**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

17 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) |
|---|---|
| 22L0329 | N/A |

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2023.01.25 16:42:53 -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

*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.*

Susan Dunnihoo, Director, Client Services

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

22L0329

# CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3320

Project/Client Name: AOC4 UR Phase 3
Project Number: 160067-02.04
Contact Name: Amara Vanderwort
Sampled By: Windward

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: AV/CC
Shipping Date: 12/13/2022
Airbill Number: —
Turnaround requested: std

| Sample Collection Date (m/d/y) | Time | Sample Identification | Volume of Sample / # of Containers | Matrix | Archive | Arsenic | TOC / Total Solids | PCBs | | | | Comments / Instructions [Jar tag number(s)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/13/22 | 0813 | LDW22-IT799A | 3 | sediment | X | — | X | X | | | | |
| | 0813 | LDW22-IT799B | 3 | | X | — | X | X | | | | |
| | 0813 | LDW22-IT799C | ~~3~~ 2" | | ~~X~~ | — | X | X | | | | |
| | 0813 | LDW22-IT799D | 3 | | X | — | X | X | | | | |
| | 0813 | LDW22-IT799E | 3 | | X | — | X | X | | | | |
| | 0813 | LDW22-IT799F | 3 | | X | — | X | X | | | | |
| | | ~~LDW22-IT799G~~ | ~~3~~ | | | | | | | | | |
| | 1028 | LDW22-SC788B | 3 | | X | X | X | X | | | | |
| | 1028 | LDW22-SC788C | 3 | | X | X | X | X | | | | |
| | 1028 | LDW22-SC788D | 3 | | X | X | X | X | | | | |
| | 1028 | LDW22-SC788E | 3 | | X | X | X | X | | | | |
| | 1028 | LDW22-SC788E-FD | 3 | | X | X | X | X | | | | |
| | 1028 | **Total Number of Containers** | 32 | | | | | | | | | |

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: Amara Vanderwort | YARED | YARED | Phillip |
| Signature: A. Vanderwort | | | |
| Company: Windward | YA YA SAFETY | YA YA SAFETY | Phillips Batch |
| Date/Time: 12/13/22 16:20 | 12/13/22 4:20PM | 12/13/22 4:57 | 12/13/22 16:54 |

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

Windward 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:: | Laboratory W.O. #: |
| Condition upon receipt: | Time of receipt: |
| Cooler temperature: | Received by: |

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# CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3384

Project/Client Name: AOC4 UR Phase 3
Project Number: 1B0067 - 02.04
Contact Name: Amara Vandervort
Sampled By: Windward

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

Shipping Date: 12/13/2022
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 | Arsenic | TOC / Total Solids | PCBs | | | | Comments / Instructions [Jar tag number(s)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/13/22 | 1028 | LDW22 - SC788F | 3 | sed | X | X | X | X | | | | |
| | 1028 | LDW22-SC788 G | 3 | | X | X | X | X | | | | |
| | 1028 | LDW22-SC788 H | 3 | | X | X | X | X | | | | |
| | 0950 | LDW22-IT791A | 3 | | X | – | X | X | | | | |
| | 0950 | LDW22-IT791B | 3 | | X | – | X | X | | | | |
| | 0950 | LDW22-IT791C | 3 | | X | – | X | X | | | | |
| | 0950 | LDW22-IT791D | 3 | | X | – | X | X | | | | |
| | 0950 | LDW22-IT791E | 3 | | X | – | X | X | | | | |
| | 0950 | LDW22-IT791F | 3 | | X | – | X | X | | | | |
| | 0950 | LDW22-IT791G | 3 | | X | – | X | X | | | | |
| | 1100 | LDW22-SC781B | 3 | | X | – | X | X | | | | |
| | 1100 | LDW22-SC781C | 3 | | X | – | X | X | | | | |
| | | **Total Number of Containers** | 36 | Purchase Order / Statement of Work # APJ-110222 - AOC4 - ARL | | | | | | | | |

| 1) Released by: | 1) Rec'd by: | 2) Released by: | 2) Rec'd by: |
|---|---|---|---|
| Print name: Amara Vandervort | YARED | YARED | Philip |
| Signature: | Company: YA YA SAFETY NET | Signature: | Company: AR |
| Company: Windward | Date/Time: 12/13/22 4:20 | Company: YA YA SAFETY | Date/Time: 12/13/22 16:54 |
| Date/Time: 12/13/22 16:20 | | Date/Time: 12/13/22 4:37 | |

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

**To be completed by Laboratory upon sample receipt:**

| | |
|---|---|
| Date of receipt:: | Laboratory W.O. #: |
| Condition upon receipt: | Time of receipt: |
| Cooler temperature: | Received by: |

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Seattle, WA 98119
206.378.1364

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# CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3383

Project/Client Name: AOC4 UR Phase 3
Project Number: 1B0067 - 02.04
Contact Name: Amara Vanderwort
Sampled By: Windward

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

Shipping Date: 12/13/2022
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 | | TOC Total Solids | PCBs | | | | Comments / Instructions [Jar tag number(s)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/13/22 | 1100 | LDW22-SC781E | 3 | sed | X | | X | X | | | | |
| | 1100 | LDW22-SC781F | 3 | | X | | X | X | | | | |
| | 1100 | LDW22-SC781G | 3 | | X | | X | X | | | | |
| | 1100 | LDW22-SC781H | 3 | | X | | X | X | | | | |
| | 1214 | LDW22-SC765B | 3 | | X | | X | X | | | | |
| | 1214 | LDW22-SC765C | 3 | | X | | X | X | | | | |
| | 1214 | LDW22-SC765D | 3 | | X | | X | X | | | | |
| | 1214 | LDW22-SC765E | 3 | | X | | X | X | | | | |
| | 1336 | LDW22-SC757A | 3 | | X | | X | X | | | | |
| | 1336 | LDW22-SC757B | 3 | | X | | X | X | | | | |
| | 1336 | LDW22-SC757C | 3 | | X | | X | X | | | | |
| | 1336 | LDW22-SC757D | 3 | | X | | X | X | | | | |
| CC | ~~1336~~ | **Total Number of Containers** | 36 | Purchase Order / Statement of Work # APJ-110222-AOC4-ARL | | | | | | | | |

| 1) Released by: | 1) Rec'd by: | 2) Released by: | 2) Rec'd by: |
|---|---|---|---|
| Print name: Amara Vanderwort | YARED | YARED | Philip |
| Signature: | Company: YA YA SAFETY | Signature: | Company: AR |
| Company: Windward | Date/Time: 12/13/22 4:20PM | Company: YA YA SAFETY | Date/Time: 12/13/22 16:54 |
| Date/Time: 12/13/22 16:20 | | Date/Time: 12/13/22 4:57 | |

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

**To be completed by Laboratory upon sample receipt:**

| | |
|---|---|
| Date of receipt:: | Laboratory W.O. #: |
| Condition upon receipt: | Time of receipt: |
| Cooler temperature: | Received by: |

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Seattle, WA 98119
206.378.1364

22L0329

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# CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3382

Project/Client Name: AOC4 UR Phase 3
Project Number: 1B0067-02.04
Contact Name: Amara Vandervort
Sampled By: Windward

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

Shipping Date: 12/13/22
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 | TOC (total solids) | | PCBs | | | | Comments / Instructions [Jar tag number(s)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/13/22 | 1336 | LDW22-SC757E | 3 | sed | X | X | | X | | | | |
| | 1336 | LDW22-SC757F | 3 | | X | X | | X | | | | |
| | 1336 | LDW22-SC757G | 3 | | X | X | | X | | | | |
| | 1336 | LDW22-SC757H | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754A | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754B | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754C | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754D | 3 | | X | X | | X | | | | |
| | ~~1551~~ CC 1528 | LDW22-SC754E | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754F | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754G | 3 | | X | X | | X | | | | |
| | 1528 | LDW22-SC754H | 3 | | X | X | | X | | | | |
| | | **Total Number of Containers** | 36 | Purchase Order / Statement of Work # APJ-110222-AOC4-ARL | | | | | | | | |

| 1) Released by: | 1) Rec'd by: | 2) Released by: | 2) Rec'd by: |
|---|---|---|---|
| Print name: Amara Vandervort | YARED | YARED | Phillip |
| Signature: | | | |
| Company: Windward | YA YA SAFETY | YA YA SAFETY | AR |
| Date/Time: 12/13/22 16:20 | 12/13/22 4:20 | 12/13/22 4:57 | 12/13/22 16:54 |

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

**To be completed by Laboratory upon sample receipt:**

| | |
|---|---|
| Date of receipt:: | Laboratory W.O. #: |
| Condition upon receipt: | Time of receipt: |
| Cooler temperature: | Received by: |

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Seattle, WA 98119
206.378.1364

**Analytical Resources, LLC**
Analytical Chemists and Consultants

# Cooler Receipt Form

ARI Client: windward / Anchor QEA
Project Name: AOC4 UR Phase 3
COC No(s): 3320, 3384, 3383, 3382 NA PIB
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Assigned ARI Job No: 22L0329
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) 4.1 5.8 3.6 5.9

Time 16:54

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 00097038

Cooler Accepted by: PIB Date: 12/13/22 Time: 16:54

***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? | | 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: [illegible] Date: 12/14/22 Time: 8:45 Labels checked by: PIB

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

| Sample ID on Bottle | Sample ID on COC | Sample ID on Bottle | Sample ID on COC |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

***Additional Notes, Discrepancies, & Resolutions:***

"Ghost" Sample - Provided 3 Containers for LDW22-SS781D - Not on CoC

By: [illegible] Date: 12/14/22

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

| | | | |
|---|---|---|---|
| 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 | 01/17/2023 13:44 |

## ANALYTICAL REPORT FOR SAMPLES

| Laboratory ID | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 22L0329-01 | LDW22-IT799A | Solid | 12/13/22 08:13 | 12/13/22 16:54 |
| 22L0329-02 | LDW22-IT799B | Solid | 12/13/22 08:13 | 12/13/22 16:54 |
| 22L0329-03 | LDW22-IT799C | Solid | 12/13/22 08:13 | 12/13/22 16:54 |
| 22L0329-04 | LDW22-IT799D | Solid | 12/13/22 08:13 | 12/13/22 16:54 |
| 22L0329-05 | LDW22-IT799E | Solid | 12/13/22 08:13 | 12/13/22 16:54 |
| 22L0329-06 | LDW22-IT799F | Solid | 12/13/22 08:13 | 12/13/22 16:54 |
| 22L0329-07 | LDW22-SC788B | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-08 | LDW22-SC788C | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-09 | LDW22-SC788D | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-10 | LDW22-SC788E | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-11 | LDW22-SC788E-FD | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-12 | LDW22-SC788F | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-13 | LDW22-SC788G | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-14 | LDW22-SC788H | Solid | 12/13/22 10:28 | 12/13/22 16:54 |
| 22L0329-15 | LDW22-IT791A | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-16 | LDW22-IT791B | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-17 | LDW22-IT791C | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-18 | LDW22-IT791D | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-19 | LDW22-IT791E | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-20 | LDW22-IT791F | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-21 | LDW22-IT791G | Solid | 12/13/22 09:50 | 12/13/22 16:54 |
| 22L0329-22 | LDW22-SC781B | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-23 | LDW22-SC781C | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-24 | LDW22-SC781D | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-25 | LDW22-SC781E | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-26 | LDW22-SC781F | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-27 | LDW22-SC781G | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-28 | LDW22-SC781H | Solid | 12/13/22 11:00 | 12/13/22 16:54 |
| 22L0329-29 | LDW22-SC765B | Solid | 12/13/22 12:14 | 12/13/22 16:54 |
| 22L0329-30 | LDW22-SC765C | Solid | 12/13/22 12:14 | 12/13/22 16:54 |
| 22L0329-31 | LDW22-SC765D | Solid | 12/13/22 12:14 | 12/13/22 16:54 |
| 22L0329-32 | LDW22-SC765E | Solid | 12/13/22 12:14 | 12/13/22 16:54 |
| 22L0329-33 | LDW22-SC757A | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-34 | LDW22-SC757B | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-35 | LDW22-SC757C | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-36 | LDW22-SC757D | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-37 | LDW22-SC757E | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-38 | LDW22-SC757F | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-39 | LDW22-SC757G | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-40 | LDW22-SC757H | Solid | 12/13/22 13:36 | 12/13/22 16:54 |
| 22L0329-41 | LDW22-SC754A | Solid | 12/13/22 15:28 | 12/13/22 16:54 |
| 22L0329-42 | LDW22-SC754B | Solid | 12/13/22 15:28 | 12/13/22 16:54 |
| 22L0329-43 | LDW22-SC754C | Solid | 12/13/22 15:28 | 12/13/22 16:54 |
| 22L0329-44 | LDW22-SC754D | Solid | 12/13/22 15:28 | 12/13/22 16:54 |
| 22L0329-45 | LDW22-SC754E | Solid | 12/13/22 15:28 | 12/13/22 16:54 |
| 22L0329-46 | LDW22-SC754F | Solid | 12/13/22 15:28 | 12/13/22 16:54 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

| | | | |
|---|---|---|---|
| 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 | 01/17/2023 13:44 |

## ANALYTICAL REPORT FOR SAMPLES

| Laboratory ID | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 22L0329-47 | LDW22-SC754G | Solid | 12/13/22 15:28 | 12/13/22 16:54 |
| 22L0329-48 | LDW22-SC754H | Solid | 12/13/22 15:28 | 12/13/22 16:54 |

| | | |
|---|---|---|
| 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 | 17-Jan-2023 13:44 |

# Case Narrative

**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Work Order:** 22L0329

**Sample receipt**

Samples as listed on the preceding page were received 13-Dec-2022 16:54 under ARI work order 22L0329. 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. Sample LDW22-SC788G required a high dilution, bringing the surrogates below detectable level.

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 control 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.

Several results have been "P1" flagged, indicating a greater than 40% difference between the results on the two analytical columns.

**Total Metals - EPA Method 6020B (Arsenic)**

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

The duplicate (DUP) relative percent difference (RPD) was within advisory control limits.

**Wet Chemistry (Total Organic Carbon)**

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

| | | |
|---|---|---|
| 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 | 17-Jan-2023 13:44 |

# Case Narrative

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

The matrix spike (MS) percent recoveries were within advisory limits.

The duplicate relative percent difference (RPD) was outside advisory control limits for batch BKL0650. The replicate was reanalyzed as DUP2 with acceptable results.

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# 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. |
| J | Estimated concentration value detected below the reporting limit. |
| H | Hold time violation - Hold time was exceeded. |
| D1 | Surrogate was not detected due to sample extract dilution |
| D | The reported value is from a dilution |
| B | This analyte was detected in the method blank. |
| * | 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-IT799A**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-01 B | File ID: | 01092359ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 05:26 |
| % Solids: | 81.35 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.39 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 7.6 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 5.1 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9874* | *7.08* | *88.6* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9874* | *6.19* | *77.5* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9874* | *6.84* | *85.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9874* | *6.08* | *76.1* | *44 - 120* | |

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

Data file 1: /230109.b/01092359ECD7.D
Data file 2: /230109.b/230109.b/01092359ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-01
Client ID:
Injection Date: 10-JAN-2023 05:26
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 225826 | 5.705 | -0.008 | 150608 | 31.0 | 30.4 | 1.8 | Tetrachloro-m-xylene |
| 13.896 | -0.011 | 235524 | 14.122 | -0.015 | 232517 | 35.4 | 34.3 | 3.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 514199 | 14.9 |
| Hexabromobiphenyl | 798898 | 725031 | -9.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 361089 | 45.0 |
| Hexabromobiphenyl | 362541 | 477862 | 31.8 |

* 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 | --- | | | 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 | 9.303 | -0.018 | 11706 | 25.9 | 1 | 9.454 | -0.013 | 7194 | 30.9 |
| Aroclor-1254 | 2 | 9.380 | -0.022 | 6500 | 36.9 | 2 | 9.971 | -0.015 | 3675 | 19.6 |
| Aroclor-1254 | 3 | 9.677 | -0.017 | 9174 | 32.1 | 3 | 10.120 | -0.019 | 14937 | 37.1 |
| Aroclor-1254 | 4 | 9.806 | -0.025 | 19703 | 35.3 | 4 | 10.369 | -0.020 | 17331 | 41.6 |
| Aroclor-1254 | 5 | 10.126 | -0.064 | 22267 | 58.3 | 5 | 10.568 | -0.019 | 12062 | 60.0 |
| | Total Col1Ave (5 peaks): | | | 37.7 | | Total Col2Ave (5 peaks): | | | 37.9 | RPD = 0 |
| | Corrected Ave (4 peaks): | | | 32.6 | | Corrected Ave (4 peaks): | | | 32.3 | RPD = 1 |
| Aroclor-1260 | 1 | 11.046 | -0.016 | 7099 | 26.9 | 1 | 11.655 | -0.014 | 8004 | 31.7 |
| Aroclor-1260 | 2 | 11.364 | -0.014 | 6030 | 22.1 | 2 | 11.916 | -0.017 | 10547 | 16.7 |
| Aroclor-1260 | 3 | 11.732 | -0.019 | 17396 | 24.3 | 3 | 12.431 | -0.021 | 5931 | 35.2 |
| Aroclor-1260 | 4 | 12.135 | -0.024 | 8811 | 24.1 | 4 | 12.499 | -0.018 | 7711 | 18.3 |
| Aroclor-1260 | 5 | 12.246 | -0.015 | 3026 | 20.2 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | 23.5 | | Total Col2Ave (4 peaks): | | | 25.5 | RPD = 8 |
| | Corrected Ave (4 peaks): | | | 22.7 | | Corrected Ave (3 peaks): | | | 22.2 | RPD = 2 |
| 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) = 340542 Col1 Total PCB = 0.1 ppm*

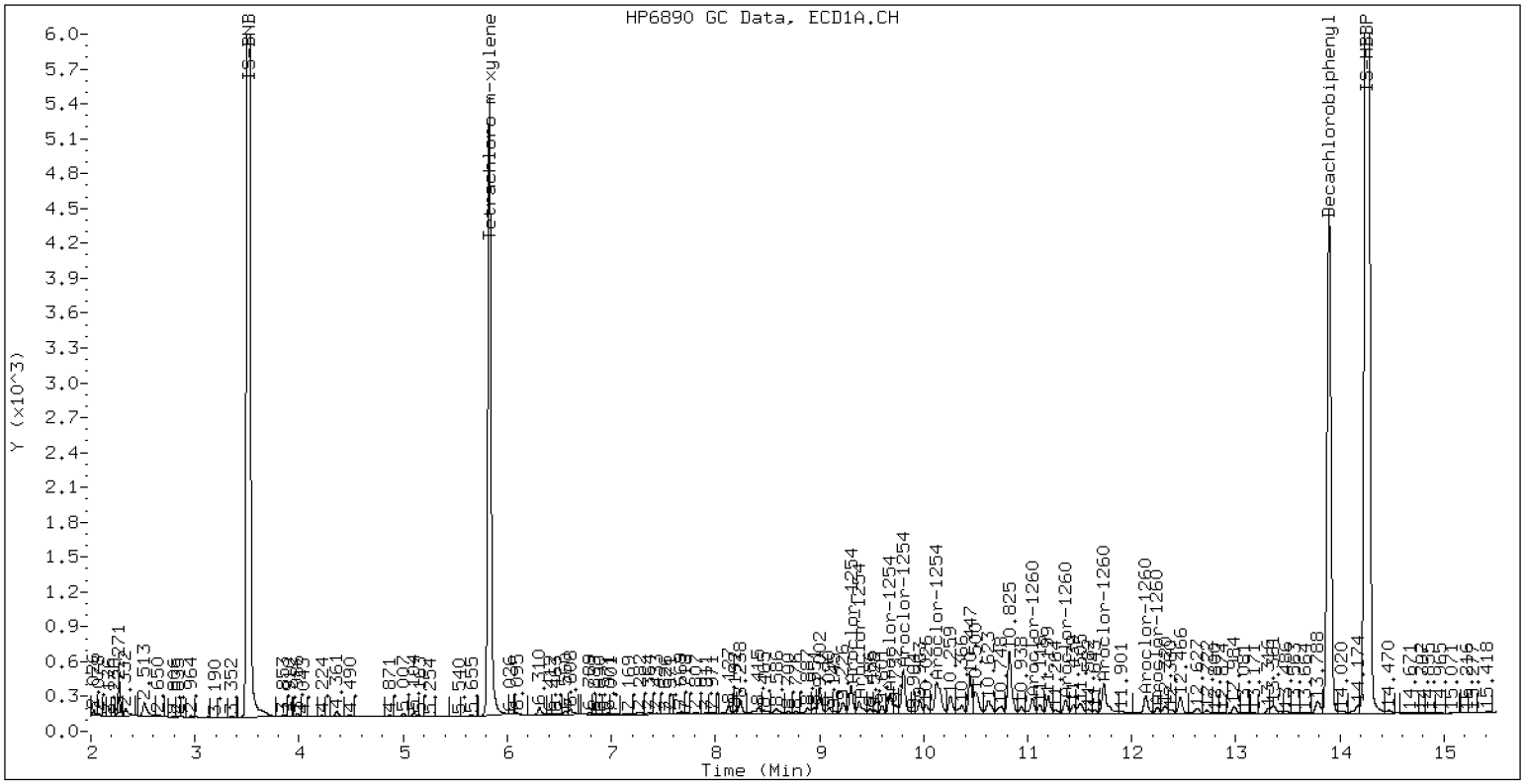
Total PCB Area Col2 (5.813 - 14.037) = 225207 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

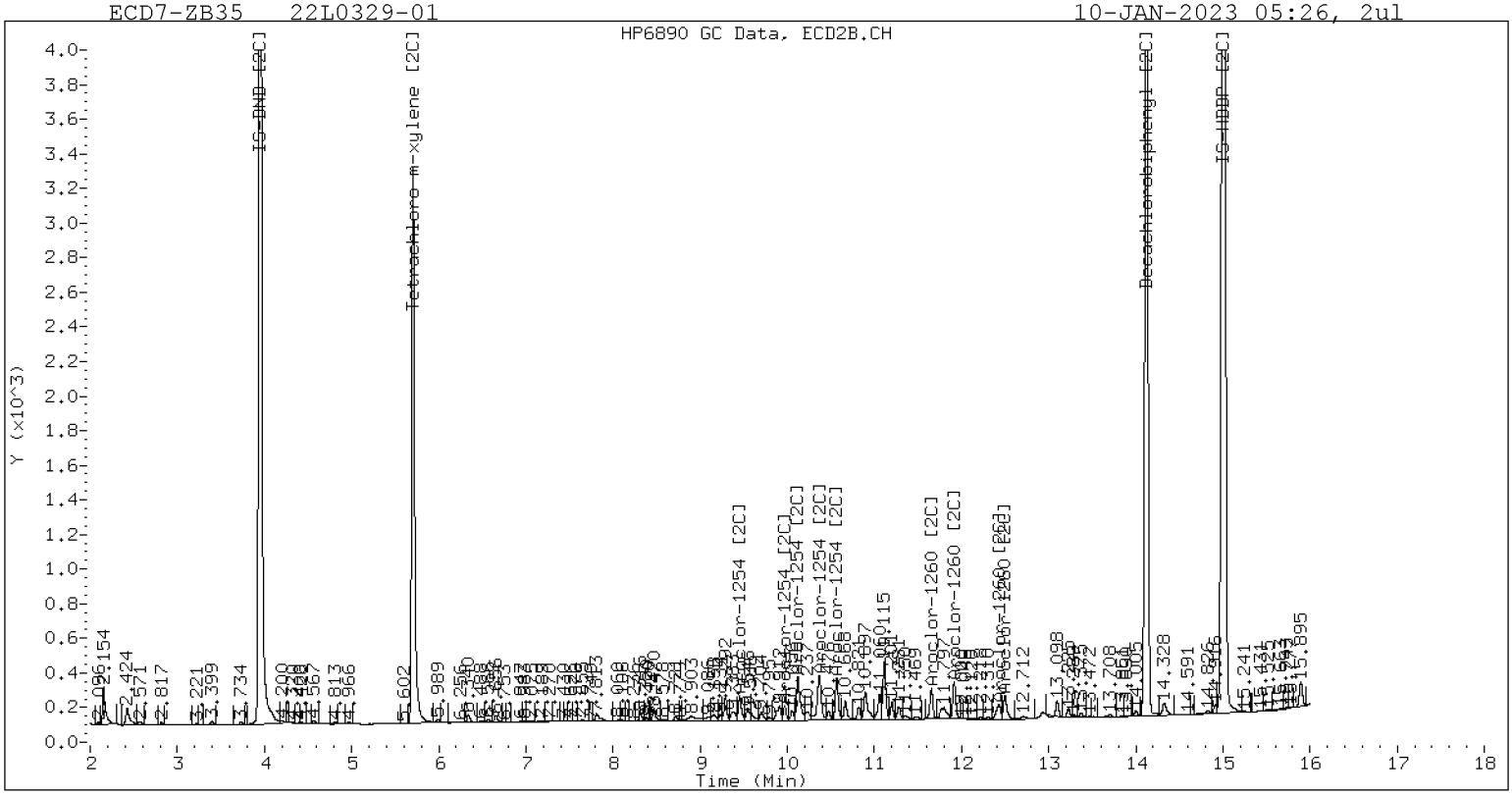
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-01 10-JAN-2023 05:26, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-01 10-JAN-2023 05:26, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT799B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-02 B | File ID: | 01092360ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 05:47 |
| % Solids: | 82.00 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.24 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 65.3 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 91.7 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 49.7 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *8.0020* | *7.43* | *92.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *8.0020* | *4.48* | *55.9* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *8.0020* | *7.26* | *90.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *8.0020* | *5.27* | *65.9* | *44 - 120* | |

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

Data file 1: /230109.b/01092360ECD7.D
Data file 2: /230109.b/230109.b/01092360ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-02
Client ID:
Injection Date: 10-JAN-2023 05:47
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.826 | -0.010 | 169354 | 5.702 | -0.011 | 118720 | 22.4 | 26.4 | 16.4 | Tetrachloro-m-xylene |
| 13.894 | -0.014 | 130721 | 14.121 | -0.016 | 147898 | 37.1 | 36.3 | 2.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 534197 | 19.3 |
| Hexabromobiphenyl | 798898 | 383972 | -51.9 <- |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 328578 | 31.9 |
| Hexabromobiphenyl | 362541 | 286947 | -20.9 |

* 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-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 | 8.410 | -0.017 | 51643 | 224.8 | 1 | 8.312 | -0.015 | 41353 | 308.1 |
| Aroclor-1248 | 2 | 8.579 | -0.025 | 45755 | 156.0 | 2 | 8.718 | -0.015 | 37411 | 265.0 |
| Aroclor-1248 | 3 | 8.997 | -0.026 | 168184 | 318.8 | 3 | 9.150 | -0.027 | 51250 | 298.4 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 160621 | 621.5 | 4 | 9.543 | -0.059 | 87344 | 433.3 |
| | | Total Col1Ave (4 peaks): | | | 330.3 | | Total Col2Ave (4 peaks): | | 326.2 | RPD = 1 |
| | | Corrected Ave (3 peaks): | | | 233.2 | | Corrected Ave (3 peaks): | | 290.5 | RPD = 22 |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 160621 | 341.5 | 1 | 9.448 | -0.019 | 91111 | 430.1 |
| Aroclor-1254 | 2 | 9.373 | -0.028 | 59284 | 324.1 | 2 | 9.966 | -0.020 | 64484 | 378.6 |
| Aroclor-1254 | 3 | 9.665 | -0.029 | 113790 | 383.0 | 3 | 10.114 | -0.025 | 178283 | 487.0 |
| Aroclor-1254 | 4 | 9.798 | -0.032 | 227861 | 393.5 | 4 | 10.353 | -0.036 | 174057 | 459.1 |
| Aroclor-1254 | 5 | 10.137 | -0.052 | 218630 | 550.8 | 5 | 10.562 | -0.024 | 98272 | 537.4 |
| | | Total Col1Ave (5 peaks): | | | 398.6 | | Total Col2Ave (5 peaks): | | 458.4 | RPD = 14 |
| | | Corrected Ave (4 peaks): | | | 360.5 | | Corrected Ave (4 peaks): | | 438.7 | RPD = 20 |
| Aroclor-1260 | 1 | 11.042 | -0.020 | 33489 | 239.6 | 1 | 11.651 | -0.018 | 57224 | 377.8 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 32876 | 227.4 | 2 | 11.913 | -0.020 | 72110 | 189.7 |
| Aroclor-1260 | 3 | 11.727 | -0.024 | 85252 | 224.5 | 3 | 12.431 | -0.021 | 24638 | 243.4 |
| Aroclor-1260 | 4 | 12.127 | -0.031 | 46749 | 241.7 | 4 | 12.495 | -0.021 | 46493 | 183.5 |
| Aroclor-1260 | 5 | 12.243 | -0.018 | 13629 | 172.1 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 221.1 | | Total Col2Ave (4 peaks): | | 248.6 | RPD = 12 |
| | | Corrected Ave (4 peaks): | | | 215.9 | | Corrected Ave (3 peaks): | | 205.6 | RPD = 5 |
| 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) = 2853223 Col1 Total PCB = 0.6 ppm*

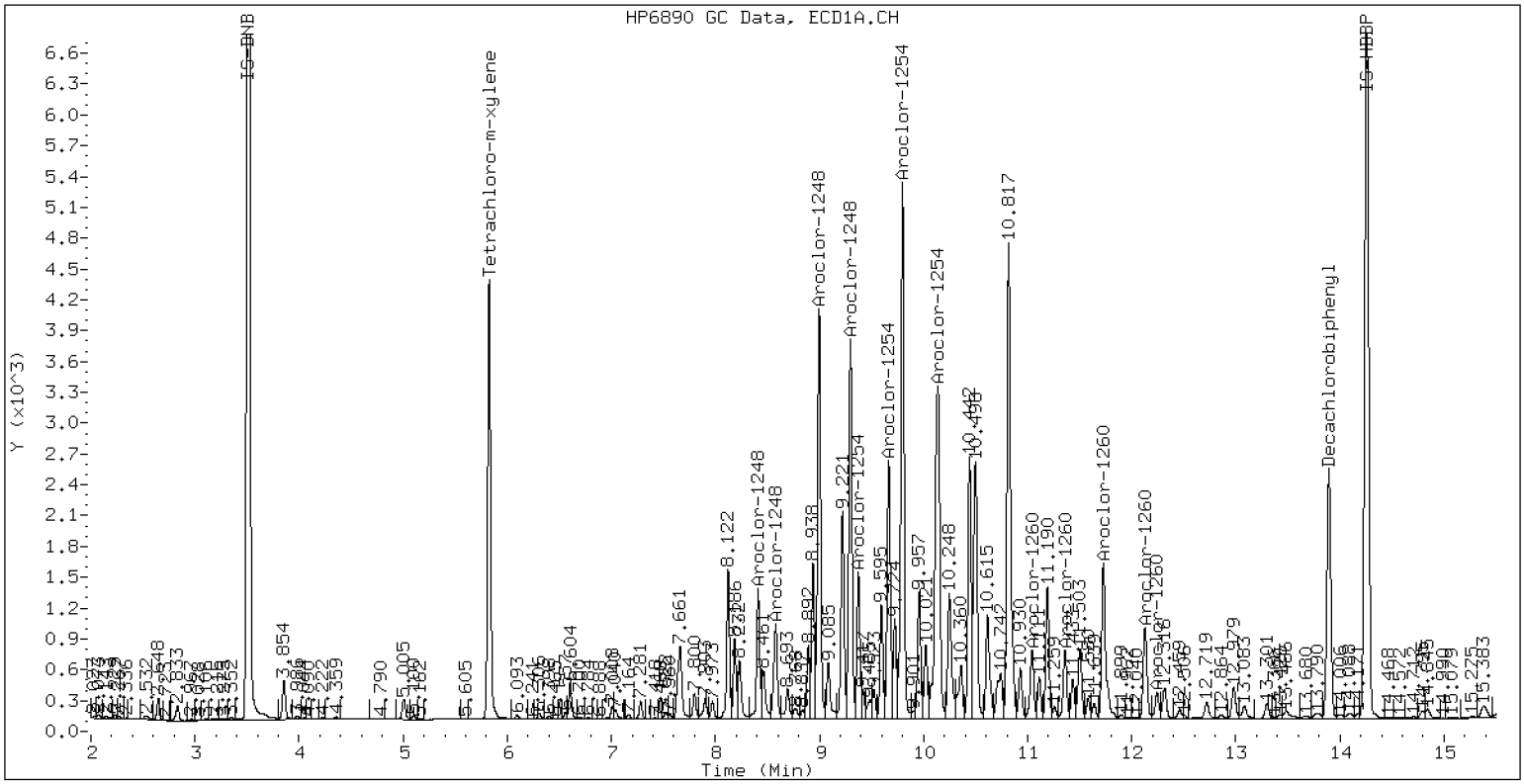
Total PCB Area Col2 (5.813 - 14.037) = 2107678 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

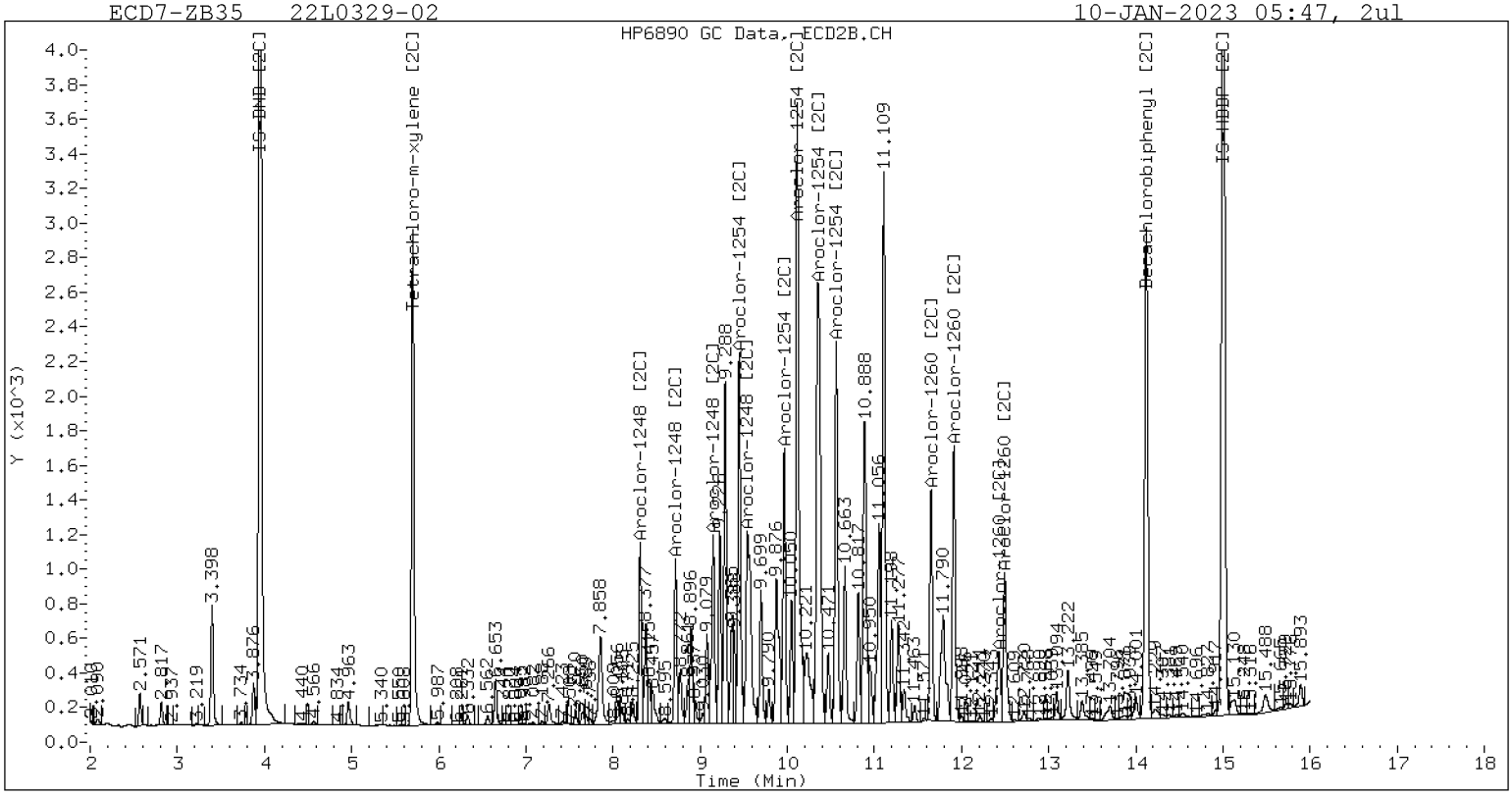
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-02 10-JAN-2023 05:47, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-02 10-JAN-2023 05:47, 2ul

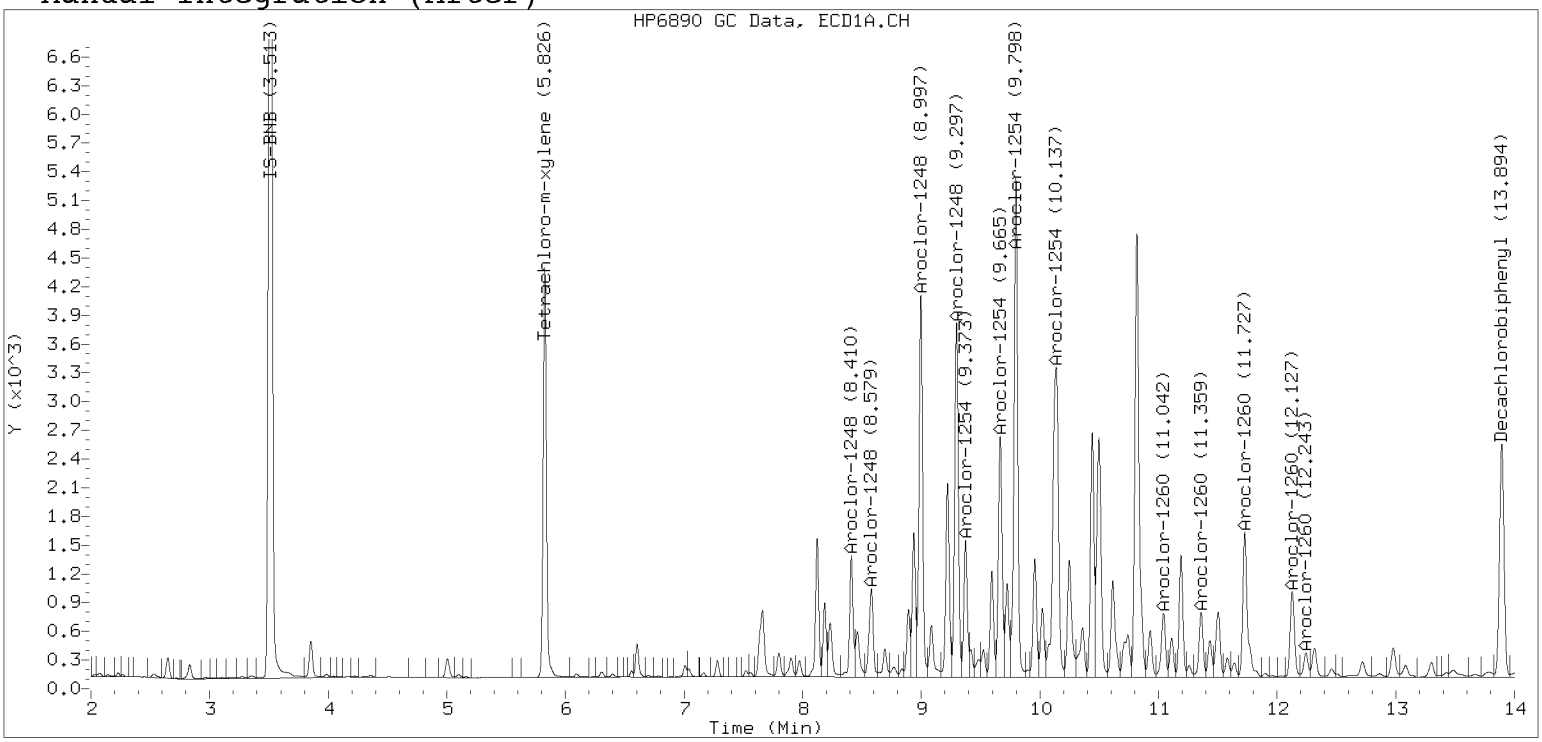



ZB-35 Manual Integration: NO

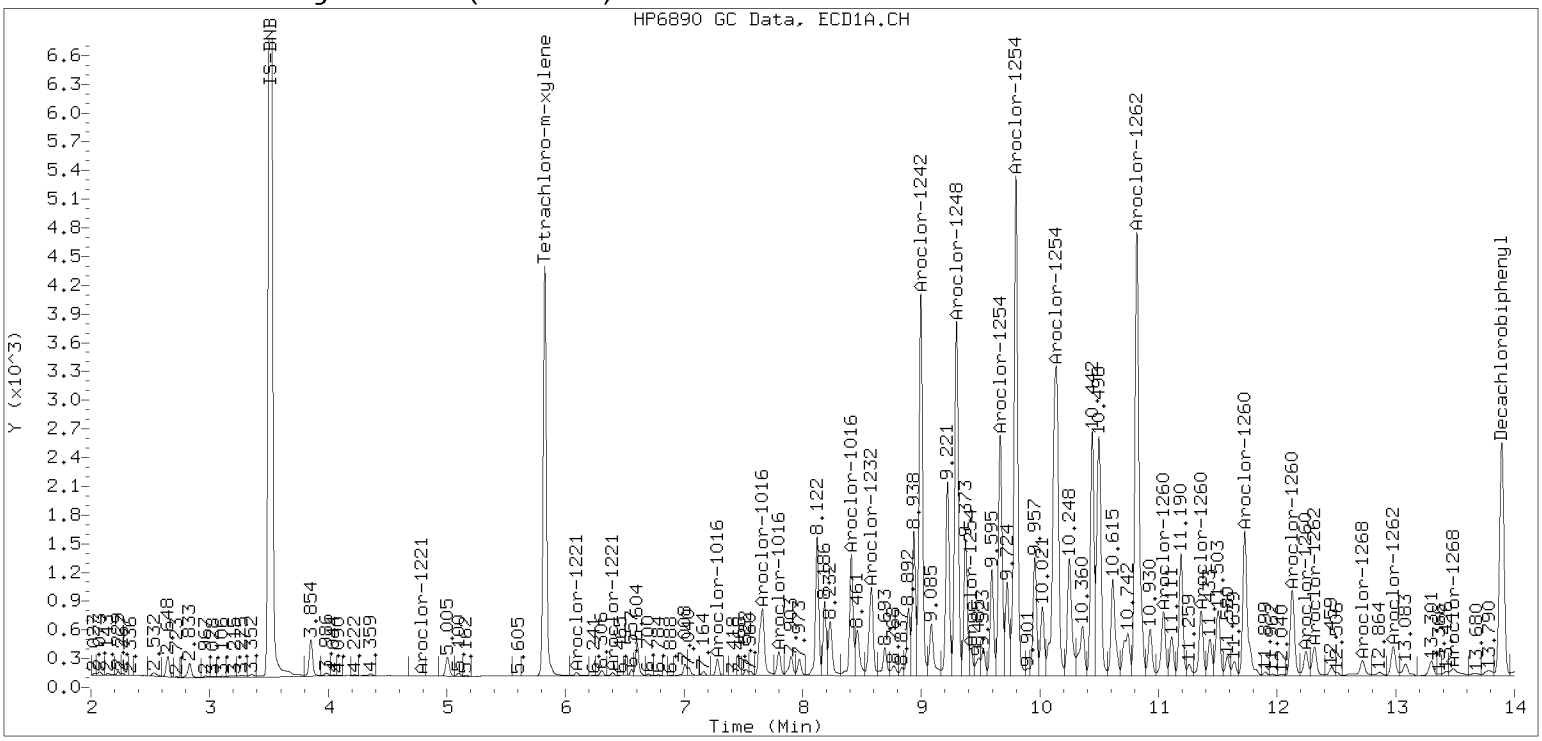
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092360ECD7.D  Injection Date: 10-JAN-2023 05:47

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT799C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-03 A | File ID: | 01092361ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 06:08 |
| % Solids: | 75.69 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 16.53 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 32.2 | 1.6 | 4.0 | P1 |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 116 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 63.1 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9926* | *7.11* | *88.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9926* | *3.85* | *48.2* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9926* | *6.89* | *86.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9926* | *5.84* | *73.0* | *44 - 120* | |

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

Data file 1: /230109.b/01092361ECD7.D
Data file 2: /230109.b/230109.b/01092361ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-03
Client ID:
Injection Date: 10-JAN-2023 06:08
Report Date: 01/14/2023 13:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.008 | 200718 | 5.705 | -0.009 | 138610 | 19.3 | 29.2 | 41.1* | Tetrachloro-m-xylene |
| 13.895 | -0.012 | 140383 | 14.122 | -0.015 | 154609 | 35.6 | 34.5 | 3.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 735195 | 64.2 |
| Hexabromobiphenyl | 798898 | 430664 | -46.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 346082 | 38.9 |
| Hexabromobiphenyl | 362541 | 316017 | -12.8 |

* 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 | --- | | | 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 | 8.413 | -0.014 | 28469 | 90.1 | 1 | 8.314 | -0.013 | 23899 | 169.0 |
| Aroclor-1248 | 2 | 8.582 | -0.022 | 16814 | 41.7 | 2 | 8.719 | -0.013 | 18674 | 125.6 |
| Aroclor-1248 | 3 | 9.000 | -0.022 | 120279 | 165.7 | 3 | 9.153 | -0.024 | 34090 | 188.5 |
| Aroclor-1248 | 4 | 9.300 | -0.011 | 178153 | 500.9 | 4 | 9.543 | -0.060 | 73090 | 344.2 |
| | | Total Col1Ave (4 peaks): | | | 199.6 | | Total Col2Ave (4 peaks): | | | 206.8 RPD = 4 |
| | | Corrected Ave (3 peaks): | | | 99.1 | | Corrected Ave (3 peaks): | | | 161.0 RPD = 48* |
| Aroclor-1254 | 1 | 9.300 | -0.021 | 178153 | 275.2 | 1 | 9.450 | -0.017 | 107988 | 484.0 |
| Aroclor-1254 | 2 | 9.376 | -0.026 | 81772 | 324.8 | 2 | 9.968 | -0.019 | 81847 | 456.2 |
| Aroclor-1254 | 3 | 9.668 | -0.026 | 157206 | 384.5 | 3 | 10.117 | -0.023 | 220376 | 571.5 |
| Aroclor-1254 | 4 | 9.801 | -0.030 | 284729 | 357.3 | 4 | 10.357 | -0.032 | 254660 | 637.7 |
| Aroclor-1254 | 5 | 10.143 | -0.046 | 325727 | 596.3 | 5 | 10.565 | -0.021 | 143452 | 744.8 |
| | | Total Col1Ave (5 peaks): | | | 387.6 | | Total Col2Ave (5 peaks): | | | 578.8 RPD = 40 |
| | | Corrected Ave (4 peaks): | | | 335.5 | | Corrected Ave (4 peaks): | | | 537.3 RPD = 46* |
| Aroclor-1260 | 1 | 11.044 | -0.018 | 51586 | 329.1 | 1 | 11.653 | -0.016 | 91175 | 546.6 |
| Aroclor-1260 | 2 | 11.360 | -0.017 | 46345 | 285.8 | 2 | 11.913 | -0.019 | 105684 | 252.5 |
| Aroclor-1260 | 3 | 11.729 | -0.023 | 104650 | 245.7 | 3 | 12.433 | -0.018 | 24819 | 222.7 |
| Aroclor-1260 | 4 | 12.130 | -0.028 | 70068 | 323.0 | 4 | 12.496 | -0.021 | 67391 | 241.5 |
| Aroclor-1260 | 5 | 12.243 | -0.018 | 18701 | 210.6 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 278.8 | | Total Col2Ave (4 peaks): | | | 315.8 RPD = 12 |
| | | Corrected Ave (4 peaks): | | | 266.3 | | Corrected Ave (3 peaks): | | | 238.9 RPD = 11 |
| 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) = 3478852 Col1 Total PCB = 0.5 ppm*

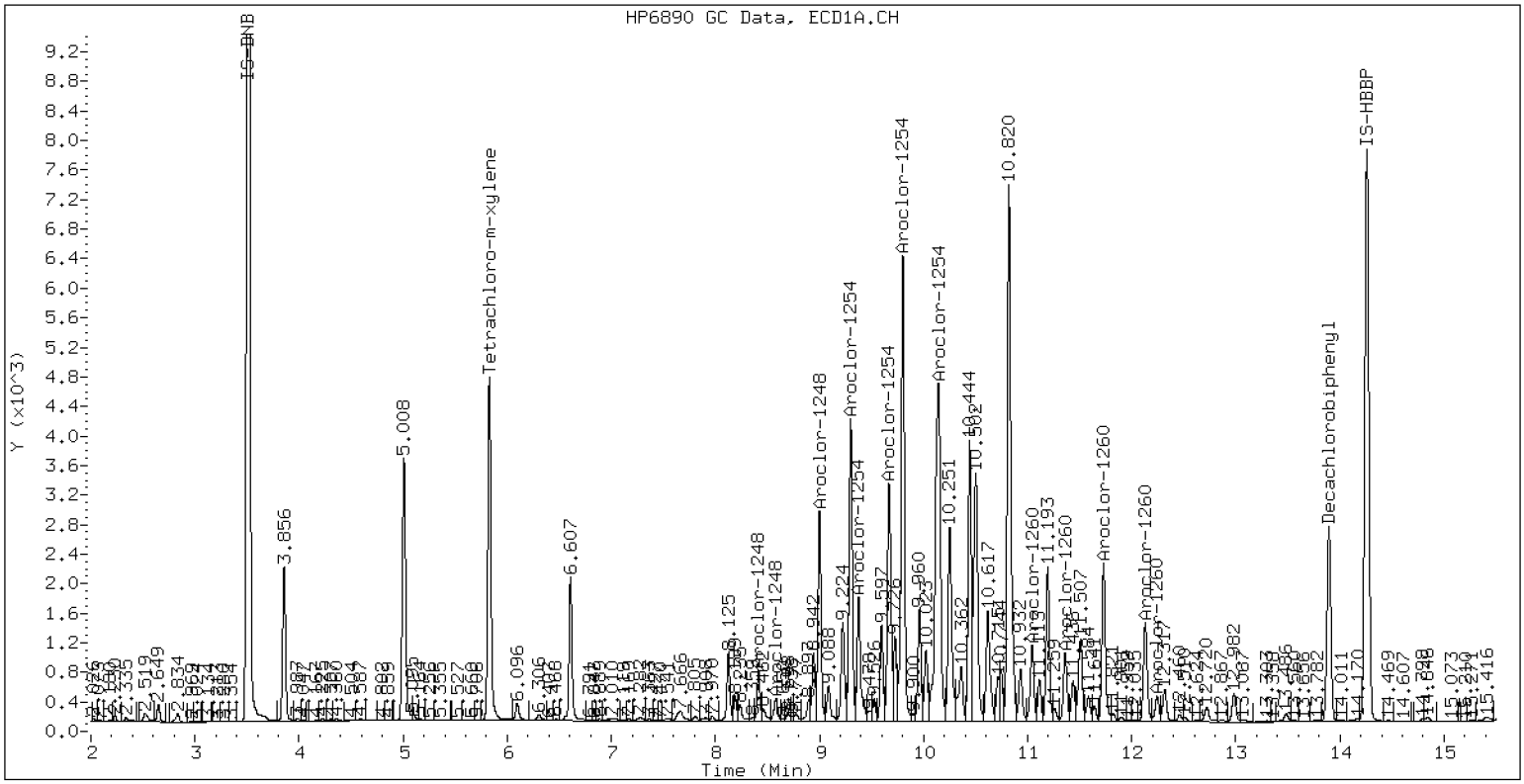
Total PCB Area Col2 (5.813 - 14.037) = 2578598 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

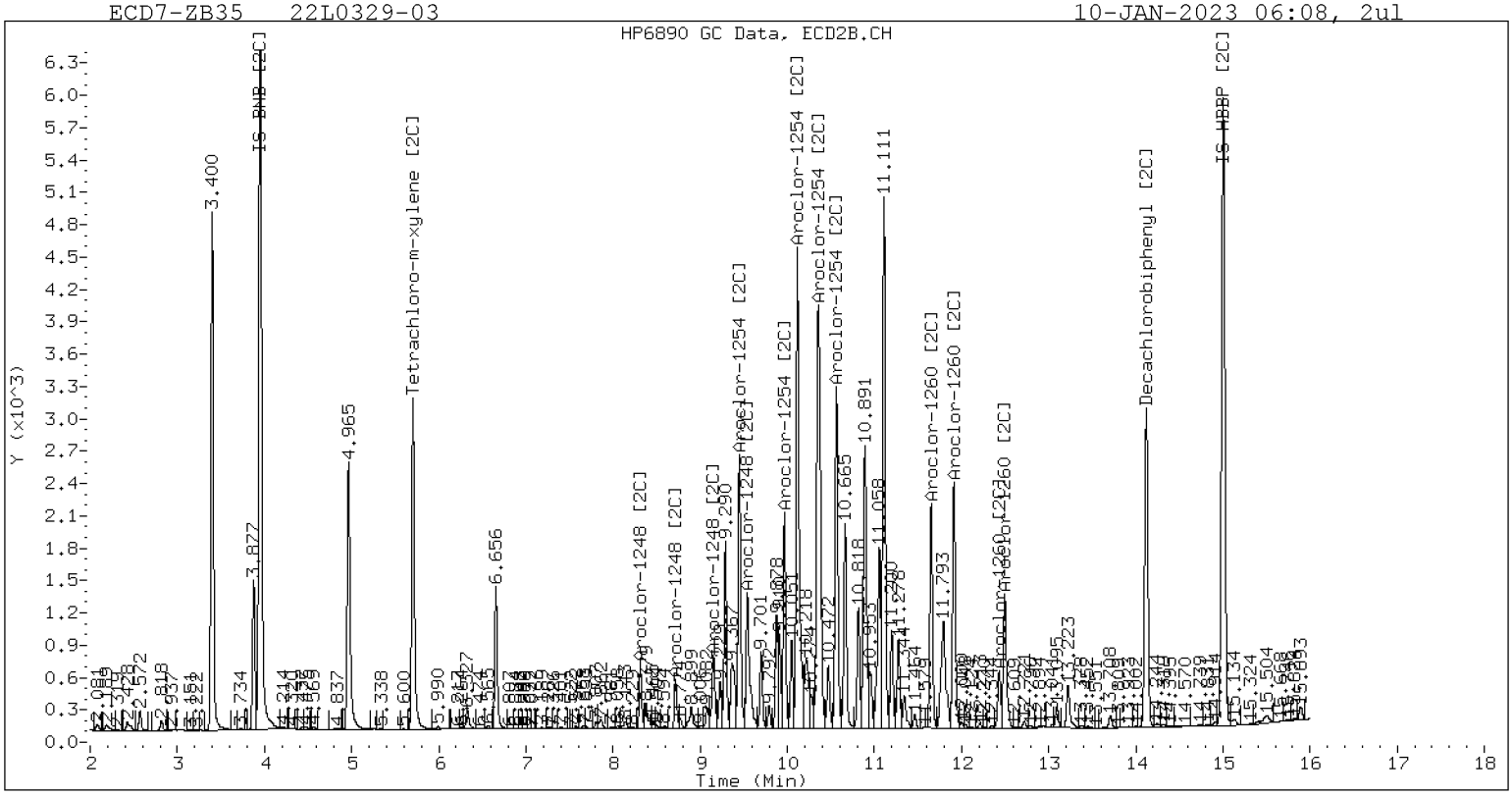
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-03 10-JAN-2023 06:08, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-03 10-JAN-2023 06:08, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT799D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-04 A | File ID: | 01092362ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 06:29 |
| % Solids: | 72.78 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.2 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 13.1 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 51.8 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 27.4 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9884* | *7.22* | *90.3* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9884* | *4.90* | *61.4* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9884* | *6.97* | *87.3* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9884* | *5.68* | *71.1* | *44 - 120* | |

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

Data file 1: /230109.b/01092362ECD7.D
Data file 2: /230109.b/230109.b/01092362ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-04
Client ID:
Injection Date: 10-JAN-2023 06:29
Report Date: 01/14/2023 13:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.007 | 198945 | 5.706 | -0.008 | 134720 | 24.5 | 28.4 | 14.6 | Tetrachloro-m-xylene |
| 13.895 | -0.013 | 161690 | 14.122 | -0.015 | 170365 | 36.1 | 34.9 | 3.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 571860 | 27.7 |
| Hexabromobiphenyl | 798898 | 488125 | -38.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 345768 | 38.8 |
| Hexabromobiphenyl | 362541 | 343787 | -5.2 |

* 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 | --- | | | 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 | 8.414 | -0.013 | 11963 | 48.7 | 1 | 8.315 | -0.011 | 9906 | 70.1 |
| Aroclor-1248 | 2 | 8.585 | -0.020 | 9154 | 29.2 | 2 | 8.721 | -0.012 | 7768 | 52.3 |
| Aroclor-1248 | 3 | 9.001 | -0.021 | 55646 | 98.5 | 3 | 9.155 | -0.022 | 14101 | 78.0 |
| Aroclor-1248 | 4 | 9.301 | -0.010 | 84420 | 305.1 | 4 | 9.588 | -0.014 | 13163 | 62.0 |
| | | Total Col1Ave (4 peaks): | | | 120.4 | | Total Col2Ave (4 peaks): | | | 65.6 RPD = 59* |
| | | Corrected Ave (3 peaks): | | | 58.8 | | Corrected Ave (3 peaks): | | | 61.5 RPD = 4 |
| Aroclor-1254 | 1 | 9.301 | -0.020 | 84420 | 167.7 | 1 | 9.451 | -0.015 | 48441 | 217.3 |
| Aroclor-1254 | 2 | 9.377 | -0.024 | 34739 | 177.4 | 2 | 9.969 | -0.017 | 36172 | 201.8 |
| Aroclor-1254 | 3 | 9.672 | -0.023 | 75200 | 236.5 | 3 | 10.119 | -0.021 | 99018 | 257.0 |
| Aroclor-1254 | 4 | 9.803 | -0.027 | 142966 | 230.6 | 4 | 10.361 | -0.028 | 116413 | 291.8 |
| Aroclor-1254 | 5 | 10.148 | -0.041 | 158307 | 372.6 | 5 | 10.566 | -0.020 | 63101 | 327.9 |
| | | Total Col1Ave (5 peaks): | | | 236.9 | | Total Col2Ave (5 peaks): | | | 259.2 RPD = 9 |
| | | Corrected Ave (4 peaks): | | | 203.0 | | Corrected Ave (4 peaks): | | | 242.0 RPD = 17 |
| Aroclor-1260 | 1 | 11.045 | -0.017 | 22063 | 124.2 | 1 | 11.655 | -0.014 | 43027 | 237.1 |
| Aroclor-1260 | 2 | 11.362 | -0.015 | 21230 | 115.5 | 2 | 11.916 | -0.017 | 46658 | 102.5 |
| Aroclor-1260 | 3 | 11.731 | -0.021 | 50279 | 104.1 | 3 | 12.435 | -0.017 | 12618 | 104.1 |
| Aroclor-1260 | 4 | 12.133 | -0.026 | 34237 | 139.2 | 4 | 12.497 | -0.019 | 31801 | 104.8 |
| Aroclor-1260 | 5 | 12.245 | -0.016 | 8895 | 88.4 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 114.3 | | Total Col2Ave (4 peaks): | | | 137.1 RPD = 18 |
| | | Corrected Ave (4 peaks): | | | 108.0 | | Corrected Ave (3 peaks): | | | 103.8 RPD = 4 |
| 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) = 1846921 Col1 Total PCB = 0.3 ppm*

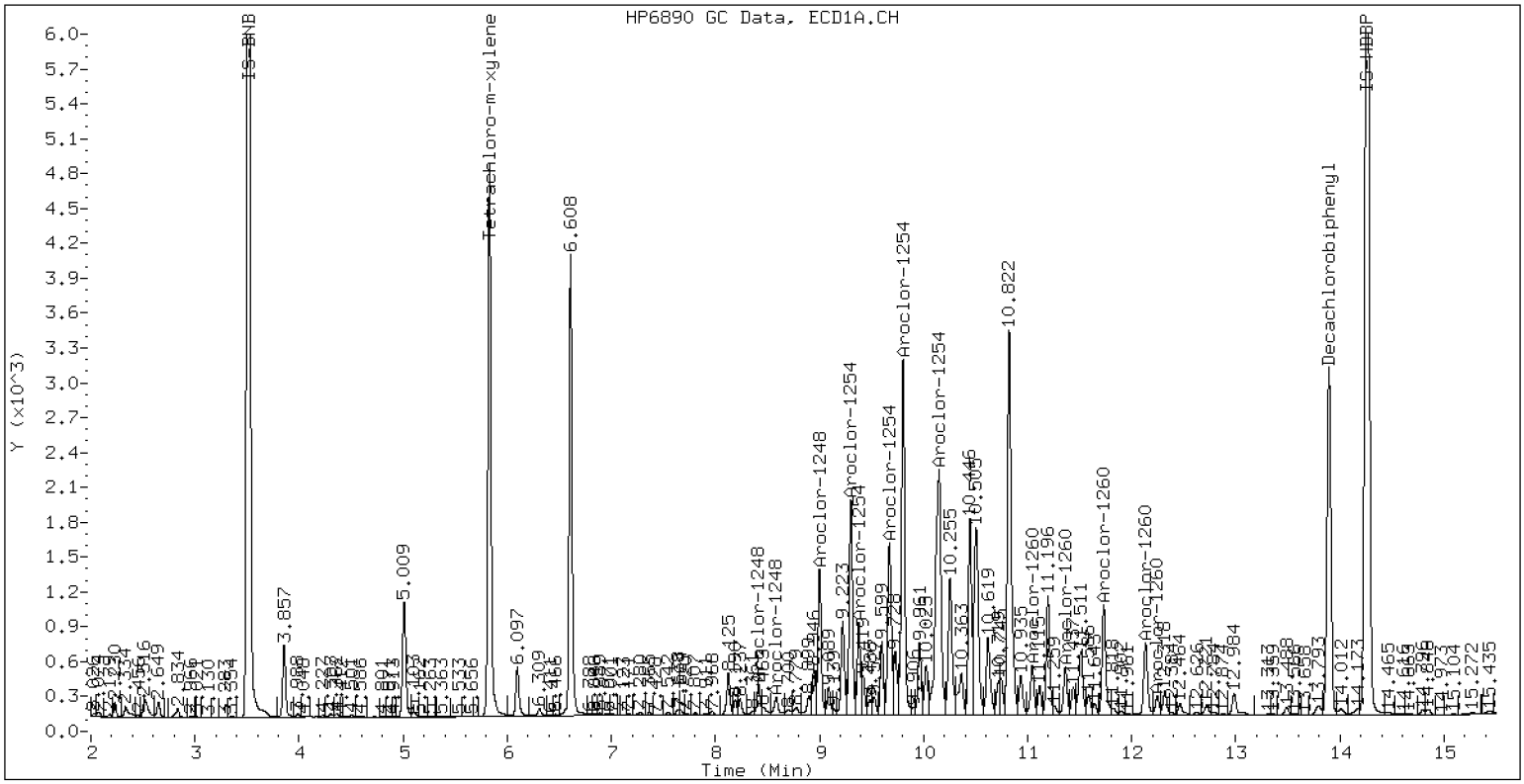
Total PCB Area Col2 (5.813 - 14.037) = 1306634 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

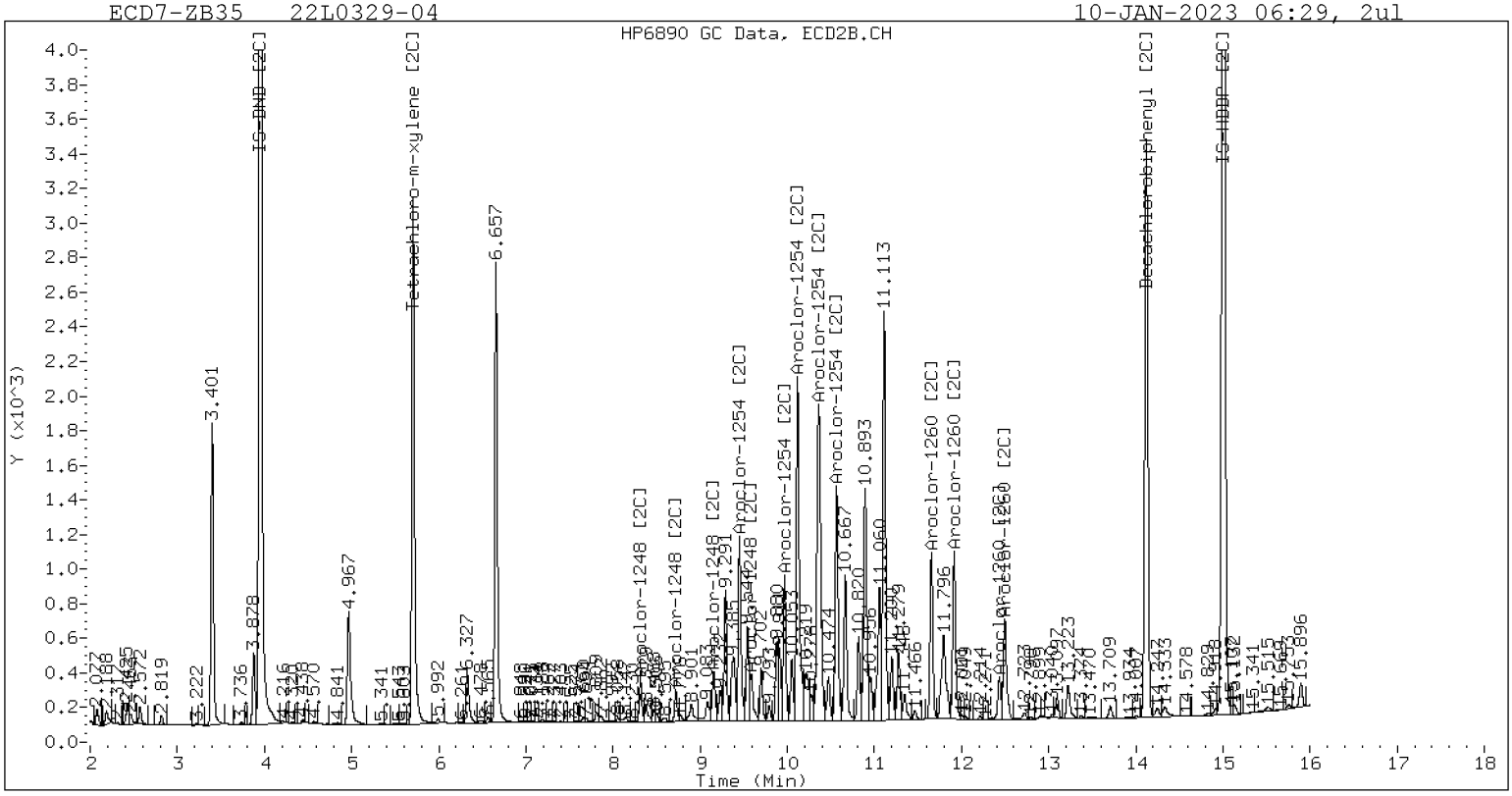
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-04 10-JAN-2023 06:29, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-04 10-JAN-2023 06:29, 2ul

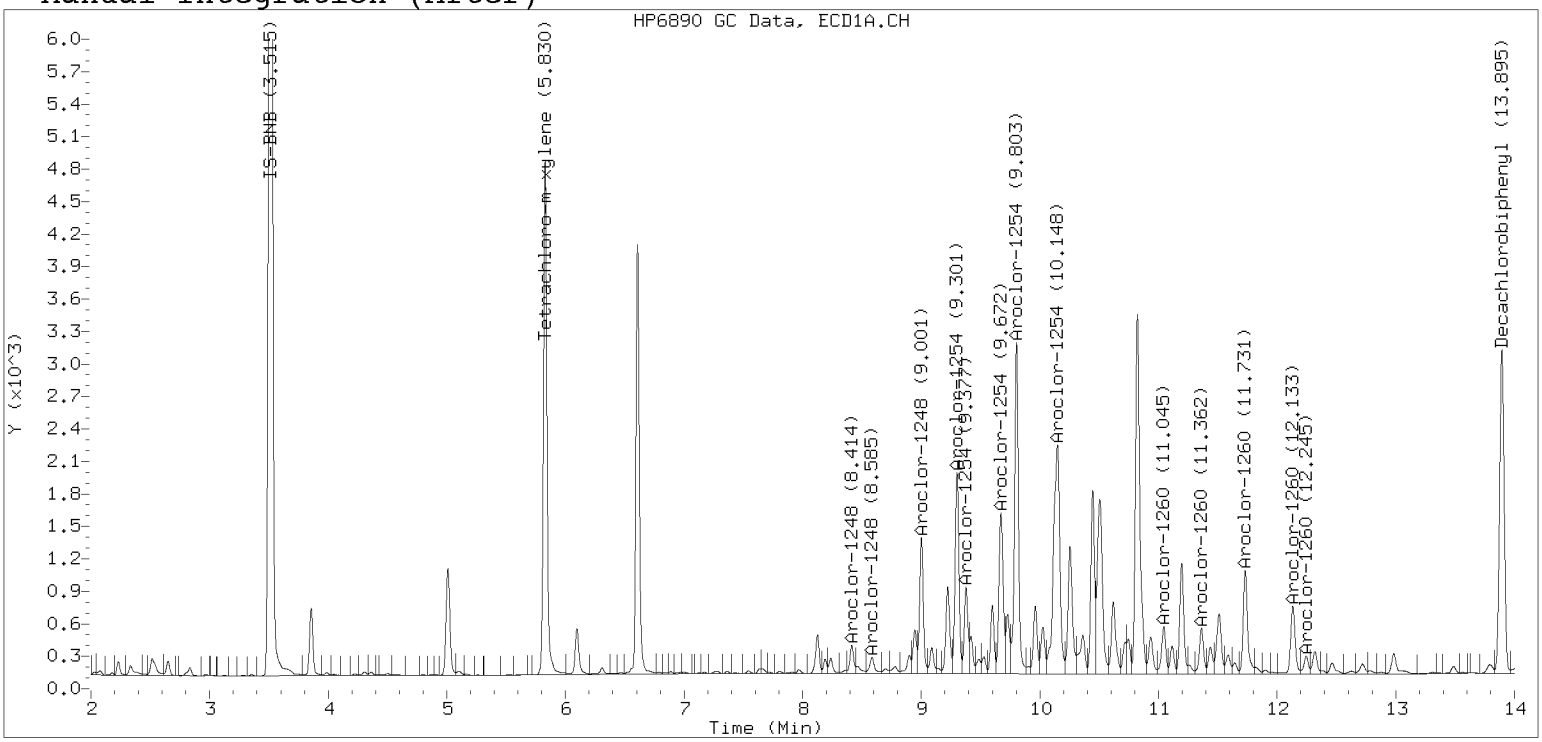



ZB-35 Manual Integration: NO

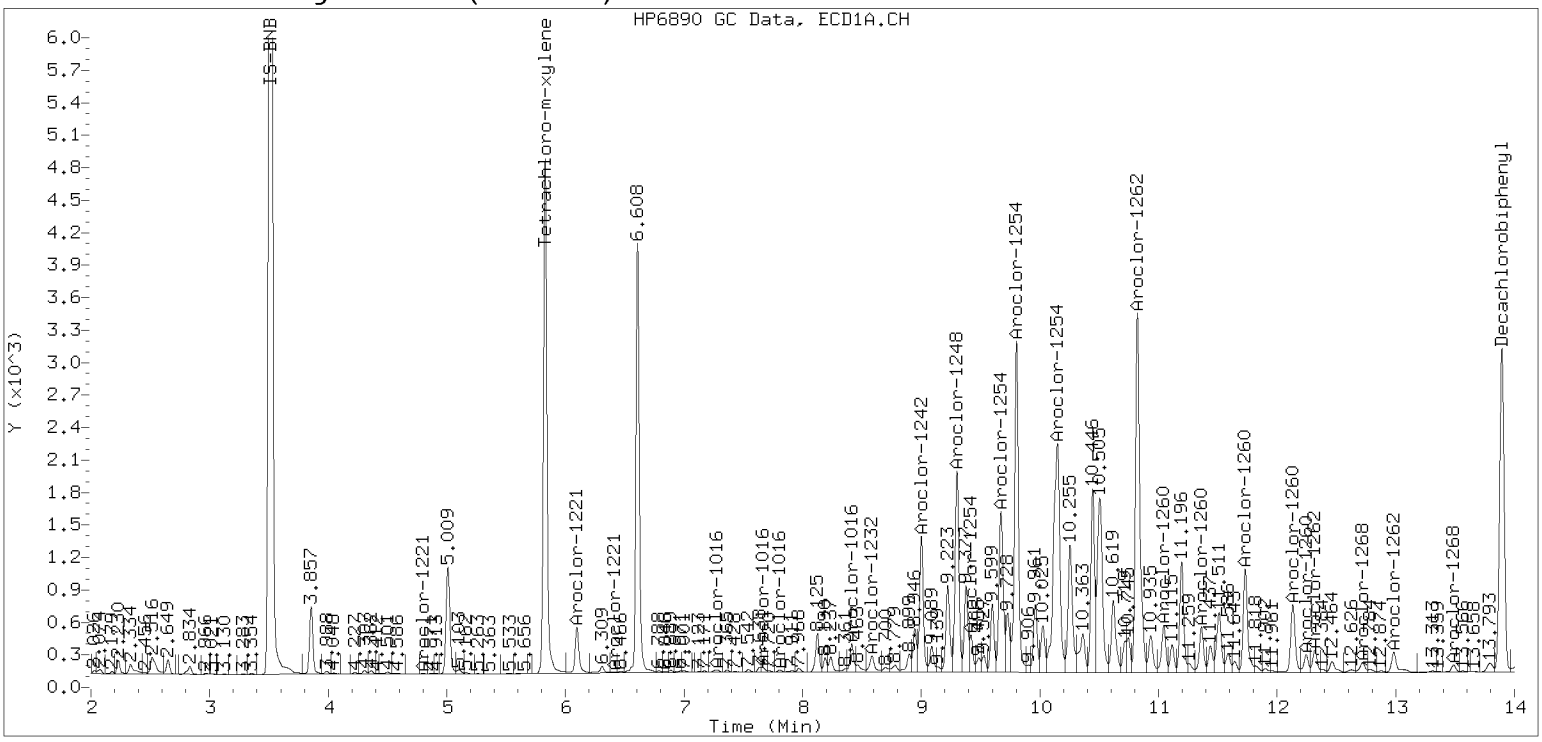
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092362ECD7.D  Injection Date: 10-JAN-2023 06:29

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT799E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-05 A | File ID: | 01092363ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 06:51 |
| % Solids: | 74.98 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 16.68 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 14.7 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 1 | 1 | 48.8 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 20.1 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9957* | *7.11* | *88.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9957* | *5.56* | *69.5* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9957* | *6.99* | *87.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9957* | *5.45* | *68.2* | *44 - 120* | |

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

Data file 1: /230109.b/01092363ECD7.D
Data file 2: /230109.b/230109.b/01092363ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-05
Client ID:
Injection Date: 10-JAN-2023 06:51
Report Date: 01/14/2023 13:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 198811 | 5.706 | -0.007 | 131392 | 27.8 | 27.3 | 2.0 | Tetrachloro-m-xylene |
| 13.896 | -0.012 | 176713 | 14.123 | -0.014 | 185683 | 35.6 | 35.0 | 1.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 504396 | 12.7 |
| Hexabromobiphenyl | 798898 | 541922 | -32.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 351573 | 41.1 |
| Hexabromobiphenyl | 362541 | 373858 | 3.1 |

* 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 | --- | | | 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 | 8.415 | -0.012 | 19746 | 91.0 | 1 | 8.315 | -0.011 | 8699 | 60.6 |
| Aroclor-1248 | 2 | 8.586 | -0.018 | 10321 | 37.3 | 2 | 8.721 | -0.011 | 6154 | 40.7 |
| Aroclor-1248 | 3 | 9.002 | -0.020 | 46133 | 92.6 | 3 | 9.157 | -0.020 | 10652 | 58.0 |
| Aroclor-1248 | 4 | 9.302 | -0.009 | 64025 | 262.4 | 4 | 9.590 | -0.013 | 14015 | 65.0 |
| | Total Col1Ave (4 peaks): | | | | 120.8 | Total Col2Ave (4 peaks): | | | | 56.1 RPD = 73* |
| | Corrected Ave (3 peaks): | | | | 73.6 | Corrected Ave (3 peaks): | | | | 53.1 RPD = 32 |
| Aroclor-1254 | 1 | 9.302 | -0.019 | 64025 | 144.2 | 1 | 9.453 | -0.014 | 40567 | 179.0 |
| Aroclor-1254 | 2 | 9.379 | -0.022 | 41817 | 242.1 | 2 | 9.970 | -0.017 | 25975 | 142.5 |
| Aroclor-1254 | 3 | 9.675 | -0.019 | 80092 | 285.5 | 3 | 10.120 | -0.020 | 76990 | 196.5 |
| Aroclor-1254 | 4 | 9.805 | -0.026 | 117557 | 215.0 | 4 | 10.363 | -0.027 | 86800 | 214.0 |
| Aroclor-1254 | 5 | 10.150 | -0.039 | 124945 | 333.4 | 5 | 10.567 | -0.019 | 47692 | 243.7 |
| | Total Col1Ave (5 peaks): | | | | 244.0 | Total Col2Ave (5 peaks): | | | | 195.1 RPD = 22 |
| | Corrected Ave (4 peaks): | | | | 221.7 | Corrected Ave (4 peaks): | | | | 183.0 RPD = 19 |
| Aroclor-1260 | 1 | 11.046 | -0.016 | 19138 | 97.0 | 1 | 11.655 | -0.014 | 30437 | 154.2 |
| Aroclor-1260 | 2 | 11.364 | -0.014 | 20394 | 100.0 | 2 | 11.917 | -0.016 | 40126 | 81.0 |
| Aroclor-1260 | 3 | 11.733 | -0.019 | 49397 | 92.1 | 3 | 12.436 | -0.015 | 11427 | 86.7 |
| Aroclor-1260 | 4 | 12.134 | -0.024 | 28194 | 103.3 | 4 | 12.498 | -0.019 | 26391 | 79.9 |
| Aroclor-1260 | 5 | 12.246 | -0.015 | 9289 | 83.1 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 95.1 | Total Col2Ave (4 peaks): | | | | 100.5 RPD = 5 |
| | Corrected Ave (4 peaks): | | | | 93.1 | Corrected Ave (3 peaks): | | | | 82.5 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 (5.936 - 13.808) = 1685463 Col1 Total PCB = 0.3 ppm*

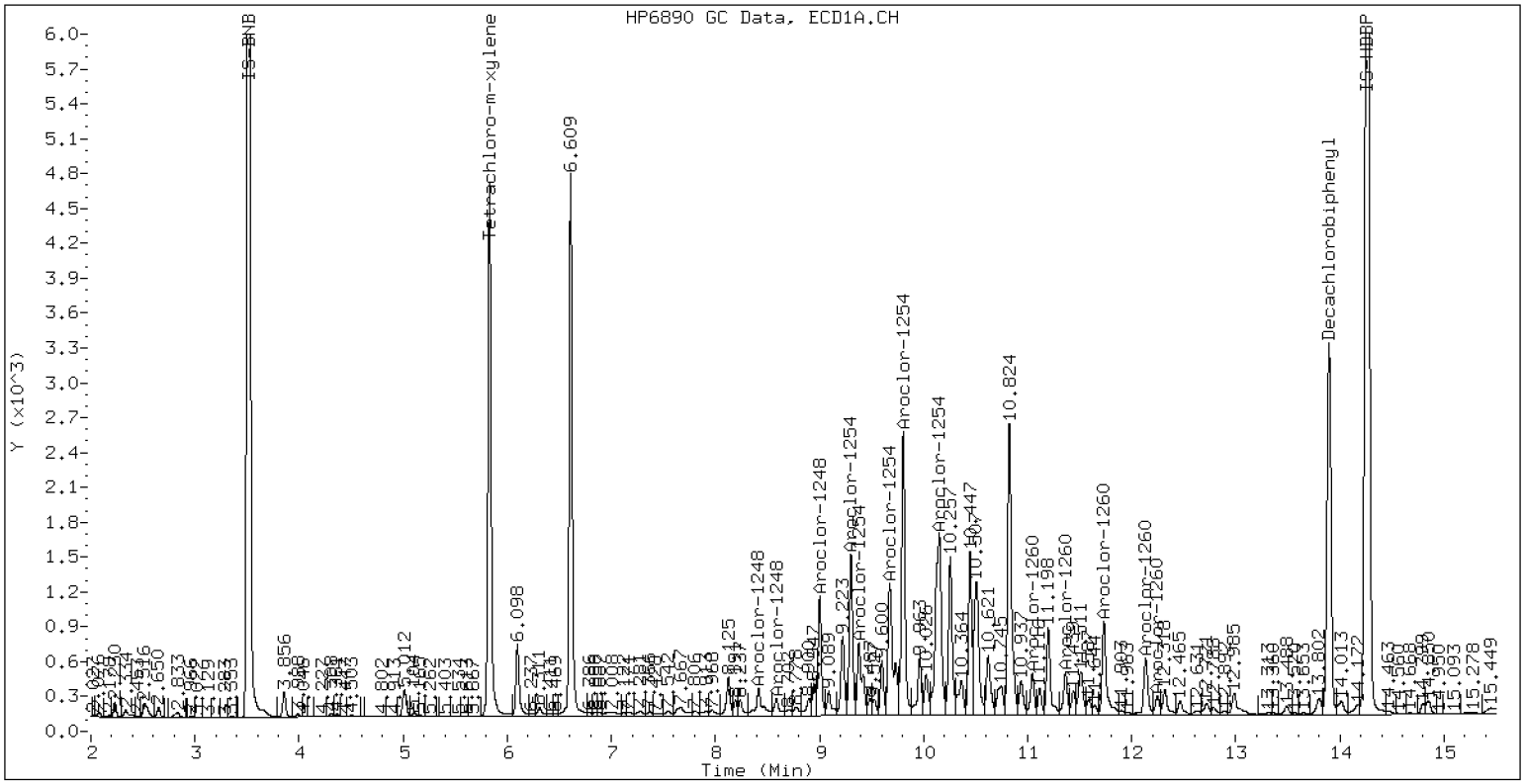
Total PCB Area Col2 (5.813 - 14.037) = 1097301 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

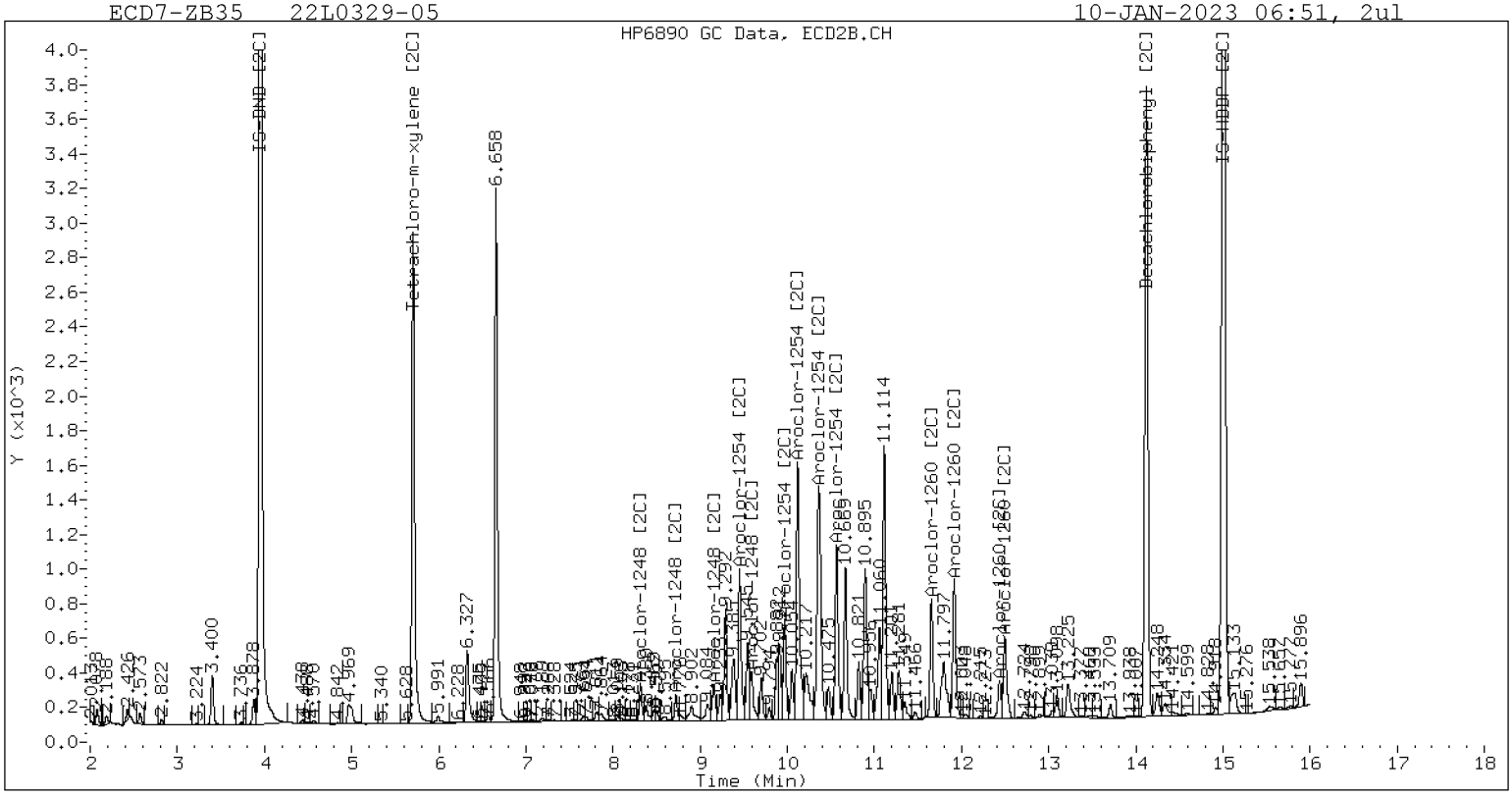
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-05 10-JAN-2023 06:51, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-05 10-JAN-2023 06:51, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT799F**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-06 B | File ID: | 01092364ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 07:12 |
| % Solids: | 70.36 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.81 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 15.2 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 39.5 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 20.5 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9801* | *7.43* | *93.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9801* | *5.79* | *72.5* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9801* | *7.32* | *91.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9801* | *5.91* | *74.1* | *44 - 120* | |

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

Data file 1: /230109.b/01092364ECD7.D
Data file 2: /230109.b/230109.b/01092364ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-06
Client ID:
Injection Date: 10-JAN-2023 07:12
Report Date: 01/14/2023 13:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.828 | -0.008 | 205295 | 5.705 | -0.008 | 138275 | 29.0 | 29.6 | 2.2 | Tetrachloro-m-xylene |
| 13.894 | -0.013 | 173774 | 14.122 | -0.015 | 184777 | 37.2 | 36.7 | 1.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 499592 | 11.6 |
| Hexabromobiphenyl | 798898 | 509148 | -36.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 340309 | 36.6 |
| Hexabromobiphenyl | 362541 | 354589 | -2.2 |

* 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 | --- | | | 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 | 8.411 | -0.016 | 13910 | 64.8 | 1 | 8.312 | -0.014 | 11709 | 84.2 |
| Aroclor-1248 | 2 | 8.580 | -0.024 | 10954 | 39.9 | 2 | 8.719 | -0.014 | 8953 | 61.2 |
| Aroclor-1248 | 3 | 8.998 | -0.025 | 45062 | 91.3 | 3 | 9.152 | -0.026 | 17020 | 95.7 |
| Aroclor-1248 | 4 | 9.299 | -0.012 | 64837 | 268.2 | 4 | 9.587 | -0.016 | 13406 | 64.2 |
| Total Col1Ave (4 peaks): 116.1 | | | | | | Total Col2Ave (4 peaks): 76.3 RPD = 41* | | | | |
| Corrected Ave (3 peaks): 65.3 | | | | | | Corrected Ave (3 peaks): 69.9 RPD = 7 | | | | |
| Aroclor-1254 | 1 | 9.299 | -0.022 | 64837 | 147.4 | 1 | 9.449 | -0.018 | 42755 | 194.9 |
| Aroclor-1254 | 2 | 9.375 | -0.027 | 23078 | 134.9 | 2 | 9.967 | -0.020 | 26403 | 149.7 |
| Aroclor-1254 | 3 | 9.669 | -0.025 | 55558 | 200.0 | 3 | 10.116 | -0.024 | 72148 | 190.3 |
| Aroclor-1254 | 4 | 9.800 | -0.031 | 98158 | 181.3 | 4 | 10.356 | -0.034 | 82072 | 209.0 |
| Aroclor-1254 | 5 | 10.143 | -0.046 | 102940 | 277.3 | 5 | 10.564 | -0.022 | 46439 | 245.2 |
| Total Col1Ave (5 peaks): 188.2 | | | | | | Total Col2Ave (5 peaks): 197.8 RPD = 5 | | | | |
| Corrected Ave (4 peaks): 165.9 | | | | | | Corrected Ave (4 peaks): 186.0 RPD = 11 | | | | |
| Aroclor-1260 | 1 | 11.044 | -0.018 | 17950 | 96.9 | 1 | 11.653 | -0.017 | 27215 | 145.4 |
| Aroclor-1260 | 2 | 11.360 | -0.017 | 17530 | 91.5 | 2 | 11.914 | -0.018 | 38853 | 82.7 |
| Aroclor-1260 | 3 | 11.729 | -0.023 | 45333 | 90.0 | 3 | 12.433 | -0.018 | 11866 | 94.9 |
| Aroclor-1260 | 4 | 12.130 | -0.028 | 25557 | 99.6 | 4 | 12.496 | -0.020 | 27535 | 87.9 |
| Aroclor-1260 | 5 | 12.244 | -0.017 | 9859 | 93.9 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): 94.4 | | | | | | Total Col2Ave (4 peaks): 102.7 RPD = 8 | | | | |
| Corrected Ave (4 peaks): 93.1 | | | | | | Corrected Ave (3 peaks): 88.5 RPD = 5 | | | | |
| 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) = 1379955 Col1 Total PCB = 0.3 ppm*

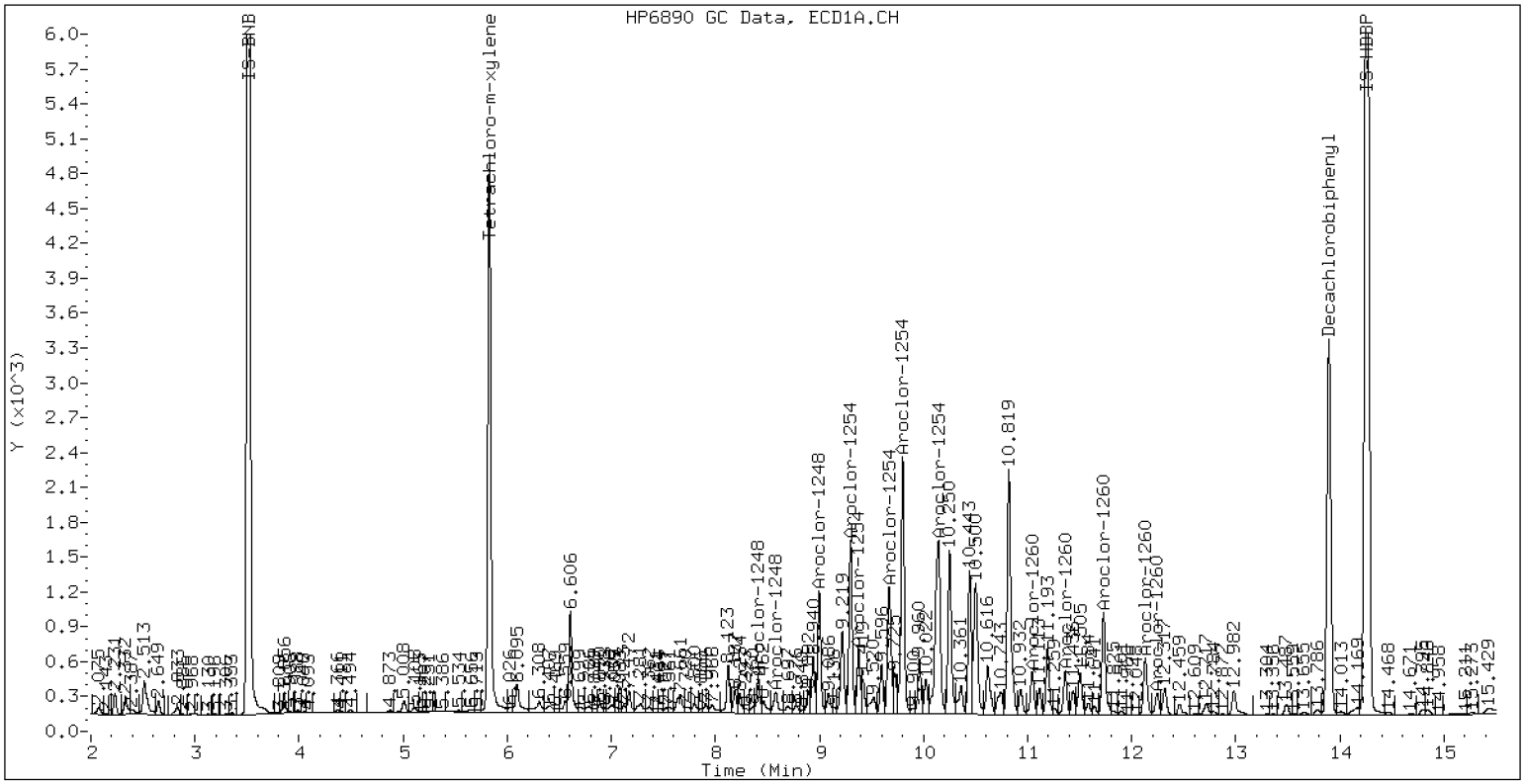
Total PCB Area Col2 (5.813 - 14.037) = 1014200 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

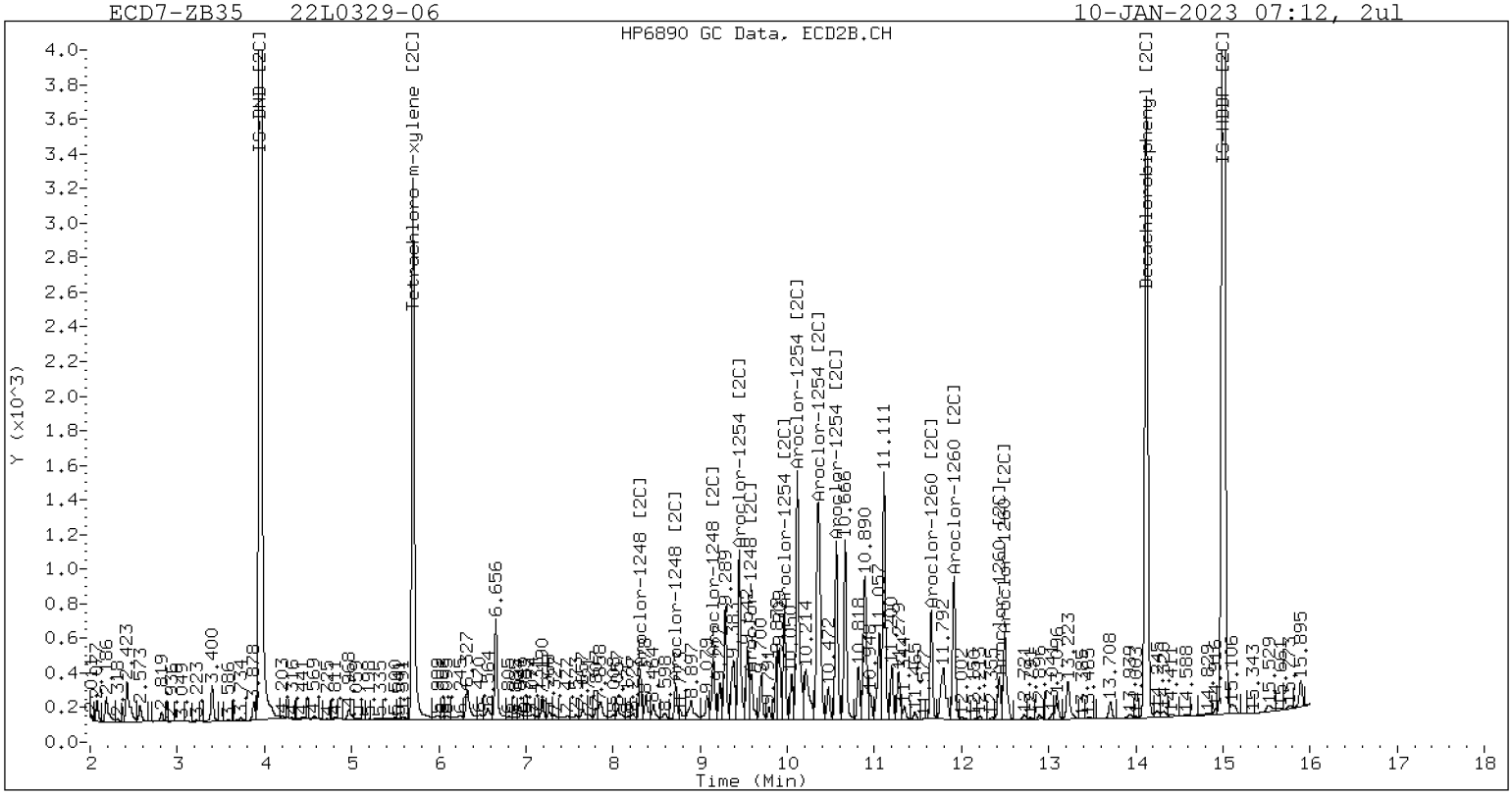
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-06 10-JAN-2023 07:12, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-06 10-JAN-2023 07:12, 2ul

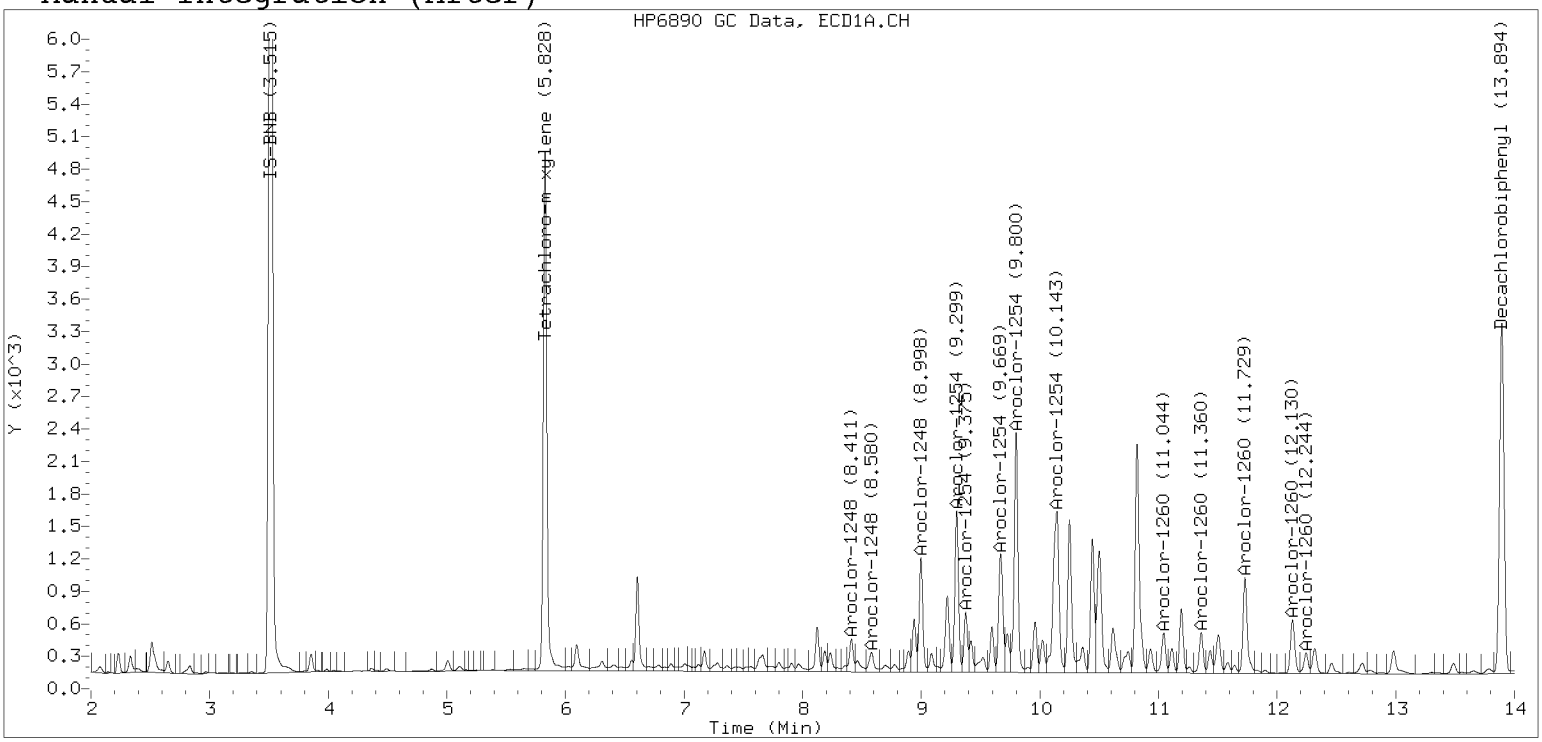



ZB-35 Manual Integration: NO

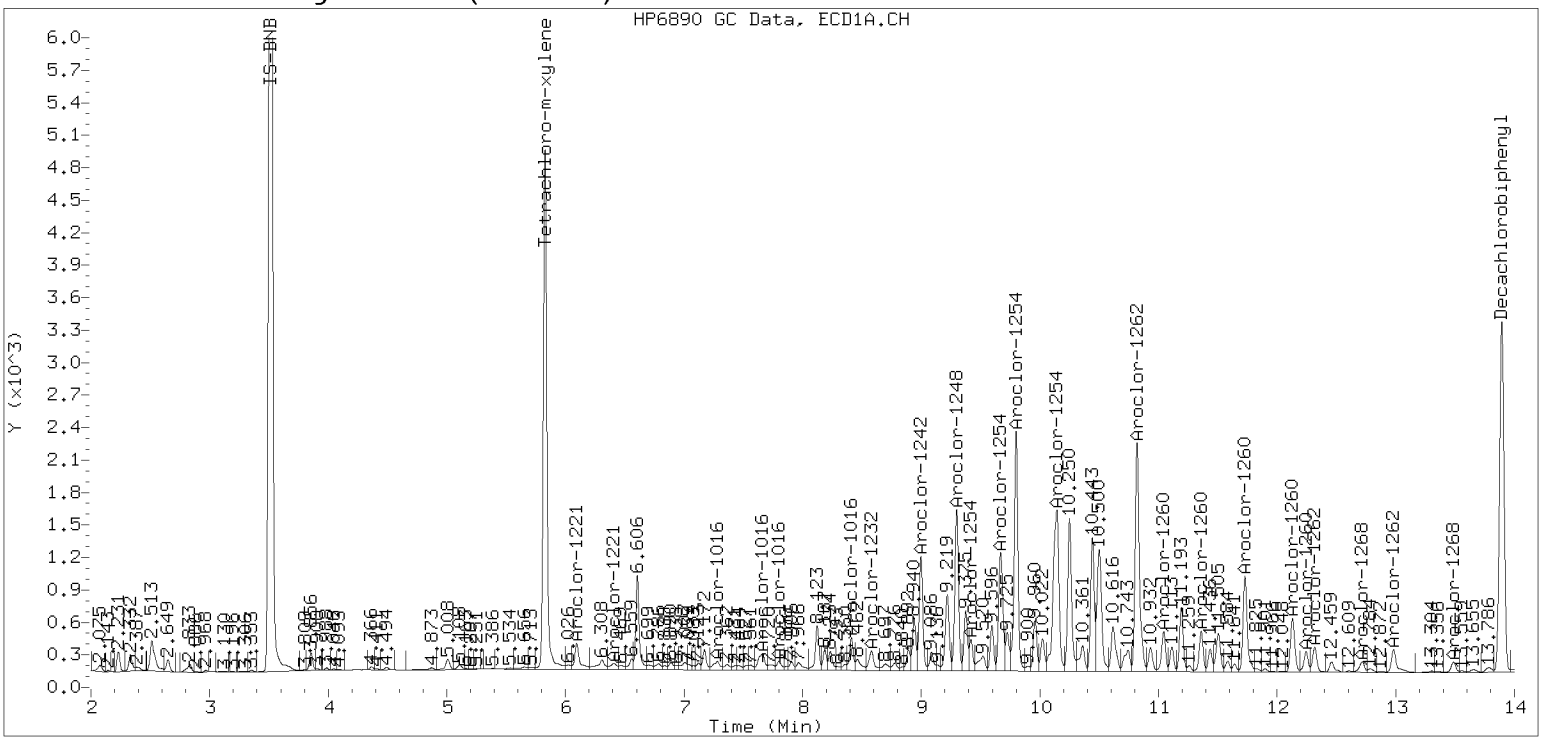
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092364ECD7.D  Injection Date: 10-JAN-2023 07:12

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-07 A | File ID: | 01092365ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 07:33 |
| % Solids: | 56.96 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 21.98 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 33.0 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 75.5 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 52.3 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9873* | *6.66* | *83.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9873* | *4.75* | *59.5* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9873* | *6.26* | *78.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9873* | *5.22* | *65.4* | *44 - 120* | |

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

Data file 1: /230109.b/01092365ECD7.D
Data file 2: /230109.b/230109.b/01092365ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-07
Client ID:
Injection Date: 10-JAN-2023 07:33
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.825 | -0.011 | 164760 | 5.702 | -0.012 | 115318 | 23.8 | 26.1 | 9.4 | Tetrachloro-m-xylene |
| 13.895 | -0.013 | 149591 | 14.121 | -0.016 | 166779 | 33.4 | 31.4 | 6.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 488662 | 9.2 |
| Hexabromobiphenyl | 798898 | 489041 | -38.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 321747 | 29.2 |
| Hexabromobiphenyl | 362541 | 374592 | 3.3 |

* 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 | --- | | | 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 | 4.766 | 0.006 | 1839 | 45.5 | 1 | --- | | | 0.0 |
| Aroclor-1221 | 2 | 6.153 | -0.006 | 3396 | 47.7 | 2 | --- | | | 0.0 |
| Aroclor-1221 | 3 | 6.398 | -0.011 | 9027 | 55.0 | 3 | --- | | | 0.0 |
| | | Total Col1Ave (3 peaks): | | | 49.4 | | Col2Ave: <3 Quant Peaks | | | |
| Aroclor-1232 | 1 | 4.766 | 0.005 | 1839 | 75.6 | 1 | --- | | | 0.0 |
| Aroclor-1232 | 2 | 6.153 | -0.007 | 3396 | 66.1 | 2 | --- | | | 0.0 |
| Aroclor-1232 | 3 | 7.658 | -0.026 | 43742 | 189.7 | 3 | --- | | | 0.0 |
| Aroclor-1232 | 4 | 8.577 | -0.028 | 30424 | 310.9 | 4 | --- | | | 0.0 |
| | | Total Col1Ave (4 peaks): | | | 160.6 | | 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 | 8.409 | -0.019 | 41636 | 198.2 | 1 | 8.311 | -0.015 | 28599 | 217.6 |
| Aroclor-1248 | 2 | 8.577 | -0.027 | 30424 | 113.4 | 2 | 8.717 | -0.016 | 26111 | 188.9 |
| Aroclor-1248 | 3 | 8.996 | -0.027 | 89287 | 185.0 | 3 | 9.148 | -0.029 | 35382 | 210.4 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 107648 | 455.3 | 4 | 9.625 | 0.023 | 3721 | 18.8 |
| | | Total Col1Ave (4 peaks): | | | 238.0 | | Total Col2Ave (4 peaks): | | 158.9 | RPD = 40 |
| | | Corrected Ave (3 peaks): | | | 165.5 | | Corrected Ave (3 peaks): | | 139.4 | RPD = 17 |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 107648 | 250.2 | 1 | 9.448 | -0.019 | 68973 | 332.5 |
| Aroclor-1254 | 2 | 9.374 | -0.028 | 41345 | 247.1 | 2 | 9.966 | -0.021 | 38608 | 231.5 |
| Aroclor-1254 | 3 | 9.666 | -0.028 | 74925 | 275.7 | 3 | 10.114 | -0.025 | 128417 | 358.2 |
| Aroclor-1254 | 4 | 9.798 | -0.033 | 151599 | 286.2 | 4 | 10.358 | -0.031 | 150996 | 406.7 |
| Aroclor-1254 | 5 | 10.131 | -0.058 | 180216 | 496.3 | 5 | 10.564 | -0.023 | 100670 | 562.2 |
| | | Total Col1Ave (5 peaks): | | | 311.1 | | Total Col2Ave (5 peaks): | | 378.2 | RPD = 19 |
| | | Corrected Ave (4 peaks): | | | 264.8 | | Corrected Ave (4 peaks): | | 332.2 | RPD = 23 |
| Aroclor-1260 | 1 | 11.043 | -0.019 | 48078 | 270.1 | 1 | 11.652 | -0.017 | 60859 | 307.8 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 44932 | 244.0 | 2 | 11.912 | -0.020 | 105908 | 213.5 |
| Aroclor-1260 | 3 | 11.728 | -0.023 | 122749 | 253.7 | 3 | 12.432 | -0.020 | 39764 | 301.0 |
| Aroclor-1260 | 4 | 12.130 | -0.028 | 67681 | 274.7 | 4 | 12.496 | -0.021 | 74508 | 225.3 |
| Aroclor-1260 | 5 | 12.244 | -0.017 | 27317 | 270.9 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 262.7 | | Total Col2Ave (4 peaks): | | 261.9 | RPD = 0 |
| | | Corrected Ave (4 peaks): | | | 259.7 | | Corrected Ave (3 peaks): | | 246.6 | RPD = 5 |
| 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) = 2598980 Col1 Total PCB = 0.6 ppm*

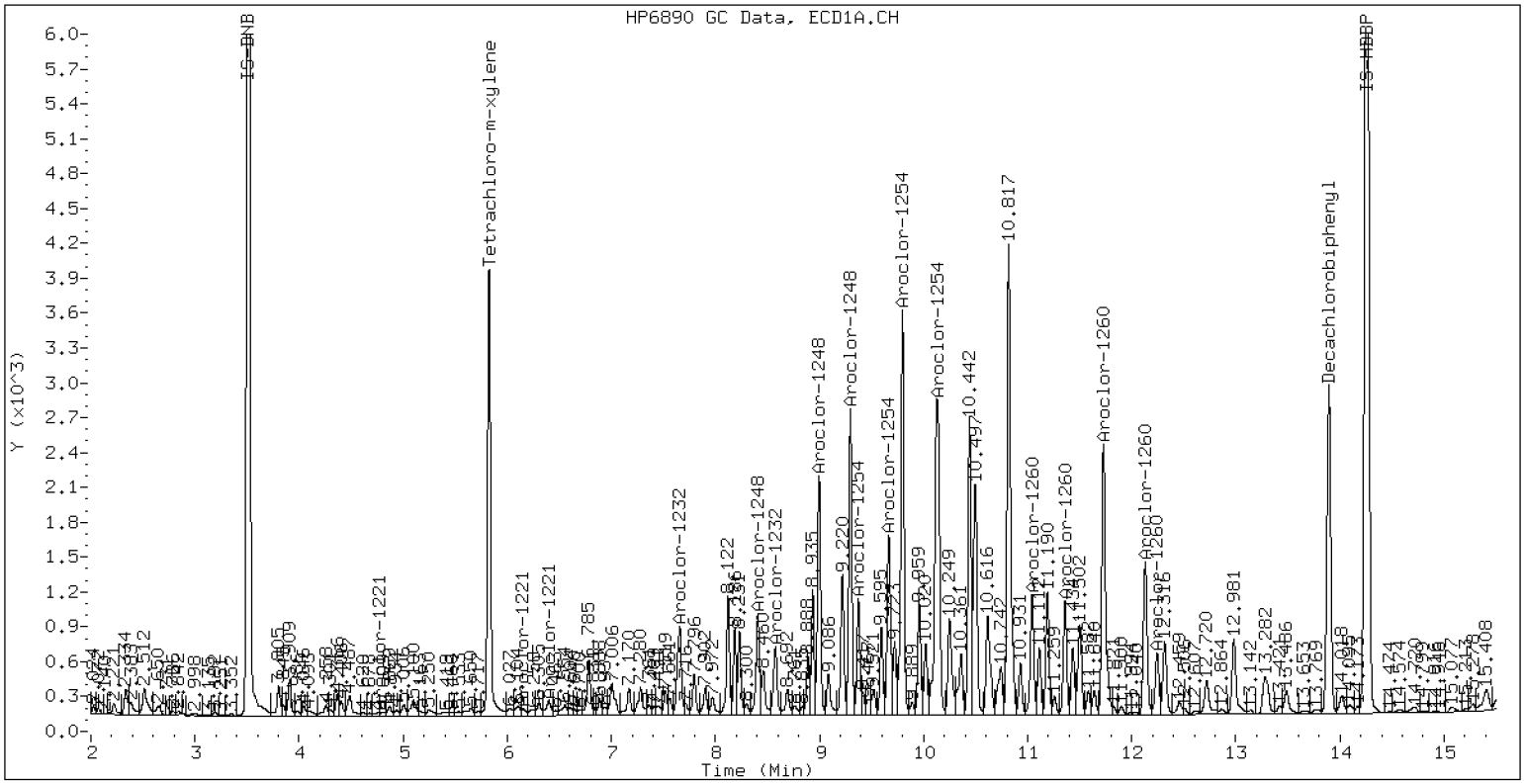
Total PCB Area Col2 (5.813 - 14.037) = 1984353 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

