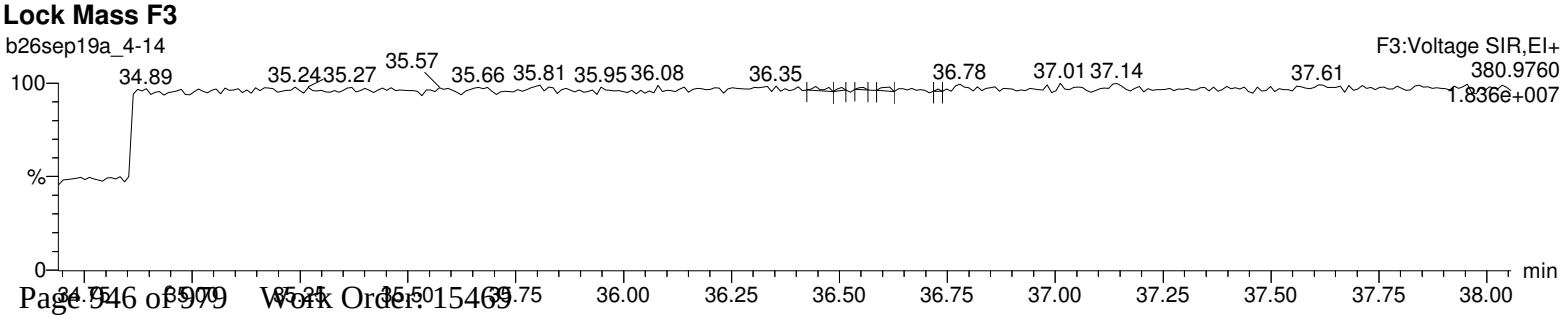


Lock Mass F3



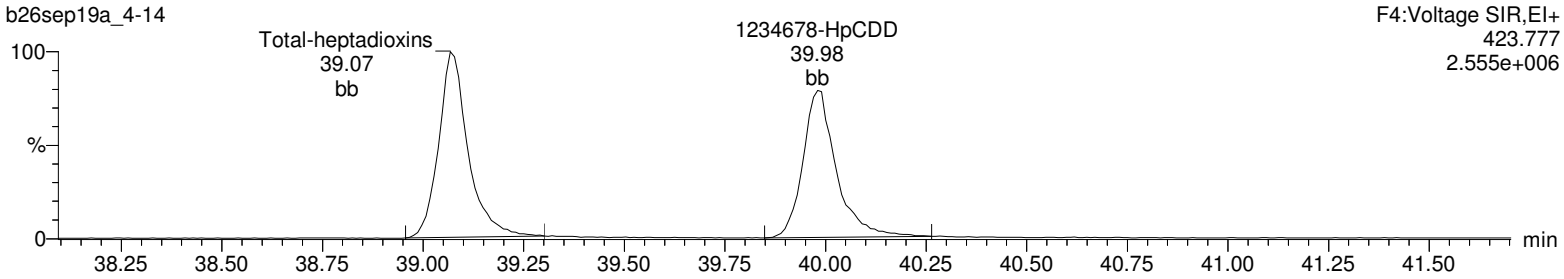
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

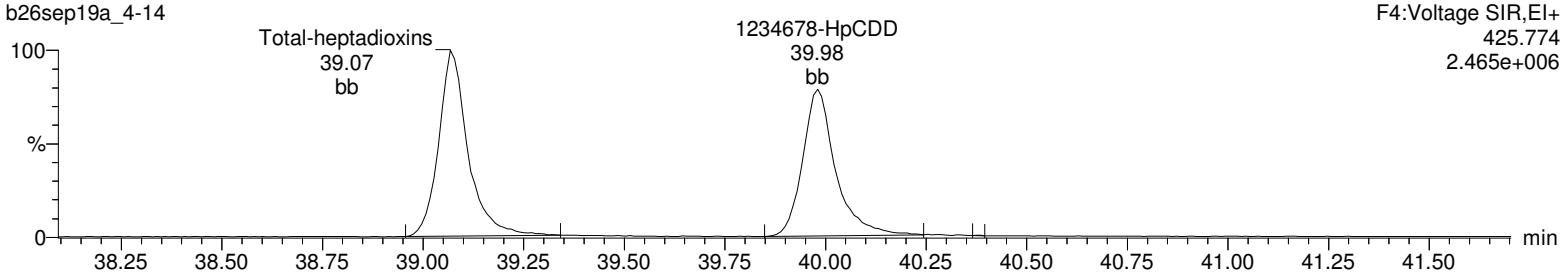
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

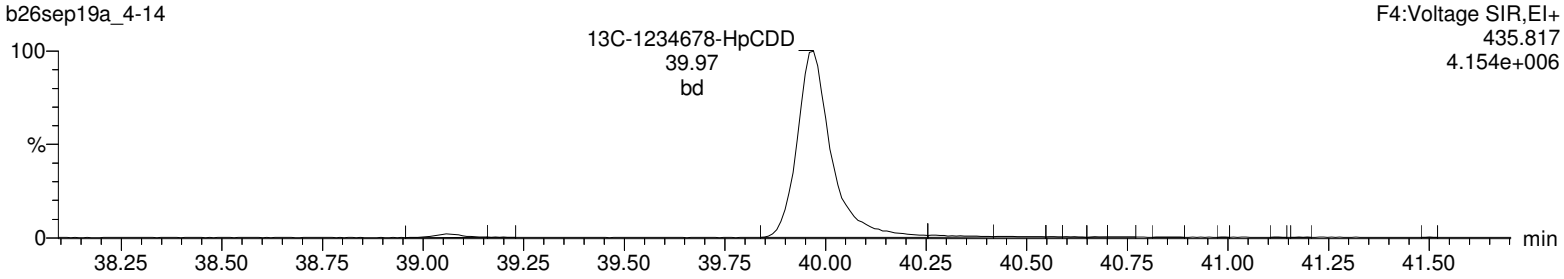
Total-heptadioxins



Total-heptadioxins



13C-1234678-HpCDD



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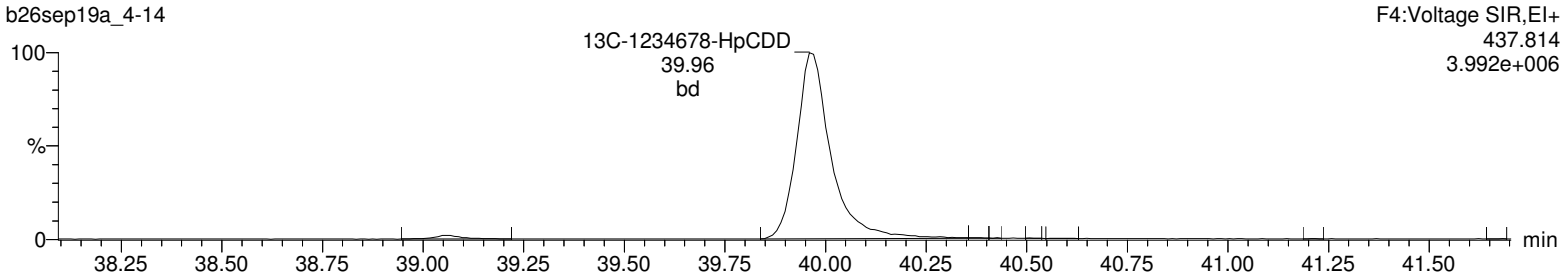
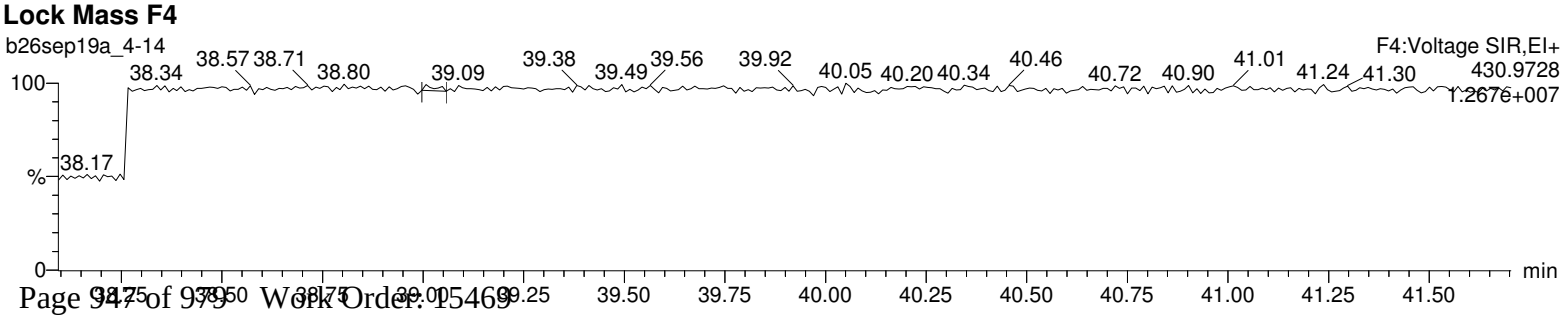


Lock Mass F4



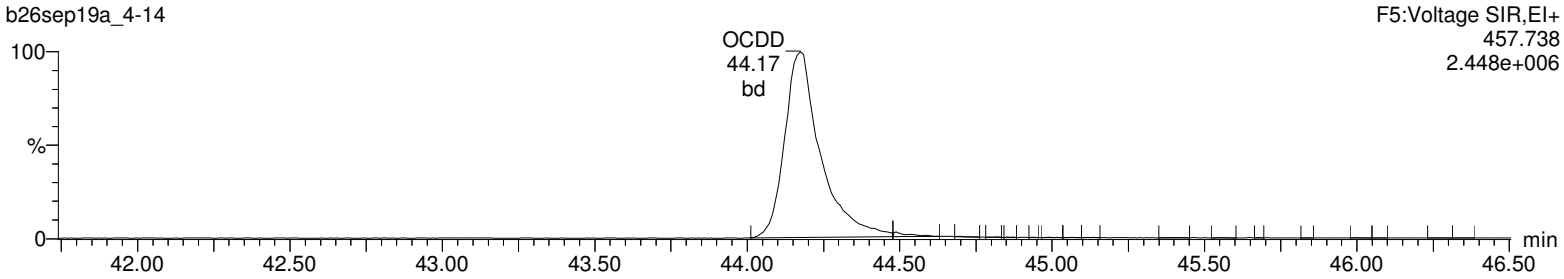
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

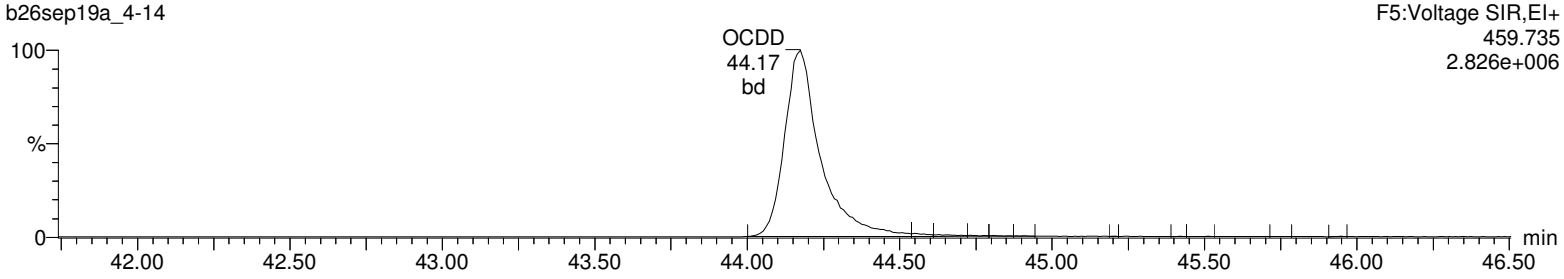
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

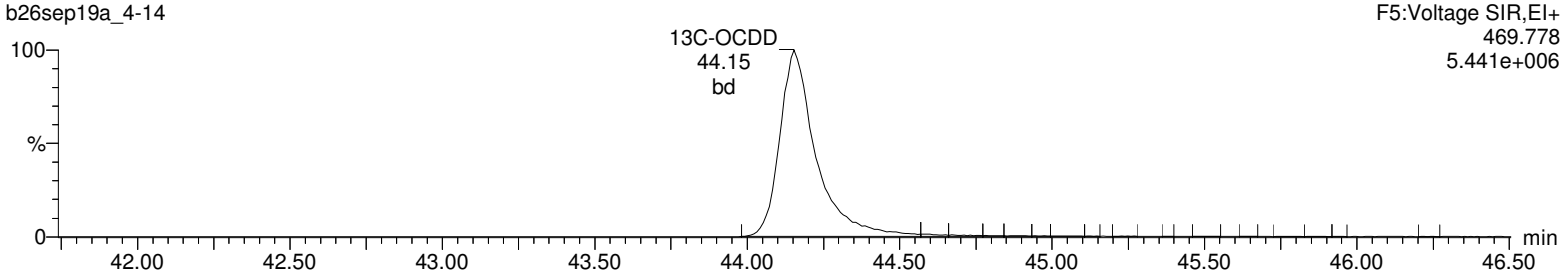
OCDD



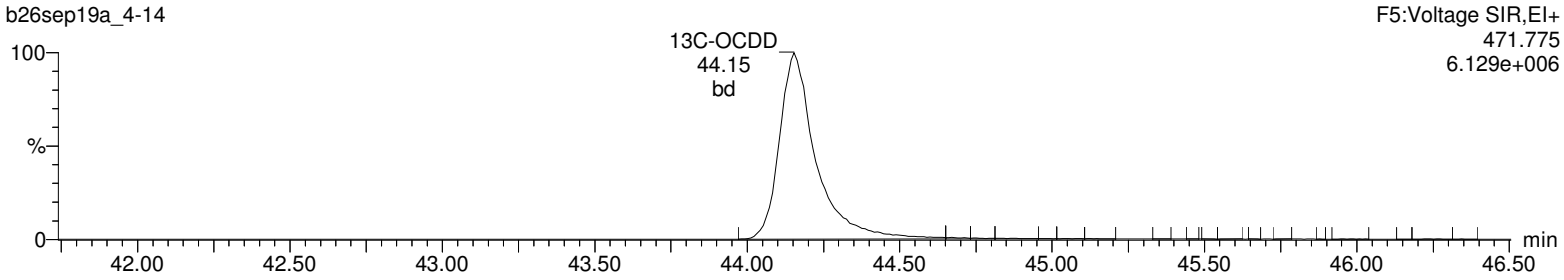
OCDD



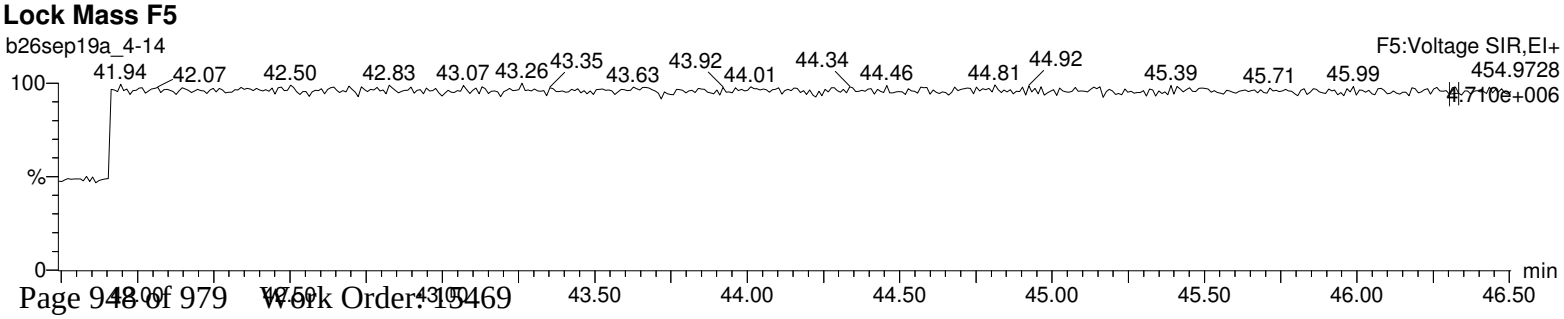
13C-OCDD



13C-OCDD



Lock Mass F5



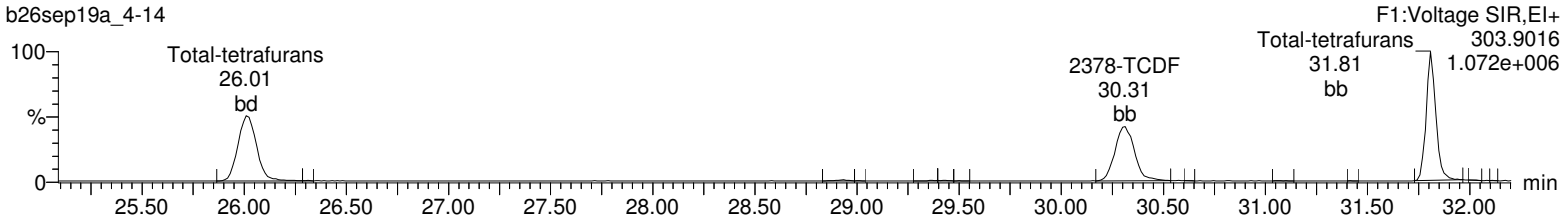
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

