Analytical Resources, LLC
Analytical Chemists and Consultants

06 January 2023

Ali Judkins
Anchor QEA, LLC
1201 3rd Ave, Suite 2600
Seattle, WA 98101

RE: AOC4 UR Phase 3

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
22L0156	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2023.01.06 11:06:58 -08'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

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

Accredited in accordance with nelac
Cert# 100006-012

1 of 1

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3430

Project/Client Name: LDW AOC4 UR Phase 3
Project Number: 180067-02.04
Contact Name: Amara Vandervort
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: courier
Form filled out by: S. Replinger

Shipping Date: 12.7.2022
Airbill Number: —
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	TOC/ total solids	Archive	Mercury				Comments / Instructions [Jar tag number(s)]
12.7.2022	1000	LDW22-SS797	3	Sediment	x	x	x					
	1010	LDW22-IT797	3		x	x	x					
	1040	LDW22-SS812	3		x	x	x	x				
	1105	LDW22-SS794	3		x	x	x					
	1110	LDW22-~~SS~~IT794	3		x	x	x					
		Total Number of Containers	15	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THAN DU	YARED	YARED	Ra
Signature:			
Company: WINDWARD	YA YA SAFETY	YA YA SAFETY	ARI
Date/Time: 12/07/22 1640	12/07/22 4:40	12/07/22 17:07	12/7/22 1707

* Distribution: White copies accompany shipment; yellow retained by consignor.

Wind Ward environmental LLC
200 1st Ave W, Suite 500
Seattle, WA 98119
206.378.1364

To be completed by Laboratory upon sample receipt:

Date of receipt::	12/07/22	Laboratory W.O. #:	22L0156
Condition upon receipt:	good	Time of receipt:	17:07
Cooler temperature:	2.2°C	Received by:	Rowan miller

1 of 3

CHAIN-OF-CUSTODY/TEST REQUEST FORM

TIER 2

№ 3286

Project/Client Name: AOC 4 UR Phase 3
Project Number: 180067-02.04
Contact Name: Amara Vanderhoof
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunihoo
Shipper: Courier
Form filled out by: AV/BQ

Shipping Date: 12/7/2022
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) Archive							Comments / Instructions [Jar tag number(s)]
12/6/22	12:04	LDW22-SC768M	3	Sediment	X							
	14:06	LDW22-SC764A	3		X							
		LDW22-SC764B	3		X							
		LDW22-SC764C	3		X							
		LDW22-SC764D	3		X							
12/6/22	14:06	LDW22-SC764O	3		X							
12/7/22	09:10	LDW22-BT807	4		X							
12/7/22	0920	LDW22-SC755A	3		X							
		LDW22-SC755B	3		X							
		LDW22-SC755K	3		X							
		LDW22-SC755L	3		X							
12/7/22	9:20	LDW22-SC755M	3	Sediment	X							
		Total Number of Containers	37	Purchase Order / Statement of Work # APJ-110222-AOC4-ARI								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THAN TSO	YARED	YARED	R~
Signature:			
Company: Windward	YA YA SAFETY	YA YA SAFETY	ARI
Date/Time: 12/7/2022 1640	12/7/22 4:40	12/7/22 ~~4:50~~ 1707	12/7/22 1707

* Distribution: White copies accompany shipment; yellow retained by consignor.

Wind Ward environmental LLC
200 1st Ave W, Suite 500
Seattle, WA 98119
206.378.1364

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/07/22	Laboratory W.O. #: 22L0156
Condition upon receipt: good	Time of receipt: 17:07
Cooler temperature: 2.4, 5.3	Received by: Rowan Millar

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

Tier 2

№ 3290

Project/Client Name: ADC4 UR Phase 3
Project Number: 180067-02.04
Contact Name: Amara Vandervort
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: AV/BZ

Shipping Date: 12/7/2022
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) Archive							Comments / Instructions [Jar tag number(s)]
12/7/22	9:20	LDW22-SC755N	3	Sediment	X							
	10:08	LDW22-SC753L	3		X							
	10:08	LDW22-SC753M	3		X							
	10:08	LDW22-SC753N	3		X							
	1056	LDW22-SC751A	3		X							
		LDW22-SC751B	3		X							
		LDW22-SC751C	3		X							
		LDW22-SC751L	3		X							
		LDW22-SC751M	3		X							
	1056	LDW22-SC751N	3		X							
	1330	LDW22-SC760I	3		X							
12/7/22	1322	LDW22-SC763A	3	Sediment	X							
		Total Number of Containers	36	Purchase Order / Statement of Work # APJ-110222-4004-ARI								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THOM DO	YARED	Print name: YARED	RN
Signature:	Company: YA YA SAFETY	Signature:	Company: ARI
Company: Windward	Date/Time: 12/7/22 4:40	Company: YA YA	Date/Time: 12/7/22 1707
Date/Time: 12/7/2022 1640		Date/Time: 12/7/22 17:07	

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/07/22	Laboratory W.O. #: 22L0156
Condition upon receipt: good	Time of receipt: 17:07
Cooler temperature: 2.4, 5.2	Received by: Roman Miller

Wind Ward environmental LLC
200 1st Ave W, Suite 500
Seattle, WA 98119
206.378.1364

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

Tier 2

№ 3253

Project/Client Name: AOC4 UR Phase 3
Project Number: B0067-02.04
Contact Name: Amara VanderVort
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: AV/BQ
Shipping Date: 12/7/2022
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)							Comments / Instructions [Jar tag number(s)]
					Archive							
12/7/22	1322	LDW22-SC763B	3	Sediment	X							
12/7/22	1322	LDW22-SC763C	3	Sediment	X							
12/7/22	1322	LDW22-SC763D	3	sediment	X							
		LDW22-SC763E	3									
		SC763F	3									
		SC763G	2									
		SC763H	3									
12/7/22	1322	LDW22-SC763I	3									
		Total Number of Containers	23 AV	Purchase Order / Statement of Work #	APJ-110222-AOC4-ARI							

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THAI DO	YARED	YARED	
Signature:			
Company: Windward	YA YA SAFETY	YA YA SAFETY	ARI
Date/Time: 12/7/2022 1640	12/7/22 4:40	12/7/22 17:07	12/7/22 ~~1707~~ 1707

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt:: 12/07/22	Laboratory W.O. #: 22L0156
Condition upon receipt: good	Time of receipt: 17:02
Cooler temperature: 2.4, 5.2	Received by: Rowan miller

Wind Ward environmental LLC
200 1st Ave W, Suite 500
Seattle, WA 98119
206.378.1364

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Windward

COC No(s): _____ NA

Assigned ARI Job No: 22L0156

Project Name: AOC4 UR Phase W

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

2.4° 5.3° 4.2° 0.0° 1.1° 2.2° 4.5°

Time 1707

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 4708

Cooler Accepted by: RW Date: 12/07/22 Time: 1707

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		PIB YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: PIB Date: 12/08/22 Time: 10:06 Labels checked by: _____

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
LDW22-SC775	LDW22-SC755		

Additional Notes, Discrepancies, & Resolutions:

All jars with name beginning with LDW22-SC775 on bottle label are called out as LDW22-SC755 on COC.

By: PIB Date: 12/08/22

Anchor QEA, LLC	Project: AOC4 UR Phase 3	
1201 3rd Ave, Suite 2600	Project Number: 180067-02.04	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	01/06/2023 10:52

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
22L0156-01	LDW22-SS797	Solid	12/07/22 10:00	12/07/22 17:07
22L0156-02	LDW22-IT797	Solid	12/07/22 10:10	12/07/22 17:07
22L0156-03	LDW22-SS812	Solid	12/07/22 10:40	12/07/22 17:07
22L0156-04	LDW22-SS794	Solid	12/07/22 11:05	12/07/22 17:07
22L0156-05	LDW22-IT794	Solid	12/07/22 11:10	12/07/22 17:07
22L0156-06	LDW22-SC768M	Solid	12/06/22 12:04	12/07/22 17:07
22L0156-07	.	Solid	12/06/22 00:00	12/07/22 17:07
22L0156-08	LDW22-SC764A	Solid	12/06/22 14:06	12/07/22 17:07
22L0156-09	LDW22-SC764B	Solid	12/06/22 14:06	12/07/22 17:07
22L0156-10	LDW22-SC764C	Solid	12/06/22 14:06	12/07/22 17:07
22L0156-11	LDW22-SC764D	Solid	12/06/22 14:06	12/07/22 17:07
22L0156-12	LDW22-SC764O	Solid	12/06/22 14:06	12/07/22 17:07
22L0156-13	LDW22-IT807	Solid	12/07/22 09:10	12/07/22 17:07
22L0156-14	LDW22-SC755A	Solid	12/07/22 09:20	12/07/22 17:07
22L0156-15	LDW22-SC755B	Solid	12/07/22 09:20	12/07/22 17:07
22L0156-16	LDW22-SC755K	Solid	12/07/22 09:20	12/07/22 17:07
22L0156-17	LDW22-SC755L	Solid	12/07/22 09:20	12/07/22 17:07
22L0156-18	LDW22-SC755M	Solid	12/07/22 09:20	12/07/22 17:07
22L0156-19	LDW22-SC755N	Solid	12/07/22 09:20	12/07/22 17:07
22L0156-20	LDW22-SC753L	Solid	12/07/22 10:08	12/07/22 17:07
22L0156-21	LDW22-SC753M	Solid	12/07/22 10:08	12/07/22 17:07
22L0156-22	LDW22-SC753N	Solid	12/07/22 10:08	12/07/22 17:07
22L0156-23	LDW22-SC751A	Solid	12/07/22 10:56	12/07/22 17:07
22L0156-24	LDW22-SC751B	Solid	12/07/22 10:56	12/07/22 17:07
22L0156-25	LDW22-SC751C	Solid	12/07/22 10:56	12/07/22 17:07
22L0156-26	LDW22-SC751L	Solid	12/07/22 10:56	12/07/22 17:07
22L0156-27	LDW22-SC751M	Solid	12/07/22 10:56	12/07/22 17:07
22L0156-28	LDW22-SC751N	Solid	12/07/22 10:56	12/07/22 17:07
22L0156-29	LDW22-SC760I	Solid	12/07/22 13:30	12/07/22 17:07
22L0156-30	LDW22-SC763A	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-31	LDW22-SC763B	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-32	LDW22-SC763C	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-33	LDW22-SC763D	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-34	LDW22-SC763E	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-35	LDW22-SC763F	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-36	LDW22-SC763G	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-37	LDW22-SC763H	Solid	12/07/22 13:22	12/07/22 17:07
22L0156-38	LDW22-SC763I	Solid	12/07/22 13:22	12/07/22 17:07

Anchor QEA, LLC	Project: AOC4 UR Phase 3	
1201 3rd Ave, Suite 2600	Project Number: 180067-02.04	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	06-Jan-2023 10:52

Case Narrative

Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Work Order: 22L0156

Sample receipt

Samples as listed on the preceding page were received 07-Dec-2022 17:07 under ARI work order 22L0156. For details regarding sample receipt, please refer to the Cooler Receipt Form.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

The reference material (SRM) percent recoveries were within control limits.

Total Mercury - EPA Method 7470/7471

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The batch BKL0496 matrix spike (MS) percent recovery was within limits. The matrix spike duplicate percent recovery was low of advisory control limits and the RPD was high of advisory control limits. The duplicate (DUP) relative percent difference (RPD) was "L" flagged, indicating the a low value with the control window defaulting to +/- the reporting limit. Matrix QC is reported in work order 22L0155.

The reference material (SRM) percent recoveries were within control limits.

Wet Chemistry (Total Organic Carbon)

The sample(s) were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Anchor QEA, LLC	Project: AOC4 UR Phase 3	
1201 3rd Ave, Suite 2600	Project Number: 180067-02.04	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	06-Jan-2023 10:52

Case Narrative

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
J	Estimated concentration value detected below the reporting limit.
D	The reported value is from a dilution
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW22-SS797

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Solid	Laboratory ID:	22L0156-01 B	File ID:	12262266ECD7.D
Sampled:	12/07/22 10:00	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 14:51
% Solids:	89.01	Preparation:	EPA 3546 (Microwave)	Initial/Final:	14.08 g Wet / 2.5 mL
Batch:	BKL0366	Sequence:	SKL0359	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9792*	*8.33*	*104*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9792*	*7.10*	*89.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262266ECD7.D
Data file 2: /221226.b/221226.b/12262266ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0156-01
Client ID:
Injection Date: 27-DEC-2022 14:51
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	267705	5.708	0.000	165286	35.6	34.3	3.7	Tetrachloro-m-xylene
13.898	-0.003	263946	14.124	-0.003	246729	41.7	44.1	5.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	530548	18.5
Hexabromobiphenyl	798898	689710	-13.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	351340	41.0
Hexabromobiphenyl	362541	393920	8.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.931 - 13.801) = 97025 Col1 Total PCB = 0.0 ppm*

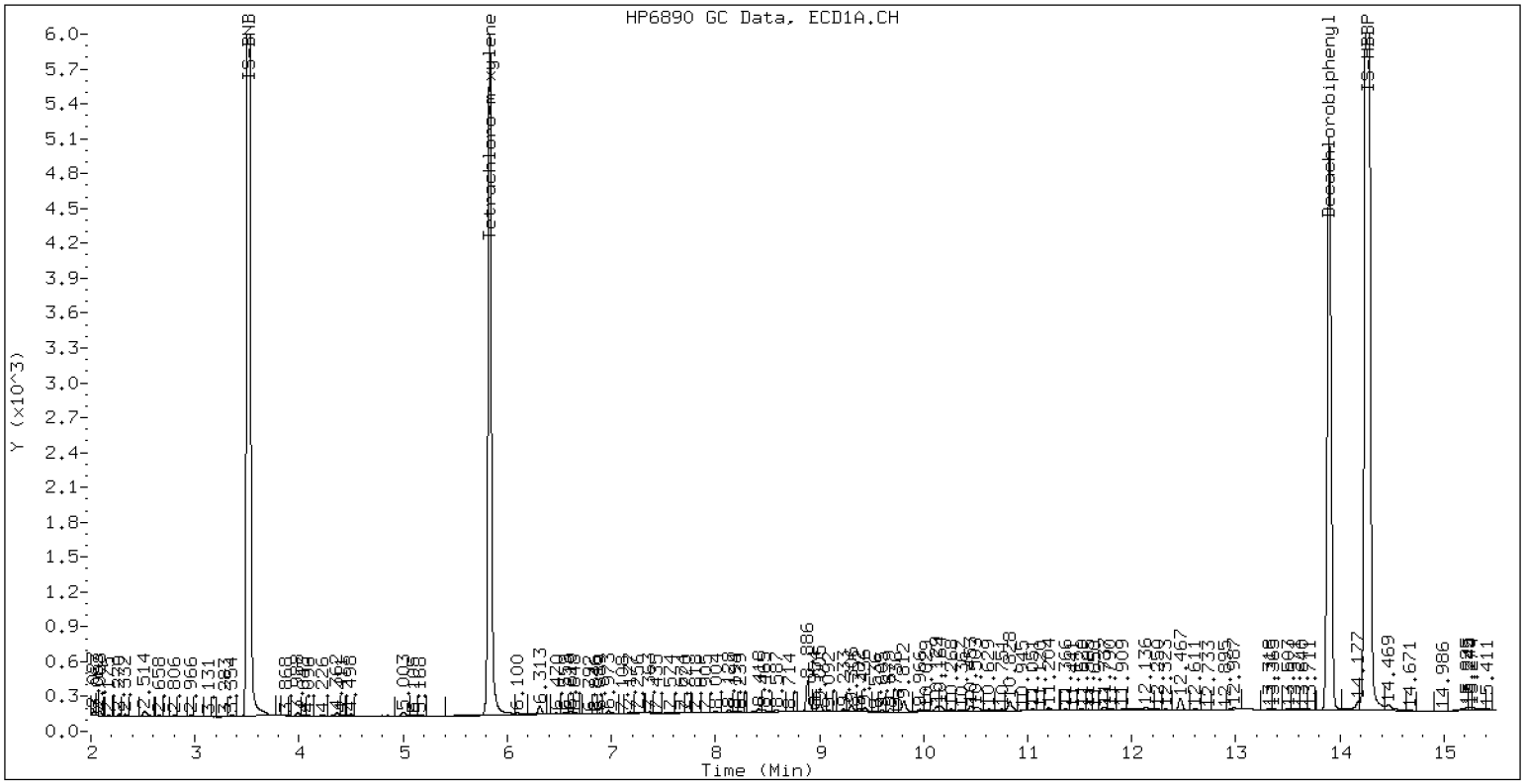
Total PCB Area Col2 (5.807 - 14.027) = 62000 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

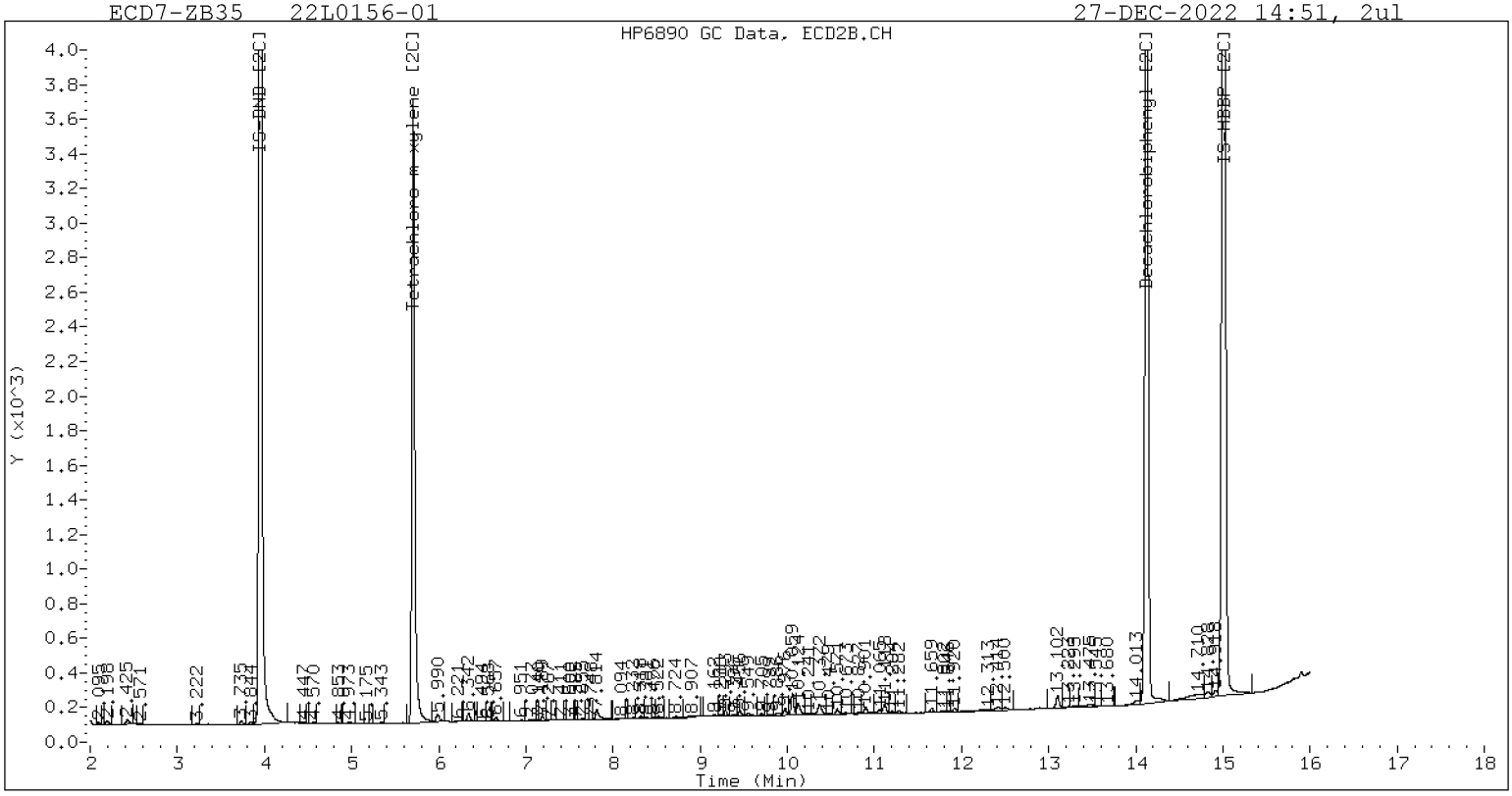
PCB Dual Column Chromatograms

ECD7-ZB5 22L0156-01 27-DEC-2022 14:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0156-01 27-DEC-2022 14:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW22-IT797

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Solid	Laboratory ID:	22L0156-02 B	File ID:	12262267ECD7.D
Sampled:	12/07/22 10:10	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 15:16
% Solids:	84.75	Preparation:	EPA 3546 (Microwave)	Initial/Final:	14.77 g Wet / 2.5 mL
Batch:	BKL0366	Sequence:	SKL0359	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	2	1	4.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	2.1	0.6	4.0	J

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9888*	*8.68*	*109*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9888*	*7.35*	*92.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9888*	*8.87*	*111*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9888*	*7.18*	*89.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262267ECD7.D
Data file 2: /221226.b/221226.b/12262267ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0156-02
Client ID:
Injection Date: 27-DEC-2022 15:16
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.840	0.009	269758	5.706	-0.002	166475	36.8	36.0	2.3	Tetrachloro-m-xylene
13.900	-0.000	213296	14.124	-0.003	207426	43.5	44.4	2.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	517065	15.5
Hexabromobiphenyl	798898	535408	-33.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	337661	35.6
Hexabromobiphenyl	362541	328946	-9.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.309	-0.001	6282	13.8	1	9.454	-0.004	3823	17.6
Aroclor-1254	2	9.386	-0.003	2143	12.1	2	9.973	-0.003	3120	17.8
Aroclor-1254	3	9.680	-0.001	3897	13.6	3	10.121	-0.005	8150	21.7
Aroclor-1254	4	9.812	-0.004	11211	20.0	4	10.369	-0.005	8233	21.1
Aroclor-1254	5	10.132	0.000	5667	14.7	5	10.569	-0.003	4531	24.1
		Total Col1Ave (5 peaks):			14.8	Total Col2Ave (5 peaks):				20.5 RPD = 32
		Corrected Ave (4 peaks):			13.6	Corrected Ave (4 peaks):				19.5 RPD = 36
Aroclor-1260	1	11.052	-0.003	2019	10.4	1	11.656	-0.005	3349	~~19.~~3
Aroclor-1260	2	11.368	-0.003	1902	9.4	2	11.916	-0.007	3063	7.0
Aroclor-1260	3	11.737	-0.006	3627	6.8	3	12.417	-0.025	1940	16.7
Aroclor-1260	4	12.138	-0.010	2455	9.1	4	12.499	-0.008	2144	7.4
Aroclor-1260	5	12.250	-0.004	639	5.8	NS	---			----
		Total Col1Ave (5 peaks):			8.3	Total Col2Ave (4 peaks):				~~12.~~6 RPD = 41*
		Corrected Ave (4 peaks):			7.8	Corrected Ave (3 peaks):				10.4 RPD = 28
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.931 - 13.801) = 192761 Col1 Total PCB = 0.0 ppm*

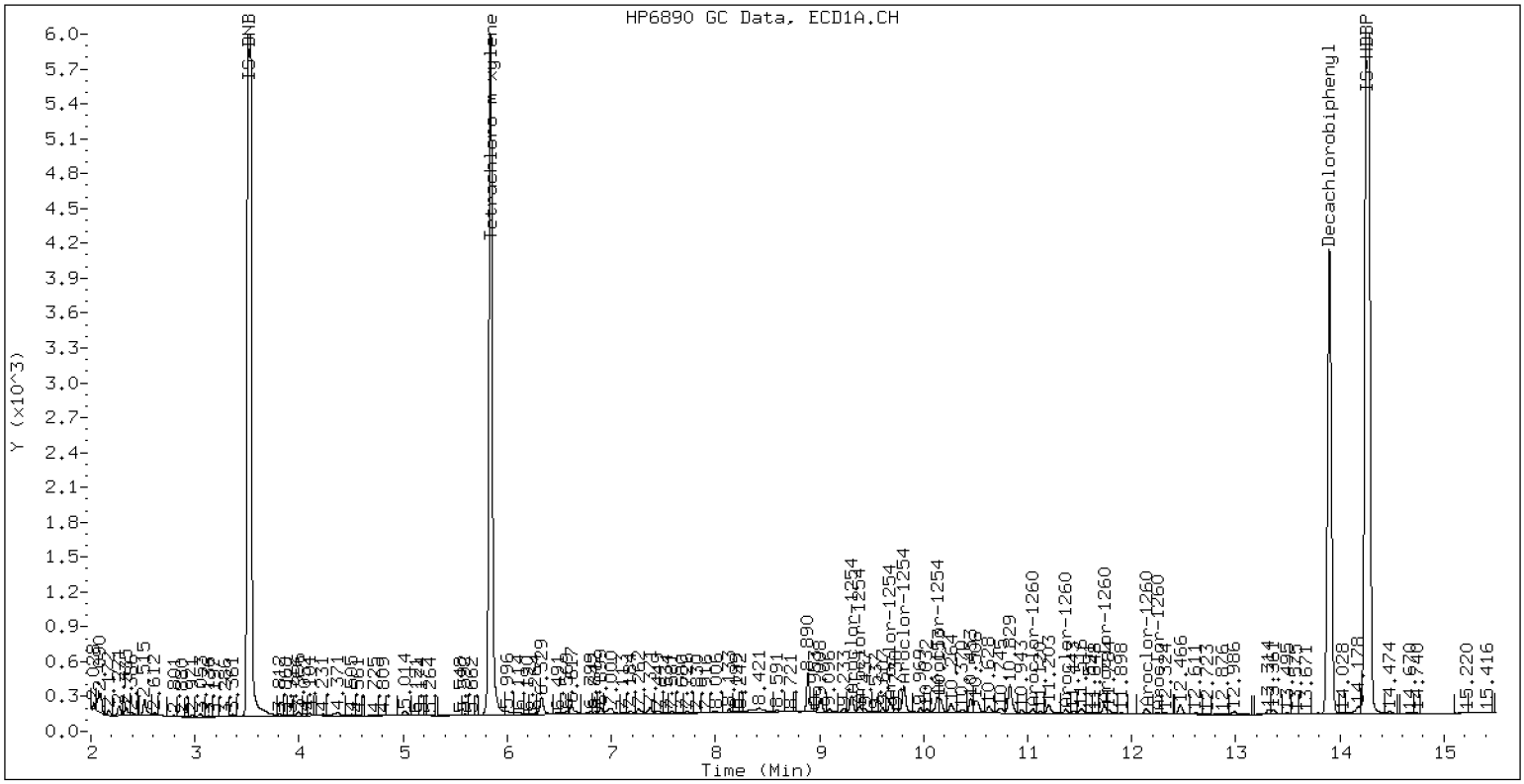
Total PCB Area Col2 (5.807 - 14.027) = 125434 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

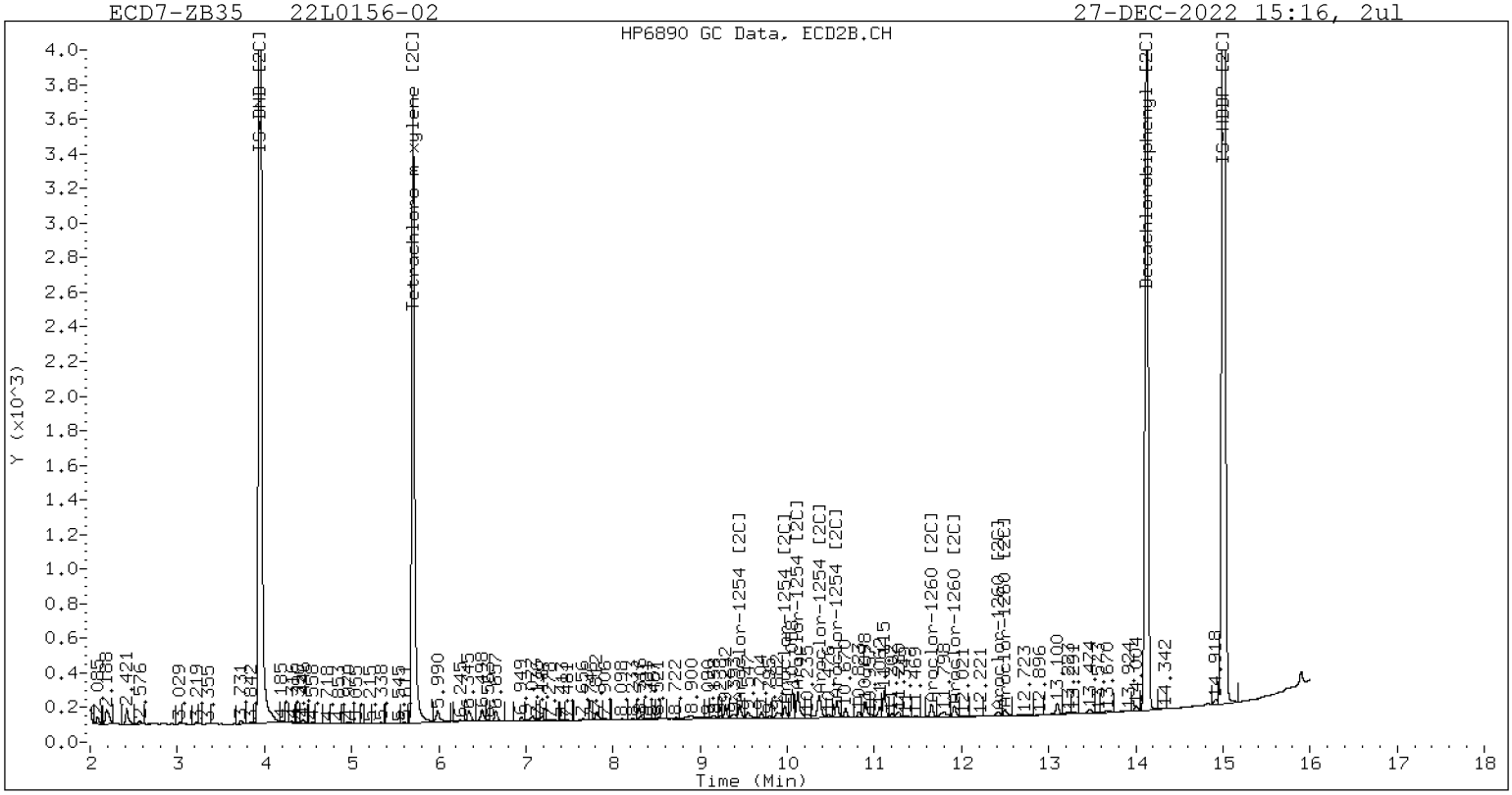
PCB Dual Column Chromatograms

ECD7-ZB5 22L0156-02 27-DEC-2022 15:16, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 22L0156-02 27-DEC-2022 15:16, 2ul

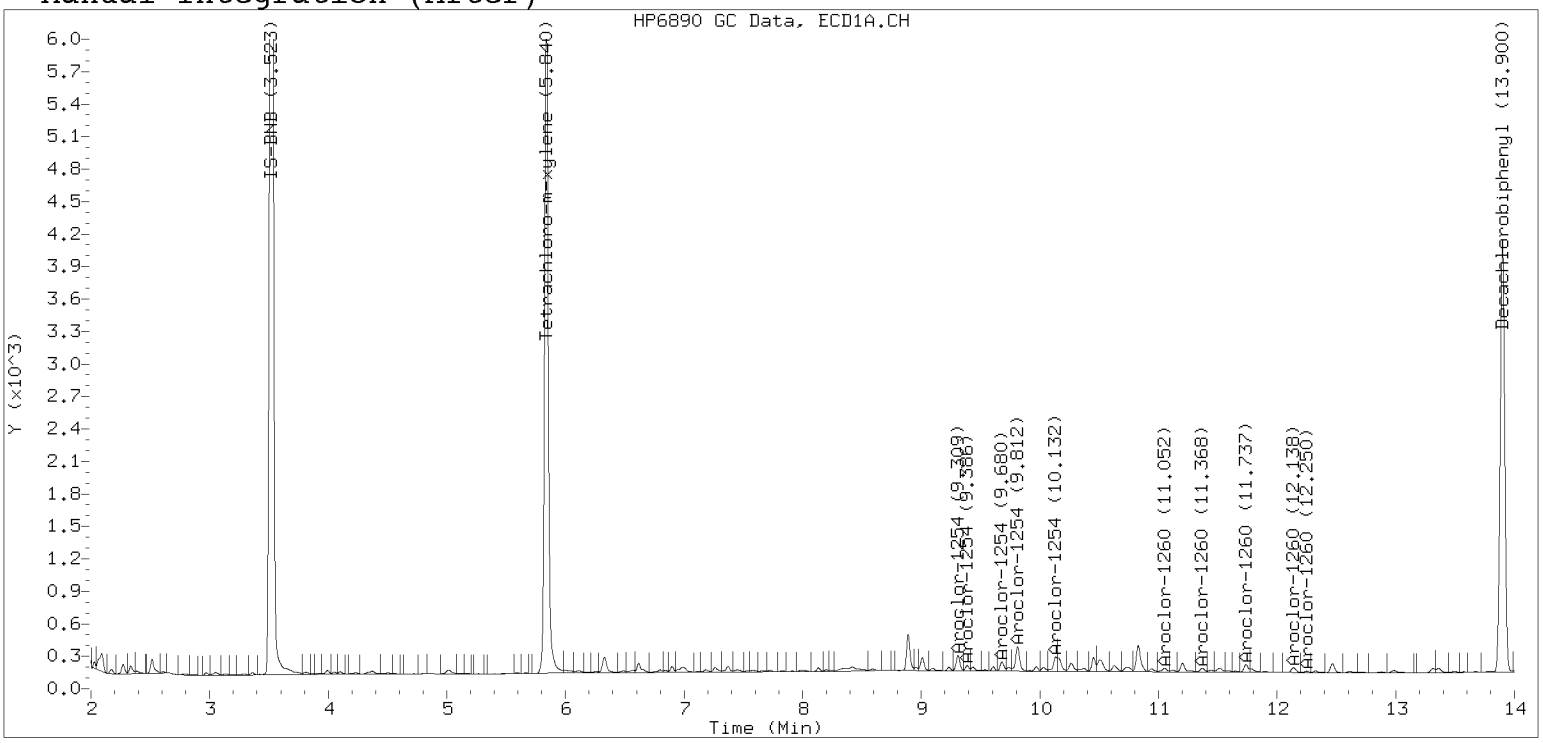


ZB-35 Manual Integration: NO

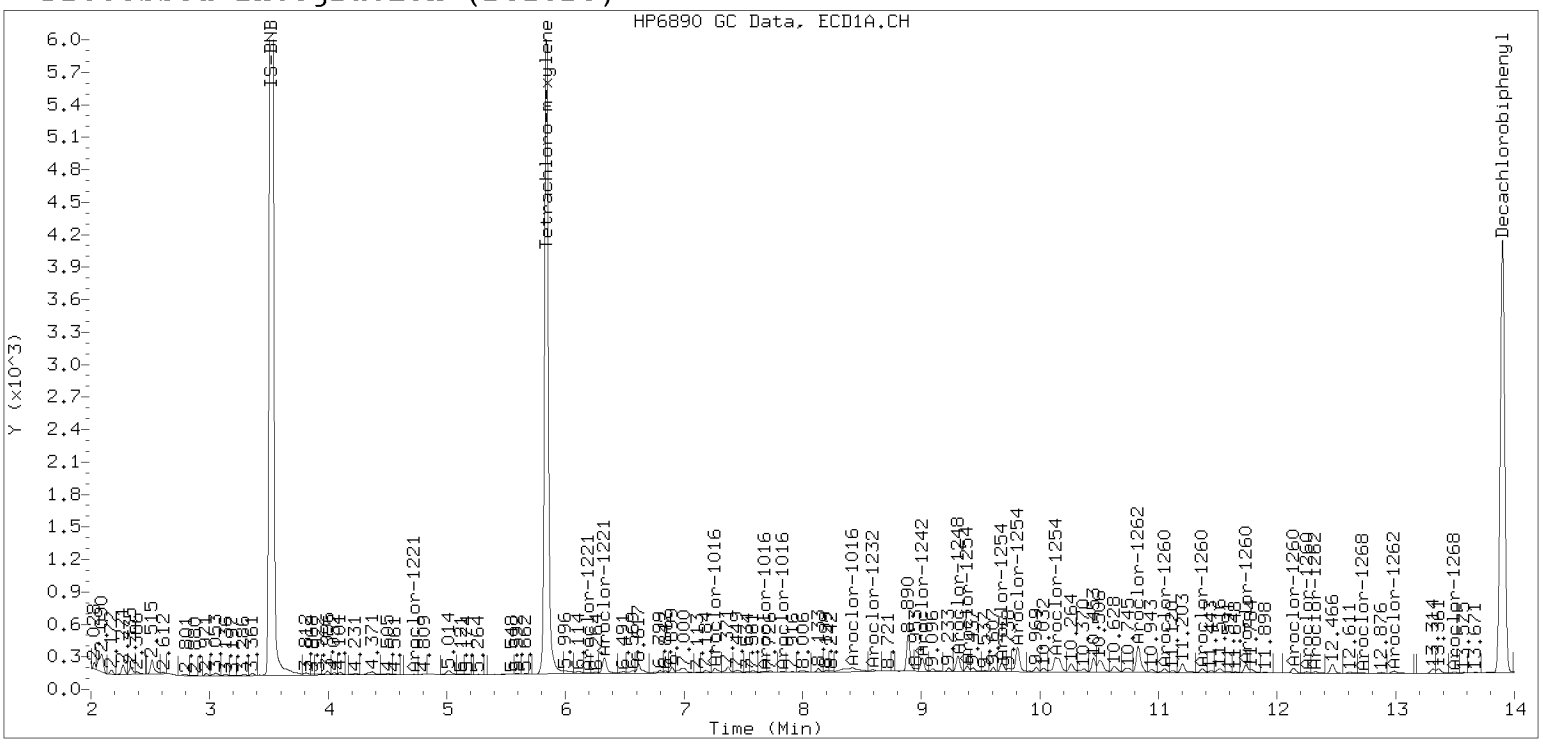
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262267ECD7.D Injection Date: 27-DEC-2022 15:16

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW22-SS812

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Solid	Laboratory ID:	22L0156-03 B	File ID:	12272204ECD7.D
Sampled:	12/07/22 10:40	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 17:42
% Solids:	77.60	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.16 g Wet / 2.5 mL
Batch:	BKL0366	Sequence:	SKL0377	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	2	1	2.6	1.6	4.0	J
11096-82-5	Aroclor 1260	2	1	6.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9744*	*9.59*	*120*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9744*	*7.74*	*97.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9744*	*9.22*	*116*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9744*	*7.81*	*97.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272204ECD7.D
Data file 2: /221227.b/221227.b/12272204ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0156-03
Client ID:
Injection Date: 27-DEC-2022 17:42
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.001	265547	5.707	-0.002	166458	38.8	39.2	1.0	Tetrachloro-m-xylene
13.897	-0.006	325292	14.124	-0.004	277899	48.1	46.3	3.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482901	7.9
Hexabromobiphenyl	798898	737745	-7.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	309946	24.4
Hexabromobiphenyl	362541	423146	16.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.306	-0.016	3640	8.6	1	9.460	-0.001	2764	13.8
Aroclor-1254	2	9.418	0.016	1088	6.6	2	9.973	-0.006	1278	8.0
Aroclor-1254	3	9.684	-0.010	2107	7.8	3	10.124	-0.006	6228	18.0
Aroclor-1254	4	9.809	-0.022	8411	16.1	4	10.372	-0.006	6866	~~19.~~2
Aroclor-1254	5	10.125	-0.065	7049	~~19.~~6	5	10.570	-0.006	6440	37.~~3~~
	Total Col1Ave (5 peaks):				11.~~7~~	Total Col2Ave (5 peaks):				19.3 RPD = 49*
	Corrected Ave (4 peaks):				9.8	Corrected Ave (4 peaks):				14.8 RPD = 41*
										13.27
Aroclor-1260	1	11.046	-0.009	6038	22.5	1	11.657	-0.006	4177	18.7
Aroclor-1260	2	11.363	-0.009	4845	17.4	2	11.919	-0.007	8386	15.0
Aroclor-1260	3	11.731	-0.012	16337	22.4	3	12.433	-0.011	10276	68.9
Aroclor-1260	4	12.137	-0.012	6372	17.1	4	12.501	-0.008	7188	19.2
Aroclor-1260	5	12.246	-0.010	4547	29.9	NS	---			----
	Total Col1Ave (5 peaks):				21.9	Total Col2Ave (4 peaks):				30.4 RPD = 33
	Corrected Ave (4 peaks):				19.9	Corrected Ave (3 peaks):				17.6 RPD = 12
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.931 - 13.803) = 306669 Col1 Total PCB = 0.1 ppm*

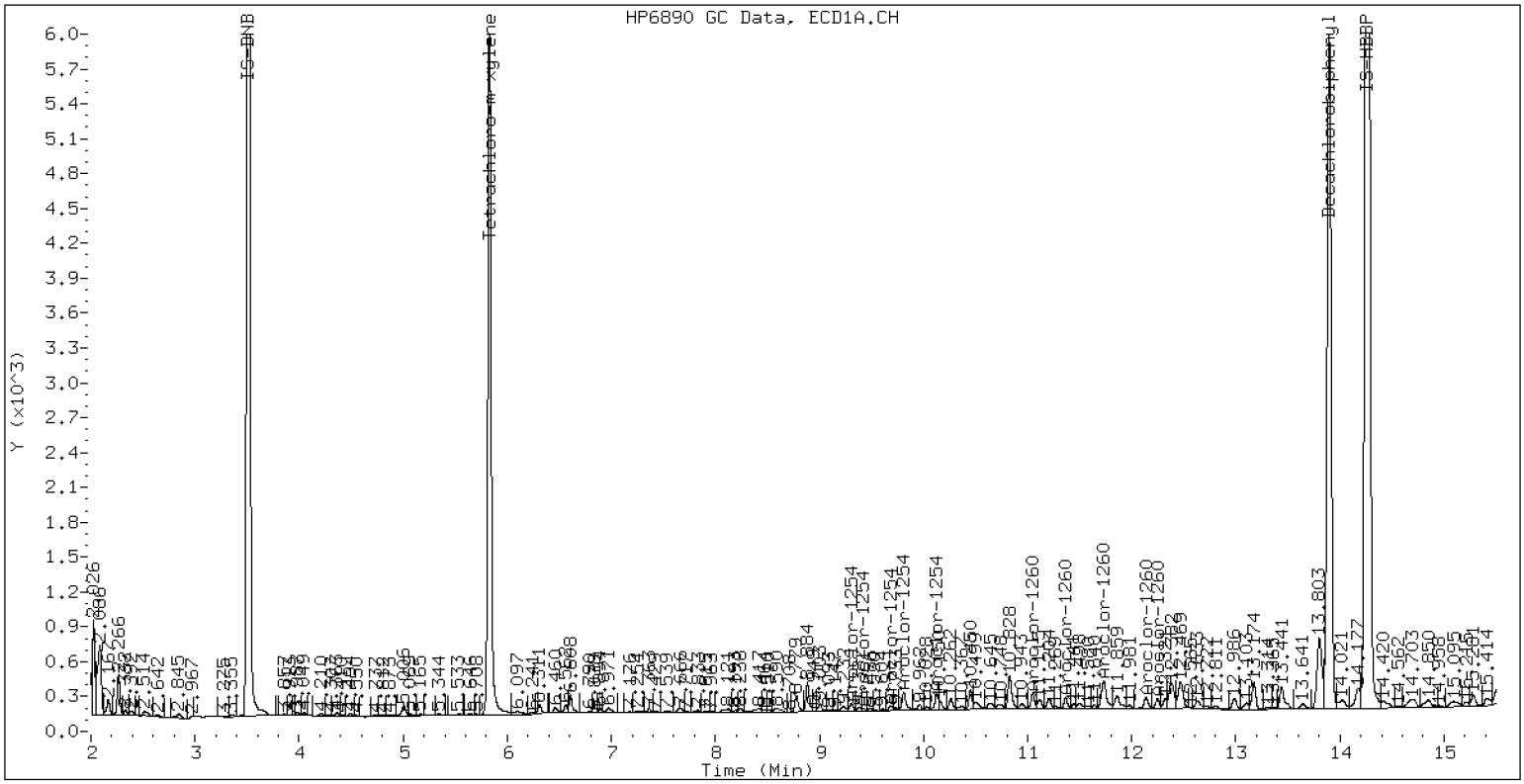
Total PCB Area Col2 (5.809 - 14.028) = 207109 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

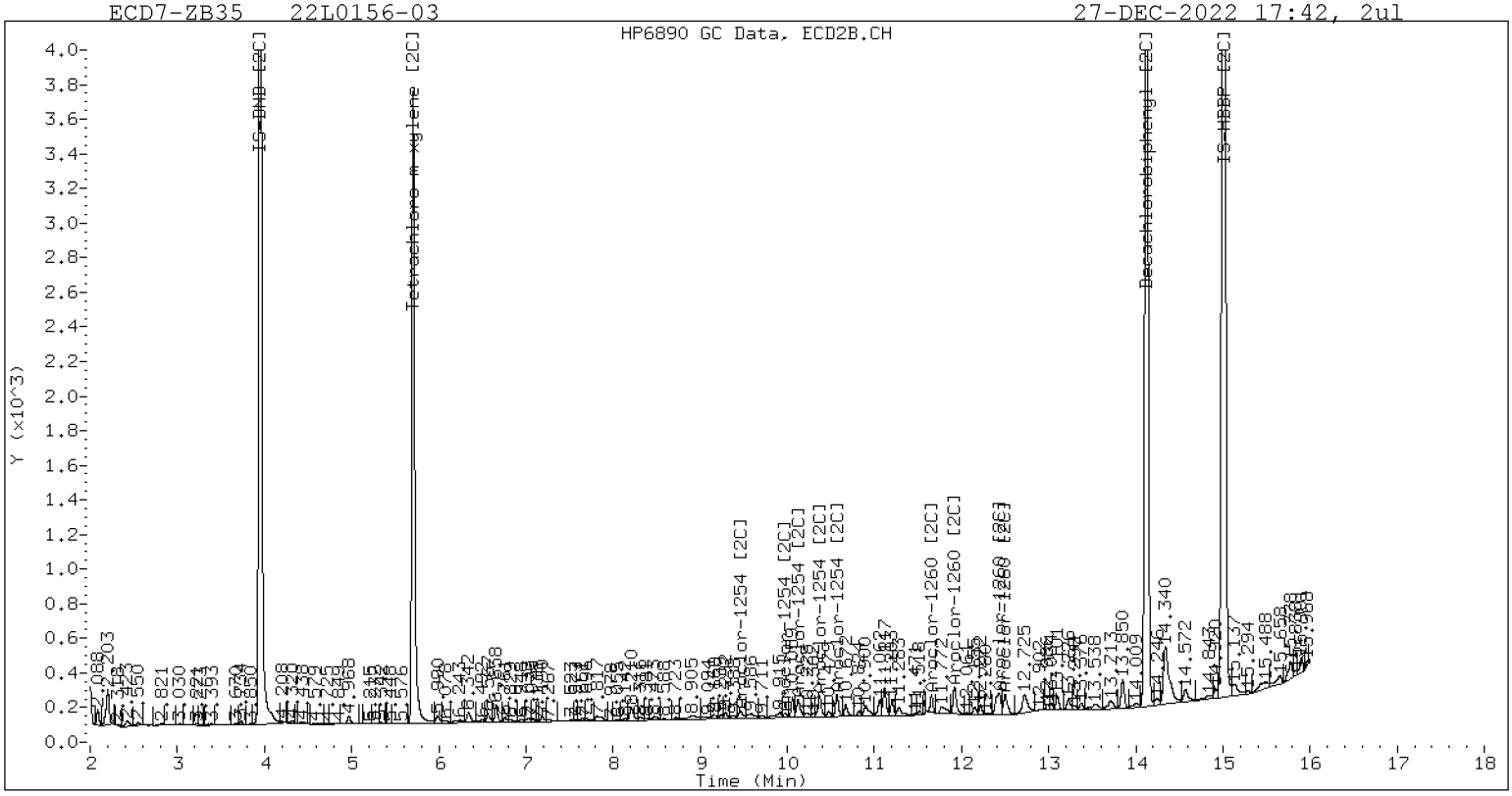
PCB Dual Column Chromatograms

ECD7-ZB5 22L0156-03 27-DEC-2022 17:42, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 22L0156-03 27-DEC-2022 17:42, 2ul

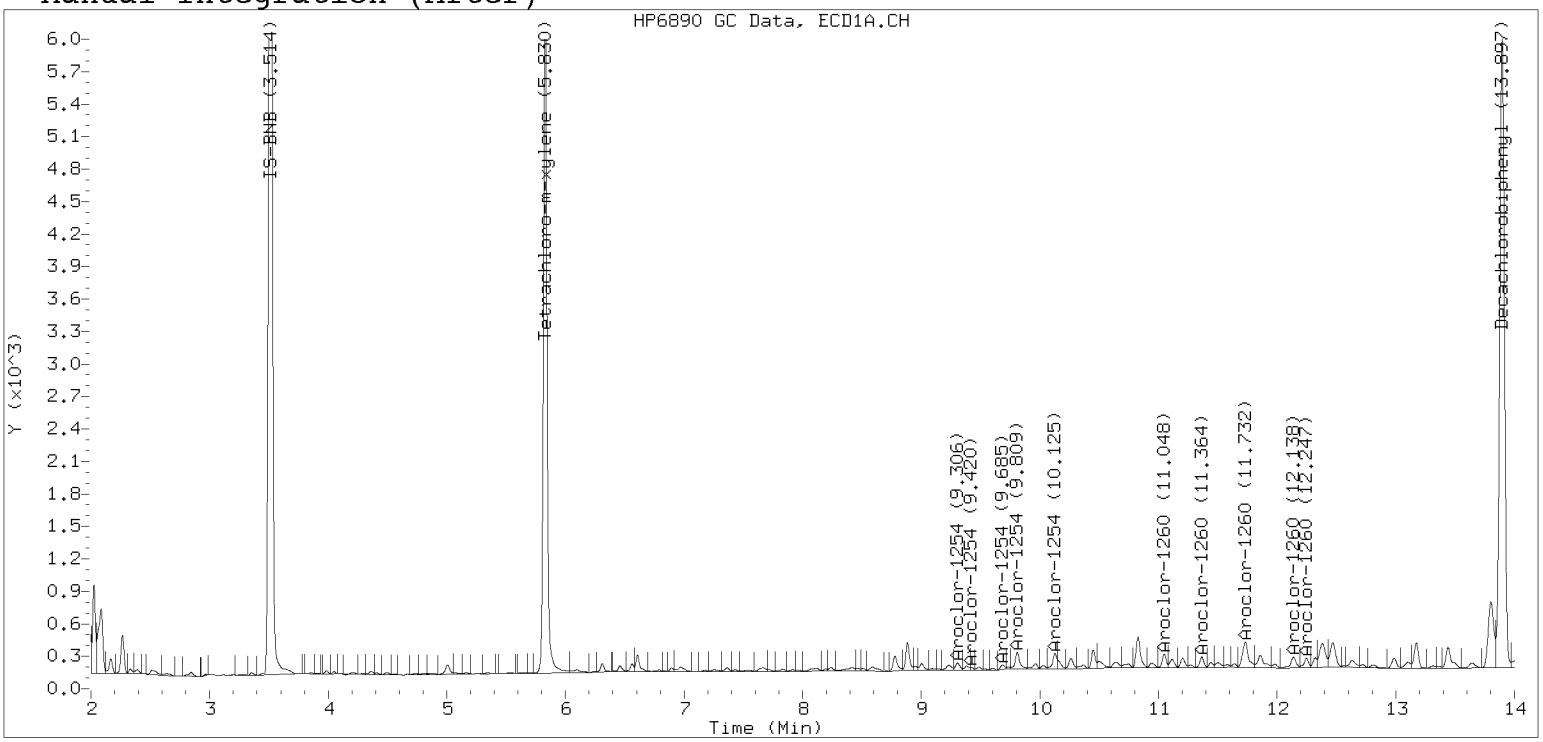


ZB-35 Manual Integration: NO

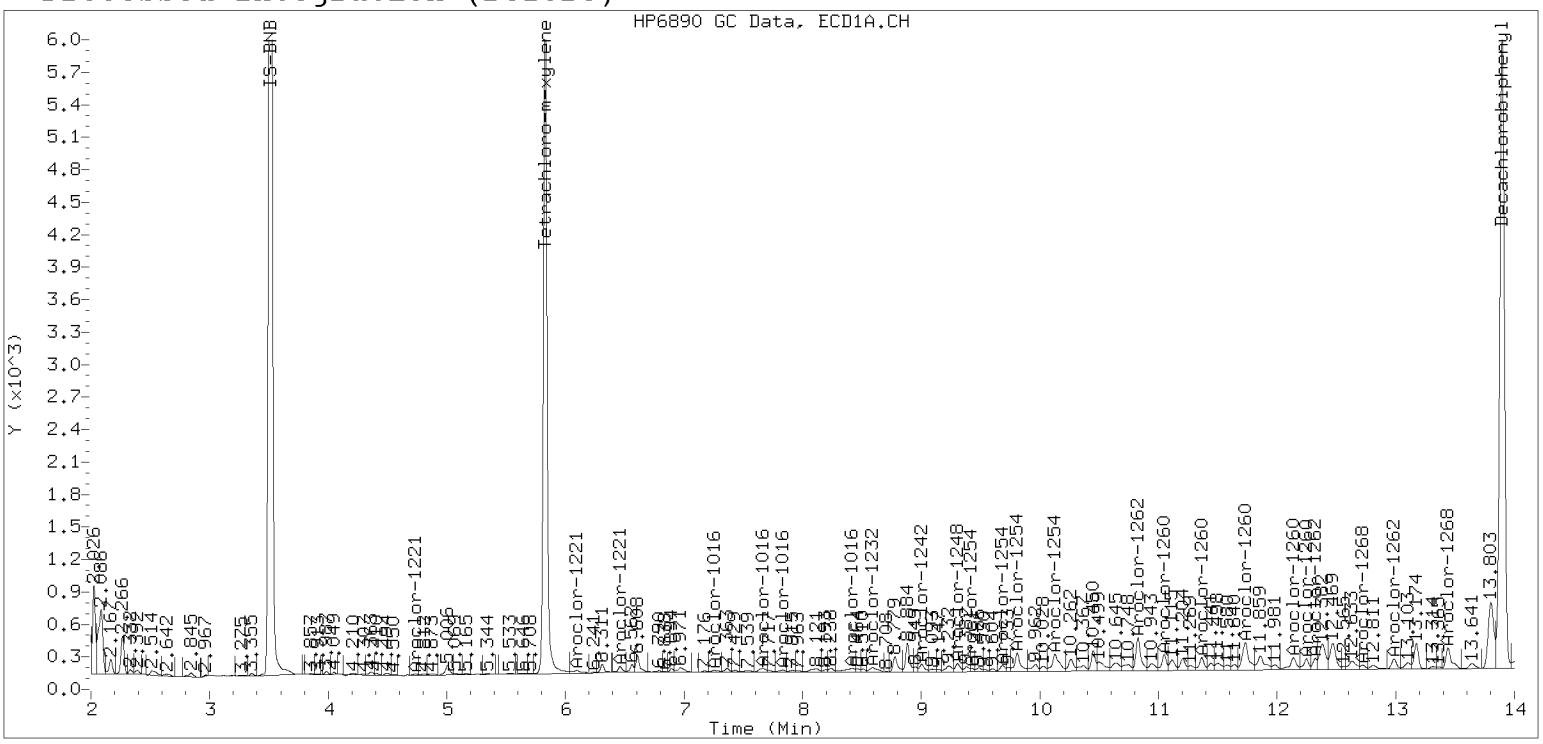
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221227.b/12272204ECD7.D Injection Date: 27-DEC-2022 17:42

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW22-SS794

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Solid	Laboratory ID:	22L0156-04 B	File ID:	12272205ECD7.D
Sampled:	12/07/22 11:05	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 18:03
% Solids:	90.91	Preparation:	EPA 3546 (Microwave)	Initial/Final:	13.76 g Wet / 2.5 mL
Batch:	BKL0366	Sequence:	SKL0377	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	2	1	4.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	2.0	0.6	4.0	J

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9941*	*8.75*	*109*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9941*	*7.24*	*90.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9941*	*9.03*	*113*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9941*	*7.18*	*89.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272205ECD7.D
Data file 2: /221227.b/221227.b/12272205ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0156-04
Client ID:
Injection Date: 27-DEC-2022 18:03
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.001	262754	5.707	-0.002	163275	36.2	35.9	0.9	Tetrachloro-m-xylene
13.899	-0.005	334872	14.126	-0.003	282205	43.8	45.2	3.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	511658	14.3
Hexabromobiphenyl	798898	834635	4.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	331521	33.1
Hexabromobiphenyl	362541	439689	21.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.307	-0.014	5717	12.7	1	9.459	-0.002	3669	17.2
Aroclor-1254	2	9.386	-0.016	2497	14.3	2	9.976	-0.003	2383	13.9
Aroclor-1254	3	9.683	-0.012	3363	11.8	3	10.127	-0.003	7595	20.6
Aroclor-1254	4	9.813	-0.017	9818	17.7	4	10.375	-0.004	8364	21.9
Aroclor-1254	5	10.166	-0.023	5006	13.2	5	10.574	-0.002	5280	28.6
	Total Col1Ave (5 peaks):				13.9	Total Col2Ave (5 peaks):				20.4 RPD = 38
	Corrected Ave (4 peaks):				13.0	Corrected Ave (4 peaks):				18.4 RPD = 34
Aroclor-1260	1	11.051	-0.005	1930	6.4	1	11.660	-0.003	3515	15.1
Aroclor-1260	2	11.368	-0.004	1848	5.9	2	11.921	-0.005	3780	6.5
Aroclor-1260	3	11.739	-0.005	4081	4.9	3	12.418	-0.026	5603	36.1
Aroclor-1260	4	12.141	-0.008	3962	9.4	4	12.503	-0.006	3147	8.1
Aroclor-1260	5	12.250	-0.005	1305	7.6	NS	---			----
	Total Col1Ave (5 peaks):				6.8	Total Col2Ave (4 peaks):				16.5 RPD = 83*
	Corrected Ave (4 peaks):				6.2	Corrected Ave (3 peaks):				9.9 RPD = 46*
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.931 - 13.803) = 276589 Col1 Total PCB = 0.1 ppm*

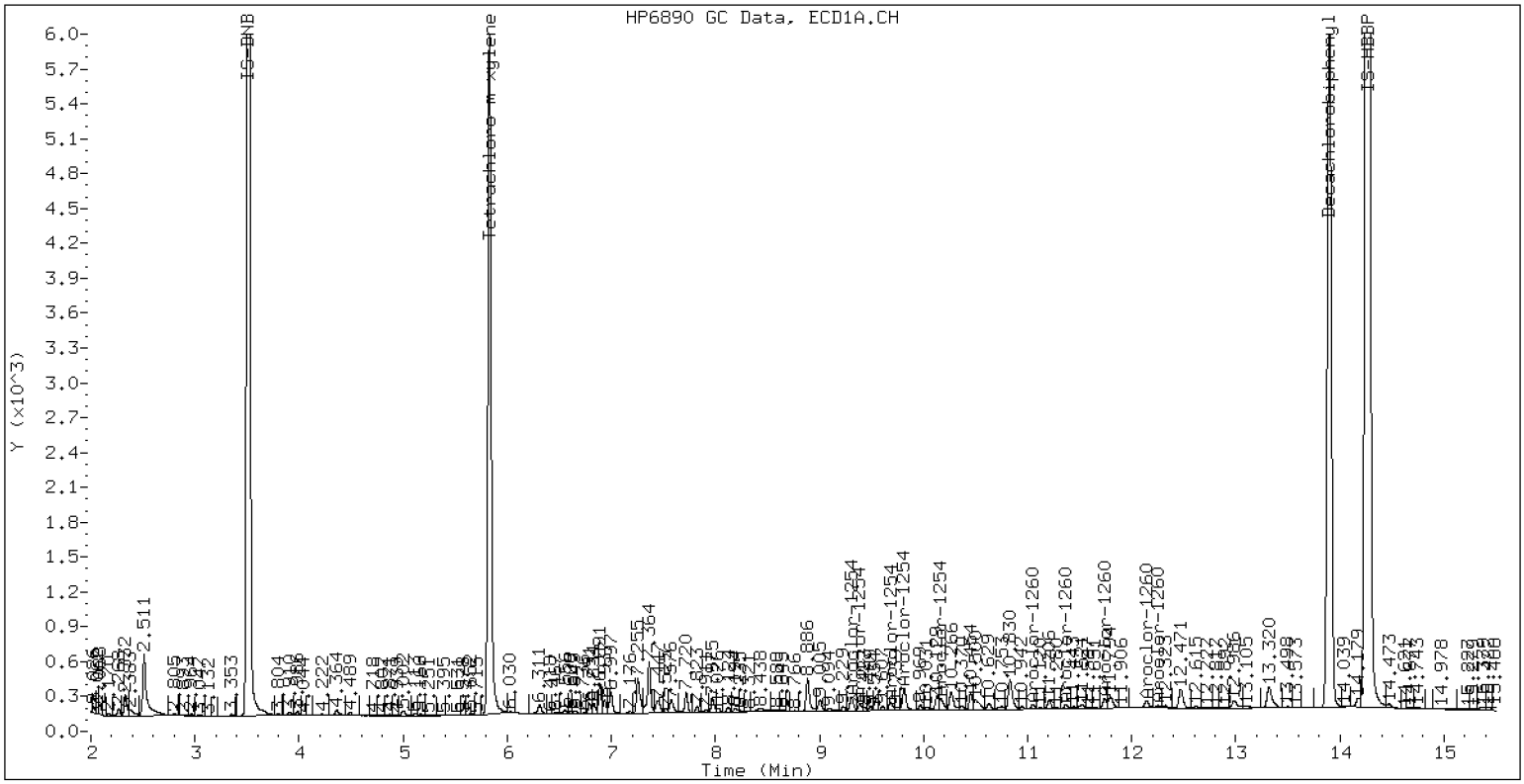
Total PCB Area Col2 (5.809 - 14.028) = 173308 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

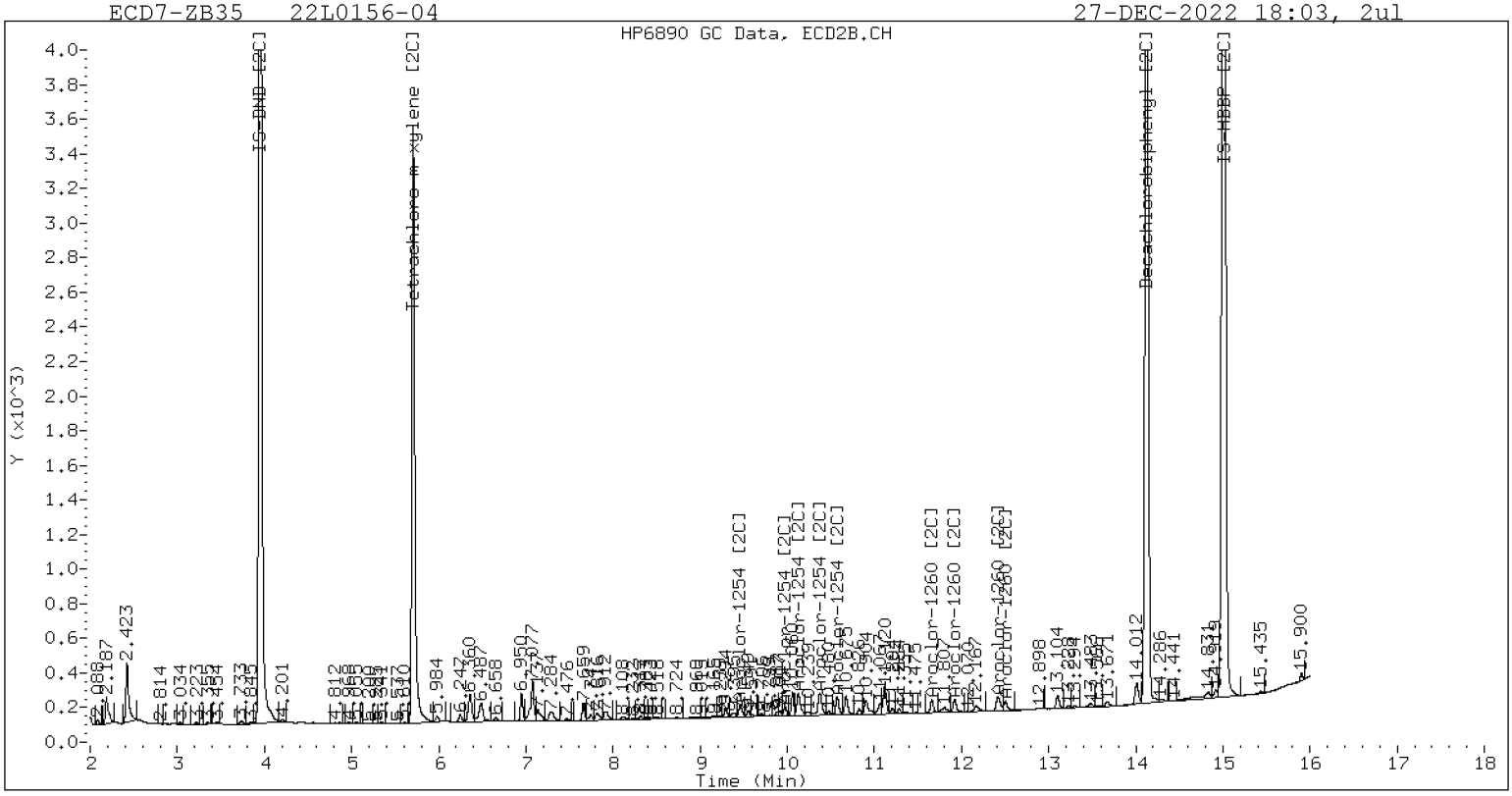
PCB Dual Column Chromatograms

ECD7-ZB5 22L0156-04 27-DEC-2022 18:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0156-04 27-DEC-2022 18:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW22-IT794

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Solid	Laboratory ID:	22L0156-05 B	File ID:	12272208ECD7.D
Sampled:	12/07/22 11:10	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 19:07
% Solids:	84.04	Preparation:	EPA 3546 (Microwave)	Initial/Final:	14.88 g Wet / 2.5 mL
Batch:	BKL0366	Sequence:	SKL0377	Calibration:	FL00010
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	2	1	4.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	1.5	0.6	4.0	J

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9967*	*8.90*	*111*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9967*	*7.52*	*94.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9967*	*8.99*	*112*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9967*	*7.28*	*91.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272208ECD7.D
Data file 2: /221227.b/221227.b/12272208ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0156-05
Client ID:
Injection Date: 27-DEC-2022 19:07
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.000	273814	5.708	-0.001	166555	37.6	36.4	3.3	Tetrachloro-m-xylene
13.899	-0.004	340385	14.126	-0.002	278261	44.5	45.0	1.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	513580	14.7
Hexabromobiphenyl	798898	833707	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	333641	33.9
Hexabromobiphenyl	362541	435842	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.308	-0.013	7820	17.3	1	9.457	-0.004	3866	18.0
Aroclor-1254	2	9.386	-0.015	2994	17.0	2	9.976	-0.002	3160	18.3
Aroclor-1254	3	9.680	-0.014	3310	11.6	3	10.128	-0.002	8310	22.4
Aroclor-1254	4	9.814	-0.017	11470	20.6	4	10.375	-0.004	8035	20.9
Aroclor-1254	5	10.169	-0.020	6632	17.4	5	10.573	-0.003	4378	23.6
		Total Col1Ave (5 peaks):			16.8	Total Col2Ave (5 peaks):				20.6 RPD = 20
		Corrected Ave (4 peaks):			15.8	Corrected Ave (4 peaks):				19.9 RPD = 23
Aroclor-1260	1	11.052	-0.003	1934	6.4	1	11.662	-0.001	2954	12.8
Aroclor-1260	2	11.369	-0.003	1748	5.6	2	11.922	-0.004	2824	4.9
Aroclor-1260	3	11.739	-0.004	4426	5.4	3	12.437	-0.008	1013	6.6
Aroclor-1260	4	12.142	-0.007	2424	5.8	4	12.505	-0.005	2004	5.2
Aroclor-1260	5	12.252	-0.004	623	3.6	NS	---			----
		Total Col1Ave (5 peaks):			5.3	Total Col2Ave (4 peaks):				7.4 RPD = 32
		Corrected Ave (4 peaks):			5.1	Corrected Ave (3 peaks):				5.6 RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.931 - 13.803) = 185398 Col1 Total PCB = 0.0 ppm*

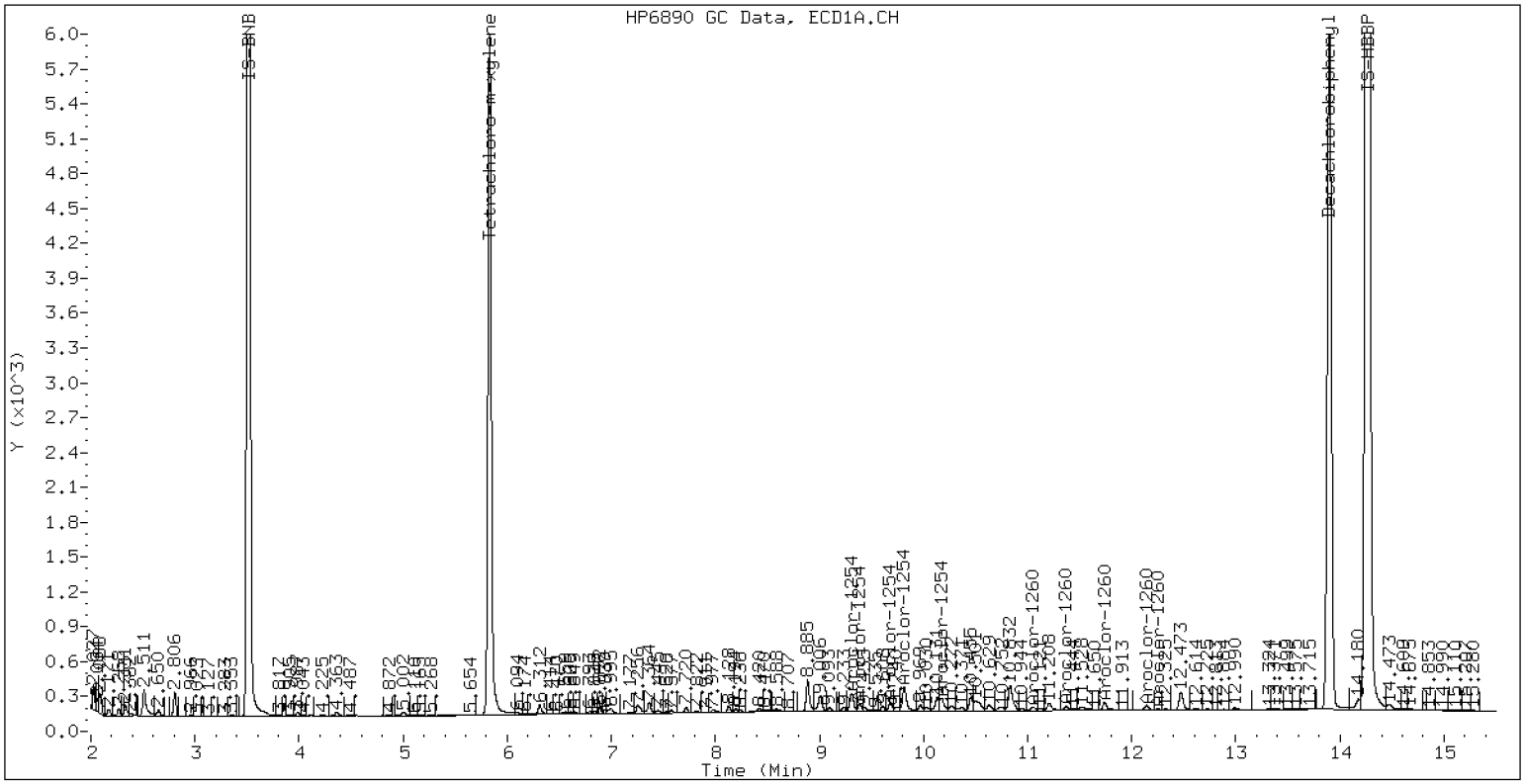
Total PCB Area Col2 (5.809 - 14.028) = 109753 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

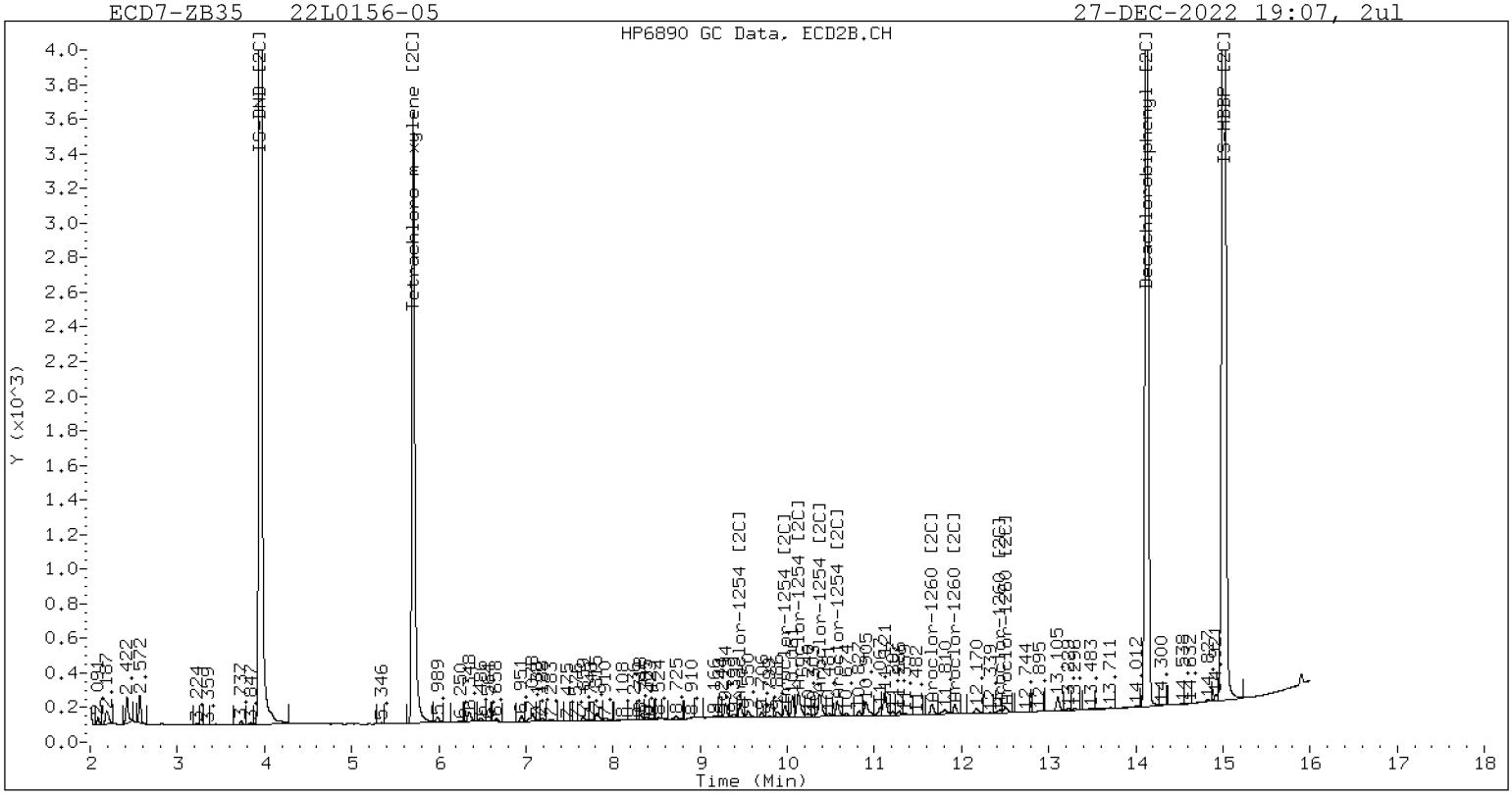
PCB Dual Column Chromatograms

ECD7-ZB5 22L0156-05 27-DEC-2022 19:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 22L0156-05 27-DEC-2022 19:07, 2ul



ZB-35 Manual Integration: NO

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 22L0156

Client: Anchor QEA, LLC Project: AOC4 UR Phase 3

Batch: BKL0366 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW22-SS797	22L0156-01	12262266ECD7.D	12/16/22 14:35	
LDW22-IT797	22L0156-02	12262267ECD7.D	12/16/22 14:35	
LDW22-SS812	22L0156-03	12272204ECD7.D	12/16/22 14:35	
LDW22-SS794	22L0156-04	12272205ECD7.D	12/16/22 14:35	
LDW22-IT794	22L0156-05	12272208ECD7.D	12/16/22 14:35	
Blank	BKL0366-BLK1	12262256ECD7.D	12/16/22 14:35	
LCS	BKL0366-BS1	12262257ECD7.D	12/16/22 14:35	
LCS Dup	BKL0366-BSD1	12262258ECD7.D	12/16/22 14:35	
MRL Check	BKL0366-MRL1	12262259ECD7.D	12/16/22 14:35	
MRL Check	BKL0366-MRL2	12262260ECD7.D	12/16/22 14:35	
LDW22-SS794	BKL0366-MS1	12272206ECD7.D	12/16/22 14:35	
LDW22-SS794	BKL0366-MSD1	12272207ECD7.D	12/16/22 14:35	
Reference	BKL0366-SRM1	12262261ECD7.D	12/16/22 14:35	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BKL0366

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid **Date Prepared:** 12/16/22 **Balance ID:** B139298002 **Set Up By:** PCB CRO in/14/m

WO Comments

22L0155: <G> BPR Project batch as much as possible </G> <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36, MS/MSD </E>
<H>BPR J006840-43, 7935-36 Dup </H> Store immediately in freezer (except GS)

22L0156: <G> BPR Project batch as much as possible </G> <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36, MS/MSD </E>
<H>BPR J006840-43, 7935-36 Dup </H> Store immediately in freezer (except GS)

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
22L0155-61 B	57.9	(21.59) 21.60	5mL	5mL	2mL	2.5	1.0	
22L0155-62 B	62.9	(19.87) 19.91	5mL	5mL	2mL	2.5	1.0	
22L0155-63 B	58.7	(21.30) 21.39	5mL	5mL	2mL	2.5	1.0	
22L0155-64 B	59.5	(21.01) 21.03	5mL	5mL	2mL	2.5	1.0	
22L0156-01 B	89.0	(14.04) 14.08	5mL	5mL	2mL	2.5	1.0	
22L0156-02 B	84.8	(14.75) 14.77	5mL	5mL	2mL	2.5	1.0	
22L0156-03 B	77.6	(16.11) 16.16	5mL	5mL	2mL	2.5	1.0	
22L0156-04 B	90.9	(13.75) 13.76	5mL	5mL	2mL	2.5	1.0	
22L0156-05 B	84.0	(14.87) 14.88	5mL	5mL	2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BKL0366-BLK1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0366-BS1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0366-BSD1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BKL0366-MRL1	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.) 25µL
BKL0366-MRL2	100.0	(12.50) 12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.) 13µL
BKL0366-MS1	90.9	(13.75) 13.77	5mL	5mL	2mL	2.5	1.0	Use 22L0156-04
BKL0366-MSD1	90.9	(13.75) 13.76	5mL	5mL	2mL	2.5	1.0	Use 22L0156-04
BKL0366-SRM1	100.0	~~(12.50)~~ (2.50) 2.50 +1g DI WATER	5mL	5mL	2mL	2.5	1.0	Use K003525

VR 12/16/22
Client ID verified By Date

TWC 12/20/22
Preparation Reviewed By Date

12/16/22 14:35
Extraction Date and Time

Printed: 12/14/2022 11:41:54AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BKL0366

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

22L0155: <G> BPR Project batch as much as possible </G> <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36, MS/MSD </E>
<H>BPR J006840-43, 7935-36 Dup </H> Store immediately in freezer (except GS)

22L0156: <G> BPR Project batch as much as possible </G> <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36, MS/MSD </E>
<H>BPR J006840-43, 7935-36 Dup </H> Store immediately in freezer (except GS)

Prep Steps

Microwave
1 2 3
CT
Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)
1 2 3 (4) (5) 6
AA 12-17-22
Analyst/Date

TurboVap
Pre Cleanups
1 2 3 (4) 5
TWC for NRB 12/14/22
Analyst/Date

TurboVap
Post Cleanups
1 (2) 3 4 5
TWC 12/20/22
Analyst/Date

Vialing
TWC 12/20/22
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT Date: 12/16/22	
Neutral Glass Wool	K011285
1:1 Hexane/Acetone	K011389
Hexane	K011373
Anhydrous Sodium Sulfate	K011562
KD Analyst: AA Date: 12-17-22	
Anhydrous Sodium Sulfate	NA
Hexane	K008310
Vialing Analyst: TWC/NRB Date: 12/20/22	
Hexane	K008310
Concentrated Sulfuric Acid	K010364
Silica Gel (SPE) Darts	K011573
Sodium Sulfite	K003744
Tetrabutylammonium hydrogensulfate (TBAS)	K011530

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate	N K010600 (V)	50µL	CT	
2µg/mL	Exp Date: 1/23/2023			
Spike	1 K008150 (V)	63µL	CT	
20µg/mL	Exp Date: 3/5/2023			
QLS Spike	QLS K009793	25µL	CT	
2µg/mL	Exp Date: 3/5/2023	13µL		

MANUALLY ENTER EXPIRATION DATES!

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BKL0366

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

22L0155: <G> BPR Project batch as much as possible </G> <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36, MS/MSD </E>
<H>BPR J006840-43, 7935-36 Dup </H> Store immediately in freezer (except GS)
22L0156: <G> BPR Project batch as much as possible </G> <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36, MS/MSD </E>
<H>BPR J006840-43, 7935-36 Dup </H> Store immediately in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Clean-ups. 14. TurboVap. 15. Vial with Hexane. A. Need Total Solids Y (N) B. Archive/Freeze (Y) N	

3099F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

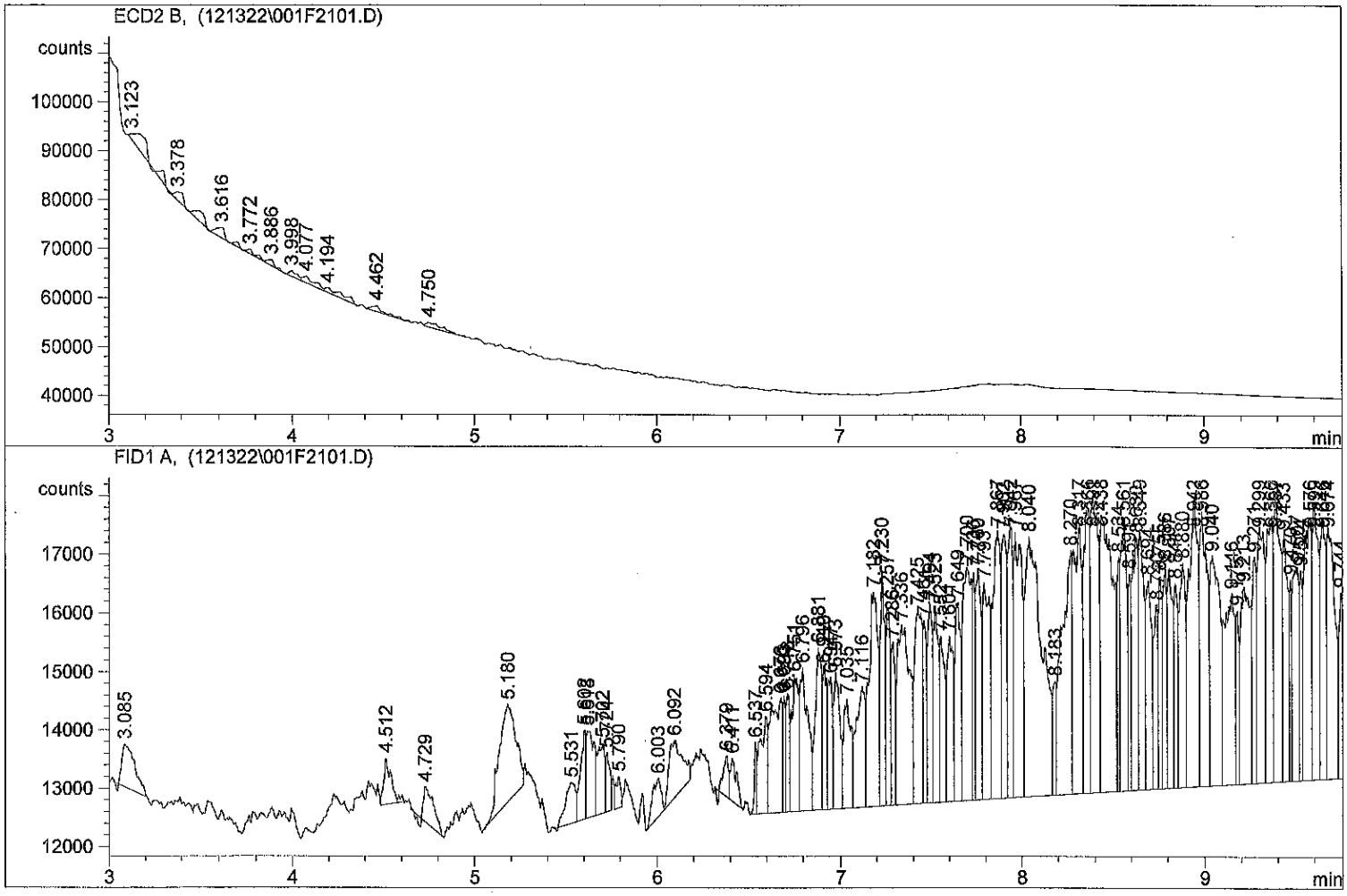
Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB Extraction Batch: BKL0366

Total Solids Batch: BKL0231 Work Order(s): 22L0155 61-64, 22L0156

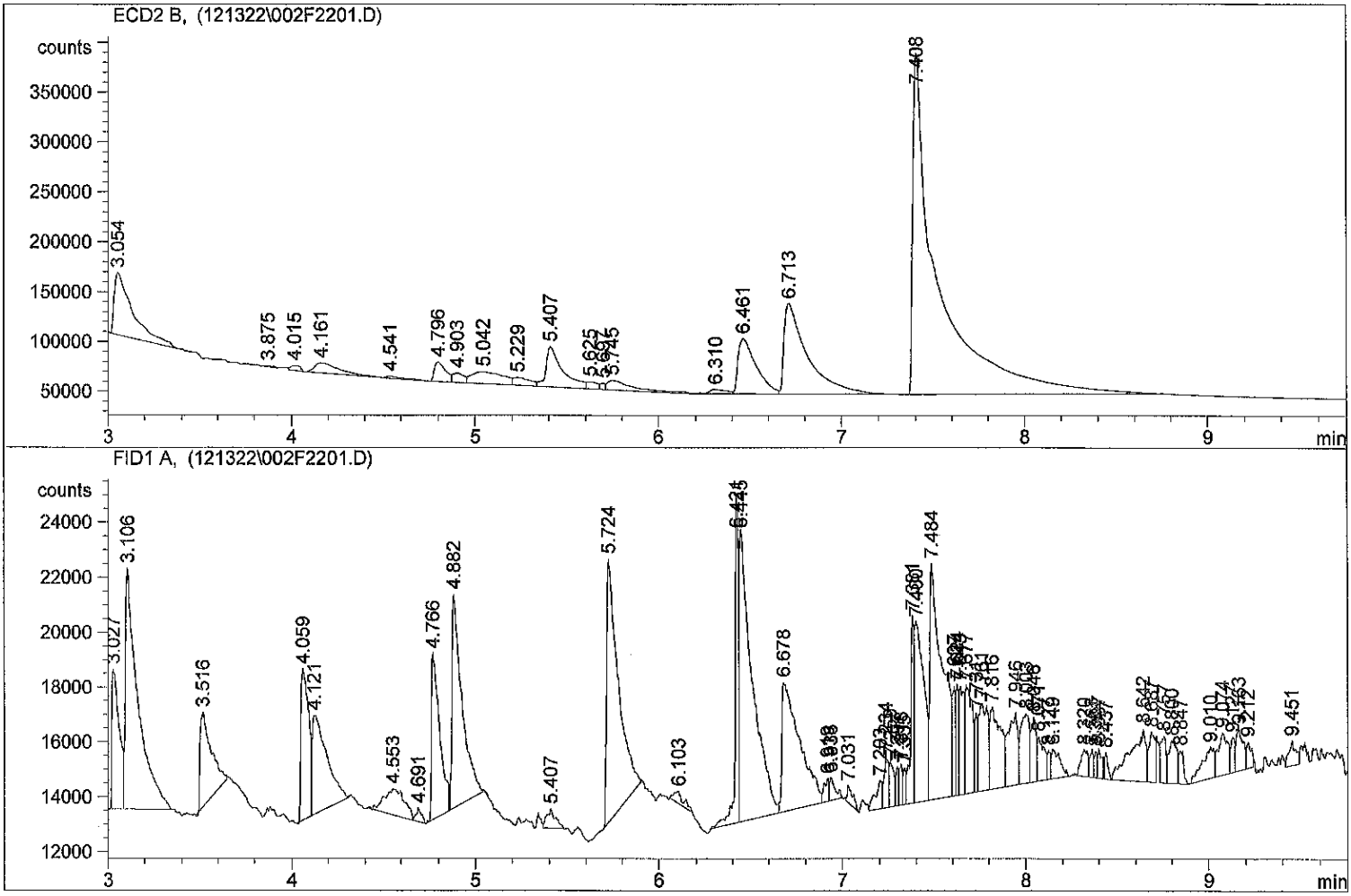
Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= 0155:63,64, 0156:01-05	CR 12/13/22
[X] Standing Water Decanted (Not shared)= 0155:61-64, 0156:02,03,05	CR 12/13/22
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[X] Oily, obvious fuel/sulfur odors= 0155:61,62	CR 12/13/22
[ ] Received in 32oz jar(s)=Homogenized in Pyrex dish=	
[ ] Previously Frozen =	
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
[ ] Received in 1.0L Bottle(s)=No Bottle Rinse=	
[ ] Other Notes/Comments= (Note problems, concerns, corrective actions).	
[X] Share Samples Y / (N)	CR 12/13/22
[X] Multiple Jars Y / (N)	CR 12/13/22
[ ] Sample Pre-Screens indicate analyte activity=	
[ ] Sample weights/volumes reduced based on Pre-Screen=	

Injection Date	: 12/13/2022 8:59:17 PM	Seq. Line	: 21
Sample Name	: DCM RINSE	Location	: Vial 1
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

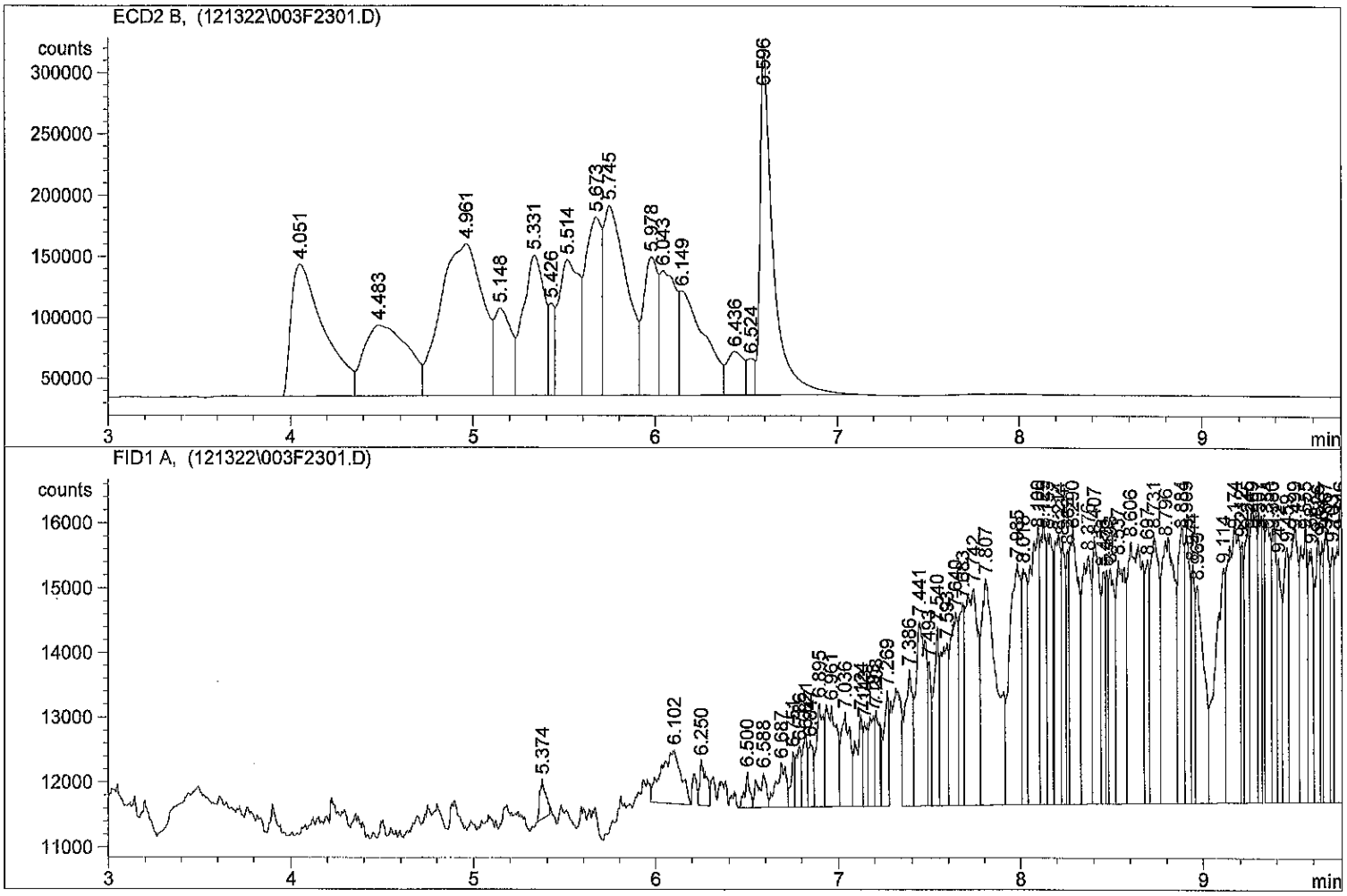
Injection Date	: 12/13/2022 9:13:53 PM	Seq. Line	: 22
Sample Name	: PNA STD 10PPM	Location	: Vial 2
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

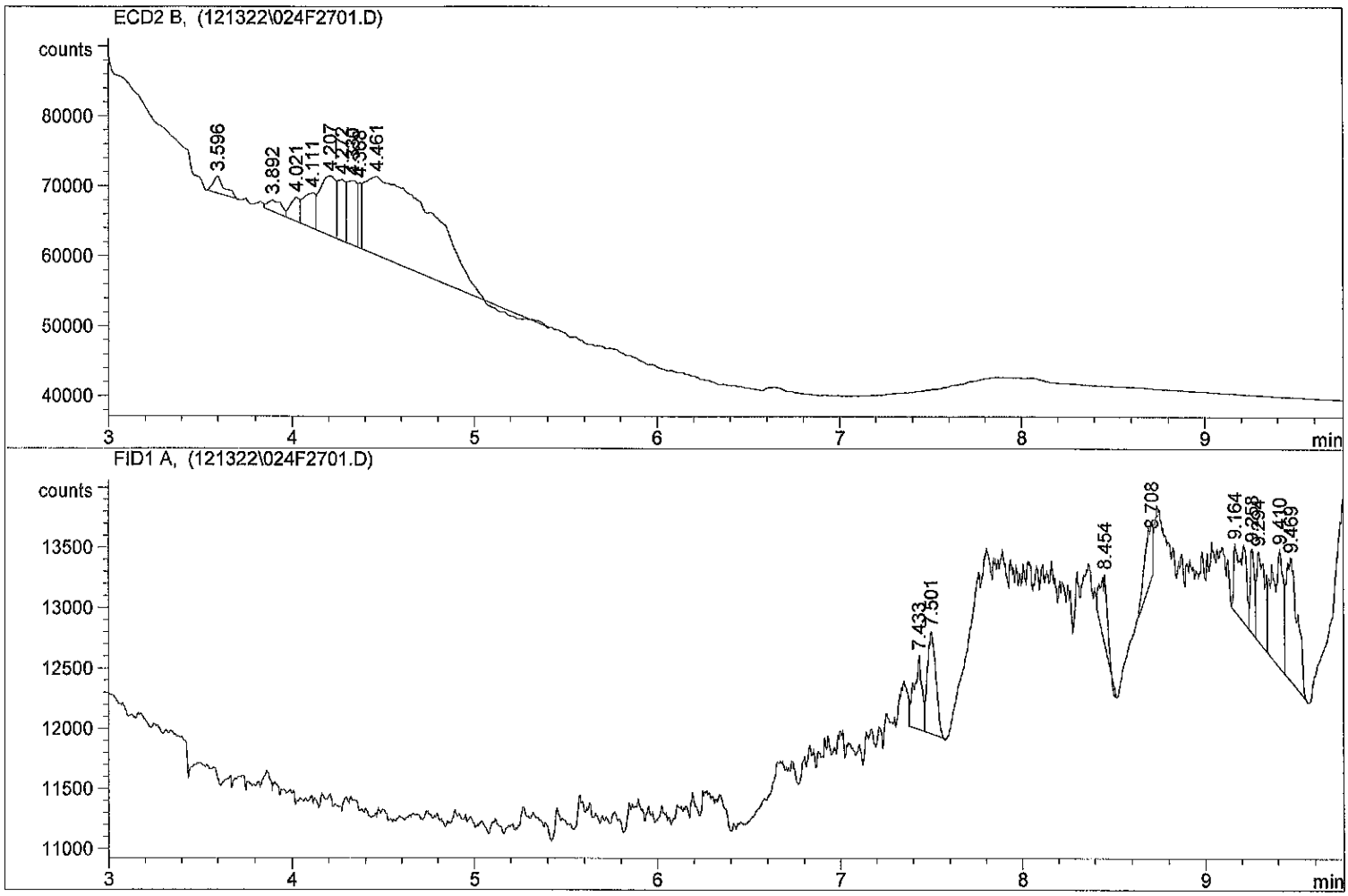
Injection Date : 12/13/2022 9:28:27 PM Seq. Line : 23
Sample Name : AR1660 1PPM Location : Vial 3
Acq. Operator : CR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\121322.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



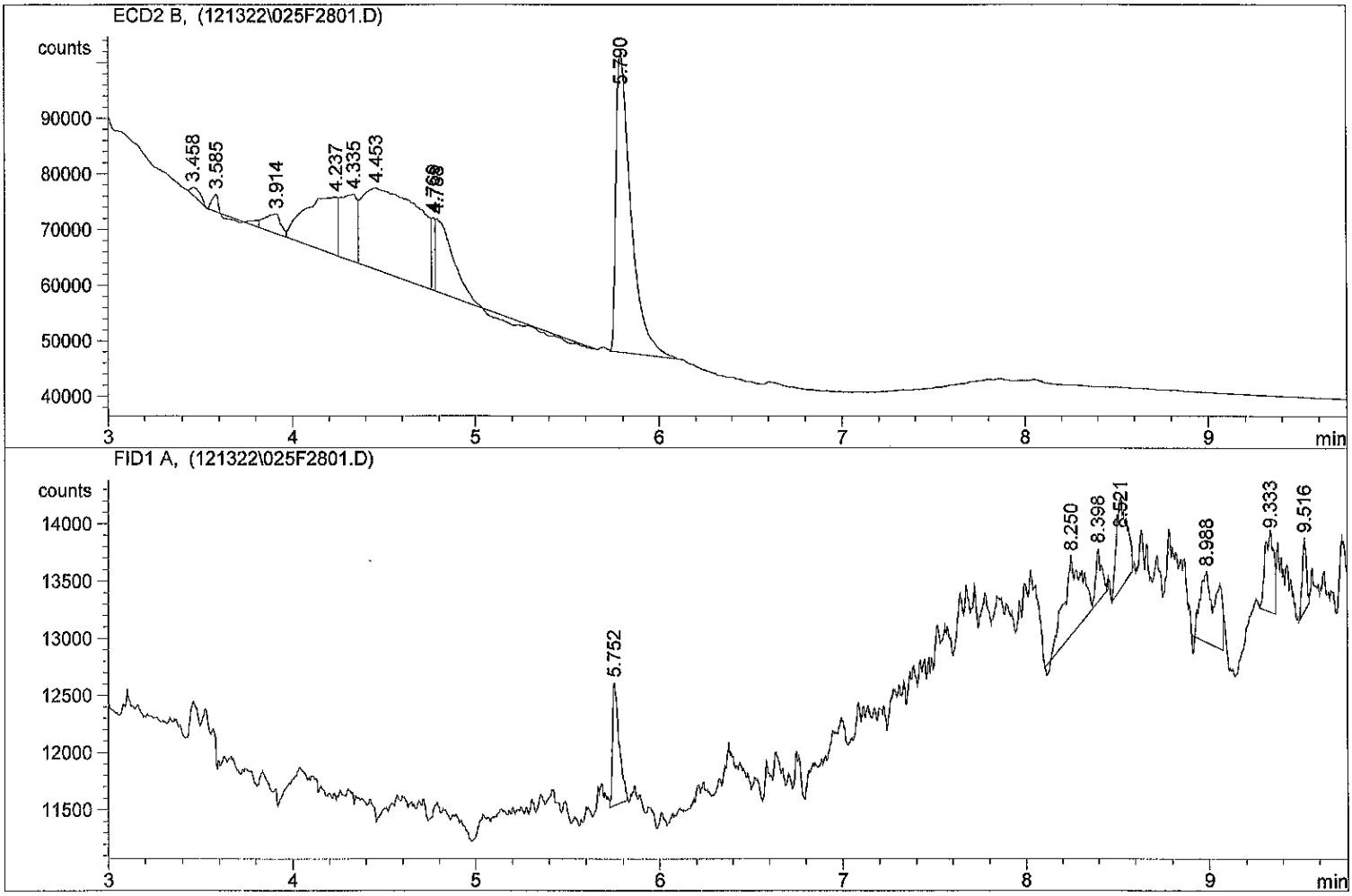
*** End of Report ***

Injection Date	: 12/13/2022 10:26:32 PM	Seq. Line	: 27
Sample Name	: 22L0155 61	Location	: Vial 24
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