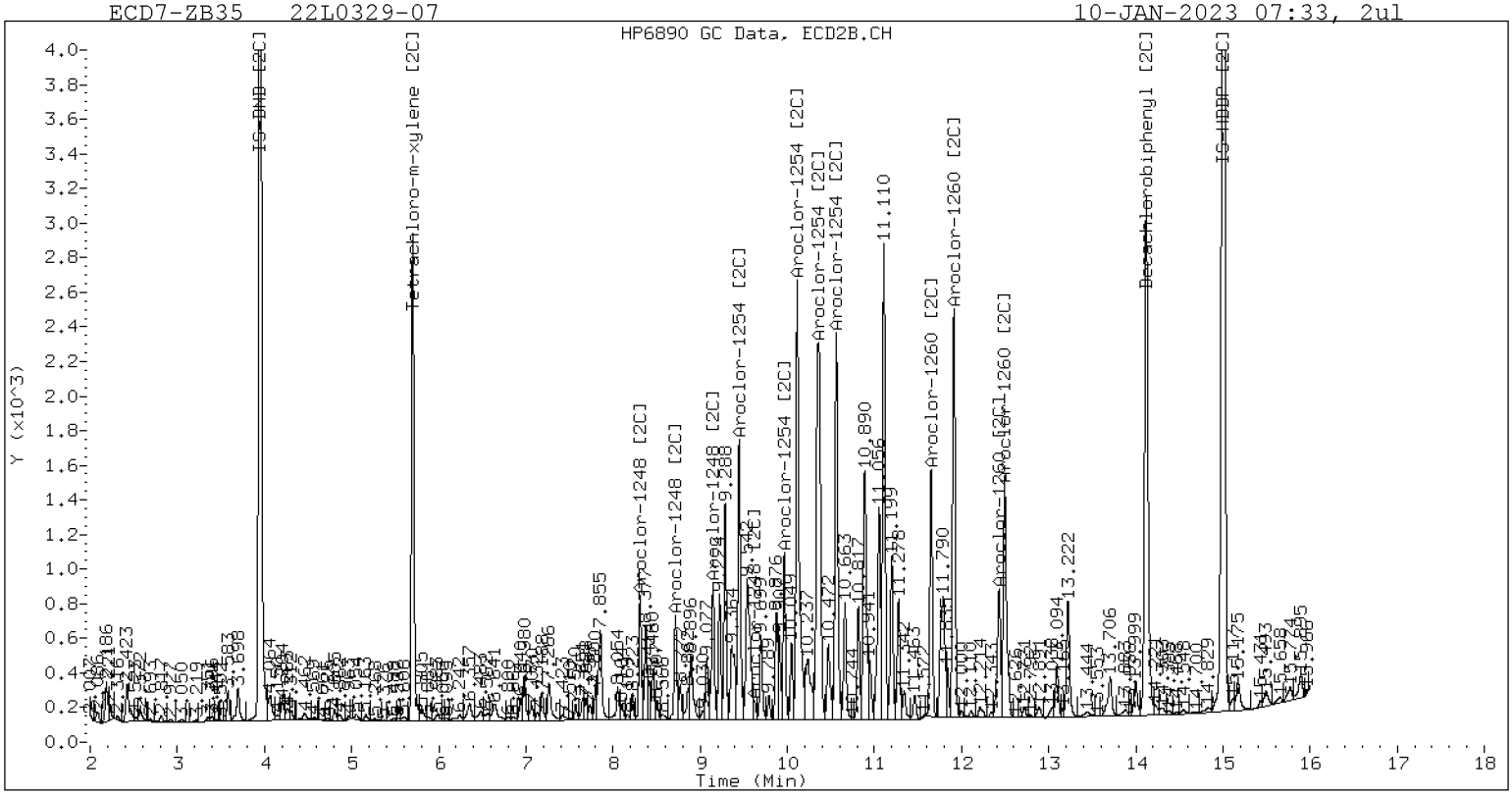
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-07 10-JAN-2023 07:33, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-07 10-JAN-2023 07:33, 2ul

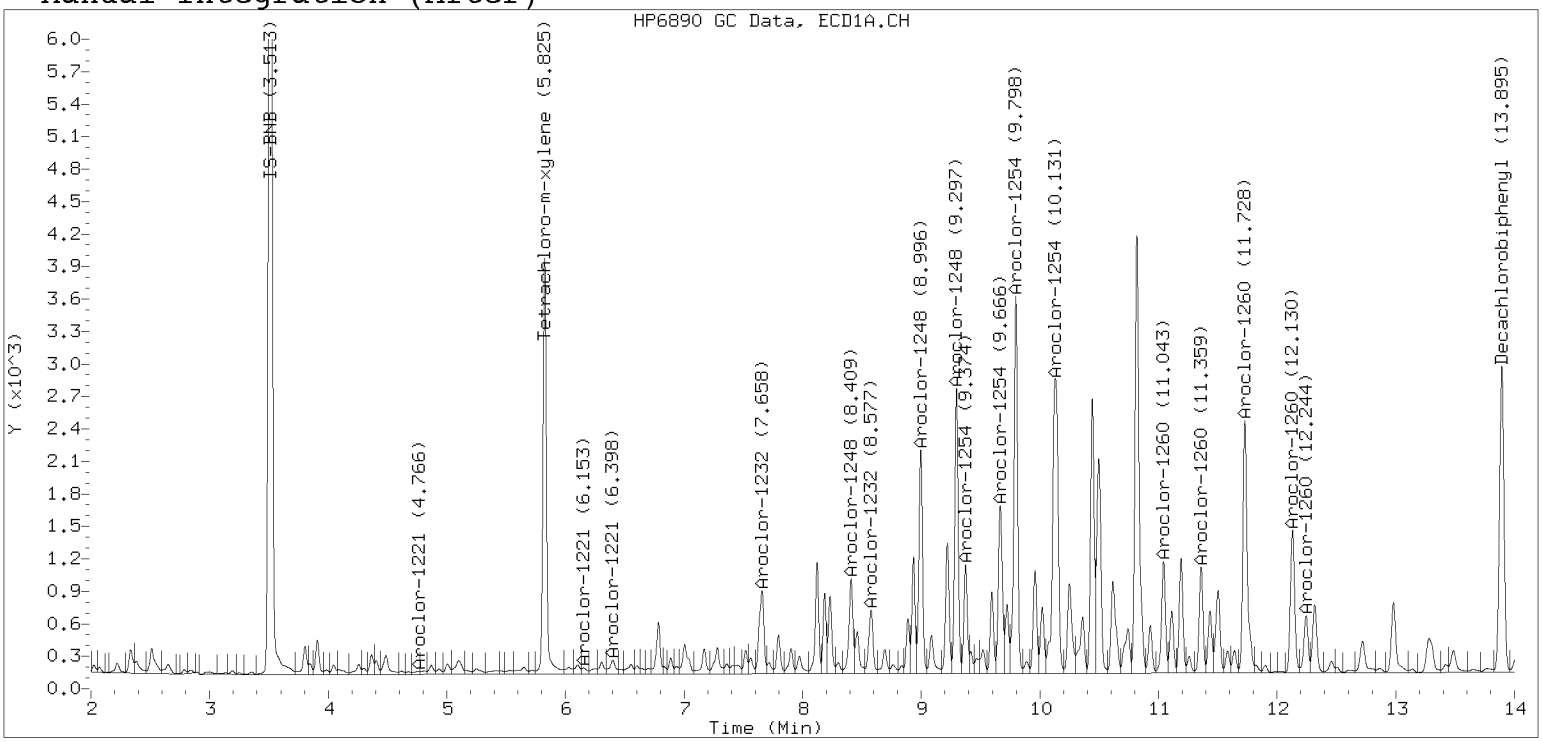



ZB-35 Manual Integration: NO

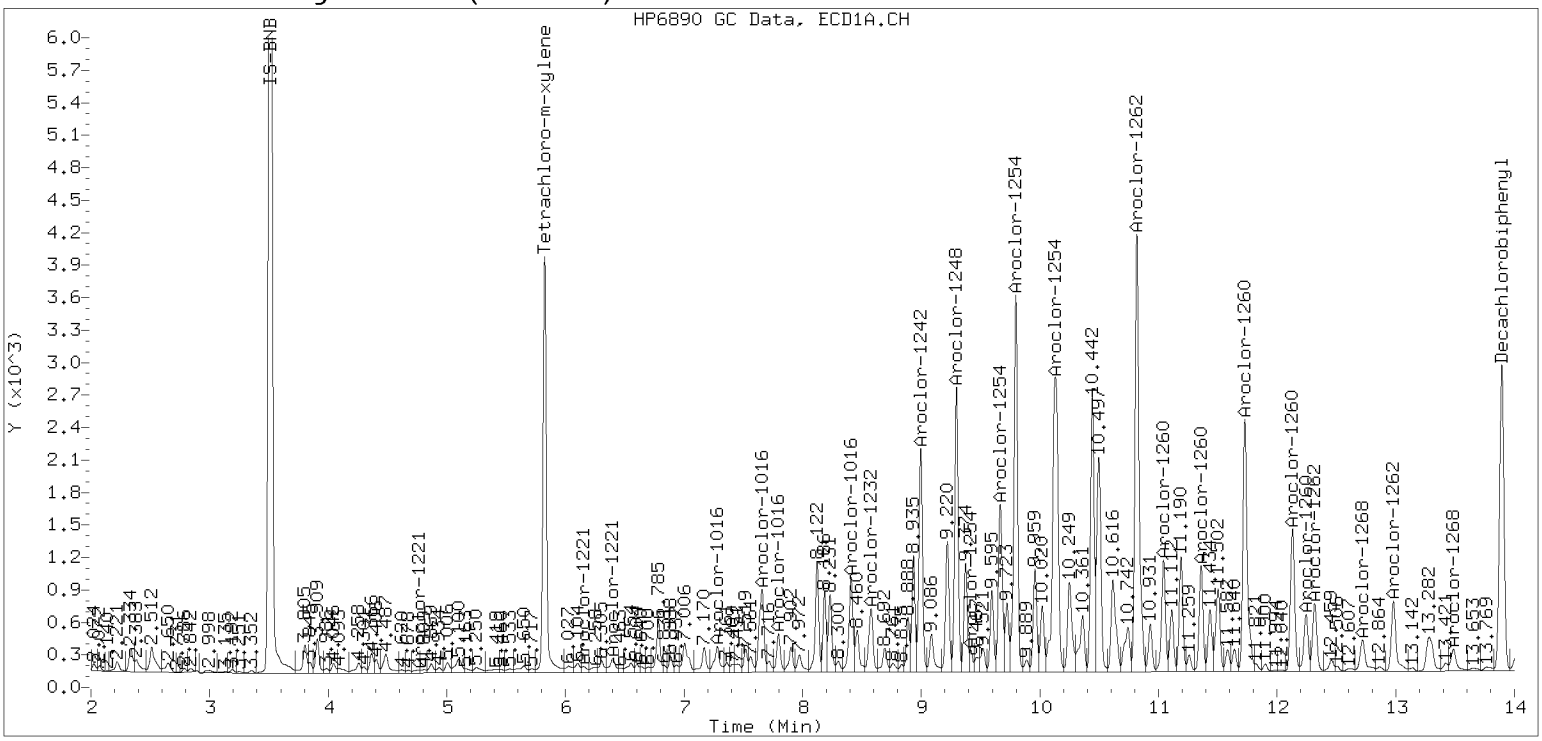
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092365ECD7.D  Injection Date: 10-JAN-2023 07:33

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-08 A | File ID: | 01092366ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 07:54 |
| % Solids: | 58.56 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 21.4 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 83.3 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 194 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 129 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9797* | *7.02* | *87.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9797* | *4.21* | *52.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9797* | *6.91* | *86.6* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9797* | *4.78* | *59.9* | *44 - 120* | |

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

Data file 1: /230109.b/01092366ECD7.D
Data file 2: /230109.b/230109.b/01092366ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-08
Client ID:
Injection Date: 10-JAN-2023 07:54
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.826 | -0.010 | 138295 | 5.702 | -0.012 | 101525 | 21.1 | 24.0 | 12.8 | Tetrachloro-m-xylene |
| 13.895 | -0.013 | 136817 | 14.120 | -0.017 | 161465 | 35.2 | 34.6 | 1.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 462895 | 3.4 |
| Hexabromobiphenyl | 798898 | 424446 | -46.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 308915 | 24.0 |
| Hexabromobiphenyl | 362541 | 328309 | -9.4 |

* 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 | --- | | | 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 | 8.409 | -0.018 | 86147 | 432.8 | 1 | 8.310 | -0.016 | 73227 | 580.2 |
| Aroclor-1248 | 2 | 8.577 | -0.027 | 69633 | 274.0 | 2 | 8.716 | -0.017 | 63672 | 479.7 |
| Aroclor-1248 | 3 | 8.995 | -0.027 | 249285 | 545.3 | 3 | 9.147 | -0.031 | 90741 | 562.0 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 314468 | 1404.1 | 4 | 9.624 | 0.022 | 8233 | 43.4 |
| | Total Col1Ave (4 peaks): | | | | 664.1 | Total Col2Ave (4 peaks): | | | | 416.4 RPD = 46* |
| | Corrected Ave (3 peaks): | | | | 417.4 | Corrected Ave (3 peaks): | | | | 361.7 RPD = 14 |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 314468 | 771.6 | 1 | 9.447 | -0.020 | 193566 | 971.9 |
| Aroclor-1254 | 2 | 9.372 | -0.030 | 127923 | 807.1 | 2 | 9.964 | -0.022 | 122374 | 764.2 |
| Aroclor-1254 | 3 | 9.663 | -0.031 | 207204 | 804.9 | 3 | 10.113 | -0.026 | 359155 | 1043.5 |
| Aroclor-1254 | 4 | 9.796 | -0.034 | 427329 | 851.6 | 4 | 10.351 | -0.038 | 395085 | 1108.3 |
| Aroclor-1254 | 5 | 10.134 | -0.055 | 485134 | 1410.5 | 5 | 10.562 | -0.024 | 245647 | 1428.8 |
| | Total Col1Ave (5 peaks): | | | | 929.1 | Total Col2Ave (5 peaks): | | | | 1063.3 RPD = 13 |
| | Corrected Ave (4 peaks): | | | | 808.8 | Corrected Ave (4 peaks): | | | | 972.0 RPD = 18 |
| Aroclor-1260 | 1 | 11.042 | -0.020 | 100722 | 651.9 | 1 | 11.651 | -0.018 | 150274 | 867.1 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 91106 | 570.1 | 2 | 11.912 | -0.021 | 232091 | 533.7 |
| Aroclor-1260 | 3 | 11.727 | -0.025 | 241541 | 575.3 | 3 | 12.431 | -0.020 | 74450 | 642.9 |
| Aroclor-1260 | 4 | 12.127 | -0.031 | 142365 | 665.8 | 4 | 12.495 | -0.022 | 159688 | 550.9 |
| Aroclor-1260 | 5 | 12.242 | -0.019 | 53705 | 613.6 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 615.4 | Total Col2Ave (4 peaks): | | | | 648.7 RPD = 5 |
| | Corrected Ave (4 peaks): | | | | 602.7 | Corrected Ave (3 peaks): | | | | 575.8 RPD = 5 |
| 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) = 6029929 Col1 Total PCB = 1.4 ppm*

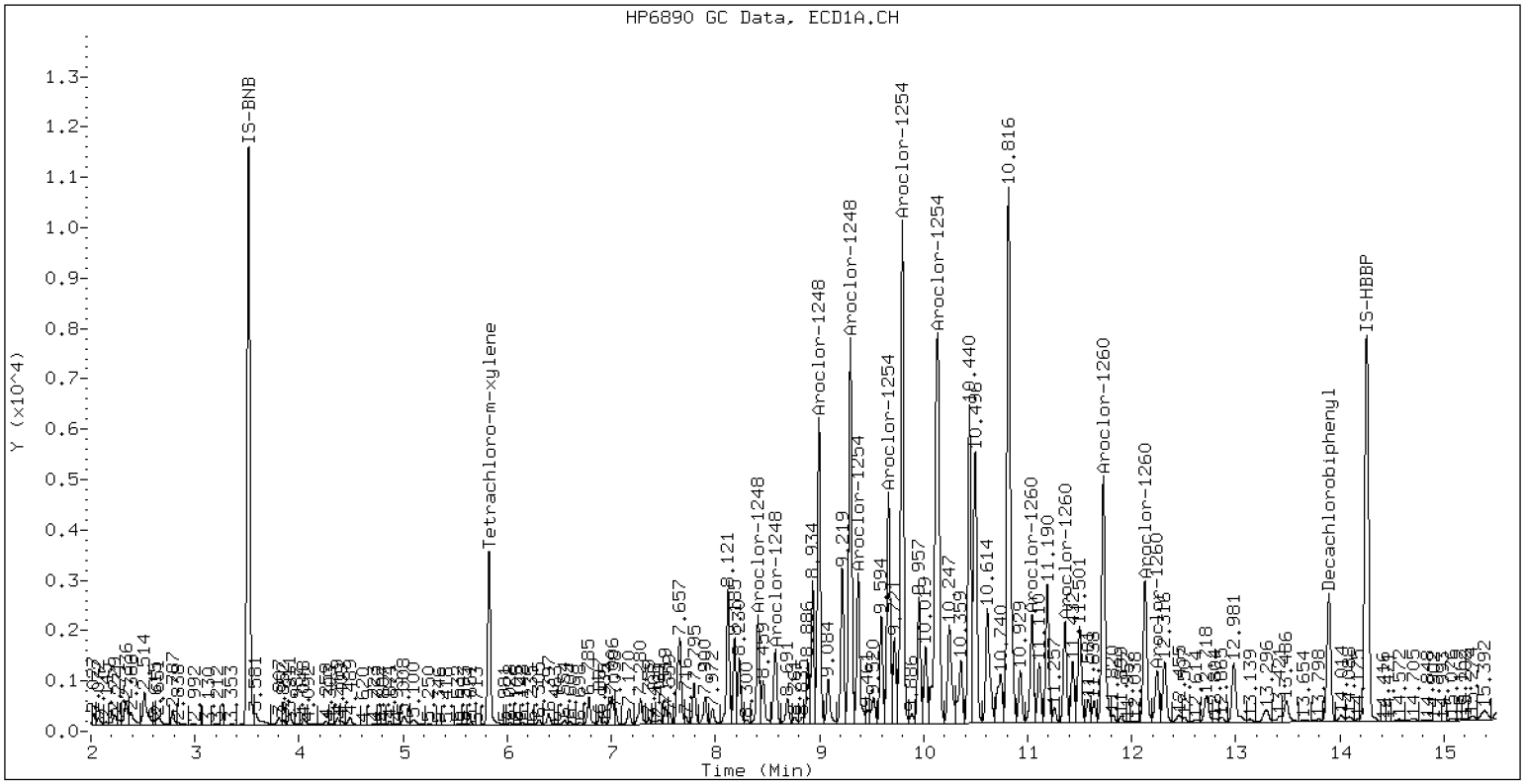
Total PCB Area Col2 (5.813 - 14.037) = 4752144 Col2 Total PCB = 1.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

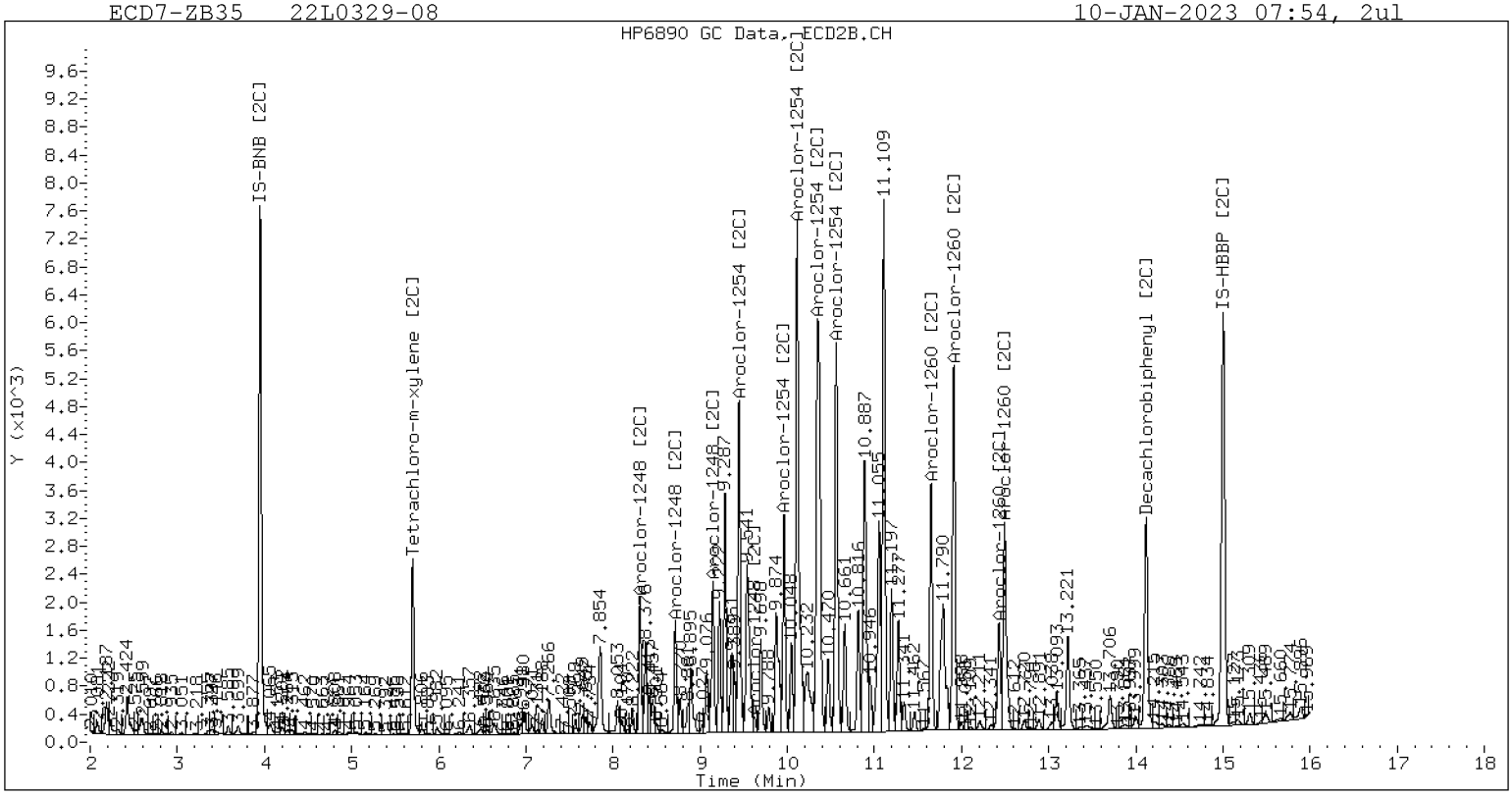
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-08 10-JAN-2023 07:54, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-08 10-JAN-2023 07:54, 2ul

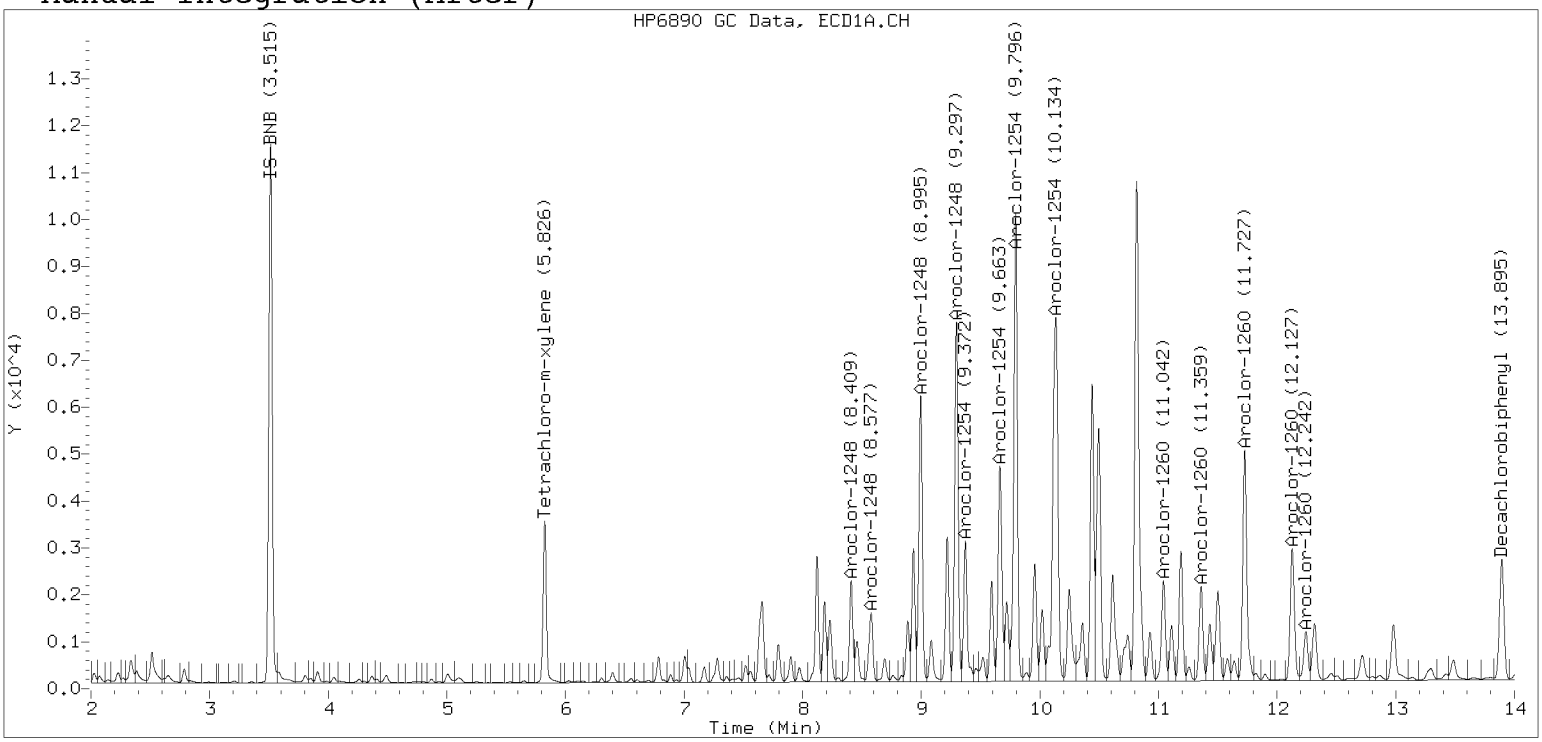



ZB-35 Manual Integration: NO

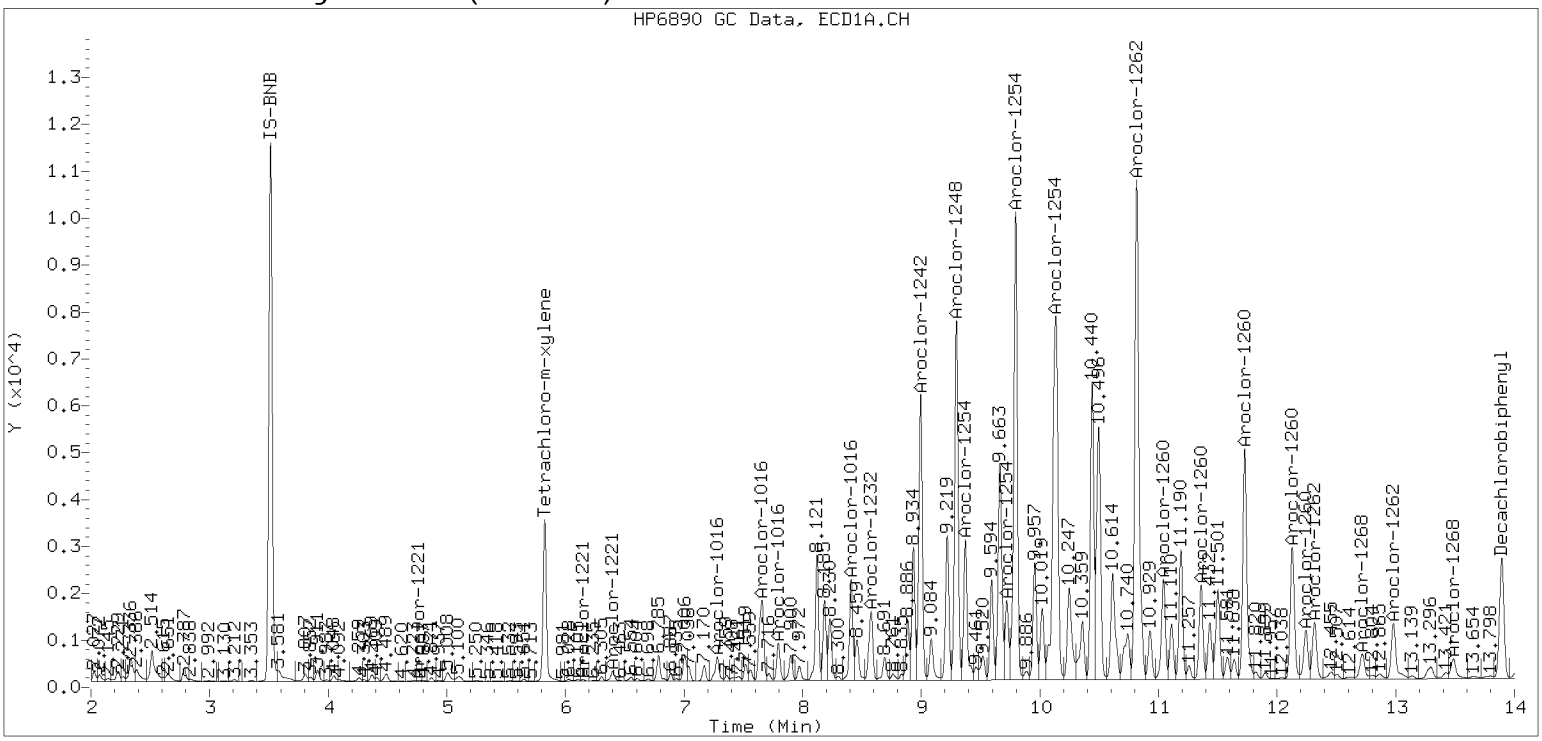
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092366ECD7.D  Injection Date: 10-JAN-2023 07:54

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-09 B | File ID: | 01092367ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 08:15 |
| % Solids: | 55.92 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 22.42 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 83.3 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 129 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 178 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9762* | *7.14* | *89.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9762* | *4.60* | *57.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9762* | *6.87* | *86.2* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9762* | *5.24* | *65.7* | *44 - 120* | |

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

Data file 1: /230109.b/01092367ECD7.D
Data file 2: /230109.b/230109.b/01092367ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-09
Client ID:
Injection Date: 10-JAN-2023 08:15
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.826 | -0.010 | 150027 | 5.702 | -0.012 | 110591 | 23.1 | 26.3 | 13.0 | Tetrachloro-m-xylene |
| 13.894 | -0.014 | 142572 | 14.120 | -0.016 | 162308 | 35.8 | 34.5 | 3.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 458664 | 2.5 |
| Hexabromobiphenyl | 798898 | 434234 | -45.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 306934 | 23.2 |
| Hexabromobiphenyl | 362541 | 331708 | -8.5 |

* 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 | --- | | | 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 | 8.409 | -0.018 | 66496 | 337.2 | 1 | 8.311 | -0.016 | 56131 | 447.7 |
| Aroclor-1248 | 2 | 8.577 | -0.027 | 60034 | 238.4 | 2 | 8.716 | -0.017 | 49883 | 378.2 |
| Aroclor-1248 | 3 | 8.996 | -0.027 | 177284 | 391.4 | 3 | 9.147 | -0.030 | 68452 | 426.7 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 205017 | 923.9 | 4 | 9.625 | 0.022 | 6675 | 35.4 |
| | | Total Col1Ave (4 peaks): | | | 472.7 | | Total Col2Ave (4 peaks): | | 322.0 | RPD = 38 |
| | | Corrected Ave (3 peaks): | | | 322.3 | | Corrected Ave (3 peaks): | | 280.1 | RPD = 14 |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 205017 | 507.7 | 1 | 9.447 | -0.020 | 129534 | 654.6 |
| Aroclor-1254 | 2 | 9.372 | -0.030 | 85910 | 547.0 | 2 | 9.965 | -0.022 | 71831 | 451.5 |
| Aroclor-1254 | 3 | 9.664 | -0.030 | 127989 | 501.8 | 3 | 10.114 | -0.025 | 243458 | 711.9 |
| Aroclor-1254 | 4 | 9.797 | -0.034 | 293890 | 591.1 | 4 | 10.364 | -0.025 | 273089 | 771.0 |
| Aroclor-1254 | 5 | 10.247 | 0.058 | 156331 | 458.7 | 5 | 10.562 | -0.024 | 185976 | 1088.7 |
| | | Total Col1Ave (5 peaks): | | | 521.3 | | Total Col2Ave (5 peaks): | | 735.5 | RPD = 34 |
| | | Corrected Ave (4 peaks): | | | 503.8 | | Corrected Ave (4 peaks): | | 647.2 | RPD = 25 |
| Aroclor-1260 | 1 | 11.043 | -0.019 | 149669 | 946.9 | 1 | 11.651 | -0.018 | 153604 | 877.3 |
| Aroclor-1260 | 2 | 11.359 | -0.019 | 126884 | 776.2 | 2 | 11.912 | -0.021 | 313244 | 712.9 |
| Aroclor-1260 | 3 | 11.727 | -0.024 | 334714 | 779.2 | 3 | 12.431 | -0.021 | 139465 | 1192.0 |
| Aroclor-1260 | 4 | 12.129 | -0.029 | 147017 | 672.1 | 4 | 12.495 | -0.021 | 228381 | 779.8 |
| Aroclor-1260 | 5 | 12.243 | -0.018 | 121787 | 1360.0 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 906.9 | | Total Col2Ave (4 peaks): | | 890.5 | RPD = 2 |
| | | Corrected Ave (4 peaks): | | | 793.6 | | Corrected Ave (3 peaks): | | 790.0 | RPD = 0 |
| 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) = 5263133 Col1 Total PCB = 1.2 ppm*

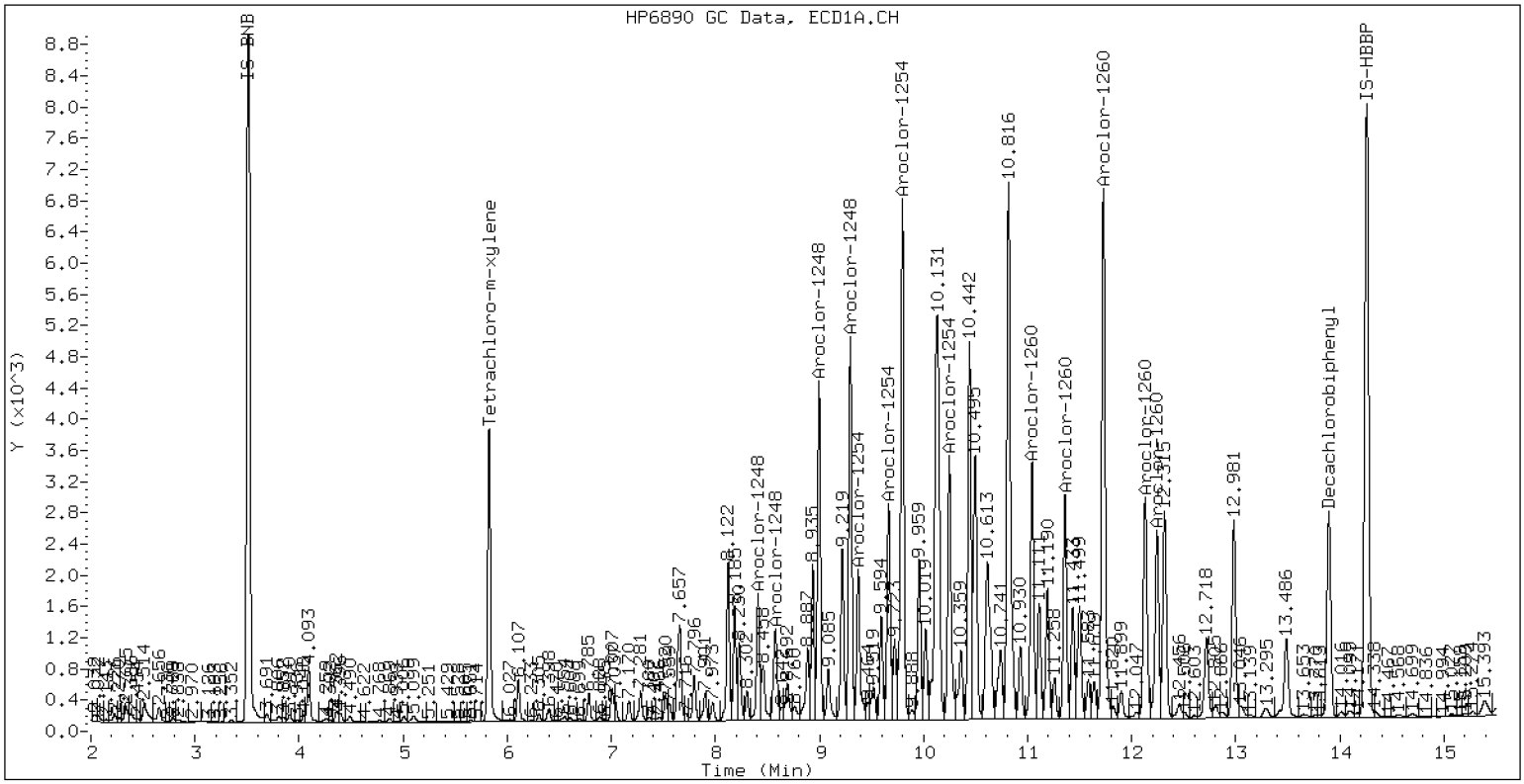
Total PCB Area Col2 (5.813 - 14.037) = 4216140 Col2 Total PCB = 1.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

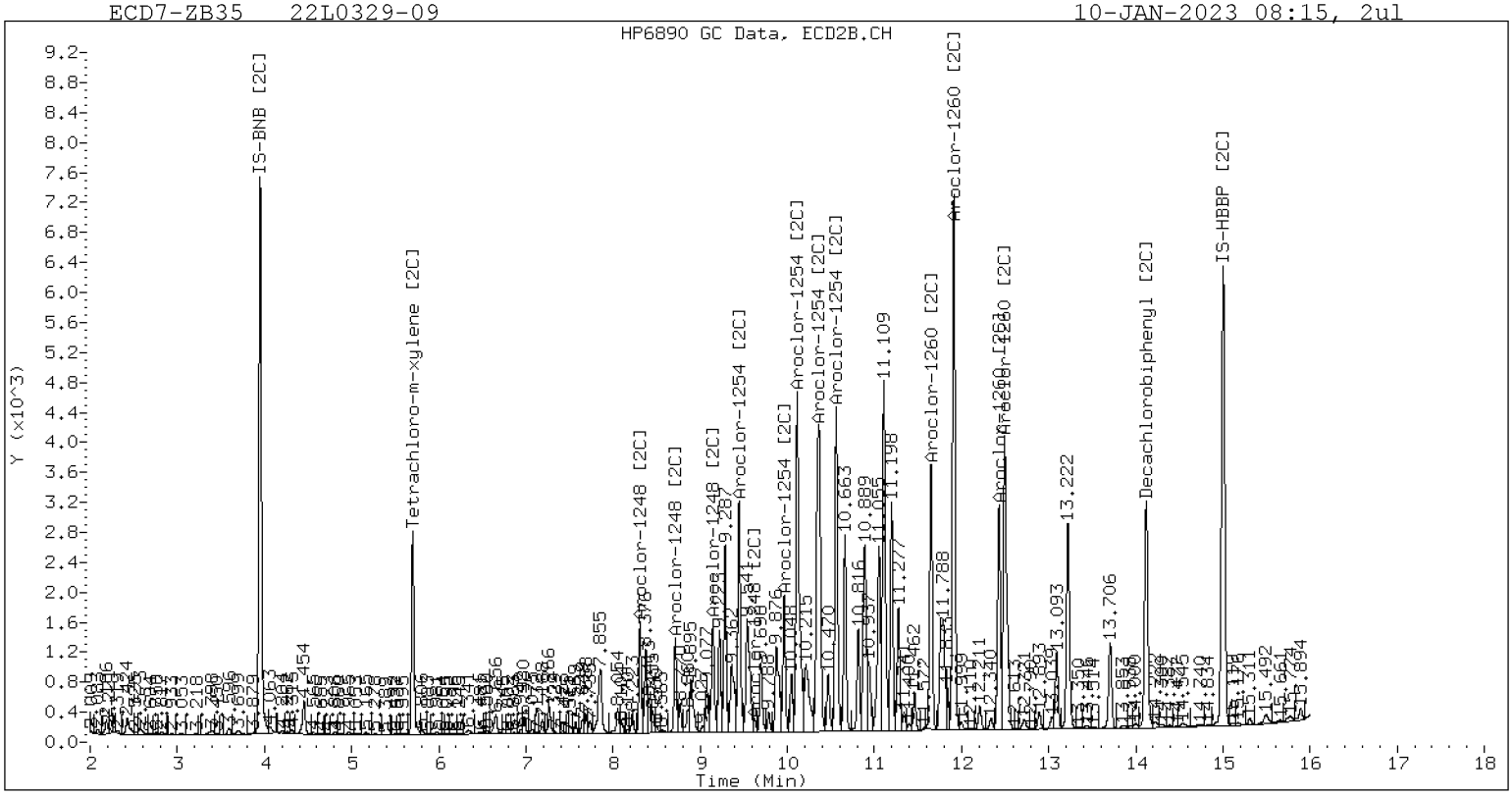
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-09 10-JAN-2023 08:15, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-09 10-JAN-2023 08:15, 2ul

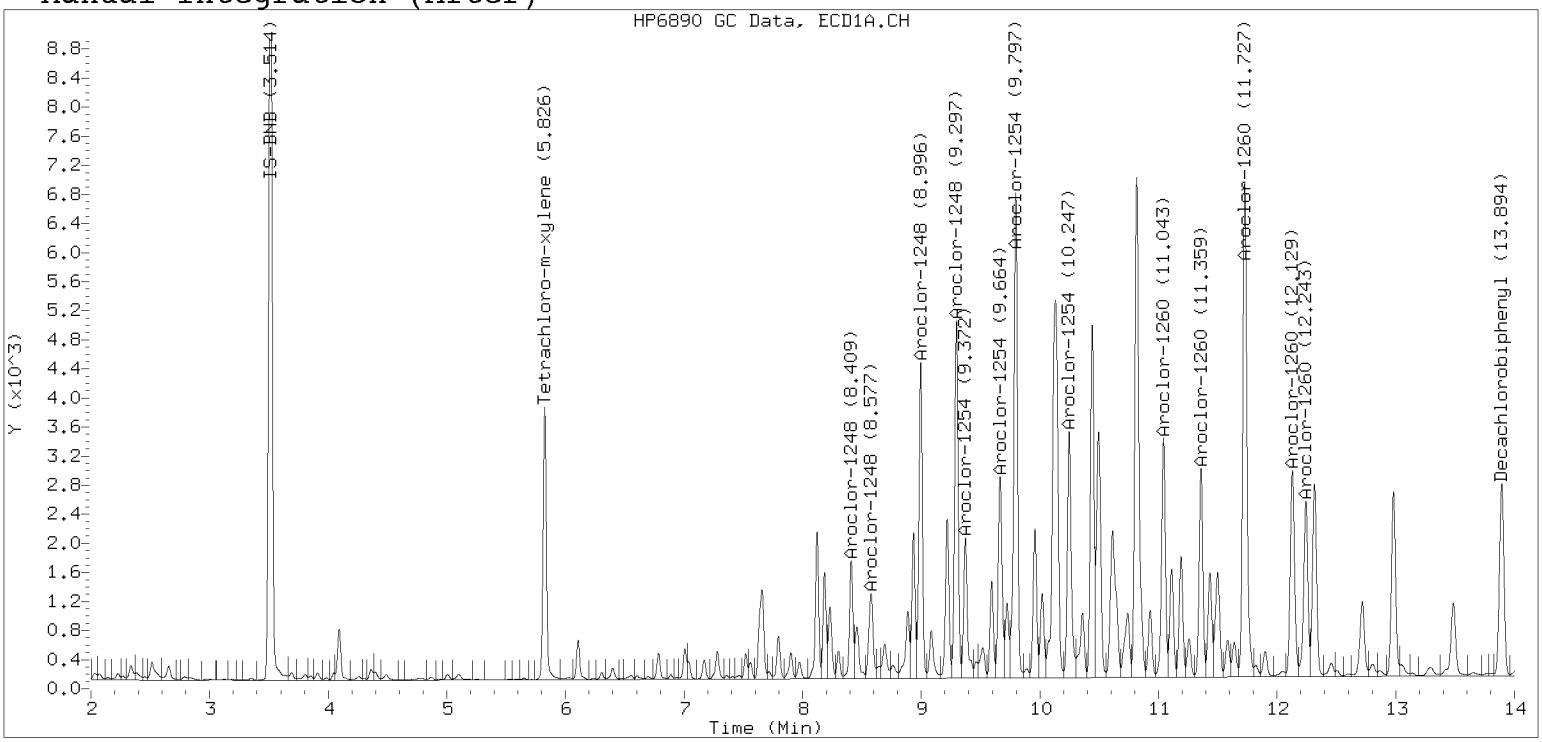



ZB-35 Manual Integration: NO

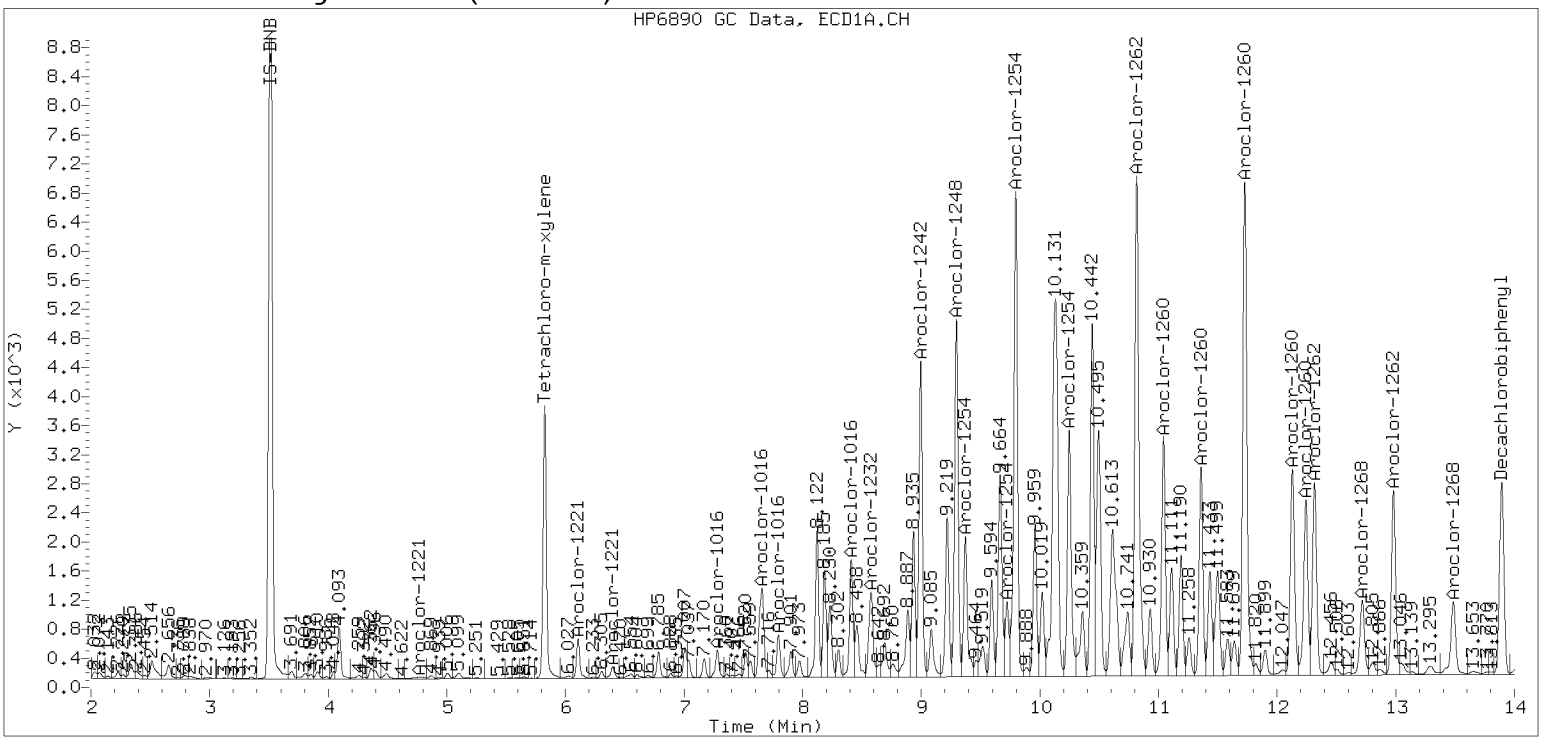
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092367ECD7.D  Injection Date: 10-JAN-2023 08:15

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-10 A | File ID: | 01092368ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 08:36 |
| % Solids: | 54.75 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 22.89 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 91.4 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 147 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 100 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9794* | *7.54* | *94.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9794* | *4.56* | *57.2* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9794* | *7.27* | *91.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9794* | *5.29* | *66.3* | *44 - 120* | |

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

Data file 1: /230109.b/01092368ECD7.D
Data file 2: /230109.b/230109.b/01092368ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-10
Client ID:
Injection Date: 10-JAN-2023 08:36
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.825 | -0.011 | 154322 | 5.701 | -0.013 | 114103 | 22.9 | 26.5 | 14.7 | Tetrachloro-m-xylene |
| 13.895 | -0.013 | 148298 | 14.121 | -0.016 | 171533 | 37.8 | 36.4 | 3.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 476189 | 6.4 |
| Hexabromobiphenyl | 798898 | 428098 | -46.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 314074 | 26.1 |
| Hexabromobiphenyl | 362541 | 331502 | -8.6 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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 | 4.966 | -0.024 | 2778 | 181.9 |
| Aroclor-1232 | 2 | --- | | | 0.0 | 2 | 7.266 | -0.011 | 22112 | 283.5 |
| Aroclor-1232 | 3 | --- | | | 0.0 | 3 | 7.854 | -0.022 | 68407 | 448.6 |
| Aroclor-1232 | 4 | --- | | | 0.0 | 4 | 8.716 | -0.018 | 55545 | 1343.6 |
| Col1Ave: <3 Quant Peaks | | | | | | Col2Ave: 564.4 | | | | |
| Aroclor-1242 | 1 | 7.280 | -0.014 | 21397 | 158.5 | 1 | --- | | | 0.0 |
| Aroclor-1242 | 2 | 7.657 | -0.028 | 88382 | 206.2 | 2 | --- | | | 0.0 |
| Aroclor-1242 | 3 | 8.409 | -0.020 | 73247 | 594.0 | 3 | --- | | | 0.0 |
| Aroclor-1242 | 4 | 8.996 | -0.035 | 206976 | 808.4 | 4 | --- | | | 0.0 |
| Total Col1Ave (4 peaks): 441.8 | | | | | | Col2Ave: <3 Quant Peaks | | | | |
| Aroclor-1248 | 1 | 8.409 | -0.018 | 73247 | 357.8 | 1 | 8.310 | -0.016 | 61146 | 476.6 |
| Aroclor-1248 | 2 | 8.578 | -0.027 | 62586 | 239.4 | 2 | 8.716 | -0.016 | 55545 | 411.6 |
| Aroclor-1248 | 3 | 8.996 | -0.027 | 206976 | 440.1 | 3 | 9.147 | -0.030 | 79932 | 486.9 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 247131 | 1072.7 | 4 | 9.625 | 0.023 | 9138 | 47.4 |
| Total Col1Ave (4 peaks): 527.5 | | | | | | Total Col2Ave (4 peaks): 355.6 RPD = 39 | | | | |
| Corrected Ave (3 peaks): 345.8 | | | | | | Corrected Ave (3 peaks): 311.9 RPD = 10 | | | | |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 247131 | 589.4 | 1 | 9.447 | -0.020 | 153833 | 759.7 |
| Aroclor-1254 | 2 | 9.373 | -0.029 | 111716 | 685.1 | 2 | 9.965 | -0.022 | 85765 | 526.8 |
| Aroclor-1254 | 3 | 9.664 | -0.030 | 156702 | 591.7 | 3 | 10.114 | -0.026 | 278151 | 794.8 |
| Aroclor-1254 | 4 | 9.797 | -0.034 | 334289 | 647.6 | 4 | 10.352 | -0.037 | 315713 | 871.1 |
| Aroclor-1254 | 5 | 10.135 | -0.055 | 390147 | 1102.6 | 5 | 10.562 | -0.024 | 188874 | 1080.5 |
| Total Col1Ave (5 peaks): 723.3 | | | | | | Total Col2Ave (5 peaks): 806.6 RPD = 11 | | | | |
| Corrected Ave (4 peaks): 628.5 | | | | | | Corrected Ave (4 peaks): 738.1 RPD = 16 | | | | |
| Aroclor-1260 | 1 | 11.042 | -0.020 | 80591 | 517.2 | 1 | 11.652 | -0.018 | 114261 | 653.0 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 69172 | 429.2 | 2 | 11.912 | -0.021 | 177450 | 404.1 |
| Aroclor-1260 | 3 | 11.729 | -0.023 | 183580 | 433.5 | 3 | 12.431 | -0.021 | 60263 | 515.4 |
| Aroclor-1260 | 4 | 12.128 | -0.030 | 107655 | 499.2 | 4 | 12.495 | -0.022 | 126457 | 432.0 |
| Aroclor-1260 | 5 | 12.244 | -0.018 | 47353 | 536.4 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): 483.1 | | | | | | Total Col2Ave (4 peaks): 501.1 RPD = 4 | | | | |
| Corrected Ave (4 peaks): 469.8 | | | | | | Corrected Ave (3 peaks): 450.5 RPD = 4 | | | | |
| 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) = 4949605 Col1 Total PCB = 1.1 ppm*

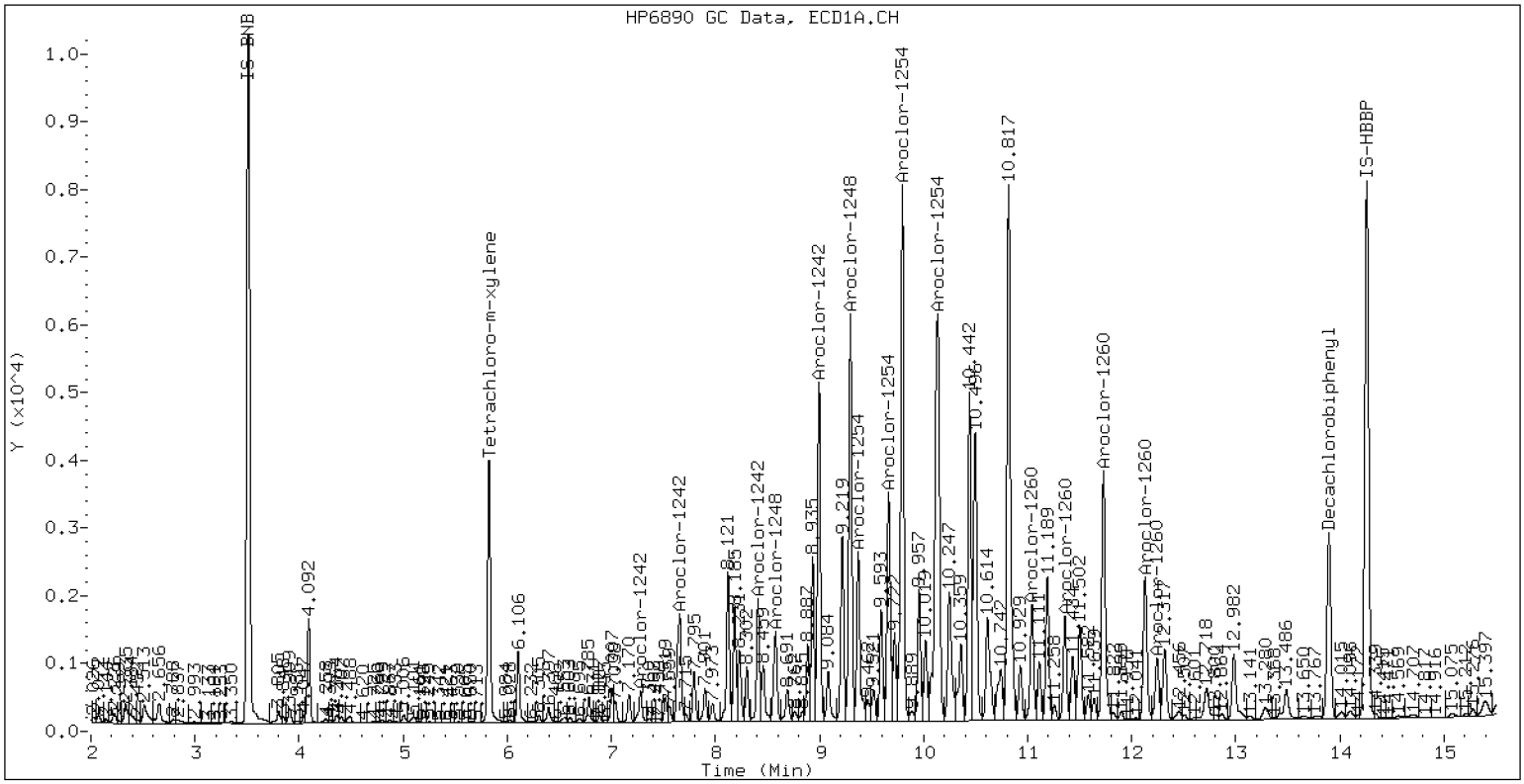
Total PCB Area Col2 (5.813 - 14.037) = 3861273 Col2 Total PCB = 1.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

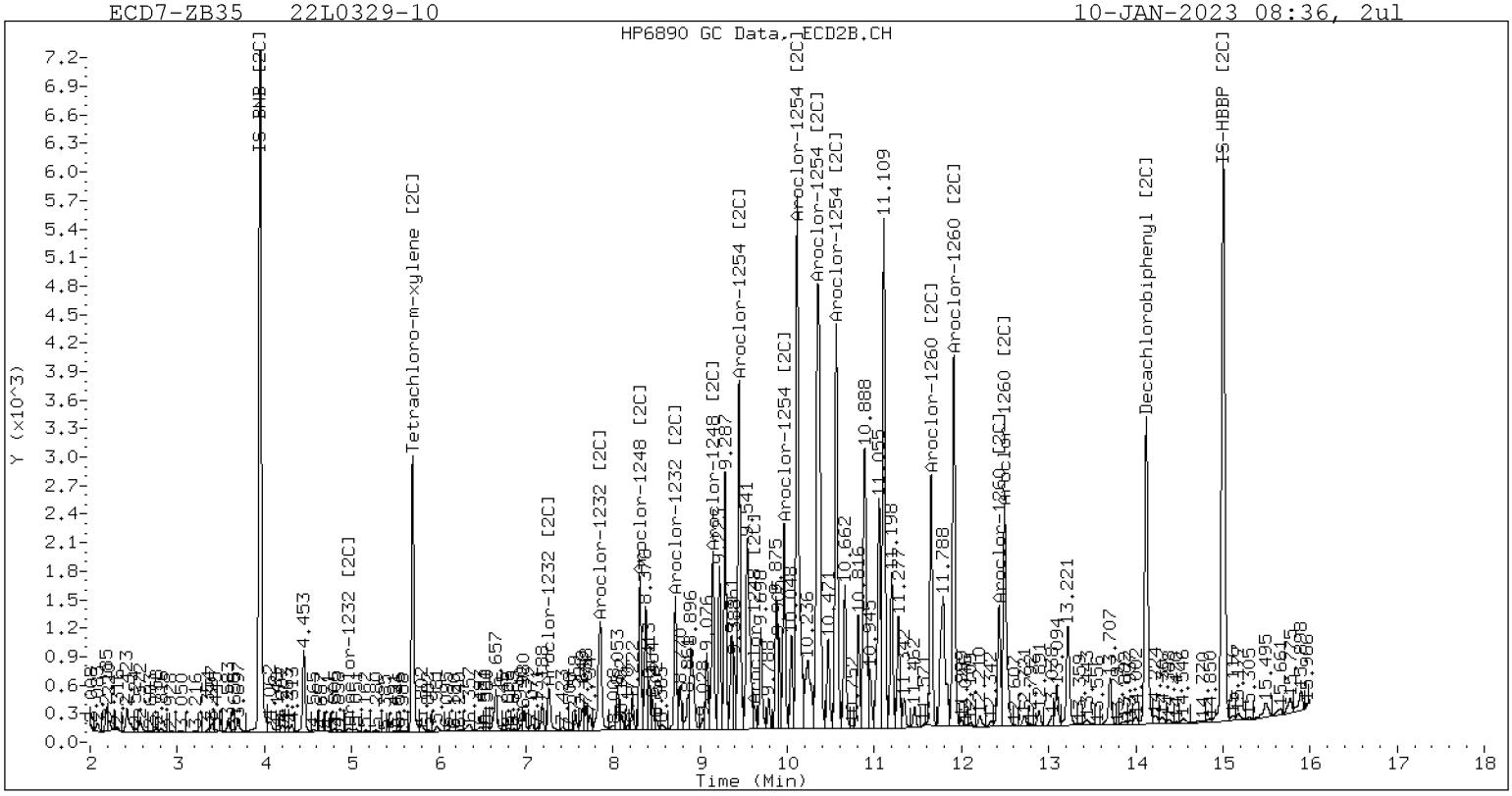
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-10 10-JAN-2023 08:36, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-10 10-JAN-2023 08:36, 2ul

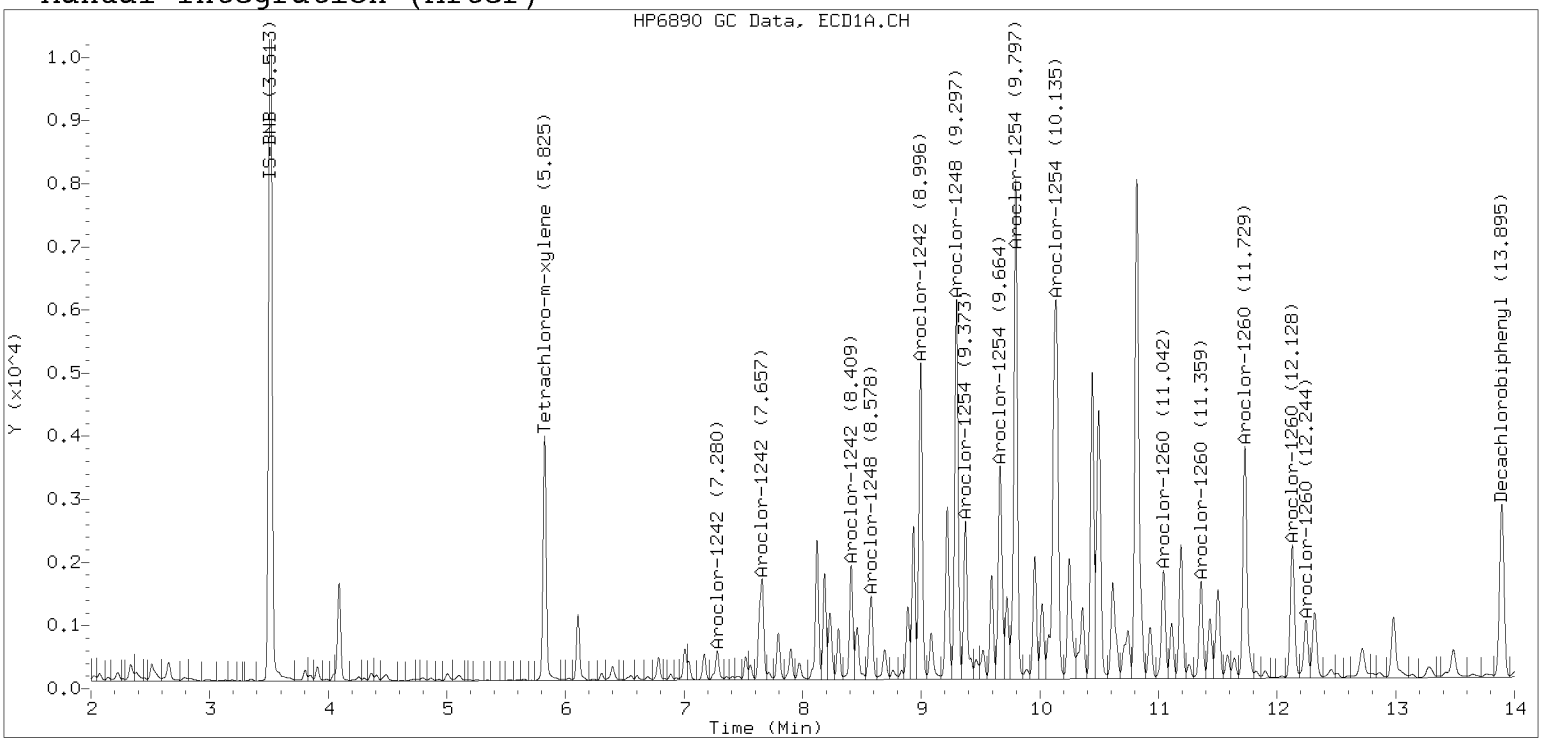



ZB-35 Manual Integration: NO

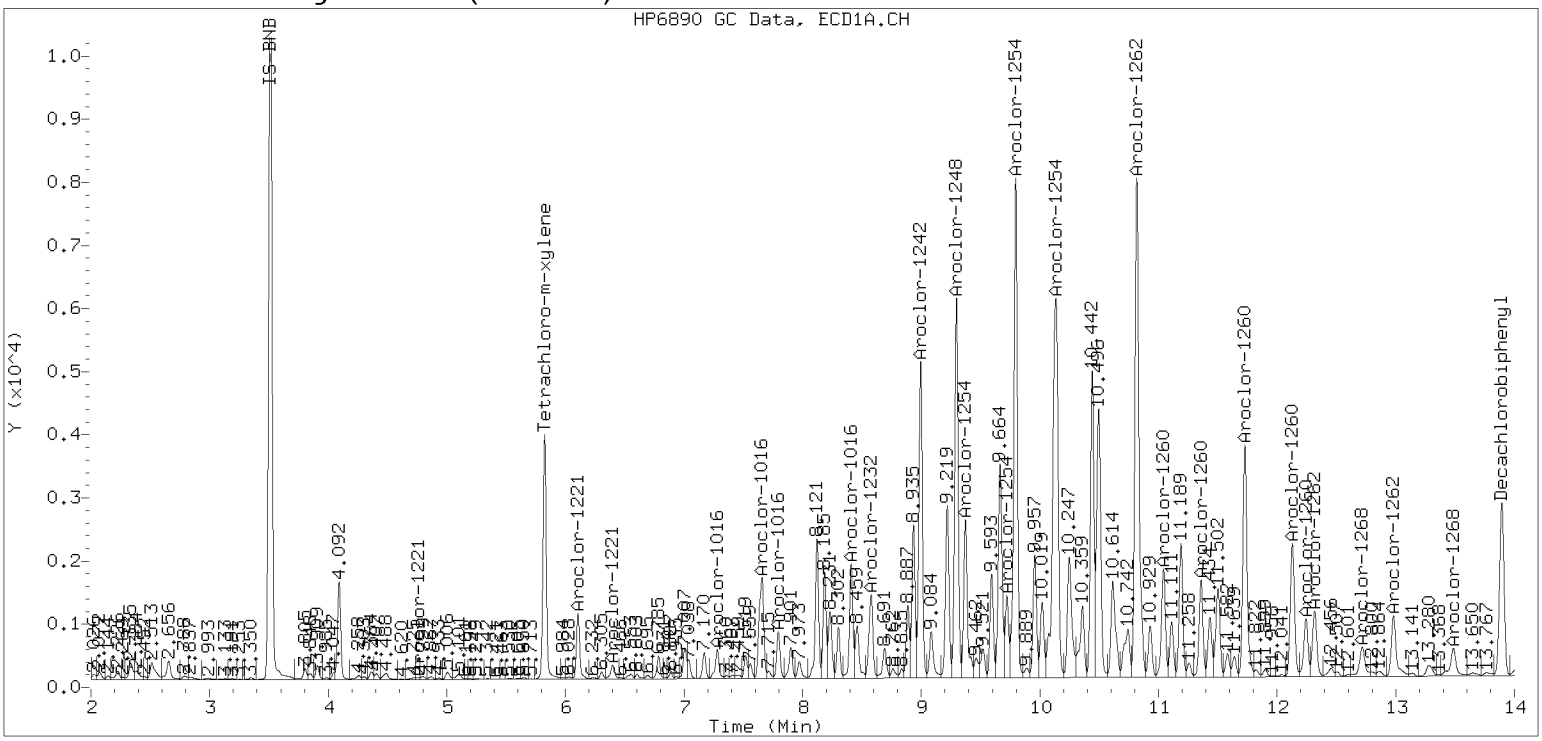
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092368ECD7.D  Injection Date: 10-JAN-2023 08:36

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788E-FD**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-11 B | File ID: | 01092371ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 09:39 |
| % Solids: | 54.92 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 22.8 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 81.0 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 141 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 77.7 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9861* | *6.87* | *86.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9861* | *4.47* | *55.9* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9861* | *6.42* | *80.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9861* | *5.24* | *65.7* | *44 - 120* | |

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

Data file 1: /230109.b/01092371ECD7.D
Data file 2: /230109.b/230109.b/01092371ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-11
Client ID:
Injection Date: 10-JAN-2023 09:39
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.009 | 147995 | 5.704 | -0.010 | 111267 | 22.4 | 26.3 | 16.0 | Tetrachloro-m-xylene |
| 13.895 | -0.013 | 146099 | 14.121 | -0.016 | 160943 | 34.4 | 32.2 | 6.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 466688 | 4.3 |
| Hexabromobiphenyl | 798898 | 462848 | -42.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 309048 | 24.1 |
| Hexabromobiphenyl | 362541 | 352518 | -2.8 |

* 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 | --- | | | 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 | 7.281 | -0.013 | 18960 | 143.3 | 1 | --- | | | 0.0 |
| Aroclor-1242 | 2 | 7.659 | -0.026 | 75621 | 180.1 | 2 | --- | | | 0.0 |
| Aroclor-1242 | 3 | 8.410 | -0.020 | 66243 | 548.2 | 3 | --- | | | 0.0 |
| Aroclor-1242 | 4 | 8.996 | -0.035 | 186082 | 741.6 | 4 | --- | | | 0.0 |
| | | Total Col1Ave (4 peaks): | | | 403.3 | | Col2Ave: <3 Quant Peaks | | | |
| Aroclor-1248 | 1 | 8.410 | -0.017 | 66243 | 330.1 | 1 | 8.311 | -0.015 | 53232 | 421.6 |
| Aroclor-1248 | 2 | 8.578 | -0.026 | 56726 | 221.4 | 2 | 8.716 | -0.016 | 48717 | 366.9 |
| Aroclor-1248 | 3 | 8.996 | -0.026 | 186082 | 403.7 | 3 | 9.148 | -0.029 | 69132 | 428.0 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 215794 | 955.7 | 4 | 9.626 | 0.024 | 8217 | 43.3 |
| | | Total Col1Ave (4 peaks): | | | 477.8 | | Total Col2Ave (4 peaks): | | 315.0 | RPD = 41* |
| | | Corrected Ave (3 peaks): | | | 318.4 | | Corrected Ave (3 peaks): | | 277.3 | RPD = 14 |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 215794 | 525.2 | 1 | 9.447 | -0.020 | 132739 | 666.2 |
| Aroclor-1254 | 2 | 9.373 | -0.029 | 97094 | 607.6 | 2 | 9.965 | -0.021 | 73918 | 461.4 |
| Aroclor-1254 | 3 | 9.664 | -0.030 | 138560 | 533.9 | 3 | 10.114 | -0.025 | 242201 | 703.4 |
| Aroclor-1254 | 4 | 9.797 | -0.034 | 294749 | 582.6 | 4 | 10.354 | -0.035 | 272709 | 764.7 |
| Aroclor-1254 | 5 | 10.135 | -0.054 | 339654 | 979.5 | 5 | 10.563 | -0.023 | 161491 | 938.9 |
| | | Total Col1Ave (5 peaks): | | | 645.8 | | Total Col2Ave (5 peaks): | | 706.9 | RPD = 9 |
| | | Corrected Ave (4 peaks): | | | 562.3 | | Corrected Ave (4 peaks): | | 648.9 | RPD = 14 |
| Aroclor-1260 | 1 | 11.043 | -0.019 | 72126 | 428.1 | 1 | 11.652 | -0.018 | 97807 | 525.6 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 62283 | 357.4 | 2 | 11.913 | -0.020 | 148452 | 317.9 |
| Aroclor-1260 | 3 | 11.728 | -0.024 | 155780 | 340.2 | 3 | 12.432 | -0.020 | 47386 | 381.1 |
| Aroclor-1260 | 4 | 12.128 | -0.030 | 91641 | 393.0 | 4 | 12.495 | -0.022 | 103636 | 333.0 |
| Aroclor-1260 | 5 | 12.243 | -0.019 | 37713 | 395.1 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 382.8 | | Total Col2Ave (4 peaks): | | 389.4 | RPD = 2 |
| | | Corrected Ave (4 peaks): | | | 371.5 | | Corrected Ave (3 peaks): | | 344.0 | RPD = 8 |
| 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) = 4305521 Col1 Total PCB = 1.0 ppm*

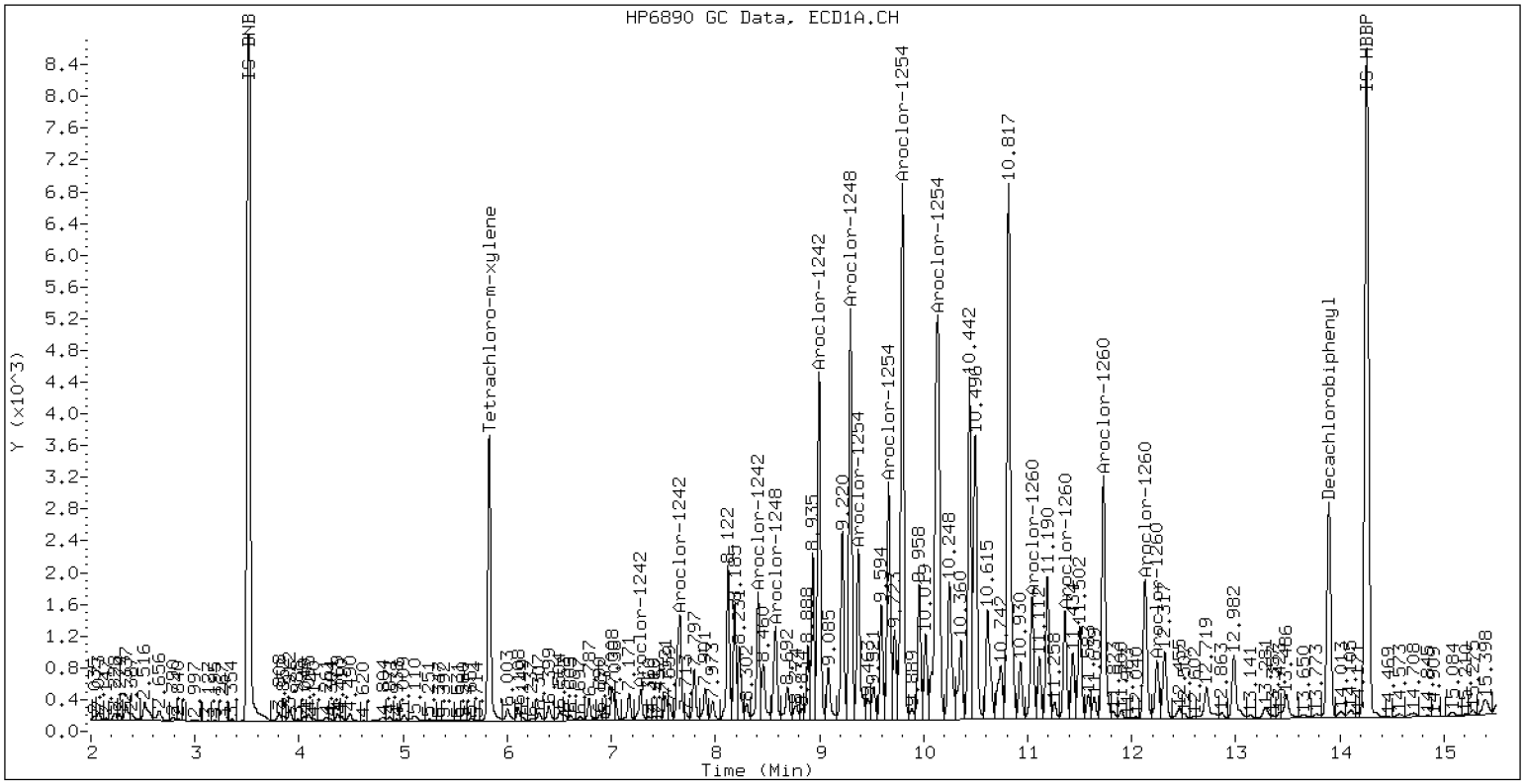
Total PCB Area Col2 (5.813 - 14.037) = 3296258 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

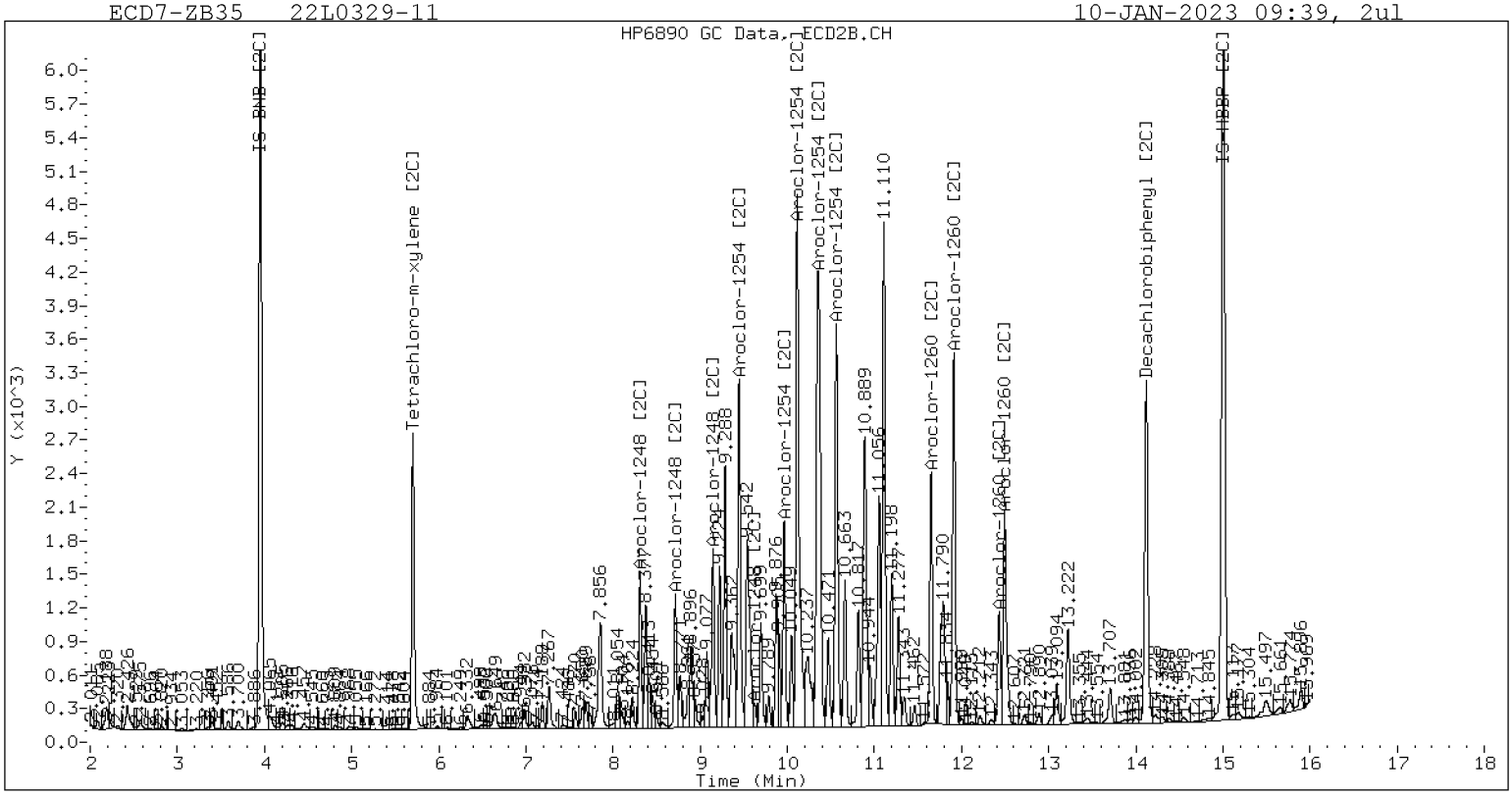
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-11 10-JAN-2023 09:39, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-11 10-JAN-2023 09:39, 2ul

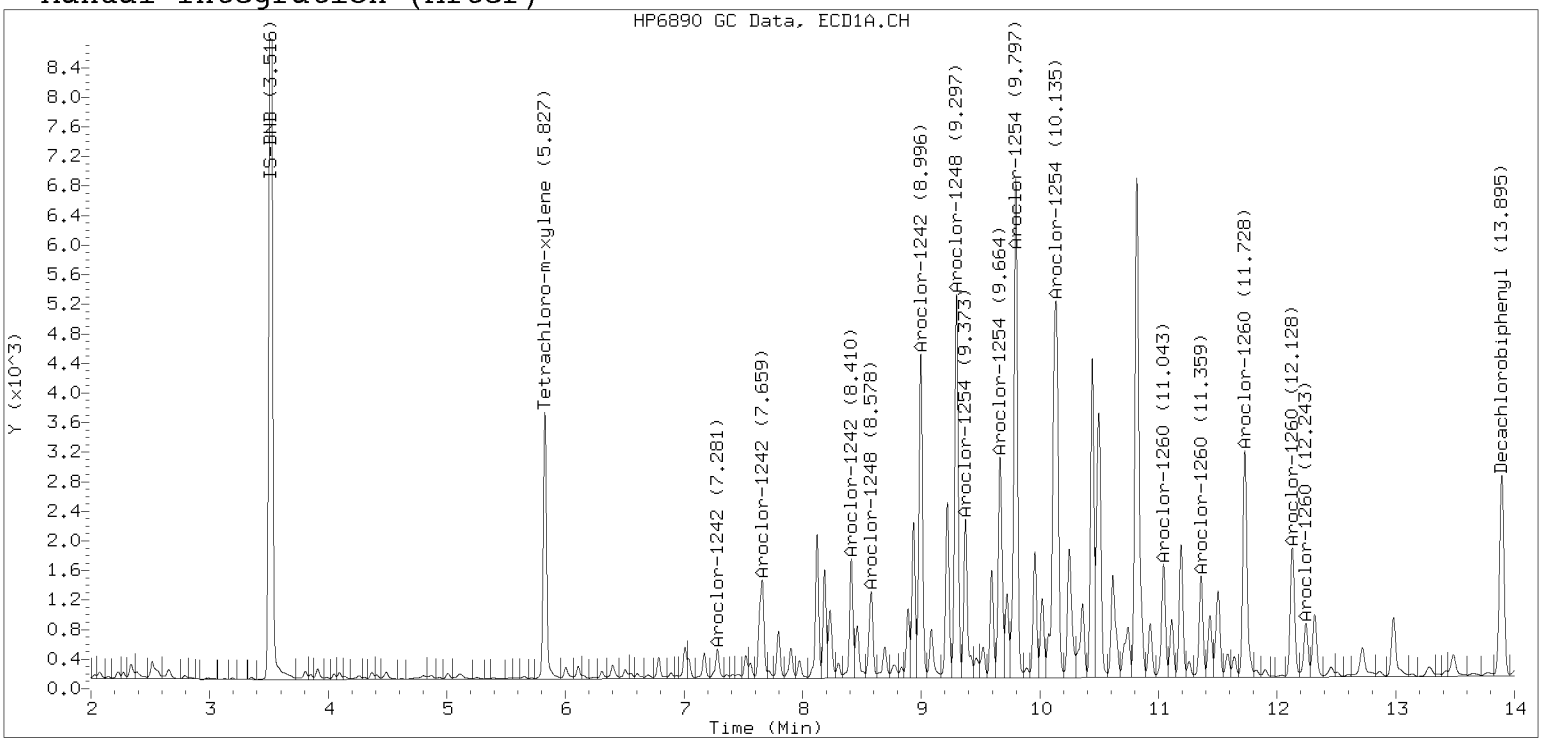



ZB-35 Manual Integration: NO

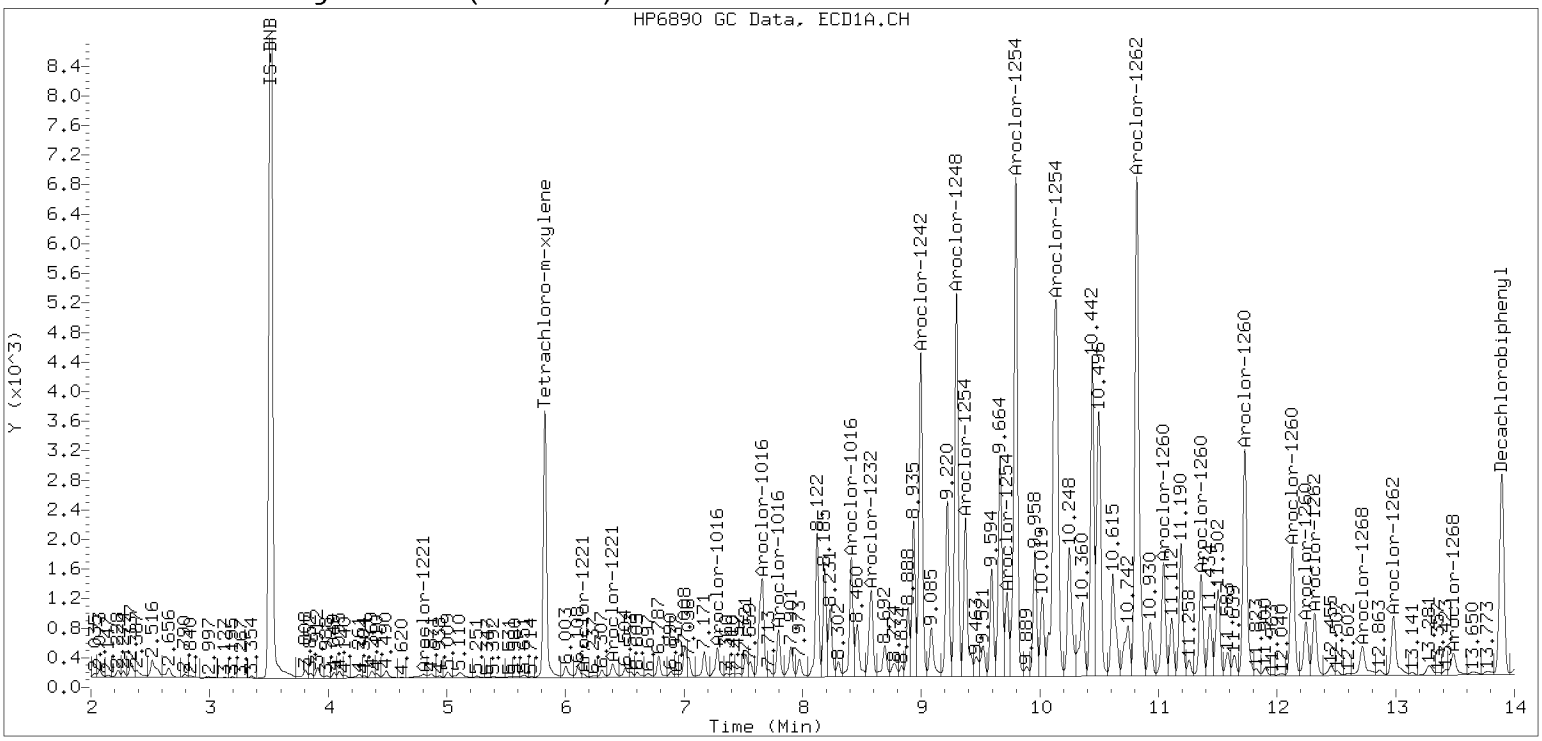
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092371ECD7.D  Injection Date: 10-JAN-2023 09:39

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788F**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-12 B | File ID: | 01102321ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 23:31 |
| % Solids: | 59.73 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 20.98 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0156 | 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 | 5 | 19.9 | 7.8 | 19.9 | U |
| 11104-28-2 | Aroclor 1221 | 1 | 5 | 19.9 | 7.8 | 19.9 | U |
| 11141-16-5 | Aroclor 1232 | 1 | 5 | 19.9 | 7.8 | 19.9 | U |
| 53469-21-9 | Aroclor 1242 | 1 | 5 | 19.9 | 7.8 | 19.9 | U |
| 12672-29-6 | Aroclor 1248 | 1 | 5 | 370 | 7.8 | 19.9 | D |
| 11097-69-1 | Aroclor 1254 | 2 | 5 | 539 | 7.8 | 19.9 | D |
| 11096-82-5 | Aroclor 1260 | 2 | 5 | 234 | 2.9 | 19.9 | D |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9800* | *8.74* | *110* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9800* | *6.22* | *77.9* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9800* | *7.70* | *96.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9800* | *6.67* | *83.6* | *44 - 120* | |

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

Data file 1: /230110.b/01102321ECD7.D
Data file 2: /230110.b/230110.b/01102321ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-12RE1
Client ID:
Injection Date: 10-JAN-2023 23:31
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.828 | -0.008 | 36418 | 5.705 | -0.002 | 27790 | 6.2 | 6.7 | 7.0 | Tetrachloro-m-xylene |
| 13.895 | -0.013 | 41211 | 14.122 | -0.006 | 42416 | 8.8 | 7.7 | 12.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 412401 | -7.9 |
| Hexabromobiphenyl | 798898 | 512825 | -35.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 303190 | 21.7 |
| Hexabromobiphenyl | 362541 | 386844 | 6.7 |

* 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 | --- | | | 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 | 8.413 | -0.015 | 41988 | 236.8 | 1 | 8.314 | -0.006 | 39733 | 320.8 |
| Aroclor-1248 | 2 | 8.582 | -0.022 | 33927 | 149.9 | 2 | 8.720 | -0.008 | 31411 | 241.1 |
| Aroclor-1248 | 3 | 9.000 | -0.022 | 117395 | 288.2 | 3 | 9.153 | -0.022 | 49378 | 311.6 |
| Aroclor-1248 | 4 | 9.300 | -0.011 | 161647 | 810.2 | 4 | 9.545 | -0.051 | 64858 | 348.7 |
| Total Col1Ave (4 peaks): | | | | 371.3 | | Total Col2Ave (4 peaks): | | | 305.5 | RPD = 19 |
| Corrected Ave (3 peaks): | | | | 225.0 | | Corrected Ave (3 peaks): | | | 291.2 | RPD = 26 |
| Aroclor-1254 | 1 | 9.300 | -0.021 | 161647 | 445.2 | 1 | 9.450 | -0.011 | 99949 | 511.3 |
| Aroclor-1254 | 2 | 9.376 | -0.025 | 62677 | 443.8 | 2 | 9.968 | -0.012 | 63961 | 407.0 |
| Aroclor-1254 | 3 | 9.667 | -0.027 | 100320 | 437.4 | 3 | 10.118 | -0.016 | 178860 | 529.5 |
| Aroclor-1254 | 4 | 9.801 | -0.030 | 213505 | 477.6 | 4 | 10.360 | -0.022 | 205668 | 587.9 |
| Aroclor-1254 | 5 | 10.145 | -0.045 | 250295 | 816.8 | 5 | 10.566 | -0.014 | 112062 | 664.1 |
| Total Col1Ave (5 peaks): | | | | 524.2 | | Total Col2Ave (5 peaks): | | | 539.9 | RPD = 3 |
| Corrected Ave (4 peaks): | | | | 451.0 | | Corrected Ave (4 peaks): | | | 508.9 | RPD = 12 |
| Aroclor-1260 | 1 | 11.044 | -0.018 | 42717 | 228.8 | 1 | 11.654 | -0.008 | 69143 | 338.6 |
| Aroclor-1260 | 2 | 11.362 | -0.015 | 38767 | 200.8 | 2 | 11.915 | -0.011 | 95610 | 186.6 |
| Aroclor-1260 | 3 | 11.731 | -0.021 | 102001 | 201.1 | 3 | 12.434 | -0.010 | 29070 | 213.1 |
| Aroclor-1260 | 4 | 12.132 | -0.026 | 61800 | 239.2 | 4 | 12.498 | -0.012 | 68723 | 201.2 |
| Aroclor-1260 | 5 | 12.245 | -0.016 | 22860 | 216.2 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 217.2 | | Total Col2Ave (4 peaks): | | | 234.9 | RPD = 8 |
| Corrected Ave (4 peaks): | | | | 211.7 | | Corrected Ave (3 peaks): | | | 200.3 | RPD = 6 |
| 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) = 2860975 Col1 Total PCB = 0.7 ppm*

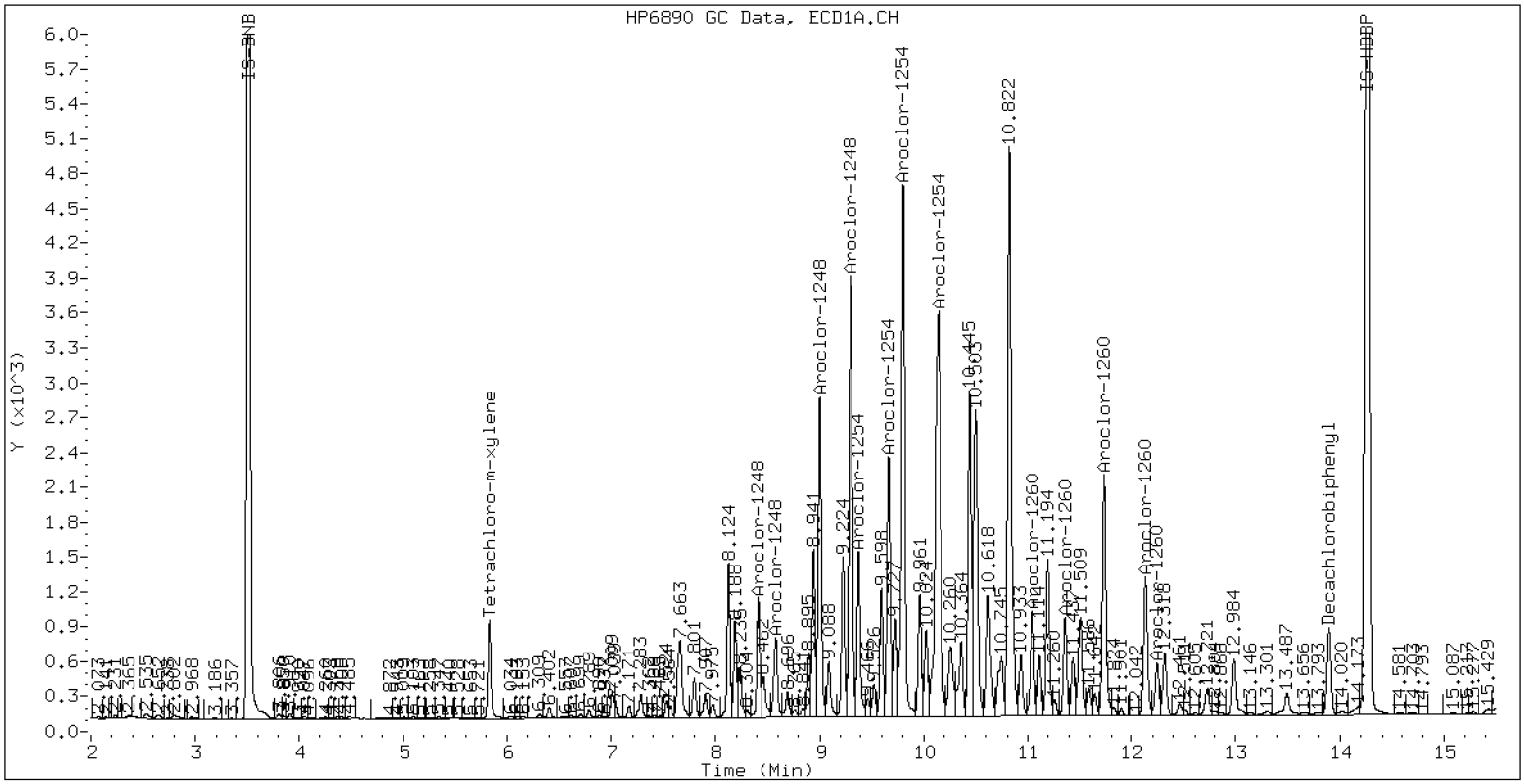
Total PCB Area Col2 (5.807 - 14.028) = 2248354 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

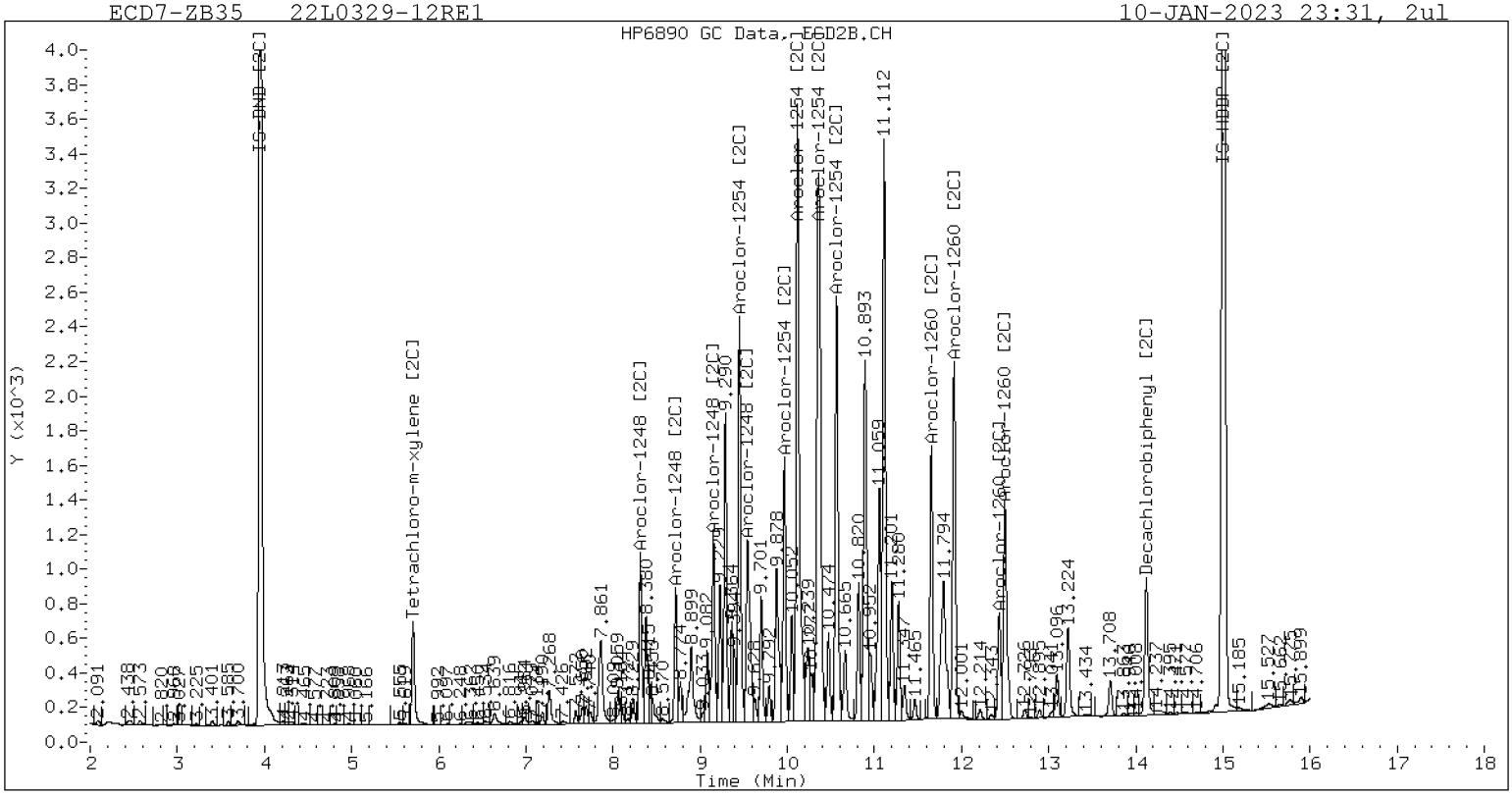
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-12RE1 10-JAN-2023 23:31, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-12RE1 10-JAN-2023 23:31, 2ul

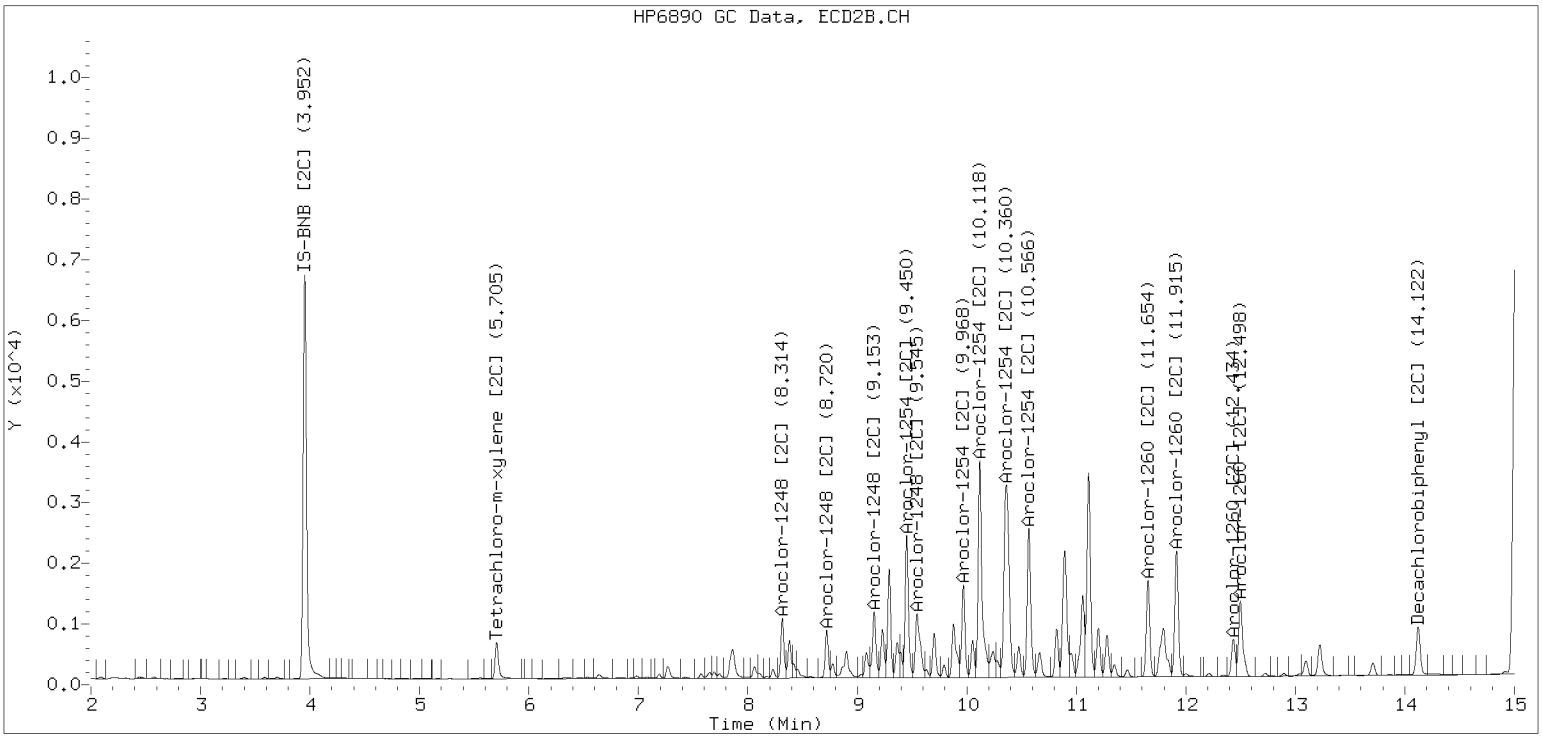



ZB-35 Manual Integration: YES

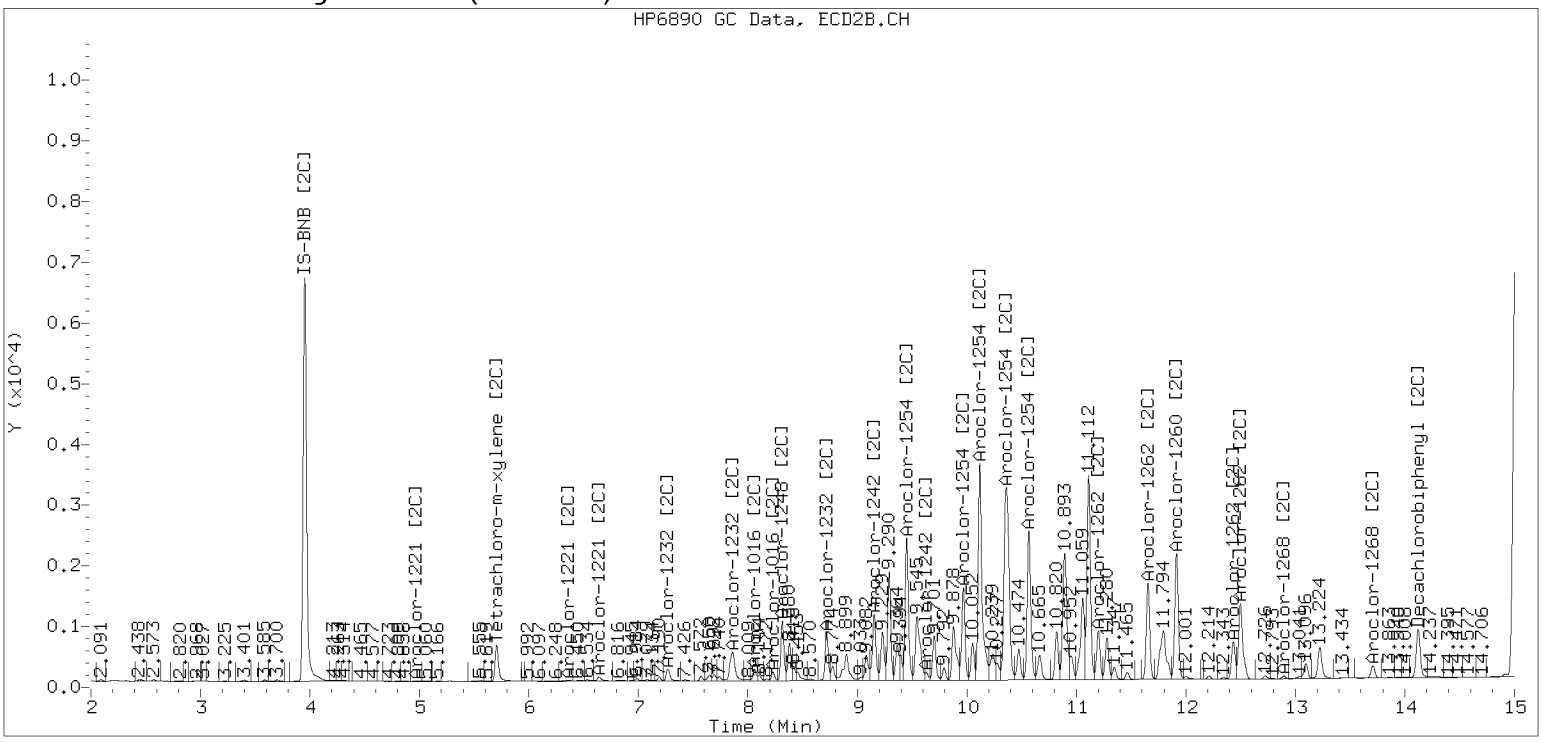
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230110.b/230110.b/01102321ECD7.D  Injection Date: 10-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788G**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-13 B | File ID: | 01102322ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 23:52 |
| % Solids: | 59.30 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 21.08 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0156 | 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 | 100 | 400 | 156 | 400 | U |
| 11104-28-2 | Aroclor 1221 | 1 | 100 | 400 | 156 | 400 | U |
| 11141-16-5 | Aroclor 1232 | 1 | 100 | 400 | 156 | 400 | U |
| 53469-21-9 | Aroclor 1242 | 1 | 100 | 400 | 156 | 400 | U |
| 12672-29-6 | Aroclor 1248 | 1 | 100 | 400 | 156 | 400 | U |
| 11097-69-1 | Aroclor 1254 | 2 | 100 | 7690 | 156 | 400 | P1, D |
| 11096-82-5 | Aroclor 1260 | 2 | 100 | 16700 | 58.9 | 400 | D |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9997* | | | *40 - 126* | *D1* |
| *Tetrachlorometaxylene* | *1* | *7.9997* | | | *44 - 120* | *D1* |
| *Decachlorobiphenyl* | *2* | *7.9997* | | | *40 - 126* | *D1* |
| *Tetrachlorometaxylene* | *2* | *7.9997* | | | *44 - 120* | *D1* |

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

Data file 1: /230110.b/01102322ECD7.D
Data file 2: /230110.b/230110.b/01102322ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-13RE
Client ID:
Injection Date: 10-JAN-2023 23:52
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 100.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 1847 | 5.708 | 0.001 | 1323 | 0.3 | 0.3 | 2.8 | Tetrachloro-m-xylene |
| 13.899 | -0.009 | 3134 | 14.124 | -0.004 | 4866 | 0.5 | 0.7 | 36.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 457769 | 2.3 |
| Hexabromobiphenyl | 798898 | 712748 | -10.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 348449 | 39.9 |
| Hexabromobiphenyl | 362541 | 492812 | 35.9 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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 | 9.311 | -0.010 | 102030 | 253.1 | 1 | 9.457 | -0.005 | 73034 | 325.1 |
| Aroclor-1254 | 2 | 9.386 | -0.016 | 41475 | 264.6 | 2 | 9.976 | -0.005 | 12699 | 70.3 |
| Aroclor-1254 | 3 | 9.676 | -0.018 | 18178 | 71.4 | 3 | 10.152 | 0.018 | 196021 | 504.9 |
| Aroclor-1254 | 4 | 9.812 | -0.019 | 94774 | 191.0 | 4 | 10.377 | -0.006 | 256378 | 637.6 |
| Aroclor-1254 | 5 | 10.129 | -0.061 | 337716 | 992.9 | 5 | 10.572 | -0.008 | 330137 | 1702.4 |
| | | Total Col1Ave (5 peaks): | | | 354.6 | Total Col2Ave (5 peaks): | | | 648.1 | RPD = 59* |
| | | Corrected Ave (4 peaks): | | | 195.0 | Corrected Ave (4 peaks): | | | 384.5 | RPD = 65* |
| Aroclor-1260 | 1 | 11.053 | -0.009 | 245463 | 946.1 | 1 | 11.658 | -0.004 | 217008 | 834.2 |
| Aroclor-1260 | 2 | 11.369 | -0.008 | 258811 | 964.5 | 2 | 11.921 | -0.004 | 563759 | 863.7 |
| Aroclor-1260 | 3 | 11.740 | -0.011 | 696629 | 988.1 | 3 | 12.441 | -0.003 | 134218 | 772.2 |
| Aroclor-1260 | 4 | 12.143 | -0.015 | 393811 | 1096.8 | 4 | 12.505 | -0.006 | 380940 | 875.4 |
| Aroclor-1260 | 5 | 12.251 | -0.010 | 115458 | 785.5 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 956.2 | Total Col2Ave (4 peaks): | | | 836.4 | RPD = 13 |
| | | Corrected Ave (4 peaks): | | | 921.1 | Corrected Ave (3 peaks): | | | 823.3 | RPD = 11 |
| 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) = 5393170 Col1 Total PCB = 1.2 ppm*