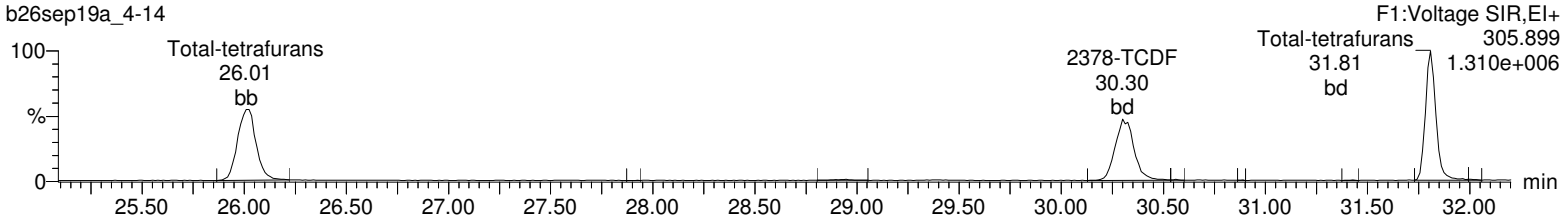
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

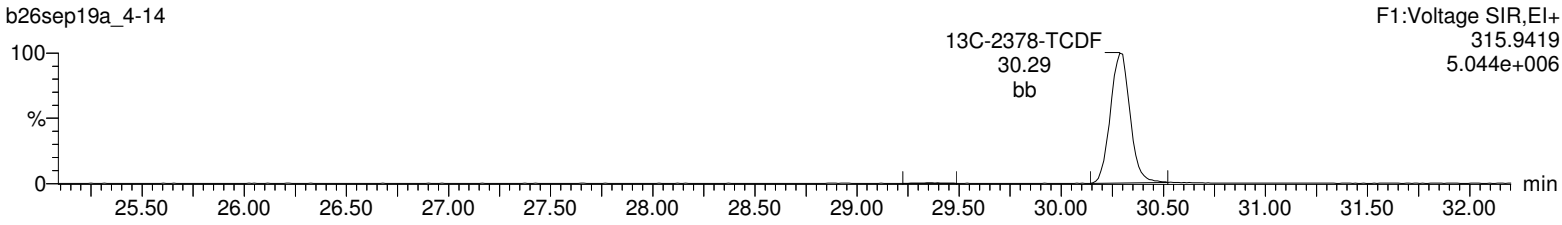
Total-tetrafurans



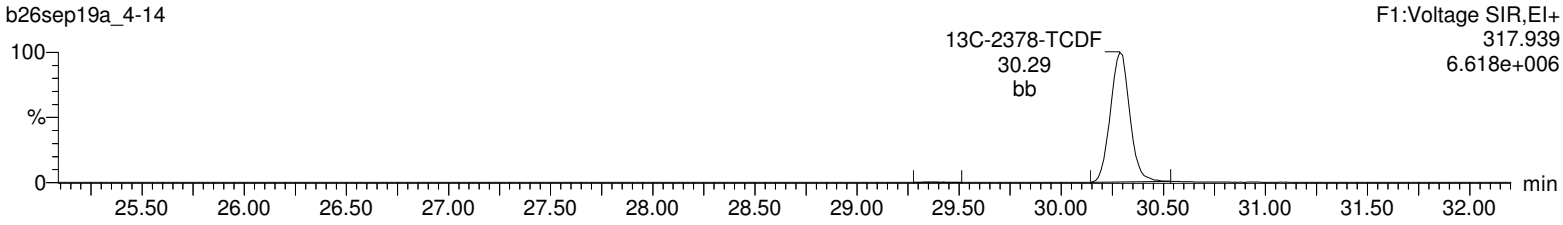
Total-tetrafurans



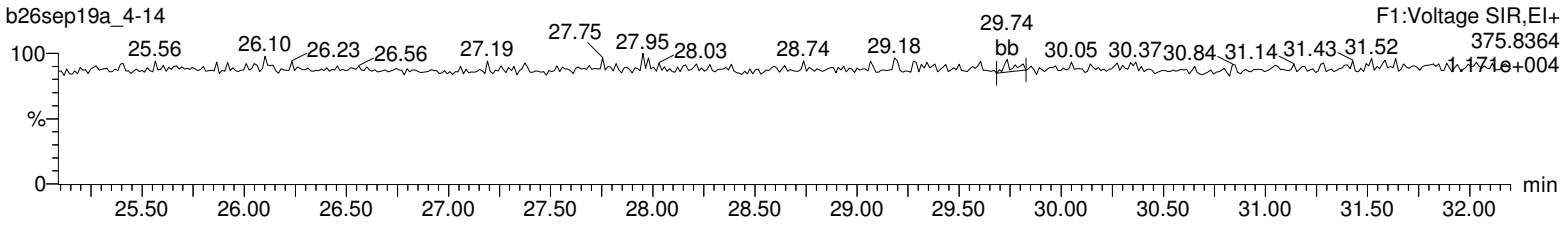
13C-2378-TCDF



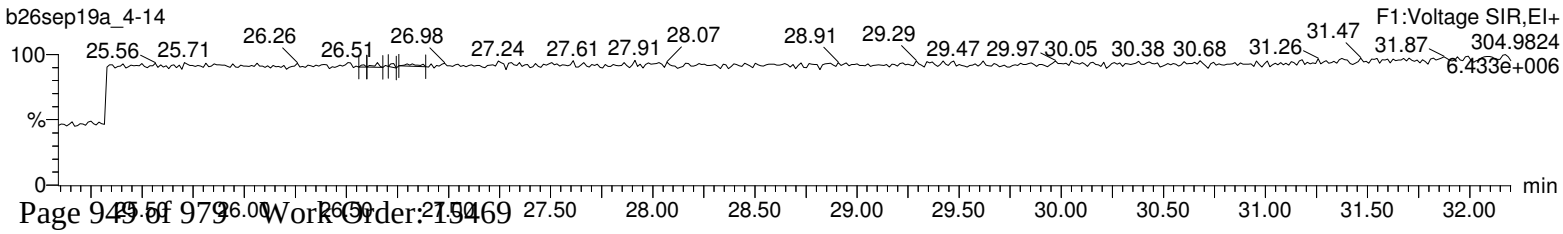
13C-2378-TCDF



HxDPE



Lock Mass F1



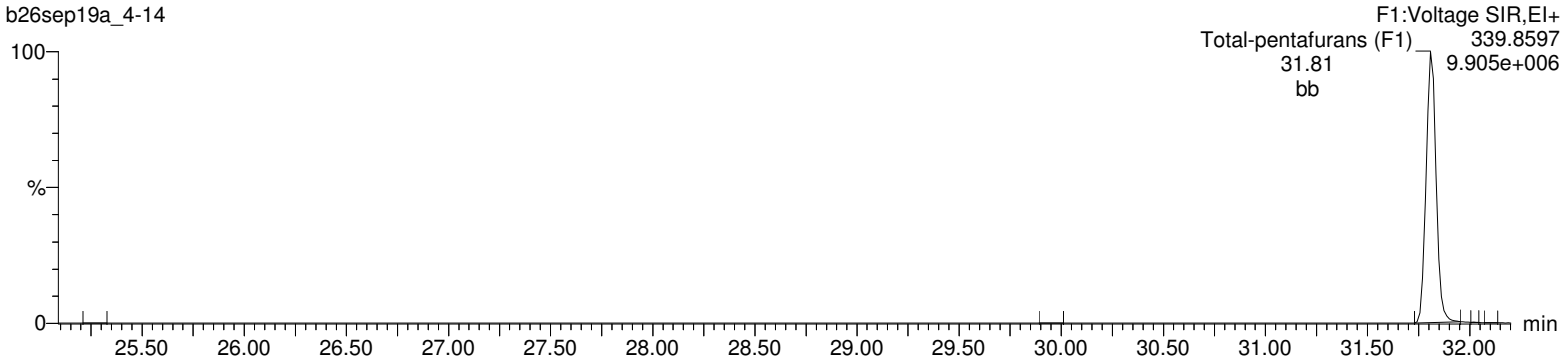
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

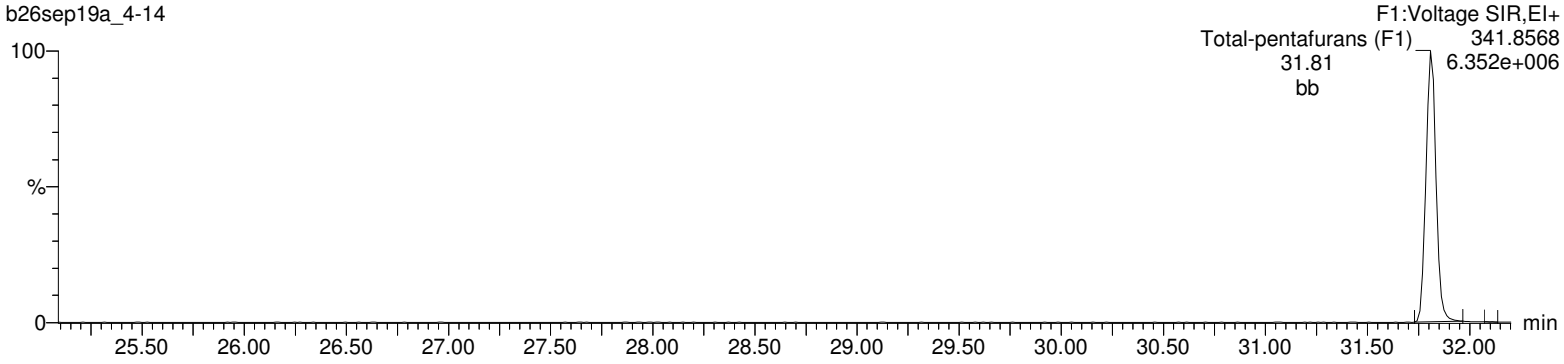
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

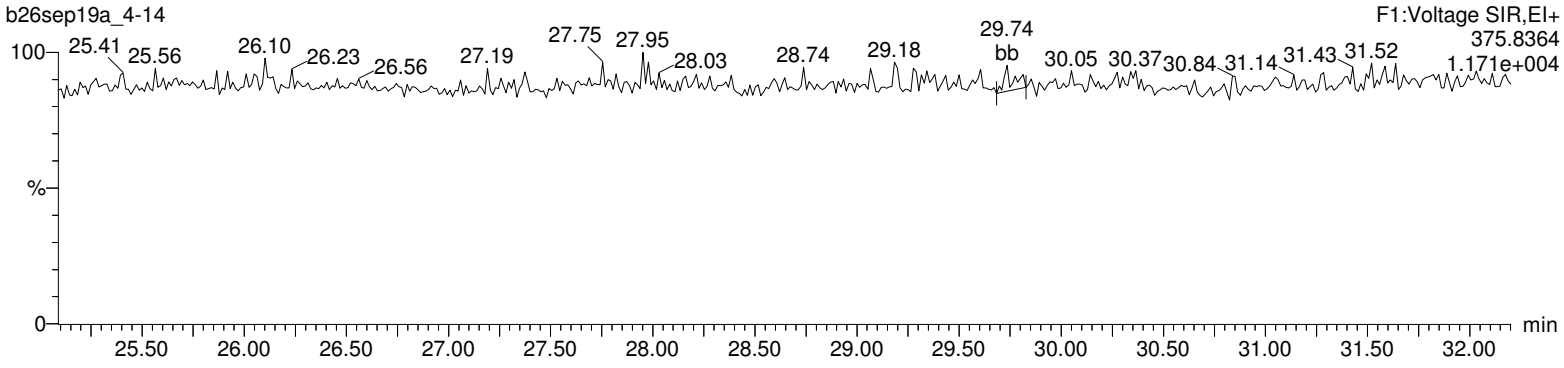
Total-pentafurans (F1)



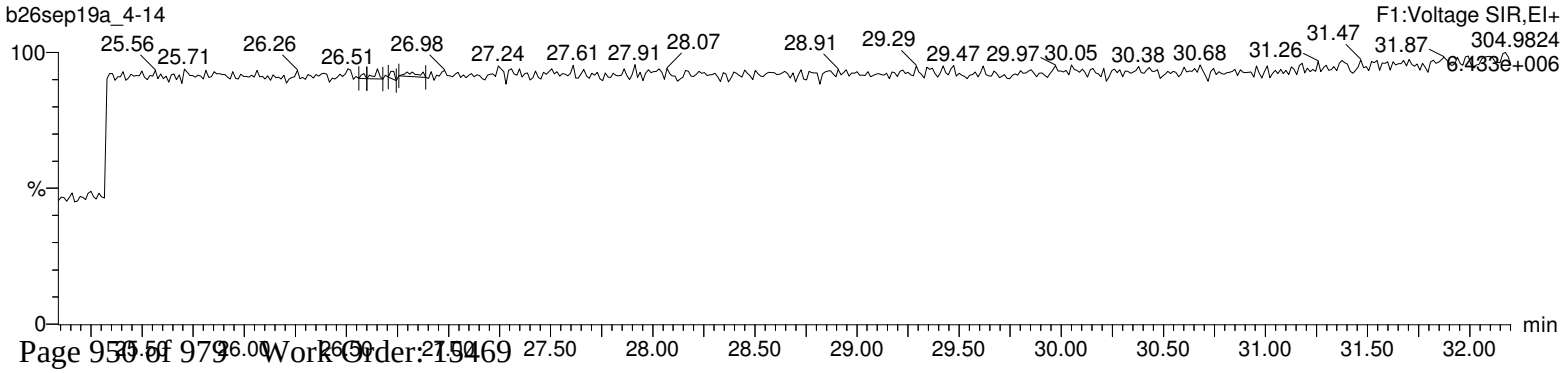
Total-pentafurans (F1)



HxDPE



Lock Mass F1



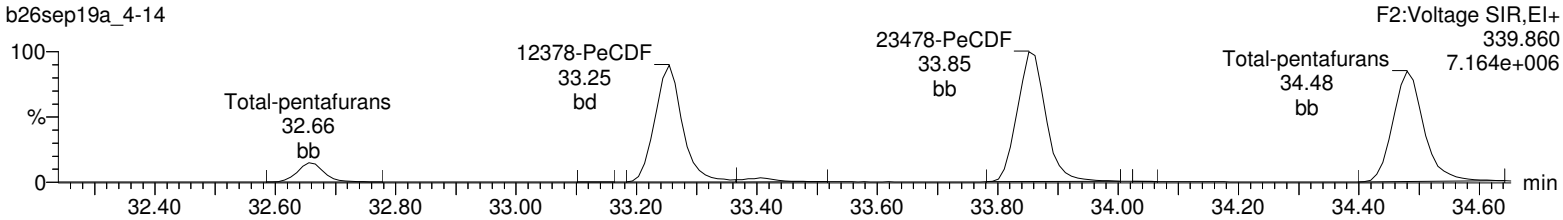
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

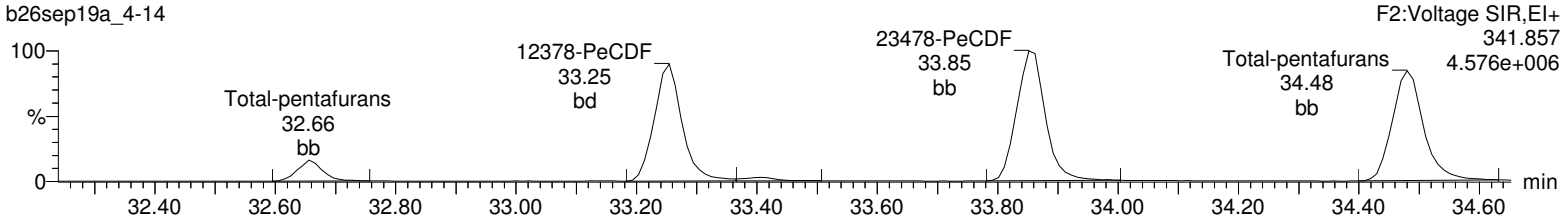
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