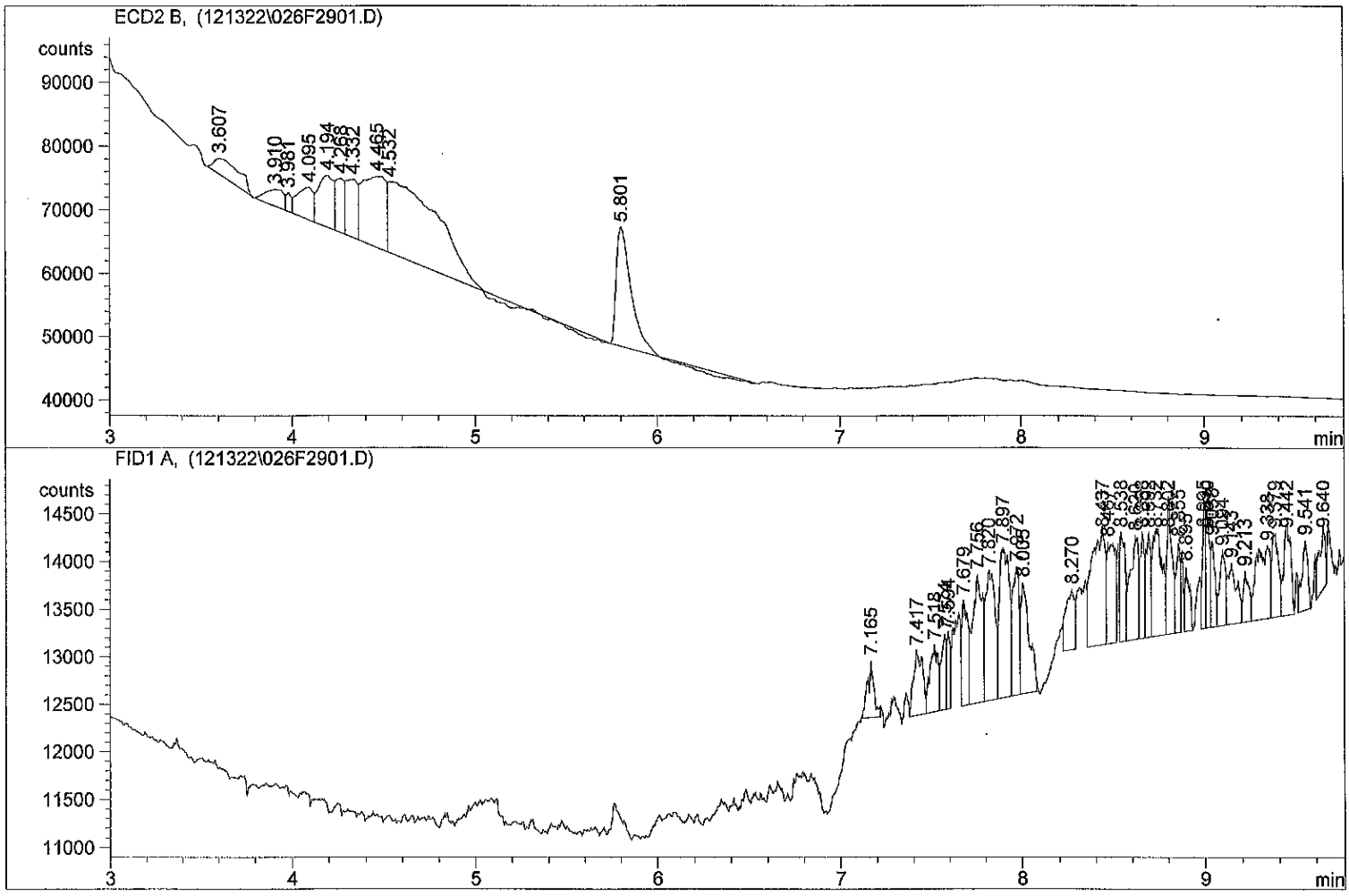
Injection Date	: 12/13/2022 10:41:09 PM	Seq. Line	: 28
Sample Name	: 22L0155 62	Location	: Vial 25
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date : 12/13/2022 10:54:42 PM Seq. Line : 29
Sample Name : 22L0155 63 Location : Vial 26
Acq. Operator : CR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\121322.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

```
Injection Date  : 12/13/2022 11:08:00 PM        Seq. Line :  30
Sample Name     : 22L0155 64                    Location : Vial 27
Acq. Operator   : CR                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\121322.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
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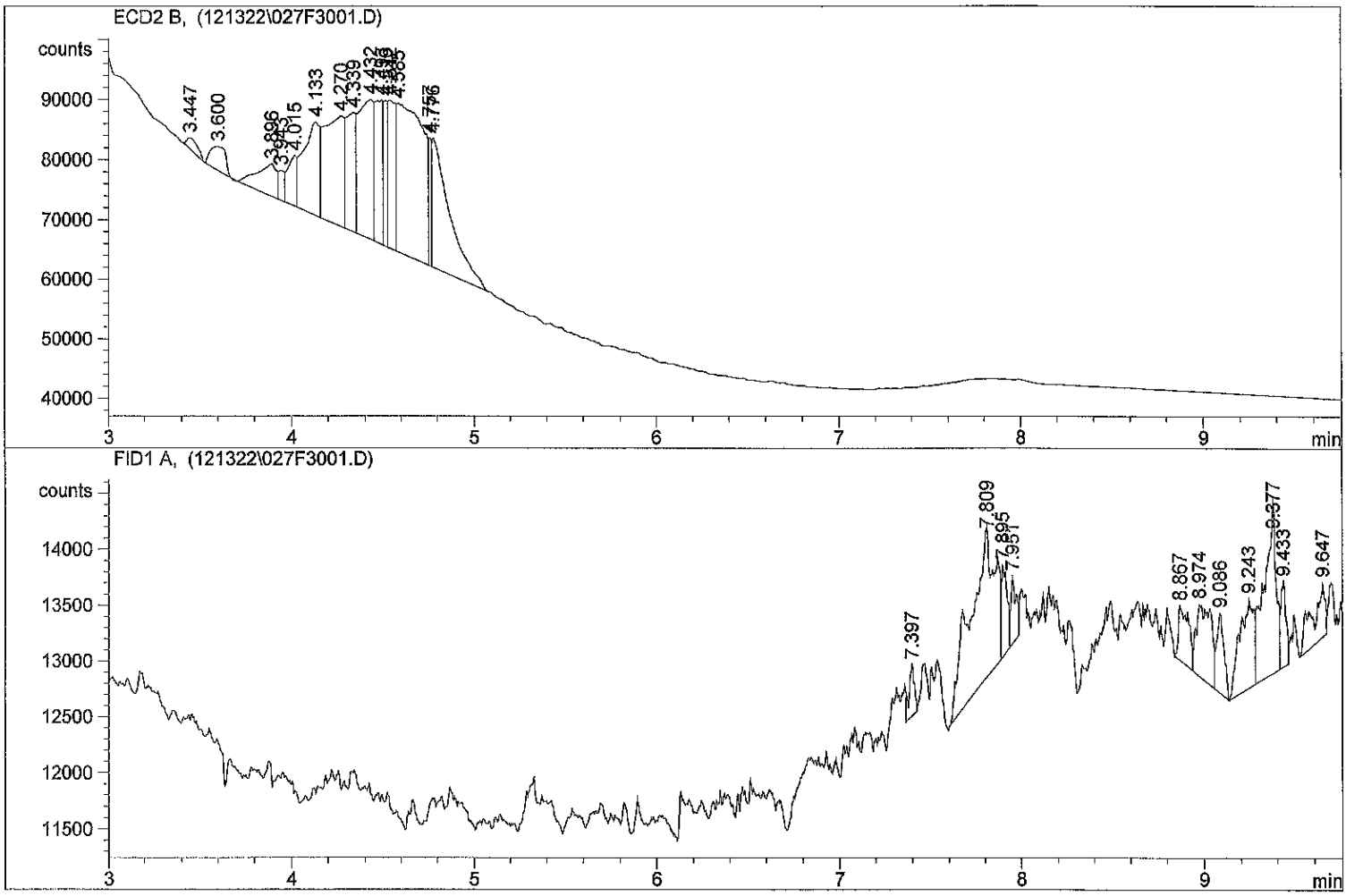
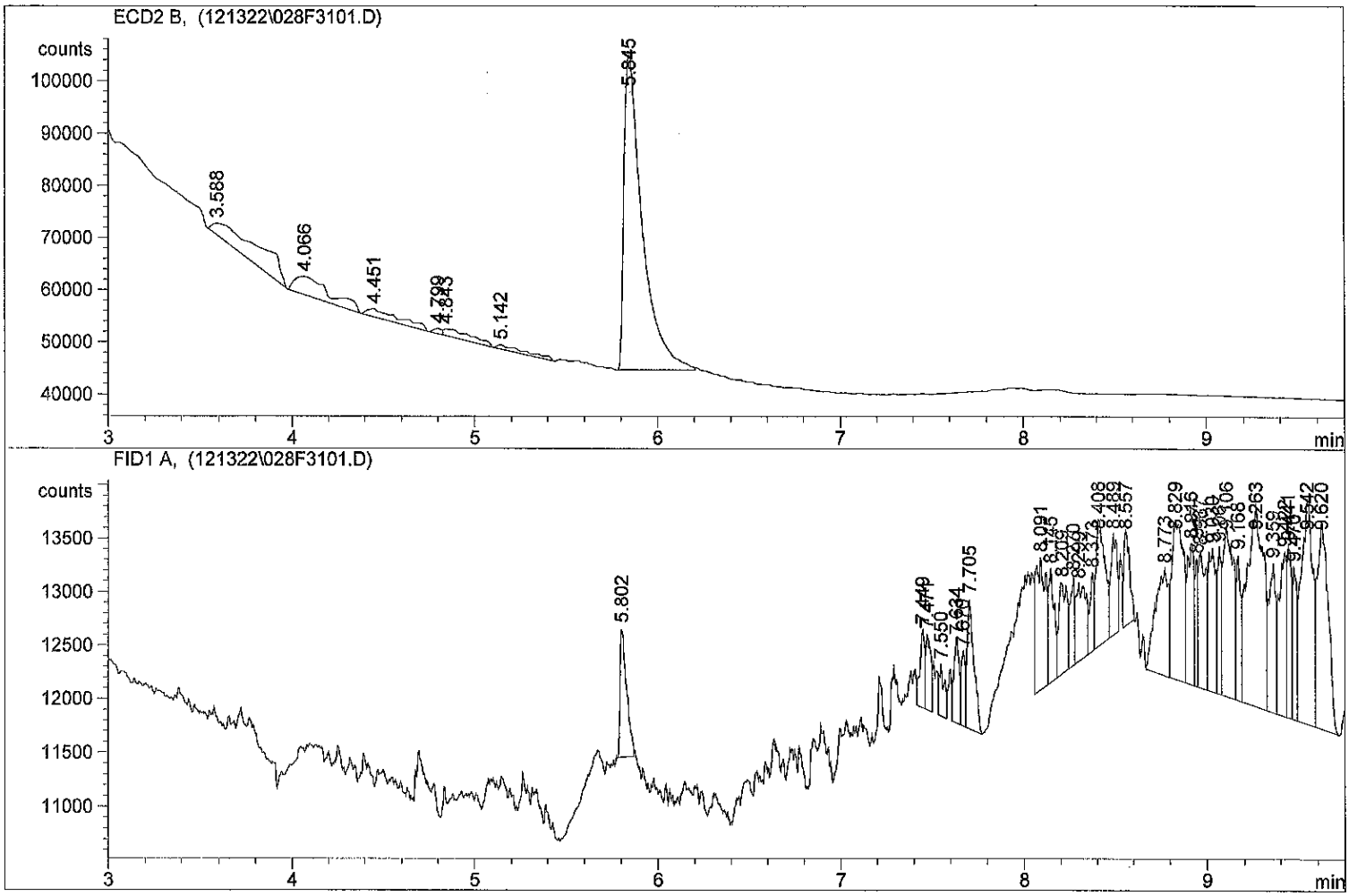


*** End of Report ***

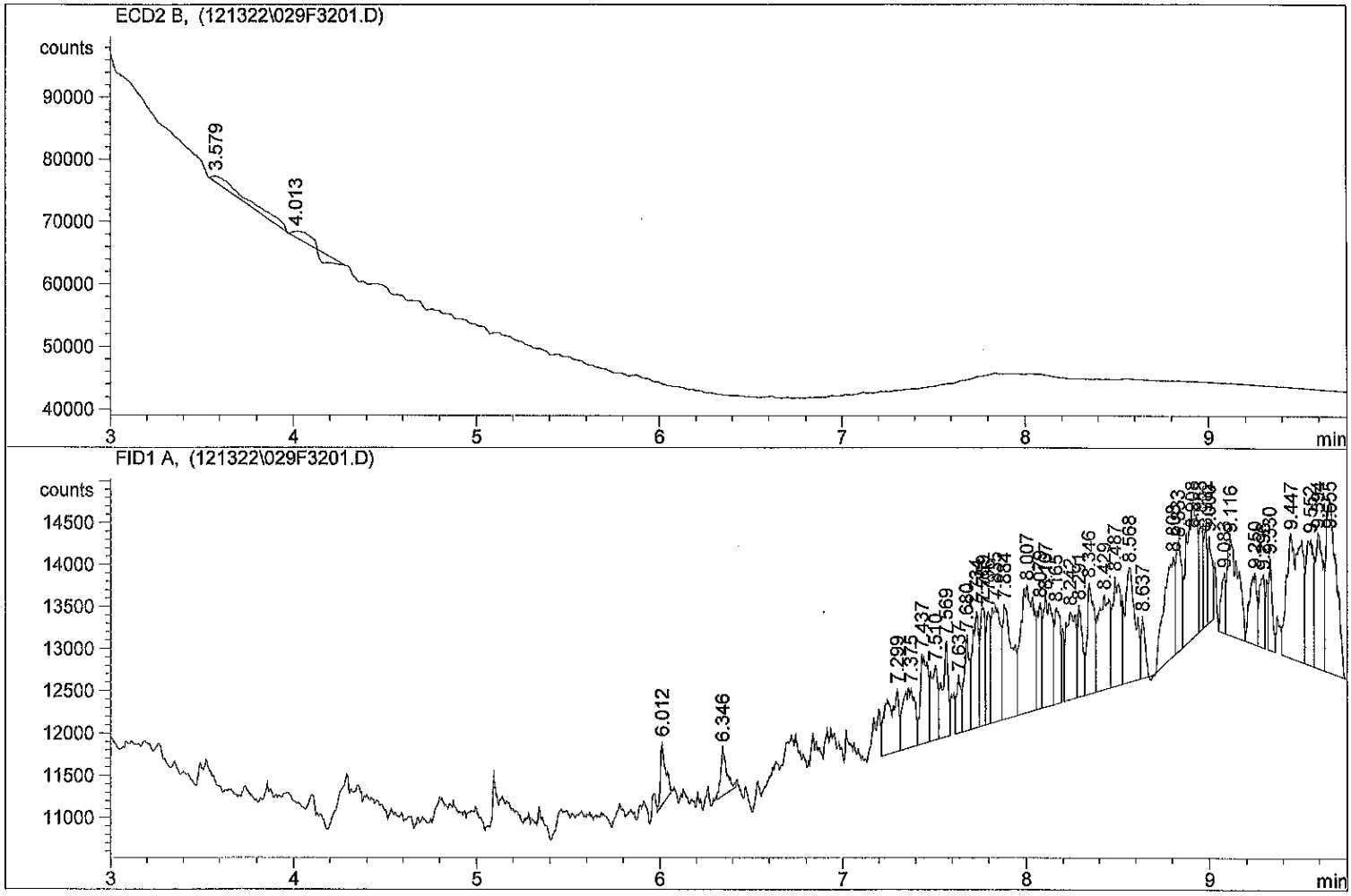
Injection Date	: 12/13/2022 11:20:44 PM	Seq. Line	: 31
Sample Name	: 22L0156 01	Location	: Vial 28
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

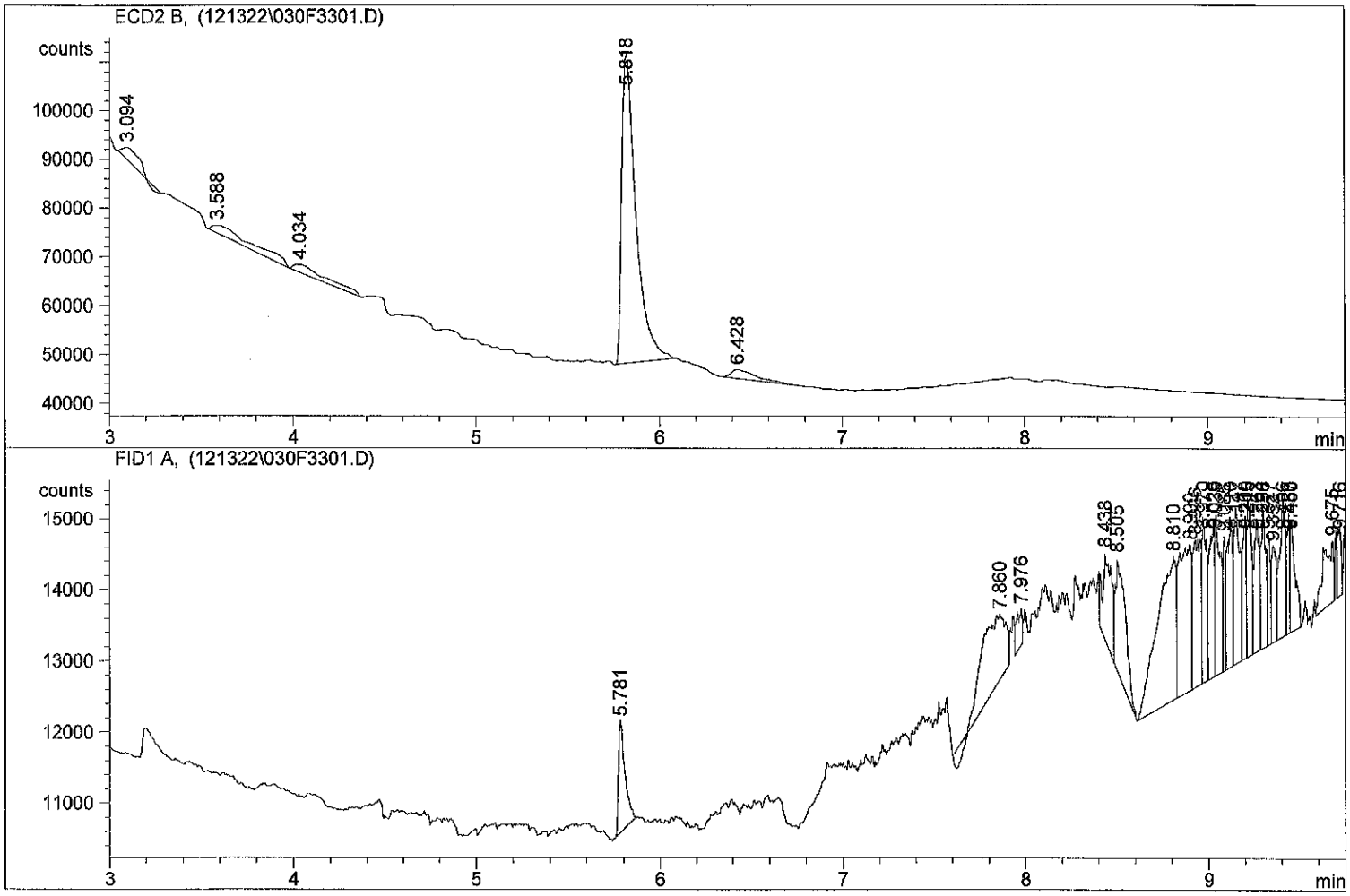
Injection Date : 12/13/2022 11:39:58 PM Seq. Line : 32
Sample Name : 22L0156 02 Location : Vial 29
Acq. Operator : CR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\121322.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



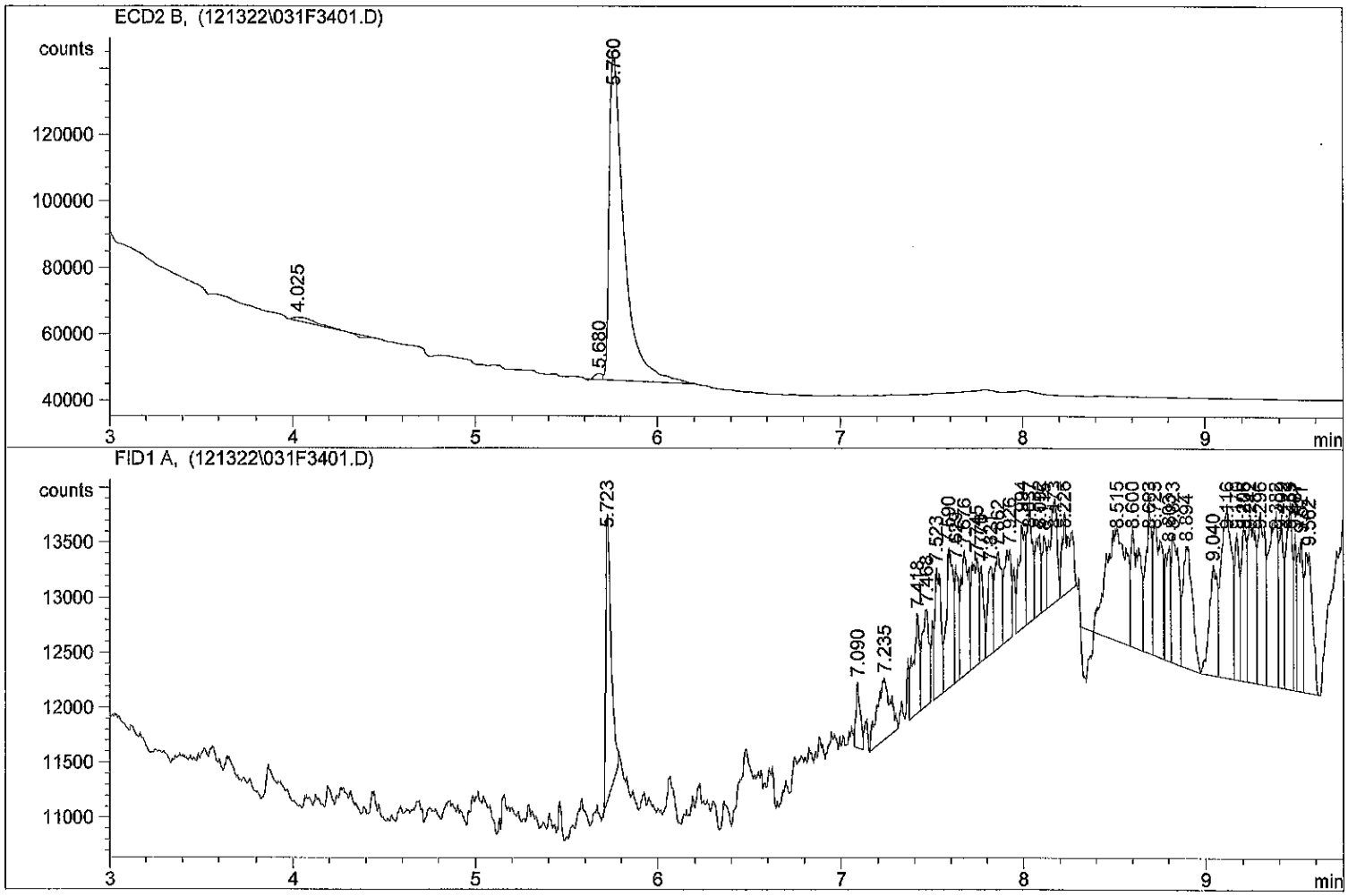
*** End of Report ***

Injection Date	: 12/13/2022 11:51:53 PM	Seq. Line	: 33
Sample Name	: 22L0156 03	Location	: Vial 30
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



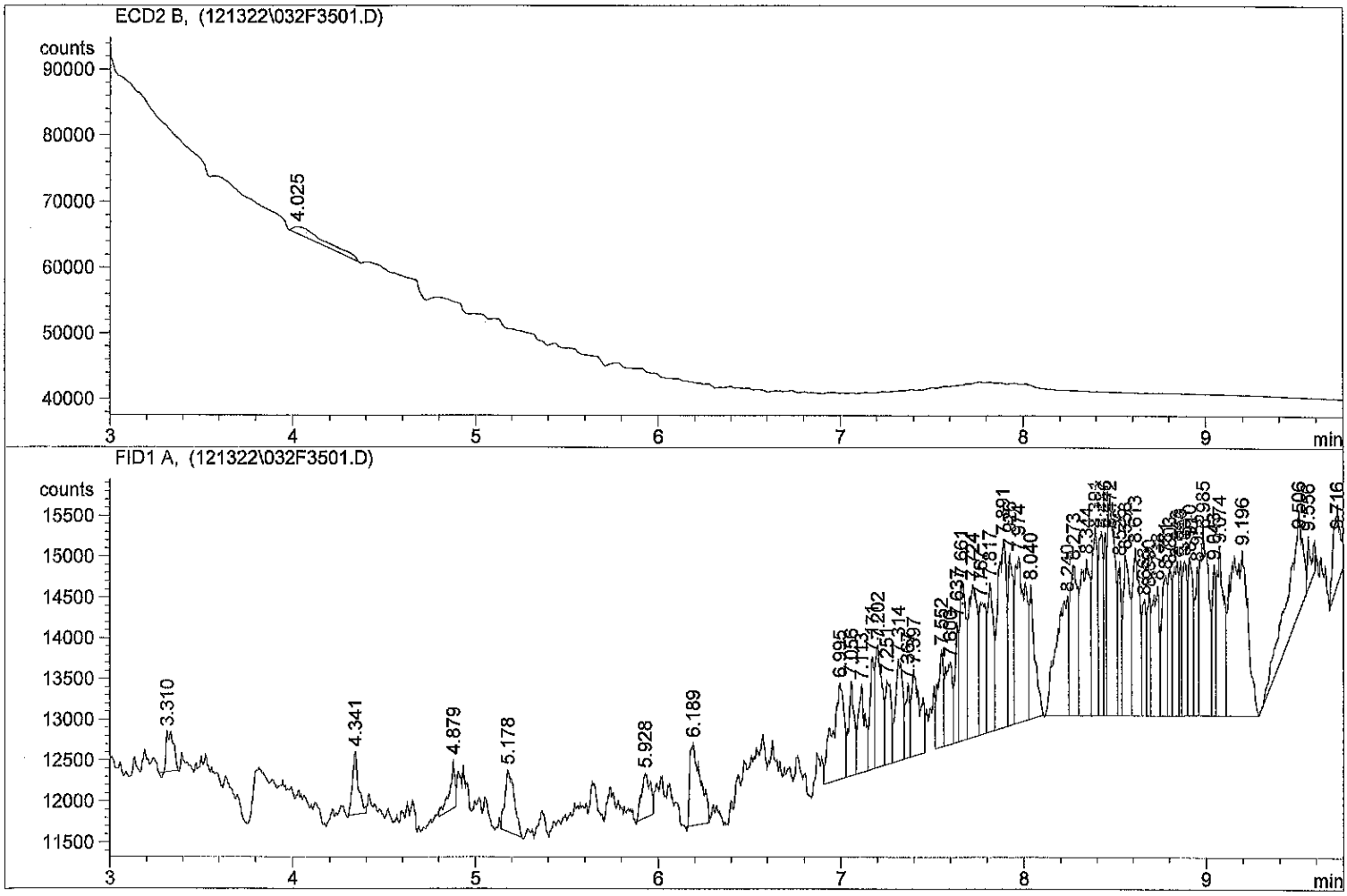
*** End of Report ***

Injection Date	: 12/14/2022 12:10:27 AM	Seq. Line	: 34
Sample Name	: 22L0156 04	Location	: Vial 31
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date	: 12/14/2022 12:24:55 AM	Seq. Line	: 35
Sample Name	: 22L0156 05	Location	: Vial 32
Acq. Operator	: CR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\121322.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Cleanup Batch:	CKL0227	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike	BKL0366-MS1	12272206ECD7.D	12/19/2022	
Reference	BKL0366-SRM1	12262261ECD7.D	12/19/2022	
MRL Check	BKL0366-MRL2	12262260ECD7.D	12/19/2022	
Matrix Spike Dup	BKL0366-MSD1	12272207ECD7.D	12/19/2022	
LDW22-IT794	22L0156-05	12272208ECD7.D	12/19/2022	
LCS Dup	BKL0366-BSD1	12262258ECD7.D	12/19/2022	
LCS	BKL0366-BS1	12262257ECD7.D	12/19/2022	
Blank	BKL0366-BLK1	12262256ECD7.D	12/19/2022	
LDW22-SS812	22L0156-03	12272204ECD7.D	12/19/2022	
LDW22-SS797	22L0156-01	12262266ECD7.D	12/19/2022	
LDW22-SS794	22L0156-04	12272205ECD7.D	12/19/2022	
LDW22-IT797	22L0156-02	12262267ECD7.D	12/19/2022	
MRL Check	BKL0366-MRL1	12262259ECD7.D	12/19/2022	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CKL0227

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 12/20/2022 1:39:02PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
22L0155-61	B	LDW22-SC760E	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0155-62	B	LDW22-SC760F	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0155-63	B	LDW22-SC760G	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0155-64	B	LDW22-SC760H	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-01	B	LDW22-SS797	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-02	B	LDW22-IT797	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-03	B	LDW22-SS812	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-04	B	LDW22-SS794	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-05	B	LDW22-IT794	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
BKL0366-BLK1	-	Blank	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-BS1	-	LCS	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-BSD1	-	LCS Dup	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MRL1	-	MRL Check	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MRL2	-	MRL Check	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MS1	-	Matrix Spike	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-SRM1	-	Reference	-	2.5	2.5	-	12/19/2022	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Cleanup Batch:	CKL0228	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3660C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW22-IT794	22L0156-05	12272208ECD7.D	12/20/2022	
Matrix Spike	BKL0366-MS1	12272206ECD7.D	12/20/2022	
LDW22-SS797	22L0156-01	12262266ECD7.D	12/20/2022	
LDW22-IT797	22L0156-02	12262267ECD7.D	12/20/2022	
LDW22-SS794	22L0156-04	12272205ECD7.D	12/20/2022	
MRL Check	BKL0366-MRL2	12262260ECD7.D	12/20/2022	
LDW22-SS812	22L0156-03	12272204ECD7.D	12/20/2022	
MRL Check	BKL0366-MRL1	12262259ECD7.D	12/20/2022	
Matrix Spike Dup	BKL0366-MSD1	12272207ECD7.D	12/20/2022	
Blank	BKL0366-BLK1	12262256ECD7.D	12/20/2022	
LCS	BKL0366-BS1	12262257ECD7.D	12/20/2022	
LCS Dup	BKL0366-BSD1	12262258ECD7.D	12/20/2022	
Reference	BKL0366-SRM1	12262261ECD7.D	12/20/2022	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CKL0228

Matrix: Solid **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 12/20/2022 1:39:42PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
22L0155-61	B	LDW22-SC760E	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0155-62	B	LDW22-SC760F	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0155-63	B	LDW22-SC760G	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0155-64	B	LDW22-SC760H	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0156-01	B	LDW22-SS797	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0156-02	B	LDW22-IT797	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0156-03	B	LDW22-SS812	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0156-04	B	LDW22-SS794	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
22L0156-05	B	LDW22-IT794	B 01	2.5	2.5	8082A PCB Solid 4	12/20/2022	TWC	
BKL0366-BLK1	-	Blank	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-BS1	-	LCS	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-BSD1	-	LCS Dup	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-MRL1	-	MRL Check	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-MRL2	-	MRL Check	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-MS1	-	Matrix Spike	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	12/20/2022	TWC	
BKL0366-SRM1	-	Reference	-	2.5	2.5	-	12/20/2022	TWC	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Cleanup Batch:	CKL0229	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW22-SS794	22L0156-04	12272205ECD7.D	12/19/2022	
Reference	BKL0366-SRM1	12262261ECD7.D	12/19/2022	
Blank	BKL0366-BLK1	12262256ECD7.D	12/19/2022	
LCS	BKL0366-BS1	12262257ECD7.D	12/19/2022	
LCS Dup	BKL0366-BSD1	12262258ECD7.D	12/19/2022	
LDW22-SS797	22L0156-01	12262266ECD7.D	12/19/2022	
LDW22-IT797	22L0156-02	12262267ECD7.D	12/19/2022	
LDW22-IT794	22L0156-05	12272208ECD7.D	12/19/2022	
Matrix Spike Dup	BKL0366-MSD1	12272207ECD7.D	12/19/2022	
MRL Check	BKL0366-MRL2	12262260ECD7.D	12/19/2022	
LDW22-SS812	22L0156-03	12272204ECD7.D	12/19/2022	
MRL Check	BKL0366-MRL1	12262259ECD7.D	12/19/2022	
Matrix Spike	BKL0366-MS1	12272206ECD7.D	12/19/2022	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CKL0229

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 12/20/2022 1:40:25PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
22L0155-61	B	LDW22-SC760E	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0155-62	B	LDW22-SC760F	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0155-63	B	LDW22-SC760G	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0155-64	B	LDW22-SC760H	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-01	B	LDW22-SS797	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-02	B	LDW22-IT797	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-03	B	LDW22-SS812	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-04	B	LDW22-SS794	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
22L0156-05	B	LDW22-IT794	B 01	2.5	2.5	8082A PCB Solid 4	12/19/2022	NRB	
BKL0366-BLK1	-	Blank	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-BS1	-	LCS	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-BSD1	-	LCS Dup	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MRL1	-	MRL Check	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MRL2	-	MRL Check	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MS1	-	Matrix Spike	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	12/19/2022	NRB	
BKL0366-SRM1	-	Reference	-	2.5	2.5	-	12/19/2022	NRB	

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC			Project:	AOC4 UR Phase 3
Matrix:	Solid	Laboratory ID:	BKL0366-BLK1	File ID:	12262256ECD7.D
Sampled:	N/A	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 11:17
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BKL0366	Sequence:	SKL0359	Calibration:	FL00010
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	9.75	122	40 - 126	
Tetrachlorometaxylene	8.0000	7.52	94.0	44 - 120	
Decachlorobiphenyl [2C]	8.0000	9.47	118	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	7.30	91.3	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262256ECD7.D
Data file 2: /221226.b/221226.b/12262256ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0366-BLK
Client ID:
Injection Date: 27-DEC-2022 11:17
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	288201	5.710	0.002	173065	37.6	36.5	2.9	Tetrachloro-m-xylene
13.900	-0.000	457244	14.126	-0.001	338147	48.8	47.4	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	541149	20.9
Hexabromobiphenyl	798898	1023157	28.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	345828	38.8
Hexabromobiphenyl	362541	502910	38.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.931 - 13.801) = 59810 Col1 Total PCB = 0.0 ppm*

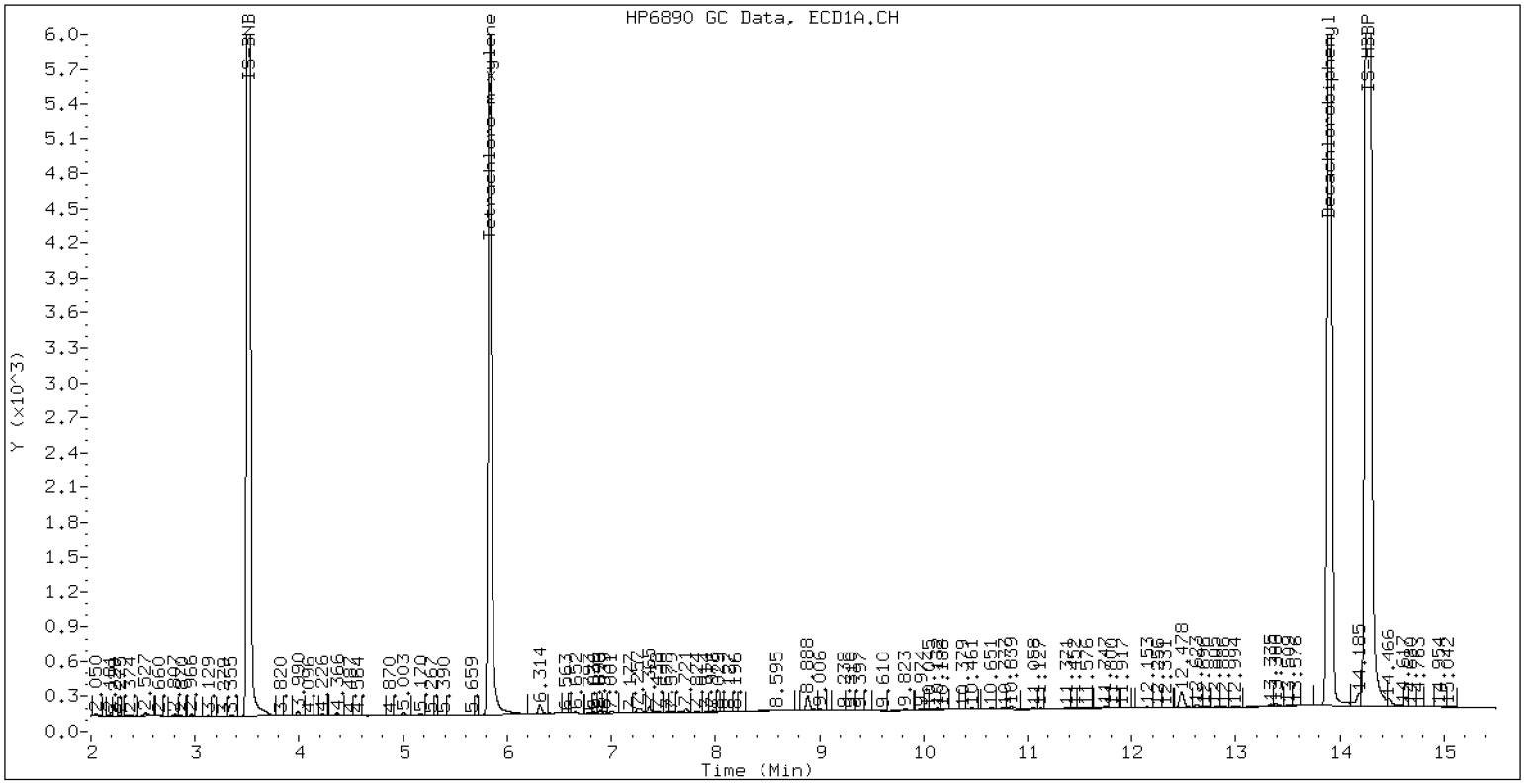
Total PCB Area Col2 (5.807 - 14.027) = 32539 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

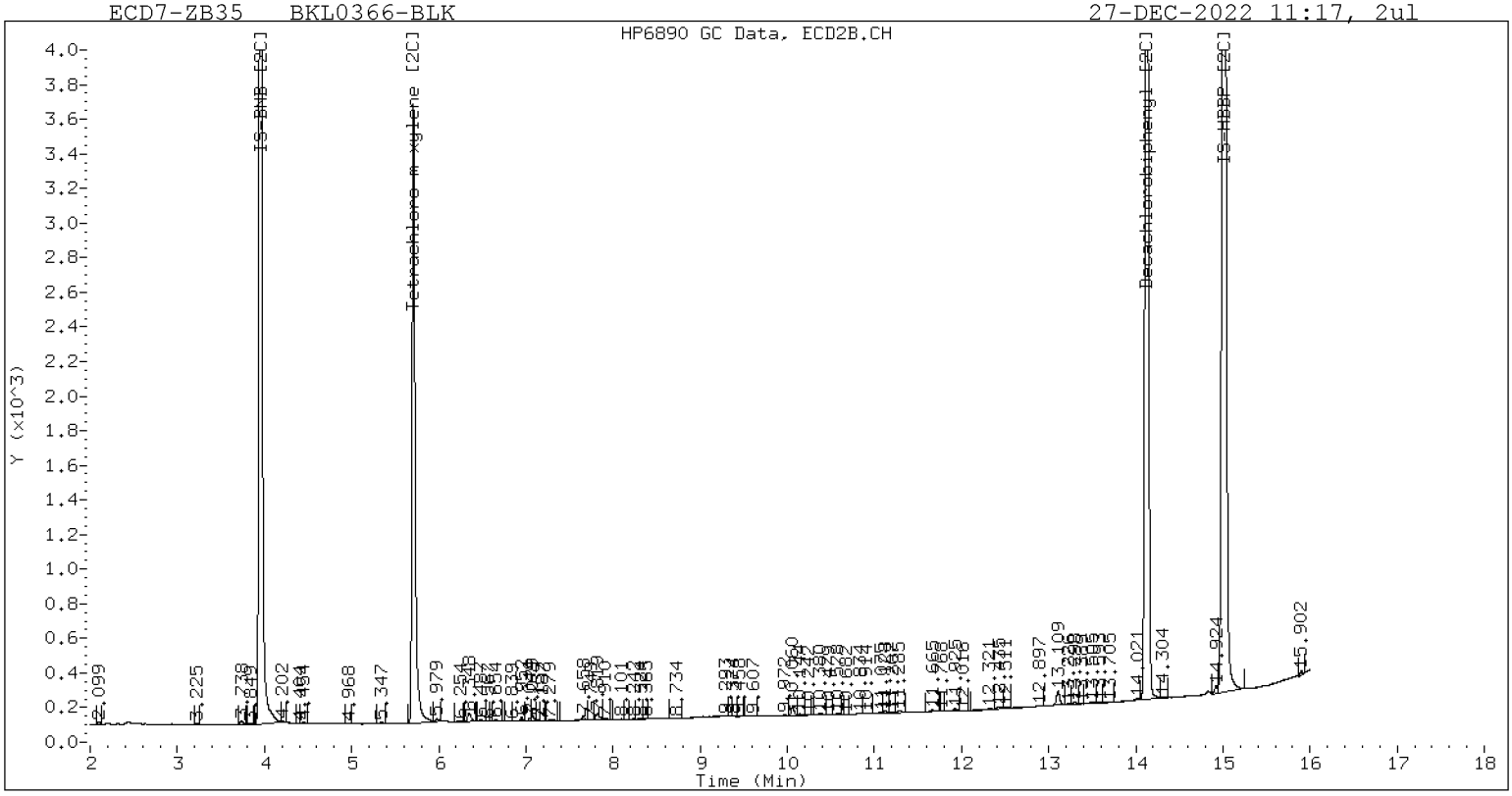
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0366-BLK 27-DEC-2022 11:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0366-BLK 27-DEC-2022 11:17, 2ul



ZB-35 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Matrix:	Solid	Analyzed:	12/27/22 11:38
Batch:	BKL0366	Laboratory ID:	BKL0366-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016	101	79.0		78.3	56 - 120
Aroclor 1260 [2C]	101	89.9		89.2	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	101	85.2		84.5	7.55	30	56 - 120
Aroclor 1260 [2C]	101	95.6		94.9	6.20	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262257ECD7.D
Data file 2: /221226.b/221226.b/12262257ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0366-BS1
Client ID:
Injection Date: 27-DEC-2022 11:38
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	267798	5.709	0.002	157670	34.8	33.3	4.4	Tetrachloro-m-xylene
13.901	0.001	449260	14.128	0.001	334578	42.0	45.0	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	542440	21.2
Hexabromobiphenyl	798898	1165823	45.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	345019	38.5
Hexabromobiphenyl	362541	523270	44.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.287	-0.000	70291	388.5	1	7.270	0.000	65648	372.1
Aroclor-1016	2	7.668	-0.006	235231	402.7	2	7.864	-0.004	144314	379.3
Aroclor-1016	3	7.805	-0.003	97295	367.5	3	8.063	-0.004	58772	359.7
Aroclor-1016	4	8.418	-0.003	70990	420.6	4	8.234	-0.005	35191	409.6
Total Col1Ave (4 peaks):					394.8	Total Col2Ave (4 peaks):				380.2 RPD = 4
Corrected Ave (3 peaks):					386.2	Corrected Ave (3 peaks):				370.4 RPD = 4
Aroclor-1221	1	4.760	-0.000	575	12.8	1	---			0.0
Aroclor-1221	2	6.154	-0.005	9111	115.3	2	6.318	-0.003	6873	123.8
Aroclor-1221	3	6.404	-0.005	46513	255.2	3	6.640	-0.005	29031	310.9
Total Col1Ave (3 peaks):					127.8	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.760	-0.001	575	21.3	1	---			0.0
Aroclor-1232	2	6.154	-0.006	9111	159.8	2	7.270	-0.007	65648	766.2
Aroclor-1232	3	7.668	-0.015	235231	918.9	3	7.864	-0.012	144314	861.6
Aroclor-1232	4	8.591	-0.015	91795	845.2	4	8.723	-0.011	43381	955.2
Total Col1Ave (4 peaks):					486.3	Total Col2Ave (3 peaks):				861.0 RPD = 56*
Corrected Ave (3 peaks):					342.1	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.287	-0.000	70291	457.2	1	7.270	0.000	65648	449.6
Aroclor-1242	2	7.668	-0.006	235231	481.9	2	7.864	-0.005	144314	465.6
Aroclor-1242	3	8.418	-0.003	70990	505.4	3	9.164	-0.003	8019	80.2
Aroclor-1242	4	9.005	-0.013	82113	281.5	4	9.587	-0.001	3852	32.0
Total Col1Ave (4 peaks):					431.5	Total Col2Ave (4 peaks):				256.8 RPD = 51*
Corrected Ave (3 peaks):					406.9	Corrected Ave (3 peaks):				187.3 RPD = 74*
Aroclor-1248	1	8.418	-0.003	70990	304.4	1	8.317	-0.002	43366	307.7
Aroclor-1248	2	8.591	-0.005	91795	308.3	2	8.723	-0.001	43381	292.6
Aroclor-1248	3	9.005	-0.010	82113	153.3	3	9.164	-0.005	8019	44.5
Aroclor-1248	4	9.310	0.002	68314	260.3	4	9.587	-0.003	3852	18.2
Total Col1Ave (4 peaks):					256.6	Total Col2Ave (4 peaks):				165.7 RPD = 43*
Corrected Ave (3 peaks):					239.3	Corrected Ave (3 peaks):				118.4 RPD = 68*
Aroclor-1254	1	9.310	-0.001	68314	143.0	1	9.456	-0.002	37487	168.5
Aroclor-1254	2	---			0.0	2	9.976	-0.000	8598	48.1
Aroclor-1254	3	9.678	-0.003	13373	44.3	3	10.152	0.026	87901	228.7
Aroclor-1254	4	9.815	-0.001	43401	73.8	4	10.378	0.004	115579	290.3
Aroclor-1254	5	10.129	-0.003	206768	513.0	5	10.572	-0.000	155536	810.0
Total Col1Ave (4 peaks):					193.5	Total Col2Ave (5 peaks):				309.1 RPD = 46*
Corrected Ave (3 peaks):					87.1	Corrected Ave (4 peaks):				183.9 RPD = 71*
Aroclor-1260	1	11.052	-0.002	174190	410.5	1	11.659	-0.002	121831	441.1
Aroclor-1260	2	11.368	-0.003	184953	421.4	2	11.921	-0.002	300474	433.5
Aroclor-1260	3	11.740	-0.004	468563	406.3	3	12.441	-0.001	85886	465.3
Aroclor-1260	4	12.143	-0.005	258223	439.7	4	12.505	-0.002	211488	457.7
Aroclor-1260	5	12.252	-0.003	103255	429.5	NS	---			----
Total Col1Ave (5 peaks):					421.5	Total Col2Ave (4 peaks):				449.4 RPD = 6
Corrected Ave (4 peaks):					416.9	Corrected Ave (3 peaks):				444.1 RPD = 6
Aroclor-1262	1	10.833	-0.016	350701	899.5	1	11.206	-0.012	111100	279.2
Aroclor-1262	2	12.252	-0.011	103255	170.4	2	11.659	-0.011	121831	353.5
Aroclor-1262	3	12.326	-0.011	125394	193.7	3	12.441	-0.011	85886	225.9
Aroclor-1262	4	12.994	-0.011	119249	229.5	4	12.505	-0.014	211488	355.2
Total Col1Ave (4 peaks):					373.3	Total Col2Ave (4 peaks):				303.5 RPD = 21
Corrected Ave (3 peaks):					197.9	Corrected Ave (3 peaks):				286.2 RPD = 37
Aroclor-1268	1	12.252	-0.011	103255	63.3	1	12.441	-0.009	85886	87.0
Aroclor-1268	2	12.326	-0.009	125394	78.6	2	12.505	-0.012	211488	208.8
Aroclor-1268	3	12.731	0.015	56254	43.0	3	12.899	-0.011	4629	12.3
Aroclor-1268	4	13.496	-0.009	36310	9.1	4	13.714	-0.012	23504	8.7
Total Col1Ave (4 peaks):					48.5	Total Col2Ave (4 peaks):				79.2 RPD = 48*
Corrected Ave (3 peaks):					38.5	Corrected Ave (3 peaks):				36.0 RPD = 7

Total PCB Area Col1 (5.931 - 13.801) = 4724295 Col1 Total PCB = 0.9 ppm*

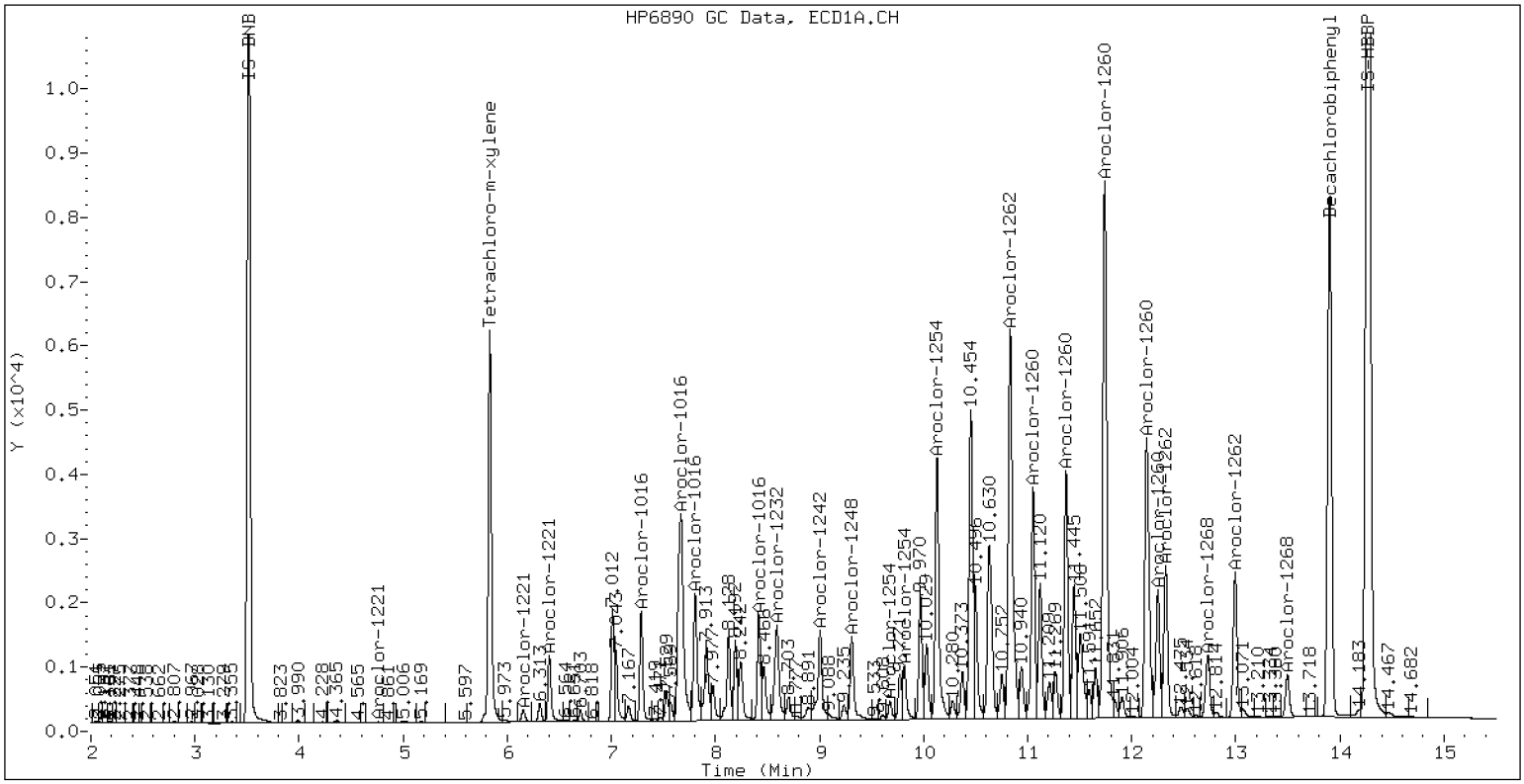
Total PCB Area Col2 (5.807 - 14.027) = 2817907 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

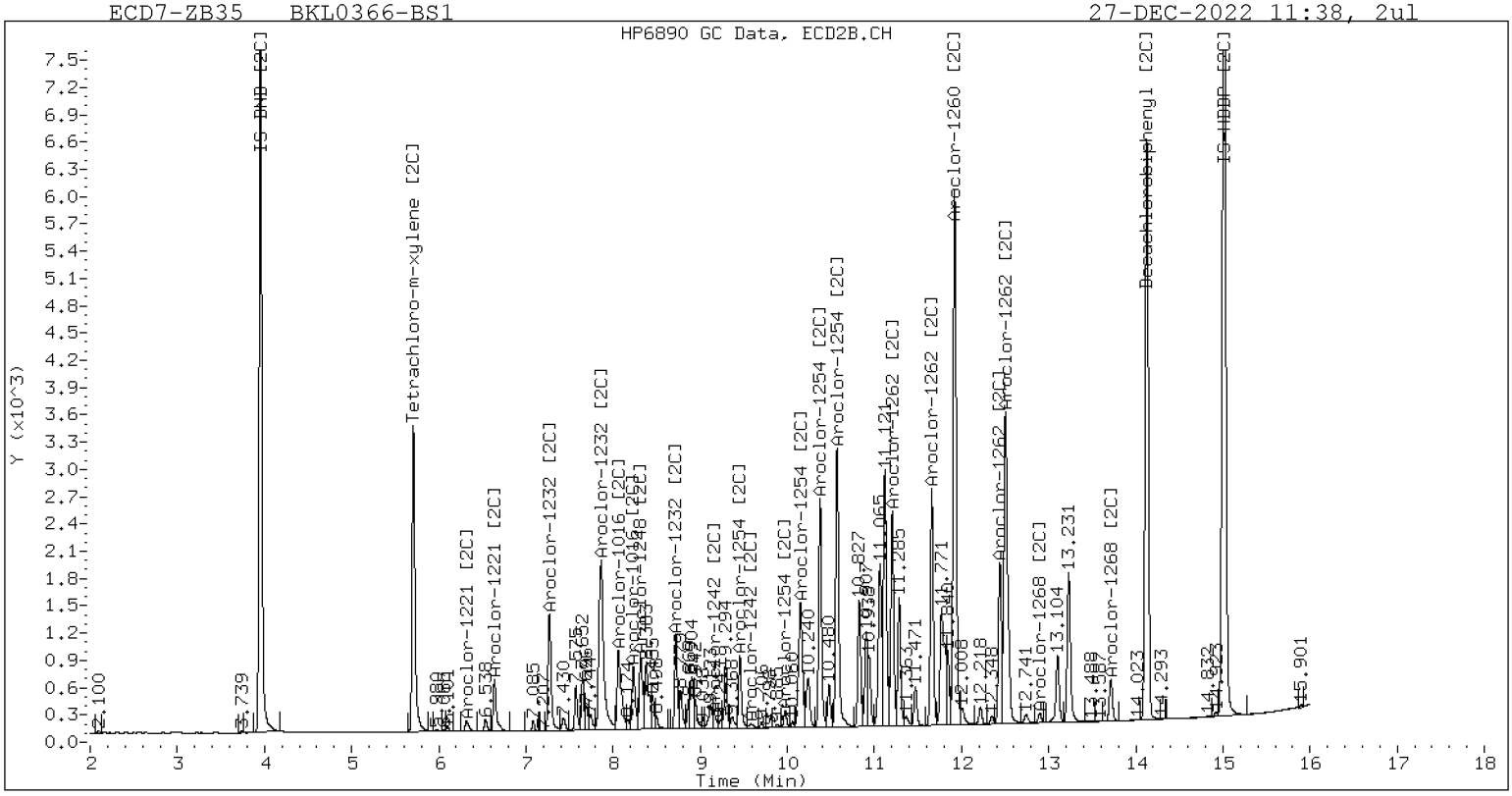
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0366-BS1 27-DEC-2022 11:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0366-BS1 27-DEC-2022 11:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262258ECD7.D
Data file 2: /221226.b/221226.b/12262258ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0366-BSD1
Client ID:
Injection Date: 27-DEC-2022 12:00
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	279124	5.709	0.001	167697	36.6	35.2	3.9	Tetrachloro-m-xylene
13.901	0.001	447606	14.126	-0.001	333781	43.0	45.6	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	538725	20.3
Hexabromobiphenyl	798898	1136789	42.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	348023	39.7
Hexabromobiphenyl	362541	516122	42.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.286	-0.001	75961	422.7	1	7.269	-0.001	71176	400.0
Aroclor-1016	2	7.667	-0.008	253096	436.2	2	7.864	-0.005	161052	419.7
Aroclor-1016	3	7.805	-0.003	104196	396.3	3	8.062	-0.004	64808	393.2
Aroclor-1016	4	8.417	-0.003	75084	448.0	4	8.234	-0.005	38337	442.4
Total Col1Ave (4 peaks):					425.8	Total Col2Ave (4 peaks):				413.8 RPD = 3
Corrected Ave (3 peaks):					418.4	Corrected Ave (3 peaks):				404.3 RPD = 3
Aroclor-1221	1	4.758	-0.002	457	10.3	1	4.983	-0.004	312	10.6
Aroclor-1221	2	6.153	-0.006	8473	108.0	2	6.318	-0.004	7413	132.4
Aroclor-1221	3	6.404	-0.005	49252	272.1	3	6.640	-0.005	31810	337.7
Total Col1Ave (3 peaks):					130.1	Total Col2Ave (3 peaks):				160.2 RPD = 21
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.758	-0.003	457	17.1	1	4.983	-0.006	312	18.4
Aroclor-1232	2	6.153	-0.007	8473	149.7	2	7.269	-0.008	71176	823.5
Aroclor-1232	3	7.667	-0.017	253096	995.5	3	7.864	-0.012	161052	953.2
Aroclor-1232	4	8.591	-0.015	97465	903.5	4	8.723	-0.011	48512	1059.0
Total Col1Ave (4 peaks):					516.4	Total Col2Ave (4 peaks):				713.5 RPD = 32
Corrected Ave (3 peaks):					356.8	Corrected Ave (3 peaks):				598.4 RPD = 51*
Aroclor-1242	1	7.286	-0.001	75961	497.5	1	7.269	-0.001	71176	483.2
Aroclor-1242	2	7.667	-0.008	253096	522.0	2	7.864	-0.005	161052	515.1
Aroclor-1242	3	8.417	-0.003	75084	538.3	3	9.164	-0.003	8806	87.3
Aroclor-1242	4	9.005	-0.013	87017	300.4	4	9.586	-0.001	4545	37.5
Total Col1Ave (4 peaks):					464.5	Total Col2Ave (4 peaks):				280.8 RPD = 49*
Corrected Ave (3 peaks):					440.0	Corrected Ave (3 peaks):				202.7 RPD = 74*
Aroclor-1248	1	8.417	-0.003	75084	324.2	1	8.317	-0.002	47429	333.6
Aroclor-1248	2	8.591	-0.005	97465	329.6	2	8.723	-0.002	48512	324.4
Aroclor-1248	3	9.005	-0.010	87017	163.6	3	9.164	-0.005	8806	48.4
Aroclor-1248	4	9.310	0.001	79337	304.4	4	9.586	-0.003	4545	21.3
Total Col1Ave (4 peaks):					280.4	Total Col2Ave (4 peaks):				181.9 RPD = 43*
Corrected Ave (3 peaks):					264.0	Corrected Ave (3 peaks):				131.4 RPD = 67*
Aroclor-1254	1	9.310	-0.001	79337	167.3	1	9.456	-0.002	40766	181.7
Aroclor-1254	2	---			0.0	2	9.976	0.000	8991	49.8
Aroclor-1254	3	9.677	-0.004	13883	46.3	3	10.153	0.027	93121	240.1
Aroclor-1254	4	9.814	-0.002	45835	78.5	4	10.378	0.004	120751	300.7
Aroclor-1254	5	10.130	-0.002	214732	536.4	5	10.572	0.000	161984	836.3
Total Col1Ave (4 peaks):					207.1	Total Col2Ave (5 peaks):				321.7 RPD = 43*
Corrected Ave (3 peaks):					97.4	Corrected Ave (4 peaks):				193.1 RPD = 66*
Aroclor-1260	1	11.053	-0.002	181970	439.8	1	11.660	-0.001	128035	470.0
Aroclor-1260	2	11.369	-0.002	193958	453.2	2	11.923	-0.001	316159	462.5
Aroclor-1260	3	11.742	-0.002	506211	450.2	3	12.442	-0.000	89965	494.2
Aroclor-1260	4	12.145	-0.003	270581	472.5	4	12.506	-0.001	221479	486.0
Aroclor-1260	5	12.252	-0.002	108061	461.0	NS	---			----
Total Col1Ave (5 peaks):					455.3	Total Col2Ave (4 peaks):				478.2 RPD = 5
Corrected Ave (4 peaks):					451.0	Corrected Ave (3 peaks):				472.8 RPD = 5
Aroclor-1262	1	10.833	-0.015	363298	955.7	1	11.206	-0.011	116576	297.1
Aroclor-1262	2	12.252	-0.011	108061	182.8	2	11.660	-0.010	128035	376.7
Aroclor-1262	3	12.327	-0.009	130900	207.4	3	12.442	-0.009	89965	240.0
Aroclor-1262	4	12.995	-0.010	125638	248.0	4	12.506	-0.013	221479	377.1
Total Col1Ave (4 peaks):					398.5	Total Col2Ave (4 peaks):				322.7 RPD = 21
Corrected Ave (3 peaks):					212.7	Corrected Ave (3 peaks):				304.6 RPD = 36
Aroclor-1268	1	12.252	-0.010	108061	67.9	1	12.442	-0.007	89965	92.3
Aroclor-1268	2	12.327	-0.008	130900	84.1	2	12.506	-0.011	221479	221.7
Aroclor-1268	3	12.732	0.016	58644	46.0	3	12.899	-0.011	4749	12.8
Aroclor-1268	4	13.497	-0.008	39814	10.2	4	13.715	-0.011	25337	9.5
Total Col1Ave (4 peaks):					52.1	Total Col2Ave (4 peaks):				84.1 RPD = 47*

Corrected Ave (3 peaks): 41.4 Corrected Ave (3 peaks): 38.2 RPD = 8

Total PCB Area Col1 (5.931 - 13.801) = 4997785 Col1 Total PCB = 1.0 ppm*

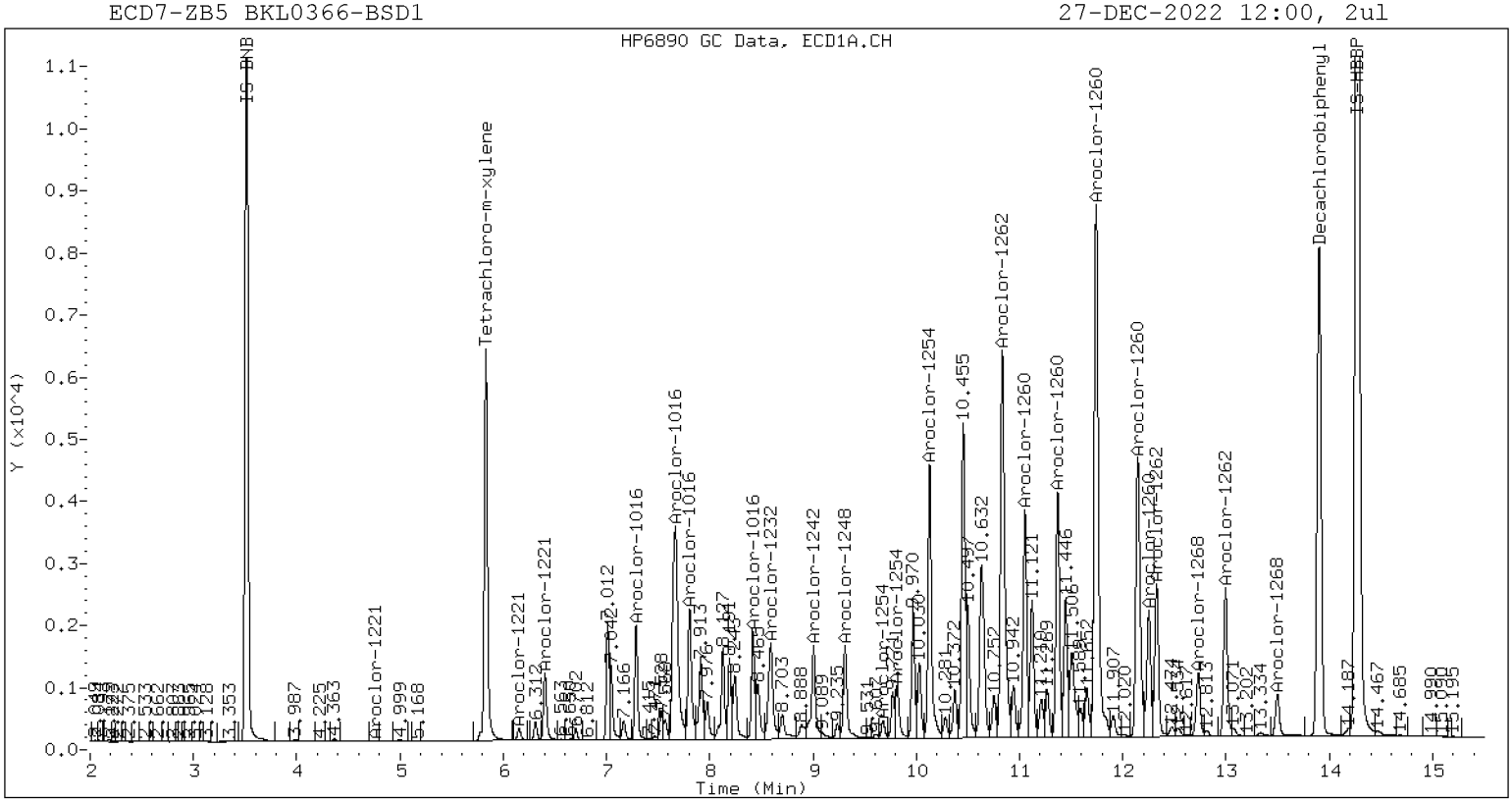
Total PCB Area Col2 (5.807 - 14.027) = 2998121 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

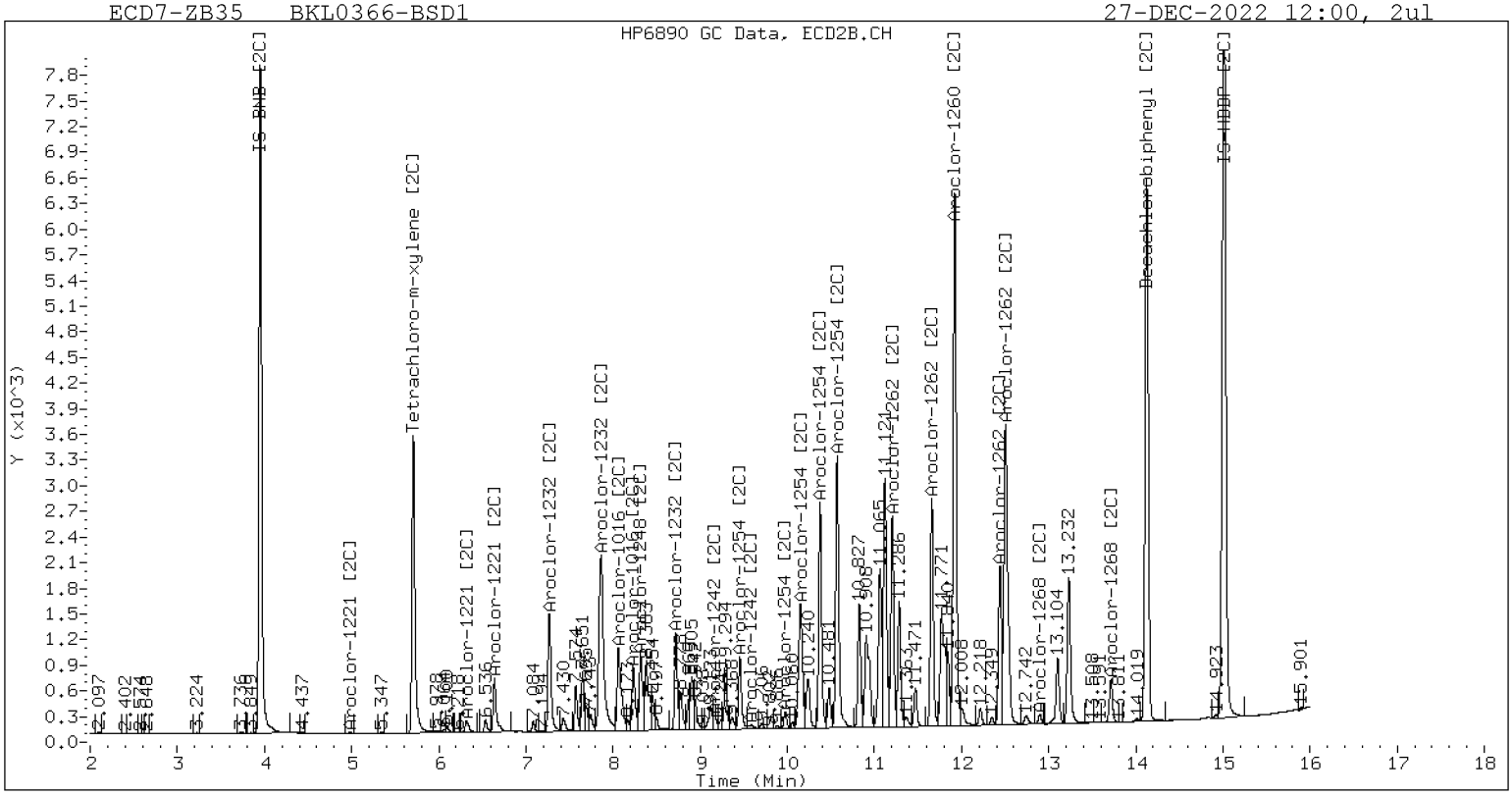
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0366-BSD1 27-DEC-2022 12:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0366-BSD1 27-DEC-2022 12:00, 2ul



ZB-35 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Matrix:	Solid	Analyzed:	12/27/22 18:24
Batch:	BKL0366	Laboratory ID:	BKL0366-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	13.77 g / 2.5 mL	Source Sample:	LDW22-SS794

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	90.0		89.1	56 - 120
Aroclor 1260 [2C]	101	2.0	J	103		100	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Matrix:	Solid	Analyzed:	12/27/22 18:45
Batch:	BKL0366	Laboratory ID:	BKL0366-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	13.76 g / 2.5 mL	Source Sample:	LDW22-SS794

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	75.8		75.2	17.1	30	56 - 120
Aroclor 1260 [2C]	101	99.5		96.5	3.14	30	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272206ECD7.D
Data file 2: /221227.b/221227.b/12272206ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0366-MS1
Client ID:
Injection Date: 27-DEC-2022 18:24
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.001	265156	5.707	-0.002	160208	38.1	36.5	4.2	Tetrachloro-m-xylene
13.899	-0.004	338711	14.126	-0.003	278233	44.2	44.9	1.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	490776	9.6
Hexabromobiphenyl	798898	835866	4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	319781	28.4
Hexabromobiphenyl	362541	436377	20.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.286	-0.003	73761	450.6	1	7.270	-0.002	68356	418.1
Aroclor-1016	2	7.667	-0.005	243804	461.3	2	7.863	-0.008	153843	436.3
Aroclor-1016	3	7.803	-0.006	98734	412.2	3	8.062	-0.009	61652	407.1
Aroclor-1016	4	8.417	-0.006	72972	477.9	4	8.233	-0.009	36881	463.2
Total Col1Ave (4 peaks):					450.5	Total Col2Ave (4 peaks):				431.2 RPD = 4
Corrected Ave (3 peaks):					441.4	Corrected Ave (3 peaks):				420.5 RPD = 5
Aroclor-1221	1	4.757	-0.003	389	9.6	1	4.979	-0.008	571	21.2
Aroclor-1221	2	6.151	-0.008	10085	141.1	2	6.318	-0.003	7636	148.5
Aroclor-1221	3	6.402	-0.007	48468	294.0	3	6.639	-0.006	31275	361.3
Total Col1Ave (3 peaks):					148.2	Total Col2Ave (3 peaks):				177.0 RPD = 18
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.757	-0.004	389	15.9	1	4.979	-0.011	571	36.7
Aroclor-1232	2	6.151	-0.009	10085	195.5	2	7.270	-0.007	68356	860.8
Aroclor-1232	3	7.667	-0.017	243804	1052.6	3	7.863	-0.013	153843	990.9
Aroclor-1232	4	8.589	-0.017	91957	935.8	4	8.723	-0.011	46527	1105.3
Total Col1Ave (4 peaks):					550.0	Total Col2Ave (4 peaks):				748.4 RPD = 31
Corrected Ave (3 peaks):					382.4	Corrected Ave (3 peaks):				629.5 RPD = 49*
Aroclor-1242	1	7.286	-0.009	73761	530.2	1	7.270	-0.001	68356	505.1
Aroclor-1242	2	7.667	-0.019	243804	552.0	2	7.863	-0.007	153843	535.5
Aroclor-1242	3	8.417	-0.013	72972	574.2	3	9.161	-0.009	8958	96.6
Aroclor-1242	4	9.004	-0.027	72343	274.2	4	9.585	-0.005	3773	33.9
Total Col1Ave (4 peaks):					482.7	Total Col2Ave (4 peaks):				292.8 RPD = 49*
Corrected Ave (3 peaks):					452.1	Corrected Ave (3 peaks):				211.9 RPD = 72*
Aroclor-1248	1	8.417	-0.010	72972	345.8	1	8.317	-0.005	44981	344.3
Aroclor-1248	2	8.589	-0.015	91957	341.3	2	8.723	-0.004	46527	338.6
Aroclor-1248	3	9.004	-0.018	72343	149.3	3	9.161	-0.012	8958	53.6
Aroclor-1248	4	9.308	-0.003	73688	310.3	4	9.585	-0.009	3773	19.2
Total Col1Ave (4 peaks):					286.7	Total Col2Ave (4 peaks):				188.9 RPD = 41*
Corrected Ave (3 peaks):					267.0	Corrected Ave (3 peaks):				137.2 RPD = 64*
Aroclor-1254	1	9.308	-0.013	73688	170.5	1	9.456	-0.005	42035	203.9
Aroclor-1254	2	9.382	-0.020	9891	58.9	2	9.975	-0.004	10832	65.3
Aroclor-1254	3	9.676	-0.018	18160	66.5	3	10.152	0.022	94145	264.2
Aroclor-1254	4	9.811	-0.020	54928	103.2	4	10.376	-0.002	119975	325.1
Aroclor-1254	5	10.127	-0.062	206209	565.5	5	10.571	-0.005	150691	846.7
Total Col1Ave (5 peaks):					192.9	Total Col2Ave (5 peaks):				341.1 RPD = 55*
Corrected Ave (4 peaks):					99.8	Corrected Ave (4 peaks):				214.6 RPD = 73*
Aroclor-1260	1	11.050	-0.005	159910	525.6	1	11.659	-0.004	118753	515.5
Aroclor-1260	2	11.367	-0.005	166288	528.4	2	11.920	-0.006	286745	496.1
Aroclor-1260	3	11.738	-0.006	416647	503.9	3	12.440	-0.005	83256	540.9
Aroclor-1260	4	12.140	-0.009	230364	547.1	4	12.504	-0.005	194017	503.5
Aroclor-1260	5	12.249	-0.006	89323	518.2	NS	---			----
Total Col1Ave (5 peaks):					524.6	Total Col2Ave (4 peaks):				514.0 RPD = 2
Corrected Ave (4 peaks):					519.0	Corrected Ave (3 peaks):				505.1 RPD = 3
Aroclor-1262	1	10.830	-0.018	331698	1186.7	1	11.205	-0.012	106373	320.6
Aroclor-1262	2	12.249	-0.013	89323	205.5	2	11.659	-0.011	118753	413.2
Aroclor-1262	3	12.324	-0.012	107467	231.6	3	12.440	-0.012	83256	262.6
Aroclor-1262	4	12.991	-0.014	101487	272.5	4	12.504	-0.016	194017	390.7
Total Col1Ave (4 peaks):					474.1	Total Col2Ave (4 peaks):				346.8 RPD = 31
Corrected Ave (3 peaks):					236.5	Corrected Ave (3 peaks):				324.7 RPD = 31
Aroclor-1268	1	12.249	-0.013	89323	76.4	1	12.440	-0.010	83256	101.1
Aroclor-1268	2	12.324	-0.011	107467	93.9	2	12.504	-0.014	194017	229.7
Aroclor-1268	3	12.727	0.010	48894	52.1	3	12.898	-0.012	4263	13.6
Aroclor-1268	4	13.493	-0.013	28448	9.9	4	13.713	-0.013	21880	9.7
Total Col1Ave (4 peaks):					58.1	Total Col2Ave (4 peaks):				88.5 RPD = 42*

Corrected Ave (3 peaks): 46.2 Corrected Ave (3 peaks): 41.5 RPD = 11

Total PCB Area Col1 (5.931 - 13.803) = 4591000 Col1 Total PCB = 1.0 ppm*

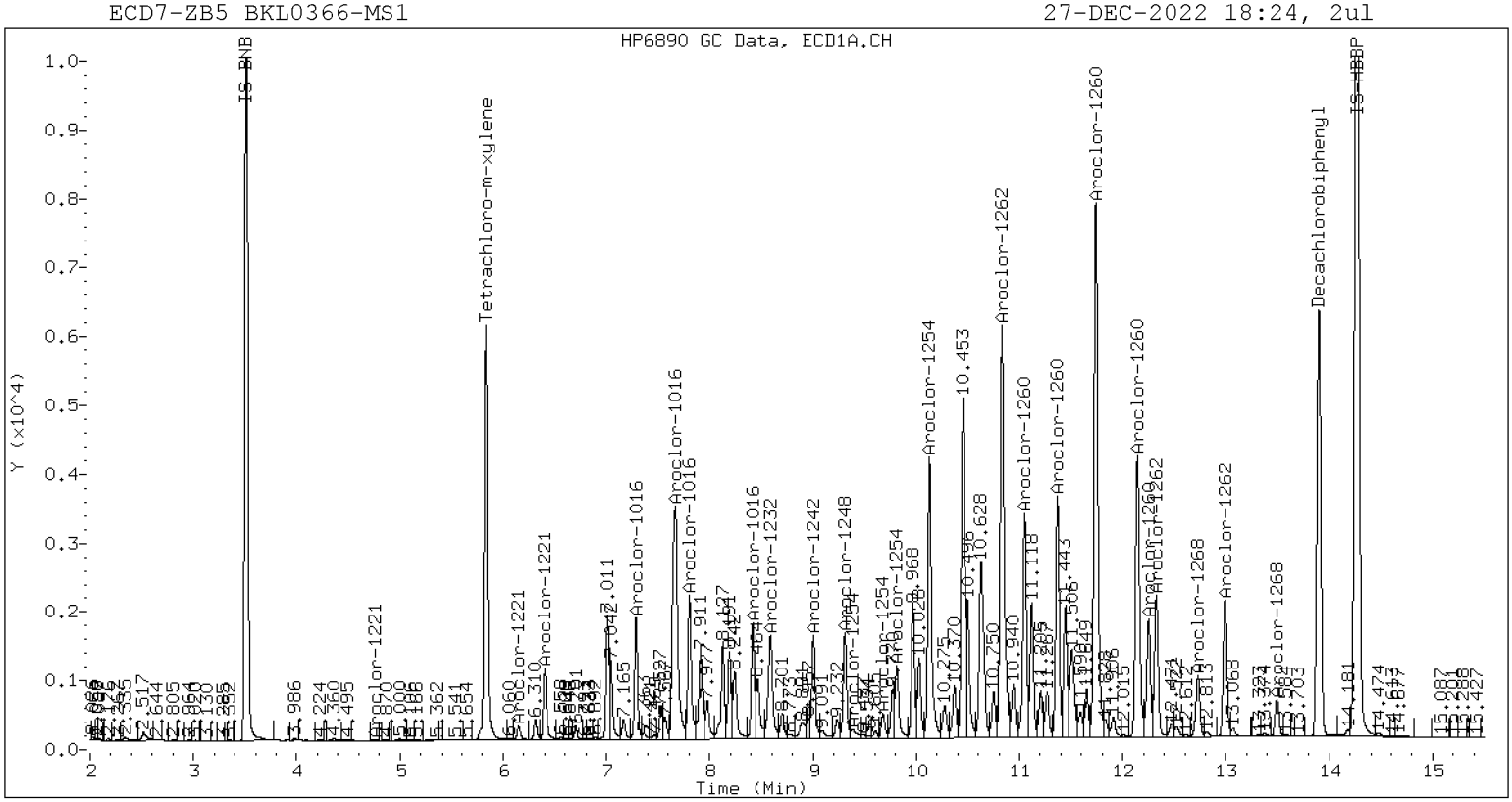
Total PCB Area Col2 (5.809 - 14.028) = 2838936 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

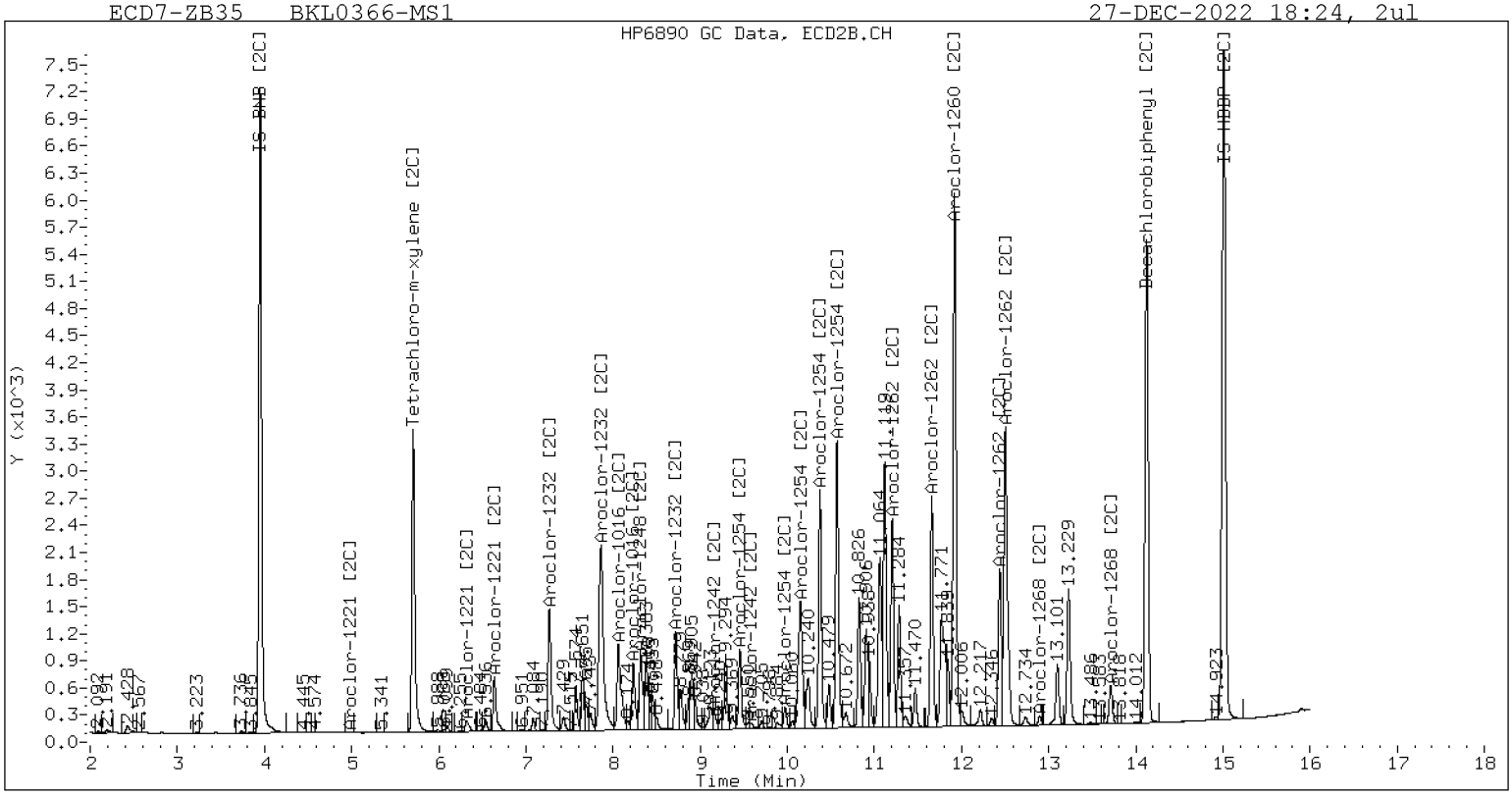
PCB Dual Column Chromatograms

ECD7-ZB5 BKL0366-MS1 27-DEC-2022 18:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0366-MS1 27-DEC-2022 18:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272207ECD7.D
Data file 2: /221227.b/221227.b/12272207ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0366-MSD1
Client ID:
Injection Date: 27-DEC-2022 18:45
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.828	-0.003	212914	5.705	-0.004	161346	29.2	36.1	21.0	Tetrachloro-m-xylene
13.899	-0.005	334563	14.126	-0.003	277968	43.1	43.7	1.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	514712	15.0
Hexabromobiphenyl	798898	847361	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	326473	31.1
Hexabromobiphenyl	362541	447640	23.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.283	-0.005	66877	389.5	1	7.266	-0.007	59586	357.0
Aroclor-1016	2	7.659	-0.013	218933	395.0	2	7.858	-0.013	150285	417.5
Aroclor-1016	3	7.797	-0.012	83421	332.1	3	8.058	-0.013	61658	398.8
Aroclor-1016	4	8.413	-0.009	64101	400.3	4	8.228	-0.014	37208	457.7
Total Col1Ave (4 peaks):					379.2	Total Col2Ave (4 peaks):				407.7 RPD = 7
Corrected Ave (3 peaks):					372.2	Corrected Ave (3 peaks):				391.1 RPD = 5
Aroclor-1221	1	4.757	-0.003	537	12.6	1	4.979	-0.009	627	22.8
Aroclor-1221	2	6.149	-0.010	8766	116.9	2	6.315	-0.007	9306	177.2
Aroclor-1221	3	6.399	-0.010	47073	272.2	3	6.637	-0.008	27970	316.5
Total Col1Ave (3 peaks):					133.9	Total Col2Ave (3 peaks):				172.2 RPD = 25
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.757	-0.004	537	21.0	1	4.979	-0.011	627	39.5
Aroclor-1232	2	6.149	-0.011	8766	162.1	2	7.266	-0.011	59586	735.0
Aroclor-1232	3	7.659	-0.024	218933	901.3	3	7.858	-0.019	150285	948.2
Aroclor-1232	4	8.584	-0.021	81690	792.6	4	8.721	-0.013	48961	1139.3
Total Col1Ave (4 peaks):					469.2	Total Col2Ave (4 peaks):				715.5 RPD = 42*
Corrected Ave (3 peaks):					325.2	Corrected Ave (3 peaks):				574.2 RPD = 55*
Aroclor-1242	1	7.283	-0.012	66877	458.4	1	7.266	-0.005	59586	431.2
Aroclor-1242	2	7.659	-0.026	218933	472.6	2	7.858	-0.013	150285	512.4
Aroclor-1242	3	8.413	-0.016	64101	481.0	3	9.152	-0.018	9133	96.5
Aroclor-1242	4	9.002	-0.029	59368	214.5	4	9.576	-0.014	6863	60.3
Total Col1Ave (4 peaks):					406.6	Total Col2Ave (4 peaks):				275.1 RPD = 39
Corrected Ave (3 peaks):					381.9	Corrected Ave (3 peaks):				196.0 RPD = 64*
Aroclor-1248	1	8.413	-0.014	64101	289.6	1	8.315	-0.006	43326	324.9
Aroclor-1248	2	8.584	-0.020	81690	289.1	2	8.721	-0.007	48961	349.0
Aroclor-1248	3	9.002	-0.021	59368	116.8	3	9.152	-0.020	9133	53.5
Aroclor-1248	4	9.304	-0.007	68661	275.7	4	9.576	-0.018	6863	34.3
Total Col1Ave (4 peaks):					242.8	Total Col2Ave (4 peaks):				190.4 RPD = 24
Corrected Ave (3 peaks):					227.2	Corrected Ave (3 peaks):				137.5 RPD = 49*
Aroclor-1254	1	9.304	-0.017	68661	151.5	1	9.453	-0.008	40158	190.8
Aroclor-1254	2	9.378	-0.024	4161	23.6	2	9.972	-0.007	9630	56.9
Aroclor-1254	3	9.671	-0.024	15322	53.5	3	10.150	0.020	73779	202.8
Aroclor-1254	4	9.804	-0.026	51622	92.5	4	10.375	-0.003	118088	313.5
Aroclor-1254	5	10.126	-0.063	188148	491.9	5	10.569	-0.007	143251	788.4
Total Col1Ave (5 peaks):					162.6	Total Col2Ave (5 peaks):				310.5 RPD = 63*
Corrected Ave (4 peaks):					80.3	Corrected Ave (4 peaks):				191.0 RPD = 82*
Aroclor-1260	1	11.049	-0.006	147150	477.1	1	11.657	-0.006	115663	489.5
Aroclor-1260	2	11.366	-0.006	158404	496.5	2	11.919	-0.006	285461	481.4
Aroclor-1260	3	11.736	-0.008	398991	476.0	3	12.438	-0.006	83756	530.5
Aroclor-1260	4	12.137	-0.012	221079	517.9	4	12.502	-0.007	193572	489.7
Aroclor-1260	5	12.248	-0.007	84214	481.9	NS	---			----
Total Col1Ave (5 peaks):					489.9	Total Col2Ave (4 peaks):				497.8 RPD = 2
Corrected Ave (4 peaks):					482.9	Corrected Ave (3 peaks):				486.9 RPD = 1
Aroclor-1262	1	10.826	-0.022	310912	1097.2	1	11.204	-0.013	100946	296.6
Aroclor-1262	2	12.248	-0.015	84214	191.2	2	11.657	-0.013	115663	392.4
Aroclor-1262	3	12.322	-0.014	101879	216.5	3	12.438	-0.013	83756	257.6
Aroclor-1262	4	12.988	-0.017	100366	265.8	4	12.502	-0.017	193572	380.0
Total Col1Ave (4 peaks):					442.7	Total Col2Ave (4 peaks):				331.6 RPD = 29
Corrected Ave (3 peaks):					224.5	Corrected Ave (3 peaks):				311.4 RPD = 32
Aroclor-1268	1	12.248	-0.014	84214	71.0	1	12.438	-0.011	83756	99.1
Aroclor-1268	2	12.322	-0.013	101879	87.8	2	12.502	-0.015	193572	223.4
Aroclor-1268	3	12.725	0.009	47649	50.1	3	12.898	-0.012	4403	13.7
Aroclor-1268	4	13.491	-0.014	28094	9.7	4	13.712	-0.015	21701	9.4
Total Col1Ave (4 peaks):					54.7	Total Col2Ave (4 peaks):				86.4 RPD = 45*

Corrected Ave (3 peaks): 43.6 Corrected Ave (3 peaks): 40.7 RPD = 7

Total PCB Area Col1 (5.931 - 13.803) = 4126617 Col1 Total PCB = 0.8 ppm*

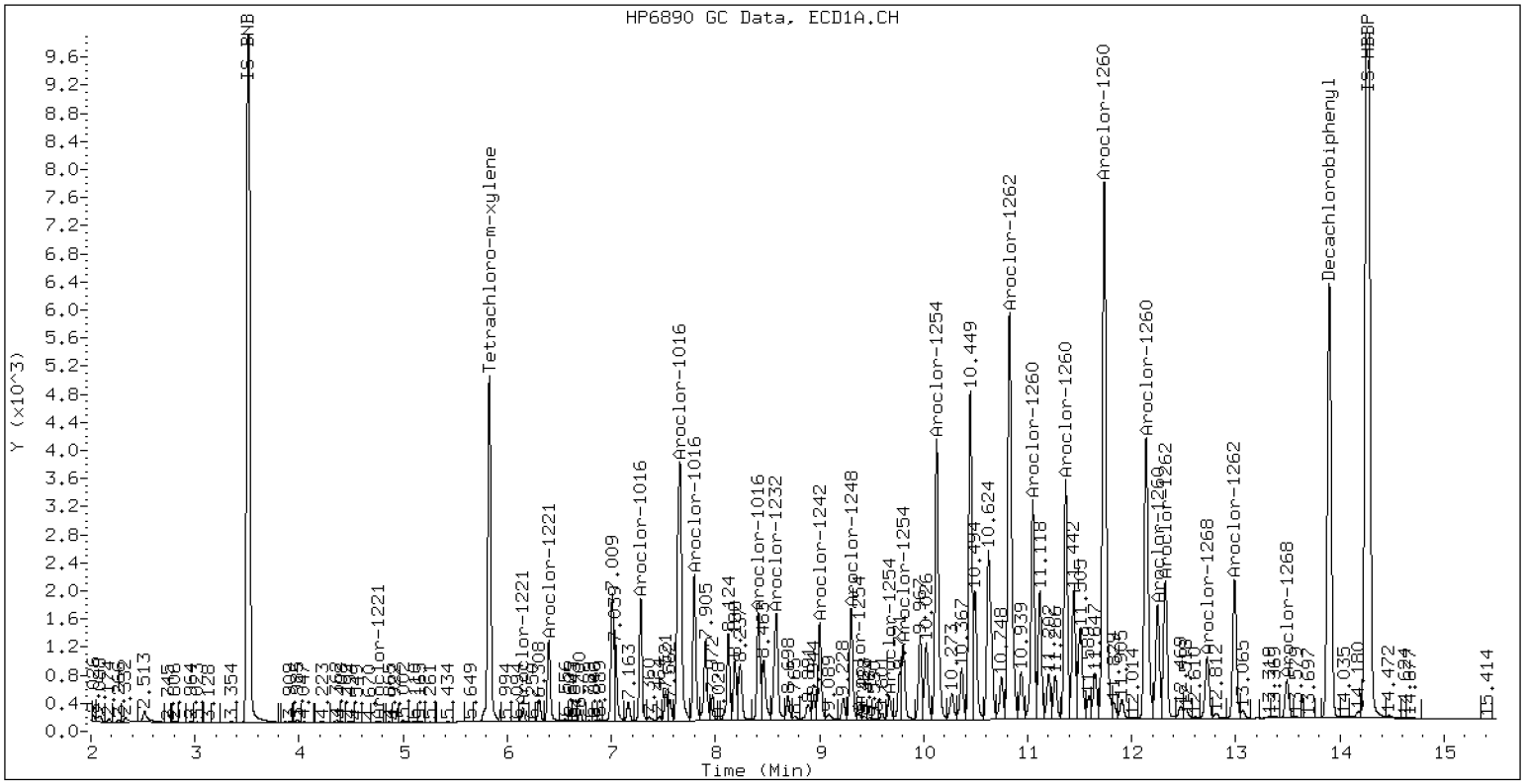
Total PCB Area Col2 (5.809 - 14.028) = 2756905 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 BKL0366-MSD1 27-DEC-2022 18:45, 2ul



ZB-5 Manual Integration: NO

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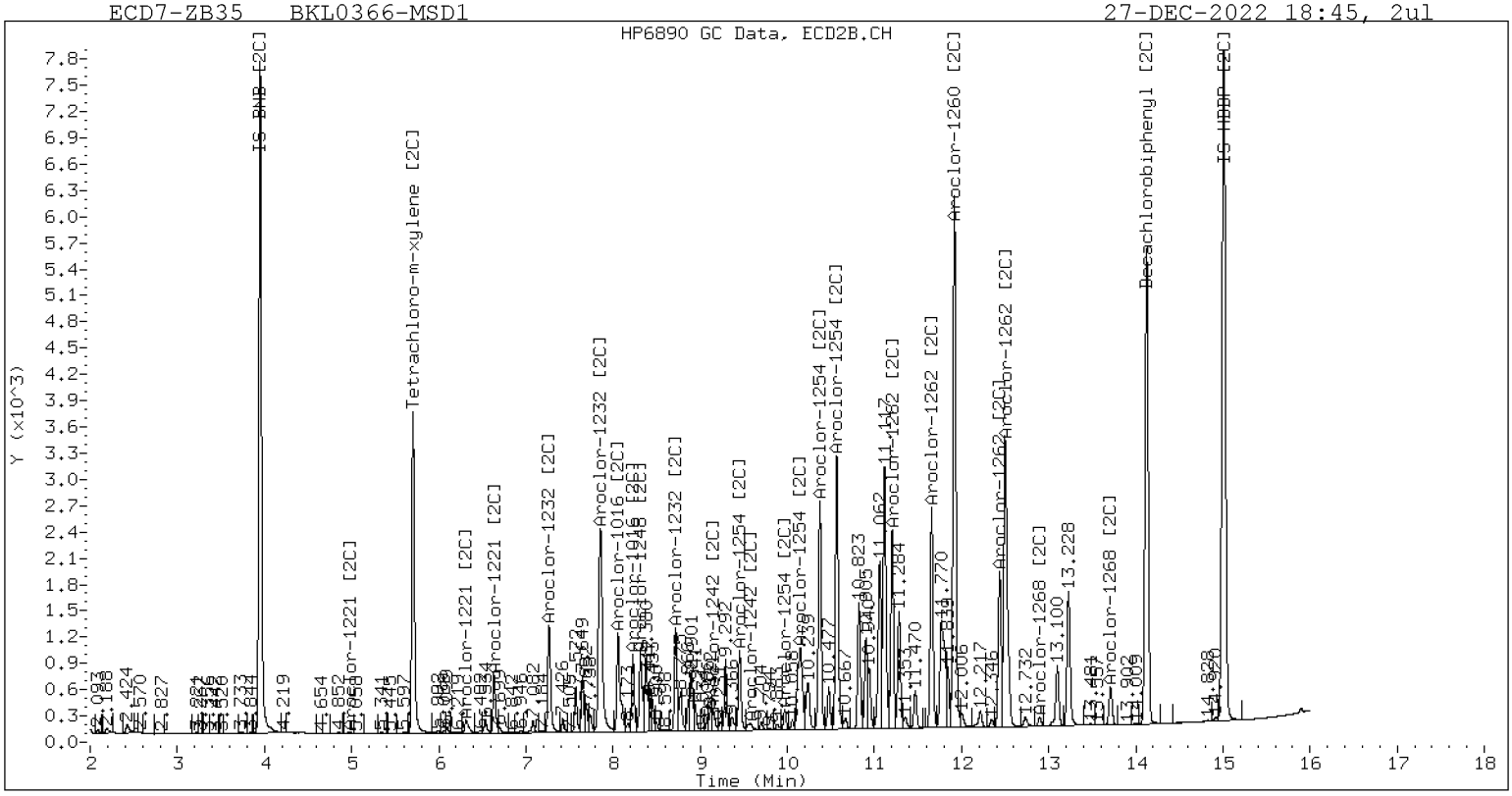


ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0366-SRM1
Batch: BKL0366
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 12/27/2022 13:04
Standard ID: K003525
Expires: 04/12/2023
Standard Lot#: PSRM0148
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	127	2.9	20.0		117	38 - 167
Aroclor 1260 [2C]	108.00	129	2.9	20.0		119	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262261ECD7.D
Data file 2: /221226.b/221226.b/12262261ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0366-SRM1
Client ID:
Injection Date: 27-DEC-2022 13:04
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	281129	5.708	0.001	170604	36.2	36.5	0.7	Tetrachloro-m-xylene
13.897	-0.003	355119	14.124	-0.003	295582	45.3	45.2	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	547269	22.3
Hexabromobiphenyl	798898	855645	7.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	340922	36.9
Hexabromobiphenyl	362541	460352	27.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.281	-0.006	3504	19.2	1	7.273	0.003	4671	26.8
Aroclor-1016	2	7.665	-0.010	8898	15.1	2	7.860	-0.009	7985	21.2
Aroclor-1016	3	7.805	-0.003	3944	14.8	3	8.060	-0.007	2694	16.7
Aroclor-1016	4	8.414	-0.006	10116	59.4	4	8.229	-0.010	2591	30.5
	Total Col1Ave (4 peaks):			27.1		Total Col2Ave (4 peaks):			23.8	RPD = 13
	Corrected Ave (3 peaks):			16.4		Corrected Ave (3 peaks):			21.6	RPD = 28
Aroclor-1221	1	4.721	-0.039	217	4.8	1	4.971	-0.017	645	22.4
Aroclor-1221	2	6.189	0.030	597	7.5	2	6.351	0.029	4660	85.0
Aroclor-1221	3	6.418	0.009	2707	14.7	3	6.658	0.013	2656	28.8
	Total Col1Ave (3 peaks):			9.0		Total Col2Ave (3 peaks):			45.4	RPD = 134*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.721	-0.040	217	8.0	1	4.971	-0.019	645	38.9
Aroclor-1232	2	6.189	0.029	597	10.4	2	7.273	-0.004	4671	55.2
Aroclor-1232	3	7.665	-0.019	8898	34.5	3	7.860	-0.016	7985	48.2
Aroclor-1232	4	8.584	-0.021	8628	78.7	4	8.720	-0.014	4563	101.7
	Total Col1Ave (4 peaks):			32.9		Total Col2Ave (4 peaks):			61.0	RPD = 60*
	Corrected Ave (3 peaks):			17.6		Corrected Ave (3 peaks):			47.4	RPD = 92*
Aroclor-1242	1	7.281	-0.006	3504	22.6	1	7.273	0.003	4671	32.4
Aroclor-1242	2	7.665	-0.010	8898	18.1	2	7.860	-0.009	7985	26.1
Aroclor-1242	3	8.414	-0.006	10116	71.4	3	9.156	-0.011	7532	76.2
Aroclor-1242	4	9.001	-0.017	23518	79.9	4	9.547	-0.040	11435	96.3
	Total Col1Ave (4 peaks):			48.0		Total Col2Ave (4 peaks):			57.7	RPD = 18
	Corrected Ave (3 peaks):			37.3		Corrected Ave (3 peaks):			44.9	RPD = 18
Aroclor-1248	1	8.414	-0.006	10116	43.0	1	8.315	-0.004	6411	46.0
Aroclor-1248	2	8.584	-0.011	8628	28.7	2	8.720	-0.005	4563	31.2
Aroclor-1248	3	9.001	-0.014	23518	43.5	3	9.156	-0.013	7532	42.3
Aroclor-1248	4	9.303	-0.006	32650	123.3	4	9.547	-0.043	11435	54.7
	Total Col1Ave (4 peaks):			59.6		Total Col2Ave (4 peaks):			43.5	RPD = 31
	Corrected Ave (3 peaks):			38.4		Corrected Ave (3 peaks):			39.8	RPD = 4
Aroclor-1254	1	9.303	-0.008	32650	67.8	1	9.452	-0.006	18633	84.8
Aroclor-1254	2	9.378	-0.011	13376	71.4	2	9.970	-0.006	8869	50.2
Aroclor-1254	3	9.673	-0.008	20072	66.0	3	10.121	-0.005	36897	97.1
Aroclor-1254	4	9.804	-0.011	45094	76.0	4	10.371	-0.003	45824	116.5
Aroclor-1254	5	10.124	-0.008	72082	177.3	5	10.566	-0.006	45672	240.7
	Total Col1Ave (5 peaks):			91.7		Total Col2Ave (5 peaks):			117.9	RPD = 25
	Corrected Ave (4 peaks):			70.3		Corrected Ave (4 peaks):			87.1	RPD = 21
Aroclor-1260	1	11.046	-0.009	41730	134.0	1	11.655	-0.007	30913	127.2
Aroclor-1260	2	11.360	-0.012	33571	104.2	2	11.916	-0.007	71879	117.9
Aroclor-1260	3	11.732	-0.011	113957	134.6	3	12.435	-0.007	24468	150.7
Aroclor-1260	4	12.133	-0.015	56827	131.8	4	12.499	-0.008	48523	119.4
Aroclor-1260	5	12.246	-0.009	22880	129.7	NS	---			----
	Total Col1Ave (5 peaks):			126.9		Total Col2Ave (4 peaks):			128.8	RPD = 2
	Corrected Ave (4 peaks):			124.9		Corrected Ave (3 peaks):			121.5	RPD = 3
Aroclor-1262	1	10.822	-0.026	93367	326.3	1	11.201	-0.016	28526	81.5
Aroclor-1262	2	12.246	-0.017	22880	51.4	2	11.655	-0.015	30913	102.0
Aroclor-1262	3	12.319	-0.017	27442	57.8	3	12.435	-0.016	24468	73.2
Aroclor-1262	4	12.986	-0.019	25615	67.2	4	12.499	-0.020	48523	92.6
	Total Col1Ave (4 peaks):			125.7		Total Col2Ave (4 peaks):			87.3	RPD = 36
	Corrected Ave (3 peaks):			58.8		Corrected Ave (3 peaks):			82.4	RPD = 33
Aroclor-1268	1	12.246	-0.017	22880	19.1	1	12.435	-0.014	24468	28.2
Aroclor-1268	2	12.319	-0.016	27442	23.4	2	12.499	-0.018	48523	54.5
Aroclor-1268	3	12.723	0.006	12935	13.5	3	12.898	-0.012	1309	4.0
Aroclor-1268	4	13.490	-0.015	5207	1.8	4	13.709	-0.017	7250	3.0
	Total Col1Ave (4 peaks):			14.4		Total Col2Ave (4 peaks):			22.4	RPD = 43*

Corrected Ave (3 peaks): 11.5 Corrected Ave (3 peaks): 11.7 RPD = 2

Total PCB Area Col1 (5.931 - 13.801) = 1247645 Col1 Total PCB = 0.2 ppm*

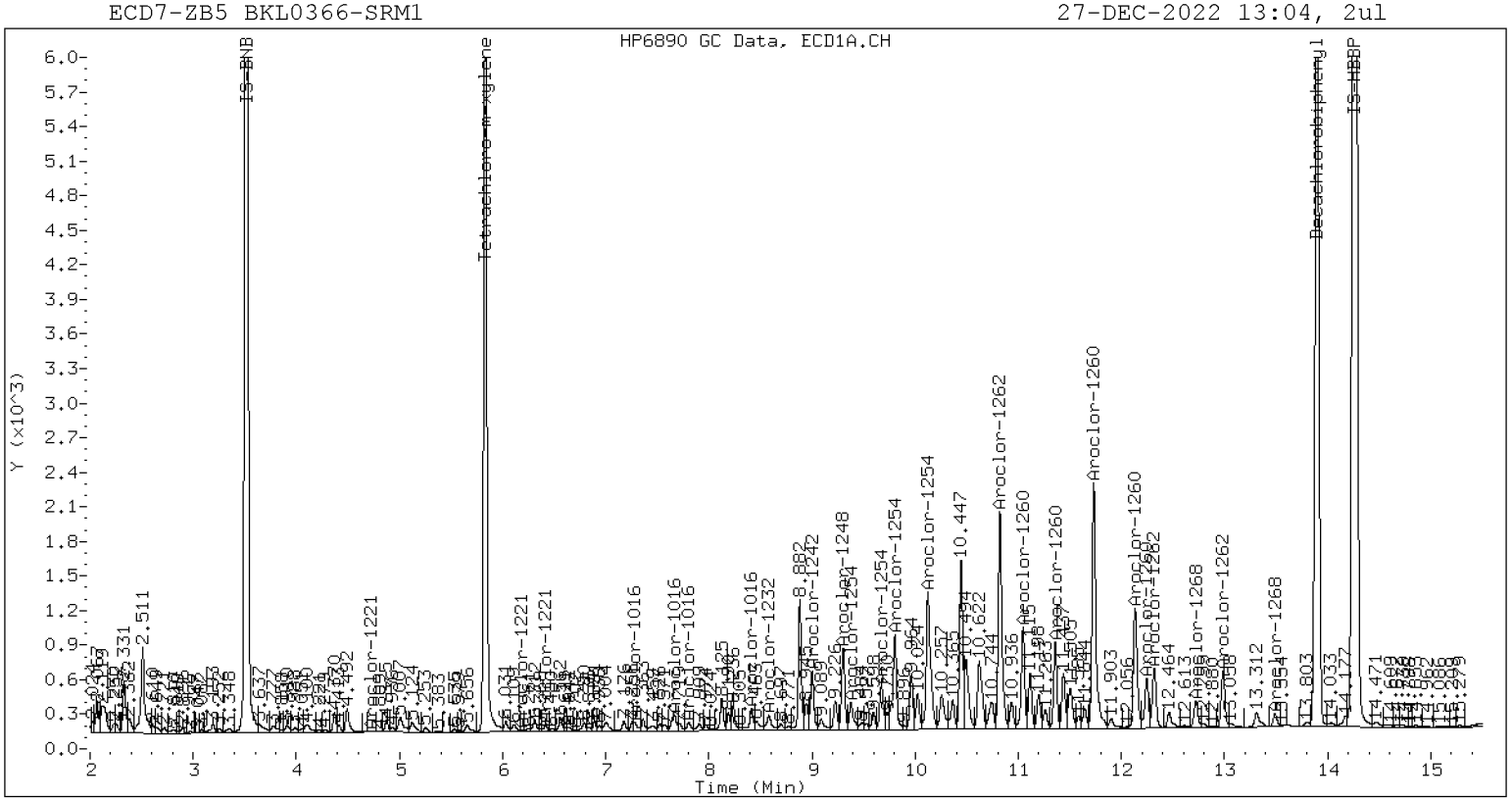
Total PCB Area Col2 (5.807 - 14.027) = 804778 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 BKL0366-SRM1 27-DEC-2022 13:04, 2ul



ZB-5 Manual Integration: NO

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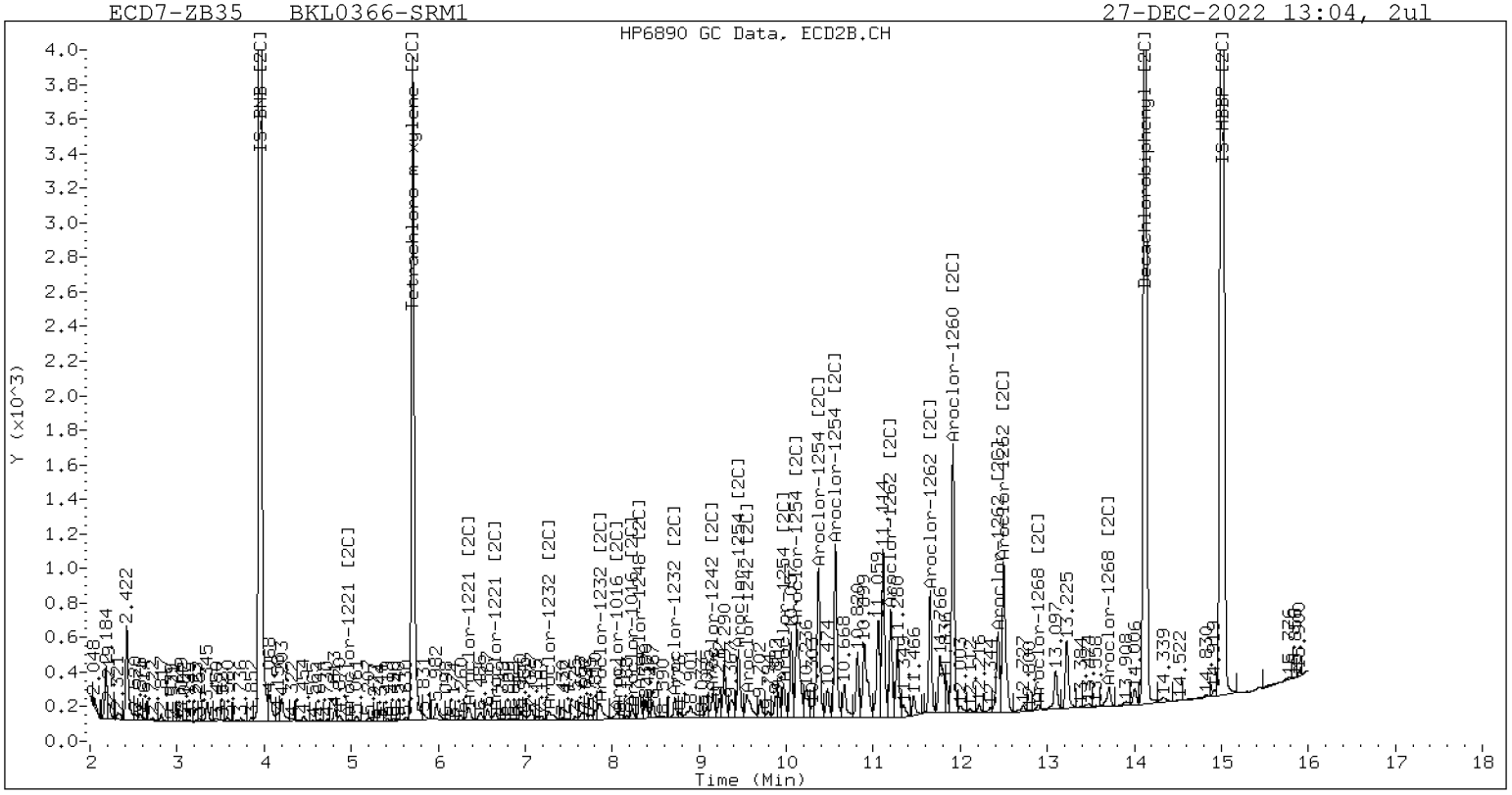


ZB-35 Manual Integration: NO

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	4.442913E-02	20	4.639571E-02	50	4.556147E-02	1000	3.903737E-02	100	4.740063E-02	500	4.233908E-02
Aroclor-1016 (1)	250	0.0268956	20	2.831682E-02	50	2.733211E-02	1000	2.312039E-02	100	2.907079E-02	500	2.538029E-02
Aroclor-1016 (2)	250	8.716121E-02	20	8.901322E-02	50	8.663465E-02	1000	7.848829E-02	100	9.099677E-02	500	8.464895E-02
Aroclor-1016 (3)	250	3.855698E-02	20	4.367479E-02	50	4.254251E-02	1000	3.139182E-02	100	4.326795E-02	500	3.482108E-02
Aroclor-1016 (4)	250	2.510275E-02	20	2.457802E-02	50	2.573659E-02	1000	2.314899E-02	100	2.626702E-02	500	2.450599E-02
Aroclor 1260	250	3.933402E-02	20	3.911434E-02	50	3.944532E-02	1000	3.674839E-02	100	4.123393E-02	500	3.832917E-02
Aroclor-1260 (1)	250	2.958395E-02	20	0.0300145	50	2.965004E-02	1000	0.0267287	100	3.044201E-02	500	2.830143E-02
Aroclor-1260 (2)	250	3.061257E-02	20	3.036959E-02	50	3.047228E-02	1000	2.827023E-02	100	0.0314491	500	2.953467E-02
Aroclor-1260 (3)	250	7.944504E-02	20	7.975557E-02	50	8.046888E-02	1000	7.412282E-02	100	8.422959E-02	500	7.678876E-02
Aroclor-1260 (4)	250	4.058671E-02	20	3.908843E-02	50	3.991468E-02	1000	3.908356E-02	100	4.249747E-02	500	4.063095E-02
Aroclor-1260 (5)	250	1.644185E-02	20	1.634363E-02	50	1.672073E-02	1000	1.553661E-02	100	1.755145E-02	500	1.639006E-02
Decachlorobiphenyl	40	0.7065182	3.2	0.8368252	8	0.7533014	160	0.6637701	16	0.7576822	80	0.6818994
Tetrachlorometaxylene	40	1.143098	3.2	1.157321	8	1.126881	160	1.081522	16	1.184437	80	1.108767

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	1.504683E-02				
Aroclor-1221 (1)							250	6.613213E-03				
Aroclor-1221 (2)							250	1.165022E-02				
Aroclor-1221 (3)							250	2.687706E-02				
Aroclor 1232									250	0.0165403		
Aroclor-1232 (1)									250	3.980209E-03		
Aroclor-1232 (2)									250	8.407005E-03		
Aroclor-1232 (3)									250	3.775546E-02		
Aroclor-1232 (4)									250	1.601853E-02		
Aroclor 1242	250	3.960003E-02										
Aroclor-1242 (1)	250	2.267549E-02										
Aroclor-1242 (2)	250	0.0719967										
Aroclor-1242 (3)	250	2.071466E-02										
Aroclor-1242 (4)	250	4.301325E-02										
Aroclor 1248			250	4.900615E-02								
Aroclor-1248 (1)			250	3.439698E-02								
Aroclor-1248 (2)			250	4.391715E-02								
Aroclor-1248 (3)			250	7.900514E-02								
Aroclor-1248 (4)			250	3.870534E-02								
Aroclor 1254					250	5.769652E-02						
Aroclor-1254 (1)					250	7.043771E-02						
Aroclor-1254 (2)					250	2.739345E-02						
Aroclor-1254 (3)					250	4.448852E-02						
Aroclor-1254 (4)					250	8.671846E-02						
Aroclor-1254 (5)					250	5.944443E-02						
Aroclor-1262 (1)							250	2.675294E-02				
Aroclor-1262 (2)							250	4.159274E-02				
Aroclor-1262 (3)							250	4.441976E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4)							250	0.0356499				
Aroclor-1268 (1)									250	0.1119264		
Aroclor-1268 (2)									250	0.1094959		
Aroclor-1268 (3)									250	8.974437E-02		
Aroclor-1268 (4)									250	0.2739969		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0441939	6.9			RSD (20)	
Aroclor-1016 (1)	0.026686	8.1			RSD (20)	
Aroclor-1016 (2)	8.615718E-02	5.0			RSD (20)	
Aroclor-1016 (3)	3.904252E-02	13.0			RSD (20)	
Aroclor-1016 (4)	2.488989E-02	4.4			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	0.0390342	3.8			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	2.912011E-02	4.7			RSD (20)	
Aroclor-1260 (2)	3.011807E-02	3.6			RSD (20)	
Aroclor-1260 (3)	7.913511E-02	4.3			RSD (20)	
Aroclor-1260 (4)	0.0403003	3.2			RSD (20)	
Aroclor-1260 (5)	1.649739E-02	3.9			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.7333327	8.6			RSD (20)	
Tetrachlorometaxylene	1.133671	3.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016 [2C]	250	4.636996E-02	20	4.892746E-02	50	4.983417E-02	1000	4.130781E-02	100	4.955636E-02	500	4.439044E-02
Aroclor-1016 (1) [2C]	250	4.084306E-02	20	4.420829E-02	50	4.265547E-02	1000	3.510686E-02	100	0.0443387	500	3.826546E-02
Aroclor-1016 (2) [2C]	250	8.779336E-02	20	9.126619E-02	50	9.396419E-02	1000	7.840925E-02	100	9.357078E-02	500	8.428834E-02
Aroclor-1016 (3) [2C]	250	3.650991E-02	20	4.176802E-02	50	4.245186E-02	1000	3.207576E-02	100	3.977512E-02	500	3.472696E-02
Aroclor-1016 (4) [2C]	250	2.033353E-02	20	1.846735E-02	50	2.026517E-02	1000	1.963937E-02	100	2.054085E-02	500	0.020281
Aroclor 1260 [2C]	250	6.221729E-02	20	0.0650374	50	6.381838E-02	1000	5.557609E-02	100	6.547338E-02	500	5.844879E-02
Aroclor-1260 (1) [2C]	250	4.226259E-02	20	4.530508E-02	50	4.502141E-02	1000	3.753653E-02	100	0.0443443	500	3.890007E-02
Aroclor-1260 (2) [2C]	250	0.1084108	20	0.1102753	50	0.109287	1000	9.364812E-02	100	0.1132315	500	0.1009332
Aroclor-1260 (3) [2C]	250	0.0279644	20	2.937953E-02	50	2.834399E-02	1000	2.696653E-02	100	2.956699E-02	500	2.708248E-02
Aroclor-1260 (4) [2C]	250	7.023139E-02	20	7.518967E-02	50	7.262117E-02	1000	0.0641532	100	0.0747507	500	6.687944E-02
Decachlorobiphenyl [2C]	40	1.127762	3.2	1.199521	8	1.131904	160	1.086775	16	1.175985	80	1.092964
Tetrachlorometaxylene [2C]	40	1.103254	3.2	1.151553	8	1.074022	160	1.032691	16	1.152616	80	1.06551

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	0.0137578				
Aroclor-1221 (1) [2C]							250	6.751325E-03				
Aroclor-1221 (2) [2C]							250	1.286764E-02				
Aroclor-1221 (3) [2C]							250	2.165445E-02				
Aroclor 1232 [2C]									250	1.828151E-02		
Aroclor-1232 (1) [2C]									250	3.890243E-03		
Aroclor-1232 (2) [2C]									250	1.986677E-02		
Aroclor-1232 (3) [2C]									250	3.883859E-02		
Aroclor-1232 (4) [2C]									250	1.053044E-02		
Aroclor 1242 [2C]	250	3.919814E-02										
Aroclor-1242 (1) [2C]	250	3.385823E-02										
Aroclor-1242 (2) [2C]	250	7.187561E-02										
Aroclor-1242 (3) [2C]	250	2.318837E-02										
Aroclor-1242 (4) [2C]	250	2.787036E-02										
Aroclor 1248 [2C]			250	3.948755E-02								
Aroclor-1248 (1) [2C]			250	3.268192E-02								
Aroclor-1248 (2) [2C]			250	3.437347E-02								
Aroclor-1248 (3) [2C]			250	4.181202E-02								
Aroclor-1248 (4) [2C]			250	0.0490828								
Aroclor 1254 [2C]					250	6.380467E-02						
Aroclor-1254 (1) [2C]					250	5.157979E-02						
Aroclor-1254 (2) [2C]					250	4.146889E-02						
Aroclor-1254 (3) [2C]					250	8.913704E-02						
Aroclor-1254 (4) [2C]					250	0.092314						
Aroclor-1254 (5) [2C]					250	4.452362E-02						
Aroclor-1262 (1) [2C]							250	6.082829E-02				
Aroclor-1262 (2) [2C]							250	5.268389E-02				
Aroclor-1262 (3) [2C]							250	5.811375E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4) [2C]							250	9.103002E-02				
Aroclor-1268 (1) [2C]									250	0.1510112		
Aroclor-1268 (2) [2C]									250	0.1548399		
Aroclor-1268 (3) [2C]									250	5.741847E-02		
Aroclor-1268 (4) [2C]									250	0.4132099		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	4.673103E-02	7.3			RSD (20)	
Aroclor-1016 (1) [2C]	4.090297E-02	8.9			RSD (20)	
Aroclor-1016 (2) [2C]	8.821535E-02	6.9			RSD (20)	
Aroclor-1016 (3) [2C]	0.0378846	10.9			RSD (20)	
Aroclor-1016 (4) [2C]	1.992121E-02	3.9			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	6.176189E-02	6.4			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00010	Instrument:	ECD7
Calibration Date:	12/03/2022	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	4.222833E-02	7.8			RSD (20)	
Aroclor-1260 (2) [2C]	0.1059643	6.9			RSD (20)	
Aroclor-1260 (3) [2C]	2.821732E-02	3.9			RSD (20)	
Aroclor-1260 (4) [2C]	7.063759E-02	6.3			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.135818	3.9			RSD (20)	
Tetrachlorometaxylene [2C]	1.096608	4.4			RSD (20)	

Printed: 12/6/2022 9:25:24AM

ANALYSIS SEQUENCE

SKL0048

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0048-CAL1	0.25PPM AR1660	QC		1	K006954	K006953		
SKL0048-CAL2	0.02PPM AR1660	QC		2	K010070	K006953		
SKL0048-CAL3	0.05PPM AR1660	QC		3	K010069	K006953		
SKL0048-CAL4	1PPM AR1660	QC		4	K006741	K006953		
SKL0048-CAL5	0.1PPM AR1660	QC		5	K010068	K006953		
SKL0048-CAL6	0.5PPM AR1660	QC		6	K010067	K006953		
SKL0048-CAL7	0.25PPM AR1242	QC		7	K006955	K006953		
SKL0048-CAL8	0.25PPM AR1248	QC		8	K006956	K006953		
SKL0048-CAL9	0.25PPM AR1254	QC		9	K006957	K006953		
SKL0048-CALA	0.25PPM AR2162	QC		10	K010071	K006953		
SKL0048-CALB	0.25PPM AR3268	QC		11	K010072	K006953		
SKL0048-SCV1	AR1660SCV1	QC		12	K007655	K006953		
SKL0048-SCV2	AR1242SCV2	QC		13	K007656	K006953		
SKL0048-SCV3	AR1248SCV3	QC		14	K007657	K006953		
SKL0048-SCV4	AR1254SCV4	QC		15	K007658	K006953		
SKL0048-SCV5	AR2162SCV5	QC		16	K007659	K006953		
SKL0048-SCV6	AR3268SCV6	QC		17	K007660	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-DEC-2022 17:58	12032210ECD7.D	1	IB	
2	03-DEC-2022 18:19	12032211ECD7.D	1	0.25PPAR1660	
3	03-DEC-2022 18:40	12032212ECD7.D	1	0.02PPAR1660	
4	03-DEC-2022 19:01	12032213ECD7.D	1	0.05PPAR1660	
5	03-DEC-2022 19:23	12032214ECD7.D	1	1PPMAR1660	
6	03-DEC-2022 19:44	12032215ECD7.D	1	0.1PPMAR1660	
7	03-DEC-2022 20:05	12032216ECD7.D	1	0.5PPMAR1660	
8	03-DEC-2022 20:26	12032217ECD7.D	1	AR1242	
9	03-DEC-2022 20:48	12032218ECD7.D	1	AR1248	
10	03-DEC-2022 21:09	12032219ECD7.D	1	AR1254	
11	03-DEC-2022 21:30	12032220ECD7.D	1	AR2162	
12	03-DEC-2022 21:52	12032221ECD7.D	1	AR3268	
13	03-DEC-2022 22:13	12032222ECD7.D	1	AR1660SCV1	
14	03-DEC-2022 22:34	12032223ECD7.D	1	AR1242SCV2	
15	03-DEC-2022 22:55	12032224ECD7.D	1	AR1248SCV3	
16	03-DEC-2022 23:17	12032225ECD7.D	1	AR1254SCV4	
17	03-DEC-2022 23:38	12032226ECD7.D	1	AR2162SCV5	
18	03-DEC-2022 23:59	12032227ECD7.D	1	AR3268SCV6	
19	04-DEC-2022 00:20	12032228ECD7.D	1	0.1 PPM DDTS	
20	04-DEC-2022 00:42	12032229ECD7.D	1	DDT BD	
21	04-DEC-2022 01:03	12032230ECD7.D	1	AR1254ICV1	
22	04-DEC-2022 01:24	12032231ECD7.D	1	AR1660ICV2	
23	04-DEC-2022 01:46	12032232ECD7.D	1	BKK0834-BLK1	
24	04-DEC-2022 02:07	12032233ECD7.D	1	BKK0834-BS1	
25	04-DEC-2022 02:28	12032234ECD7.D	1	BKK0834-BSD1	
26	04-DEC-2022 02:49	12032235ECD7.D	1	22K0523-01	
27	04-DEC-2022 03:11	12032236ECD7.D	1	22K0525-01	
28	04-DEC-2022 03:32	12032237ECD7.D	1	BKK0374-BLK1	
29	04-DEC-2022 03:53	12032238ECD7.D	1	BKK0374-BS1	
30	04-DEC-2022 04:15	12032239ECD7.D	1	BKK0374-BSD1	
31	04-DEC-2022 04:36	12032240ECD7.D	1	22K0161-01	
32	04-DEC-2022 04:57	12032241ECD7.D	1	AR1248CCV1	
33	04-DEC-2022 05:18	12032242ECD7.D	1	AR1660CCV2	
34	04-DEC-2022 05:40	12032243ECD7.D	1	BKL0017-BLK1	
35	04-DEC-2022 06:01	12032244ECD7.D	1	BKL0017-BS1	
36	04-DEC-2022 06:22	12032245ECD7.D	1	BKL0017-BSD1	
37	04-DEC-2022 06:44	12032246ECD7.D	1	22J0139-01	
38	04-DEC-2022 07:05	12032247ECD7.D	1	BKK0383-BLK1	
39	04-DEC-2022 07:26	12032248ECD7.D	1	BKK0383-BS1	
40	04-DEC-2022 07:47	12032249ECD7.D	1	BKK0383-BSD	
41	04-DEC-2022 08:09	12032250ECD7.D	1	22K0075-01	
42	04-DEC-2022 08:30	12032251ECD7.D	1	BKK00803-BLK1	
43	04-DEC-2022 08:51	12032252ECD7.D	1	BKK00803-BS1	
44	04-DEC-2022 09:13	12032253ECD7.D	1	BKK00803-BSD1	
45	04-DEC-2022 09:34	12032254ECD7.D	1	22K0511-01	
46	04-DEC-2022 09:55	12032255ECD7.D	1	AR1242CCV3	
47	04-DEC-2022 10:17	12032256ECD7.D	1	AR1660CCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1758	12032210ECD7.D	IB	1	NO MANUAL INTEGRATION
1819	12032211ECD7.D	0.25PPAR1660	1	NO MANUAL INTEGRATION
1840	12032212ECD7.D	0.02PPAR1660	1	NO MANUAL INTEGRATION
1901	12032213ECD7.D	0.05PPAR1660	1	NO MANUAL INTEGRATION
1923	12032214ECD7.D	1PPMAR1660	1	NO MANUAL INTEGRATION
1944	12032215ECD7.D	0.1PPMAR1660	1	NO MANUAL INTEGRATION
2005	12032216ECD7.D	0.5PPMAR1660	1	NO MANUAL INTEGRATION
2026	12032217ECD7.D	AR1242	1	Aroclor-1242,
2048	12032218ECD7.D	AR1248	1	NO MANUAL INTEGRATION
2109	12032219ECD7.D	AR1254	1	NO MANUAL INTEGRATION
2130	12032220ECD7.D	AR2162	1	NO MANUAL INTEGRATION
2152	12032221ECD7.D	AR3268	1	NO MANUAL INTEGRATION
2213	12032222ECD7.D	AR1660SCV1	1	NO MANUAL INTEGRATION
2234	12032223ECD7.D	AR1242SCV2	1	NO MANUAL INTEGRATION
2255	12032224ECD7.D	AR1248SCV3	1	NO MANUAL INTEGRATION
2317	12032225ECD7.D	AR1254SCV4	1	NO MANUAL INTEGRATION
2338	12032226ECD7.D	AR2162SCV5	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b page 2

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
2359	12032227ECD7.D	AR3268SCV6	1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032210ECD7.D
Data file 2: /221203.b/221203.b/12032210ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 03-DEC-2022 17:58
Report Date: 12/05/2022 13:27
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	239778	5.713	-0.000	128576	38.5	38.5	0.1	Tetrachloro-m-xylene
13.907	-0.001	273387	14.135	-0.002	193829	39.5	39.9	1.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	439478	-1.8
Hexabromobiphenyl	798898	755658	-5.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	243327	-2.3
Hexabromobiphenyl	362541	342503	-5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.936 - 13.808) = 14711 Col1 Total PCB = 0.0 ppm*

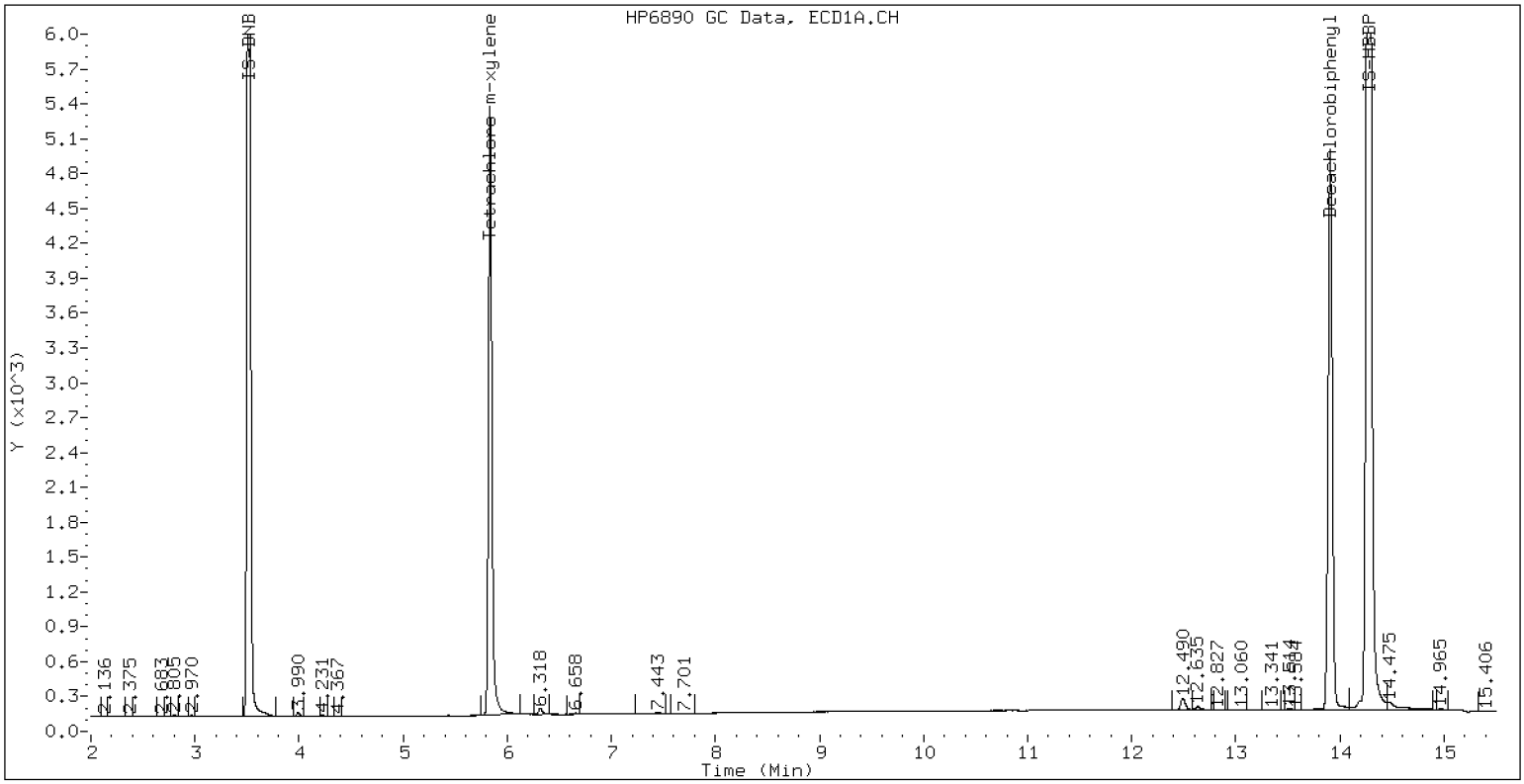
Total PCB Area Col2 (5.936 - 13.808) = 6305 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

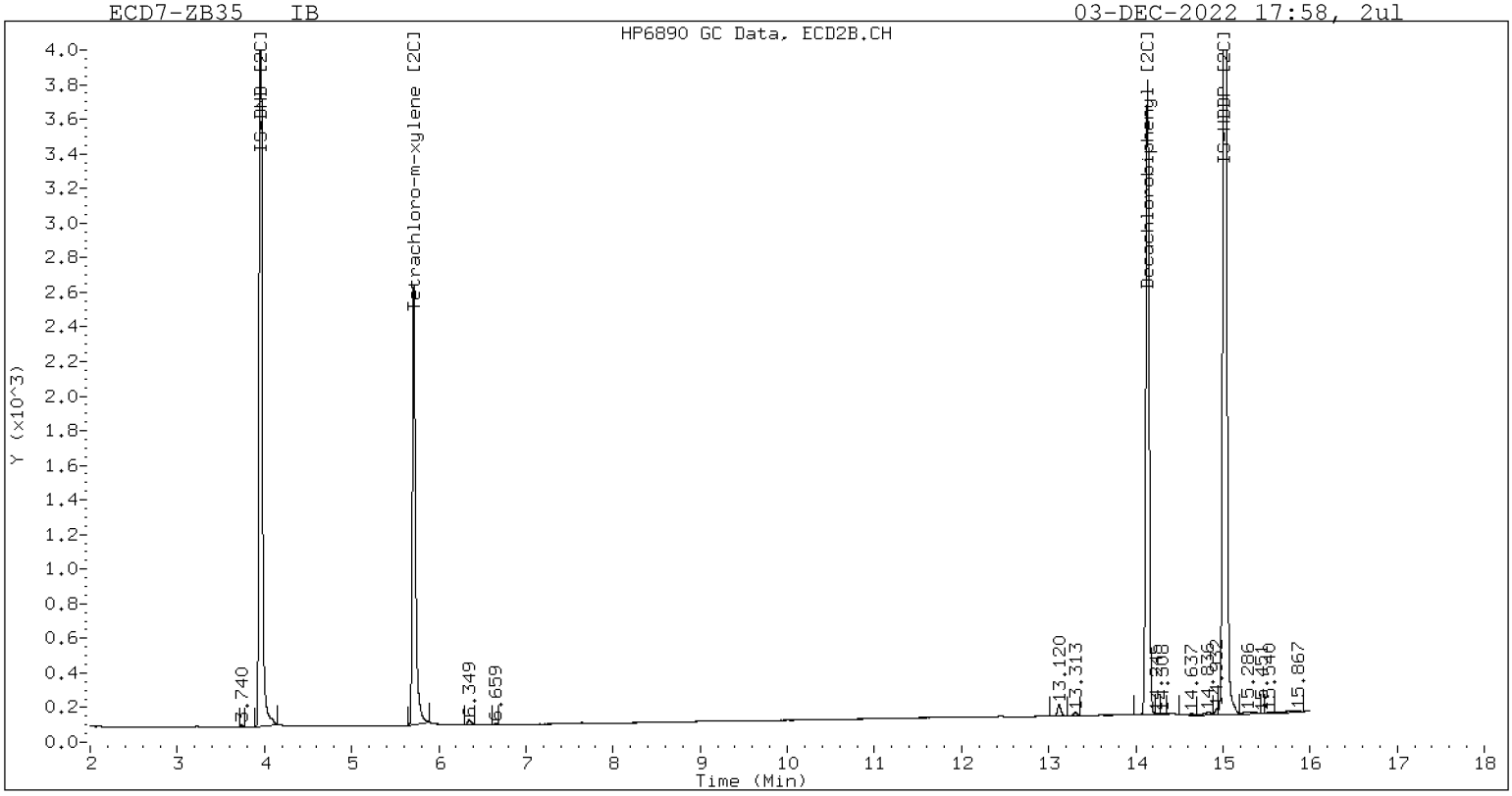
PCB Dual Column Chromatograms

ECD7-ZB5 IB 03-DEC-2022 17:58, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 03-DEC-2022 17:58, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032211ECD7.D
Data file 2: /221203.b/221203.b/12032211ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPAR1660
Client ID:
Injection Date: 03-DEC-2022 18:19
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	255851	5.713	-0.000	137407	40.3	40.2	0.2	Tetrachloro-m-xylene
13.908	-0.001	282218	14.135	-0.001	204430	38.5	39.7	3.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	447645	0.0
Hexabromobiphenyl	798898	798898	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	249094	0.0
Hexabromobiphenyl	362541	362541	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.293	0.001	37624	252.0	1	7.277	0.002	31793	249.6
Aroclor-1016	2	7.679	0.005	121929	252.9	2	7.873	0.002	68340	248.8
Aroclor-1016	3	7.813	0.003	53937	246.9	3	8.072	0.002	28420	240.9
Aroclor-1016	4	8.426	0.002	35116	252.1	4	8.243	0.002	15828	255.2
Total Col1Ave (4 peaks):					251.0	Total Col2Ave (4 peaks):				248.6 RPD = 1
Corrected Ave (3 peaks):					250.3	Corrected Ave (3 peaks):				246.5 RPD = 2
CalAmt %D:					0.4	CalAmt %D:				-0.5
Aroclor-1260	1	11.062	0.001	73858	254.0	1	11.670	0.001	47881	250.2
Aroclor-1260	2	11.378	0.000	76426	254.1	2	11.933	0.000	122823	255.8
Aroclor-1260	3	11.752	0.002	198339	251.0	3	12.452	0.001	31682	247.8
Aroclor-1260	4	12.156	0.002	101327	251.8	4	12.518	0.001	79568	248.6
Aroclor-1260	5	12.262	0.002	41048	249.2	NS	---			----
Total Col1Ave (5 peaks):					252.0	Total Col2Ave (4 peaks):				250.6 RPD = 1
Corrected Ave (4 peaks):					251.5	Corrected Ave (3 peaks):				248.8 RPD = 1
CalAmt %D:					0.8	CalAmt %D:				0.2

Total PCB Area Col1 (5.936 - 13.808) = 2139467 Col1 Total PCB = 0.4 ppm*

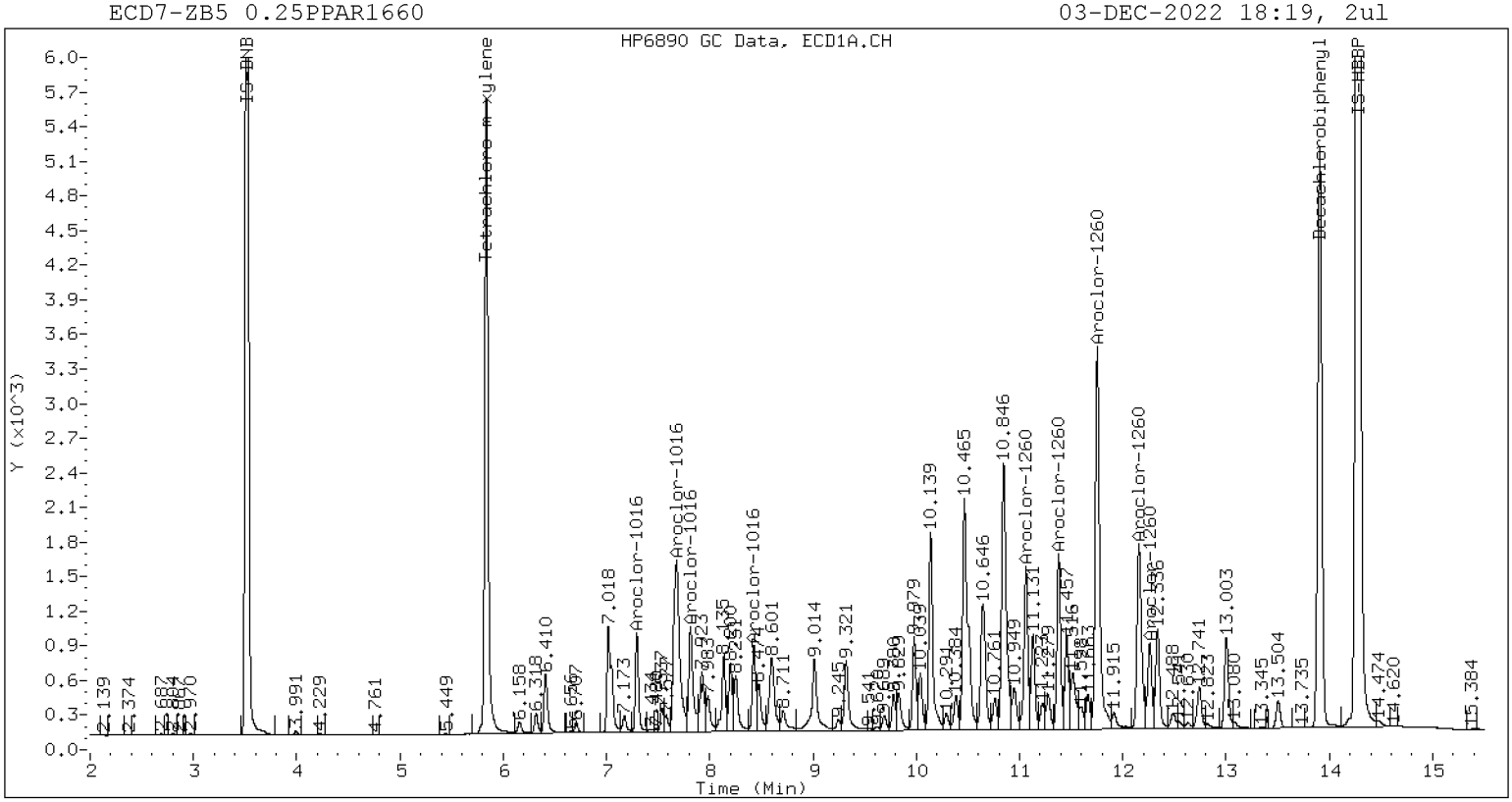
Total PCB Area Col2 (5.936 - 13.808) = 1168134 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

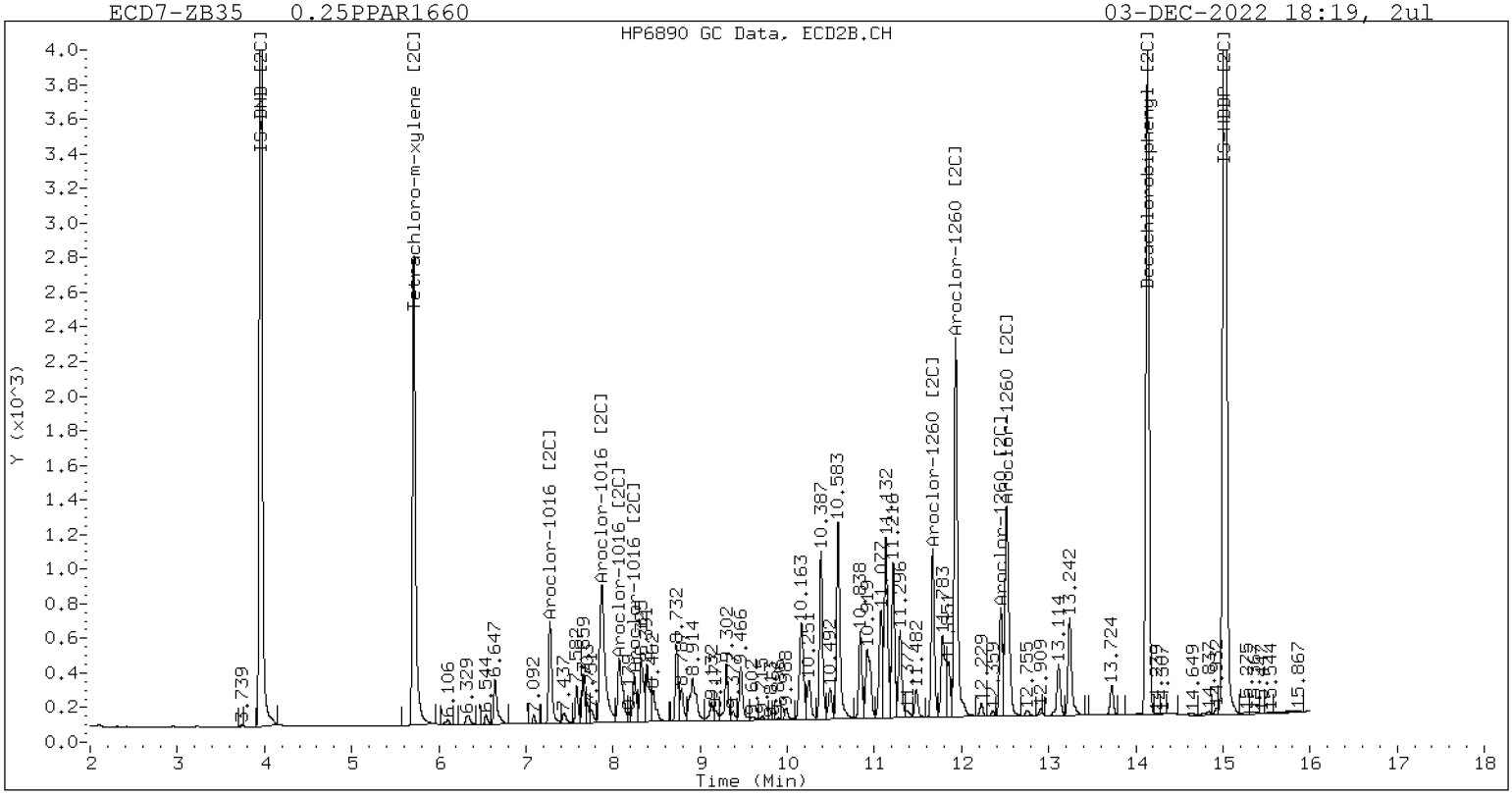
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPAR1660 03-DEC-2022 18:19, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPAR1660 03-DEC-2022 18:19, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032212ECD7.D
Data file 2: /221203.b/221203.b/12032212ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPAR1660
Client ID:
Injection Date: 03-DEC-2022 18:40
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	21148	5.713	-0.000	11703	3.3	3.4	2.8	Tetrachloro-m-xylene
13.907	-0.002	27903	14.135	-0.002	17860	3.7	3.4	7.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	456831	2.1
Hexabromobiphenyl	798898	833597	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	254070	2.0
Hexabromobiphenyl	362541	372232	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.294	0.002	3234	21.2	1	7.276	0.001	2808	21.6
Aroclor-1016	2	7.687	0.013	10166	20.7	2	7.879	0.009	5797	20.7
Aroclor-1016	3	7.819	0.009	4988	22.4	3	8.077	0.007	2653	22.1
Aroclor-1016	4	8.430	0.006	2807	19.7	4	8.249	0.008	1173	18.5
Total Col1Ave (4 peaks):					21.0	Total Col2Ave (4 peaks):				20.7 RPD = 1
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				20.3 RPD = 1
CalAmt %D:					5.0	CalAmt %D:				3.6
Aroclor-1260	1	11.066	0.004	6255	20.6	1	11.672	0.003	4216	21.5
Aroclor-1260	2	11.382	0.004	6329	20.2	2	11.937	0.005	10262	20.8
Aroclor-1260	3	11.758	0.008	16621	20.2	3	12.453	0.002	2734	20.8
Aroclor-1260	4	12.162	0.008	8146	19.4	4	12.521	0.004	6997	21.3
Aroclor-1260	5	12.264	0.004	3406	19.8	NS	---			----
Total Col1Ave (5 peaks):					20.0	Total Col2Ave (4 peaks):				21.1 RPD = 5
Corrected Ave (4 peaks):					19.9	Corrected Ave (3 peaks):				21.0 RPD = 5
CalAmt %D:					0.2	CalAmt %D:				5.5

Total PCB Area Col1 (5.936 - 13.808) = 188011 Col1 Total PCB = 0.0 ppm*

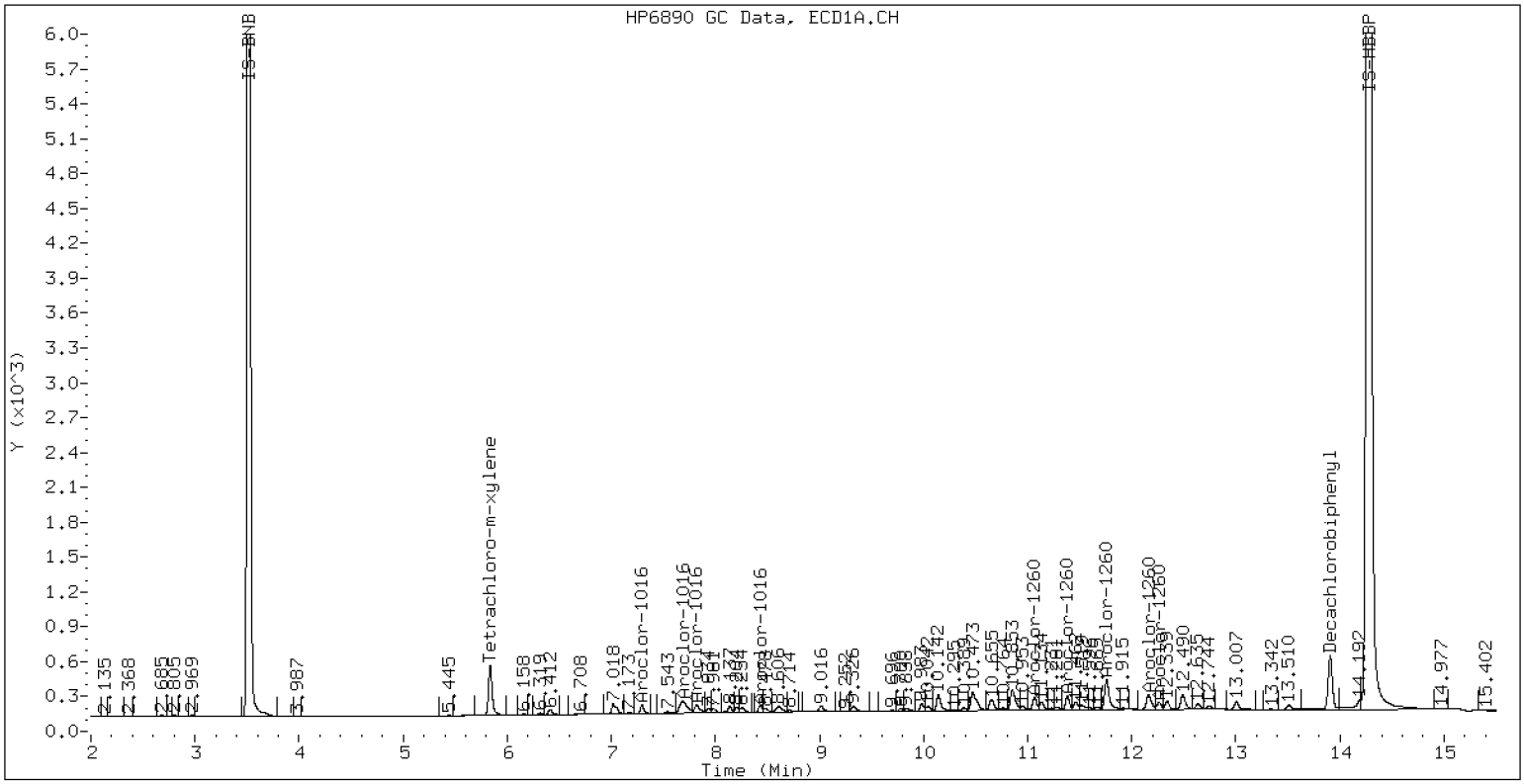
Total PCB Area Col2 (5.936 - 13.808) = 100527 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

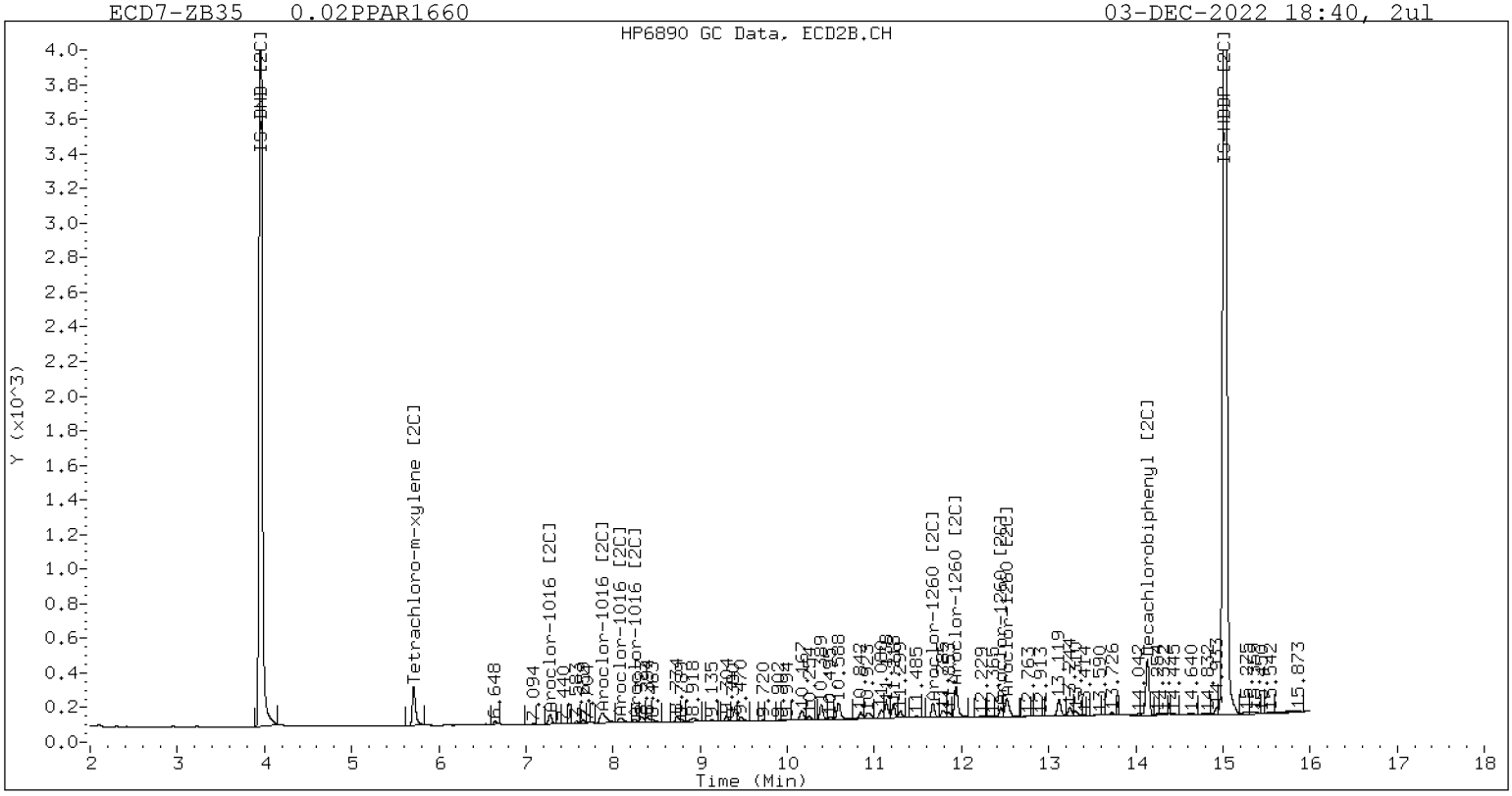
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPAR1660 03-DEC-2022 18:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPAR1660 03-DEC-2022 18:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032213ECD7.D
Data file 2: /221203.b/221203.b/12032213ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPAR1660
Client ID:
Injection Date: 03-DEC-2022 19:01
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	51078	5.713	-0.000	27008	8.0	7.8	1.5	Tetrachloro-m-xylene
13.907	-0.001	63325	14.137	-0.000	42829	8.2	8.0	3.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	453269	1.3
Hexabromobiphenyl	798898	840633	5.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	251466	1.0
Hexabromobiphenyl	362541	378380	4.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.294	0.002	7743	51.2	1	7.277	0.002	6704	52.1
Aroclor-1016	2	7.686	0.012	24543	50.3	2	7.879	0.008	14768	53.3
Aroclor-1016	3	7.818	0.008	12052	54.5	3	8.078	0.007	6672	56.0
Aroclor-1016	4	8.429	0.005	7291	51.7	4	8.249	0.007	3185	50.9
Total Col1Ave (4 peaks):					51.9	Total Col2Ave (4 peaks):				53.1 RPD = 2
Corrected Ave (3 peaks):					51.1	Corrected Ave (3 peaks):				52.1 RPD = 2
CalAmt %D:					3.8	CalAmt %D:				6.1
Aroclor-1260	1	11.066	0.004	15578	50.9	1	11.673	0.003	10647	53.3
Aroclor-1260	2	11.382	0.005	16010	50.6	2	11.937	0.004	25845	51.6
Aroclor-1260	3	11.757	0.007	42278	50.8	3	12.454	0.002	6703	50.2
Aroclor-1260	4	12.160	0.006	20971	49.5	4	12.520	0.004	17174	51.4
Aroclor-1260	5	12.263	0.004	8785	50.7	NS	---			----