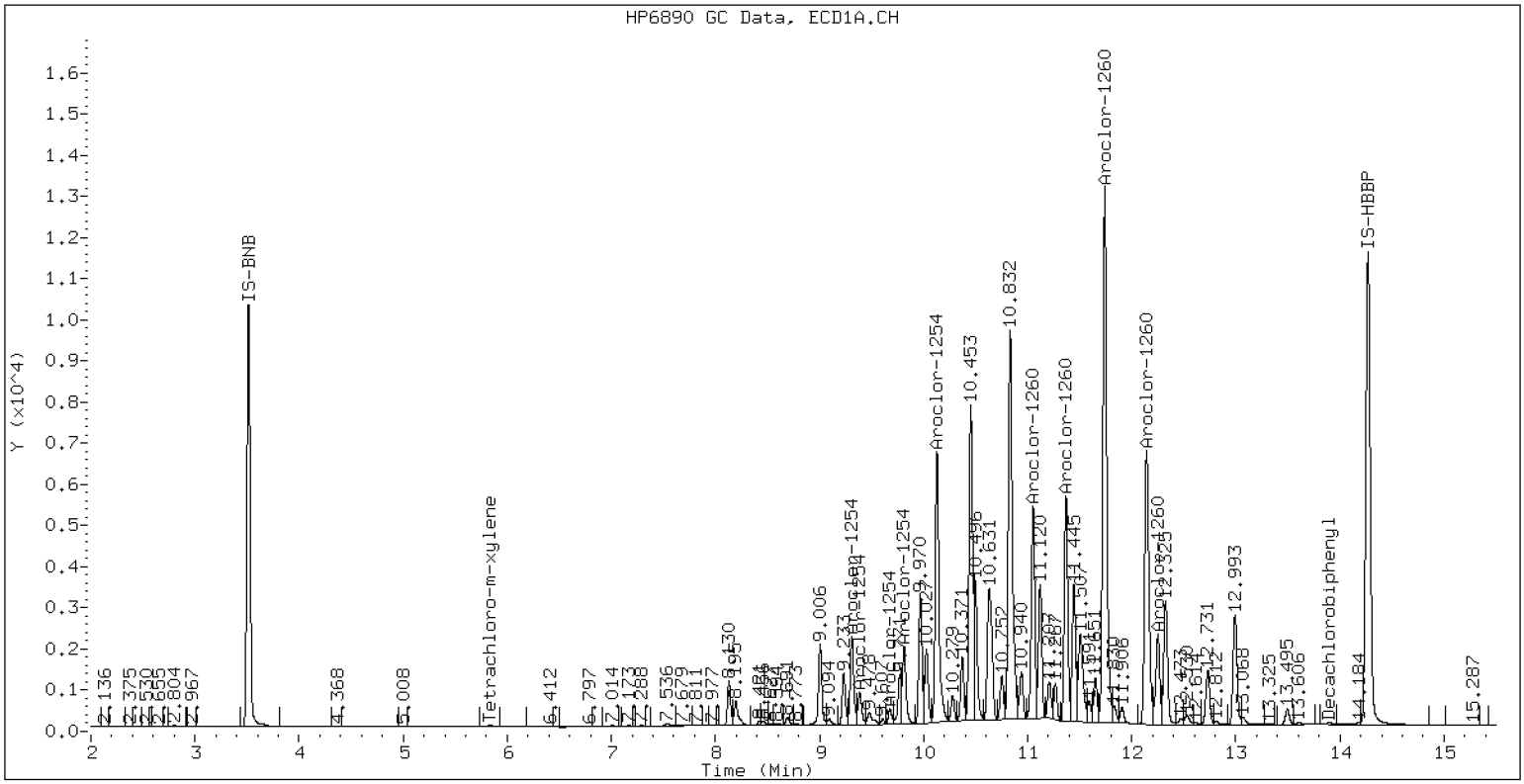
Total PCB Area Col2 (5.807 - 14.028) = 4250085 Col2 Total PCB = 1.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

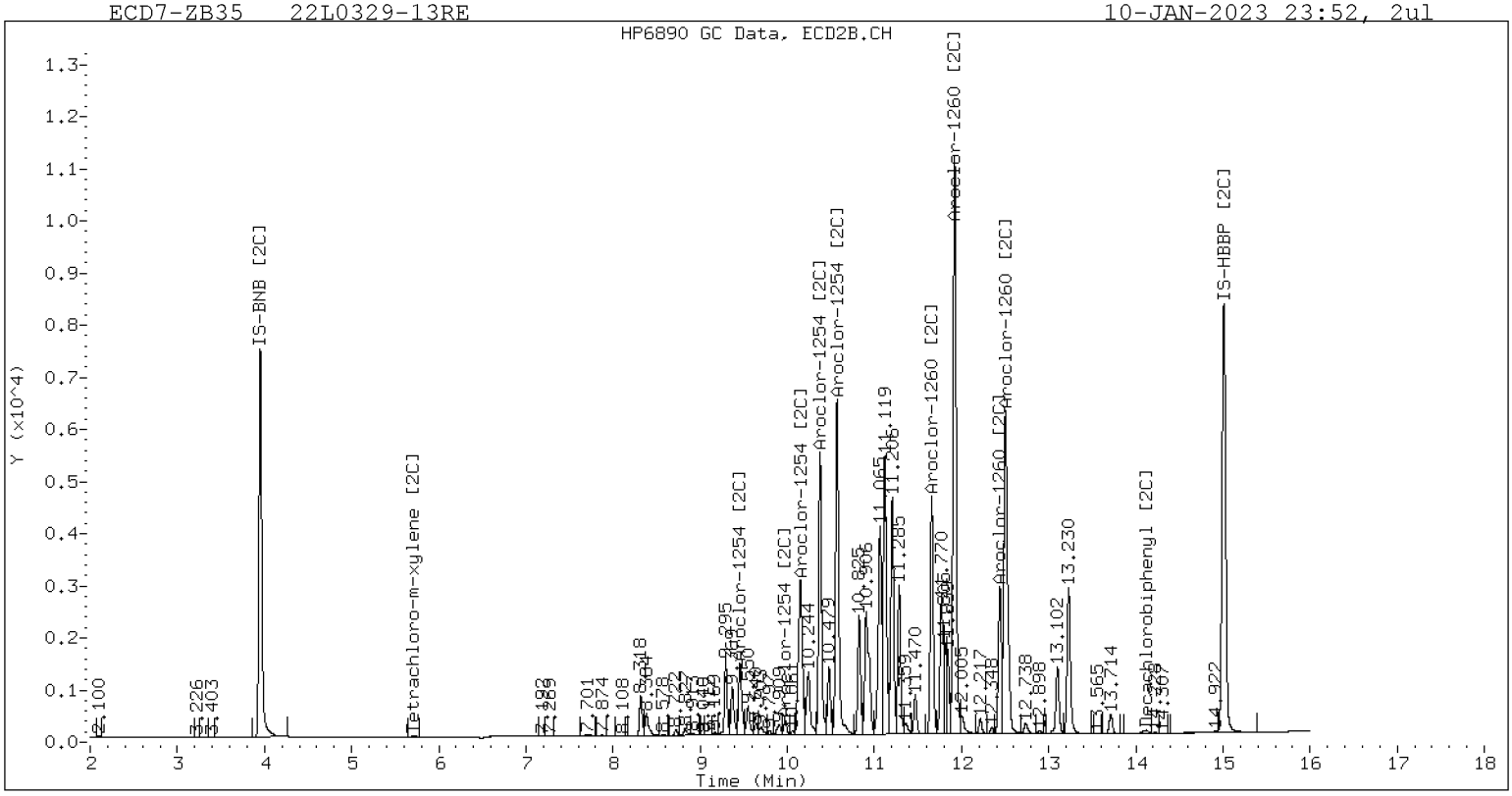
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-13RE 10-JAN-2023 23:52, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-13RE 10-JAN-2023 23:52, 2ul

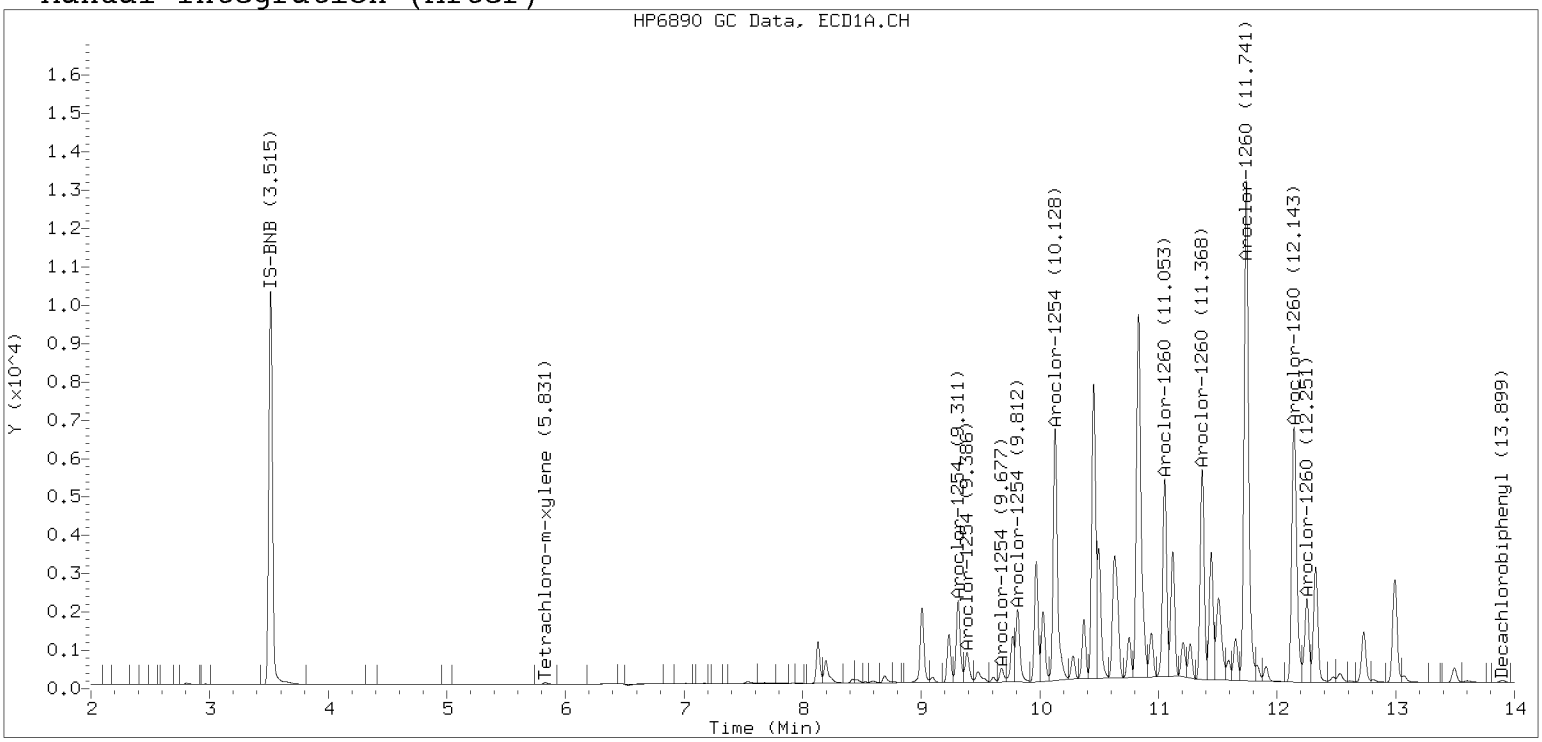



ZB-35 Manual Integration: NO

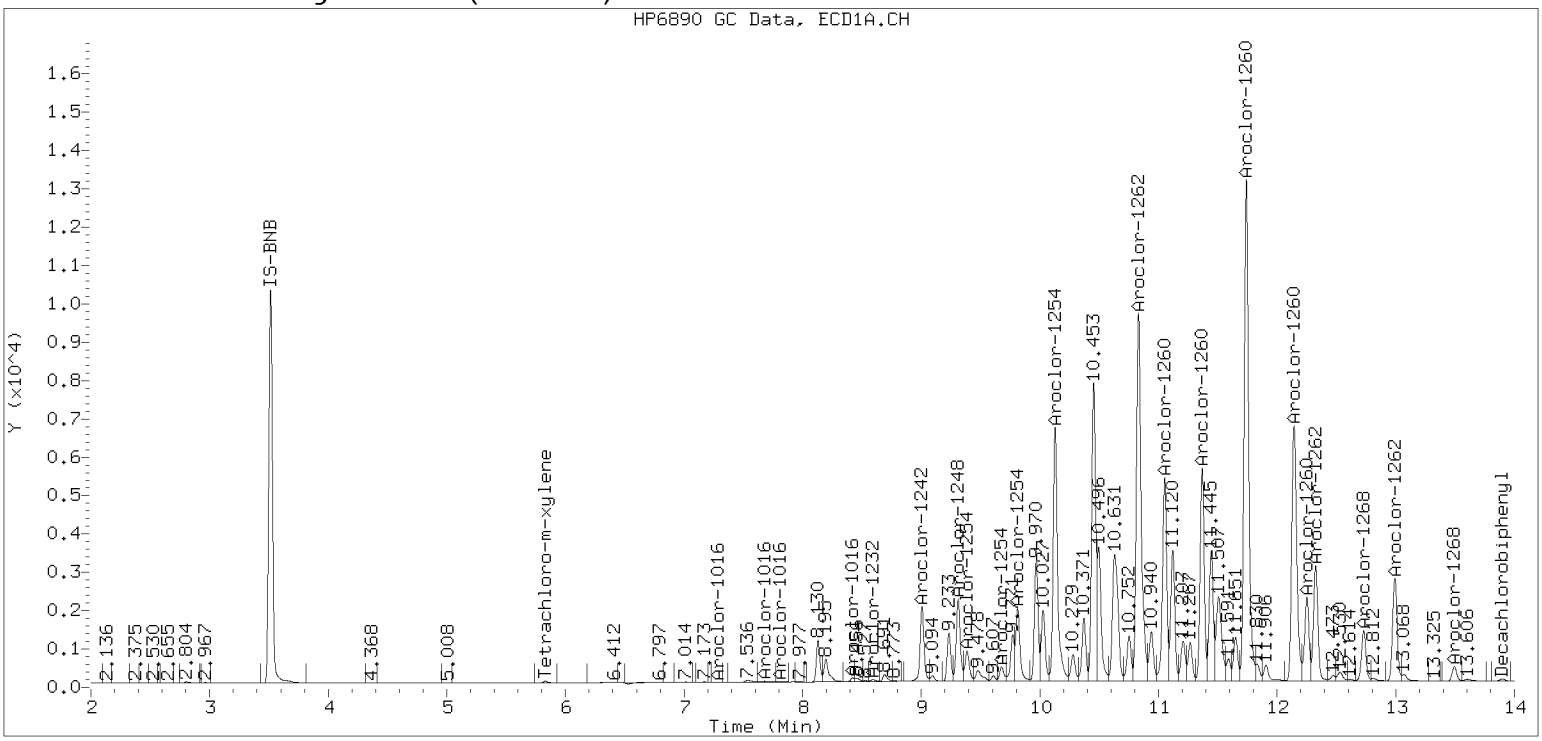
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230110.b/01102322ECD7.D  Injection Date: 10-JAN-2023 23:52

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC788H**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-14 B | File ID: | 01092374ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 10:42 |
| % Solids: | 60.79 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 20.59 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 2 | 1 | 38.1 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 58.3 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 35.2 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9894* | *7.35* | *91.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9894* | *4.72* | *59.0* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9894* | *7.02* | *87.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9894* | *5.40* | *67.6* | *44 - 120* | |

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

Data file 1: /230109.b/01092374ECD7.D
Data file 2: /230109.b/230109.b/01092374ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-14
Client ID:
Injection Date: 10-JAN-2023 10:42
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.825 | -0.011 | 149592 | 5.702 | -0.012 | 110822 | 23.6 | 27.0 | 13.5 | Tetrachloro-m-xylene |
| 13.894 | -0.014 | 162446 | 14.121 | -0.016 | 178189 | 36.8 | 35.1 | 4.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 447024 | -0.1 |
| Hexabromobiphenyl | 798898 | 481880 | -39.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 298983 | 20.0 |
| Hexabromobiphenyl | 362541 | 357241 | -1.5 |

* 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 | --- | | | 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 | 8.409 | -0.018 | 20956 | 109.0 | 1 | 8.311 | -0.015 | 39210 | 321.0 |
| Aroclor-1248 | 2 | 8.570 | -0.034 | 22221 | 90.6 | 2 | 8.716 | -0.016 | 15905 | 123.8 |
| Aroclor-1248 | 3 | 8.996 | -0.026 | 76420 | 173.1 | 3 | 9.149 | -0.028 | 19887 | 127.3 |
| Aroclor-1248 | 4 | 9.297 | -0.014 | 83814 | 387.5 | 4 | 9.628 | 0.025 | 7181 | 39.1 |
| | Total Col1Ave (4 peaks): | | | | 190.1 | Total Col2Ave (4 peaks): | | | 152.8 | RPD = 22 |
| | Corrected Ave (3 peaks): | | | | 124.2 | Corrected Ave (3 peaks): | | | 96.7 | RPD = 25 |
| Aroclor-1254 | 1 | 9.297 | -0.024 | 83814 | 212.9 | 1 | 9.448 | -0.019 | 56836 | 294.8 |
| Aroclor-1254 | 2 | 9.373 | -0.029 | 36473 | 238.3 | 2 | 9.966 | -0.021 | 23733 | 153.1 |
| Aroclor-1254 | 3 | 9.669 | -0.026 | 54093 | 217.6 | 3 | 10.114 | -0.026 | 99365 | 298.3 |
| Aroclor-1254 | 4 | 9.798 | -0.033 | 145731 | 300.7 | 4 | 10.363 | -0.026 | 112158 | 325.1 |
| Aroclor-1254 | 5 | 10.248 | 0.058 | 201443 | 606.5 | 5 | 10.563 | -0.023 | 64485 | 387.5 |
| | Total Col1Ave (5 peaks): | | | | 315.2 | Total Col2Ave (5 peaks): | | | 291.8 | RPD = 8 |
| | Corrected Ave (4 peaks): | | | | 242.4 | Corrected Ave (4 peaks): | | | 267.8 | RPD = 10 |
| Aroclor-1260 | 1 | 11.043 | -0.019 | 35903 | 204.7 | 1 | 11.652 | -0.017 | 39435 | 209.1 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 28369 | 156.4 | 2 | 11.913 | -0.020 | 68743 | 145.3 |
| Aroclor-1260 | 3 | 11.728 | -0.024 | 74900 | 157.1 | 3 | 12.432 | -0.019 | 24698 | 196.0 |
| Aroclor-1260 | 4 | 12.129 | -0.030 | 38368 | 158.1 | 4 | 12.496 | -0.020 | 48907 | 155.0 |
| Aroclor-1260 | 5 | 12.243 | -0.019 | 22420 | 225.6 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 180.4 | Total Col2Ave (4 peaks): | | | 176.4 | RPD = 2 |
| | Corrected Ave (4 peaks): | | | | 169.1 | Corrected Ave (3 peaks): | | | 165.4 | RPD = 2 |
| Aroclor-1262 | 1 | 10.816 | -0.032 | 124716 | 773.9 | 1 | --- | | | 0.0 |
| Aroclor-1262 | 2 | 12.243 | -0.020 | 22420 | 89.5 | 2 | --- | | | 0.0 |
| Aroclor-1262 | 3 | 12.316 | -0.021 | 23992 | 89.7 | 3 | --- | | | 0.0 |
| Aroclor-1262 | 4 | 12.982 | -0.023 | 28572 | 133.1 | 4 | --- | | | 0.0 |
| | Total Col1Ave (4 peaks): | | | | 271.5 | Col2Ave: <3 Quant Peaks | | | | |
| Aroclor-1268 | 1 | 12.243 | -0.020 | 22420 | 33.3 | 1 | --- | | | 0.0 |
| Aroclor-1268 | 2 | 12.316 | -0.019 | 23992 | 36.4 | 2 | --- | | | 0.0 |
| Aroclor-1268 | 3 | 12.717 | 0.001 | 10962 | 20.3 | 3 | --- | | | 0.0 |
| Aroclor-1268 | 4 | 13.485 | -0.020 | 11689 | 7.1 | 4 | --- | | | 0.0 |
| | Total Col1Ave (4 peaks): | | | | 24.2 | Col2Ave: <3 Quant Peaks | | | | |

Total PCB Area Col1 (5.936 - 13.808) = 2078001 Col1 Total PCB = 0.5 ppm*

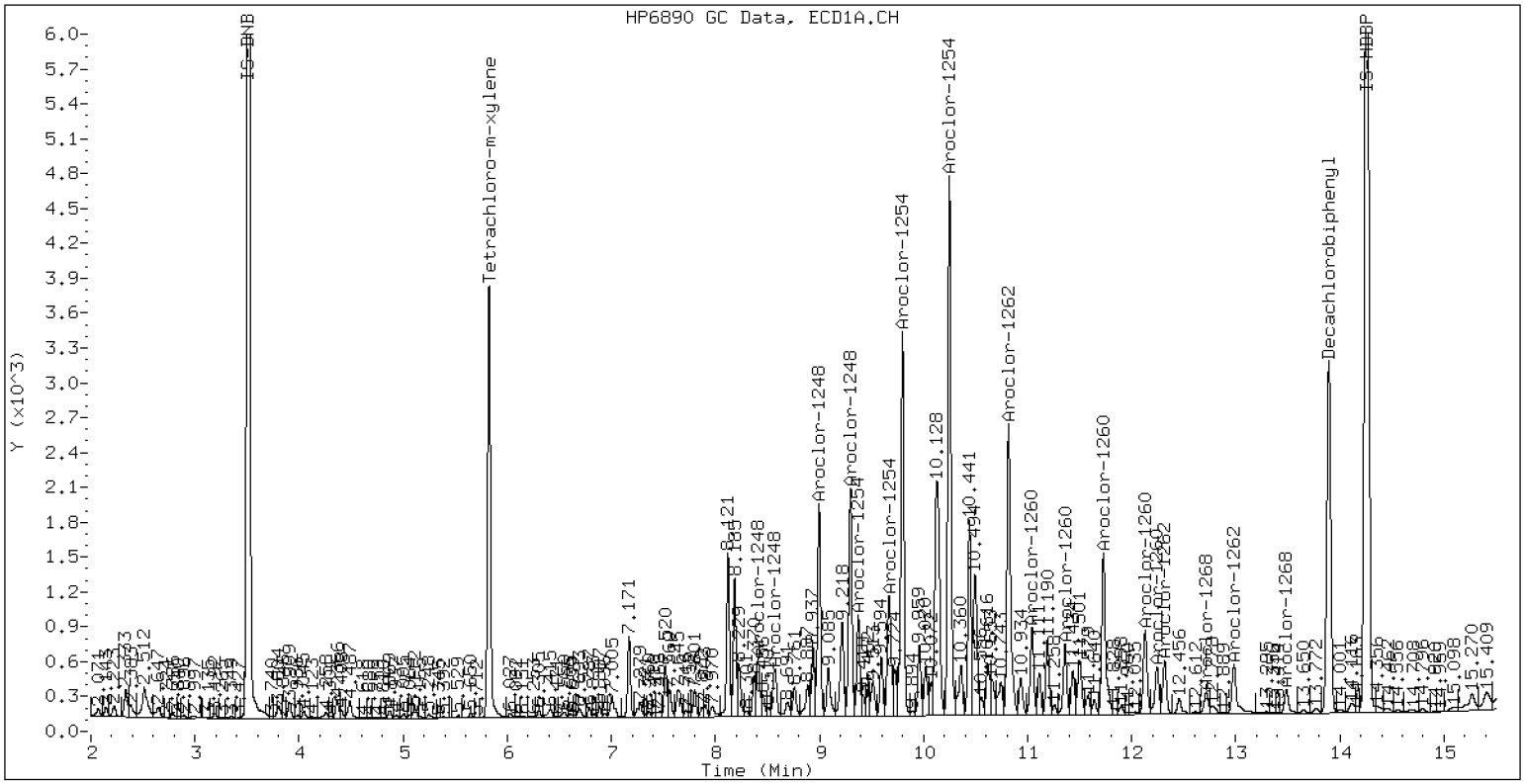
Total PCB Area Col2 (5.813 - 14.037) = 1641025 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

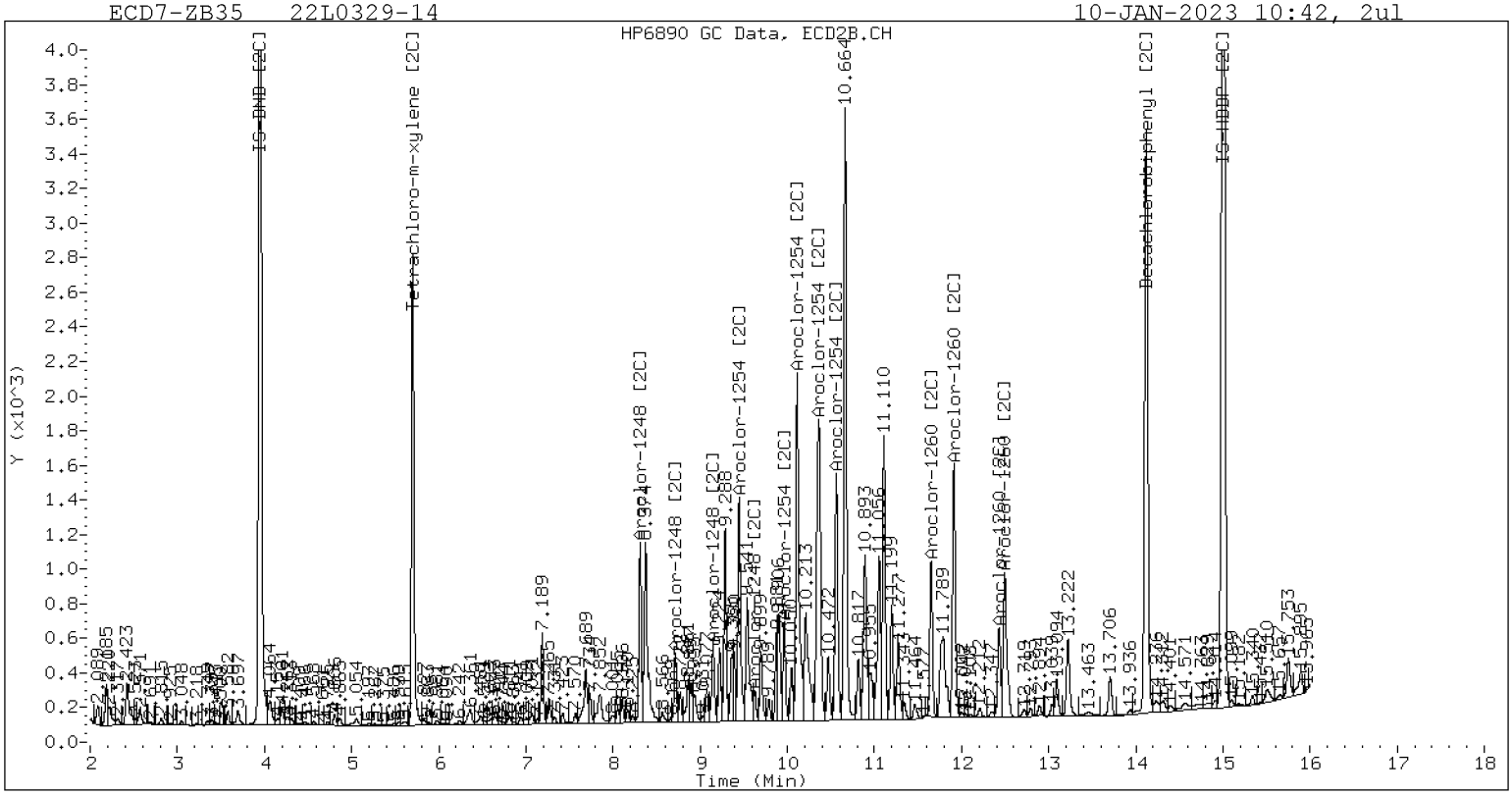
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-14 10-JAN-2023 10:42, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-14 10-JAN-2023 10:42, 2ul

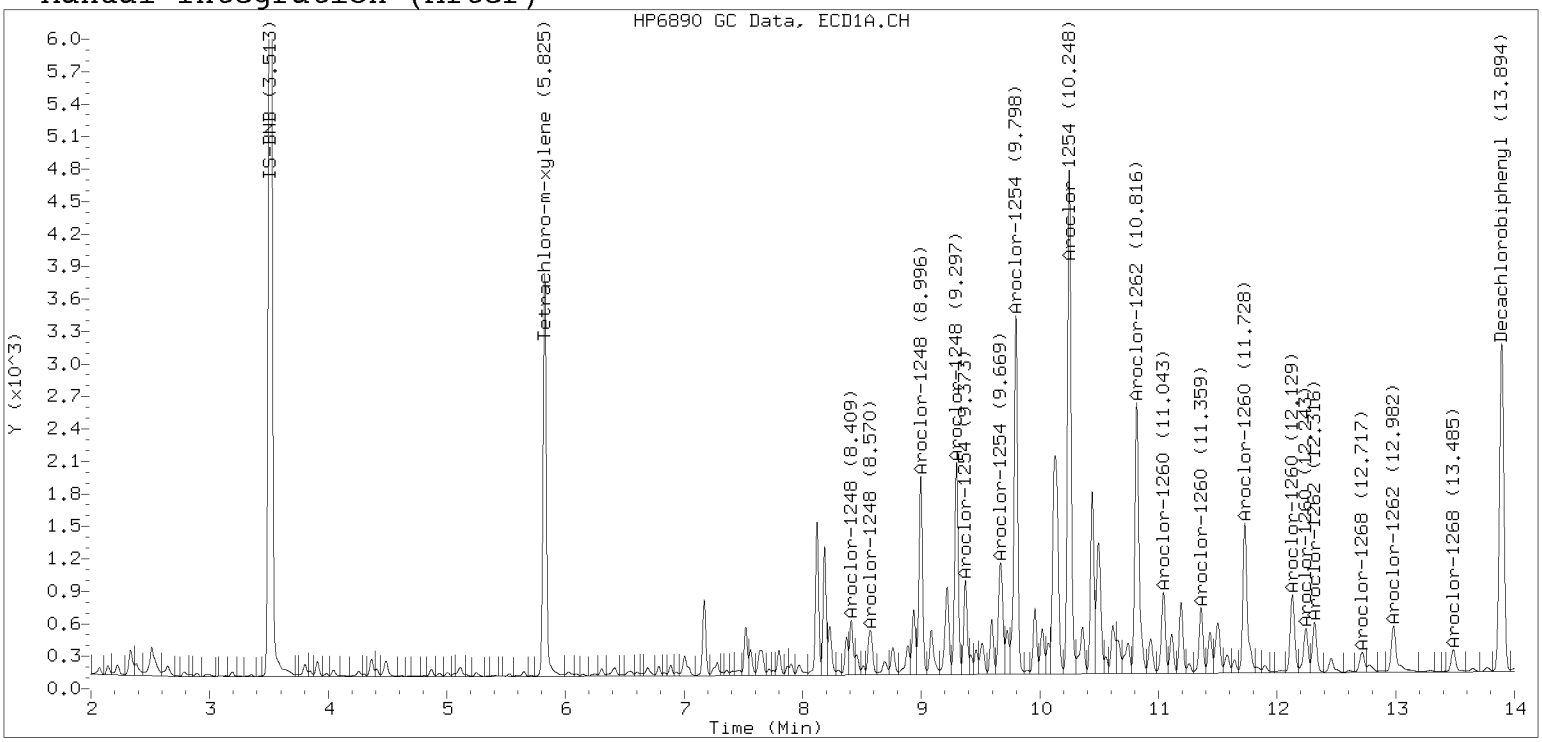



ZB-35 Manual Integration: NO

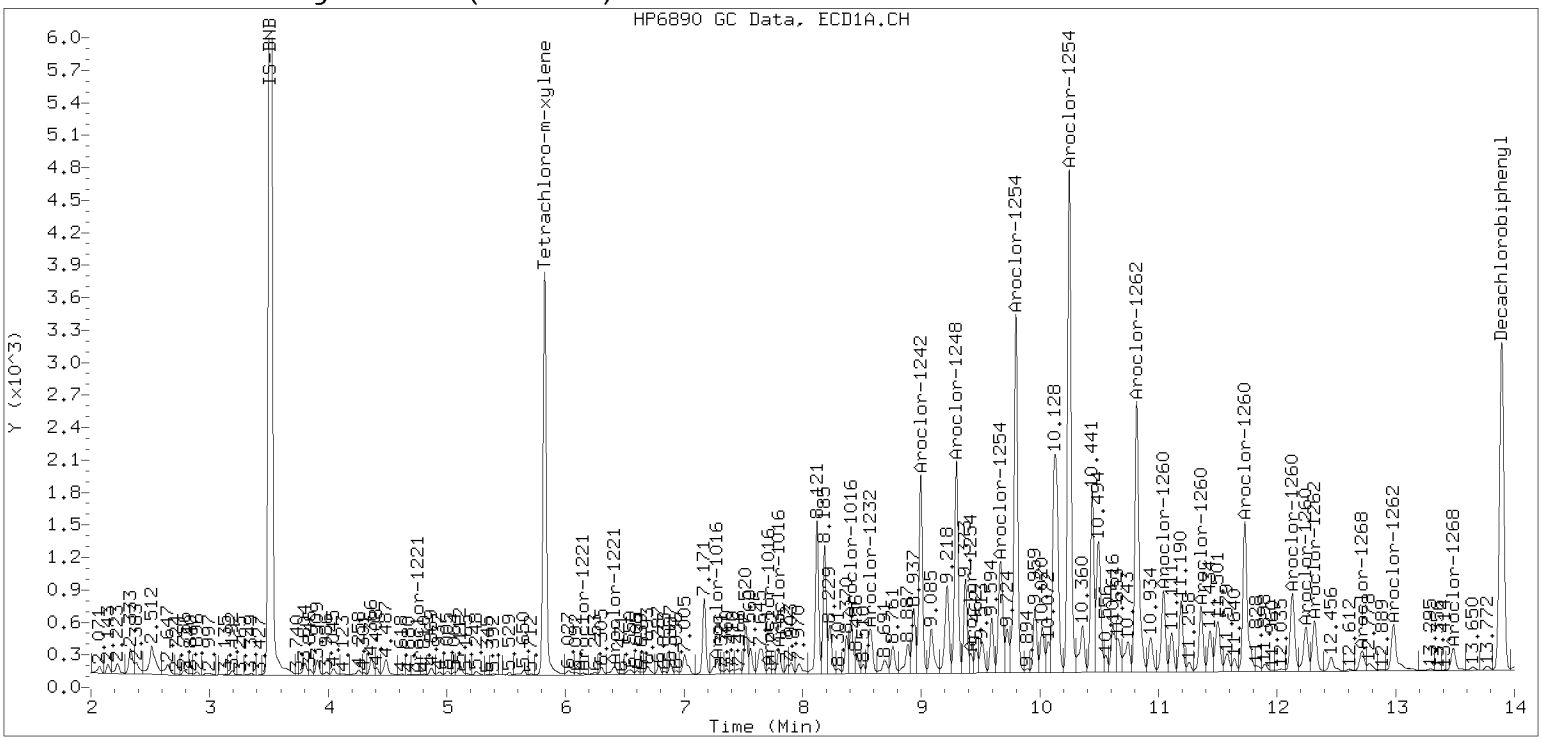
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092374ECD7.D  Injection Date: 10-JAN-2023 10:42

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791A**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-15 B | File ID: | 01092375ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 11:04 |
| % Solids: | 80.90 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.45 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 54.2 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 24.4 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *8.0006* | *7.41* | *92.6* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *8.0006* | *5.89* | *73.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *8.0006* | *6.62* | *82.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *8.0006* | *5.87* | *73.4* | *44 - 120* | |

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

Data file 1: /230109.b/01092375ECD7.D
Data file 2: /230109.b/230109.b/01092375ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-15
Client ID:
Injection Date: 10-JAN-2023 11:04
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.008 | 198301 | 5.705 | -0.008 | 137265 | 29.5 | 29.3 | 0.4 | Tetrachloro-m-xylene |
| 13.894 | -0.014 | 170981 | 14.121 | -0.016 | 164178 | 37.0 | 33.1 | 11.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 474893 | 6.1 |
| Hexabromobiphenyl | 798898 | 503486 | -37.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 341289 | 37.0 |
| Hexabromobiphenyl | 362541 | 349256 | -3.7 |

* 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 | --- | | | 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 | 9.302 | -0.019 | 101108 | 241.8 | 1 | 9.451 | -0.015 | 57599 | 261.8 |
| Aroclor-1254 | 2 | 9.377 | -0.024 | 42965 | 264.2 | 2 | 9.969 | -0.017 | 36414 | 205.8 |
| Aroclor-1254 | 3 | 9.669 | -0.025 | 71336 | 270.1 | 3 | 10.119 | -0.020 | 110699 | 291.1 |
| Aroclor-1254 | 4 | 9.803 | -0.028 | 148507 | 288.5 | 4 | 10.363 | -0.026 | 107476 | 272.9 |
| Aroclor-1254 | 5 | 10.146 | -0.043 | 149078 | 422.5 | 5 | 10.566 | -0.020 | 61518 | 323.9 |
| | Total Col1Ave (5 peaks): | | | 297.4 | | Total Col2Ave (5 peaks): | | | 271.1 | RPD = 9 |
| | Corrected Ave (4 peaks): | | | 266.2 | | Corrected Ave (4 peaks): | | | 257.9 | RPD = 3 |
| Aroclor-1260 | 1 | 11.044 | -0.018 | 25573 | 139.5 | 1 | 11.654 | -0.015 | 36962 | 200.5 |
| Aroclor-1260 | 2 | 11.362 | -0.015 | 24160 | 127.5 | 2 | 11.914 | -0.018 | 43417 | 93.9 |
| Aroclor-1260 | 3 | 11.730 | -0.021 | 49332 | 99.1 | 3 | 12.432 | -0.019 | 13339 | 108.3 |
| Aroclor-1260 | 4 | 12.131 | -0.027 | 33032 | 130.2 | 4 | 12.497 | -0.020 | 26282 | 85.2 |
| Aroclor-1260 | 5 | 12.244 | -0.017 | 9607 | 92.5 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | 117.8 | | Total Col2Ave (4 peaks): | | | 122.0 | RPD = 4 |
| | Corrected Ave (4 peaks): | | | 112.3 | | Corrected Ave (3 peaks): | | | 95.8 | RPD = 16 |
| 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) = 1743911 Col1 Total PCB = 0.4 ppm*

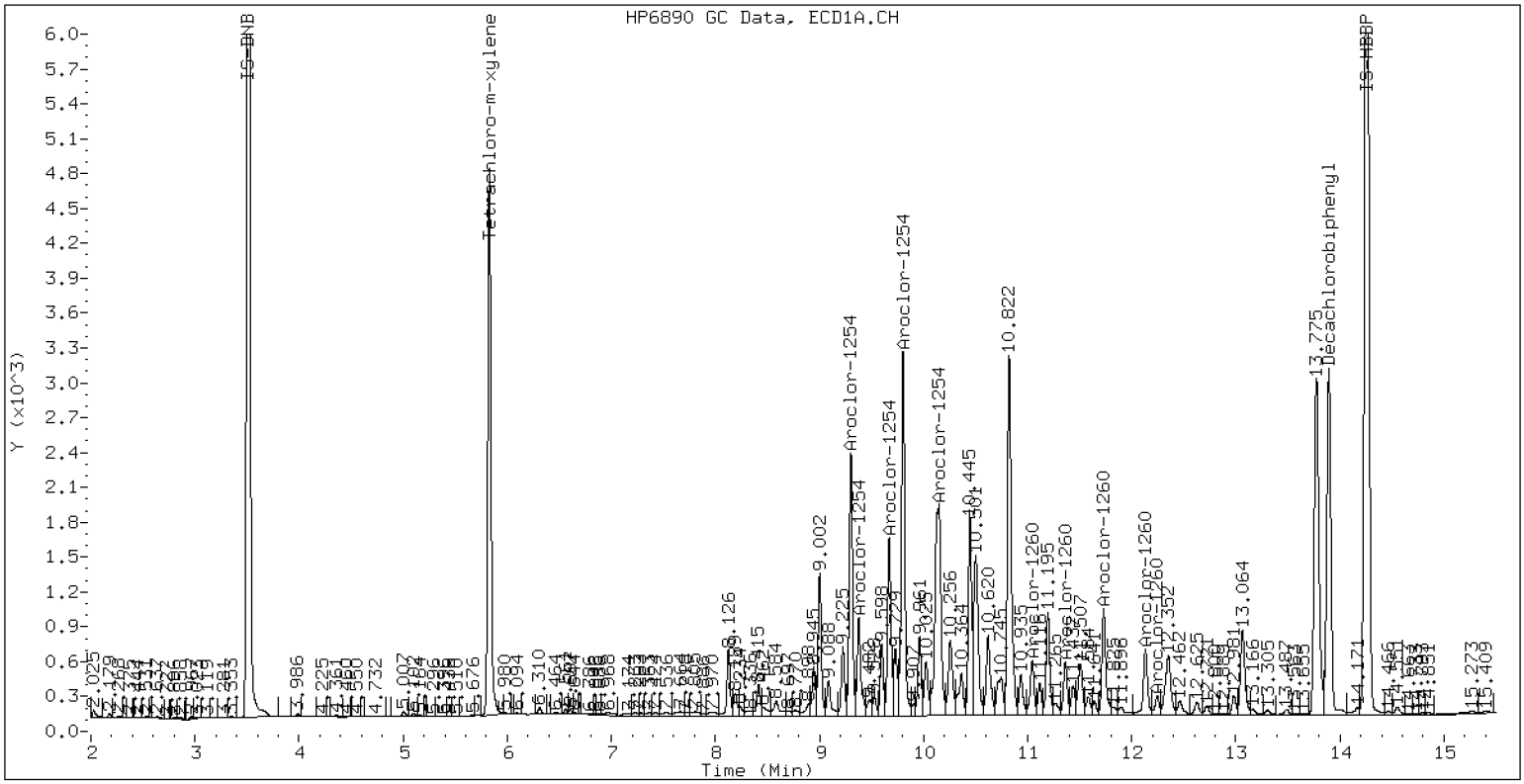
Total PCB Area Col2 (5.813 - 14.037) = 1123099 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

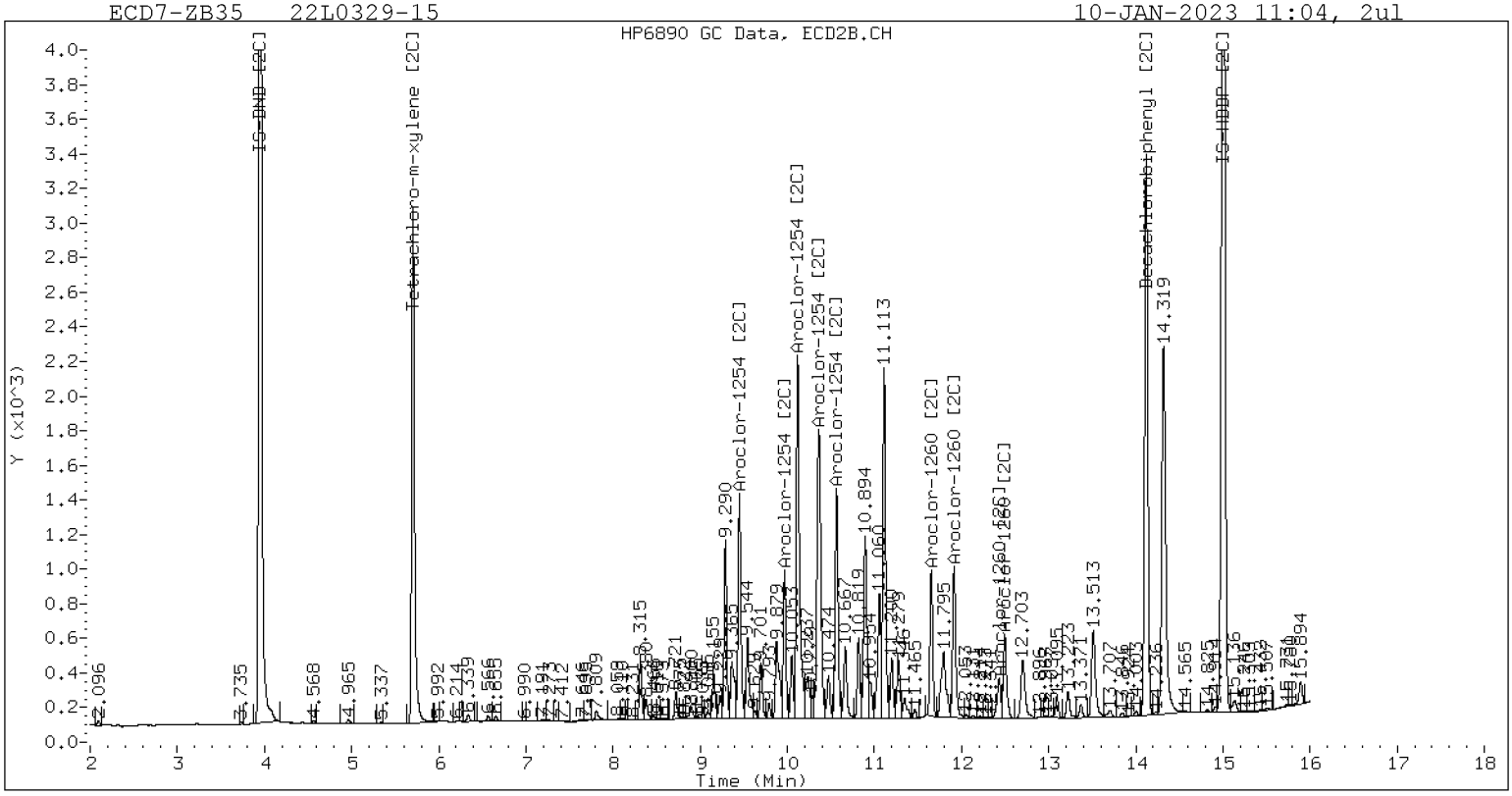
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-15 10-JAN-2023 11:04, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-15 10-JAN-2023 11:04, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-16 B | File ID: | 01092376ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 11:25 |
| % Solids: | 89.48 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 13.98 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 22.3 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 6.9 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9941* | *8.62* | *108* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9941* | *5.66* | *70.8* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9941* | *7.17* | *89.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9941* | *5.34* | *66.8* | *44 - 120* | |

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

Data file 1: /230109.b/01092376ECD7.D
Data file 2: /230109.b/230109.b/01092376ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-16
Client ID:
Injection Date: 10-JAN-2023 11:25
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 195479 | 5.707 | -0.007 | 128222 | 28.3 | 26.7 | 5.8 | Tetrachloro-m-xylene |
| 13.899 | -0.009 | 262304 | 14.124 | -0.013 | 214921 | 43.1 | 35.9 | 18.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 487388 | 8.9 |
| Hexabromobiphenyl | 798898 | 663643 | -16.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 350086 | 40.5 |
| Hexabromobiphenyl | 362541 | 421768 | 16.3 |

* 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 | --- | | | 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 | 7.815 | -0.061 | 2665 | 15.7 |
| Aroclor-1232 | 4 | --- | | | 0.0 | 4 | 8.725 | -0.009 | 4452 | 96.6 |
| | 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 | -0.012 | 46090 | 107.4 | 1 | 9.456 | -0.011 | 26732 | 118.4 |
| Aroclor-1254 | 2 | 9.387 | -0.015 | 16841 | 100.9 | 2 | 9.975 | -0.011 | 15495 | 85.4 |
| Aroclor-1254 | 3 | 9.679 | -0.015 | 24255 | 89.5 | 3 | 10.127 | -0.012 | 50405 | 129.2 |
| Aroclor-1254 | 4 | 9.815 | -0.015 | 65446 | 123.9 | 4 | 10.376 | -0.014 | 42904 | 106.2 |
| Aroclor-1254 | 5 | 10.175 | -0.014 | 32349 | 89.3 | 5 | 10.573 | -0.014 | 22882 | 117.4 |
| | Total Col1Ave (5 peaks): | | | | 102.2 | Total Col2Ave (5 peaks): | | | | 111.3 RPD = 9 |
| | Corrected Ave (4 peaks): | | | | 96.8 | Corrected Ave (4 peaks): | | | | 106.9 RPD = 10 |
| Aroclor-1260 | 1 | 11.051 | -0.011 | 8826 | 36.5 | 1 | 11.661 | -0.008 | 14340 | 64.4 |
| Aroclor-1260 | 2 | 11.369 | -0.008 | 8328 | 33.3 | 2 | 11.923 | -0.010 | 14391 | 25.8 |
| Aroclor-1260 | 3 | 11.741 | -0.011 | 14590 | 22.2 | 3 | 12.441 | -0.010 | 3796 | 25.5 |
| Aroclor-1260 | 4 | 12.146 | -0.013 | 10122 | 30.3 | 4 | 12.505 | -0.011 | 8691 | 23.3 |
| Aroclor-1260 | 5 | 12.251 | -0.010 | 2359 | 17.2 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 27.9 | Total Col2Ave (4 peaks): | | | | 34.8 RPD = 22 |
| | Corrected Ave (4 peaks): | | | | 25.8 | Corrected Ave (3 peaks): | | | | 24.9 RPD = 4 |
| 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) = 656059 Col1 Total PCB = 0.1 ppm*

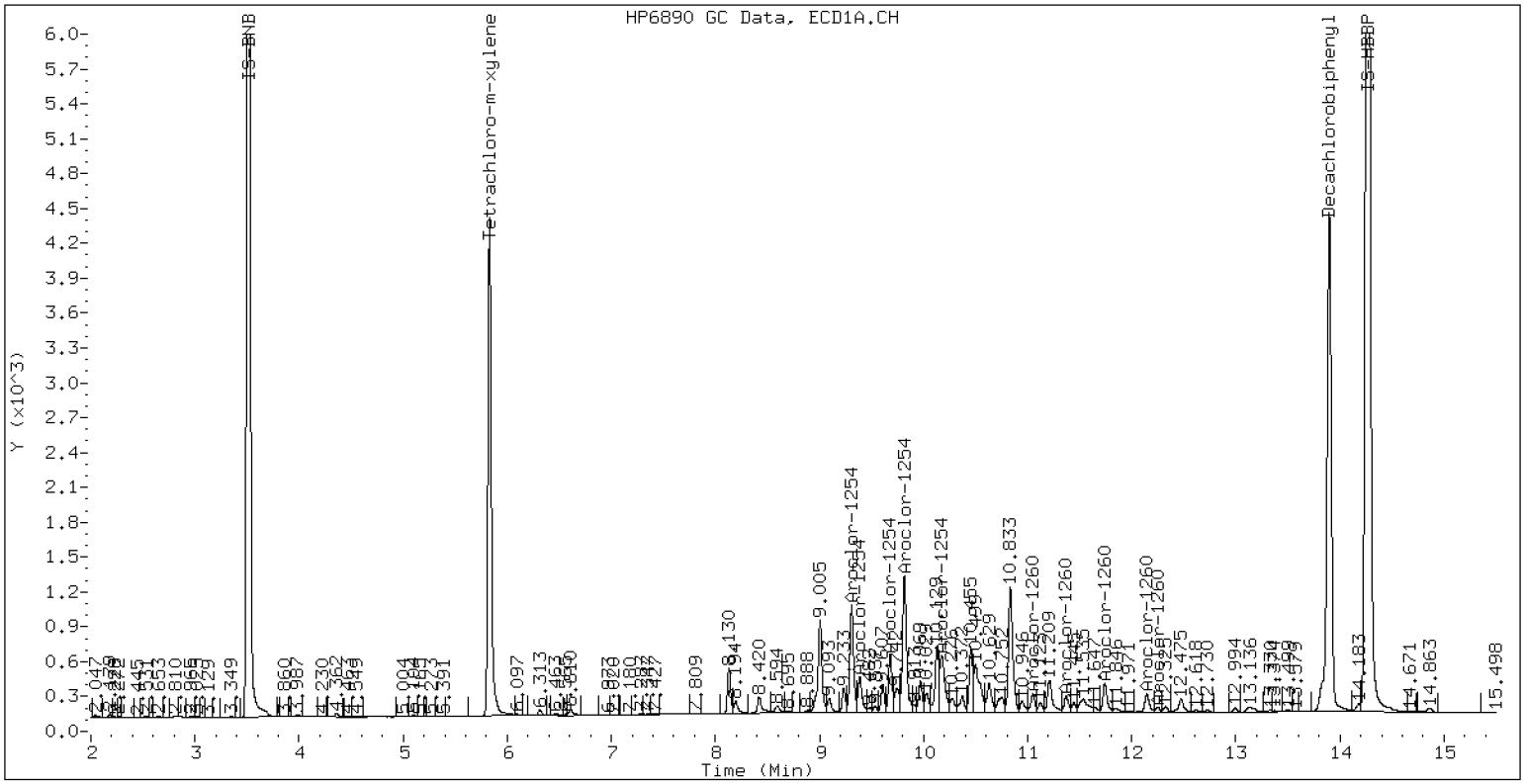
Total PCB Area Col2 (5.813 - 14.037) = 447679 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

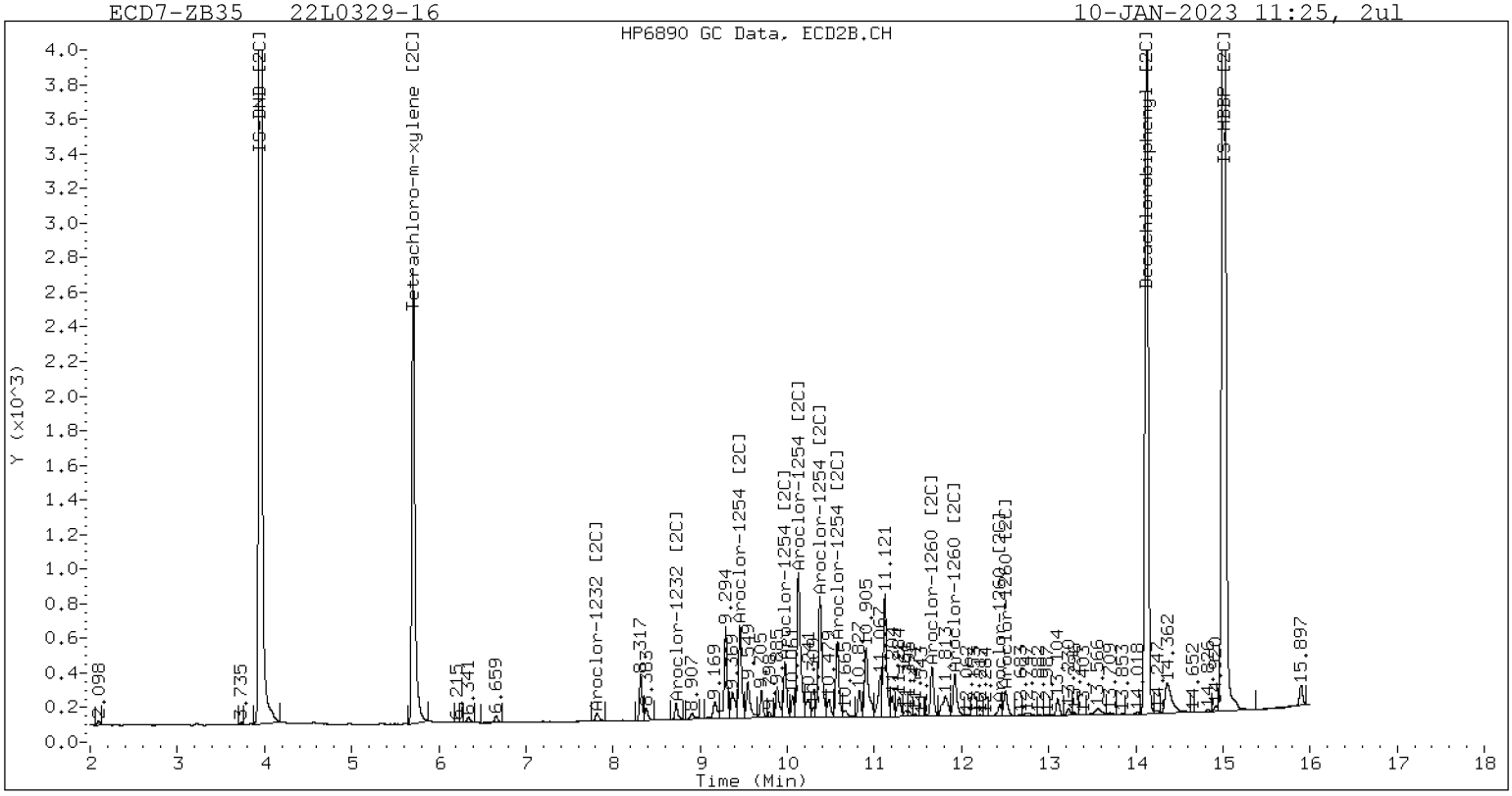
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-16 10-JAN-2023 11:25, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-16 10-JAN-2023 11:25, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-17 B | File ID: | 01092379ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 12:28 |
| % Solids: | 86.67 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 14.43 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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* | *7.9959* | *7.89* | *98.6* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9959* | *5.82* | *72.7* | *44 - 120* | |

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

Data file 1: /230109.b/01092379ECD7.D
Data file 2: /230109.b/230109.b/01092379ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-17
Client ID:
Injection Date: 10-JAN-2023 12:28
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 199842 | 5.707 | -0.007 | 132115 | 29.1 | 27.6 | 5.3 | Tetrachloro-m-xylene |
| 13.901 | -0.007 | 314389 | 14.126 | -0.011 | 264287 | 39.5 | 38.1 | 3.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 484692 | 8.3 |
| Hexabromobiphenyl | 798898 | 869347 | 8.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 349222 | 40.2 |
| Hexabromobiphenyl | 362541 | 487947 | 34.6 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col 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 | 6.098 | -0.060 | 901 | 12.8 | 2 | --- | | | 0.0 |
| Aroclor-1221 | 3 | 6.462 | 0.053 | 436 | 2.7 | 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) = 92436 Col1 Total PCB = 0.0 ppm*

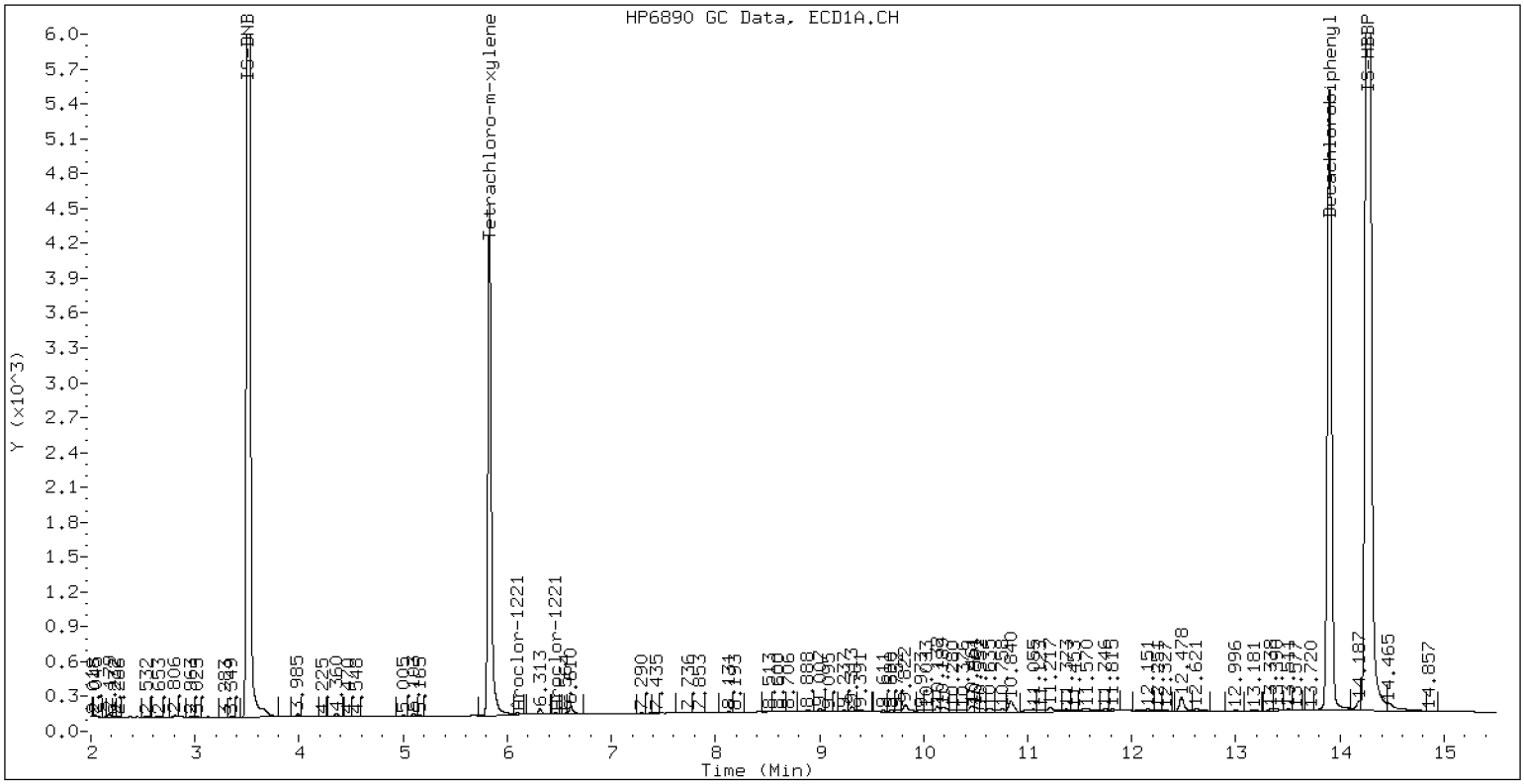
Total PCB Area Col2 (5.813 - 14.037) = 46375 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

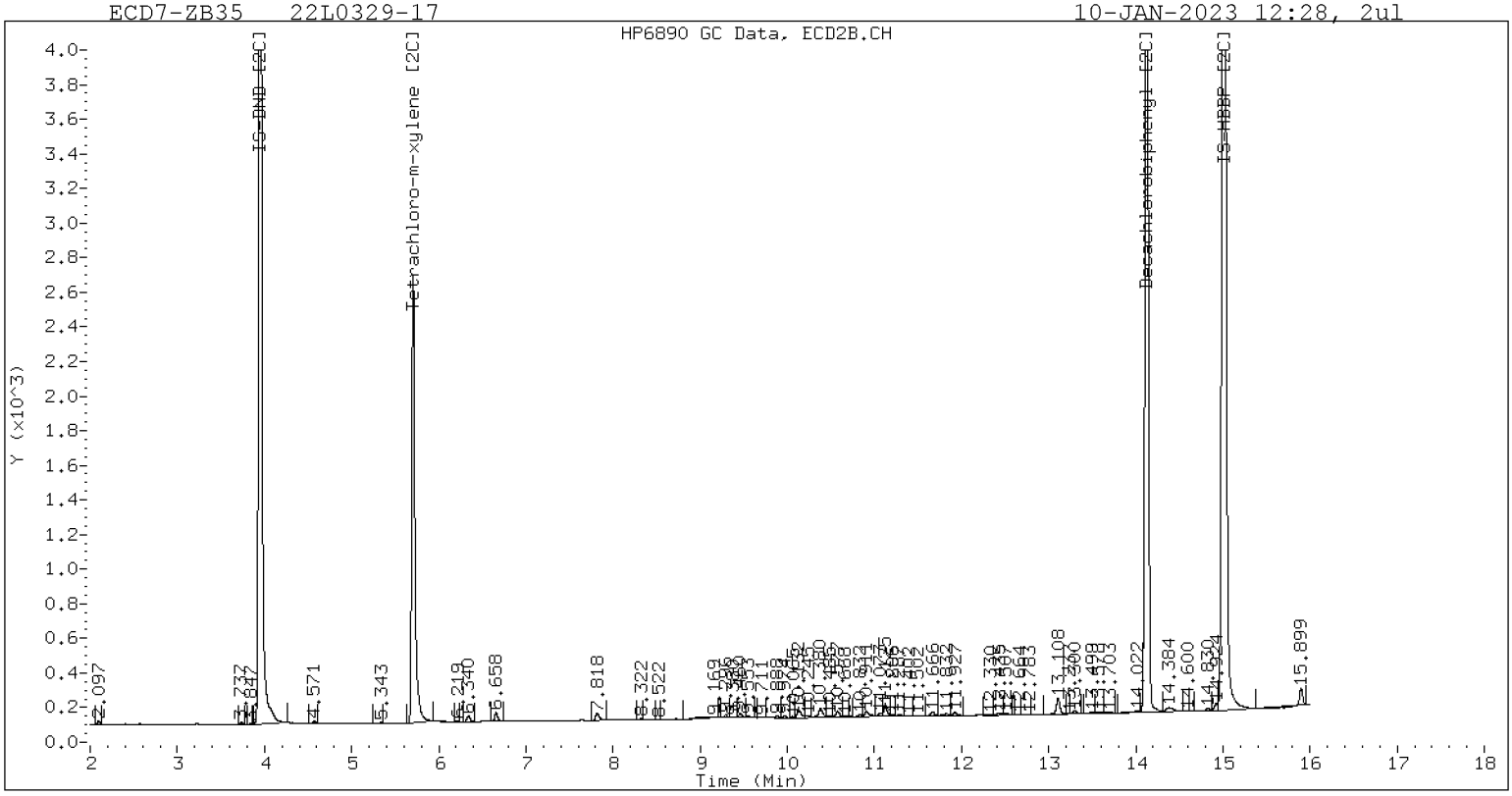
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-17 10-JAN-2023 12:28, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-17 10-JAN-2023 12:28, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-18 B | File ID: | 01092380ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 12:49 |
| % Solids: | 80.30 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.61 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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* | *7.9778* | *7.77* | *97.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9778* | *5.79* | *72.6* | *44 - 120* | |

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

Data file 1: /230109.b/01092380ECD7.D
Data file 2: /230109.b/230109.b/01092380ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-18
Client ID:
Injection Date: 10-JAN-2023 12:49
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 202686 | 5.706 | -0.007 | 131908 | 29.0 | 27.1 | 6.8 | Tetrachloro-m-xylene |
| 13.900 | -0.008 | 326784 | 14.125 | -0.012 | 275293 | 39.0 | 39.1 | 0.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 492859 | 10.1 |
| Hexabromobiphenyl | 798898 | 914738 | 14.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 354859 | 42.5 |
| Hexabromobiphenyl | 362541 | 496384 | 36.9 |

* 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-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) = 112571 Col1 Total PCB = 0.0 ppm*

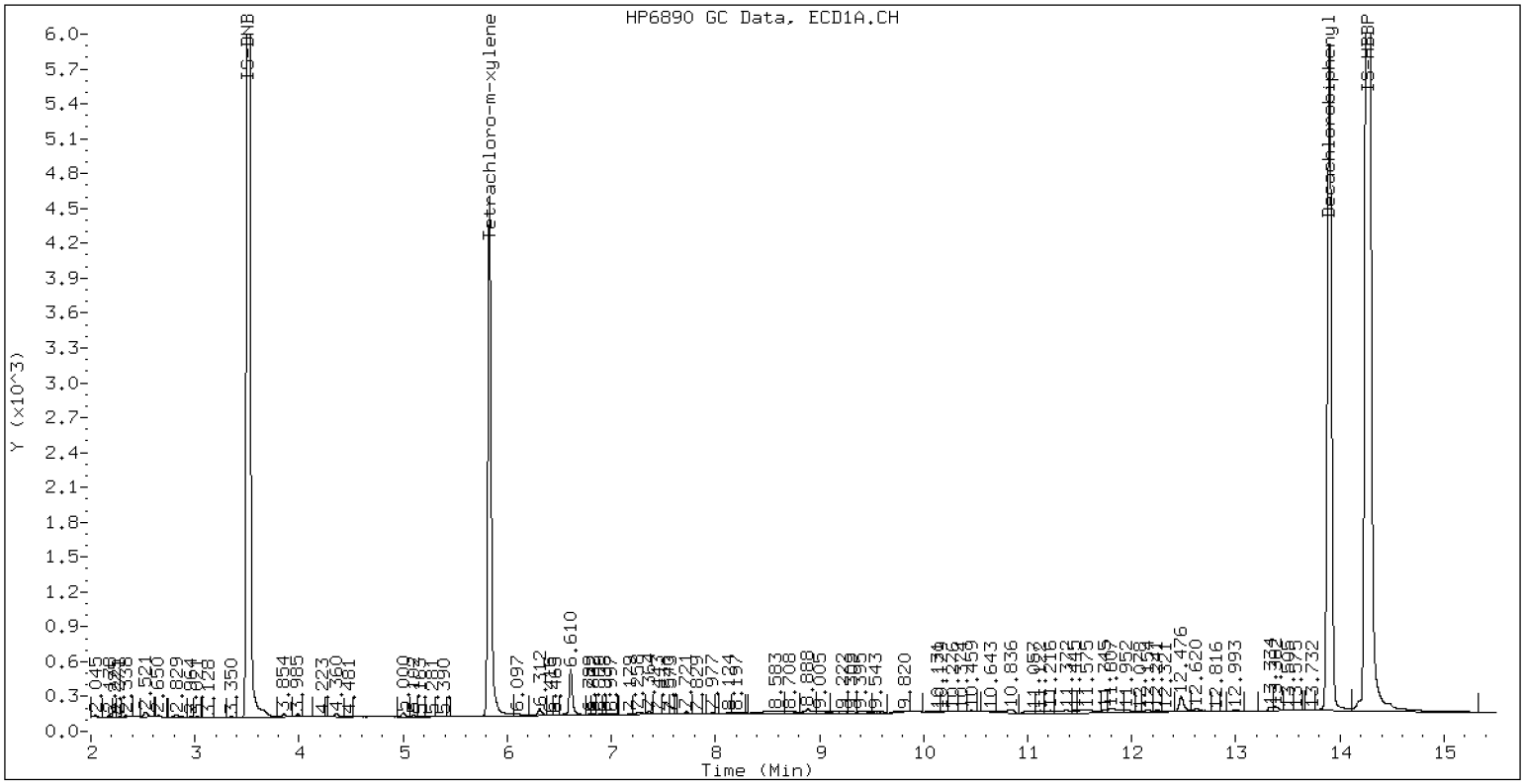
Total PCB Area Col2 (5.813 - 14.037) = 42694 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

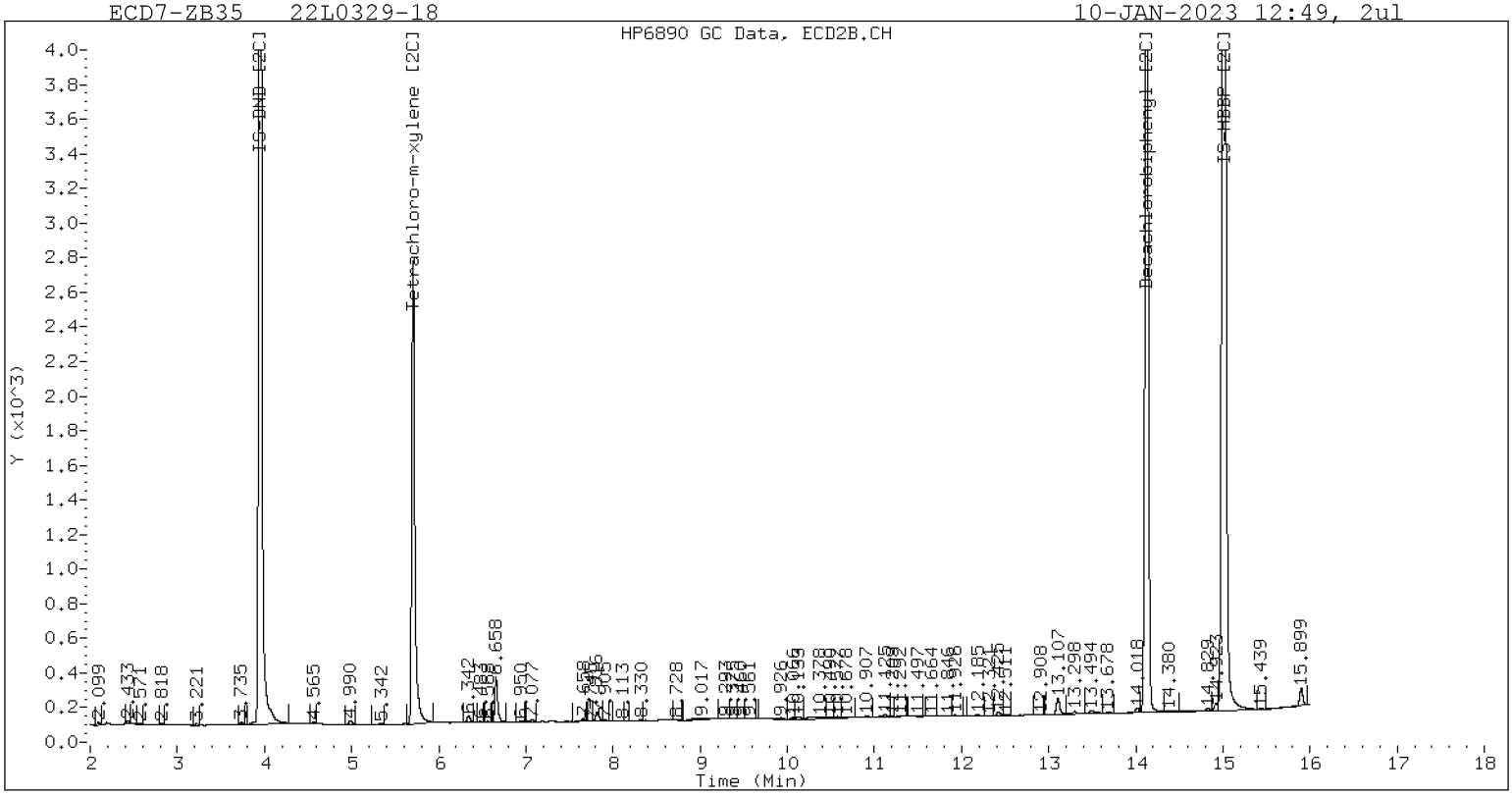
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-18 10-JAN-2023 12:49, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-18 10-JAN-2023 12:49, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-19 B | File ID: | 01092381ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 13:10 |
| % Solids: | 77.15 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 16.24 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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* | *7.9814* | *7.42* | *92.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9814* | *5.79* | *72.5* | *44 - 120* | |

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

Data file 1: /230109.b/01092381ECD7.D
Data file 2: /230109.b/230109.b/01092381ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-19
Client ID:
Injection Date: 10-JAN-2023 13:10
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 204466 | 5.706 | -0.007 | 132885 | 29.0 | 27.6 | 4.8 | Tetrachloro-m-xylene |
| 13.901 | -0.007 | 323961 | 14.126 | -0.011 | 278955 | 37.2 | 38.7 | 3.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 497624 | 11.2 |
| Hexabromobiphenyl | 798898 | 950566 | 19.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 350693 | 40.8 |
| Hexabromobiphenyl | 362541 | 508153 | 40.2 |

* 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 | --- | | | 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) = 87042 Col1 Total PCB = 0.0 ppm*

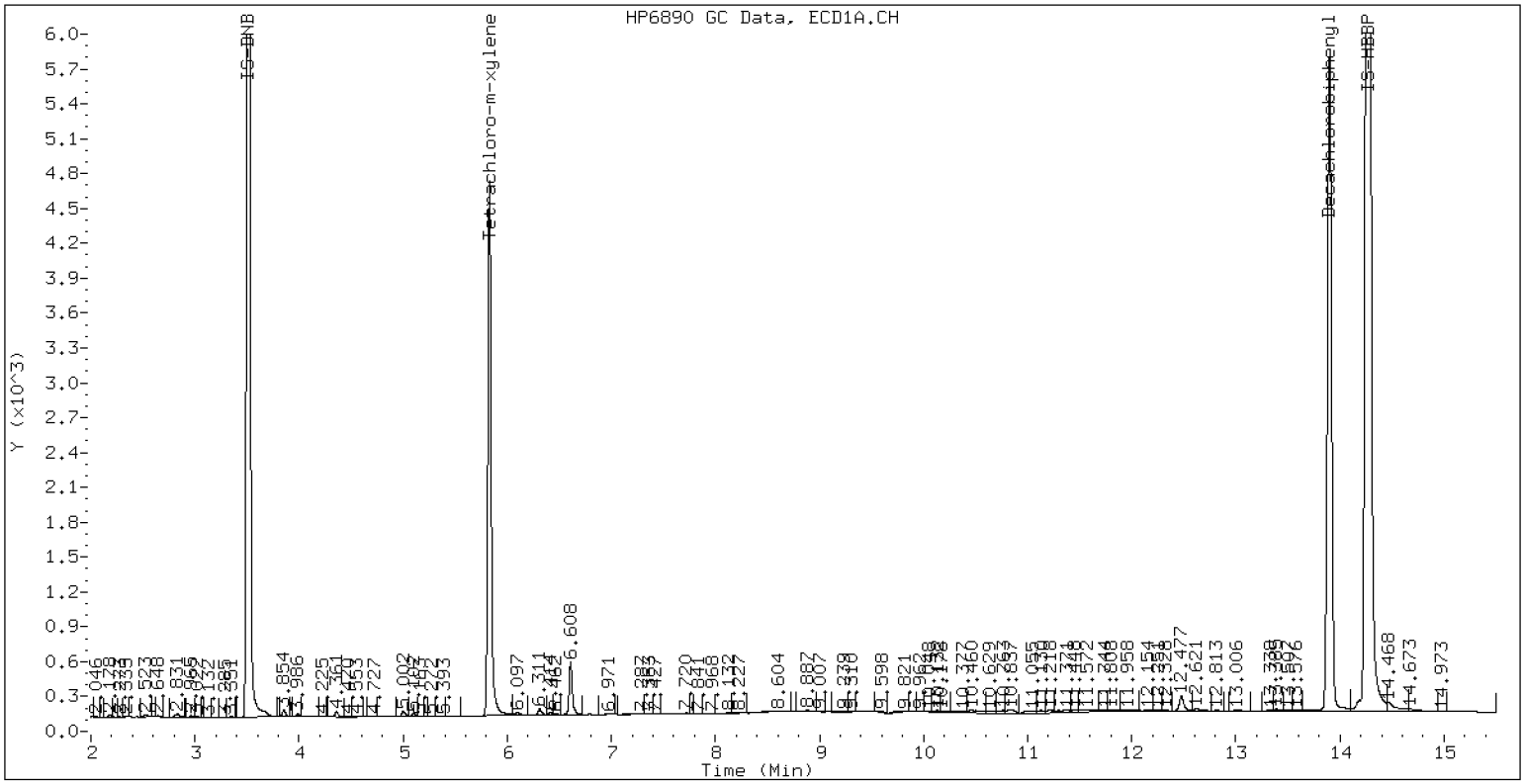
Total PCB Area Col2 (5.813 - 14.037) = 33900 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

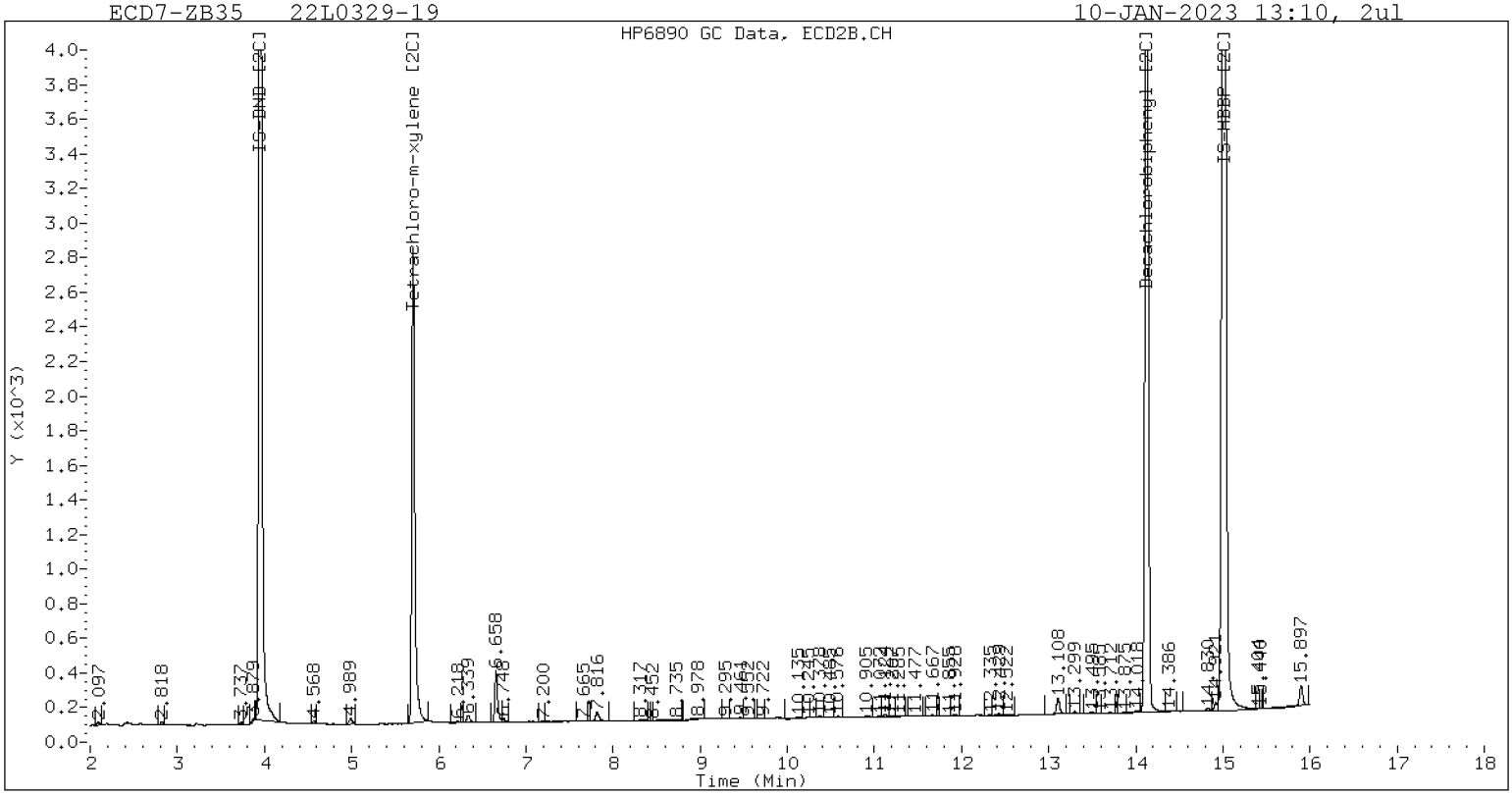
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-19 10-JAN-2023 13:10, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-19 10-JAN-2023 13:10, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791F**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-20 B | File ID: | 01092382ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 13:31 |
| % Solids: | 76.74 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 16.29 g Wet / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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* | *7.9994* | *6.90* | *86.2* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9994* | *5.61* | *70.1* | *44 - 120* | |

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

Data file 1: /230109.b/01092382ECD7.D
Data file 2: /230109.b/230109.b/01092382ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-20
Client ID:
Injection Date: 10-JAN-2023 13:31
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 196645 | 5.708 | -0.006 | 129067 | 28.0 | 26.5 | 5.8 | Tetrachloro-m-xylene |
| 13.901 | -0.006 | 319335 | 14.125 | -0.012 | 276082 | 34.5 | 36.6 | 6.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 494768 | 10.5 |
| Hexabromobiphenyl | 798898 | 1009765 | 26.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 355879 | 42.9 |
| Hexabromobiphenyl | 362541 | 530642 | 46.4 |

* 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 | --- | | | 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) = 51794 Col1 Total PCB = 0.0 ppm*

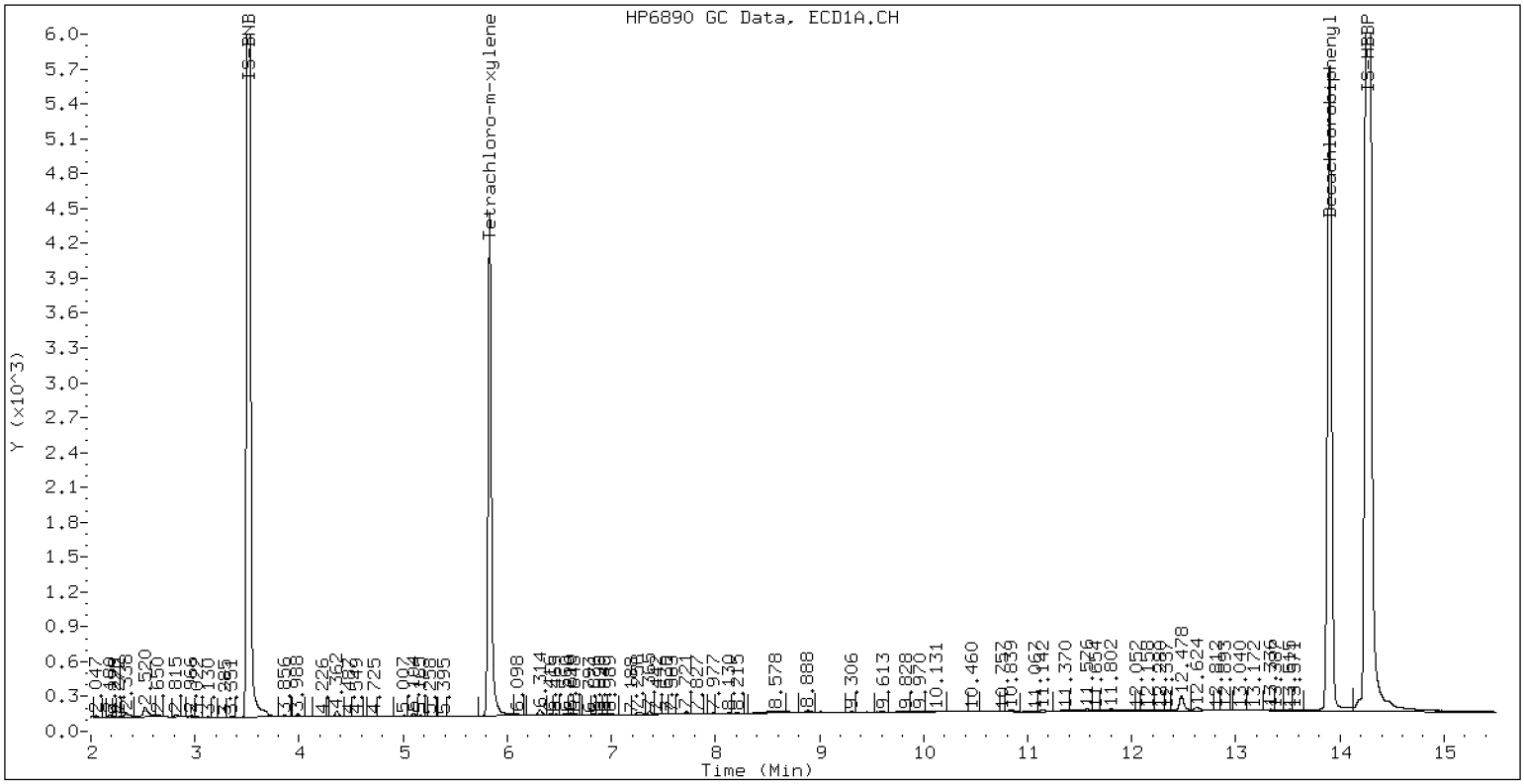
Total PCB Area Col2 (5.813 - 14.037) = 25594 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

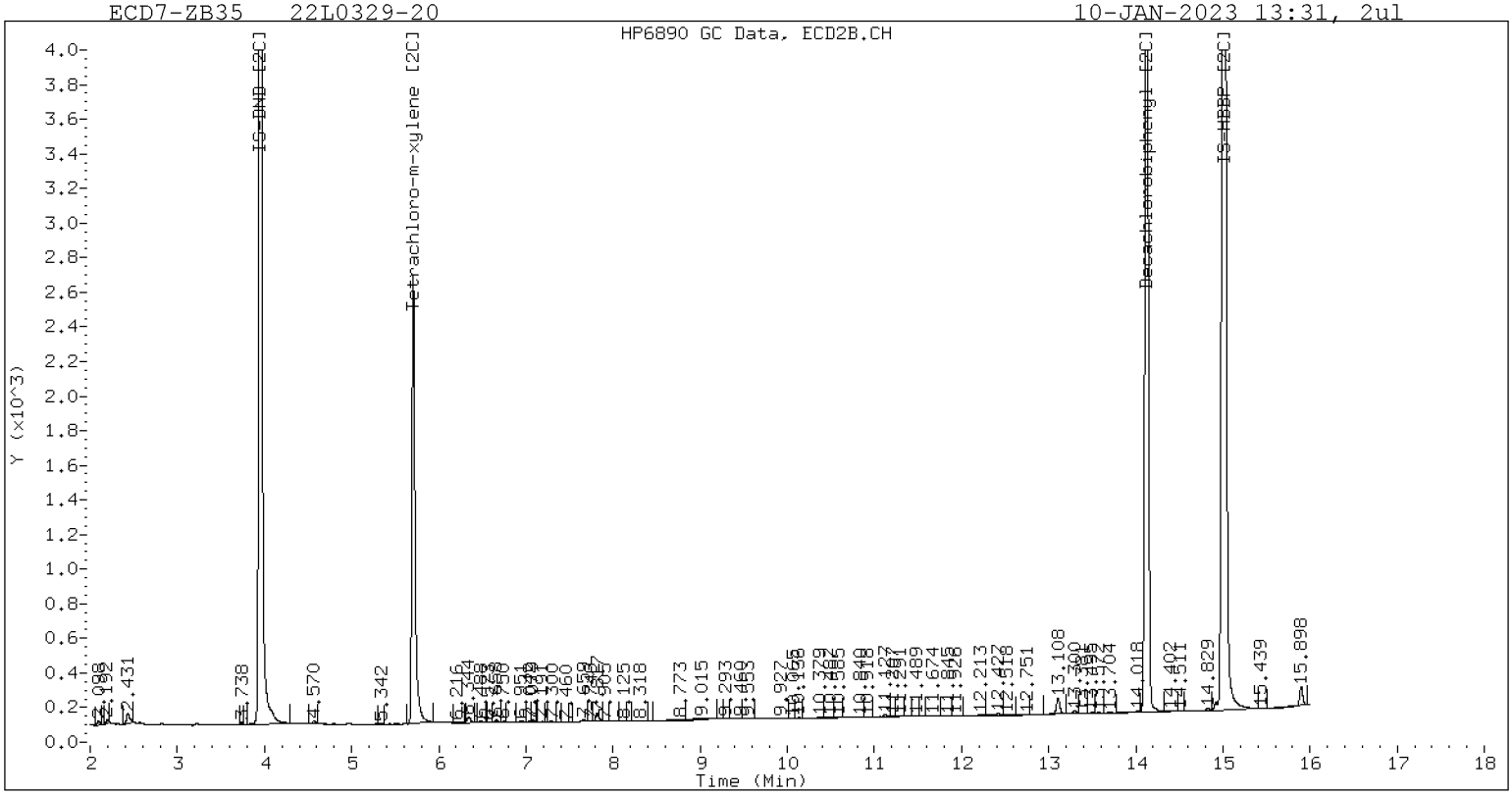
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-20 10-JAN-2023 13:31, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-20 10-JAN-2023 13:31, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-IT791G**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-21 B | File ID: | 01072379ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 13:01 |
| % Solids: | 73.54 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.06 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9707* | *7.93* | *99.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9707* | *6.30* | *79.1* | *44 - 120* | |

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

Data file 1: /230107.b/01072379ECD7.D
Data file 2: /230107.b/230107.b/01072379ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-21
Client ID:
Injection Date: 08-JAN-2023 13:01
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.004 | 223436 | 5.706 | -0.003 | 148159 | 31.6 | 31.0 | 2.0 | Tetrachloro-m-xylene |
| 13.898 | -0.005 | 341196 | 14.124 | -0.004 | 311010 | 39.8 | 37.9 | 4.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 498401 | 11.3 |
| Hexabromobiphenyl | 798898 | 935841 | 17.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 348497 | 39.9 |
| Hexabromobiphenyl | 362541 | 577473 | 59.3 |

* 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 | --- | | | 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 (5.933 - 13.804) = 151082 Col1 Total PCB = 0.0 ppm*

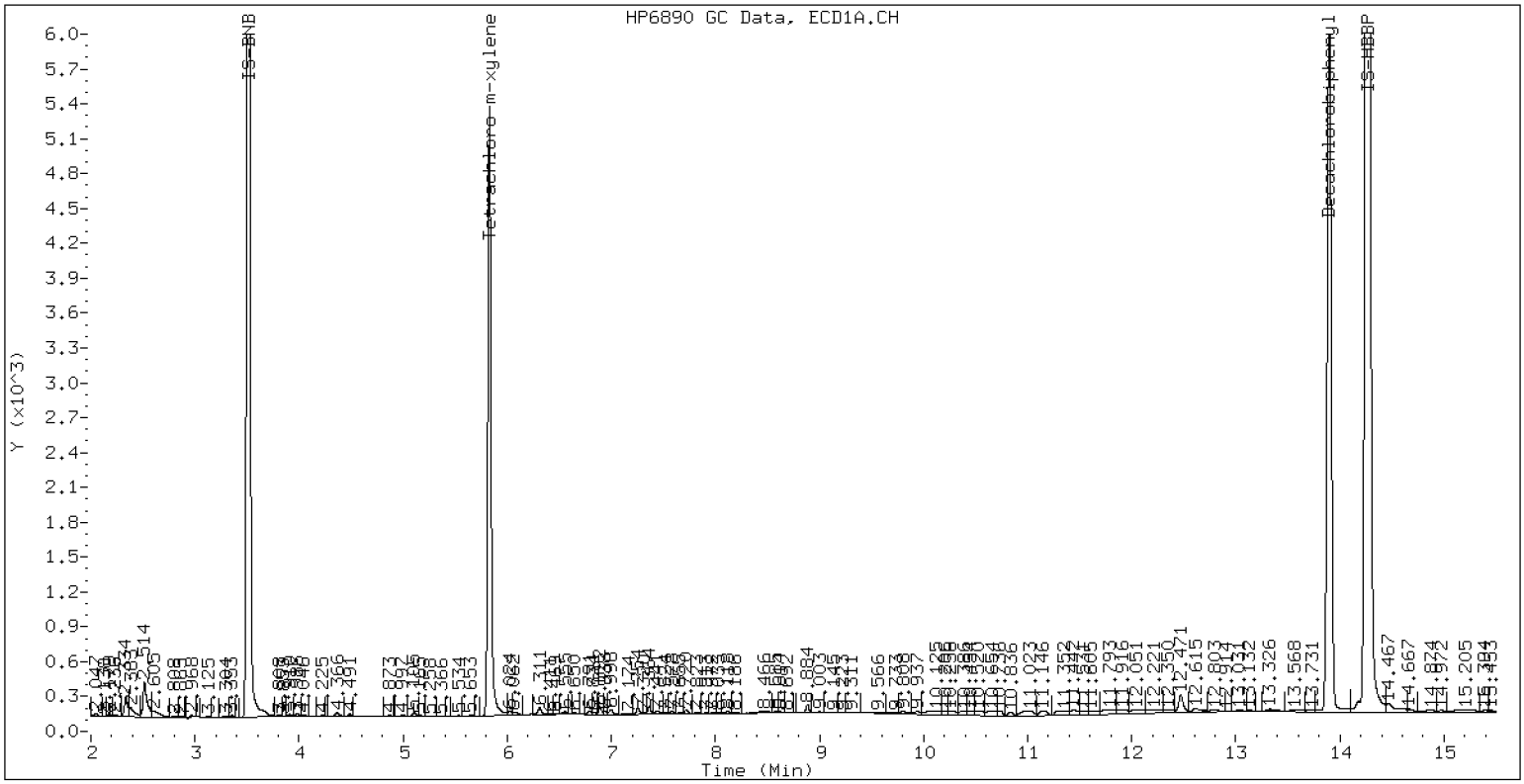
Total PCB Area Col2 (5.809 - 14.028) = 100413 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

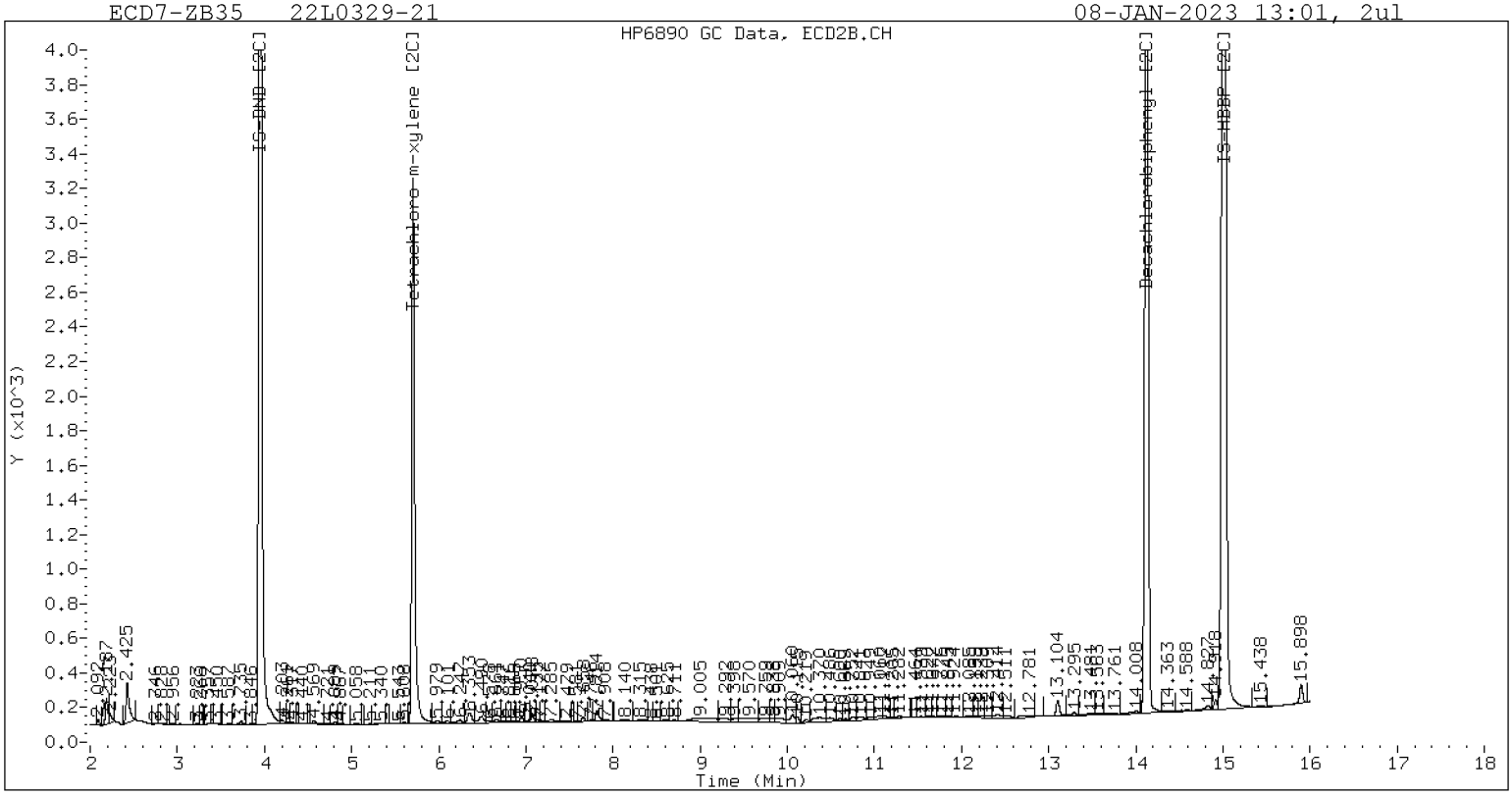
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-21 08-JAN-2023 13:01, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-21 08-JAN-2023 13:01, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-22 B | File ID: | 01072380ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 13:22 |
| % Solids: | 61.71 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 20.27 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 147 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 182 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 65.6 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9945* | *7.66* | *95.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9945* | *5.03* | *62.9* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9945* | *6.94* | *86.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9945* | *5.82* | *72.8* | *44 - 120* | |

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

Data file 1: /230107.b/01072380ECD7.D
Data file 2: /230107.b/230107.b/01072380ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-22
Client ID:
Injection Date: 08-JAN-2023 13:22
Report Date: 01/11/2023 16:05
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.825 | -0.007 | 175414 | 5.701 | -0.008 | 124050 | 25.2 | 29.1 | 14.6 | Tetrachloro-m-xylene |
| 13.894 | -0.010 | 190090 | 14.122 | -0.006 | 200036 | 38.3 | 34.7 | 9.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 491874 | 9.9 |
| Hexabromobiphenyl | 798898 | 541016 | -32.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 310730 | 24.7 |
| Hexabromobiphenyl | 362541 | 405517 | 11.9 |

* 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-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 | 8.410 | -0.015 | 105304 | 497.9 | 1 | 8.311 | -0.011 | 106500 | 839.0 |
| Aroclor-1248 | 2 | 8.579 | -0.024 | 71740 | 265.7 | 2 | 8.716 | -0.012 | 74896 | 561.0 |
| Aroclor-1248 | 3 | 8.996 | -0.023 | 324896 | 668.8 | 3 | 9.149 | -0.030 | 108675 | 669.2 |
| Aroclor-1248 | 4 | 9.299 | -0.014 | 361070 | 1517.2 | 4 | 9.541 | -0.061 | 166719 | 874.5 |
| | Total Col1Ave (4 peaks): | | | | 737.4 | Total Col2Ave (4 peaks): | | | | 735.9 RPD = 0 |
| | Corrected Ave (3 peaks): | | | | 477.5 | Corrected Ave (3 peaks): | | | | 689.7 RPD = 36 |
| Aroclor-1254 | 1 | 9.299 | -0.017 | 361070 | 833.7 | 1 | 9.449 | -0.012 | 212901 | 1062.7 |
| Aroclor-1254 | 2 | 9.373 | -0.021 | 169169 | 1004.4 | 2 | 9.966 | -0.015 | 90790 | 563.7 |
| Aroclor-1254 | 3 | 9.667 | -0.018 | 197961 | 723.7 | 3 | 10.114 | -0.020 | 382256 | 1104.1 |
| Aroclor-1254 | 4 | 9.799 | -0.025 | 510323 | 957.1 | 4 | 10.358 | -0.025 | 209041 | 583.0 |
| Aroclor-1254 | 5 | 10.139 | -0.052 | 274539 | 751.2 | 5 | 10.564 | -0.014 | 212360 | 1228.0 |
| | Total Col1Ave (5 peaks): | | | | 854.0 | Total Col2Ave (5 peaks): | | | | 908.3 RPD = 6 |
| | Corrected Ave (4 peaks): | | | | 816.4 | Corrected Ave (4 peaks): | | | | 828.4 RPD = 1 |
| Aroclor-1260 | 1 | 11.042 | -0.017 | 68593 | 348.3 | 1 | 11.652 | -0.011 | 109363 | 510.9 |
| Aroclor-1260 | 2 | 11.358 | -0.018 | 55741 | 273.7 | 2 | 11.914 | -0.014 | 138925 | 258.6 |
| Aroclor-1260 | 3 | 11.729 | -0.020 | 147732 | 276.0 | 3 | 12.433 | -0.013 | 39413 | 275.6 |
| Aroclor-1260 | 4 | 12.129 | -0.025 | 89439 | 328.2 | 4 | 12.496 | -0.015 | 96189 | 268.6 |
| Aroclor-1260 | 5 | 12.243 | -0.015 | 33407 | 299.4 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 305.1 | Total Col2Ave (4 peaks): | | | | 328.4 RPD = 7 |
| | Corrected Ave (4 peaks): | | | | 294.3 | Corrected Ave (3 peaks): | | | | 267.6 RPD = 10 |
| 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 (5.932 - 13.803) = 5984927 Col1 Total PCB = 1.3 ppm*

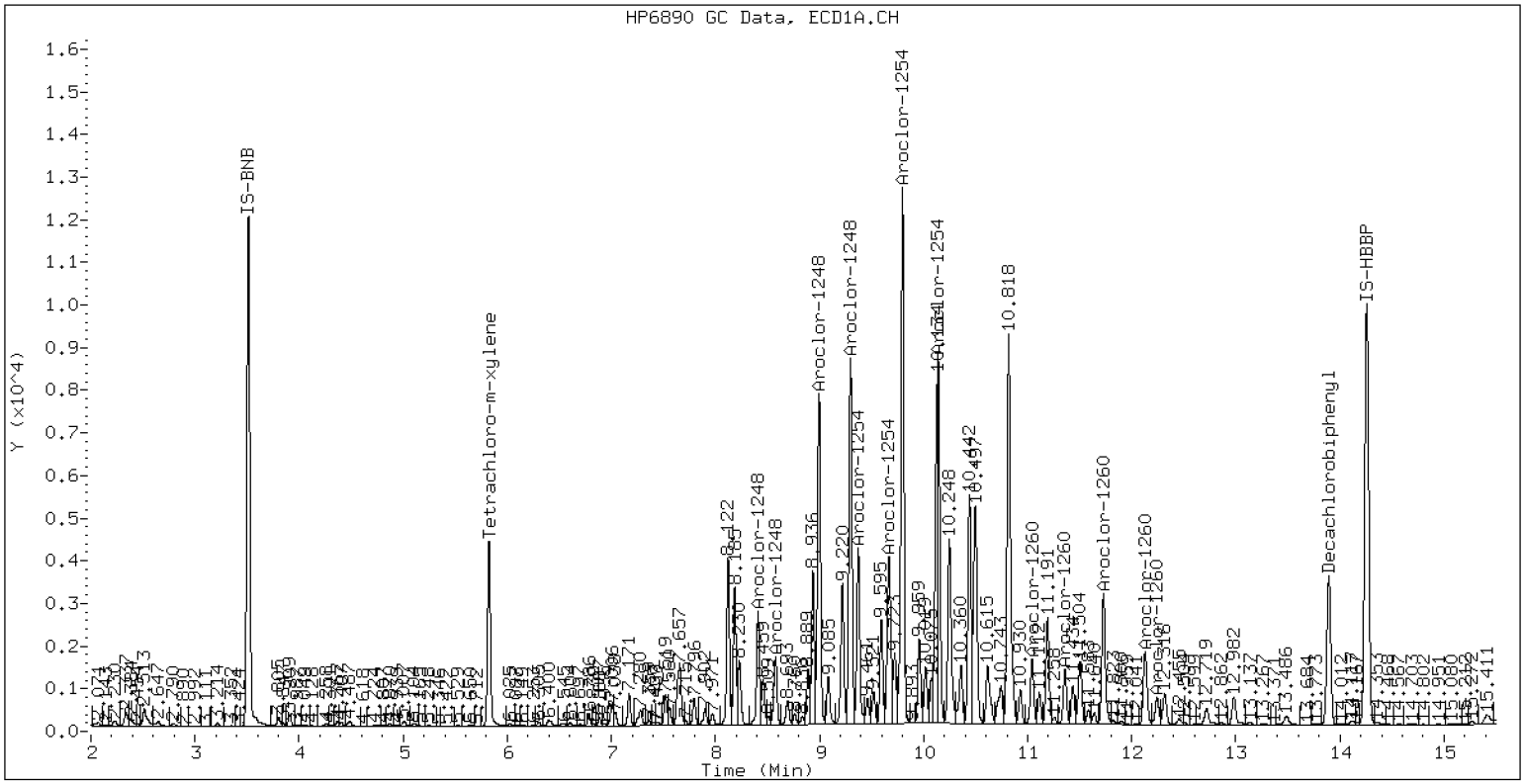
Total PCB Area Col2 (5.809 - 14.028) = 4551865 Col2 Total PCB = 1.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

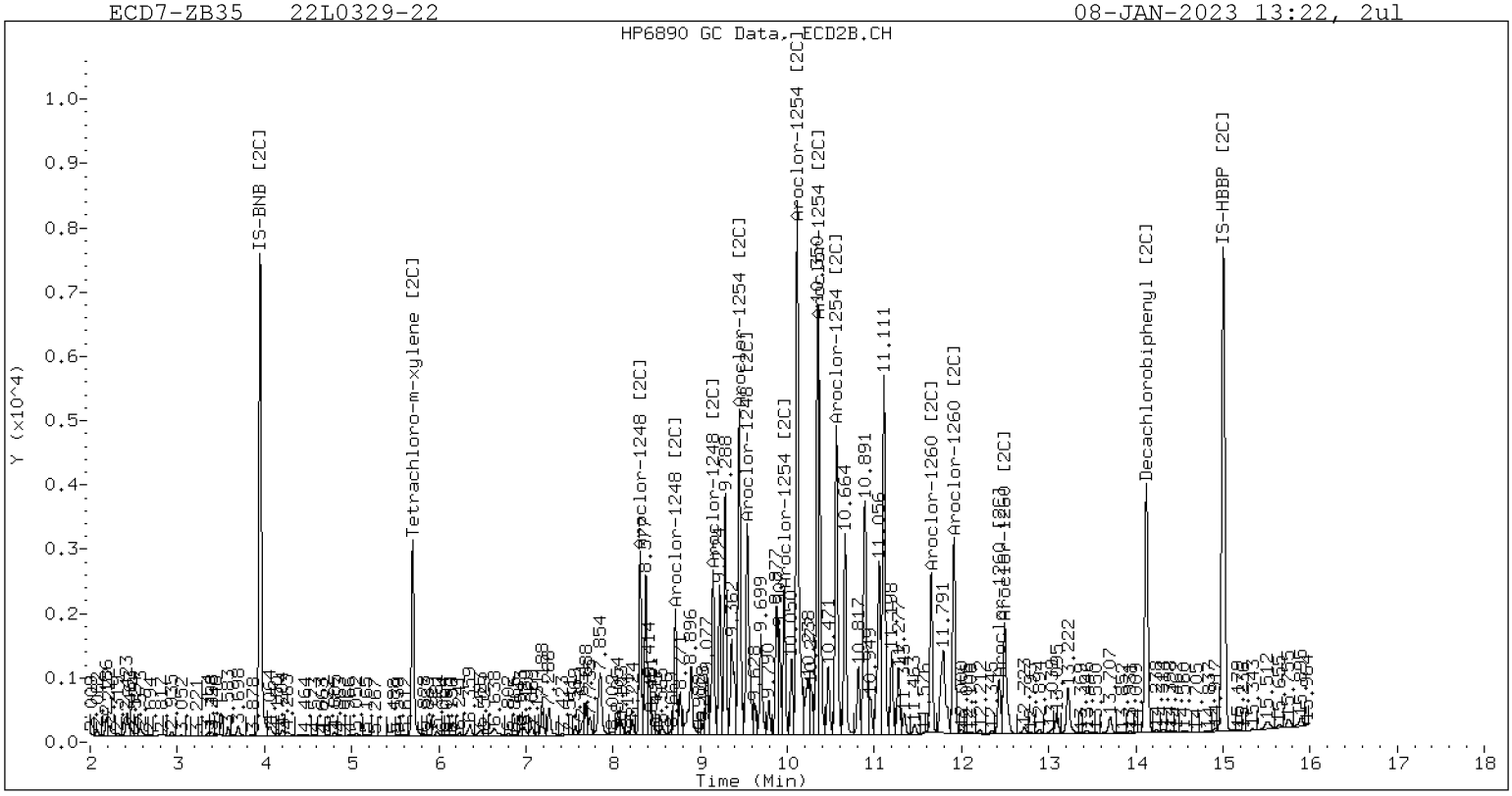
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-22 08-JAN-2023 13:22, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-22 08-JAN-2023 13:22, 2ul