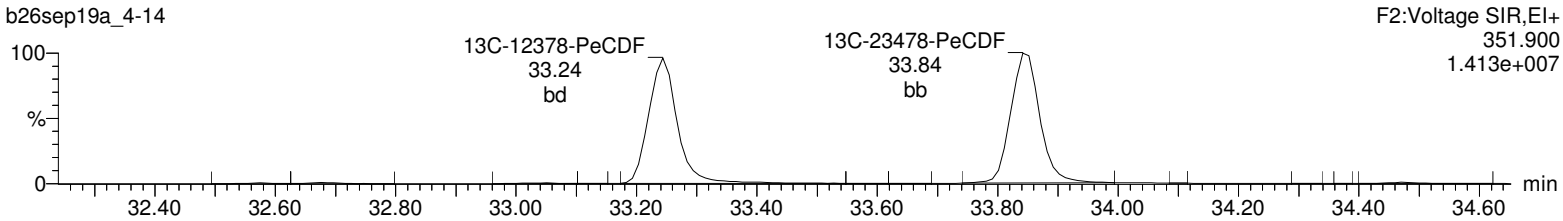
Total-pentafurans



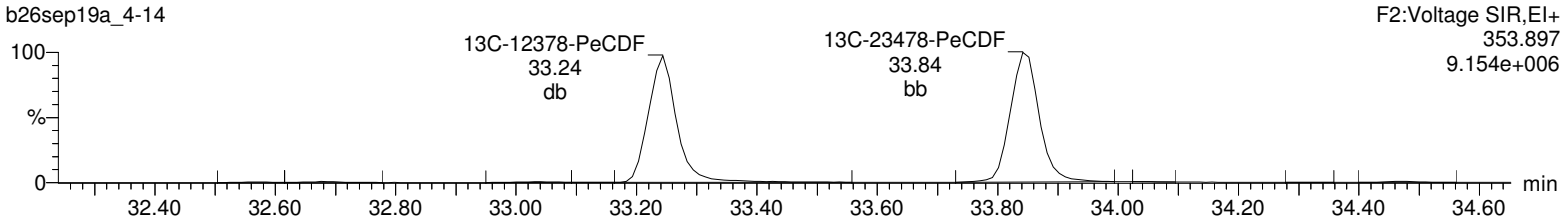
Total-pentafurans



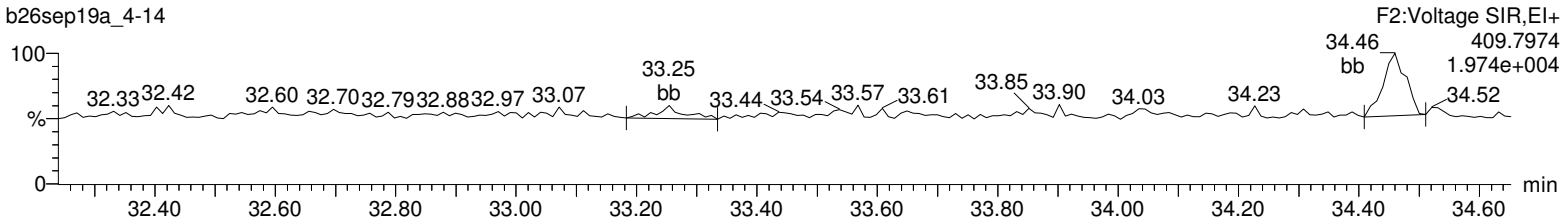
13C-12378-PeCDF



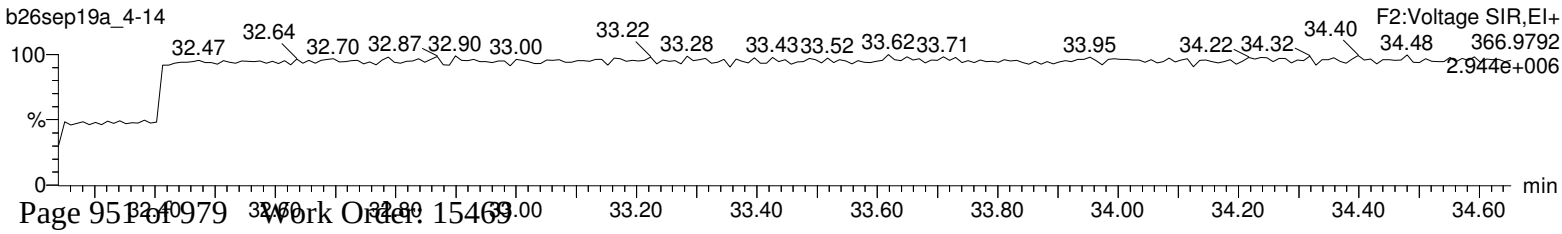
13C-12378-PeCDF



HpDPE



Lock Mass F2



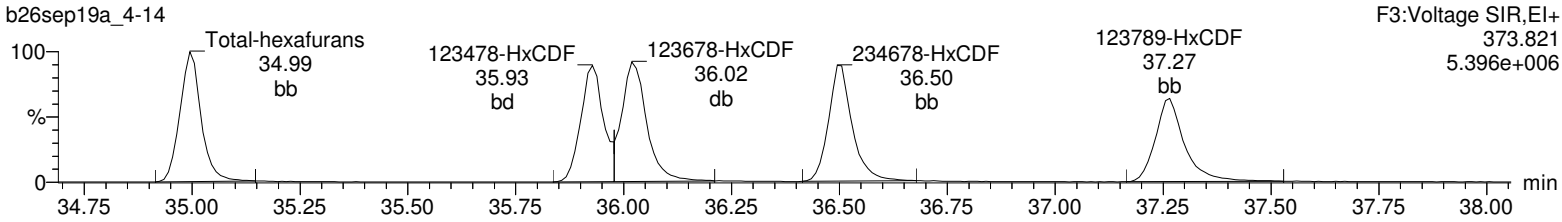
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

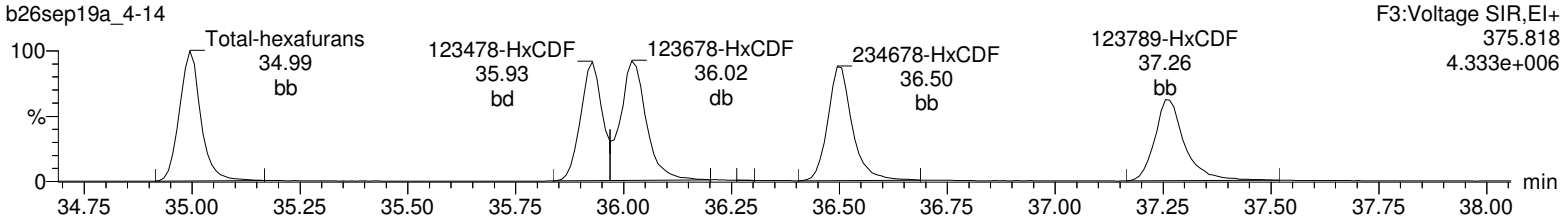
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

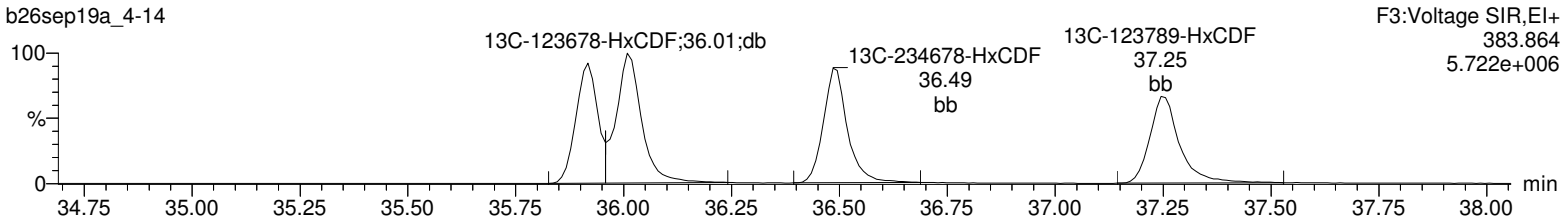
Total-hexafurans



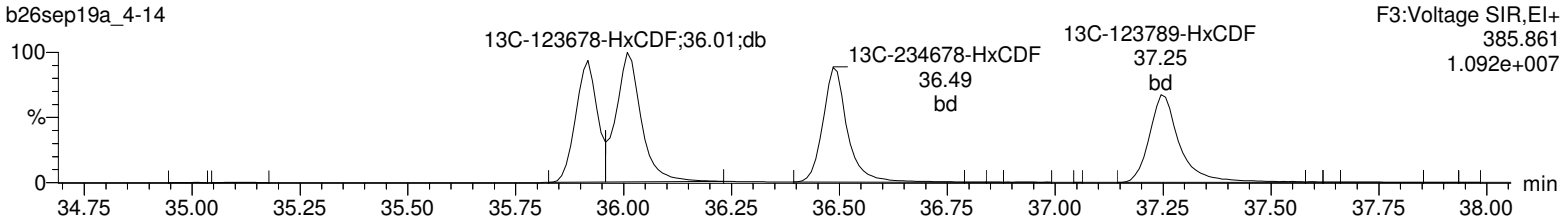
Total-hexafurans



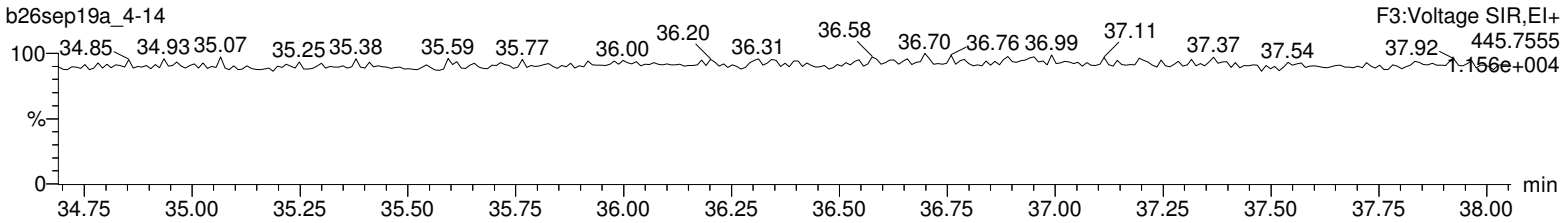
13C-123478-HxCDF



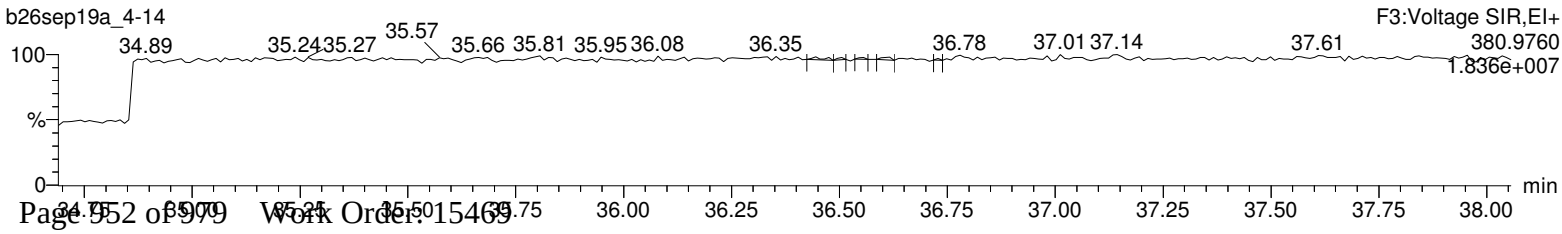
13C-123478-HxCDF



OcDPE



Lock Mass F3



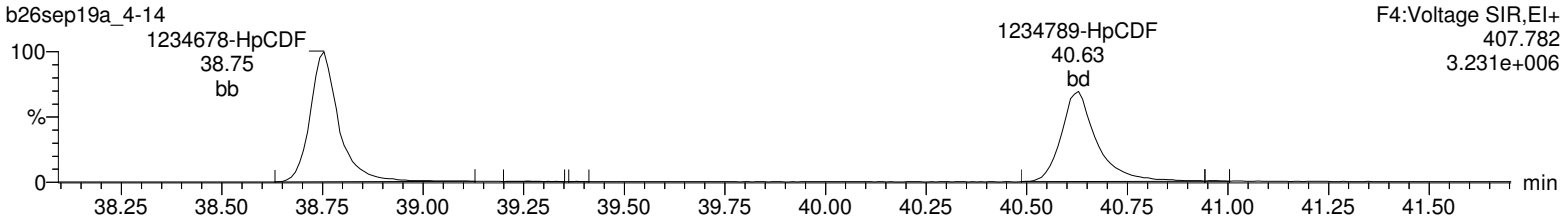
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

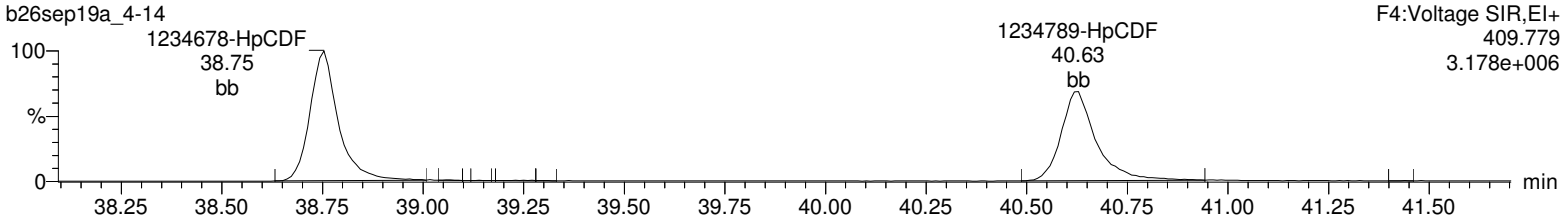
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