Total Col1Ave (5 peaks):					50.5	Total Col2Ave (4 peaks):				51.6 RPD = 2
Corrected Ave (4 peaks):					50.4	Corrected Ave (3 peaks):				51.1 RPD = 1
CalAmt %D:					1.0	CalAmt %D:				3.3

Total PCB Area Col1 (5.936 - 13.808) = 457627 Col1 Total PCB = 0.1 ppm*

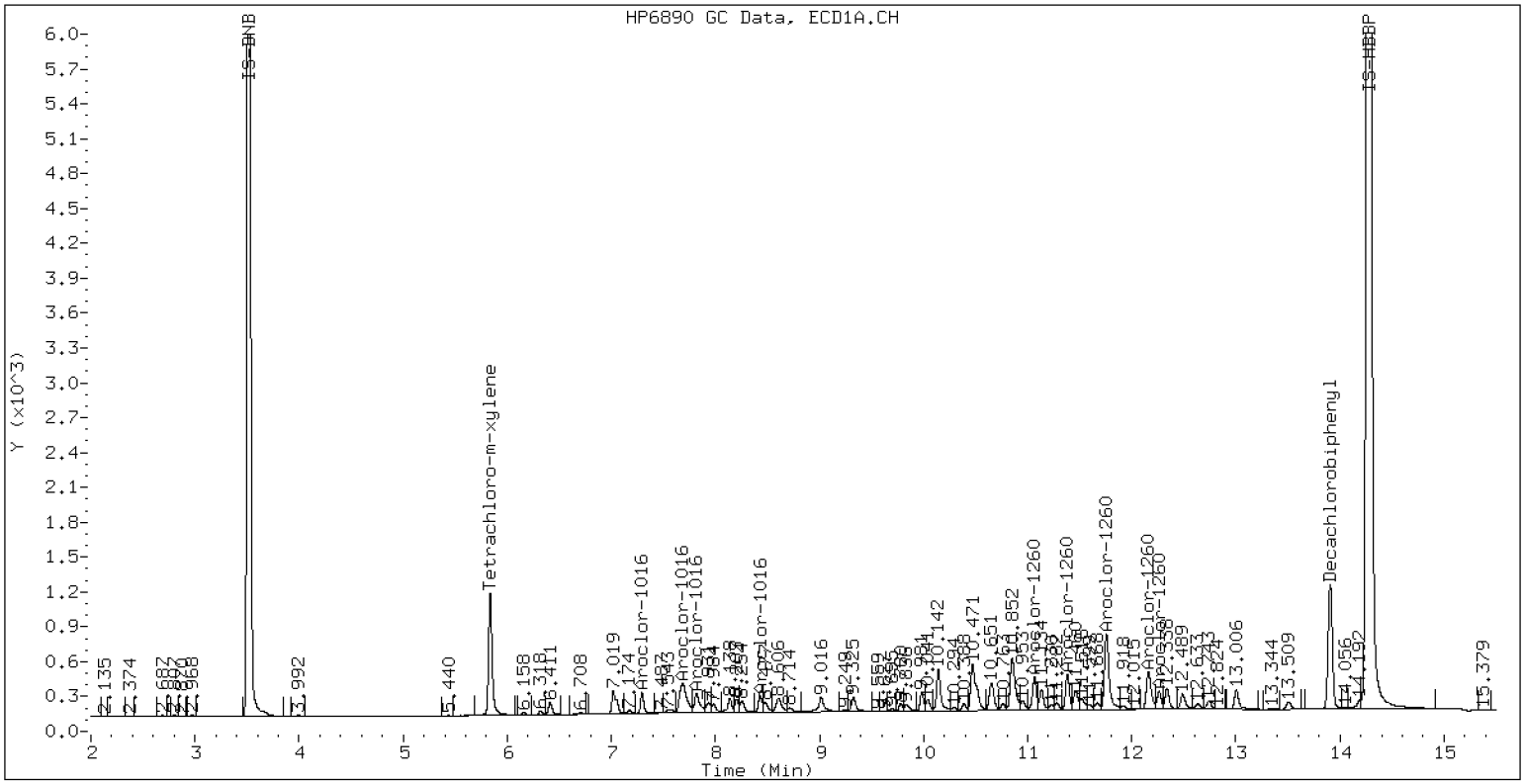
Total PCB Area Col2 (5.936 - 13.808) = 253240 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

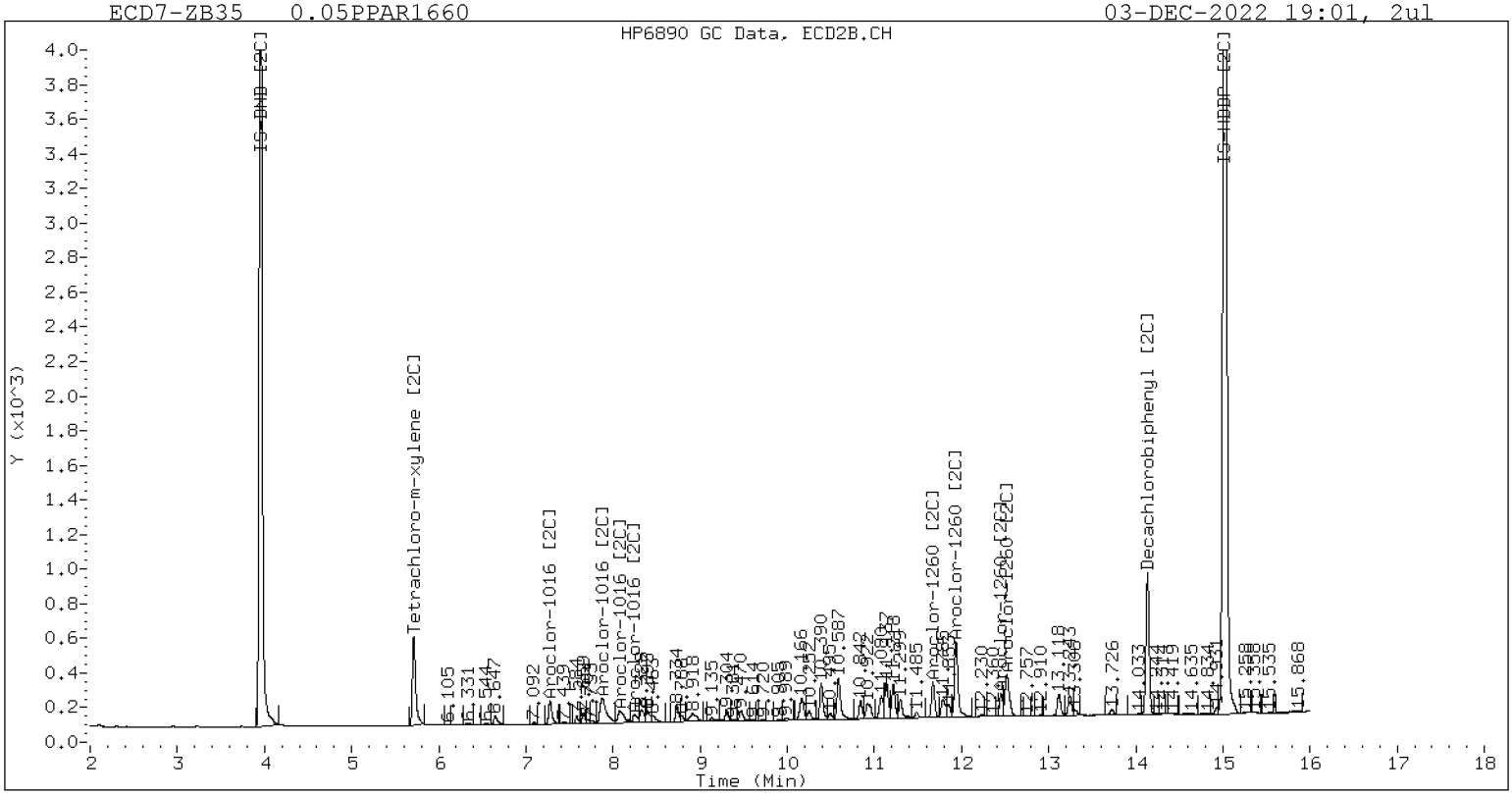
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPAR1660 03-DEC-2022 19:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPAR1660 03-DEC-2022 19:01, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032214ECD7.D
Data file 2: /221203.b/221203.b/12032214ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 03-DEC-2022 19:23
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	1010529	5.712	-0.002	531708	152.6	150.7	1.3	Tetrachloro-m-xylene
13.908	-0.001	1103073	14.137	-0.000	836962	144.8	153.1	5.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	467179	4.4
Hexabromobiphenyl	798898	830915	4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	257438	3.3
Hexabromobiphenyl	362541	385067	6.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.291	-0.001	135017	866.4	1	7.276	0.001	112973	858.3
Aroclor-1016	2	7.671	-0.003	458351	911.0	2	7.869	-0.001	252319	888.8
Aroclor-1016	3	7.807	-0.003	183320	804.0	3	8.068	-0.002	103219	846.7
Aroclor-1016	4	8.423	-0.001	135184	930.1	4	8.239	-0.002	63199	985.9
Total Col1Ave (4 peaks):					877.9	Total Col2Ave (4 peaks):				894.9 RPD = 2
Corrected Ave (3 peaks):					860.5	Corrected Ave (3 peaks):				864.6 RPD = 0
CalAmt %D:					-12.2	CalAmt %D:				-10.5
Aroclor-1260	1	11.058	-0.003	277616	917.9	1	11.668	-0.002	180676	888.9
Aroclor-1260	2	11.375	-0.002	293627	938.6	2	11.930	-0.002	450760	883.8
Aroclor-1260	3	11.748	-0.002	769872	936.7	3	12.449	-0.002	129799	955.7
Aroclor-1260	4	12.151	-0.003	405939	969.8	4	12.514	-0.002	308791	908.2
Aroclor-1260	5	12.259	-0.001	161370	941.8	NS	---			----
Total Col1Ave (5 peaks):					941.0	Total Col2Ave (4 peaks):				909.1 RPD = 3
Corrected Ave (4 peaks):					933.7	Corrected Ave (3 peaks):				893.6 RPD = 4
CalAmt %D:					-5.9	CalAmt %D:				-9.1

Total PCB Area Col1 (5.936 - 13.808) = 7995465 Col1 Total PCB = 1.5 ppm*

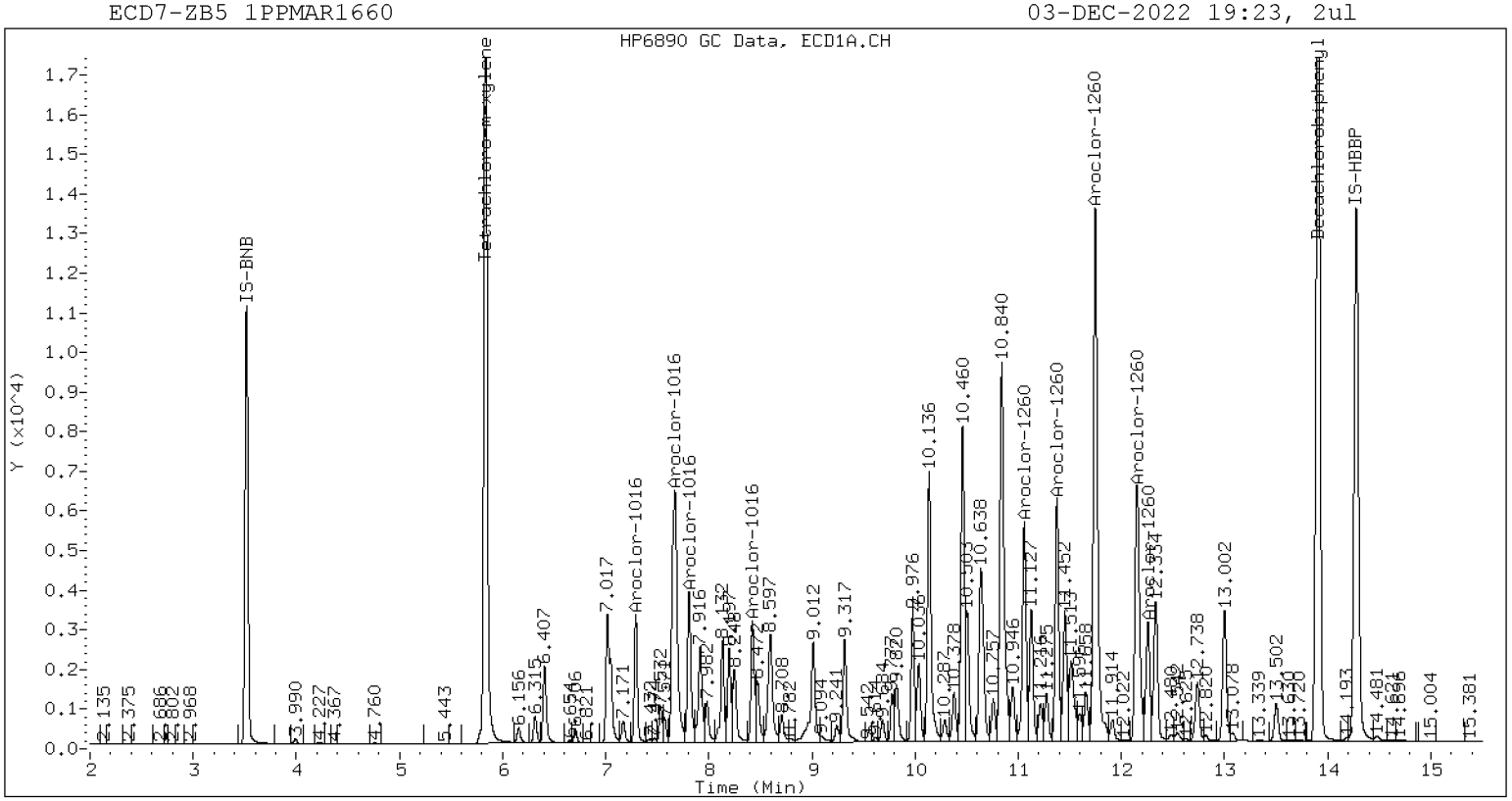
Total PCB Area Col2 (5.936 - 13.808) = 4426537 Col2 Total PCB = 2.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

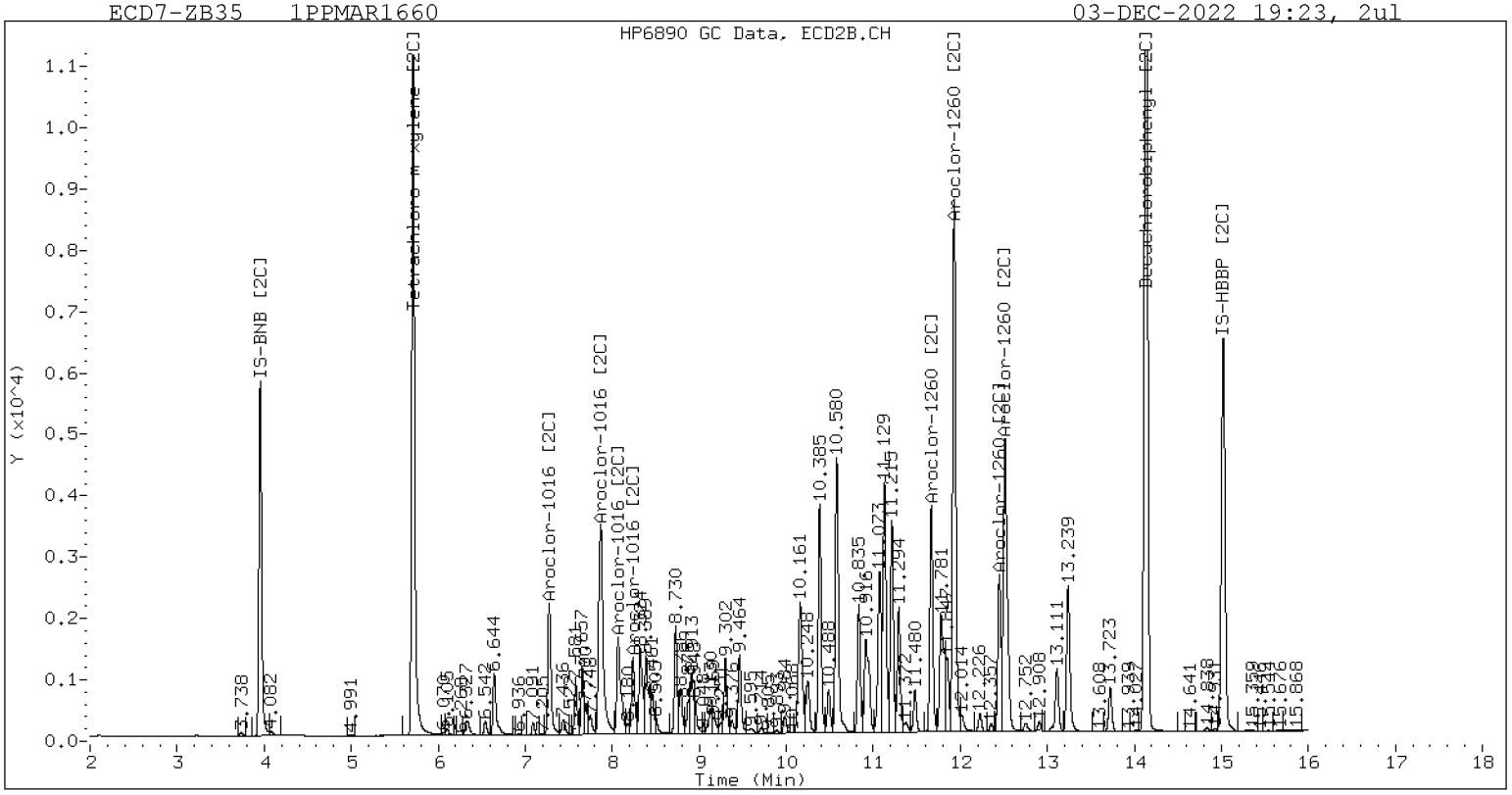
PCB Dual Column Chromatograms

ECD7-ZB5 1PPMAR1660 03-DEC-2022 19:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1PPMAR1660 03-DEC-2022 19:23, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032215ECD7.D
Data file 2: /221203.b/221203.b/12032215ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 03-DEC-2022 19:44
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	108416	5.713	-0.000	58717	16.7	16.8	0.6	Tetrachloro-m-xylene
13.907	-0.002	126876	14.136	-0.001	91231	16.5	16.6	0.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	457669	2.2
Hexabromobiphenyl	798898	837264	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	254712	2.3
Hexabromobiphenyl	362541	387892	7.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.293	0.001	16631	108.9	1	7.277	0.001	14117	108.4
Aroclor-1016	2	7.680	0.007	52058	105.6	2	7.876	0.006	29792	106.1
Aroclor-1016	3	7.816	0.006	24753	110.8	3	8.076	0.005	12664	105.0
Aroclor-1016	4	8.428	0.004	15027	105.5	4	8.247	0.006	6540	103.1
Total Col1Ave (4 peaks):					107.7	Total Col2Ave (4 peaks):				105.6 RPD = 2
Corrected Ave (3 peaks):					106.7	Corrected Ave (3 peaks):				104.7 RPD = 2
CalAmt %D:					7.7	CalAmt %D:				5.6
Aroclor-1260	1	11.064	0.003	31860	104.5	1	11.671	0.002	21501	105.0
Aroclor-1260	2	11.381	0.003	32914	104.4	2	11.935	0.003	54902	106.9
Aroclor-1260	3	11.756	0.006	88153	106.4	3	12.453	0.002	14336	104.8
Aroclor-1260	4	12.159	0.005	44477	105.5	4	12.520	0.004	36244	105.8
Aroclor-1260	5	12.262	0.002	18369	106.4	NS	---			----
Total Col1Ave (5 peaks):					105.4	Total Col2Ave (4 peaks):				105.6 RPD = 0
Corrected Ave (4 peaks):					105.2	Corrected Ave (3 peaks):				105.2 RPD = 0
CalAmt %D:					5.4	CalAmt %D:				5.6

Total PCB Area Col1 (5.936 - 13.808) = 933356 Col1 Total PCB = 0.2 ppm*

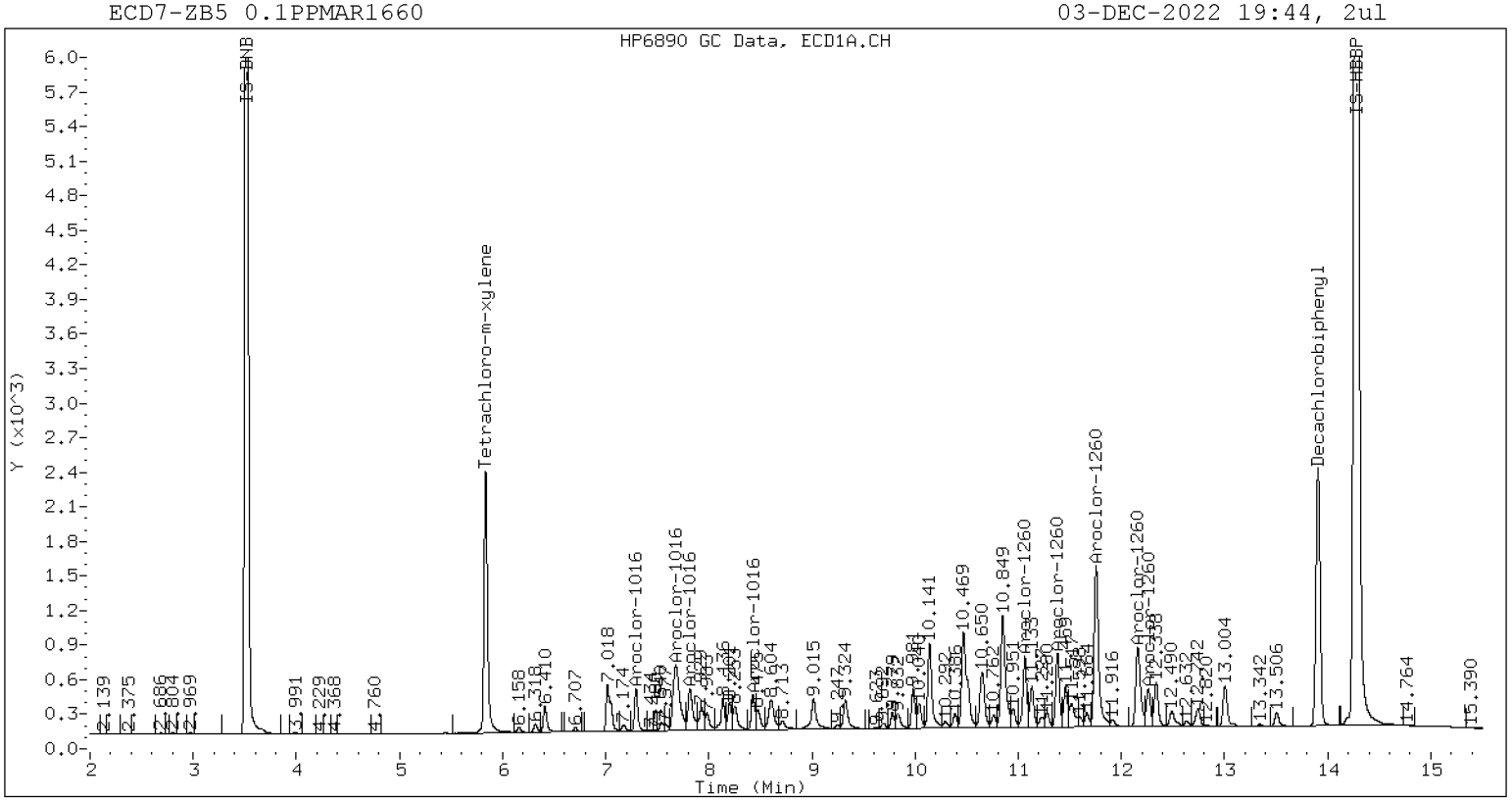
Total PCB Area Col2 (5.936 - 13.808) = 523507 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

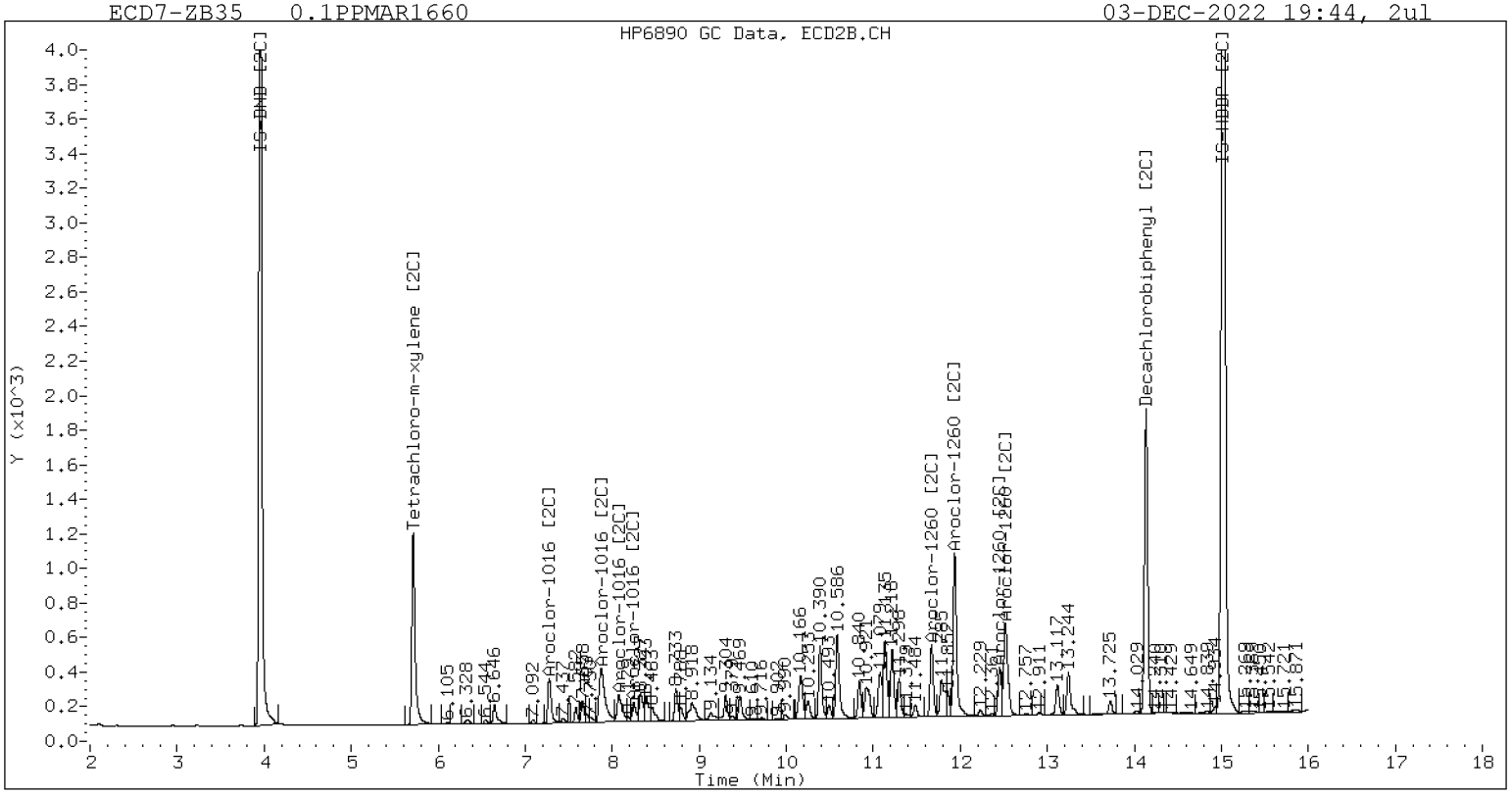
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 03-DEC-2022 19:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 03-DEC-2022 19:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032216ECD7.D
Data file 2: /221203.b/221203.b/12032216ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 03-DEC-2022 20:05
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	510310	5.711	-0.002	273850	78.2	77.7	0.7	Tetrachloro-m-xylene
13.908	-0.001	570893	14.137	-0.000	431489	74.4	77.0	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	460250	2.8
Hexabromobiphenyl	798898	837210	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	257013	3.2
Hexabromobiphenyl	362541	394788	8.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.292	0.000	73008	475.5	1	7.275	0.000	61467	467.8
Aroclor-1016	2	7.674	0.000	243498	491.2	2	7.870	0.000	135395	477.7
Aroclor-1016	3	7.810	0.000	100165	445.9	3	8.070	0.000	55783	458.3
Aroclor-1016	4	8.424	0.000	70493	492.3	4	8.241	0.000	32578	509.0
Total Col1Ave (4 peaks):					476.3	Total Col2Ave (4 peaks):				478.2 RPD = 0
Corrected Ave (3 peaks):					470.9	Corrected Ave (3 peaks):				467.9 RPD = 1
			CalAmt %D:		-4.7			CalAmt %D:		-4.4
Aroclor-1260	1	11.062	0.000	148089	485.9	1	11.669	0.000	95983	460.6
Aroclor-1260	2	11.377	0.000	154542	490.3	2	11.933	0.000	249045	476.3
Aroclor-1260	3	11.750	0.000	401802	485.2	3	12.451	0.000	66824	479.9
Aroclor-1260	4	12.154	0.000	212604	504.1	4	12.517	0.000	165020	473.4
Aroclor-1260	5	12.260	0.000	85762	496.7	NS	---			----
Total Col1Ave (5 peaks):					492.5	Total Col2Ave (4 peaks):				472.5 RPD = 4
Corrected Ave (4 peaks):					489.5	Corrected Ave (3 peaks):				470.1 RPD = 4
			CalAmt %D:		-1.5			CalAmt %D:		-5.5

Total PCB Area Col1 (5.936 - 13.808) = 4267475 Col1 Total PCB = 0.8 ppm*

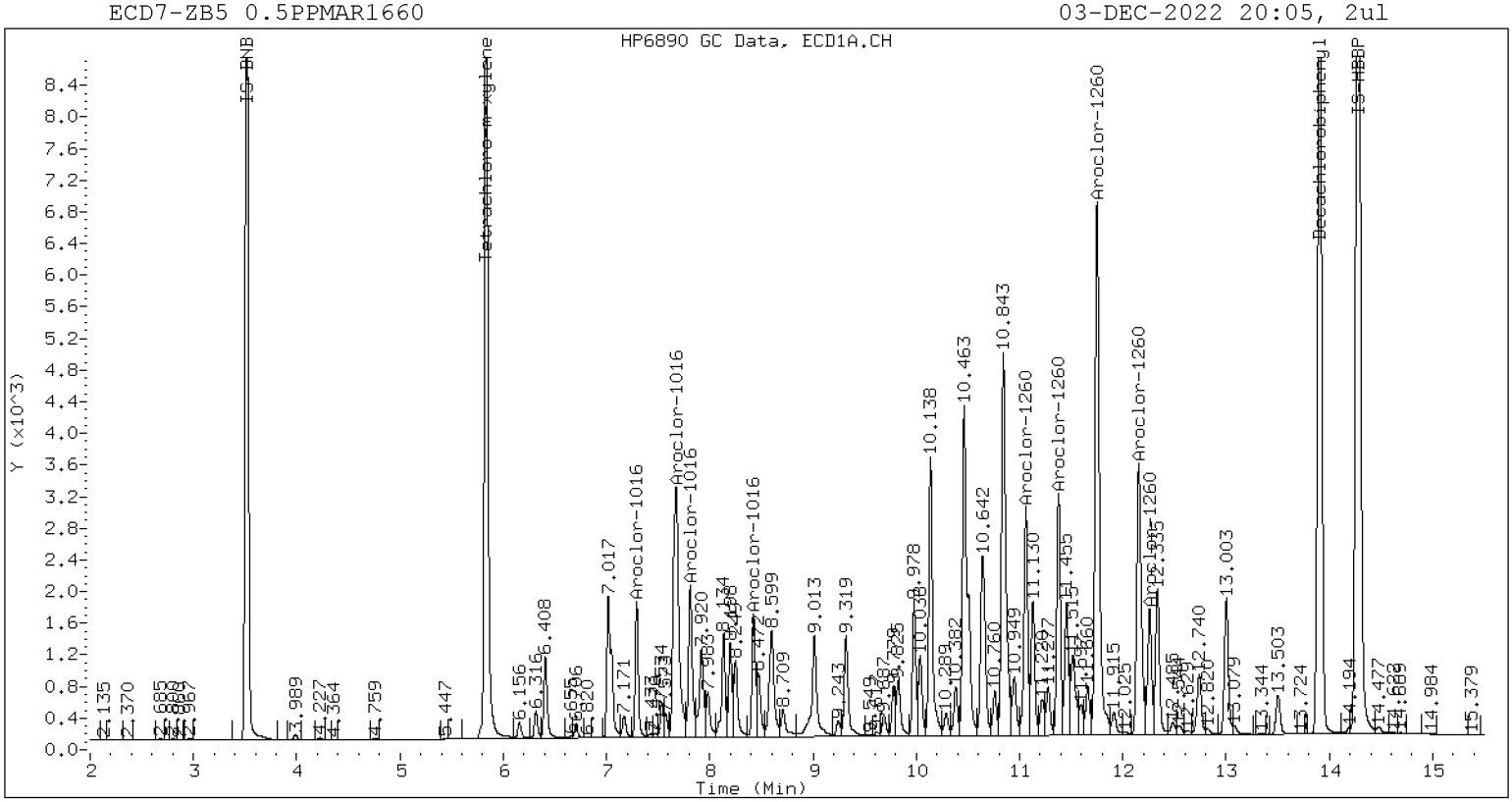
Total PCB Area Col2 (5.936 - 13.808) = 2352394 Col2 Total PCB = 1.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

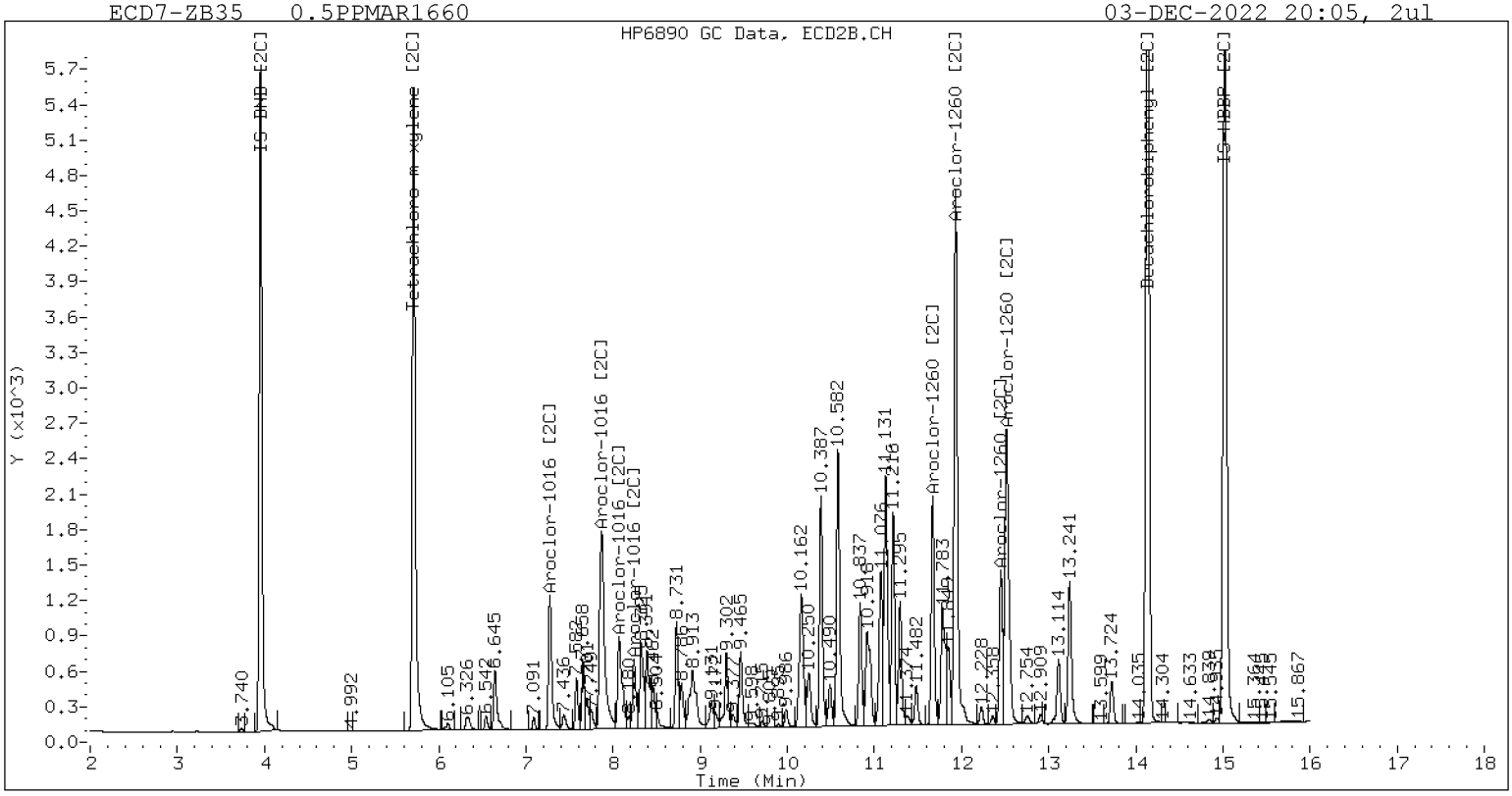
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 03-DEC-2022 20:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 03-DEC-2022 20:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032217ECD7.D
Data file 2: /221203.b/221203.b/12032217ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 03-DEC-2022 20:26
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243461	5.713	-0.000	130768	37.3	37.1	0.4	Tetrachloro-m-xylene
13.908	-0.001	300671	14.137	0.000	218277	38.5	38.4	0.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	461030	3.0
Hexabromobiphenyl	798898	851899	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	257053	3.2
Hexabromobiphenyl	362541	400012	10.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	32669	250.0	1	7.277	0.000	27198	250.0
Aroclor-1242	2	7.680	0.000	103727	250.0	2	7.875	0.000	57737	250.0
Aroclor-1242	3	8.427	0.000	29844	250.0	3	9.178	0.000	18627	250.0
Aroclor-1242	4	9.030	0.000	61970	250.0	4	9.605	0.000	22388	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 766457 Col1 Total PCB = 0.1 ppm*

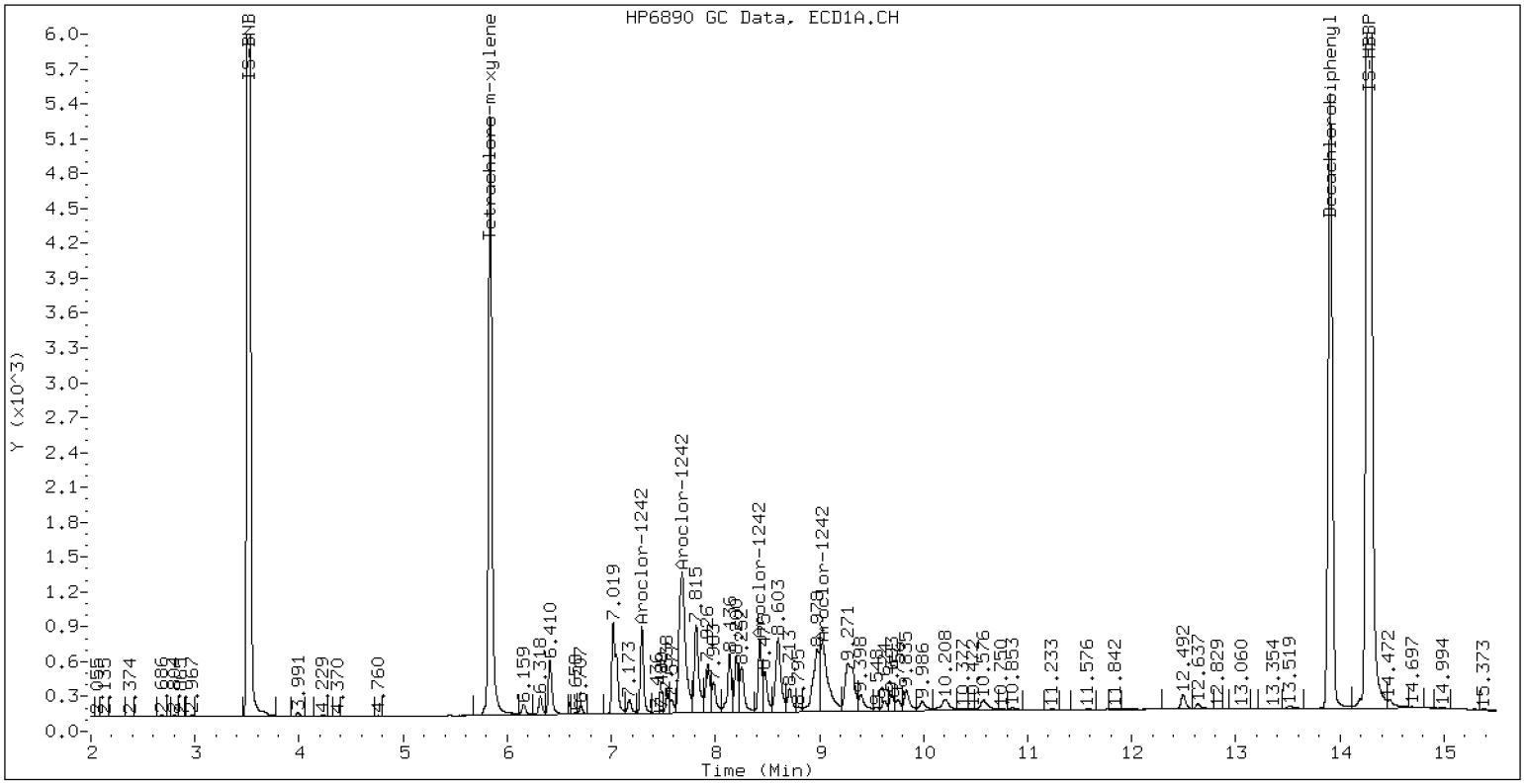
Total PCB Area Col2 (5.936 - 13.808) = 407128 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

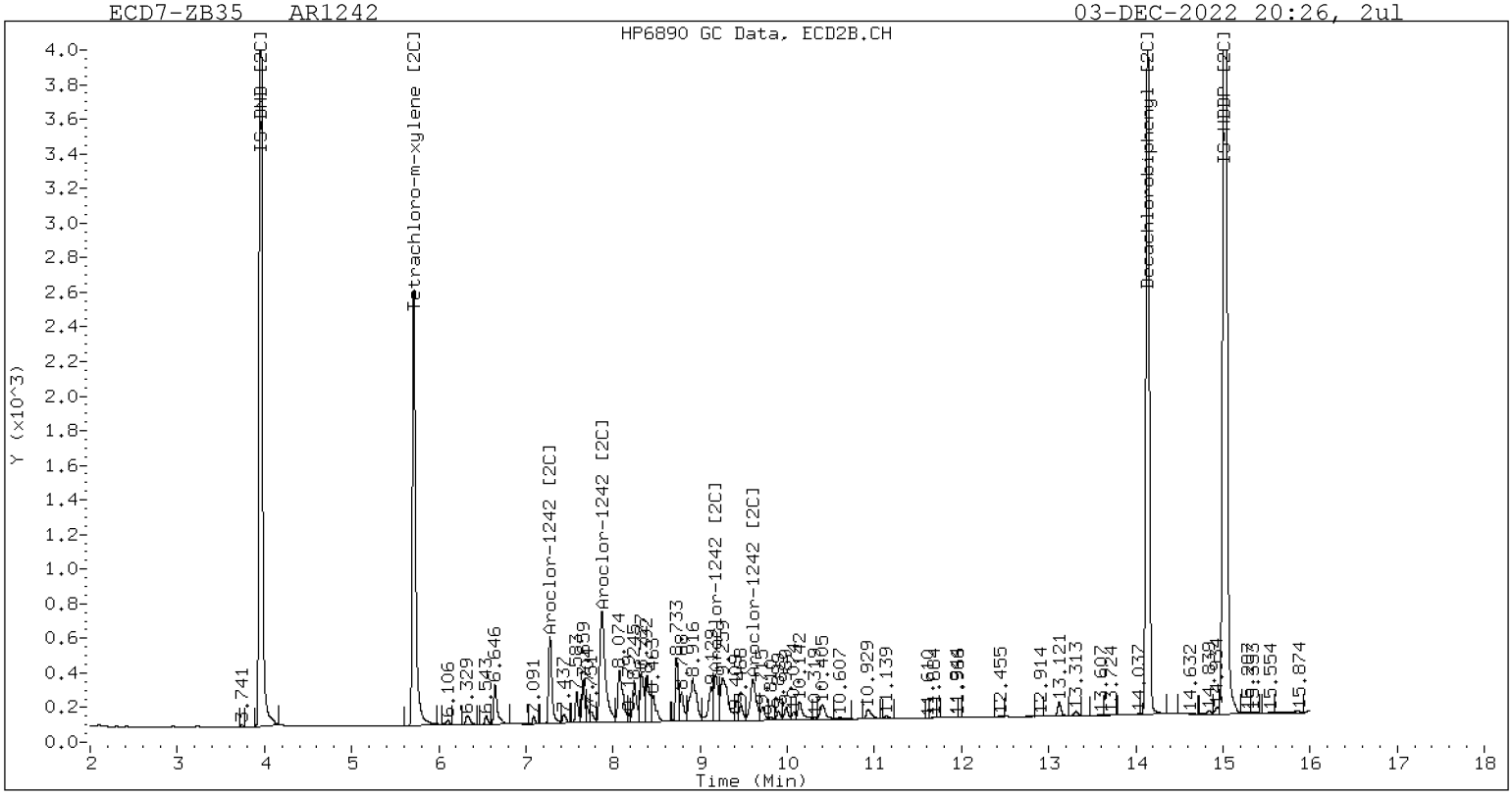
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 03-DEC-2022 20:26, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242 03-DEC-2022 20:26, 2ul

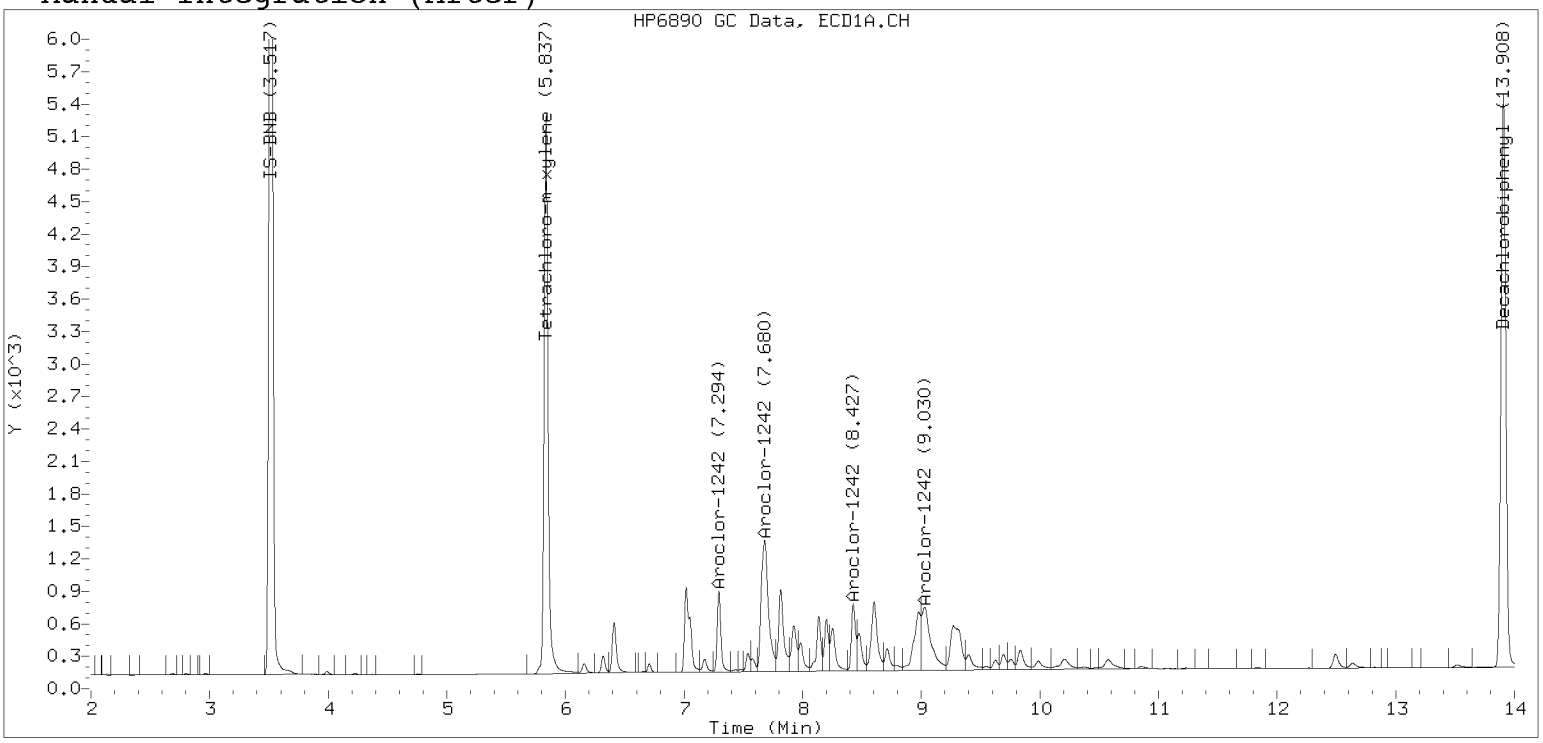


ZB-35 Manual Integration: YES

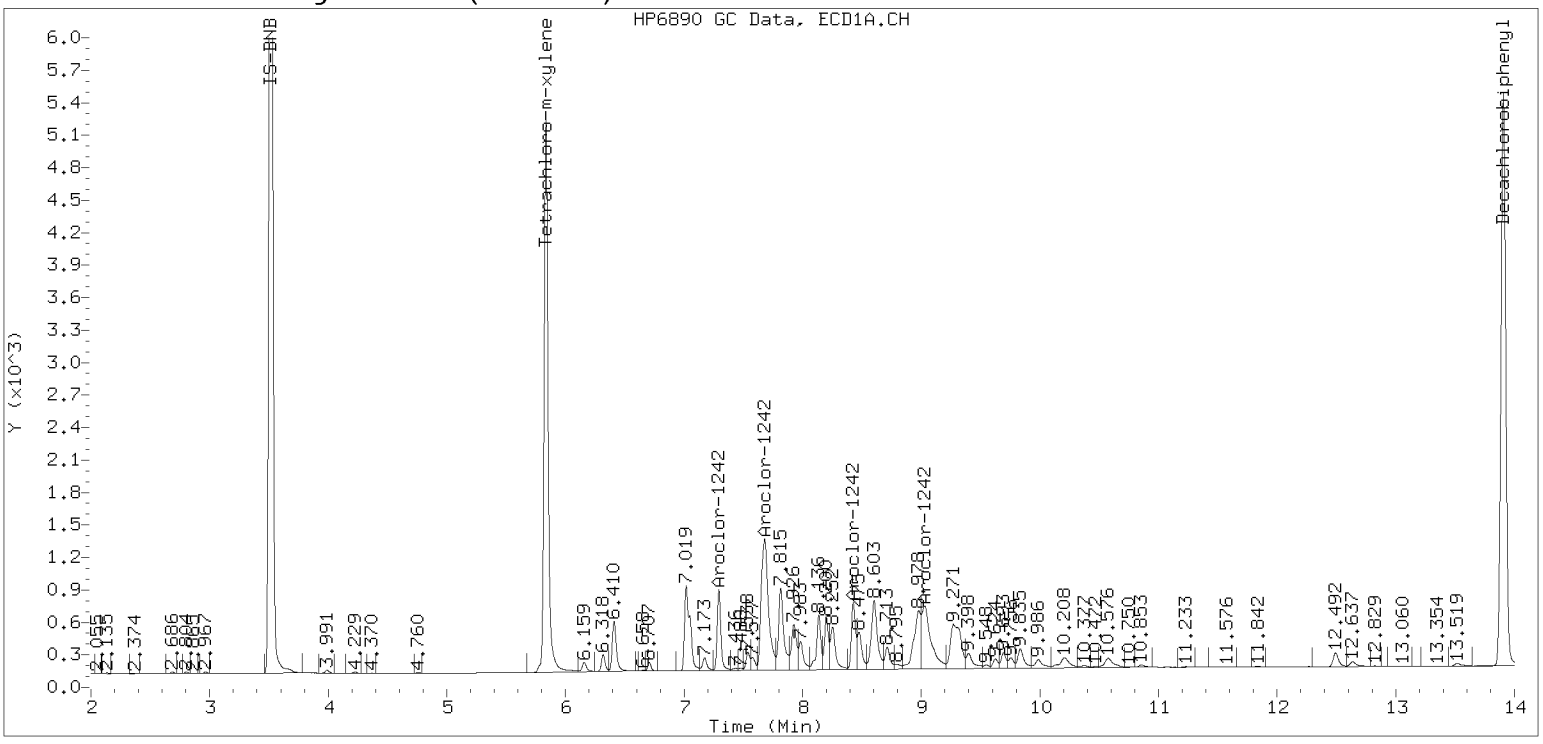
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221203.b/12032217ECD7.D Injection Date: 03-DEC-2022 20:26

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032218ECD7.D
Data file 2: /221203.b/221203.b/12032218ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 03-DEC-2022 20:48
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.001	231737	5.713	-0.000	124430	36.1	35.8	0.8	Tetrachloro-m-xylene
13.907	-0.001	296478	14.137	0.000	215774	38.9	38.1	1.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	453370	1.3
Hexabromobiphenyl	798898	832030	4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	253684	1.8
Hexabromobiphenyl	362541	398468	9.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	0.000	48733	250.0	1	8.326	0.000	25909	250.0
Aroclor-1248	2	8.603	0.000	62221	250.0	2	8.733	0.000	27250	250.0
Aroclor-1248	3	9.023	0.000	111933	250.0	3	9.177	0.000	33147	250.0
Aroclor-1248	4	9.315	0.000	54837	250.0	4	9.602	0.000	38911	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 964384 Col1 Total PCB = 0.2 ppm*

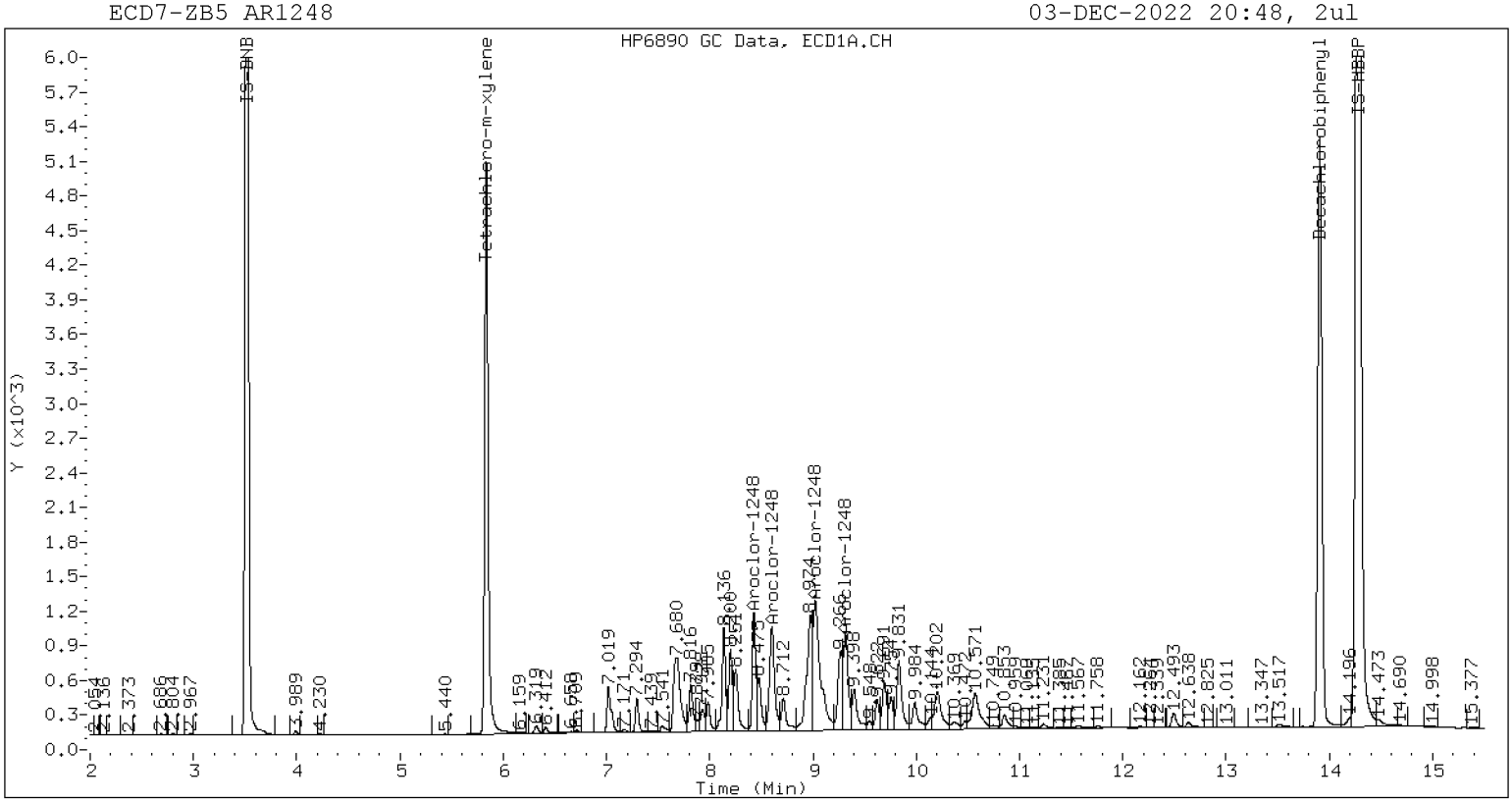
Total PCB Area Col2 (5.936 - 13.808) = 514558 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

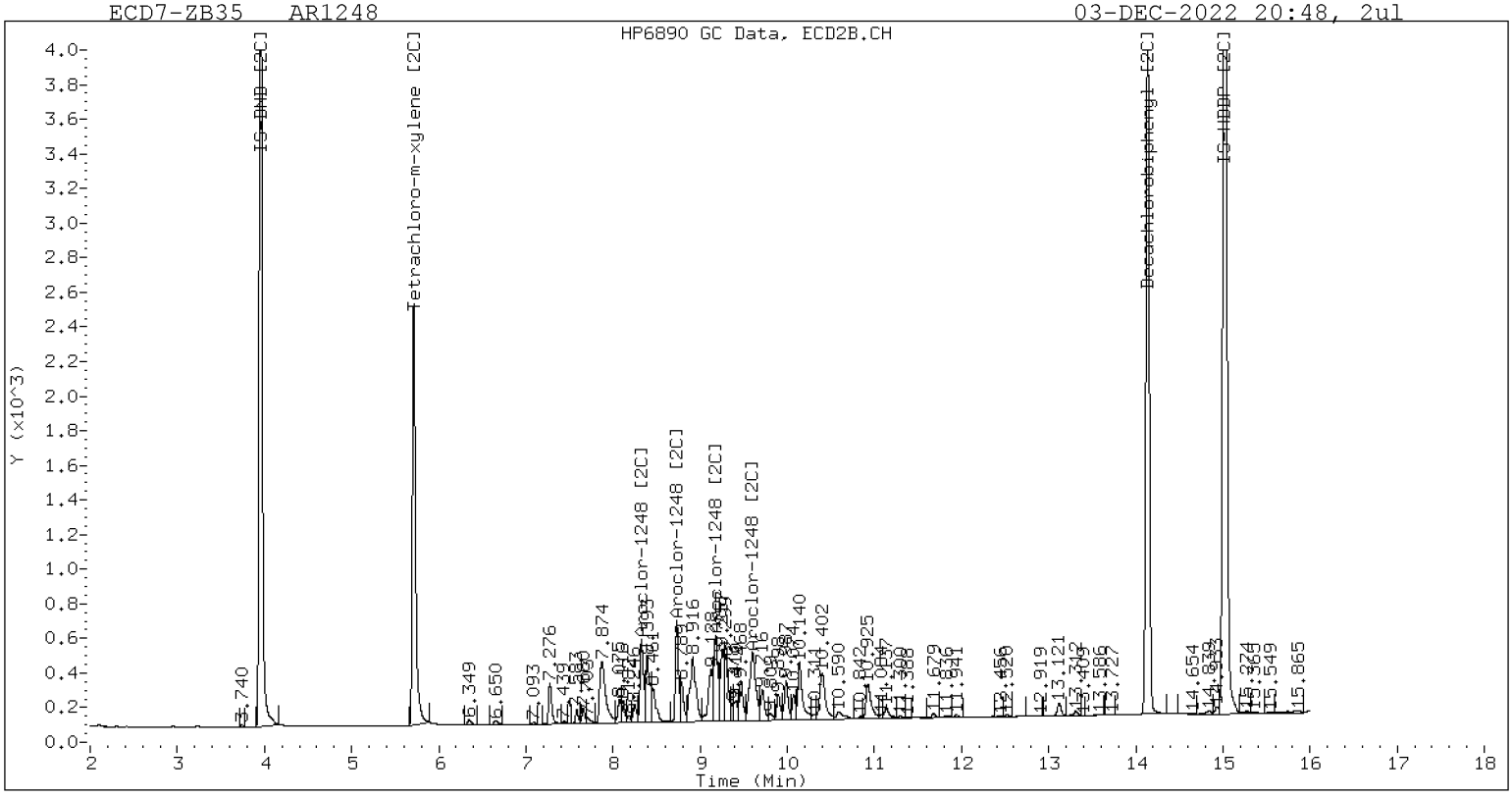
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 03-DEC-2022 20:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 03-DEC-2022 20:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032219ECD7.D
Data file 2: /221203.b/221203.b/12032219ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 03-DEC-2022 21:09
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	235742	5.713	-0.000	129532	36.3	36.8	1.4	Tetrachloro-m-xylene
13.908	-0.000	304424	14.136	-0.001	220843	39.5	38.4	2.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	458200	2.4
Hexabromobiphenyl	798898	841638	5.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	256547	3.0
Hexabromobiphenyl	362541	405063	11.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.319	0.000	100858	250.0	1	9.467	0.000	41352	250.0
Aroclor-1254	2	9.397	0.000	39224	250.0	2	9.987	0.000	33246	250.0
Aroclor-1254	3	9.688	0.000	63702	250.0	3	10.139	0.000	71462	250.0
Aroclor-1254	4	9.828	0.000	124170	250.0	4	10.389	0.000	74009	250.0
Aroclor-1254	5	10.194	0.000	85117	250.0	5	10.586	0.000	35695	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1310899 Col1 Total PCB = 0.2 ppm*

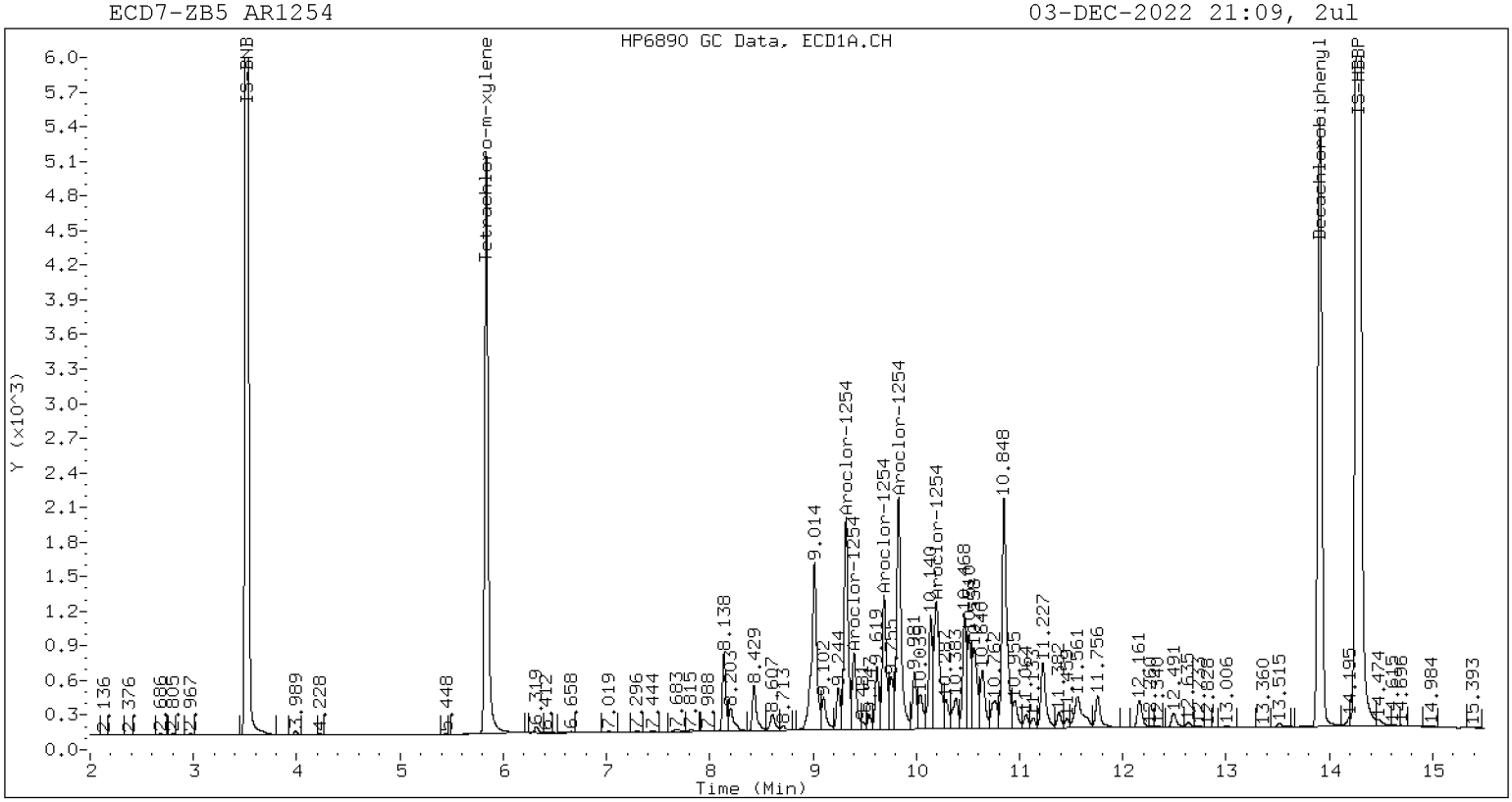
Total PCB Area Col2 (5.936 - 13.808) = 697760 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

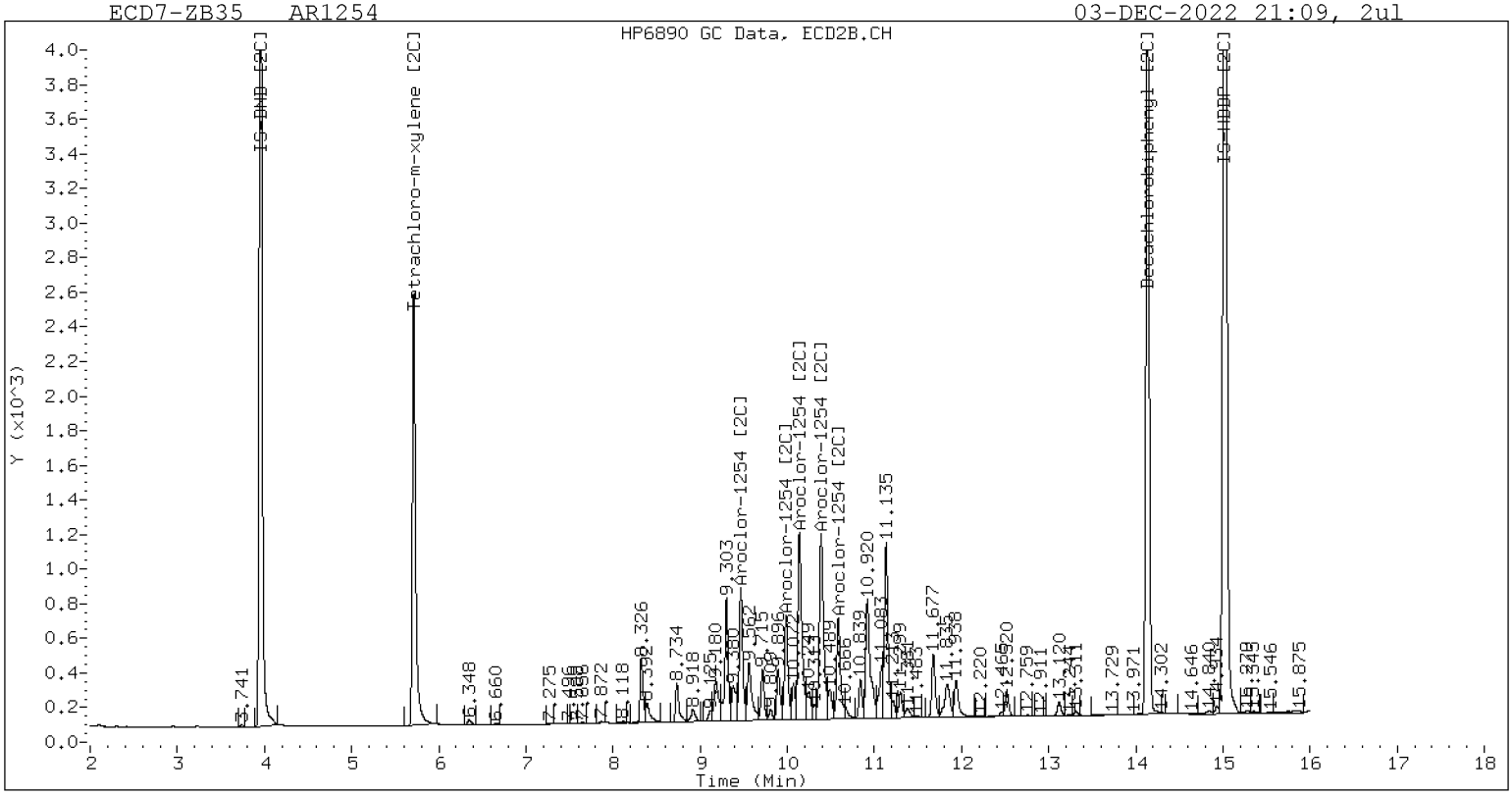
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 03-DEC-2022 21:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 03-DEC-2022 21:09, 2ul



ZB-35 Manual Integration: YES

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032220ECD7.D
Data file 2: /221203.b/221203.b/12032220ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 03-DEC-2022 21:30
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.835	-0.001	241351	5.713	-0.001	129143	36.5	36.2	0.7	Tetrachloro-m-xylene
13.908	0.000	313862	14.136	-0.001	226219	40.2	38.7	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	466944	4.3
Hexabromobiphenyl	798898	850987	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	260026	4.4
Hexabromobiphenyl	362541	412003	13.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.760	0.000	9650	250.0	1	4.987	0.000	5486	250.0
Aroclor-1221	2	6.159	0.000	17000	250.0	2	6.322	0.000	10456	250.0
Aroclor-1221	3	6.409	0.000	39219	250.0	3	6.645	0.000	17596	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.848	0.000	71145	250.0	1	11.217	0.000	78317	250.0
Aroclor-1262	2	12.263	0.000	110609	250.0	2	11.670	0.000	67831	250.0
Aroclor-1262	3	12.337	0.000	118127	250.0	3	12.451	0.000	74822	250.0
Aroclor-1262	4	13.005	0.000	94805	250.0	4	12.519	0.000	117202	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1878739 Col1 Total PCB = 0.3 ppm*

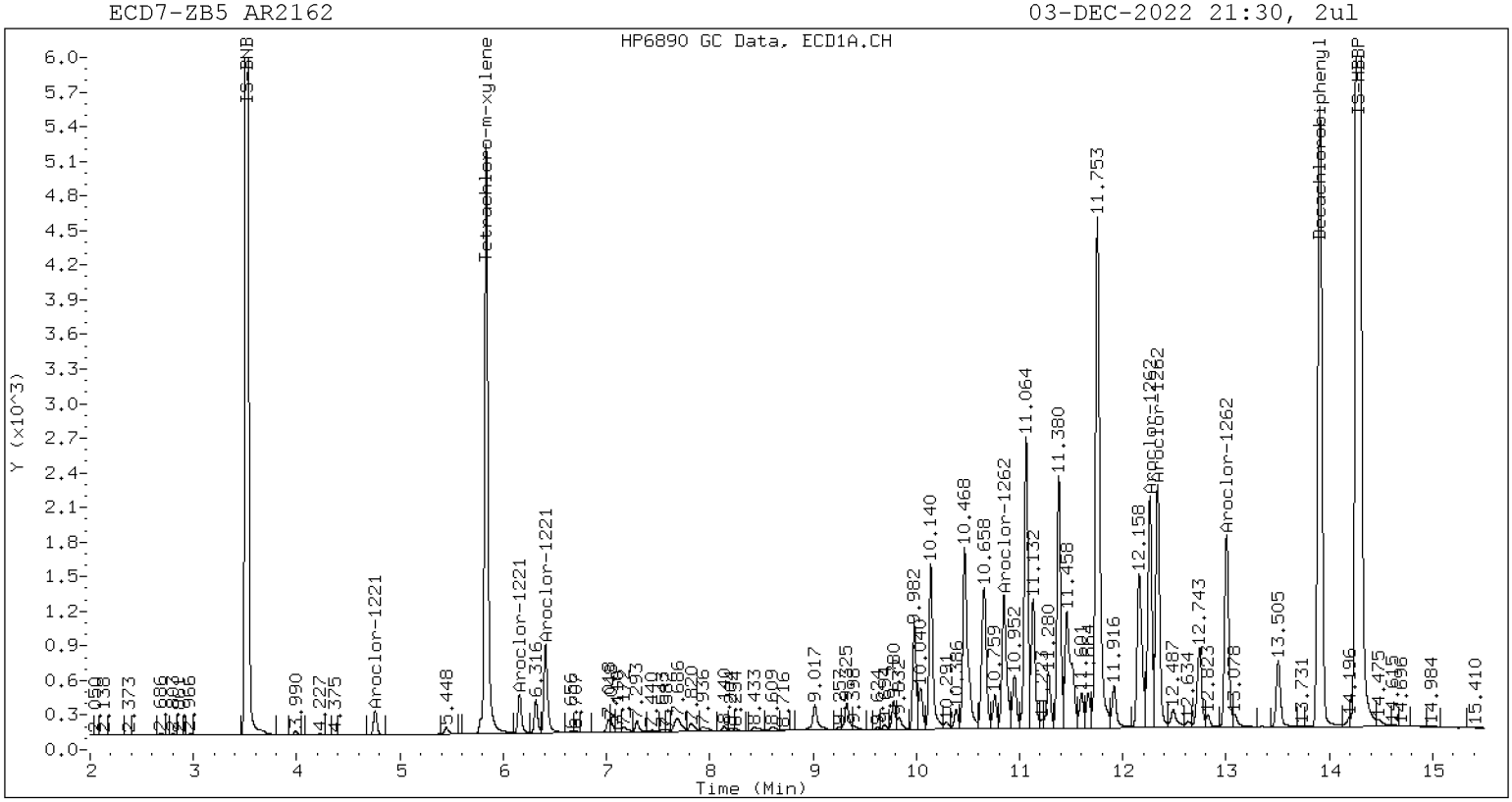
Total PCB Area Col2 (5.936 - 13.808) = 1073324 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

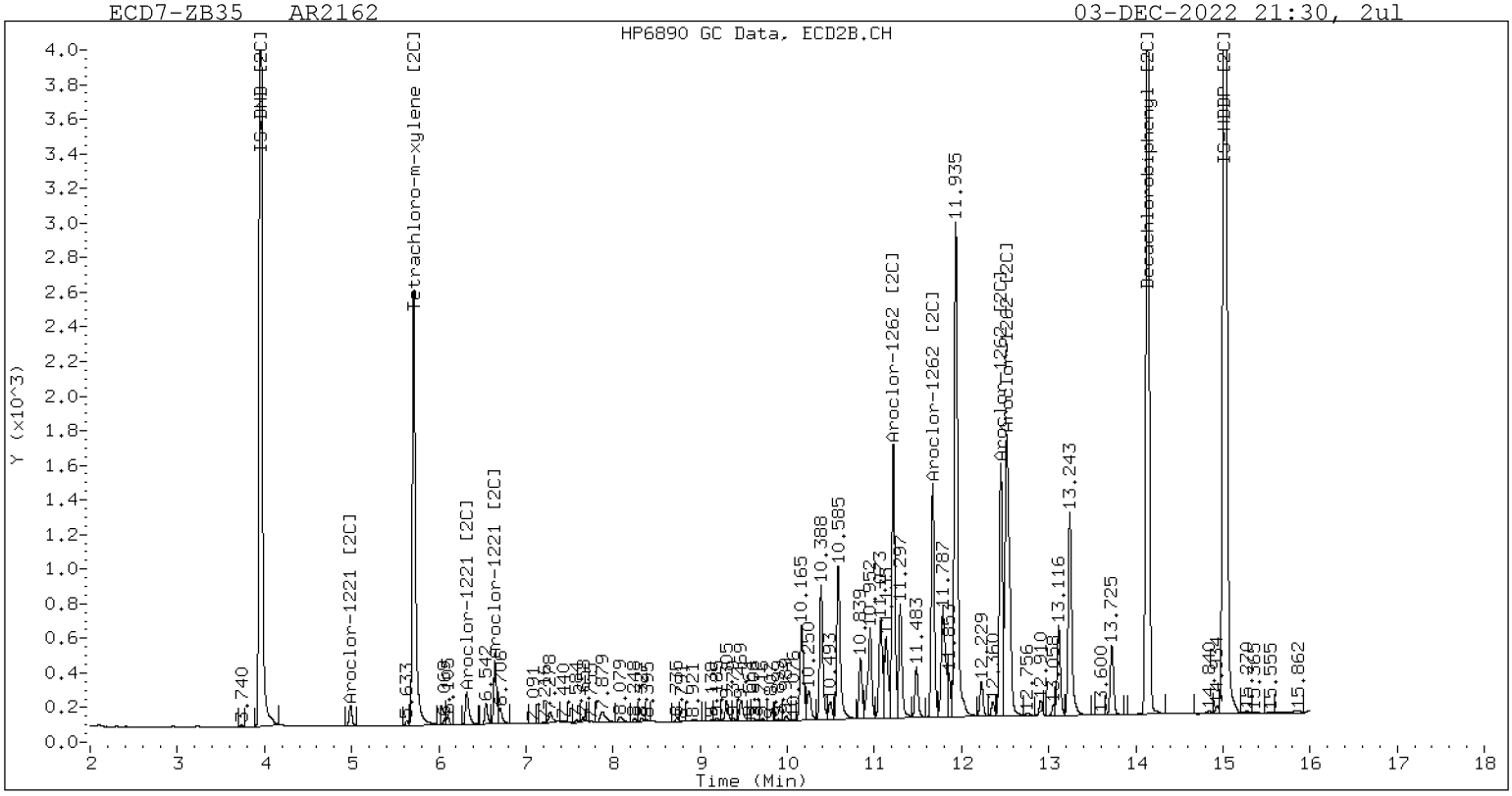
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 03-DEC-2022 21:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 03-DEC-2022 21:30, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032221ECD7.D
Data file 2: /221203.b/221203.b/12032221ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 03-DEC-2022 21:52
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	243663	5.713	0.000	131067	37.5	37.4	0.3	Tetrachloro-m-xylene
13.908	0.000	449152	14.137	0.000	328563	57.2	55.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	458589	2.4
Hexabromobiphenyl	798898	855928	7.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	255655	2.6
Hexabromobiphenyl	362541	413793	14.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.761	0.000	5704	250.0	1	4.989	0.000	3108	250.0
Aroclor-1232	2	6.160	0.000	12048	250.0	2	7.277	0.000	15872	250.0
Aroclor-1232	3	7.684	0.000	54107	250.0	3	7.876	0.000	31029	250.0
Aroclor-1232	4	8.606	0.000	22956	250.0	4	8.734	0.000	8413	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.262	0.000	299378	250.0	1	12.450	0.000	195273	250.0
Aroclor-1268	2	12.335	0.000	292877	250.0	2	12.517	0.000	200224	250.0
Aroclor-1268	3	12.716	0.000	240046	250.0	3	12.910	0.000	74248	250.0
Aroclor-1268	4	13.505	0.000	732880	250.0	4	13.726	0.000	534323	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 2400701 Col1 Total PCB = 0.5 ppm*

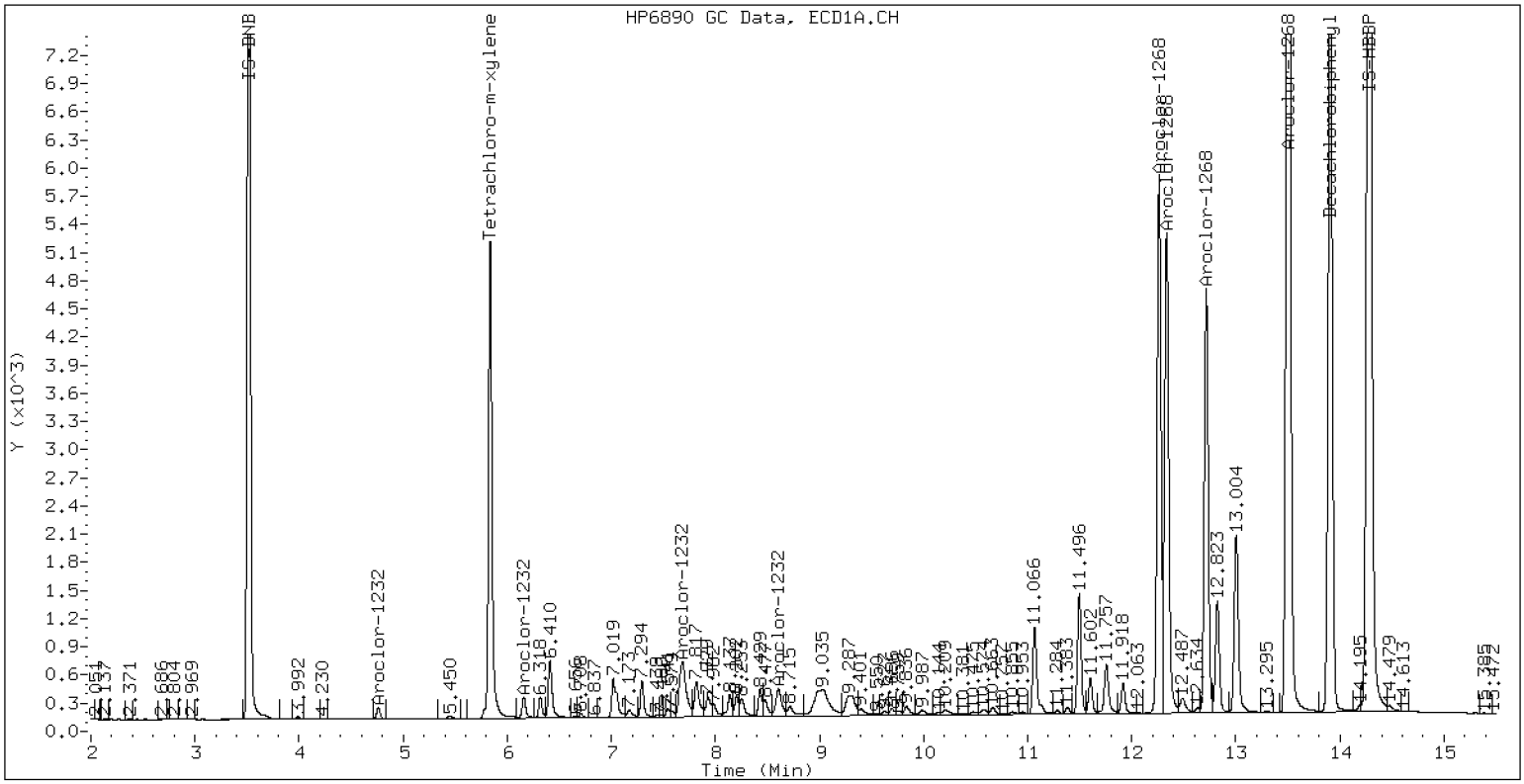
Total PCB Area Col2 (5.936 - 13.808) = 1468669 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

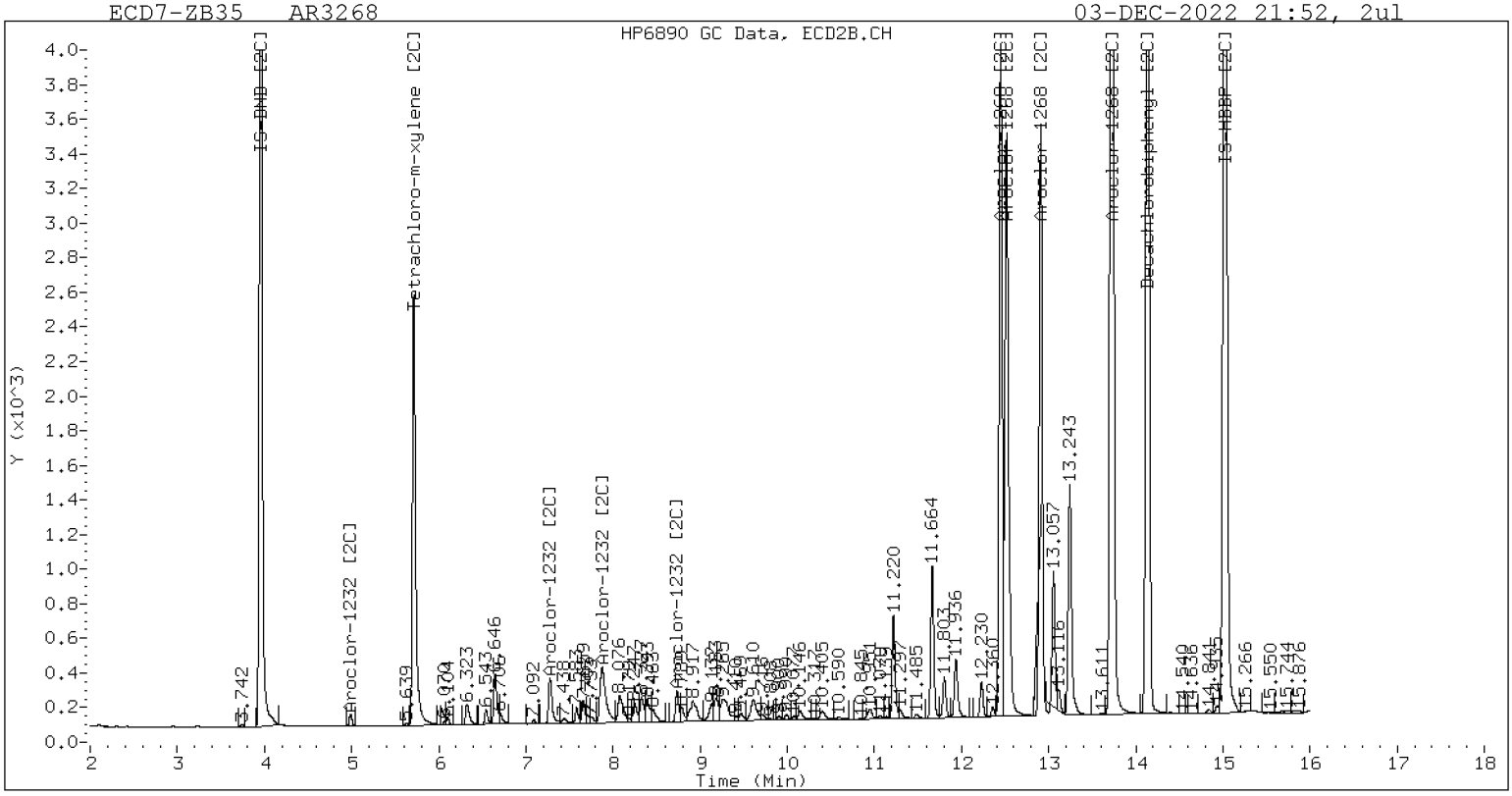
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 03-DEC-2022 21:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 03-DEC-2022 21:52, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032222ECD7.D
Data file 2: /221203.b/221203.b/12032222ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 03-DEC-2022 22:13
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	247495	5.714	0.000	133904	36.1	36.1	0.2	Tetrachloro-m-xylene
13.909	0.001	325466	14.137	0.000	234467	39.8	38.2	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483506	8.0
Hexabromobiphenyl	798898	892033	11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270882	8.7
Hexabromobiphenyl	362541	432562	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.293	0.001	36100	223.8	1	7.277	0.002	30155	217.7
Aroclor-1016	2	7.681	0.007	113995	218.9	2	7.875	0.004	64468	215.8
Aroclor-1016	3	7.815	0.004	53043	224.8	3	8.074	0.004	27130	211.5
Aroclor-1016	4	8.428	0.004	33958	225.7	4	8.245	0.004	14848	220.1
Total Col1Ave (4 peaks):					223.3	Total Col2Ave (4 peaks):				216.3 RPD = 3
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				215.0 RPD = 3
Aroclor-1260	1	11.063	0.001	93173	286.9	1	11.671	0.002	56796	248.7
Aroclor-1260	2	11.380	0.003	95530	284.5	2	11.935	0.002	153247	267.5
Aroclor-1260	3	11.754	0.004	250548	283.9	3	12.452	0.001	41316	270.8
Aroclor-1260	4	12.159	0.005	120399	267.9	4	12.519	0.003	100704	263.7
Aroclor-1260	5	12.263	0.003	55639	302.5	NS	---			----
Total Col1Ave (5 peaks):					285.1	Total Col2Ave (4 peaks):				262.7 RPD = 8
Corrected Ave (4 peaks):					280.8	Corrected Ave (3 peaks):				260.0 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 2318083 Col1 Total PCB = 0.4 ppm*

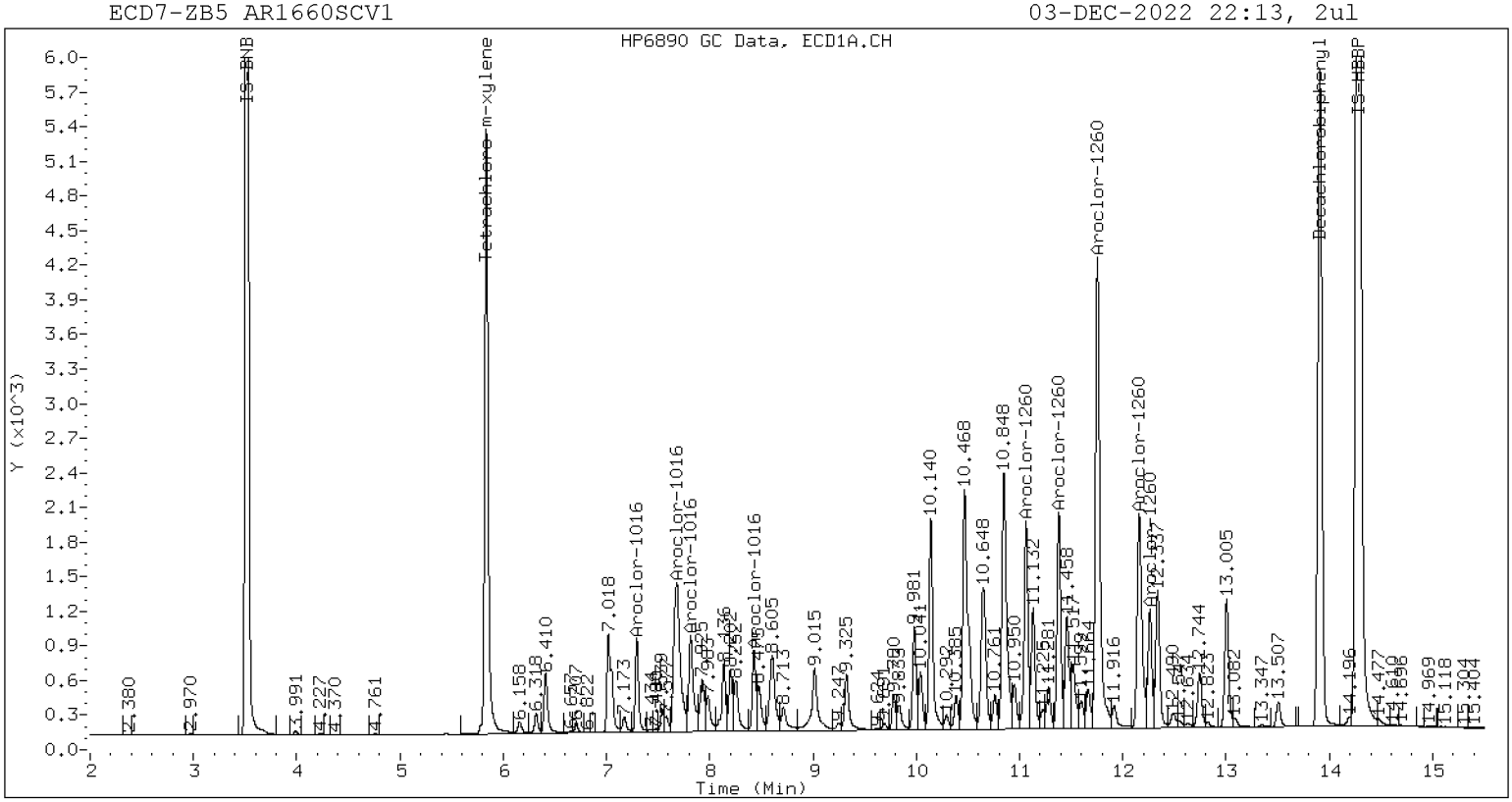
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

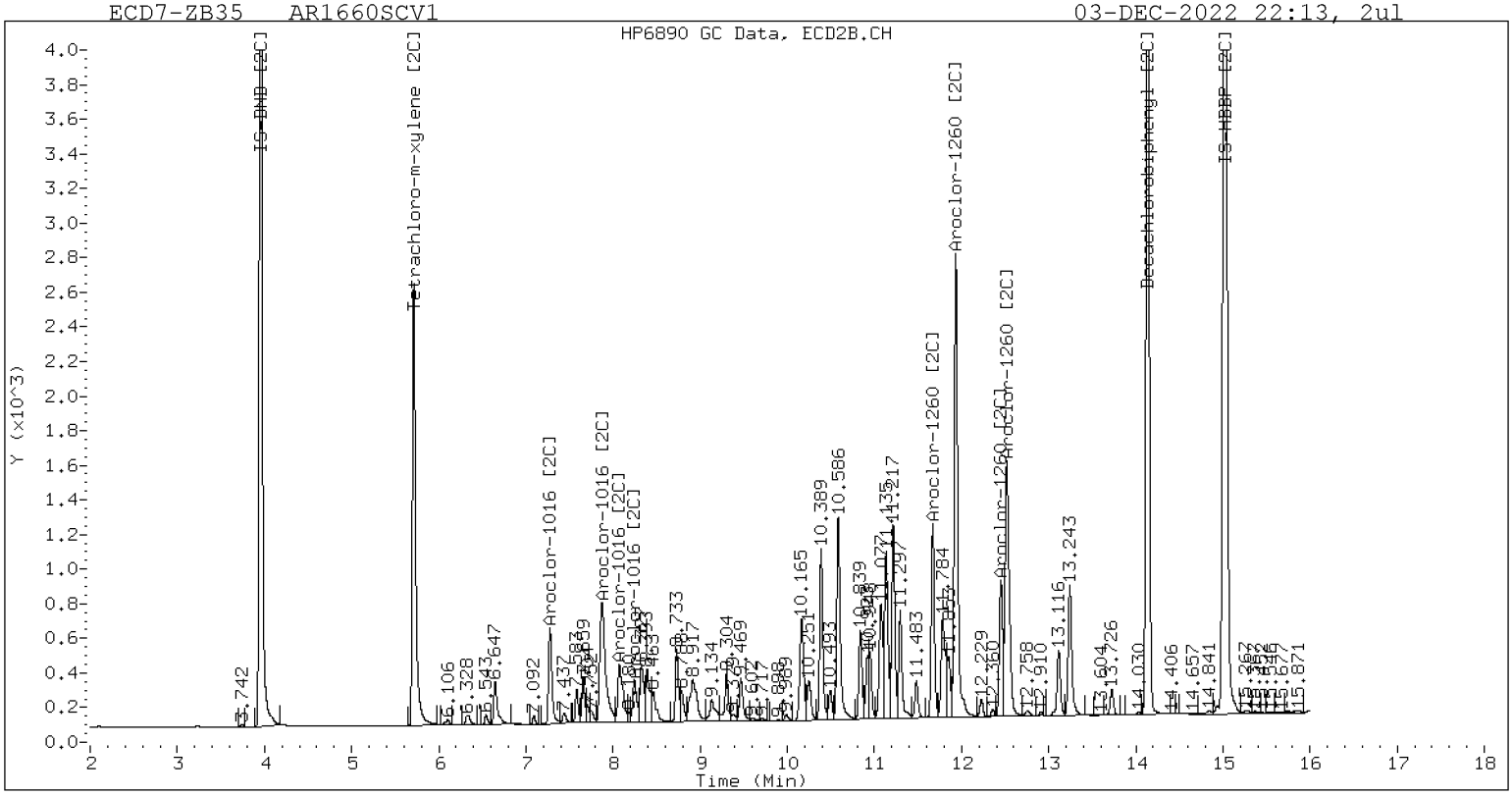
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032223ECD7.D
Data file 2: /221203.b/221203.b/12032223ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 03-DEC-2022 22:34
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	242356	5.713	-0.001	132586	35.6	35.8	0.7	Tetrachloro-m-xylene
13.909	0.001	321690	14.136	-0.001	228130	39.1	38.0	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480791	7.4
Hexabromobiphenyl	798898	896515	12.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270117	8.4
Hexabromobiphenyl	362541	422729	16.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	26316	193.1	1	7.277	-0.001	23973	209.7
Aroclor-1242	2	7.677	-0.003	89703	207.3	2	7.873	-0.002	50204	206.9
Aroclor-1242	3	8.427	0.000	26786	215.2	3	9.176	-0.002	19686	251.4
Aroclor-1242	4	9.025	-0.005	54647	211.4	4	9.599	-0.006	21874	232.4
Total Col1Ave (4 peaks):					206.7	Total Col2Ave (4 peaks):				225.1 RPD = 9
Corrected Ave (3 peaks):					203.9	Corrected Ave (3 peaks):				216.3 RPD = 6

Total PCB Area Col1 (5.936 - 13.808) = 731052 Col1 Total PCB = 0.1 ppm*

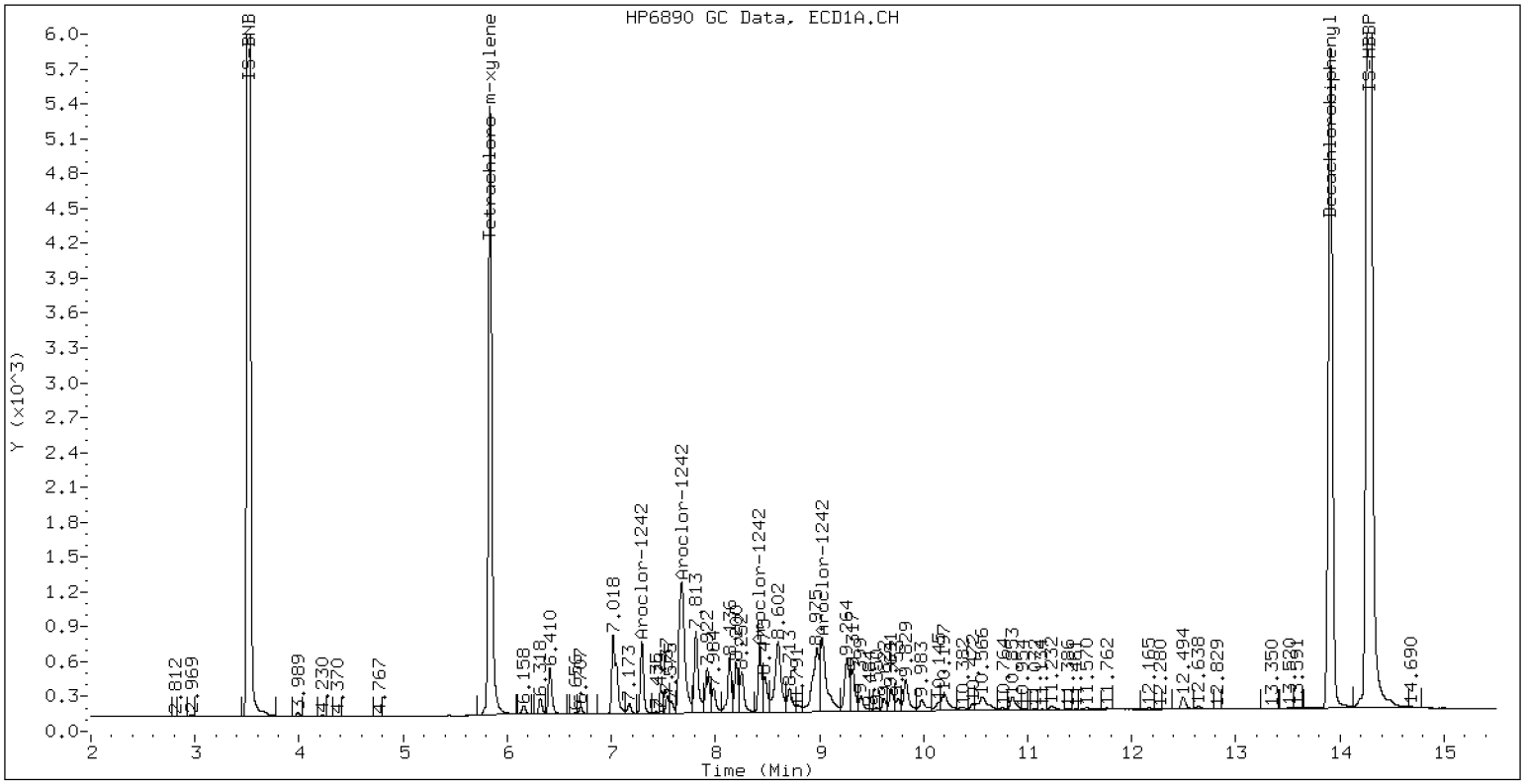
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

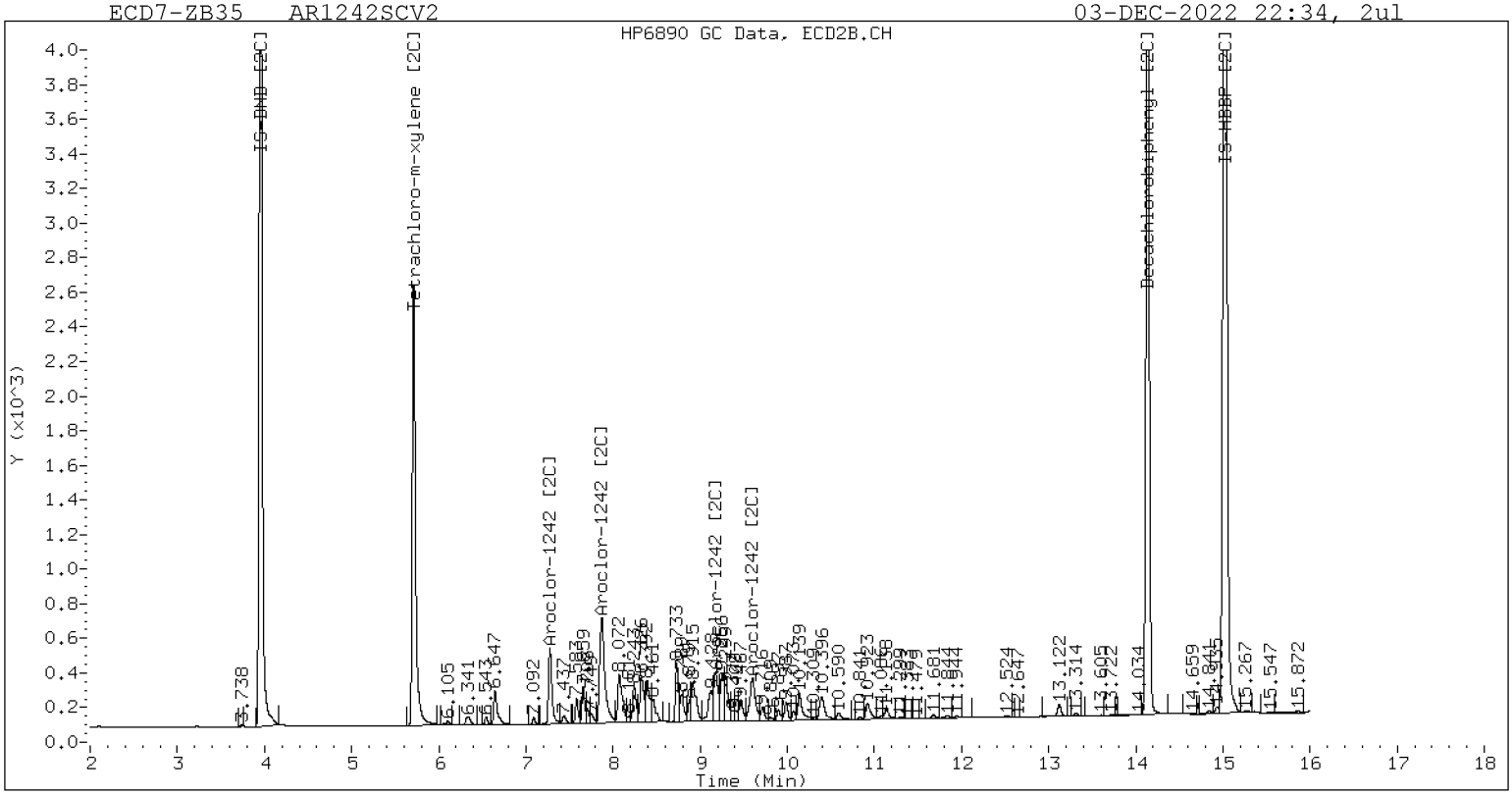
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032224ECD7.D
Data file 2: /221203.b/221203.b/12032224ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 03-DEC-2022 22:55
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	238518	5.713	-0.001	130772	34.7	35.1	1.0	Tetrachloro-m-xylene
13.909	0.001	329816	14.137	0.000	230748	39.3	38.1	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484977	8.3
Hexabromobiphenyl	798898	915518	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	272055	9.2
Hexabromobiphenyl	362541	426674	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	-0.000	49184	235.9	1	8.326	0.000	25647	230.8
Aroclor-1248	2	8.604	0.002	62884	236.2	2	8.733	0.000	26944	230.5
Aroclor-1248	3	9.021	-0.002	117065	244.4	3	9.179	0.001	32692	229.9
Aroclor-1248	4	9.315	0.000	62309	265.6	4	9.604	0.002	38342	229.7
Total Col1Ave (4 peaks): 245.5						Total Col2Ave (4 peaks): 230.2			RPD = 6	
Corrected Ave (3 peaks): 238.8						Corrected Ave (3 peaks): 230.0			RPD = 4	

Total PCB Area Col1 (5.936 - 13.808) = 991353 Col1 Total PCB = 0.2 ppm*

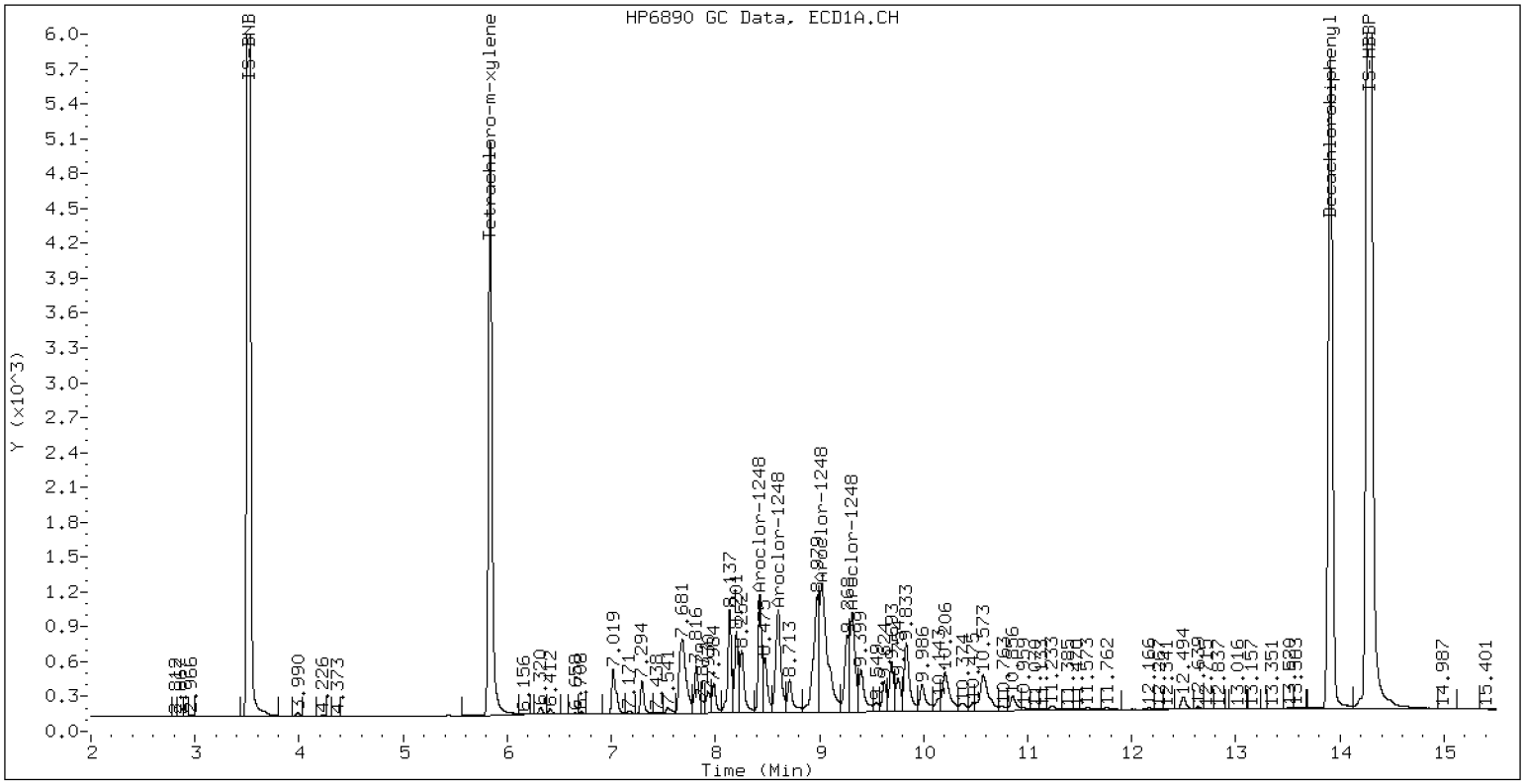
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

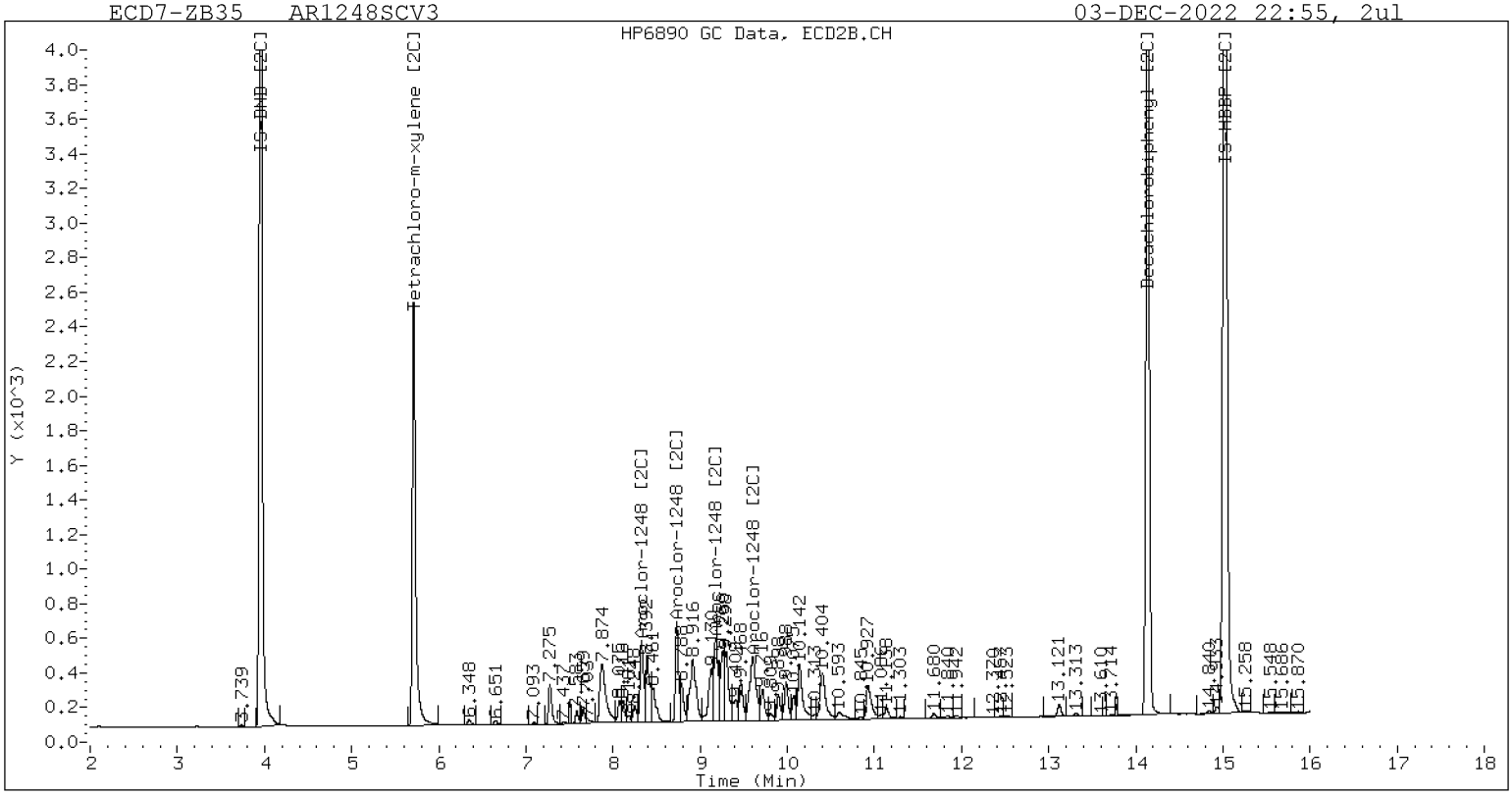
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032225ECD7.D
Data file 2: /221203.b/221203.b/12032225ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 03-DEC-2022 23:17
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243863	5.713	-0.000	133610	35.5	36.0	1.4	Tetrachloro-m-xylene
13.909	0.001	332566	14.137	-0.000	233115	39.5	38.1	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484642	8.3
Hexabromobiphenyl	798898	917405	14.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270782	8.7
Hexabromobiphenyl	362541	431238	18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.321	0.003	94448	221.3	1	9.469	0.002	39410	225.7
Aroclor-1254	2	9.401	0.003	41171	248.1	2	9.989	0.002	31415	223.8
Aroclor-1254	3	9.692	0.004	60946	226.1	3	10.143	0.004	66244	219.6
Aroclor-1254	4	9.832	0.004	116490	221.7	4	10.392	0.003	70095	224.3
Aroclor-1254	5	10.199	0.005	80050	222.3	5	10.588	0.002	39206	260.2

Total Col1Ave (5 peaks): 227.9 Total Col2Ave (5 peaks): 230.7 RPD = 1

Corrected Ave (4 peaks): 222.9 Corrected Ave (4 peaks): 223.4 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1261470 Col1 Total PCB = 0.2 ppm*

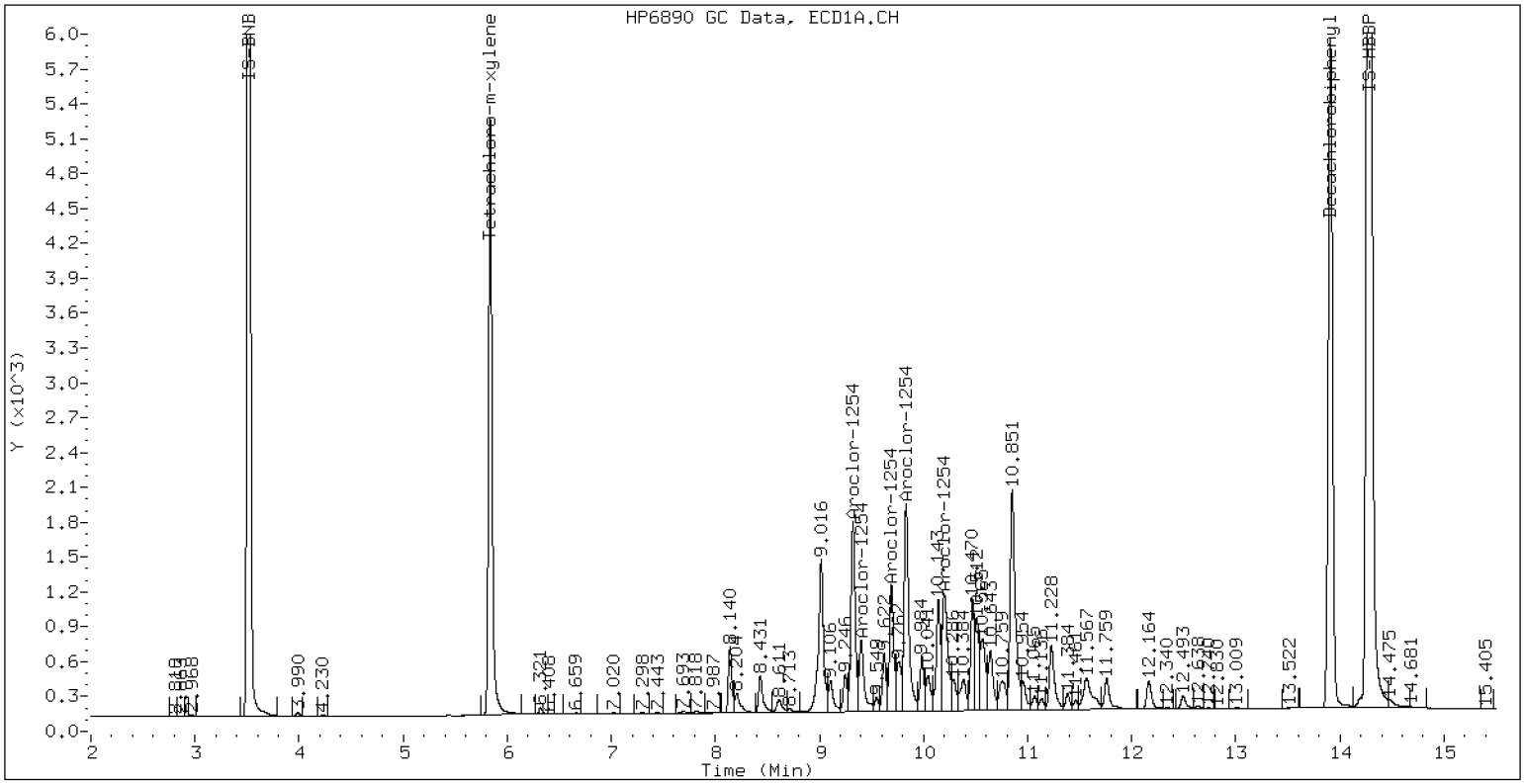
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

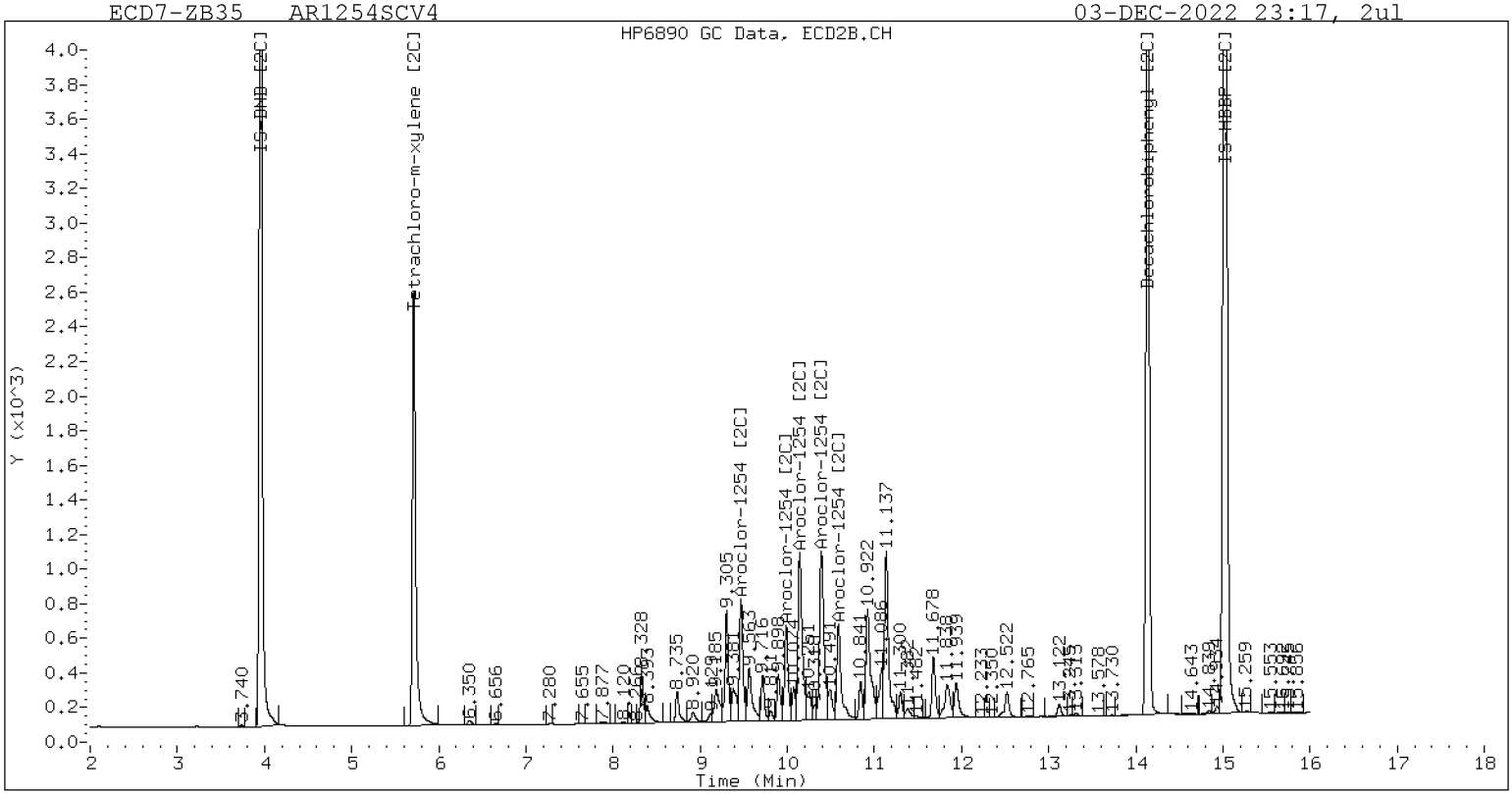
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032226ECD7.D
Data file 2: /221203.b/221203.b/12032226ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 03-DEC-2022 23:38
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	246394	5.713	-0.000	131378	36.1	35.7	1.1	Tetrachloro-m-xylene
13.908	-0.001	334929	14.136	-0.001	237241	40.0	38.4	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482097	7.7
Hexabromobiphenyl	798898	913775	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	268757	7.9
Hexabromobiphenyl	362541	434790	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.761	0.001	9579	240.4	1	4.988	0.001	5527	243.7
Aroclor-1221	2	6.159	0.001	16402	233.6	2	6.323	0.001	10041	232.3
Aroclor-1221	3	6.410	0.001	38315	236.6	3	6.646	0.001	16814	231.1
Total Col1Ave (3 peaks):					236.8	Total Col2Ave (3 peaks):				235.7 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.845	-0.003	145305	475.5	1	11.216	-0.001	152840	462.3
Aroclor-1262	2	12.261	-0.001	222795	469.0	2	11.668	-0.002	131097	457.9
Aroclor-1262	3	12.336	-0.001	238475	470.0	3	12.449	-0.002	148386	469.8
Aroclor-1262	4	13.004	-0.001	188009	461.7	4	12.518	-0.001	231081	467.1
Total Col1Ave (4 peaks):					469.1	Total Col2Ave (4 peaks):				464.3 RPD = 1
Corrected Ave (3 peaks):					466.9	Corrected Ave (3 peaks):				462.4 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 3654831 Col1 Total PCB = 0.7 ppm*

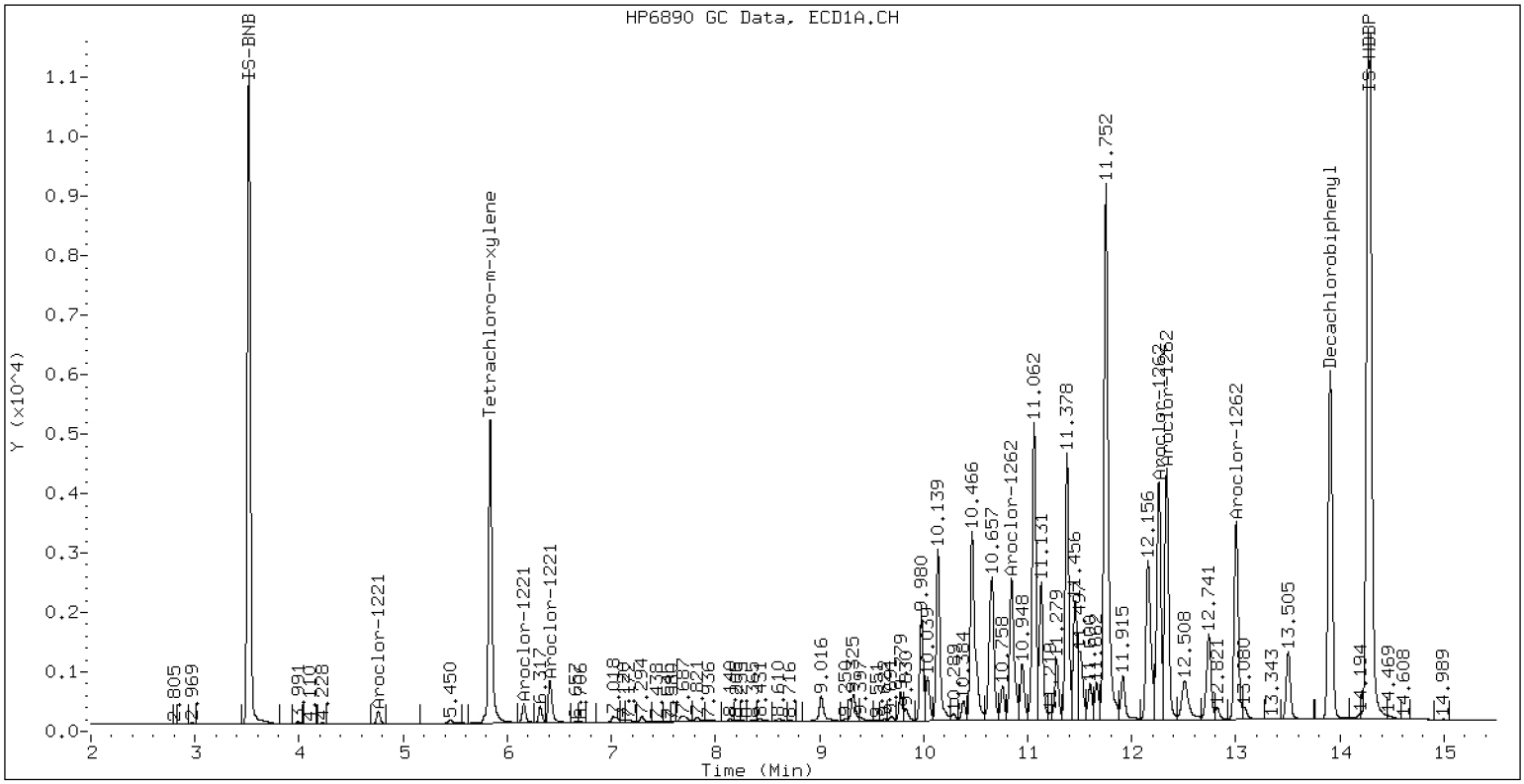
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

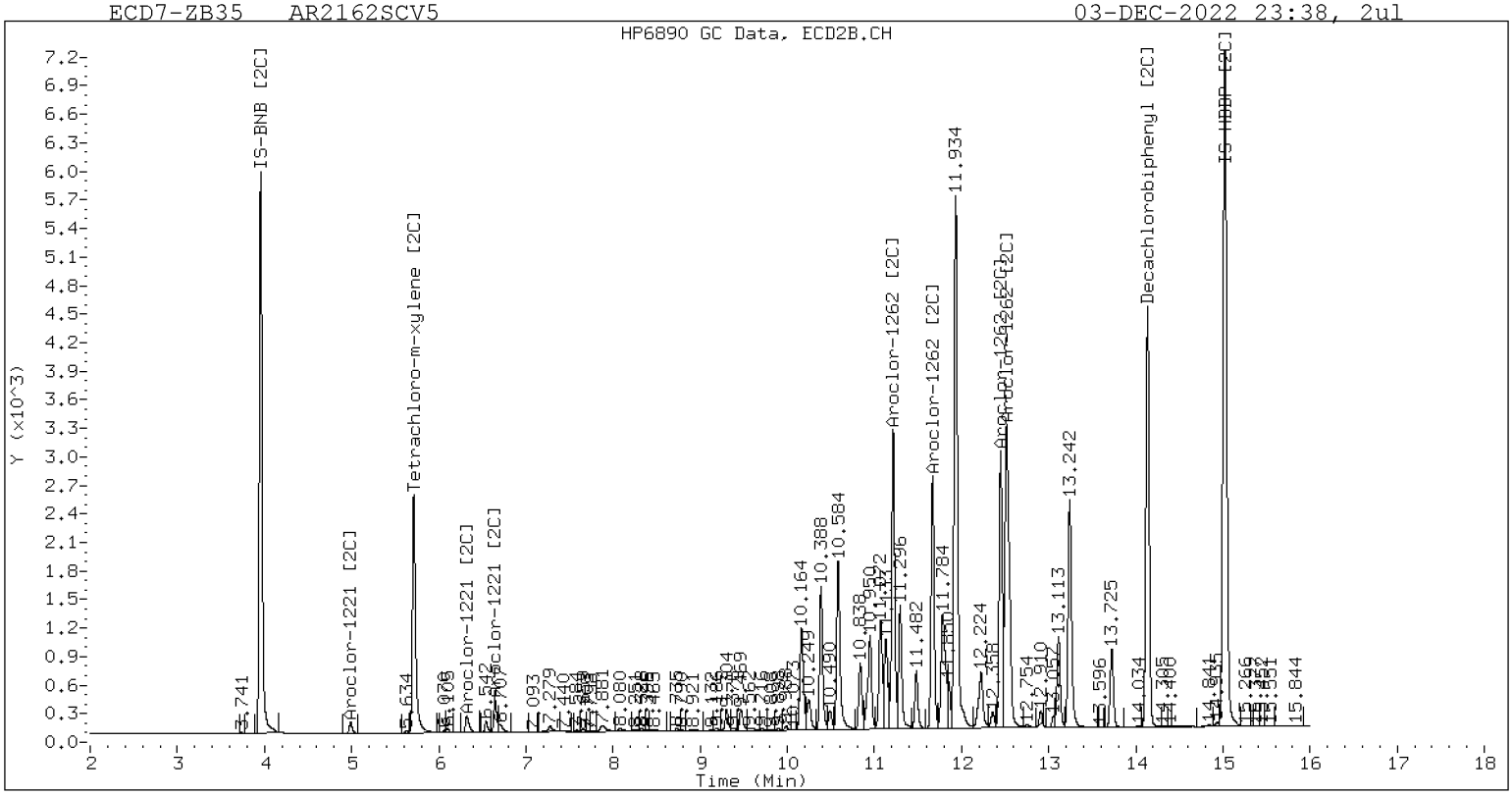
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032227ECD7.D
Data file 2: /221203.b/221203.b/12032227ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 03-DEC-2022 23:59
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236120	5.711	-0.002	126782	34.5	34.2	0.7	Tetrachloro-m-xylene
13.907	-0.002	474236	14.136	-0.001	339687	56.2	54.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483276	8.0
Hexabromobiphenyl	798898	920878	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270175	8.5
Hexabromobiphenyl	362541	435731	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.758	-0.003	5334	221.8	1	4.986	-0.004	3031	230.7
Aroclor-1232	2	6.158	-0.002	9882	194.6	2	7.276	-0.001	14982	223.3
Aroclor-1232	3	7.684	0.000	51409	225.4	3	7.875	-0.001	29992	228.7
Aroclor-1232	4	8.607	0.001	21710	224.4	4	8.734	0.000	8467	238.1
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				230.2 RPD = 6
Corrected Ave (3 peaks):					213.6	Corrected Ave (3 peaks):				227.6 RPD = 6
Aroclor-1268	1	12.262	-0.000	296463	230.1	1	12.449	-0.000	189354	230.2
Aroclor-1268	2	12.336	0.001	294353	233.5	2	12.517	0.000	196449	232.9
Aroclor-1268	3	12.715	-0.001	238693	231.1	3	12.909	-0.001	66881	213.9
Aroclor-1268	4	13.506	0.001	725881	230.1	4	13.725	-0.001	525890	233.7
Total Col1Ave (4 peaks):					231.2	Total Col2Ave (4 peaks):				227.7 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				225.7 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 2353838 Col1 Total PCB = 0.4 ppm*

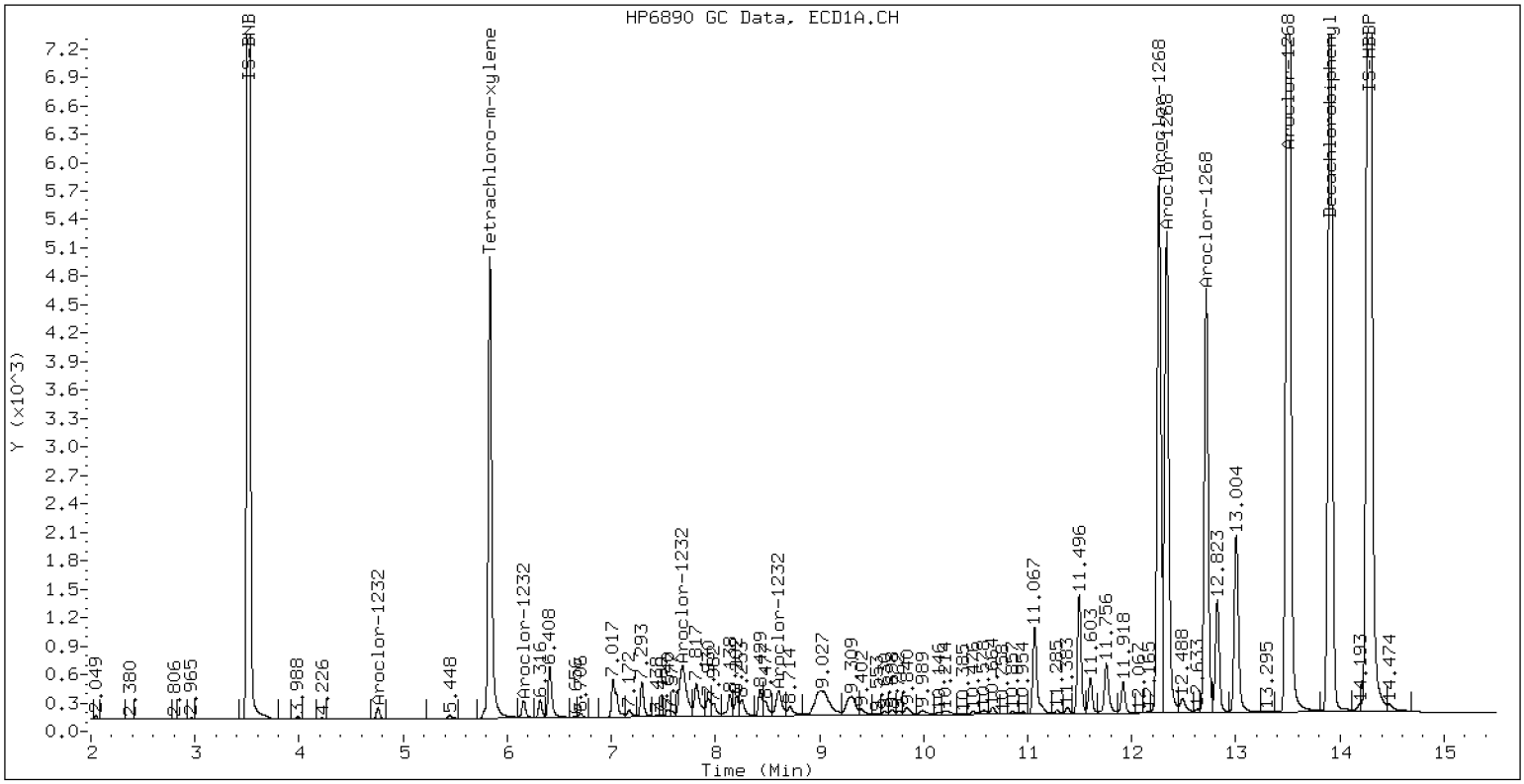
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

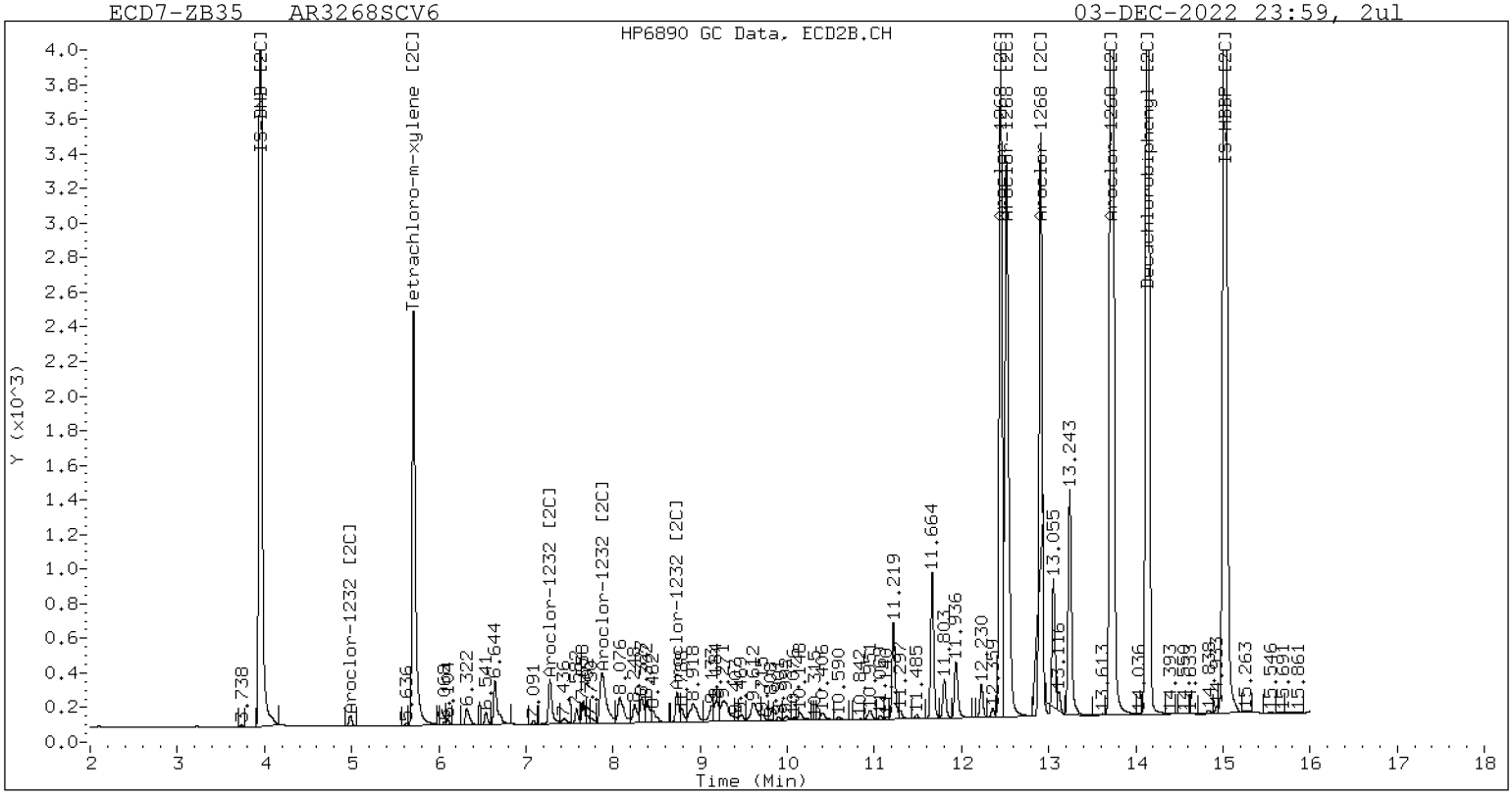
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FL00010
Laboratory ID: SKL0048-SCV1
Sequence: SKL0048
Sequence Name: AR1660SCV1
Standard ID: K007655

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	223	-10.7	20.00
Aroclor 1016 [2C]	250.00	216	-13.5	20.00
Aroclor 1260	250.00	285	14.1	20.00
Aroclor 1260 [2C]	250.00	263	5.1	20.00
Decachlorobiphenyl	40.000	39.8	-0.5	20.00
Tetrachlorometaxylene	40.000	36.1	-9.7	20.00
Decachlorobiphenyl [2C]	40.000	38.2	-4.6	20.00
Tetrachlorometaxylene [2C]	40.000	36.1	-9.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032222ECD7.D
Data file 2: /221203.b/221203.b/12032222ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 03-DEC-2022 22:13
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	247495	5.714	0.000	133904	36.1	36.1	0.2	Tetrachloro-m-xylene
13.909	0.001	325466	14.137	0.000	234467	39.8	38.2	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483506	8.0
Hexabromobiphenyl	798898	892033	11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270882	8.7
Hexabromobiphenyl	362541	432562	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.293	0.001	36100	223.8	1	7.277	0.002	30155	217.7
Aroclor-1016	2	7.681	0.007	113995	218.9	2	7.875	0.004	64468	215.8
Aroclor-1016	3	7.815	0.004	53043	224.8	3	8.074	0.004	27130	211.5
Aroclor-1016	4	8.428	0.004	33958	225.7	4	8.245	0.004	14848	220.1
Total Col1Ave (4 peaks):					223.3	Total Col2Ave (4 peaks):				216.3 RPD = 3
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				215.0 RPD = 3
Aroclor-1260	1	11.063	0.001	93173	286.9	1	11.671	0.002	56796	248.7
Aroclor-1260	2	11.380	0.003	95530	284.5	2	11.935	0.002	153247	267.5
Aroclor-1260	3	11.754	0.004	250548	283.9	3	12.452	0.001	41316	270.8
Aroclor-1260	4	12.159	0.005	120399	267.9	4	12.519	0.003	100704	263.7
Aroclor-1260	5	12.263	0.003	55639	302.5	NS	---			----
Total Col1Ave (5 peaks):					285.1	Total Col2Ave (4 peaks):				262.7 RPD = 8
Corrected Ave (4 peaks):					280.8	Corrected Ave (3 peaks):				260.0 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 2318083 Col1 Total PCB = 0.4 ppm*

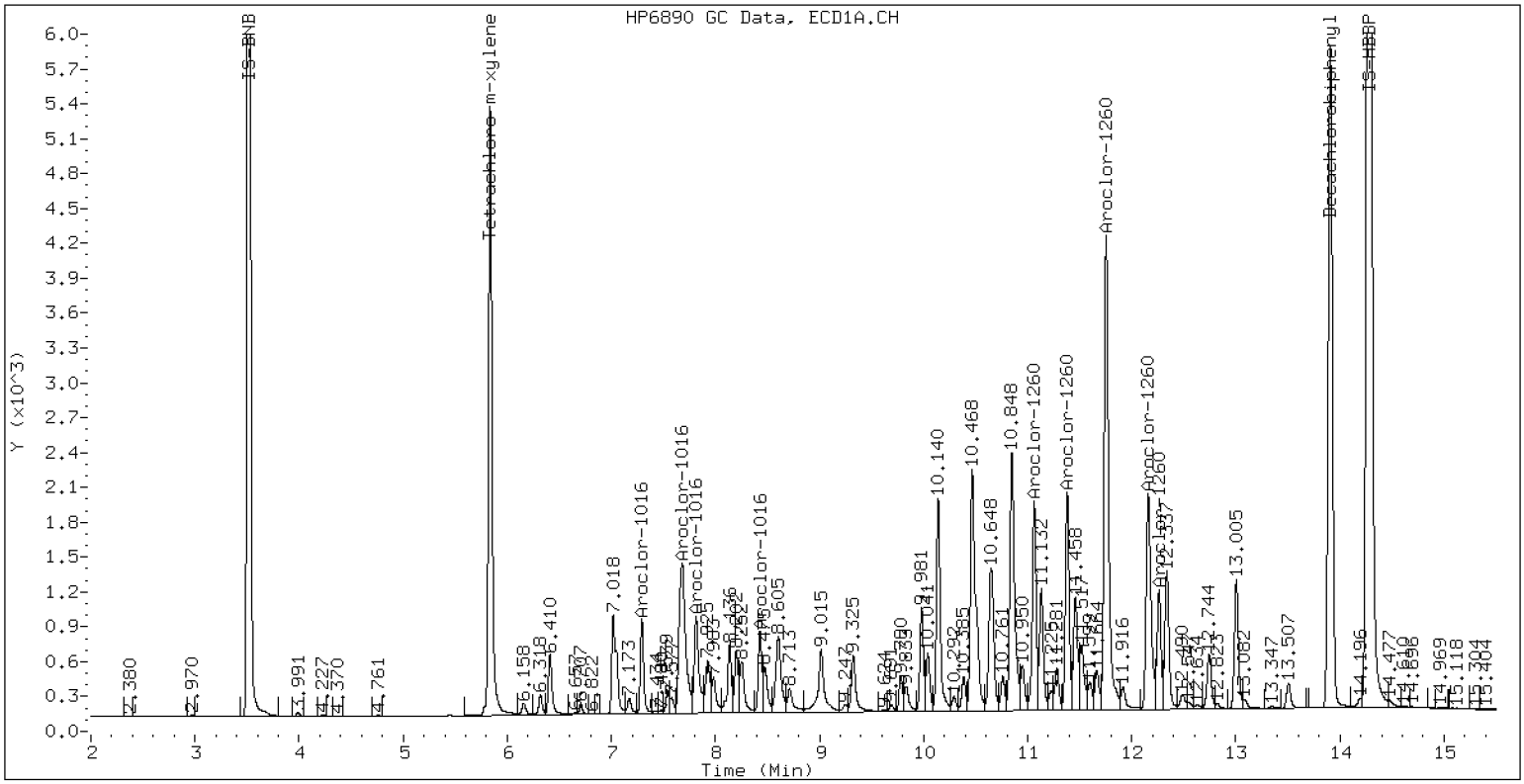
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

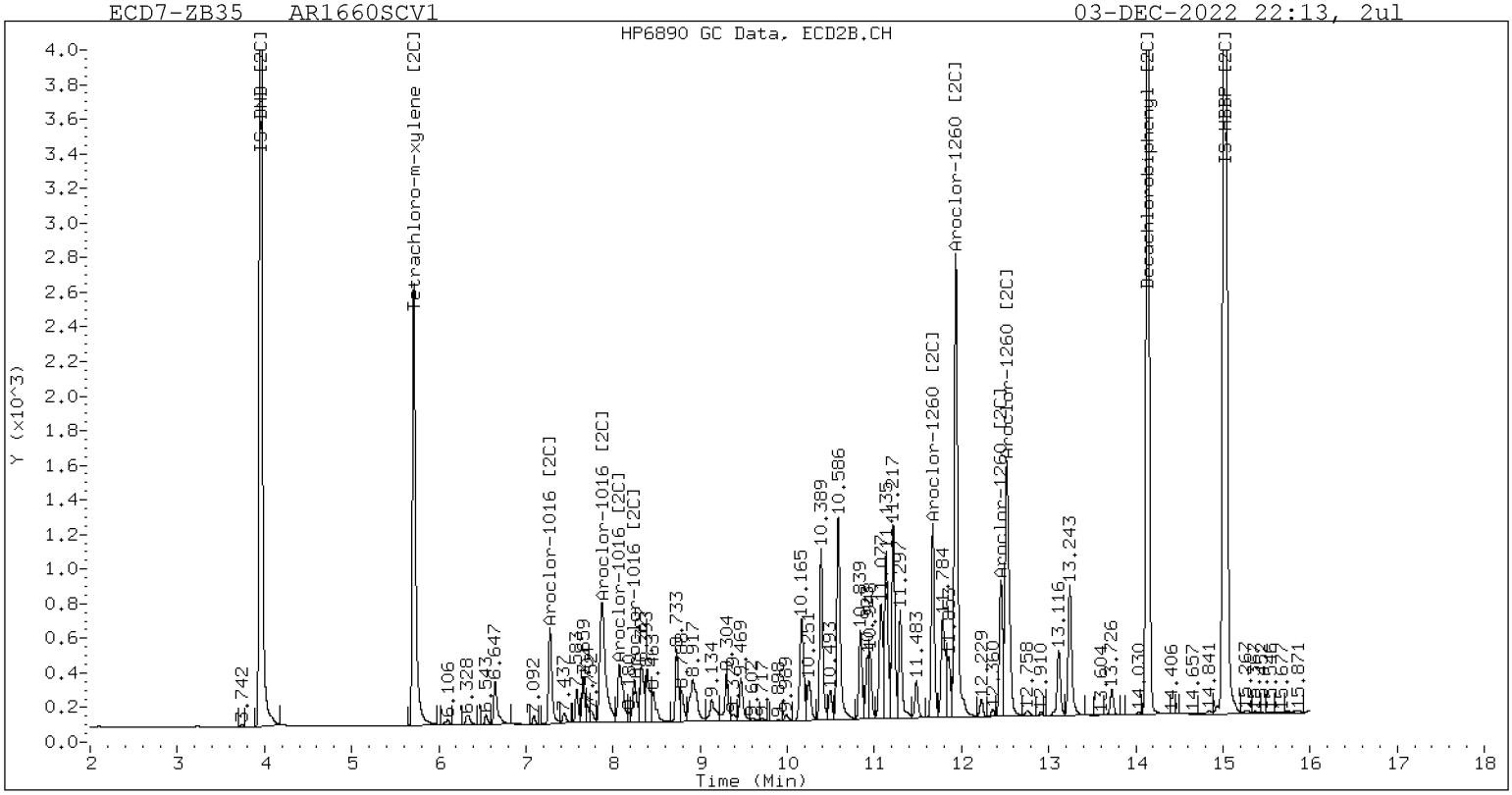
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FL00010
Laboratory ID: SKL0048-SCV2
Sequence: SKL0048
Sequence Name: AR1242SCV2
Standard ID: K007656

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	207	-17.3	20.00
Aroclor 1242 [2C]	250.00	225	-10.0	20.00
Decachlorobiphenyl	40.000	39.1	-2.1	20.00
Tetrachlorometaxylene	40.000	35.6	-11.1	20.00
Decachlorobiphenyl [2C]	40.000	38.0	-5.0	20.00
Tetrachlorometaxylene [2C]	40.000	35.8	-10.5	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032223ECD7.D
Data file 2: /221203.b/221203.b/12032223ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 03-DEC-2022 22:34
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	242356	5.713	-0.001	132586	35.6	35.8	0.7	Tetrachloro-m-xylene
13.909	0.001	321690	14.136	-0.001	228130	39.1	38.0	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480791	7.4
Hexabromobiphenyl	798898	896515	12.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270117	8.4
Hexabromobiphenyl	362541	422729	16.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	26316	193.1	1	7.277	-0.001	23973	209.7
Aroclor-1242	2	7.677	-0.003	89703	207.3	2	7.873	-0.002	50204	206.9
Aroclor-1242	3	8.427	0.000	26786	215.2	3	9.176	-0.002	19686	251.4
Aroclor-1242	4	9.025	-0.005	54647	211.4	4	9.599	-0.006	21874	232.4
Total Col1Ave (4 peaks):					206.7	Total Col2Ave (4 peaks):				225.1 RPD = 9
Corrected Ave (3 peaks):					203.9	Corrected Ave (3 peaks):				216.3 RPD = 6

Total PCB Area Col1 (5.936 - 13.808) = 731052 Col1 Total PCB = 0.1 ppm*

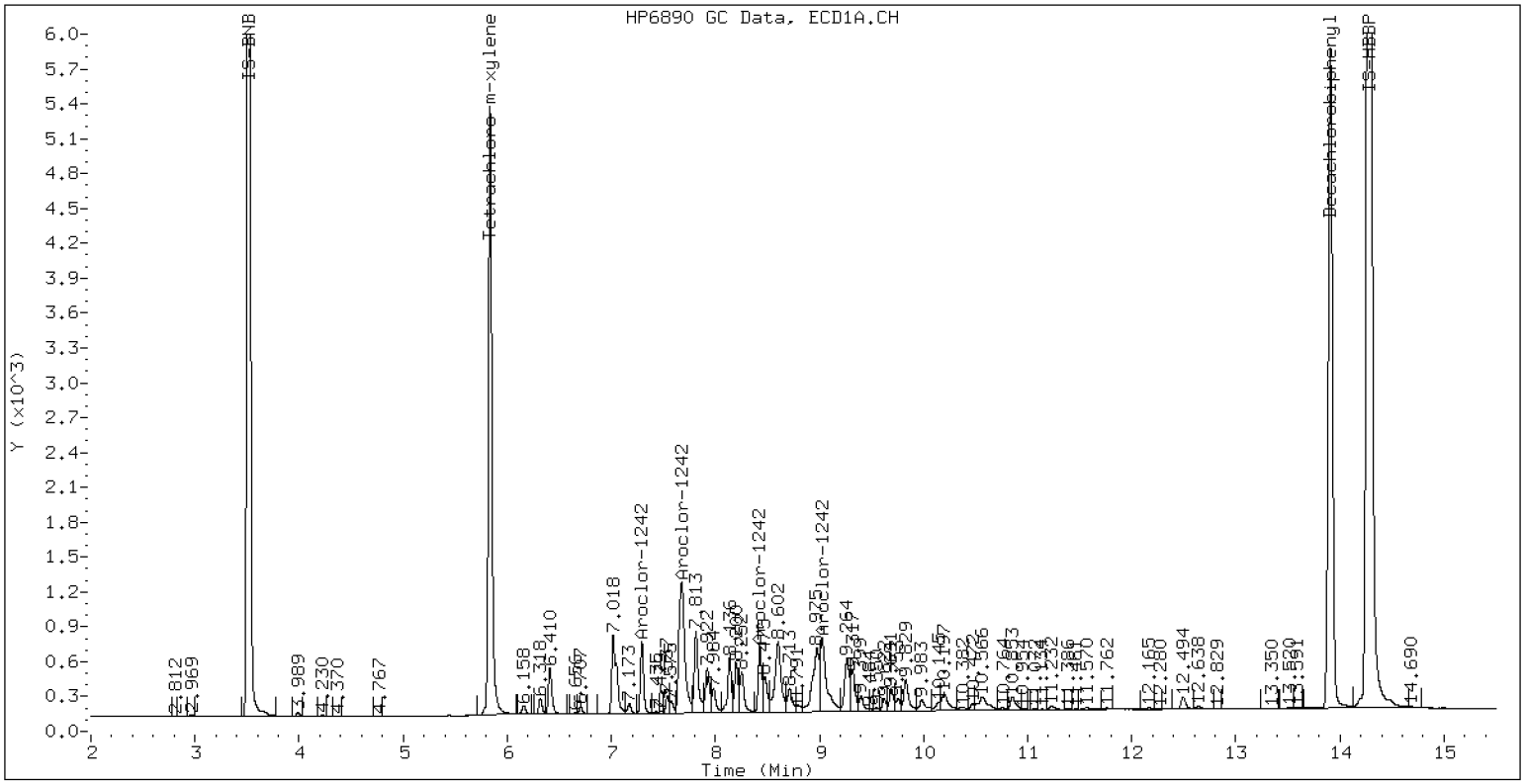
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

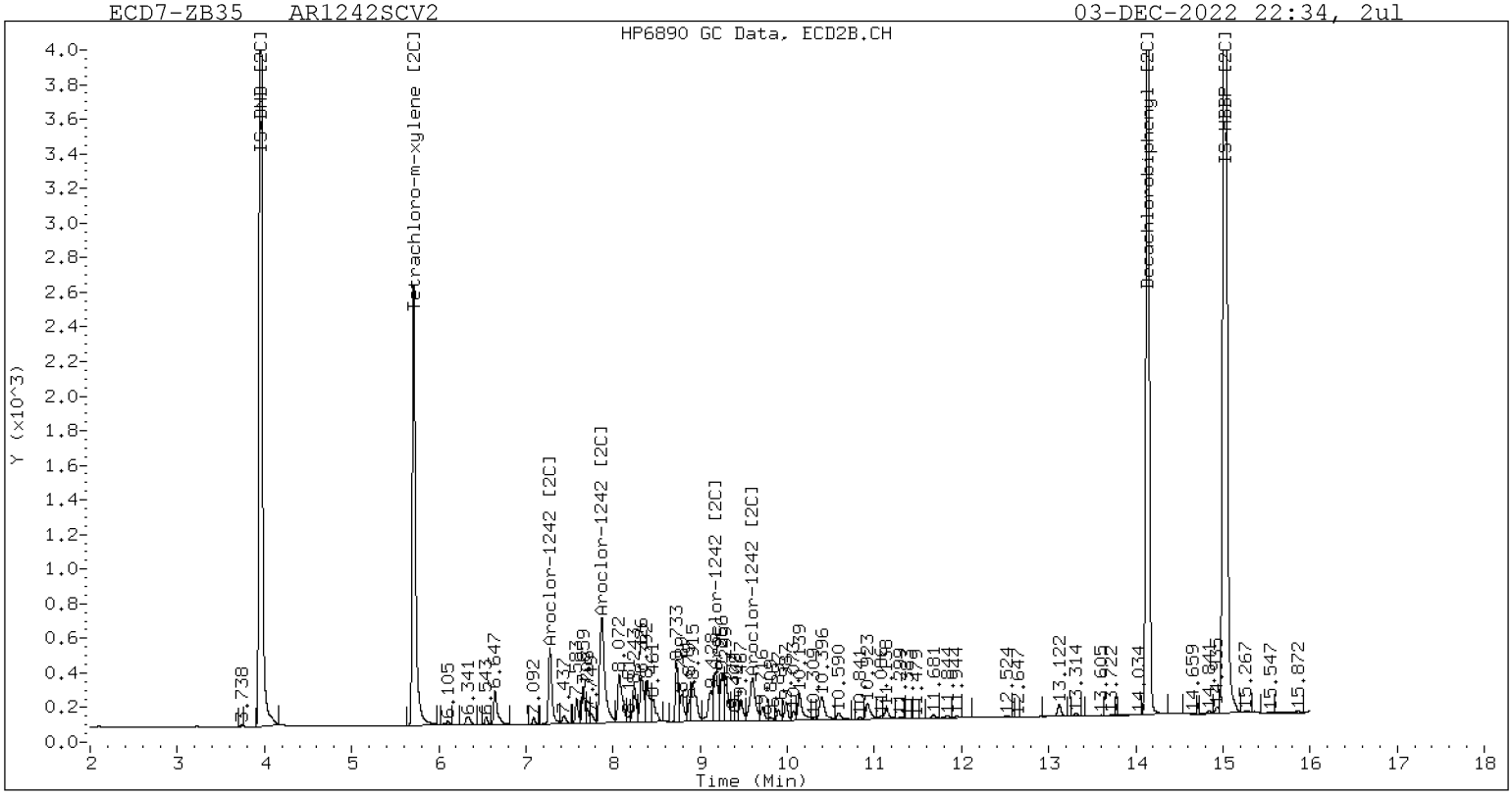
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FL00010
Laboratory ID: SKL0048-SCV3
Sequence: SKL0048
Sequence Name: AR1248SCV3
Standard ID: K007657

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	246	-1.8	20.00
Aroclor 1248 [2C]	250.00	230	-7.9	20.00
Decachlorobiphenyl	40.000	39.3	-1.7	20.00
Tetrachlorometaxylene	40.000	34.7	-13.2	20.00
Decachlorobiphenyl [2C]	40.000	38.1	-4.8	20.00
Tetrachlorometaxylene [2C]	40.000	35.1	-12.3	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032224ECD7.D
Data file 2: /221203.b/221203.b/12032224ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 03-DEC-2022 22:55
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	238518	5.713	-0.001	130772	34.7	35.1	1.0	Tetrachloro-m-xylene
13.909	0.001	329816	14.137	0.000	230748	39.3	38.1	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484977	8.3
Hexabromobiphenyl	798898	915518	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	272055	9.2
Hexabromobiphenyl	362541	426674	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	-0.000	49184	235.9	1	8.326	0.000	25647	230.8
Aroclor-1248	2	8.604	0.002	62884	236.2	2	8.733	0.000	26944	230.5
Aroclor-1248	3	9.021	-0.002	117065	244.4	3	9.179	0.001	32692	229.9
Aroclor-1248	4	9.315	0.000	62309	265.6	4	9.604	0.002	38342	229.7

Total Col1Ave (4 peaks): 245.5 Total Col2Ave (4 peaks): 230.2 RPD = 6

Corrected Ave (3 peaks): 238.8 Corrected Ave (3 peaks): 230.0 RPD = 4

Total PCB Area Col1 (5.936 - 13.808) = 991353 Col1 Total PCB = 0.2 ppm*

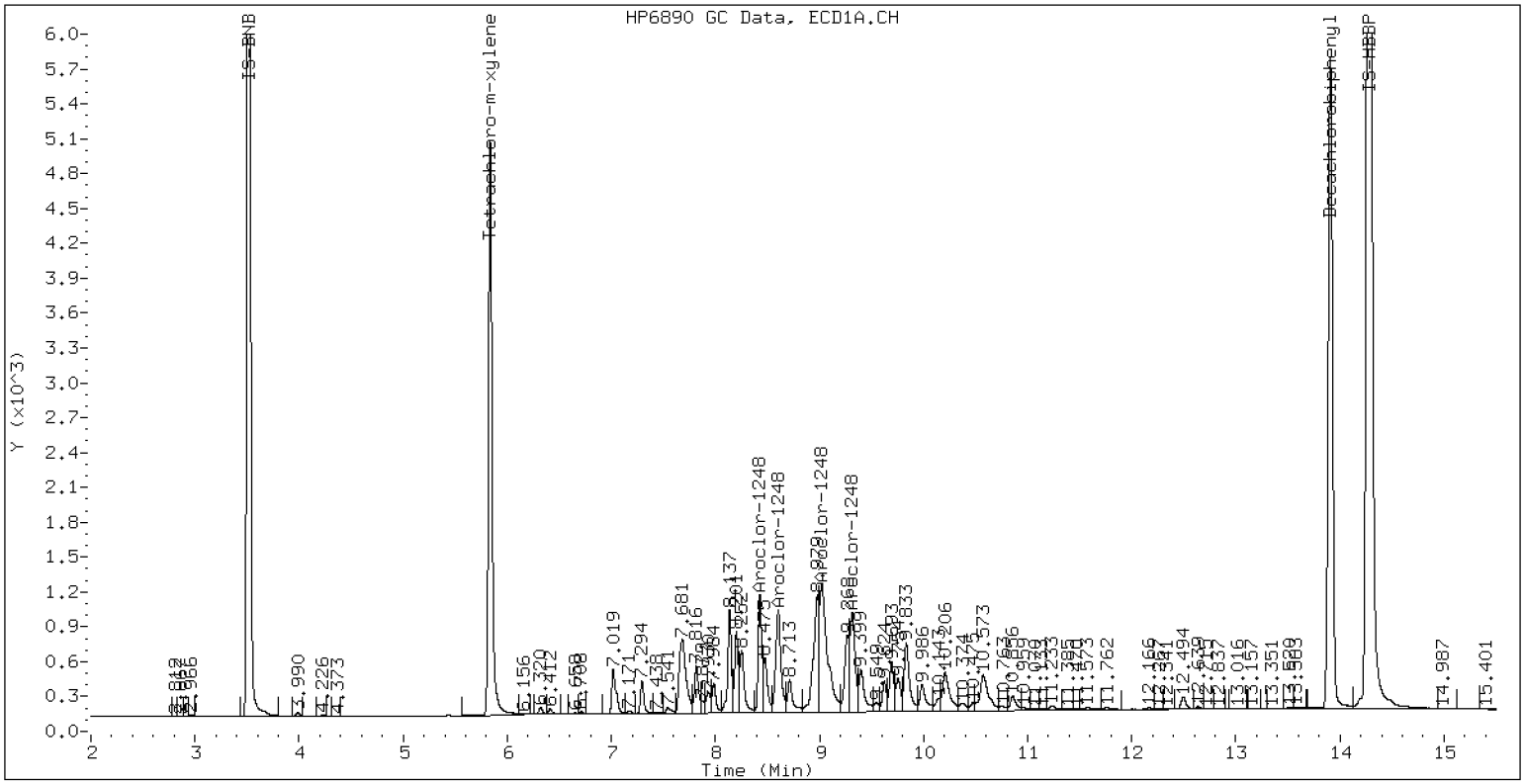
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

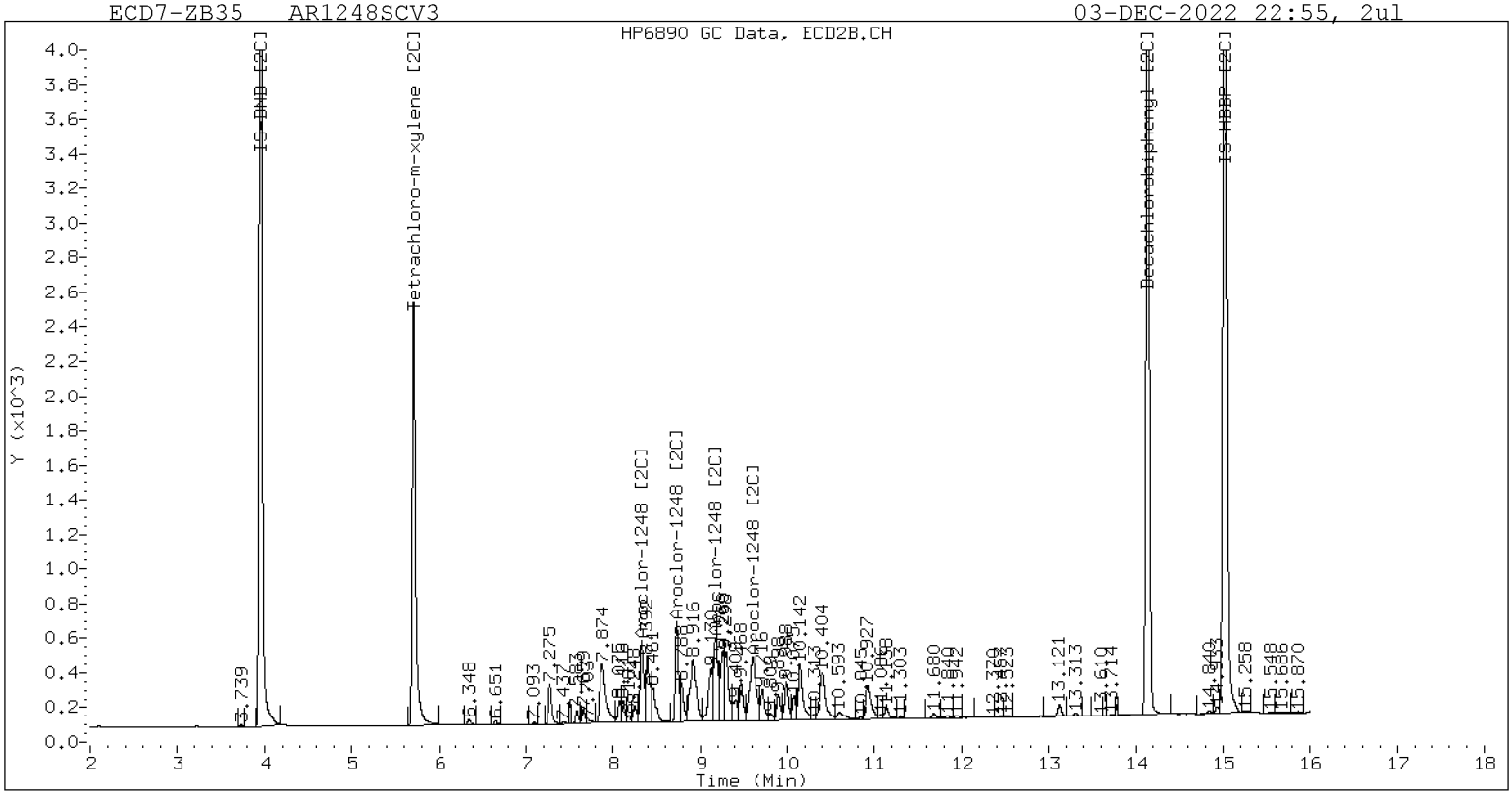
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FL00010
Laboratory ID: SKL0048-SCV4
Sequence: SKL0048
Sequence Name: AR1254SCV4
Standard ID: K007658

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	228	-8.8	20.00
Aroclor 1254 [2C]	250.00	231	-7.7	20.00
Decachlorobiphenyl	40.000	39.5	-1.1	20.00
Tetrachlorometaxylene	40.000	35.5	-11.2	20.00
Decachlorobiphenyl [2C]	40.000	38.1	-4.8	20.00
Tetrachlorometaxylene [2C]	40.000	36.0	-10.0	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032225ECD7.D
Data file 2: /221203.b/221203.b/12032225ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 03-DEC-2022 23:17
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243863	5.713	-0.000	133610	35.5	36.0	1.4	Tetrachloro-m-xylene
13.909	0.001	332566	14.137	-0.000	233115	39.5	38.1	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484642	8.3
Hexabromobiphenyl	798898	917405	14.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270782	8.7
Hexabromobiphenyl	362541	431238	18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.321	0.003	94448	221.3	1	9.469	0.002	39410	225.7
Aroclor-1254	2	9.401	0.003	41171	248.1	2	9.989	0.002	31415	223.8
Aroclor-1254	3	9.692	0.004	60946	226.1	3	10.143	0.004	66244	219.6
Aroclor-1254	4	9.832	0.004	116490	221.7	4	10.392	0.003	70095	224.3
Aroclor-1254	5	10.199	0.005	80050	222.3	5	10.588	0.002	39206	260.2

Total Col1Ave (5 peaks): 227.9 Total Col2Ave (5 peaks): 230.7 RPD = 1

Corrected Ave (4 peaks): 222.9 Corrected Ave (4 peaks): 223.4 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1261470 Col1 Total PCB = 0.2 ppm*

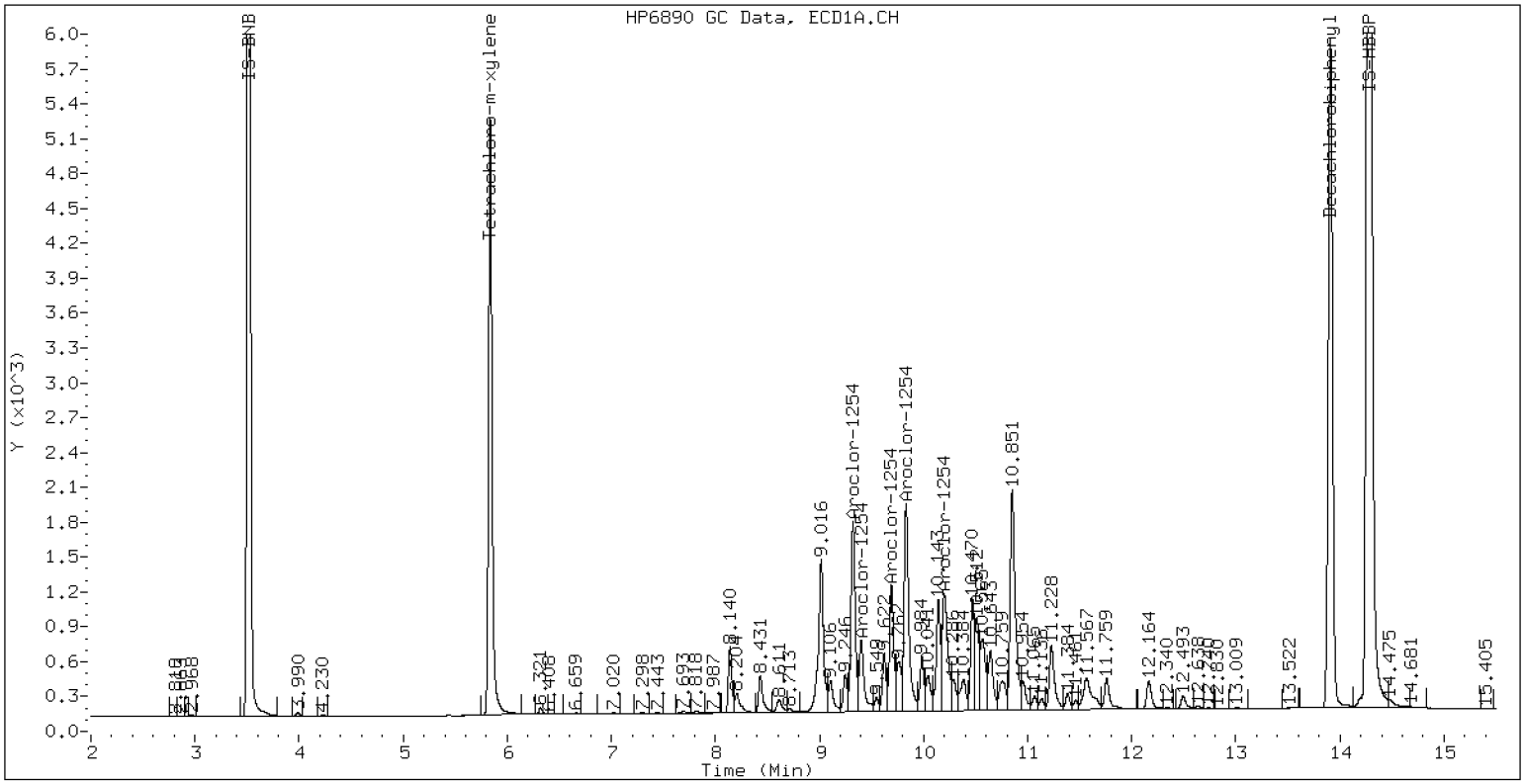
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

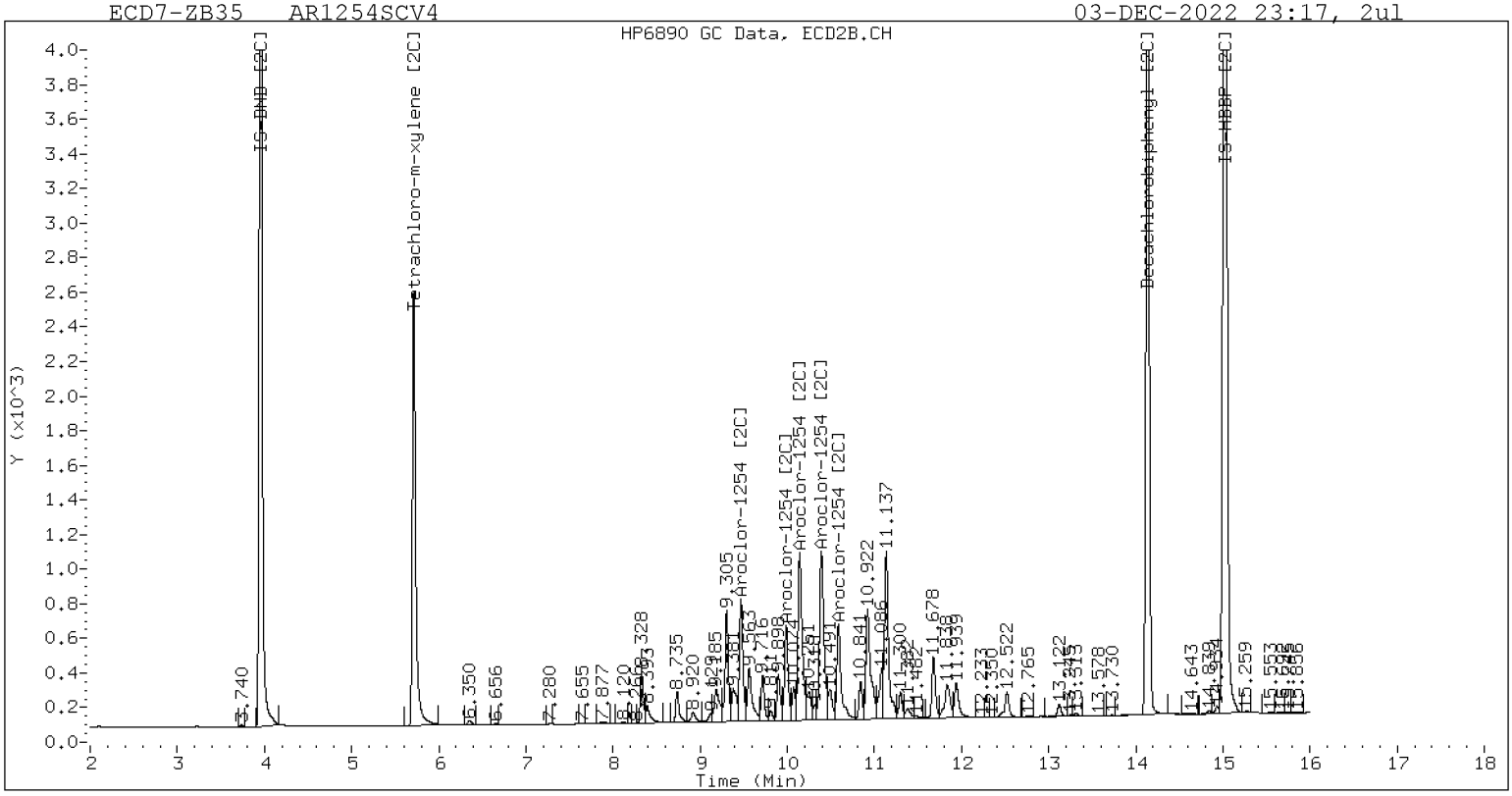
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FL00010
Laboratory ID: SKL0048-SCV5
Sequence: SKL0048
Sequence Name: AR2162SCV5
Standard ID: K007659

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	237	-5.3	20.00
Aroclor 1221 [2C]	250.00	236	-5.7	20.00
Decachlorobiphenyl	40.000	40.0	-0.04	20.00
Tetrachlorometaxylene	40.000	36.1	-9.8	20.00
Decachlorobiphenyl [2C]	40.000	38.4	-3.9	20.00
Tetrachlorometaxylene [2C]	40.000	35.7	-10.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032226ECD7.D
Data file 2: /221203.b/221203.b/12032226ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 03-DEC-2022 23:38
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	246394	5.713	-0.000	131378	36.1	35.7	1.1	Tetrachloro-m-xylene
13.908	-0.001	334929	14.136	-0.001	237241	40.0	38.4	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482097	7.7
Hexabromobiphenyl	798898	913775	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	268757	7.9
Hexabromobiphenyl	362541	434790	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.761	0.001	9579	240.4	1	4.988	0.001	5527	243.7
Aroclor-1221	2	6.159	0.001	16402	233.6	2	6.323	0.001	10041	232.3
Aroclor-1221	3	6.410	0.001	38315	236.6	3	6.646	0.001	16814	231.1
Total Col1Ave (3 peaks):					236.8	Total Col2Ave (3 peaks):				235.7 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.845	-0.003	145305	475.5	1	11.216	-0.001	152840	462.3
Aroclor-1262	2	12.261	-0.001	222795	469.0	2	11.668	-0.002	131097	457.9
Aroclor-1262	3	12.336	-0.001	238475	470.0	3	12.449	-0.002	148386	469.8
Aroclor-1262	4	13.004	-0.001	188009	461.7	4	12.518	-0.001	231081	467.1
Total Col1Ave (4 peaks):					469.1	Total Col2Ave (4 peaks):				464.3 RPD = 1
Corrected Ave (3 peaks):					466.9	Corrected Ave (3 peaks):				462.4 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 3654831 Col1 Total PCB = 0.7 ppm*

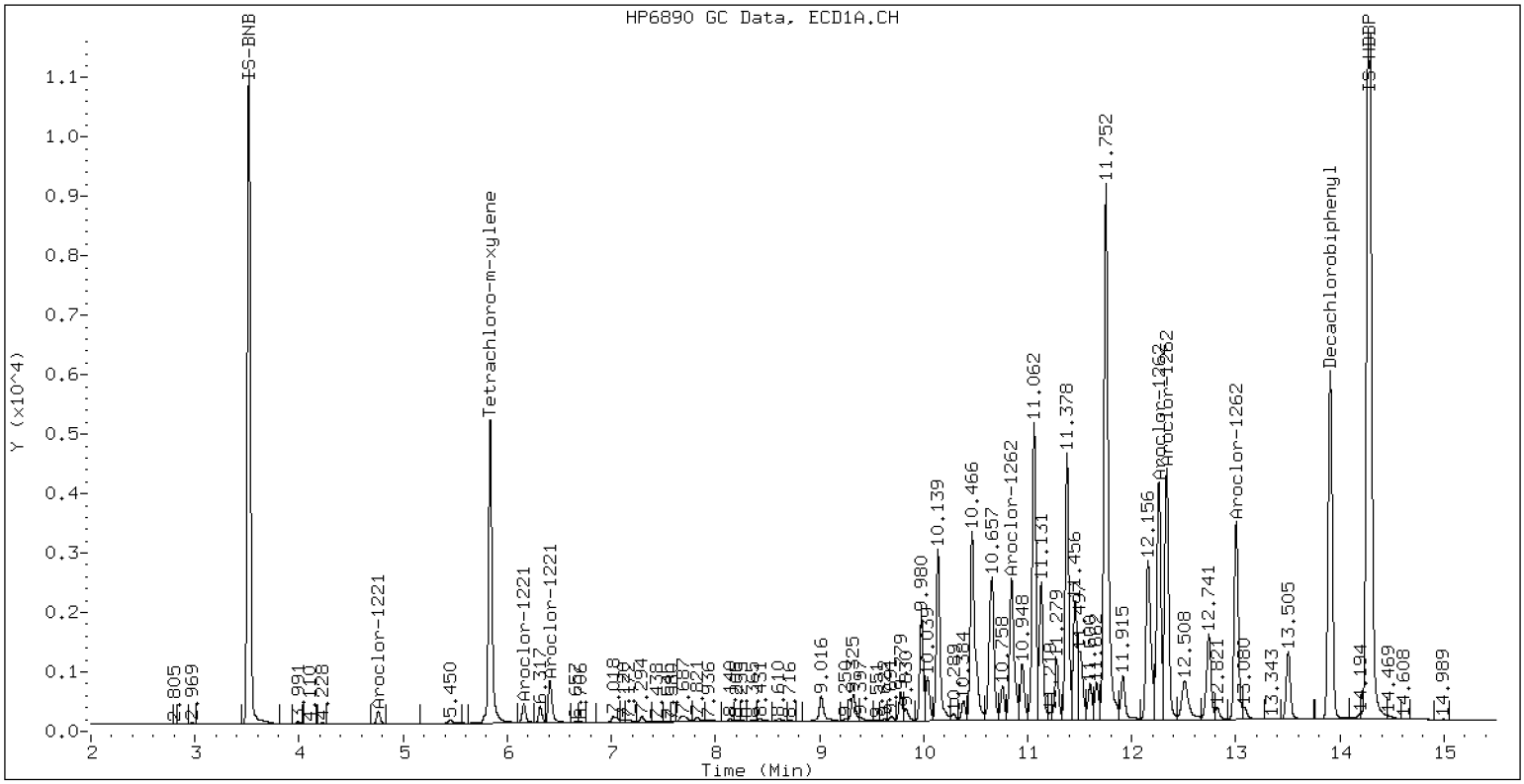
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

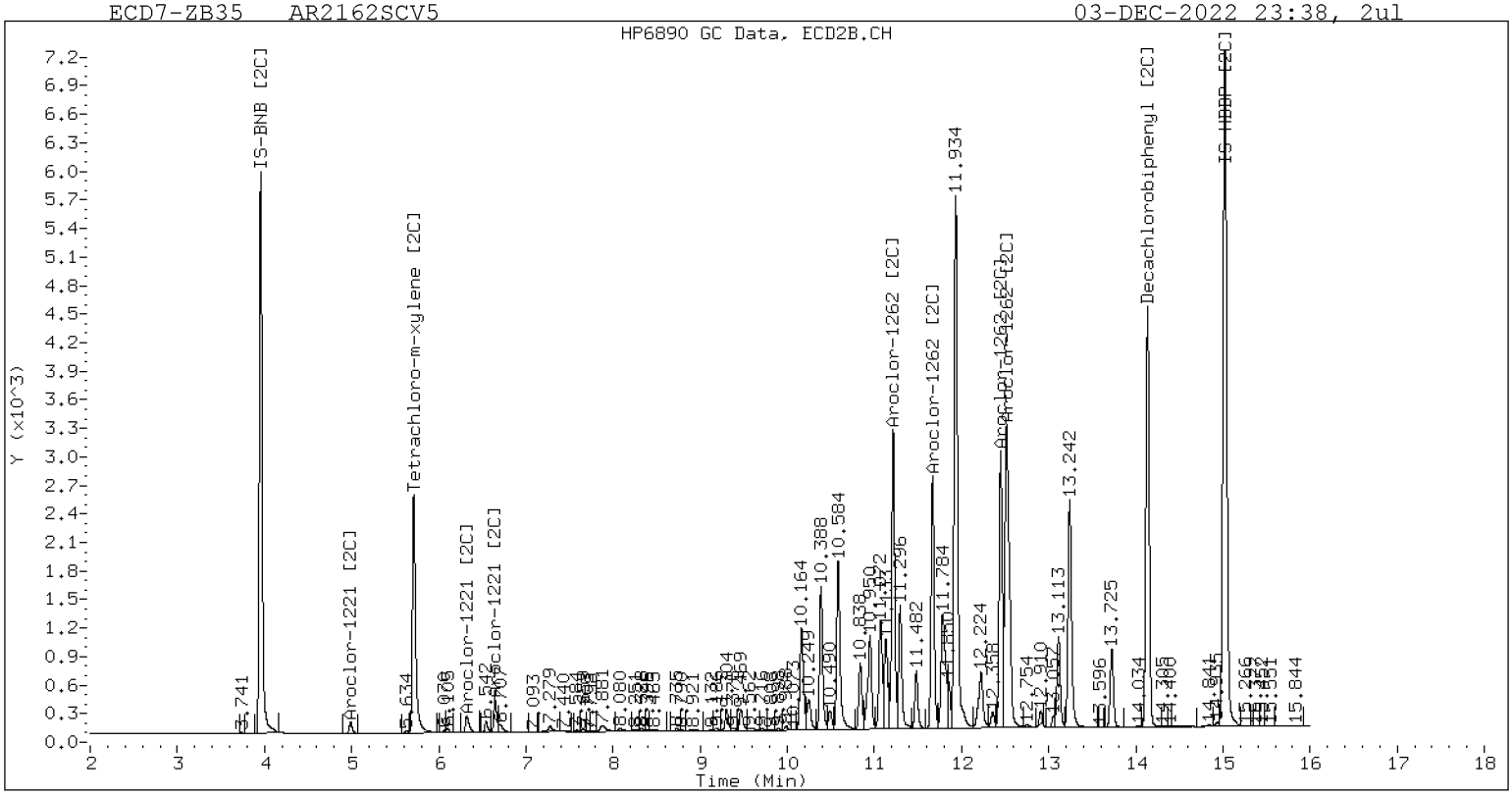
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FL00010
Laboratory ID: SKL0048-SCV6
Sequence: SKL0048
Sequence Name: AR3268SCV6
Standard ID: K007660

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	217	-13.4	20.00
Aroclor 1232 [2C]	250.00	230	-7.9	20.00
Decachlorobiphenyl	40.000	56.2	40.4	20.00
Tetrachlorometaxylene	40.000	34.5	-13.8	20.00
Decachlorobiphenyl [2C]	40.000	54.9	37.3	20.00
Tetrachlorometaxylene [2C]	40.000	34.2	-14.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032227ECD7.D
Data file 2: /221203.b/221203.b/12032227ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 03-DEC-2022 23:59
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236120	5.711	-0.002	126782	34.5	34.2	0.7	Tetrachloro-m-xylene
13.907	-0.002	474236	14.136	-0.001	339687	56.2	54.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483276	8.0
Hexabromobiphenyl	798898	920878	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270175	8.5
Hexabromobiphenyl	362541	435731	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.758	-0.003	5334	221.8	1	4.986	-0.004	3031	230.7
Aroclor-1232	2	6.158	-0.002	9882	194.6	2	7.276	-0.001	14982	223.3
Aroclor-1232	3	7.684	0.000	51409	225.4	3	7.875	-0.001	29992	228.7
Aroclor-1232	4	8.607	0.001	21710	224.4	4	8.734	0.000	8467	238.1
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				230.2 RPD = 6
Corrected Ave (3 peaks):					213.6	Corrected Ave (3 peaks):				227.6 RPD = 6
Aroclor-1268	1	12.262	-0.000	296463	230.1	1	12.449	-0.000	189354	230.2
Aroclor-1268	2	12.336	0.001	294353	233.5	2	12.517	0.000	196449	232.9
Aroclor-1268	3	12.715	-0.001	238693	231.1	3	12.909	-0.001	66881	213.9
Aroclor-1268	4	13.506	0.001	725881	230.1	4	13.725	-0.001	525890	233.7
Total Col1Ave (4 peaks):					231.2	Total Col2Ave (4 peaks):				227.7 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				225.7 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 2353838 Col1 Total PCB = 0.4 ppm*

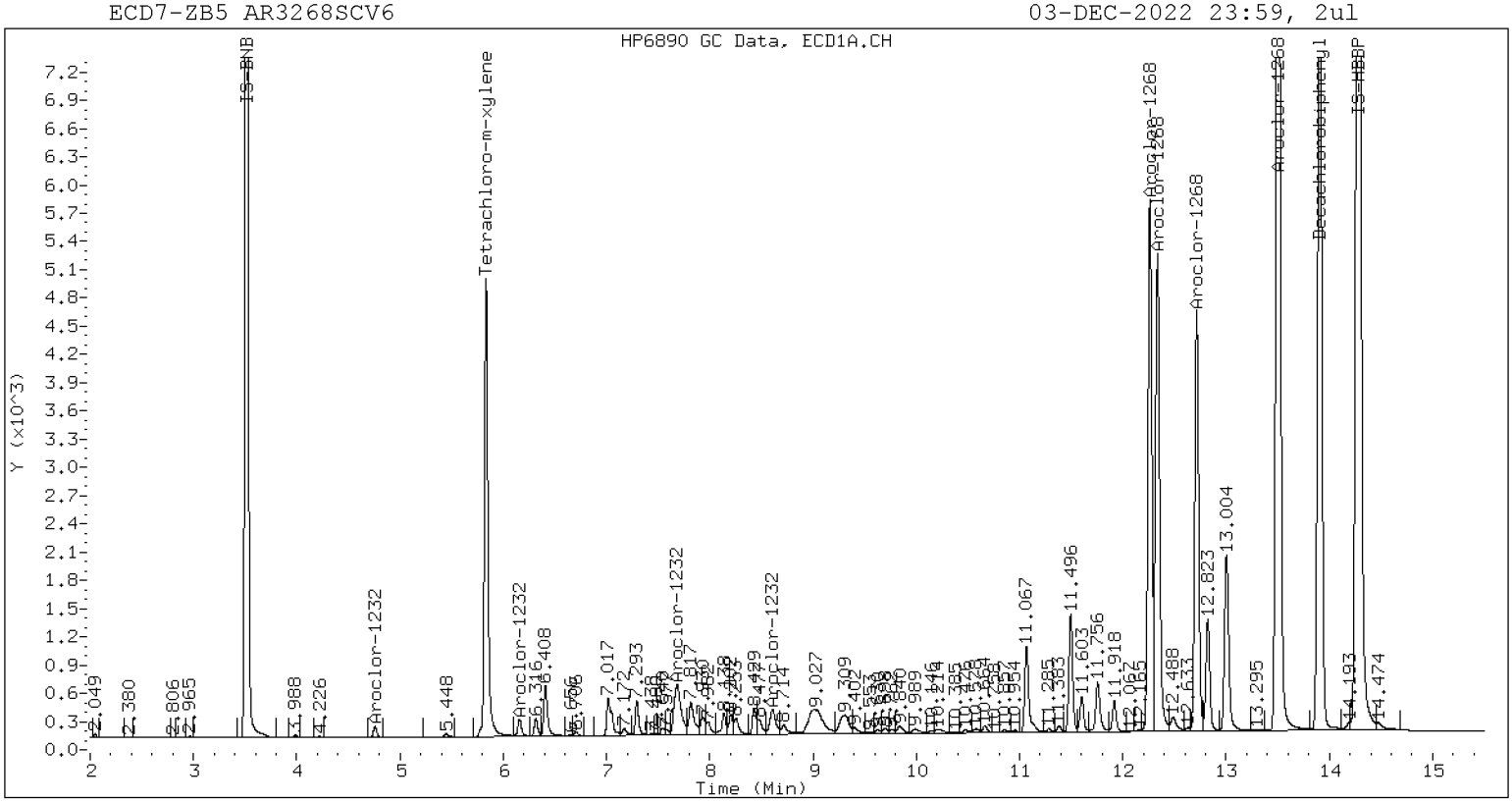
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

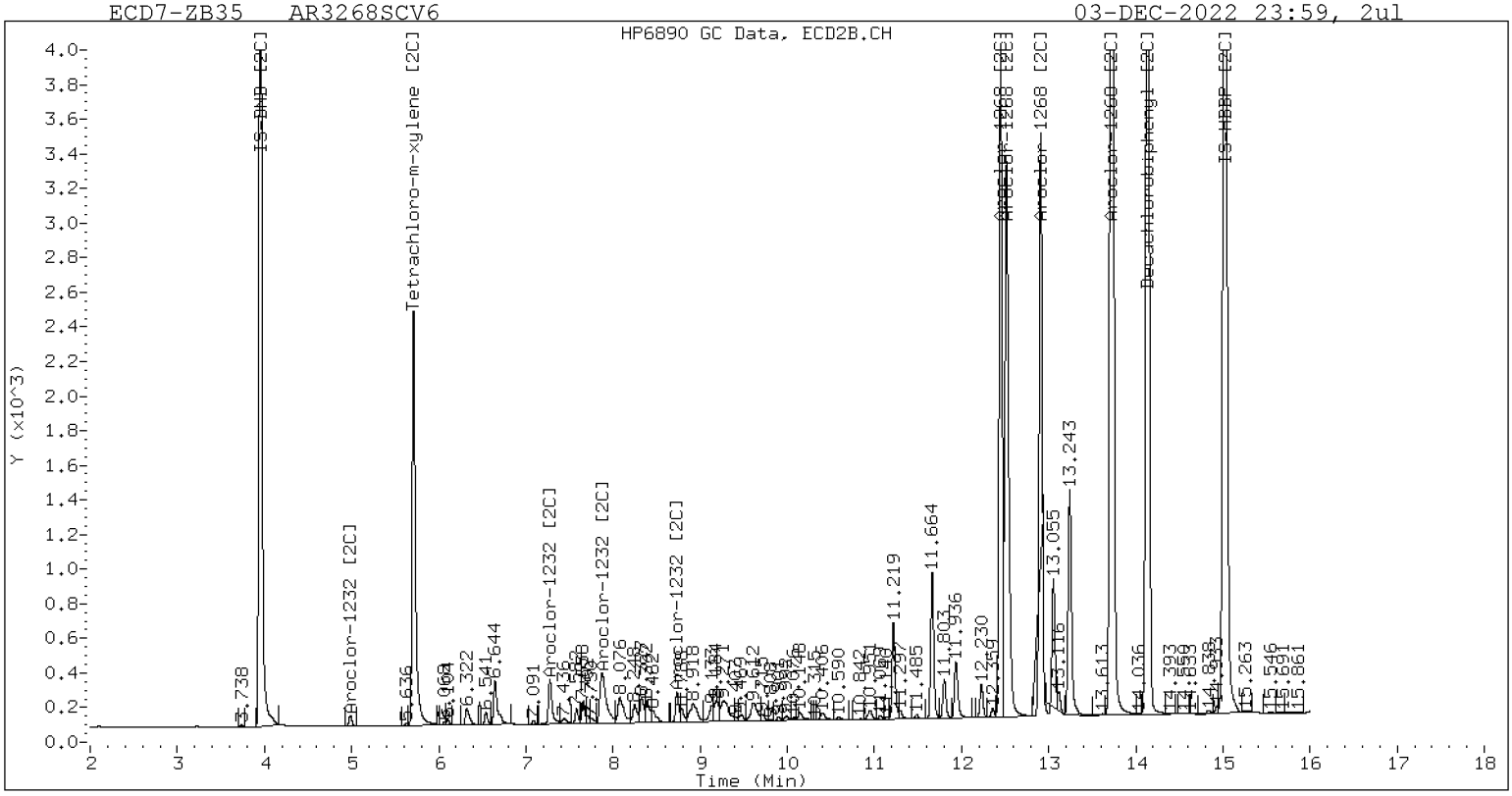
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262202ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/26/22
Lab Sample ID:	SKL0359-ICV1	Injection Time:	16:04
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	267	0.0576965	0.0616279		6.8	+/-20
Aroclor-1254 (1)	A	250.00	265	0.0704377	0.0746023			
Aroclor-1254 (2)	A	250.00	294	0.0273935	0.0321933			
Aroclor-1254 (3)	A	250.00	287	0.0444885	0.0510066			
Aroclor-1254 (4)	A	250.00	312	0.0867185	0.1083171			
Aroclor-1254 (5)	A	250.00	177	0.0594444	0.0420200			
Aroclor 1254 [2C]	A	250.00	242	0.0638047	0.0644032		-3.0	+/-20
Aroclor-1254 (1) [2C]	A	250.00	267	0.0515798	0.0550137			
Aroclor-1254 (2) [2C]	A	250.00	147	0.0414689	0.0244496			
Aroclor-1254 (3) [2C]	A	250.00	251	0.0891370	0.0895019			
Aroclor-1254 (4) [2C]	A	250.00	291	0.0923140	0.1074071			
Aroclor-1254 (5) [2C]	A	250.00	256	0.0445236	0.0456437			
Decachlorobiphenyl	A	40.000	47.5	0.7333327	0.8701786		18.8	+/-20
Tetrachlorometaxylene	A	40.000	41.4	1.1336710	1.1724350		3.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	46.9	1.1358180	1.3312320		17.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.4	1.0966080	1.1069480		1.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262202ECD7.D
Data file 2: /221226.b/221226.b/12262202ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 26-DEC-2022 16:04
Report Date: 12/29/2022 12:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	254103	5.709	0.001	154448	41.4	40.4	2.4	Tetrachloro-m-xylene
13.903	0.002	326947	14.128	0.001	231060	47.5	46.9	1.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	433462	-3.2
Hexabromobiphenyl	798898	751448	-5.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	279052	12.0
Hexabromobiphenyl	362541	347137	-4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	9.309	-0.002	101054	264.8	1	9.457	-0.001	47974	266.6
Aroclor-1254	2	9.386	-0.004	43608	293.8	2	9.976	0.000	21321	147.4
Aroclor-1254	3	9.676	-0.005	69092	286.6	3	10.126	-0.000	78049	251.0
Aroclor-1254	4	9.811	-0.004	146723	312.3	4	10.372	-0.002	93663	290.9
Aroclor-1254	5	10.141	0.010	56919	176.7	5	10.572	0.000	39803	256.3
Total Col1Ave (5 peaks):					266.8	Total Col2Ave (5 peaks):				242.4 RPD = 10
Corrected Ave (4 peaks):					255.5	Corrected Ave (4 peaks):				230.3 RPD = 10
CalAmt %D:					6.7	CalAmt %D:				-3.0

Total PCB Area Col1 (5.931 - 13.801) = 1569265 Col1 Total PCB = 0.4 ppm*

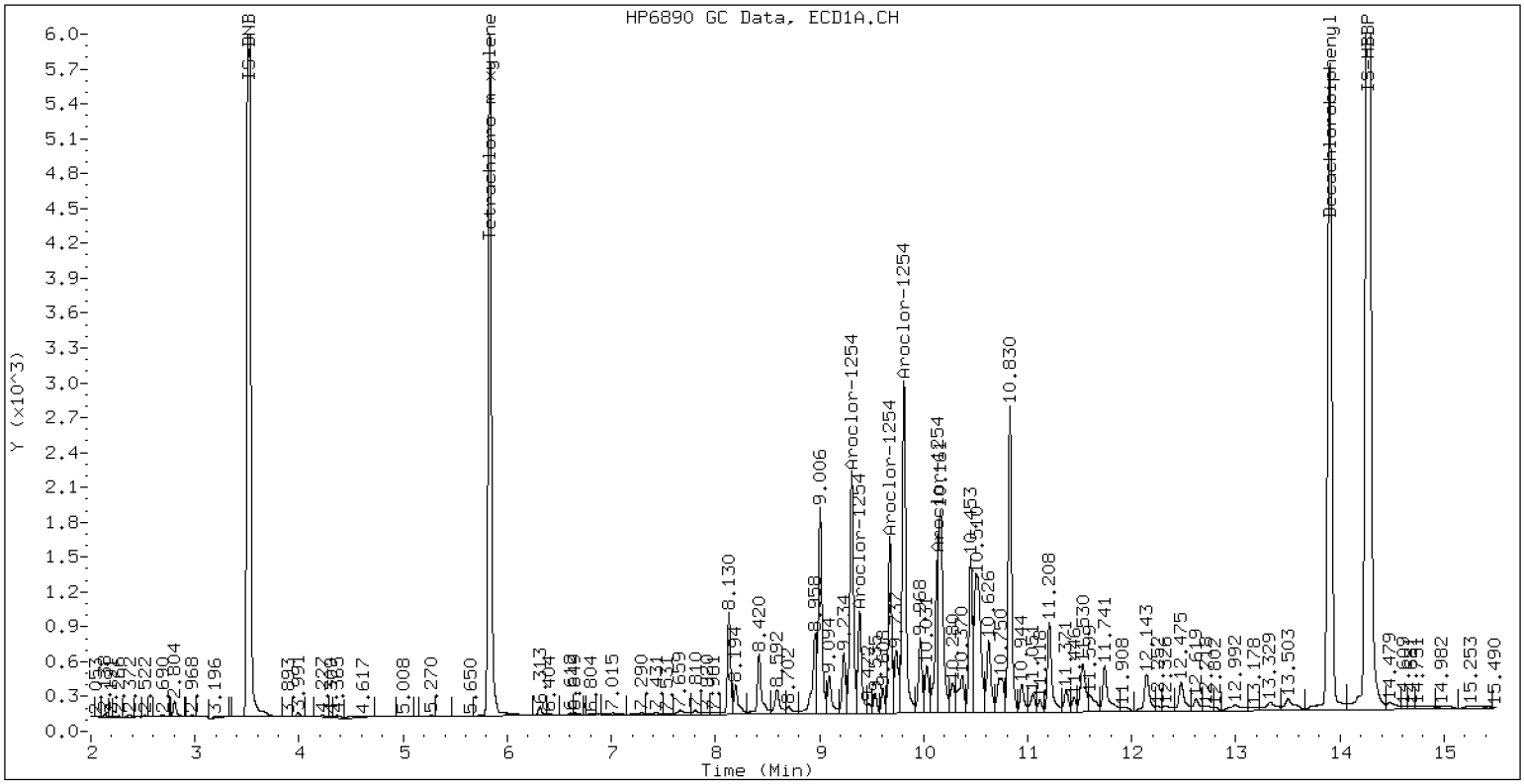
Total PCB Area Col2 (5.807 - 14.027) = 784677 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

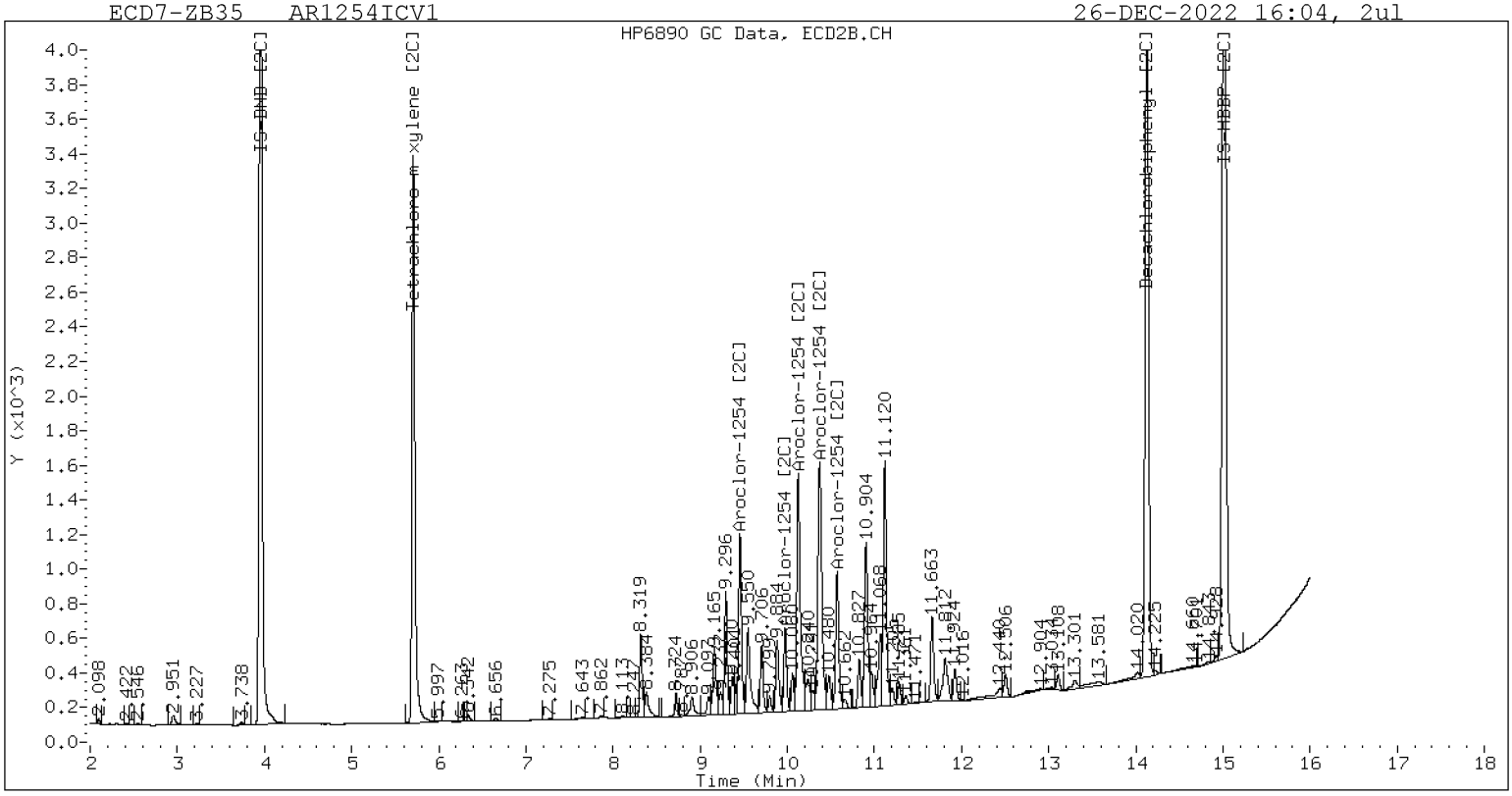
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 26-DEC-2022 16:04, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254ICV1 26-DEC-2022 16:04, 2ul

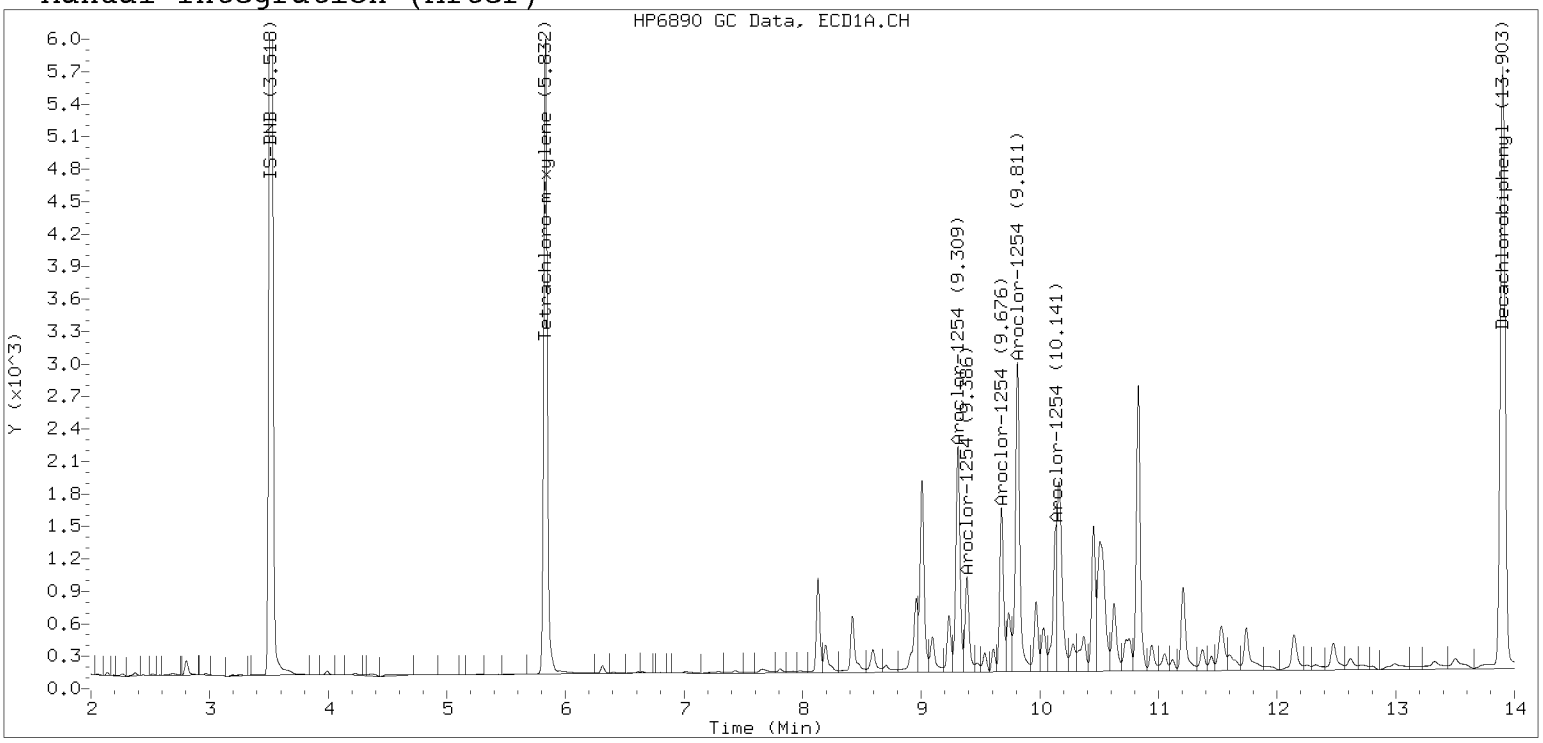


ZB-35 Manual Integration: NO

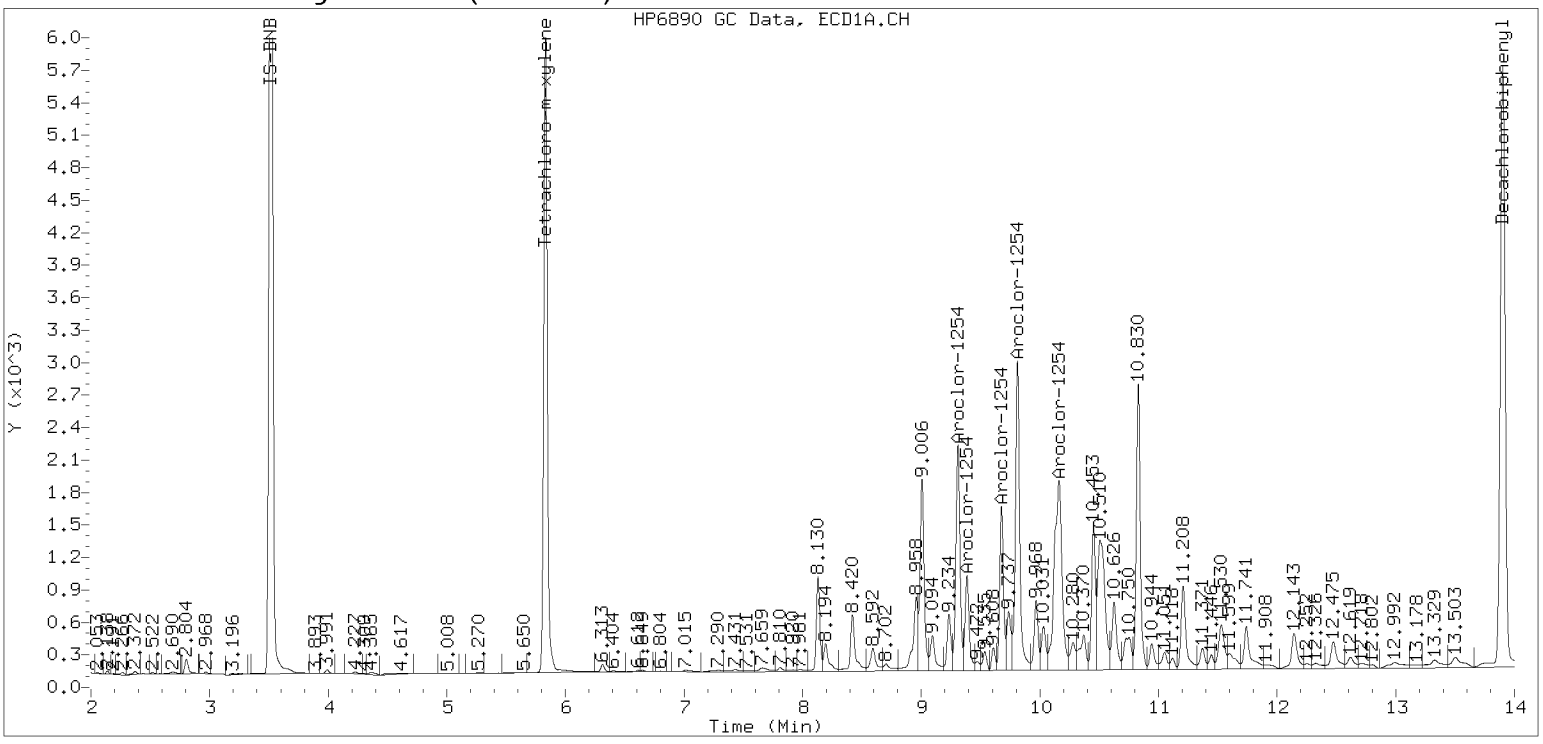
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262202ECD7.D Injection Date: 26-DEC-2022 16:04

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262203ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/26/22
Lab Sample ID:	SKL0359-ICV2	Injection Time:	16:26
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	282	0.0441939	0.0495947		12.9	+/-20	
Aroclor-1016 (1)	A	250.00	284	0.0266860	0.0303377		13.6		
Aroclor-1016 (2)	A	250.00	283	0.0861572	0.0976817		13.2		
Aroclor-1016 (3)	A	250.00	254	0.0390425	0.0397156		1.6		
Aroclor-1016 (4)	A	250.00	308	0.0248899	0.0306439		23.2		
Aroclor 1016 [2C]	A	250.00	268	0.0467310	0.0477240		7.3	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	277	0.0409030	0.0453041		10.8		
Aroclor-1016 (2) [2C]	A	250.00	231	0.0882154	0.0814262		-7.6		
Aroclor-1016 (3) [2C]	A	250.00	265	0.0378846	0.0402200		6.0		
Aroclor-1016 (4) [2C]	A	250.00	300	0.0199212	0.0239460		20.0		
Aroclor 1260	A	250.00	303	0.0390342	0.0474406		21.4	+/-20	*
Aroclor-1260 (1)	A	250.00	290	0.0291201	0.0337826		16.0		
Aroclor-1260 (2)	A	250.00	294	0.0301181	0.0354604		17.6		
Aroclor-1260 (3)	A	250.00	306	0.0791351	0.0969129		22.4		
Aroclor-1260 (4)	A	250.00	312	0.0403003	0.0502800		24.8		
Aroclor-1260 (5)	A	250.00	315	0.0164974	0.0207672		26.0		
Aroclor 1260 [2C]	A	250.00	245	0.0617619	0.0538891		-2.1	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	304	0.0422283	0.0513681		21.6		
Aroclor-1260 (2) [2C]	A	250.00	177	0.1059643	0.0749994		-29.2		
Aroclor-1260 (3) [2C]	A	250.00	304	0.0282173	0.0342625		21.6		
Aroclor-1260 (4) [2C]	A	250.00	194	0.0706376	0.0549264		-22.4		
Decachlorobiphenyl	A	40.000	46.6	0.7333327	0.8545969		16.5	+/-20	
Tetrachlorometaxylene	A	40.000	45.9	1.1336710	1.3013980		14.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	47.1	1.1358180	1.3375600		17.8	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	44.5	1.0966080	1.2209830		11.3	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262203ECD7.D
Data file 2: /221226.b/221226.b/12262203ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 26-DEC-2022 16:26
Report Date: 12/29/2022 12:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	0.000	244795	5.708	0.001	149549	45.9	44.5	3.1	Tetrachloro-m-xylene
13.902	0.001	325266	14.128	0.001	234257	46.6	47.1	1.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	376203	-16.0
Hexabromobiphenyl	798898	761215	-4.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	244965	-1.7
Hexabromobiphenyl	362541	350275	-3.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.288	0.001	35666	284.2	1	7.272	0.002	34681	276.9
Aroclor-1016	2	7.668	-0.007	114838	283.4	2	7.866	-0.002	62333	230.8
Aroclor-1016	3	7.806	-0.002	46691	254.3	3	8.066	-0.001	30789	265.4
Aroclor-1016	4	8.418	-0.002	36026	307.8	4	8.236	-0.003	18331	300.5
Total Col1Ave (4 peaks):					282.4	Total Col2Ave (4 peaks):				268.4 RPD = 5
Corrected Ave (3 peaks):					274.0	Corrected Ave (3 peaks):				257.7 RPD = 6
CalAmt %D:					13.0	CalAmt %D:				7.4
Aroclor-1260	1	11.053	-0.002	80362	290.0	1	11.661	-0.000	56228	304.1
Aroclor-1260	2	11.369	-0.002	84353	294.3	2	11.922	-0.001	82095	176.9
Aroclor-1260	3	11.741	-0.003	230536	306.2	3	12.441	-0.001	37504	303.6
Aroclor-1260	4	12.142	-0.006	119606	311.9	4	12.507	-0.000	60123	194.4
Aroclor-1260	5	12.253	-0.001	49401	314.7	NS	---			----
Total Col1Ave (5 peaks):					303.4	Total Col2Ave (4 peaks):				244.8 RPD = 21
Corrected Ave (4 peaks):					300.6	Corrected Ave (3 peaks):				225.0 RPD = 29
CalAmt %D:					21.4	CalAmt %D:				-2.1

Total PCB Area Col1 (5.931 - 13.801) = 2197238 Col1 Total PCB = 0.6 ppm*

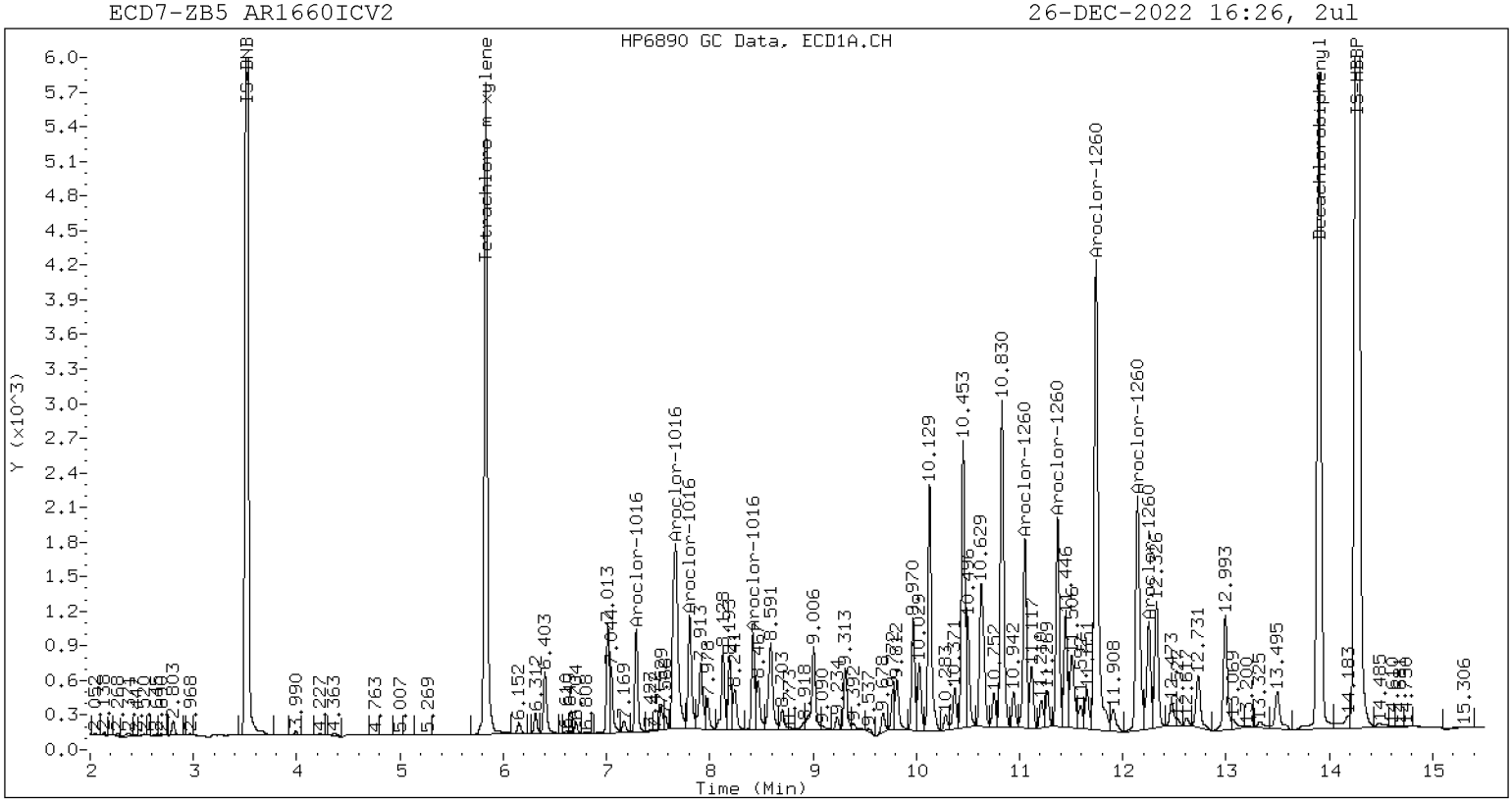
Total PCB Area Col2 (5.807 - 14.027) = 1198321 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

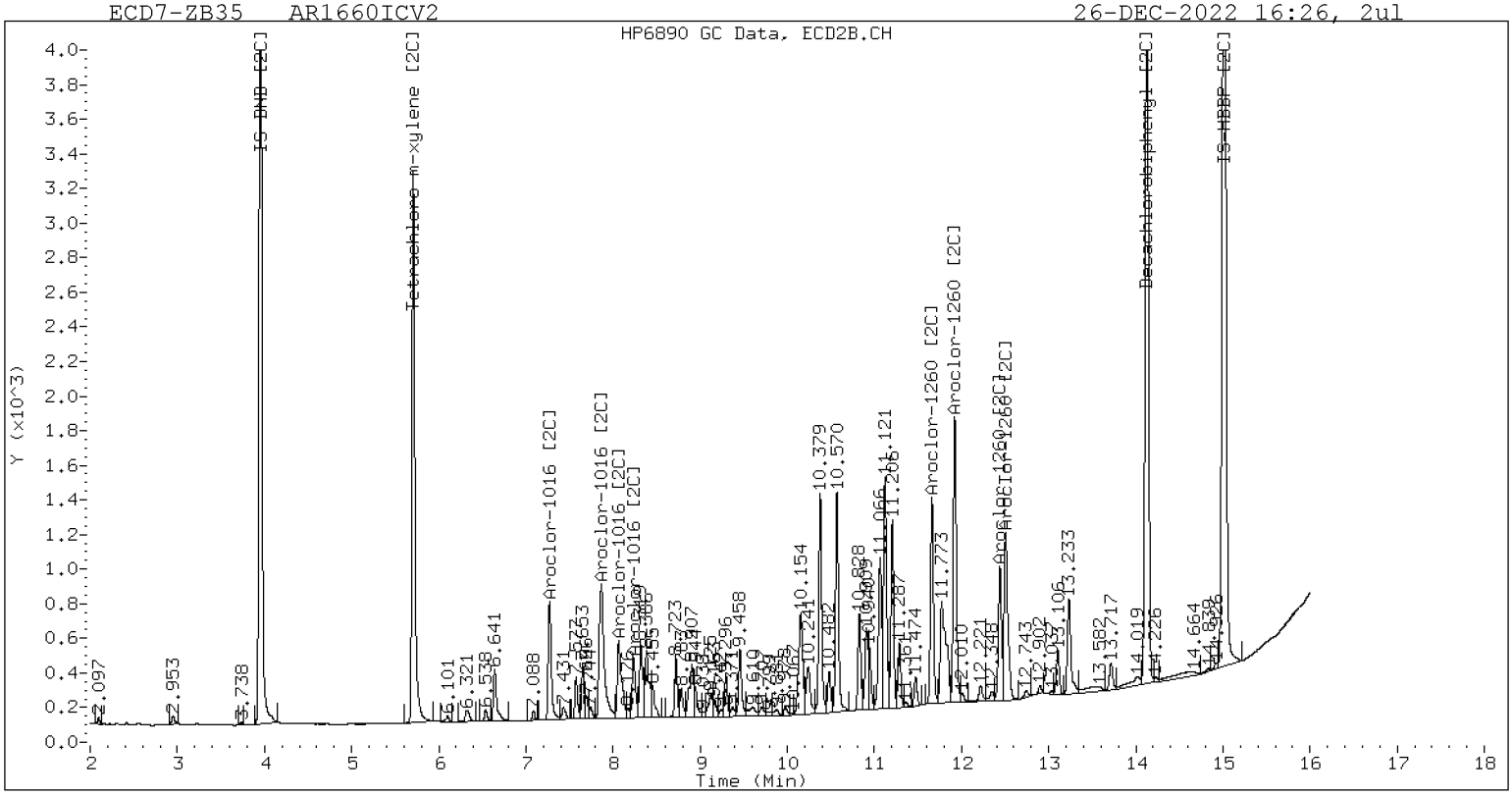
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 26-DEC-2022 16:26, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660ICV2 26-DEC-2022 16:26, 2ul

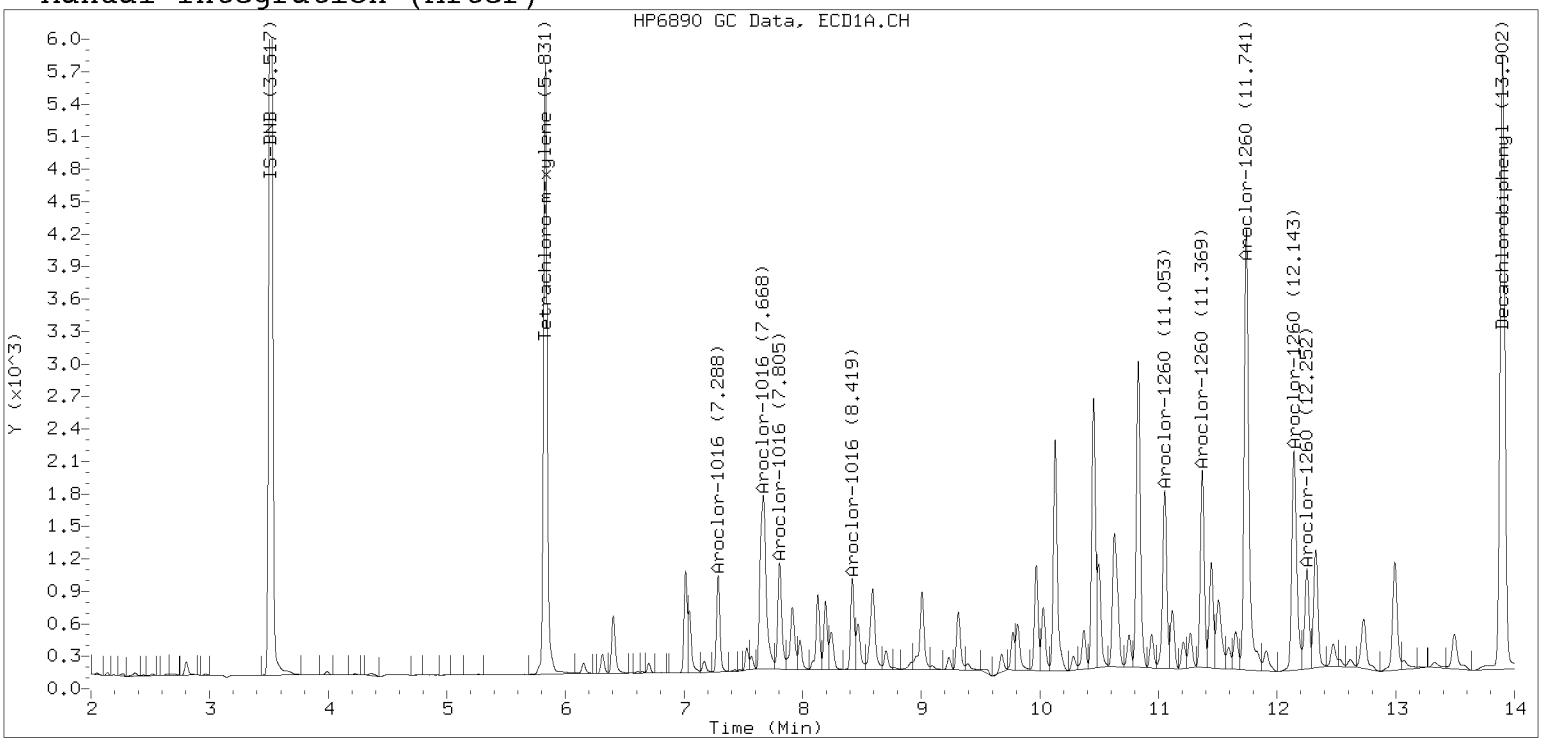


ZB-35 Manual Integration: NO

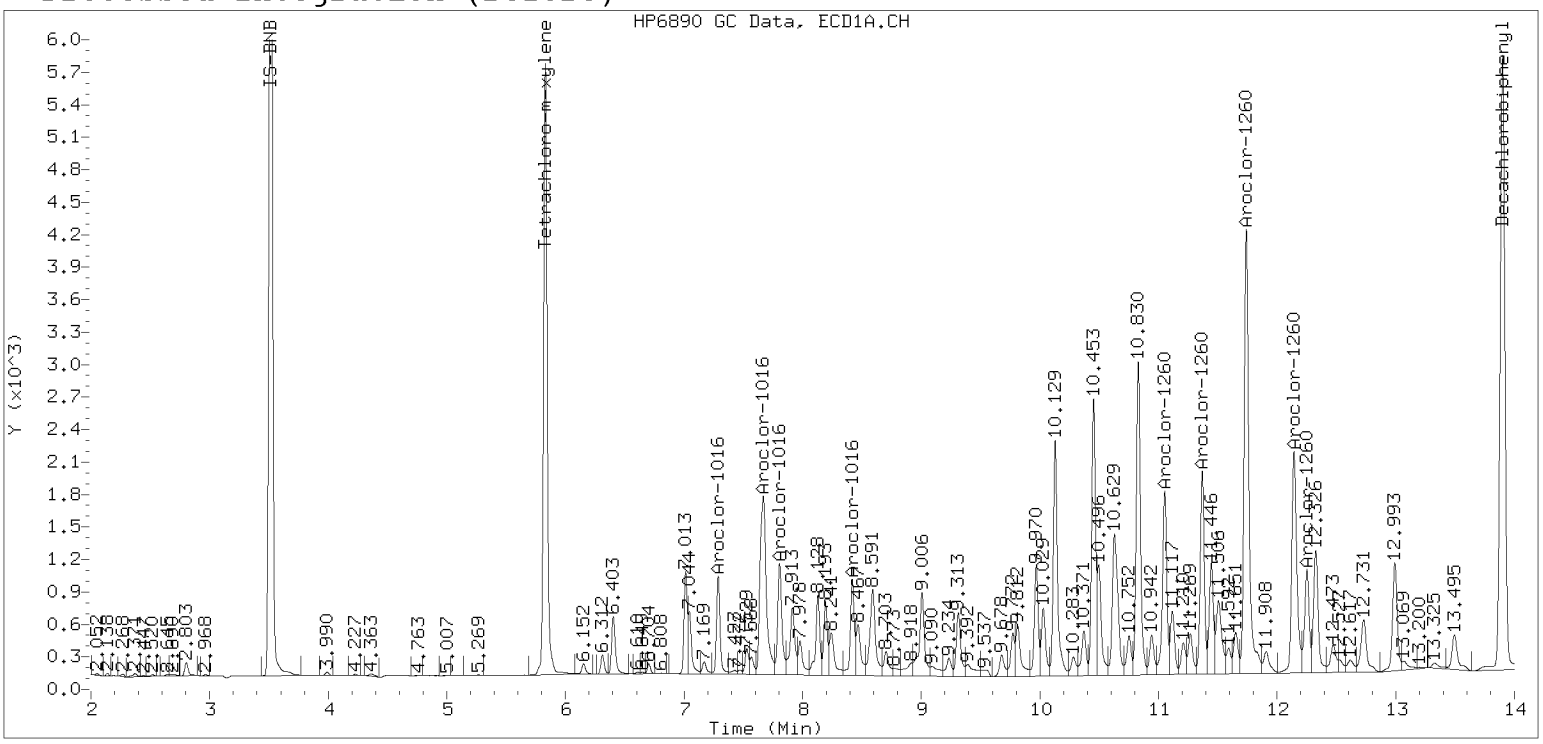
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262203ECD7.D Injection Date: 26-DEC-2022 16:26

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272202ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/27/22
Lab Sample ID:	SKL0377-ICV1	Injection Time:	17:00
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	251	0.0576965	0.0585396		0.3	+/-20
Aroclor-1254 (1)	A	250.00	235	0.0704377	0.0661042			
Aroclor-1254 (2)	A	250.00	255	0.0273935	0.0279828			
Aroclor-1254 (3)	A	250.00	210	0.0444885	0.0374734			
Aroclor-1254 (4)	A	250.00	268	0.0867185	0.0930084			
Aroclor-1254 (5)	A	250.00	286	0.0594444	0.0681293			
Aroclor 1254 [2C]	A	250.00	232	0.0638047	0.0603514		-7.4	+/-20
Aroclor-1254 (1) [2C]	A	250.00	237	0.0515798	0.0488761			
Aroclor-1254 (2) [2C]	A	250.00	162	0.0414689	0.0268711			
Aroclor-1254 (3) [2C]	A	250.00	222	0.0891370	0.0790822			
Aroclor-1254 (4) [2C]	A	250.00	269	0.0923140	0.0992503			
Aroclor-1254 (5) [2C]	A	250.00	268	0.0445236	0.0476775			
Decachlorobiphenyl	A	40.000	45.4	0.7333327	0.8322169		13.5	+/-20
Tetrachlorometaxylene	A	40.000	36.7	1.1336710	1.0392020		-8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.2	1.1358180	1.2252910		8.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.8	1.0966080	1.0084890		-8.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272202ECD7.D
Data file 2: /221227.b/221227.b/12272202ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 27-DEC-2022 17:00
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	0.000	197308	5.707	-0.002	122362	36.7	36.8	0.3	Tetrachloro-m-xylene
13.904	0.001	287114	14.129	0.001	217600	45.4	43.2	5.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	379730	-15.2
Hexabromobiphenyl	798898	689998	-13.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	242664	-2.6
Hexabromobiphenyl	362541	355181	-2.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.313	-0.008	78443	234.6	1	9.459	-0.002	37064	236.9
Aroclor-1254	2	9.392	-0.010	33206	255.4	2	9.976	-0.003	20377	162.0
Aroclor-1254	3	9.685	-0.010	44468	210.6	3	10.128	-0.002	59970	221.8
Aroclor-1254	4	9.819	-0.012	110369	268.1	4	10.376	-0.002	75264	268.8
Aroclor-1254	5	10.173	-0.016	80846	286.5	5	10.574	-0.002	36155	267.7
Total Col1Ave (5 peaks):					251.0	Total Col2Ave (5 peaks):				231.4 RPD = 8
Corrected Ave (4 peaks):					242.2	Corrected Ave (4 peaks):				222.1 RPD = 9
CalAmt %D:					0.4	CalAmt %D:				-7.4

Total PCB Area Col1 (5.931 - 13.803) = 1162824 Col1 Total PCB = 0.3 ppm*

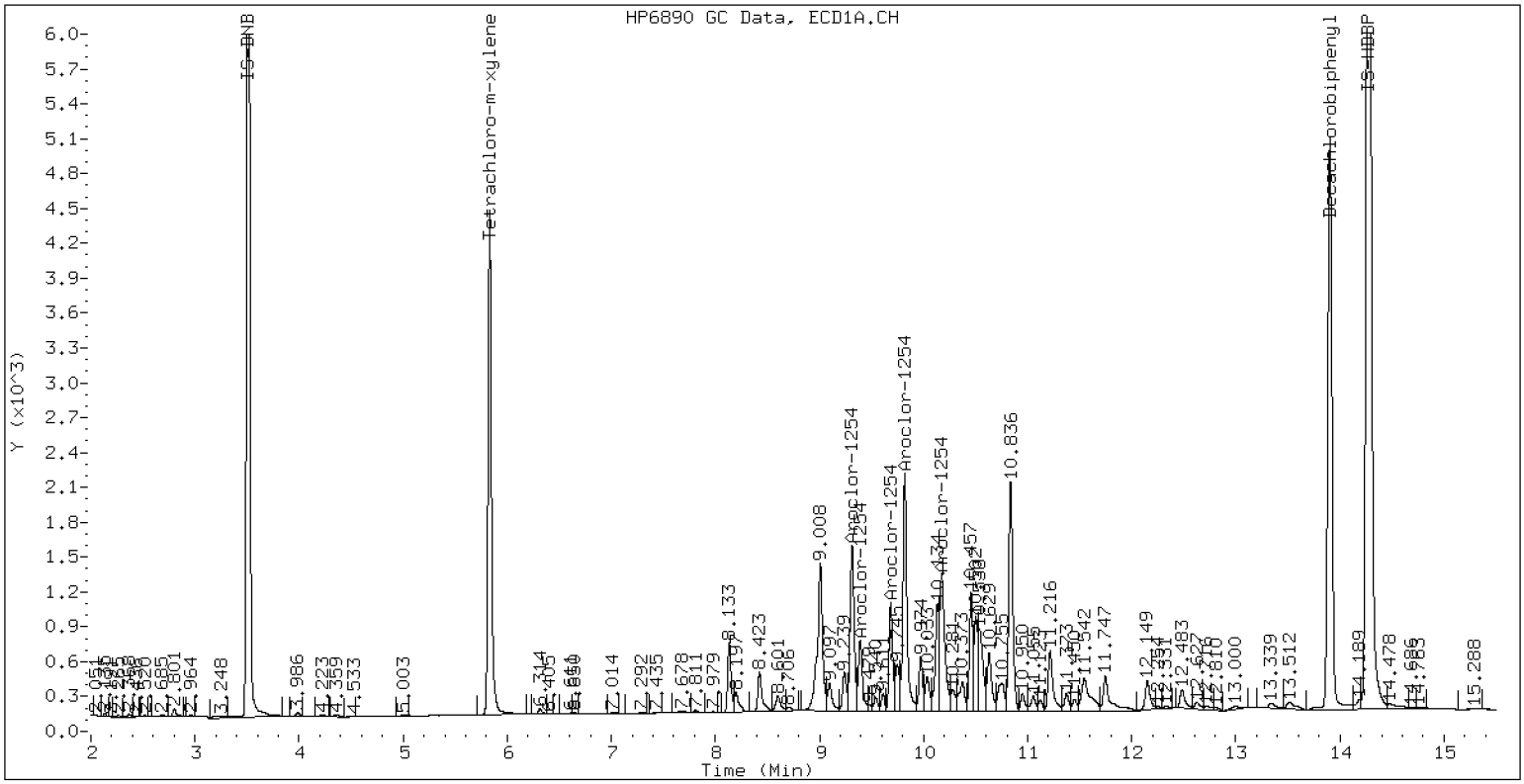
Total PCB Area Col2 (5.809 - 14.028) = 662622 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

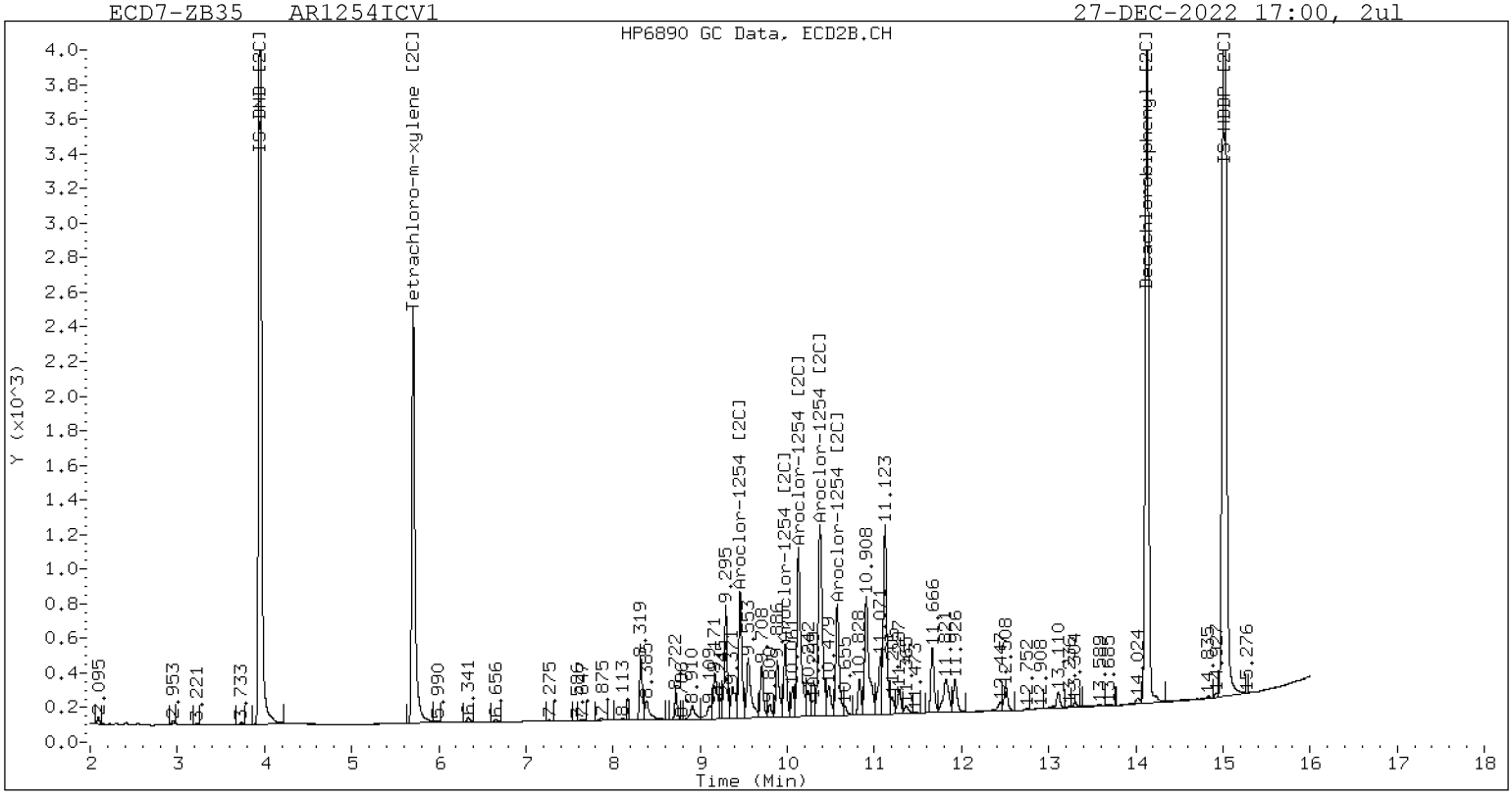
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 27-DEC-2022 17:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 27-DEC-2022 17:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272203ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/27/22
Lab Sample ID:	SKL0377-ICV2	Injection Time:	17:21
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	273	0.0441939	0.0479650		9.3	+/-20
Aroclor-1016 (1)	A	250.00	272	0.0266860	0.0290174		8.8	
Aroclor-1016 (2)	A	250.00	267	0.0861572	0.0920267		6.8	
Aroclor-1016 (3)	A	250.00	276	0.0390425	0.0431185		10.4	
Aroclor-1016 (4)	A	250.00	278	0.0248899	0.0276971		11.2	
Aroclor 1016 [2C]	A	250.00	258	0.0467310	0.0460666		3.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	269	0.0409030	0.0439654		7.6	
Aroclor-1016 (2) [2C]	A	250.00	223	0.0882154	0.0785726		-10.8	
Aroclor-1016 (3) [2C]	A	250.00	259	0.0378846	0.0392872		3.6	
Aroclor-1016 (4) [2C]	A	250.00	282	0.0199212	0.0224413		12.8	
Aroclor 1260	A	250.00	290	0.0390342	0.0448714		16.0	+/-20
Aroclor-1260 (1)	A	250.00	286	0.0291201	0.0332710		14.4	
Aroclor-1260 (2)	A	250.00	286	0.0301181	0.0344691		14.4	
Aroclor-1260 (3)	A	250.00	286	0.0791351	0.0903859		14.4	
Aroclor-1260 (4)	A	250.00	286	0.0403003	0.0460385		14.4	
Aroclor-1260 (5)	A	250.00	306	0.0164974	0.0201924		22.4	
Aroclor 1260 [2C]	A	250.00	222	0.0617619	0.0507589		-11.3	+/-20
Aroclor-1260 (1) [2C]	A	250.00	248	0.0422283	0.0418607		-0.8	
Aroclor-1260 (2) [2C]	A	250.00	179	0.1059643	0.0758629		-28.4	
Aroclor-1260 (3) [2C]	A	250.00	263	0.0282173	0.0296939		5.2	
Aroclor-1260 (4) [2C]	A	250.00	197	0.0706376	0.0556181		-21.2	
Decachlorobiphenyl	A	40.000	45.6	0.7333327	0.8351911		14.0	+/-20
Tetrachlorometaxylene	A	40.000	41.3	1.1336710	1.1699360		3.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.5	1.1358180	1.1786150		3.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.3	1.0966080	1.1597770		5.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272203ECD7.D
Data file 2: /221227.b/221227.b/12272203ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 27-DEC-2022 17:21
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	0.000	160493	5.709	0.000	102377	41.3	42.3	2.5	Tetrachloro-m-xylene
13.901	-0.002	245271	14.128	-0.001	174385	45.6	41.5	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	274362	-38.7
Hexabromobiphenyl	798898	587341	-26.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	176546	-29.1
Hexabromobiphenyl	362541	295915	-18.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.289	0.000	24879	271.8	1	7.271	-0.001	24256	268.7
Aroclor-1016	2	7.676	0.004	78902	267.0	2	7.869	-0.002	43349	222.7
Aroclor-1016	3	7.810	0.000	36969	276.1	3	8.069	-0.003	21675	259.3
Aroclor-1016	4	8.422	-0.001	23747	278.2	4	8.240	-0.002	12381	281.6
Total Col1Ave (4 peaks):					273.3	Total Col2Ave (4 peaks):				258.1 RPD = 6
Corrected Ave (3 peaks):					271.7	Corrected Ave (3 peaks):				250.2 RPD = 8
CalAmt %D:					9.3	CalAmt %D:				3.2
Aroclor-1260	1	11.055	-0.000	61067	285.6	1	11.661	-0.002	38710	247.8
Aroclor-1260	2	11.372	0.000	63266	286.1	2	11.924	-0.002	70153	179.0
Aroclor-1260	3	11.745	0.001	165898	285.5	3	12.442	-0.003	27459	263.1
Aroclor-1260	4	12.148	-0.001	84501	285.6	4	12.507	-0.002	51432	196.8
Aroclor-1260	5	12.255	-0.001	37062	306.0	NS	---			----
Total Col1Ave (5 peaks):					289.8	Total Col2Ave (4 peaks):				221.7 RPD = 27
Corrected Ave (4 peaks):					285.7	Corrected Ave (3 peaks):				207.9 RPD = 32
CalAmt %D:					15.9	CalAmt %D:				-11.3

Total PCB Area Col1 (5.931 - 13.803) = 1712730 Col1 Total PCB = 0.7 ppm*

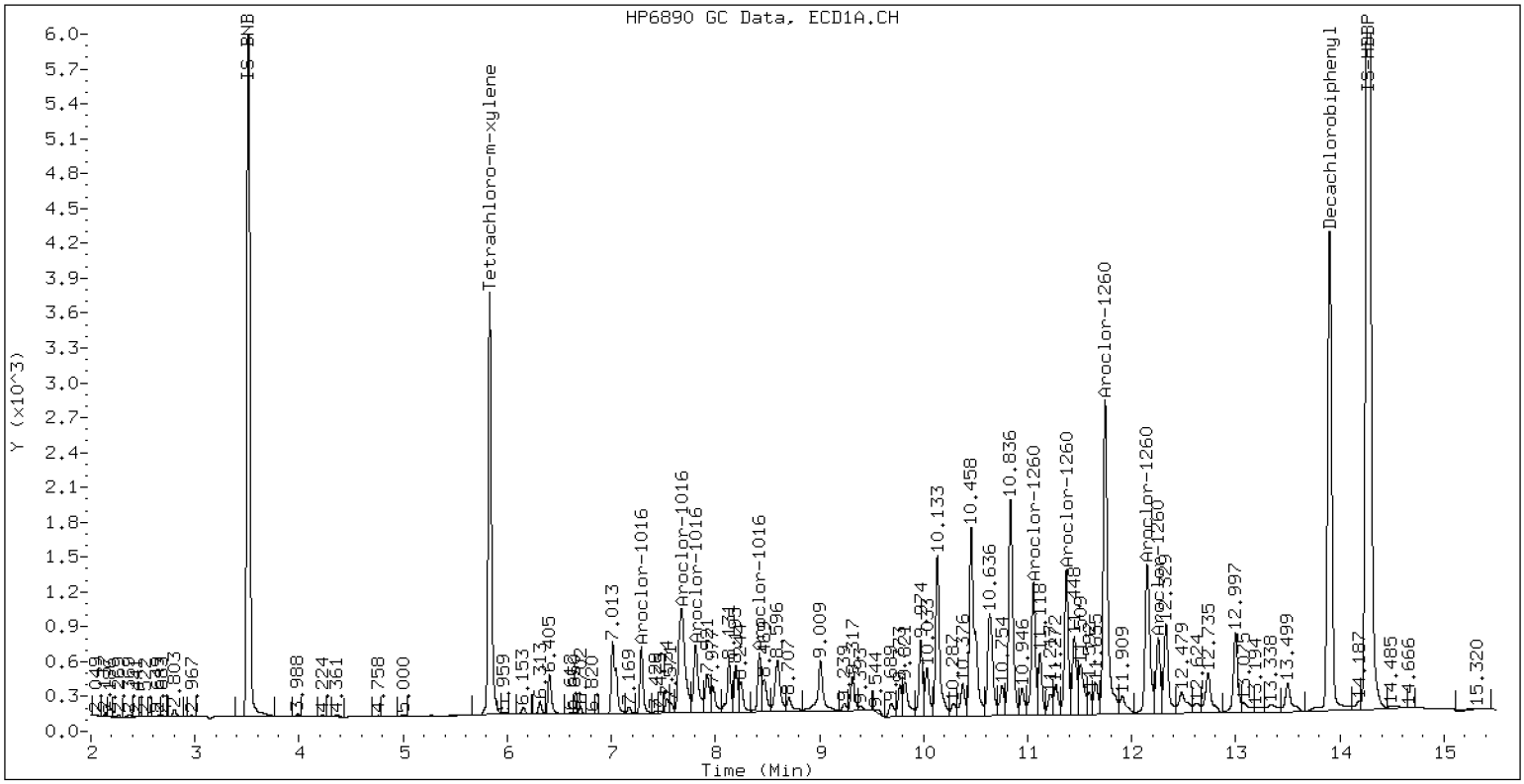
Total PCB Area Col2 (5.809 - 14.028) = 864295 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

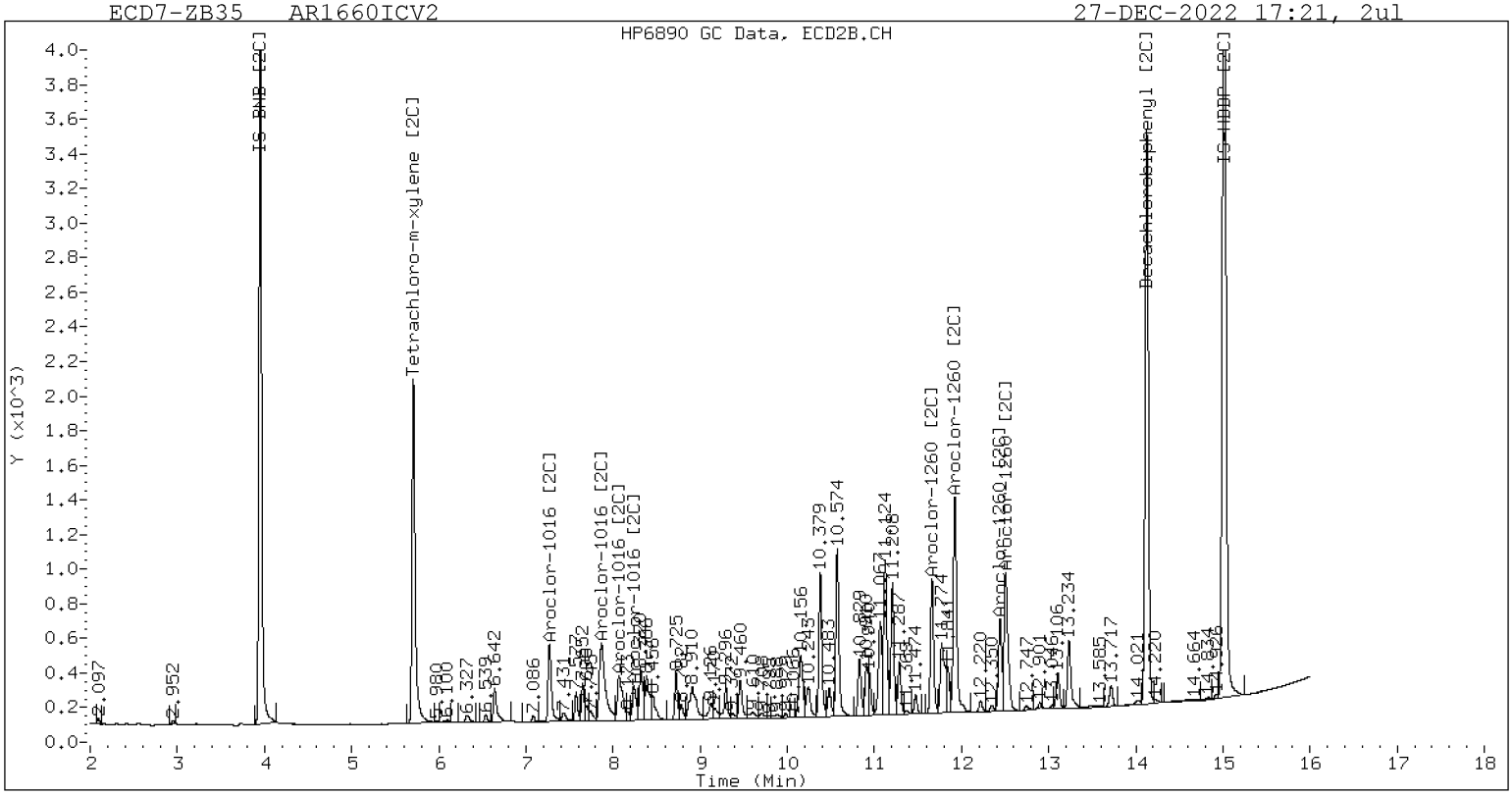
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 27-DEC-2022 17:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 27-DEC-2022 17:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032222ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV1	Injection Time:	22:13
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	223	0.0441939	0.0392295		-10.7	+/-20
Aroclor 1016 [2C]	A	250.00	216	0.0467310	0.0403426		-13.5	+/-20
Aroclor 1260	A	250.00	285	0.0390342	0.0441447		14.1	+/-20
Aroclor 1260 [2C]	A	250.00	263	0.0617619	0.0651122		5.1	+/-20
Decachlorobiphenyl	A	40.000	39.8	0.7333327	0.7297174		-0.5	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.1336710	1.0237520		-9.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.2	1.1358180	1.0840850		-4.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.1	1.0966080	0.9886519		-9.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032222ECD7.D
Data file 2: /221203.b/221203.b/12032222ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV1
Client ID:
Injection Date: 03-DEC-2022 22:13
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	247495	5.714	0.000	133904	36.1	36.1	0.2	Tetrachloro-m-xylene
13.909	0.001	325466	14.137	0.000	234467	39.8	38.2	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483506	8.0
Hexabromobiphenyl	798898	892033	11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270882	8.7
Hexabromobiphenyl	362541	432562	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.293	0.001	36100	223.8	1	7.277	0.002	30155	217.7
Aroclor-1016	2	7.681	0.007	113995	218.9	2	7.875	0.004	64468	215.8
Aroclor-1016	3	7.815	0.004	53043	224.8	3	8.074	0.004	27130	211.5
Aroclor-1016	4	8.428	0.004	33958	225.7	4	8.245	0.004	14848	220.1
Total Col1Ave (4 peaks):					223.3	Total Col2Ave (4 peaks):				216.3 RPD = 3
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				215.0 RPD = 3
Aroclor-1260	1	11.063	0.001	93173	286.9	1	11.671	0.002	56796	248.7
Aroclor-1260	2	11.380	0.003	95530	284.5	2	11.935	0.002	153247	267.5
Aroclor-1260	3	11.754	0.004	250548	283.9	3	12.452	0.001	41316	270.8
Aroclor-1260	4	12.159	0.005	120399	267.9	4	12.519	0.003	100704	263.7
Aroclor-1260	5	12.263	0.003	55639	302.5	NS	---			----
Total Col1Ave (5 peaks):					285.1	Total Col2Ave (4 peaks):				262.7 RPD = 8
Corrected Ave (4 peaks):					280.8	Corrected Ave (3 peaks):				260.0 RPD = 8

Total PCB Area Col1 (5.936 - 13.808) = 2318083 Col1 Total PCB = 0.4 ppm*

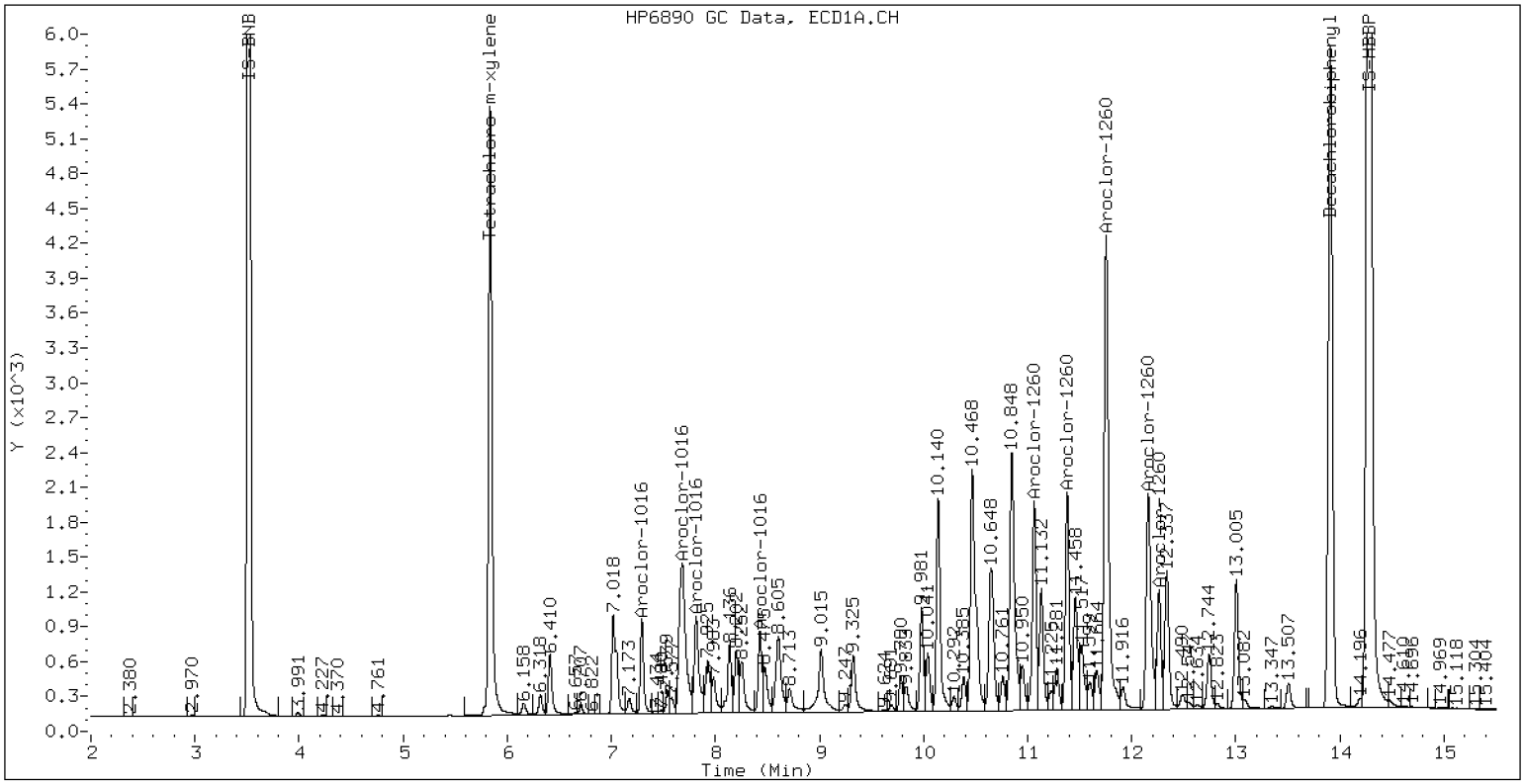
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

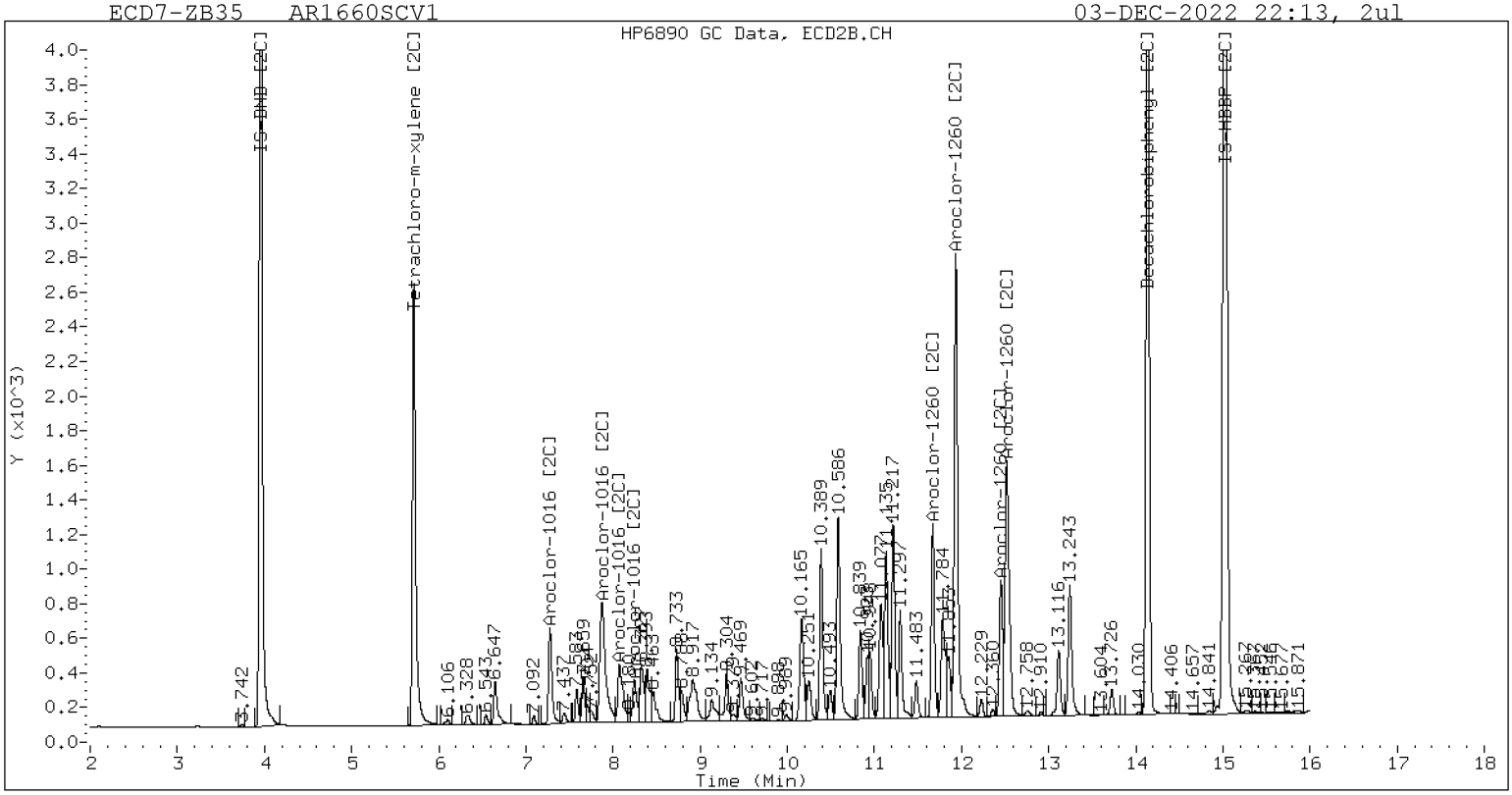
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV1 03-DEC-2022 22:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032223ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV2	Injection Time:	22:34
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	207	0.0396000	0.0328545		-17.3	+/-20
Aroclor 1242 [2C]	A	250.00	225	0.0391981	0.0342776		-10.0	+/-20
Decachlorobiphenyl	A	40.000	39.1	0.7333327	0.7176455		-2.1	+/-20
Tetrachlorometaxylene	A	40.000	35.6	1.1336710	1.0081550		-11.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.0	1.1358180	1.0793200		-5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.8	1.0966080	0.9816931		-10.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032223ECD7.D
Data file 2: /221203.b/221203.b/12032223ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV2
Client ID:
Injection Date: 03-DEC-2022 22:34
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	-0.000	242356	5.713	-0.001	132586	35.6	35.8	0.7	Tetrachloro-m-xylene
13.909	0.001	321690	14.136	-0.001	228130	39.1	38.0	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480791	7.4
Hexabromobiphenyl	798898	896515	12.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270117	8.4
Hexabromobiphenyl	362541	422729	16.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.294	0.000	26316	193.1	1	7.277	-0.001	23973	209.7
Aroclor-1242	2	7.677	-0.003	89703	207.3	2	7.873	-0.002	50204	206.9
Aroclor-1242	3	8.427	0.000	26786	215.2	3	9.176	-0.002	19686	251.4
Aroclor-1242	4	9.025	-0.005	54647	211.4	4	9.599	-0.006	21874	232.4
Total Col1Ave (4 peaks):					206.7	Total Col2Ave (4 peaks):				225.1 RPD = 9
Corrected Ave (3 peaks):					203.9	Corrected Ave (3 peaks):				216.3 RPD = 6

Total PCB Area Col1 (5.936 - 13.808) = 731052 Col1 Total PCB = 0.1 ppm*

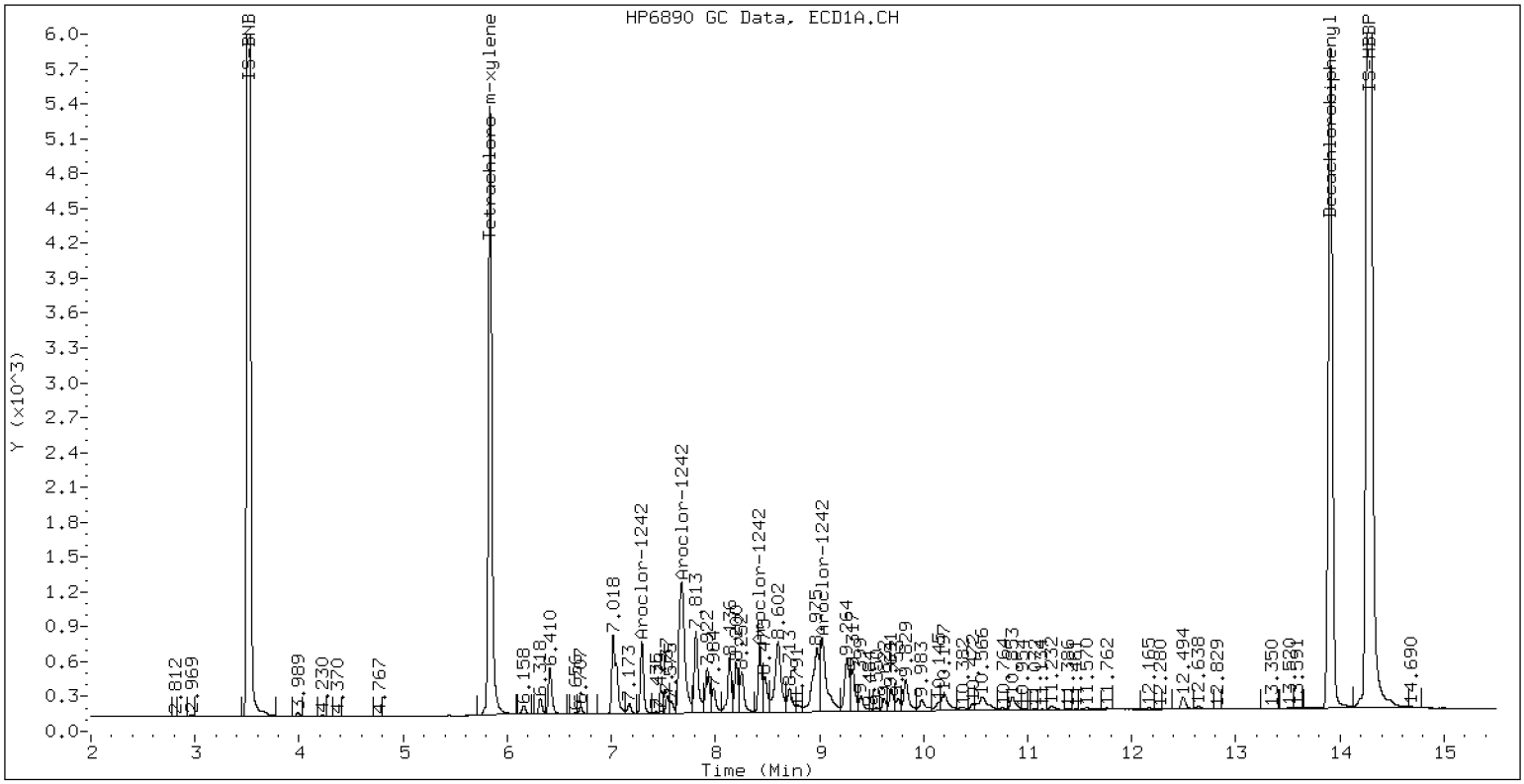
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

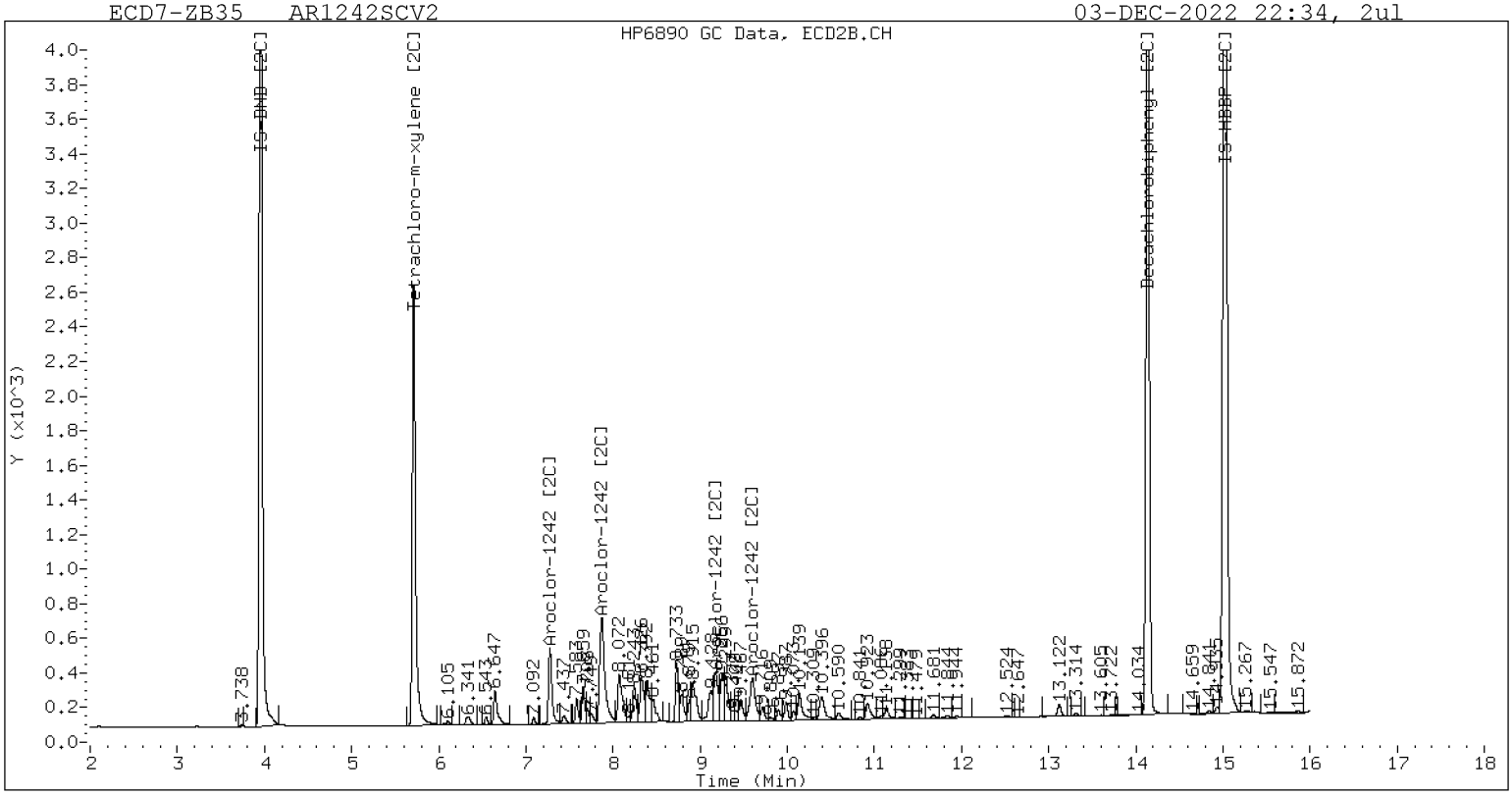
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV2 03-DEC-2022 22:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032224ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV3	Injection Time:	22:55
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	246	0.0490062	0.0480752		-1.8	+/-20
Aroclor 1248 [2C]	A	250.00	230	0.0394876	0.0363529		-7.9	+/-20
Decachlorobiphenyl	A	40.000	39.3	0.7333327	0.7205014		-1.7	+/-20
Tetrachlorometaxylene	A	40.000	34.7	1.1336710	0.9836260		-13.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.1	1.1358180	1.0816130		-4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.1	1.0966080	0.9613644		-12.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032224ECD7.D
Data file 2: /221203.b/221203.b/12032224ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV3
Client ID:
Injection Date: 03-DEC-2022 22:55
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	238518	5.713	-0.001	130772	34.7	35.1	1.0	Tetrachloro-m-xylene
13.909	0.001	329816	14.137	0.000	230748	39.3	38.1	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484977	8.3
Hexabromobiphenyl	798898	915518	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	272055	9.2
Hexabromobiphenyl	362541	426674	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.427	-0.000	49184	235.9	1	8.326	0.000	25647	230.8
Aroclor-1248	2	8.604	0.002	62884	236.2	2	8.733	0.000	26944	230.5
Aroclor-1248	3	9.021	-0.002	117065	244.4	3	9.179	0.001	32692	229.9
Aroclor-1248	4	9.315	0.000	62309	265.6	4	9.604	0.002	38342	229.7
Total Col1Ave (4 peaks): 245.5						Total Col2Ave (4 peaks): 230.2			RPD = 6	
Corrected Ave (3 peaks): 238.8						Corrected Ave (3 peaks): 230.0			RPD = 4	

Total PCB Area Col1 (5.936 - 13.808) = 991353 Col1 Total PCB = 0.2 ppm*

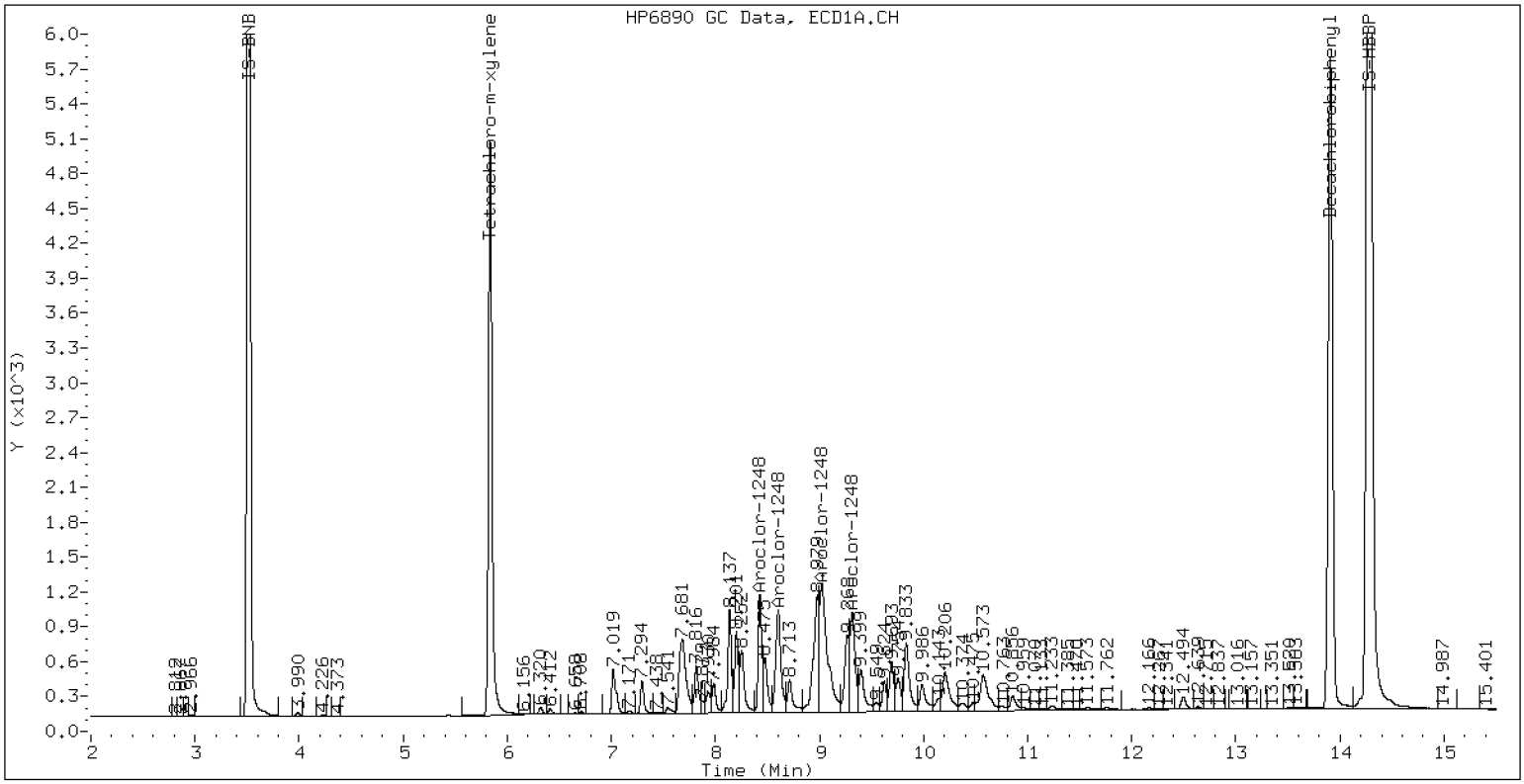
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

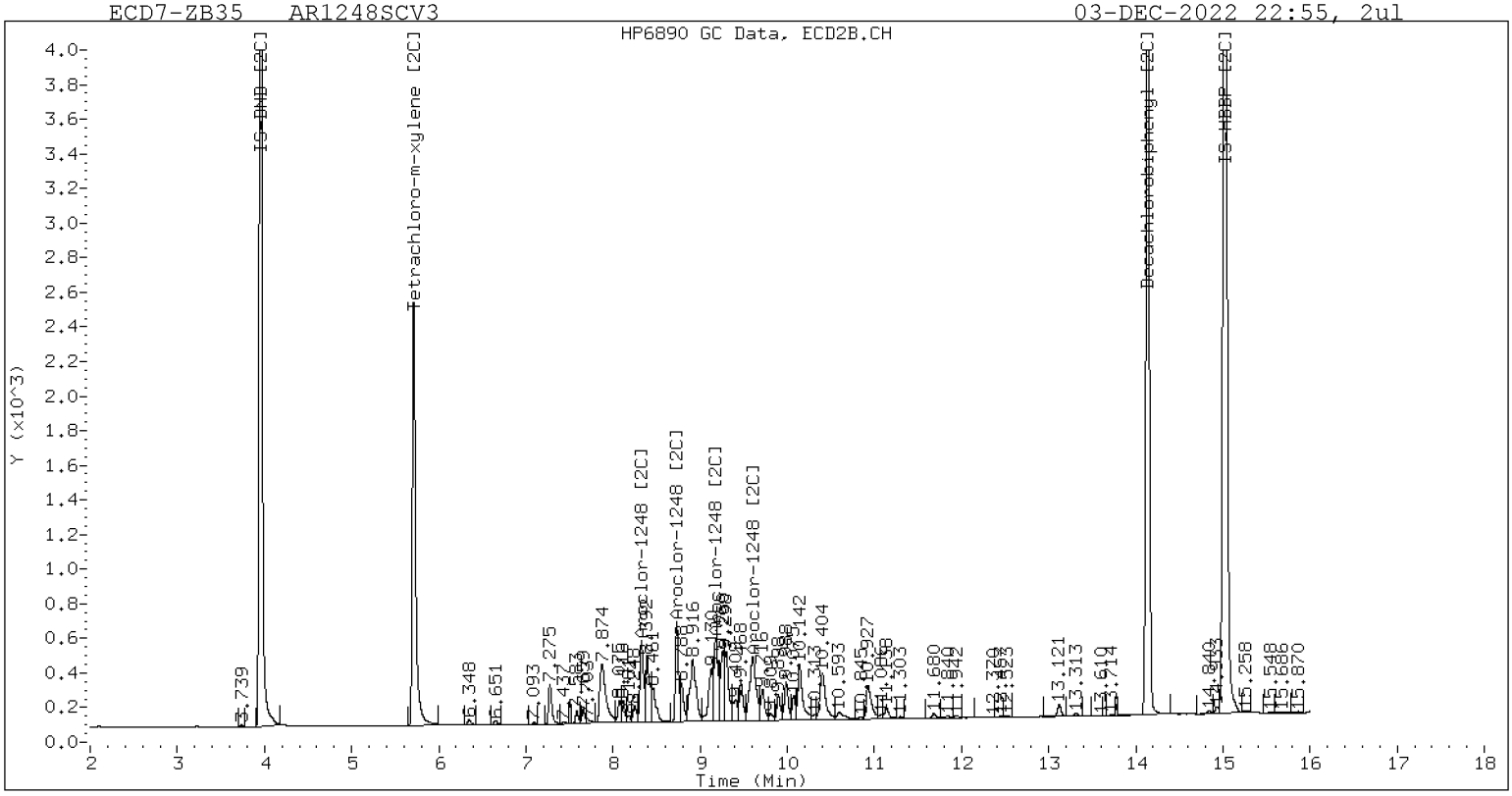
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV3 03-DEC-2022 22:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032225ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV4	Injection Time:	23:17
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	228	0.0576965	0.0519120		-8.8	+/-20
Aroclor 1254 [2C]	A	250.00	231	0.0638047	0.0582302		-7.7	+/-20
Decachlorobiphenyl	A	40.000	39.5	0.7333327	0.7250146		-1.1	+/-20
Tetrachlorometaxylene	A	40.000	35.5	1.1336710	1.0063630		-11.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.1	1.1358180	1.0811430		-4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.0	1.0966080	0.9868455		-10.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032225ECD7.D