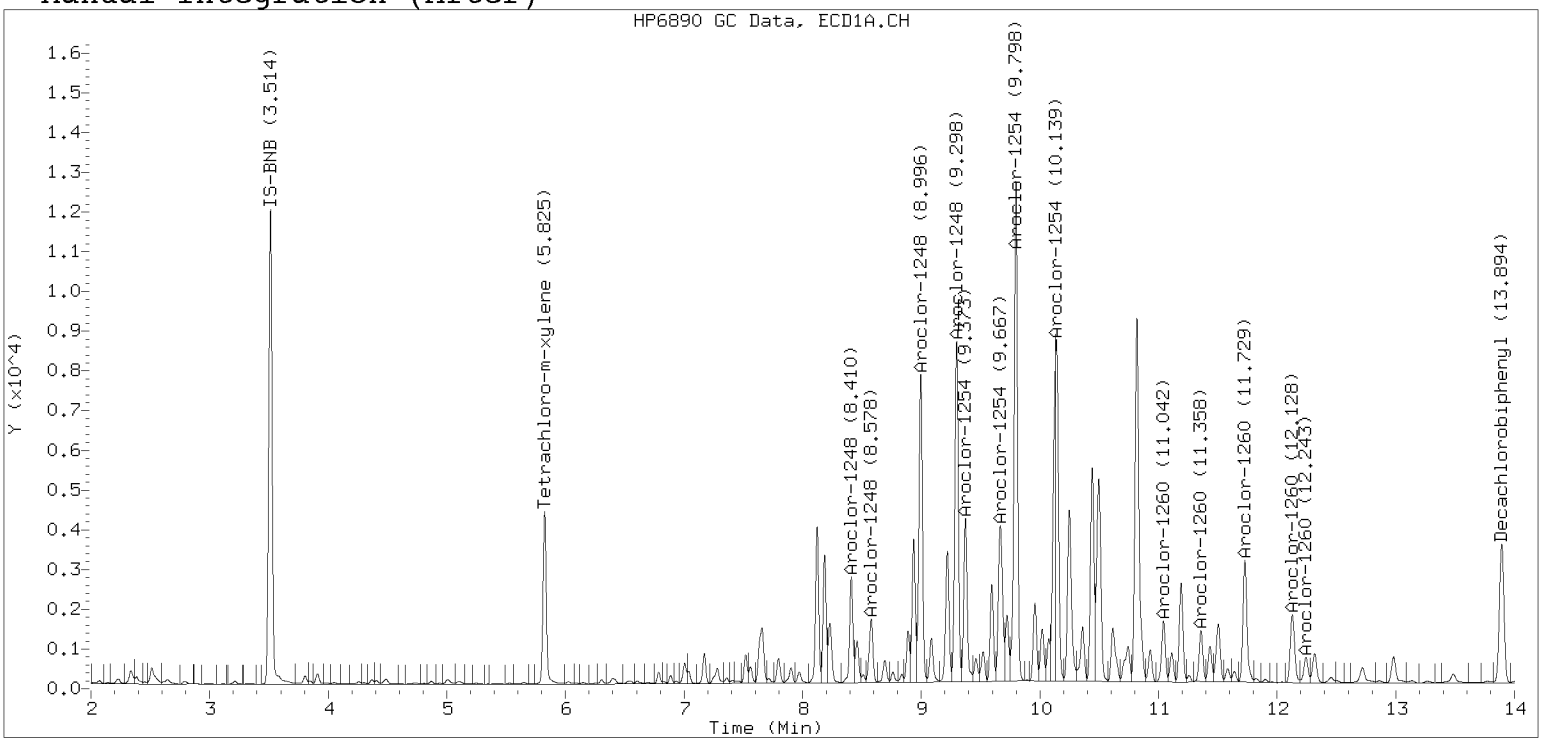



ZB-35 Manual Integration: YES

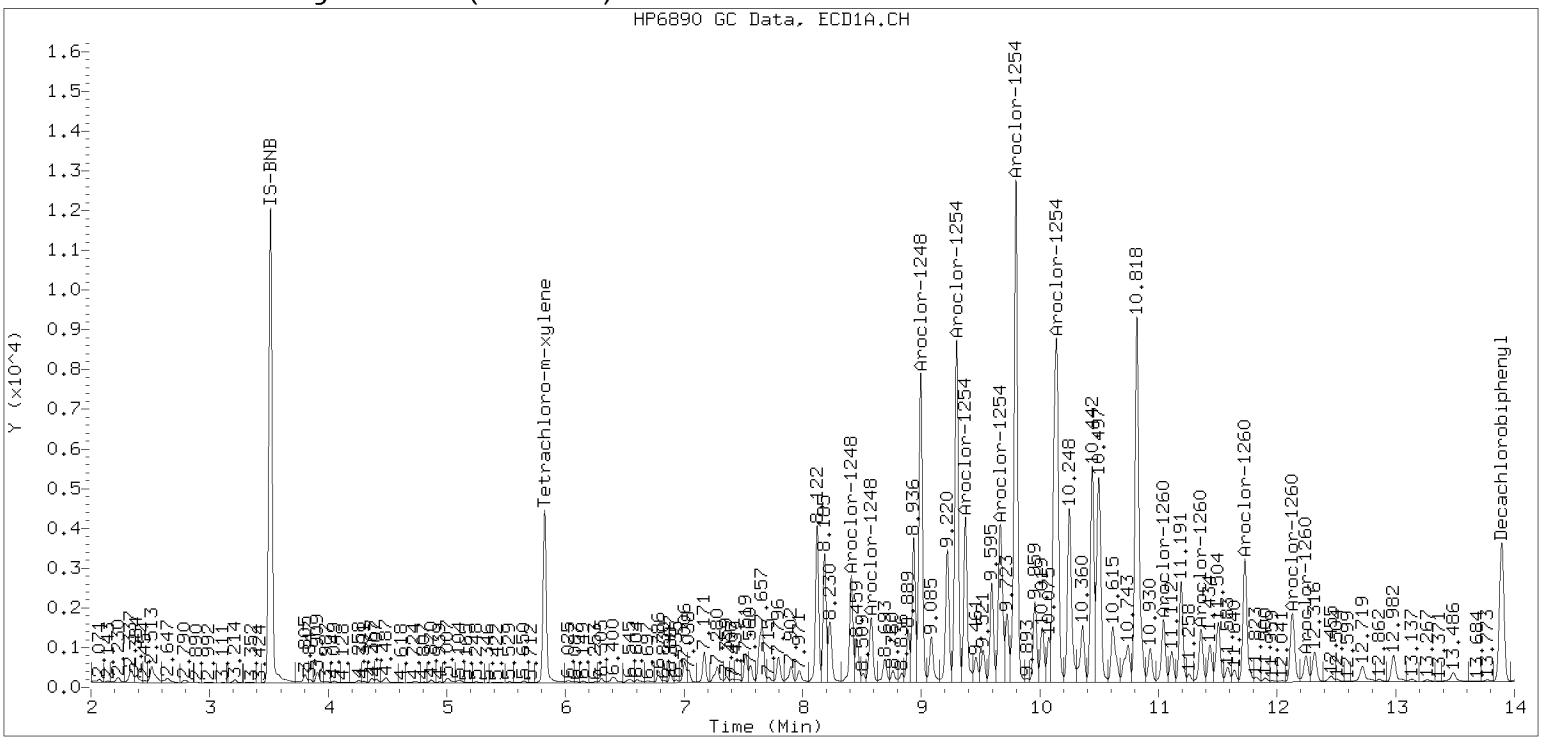
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072380ECD7.D  Injection Date: 08-JAN-2023 13:22

Manual Integration (After)



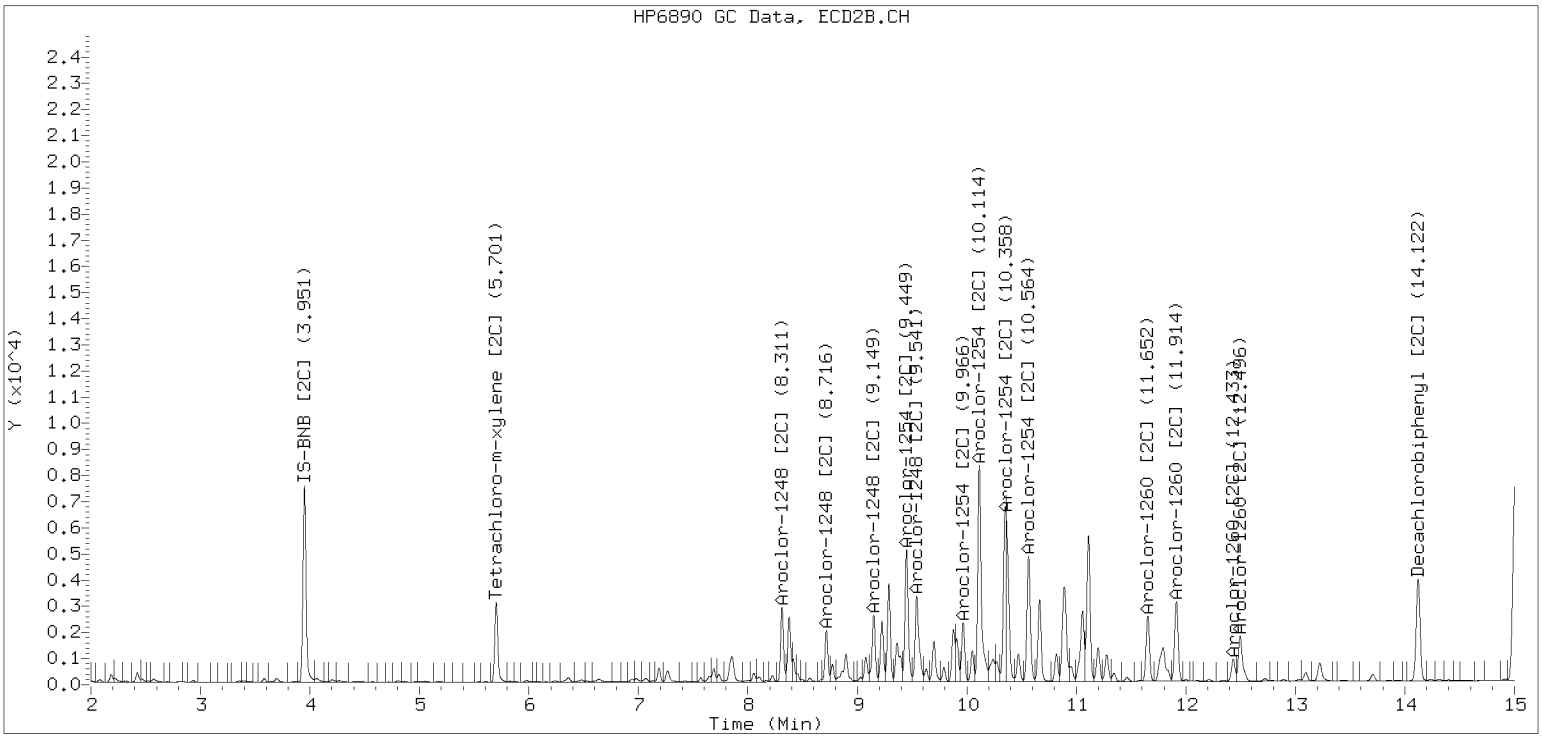

Processed Integration (Before)



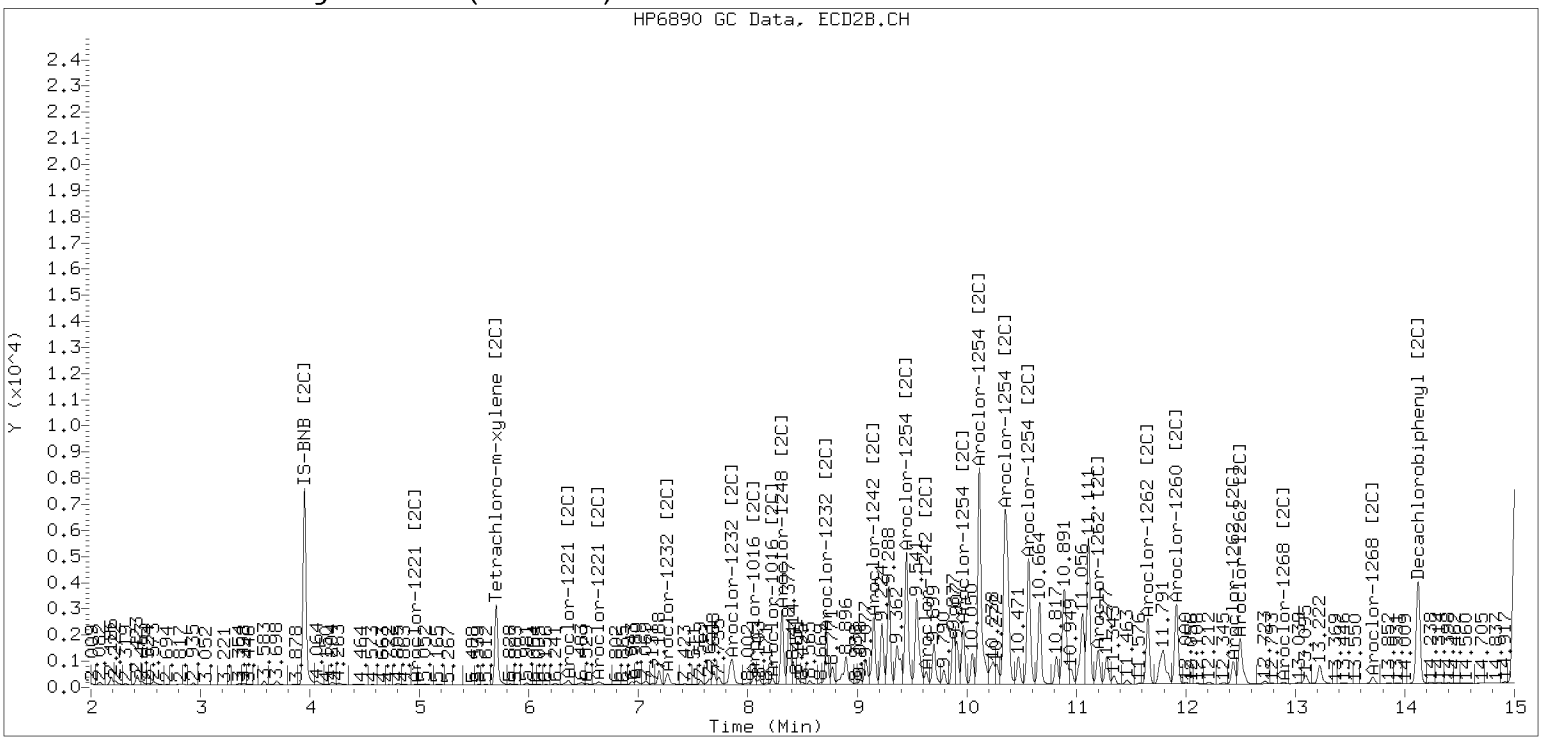
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072380ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-23 B | File ID: | 01072381ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 13:44 |
| % Solids: | 59.09 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 21.29 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 2 | 1 | 170 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 1 | 1 | 192 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 96.8 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9490* | *7.51* | *94.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9490* | *4.75* | *59.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9490* | *6.93* | *87.2* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9490* | *5.60* | *70.4* | *44 - 120* | |

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

Data file 1: /230107.b/01072381ECD7.D
Data file 2: /230107.b/230107.b/01072381ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-23
Client ID:
Injection Date: 08-JAN-2023 13:44
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.824 | -0.009 | 156448 | 5.700 | -0.009 | 112360 | 23.9 | 28.2 | 16.5 | Tetrachloro-m-xylene |
| 13.893 | -0.011 | 170563 | 14.121 | -0.007 | 182360 | 37.8 | 34.9 | 8.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 462334 | 3.3 |
| Hexabromobiphenyl | 798898 | 492534 | -38.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 290895 | 16.8 |
| Hexabromobiphenyl | 362541 | 368321 | 1.6 |

* 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 | --- | | | 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 | 8.410 | -0.015 | 65013 | 327.0 | 1 | 8.311 | -0.012 | 202857 | 1707.0 |
| Aroclor-1248 | 2 | 8.577 | -0.026 | 43799 | 172.6 | 2 | 8.714 | -0.014 | 59695 | 477.6 |
| Aroclor-1248 | 3 | 8.998 | -0.021 | 374663 | 820.6 | 3 | 9.148 | -0.030 | 57629 | 379.0 |
| Aroclor-1248 | 4 | 9.298 | -0.015 | 259891 | 1161.9 | 4 | 9.540 | -0.062 | 112918 | ~~632.7~~ |
| | | Total Col1Ave (4 peaks): | | | 620.5 | | Total Col2Ave (4 peaks): | | | 799.1 RPD = 25 |
| | | Corrected Ave (3 peaks): | | | 440.1 | | Corrected Ave (3 peaks): | | | 496.4 RPD = 12 |
| | | | | | | | | | | 854.53 |
| Aroclor-1254 | 1 | 9.298 | -0.013 | 259891 | 638.4 | 1 | 9.447 | -0.014 | 162801 | 868.0 |
| Aroclor-1254 | 2 | 9.372 | -0.015 | 139749 | 882.7 | 2 | 9.965 | -0.015 | 49444 | 327.9 |
| Aroclor-1254 | 3 | 9.672 | -0.006 | 148729 | 578.5 | 3 | 10.113 | -0.020 | 268040 | 827.0 |
| Aroclor-1254 | 4 | 9.798 | -0.016 | 481074 | 959.9 | 4 | 10.367 | -0.015 | 451847 | 1346.1 |
| Aroclor-1254 | 5 | 10.124 | -0.044 | 604983 | 1761.0 | 5 | 10.563 | -0.015 | 181979 | 1124.0 |
| | | Total Col1Ave (5 peaks): | | | 964.1 | | Total Col2Ave (5 peaks): | | | 898.6 RPD = 7 |
| | | Corrected Ave (4 peaks): | | | 764.9 | | Corrected Ave (4 peaks): | | | 786.7 RPD = 3 |
| Aroclor-1260 | 1 | 11.043 | -0.017 | 137775 | 768.5 | 1 | 11.652 | -0.011 | 100363 | 516.2 |
| Aroclor-1260 | 2 | 11.358 | -0.017 | 75293 | 406.1 | 2 | 11.913 | -0.016 | 143950 | 295.1 |
| Aroclor-1260 | 3 | 11.728 | -0.023 | 156684 | 321.6 | 3 | 12.431 | -0.014 | 67434 | 519.1 |
| Aroclor-1260 | 4 | 12.127 | -0.026 | 81729 | 329.4 | 4 | 12.495 | -0.016 | 110003 | 338.2 |
| Aroclor-1260 | 5 | 12.243 | -0.013 | 62021 | 610.6 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 487.2 | | Total Col2Ave (4 peaks): | | | 417.1 RPD = 15 |
| | | Corrected Ave (4 peaks): | | | 416.9 | | Corrected Ave (3 peaks): | | | 383.2 RPD = 8 |
| 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 (5.933 - 13.804) = 5803058 Col1 Total PCB = 1.3 ppm*

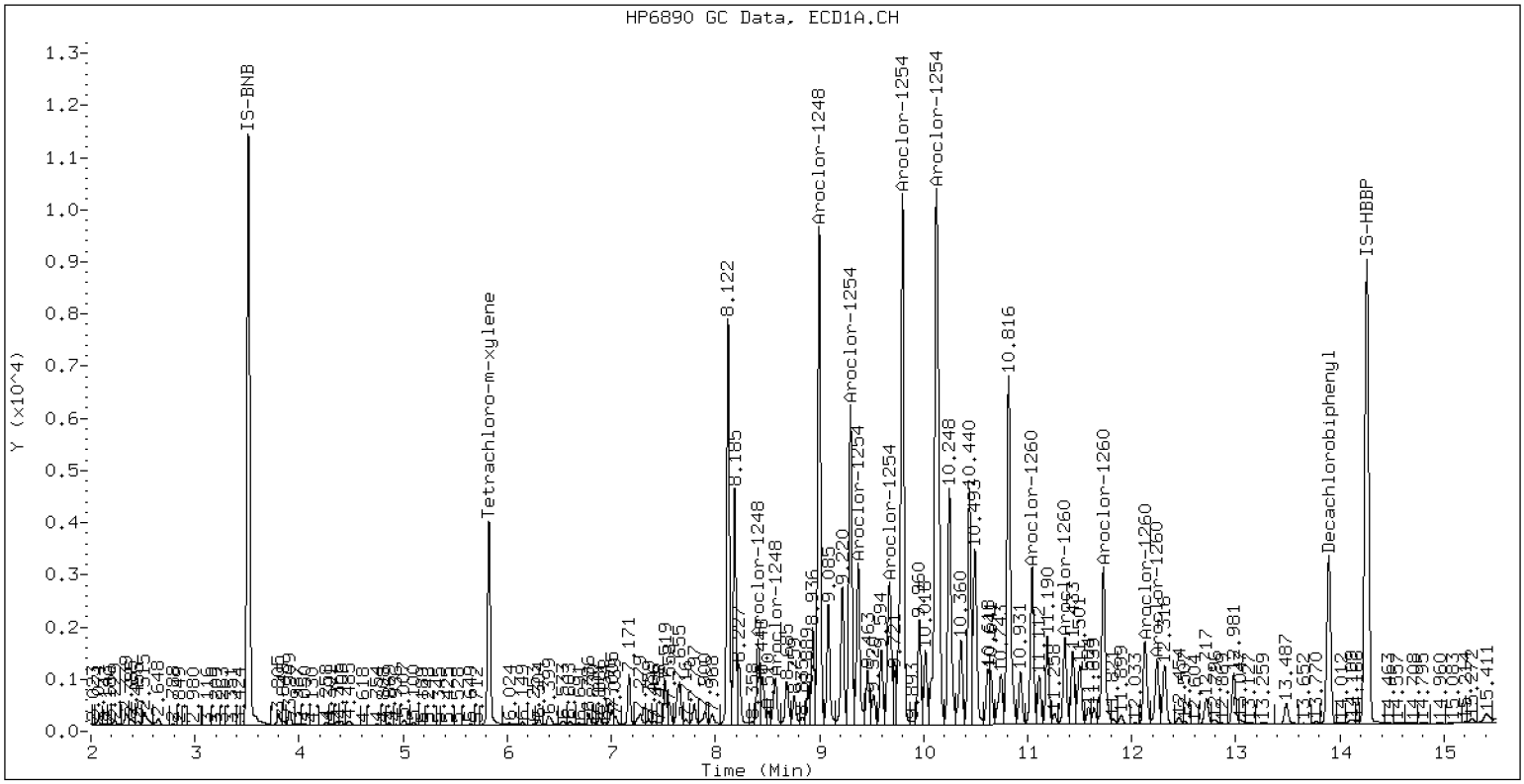
Total PCB Area Col2 (5.809 - 14.028) = 4394760 Col2 Total PCB = 1.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

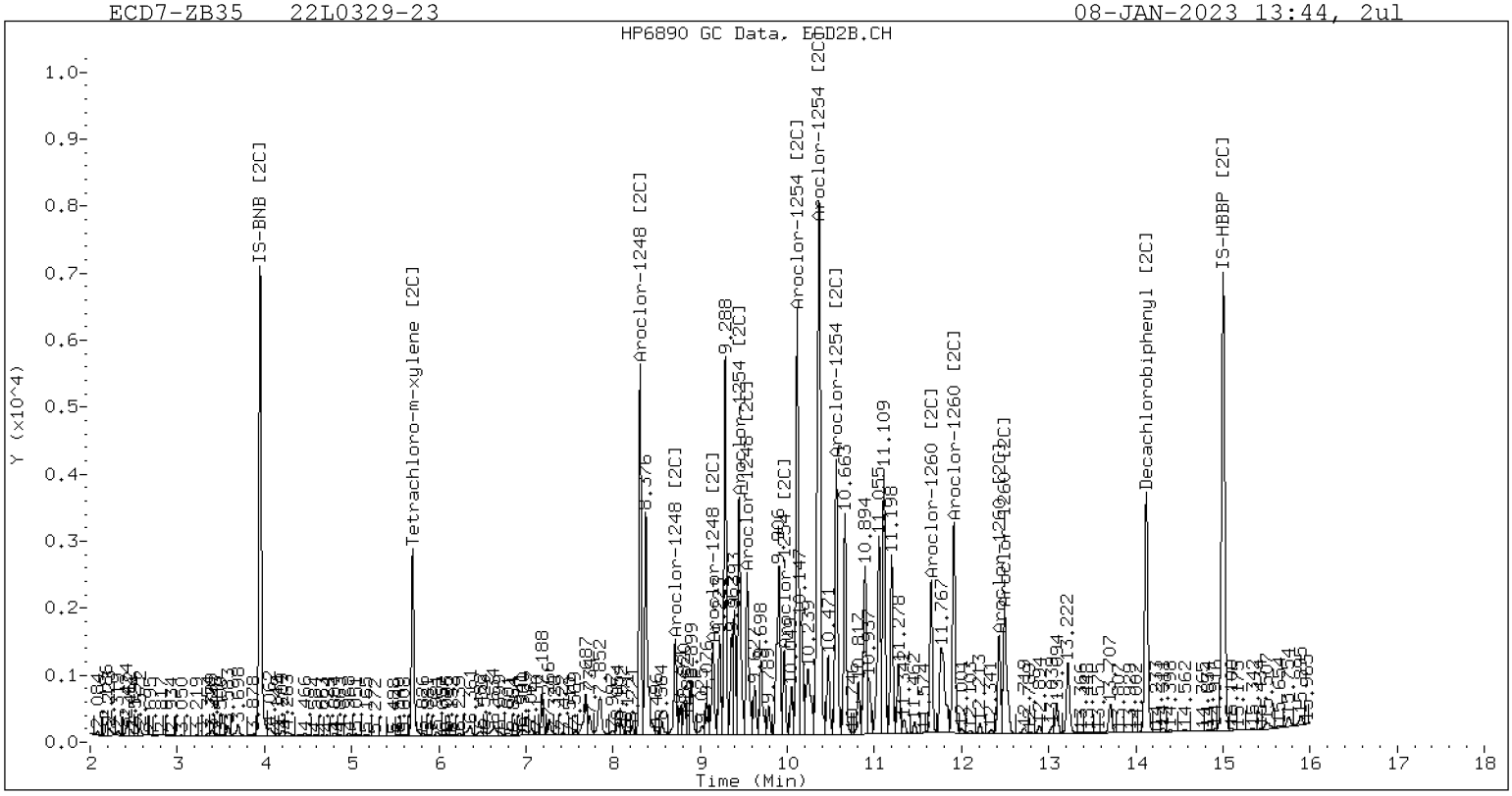
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-23 08-JAN-2023 13:44, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-23 08-JAN-2023 13:44, 2ul

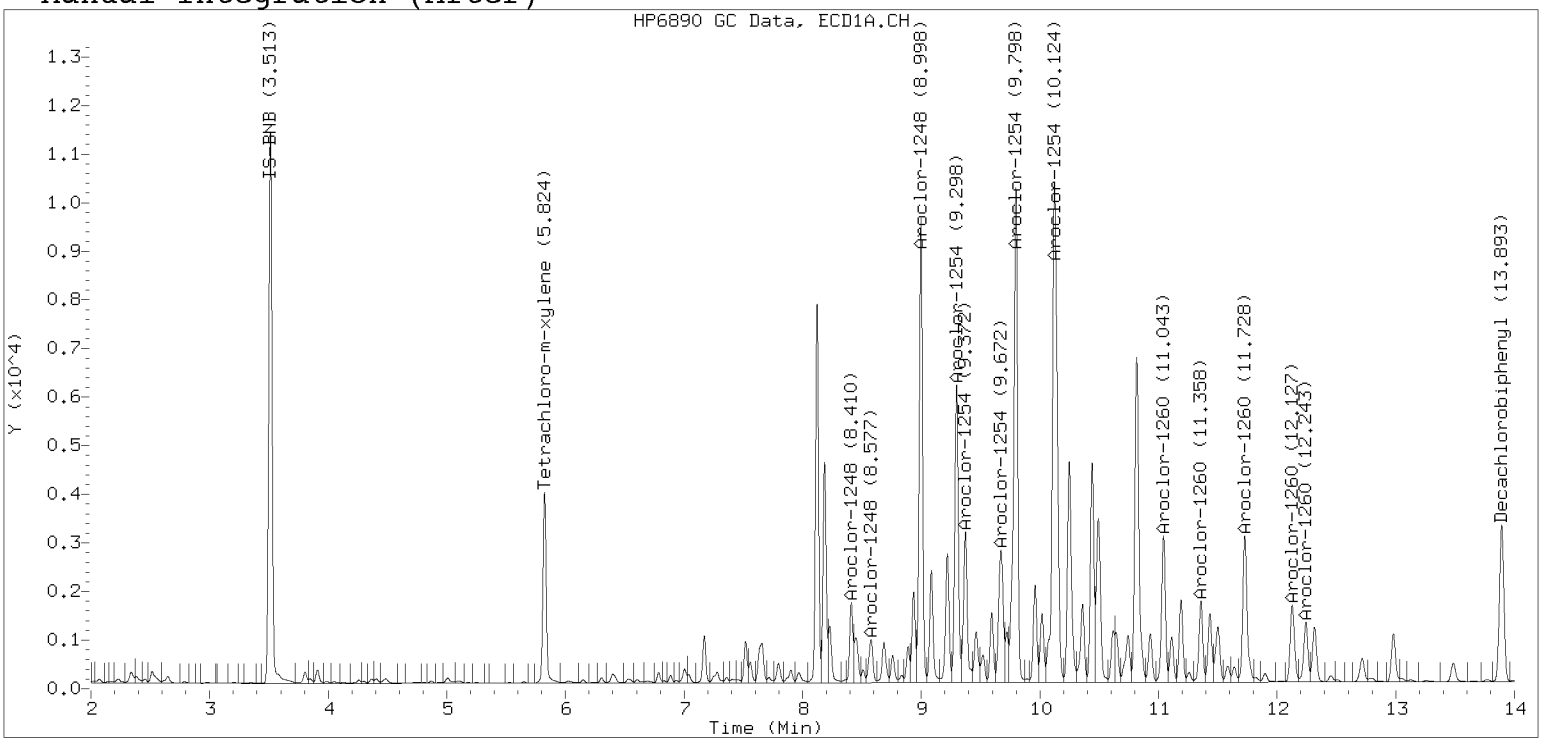



ZB-35 Manual Integration: YES

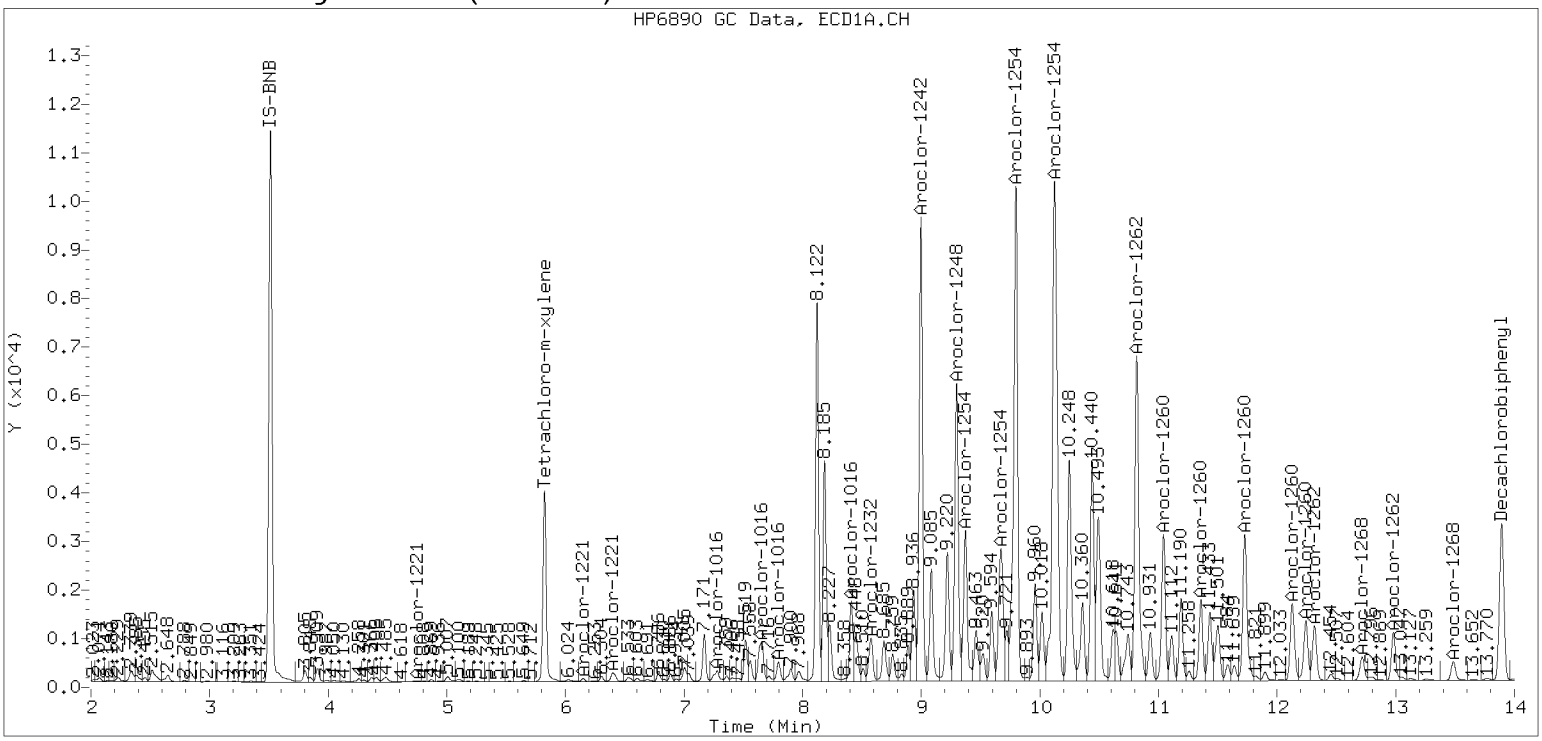
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072381ECD7.D  Injection Date: 08-JAN-2023 13:44

Manual Integration (After)



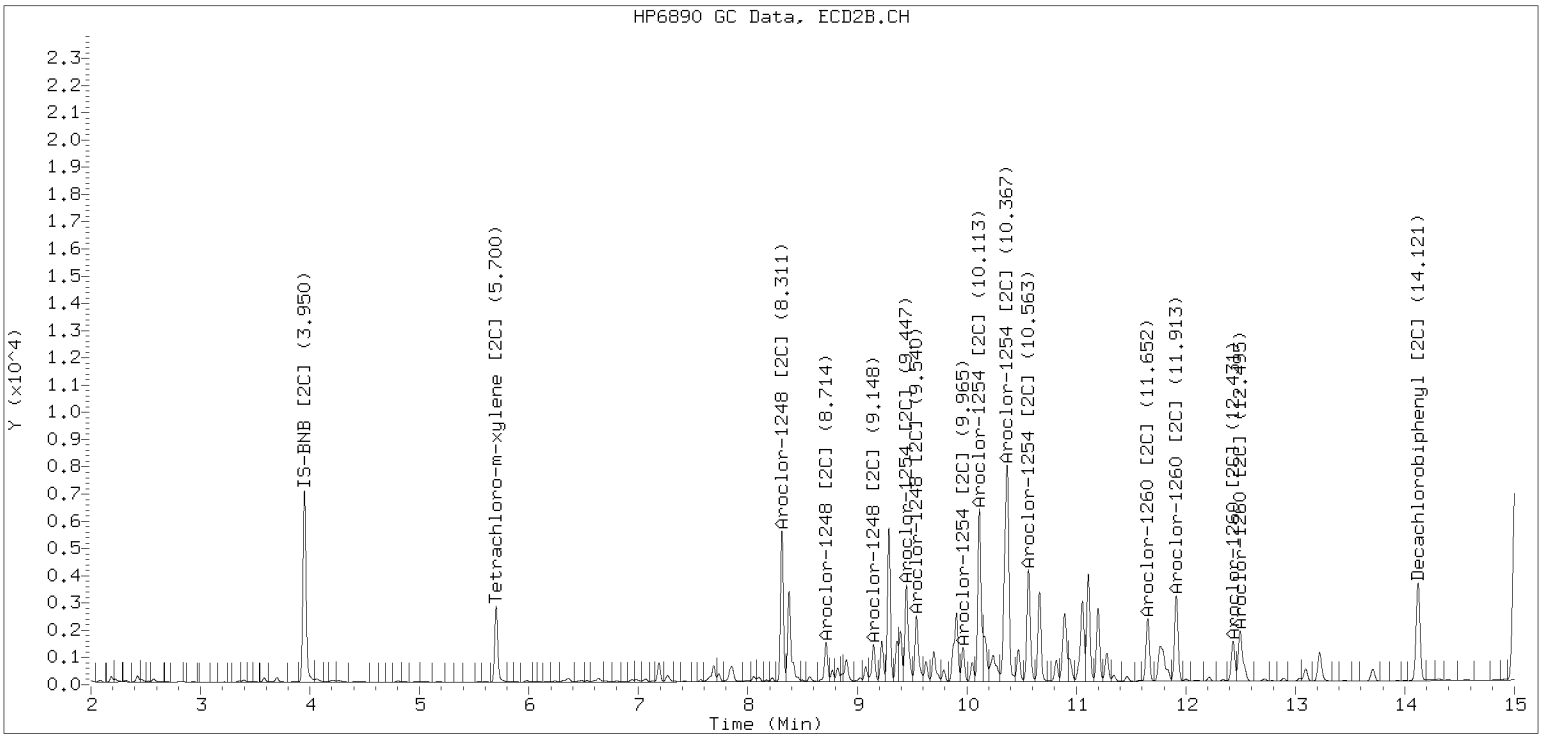

Processed Integration (Before)



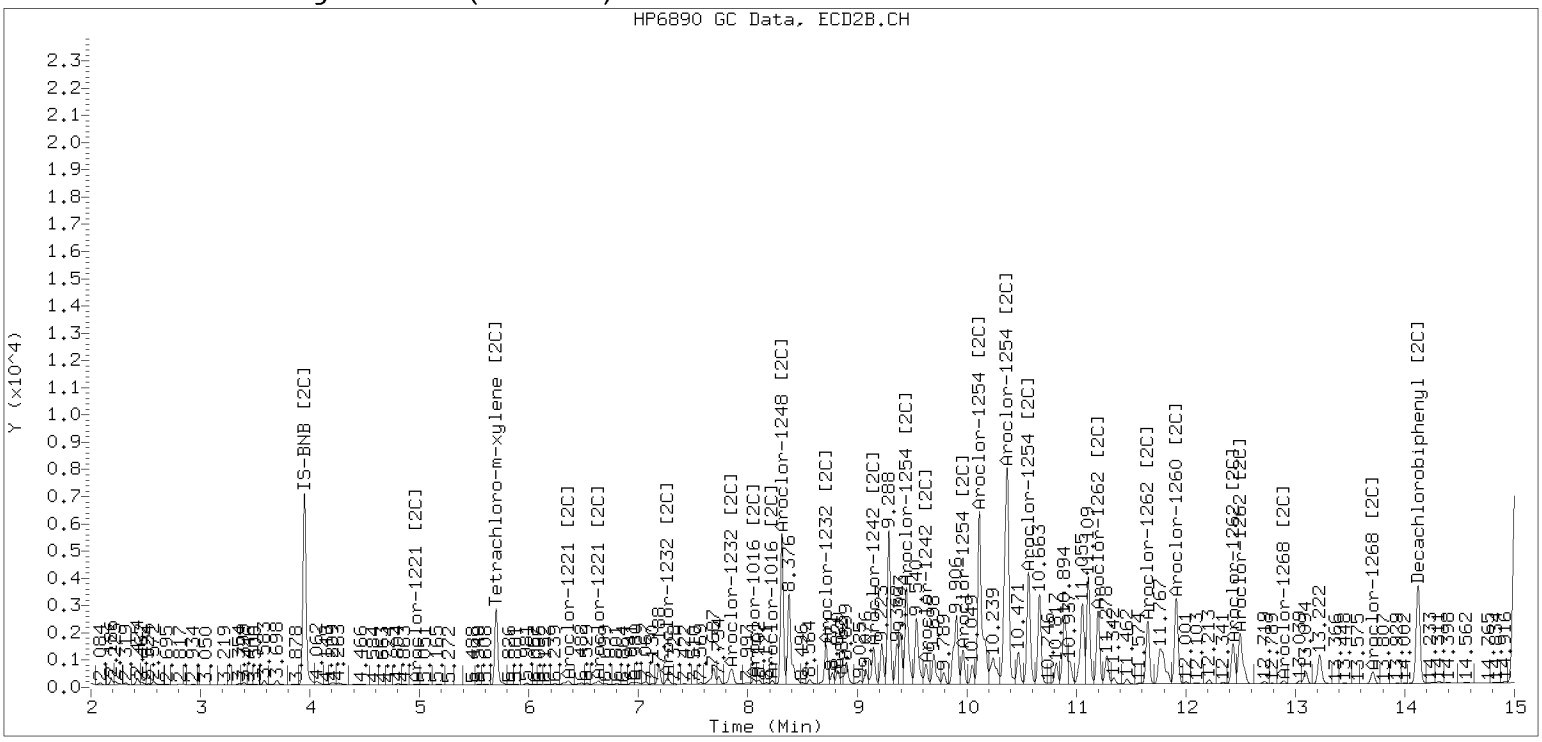
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072381ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-24 B | File ID: | 01072382ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 14:05 |
| % Solids: | 60.77 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 20.64 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 133 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 177 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 90.3 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9726* | *7.55* | *94.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9726* | *4.37* | *54.8* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9726* | *6.99* | *87.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9726* | *5.27* | *66.1* | *44 - 120* | |

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

Data file 1: /230107.b/01072382ECD7.D
Data file 2: /230107.b/230107.b/01072382ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-24
Client ID:
Injection Date: 08-JAN-2023 14:05
Report Date: 01/11/2023 16:05
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.824 | -0.008 | 149023 | 5.701 | -0.008 | 107689 | 21.9 | 26.4 | 18.7 | Tetrachloro-m-xylene |
| 13.894 | -0.010 | 161711 | 14.121 | -0.007 | 175521 | 37.9 | 35.1 | 7.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 479626 | 7.1 |
| Hexabromobiphenyl | 798898 | 465432 | -41.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 297114 | 19.3 |
| Hexabromobiphenyl | 362541 | 352294 | -2.8 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col 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 | 8.409 | -0.016 | 90485 | 438.8 | 1 | 8.310 | -0.012 | 103235 | 850.5 |
| Aroclor-1248 | 2 | 8.577 | -0.026 | 63800 | 242.3 | 2 | 8.716 | -0.012 | 68009 | 532.7 |
| Aroclor-1248 | 3 | 8.994 | -0.025 | 285907 | 603.6 | 3 | 9.148 | -0.031 | 88532 | 570.1 |
| Aroclor-1248 | 4 | 9.297 | -0.016 | 321610 | 1385.9 | 4 | 9.540 | -0.062 | 153477 | 841.9 |
| | Total Col1Ave (4 peaks): | | | | 667.7 | Total Col2Ave (4 peaks): | | | | 698.8 RPD = 5 |
| | Corrected Ave (3 peaks): | | | | 428.2 | Corrected Ave (3 peaks): | | | | 648.3 RPD = 41* |
| | | | | | | | | | | 651.1 |
| Aroclor-1254 | 1 | 9.297 | -0.018 | 321610 | 761.6 | 1 | 9.447 | -0.014 | 193391 | 1009.5 |
| Aroclor-1254 | 2 | 9.372 | -0.022 | 166099 | 1011.4 | 2 | 9.966 | -0.015 | 67923 | 441.0 |
| Aroclor-1254 | 3 | 9.673 | -0.012 | 207936 | 779.6 | 3 | 10.114 | -0.019 | 362311 | 1094.4 |
| Aroclor-1254 | 4 | 9.797 | -0.027 | 475236 | 914.1 | 4 | 10.358 | -0.025 | 199147 | 580.9 |
| Aroclor-1254 | 5 | 10.136 | -0.055 | 481755 | 1351.8 | 5 | 10.563 | -0.015 | 216637 | 1310.1 |
| | Total Col1Ave (5 peaks): | | | | 963.7 | Total Col2Ave (5 peaks): | | | | 887.2 RPD = 8 |
| | Corrected Ave (4 peaks): | | | | 866.7 | Corrected Ave (4 peaks): | | | | 781.5 RPD = 10 |
| Aroclor-1260 | 1 | 11.043 | -0.016 | 90934 | 536.7 | 1 | 11.651 | -0.012 | 114107 | 613.6 |
| Aroclor-1260 | 2 | 11.358 | -0.017 | 70697 | 403.5 | 2 | 11.913 | -0.015 | 172991 | 370.7 |
| Aroclor-1260 | 3 | 11.728 | -0.021 | 184301 | 400.3 | 3 | 12.432 | -0.013 | 54148 | 435.8 |
| Aroclor-1260 | 4 | 12.127 | -0.026 | 103110 | 439.8 | 4 | 12.495 | -0.017 | 121947 | 392.0 |
| Aroclor-1260 | 5 | 12.242 | -0.015 | 45824 | 477.4 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 451.5 | Total Col2Ave (4 peaks): | | | | 453.0 RPD = 0 |
| | Corrected Ave (4 peaks): | | | | 430.2 | Corrected Ave (3 peaks): | | | | 399.5 RPD = 7 |
| 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 (5.932 - 13.803) = 6097017 Col1 Total PCB = 1.3 ppm*

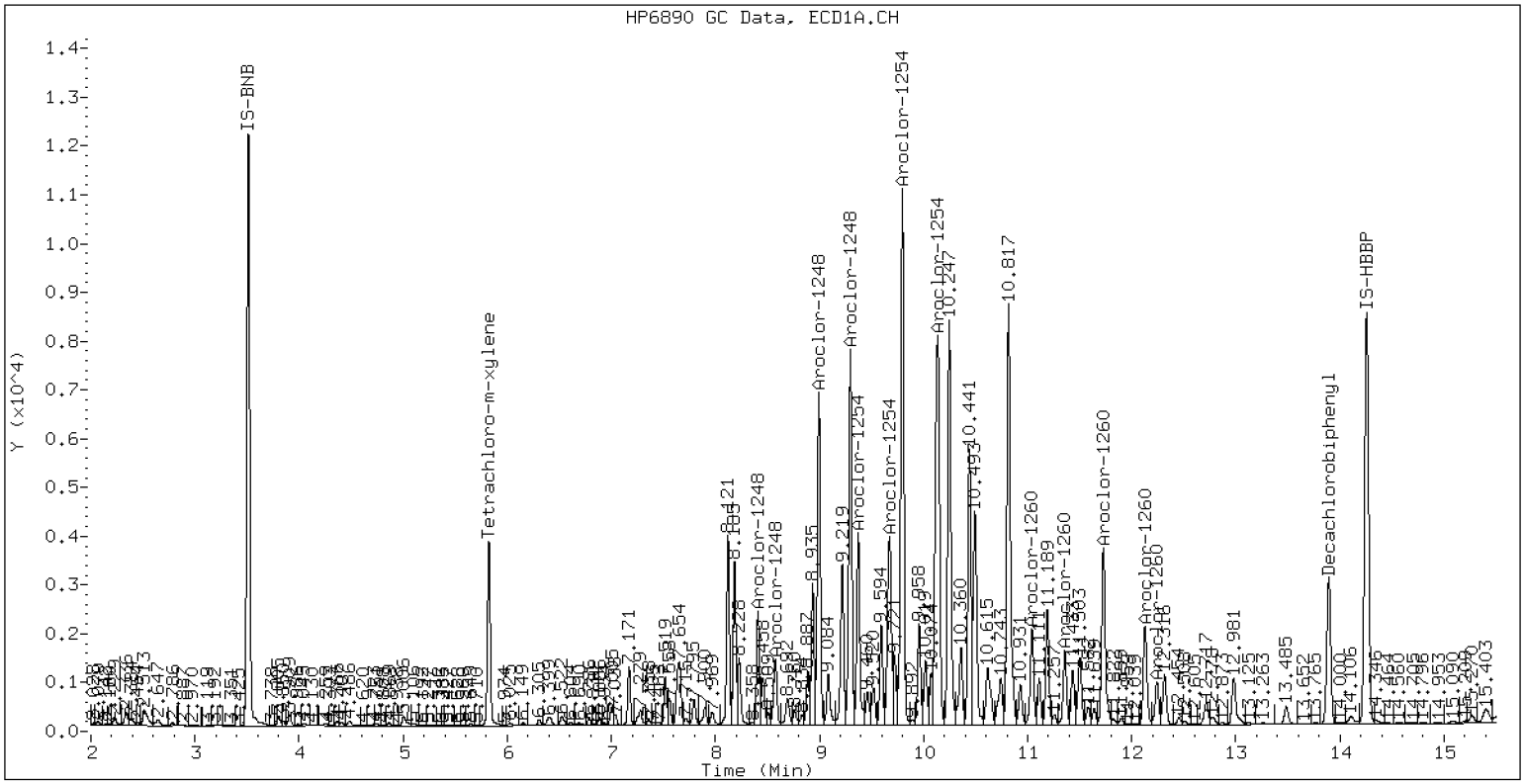
Total PCB Area Col2 (5.809 - 14.028) = 4667677 Col2 Total PCB = 1.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

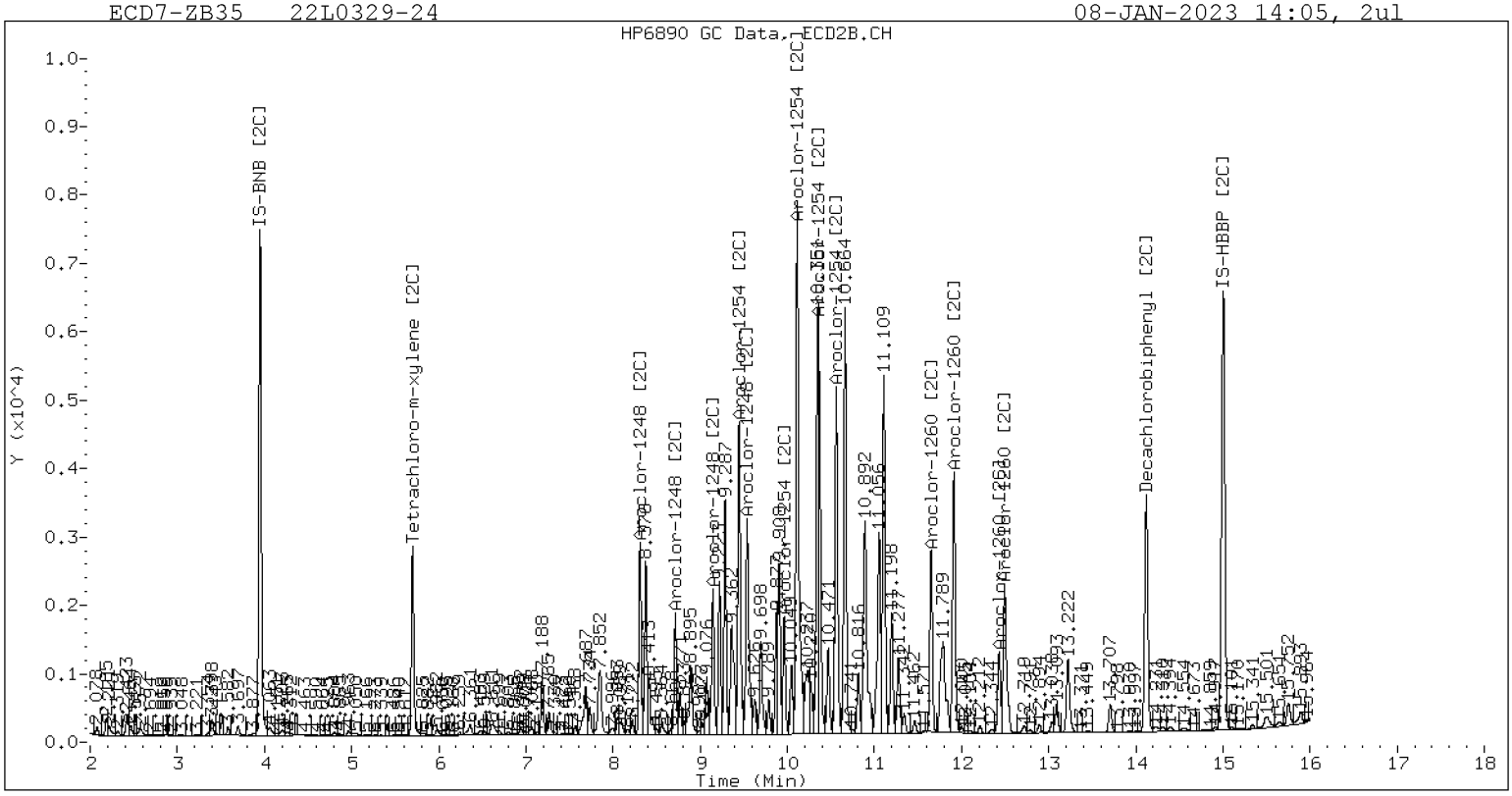
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-24 08-JAN-2023 14:05, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-24 08-JAN-2023 14:05, 2ul

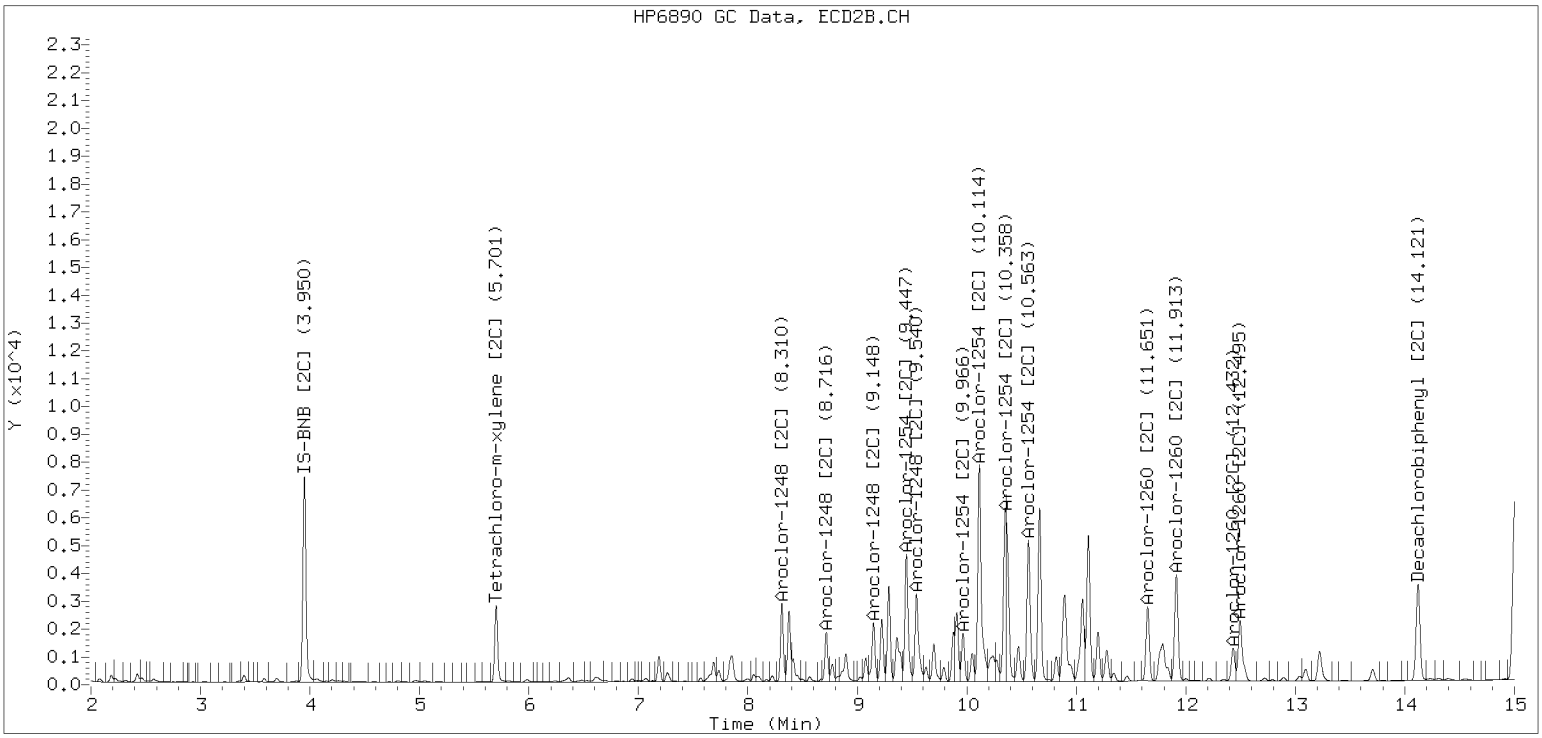



ZB-35 Manual Integration: YES

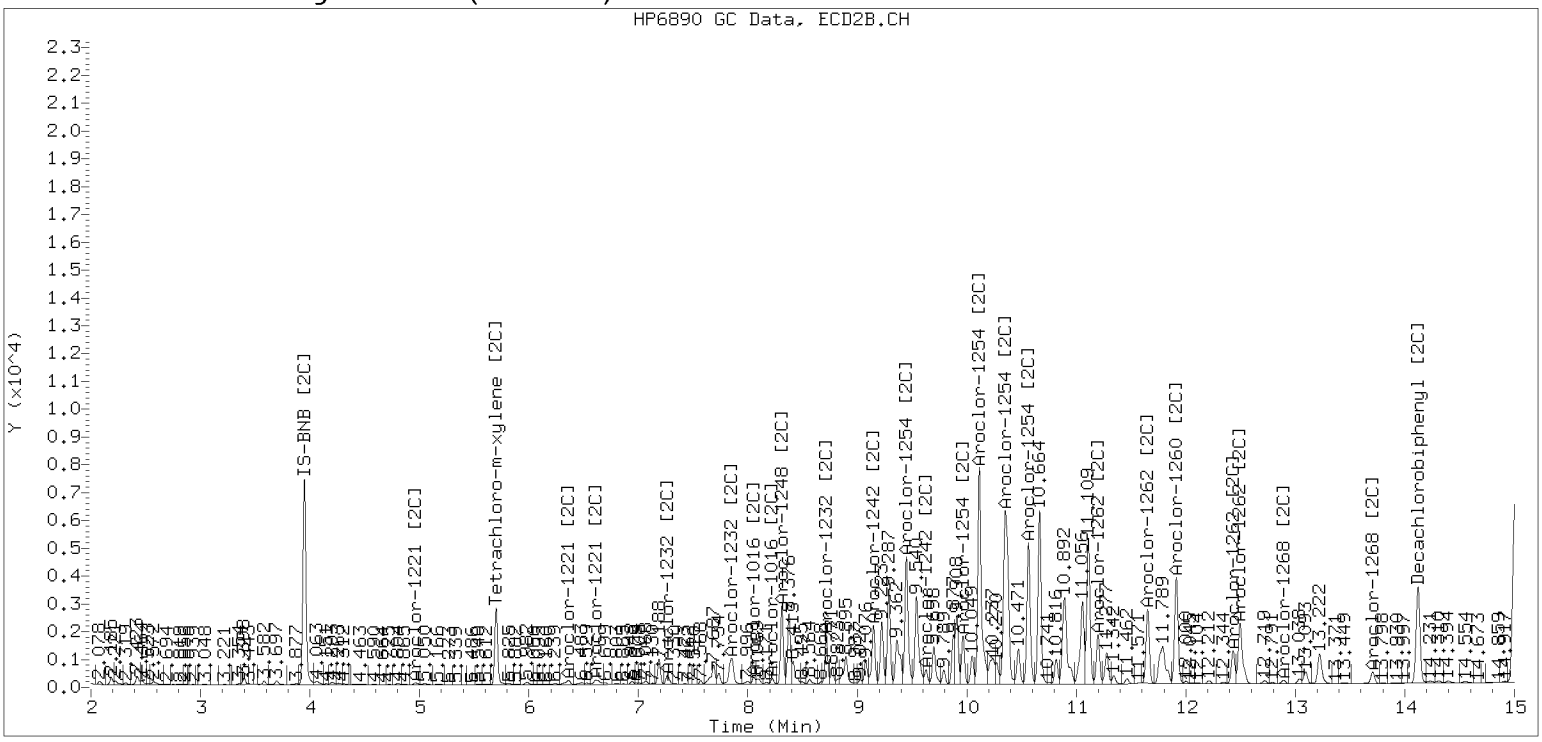
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072382ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-25 B | File ID: | 01072383ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 14:26 |
| % Solids: | 60.57 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 20.64 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 9.5 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 1 | 1 | 12.8 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 6.9 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9989* | *7.83* | *97.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9989* | *5.33* | *66.6* | *44 - 120* | |

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

Data file 1: /230107.b/01072383ECD7.D
Data file 2: /230107.b/230107.b/01072383ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-25
Client ID:
Injection Date: 08-JAN-2023 14:26
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.826 | -0.007 | 168069 | 5.702 | -0.007 | 122417 | 26.6 | 30.5 | 13.5 | Tetrachloro-m-xylene |
| 13.896 | -0.008 | 202369 | 14.122 | -0.006 | 212570 | 39.1 | 35.9 | 8.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 445119 | -0.6 |
| Hexabromobiphenyl | 798898 | 564058 | -29.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 292807 | 17.5 |
| Hexabromobiphenyl | 362541 | 416983 | 15.0 |

* 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 | --- | | | 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 | 8.412 | -0.013 | 7185 | 37.5 | 1 | 8.313 | -0.010 | 6086 | 50.9 |
| Aroclor-1248 | 2 | 8.580 | -0.023 | 6938 | 28.4 | 2 | 8.717 | -0.011 | 3821 | 30.4 |
| Aroclor-1248 | 3 | 8.997 | -0.021 | 16039 | 36.5 | 3 | 9.150 | -0.028 | 6055 | 39.6 |
| Aroclor-1248 | 4 | 9.299 | -0.014 | 18834 | 87.5 | 4 | 9.544 | -0.058 | 7001 | ~~39.0~~ 40.3 |
| | Total Col1Ave (4 peaks): | | | | 47.5 | Total Col2Ave (4 peaks): | | | | 39.9 RPD = 17 |
| | Corrected Ave (3 peaks): | | | | 34.1 | Corrected Ave (3 peaks): | | | | 36.3 RPD = 6 |
| Aroclor-1254 | 1 | 9.299 | -0.012 | 18834 | 48.1 | 1 | 9.449 | -0.012 | 12223 | 64.7 |
| Aroclor-1254 | 2 | 9.374 | -0.014 | 6861 | 45.0 | 2 | 9.968 | -0.012 | 4871 | 32.1 |
| Aroclor-1254 | 3 | 9.681 | 0.002 | 26252 | 106.1 | 3 | 10.113 | -0.021 | 15272 | 46.8 |
| Aroclor-1254 | 4 | 9.801 | -0.014 | 36767 | 76.2 | 4 | 10.357 | -0.026 | 21193 | 62.7 |
| Aroclor-1254 | 5 | 10.139 | -0.029 | 14518 | 43.9 | 5 | 10.566 | -0.011 | 11957 | 73.4 |
| | Total Col1Ave (5 peaks): | | | | 63.8 | Total Col2Ave (5 peaks): | | | | 55.9 RPD = 13 |
| | Corrected Ave (4 peaks): | | | | 53.3 | Corrected Ave (4 peaks): | | | | 51.6 RPD = 3 |
| Aroclor-1260 | 1 | 11.044 | -0.016 | 7799 | 38.0 | 1 | 11.654 | -0.009 | 4483 | 20.4 |
| Aroclor-1260 | 2 | 11.356 | -0.019 | 6279 | 29.6 | 2 | 11.914 | -0.014 | 7886 | 14.3 |
| Aroclor-1260 | 3 | 11.729 | -0.021 | 13853 | 24.8 | 3 | 12.431 | -0.015 | 7143 | 48.6 |
| Aroclor-1260 | 4 | 12.130 | -0.024 | 7059 | 24.8 | 4 | 12.499 | -0.013 | 7179 | 19.5 |
| Aroclor-1260 | 5 | 12.244 | -0.013 | 6543 | 56.3 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 34.7 | Total Col2Ave (4 peaks): | | | | 25.7 RPD = 30 |
| | Corrected Ave (4 peaks): | | | | 29.3 | Corrected Ave (3 peaks): | | | | 18.0 RPD = 48* |
| 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 (5.933 - 13.804) = 756423 Col1 Total PCB = 0.2 ppm*

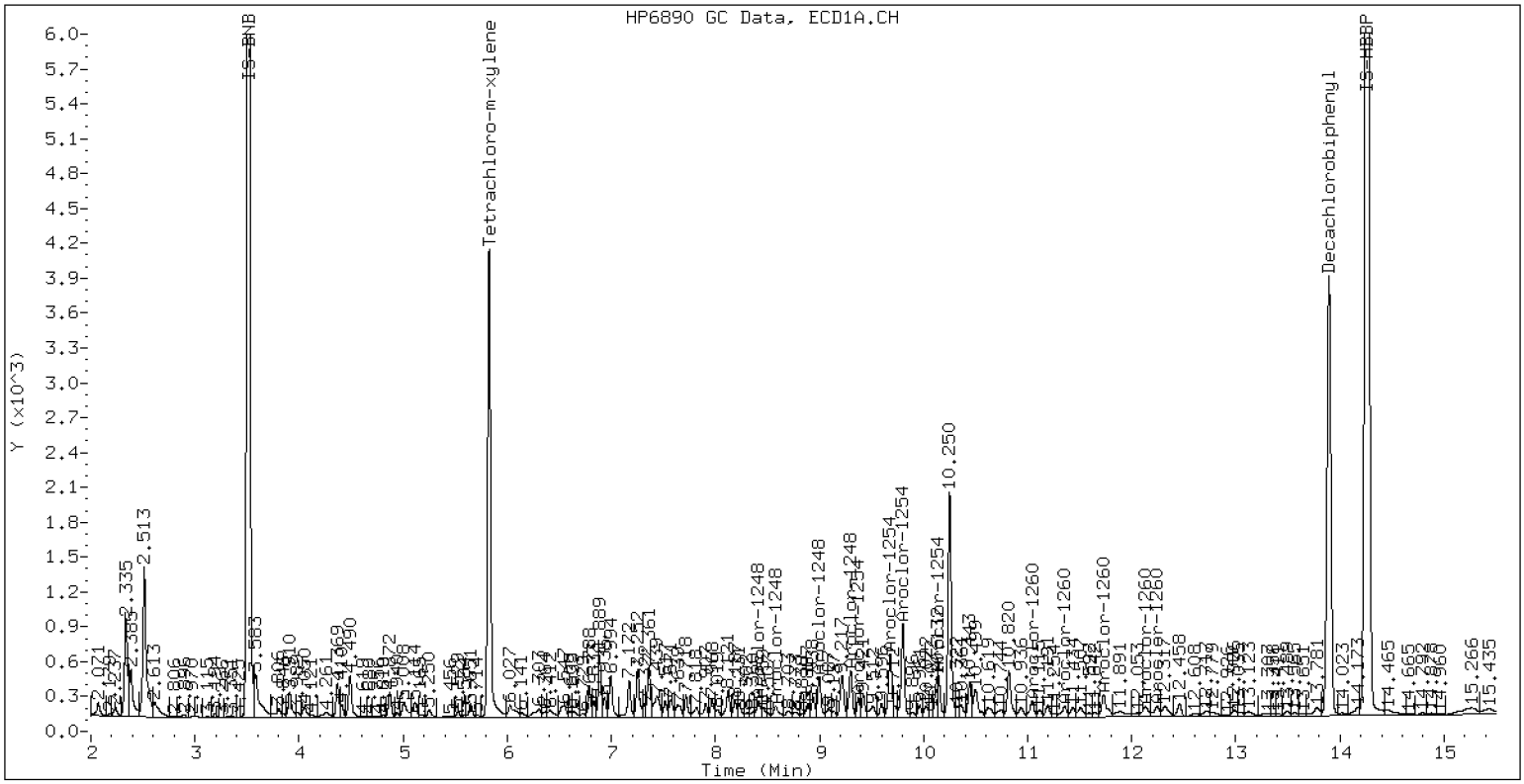
Total PCB Area Col2 (5.809 - 14.028) = 485639 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

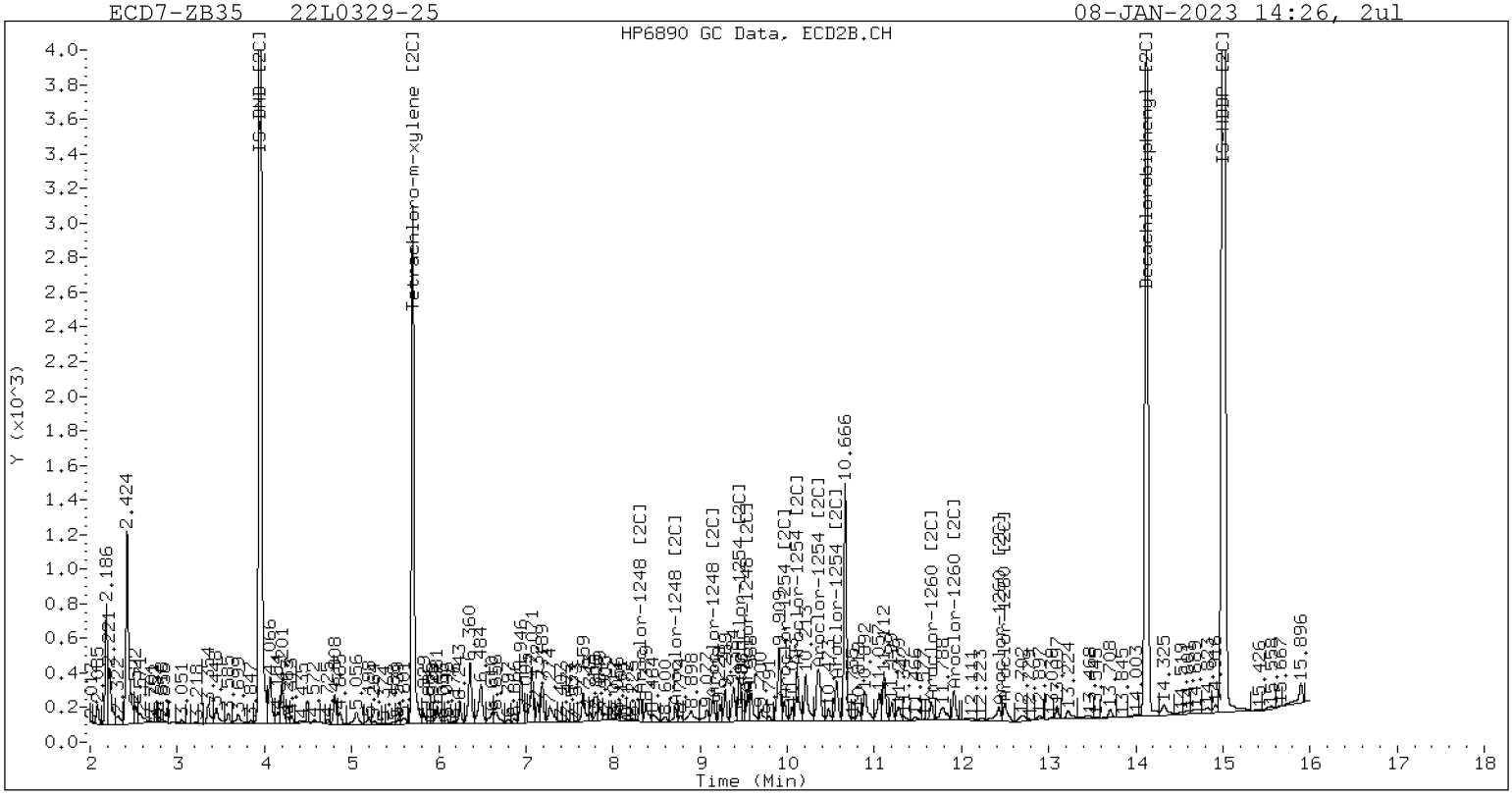
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-25 08-JAN-2023 14:26, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-25 08-JAN-2023 14:26, 2ul

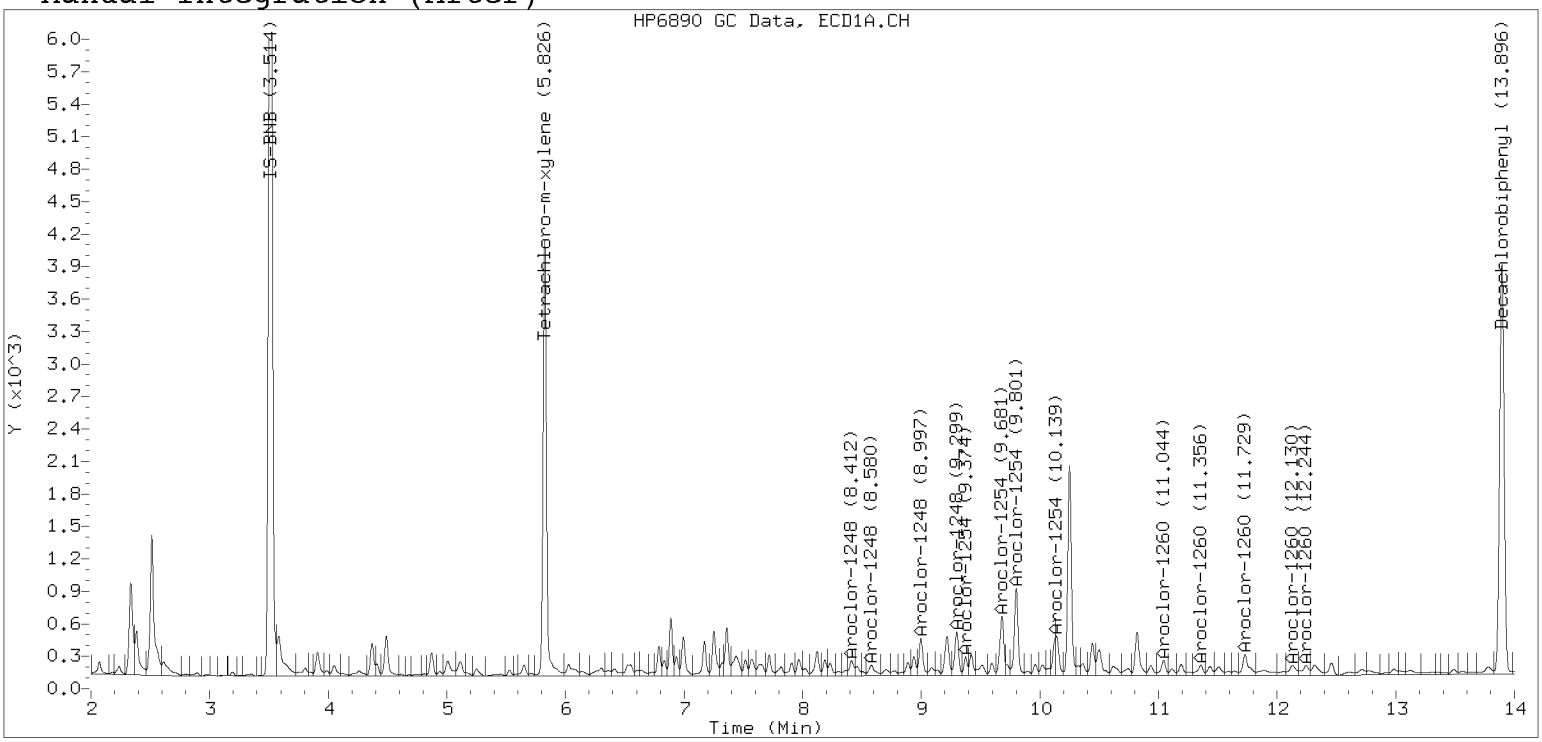



ZB-35 Manual Integration: YES

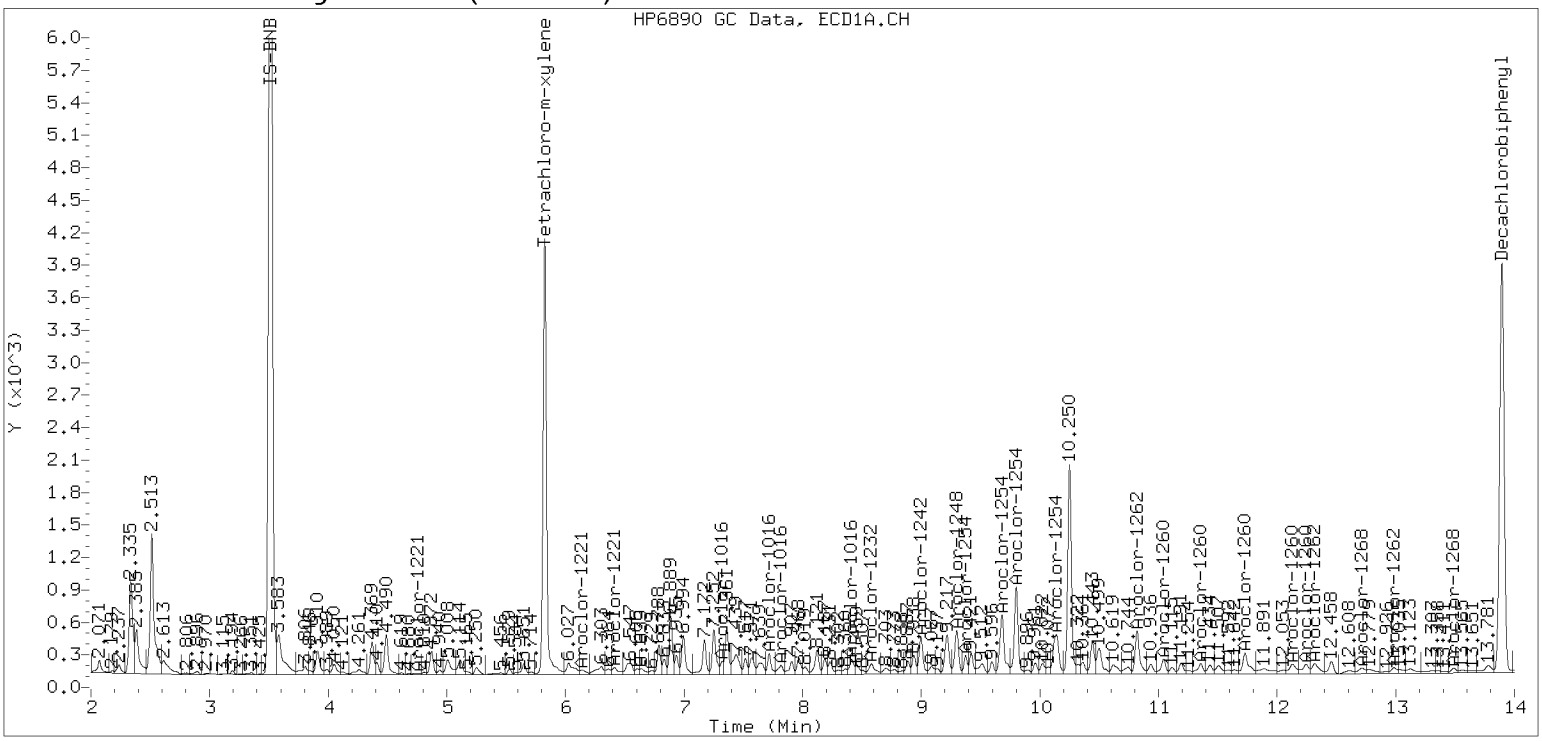
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072383ECD7.D  Injection Date: 08-JAN-2023 14:26

Manual Integration (After)



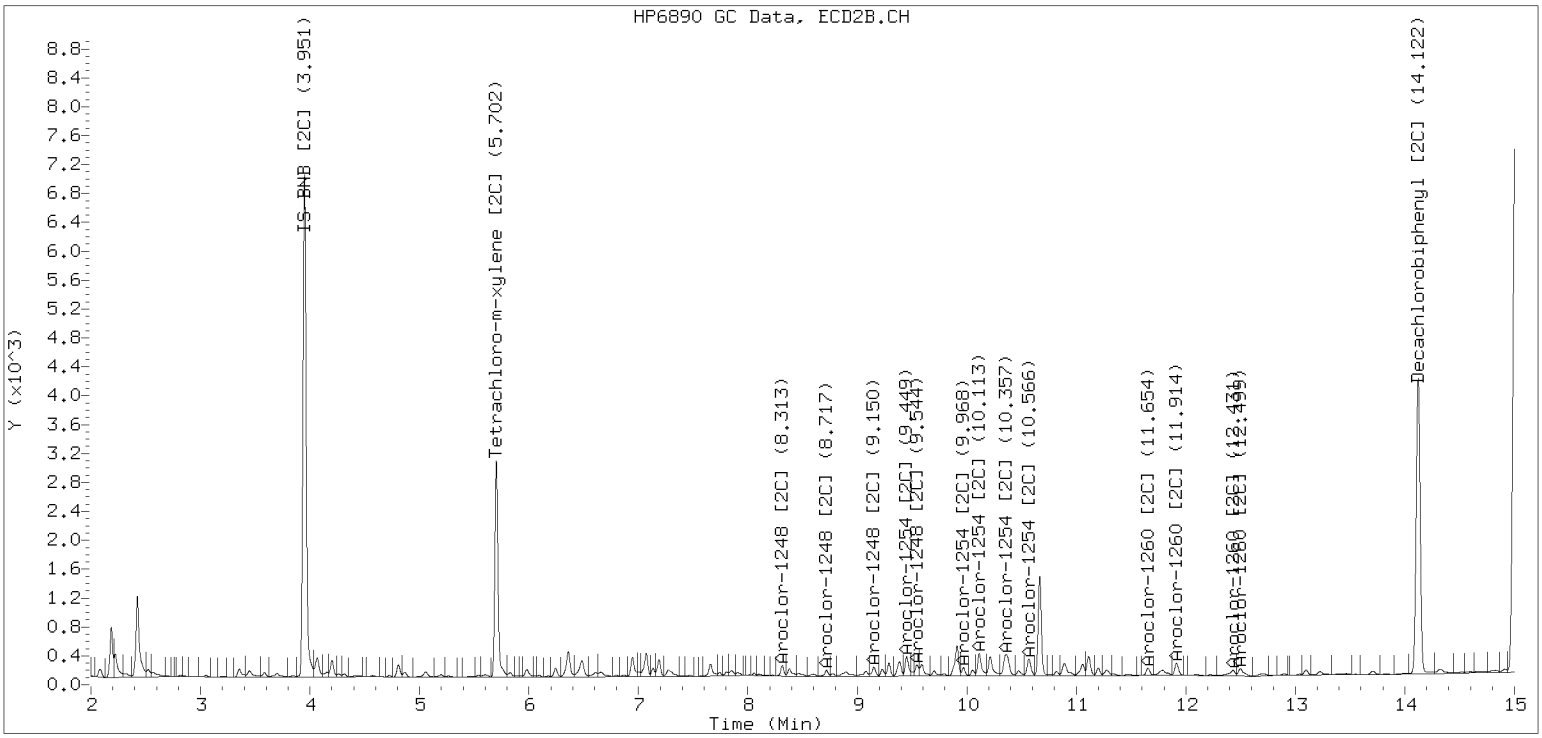

Processed Integration (Before)



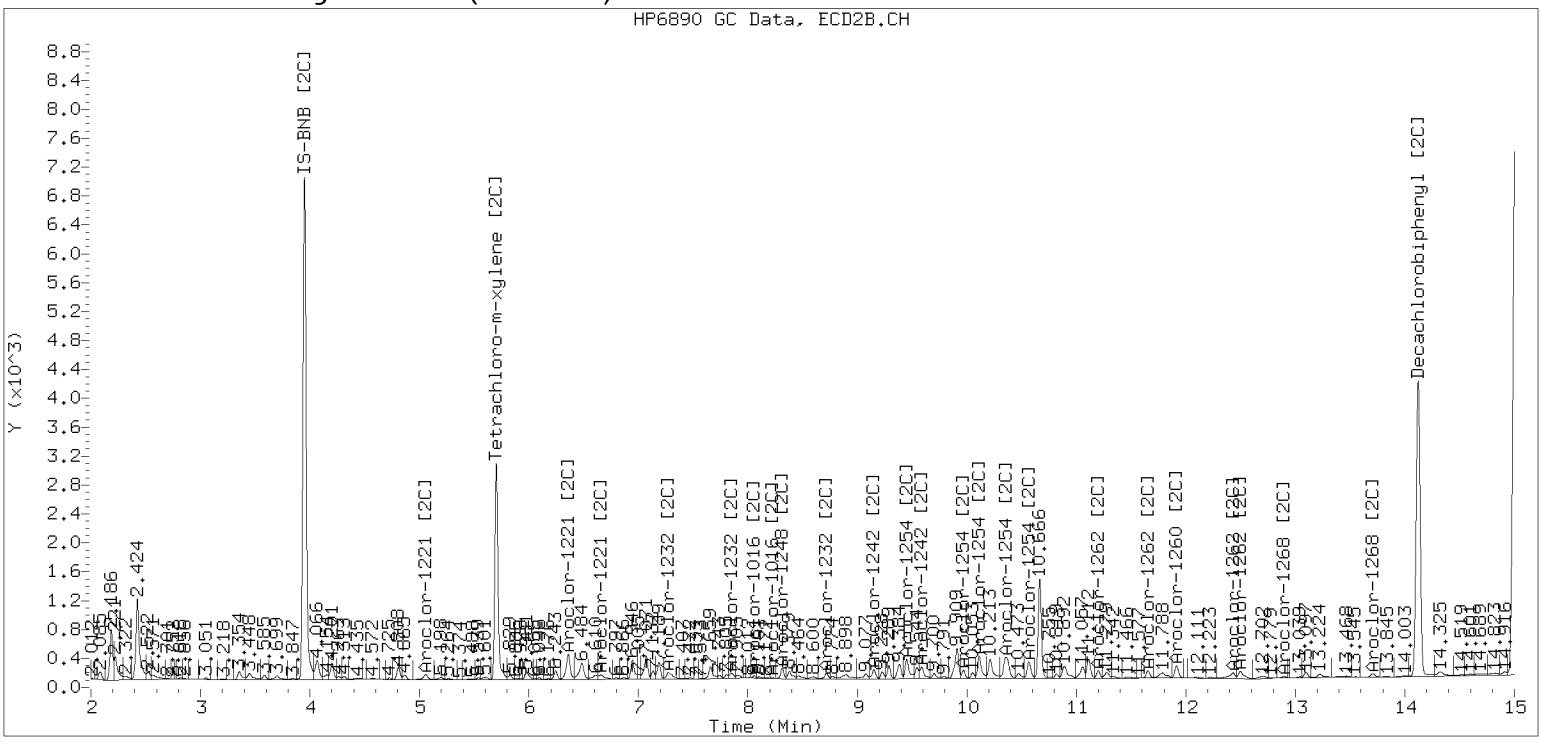
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072383ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781F**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-26 B | File ID: | 01072384ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 14:47 |
| % Solids: | 57.17 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 21.9 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 32.9 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 1 | 1 | 49.7 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 17.8 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9871* | *7.20* | *90.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9871* | *4.96* | *62.1* | *44 - 120* | |

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

Data file 1: /230107.b/01072384ECD7.D
Data file 2: /230107.b/230107.b/01072384ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-26
Client ID:
Injection Date: 08-JAN-2023 14:47
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.826 | -0.007 | 143006 | 5.703 | -0.006 | 104141 | 24.8 | 27.3 | 9.6 | Tetrachloro-m-xylene |
| 13.893 | -0.010 | 162454 | 14.122 | -0.006 | 176777 | 36.0 | 33.2 | 8.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 406199 | -9.3 |
| Hexabromobiphenyl | 798898 | 491615 | -38.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 277891 | 11.6 |
| Hexabromobiphenyl | 362541 | 375028 | 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# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | ZB5 Col | | | | | ZB35 Col | | | | |
| 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 | 8.410 | -0.015 | 18969 | 108.6 | 1 | 8.312 | -0.011 | 17976 | 158.3 |
| Aroclor-1248 | 2 | 8.578 | -0.025 | 16646 | 74.6 | 2 | 8.718 | -0.010 | 13444 | 112.6 |
| Aroclor-1248 | 3 | 8.995 | -0.024 | 56546 | 141.0 | 3 | 9.149 | -0.030 | 20854 | 143.6 |
| Aroclor-1248 | 4 | 9.298 | -0.016 | 65724 | 334.4 | 4 | 9.541 | -0.061 | 28850 | 169.2 |
| | Total Col1Ave (4 peaks): | | | | 164.7 | Total Col2Ave (4 peaks): | | | | 145.9 RPD = 12 |
| | Corrected Ave (3 peaks): | | | | 108.1 | Corrected Ave (3 peaks): | | | | 138.2 RPD = 24 |
| Aroclor-1254 | 1 | 9.298 | -0.013 | 65724 | 183.8 | 1 | 9.448 | -0.013 | 47253 | 263.7 |
| Aroclor-1254 | 2 | 9.372 | -0.016 | 28507 | 205.0 | 2 | 9.966 | -0.014 | 13992 | 97.1 |
| Aroclor-1254 | 3 | 9.678 | -0.001 | 71019 | 314.4 | 3 | 10.113 | -0.020 | 60067 | 194.0 |
| Aroclor-1254 | 4 | 9.798 | -0.016 | 113369 | 257.5 | 4 | 10.351 | -0.032 | 70917 | 221.2 |
| Aroclor-1254 | 5 | 10.137 | -0.030 | 85746 | 284.1 | 5 | 10.563 | -0.015 | 40261 | 260.3 |
| | Total Col1Ave (5 peaks): | | | | 248.9 | Total Col2Ave (5 peaks): | | | | 207.3 RPD = 18 |
| | Corrected Ave (4 peaks): | | | | 232.6 | Corrected Ave (4 peaks): | | | | 193.2 RPD = 19 |
| Aroclor-1260 | 1 | 11.041 | -0.018 | 19953 | 111.5 | 1 | 11.652 | -0.011 | 16140 | 81.5 |
| Aroclor-1260 | 2 | 11.354 | -0.021 | 13406 | 72.4 | 2 | 11.912 | -0.016 | 27876 | 56.1 |
| Aroclor-1260 | 3 | 11.727 | -0.023 | 33191 | 68.3 | 3 | 12.430 | -0.015 | 13256 | 100.2 |
| Aroclor-1260 | 4 | 12.127 | -0.027 | 17233 | 69.6 | 4 | 12.495 | -0.016 | 21069 | 63.6 |
| Aroclor-1260 | 5 | 12.243 | -0.014 | 12666 | 124.9 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 89.3 | Total Col2Ave (4 peaks): | | | | 75.4 RPD = 17 |
| | Corrected Ave (4 peaks): | | | | 80.4 | Corrected Ave (3 peaks): | | | | 67.1 RPD = 18 |
| 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 (5.933 - 13.804) = 1588055 Col1 Total PCB = 0.4 ppm*

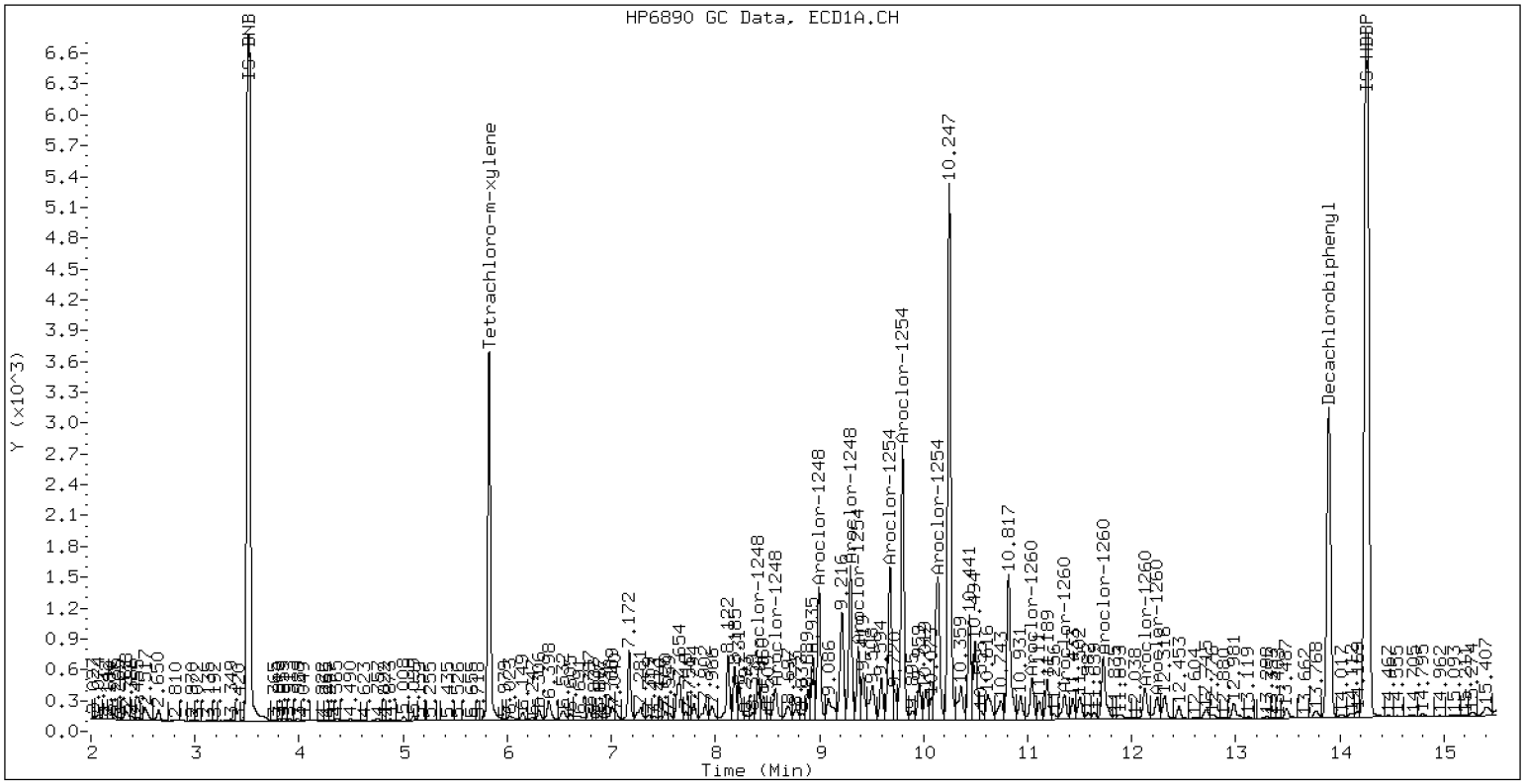
Total PCB Area Col2 (5.809 - 14.028) = 1164758 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

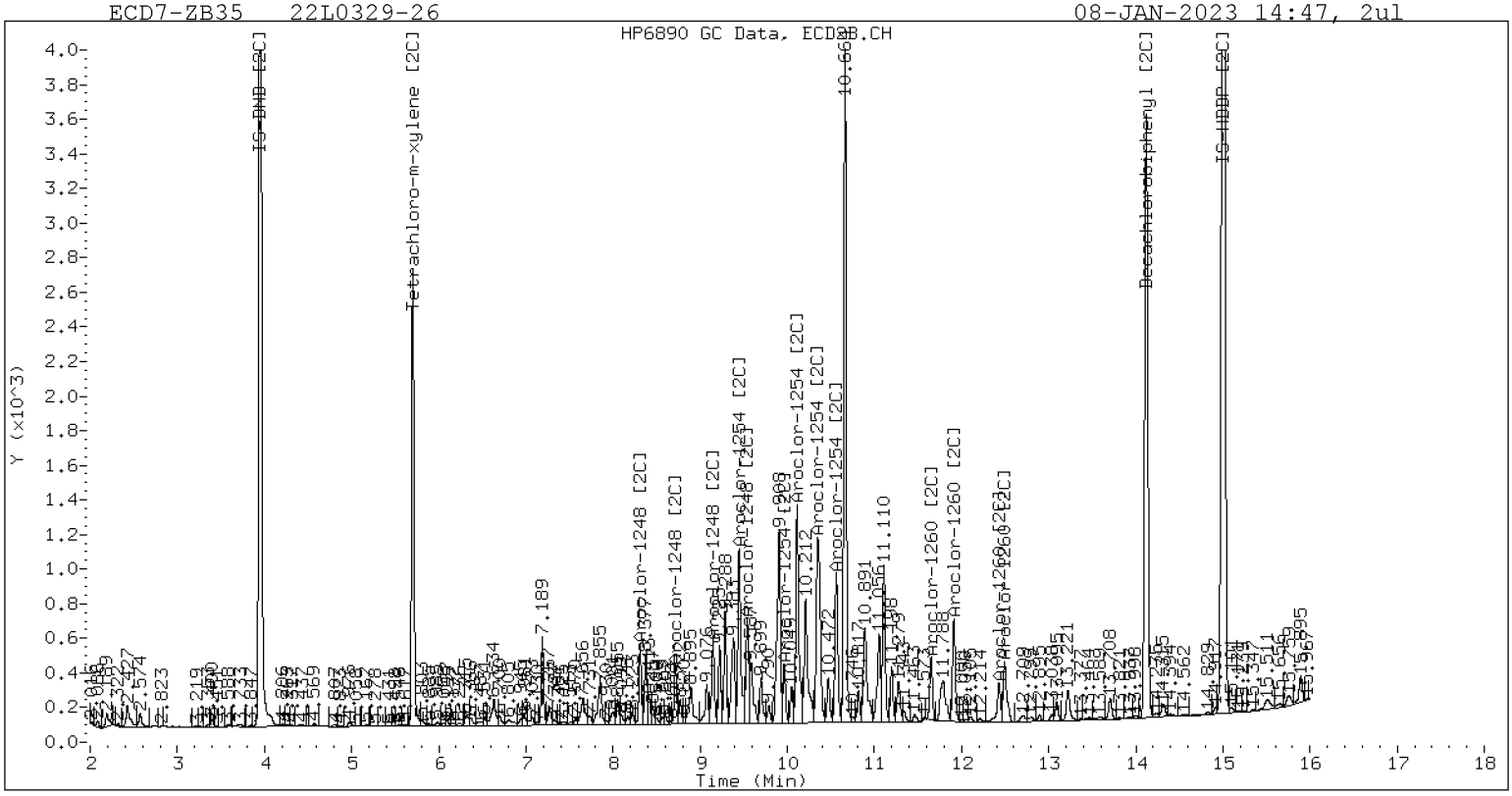
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-26 08-JAN-2023 14:47, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-26 08-JAN-2023 14:47, 2ul

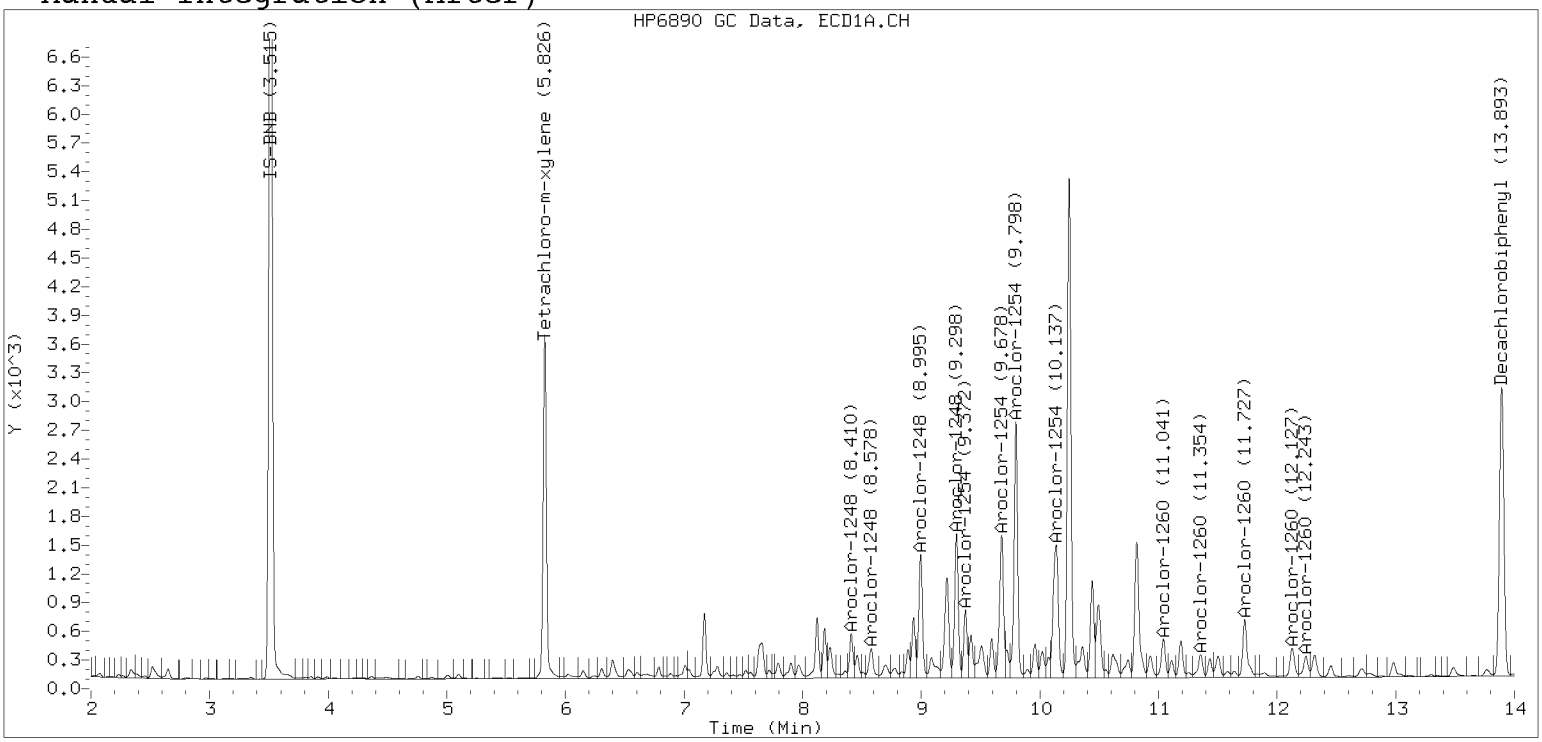



ZB-35 Manual Integration: YES

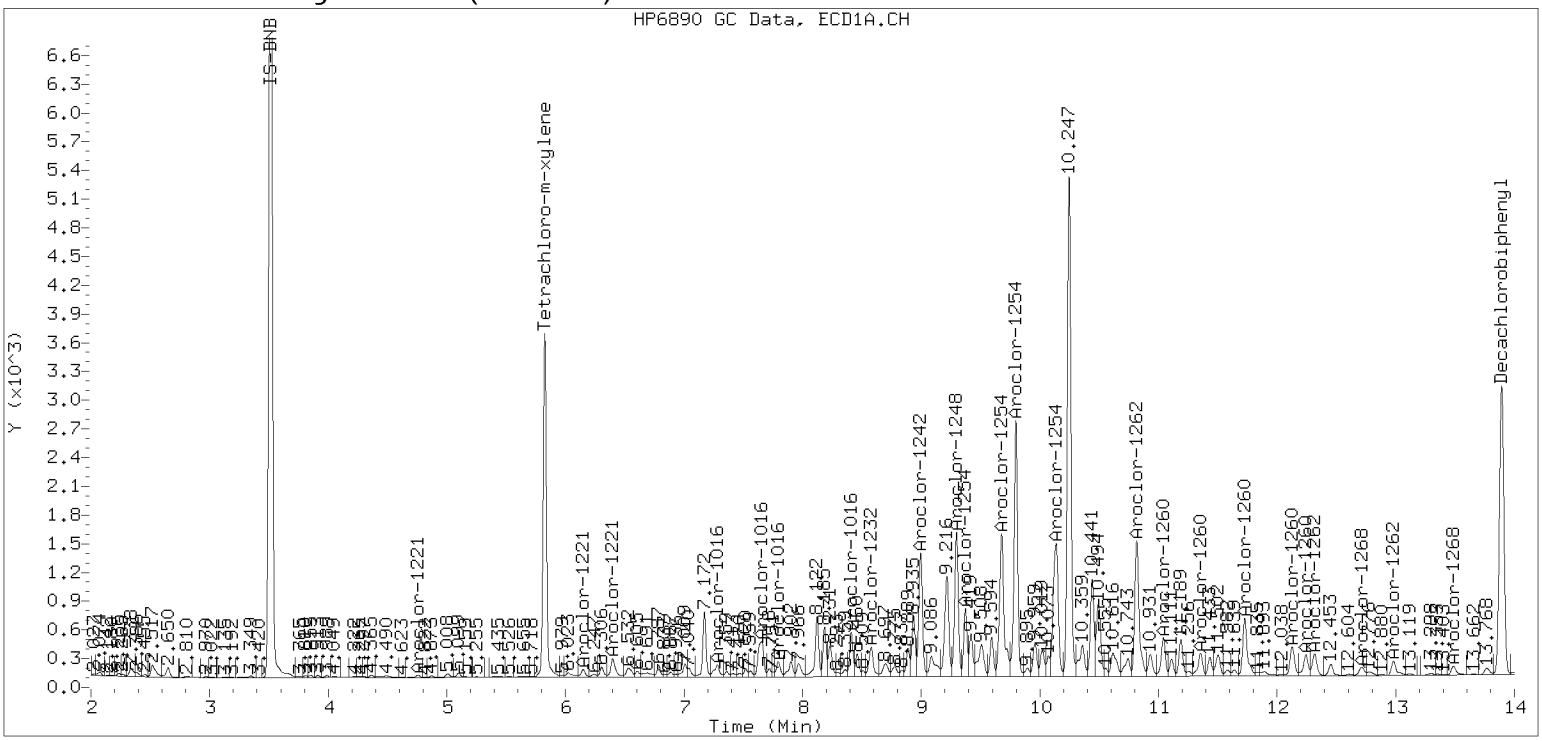
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072384ECD7.D  Injection Date: 08-JAN-2023 14:47

Manual Integration (After)



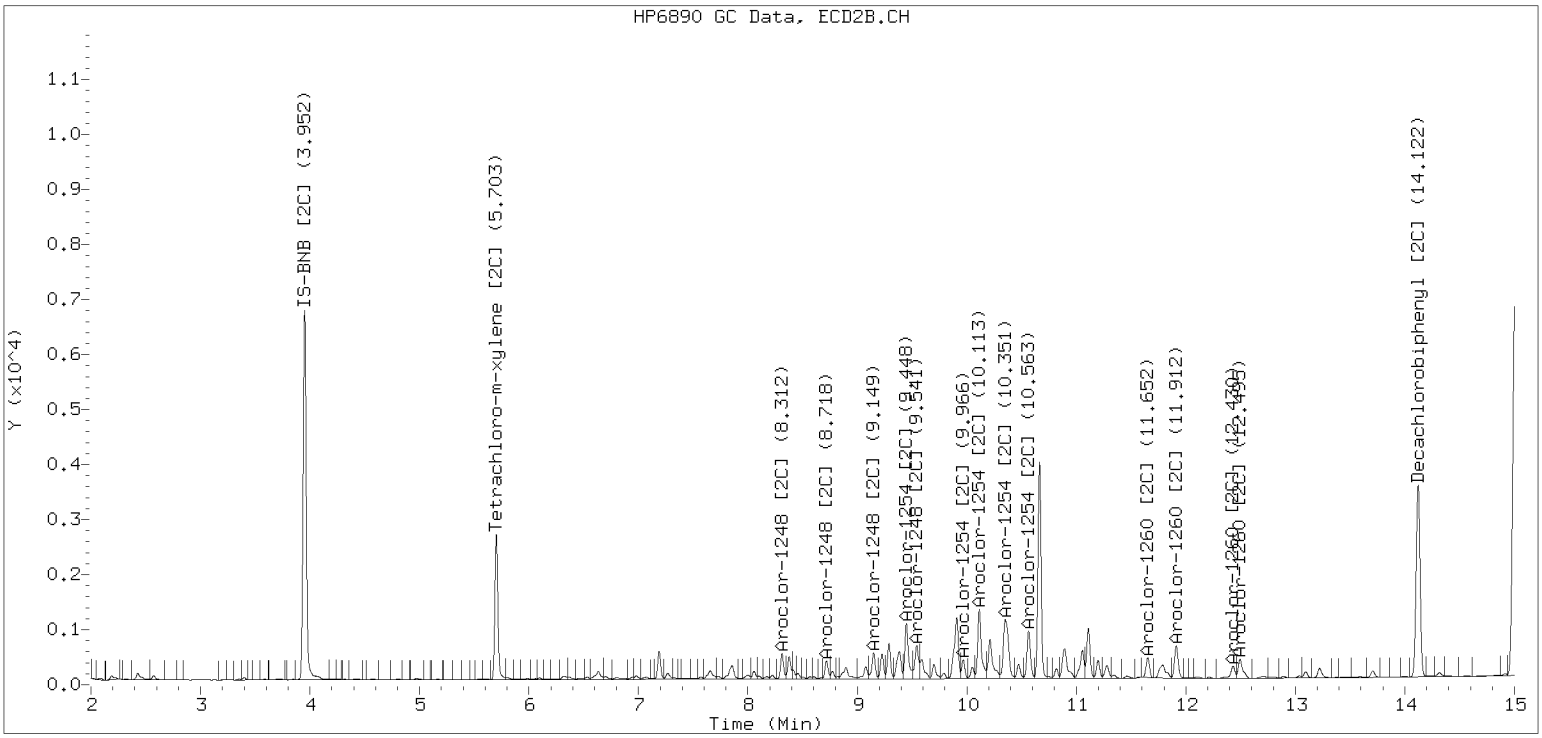

Processed Integration (Before)



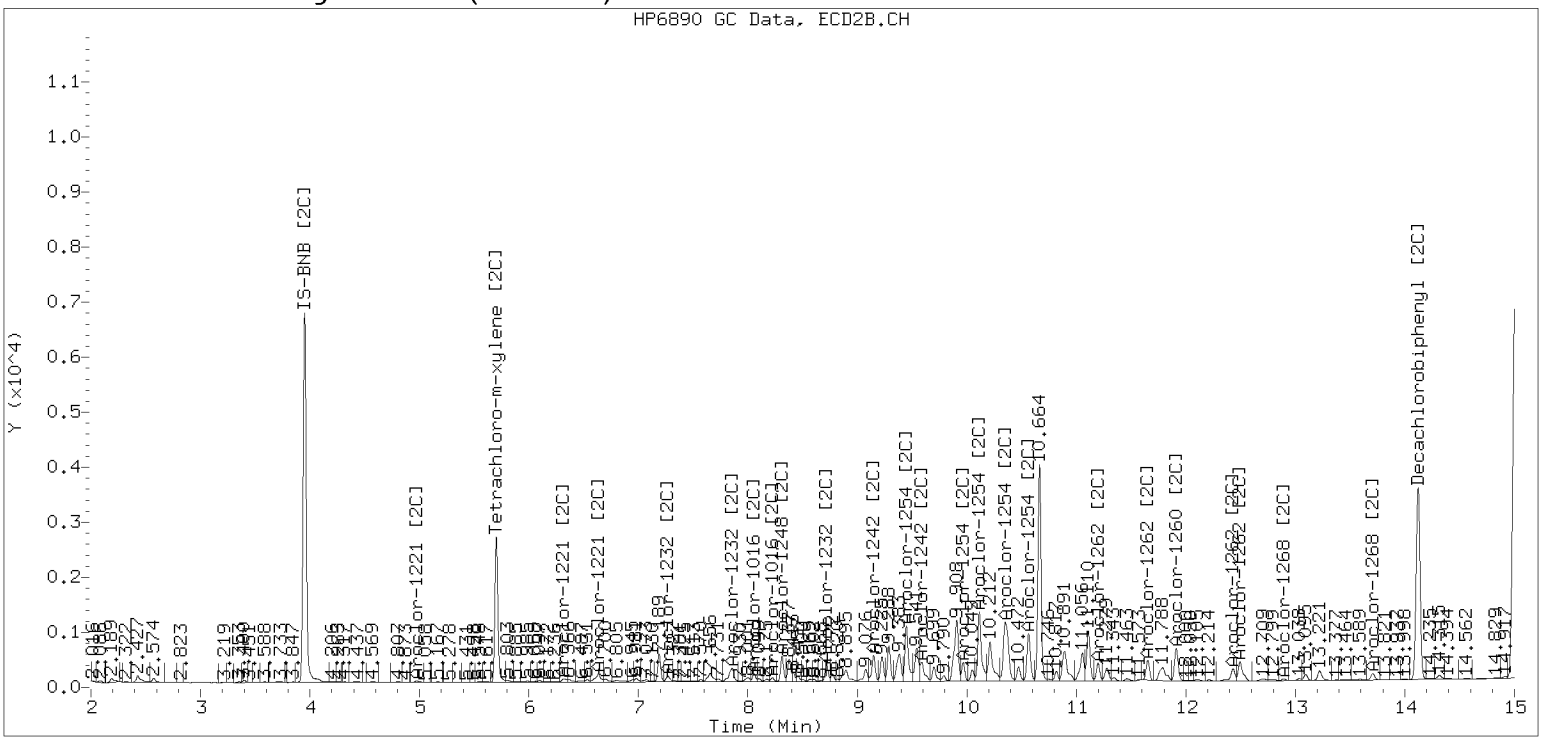
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072384ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781G**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-27 B | File ID: | 01072385ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 15:08 |
| % Solids: | 58.73 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 21.28 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 47.8 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 1 | 1 | 71.1 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 32.1 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *8.0014* | *7.24* | *90.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *8.0014* | *4.80* | *59.9* | *44 - 120* | |

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

Data file 1: /230107.b/01072385ECD7.D
Data file 2: /230107.b/230107.b/01072385ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-27
Client ID:
Injection Date: 08-JAN-2023 15:08
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.825 | -0.008 | 153508 | 5.701 | -0.008 | 109097 | 24.0 | 27.7 | 14.5 | Tetrachloro-m-xylene |
| 13.894 | -0.010 | 160591 | 14.121 | -0.007 | 175635 | 36.2 | 32.9 | 9.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 451778 | 0.9 |
| Hexabromobiphenyl | 798898 | 484250 | -39.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 287125 | 15.3 |
| Hexabromobiphenyl | 362541 | 376479 | 3.8 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col 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 | | 8.409 | -0.016 | 28714 | 147.8 | 1 | 8.311 | -0.011 | 27916 | 238.0 |
| Aroclor-1248 2 | | 8.577 | -0.026 | 22716 | 91.6 | 2 | 8.717 | -0.011 | 20871 | 169.2 |
| Aroclor-1248 3 | | 8.994 | -0.025 | 94562 | 211.9 | 3 | 9.148 | -0.030 | 32410 | 216.0 |
| Aroclor-1248 4 | | 9.297 | -0.016 | 110435 | 505.2 | 4 | 9.539 | -0.062 | 48927 | 277.7 |
| | Total Col1Ave (4 peaks): | | | | 239.2 | Total Col2Ave (4 peaks): | | | | 225.2 RPD = 6 |
| | Corrected Ave (3 peaks): | | | | 150.5 | Corrected Ave (3 peaks): | | | | 207.7 RPD = 32 |
| Aroclor-1254 1 | | 9.297 | -0.014 | 110435 | 277.6 | 1 | 9.448 | -0.013 | 71108 | 384.1 |
| Aroclor-1254 2 | | 9.372 | -0.016 | 50872 | 328.8 | 2 | 9.966 | -0.015 | 21429 | 144.0 |
| Aroclor-1254 3 | | 9.677 | -0.001 | 89167 | 354.9 | 3 | 10.113 | -0.021 | 108247 | 338.4 |
| Aroclor-1254 4 | | 9.798 | -0.017 | 173759 | 354.8 | 4 | 10.352 | -0.031 | 127550 | 385.0 |
| Aroclor-1254 5 | | 10.137 | -0.031 | 155000 | 461.7 | 5 | 10.563 | -0.015 | 75110 | 470.0 |
| | Total Col1Ave (5 peaks): | | | | 355.6 | Total Col2Ave (5 peaks): | | | | 344.3 RPD = 3 |
| | Corrected Ave (4 peaks): | | | | 329.1 | Corrected Ave (4 peaks): | | | | 312.9 RPD = 5 |
| Aroclor-1260 1 | | 11.041 | -0.018 | 34826 | 197.6 | 1 | 11.652 | -0.011 | 29954 | 150.7 |
| Aroclor-1260 2 | | 11.356 | -0.020 | 21845 | 119.8 | 2 | 11.913 | -0.016 | 58363 | 117.0 |
| Aroclor-1260 3 | | 11.726 | -0.024 | 64273 | 134.2 | 3 | 12.432 | -0.014 | 21170 | 159.4 |
| Aroclor-1260 4 | | 12.127 | -0.027 | 35313 | 144.8 | 4 | 12.496 | -0.016 | 42487 | 127.8 |
| Aroclor-1260 5 | | 12.242 | -0.014 | 20467 | 205.0 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 160.3 | Total Col2Ave (4 peaks): | | | | 138.8 RPD = 14 |
| | Corrected Ave (4 peaks): | | | | 149.1 | Corrected Ave (3 peaks): | | | | 131.9 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 (5.933 - 13.804) = 2429996 Col1 Total PCB = 0.6 ppm*