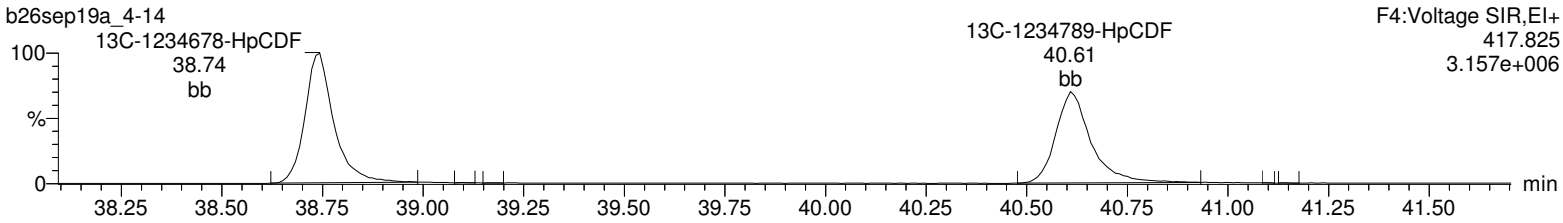
Total-heptafurans



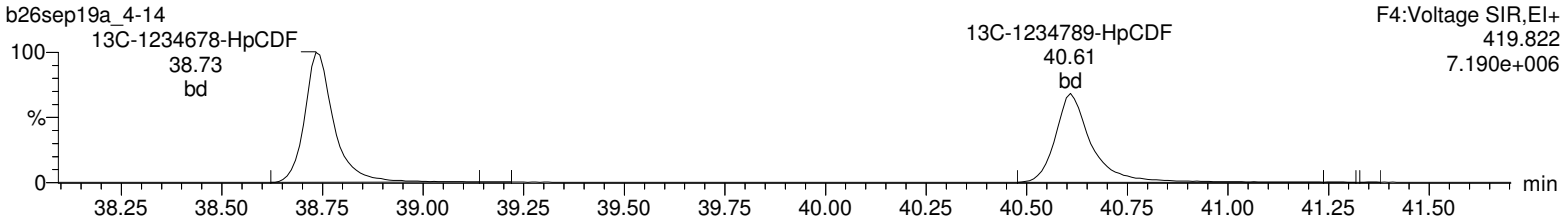
Total-heptafurans



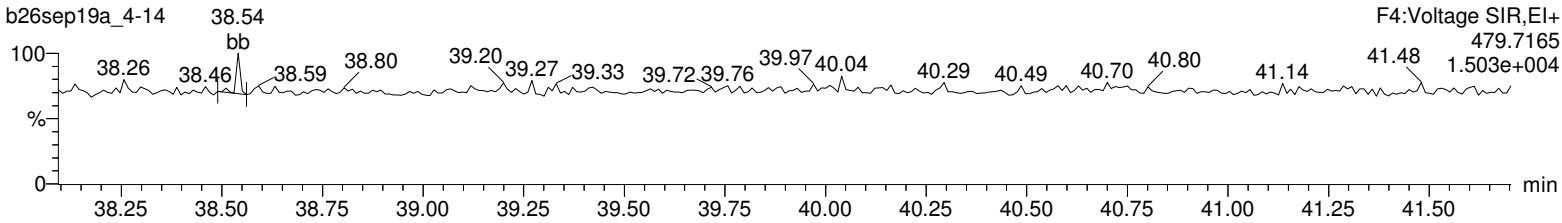
13C-1234678-HpCDF



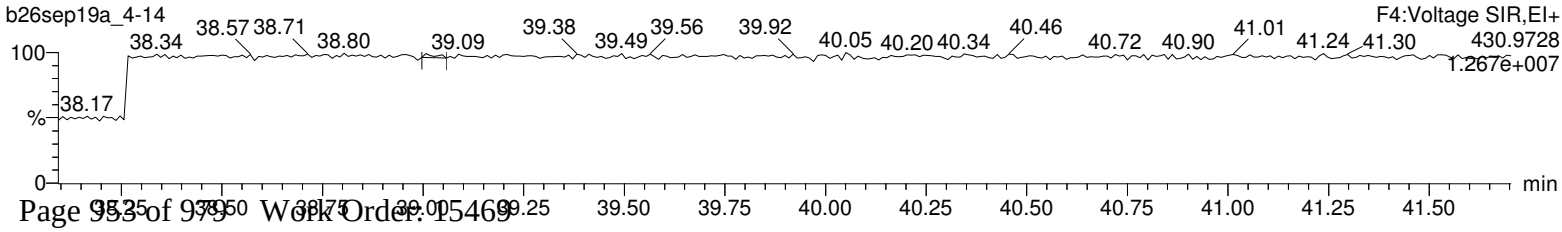
13C-1234678-HpCDF



NoDPE



Lock Mass F4



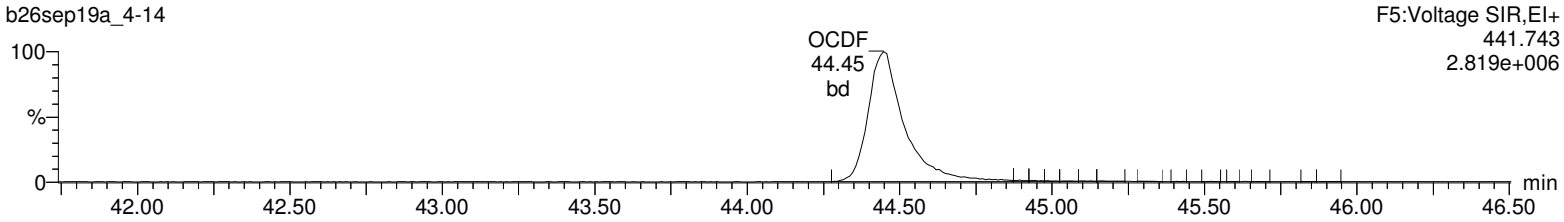
Quantify Sample Report **MassLynx 4.1**
Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b26sep19a_4-14.qld

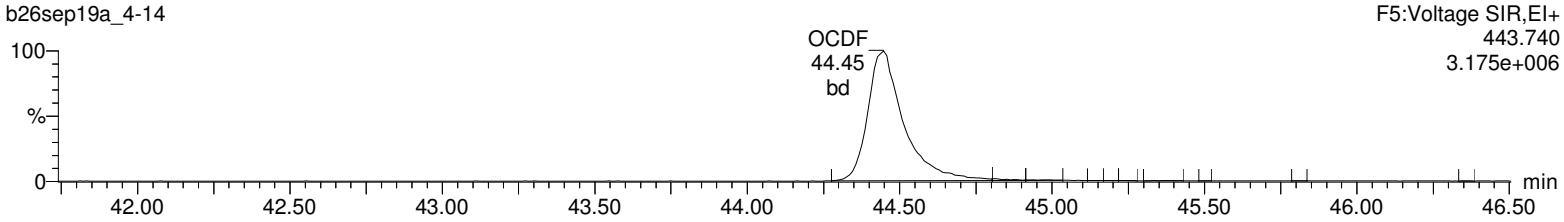
Last Altered: Monday, September 30, 2019 08:58:29 Eastern Standard Time
Printed: Monday, September 30, 2019 09:00:58 Eastern Standard Time

Name: b26sep19a_4-14, Date: 27-Sep-2019, Time: 22:53:48, ID: CS3WT UD190902-02.1, Description: , Job: b26sep19a_4, Task: HRP763_1, User: MLS

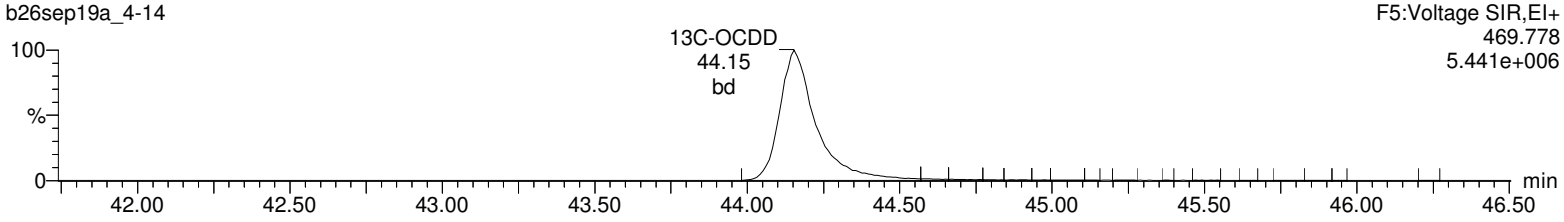
OCDF



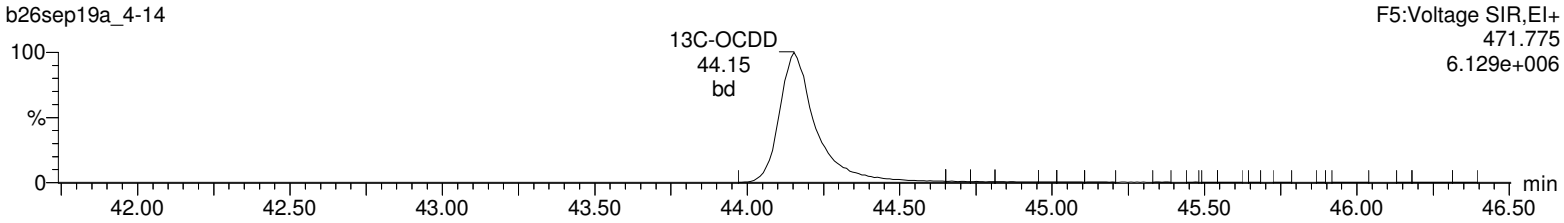
OCDF



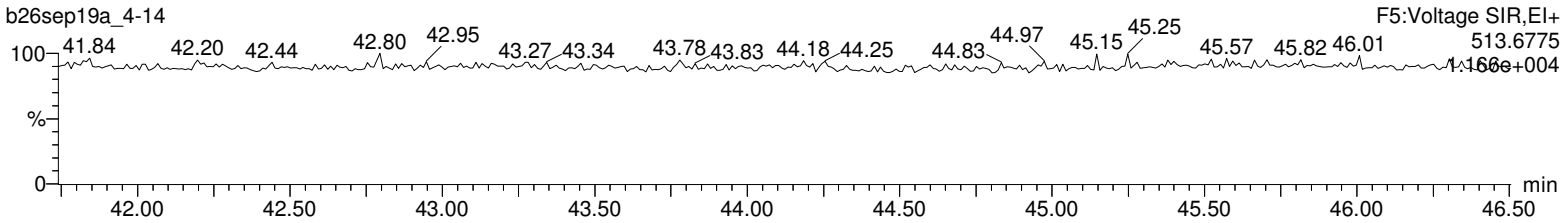
13C-OCDD



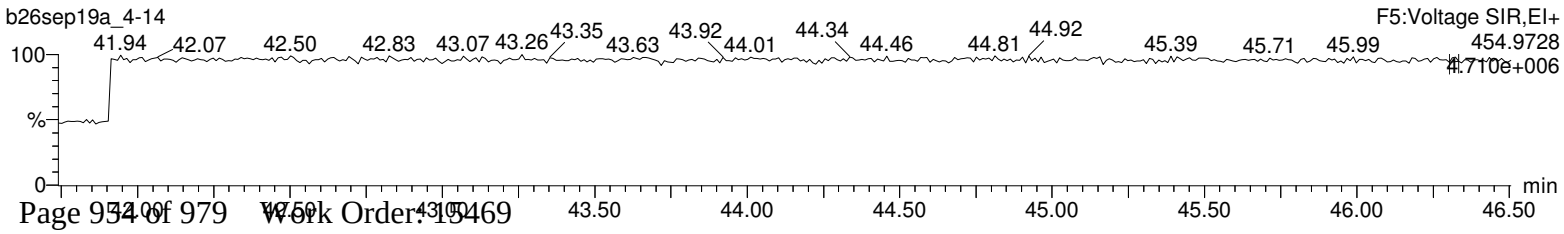
13C-OCDD



DeDPE



Lock Mass F5

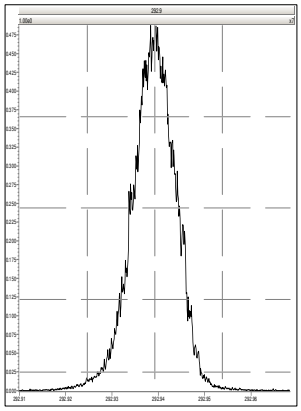


RUN LOG

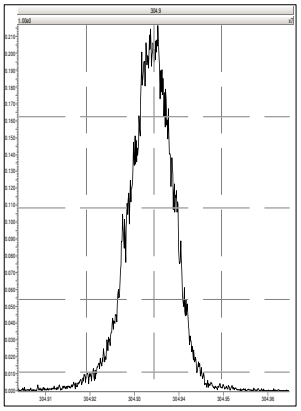
Instrument: HRP763_1

Name	Run Date	Analyst	Sample Information	Batch ID	Injection Volume	Ms Method	Tune Method
b26sep19a_5-1	27-SEP-2019 23:50:24	Mary Showalter	SB		1 uL	dioxin_db5ms	10K
b26sep19a_5-2	28-SEP-2019 00:38:09	Mary Showalter	15469014-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-3	28-SEP-2019 01:26:34	Mary Showalter	15469001-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-4	28-SEP-2019 02:14:59	Mary Showalter	12024795-1 MS	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-5	28-SEP-2019 03:03:25	Mary Showalter	12024796-1 MSD	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-6	28-SEP-2019 03:51:50	Mary Showalter	15469002-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-7	28-SEP-2019 04:40:16	Mary Showalter	15469003-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-8	28-SEP-2019 05:28:41	Mary Showalter	15469004-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-9	28-SEP-2019 06:17:08	Mary Showalter	15469005-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-10	28-SEP-2019 07:05:33	Mary Showalter	15469006-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-11	28-SEP-2019 07:53:58	Mary Showalter	15469007-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-12	28-SEP-2019 08:42:25	Mary Showalter	15469008-1	41747	1 uL	dioxin_db5ms	10K
b26sep19a_5-13	28-SEP-2019 09:30:51	Mary Showalter	CS3WT UD190902-02.1		1 uL	dioxin_db5ms	10K

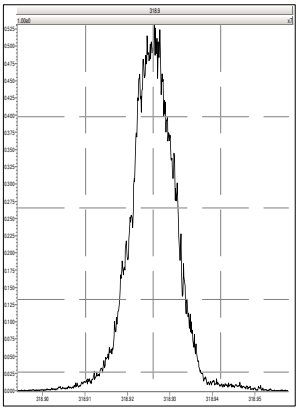
M 292.9824 R 13300



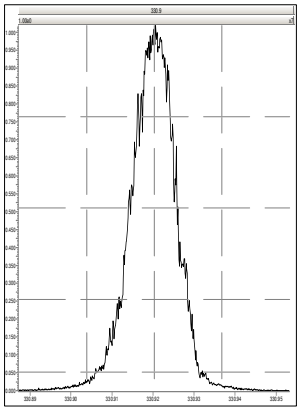
M 304.9824 R 13160



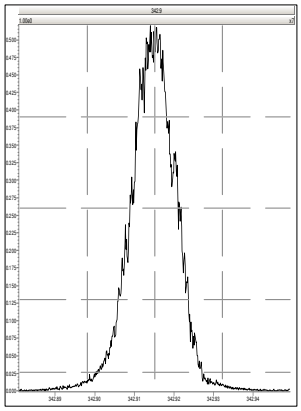
M 318.9792 R 13527



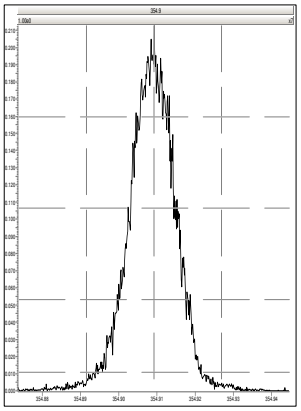
M 330.9792 R 13125



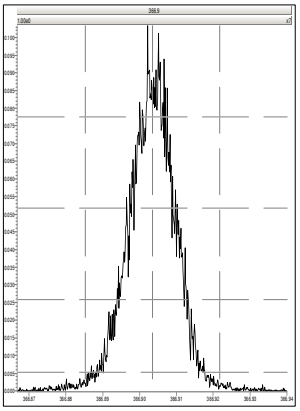
M 342.9792 R 13088



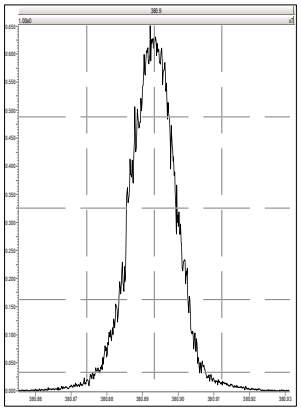
M 354.9792 R 13138



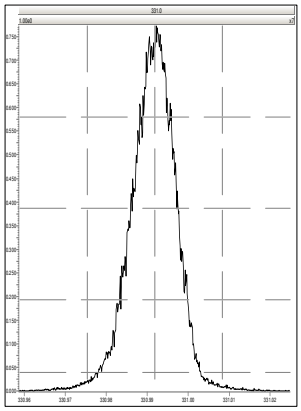
M 366.9792 R 13368



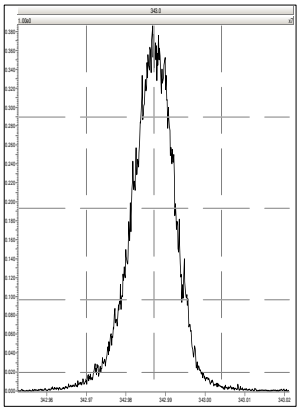
M 380.9760 R 12540



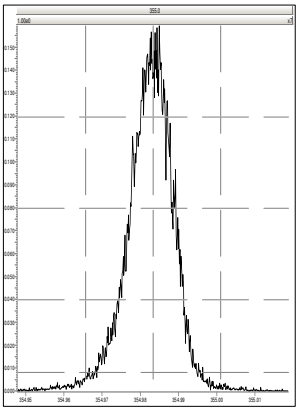
M 330.9792 R 13566



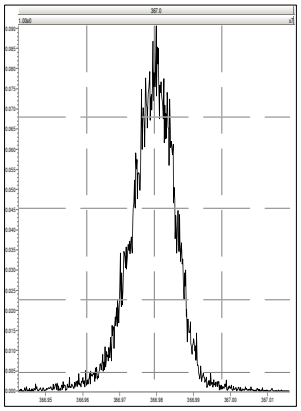
M 342.9792 R 13192



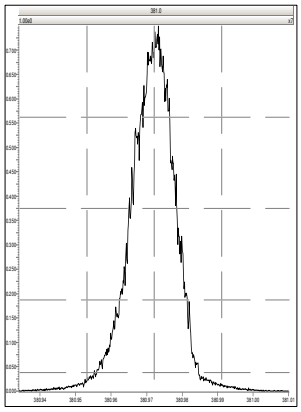
M 354.9792 R 13233



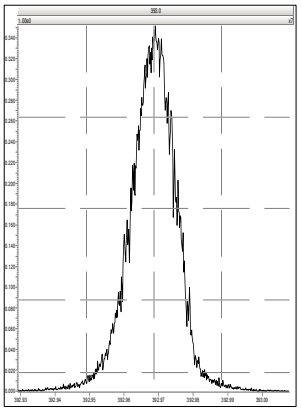
M 366.9792 R 13703



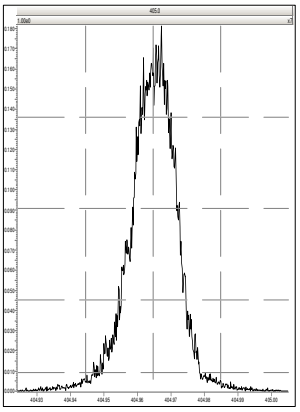
M 380.9760 R 13122



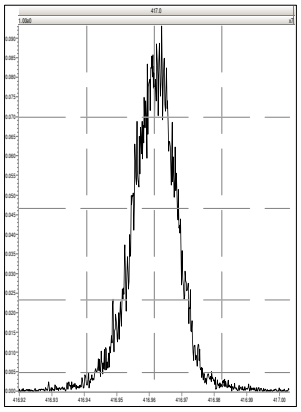
M 392.9760 R 13055



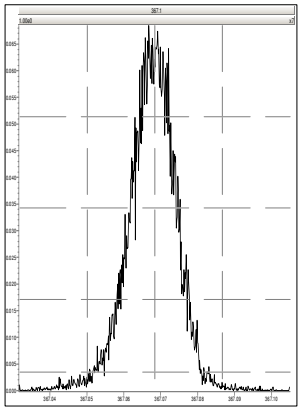
M 404.9760 R 13158



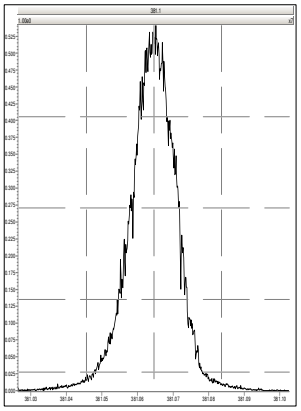
M 416.9760 R 12891



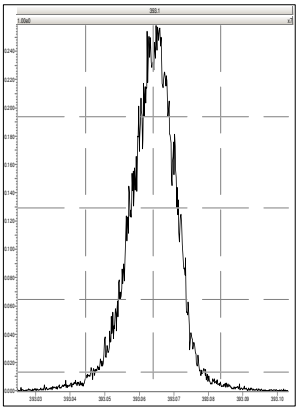
M 366.9792 R 13162



M 380.9760 R 12472



M 392.9760 R 12659



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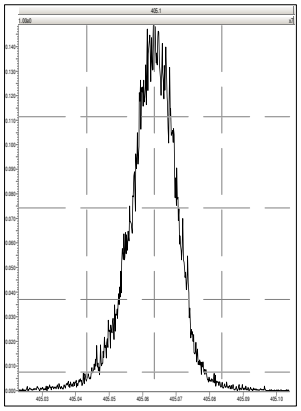