Data file 2: /221203.b/221203.b/12032225ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV4
Client ID:
Injection Date: 03-DEC-2022 23:17
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.837	0.000	243863	5.713	-0.000	133610	35.5	36.0	1.4	Tetrachloro-m-xylene
13.909	0.001	332566	14.137	-0.000	233115	39.5	38.1	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	484642	8.3
Hexabromobiphenyl	798898	917405	14.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270782	8.7
Hexabromobiphenyl	362541	431238	18.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.321	0.003	94448	221.3	1	9.469	0.002	39410	225.7
Aroclor-1254	2	9.401	0.003	41171	248.1	2	9.989	0.002	31415	223.8
Aroclor-1254	3	9.692	0.004	60946	226.1	3	10.143	0.004	66244	219.6
Aroclor-1254	4	9.832	0.004	116490	221.7	4	10.392	0.003	70095	224.3
Aroclor-1254	5	10.199	0.005	80050	222.3	5	10.588	0.002	39206	260.2

Total Col1Ave (5 peaks): 227.9 Total Col2Ave (5 peaks): 230.7 RPD = 1

Corrected Ave (4 peaks): 222.9 Corrected Ave (4 peaks): 223.4 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 1261470 Col1 Total PCB = 0.2 ppm*

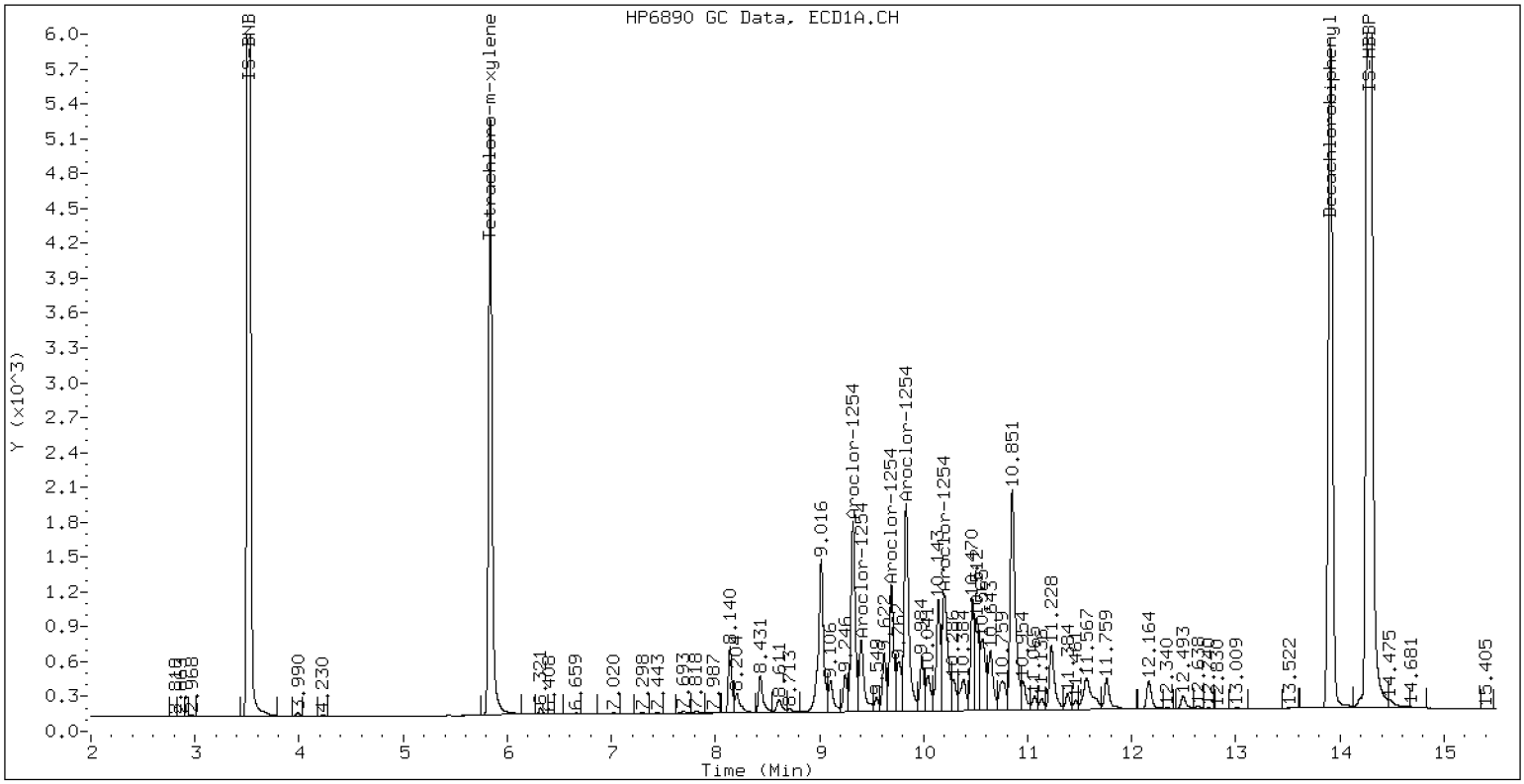
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

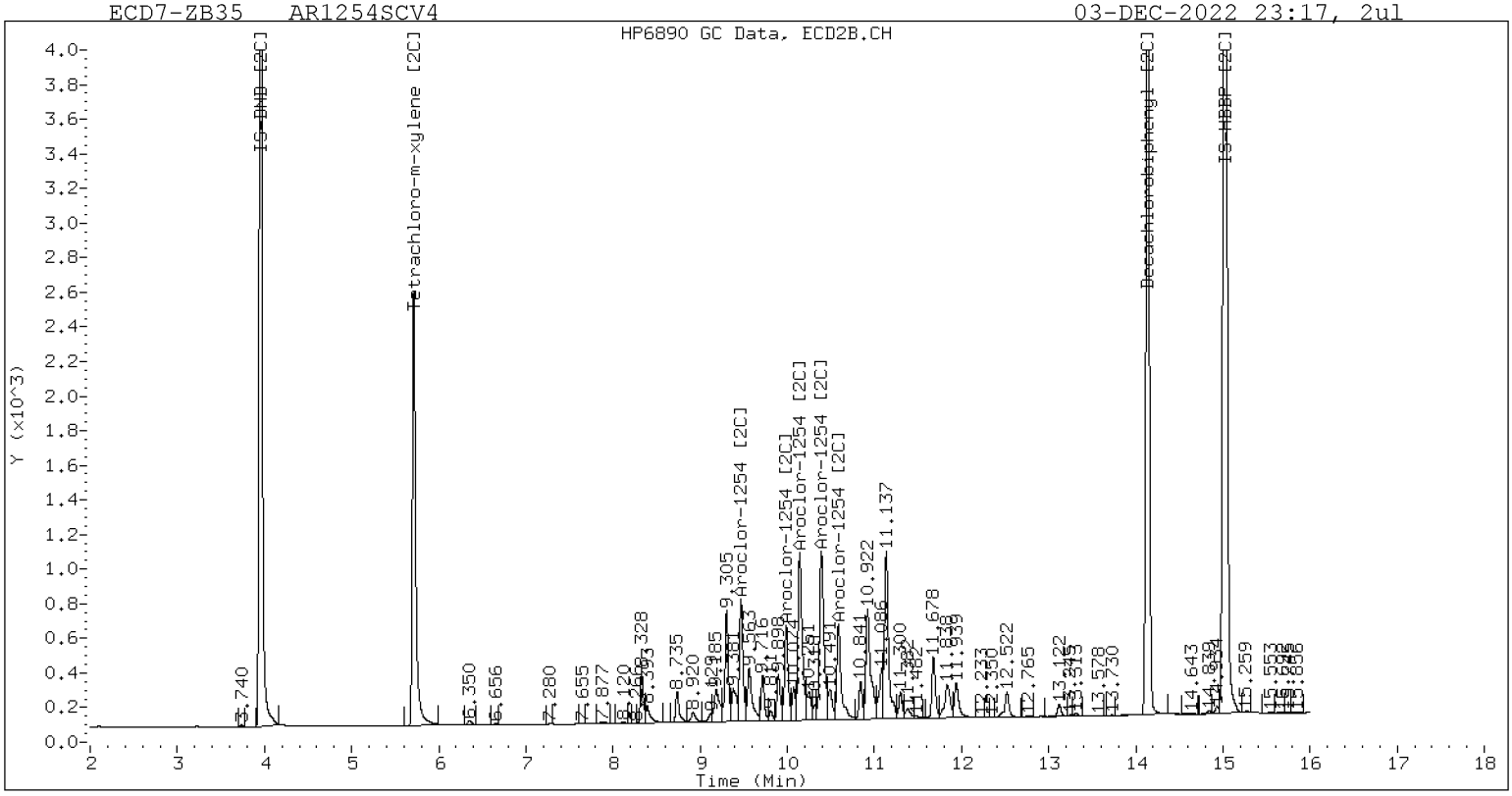
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV4 03-DEC-2022 23:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032226ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV5	Injection Time:	23:38
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	237	0.0150468	0.0142259		-5.3	+/-20
Aroclor 1221 [2C]	A	250.00	236	0.0137578	0.0128521		-5.7	+/-20
Decachlorobiphenyl	A	40.000	40.0	0.7333327	0.7330667		-0.04	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.1336710	1.0221760		-9.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.4	1.1358180	1.0912900		-3.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.7	1.0966080	0.9776713		-10.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032226ECD7.D
Data file 2: /221203.b/221203.b/12032226ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV5
Client ID:
Injection Date: 03-DEC-2022 23:38
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.836	0.000	246394	5.713	-0.000	131378	36.1	35.7	1.1	Tetrachloro-m-xylene
13.908	-0.001	334929	14.136	-0.001	237241	40.0	38.4	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	482097	7.7
Hexabromobiphenyl	798898	913775	14.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	268757	7.9
Hexabromobiphenyl	362541	434790	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.761	0.001	9579	240.4	1	4.988	0.001	5527	243.7
Aroclor-1221	2	6.159	0.001	16402	233.6	2	6.323	0.001	10041	232.3
Aroclor-1221	3	6.410	0.001	38315	236.6	3	6.646	0.001	16814	231.1
Total Col1Ave (3 peaks):					236.8	Total Col2Ave (3 peaks):				235.7 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.845	-0.003	145305	475.5	1	11.216	-0.001	152840	462.3
Aroclor-1262	2	12.261	-0.001	222795	469.0	2	11.668	-0.002	131097	457.9
Aroclor-1262	3	12.336	-0.001	238475	470.0	3	12.449	-0.002	148386	469.8
Aroclor-1262	4	13.004	-0.001	188009	461.7	4	12.518	-0.001	231081	467.1
Total Col1Ave (4 peaks):					469.1	Total Col2Ave (4 peaks):				464.3 RPD = 1
Corrected Ave (3 peaks):					466.9	Corrected Ave (3 peaks):				462.4 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 3654831 Col1 Total PCB = 0.7 ppm*

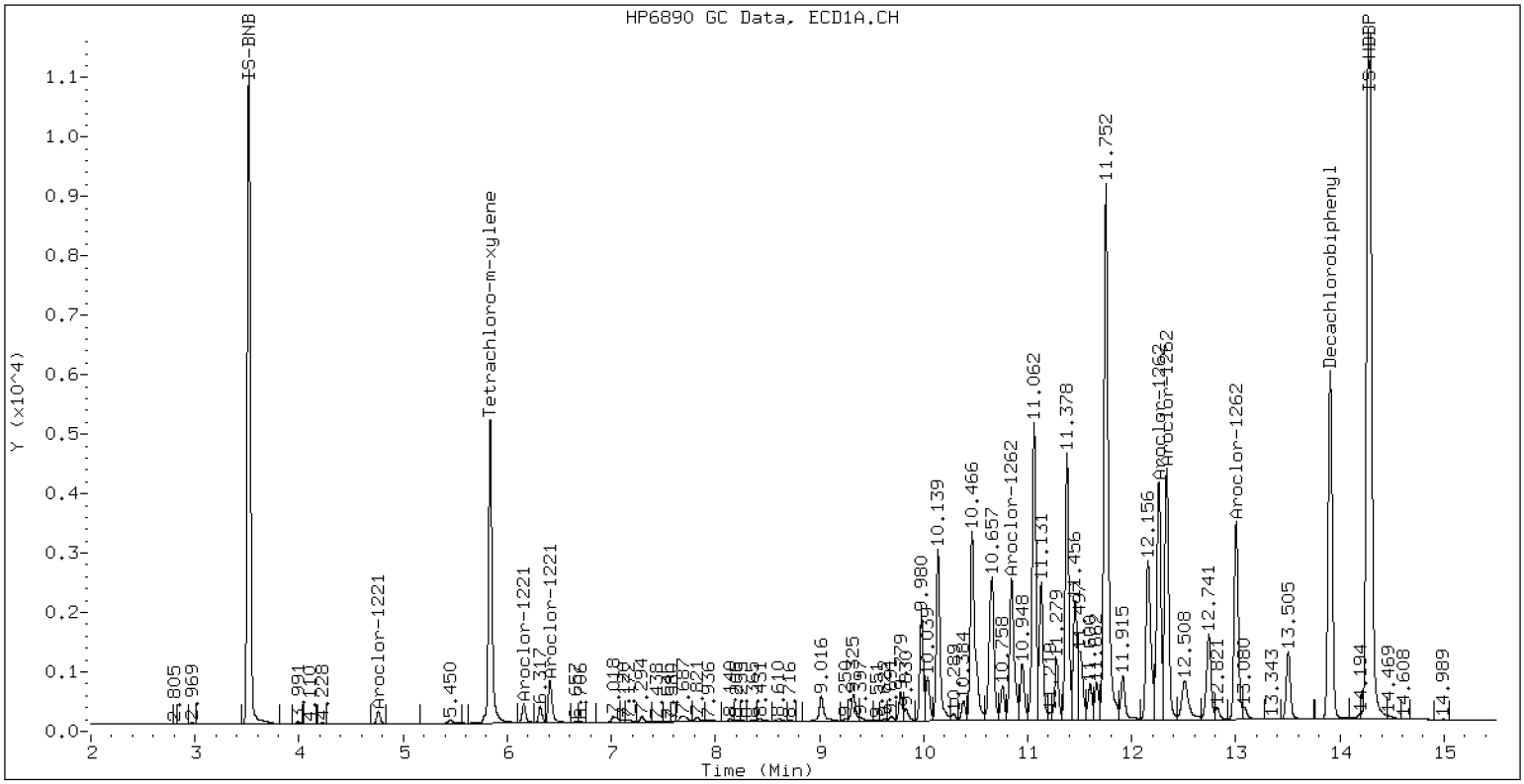
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

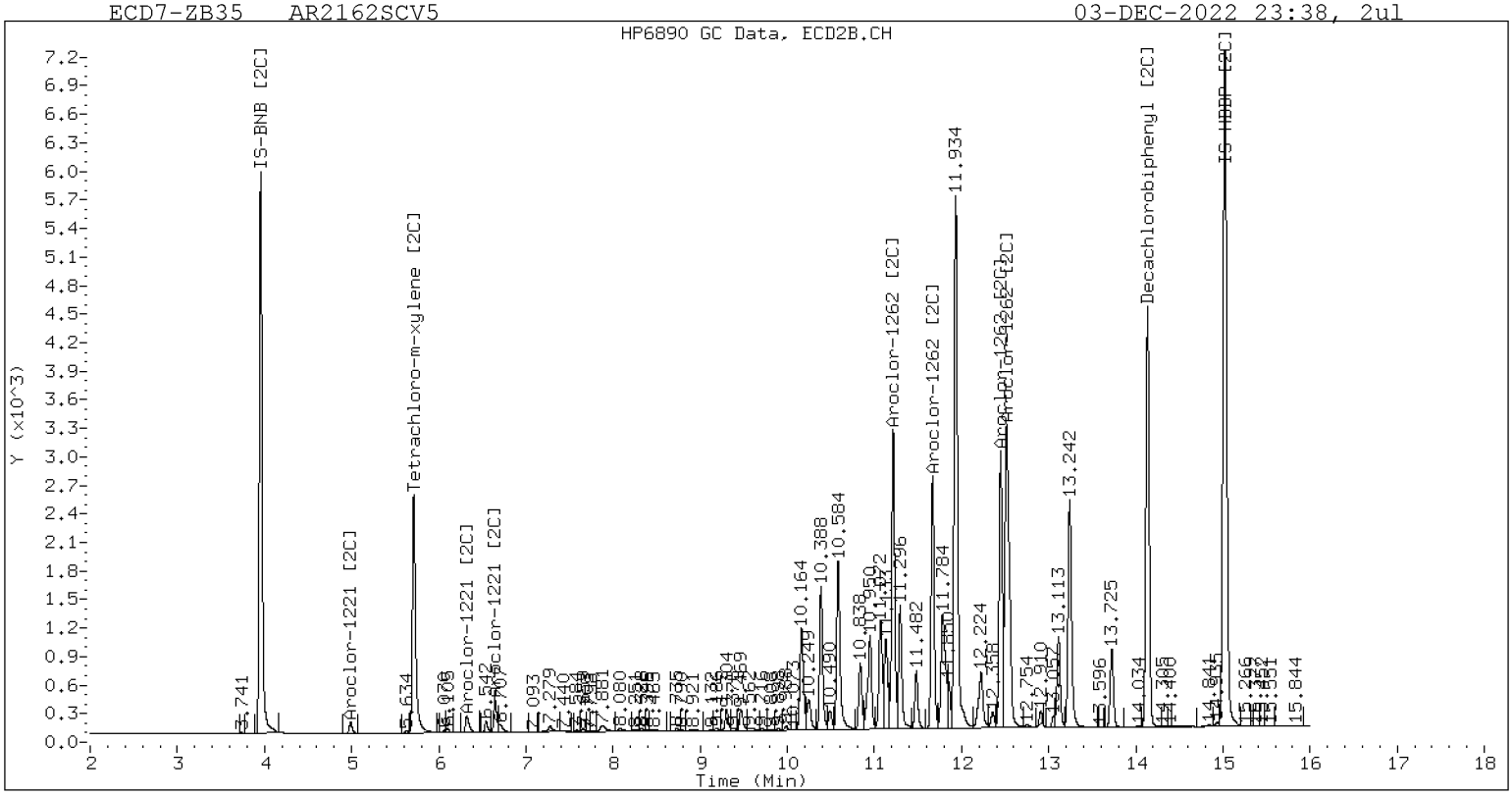
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV5 03-DEC-2022 23:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12032227ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0048	Injection Date:	12/03/22
Lab Sample ID:	SKL0048-SCV6	Injection Time:	23:59
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	217	0.0165403	0.0146227		-13.4	+/-20
Aroclor 1232 [2C]	A	250.00	230	0.0182815	0.0167216		-7.9	+/-20
Decachlorobiphenyl	A	40.000	56.2	0.7333327	1.0299650		40.4	+/-20
Tetrachlorometaxylene	A	40.000	34.5	1.1336710	0.9771642		-13.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	54.9	1.1358180	1.5591590		37.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	34.2	1.0966080	0.9385176		-14.4	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221203.b/12032227ECD7.D
Data file 2: /221203.b/221203.b/12032227ECD7.D
Method: \\target\share\chem4\ecd7.i\221203.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV6
Client ID:
Injection Date: 03-DEC-2022 23:59
Report Date: 12/05/2022 13:28
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.834	-0.002	236120	5.711	-0.002	126782	34.5	34.2	0.7	Tetrachloro-m-xylene
13.907	-0.002	474236	14.136	-0.001	339687	56.2	54.9	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	483276	8.0
Hexabromobiphenyl	798898	920878	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	270175	8.5
Hexabromobiphenyl	362541	435731	20.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.758	-0.003	5334	221.8	1	4.986	-0.004	3031	230.7
Aroclor-1232	2	6.158	-0.002	9882	194.6	2	7.276	-0.001	14982	223.3
Aroclor-1232	3	7.684	0.000	51409	225.4	3	7.875	-0.001	29992	228.7
Aroclor-1232	4	8.607	0.001	21710	224.4	4	8.734	0.000	8467	238.1
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				230.2 RPD = 6
Corrected Ave (3 peaks):					213.6	Corrected Ave (3 peaks):				227.6 RPD = 6
Aroclor-1268	1	12.262	-0.000	296463	230.1	1	12.449	-0.000	189354	230.2
Aroclor-1268	2	12.336	0.001	294353	233.5	2	12.517	0.000	196449	232.9
Aroclor-1268	3	12.715	-0.001	238693	231.1	3	12.909	-0.001	66881	213.9
Aroclor-1268	4	13.506	0.001	725881	230.1	4	13.725	-0.001	525890	233.7
Total Col1Ave (4 peaks):					231.2	Total Col2Ave (4 peaks):				227.7 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				225.7 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 2353838 Col1 Total PCB = 0.4 ppm*

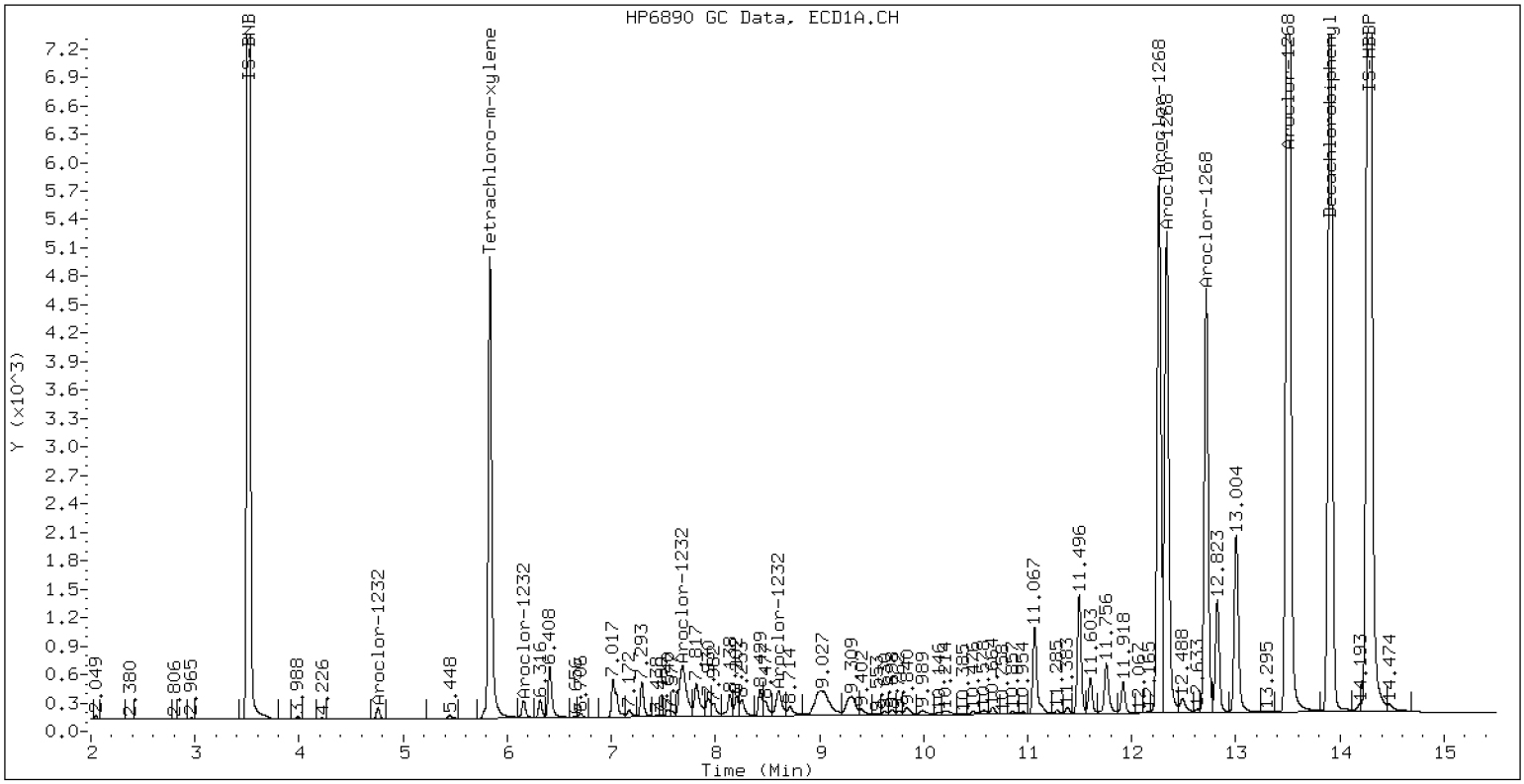
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

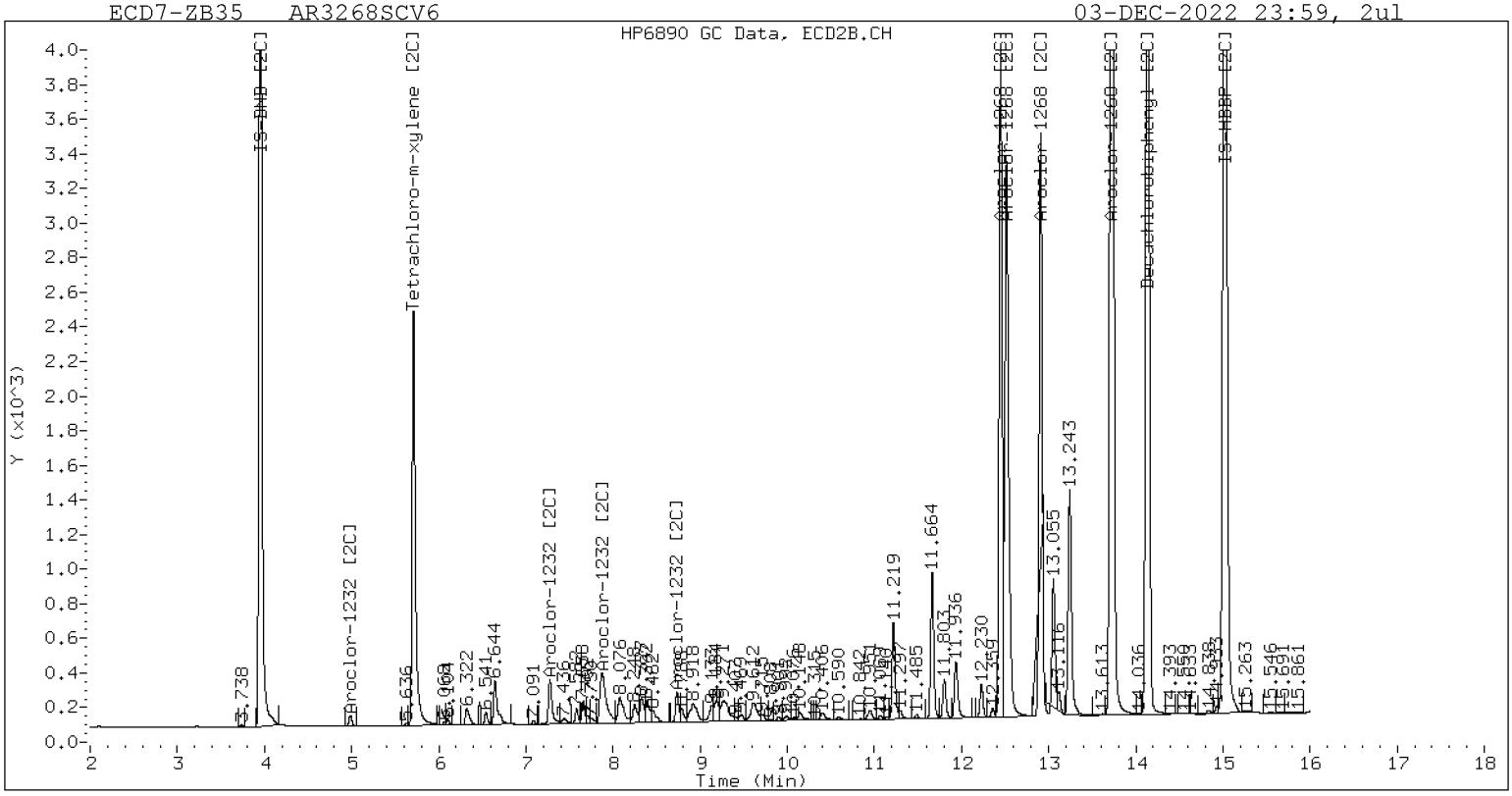
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV6 03-DEC-2022 23:59, 2ul



ZB-35 Manual Integration: NO

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262214ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/26/22
Lab Sample ID:	SKL0359-CCV1	Injection Time:	20:20
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	248	0.0490062	0.0478183		-1.0	+/-20
Aroclor-1248 (1)	A	250.00	296		0.0407780			
Aroclor-1248 (2)	A	250.00	310		0.0545231			
Aroclor-1248 (3)	A	250.00	227		0.0716925			
Aroclor-1248 (4)	A	250.00	157		0.0242795			
Aroclor 1248 [2C]	A	250.00	256	0.0394876	0.0409291		2.4	+/-20
Aroclor-1248 (1) [2C]	A	250.00	271		0.0354335			
Aroclor-1248 (2) [2C]	A	250.00	195		0.0268320			
Aroclor-1248 (3) [2C]	A	250.00	283		0.0473652			
Aroclor-1248 (4) [2C]	A	250.00	275		0.0540855			
Decachlorobiphenyl	A	40.000	43.4	0.7333327	0.7955668		8.5	+/-20
Tetrachlorometaxylene	A	40.000	39.5	1.1336710	1.1190720		-1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	45.1	1.1358180	1.2817980		12.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.3	1.0966080	1.0769590		-1.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262214ECD7.D
Data file 2: /221226.b/221226.b/12262214ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 26-DEC-2022 20:20
Report Date: 12/29/2022 12:29
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	255958	5.710	0.002	160202	39.5	39.3	0.5	Tetrachloro-m-xylene
13.901	0.000	382853	14.127	-0.000	274481	43.4	45.1	3.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	457447	2.2
Hexabromobiphenyl	798898	962466	20.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	297508	19.4
Hexabromobiphenyl	362541	428275	18.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.421	0.000	58293	296.4	1	8.320	0.000	32943	271.0
Aroclor-1248	2	8.595	-0.001	77942	310.4	2	8.724	-0.000	24946	195.2
Aroclor-1248	3	9.015	-0.000	102486	226.9	3	9.168	-0.000	44036	283.2
Aroclor-1248	4	9.310	0.002	34708	156.8	4	9.589	-0.001	50284	275.5
Total Col1Ave (4 peaks):					247.6	Total Col2Ave (4 peaks):				256.2 RPD = 3
Corrected Ave (3 peaks):					226.7	Corrected Ave (3 peaks):				247.2 RPD = 9
CalAmt %D:					-1.0	CalAmt %D:				2.5

Total PCB Area Col1 (5.931 - 13.801) = 1228997 Col1 Total PCB = 0.3 ppm*

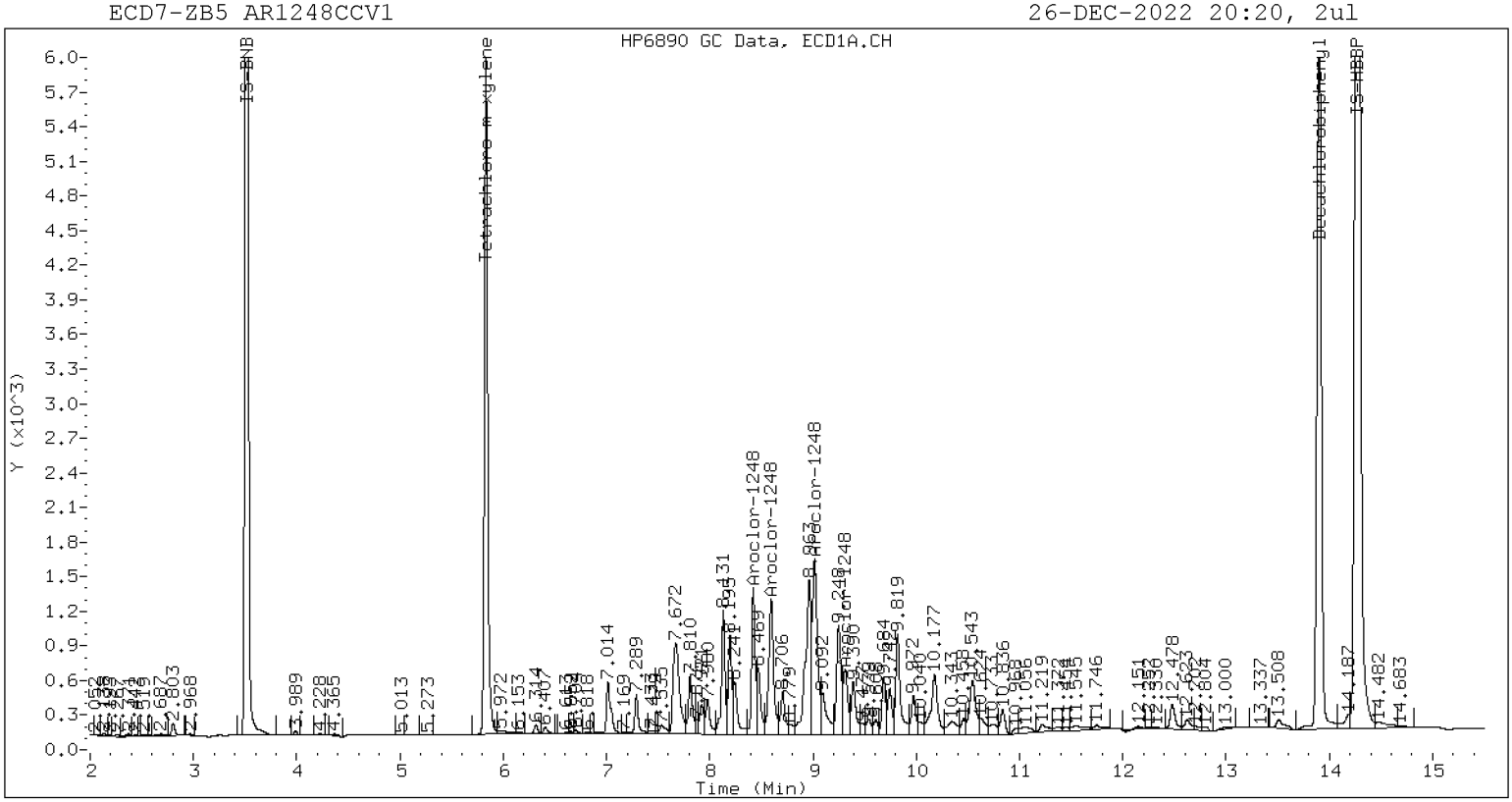
Total PCB Area Col2 (5.807 - 14.027) = 627649 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

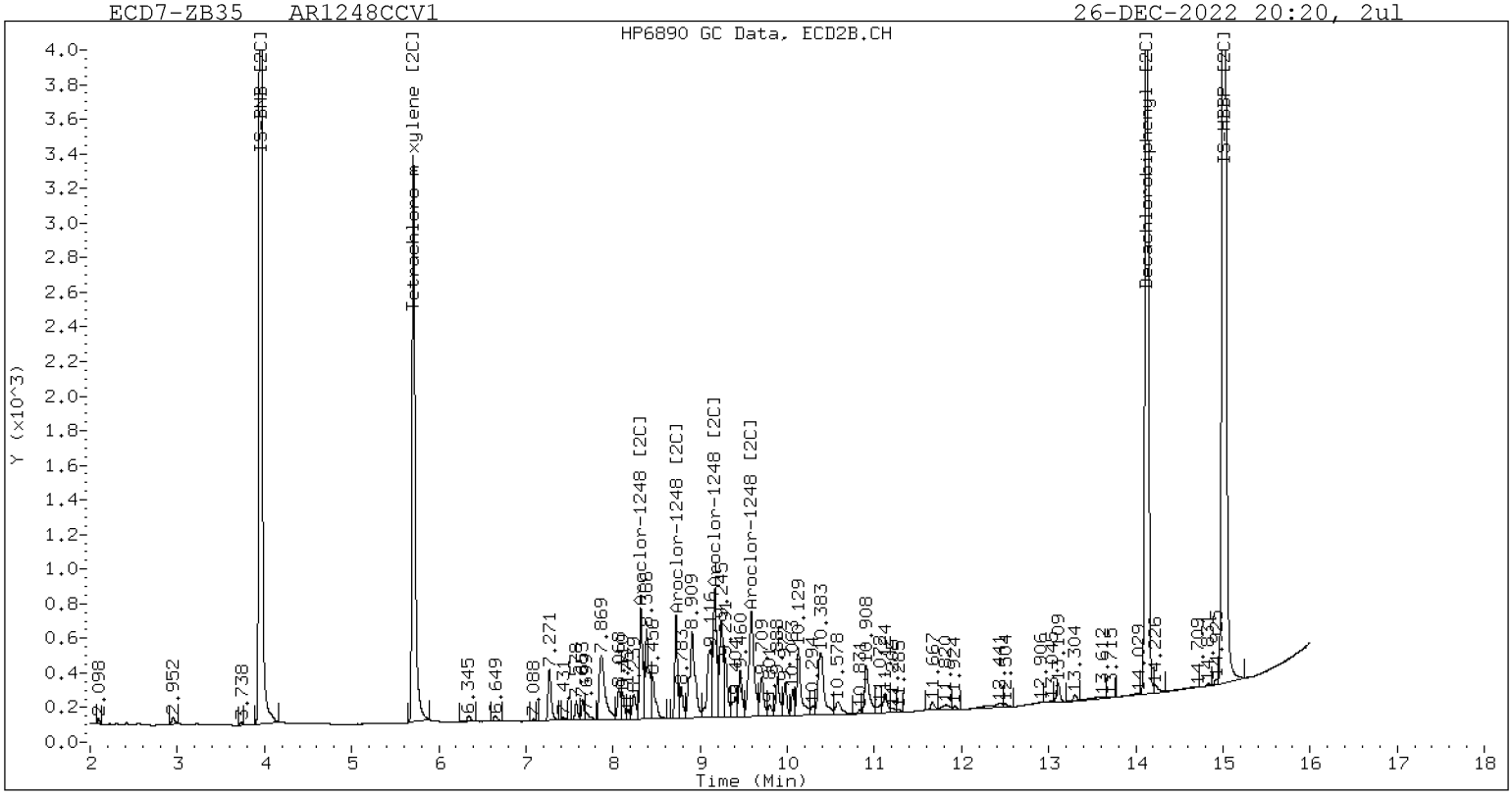
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 26-DEC-2022 20:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 26-DEC-2022 20:20, 2ul



ZB-35 Manual Integration: NO

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262215ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/26/22
Lab Sample ID:	SKL0359-CCV2	Injection Time:	20:41
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	268	0.0441939	0.0468247		7.1	+/-20
Aroclor-1016 (1)	A	250.00	267	0.0266860	0.0284656		6.8	
Aroclor-1016 (2)	A	250.00	264	0.0861572	0.0908562		5.6	
Aroclor-1016 (3)	A	250.00	250	0.0390425	0.0391227		0.0	
Aroclor-1016 (4)	A	250.00	290	0.0248899	0.0288542		16.0	
Aroclor 1016 [2C]	A	250.00	246	0.0467310	0.0433976		-1.6	+/-20
Aroclor-1016 (1) [2C]	A	250.00	257	0.0409030	0.0420655		2.8	
Aroclor-1016 (2) [2C]	A	250.00	205	0.0882154	0.0723266		-18.0	
Aroclor-1016 (3) [2C]	A	250.00	245	0.0378846	0.0371426		-2.0	
Aroclor-1016 (4) [2C]	A	250.00	277	0.0199212	0.0220557		10.8	
Aroclor 1260	A	250.00	256	0.0390342	0.0397199		2.2	+/-20
Aroclor-1260 (1)	A	250.00	252	0.0291201	0.0293365		0.8	
Aroclor-1260 (2)	A	250.00	251	0.0301181	0.0302247		0.4	
Aroclor-1260 (3)	A	250.00	253	0.0791351	0.0801659		1.2	
Aroclor-1260 (4)	A	250.00	256	0.0403003	0.0413413		2.4	
Aroclor-1260 (5)	A	250.00	266	0.0164974	0.0175308		6.4	
Aroclor 1260 [2C]	A	250.00	232	0.0617619	0.0512802		-7.3	+/-20
Aroclor-1260 (1) [2C]	A	250.00	272	0.0422283	0.0459221		8.8	
Aroclor-1260 (2) [2C]	A	250.00	169	0.1059643	0.0715774		-32.4	
Aroclor-1260 (3) [2C]	A	250.00	292	0.0282173	0.0329236		16.8	
Aroclor-1260 (4) [2C]	A	250.00	194	0.0706376	0.0546976		-22.4	
Decachlorobiphenyl	A	40.000	43.8	0.7333327	0.8031376		9.5	+/-20
Tetrachlorometaxylene	A	40.000	43.6	1.1336710	1.2368760		9.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	45.7	1.1358180	1.2977490		14.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.6	1.0966080	1.1419200		4.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262215ECD7.D
Data file 2: /221226.b/221226.b/12262215ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 26-DEC-2022 20:41
Report Date: 12/29/2022 12:29
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	259736	5.709	0.001	157179	43.6	41.7	4.7	Tetrachloro-m-xylene
13.901	0.001	383809	14.128	0.001	266736	43.8	45.7	4.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	419987	-6.2
Hexabromobiphenyl	798898	955774	19.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	275289	10.5
Hexabromobiphenyl	362541	411075	13.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.288	0.001	37360	266.7	1	7.272	0.002	36188	257.1
Aroclor-1016	2	7.673	-0.002	119245	263.6	2	7.869	0.000	62221	205.0
Aroclor-1016	3	7.808	-0.000	51347	250.5	3	8.067	0.000	31953	245.1
Aroclor-1016	4	8.420	-0.000	37870	289.8	4	8.238	-0.001	18974	276.8
Total Col1Ave (4 peaks):					267.7	Total Col2Ave (4 peaks):				246.0 RPD = 8
Corrected Ave (3 peaks):					260.3	Corrected Ave (3 peaks):				235.7 RPD = 10
CalAmt %D:					7.1	CalAmt %D:				-1.6
Aroclor-1260	1	11.054	-0.001	87622	251.9	1	11.662	0.001	58992	271.9
Aroclor-1260	2	11.369	-0.002	90275	250.9	2	11.924	0.001	91949	168.9
Aroclor-1260	3	11.743	-0.001	239439	253.3	3	12.443	0.001	42294	291.7
Aroclor-1260	4	12.145	-0.003	123478	256.5	4	12.507	0.000	70265	193.6
Aroclor-1260	5	12.253	-0.002	52361	265.7	NS	---			----
Total Col1Ave (5 peaks):					255.6	Total Col2Ave (4 peaks):				231.5 RPD = 10
Corrected Ave (4 peaks):					253.1	Corrected Ave (3 peaks):				211.4 RPD = 18
CalAmt %D:					2.2	CalAmt %D:				-7.4

Total PCB Area Col1 (5.931 - 13.801) = 2309844 Col1 Total PCB = 0.6 ppm*

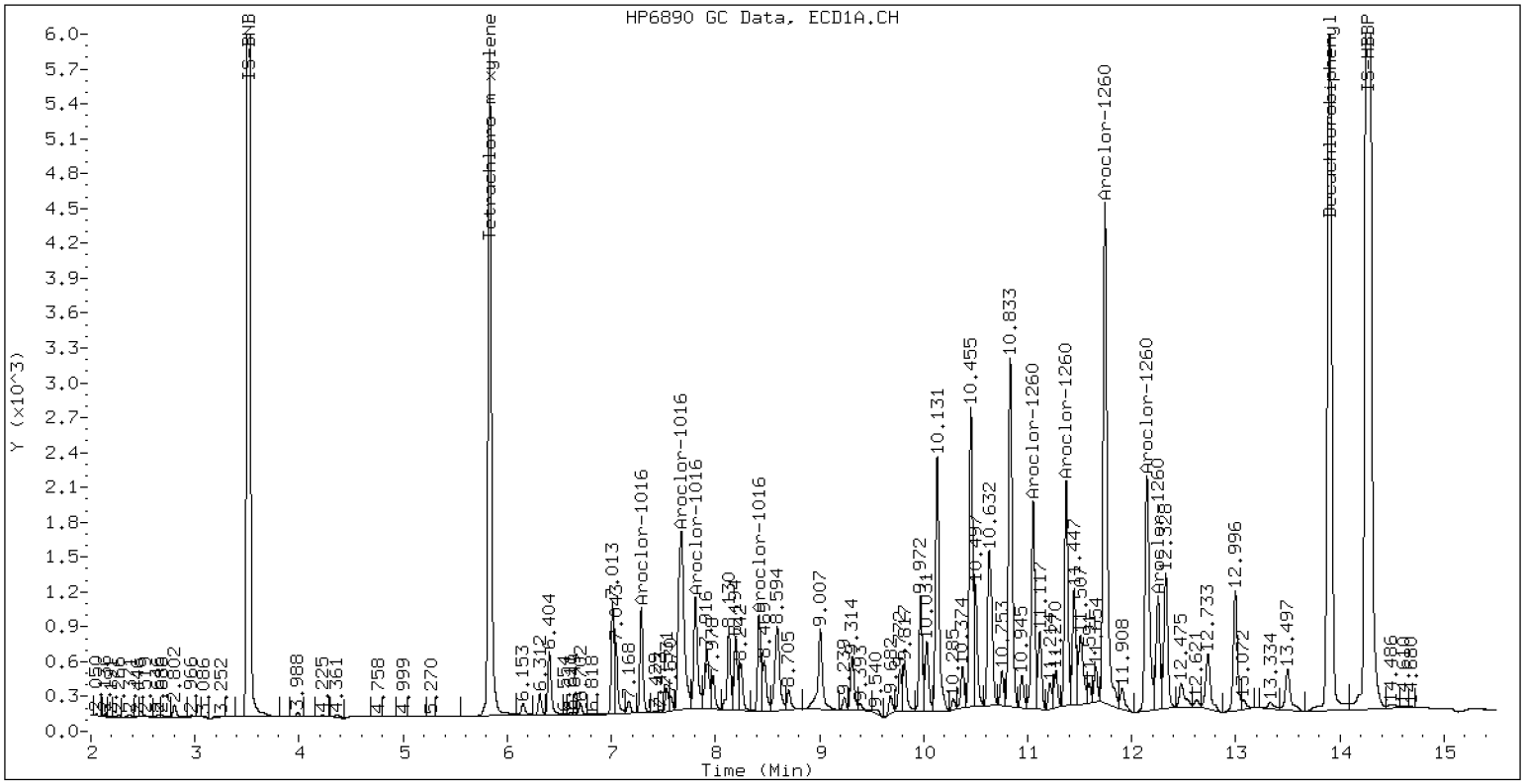
Total PCB Area Col2 (5.807 - 14.027) = 1268169 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

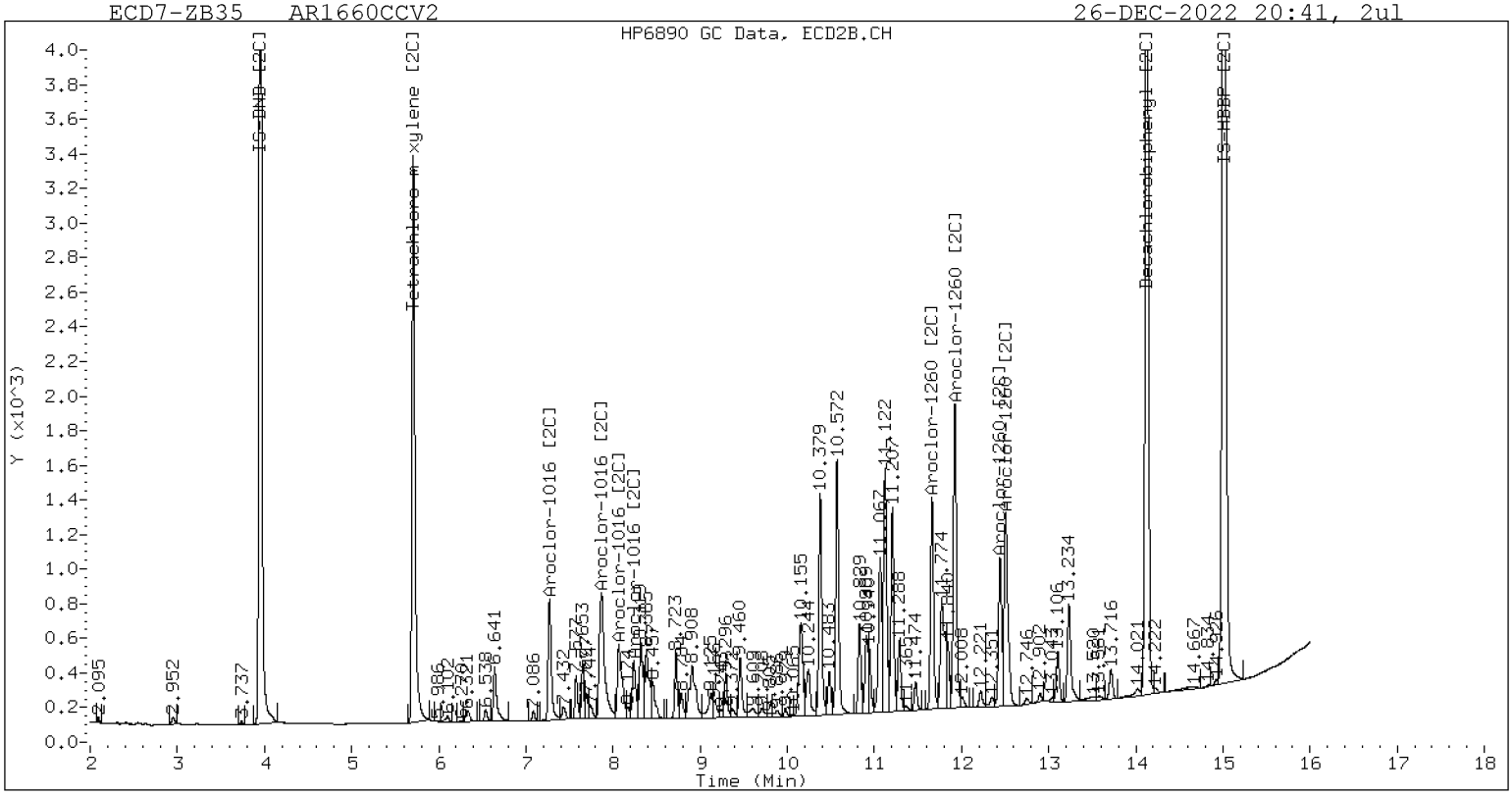
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 26-DEC-2022 20:41, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCV2 26-DEC-2022 20:41, 2ul

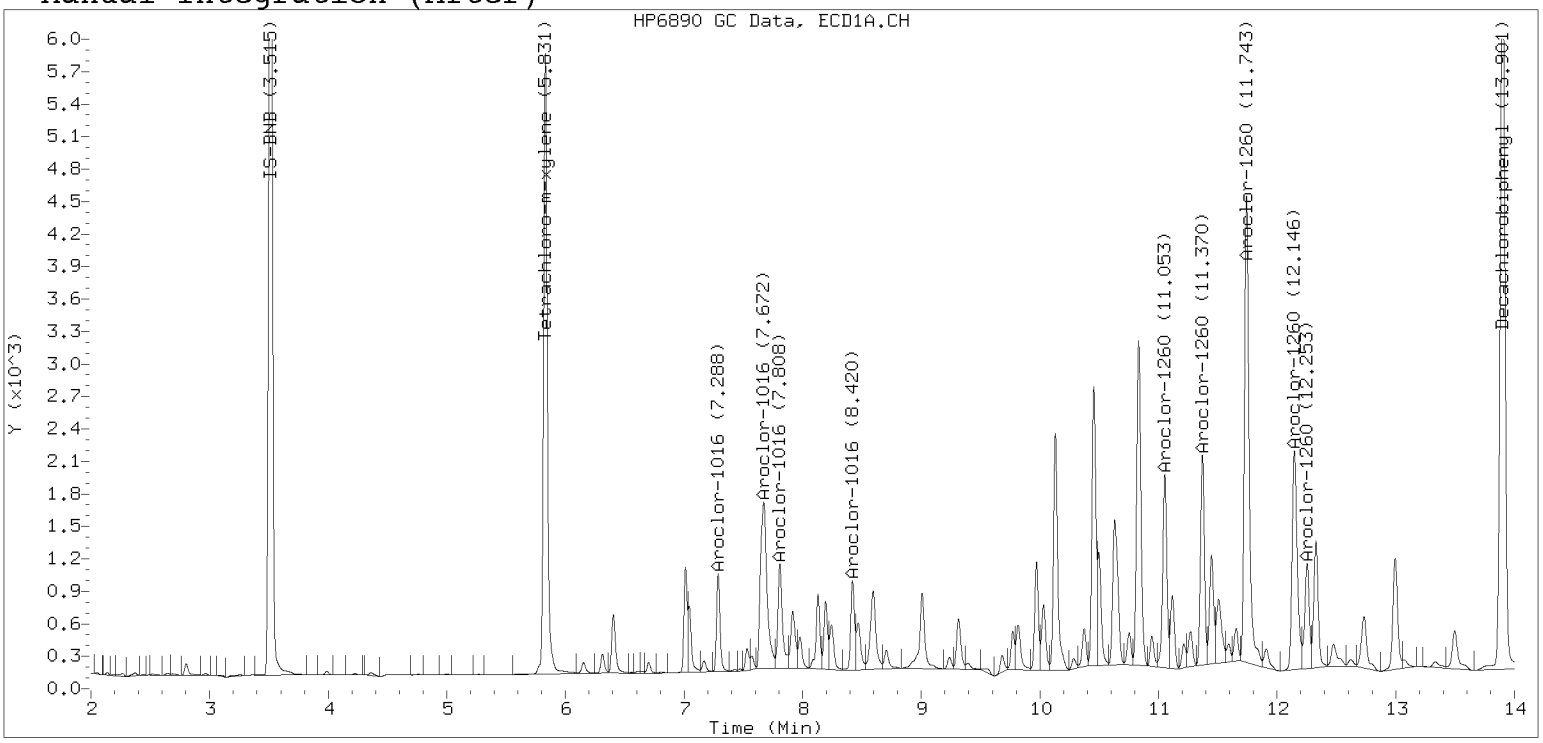


ZB-35 Manual Integration: NO

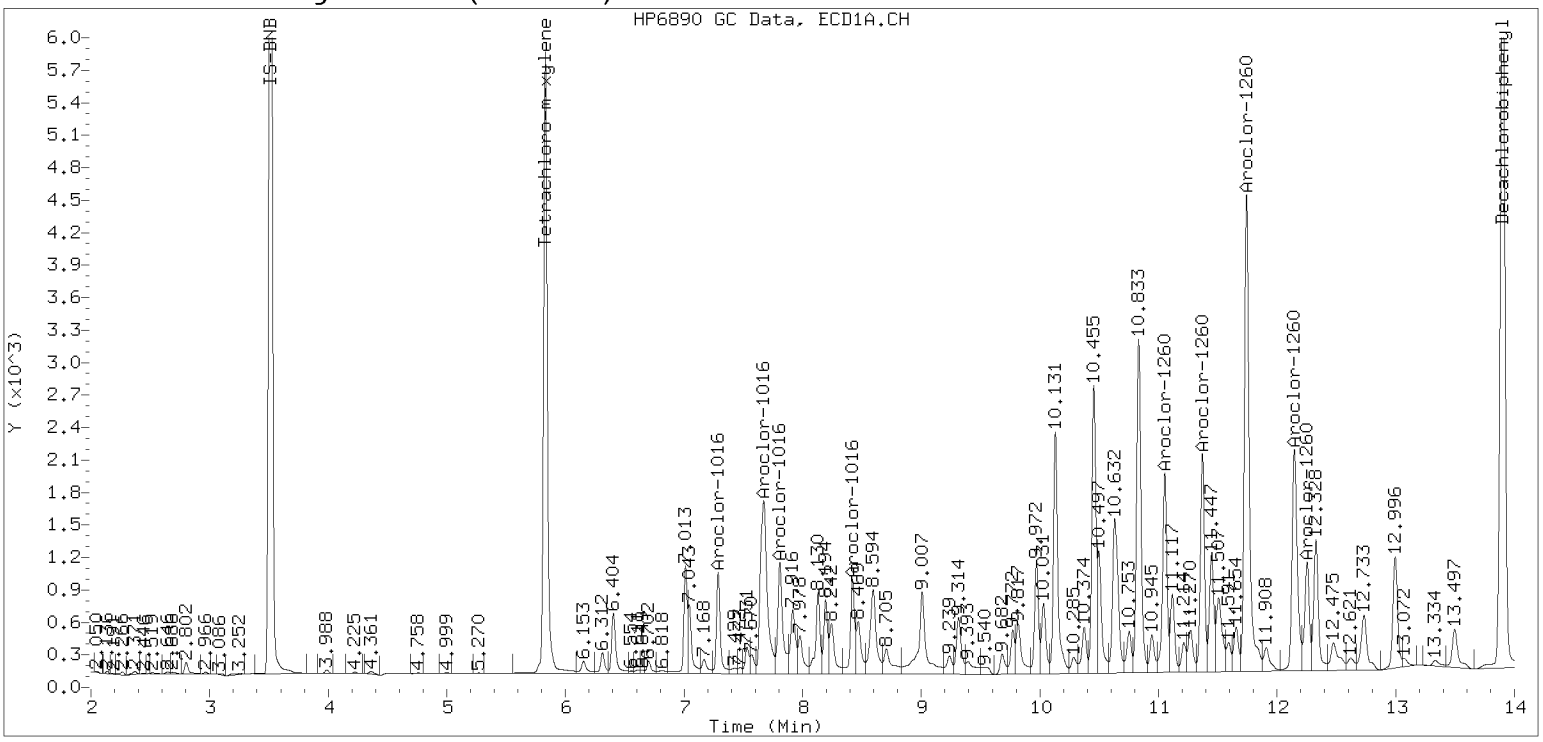
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262215ECD7.D Injection Date: 26-DEC-2022 20:41

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262226ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV3	Injection Time:	00:36
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	264	0.0396000	0.0417892		5.7	+/-20
Aroclor-1242 (1)	A	250.00	271		0.0246048			
Aroclor-1242 (2)	A	250.00	278		0.0800507			
Aroclor-1242 (3)	A	250.00	280		0.0232205			
Aroclor-1242 (4)	A	250.00	228		0.0392809			
Aroclor 1242 [2C]	A	250.00	271	0.0391981	0.0397265		8.2	+/-20
Aroclor-1242 (1) [2C]	A	250.00	277		0.0375074			
Aroclor-1242 (2) [2C]	A	250.00	211		0.0606586			
Aroclor-1242 (3) [2C]	A	250.00	293		0.0271407			
Aroclor-1242 (4) [2C]	A	250.00	301		0.0335995			
Decachlorobiphenyl	A	40.000	42.9	0.7333327	0.7865956		7.3	+/-20
Tetrachlorometaxylene	A	40.000	41.0	1.1336710	1.1624160		2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.4	1.1358180	1.2315850		8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.1	1.0966080	1.1256770		2.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262226ECD7.D
Data file 2: /221226.b/221226.b/12262226ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 27-DEC-2022 00:36
Report Date: 12/29/2022 12:29
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	232975	5.709	0.002	150248	41.0	41.1	0.1	Tetrachloro-m-xylene
13.901	0.000	261158	14.127	0.000	218647	42.9	43.4	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	400846	-10.5
Hexabromobiphenyl	798898	664021	-16.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	266947	7.2
Hexabromobiphenyl	362541	355066	-2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.288	0.001	30821	271.3	1	7.272	0.002	31289	276.9
Aroclor-1242	2	7.673	-0.002	100275	278.0	2	7.869	-0.000	50602	211.0
Aroclor-1242	3	8.420	-0.000	29087	280.2	3	9.166	-0.001	22641	292.6
Aroclor-1242	4	9.017	-0.001	49205	228.3	4	9.587	0.000	28029	301.4
Total Col1Ave (4 peaks):					264.4	Total Col2Ave (4 peaks):				270.5 RPD = 2
Corrected Ave (3 peaks):					259.2	Corrected Ave (3 peaks):				260.2 RPD = 0
CalAmt %D:					5.8	CalAmt %D:				8.2

Total PCB Area Col1 (5.931 - 13.801) = 928402 Col1 Total PCB = 0.2 ppm*

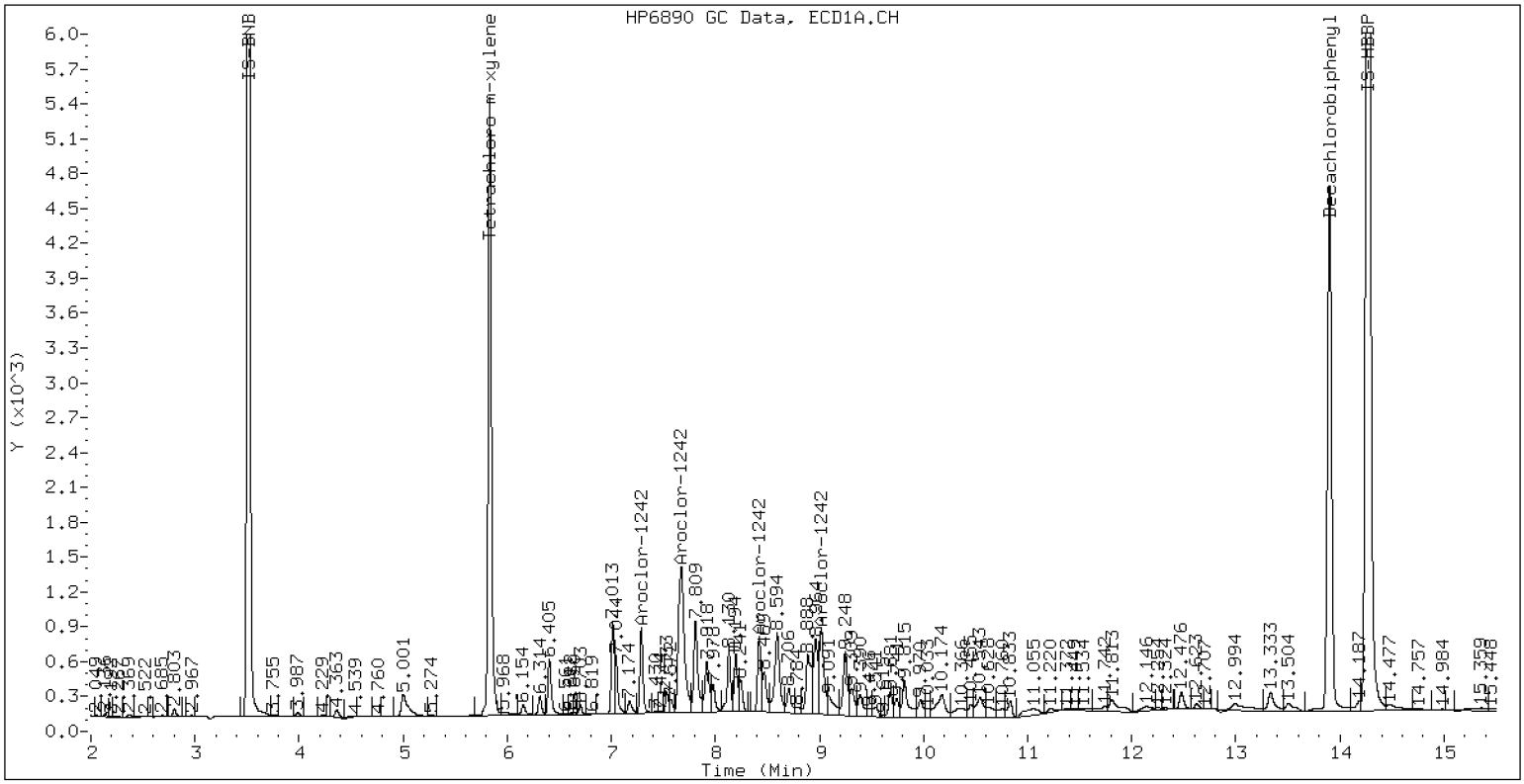
Total PCB Area Col2 (5.807 - 14.027) = 502265 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

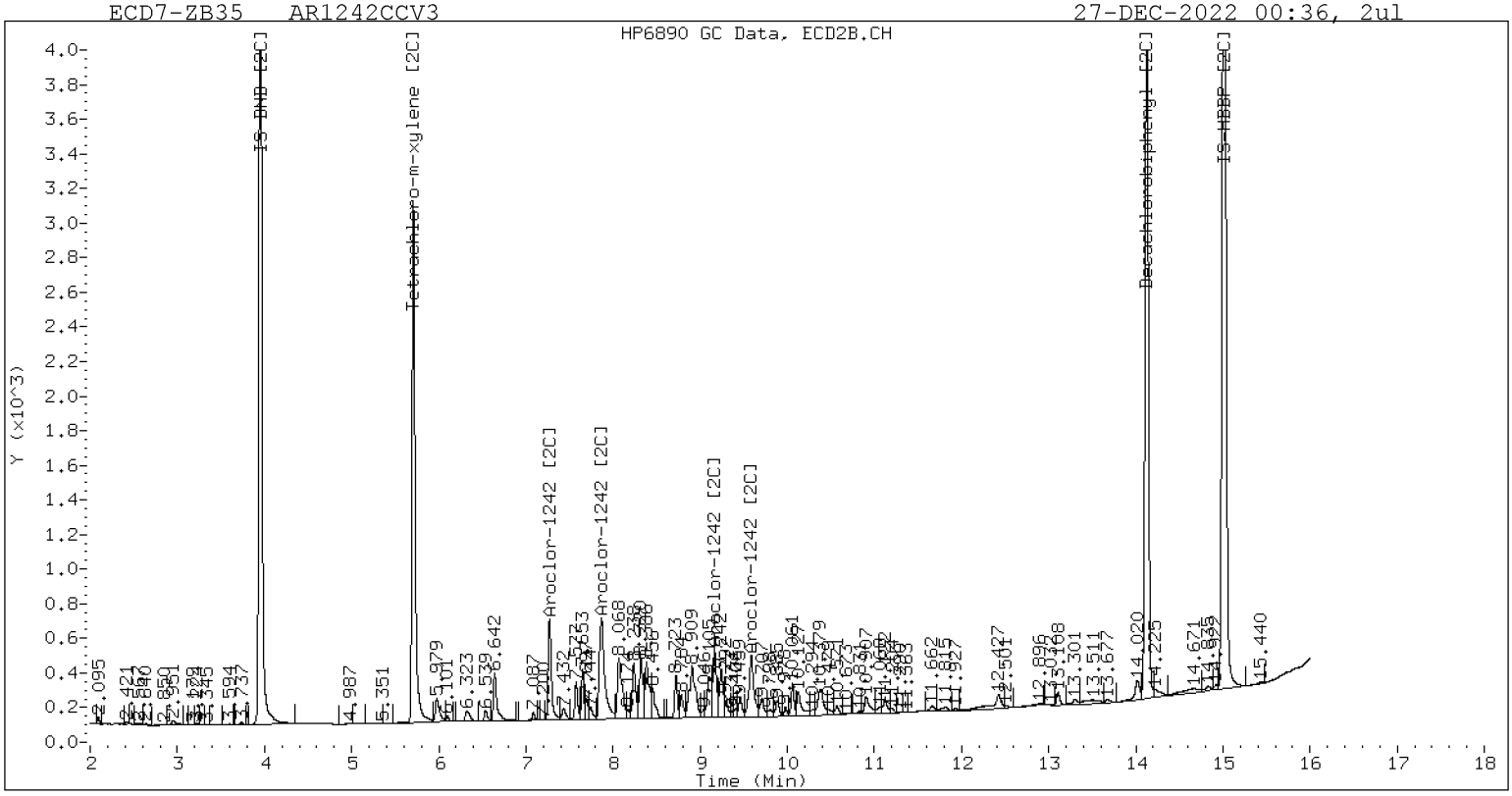
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 27-DEC-2022 00:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 27-DEC-2022 00:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262227ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV4	Injection Time:	00:57
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	270	0.0441939	0.0474202		7.9	+/-20
Aroclor-1016 (1)	A	250.00	264	0.0266860	0.0282367		5.6	
Aroclor-1016 (2)	A	250.00	267	0.0861572	0.0920922		6.8	
Aroclor-1016 (3)	A	250.00	260	0.0390425	0.0406880		4.0	
Aroclor-1016 (4)	A	250.00	288	0.0248899	0.0286640		15.2	
Aroclor 1016 [2C]	A	250.00	246	0.0467310	0.0435169		-1.6	+/-20
Aroclor-1016 (1) [2C]	A	250.00	257	0.0409030	0.0419977		2.8	
Aroclor-1016 (2) [2C]	A	250.00	207	0.0882154	0.0731567		-17.2	
Aroclor-1016 (3) [2C]	A	250.00	243	0.0378846	0.0368676		-2.8	
Aroclor-1016 (4) [2C]	A	250.00	277	0.0199212	0.0220458		10.8	
Aroclor 1260	A	250.00	286	0.0390342	0.0442938		14.2	+/-20
Aroclor-1260 (1)	A	250.00	282	0.0291201	0.0327965		12.8	
Aroclor-1260 (2)	A	250.00	278	0.0301181	0.0334386		11.2	
Aroclor-1260 (3)	A	250.00	280	0.0791351	0.0886653		12.0	
Aroclor-1260 (4)	A	250.00	292	0.0403003	0.0470473		16.8	
Aroclor-1260 (5)	A	250.00	296	0.0164974	0.0195214		18.4	
Aroclor 1260 [2C]	A	250.00	230	0.0617619	0.0514477		-8.1	+/-20
Aroclor-1260 (1) [2C]	A	250.00	266	0.0422283	0.0450294		6.4	
Aroclor-1260 (2) [2C]	A	250.00	173	0.1059643	0.0732046		-30.8	
Aroclor-1260 (3) [2C]	A	250.00	284	0.0282173	0.0320954		13.6	
Aroclor-1260 (4) [2C]	A	250.00	196	0.0706376	0.0554615		-21.6	
Decachlorobiphenyl	A	40.000	46.6	0.7333327	0.8541772		16.5	+/-20
Tetrachlorometaxylene	A	40.000	42.9	1.1336710	1.2163950		7.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	44.4	1.1358180	1.2614200		11.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.3	1.0966080	1.1597510		5.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262227ECD7.D
Data file 2: /221226.b/221226.b/12262227ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 27-DEC-2022 00:57
Report Date: 12/29/2022 12:29
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	254156	5.709	0.002	160673	42.9	42.3	1.4	Tetrachloro-m-xylene
13.901	0.000	342045	14.127	-0.000	260407	46.6	44.4	4.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	417884	-6.6
Hexabromobiphenyl	798898	800876	0.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	277082	11.2
Hexabromobiphenyl	362541	412879	13.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.288	0.001	36874	264.5	1	7.271	0.001	36365	256.7
Aroclor-1016	2	7.674	-0.001	120262	267.2	2	7.867	-0.002	63345	207.3
Aroclor-1016	3	7.807	-0.001	53134	260.5	3	8.066	-0.000	31923	243.3
Aroclor-1016	4	8.420	-0.001	37432	287.9	4	8.237	-0.002	19089	276.7
Total Col1Ave (4 peaks):					270.0	Total Col2Ave (4 peaks):				246.0 RPD = 9
Corrected Ave (3 peaks):					264.1	Corrected Ave (3 peaks):				235.8 RPD = 11
CalAmt %D:					8.0	CalAmt %D:				-1.6
Aroclor-1260	1	11.051	-0.003	82081	281.6	1	11.660	-0.001	58099	266.6
Aroclor-1260	2	11.370	-0.002	83688	277.6	2	11.922	-0.002	94452	172.7
Aroclor-1260	3	11.742	-0.002	221906	280.1	3	12.441	-0.001	41411	284.4
Aroclor-1260	4	12.146	-0.002	117747	291.9	4	12.506	-0.002	71559	196.3
Aroclor-1260	5	12.252	-0.002	48857	295.8	NS	---			----
Total Col1Ave (5 peaks):					285.4	Total Col2Ave (4 peaks):				230.0 RPD = 21
Corrected Ave (4 peaks):					282.8	Corrected Ave (3 peaks):				211.9 RPD = 29
CalAmt %D:					14.2	CalAmt %D:				-8.0

Total PCB Area Col1 (5.931 - 13.801) = 2236590 Col1 Total PCB = 0.6 ppm*

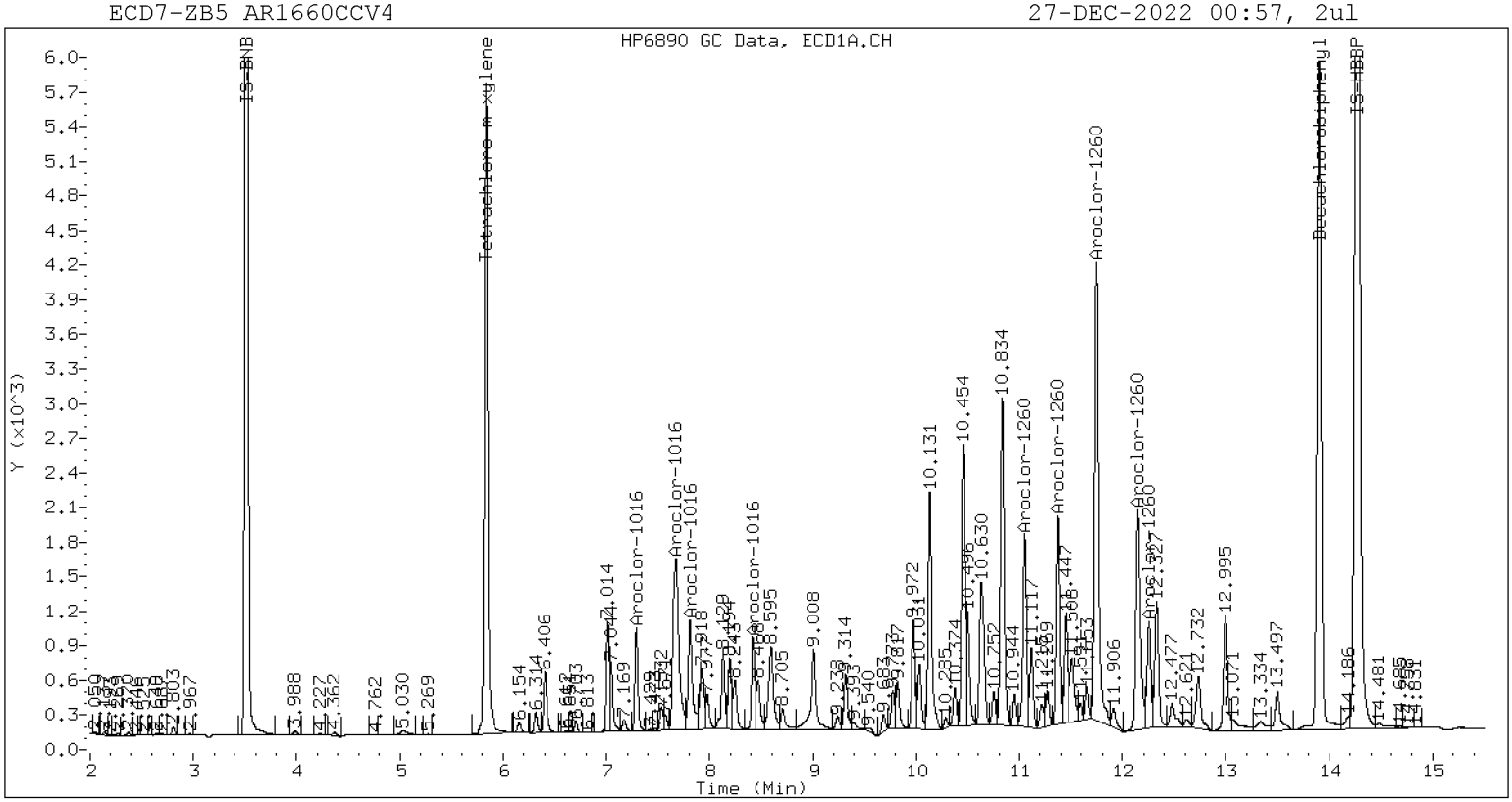
Total PCB Area Col2 (5.807 - 14.027) = 1268080 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

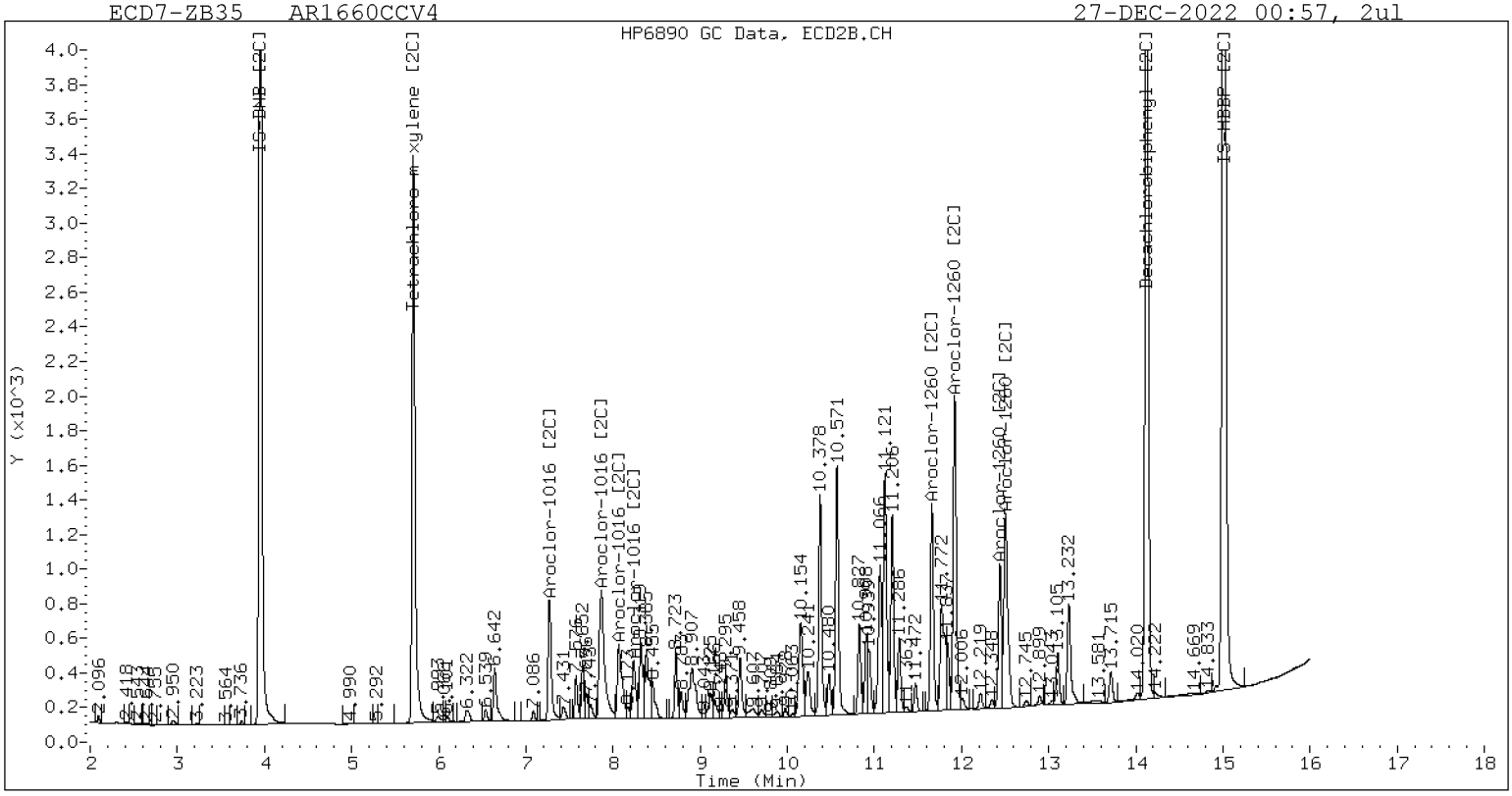
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 27-DEC-2022 00:57, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCV4 27-DEC-2022 00:57, 2ul

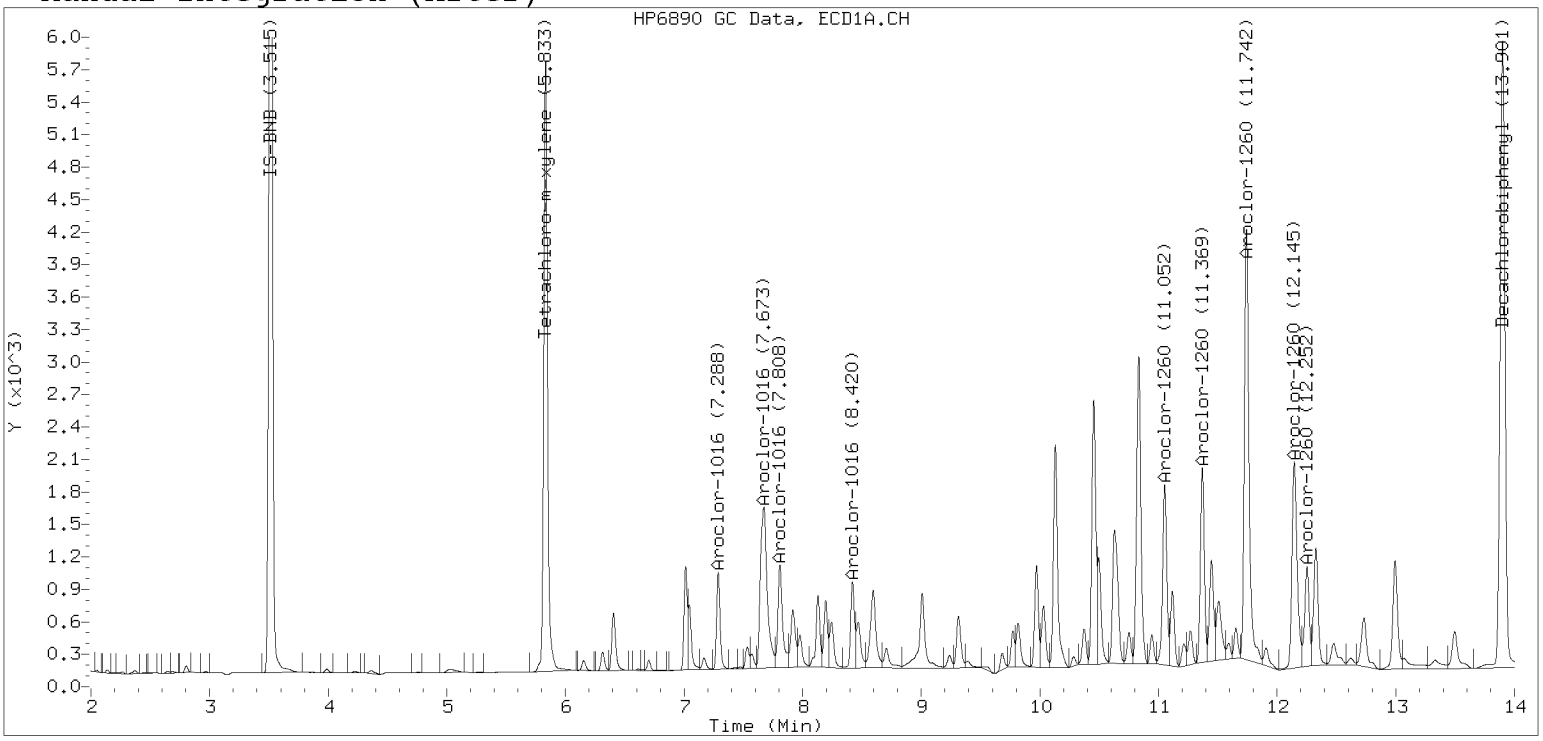


ZB-35 Manual Integration: NO

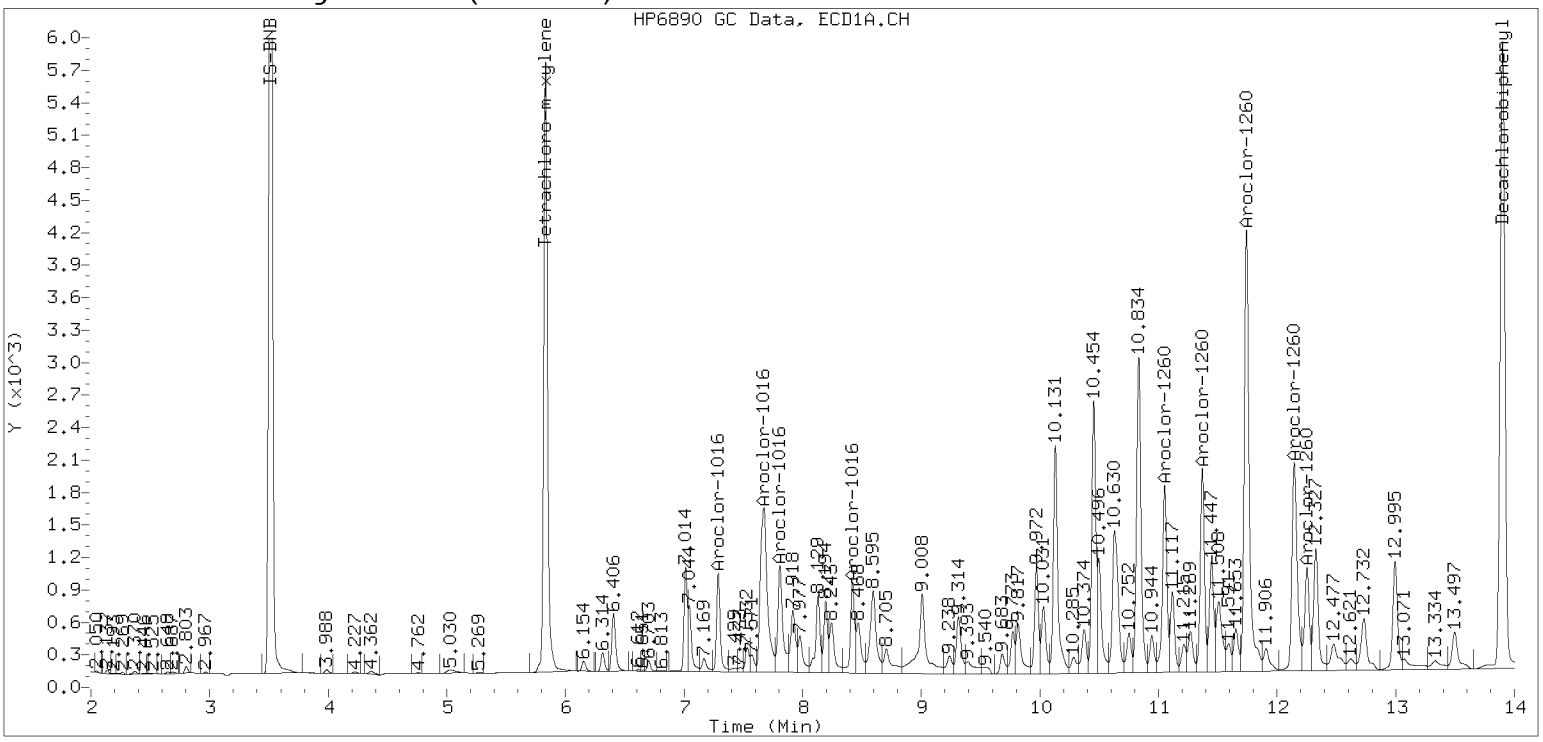
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262227ECD7.D Injection Date: 27-DEC-2022 00:57

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262238ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV5	Injection Time:	04:52
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	243	0.0576965	0.0561510		-2.7	+/-20
Aroclor-1254 (1)	A	250.00	242		0.0682910			
Aroclor-1254 (2)	A	250.00	280		0.0306775			
Aroclor-1254 (3)	A	250.00	239		0.0425352			
Aroclor-1254 (4)	A	250.00	285		0.0989006			
Aroclor-1254 (5)	A	250.00	170		0.0403505			
Aroclor 1254 [2C]	A	250.00	226	0.0638047	0.0590971		-9.7	+/-20
Aroclor-1254 (1) [2C]	A	250.00	230		0.0474725			
Aroclor-1254 (2) [2C]	A	250.00	153		0.0254517			
Aroclor-1254 (3) [2C]	A	250.00	214		0.0763461			
Aroclor-1254 (4) [2C]	A	250.00	269		0.0992961			
Aroclor-1254 (5) [2C]	A	250.00	263		0.0469193			
Decachlorobiphenyl	A	40.000	44.6	0.7333327	0.8186739		11.5	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.1336710	1.1097630		-2.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.0	1.1358180	1.2219160		7.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.4	1.0966080	1.0516020		-4.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262238ECD7.D
Data file 2: /221226.b/221226.b/12262238ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 27-DEC-2022 04:52
Report Date: 12/29/2022 12:29
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	266828	5.709	0.002	166394	39.2	38.4	2.1	Tetrachloro-m-xylene
13.903	0.002	386094	14.127	0.000	280874	44.7	43.0	3.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	480874	7.4
Hexabromobiphenyl	798898	943218	18.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	316458	27.0
Hexabromobiphenyl	362541	459727	26.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.311	0.000	102623	242.4	1	9.458	0.000	46947	230.1
Aroclor-1254	2	9.389	0.000	46100	280.0	2	9.976	0.000	25170	153.4
Aroclor-1254	3	9.681	0.000	63919	239.0	3	10.126	0.000	75501	214.1
Aroclor-1254	4	9.816	0.000	148621	285.1	4	10.374	0.000	98197	268.9
Aroclor-1254	5	10.132	0.000	60636	169.7	5	10.572	0.000	46400	263.5

Total Col1Ave (5 peaks): 243.2 Total Col2Ave (5 peaks): 226.0 RPD = 7

Corrected Ave (4 peaks): 232.8 Corrected Ave (4 peaks): 215.3 RPD = 8

CalAmt %D: -2.7 CalAmt %D: -9.6

Total PCB Area Col1 (5.931 - 13.801) = 1706853 Col1 Total PCB = 0.4 ppm*

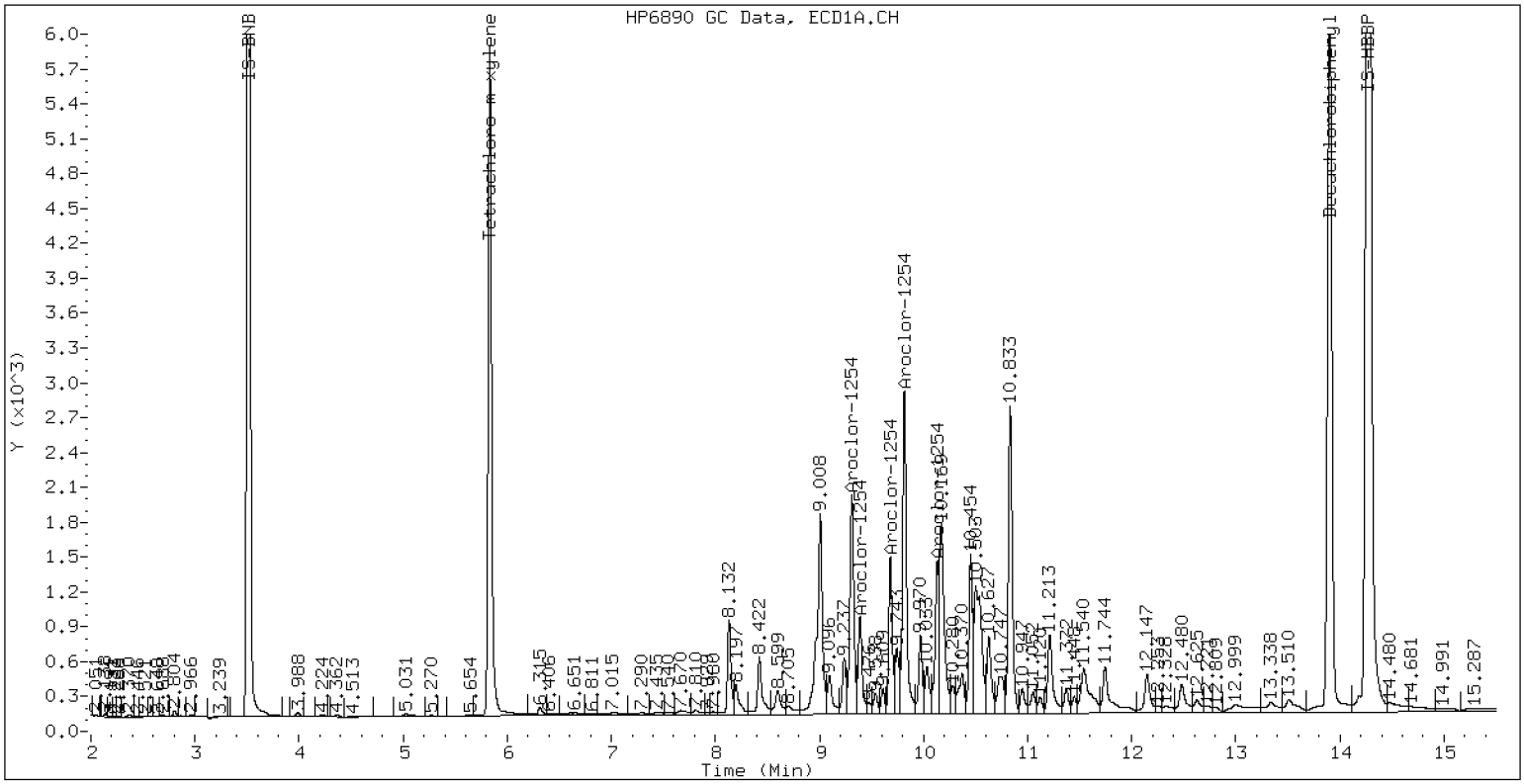
Total PCB Area Col2 (5.807 - 14.027) = 850557 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

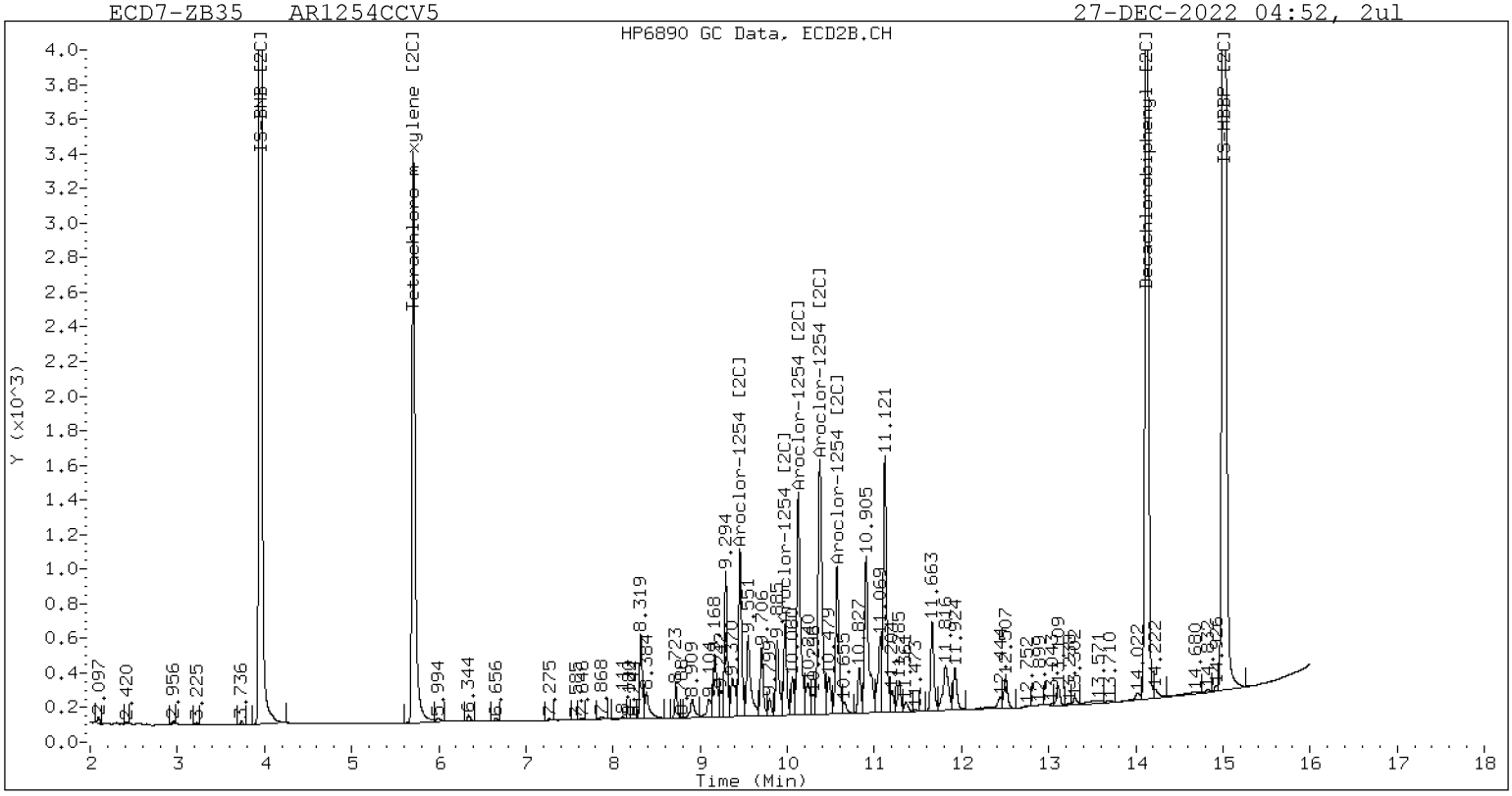
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 27-DEC-2022 04:52, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254CCV5 27-DEC-2022 04:52, 2ul

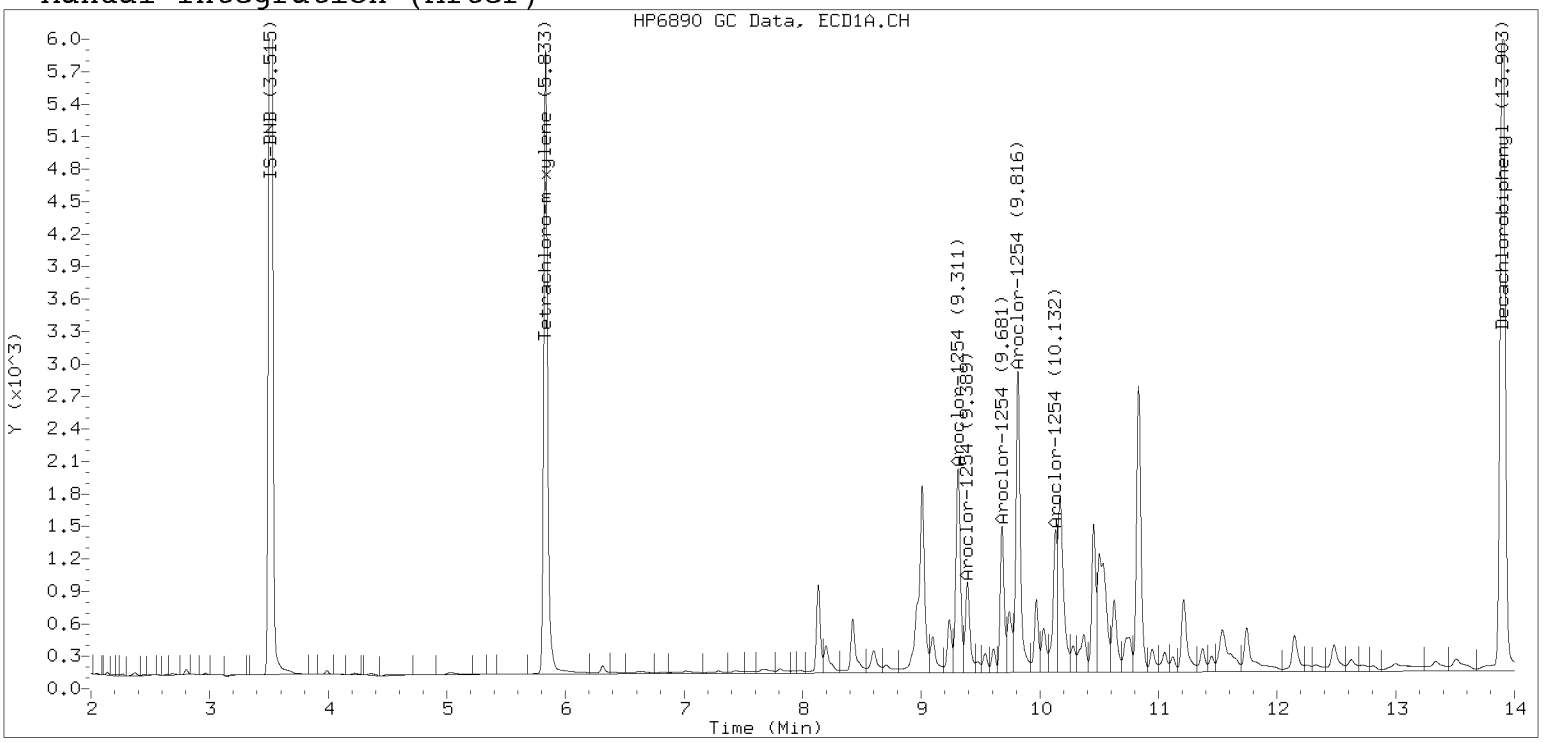


ZB-35 Manual Integration: NO

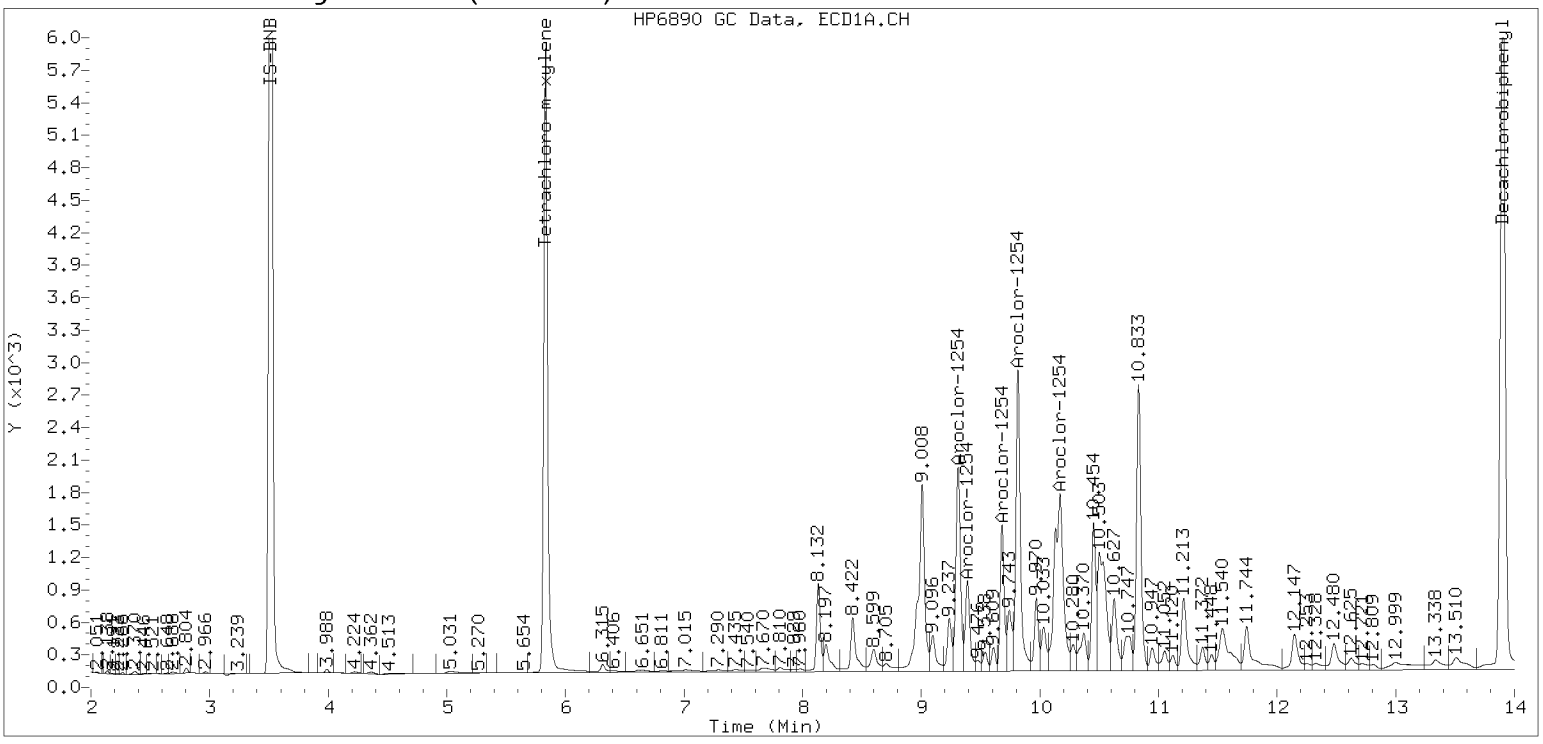
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262238ECD7.D Injection Date: 27-DEC-2022 04:52

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262239ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV6	Injection Time:	05:14
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	289	0.0441939	0.0503906		15.7	+/-20
Aroclor-1016 (1)	A	250.00	281	0.0266860	0.0300449		12.4	
Aroclor-1016 (2)	A	250.00	279	0.0861572	0.0960586		11.6	
Aroclor-1016 (3)	A	250.00	283	0.0390425	0.0441827		13.2	
Aroclor-1016 (4)	A	250.00	314	0.0248899	0.0312764		25.6	
Aroclor 1016 [2C]	A	250.00	252	0.0467310	0.0445026		0.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	264	0.0409030	0.0431304		5.6	
Aroclor-1016 (2) [2C]	A	250.00	211	0.0882154	0.0744672		-15.6	
Aroclor-1016 (3) [2C]	A	250.00	250	0.0378846	0.0378434		0.0	
Aroclor-1016 (4) [2C]	A	250.00	283	0.0199212	0.0225692		13.2	
Aroclor 1260	A	250.00	276	0.0390342	0.0429252		10.5	+/-20
Aroclor-1260 (1)	A	250.00	275	0.0291201	0.0320677		10.0	
Aroclor-1260 (2)	A	250.00	277	0.0301181	0.0333784		10.8	
Aroclor-1260 (3)	A	250.00	275	0.0791351	0.0869803		10.0	
Aroclor-1260 (4)	A	250.00	269	0.0403003	0.0433681		7.6	
Aroclor-1260 (5)	A	250.00	285	0.0164974	0.0188313		14.0	
Aroclor 1260 [2C]	A	250.00	218	0.0617619	0.0488337		-12.9	+/-20
Aroclor-1260 (1) [2C]	A	250.00	252	0.0422283	0.0426573		0.8	
Aroclor-1260 (2) [2C]	A	250.00	166	0.1059643	0.0704406		-33.6	
Aroclor-1260 (3) [2C]	A	250.00	270	0.0282173	0.0305375		8.0	
Aroclor-1260 (4) [2C]	A	250.00	183	0.0706376	0.0516993		-26.8	
Decachlorobiphenyl	A	40.000	44.8	0.7333327	0.8207672		12.0	+/-20
Tetrachlorometaxylene	A	40.000	43.1	1.1336710	1.2227580		7.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.2	1.1358180	1.2261840		8.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.4	1.0966080	1.1362330		3.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262239ECD7.D
Data file 2: /221226.b/221226.b/12262239ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 27-DEC-2022 05:14
Report Date: 12/29/2022 12:29
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	273248	5.707	-0.000	166048	43.1	41.4	4.0	Tetrachloro-m-xylene
13.902	0.002	405656	14.127	-0.001	288057	44.8	43.2	3.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	446937	-0.2
Hexabromobiphenyl	798898	988480	23.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	292278	17.3
Hexabromobiphenyl	362541	469843	29.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.287	0.000	41963	281.5	1	7.270	-0.000	39394	263.6
Aroclor-1016	2	7.671	-0.004	134163	278.7	2	7.867	-0.002	68016	211.0
Aroclor-1016	3	7.807	-0.001	61709	282.9	3	8.065	-0.002	34565	249.7
Aroclor-1016	4	8.420	-0.001	43683	314.1	4	8.236	-0.003	20614	283.2
Total Col1Ave (4 peaks):					289.3	Total Col2Ave (4 peaks):				251.9 RPD = 14
Corrected Ave (3 peaks):					281.0	Corrected Ave (3 peaks):				241.5 RPD = 15
CalAmt %D:					15.7	CalAmt %D:				0.8
Aroclor-1260	1	11.053	-0.002	99057	275.3	1	11.660	-0.001	62632	252.5
Aroclor-1260	2	11.370	-0.001	103106	277.1	2	11.922	-0.002	103425	166.2
Aroclor-1260	3	11.742	-0.002	268682	274.8	3	12.441	-0.001	44837	270.6
Aroclor-1260	4	12.146	-0.002	133964	269.0	4	12.505	-0.002	75908	183.0
Aroclor-1260	5	12.253	-0.002	58170	285.4	NS	---			----
Total Col1Ave (5 peaks):					276.3	Total Col2Ave (4 peaks):				218.1 RPD = 24
Corrected Ave (4 peaks):					274.0	Corrected Ave (3 peaks):				200.6 RPD = 31
CalAmt %D:					10.5	CalAmt %D:				-12.8

Total PCB Area Col1 (5.931 - 13.801) = 2805382 Col1 Total PCB = 0.7 ppm*

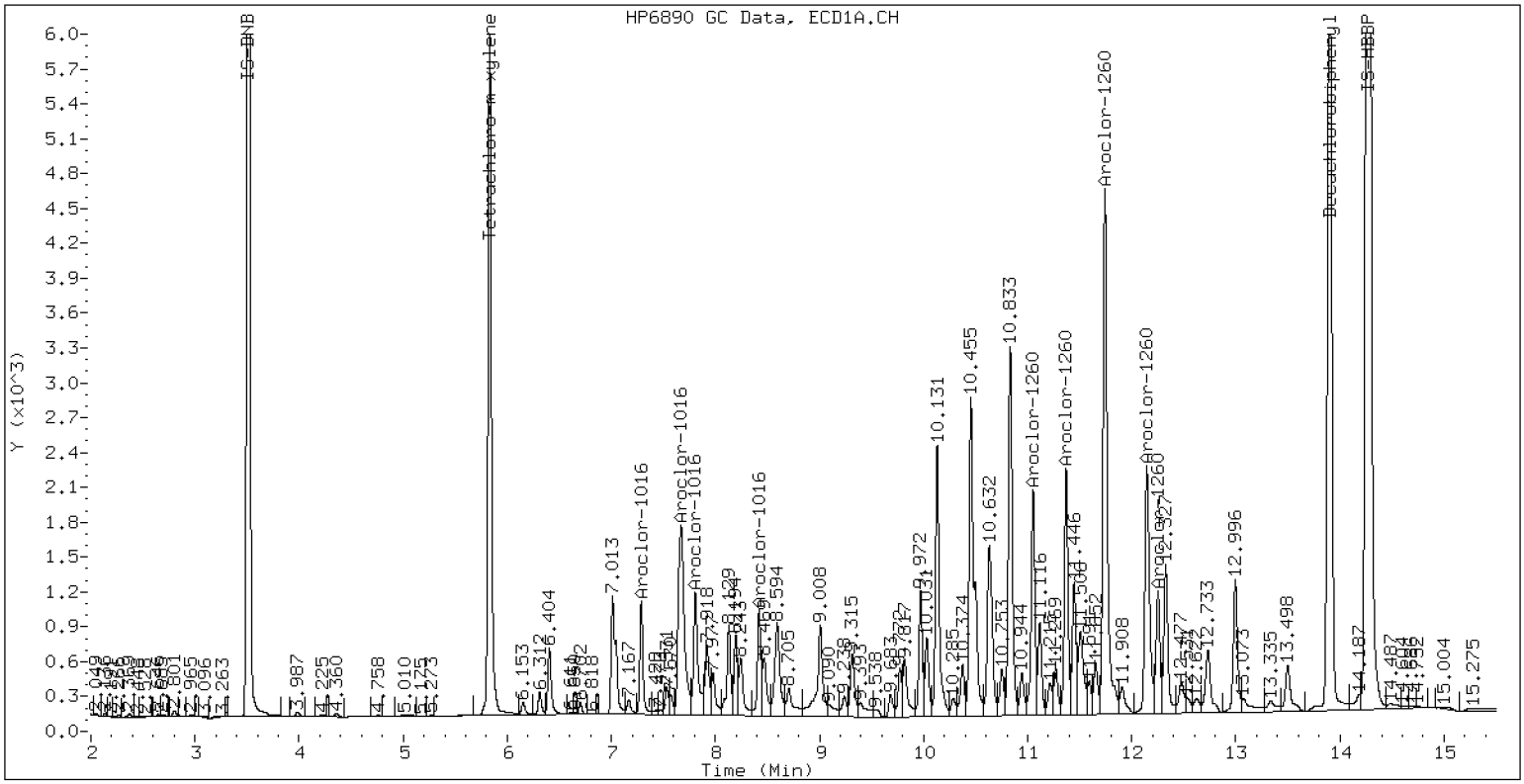
Total PCB Area Col2 (5.807 - 14.027) = 1359510 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

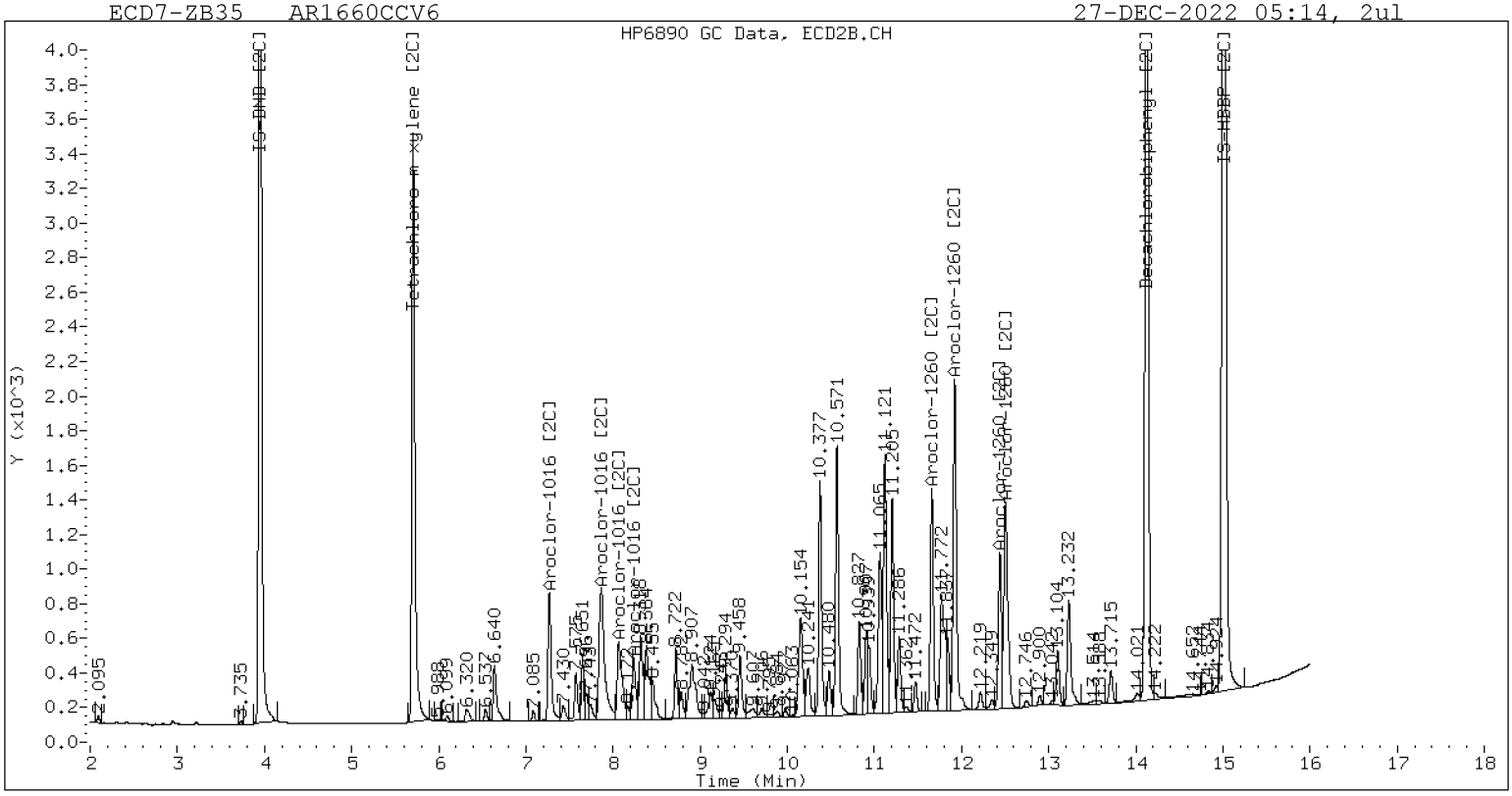
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 27-DEC-2022 05:14, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 27-DEC-2022 05:14, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262254ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV7	Injection Time:	10:34
Sequence Name:	AR1248CCV7		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	223	0.0490062	0.0435244		-10.7	+/-20
Aroclor-1248 (1)	A	250.00	262		0.0361183			
Aroclor-1248 (2)	A	250.00	274		0.0481539			
Aroclor-1248 (3)	A	250.00	214		0.0677133			
Aroclor-1248 (4)	A	250.00	143		0.0221123			
Aroclor 1248 [2C]	A	250.00	249	0.0394876	0.0397156		-0.5	+/-20
Aroclor-1248 (1) [2C]	A	250.00	262		0.0343095			
Aroclor-1248 (2) [2C]	A	250.00	193		0.0265499			
Aroclor-1248 (3) [2C]	A	250.00	273		0.0456432			
Aroclor-1248 (4) [2C]	A	250.00	267		0.0523597			
Decachlorobiphenyl	A	40.000	42.7	0.7333327	0.7836150		6.8	+/-20
Tetrachlorometaxylene	A	40.000	38.4	1.1336710	1.0878600		-4.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.7	1.1358180	1.2135420		6.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.2	1.0966080	1.0735110		-2.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262254ECD7.D
Data file 2: /221226.b/221226.b/12262254ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 27-DEC-2022 10:34
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	268703	5.710	0.002	170598	38.4	39.2	2.0	Tetrachloro-m-xylene
13.902	0.001	401205	14.128	0.001	303400	42.7	42.7	0.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	494003	10.4
Hexabromobiphenyl	798898	1023985	28.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	317832	27.6
Hexabromobiphenyl	362541	500024	37.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	8.421	0.000	55758	262.5	1	8.319	0.000	34077	262.4
Aroclor-1248	2	8.596	0.000	74338	274.1	2	8.724	0.000	26370	193.1
Aroclor-1248	3	9.015	0.000	104533	214.3	3	9.169	0.000	45334	272.9
Aroclor-1248	4	9.308	0.000	34136	142.8	4	9.590	0.000	52005	266.7
Total Col1Ave (4 peaks):					223.4	Total Col2Ave (4 peaks):				248.8 RPD = 11
Corrected Ave (3 peaks):					206.5	Corrected Ave (3 peaks):				240.7 RPD = 15
CalAmt %D:					-10.6	CalAmt %D:				-0.5

Total PCB Area Col1 (5.931 - 13.801) = 1199659 Col1 Total PCB = 0.3 ppm*

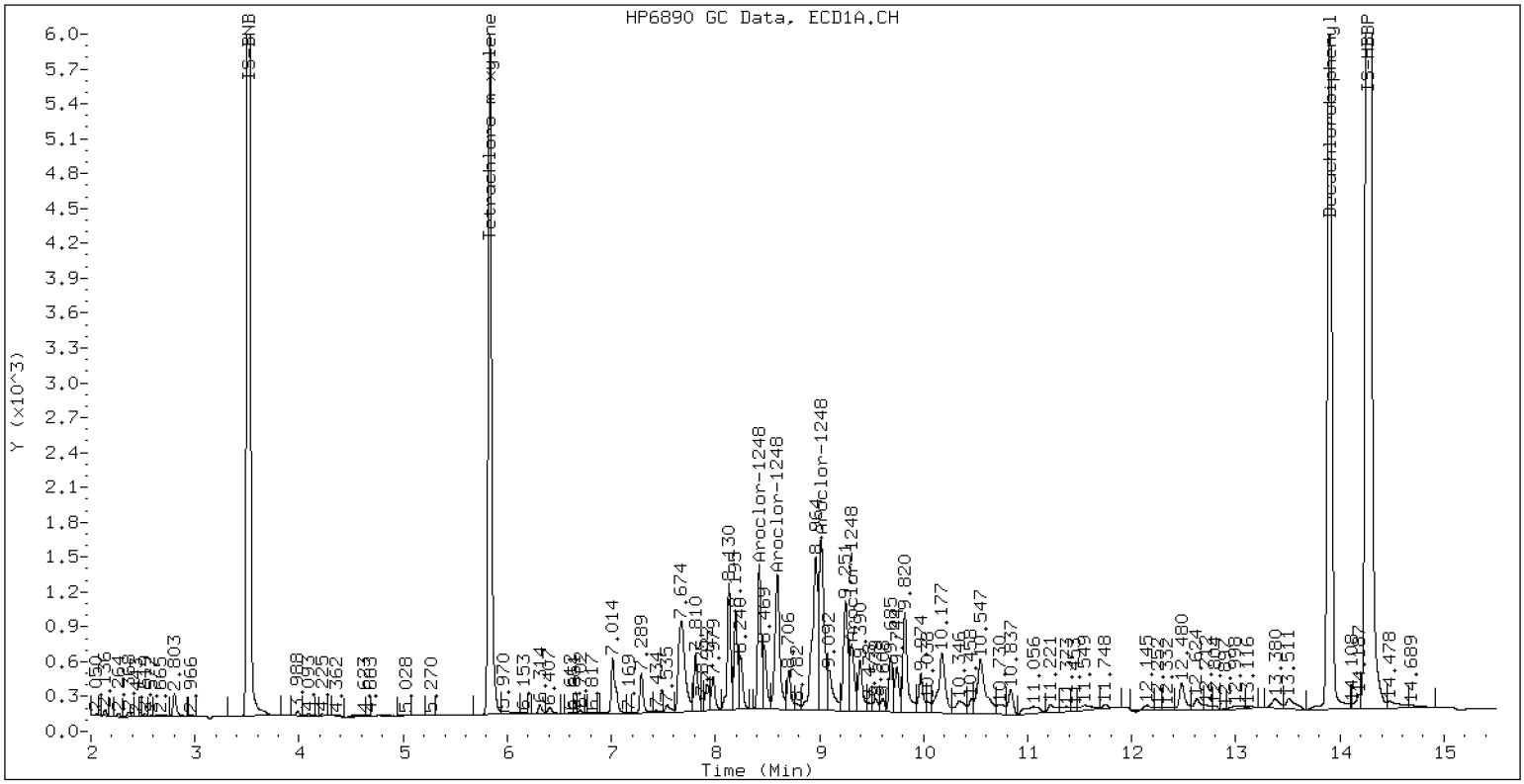
Total PCB Area Col2 (5.807 - 14.027) = 652545 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

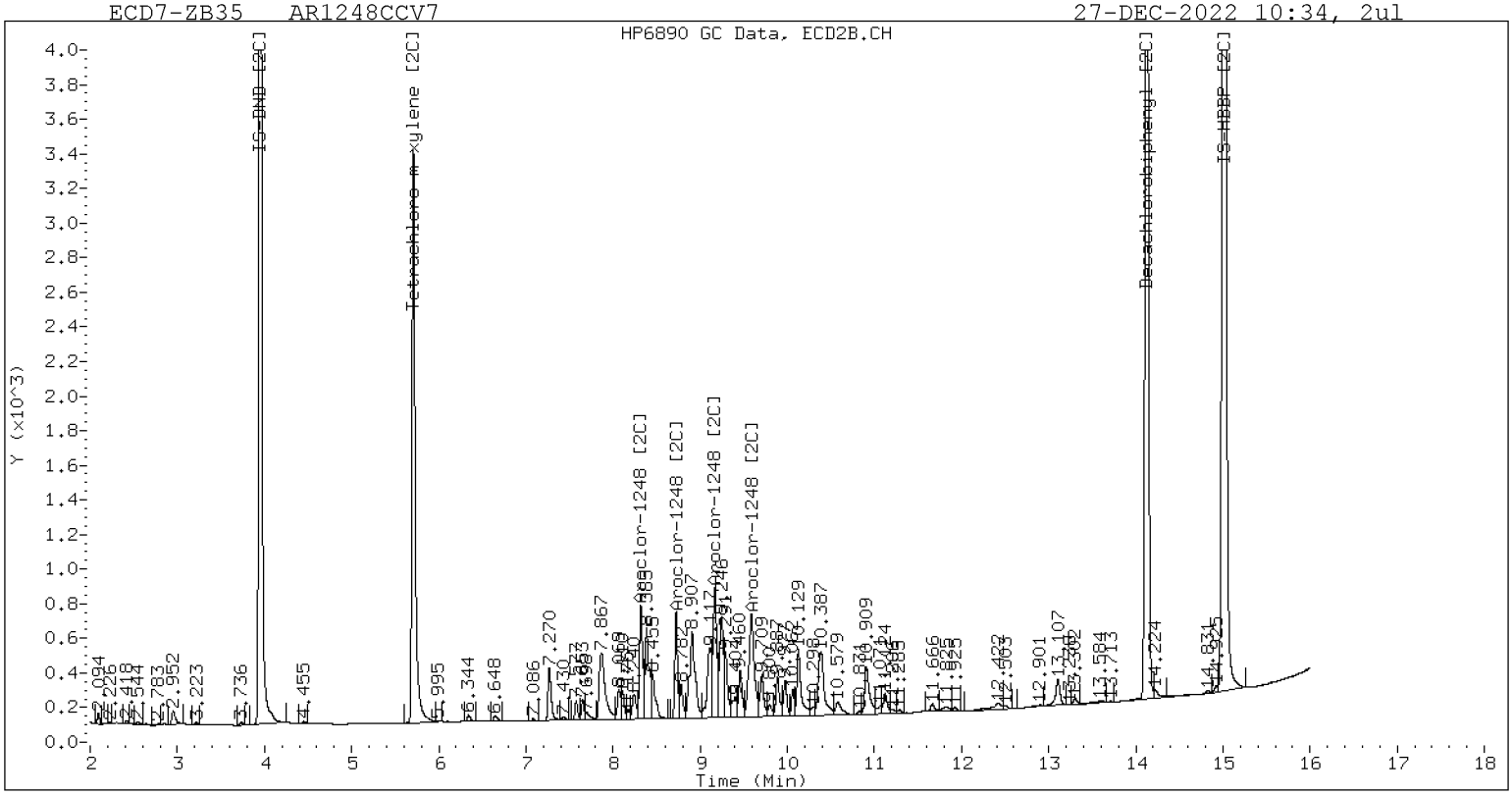
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 27-DEC-2022 10:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 27-DEC-2022 10:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262255ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV8	Injection Time:	10:56
Sequence Name:	AR1660CCV8		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	291	0.0441939	0.0505635		16.5	+/-20
Aroclor-1016 (1)	A	250.00	282	0.0266860	0.0300938		12.8	
Aroclor-1016 (2)	A	250.00	279	0.0861572	0.0960407		11.6	
Aroclor-1016 (3)	A	250.00	282	0.0390425	0.0440363		12.8	
Aroclor-1016 (4)	A	250.00	322	0.0248899	0.0320832		28.8	
Aroclor 1016 [2C]	A	250.00	242	0.0467310	0.0427631		-3.2	+/-20
Aroclor-1016 (1) [2C]	A	250.00	254	0.0409030	0.0415205		1.6	
Aroclor-1016 (2) [2C]	A	250.00	202	0.0882154	0.0714278		-19.2	
Aroclor-1016 (3) [2C]	A	250.00	240	0.0378846	0.0364010		-4.0	
Aroclor-1016 (4) [2C]	A	250.00	272	0.0199212	0.0217032		8.8	
Aroclor 1260	A	250.00	264	0.0390342	0.0409678		5.5	+/-20
Aroclor-1260 (1)	A	250.00	259	0.0291201	0.0301956		3.6	
Aroclor-1260 (2)	A	250.00	262	0.0301181	0.0315381		4.8	
Aroclor-1260 (3)	A	250.00	262	0.0791351	0.0830381		4.8	
Aroclor-1260 (4)	A	250.00	259	0.0403003	0.0418078		3.6	
Aroclor-1260 (5)	A	250.00	277	0.0164974	0.0182592		10.8	
Aroclor 1260 [2C]	A	250.00	213	0.0617619	0.0470979		-15.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	246	0.0422283	0.0416182		-1.6	
Aroclor-1260 (2) [2C]	A	250.00	155	0.1059643	0.0658123		-38.0	
Aroclor-1260 (3) [2C]	A	250.00	270	0.0282173	0.0304246		8.0	
Aroclor-1260 (4) [2C]	A	250.00	179	0.0706376	0.0505364		-28.4	
Decachlorobiphenyl	A	40.000	43.8	0.7333327	0.8026571		9.5	+/-20
Tetrachlorometaxylene	A	40.000	43.2	1.1336710	1.2243860		8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.5	1.1358180	1.2360430		8.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.9	1.0966080	1.1497800		4.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262255ECD7.D
Data file 2: /221226.b/221226.b/12262255ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 27-DEC-2022 10:56
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	284188	5.708	0.001	174029	43.2	41.9	3.0	Tetrachloro-m-xylene
13.901	0.001	439470	14.128	0.001	308020	43.8	43.5	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	464213	3.7
Hexabromobiphenyl	798898	1095038	37.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	302717	21.5
Hexabromobiphenyl	362541	498397	37.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.288	0.001	43656	281.9	1	7.270	0.001	39278	253.8
Aroclor-1016	2	7.673	-0.002	139323	278.7	2	7.867	-0.001	67570	202.4
Aroclor-1016	3	7.808	-0.000	63882	282.0	3	8.067	0.000	34435	240.2
Aroclor-1016	4	8.420	-0.000	46542	322.3	4	8.237	-0.002	20531	272.4
	Total Col1Ave (4 peaks):				291.2		Total Col2Ave (4 peaks):			242.2 RPD = 18
	Corrected Ave (3 peaks):				280.9		Corrected Ave (3 peaks):			232.1 RPD = 19
			CalAmt %D:		16.5			CalAmt %D:		-3.1
Aroclor-1260	1	11.053	-0.002	103329	259.2	1	11.660	-0.001	64820	246.4
Aroclor-1260	2	11.370	-0.002	107923	261.8	2	11.922	-0.002	102502	155.3
Aroclor-1260	3	11.742	-0.002	284156	262.3	3	12.441	-0.001	47386	269.6
Aroclor-1260	4	12.145	-0.003	143066	259.4	4	12.506	-0.001	78710	178.9
Aroclor-1260	5	12.252	-0.002	62483	276.7	NS	---			----
	Total Col1Ave (5 peaks):				263.9		Total Col2Ave (4 peaks):			212.5 RPD = 22
	Corrected Ave (4 peaks):				260.7		Corrected Ave (3 peaks):			193.5 RPD = 30
			CalAmt %D:		5.6			CalAmt %D:		-15.0

Total PCB Area Col1 (5.931 - 13.801) = 2953059 Col1 Total PCB = 0.7 ppm*

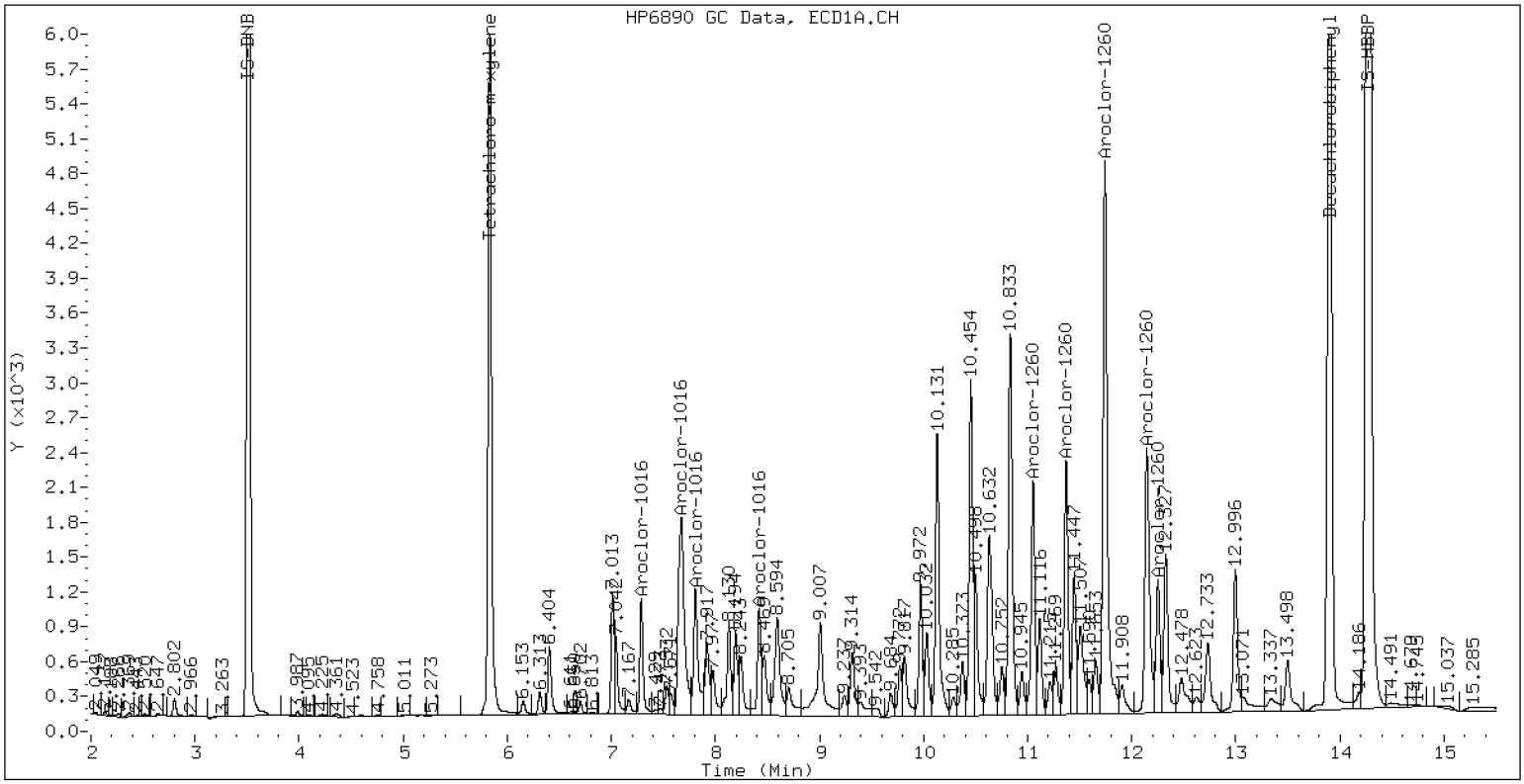
Total PCB Area Col2 (5.807 - 14.027) = 1385374 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

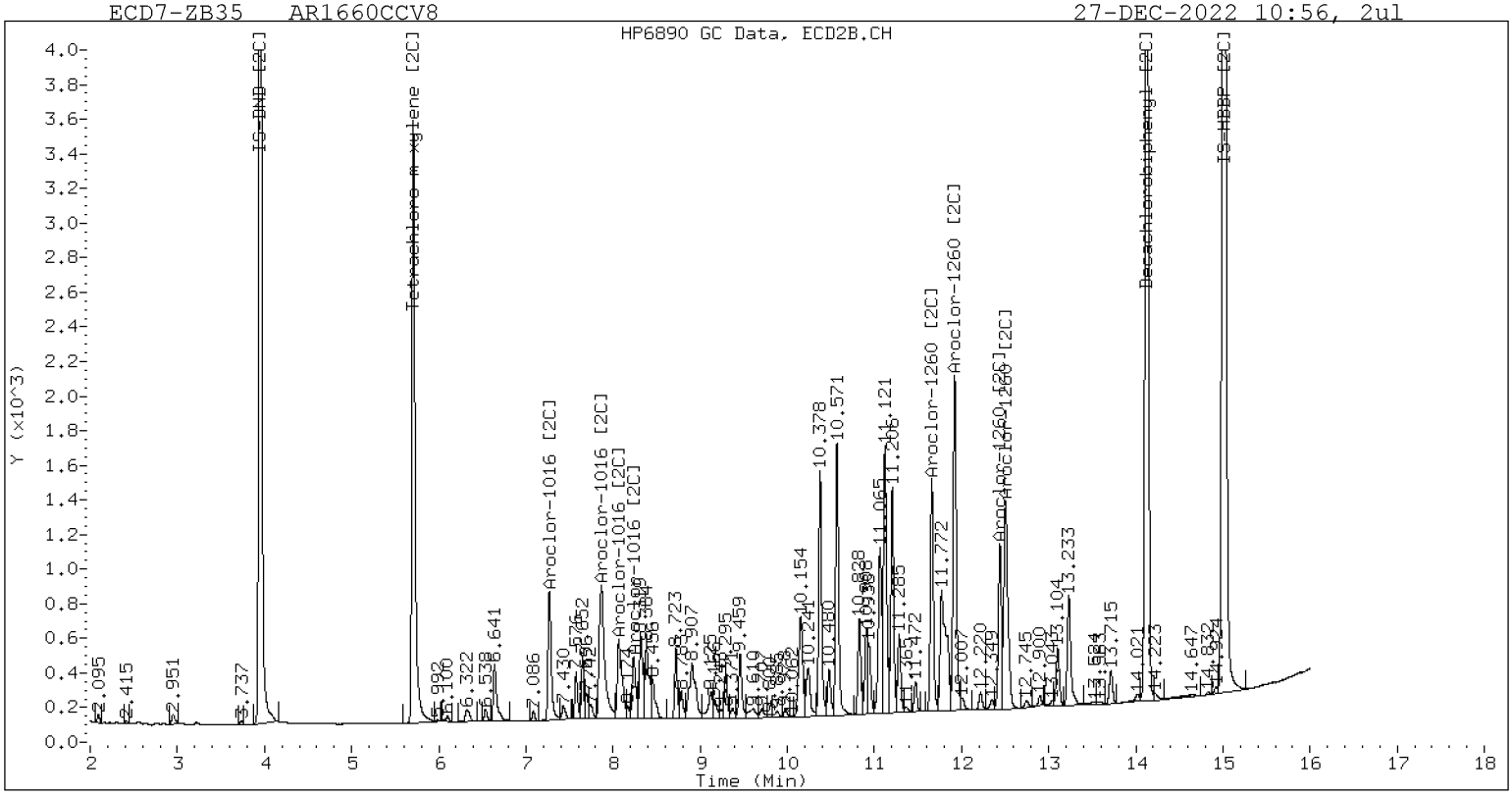
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 27-DEC-2022 10:56, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 27-DEC-2022 10:56, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262268ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCV9	Injection Time:	15:37
Sequence Name:	AR1242CCV9		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	268	0.0396000	0.0419977		7.0	+/-20
Aroclor-1242 (1)	A	250.00	263		0.0238699			
Aroclor-1242 (2)	A	250.00	261		0.0750605			
Aroclor-1242 (3)	A	250.00	280		0.0232259			
Aroclor-1242 (4)	A	250.00	266		0.0458346			
Aroclor 1242 [2C]	A	250.00	262	0.0391981	0.0384116		4.9	+/-20
Aroclor-1242 (1) [2C]	A	250.00	262		0.0354485			
Aroclor-1242 (2) [2C]	A	250.00	204		0.0585524			
Aroclor-1242 (3) [2C]	A	250.00	287		0.0266304			
Aroclor-1242 (4) [2C]	A	250.00	296		0.0330150			
Decachlorobiphenyl	A	40.000	43.0	0.7333327	0.7882350		7.5	+/-20
Tetrachlorometaxylene	A	40.000	39.5	1.1336710	1.1184480		-1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.5	1.1358180	1.1776150		3.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.5	1.0966080	1.0822200		-1.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262268ECD7.D
Data file 2: /221226.b/221226.b/12262268ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 27-DEC-2022 15:37
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	200634	5.708	0.000	128795	39.5	39.5	0.0	Tetrachloro-m-xylene
13.901	0.001	238715	14.127	-0.000	193491	43.0	41.5	3.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	358772	-19.9
Hexabromobiphenyl	798898	605695	-24.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	238020	-4.4
Hexabromobiphenyl	362541	328615	-9.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.287	0.000	26762	263.2	1	7.270	0.000	26367	261.7
Aroclor-1242	2	7.675	0.000	84155	260.6	2	7.869	0.000	43552	203.7
Aroclor-1242	3	8.421	0.000	26040	280.3	3	9.167	0.000	19808	287.1
Aroclor-1242	4	9.018	0.000	51388	266.4	4	9.587	0.000	24557	296.1
Total Col1Ave (4 peaks):					267.6	Total Col2Ave (4 peaks):				262.2 RPD = 2
Corrected Ave (3 peaks):					263.4	Corrected Ave (3 peaks):				250.8 RPD = 5
CalAmt %D:					7.1	CalAmt %D:				4.9

Total PCB Area Col1 (5.931 - 13.801) = 808717 Col1 Total PCB = 0.2 ppm*

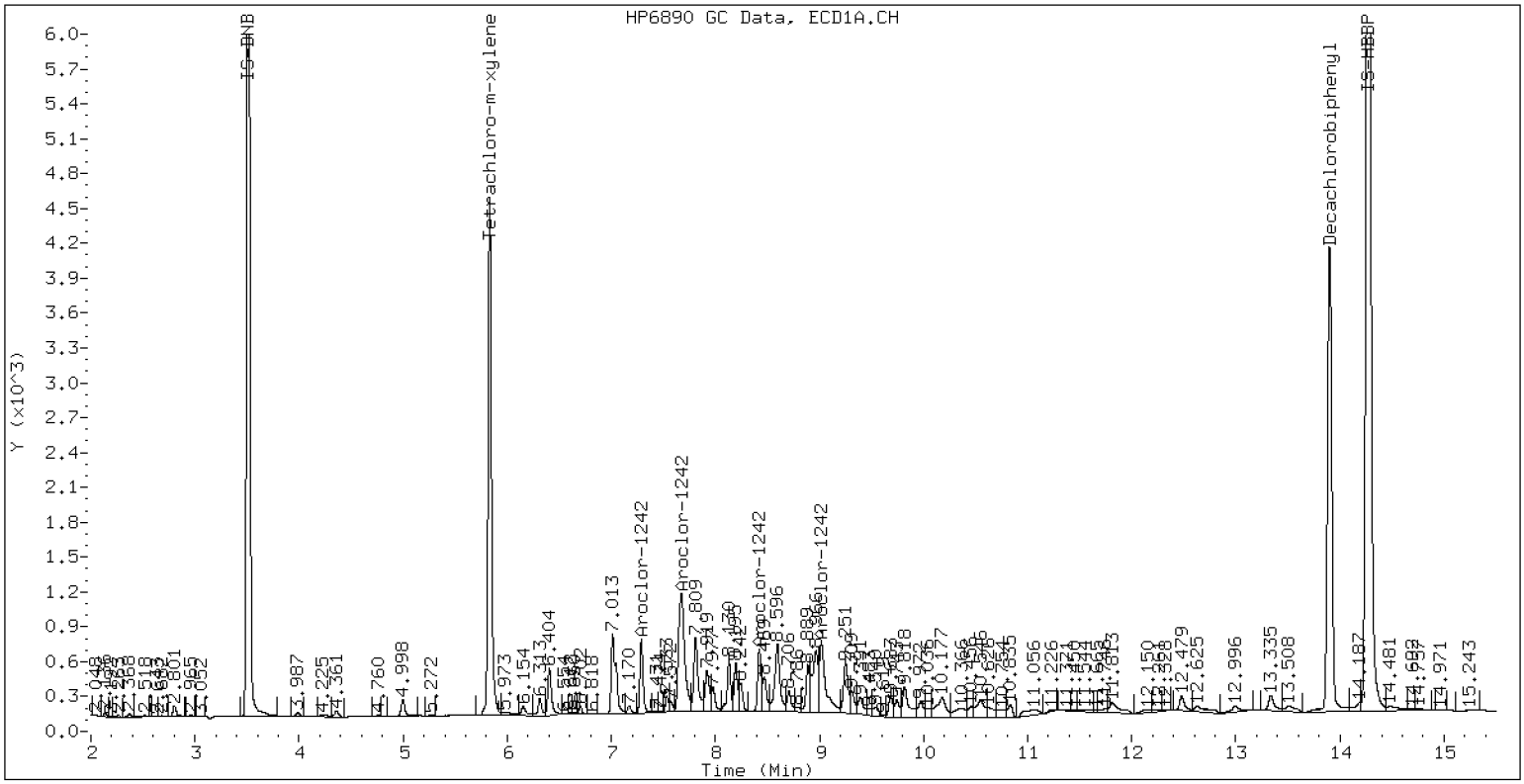
Total PCB Area Col2 (5.807 - 14.027) = 413822 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

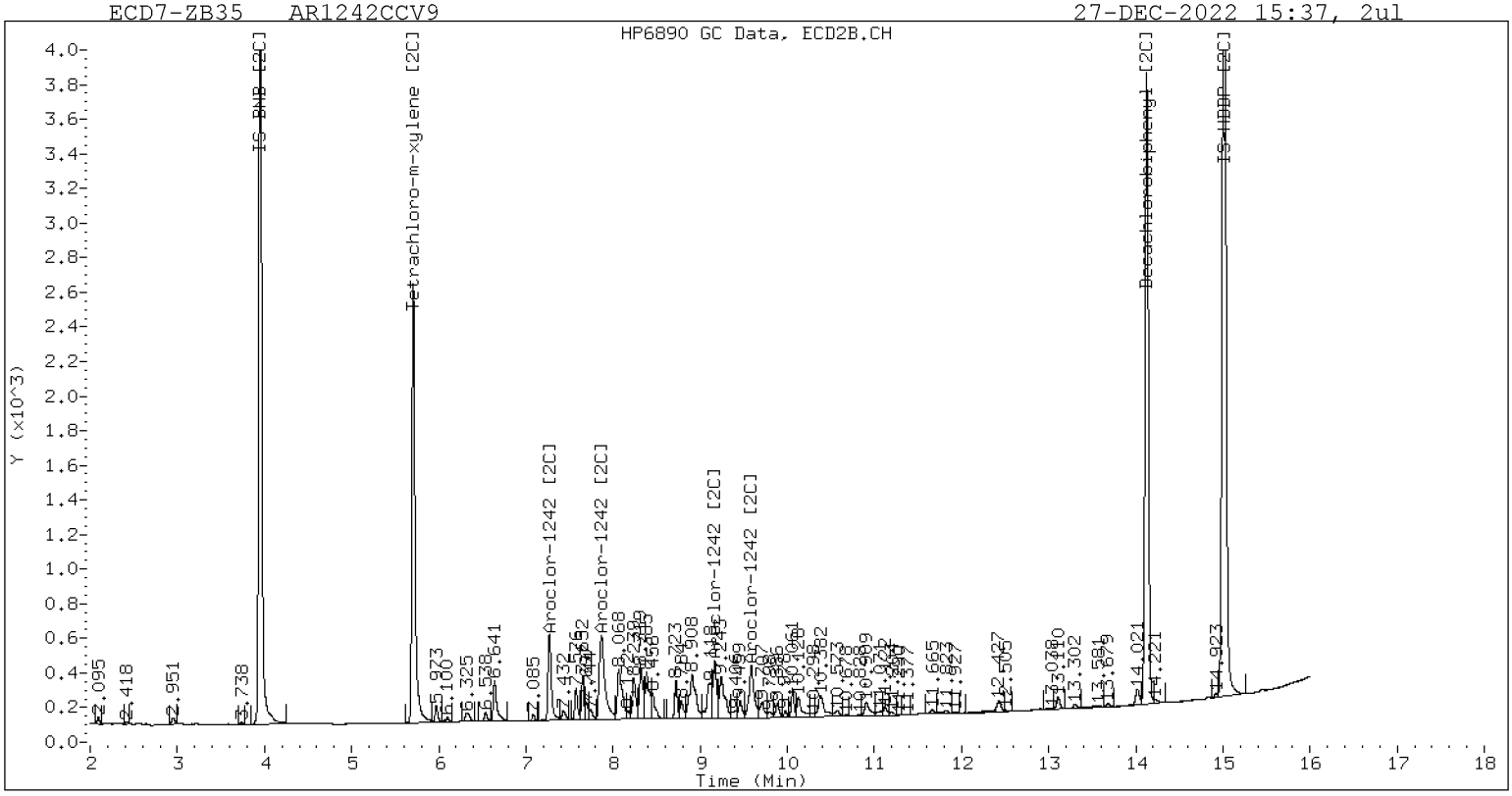
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 27-DEC-2022 15:37, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242CCV9 27-DEC-2022 15:37, 2ul

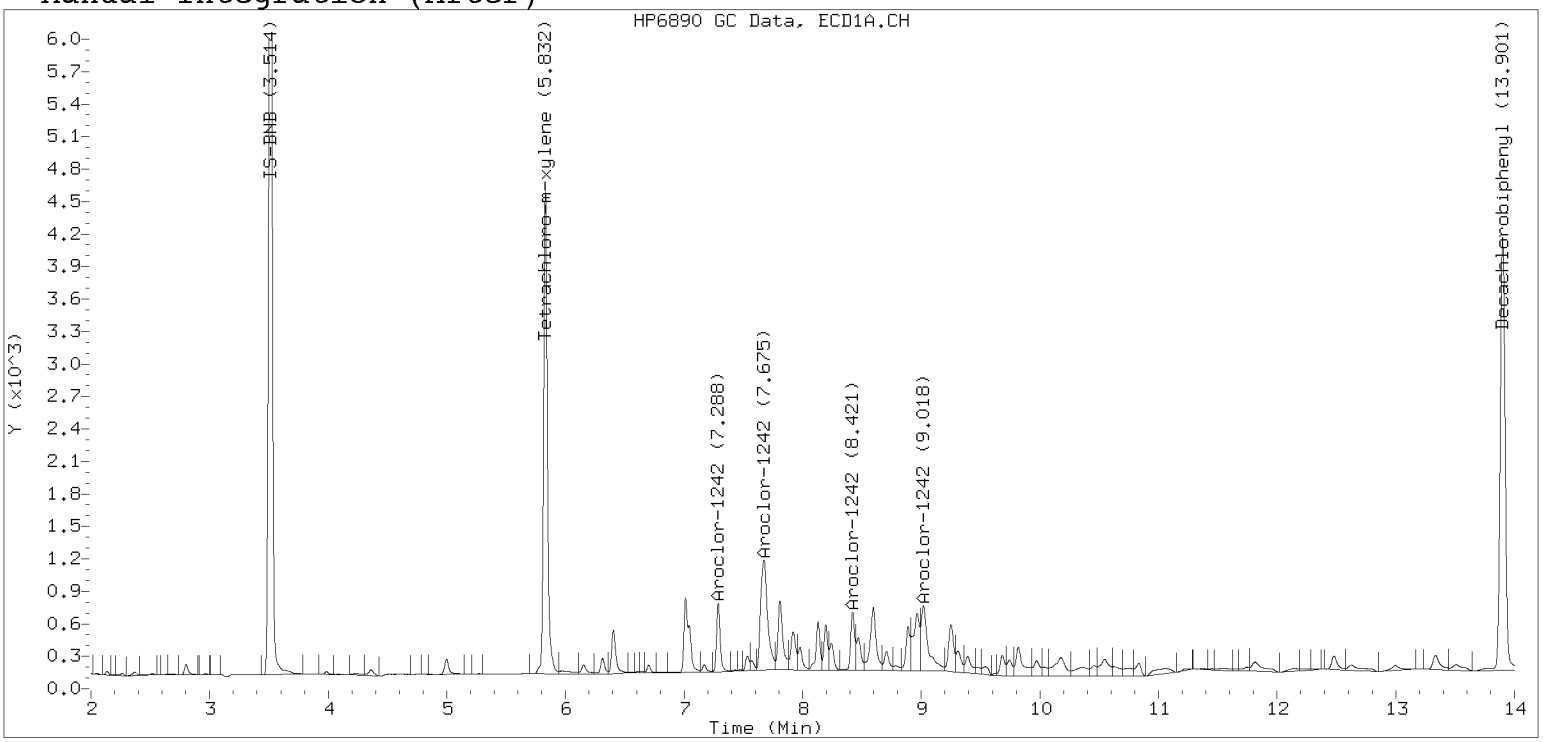


ZB-35 Manual Integration: NO

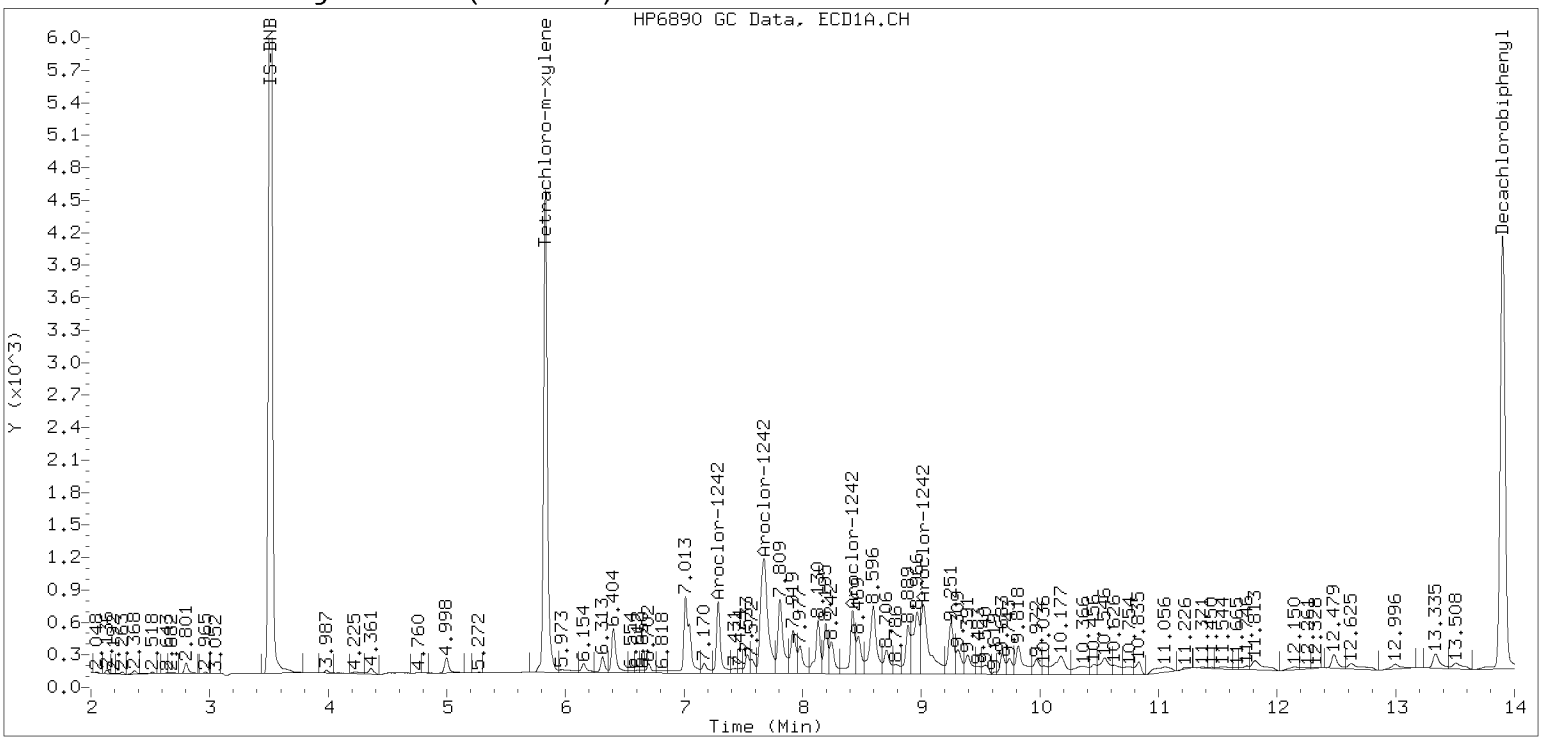
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262268ECD7.D Injection Date: 27-DEC-2022 15:37

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12262269ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0359	Injection Date:	12/27/22
Lab Sample ID:	SKL0359-CCVA	Injection Time:	15:58
Sequence Name:	AR1660CCVA		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	271	0.0441939	0.0471279		8.5	+/-20
Aroclor-1016 (1)	A	250.00	282	0.0266860	0.0300578		12.8	
Aroclor-1016 (2)	A	250.00	260	0.0861572	0.0898069		4.0	
Aroclor-1016 (3)	A	250.00	258	0.0390425	0.0402823		3.2	
Aroclor-1016 (4)	A	250.00	285	0.0248899	0.0283644		14.0	
Aroclor 1016 [2C]	A	250.00	252	0.0467310	0.0449231		0.7	+/-20
Aroclor-1016 (1) [2C]	A	250.00	261	0.0409030	0.0427304		4.4	
Aroclor-1016 (2) [2C]	A	250.00	218	0.0882154	0.0769497		-12.8	
Aroclor-1016 (3) [2C]	A	250.00	250	0.0378846	0.0378778		0.0	
Aroclor-1016 (4) [2C]	A	250.00	278	0.0199212	0.0221345		11.2	
Aroclor 1260	A	250.00	290	0.0390342	0.0446069		16.0	+/-20
Aroclor-1260 (1)	A	250.00	273	0.0291201	0.0317570		9.2	
Aroclor-1260 (2)	A	250.00	278	0.0301181	0.0335025		11.2	
Aroclor-1260 (3)	A	250.00	278	0.0791351	0.0879427		11.2	
Aroclor-1260 (4)	A	250.00	302	0.0403003	0.0487597		20.8	
Aroclor-1260 (5)	A	250.00	319	0.0164974	0.0210726		27.6	
Aroclor 1260 [2C]	A	250.00	231	0.0617619	0.0527400		-7.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	257	0.0422283	0.0434875		2.8	
Aroclor-1260 (2) [2C]	A	250.00	183	0.1059643	0.0775950		-26.8	
Aroclor-1260 (3) [2C]	A	250.00	274	0.0282173	0.0309705		9.6	
Aroclor-1260 (4) [2C]	A	250.00	208	0.0706376	0.0589069		-16.8	
Decachlorobiphenyl	A	40.000	47.2	0.7333327	0.8646371		18.0	+/-20
Tetrachlorometaxylene	A	40.000	43.2	1.1336710	1.2257690		8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.8	1.1358180	1.2146820		7.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.5	1.0966080	1.1647090		6.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221226.b/12262269ECD7.D
Data file 2: /221226.b/221226.b/12262269ECD7.D
Method: \\target\share\chem4\ecd7.i\221226.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 27-DEC-2022 15:58
Report Date: 12/29/2022 12:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	0.000	178122	5.707	0.000	111907	43.2	42.5	1.8	Tetrachloro-m-xylene
13.901	0.000	238789	14.127	0.000	181400	47.2	42.8	9.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	290629	-35.1
Hexabromobiphenyl	798898	552345	-30.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	192163	-22.9
Hexabromobiphenyl	362541	298679	-17.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.287	0.000	27299	281.6	1	7.270	0.000	25660	261.2
Aroclor-1016	2	7.675	0.000	81564	260.6	2	7.869	0.000	46209	218.1
Aroclor-1016	3	7.808	0.000	36585	257.9	3	8.067	0.000	22746	250.0
Aroclor-1016	4	8.420	0.000	25761	284.9	4	8.239	0.000	13292	277.8
Total Col1Ave (4 peaks):					271.3	Total Col2Ave (4 peaks):				251.7 RPD = 7
Corrected Ave (3 peaks):					266.7	Corrected Ave (3 peaks):				243.1 RPD = 9
			CalAmt %D:		8.5			CalAmt %D:		0.7
Aroclor-1260	1	11.055	0.000	54815	272.6	1	11.661	0.000	40590	257.5
Aroclor-1260	2	11.371	0.000	57828	278.1	2	11.923	0.000	72425	183.1
Aroclor-1260	3	11.744	0.000	151796	277.8	3	12.442	0.000	28907	274.4
Aroclor-1260	4	12.148	0.000	84163	302.5	4	12.507	0.000	54982	208.5
Aroclor-1260	5	12.254	0.000	36373	319.3	NS	---			----
Total Col1Ave (5 peaks):					290.1	Total Col2Ave (4 peaks):				230.8 RPD = 23
Corrected Ave (4 peaks):					282.8	Corrected Ave (3 peaks):				216.3 RPD = 27
			CalAmt %D:		16.0			CalAmt %D:		-7.7

Total PCB Area Col1 (5.931 - 13.801) = 1574041 Col1 Total PCB = 0.6 ppm*

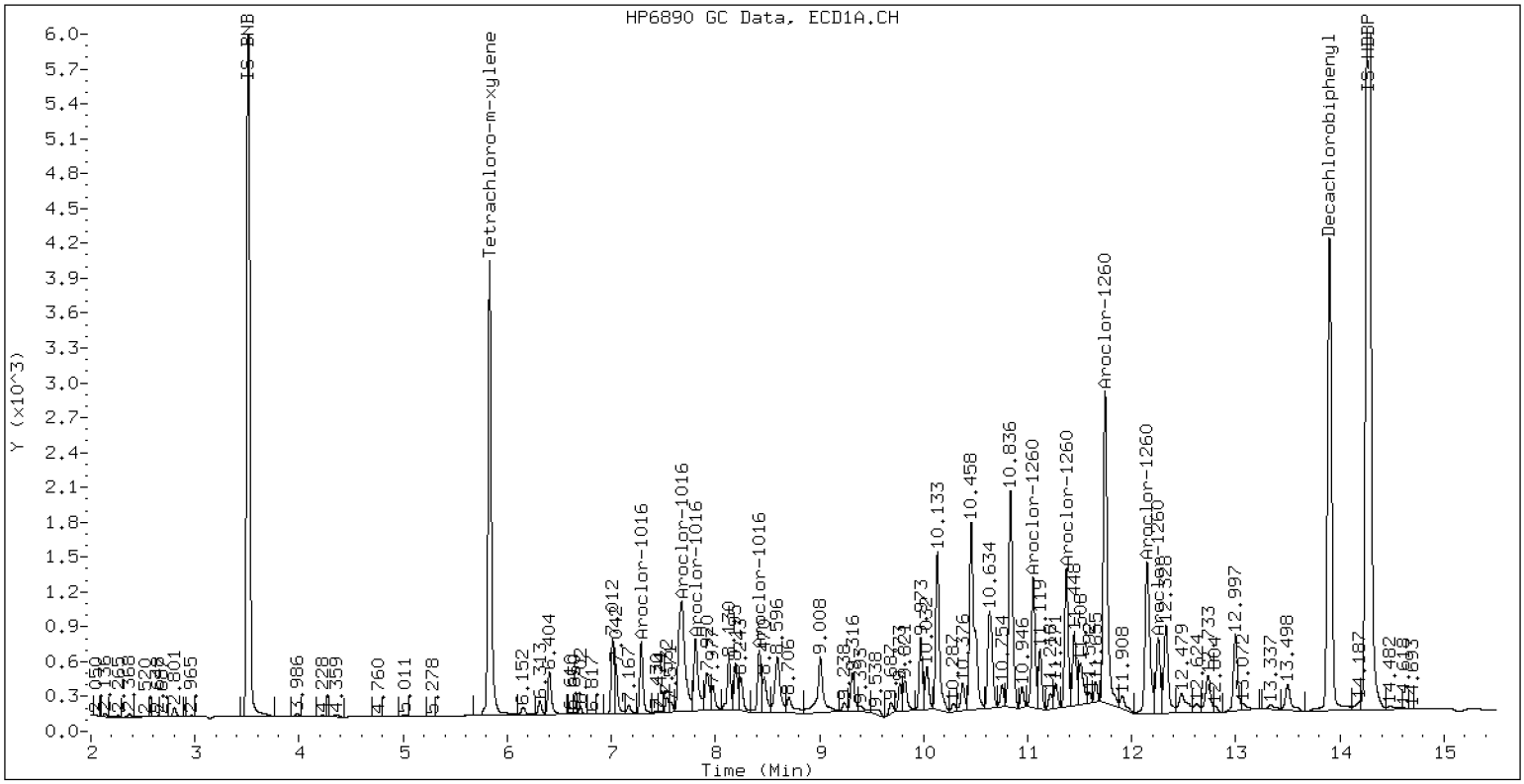
Total PCB Area Col2 (5.807 - 14.027) = 903376 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

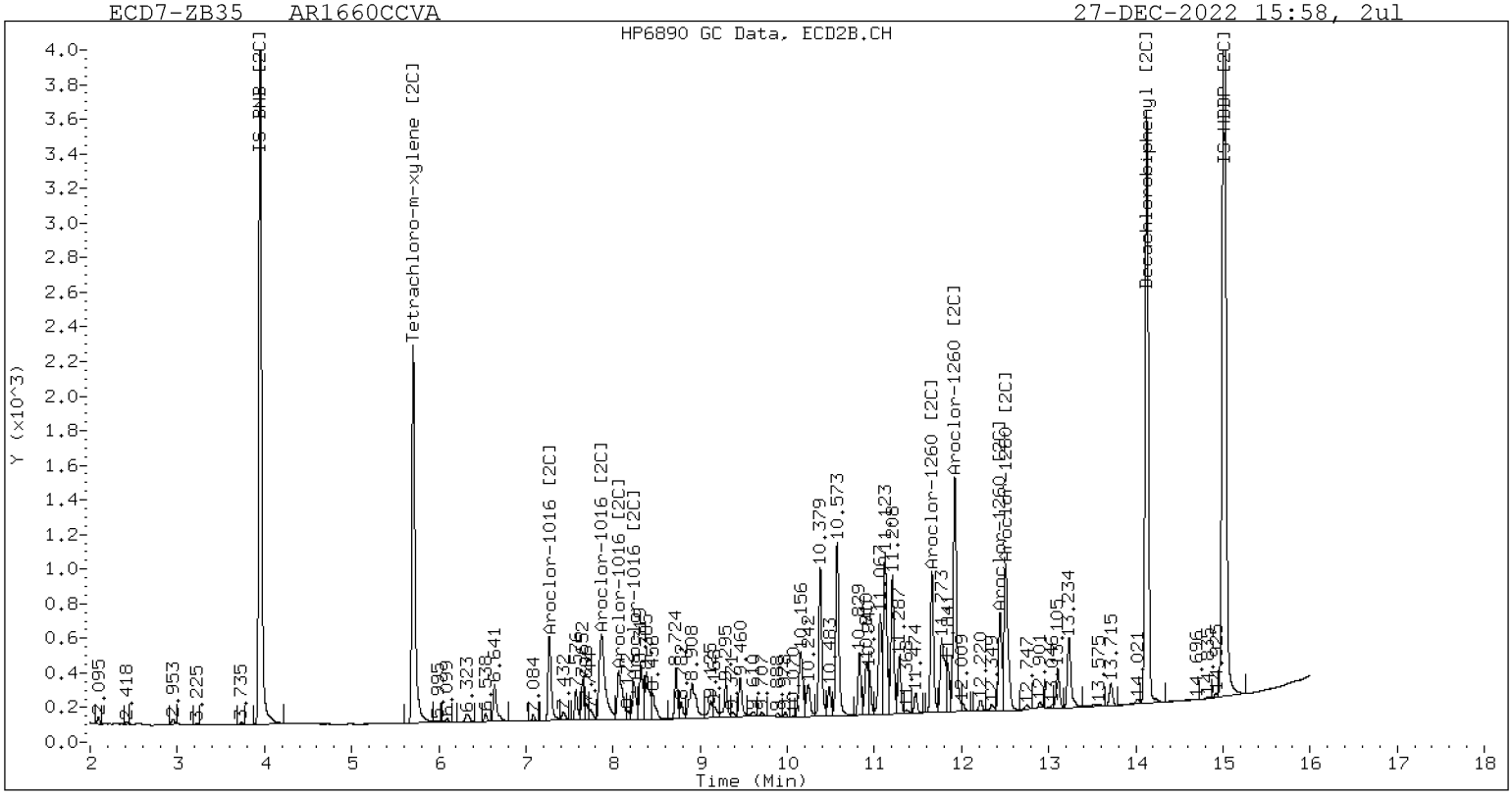
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 27-DEC-2022 15:58, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCVA 27-DEC-2022 15:58, 2ul

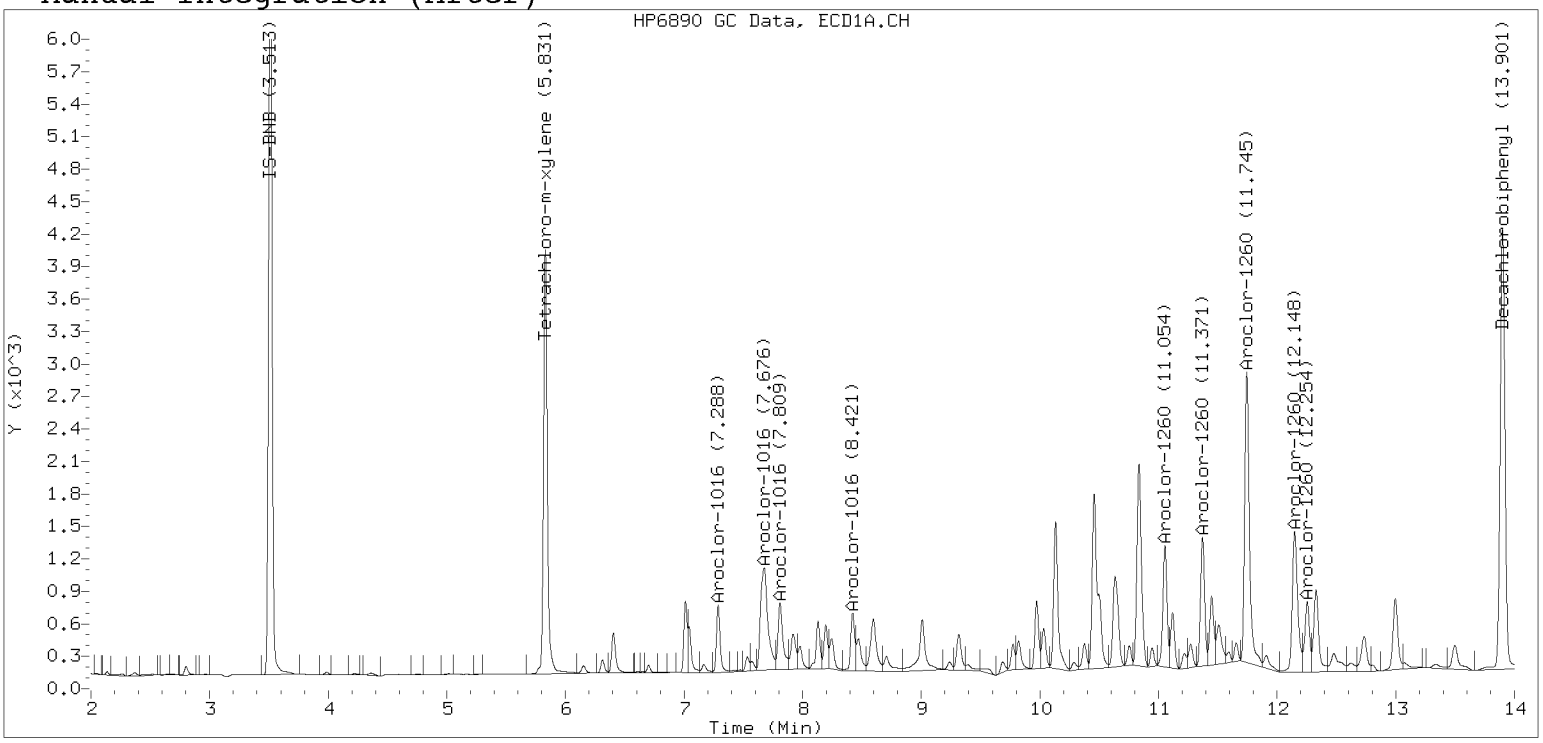


ZB-35 Manual Integration: NO

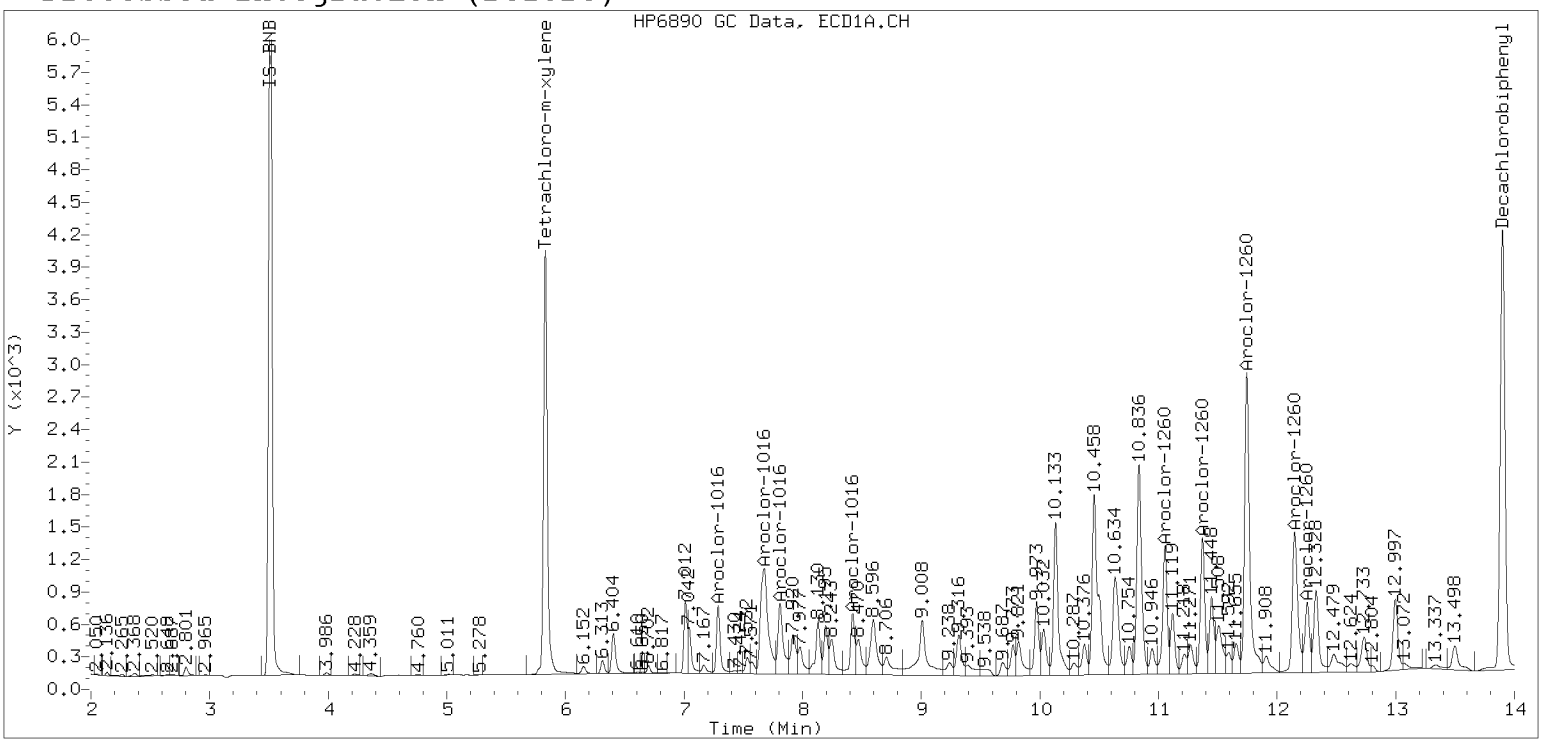
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221226.b/12262269ECD7.D Injection Date: 27-DEC-2022 15:58

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272215ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/27/22
Lab Sample ID:	SKL0377-CCV1	Injection Time:	21:35
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	262	0.0490062	0.0526895		4.8	+/-20
Aroclor-1248 (1)	A	250.00	281		0.0386253			
Aroclor-1248 (2)	A	250.00	298		0.0523434			
Aroclor-1248 (3)	A	250.00	293		0.0925327			
Aroclor-1248 (4)	A	250.00	176		0.0272566			
Aroclor 1248 [2C]	A	250.00	253	0.0394876	0.0403068		1.1	+/-20
Aroclor-1248 (1) [2C]	A	250.00	263		0.0343451			
Aroclor-1248 (2) [2C]	A	250.00	206		0.0283648			
Aroclor-1248 (3) [2C]	A	250.00	274		0.0458411			
Aroclor-1248 (4) [2C]	A	250.00	268		0.0526760			
Decachlorobiphenyl	A	40.000	41.7	0.7333327	0.7648914		4.3	+/-20
Tetrachlorometaxylene	A	40.000	37.4	1.1336710	1.0595010		-6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.8	1.1358180	1.1866020		4.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.2	1.0966080	1.0472910		-4.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272215ECD7.D
Data file 2: /221227.b/221227.b/12272215ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 27-DEC-2022 21:35
Report Date: 12/30/2022 14:45
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.000	194456	5.708	-0.001	125500	37.4	38.2	2.2	Tetrachloro-m-xylene
13.903	-0.000	337075	14.129	0.001	238593	41.7	41.8	0.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	367071	-18.0
Hexabromobiphenyl	798898	881367	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	239666	-3.8
Hexabromobiphenyl	362541	402145	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.422	-0.005	44307	280.7	1	8.321	-0.001	25723	262.7
Aroclor-1248	2	8.598	-0.007	60043	298.0	2	8.726	-0.001	21244	206.3
Aroclor-1248	3	9.015	-0.007	106144	292.8	3	9.172	-0.000	34333	274.1
Aroclor-1248	4	9.310	-0.002	31266	176.1	4	9.593	-0.001	39452	268.3
Total Col1Ave (4 peaks):					261.9	Total Col2Ave (4 peaks):				252.9 RPD = 4
Corrected Ave (3 peaks):					249.9	Corrected Ave (3 peaks):				245.8 RPD = 2
CalAmt %D:					4.8	CalAmt %D:				1.1

Total PCB Area Col1 (5.931 - 13.803) = 965245 Col1 Total PCB = 0.3 ppm*

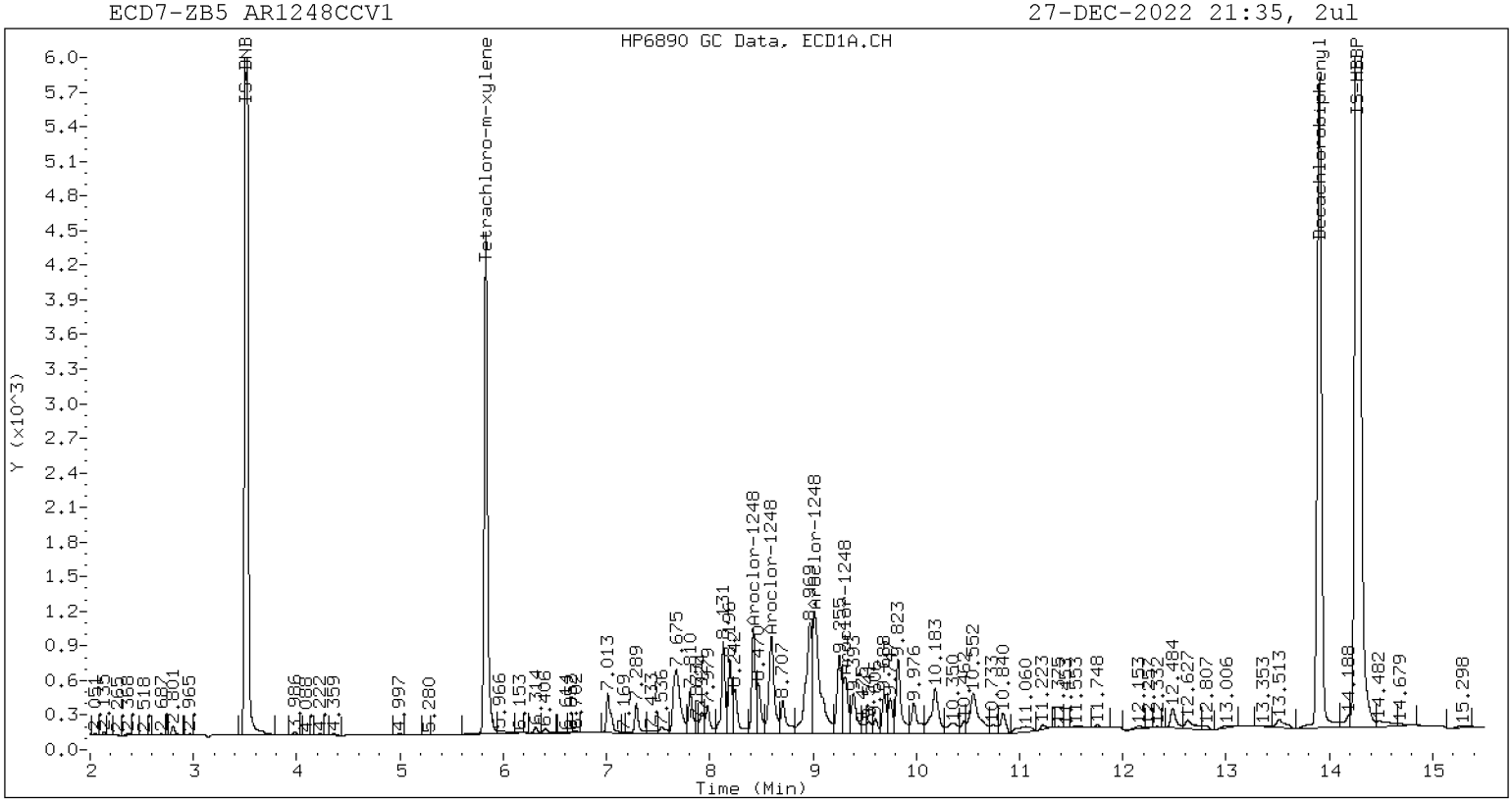
Total PCB Area Col2 (5.809 - 14.028) = 503123 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

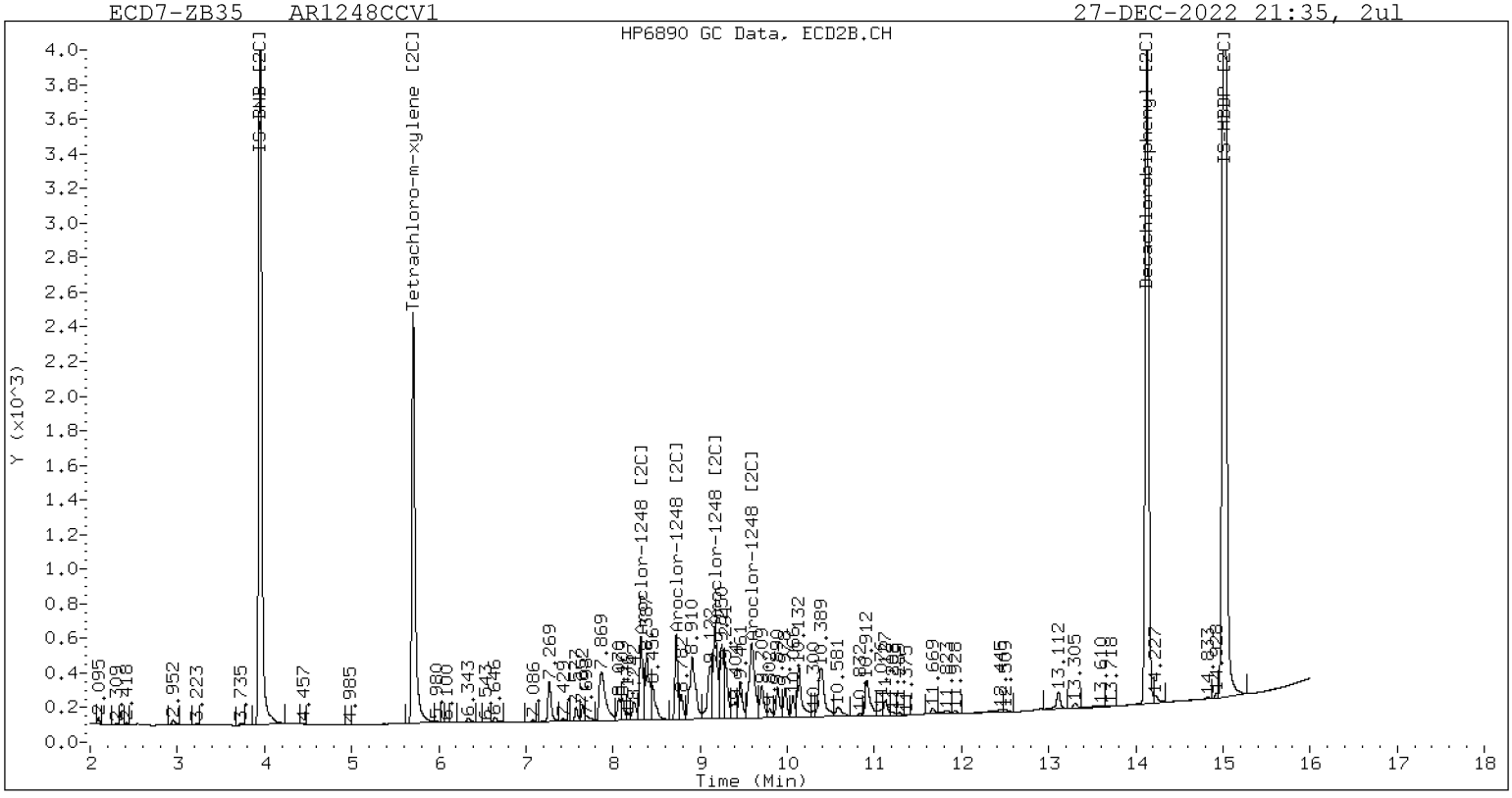
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 27-DEC-2022 21:35, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 27-DEC-2022 21:35, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272216ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/27/22
Lab Sample ID:	SKL0377-CCV2	Injection Time:	21:56
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	269	0.0441939	0.0471406		7.4	+/-20
Aroclor-1016 (1)	A	250.00	266	0.0266860	0.0284101		6.4	
Aroclor-1016 (2)	A	250.00	262	0.0861572	0.0903301		4.8	
Aroclor-1016 (3)	A	250.00	272	0.0390425	0.0425669		8.8	
Aroclor-1016 (4)	A	250.00	274	0.0248899	0.0272554		9.6	
Aroclor 1016 [2C]	A	250.00	244	0.0467310	0.0433673		-2.6	+/-20
Aroclor-1016 (1) [2C]	A	250.00	251	0.0409030	0.0410715		0.4	
Aroclor-1016 (2) [2C]	A	250.00	209	0.0882154	0.0737721		-16.4	
Aroclor-1016 (3) [2C]	A	250.00	246	0.0378846	0.0372521		-1.6	
Aroclor-1016 (4) [2C]	A	250.00	268	0.0199212	0.0213735		7.2	
Aroclor 1260	A	250.00	256	0.0390342	0.0396672		2.2	+/-20
Aroclor-1260 (1)	A	250.00	253	0.0291201	0.0294894		1.2	
Aroclor-1260 (2)	A	250.00	253	0.0301181	0.0305321		1.2	
Aroclor-1260 (3)	A	250.00	254	0.0791351	0.0804319		1.6	
Aroclor-1260 (4)	A	250.00	249	0.0403003	0.0401387		-0.4	
Aroclor-1260 (5)	A	250.00	269	0.0164974	0.0177438		7.6	
Aroclor 1260 [2C]	A	250.00	214	0.0617619	0.0487212		-14.6	+/-20
Aroclor-1260 (1) [2C]	A	250.00	237	0.0422283	0.0400373		-5.2	
Aroclor-1260 (2) [2C]	A	250.00	170	0.1059643	0.0721484		-32.0	
Aroclor-1260 (3) [2C]	A	250.00	257	0.0282173	0.0290016		2.8	
Aroclor-1260 (4) [2C]	A	250.00	190	0.0706376	0.0536974		-24.0	
Decachlorobiphenyl	A	40.000	43.6	0.7333327	0.8000764		9.0	+/-20
Tetrachlorometaxylene	A	40.000	40.6	1.1336710	1.1521160		1.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.0	1.1358180	1.1929090		5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.8	1.0966080	1.1180230		2.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272216ECD7.D
Data file 2: /221227.b/221227.b/12272216ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 27-DEC-2022 21:56
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	0.000	160772	5.708	-0.001	102383	40.7	40.8	0.3	Tetrachloro-m-xylene
13.903	-0.001	276610	14.128	-0.000	190473	43.6	42.0	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	279090	-37.7
Hexabromobiphenyl	798898	691459	-13.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	183150	-26.5
Hexabromobiphenyl	362541	319342	-11.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.288	-0.001	24778	266.2	1	7.271	-0.001	23507	251.0
Aroclor-1016	2	7.675	0.003	78782	262.1	2	7.870	-0.001	42223	209.1
Aroclor-1016	3	7.810	0.001	37125	272.6	3	8.069	-0.002	21321	245.8
Aroclor-1016	4	8.422	-0.001	23771	273.8	4	8.241	-0.000	12233	268.2
Total Col1Ave (4 peaks):					268.6	Total Col2Ave (4 peaks):				243.5 RPD = 10
Corrected Ave (3 peaks):					266.9	Corrected Ave (3 peaks):				235.3 RPD = 13
CalAmt %D:					7.5	CalAmt %D:				-2.6
Aroclor-1260	1	11.056	0.000	63721	253.2	1	11.662	-0.001	39955	237.0
Aroclor-1260	2	11.372	0.000	65974	253.4	2	11.925	-0.001	72000	170.2
Aroclor-1260	3	11.745	0.002	173798	254.1	3	12.444	-0.001	28942	256.9
Aroclor-1260	4	12.149	-0.000	86732	249.0	4	12.509	-0.000	53587	190.0
Aroclor-1260	5	12.255	-0.000	38341	268.9	NS	---			----
Total Col1Ave (5 peaks):					255.7	Total Col2Ave (4 peaks):				213.6 RPD = 18
Corrected Ave (4 peaks):					252.4	Corrected Ave (3 peaks):				199.1 RPD = 24
CalAmt %D:					2.3	CalAmt %D:				-14.6

Total PCB Area Col1 (5.931 - 13.803) = 1741130 Col1 Total PCB = 0.7 ppm*

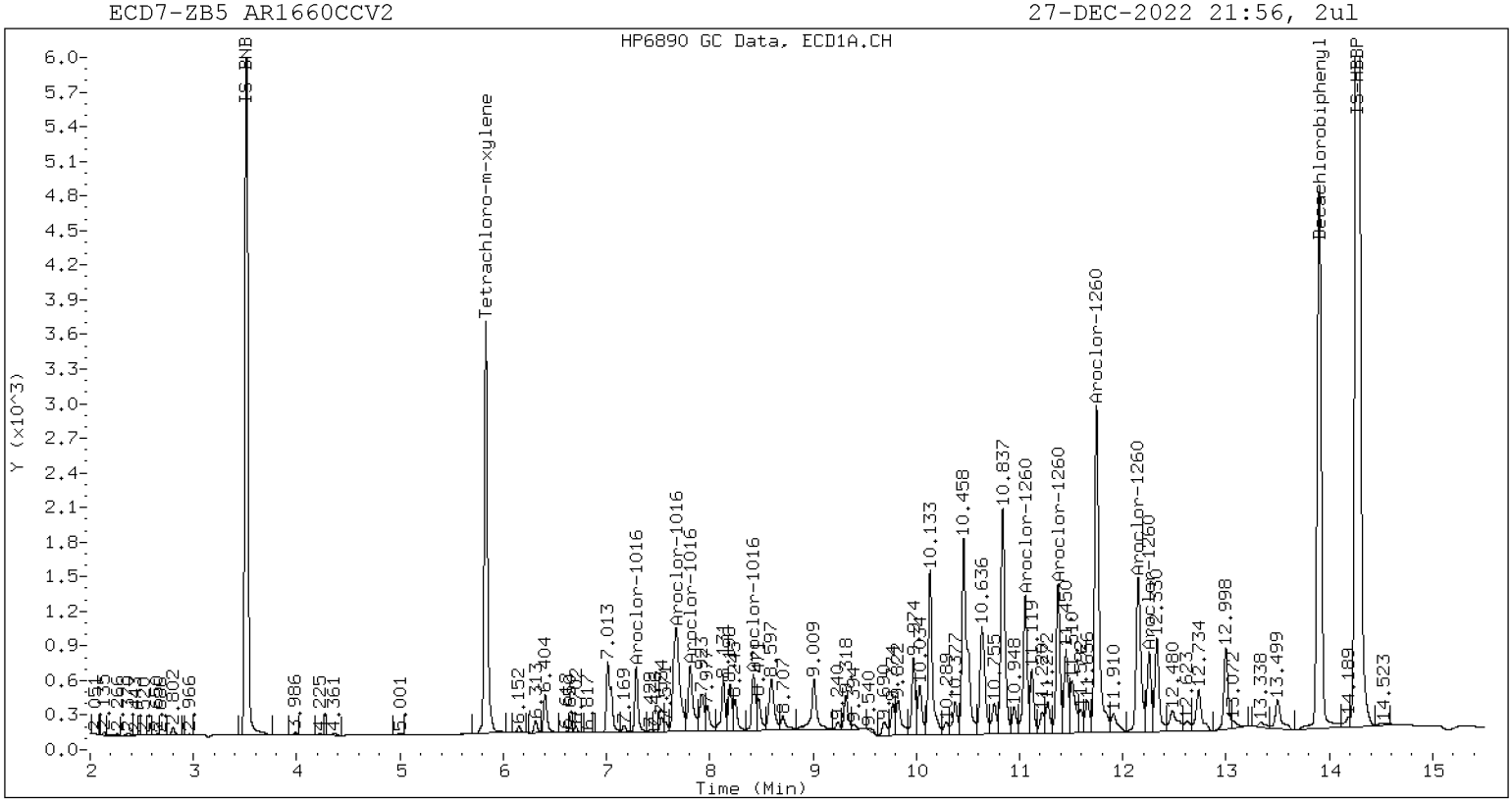
Total PCB Area Col2 (5.809 - 14.028) = 877514 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

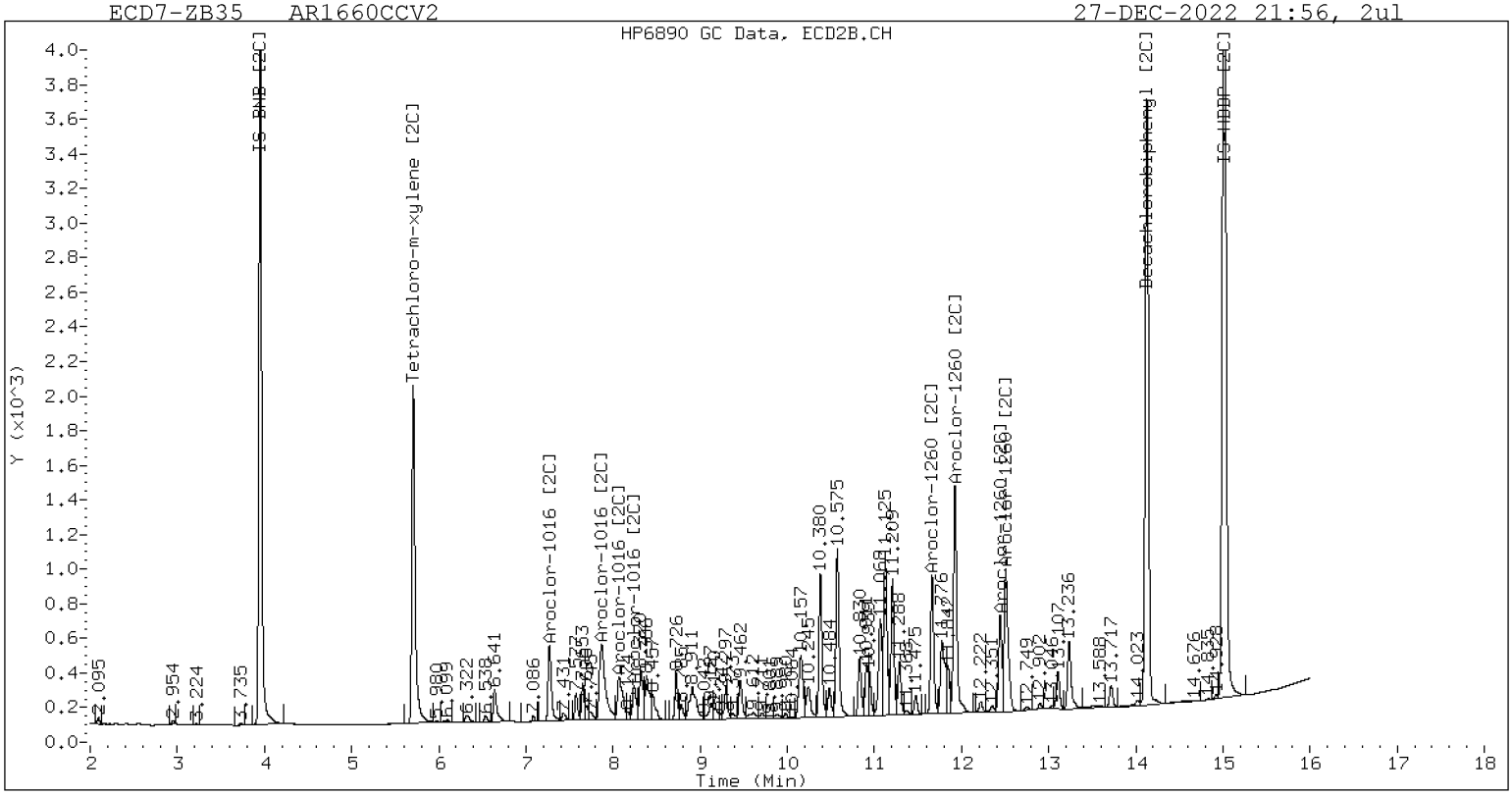
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 27-DEC-2022 21:56, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 27-DEC-2022 21:56, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272227ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV3	Injection Time:	01:48
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	265	0.0396000	0.0423492		6.1	+/-20
Aroclor-1242 (1)	A	250.00	257		0.0233244			
Aroclor-1242 (2)	A	250.00	264		0.0761395			
Aroclor-1242 (3)	A	250.00	258		0.0213801			
Aroclor-1242 (4)	A	250.00	282		0.0485527			
Aroclor 1242 [2C]	A	250.00	259	0.0391981	0.0381220		3.7	+/-20
Aroclor-1242 (1) [2C]	A	250.00	261		0.0353092			
Aroclor-1242 (2) [2C]	A	250.00	203		0.0585049			
Aroclor-1242 (3) [2C]	A	250.00	280		0.0260206			
Aroclor-1242 (4) [2C]	A	250.00	293		0.0326531			
Decachlorobiphenyl	A	40.000	41.7	0.7333327	0.7643812		4.3	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.1336710	1.1099060		-2.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.2	1.1358180	1.1972850		5.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.4	1.0966080	1.0796960		-1.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272227ECD7.D
Data file 2: /221227.b/221227.b/12272227ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 28-DEC-2022 01:48
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	180483	5.710	0.001	120777	39.2	39.4	0.6	Tetrachloro-m-xylene
13.901	-0.002	184947	14.128	-0.001	173950	41.7	42.2	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	325222	-27.3
Hexabromobiphenyl	798898	483913	-39.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	223724	-10.2
Hexabromobiphenyl	362541	290574	-19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.289	-0.006	23705	257.2	1	7.272	0.000	24686	260.7
Aroclor-1242	2	7.674	-0.011	77382	264.4	2	7.870	-0.000	40903	203.5
Aroclor-1242	3	8.422	-0.008	21729	258.0	3	9.169	-0.001	18192	280.5
Aroclor-1242	4	9.020	-0.011	49345	282.2	4	9.588	-0.001	22829	292.9
Total Col1Ave (4 peaks):					265.4	Total Col2Ave (4 peaks):				259.4 RPD = 2
Corrected Ave (3 peaks):					259.9	Corrected Ave (3 peaks):				248.2 RPD = 5
CalAmt %D:					6.2	CalAmt %D:				3.8

Total PCB Area Col1 (5.931 - 13.803) = 721145 Col1 Total PCB = 0.2 ppm*

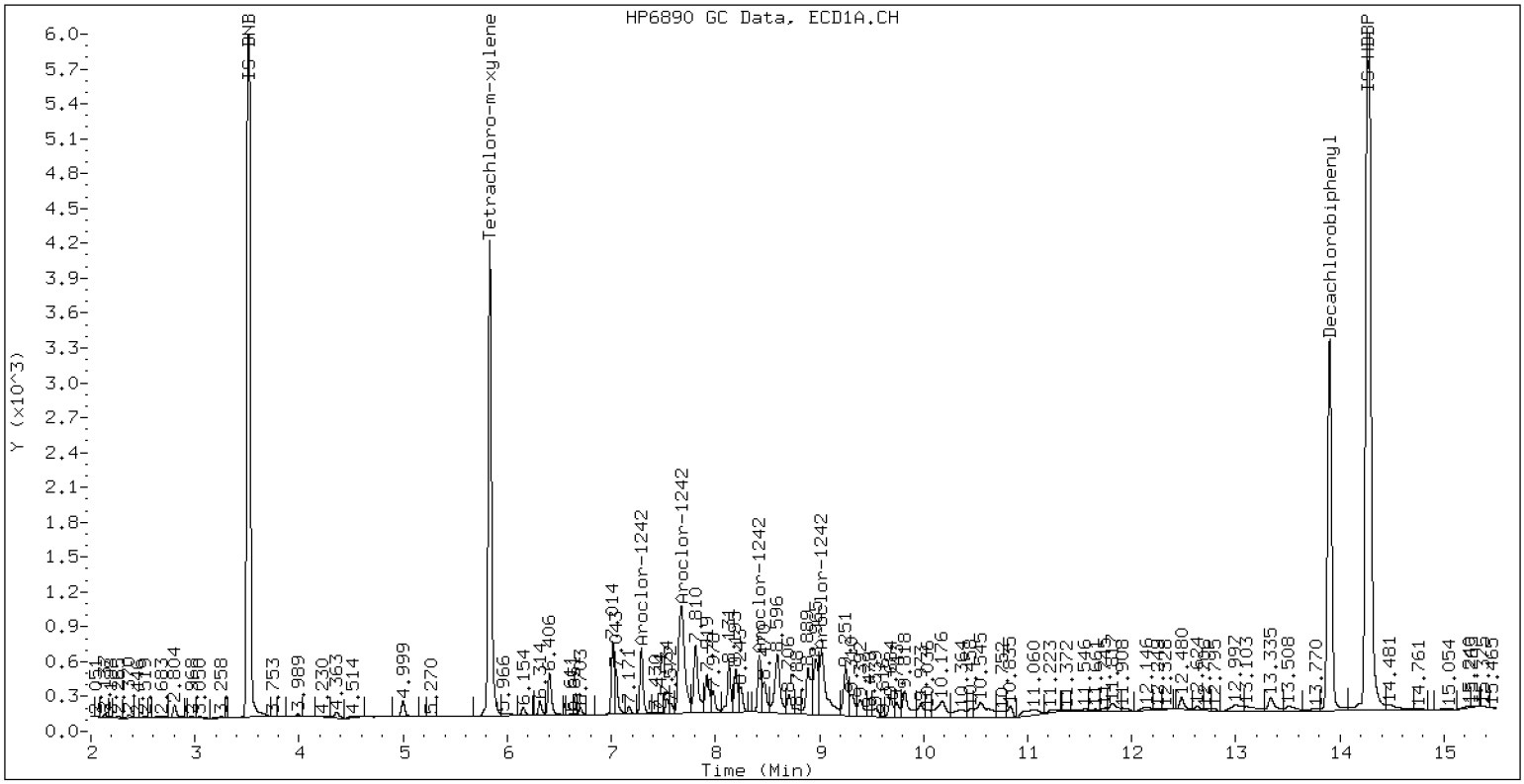
Total PCB Area Col2 (5.809 - 14.028) = 386426 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

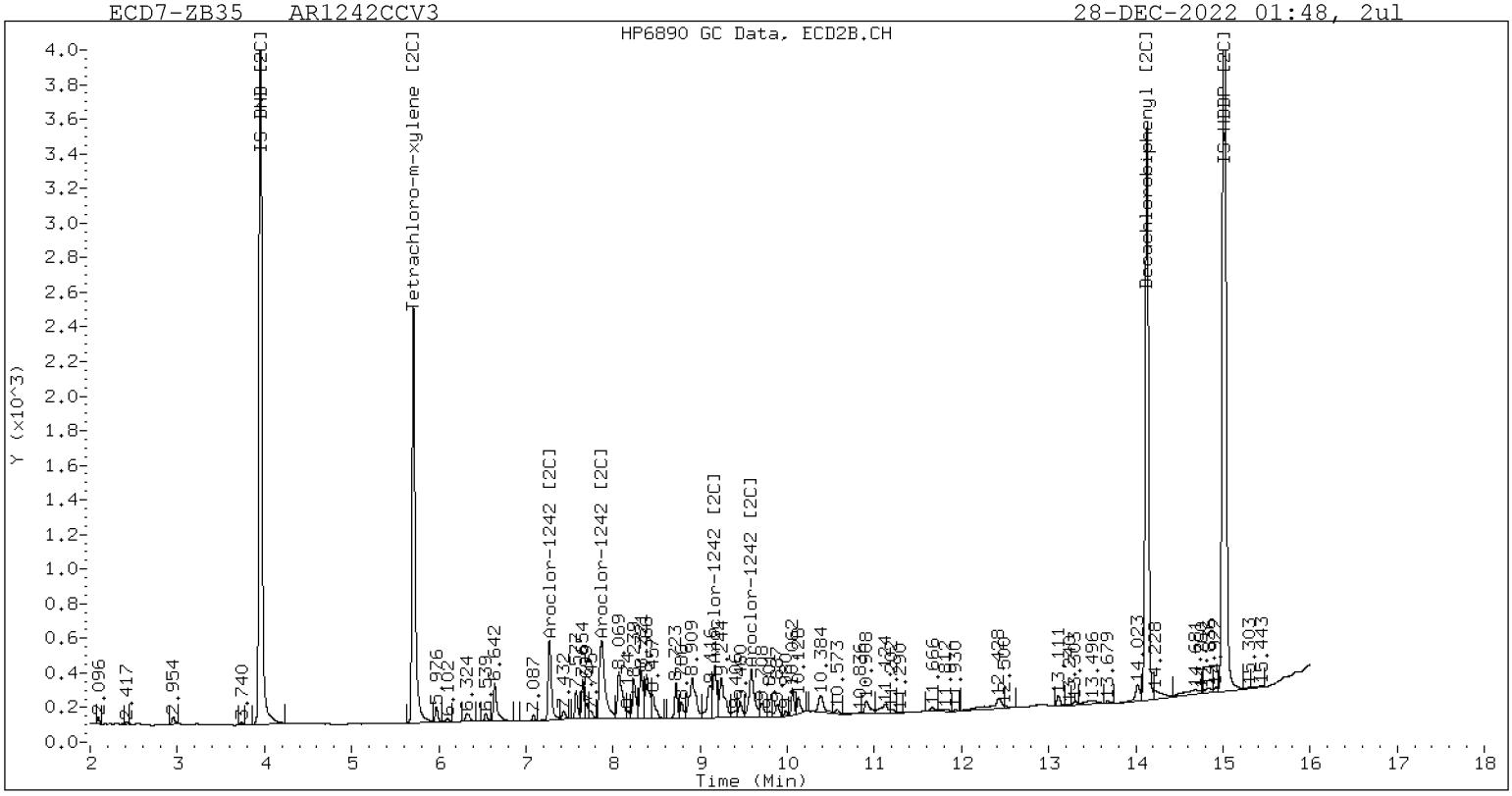
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 28-DEC-2022 01:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 28-DEC-2022 01:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272228ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV4	Injection Time:	02:09
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	296	0.0441939	0.0511621		18.5	+/-20	
Aroclor-1016 (1)	A	250.00	288	0.0266860	0.0307294		15.2		
Aroclor-1016 (2)	A	250.00	278	0.0861572	0.0958013		11.2		
Aroclor-1016 (3)	A	250.00	291	0.0390425	0.0454237		16.4		
Aroclor-1016 (4)	A	250.00	328	0.0248899	0.0326940		31.2		
Aroclor 1016 [2C]	A	250.00	250	0.0467310	0.0445198		0.1	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	262	0.0409030	0.0427939		4.8		
Aroclor-1016 (2) [2C]	A	250.00	214	0.0882154	0.0754650		-14.4		
Aroclor-1016 (3) [2C]	A	250.00	250	0.0378846	0.0379256		0.0		
Aroclor-1016 (4) [2C]	A	250.00	275	0.0199212	0.0218945		10.0		
Aroclor 1260	A	250.00	305	0.0390342	0.0467929		22.0	+/-20	*
Aroclor-1260 (1)	A	250.00	292	0.0291201	0.0339889		16.8		
Aroclor-1260 (2)	A	250.00	287	0.0301181	0.0345446		14.8		
Aroclor-1260 (3)	A	250.00	290	0.0791351	0.0917499		16.0		
Aroclor-1260 (4)	A	250.00	319	0.0403003	0.0514327		27.6		
Aroclor-1260 (5)	A	250.00	337	0.0164974	0.0222482		34.8		
Aroclor 1260 [2C]	A	250.00	239	0.0617619	0.0546030		-4.6	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	266	0.0422283	0.0448980		6.4		
Aroclor-1260 (2) [2C]	A	250.00	193	0.1059643	0.0817310		-22.8		
Aroclor-1260 (3) [2C]	A	250.00	284	0.0282173	0.0320607		13.6		
Aroclor-1260 (4) [2C]	A	250.00	211	0.0706376	0.0597224		-15.6		
Decachlorobiphenyl	A	40.000	47.3	0.7333327	0.8669780		18.3	+/-20	
Tetrachlorometaxylene	A	40.000	42.2	1.1336710	1.1977150		5.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	42.8	1.1358180	1.2148260		7.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.5	1.0966080	1.1374060		3.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272228ECD7.D
Data file 2: /221227.b/221227.b/12272228ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 28-DEC-2022 02:09
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.000	162509	5.708	-0.001	105528	42.3	41.5	1.8	Tetrachloro-m-xylene
13.902	-0.001	202168	14.129	0.000	166583	47.3	42.8	10.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	271365	-39.4
Hexabromobiphenyl	798898	466374	-41.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	185559	-25.5
Hexabromobiphenyl	362541	274250	-24.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.289	0.000	26059	287.9	1	7.272	-0.000	24815	261.6
Aroclor-1016	2	7.674	0.002	81241	278.0	2	7.871	-0.000	43760	213.9
Aroclor-1016	3	7.810	0.001	38520	290.9	3	8.069	-0.003	21992	250.3
Aroclor-1016	4	8.422	-0.001	27725	328.4	4	8.239	-0.002	12696	274.8
Total Col1Ave (4 peaks):					296.3	Total Col2Ave (4 peaks):				250.1 RPD = 17
Corrected Ave (3 peaks):					285.6	Corrected Ave (3 peaks):				241.9 RPD = 17
CalAmt %D:					18.5	CalAmt %D:				0.0
Aroclor-1260	1	11.055	-0.000	49536	291.8	1	11.662	-0.001	38479	265.8
Aroclor-1260	2	11.372	-0.000	50346	286.7	2	11.924	-0.002	70046	192.8
Aroclor-1260	3	11.745	0.001	133718	289.9	3	12.444	-0.001	27477	284.1
Aroclor-1260	4	12.148	-0.001	74959	319.1	4	12.507	-0.002	51184	211.4
Aroclor-1260	5	12.254	-0.001	32425	337.1	NS	---			----
Total Col1Ave (5 peaks):					304.9	Total Col2Ave (4 peaks):				238.5 RPD = 24
Corrected Ave (4 peaks):					296.9	Corrected Ave (3 peaks):				223.3 RPD = 28
CalAmt %D:					22.0	CalAmt %D:				-4.6

Total PCB Area Col1 (5.931 - 13.803) = 1487867 Col1 Total PCB = 0.6 ppm*

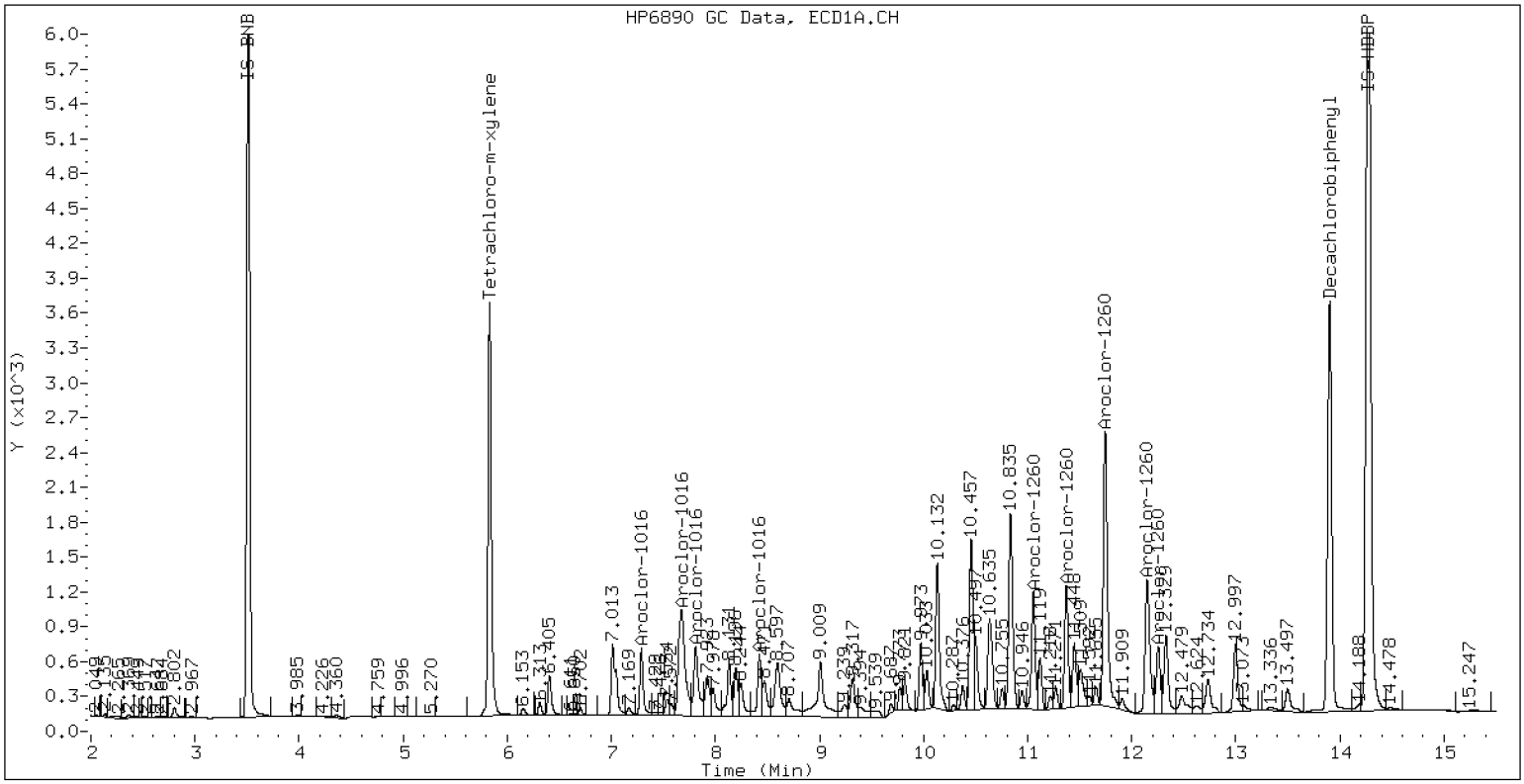
Total PCB Area Col2 (5.809 - 14.028) = 853821 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

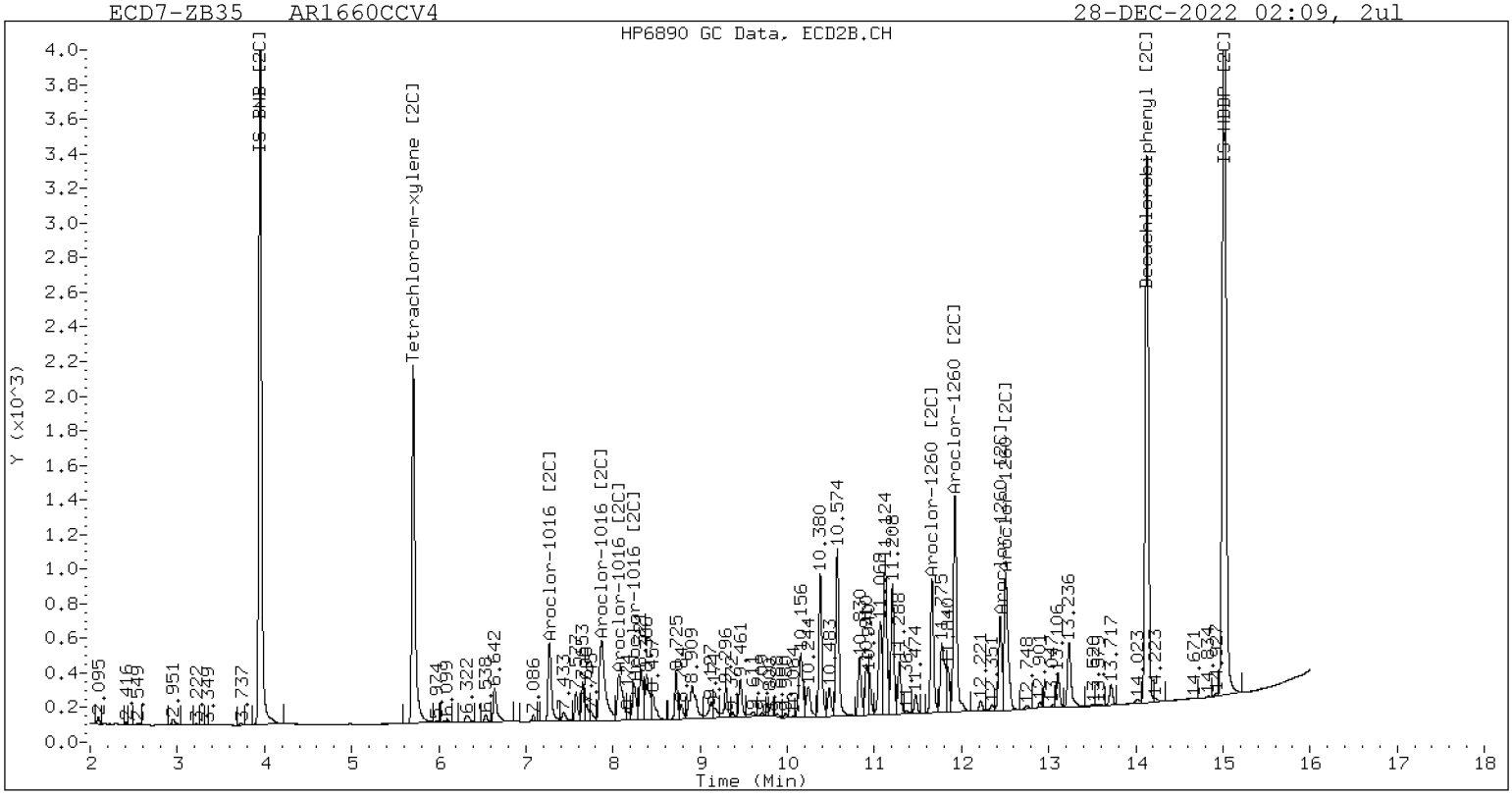
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 28-DEC-2022 02:09, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCV4 28-DEC-2022 02:09, 2ul

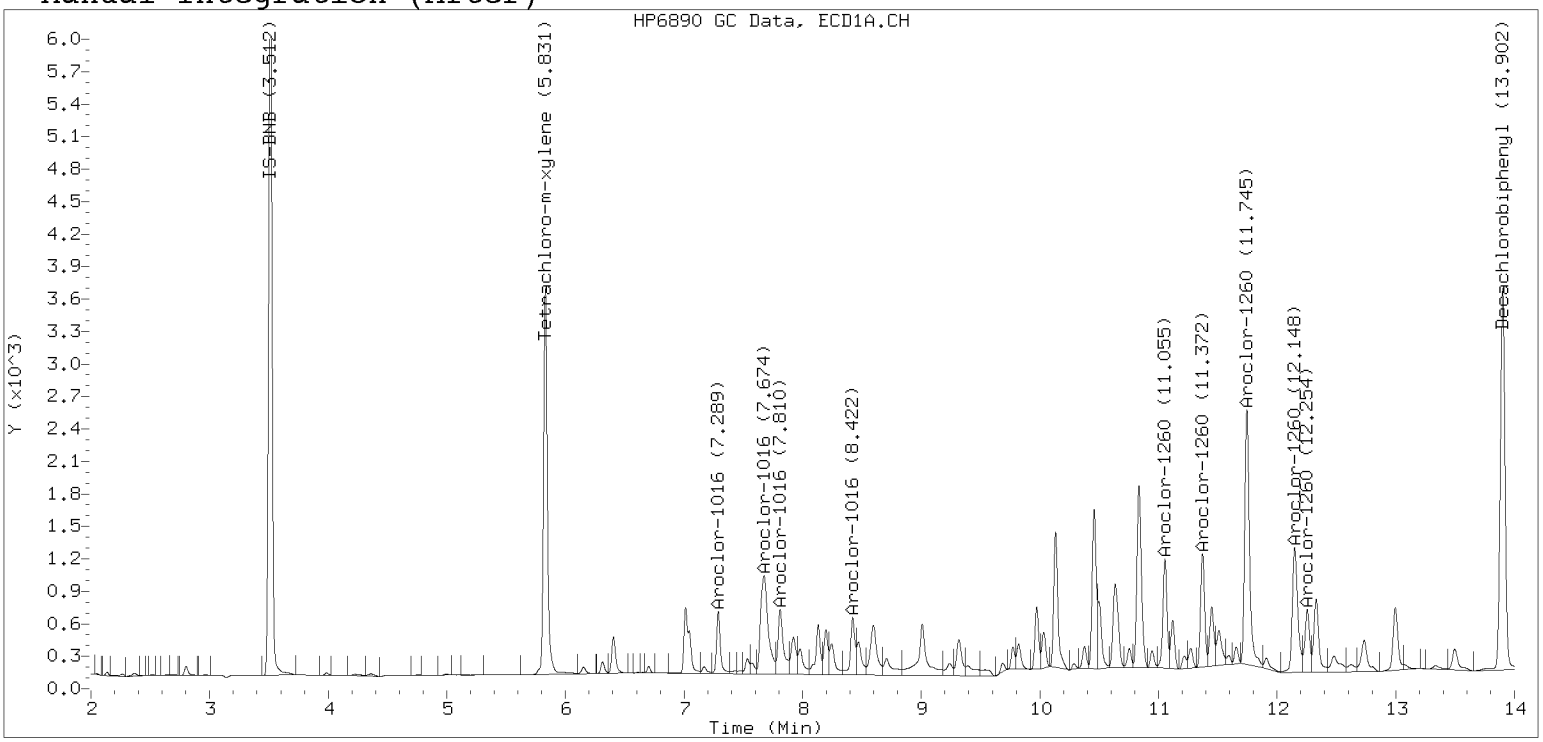


ZB-35 Manual Integration: NO

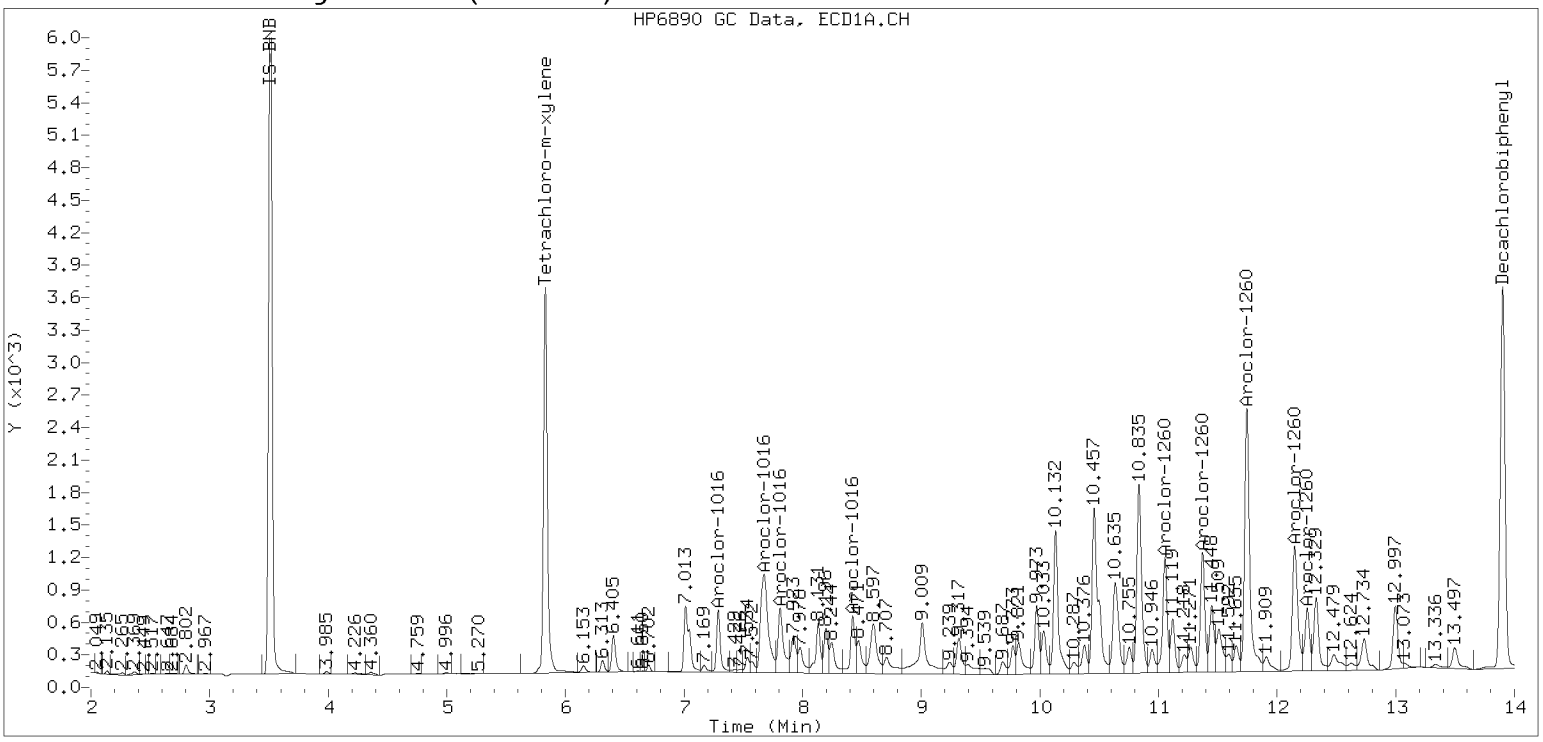
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221227.b/12272228ECD7.D Injection Date: 28-DEC-2022 02:09

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272239ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV5	Injection Time:	06:01
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	267	0.0576965	0.0622493		6.8	+/-20
Aroclor-1254 (1)	A	250.00	250		0.0703209			
Aroclor-1254 (2)	A	250.00	272		0.0298467			
Aroclor-1254 (3)	A	250.00	226		0.0401417			
Aroclor-1254 (4)	A	250.00	288		0.0999266			
Aroclor-1254 (5)	A	250.00	299		0.0710104			
Aroclor 1254 [2C]	A	250.00	235	0.0638047	0.0617294		-5.8	+/-20
Aroclor-1254 (1) [2C]	A	250.00	239		0.0494130			
Aroclor-1254 (2) [2C]	A	250.00	155		0.0256849			
Aroclor-1254 (3) [2C]	A	250.00	226		0.0807510			
Aroclor-1254 (4) [2C]	A	250.00	280		0.1033836			
Aroclor-1254 (5) [2C]	A	250.00	277		0.0494144			
Decachlorobiphenyl	A	40.000	44.4	0.7333327	0.8139294		11.0	+/-20
Tetrachlorometaxylene	A	40.000	38.4	1.1336710	1.0879620		-4.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.6	1.1358180	1.1825020		4.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.8	1.0966080	1.0373200		-5.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272239ECD7.D
Data file 2: /221227.b/221227.b/12272239ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 28-DEC-2022 06:01
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	192115	5.709	0.001	123925	38.4	37.8	1.4	Tetrachloro-m-xylene
13.903	-0.000	300471	14.129	0.000	224799	44.4	41.6	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	353165	-21.1
Hexabromobiphenyl	798898	738322	-7.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	238933	-4.1
Hexabromobiphenyl	362541	380209	4.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	9.314	-0.007	77609	249.6	1	9.462	0.001	36895	239.5
Aroclor-1254	2	9.392	-0.010	32940	272.4	2	9.979	-0.000	19178	154.8
Aroclor-1254	3	9.684	-0.010	44302	225.6	3	10.130	-0.000	60294	226.5
Aroclor-1254	4	9.819	-0.012	110283	288.1	4	10.378	-0.000	77193	280.0
Aroclor-1254	5	10.172	-0.017	78370	298.6	5	10.576	0.000	36896	277.5

Total Col1Ave (5 peaks): 266.9 Total Col2Ave (5 peaks): 235.7 RPD = 12

Corrected Ave (4 peaks): 258.9 Corrected Ave (4 peaks): 224.6 RPD = 14

CalAmt %D: 6.7 CalAmt %D: -5.7

Total PCB Area Col1 (5.931 - 13.803) = 1154653 Col1 Total PCB = 0.3 ppm*

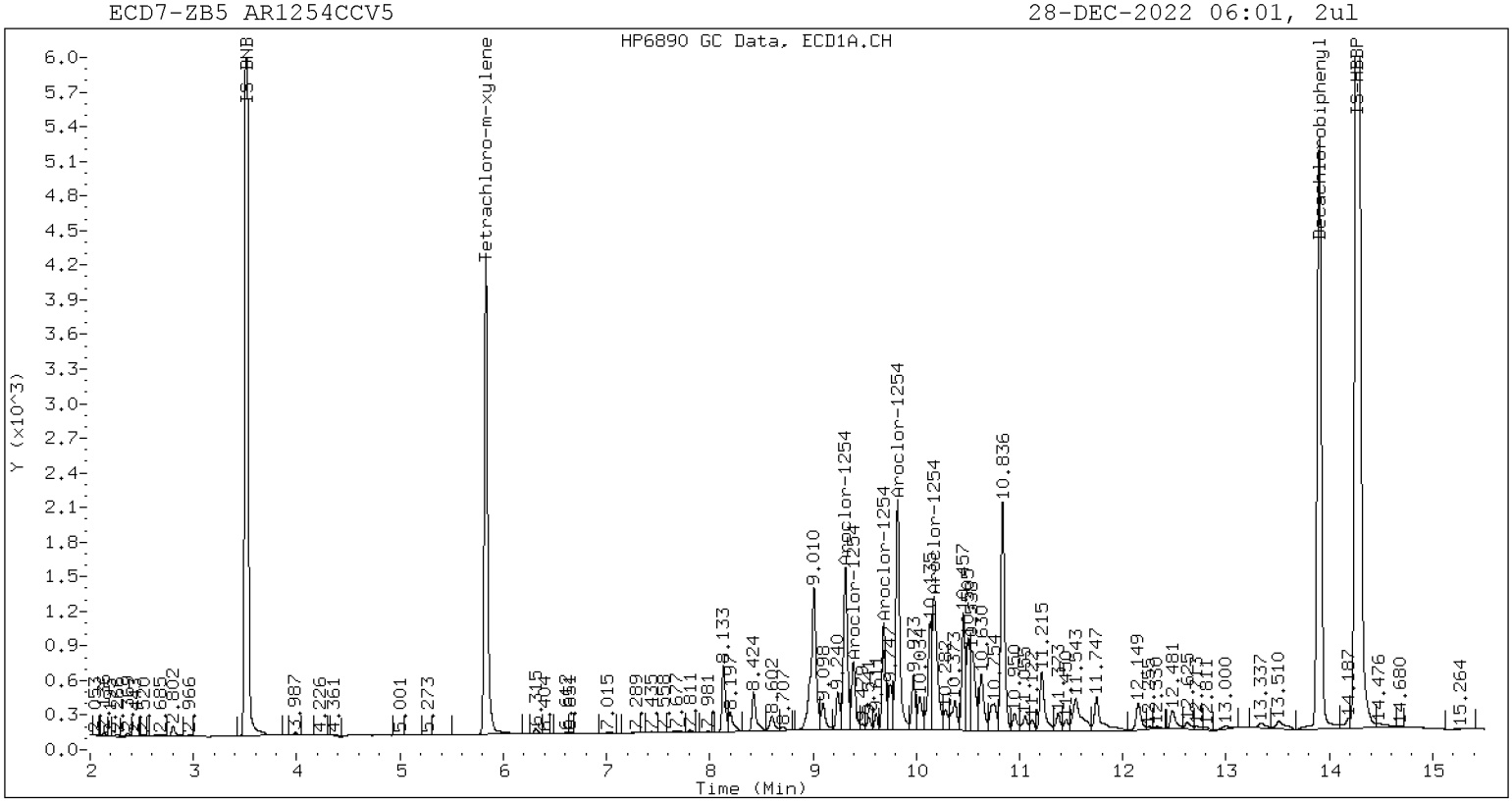
Total PCB Area Col2 (5.809 - 14.028) = 659369 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

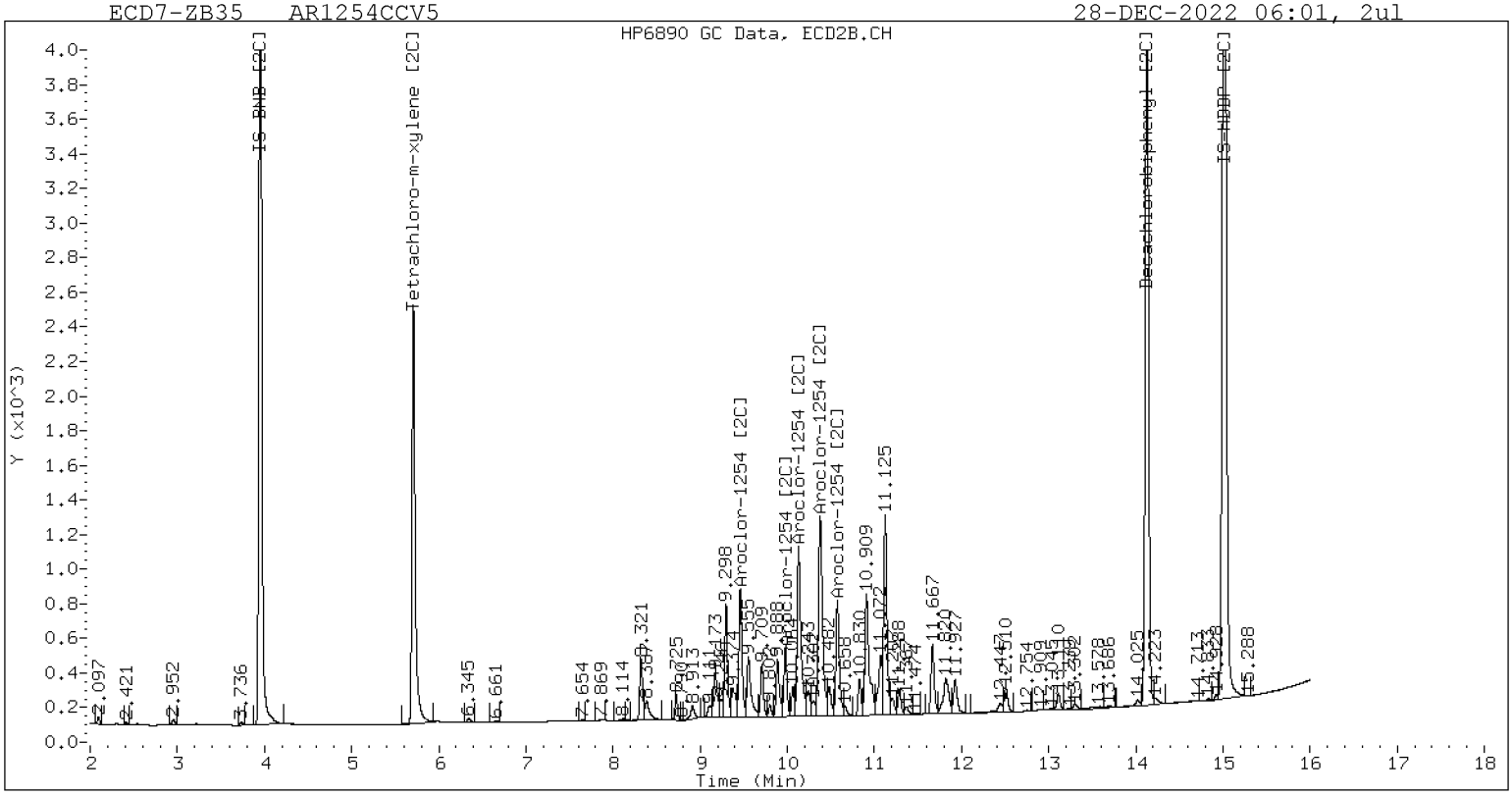
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 28-DEC-2022 06:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 28-DEC-2022 06:01, 2ul



ZB-35 Manual Integration: NO

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272240ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV6	Injection Time:	06:22
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	288	0.0441939	0.0497146		15.3	+/-20
Aroclor-1016 (1)	A	250.00	278	0.0266860	0.0297303		11.2	
Aroclor-1016 (2)	A	250.00	269	0.0861572	0.0925711		7.6	