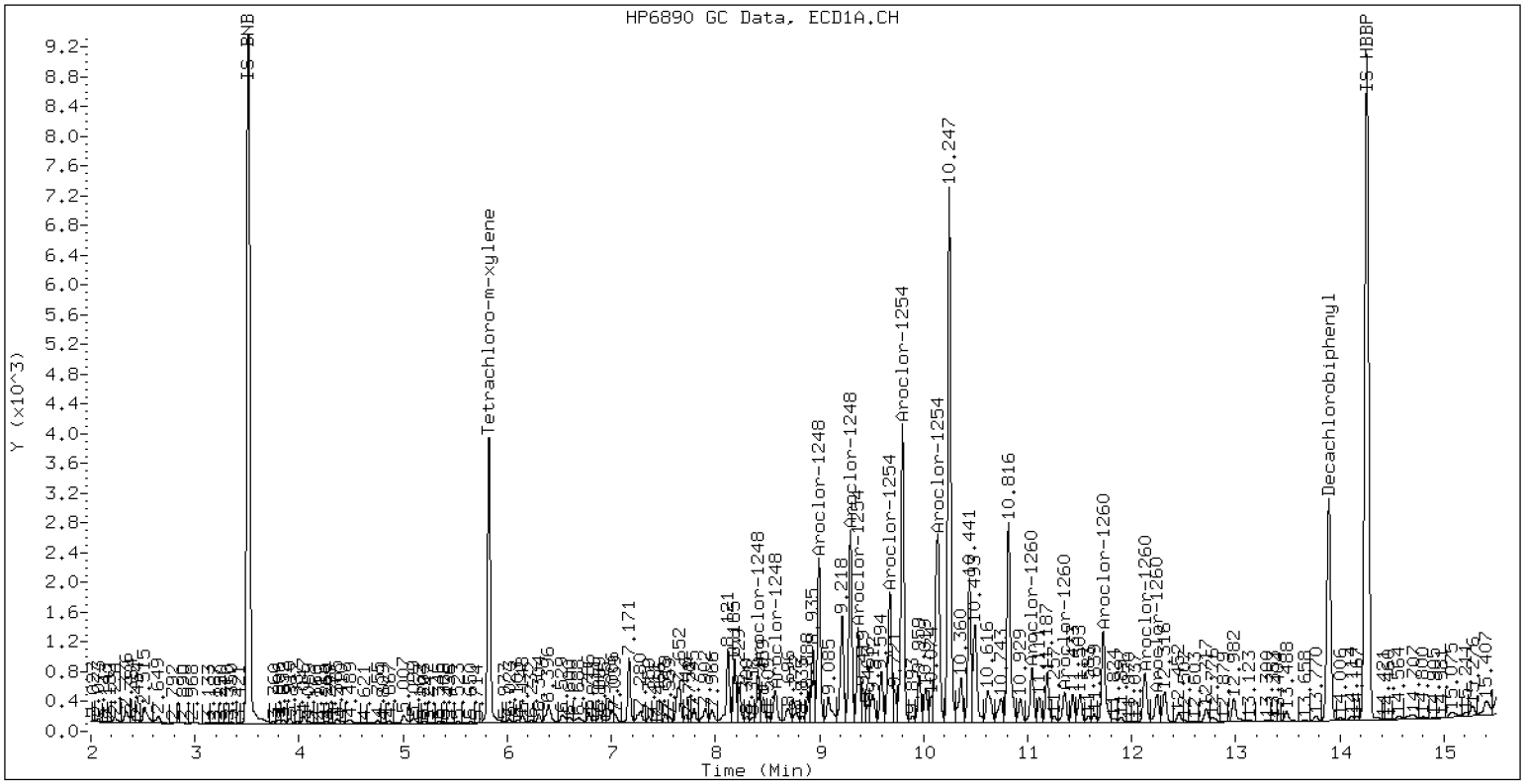
Total PCB Area Col2 (5.809 - 14.028) = 1816758 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

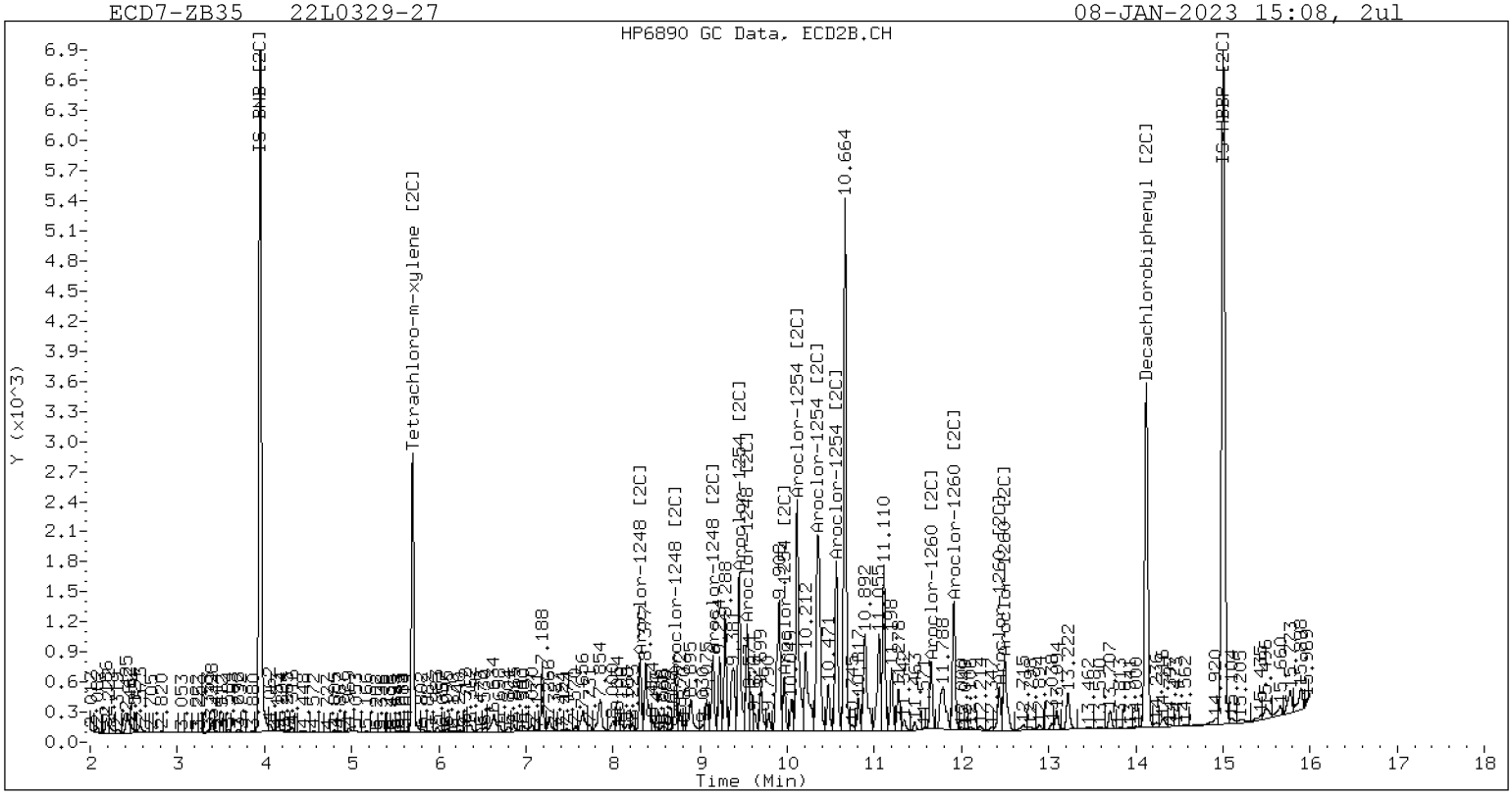
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-27 08-JAN-2023 15:08, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-27 08-JAN-2023 15:08, 2ul

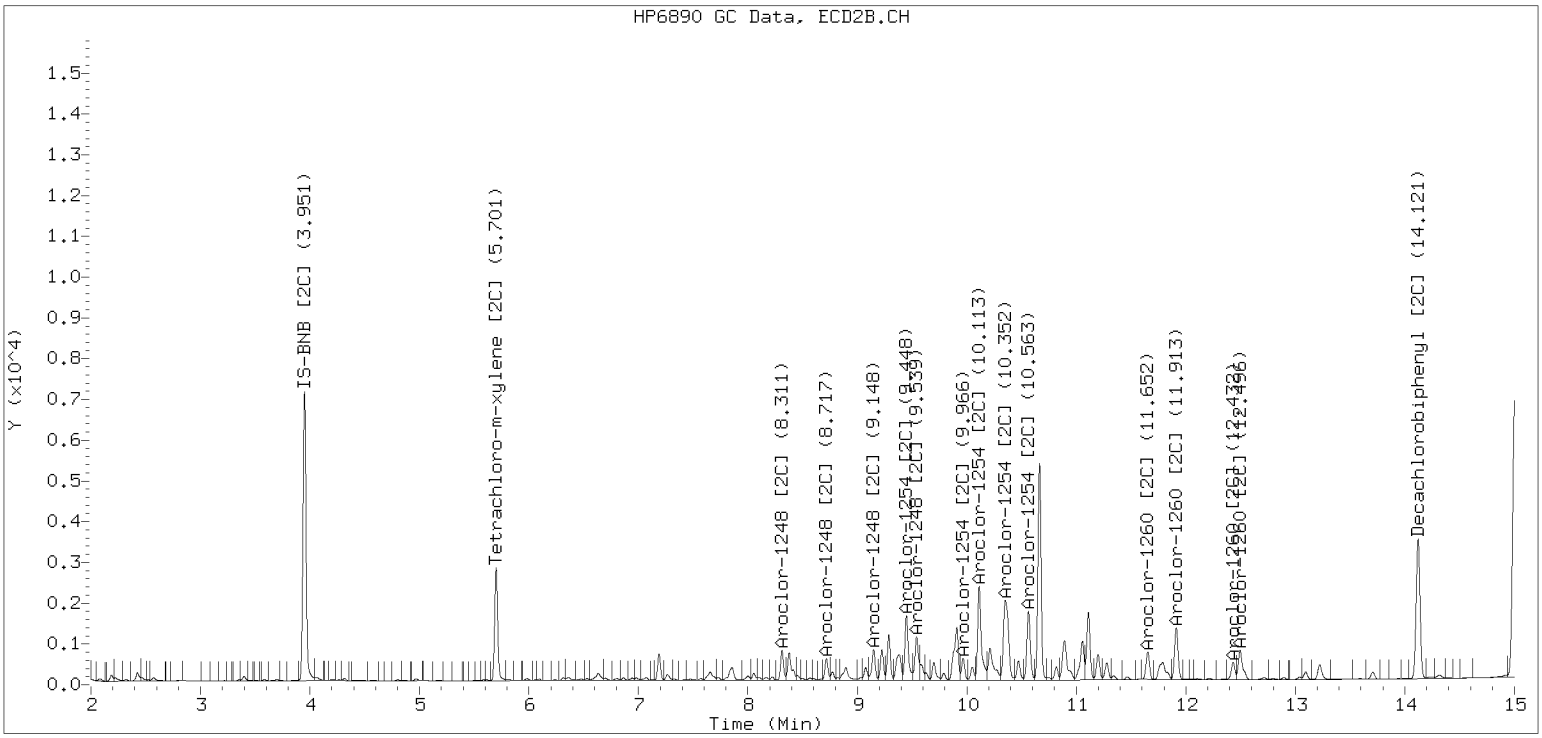



ZB-35 Manual Integration: YES

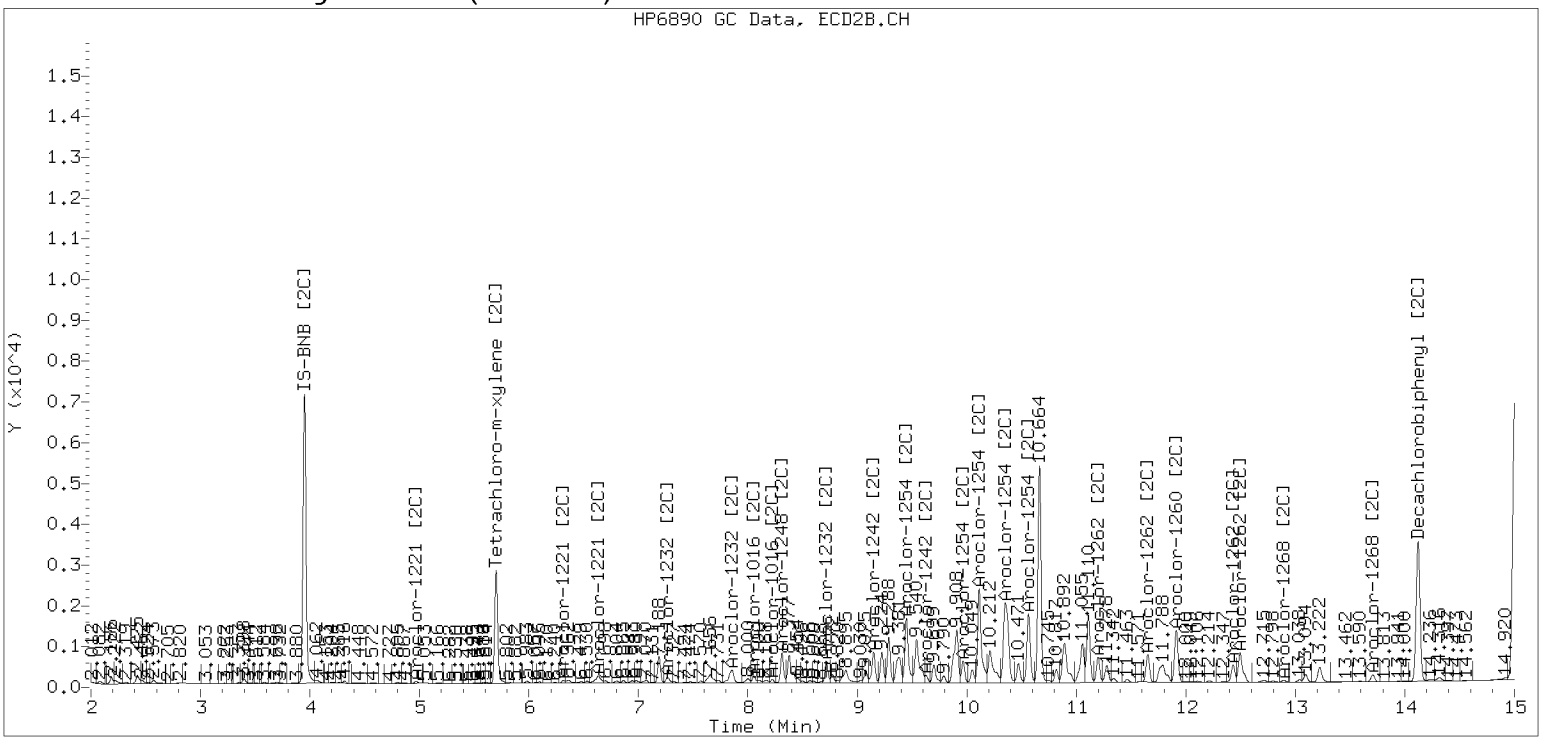
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072385ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC781H**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-28 B | File ID: | 01112365ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/12/23 07:23 |
| % Solids: | 59.77 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 20.96 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0136 | 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 | 5 | 20.0 | 7.8 | 20.0 | U |
| 11104-28-2 | Aroclor 1221 | 1 | 5 | 20.0 | 7.8 | 20.0 | U |
| 11141-16-5 | Aroclor 1232 | 1 | 5 | 20.0 | 7.8 | 20.0 | U |
| 53469-21-9 | Aroclor 1242 | 1 | 5 | 20.0 | 7.8 | 20.0 | U |
| 12672-29-6 | Aroclor 1248 | 2 | 5 | 176 | 7.8 | 20.0 | D |
| 11097-69-1 | Aroclor 1254 | 2 | 5 | 376 | 7.8 | 20.0 | D |
| 11096-82-5 | Aroclor 1260 | 2 | 5 | 147 | 2.9 | 20.0 | D |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9823* | *8.34* | *105* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9823* | *5.56* | *69.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9823* | *7.27* | *91.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9823* | *6.17* | *77.3* | *44 - 120* | |

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

Data file 1: /230111.b/01112365ECD7.D
Data file 2: /230111.b/230111.b/01112365ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-28RE1
Client ID:
Injection Date: 12-JAN-2023 07:23
Report Date: 01/14/2023 13:22
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.828 | -0.003 | 31965 | 5.705 | -0.003 | 24430 | 5.6 | 6.2 | 10.4 | Tetrachloro-m-xylene |
| 13.895 | -0.007 | 40881 | 14.122 | -0.005 | 41714 | 8.4 | 7.3 | 13.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 404629 | -9.6 |
| Hexabromobiphenyl | 798898 | 533309 | -33.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 288148 | 15.7 |
| Hexabromobiphenyl | 362541 | 403200 | 11.2 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col 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 | 8.411 | -0.013 | 22438 | 129.0 | 1 | 8.312 | -0.008 | 25316 | 215.1 |
| Aroclor-1248 | 2 | 8.581 | -0.019 | 15014 | 67.6 | 2 | 8.718 | -0.009 | 16812 | 135.8 |
| Aroclor-1248 | 3 | 8.998 | -0.018 | 86879 | 217.4 | 3 | 9.151 | -0.023 | 26836 | 178.2 |
| Aroclor-1248 | 4 | 9.300 | -0.010 | 108509 | 554.3 | 4 | 9.542 | -0.056 | 52196 | 295.2 |
| | Total Col1Ave (4 peaks): | | | 242.1 | | Total Col2Ave (4 peaks): | | | 206.1 | RPD = 16 |
| | Corrected Ave (3 peaks): | | | 138.0 | | Corrected Ave (3 peaks): | | | 176.3 | RPD = 24 |
| Aroclor-1254 | 1 | 9.300 | -0.016 | 108509 | 304.6 | 1 | 9.449 | -0.011 | 70426 | 379.1 |
| Aroclor-1254 | 2 | 9.374 | -0.020 | 57578 | 415.6 | 2 | 9.967 | -0.012 | 22568 | 151.1 |
| Aroclor-1254 | 3 | 9.675 | -0.011 | 59839 | 265.9 | 3 | 10.115 | -0.017 | 122399 | 381.2 |
| Aroclor-1254 | 4 | 9.800 | -0.025 | 152479 | 347.6 | 4 | 10.359 | -0.022 | 145209 | 436.7 |
| Aroclor-1254 | 5 | 10.140 | -0.051 | 182816 | 608.0 | 5 | 10.564 | -0.013 | 85741 | 534.7 |
| | Total Col1Ave (5 peaks): | | | 388.4 | | Total Col2Ave (5 peaks): | | | 376.6 | RPD = 3 |
| | Corrected Ave (4 peaks): | | | 333.4 | | Corrected Ave (4 peaks): | | | 337.0 | RPD = 1 |
| Aroclor-1260 | 1 | 11.044 | -0.014 | 34326 | 176.8 | 1 | 11.653 | -0.008 | 40907 | 192.2 |
| Aroclor-1260 | 2 | 11.358 | -0.015 | 25768 | 128.3 | 2 | 11.914 | -0.011 | 66743 | 125.0 |
| Aroclor-1260 | 3 | 11.730 | -0.017 | 70334 | 133.3 | 3 | 12.433 | -0.011 | 20323 | 142.9 |
| Aroclor-1260 | 4 | 12.130 | -0.023 | 39241 | 146.1 | 4 | 12.497 | -0.013 | 46209 | 129.8 |
| Aroclor-1260 | 5 | 12.244 | -0.012 | 16660 | 151.5 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | 147.2 | | Total Col2Ave (4 peaks): | | | 147.5 | RPD = 0 |
| | Corrected Ave (4 peaks): | | | 139.8 | | Corrected Ave (3 peaks): | | | 132.6 | RPD = 5 |
| 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 - 13.802) = 1946822 Col1 Total PCB = 0.5 ppm*

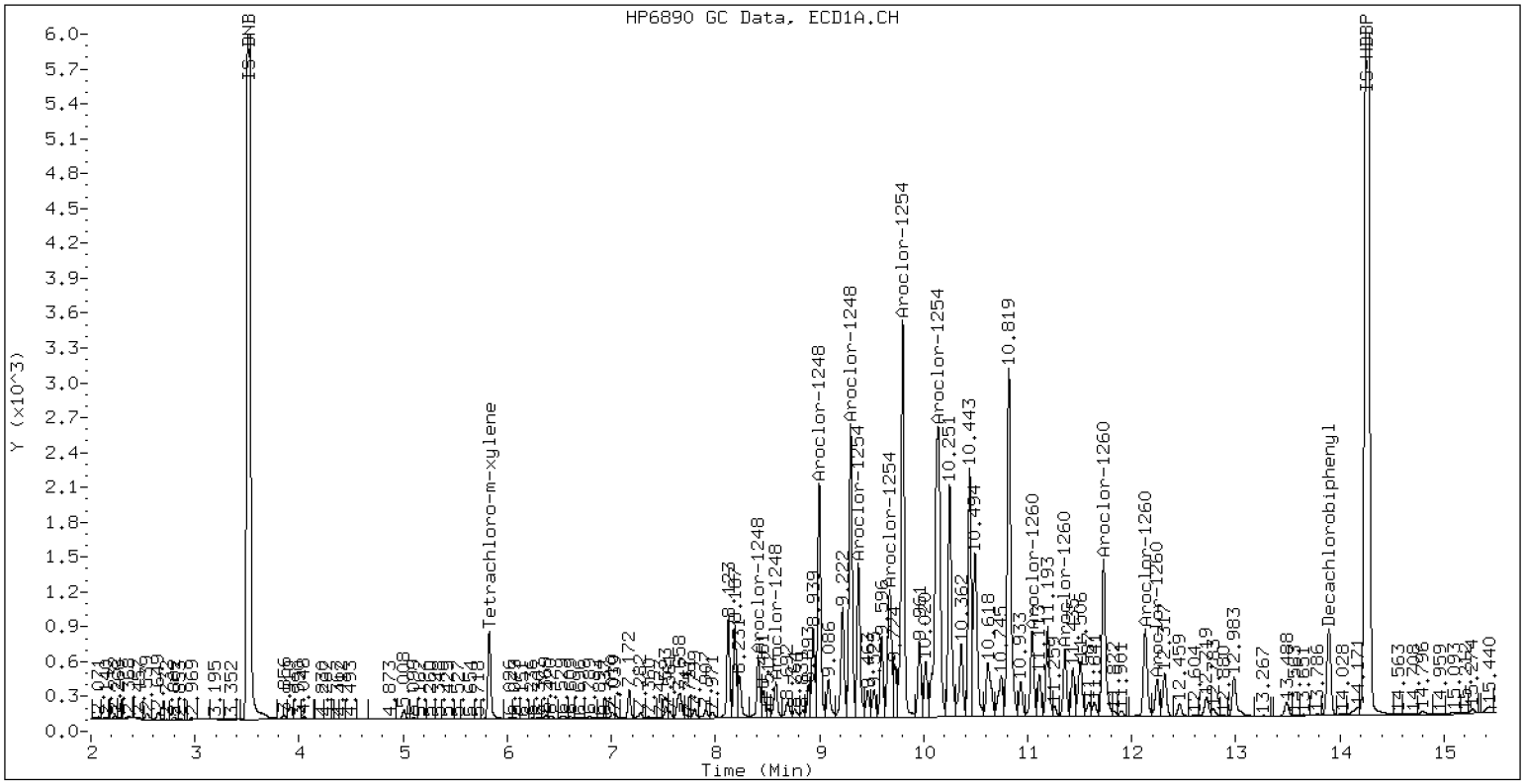
Total PCB Area Col2 (5.807 - 14.027) = 1572170 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

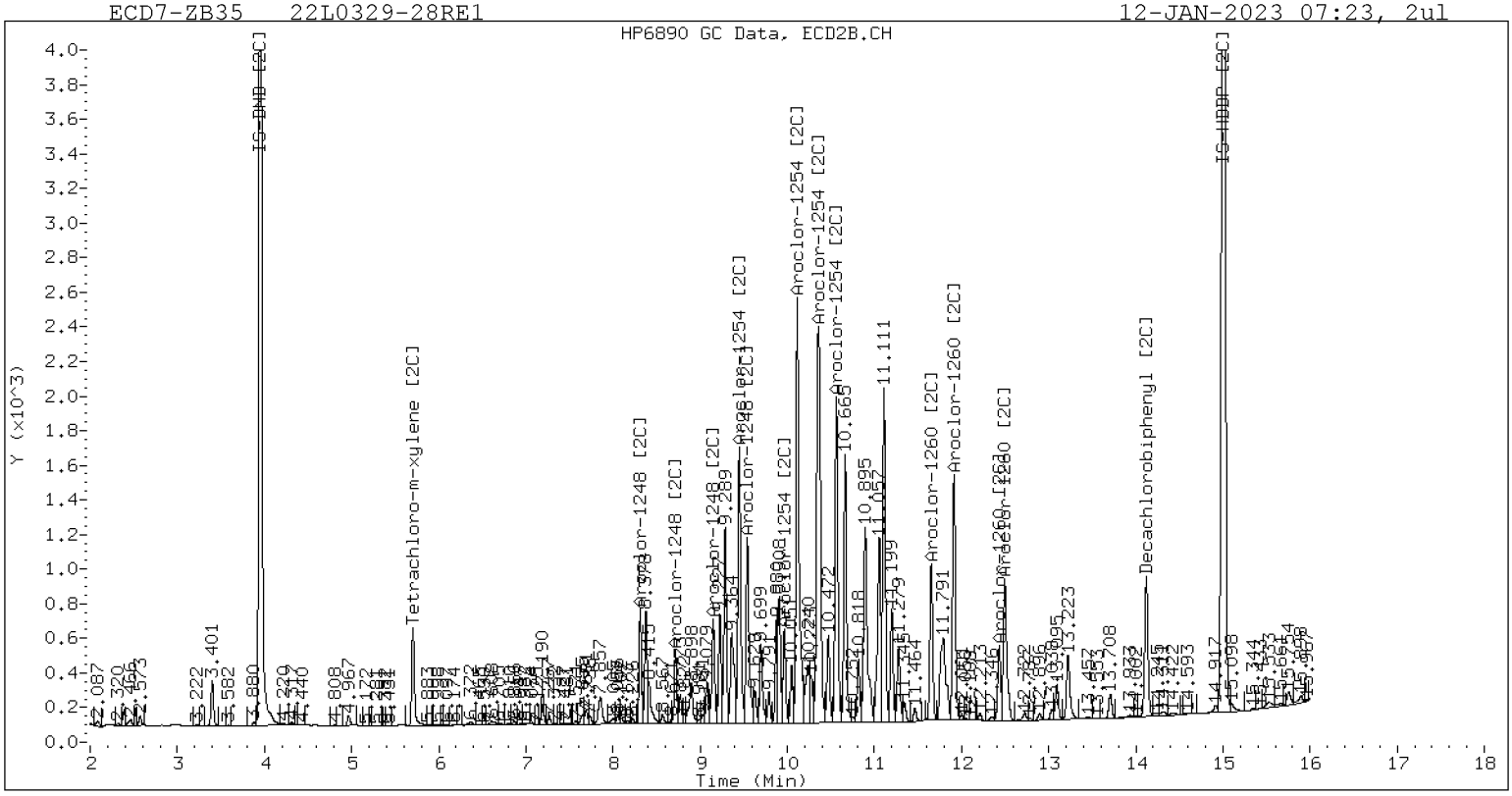
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-28RE1 12-JAN-2023 07:23, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-28RE1 12-JAN-2023 07:23, 2ul

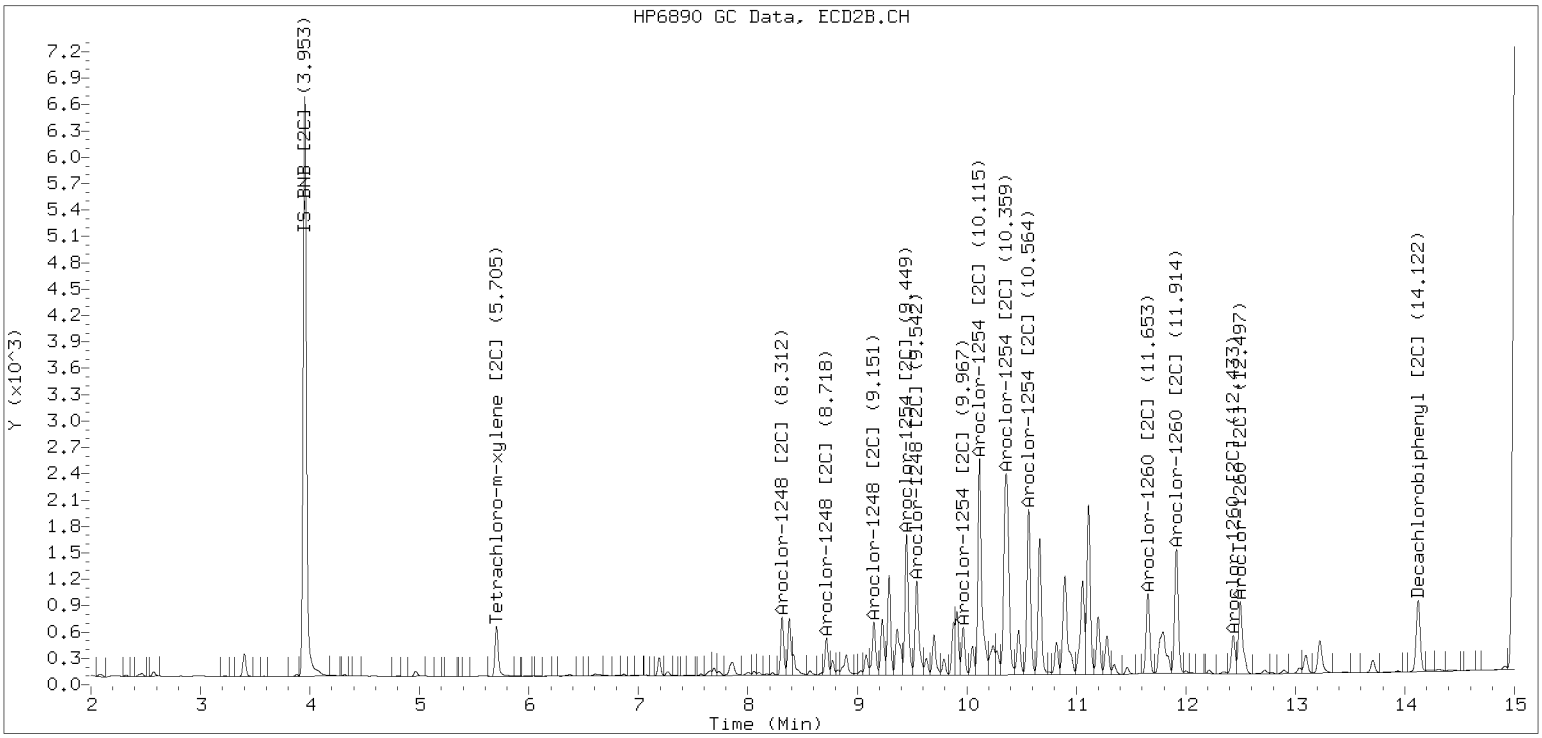



ZB-35 Manual Integration: YES

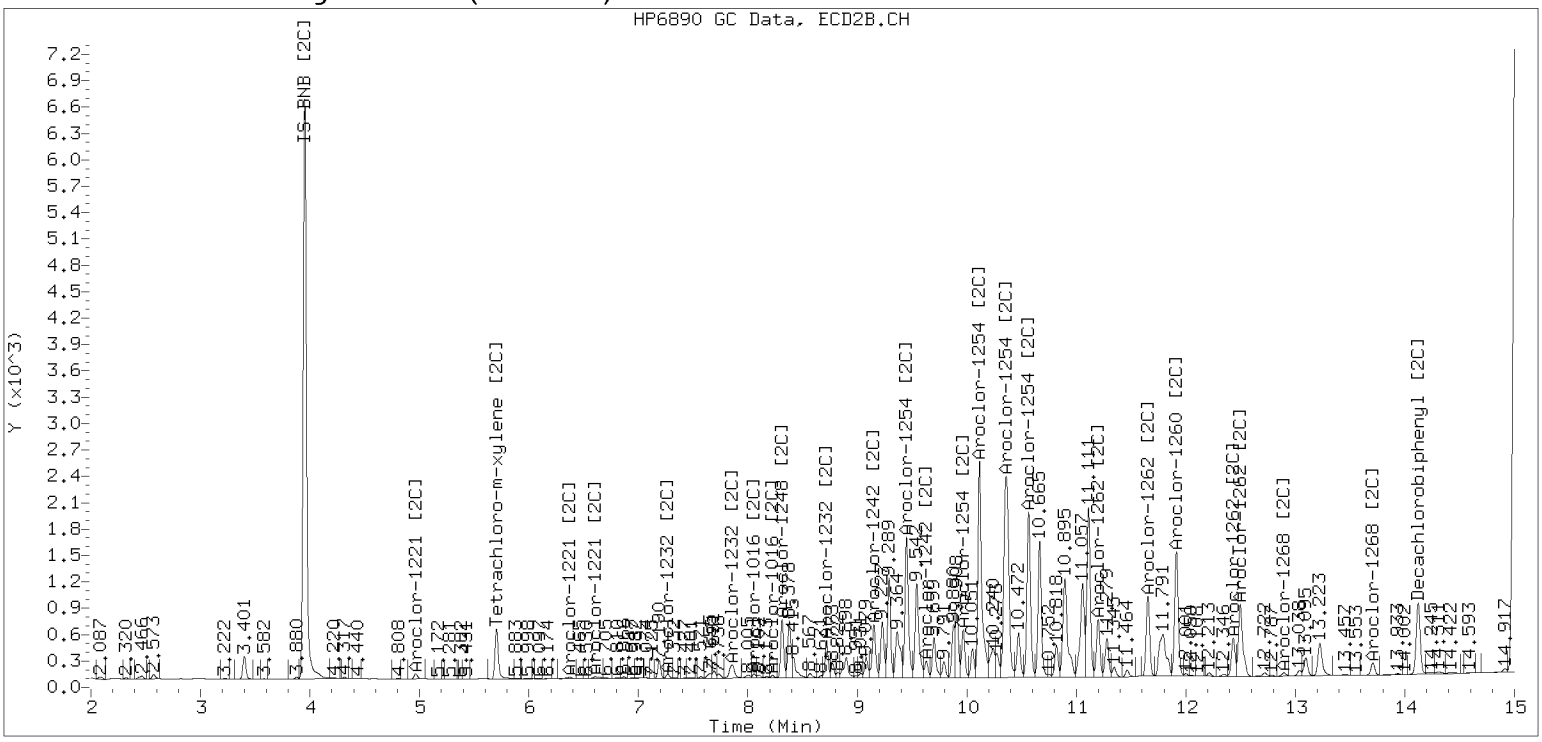
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230111.b/230111.b/01112365ECD7.D  Injection Date: 12-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC765B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-29 B | File ID: | 01072387ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 15:50 |
| % Solids: | 82.94 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.11 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 2 | 1 | 7.3 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 10.2 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 6.6 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9794* | *7.80* | *97.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9794* | *6.44* | *80.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9794* | *7.52* | *94.2* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9794* | *6.43* | *80.6* | *44 - 120* | |

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

Data file 1: /230107.b/01072387ECD7.D
Data file 2: /230107.b/230107.b/01072387ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-29
Client ID:
Injection Date: 08-JAN-2023 15:50
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.828 | -0.005 | 215638 | 5.704 | -0.005 | 145463 | 32.3 | 32.2 | 0.2 | Tetrachloro-m-xylene |
| 13.895 | -0.009 | 235569 | 14.122 | -0.006 | 243306 | 39.1 | 37.7 | 3.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 471205 | 5.3 |
| Hexabromobiphenyl | 798898 | 657494 | -17.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 329100 | 32.1 |
| Hexabromobiphenyl | 362541 | 454683 | 25.4 |

* 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 | --- | | | 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 | 8.415 | -0.010 | 7197 | 35.5 | 1 | 8.315 | -0.007 | 5315 | 39.5 |
| Aroclor-1248 | 2 | 8.585 | -0.018 | 5891 | 22.8 | 2 | 8.721 | -0.007 | 4821 | 34.1 |
| Aroclor-1248 | 3 | 9.002 | -0.017 | 12056 | 25.9 | 3 | 9.156 | -0.022 | 6148 | 35.7 |
| Aroclor-1248 | 4 | 9.303 | -0.010 | 13589 | 59.6 | 4 | 9.547 | -0.055 | 4841 | 24.0 |
| | Total Col1Ave (4 peaks): | | | | 36.0 | Total Col2Ave (4 peaks): | | | | 33.3 RPD = 8 |
| | Corrected Ave (3 peaks): | | | | 28.1 | Corrected Ave (3 peaks): | | | | 31.3 RPD = 11 |
| | | | | | | | | | | 36.43 |
| Aroclor-1254 | 1 | 9.303 | -0.008 | 13589 | 32.8 | 1 | 9.453 | -0.008 | 10097 | 47.6 |
| Aroclor-1254 | 2 | 9.379 | -0.009 | 7244 | 44.9 | 2 | 9.971 | -0.010 | 5045 | 29.6 |
| Aroclor-1254 | 3 | 9.676 | -0.003 | 9681 | 36.9 | 3 | 10.119 | -0.014 | 15626 | 42.6 |
| Aroclor-1254 | 4 | 9.805 | -0.009 | 19478 | 38.1 | 4 | 10.369 | -0.014 | 20049 | 52.8 |
| Aroclor-1254 | 5 | 10.141 | -0.026 | 10399 | 29.7 | 5 | 10.567 | -0.011 | 15200 | 83.0 |
| | Total Col1Ave (5 peaks): | | | | 36.5 | Total Col2Ave (5 peaks): | | | | 51.1 RPD = 33 |
| | Corrected Ave (4 peaks): | | | | 34.4 | Corrected Ave (4 peaks): | | | | 43.1 RPD = 23 |
| Aroclor-1260 | 1 | 11.047 | -0.013 | 8781 | 36.7 | 1 | 11.656 | -0.007 | 6607 | 27.5 |
| Aroclor-1260 | 2 | 11.359 | -0.017 | 5492 | 22.2 | 2 | 11.916 | -0.012 | 13508 | 22.4 |
| Aroclor-1260 | 3 | 11.733 | -0.017 | 20553 | 31.6 | 3 | 12.432 | -0.013 | 7510 | 46.8 |
| Aroclor-1260 | 4 | 12.134 | -0.020 | 11474 | 34.6 | 4 | 12.499 | -0.013 | 10695 | 26.6 |
| Aroclor-1260 | 5 | 12.246 | -0.011 | 5342 | 39.4 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 32.9 | Total Col2Ave (4 peaks): | | | | 30.9 RPD = 6 |
| | Corrected Ave (4 peaks): | | | | 31.3 | Corrected Ave (3 peaks): | | | | 25.5 RPD = 20 |
| 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 (5.933 - 13.804) = 435208 Col1 Total PCB = 0.1 ppm*

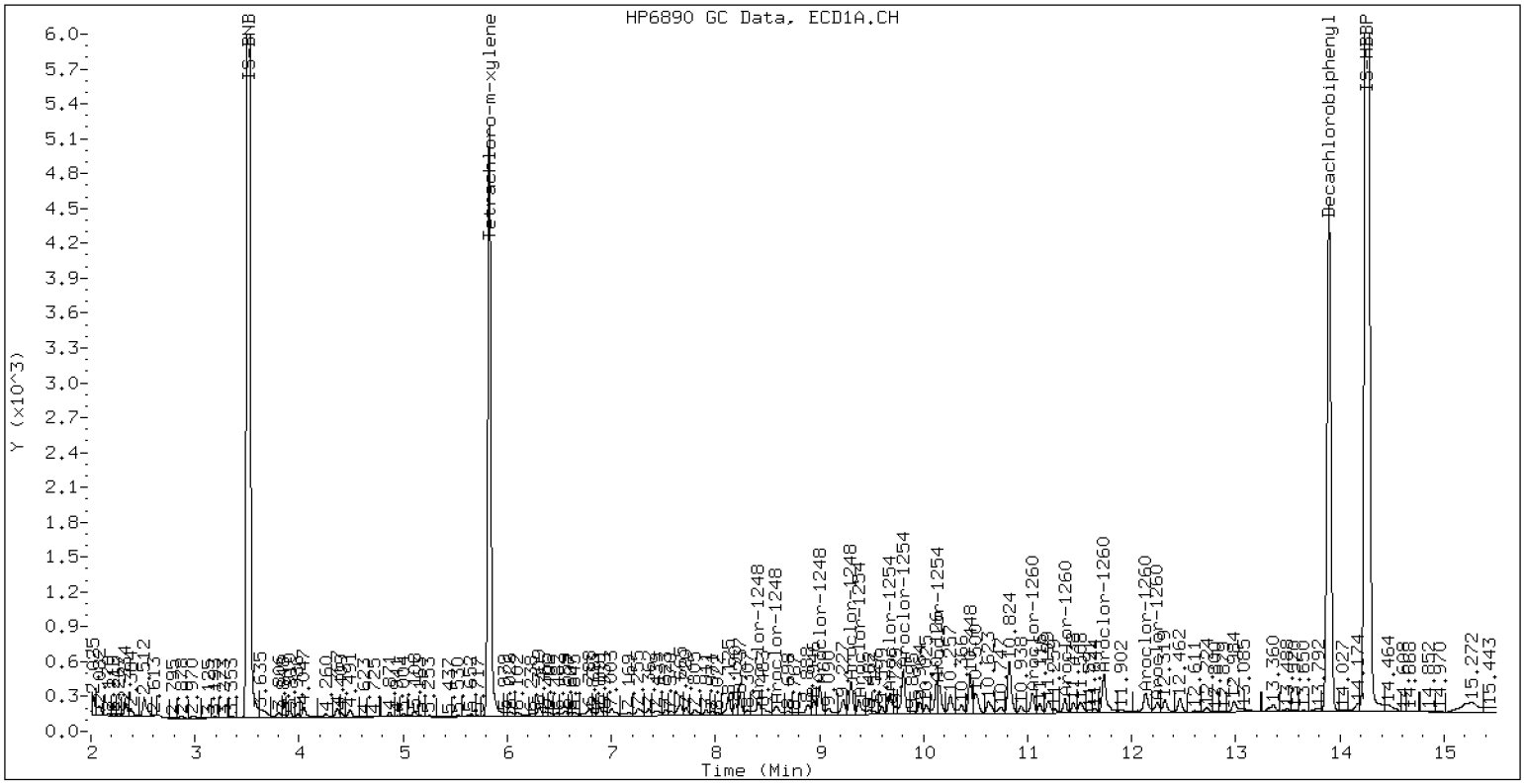
Total PCB Area Col2 (5.809 - 14.028) = 364188 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

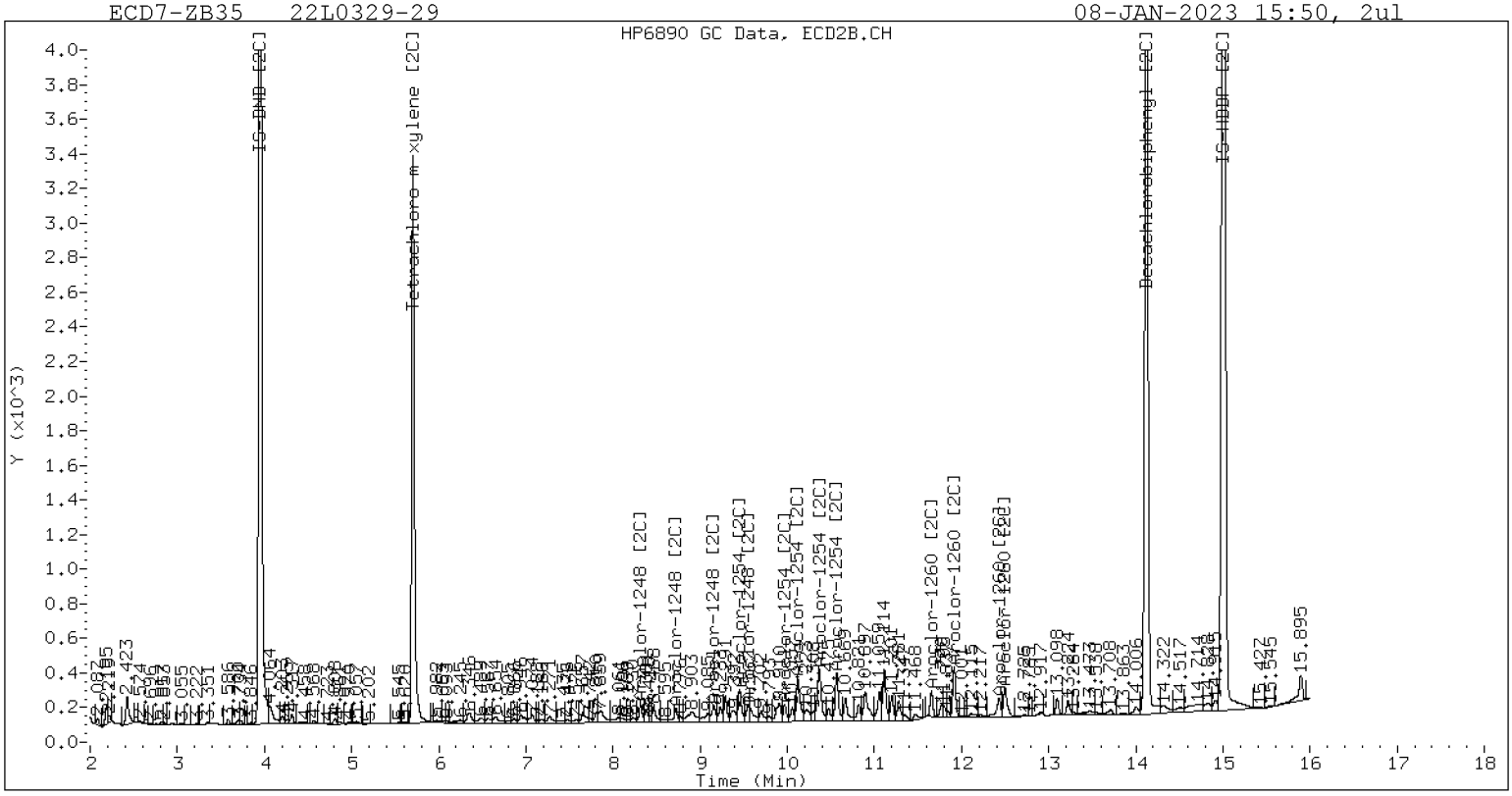
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-29 08-JAN-2023 15:50, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-29 08-JAN-2023 15:50, 2ul

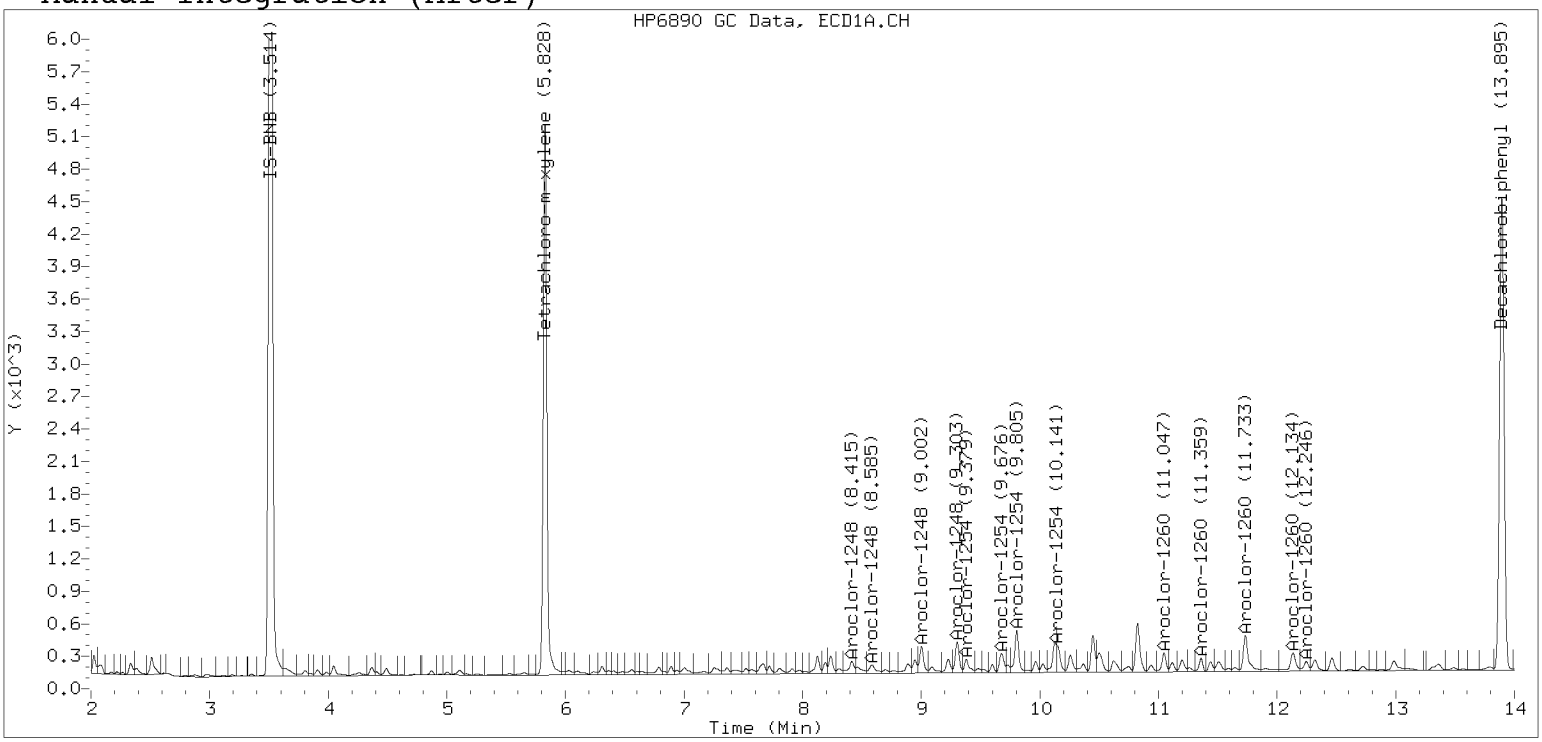



ZB-35 Manual Integration: YES

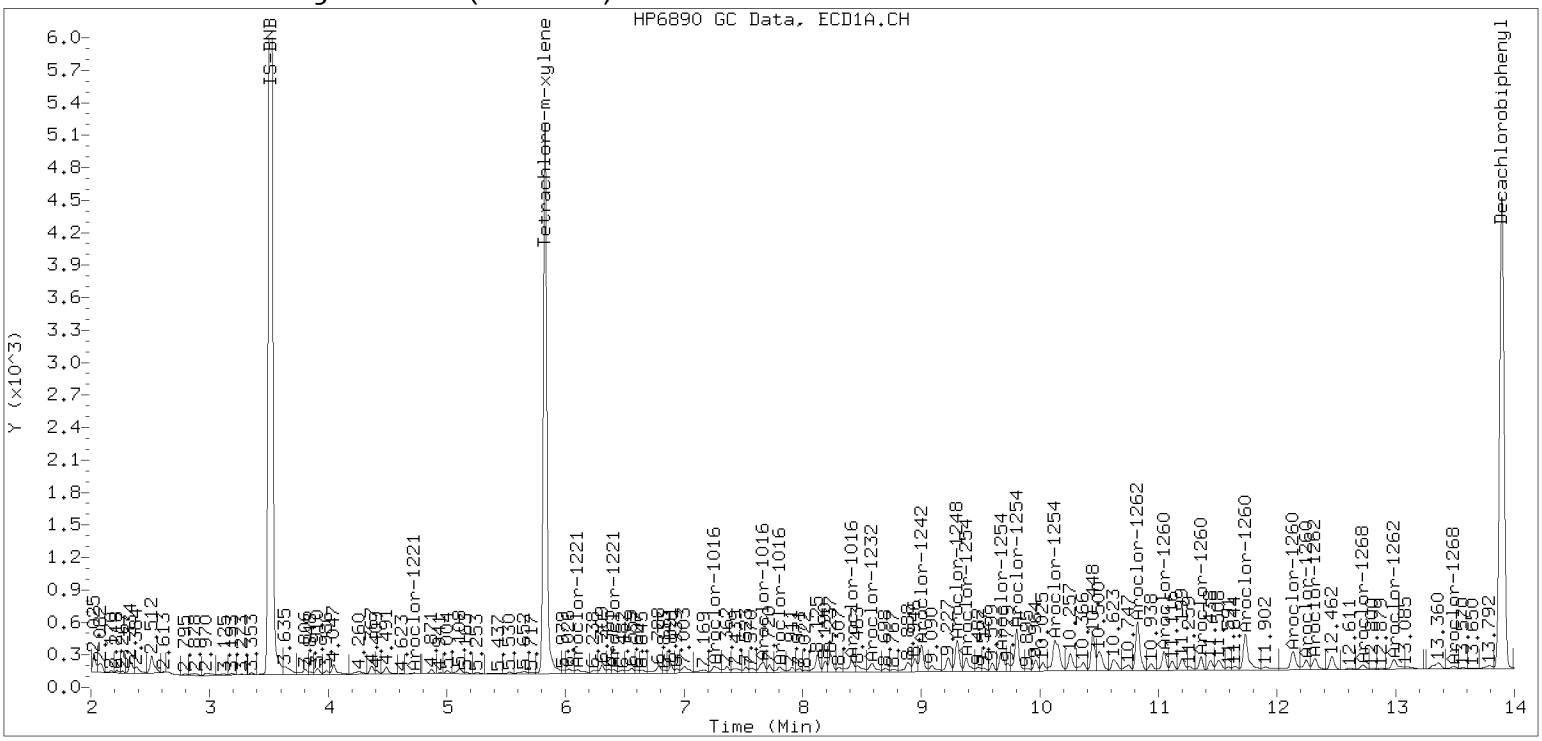
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072387ECD7.D  Injection Date: 08-JAN-2023 15:50

Manual Integration (After)



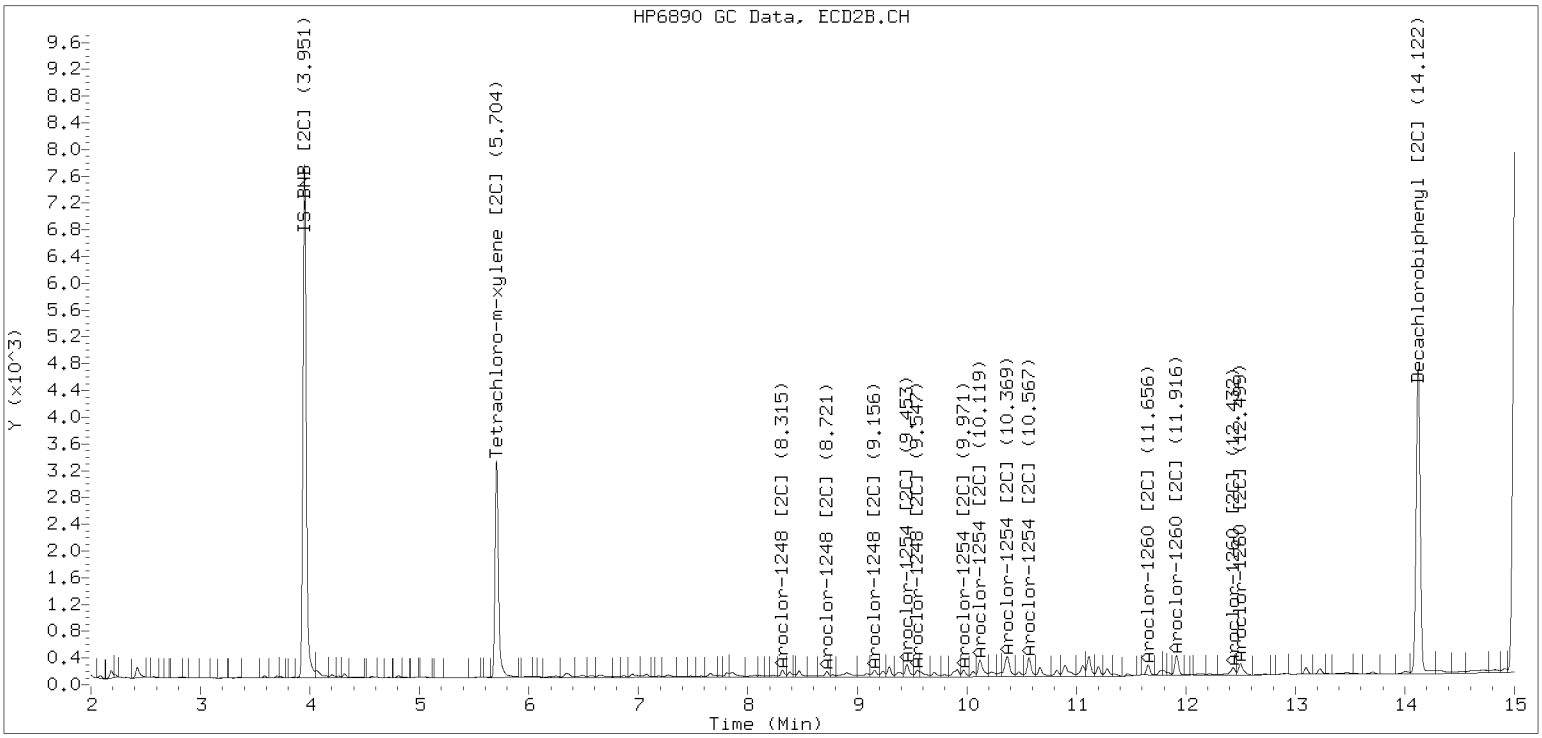

Processed Integration (Before)



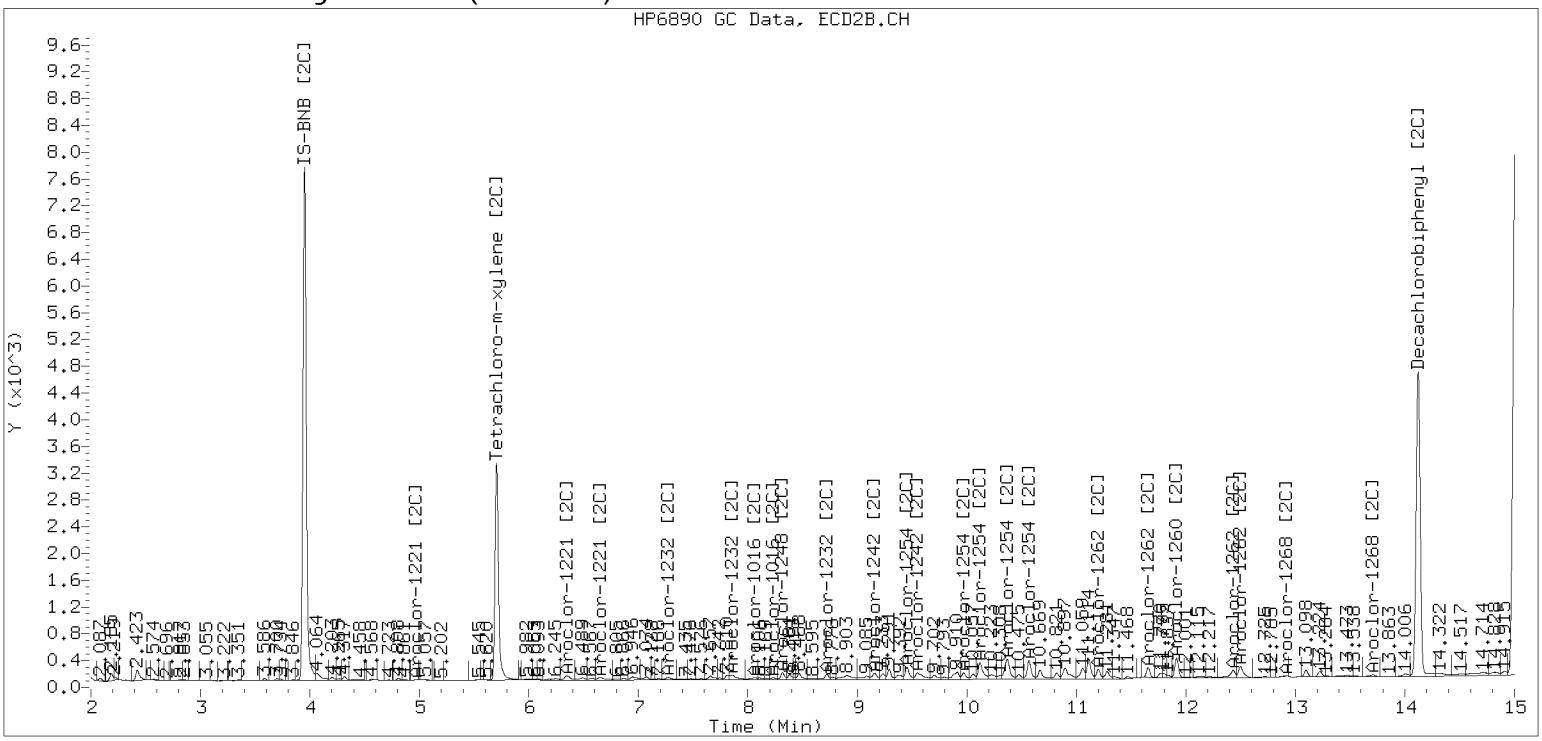
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072387ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC765C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-30 B | File ID: | 01072388ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 16:11 |
| % Solids: | 55.36 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 22.65 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 41.2 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 75.4 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 73.1 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9751* | *7.64* | *95.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9751* | *5.64* | *70.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9751* | *7.11* | *89.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9751* | *6.21* | *77.9* | *44 - 120* | |

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

Data file 1: /230107.b/01072388ECD7.D
Data file 2: /230107.b/230107.b/01072388ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-30
Client ID:
Injection Date: 08-JAN-2023 16:11
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.006 | 186329 | 5.703 | -0.006 | 130676 | 28.3 | 31.1 | 9.7 | Tetrachloro-m-xylene |
| 13.894 | -0.010 | 176008 | 14.122 | -0.006 | 186843 | 38.3 | 35.6 | 7.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 465151 | 3.9 |
| Hexabromobiphenyl | 798898 | 501079 | -37.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 306079 | 22.9 |
| Hexabromobiphenyl | 362541 | 369192 | 1.8 |

* 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 | --- | | | 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 | 8.411 | -0.014 | 27624 | 138.1 | 1 | 8.312 | -0.010 | 27507 | 220.0 |
| Aroclor-1248 | 2 | 8.578 | -0.025 | 21362 | 83.7 | 2 | 8.718 | -0.011 | 18112 | 137.7 |
| Aroclor-1248 | 3 | 8.998 | -0.021 | 80946 | 176.2 | 3 | 9.150 | -0.028 | 24790 | 155.0 |
| Aroclor-1248 | 4 | 9.299 | -0.014 | 96566 | 429.1 | 4 | 9.542 | -0.060 | 42798 | 227.9 |
| | Total Col1Ave (4 peaks): | | | 206.8 | | Total Col2Ave (4 peaks): | | | 185.1 | RPD = 11 |
| | Corrected Ave (3 peaks): | | | 132.7 | | Corrected Ave (3 peaks): | | | 170.9 | RPD = 25 |
| Aroclor-1254 | 1 | 9.299 | -0.012 | 96566 | 235.8 | 1 | 9.449 | -0.012 | 60940 | 308.8 |
| Aroclor-1254 | 2 | 9.374 | -0.014 | 44536 | 279.6 | 2 | 9.966 | -0.014 | 27858 | 175.6 |
| Aroclor-1254 | 3 | 9.667 | -0.012 | 58206 | 225.0 | 3 | 10.115 | -0.018 | 110779 | 324.8 |
| Aroclor-1254 | 4 | 9.798 | -0.016 | 131066 | 259.9 | 4 | 10.368 | -0.015 | 145995 | 413.4 |
| Aroclor-1254 | 5 | 10.125 | -0.043 | 180510 | 522.3 | 5 | 10.564 | -0.014 | 113939 | 668.9 |
| | Total Col1Ave (5 peaks): | | | 304.5 | | Total Col2Ave (5 peaks): | | | 378.3 | RPD = 22 |
| | Corrected Ave (4 peaks): | | | 250.1 | | Corrected Ave (4 peaks): | | | 305.6 | RPD = 20 |
| Aroclor-1260 | 1 | 11.043 | -0.017 | 78171 | 428.6 | 1 | 11.652 | -0.011 | 67326 | 345.5 |
| Aroclor-1260 | 2 | 11.358 | -0.017 | 65762 | 348.6 | 2 | 11.912 | -0.016 | 153029 | 312.9 |
| Aroclor-1260 | 3 | 11.728 | -0.022 | 178834 | 360.8 | 3 | 12.433 | -0.013 | 49835 | 382.7 |
| Aroclor-1260 | 4 | 12.128 | -0.025 | 76946 | 304.8 | 4 | 12.497 | -0.015 | 94992 | 291.4 |
| Aroclor-1260 | 5 | 12.243 | -0.013 | 40213 | 389.2 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | 366.4 | | Total Col2Ave (4 peaks): | | | 333.1 | RPD = 10 |
| | Corrected Ave (4 peaks): | | | 350.9 | | Corrected Ave (3 peaks): | | | 316.6 | RPD = 10 |
| 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 (5.933 - 13.804) = 2581250 Col1 Total PCB = 0.6 ppm*

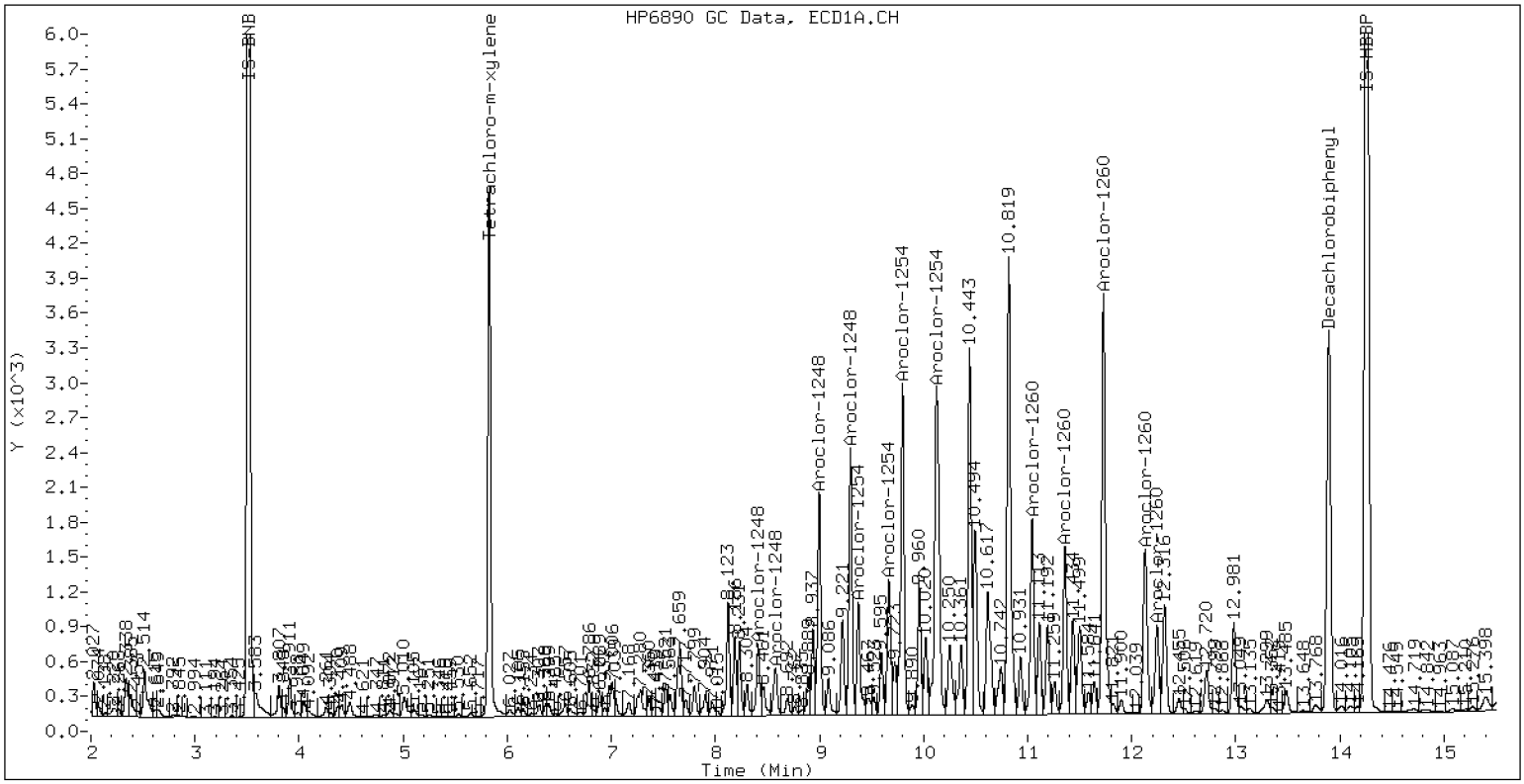
Total PCB Area Col2 (5.809 - 14.028) = 1963180 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

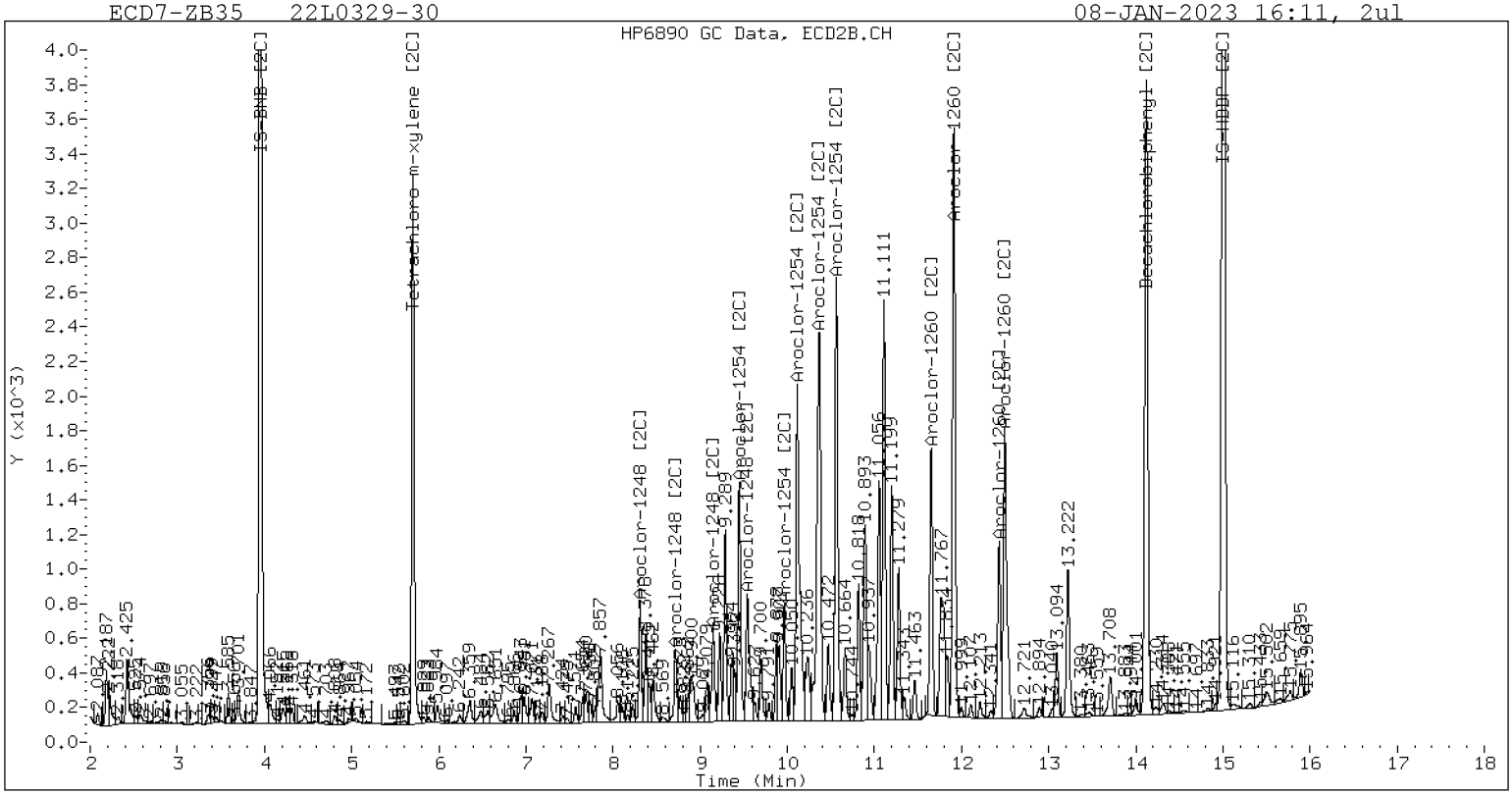
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-30 08-JAN-2023 16:11, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-30 08-JAN-2023 16:11, 2ul

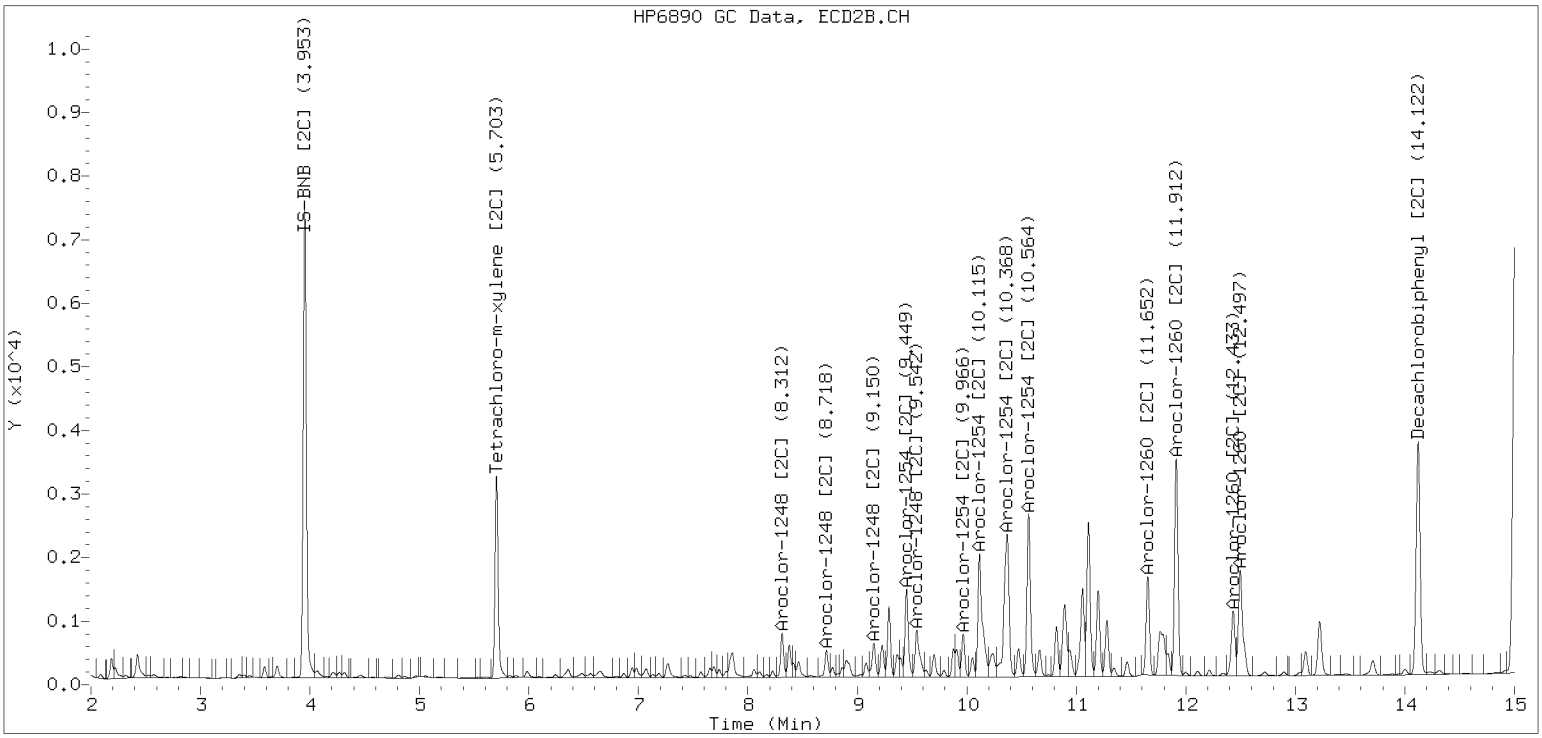



ZB-35 Manual Integration: YES

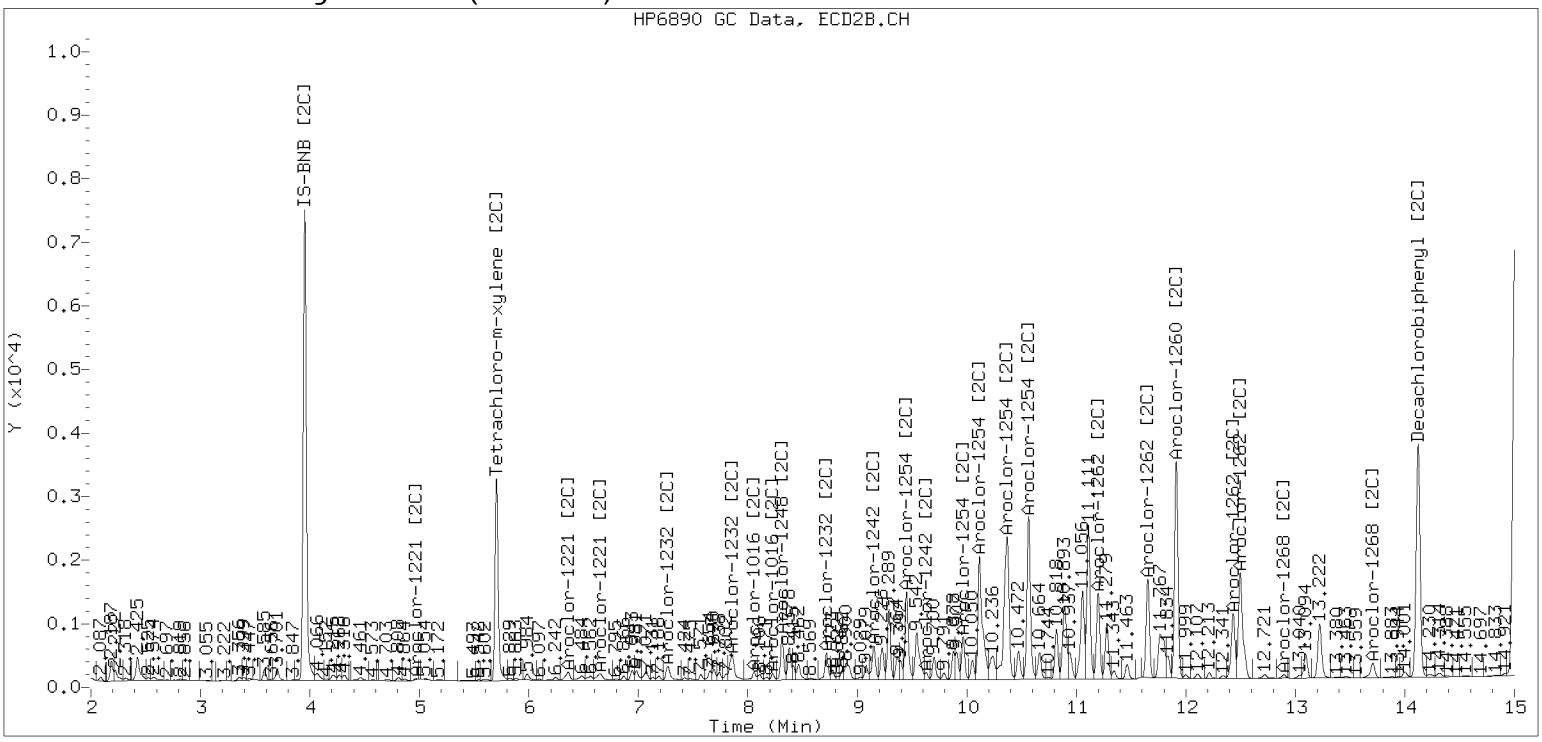
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072388ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC765D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-31 B | File ID: | 01112366ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/12/23 07:45 |
| % Solids: | 65.07 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 19.28 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0136 | 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 | 5 | 19.9 | 7.8 | 19.9 | U |
| 11104-28-2 | Aroclor 1221 | 1 | 5 | 19.9 | 7.8 | 19.9 | U |
| 11141-16-5 | Aroclor 1232 | 1 | 5 | 19.9 | 7.8 | 19.9 | U |
| 53469-21-9 | Aroclor 1242 | 1 | 5 | 19.9 | 7.8 | 19.9 | U |
| 12672-29-6 | Aroclor 1248 | 2 | 5 | 146 | 7.8 | 19.9 | D |
| 11097-69-1 | Aroclor 1254 | 2 | 5 | 386 | 7.8 | 19.9 | D |
| 11096-82-5 | Aroclor 1260 | 2 | 5 | 382 | 2.9 | 19.9 | D |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9710* | *8.75* | *110* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9710* | *6.48* | *81.3* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9710* | *7.32* | *91.8* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9710* | *6.83* | *85.7* | *44 - 120* | |

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

Data file 1: /230111.b/01112366ECD7.D
Data file 2: /230111.b/230111.b/01112366ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-31RE1
Client ID:
Injection Date: 12-JAN-2023 07:45
Report Date: 01/14/2023 13:22
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.003 | 36783 | 5.705 | -0.003 | 27912 | 6.5 | 6.9 | 5.2 | Tetrachloro-m-xylene |
| 13.894 | -0.008 | 44155 | 14.121 | -0.006 | 44449 | 8.8 | 7.3 | 17.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 398972 | -10.9 |
| Hexabromobiphenyl | 798898 | 548497 | -31.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 297117 | 19.3 |
| Hexabromobiphenyl | 362541 | 426230 | 17.6 |

* 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 | --- | | | 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 | 8.413 | -0.011 | 21510 | 125.4 | 1 | 8.314 | -0.007 | 24002 | 197.7 |
| Aroclor-1248 | 2 | 8.581 | -0.018 | 15246 | 69.6 | 2 | 8.719 | -0.008 | 14824 | 116.1 |
| Aroclor-1248 | 3 | 9.000 | -0.016 | 73112 | 185.6 | 3 | 9.154 | -0.020 | 19521 | 125.7 |
| Aroclor-1248 | 4 | 9.301 | -0.008 | 95245 | 493.4 | 4 | 9.543 | -0.055 | 34081 | 1~~87.~~0 |
| | Total Col1Ave (4 peaks): | | | | 218.5 | Total Col2Ave (4 peaks): | | | | 156.6 RPD = 33 |
| | Corrected Ave (3 peaks): | | | | 126.9 | Corrected Ave (3 peaks): | | | | 142.9 RPD = 12 |
| | | | | | | | | | | 146.5 |
| Aroclor-1254 | 1 | 9.301 | -0.015 | 95245 | 271.1 | 1 | 9.450 | -0.010 | 60956 | 318.2 |
| Aroclor-1254 | 2 | 9.376 | -0.019 | 37143 | 271.9 | 2 | 9.968 | -0.012 | 31768 | 206.3 |
| Aroclor-1254 | 3 | 9.667 | -0.019 | 49248 | 222.0 | 3 | 10.116 | -0.016 | 111287 | 336.2 |
| Aroclor-1254 | 4 | 9.801 | -0.024 | 127032 | 293.7 | 4 | 10.367 | -0.013 | 138762 | 404.7 |
| Aroclor-1254 | 5 | 10.125 | -0.067 | 170109 | 5~~73.~~8 | 5 | 10.565 | -0.012 | 111355 | 673.4 |
| | Total Col1Ave (5 peaks): | | | | 3~~26.~~5 | Total Col2Ave (5 peaks): | | | | 387.8 RPD = 17 |
| | Corrected Ave (4 peaks): | | | | 264.7 | Corrected Ave (4 peaks): | | | | 316.3 RPD = 18 |
| Aroclor-1260 | 1 | 11.045 | -0.013 | 74947 | 375.4 | 1 | 11.653 | -0.008 | 78734 | 349.9 |
| Aroclor-1260 | 2 | 11.361 | -0.013 | 65884 | 319.1 | 2 | 11.913 | -0.012 | 183656 | 325.3 |
| Aroclor-1260 | 3 | 11.730 | -0.017 | 218709 | 403.1 | 3 | 12.432 | -0.013 | 76639 | 509.8 |
| Aroclor-1260 | 4 | 12.131 | -0.022 | 100504 | 363.7 | 4 | 12.498 | -0.012 | 131743 | 350.1 |
| Aroclor-1260 | 5 | 12.245 | -0.011 | 50955 | 450.5 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 382.4 | Total Col2Ave (4 peaks): | | | | 383.8 RPD = 0 |
| | Corrected Ave (4 peaks): | | | | 365.3 | Corrected Ave (3 peaks): | | | | 341.8 RPD = 7 |
| 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 - 13.802) = 2481737 Col1 Total PCB = 0.7 ppm*

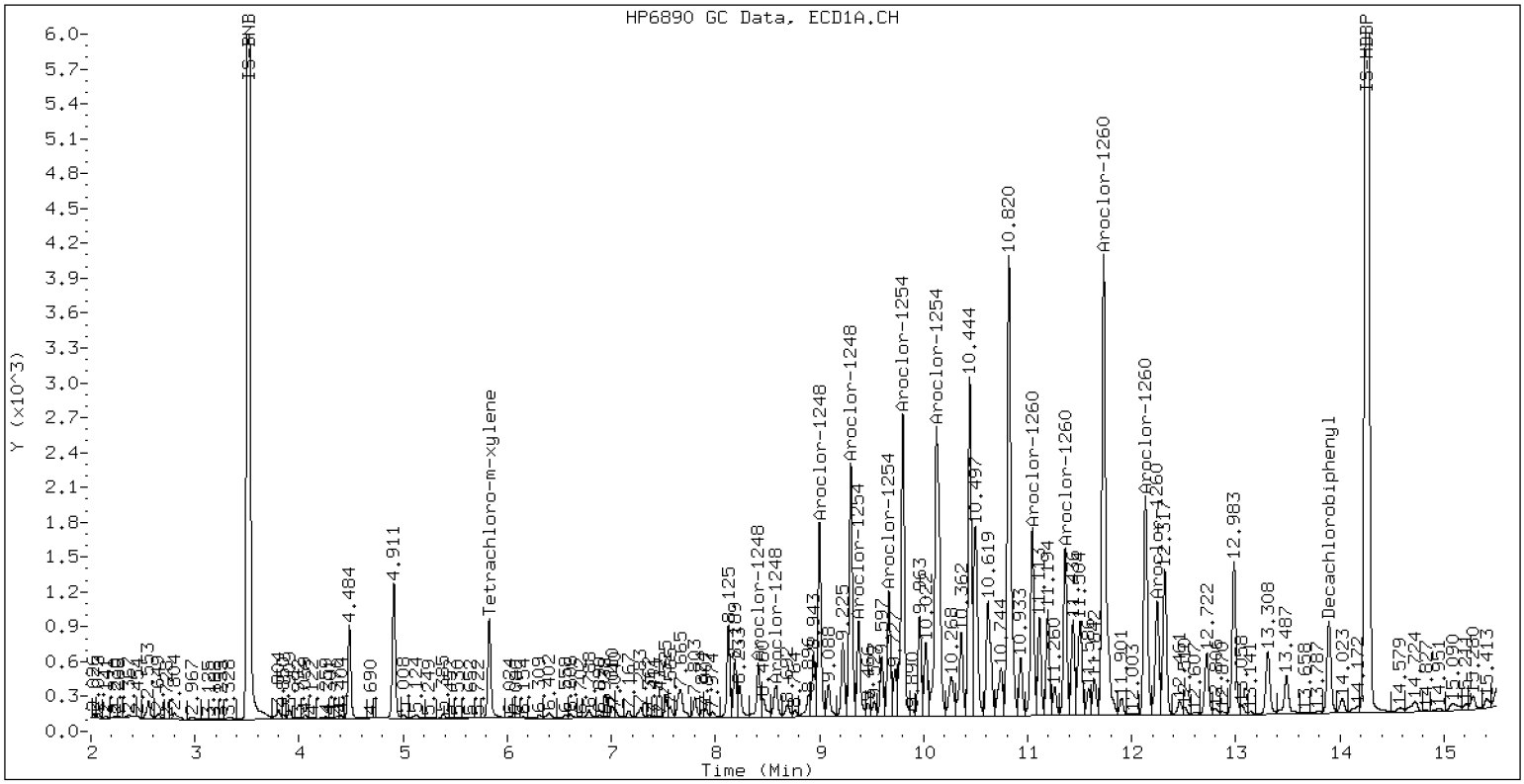
Total PCB Area Col2 (5.807 - 14.027) = 2008700 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

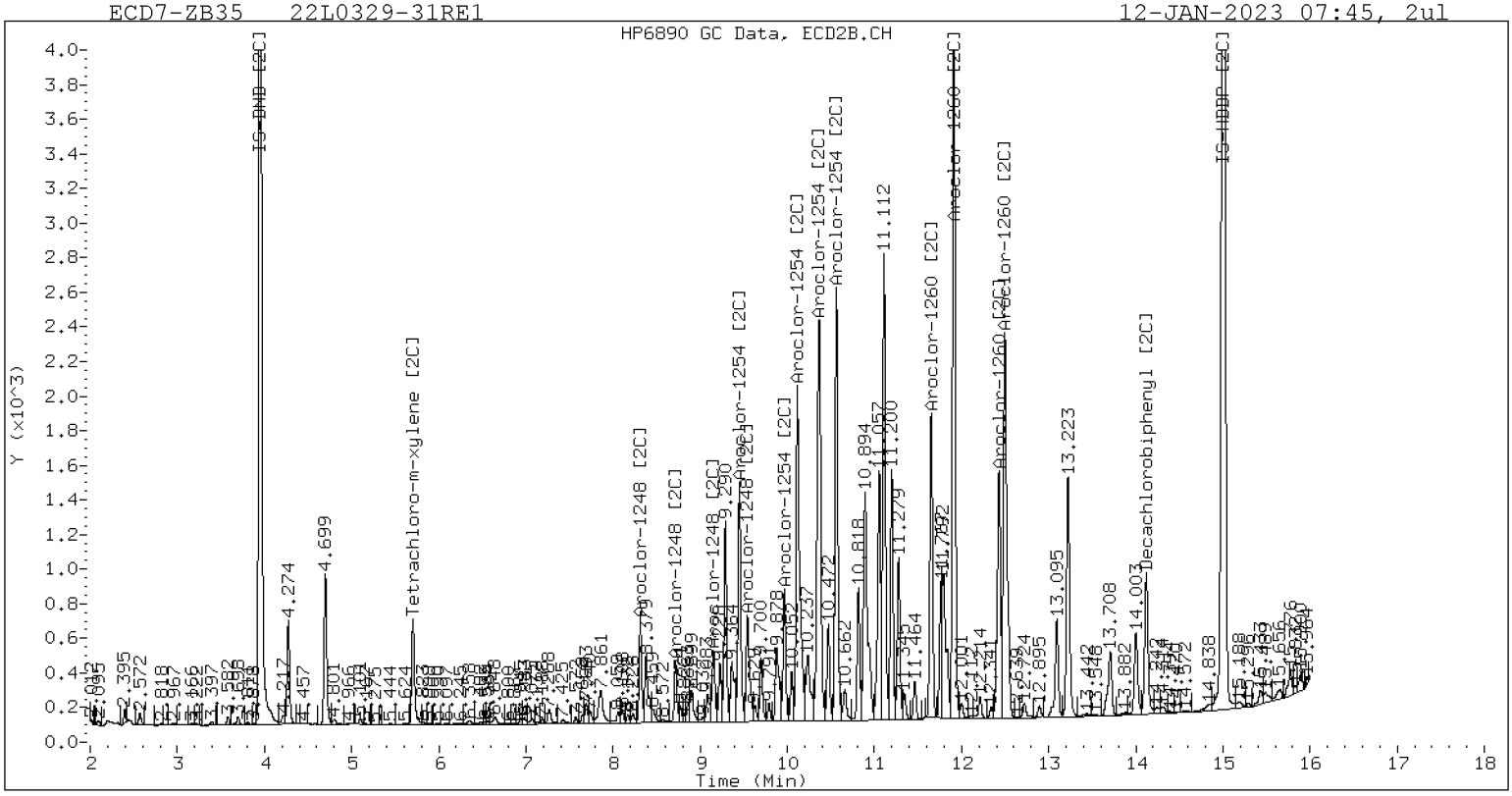
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-31RE1 12-JAN-2023 07:45, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-31RE1 12-JAN-2023 07:45, 2ul

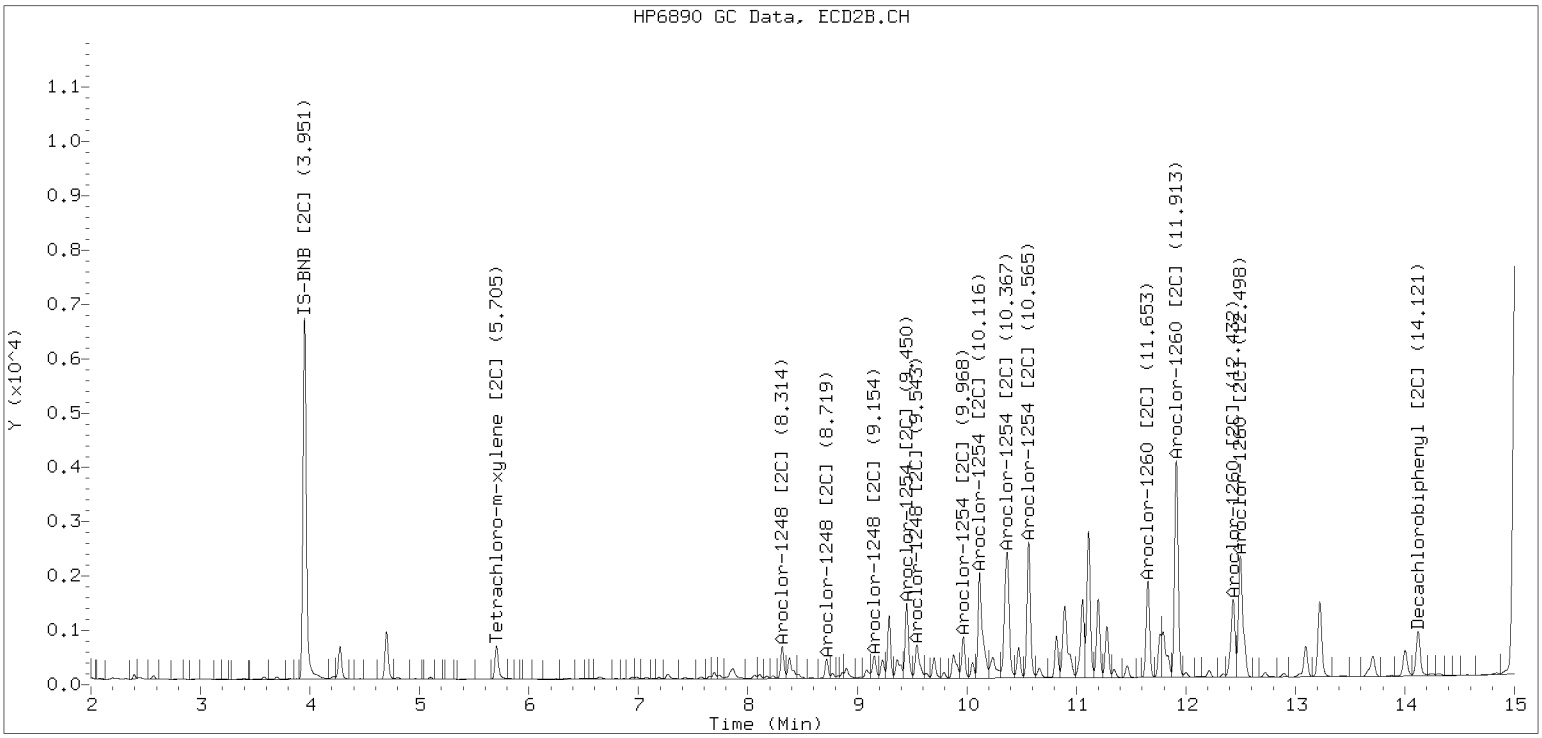



ZB-35 Manual Integration: YES

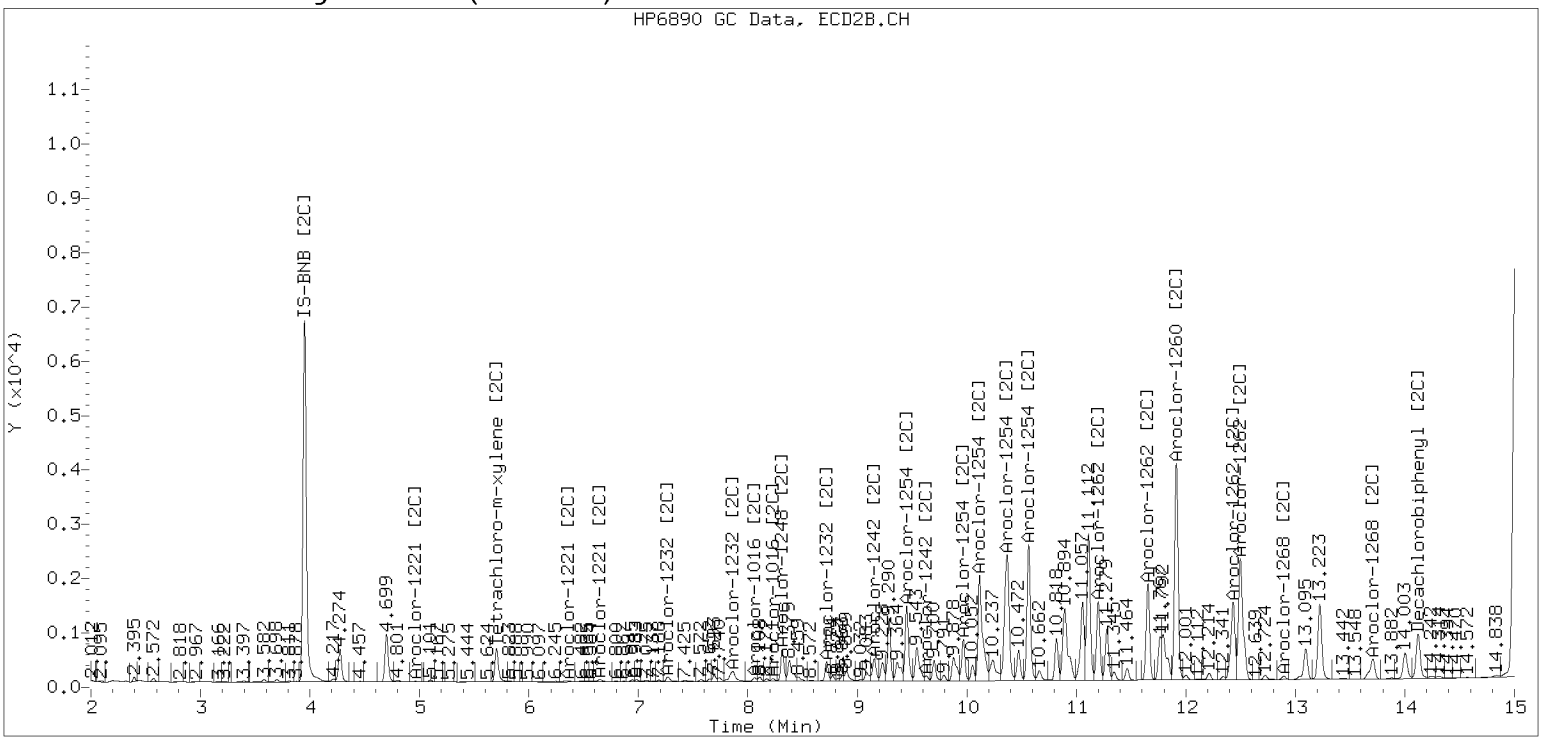
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230111.b/230111.b/01112366ECD7.D  Injection Date: 12-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC765E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-32 B | File ID: | 01072392ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 17:35 |
| % Solids: | 77.43 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 16.19 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 6.4 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 9.9 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 9.4 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9771* | *7.82* | *98.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9771* | *6.07* | *76.1* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9771* | *8.10* | *102* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9771* | *6.24* | *78.3* | *44 - 120* | |

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

Data file 1: /230107.b/01072392ECD7.D
Data file 2: /230107.b/230107.b/01072392ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-32
Client ID:
Injection Date: 08-JAN-2023 17:35
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.828 | -0.005 | 201843 | 5.704 | -0.005 | 137960 | 30.4 | 31.3 | 2.8 | Tetrachloro-m-xylene |
| 13.895 | -0.009 | 214104 | 14.123 | -0.005 | 251404 | 39.2 | 40.6 | 3.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 468131 | 4.6 |
| Hexabromobiphenyl | 798898 | 595407 | -25.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 321504 | 29.1 |
| Hexabromobiphenyl | 362541 | 436035 | 20.3 |

* 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 | --- | | | 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 | 8.414 | -0.011 | 6379 | 31.7 | 1 | 8.315 | -0.007 | 3909 | 29.8 |
| Aroclor-1248 | 2 | 8.583 | -0.019 | 4768 | 18.6 | 2 | 8.719 | -0.009 | 2673 | 19.3 |
| Aroclor-1248 | 3 | 9.001 | -0.018 | 10588 | 22.9 | 3 | 9.155 | -0.024 | 4016 | 23.9 |
| Aroclor-1248 | 4 | 9.302 | -0.011 | 12293 | 54.3 | 4 | 9.546 | -0.056 | 5392 | ~~27.~~3 |
| | | Total Col1Ave (4 peaks): | | | 31.9 | | Total Col2Ave (4 peaks): | | | 25.1 RPD = 24 |
| | | Corrected Ave (3 peaks): | | | 24.4 | | Corrected Ave (3 peaks): | | | 23.5 RPD = 4 |
| | | | | | | | | | | 27.67 |
| Aroclor-1254 | 1 | 9.302 | -0.009 | 12293 | 29.8 | 1 | 9.452 | -0.009 | 7620 | 36.8 |
| Aroclor-1254 | 2 | 9.378 | -0.010 | 5808 | 36.2 | 2 | 9.971 | -0.010 | 3302 | 19.8 |
| Aroclor-1254 | 3 | 9.683 | 0.004 | 14515 | 55.8 | 3 | 10.118 | -0.016 | 12694 | 35.4 |
| Aroclor-1254 | 4 | 9.806 | -0.009 | 28567 | 56.3 | 4 | 10.370 | -0.013 | 22767 | 61.4 |
| Aroclor-1254 | 5 | 10.126 | -0.042 | 17504 | 50.3 | 5 | 10.567 | -0.011 | 16887 | 94.4 |
| | | Total Col1Ave (5 peaks): | | | 45.7 | | Total Col2Ave (5 peaks): | | | 49.6 RPD = 8 |
| | | Corrected Ave (4 peaks): | | | 43.0 | | Corrected Ave (4 peaks): | | | 38.3 RPD = 12 |
| Aroclor-1260 | 1 | 11.047 | -0.013 | 11763 | 54.3 | 1 | 11.655 | -0.008 | 8221 | 35.7 |
| Aroclor-1260 | 2 | 11.360 | -0.016 | 9039 | 40.3 | 2 | 11.915 | -0.013 | 20227 | 35.0 |
| Aroclor-1260 | 3 | 11.730 | -0.020 | 25948 | 44.1 | 3 | 12.432 | -0.014 | 12561 | 81.7 |
| Aroclor-1260 | 4 | 12.129 | -0.025 | 4682 | 15.6 | 4 | 12.501 | -0.010 | 14227 | 37.0 |
| Aroclor-1260 | 5 | 12.244 | -0.012 | 5928 | 48.3 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 40.5 | | Total Col2Ave (4 peaks): | | | 47.3 RPD = 16 |
| | | Corrected Ave (4 peaks): | | | 37.1 | | Corrected Ave (3 peaks): | | | 35.9 RPD = 3 |
| 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 (5.933 - 13.804) = 497609 Col1 Total PCB = 0.1 ppm*

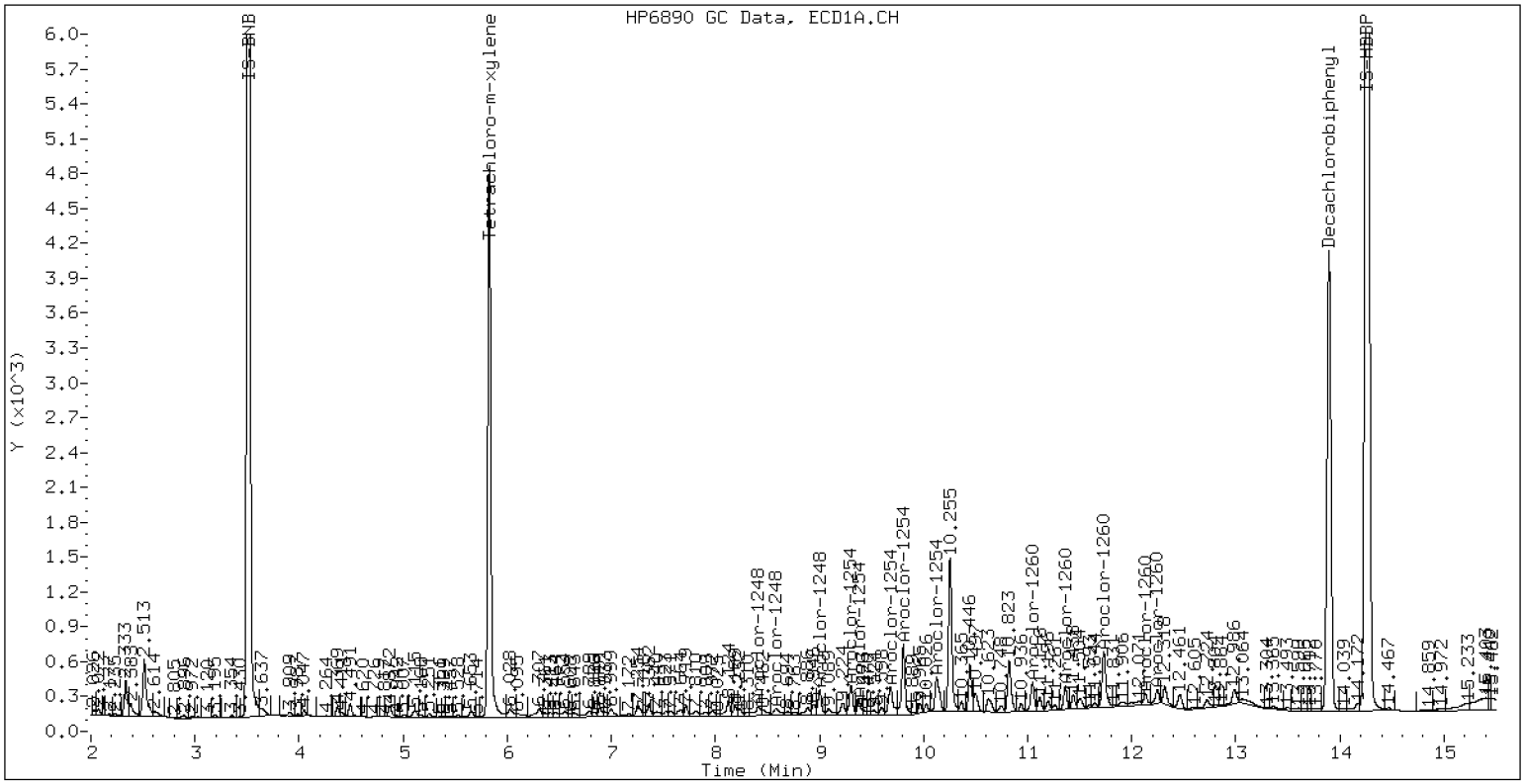
Total PCB Area Col2 (5.809 - 14.028) = 410165 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

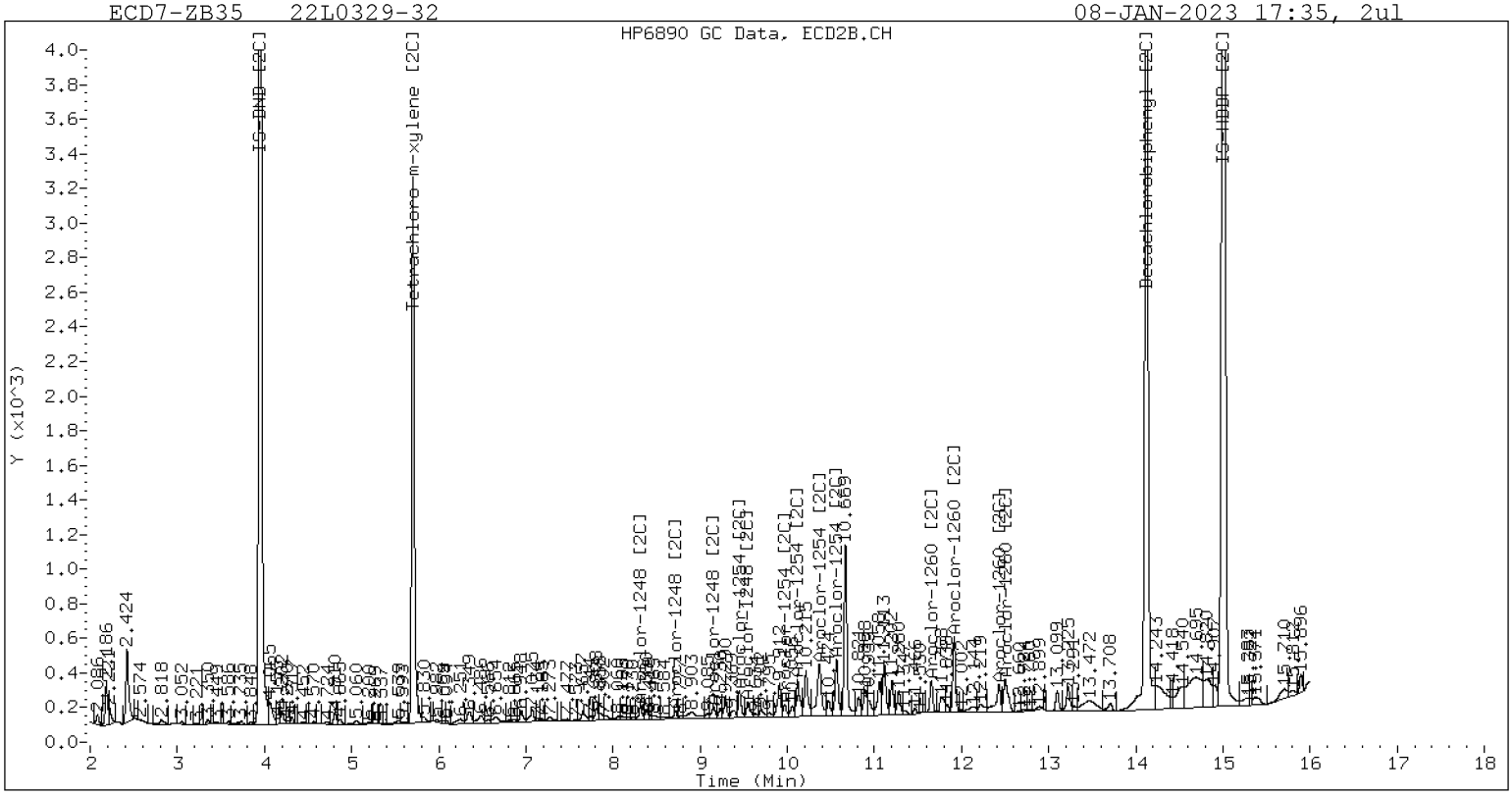
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-32 08-JAN-2023 17:35, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-32 08-JAN-2023 17:35, 2ul