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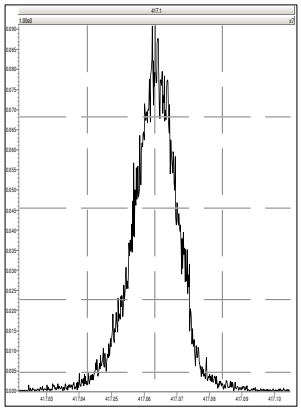

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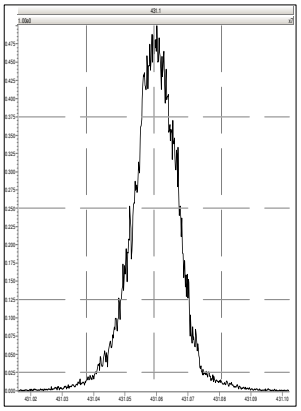

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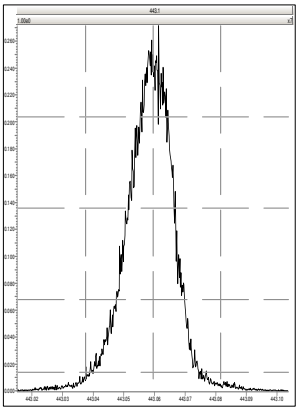

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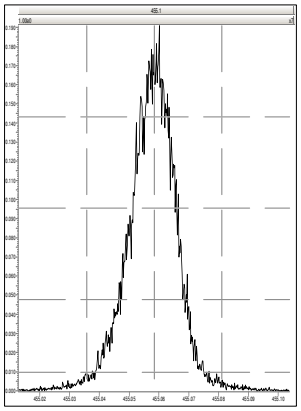

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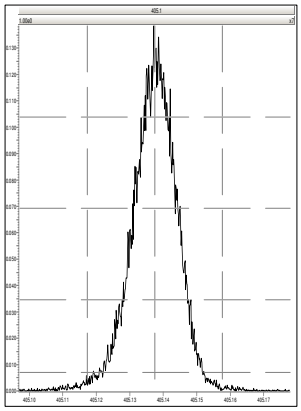

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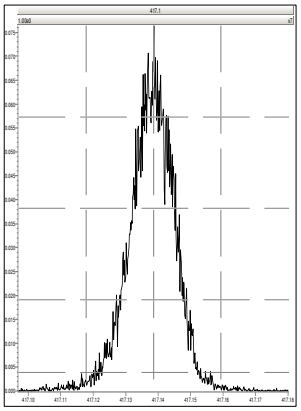

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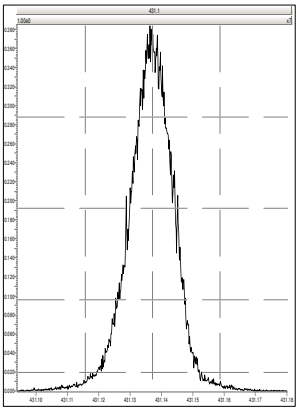

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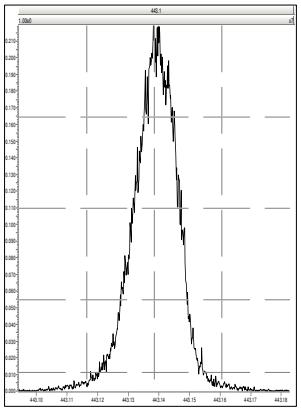

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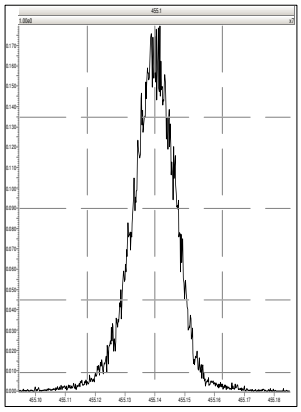

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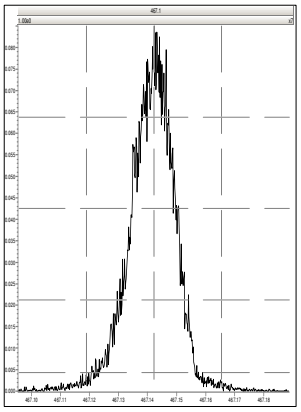

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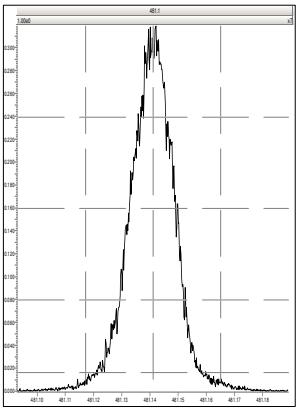

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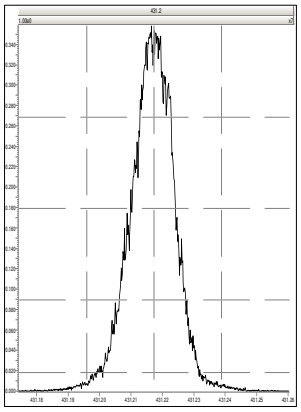

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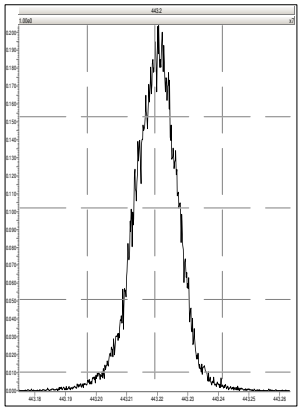

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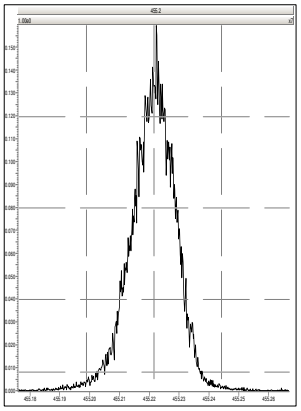

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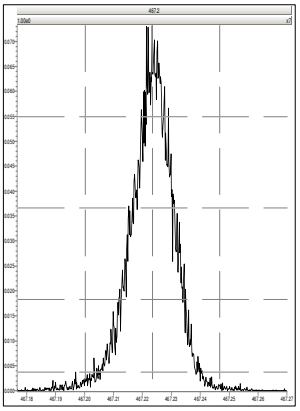

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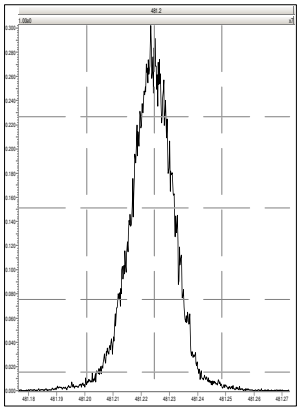

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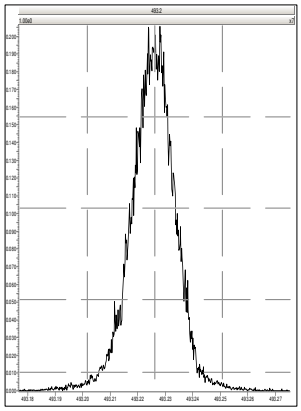

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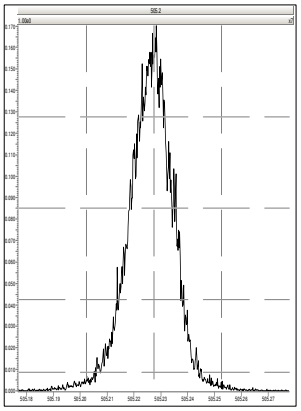

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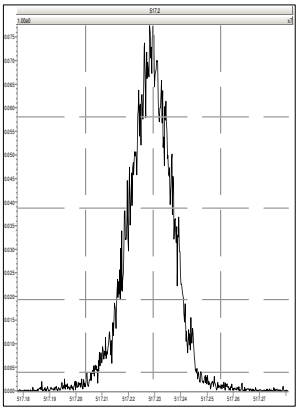

Runlog Information

10/1/19

	Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
•	b30sep19-1	HRP763_2	30-SEP-2019 12:33	b30sep19a	Mary Showalter		CS3WT 1613CS3 UD190313-03.3	1 uL
•	b30sep19-2	HRP763_2	30-SEP-2019 12:54	b30sep19a	Mary Showalter		CPM225 WD190612-04	1 uL
•	b30sep19-3	HRP763_2	30-SEP-2019 13:16	b30sep19a	Mary Showalter		SB	1 uL
•	b30sep19-4	HRP763_2	30-SEP-2019 13:37	HMS8290_1S	Mary Showalter	41805	15473001-2	1 uL
•	b30sep19-5	HRP763_2	30-SEP-2019 13:59	HMS8290_1S	Mary Showalter	41805	15473002-2	1 uL
•	b30sep19-6	HRP763_2	30-SEP-2019 14:20	HMS8290_1S	Mary Showalter	41805	15473003-2	1 uL
•	b30sep19-7	HRP763_2	30-SEP-2019 14:42	HMS8290_1S	Mary Showalter	41805	15473004-2	1 uL
•	b30sep19-8	HRP763_2	30-SEP-2019 15:04	HMS8290_1S	Mary Showalter	41805	15473009-2	1 uL
•	b30sep19-9	HRP763_2	30-SEP-2019 15:25	b30sep19a	Mary Showalter		CS3WT 1613CS3 UD190313-03.3	1 uL
•	b30sep19a_2-1	HRP763_2	30-SEP-2019 15:49	b30sep19a_2	Mary Showalter		CPM225 WD190612-04	1 uL
•	b30sep19a_2-2	HRP763_2	30-SEP-2019 16:10	b30sep19a_2	Mary Showalter		SB	1 uL
•	b30sep19a_2-3	HRP763_2	30-SEP-2019 16:31	HMS1613_1S	Mary Showalter	41747	15469001-2	1 uL
•	b30sep19a_2-4	HRP763_2	30-SEP-2019 16:53	HMS1613_1S	Mary Showalter	41747	12024795-2 MS	1 uL

•	b30sep19a_2-5	HRP763_2	30-SEP-2019 17:15	HMS1613_1S	Mary Showalter	41747	12024796-2 MSD	1 uL
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•	b30sep19a_2-9	HRP763_2	30-SEP-2019 18:41	HMS1613_1S	Mary Showalter	41761	15471016-2	1 uL
•	b30sep19a_2-10	HRP763_2	30-SEP-2019 19:03	b30sep19a_2	Mary Showalter		CS3WT 1613CS3 UD190313-03.3	1 uL
•	b30sep19a_3-1	HRP763_2	30-SEP-2019 19:26	b30sep19a_3	Mary Showalter		CPM225 WD190612-04	1 uL
•	b30sep19a_3-2	HRP763_2	30-SEP-2019 19:47	b30sep19a_3	Mary Showalter		SB	1 uL
•	b30sep19a_3-3	HRP763_2	30-SEP-2019 20:09	HMS8290_1S	Mary Showalter	41805	15479001-2	1 uL
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•	b30sep19a_3-7	HRP763_2	30-SEP-2019 21:35	HMS8290_1S	Mary Showalter	41805	15479012-2	1 uL
•	b30sep19a_3-8	HRP763_2	30-SEP-2019 21:57	HMS8290_1S	Mary Showalter	41805	15479013-2 MS	1 uL
•	b30sep19a_3-9	HRP763_2	30-SEP-2019	HMS8290_1S	Mary Showalter	41805	15479014-2 MSD	1 uL

			22:18					
•	b30sep19a_3-10	HRP763_2	30-SEP-2019 22:40	b30sep19a_3	Mary Showalter		CS3WT 1613CS3 UD190313-03.3	1 uL

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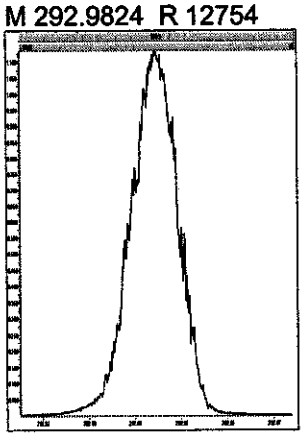

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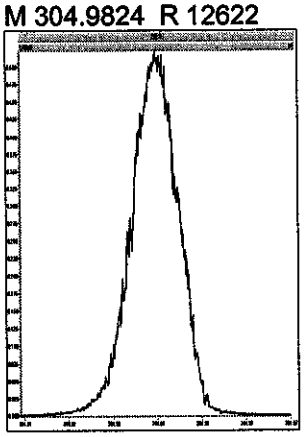

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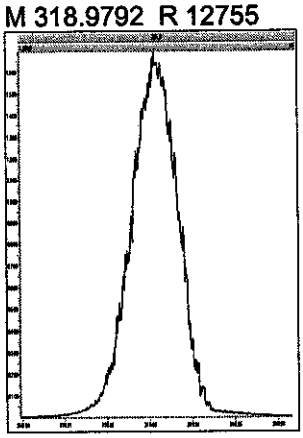

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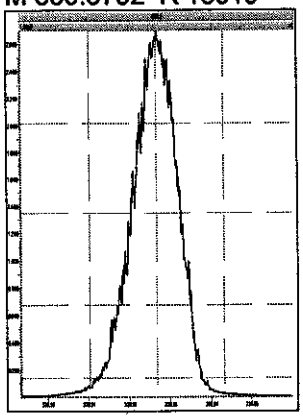
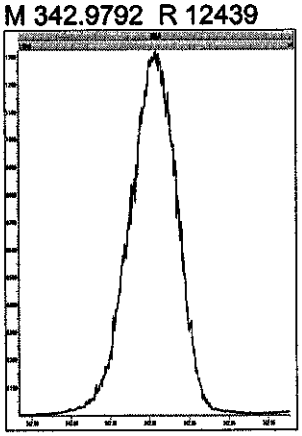


M 342.9792 R 12439



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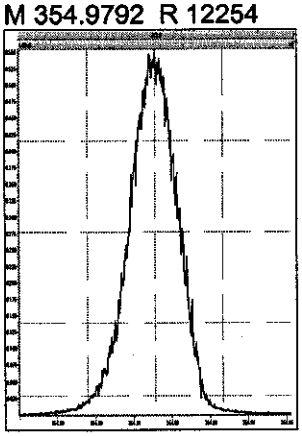
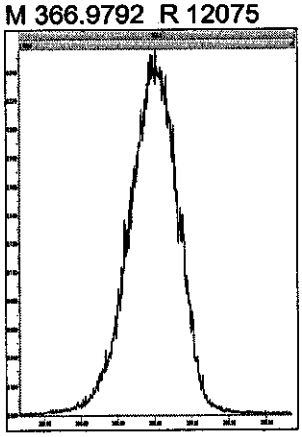
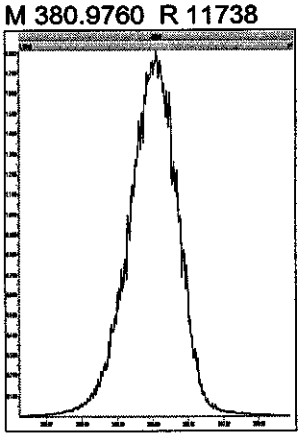