Aroclor-1016 (3)	A	250.00	287	0.0390425	0.0447694		14.8	
Aroclor-1016 (4)	A	250.00	319	0.0248899	0.0317874		27.6	
Aroclor 1016 [2C]	A	250.00	242	0.0467310	0.0431477		-3.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	250	0.0409030	0.0409661		0.0	
Aroclor-1016 (2) [2C]	A	250.00	208	0.0882154	0.0735445		-16.8	
Aroclor-1016 (3) [2C]	A	250.00	244	0.0378846	0.0369667		-2.4	
Aroclor-1016 (4) [2C]	A	250.00	265	0.0199212	0.0211138		6.0	
Aroclor 1260	A	250.00	273	0.0390342	0.0424202		9.4	+/-20
Aroclor-1260 (1)	A	250.00	275	0.0291201	0.0320072		10.0	
Aroclor-1260 (2)	A	250.00	273	0.0301181	0.0329333		9.2	
Aroclor-1260 (3)	A	250.00	271	0.0791351	0.0857473		8.4	
Aroclor-1260 (4)	A	250.00	265	0.0403003	0.0427528		6.0	
Aroclor-1260 (5)	A	250.00	283	0.0164974	0.0186603		13.2	
Aroclor 1260 [2C]	A	250.00	219	0.0617619	0.0498256		-12.4	+/-20
Aroclor-1260 (1) [2C]	A	250.00	248	0.0422283	0.0418235		-0.8	
Aroclor-1260 (2) [2C]	A	250.00	174	0.1059643	0.0736869		-30.4	
Aroclor-1260 (3) [2C]	A	250.00	263	0.0282173	0.0297138		5.2	
Aroclor-1260 (4) [2C]	A	250.00	191	0.0706376	0.0540781		-23.6	
Decachlorobiphenyl	A	40.000	45.2	0.7333327	0.8288192		13.0	+/-20
Tetrachlorometaxylene	A	40.000	40.2	1.1336710	1.1394690		0.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.5	1.1358180	1.1796510		3.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.9	1.0966080	1.0943320		-0.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272240ECD7.D
Data file 2: /221227.b/221227.b/12272240ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 28-DEC-2022 06:22
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.833	0.002	157220	5.710	0.002	101745	40.2	39.9	0.7	Tetrachloro-m-xylene
13.903	-0.001	259035	14.129	0.001	184915	45.2	41.5	8.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	275953	-38.4
Hexabromobiphenyl	798898	625070	-21.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	185949	-25.3
Hexabromobiphenyl	362541	313508	-13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.290	0.001	25638	278.5	1	7.273	0.000	23805	250.4
Aroclor-1016	2	7.676	0.005	79829	268.6	2	7.872	0.001	42736	208.4
Aroclor-1016	3	7.811	0.002	38607	286.7	3	8.072	0.000	21481	243.9
Aroclor-1016	4	8.423	0.000	27412	319.3	4	8.242	0.000	12269	265.0
Total Col1Ave (4 peaks):					288.3	Total Col2Ave (4 peaks):				241.9 RPD = 17
Corrected Ave (3 peaks):					277.9	Corrected Ave (3 peaks):				234.3 RPD = 17
CalAmt %D:					15.3	CalAmt %D:				-3.2
Aroclor-1260	1	11.056	0.001	62521	274.8	1	11.664	0.001	40975	247.6
Aroclor-1260	2	11.372	0.001	64330	273.4	2	11.927	0.001	72192	173.8
Aroclor-1260	3	11.746	0.002	167494	270.9	3	12.446	0.001	29111	263.3
Aroclor-1260	4	12.149	-0.000	83511	265.2	4	12.510	0.001	52981	191.4
Aroclor-1260	5	12.255	-0.001	36450	282.8	NS	---			----
Total Col1Ave (5 peaks):					273.4	Total Col2Ave (4 peaks):				219.0 RPD = 22
Corrected Ave (4 peaks):					271.1	Corrected Ave (3 peaks):				204.3 RPD = 28
CalAmt %D:					9.4	CalAmt %D:				-12.4

Total PCB Area Col1 (5.931 - 13.803) = 1776659 Col1 Total PCB = 0.7 ppm*

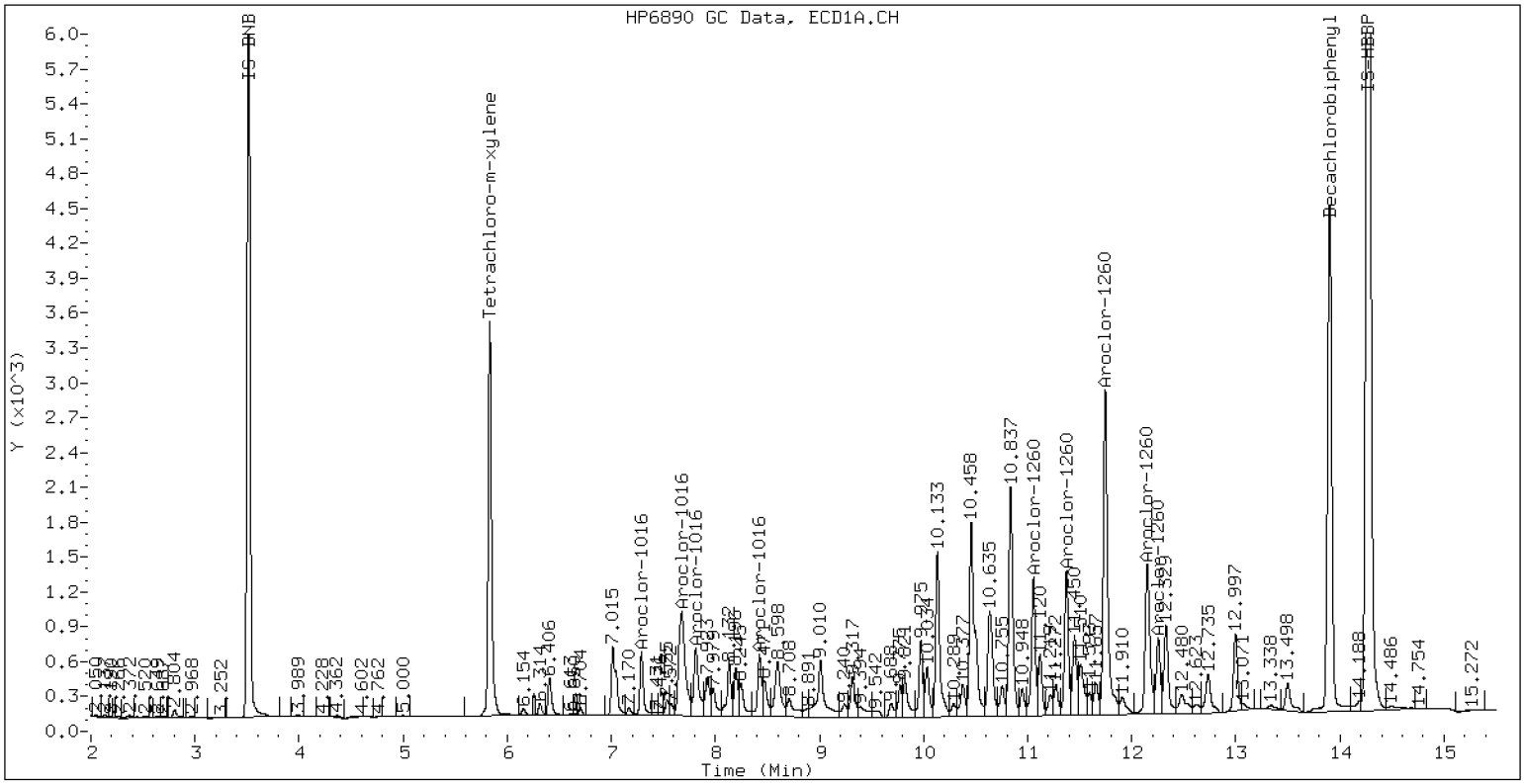
Total PCB Area Col2 (5.809 - 14.028) = 888113 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

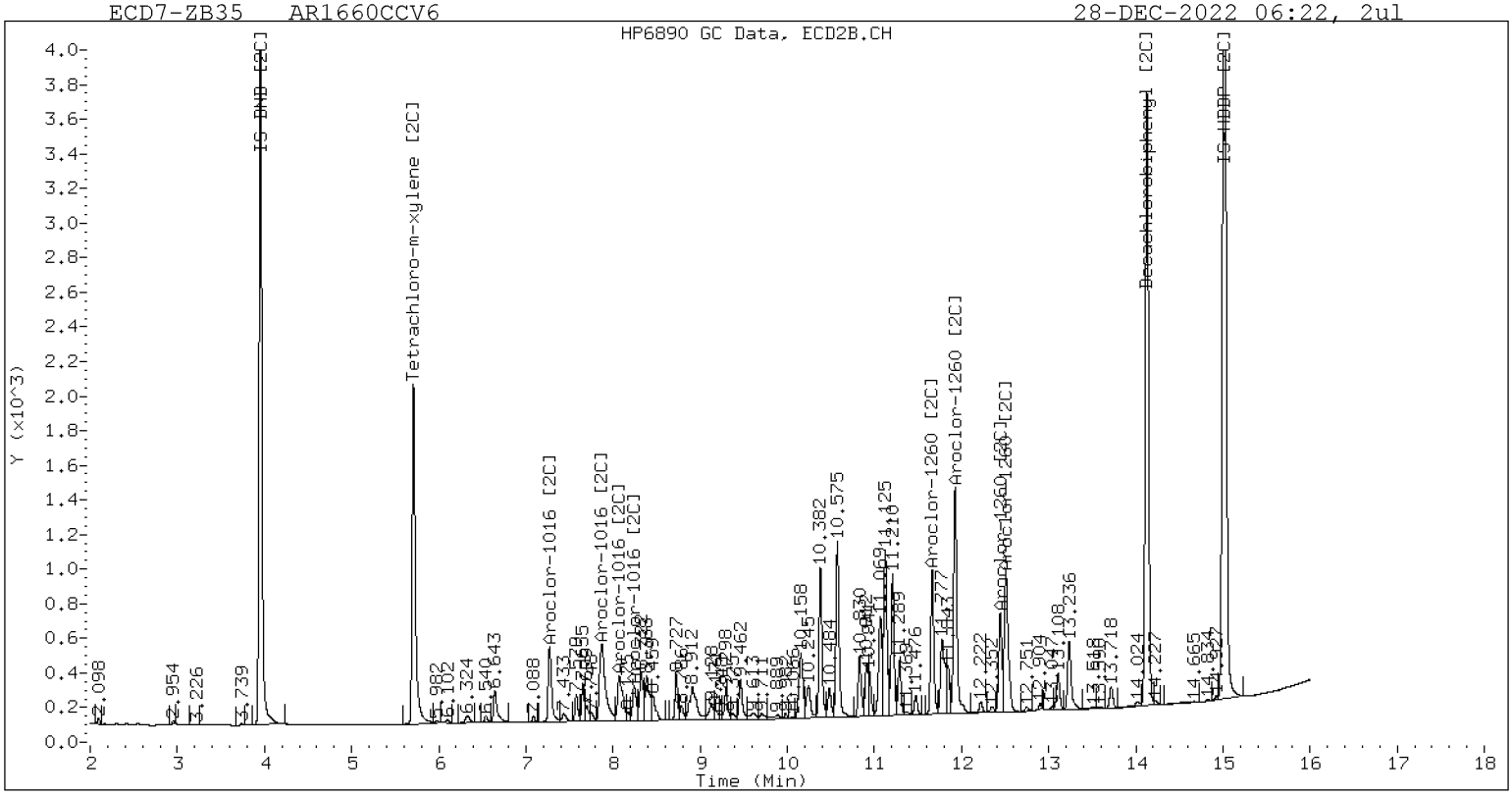
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 28-DEC-2022 06:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 28-DEC-2022 06:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272247ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV7	Injection Time:	08:50
Sequence Name:	AR1248CCV7		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	260	0.0490062	0.0521620		3.8	+/-20
Aroclor-1248 (1)	A	250.00	282		0.0387752			
Aroclor-1248 (2)	A	250.00	296		0.0520573			
Aroclor-1248 (3)	A	250.00	289		0.0913577			
Aroclor-1248 (4)	A	250.00	171		0.0264578			
Aroclor 1248 [2C]	A	250.00	251	0.0394876	0.0400584		0.3	+/-20
Aroclor-1248 (1) [2C]	A	250.00	258		0.0337053			
Aroclor-1248 (2) [2C]	A	250.00	199		0.0273375			
Aroclor-1248 (3) [2C]	A	250.00	275		0.0459657			
Aroclor-1248 (4) [2C]	A	250.00	271		0.0532252			
Decachlorobiphenyl	A	40.000	41.5	0.7333327	0.7605915		3.8	+/-20
Tetrachlorometaxylene	A	40.000	37.4	1.1336710	1.0592880		-6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.5	1.1358180	1.1774090		3.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.7	1.0966080	1.0326760		-5.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272247ECD7.D
Data file 2: /221227.b/221227.b/12272247ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 28-DEC-2022 08:50
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	195873	5.709	-0.000	127299	37.4	37.7	0.8	Tetrachloro-m-xylene
13.904	0.000	336896	14.131	0.003	249842	41.5	41.5	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	369820	-17.4
Hexabromobiphenyl	798898	885879	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	246542	-1.0
Hexabromobiphenyl	362541	424393	17.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.423	-0.005	44812	281.8	1	8.322	0.000	25968	257.8
Aroclor-1248	2	8.598	-0.006	60162	296.3	2	8.727	0.000	21062	198.8
Aroclor-1248	3	9.016	-0.006	105581	289.1	3	9.173	0.000	35414	274.8
Aroclor-1248	4	9.311	-0.001	30577	170.9	4	9.594	0.000	41007	271.1
Total Col1Ave (4 peaks):					259.5	Total Col2Ave (4 peaks):				250.6 RPD = 3
Corrected Ave (3 peaks):					247.3	Corrected Ave (3 peaks):				242.6 RPD = 2
CalAmt %D:					3.8	CalAmt %D:				0.3

Total PCB Area Col1 (5.931 - 13.803) = 993977 Col1 Total PCB = 0.3 ppm*

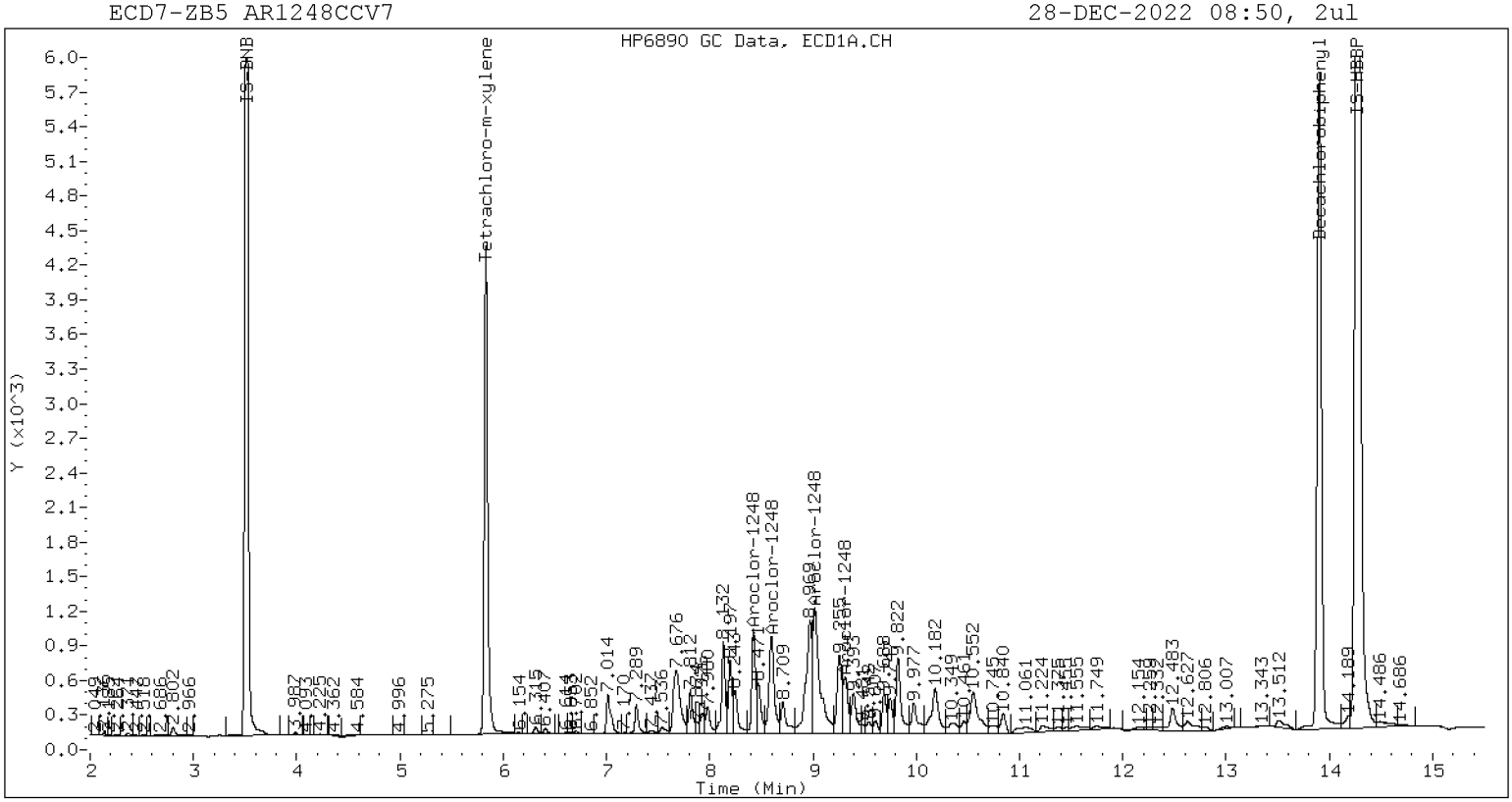
Total PCB Area Col2 (5.809 - 14.028) = 509464 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

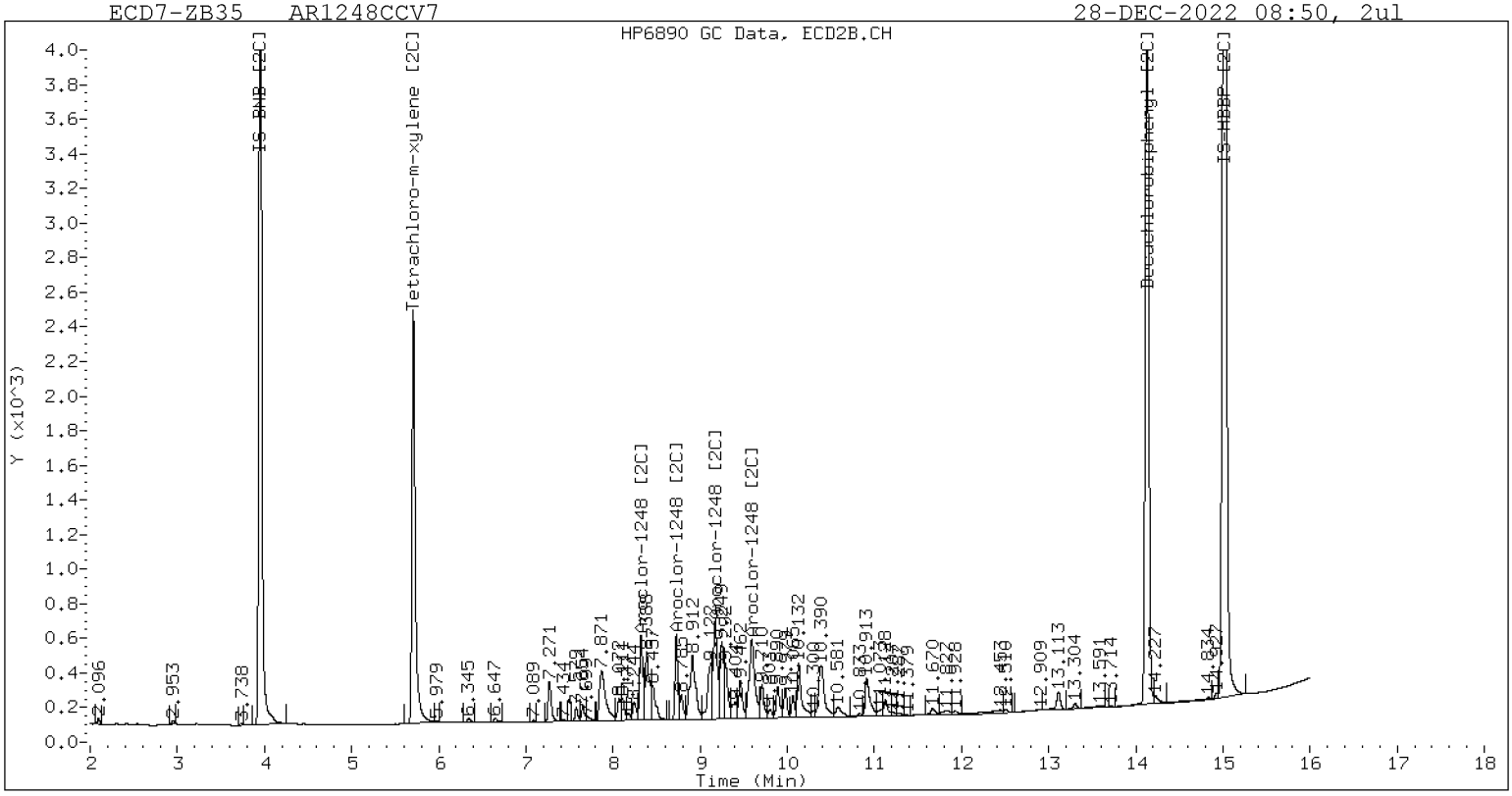
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 28-DEC-2022 08:50, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 28-DEC-2022 08:50, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272248ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV8	Injection Time:	09:11
Sequence Name:	AR1660CCV8		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	295	0.0441939	0.0507524		17.9	+/-20
Aroclor-1016 (1)	A	250.00	282	0.0266860	0.0300679		12.8	
Aroclor-1016 (2)	A	250.00	274	0.0861572	0.0943709		9.6	
Aroclor-1016 (3)	A	250.00	291	0.0390425	0.0454998		16.4	
Aroclor-1016 (4)	A	250.00	332	0.0248899	0.0330711		32.8	
Aroclor 1016 [2C]	A	250.00	249	0.0467310	0.0443186		-0.6	+/-20
Aroclor-1016 (1) [2C]	A	250.00	258	0.0409030	0.0422458		3.2	
Aroclor-1016 (2) [2C]	A	250.00	214	0.0882154	0.0753798		-14.4	
Aroclor-1016 (3) [2C]	A	250.00	250	0.0378846	0.0379378		0.0	
Aroclor-1016 (4) [2C]	A	250.00	272	0.0199212	0.0217109		8.8	
Aroclor 1260	A	250.00	262	0.0390342	0.0406077		4.6	+/-20
Aroclor-1260 (1)	A	250.00	261	0.0291201	0.0304302		4.4	
Aroclor-1260 (2)	A	250.00	261	0.0301181	0.0314386		4.4	
Aroclor-1260 (3)	A	250.00	260	0.0791351	0.0823535		4.0	
Aroclor-1260 (4)	A	250.00	253	0.0403003	0.0407991		1.2	
Aroclor-1260 (5)	A	250.00	273	0.0164974	0.0180173		9.2	
Aroclor 1260 [2C]	A	250.00	212	0.0617619	0.0482543		-15.1	+/-20
Aroclor-1260 (1) [2C]	A	250.00	239	0.0422283	0.0403893		-4.4	
Aroclor-1260 (2) [2C]	A	250.00	168	0.1059643	0.0712209		-32.8	
Aroclor-1260 (3) [2C]	A	250.00	256	0.0282173	0.0288416		2.4	
Aroclor-1260 (4) [2C]	A	250.00	186	0.0706376	0.0525653		-25.6	
Decachlorobiphenyl	A	40.000	43.3	0.7333327	0.7941732		8.3	+/-20
Tetrachlorometaxylene	A	40.000	41.1	1.1336710	1.1637160		2.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.5	1.1358180	1.1785060		3.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.5	1.0966080	1.1112740		1.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272248ECD7.D
Data file 2: /221227.b/221227.b/12272248ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 28-DEC-2022 09:11
Report Date: 12/30/2022 14:46
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.000	164912	5.708	-0.001	105081	41.1	40.5	1.3	Tetrachloro-m-xylene
13.903	-0.001	273927	14.130	0.002	197187	43.3	41.5	4.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	283423	-36.7
Hexabromobiphenyl	798898	689842	-13.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	189118	-24.1
Hexabromobiphenyl	362541	334639	-7.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.289	0.000	26631	281.7	1	7.272	-0.000	24967	258.2
Aroclor-1016	2	7.676	0.004	83584	273.8	2	7.871	-0.000	44549	213.6
Aroclor-1016	3	7.811	0.002	40299	291.3	3	8.070	-0.001	22421	250.4
Aroclor-1016	4	8.422	-0.000	29291	332.2	4	8.242	-0.000	12831	272.5
Total Col1Ave (4 peaks):					294.8	Total Col2Ave (4 peaks):				248.7 RPD = 17
Corrected Ave (3 peaks):					282.3	Corrected Ave (3 peaks):				240.7 RPD = 16
CalAmt %D:					17.9	CalAmt %D:				-0.5
Aroclor-1260	1	11.055	-0.000	65600	261.2	1	11.663	-0.000	42237	239.1
Aroclor-1260	2	11.372	0.000	67774	261.0	2	11.926	0.001	74479	168.0
Aroclor-1260	3	11.745	0.002	177534	260.2	3	12.444	-0.000	30161	255.5
Aroclor-1260	4	12.149	0.000	87953	253.1	4	12.508	-0.001	54970	186.0
Aroclor-1260	5	12.255	-0.000	38841	273.0	NS	---			----
Total Col1Ave (5 peaks):					261.7	Total Col2Ave (4 peaks):				212.2 RPD = 21
Corrected Ave (4 peaks):					258.9	Corrected Ave (3 peaks):				197.7 RPD = 27
CalAmt %D:					4.7	CalAmt %D:				-15.1

Total PCB Area Col1 (5.931 - 13.803) = 1865106 Col1 Total PCB = 0.7 ppm*

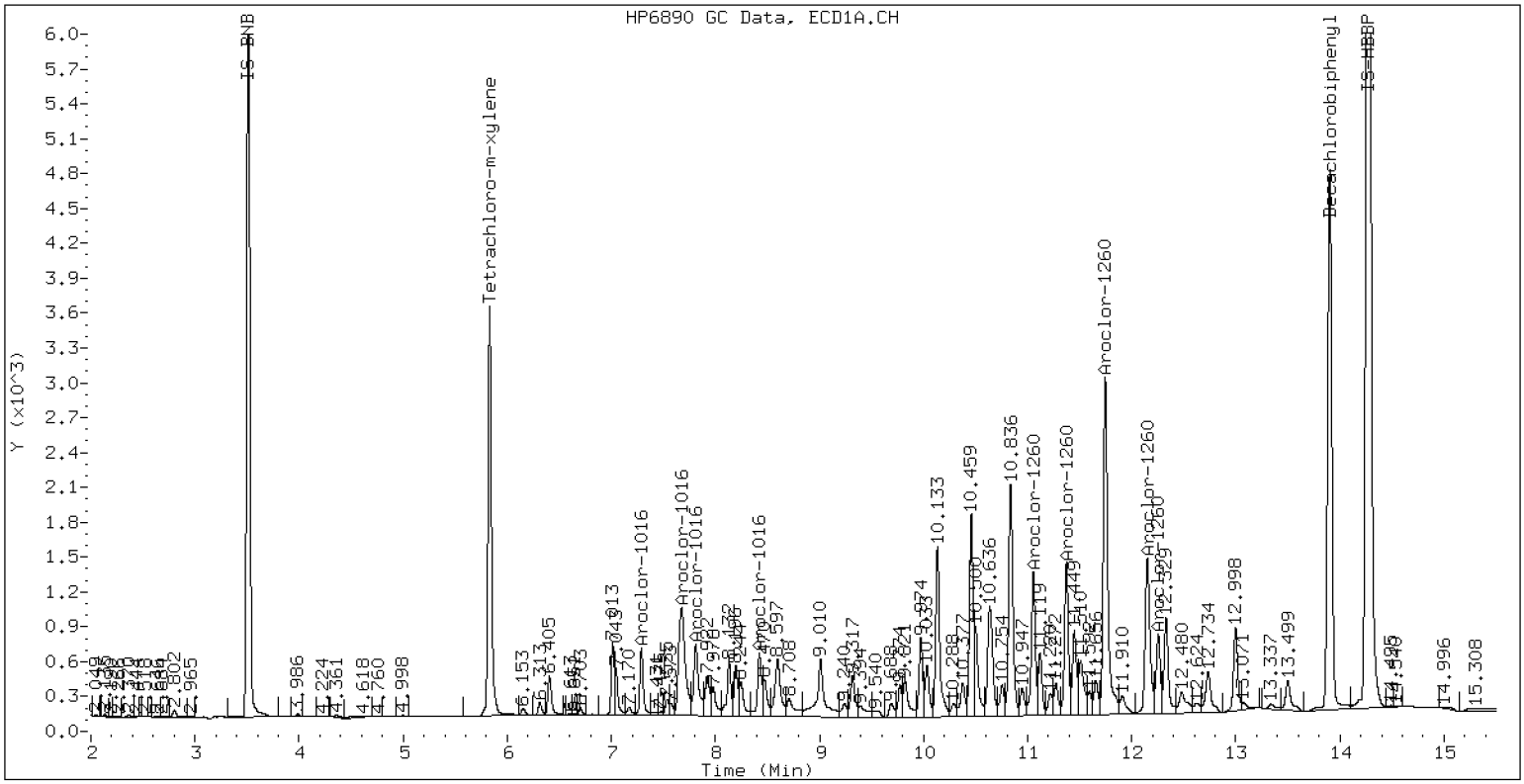
Total PCB Area Col2 (5.809 - 14.028) = 917097 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

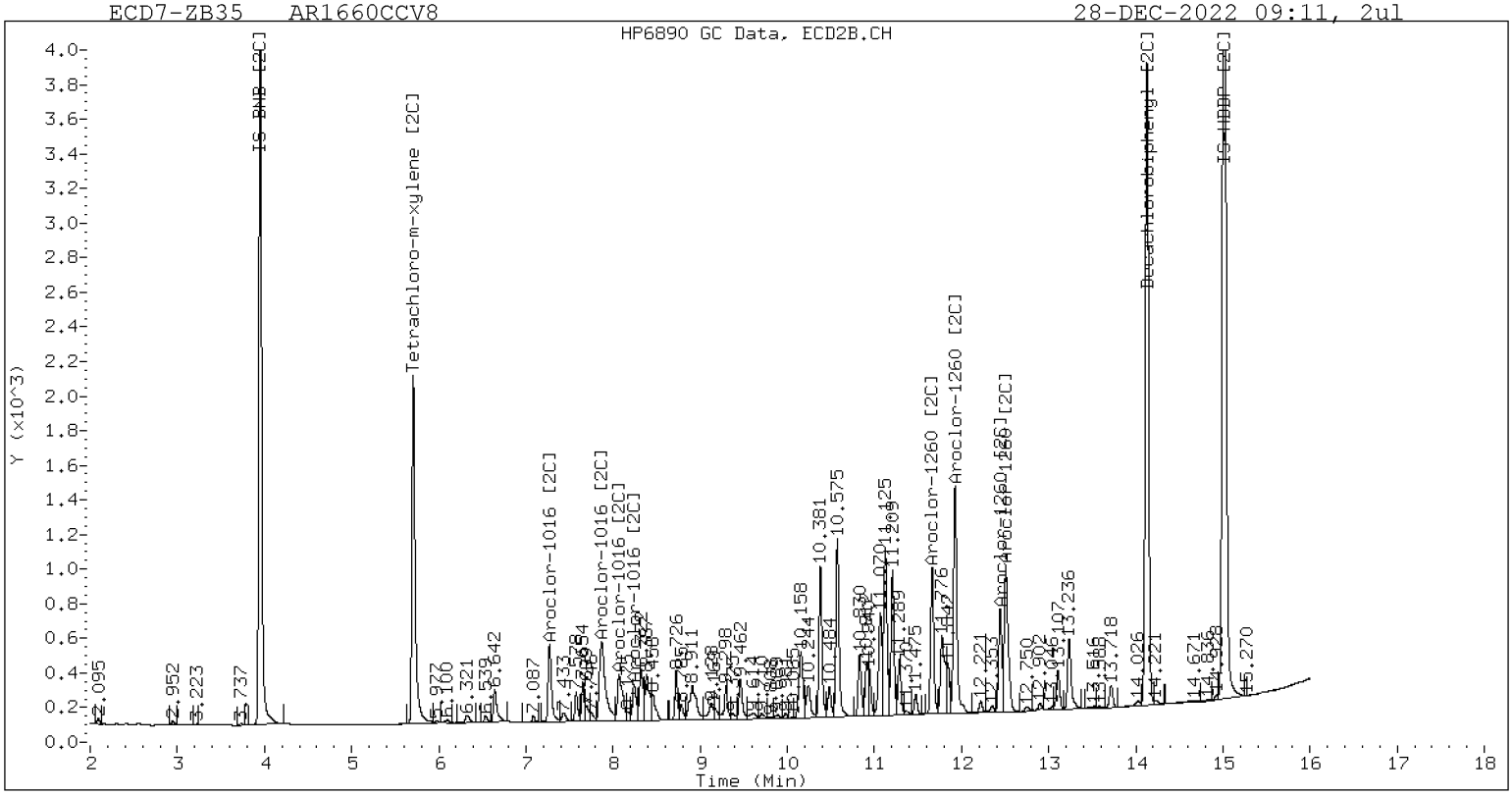
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 28-DEC-2022 09:11, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 28-DEC-2022 09:11, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272259ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCV9	Injection Time:	13:03
Sequence Name:	AR1242CCV9		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	274	0.0396000	0.0435843		9.7	+/-20
Aroclor-1242 (1)	A	250.00	264		0.0239136			
Aroclor-1242 (2)	A	250.00	268		0.0772773			
Aroclor-1242 (3)	A	250.00	270		0.0223738			
Aroclor-1242 (4)	A	250.00	295		0.0507725			
Aroclor 1242 [2C]	A	250.00	274	0.0391981	0.0399894		9.5	+/-20
Aroclor-1242 (1) [2C]	A	250.00	272		0.0368940			
Aroclor-1242 (2) [2C]	A	250.00	210		0.0603214			
Aroclor-1242 (3) [2C]	A	250.00	297		0.0275369			
Aroclor-1242 (4) [2C]	A	250.00	316		0.0352055			
Decachlorobiphenyl	A	40.000	43.4	0.7333327	0.7956008		8.5	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.1336710	1.1124470		-2.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.6	1.1358180	1.2383780		9.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.2	1.0966080	1.1032180		0.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272259ECD7.D
Data file 2: /221227.b/221227.b/12272259ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 28-DEC-2022 13:03
Report Date: 12/30/2022 14:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.830	-0.001	181478	5.707	-0.002	123145	39.3	40.2	2.5	Tetrachloro-m-xylene
13.902	-0.002	243175	14.129	0.001	202211	43.4	43.6	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	326268	-27.1
Hexabromobiphenyl	798898	611299	-23.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	223247	-10.4
Hexabromobiphenyl	362541	326574	-9.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	7.289	-0.006	24382	263.7	1	7.271	0.000	25739	272.4
Aroclor-1242	2	7.675	-0.011	78791	268.3	2	7.870	0.000	42083	209.8
Aroclor-1242	3	8.421	-0.008	22812	270.0	3	9.170	0.000	19211	296.9
Aroclor-1242	4	9.019	-0.012	51767	295.1	4	9.589	0.000	24561	315.8
Total Col1Ave (4 peaks):		274.3				Total Col2Ave (4 peaks):		273.7	RPD = 0	
Corrected Ave (3 peaks):		267.3				Corrected Ave (3 peaks):		259.7	RPD = 3	
CalAmt %D:		9.7				CalAmt %D:		9.5		

Total PCB Area Col1 (5.931 - 13.803) = 744872 Col1 Total PCB = 0.2 ppm*

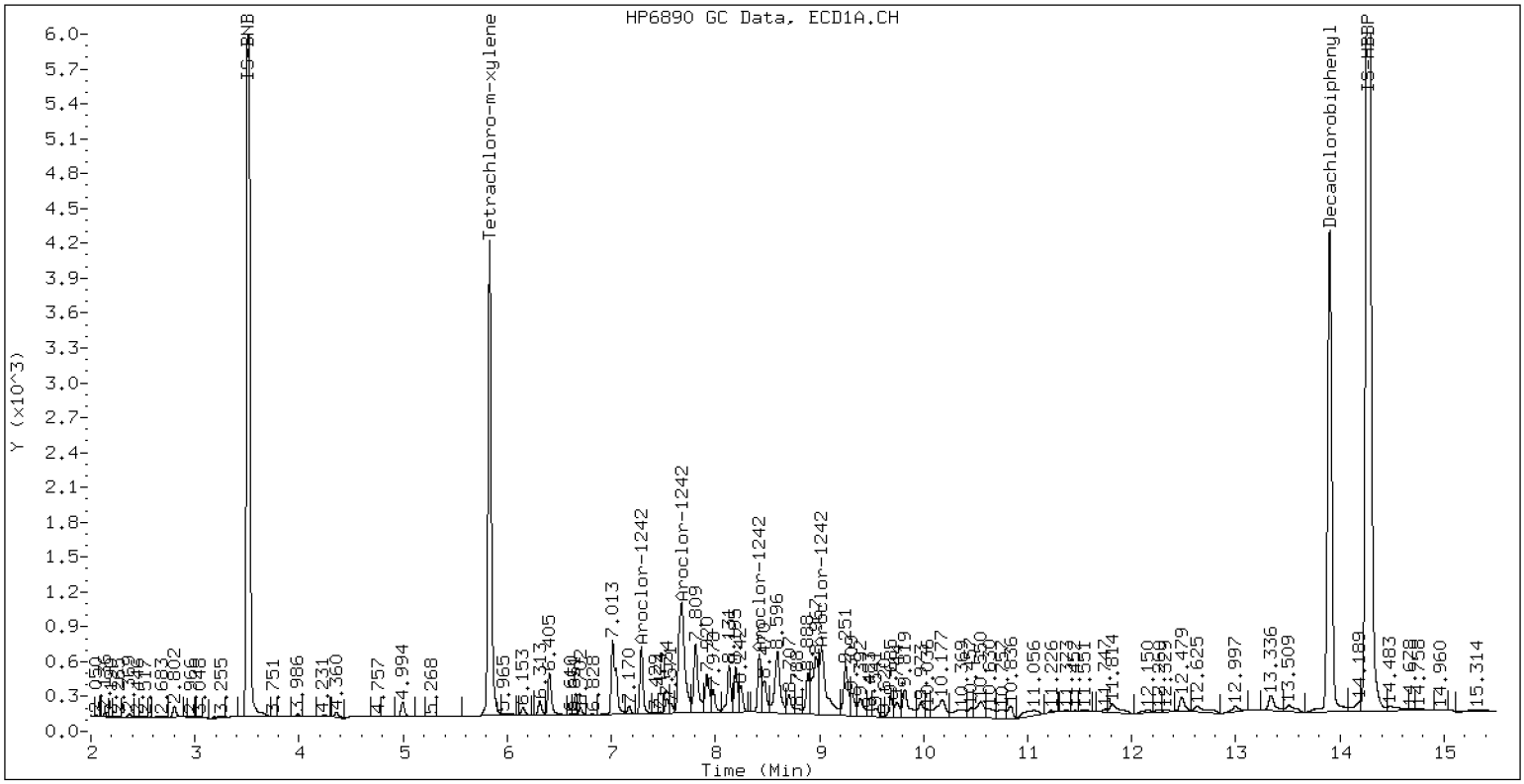
Total PCB Area Col2 (5.809 - 14.028) = 408313 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

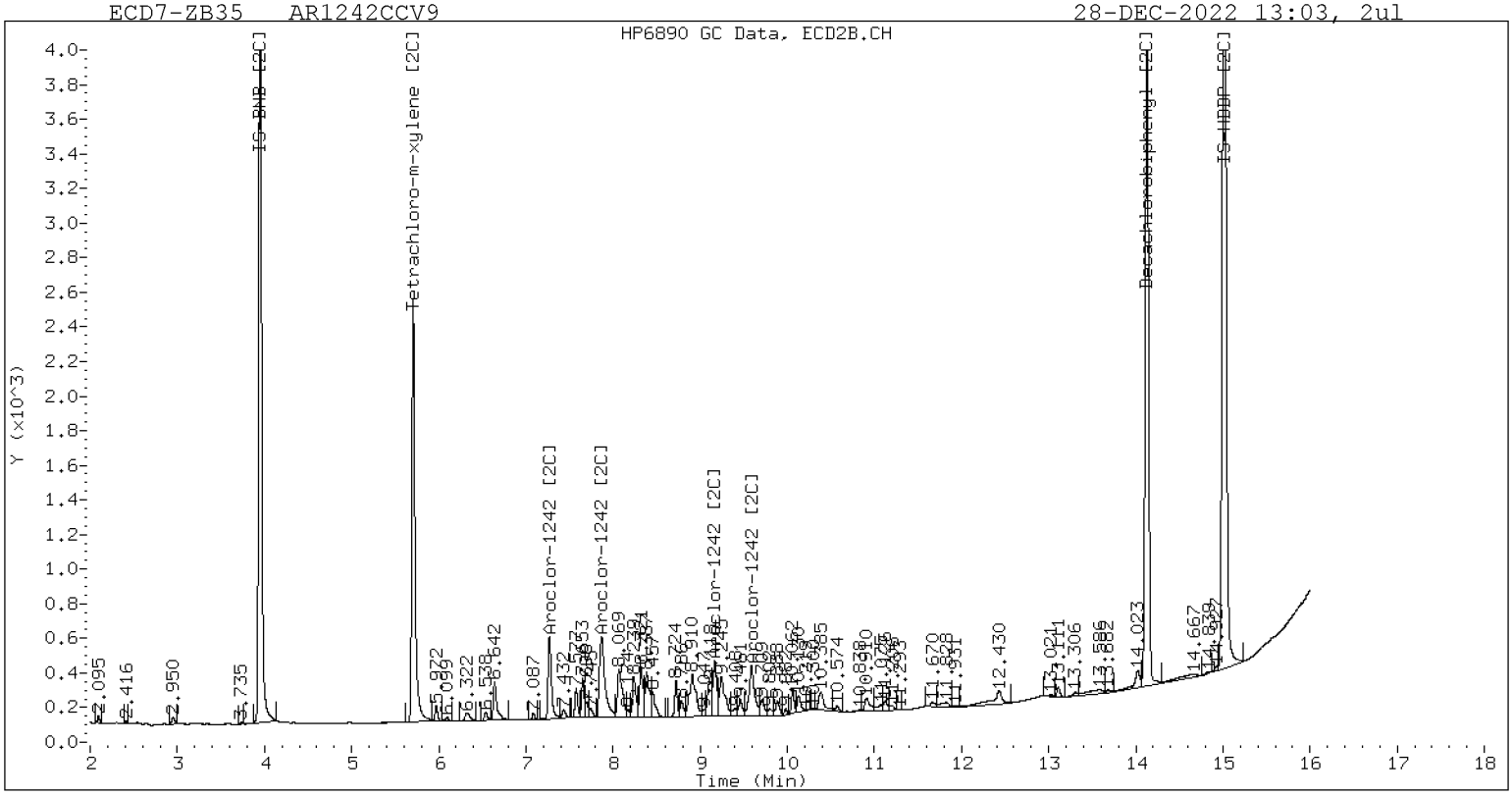
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 28-DEC-2022 13:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV9 28-DEC-2022 13:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272260ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCVA	Injection Time:	13:24
Sequence Name:	AR1660CCVA		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	241	0.0441939	0.0418727		-3.7	+/-20	
Aroclor-1016 (1)	A	250.00	265	0.0266860	0.0283380		6.0		
Aroclor-1016 (2)	A	250.00	235	0.0861572	0.0809403		-6.0		
Aroclor-1016 (3)	A	250.00	214	0.0390425	0.0334156		-14.4		
Aroclor-1016 (4)	A	250.00	249	0.0248899	0.0247970		-0.4		
Aroclor 1016 [2C]	A	250.00	251	0.0467310	0.0444913		0.2	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	261	0.0409030	0.0426875		4.4		
Aroclor-1016 (2) [2C]	A	250.00	213	0.0882154	0.0751181		-14.8		
Aroclor-1016 (3) [2C]	A	250.00	252	0.0378846	0.0381669		0.8		
Aroclor-1016 (4) [2C]	A	250.00	276	0.0199212	0.0219926		10.4		
Aroclor 1260	A	250.00	287	0.0390342	0.0439910		14.7	+/-20	
Aroclor-1260 (1)	A	250.00	276	0.0291201	0.0321094		10.4		
Aroclor-1260 (2)	A	250.00	272	0.0301181	0.0327203		8.8		
Aroclor-1260 (3)	A	250.00	271	0.0791351	0.0859111		8.4		
Aroclor-1260 (4)	A	250.00	300	0.0403003	0.0483953		20.0		
Aroclor-1260 (5)	A	250.00	315	0.0164974	0.0208190		26.0		
Aroclor 1260 [2C]	A	250.00	231	0.0617619	0.0521863		-7.6	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	260	0.0422283	0.0439873		4.0		
Aroclor-1260 (2) [2C]	A	250.00	180	0.1059643	0.0762858		-28.0		
Aroclor-1260 (3) [2C]	A	250.00	284	0.0282173	0.0320199		13.6		
Aroclor-1260 (4) [2C]	A	250.00	200	0.0706376	0.0564523		-20.0		
Decachlorobiphenyl	A	40.000	48.2	0.7333327	0.8846759		20.5	+/-20	*
Tetrachlorometaxylene	A	40.000	40.4	1.1336710	1.1462720		1.0	+/-20	
Decachlorobiphenyl [2C]	A	40.000	44.0	1.1358180	1.2495150		10.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.3	1.0966080	1.1328530		3.3	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272260ECD7.D
Data file 2: /221227.b/221227.b/12272260ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 28-DEC-2022 13:24
Report Date: 12/30/2022 14:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	0.000	160771	5.708	-0.001	108098	40.4	41.3	2.1	Tetrachloro-m-xylene
13.903	0.000	246967	14.129	0.001	187236	48.3	44.0	9.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	280511	-37.3
Hexabromobiphenyl	798898	558322	-30.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	190842	-23.4
Hexabromobiphenyl	362541	299694	-17.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.289	0.000	24841	265.5	1	7.272	-0.000	25458	260.9
Aroclor-1016	2	7.672	0.000	70952	234.9	2	7.872	0.001	44799	212.9
Aroclor-1016	3	7.809	0.000	29292	214.0	3	8.070	-0.002	22762	251.9
Aroclor-1016	4	8.423	0.000	21737	249.1	4	8.241	-0.001	13116	276.0
	Total Col1Ave (4 peaks):				240.8		Total Col2Ave (4 peaks):			250.4 RPD = 4
	Corrected Ave (3 peaks):				232.6		Corrected Ave (3 peaks):			241.9 RPD = 4
			CalAmt %D:		-3.7			CalAmt %D:		0.2
Aroclor-1260	1	11.055	0.000	56023	275.7	1	11.662	-0.001	41196	260.4
Aroclor-1260	2	11.372	0.000	57089	271.6	2	11.925	-0.001	71445	180.0
Aroclor-1260	3	11.744	0.000	149894	271.4	3	12.444	-0.001	29988	283.7
Aroclor-1260	4	12.149	0.000	84438	300.2	4	12.509	0.000	52870	199.8
Aroclor-1260	5	12.255	0.000	36324	315.5	NS	---			----
	Total Col1Ave (5 peaks):				286.9		Total Col2Ave (4 peaks):			231.0 RPD = 22
	Corrected Ave (4 peaks):				279.7		Corrected Ave (3 peaks):			213.4 RPD = 27
			CalAmt %D:		14.8			CalAmt %D:		-7.6

Total PCB Area Col1 (5.931 - 13.803) = 1523218 Col1 Total PCB = 0.6 ppm*

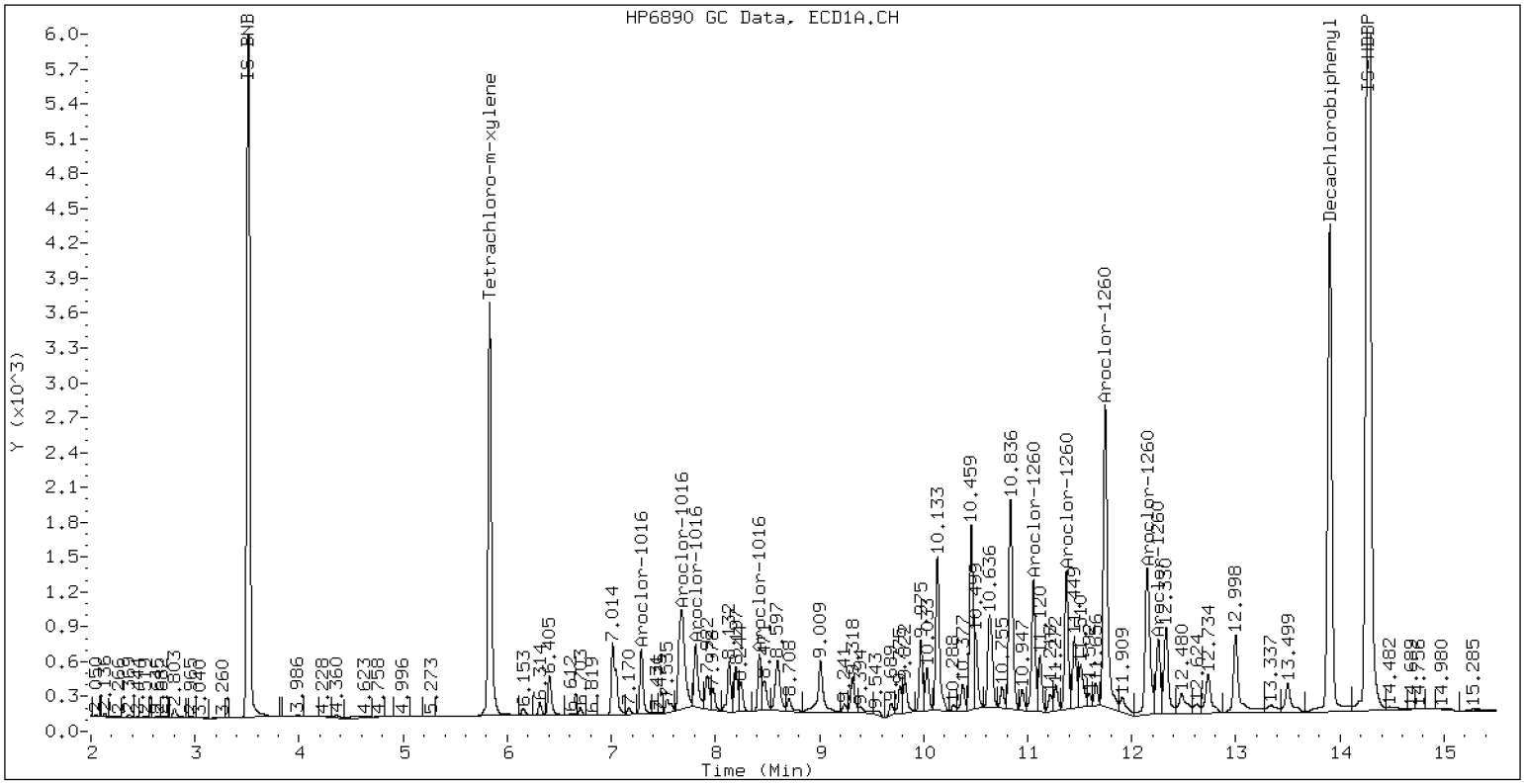
Total PCB Area Col2 (5.809 - 14.028) = 912444 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

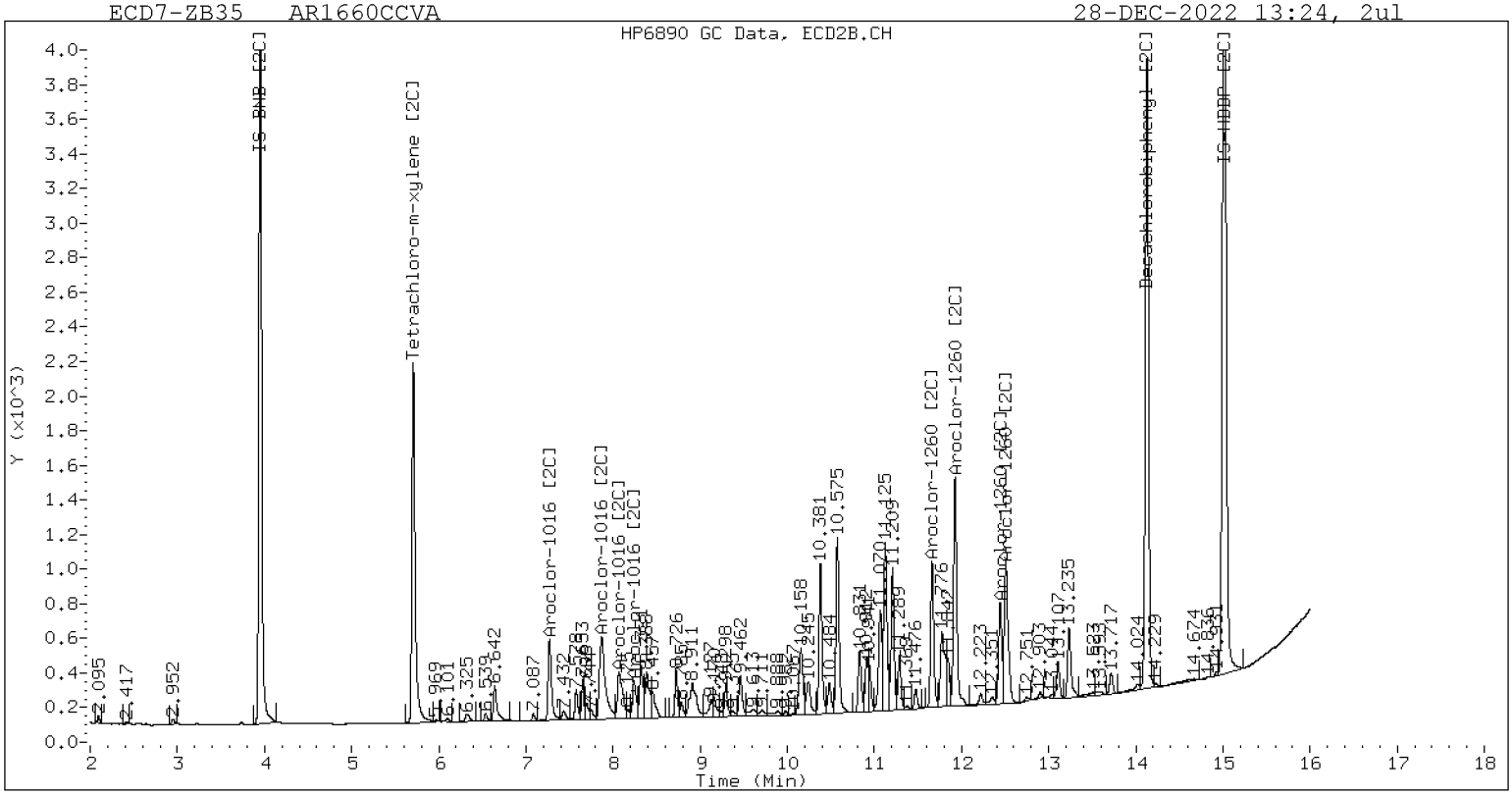
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 28-DEC-2022 13:24, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1660CCVA 28-DEC-2022 13:24, 2ul

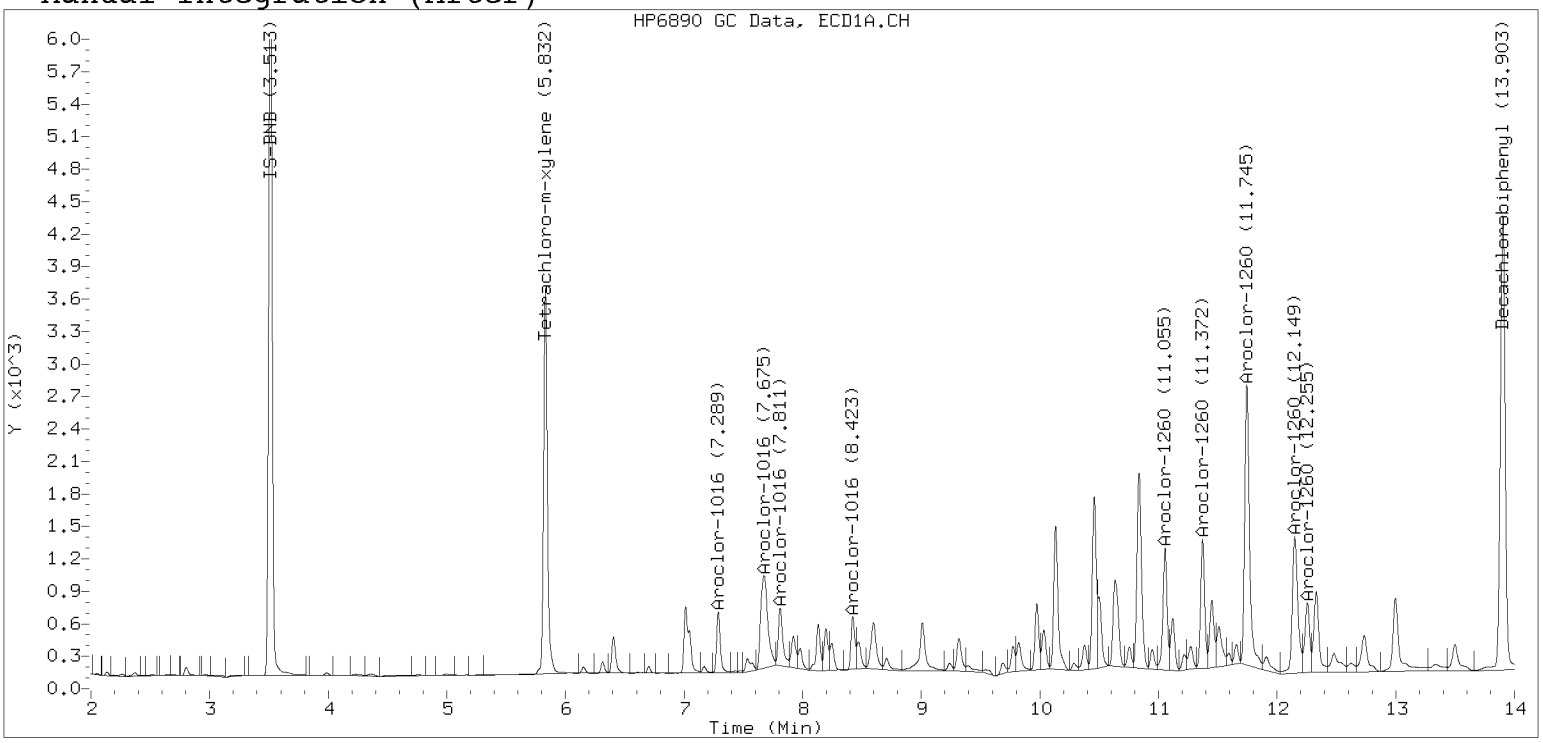


ZB-35 Manual Integration: NO

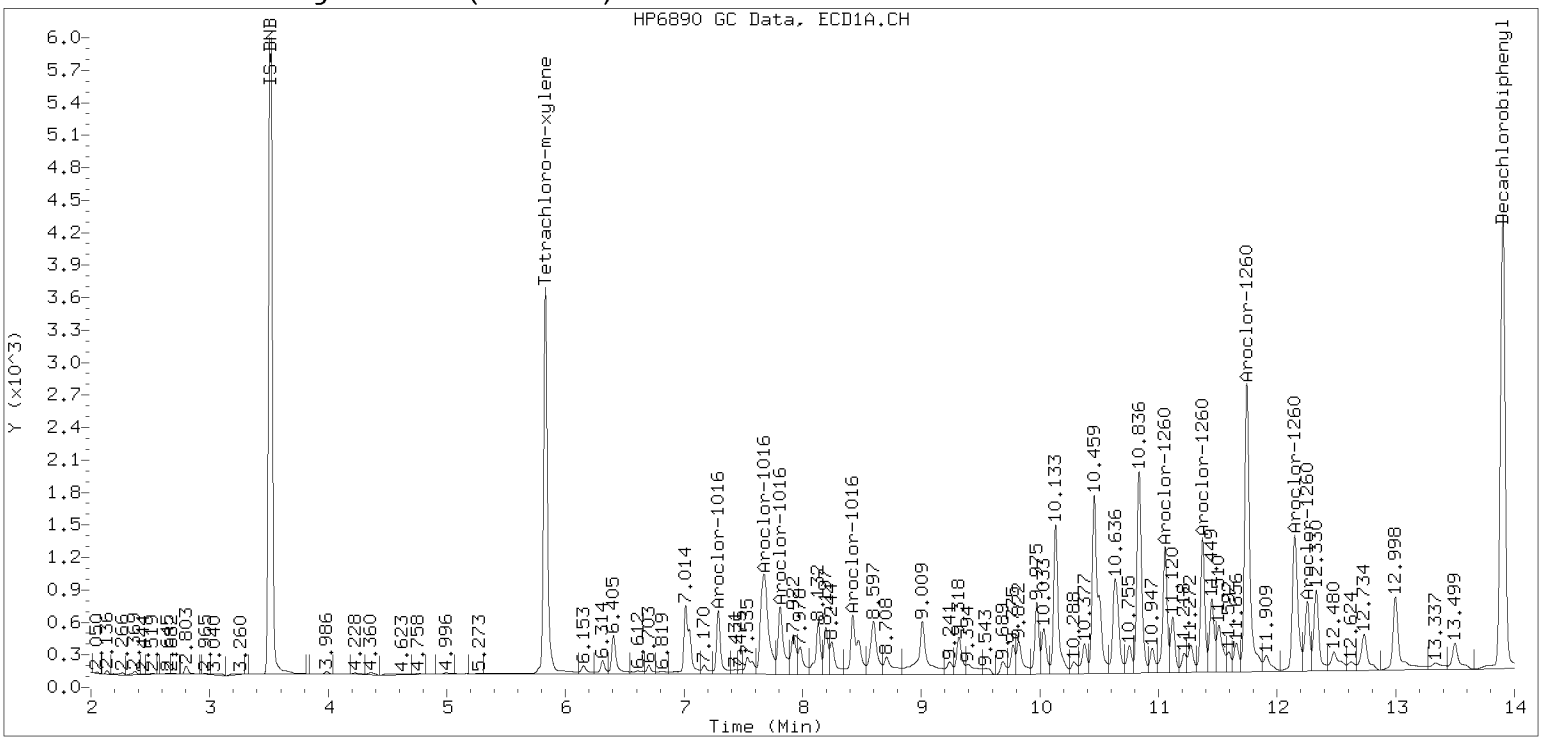
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/221227.b/12272260ECD7.D Injection Date: 28-DEC-2022 13:24

Manual Integration (After)



Processed Integration (Before)



CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272271ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCVB	Injection Time:	17:16
Sequence Name:	AR1254CCVB		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	275	0.0576965	0.0641078		10.1	+/-20
Aroclor-1254 (1)	A	250.00	254		0.0717291			
Aroclor-1254 (2)	A	250.00	286		0.0313600			
Aroclor-1254 (3)	A	250.00	230		0.0410300			
Aroclor-1254 (4)	A	250.00	295		0.1024557			
Aroclor-1254 (5)	A	250.00	311		0.0739642			
Aroclor 1254 [2C]	A	250.00	243	0.0638047	0.0634893		-2.7	+/-20
Aroclor-1254 (1) [2C]	A	250.00	248		0.0512748			
Aroclor-1254 (2) [2C]	A	250.00	166		0.0274724			
Aroclor-1254 (3) [2C]	A	250.00	230		0.0821991			
Aroclor-1254 (4) [2C]	A	250.00	286		0.1055433			
Aroclor-1254 (5) [2C]	A	250.00	286		0.0509568			
Decachlorobiphenyl	A	40.000	43.2	0.7333327	0.7924182		8.0	+/-20
Tetrachlorometaxylene	A	40.000	38.6	1.1336710	1.0932320		-3.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.6	1.1358180	1.2393460		9.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.4	1.0966080	1.0523980		-4.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272271ECD7.D
Data file 2: /221227.b/221227.b/12272271ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCVB
Client ID:
Injection Date: 28-DEC-2022 17:16
Report Date: 12/30/2022 14:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.831	-0.000	197998	5.708	-0.000	129706	38.6	38.4	0.5	Tetrachloro-m-xylene
13.903	-0.001	344650	14.129	0.001	250154	43.2	43.6	1.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	362225	-19.1
Hexabromobiphenyl	798898	869869	8.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	246496	-1.0
Hexabromobiphenyl	362541	403687	11.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.314	-0.007	81194	254.6	1	9.461	0.000	39497	248.5
Aroclor-1254	2	9.393	-0.009	35498	286.2	2	9.979	0.000	21162	165.6
Aroclor-1254	3	9.685	-0.009	46444	230.6	3	10.130	0.000	63318	230.5
Aroclor-1254	4	9.819	-0.011	115975	295.4	4	10.379	0.000	81300	285.8
Aroclor-1254	5	10.174	-0.015	83724	311.1	5	10.576	0.000	39252	286.1

Total Col1Ave (5 peaks): 275.6 Total Col2Ave (5 peaks): 243.3 RPD = 12

Corrected Ave (4 peaks): 266.7 Corrected Ave (4 peaks): 232.6 RPD = 14

CalAmt %D: 10.2 CalAmt %D: -2.7

Total PCB Area Col1 (5.931 - 13.803) = 1270304 Col1 Total PCB = 0.4 ppm*

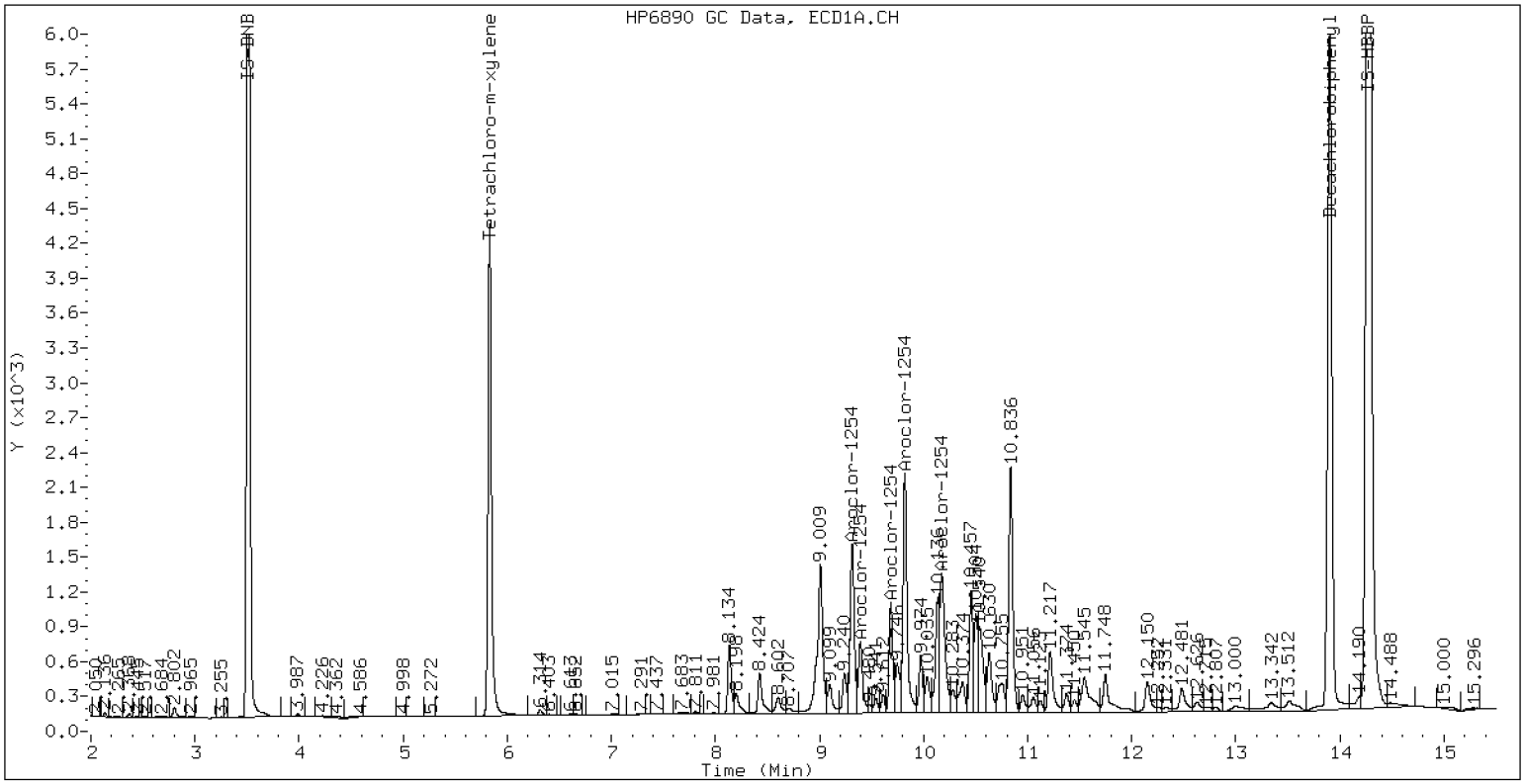
Total PCB Area Col2 (5.809 - 14.028) = 713292 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

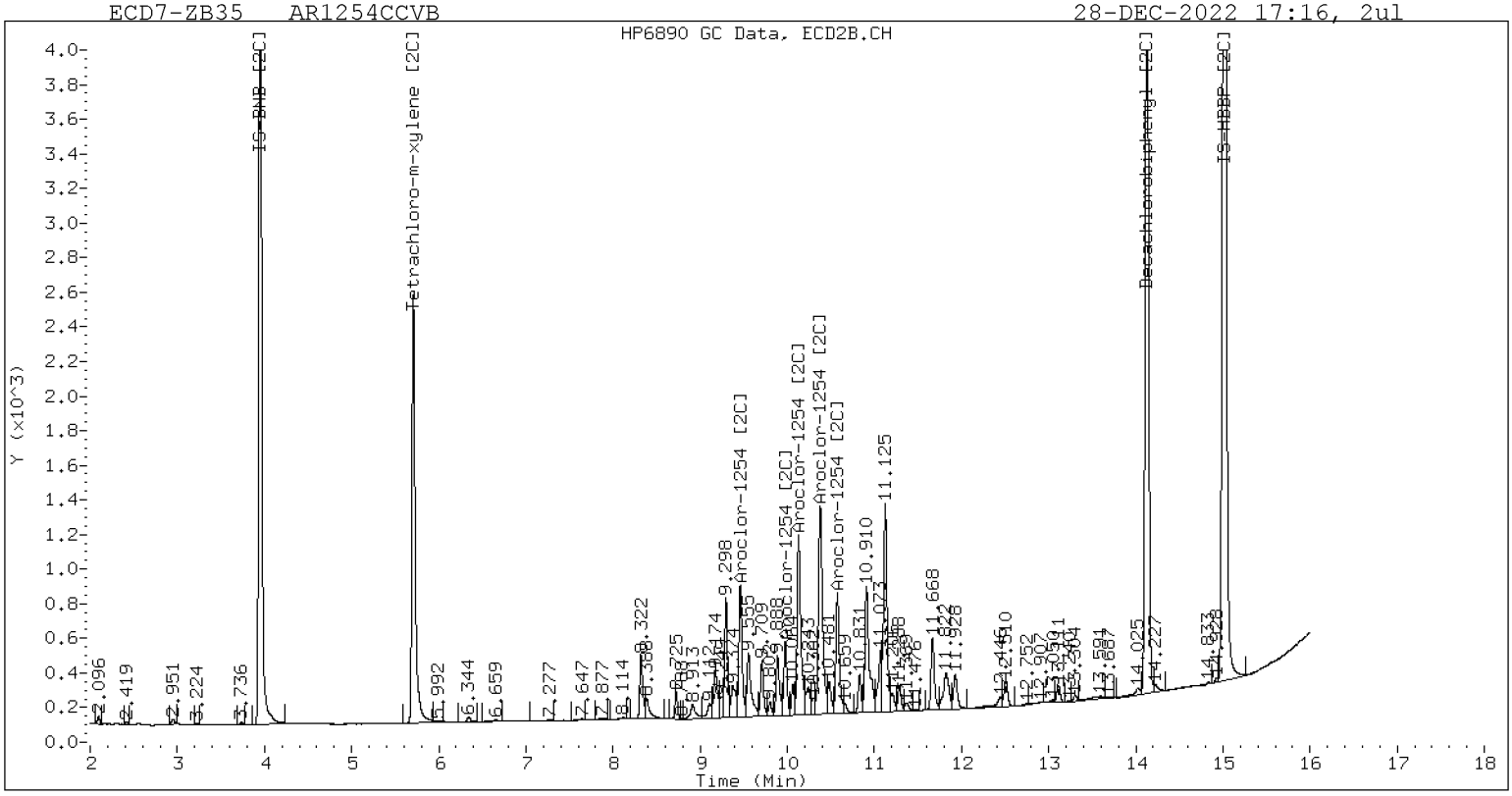
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCVB 28-DEC-2022 17:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCVB 28-DEC-2022 17:16, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Instrument ID:	ECD7	Calibration:	FL00010
Lab File ID:	12272272ECD7.D	Calibration Date:	12/03/2022
Sequence:	SKL0377	Injection Date:	12/28/22
Lab Sample ID:	SKL0377-CCVC	Injection Time:	17:38
Sequence Name:	AR1660CCVC		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	296	0.0441939	0.0510559		18.5	+/-20
Aroclor-1016 (1)	A	250.00	283	0.0266860	0.0301814		13.2	
Aroclor-1016 (2)	A	250.00	275	0.0861572	0.0949421		10.0	
Aroclor-1016 (3)	A	250.00	295	0.0390425	0.0460698		18.0	
Aroclor-1016 (4)	A	250.00	332	0.0248899	0.0330304		32.8	
Aroclor 1016 [2C]	A	250.00	250	0.0467310	0.0444724		-0.1	+/-20
Aroclor-1016 (1) [2C]	A	250.00	257	0.0409030	0.0420754		2.8	
Aroclor-1016 (2) [2C]	A	250.00	214	0.0882154	0.0755594		-14.4	
Aroclor-1016 (3) [2C]	A	250.00	253	0.0378846	0.0383336		1.2	
Aroclor-1016 (4) [2C]	A	250.00	275	0.0199212	0.0219213		10.0	
Aroclor 1260	A	250.00	258	0.0390342	0.0400690		3.2	+/-20
Aroclor-1260 (1)	A	250.00	256	0.0291201	0.0298210		2.4	
Aroclor-1260 (2)	A	250.00	257	0.0301181	0.0309962		2.8	
Aroclor-1260 (3)	A	250.00	256	0.0791351	0.0811564		2.4	
Aroclor-1260 (4)	A	250.00	251	0.0403003	0.0405413		0.4	
Aroclor-1260 (5)	A	250.00	270	0.0164974	0.0178299		8.0	
Aroclor 1260 [2C]	A	250.00	219	0.0617619	0.0495281		-12.4	+/-20
Aroclor-1260 (1) [2C]	A	250.00	247	0.0422283	0.0417341		-1.2	
Aroclor-1260 (2) [2C]	A	250.00	172	0.1059643	0.0727153		-31.2	
Aroclor-1260 (3) [2C]	A	250.00	267	0.0282173	0.0300973		6.8	
Aroclor-1260 (4) [2C]	A	250.00	190	0.0706376	0.0535659		-24.0	
Decachlorobiphenyl	A	40.000	44.7	0.7333327	0.8192612		11.8	+/-20
Tetrachlorometaxylene	A	40.000	41.2	1.1336710	1.1692180		3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	43.4	1.1358180	1.2319500		8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.1	1.0966080	1.1280760		2.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /221227.b/12272272ECD7.D
Data file 2: /221227.b/221227.b/12272272ECD7.D
Method: \\target\share\chem4\ecd7.i\221227.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVC
Client ID:
Injection Date: 28-DEC-2022 17:38
Report Date: 12/30/2022 14:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.832	0.001	164616	5.709	0.000	108676	41.3	41.1	0.3	Tetrachloro-m-xylene
13.902	-0.001	288212	14.128	0.000	206279	44.7	43.4	3.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	447645	281583	-37.1
Hexabromobiphenyl	798898	703590	-11.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	249094	192675	-22.6
Hexabromobiphenyl	362541	334882	-7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 03-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.290	0.001	26558	282.7	1	7.272	0.000	25334	257.2
Aroclor-1016	2	7.677	0.005	83544	275.5	2	7.871	0.000	45495	214.1
Aroclor-1016	3	7.811	0.002	40539	295.0	3	8.071	0.000	23081	253.0
Aroclor-1016	4	8.424	0.001	29065	331.8	4	8.242	0.000	13199	275.1
Total Col1Ave (4 peaks):					296.2	Total Col2Ave (4 peaks):				249.8 RPD = 17
Corrected Ave (3 peaks):					284.4	Corrected Ave (3 peaks):				241.4 RPD = 16
CalAmt %D:					18.5	CalAmt %D:				-0.1
Aroclor-1260	1	11.056	0.000	65568	256.0	1	11.663	0.000	43675	247.1
Aroclor-1260	2	11.372	0.000	68152	257.3	2	11.926	0.000	76097	171.6
Aroclor-1260	3	11.746	0.002	178440	256.4	3	12.444	0.000	31497	266.7
Aroclor-1260	4	12.150	0.001	89139	251.5	4	12.509	0.000	56057	189.6
Aroclor-1260	5	12.255	-0.000	39203	270.2	NS	---			----
Total Col1Ave (5 peaks):					258.3	Total Col2Ave (4 peaks):				218.7 RPD = 17
Corrected Ave (4 peaks):					255.3	Corrected Ave (3 peaks):				202.7 RPD = 23
CalAmt %D:					3.3	CalAmt %D:				-12.5

Total PCB Area Col1 (5.931 - 13.803) = 1868810 Col1 Total PCB = 0.7 ppm*

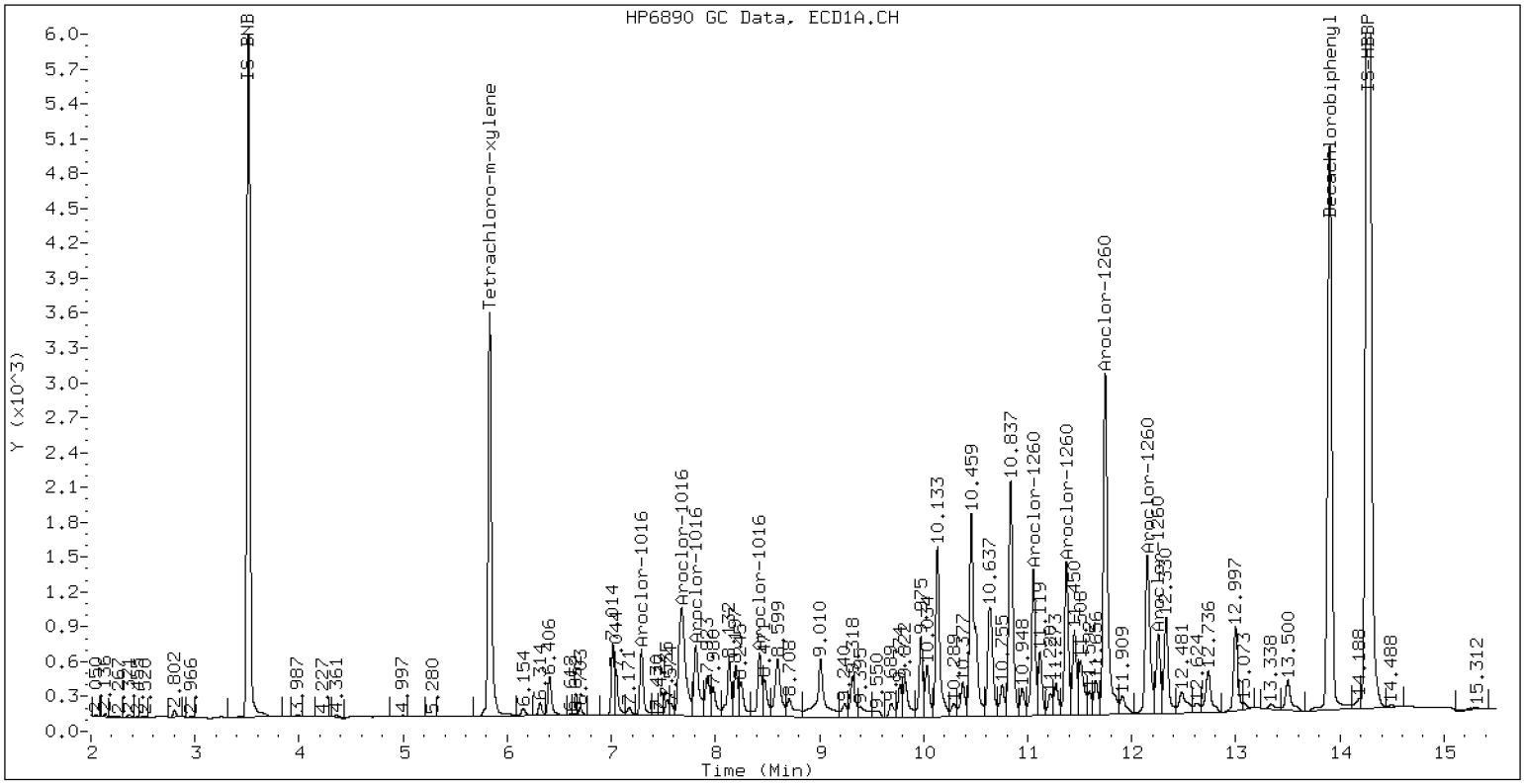
Total PCB Area Col2 (5.809 - 14.028) = 948646 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

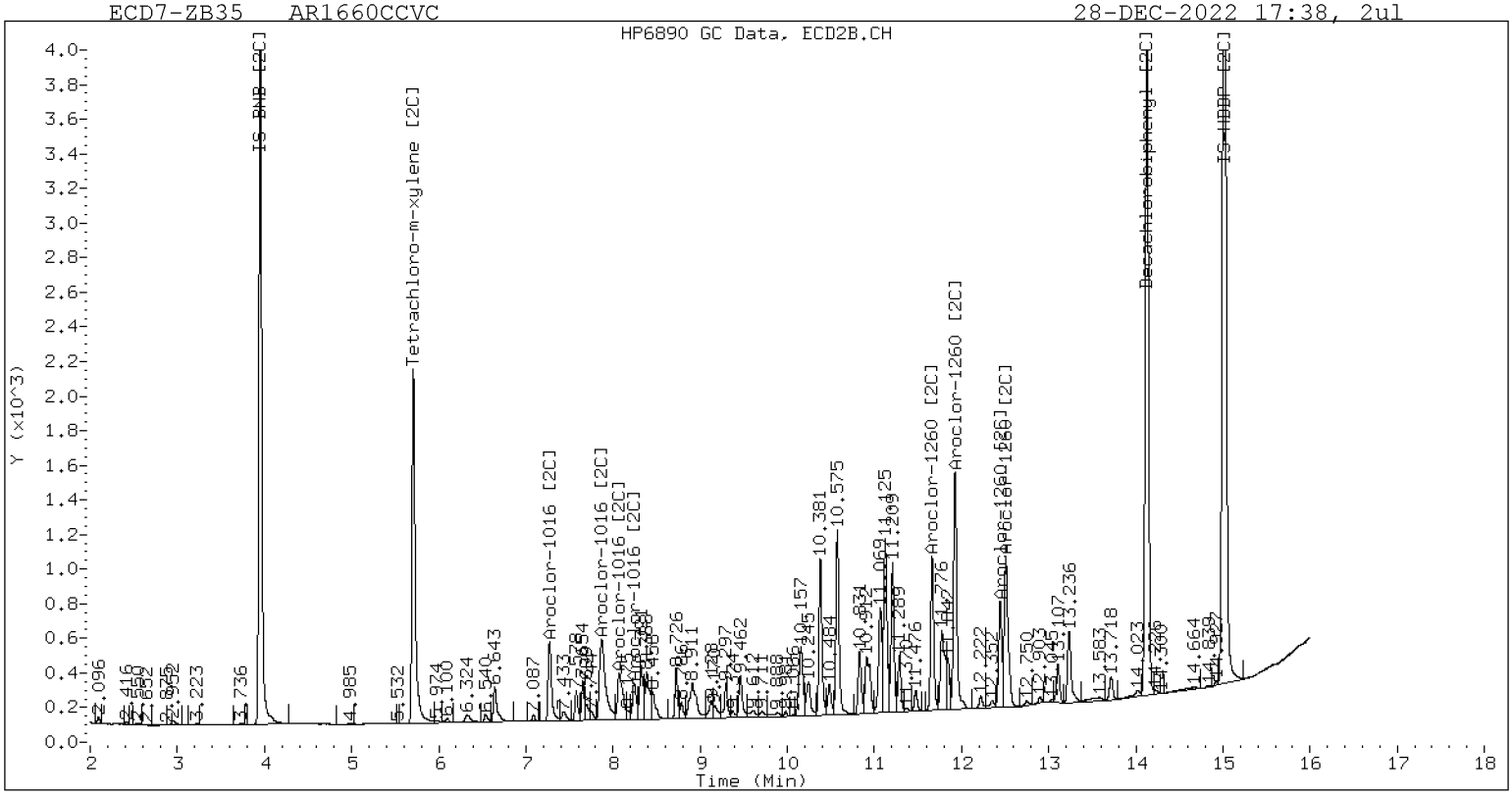
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVC 28-DEC-2022 17:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVC 28-DEC-2022 17:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0048
Instrument: ECD7
Calibration: FL00010

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SKL0048-CAL1	12032211ECD7.D	12032211ECD7.D	NA	12/03/22 18:19
Cal Standard	SKL0048-CAL2	12032212ECD7.D	12032212ECD7.D	NA	12/03/22 18:40
Cal Standard	SKL0048-CAL3	12032213ECD7.D	12032213ECD7.D	NA	12/03/22 19:01
Cal Standard	SKL0048-CAL4	12032214ECD7.D	12032214ECD7.D	NA	12/03/22 19:23
Cal Standard	SKL0048-CAL5	12032215ECD7.D	12032215ECD7.D	NA	12/03/22 19:44
Cal Standard	SKL0048-CAL6	12032216ECD7.D	12032216ECD7.D	NA	12/03/22 20:05
Cal Standard	SKL0048-CAL7	12032217ECD7.D	12032217ECD7.D	NA	12/03/22 20:26
Cal Standard	SKL0048-CAL8	12032218ECD7.D	12032218ECD7.D	NA	12/03/22 20:48
Cal Standard	SKL0048-CAL9	12032219ECD7.D	12032219ECD7.D	NA	12/03/22 21:09
Cal Standard	SKL0048-CALA	12032220ECD7.D	12032220ECD7.D	NA	12/03/22 21:30
Cal Standard	SKL0048-CALB	12032221ECD7.D	12032221ECD7.D	NA	12/03/22 21:52
Secondary Cal Check	SKL0048-SCV1	12032222ECD7.D	12032222ECD7.D	NA	12/03/22 22:13
Secondary Cal Check	SKL0048-SCV2	12032223ECD7.D	12032223ECD7.D	NA	12/03/22 22:34
Secondary Cal Check	SKL0048-SCV3	12032224ECD7.D	12032224ECD7.D	NA	12/03/22 22:55
Secondary Cal Check	SKL0048-SCV4	12032225ECD7.D	12032225ECD7.D	NA	12/03/22 23:17
Secondary Cal Check	SKL0048-SCV5	12032226ECD7.D	12032226ECD7.D	NA	12/03/22 23:38
Secondary Cal Check	SKL0048-SCV6	12032227ECD7.D	12032227ECD7.D	NA	12/03/22 23:59

Printed: 12/6/2022 9:25:24AM

ANALYSIS SEQUENCE

SKL0048

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0048-CAL1	0.25PPM AR1660	QC		1	K006954	K006953		
SKL0048-CAL2	0.02PPM AR1660	QC		2	K010070	K006953		
SKL0048-CAL3	0.05PPM AR1660	QC		3	K010069	K006953		
SKL0048-CAL4	1PPM AR1660	QC		4	K006741	K006953		
SKL0048-CAL5	0.1PPM AR1660	QC		5	K010068	K006953		
SKL0048-CAL6	0.5PPM AR1660	QC		6	K010067	K006953		
SKL0048-CAL7	0.25PPM AR1242	QC		7	K006955	K006953		
SKL0048-CAL8	0.25PPM AR1248	QC		8	K006956	K006953		
SKL0048-CAL9	0.25PPM AR1254	QC		9	K006957	K006953		
SKL0048-CALA	0.25PPM AR2162	QC		10	K010071	K006953		
SKL0048-CALB	0.25PPM AR3268	QC		11	K010072	K006953		
SKL0048-SCV1	AR1660SCV1	QC		12	K007655	K006953		
SKL0048-SCV2	AR1242SCV2	QC		13	K007656	K006953		
SKL0048-SCV3	AR1248SCV3	QC		14	K007657	K006953		
SKL0048-SCV4	AR1254SCV4	QC		15	K007658	K006953		
SKL0048-SCV5	AR2162SCV5	QC		16	K007659	K006953		
SKL0048-SCV6	AR3268SCV6	QC		17	K007660	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-DEC-2022 17:58	12032210ECD7.D	1	IB	
2	03-DEC-2022 18:19	12032211ECD7.D	1	0.25PPAR1660	
3	03-DEC-2022 18:40	12032212ECD7.D	1	0.02PPAR1660	
4	03-DEC-2022 19:01	12032213ECD7.D	1	0.05PPAR1660	
5	03-DEC-2022 19:23	12032214ECD7.D	1	1PPMAR1660	
6	03-DEC-2022 19:44	12032215ECD7.D	1	0.1PPMAR1660	
7	03-DEC-2022 20:05	12032216ECD7.D	1	0.5PPMAR1660	
8	03-DEC-2022 20:26	12032217ECD7.D	1	AR1242	
9	03-DEC-2022 20:48	12032218ECD7.D	1	AR1248	
10	03-DEC-2022 21:09	12032219ECD7.D	1	AR1254	
11	03-DEC-2022 21:30	12032220ECD7.D	1	AR2162	
12	03-DEC-2022 21:52	12032221ECD7.D	1	AR3268	
13	03-DEC-2022 22:13	12032222ECD7.D	1	AR1660SCV1	
14	03-DEC-2022 22:34	12032223ECD7.D	1	AR1242SCV2	
15	03-DEC-2022 22:55	12032224ECD7.D	1	AR1248SCV3	
16	03-DEC-2022 23:17	12032225ECD7.D	1	AR1254SCV4	
17	03-DEC-2022 23:38	12032226ECD7.D	1	AR2162SCV5	
18	03-DEC-2022 23:59	12032227ECD7.D	1	AR3268SCV6	
19	04-DEC-2022 00:20	12032228ECD7.D	1	0.1 PPM DDTS	
20	04-DEC-2022 00:42	12032229ECD7.D	1	DDT BD	
21	04-DEC-2022 01:03	12032230ECD7.D	1	AR1254ICV1	
22	04-DEC-2022 01:24	12032231ECD7.D	1	AR1660ICV2	
23	04-DEC-2022 01:46	12032232ECD7.D	1	BKK0834-BLK1	
24	04-DEC-2022 02:07	12032233ECD7.D	1	BKK0834-BS1	
25	04-DEC-2022 02:28	12032234ECD7.D	1	BKK0834-BSD1	
26	04-DEC-2022 02:49	12032235ECD7.D	1	22K0523-01	
27	04-DEC-2022 03:11	12032236ECD7.D	1	22K0525-01	
28	04-DEC-2022 03:32	12032237ECD7.D	1	BKK0374-BLK1	
29	04-DEC-2022 03:53	12032238ECD7.D	1	BKK0374-BS1	
30	04-DEC-2022 04:15	12032239ECD7.D	1	BKK0374-BSD1	
31	04-DEC-2022 04:36	12032240ECD7.D	1	22K0161-01	
32	04-DEC-2022 04:57	12032241ECD7.D	1	AR1248CCV1	
33	04-DEC-2022 05:18	12032242ECD7.D	1	AR1660CCV2	
34	04-DEC-2022 05:40	12032243ECD7.D	1	BKL0017-BLK1	
35	04-DEC-2022 06:01	12032244ECD7.D	1	BKL0017-BS1	
36	04-DEC-2022 06:22	12032245ECD7.D	1	BKL0017-BSD1	
37	04-DEC-2022 06:44	12032246ECD7.D	1	22J0139-01	
38	04-DEC-2022 07:05	12032247ECD7.D	1	BKK0383-BLK1	
39	04-DEC-2022 07:26	12032248ECD7.D	1	BKK0383-BS1	
40	04-DEC-2022 07:47	12032249ECD7.D	1	BKK0383-BSD	
41	04-DEC-2022 08:09	12032250ECD7.D	1	22K0075-01	
42	04-DEC-2022 08:30	12032251ECD7.D	1	BKK00803-BLK1	
43	04-DEC-2022 08:51	12032252ECD7.D	1	BKK00803-BS1	
44	04-DEC-2022 09:13	12032253ECD7.D	1	BKK00803-BSD1	
45	04-DEC-2022 09:34	12032254ECD7.D	1	22K0511-01	
46	04-DEC-2022 09:55	12032255ECD7.D	1	AR1242CCV3	
47	04-DEC-2022 10:17	12032256ECD7.D	1	AR1660CCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
1758	12032210ECD7.D	IB	1	NO MANUAL INTEGRATION
1819	12032211ECD7.D	0.25PPAR1660	1	NO MANUAL INTEGRATION
1840	12032212ECD7.D	0.02PPAR1660	1	NO MANUAL INTEGRATION
1901	12032213ECD7.D	0.05PPAR1660	1	NO MANUAL INTEGRATION
1923	12032214ECD7.D	1PPMAR1660	1	NO MANUAL INTEGRATION
1944	12032215ECD7.D	0.1PPMAR1660	1	NO MANUAL INTEGRATION
2005	12032216ECD7.D	0.5PPMAR1660	1	NO MANUAL INTEGRATION
2026	12032217ECD7.D	AR1242	1	Aroclor-1242,
2048	12032218ECD7.D	AR1248	1	NO MANUAL INTEGRATION
2109	12032219ECD7.D	AR1254	1	NO MANUAL INTEGRATION
2130	12032220ECD7.D	AR2162	1	NO MANUAL INTEGRATION
2152	12032221ECD7.D	AR3268	1	NO MANUAL INTEGRATION
2213	12032222ECD7.D	AR1660SCV1	1	NO MANUAL INTEGRATION
2234	12032223ECD7.D	AR1242SCV2	1	NO MANUAL INTEGRATION
2255	12032224ECD7.D	AR1248SCV3	1	NO MANUAL INTEGRATION
2317	12032225ECD7.D	AR1254SCV4	1	NO MANUAL INTEGRATION
2338	12032226ECD7.D	AR2162SCV5	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221203.b page 2

Instrument: ecd7.i Date: 03-DEC-2022

Time	Filename	LabID	DF	Manually Integrated Compounds
2359	12032227ECD7.D	AR3268SCV6	1	NO MANUAL INTEGRATION

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0359	Instrument:	ECD7
		Calibration:	FL00010

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SKL0359-ICV1	12262202ECD7.D	12262202ECD7.D	NA	12/26/22 16:04
Initial Cal Check	SKL0359-ICV2	12262203ECD7.D	12262203ECD7.D	NA	12/26/22 16:26
Calibration Check	SKL0359-CCV1	12262214ECD7.D	12262214ECD7.D	NA	12/26/22 20:20
Calibration Check	SKL0359-CCV2	12262215ECD7.D	12262215ECD7.D	NA	12/26/22 20:41
Calibration Check	SKL0359-CCV3	12262226ECD7.D	12262226ECD7.D	NA	12/27/22 00:36
Calibration Check	SKL0359-CCV4	12262227ECD7.D	12262227ECD7.D	NA	12/27/22 00:57
Calibration Check	SKL0359-CCV5	12262238ECD7.D	12262238ECD7.D	NA	12/27/22 04:52
Calibration Check	SKL0359-CCV6	12262239ECD7.D	12262239ECD7.D	NA	12/27/22 05:14
Calibration Check	SKL0359-CCV7	12262254ECD7.D	12262254ECD7.D	NA	12/27/22 10:34
Calibration Check	SKL0359-CCV8	12262255ECD7.D	12262255ECD7.D	NA	12/27/22 10:56
Blank	BKL0366-BLK1	12262256ECD7.D	12262256ECD7.D	Solid	12/27/22 11:17
LCS	BKL0366-BS1	12262257ECD7.D	12262257ECD7.D	Solid	12/27/22 11:38
LCS Dup	BKL0366-BSD1	12262258ECD7.D	12262258ECD7.D	Solid	12/27/22 12:00
MRL Check	BKL0366-MRL1	12262259ECD7.D	12262259ECD7.D	Solid	12/27/22 12:21
MRL Check	BKL0366-MRL2	12262260ECD7.D	12262260ECD7.D	Solid	12/27/22 12:42
Reference	BKL0366-SRM1	12262261ECD7.D	12262261ECD7.D	Solid	12/27/22 13:04
LDW22-SS797	22L0156-01	12262266ECD7.D	12262266ECD7.D	Solid	12/27/22 14:51
LDW22-IT797	22L0156-02	12262267ECD7.D	12262267ECD7.D	Solid	12/27/22 15:16
Calibration Check	SKL0359-CCV9	12262268ECD7.D	12262268ECD7.D	NA	12/27/22 15:37
Calibration Check	SKL0359-CCVA	12262269ECD7.D	12262269ECD7.D	NA	12/27/22 15:58

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SKL0359

Instrument: ECD7
Calibration ID: FL00010

Printed: 12/29/2022 12:17:33PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SKL0359-ICV1	QC		1		K006957	K006953		
SKL0359-ICV2	QC		2		K006954	K006953		
22L0155-01	8082A PCB Solid 4	B 01	3				Anchor QEA, LLC	
22L0155-10	8082A PCB Solid 4	B 01	4				Anchor QEA, LLC	
22L0155-13	8082A PCB Solid 4	B 01	5				Anchor QEA, LLC	
22L0155-24	8082A PCB Solid 4	B 01	6				Anchor QEA, LLC	
22L0155-25	8082A PCB Solid 4	B 01	7				Anchor QEA, LLC	
22L0155-27	8082A PCB Solid 4	B 01	8				Anchor QEA, LLC	
22L0155-28	8082A PCB Solid 4	B 01	9				Anchor QEA, LLC	
22L0155-29	8082A PCB Solid 4	B 01	10				Anchor QEA, LLC	
22L0155-31	8082A PCB Solid 4	B 01	11				Anchor QEA, LLC	
SKL0359-CCV1	QC		12		K006956	K006953		
SKL0359-CCV2	QC		13		K006954	K006953		
22L0155-32	8082A PCB Solid 4	B 01	14				Anchor QEA, LLC	
22L0155-33	8082A PCB Solid 4	B 01	15				Anchor QEA, LLC	
22L0155-34	8082A PCB Solid 4	B 01	16				Anchor QEA, LLC	
22L0155-38	8082A PCB Solid 4	B 01	17				Anchor QEA, LLC	
SKL0359-CCV3	QC		18		K006955	K006953		
SKL0359-CCV4	QC		19		K006954	K006953		
22L0155-49	8082A PCB Solid 4	B 01	20				Anchor QEA, LLC	
22L0155-50	8082A PCB Solid 4	B 01	21				Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SKL0359

Instrument: ECD7
Calibration ID: FL00010

Printed: 12/29/2022 12:17:33PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
22L0155-54	8082A PCB Solid 4	B 01	22				Anchor QEA, LLC	
22L0155-56	8082A PCB Solid 4	B 01	23				Anchor QEA, LLC	
22L0155-57	8082A PCB Solid 4	B 01	24				Anchor QEA, LLC	
22L0155-58	8082A PCB Solid 4	B 01	25				Anchor QEA, LLC	
22L0155-59	8082A PCB Solid 4	B 01	26				Anchor QEA, LLC	
22L0155-60	8082A PCB Solid 4	B 01	27				Anchor QEA, LLC	
SKL0359-CCV5	QC		28		K006957	K006953		
SKL0359-CCV6	QC		29		K006954	K006953		
BKL0548-BLK1	QC		30					
BKL0548-BS1	QC		31					
BKL0548-BSD1	QC		32					
BKL0548-SRM1	QC		33					
22L0136-09RE1	8082A PCB Solid 4	A 03	34				Anchor QEA, LLC	From BKL0190 by CTO on 21-Dec-20
BKL0548-MS1	QC		35					
BKL0548-MSD1	QC		36					
22L0136-11RE1	8082A PCB Solid 4	A 03	37				Anchor QEA, LLC	From BKL0190 by CTO on 21-Dec-20
BKL0353-BLK1	QC		38					
BKL0353-BS1	QC		39					
BKL0353-BSD1	QC		40					
BKL0353-MRL1	QC		41					
BKL0353-MRL2	QC		42					

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SKL0359

Instrument: ECD7
Calibration ID: FL00010

Printed: 12/29/2022 12:17:33PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
22L0241-01	8.3 PCBs 0.01 ug/L or 20 ug/	A 01	43				Nucor Steel Corporation	
SKL0359-CCV7	QC		44		K006956	K006953		
SKL0359-CCV8	QC		45		K006954	K006953		
BKL0366-BLK1	QC		46					
BKL0366-BS1	QC		47					
BKL0366-BSD1	QC		48					
BKL0366-MRL1	QC		49					
BKL0366-MRL2	QC		50					
BKL0366-SRM1	QC		51					
22L0155-64	8082A PCB Solid 4	B 01	52				Anchor QEA, LLC	
22L0156-01	8082A PCB Solid 4	B 01	53				Anchor QEA, LLC	
22L0156-02	8082A PCB Solid 4	B 01	54				Anchor QEA, LLC	
SKL0359-CCV9	QC		55		K006955	K006953		
SKL0359-CCVA	QC		56		K006954	K006953		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	26-DEC-2022 16:04	12262202ECD7.D	1	AR1254ICV1	
2	26-DEC-2022 16:26	12262203ECD7.D	1	AR1660ICV2	
3	26-DEC-2022 16:47	12262204ECD7.D	1	22L0155-01	
4	26-DEC-2022 17:08	12262205ECD7.D	1	22L0155-10	
5	26-DEC-2022 17:29	12262206ECD7.D	1	22L0155-13	
6	26-DEC-2022 17:51	12262207ECD7.D	5	22L0155-24RE1	
7	26-DEC-2022 18:12	12262208ECD7.D	5	22L0155-25RE1	
8	26-DEC-2022 18:33	12262209ECD7.D	5	22L0155-26RE1	
9	26-DEC-2022 18:55	12262210ECD7.D	5	22L0155-27RE1	
10	26-DEC-2022 19:16	12262211ECD7.D	1	22L0155-28	
11	26-DEC-2022 19:37	12262212ECD7.D	1	22L0155-29	
12	26-DEC-2022 19:59	12262213ECD7.D	1	22L0155-31	
13	26-DEC-2022 20:20	12262214ECD7.D	1	AR1248CCV1	
14	26-DEC-2022 20:41	12262215ECD7.D	1	AR1660CCV2	
15	26-DEC-2022 21:03	12262216ECD7.D	1	22L0155-32	
16	26-DEC-2022 21:24	12262217ECD7.D	1	22L0155-33	
17	26-DEC-2022 21:45	12262218ECD7.D	1	22L0155-34	
18	26-DEC-2022 22:07	12262219ECD7.D	1	22L0155-35	
19	26-DEC-2022 22:28	12262220ECD7.D	1	22L0155-36	
20	26-DEC-2022 22:49	12262221ECD7.D	1	22L0155-37	
21	26-DEC-2022 23:11	12262222ECD7.D	1	22L0155-38	
22	26-DEC-2022 23:32	12262223ECD7.D	1	22L0155-39	
23	26-DEC-2022 23:53	12262224ECD7.D	1	22L0155-40	
24	27-DEC-2022 00:15	12262225ECD7.D	1	22L0155-46	
25	27-DEC-2022 00:36	12262226ECD7.D	1	AR1242CCV3	
26	27-DEC-2022 00:57	12262227ECD7.D	1	AR1660CCV4	
27	27-DEC-2022 01:19	12262228ECD7.D	1	22L0155-47	
28	27-DEC-2022 01:40	12262229ECD7.D	1	22L0155-48	
29	27-DEC-2022 02:02	12262230ECD7.D	1	22L0155-49	
30	27-DEC-2022 02:23	12262231ECD7.D	1	22L0155-50	
31	27-DEC-2022 02:44	12262232ECD7.D	5	22L0155-54RE1	
32	27-DEC-2022 03:06	12262233ECD7.D	1	22L0155-56	
33	27-DEC-2022 03:27	12262234ECD7.D	5	22L0155-57RE1	
34	27-DEC-2022 03:48	12262235ECD7.D	5	22L0155-58RE1	
35	27-DEC-2022 04:10	12262236ECD7.D	5	22L0155-59RE1	
36	27-DEC-2022 04:31	12262237ECD7.D	5	22L0155-60RE1	
37	27-DEC-2022 04:52	12262238ECD7.D	1	AR1254CCV5	
38	27-DEC-2022 05:14	12262239ECD7.D	1	AR1660CCV6	
39	27-DEC-2022 05:35	12262240ECD7.D	1	BKL0548-BLK1	
40	27-DEC-2022 05:57	12262241ECD7.D	1	BKL0548-BS1	
41	27-DEC-2022 06:18	12262242ECD7.D	1	BKL0548-BSD1	
42	27-DEC-2022 06:39	12262243ECD7.D	1	BKL0548-SRM1	
43	27-DEC-2022 07:01	12262244ECD7.D	1	22L0136-09	
44	27-DEC-2022 07:22	12262245ECD7.D	1	BKL0548-MS1	
45	27-DEC-2022 07:43	12262246ECD7.D	1	BKL0548-MSD1	
46	27-DEC-2022 08:05	12262247ECD7.D	1	22L0136-11	
47	27-DEC-2022 08:26	12262248ECD7.D	1	BKL0353-BLK1	
48	27-DEC-2022 08:47	12262249ECD7.D	1	BKL0353-BS1	
49	27-DEC-2022 09:09	12262250ECD7.D	1	BKL0353-BSD1	
50	27-DEC-2022 09:30	12262251ECD7.D	1	BKL0353-MRL1	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	27-DEC-2022 09:52	12262252ECD7.D	1	BKL0353-MRL2	
52	27-DEC-2022 10:13	12262253ECD7.D	1	22L0241-01	
53	27-DEC-2022 10:34	12262254ECD7.D	1	AR1248CCV7	
54	27-DEC-2022 10:56	12262255ECD7.D	1	AR1660CCV8	
55	27-DEC-2022 11:17	12262256ECD7.D	1	BKL0366-BLK	
56	27-DEC-2022 11:38	12262257ECD7.D	1	BKL0366-BS1	
57	27-DEC-2022 12:00	12262258ECD7.D	1	BKL0366-BSD1	
58	27-DEC-2022 12:21	12262259ECD7.D	1	BKL0366-MRL1	
59	27-DEC-2022 12:42	12262260ECD7.D	1	BKL0366-MRL2	
60	27-DEC-2022 13:04	12262261ECD7.D	1	BKL0366-SRM1	
61	27-DEC-2022 13:25	12262262ECD7.D	1	22L0155-61	
62	27-DEC-2022 13:47	12262263ECD7.D	1	22L0155-62	
63	27-DEC-2022 14:08	12262264ECD7.D	1	22L0155-63	
64	27-DEC-2022 14:29	12262265ECD7.D	1	22L0155-64	
65	27-DEC-2022 14:51	12262266ECD7.D	1	22L0156-01	
66	27-DEC-2022 15:16	12262267ECD7.D	1	22L0156-02	
67	27-DEC-2022 15:37	12262268ECD7.D	1	AR1242CCV9	
68	27-DEC-2022 15:58	12262269ECD7.D	1	AR1660CCVA	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 26-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1543	12262201ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1604	12262202ECD7.D	AR1254ICV1		1	Aroclor-1254,
1626	12262203ECD7.D	AR1660ICV2		1	Aroclor-1016, Aroclor-1260,
1647	12262204ECD7.D	22L0155-01		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, IS-BNB, Tetrachloro-m-xylene,
1708	12262205ECD7.D	22L0155-10		1	Aroclor-1260,
1729	12262206ECD7.D	22L0155-13		1	NO MANUAL INTEGRATION
1751	12262207ECD7.D	22L0155-24RE1		5	Aroclor-1254,
1812	12262208ECD7.D	22L0155-25RE1		5	NO MANUAL INTEGRATION
1833	12262209ECD7.D	22L0155-26RE1		5	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, Tetrachloro-m-xylene,
1855	12262210ECD7.D	22L0155-27RE1		5	Aroclor-1254, Aroclor-1260,
1916	12262211ECD7.D	22L0155-28		1	NO MANUAL INTEGRATION
1937	12262212ECD7.D	22L0155-29		1	Aroclor-1260,
1959	12262213ECD7.D	22L0155-31		1	NO MANUAL INTEGRATION
2020	12262214ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2041	12262215ECD7.D	AR1660CCV2		1	Aroclor-1016, Aroclor-1260, Tetrachloro-m-xylene,
2103	12262216ECD7.D	22L0155-32		1	NO MANUAL INTEGRATION
2124	12262217ECD7.D	22L0155-33		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2145	12262218ECD7.D	22L0155-34		1	Aroclor-1248, Aroclor-1254, Tetrachloro-m-xylene,
2207	12262219ECD7.D	22L0155-35		1	NO MANUAL INTEGRATION
2228	12262220ECD7.D	22L0155-36		1	NO MANUAL INTEGRATION
2249	12262221ECD7.D	22L0155-37		1	NO MANUAL INTEGRATION
2311	12262222ECD7.D	22L0155-38		1	NO MANUAL INTEGRATION
2332	12262223ECD7.D	22L0155-39		1	NO MANUAL INTEGRATION
2353	12262224ECD7.D	22L0155-40		1	NO MANUAL INTEGRATION
0015	12262225ECD7.D	22L0155-46		1	NO MANUAL INTEGRATION
0036	12262226ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0057	12262227ECD7.D	AR1660CCV4		1	Aroclor-1016, Aroclor-1260,
0119	12262228ECD7.D	22L0155-47		1	NO MANUAL INTEGRATION
0140	12262229ECD7.D	22L0155-48		1	NO MANUAL INTEGRATION
0202	12262230ECD7.D	22L0155-49		1	Aroclor-1254, Aroclor-1260,
0223	12262231ECD7.D	22L0155-50		1	Aroclor-1248, Aroclor-1254, Aroclor-1260,
0244	12262232ECD7.D	22L0155-54RE1		5	NO MANUAL INTEGRATION
0306	12262233ECD7.D	22L0155-56		1	Aroclor-1260,
0327	12262234ECD7.D	22L0155-57RE1		5	NO MANUAL INTEGRATION
0348	12262235ECD7.D	22L0155-58RE1		5	Aroclor-1254,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0410	12262236ECD7.D	22L0155-59RE1		5	Aroclor-1254,
0431	12262237ECD7.D	22L0155-60RE1		5	Aroclor-1254,
0452	12262238ECD7.D	AR1254CCV5		1	Aroclor-1254,
0514	12262239ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0535	12262240ECD7.D	BKL0548-BLK1		1	NO MANUAL INTEGRATION
0557	12262241ECD7.D	BKL0548-BS1		1	NO MANUAL INTEGRATION
0618	12262242ECD7.D	BKL0548-BSD1		1	NO MANUAL INTEGRATION
0639	12262243ECD7.D	BKL0548-SRM1		1	NO MANUAL INTEGRATION
0701	12262244ECD7.D	22L0136-09		1	Aroclor-1254, Aroclor-1260,
0722	12262245ECD7.D	BKL0548-MS1		1	NO MANUAL INTEGRATION
0743	12262246ECD7.D	BKL0548-MSD1		1	NO MANUAL INTEGRATION
0805	12262247ECD7.D	22L0136-11		1	Aroclor-1260, IS-BNB, IS-HBBP, Tetrachloro-m-xylene, Decachlorobiphenyl,
0826	12262248ECD7.D	BKL0353-BLK1		1	NO MANUAL INTEGRATION
0847	12262249ECD7.D	BKL0353-BS1		1	NO MANUAL INTEGRATION
0909	12262250ECD7.D	BKL0353-BSD1		1	NO MANUAL INTEGRATION
0930	12262251ECD7.D	BKL0353-MRL1		1	NO MANUAL INTEGRATION
0952	12262252ECD7.D	BKL0353-MRL2		1	NO MANUAL INTEGRATION
1013	12262253ECD7.D	22L0241-01		1	Tetrachloro-m-xylene,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1034	12262254ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
1056	12262255ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
1117	12262256ECD7.D	BKL0366-BLK		1	NO MANUAL INTEGRATION
1138	12262257ECD7.D	BKL0366-BS1		1	NO MANUAL INTEGRATION
1200	12262258ECD7.D	BKL0366-BSD1		1	NO MANUAL INTEGRATION
1221	12262259ECD7.D	BKL0366-MRL1		1	NO MANUAL INTEGRATION
1242	12262260ECD7.D	BKL0366-MRL2		1	NO MANUAL INTEGRATION
1304	12262261ECD7.D	BKL0366-SRM1		1	NO MANUAL INTEGRATION
1325	12262262ECD7.D	22L0155-61		1	NO MANUAL INTEGRATION
1347	12262263ECD7.D	22L0155-62		1	NO MANUAL INTEGRATION
1408	12262264ECD7.D	22L0155-63		1	NO MANUAL INTEGRATION
1429	12262265ECD7.D	22L0155-64		1	Aroclor-1254,
1451	12262266ECD7.D	22L0156-01		1	NO MANUAL INTEGRATION
1516	12262267ECD7.D	22L0156-02		1	Aroclor-1254,
1537	12262268ECD7.D	AR1242CCV9		1	Aroclor-1242,
1558	12262269ECD7.D	AR1660CCVA		1	Aroclor-1016, Aroclor-1260,
1543	12262201ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1604	12262202ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b\221226.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1626	12262203ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1647	12262204ECD7.D	22L0155-01		1	NO MANUAL INTEGRATION
1708	12262205ECD7.D	22L0155-10		1	NO MANUAL INTEGRATION
1729	12262206ECD7.D	22L0155-13		1	NO MANUAL INTEGRATION
1751	12262207ECD7.D	22L0155-24RE1		5	NO MANUAL INTEGRATION
1812	12262208ECD7.D	22L0155-25RE1		5	NO MANUAL INTEGRATION
1833	12262209ECD7.D	22L0155-26RE1		5	NO MANUAL INTEGRATION
1855	12262210ECD7.D	22L0155-27RE1		5	NO MANUAL INTEGRATION
1916	12262211ECD7.D	22L0155-28		1	NO MANUAL INTEGRATION
1937	12262212ECD7.D	22L0155-29		1	NO MANUAL INTEGRATION
1959	12262213ECD7.D	22L0155-31		1	NO MANUAL INTEGRATION
2020	12262214ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2041	12262215ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
2103	12262216ECD7.D	22L0155-32		1	NO MANUAL INTEGRATION
2124	12262217ECD7.D	22L0155-33		1	NO MANUAL INTEGRATION
2145	12262218ECD7.D	22L0155-34		1	NO MANUAL INTEGRATION
2207	12262219ECD7.D	22L0155-35		1	NO MANUAL INTEGRATION
2228	12262220ECD7.D	22L0155-36		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b\221226.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
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2332	12262223ECD7.D	22L0155-39		1	NO MANUAL INTEGRATION
2353	12262224ECD7.D	22L0155-40		1	NO MANUAL INTEGRATION
0015	12262225ECD7.D	22L0155-46		1	NO MANUAL INTEGRATION
0036	12262226ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0057	12262227ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0119	12262228ECD7.D	22L0155-47		1	NO MANUAL INTEGRATION
0140	12262229ECD7.D	22L0155-48		1	NO MANUAL INTEGRATION
0202	12262230ECD7.D	22L0155-49		1	NO MANUAL INTEGRATION
0223	12262231ECD7.D	22L0155-50		1	NO MANUAL INTEGRATION
0244	12262232ECD7.D	22L0155-54RE1		5	NO MANUAL INTEGRATION
0306	12262233ECD7.D	22L0155-56		1	NO MANUAL INTEGRATION
0327	12262234ECD7.D	22L0155-57RE1		5	NO MANUAL INTEGRATION
0348	12262235ECD7.D	22L0155-58RE1		5	NO MANUAL INTEGRATION
0410	12262236ECD7.D	22L0155-59RE1		5	NO MANUAL INTEGRATION
0431	12262237ECD7.D	22L0155-60RE1		5	NO MANUAL INTEGRATION
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MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221226.b\221226.b

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1034	12262254ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
1056	12262255ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
1117	12262256ECD7.D	BKL0366-BLK		1	NO MANUAL INTEGRATION

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1347	12262263ECD7.D	22L0155-62		1	NO MANUAL INTEGRATION
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1451	12262266ECD7.D	22L0156-01		1	NO MANUAL INTEGRATION
1516	12262267ECD7.D	22L0156-02		1	NO MANUAL INTEGRATION
1537	12262268ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
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Security Status Report

Date: 29-Dec-2022 12:18

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Security Status Report

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Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0377	Instrument:	ECD7
		Calibration:	FL00010

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
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LDW22-SS794	22L0156-04	12272205ECD7.D	12272205ECD7.D	Solid	12/27/22 18:03
LDW22-SS794	BKL0366-MS1	12272206ECD7.D	12272206ECD7.D	Solid	12/27/22 18:24
LDW22-SS794	BKL0366-MSD1	12272207ECD7.D	12272207ECD7.D	Solid	12/27/22 18:45
LDW22-IT794	22L0156-05	12272208ECD7.D	12272208ECD7.D	Solid	12/27/22 19:07
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Calibration Check	SKL0377-CCV2	12272216ECD7.D	12272216ECD7.D	NA	12/27/22 21:56
Calibration Check	SKL0377-CCV3	12272227ECD7.D	12272227ECD7.D	NA	12/28/22 01:48
Calibration Check	SKL0377-CCV4	12272228ECD7.D	12272228ECD7.D	NA	12/28/22 02:09
Calibration Check	SKL0377-CCV5	12272239ECD7.D	12272239ECD7.D	NA	12/28/22 06:01
Calibration Check	SKL0377-CCV6	12272240ECD7.D	12272240ECD7.D	NA	12/28/22 06:22
Calibration Check	SKL0377-CCV7	12272247ECD7.D	12272247ECD7.D	NA	12/28/22 08:50
Calibration Check	SKL0377-CCV8	12272248ECD7.D	12272248ECD7.D	NA	12/28/22 09:11
Calibration Check	SKL0377-CCV9	12272259ECD7.D	12272259ECD7.D	NA	12/28/22 13:03
Calibration Check	SKL0377-CCVA	12272260ECD7.D	12272260ECD7.D	NA	12/28/22 13:24
Calibration Check	SKL0377-CCVB	12272271ECD7.D	12272271ECD7.D	NA	12/28/22 17:16
Calibration Check	SKL0377-CCVC	12272272ECD7.D	12272272ECD7.D	NA	12/28/22 17:38

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SKL0377

Instrument: ECD7
Calibration ID: FL00010

Printed: 12/30/2022 3:28:32PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SKL0377-ICV1	QC		1		K006957	K006953		
SKL0377-ICV2	QC		2		K006954	K006953		
22L0156-03	8082A PCB Solid 4	B 01	3			K006953	Anchor QEA, LLC	
22L0156-04	8082A PCB Solid 4	B 01	4			K006953	Anchor QEA, LLC	
BKL0366-MS1	QC		5			K006953		
BKL0366-MSD1	QC		6			K006953		
22L0156-05	8082A PCB Solid 4	B 01	7			K006953	Anchor QEA, LLC	
BKL0404-BLK1	QC		8			K006953		
BKL0404-BS1	QC		9			K006953		
BKL0404-BSD1	QC		10			K006953		
BKL0404-SRM1	QC		11			K006953		
BKL0404-MS1	QC		12			K006953		
BKL0404-MSD1	QC		13			K006953		
SKL0377-CCV1	QC		14		K006956	K006953		
SKL0377-CCV2	QC		15		K006954	K006953		
22L0199-46	8082A PCB Solid 4	B 01	16			K006953	Anchor QEA, LLC	
22L0199-47	8082A PCB Solid 4	B 01	17			K006953	Anchor QEA, LLC	
22L0199-48	8082A PCB Solid 4	B 01	18			K006953	Anchor QEA, LLC	
SKL0377-CCV3	QC		19		K006955	K006953		
SKL0377-CCV4	QC		20		K006954	K006953		
22L0199-53	8082A PCB Solid 4	B 01	21			K006953	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SKL0377

Instrument: ECD7
Calibration ID: FL00010

Printed: 12/30/2022 3:28:32PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
22L0199-55	8082A PCB Solid 4	B 01	22			K006953	Anchor QEA, LLC	
22L0199-56	8082A PCB Solid 4	B 01	23			K006953	Anchor QEA, LLC	
22L0199-57	8082A PCB Solid 4	B 01	24			K006953	Anchor QEA, LLC	
22L0199-58	8082A PCB Solid 4	B 01	25			K006953	Anchor QEA, LLC	
22L0199-59	8082A PCB Solid 4	B 01	26			K006953	Anchor QEA, LLC	
22L0199-60	8082A PCB Solid 4	B 01	27			K006953	Anchor QEA, LLC	
SKL0377-CCV5	QC		28		K006957	K006953		
SKL0377-CCV6	QC		29		K006954	K006953		
BKL0401-BLK1	QC		30			K006953		
BKL0401-BS1	QC		31			K006953		
BKL0401-BSD1	QC		32			K006953		
BKL0401-SRM1	QC		33			K006953		
BKL0401-MS1	QC		34			K006953		
BKL0401-MSD1	QC		35			K006953		
SKL0377-CCV7	QC		36		K006956	K006953		
SKL0377-CCV8	QC		37		K006954	K006953		
22L0199-05	8082A PCB Solid 4	B 01	38			K006953	Anchor QEA, LLC	
22L0199-06	8082A PCB Solid 4	B 01	39			K006953	Anchor QEA, LLC	
22L0199-08	8082A PCB Solid 4	B 01	40			K006953	Anchor QEA, LLC	
22L0199-10	8082A PCB Solid 4	B 01	41			K006953	Anchor QEA, LLC	
SKL0377-CCV9	QC		42		K006955	K006953		

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SKL0377

Instrument: ECD7
Calibration ID: FL00010

Printed: 12/30/2022 3:28:32PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SKL0377-CCVA	QC		43		K006954	K006953		
22L0199-11	8082A PCB Solid 4	B 01	44			K006953	Anchor QEA, LLC	
22L0199-12	8082A PCB Solid 4	B 01	45			K006953	Anchor QEA, LLC	
22L0199-14	8082A PCB Solid 4	B 01	46			K006953	Anchor QEA, LLC	
22L0199-16	8082A PCB Solid 4	B 01	47			K006953	Anchor QEA, LLC	
22L0199-17	8082A PCB Solid 4	B 01	48			K006953	Anchor QEA, LLC	
22L0199-18	8082A PCB Solid 4	B 01	49			K006953	Anchor QEA, LLC	
22L0199-19	8082A PCB Solid 4	B 01	50			K006953	Anchor QEA, LLC	
22L0199-20	8082A PCB Solid 4	B 01	51			K006953	Anchor QEA, LLC	
SKL0377-CCVB	QC		52		K006957	K006953		
SKL0377-CCVC	QC		53		K006954	K006953		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	27-DEC-2022 16:39	12272201ECD7.D	1	DDTS	
2	27-DEC-2022 17:00	12272202ECD7.D	1	AR1254ICV1	
3	27-DEC-2022 17:21	12272203ECD7.D	1	AR1660ICV2	
4	27-DEC-2022 17:42	12272204ECD7.D	1	22L0156-03	
5	27-DEC-2022 18:03	12272205ECD7.D	1	22L0156-04	
6	27-DEC-2022 18:24	12272206ECD7.D	1	BKL0366-MS1	
7	27-DEC-2022 18:45	12272207ECD7.D	1	BKL0366-MSD1	
8	27-DEC-2022 19:07	12272208ECD7.D	1	22L0156-05	
9	27-DEC-2022 19:28	12272209ECD7.D	1	BKL0404-BLK1	
10	27-DEC-2022 19:49	12272210ECD7.D	1	BKL0404-BS1	
11	27-DEC-2022 20:10	12272211ECD7.D	1	BKL0404-BSD1	
12	27-DEC-2022 20:31	12272212ECD7.D	1	BKL0404-SRM1	
13	27-DEC-2022 20:52	12272213ECD7.D	1	BKL0404-MS1	
14	27-DEC-2022 21:13	12272214ECD7.D	1	BKL0404-MSD1	
15	27-DEC-2022 21:35	12272215ECD7.D	1	AR1248CCV1	
16	27-DEC-2022 21:56	12272216ECD7.D	1	AR1660CCV2	
17	27-DEC-2022 22:17	12272217ECD7.D	1	22L0199-41	
18	27-DEC-2022 22:38	12272218ECD7.D	1	22L0199-42	
19	27-DEC-2022 22:59	12272219ECD7.D	1	22L0199-43	
20	27-DEC-2022 23:20	12272220ECD7.D	1	22L0199-44	
21	27-DEC-2022 23:41	12272221ECD7.D	1	22L0199-45	
22	28-DEC-2022 00:02	12272222ECD7.D	1	22L0199-46	
23	28-DEC-2022 00:23	12272223ECD7.D	1	22L0199-47	
24	28-DEC-2022 00:45	12272224ECD7.D	1	22L0199-48	
25	28-DEC-2022 01:06	12272225ECD7.D	1	22L0199-49	
26	28-DEC-2022 01:27	12272226ECD7.D	1	22L0199-50	
27	28-DEC-2022 01:48	12272227ECD7.D	1	AR1242CCV3	
28	28-DEC-2022 02:09	12272228ECD7.D	1	AR1660CCV4	
29	28-DEC-2022 02:30	12272229ECD7.D	1	22L0199-51	
30	28-DEC-2022 02:51	12272230ECD7.D	1	22L0199-52	
31	28-DEC-2022 03:12	12272231ECD7.D	1	22L0199-53	
32	28-DEC-2022 03:33	12272232ECD7.D	1	22L0199-54	
33	28-DEC-2022 03:55	12272233ECD7.D	1	22L0199-55	
34	28-DEC-2022 04:16	12272234ECD7.D	1	22L0199-56	
35	28-DEC-2022 04:37	12272235ECD7.D	1	22L0199-57	
36	28-DEC-2022 04:58	12272236ECD7.D	1	22L0199-58	
37	28-DEC-2022 05:19	12272237ECD7.D	1	22L0199-59	
38	28-DEC-2022 05:40	12272238ECD7.D	1	22L0199-60	
39	28-DEC-2022 06:01	12272239ECD7.D	1	AR1254CCV5	
40	28-DEC-2022 06:22	12272240ECD7.D	1	AR1660CCV6	
41	28-DEC-2022 06:43	12272241ECD7.D	1	BKL0401-BLK1	
42	28-DEC-2022 07:05	12272242ECD7.D	1	BKL0401-BS1	
43	28-DEC-2022 07:26	12272243ECD7.D	1	BKL0401-BSD1	
44	28-DEC-2022 07:47	12272244ECD7.D	1	BKL0401-SRM1	
45	28-DEC-2022 08:08	12272245ECD7.D	1	BKL0401-MS1	
46	28-DEC-2022 08:29	12272246ECD7.D	1	BKL0401-MSD1	
47	28-DEC-2022 08:50	12272247ECD7.D	1	AR1248CCV7	
48	28-DEC-2022 09:11	12272248ECD7.D	1	AR1660CCV8	
49	28-DEC-2022 09:32	12272249ECD7.D	1	22L0199-01	
50	28-DEC-2022 09:53	12272250ECD7.D	1	22L0199-02	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	28-DEC-2022 10:14	12272251ECD7.D	1	22L0199-03	
52	28-DEC-2022 10:35	12272252ECD7.D	1	22L0199-04	
53	28-DEC-2022 10:57	12272253ECD7.D	1	22L0199-05	
54	28-DEC-2022 11:18	12272254ECD7.D	1	22L0199-06	
55	28-DEC-2022 11:39	12272255ECD7.D	1	22L0199-07	
56	28-DEC-2022 12:00	12272256ECD7.D	1	22L0199-08	
57	28-DEC-2022 12:21	12272257ECD7.D	1	22L0199-09	
58	28-DEC-2022 12:42	12272258ECD7.D	1	22L0199-10	
59	28-DEC-2022 13:03	12272259ECD7.D	1	AR1242CCV9	
60	28-DEC-2022 13:24	12272260ECD7.D	1	AR1660CCVA	
61	28-DEC-2022 13:45	12272261ECD7.D	1	22L0199-11	
62	28-DEC-2022 14:06	12272262ECD7.D	1	22L0199-12	
63	28-DEC-2022 14:28	12272263ECD7.D	1	22L0199-13	
64	28-DEC-2022 14:49	12272264ECD7.D	1	22L0199-14	
65	28-DEC-2022 15:10	12272265ECD7.D	1	22L0199-15	
66	28-DEC-2022 15:31	12272266ECD7.D	1	22L0199-16	
67	28-DEC-2022 15:52	12272267ECD7.D	1	22L0199-17	
68	28-DEC-2022 16:13	12272268ECD7.D	1	22L0199-18	
69	28-DEC-2022 16:34	12272269ECD7.D	1	22L0199-19	
70	28-DEC-2022 16:55	12272270ECD7.D	1	22L0199-20	
71	28-DEC-2022 17:16	12272271ECD7.D	1	AR1254CCVB	
72	28-DEC-2022 17:38	12272272ECD7.D	1	AR1660CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 27-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1639	12272201ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1700	12272202ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1721	12272203ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1742	12272204ECD7.D	22L0156-03		1	Aroclor-1254, Aroclor-1260,
1803	12272205ECD7.D	22L0156-04		1	NO MANUAL INTEGRATION
1824	12272206ECD7.D	BKL0366-MS1		1	NO MANUAL INTEGRATION
1845	12272207ECD7.D	BKL0366-MSD1		1	NO MANUAL INTEGRATION
1907	12272208ECD7.D	22L0156-05		1	NO MANUAL INTEGRATION
1928	12272209ECD7.D	BKL0404-BLK1		1	NO MANUAL INTEGRATION
1949	12272210ECD7.D	BKL0404-BS1		1	NO MANUAL INTEGRATION
2010	12272211ECD7.D	BKL0404-BSD1		1	NO MANUAL INTEGRATION
2031	12272212ECD7.D	BKL0404-SRM1		1	NO MANUAL INTEGRATION
2052	12272213ECD7.D	BKL0404-MS1		1	NO MANUAL INTEGRATION
2113	12272214ECD7.D	BKL0404-MSD1		1	NO MANUAL INTEGRATION