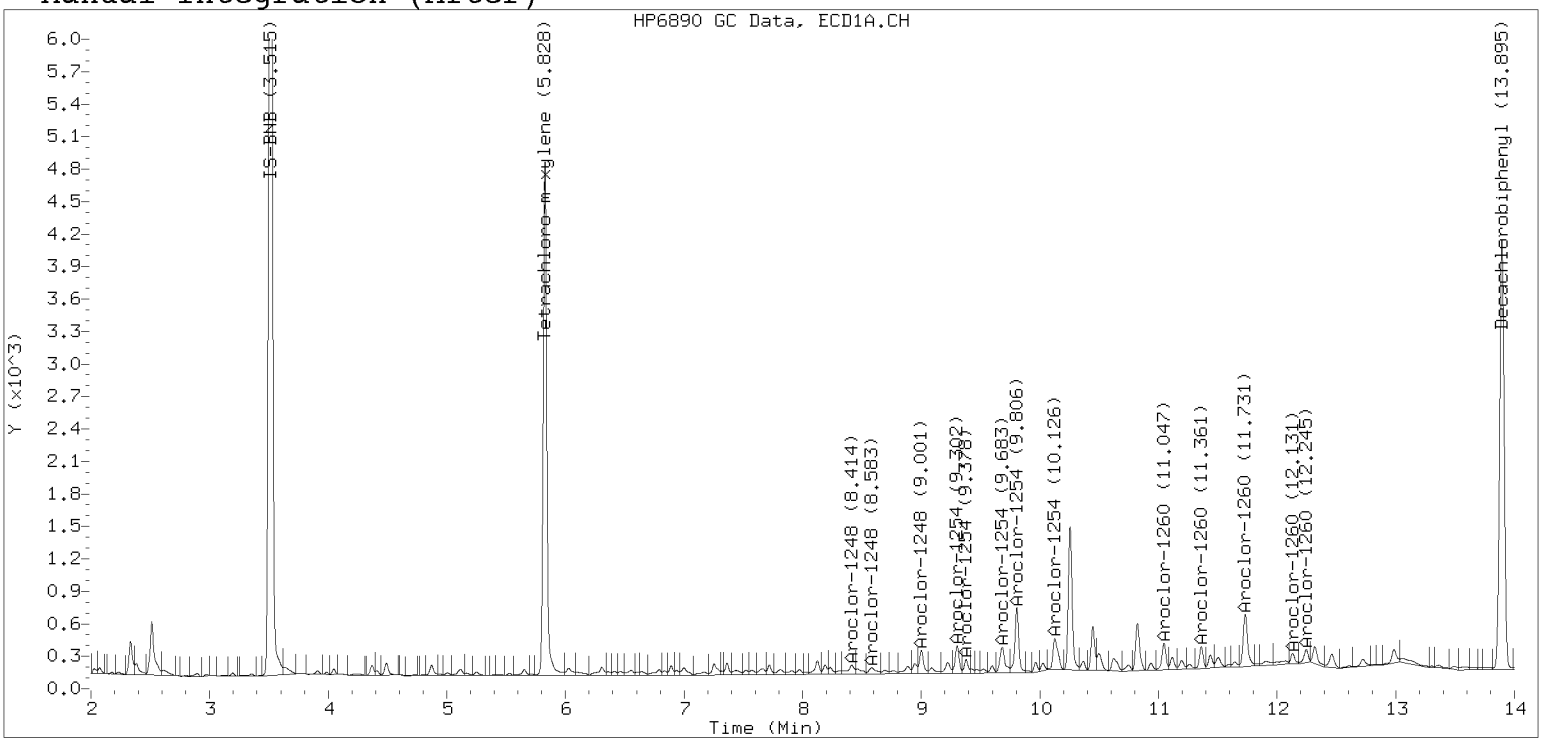



ZB-35 Manual Integration: YES

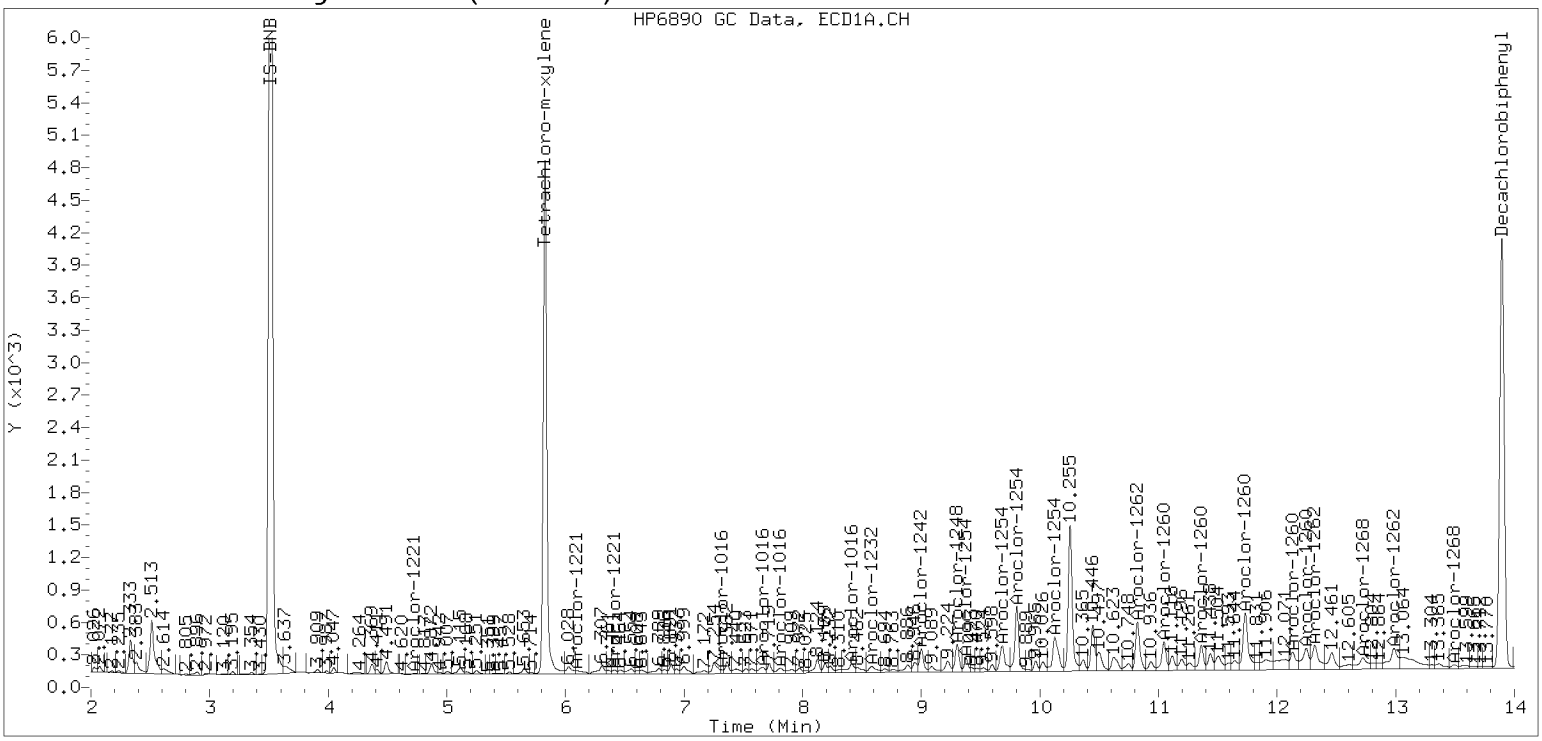
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072392ECD7.D  Injection Date: 08-JAN-2023 17:35

Manual Integration (After)



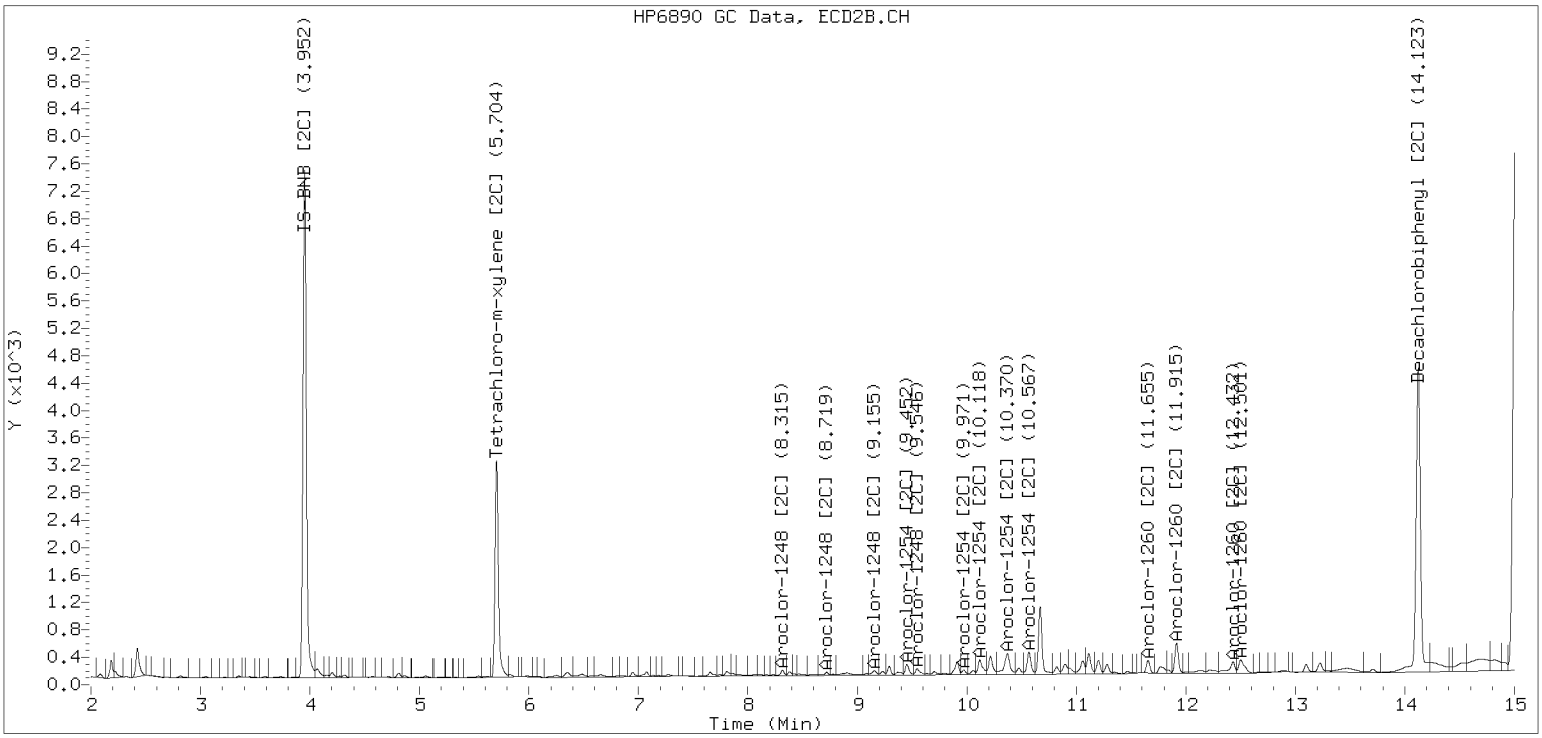

Processed Integration (Before)



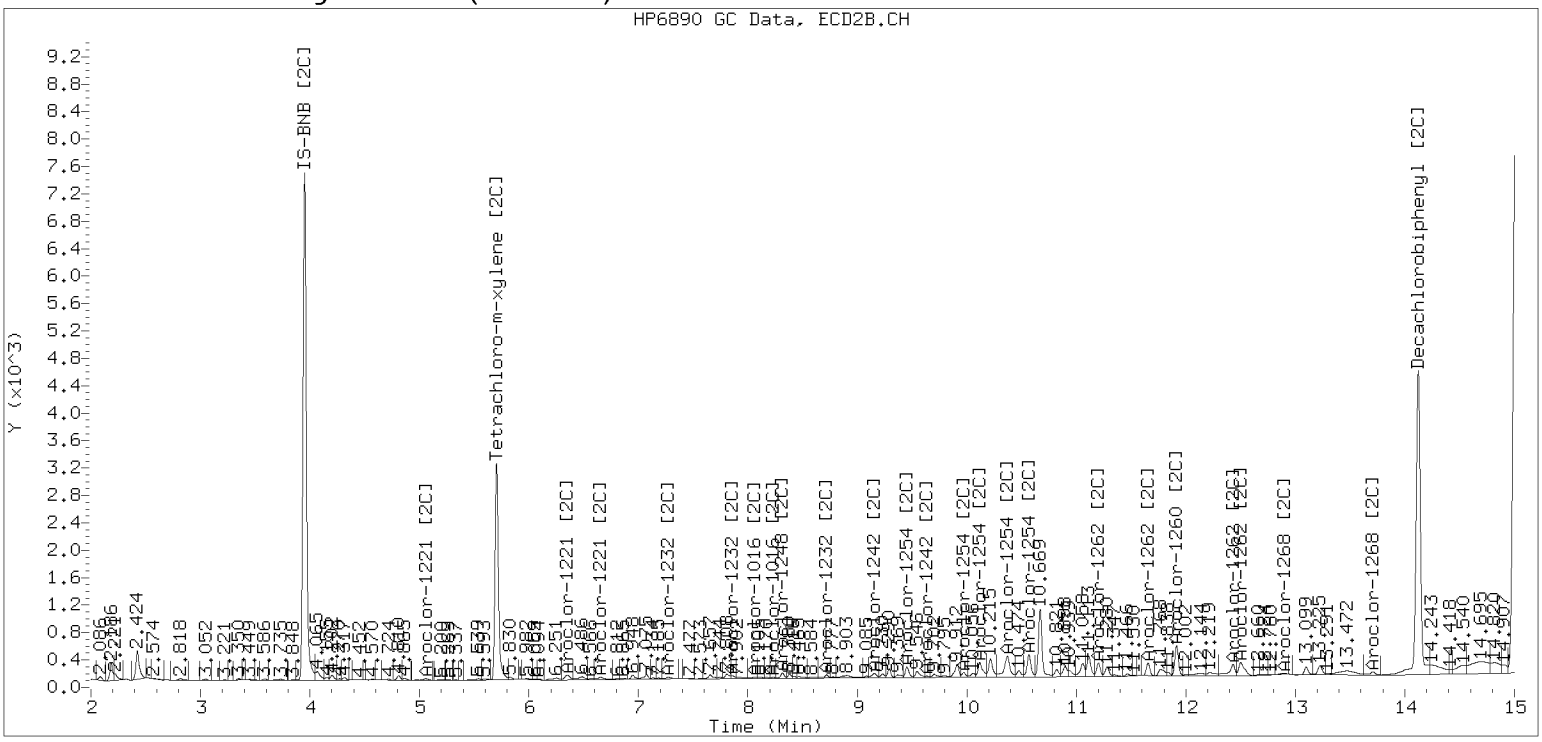
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072392ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757A**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-33 B | File ID: | 01072393ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 17:56 |
| % Solids: | 70.59 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.77 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 39.1 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 73.1 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 70.0 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9720* | *7.61* | *95.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9720* | *5.23* | *65.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9720* | *7.06* | *88.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9720* | *5.84* | *73.2* | *44 - 120* | |

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

Data file 1: /230107.b/01072393ECD7.D
Data file 2: /230107.b/230107.b/01072393ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-33
Client ID:
Injection Date: 08-JAN-2023 17:56
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.006 | 170553 | 5.704 | -0.005 | 122057 | 26.3 | 29.3 | 10.9 | Tetrachloro-m-xylene |
| 13.895 | -0.009 | 174535 | 14.122 | -0.006 | 186920 | 38.2 | 35.4 | 7.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 458247 | 2.4 |
| Hexabromobiphenyl | 798898 | 498523 | -37.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 304078 | 22.1 |
| Hexabromobiphenyl | 362541 | 371830 | 2.6 |

* 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 | --- | | | 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 | 8.410 | -0.014 | 24356 | 123.6 | 1 | 8.313 | -0.010 | 17558 | 141.3 |
| Aroclor-1248 | 2 | 8.579 | -0.024 | 22295 | 88.6 | 2 | 8.719 | -0.010 | 17338 | 132.7 |
| Aroclor-1248 | 3 | 8.997 | -0.022 | 75468 | 166.8 | 3 | 9.150 | -0.028 | 27466 | 172.8 |
| Aroclor-1248 | 4 | 9.299 | -0.014 | 89902 | 405.5 | 4 | 9.543 | -0.059 | 27422 | 147.0 |
| | | Total Col1Ave (4 peaks): | | | 196.1 | | Total Col2Ave (4 peaks): | | | 148.5 RPD = 28 |
| | | Corrected Ave (3 peaks): | | | 126.3 | | Corrected Ave (3 peaks): | | | 140.3 RPD = 11 |
| | | | | | | | | | | 148.93 |
| Aroclor-1254 | 1 | 9.299 | -0.012 | 89902 | 222.8 | 1 | 9.449 | -0.012 | 57435 | 293.0 |
| Aroclor-1254 | 2 | 9.374 | -0.014 | 35793 | 228.1 | 2 | 9.967 | -0.013 | 31366 | 199.0 |
| Aroclor-1254 | 3 | 9.667 | -0.012 | 65294 | 256.2 | 3 | 10.116 | -0.018 | 108648 | 320.7 |
| Aroclor-1254 | 4 | 9.798 | -0.016 | 128021 | 257.7 | 4 | 10.363 | -0.019 | 138301 | 394.2 |
| Aroclor-1254 | 5 | 10.127 | -0.041 | 179550 | 527.3 | 5 | 10.564 | -0.014 | 106056 | 626.7 |
| | | Total Col1Ave (5 peaks): | | | 298.4 | | Total Col2Ave (5 peaks): | | | 366.7 RPD = 21 |
| | | Corrected Ave (4 peaks): | | | 241.2 | | Corrected Ave (4 peaks): | | | 301.7 RPD = 22 |
| Aroclor-1260 | 1 | 11.043 | -0.017 | 66805 | 368.1 | 1 | 11.653 | -0.010 | 69330 | 353.2 |
| Aroclor-1260 | 2 | 11.359 | -0.016 | 58788 | 313.2 | 2 | 11.913 | -0.015 | 150758 | 306.1 |
| Aroclor-1260 | 3 | 11.729 | -0.022 | 168118 | 340.9 | 3 | 12.434 | -0.012 | 46218 | 352.4 |
| Aroclor-1260 | 4 | 12.129 | -0.024 | 90555 | 360.6 | 4 | 12.497 | -0.014 | 101813 | 310.1 |
| Aroclor-1260 | 5 | 12.243 | -0.014 | 38481 | 374.3 | NS | --- | | | ---- |
| | | Total Col1Ave (5 peaks): | | | 351.4 | | Total Col2Ave (4 peaks): | | | 330.5 RPD = 6 |
| | | Corrected Ave (4 peaks): | | | 345.7 | | Corrected Ave (3 peaks): | | | 322.9 RPD = 7 |
| 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 (5.933 - 13.804) = 2541358 Col1 Total PCB = 0.6 ppm*

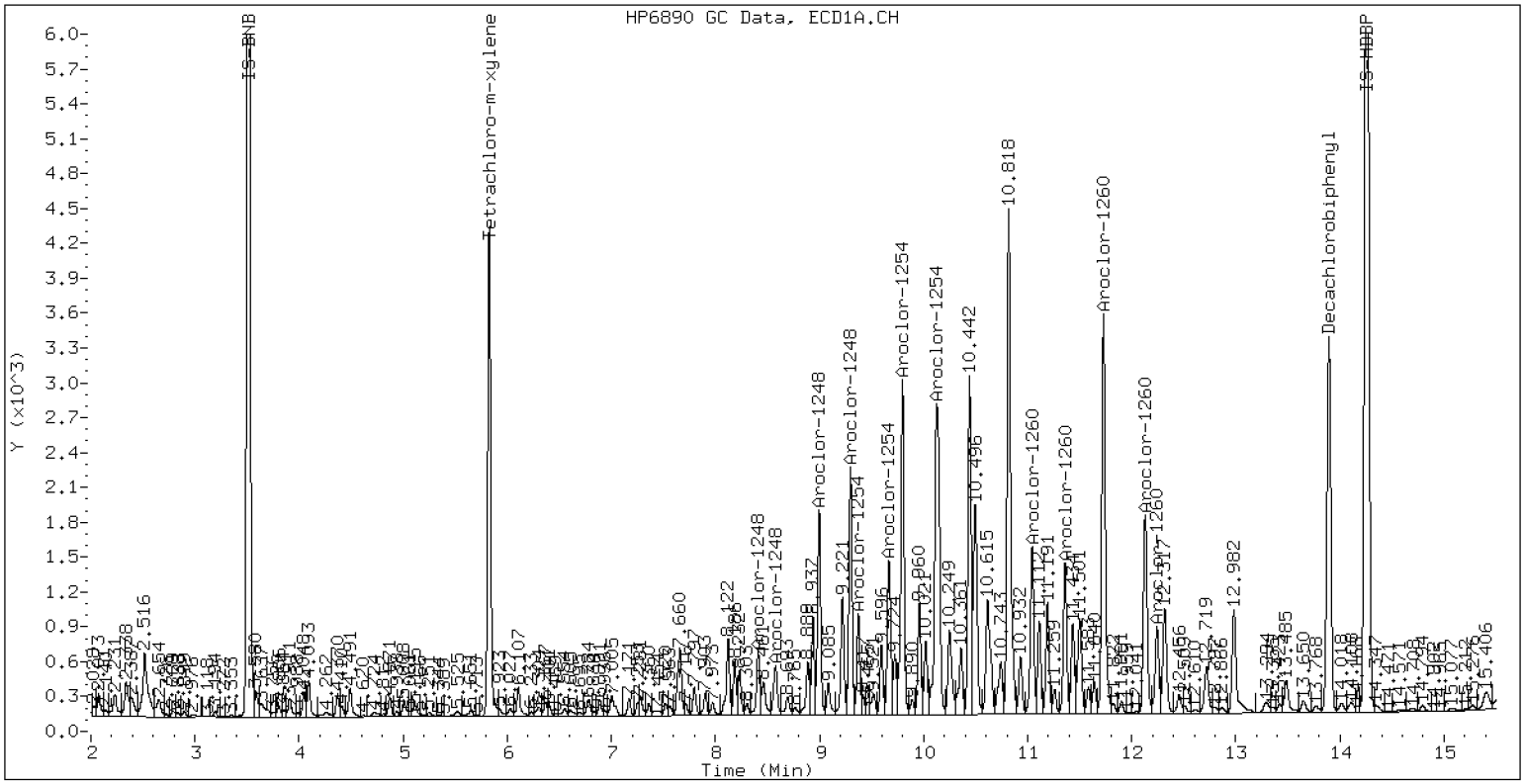
Total PCB Area Col2 (5.809 - 14.028) = 1928304 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

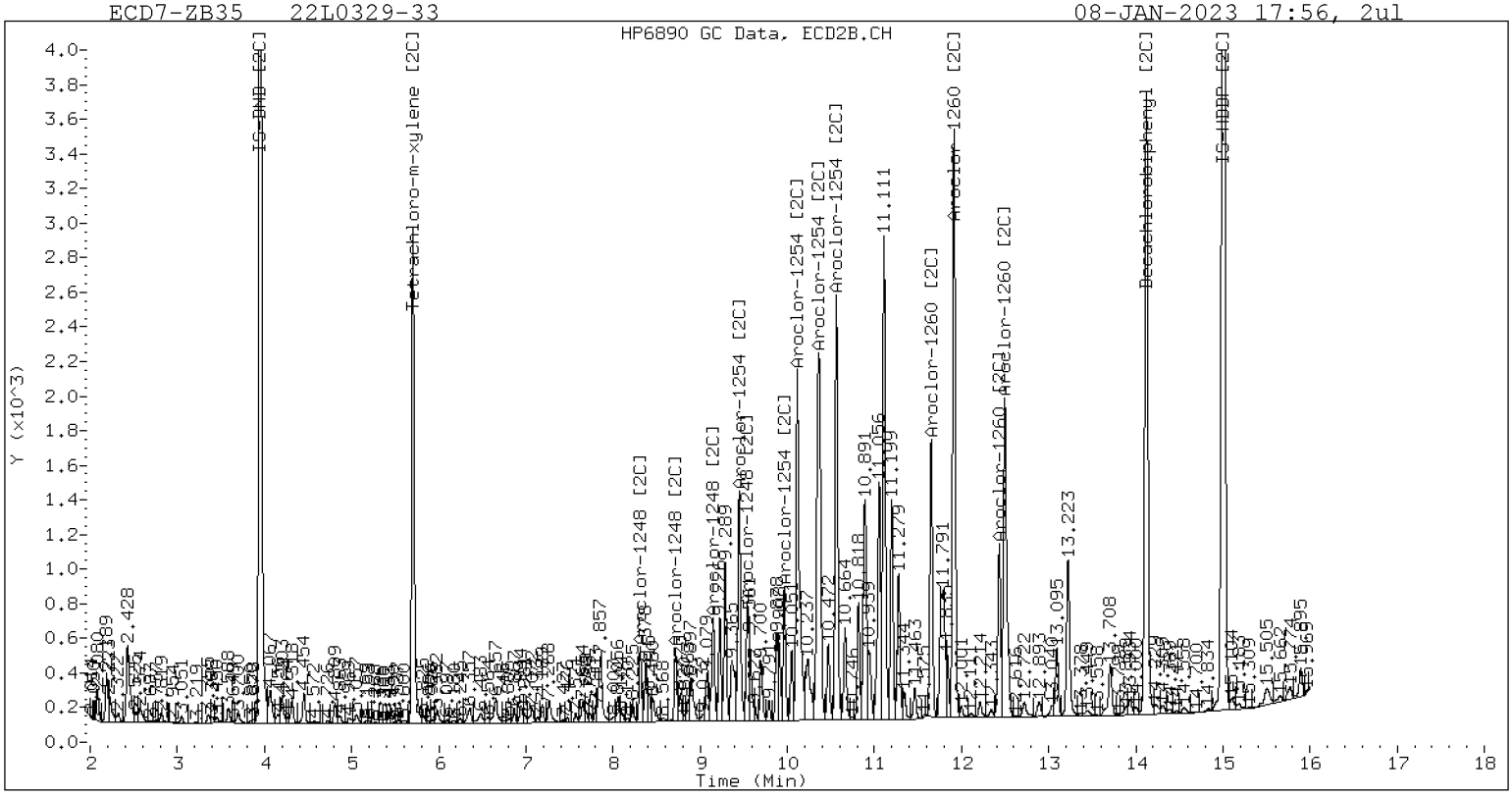
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-33 08-JAN-2023 17:56, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-33 08-JAN-2023 17:56, 2ul

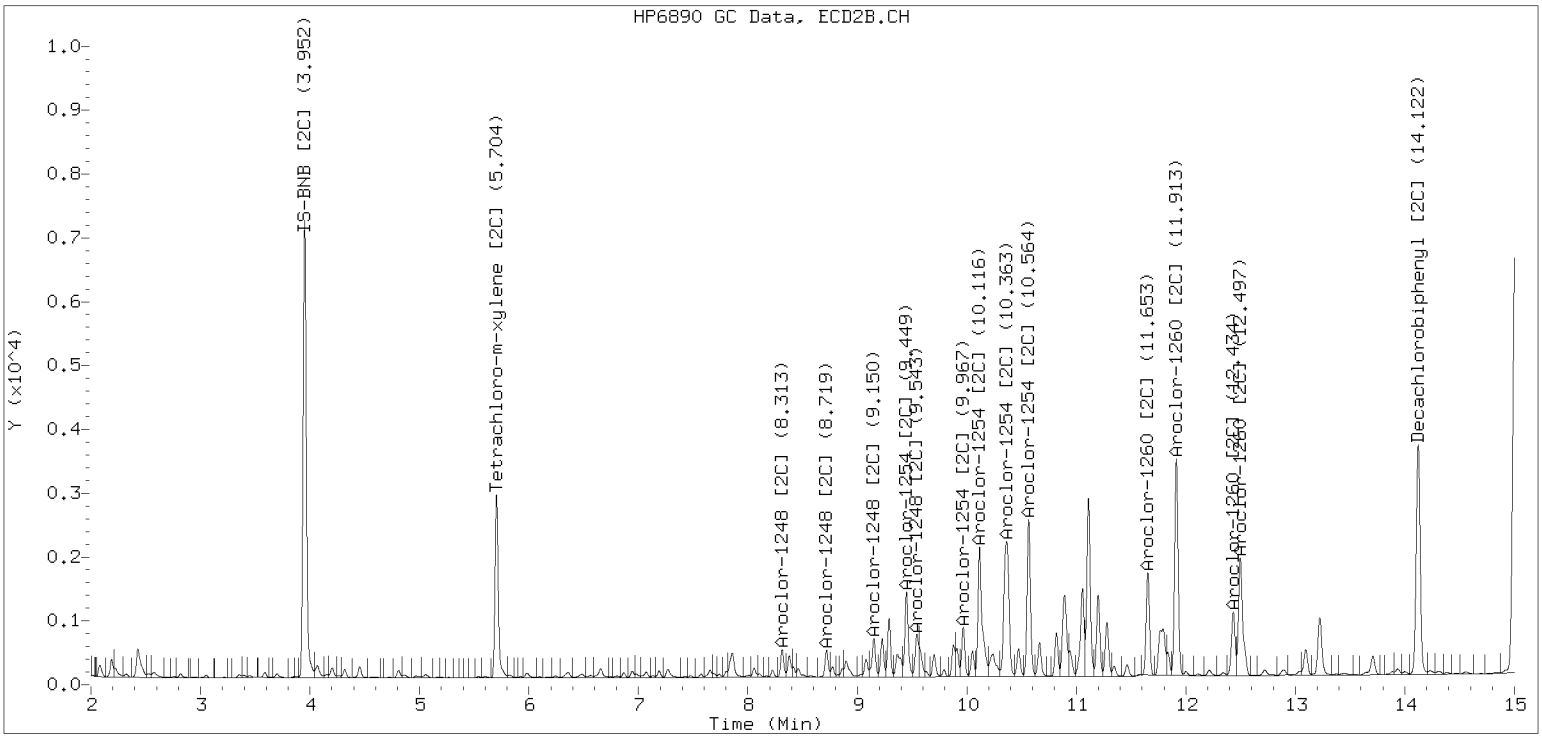



ZB-35 Manual Integration: YES

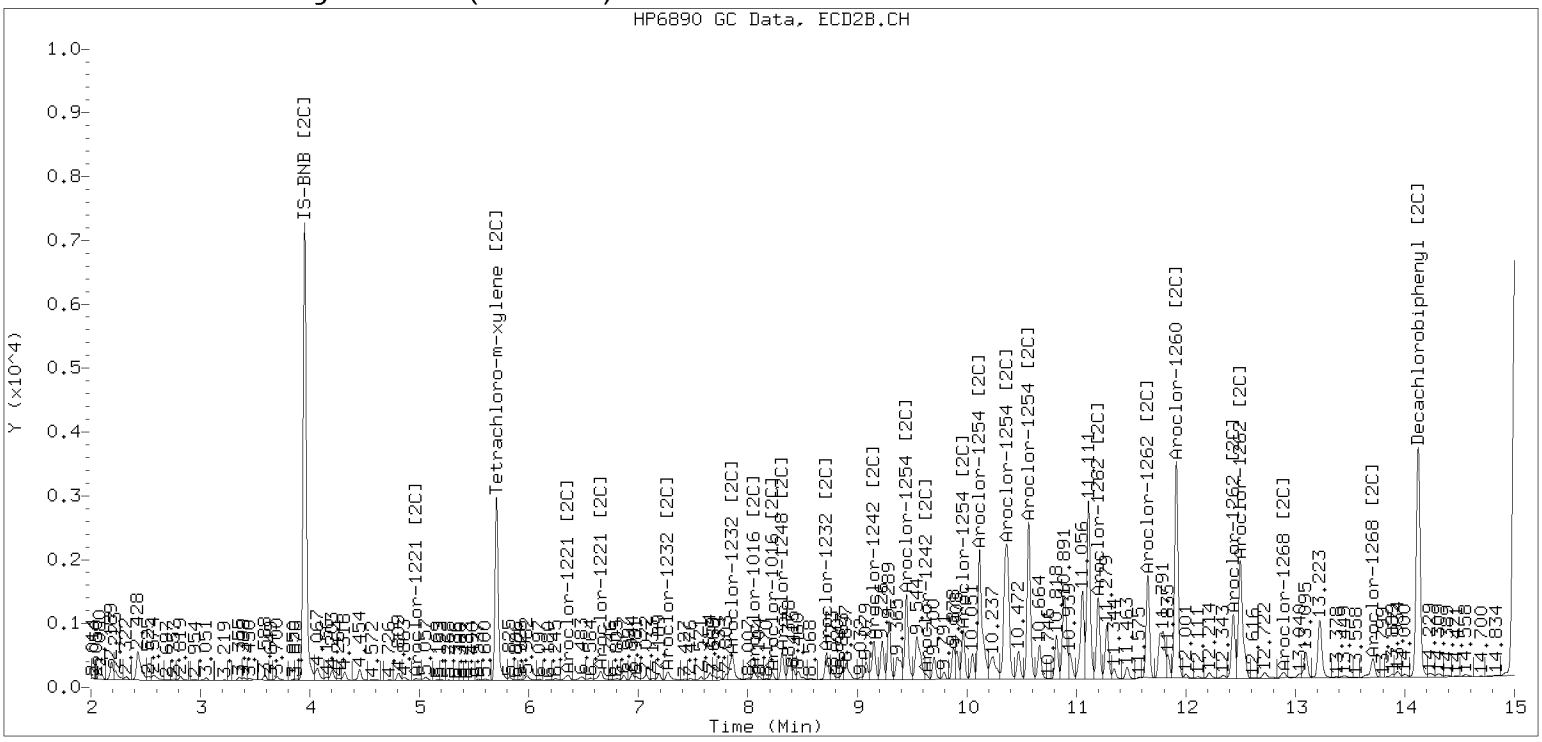
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072393ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-34 B | File ID: | 01072394ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 18:18 |
| % Solids: | 72.63 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.27 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 5.6 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 14.8 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 1 | 1 | 15.4 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9724* | *7.81* | *98.0* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9724* | *5.72* | *71.7* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9724* | *7.34* | *92.0* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9724* | *6.04* | *75.7* | *44 - 120* | |

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

Data file 1: /230107.b/01072394ECD7.D
Data file 2: /230107.b/230107.b/01072394ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-34
Client ID:
Injection Date: 08-JAN-2023 18:18
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.006 | 193784 | 5.703 | -0.006 | 131944 | 28.7 | 30.3 | 5.4 | Tetrachloro-m-xylene |
| 13.895 | -0.009 | 195009 | 14.123 | -0.005 | 205980 | 39.2 | 36.8 | 6.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 476748 | 6.5 |
| Hexabromobiphenyl | 798898 | 542964 | -32.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 317798 | 27.6 |
| Hexabromobiphenyl | 362541 | 394208 | 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 | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | ZB5 Col | | | | | ZB35 Col | | | | |
| 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 | 8.413 | -0.012 | 6690 | 32.6 | 1 | 8.313 | -0.009 | 3605 | 27.8 |
| Aroclor-1248 | 2 | 8.580 | -0.022 | 5035 | 19.2 | 2 | 8.720 | -0.008 | 3193 | 23.4 |
| Aroclor-1248 | 3 | 8.999 | -0.020 | 15592 | 33.1 | 3 | 9.152 | -0.027 | 4559 | 27.4 |
| Aroclor-1248 | 4 | 9.300 | -0.013 | 19009 | ~~82.4~~ | 4 | 9.543 | -0.058 | 5969 | ~~30.6~~ |
| | Total Col1Ave (4 peaks): | | | | ~~41.9~~ | Total Col2Ave (4 peaks): | | | ~~27~~.3 | RPD = 42* |
| | Corrected Ave (3 peaks): | | | | 28.3 | Corrected Ave (3 peaks): | | | 26.2 | RPD = 8 |
| Aroclor-1254 | 1 | 9.300 | -0.011 | 19009 | 45.3 | 1 | 9.450 | -0.011 | 12415 | 60.6 |
| Aroclor-1254 | 2 | 9.375 | -0.012 | 6856 | 42.0 | 2 | 9.968 | -0.013 | 6278 | 38.1 |
| Aroclor-1254 | 3 | 9.672 | -0.006 | 15754 | 59.4 | 3 | 10.116 | -0.018 | 21892 | 61.8 |
| Aroclor-1254 | 4 | 9.800 | -0.014 | 27621 | 53.4 | 4 | 10.367 | -0.016 | 29291 | 79.9 |
| Aroclor-1254 | 5 | 10.125 | -0.043 | 36819 | 103.9 | 5 | 10.565 | -0.013 | 23312 | 131.8 |
| | Total Col1Ave (5 peaks): | | | | 60.8 | Total Col2Ave (5 peaks): | | | 74.4 | RPD = 20 |
| | Corrected Ave (4 peaks): | | | | 50.0 | Corrected Ave (4 peaks): | | | 60.1 | RPD = 18 |
| Aroclor-1260 | 1 | 11.044 | -0.016 | 15769 | 79.8 | 1 | 11.653 | -0.010 | 15435 | 74.2 |
| Aroclor-1260 | 2 | 11.360 | -0.016 | 13366 | 65.4 | 2 | 11.913 | -0.015 | 34460 | 66.0 |
| Aroclor-1260 | 3 | 11.729 | -0.021 | 40475 | 75.4 | 3 | 12.434 | -0.012 | 13232 | 95.2 |
| Aroclor-1260 | 4 | 12.130 | -0.024 | 21407 | 78.3 | 4 | 12.497 | -0.015 | 23844 | 68.5 |
| Aroclor-1260 | 5 | 12.244 | -0.013 | 9698 | 86.6 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 77.1 | Total Col2Ave (4 peaks): | | | 76.0 | RPD = 1 |
| | Corrected Ave (4 peaks): | | | | 74.7 | Corrected Ave (3 peaks): | | | 69.6 | RPD = 7 |
| 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 (5.933 - 13.804) = 659017 Col1 Total PCB = 0.1 ppm*

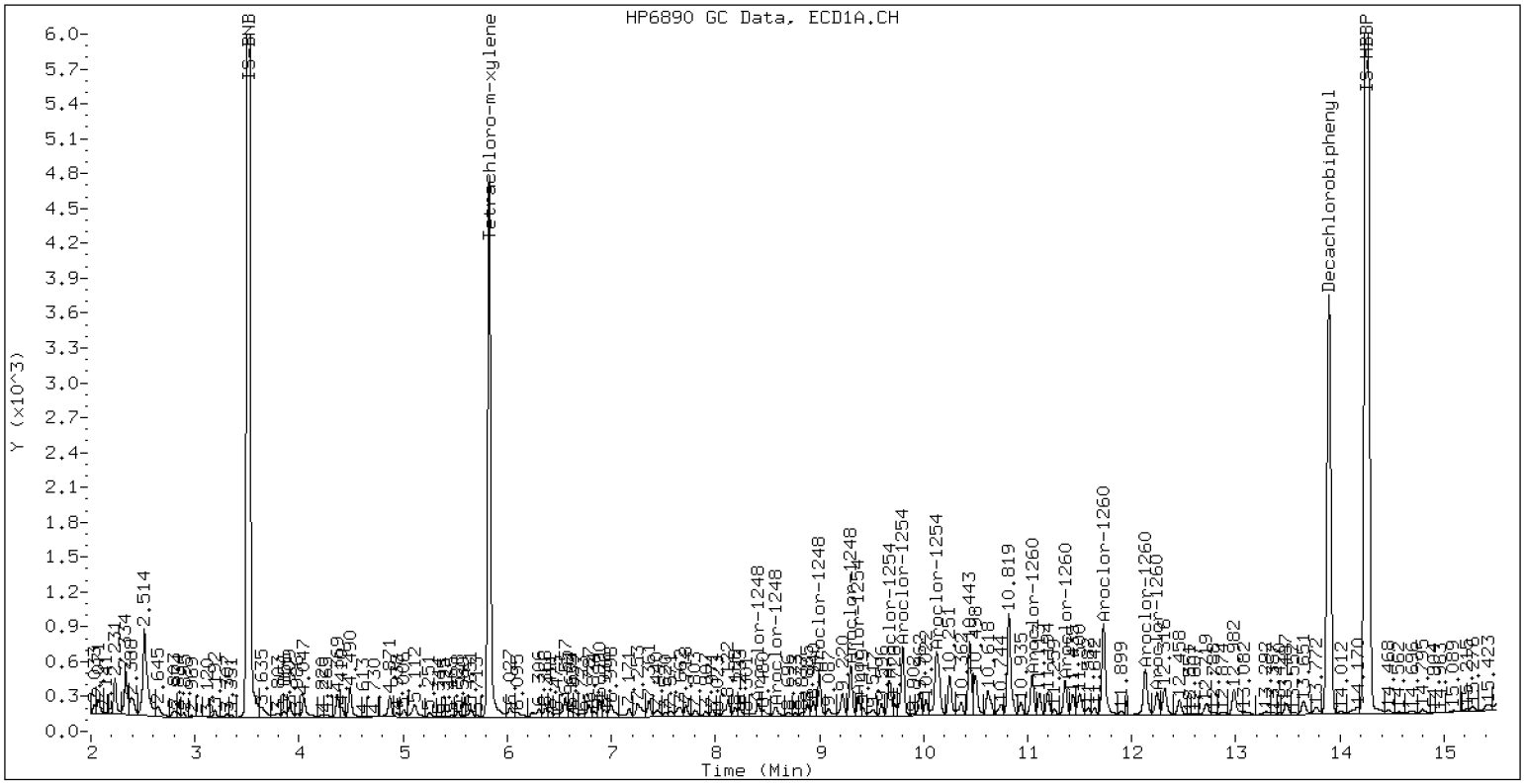
Total PCB Area Col2 (5.809 - 14.028) = 466434 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

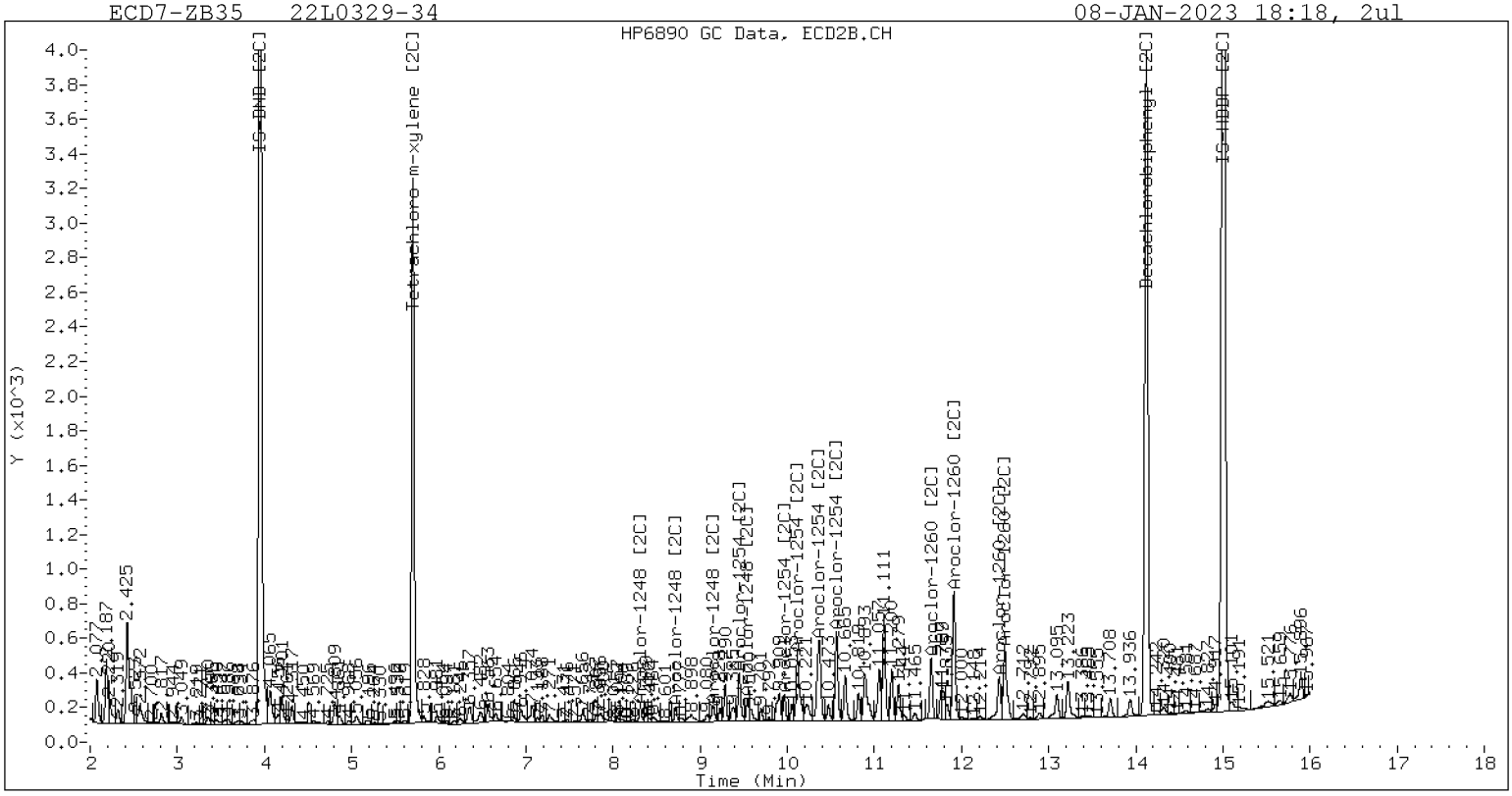
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-34 08-JAN-2023 18:18, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-34 08-JAN-2023 18:18, 2ul

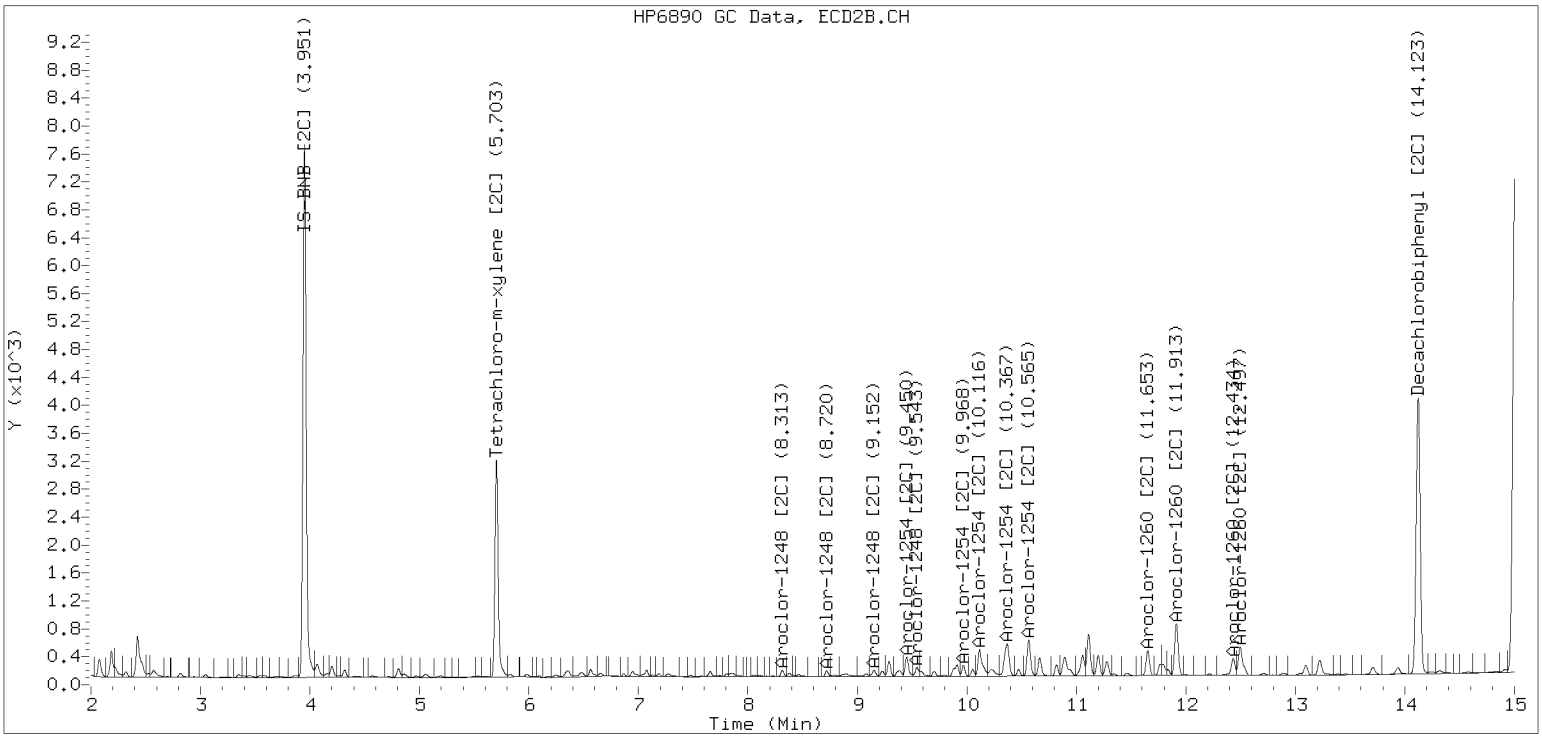



ZB-35 Manual Integration: YES

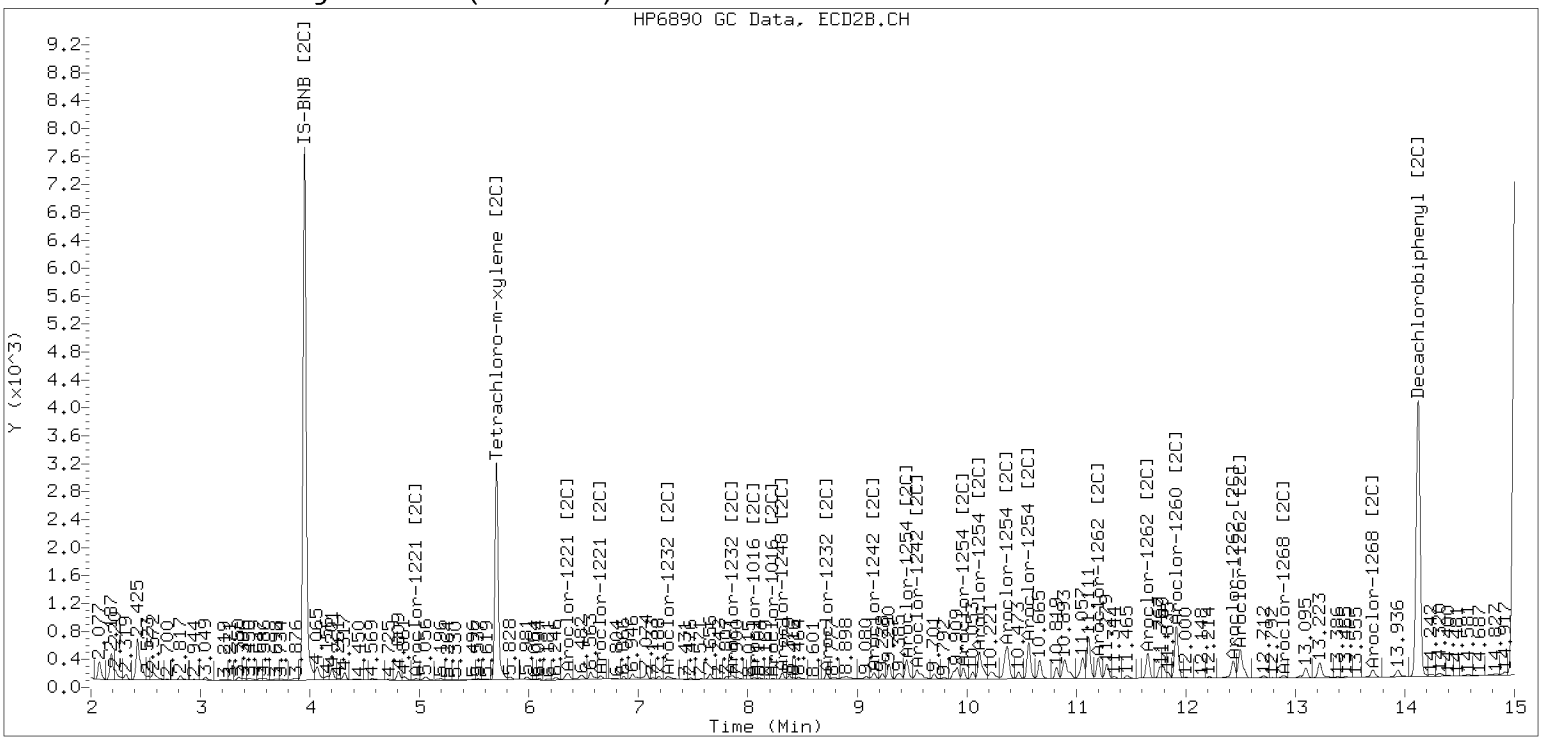
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072394ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-35 B | File ID: | 01072395ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 18:39 |
| % Solids: | 79.21 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.81 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9852* | *8.03* | *101* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9852* | *6.19* | *77.5* | *44 - 120* | |

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

Data file 1: /230107.b/01072395ECD7.D
Data file 2: /230107.b/230107.b/01072395ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-35
Client ID:
Injection Date: 08-JAN-2023 18:39
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.003 | 210885 | 5.708 | -0.001 | 139276 | 31.0 | 29.8 | 4.1 | Tetrachloro-m-xylene |
| 13.898 | -0.005 | 301550 | 14.125 | -0.003 | 294703 | 40.2 | 39.8 | 0.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 479877 | 7.2 |
| Hexabromobiphenyl | 798898 | 818207 | 2.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 341325 | 37.0 |
| Hexabromobiphenyl | 362541 | 521033 | 43.7 |

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

| Aroclor | Peak# | 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 (5.933 - 13.804) = 74763 Col1 Total PCB = 0.0 ppm*

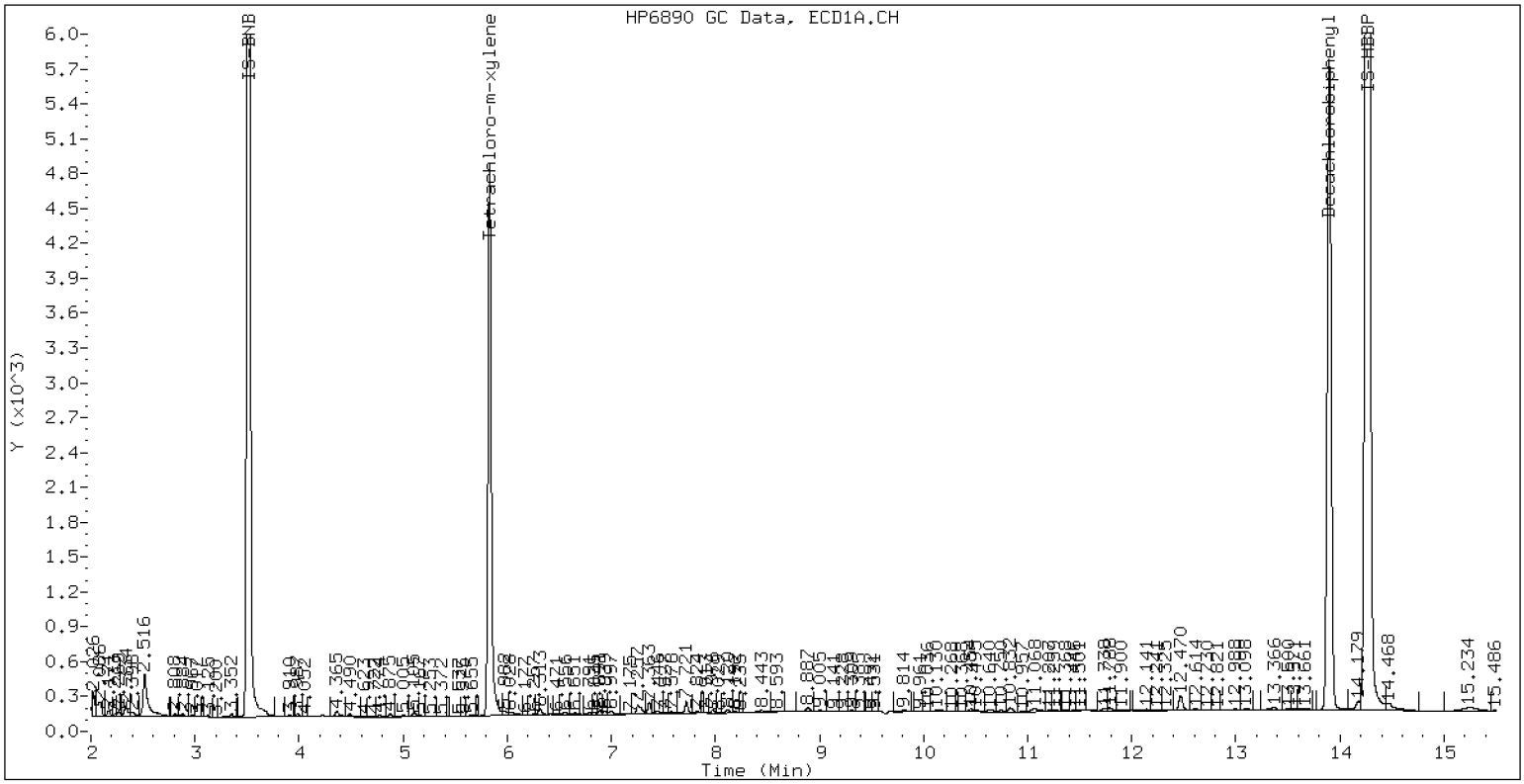
Total PCB Area Col2 (5.809 - 14.028) = 55449 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

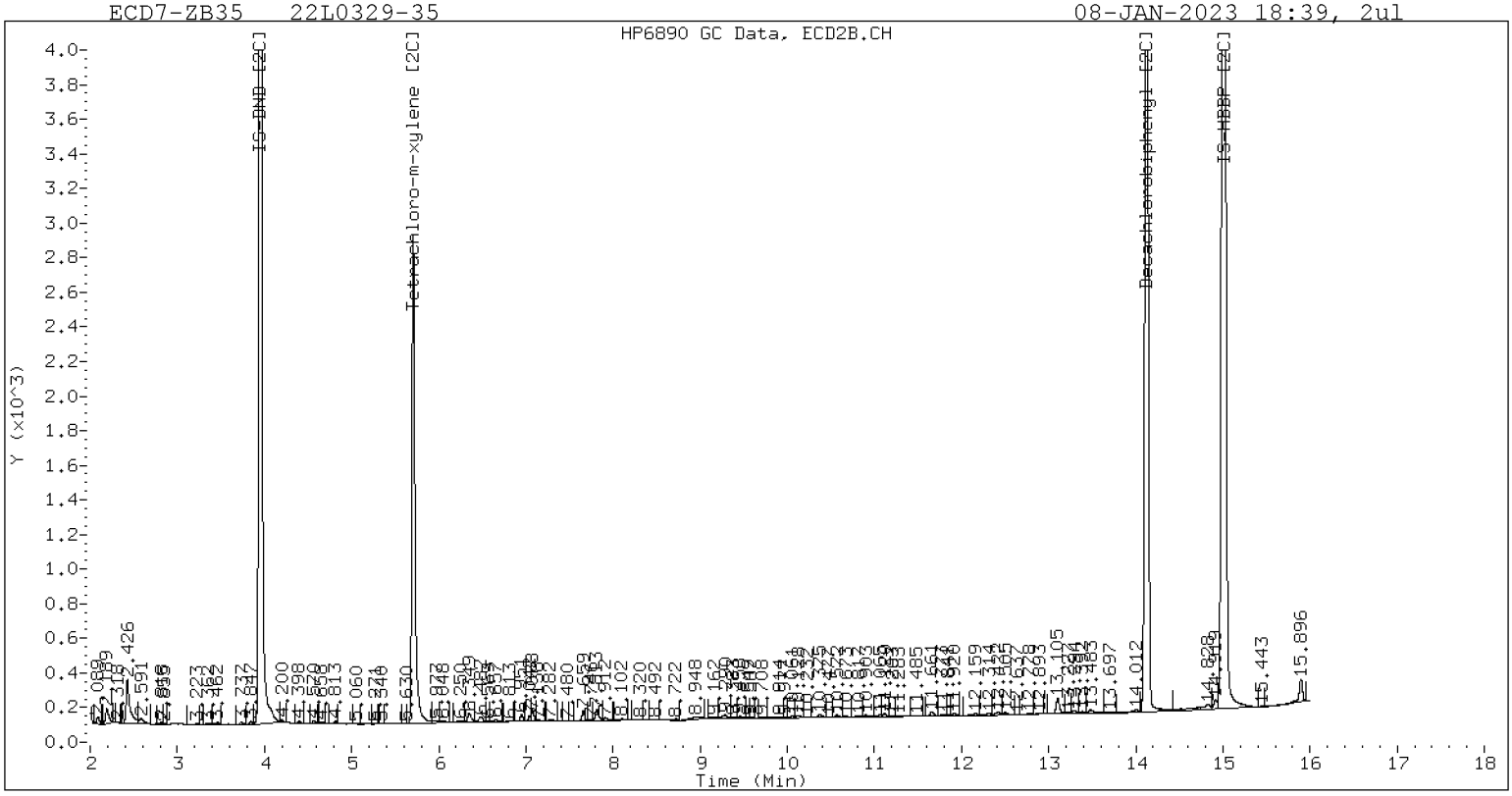
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-35 08-JAN-2023 18:39, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-35 08-JAN-2023 18:39, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-36 B | File ID: | 01072396ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 19:00 |
| % Solids: | 82.09 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.23 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9985* | *7.95* | *99.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9985* | *5.91* | *73.9* | *44 - 120* | |

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

Data file 1: /230107.b/01072396ECD7.D
Data file 2: /230107.b/230107.b/01072396ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-36
Client ID:
Injection Date: 08-JAN-2023 19:00
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.003 | 206956 | 5.708 | -0.001 | 131538 | 29.6 | 28.7 | 3.1 | Tetrachloro-m-xylene |
| 13.897 | -0.007 | 317285 | 14.124 | -0.004 | 283011 | 39.8 | 37.3 | 6.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 494027 | 10.4 |
| Hexabromobiphenyl | 798898 | 870383 | 8.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 334681 | 34.4 |
| Hexabromobiphenyl | 362541 | 533961 | 47.3 |

* 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 | --- | | | 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 (5.933 - 13.804) = 125962 Col1 Total PCB = 0.0 ppm*

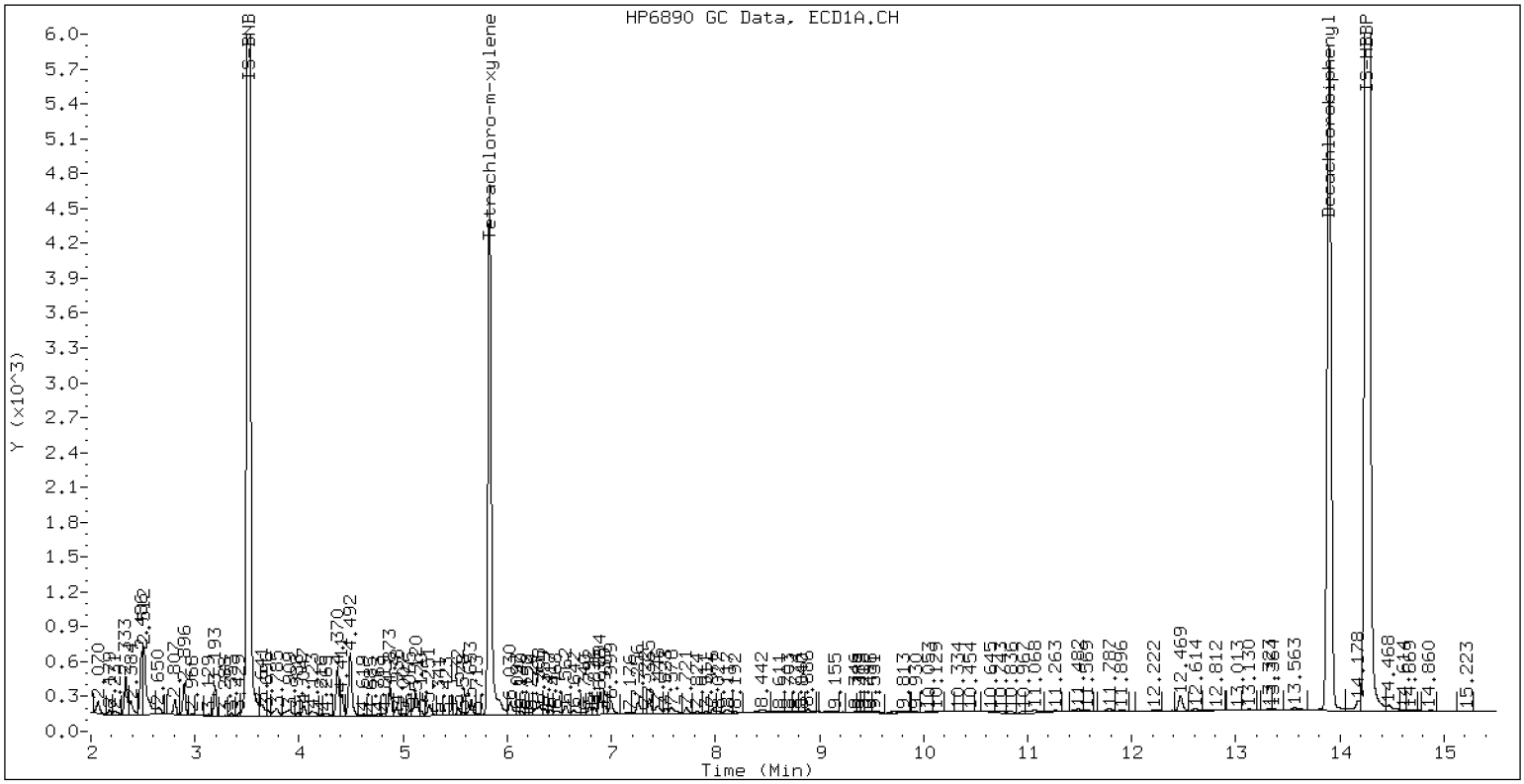
Total PCB Area Col2 (5.809 - 14.028) = 72891 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

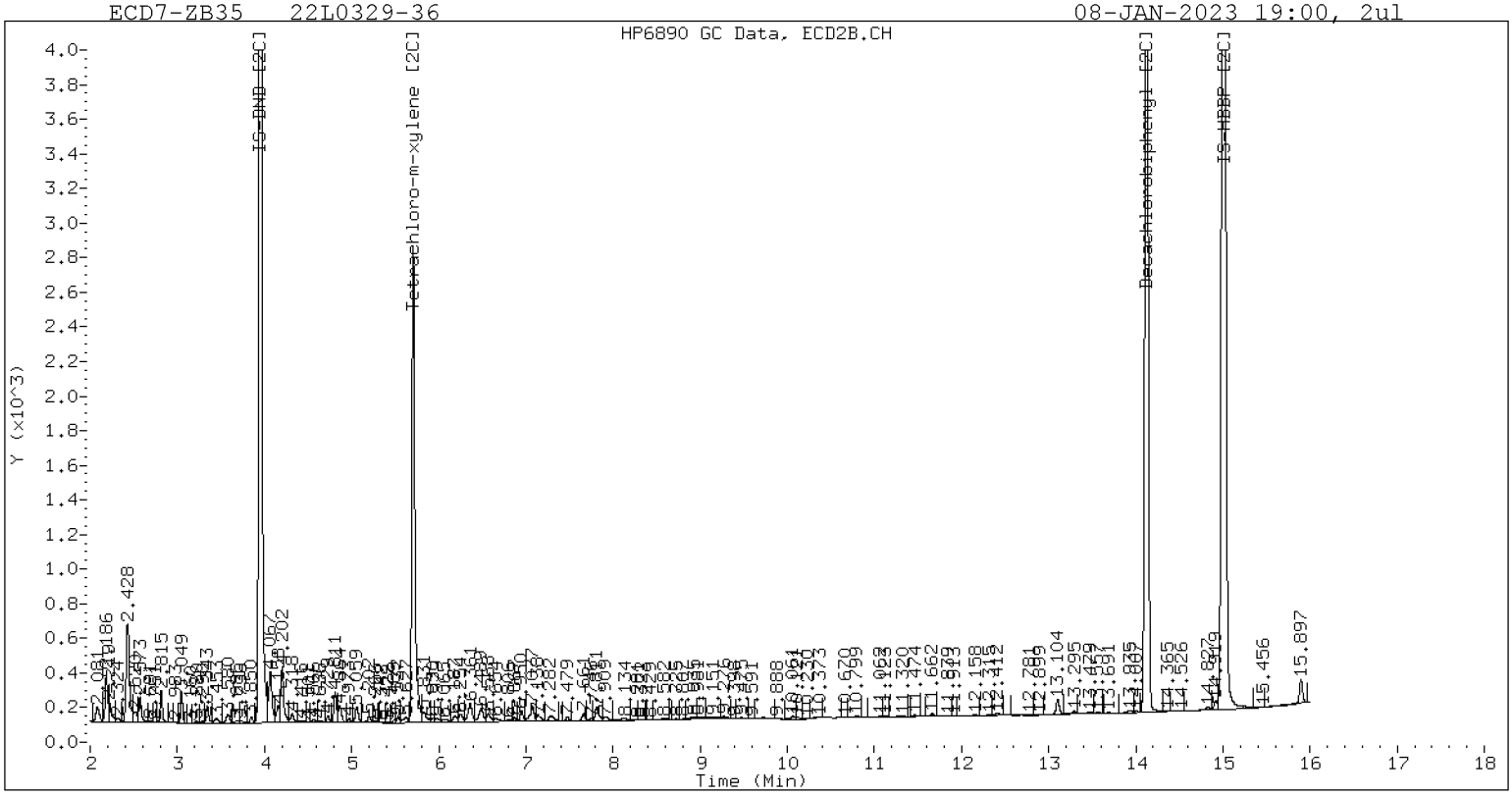
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-36 08-JAN-2023 19:00, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-36 08-JAN-2023 19:00, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-37 B | File ID: | 01072397ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 19:21 |
| % Solids: | 81.20 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.4 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9969* | *7.75* | *96.9* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9969* | *5.75* | *71.9* | *44 - 120* | |

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

Data file 1: /230107.b/01072397ECD7.D
Data file 2: /230107.b/230107.b/01072397ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-37
Client ID:
Injection Date: 08-JAN-2023 19:21
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.003 | 216146 | 5.706 | -0.003 | 140501 | 28.8 | 29.4 | 2.4 | Tetrachloro-m-xylene |
| 13.898 | -0.006 | 341692 | 14.124 | -0.004 | 300839 | 38.8 | 37.0 | 4.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 530350 | 18.5 |
| Hexabromobiphenyl | 798898 | 961866 | 20.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 348072 | 39.7 |
| Hexabromobiphenyl | 362541 | 573270 | 58.1 |

* 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 | --- | | | 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 (5.933 - 13.804) = 272431 Col1 Total PCB = 0.1 ppm*

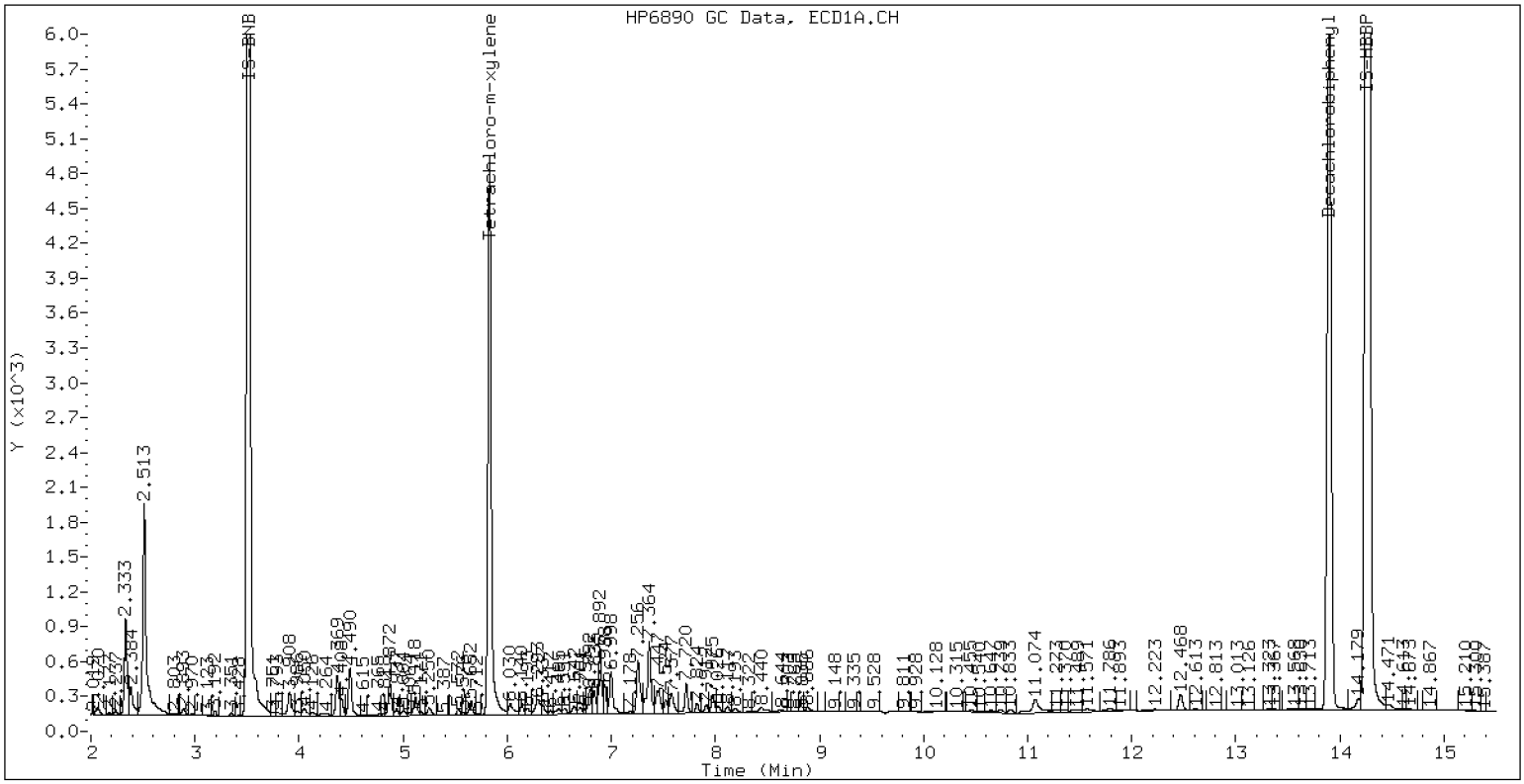
Total PCB Area Col2 (5.809 - 14.028) = 177870 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

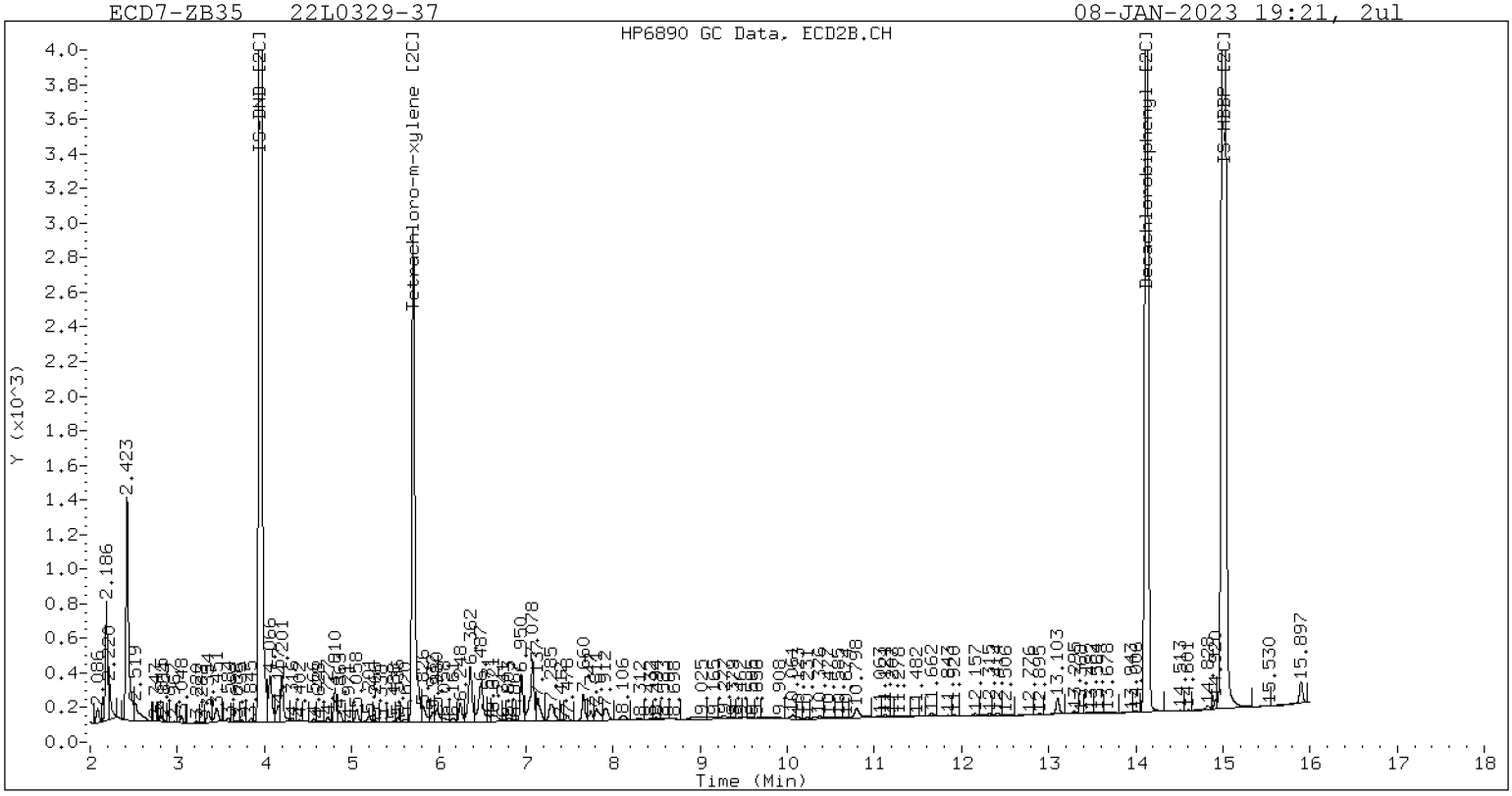
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-37 08-JAN-2023 19:21, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-37 08-JAN-2023 19:21, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757F**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-38 B | File ID: | 01072398ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 19:42 |
| % Solids: | 87.20 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 14.37 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9804* | *7.69* | *96.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9804* | *6.12* | *76.6* | *44 - 120* | |

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

Data file 1: /230107.b/01072398ECD7.D
Data file 2: /230107.b/230107.b/01072398ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-38
Client ID:
Injection Date: 08-JAN-2023 19:42
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.002 | 221082 | 5.708 | -0.001 | 145452 | 30.7 | 29.8 | 3.0 | Tetrachloro-m-xylene |
| 13.898 | -0.006 | 356199 | 14.124 | -0.004 | 319415 | 38.6 | 37.4 | 3.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 509005 | 13.7 |
| Hexabromobiphenyl | 798898 | 1007749 | 26.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 356670 | 43.2 |
| Hexabromobiphenyl | 362541 | 601164 | 65.8 |

* 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 | --- | | | 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 (5.933 - 13.804) = 121405 Col1 Total PCB = 0.0 ppm*

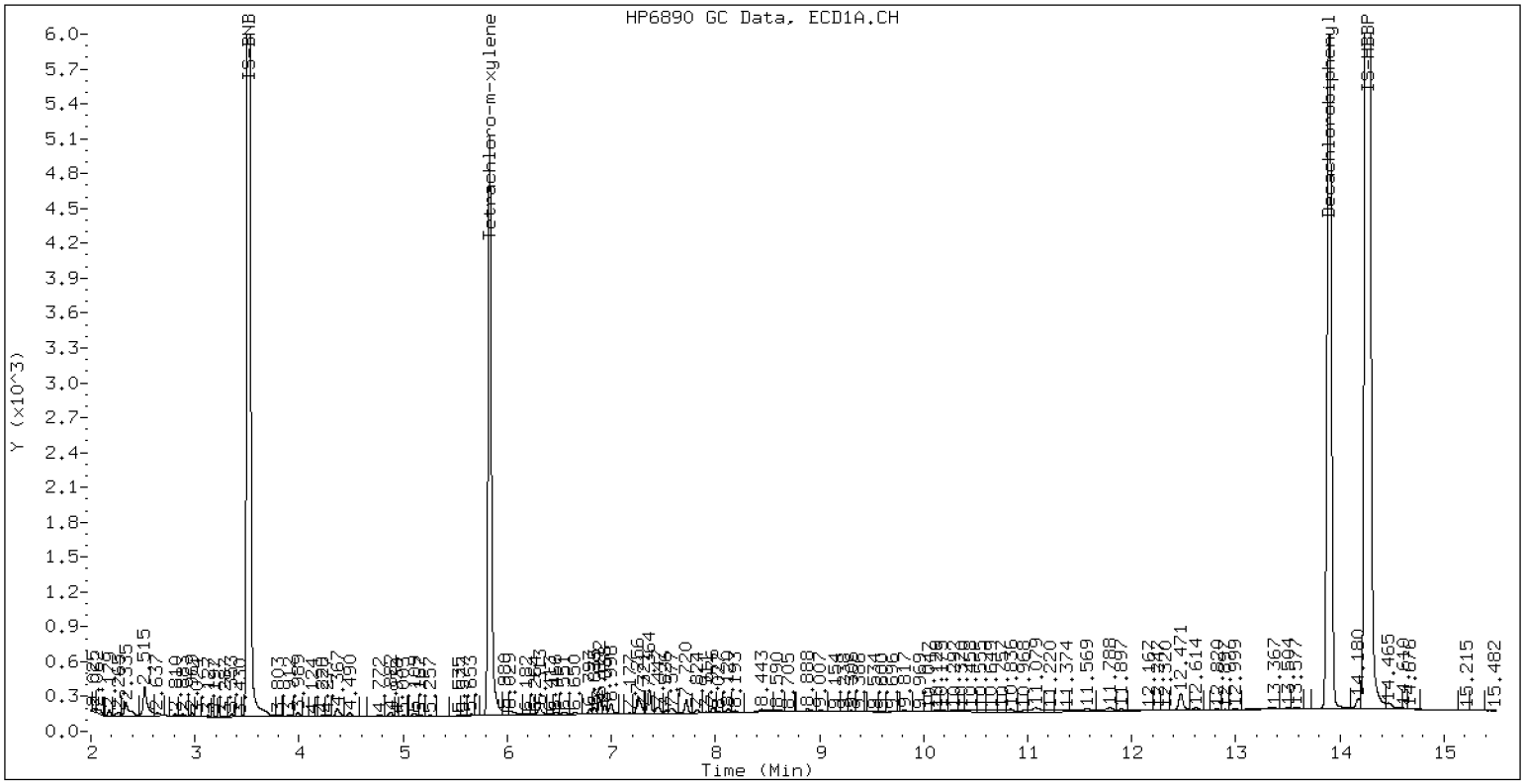
Total PCB Area Col2 (5.809 - 14.028) = 60289 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

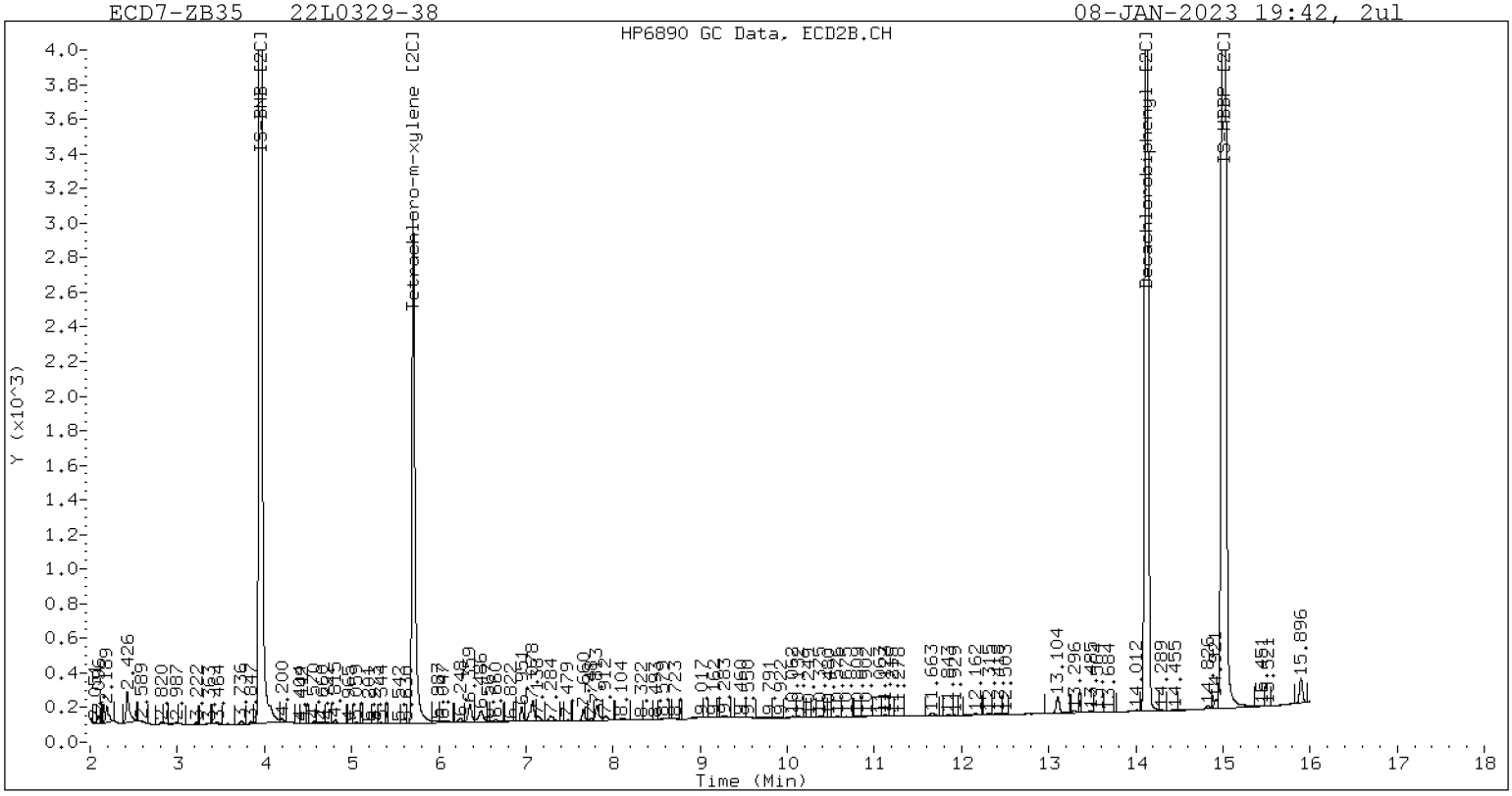
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-38 08-JAN-2023 19:42, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-38 08-JAN-2023 19:42, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757G**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-39 B | File ID: | 010723992ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 20:45 |
| % Solids: | 82.78 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.13 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9843* | *7.80* | *97.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9843* | *6.26* | *78.4* | *44 - 120* | |

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

Data file 1: /230107.b/010723992ECD7.D
Data file 2: /230107.b/230107.b/010723992ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-39
Client ID:
Injection Date: 08-JAN-2023 20:45
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.003 | 220338 | 5.706 | -0.003 | 143813 | 31.4 | 30.1 | 4.1 | Tetrachloro-m-xylene |
| 13.899 | -0.005 | 383278 | 14.125 | -0.003 | 337650 | 39.1 | 39.3 | 0.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 495953 | 10.8 |
| Hexabromobiphenyl | 798898 | 1069641 | 33.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 348628 | 40.0 |
| Hexabromobiphenyl | 362541 | 605058 | 66.9 |

* 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-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 (5.933 - 13.804) = 82005 Col1 Total PCB = 0.0 ppm*

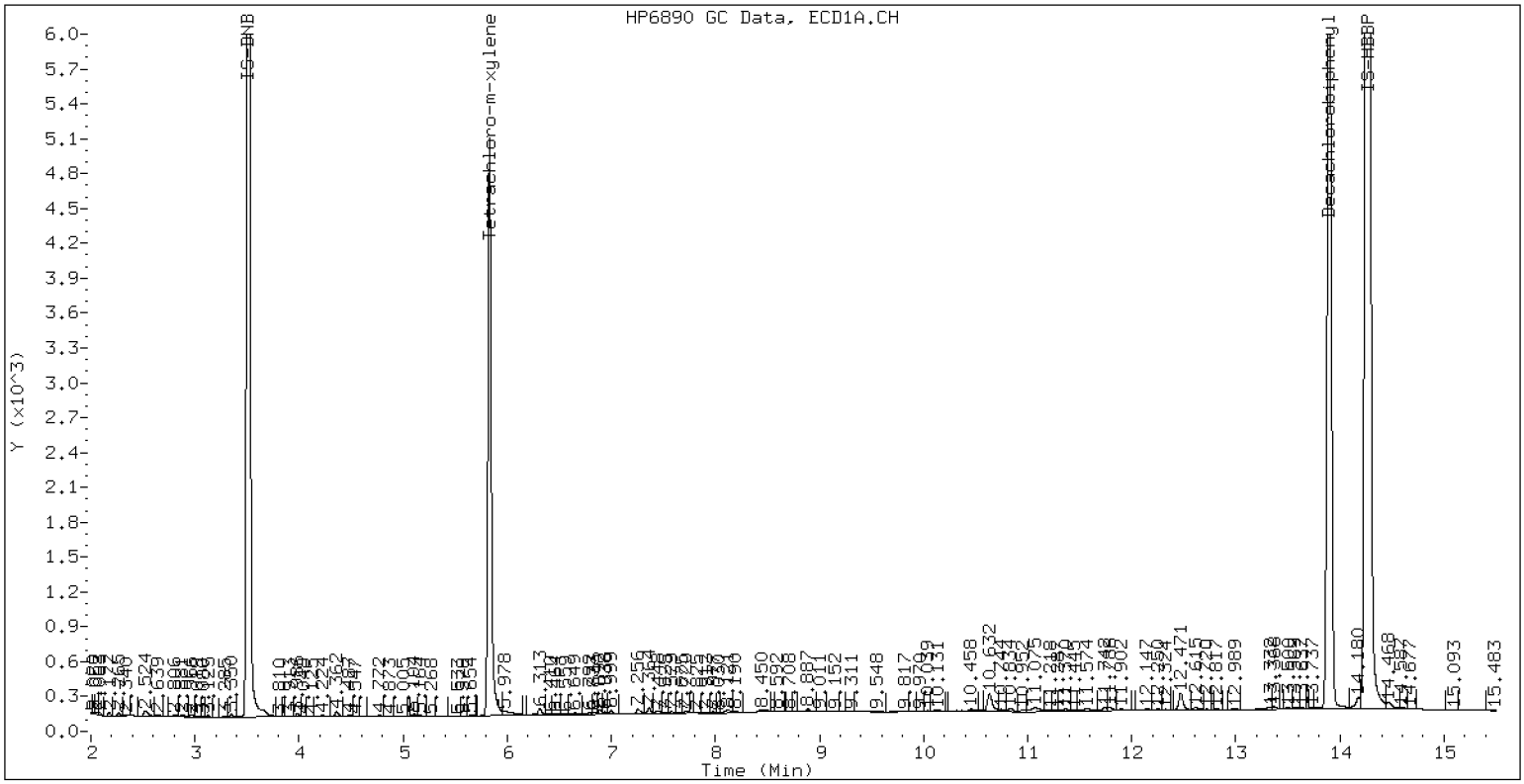
Total PCB Area Col2 (5.809 - 14.028) = 46145 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

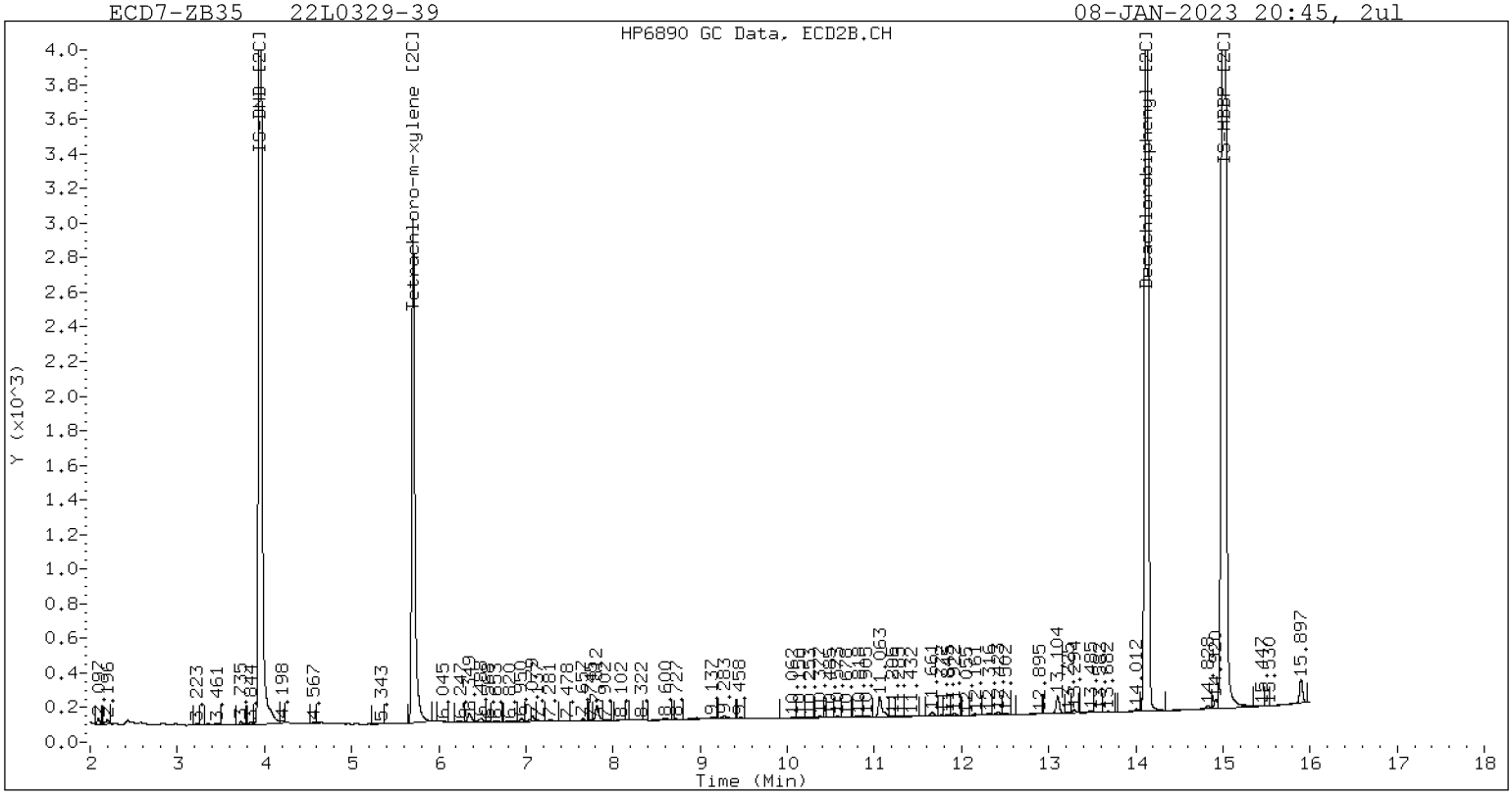
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-39 08-JAN-2023 20:45, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-39 08-JAN-2023 20:45, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC757H**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-40 B | File ID: | 010723993ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 21:06 |
| % Solids: | 82.46 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 15.17 g Wet / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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* | *7.9941* | *7.55* | *94.4* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9941* | *5.94* | *74.3* | *44 - 120* | |

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

Data file 1: /230107.b/010723993ECD7.D
Data file 2: /230107.b/230107.b/010723993ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-40
Client ID:
Injection Date: 08-JAN-2023 21:06
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.002 | 211613 | 5.707 | -0.002 | 138211 | 29.7 | 28.4 | 4.6 | Tetrachloro-m-xylene |
| 13.899 | -0.005 | 388538 | 14.125 | -0.003 | 333169 | 37.8 | 38.0 | 0.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 502288 | 12.2 |
| Hexabromobiphenyl | 798898 | 1121978 | 40.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 355187 | 42.6 |
| Hexabromobiphenyl | 362541 | 617751 | 70.4 |

* 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 | --- | | | 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 (5.933 - 13.804) = 74698 Col1 Total PCB = 0.0 ppm*

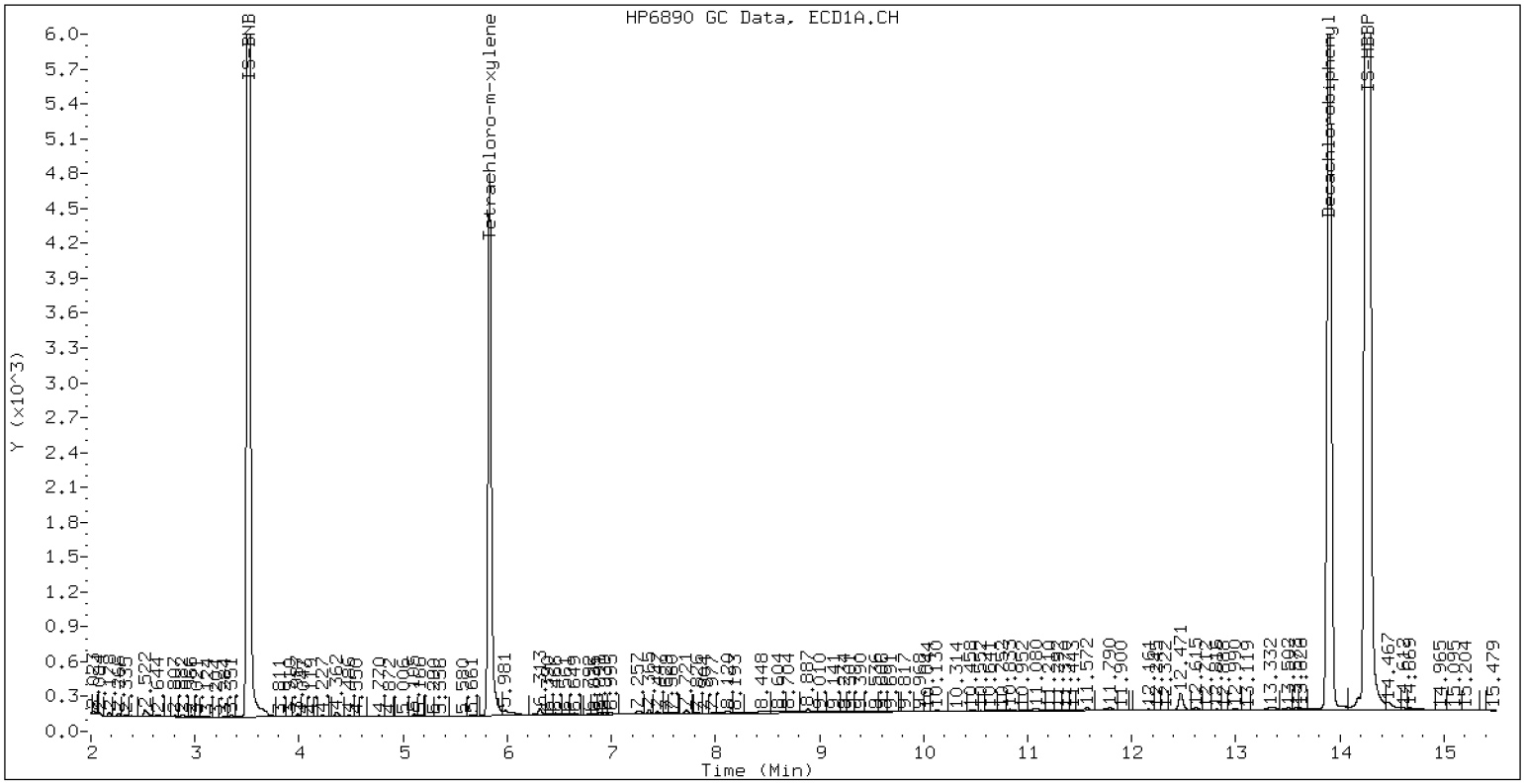
Total PCB Area Col2 (5.809 - 14.028) = 36230 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

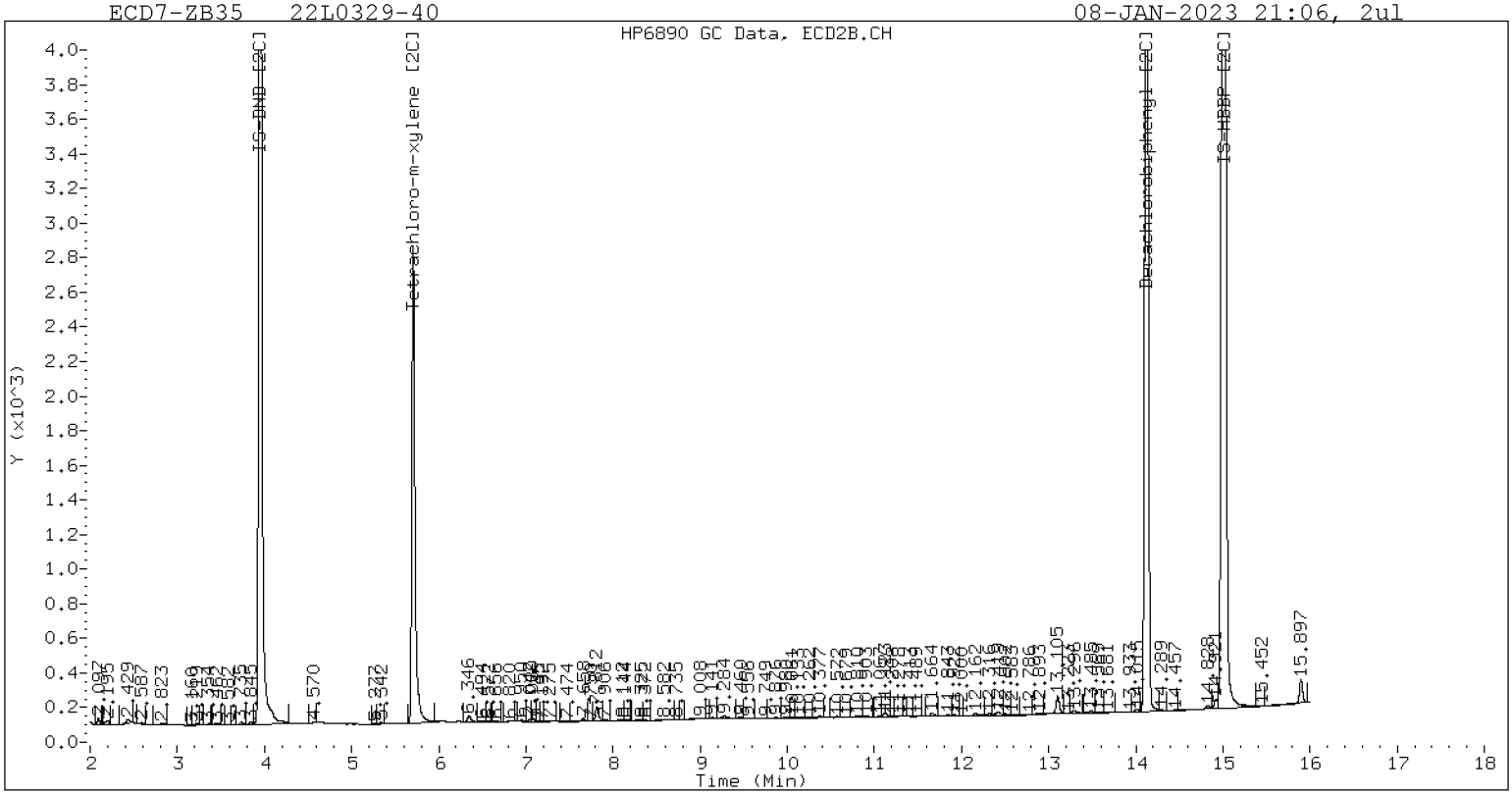
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-40 08-JAN-2023 21:06, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-40 08-JAN-2023 21:06, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754A**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-41 B | File ID: | 01102331ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 03:01 |
| % Solids: | 70.38 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.82 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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 | 2 | 1 | 19.2 | 1.6 | 4.0 | |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 36.4 | 1.6 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 25.5 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9734* | *6.43* | *80.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9734* | *4.93* | *61.8* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9734* | *5.75* | *72.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9734* | *5.33* | *66.9* | *44 - 120* | |

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

Data file 1: /230110.b/01102331ECD7.D
Data file 2: /230110.b/230110.b/01102331ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-41
Client ID:
Injection Date: 11-JAN-2023 03:01
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.009 | 160645 | 5.703 | -0.004 | 118158 | 24.7 | 26.7 | 7.8 | Tetrachloro-m-xylene |
| 13.896 | -0.012 | 164209 | 14.122 | -0.006 | 175014 | 32.3 | 28.8 | 11.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 458346 | 2.4 |
| Hexabromobiphenyl | 798898 | 555257 | -30.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 322261 | 29.4 |
| Hexabromobiphenyl | 362541 | 427550 | 17.9 |

* 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-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 | 8.411 | -0.016 | 16899 | 85.8 | 1 | 8.313 | -0.008 | 13547 | 102.9 |
| Aroclor-1248 | 2 | 8.580 | -0.024 | 15119 | 60.1 | 2 | 8.718 | -0.009 | 11706 | 84.5 |
| Aroclor-1248 | 3 | 8.998 | -0.024 | 44037 | 97.3 | 3 | 9.151 | -0.023 | 17163 | 101.9 |
| Aroclor-1248 | 4 | 9.299 | -0.012 | 50784 | 229.0 | 4 | 9.543 | -0.053 | 16784 | 84.9 |
| | Total Col1Ave (4 peaks): | | | | 118.0 | Total Col2Ave (4 peaks): | | | | 93.6 RPD = 23 |
| | Corrected Ave (3 peaks): | | | | 81.0 | Corrected Ave (3 peaks): | | | | 90.4 RPD = 11 |
| | | | | | | | | | | 96.46 |
| Aroclor-1254 | 1 | 9.299 | -0.022 | 50784 | 125.8 | 1 | 9.450 | -0.012 | 34024 | 163.8 |
| Aroclor-1254 | 2 | 9.375 | -0.027 | 23992 | 152.9 | 2 | 9.968 | -0.013 | 17014 | 101.9 |
| Aroclor-1254 | 3 | 9.668 | -0.027 | 32755 | 128.5 | 3 | 10.116 | -0.018 | 57648 | 160.5 |
| Aroclor-1254 | 4 | 9.800 | -0.031 | 72845 | 146.6 | 4 | 10.366 | -0.017 | 72760 | 195.7 |
| Aroclor-1254 | 5 | 10.129 | -0.060 | 51533 | 151.3 | 5 | 10.564 | -0.016 | 52057 | 290.2 |
| | Total Col1Ave (5 peaks): | | | | 141.0 | Total Col2Ave (5 peaks): | | | | 182.4 RPD = 26 |
| | Corrected Ave (4 peaks): | | | | 138.1 | Corrected Ave (4 peaks): | | | | 155.5 RPD = 12 |
| | | | | | 138.45 | | | | | |
| Aroclor-1260 | 1 | 11.044 | -0.018 | 29485 | 145.9 | 1 | 11.653 | -0.009 | 31164 | 138.1 |
| Aroclor-1260 | 2 | 11.361 | -0.017 | 26100 | 124.9 | 2 | 11.914 | -0.012 | 61668 | 108.9 |
| Aroclor-1260 | 3 | 11.729 | -0.022 | 74706 | 136.0 | 3 | 12.432 | -0.012 | 22936 | 152.1 |
| Aroclor-1260 | 4 | 12.130 | -0.029 | 37539 | 134.2 | 4 | 12.497 | -0.013 | 42682 | 113.1 |
| Aroclor-1260 | 5 | 12.245 | -0.016 | 16470 | 143.8 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 137.0 | Total Col2Ave (4 peaks): | | | | 128.0 RPD = 7 |
| | Corrected Ave (4 peaks): | | | | 134.7 | Corrected Ave (3 peaks): | | | | 120.0 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 (5.936 - 13.808) = 1345396 Col1 Total PCB = 0.3 ppm*

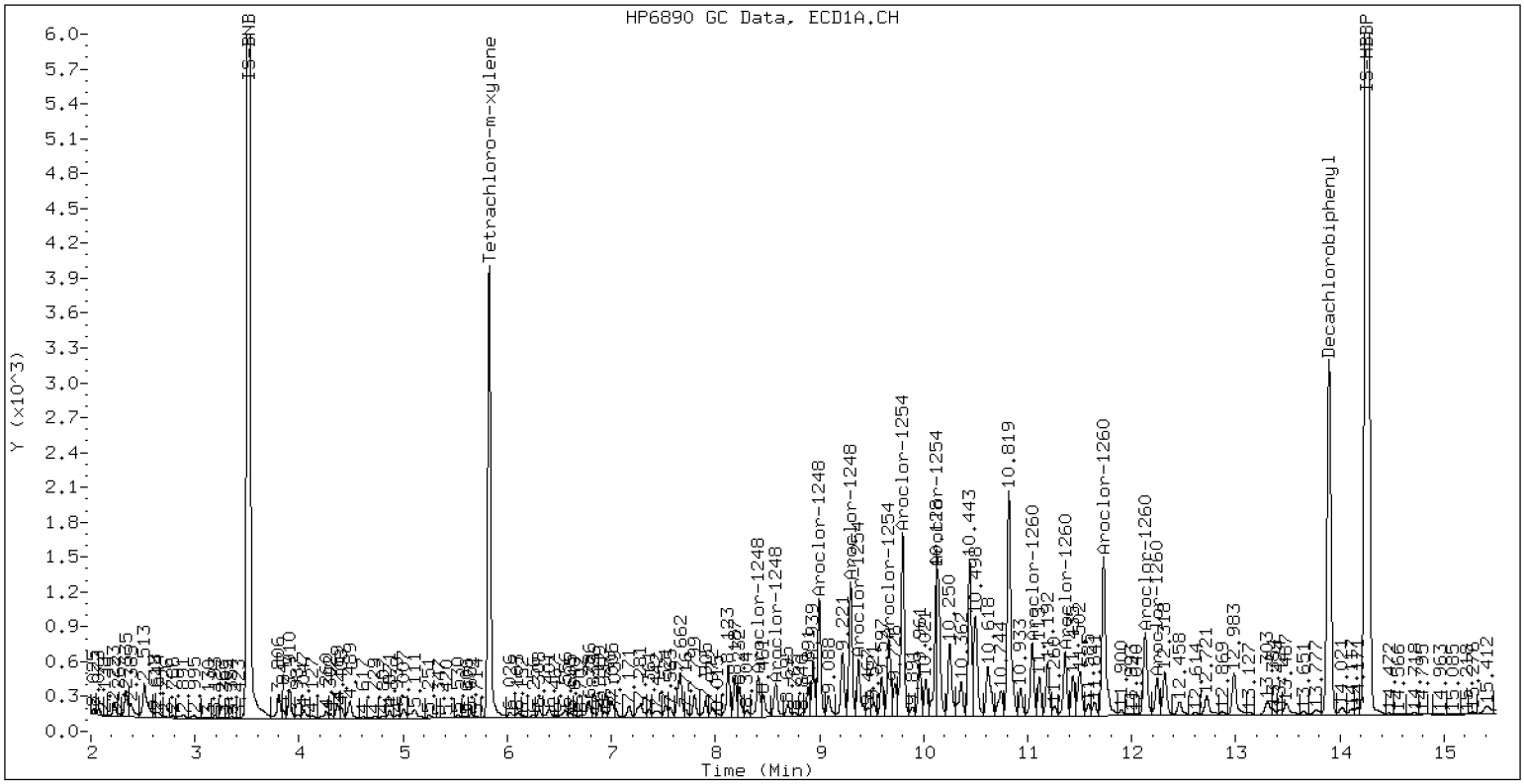
Total PCB Area Col2 (5.807 - 14.028) = 1040520 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

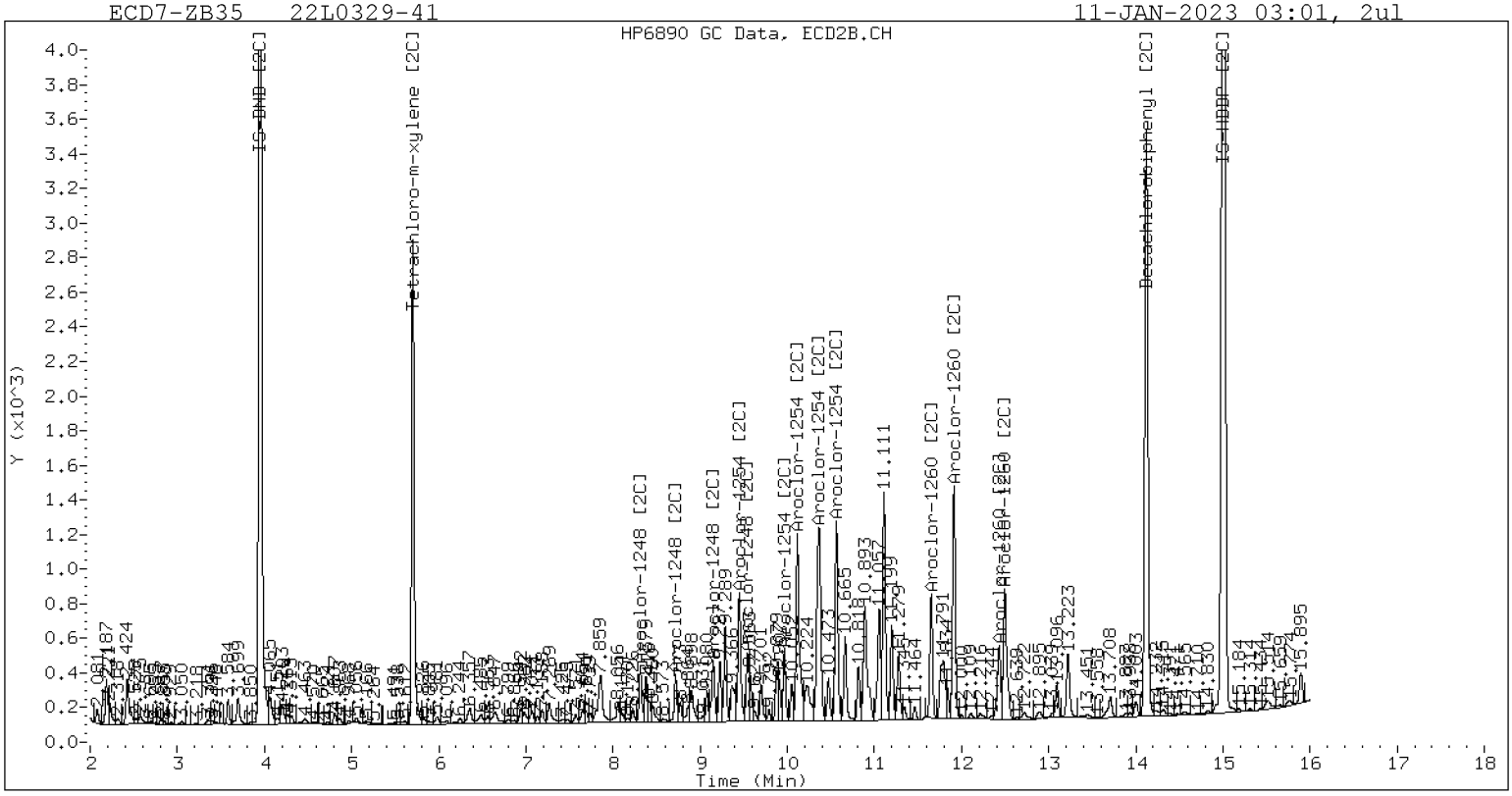
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-41 11-JAN-2023 03:01, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-41 11-JAN-2023 03:01, 2ul