M 366.9792 R 12075



M 380.9760 R 11738



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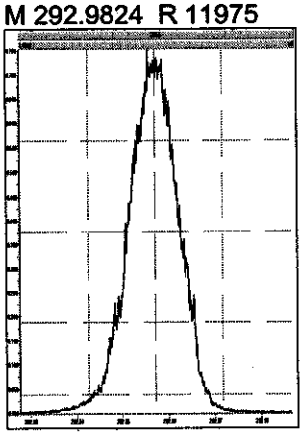

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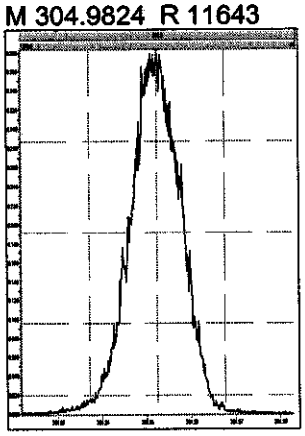

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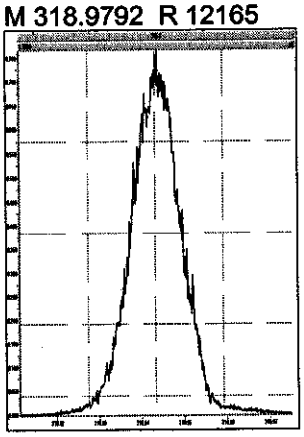

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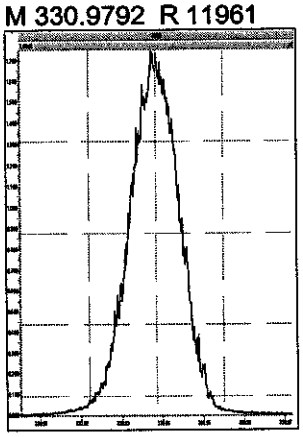

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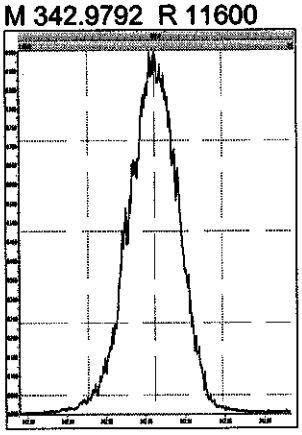

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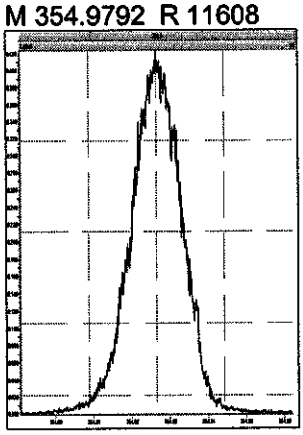

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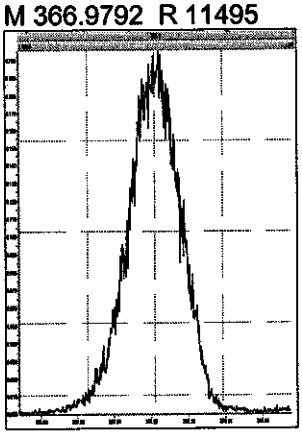
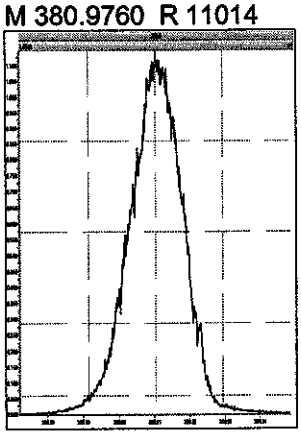


M 380.9760 R 11014



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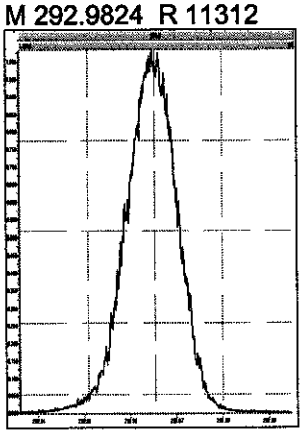

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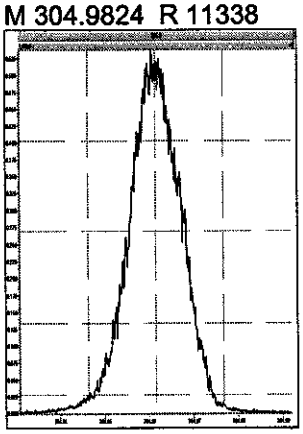

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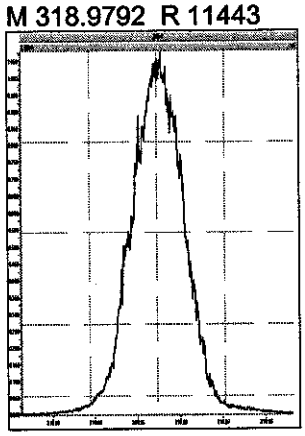

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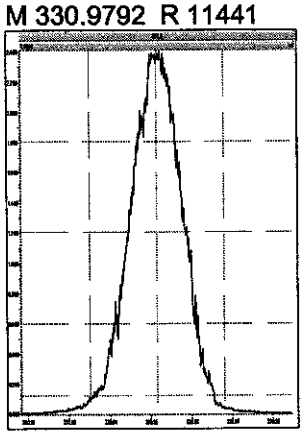

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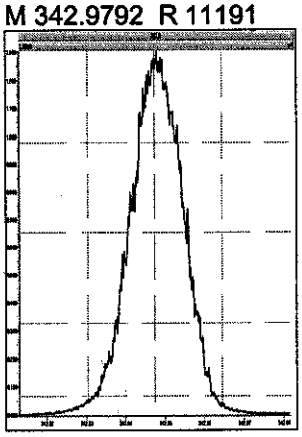
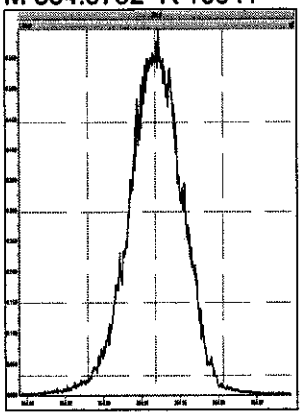
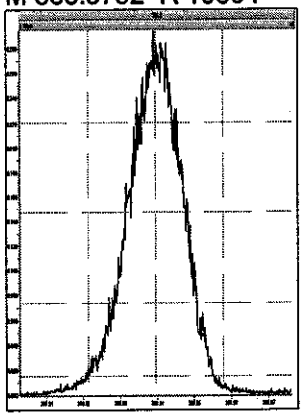


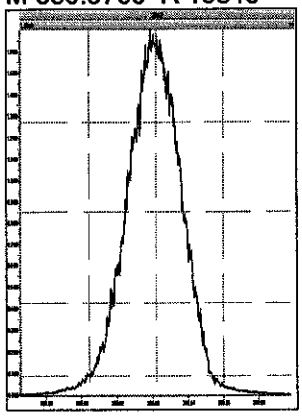
M 354.9792 R 10941



M 366.9792 R 10504

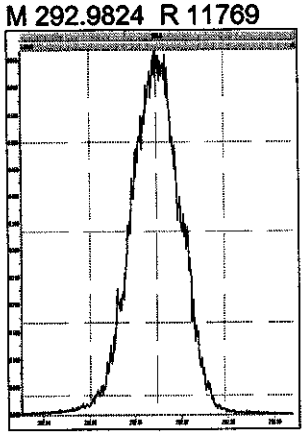


M 380.9760 R 10846

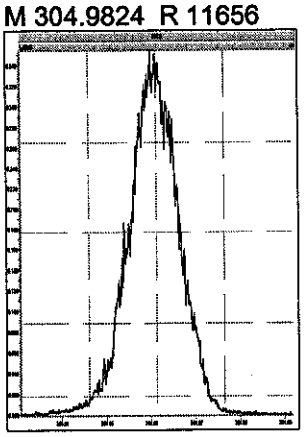


Printed: Monday, September 30, 2019 23:03:44 Eastern Standard Time

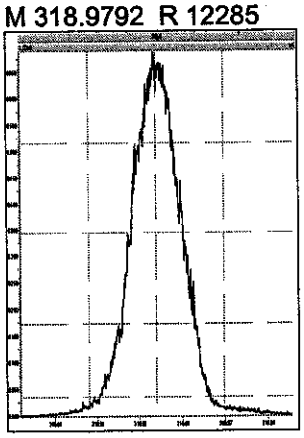
M 292.9824 R 11769



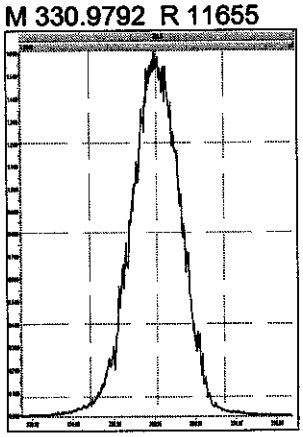
M 304.9824 R 11656



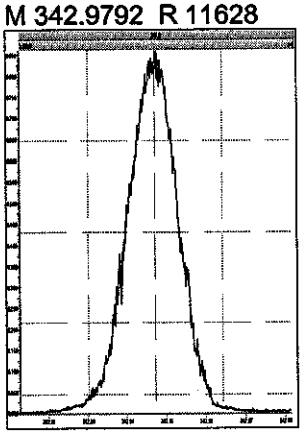
M 318.9792 R 12285



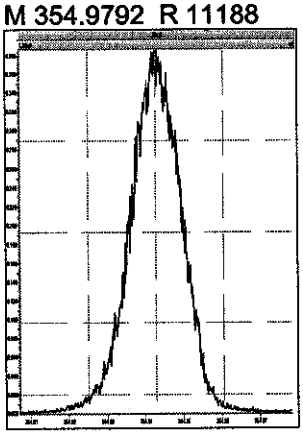
M 330.9792 R 11655



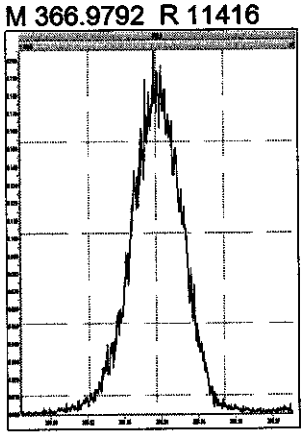
M 342.9792 R 11628



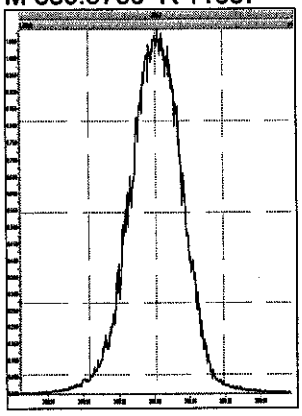
M 354.9792 R 11188



M 366.9792 R 11416



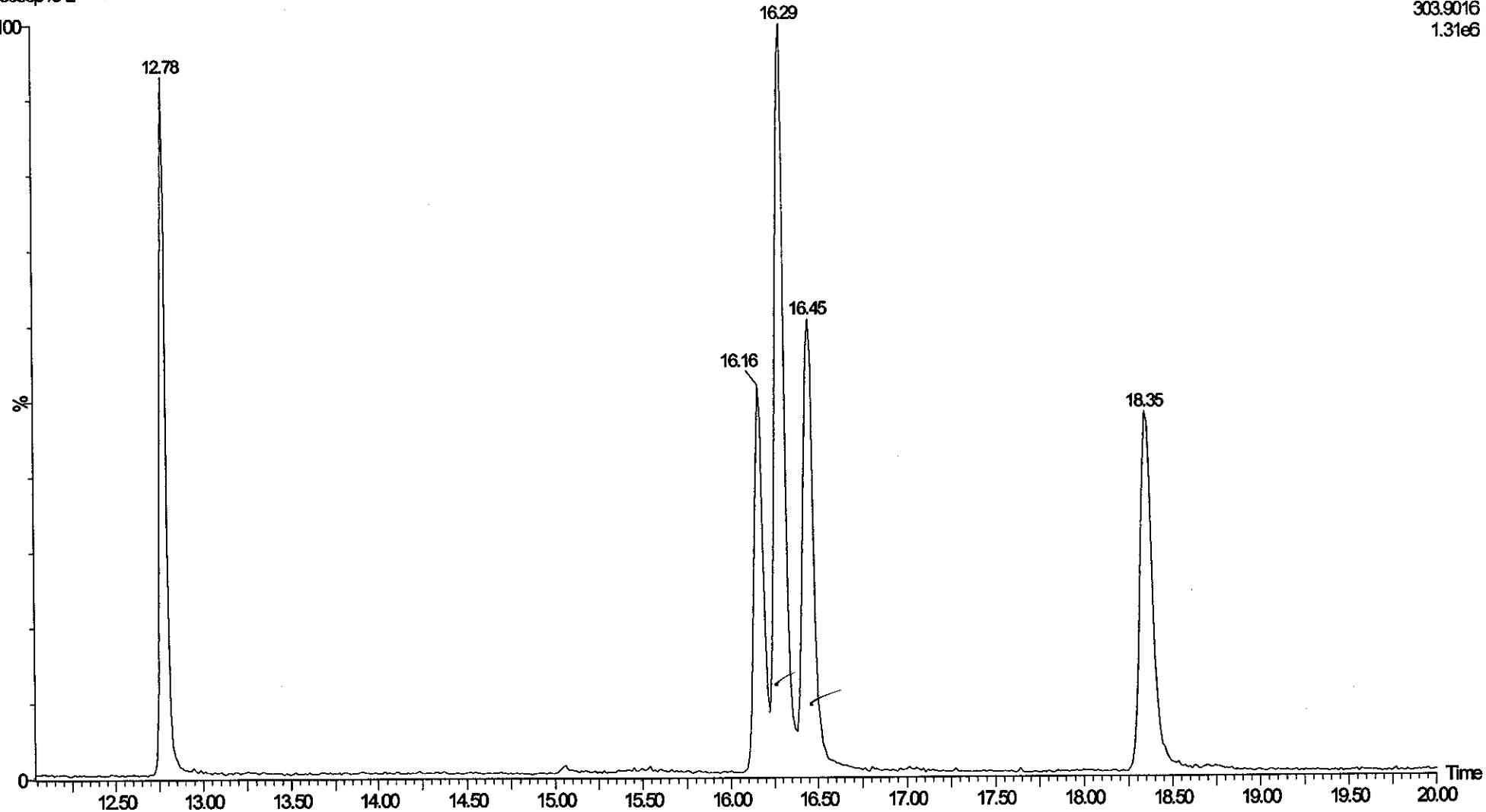
M 380.9760 R 11557



COLUMN CHECK (17% & 6%)
METHOD DXCF
CPM225 WD190612-04
b30sep19-2

HRP763_2

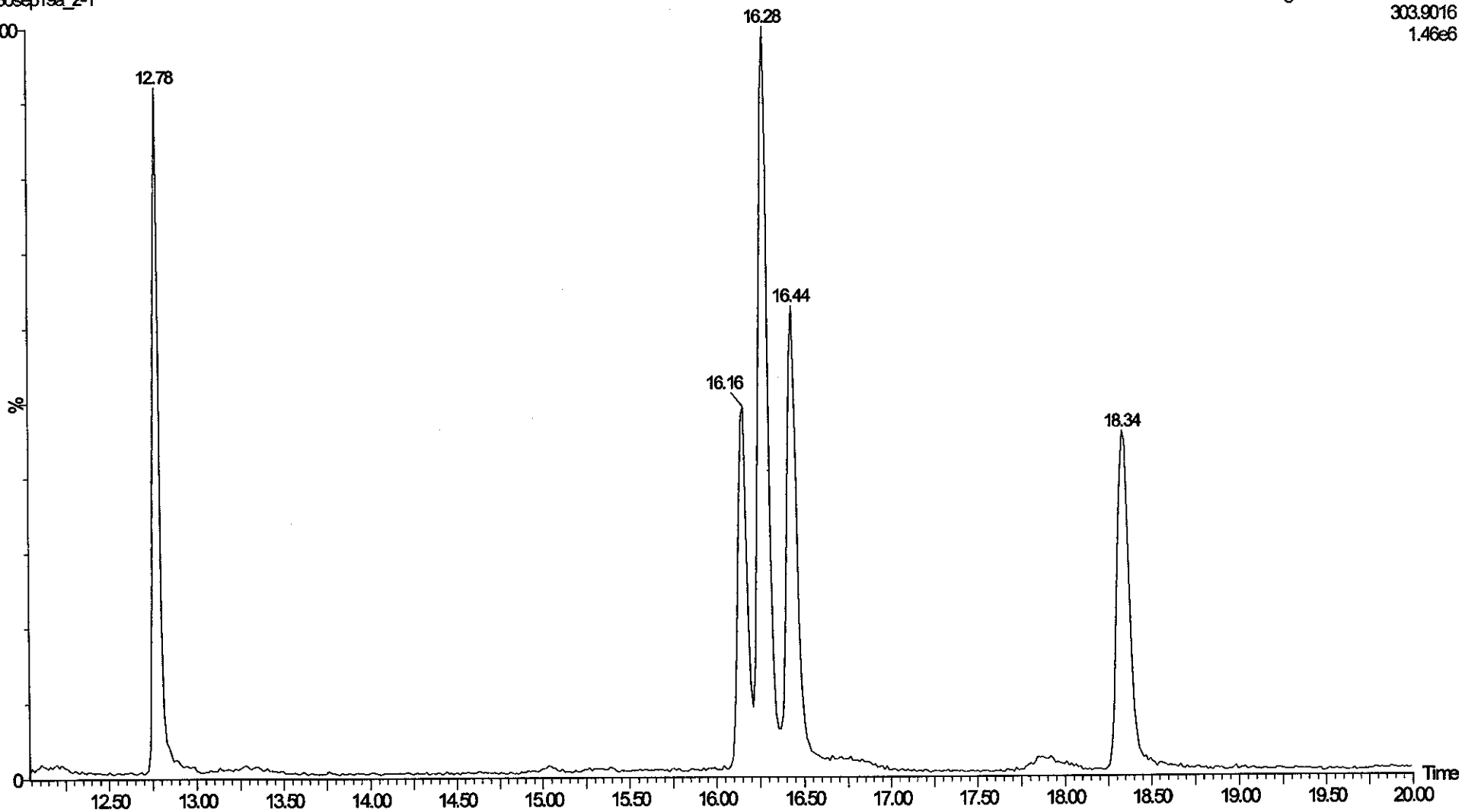
30-Sep-201912:54:37
Voltage SIR 13 Channels EI+
303.9016
1.31e6