2135	12272215ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2156	12272216ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
2217	12272217ECD7.D	22L0199-41		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2238	12272218ECD7.D	22L0199-42		1	NO MANUAL INTEGRATION
2259	12272219ECD7.D	22L0199-43		1	NO MANUAL INTEGRATION
2320	12272220ECD7.D	22L0199-44		1	NO MANUAL INTEGRATION
2341	12272221ECD7.D	22L0199-45		1	NO MANUAL INTEGRATION
0002	12272222ECD7.D	22L0199-46		1	Aroclor-1254,
0023	12272223ECD7.D	22L0199-47		1	Aroclor-1248, Aroclor-1254, IS-BNB, Tetrachloro-m-xylene,
0045	12272224ECD7.D	22L0199-48		1	NO MANUAL INTEGRATION
0106	12272225ECD7.D	22L0199-49		1	NO MANUAL INTEGRATION
0127	12272226ECD7.D	22L0199-50		1	NO MANUAL INTEGRATION
0148	12272227ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0209	12272228ECD7.D	AR1660CCV4		1	Aroclor-1260,
0230	12272229ECD7.D	22L0199-51		1	NO MANUAL INTEGRATION
0251	12272230ECD7.D	22L0199-52		1	NO MANUAL INTEGRATION
0312	12272231ECD7.D	22L0199-53		1	NO MANUAL INTEGRATION
0333	12272232ECD7.D	22L0199-54		1	NO MANUAL INTEGRATION
0355	12272233ECD7.D	22L0199-55		1	NO MANUAL INTEGRATION
0416	12272234ECD7.D	22L0199-56		1	NO MANUAL INTEGRATION
0437	12272235ECD7.D	22L0199-57		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0458	12272236ECD7.D	22L0199-58		1	NO MANUAL INTEGRATION
0519	12272237ECD7.D	22L0199-59		1	NO MANUAL INTEGRATION
0540	12272238ECD7.D	22L0199-60		1	NO MANUAL INTEGRATION
0601	12272239ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0622	12272240ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0643	12272241ECD7.D	BKL0401-BLK1		1	NO MANUAL INTEGRATION
0705	12272242ECD7.D	BKL0401-BS1		1	NO MANUAL INTEGRATION
0726	12272243ECD7.D	BKL0401-BSD1		1	NO MANUAL INTEGRATION
0747	12272244ECD7.D	BKL0401-SRM1		1	NO MANUAL INTEGRATION
0808	12272245ECD7.D	BKL0401-MS1		1	NO MANUAL INTEGRATION
0829	12272246ECD7.D	BKL0401-MSD1		1	NO MANUAL INTEGRATION
0850	12272247ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0911	12272248ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0932	12272249ECD7.D	22L0199-01		1	NO MANUAL INTEGRATION
0953	12272250ECD7.D	22L0199-02		1	NO MANUAL INTEGRATION
1014	12272251ECD7.D	22L0199-03		1	NO MANUAL INTEGRATION
1035	12272252ECD7.D	22L0199-04		1	NO MANUAL INTEGRATION
1057	12272253ECD7.D	22L0199-05		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1118	12272254ECD7.D	22L0199-06		1	Aroclor-1254,
1139	12272255ECD7.D	22L0199-07		1	NO MANUAL INTEGRATION
1200	12272256ECD7.D	22L0199-08		1	NO MANUAL INTEGRATION
1221	12272257ECD7.D	22L0199-09		1	NO MANUAL INTEGRATION
1242	12272258ECD7.D	22L0199-10		1	NO MANUAL INTEGRATION
1303	12272259ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
1324	12272260ECD7.D	AR1660CCVA		1	Aroclor-1016, Aroclor-1260, Tetrachloro-m-xylene,
1345	12272261ECD7.D	22L0199-11		1	NO MANUAL INTEGRATION
1406	12272262ECD7.D	22L0199-12		1	NO MANUAL INTEGRATION
1428	12272263ECD7.D	22L0199-13		1	NO MANUAL INTEGRATION
1449	12272264ECD7.D	22L0199-14		1	NO MANUAL INTEGRATION
1510	12272265ECD7.D	22L0199-15		1	NO MANUAL INTEGRATION
1531	12272266ECD7.D	22L0199-16		1	NO MANUAL INTEGRATION
1552	12272267ECD7.D	22L0199-17		1	NO MANUAL INTEGRATION
1613	12272268ECD7.D	22L0199-18		1	NO MANUAL INTEGRATION
1634	12272269ECD7.D	22L0199-19		1	NO MANUAL INTEGRATION
1655	12272270ECD7.D	22L0199-20		1	NO MANUAL INTEGRATION
1716	12272271ECD7.D	AR1254CCVB		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	12272272ECD7.D	AR1660CCVC		1	NO MANUAL INTEGRATION
1639	12272201ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1700	12272202ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1721	12272203ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1742	12272204ECD7.D	22L0156-03		1	NO MANUAL INTEGRATION
1803	12272205ECD7.D	22L0156-04		1	NO MANUAL INTEGRATION
1824	12272206ECD7.D	BKL0366-MS1		1	NO MANUAL INTEGRATION
1845	12272207ECD7.D	BKL0366-MSD1		1	NO MANUAL INTEGRATION
1907	12272208ECD7.D	22L0156-05		1	NO MANUAL INTEGRATION
1928	12272209ECD7.D	BKL0404-BLK1		1	NO MANUAL INTEGRATION
1949	12272210ECD7.D	BKL0404-BS1		1	NO MANUAL INTEGRATION
2010	12272211ECD7.D	BKL0404-BSD1		1	NO MANUAL INTEGRATION
2031	12272212ECD7.D	BKL0404-SRM1		1	NO MANUAL INTEGRATION
2052	12272213ECD7.D	BKL0404-MS1		1	NO MANUAL INTEGRATION
2113	12272214ECD7.D	BKL0404-MSD1		1	NO MANUAL INTEGRATION
2135	12272215ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2156	12272216ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
2217	12272217ECD7.D	22L0199-41		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2238	12272218ECD7.D	22L0199-42		1	NO MANUAL INTEGRATION
2259	12272219ECD7.D	22L0199-43		1	NO MANUAL INTEGRATION
2320	12272220ECD7.D	22L0199-44		1	NO MANUAL INTEGRATION
2341	12272221ECD7.D	22L0199-45		1	NO MANUAL INTEGRATION
0002	12272222ECD7.D	22L0199-46		1	NO MANUAL INTEGRATION
0023	12272223ECD7.D	22L0199-47		1	NO MANUAL INTEGRATION
0045	12272224ECD7.D	22L0199-48		1	NO MANUAL INTEGRATION
0106	12272225ECD7.D	22L0199-49		1	NO MANUAL INTEGRATION
0127	12272226ECD7.D	22L0199-50		1	NO MANUAL INTEGRATION
0148	12272227ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0209	12272228ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0230	12272229ECD7.D	22L0199-51		1	NO MANUAL INTEGRATION
0251	12272230ECD7.D	22L0199-52		1	NO MANUAL INTEGRATION
0312	12272231ECD7.D	22L0199-53		1	NO MANUAL INTEGRATION
0333	12272232ECD7.D	22L0199-54		1	NO MANUAL INTEGRATION
0355	12272233ECD7.D	22L0199-55		1	NO MANUAL INTEGRATION
0416	12272234ECD7.D	22L0199-56		1	NO MANUAL INTEGRATION
0437	12272235ECD7.D	22L0199-57		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b\221227.b

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0540	12272238ECD7.D	22L0199-60		1	NO MANUAL INTEGRATION
0601	12272239ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0622	12272240ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0643	12272241ECD7.D	BKL0401-BLK1		1	NO MANUAL INTEGRATION
0705	12272242ECD7.D	BKL0401-BS1		1	NO MANUAL INTEGRATION
0726	12272243ECD7.D	BKL0401-BSD1		1	NO MANUAL INTEGRATION
0747	12272244ECD7.D	BKL0401-SRM1		1	NO MANUAL INTEGRATION
0808	12272245ECD7.D	BKL0401-MS1		1	NO MANUAL INTEGRATION
0829	12272246ECD7.D	BKL0401-MSD1		1	NO MANUAL INTEGRATION
0850	12272247ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0911	12272248ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0932	12272249ECD7.D	22L0199-01		1	NO MANUAL INTEGRATION
0953	12272250ECD7.D	22L0199-02		1	NO MANUAL INTEGRATION
1014	12272251ECD7.D	22L0199-03		1	NO MANUAL INTEGRATION
1035	12272252ECD7.D	22L0199-04		1	NO MANUAL INTEGRATION
1057	12272253ECD7.D	22L0199-05		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1118	12272254ECD7.D	22L0199-06		1	NO MANUAL INTEGRATION
1139	12272255ECD7.D	22L0199-07		1	NO MANUAL INTEGRATION
1200	12272256ECD7.D	22L0199-08		1	Tetrachloro-m-xylene [2C],
1221	12272257ECD7.D	22L0199-09		1	NO MANUAL INTEGRATION
1242	12272258ECD7.D	22L0199-10		1	NO MANUAL INTEGRATION
1303	12272259ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
1324	12272260ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1345	12272261ECD7.D	22L0199-11		1	NO MANUAL INTEGRATION
1406	12272262ECD7.D	22L0199-12		1	NO MANUAL INTEGRATION
1428	12272263ECD7.D	22L0199-13		1	NO MANUAL INTEGRATION
1449	12272264ECD7.D	22L0199-14		1	NO MANUAL INTEGRATION
1510	12272265ECD7.D	22L0199-15		1	NO MANUAL INTEGRATION
1531	12272266ECD7.D	22L0199-16		1	NO MANUAL INTEGRATION
1552	12272267ECD7.D	22L0199-17		1	NO MANUAL INTEGRATION
1613	12272268ECD7.D	22L0199-18		1	NO MANUAL INTEGRATION
1634	12272269ECD7.D	22L0199-19		1	NO MANUAL INTEGRATION
1655	12272270ECD7.D	22L0199-20		1	NO MANUAL INTEGRATION
1716	12272271ECD7.D	AR1254CCVB		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\221227.b\221227.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	12272272ECD7.D	AR1660CCVC		1	NO MANUAL INTEGRATION

Security Status Report

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Security Status Report

Date: 03-Jan-2023 14:57

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SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0048	Instrument:	ECD7
Calibration:	FL00010	Calibration Date:	12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0048-SCV1 (Solid)			Lab File ID: 12032222ECD7.D			Analyzed: 12/03/22 22:13		
Decachlorobiphenyl	40.000	99.5	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	90.3	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.4	80 - 120	14.137	14.13533	0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	90.2	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0048-SCV2 (Solid)			Lab File ID: 12032223ECD7.D			Analyzed: 12/03/22 22:34		
Decachlorobiphenyl	40.000	97.9	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	88.9	80 - 120	5.835	5.835333	-0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	95.0	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	89.5	80 - 120	5.712	5.712333	-0.0003	N/A	
SKL0048-SCV3 (Solid)			Lab File ID: 12032224ECD7.D			Analyzed: 12/03/22 22:55		
Decachlorobiphenyl	40.000	98.3	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	86.8	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.2	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	87.7	80 - 120	5.712	5.712333	-0.0003	N/A	
SKL0048-SCV4 (Solid)			Lab File ID: 12032225ECD7.D			Analyzed: 12/03/22 23:17		
Decachlorobiphenyl	40.000	98.9	80 - 120	13.909	13.90667	0.0023	N/A	
Tetrachlorometaxylene	40.000	88.8	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.2	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	90.0	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0048-SCV5 (Solid)			Lab File ID: 12032226ECD7.D			Analyzed: 12/03/22 23:38		
Decachlorobiphenyl	40.000	100	80 - 120	13.907	13.90667	0.0003	N/A	
Tetrachlorometaxylene	40.000	90.2	80 - 120	5.836	5.835333	0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	96.1	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	89.2	80 - 120	5.713	5.712333	0.0007	N/A	
SKL0048-SCV6 (Solid)			Lab File ID: 12032227ECD7.D			Analyzed: 12/03/22 23:59		
Decachlorobiphenyl	40.000	140	80 - 120	13.906	13.90667	-0.0007	N/A	
Tetrachlorometaxylene	40.000	86.2	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	137	80 - 120	14.136	14.13533	0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	85.6	80 - 120	5.711	5.712333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0359
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0359-ICV1 (Solid)			Lab File ID: 12262202ECD7.D			Analyzed: 12/26/22 16:04		
Decachlorobiphenyl	40.000	119	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	117	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0359-ICV2 (Solid)			Lab File ID: 12262203ECD7.D			Analyzed: 12/26/22 16:26		
Decachlorobiphenyl	40.000	117	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	115	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	118	80 - 120	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	111	80 - 120	5.707	5.712333	-0.0053	N/A	
SKL0359-CCV1 (Solid)			Lab File ID: 12262214ECD7.D			Analyzed: 12/26/22 20:20		
Decachlorobiphenyl	40.000	109	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	98.8	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	113	80 - 120	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	40.000	98.3	80 - 120	5.709	5.712333	-0.0033	N/A	
SKL0359-CCV2 (Solid)			Lab File ID: 12262215ECD7.D			Analyzed: 12/26/22 20:41		
Decachlorobiphenyl	40.000	110	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	109	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	114	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0359-CCV3 (Solid)			Lab File ID: 12262226ECD7.D			Analyzed: 12/27/22 00:36		
Decachlorobiphenyl	40.000	107	80 - 120	13.9	13.90667	-0.0067	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	103	80 - 120	5.709	5.712333	-0.0033	N/A	
SKL0359-CCV4 (Solid)			Lab File ID: 12262227ECD7.D			Analyzed: 12/27/22 00:57		
Decachlorobiphenyl	40.000	117	80 - 120	13.9	13.90667	-0.0067	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	111	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.709	5.712333	-0.0033	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0359
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0359-CCV5 (Solid)			Lab File ID: 12262238ECD7.D			Analyzed: 12/27/22 04:52		
Decachlorobiphenyl	40.000	112	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	98.0	80 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	96.0	80 - 120	5.709	5.712333	-0.0033	N/A	
SKL0359-CCV6 (Solid)			Lab File ID: 12262239ECD7.D			Analyzed: 12/27/22 05:14		
Decachlorobiphenyl	40.000	112	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.707	5.712333	-0.0053	N/A	
SKL0359-CCV7 (Solid)			Lab File ID: 12262254ECD7.D			Analyzed: 12/27/22 10:34		
Decachlorobiphenyl	40.000	107	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	96.0	80 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	98.0	80 - 120	5.709	5.712333	-0.0033	N/A	
SKL0359-CCV8 (Solid)			Lab File ID: 12262255ECD7.D			Analyzed: 12/27/22 10:56		
Decachlorobiphenyl	40.000	110	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.708	5.712333	-0.0043	N/A	
BKL0366-BLK1 (Solid)			Lab File ID: 12262256ECD7.D			Analyzed: 12/27/22 11:17		
Decachlorobiphenyl	8.0000	122	40 - 126	13.9	13.90667	-0.0067	N/A	
Tetrachlorometaxylene	8.0000	94.0	44 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	8.0000	118	40 - 126	14.125	14.13533	-0.0103	N/A	
Tetrachlorometaxylene [2C]	8.0000	91.3	44 - 120	5.709	5.712333	-0.0033	N/A	
BKL0366-BS1 (Solid)			Lab File ID: 12262257ECD7.D			Analyzed: 12/27/22 11:38		
Decachlorobiphenyl	8.0000	105	40 - 126	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	8.0000	87.1	44 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	8.0000	113	40 - 126	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	8.0000	83.3	44 - 120	5.709	5.712333	-0.0033	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0359
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BKL0366-BSD1 (Solid)			Lab File ID: 12262258ECD7.D			Analyzed: 12/27/22 12:00		
Decachlorobiphenyl	8.0000	107	40 - 126	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	8.0000	91.4	44 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	8.0000	114	40 - 126	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	8.0000	87.9	44 - 120	5.708	5.712333	-0.0043	N/A	
BKL0366-MRL1 (Solid)			Lab File ID: 12262259ECD7.D			Analyzed: 12/27/22 12:21		
Decachlorobiphenyl	8.0000	108	40 - 126	13.9	13.90667	-0.0067	N/A	
Tetrachlorometaxylene	8.0000	92.9	44 - 120	5.833	5.835333	-0.0023	N/A	
Decachlorobiphenyl [2C]	8.0000	116	40 - 126	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	8.0000	89.6	44 - 120	5.709	5.712333	-0.0033	N/A	
BKL0366-MRL2 (Solid)			Lab File ID: 12262260ECD7.D			Analyzed: 12/27/22 12:42		
Decachlorobiphenyl	8.0000	108	40 - 126	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	8.0000	95.8	44 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	8.0000	118	40 - 126	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	8.0000	91.9	44 - 120	5.709	5.712333	-0.0033	N/A	
BKL0366-SRM1 (Solid)			Lab File ID: 12262261ECD7.D			Analyzed: 12/27/22 13:04		
Decachlorobiphenyl	40.000	113	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	40.000	90.6	44 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	113	40 - 126	14.124	14.13533	-0.0113	N/A	
Tetrachlorometaxylene [2C]	40.000	91.3	44 - 120	5.708	5.712333	-0.0043	N/A	
22L0156-01 (Solid)			Lab File ID: 12262266ECD7.D			Analyzed: 12/27/22 14:51		
Decachlorobiphenyl	7.9792	104	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9792	89.0	44 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	7.9792	110	40 - 126	14.124	14.13533	-0.0113	N/A	
Tetrachlorometaxylene [2C]	7.9792	85.8	44 - 120	5.707	5.712333	-0.0053	N/A	
22L0156-02 (Solid)			Lab File ID: 12262267ECD7.D			Analyzed: 12/27/22 15:16		
Decachlorobiphenyl	7.9888	109	40 - 126	13.9	13.90667	-0.0067	N/A	
Tetrachlorometaxylene	7.9888	92.0	44 - 120	5.839	5.835333	0.0037	N/A	
Decachlorobiphenyl [2C]	7.9888	111	40 - 126	14.123	14.13533	-0.0123	N/A	
Tetrachlorometaxylene [2C]	7.9888	89.9	44 - 120	5.705	5.712333	-0.0073	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0359	Instrument:	ECD7
Calibration:	FL00010	Calibration Date:	12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0359-CCV9 (Solid)			Lab File ID: 12262268ECD7.D			Analyzed: 12/27/22 15:37		
Decachlorobiphenyl	40.000	108	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	98.8	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.126	14.13533	-0.0093	N/A	
Tetrachlorometaxylene [2C]	40.000	98.8	80 - 120	5.707	5.712333	-0.0053	N/A	
SKL0359-CCVA (Solid)			Lab File ID: 12262269ECD7.D			Analyzed: 12/27/22 15:58		
Decachlorobiphenyl	40.000	118	80 - 120	13.9	13.90667	-0.0067	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.707	5.712333	-0.0053	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0377
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0377-ICV1 (Solid)			Lab File ID: 12272202ECD7.D			Analyzed: 12/27/22 17:00		
Decachlorobiphenyl	40.000	114	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	91.8	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	108	80 - 120	14.129	14.13533	-0.0063	N/A	
Tetrachlorometaxylene [2C]	40.000	92.0	80 - 120	5.707	5.712333	-0.0053	N/A	
SKL0377-ICV2 (Solid)			Lab File ID: 12272203ECD7.D			Analyzed: 12/27/22 17:21		
Decachlorobiphenyl	40.000	114	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.709	5.712333	-0.0033	N/A	
22L0156-03 (Solid)			Lab File ID: 12272204ECD7.D			Analyzed: 12/27/22 17:42		
Decachlorobiphenyl	7.9744	120	40 - 126	13.897	13.90667	-0.0097	N/A	
Tetrachlorometaxylene	7.9744	97.0	44 - 120	5.829	5.835333	-0.0063	N/A	
Decachlorobiphenyl [2C]	7.9744	116	40 - 126	14.124	14.13533	-0.0113	N/A	
Tetrachlorometaxylene [2C]	7.9744	97.9	44 - 120	5.706	5.712333	-0.0063	N/A	
22L0156-04 (Solid)			Lab File ID: 12272205ECD7.D			Analyzed: 12/27/22 18:03		
Decachlorobiphenyl	7.9941	109	40 - 126	13.898	13.90667	-0.0087	N/A	
Tetrachlorometaxylene	7.9941	90.6	44 - 120	5.829	5.835333	-0.0063	N/A	
Decachlorobiphenyl [2C]	7.9941	113	40 - 126	14.125	14.13533	-0.0103	N/A	
Tetrachlorometaxylene [2C]	7.9941	89.8	44 - 120	5.707	5.712333	-0.0053	N/A	
BKL0366-MS1 (Solid)			Lab File ID: 12272206ECD7.D			Analyzed: 12/27/22 18:24		
Decachlorobiphenyl	7.9883	111	40 - 126	13.899	13.90667	-0.0077	N/A	
Tetrachlorometaxylene	7.9883	95.3	44 - 120	5.829	5.835333	-0.0063	N/A	
Decachlorobiphenyl [2C]	7.9883	112	40 - 126	14.125	14.13533	-0.0103	N/A	
Tetrachlorometaxylene [2C]	7.9883	91.4	44 - 120	5.707	5.712333	-0.0053	N/A	
BKL0366-MSD1 (Solid)			Lab File ID: 12272207ECD7.D			Analyzed: 12/27/22 18:45		
Decachlorobiphenyl	7.9941	108	40 - 126	13.898	13.90667	-0.0087	N/A	
Tetrachlorometaxylene	7.9941	73.0	44 - 120	5.827	5.835333	-0.0083	N/A	
Decachlorobiphenyl [2C]	7.9941	109	40 - 126	14.125	14.13533	-0.0103	N/A	
Tetrachlorometaxylene [2C]	7.9941	90.1	44 - 120	5.705	5.712333	-0.0073	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0377
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
22L0156-05 (Solid)			Lab File ID: 12272208ECD7.D			Analyzed: 12/27/22 19:07		
Decachlorobiphenyl	7.9967	111	40 - 126	13.899	13.90667	-0.0077	N/A	
Tetrachlorometaxylene	7.9967	94.1	44 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	7.9967	112	40 - 126	14.125	14.13533	-0.0103	N/A	
Tetrachlorometaxylene [2C]	7.9967	91.0	44 - 120	5.707	5.712333	-0.0053	N/A	
SKL0377-CCV1 (Solid)			Lab File ID: 12272215ECD7.D			Analyzed: 12/27/22 21:35		
Decachlorobiphenyl	40.000	104	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	93.5	80 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.129	14.13533	-0.0063	N/A	
Tetrachlorometaxylene [2C]	40.000	95.5	80 - 120	5.707	5.712333	-0.0053	N/A	
SKL0377-CCV2 (Solid)			Lab File ID: 12272216ECD7.D			Analyzed: 12/27/22 21:56		
Decachlorobiphenyl	40.000	109	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	102	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0377-CCV3 (Solid)			Lab File ID: 12272227ECD7.D			Analyzed: 12/28/22 01:48		
Decachlorobiphenyl	40.000	104	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	98.0	80 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	14.127	14.13533	-0.0083	N/A	
Tetrachlorometaxylene [2C]	40.000	98.5	80 - 120	5.71	5.712333	-0.0023	N/A	
SKL0377-CCV4 (Solid)			Lab File ID: 12272228ECD7.D			Analyzed: 12/28/22 02:09		
Decachlorobiphenyl	40.000	118	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.707	5.712333	-0.0053	N/A	
SKL0377-CCV5 (Solid)			Lab File ID: 12272239ECD7.D			Analyzed: 12/28/22 06:01		
Decachlorobiphenyl	40.000	111	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	96.0	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	94.5	80 - 120	5.709	5.712333	-0.0033	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0377
Instrument: ECD7
Calibration: FL00010
Calibration Date: 12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0377-CCV6 (Solid)			Lab File ID: 12272240ECD7.D			Analyzed: 12/28/22 06:22		
Decachlorobiphenyl	40.000	113	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.832	5.835333	-0.0033	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.129	14.13533	-0.0063	N/A	
Tetrachlorometaxylene [2C]	40.000	99.8	80 - 120	5.71	5.712333	-0.0023	N/A	
SKL0377-CCV7 (Solid)			Lab File ID: 12272247ECD7.D			Analyzed: 12/28/22 08:50		
Decachlorobiphenyl	40.000	104	80 - 120	13.903	13.90667	-0.0037	N/A	
Tetrachlorometaxylene	40.000	93.5	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.13	14.13533	-0.0053	N/A	
Tetrachlorometaxylene [2C]	40.000	94.3	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0377-CCV8 (Solid)			Lab File ID: 12272248ECD7.D			Analyzed: 12/28/22 09:11		
Decachlorobiphenyl	40.000	108	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.129	14.13533	-0.0063	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0377-CCV9 (Solid)			Lab File ID: 12272259ECD7.D			Analyzed: 12/28/22 13:03		
Decachlorobiphenyl	40.000	109	80 - 120	13.901	13.90667	-0.0057	N/A	
Tetrachlorometaxylene	40.000	98.0	80 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.706	5.712333	-0.0063	N/A	
SKL0377-CCVA (Solid)			Lab File ID: 12272260ECD7.D			Analyzed: 12/28/22 13:24		
Decachlorobiphenyl	40.000	121	80 - 120	13.903	13.90667	-0.0037	N/A	*
Tetrachlorometaxylene	40.000	101	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	110	80 - 120	14.129	14.13533	-0.0063	N/A	
Tetrachlorometaxylene [2C]	40.000	103	80 - 120	5.708	5.712333	-0.0043	N/A	
SKL0377-CCVB (Solid)			Lab File ID: 12272271ECD7.D			Analyzed: 12/28/22 17:16		
Decachlorobiphenyl	40.000	108	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	96.5	80 - 120	5.83	5.835333	-0.0053	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	96.0	80 - 120	5.708	5.712333	-0.0043	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0377	Instrument:	ECD7
Calibration:	FL00010	Calibration Date:	12/03/2022

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0377-CCVC (Solid)			Lab File ID: 12272272ECD7.D				Analyzed: 12/28/22 17:38	
Decachlorobiphenyl	40.000	112	80 - 120	13.902	13.90667	-0.0047	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.831	5.835333	-0.0043	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	14.128	14.13533	-0.0073	N/A	
Tetrachlorometaxylene [2C]	40.000	103	80 - 120	5.708	5.712333	-0.0043	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0048
Instrument: ECD7
Calibration: FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SKL0048-SCV1)		(Solid)	Lab File ID: 12032222ECD7.D				Analyzed: 12/03/22 22:13		
1-Bromo-2-Nitrobenzene	483506	3.518	457669	3.516	106	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	892033	14.281	837264	14.278	107	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270882	3.956	254712	3.955	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	432562	15.023	387892	15.021	112	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SKL0048-SCV2)		(Solid)	Lab File ID: 12032223ECD7.D				Analyzed: 12/03/22 22:34		
1-Bromo-2-Nitrobenzene	480791	3.515	457669	3.516	105	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	896515	14.281	837264	14.278	107	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270117	3.955	254712	3.955	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	422729	15.023	387892	15.021	109	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SKL0048-SCV3)		(Solid)	Lab File ID: 12032224ECD7.D				Analyzed: 12/03/22 22:55		
1-Bromo-2-Nitrobenzene	484977	3.515	457669	3.516	106	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	915518	14.281	837264	14.278	109	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	272055	3.955	254712	3.955	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	426674	15.023	387892	15.021	110	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SKL0048-SCV4)		(Solid)	Lab File ID: 12032225ECD7.D				Analyzed: 12/03/22 23:17		
1-Bromo-2-Nitrobenzene	484642	3.516	457669	3.516	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	917405	14.28	837264	14.278	110	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270782	3.955	254712	3.955	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	431238	15.024	387892	15.021	111	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SKL0048-SCV5)		(Solid)	Lab File ID: 12032226ECD7.D				Analyzed: 12/03/22 23:38		
1-Bromo-2-Nitrobenzene	482097	3.517	457669	3.516	105	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	913775	14.28	837264	14.278	109	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	268757	3.956	254712	3.955	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	434790	15.024	387892	15.021	112	50 - 200	0.003	+/-0.50	
Secondary Cal Check (SKL0048-SCV6)		(Solid)	Lab File ID: 12032227ECD7.D				Analyzed: 12/03/22 23:59		
1-Bromo-2-Nitrobenzene	483276	3.514	457669	3.516	106	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	920878	14.281	837264	14.278	110	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270175	3.953	254712	3.955	106	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	435731	15.023	387892	15.021	112	50 - 200	0.002	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0359	Instrument:	ECD7
		Calibration:	FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SKL0359-ICV1)		(Solid)	Lab File ID: 12262202ECD7.D				Analyzed: 12/26/22 16:04		
1-Bromo-2-Nitrobenzene	433462	3.517	433462	3.517	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	751448	14.271	751448	14.271	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	279052	3.954	279052	3.954	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	347137	15.014	347137	15.014	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SKL0359-ICV2)		(Solid)	Lab File ID: 12262203ECD7.D				Analyzed: 12/26/22 16:26		
1-Bromo-2-Nitrobenzene	376203	3.516	433462	3.517	87	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	761215	14.27	751448	14.271	101	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	244965	3.953	279052	3.954	88	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	350275	15.015	347137	15.014	101	50 - 200	0.001	+/-0.50	
Blank (BKL0366-BLK1)		(Solid)	Lab File ID: 12262256ECD7.D				Analyzed: 12/27/22 11:17		
1-Bromo-2-Nitrobenzene	541149	3.516	433462	3.517	125	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1023157	14.27	751448	14.271	136	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	345828	3.954	279052	3.954	124	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	502910	15.012	347137	15.014	145	50 - 200	-0.002	+/-0.50	
LCS (BKL0366-BS1)		(Solid)	Lab File ID: 12262257ECD7.D				Analyzed: 12/27/22 11:38		
1-Bromo-2-Nitrobenzene	542440	3.516	433462	3.517	125	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1165823	14.272	751448	14.271	155	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	345019	3.953	279052	3.954	124	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	523270	15.013	347137	15.014	151	50 - 200	-0.001	+/-0.50	
LCS Dup (BKL0366-BSD1)		(Solid)	Lab File ID: 12262258ECD7.D				Analyzed: 12/27/22 12:00		
1-Bromo-2-Nitrobenzene	538725	3.514	433462	3.517	124	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	1136789	14.273	751448	14.271	151	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	348023	3.952	279052	3.954	125	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	516122	15.013	347137	15.014	149	50 - 200	-0.001	+/-0.50	
MRL Check (BKL0366-MRL1)		(Solid)	Lab File ID: 12262259ECD7.D				Analyzed: 12/27/22 12:21		
1-Bromo-2-Nitrobenzene	552428	3.516	433462	3.517	127	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1237249	14.272	751448	14.271	165	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	355514	3.953	279052	3.954	127	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	537695	15.013	347137	15.014	155	50 - 200	-0.001	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SKL0359
SDG: 22L0156
Project: AOC4 UR Phase 3
Instrument: ECD7
Calibration: FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MRL Check (BKL0366-MRL2)		(Solid)	Lab File ID: 12262260ECD7.D				Analyzed: 12/27/22 12:42		
1-Bromo-2-Nitrobenzene	513093	3.516	433462	3.517	118	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1167787	14.274	751448	14.271	155	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	328193	3.953	279052	3.954	118	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	514009	15.014	347137	15.014	148	50 - 200	0.000	+/-0.50	
Reference (BKL0366-SRM1)		(Solid)	Lab File ID: 12262261ECD7.D				Analyzed: 12/27/22 13:04		
1-Bromo-2-Nitrobenzene	547269	3.515	433462	3.517	126	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	855645	14.262	751448	14.271	114	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340922	3.953	279052	3.954	122	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	460352	15.009	347137	15.014	133	50 - 200	-0.005	+/-0.50	
LDW22-SS797 (22L0156-01)		(Solid)	Lab File ID: 12262266ECD7.D				Analyzed: 12/27/22 14:51		
1-Bromo-2-Nitrobenzene	530548	3.515	433462	3.517	122	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	689710	14.265	751448	14.271	92	50 - 200	-0.006	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	351340	3.952	279052	3.954	126	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	393920	15.009	347137	15.014	113	50 - 200	-0.005	+/-0.50	
LDW22-IT797 (22L0156-02)		(Solid)	Lab File ID: 12262267ECD7.D				Analyzed: 12/27/22 15:16		
1-Bromo-2-Nitrobenzene	517065	3.522	433462	3.517	119	50 - 200	0.005	+/-0.50	
Hexabromobiphenyl	535408	14.264	751448	14.271	71	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	337661	3.949	279052	3.954	121	50 - 200	-0.005	+/-0.50	
Hexabromobiphenyl [2C]	328946	15.008	347137	15.014	95	50 - 200	-0.006	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0377
Instrument: ECD7
Calibration: FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SKL0377-ICV1)		(Solid)	Lab File ID: 12272202ECD7.D				Analyzed: 12/27/22 17:00		
1-Bromo-2-Nitrobenzene	379730	3.512	274362	3.513	138	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	689998	14.276	587341	14.273	117	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	242664	3.949	176546	3.951	137	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	355181	15.016	295915	15.013	120	50 - 200	0.003	+/-0.50	
Initial Cal Check (SKL0377-ICV2)		(Solid)	Lab File ID: 12272203ECD7.D				Analyzed: 12/27/22 17:21		
1-Bromo-2-Nitrobenzene	274362	3.513	274362	3.513	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	587341	14.273	587341	14.273	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	176546	3.951	176546	3.951	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	295915	15.013	295915	15.013	100	50 - 200	0.000	+/-0.50	
LDW22-SS812 (22L0156-03)		(Solid)	Lab File ID: 12272204ECD7.D				Analyzed: 12/27/22 17:42		
1-Bromo-2-Nitrobenzene	482901	3.514	274362	3.513	176	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	737745	14.265	587341	14.273	126	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	309946	3.951	176546	3.951	176	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	423146	15.009	295915	15.013	143	50 - 200	-0.004	+/-0.50	
LDW22-SS794 (22L0156-04)		(Solid)	Lab File ID: 12272205ECD7.D				Analyzed: 12/27/22 18:03		
1-Bromo-2-Nitrobenzene	511658	3.514	274362	3.513	186	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	834635	14.266	587341	14.273	142	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331521	3.951	176546	3.951	188	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	439689	15.011	295915	15.013	149	50 - 200	-0.002	+/-0.50	
Matrix Spike (BKL0366-MS1)		(Solid)	Lab File ID: 12272206ECD7.D				Analyzed: 12/27/22 18:24		
1-Bromo-2-Nitrobenzene	490776	3.513	274362	3.513	179	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	835866	14.266	587341	14.273	142	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	319781	3.951	176546	3.951	181	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	436377	15.011	295915	15.013	147	50 - 200	-0.002	+/-0.50	
Matrix Spike Dup (BKL0366-MSD1)		(Solid)	Lab File ID: 12272207ECD7.D				Analyzed: 12/27/22 18:45		
1-Bromo-2-Nitrobenzene	514712	3.513	274362	3.513	188	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	847361	14.265	587341	14.273	144	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	326473	3.951	176546	3.951	185	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	447640	15.01	295915	15.013	151	50 - 200	-0.003	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0377	Instrument:	ECD7
		Calibration:	FL00010

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW22-IT794 (22L0156-05)		(Solid)		Lab File ID: 12272208ECD7.D				Analyzed: 12/27/22 19:07	
1-Bromo-2-Nitrobenzene	513580	3.515	274362	3.513	187	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	833707	14.266	587341	14.273	142	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	333641	3.953	176546	3.951	189	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	435842	15.01	295915	15.013	147	50 - 200	-0.003	+/-0.50	

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC			Project:	AOC4 UR Phase 3
Matrix:	Sediment	Laboratory ID:	22L0156-02	File ID:	12262267ECD7.D
Sampled:	12/07/22 10:10	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 15:16
Solids:	84.75	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0366	Sequence:	SKL0359		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.309	9.318	0.009	5840	3.0	31.
	* 2	9.453	9.466	0.013	5571.4	4.1	
Aroclor 1260	1	11.051	11.0625	0.0115	2128.4	1.7	21.1
	* 2	11.656	11.66983	0.0138	2624	2.1	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC			Project:	AOC4 UR Phase 3
Matrix:	Sediment	Laboratory ID:	22L0156-03	File ID:	12272204ECD7.D
Sampled:	12/07/22 10:40	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 17:42
Solids:	77.60	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0366	Sequence:	SKL0377		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.305	9.318	0.013	4459	2.0	26.1
	* 2	9.459	9.466	0.007	4715.2	2.6	
Aroclor 1260	1	11.046	11.0625	0.0165	7627.8	4.4	32.4
	* 2	11.657	11.66983	0.0128	7506.75	6.1	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC			Project:	AOC4 UR Phase 3
Matrix:	Sediment	Laboratory ID:	22L0156-04	File ID:	12272205ECD7.D
Sampled:	12/07/22 11:05	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 18:03
Solids:	90.91	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0366	Sequence:	SKL0377		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.307	9.318	0.011	5280.2	2.8	37.7
	* 2	9.459	9.466	0.007	5458.2	4.1	
Aroclor 1260	1	11.05	11.0625	0.0125	2625.2	1.4	35.3
	* 2	11.659	11.66983	0.0108	4011.25	2.0	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	22L0156
Client:	Anchor QEA, LLC			Project:	AOC4 UR Phase 3
Matrix:	Sediment	Laboratory ID:	22L0156-05	File ID:	12272208ECD7.D
Sampled:	12/07/22 11:10	Prepared:	12/16/22 14:35	Analyzed:	12/27/22 19:07
Solids:	84.04	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BKL0366	Sequence:	SKL0377		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.308	9.318	0.01	6445.2	3.4	18.7
	* 2	9.457	9.466	0.009	5549.8	4.1	
Aroclor 1260	1	11.051	11.0625	0.0115	2231	1.1	30.8
	* 2	11.661	11.66983	0.00883	2198.75	1.5	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 22L0156

Client: Anchor QEA, LLC Project: AOC4 UR Phase 3

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW22-SS797 22L0156-01	12/07/22 10:00	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 14:51	11	40	
LDW22-IT797 22L0156-02	12/07/22 10:10	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 15:16	11	40	
LDW22-SS812 22L0156-03	12/07/22 10:40	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 17:42	11	40	
LDW22-SS794 22L0156-04	12/07/22 11:05	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 18:03	11	40	
LDW22-IT794 22L0156-05	12/07/22 11:10	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 19:07	11	40	
Matrix Spike BKL0366-MS1	12/07/22 11:05	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 18:24	11	40	
Matrix Spike Dup BKL0366-MSD1	12/07/22 11:05	12/07/22 17:07	12/16/22 14:35	9	365	12/27/22 18:45	11	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg

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www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

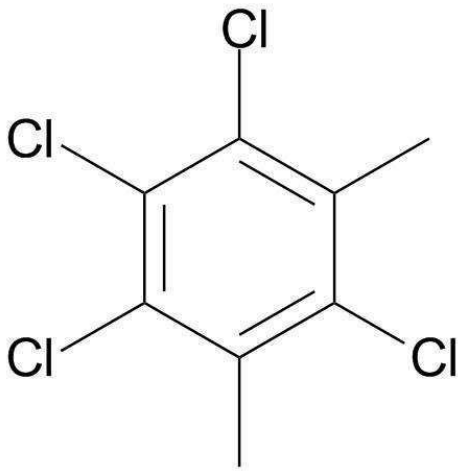
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

2,

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

I 10155

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

I 010156

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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
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[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101470
Description: Aroclor 1242
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14018
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

I 010157

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Reference Material Producer
Certicate No. 2427.02

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Certicate No. 2427.03

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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101471
Description: Aroclor 1248
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL15384
Certification Date: June 19, 2020
Expiration Date: June 30, 2028

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

I 010158

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101472
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL13055
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.247%

I 010159

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Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

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2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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IL11110613_us

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101474	**Lot Number:**	CL11330
Description:	Aroclor 1262	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

I 10160

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
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Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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IL111108(3).us

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101475	**Lot Number:**	CL11331
Description:	Aroclor 1268	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

I 012161

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Reference Material Producer
Certificate No. 2427.02

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IL111110613_us

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL16516
Certification Date: March 4, 2021
Expiration Date: February 28, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

J 006465

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Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certicate No. 2427.03

IL6491018_us

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL16555
Certification Date: June 22, 2021
Expiration Date: February 28, 2029

Andrea Gill, Certified Reference Materials Manager

J012591
AROCLOR 1016
Expires 2/28/2029
Prepared By Joshua Rains 11/26/2021

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.310%

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL16516
Certification Date: March 4, 2021
Expiration Date: February 28, 2029

J012592
AROCLOR 1260
Expires 2/28/2029
Prepared By Joshua Rains 11/26/2021

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Agilent

Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 JR
Reed
02/05/22

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MJBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

ISO 17034

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Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15350

Order Number: CB014765

Date Shipped: 4/11/2022

AirBill No(s): 519204140444

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: Kelly Bottem
Analytical Resources, Inc.
4611 S. 134th Place SUITE 100
Tukwila WA 98168
206-695-6211

K003525
K003528

Sample ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0148	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0149	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0150	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0151	1	PUGET SOUND SEDIMENT RM	PS-SRM

4/11/2022

BOEING PLANT 2

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time 1400 4/11/2022	Received by: (Signature)	Date/Time 0955 04/12/22
Custody Seal(s): Present/Absent PRESENT	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

PUGET SOUND SEDIMENT REFERENCE MATERIAL
QATS LABORATORY INSTRUCTIONS FOR
HRGC/HRMS CDD/CDF/CB CONGENER AND GC/ECD AROCLOR ANALYSIS

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocols or your contract, disregard these instructions.

APPLICATION: For the analysis of CDD/CDF and CB Congener analytes using project-specified HRGC/HRMS methods, and Aroclors using project-specified GC/ECD methods.

CAUTION: Read instructions carefully before opening bottles and proceeding with the analyses.

Contains CDD/CDF, CB Congener, and/or Aroclors
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a Puget Sound (Washington State) Sediment Reference Material (SRM) set for chlorinated dibenzo-p-dioxins/chlorinated dibenzofurans (CDD/CDF), and/or chlorinated biphenyl (CB) congener analysis using project-specified high resolution gas chromatography/ high resolution mass spectrometry (HRGC/HRMS) methods. This SRM is also suitable for Aroclors analysis using project-specified gas chromatography/electron capture detection (GC/ECD) methods. This set consists of one (1) or more bottles, each with approximately 30 grams of Puget Sound SRM containing CDD/CDF, CB Congener, and/or Aroclor analytes. Check the chain-of-custody record to determine the number of bottles provided for CDD/CDF, CB Congener, and/or Aroclor analysis. None of the bottles are to be opened until SRM preparation/analysis is to occur.

CAUTION: The SRM could contain compounds that are light sensitive and should be protected from light during storage. Store the SRM at ≤ 6° C, preferably at < 0° C, until SRM preparation and analysis is to occur. Allow the bottle(s) to reach ambient temperature before opening.

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS REQUIREMENTS*

The SRM is to be analyzed as described in the project-specified methods employed for the analysis of CDD/CDF and/or CB Congener analytes using HRGC/HRMS instrumentation and/or Aroclors using GC/ECD instrumentation. These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the project-specified methods, or your contract, disregard these instructions.

(D) *SAMPLE ANALYSIS*

General Instructions

The SRM contains CDD/CDF, CB Congener, and Aroclor analytes which are known or suspected to have severe health effects. Employing appropriate safety precautions, this SRM is to be handled, prepared, and analyzed exactly as you would process samples received from a known or suspected hazardous waste site. The SRM should be handled only by trained and experienced analysts in facilities expressly designed to handle such materials. When calculating the concentrations of analytes, use 0% as the soil moisture content.

Allow the bottle(s) to reach ambient temperature before opening and removing gravimetric amounts for sample preparation. To begin the extraction and analysis procedure, break the seal and open the bottle carefully. Weigh out the appropriate aliquot for extraction and analysis as prescribed in the project-specified methods (typically 10 grams for HRGC/HRMS methods and 30 grams for GC/ECD methods), or in accordance with your contract.

Proceed immediately with the extraction and analysis as described in the project-specified methods or your contract.

(E) *REPORTING*

Report the results for the prepared SRM as received.

Report the analytical results for the SRM to EPA or other appropriate Agency, using the format and other instructions for submission of data packages as specified in your contract.

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K 5829

IL11110613_us

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

ILT1116613_US

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW22-SS812

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-03 A	SDG:	22L0156
Sampled:	12/07/22 10:40	Prepared:	12/19/22 16:18	File ID:	SMM 12-21-22-036
% Solids:	70.94	Preparation:	SMM EPA 7471B	Analyzed:	12/21/22 13:31
Batch:	BKL0496	Sequence:	SKL0287	Initial/Final:	0.285 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	FL00048

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0312	1	0.00519	0.0247	

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 22L0156

Client: Anchor QEA, LLC Project: AOC4 UR Phase 3

Batch: BKL0496 Batch Matrix: Solid Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW22-SS812	22L0156-03	SMM 12-21-22-036	12/19/22 16:18	Store frozen
Blank	BKL0496-BLK1	SMM 12-21-22-012	12/19/22 16:18	
LCS	BKL0496-BS1	SMM 12-21-22-013	12/19/22 16:18	
Reference	BKL0496-SRM1	SMM 12-21-22-044	12/19/22 16:18	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM | Balance ID: BAL10 | Matrix: Soil
Analyst: AR | Block ID: 9 | Date: 12/16/22
Bath Temp: 98°C | Start Time: 1107 | End Time: 1153

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
22L155-01	A		0.234	50	1		
-02			0.204				
-03			0.278				
-04			0.208				
-05			0.273				
-06			0.218				
-07			0.265				
-08			0.207				
-09			0.240				
-10			0.220				
-11			0.237				
-12			0.249				
-13			0.246				
22L156-03			0.285				
22L473-05	B		0.241				
-06			0.224				
-07			0.212				
-08			0.261				
-09			0.259				
BkL496-blk	—		—				22L155-01
-bs	—		—				
-dup	—		0.232				
-MS	—		0.236				
-MSD	—		0.232				
-SRM	—		0.207				

Chemical/Reagent ID:

HNO_3: K15006 | H_2SO_4: K7951 | HCl: —
5% $K_2S_2O_8$: K10199 | 5% $KMnO_4$: K5719 | Digest Tube Lot: 22080165

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 22L0156

Client: Anchor QEA, LLC | Project: AOC4 UR Phase 3

Batch: BKL0496 | Laboratory ID: BKL0496-BLK1 | Prepared: 12/19/22 16:18

Matrix: Solid | Preparation: SMM EPA 7471B | Analyzed: 12/21/22 11:13

Sequence: SKL0287 | Calibration: FL00048 | Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Matrix:	Solid	Analyzed:	12/21/22 11:15
Batch:	BKL0496	Laboratory ID:	BKL0496-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.473		94.7	80 - 120

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0496-SRM1
Batch: BKL0496
Initial/Final: 0.202 g / 50 mL
Preparation: SMM EPA 7471B
Analyzed: 12/21/2022 13:50
Standard ID: K008376
Expires: 04/20/2025
Standard Lot#: D112-540
Description: Metals In Soil

ANALYTE	TRUE (mg/kg wet)	FOUND (mg/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Mercury	3.3100	3.61	0.0520	0.248	D	109	86.1 - 139.9

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00048	Instrument:	HYDRA
Calibration Date:	12/21/2022 15:43		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Mercury	0	0	0.0001	5830000	0.0005	5968000	0.001	6091000	0.002	6137500	0.005	6199400

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FL00048	Instrument:	HYDRA
Calibration Date:	12/21/2022 15:43		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	5037650	49.1	0.9999		0.99	

SMM 12-21-22 SKL0287 FL00048

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 21 Dec 2022 10:37:44

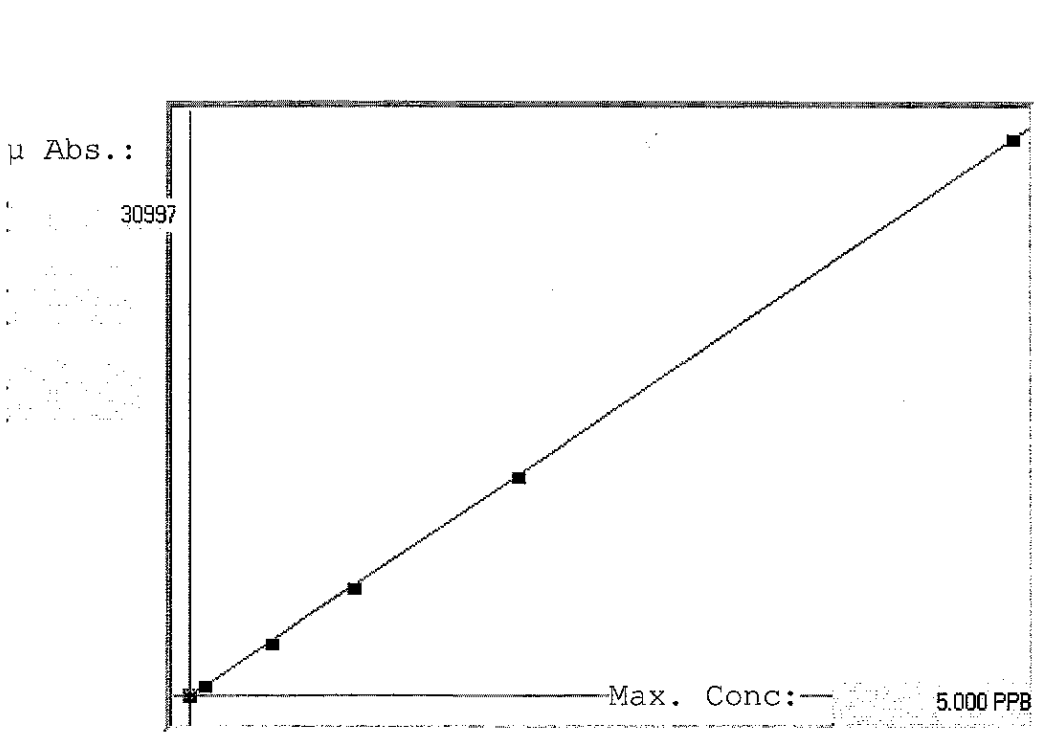
Sample ID	Mean	Units		Date	Method
SEQ-CAL1	88	PPB		21 Dec 2022 10:43:04	ARI 5 ppb (NO 0.05)
SEQ-CAL2	583	PPB		21 Dec 2022 10:45:25	ARI 5 ppb (NO 0.05)
SEQ-CAL3	2984	PPB		21 Dec 2022 10:47:46	ARI 5 ppb (NO 0.05)
SEQ-CAL4	6091	PPB		21 Dec 2022 10:50:08	ARI 5 ppb (NO 0.05)
SEQ-CAL5	12275	PPB		21 Dec 2022 10:52:27	ARI 5 ppb (NO 0.05)
SEQ-CAL6	30997	PPB		21 Dec 2022 10:54:47	ARI 5 ppb (NO 0.05)
SEQ-ICV	98.1% 3.9247	PPB	✓	21 Dec 2022 11:01:26	ARI 5 ppb (NO 0.05)
SEQ-ICB	0.0086	PPB	✓	21 Dec 2022 11:03:45	ARI 5 ppb (NO 0.05)
SEQ-CRL	101.1% 0.1011	PPB	✓	21 Dec 2022 11:06:06	ARI 5 ppb (NO 0.05)
SEQ-CCV	96.8% 3.8712	PPB	✓	21 Dec 2022 11:08:26	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0084	PPB	✓	21 Dec 2022 11:10:45	ARI 5 ppb (NO 0.05)
BKL0496-BLK1	0.0121	PPB		21 Dec 2022 11:13:06	ARI 5 ppb (NO 0.05)
BKL0496-BS1	1.8932	PPB	✓	21 Dec 2022 11:15:25	ARI 5 ppb (NO 0.05)
SEQ-CCV	94.8% 3.7922	PPB	✓	21 Dec 2022 11:17:44	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0073	PPB	✓	21 Dec 2022 11:20:03	ARI 5 ppb (NO 0.05)
SEQ-CCV	94.6% 3.7842	PPB	✓	21 Dec 2022 12:45:02	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0083	PPB	✓	21 Dec 2022 12:47:20	ARI 5 ppb (NO 0.05)
22L0155-01	0.2314	PPB		21 Dec 2022 12:49:41	ARI 5 ppb (NO 0.05)
BKL0496-DUP1	0.2953	PPB		21 Dec 2022 12:52:00	ARI 5 ppb (NO 0.05)
BKL0496-MS1	1.2866	PPB	✓	21 Dec 2022 12:54:19	ARI 5 ppb (NO 0.05)
BKL0496-MSD1	0.7020	PPB	✗	21 Dec 2022 12:56:38	ARI 5 ppb (NO 0.05)
22L0155-02	0.0346	PPB		21 Dec 2022 12:58:57	ARI 5 ppb (NO 0.05)
22L0155-03	0.0846	PPB		21 Dec 2022 13:01:16	ARI 5 ppb (NO 0.05)
22L0155-04	0.0481	PPB		21 Dec 2022 13:03:34	ARI 5 ppb (NO 0.05)
22L0155-05	0.2663	PPB		21 Dec 2022 13:05:54	ARI 5 ppb (NO 0.05)
22L0155-06	0.4604	PPB		21 Dec 2022 13:08:13	ARI 5 ppb (NO 0.05)
22L0155-07	0.2974	PPB		21 Dec 2022 13:10:33	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.6% 3.8241	PPB	✓	21 Dec 2022 13:12:53	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0080	PPB	✓	21 Dec 2022 13:15:11	ARI 5 ppb (NO 0.05)
22L0155-08	0.0755	PPB		21 Dec 2022 13:17:33	ARI 5 ppb (NO 0.05)
22L0155-09	0.2183	PPB		21 Dec 2022 13:19:53	ARI 5 ppb (NO 0.05)
22L0155-10	0.5440	PPB		21 Dec 2022 13:22:14	ARI 5 ppb (NO 0.05)
22L0155-11	0.5059	PPB		21 Dec 2022 13:24:32	ARI 5 ppb (NO 0.05)
22L0155-12	0.4444	PPB		21 Dec 2022 13:26:51	ARI 5 ppb (NO 0.05)
22L0155-13	0.4052	PPB		21 Dec 2022 13:29:09	ARI 5 ppb (NO 0.05)
22L0156-03	0.1263	PPB		21 Dec 2022 13:31:28	ARI 5 ppb (NO 0.05)
22L0473-05	0.0340	PPB		21 Dec 2022 13:33:46	ARI 5 ppb (NO 0.05)
22L0473-06	0.0402	PPB		21 Dec 2022 13:36:06	ARI 5 ppb (NO 0.05)
22L0473-07	0.0533	PPB		21 Dec 2022 13:38:25	ARI 5 ppb (NO 0.05)
SEQ-CCV	95.5% 3.8184	PPB	✓	21 Dec 2022 13:40:44	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0054	PPB	✓	21 Dec 2022 13:43:03	ARI 5 ppb (NO 0.05)
22L0473-08	0.0421	PPB		21 Dec 2022 13:45:24	ARI 5 ppb (NO 0.05)
22L0473-09	0.0364	PPB		21 Dec 2022 13:47:44	ARI 5 ppb (NO 0.05)
BKL0496-SRM1	1.4578	PPB	✓	21 Dec 2022 13:50:04	ARI 5 ppb (NO 0.05)
BKL0496-PS1	1.9905	PPB		21 Dec 2022 13:52:24	ARI 5 ppb (NO 0.05)
BKL0453-BLK1	0.0094	PPB		21 Dec 2022 13:54:45	ARI 5 ppb (NO 0.05)
BKL0453-BS1	1.8562	PPB	✓	21 Dec 2022 13:57:04	ARI 5 ppb (NO 0.05)
22H0525-40	0.1309	PPB		21 Dec 2022 13:59:23	ARI 5 ppb (NO 0.05)
BKL0453-DUP1	0.1330	PPB		21 Dec 2022 14:01:42	ARI 5 ppb (NO 0.05)
BKL0453-MS1	1.1238	PPB	✓	21 Dec 2022 14:04:01	ARI 5 ppb (NO 0.05)
BKL0453-MSD1	1.1727	PPB	✓	21 Dec 2022 14:06:20	ARI 5 ppb (NO 0.05)
SEQ-CCV	93.5% 3.7387	PPB	✓	21 Dec 2022 14:08:39	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0074	PPB	✓	21 Dec 2022 14:10:57	ARI 5 ppb (NO 0.05)
22H0525-10	0.0983	PPB		21 Dec 2022 14:13:19	ARI 5 ppb (NO 0.05)
22H0525-11	0.1033	PPB		21 Dec 2022 14:15:39	ARI 5 ppb (NO 0.05)
22H0525-12	0.1631	PPB		21 Dec 2022 14:17:58	ARI 5 ppb (NO 0.05)
22H0525-13	0.1191	PPB		21 Dec 2022 14:20:18	ARI 5 ppb (NO 0.05)
22H0525-14	0.1744	PPB		21 Dec 2022 14:22:38	ARI 5 ppb (NO 0.05)
22H0525-19	0.4375	PPB		21 Dec 2022 14:24:58	ARI 5 ppb (NO 0.05)
22H0525-20	0.6971	PPB		21 Dec 2022 14:27:19	ARI 5 ppb (NO 0.05)

SMM 12-21-22

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 21 Dec 2022 10:37:44

Sample ID	Mean	Units		Date	Method
22H0525-21	0.4196	PPB		21 Dec 2022 14:29:39	ARI 5 ppb (NO 0.05)
22H0525-22	0.4071	PPB		21 Dec 2022 14:31:58	ARI 5 ppb (NO 0.05)
22H0525-23	0.9908	PPB		21 Dec 2022 14:34:17	ARI 5 ppb (NO 0.05)
SEQ-CCV	93.8% 3.7500	PPB	✓	21 Dec 2022 14:36:37	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0081	PPB	✓	21 Dec 2022 14:38:55	ARI 5 ppb (NO 0.05)
22H0525-24	0.4330	PPB		21 Dec 2022 14:41:17	ARI 5 ppb (NO 0.05)
22H0525-31	0.4722	PPB		21 Dec 2022 14:43:37	ARI 5 ppb (NO 0.05)
22H0525-32	0.6344	PPB		21 Dec 2022 14:45:56	ARI 5 ppb (NO 0.05)
22H0525-33	0.7727	PPB		21 Dec 2022 14:48:15	ARI 5 ppb (NO 0.05)
22H0525-34	0.4976	PPB		21 Dec 2022 14:50:35	ARI 5 ppb (NO 0.05)
22H0525-35	0.4505	PPB		21 Dec 2022 14:52:54	ARI 5 ppb (NO 0.05)
22H0525-36	0.4648	PPB		21 Dec 2022 14:55:14	ARI 5 ppb (NO 0.05)
22H0525-38	0.1731	PPB		21 Dec 2022 14:57:35	ARI 5 ppb (NO 0.05)
22H0525-39	0.1307	PPB		21 Dec 2022 14:59:56	ARI 5 ppb (NO 0.05)
BKL0453-SRM1	1.3974	PPB	✓	21 Dec 2022 15:02:16	ARI 5 ppb (NO 0.05)
SEQ-CCV	92.7% 3.7076	PPB	✓	21 Dec 2022 15:04:35	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0067	PPB	✓	21 Dec 2022 15:06:53	ARI 5 ppb (NO 0.05)
SEQ-CCV	92.9% 3.7160	PPB	✓	21 Dec 2022 15:09:15	ARI 5 ppb (NO 0.05)
SEQ-CCB	0.0073	PPB	✓	21 Dec 2022 15:11:33	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



A= 0.0000e+000

B= 1.6128e-004

C= 8.1665e-003