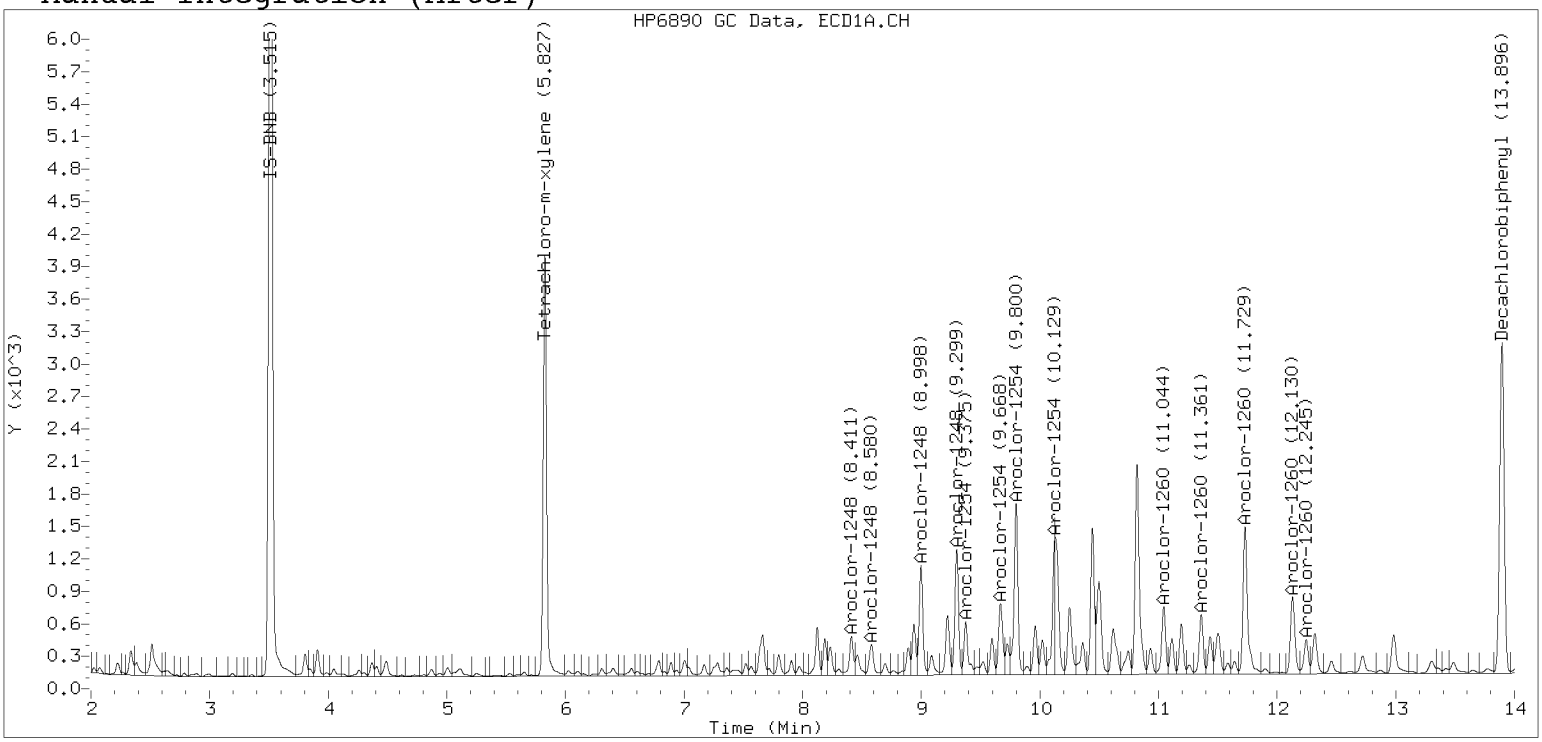



ZB-35 Manual Integration: YES

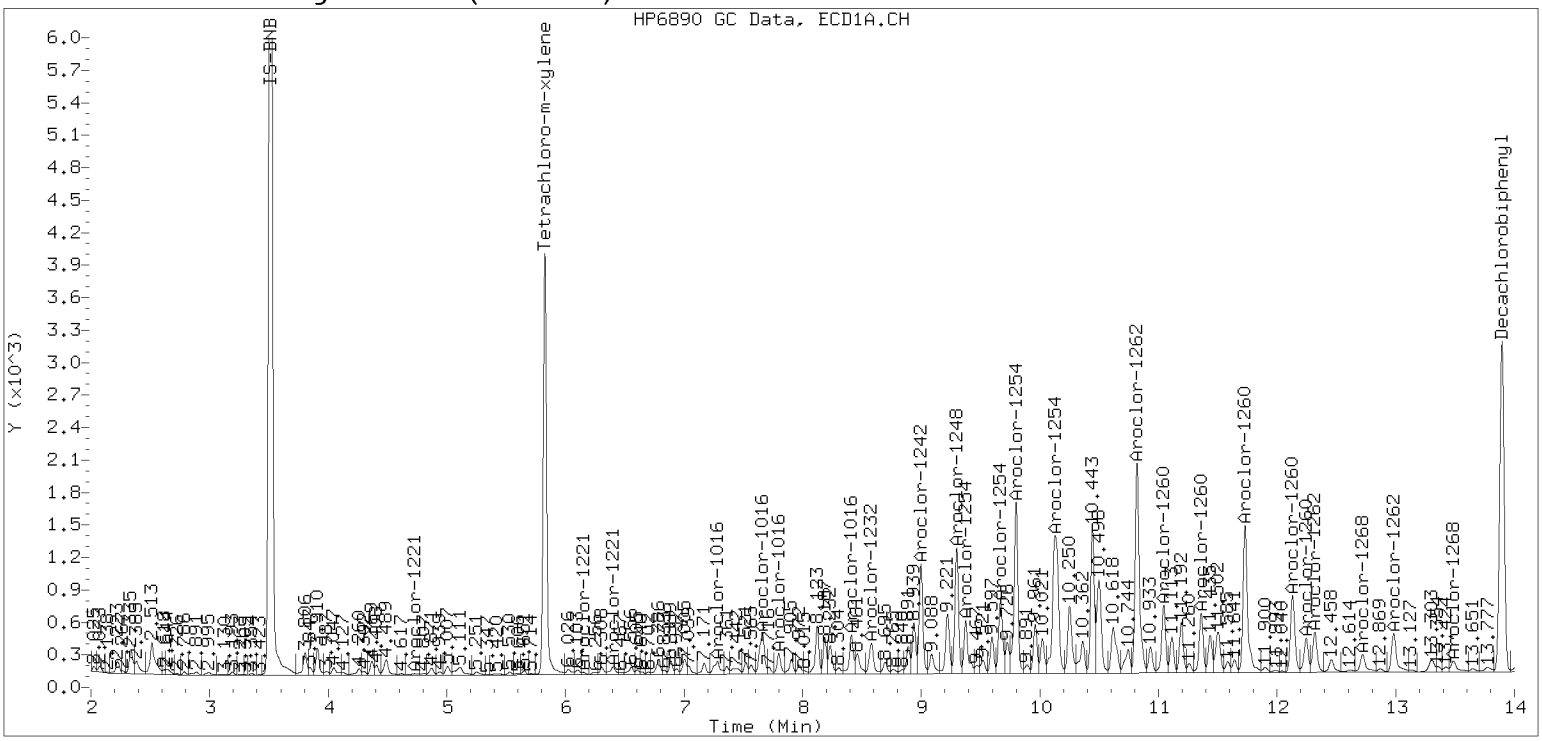
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230110.b/01102331ECD7.D  Injection Date: 11-JAN-2023 03:01

Manual Integration (After)



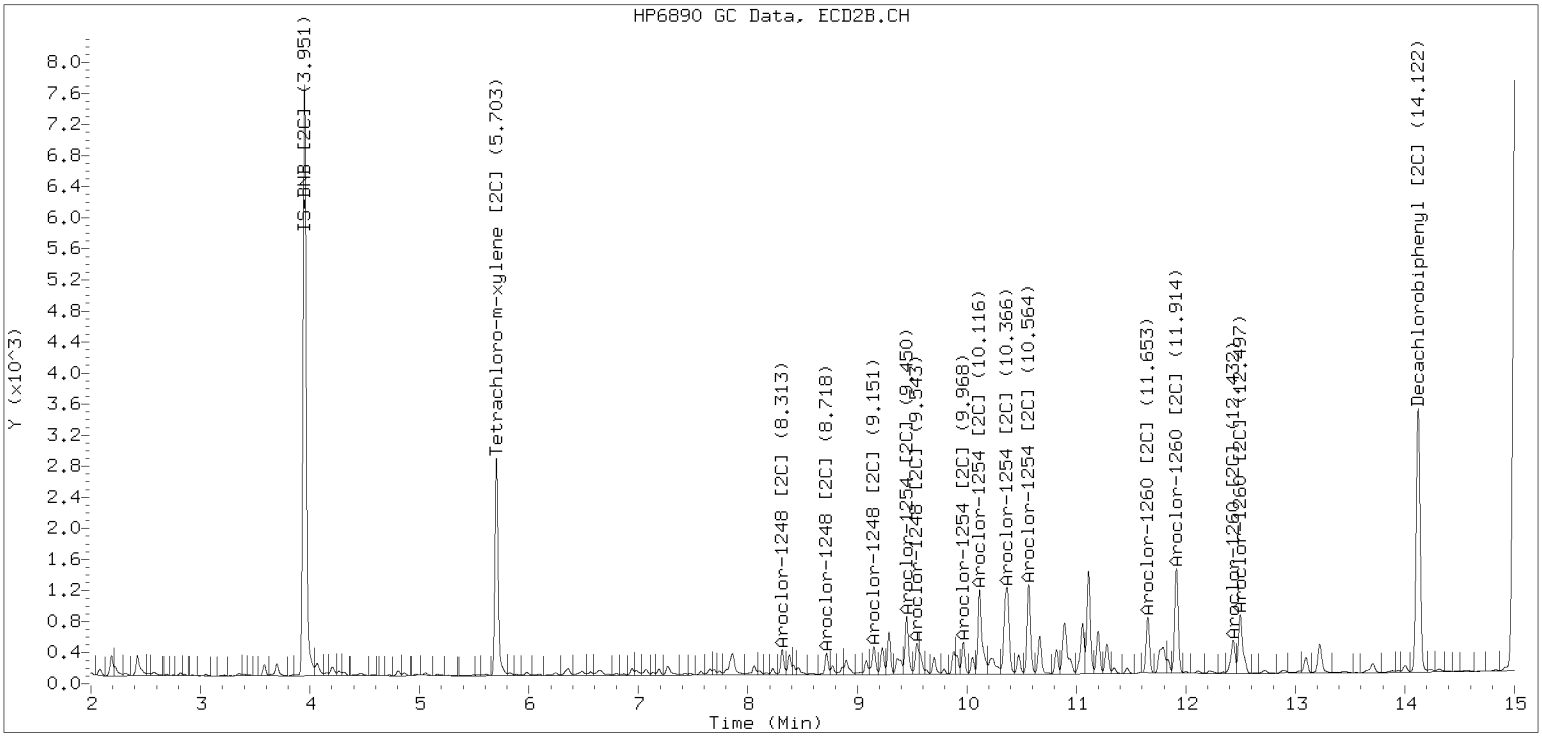

Processed Integration (Before)



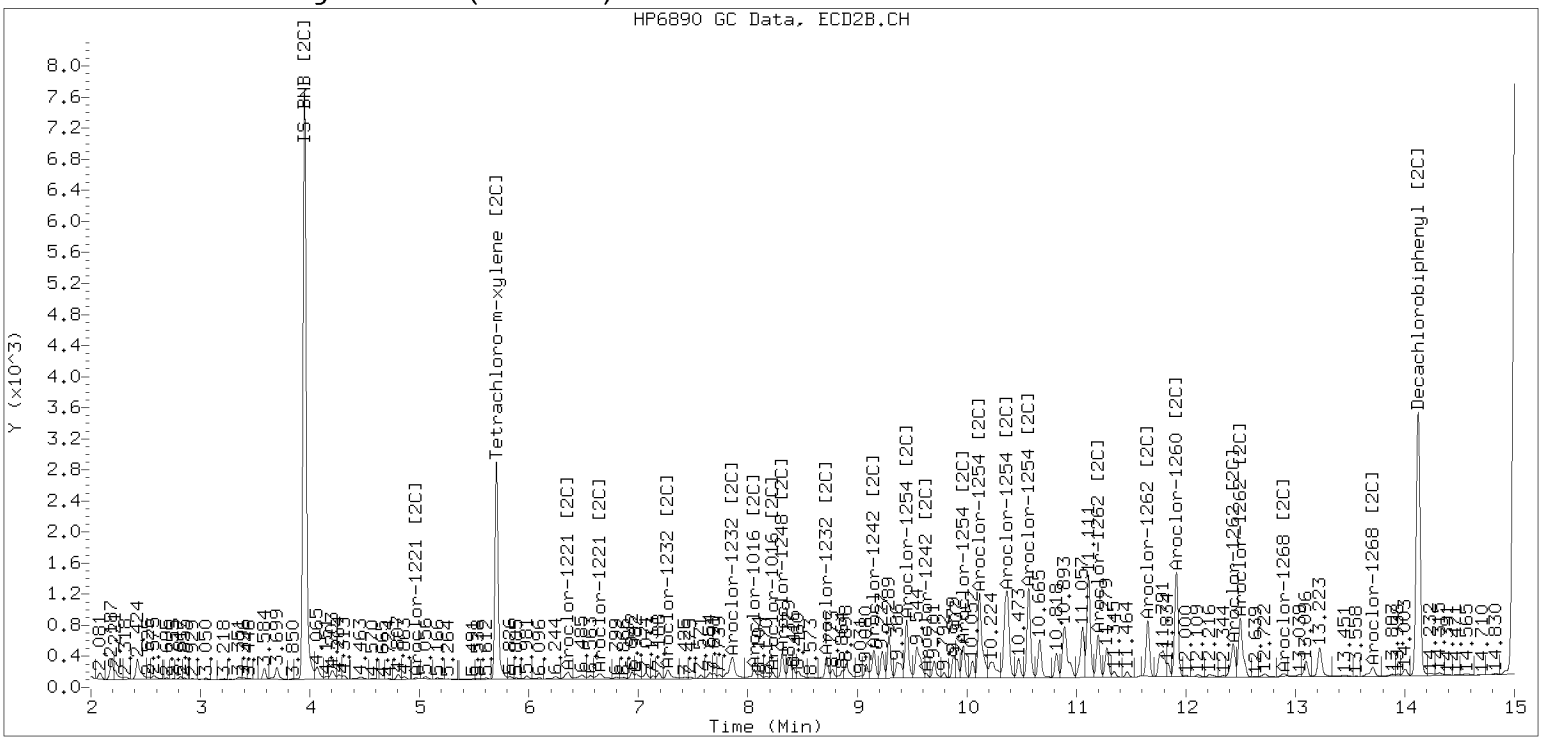
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230110.b/230110.b/01102331ECD7.D  Injection Date: 11-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754B**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-42 B | File ID: | 01102332ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 03:22 |
| % Solids: | 66.79 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 18.86 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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 | 1.5 | 4.0 | U |
| 11104-28-2 | Aroclor 1221 | 1 | 1 | 4.0 | 1.5 | 4.0 | U |
| 11141-16-5 | Aroclor 1232 | 1 | 1 | 4.0 | 1.5 | 4.0 | U |
| 53469-21-9 | Aroclor 1242 | 1 | 1 | 4.0 | 1.5 | 4.0 | U |
| 12672-29-6 | Aroclor 1248 | 1 | 1 | 4.0 | 1.5 | 4.0 | U |
| 11097-69-1 | Aroclor 1254 | 2 | 1 | 10.7 | 1.5 | 4.0 | |
| 11096-82-5 | Aroclor 1260 | 2 | 1 | 6.5 | 0.6 | 4.0 | |

| SURROGATES | Col # | ADDED (ug/kg dry) | CONC (ug/kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|---|
| *Decachlorobiphenyl* | *1* | *7.9387* | *7.08* | *89.2* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9387* | *5.31* | *66.8* | *44 - 120* | |
| *Decachlorobiphenyl* | *2* | *7.9387* | *6.31* | *79.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *2* | *7.9387* | *5.84* | *73.6* | *44 - 120* | |

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

Data file 1: /230110.b/01102332ECD7.D
Data file 2: /230110.b/230110.b/01102332ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-42
Client ID:
Injection Date: 11-JAN-2023 03:22
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.826 | -0.010 | 172642 | 5.703 | -0.005 | 126611 | 26.7 | 29.4 | 9.6 | Tetrachloro-m-xylene |
| 13.897 | -0.011 | 195883 | 14.123 | -0.005 | 203598 | 35.7 | 31.8 | 11.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 455685 | 1.8 |
| Hexabromobiphenyl | 798898 | 598819 | -25.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 313907 | 26.0 |
| Hexabromobiphenyl | 362541 | 450833 | 24.4 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col 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 | 9.300 | -0.021 | 15809 | 39.4 | 1 | 9.451 | -0.011 | 10250 | 50.6 |
| Aroclor-1254 | 2 | 9.376 | -0.026 | 6185 | 39.6 | 2 | 9.969 | -0.012 | 5316 | 32.7 |
| Aroclor-1254 | 3 | 9.668 | -0.026 | 10054 | 39.7 | 3 | 10.115 | -0.018 | 15400 | 44.0 |
| Aroclor-1254 | 4 | 9.801 | -0.029 | 22511 | 45.6 | 4 | 10.364 | -0.018 | 21603 | 59.6 |
| Aroclor-1254 | 5 | 10.131 | -0.058 | 27121 | 80.1 | 5 | 10.566 | -0.014 | 14417 | 82.5 |
| | Total Col1Ave (5 peaks): | | | | 48.9 | Total Col2Ave (5 peaks): | | | 53.9 | RPD = 10 |
| | Corrected Ave (4 peaks): | | | | 41.1 | Corrected Ave (4 peaks): | | | 46.7 | RPD = 13 |
| Aroclor-1260 | 1 | 11.046 | -0.016 | 8190 | 37.6 | 1 | 11.655 | -0.007 | 8284 | 34.8 |
| Aroclor-1260 | 2 | 11.362 | -0.015 | 7468 | 33.1 | 2 | 11.914 | -0.011 | 14652 | 24.5 |
| Aroclor-1260 | 3 | 11.731 | -0.021 | 19625 | 33.1 | 3 | 12.433 | -0.011 | 6904 | 43.4 |
| Aroclor-1260 | 4 | 12.131 | -0.027 | 10405 | 34.5 | 4 | 12.499 | -0.011 | 11046 | 27.7 |
| Aroclor-1260 | 5 | 12.246 | -0.016 | 4763 | 38.6 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): | | | | 35.4 | Total Col2Ave (4 peaks): | | | 32.6 | RPD = 8 |
| | Corrected Ave (4 peaks): | | | | 34.6 | Corrected Ave (3 peaks): | | | 29.0 | RPD = 17 |
| 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) = 688945 Col1 Total PCB = 0.2 ppm*

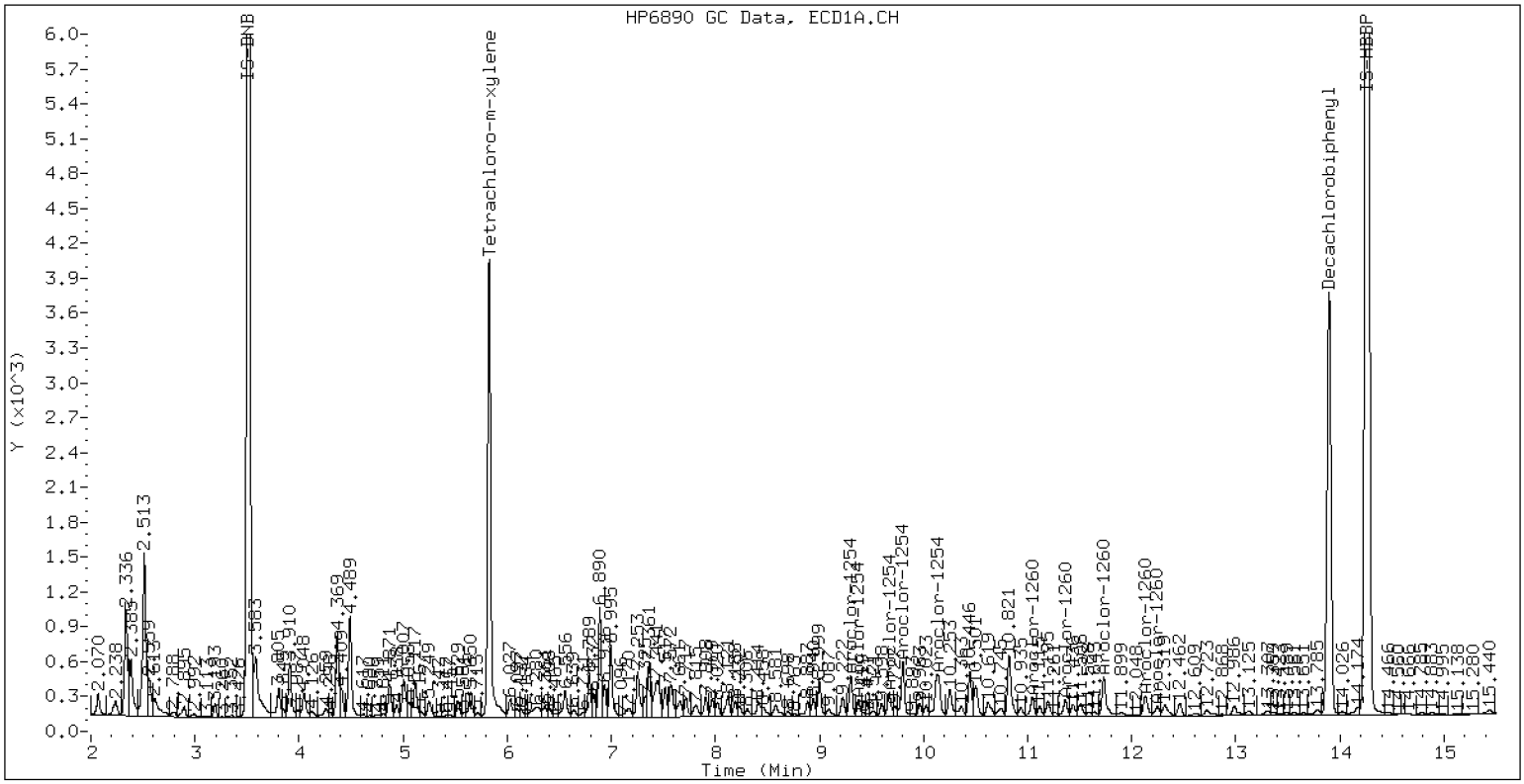
Total PCB Area Col2 (5.807 - 14.028) = 479995 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

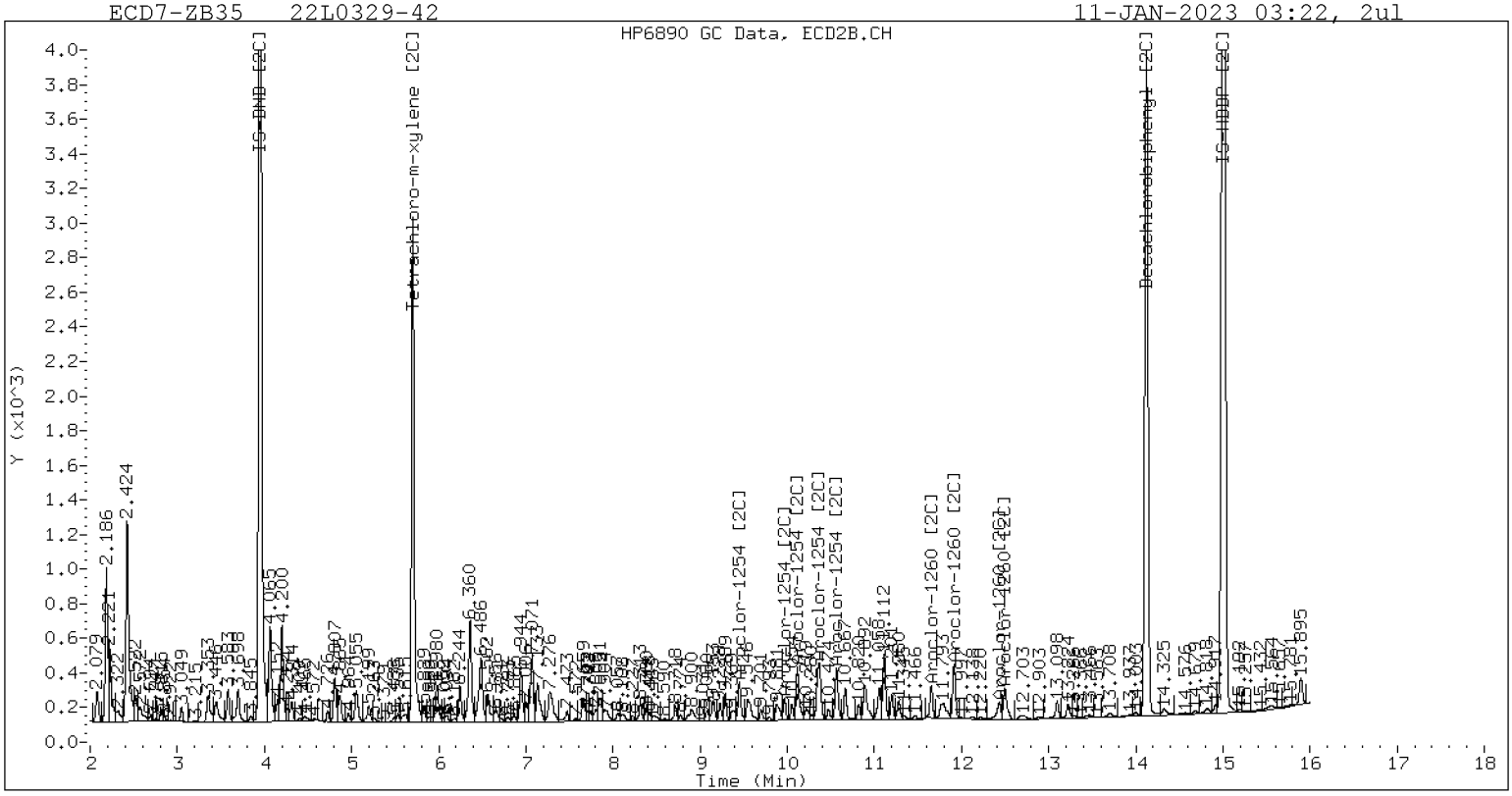
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-42 11-JAN-2023 03:22, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 22L0329-42 11-JAN-2023 03:22, 2ul

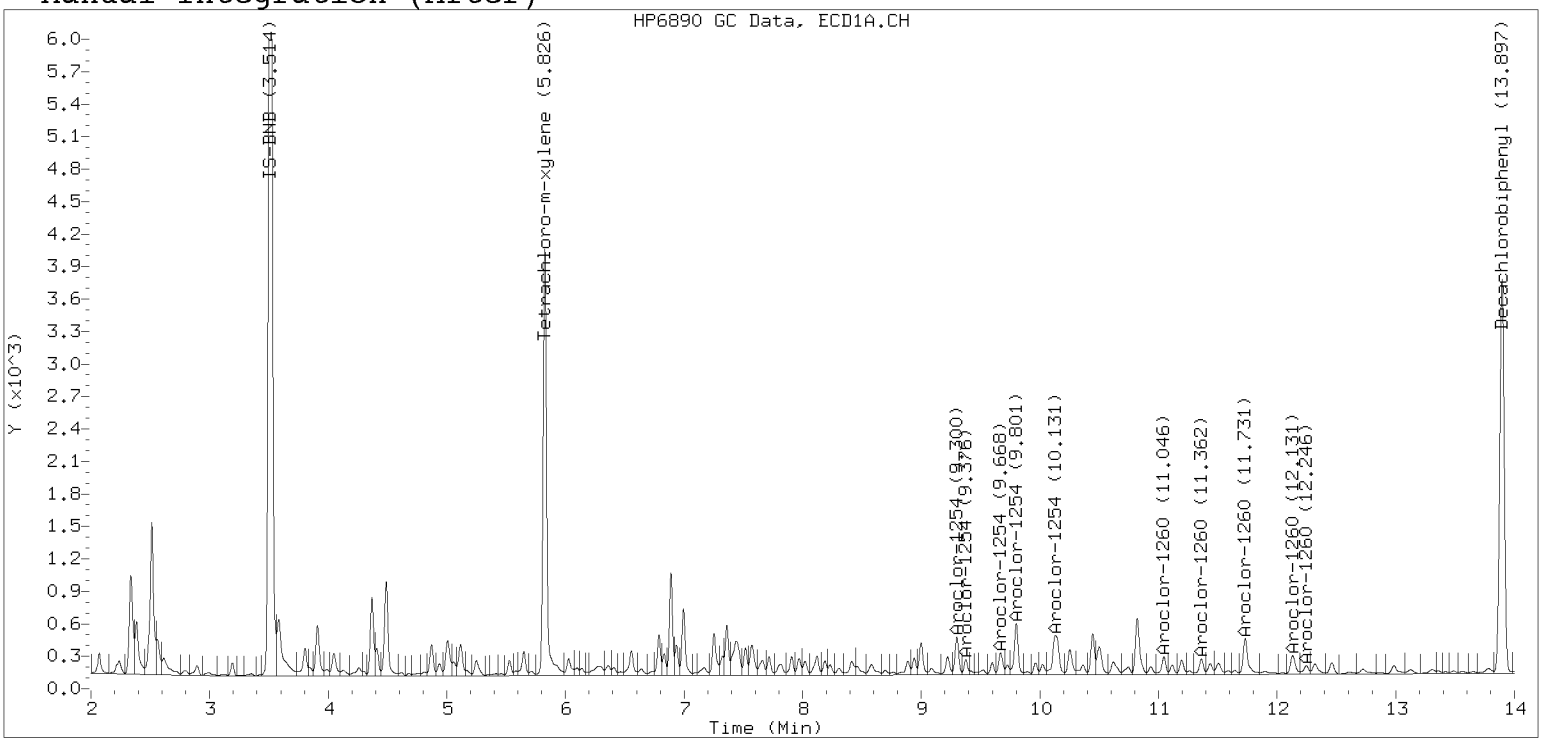



ZB-35 Manual Integration: NO

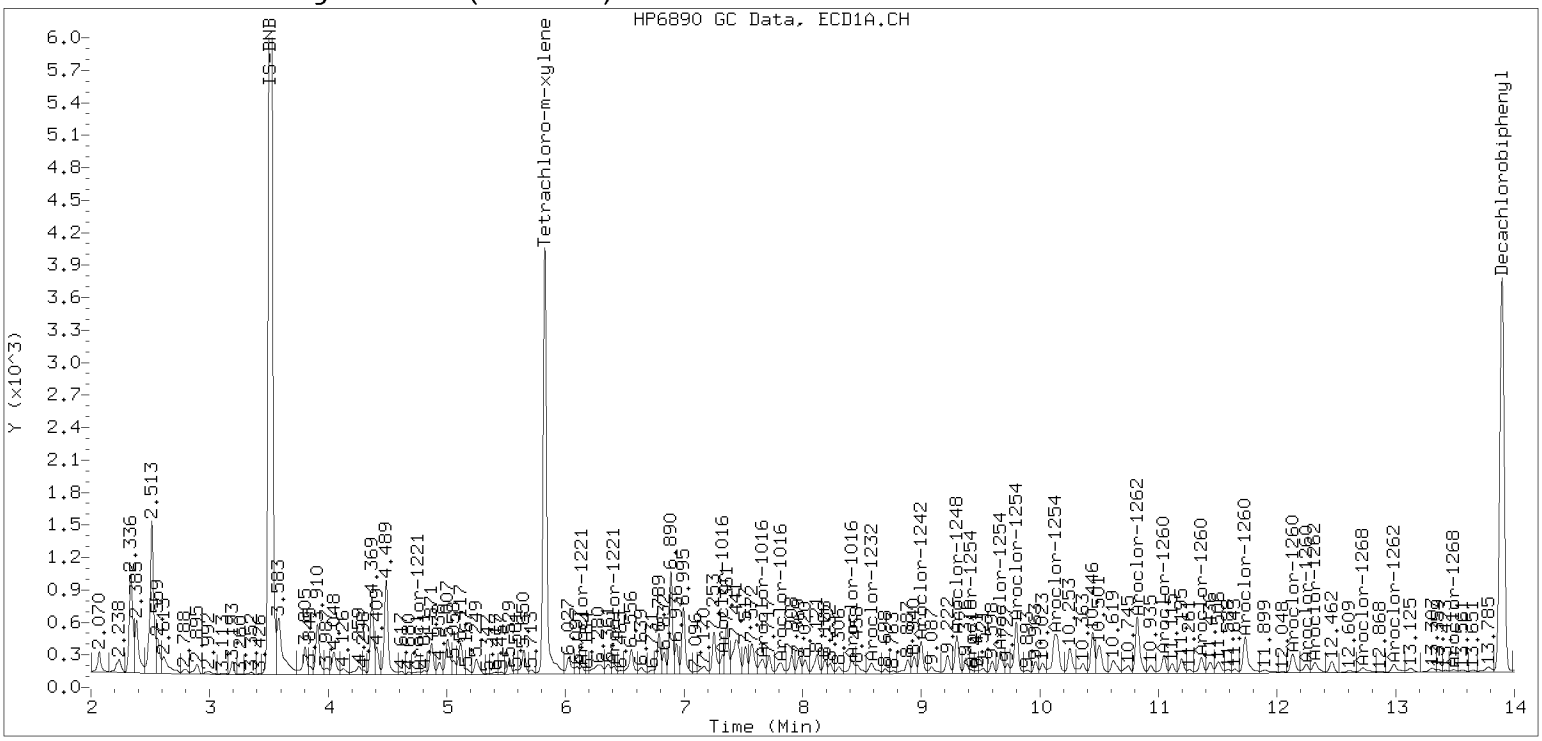
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230110.b/01102332ECD7.D  Injection Date: 11-JAN-2023 03:22

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754C**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-43 B | File ID: | 01102333ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 03:44 |
| % Solids: | 70.51 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.77 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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* | *7.9811* | *7.48* | *93.7* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9811* | *5.34* | *66.9* | *44 - 120* | |

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

Data file 1: /230110.b/01102333ECD7.D
Data file 2: /230110.b/230110.b/01102333ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-43
Client ID:
Injection Date: 11-JAN-2023 03:44
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.009 | 176980 | 5.703 | -0.004 | 133068 | 26.8 | 29.6 | 10.3 | Tetrachloro-m-xylene |
| 13.896 | -0.011 | 205148 | 14.122 | -0.006 | 214140 | 37.5 | 33.2 | 12.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 466824 | 4.3 |
| Hexabromobiphenyl | 798898 | 597256 | -25.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 327433 | 31.4 |
| Hexabromobiphenyl | 362541 | 454022 | 25.2 |

* 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 | --- | | | 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) = 207897 Col1 Total PCB = 0.0 ppm*

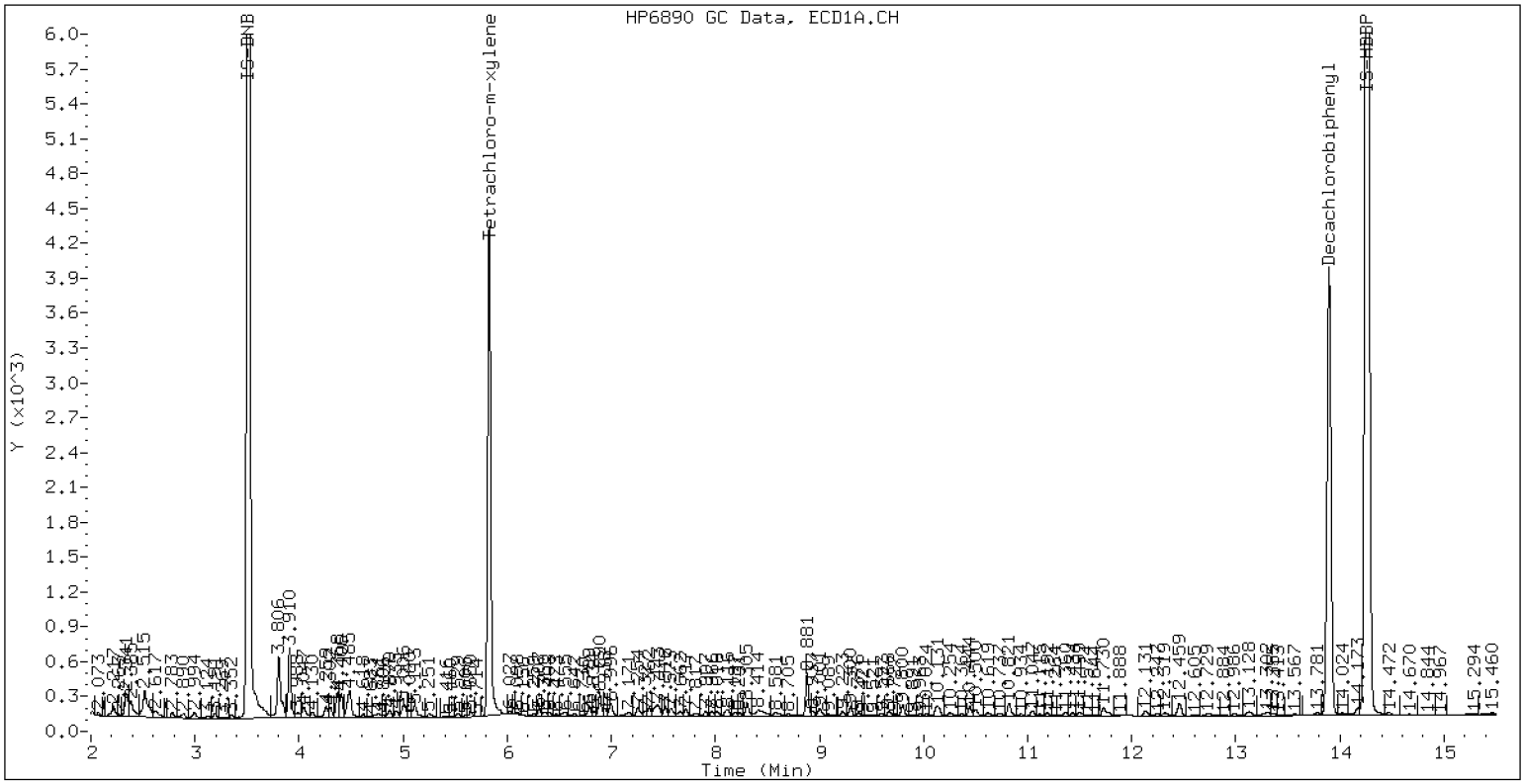
Total PCB Area Col2 (5.807 - 14.028) = 179523 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

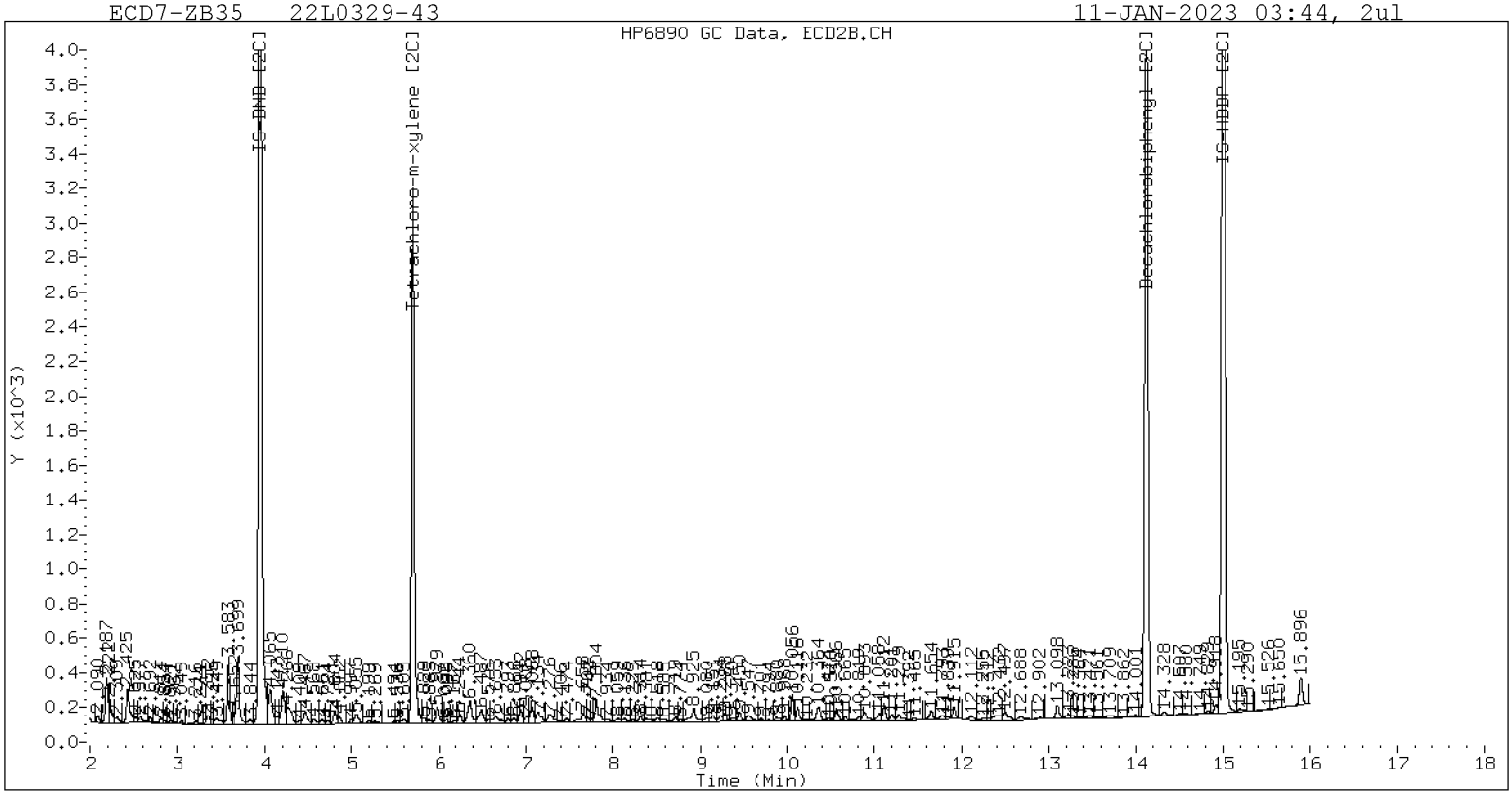
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-43 11-JAN-2023 03:44, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-43 11-JAN-2023 03:44, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754D**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-44 B | File ID: | 01102334ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 04:05 |
| % Solids: | 73.91 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 16.94 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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* | *7.9870* | *7.12* | *89.1* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9870* | *5.48* | *68.6* | *44 - 120* | |

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

Data file 1: /230110.b/01102334ECD7.D
Data file 2: /230110.b/230110.b/01102334ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-44
Client ID:
Injection Date: 11-JAN-2023 04:05
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.009 | 184589 | 5.703 | -0.004 | 132028 | 27.5 | 29.5 | 7.2 | Tetrachloro-m-xylene |
| 13.896 | -0.011 | 203943 | 14.123 | -0.005 | 213919 | 35.6 | 32.5 | 9.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 474533 | 6.0 |
| Hexabromobiphenyl | 798898 | 624363 | -21.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 326448 | 31.1 |
| Hexabromobiphenyl | 362541 | 463332 | 27.8 |

* 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 | --- | | | 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) = 168520 Col1 Total PCB = 0.0 ppm*

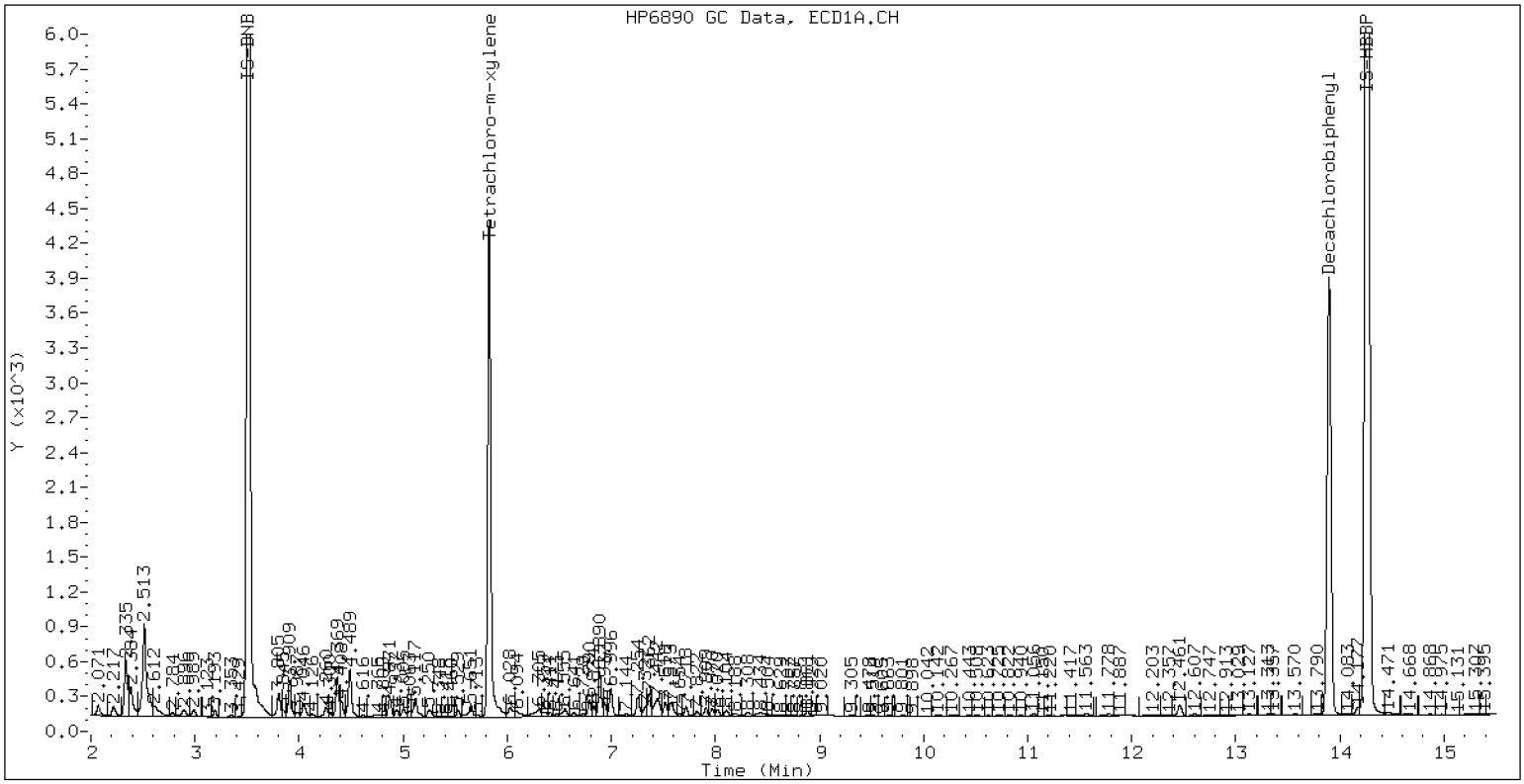
Total PCB Area Col2 (5.807 - 14.028) = 121090 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

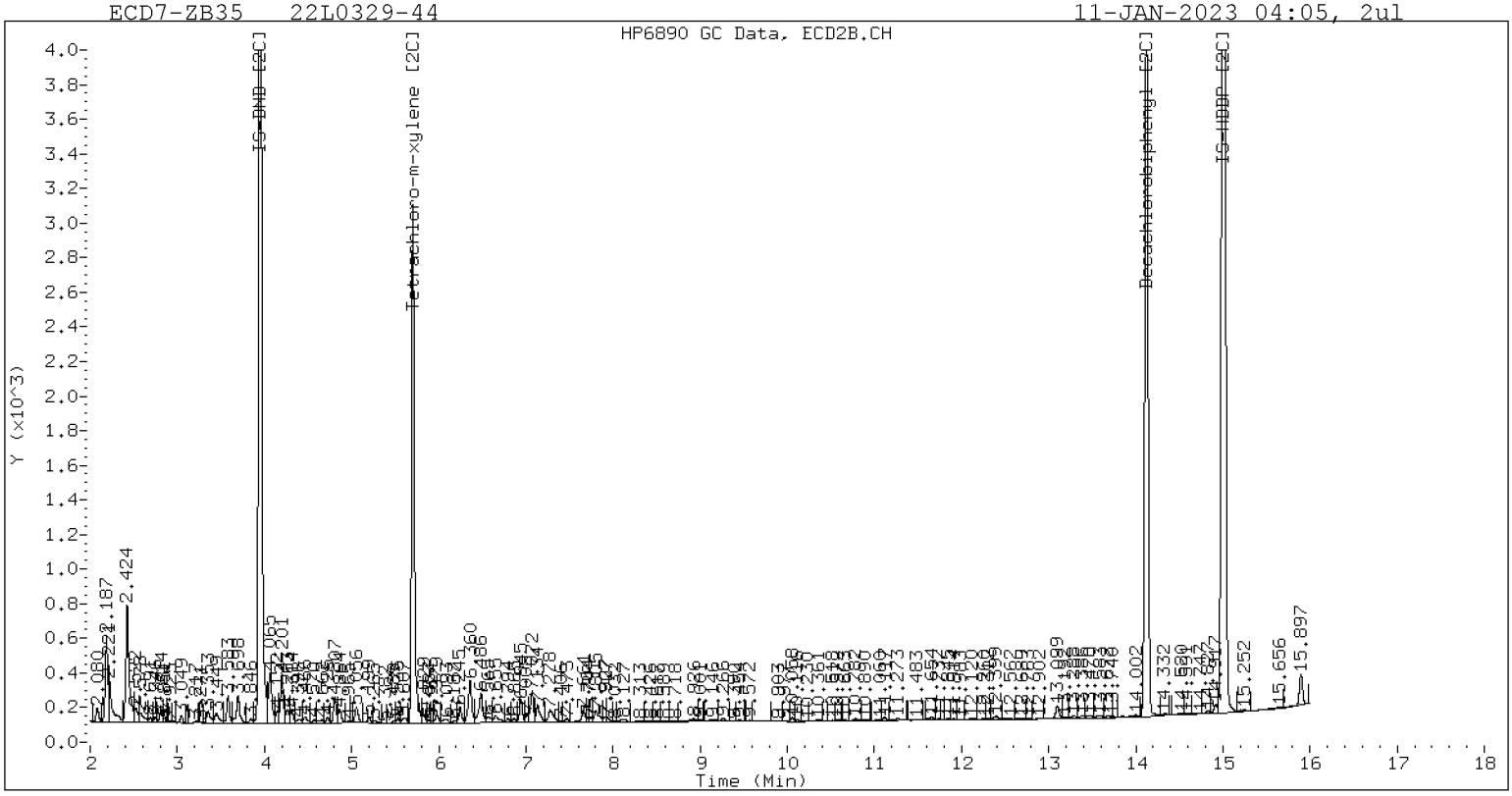
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-44 11-JAN-2023 04:05, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-44 11-JAN-2023 04:05, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754E**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-45 B | File ID: | 01102337ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 05:08 |
| % Solids: | 72.79 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.18 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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* | *7.9966* | *7.21* | *90.2* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9966* | *5.89* | *73.7* | *44 - 120* | |

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

Data file 1: /230110.b/01102337ECD7.D
Data file 2: /230110.b/230110.b/01102337ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-45
Client ID:
Injection Date: 11-JAN-2023 05:08
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.828 | -0.008 | 196499 | 5.704 | -0.003 | 137236 | 29.5 | 30.2 | 2.3 | Tetrachloro-m-xylene |
| 13.897 | -0.011 | 239218 | 14.123 | -0.005 | 239572 | 36.1 | 33.6 | 6.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 470287 | 5.1 |
| Hexabromobiphenyl | 798898 | 723582 | -9.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 331894 | 33.2 |
| Hexabromobiphenyl | 362541 | 501539 | 38.3 |

* 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 | --- | | | 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) = 140416 Col1 Total PCB = 0.0 ppm*

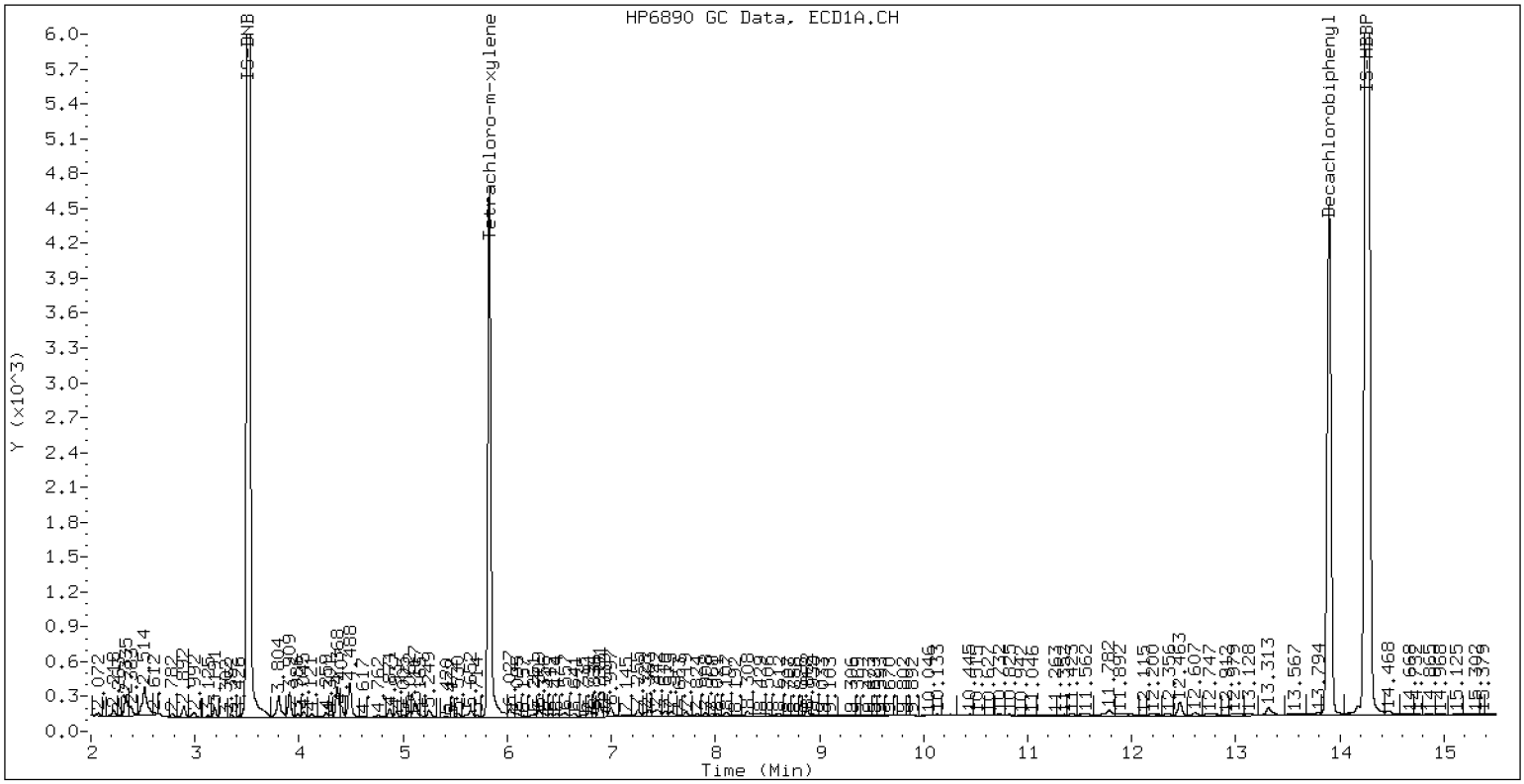
Total PCB Area Col2 (5.807 - 14.028) = 97072 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

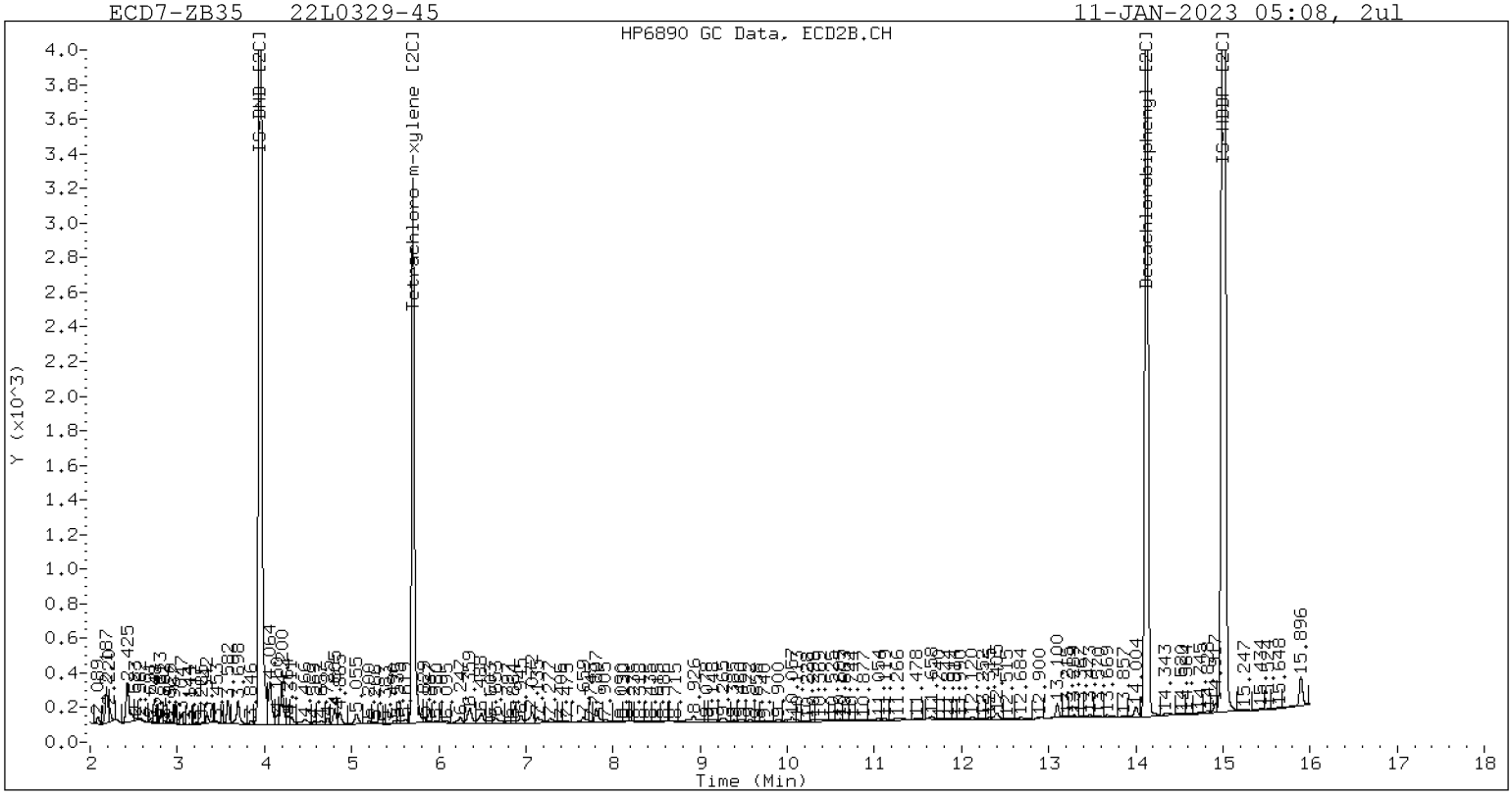
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-45 11-JAN-2023 05:08, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-45 11-JAN-2023 05:08, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754F**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-46 B | File ID: | 01102338ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 05:29 |
| % Solids: | 73.17 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.08 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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* | *8.0016* | *6.84* | *85.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *8.0016* | *5.63* | *70.3* | *44 - 120* | |

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

Data file 1: /230110.b/01102338ECD7.D
Data file 2: /230110.b/230110.b/01102338ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-46
Client ID:
Injection Date: 11-JAN-2023 05:29
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 183061 | 5.705 | -0.002 | 127728 | 28.1 | 28.3 | 0.5 | Tetrachloro-m-xylene |
| 13.897 | -0.011 | 202595 | 14.124 | -0.003 | 213124 | 34.2 | 31.5 | 8.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 459147 | 2.6 |
| Hexabromobiphenyl | 798898 | 646138 | -19.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 329461 | 32.3 |
| Hexabromobiphenyl | 362541 | 475907 | 31.3 |

* 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 | --- | | | 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) = 110975 Col1 Total PCB = 0.0 ppm*

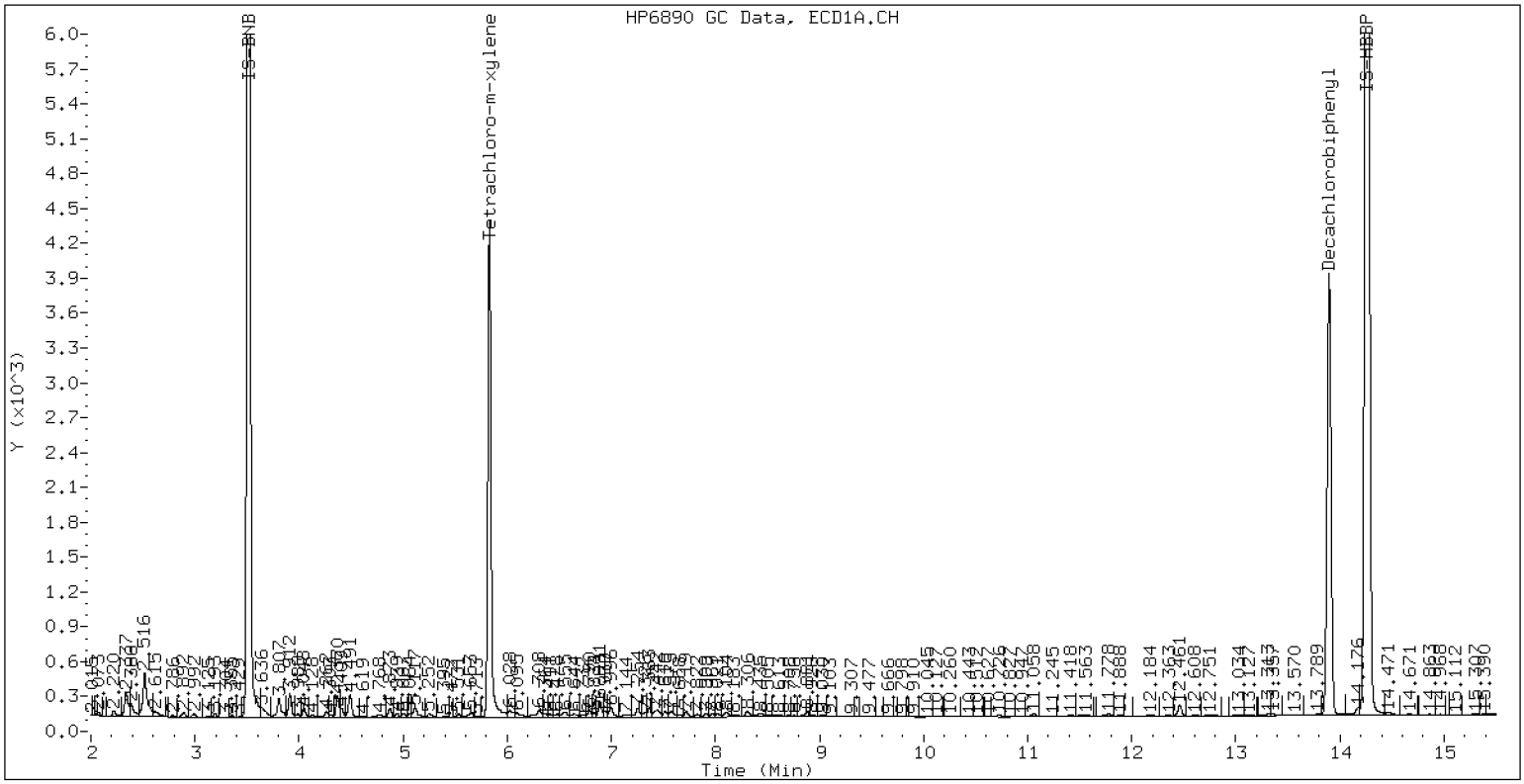
Total PCB Area Col2 (5.807 - 14.028) = 67854 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

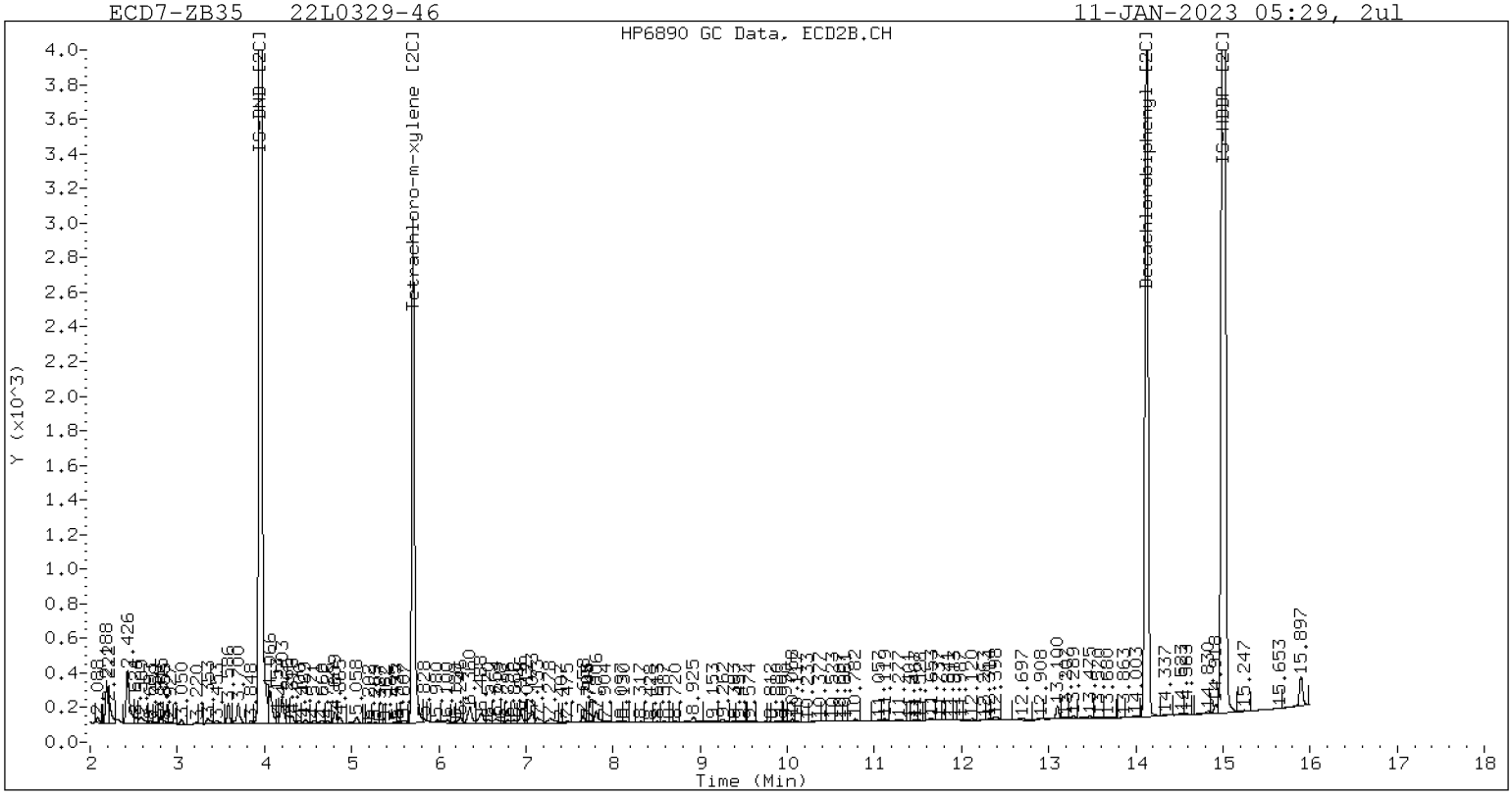
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-46 11-JAN-2023 05:29, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-46 11-JAN-2023 05:29, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754G**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-47 B | File ID: | 01102339ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 05:50 |
| % Solids: | 73.45 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 17.03 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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* | *7.9945* | *6.60* | *82.5* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9945* | *5.33* | *66.7* | *44 - 120* | |

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

Data file 1: /230110.b/01102339ECD7.D
Data file 2: /230110.b/230110.b/01102339ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-47
Client ID:
Injection Date: 11-JAN-2023 05:50
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 175560 | 5.706 | -0.001 | 126239 | 26.7 | 27.1 | 1.8 | Tetrachloro-m-xylene |
| 13.895 | -0.012 | 216069 | 14.122 | -0.006 | 225571 | 33.0 | 31.2 | 5.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 464632 | 3.8 |
| Hexabromobiphenyl | 798898 | 714205 | -10.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 339206 | 36.2 |
| Hexabromobiphenyl | 362541 | 508844 | 40.4 |

* 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 | --- | | | 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) = 60965 Col1 Total PCB = 0.0 ppm*

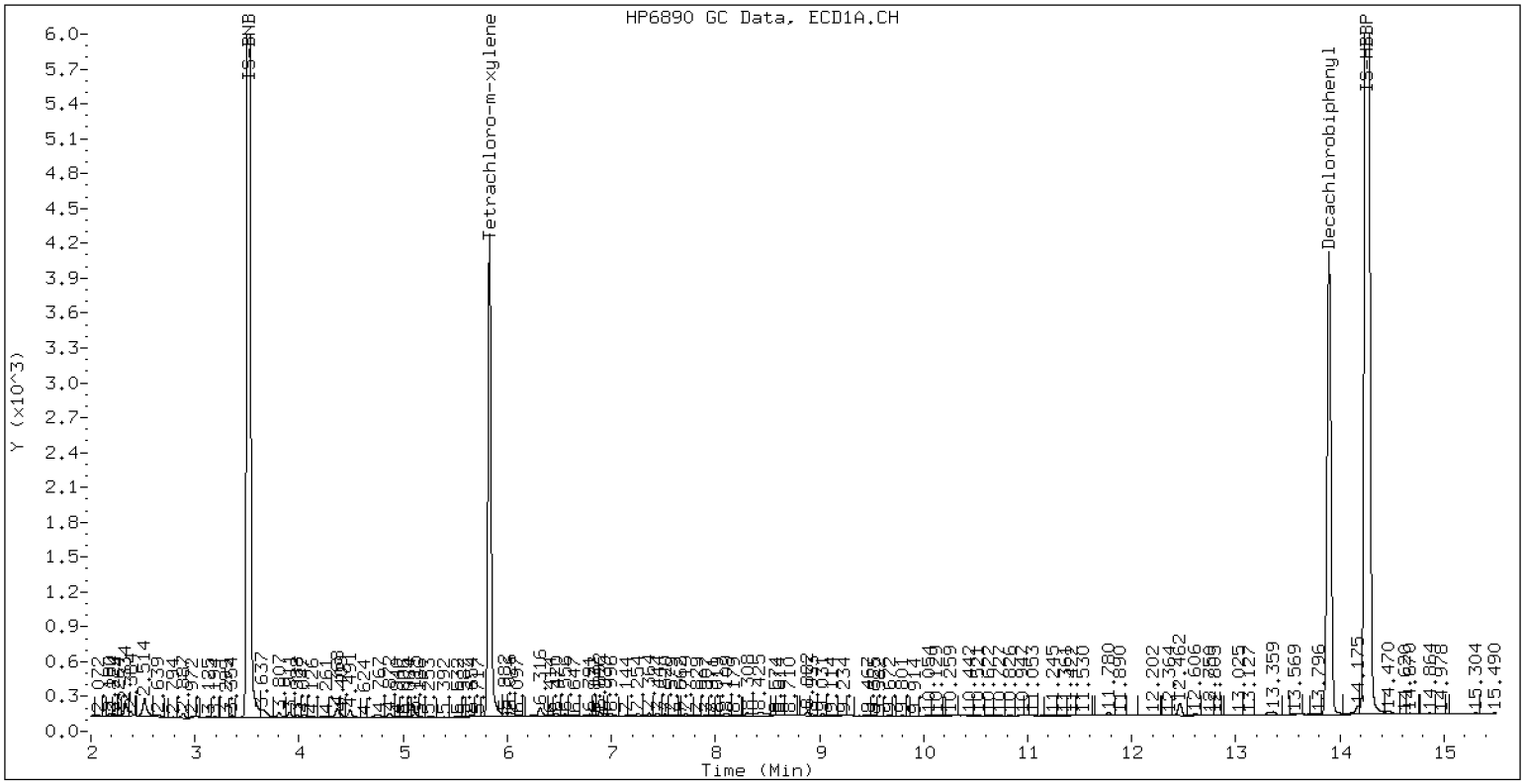
Total PCB Area Col2 (5.807 - 14.028) = 44280 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

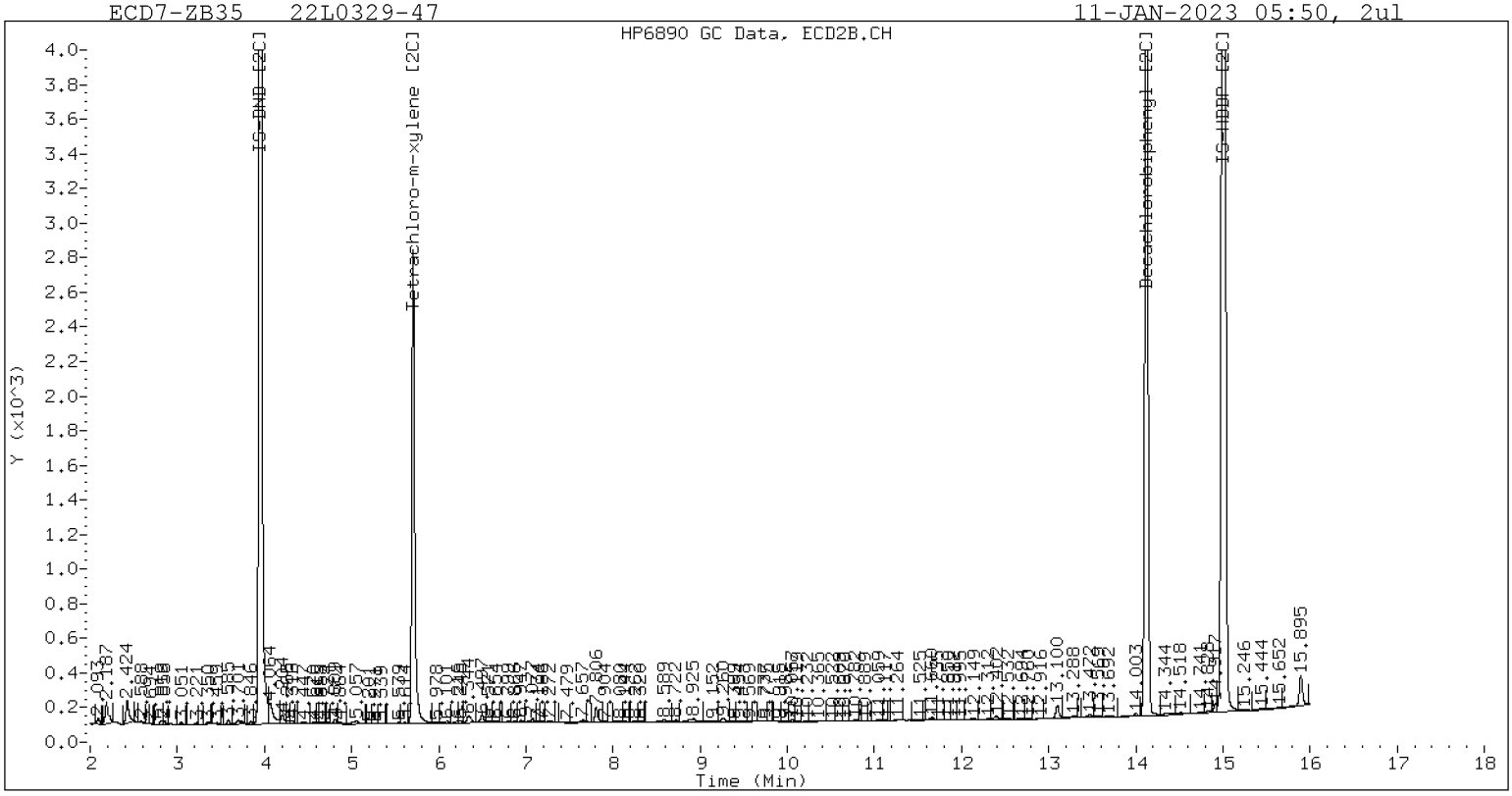
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-47 11-JAN-2023 05:50, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-47 11-JAN-2023 05:50, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**Dual Column**

**LDW22-SC754H**

# ORGANIC ANALYSIS DATA SHEET
# EPA 8082A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Solid | Laboratory ID: | 22L0329-48 B | File ID: | 01102340ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 06:11 |
| % Solids: | 67.15 | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 18.64 g Wet / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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* | *7.9893* | *6.60* | *82.6* | *40 - 126* | |
| *Tetrachlorometaxylene* | *1* | *7.9893* | *5.14* | *64.4* | *44 - 120* | |

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

Data file 1: /230110.b/01102340ECD7.D
Data file 2: /230110.b/230110.b/01102340ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 22L0329-48
Client ID:
Injection Date: 11-JAN-2023 06:11
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.009 | 168863 | 5.704 | -0.003 | 123014 | 25.8 | 27.9 | 7.8 | Tetrachloro-m-xylene |
| 13.896 | -0.012 | 201421 | 14.122 | -0.006 | 209502 | 33.0 | 30.5 | 8.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 462674 | 3.4 |
| Hexabromobiphenyl | 798898 | 665003 | -16.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 322212 | 29.4 |
| Hexabromobiphenyl | 362541 | 484246 | 33.6 |

* 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 | --- | | | 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) = 117016 Col1 Total PCB = 0.0 ppm*

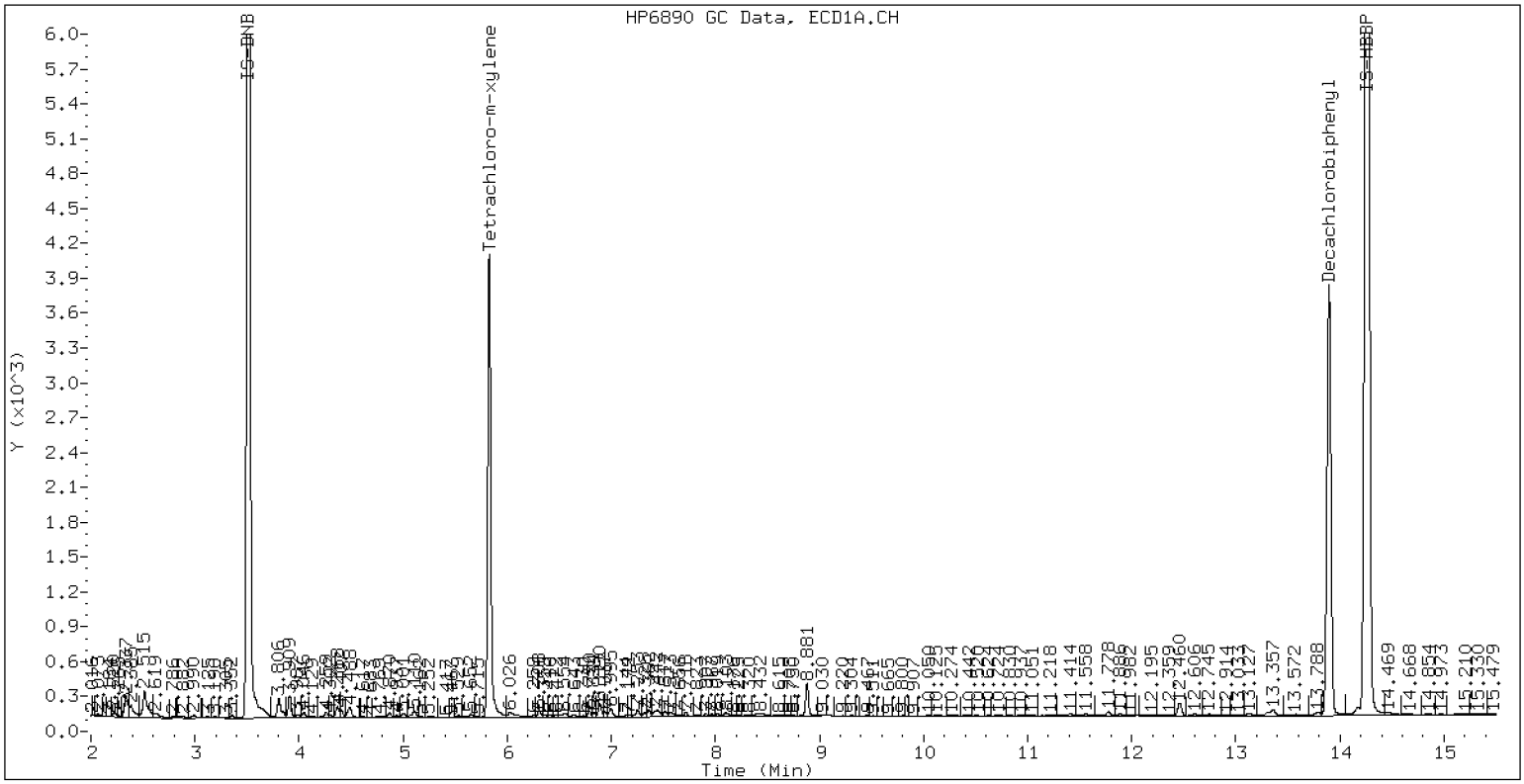
Total PCB Area Col2 (5.807 - 14.028) = 81395 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

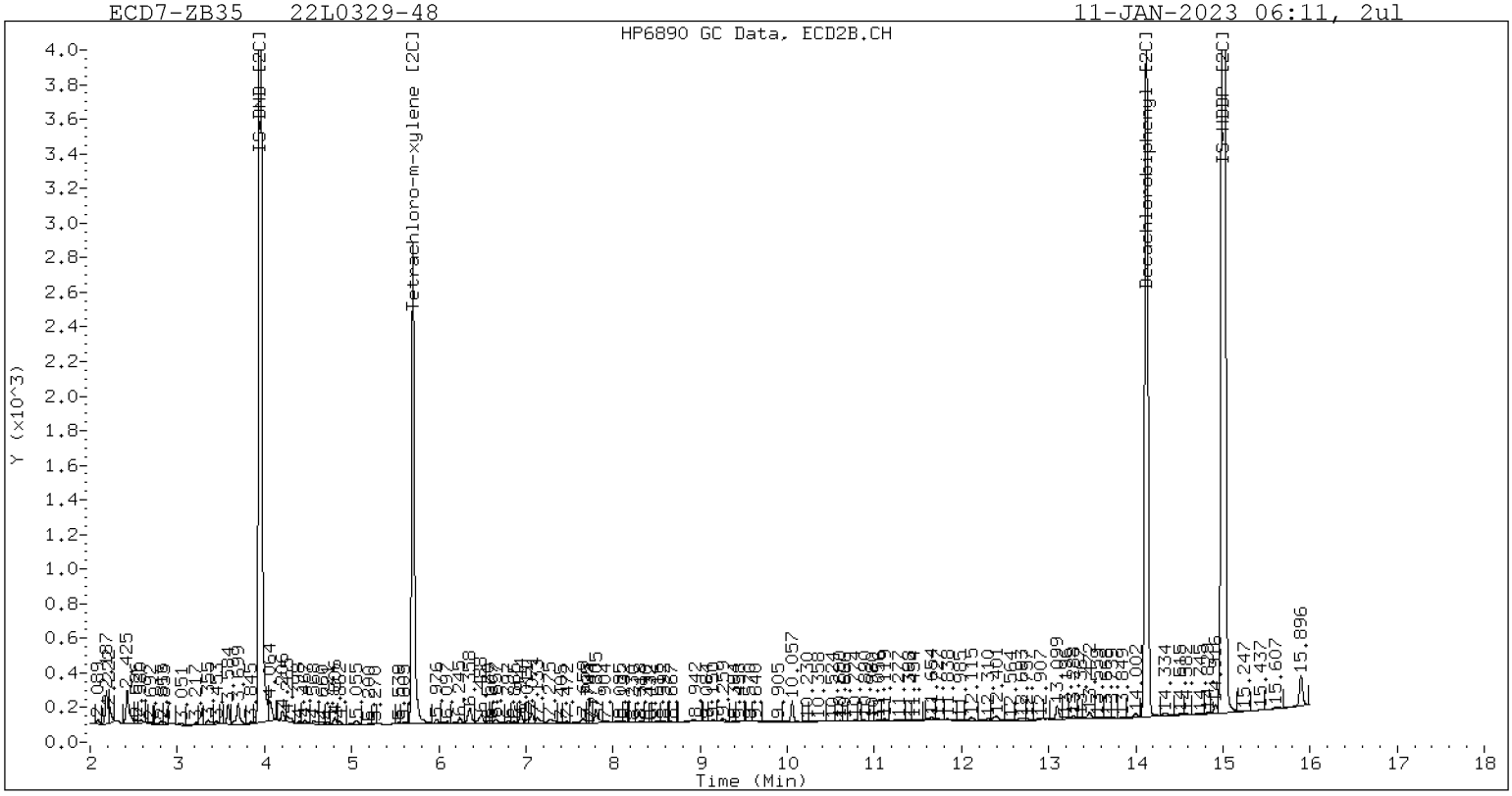
# PCB Dual Column Chromatograms

ECD7-ZB5 22L0329-48 11-JAN-2023 06:11, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 22L0329-48 11-JAN-2023 06:11, 2ul




ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

# PREPARATION BATCH SUMMARY

## EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 22L0329

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

Batch: BKL0687 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-IT799A | 22L0329-01 | 01092359ECD7.D | 12/30/22 16:34 | |
| LDW22-IT799B | 22L0329-02 | 01092360ECD7.D | 12/30/22 16:34 | |
| LDW22-IT799C | 22L0329-03 | 01092361ECD7.D | 12/30/22 16:34 | |
| LDW22-IT799D | 22L0329-04 | 01092362ECD7.D | 12/30/22 16:34 | |
| LDW22-IT799E | 22L0329-05 | 01092363ECD7.D | 12/30/22 16:34 | |
| LDW22-IT799F | 22L0329-06 | 01092364ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788B | 22L0329-07 | 01092365ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788C | 22L0329-08 | 01092366ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788D | 22L0329-09 | 01092367ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788E | 22L0329-10 | 01092368ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788E-FD | 22L0329-11 | 01092371ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788F | 22L0329-12 | 01102321ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788G | 22L0329-13 | 01102322ECD7.D | 12/30/22 16:34 | |
| LDW22-SC788H | 22L0329-14 | 01092374ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791A | 22L0329-15 | 01092375ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791B | 22L0329-16 | 01092376ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791C | 22L0329-17 | 01092379ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791D | 22L0329-18 | 01092380ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791E | 22L0329-19 | 01092381ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791F | 22L0329-20 | 01092382ECD7.D | 12/30/22 16:34 | |
| Blank | BKL0687-BLK1 | 01092355ECD7.D | 12/30/22 16:34 | |
| LCS | BKL0687-BS1 | 01092356ECD7.D | 12/30/22 16:34 | |
| LCS Dup | BKL0687-BSD1 | 01092357ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791B | BKL0687-MS1 | 01092377ECD7.D | 12/30/22 16:34 | |
| LDW22-IT791B | BKL0687-MSD1 | 01092378ECD7.D | 12/30/22 16:34 | |
| Reference | BKL0687-SRM1 | 01092358ECD7.D | 12/30/22 16:34 | |

**Analytical Resources, LLC**
Analytical Chemists and Consultants

## ORGANICS PREPARATION BENCH SHEET

Batch: BKL0687

**Prepared using: EPA 3546 (Microwave)**

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

**Matrix: Solid** **Date Prepared:** 12/30/22 **Balance ID:** B1464626 14 **Set Up By:** CTO 12/29/22

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

**The following standards may be missing from this batch!**

| Designator | Description |
|---|---|
| QLS 5 | QLS Spike |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-01 B | 81.4 | (15.37) | 15.39 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-02 B | 82.0 | (15.24) | 15.24 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-03 A | 75.7 | (16.52) | 16.53 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-04 A | 72.8 | (17.18) | 17.20 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-05 A | 75.0 | (16.67) | 16.68 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-06 B | 70.4 | (17.77) | 17.81 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-07 A | 57.0 | (21.95) | 21.98 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-08 A | 58.6 | (21.35) | 21.40 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-09 B | 55.9 | (22.35) | 22.42 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-10 A | 54.8 | (22.83) | 22.89 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-11 B | 54.9 | (22.76) | 22.80 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-12 B | 59.7 | (20.93) | 20.98 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-13 B | 59.3 | (21.08) | 21.08 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-14 B | 60.8 | (20.56) | 20.59 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-15 B | 80.9 | (15.45) | 15.45 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-16 B | 89.5 | (13.97) | 13.98 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-17 B | 86.7 | (14.42) | 14.43 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-18 B | 80.3 | (15.57) | 15.61 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-19 B | 77.2 | (16.20) | 16.24 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-20 B | 76.7 | (16.29) | 16.29 | 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 |
|---|---|---|---|---|---|---|---|---|---|
| BKL0687-BLK1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0687-BS1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0687-BSD1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0687-MS1 | 89.5 | (13.97) | 13.97 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use 22L0329-16 |
| BKL0687-MSD1 | 89.5 | (13.97) | 13.97 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use 22L0329-16 |
| BKL0687-SRM1 | 100.0 | ~~(12.50)~~ (2.50) | 2.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use K010816 |

+1g DI WATER

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**ORGANICS PREPARATION BENCH SHEET**

Batch: BKL0687

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

| | | | | | |
|---|---|---|---|---|---|
| 12/30/22 | | DM | 1-9-23 | 12/30/22 16:34 | |
| Client ID verified By | Date | Preparation Reviewed By | Date | Extraction Date and Time | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## ORGANICS PREPARATION BENCH SHEET

Batch: BKL0687

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

### Prep Steps

**Microwave**
CT
1 (2) 3
12/30/22
Analyst/Date

**KD**
100°C
Hexane Exchange
(2 X 20 mL)
(1) 2 3 4 5 6
RSV 1/5/23
Analyst/Date

**TurboVap**
Pre Cleanups
1 2 3 (4) 5
1-7-23
DM Analyst/Date

**TurboVap**
Post Cleanups
1 2 3 4 (5)
1-9-23
DM Analyst/Date

**Vialing**
1-9-23
DM Analyst/Date

### Reagents Used

| Station/Reagent | Standard ID |
|---|---|
| **Microwave** Analyst: CT Date: 12/30/22 | |
| Neutral Glass Wool | K010562 |
| 1:1 Hexane/Acetone | K011643 |
| Hexane | K011373 |
| Anhydrous Sodium Sulfate | K011753 |
| **KD** Analyst: RSV Date: 1/5/23 | |
| Anhydrous Sodium Sulfate | |
| Hexane | K011373 |
| **Vialing** Analyst: DM Date: 1-9-23 | |
| Hexane | K008951 |
| Concentrated Sulfuric Acid | K010364 |
| Silica Gel (SPE) Darts | K011573 |
| Sodium Sulfite | K010363 |
| Tetrabutylammonium hydrogensulfate (TBAS) | K011885 |

### Surrogates & Spike Standards Used

| Type | Vial ID / Standard ID | Vol uL | Analyst | Witness |
|---|---|---|---|---|
| **Surrogate** 2µg/mL | N K011752 Exp Date: 1/23/2023 | 50µL | CT | ✓ |
| **Spike** 20µg/mL | 1 K008150 Exp Date: 3/5/2023 | 63µL | CT | ✓ |

**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: BKL0687

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

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

Printed: 12/29/2022 11:00:45AM

3099F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# Organic Extractions Laboratory Analyst Notes

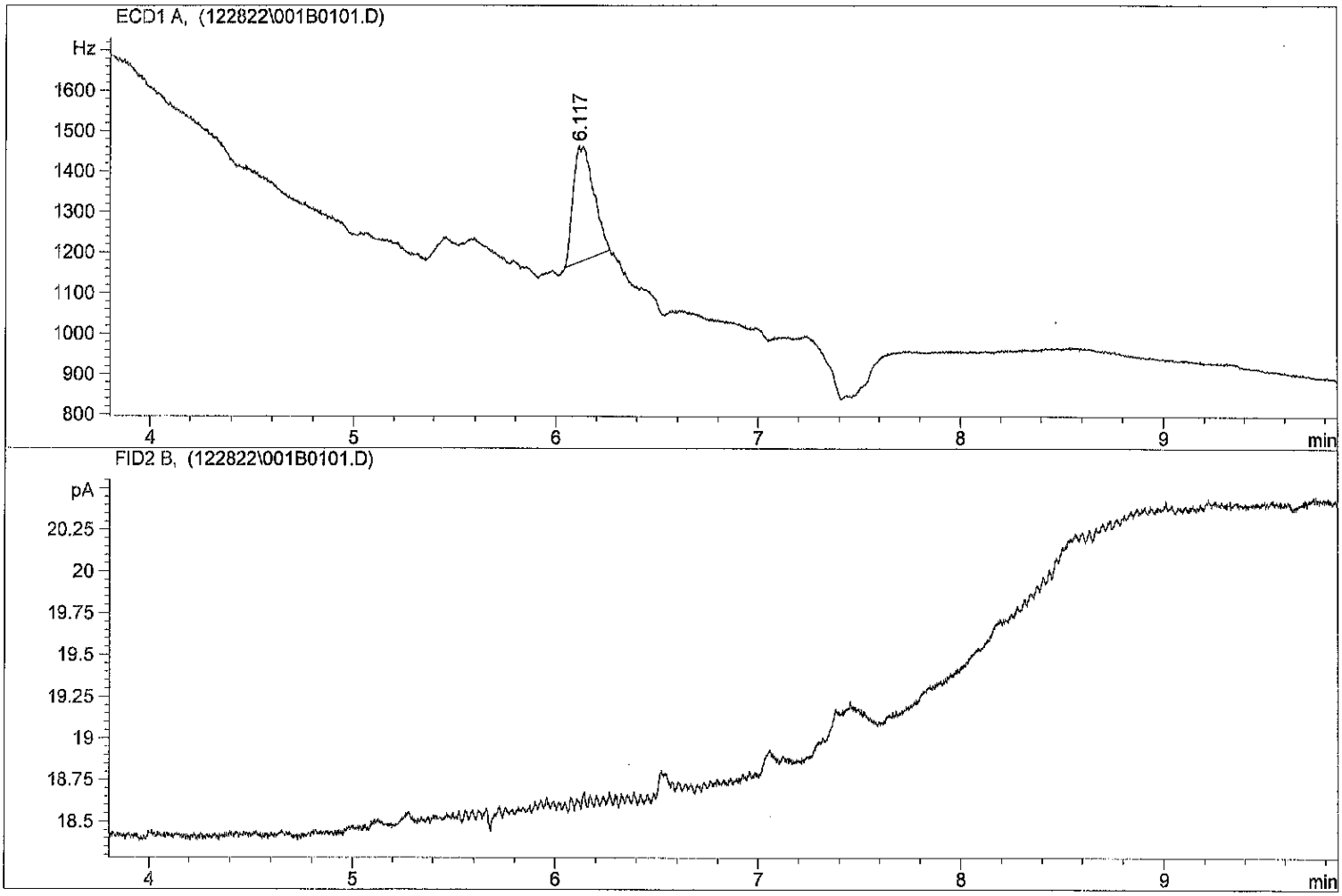
Extraction Parameter: PCB  Extraction Batch BKL0687

Total Solids Batch: BKL0638  Work Order(s): 22L0329 1-20

| Screens: Soil/Sediment/Solid/Other: | Analyst/Date |
|---|---|
| [X] No Anomalies (standard soil/wet sediment/sand/gravel)= 02-10, 12-20 | CR 12/28/22 |
| [X] Standing Water Decanted (Not shared)= 06-12 | CR 12/28/22 |
| [ ] Standing Water Homogenized (Shared samples)= | |
| [ ] Clay/Clumps (Difficult to homogenize)= | |
| [ ] Rocks (%+size)? | |
| [ ] Organics (Leaves/sticks/grass)= | |
| [X] Oily, obvious fuel/sulfur odors= 01, 11 | CR 12/28/22 |
| [ ] Received in 32oz jar(s)=Homogenized in Pyrex dish= | |
| [X] Previously Frozen = 01-20 | CR 12/28/22 |
| [ ] 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 12/28/22 |
| [X] Multiple Jars Y / N | CR 12/28/22 |
| [ ] Sample Pre-Screens indicate analyte activity= | |
| [ ] Sample weights/volumes reduced based on Pre-Screen= | |

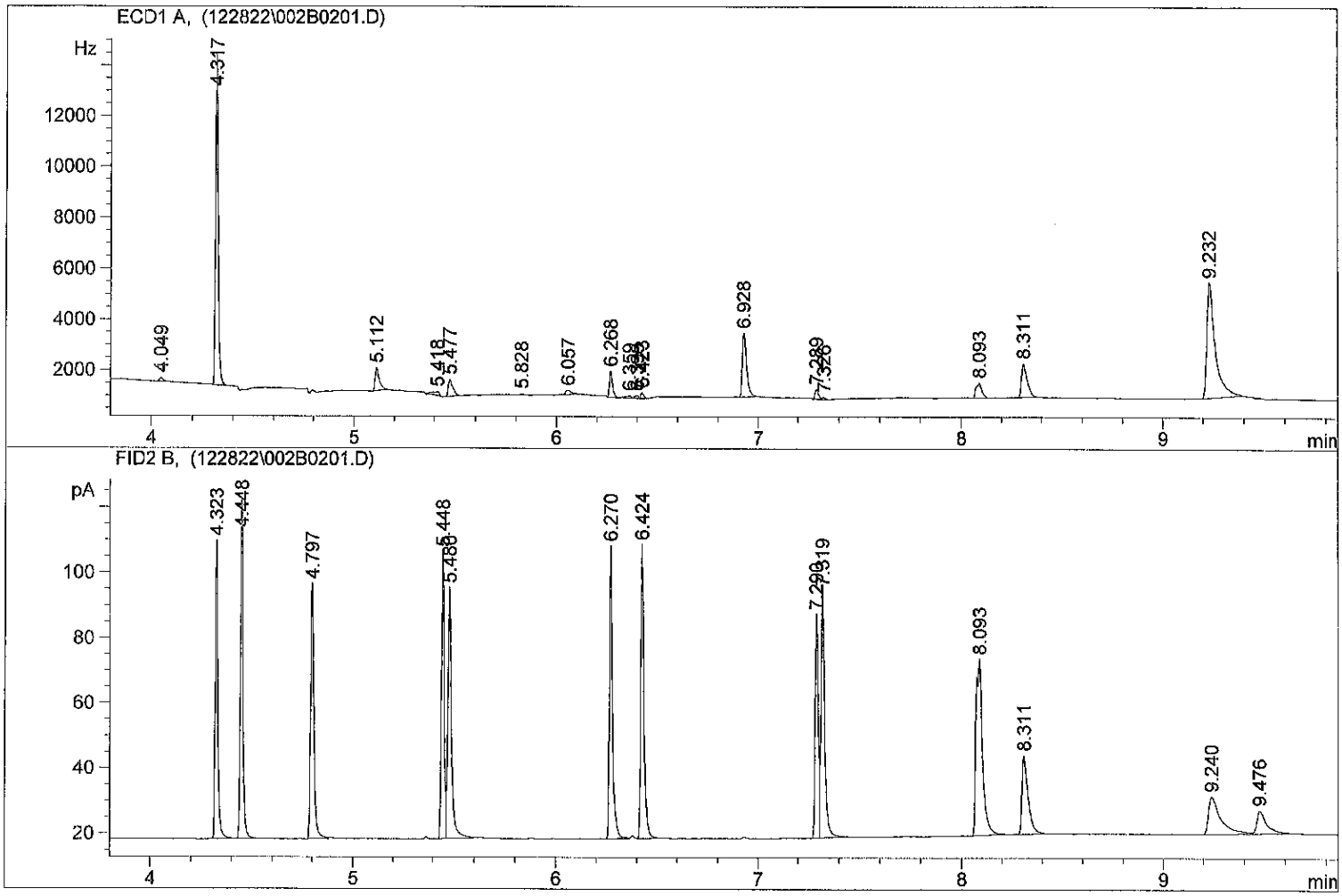
Data File C:\HPCHEM\2\DATA\122822\001B0101.D Sample Name: DCM RINSE

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 5:00:13 PM | Seq. Line : | 1 |
| Sample Name | : DCM RINSE | Location : | Vial 1 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



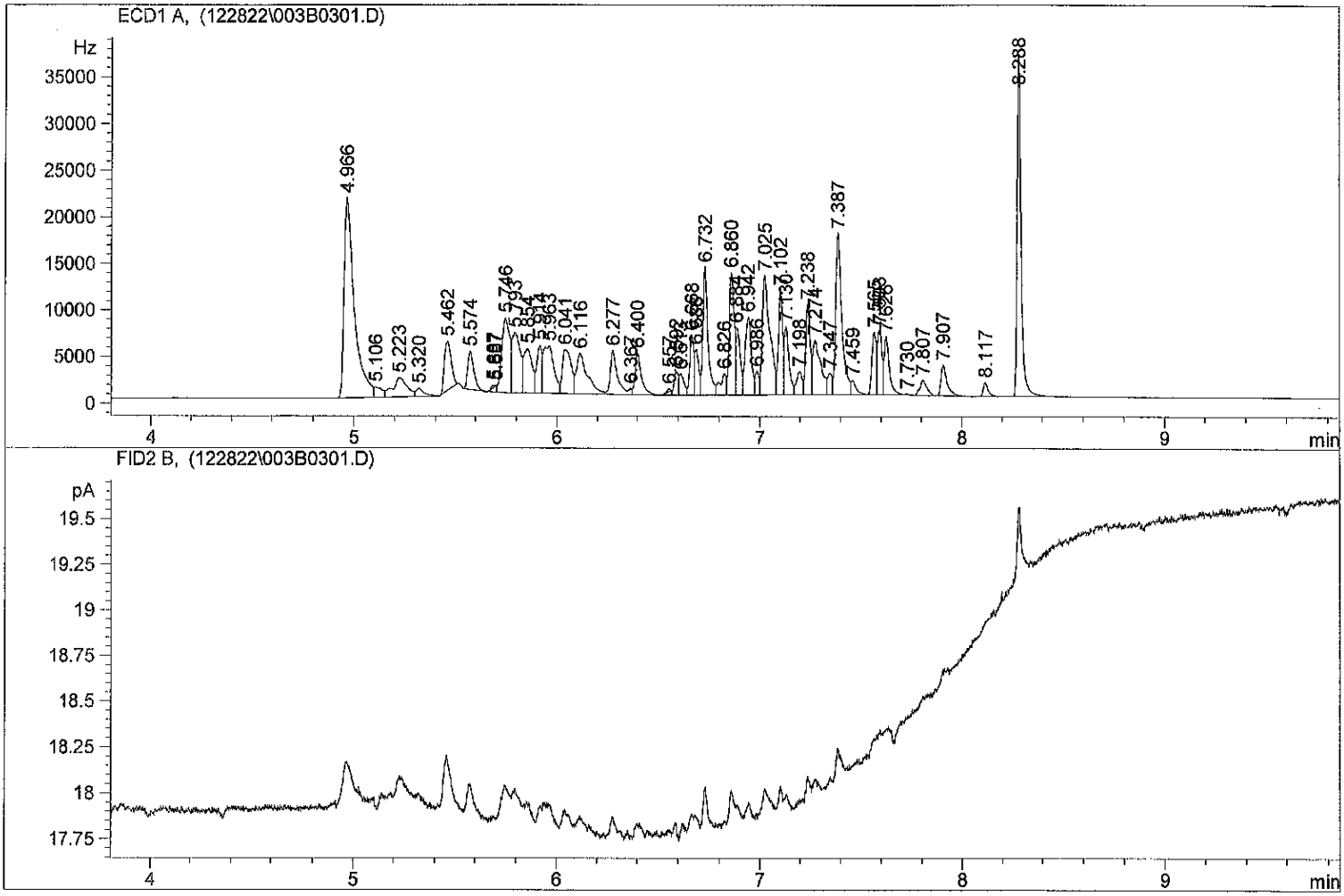

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 5:14:48 PM | Seq. Line : | 2 |
| Sample Name | : PNA STD 10PPM | Location : | Vial 2 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



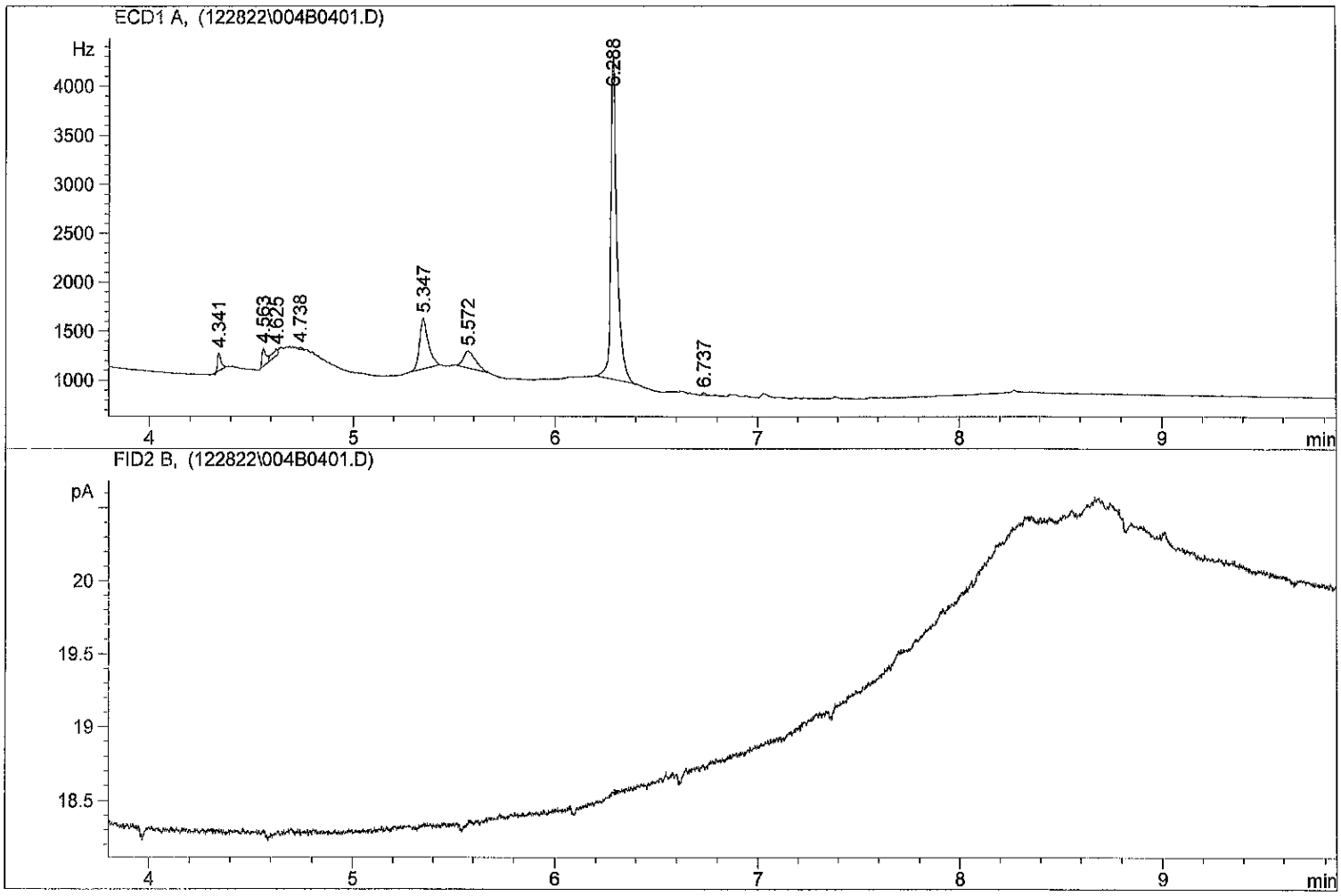

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 5:29:33 PM | Seq. Line : | 3 |
| Sample Name | : AR1660 1PPM | Location : | Vial 3 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



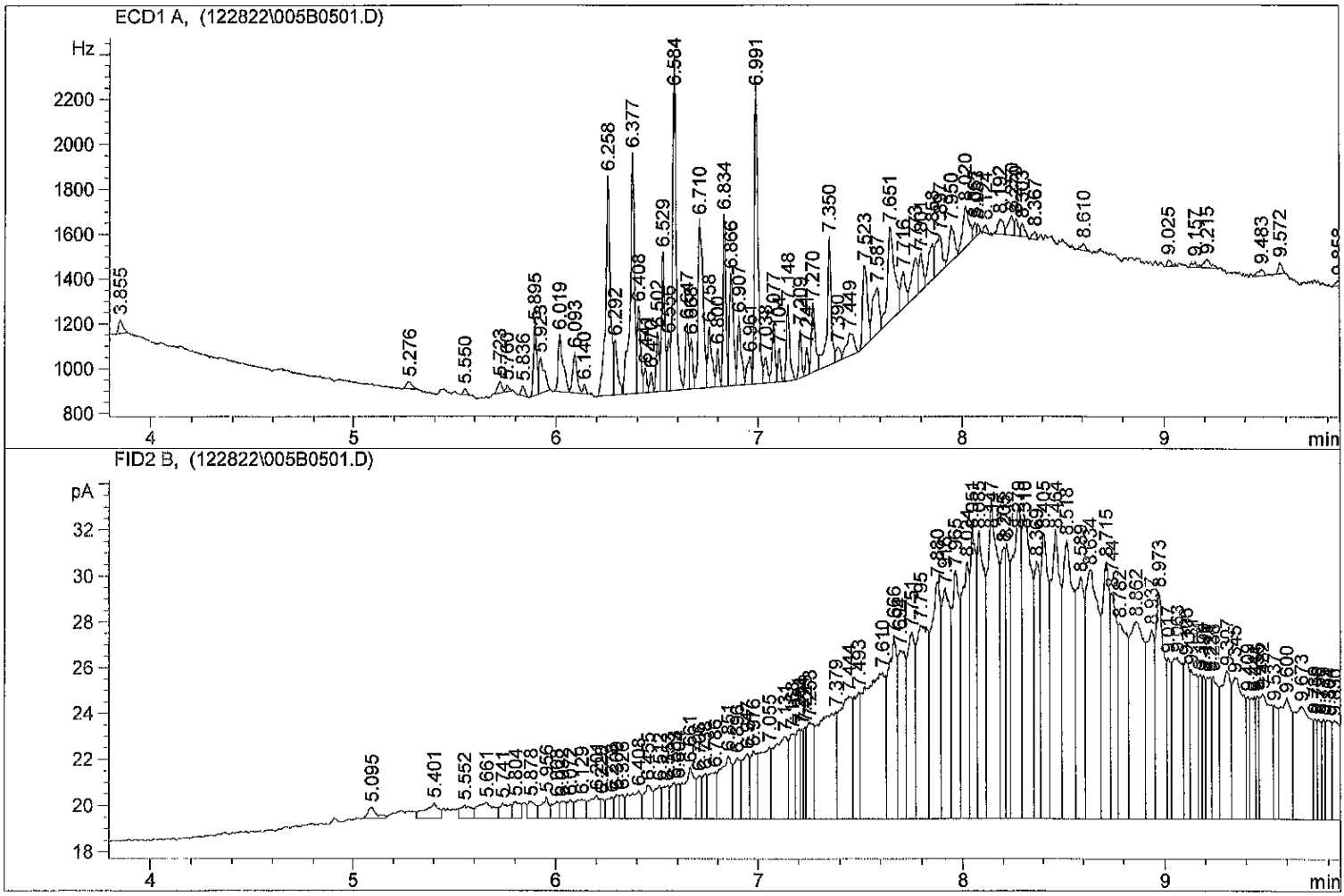

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 5:44:22 PM | Seq. Line : | 4 |
| Sample Name | : 22L0329 01 | Location : | Vial 4 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