COLUMN CHECK (19% & 6%)
METHOD DXCF
CPM225 WD190612-04
b30sep19a_2-1

HRP763_2

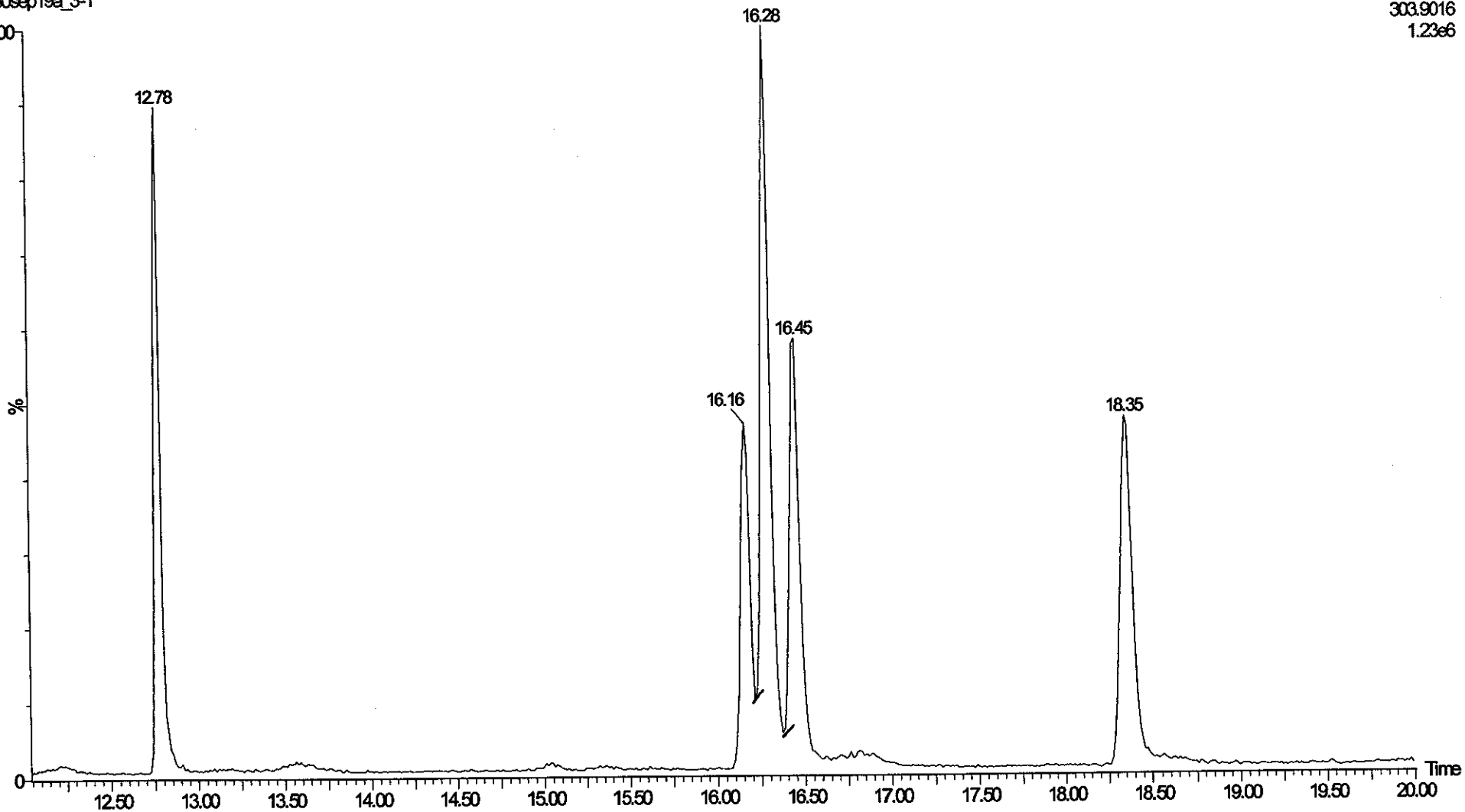
30-Sep-201915:49:09
Voltage SIR 13 Channels EI+
303.9016
1.46e6



COLUMN CHECK (21% & 6%)
METHOD DXCF
CPM225 WD190612-04
b30sep19a_3-1

HRP763_2

30-Sep-201919:26:26
Voltage SIR 13 Channels EI+
303.9016
1.23e6



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a-1.qld

Last Altered: Monday, September 30, 2019 16:31:45 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:04:25 Eastern Standard Time

10/1/19

Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\Default.pro\Curvedb\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19-1, Date: 30-Sep-2019, Time: 12:33:25, ID: CS3WT 1613CS3 UD190313-03.3, Description: , Job: b30sep19a, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	5.99e4	7.83e4	1.38e5	16.32	1.001	0.76	NO	10.812	0.0946	0.929	0.859	8.1	9.08e5	3206	283.1	1.15e6	2961	387.0	bb	bb
2	13C-2378-TCDF	6.53e5	8.36e5	1.49e6	16.31	1.065	0.78	NO	74.594	0.144	1.138	1.525	-25.4	9.99e6	10673	935.9	1.28e7	6753	1889.0	bb	bb
3	13C-1234-TCDD	5.75e5	7.33e5	1.31e6	15.31	0.000	0.79	NO	100.000	0.168	1.000	1.000	0.0	1.05e7	7861	1329.9	1.33e7	5469	2425.8	db	db

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a-1.qld

Last Altered: Monday, September 30, 2019 16:31:45 Eastern Standard Time
Printed: Tuesday, October 01, 2019 12:04:25 Eastern Standard Time

Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\Default.pro\Curvedb\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19-1, Date: 30-Sep-2019, Time: 12:33:25, ID: CS3WT 1613CS3 UD190313-03.3, Description: , Job: b30sep19a, Task: HRP763_2, User: MLS

2378-TCDF
b30sep19-1
Voltage SIR,EI+
303.9016
9.193e+005
2378-TCDF;16.32;bb
18.33
bb
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

2378-TCDF
b30sep19-1
Voltage SIR,EI+
305.899
1.156e+006
2378-TCDF;16.32;bb
18.34
bb
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

13C-2378-TCDF
b30sep19-1
Voltage SIR,EI+
315.9419
1.004e+007
13C-2378-TCDF;16.31;bb
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

13C-2378-TCDF
b30sep19-1
Voltage SIR,EI+
317.939
1.281e+007
13C-2378-TCDF;16.31;bb
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

13C-1234-TCDD
b30sep19-1
Voltage SIR,EI+
331.9368
1.055e+007
13C-1234-TCDD;15.31;db
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

13C-1234-TCDD
b30sep19-1
Voltage SIR,EI+
333.9339
1.337e+007
13C-1234-TCDD;15.31;db
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

HxDPE
b30sep19-1
Voltage SIR,EI+
375.8364
1.445e+004
12.57 bb
13.22;bd
13.46 bb
13.81 bb
14.27 db
14.63
15.33
15.41 bb
15.83
16.32 bb
16.59 db
17.17 bb
17.93
18.11 bb
18.50 bd
19.09 bb
19.17
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

Lock Mass F1
b30sep19-1
Voltage SIR,EI+
304.9824
1.933e+007
12.38
12.84
13.05
13.29
14.14
14.44
14.77
15.19
15.36
15.70
16.11
16.71
16.90
17.62
18.08
18.30
18.88
19.01
19.64
100 %
0
13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00
min

Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a-9.qld

Last Altered: Monday, September 30, 2019 15:48:49 Eastern Standard Time
Printed: Monday, September 30, 2019 15:49:26 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19-9, Date: 30-Sep-2019, Time: 15:25:40, ID: CS3WT 1613CS3 UD190313-03.3, Description: , Job: b30sep19a, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	7.72e4	1.03e5	1.80e5	16.27	1.001	0.75	NO	10.639	0.119	0.914	0.859	6.4	1.22e6	5018	243.3	1.58e6	5618	280.4	bb	bb
2	13C-2378-TCDF	8.52e5	1.12e6	1.97e6	16.25	1.065	0.76	NO	74.026	0.106	1.129	1.525	-26.0	1.35e7	9248	1460.3	1.75e7	7208	2429.8	bb	bb
3	13C-1234-TCDD	7.62e5	9.85e5	1.75e6	15.26	0.000	0.77	NO	100.000	0.125	1.000	1.000	-0.0	1.34e7	7270	1838.3	1.74e7	5455	3183.5	bb	bb
4	HxDPE														3699						
5	Lock Mass F1														497166						

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

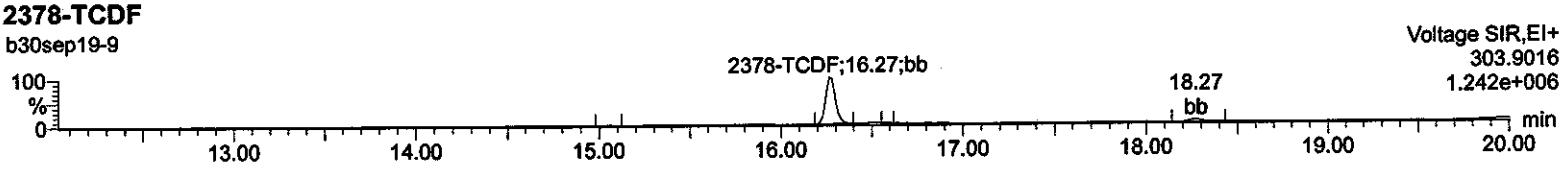
Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a-9.qld

Last Altered: Monday, September 30, 2019 15:48:49 Eastern Standard Time
Printed: Monday, September 30, 2019 15:49:26 Eastern Standard Time

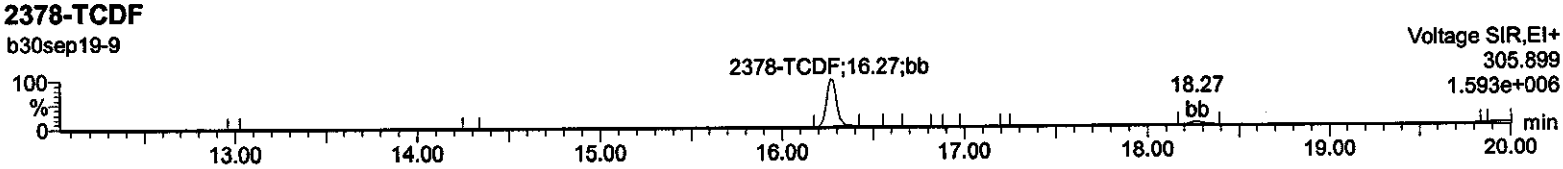
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_225TCDF.mdb 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19-9, Date: 30-Sep-2019, Time: 15:25:40, ID: CS3WT 1613CS3 UD190313-03.3, Description: , Job: b30sep19a, Task: HRP763_2, User: MLS

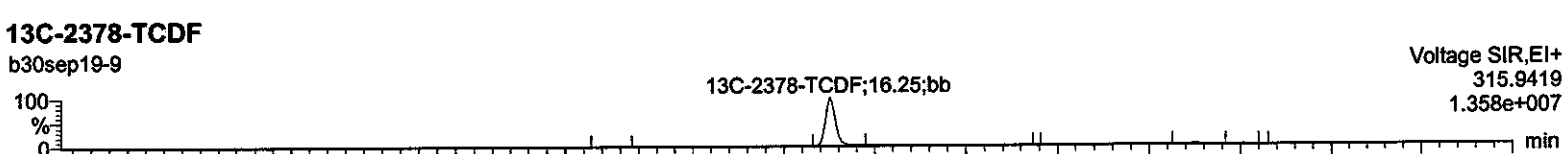
2378-TCDF



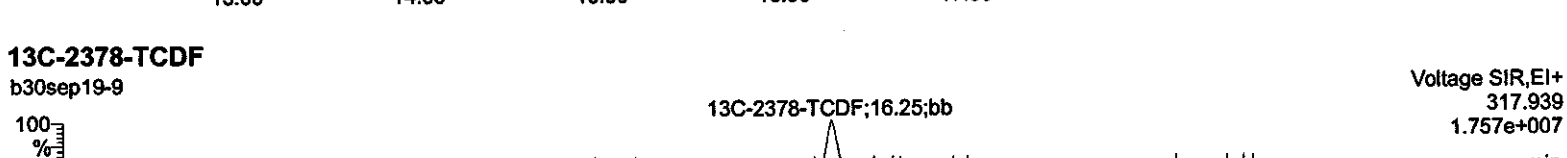
2378-TCDF



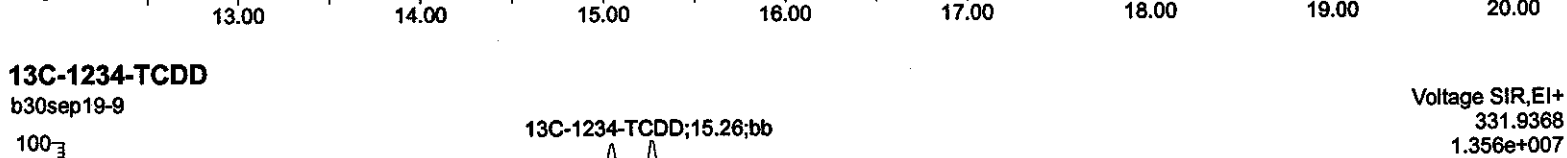
13C-2378-TCDF



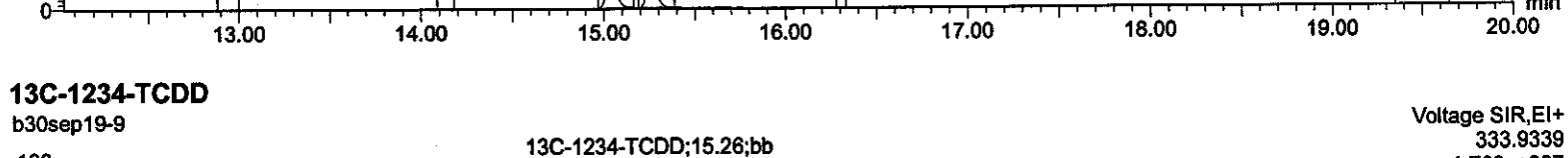
13C-2378-TCDF



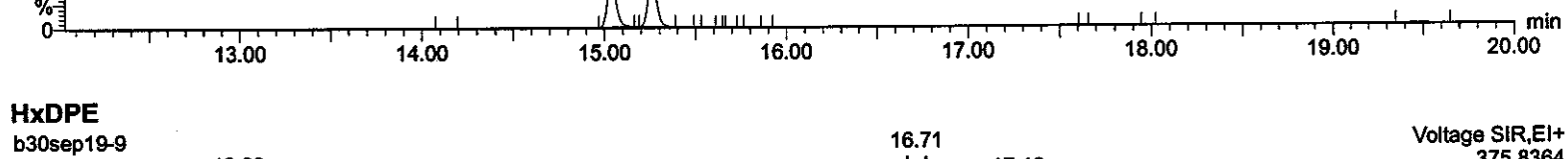
13C-1234-TCDD



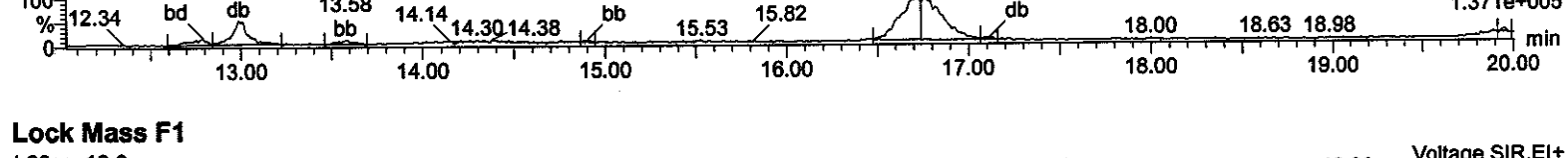
13C-1234-TCDD



HxDPE



Lock Mass F1



Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a_2-10.qld

Last Altered: Tuesday, October 01, 2019 08:09:06 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:54:25 Eastern Standard Time

Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

10/1/19

Name: b30sep19a_2-10, Date: 30-Sep-2019, Time: 19:03:01, ID: CS3WT 1613CS3 UD190313-03.3, Description: , Job: b30sep19a_2, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	9.28e4	1.22e5	2.14e5	16.29	1.001	0.76	NO	11.090	0.0738	0.953	0.859	10.9	1.45e6	3388	428.1	1.82e6	4053	448.6	bb	bd
2	13C-2378-TCDF	9.84e5	1.27e6	2.25e6	16.28	1.065	0.78	NO	74.251	0.105	1.132	1.525	-25.7	1.54e7	11763	1308.3	1.99e7	7820	2545.0	bb	bb
3	13C-1234-TCDD	8.60e5	1.13e6	1.99e6	15.28	0.000	0.76	NO	100.000	0.101	1.000	1.000	0.0	1.58e7	6933	2283.0	2.07e7	5350	3863.7	bb	db

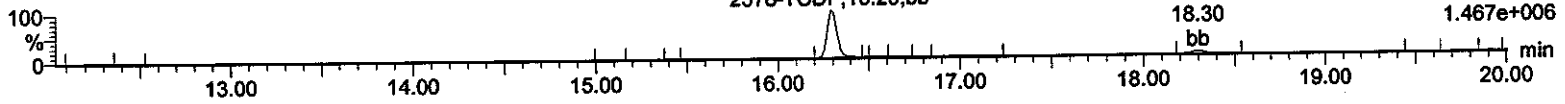
Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

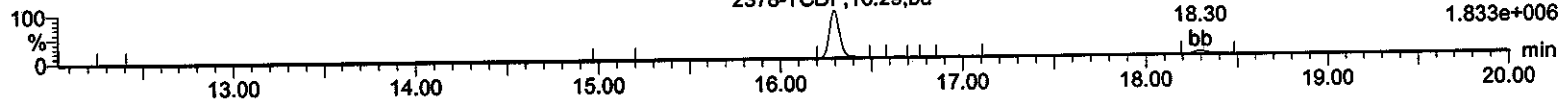
Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a_2-10.qld

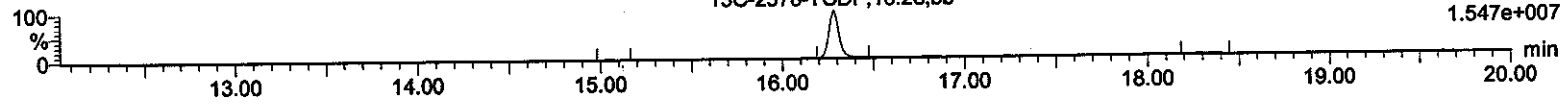
Last Altered: Tuesday, October 01, 2019 08:09:06 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:54:25 Eastern Standard Time

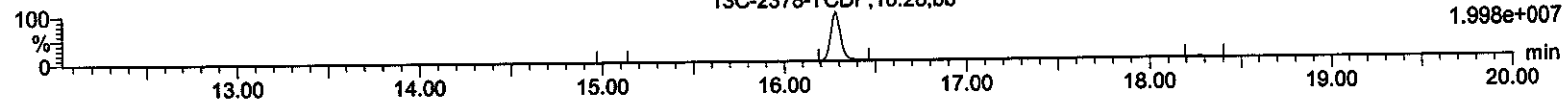
Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

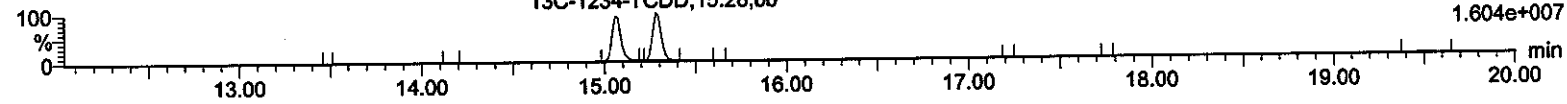
Name: b30sep19a_2-10, Date: 30-Sep-2019, Time: 19:03:01, ID: CS3WT 1613CS3 UD190313-03.3, Description: ,
Job: b30sep19a_2, Task: HRP763_2, User: MLS

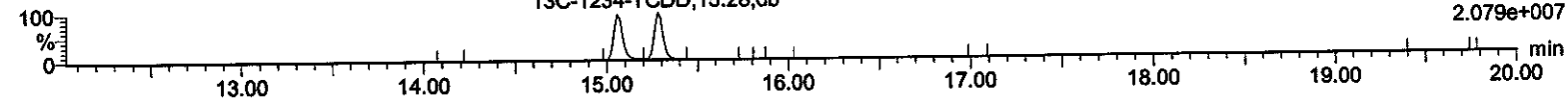
2378-TCDF
b30sep19a_2-10
Voltage SIR,EI+ 303.9016 1.467e+006
2378-TCDF;16.29;bb
18.30 bb


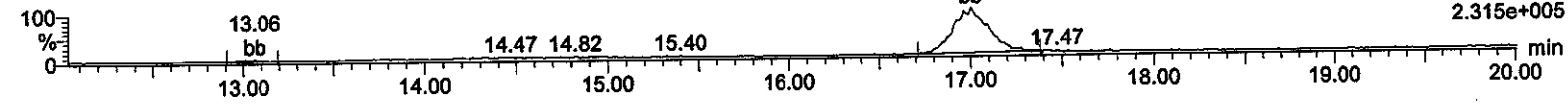
2378-TCDF
b30sep19a_2-10
Voltage SIR,EI+ 305.899 1.833e+006
2378-TCDF;16.29;bd
18.30 bb


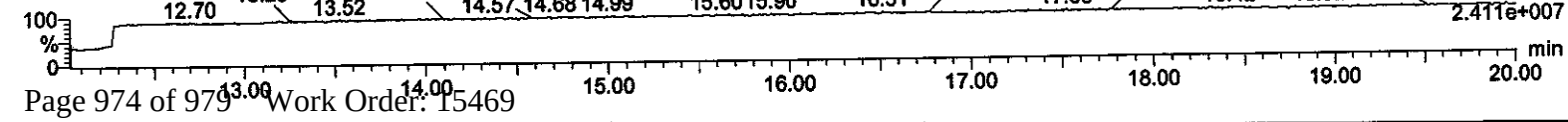
13C-2378-TCDF
b30sep19a_2-10
Voltage SIR,EI+ 315.9419 1.547e+007
13C-2378-TCDF;16.28;bb


13C-2378-TCDF
b30sep19a_2-10
Voltage SIR,EI+ 317.939 1.998e+007
13C-2378-TCDF;16.28;bb


13C-1234-TCDD
b30sep19a_2-10
Voltage SIR,EI+ 331.9368 1.604e+007
13C-1234-TCDD;15.28;bb


13C-1234-TCDD
b30sep19a_2-10
Voltage SIR,EI+ 333.9339 2.079e+007
13C-1234-TCDD;15.28;db


HxDPE
b30sep19a_2-10
Voltage SIR,EI+ 375.8364 2.315e+005
13.06 bb
14.47 14.82 15.40
17.00 bb
17.47


Lock Mass F1
b30sep19a_2-10
Voltage SIR,EI+ 304.9824 2.411e+007
12.70 13.25 13.52 14.09 14.57 14.68 14.99 15.60 15.90 16.51 16.78 17.53 17.77 18.42 18.92 19.51


Quantify Sample Summary Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a_3-10.qld

Last Altered: Tuesday, October 01, 2019 08:14:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:55:13 Eastern Standard Time

Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

10/11/19

Name: b30sep19a_3-10, Date: 30-Sep-2019, Time: 22:40:23, ID: CS3WT 1613CS3 UD190313-03.3, Description: , Job: b30sep19a_3, Task: HRP763_2, User: MLS

#	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	Mean	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M	M2
1	2378-TCDF	7.82e4	1.02e5	1.80e5	16.29	1.002	0.77	NO	10.893	0.0908	0.936	0.859	8.9	1.20e6	4001	300.1	1.56e6	3550	439.8	bd	bd
2	13C-2378-TCDF	8.39e5	1.08e6	1.92e6	16.26	1.064	0.77	NO	72.556	0.0988	1.107	1.525	-27.4	1.27e7	8969	1413.0	1.63e7	6283	2592.1	bb	bb
3	13C-1234-TCDD	7.58e5	9.79e5	1.74e6	15.28	0.000	0.77	NO	100.000	0.104	1.000	1.000	0.0	1.33e7	6132	2161.6	1.72e7	4394	3924.1	bb	bb

Quantify Sample Report **MassLynx 4.1**
Method DXCF TCDF CCAL Report

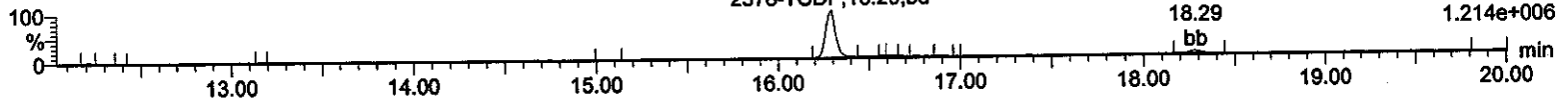
Dataset: C:\MassLynx\Default.pro\CCAL Results\cf-b30sep19a_3-10.qld

Last Altered: Tuesday, October 01, 2019 08:14:37 Eastern Standard Time
Printed: Tuesday, October 01, 2019 08:55:13 Eastern Standard Time

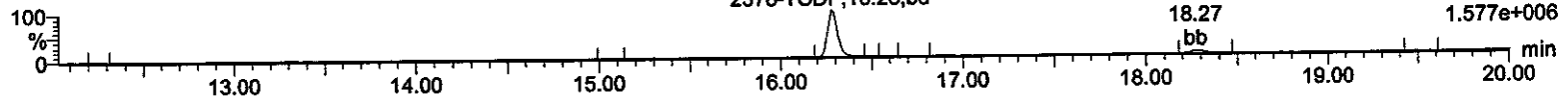
Method: Untitled 28 Aug 2019 09:46:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\CF-b30nov18a.cdb 03 Dec 2018 09:17:30

Name: b30sep19a_3-10, Date: 30-Sep-2019, Time: 22:40:23, ID: CS3WT 1613CS3 UD190313-03.3, Description: ,
Job: b30sep19a_3, Task: HRP763_2, User: MLS

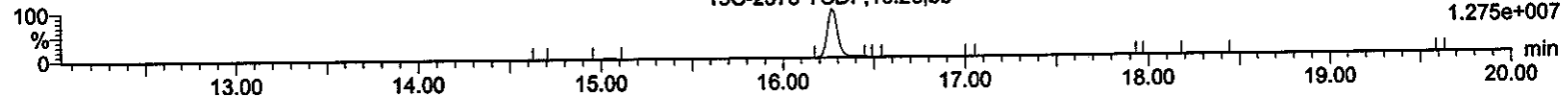
2378-TCDF
b30sep19a_3-10
Voltage SIR,EI+ 303.9016 1.214e+006
2378-TCDF;16.29;bd
18.29 bb



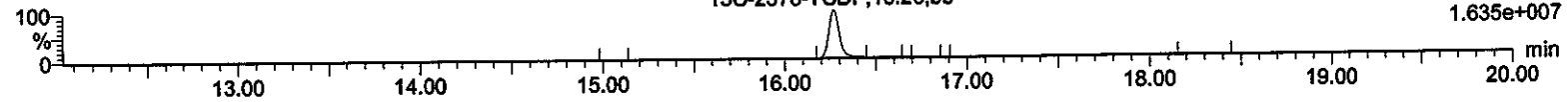
2378-TCDF
b30sep19a_3-10
Voltage SIR,EI+ 305.899 1.577e+006
2378-TCDF;16.28;bd
18.27 bb



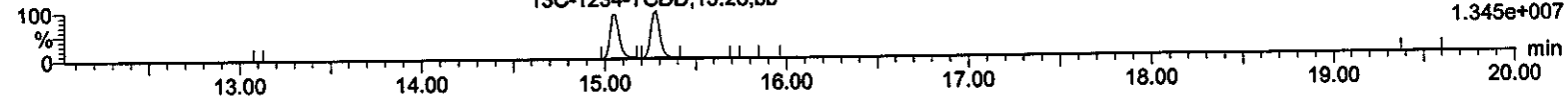
13C-2378-TCDF
b30sep19a_3-10
Voltage SIR,EI+ 315.9419 1.275e+007
13C-2378-TCDF;16.26;bb



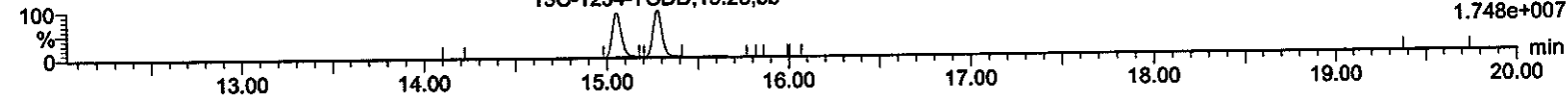
13C-2378-TCDF
b30sep19a_3-10
Voltage SIR,EI+ 317.939 1.635e+007
13C-2378-TCDF;16.26;bb



13C-1234-TCDD
b30sep19a_3-10
Voltage SIR,EI+ 331.9368 1.345e+007
13C-1234-TCDD;15.28;bb



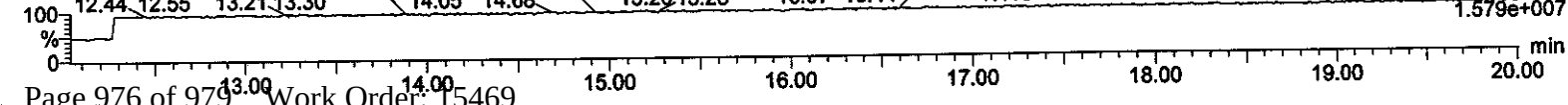
13C-1234-TCDD
b30sep19a_3-10
Voltage SIR,EI+ 333.9339 1.748e+007
13C-1234-TCDD;15.28;bb



HxDPE
b30sep19a_3-10
Voltage SIR,EI+ 375.8364 1.767e+005
12.89;bd
13.16 db
13.62 bb
14.22
16.73 bb
17.14
18.59 bb



Lock Mass F1
b30sep19a_3-10
Voltage SIR,EI+ 304.9824 1.579e+007
12.44 12.55 13.21 13.30 13.88 14.05 14.68 14.91 15.20 15.28 16.07 16.44 16.61 17.18 17.50 18.01 18.34 19.06 19.34



Miscellaneous

COMPANY - WIDE NONCONFORMANCE REPORT

Mo. Day Yr.	Division:	Quality Criteria:	Type:
04-OCT-19	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
High Res GC/MS	EPA Method 1613B	Solid	APEX, PGWG
Batch ID: 41747	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 15469(2006-00115_2),15512(A9I0248)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 12024795MS 2. Failed RPD for MS/MSD, or PS/PSD: QC 12024796MSD 3. Failed Recovery for MSD/PSD: QC 12024796MSD	Narrate Only

NCR Report No.: 647562

Revision No.:

Originator's Name:

Heather Patterson 04-OCT-2019 11:34

Data Validator/Group Leader:

Heather Patterson 04-OCT-2019 11:35