Rho= 0.9999748

Accept=Accepted

Accepted Date=

12/21/22 10:58

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	0.022	0.022	87	6.600	79	89	95		
SEQ-CAL2 - 0.1 PPB	0.100	0.102	0.002	583	0.6 %	581	580	588		
SEQ-CAL3 - 0.5 PPB	0.500	0.489	-0.011	2984	1.1 %	2943	2989	3021		
SEQ-CAL4 - 1.0 PPB	1.000	0.990	-0.010	6090	0.5 %	6059	6087	6126		
SEQ-CAL5 - 2.0 PPB	2.000	1.988	-0.012	12275	1.0 %	12162	12223	12441		
SEQ-CAL6 - 5.0 PPB	5.000	5.008	0.008	30997	1.1 %	30705	31499	30788		

Mercury Analysis Log

Analyst: ML

Instrument: HYDRA

Date: 12/21/22

Page: 1 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ -cal1	SMM	1X		
-cal2				
-cal3				
-cal4				
-cal5				
-cal6				
-ICV			✓ 3.92	
-ICB			✓ 0.008	
-CRL			✓ 0.101	
-CCV			✓ 3.87	
-CCB			✓ 0.008	
BKL0496 -BLK1				
-BS1			✓ 1.893	94.6 %R
SEQ -CCV			✓ 3.98	
-CCB			✓ 0.007	Seq Break
-CCV			✓ 3.78	
-CCB			✓ 0.008	
22L0155 -01				
BKL0496 -DUP1				
-MS1			✓ 1.28	105.5 %R
-MSD1			✗ 0.70	47.1 %R
22L0155 -02				
-03				
-04				
-05				
-06				
-07				
SEQ -CCV			✓ 3.82	
-CCB			✓ 0.008	
22L0155 -08				

Chemical/Reagent ID:

10% $SnCl_2$: K11602

14% NH_2OH/NaCl: K11415

Standard ID:

Standard: K11688-K11693

ICV/CCV: K11695

Mercury Analysis Log

Analyst: —

Instrument: —

Date: —

Page: 2 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-09				
-10				
-11				
-12				
-13				
22L0156 -03				
22L0473 -05				
-06				
-07				
SEQ -CCV ~~-08~~			✓ 3.81	
-CCB			✓ 0.005	
22L0473 -08				
-09		↓		
BKL0496 -SPM1		10x	1.45	108 %R
-PS1		1x	× 1.99	175 %R
BKL0453 -BLK1				
-BS1			✓ 1.856	92.8 %R
22H0525 -40				
BKL0453 -DUP1				RPD = 1.59
-MS1			✓ 1.123	99.2 %R
-MSD1			✓ 1.172	104.1 %R
SEQ -CCV			✓ 3.73	
-CCB			✓ 0.007	
22H0525 -10				
-11				
-12				
-13				
-14				
-19				
-20				

Chemical/Reagent ID:

10% $SnCl_2$: —

14% $NH_2OH/NaCl$: —

Standard ID:

Standard: —

ICV/CCV: —

Mercury Analysis Log

Analyst: —

Instrument: —

Date: —

Page: 3 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-21				
-22				
-23				
SEQ -CCV			✓ 3.75	
-CCB			✓ 0.008	
22H0525 -24				
-31				
-32				
-33				
-34				
-35				
-36				
-38				
-39				
BKL0453 -SRM1		10X	✓ 1.39	104 % R
SEQ -CCV		1X	✓ 3.70	
-CCB			✓ 0.006	
-CCV			✓ 3.71	
-CCB			✓ 0.007	

ML 12/2/22

Chemical/Reagent ID:

10% $SnCl_2$: —

14% NH_2OH/NaCl: —

Standard ID:

Standard: —

ICV/CCV: —

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: HYDRA
Calibration: FL00048
Control Limt: +/- 20.00%
Sequence: SKL0287

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKL0287-ICV1	Mercury	0.0040000	0.00392	98.1	mg/L	EPA 7471B
SKL0287-CCV1	Mercury	0.0040000	0.00387	96.8	mg/L	EPA 7471B
SKL0287-CCV2	Mercury	0.0040000	0.00379	94.8	mg/L	EPA 7471B
SKL0287-CCV3	Mercury	0.0040000	0.00378	94.6	mg/L	EPA 7471B
SKL0287-CCV4	Mercury	0.0040000	0.00382	95.6	mg/L	EPA 7471B
SKL0287-CCV5	Mercury	0.0040000	0.00382	95.5	mg/L	EPA 7471B
SKL0287-CCV6	Mercury	0.0040000	0.00374	93.5	mg/L	EPA 7471B
SKL0287-CCV7	Mercury	0.0040000	0.00375	93.7	mg/L	EPA 7471B
SKL0287-CCV8	Mercury	0.0040000	0.00371	92.7	mg/L	EPA 7471B
SKL0287-CCV9	Mercury	0.0040000	0.00372	92.9	mg/L	EPA 7471B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: HYDRA
Sequence: SKL0287

SDG: 22L0156
Project: AOC4 UR Phase 3
Calibration: FL00048
Date Analyzed: 12/21/22 11:03

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKL0287-ICB1	Mercury	0.000009	0.000021	0.000100	mg/L	
SKL0287-CCB1	Mercury	0.000008	0.000021	0.000100	mg/L	
SKL0287-CCB2	Mercury	0.000007	0.000021	0.000100	mg/L	
SKL0287-CCB3	Mercury	0.000008	0.000021	0.000100	mg/L	
SKL0287-CCB4	Mercury	0.000008	0.000021	0.000100	mg/L	
SKL0287-CCB5	Mercury	0.000005	0.000021	0.000100	mg/L	
SKL0287-CCB6	Mercury	0.000007	0.000021	0.000100	mg/L	
SKL0287-CCB7	Mercury	0.000008	0.000021	0.000100	mg/L	
SKL0287-CCB8	Mercury	0.000007	0.000021	0.000100	mg/L	
SKL0287-CCB9	Mercury	0.000007	0.000021	0.000100	mg/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0287	Instrument:	HYDRA
		Calibration:	FL00048

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKL0287-CAL1	SMM 12-21-22-001	NA	12/21/22 10:43
Cal Standard	SKL0287-CAL2	SMM 12-21-22-002	NA	12/21/22 10:45
Cal Standard	SKL0287-CAL3	SMM 12-21-22-003	NA	12/21/22 10:47
Cal Standard	SKL0287-CAL4	SMM 12-21-22-004	NA	12/21/22 10:50
Cal Standard	SKL0287-CAL5	SMM 12-21-22-005	NA	12/21/22 10:52
Cal Standard	SKL0287-CAL6	SMM 12-21-22-006	NA	12/21/22 10:54
Initial Cal Check	SKL0287-ICV1	SMM 12-21-22-007	NA	12/21/22 11:01
Initial Cal Blank	SKL0287-ICB1	SMM 12-21-22-008	NA	12/21/22 11:03
Instrument RL Check	SKL0287-CRL1	SMM 12-21-22-009	NA	12/21/22 11:06
Calibration Check	SKL0287-CCV1	SMM 12-21-22-010	NA	12/21/22 11:08
Calibration Blank	SKL0287-CCB1	SMM 12-21-22-011	NA	12/21/22 11:10
Blank	BKL0496-BLK1	SMM 12-21-22-012	Solid	12/21/22 11:13
LCS	BKL0496-BS1	SMM 12-21-22-013	Solid	12/21/22 11:15
Calibration Check	SKL0287-CCV2	SMM 12-21-22-014	NA	12/21/22 11:17
Calibration Blank	SKL0287-CCB2	SMM 12-21-22-015	NA	12/21/22 11:20
Calibration Check	SKL0287-CCV3	SMM 12-21-22-016	NA	12/21/22 12:45
Calibration Blank	SKL0287-CCB3	SMM 12-21-22-017	NA	12/21/22 12:47
Calibration Check	SKL0287-CCV4	SMM 12-21-22-028	NA	12/21/22 13:12
Calibration Blank	SKL0287-CCB4	SMM 12-21-22-029	NA	12/21/22 13:15
LDW22-SS812	22L0156-03	SMM 12-21-22-036	Solid	12/21/22 13:31
Calibration Check	SKL0287-CCV5	SMM 12-21-22-040	NA	12/21/22 13:40
Calibration Blank	SKL0287-CCB5	SMM 12-21-22-041	NA	12/21/22 13:43
Reference	BKL0496-SRM1	SMM 12-21-22-044	Solid	12/21/22 13:50
Calibration Check	SKL0287-CCV6	SMM 12-21-22-052	NA	12/21/22 14:08
Calibration Blank	SKL0287-CCB6	SMM 12-21-22-053	NA	12/21/22 14:10
Calibration Check	SKL0287-CCV7	SMM 12-21-22-064	NA	12/21/22 14:36
Calibration Blank	SKL0287-CCB7	SMM 12-21-22-065	NA	12/21/22 14:38
Calibration Check	SKL0287-CCV8	SMM 12-21-22-076	NA	12/21/22 15:04
Calibration Blank	SKL0287-CCB8	SMM 12-21-22-077	NA	12/21/22 15:06

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0287	Instrument:	HYDRA
		Calibration:	FL00048

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SKL0287-CCV9	SMM 12-21-22-078	NA	12/21/22 15:09
Calibration Blank	SKL0287-CCB9	SMM 12-21-22-079	NA	12/21/22 15:11

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: HYDRA
Calibration: FL00048
Sequence: SKL0287
Lab Sample ID: SKL0287-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000101	101	mg/L	70 - 130

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 22L0156

Client: Anchor QEA, LLC Project: AOC4 UR Phase 3

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW22-SS812 22L0156-03	12/07/22 10:40	12/07/22 17:07	12/19/22 16:18	12	28	12/21/22 13:31	14	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGHG1
Lot Number:	S2-HG711246
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Mercury
Starting Material:	Hg Metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1004 ± 6 µg/mL**
ICP Assay NIST SRM 3133 Lot Number: 160921

Assay Method #2 **998 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000210	M	Eu	<	0.000210	O	Na		0.000626	M	Se	<	0.008100	M	Zn	<	0.000810
M	Al		0.000161	O	Fe	<	0.001600	M	Nb	<	0.000410	O	Si		0.000626	M	Zr	<	0.000410
M	As	<	0.002500	M	Ga	<	0.000210	M	Nd	<	0.000210	M	Sm	<	0.000210				
O	Au	<	0.001700	M	Gd	<	0.000210	O	Ni	<	0.001400	M	Sn	<	0.000410				
M	B	<	0.008500	M	Ge	<	0.000410	M	Os	<	0.003900	O	Sr	<	0.000110				
M	Ba	<	0.000210	M	Hf	<	0.000210	O	P	<	0.029000	M	Ta	<	0.000210				
O	Be	<	0.000110	s	Hg	<		M	Pb	<	0.000210	M	Tb	<	0.000210				
M	Bi	<	0.001100	M	Ho	<	0.000210	M	Pd	<	0.003500	M	Te	<	0.005700				
O	Ca		0.004754	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	O	Ti	<	0.000430				
M	Ce	<	0.000210	O	K		0.000731	M	Rb	<	0.000210	O	Tl	<	0.005400				
M	Co	<	0.000210	M	La	<	0.000210	M	Re	<	0.000210	M	Tm	<	0.000210				
O	Cr	<	0.003300	O	Li	<	0.000110	M	Rh	<	0.001100	M	U	<	0.000410				
M	Cs	<	0.000410	M	Lu	<	0.000210	M	Ru	<	0.000810	M	V	<	0.000210				
M	Cu	<	0.000810	O	Mg		0.000104	O	S	<	0.022000	M	W	<	0.001100				
M	Dy	<	0.000210	O	Mn	<	0.000430	M	Sb	<	0.000210	M	Y	<	0.000210				
M	Er	<	0.000210	M	Mo	<	0.000210	M	Sc	<	0.000210	M	Yb	<	0.000210				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 18, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 18, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-QCS-4
Lot Number:	R2-MEB695951
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	5 µg/mL ea: Mercury

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Mercury, Hg	**5.011 ± 0.023 µg/mL**		

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 20, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 20, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

K8376

Certified Reference Material

▪ Certificate of Analysis ▪

1. The **Certified Values** are the actual gravimetric/volumetric "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this certified reference material alongside USEPA and NELAC compliant PT study materials. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and therefore, the acceptance limits of this certified reference material and any PT study material may differ relative to their difference in concentrations.

5. The **PT Performance Data** include the mean value, percent recovery and number of data points reported by laboratories in our Proficiency Testing study compared to the Certified Values. In the event this lot was not used in a proficiency testing scheme, the data displayed was generated internally by ERA.

6. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

7. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

8. For additional information on this product such as intended use, storage information, instructions for use, minimum sample size, and safety information, please refer to the Product Use Instructions provided.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Brian Miller

Quality Officer

Matthew Seebeck

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ T: 800.372.0122 ▪ 303.431.8454 ▪ www.eraqc.com

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number[6]	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	7970	78.9	144	-	-
Antimony	277	136	49.1	161	-	-
Arsenic	101	87.4	86.6	188	-	-
Barium	411	347	84.5	173	-	-
Beryllium	124	103	82.8	162	-	-
Boron	220	133	60.4	105	-	-
Cadmium	212	160	75.5	190	-	-
Calcium	5190	4100	79.0	131	-	-
Chromium	282	231	82.0	184	-	-
Cobalt	310	241	77.8	166	-	-
Copper	165	144	87.4	188	-	-
Iron	15000	14200	94.7	144	-	-
Lead	289	266	92.1	196	-	-
Lithium	6.42	6.37	99.2	33	-	-
Magnesium	2570	2220	86.5	132	-	-
Manganese	670	555	82.8	165	-	-
Mercury	3.31	3.74	113	117	-	-
Molybdenum	253	211	83.6	158	-	-
Nickel	458	350	76.5	187	-	-
Potassium	2420	1940	80.2	136	-	-
Selenium	154	130	84.7	174	-	-
Silver	65.0	57.1	87.9	166	-	-
Sodium	161	117	73.0	123	-	-
Strontium	98.8	84.5	85.5	113	-	-
Thallium	87.4	75.4	86.3	163	-	-
Tin	112	93.8	83.8	114	-	-
Titanium	463	333	71.8	115	-	-
Uranium	208	186	89.5	43	-	-
Vanadium	103	88.6	86.0	161	-	-
Zinc	187	160	85.5	186	-	-

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ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D115-540
Certificate Issue Date: September 14, 2021
Expiration Date: April 20, 2025
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	7970	10.4	3760 - 12200	3960 - 12000
Antimony	277	136	11.1	D.L. - 275	27.7 - 339
Arsenic	101	87.4	14.2	71.5 - 103	61.2 - 114
Barium	411	347	9.45	279 - 415	261 - 452
Beryllium	124	103	6.07	83.1 - 122	77.0 - 136
Boron	220	133	32.2	84.5 - 181	79.7 - 242
Cadmium	212	160	8.65	127 - 193	120 - 233
Calcium	5190	4100	11.2	3220 - 4970	2940 - 5710
Chromium	282	231	14.9	184 - 279	162 - 310
Cobalt	310	241	12.8	193 - 289	181 - 341
Copper	165	144	13.1	119 - 170	108 - 182
Iron	15000	14200	19.2	8600 - 19800	5010 - 23400
Lead	289	266	34.5	217 - 315	197 - 335
Lithium	6.42	6.37	18.0	4.19 - 8.54	3.13 - 9.60
Magnesium	2570	2220	6.94	1660 - 2780	1360 - 3080
Manganese	670	555	10.5	439 - 670	429 - 737
Mercury	3.31	3.74	7.72	2.85 - 4.63	2.24 - 5.23
Molybdenum	253	211	26.1	167 - 256	151 - 278
Nickel	458	350	19.3	277 - 424	245 - 504
Potassium	2420	1940	6.65	1330 - 2550	1130 - 2750
Selenium	154	130	5.42	101 - 160	87.0 - 174
Silver	65.0	57.1	9.66	44.8 - 69.5	40.1 - 74.1
Sodium	161	117	23.8	79.3 - 156	35.7 - 199
Strontium	98.8	84.5	9.49	66.6 - 102	60.3 - 109

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▪ Certificate of Analysis ▪

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Thallium	87.4	75.4	4.33	60.1 - 90.7	48.5 - 102
Tin	112	93.8	10.1	71.9 - 116	52.7 - 135
Titanium	463	333	10.9	54.7 - 610	14.7 - 650
Uranium	208	186	7.30	137 - 235	125 - 247
Vanadium	103	88.6	12.2	68.6 - 109	58.1 - 119
Zinc	187	160	8.03	126 - 194	112 - 208

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Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW22-SS797

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-01 C	SDG:	22L0156
Sampled:	12/07/22 10:00	Prepared:	12/09/22 17:12	File ID:	
% Solids:	87.65	Preparation:	No Prep Wet Chem	Analyzed:	12/09/22 17:14
Batch:	BKL0252	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	87.65	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW22-IT797

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-02 C	SDG:	22L0156
Sampled:	12/07/22 10:10	Prepared:	12/09/22 17:12	File ID:	
% Solids:	84.10	Preparation:	No Prep Wet Chem	Analyzed:	12/09/22 17:14
Batch:	BKL0252	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	84.10	1	0.04	0.04	

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW22-SS812

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-03 C	SDG:	22L0156
Sampled:	12/07/22 10:40	Prepared:	12/09/22 17:12	File ID:	
% Solids:	72.63	Preparation:	No Prep Wet Chem	Analyzed:	12/09/22 17:14
Batch:	BKL0252	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	72.63	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW22-SS794

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-04 C	SDG:	22L0156
Sampled:	12/07/22 11:05	Prepared:	12/09/22 17:12	File ID:	
% Solids:	90.84	Preparation:	No Prep Wet Chem	Analyzed:	12/09/22 17:14
Batch:	BKL0252	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	90.84	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW22-IT794

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-05 C	SDG:	22L0156
Sampled:	12/07/22 11:10	Prepared:	12/09/22 17:12	File ID:	
% Solids:	81.34	Preparation:	No Prep Wet Chem	Analyzed:	12/09/22 17:14
Batch:	BKL0252	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	81.34	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0252 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW22-SS797	22L0156-01		12/09/22 17:12	
LDW22-IT797	22L0156-02		12/09/22 17:12	
LDW22-SS812	22L0156-03		12/09/22 17:12	
LDW22-SS794	22L0156-04		12/09/22 17:12	
LDW22-IT794	22L0156-05		12/09/22 17:12	
Blank	BKL0252-BLK1		12/09/22 17:12	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BKL0252
Date:	12/9/2022 17:14
Analyst:	UW

Instrumentation

Drying Ovens:	1	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	12/9/2022 18:10	
date/time out:	12/10/2022 13:00	
elapsed hrs =	18.8	OK

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Oven Temps, °C	
Start Temp	99
Dry Cycle 1	109
Dry Cycle 2	
Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:	CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02		
Date & Time:	12/9/22 17:25	12/9/22 18:00	12/10/22 13:30								
Cal Wt (g): 10.0000	10.0000	10.0000	10.0000								
	Cal OK!	Cal OK!	Cal OK!								

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	TVS (%)	Notes
BKL0252-BLK1	70	0.7937	0.0000	0.7935			-0.0002	0.03%								
22L0155-61	71	0.7816	8.1480	5.0515			4.2699	57.96%								
BKL0252-DUP1	72	0.8270	6.9881	4.3674			3.5404	57.46%	RPD=0.9							
BKL0252-DUP2	73	0.8344	8.6736	5.3606			4.5262	57.74%	RSD=0.4							
22L0155-62	74	0.8225	7.8952	5.1966			4.3741	61.84%								
22L0155-63	75	0.8383	8.7187	5.4972			4.6589	59.12%								
22L0155-64	76	0.8291	7.5271	4.9408			4.1117	61.39%								
22L0156-01	77	0.8199	8.2479	7.3309			6.5110	87.65%								
22L0156-02	78	0.8270	7.0397	6.0521			5.2251	84.10%								
22L0156-03	79	0.8200	7.6815	5.8036			4.9836	72.63%								
22L0156-04	80	0.8253	6.4877	5.9690			5.1437	90.84%								
22L0156-05	81	0.8362	8.5815	7.1362			6.3000	81.34%								
22L0189-01	82	0.8421	7.4012	2.2807			1.4386	21.93%								

TOTAL SOLIDS (TS) BENCHSHEET for Solid samples

Method: Total Solids, Metals Correction

dry at 104°C (12-24 hr)

Batch:	BKL0435
Date:	12/16/2022 13:17
Analyst:	DOE

Instrumentation **Drying Oven:** 7 **Analytical Balance:** BAL10

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	12/16/2022 14:06	Temp in:	102	°C
date/time out:	12/17/2022 13:11	Temp out:	101	°C
elapsed hrs =	23.1	OK		

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Sample ID	Tare Weight (g)	Tare + Sample Weight (g)	Tare + Sample Dry Weight @ 104°C (g) 1	2	3	dry Wt (g)	TS (%)	Notes
22L0078-01	1.0350	10.2900	6.0100			4.9750	53.75%	
22L0078-02	1.0330	10.0460	5.9370			4.9040	54.41%	
22L0126-01	1.0500	3.5320	3.5150			2.4650	99.32%	LIMITED SAMPL
22L0126-02	1.0320	3.4980	3.4830			2.4510	99.39%	LIMITED SAMPL
22L0126-03	1.0190	3.0080	2.9980			1.9790	99.50%	LIMITED SAMPL
22L0126-04	1.0220	3.0360	3.0220			2.0000	99.30%	LIMITED SAMPL
22L0126-05	1.0410	3.4920	3.4800			2.4390	99.51%	LIMITED SAMPL
22L0126-06	1.0460	3.1010	3.0940			2.0480	99.66%	LIMITED SAMPL
22L0126-07	1.0370	3.0180	3.0040			1.9670	99.29%	LIMITED SAMPL
22L0126-08	1.0500	3.0200	3.0090			1.9590	99.44%	LIMITED SAMPL
22L0126-09	1.0210	3.1430	3.1340			2.1130	99.58%	LIMITED SAMPL
22L0126-10	1.0350	3.0080	2.9950			1.9600	99.34%	LIMITED SAMPL
22L0126-11	1.0560	2.9650	2.9480			1.8920	99.11%	LIMITED SAMPL
22L0126-12	1.0600	3.0320	3.0190			1.9590	99.34%	LIMITED SAMPL
22L0126-13	1.0430	3.0100	2.9920			1.9490	99.08%	LIMITED SAMPL
22L0126-14	1.0350	2.9470	2.9310			1.8960	99.16%	LIMITED SAMPL
22L0126-15	1.0450	2.9960	2.9820			1.9370	99.28%	LIMITED SAMPL
22L0126-16	1.0750	3.0100	2.9980			1.9230	99.38%	LIMITED SAMPL
22L0127-01	1.0720	10.1560	7.8780			6.8060	74.92%	
22L0127-02	1.0870	10.0770	8.4270			7.3400	81.65%	
22L0127-03	1.1020	10.2740	8.8190			7.7170	84.14%	
22L0127-04	1.0590	10.1580	8.5100			7.4510	81.89%	
22L0127-05	1.0490	10.5350	9.3900			8.3410	87.93%	
22L0127-06	1.0280	10.2520	8.6420			7.6140	82.55%	
22L0127-07	1.0230	10.0480	8.6970			7.6740	85.03%	
22L0127-08	1.0680	10.0260	8.4980			7.4300	82.94%	
22L0127-09	1.0140	10.1490	8.6670			7.6530	83.78%	
22L0127-10	1.0460	10.0830	8.2990			7.2530	80.26%	
22L0136-05	1.0030	10.0680	9.2100			8.2070	90.54%	
22L0156-03	1.0130	10.0920	7.4540			6.4410	70.94%	

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0252
Laboratory ID: BKL0252-BLK1
Prepared: 12/09/22 17:12
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 12/09/22 17:14
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW22-SS797 22L0156-01	12/07/22 10:00	12/07/22 17:07	12/09/22 17:12	2	28	12/09/22 17:14	2	28	
LDW22-IT797 22L0156-02	12/07/22 10:10	12/07/22 17:07	12/09/22 17:12	2	28	12/09/22 17:14	2	28	
LDW22-SS812 22L0156-03	12/07/22 10:40	12/07/22 17:07	12/09/22 17:12	2	28	12/09/22 17:14	2	28	
LDW22-SS794 22L0156-04	12/07/22 11:05	12/07/22 17:07	12/09/22 17:12	2	28	12/09/22 17:14	2	28	
LDW22-IT794 22L0156-05	12/07/22 11:10	12/07/22 17:07	12/09/22 17:12	2	28	12/09/22 17:14	2	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW22-SS797

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-01 C	SDG:	22L0156
Sampled:	12/07/22 10:00	Prepared:	12/19/22 07:12	File ID:	CubeData_12272022@1508-670
% Solids:	87.65	Preparation:	Plumb 1981	Analyzed:	12/20/22 04:13
Batch:	BKL0463	Sequence:	SKL0217	Initial/Final:	0.5985 g Wet / 0.5985 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.03	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW22-IT797

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-02 C	SDG:	22L0156
Sampled:	12/07/22 10:10	Prepared:	12/19/22 07:12	File ID:	CubeData_12272022@1508-687
% Solids:	84.10	Preparation:	Plumb 1981	Analyzed:	12/20/22 05:45
Batch:	BKL0463	Sequence:	SKL0217	Initial/Final:	0.5012 g Wet / 0.5012 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.07	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW22-SS812

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-03 C	SDG:	22L0156
Sampled:	12/07/22 10:40	Prepared:	12/19/22 07:12	File ID:	CubeData_12272022@1508-005
% Solids:	72.63	Preparation:	Plumb 1981	Analyzed:	12/20/22 06:15
Batch:	BKL0463	Sequence:	SKL0217	Initial/Final:	0.5 g Wet / 0.5 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.69	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW22-SS794

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-04 C	SDG:	22L0156
Sampled:	12/07/22 11:05	Prepared:	12/19/22 07:12	File ID:	CubeData_12272022@1508-017
% Solids:	90.84	Preparation:	Plumb 1981	Analyzed:	12/20/22 06:45
Batch:	BKL0463	Sequence:	SKL0217	Initial/Final:	0.5234 g Wet / 0.5234 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.05	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW22-IT794

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC4 UR Phase 3				
Matrix:	Sediment	Laboratory ID:	22L0156-05 C	SDG:	22L0156
Sampled:	12/07/22 11:10	Prepared:	12/19/22 07:12	File ID:	CubeData_12272022@1508-026
% Solids:	81.34	Preparation:	Plumb 1981	Analyzed:	12/20/22 07:16
Batch:	BKL0463	Sequence:	SKL0217	Initial/Final:	0.5133 g Wet / 0.5133 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.12	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0463 Batch Matrix: Solid
Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW22-SS797	22L0156-01	eData_12272022@1508-	12/19/22 07:12	
LDW22-IT797	22L0156-02	eData_12272022@1508-	12/19/22 07:12	
LDW22-SS812	22L0156-03	eData_12272022@1508-	12/19/22 07:12	
LDW22-SS794	22L0156-04	eData_12272022@1508-	12/19/22 07:12	
LDW22-IT794	22L0156-05	eData_12272022@1508-	12/19/22 07:12	
Blank	BKL0463-BLK1	eData_12272022@1508-	12/19/22 07:12	
LCS	BKL0463-BS1	eData_12272022@1508-	12/19/22 07:12	
LDW22-SS797	BKL0463-DUP1	eData_12272022@1508-	12/19/22 07:12	
MRL Check	BKL0463-MRL1	eData_12272022@1508-	12/19/22 07:12	
LDW22-SS797	BKL0463-MS1	eData_12272022@1508-	12/19/22 07:12	
Reference	BKL0463-SRM1	eData_12272022@1508-	12/19/22 07:12	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC | SDG: 22L0156

Client: Anchor QEA, LLC | Project: AOC4 UR Phase 3

Batch: BKL0463 | Laboratory ID: BKL0463-BLK1 | Prepared: 12/19/22 07:12

Matrix: Solid | Preparation: Plumb 1981 | Analyzed: 12/20/22 01:41

Sequence: SKL0217 | Calibration: FD00070 | Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Matrix:	Solid	Analyzed:	12/20/22 02:11
Batch:	BKL0463	Laboratory ID:	BKL0463-BS1
Preparation:	Plumb 1981	Sequence Name:	LCS
Initial/Final:	0.022 g / 0.022 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	44.5		100	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0463-DUP1
Batch: BKL0463
Lab Source ID: 22L0156-01
Preparation: Plumb 1981
Initial/Final: 0.5984 g / 0.5984 g
Source Sample Name: LDW22-SS797
% Solids: 87.65

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Organic Carbon	20	0.03	ND		

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Matrix:	Solid	Analyzed:	12/20/22 05:14
Batch:	BKL0463	Laboratory ID:	BKL0463-MS1
Preparation:	Plumb 1981	Sequence Name:	Matrix Spike
Initial/Final:	0.6015 g / 0.6015 g	Source Sample:	LDW22-SS797

COMPOUND	SPIKE ADDED (% dry)	SAMPLE CONCENTRATION (% dry)	Q	MS CONCENTRATION (% dry)	Q	MS % REC. #	QC LIMITS REC.
Total Organic Carbon	0.717	0.03		0.73		98.2	75 - 125

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKD0371
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Sequence: SKL0217
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SKL0217-ICV1	CubeData_12272022@1508-037	NA	12/16/22 13:12
Initial Cal Blank	SKL0217-ICB1	CubeData_12272022@1508-049	NA	12/16/22 13:43
Calibration Check	SKL0217-CCV1	CubeData_12272022@1508-163	NA	12/16/22 19:17
Calibration Blank	SKL0217-CCB1	CubeData_12272022@1508-173	NA	12/16/22 19:47
Calibration Check	SKL0217-CCV2	CubeData_12272022@1508-294	NA	12/17/22 01:23
Calibration Blank	SKL0217-CCB2	CubeData_12272022@1508-304	NA	12/17/22 01:53
Calibration Check	SKL0217-CCV3	CubeData_12272022@1508-380	NA	12/17/22 07:30
Calibration Blank	SKL0217-CCB3	CubeData_12272022@1508-388	NA	12/17/22 08:01
Calibration Check	SKL0217-CCV4	CubeData_12272022@1508-452	NA	12/17/22 13:38
Calibration Blank	SKL0217-CCB4	CubeData_12272022@1508-461	NA	12/17/22 14:08
Calibration Check	SKL0217-CCV5	CubeData_12272022@1508-525	NA	12/17/22 19:44
Calibration Blank	SKL0217-CCB5	CubeData_12272022@1508-530	NA	12/17/22 20:14
Calibration Check	SKL0217-CCV6	CubeData_12272022@1508-607	NA	12/18/22 01:51
Calibration Blank	SKL0217-CCB6	CubeData_12272022@1508-615	NA	12/18/22 02:21
Calibration Check	SKL0217-CCV7	CubeData_12272022@1508-683	NA	12/18/22 07:58
Calibration Blank	SKL0217-CCB7	CubeData_12272022@1508-688	NA	12/18/22 08:28
Calibration Check	SKL0217-CCV8	CubeData_12272022@1508-112	NA	12/18/22 14:03
Calibration Blank	SKL0217-CCB8	CubeData_12272022@1508-123	NA	12/18/22 14:34
Calibration Check	SKL0217-CCV9	CubeData_12272022@1508-238	NA	12/18/22 20:09
Calibration Blank	SKL0217-CCB9	CubeData_12272022@1508-248	NA	12/18/22 20:40
Calibration Check	SKL0217-CCVA	CubeData_12272022@1508-351	NA	12/19/22 02:16
Calibration Blank	SKL0217-CCBA	CubeData_12272022@1508-358	NA	12/19/22 02:47
Calibration Check	SKL0217-CCVB	CubeData_12272022@1508-428	NA	12/19/22 08:23
Calibration Blank	SKL0217-CCBB	CubeData_12272022@1508-433	NA	12/19/22 08:54
Calibration Check	SKL0217-CCVC	CubeData_12272022@1508-494	NA	12/19/22 14:29
Calibration Blank	SKL0217-CCBC	CubeData_12272022@1508-499	NA	12/19/22 15:00
Calibration Check	SKL0217-CCVD	CubeData_12272022@1508-574	NA	12/19/22 20:35
Calibration Blank	SKL0217-CCBD	CubeData_12272022@1508-581	NA	12/19/22 21:05
MRL Check	BKL0463-MRL1	CubeData_12272022@1508-631	Solid	12/20/22 01:10

ANALYSIS BATCH (SEQUENCE) SUMMARY

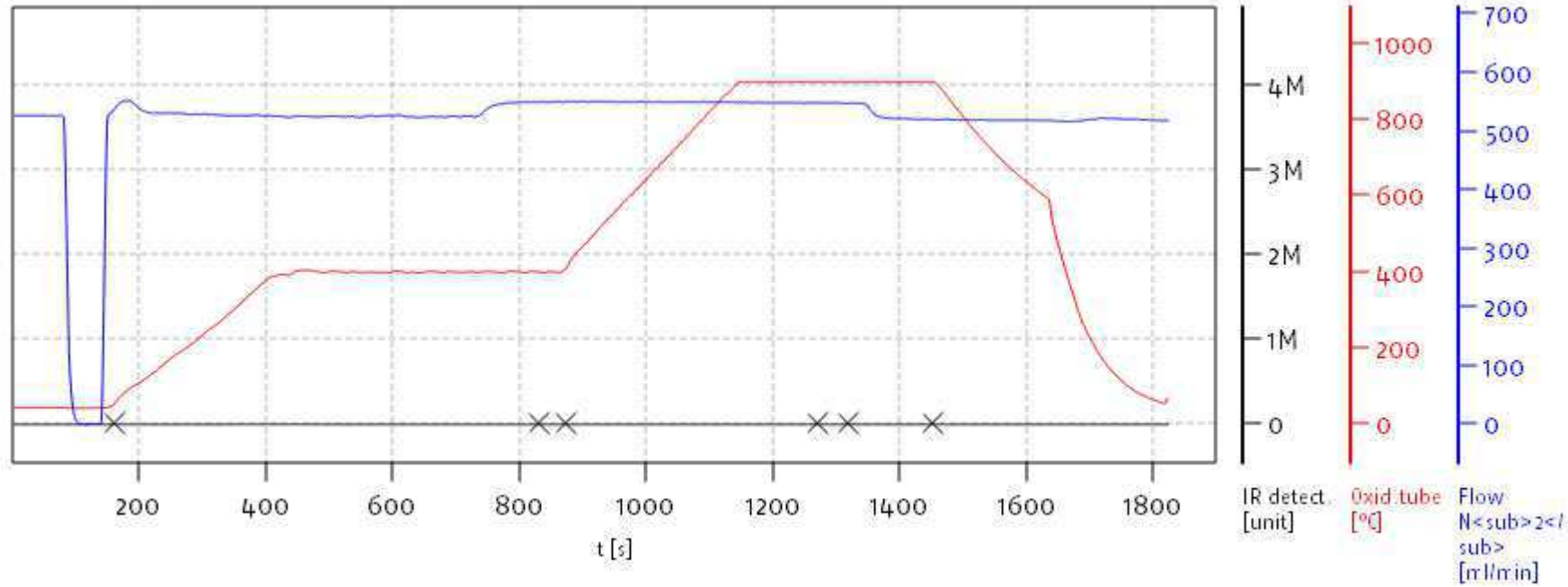
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Sequence:	SKL0217	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Blank	BKL0463-BLK1	CubeData_12272022@1508-636	Solid	12/20/22 01:41
LCS	BKL0463-BS1	CubeData_12272022@1508-643	Solid	12/20/22 02:11
Calibration Check	SKL0217-CCVE	CubeData_12272022@1508-649	NA	12/20/22 02:42
Calibration Blank	SKL0217-CCBE	CubeData_12272022@1508-654	NA	12/20/22 03:12
Reference	BKL0463-SRM1	CubeData_12272022@1508-661	Solid	12/20/22 03:43
LDW22-SS797	22L0156-01	CubeData_12272022@1508-670	Solid	12/20/22 04:13
LDW22-SS797	BKL0463-DUP1	CubeData_12272022@1508-676	Solid	12/20/22 04:44
LDW22-SS797	BKL0463-MS1	CubeData_12272022@1508-682	Solid	12/20/22 05:14
LDW22-IT797	22L0156-02	CubeData_12272022@1508-687	Solid	12/20/22 05:45
LDW22-SS812	22L0156-03	CubeData_12272022@1508-005	Solid	12/20/22 06:15
LDW22-SS794	22L0156-04	CubeData_12272022@1508-017	Solid	12/20/22 06:45
LDW22-IT794	22L0156-05	CubeData_12272022@1508-026	Solid	12/20/22 07:16
Calibration Check	SKL0217-CCVF	CubeData_12272022@1508-058	NA	12/20/22 08:47
Calibration Blank	SKL0217-CCBF	CubeData_12272022@1508-070	NA	12/20/22 09:17
Calibration Check	SKL0217-CCVG	CubeData_12272022@1508-184	NA	12/20/22 14:52
Calibration Blank	SKL0217-CCBG	CubeData_12272022@1508-193	NA	12/20/22 15:23
Calibration Check	SKL0217-CCVH	CubeData_12272022@1508-312	NA	12/20/22 20:59
Calibration Blank	SKL0217-CCBH	CubeData_12272022@1508-326	NA	12/20/22 21:29

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	12/16/2022 11:41 AM	bl	0.000	8 545	0.000	0.000	1 185	2 404	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

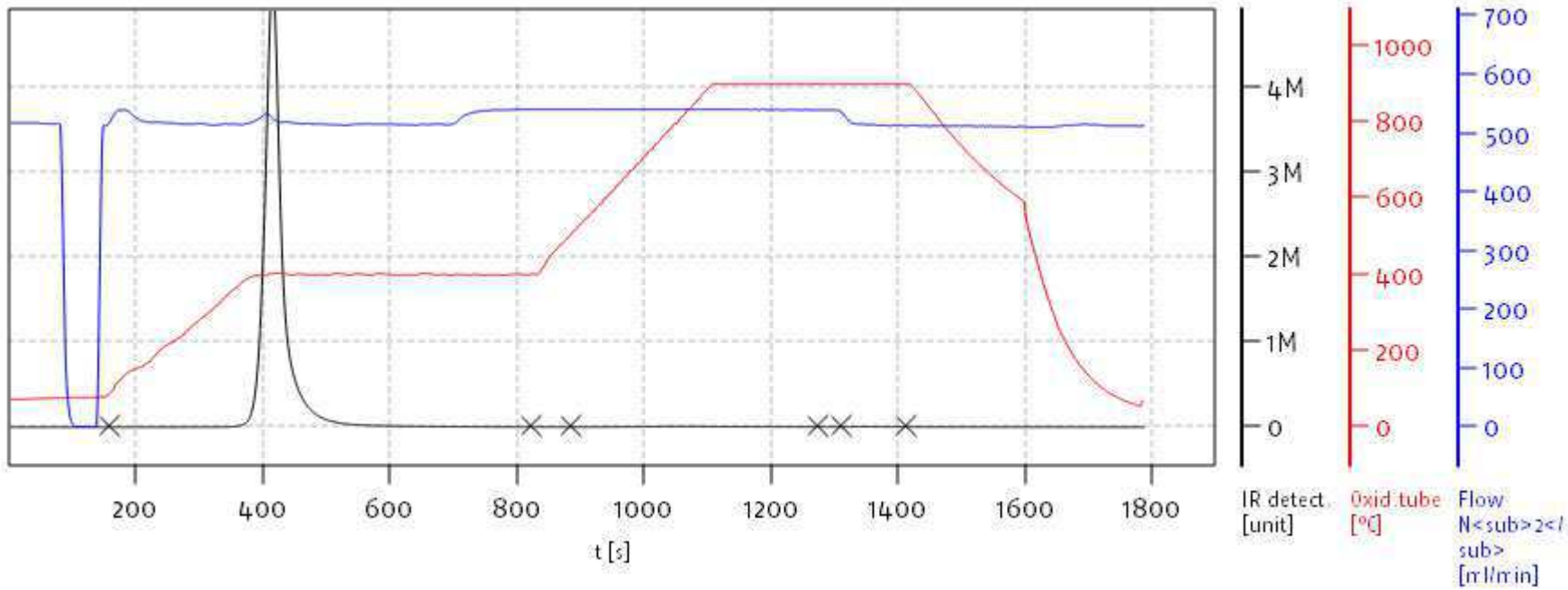
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	20.30		CARBON	12/16/2022 12:11 PM	bl	44.446	6 333 160	44.781	0.000	15 519	70 563	44.446	0.336	0.9242	1.0000



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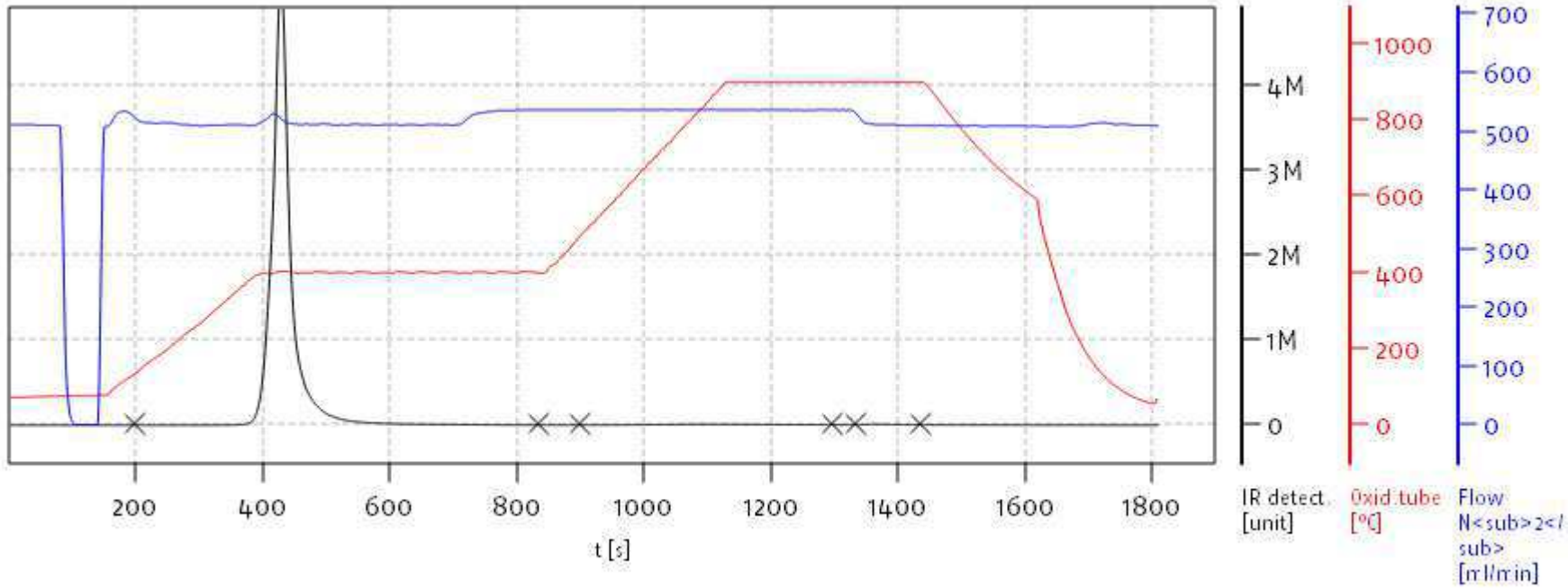
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	21.10		CARBON	12/16/2022 12:42 PM	bl	44.446	6 493 980	44.911	0.000	26 199	90 011	44.446	0.466	0.9367	1.0000



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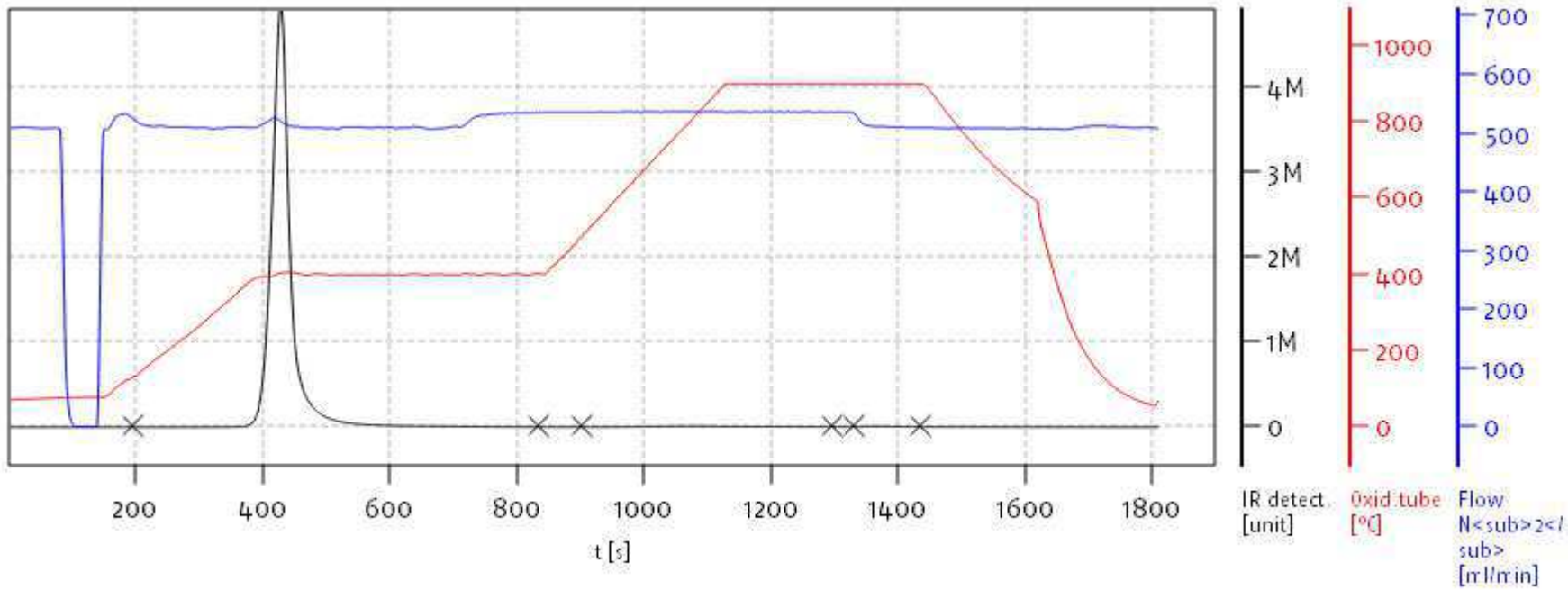
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SKL0217-ICV1	20.30		CARBON	12/16/2022 1:12 PM	bl	44.775	6 337 100	45.238	0.000	23 219	87 311	44.775	0.463	0.9304	1.0000



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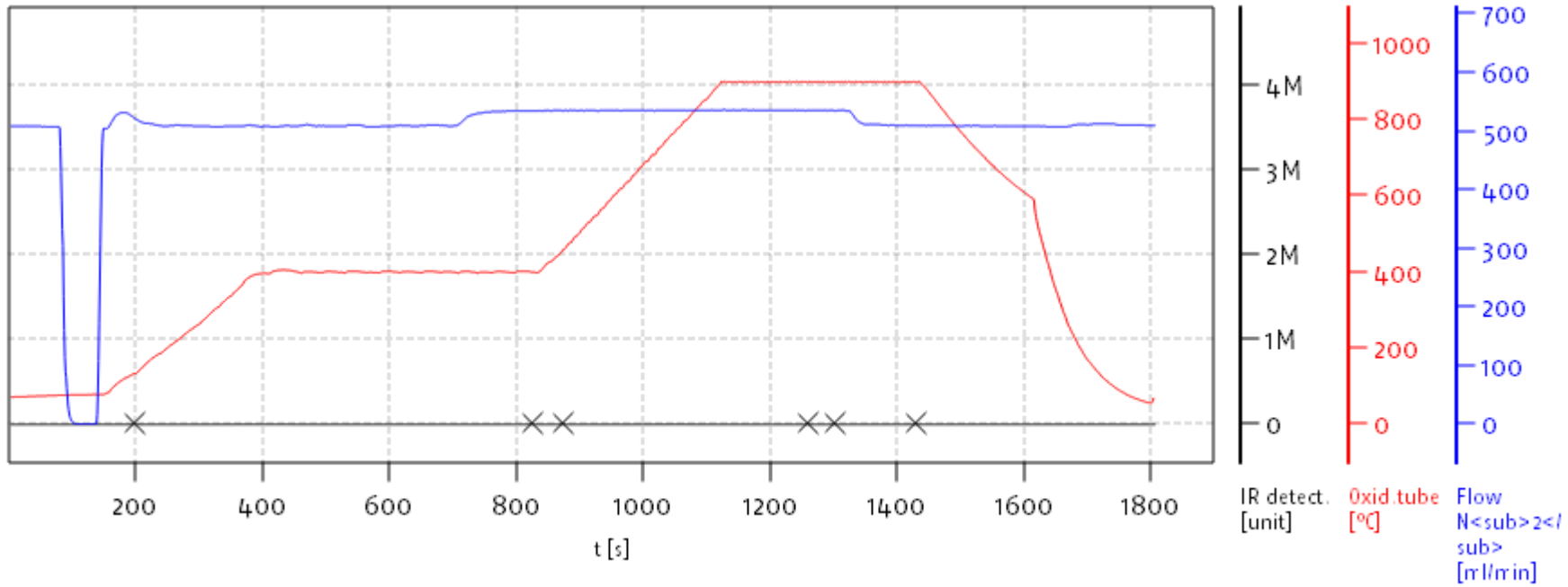
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SKL0217-ICB1	529.40		CARBON	12/16/2022 1:43 PM	bl,C2u	0.000	4 532	0.000	0.000	924	3 175	0.000	0.000	0.9304	1.0000



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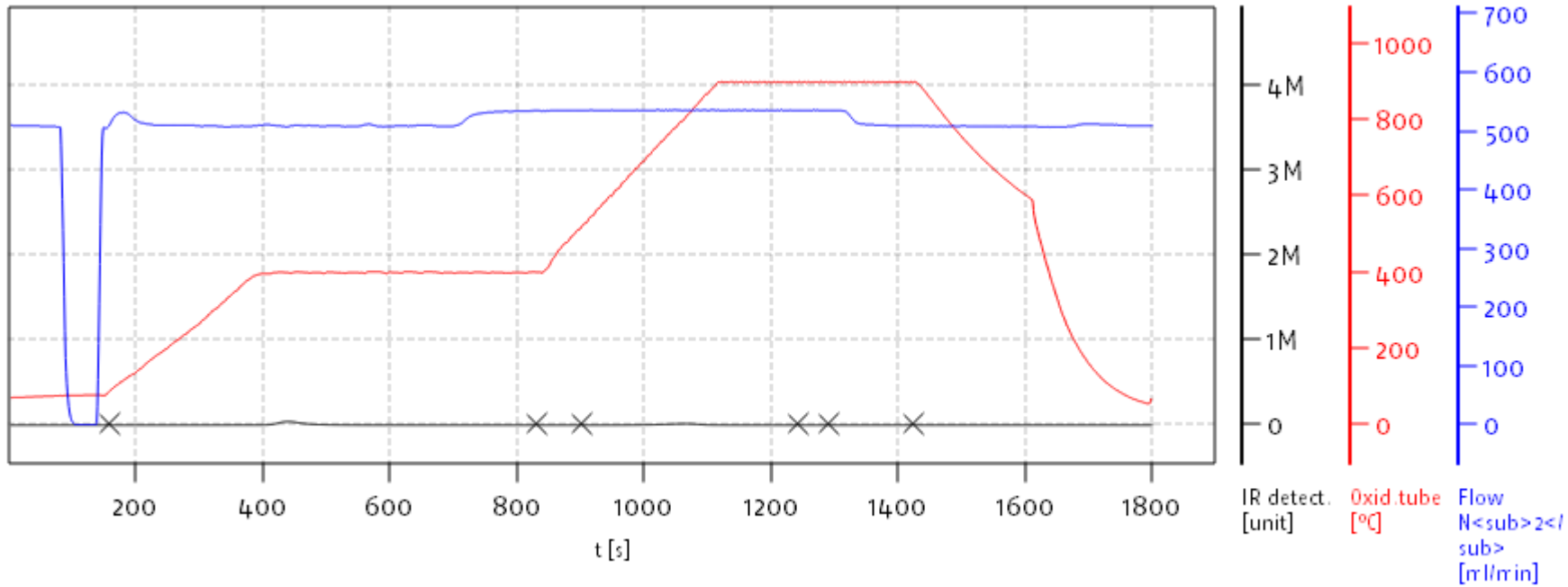
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BKL0385-MRL1	559.30		CARBON	12/16/2022 2:13 PM	bl,C2u	0.013	78 403	0.017	0.000	928	40 099	0.013	0.004	0.9304	1.0000



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Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
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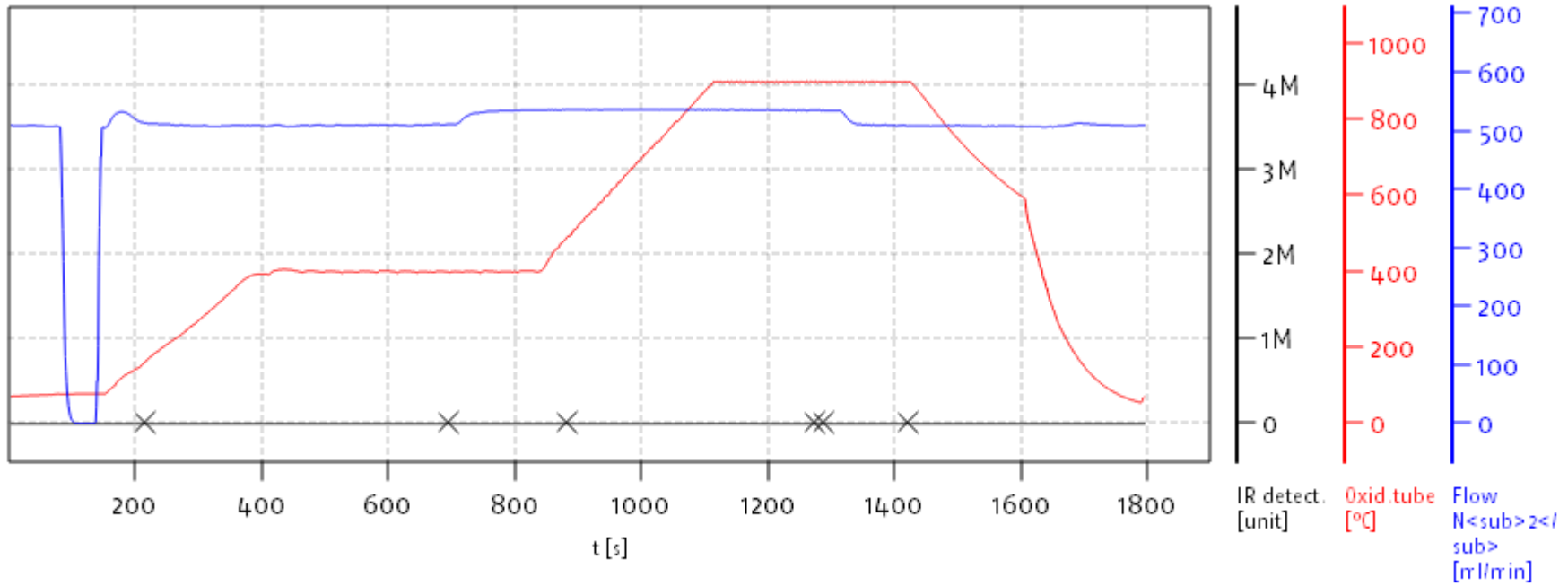
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BKL0385-BLK1	546.20		CARBON	12/16/2022 2:43 PM	bl,C2u	0.000	2 675	0.000	0.000	545	7 017	0.000	0.000	0.9304	1.0000



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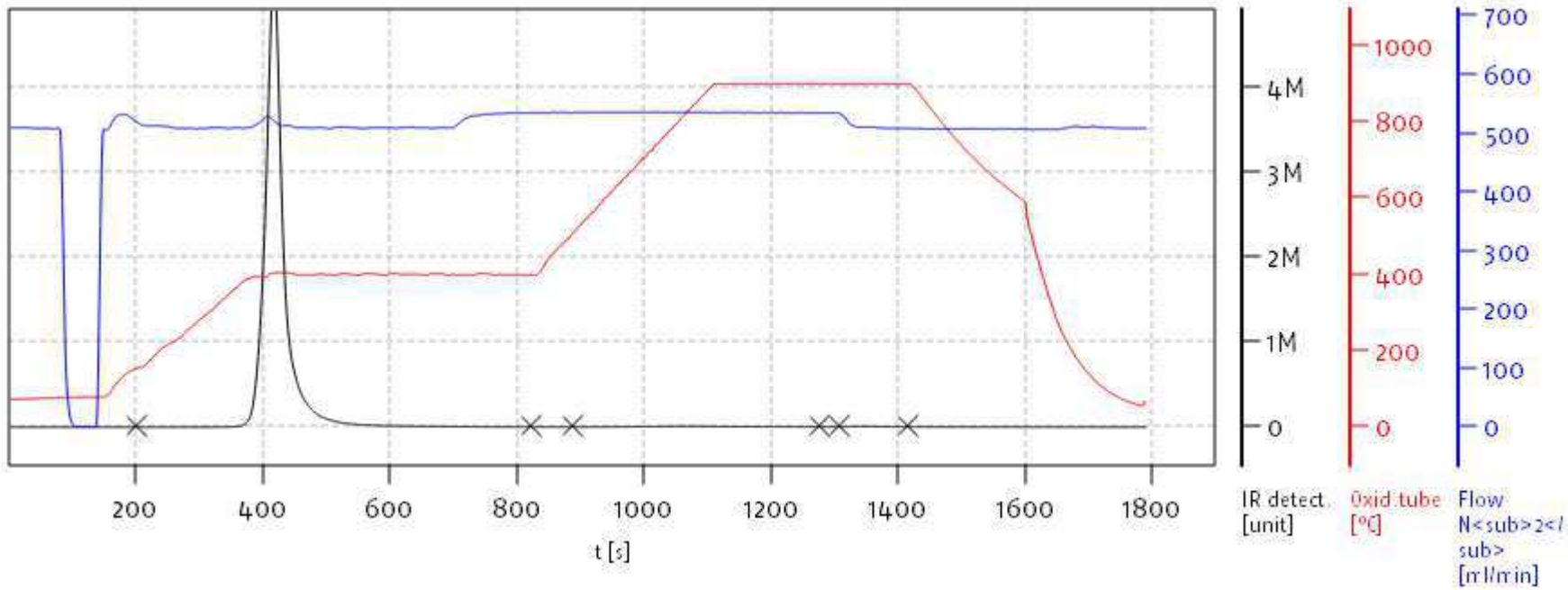
Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BKL0385-BS1	21.30		CARBON	12/16/2022 3:14 PM	bl	44.953	6 674 320	45.356	0.000	22 486	81 977	44.953	0.403	0.9304	1.0000



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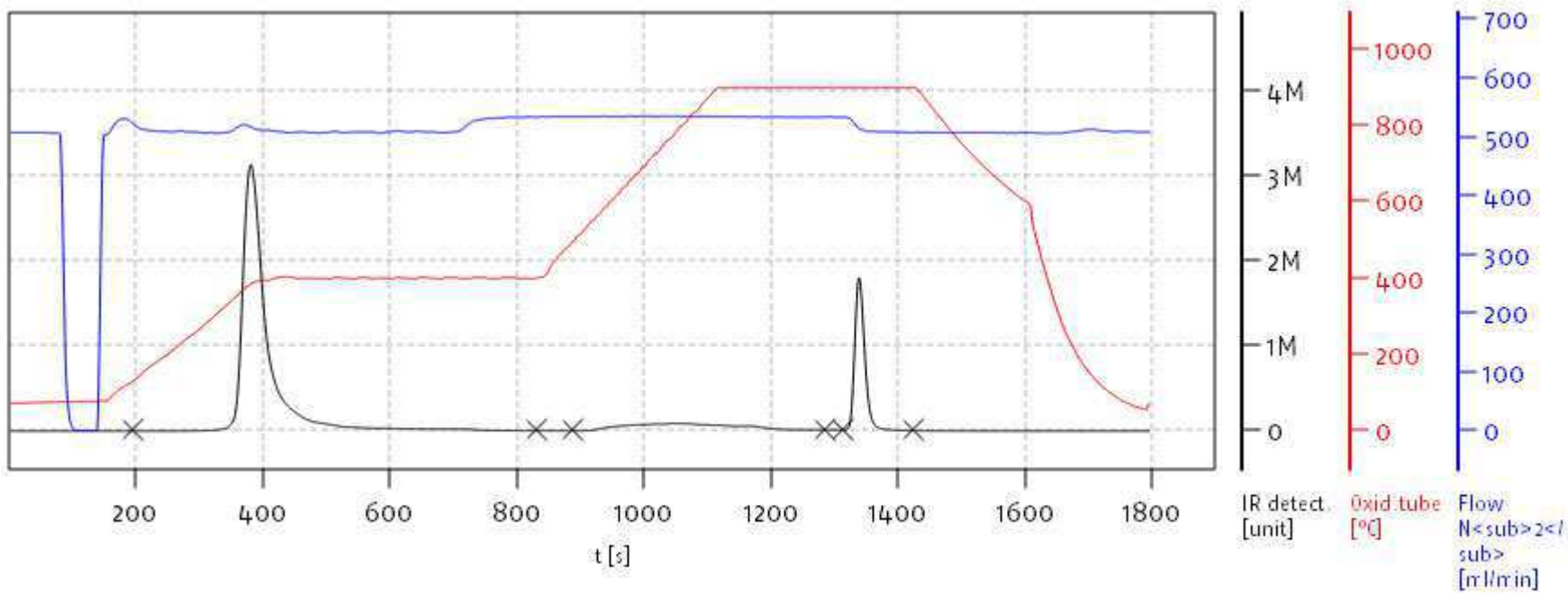
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BKL0385-SRM1	304.60		CARBON	12/16/2022 3:44 PM	bl	3.022	5 106 150	3.381	0.620	1 246 280	733 271	2.402	0.359	0.9304	1.0000



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Serial No: 0300.181017
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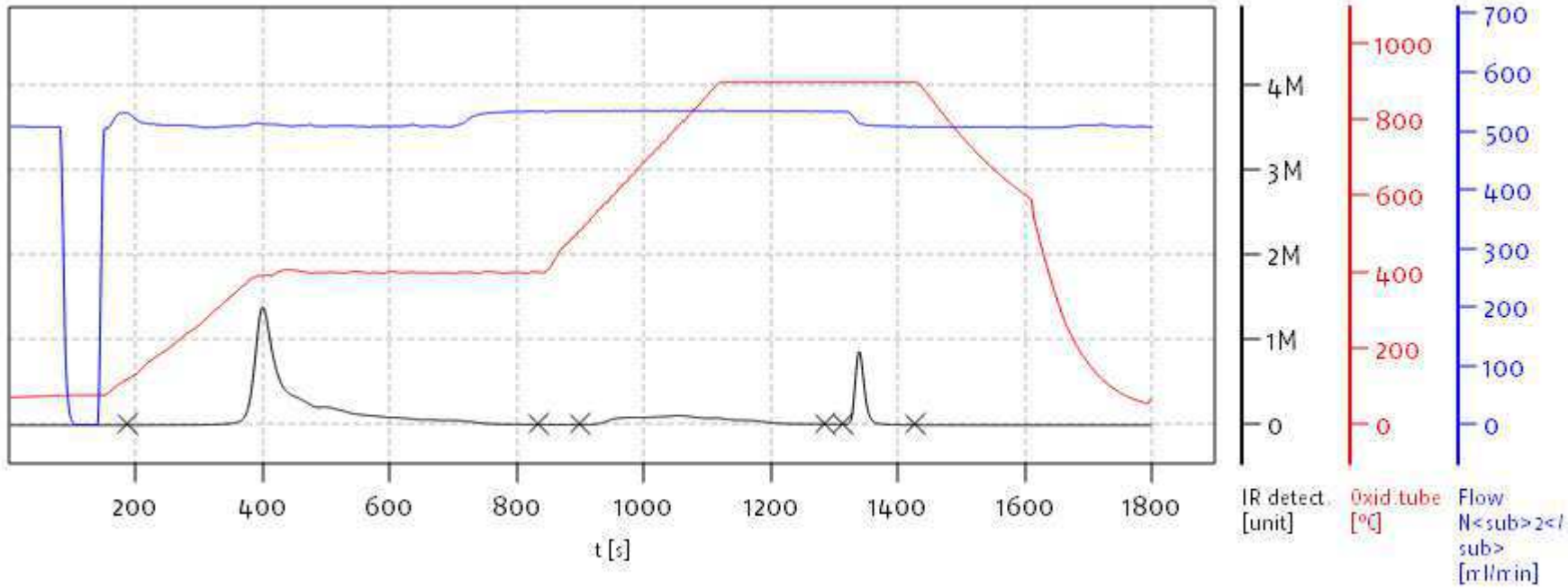
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	22L0137-36	529.70		CARBON	12/16/2022 4:14 PM	bl	1.096	3 477 240	1.339	0.158	567 530	857 094	0.938	0.243	0.9304	1.0000



Name:

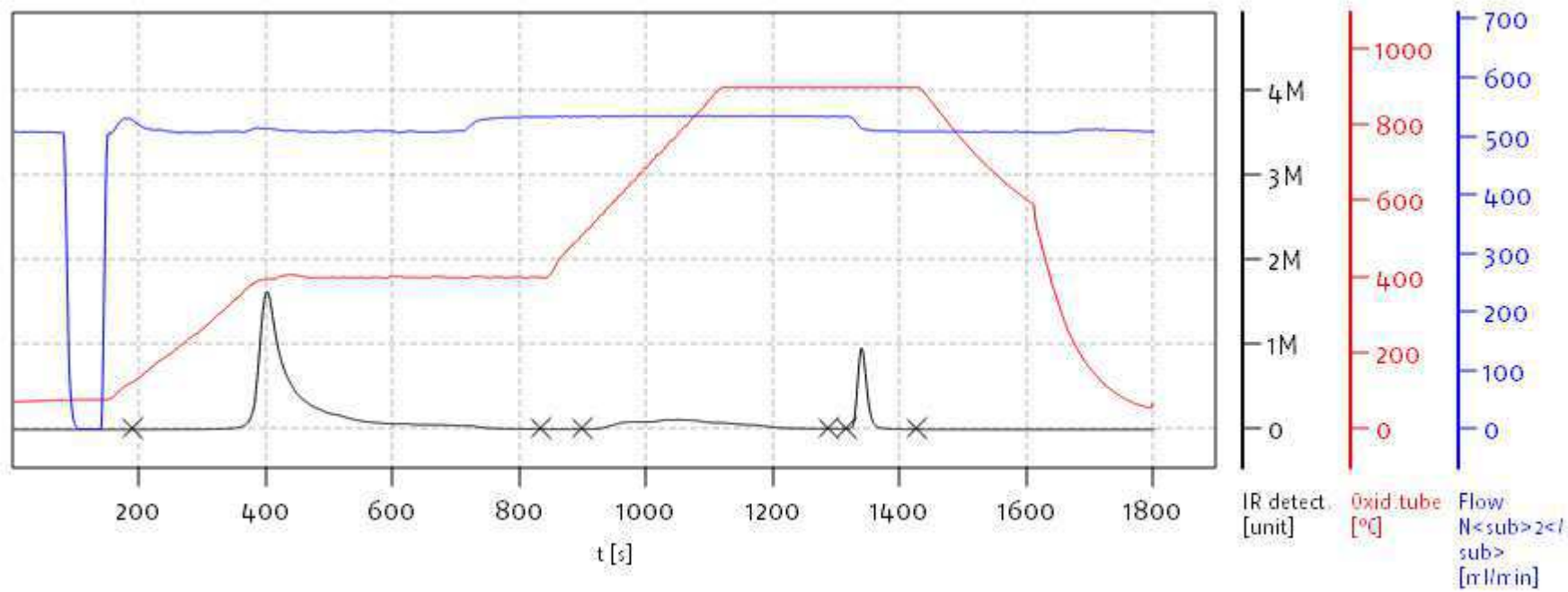
Access: soliTOC superuser

Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	BKL0385-DUP1	519.50		CARBON	12/16/2022 4:45 PM	bl	1.221	3 784 250	1.470	0.180	629 184	861 902	1.042	0.249	0.9304	1.0000



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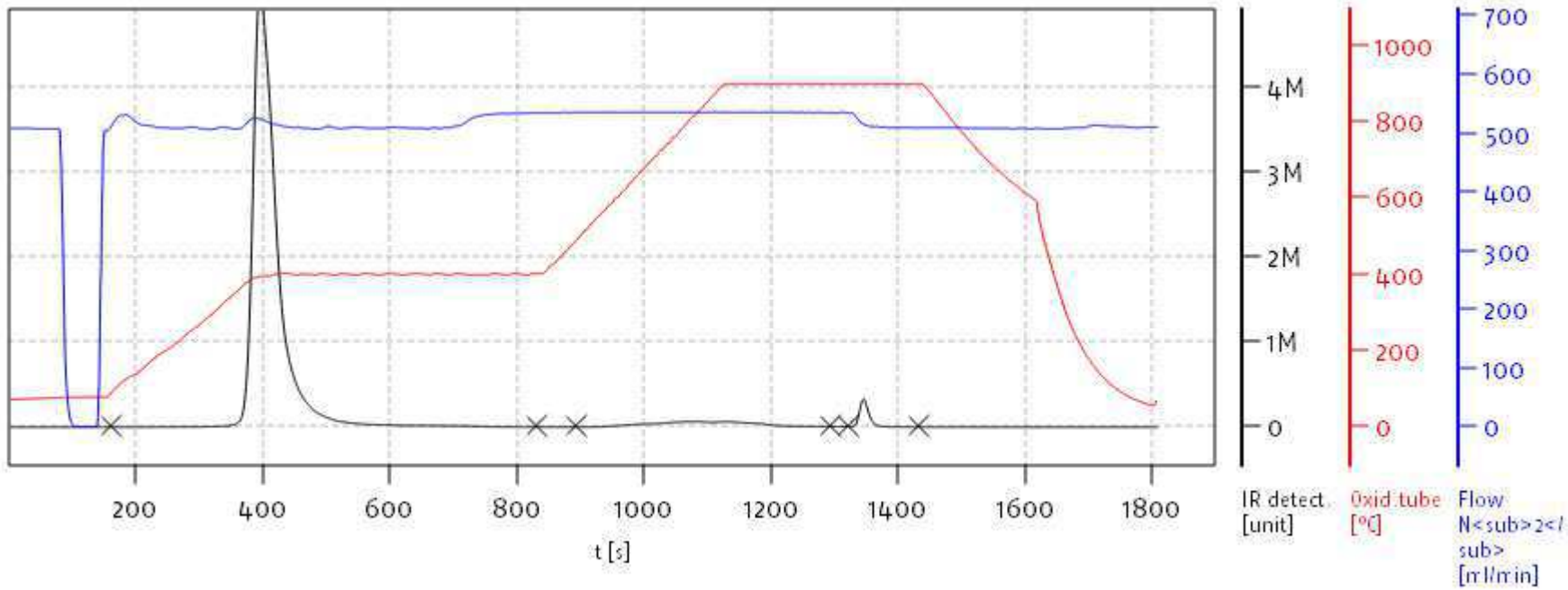
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BKL0385-MS1	523.20	0.0087	CARBON	12/16/2022 5:15 PM	bl	2.365	8 415 350	2.500	0.056	214 684	483 923	2.309	0.135	0.9304	1.0000



Name:

Access: soliTOC superuser

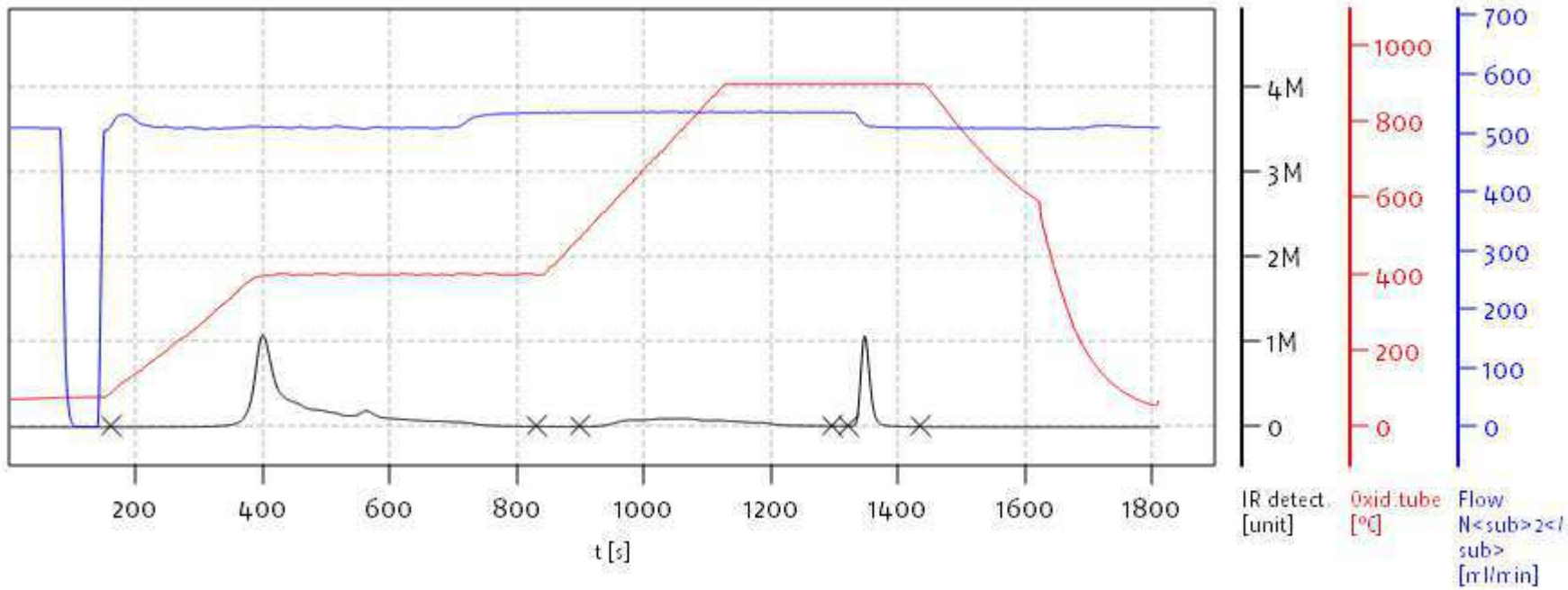
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	22L0137-37	520.90		CARBON	12/16/2022 5:46 PM	bl	1.046	3 090 810	1.281	0.199	695 560	816 362	0.847	0.235	0.9304	1.0000



Name:

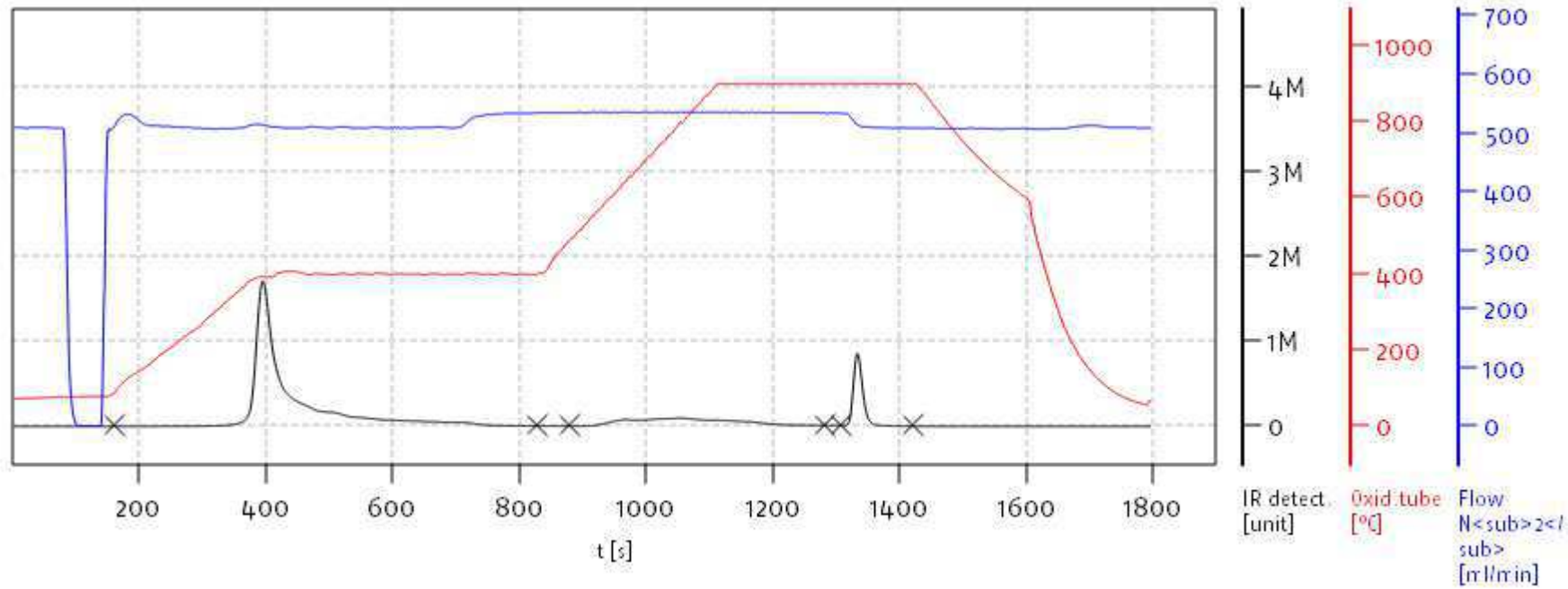
Access: soliTOC superuser

Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	22L0137-38	515.90		CARBON	12/16/2022 6:16 PM	bl	1.111	3 431 480	1.334	0.160	559 565	769 569	0.951	0.223	0.9304	1.0000



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Access: soliTOC superuser

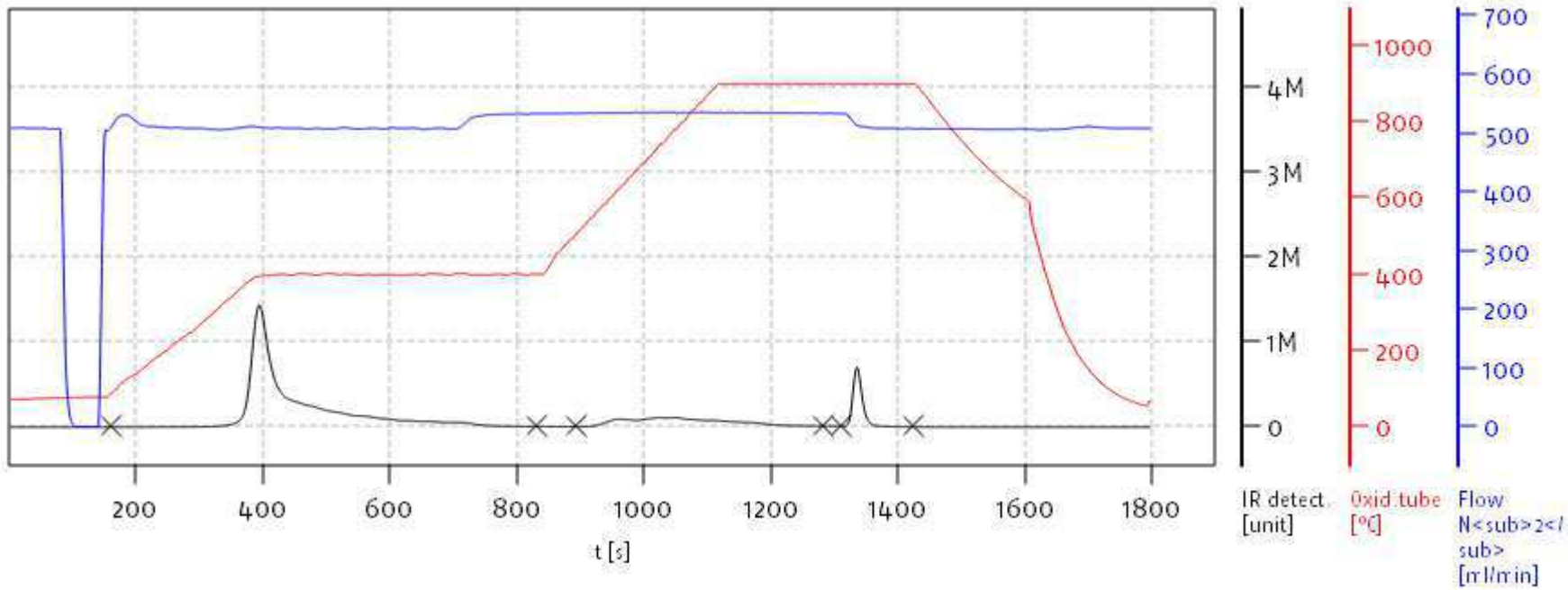
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	22L0137-39	504.80		CARBON	12/16/2022 6:47 PM	bl	1.134	3 528 840	1.391	0.135	466 110	864 978	0.999	0.257	0.9304	1.0000



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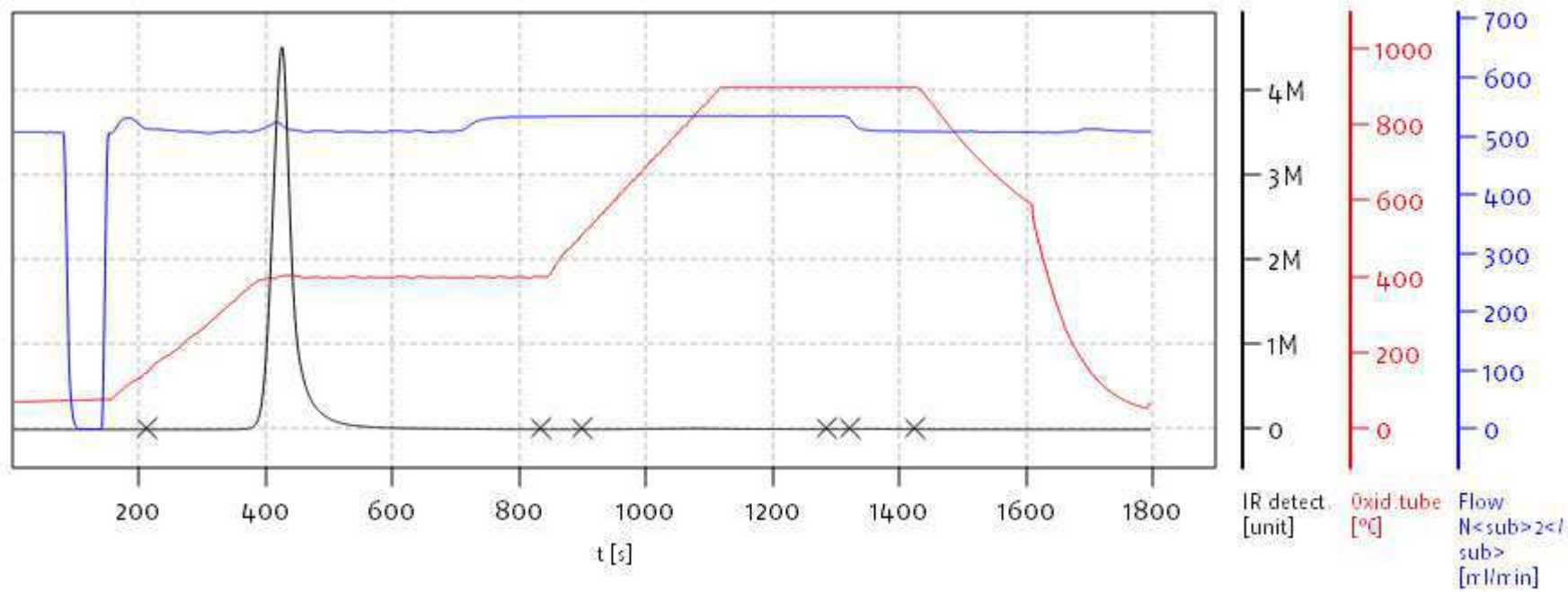
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SKL0217-CCV1	20.40		CARBON	12/16/2022 7:17 PM	bl	44.899	6 385 710	45.399	0.000	18 989	92 451	44.899	0.500	0.9304	1.0000



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Date: Wed Dec 21 09:58:21 2022

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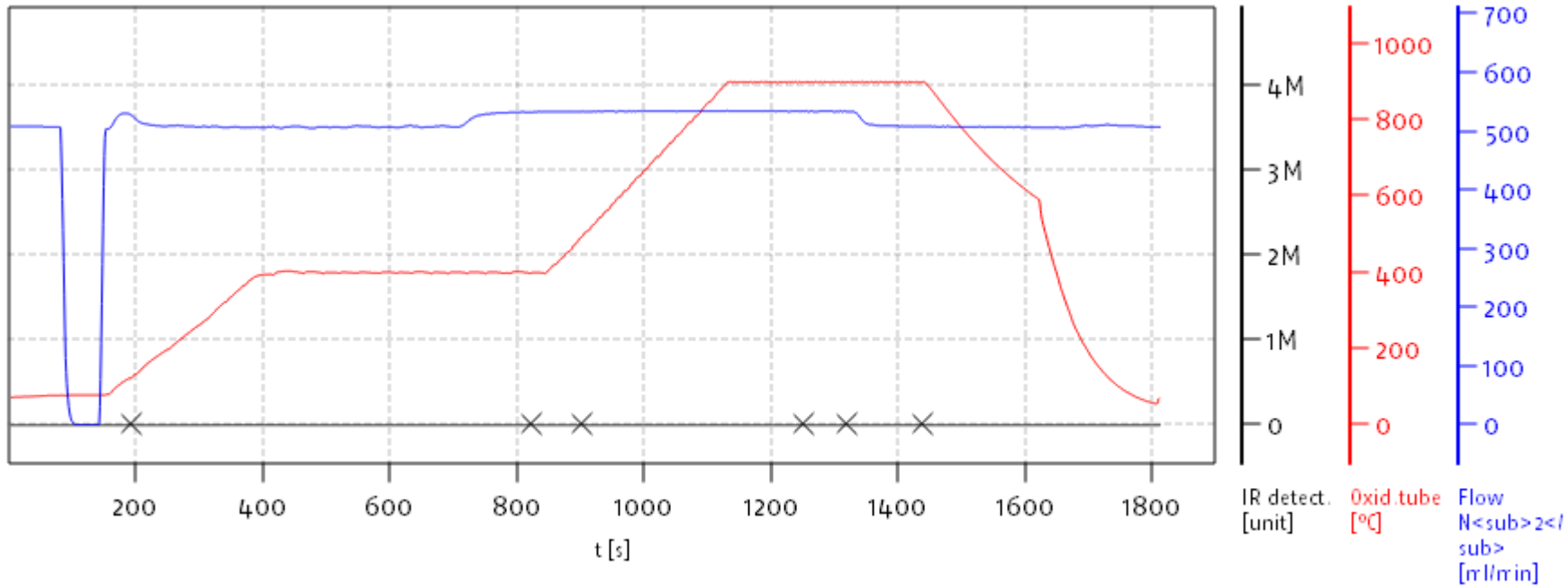
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SKL0217-CCB1	524.10		CARBON	12/16/2022 7:47 PM	bl,C3u,C2u	0.000	4 398	0.000	0.000	285	1 138	0.000	0.000	0.9304	1.0000



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Date: Wed Dec 21 09:58:21 2022

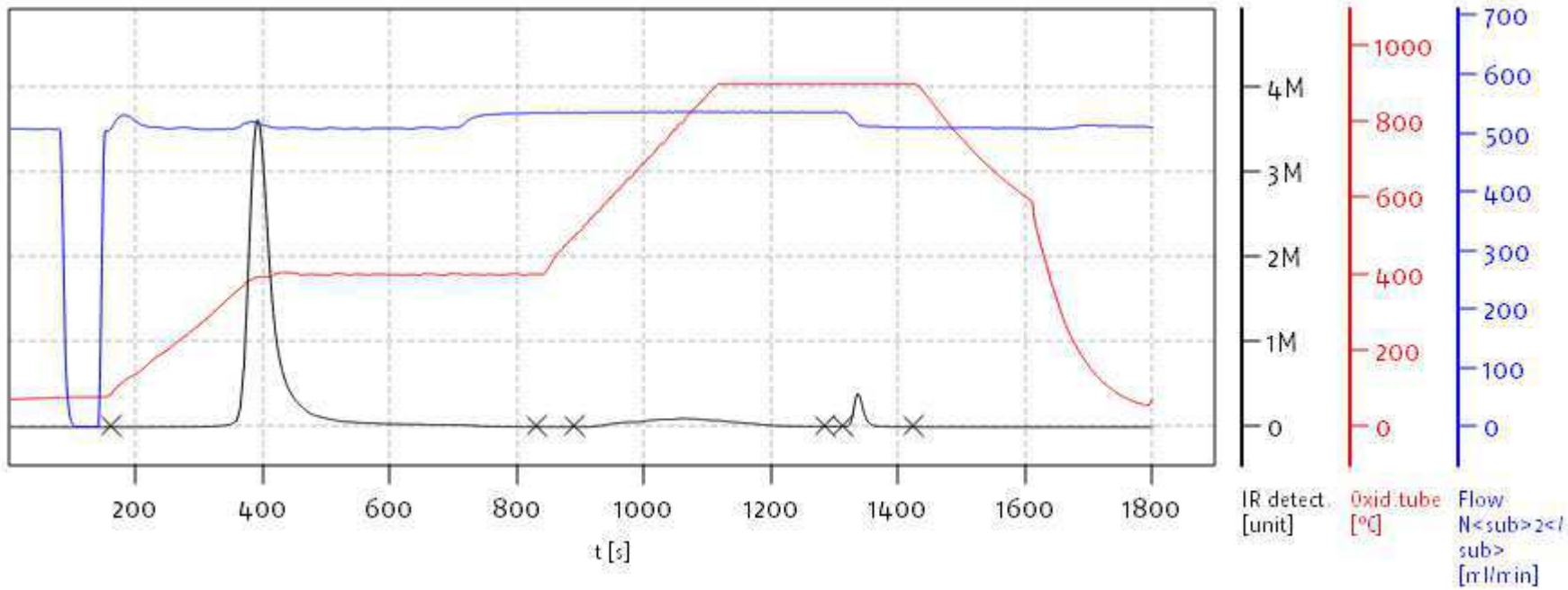
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	22L0137-40	535.40		CARBON	12/16/2022 8:18 PM	bl	1.720	6 161 650	1.915	0.069	266 294	701 813	1.650	0.195	0.9304	1.0000



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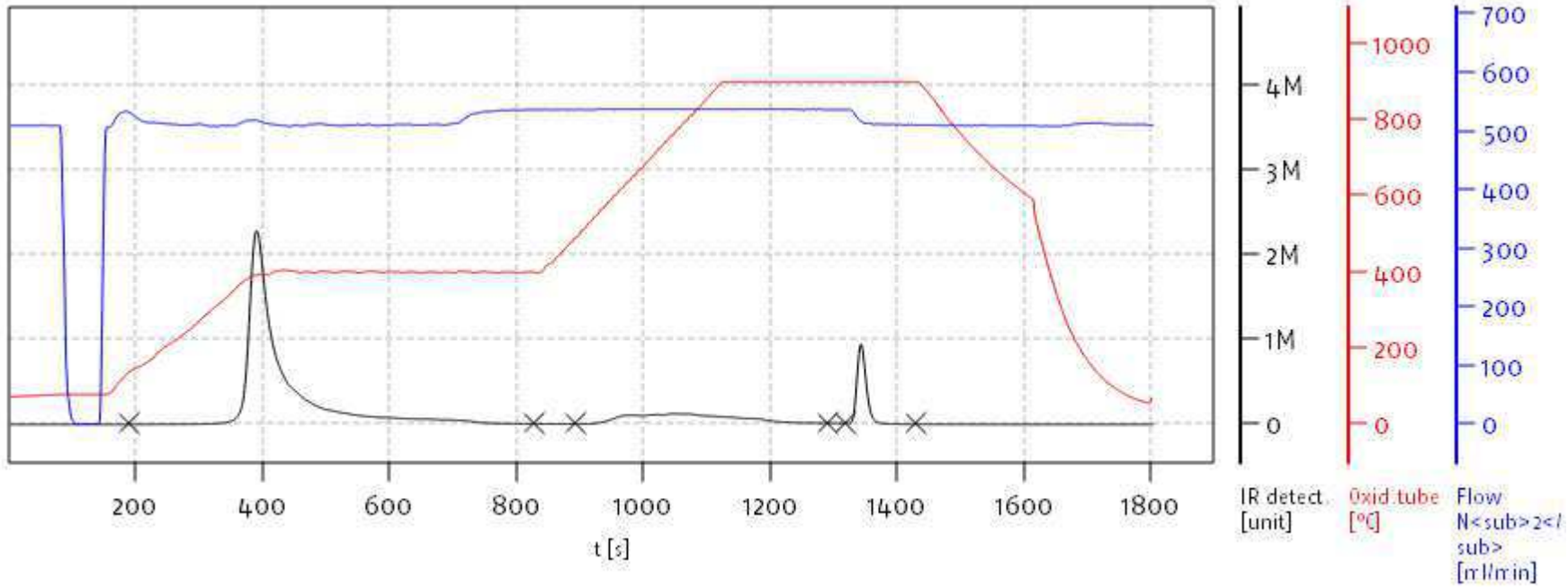
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	22L0137-41	546.80		CARBON	12/16/2022 8:48 PM	bl	1.419	4 783 510	1.702	0.166	613 994	1 025 980	1.253	0.283	0.9304	1.0000



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Serial No: 0300.181017
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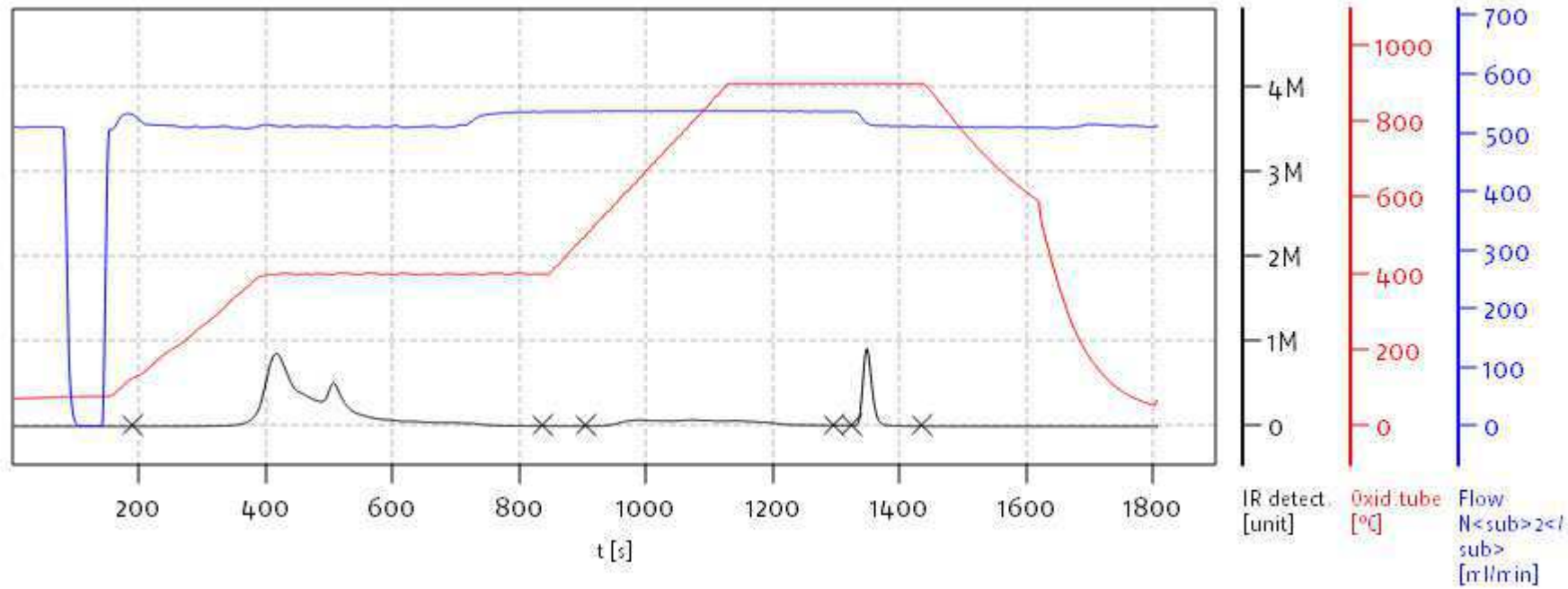
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	22L0137-42	501.10		CARBON	12/16/2022 9:19 PM	bl	1.078	3 178 100	1.278	0.173	585 332	671 410	0.906	0.199	0.9304	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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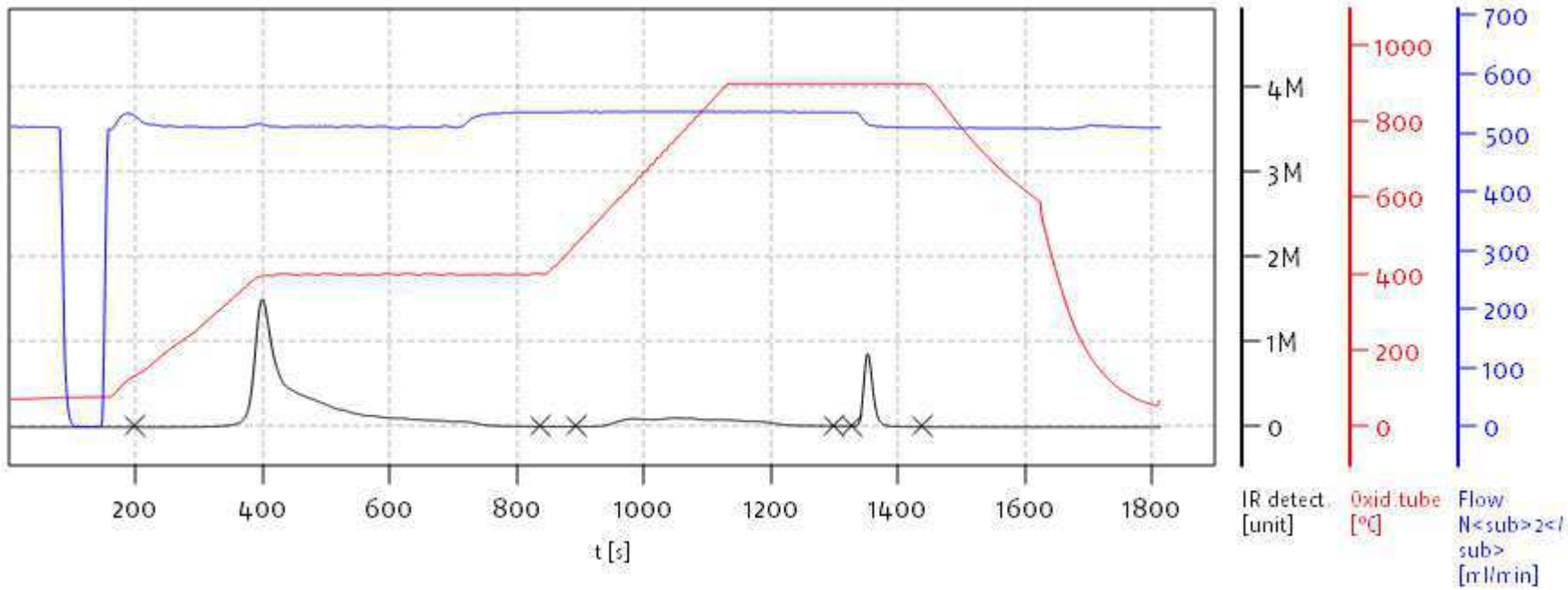
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	22L0137-43	528.10		CARBON	12/16/2022 9:49 PM	bl	1.251	4 033 830	1.508	0.158	566 301	903 746	1.093	0.257	0.9304	1.0000



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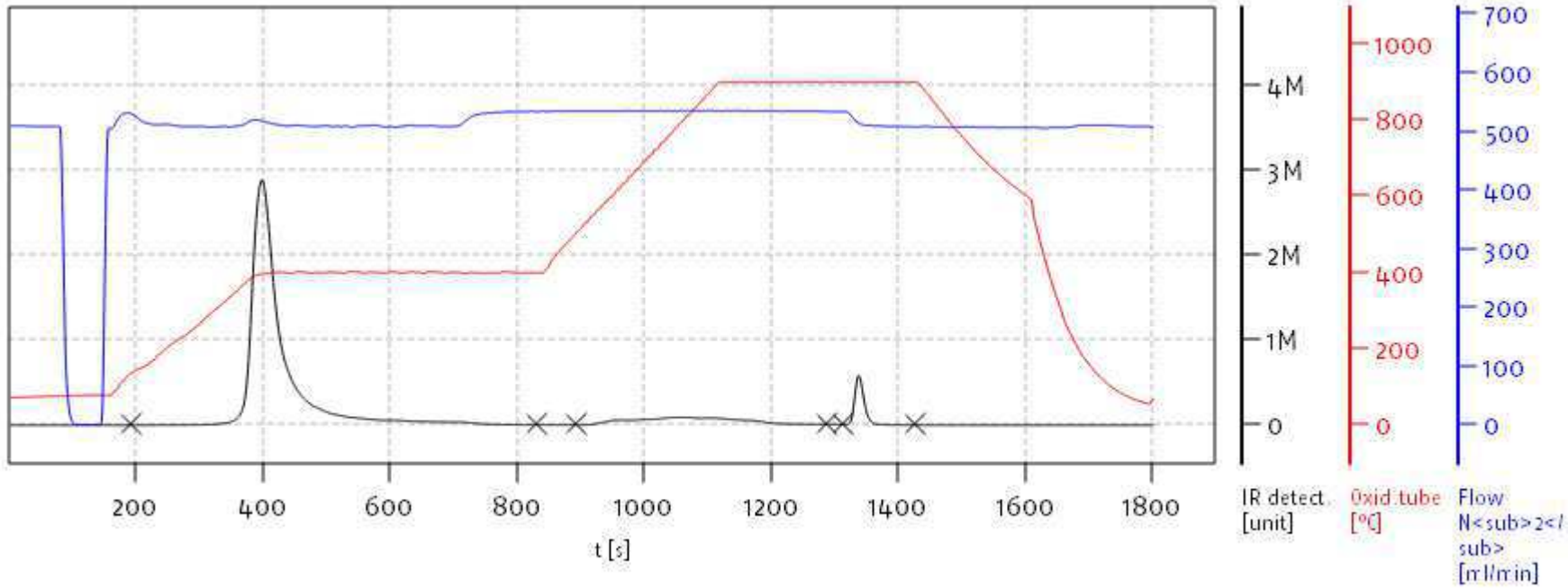
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	22L0137-44	510.20		CARBON	12/16/2022 10:20 PM	bl	1.709	5 700 630	1.924	0.107	379 826	735 639	1.602	0.215	0.9304	1.0000



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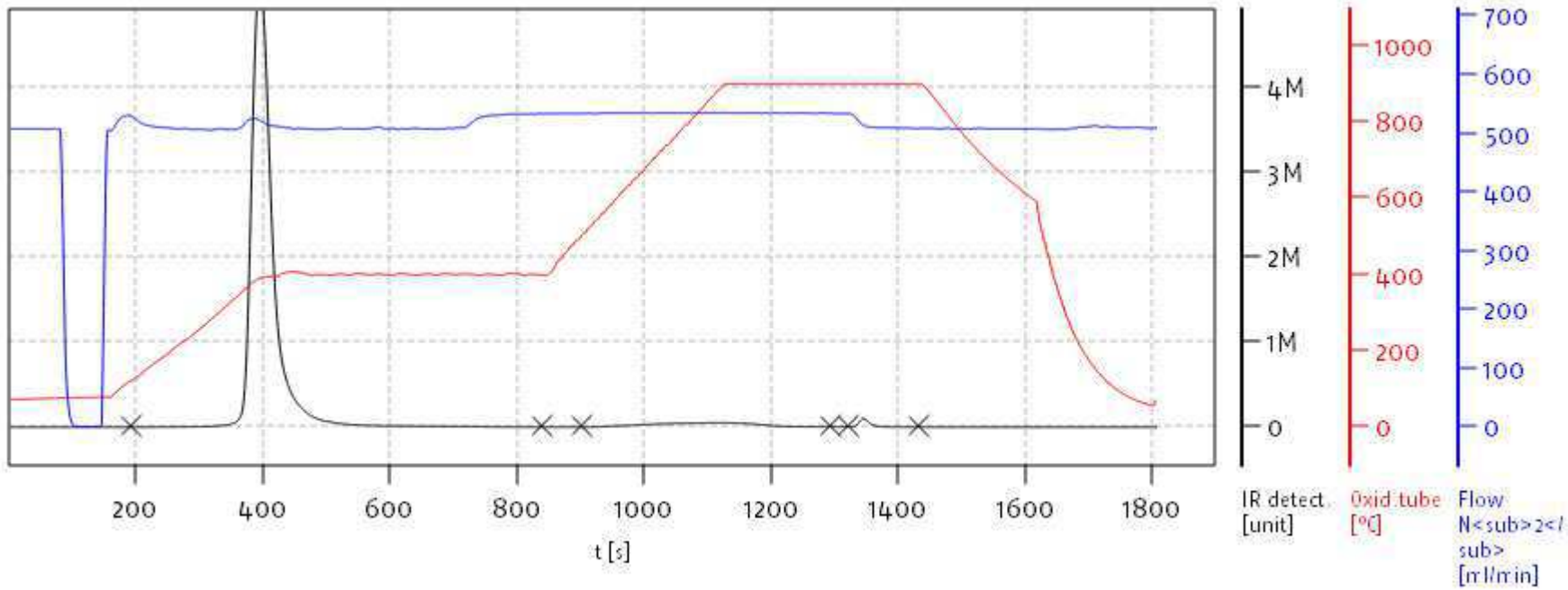
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	22L0137-45	507.10		CARBON	12/16/2022 10:50 PM	bl	2.155	7 560 180	2.263	0.015	75 113	381 937	2.140	0.108	0.9304	1.0000



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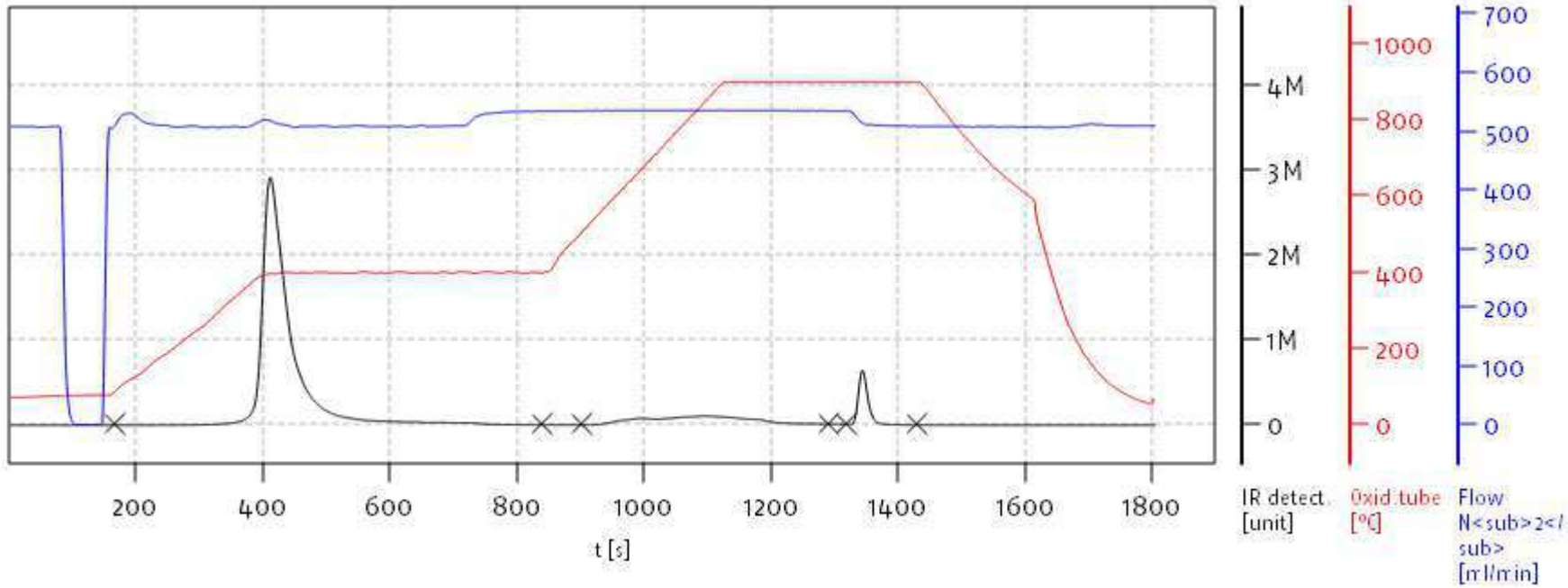
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	22L0137-46	507.90		CARBON	12/16/2022 11:21 PM	bl	1.655	5 429 400	1.903	0.123	430 431	838 948	1.532	0.248	0.9304	1.0000



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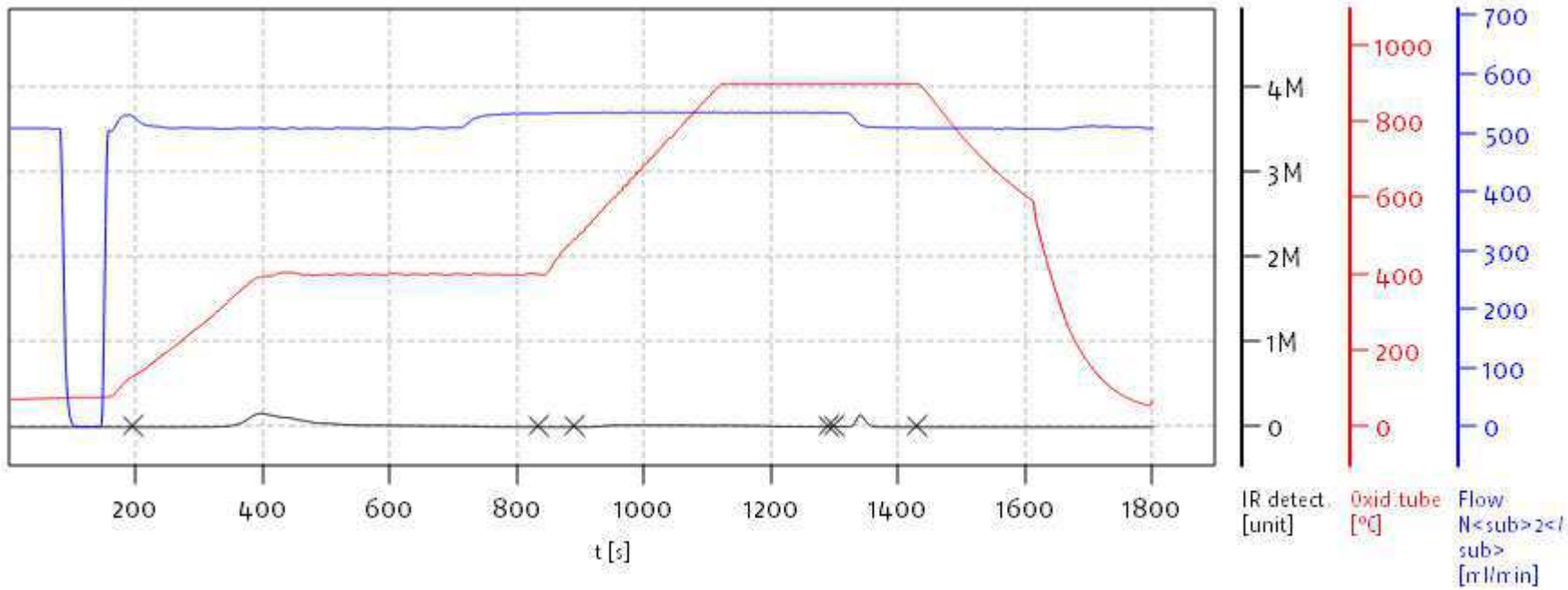
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	22L0137-47	151.00		CARBON	12/16/2022 11:51 PM	bl	0.723	709 585	0.908	0.071	95 858	207 397	0.652	0.185	0.9304	1.0000



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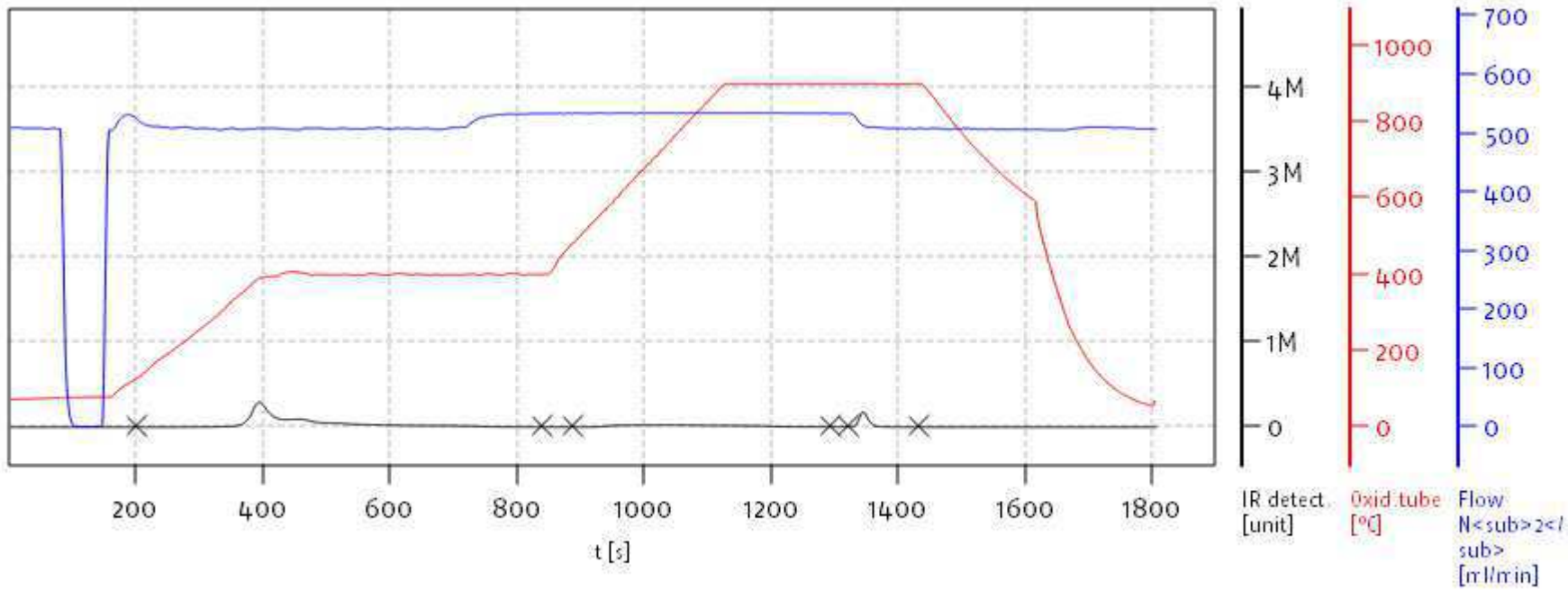
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	22L0137-48	156.80		CARBON	12/17/2022 12:22 AM	bl	0.831	836 252	1.013	0.087	114 914	210 415	0.744	0.182	0.9304	1.0000



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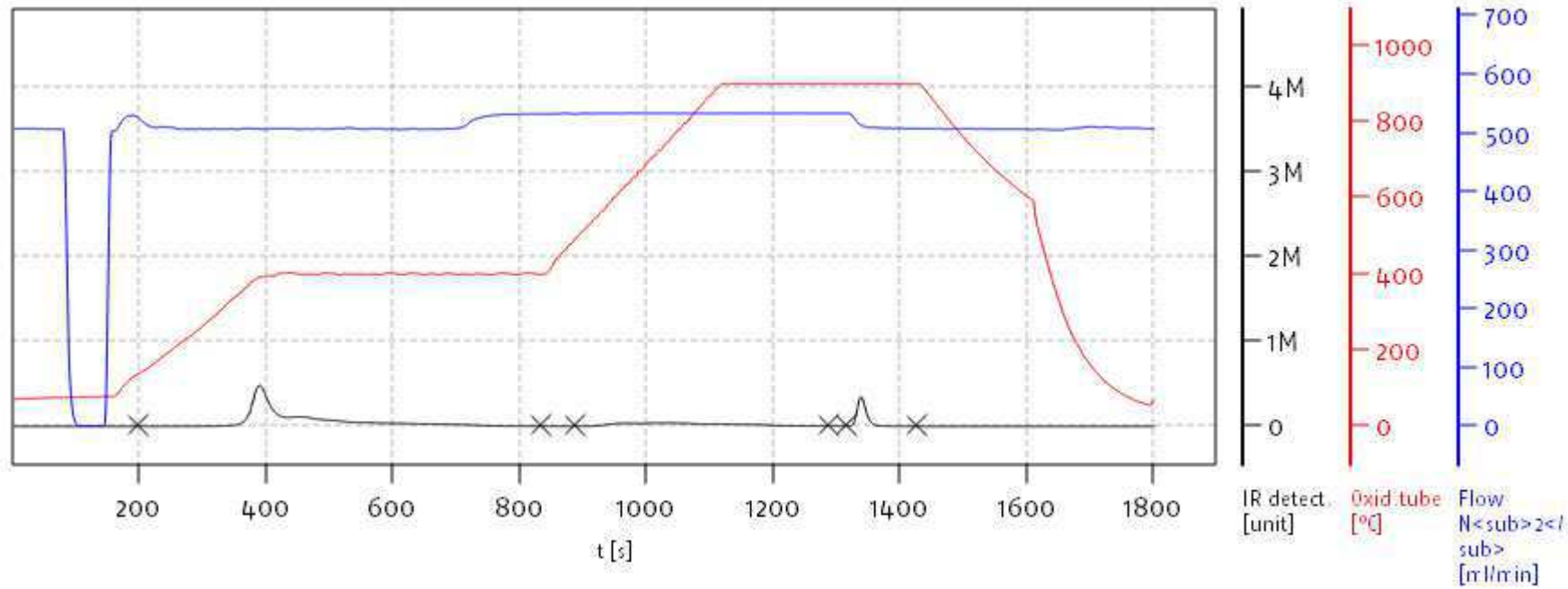
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	22L0137-49	221.60		CARBON	12/17/2022 12:52 AM	bl	0.921	1 235 860	1.129	0.135	220 108	324 133	0.786	0.208	0.9304	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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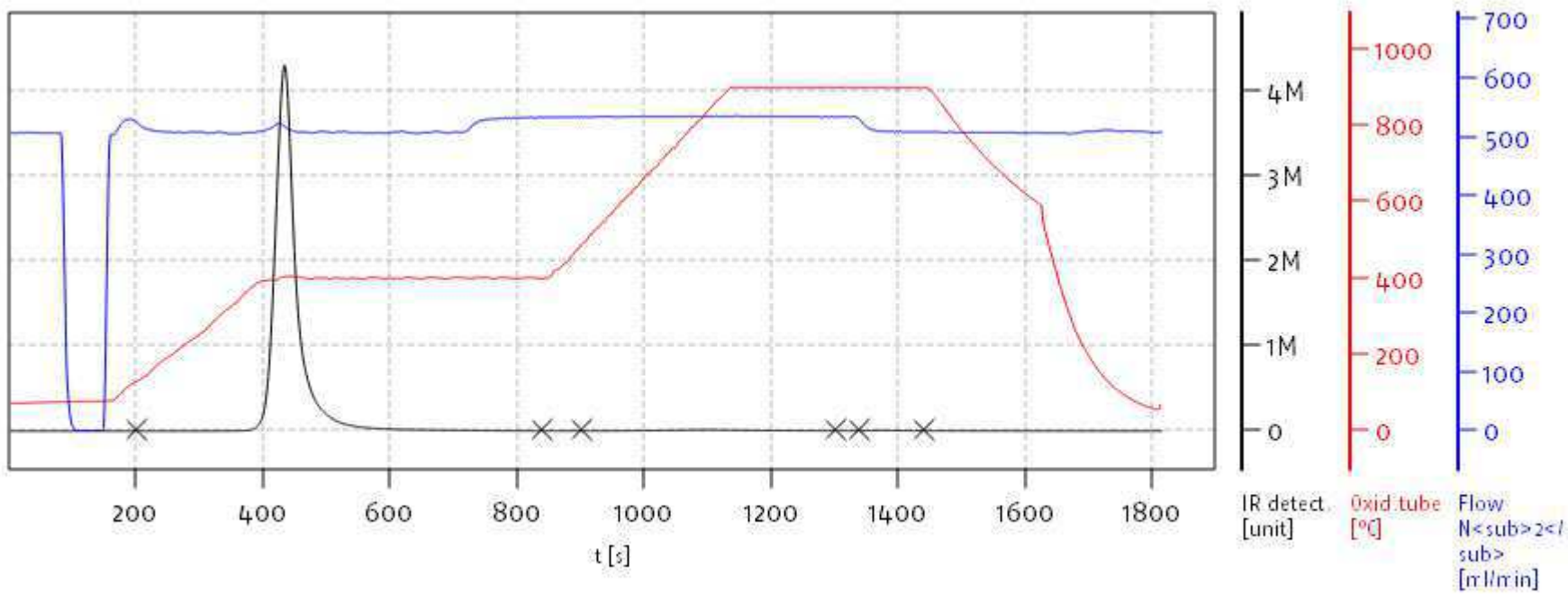
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SKL0217-CCV2	20.50		CARBON	12/17/2022 1:23 AM	bl	43.840	6 266 240	44.395	0.000	19 820	100 027	43.840	0.555	0.9304	1.0000



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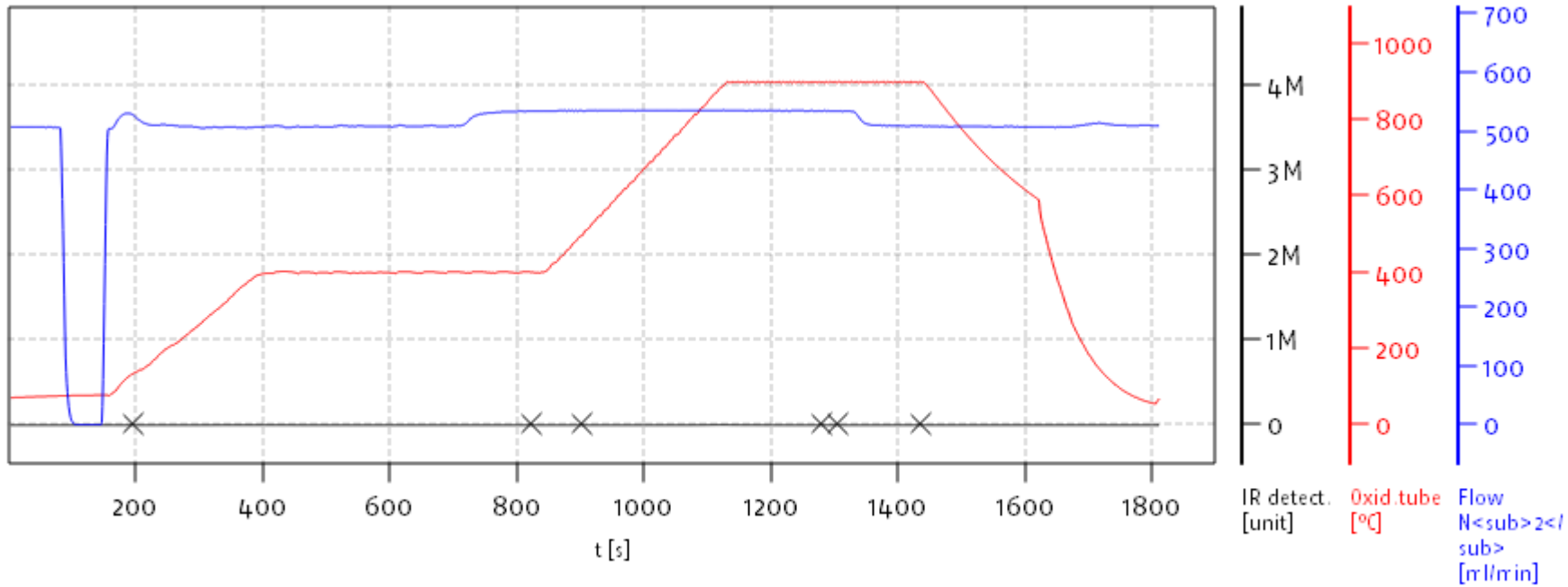
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SKL0217-CCB2	570.20		CARBON	12/17/2022 1:53 AM	bl,C2u	0.000	6 750	0.000	0.000	319	8 814	0.000	0.000	0.9304	1.0000



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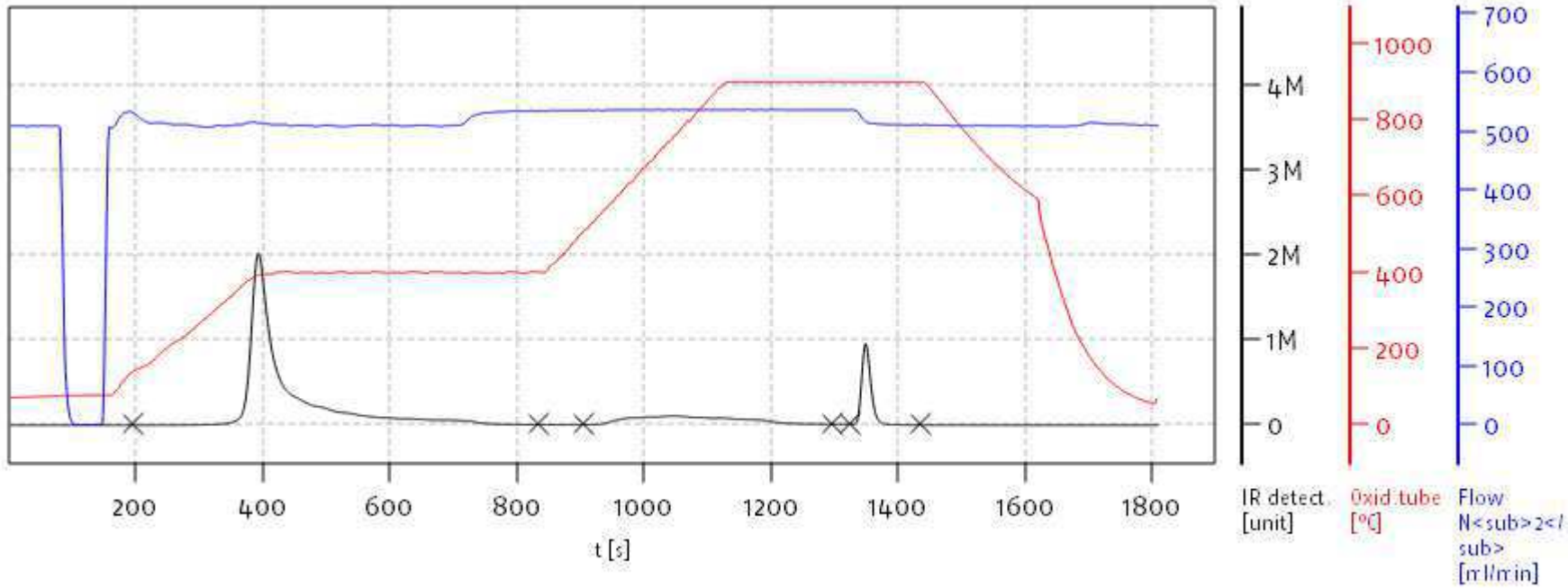
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	22L0137-50	507.80		CARBON	12/17/2022 2:24 AM	bl	1.363	4 200 090	1.621	0.179	613 780	873 347	1.184	0.258	0.9304	1.0000



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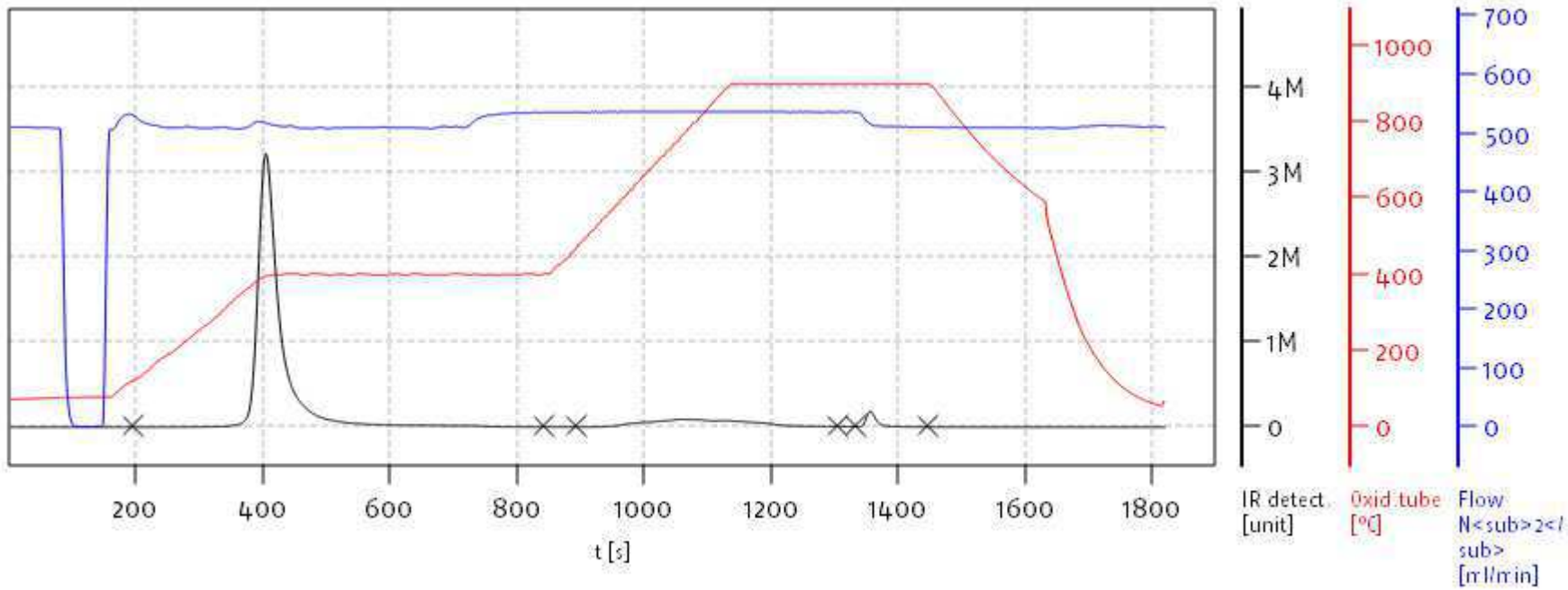
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	22L0137-51	508.60		CARBON	12/17/2022 2:55 AM	bl	1.412	4 898 960	1.606	0.033	133 458	662 412	1.380	0.194	0.9304	1.0000



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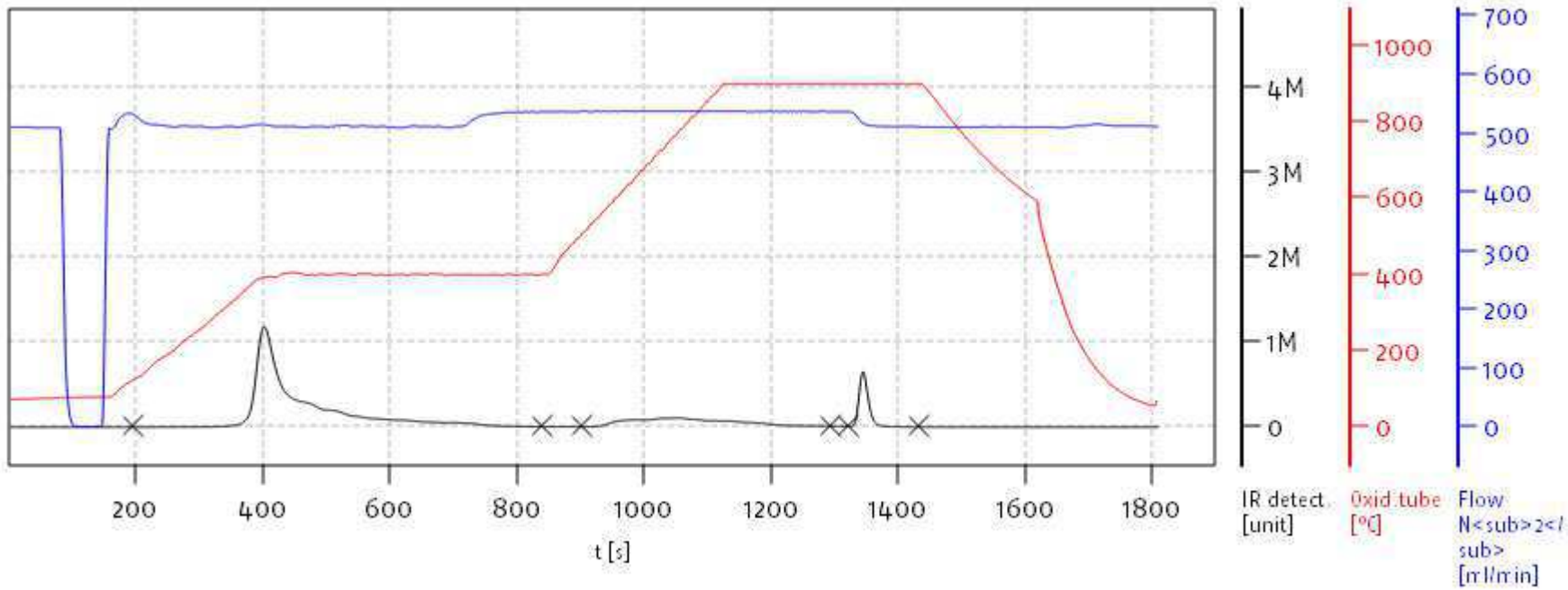
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	22L0137-52	514.30		CARBON	12/17/2022 3:25 AM	bl	1.008	3 195 740	1.247	0.120	426 413	820 266	0.888	0.239	0.9304	1.0000



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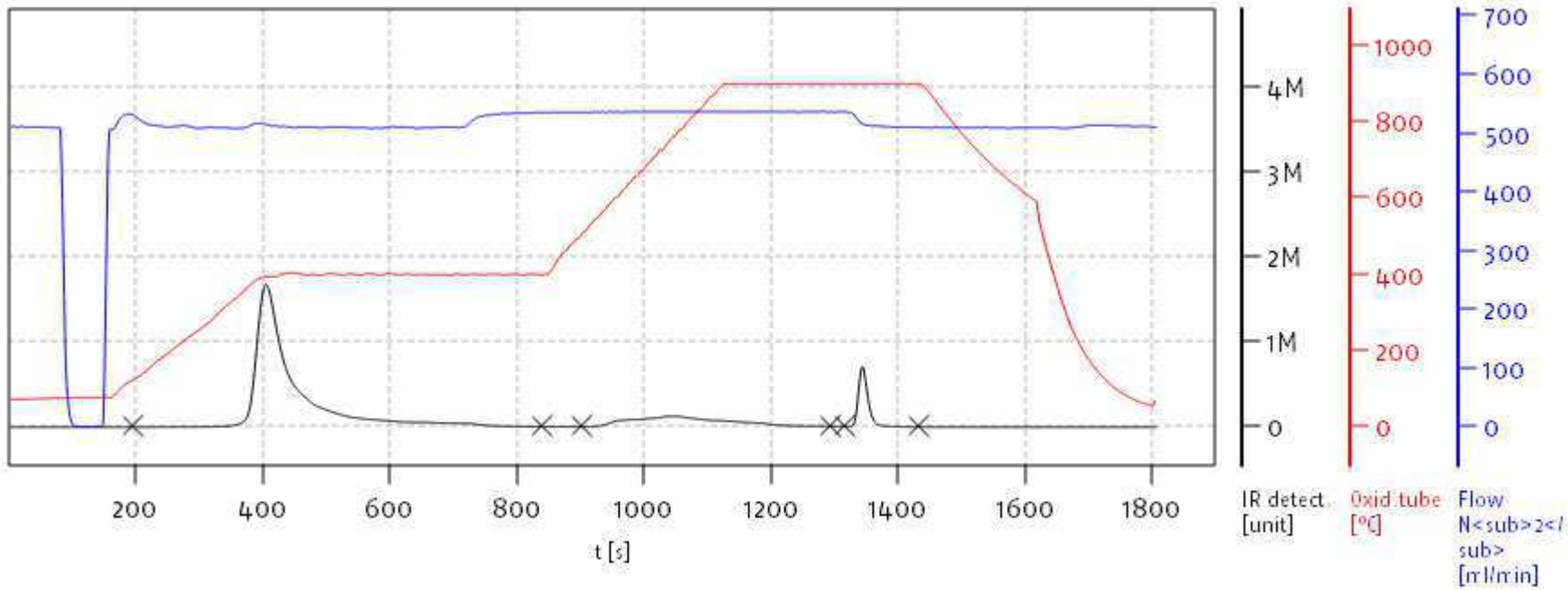
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	22L0137-53	515.00		CARBON	12/17/2022 3:56 AM	bl	1.282	4 131 150	1.539	0.134	472 731	882 811	1.148	0.257	0.9304	1.0000



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Access: soliTOC superuser

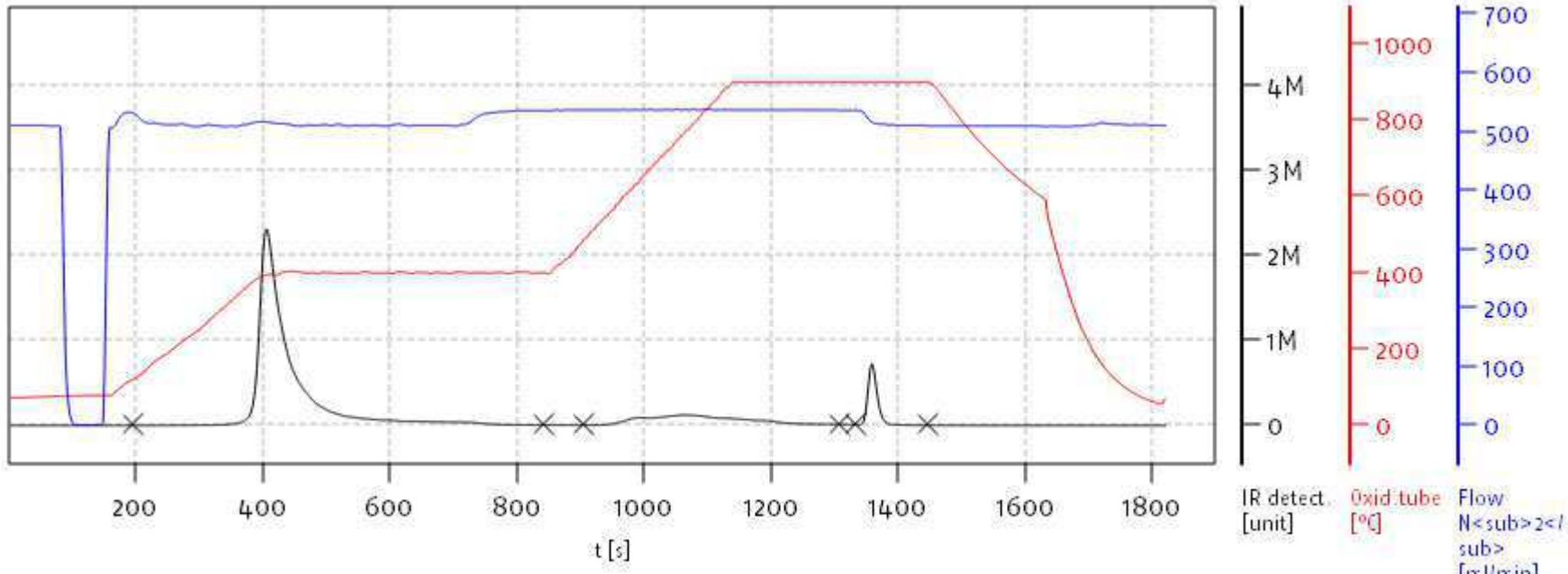
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	22L0137-54	509.80		CARBON	12/17/2022 4:27 AM	bl	1.438	4 636 570	1.703	0.136	472 852	899 656	1.302	0.265	0.9304	1.0000



Name:

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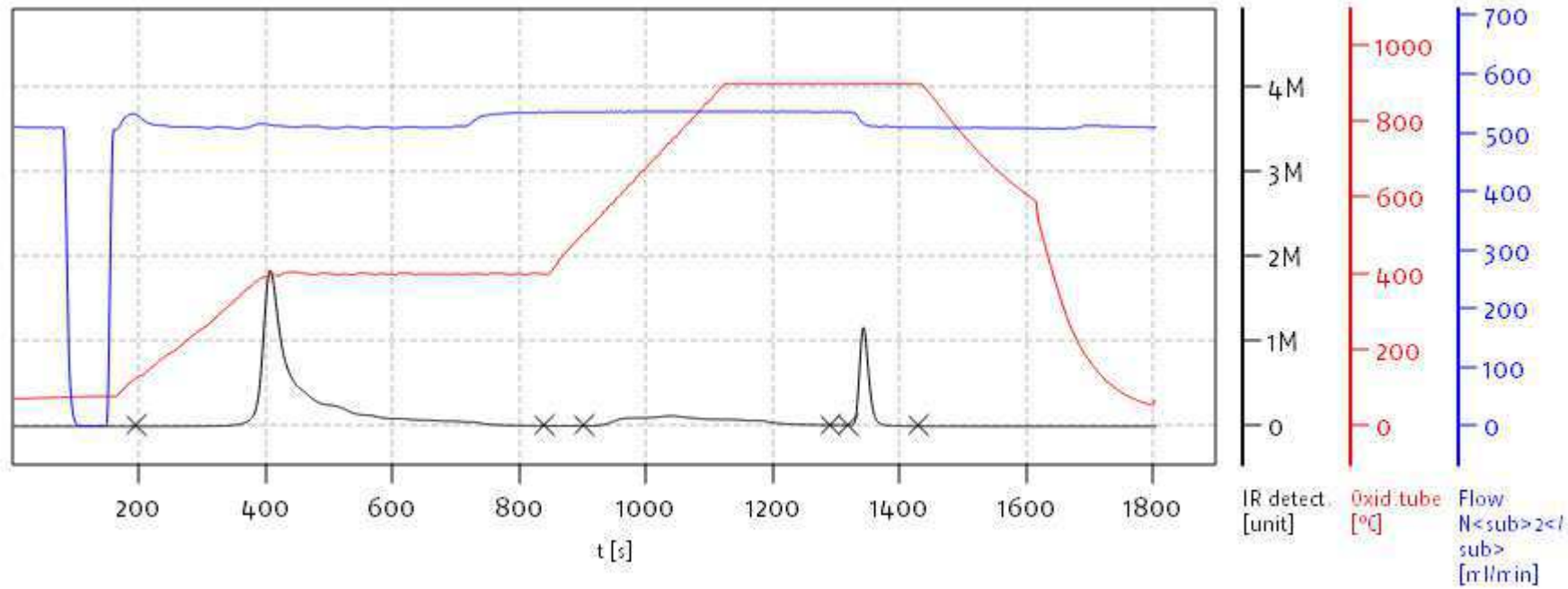
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	22L0137-55	517.70		CARBON	12/17/2022 4:57 AM	bl	1.371	4 164 520	1.652	0.220	761 987	966 010	1.151	0.281	0.9304	1.0000



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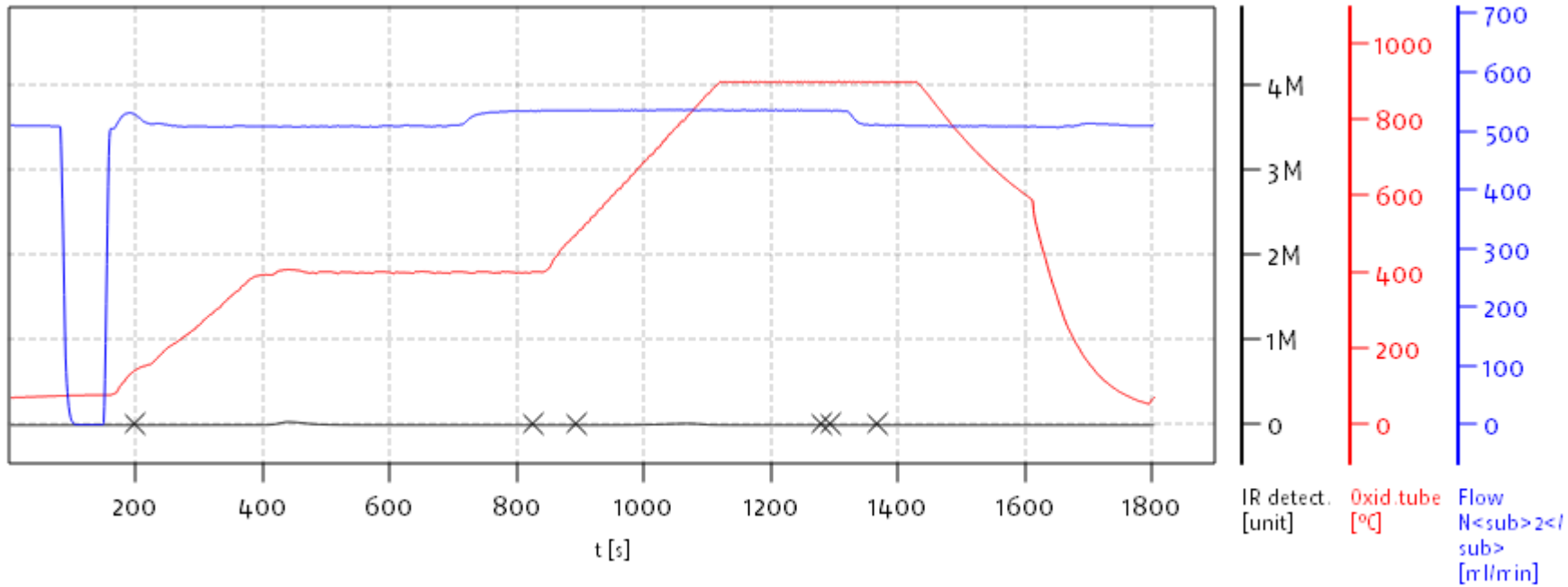
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	BKL0386-MRL1	556.30		CARBON	12/17/2022 5:27 AM	bl,C2u	0.013	78 541	0.019	0.000	158	47 997	0.013	0.006	0.9304	1.0000



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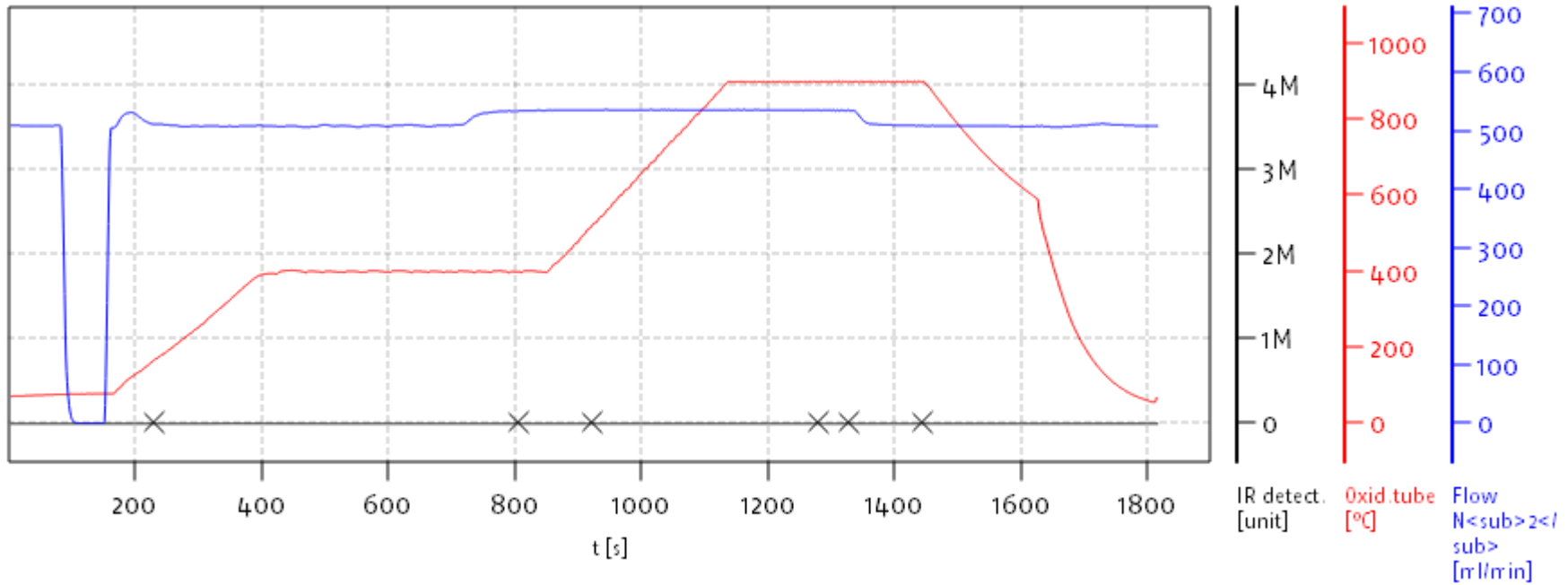
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	BKL0386-BLK1	550.40		CARBON	12/17/2022 5:58 AM	bl,C3u,C2u	0.000	7 098	0.000	0.000	242	959	0.000	0.000	0.9304	1.0000



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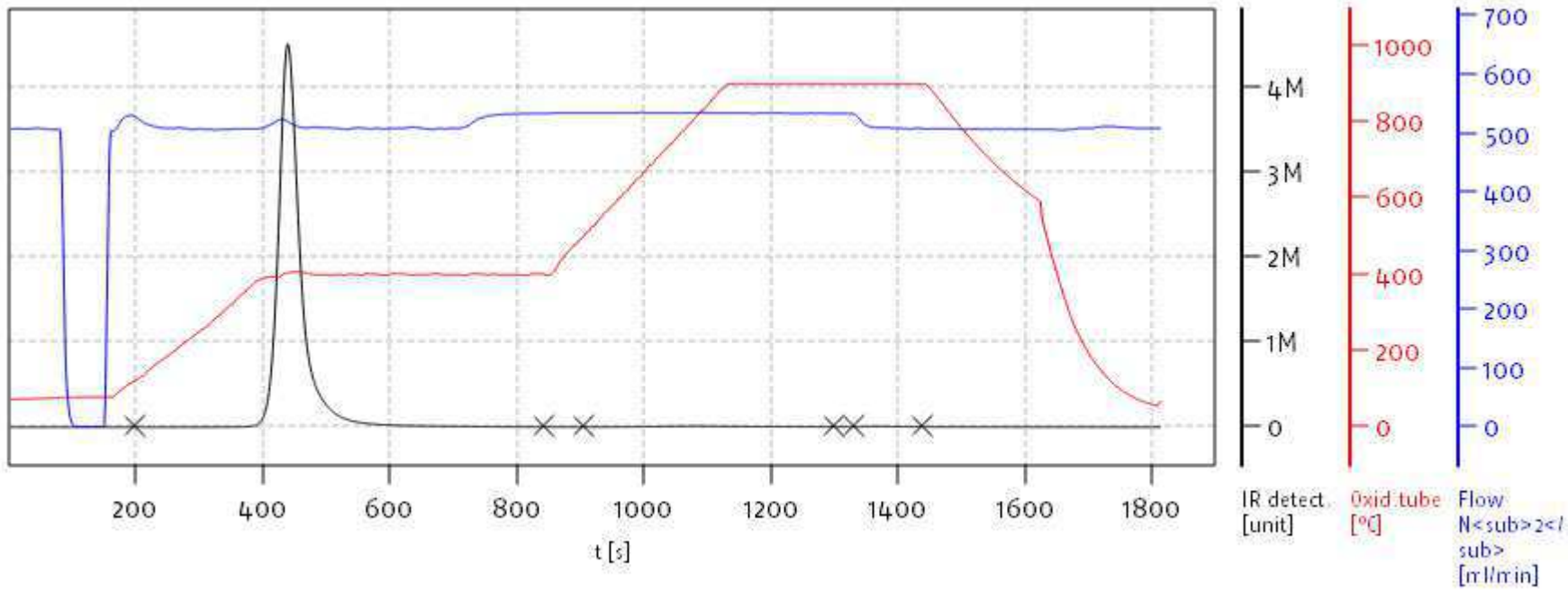
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	BKL0386-BS1	21.90		CARBON	12/17/2022 6:29 AM	bl	44.780	6 835 200	45.242	0.000	23 437	91 968	44.780	0.463	0.9304	1.0000



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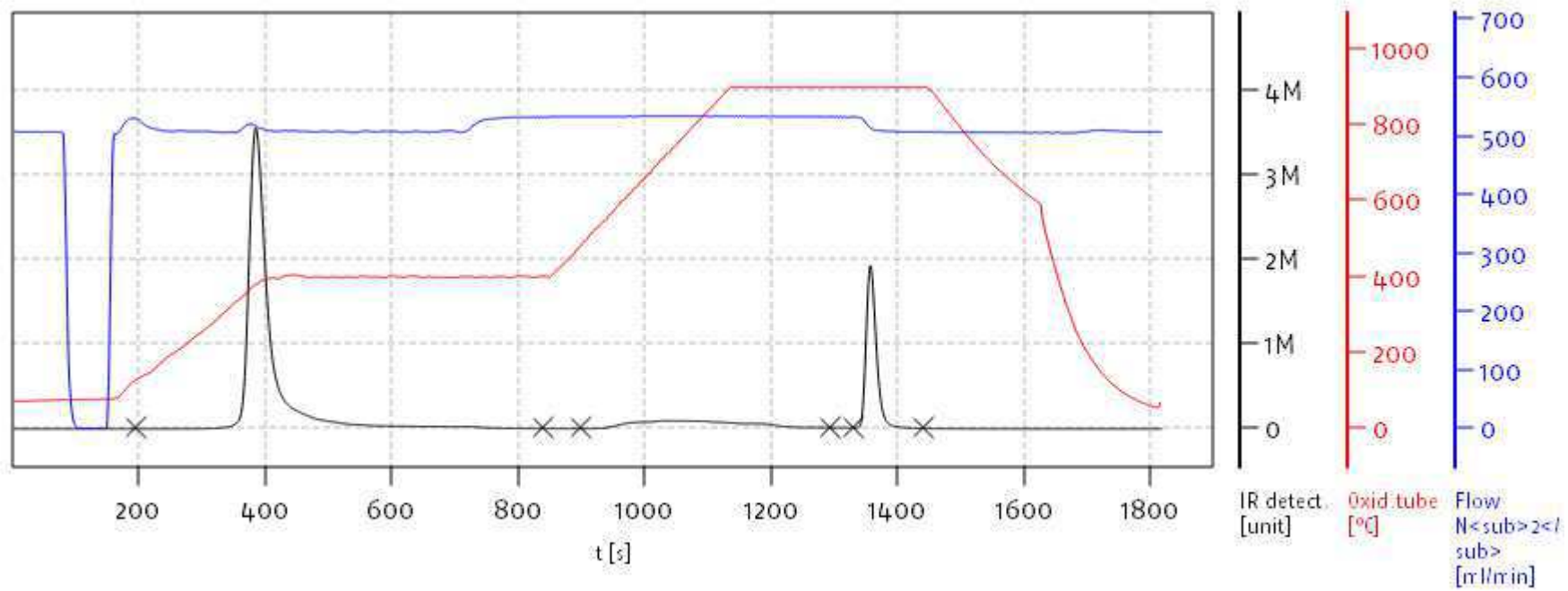
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	BKL0386-SRM1	309.60		CARBON	12/17/2022 6:59 AM	bl	2.990	5 004 870	3.378	0.674	1 374 220	803 032	2.316	0.388	0.9304	1.0000



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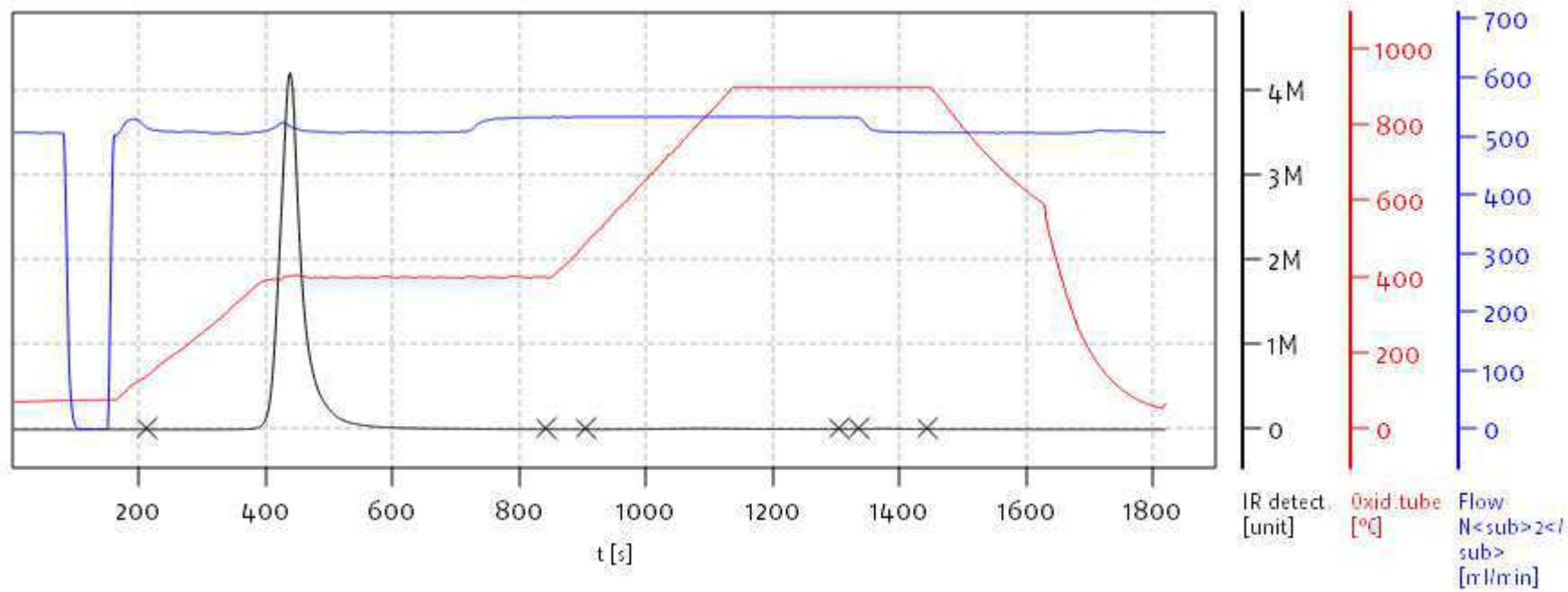
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SKL0217-CCV3	21.00		CARBON	12/17/2022 7:30 AM	bl	44.234	6 475 480	44.712	0.002	26 816	91 418	44.232	0.478	0.9304	1.0000



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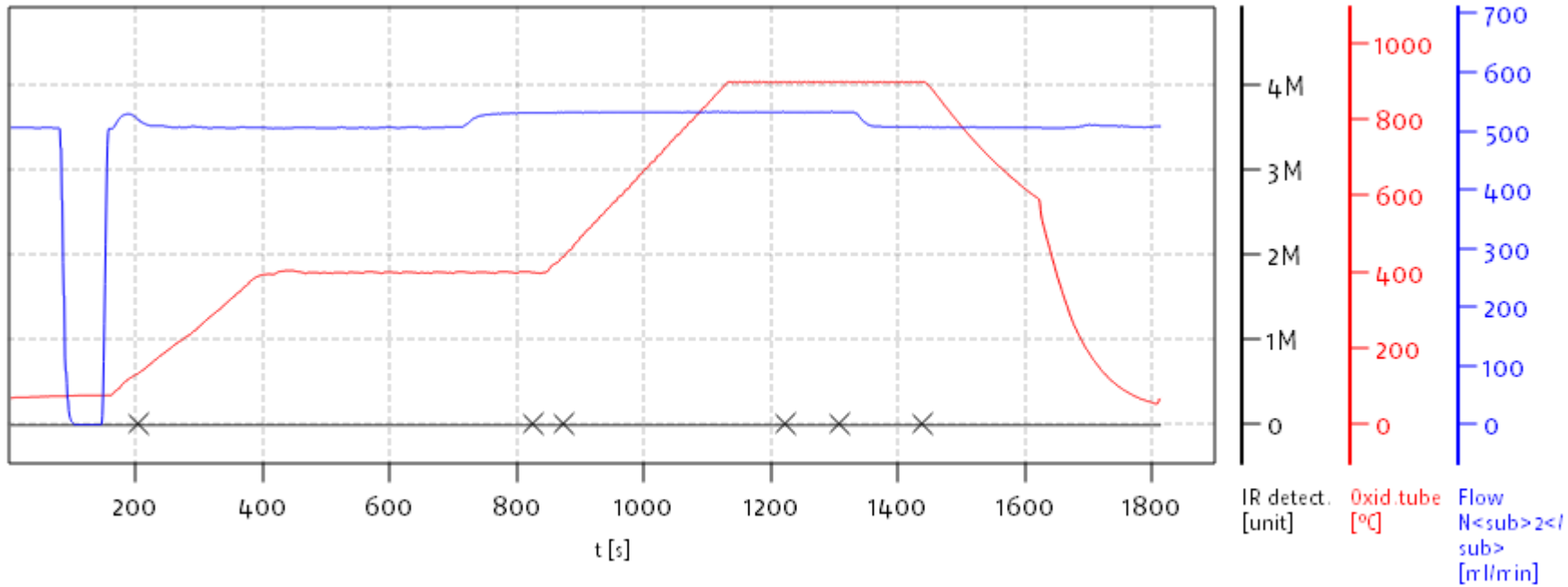
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SKL0217-CCB3	539.60		CARBON	12/17/2022 8:01 AM	bl,C3u,C2u	0.000	4 041	0.000	0.000	328	1 620	0.000	0.000	0.9304	1.0000



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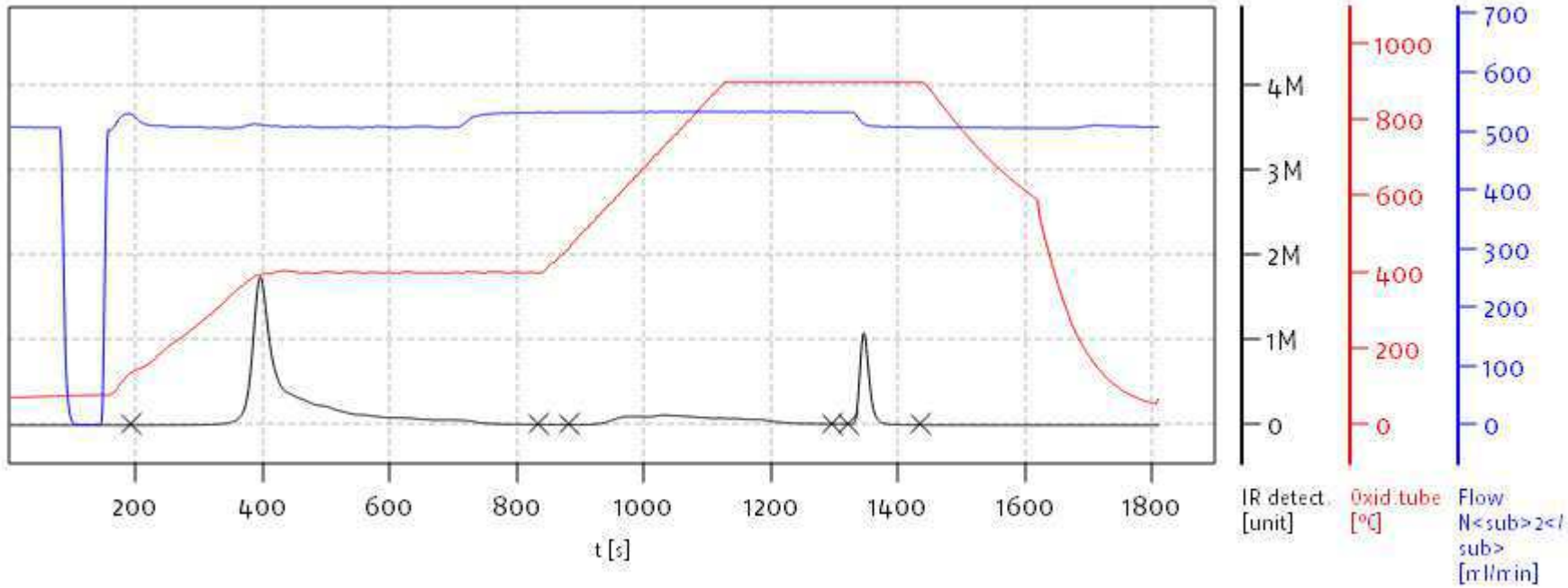
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	22L0137-56	502.10		CARBON	12/17/2022 8:31 AM	bl	1.330	3 915 680	1.619	0.214	721 581	963 218	1.116	0.289	0.9304	1.0000



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Balance: BAL3
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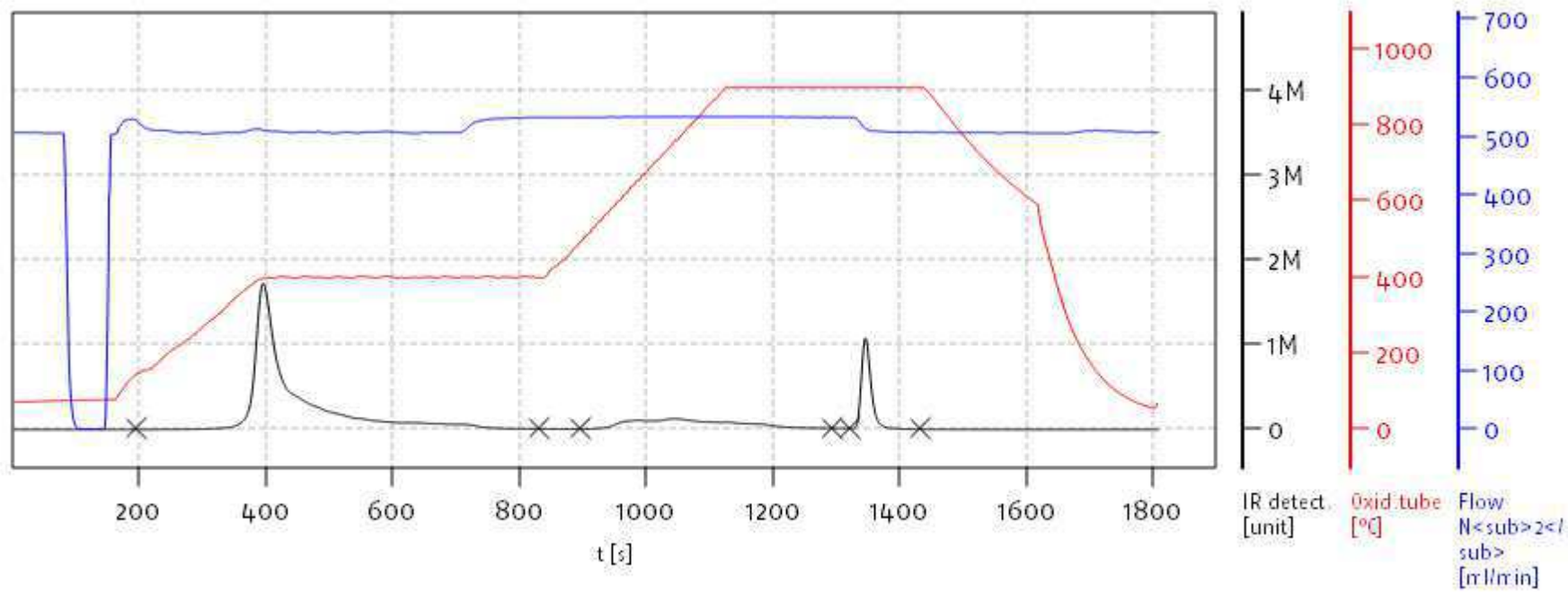
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	BKL0386-DUP1	510.90		CARBON	12/17/2022 9:02 AM	bl	1.357	4 081 220	1.646	0.214	733 899	980 242	1.143	0.289	0.9304	1.0000



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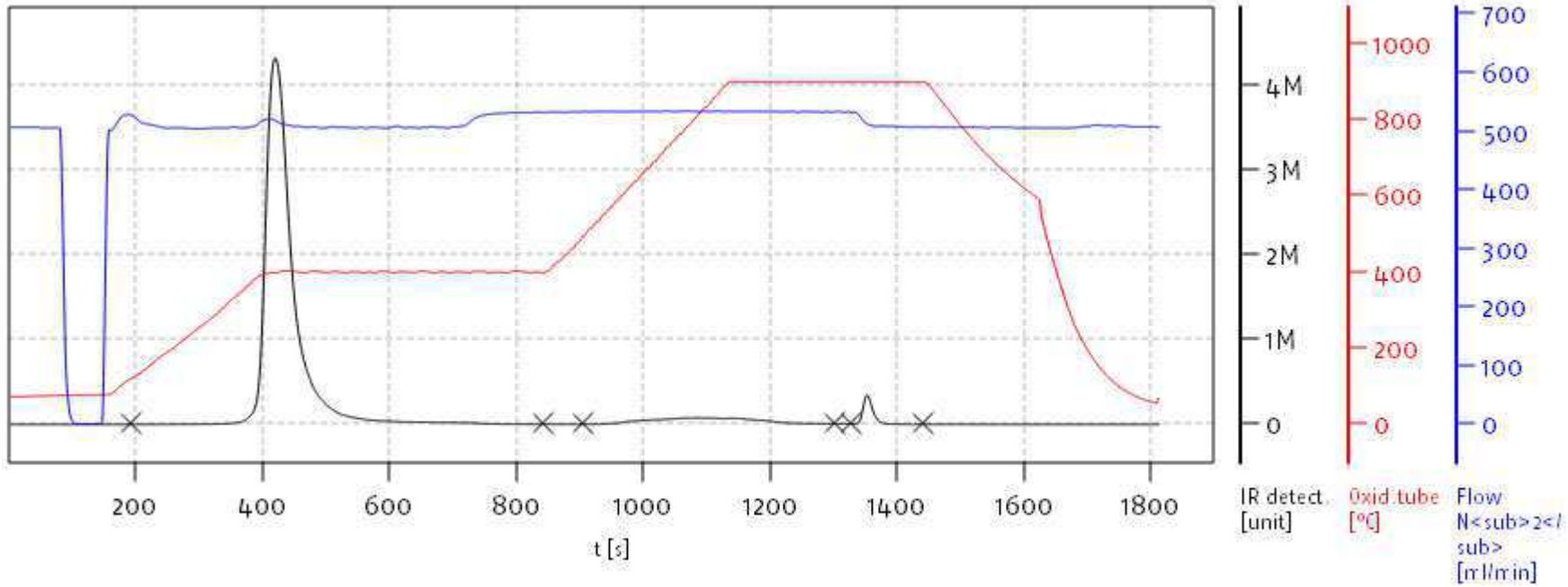
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	BKL0386-MS1	532.30	0.0082	CARBON	12/17/2022 9:32 AM	bl	2.206	7 955 870	2.377	0.061	235 497	612 496	2.146	0.170	0.9304	1.0000



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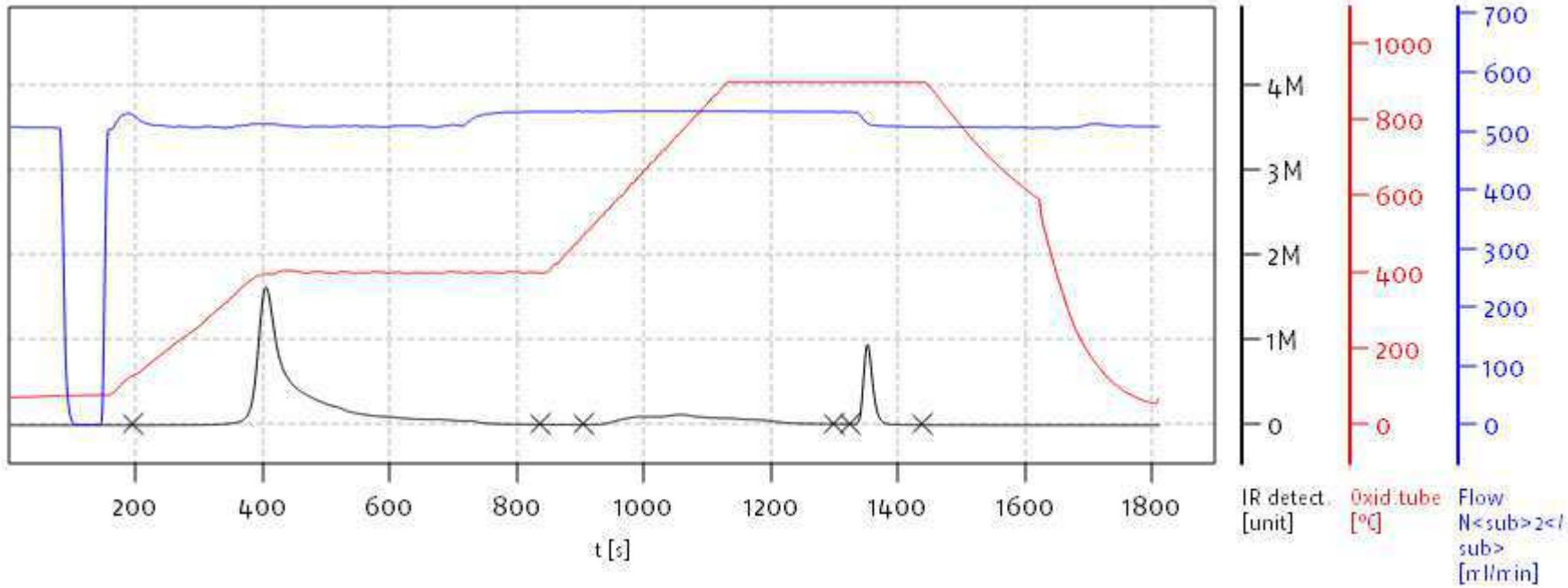
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	22L0137-57	513.00		CARBON	12/17/2022 10:03 AM	bl	1.307	4 043 250	1.579	0.180	621 822	927 707	1.128	0.272	0.9304	1.0000



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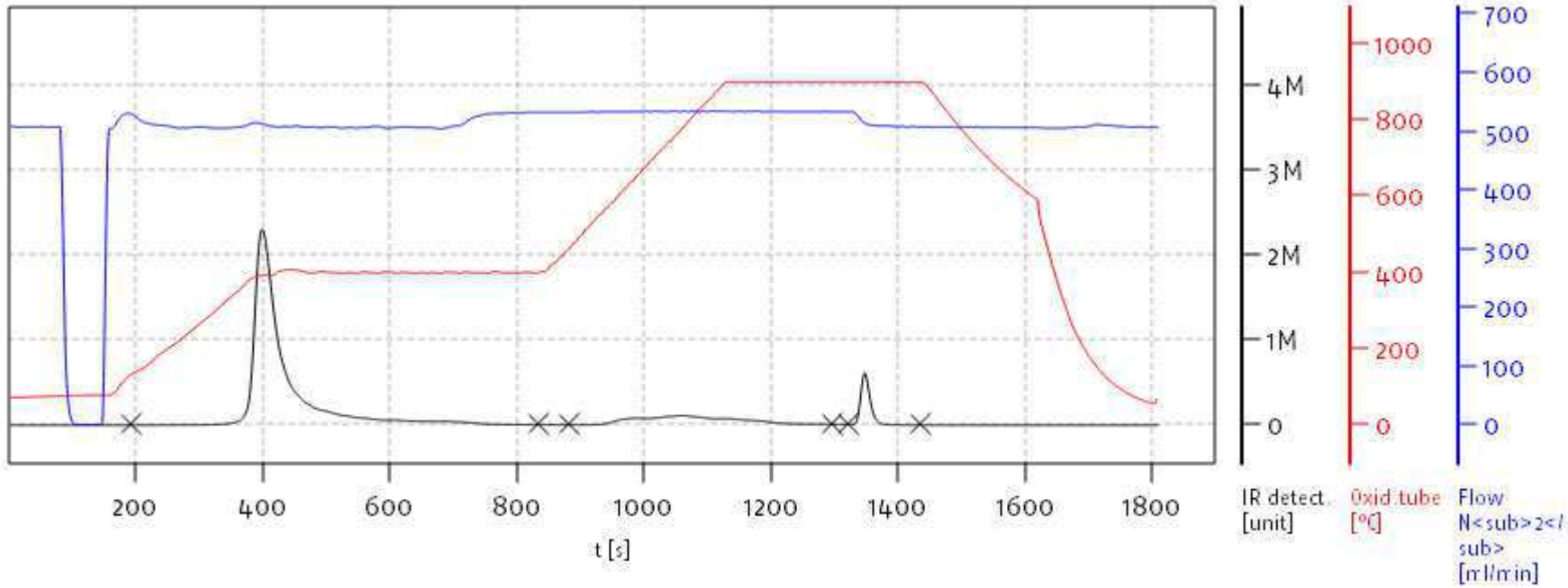
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	22L0137-58	513.60		CARBON	12/17/2022 10:34 AM	bl	1.363	4 484 360	1.600	0.113	401 110	812 730	1.250	0.237	0.9304	1.0000



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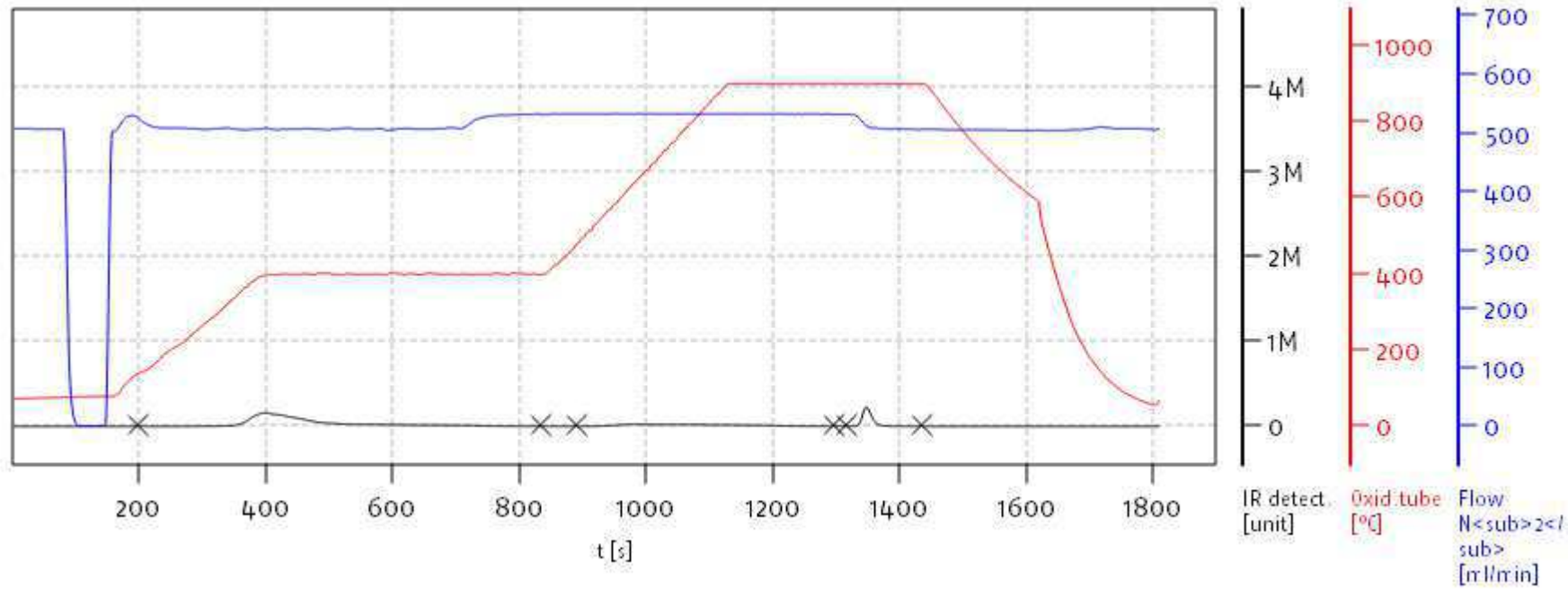
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	22L0137-59	155.60		CARBON	12/17/2022 11:04 AM	bl	0.761	713 922	0.928	0.124	151 521	195 089	0.636	0.168	0.9304	1.0000



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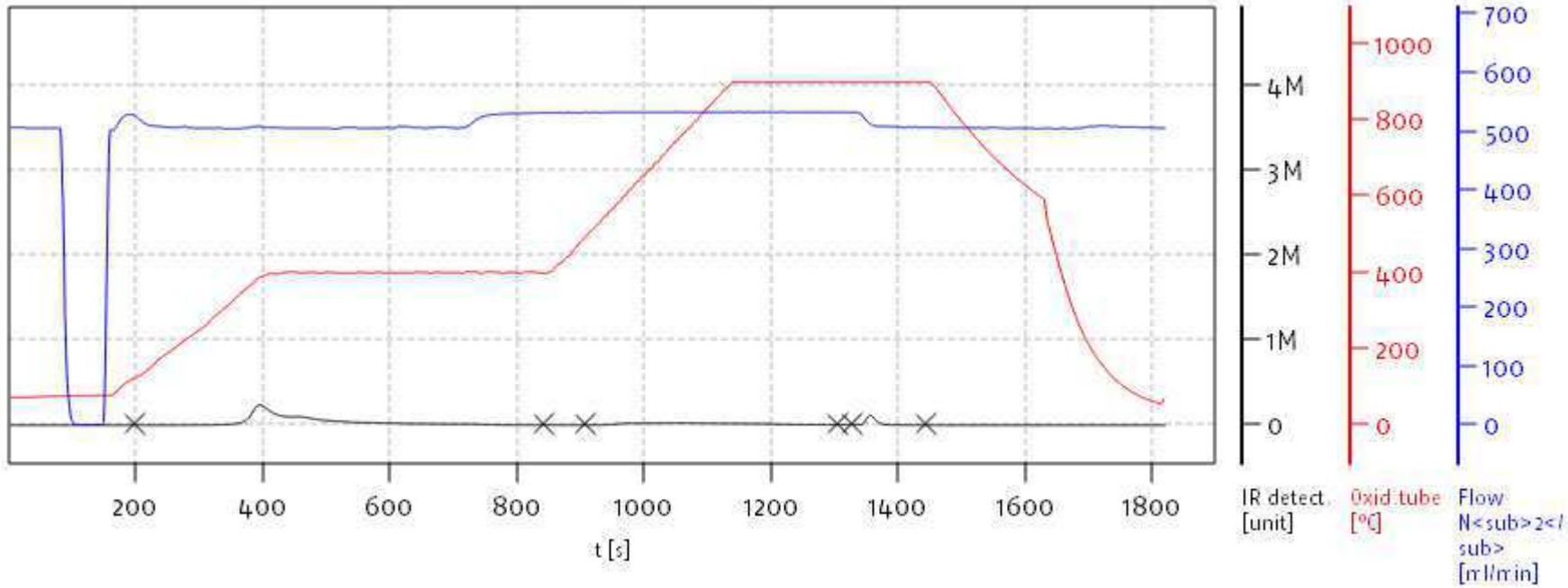
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	22L0137-60	153.60		CARBON	12/17/2022 11:35 AM	bl	0.810	831 164	1.010	0.056	81 891	224 553	0.755	0.200	0.9304	1.0000



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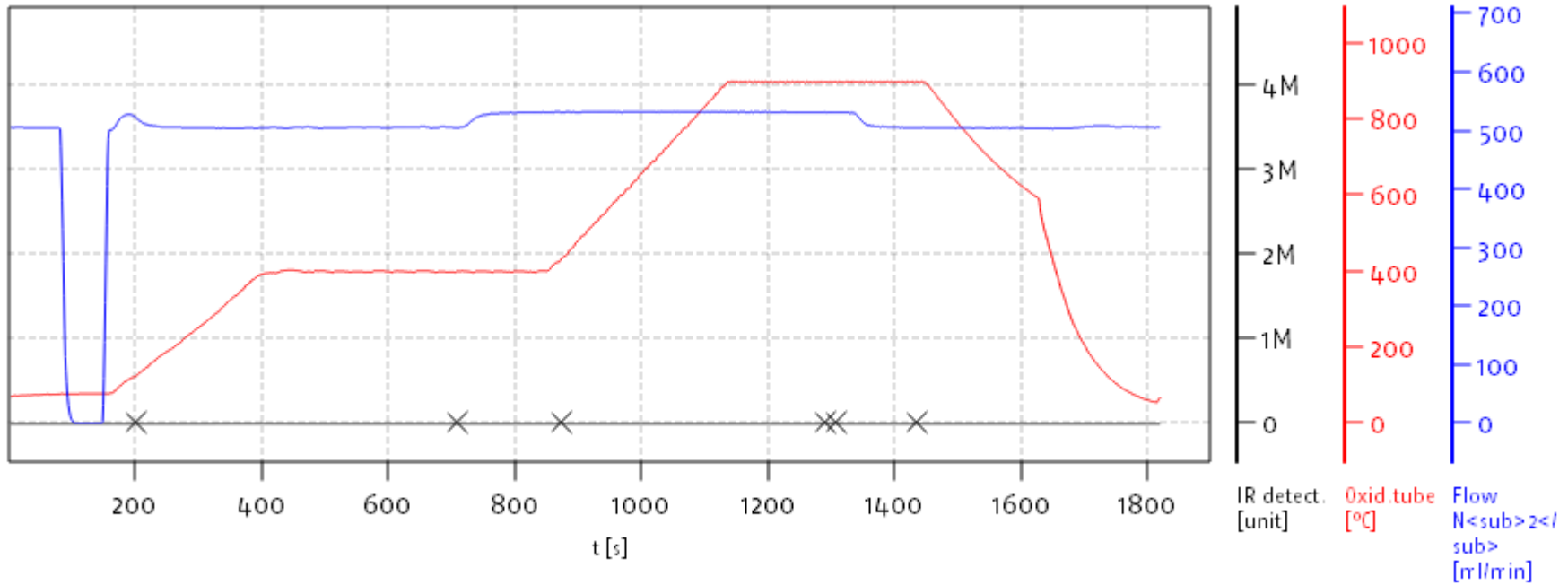
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	12/17/2022 12:06 PM	bl	0.000	6 316	0.000	0.000	167	474	0.000	0.000	0.9304	1.0000



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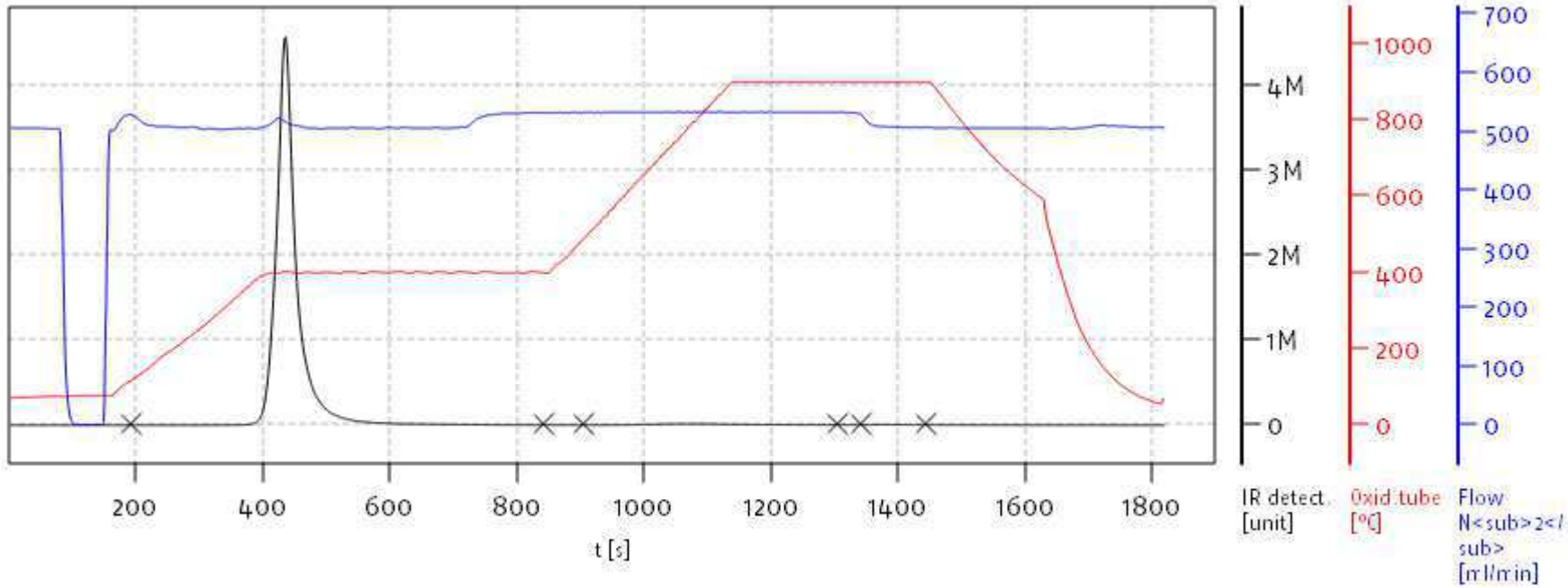
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	20.00		CARBON	12/17/2022 12:36 PM	bl	44.446	6 225 820	45.086	0.000	19 678	109 236	44.446	0.640	0.9263	1.0000



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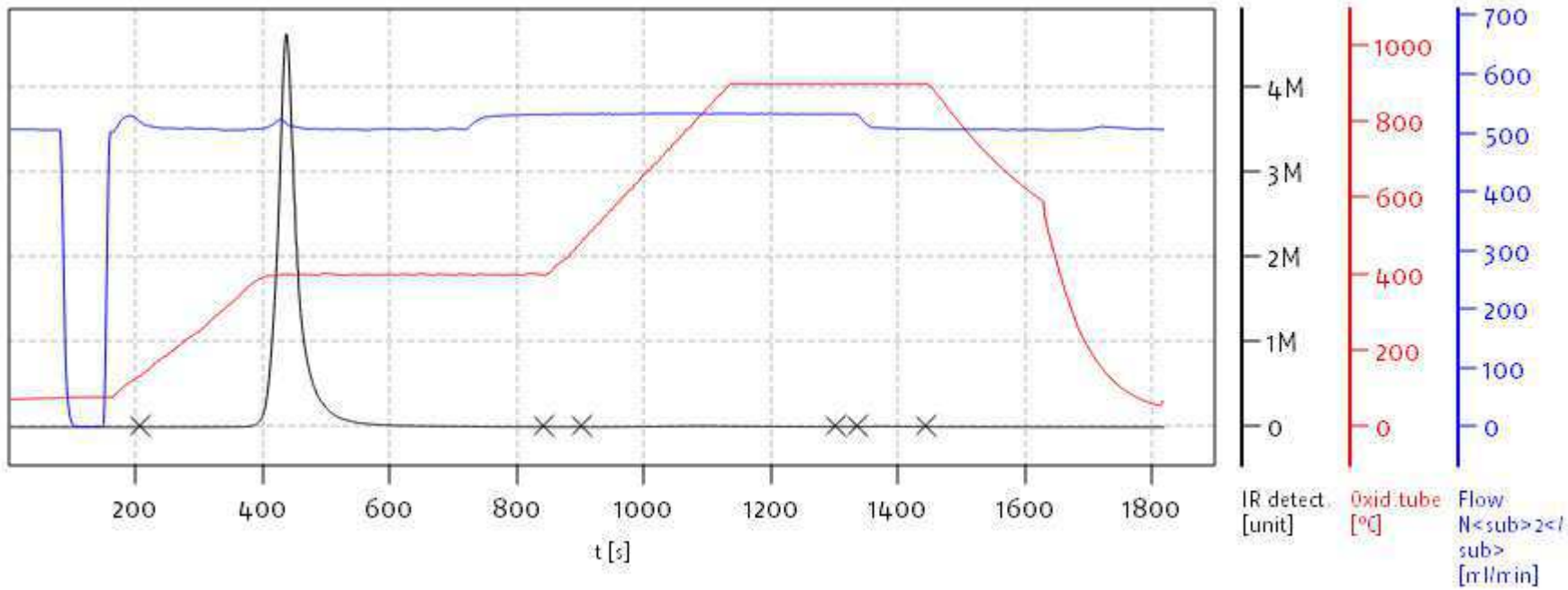
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	20.70		CARBON	12/17/2022 1:07 PM	bl	44.446	6 442 430	44.976	0.000	22 795	97 508	44.446	0.531	0.9263	1.0000



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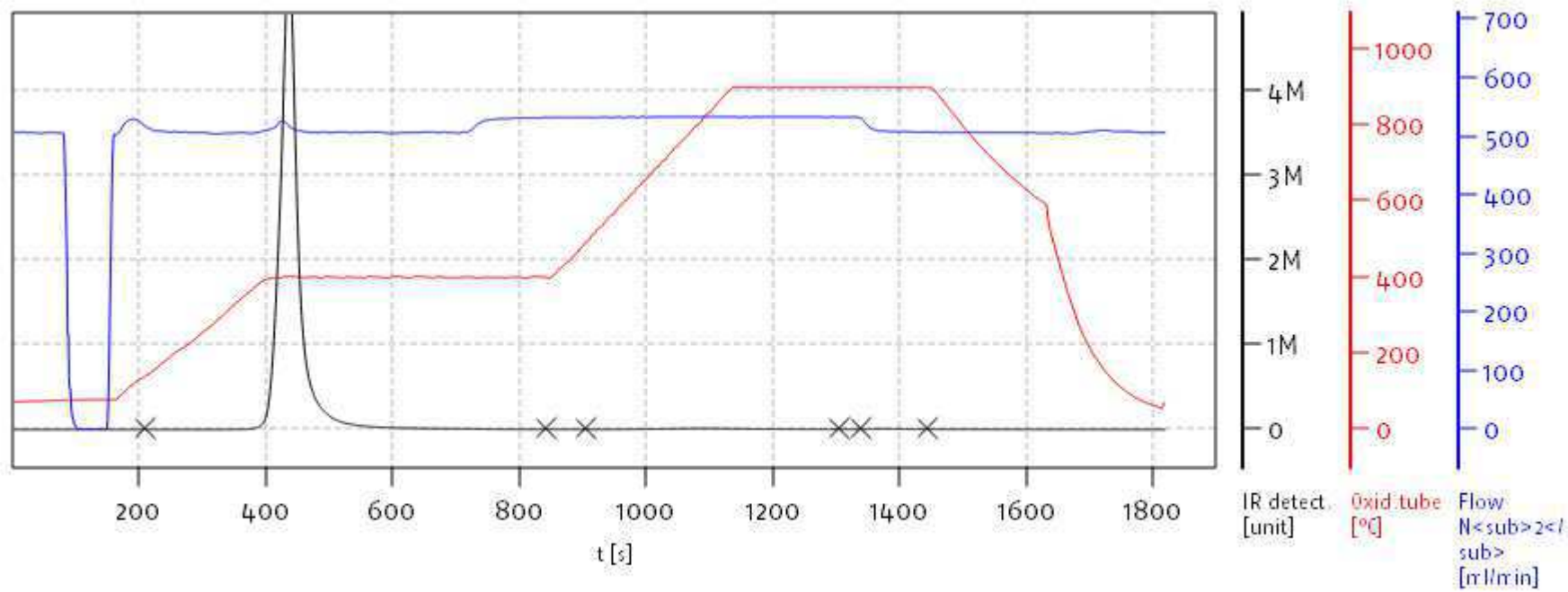
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SKL0217-CCV4	21.90		CARBON	12/17/2022 1:38 PM	bl	44.959	6 893 040	45.411	0.000	22 747	90 461	44.959	0.452	0.9263	1.0000



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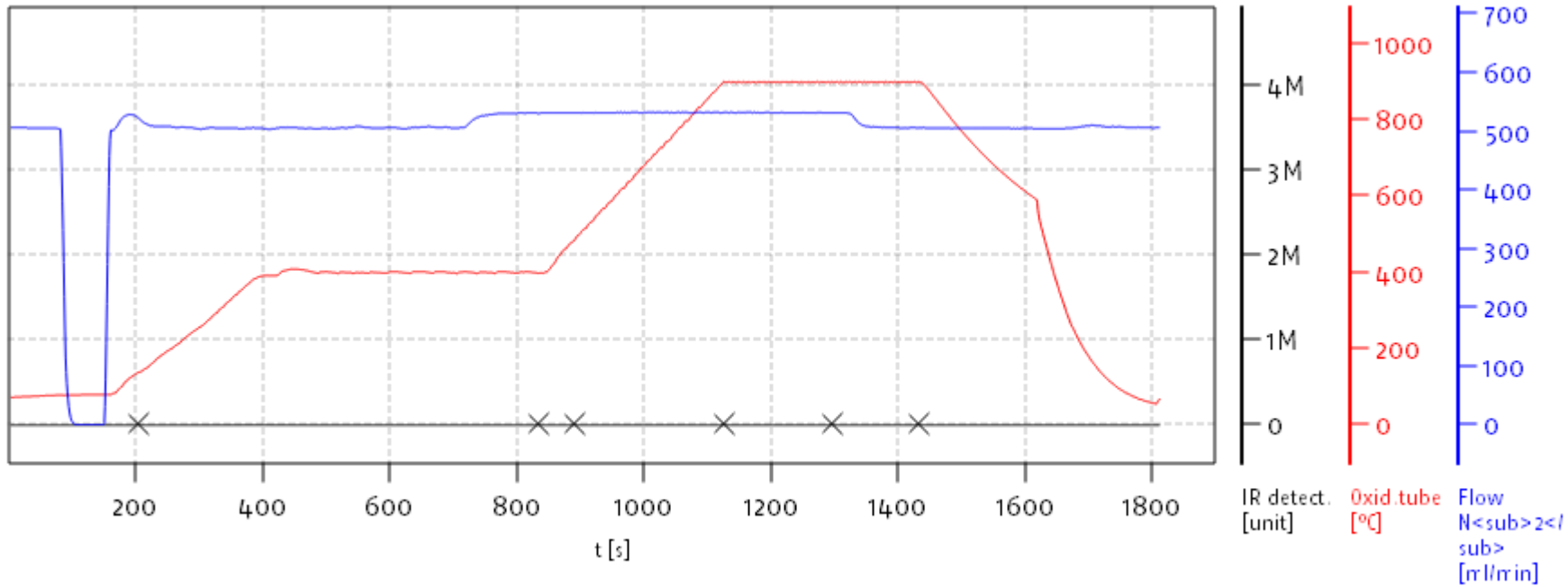
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SKL0217-CCB4	500.30		CARBON	12/17/2022 2:08 PM	bl,C3u,C2u	0.000	4 195	0.000	0.000	482	400	0.000	0.000	0.9263	1.0000



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Access: soliTOC superuser

Date: Wed Dec 21 09:58:21 2022

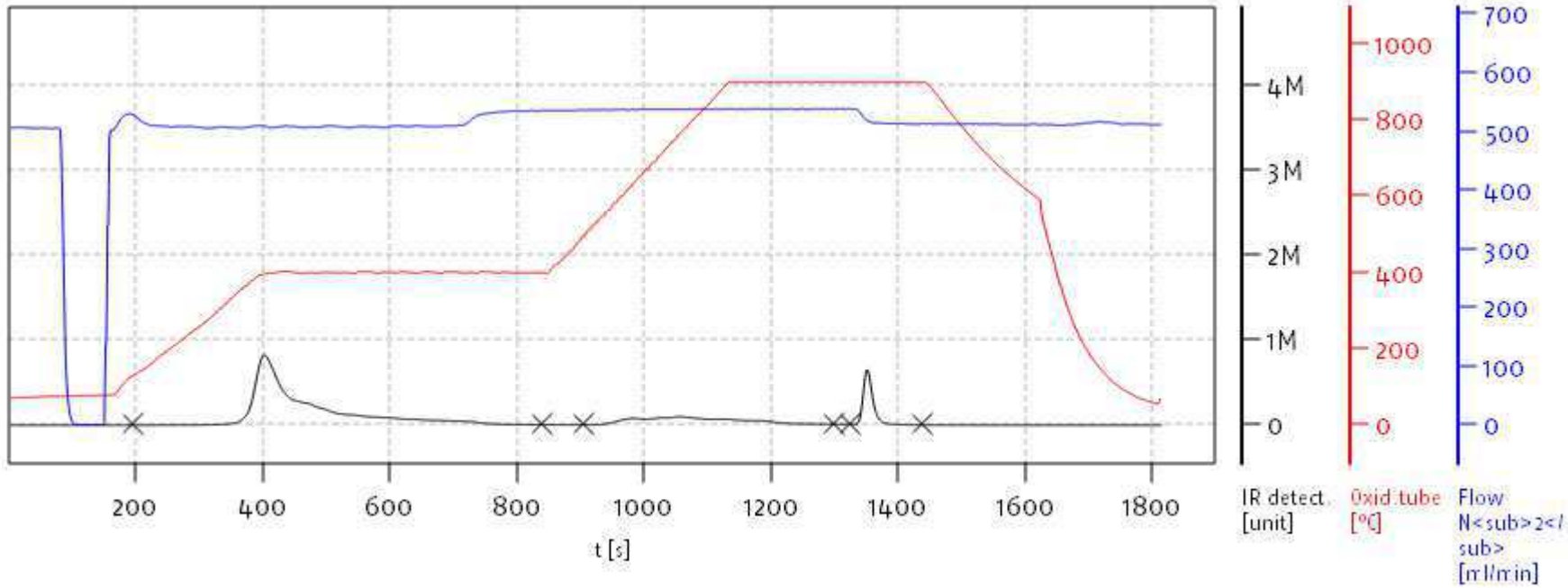
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	22L0137-61	530.30		CARBON	12/17/2022 2:39 PM	bl	0.852	2 730 290	1.064	0.121	442 041	750 746	0.731	0.211	0.9263	1.0000



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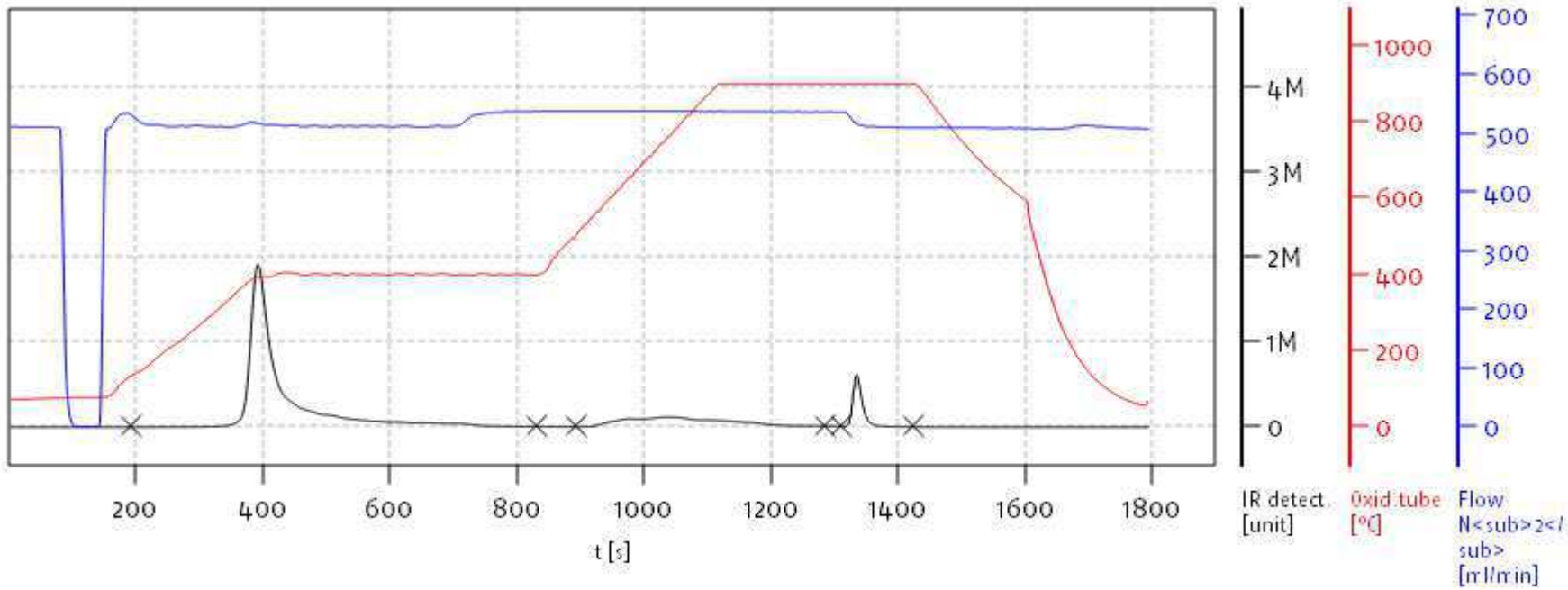
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	22L0137-62	524.40		CARBON	12/17/2022 3:09 PM	bl	1.115	3 692 440	1.367	0.113	407 967	881 195	1.002	0.252	0.9263	1.0000



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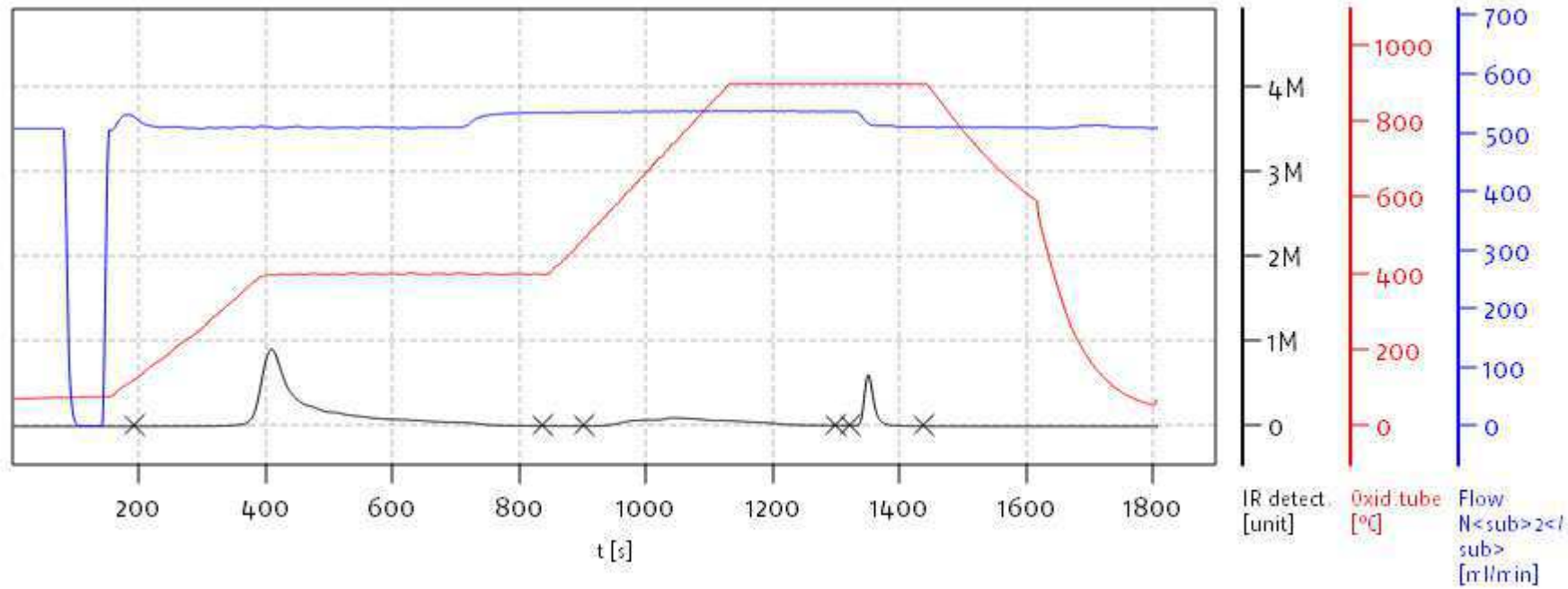
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	22L0137-63	525.90		CARBON	12/17/2022 3:40 PM	bl	0.862	2 773 120	1.070	0.113	411 815	733 204	0.749	0.208	0.9263	1.0000



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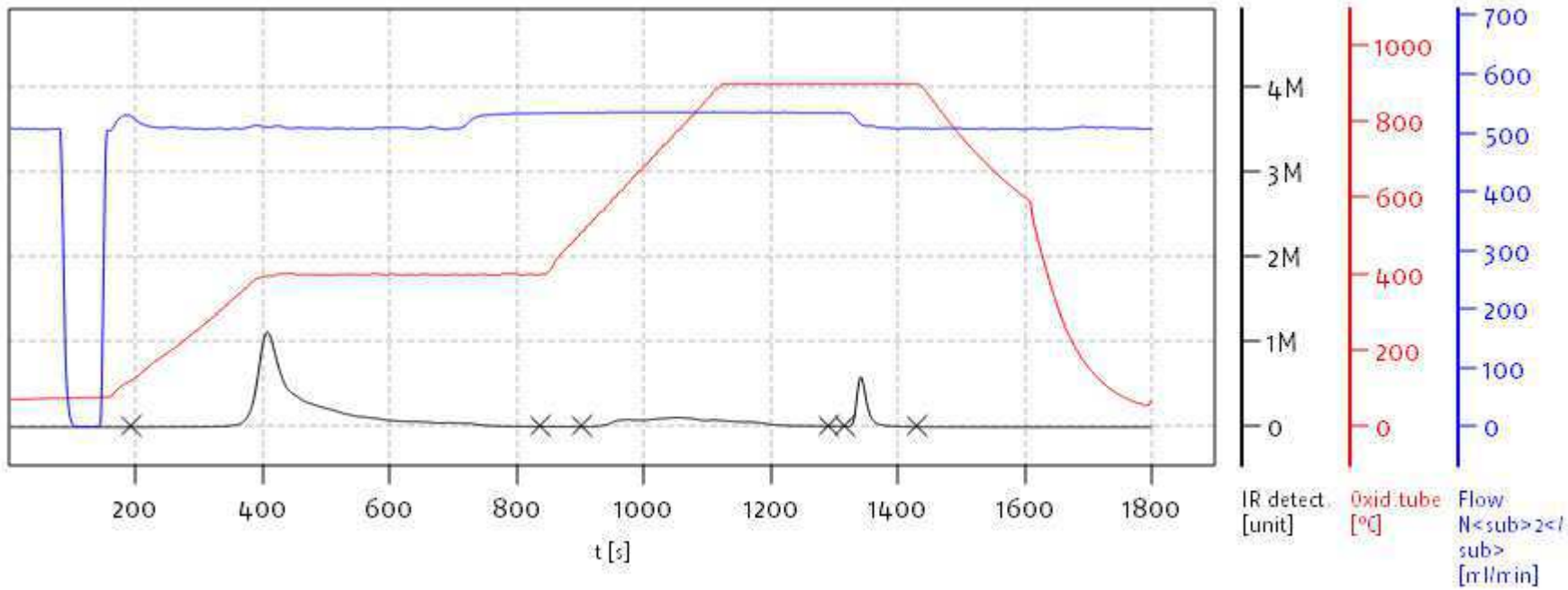
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	22L0137-64	534.50		CARBON	12/17/2022 4:10 PM	bl	0.979	3 241 530	1.214	0.116	427 563	840 653	0.863	0.236	0.9263	1.0000



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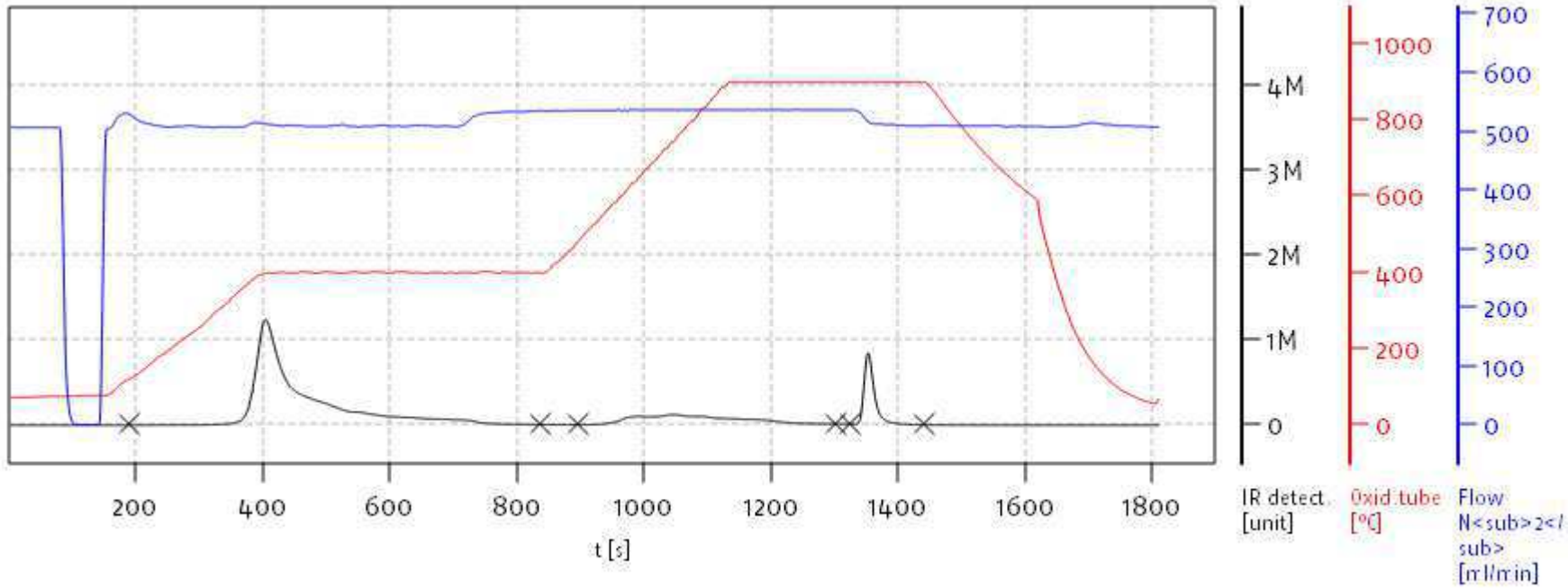
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	22L0137-65	521.00		CARBON	12/17/2022 4:41 PM	bl	1.210	3 780 470	1.481	0.177	620 711	938 190	1.033	0.271	0.9263	1.0000



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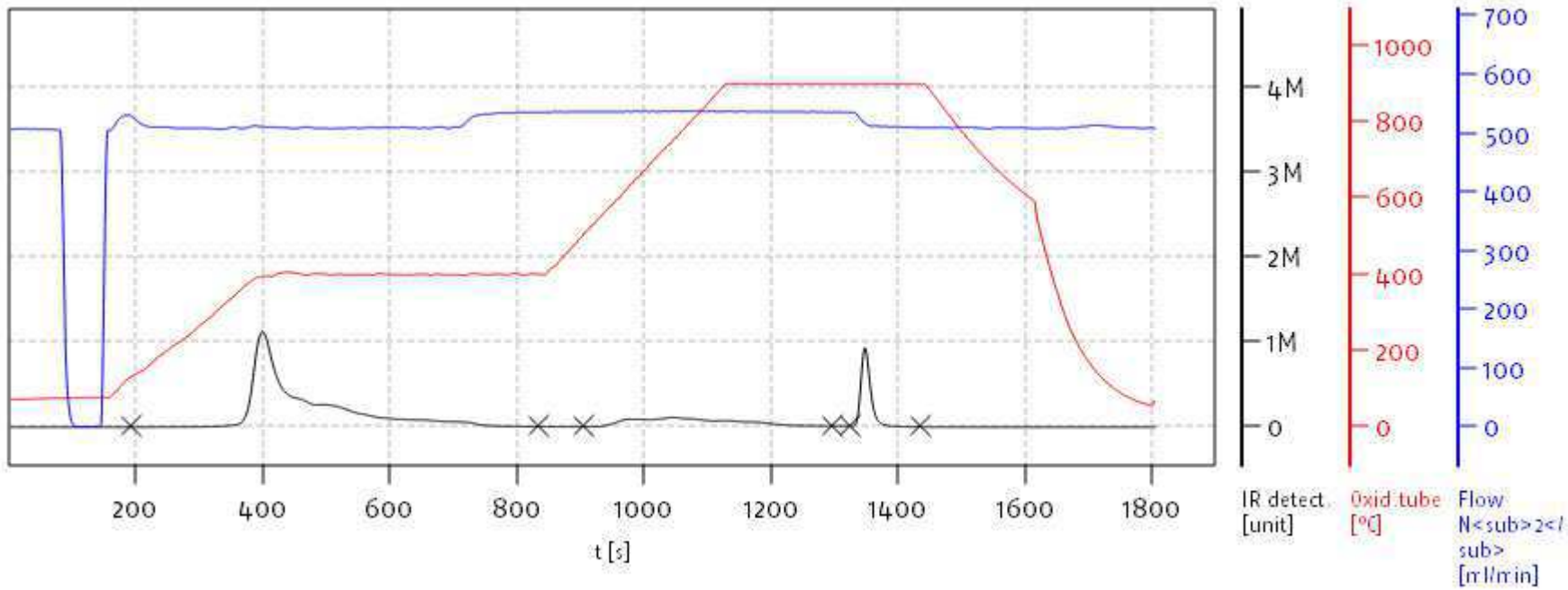
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	22L0137-66	518.80		CARBON	12/17/2022 5:11 PM	bl	1.149	3 538 950	1.396	0.179	625 191	853 977	0.971	0.247	0.9263	1.0000



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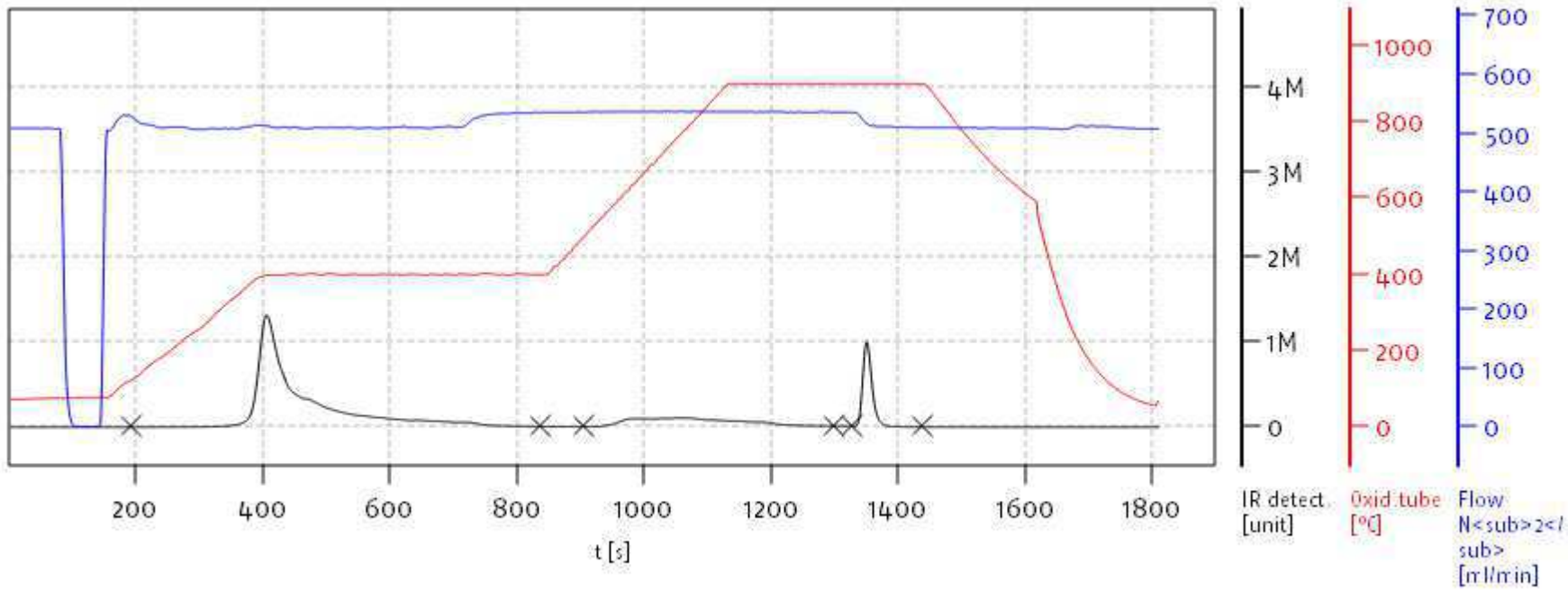
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	22L0137-67	509.30		CARBON	12/17/2022 5:42 PM	bl	1.195	3 597 610	1.456	0.189	649 618	884 798	1.005	0.261	0.9263	1.0000



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elementar
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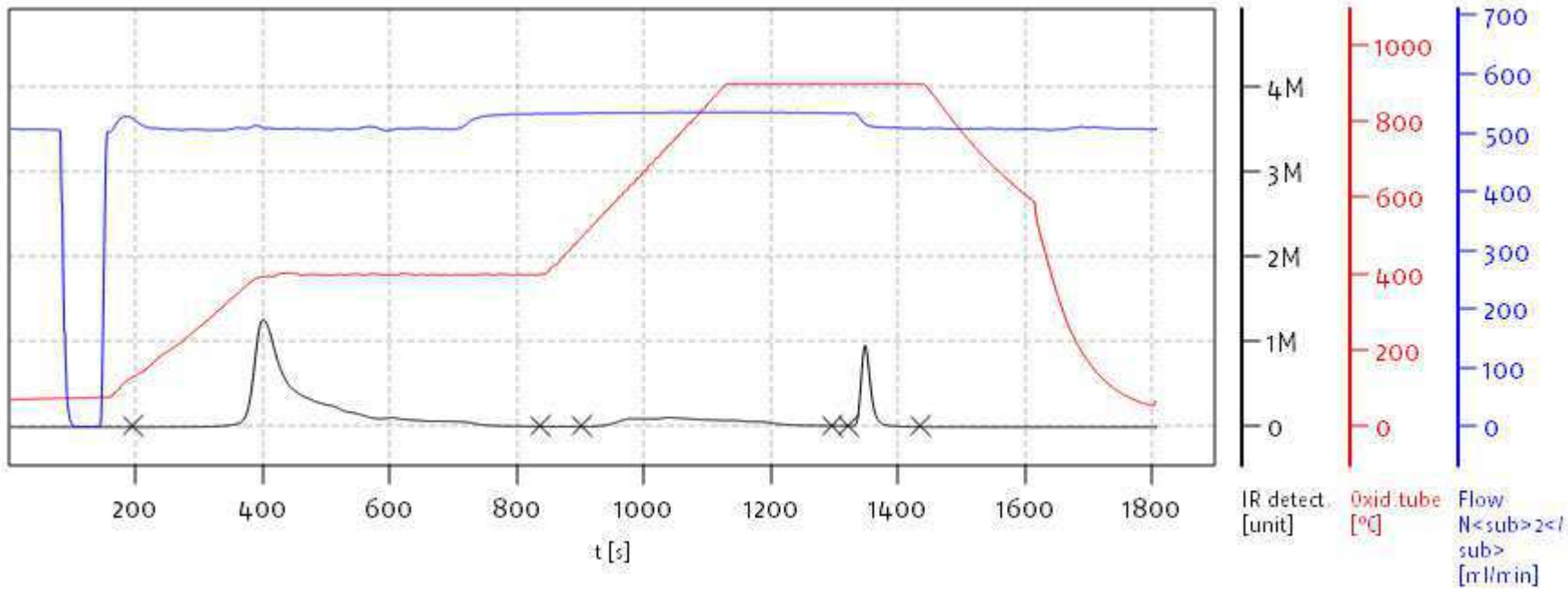
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	22L0137-68	506.20		CARBON	12/17/2022 6:12 PM	bl	1.303	3 953 220	1.577	0.191	650 444	920 580	1.112	0.273	0.9263	1.0000



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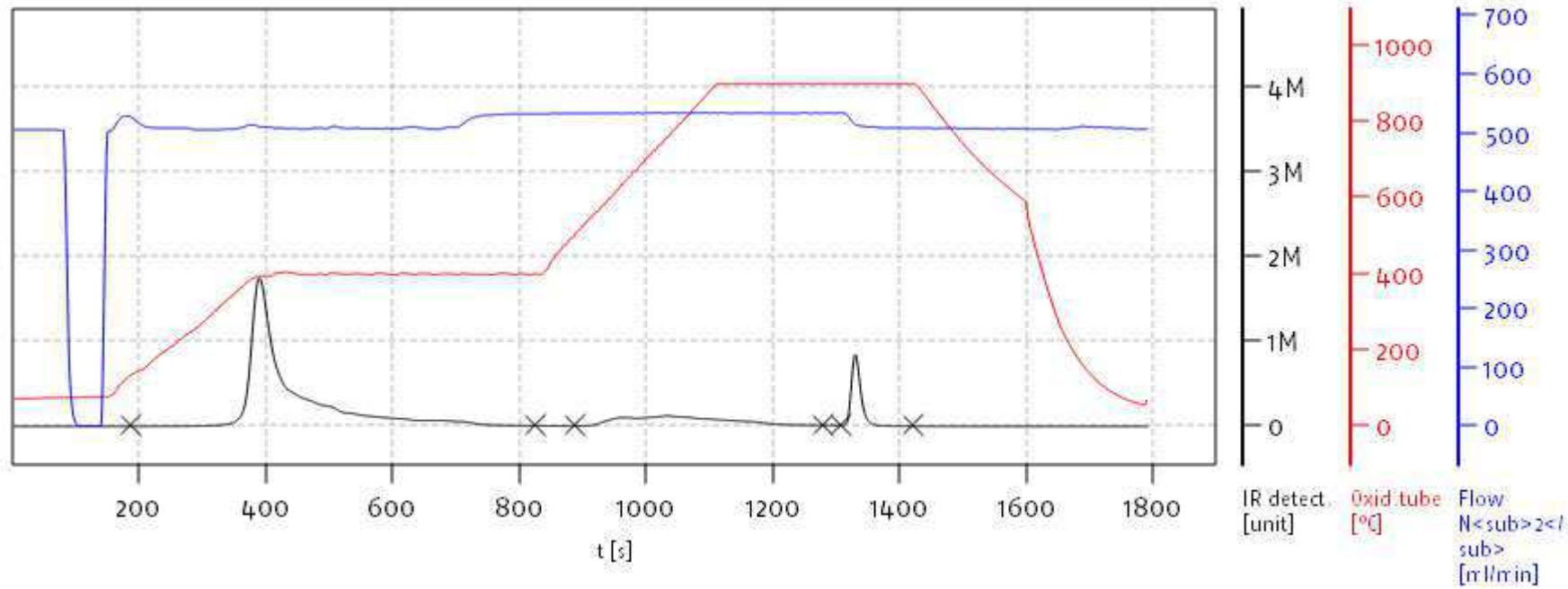
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	22L0137-69	525.50		CARBON	12/17/2022 6:43 PM	bl	1.328	4 321 100	1.599	0.156	556 453	945 045	1.172	0.271	0.9263	1.0000



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Serial No: 0300.181017
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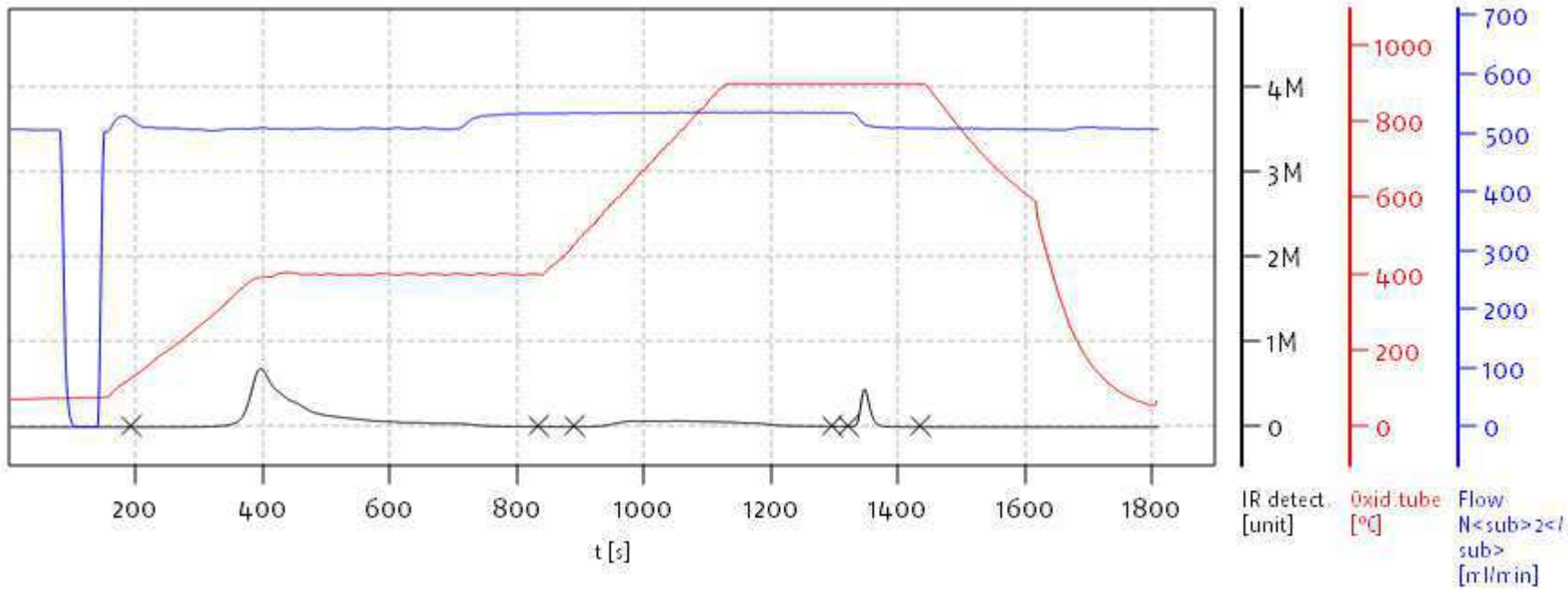
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	22L0155-01	518.60		CARBON	12/17/2022 7:13 PM	bl	0.743	2 427 300	0.925	0.079	291 226	637 882	0.664	0.182	0.9263	1.0000



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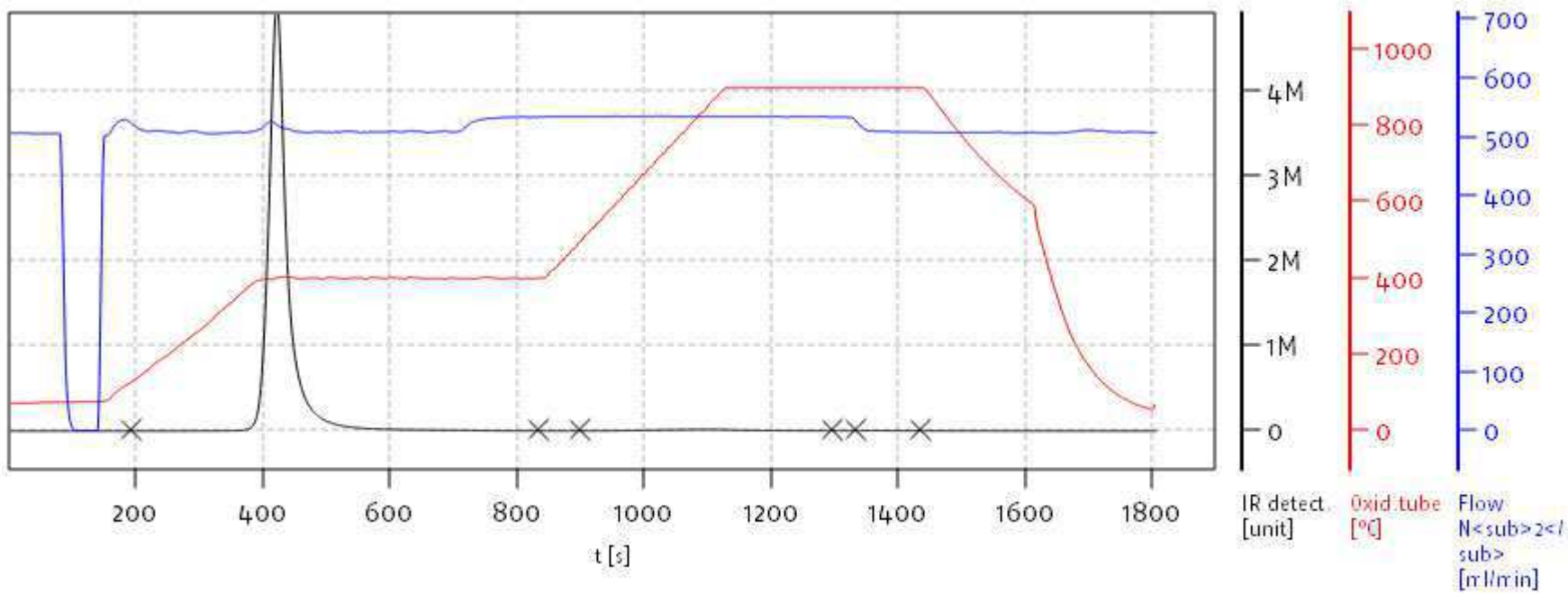
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SKL0217-CCV5	20.70		CARBON	12/17/2022 7:44 PM	bl	44.500	6 450 530	45.191	0.000	15 008	118 845	44.500	0.690	0.9263	1.0000



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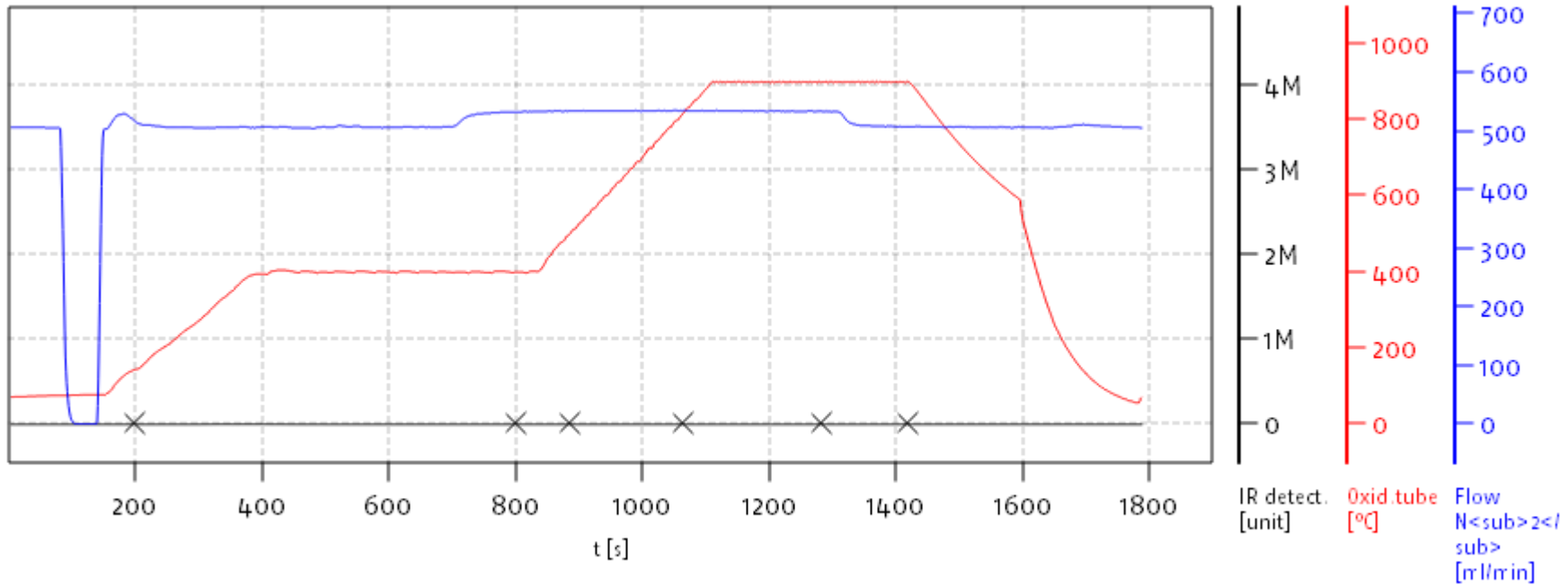
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SKL0217-CCB5	519.20		CARBON	12/17/2022 8:14 PM	bl,C3u,C2u	0.000	9 330	0.000	0.000	366	20	0.000	0.000	0.9263	1.0000



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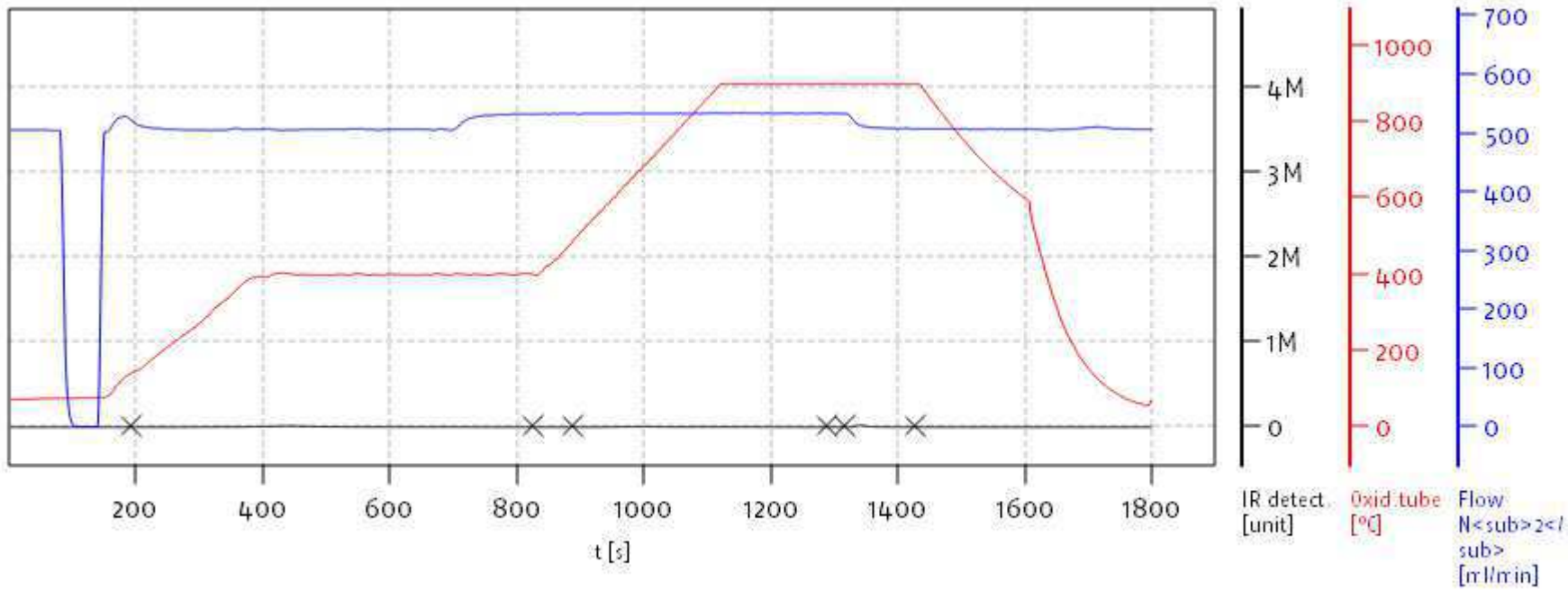
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
66	66	22L0155-02	510.00		CARBON	12/17/2022 8:44 PM	bl	0.012	70 711	0.014	0.000	18 208	33 244	0.012	0.002	0.9263	1.0000



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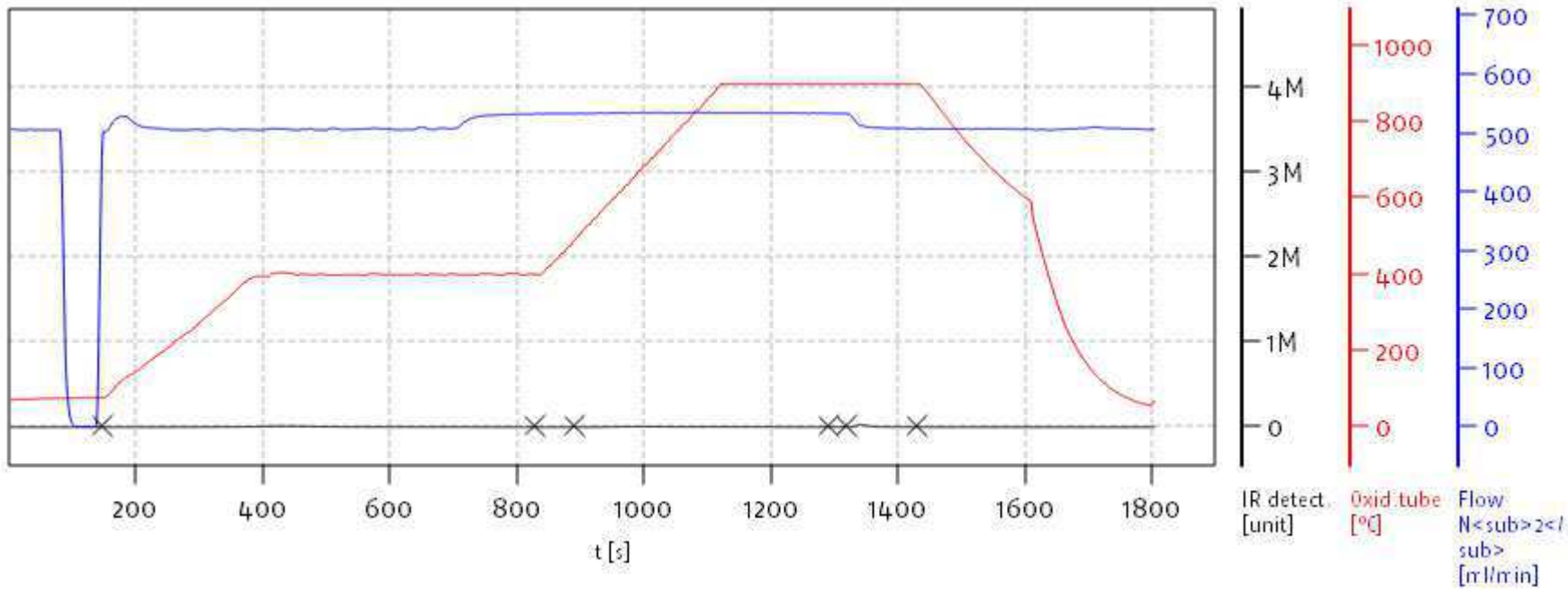
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
67	67	22L0155-03	577.30		CARBON	12/17/2022 9:15 PM	bl	0.011	72 781	0.016	0.000	24 215	43 091	0.011	0.004	0.9263	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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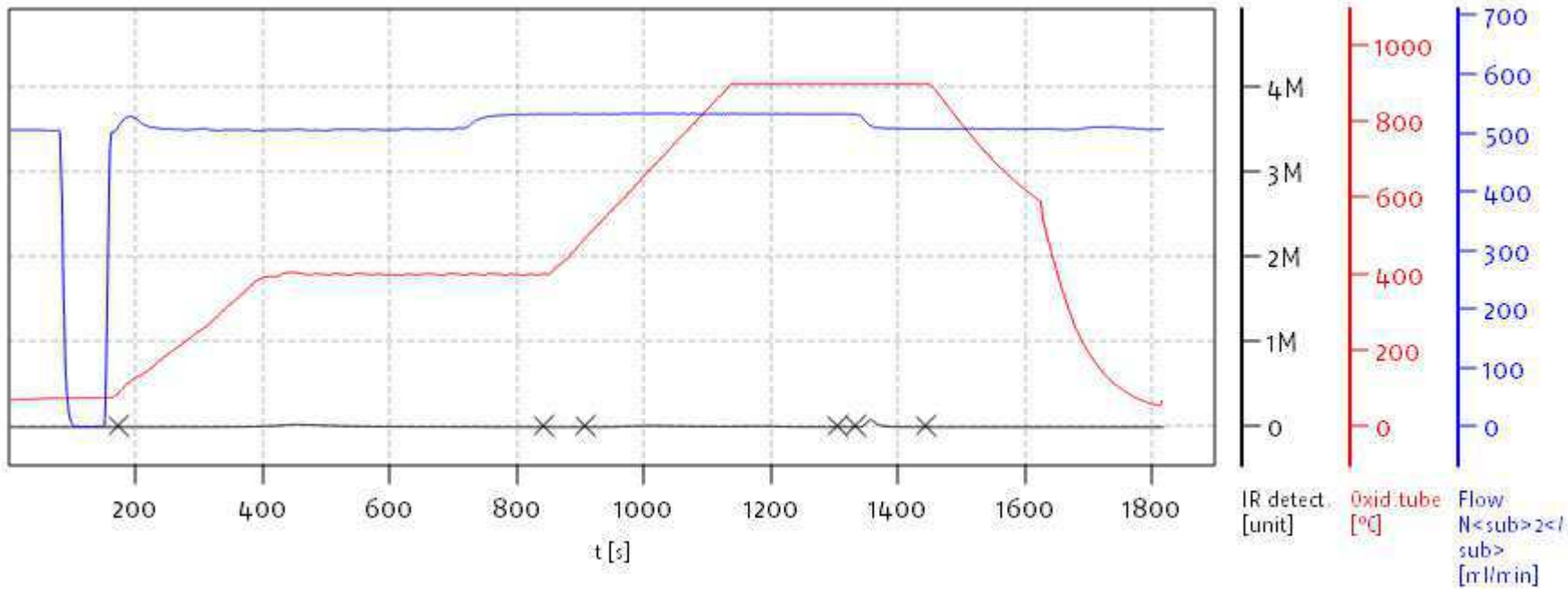
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
68	68	22L0155-04	585.90		CARBON	12/17/2022 9:45 PM	bl	0.042	158 824	0.062	0.010	64 114	102 585	0.032	0.020	0.9263	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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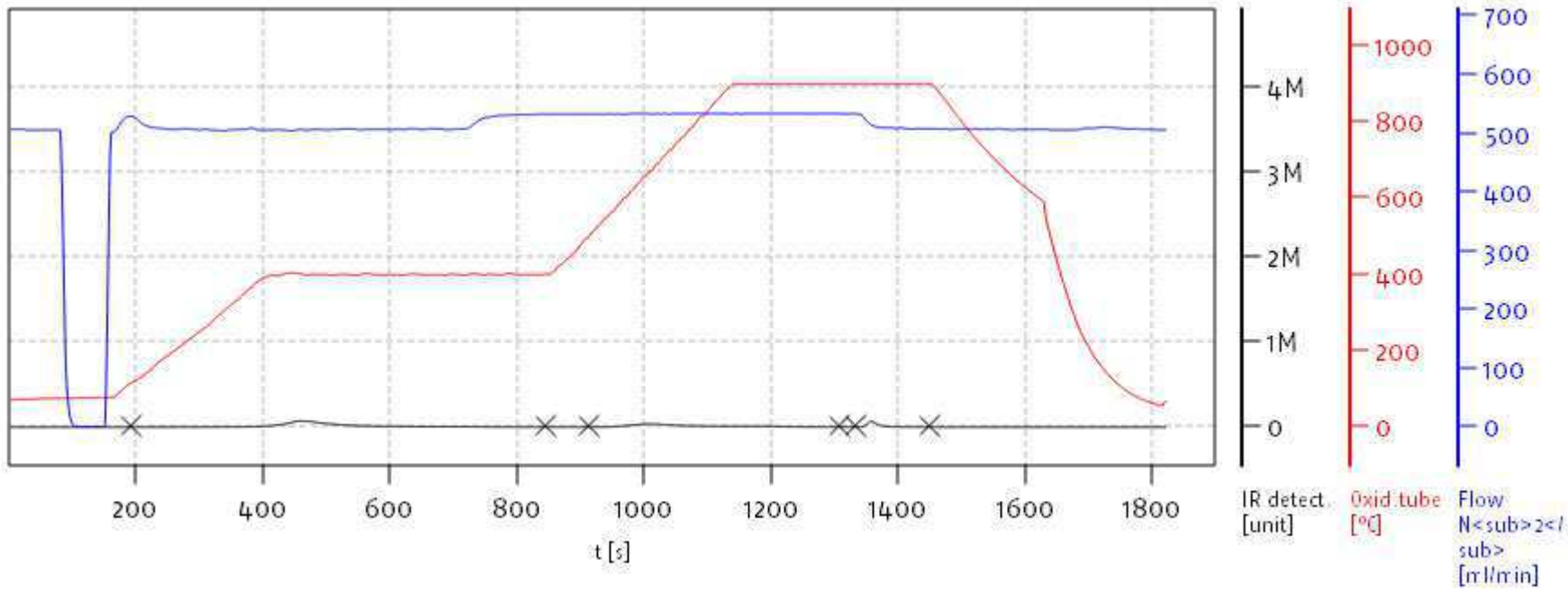
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
69	69	22L0155-05	524.00		CARBON	12/17/2022 10:16 PM	bl	0.082	298 286	0.127	0.007	51 310	179 829	0.074	0.045	0.9263	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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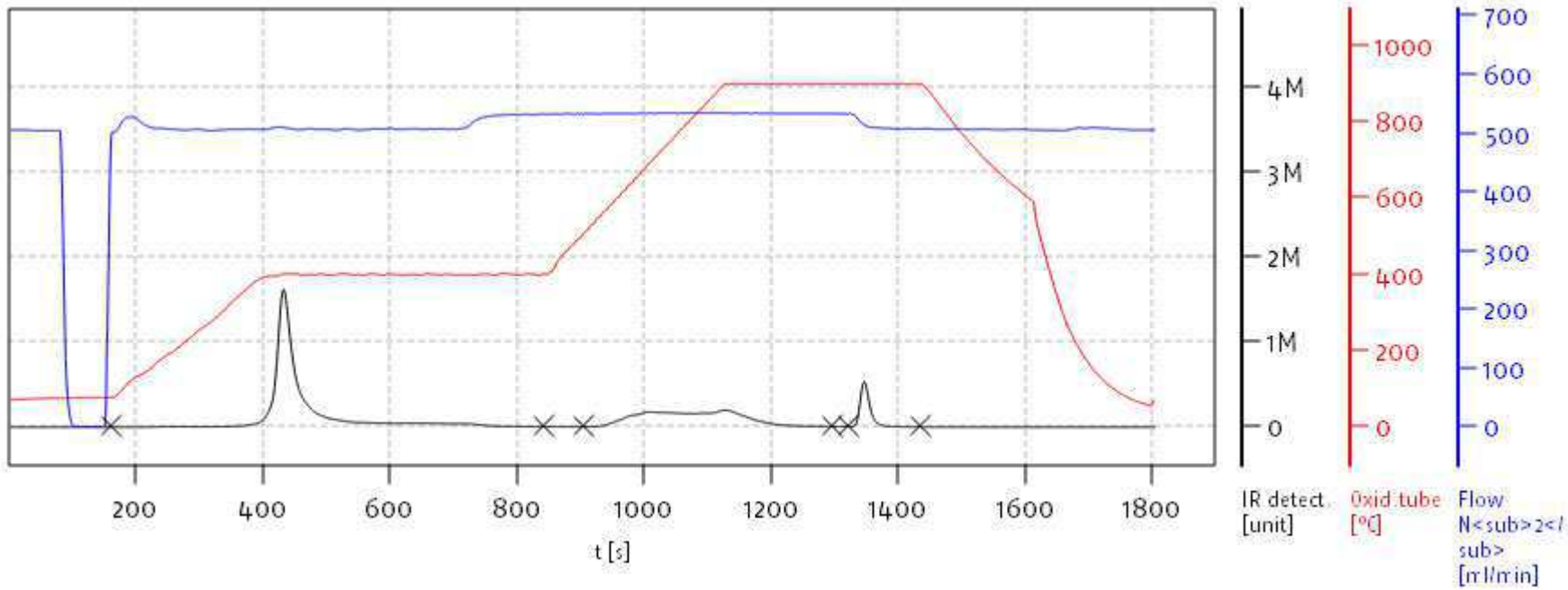
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
70	70	22L0155-06	515.40		CARBON	12/17/2022 10:46 PM	bl	0.809	2 573 080	1.231	0.100	360 184	1 432 200	0.708	0.422	0.9263	1.0000



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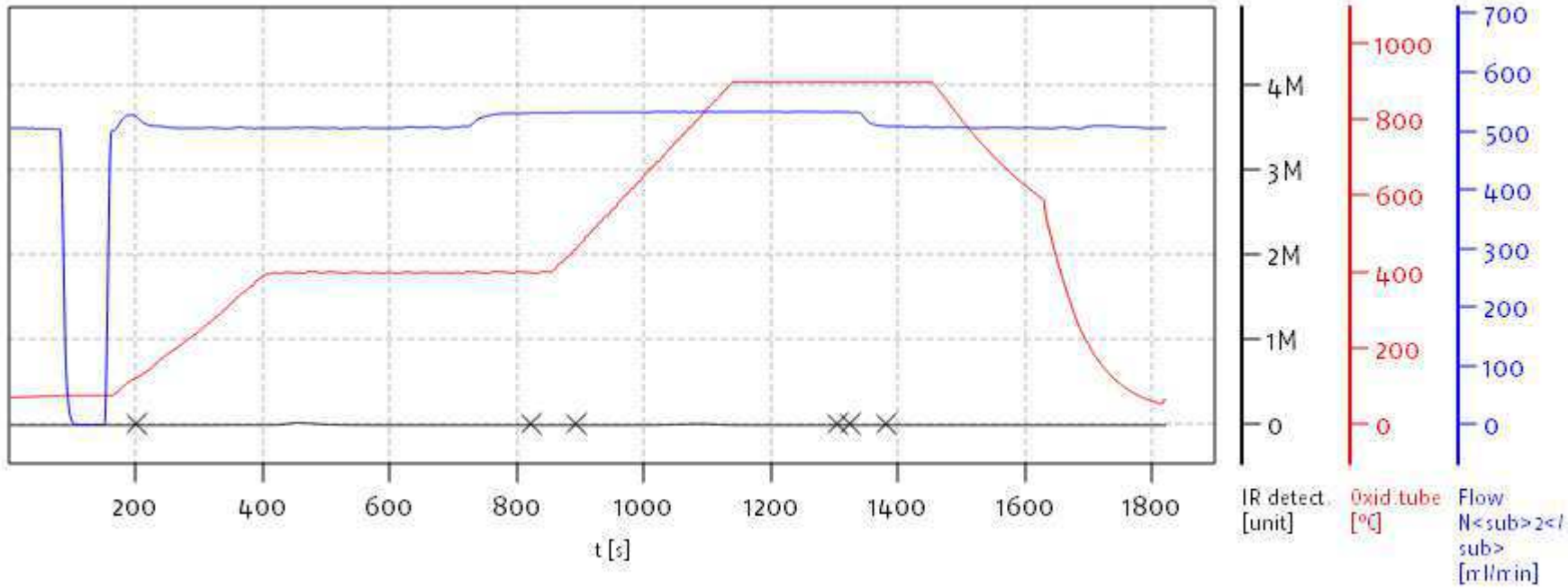
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
71	71	BKL0387-MRL1	545.70		CARBON	12/17/2022 11:17 PM	bl,C2u	0.010	66 160	0.013	0.000	81	37 188	0.010	0.003	0.9263	1.0000



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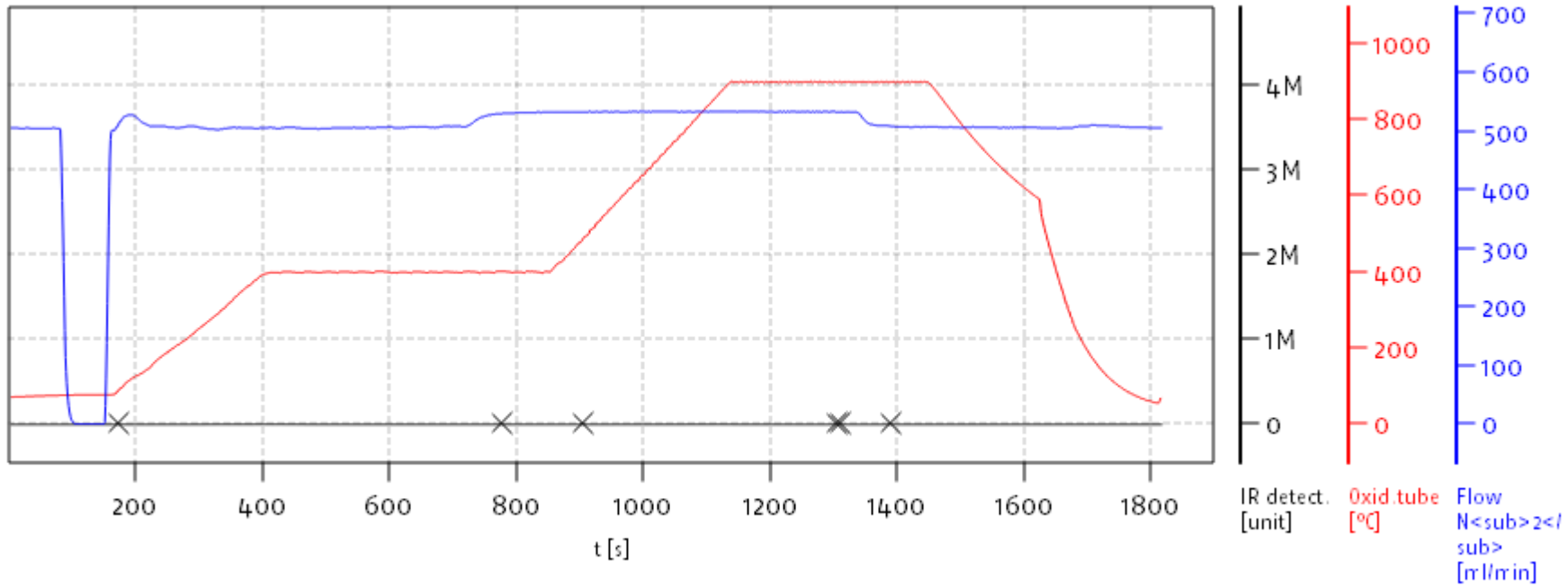
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
72	72	BKL0387-BLK1	504.40		CARBON	12/17/2022 11:48 PM	bl,C2u	0.000	10 373	0.000	0.000	210	5 720	0.000	0.000	0.9263	1.0000



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Date: Wed Dec 21 09:58:21 2022

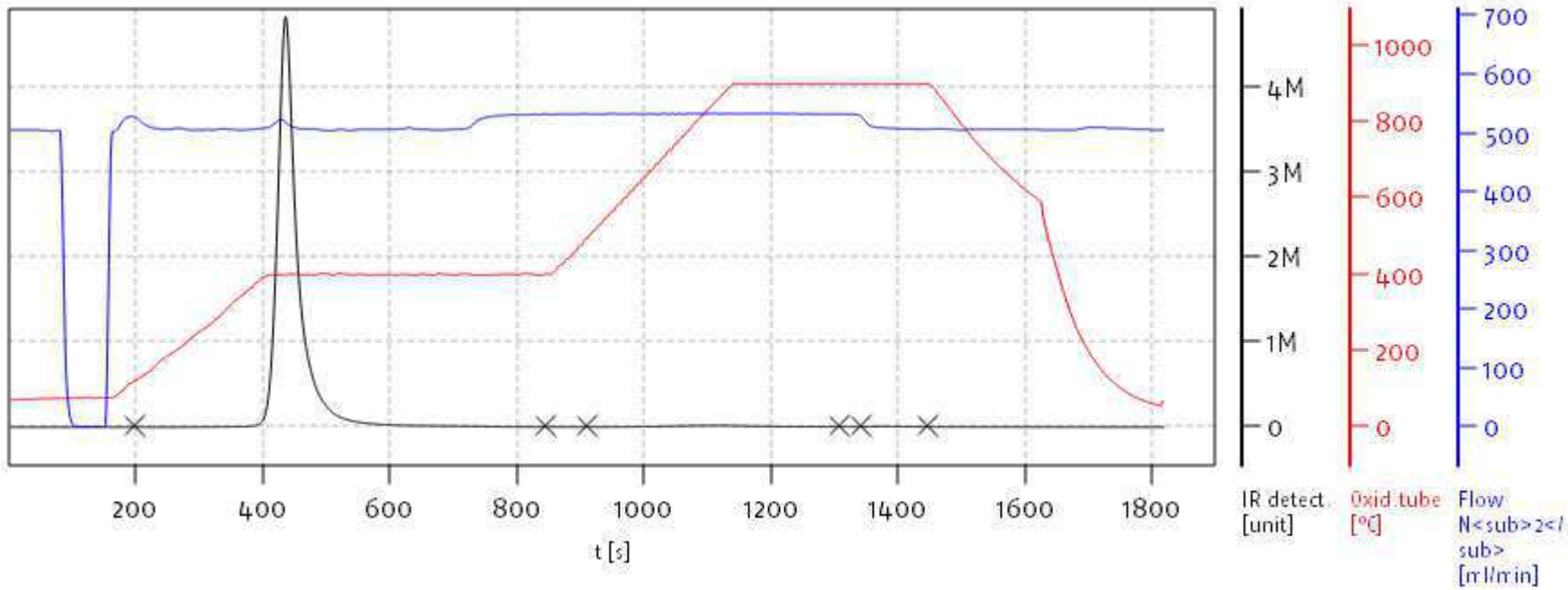
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
73	73	BKL0387-BS1	21.50		CARBON	12/18/2022 12:19 AM	bl	45.127	6 792 680	45.859	0.000	22 346	128 269	45.127	0.733	0.9263	1.0000



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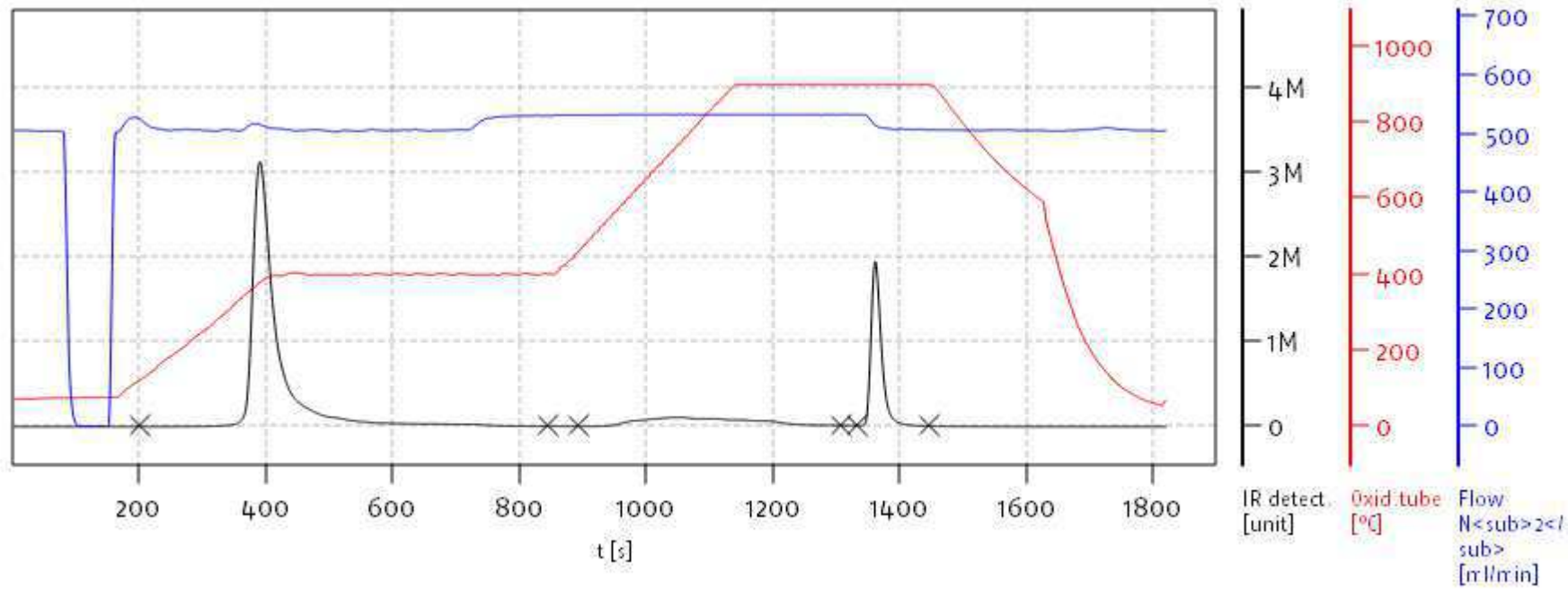
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
74	74	BKL0387-SRM1	317.40		CARBON	12/18/2022 12:49 AM	bl	2.968	5 097 090	3.386	0.677	1 415 010	882 940	2.291	0.418	0.9263	1.0000



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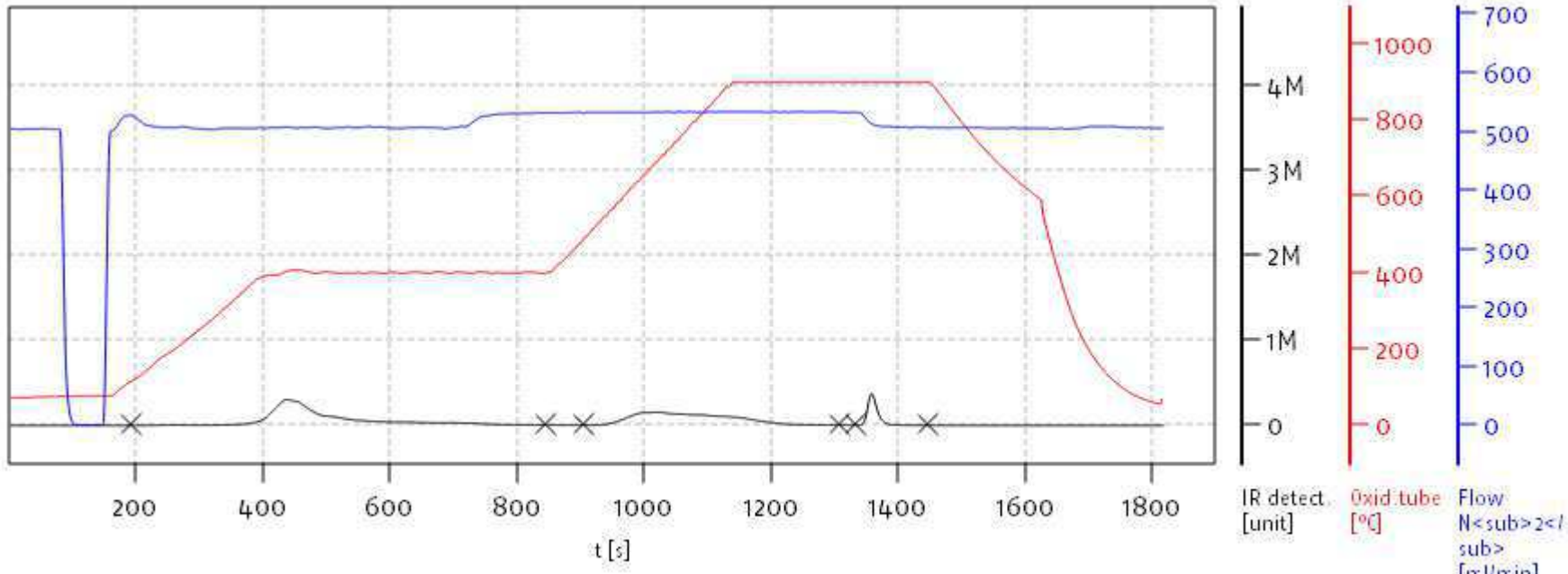
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
75	75	22L0155-07	511.10		CARBON	12/18/2022 1:20 AM	bl	0.426	1 298 550	0.744	0.070	256 097	1 076 710	0.357	0.318	0.9263	1.0000



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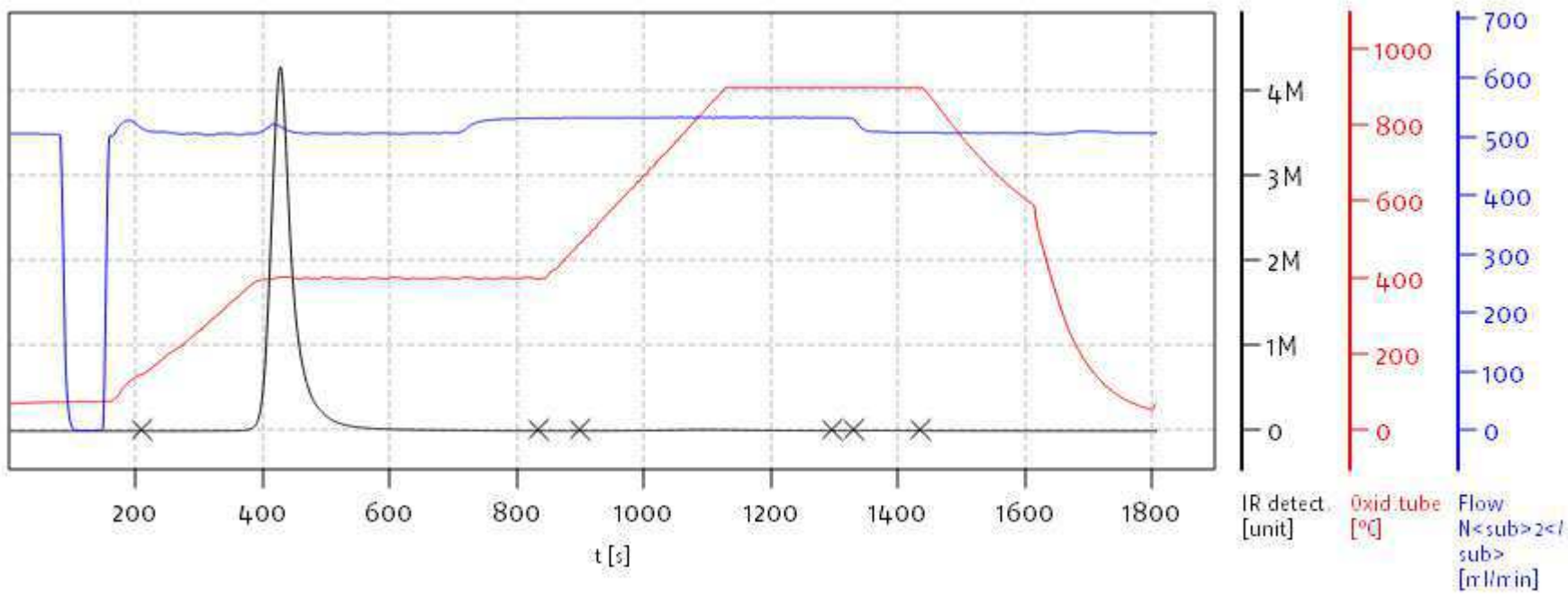
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
76	76	SKL0217-CCV6	20.80		CARBON	12/18/2022 1:51 AM	bl	44.527	6 485 490	45.144	0.000	19 347	109 416	44.527	0.617	0.9263	1.0000



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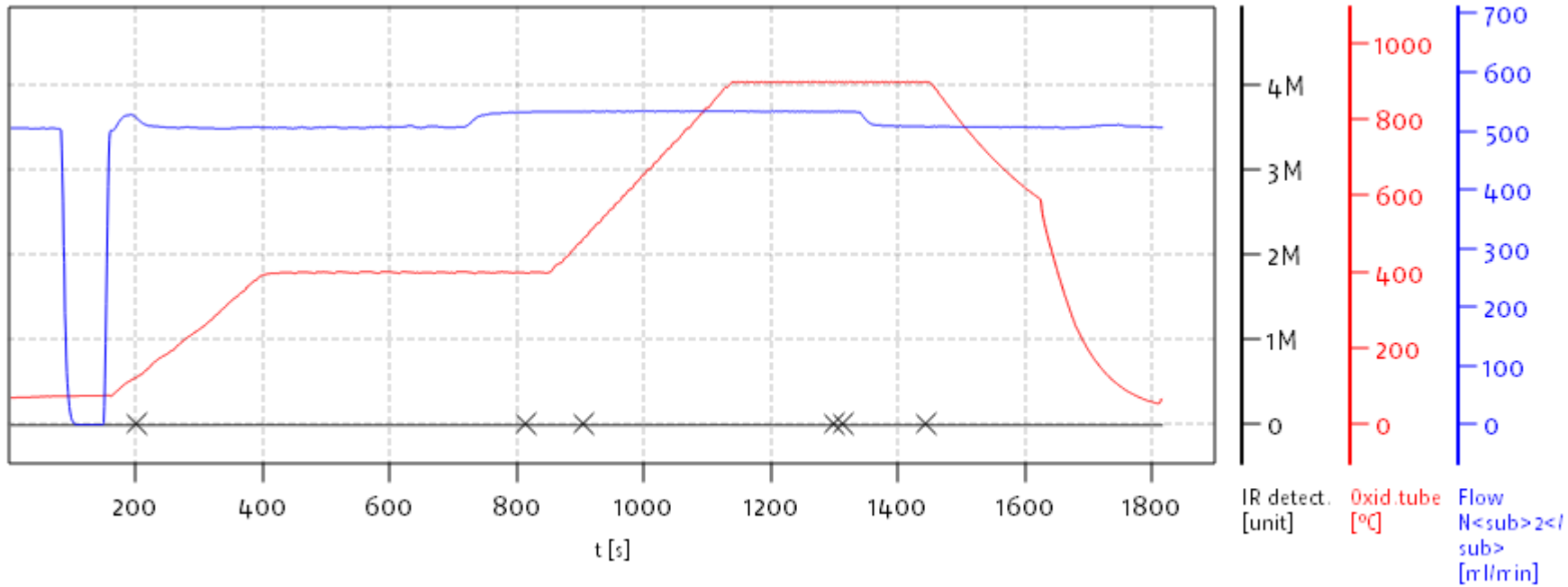
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
77	77	SKL0217-CCB6	518.30		CARBON	12/18/2022 2:21 AM	bl,C2u	0.000	8 086	0.000	0.000	400	8 086	0.000	0.000	0.9263	1.0000



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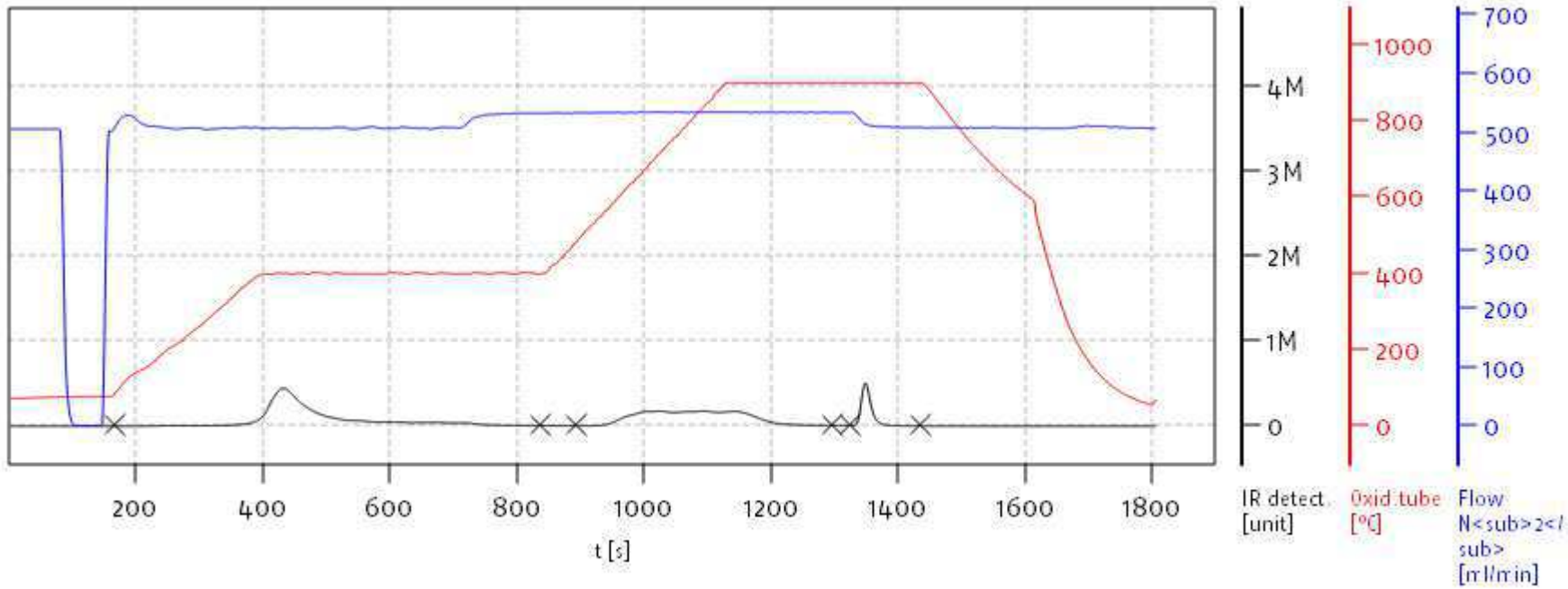
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
78	78	BKL0387-DUP1	505.50		CARBON	12/18/2022 2:52 AM	bl	0.554	1 628 840	0.992	0.099	350 266	1 457 180	0.455	0.438	0.9263	1.0000



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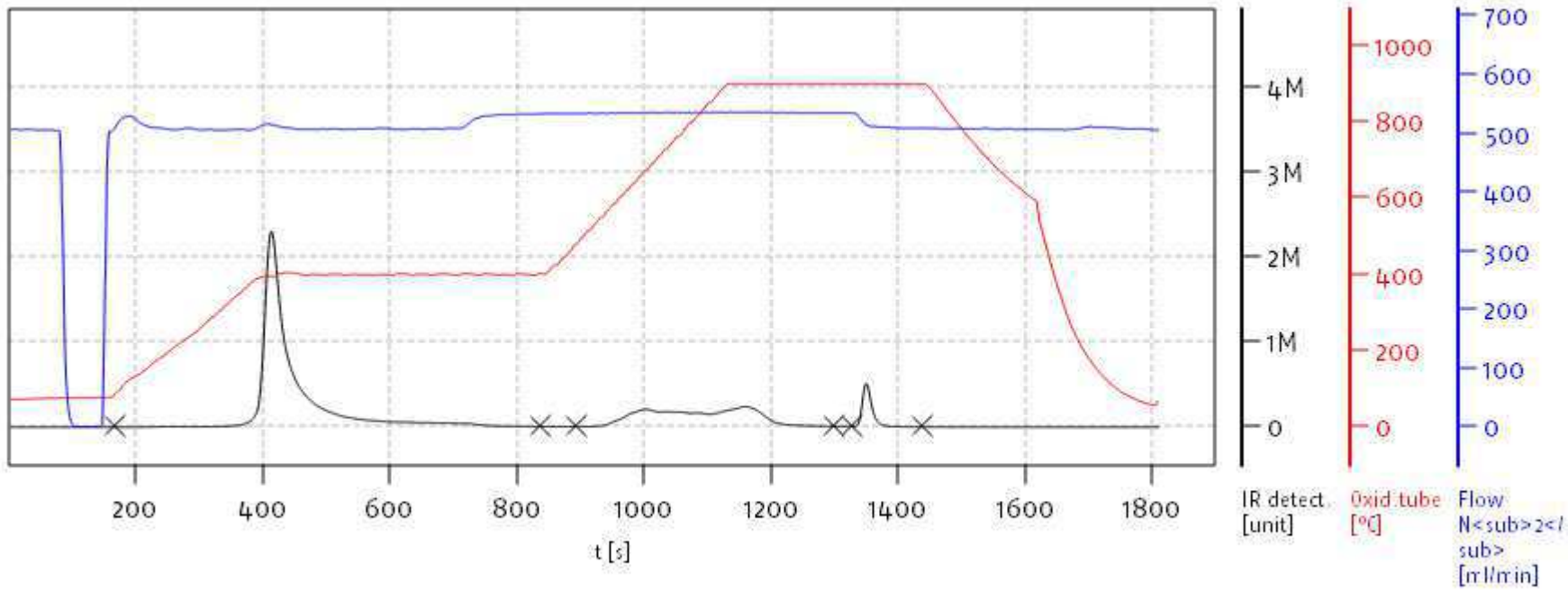
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
79	79	BKL0387-MS1	517.10	0.0080	CARBON	12/18/2022 3:22 AM	bl	1.258	4 220 440	1.772	0.095	344 078	1 743 210	1.163	0.514	0.9263	1.0000



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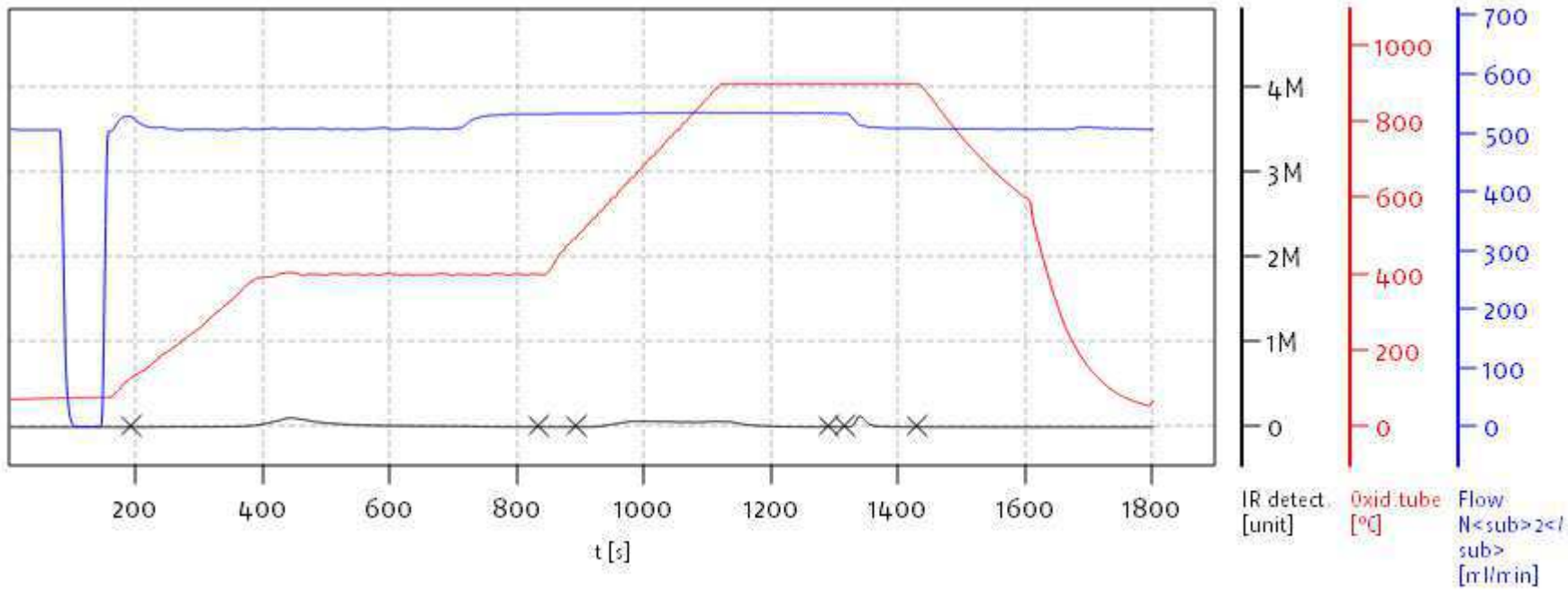
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
80	80	22L0155-08	501.00		CARBON	12/18/2022 3:53 AM	bl	0.160	507 126	0.316	0.023	99 877	530 163	0.138	0.156	0.9263	1.0000



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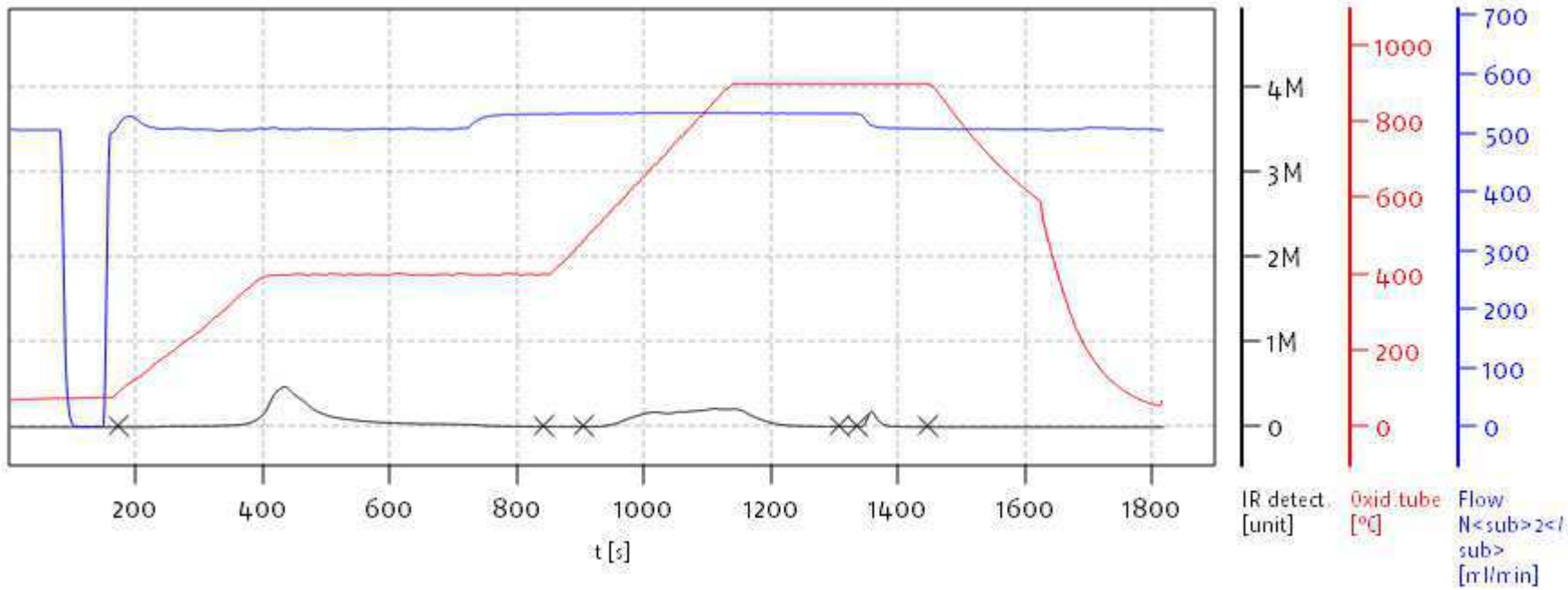
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
81	81	22L0155-09	577.90		CARBON	12/18/2022 4:23 AM	bl	0.482	1 851 270	0.890	0.029	135 466	1 548 260	0.453	0.408	0.9263	1.0000



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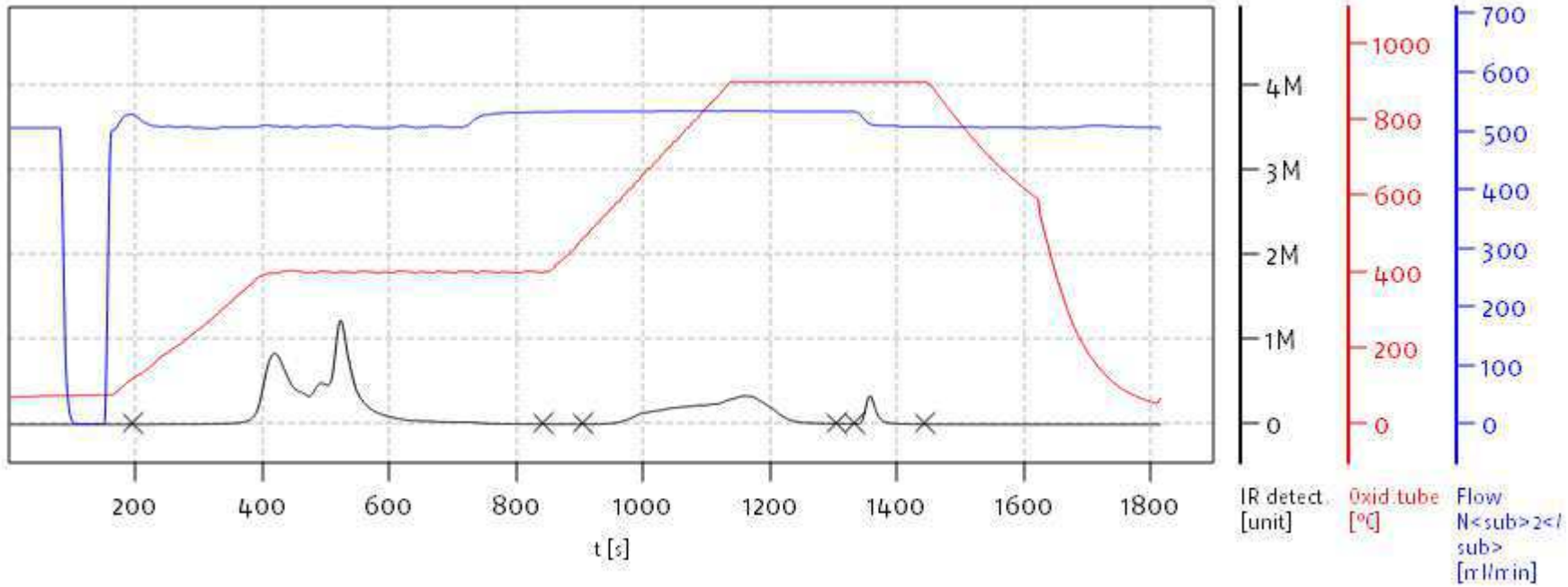
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
82	82	22L0155-10	509.90		CARBON	12/18/2022 4:54 AM	bl	1.237	4 184 240	1.866	0.068	250 453	2 096 720	1.169	0.628	0.9263	1.0000



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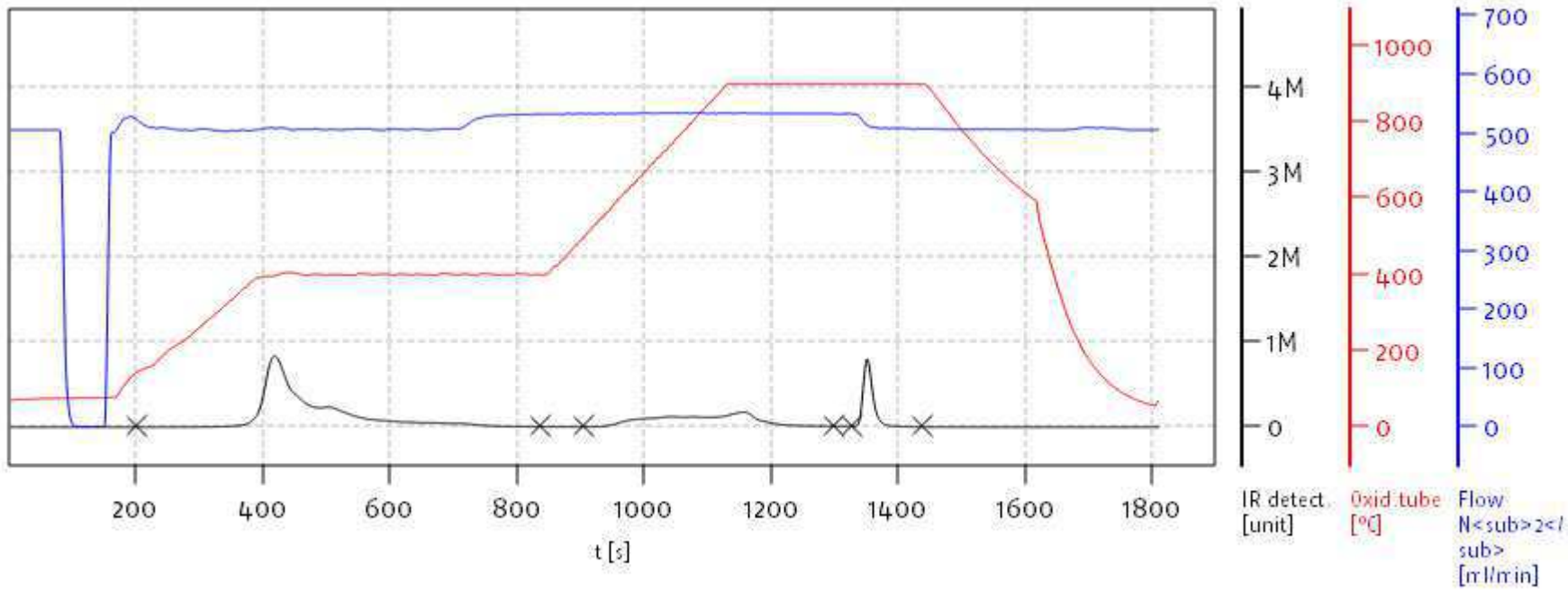
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
83	83	22L0155-11	521.00		CARBON	12/18/2022 5:25 AM	bl	0.876	2 649 870	1.201	0.154	545 866	1 119 910	0.722	0.325	0.9263	1.0000



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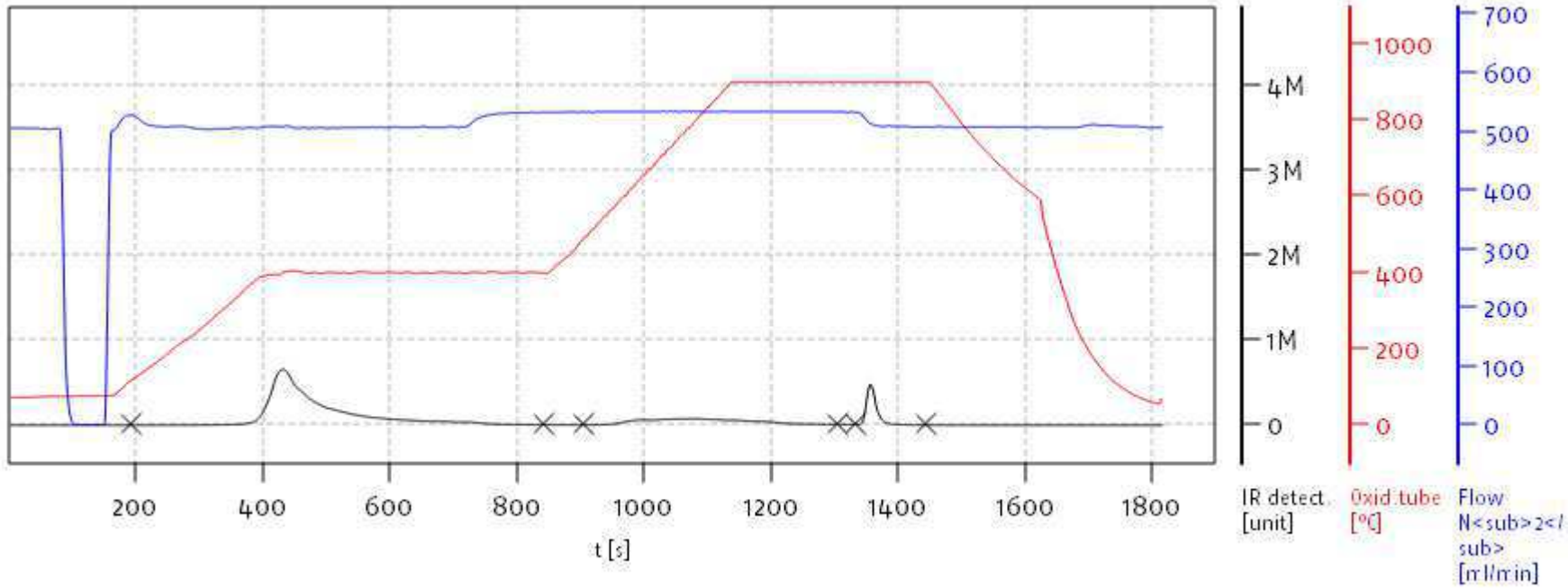
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
84	84	22L0155-12	545.80		CARBON	12/18/2022 5:55 AM	bl	0.696	2 345 330	0.863	0.087	333 066	614 285	0.609	0.167	0.9263	1.0000



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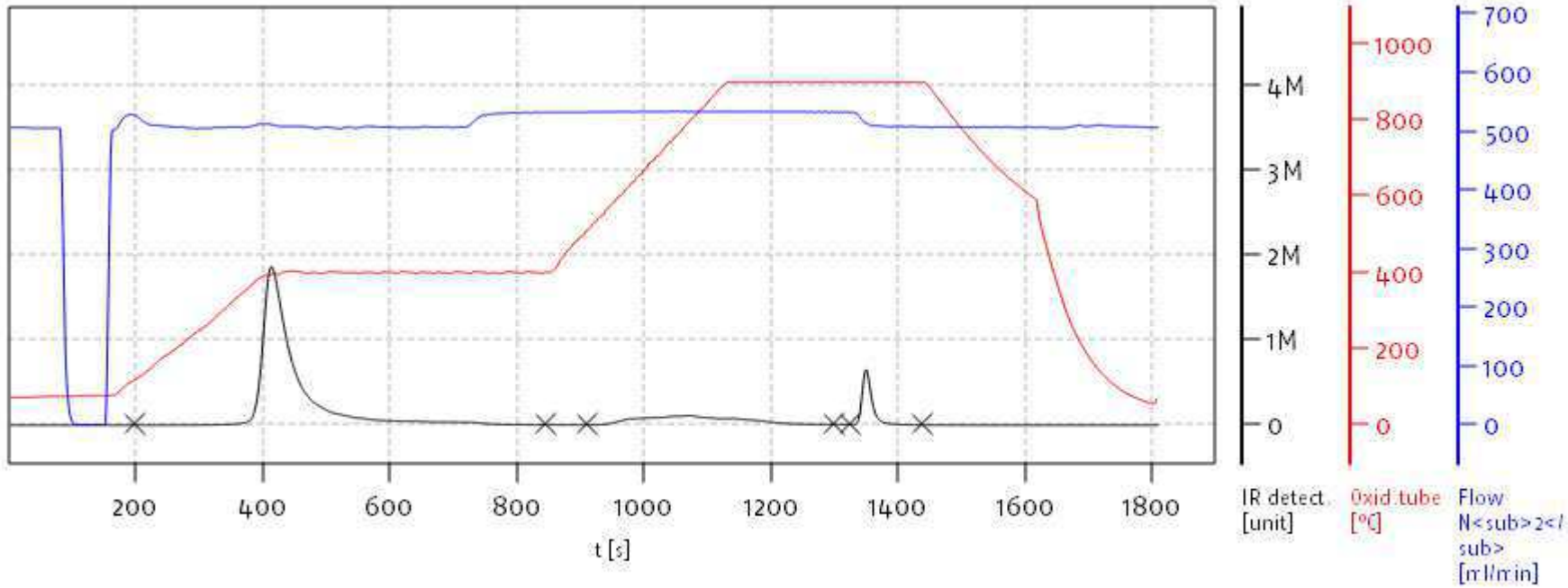
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
85	85	22L0155-13	505.80		CARBON	12/18/2022 6:26 AM	bl	1.264	4 035 010	1.503	0.128	444 650	805 263	1.136	0.238	0.9263	1.0000



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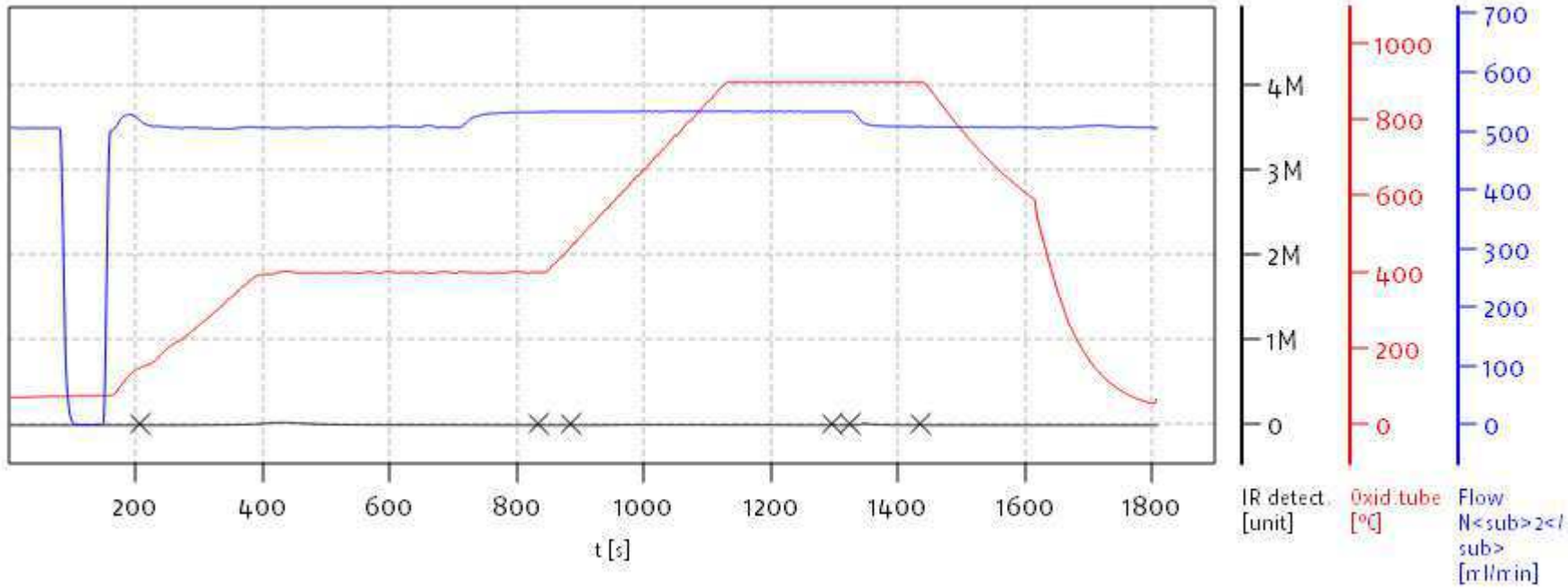
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
86	86	22L0155-14	550.20		CARBON	12/18/2022 6:56 AM	bl	0.028	135 581	0.031	0.000	17 287	36 705	0.028	0.003	0.9263	1.0000



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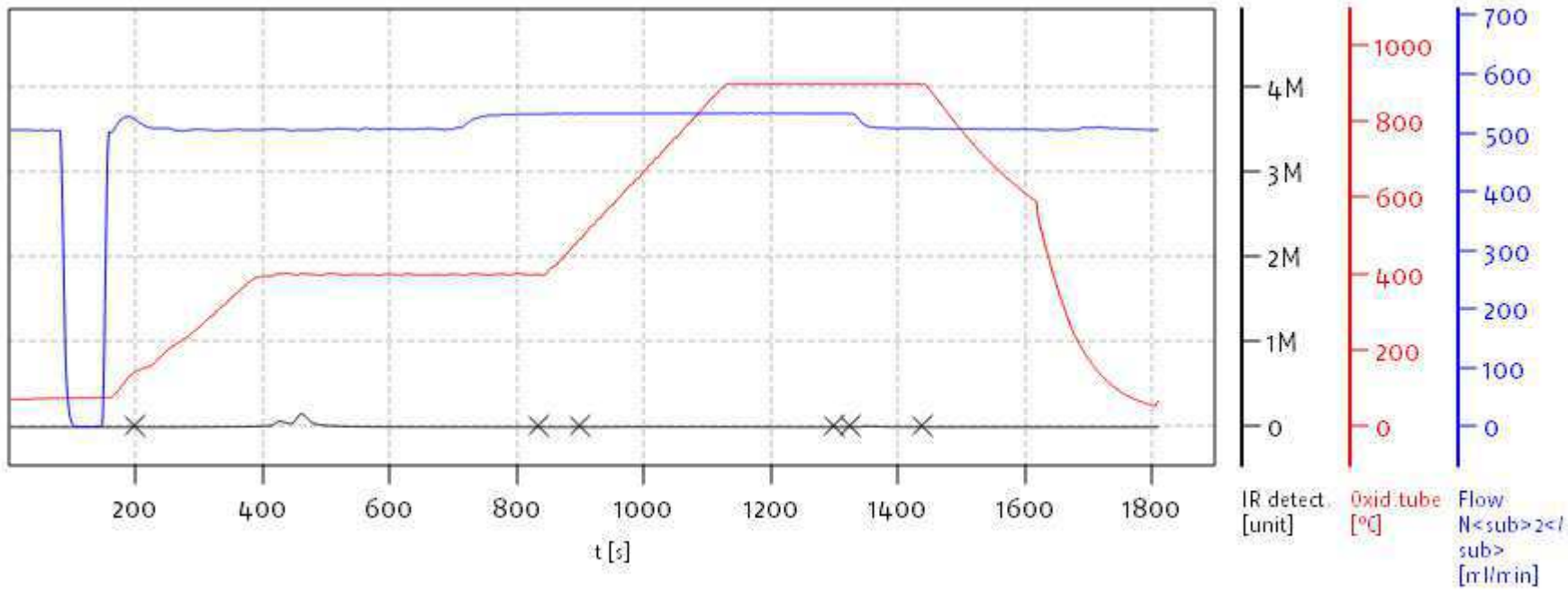
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
87	87	22L0155-15	509.90		CARBON	12/18/2022 7:27 AM	bl	0.069	270 341	0.069	0.000	13 548	24 857	0.069	0.000	0.9263	1.0000



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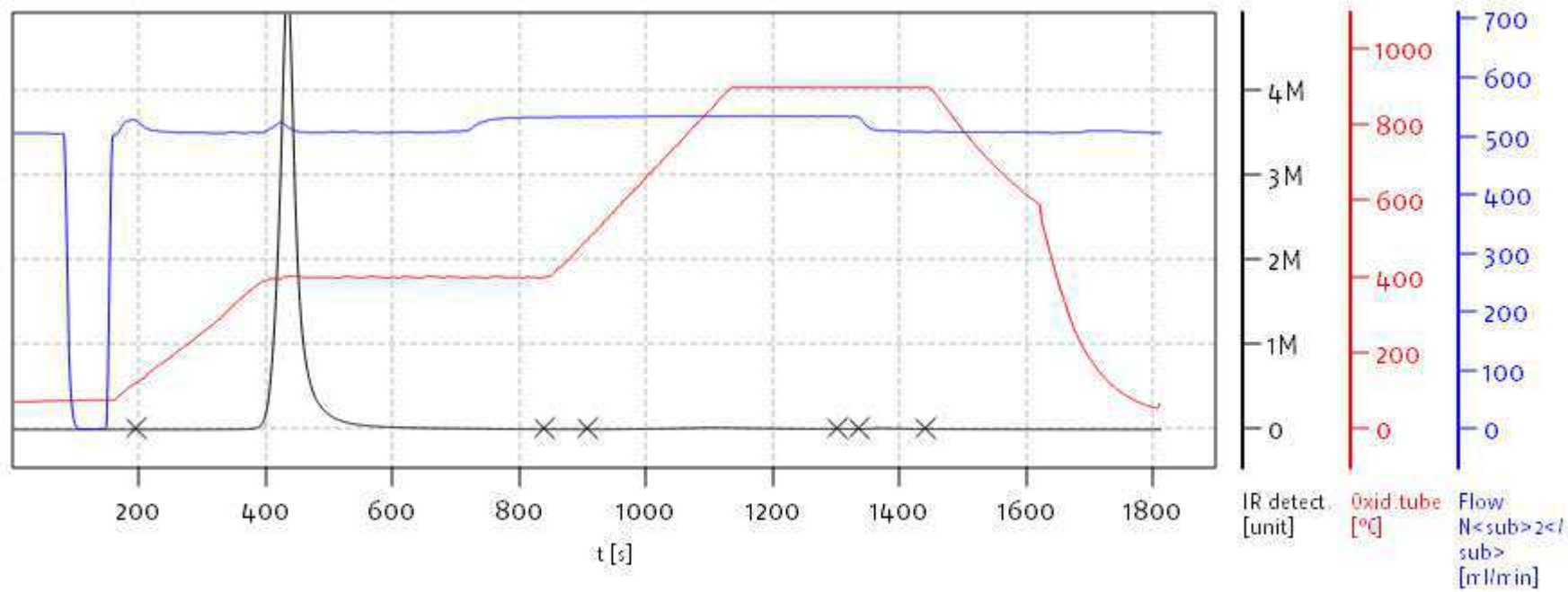
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
88	88	SKL0217-CCV7	21.90		CARBON	12/18/2022 7:58 AM	bl	43.388	6 640 800	44.331	0.081	37 931	159 807	43.308	0.942	0.9263	1.0000



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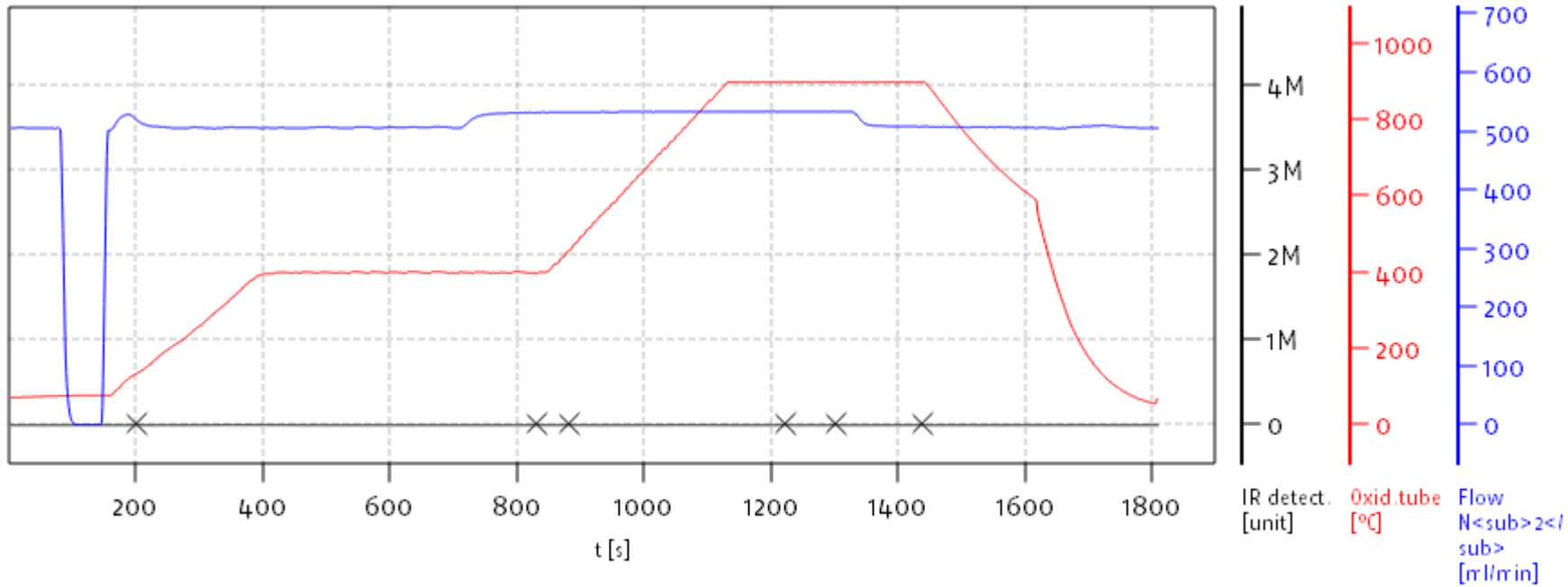
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
89	89	SKL0217-CCB7	517.00		CARBON	12/18/2022 8:28 AM	bl,C2u	0.000	9 459	0.000	0.000	235	3 597	0.000	0.000	0.9263	1.0000



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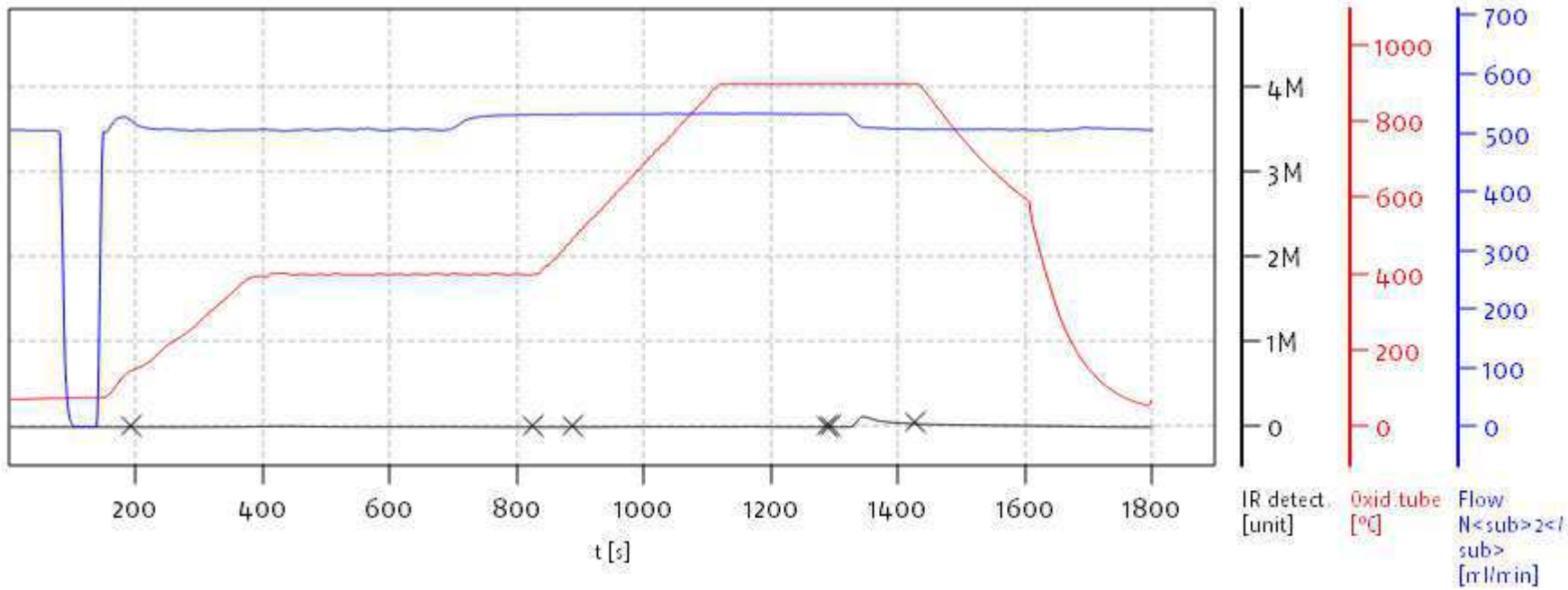
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
90	1	22L0155-16	512.00		CARBON	12/18/2022 8:59 AM	bl	0.081	66 396	0.085	0.069	256 268	42 105	0.011	0.005	0.9263	1.0000



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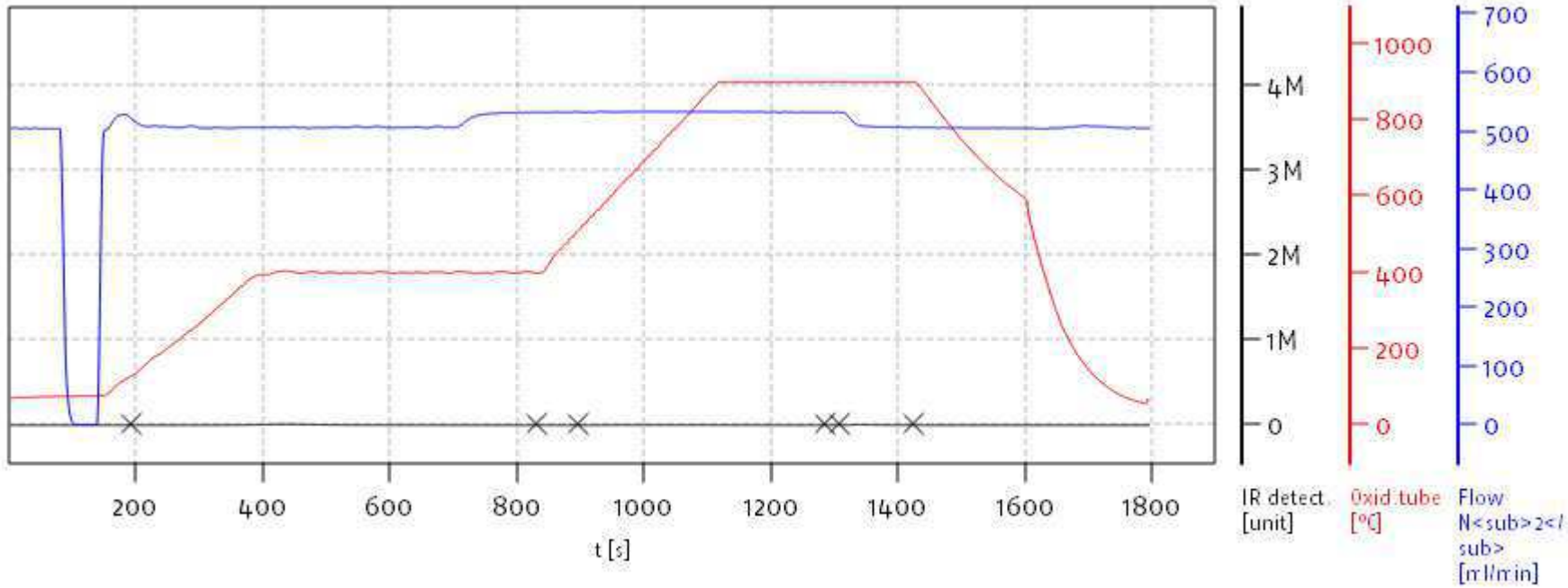
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
91	2	22L0155-17	501.90		CARBON	12/18/2022 9:29 AM	bl	0.007	52 557	0.007	0.000	11 048	16 617	0.007	0.000	0.9263	1.0000



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Access: soliTOC superuser

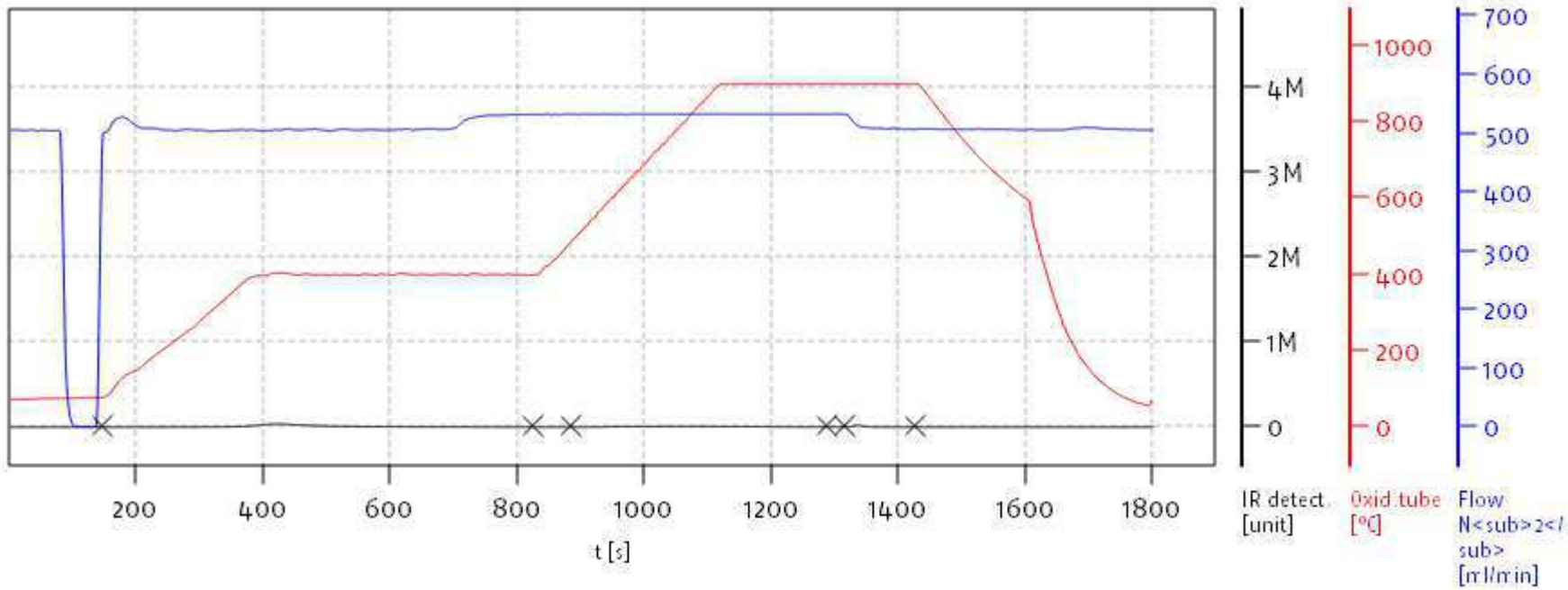
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
92	3	22L0155-18	515.00		CARBON	12/18/2022 9:59 AM	bl	0.042	178 586	0.058	0.000	15 263	79 921	0.042	0.016	0.9263	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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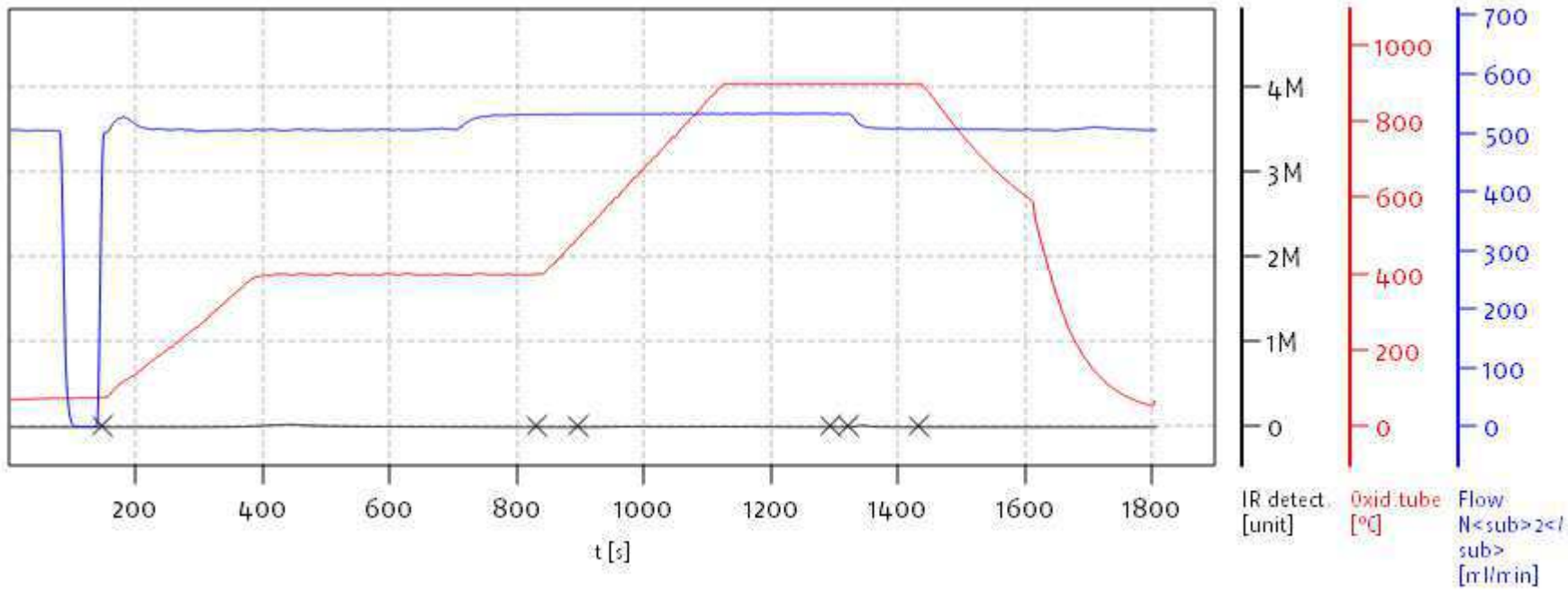
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
93	4	22L0155-19	613.40		CARBON	12/18/2022 10:30 AM	bl	0.030	154 811	0.037	0.000	17 621	52 887	0.030	0.007	0.9263	1.0000



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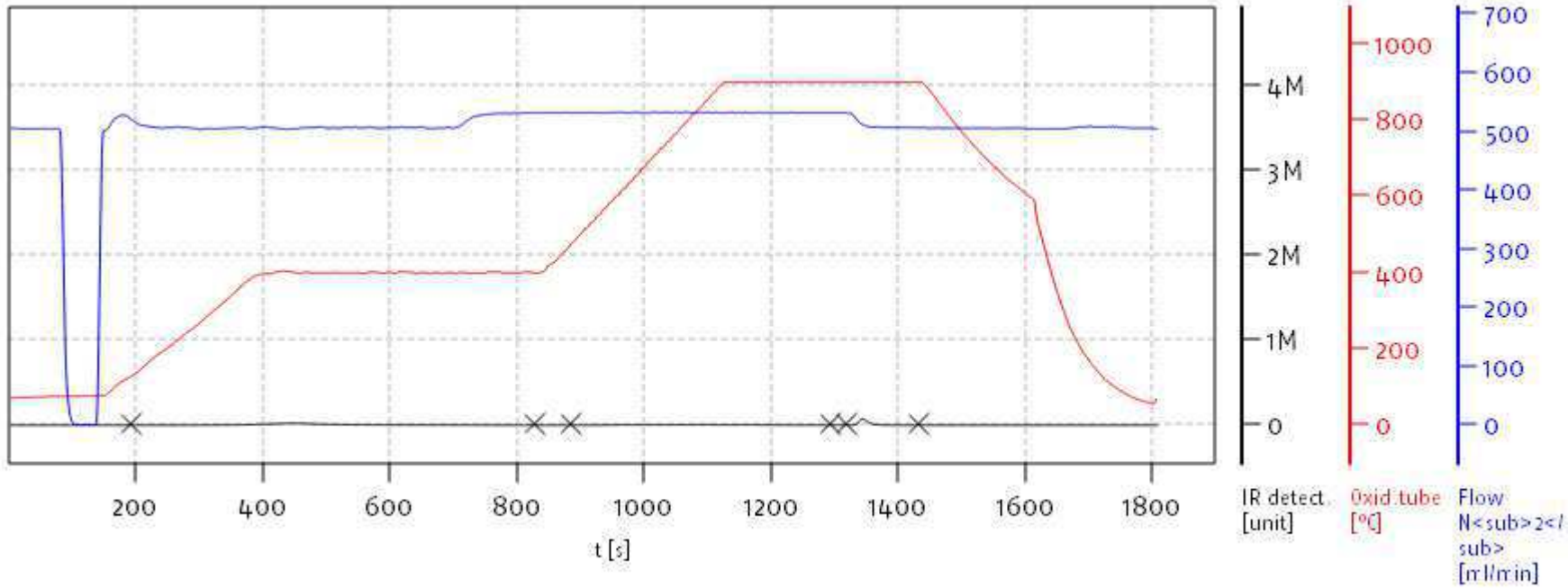
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
94	5	22L0155-20	506.00		CARBON	12/18/2022 11:01 AM	bl	0.030	110 442	0.035	0.007	47 828	42 365	0.024	0.005	0.9263	1.0000



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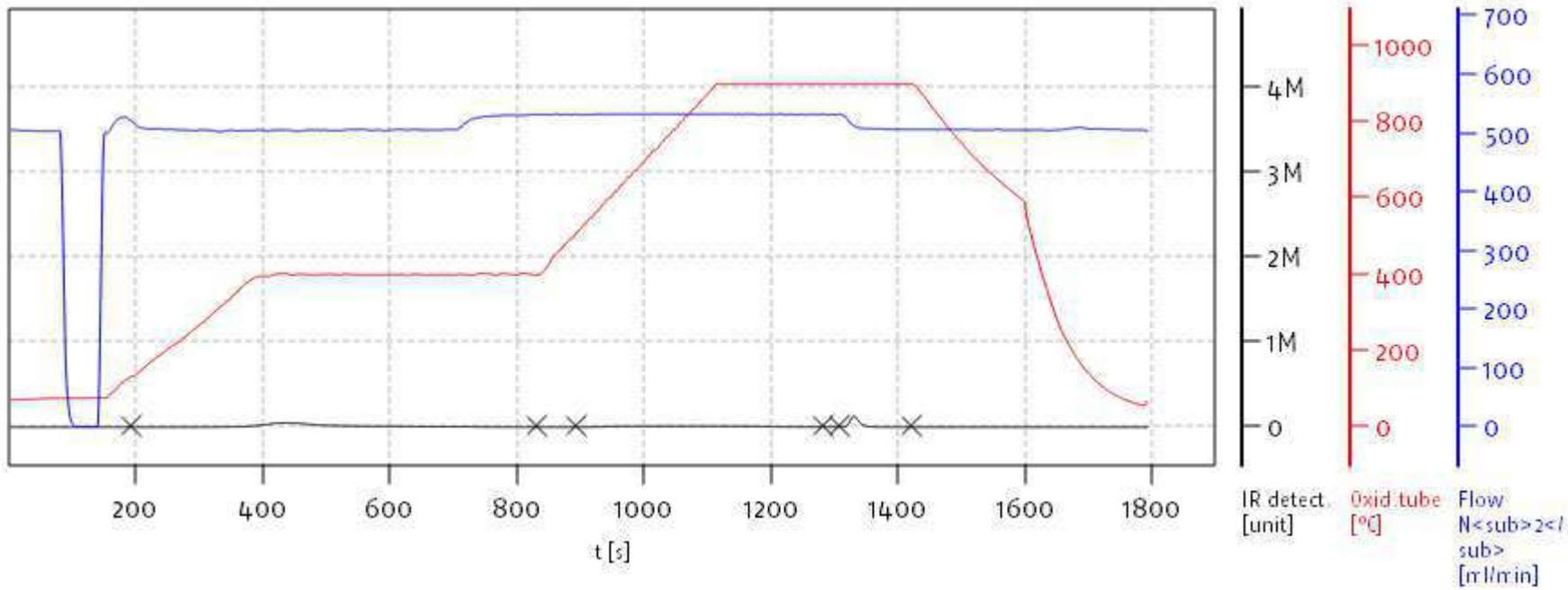
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
95	6	22L0155-21	508.20		CARBON	12/18/2022 11:31 AM	bl	0.079	248 904	0.103	0.017	81 200	104 635	0.063	0.024	0.9263	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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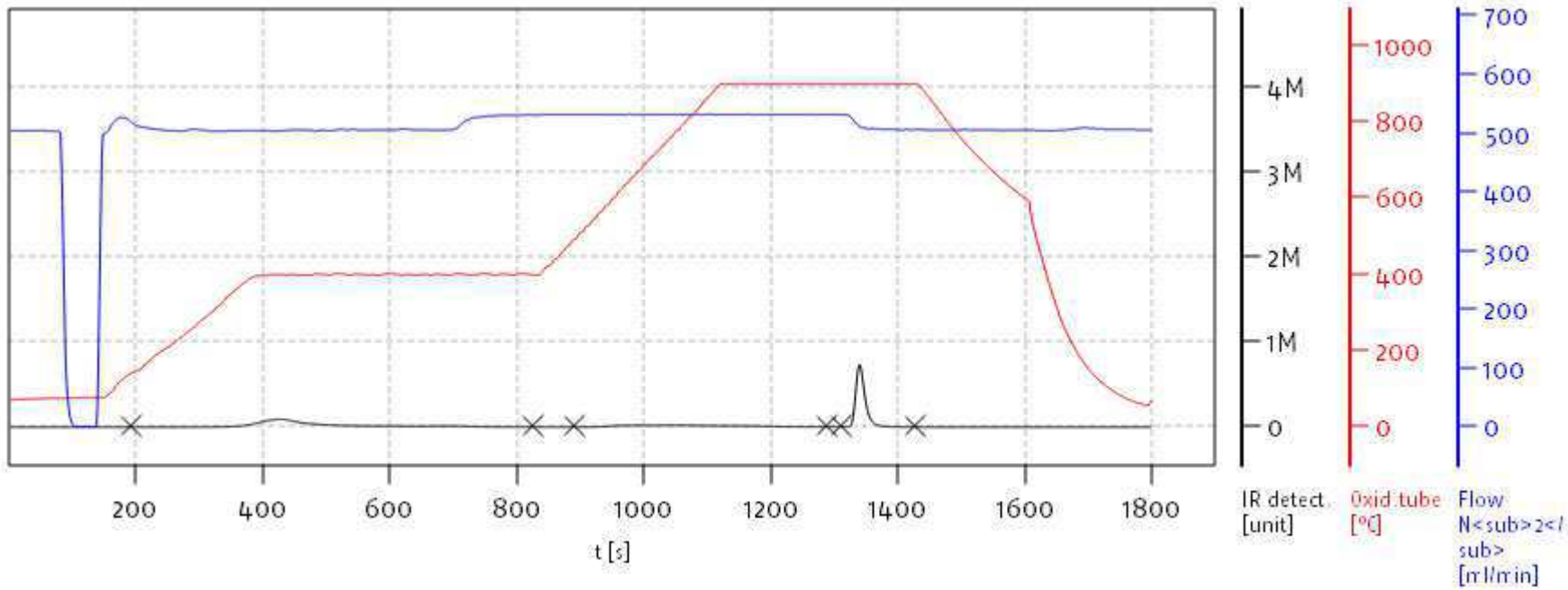
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
96	7	22L0155-22	542.10		CARBON	12/18/2022 12:01 PM	bl	0.229	411 584	0.273	0.127	471 482	179 958	0.102	0.044	0.9263	1.0000



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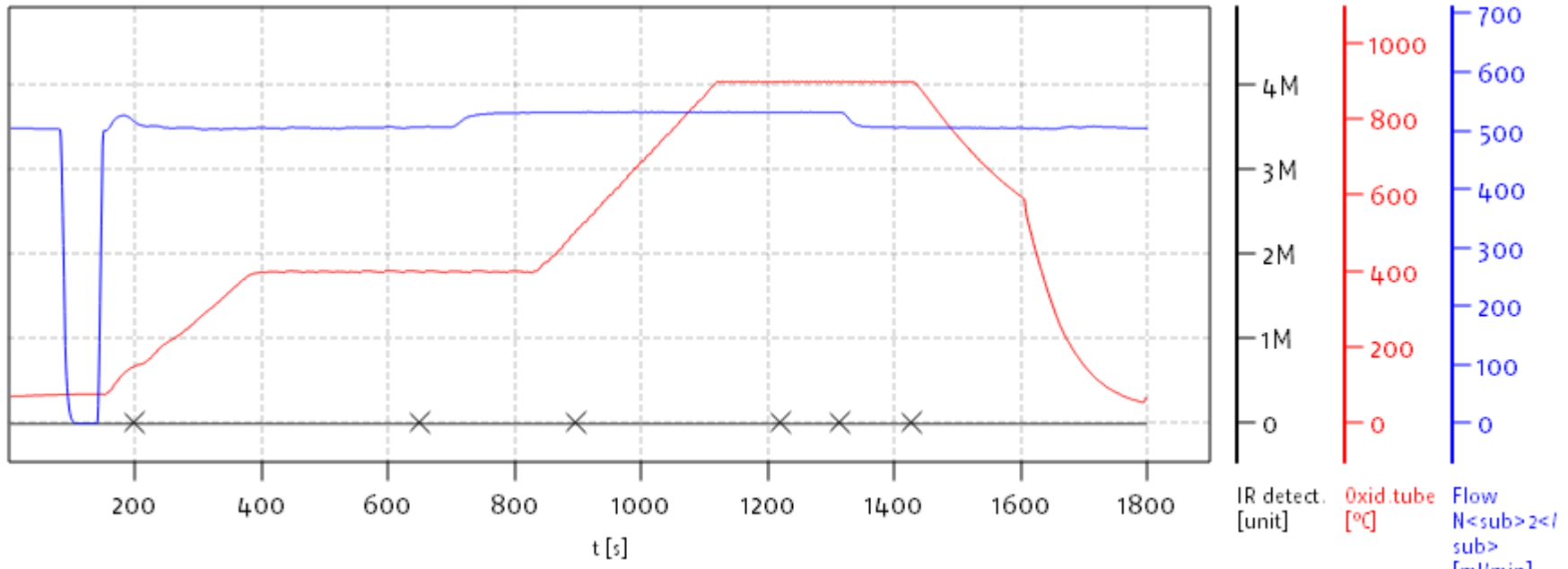
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
97	8	BLANK	1.00		CARBON	12/18/2022 12:32 PM	bl	0.000	5 321	0.000	0.000	177	452	0.000	0.000	0.9263	1.0000



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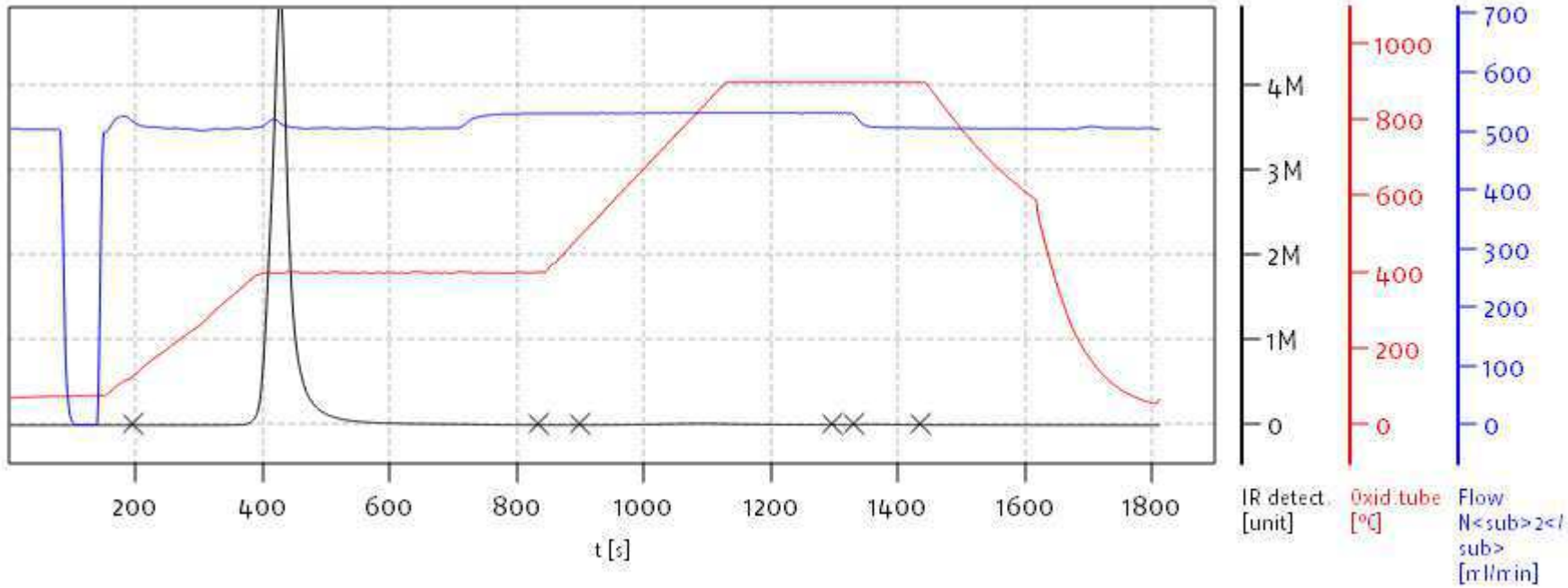
elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
98	9	Dfactor	21.00		CARBON	12/18/2022 1:02 PM	bl	44.446	6 588 110	45.209	0.000	23 443	130 030	44.446	0.763	0.9189	1.0000



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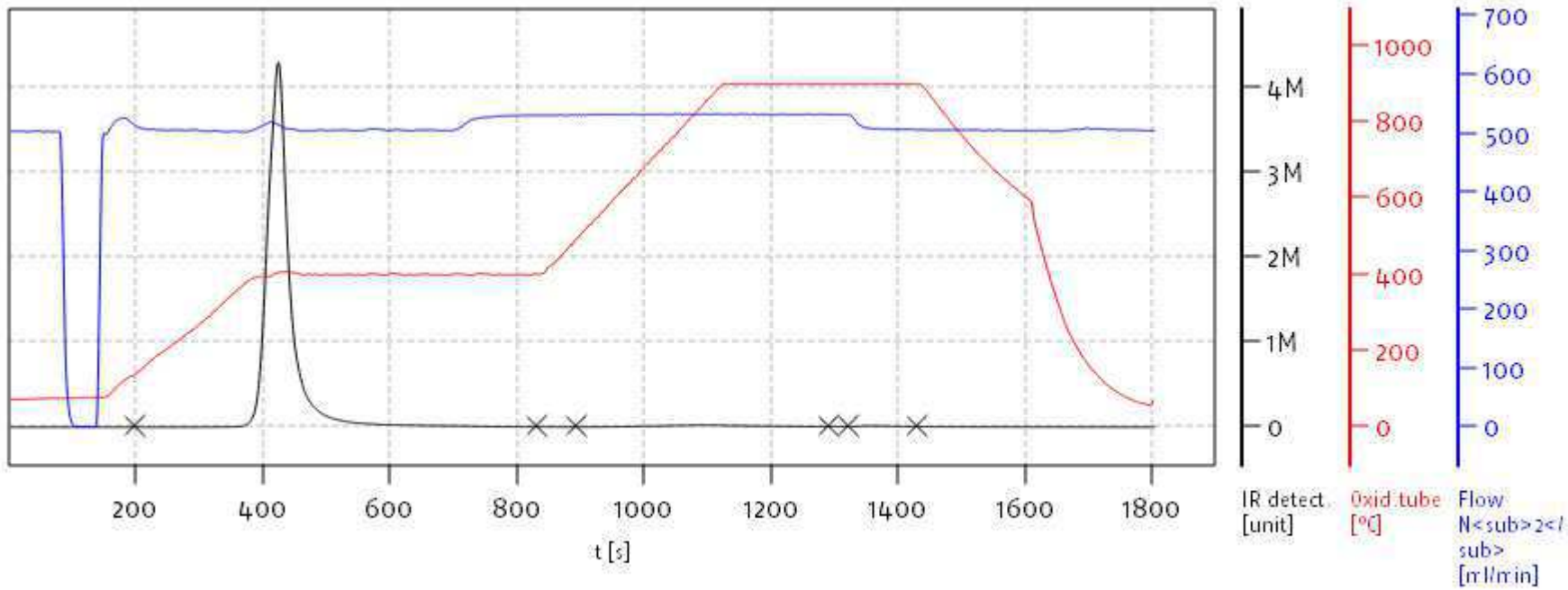
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
99	10	Dfactor	21.50		CARBON	12/18/2022 1:33 PM	bl	44.527	6 531 770	45.574	0.081	37 843	171 931	44.446	1.047	0.9489	1.0000



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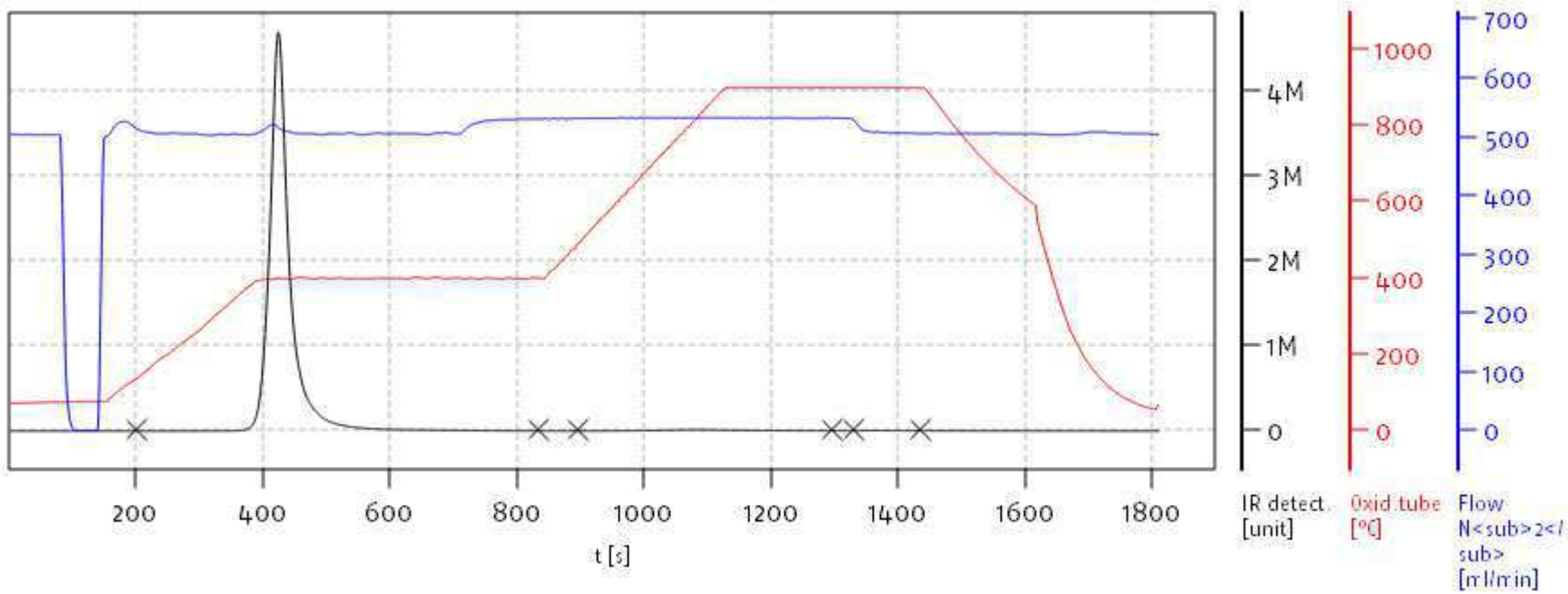
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
100	11	SKL0217-CCV8	20.40		CARBON	12/18/2022 2:03 PM	bl	45.130	6 394 800	45.677	0.000	18 427	98 576	45.130	0.547	0.9339	1.0000



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Balance: BAL3
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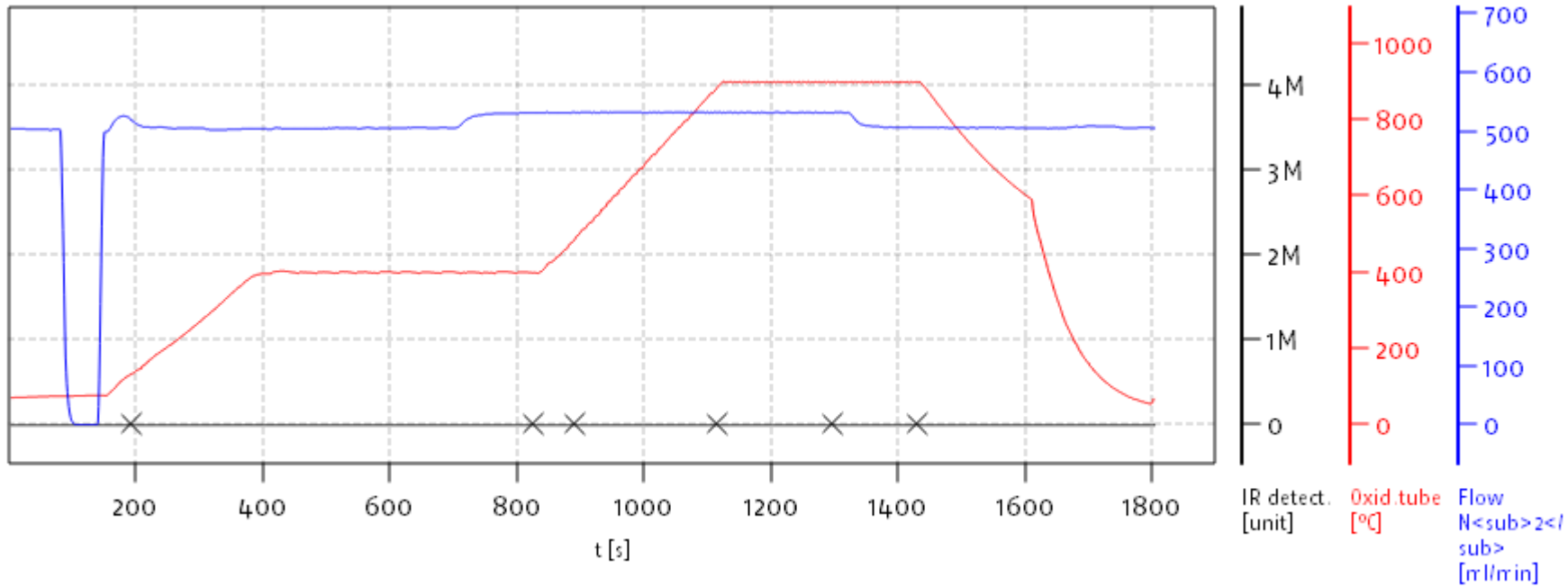
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
101	12	SKL0217-CCB8	574.10		CARBON	12/18/2022 2:34 PM	bl,C3u,C2u	0.000	4 926	0.000	0.000	828	526	0.000	0.000	0.9339	1.0000



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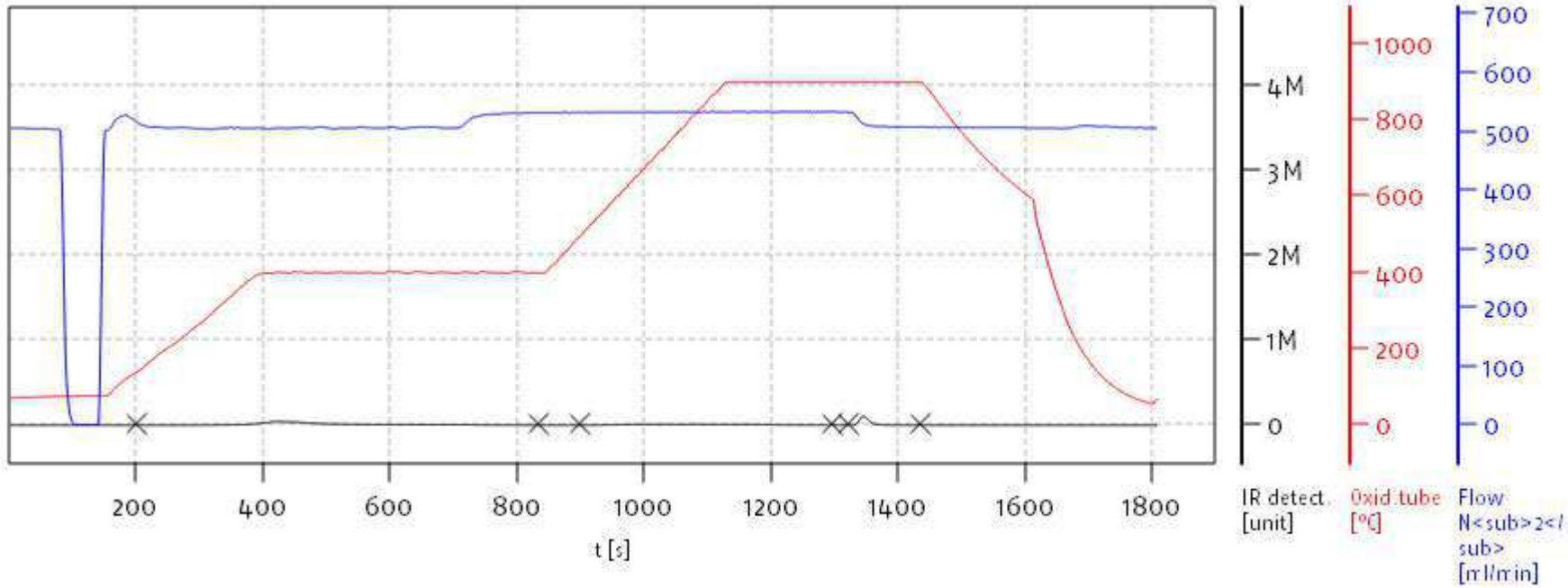
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
102	13	22L0155-23	518.30		CARBON	12/18/2022 3:04 PM	bl	0.066	218 043	0.085	0.013	69 875	87 961	0.053	0.018	0.9339	1.0000



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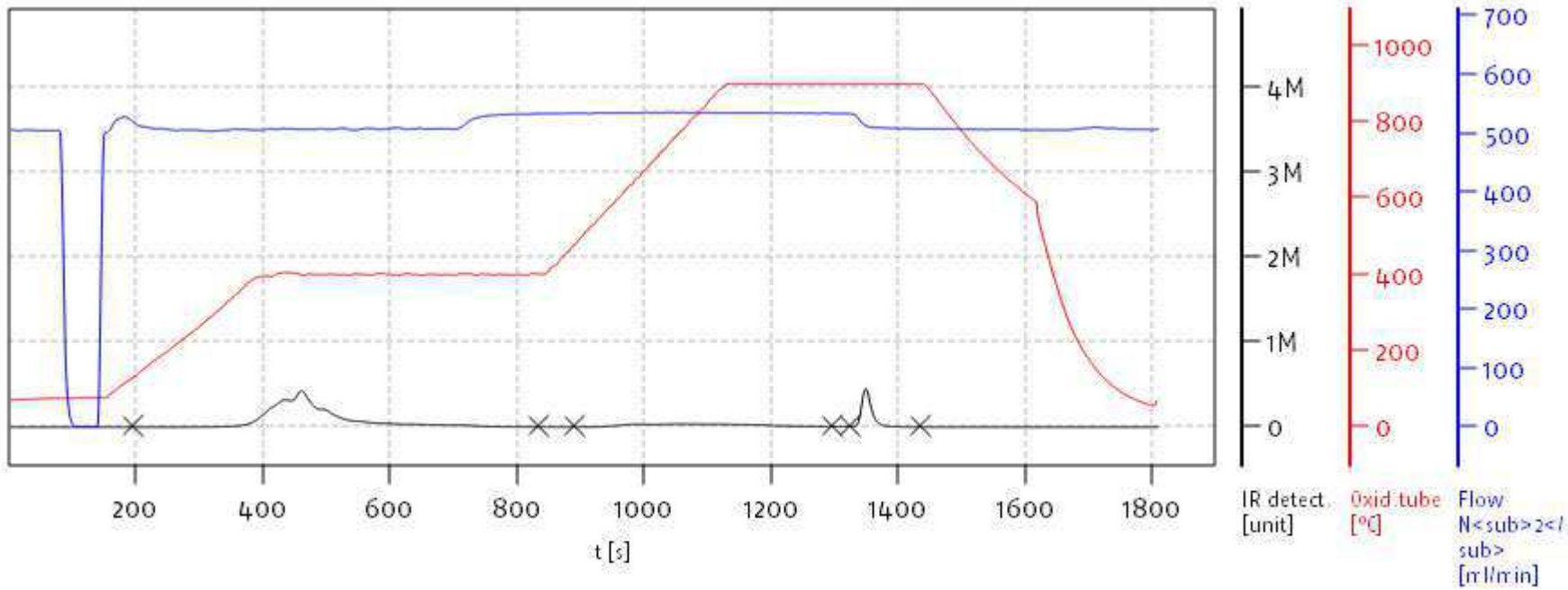
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
103	14	22L0155-24	505.70		CARBON	12/18/2022 3:35 PM	bl	0.546	1 629 490	0.639	0.088	314 031	330 258	0.458	0.093	0.9339	1.0000



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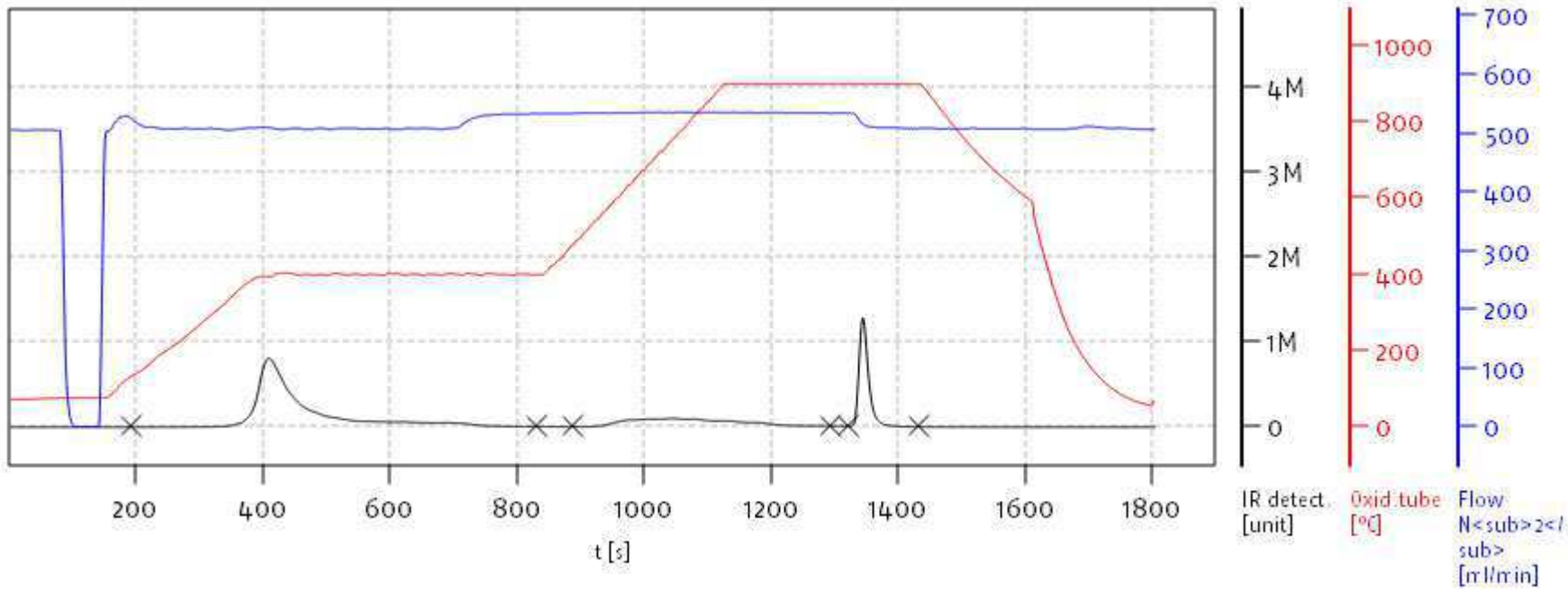
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
104	15	22L0155-25	525.00		CARBON	12/18/2022 4:05 PM	bl	0.921	2 485 870	1.155	0.244	854 639	817 392	0.677	0.233	0.9339	1.0000



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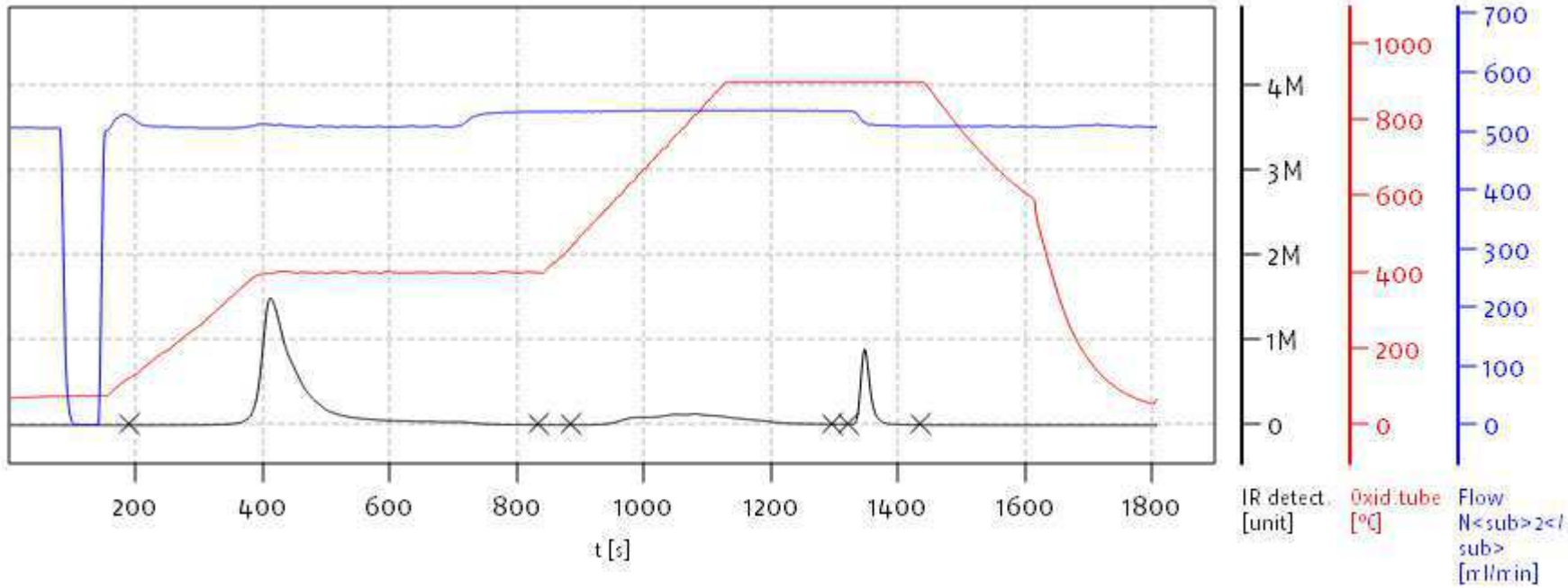
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
105	16	22L0155-26	550.10		CARBON	12/18/2022 4:36 PM	bl	1.135	3 729 610	1.395	0.161	600 257	951 434	0.973	0.260	0.9339	1.0000



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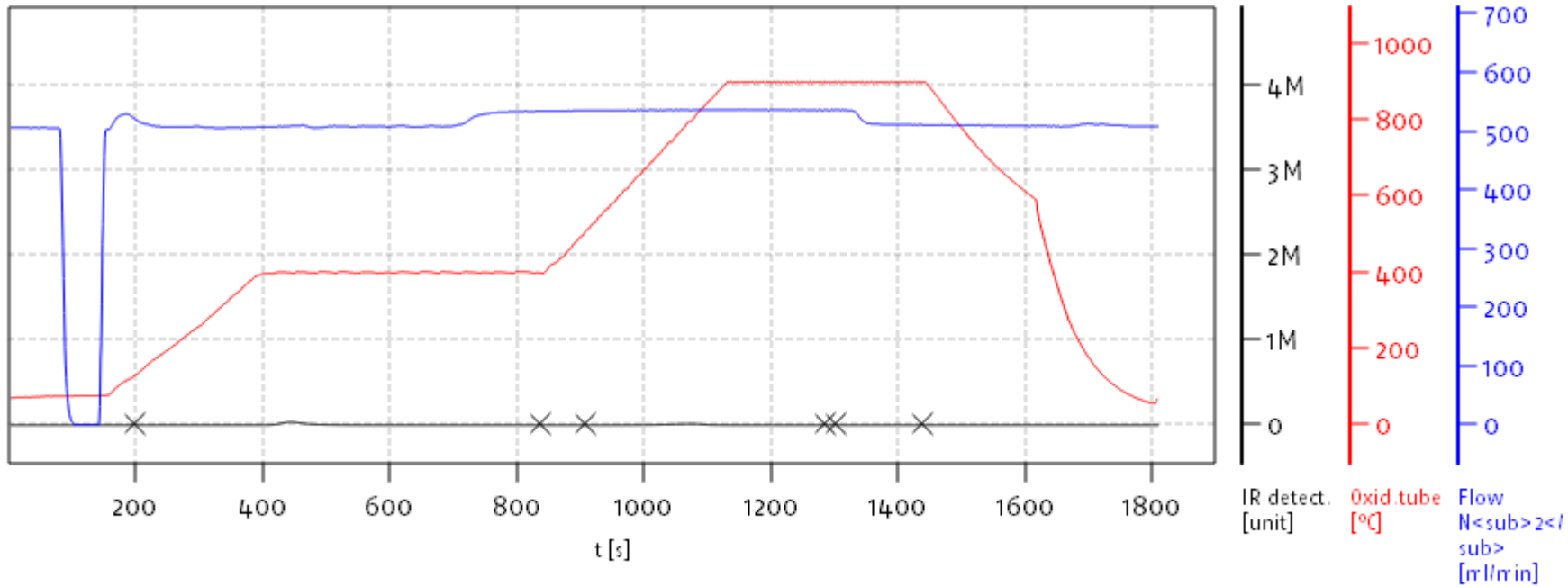
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
106	17	BKL0427-MRL1	510.50		CARBON	12/18/2022 5:06 PM	bl,C2u	0.011	66 562	0.014	0.000	325	35 996	0.011	0.003	0.9339	1.0000



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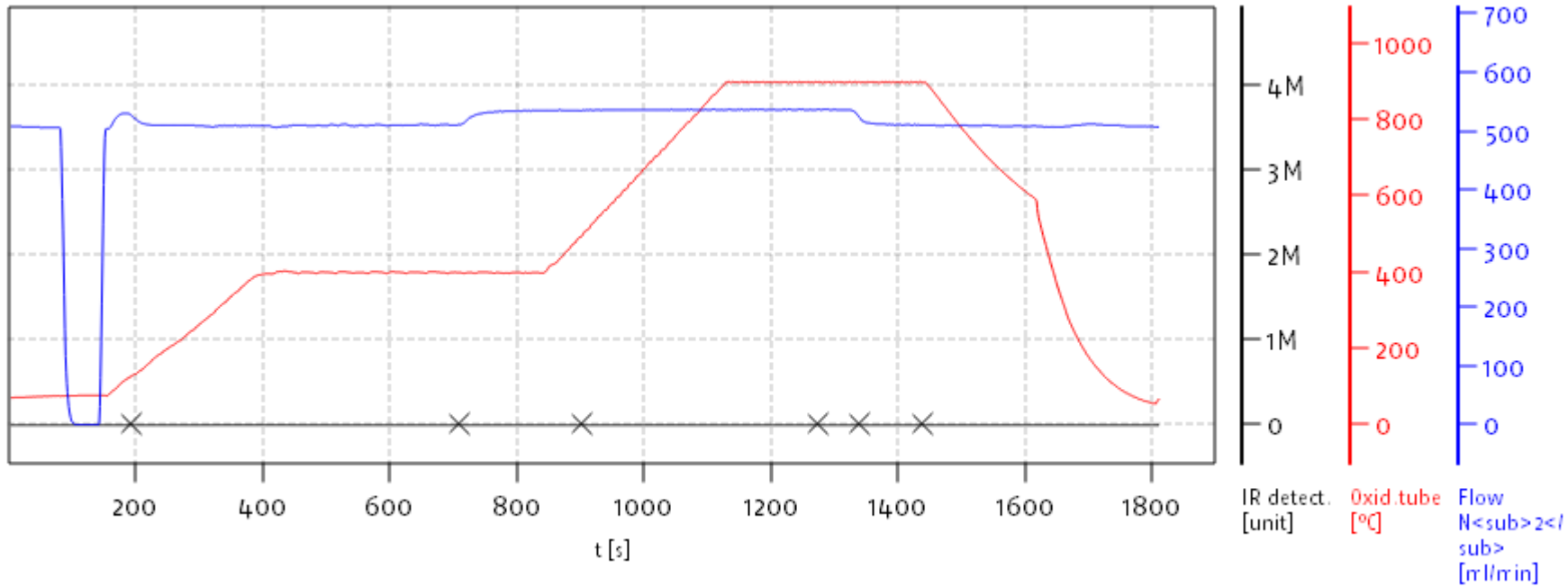
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
107	18	BKL0427-BLK1	512.90		CARBON	12/18/2022 5:37 PM	bl,C3u,C2u	0.000	7 326	0.000	0.000	336	1 287	0.000	0.000	0.9339	1.0000



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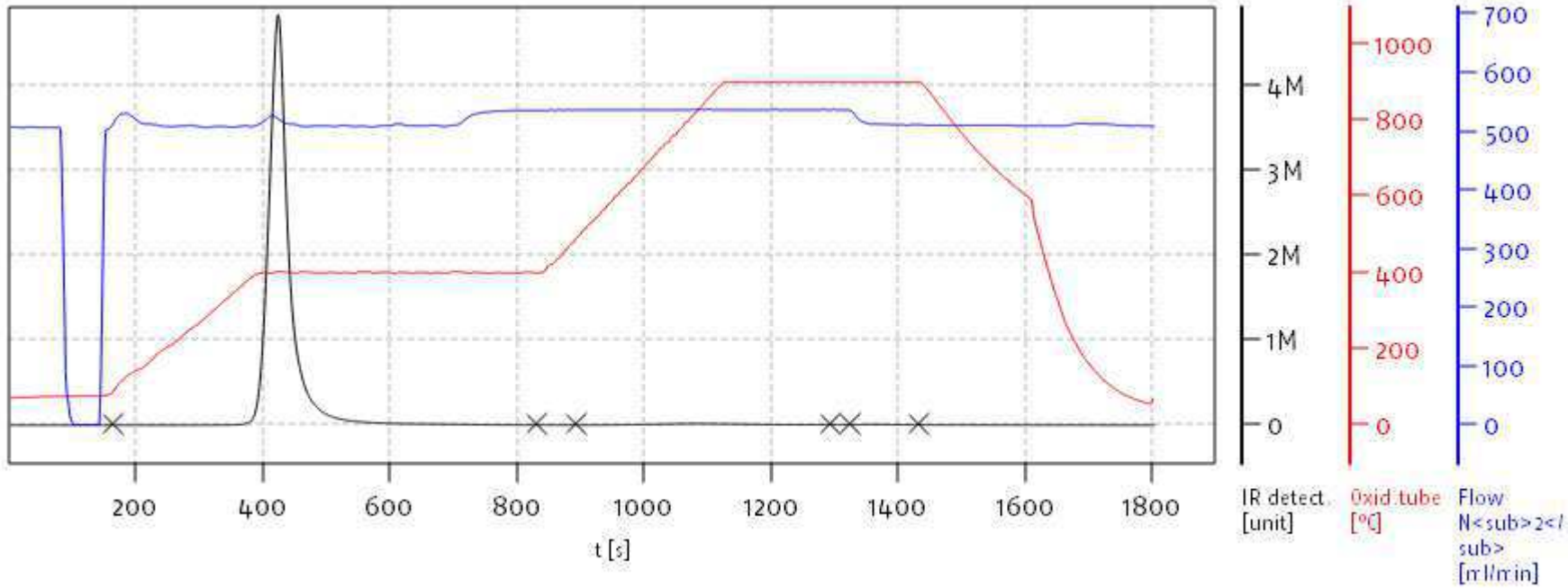
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
108	19	BKL0427-BS1	21.80		CARBON	12/18/2022 6:08 PM	bl	44.824	6 785 570	45.575	0.000	25 189	132 332	44.824	0.751	0.9339	1.0000



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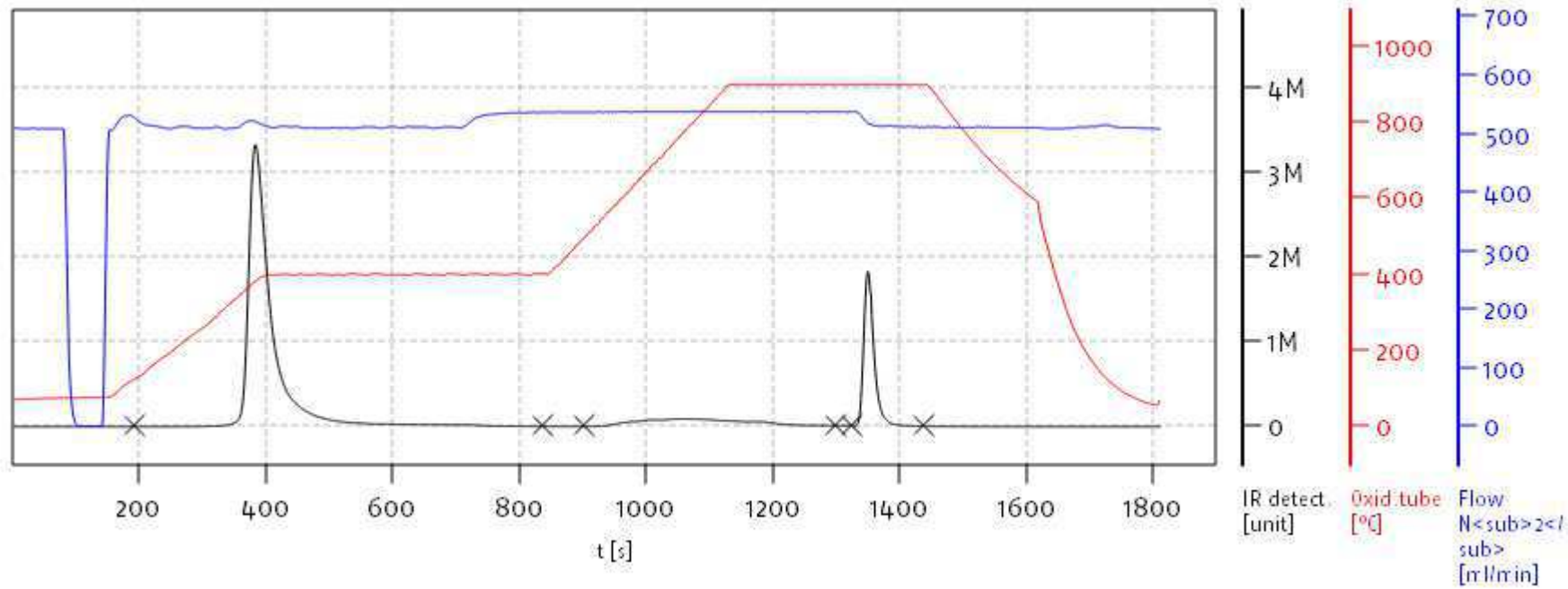
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
109	20	BKL0427-SRM1	311.00		CARBON	12/18/2022 6:38 PM	bl	3.048	5 204 460	3.404	0.641	1 314 380	742 484	2.407	0.356	0.9339	1.0000



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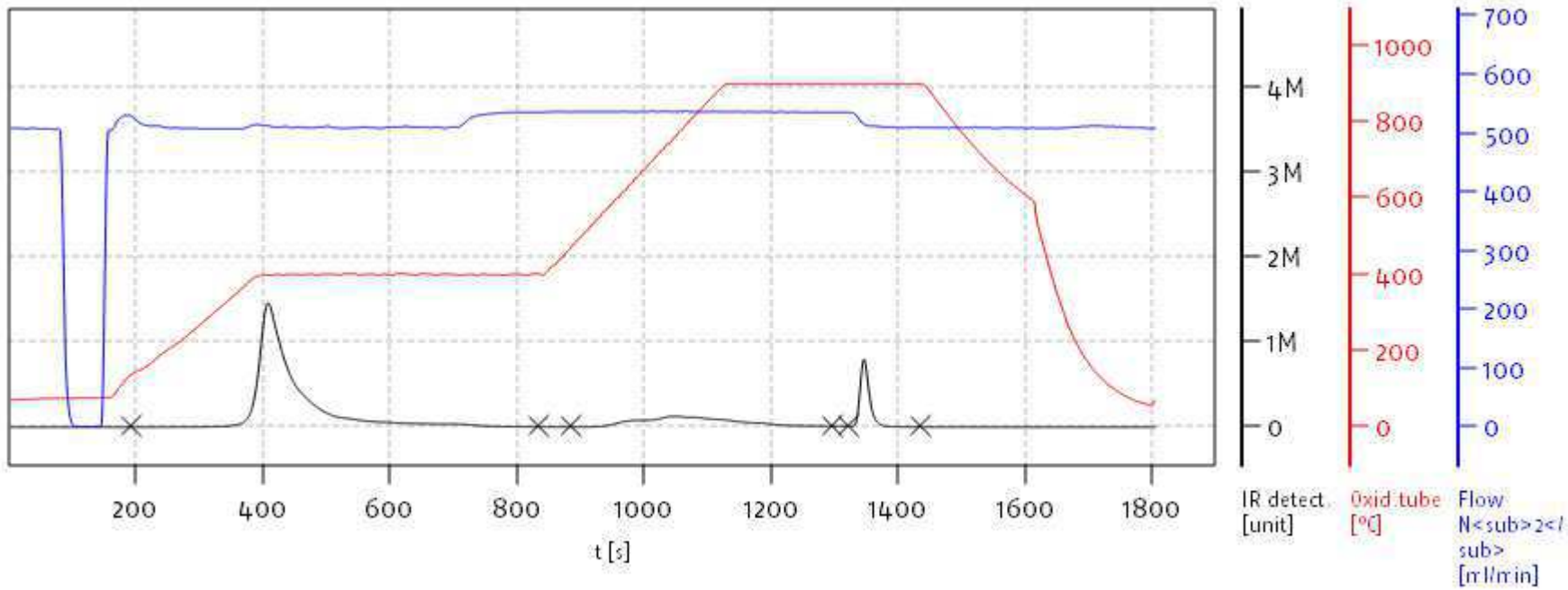
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
110	21	22L0155-27	514.70		CARBON	12/18/2022 7:09 PM	bl	1.133	3 538 770	1.383	0.147	513 921	858 300	0.987	0.250	0.9339	1.0000



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Access: soliTOC superuser

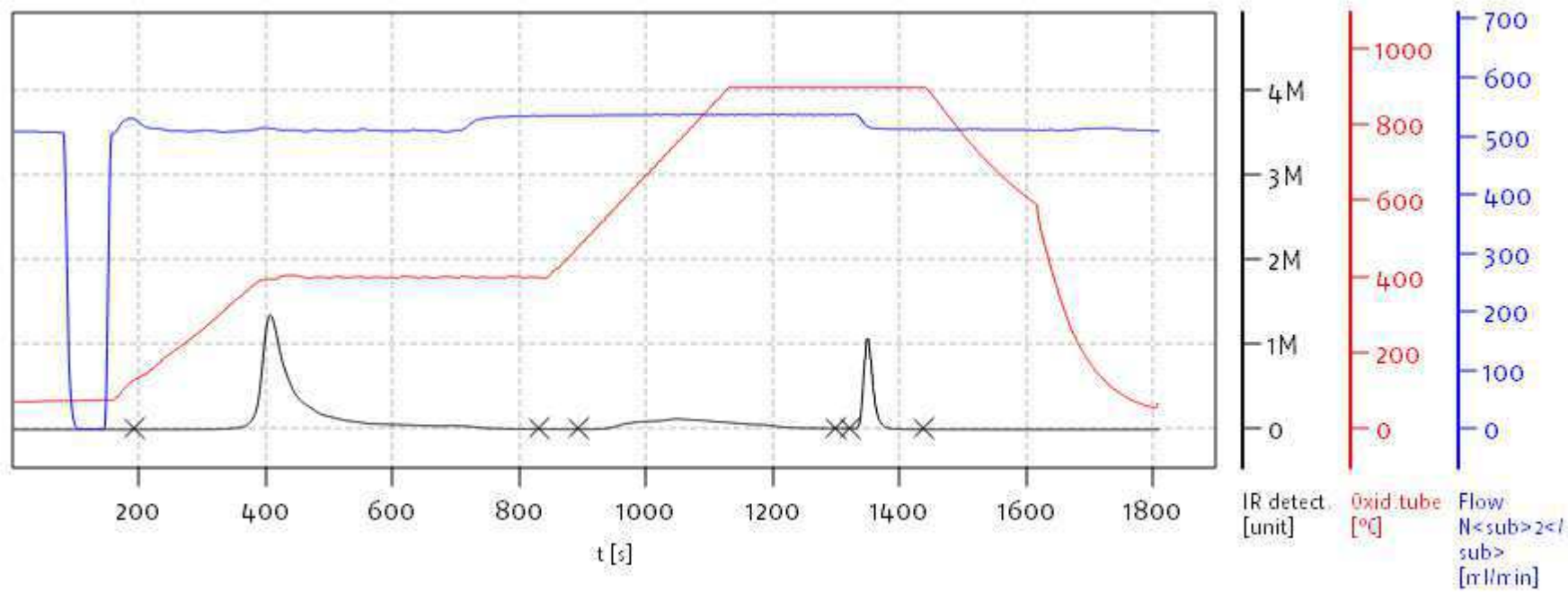
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
111	22	BKL0427-DUP1	513.40		CARBON	12/18/2022 7:39 PM	bl	1.089	3 165 300	1.358	0.205	705 330	919 454	0.884	0.269	0.9339	1.0000



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Date: Wed Dec 21 09:58:21 2022

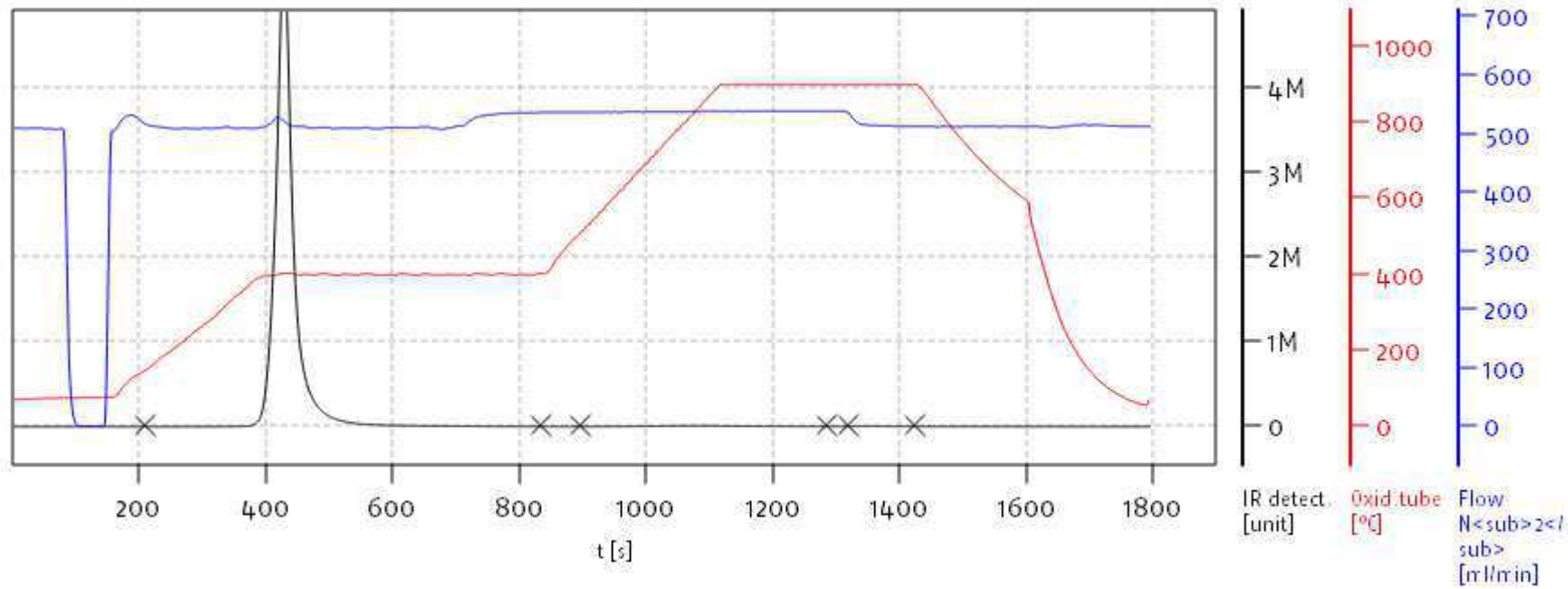
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
112	23	SKL0217-CCV9	21.30		CARBON	12/18/2022 8:09 PM	bl	45.314	6 702 750	45.672	0.000	13 935	75 912	45.314	0.359	0.9339	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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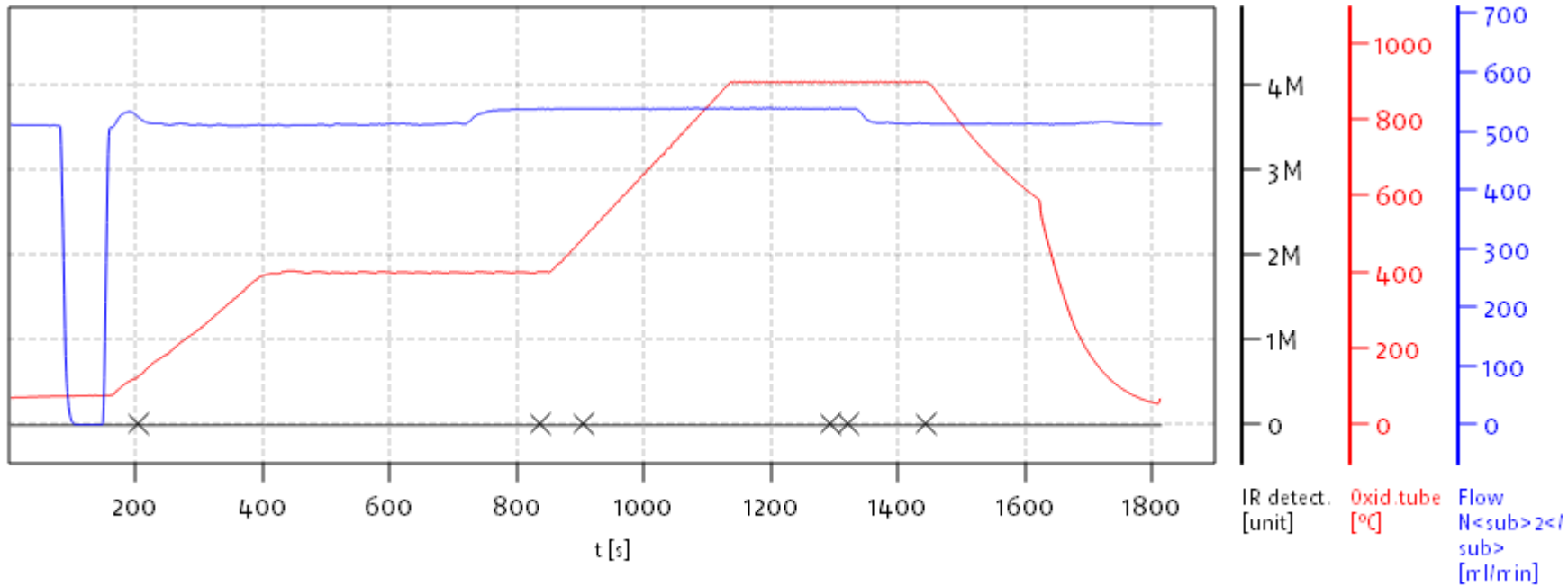
Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
113	24	SKL0217-CCB9	508.00		CARBON	12/18/2022 8:40 PM	bl,C2u	0.000	4 634	0.000	0.000	485	3 595	0.000	0.000	0.9339	1.0000



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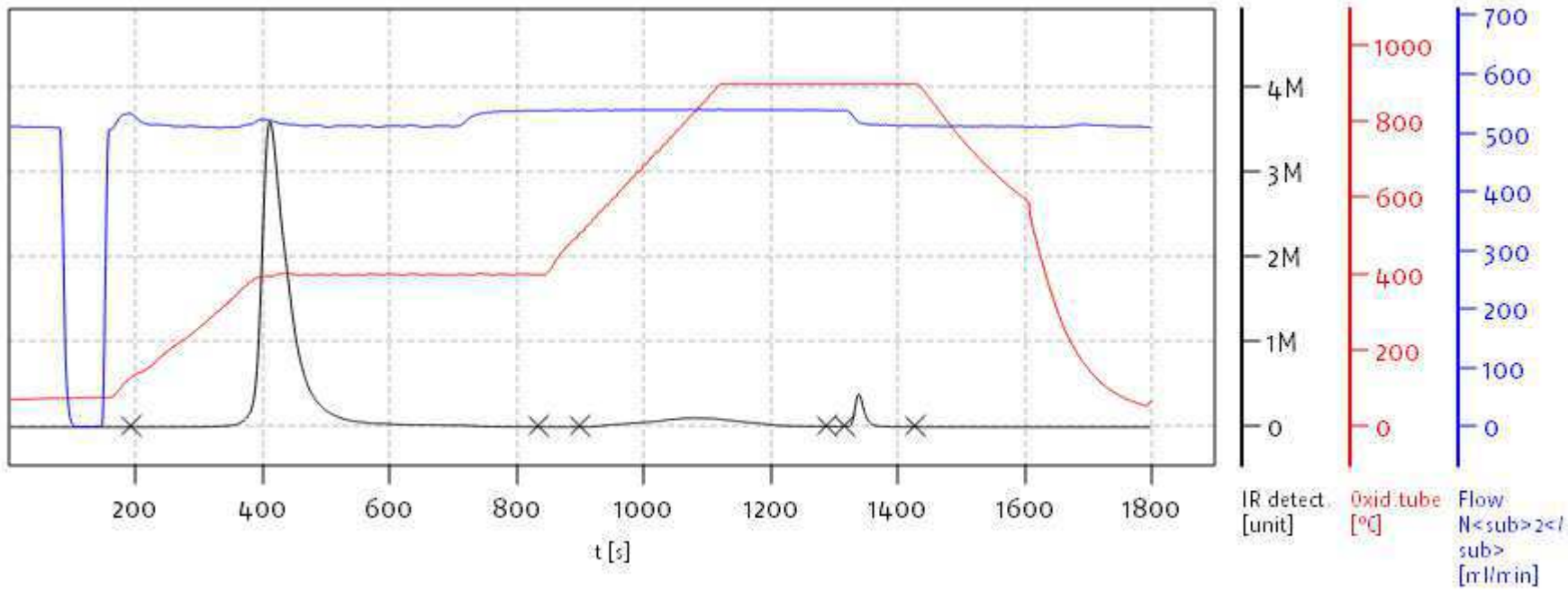
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
114	25	BKL0427-MS1	529.10	0.0087	CARBON	12/18/2022 9:11 PM	bl	1.940	6 878 110	2.144	0.068	258 197	722 779	1.872	0.204	0.9339	1.0000



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Balance: BAL3
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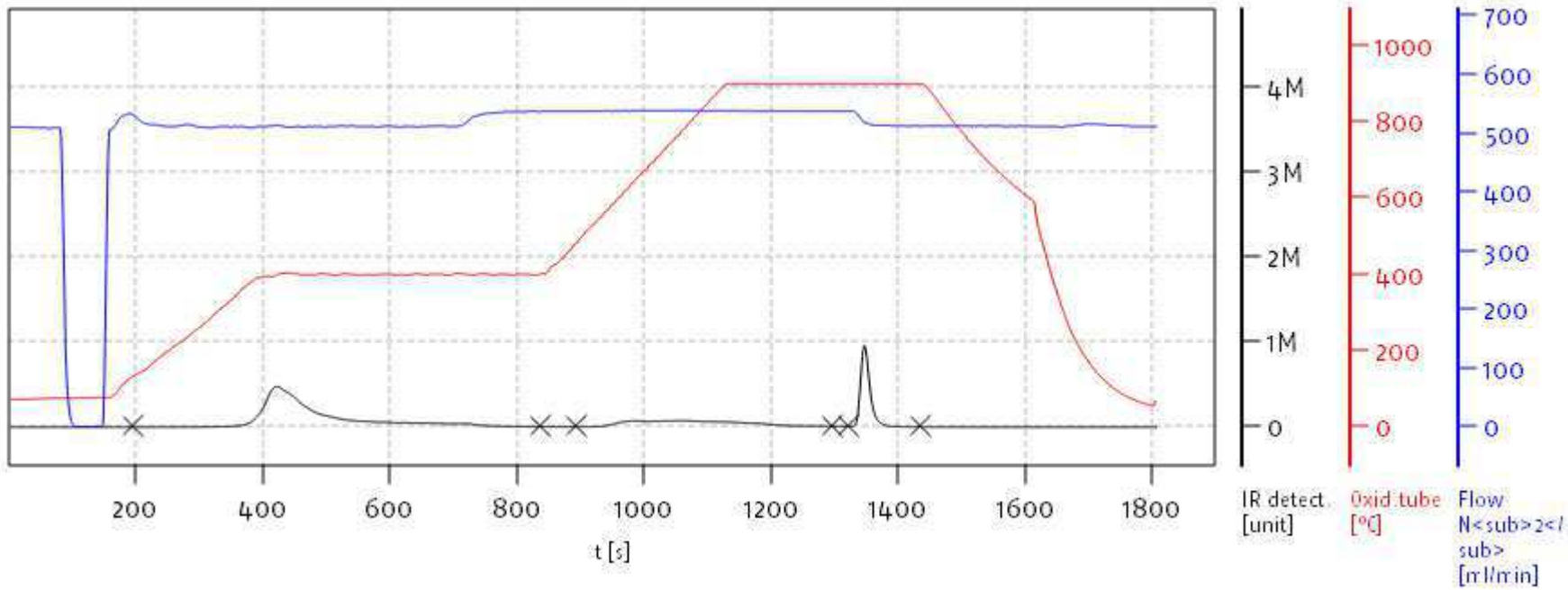
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
115	26	22L0155-28	540.40		CARBON	12/18/2022 9:41 PM	bl	0.660	1 850 440	0.841	0.172	627 969	656 593	0.488	0.180	0.9339	1.0000



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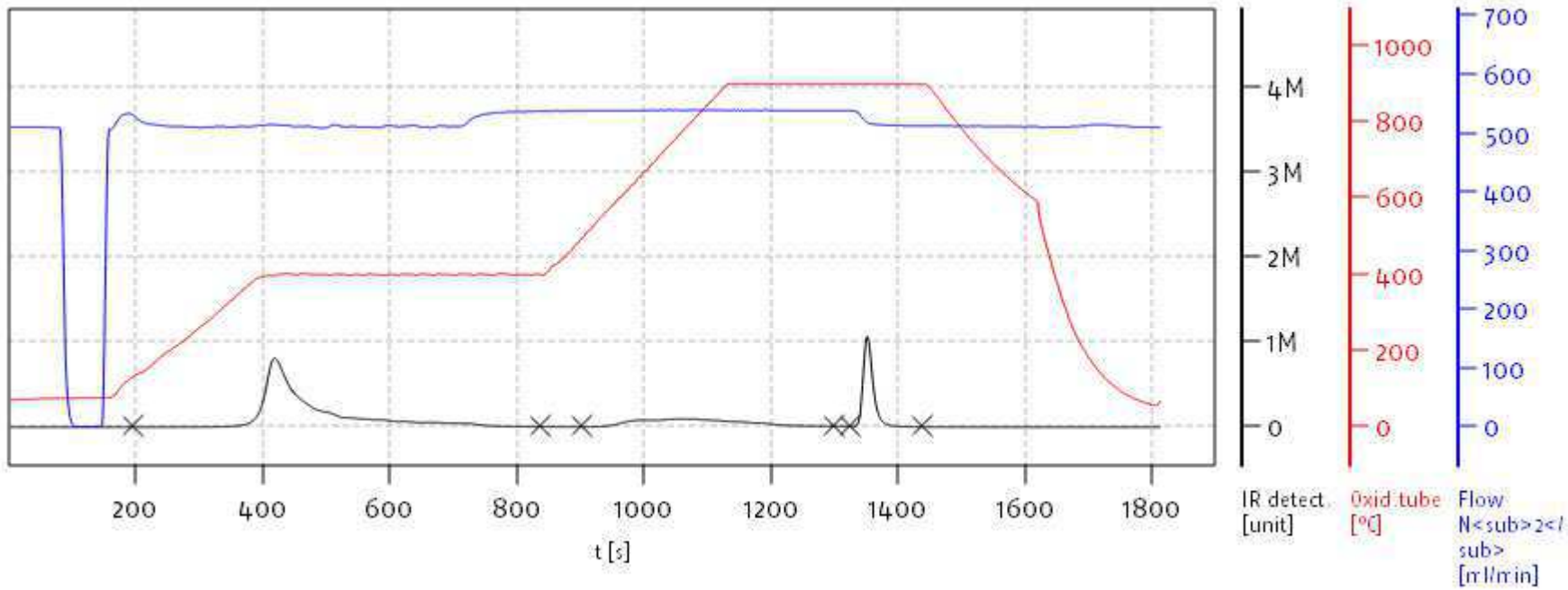
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
116	27	22L0155-29	512.90		CARBON	12/18/2022 10:12 PM	bl	0.903	2 468 130	1.124	0.215	738 726	757 098	0.688	0.220	0.9339	1.0000



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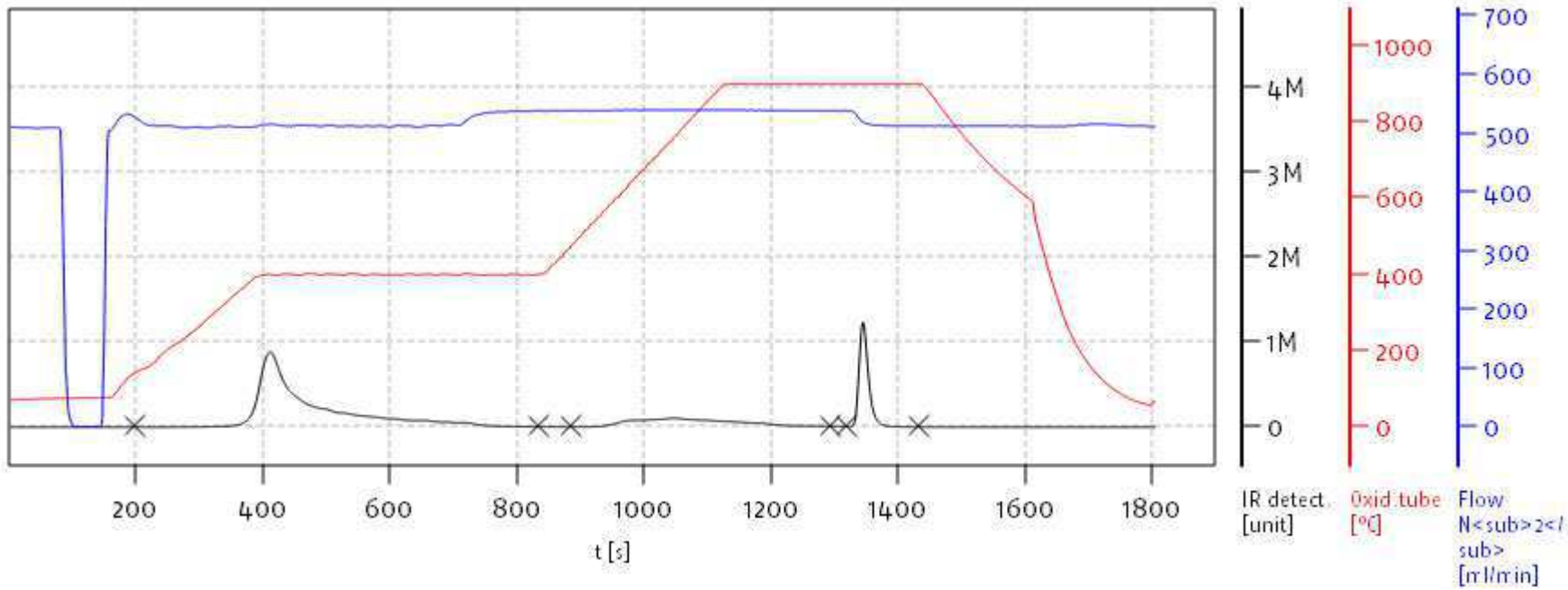
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
117	28	22L0155-30	534.80		CARBON	12/18/2022 10:42 PM	bl	1.023	2 977 200	1.237	0.226	805 951	764 278	0.798	0.214	0.9339	1.0000



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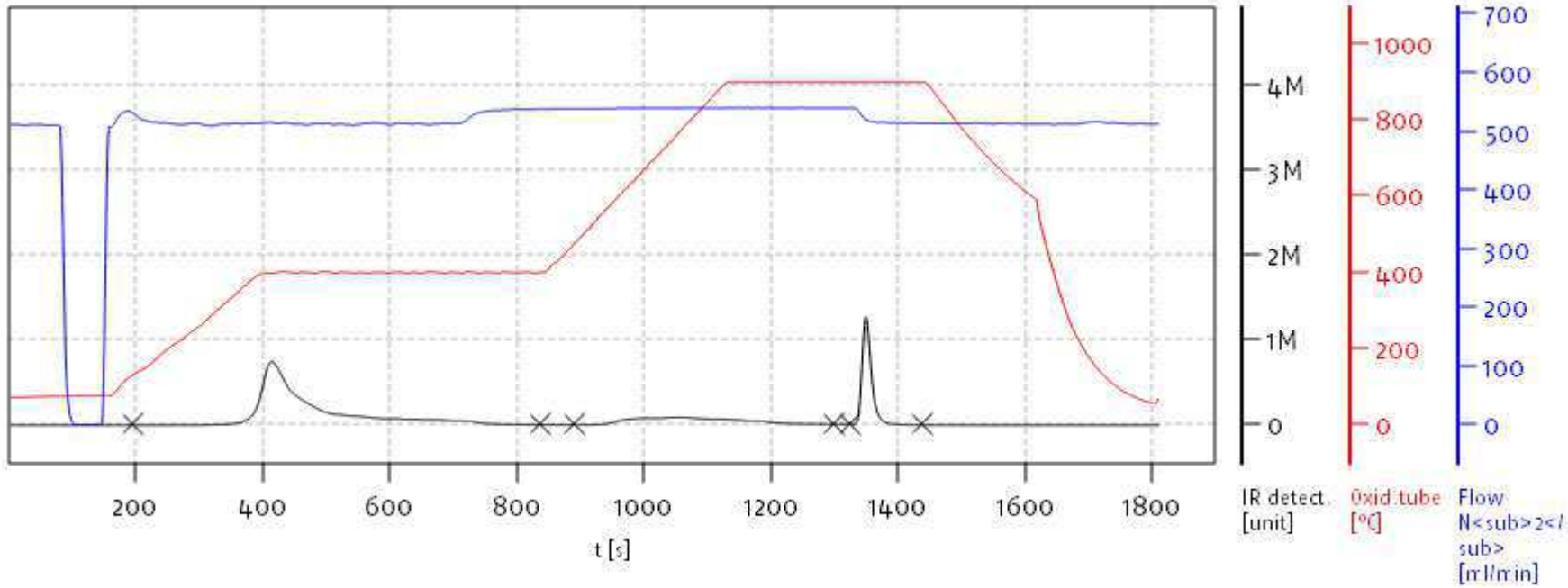
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
118	29	22L0155-31	501.70		CARBON	12/18/2022 11:13 PM	bl	0.965	2 516 370	1.186	0.248	830 152	742 498	0.717	0.221	0.9339	1.0000



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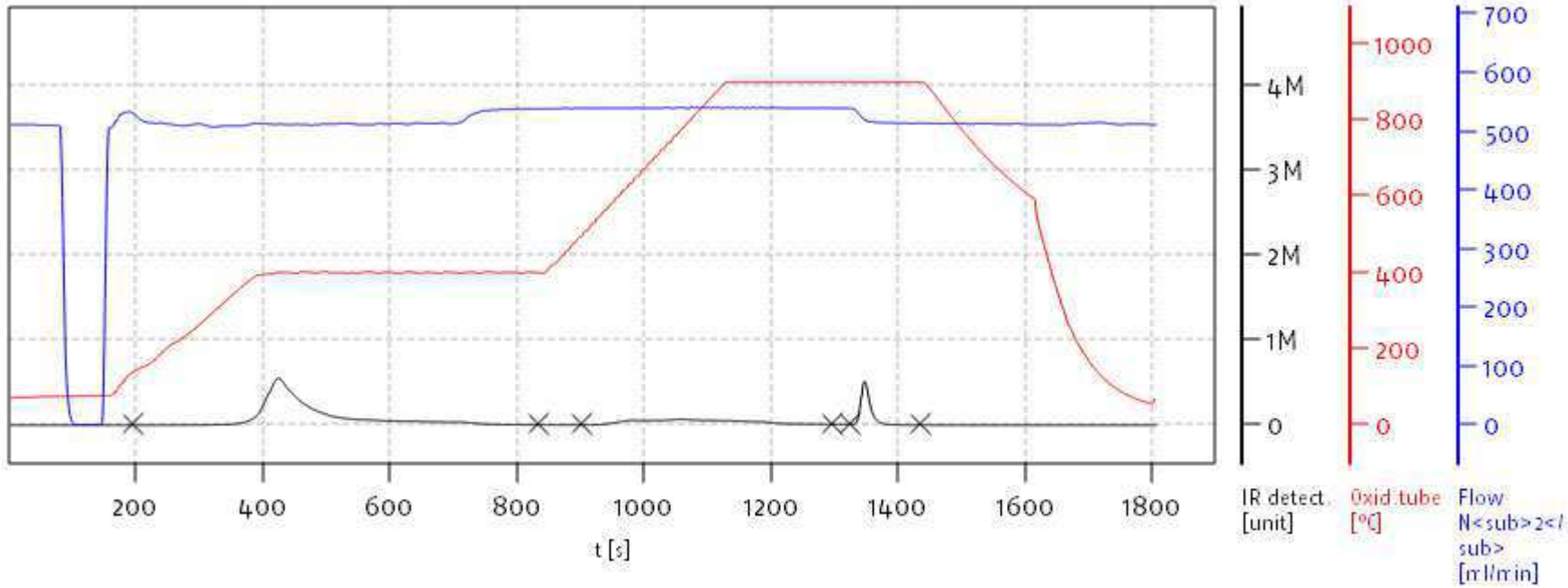
Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
119	30	22L0155-32	529.40		CARBON	12/18/2022 11:43 PM	bl	0.588	1 850 130	0.743	0.090	335 540	556 687	0.498	0.155	0.9339	1.0000



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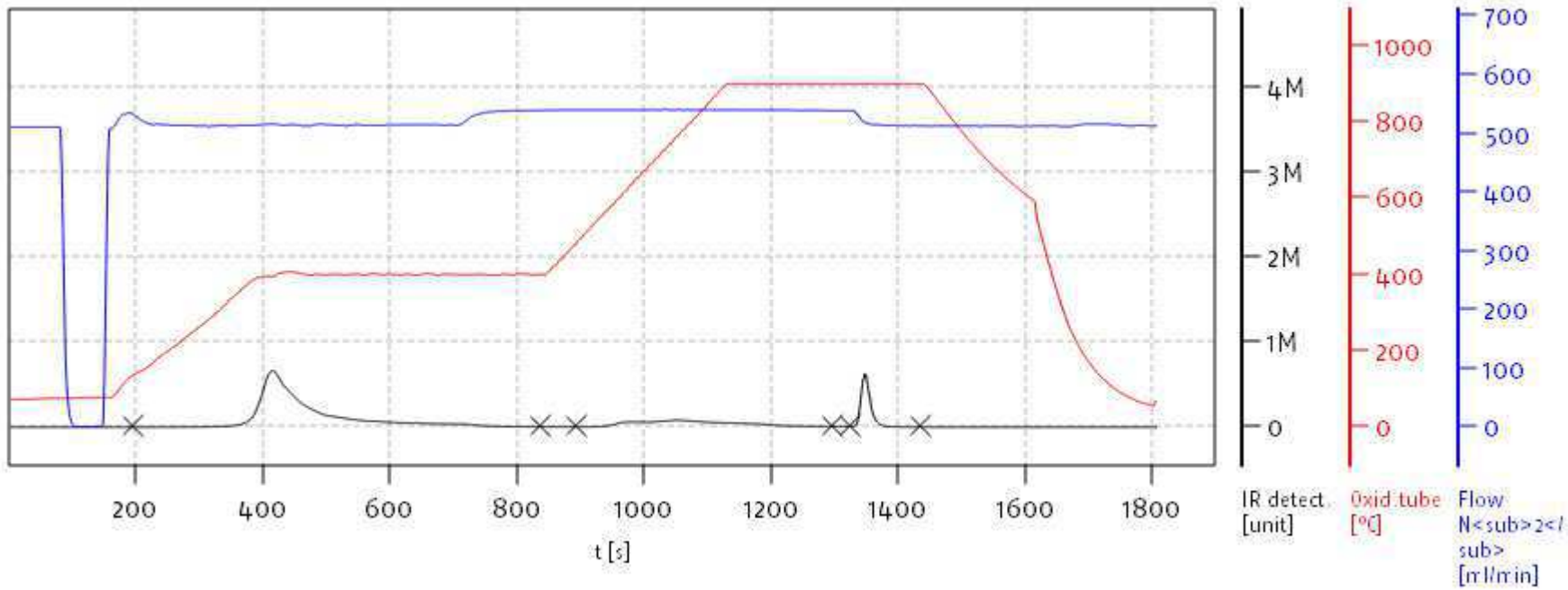
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
120	31	22L0155-33	501.10		CARBON	12/19/2022 12:14 AM	bl	0.749	2 216 440	0.922	0.117	404 831	589 218	0.632	0.174	0.9339	1.0000



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Soli TOC Cube, Carbon
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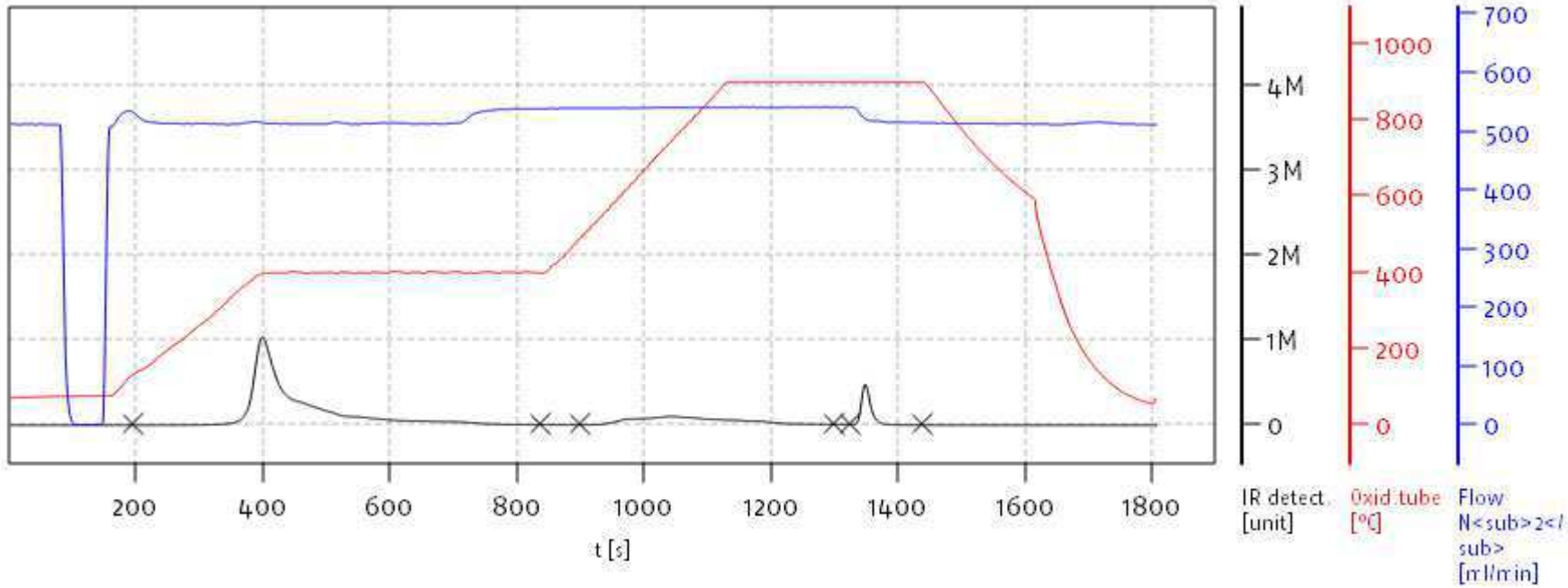
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
121	32	22L0155-34	503.70		CARBON	12/19/2022 12:44 AM	bl	0.880	2 789 390	1.097	0.087	310 682	730 848	0.793	0.216	0.9339	1.0000



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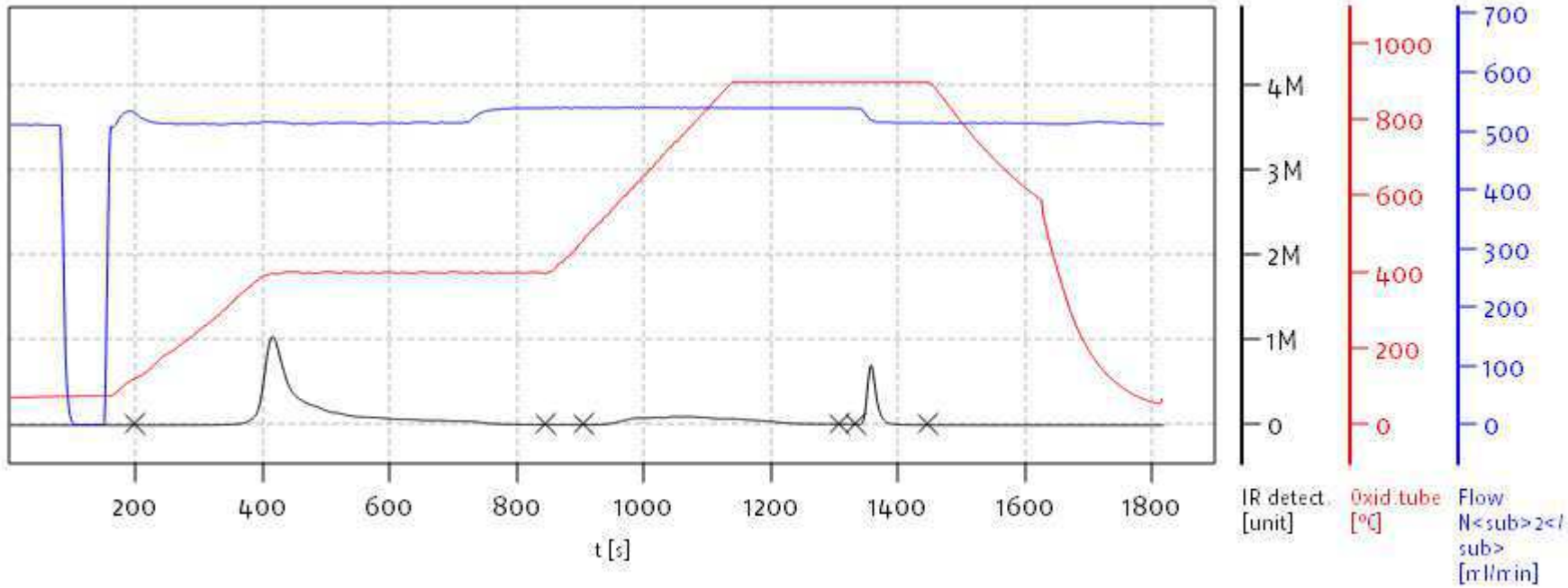
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
122	33	22L0155-35	541.60		CARBON	12/19/2022 1:15 AM	bl	0.845	2 733 430	1.068	0.122	453 399	806 624	0.723	0.223	0.9339	1.0000



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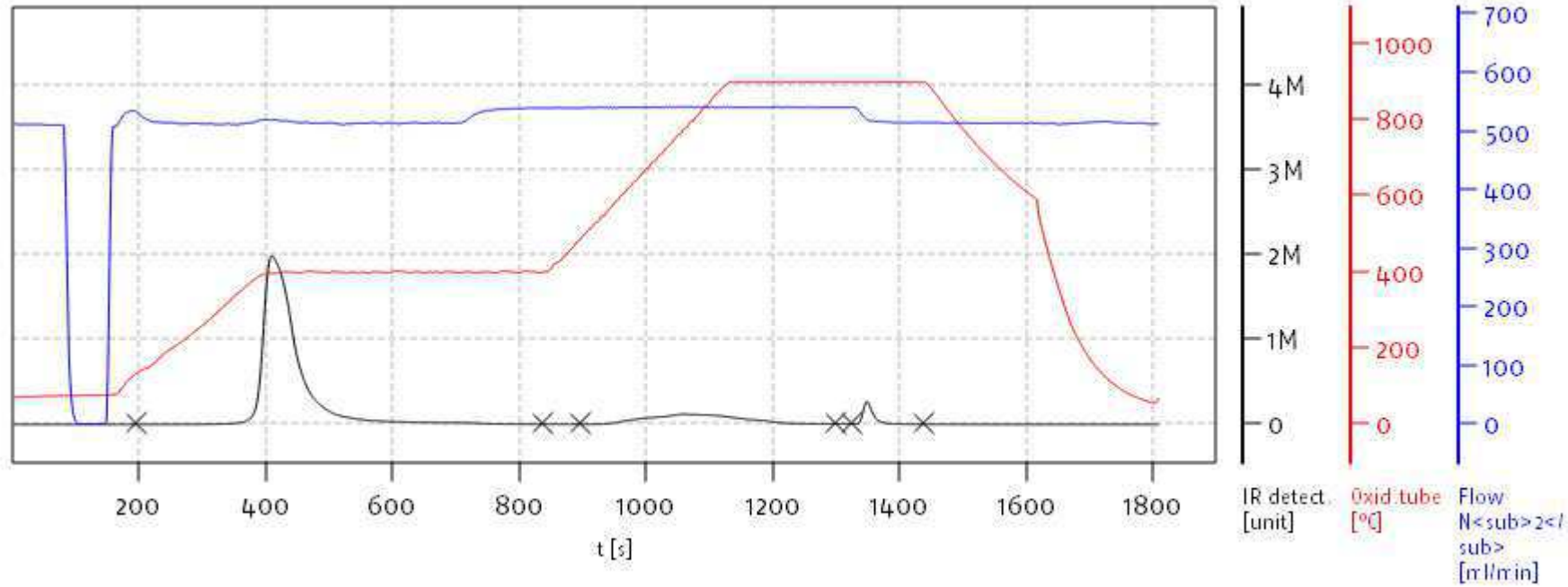
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
123	34	22L0155-36	622.50		CARBON	12/19/2022 1:46 AM	bl	1.094	4 560 040	1.287	0.041	191 970	804 056	1.053	0.193	0.9339	1.0000



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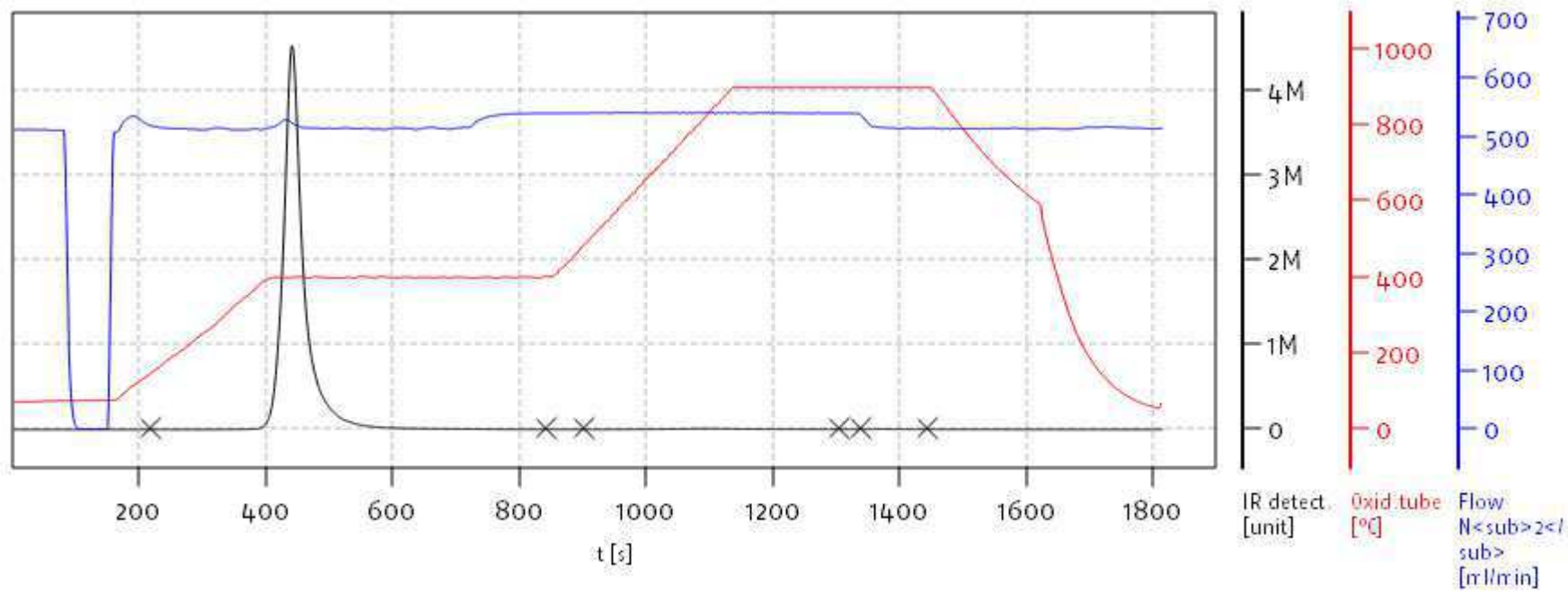
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
124	35	SKL0217-CCVA	20.30		CARBON	12/19/2022 2:16 AM	bl	44.705	6 303 870	45.068	0.000	15 233	74 069	44.705	0.362	0.9339	1.0000



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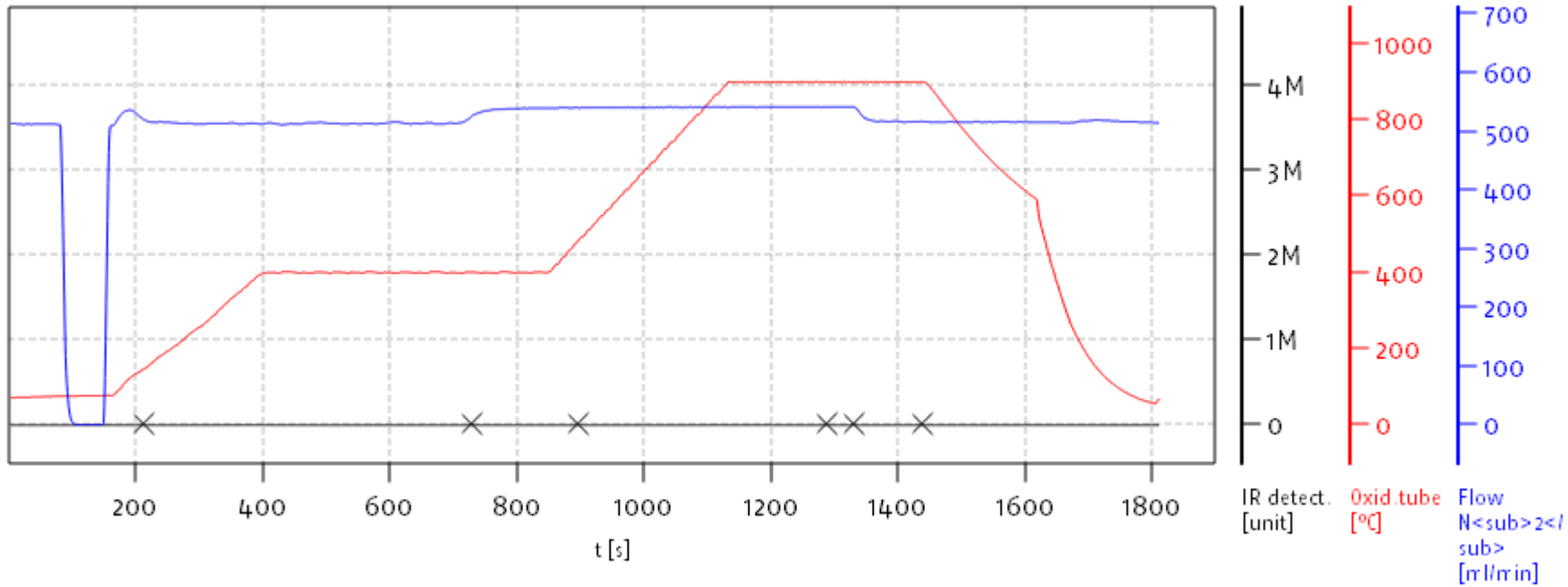
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
125	36	SKL0217-CCBA	505.40		CARBON	12/19/2022 2:47 AM	bl,C2u	0.000	3 891	0.000	0.000	329	3 860	0.000	0.000	0.9339	1.0000



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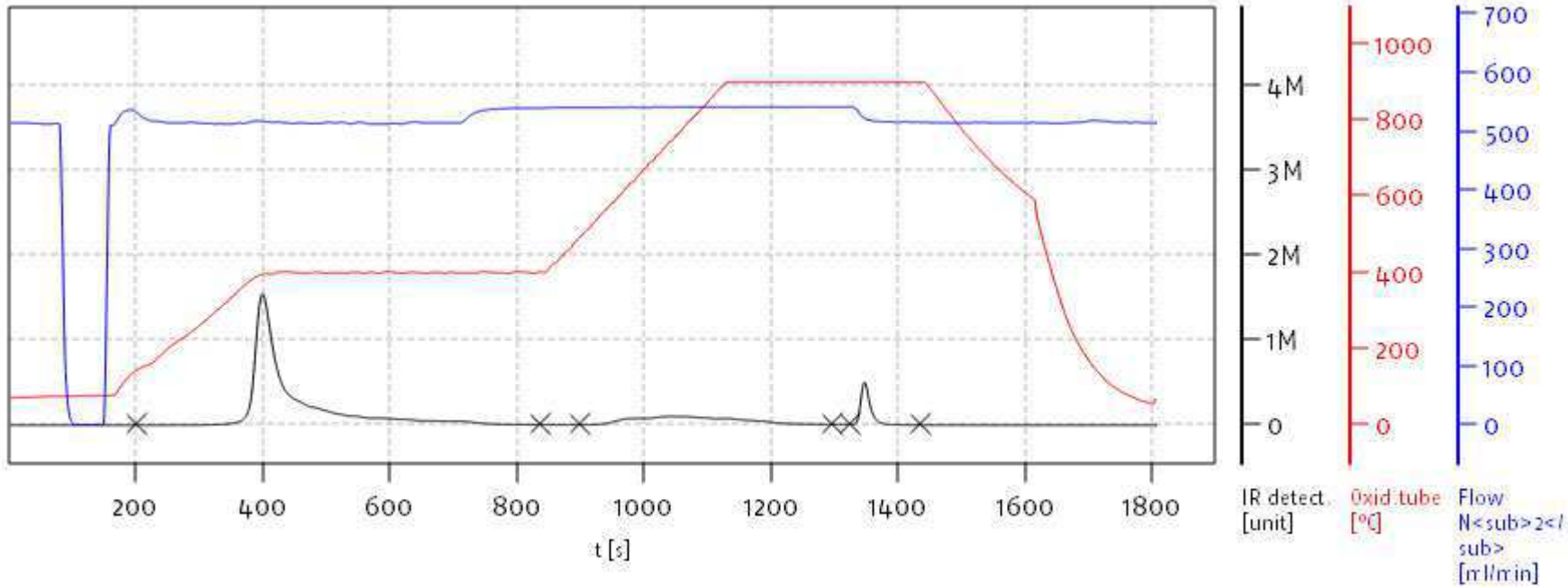
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
126	37	22L0155-37	537.10		CARBON	12/19/2022 3:17 AM	bl	0.983	3 350 610	1.208	0.089	333 816	804 873	0.895	0.224	0.9339	1.0000



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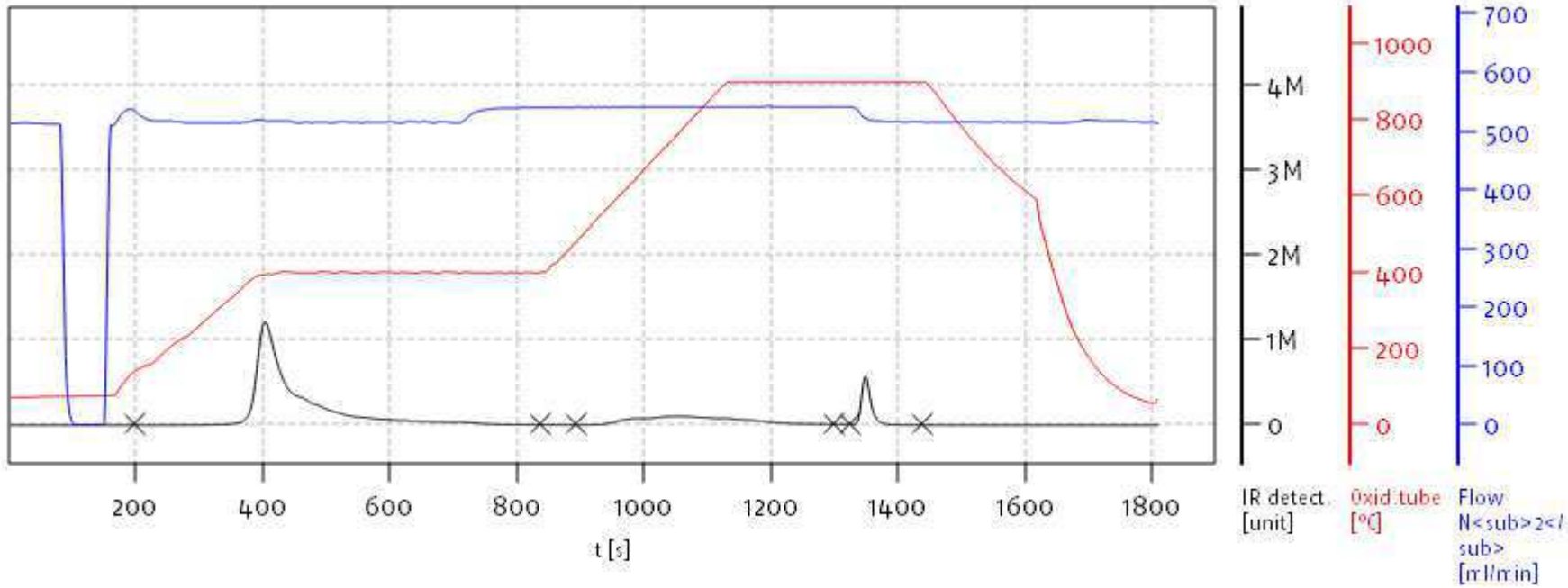
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
127	38	22L0155-38	515.40		CARBON	12/19/2022 3:48 AM	bl	0.970	3 111 150	1.206	0.105	375 718	811 807	0.865	0.236	0.9339	1.0000



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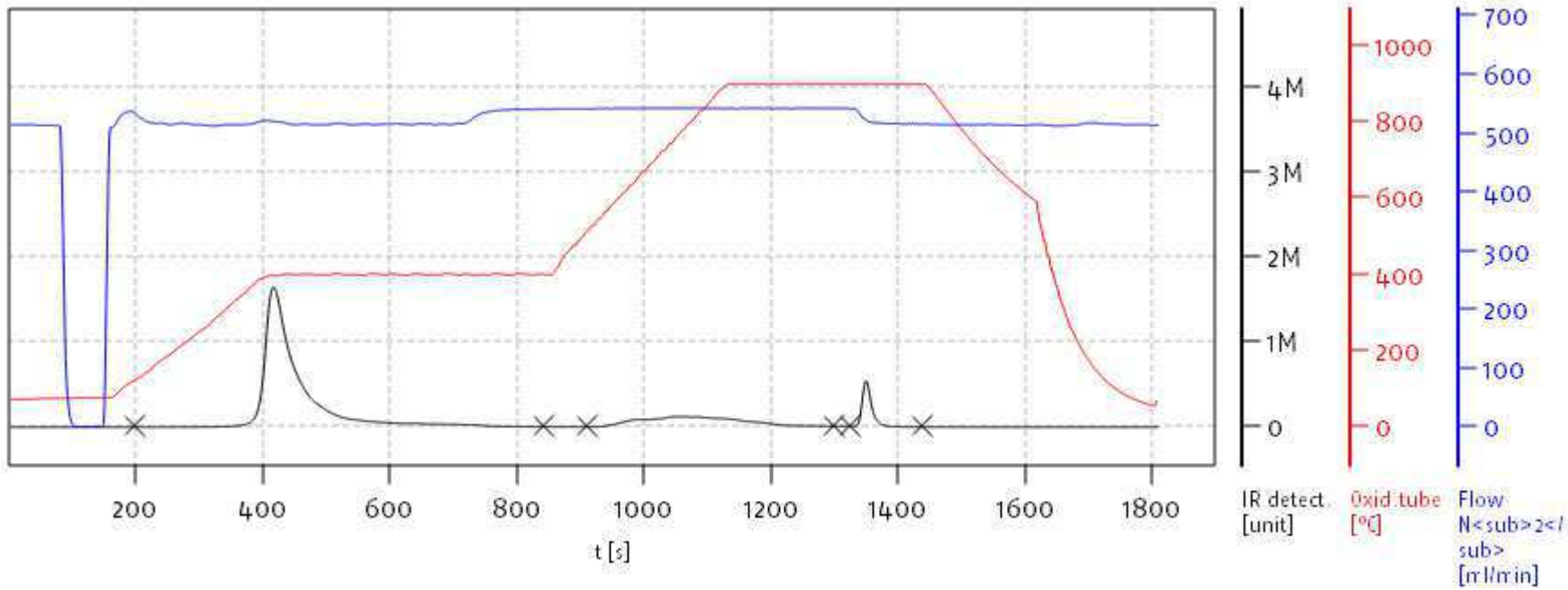
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
128	39	22L0155-39	573.30		CARBON	12/19/2022 4:18 AM	bl	1.017	3 702 650	1.258	0.090	359 396	920 469	0.927	0.241	0.9339	1.0000



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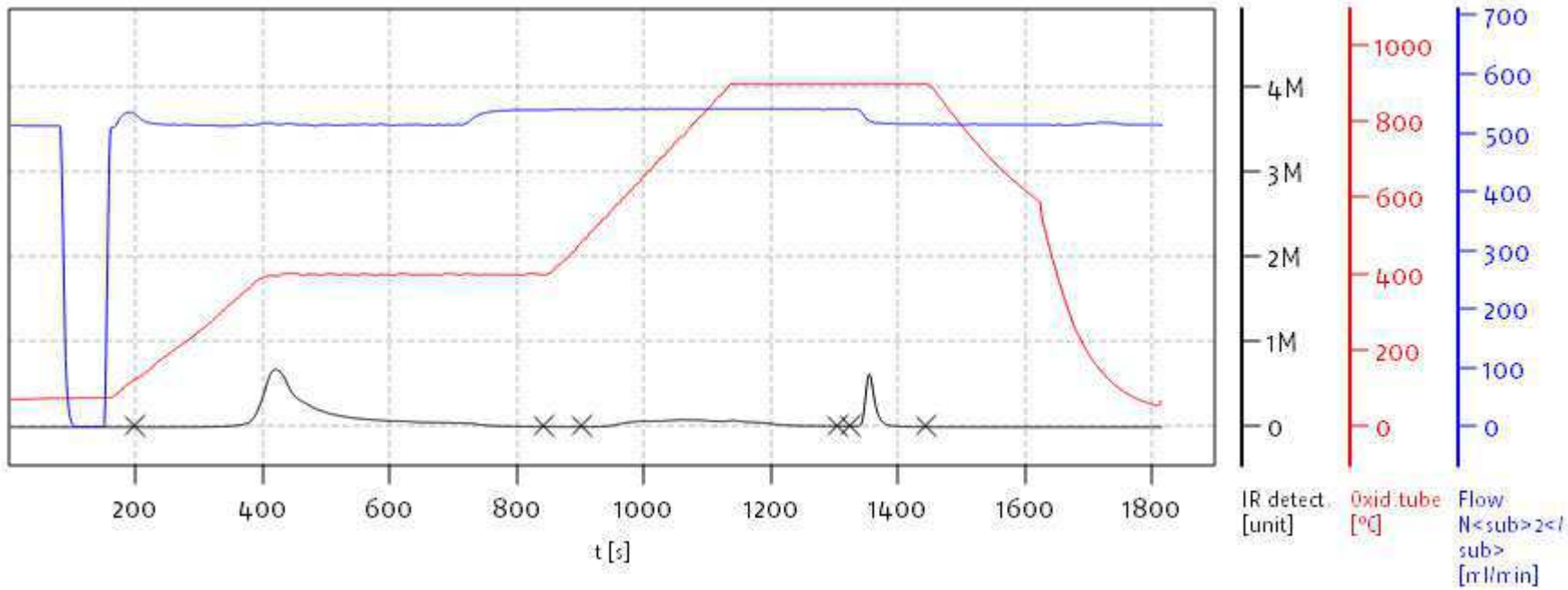
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
129	40	22L0155-40	516.70		CARBON	12/19/2022 4:49 AM	bl	0.792	2 433 790	0.996	0.118	421 587	708 183	0.674	0.204	0.9339	1.0000



Name:

Access: soliTOC superuser

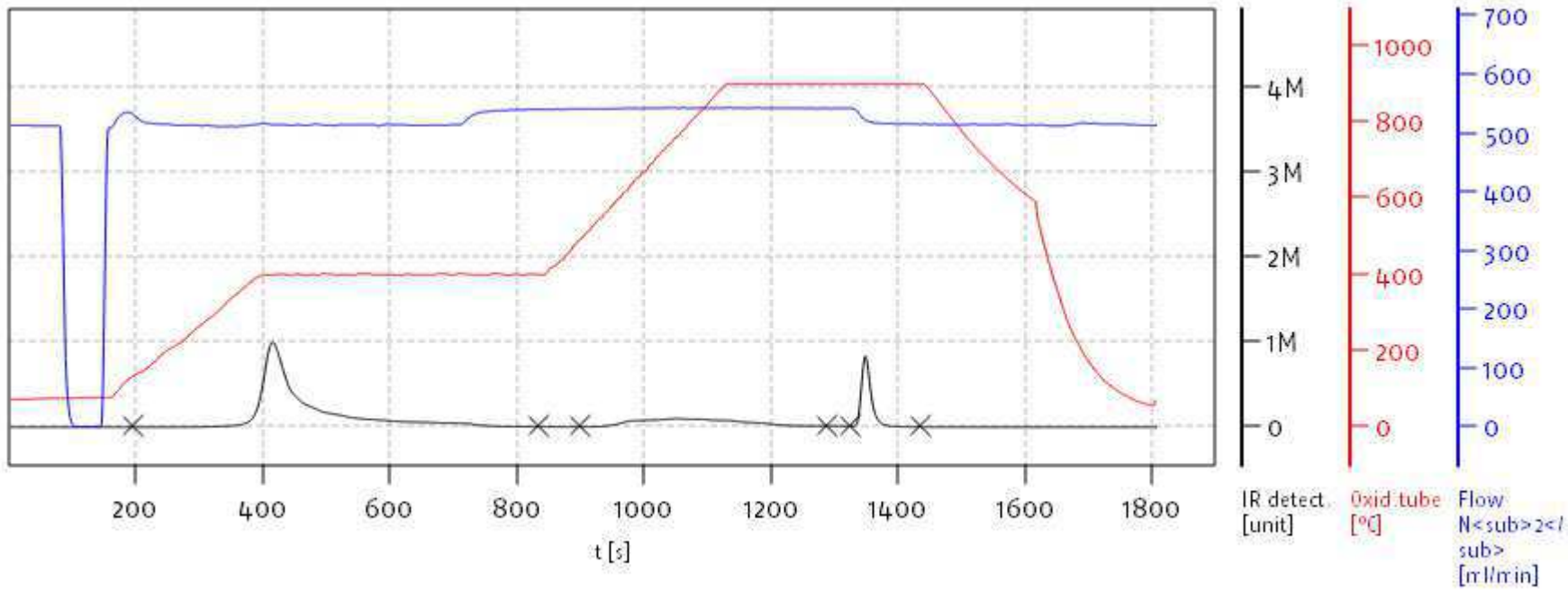
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
130	41	22L0155-41	500.90		CARBON	12/19/2022 5:20 AM	bl	0.953	2 757 590	1.183	0.165	560 587	770 733	0.788	0.230	0.9339	1.0000



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Date: Wed Dec 21 09:58:21 2022

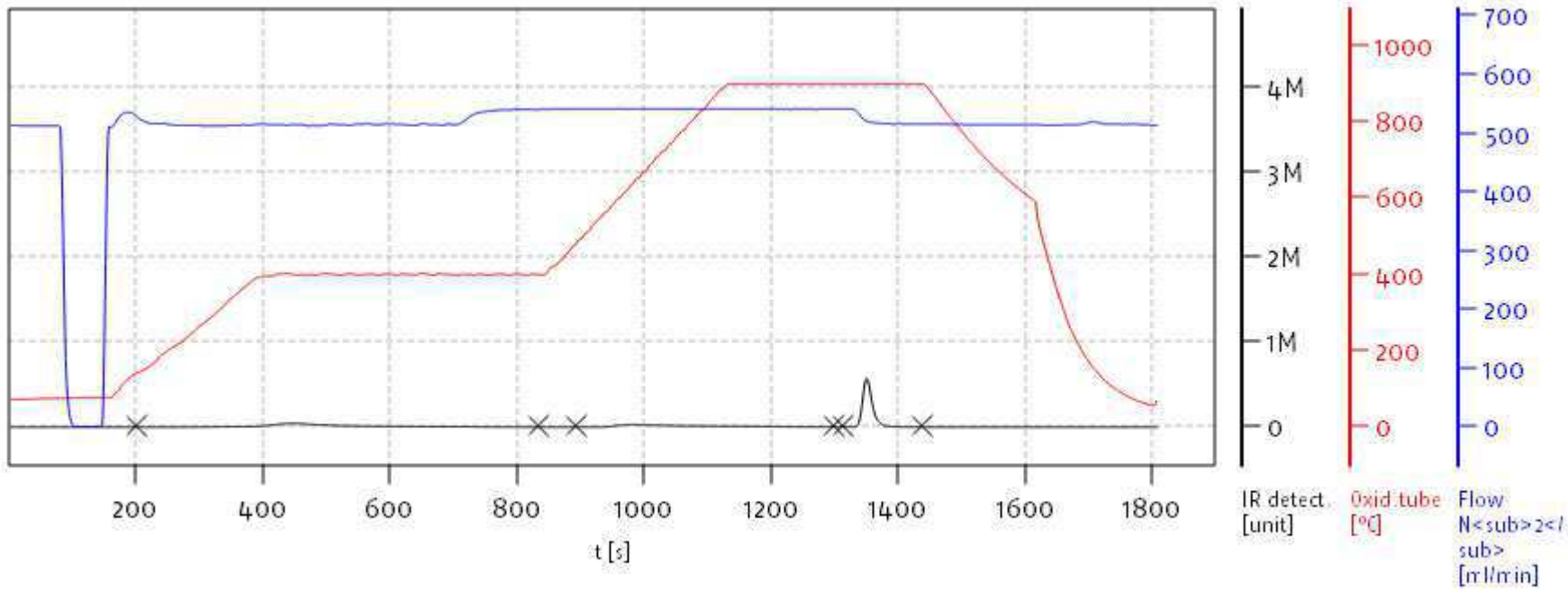
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
131	42	22L0155-42	502.30		CARBON	12/19/2022 5:50 AM	bl	0.169	231 882	0.212	0.110	384 258	164 325	0.059	0.042	0.9339	1.0000



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Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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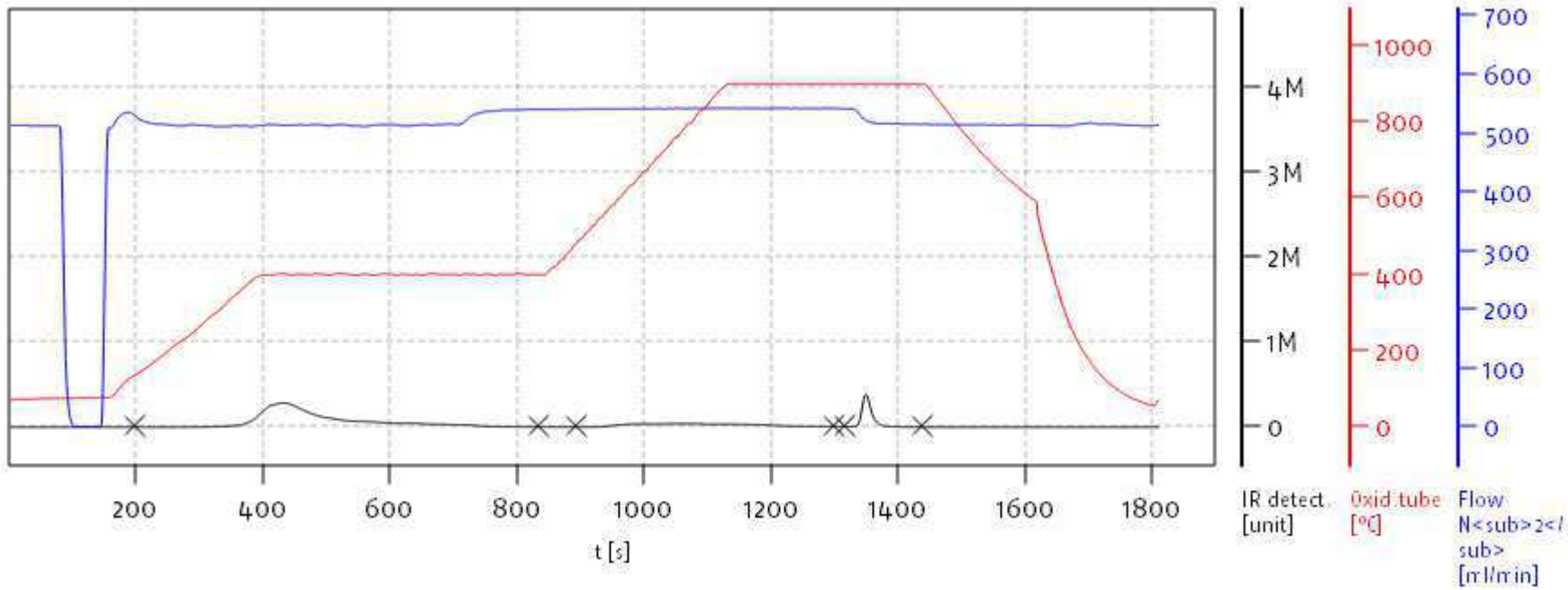
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
132	43	22L0155-43	509.80		CARBON	12/19/2022 6:21 AM	bl	0.463	1 409 690	0.566	0.071	259 052	365 753	0.392	0.103	0.9339	1.0000



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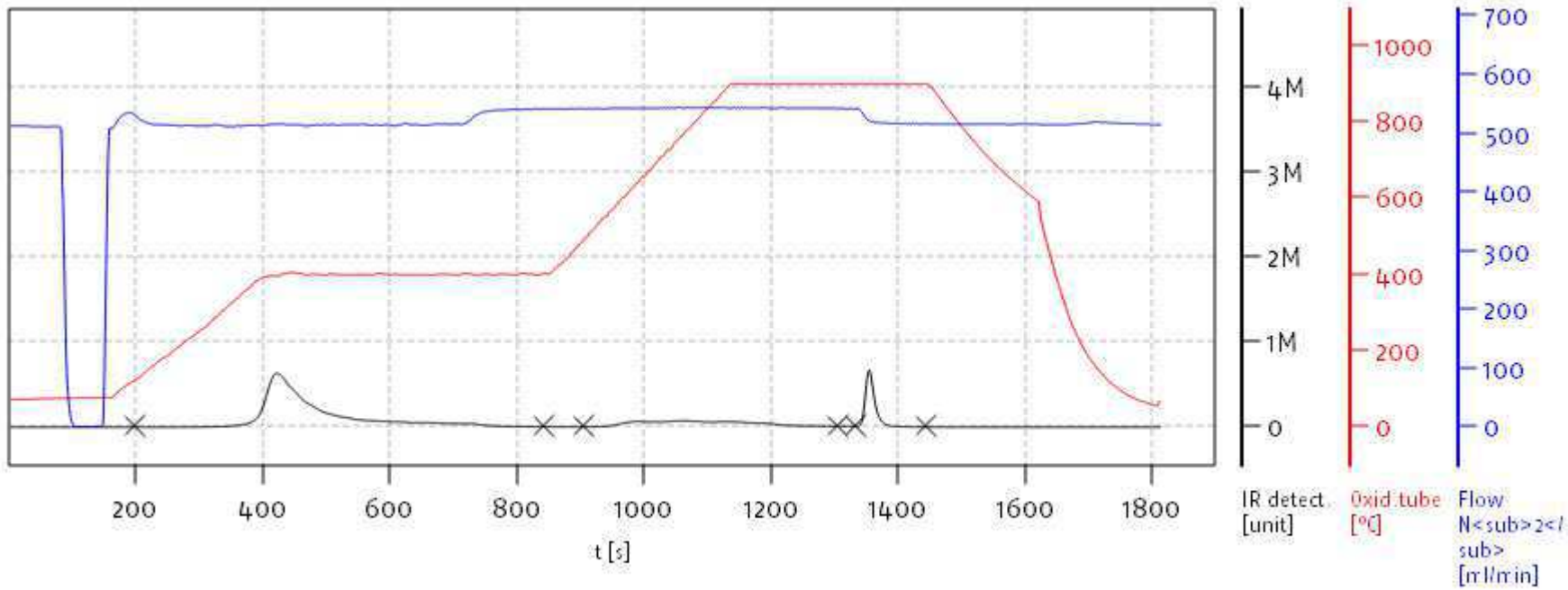
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
133	44	22L0155-44	522.10		CARBON	12/19/2022 6:51 AM	bl	0.740	2 258 700	0.919	0.122	436 962	632 127	0.618	0.180	0.9339	1.0000



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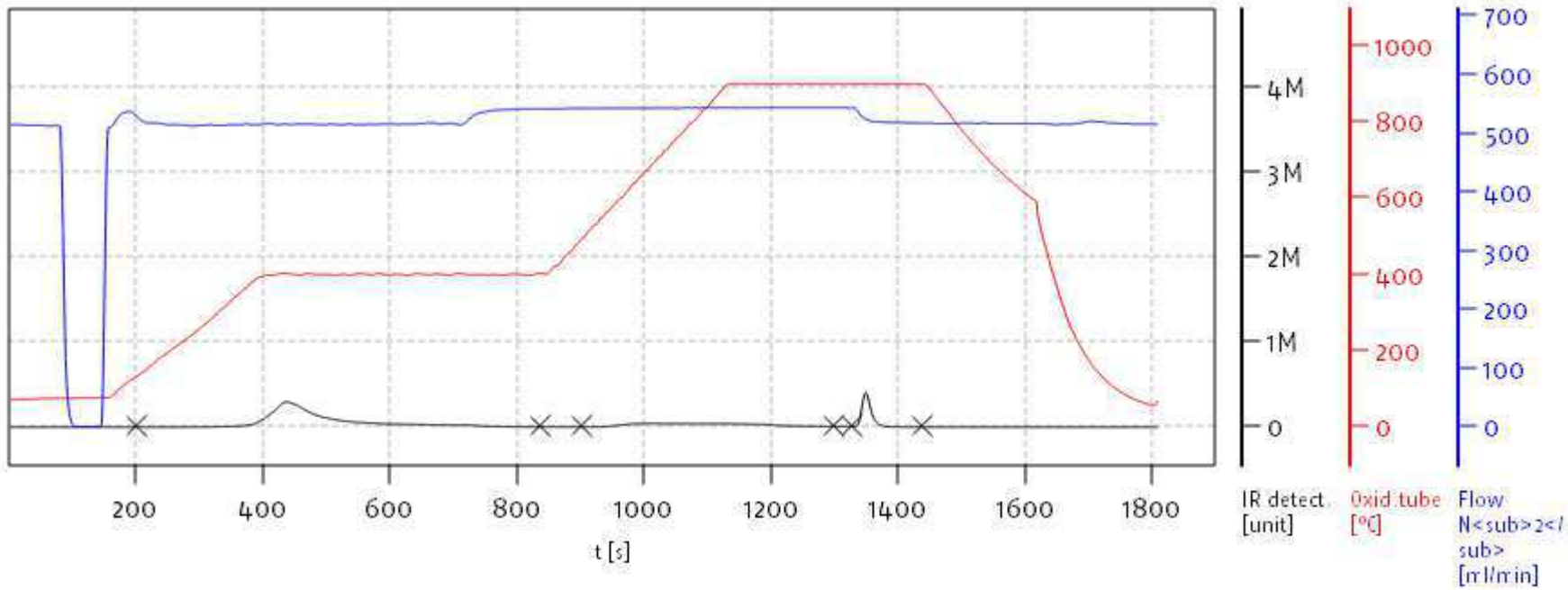
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
134	45	22L0155-45	518.50		CARBON	12/19/2022 7:22 AM	bl	0.398	1 202 780	0.510	0.070	261 965	399 327	0.328	0.111	0.9339	1.0000



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Serial No: 0300.181017
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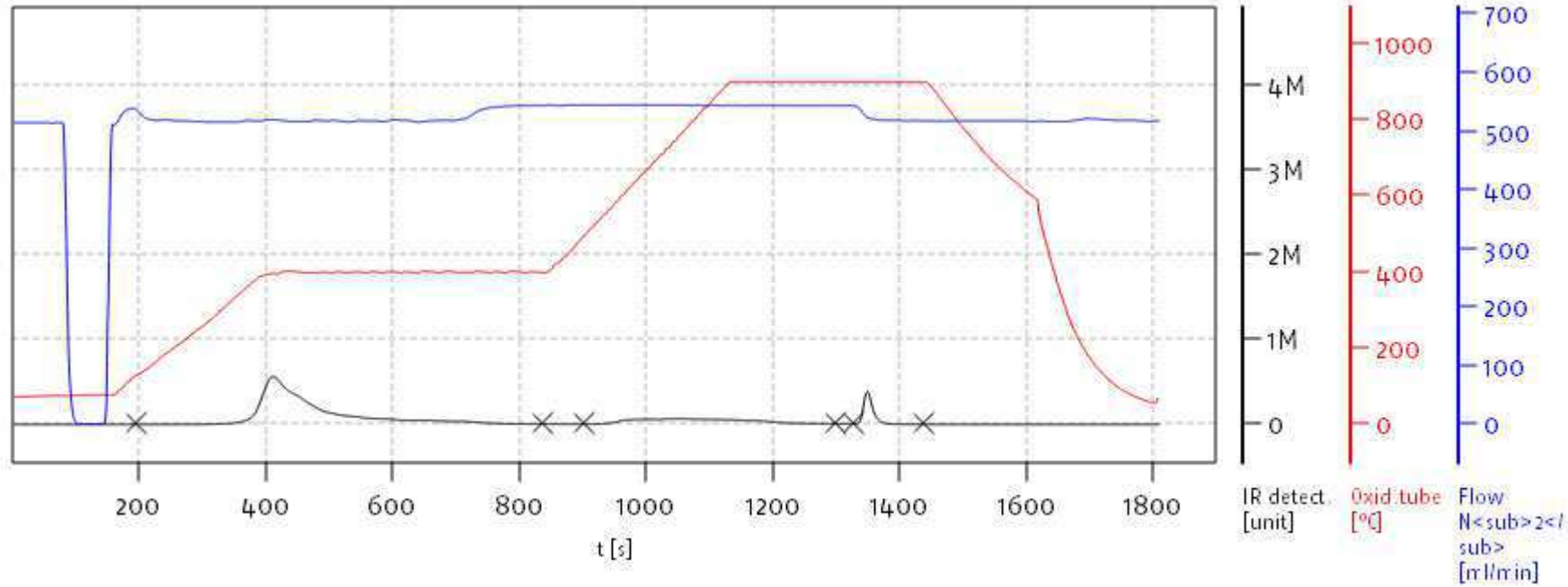
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
135	46	22L0155-46	528.90		CARBON	12/19/2022 7:53 AM	bl	0.640	2 122 680	0.802	0.067	255 287	580 235	0.573	0.162	0.9339	1.0000



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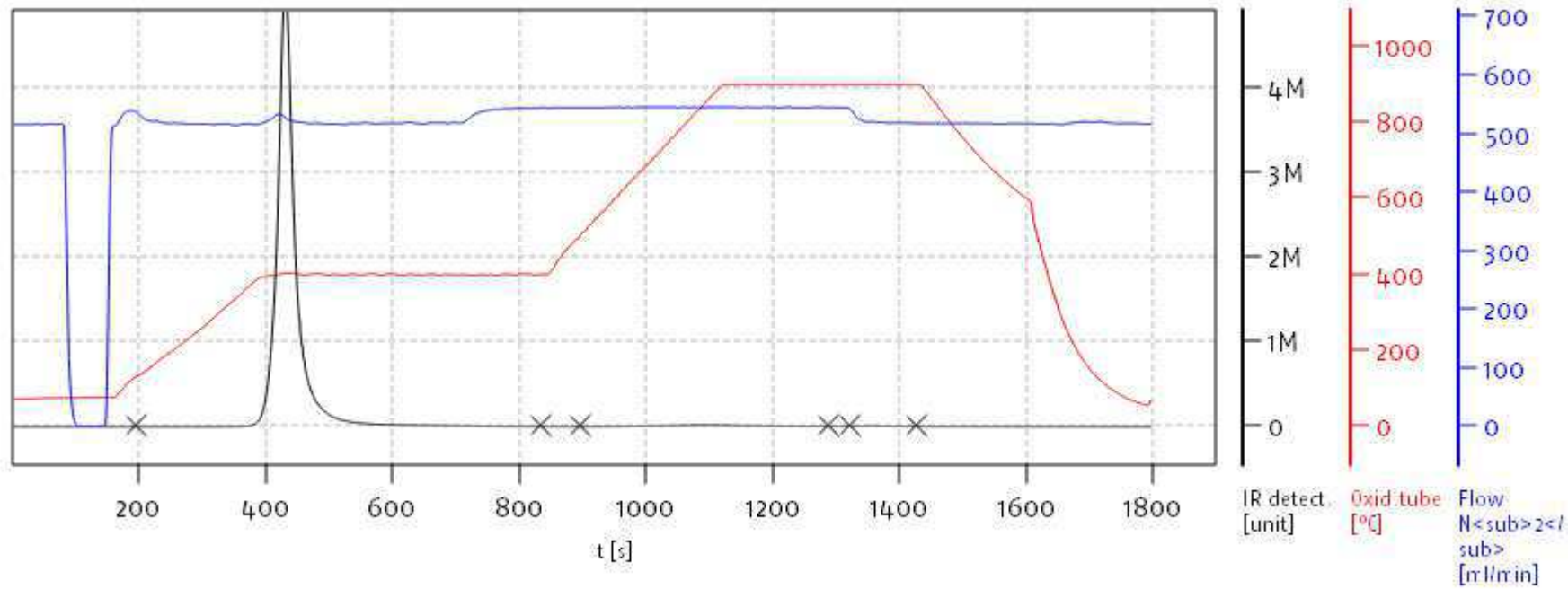
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
136	47	SKL0217-CCVB	21.00		CARBON	12/19/2022 8:23 AM	bl	44.192	6 445 800	44.861	0.000	22 634	117 274	44.192	0.669	0.9339	1.0000



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Date: Wed Dec 21 09:58:21 2022

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Serial No: 0300.181017
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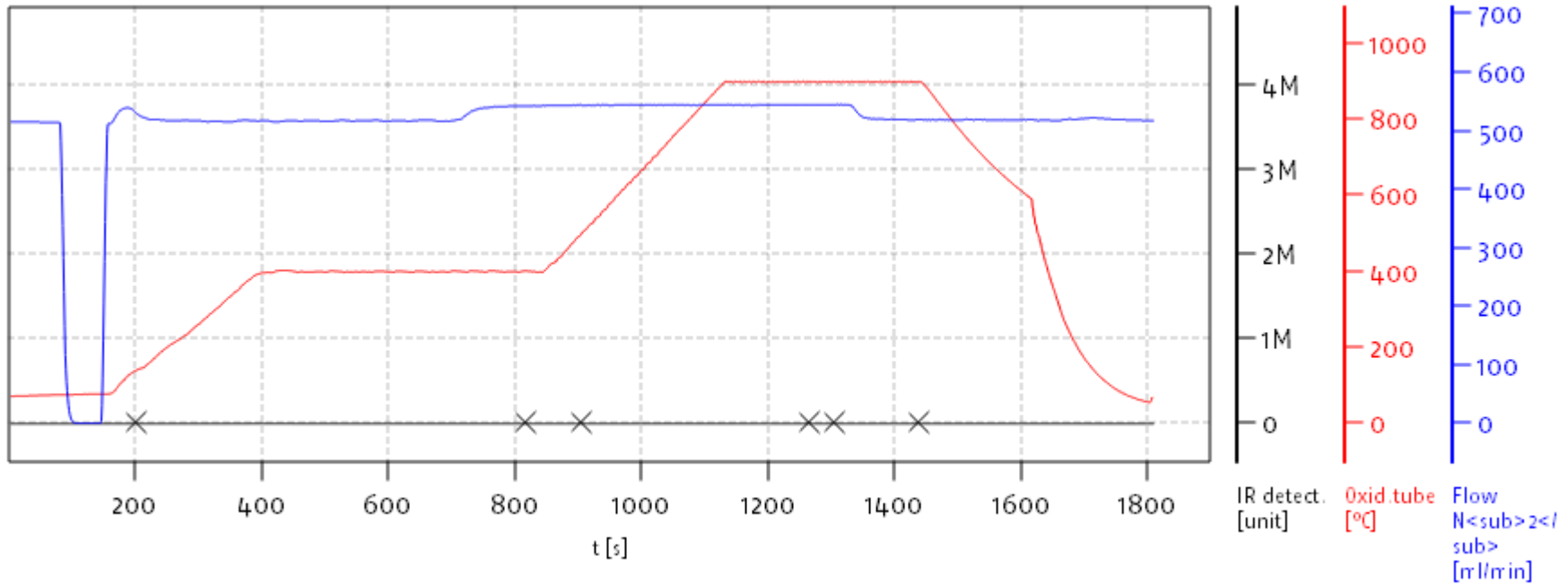
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
137	48	SKL0217-CCBB	517.70		CARBON	12/19/2022 8:54 AM	bl,C3u,C2u	0.000	4 648	0.000	0.000	426	1 879	0.000	0.000	0.9339	1.0000



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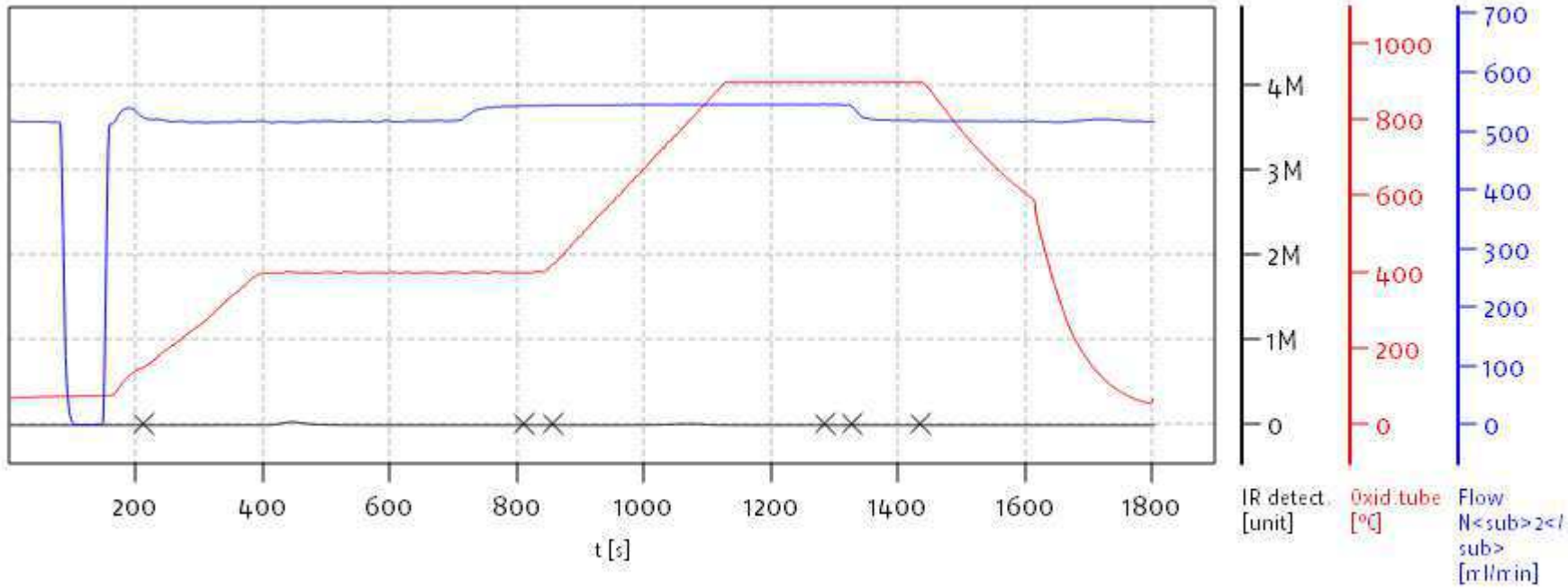
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
138	49	BKL0434-MRL1	526.80		CARBON	12/19/2022 9:24 AM	bl,C2u	0.012	71 306	0.015	0.000	656	37 327	0.012	0.003	0.9339	1.0000



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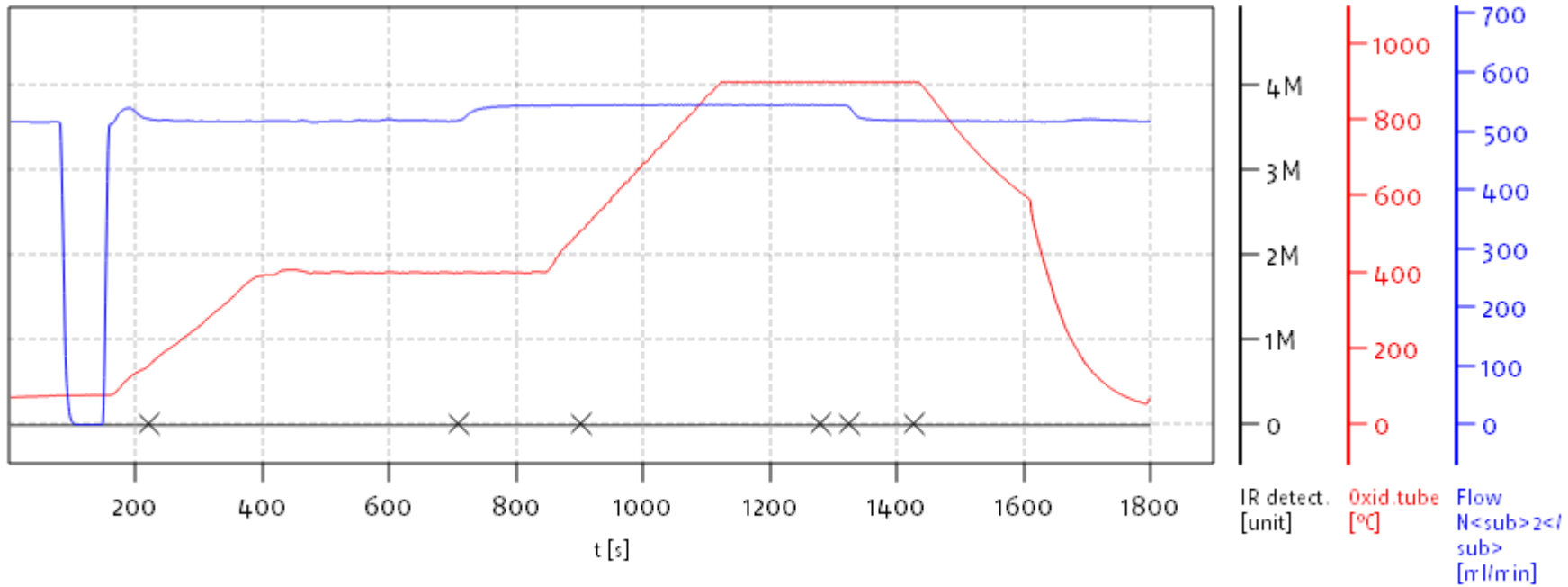
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
139	50	BKL0434-BLK1	518.90		CARBON	12/19/2022 9:54 AM	bl,C2u	0.000	5 286	0.000	0.000	403	8 688	0.000	0.000	0.9339	1.0000



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elementar
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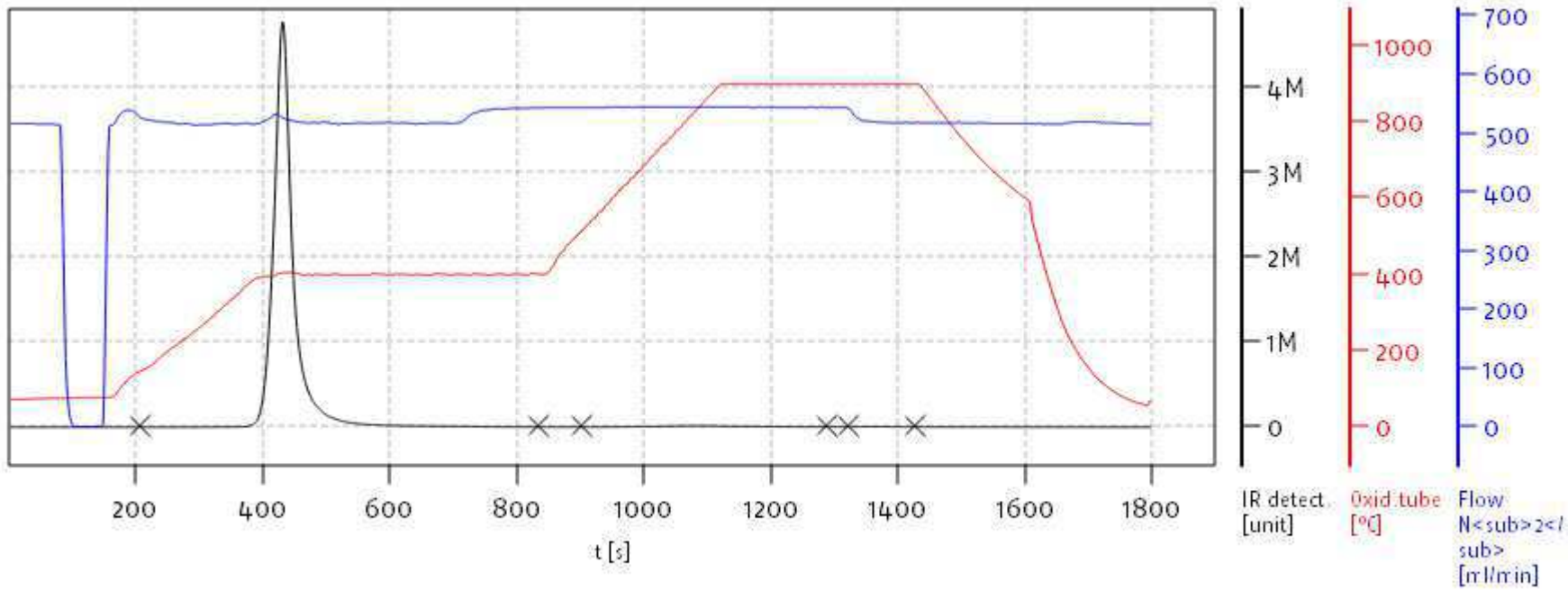
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
140	51	BKL0434-BS1	20.40		CARBON	12/19/2022 10:25 AM	bl	44.504	6 306 430	45.082	0.000	17 976	102 660	44.504	0.578	0.9339	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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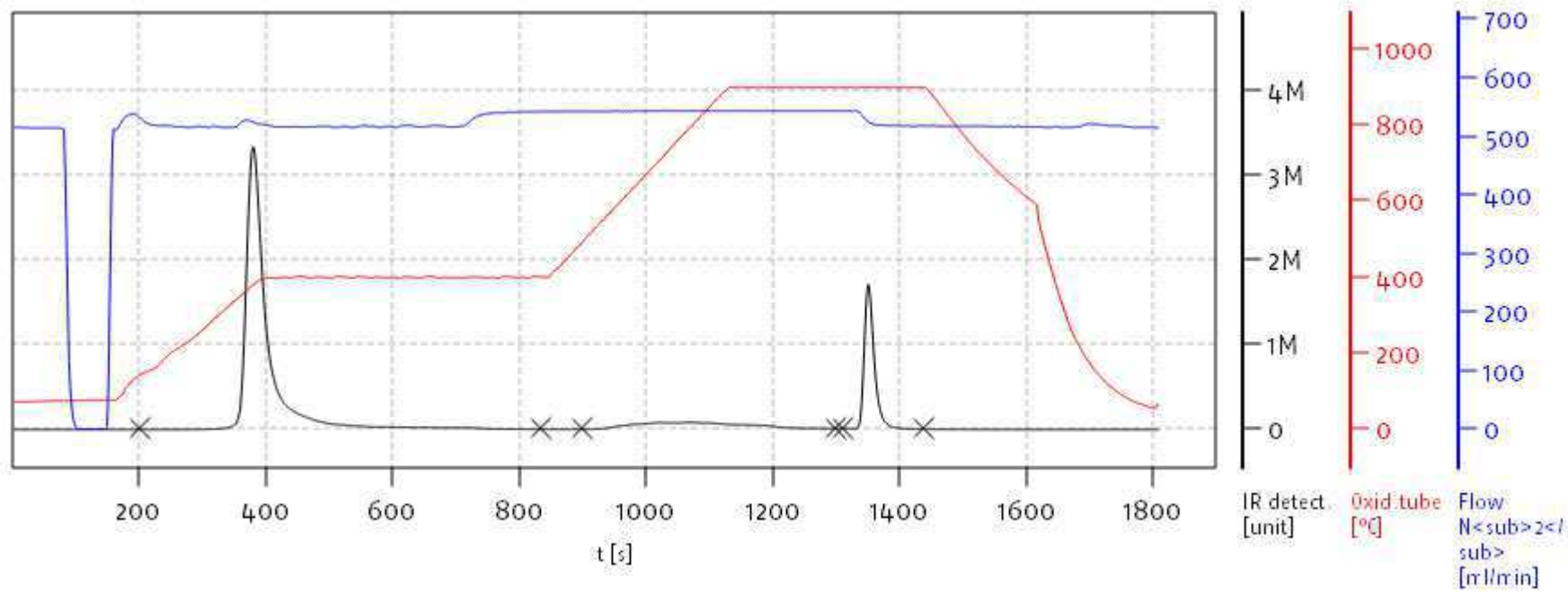
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
141	52	BKL0434-SRM1	286.60		CARBON	12/19/2022 10:55 AM	bl	2.991	4 695 020	3.357	0.636	1 203 870	704 619	2.355	0.366	0.9339	1.0000



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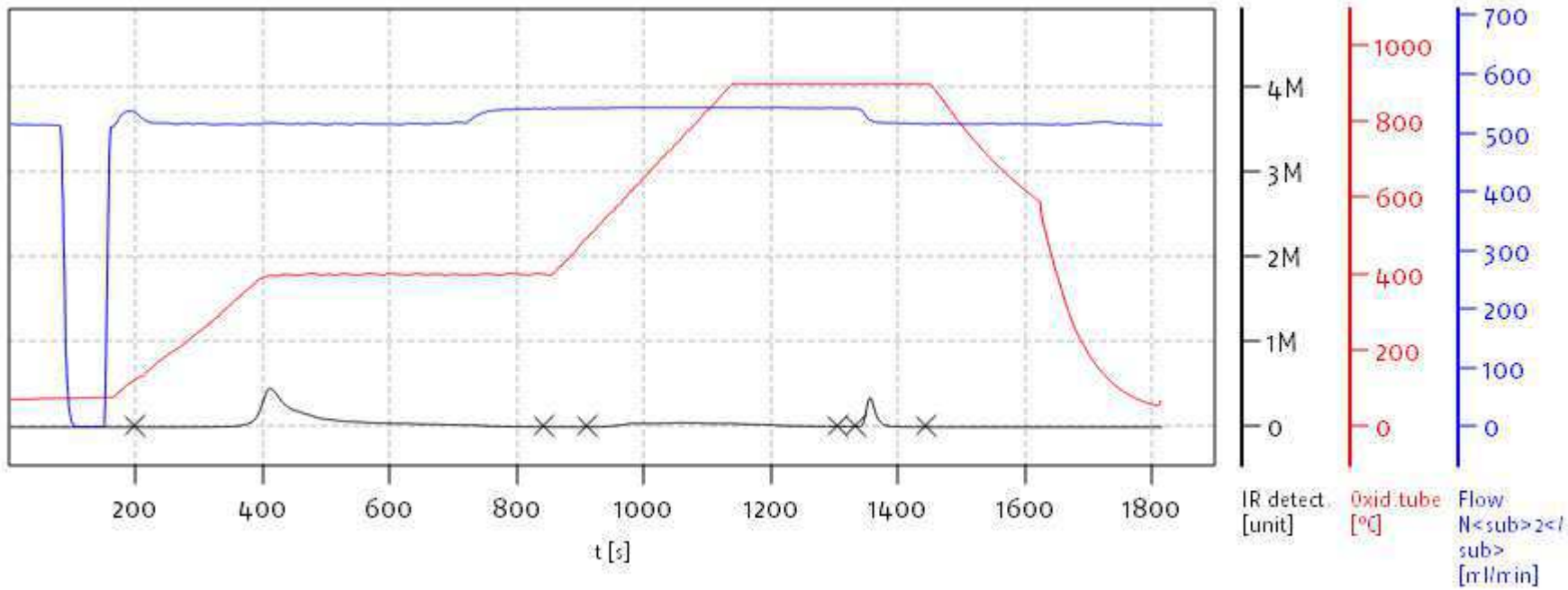
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
142	53	22L0155-47	300.70		CARBON	12/19/2022 11:26 AM	bl	0.786	1 444 340	0.991	0.105	229 800	424 210	0.682	0.205	0.9339	1.0000



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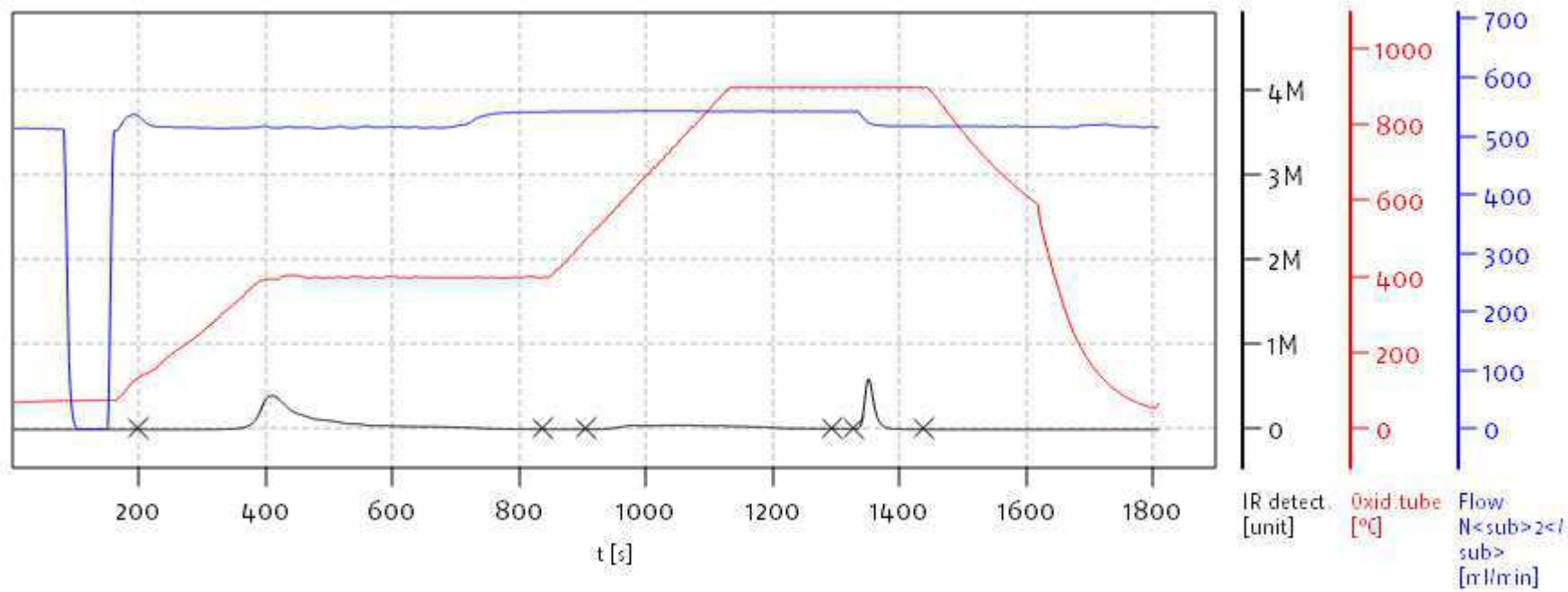
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
143	54	BKL0434-DUP1	297.50		CARBON	12/19/2022 11:57 AM	bl	0.890	1 458 470	1.104	0.194	399 377	438 580	0.696	0.214	0.9339	1.0000



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Soli TOC Cube, Carbon
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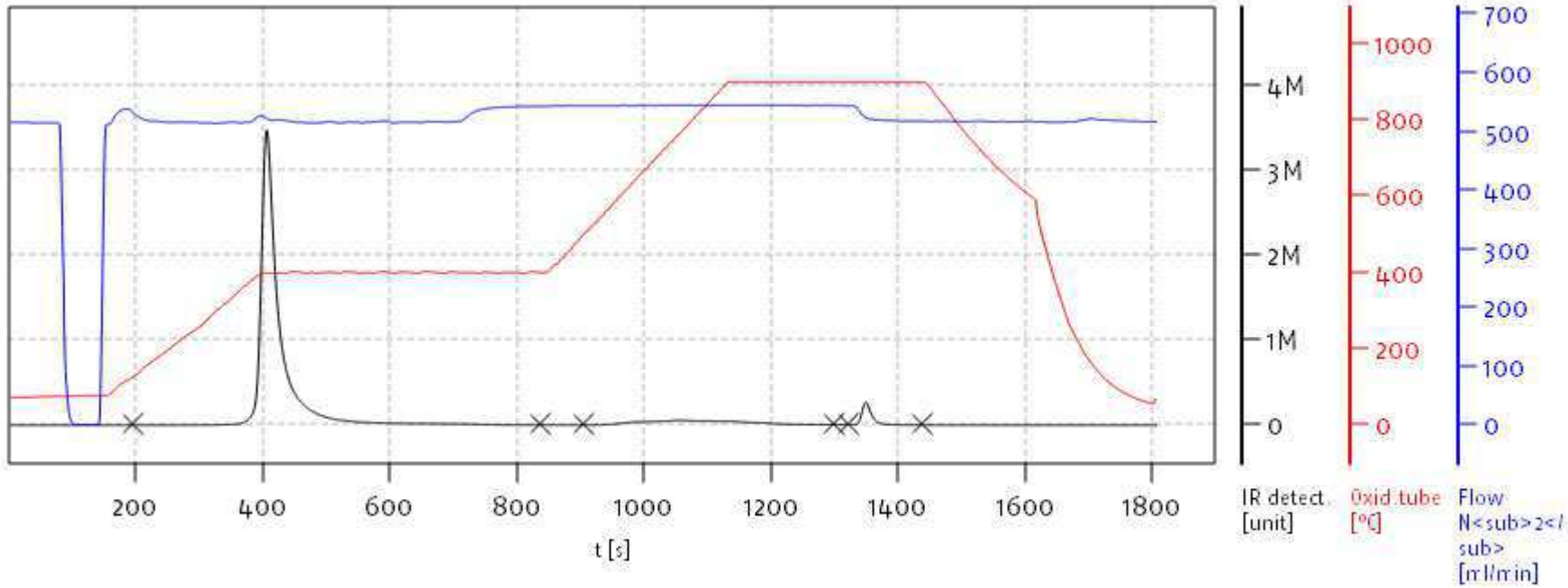
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
144	55	BKL0434-MS1	316.70	0.0081	CARBON	12/19/2022 12:27 PM	bl	2.008	4 256 370	2.200	0.077	184 213	418 601	1.931	0.192	0.9339	1.0000



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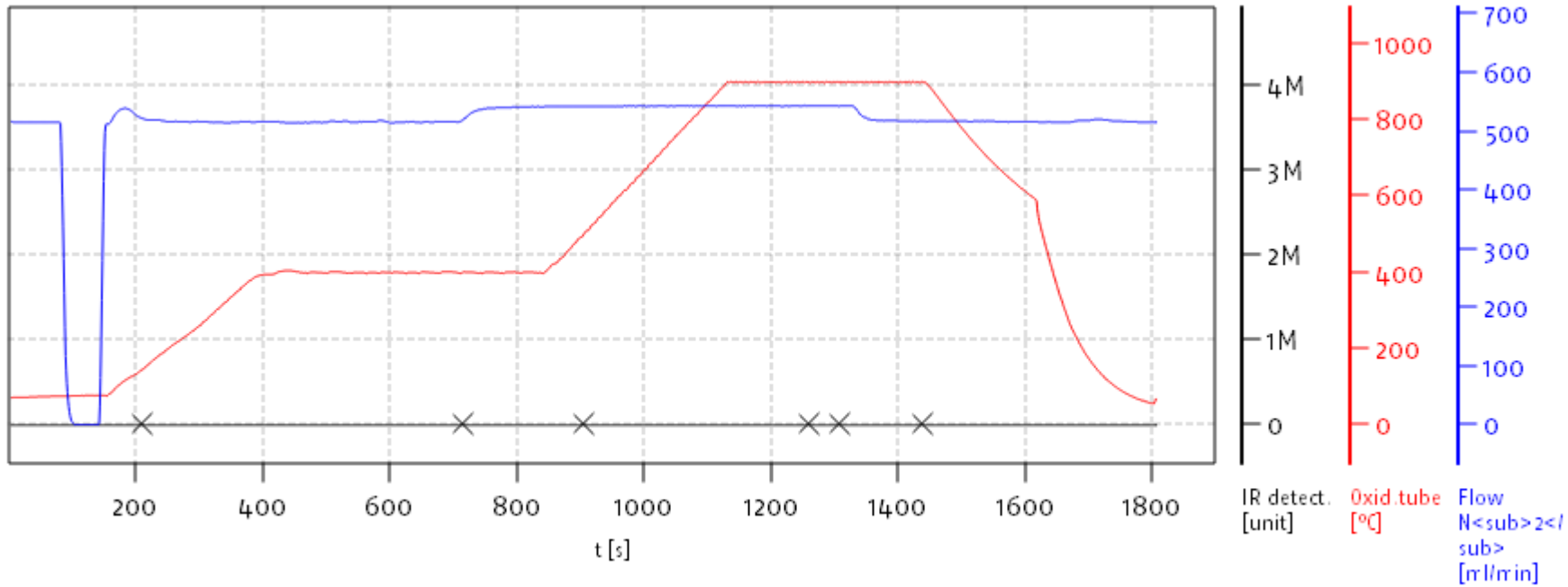
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
145	56	BLANK	1.00		CARBON	12/19/2022 12:58 PM	bl	0.000	2 843	0.000	0.000	311	466	0.000	0.000	0.9339	1.0000



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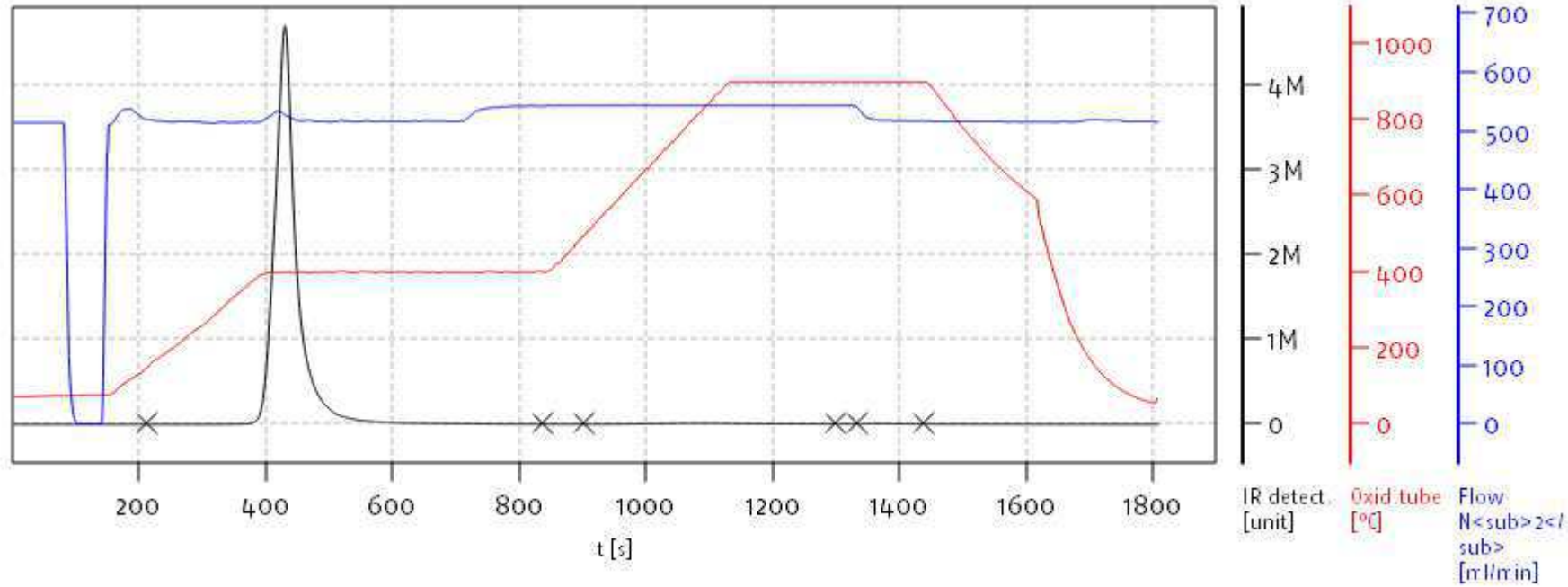
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
146	57	Dfactor	22.90		CARBON	12/19/2022 1:28 PM	bl	44.446	7 040 660	45.028	0.000	23 903	112 623	44.446	0.582	0.9374	1.0000



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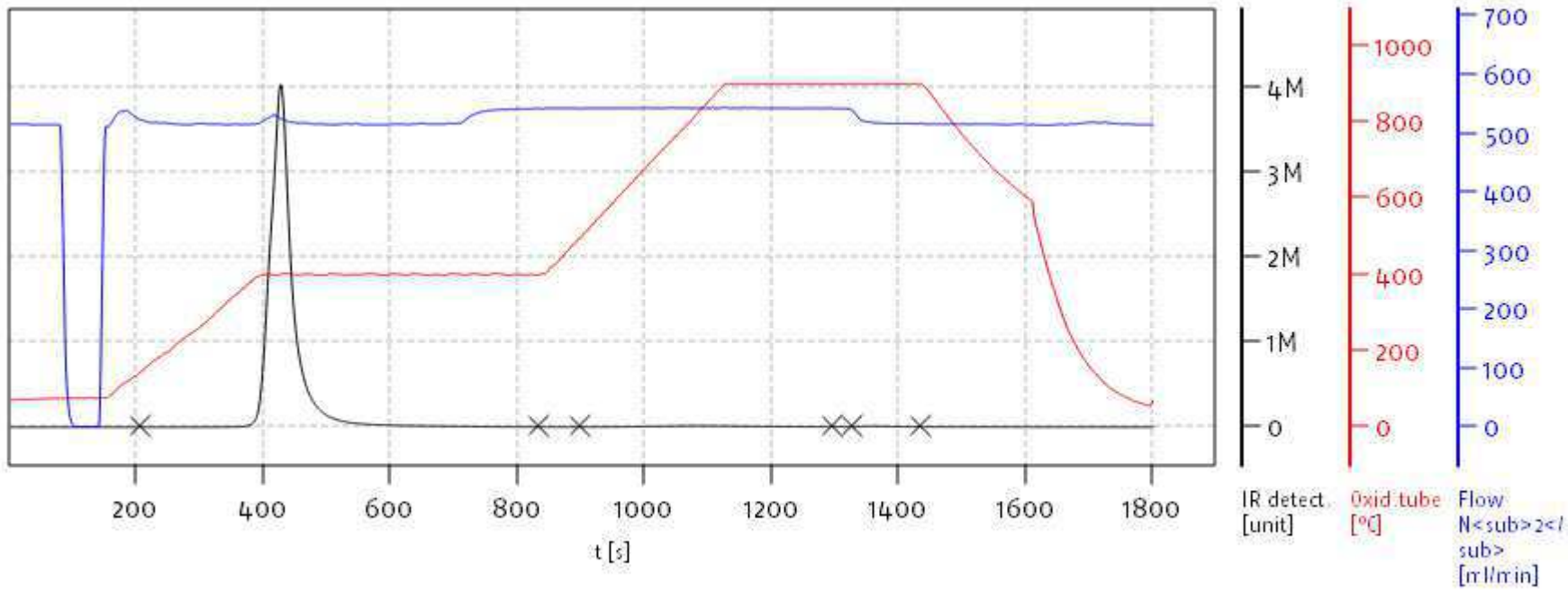
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
147	58	Dfactor	20.20		CARBON	12/19/2022 1:59 PM	bl	44.446	6 117 500	45.095	0.000	26 258	111 257	44.446	0.649	0.9522	1.0000



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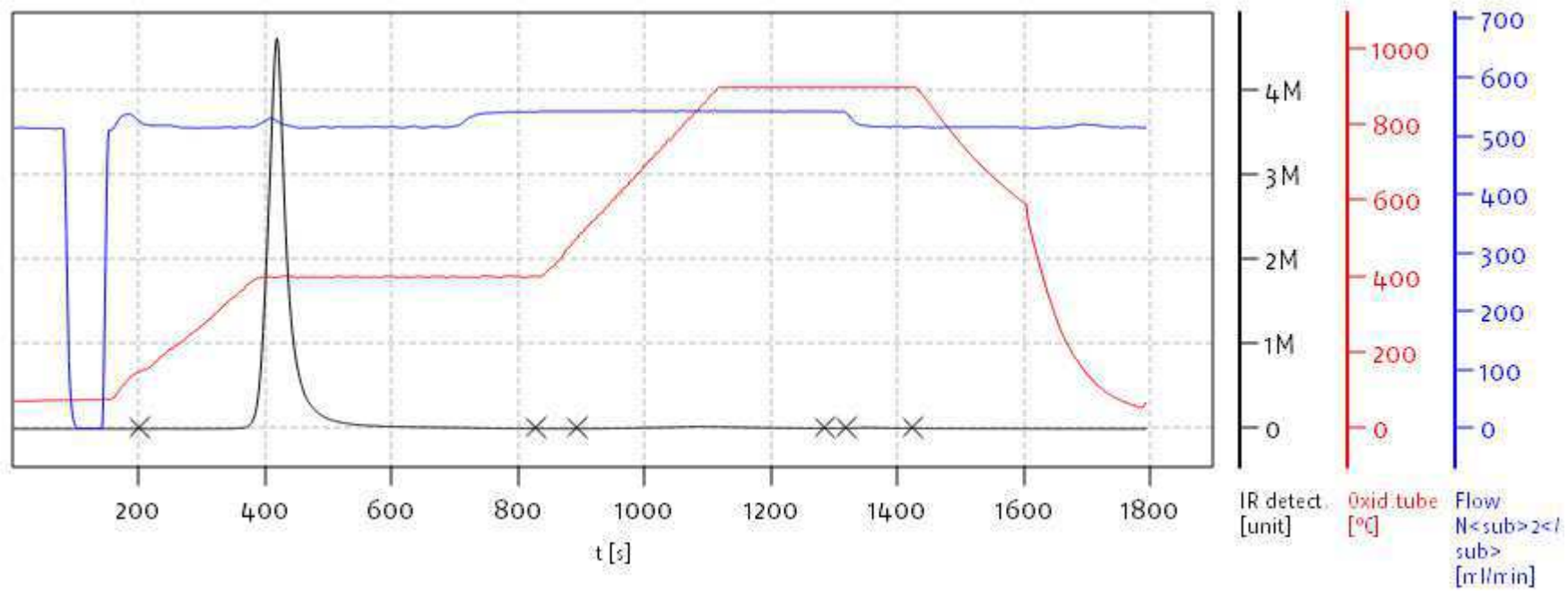
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
148	59	SKL0217-CCVC	21.40		CARBON	12/19/2022 2:29 PM	bl	43.970	6 451 750	45.117	0.059	34 630	185 118	43.912	1.147	0.9448	1.0000



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Access: soliTOC superuser

Date: Wed Dec 21 09:58:21 2022

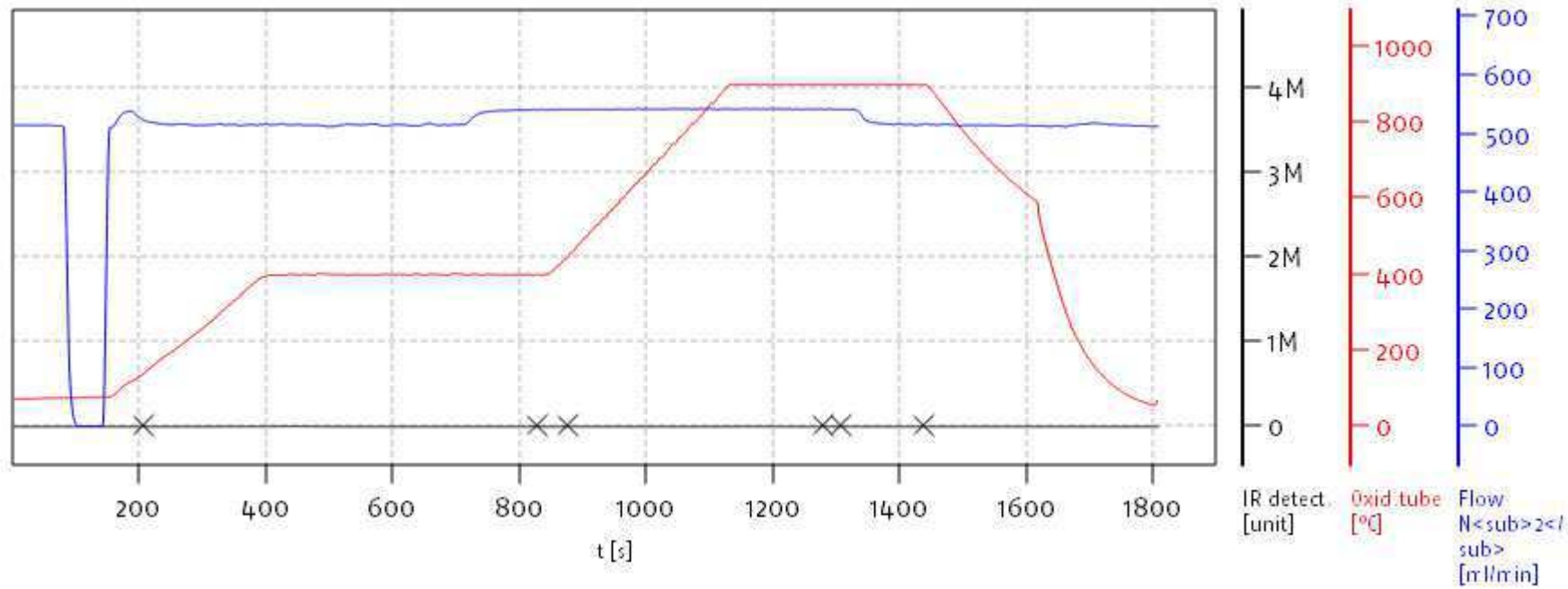
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
149	60	SKL0217-CCBC	518.80		CARBON	12/19/2022 3:00 PM	bl,C2u	0.000	13 041	0.000	0.000	900	3 302	0.000	0.000	0.9448	1.0000



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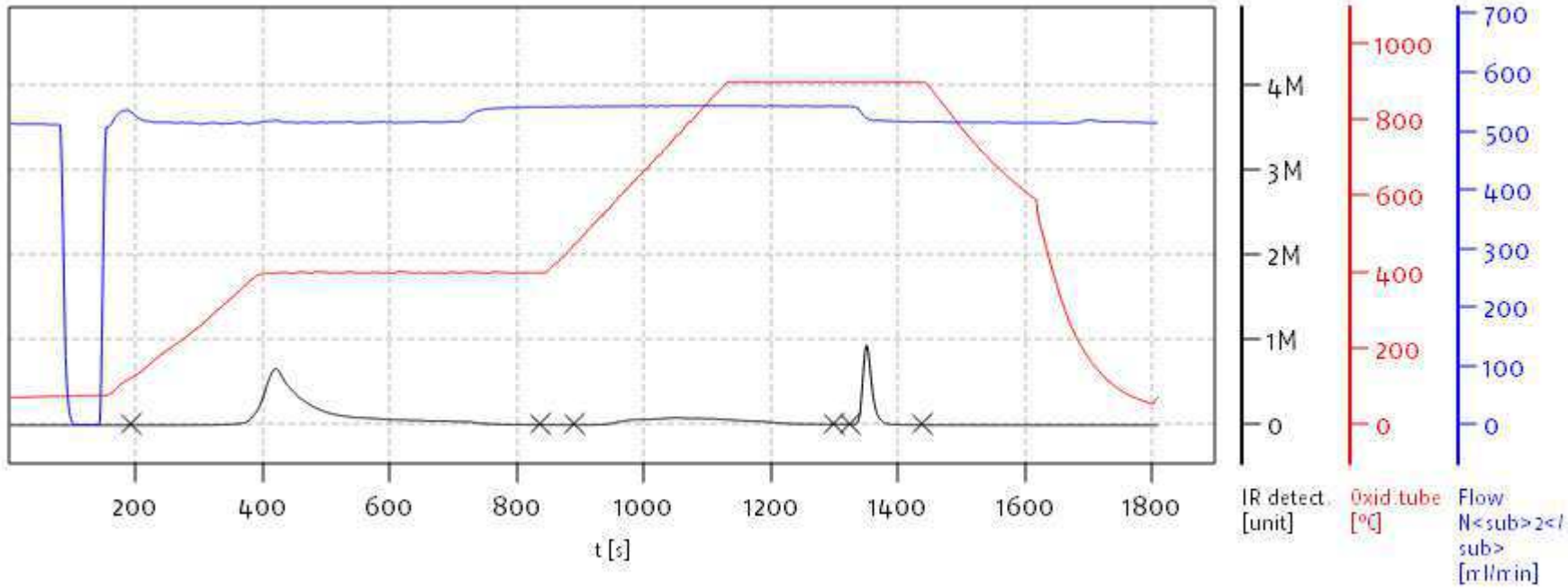
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
150	61	22L0155-48	501.40		CARBON	12/19/2022 3:30 PM	bl	0.831	2 262 460	1.032	0.179	606 182	678 322	0.652	0.201	0.9448	1.0000



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Serial No: 0300.181017
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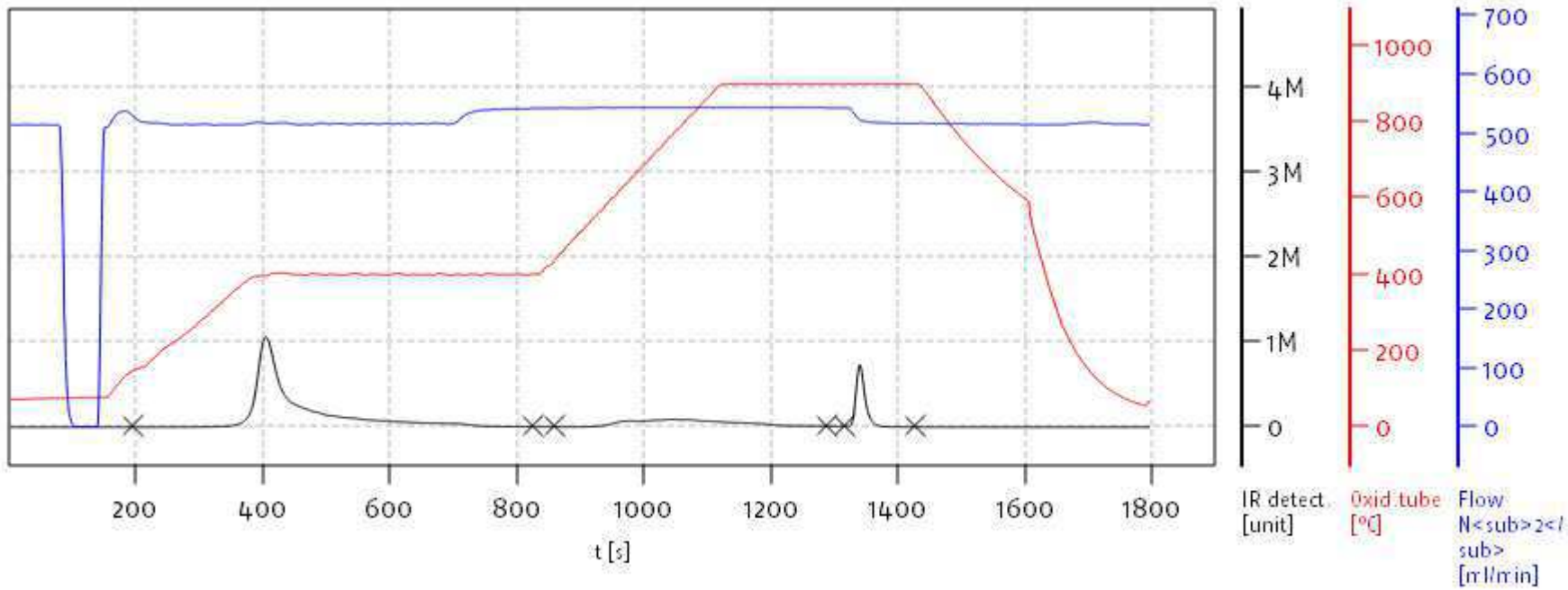
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
151	62	22L0155-49	503.70		CARBON	12/19/2022 4:00 PM	bl	0.894	2 643 310	1.103	0.134	463 351	705 750	0.760	0.209	0.9448	1.0000



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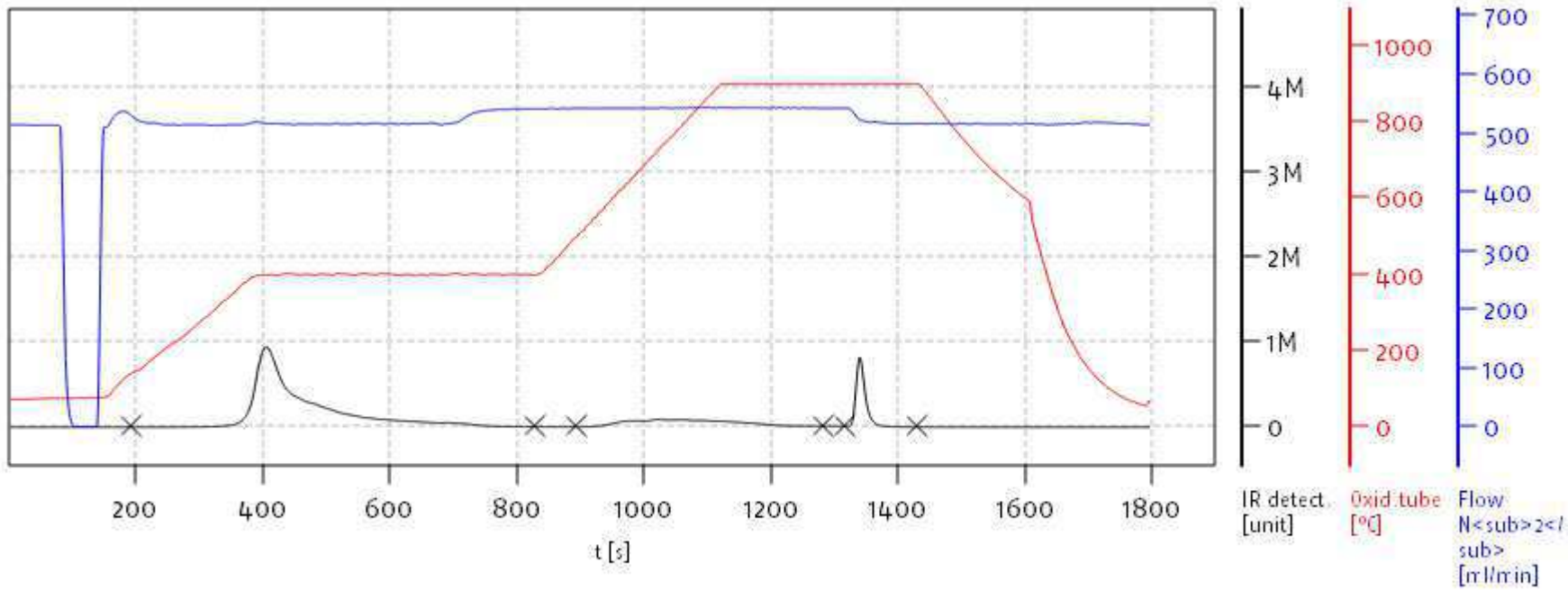
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
152	63	22L0155-50	510.00		CARBON	12/19/2022 4:31 PM	bl	1.041	3 127 170	1.248	0.152	528 022	708 468	0.889	0.207	0.9448	1.0000



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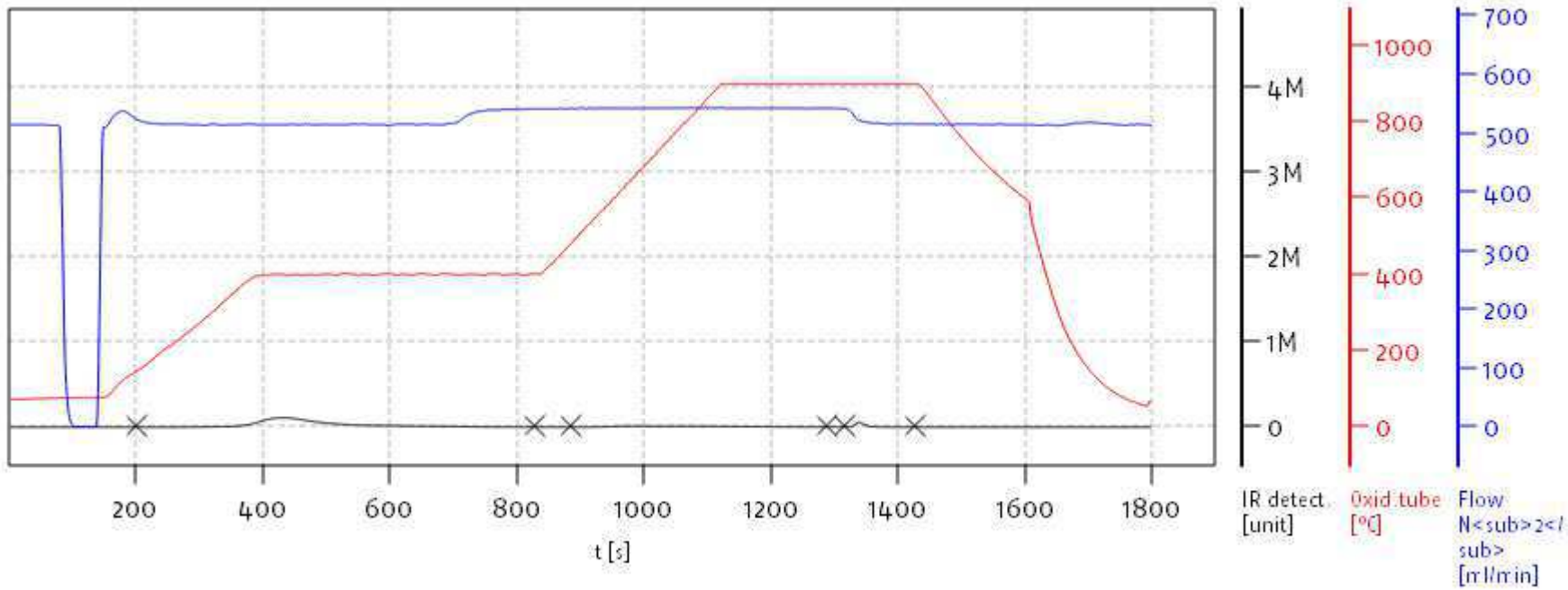
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
153	64	22L0155-51	525.80		CARBON	12/19/2022 5:01 PM	bl	0.149	551 811	0.170	0.003	36 837	97 854	0.146	0.021	0.9448	1.0000



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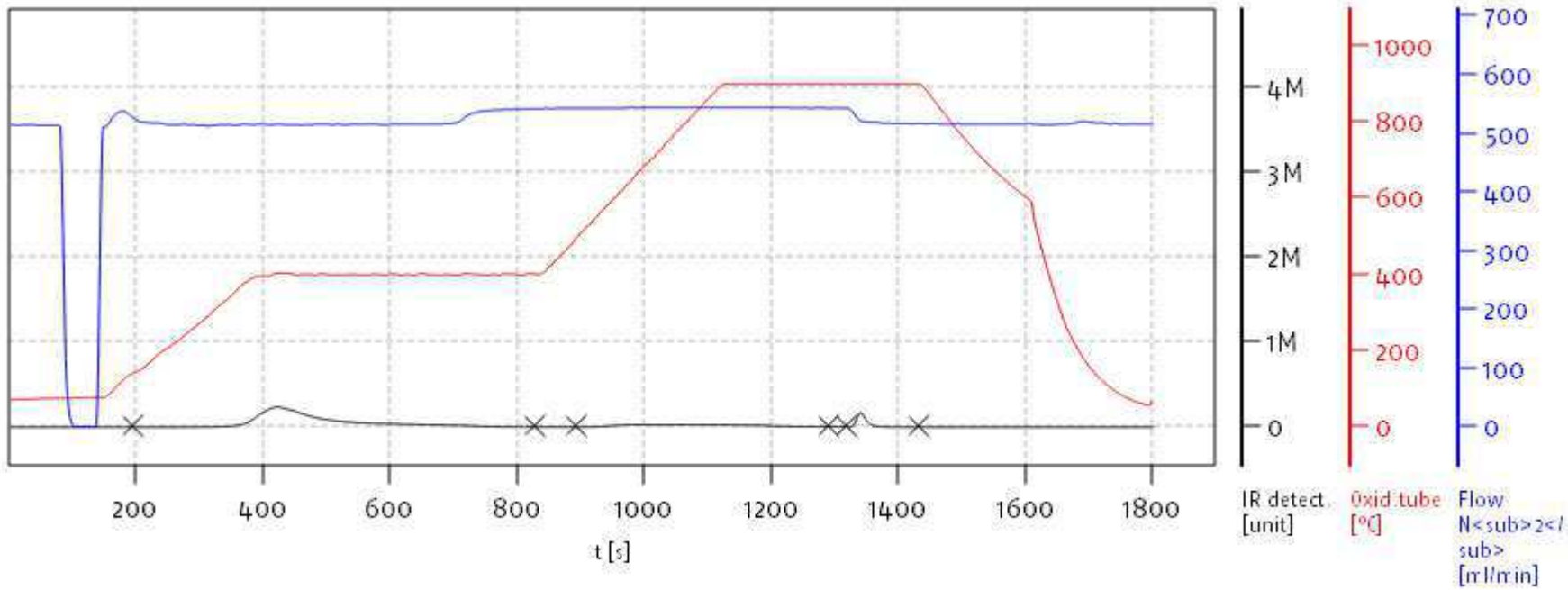
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
154	65	22L0155-52	509.70		CARBON	12/19/2022 5:32 PM	bl	0.345	1 138 450	0.417	0.026	112 697	261 264	0.319	0.071	0.9448	1.0000



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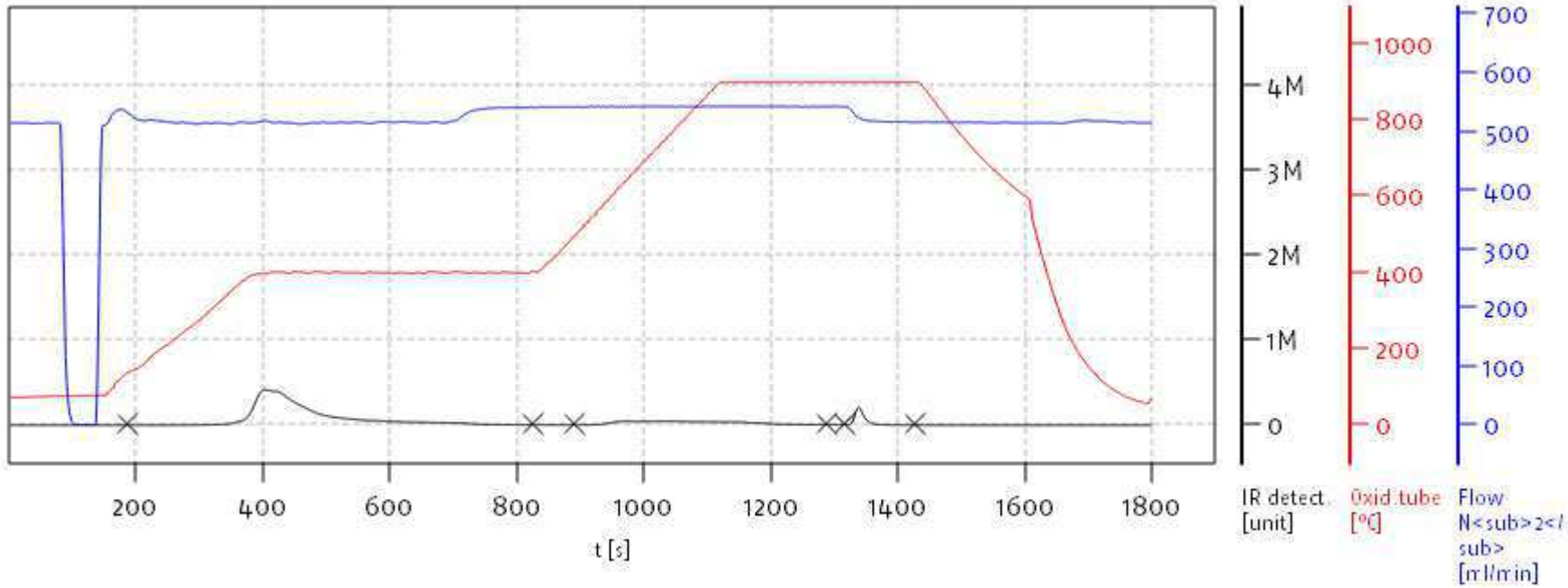
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
155	66	22L0155-53	512.00		CARBON	12/19/2022 6:02 PM	bl	0.529	1 755 950	0.645	0.035	142 432	408 766	0.494	0.116	0.9448	1.0000



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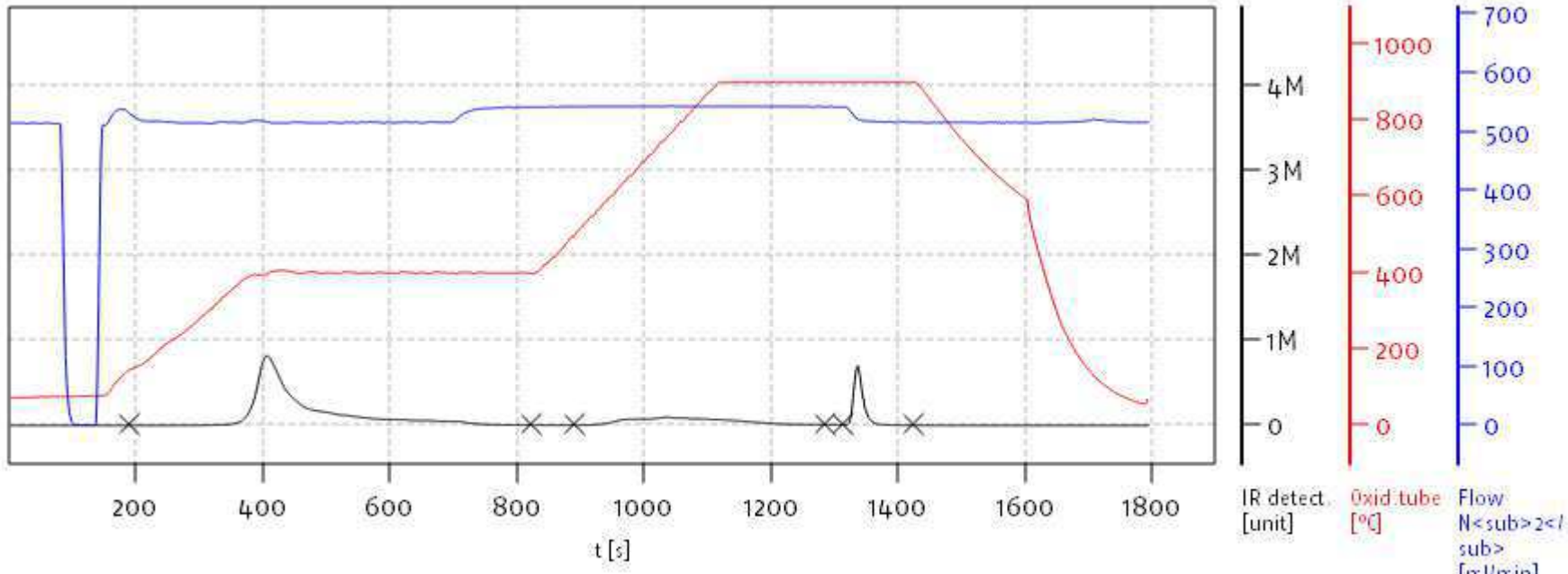
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
156	67	22L0155-54	514.80		CARBON	12/19/2022 6:32 PM	bl	0.851	2 566 930	1.054	0.129	455 693	703 634	0.722	0.204	0.9448	1.0000



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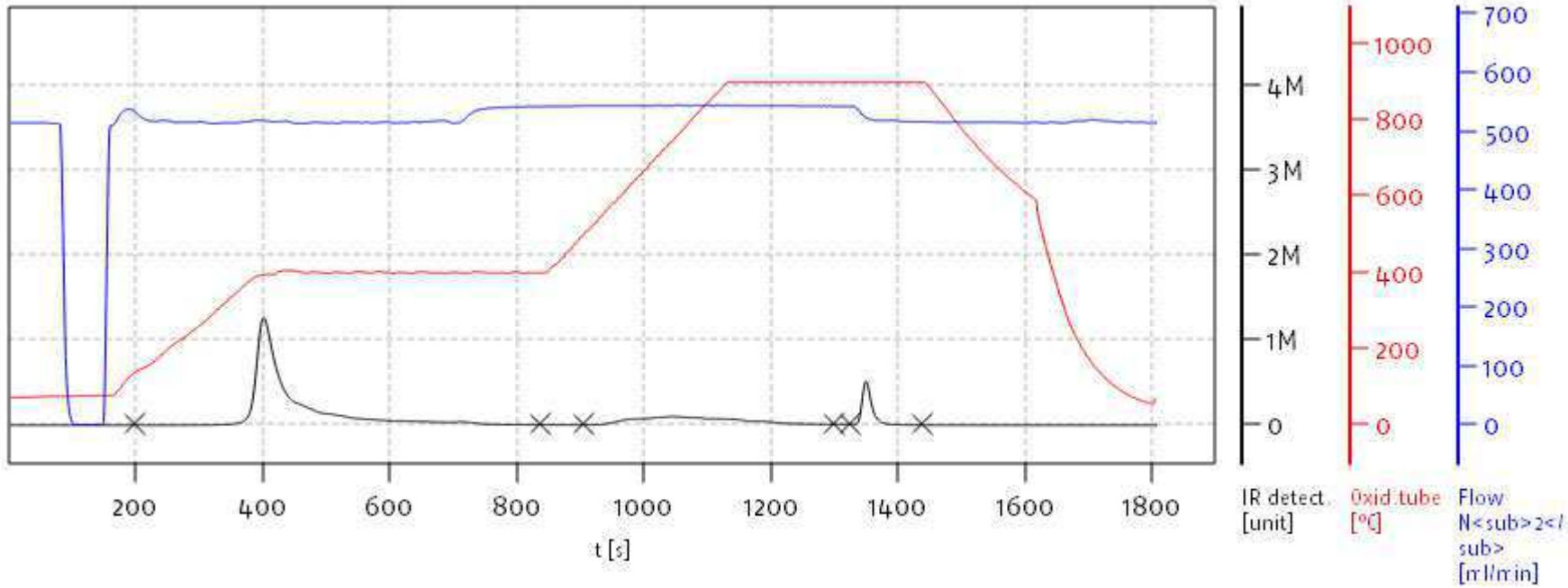
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
157	68	22L0155-55	502.40		CARBON	12/19/2022 7:03 PM	bl	0.895	2 759 840	1.119	0.099	348 228	754 944	0.796	0.224	0.9448	1.0000



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Soli TOC Cube, Carbon
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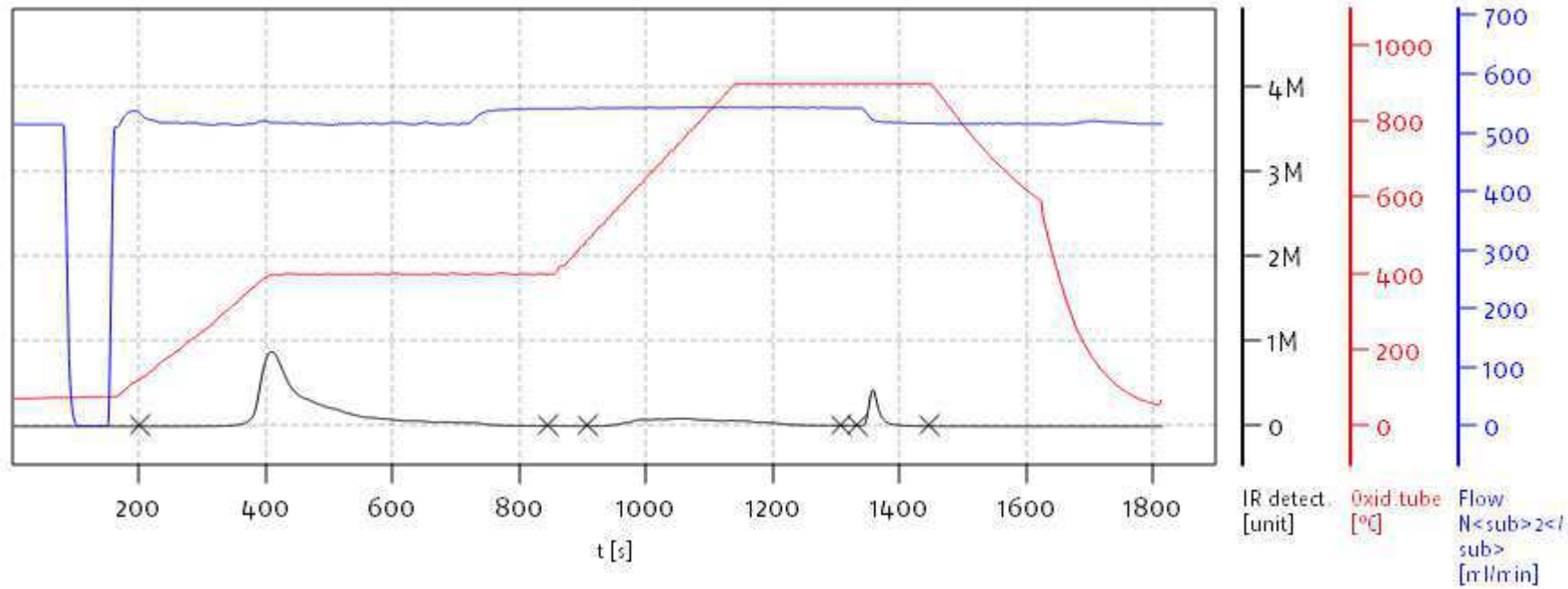
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
158	69	22L0155-56	567.80		CARBON	12/19/2022 7:34 PM	bl	0.842	2 998 180	1.030	0.077	308 923	713 266	0.765	0.187	0.9448	1.0000



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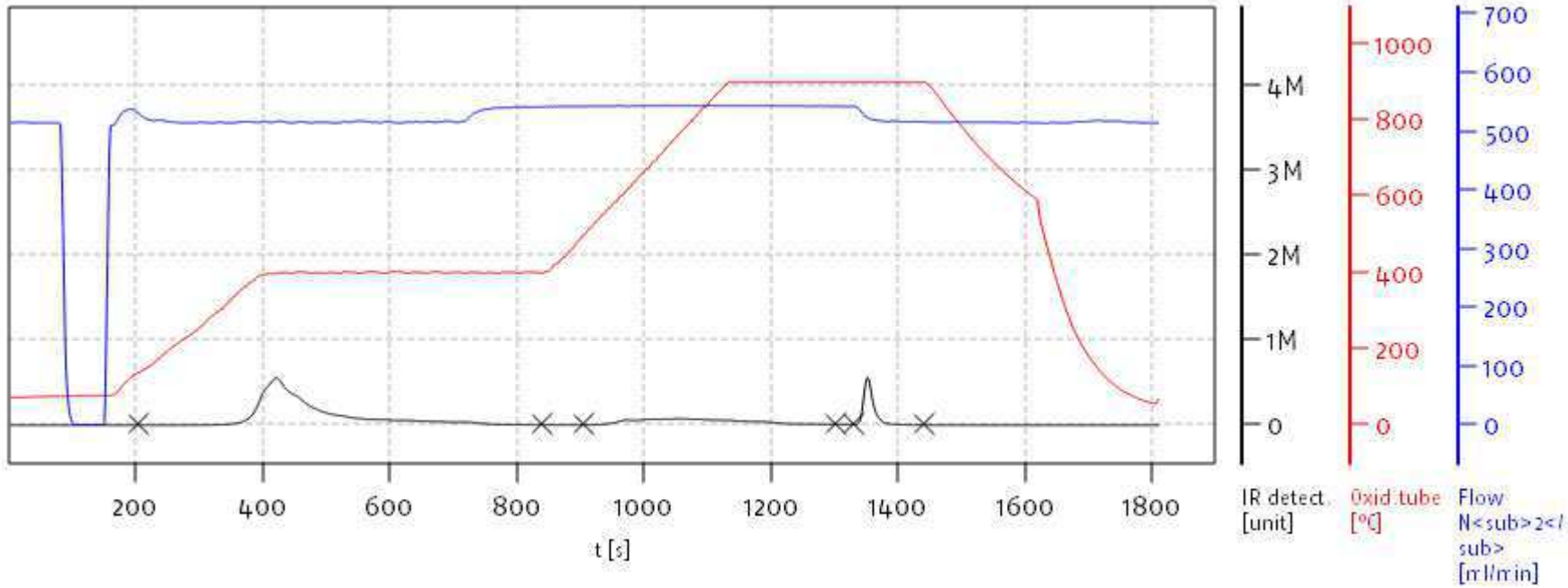
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
159	70	22L0155-57	562.70		CARBON	12/19/2022 8:04 PM	bl	0.641	2 118 640	0.805	0.098	380 998	621 204	0.544	0.164	0.9448	1.0000



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Soli TOC Cube, Carbon
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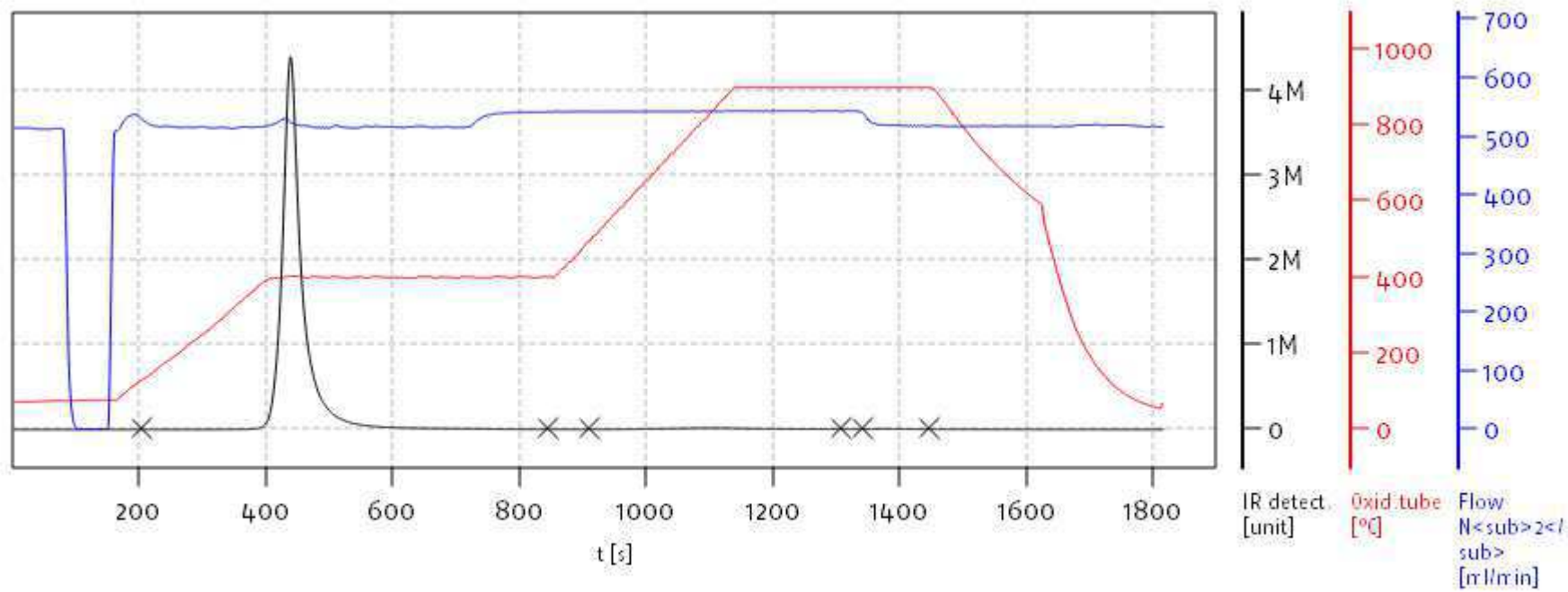
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
160	71	SKL0217-CCVD	19.70		CARBON	12/19/2022 8:35 PM	bl	44.055	5 960 590	44.844	0.000	22 603	127 020	44.055	0.790	0.9448	1.0000



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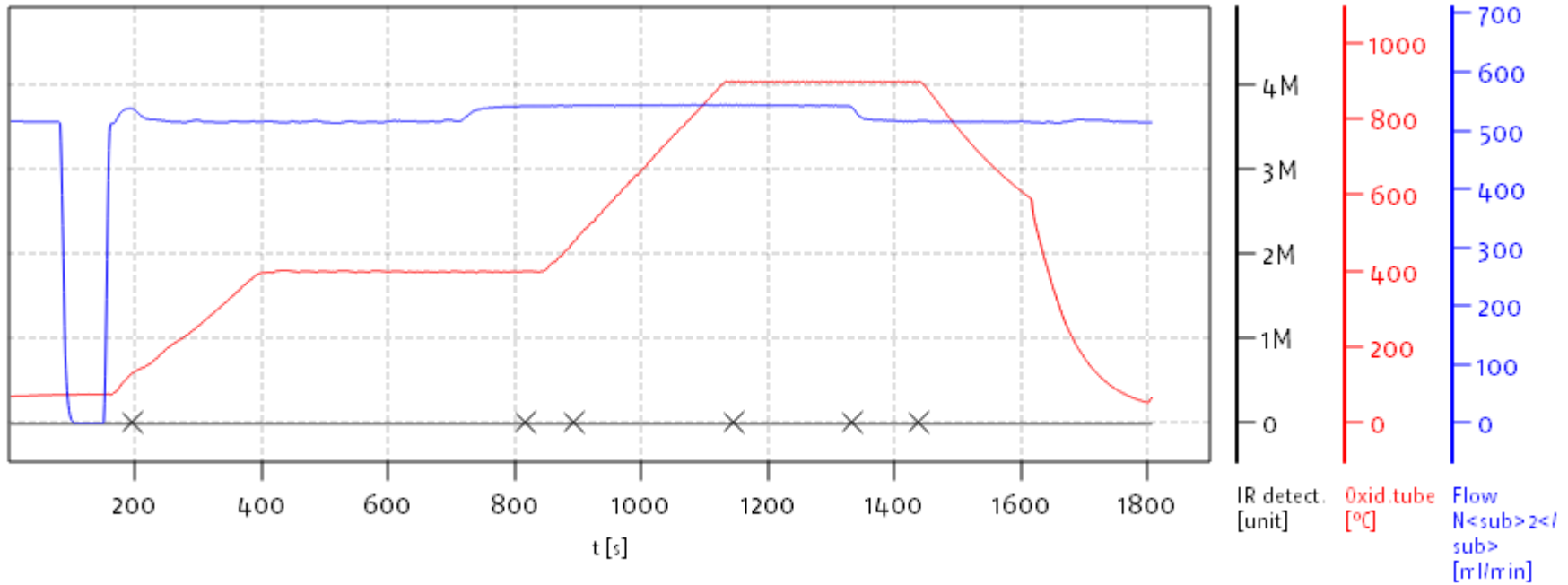
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
161	72	SKL0217-CCBD	561.60		CARBON	12/19/2022 9:05 PM	bl,C3u,C2u	0.000	3 930	0.000	0.000	497	950	0.000	0.000	0.9448	1.0000



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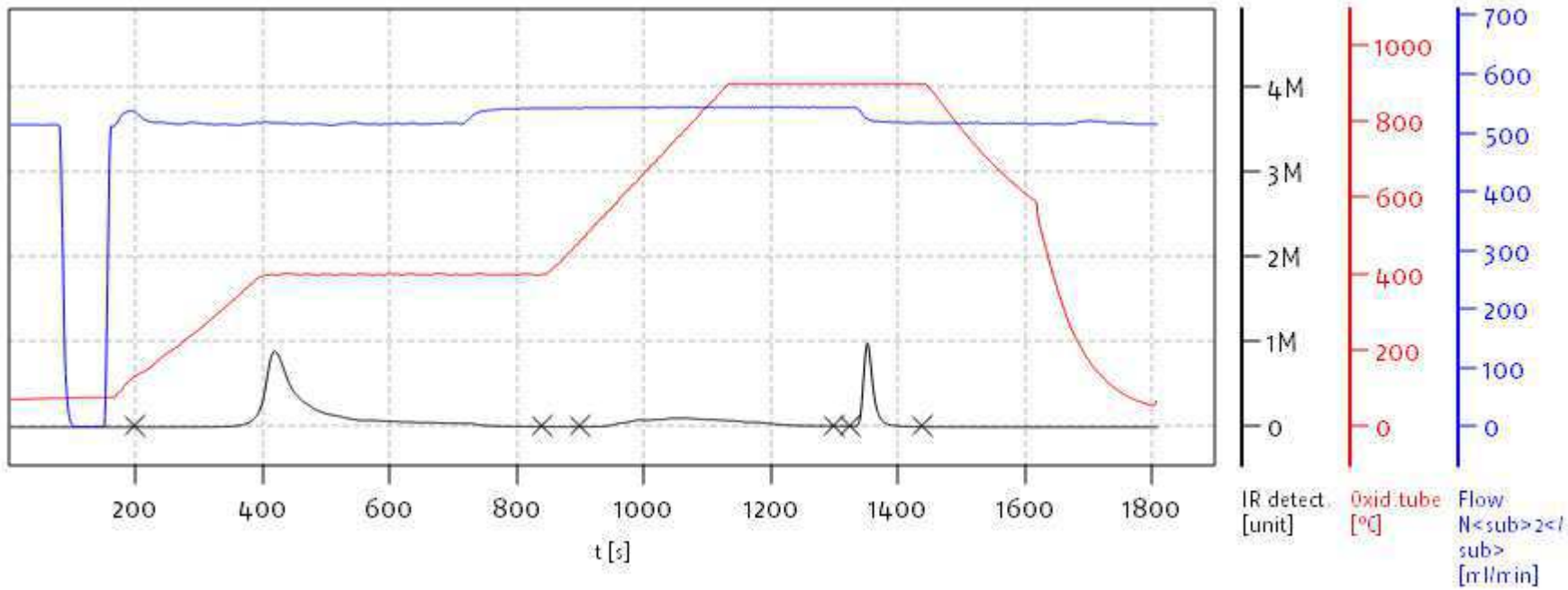
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
162	73	22L0155-58	517.10		CARBON	12/19/2022 9:36 PM	bl	0.903	2 532 670	1.138	0.194	674 833	813 027	0.709	0.235	0.9448	1.0000



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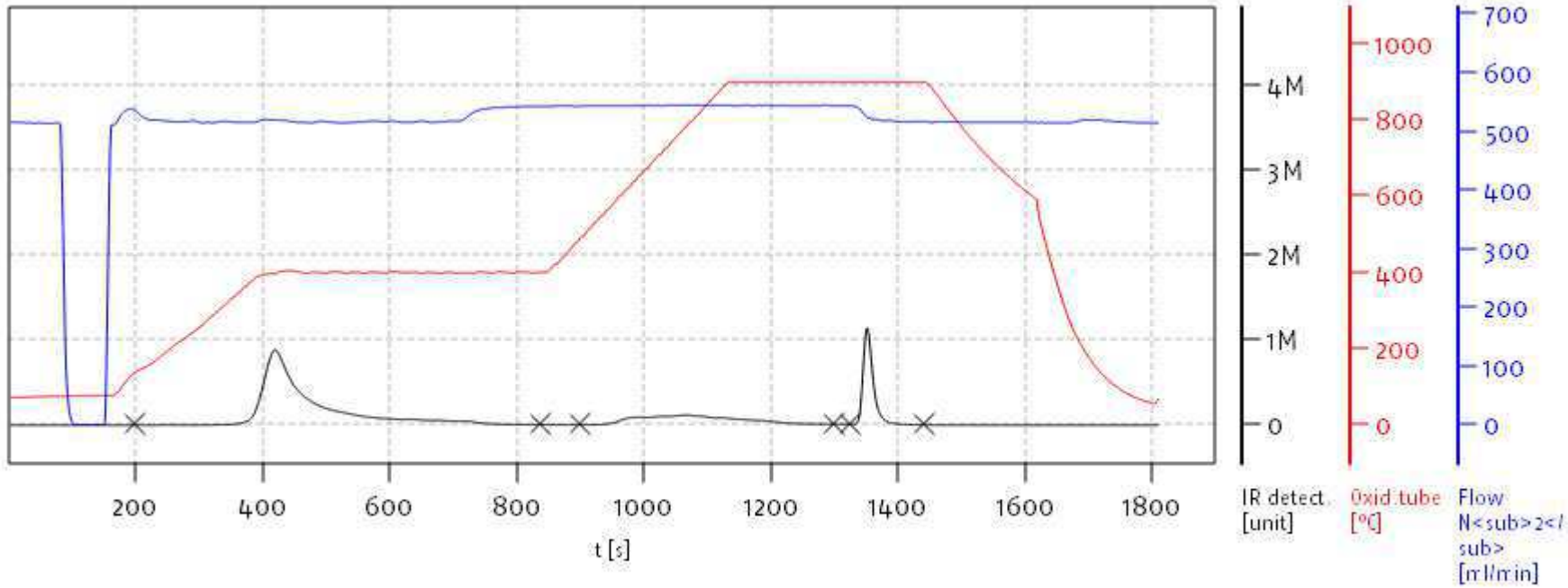
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
163	74	22L0155-59	582.80		CARBON	12/19/2022 10:06 PM	bl	0.917	2 856 050	1.146	0.207	805 275	889 946	0.710	0.229	0.9448	1.0000



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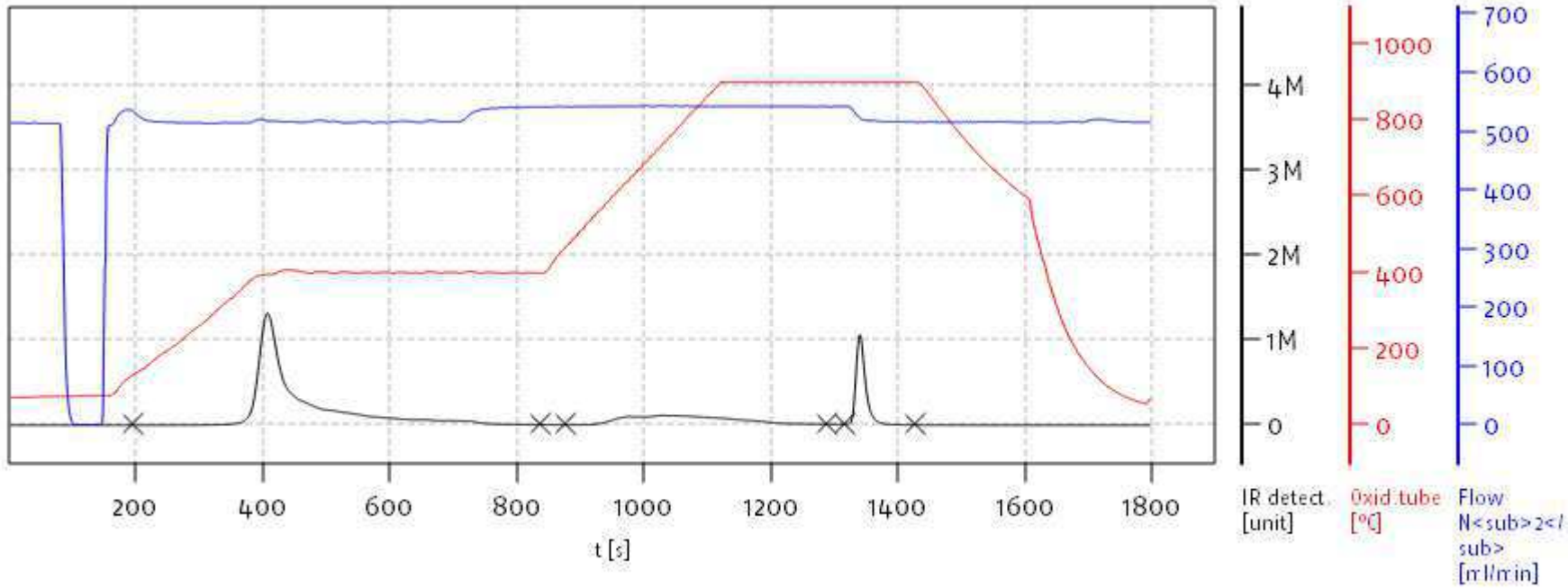
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
164	75	22L0155-60	516.40		CARBON	12/19/2022 10:37 PM	bl	1.113	3 243 110	1.376	0.202	701 927	902 483	0.911	0.263	0.9448	1.0000



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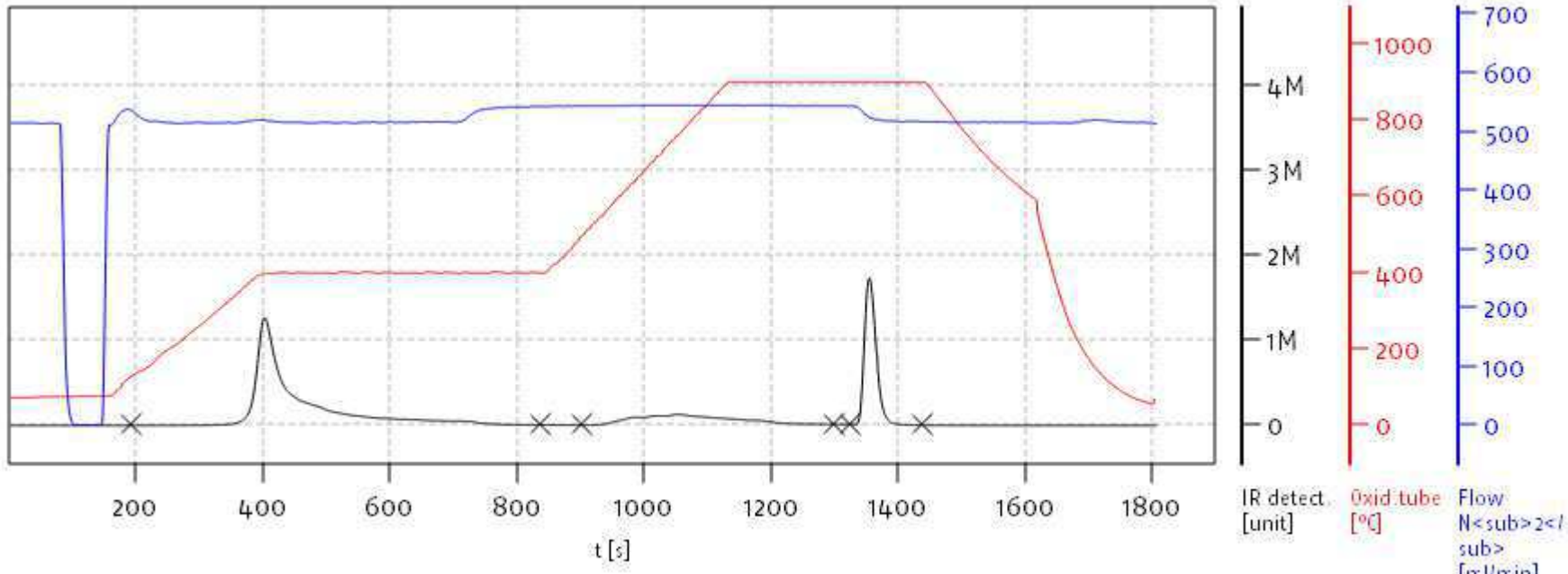
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
165	76	22L0155-61	545.90		CARBON	12/19/2022 11:07 PM	bl	1.240	3 187 960	1.496	0.393	1 412 460	930 433	0.847	0.256	0.9448	1.0000



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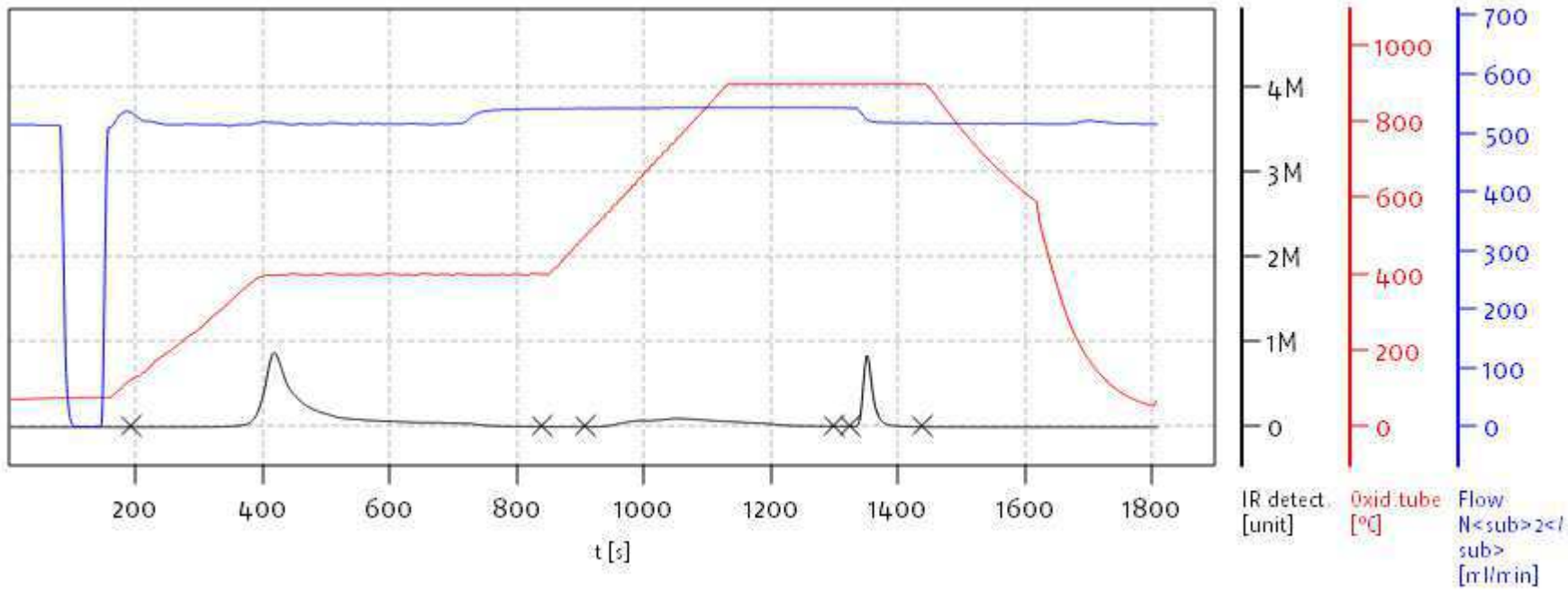
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
166	77	22L0155-62	503.60		CARBON	12/19/2022 11:38 PM	bl	0.873	2 448 400	1.090	0.170	579 959	732 274	0.703	0.217	0.9448	1.0000



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Soli TOC Cube, Carbon
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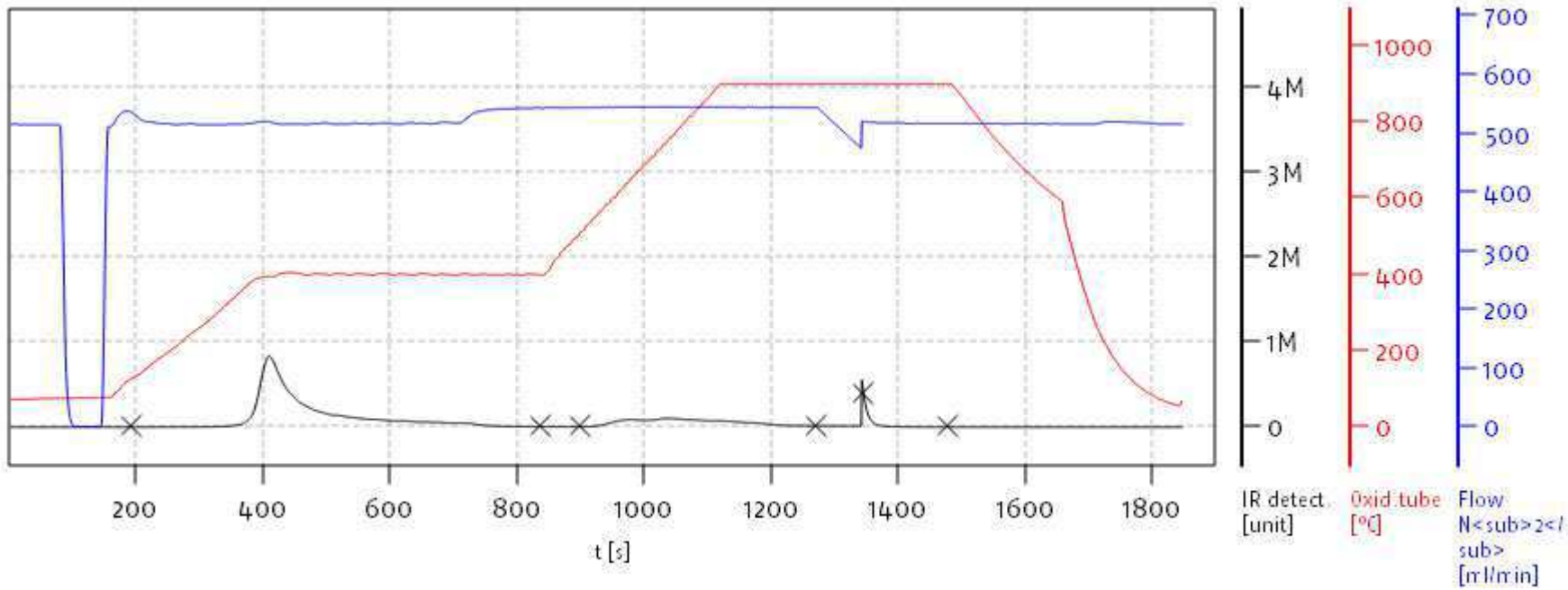
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
167	78	22L0155-63	503.80		CARBON	12/20/2022 12:09 AM	bl	0.787	2 631 460	1.022	0.031	125 896	790 922	0.756	0.235	0.9448	1.0000



Name:

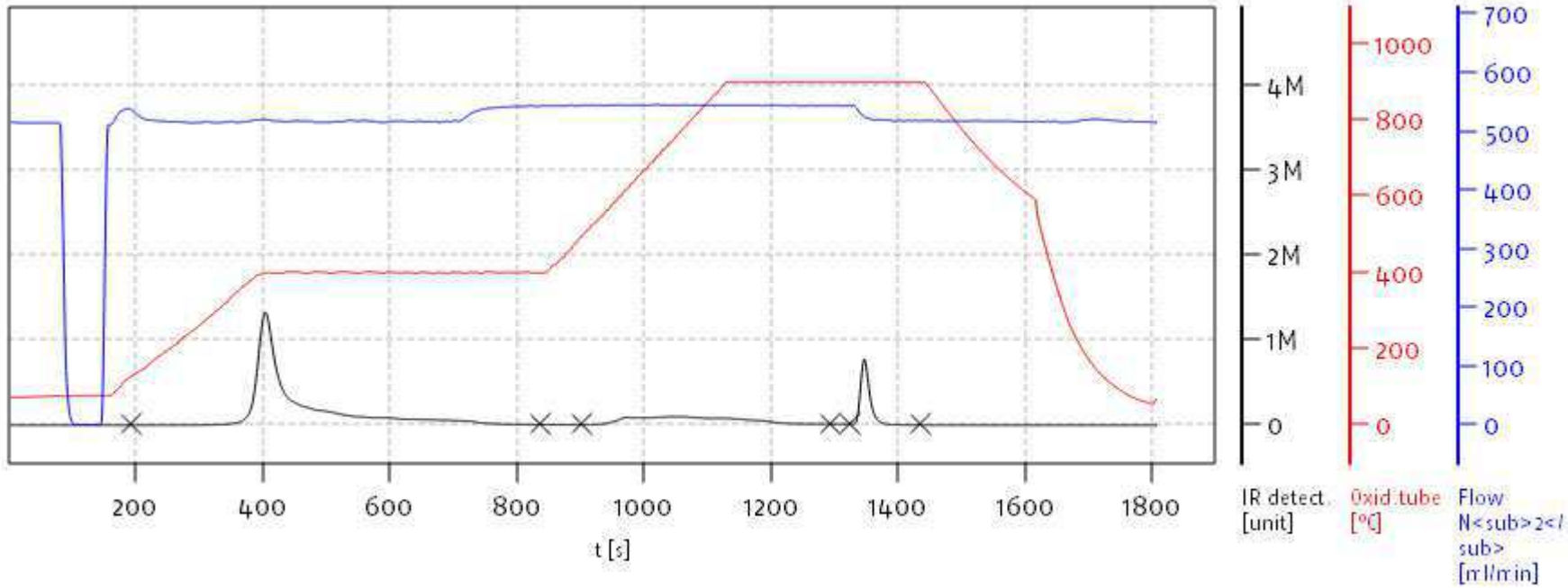
Access: soliTOC superuser

Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
168	79	22L0155-64	509.10		CARBON	12/20/2022 12:40 AM	bl	0.994	2 992 340	1.241	0.142	495 108	838 846	0.852	0.247	0.9448	1.0000



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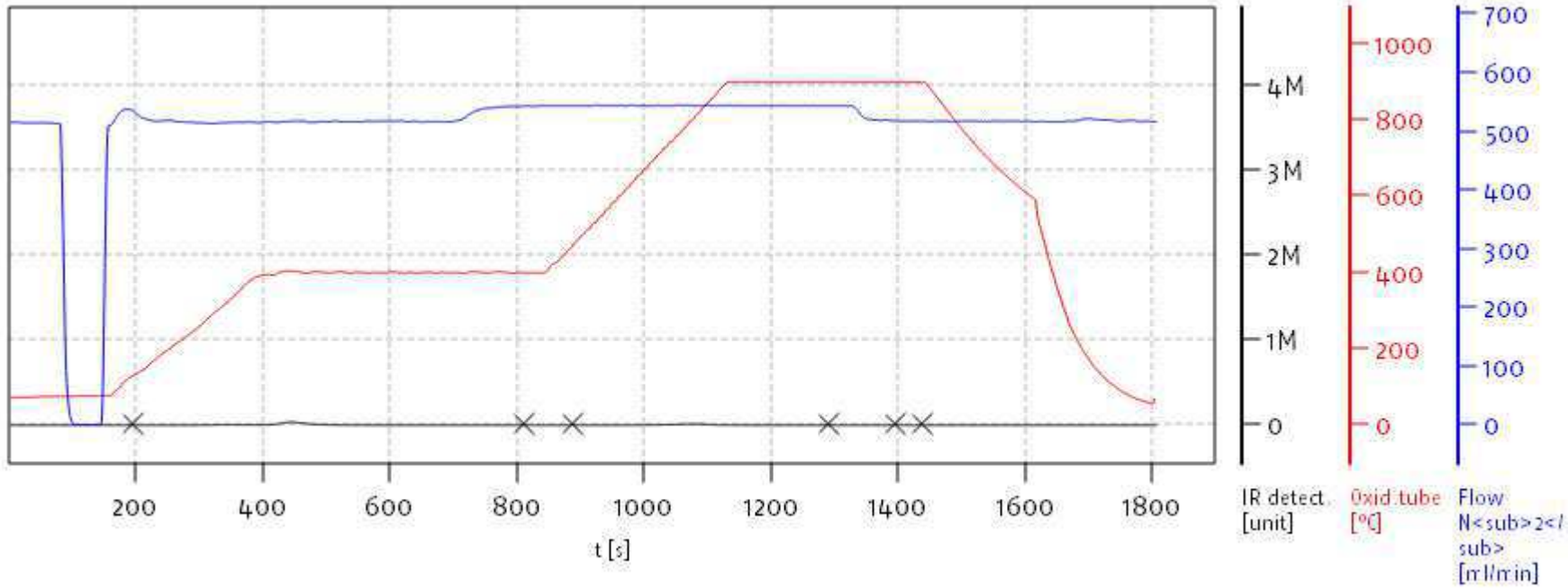
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
169	80	BKL0463-MRL1	512.00		CARBON	12/20/2022 1:10 AM	bl,C2u	0.016	82 500	0.019	0.000	93	36 106	0.016	0.003	0.9448	1.0000



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Date: Wed Dec 21 09:58:21 2022

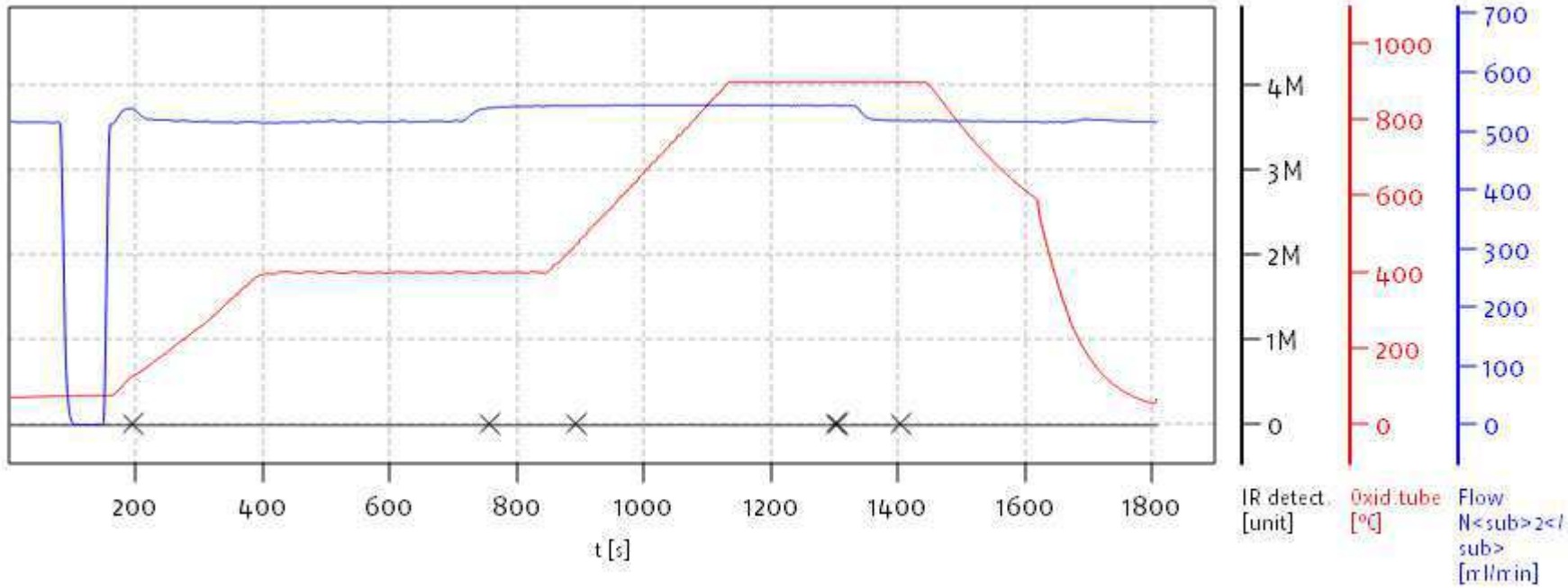
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
170	81	BKL0463-BLK1	503.90		CARBON	12/20/2022 1:41 AM	bl,C2u	0.000	6 605	0.000	0.000	274	5 913	0.000	0.000	0.9448	1.0000



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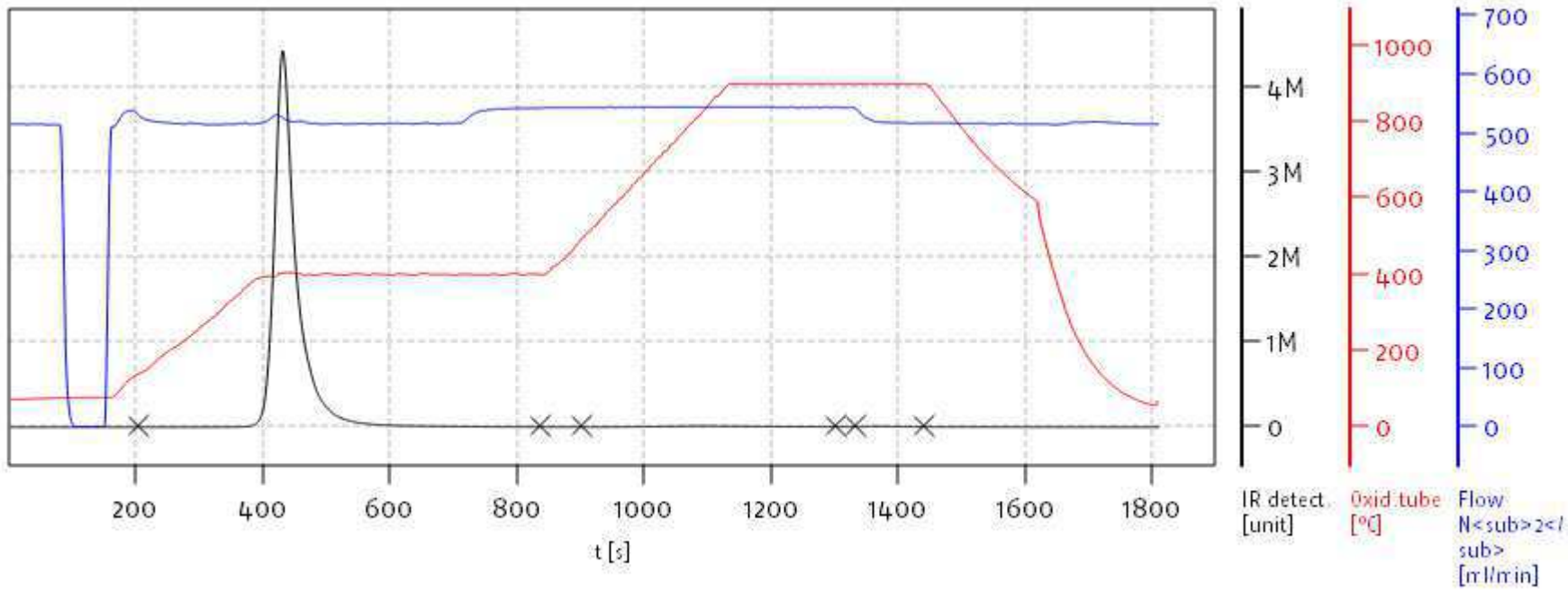
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
171	82	BKL0463-BS1	22.00		CARBON	12/20/2022 2:11 AM	bl	44.521	6 723 480	45.042	0.000	24 433	100 672	44.520	0.522	0.9448	1.0000



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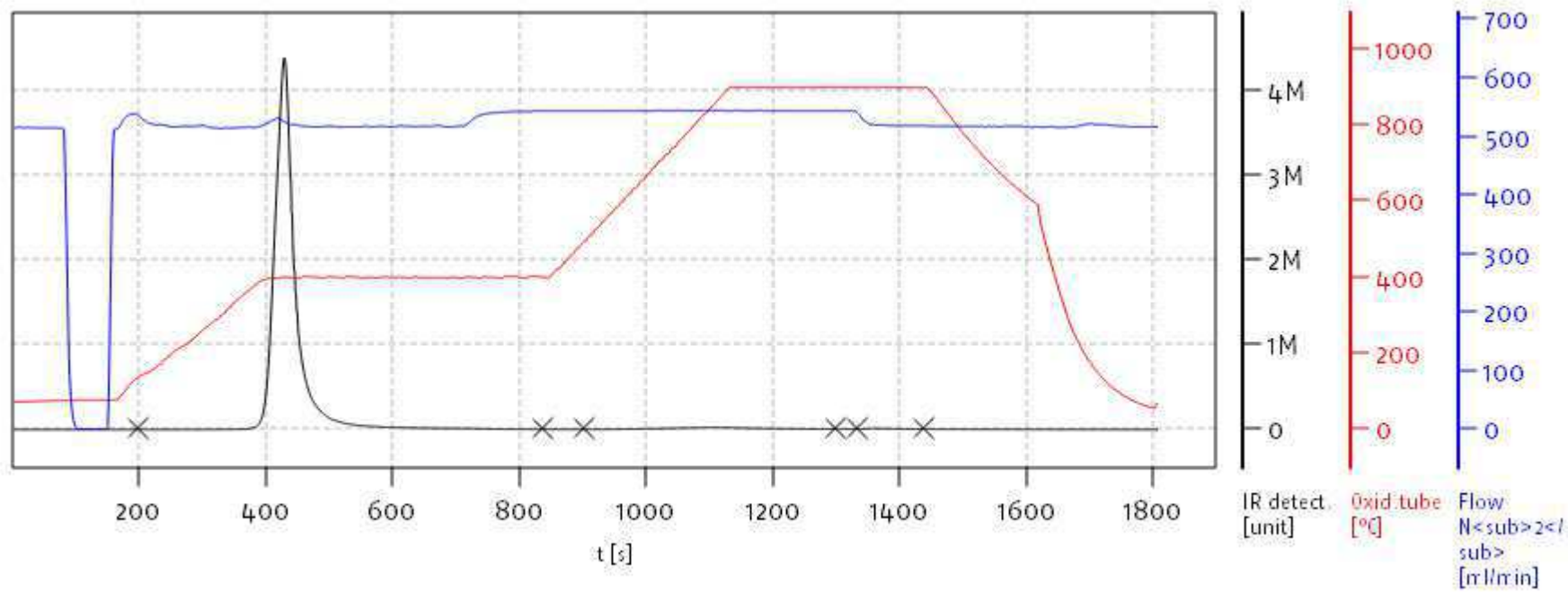
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
172	83	SKL0217-CCVE	20.40		CARBON	12/20/2022 2:42 AM	bl	43.686	6 114 500	44.791	0.039	31 725	172 204	43.646	1.105	0.9448	1.0000



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Serial No: 0300.181017
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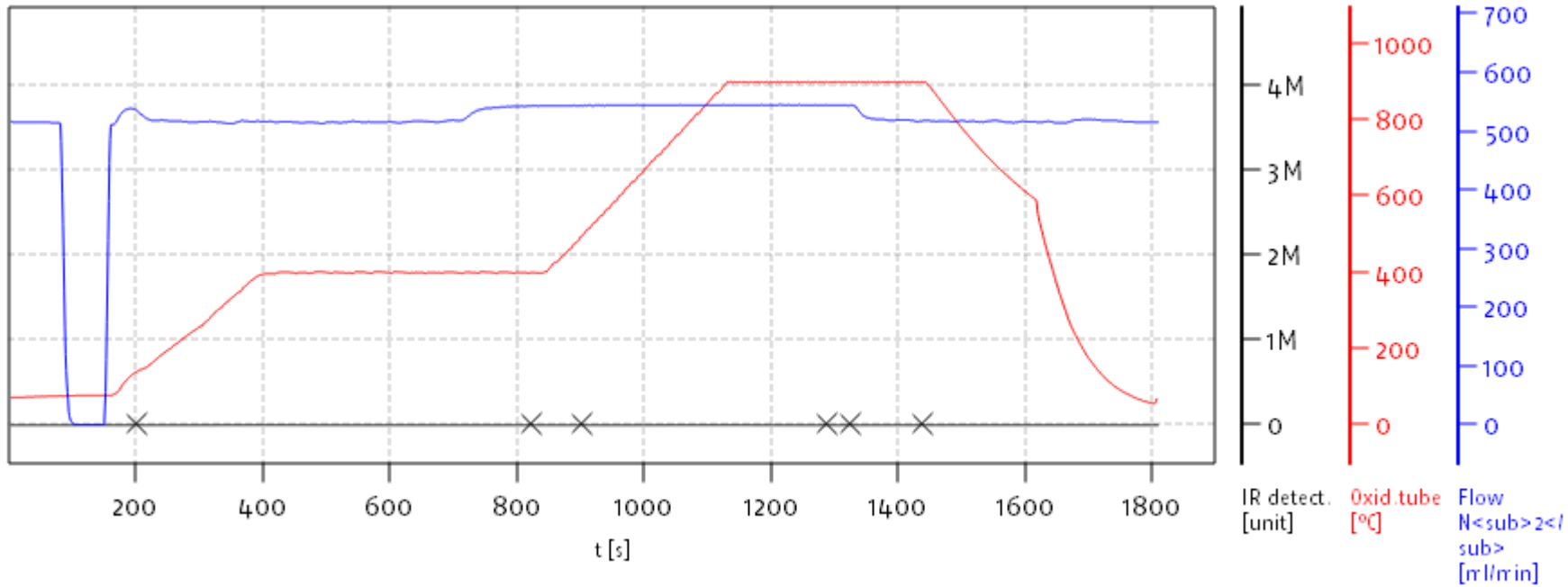
Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
173	84	SKL0217-CCBE	541.50		CARBON	12/20/2022 3:12 AM	bl,C2u	0.000	7 687	0.000	0.000	806	6 811	0.000	0.000	0.9448	1.0000



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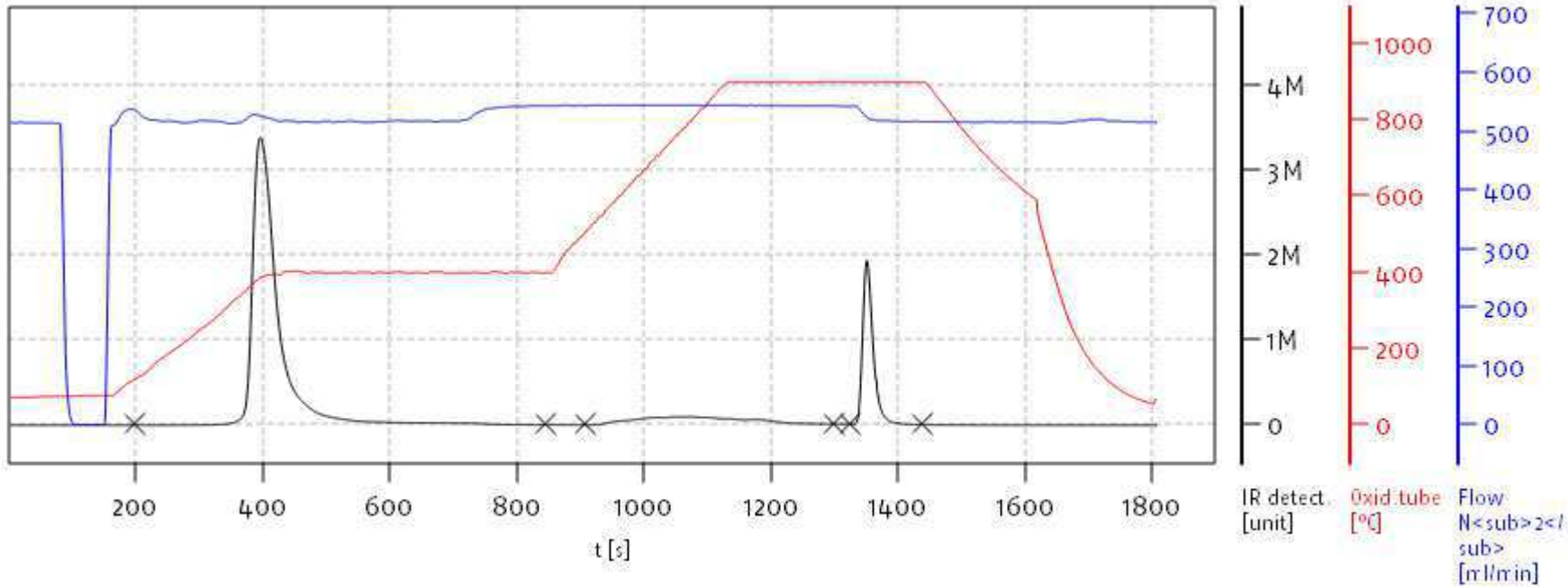
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
174	85	BKL0463-SRM1	347.90		CARBON	12/20/2022 3:43 AM	bl	3.060	5 844 020	3.415	0.614	1 407 440	823 792	2.446	0.355	0.9448	1.0000



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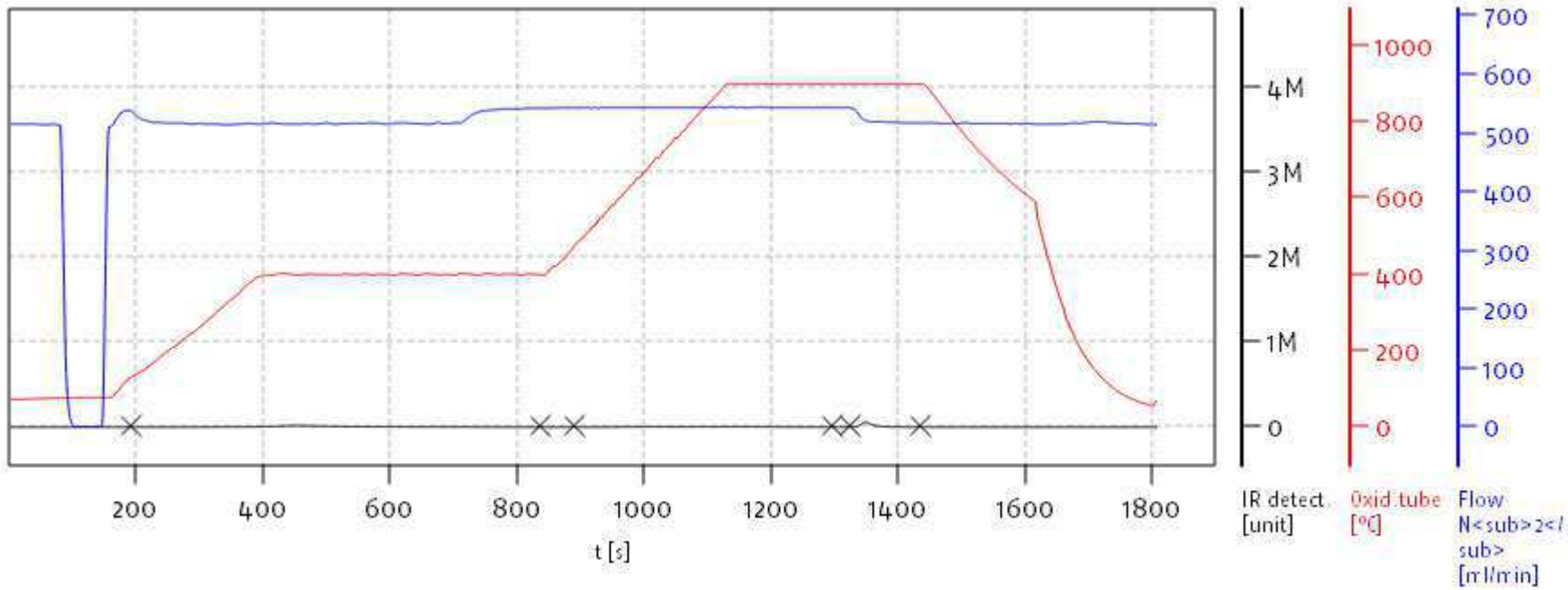
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
175	86	22L0156-01	598.50		CARBON	12/20/2022 4:13 AM	bl	0.023	96 957	0.027	0.006	48 901	40 795	0.017	0.004	0.9448	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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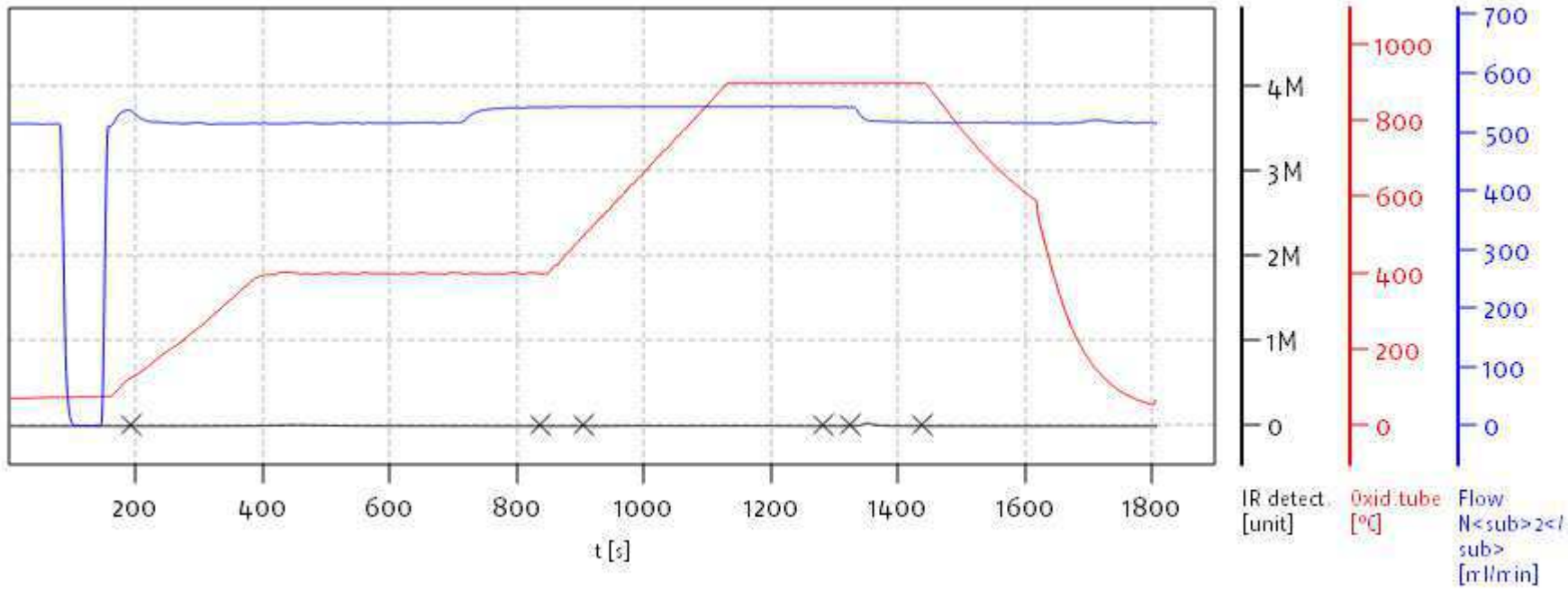
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
176	87	BKL0463-DUP1	598.40		CARBON	12/20/2022 4:44 AM	bl	0.011	66 509	0.013	0.001	31 133	33 971	0.010	0.002	0.9448	1.0000



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EXCELLENCE IN ELEMENTS

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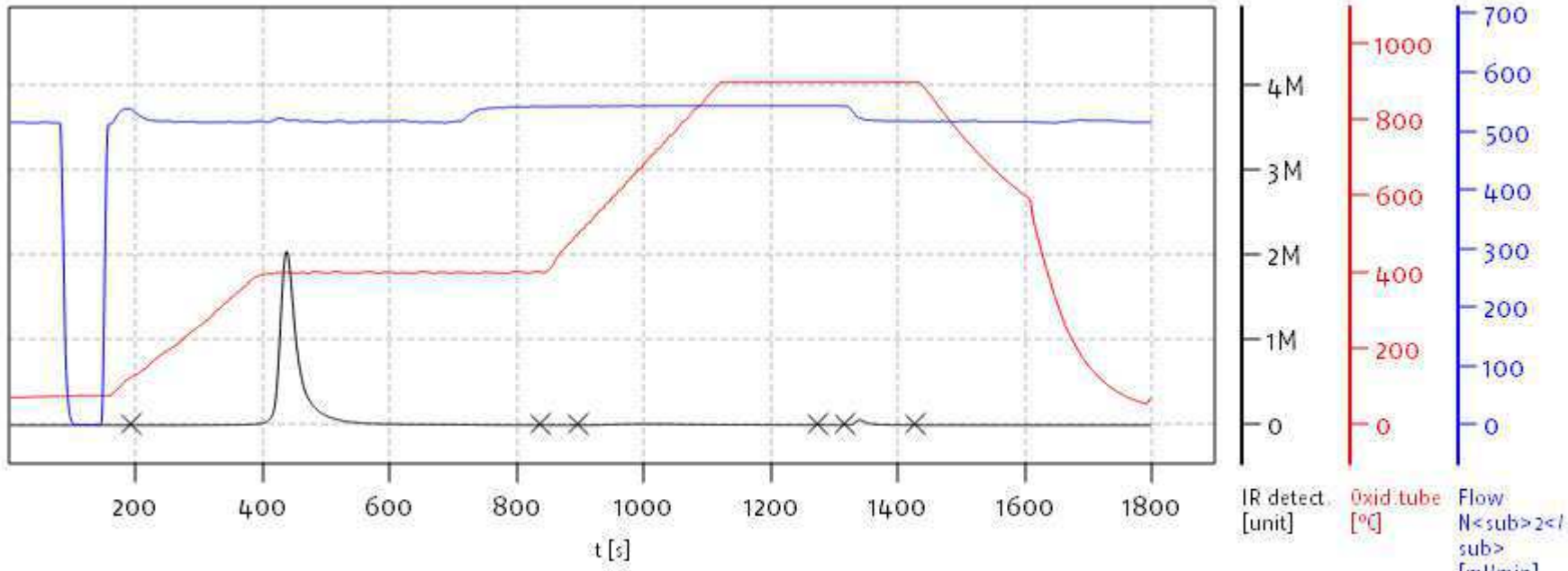
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
177	88	BKL0463-MS1	601.50	0.0085	CARBON	12/20/2022 5:14 AM	bl	0.640	2 625 410	0.658	0.008	56 440	98 817	0.632	0.019	0.9448	1.0000



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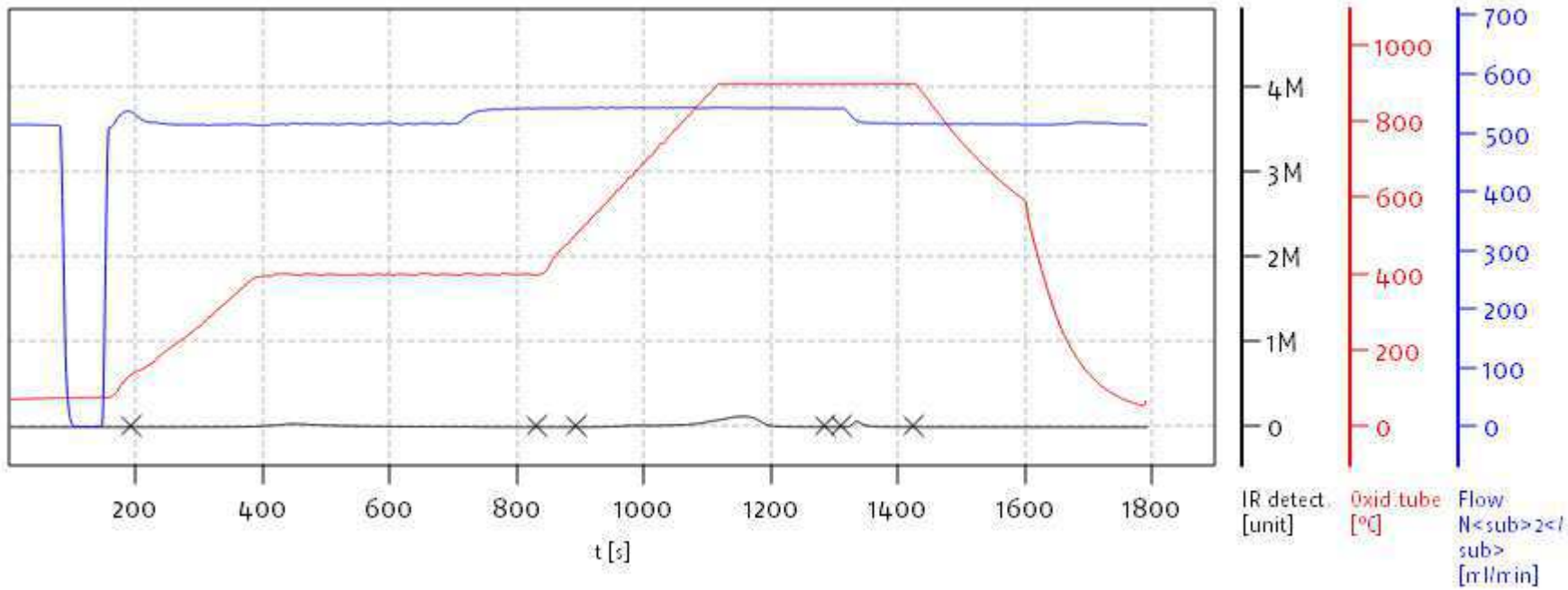
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
178	89	22L0156-02	501.20		CARBON	12/20/2022 5:45 AM	bl	0.058	198 479	0.199	0.008	51 774	484 681	0.050	0.142	0.9448	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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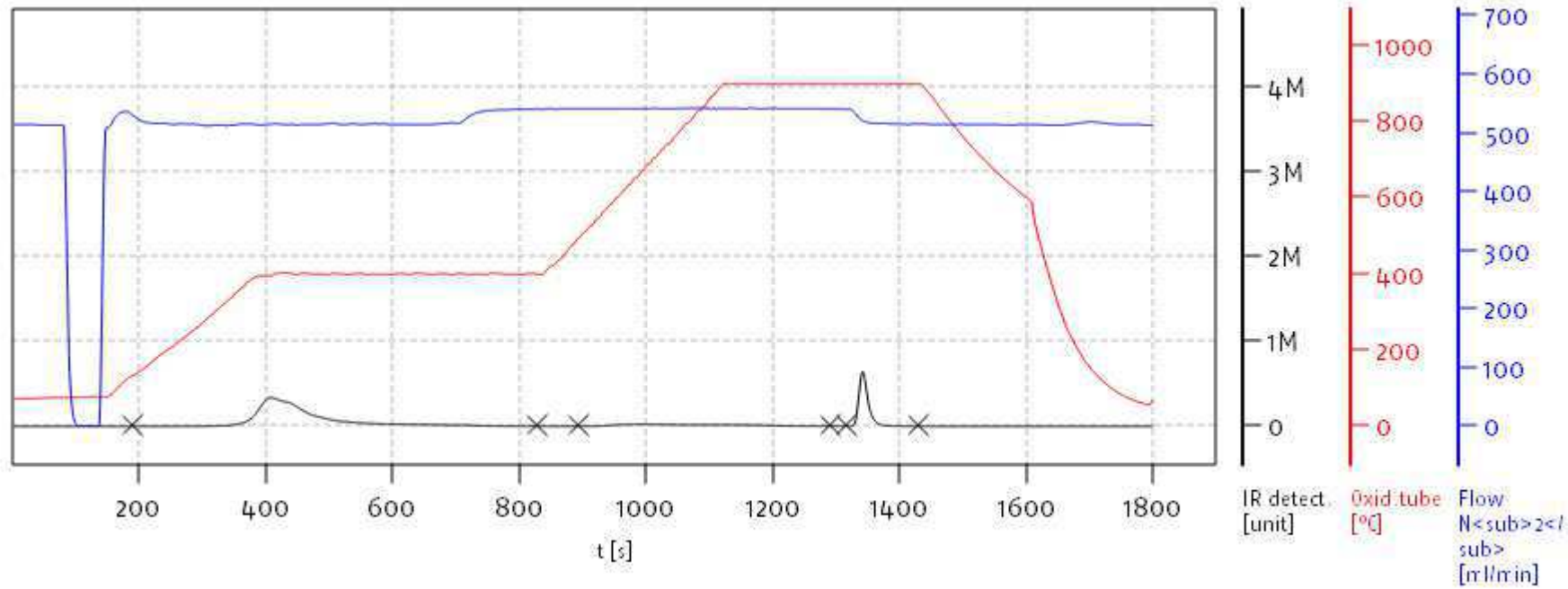
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
179	1	22L0156-03	500.00		CARBON	12/20/2022 6:15 AM	bl	0.499	1 324 590	0.553	0.119	412 411	199 861	0.380	0.054	0.9448	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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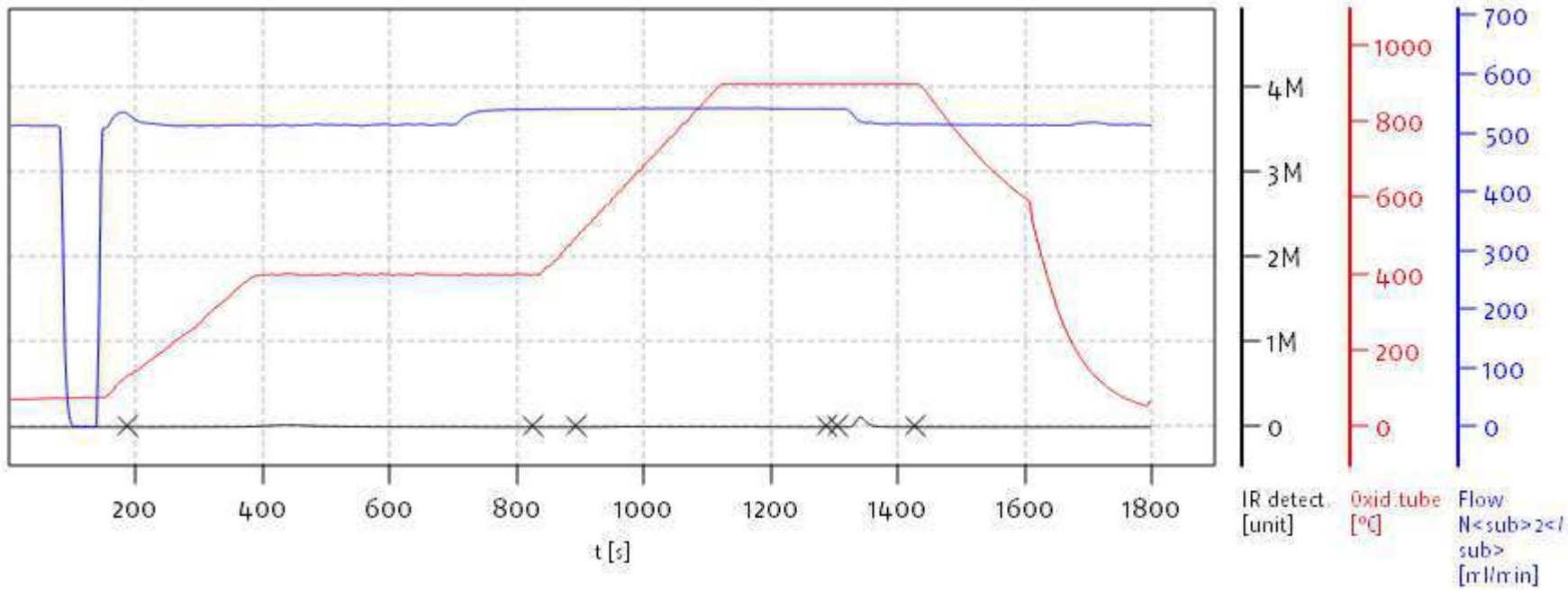
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
180	2	22L0156-04	523.40		CARBON	12/20/2022 6:45 AM	bl	0.045	122 106	0.051	0.018	87 731	47 796	0.027	0.006	0.9448	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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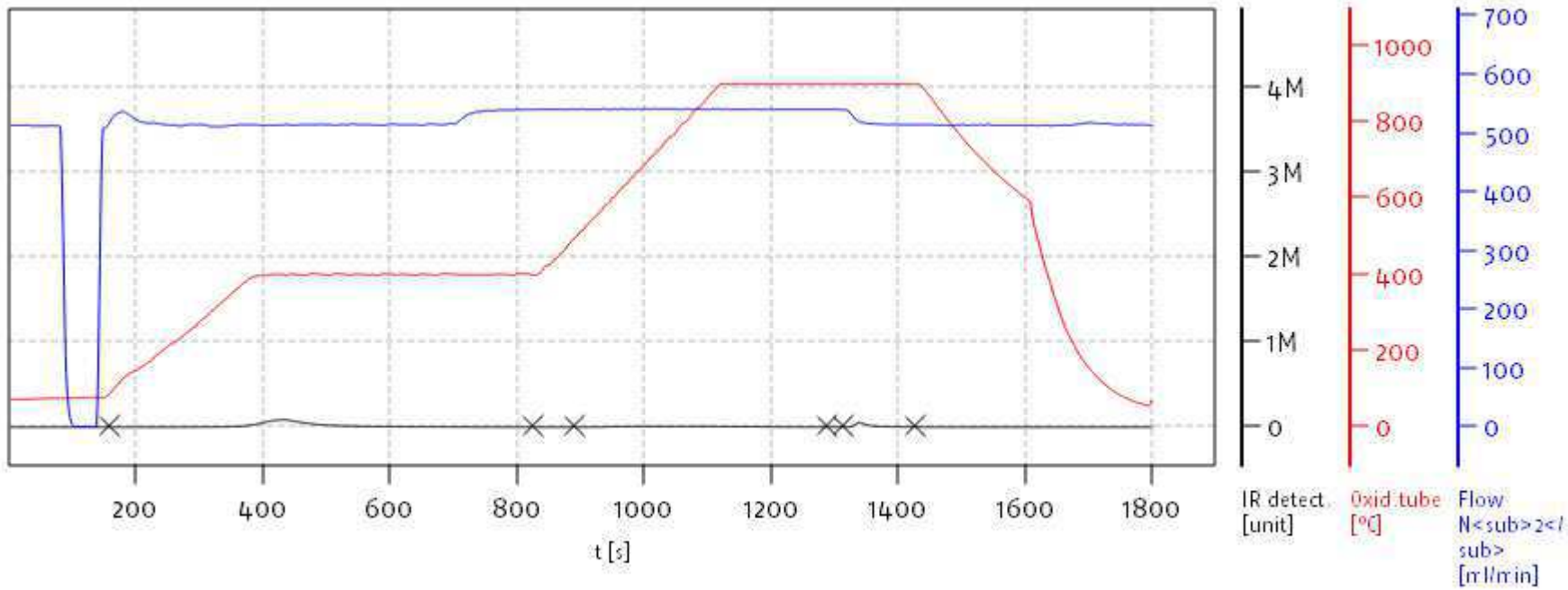
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
181	3	22L0156-05	513.30		CARBON	12/20/2022 7:16 AM	bl	0.095	332 727	0.110	0.008	52 564	77 600	0.087	0.015	0.9448	1.0000



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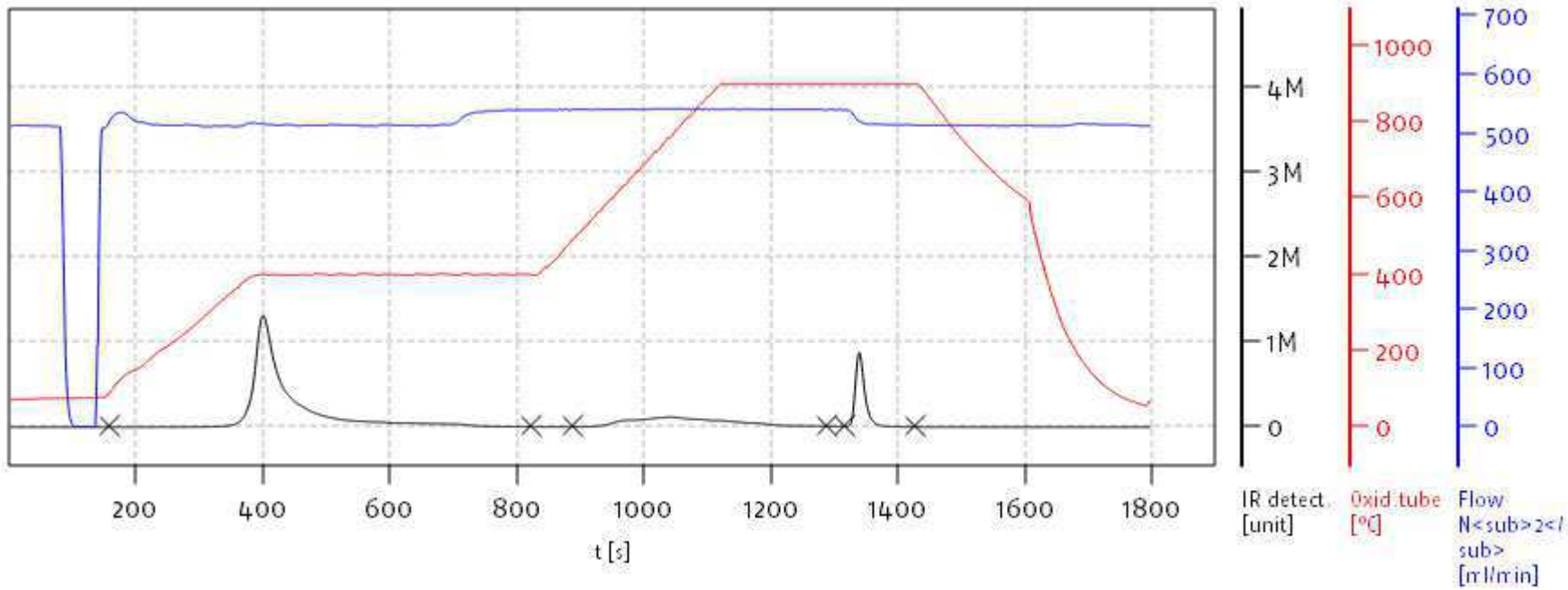
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
182	4	22L0199-01	524.40		CARBON	12/20/2022 7:46 AM	bl	0.969	2 921 100	1.206	0.162	574 519	829 196	0.807	0.237	0.9448	1.0000



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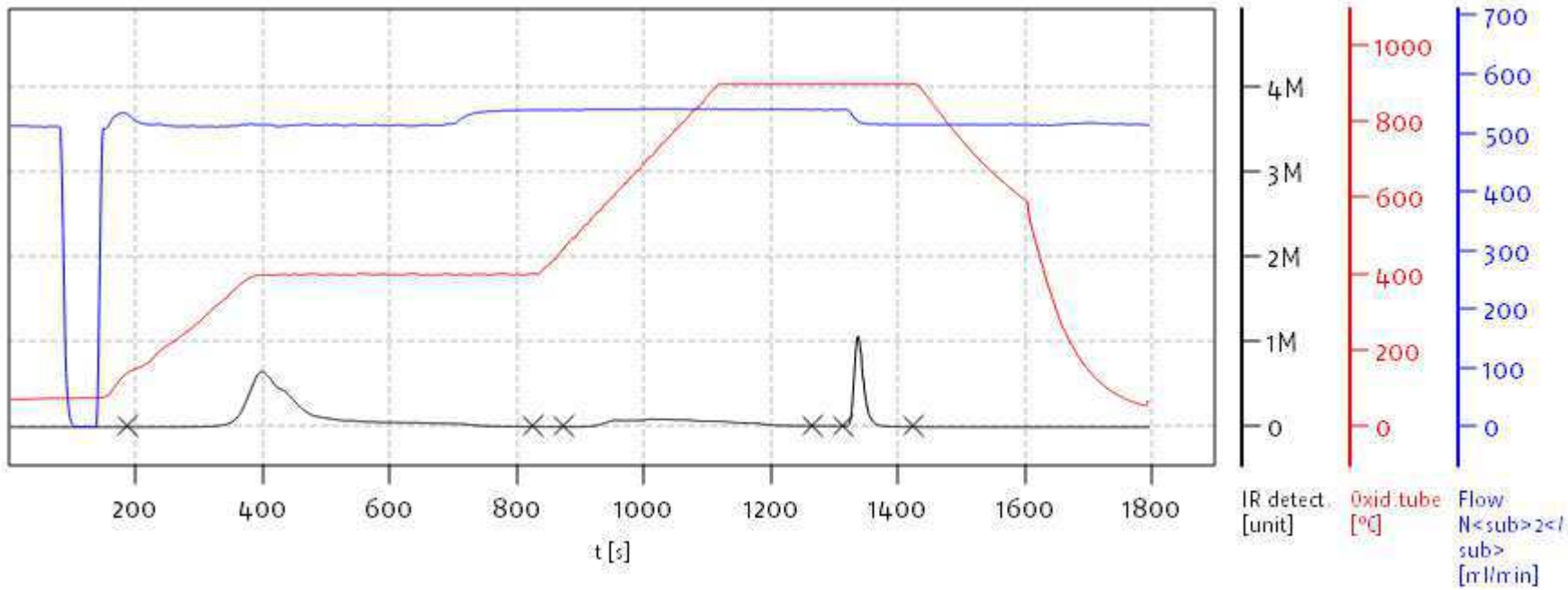
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
183	5	22L0199-02	505.50		CARBON	12/20/2022 8:17 AM	bl	0.903	2 427 950	1.127	0.209	707 865	755 105	0.695	0.223	0.9448	1.0000



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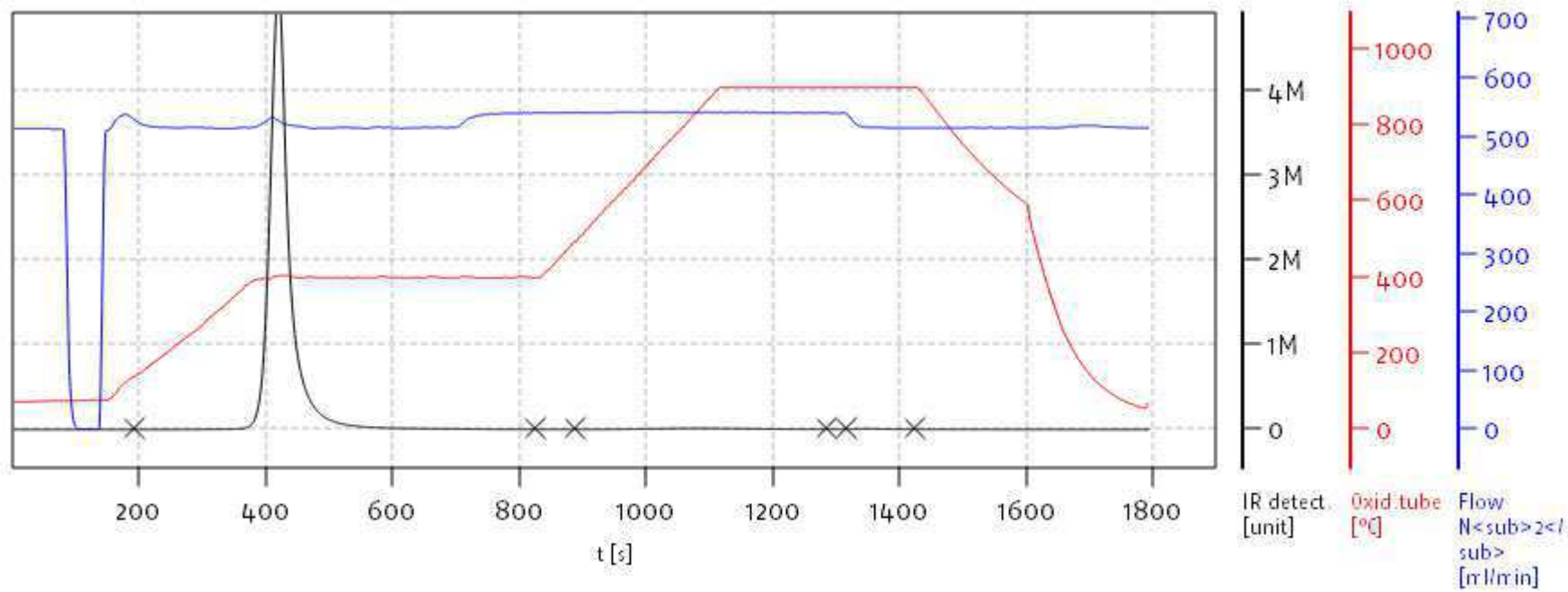
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
184	6	SKL0217-CCVF	22.50		CARBON	12/20/2022 8:47 AM	bl	45.118	6 967 550	45.663	0.000	22 312	105 828	45.118	0.546	0.9448	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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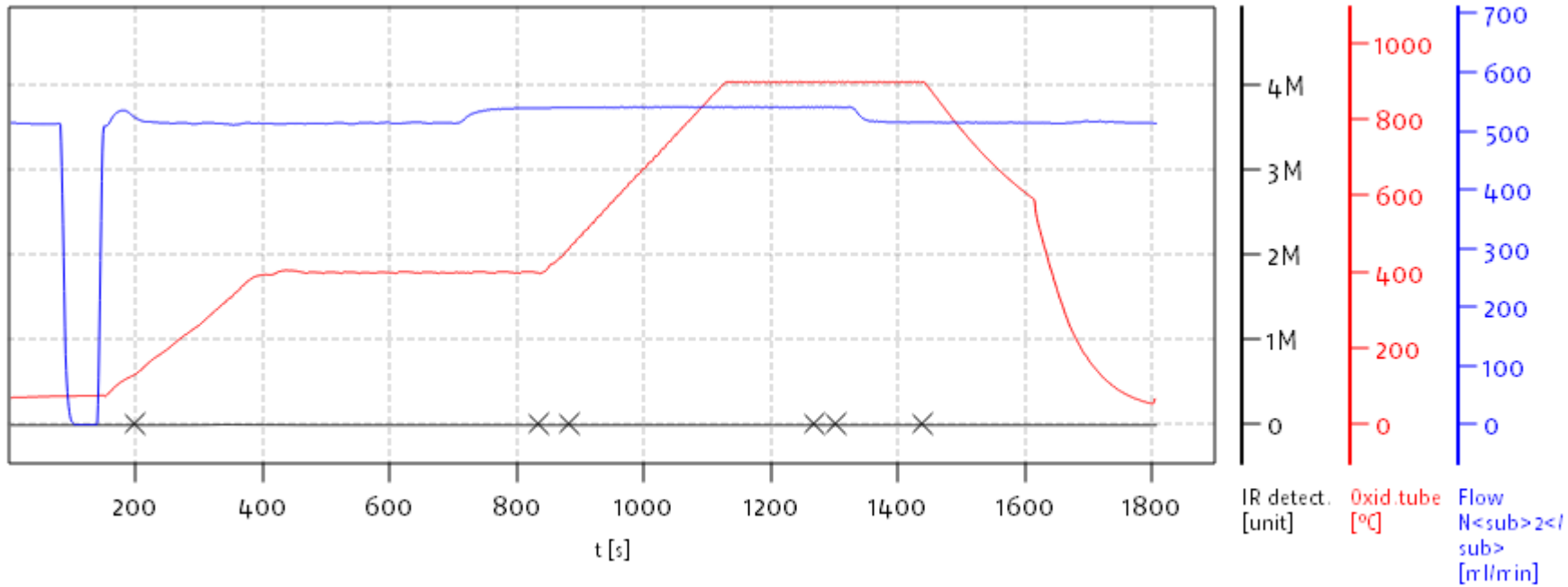
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
185	7	SKL0217-CCBF	537.70		CARBON	12/20/2022 9:17 AM	bl,C3u,C2u	0.000	21 484	0.000	0.000	398	1 196	0.000	0.000	0.9448	1.0000



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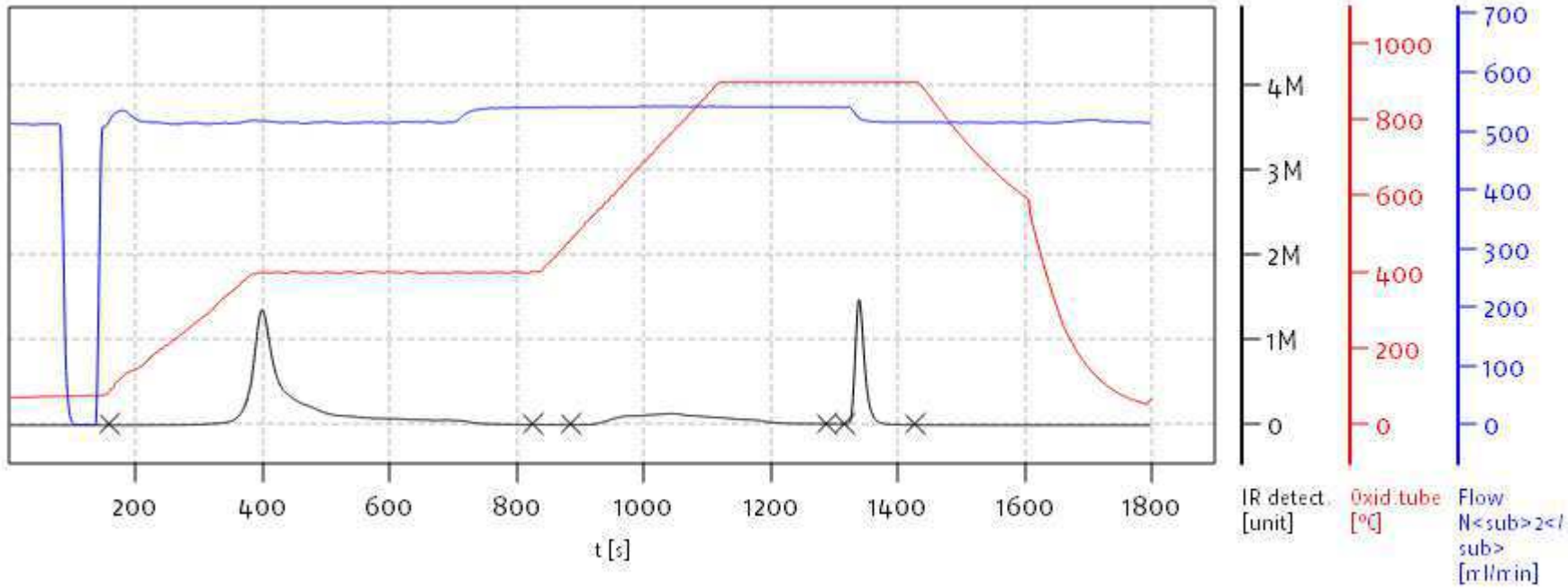
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
186	8	22L0199-03	560.10		CARBON	12/20/2022 9:48 AM	bl	1.115	3 291 930	1.391	0.262	975 703	1 023 980	0.853	0.276	0.9448	1.0000



Name:

Access: soliTOC superuser

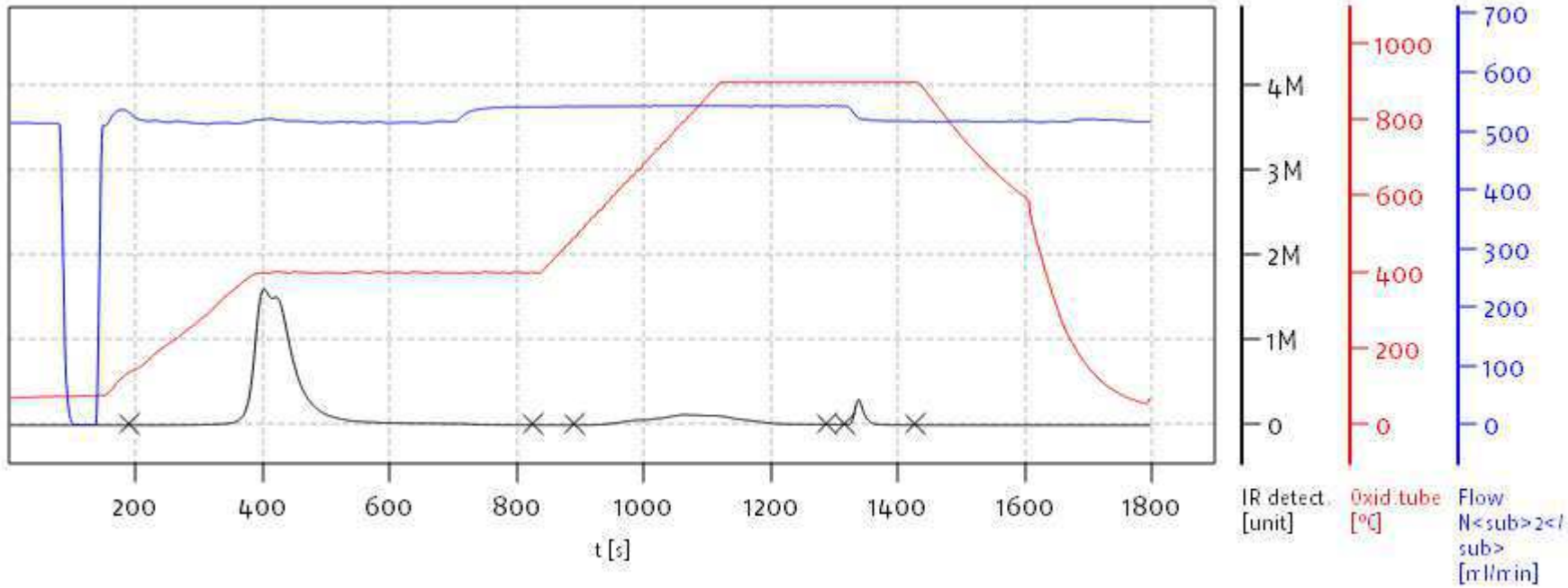
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
187	9	22L0199-04	522.70		CARBON	12/20/2022 10:18 AM	bl	1.255	4 331 230	1.479	0.051	197 323	782 278	1.204	0.224	0.9448	1.0000



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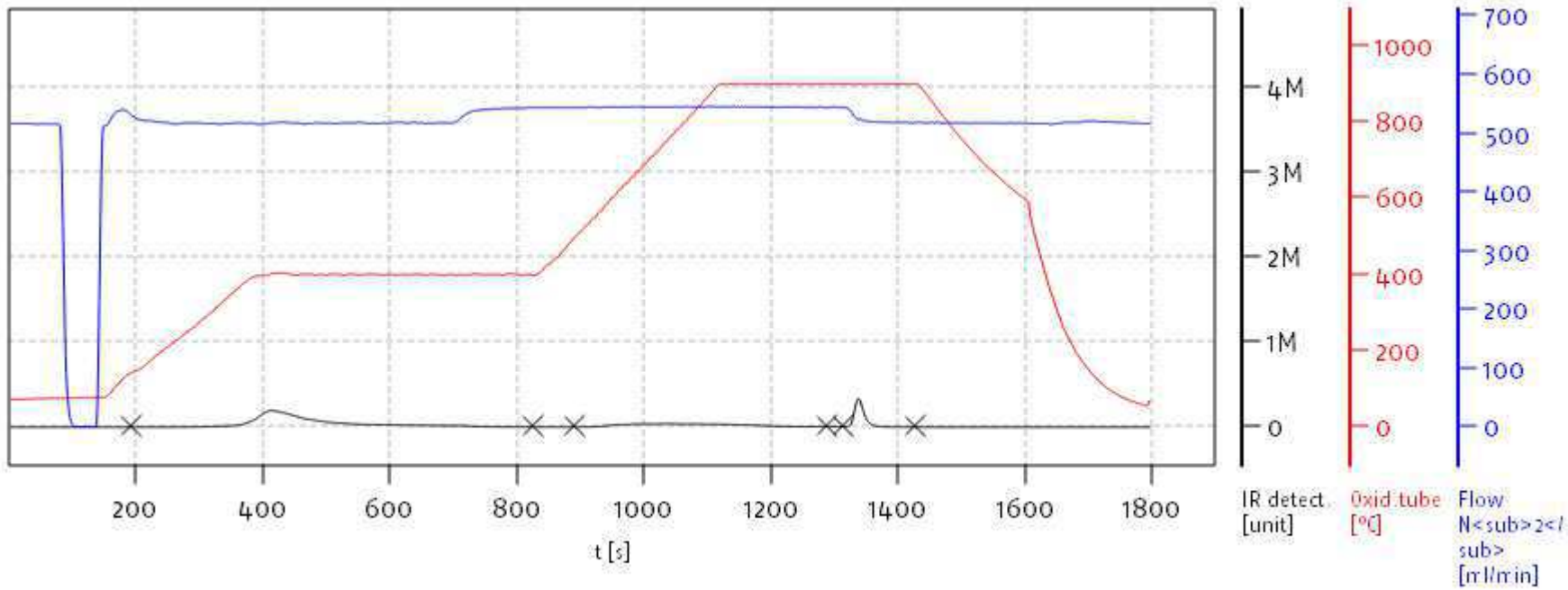
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
188	10	22L0199-05	516.00		CARBON	12/20/2022 10:49 AM	bl	0.300	874 341	0.392	0.059	224 340	333 507	0.240	0.092	0.9448	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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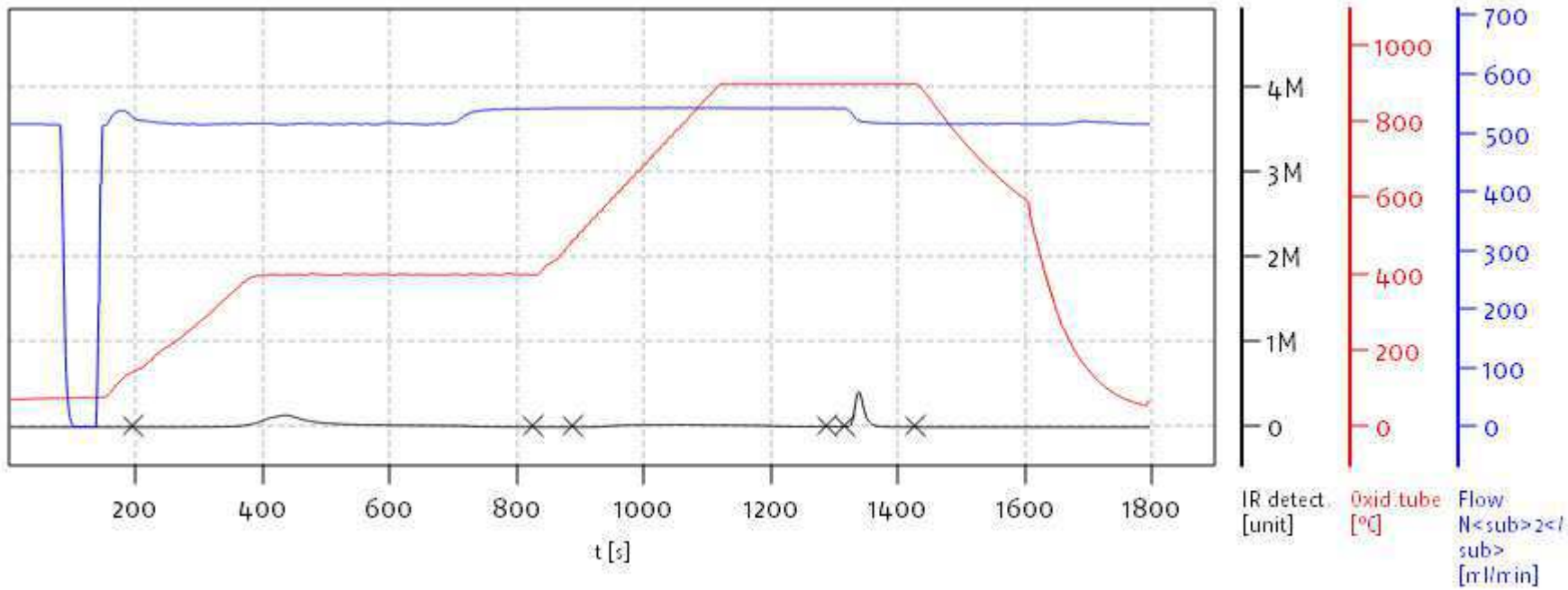
elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
189	11	22L0199-06	548.90		CARBON	12/20/2022 11:19 AM	bl	0.232	639 113	0.294	0.069	269 938	247 418	0.163	0.062	0.9448	1.0000



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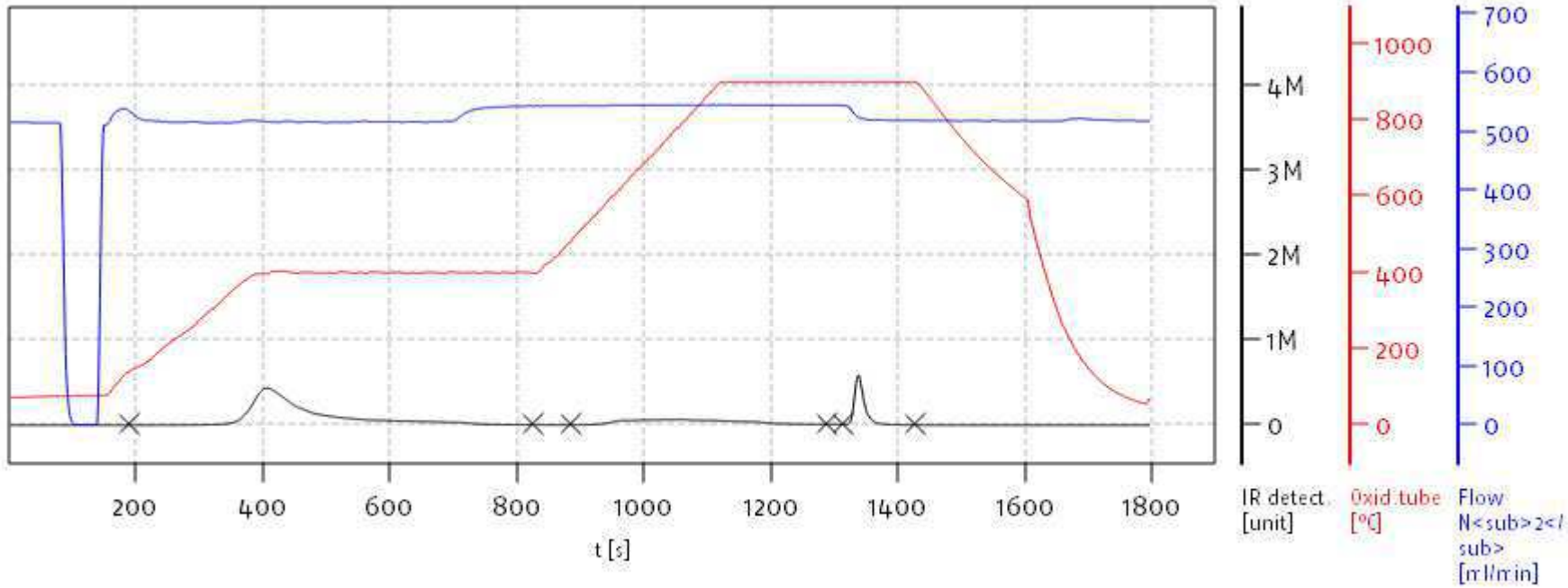
elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
190	12	22L0199-07	504.50		CARBON	12/20/2022 11:49 AM	bl	0.636	1 823 540	0.800	0.115	402 585	560 617	0.521	0.164	0.9448	1.0000



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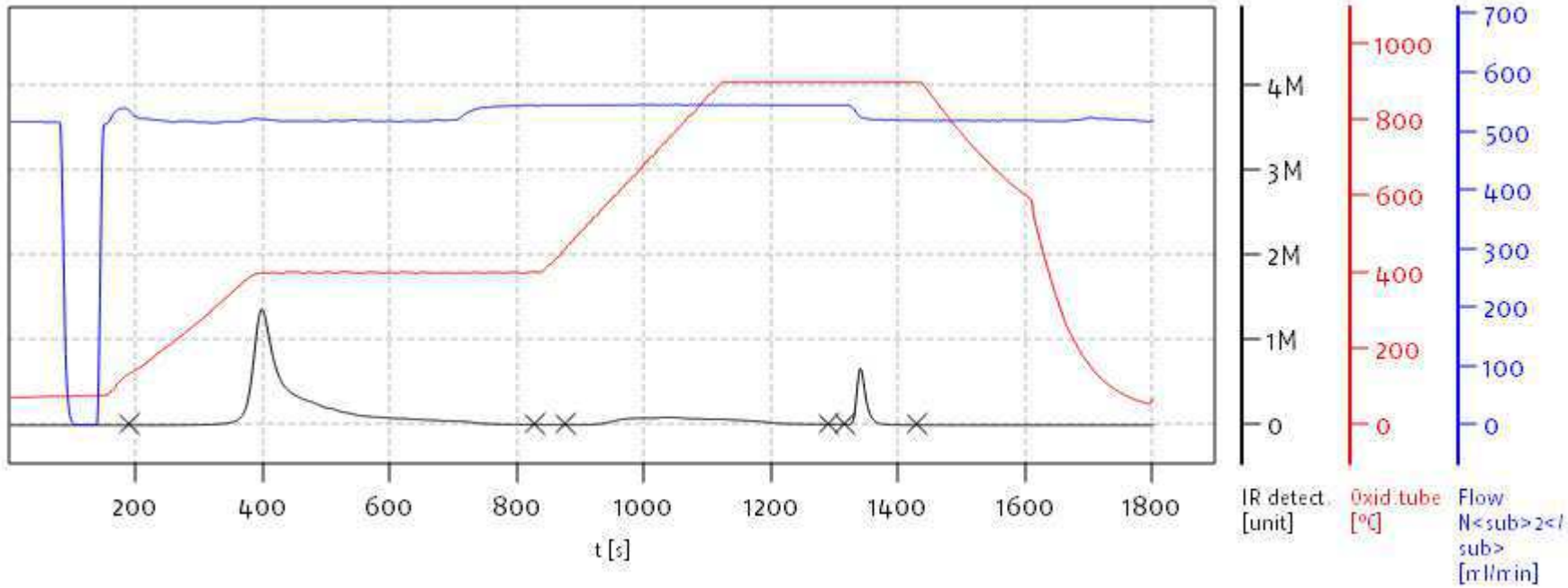
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
191	13	22L0199-08	540.40		CARBON	12/20/2022 12:20 PM	bl	1.076	3 577 230	1.281	0.116	429 874	738 756	0.961	0.204	0.9448	1.0000



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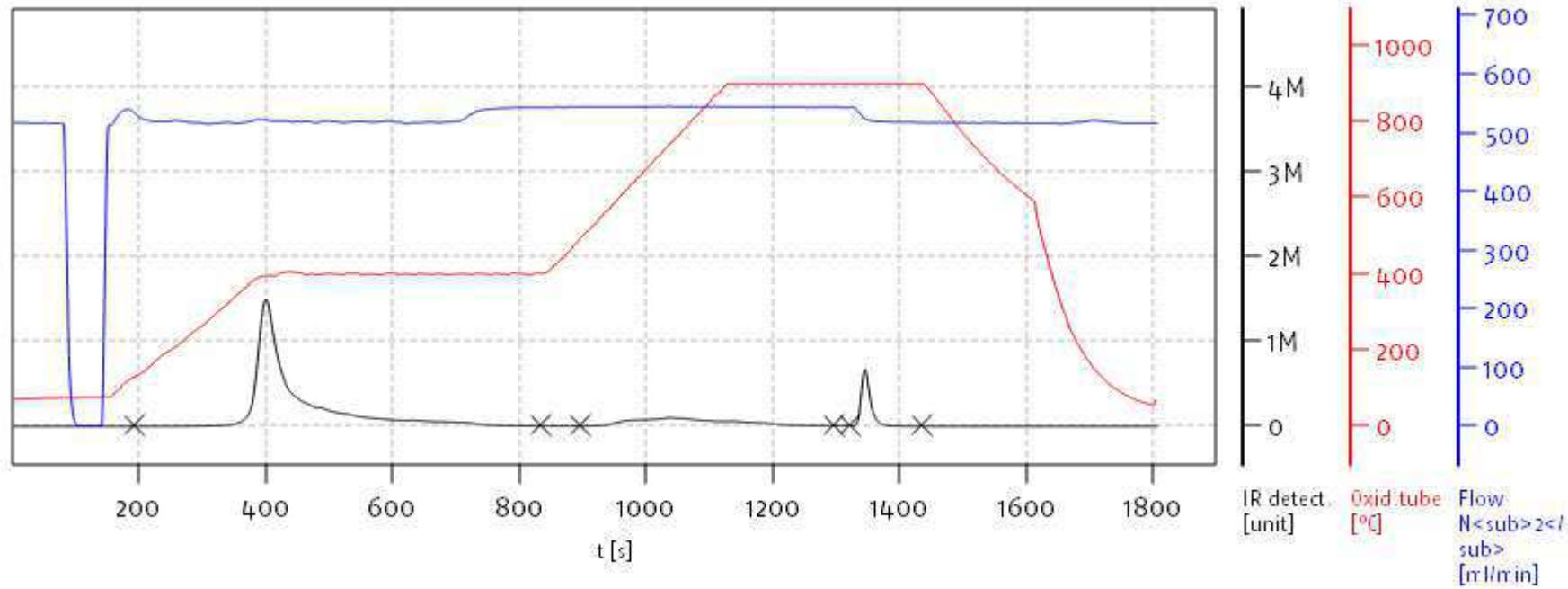
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
192	14	22L0199-09	519.80		CARBON	12/20/2022 12:50 PM	bl	1.109	3 542 490	1.314	0.120	428 410	715 126	0.989	0.205	0.9448	1.0000



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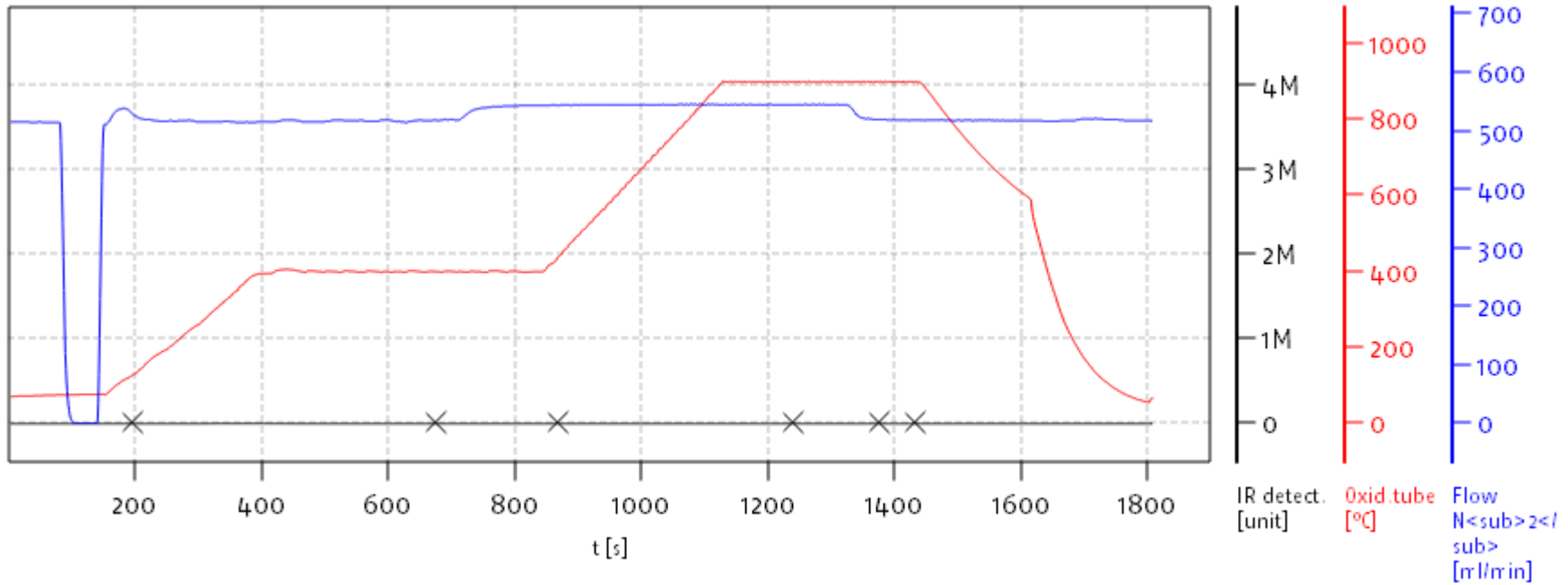
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
193	15	BLANK	1.00		CARBON	12/20/2022 1:21 PM	bl	0.000	10 041	0.000	0.000	91	568	0.000	0.000	0.9448	1.0000



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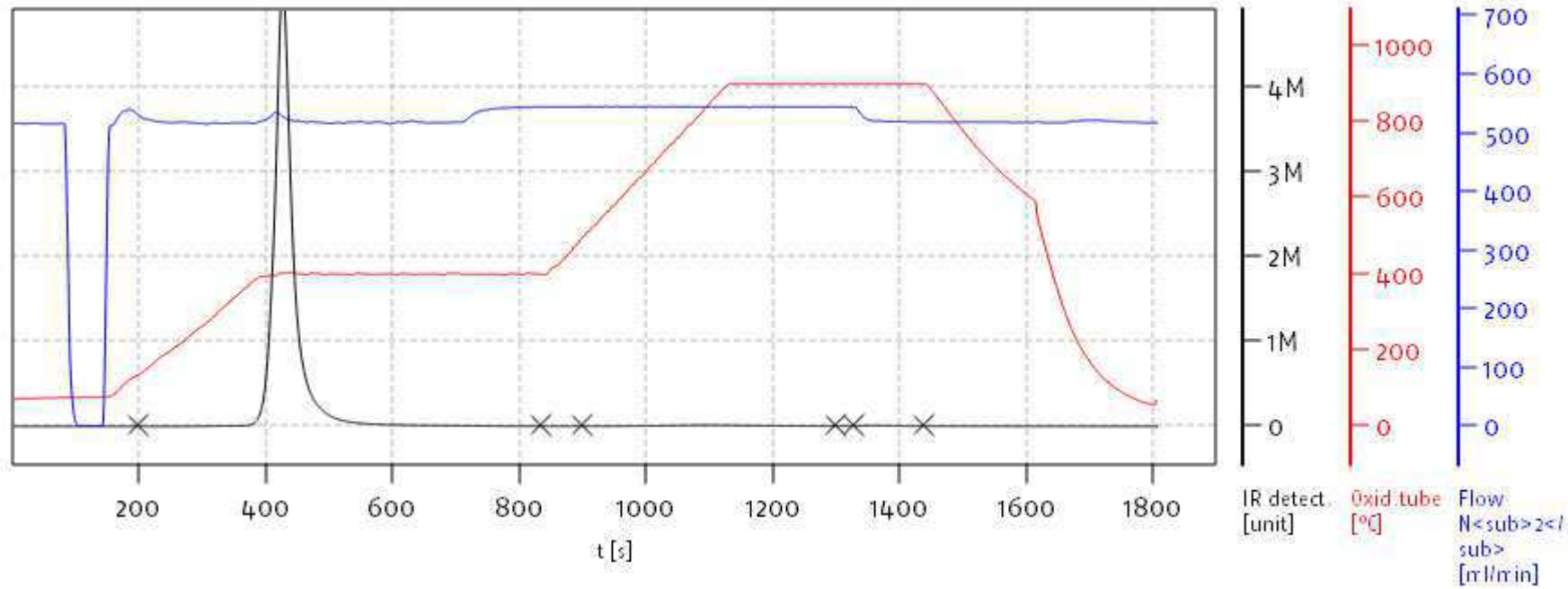
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
194	16	Dfactor	21.60		CARBON	12/20/2022 1:51 PM	bl	44.446	6 665 330	45.009	0.000	23 938	105 172	44.446	0.564	0.9341	1.0000



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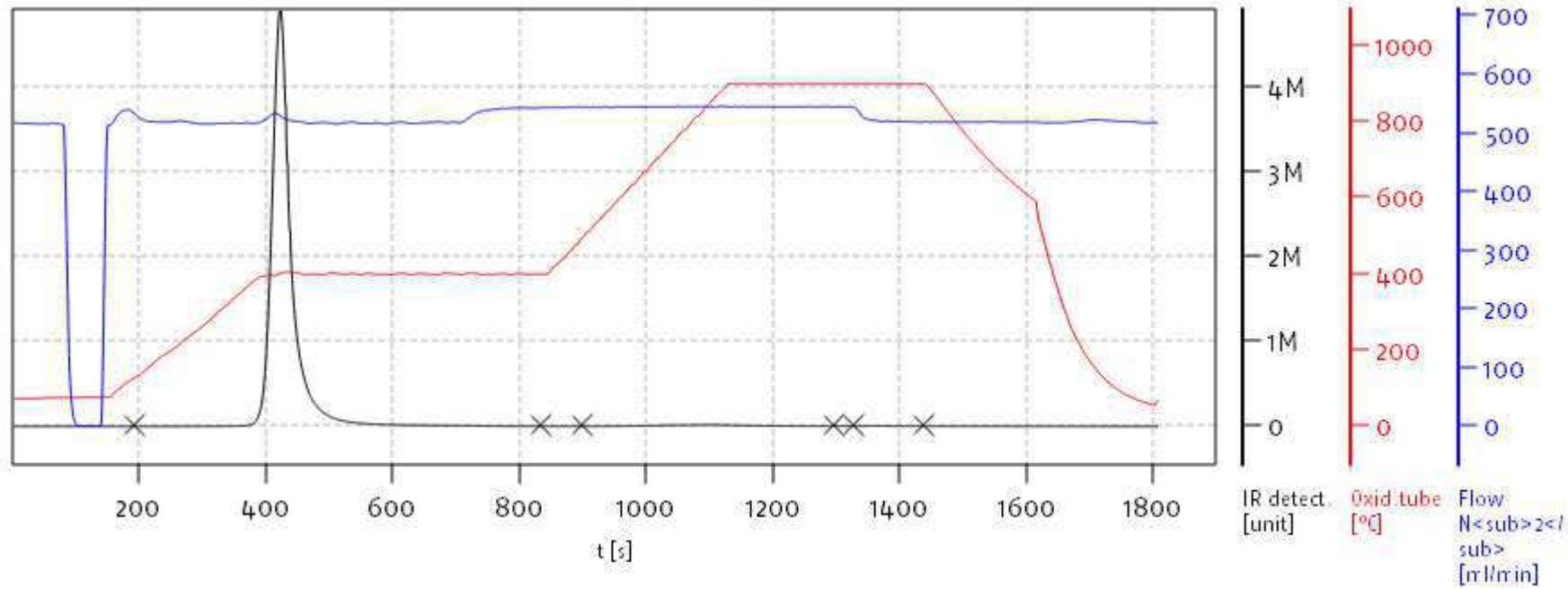
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
195	17	Dfactor	21.10		CARBON	12/20/2022 2:22 PM	bl	44.446	6 552 730	45.141	0.000	15 933	121 315	44.446	0.695	0.9283	1.0000



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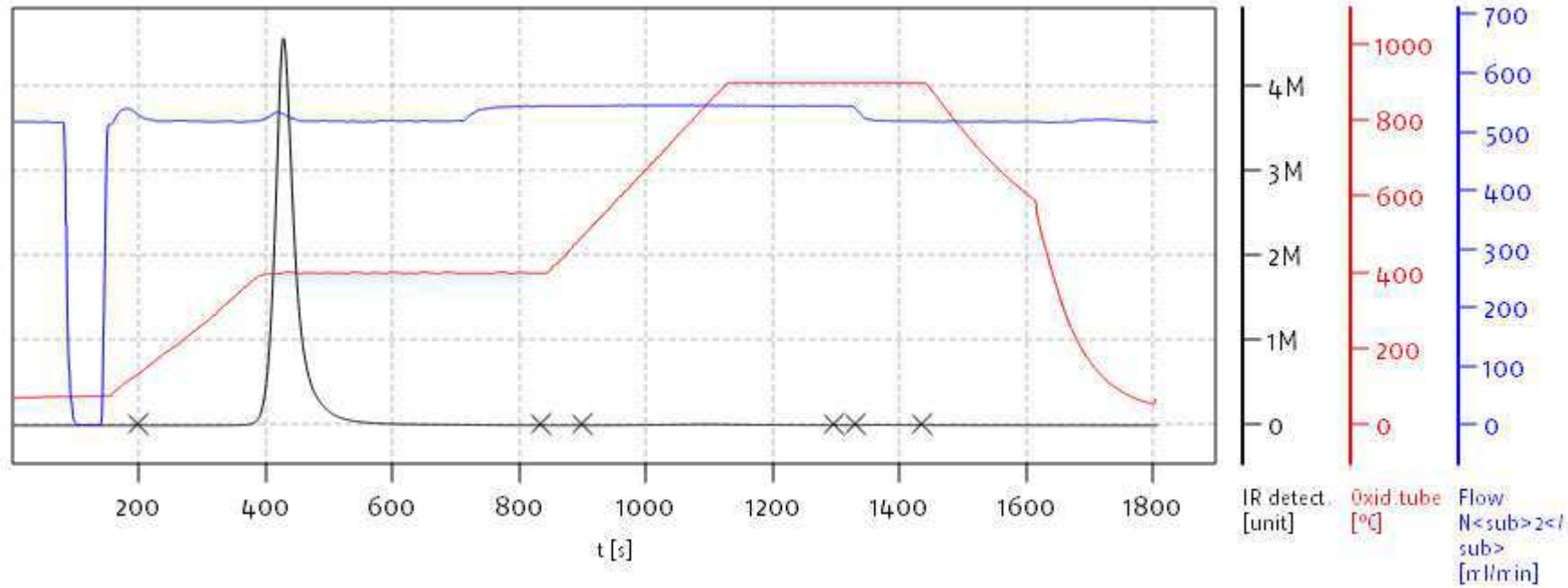
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
196	18	SKL0217-CCVG	21.40		CARBON	12/20/2022 2:52 PM	bl	44.189	6 586 520	44.630	0.000	18 852	87 537	44.189	0.441	0.9312	1.0000



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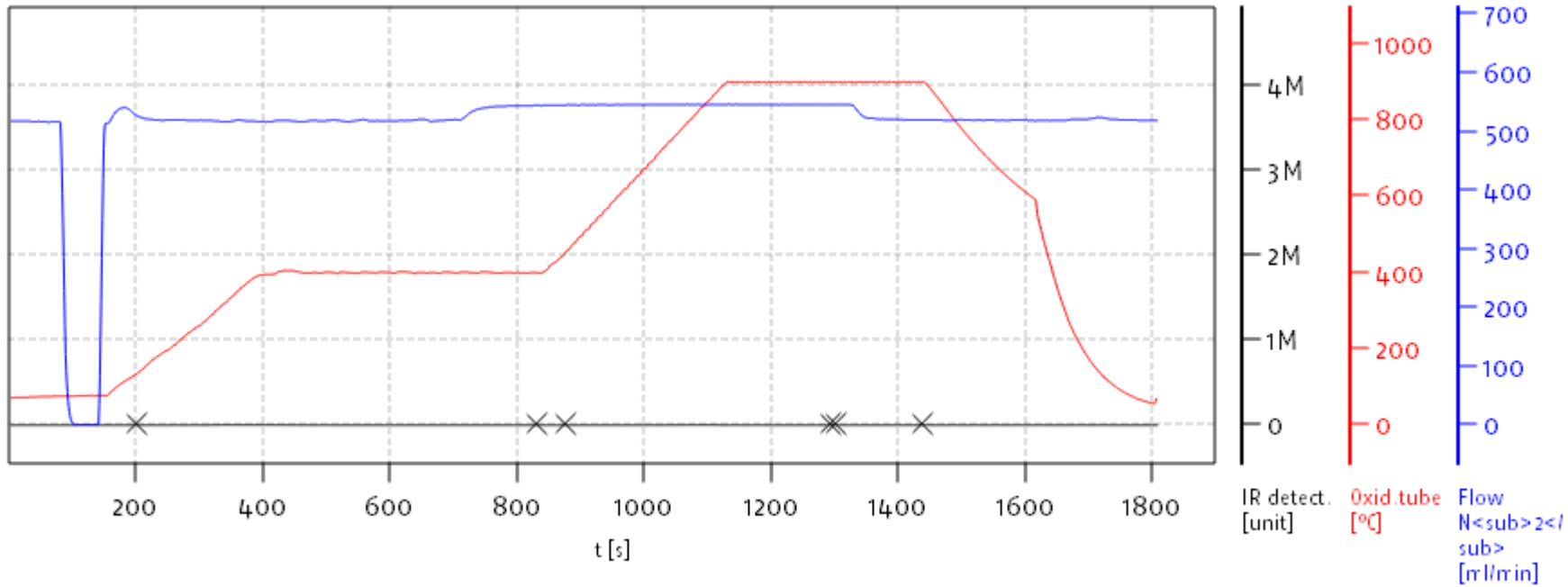
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
197	19	SKL0217-CCBG	520.70		CARBON	12/20/2022 3:23 PM	bl,C2u	0.000	12 328	0.000	0.000	705	6 361	0.000	0.000	0.9312	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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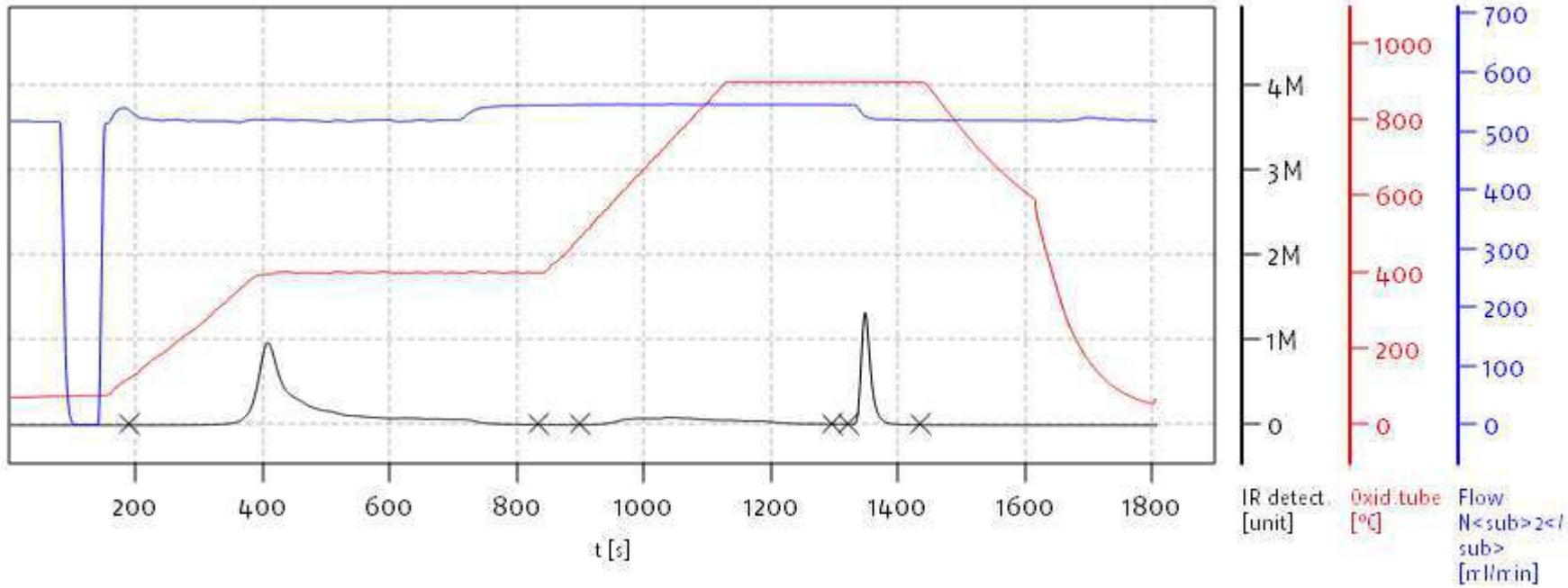
Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
198	20	22L0199-10	519.10		CARBON	12/20/2022 3:54 PM	bl	1.053	2 892 420	1.256	0.257	887 781	708 865	0.796	0.203	0.9312	1.0000



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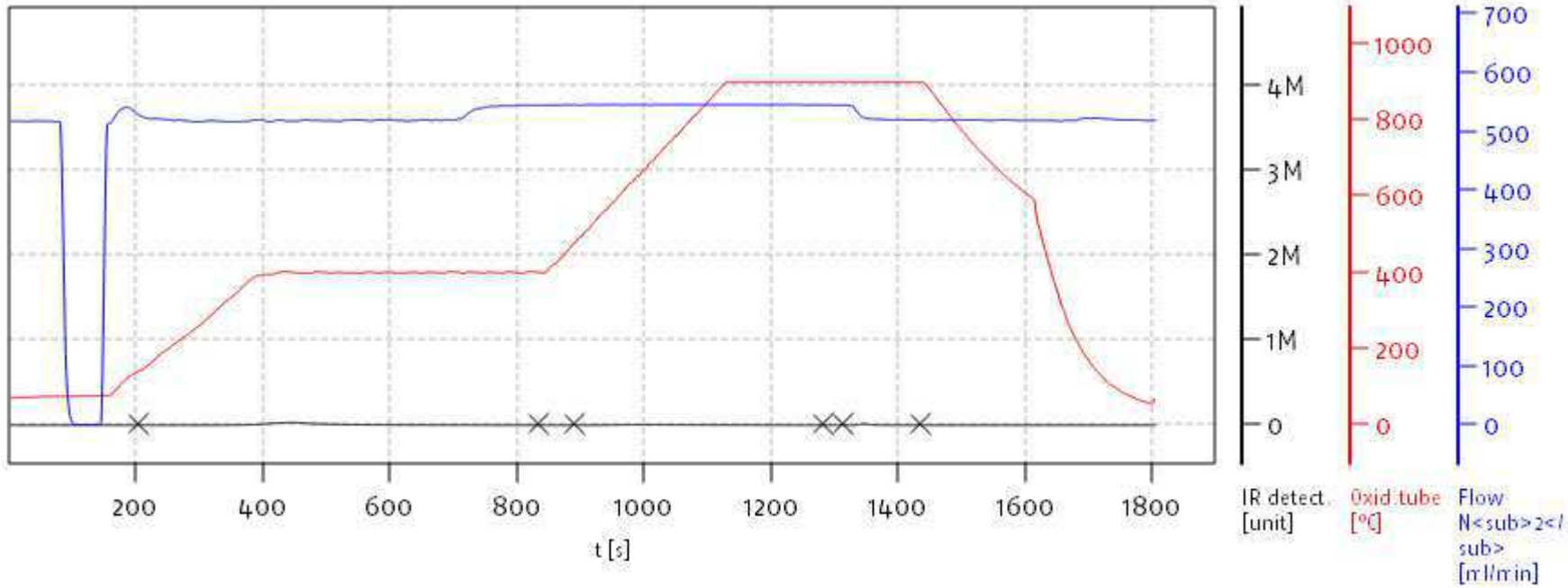
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
199	21	22L0199-11	612.50		CARBON	12/20/2022 4:24 PM	bl	0.025	131 352	0.027	0.000	11 023	34 262	0.025	0.002	0.9312	1.0000



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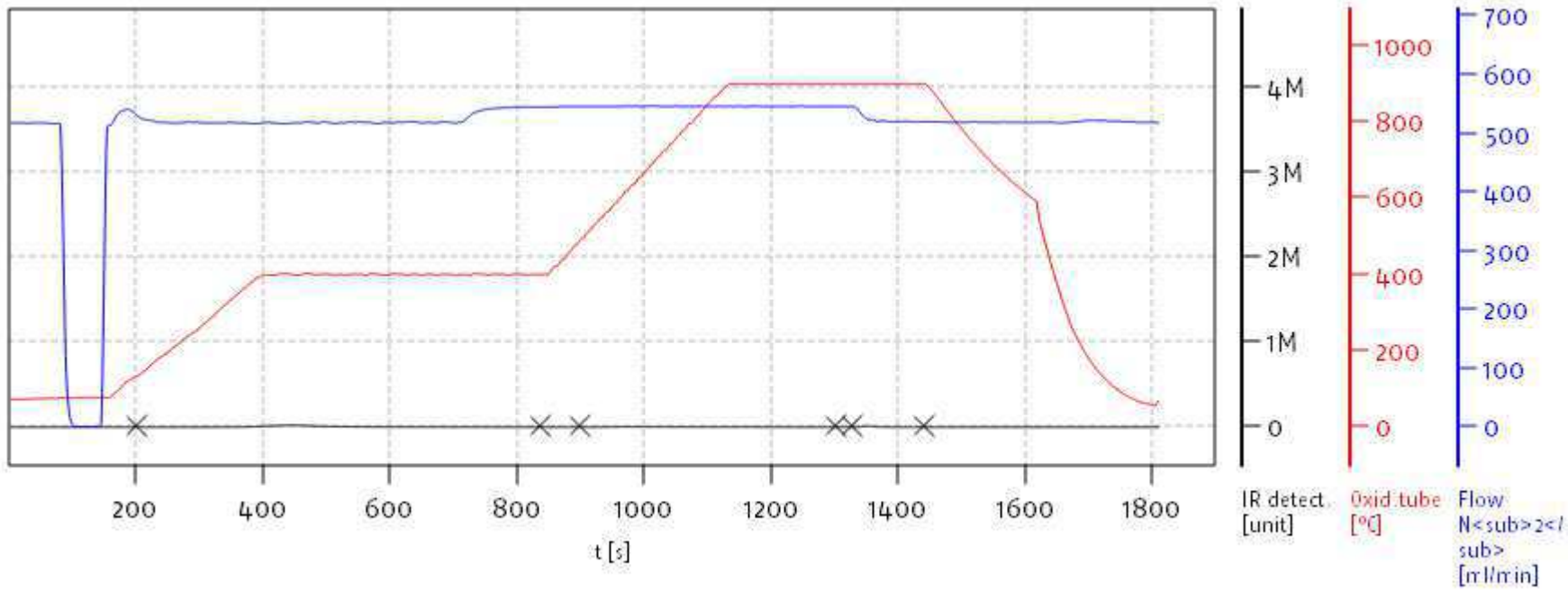
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
200	22	22L0199-12	505.10		CARBON	12/20/2022 4:55 PM	bl	0.020	97 615	0.020	0.000	9 973	26 039	0.020	0.000	0.9312	1.0000



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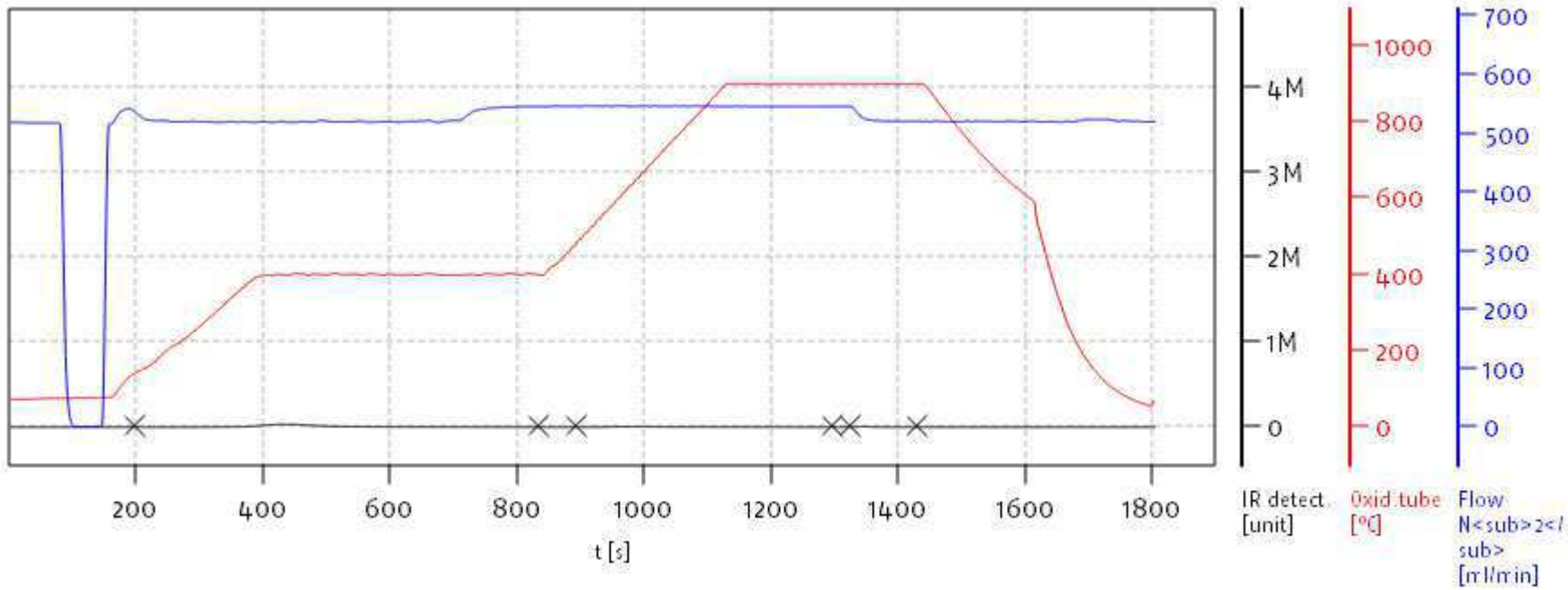
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
201	23	22L0199-13	511.70		CARBON	12/20/2022 5:25 PM	bl	0.034	148 167	0.036	0.000	5 907	30 729	0.034	0.001	0.9312	1.0000



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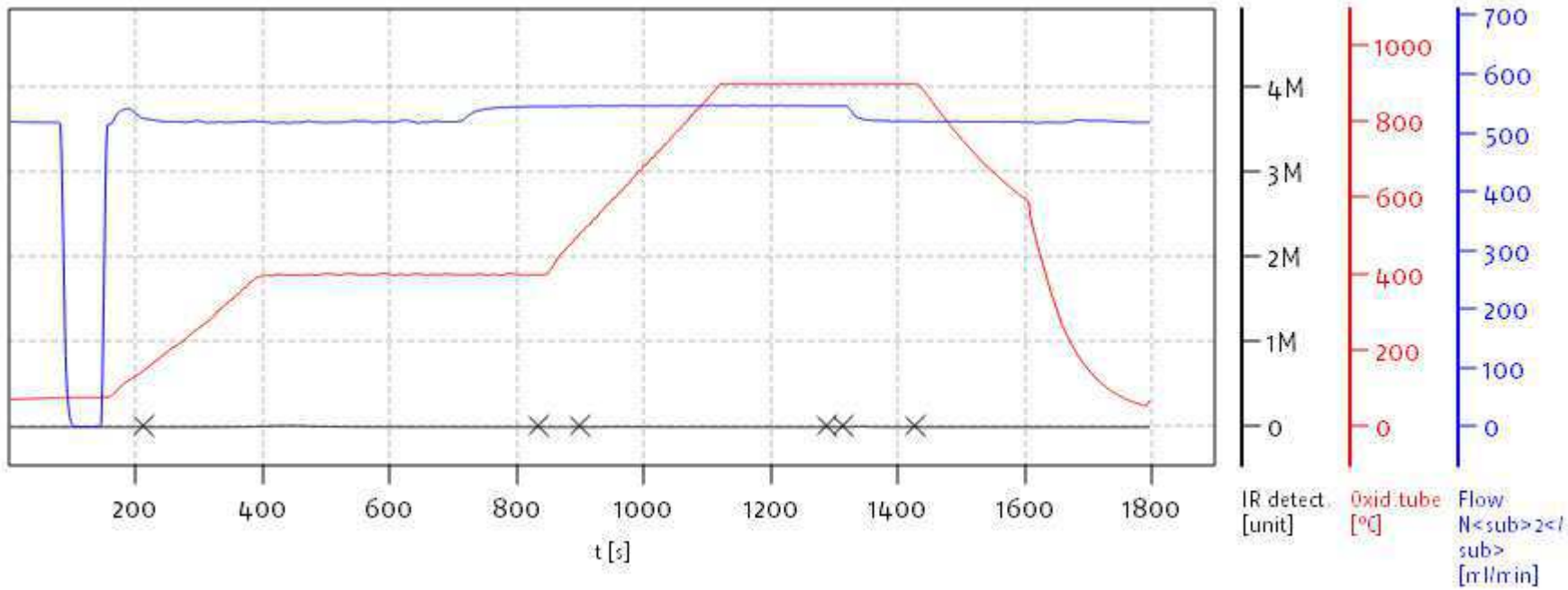
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
202	24	22L0199-14	545.70		CARBON	12/20/2022 5:55 PM	bl	0.011	68 240	0.011	0.000	7 299	14 713	0.011	0.000	0.9312	1.0000



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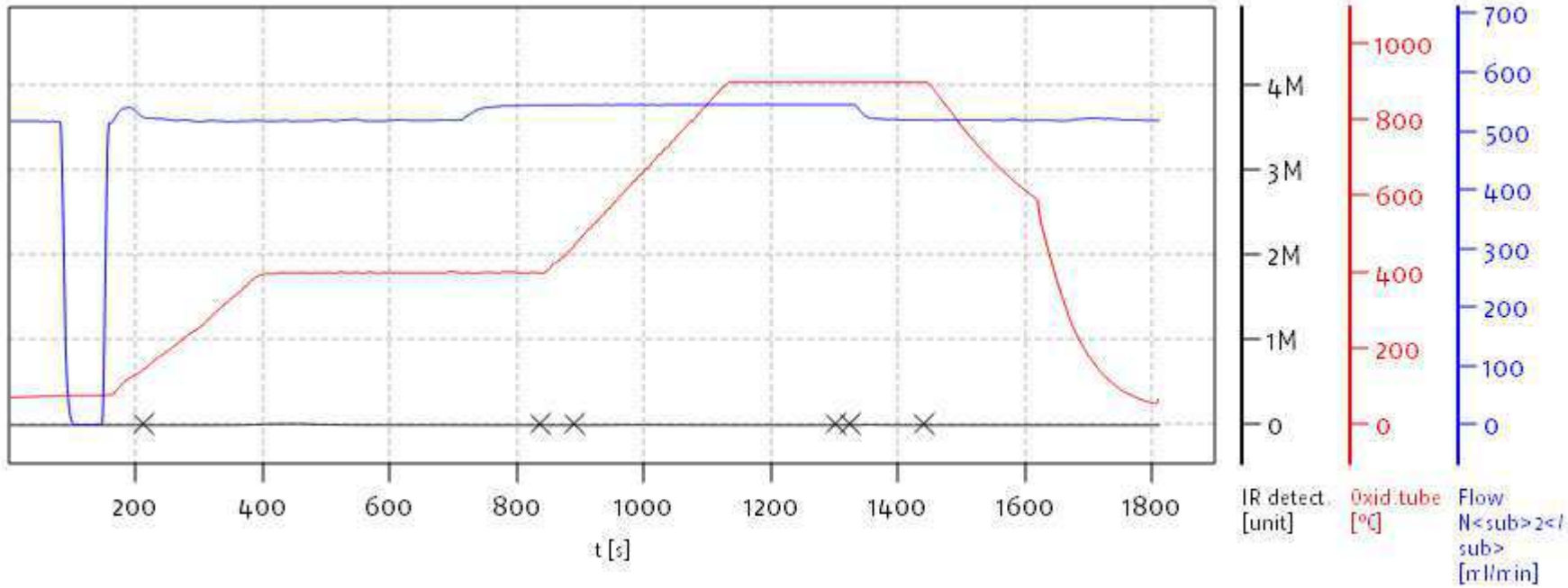
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
203	25	22L0199-15	561.20		CARBON	12/20/2022 6:26 PM	bl	0.011	69 068	0.011	0.000	6 061	16 717	0.011	0.000	0.9312	1.0000



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Balance: BAL3
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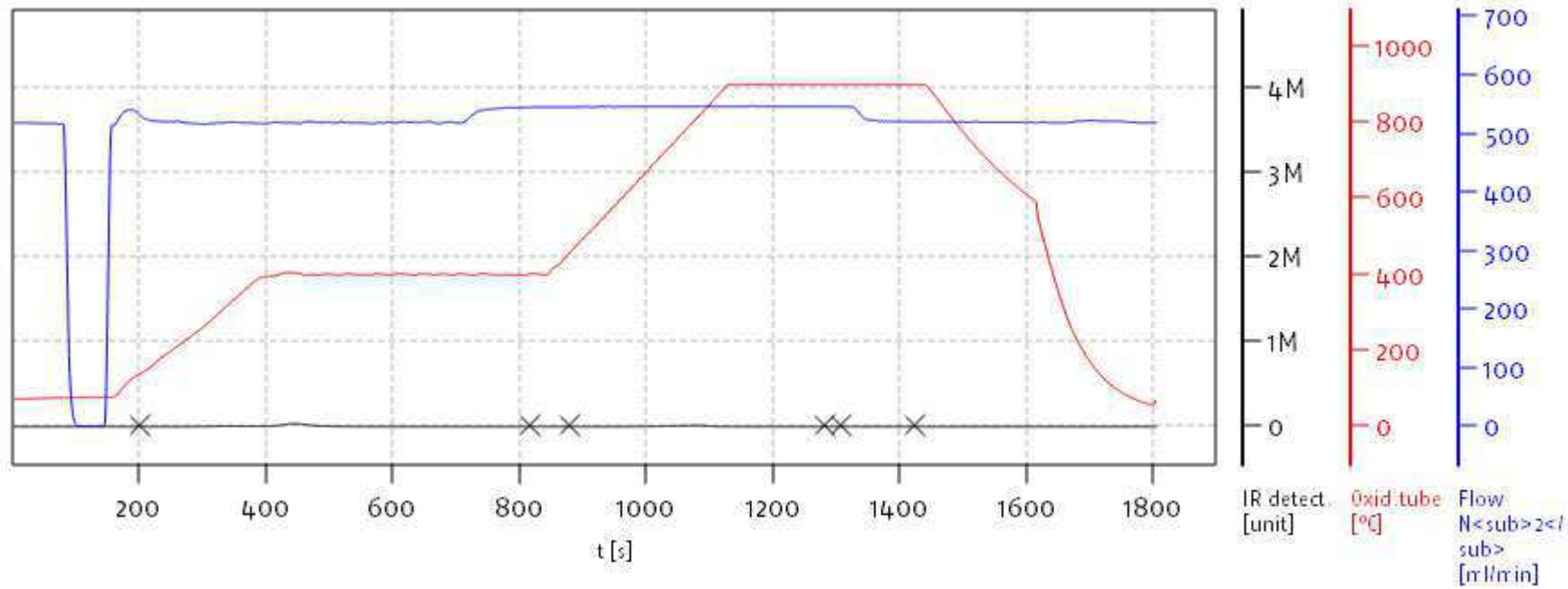
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
204	26	BKL0464-MRL1	507.50		CARBON	12/20/2022 6:57 PM	bl,C2u	0.017	87 864	0.020	0.000	287	36 173	0.017	0.003	0.9312	1.0000



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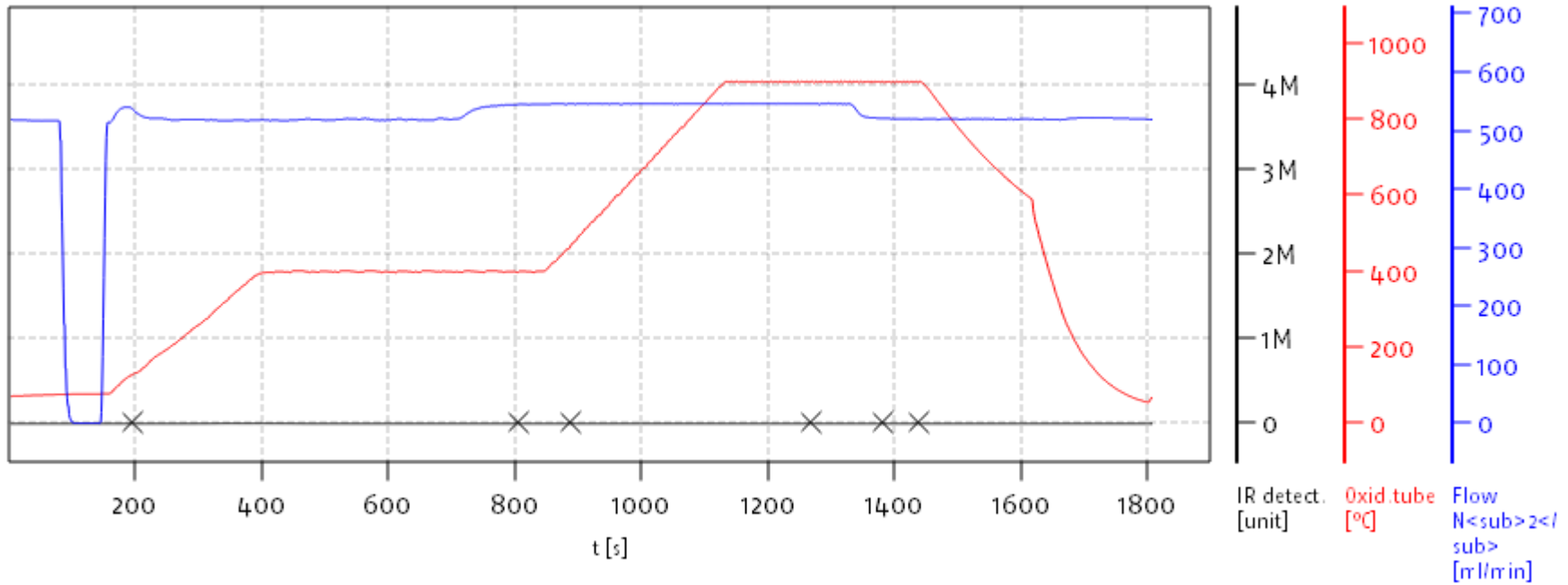
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
205	27	BKL0464-BLK1	507.10		CARBON	12/20/2022 7:27 PM	bl,C3u,C2u	0.000	15 420	0.000	0.000	102	1 881	0.000	0.000	0.9312	1.0000



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Access: soliTOC superuser

Date: Wed Dec 21 09:58:21 2022

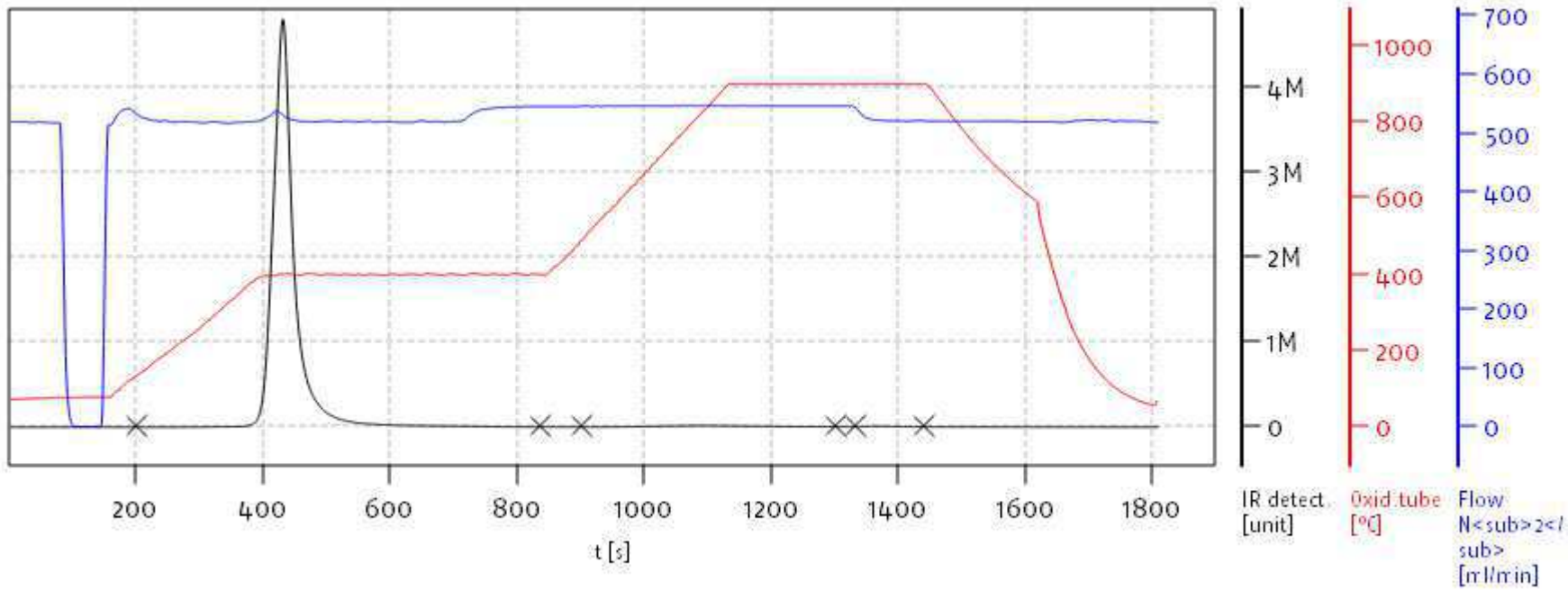
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
206	28	BKL0464-BS1	22.50		CARBON	12/20/2022 7:58 PM	bl	43.899	6 878 350	44.623	0.001	26 682	131 759	43.898	0.724	0.9312	1.0000



Name:

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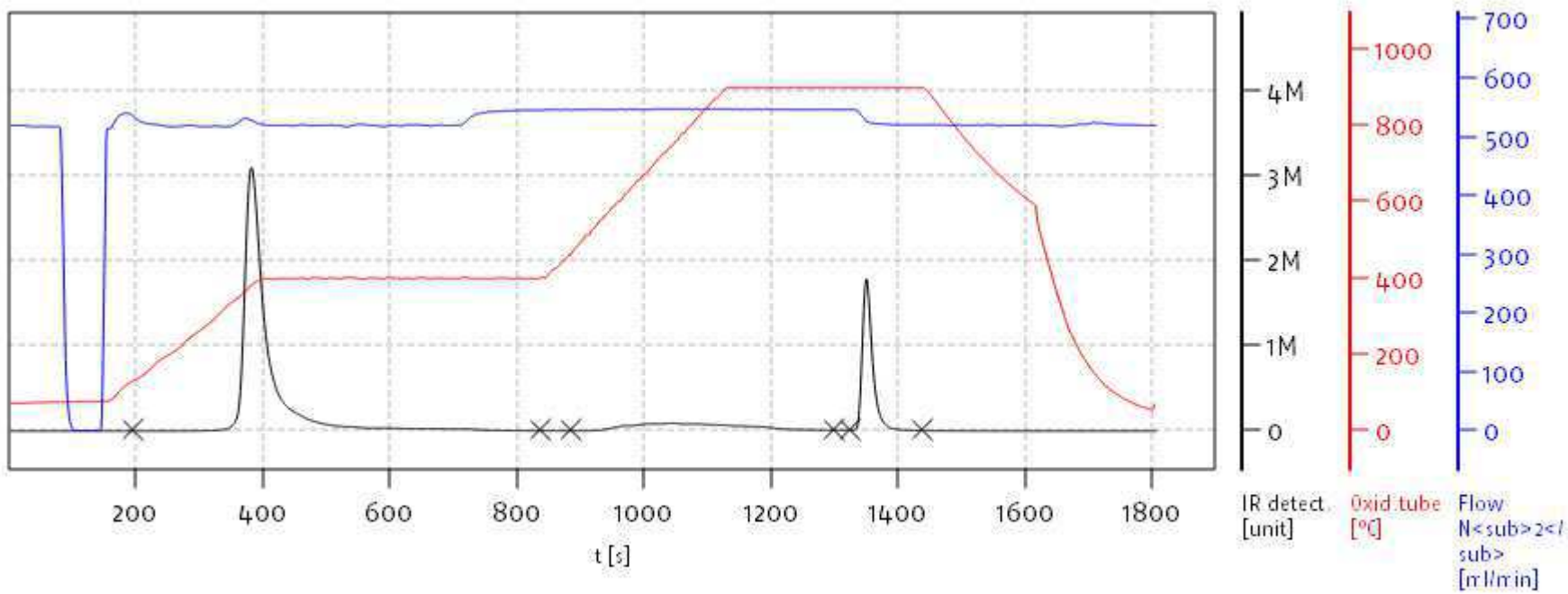
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
207	29	BKL0464-SRM1	290.00		CARBON	12/20/2022 8:28 PM	bl	2.958	4 645 980	3.339	0.662	1 266 560	739 070	2.296	0.380	0.9312	1.0000



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Serial No: 0300.181017
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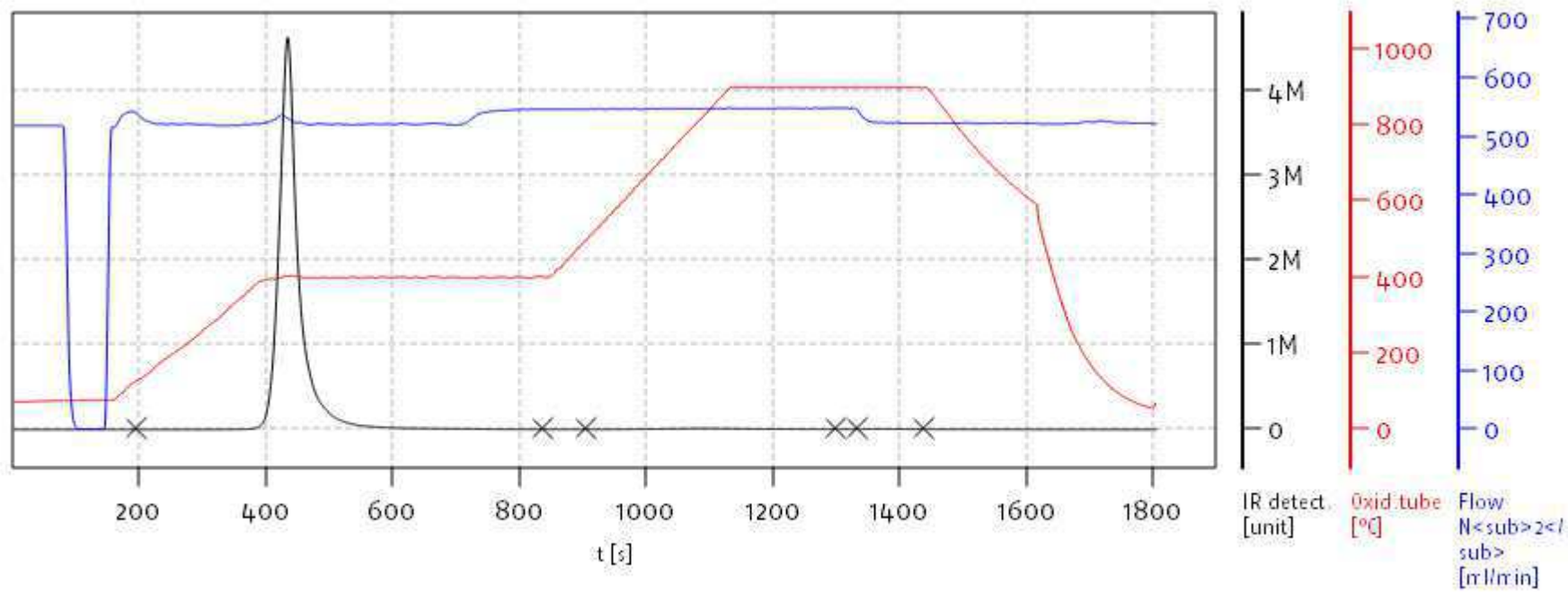
elementar
EXCELLENCE IN ELEMENTS

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
208	30	SKL0217-CCVH	20.50		CARBON	12/20/2022 8:59 PM	bl	43.865	6 264 510	44.389	0.000	22 052	95 947	43.865	0.524	0.9312	1.0000



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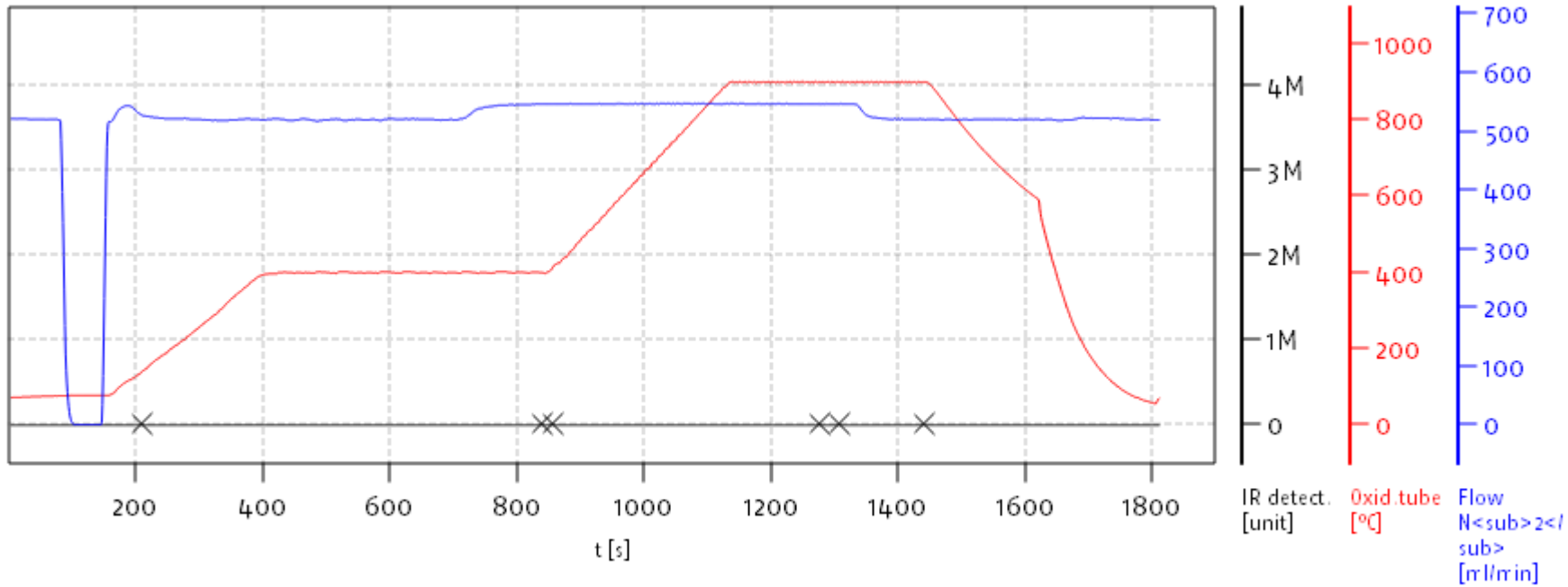
Date: Wed Dec 21 09:58:21 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 121622 DOE from: 12/21/2022 7:31 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
209	31	SKL0217-CCBH	517.20		CARBON	12/20/2022 9:29 PM	bl,C2u	0.000	3 226	0.000	0.000	549	0	0.000	0.000	0.9312	1.0000



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Serial No: 0300.181017
Mode CCC

Document: 121622 DOE from: 12/21/2022 7:31 AM

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408

INITIAL CALIBRATION DATA

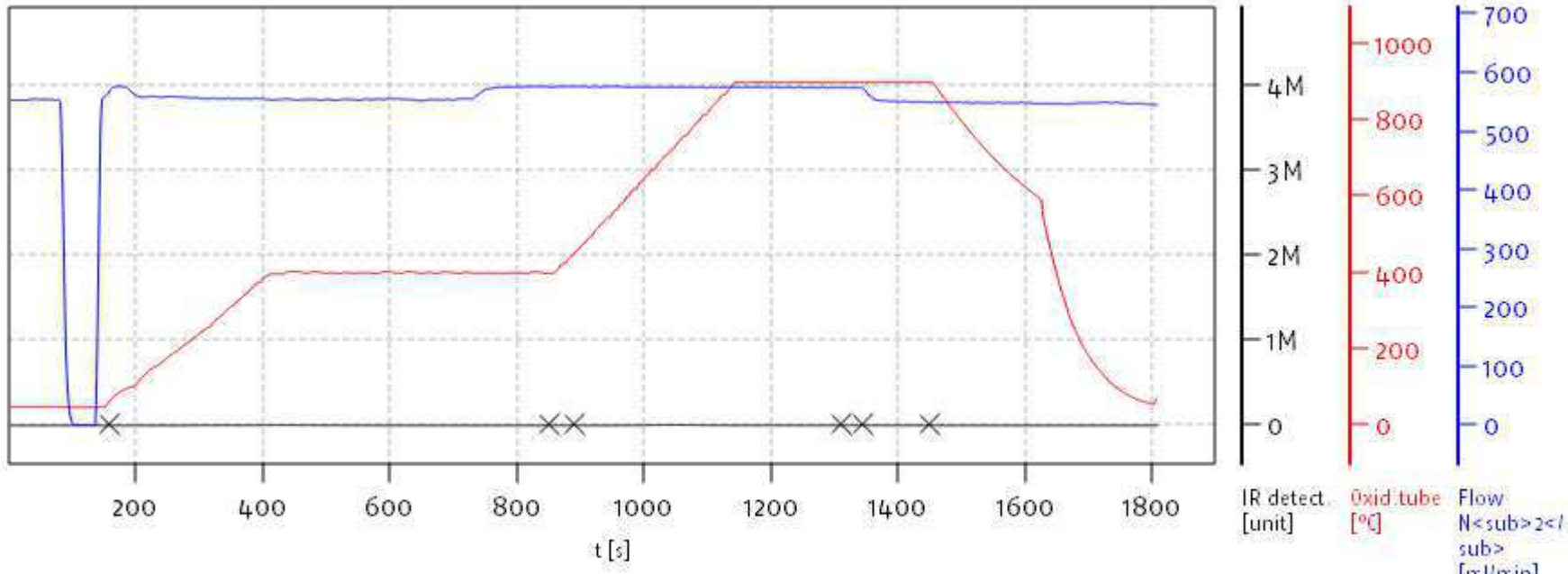
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	22L0156
Client:	Anchor QEA, LLC	Project:	AOC4 UR Phase 3
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	4/26/2022 11:29 AM	0.000	0.000	0.000	bl	29 049	30 612	3 899	1.0000	1.0000



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Access: soliTOC superuser

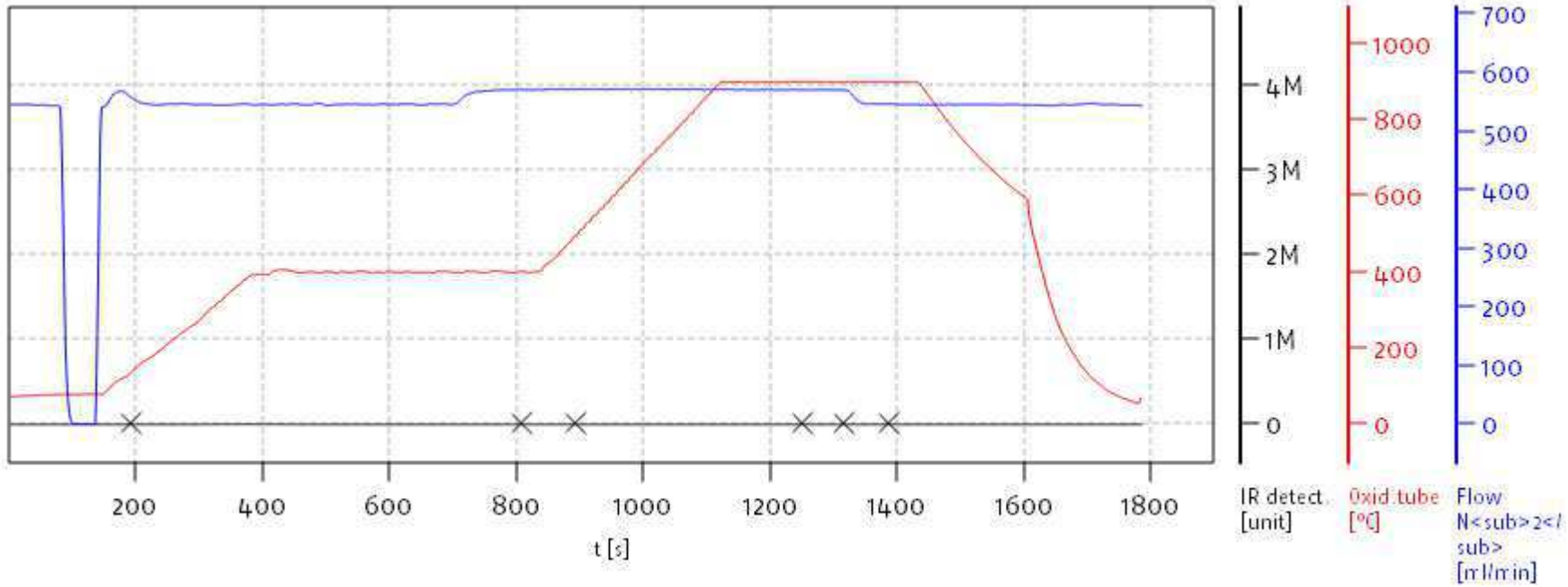
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	4/26/2022 12:00 PM	0.000	0.000	0.000	bl	11 115	60	8	1.0000	1.0000



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Serial No: 0300.181017
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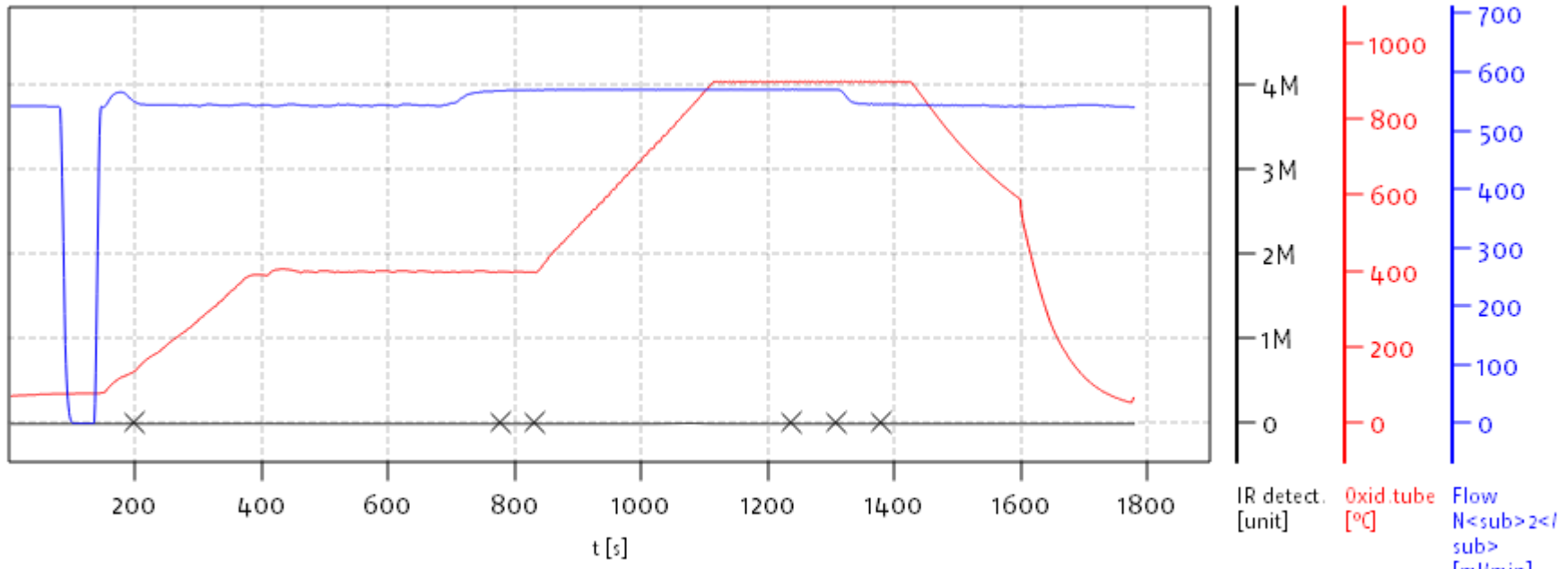
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	4/26/2022 12:30 PM	0.010	0.008	0.018	bl,C1u,C2u	7 294	11 739	22	1.0000	0.7425



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Serial No: 0300.181017
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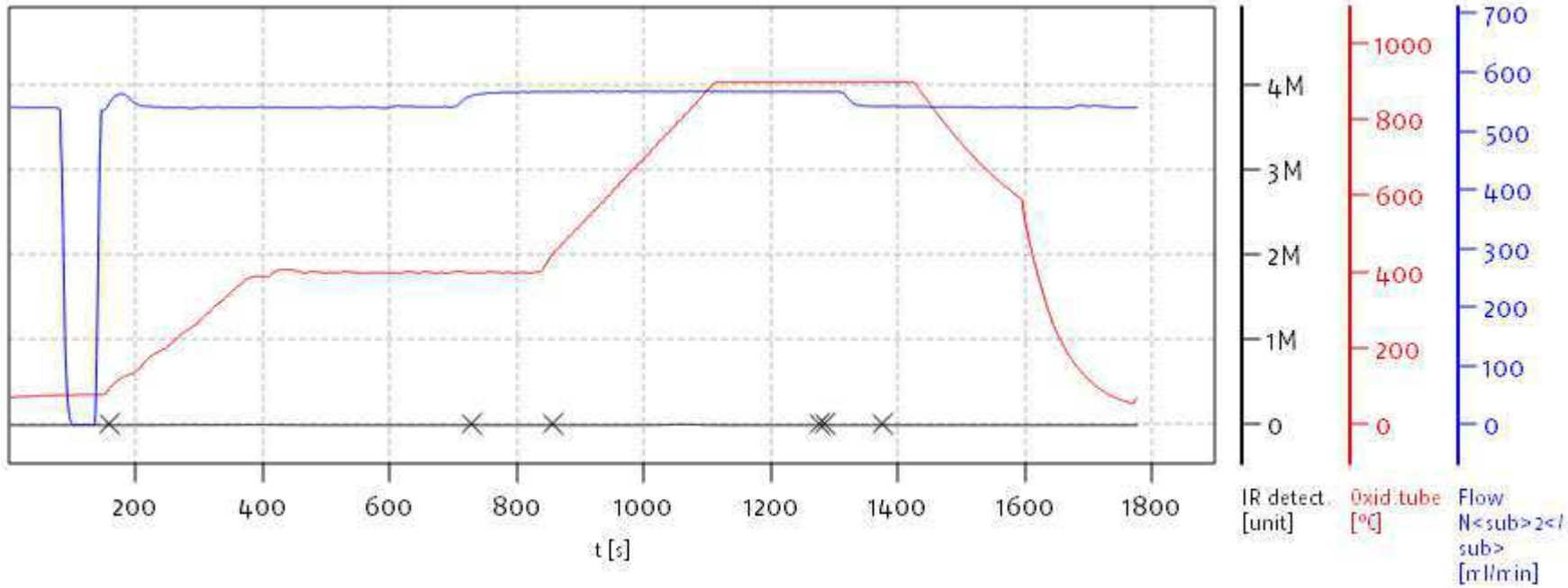
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0049	1.00	CARBON	4/26/2022 1:00 PM	0.023	0.015	0.038	bl,C2u	23 296	19 107	47	1.0000	0.8936



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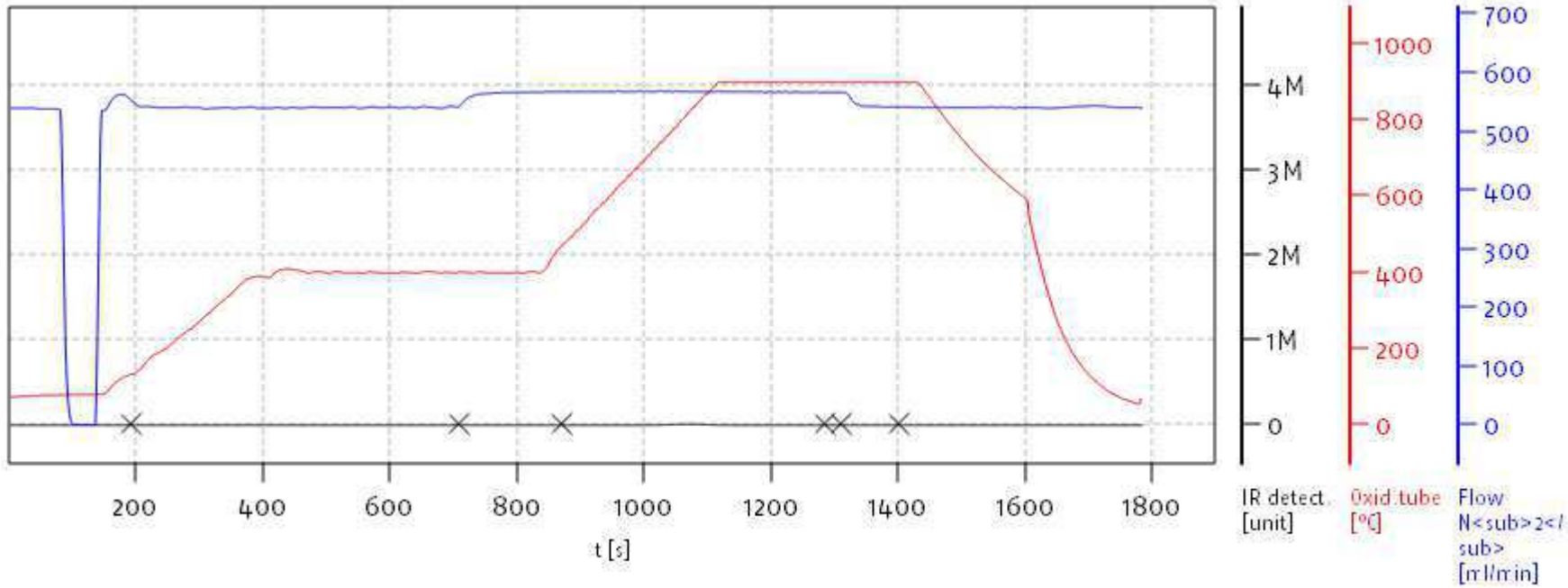
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0071	1.00	CARBON	4/26/2022 1:30 PM	0.006	0.022	0.028	bl,C1u,C2u	2 319	27 530	170	1.0000	0.9343



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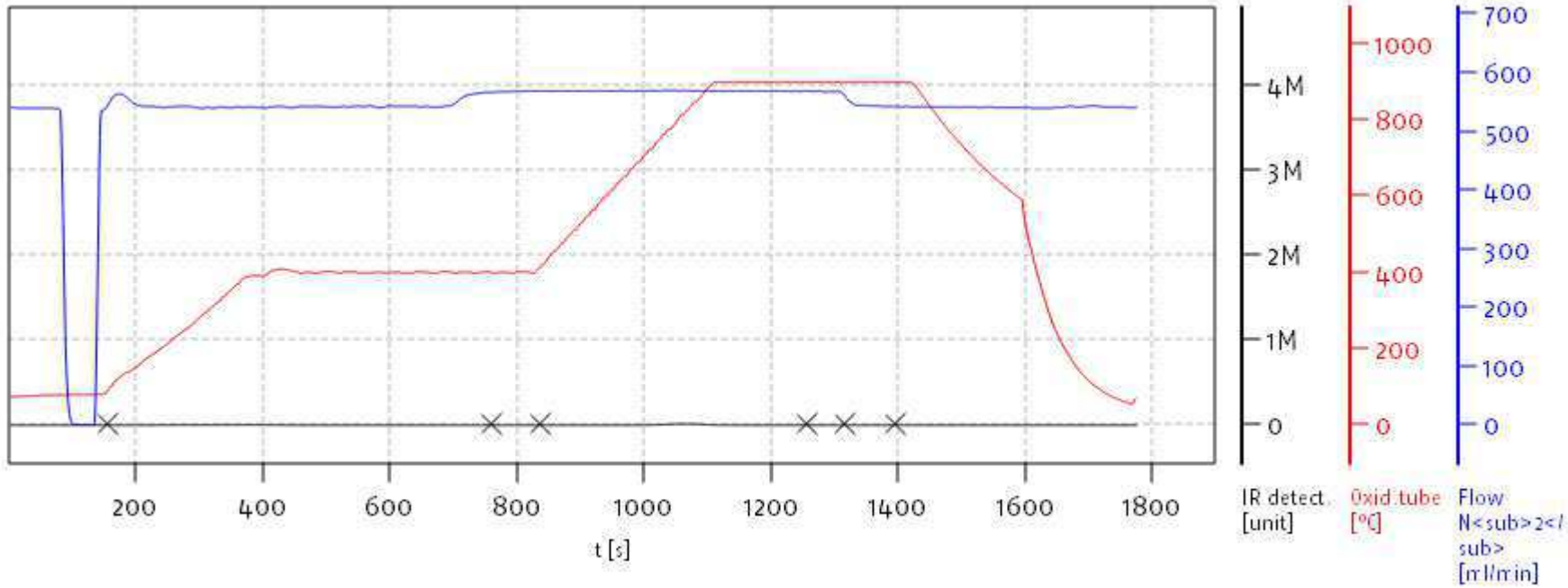
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0098	1.00	CARBON	4/26/2022 2:00 PM	0.020	0.030	0.050	bl,C2u	19 746	38 017	109	1.0000	0.9461



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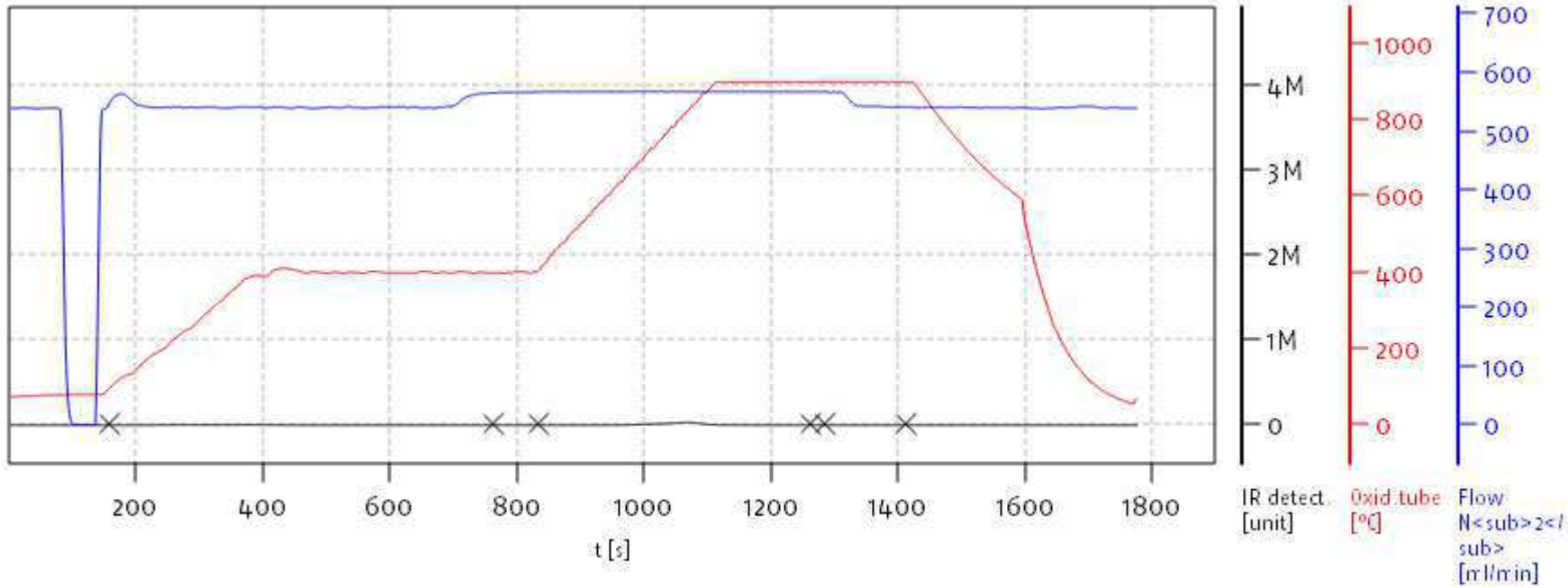
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0148	1.00	CARBON	4/26/2022 2:30 PM	0.021	0.045	0.066	bl,C2u	20 951	92 945	236	1.0000	0.5975



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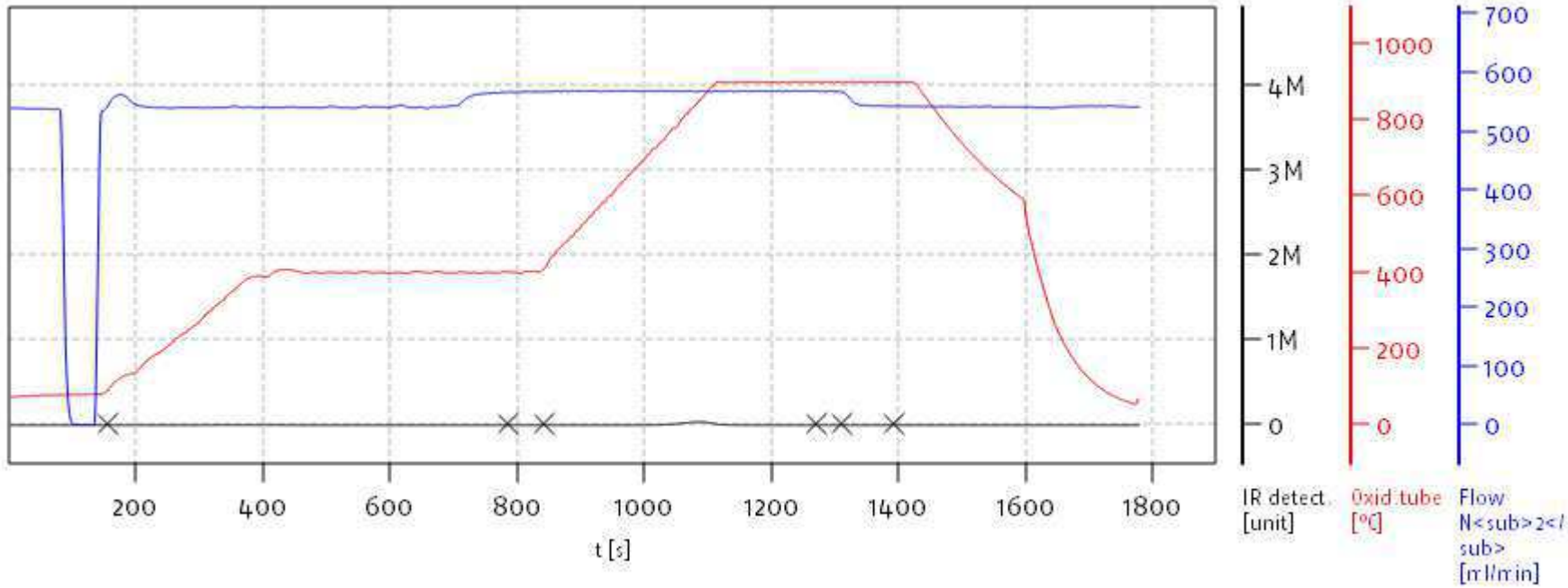
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0196	1.00	CARBON	4/26/2022 3:00 PM	0.012	0.061	0.073	bl,C2u	10 118	82 297	59	1.0000	0.9144



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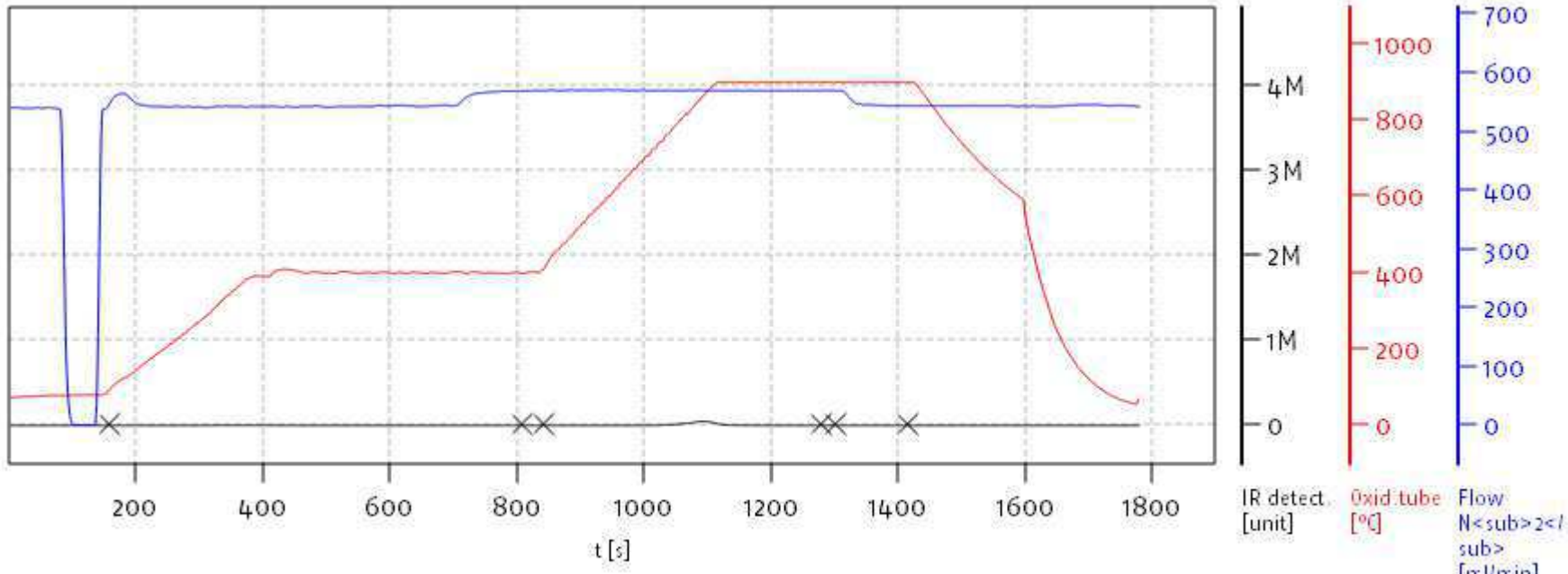
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0247	1.00	CARBON	4/26/2022 3:30 PM	0.013	0.075	0.088	bl,C2u	10 555	101 530	292	1.0000	0.9173



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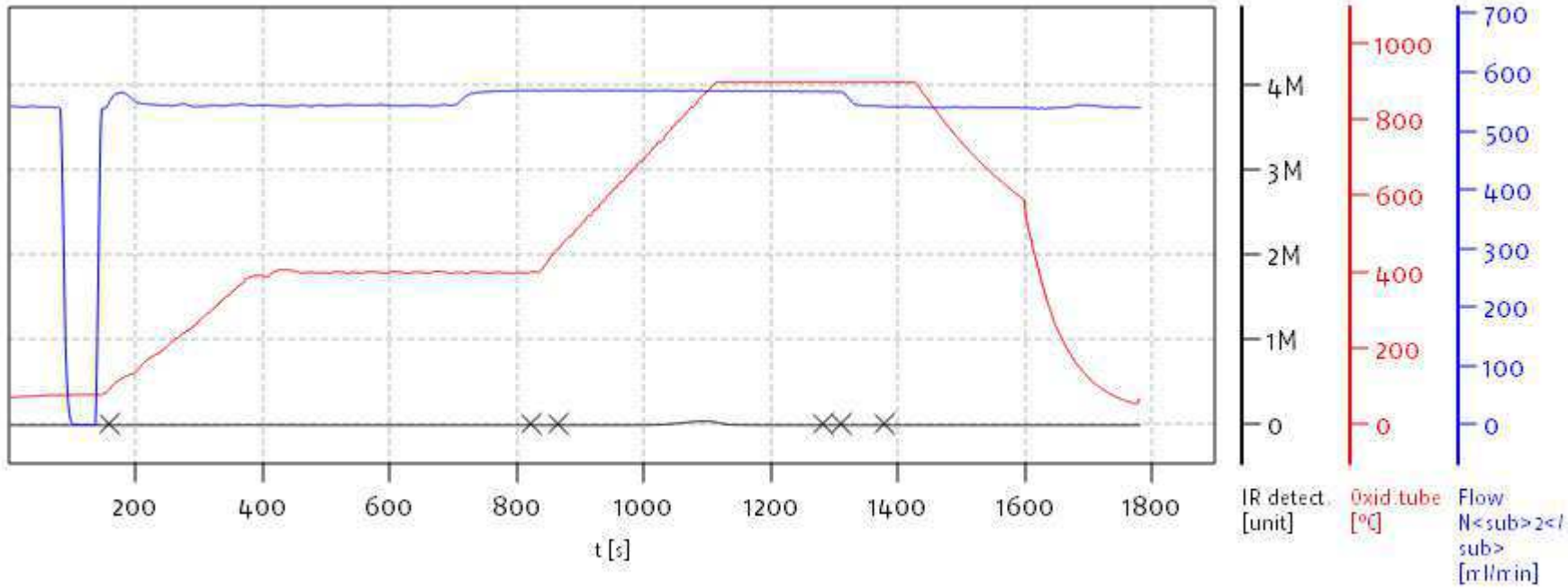
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0298	1.00	CARBON	4/26/2022 4:00 PM	0.009	0.091	0.100	bl,C1u,C2u	6 668	120 822	116	1.0000	0.9312



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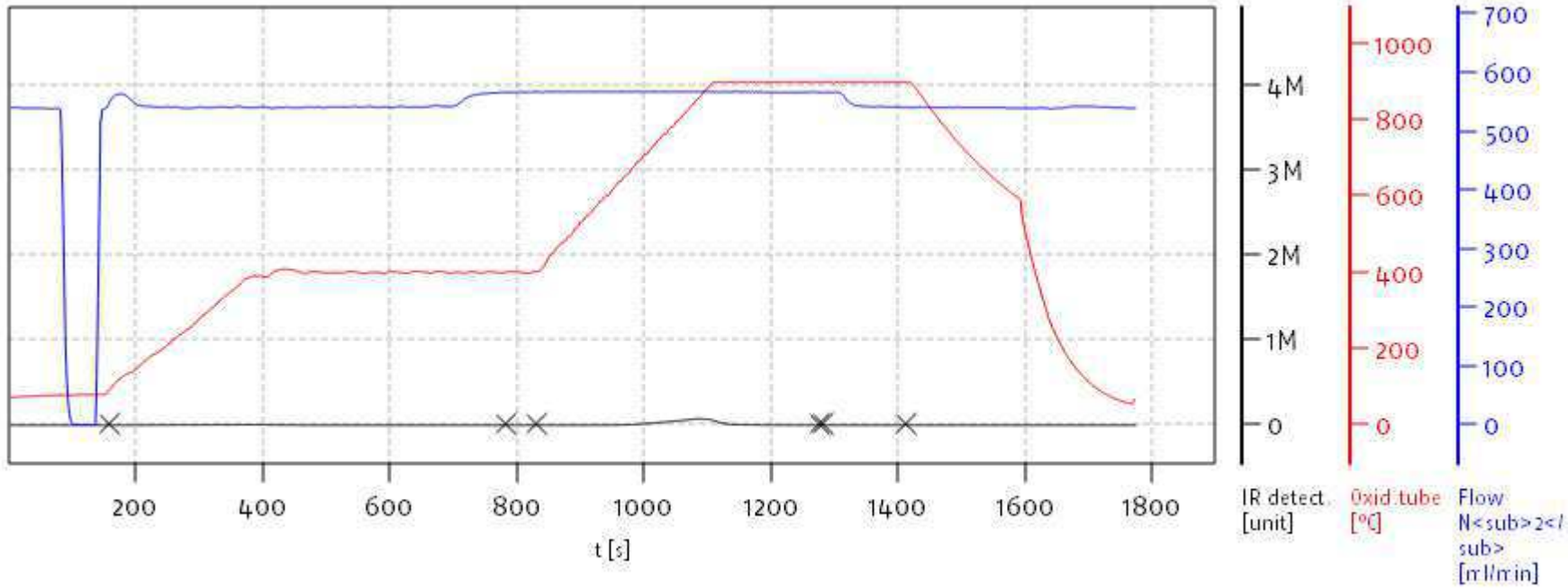
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0402	1.00	CARBON	4/26/2022 4:30 PM	0.031	0.120	0.151	bl,C2u	32 999	260 234	1 044	1.0000	0.5792



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Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

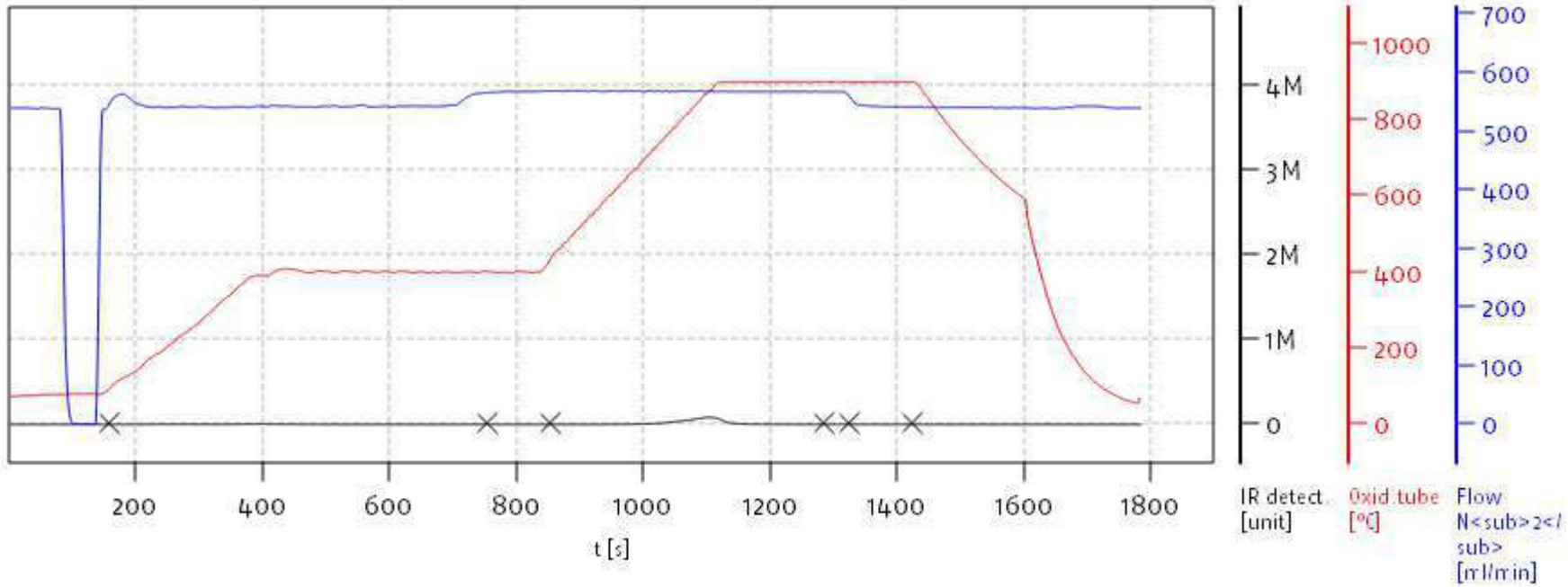
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0500	1.00	CARBON	4/26/2022 5:00 PM	0.021	0.151	0.172	bl,C2u	20 147	233 779	913	1.0000	0.8099



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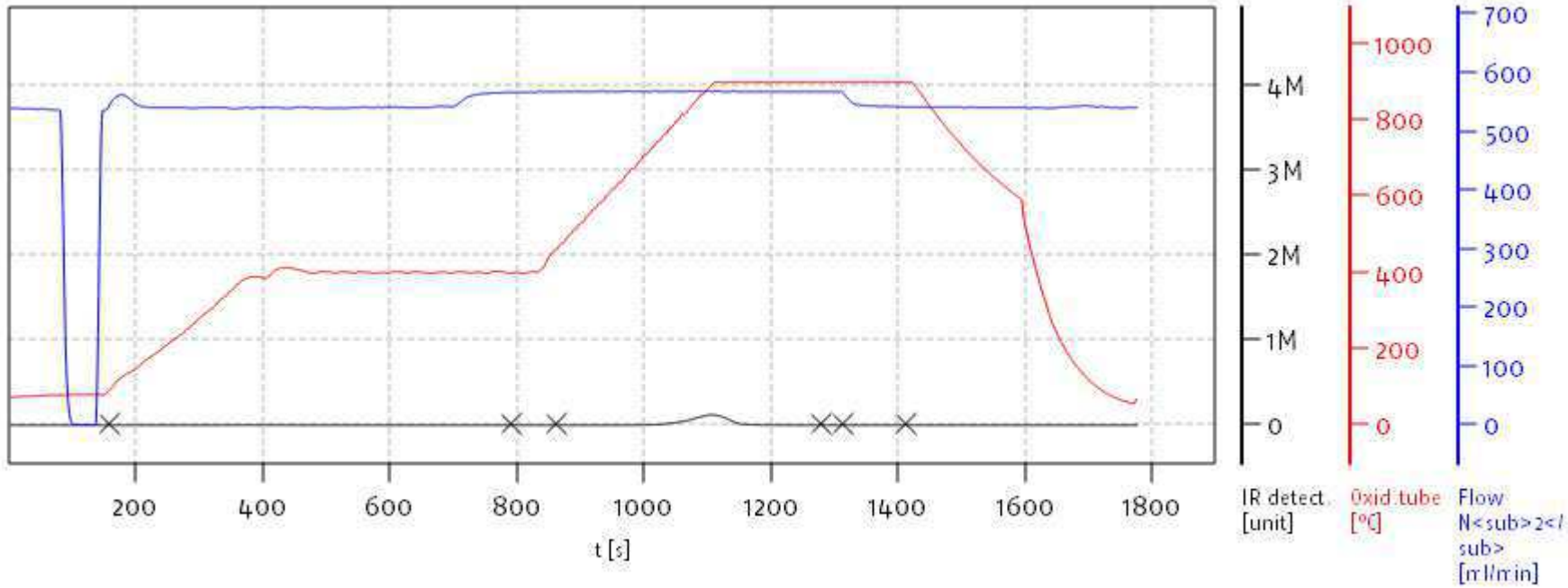
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0040	1.00	CARBON	4/26/2022 5:30 PM	0.010	0.258	0.268	bl,C1u,C2u	7 070	323 151	663	1.0000	1.0048



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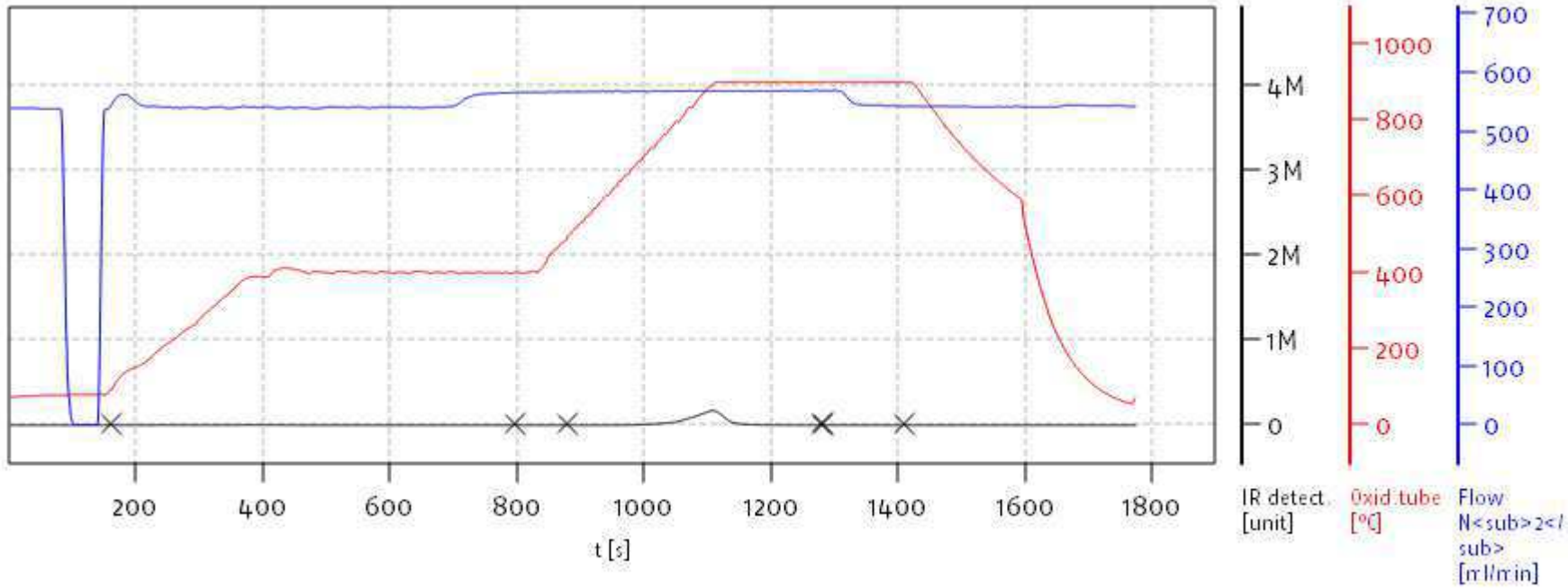
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0048	1.00	CARBON	4/26/2022 6:00 PM	0.015	0.324	0.339	bl,C2u	13 785	411 879	575	1.0000	0.9917



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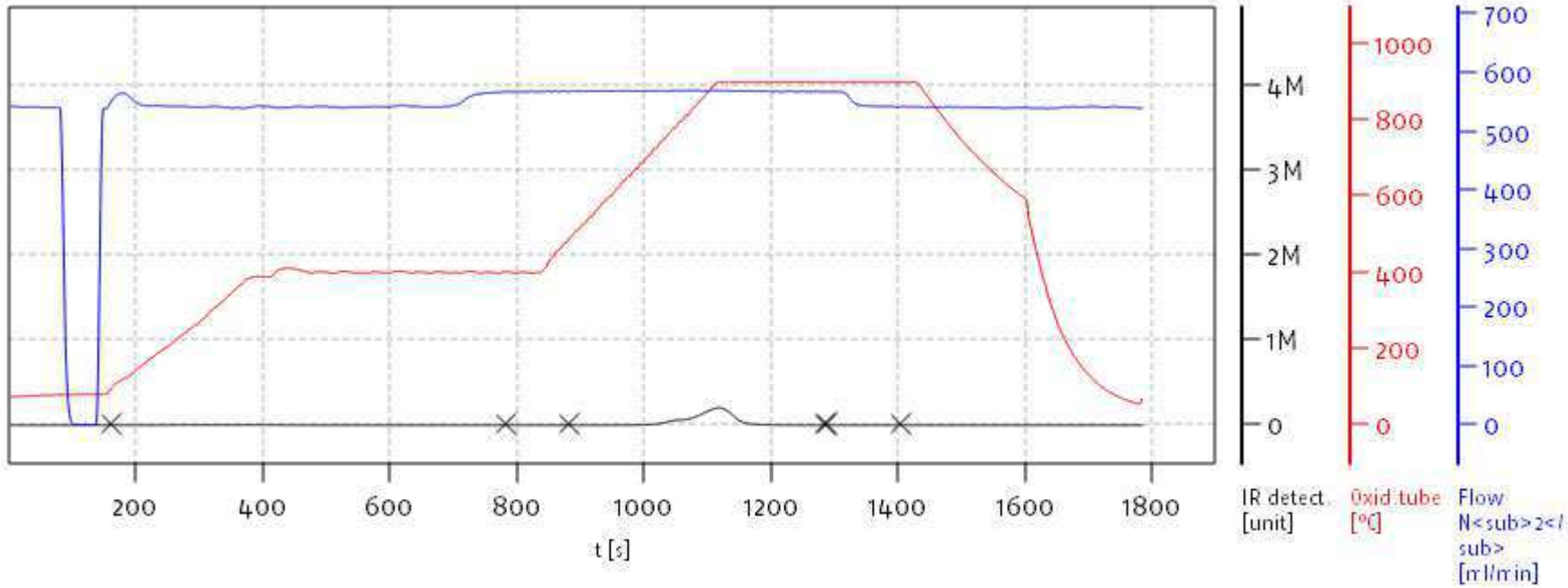
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0069	1.00	CARBON	4/26/2022 6:30 PM	0.019	0.444	0.463	bl,C2u	18 465	553 540	263	1.0000	1.0129



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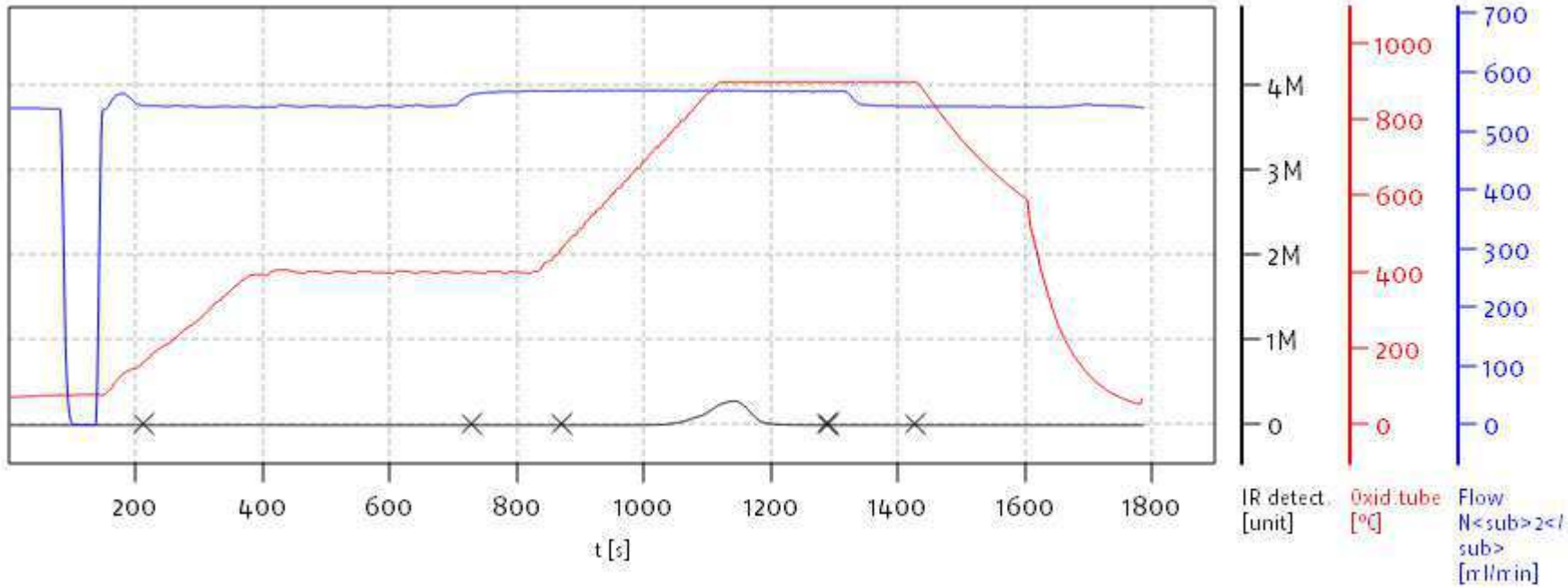
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0101	1.00	CARBON	4/26/2022 7:00 PM	0.009	0.600	0.609	bl,C1u,C2u	5 485	839 878	536	1.0000	0.9036



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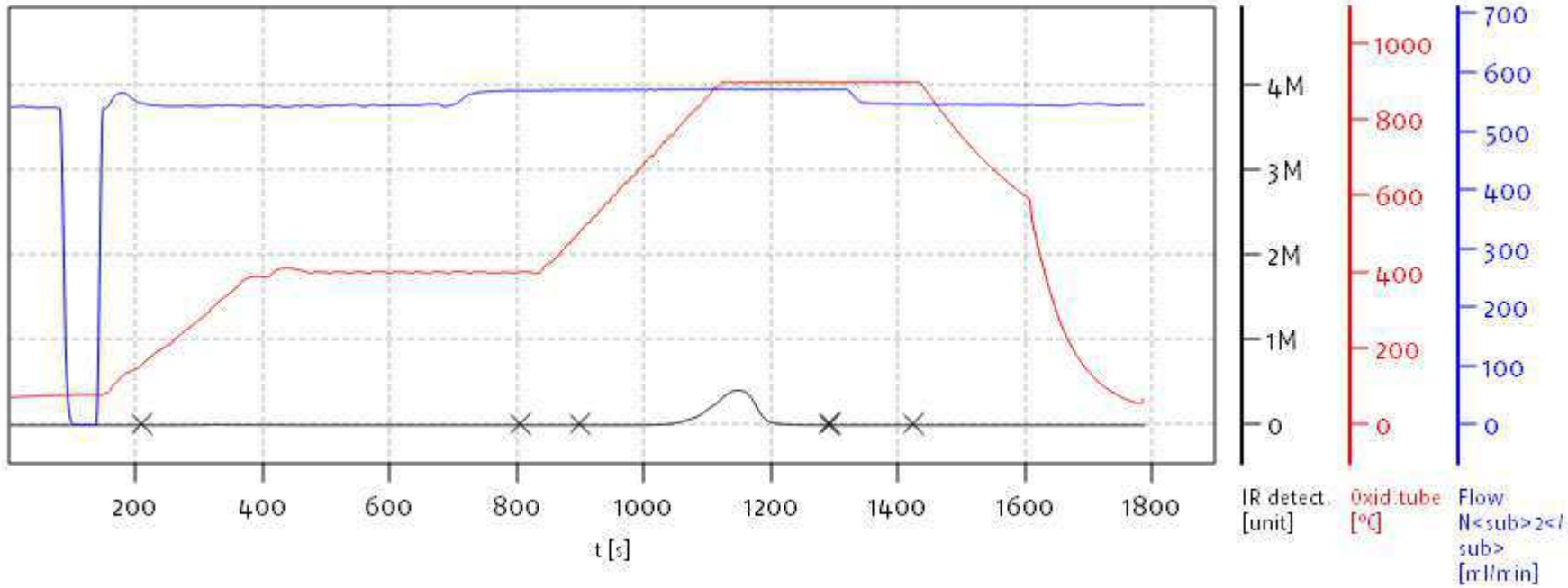
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0149	1.00	CARBON	4/26/2022 7:31 PM	0.019	0.906	0.925	bl,C2u	17 439	1 236 200	814	1.0000	0.9279



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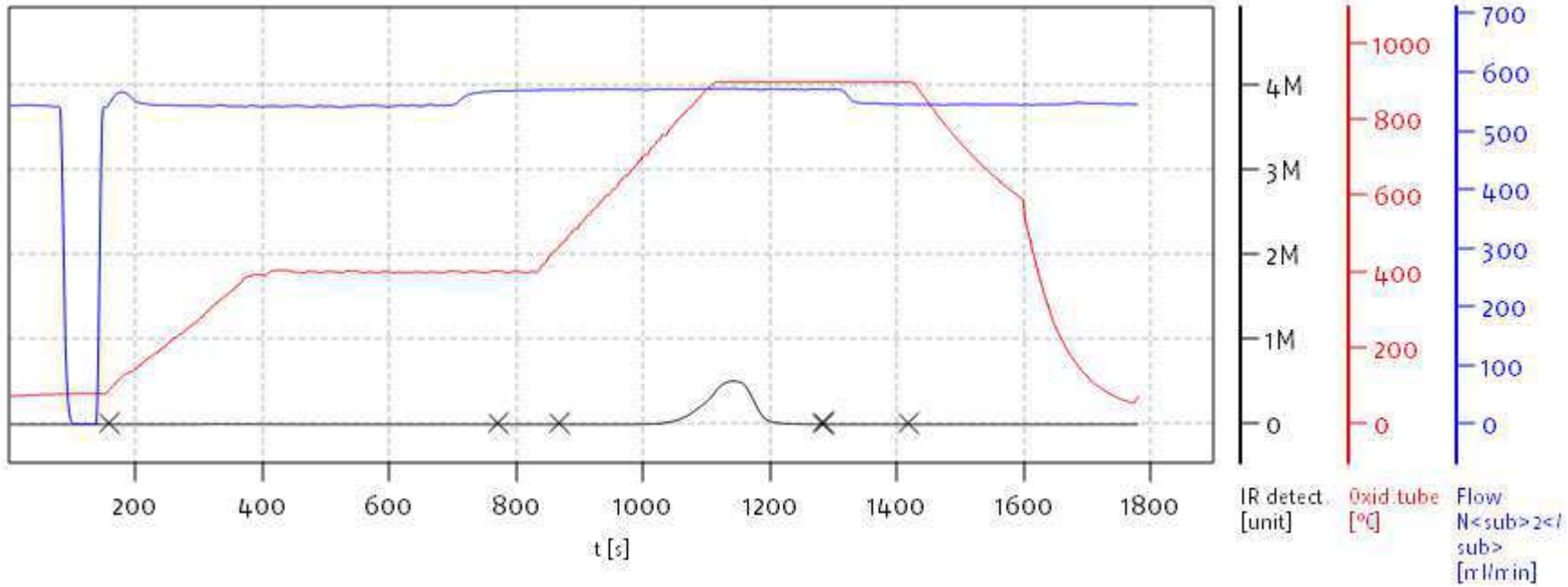
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0198	1.00	CARBON	4/26/2022 8:01 PM	0.015	1.206	1.221	bl,C2u	12 557	1 639 190	1 295	1.0000	0.9320



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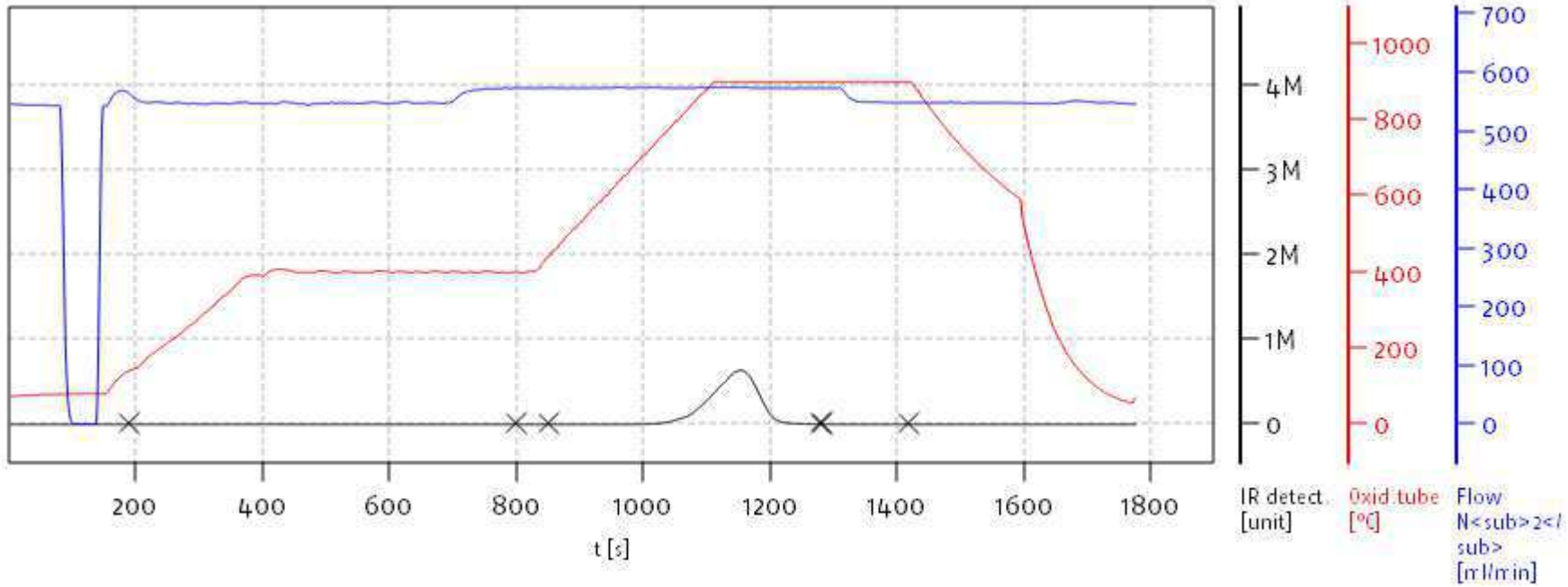
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0250	1.00	CARBON	4/26/2022 8:31 PM	0.009	1.524	1.533	bl,C1u,C2u	4 029	2 063 890	2 225	1.0000	0.9357



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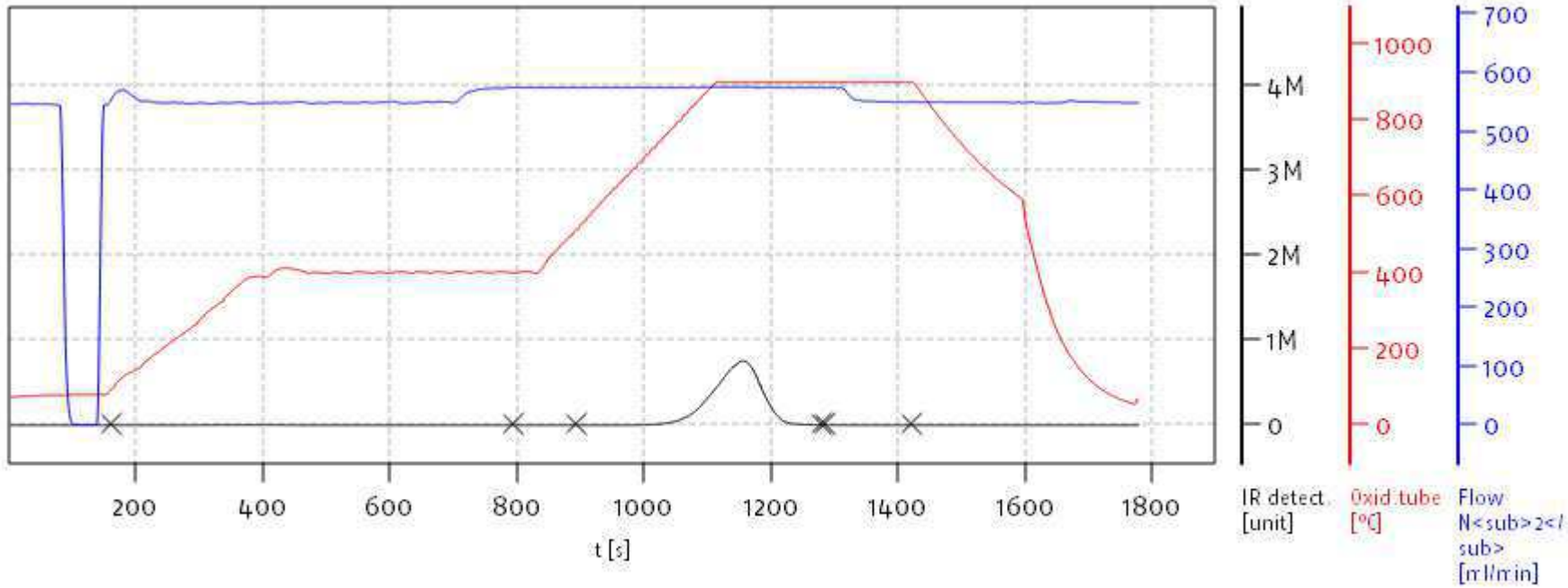
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0303	1.00	CARBON	4/26/2022 9:01 PM	0.017	1.800	1.817	bl,C2u	13 926	2 495 900	2 903	1.0000	0.9140



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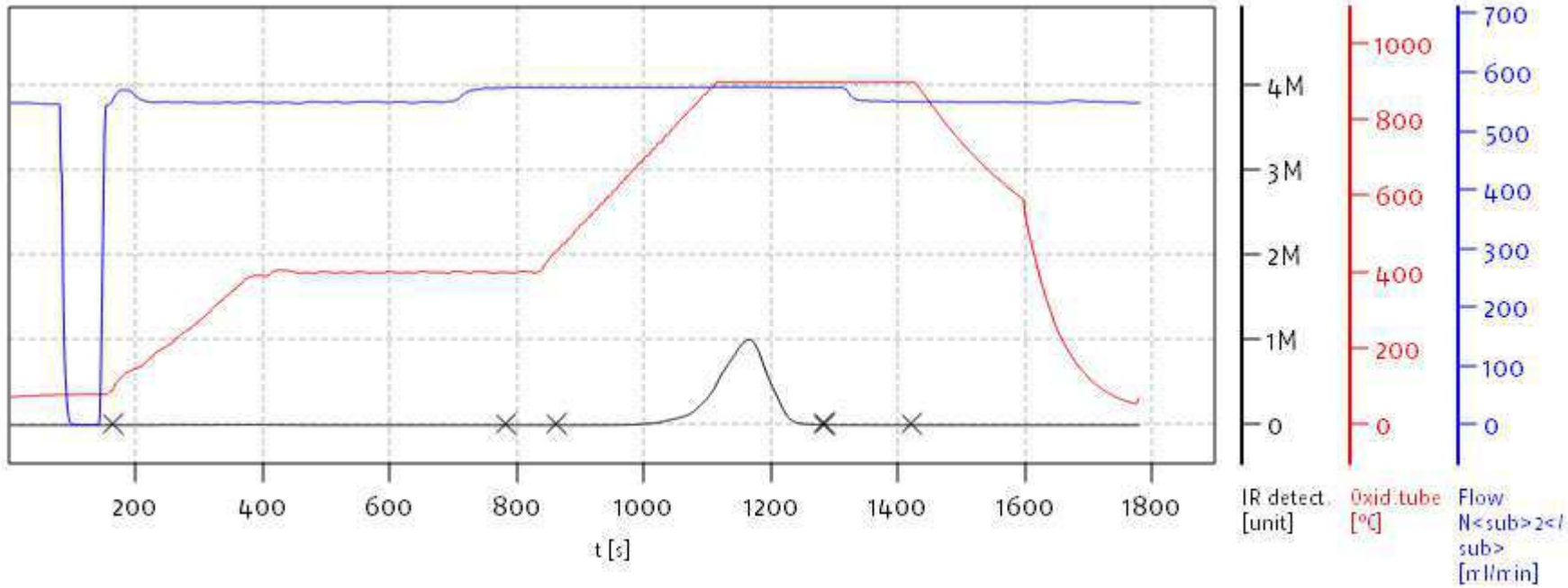
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0415	1.00	CARBON	4/26/2022 9:31 PM	0.031	2.400	2.431	bl,C2u	28 786	3 482 530	5 351	1.0000	0.8737



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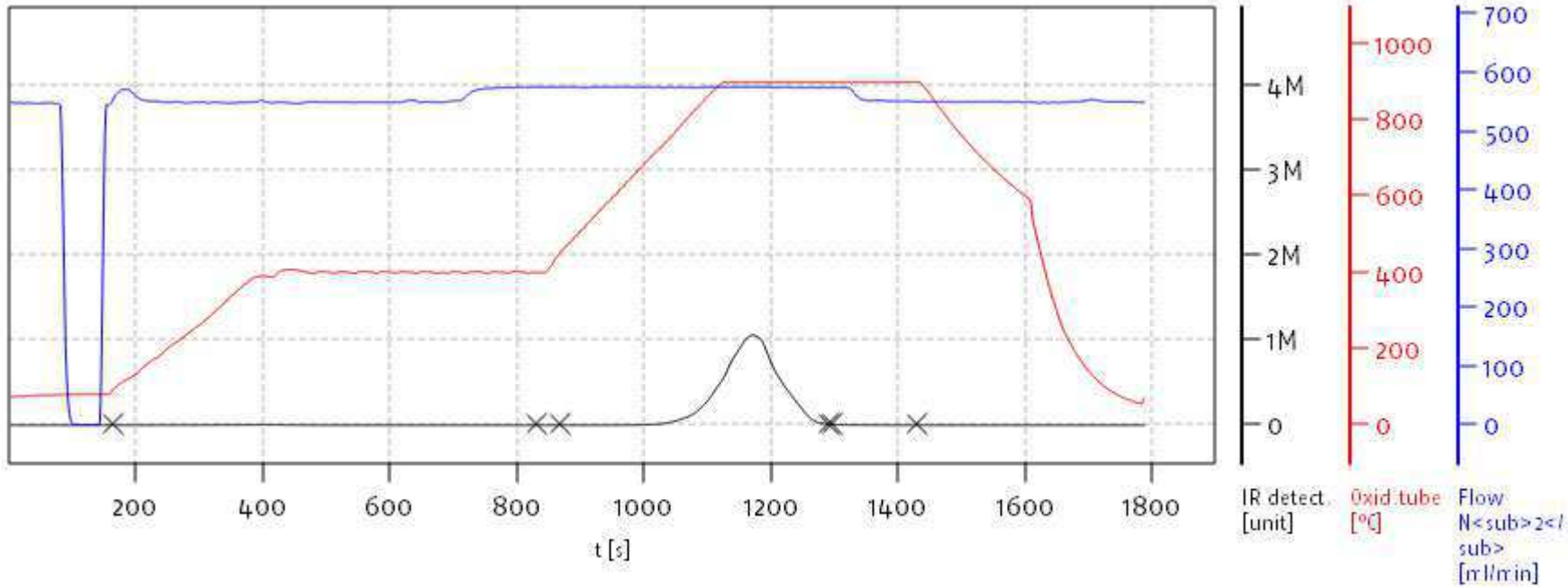
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0497	1.00	CARBON	4/26/2022 10:01 PM	0.031	3.012	3.043	bl	23 732	4 105 830	9 736	1.0000	0.9301



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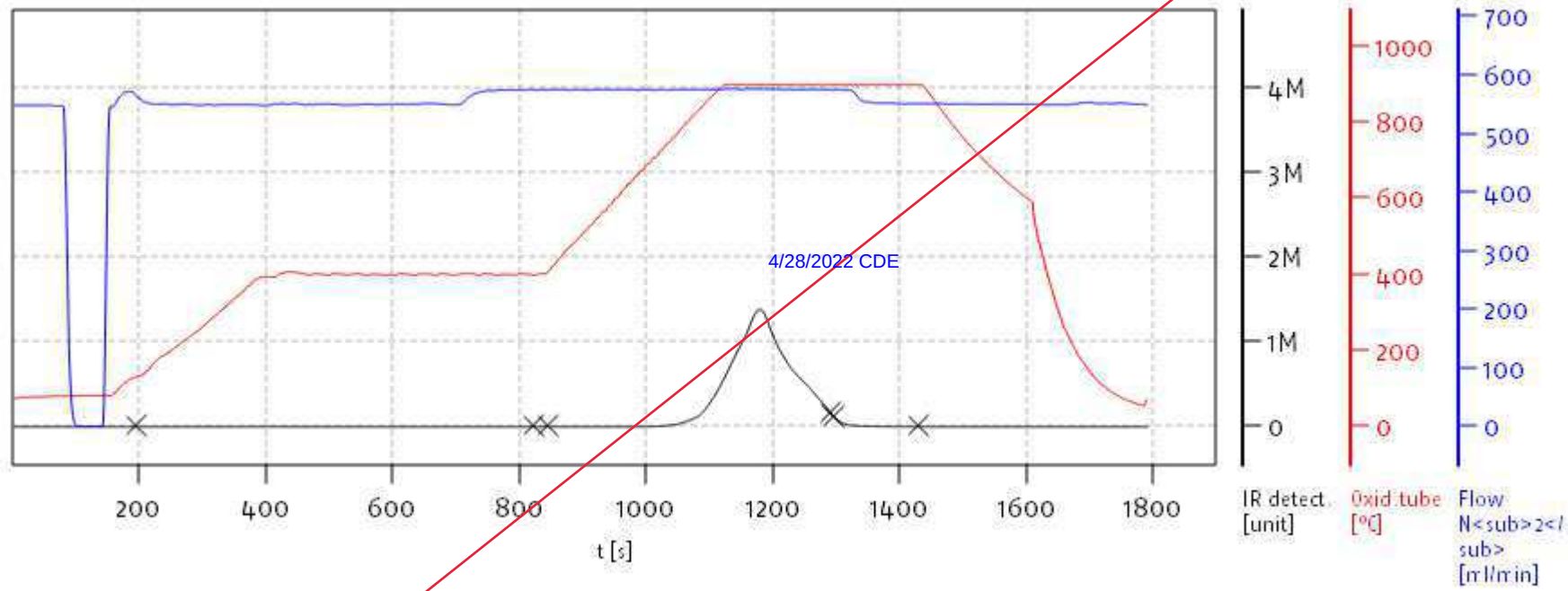
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/26/2022 10:31 PM	0.005	3.805	3.810	bl,C1u	3 605	5 648 620	71 970	1.0000	0.9443



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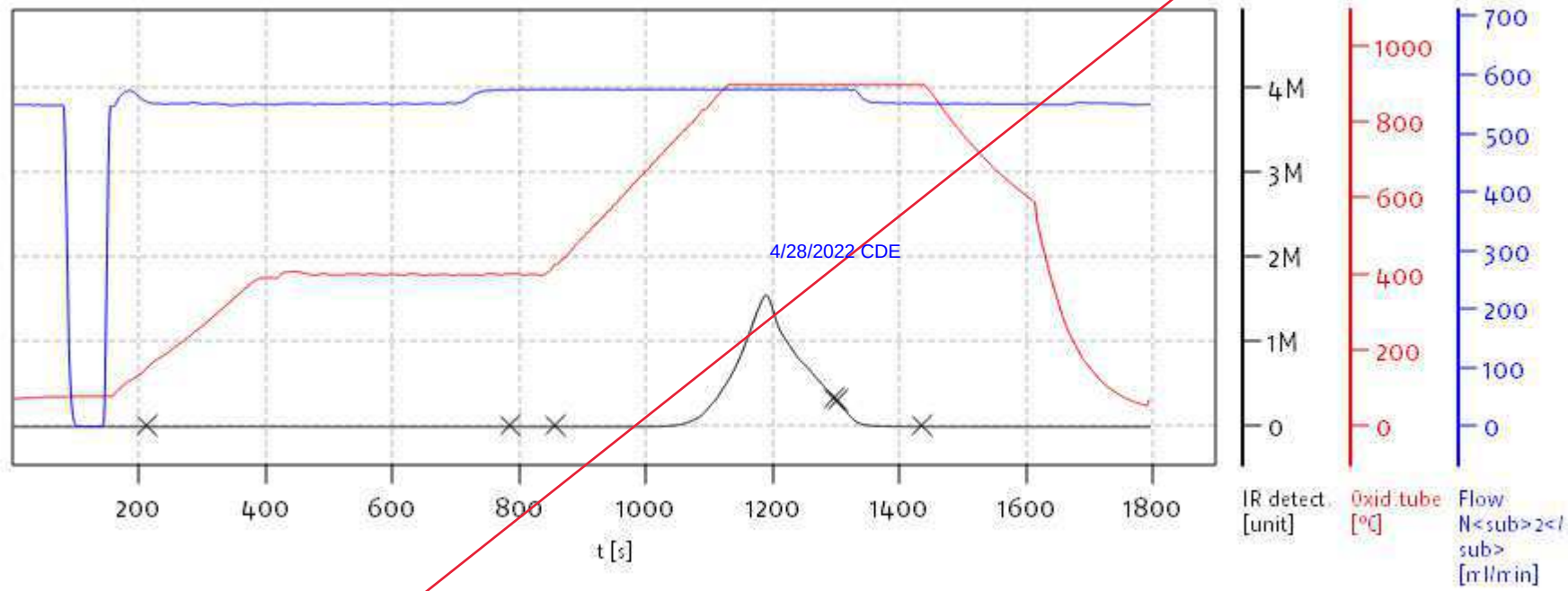
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/26/2022 11:02 PM	0.010	4.637	4.647	bl	10 023	6 397 530	228 171	1.0000	0.9539



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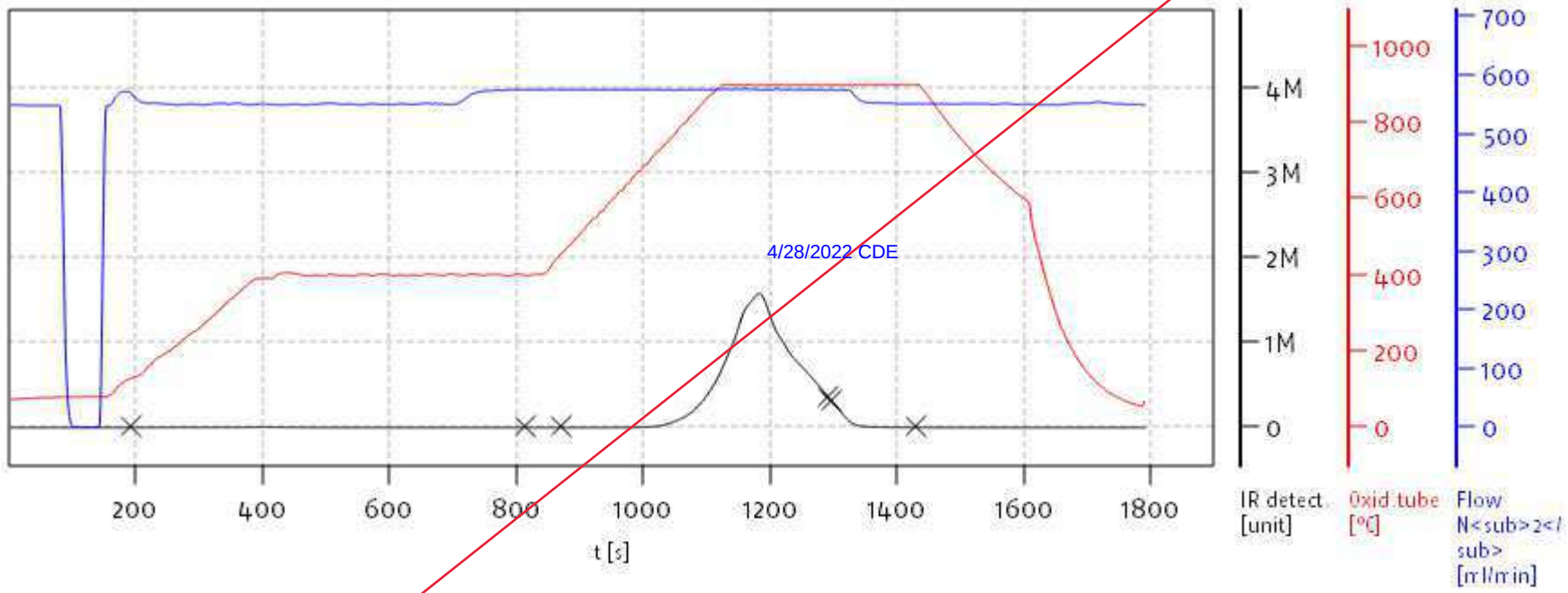
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/26/2022 11:32 PM	0.020	5.219	5.239	bl	23 354	7 186 580	239 986	1.0000	0.9540



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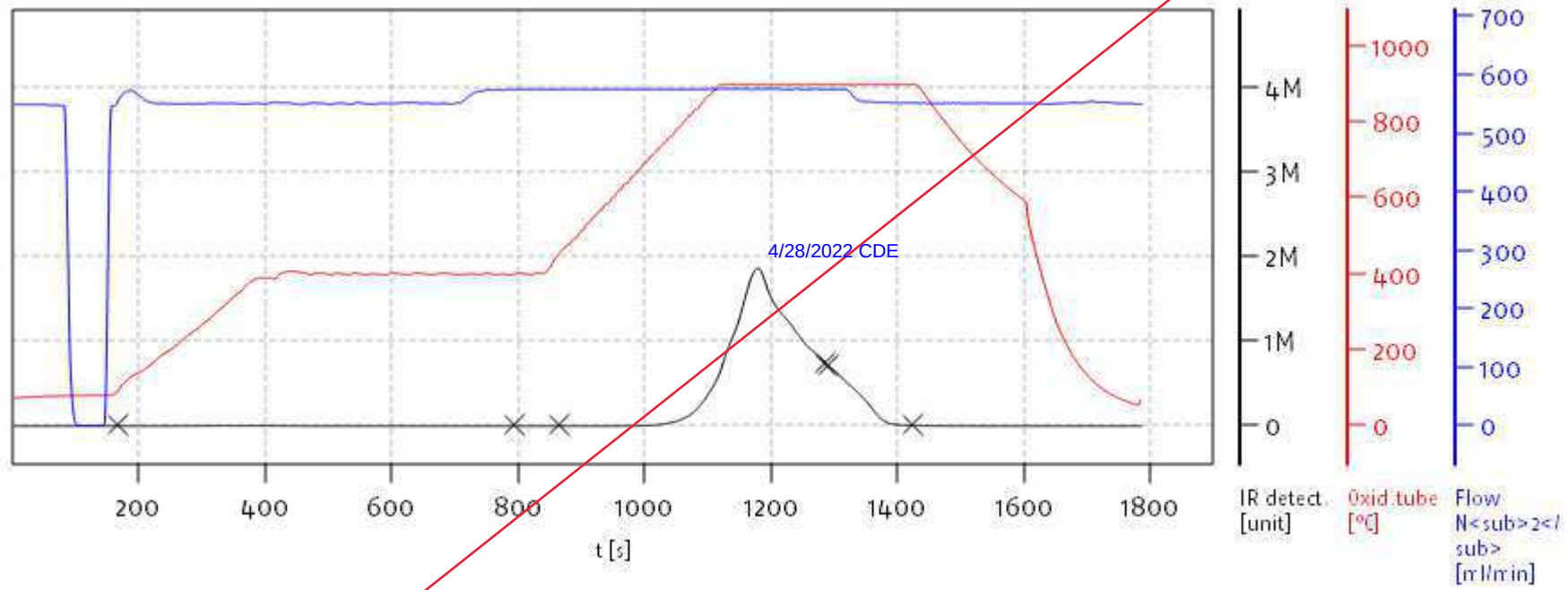
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 12:02 AM	0.019	7.915	7.934	bl,C3o	21 248	8 544 610	1 334 580	1.0000	1.0714



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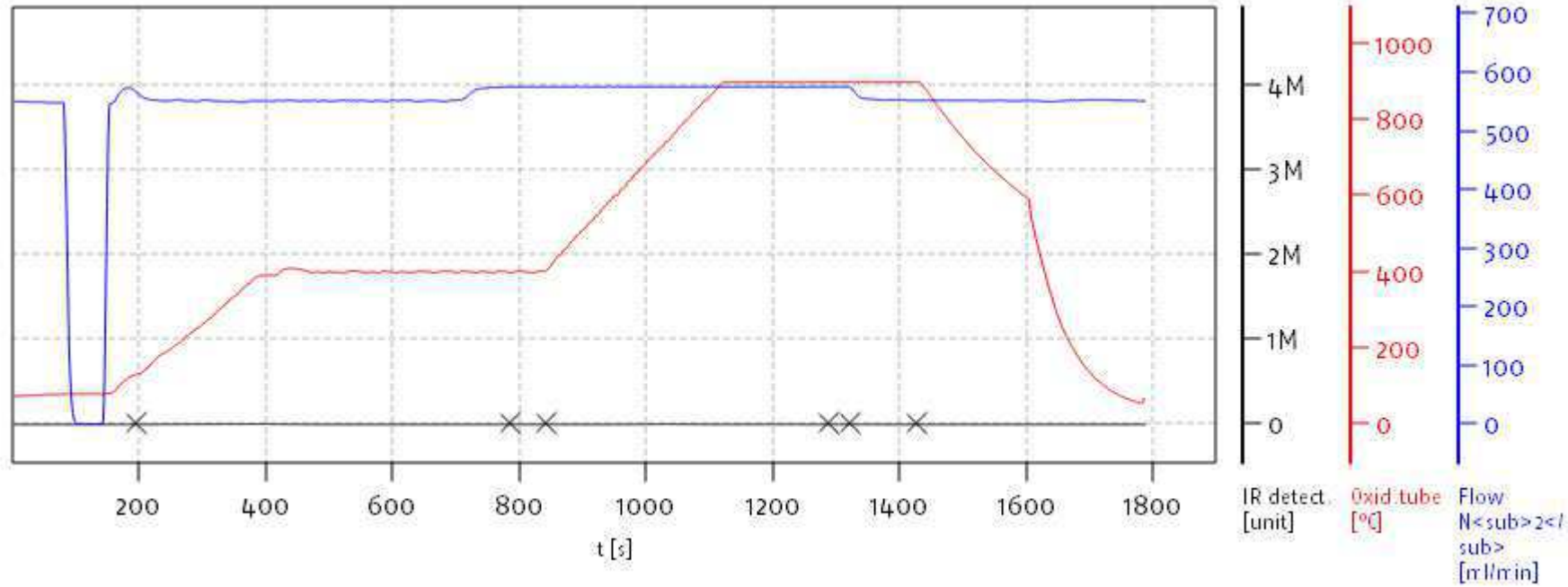
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	4/27/2022 12:32 AM	0.000	0.000	0.000	bl	29 766	19 596	1 205	1.0000	0.9007



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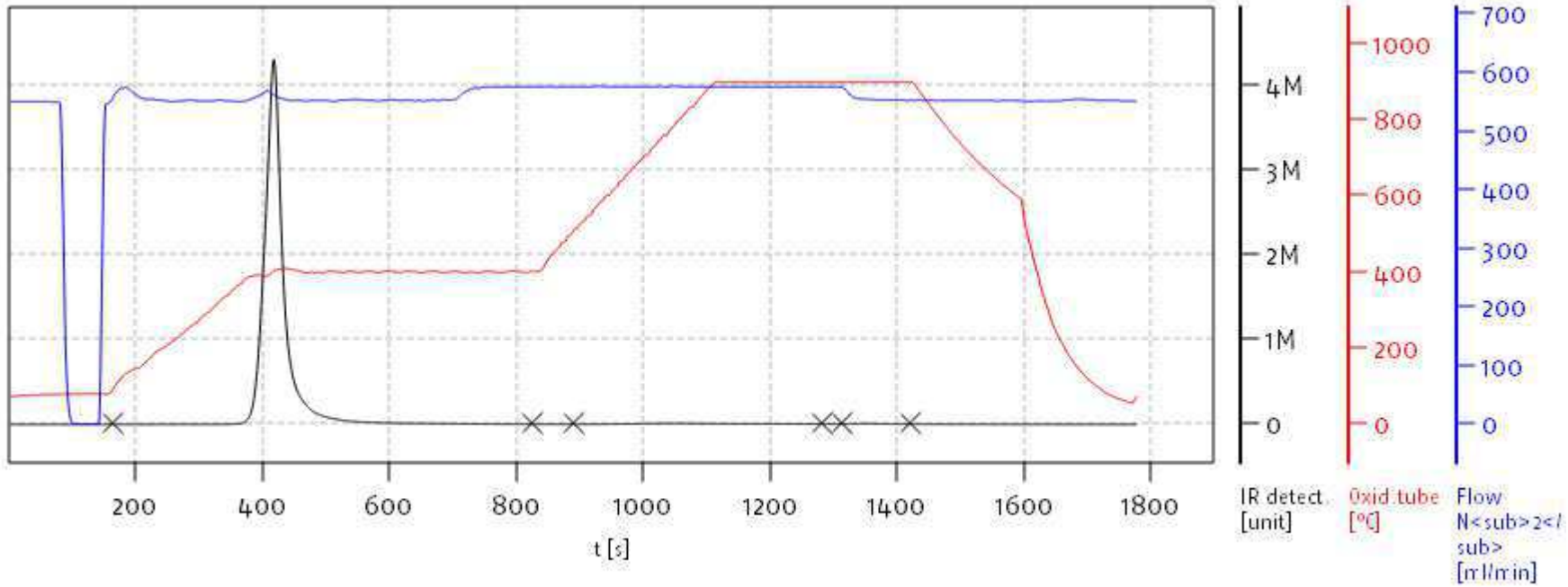
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	19.00		1.00	CARBON	4/27/2022 1:02 AM	44.678	0.893	45.571	bl	5 588 680	104 999	25 384	0.9581	1.0000



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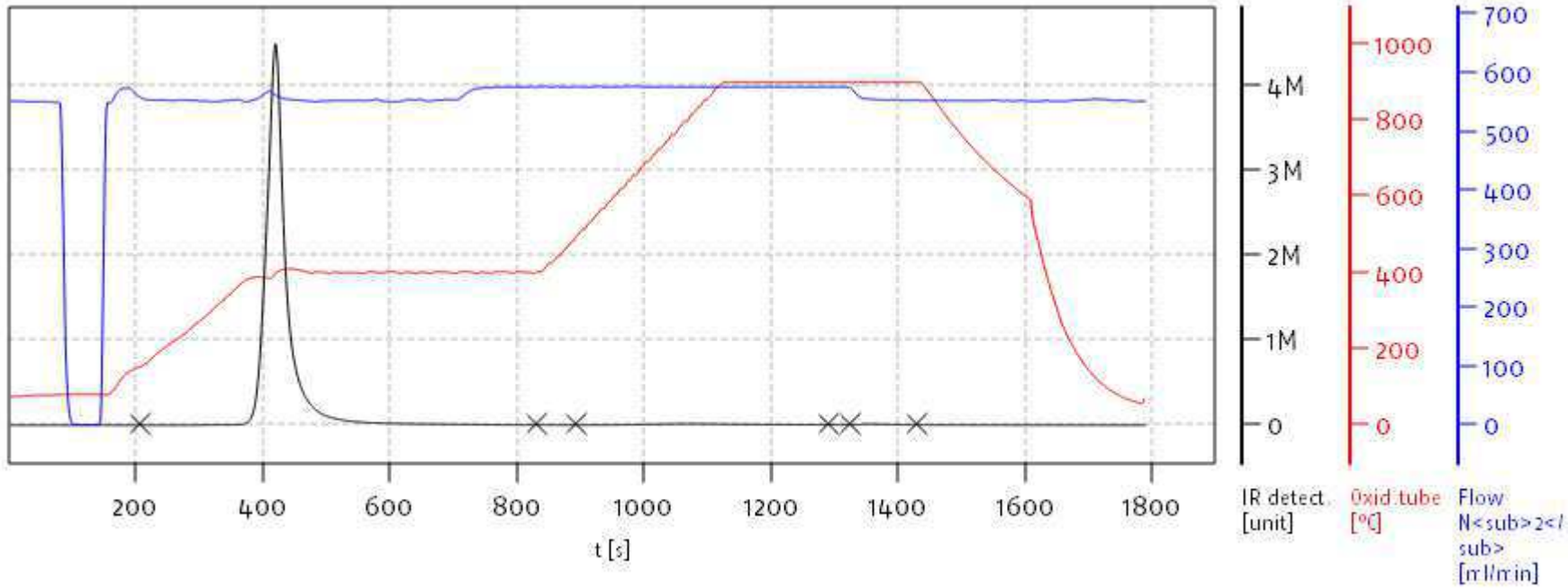
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	20.80		1.00	CARBON	4/27/2022 1:32 AM	44.694	0.937	45.631	bl	6 076 750	120 961	30 224	0.9647	1.0000



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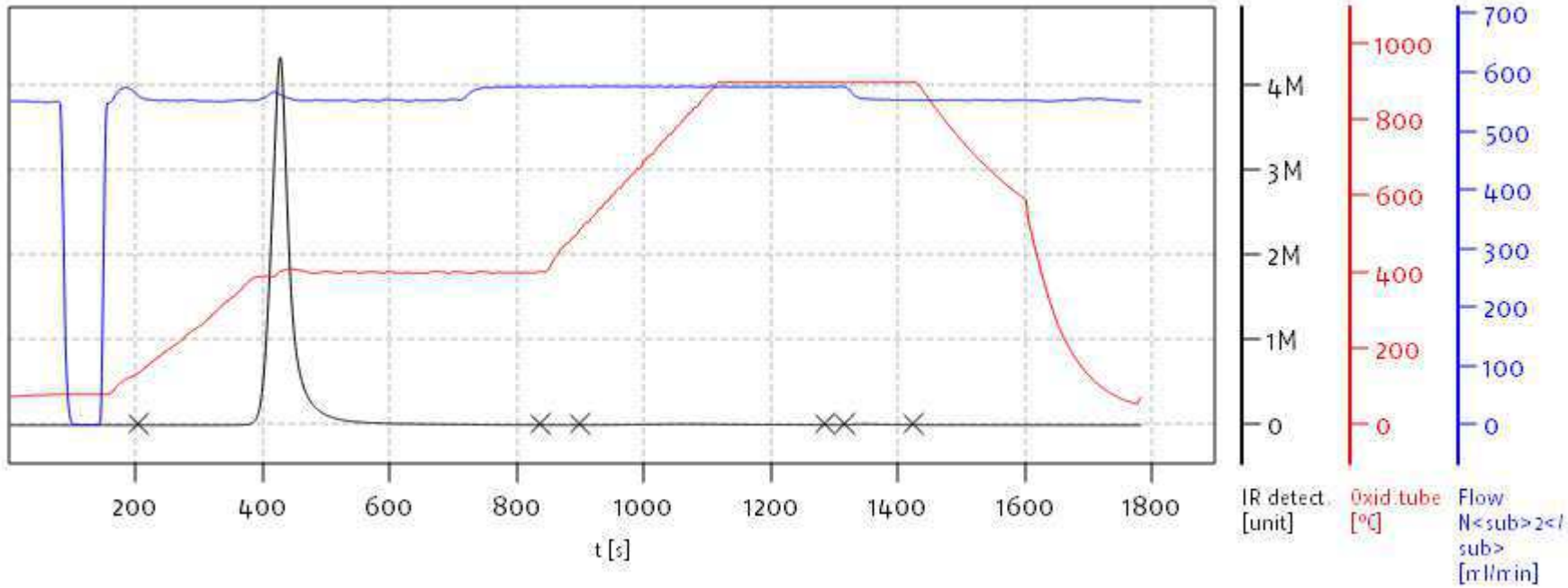
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	19.40		1.00	CARBON	4/27/2022 2:03 AM	44.964	0.742	45.706	bl	5 722 450	98 735	27 054	0.9614	0.9007



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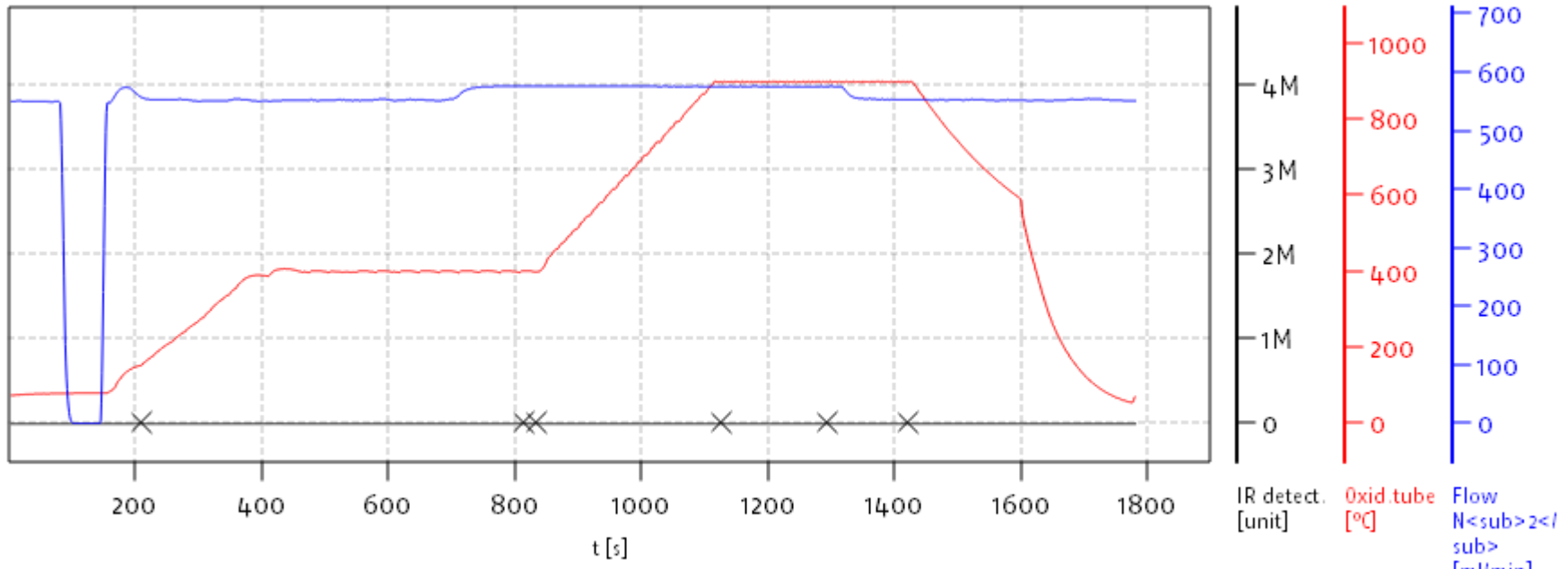
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	501.10		1.00	CARBON	4/27/2022 2:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 158	225	165	0.9614	0.9007



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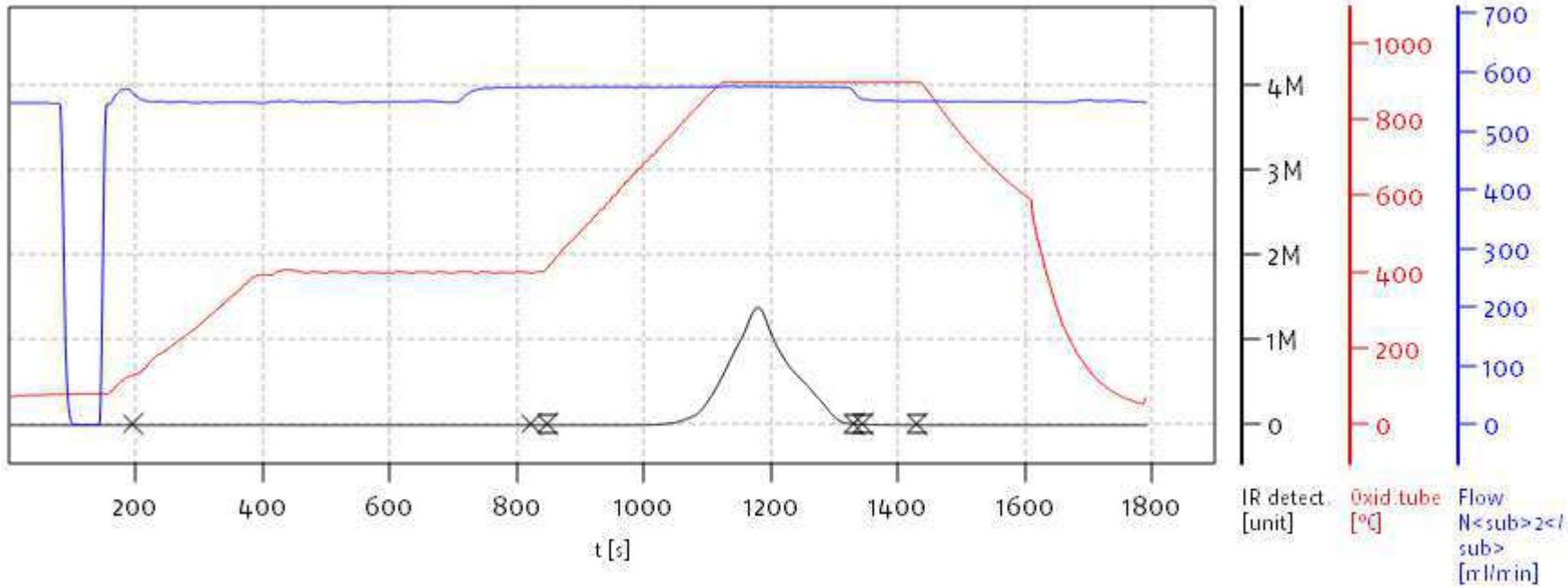
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/27/2022 11:08 AM	0.005	3.917	3.922	bl,C1u	3 605	**5 260 365**	**0**	1.0000	0.9443



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

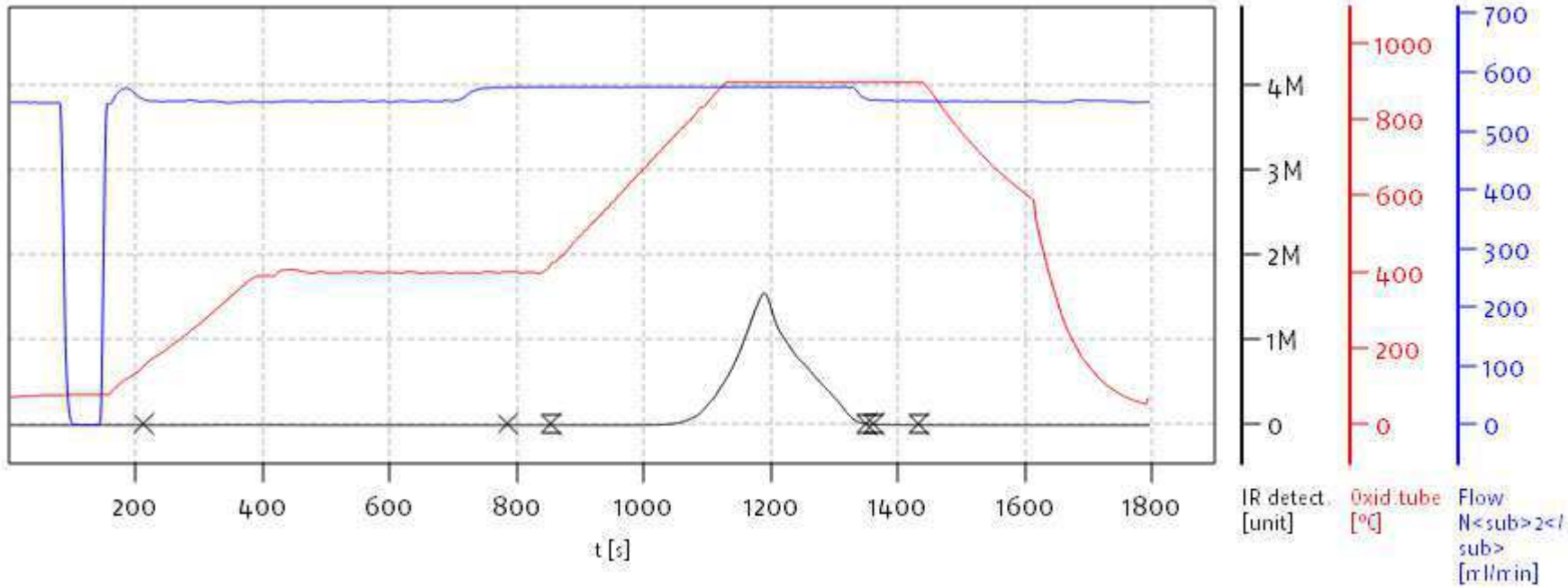
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/27/2022 11:08 AM	0.010	4.637	4.647	bl	10 023	**6 164 833**	**0**	1.0000	0.9539



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

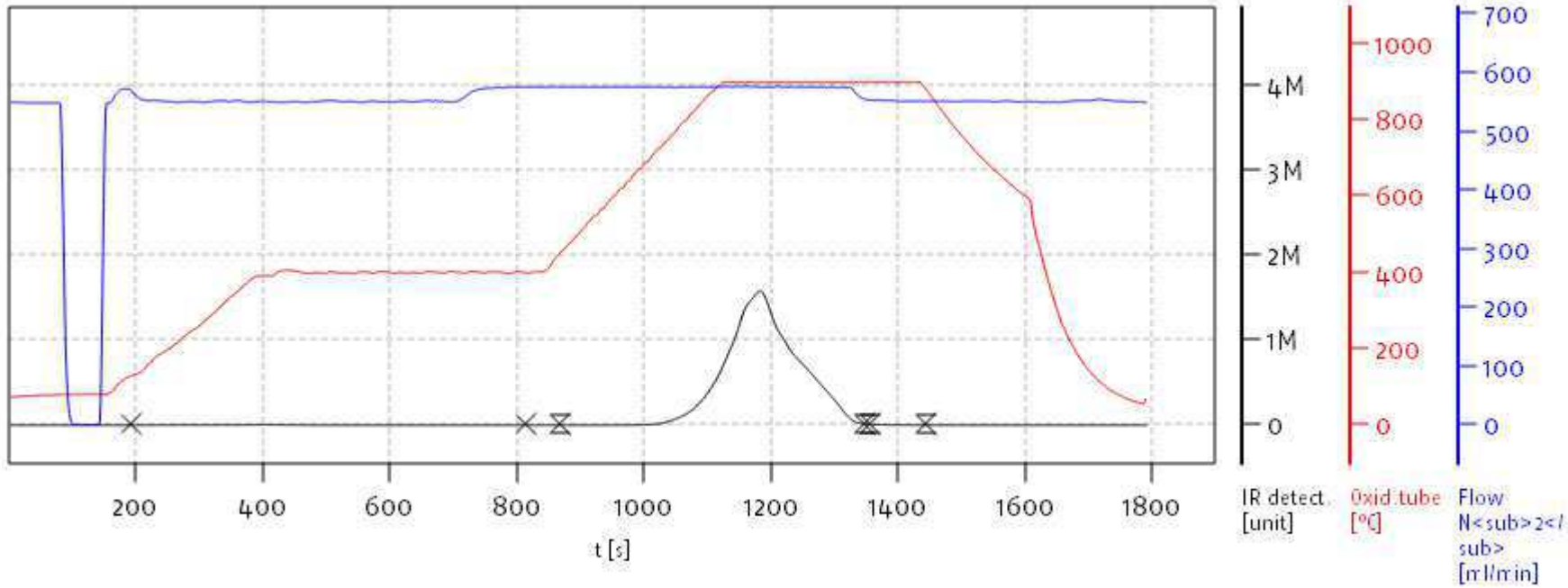
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/27/2022 11:09 AM	0.020	5.219	5.239	bl	23 354	**6 937 833**	**0**	1.0000	0.9540



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

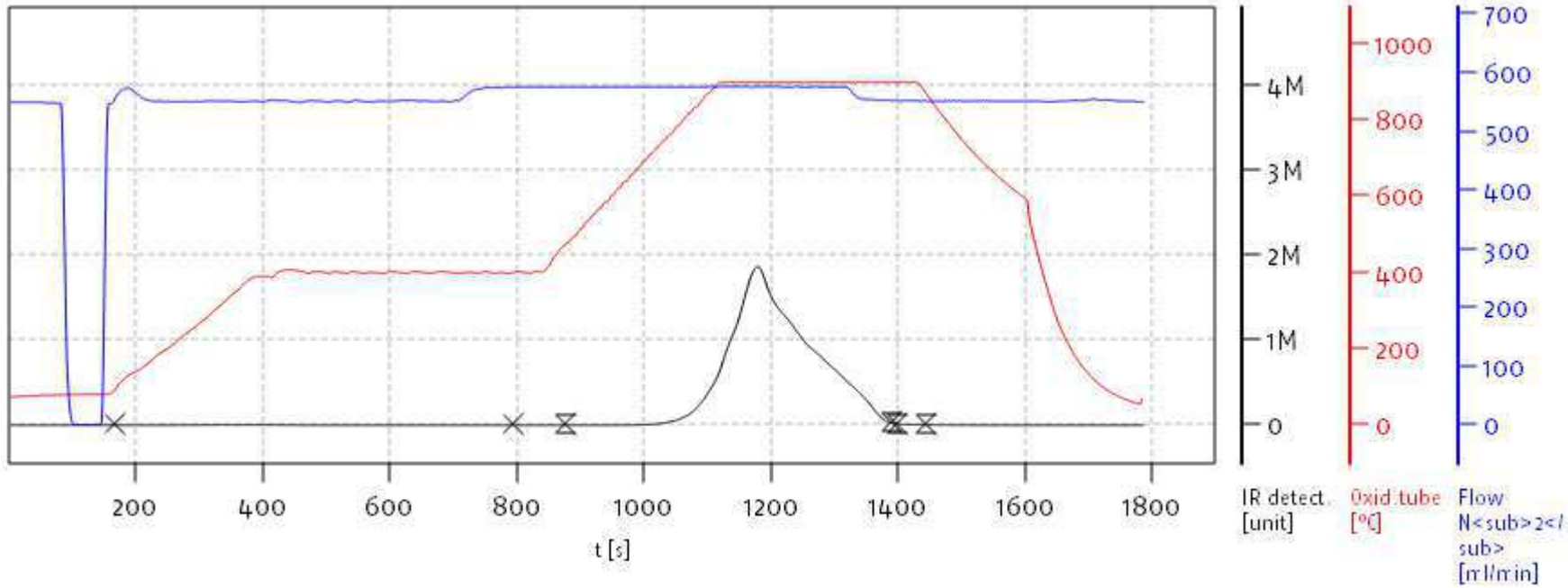
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 11:09 AM	0.019	7.915	7.934	bl,C3o	21 248	9 370 139	0	1.0000	1.0714



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

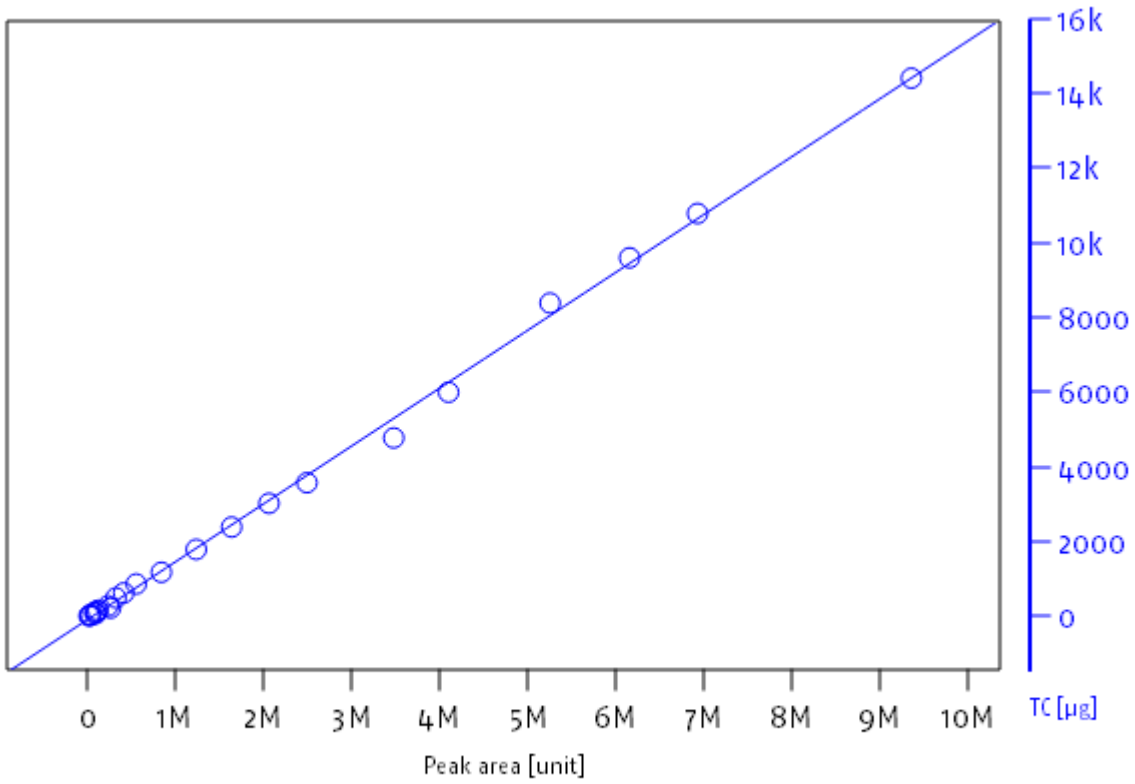
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKD0371
Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKL0217
Date Analyzed: 12/16/22 13:43

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKL0217-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB2	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB5	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCB9	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBA	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBB	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBC	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBD	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBE	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBF	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBG	Total Organic Carbon	0.00	0.02	0.02	%	
SKL0217-CCBH	Total Organic Carbon	0.00	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKL0217

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKL0217-ICV1	Total Organic Carbon	44.446	44.8	101	%	EPA 9060A m
SKL0217-CCV1	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
SKL0217-CCV2	Total Organic Carbon	44.446	43.8	98.6	%	EPA 9060A m
SKL0217-CCV3	Total Organic Carbon	44.446	44.2	99.5	%	EPA 9060A m
SKL0217-CCV4	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SKL0217-CCV5	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SKL0217-CCV6	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SKL0217-CCV7	Total Organic Carbon	44.446	43.4	97.6	%	EPA 9060A m
SKL0217-CCV8	Total Organic Carbon	44.446	45.1	102	%	EPA 9060A m
SKL0217-CCV9	Total Organic Carbon	44.446	45.3	102	%	EPA 9060A m
SKL0217-CCVA	Total Organic Carbon	44.446	44.7	101	%	EPA 9060A m
SKL0217-CCVB	Total Organic Carbon	44.446	44.2	99.4	%	EPA 9060A m
SKL0217-CCVC	Total Organic Carbon	44.446	44.0	98.9	%	EPA 9060A m
SKL0217-CCVD	Total Organic Carbon	44.446	44.1	99.1	%	EPA 9060A m
SKL0217-CCVE	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
SKL0217-CCVF	Total Organic Carbon	44.446	45.1	102	%	EPA 9060A m
SKL0217-CCVG	Total Organic Carbon	44.446	44.2	99.4	%	EPA 9060A m
SKL0217-CCVH	Total Organic Carbon	44.446	43.9	98.7	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0463-SRM1
Batch: BKL0463
Initial/Final: 0.3479 g / 0.3479 g
Preparation: Plumb 1981
Analyzed: 12/20/2022 3:43
Standard ID: K011448
Expires: 12/31/2079
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	3.06	0.02	0.02		102	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC SDG: 22L0156

Client: Anchor QEA, LLC Project: AOC4 UR Phase 3

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW22-SS797 22L0156-01	12/07/22 10:00	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 04:13			
LDW22-IT797 22L0156-02	12/07/22 10:10	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 05:45			
LDW22-SS812 22L0156-03	12/07/22 10:40	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 06:15			
LDW22-SS794 22L0156-04	12/07/22 11:05	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 06:45			
LDW22-IT794 22L0156-05	12/07/22 11:10	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 07:16			
Duplicate BKL0463-DUP1	12/07/22 10:00	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 04:44			
Matrix Spike BKL0463-MS1	12/07/22 10:00	12/07/22 17:07	12/19/22 07:12	11	14	12/20/22 05:14			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0156
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 1941b

Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Mass Fraction Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Reference Mass Fraction Values: Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Information Mass Fraction Values: Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

Expiration of Certification: The certification of **SRM 1941b** is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief
Chemical Sciences Division

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

Robert L. Watters, Jr., Director
Office of Reference Materials

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a –10 °C shelf temperature and a –50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

[1] Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture,

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.
[f] Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).
[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[f] 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)		
C2-decalins	18	±	5
C4-decalins	41	±	4
C2-naphthalenes	187	±	53
C3-naphthalenes	158	±	42
C1-benzothiophenes	25	±	14
C2-benzothiophenes	20	±	11
C3-benzothiophenes	22	±	13
C4-benzothiophenes	18	±	5
C1-fluorenes	57	±	18
C2-fluorenes	122	±	43
C3-fluorenes	128	±	31
C1-phenanthrenes/anthracenes	313	±	99
C2-phenanthrenes/anthracenes	247	±	62
C3-phenanthrenes/anthracenes	165	±	46
C4-phenanthrenes/anthracenes	87	±	36
C1-dibenzothiophenes	54	±	13
C2-dibenzothiophenes	91	±	18
C3-dibenzothiophenes	84	±	15
C4-dibenzothiophenes	57	±	13
C1-fluoranthenes/pyrenes	252	±	48
C2-fluoranthenes/pyrenes	205	±	38
C3-fluoranthenes/pyrenes	102	±	22
C4-fluoranthenes/pyrenes	121	±	59
C1-benzanthraces/chrysenes/triphenylenes	208	±	43
C2-benzanthraces/chrysenes/triphenylenes	120	±	24
C3-benzanthraces/chrysenes/triphenylenes	73	±	31
C4-benzanthraces/chrysenes/triphenylenes	41	±	11

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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Certificate Revision History: 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA
Axys Analytical Services; Sidney, BC, Canada
B & B Laboratories; College Station, TX
Battelle Ocean Sciences; Duxbury, MA
Bedford Institute of Oceanography; Dartmouth, NS, Canada
California Department of Fish and Game; Rancho Cordova, CA
Central Contra Costa Sanitary District; Martinez, CA
Chesapeake Biological Laboratory; Solomons, MD
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas; Madrid, Spain
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA
City of San Jose Environmental Services Department; San Jose, CA
Columbia Analytical Services; Kelso, WA
East Bay Municipal Utility District; Oakland, CA
Florida Department of Environmental Protection; Tallahassee, FL
Manchester Environmental Laboratory; Port Orchard, WA
Murray State University; Murray, KY
Massachusetts Water Resources Authority Central Lab; Winthrop, MA
National Research Council of Canada; Ottawa, Ontario, Canada
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA
Orange County Sanitation District; Fountain Valley, CA
Philip Analytical Services; Burlington, Ontario, Canada
Serv de Hidrografia Naval; Buenos Aires, Argentina
Skidaway Institute of Technology; Savannah, GA
Southwest Laboratory of Oklahoma; Broken Arrow, OK
Severn Trent Knoxville Laboratory; Knoxville, TN
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX
Texas Parks and Wildlife Department; San Marcos, TX
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA
University of Connecticut, Environmental Research Institute; Storrs, CT
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI
US Geological Survey, National Water Quality Laboratory; Denver, CO
Woods Hole Group Environmental Lab; Raynham, MA
Wright State University; Dayton, OH

APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

NIST

Date of Issue:
31 March 2014

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
FAX: 301-948-3730
E-mail: SRMMSDS@nist.gov
Website: http://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

NFPA Ratings (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1 Fire = 0 Reactivity = 0

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m^3 (TWA, total particulates not otherwise regulated, 8 h)
NIOSH (REL): 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm

Thermal Stability Properties:

Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: __X__ Inhalation __X__ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes __X__ No
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 31 March 2014

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992 (accessed Mar 2014).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at http://www.cdc.gov/niosh/npg/npgd0480.html (accessed Mar 2014).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

Disclaimer: Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srmmsds@nist.gov; or via the

Bill to:	68455	Ship to:	68456
	DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205		DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205

Ship via	UPS Ground	Description		Ship from	
Salesmen	MCMIDM2	Instructions		Blanket	
Contact	DAVE MITCHELL	Pro#		Truck#	

Order discrepancies (other than back ordered items) must be reported to our Customer Relations Department at 301-975-6776 within 5 days of receipt of shipment or this order will be considered complete. NIST SRMs/RMs are generally not returnable - with the exception of defective goods or shipments made in error by NIST. To return a SRM/RM, please call for instructions and a Return SRM/RM Authorization Number before shipment. Returns WILL NOT BE ACCEPTED without prior authorization.

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
							NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.

9/21/16
04:04 PM

1700101

Picked by	
Packed by	
# of pieces	
Weight	

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
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This is an electronically generated document
mailto:biotech@mpbio.com
http://www.mpbio.com
Online Ordering, MSDSs, certificates of analysis and data sheets now available on our web site
Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BKL0231
Date:	12/9/2022 10:52
Analyst:	CR
Drying Oven:	15
Analytical Balance:	B139298002

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	12/13/2022 14:15	99	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	99
Date/time out:	12/14/2022 9:30	103	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	103
Elapsed hrs:	19.3				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
22L0155-61	0.8000	12.6300	7.6500	6.85	**57.90%**	Yes
22L0155-62	0.7900	11.8700	7.7600	6.97	**62.91%**	Yes
22L0155-63	0.8000	11.2800	6.9500	6.15	**58.68%**	Yes
22L0155-64	0.8100	12.8600	7.9800	7.17	**59.50%**	Yes
22L0156-01	0.7900	12.5300	11.2400	10.45	**89.01%**	No
22L0156-02	0.8000	12.0100	10.3000	9.50	**84.75%**	Yes
22L0156-03	0.8300	12.8400	10.1500	9.32	**77.60%**	Yes
22L0156-04	0.8100	11.8100	10.8100	10.00	**90.91%**	No
22L0156-05	0.7900	11.9400	10.1600	9.37	**84.04%**	Yes

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BKL0231
Date:	12/9/2022 10:52
Analyst:	CR
Drying Oven:	015
Analytical Balance:	B13929802

Batch drying time

Record times as mm/dd/yy hh:mm

Date/time in oven:	12/13/22	14:15
Date/time out:	12/14/22	9:30
Elapsed hrs:	0.0	

Oven Temp, C: 99 / 103

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	99
End Temp:	103

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
22L0155-61 B	0.80	12.63	7.65			No ~~yes~~
22L0155-62 |	0.79	11.87	7.76			No ~~yes~~
22L0155-63 |	0.80	11.28	6.95			No ~~yes~~
22L0155-64 |	0.81	12.86	7.98			No ~~yes~~
22L0156-01 |	0.79	12.53	11.24			No
22L0156-02 |	0.80	12.01	10.30			No ~~yes~~
22L0156-03 |	0.83	12.34	10.15			No ~~yes~~
22L0156-04 |	0.81	11.81	10.81			No
22L0156-05 B	0.79	11.94	10.16			No ~~yes~~

T/S + Screens no copies