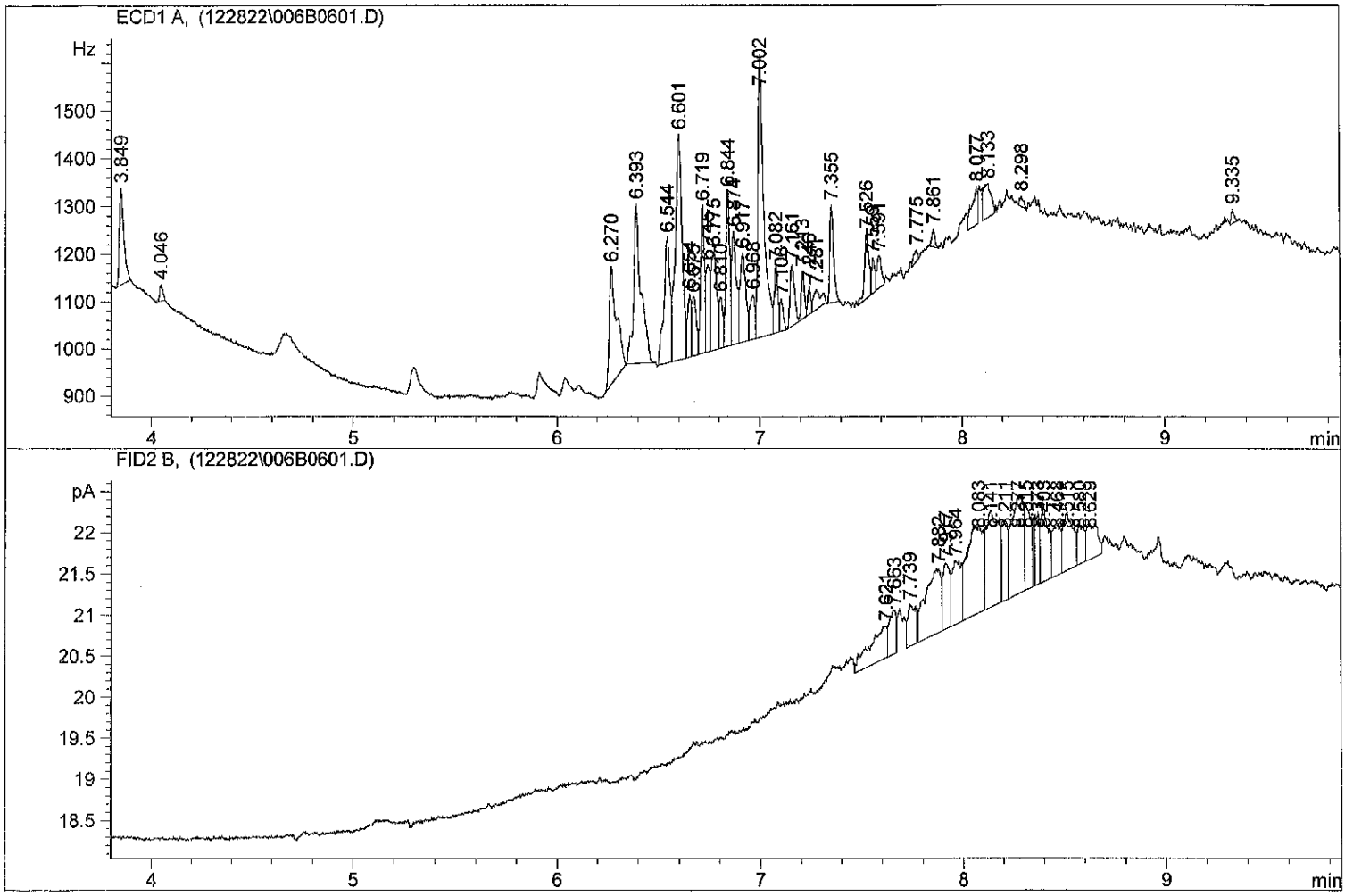

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 5:59:12 PM | Seq. Line : | 5 |
| Sample Name | : 22L0329 02 | Location : | Vial 5 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



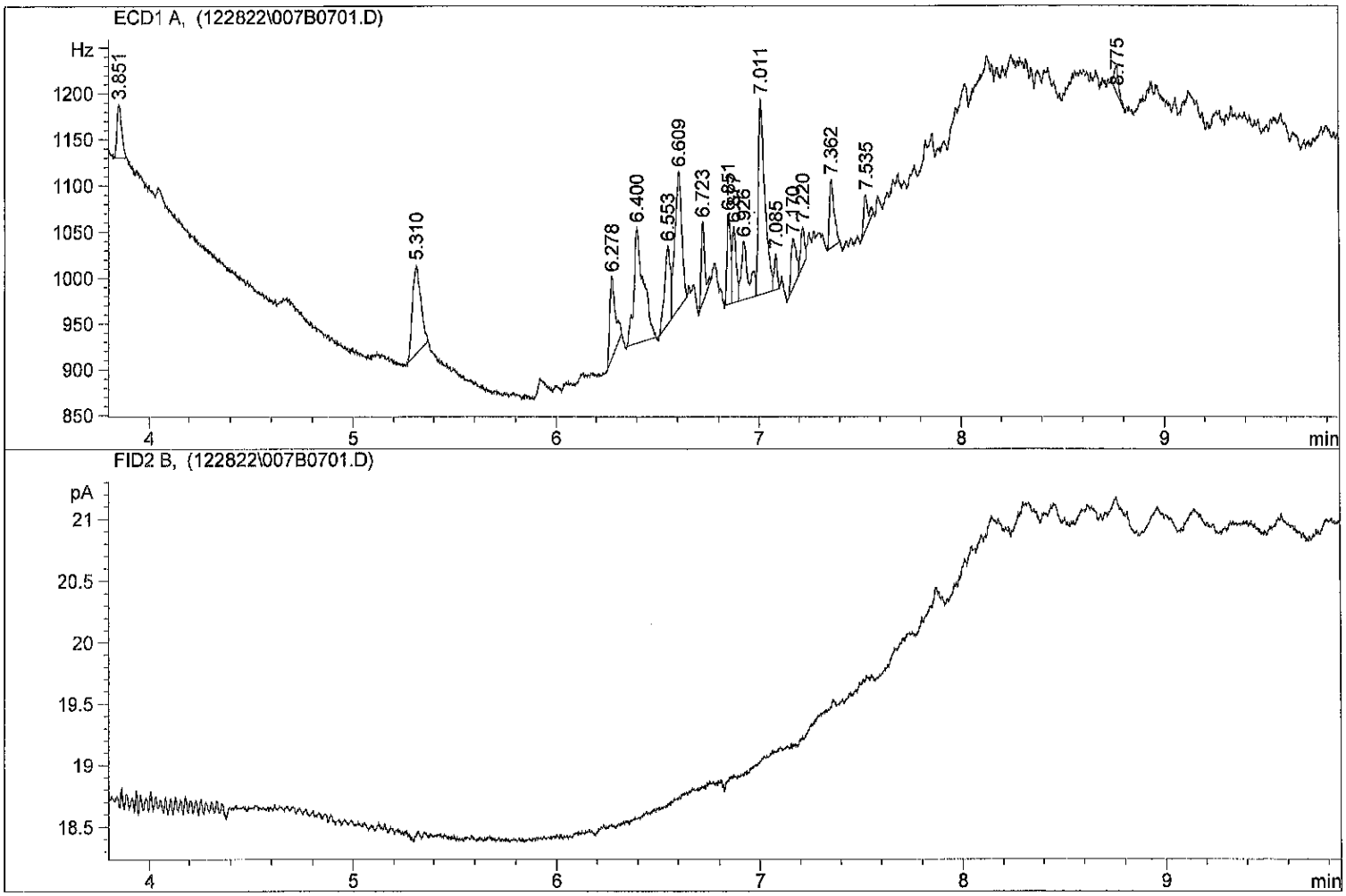

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 6:14:01 PM | Seq. Line : | 6 |
| Sample Name | : 22L0329 03 | Location : | Vial 6 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



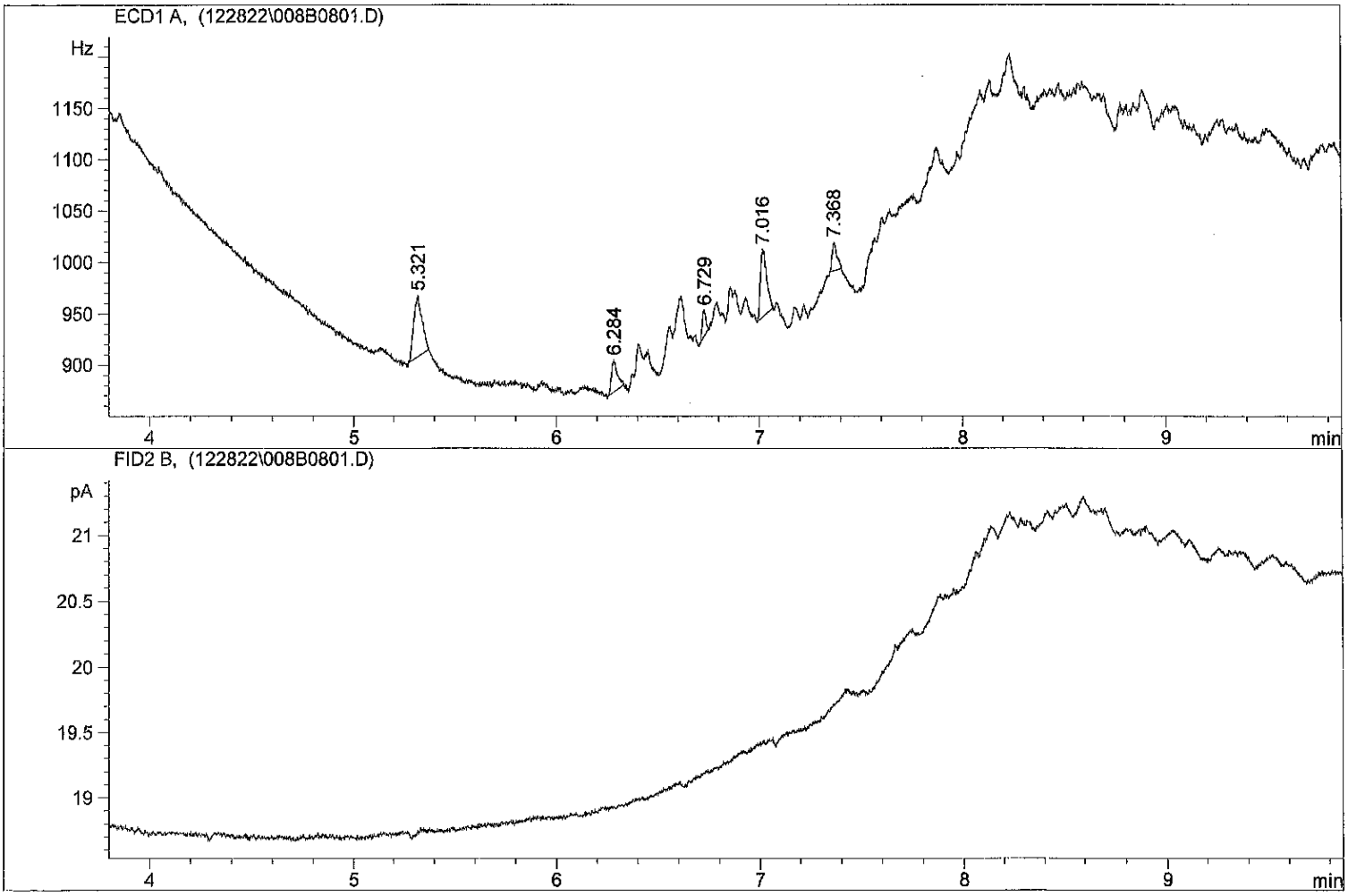

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 6:28:50 PM | Seq. Line : | 7 |
| Sample Name | : 22L0329 04 | Location : | Vial 7 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



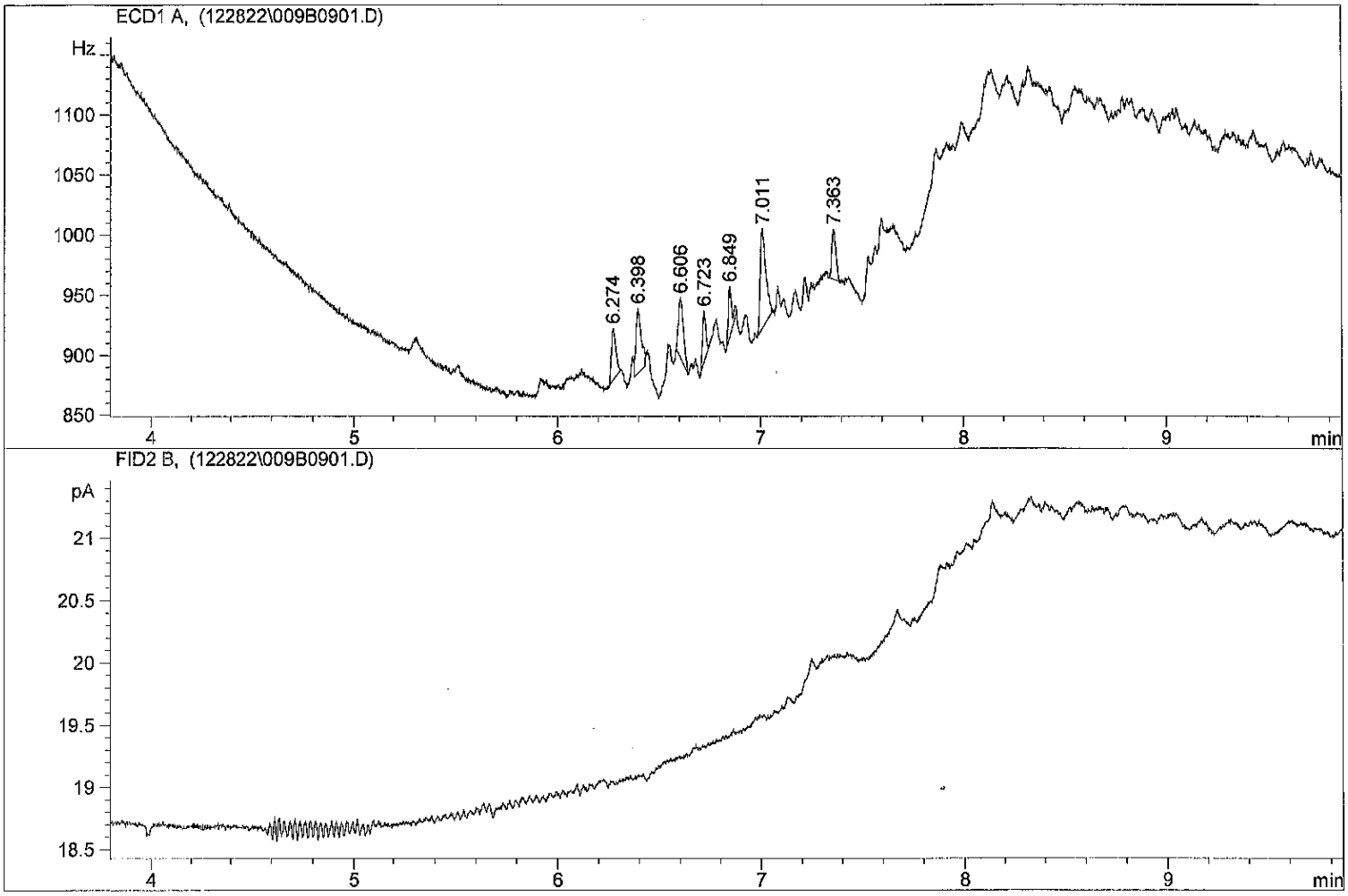

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 6:43:39 PM | Seq. Line : | 8 |
| Sample Name | : 22L0329 05 | Location : | Vial 8 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



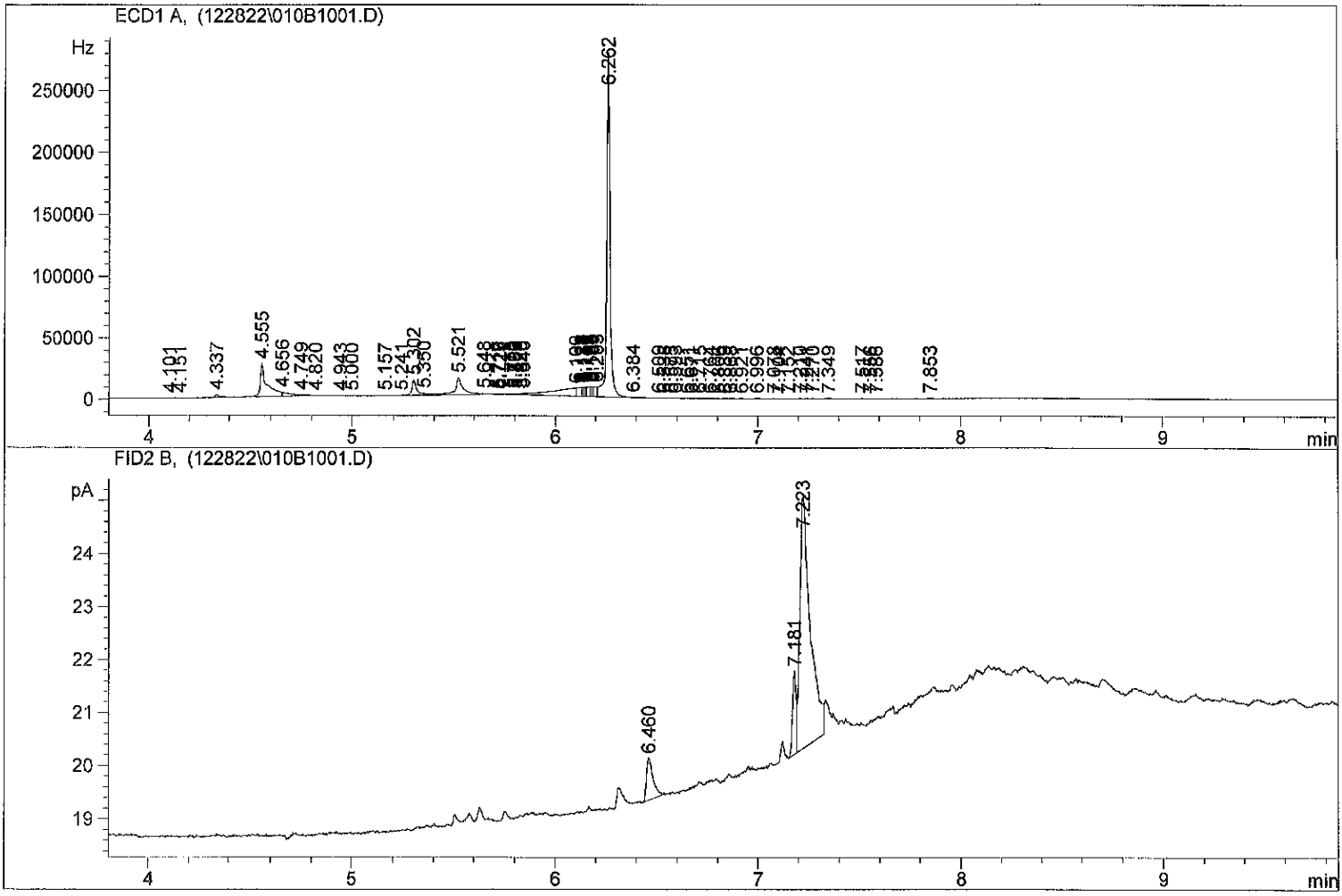

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 6:58:29 PM | Seq. Line : | 9 |
| Sample Name | : 22L0329 06 | Location : | Vial 9 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



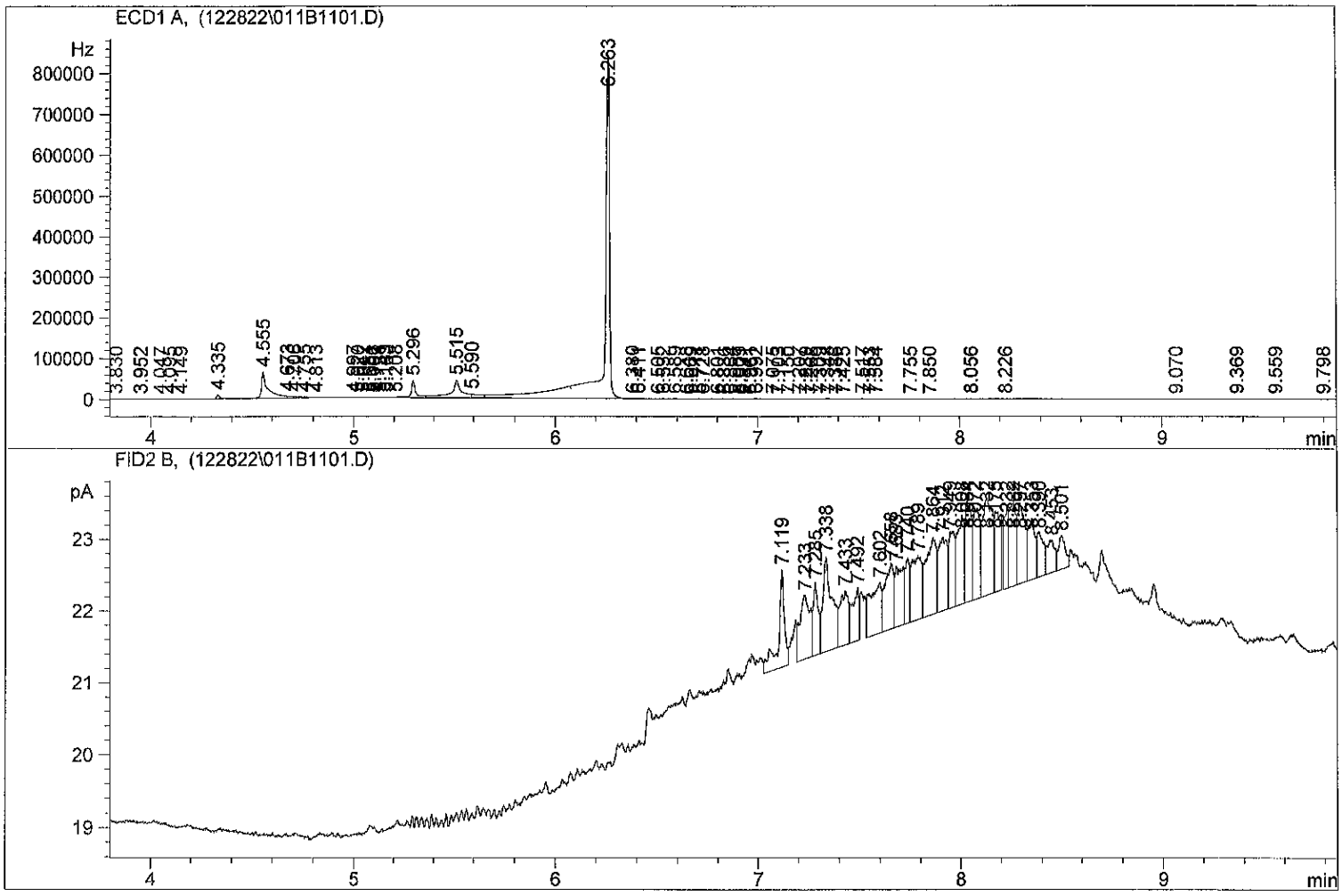

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 7:13:20 PM | Seq. Line | : 10 |
| Sample Name | : 22L0329 07 | Location | : Vial 10 |
| Acq. Operator | : CRR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



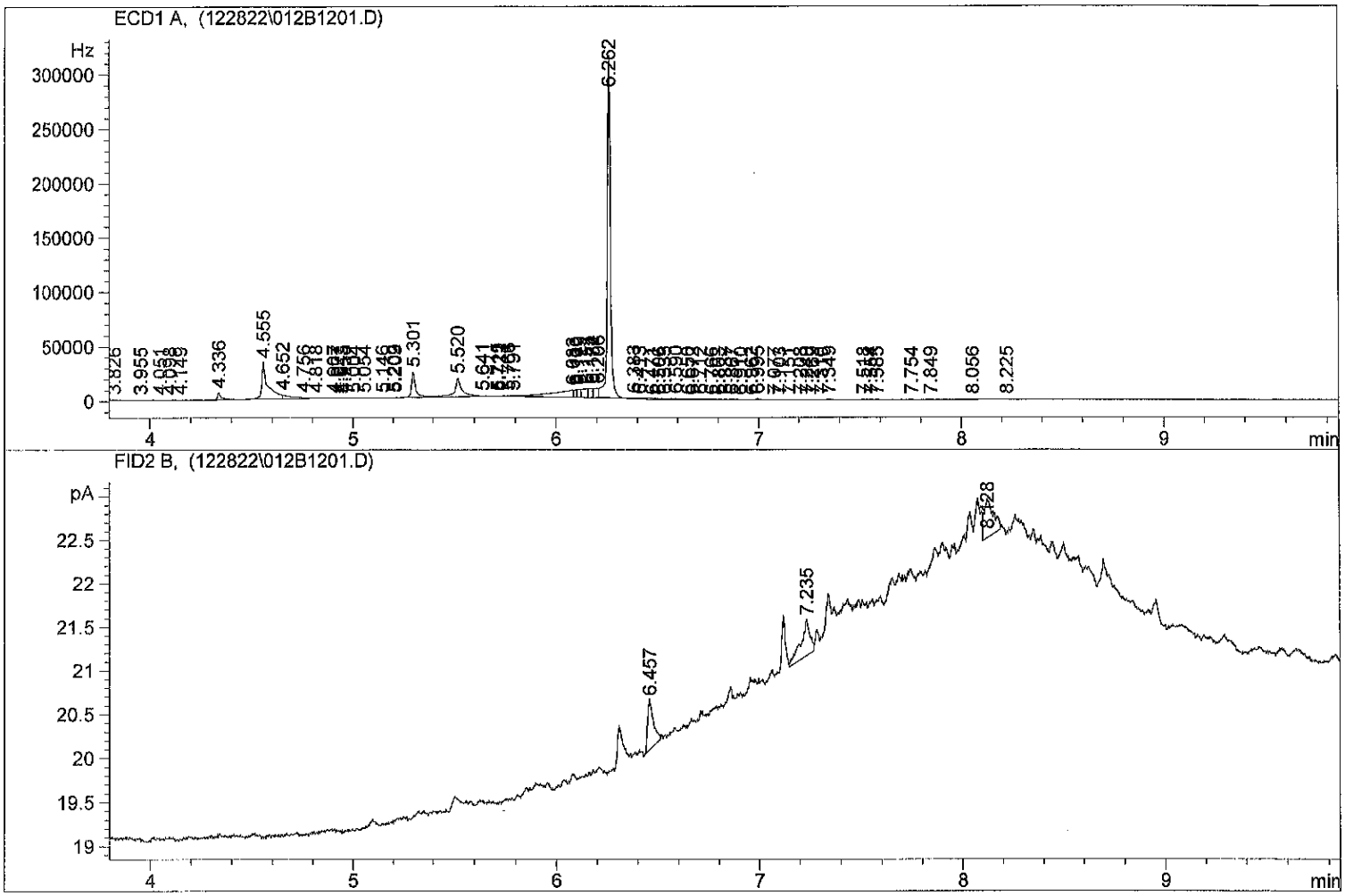

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 7:28:12 PM | Seq. Line : | 11 |
| Sample Name | : 22L0329 08 | Location : | Vial 11 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 7:43:03 PM | Seq. Line : | 12 |
| Sample Name | : 22L0329 09 | Location : | Vial 12 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

```
==================================================================
Injection Date  : 12/28/2022 7:57:51 PM          Seq. Line :  13
Sample Name     : 22L0329 10                      Location : Vial 13
Acq. Operator   : CRR                                  Inj :   1
                                                 Inj Volume : 2 µl
Different Inj Volume from Sequence !     Actual Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\122822.S
Method          : C:\HPCHEM\2\METHODS\SCREEN.M
Last changed    : 10/18/2022 7:53:49 AM by DM
==================================================================
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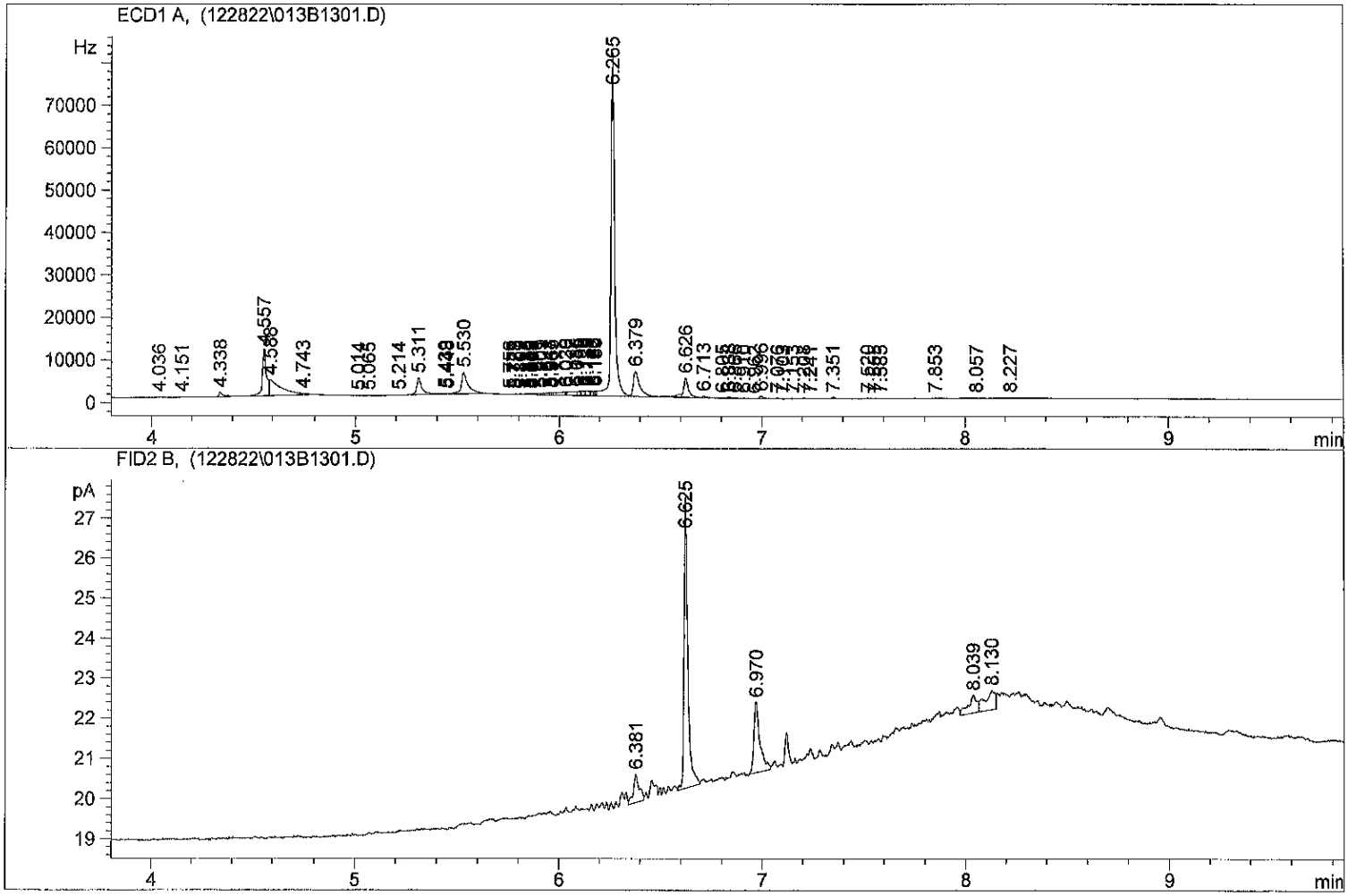
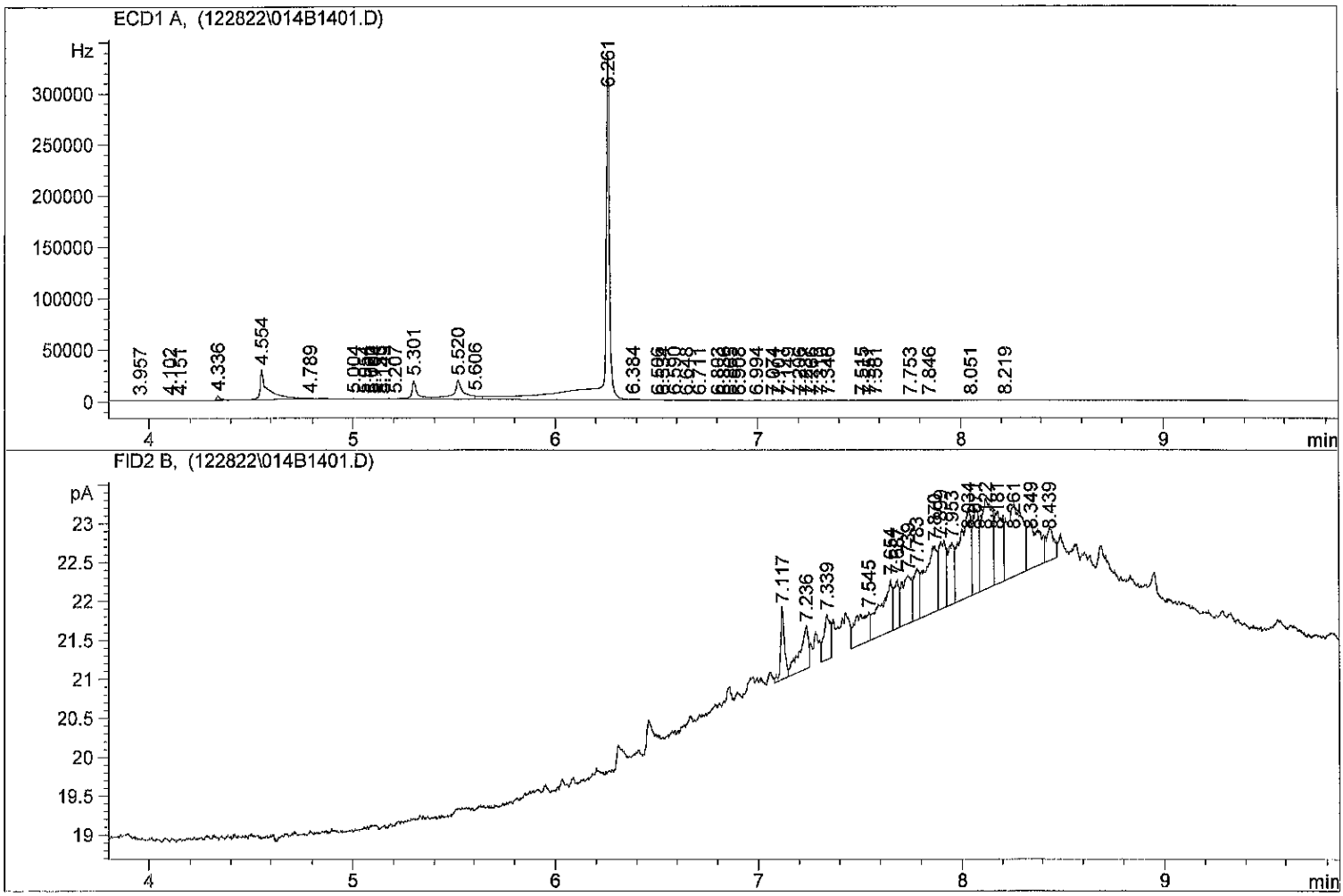


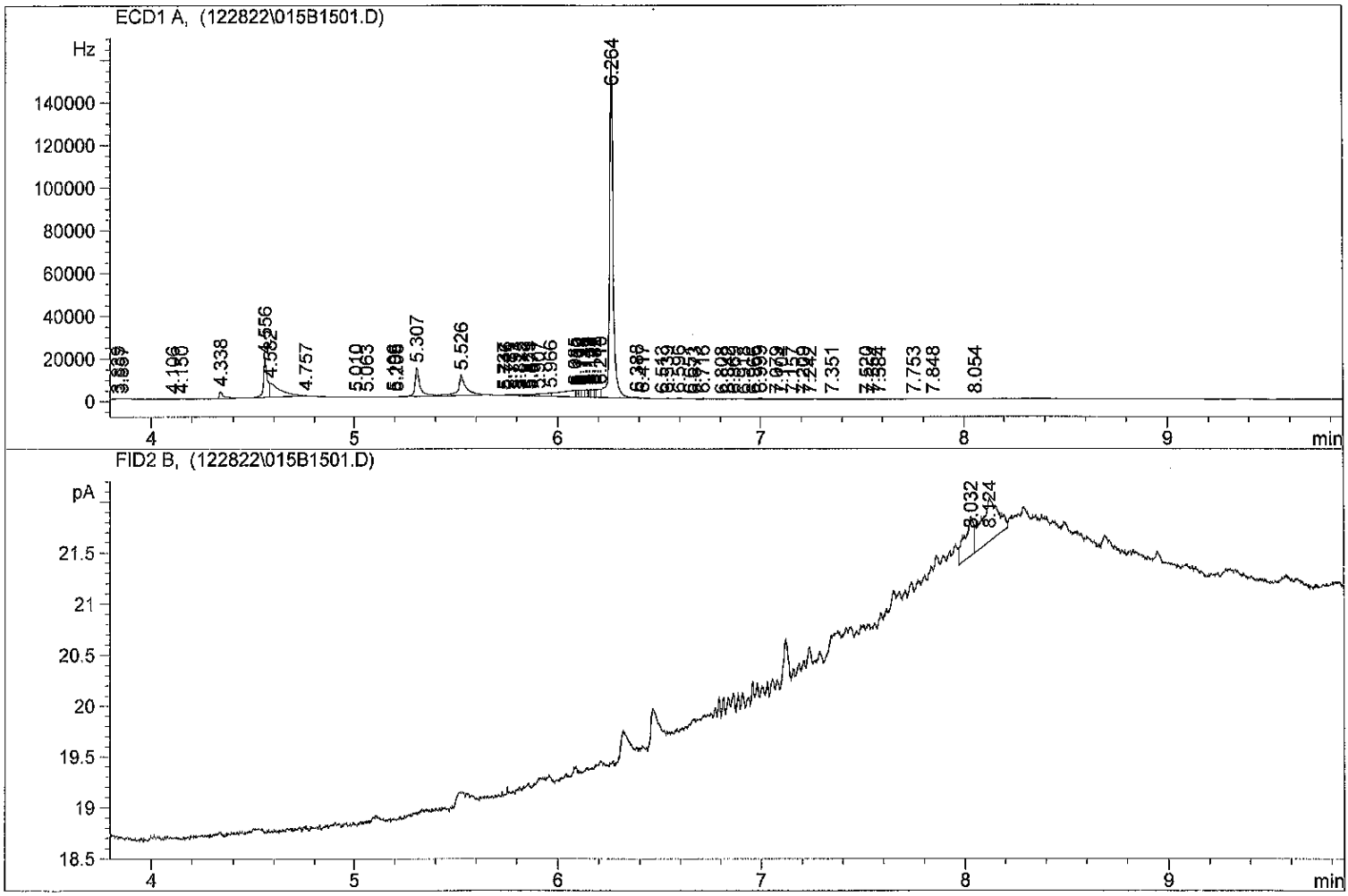

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 8:12:44 PM | Seq. Line | : 14 |
| Sample Name | : 22L0329 11 | Location | : Vial 14 |
| Acq. Operator | : CRR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 8:27:37 PM | Seq. Line : | 15 |
| Sample Name | : 22L0329 12 | Location : | Vial 15 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |

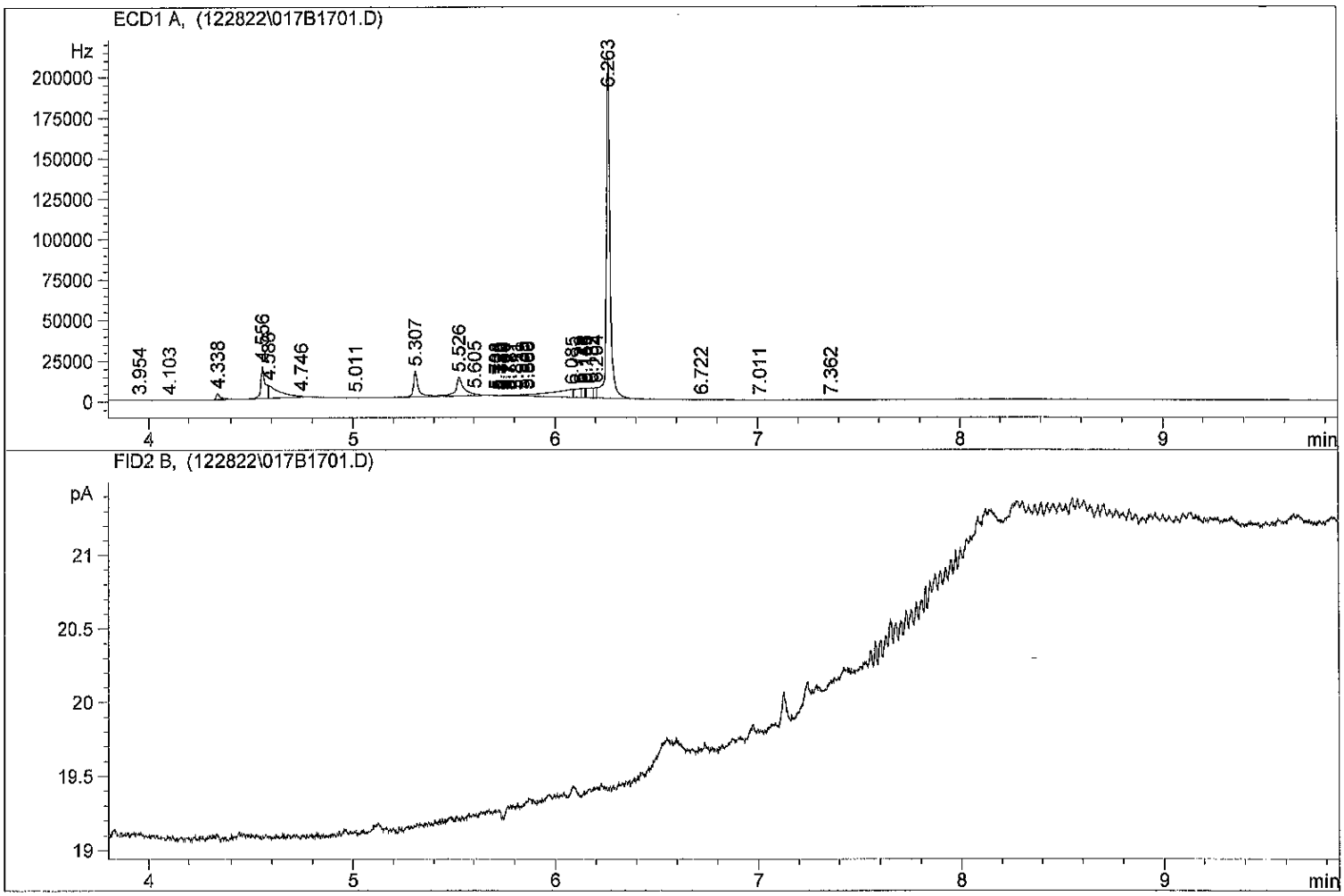



*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 8:42:29 PM | Seq. Line : | 16 |
| Sample Name | : 22L0329 13 | Location : | Vial 16 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |

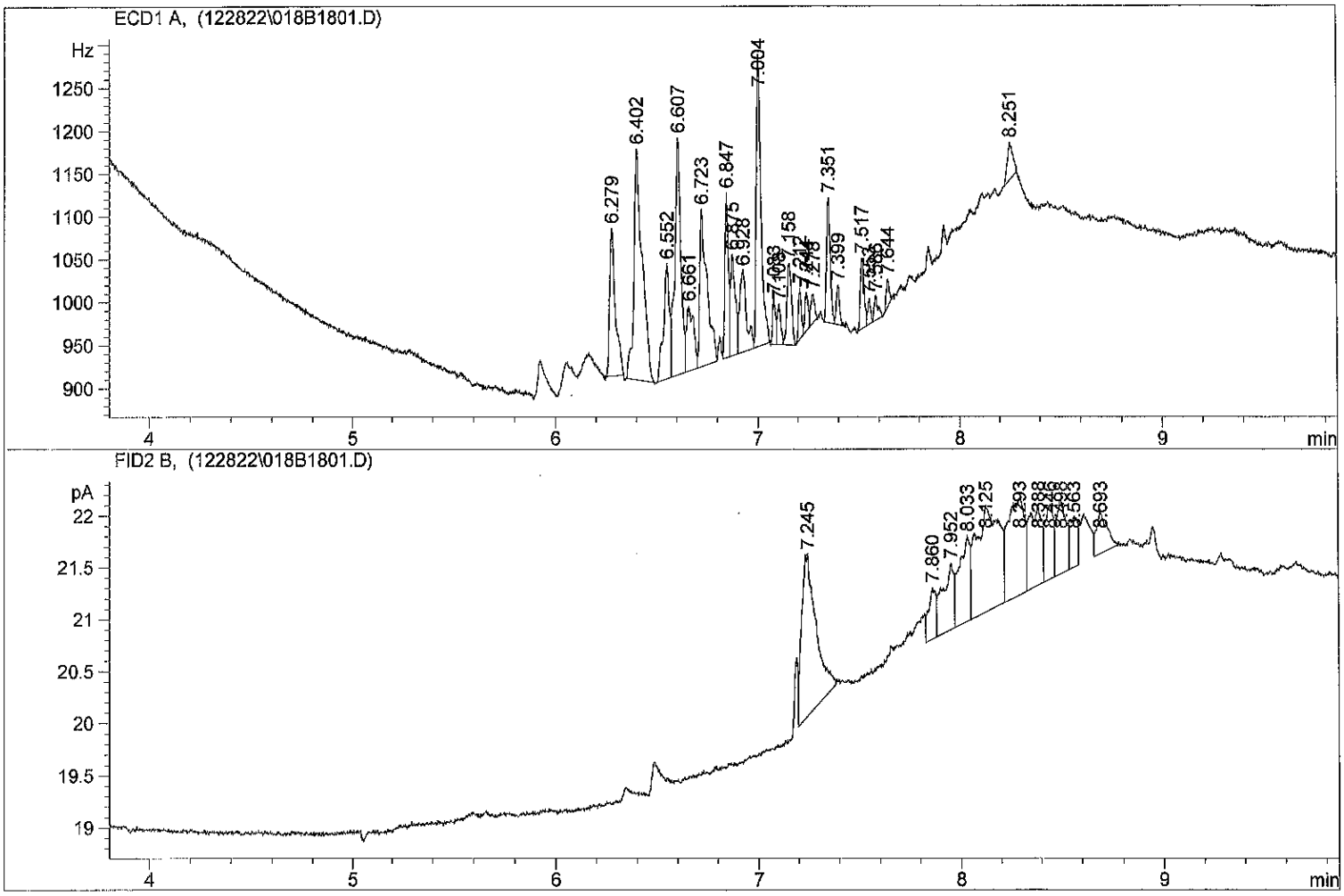
*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 8:57:22 PM | Seq. Line : | 17 |
| Sample Name | : 22L0329 14 | Location : | Vial 17 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

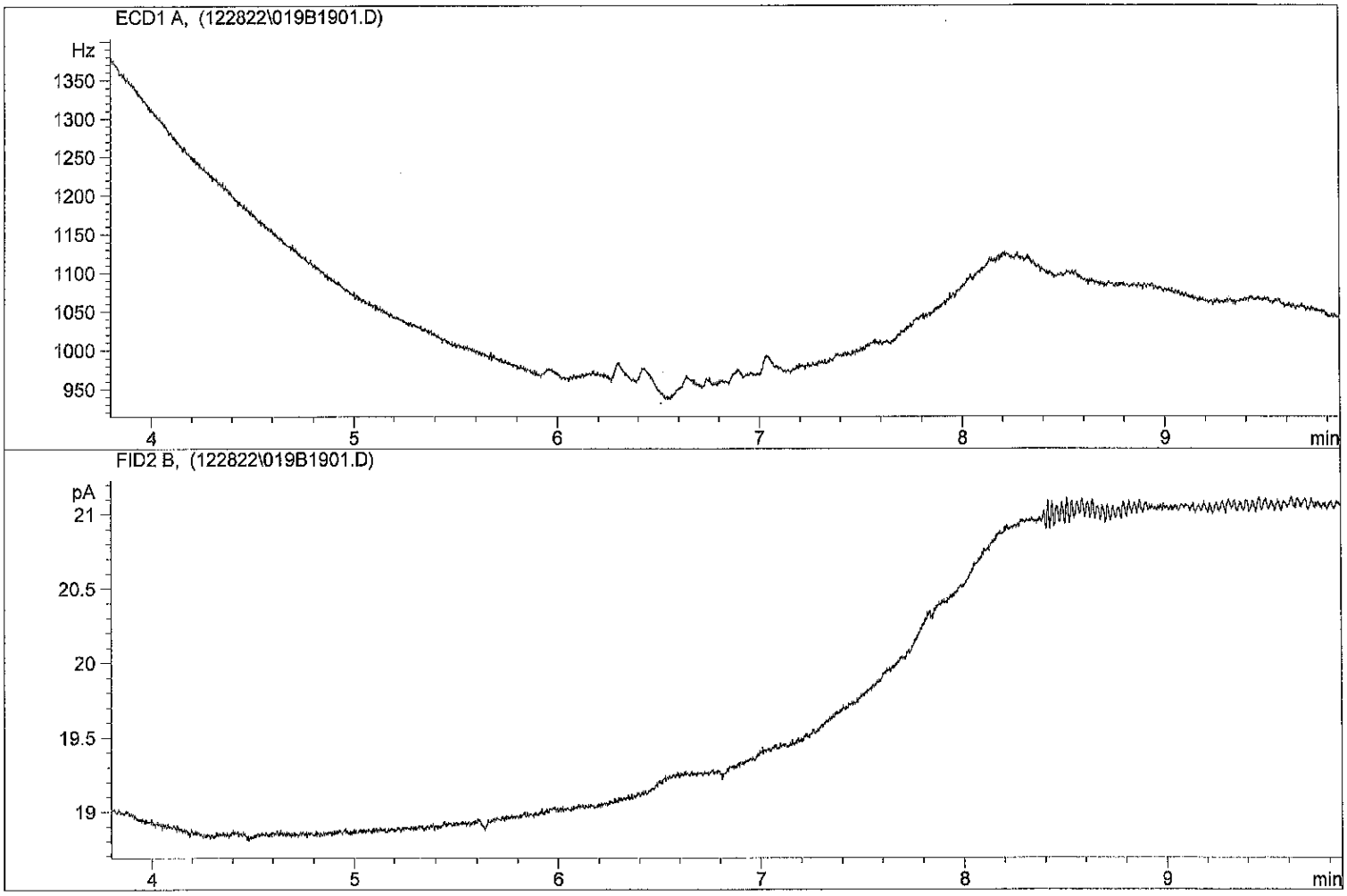
| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 9:12:12 PM | Seq. Line : | 18 |
| Sample Name | : 22L0329 15 | Location : | Vial 18 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

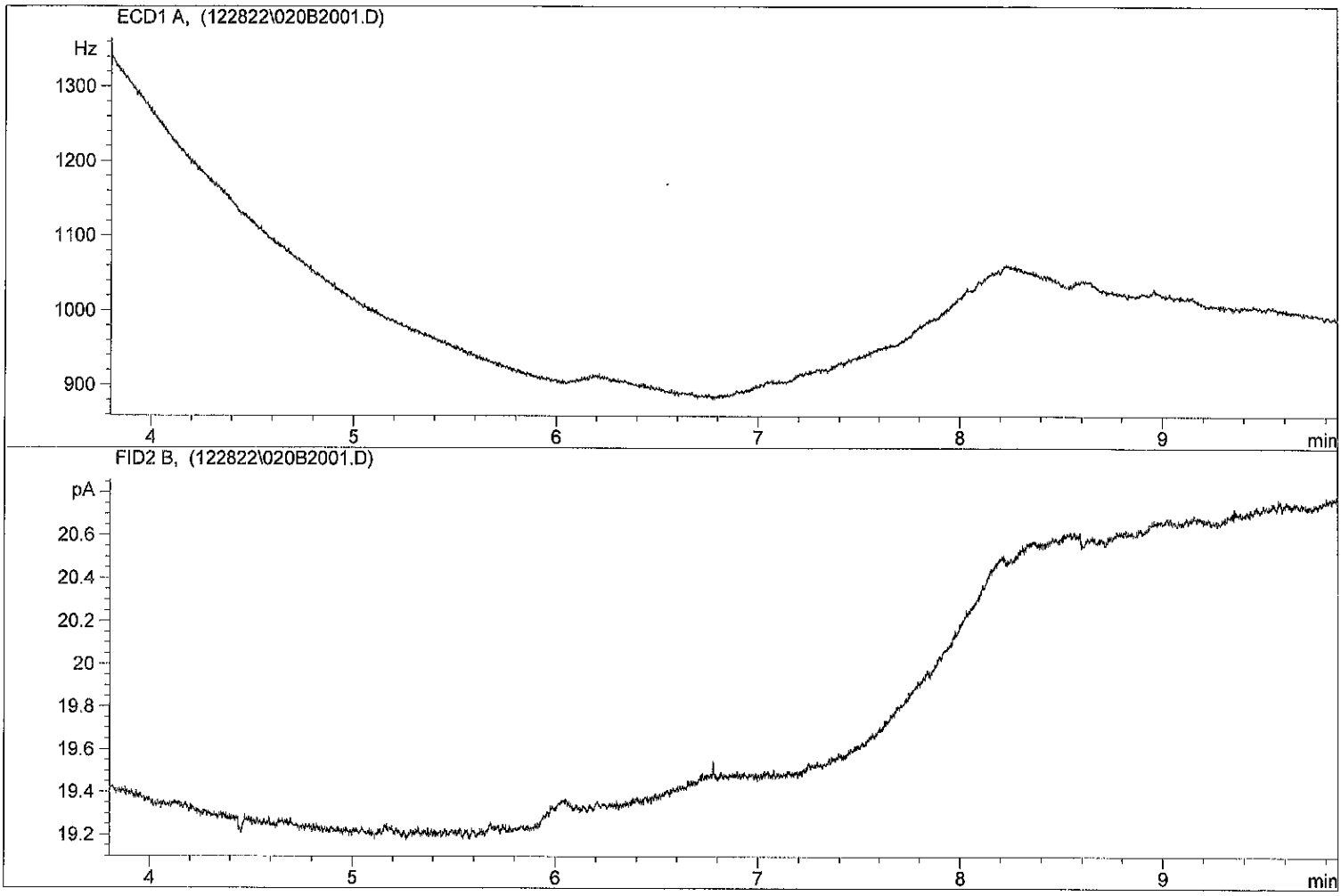
Data File C:\HPCHEM\2\DATA\122822\019B1901.D Sample Name: 22L0329 16

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 9:27:05 PM | Seq. Line : | 19 |
| Sample Name | : 22L0329 16 | Location : | Vial 19 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



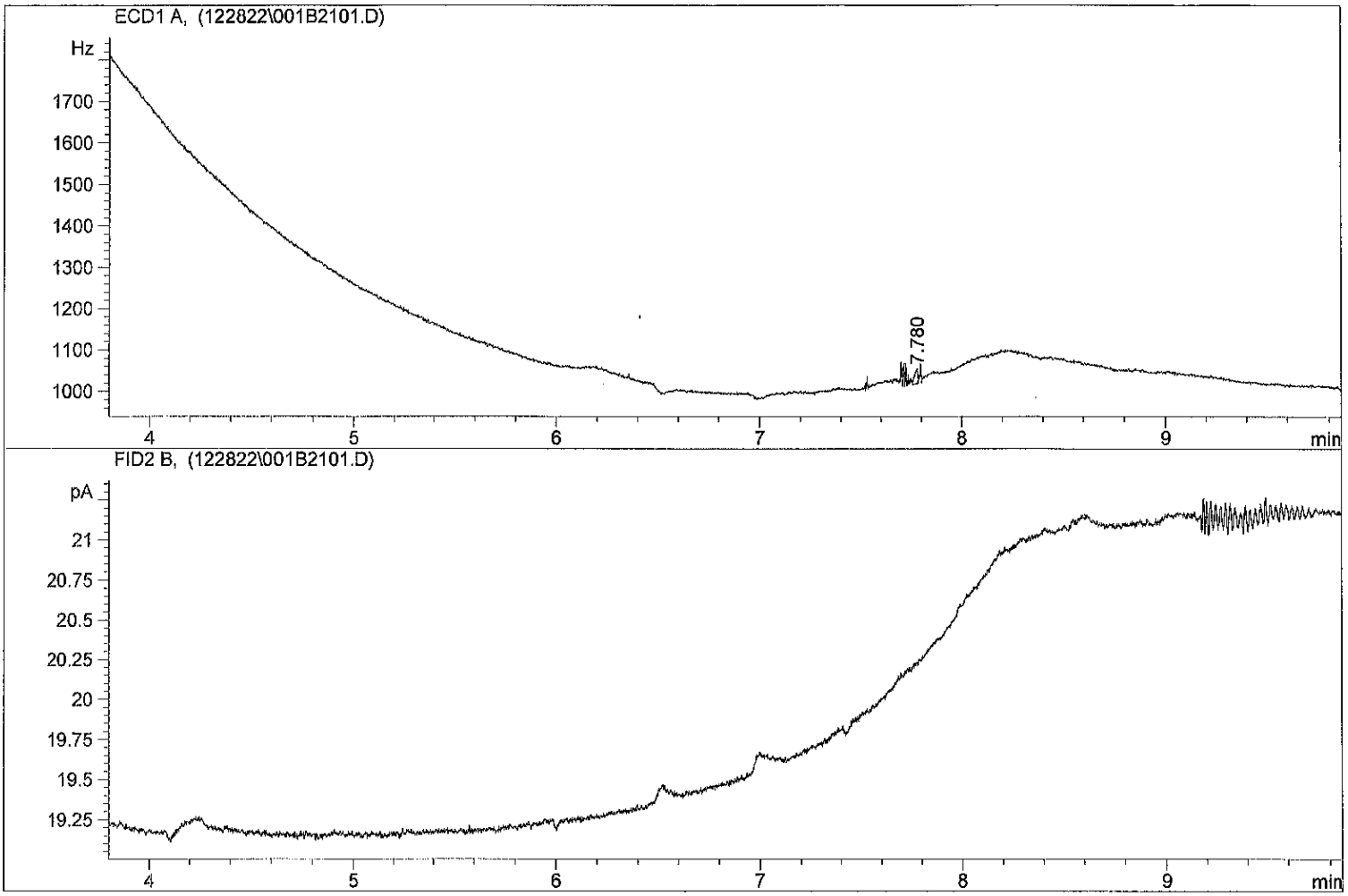

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 9:41:56 PM | Seq. Line : | 20 |
| Sample Name | : 22L0329 17 | Location : | Vial 20 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



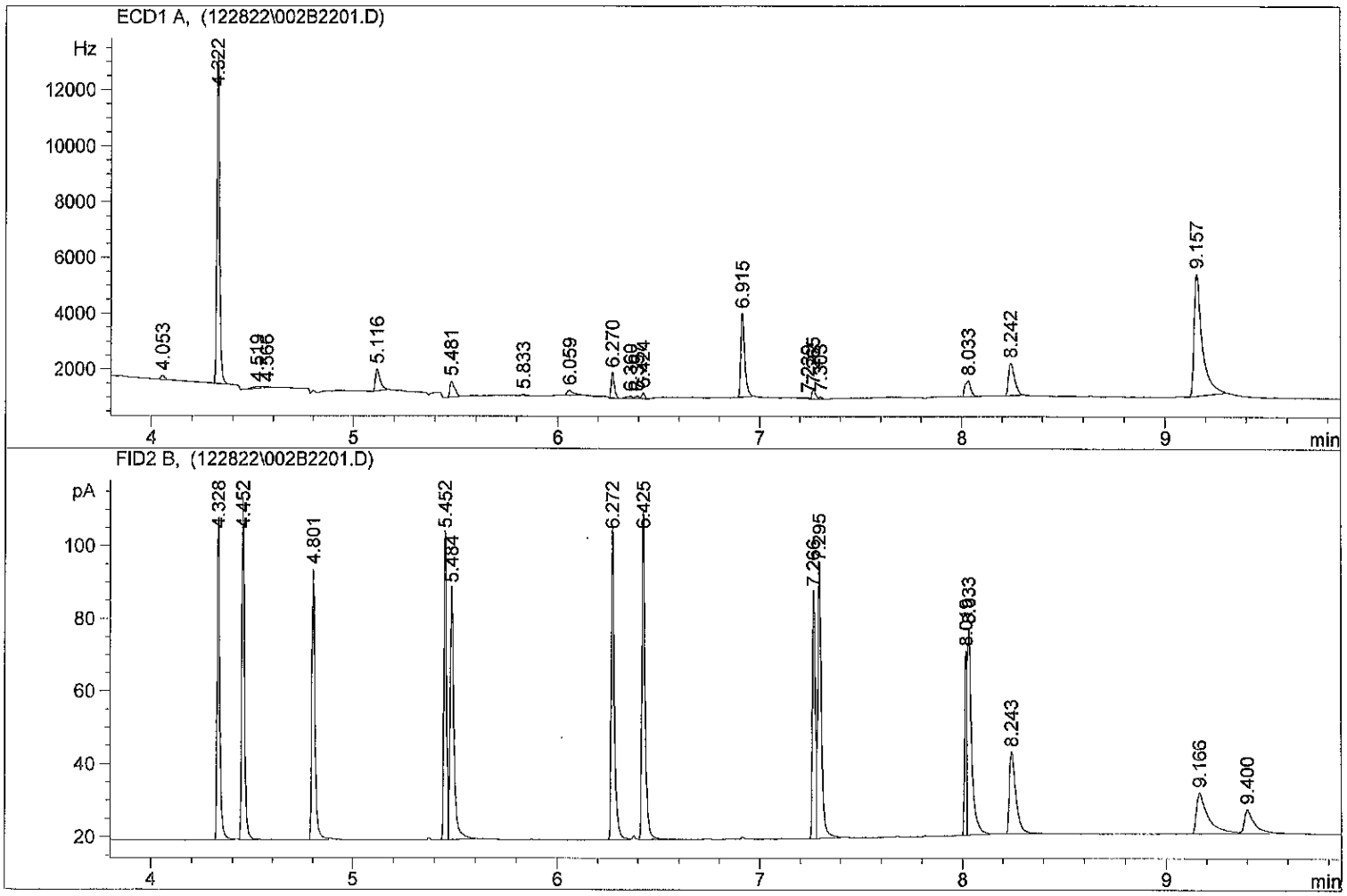

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 9:56:47 PM | Seq. Line | : 21 |
| Sample Name | : DCM RINSE | Location | : Vial 1 |
| Acq. Operator | : CRR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



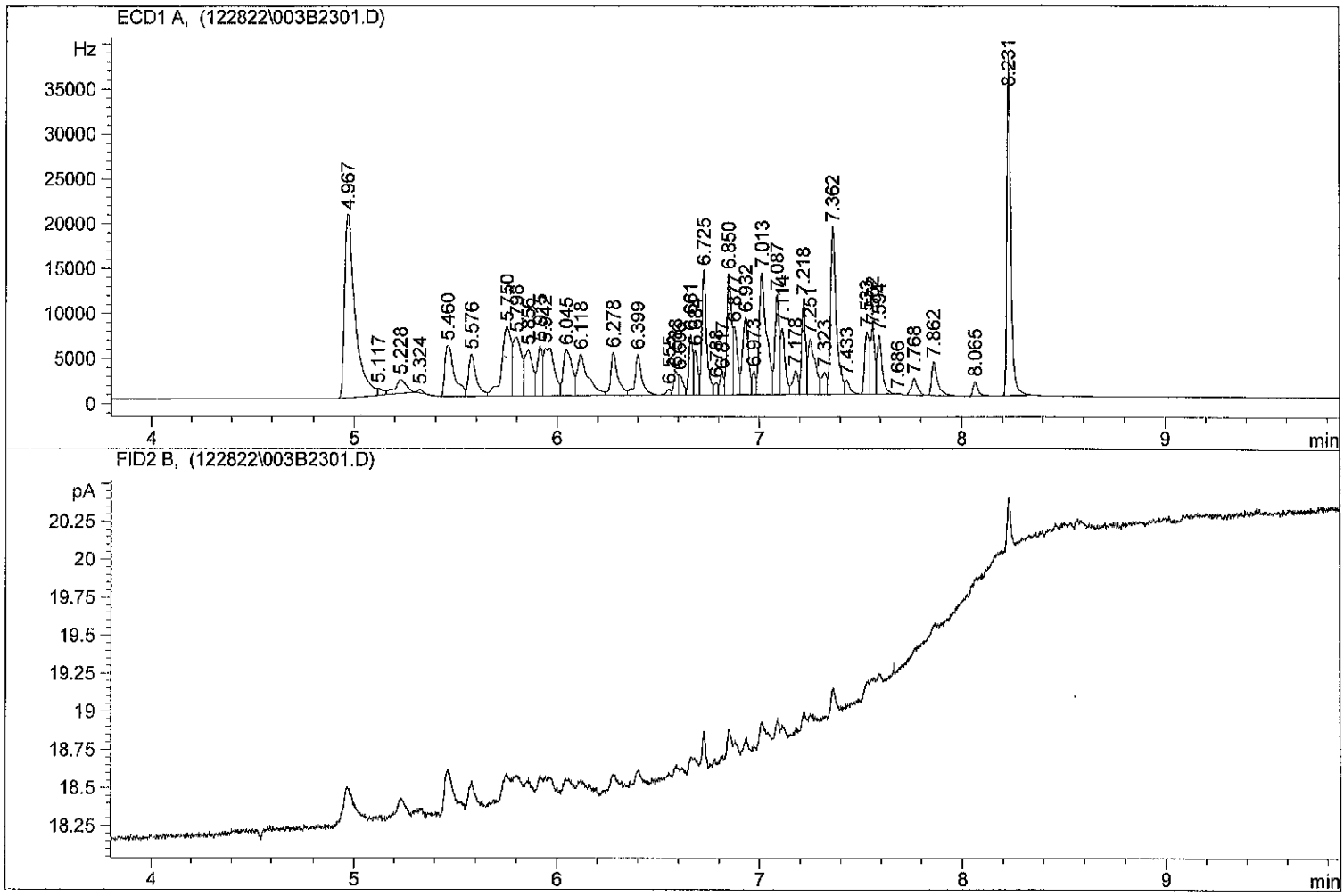

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 10:11:37 PM | Seq. Line : | 22 |
| Sample Name | : PNA STD 10PPM | Location : | Vial 2 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



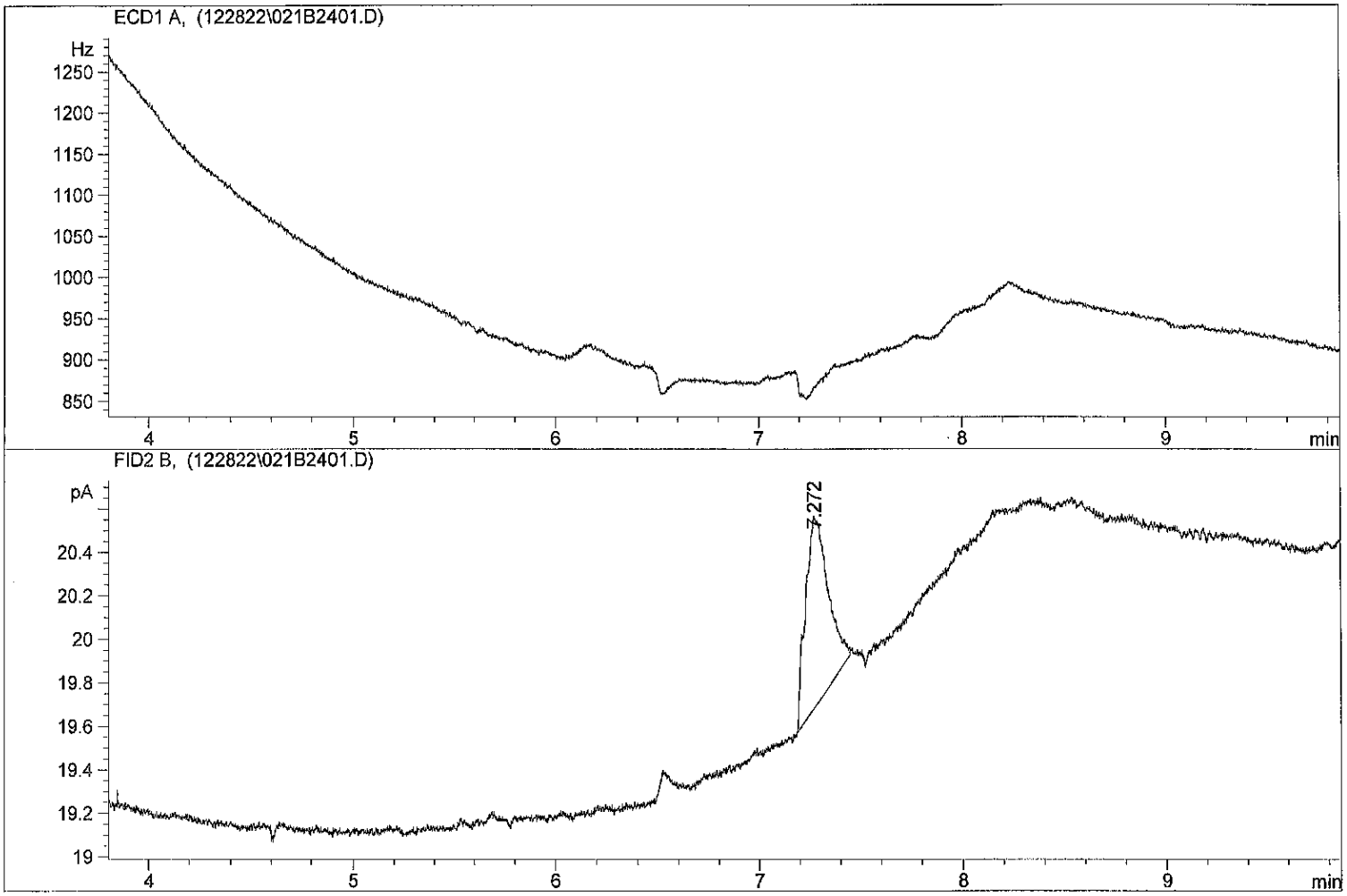

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 10:26:27 PM | Seq. Line | : 23 |
| Sample Name | : AR1660 1PPM | Location | : Vial 3 |
| Acq. Operator | : CRR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



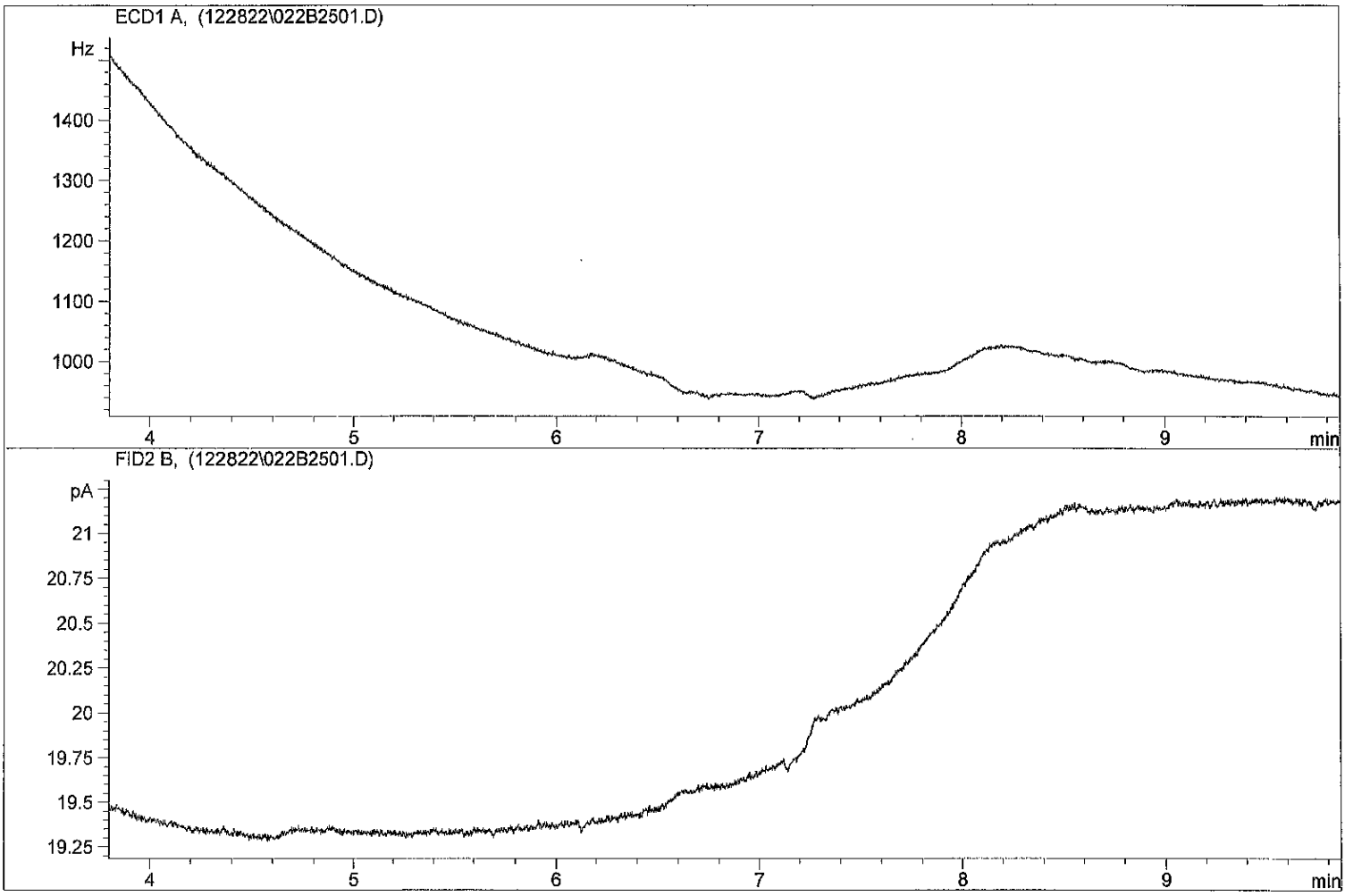

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 10:41:18 PM | Seq. Line : | 24 |
| Sample Name | : 22L0329 18 | Location : | Vial 21 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



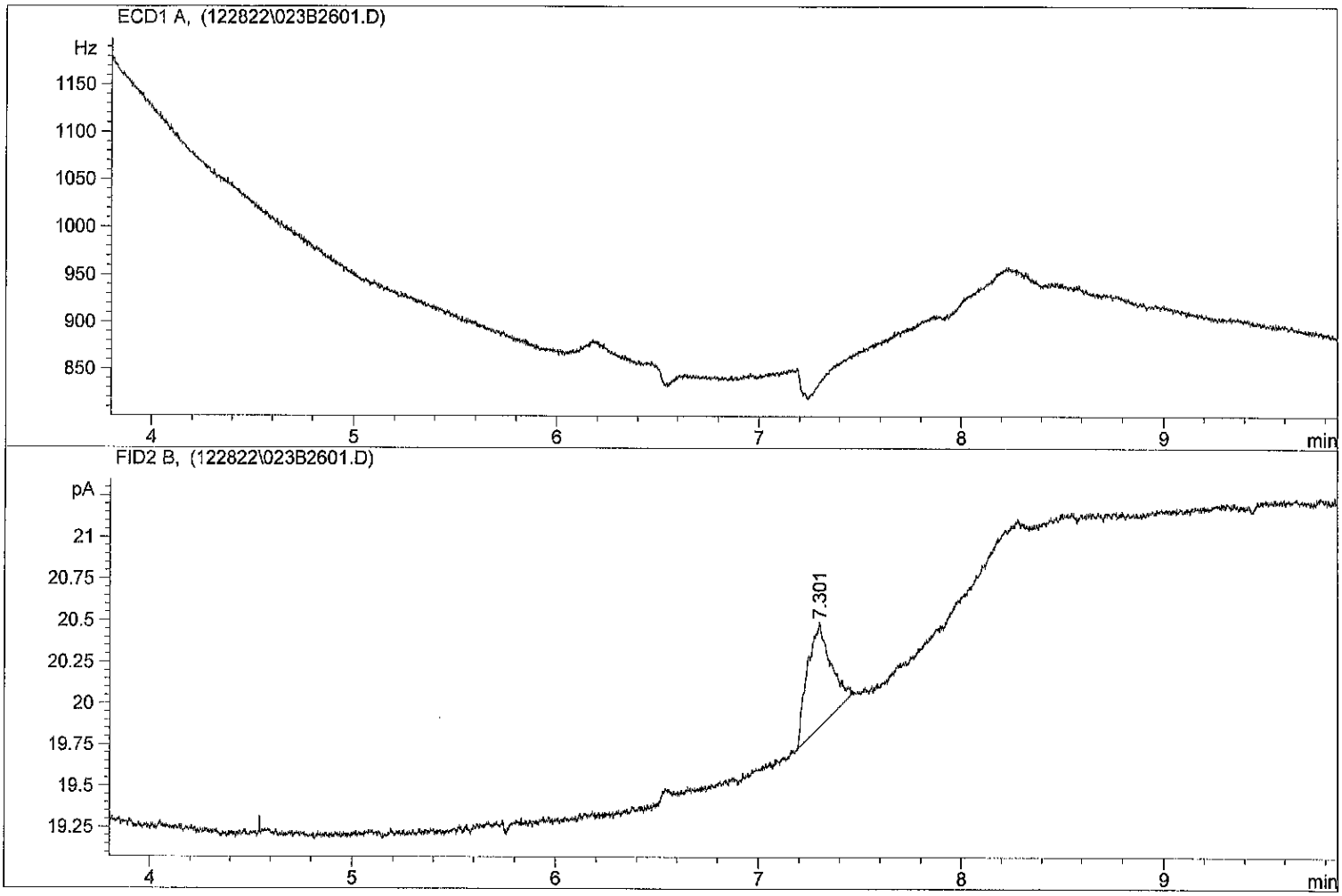

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 10:56:10 PM | Seq. Line : | 25 |
| Sample Name | : 22L0329 19 | Location : | Vial 22 |
| Acq. Operator | : CRR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/28/2022 11:11:03 PM | Seq. Line | : 26 |
| Sample Name | : 22L0329 20 | Location | : Vial 23 |
| Acq. Operator | : CRR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122822.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

Analytical Resources, LLC
Analytical Chemists and Consultants

# PREPARATION BATCH SUMMARY

## EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 22L0329

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

Batch: BKL0728 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-IT791G | 22L0329-21 | 01072379ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781B | 22L0329-22 | 01072380ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781C | 22L0329-23 | 01072381ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781D | 22L0329-24 | 01072382ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781E | 22L0329-25 | 01072383ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781F | 22L0329-26 | 01072384ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781G | 22L0329-27 | 01072385ECD7.D | 12/31/22 11:42 | |
| LDW22-SC781H | 22L0329-28 | 01112365ECD7.D | 12/31/22 11:42 | |
| LDW22-SC765B | 22L0329-29 | 01072387ECD7.D | 12/31/22 11:42 | |
| LDW22-SC765C | 22L0329-30 | 01072388ECD7.D | 12/31/22 11:42 | |
| LDW22-SC765D | 22L0329-31 | 01112366ECD7.D | 12/31/22 11:42 | |
| LDW22-SC765E | 22L0329-32 | 01072392ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757A | 22L0329-33 | 01072393ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757B | 22L0329-34 | 01072394ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757C | 22L0329-35 | 01072395ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757D | 22L0329-36 | 01072396ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757E | 22L0329-37 | 01072397ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757F | 22L0329-38 | 01072398ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757G | 22L0329-39 | 010723992ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757H | 22L0329-40 | 010723993ECD7.D | 12/31/22 11:42 | |
| Blank | BKL0728-BLK1 | 01072375ECD7.D | 12/31/22 11:42 | |
| LCS | BKL0728-BS1 | 01072376ECD7.D | 12/31/22 11:42 | |
| LCS Dup | BKL0728-BSD1 | 01072377ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757F | BKL0728-MS1 | 010723990ECD7.D | 12/31/22 11:42 | |
| LDW22-SC757F | BKL0728-MSD1 | 010723991ECD7.D | 12/31/22 11:42 | |
| Reference | BKL0728-SRM1 | 01072378ECD7.D | 12/31/22 11:42 | |

**Analytical Resources, LLC**
Analytical Chemists and Consultants

**ORGANICS PREPARATION BENCH SHEET**

Batch: BKL0728

**Prepared using: EPA 3546 (Microwave)**

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

Matrix: Solid  Date Prepared: 12/31/22  Balance ID: B14646261 4  Set Up By: CTO 12/30/22

**WO Comments**
22L0329: <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

**The following standards may be missing from this batch!**

| Designator | Description |
|---|---|
| QLS 5 | QLS Spike |

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 |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-21 B | 73.5 | (17.00) | 17.06 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-22 B | 61.7 | (20.26) | 20.27 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-23 B | 59.1 | (21.15) | 21.29 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-24 B | 60.8 | (20.57) | 20.64 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-25 B | 60.6 | (20.64) | 20.64 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-26 B | 57.2 | (21.87) | 21.90 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-27 B | 58.7 | (21.28) | 21.28 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-28 B | 59.8 | (20.91) | 20.96 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-29 B | 82.9 | (15.07) | 15.11 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-30 B | 55.4 | (22.58) | 22.65 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-31 B | 65.1 | (19.21) | 19.28 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-32 B | 77.4 | (16.14) | 16.19 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-33 B | 70.6 | (17.71) | 17.77 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-34 B | 72.6 | (17.21) | 17.27 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-35 B | 79.2 | (15.78) | 15.81 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-36 B | 82.1 | (15.23) | 15.23 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-37 B | 81.2 | (15.39) | 15.46 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-38 B | 87.2 | (14.34) | 14.37 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-39 B | 82.8 | (15.10) | 15.13 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-40 B | 82.5 | (15.16) | 15.17 | 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 |
|---|---|---|---|---|---|---|---|---|---|
| BKL0728-BLK1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0728-BS1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0728-BSD1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0728-MS1 | 87.2 | (14.34) | 14.34 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use 22L0329-38 |
| BKL0728-MSD1 | 87.2 | (14.34) | 14.34 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use 22L0329-38 |
| BKL0728-SRM1 | 100.0 | ~~(12.50)~~(2.50) | 2.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use K010816 |

+1g DI WATER

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**ORGANICS PREPARATION BENCH SHEET**

Batch: BKL0728

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

| | | | | | |
|---|---|---|---|---|---|
| 12/31/22 | | ZH | 1/6/23 | 12/31/22 | 11:42 |
| Client ID verified By | Date | Preparation Reviewed By | Date | Extraction Date and Time | |

Printed: 12/30/2022 1:49:00PM

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## ORGANICS PREPARATION BENCH SHEET

Batch: BKL0728

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

**Prep Steps**

**Microwave**
1 2 3
GT 12/31/22
Analyst/Date

**KD**
**100°C**
**Hexane Exchange**
**(2 X 20 mL)**
1 2 3 4 5 6
CP 1/4/23
Analyst/Date

**TurboVap**
**Pre Cleanups**
1 2 3 4 5
ZH 1/6/23
Analyst/Date

**TurboVap**
**Post Cleanups**
1 2 3 4 5
ZH 1/6/23
Analyst/Date

**Vialing**
ZH 1/6/23
Analyst/Date

**Reagents Used**

| Station/Reagent | Standard ID |
|---|---|
| **Microwave** Analyst: GT Date: 12/31/22 | |
| Neutral Glass Wool | K011562 |
| 1:1 Hexane/Acetone | K011642 |
| Hexane | K011373 |
| Anhydrous Sodium Sulfate | K011753 |
| **KD** Analyst: CP Date: 1/4/23 | |
| Anhydrous Sodium Sulfate | |
| Hexane | K011373 |
| **Vialing** Analyst: ZH Date: 1/6/23 | |
| Hexane | K011373 |
| Concentrated Sulfuric Acid | K010364 |
| Silica Gel (SPE) Darts | K011573 |
| Sodium Sulfite | K010363 |
| Tetrabutylammonium hydrogensulfate (TBAS) | K011885 |

**Surrogates & Spike Standards Used**

| Type | Vial ID / Standard ID | Vol uL | Analyst | Witness |
|---|---|---|---|---|
| **Surrogate** 2µg/mL | N K011752 (V) Exp Date: 1/23/2023 | 50µL | G | |
| **Spike** 20µg/mL | 1 K008150 (V) Exp Date: 3/5/2023 | 63µL | G | |

**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: BKL0728

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

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

Printed: 12/30/2022 1:49:00PM

3099F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB  Extraction Batch: BKL0728

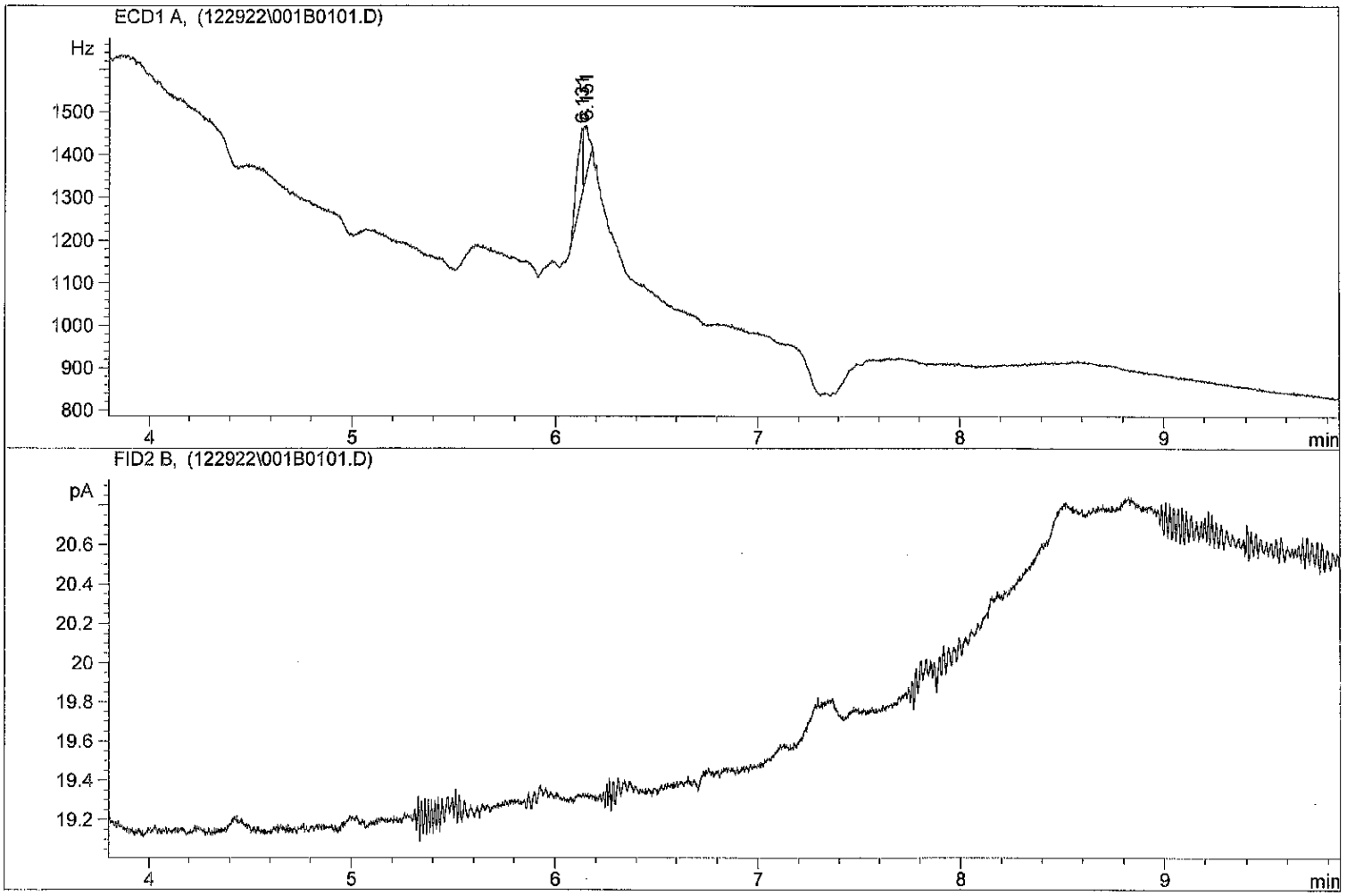
Total Solids Batch: BKL0640  Work Order(s): 22L0329 21-40

| Screens: Soil/Sediment/Solid/Other: | Analyst/Date |
|---|---|
| [X] No Anomalies (standard soil/wet sediment/sand/gravel)= 21-28, 31-40 | CR 12/29/22 |
| [X] Standing Water Decanted (Not shared)= 21-23, 25, 29-34 | CR 12/29/22 |
| [ ] Standing Water Homogenized (Shared samples)= | |
| [ ] Clay/Clumps (Difficult to homogenize)= | |
| [ ] Rocks (%+size)? | |
| [ ] Organics (Leaves/sticks/grass)= | |
| [X] Oily, obvious fuel/sulfur odors= 29, 30 | CR 12/29/22 |
| [ ] Received in 32oz jar(s)=Homogenized in Pyrex dish= | |
| [X] Previously Frozen = 21-40 | CR 12/29/22 |
| [ ] 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 12/29/22 |
| [X] Multiple Jars Y / (N) | CR 12/29/22 |
| [ ] Sample Pre-Screens indicate analyte activity= | |
| [ ] Sample weights/volumes reduced based on Pre-Screen= | |

3056F

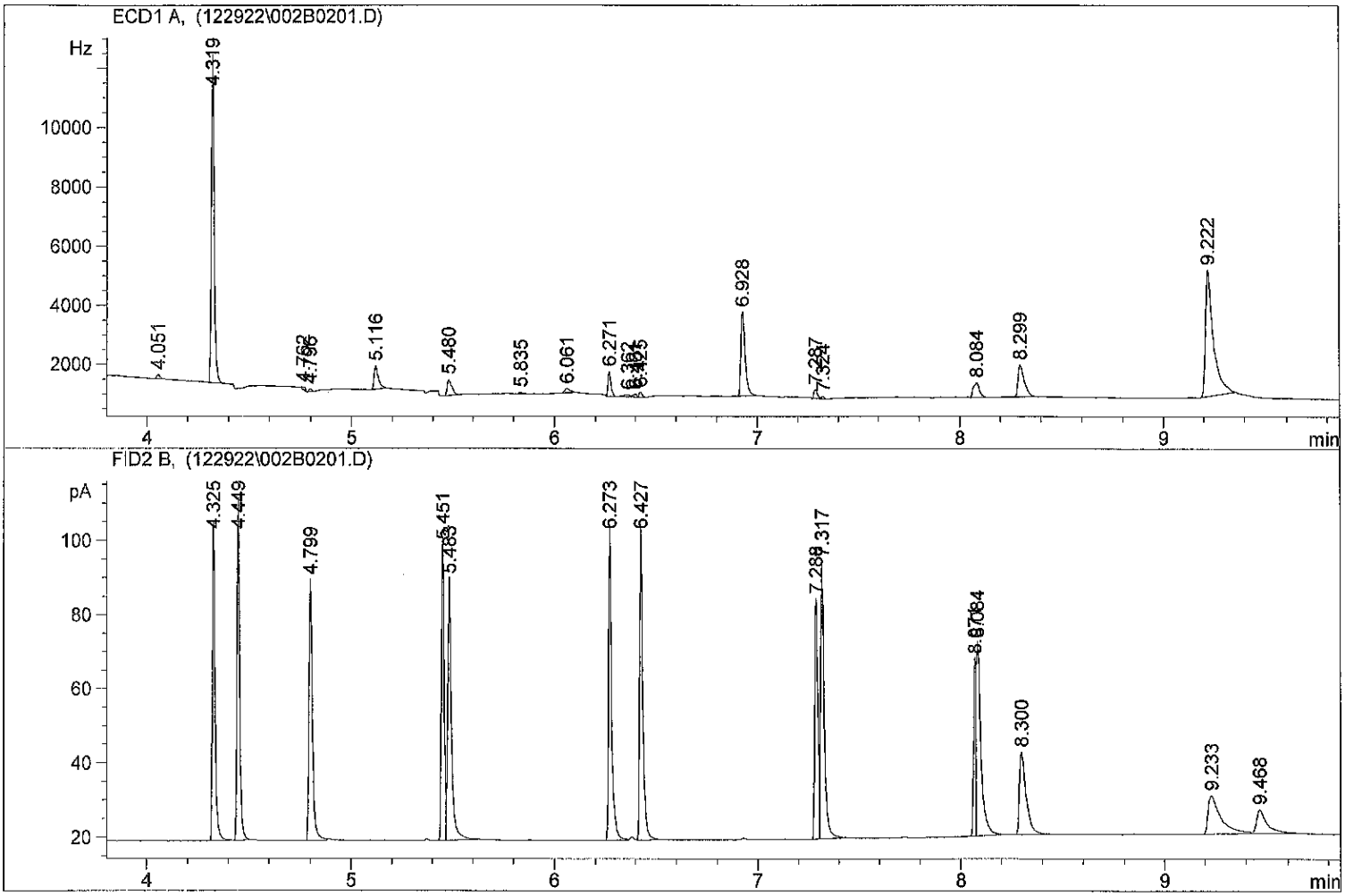
Revision 15
07/01/19

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 5:34:40 PM | Seq. Line : | 1 |
| Sample Name | : DCM RINSE | Location : | Vial 1 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



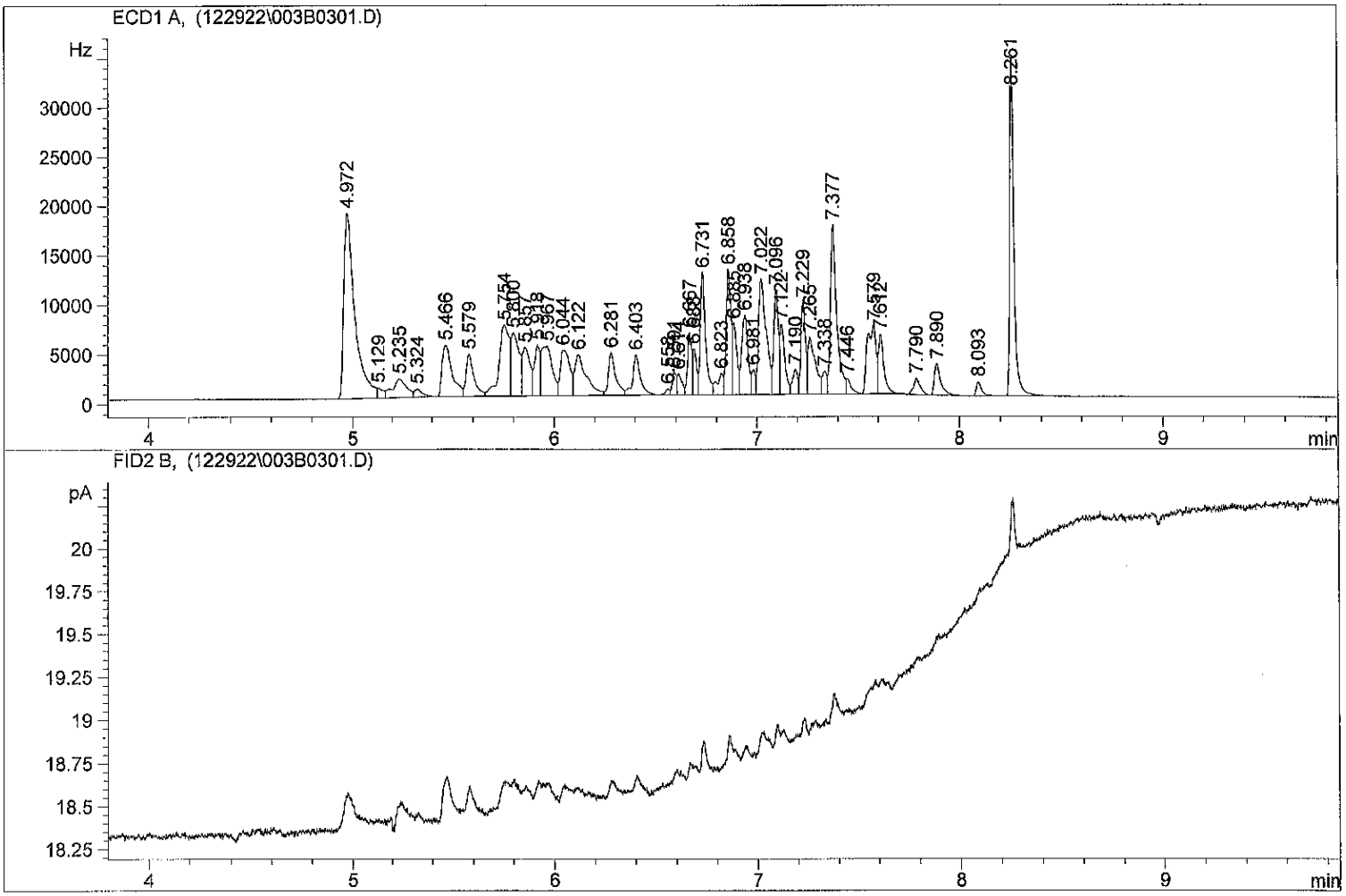

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 5:49:18 PM | Seq. Line : | 2 |
| Sample Name | : PNA STD 10PPM | Location : | Vial 2 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



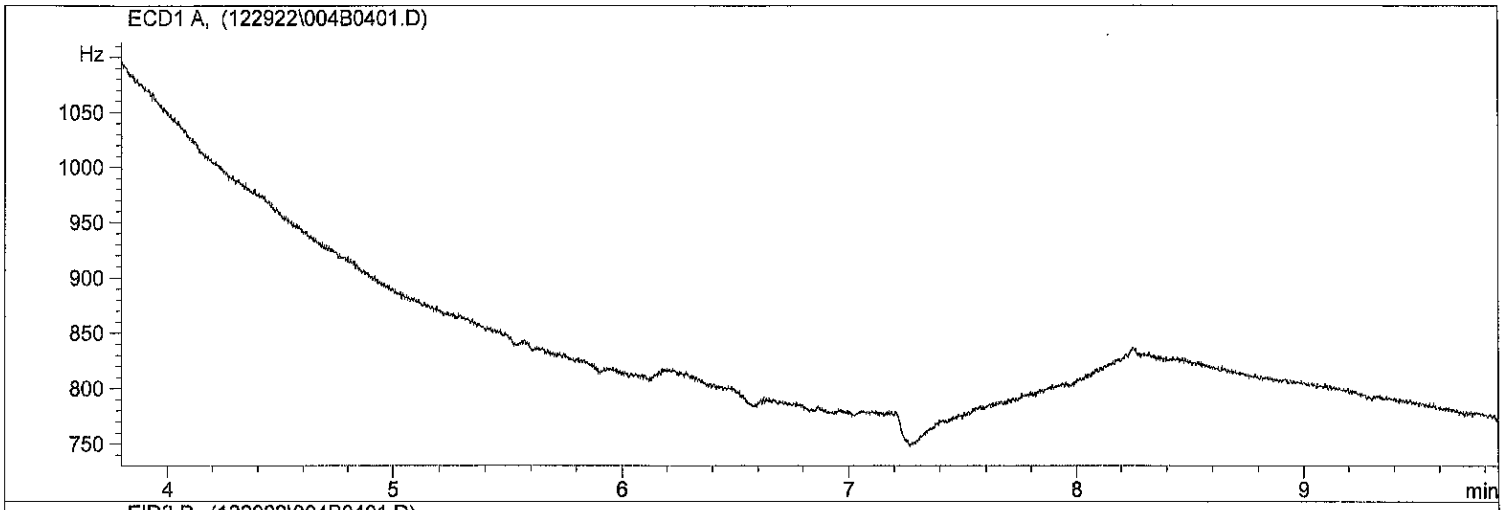

*** End of Report ***

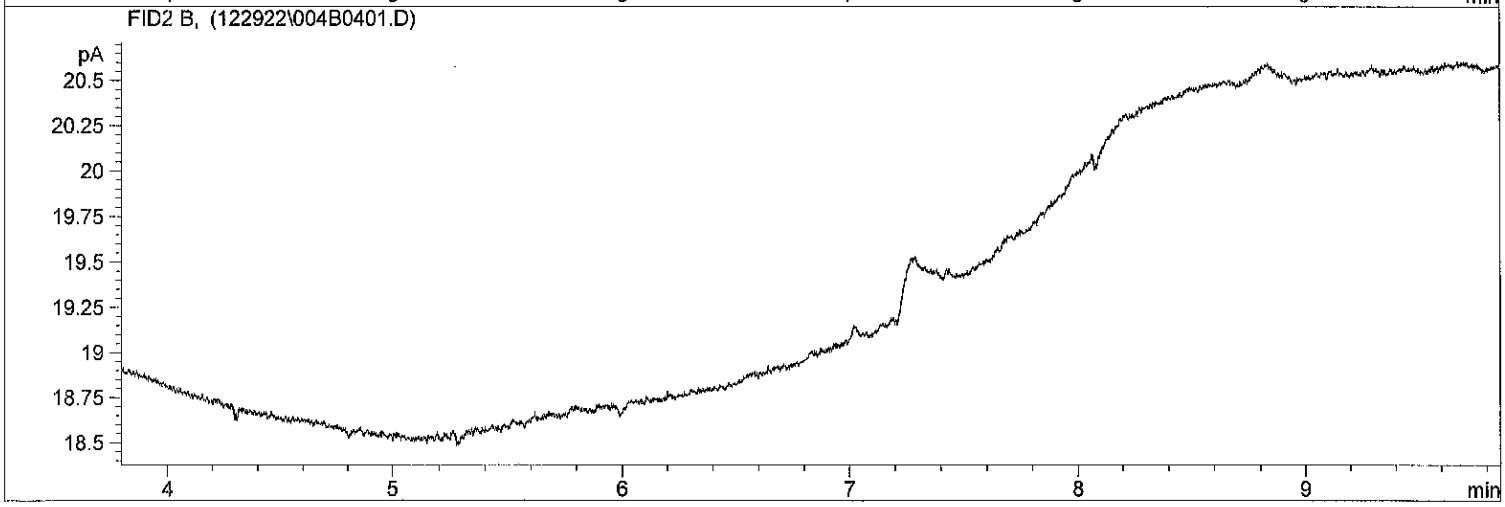
| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 6:04:04 PM | Seq. Line : | 3 |
| Sample Name | : AR1660 1PPM | Location : | Vial 3 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

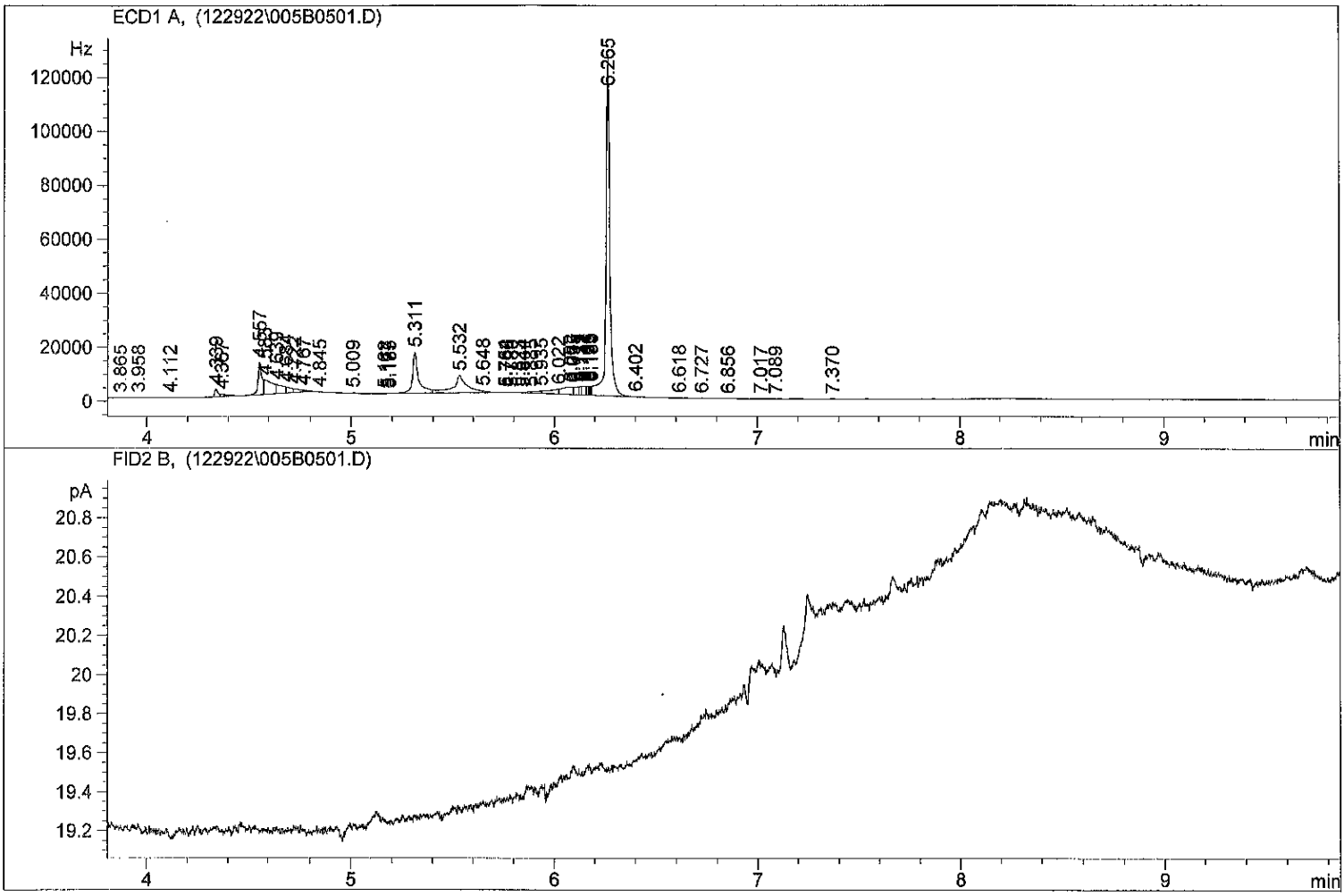
| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 6:18:58 PM | Seq. Line : | 4 |
| Sample Name | : 22L0329 21 | Location : | Vial 4 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



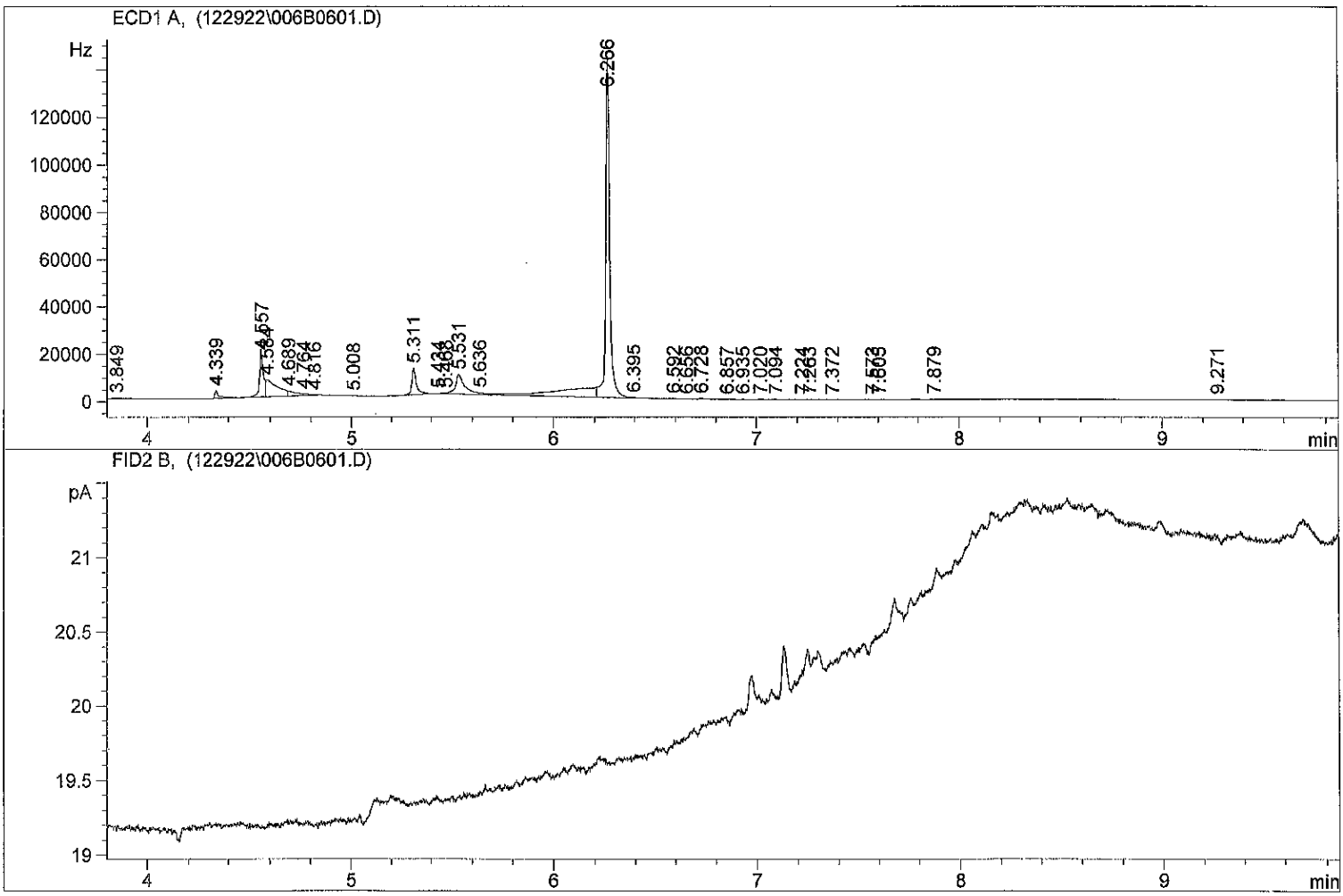

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 6:33:49 PM | Seq. Line : | 5 |
| Sample Name | : 22L0329 22 | Location : | Vial 5 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



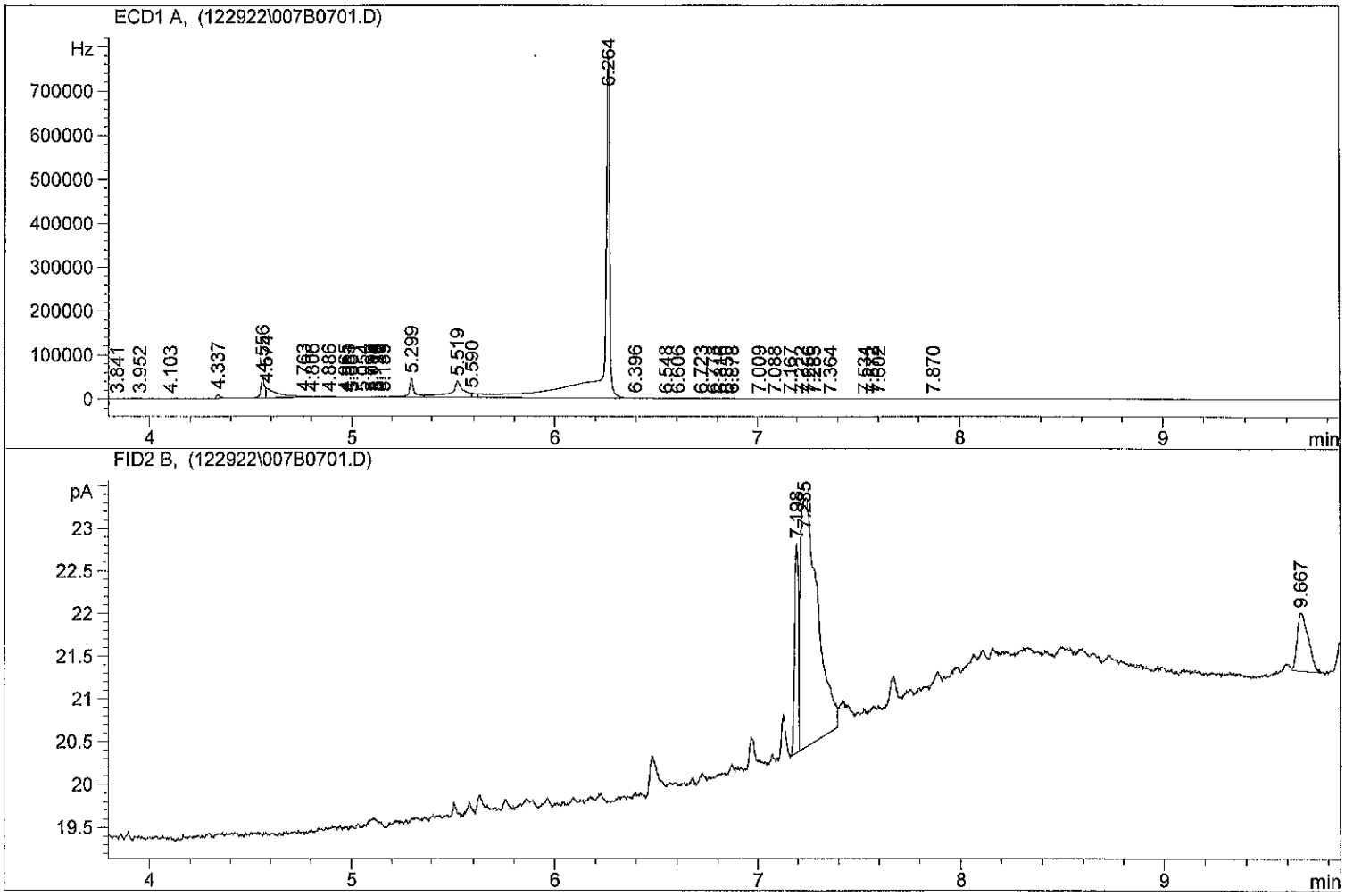

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 6:48:41 PM | Seq. Line : | 6 |
| Sample Name | : 22L0329 23 | Location : | Vial 6 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | Actual | Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



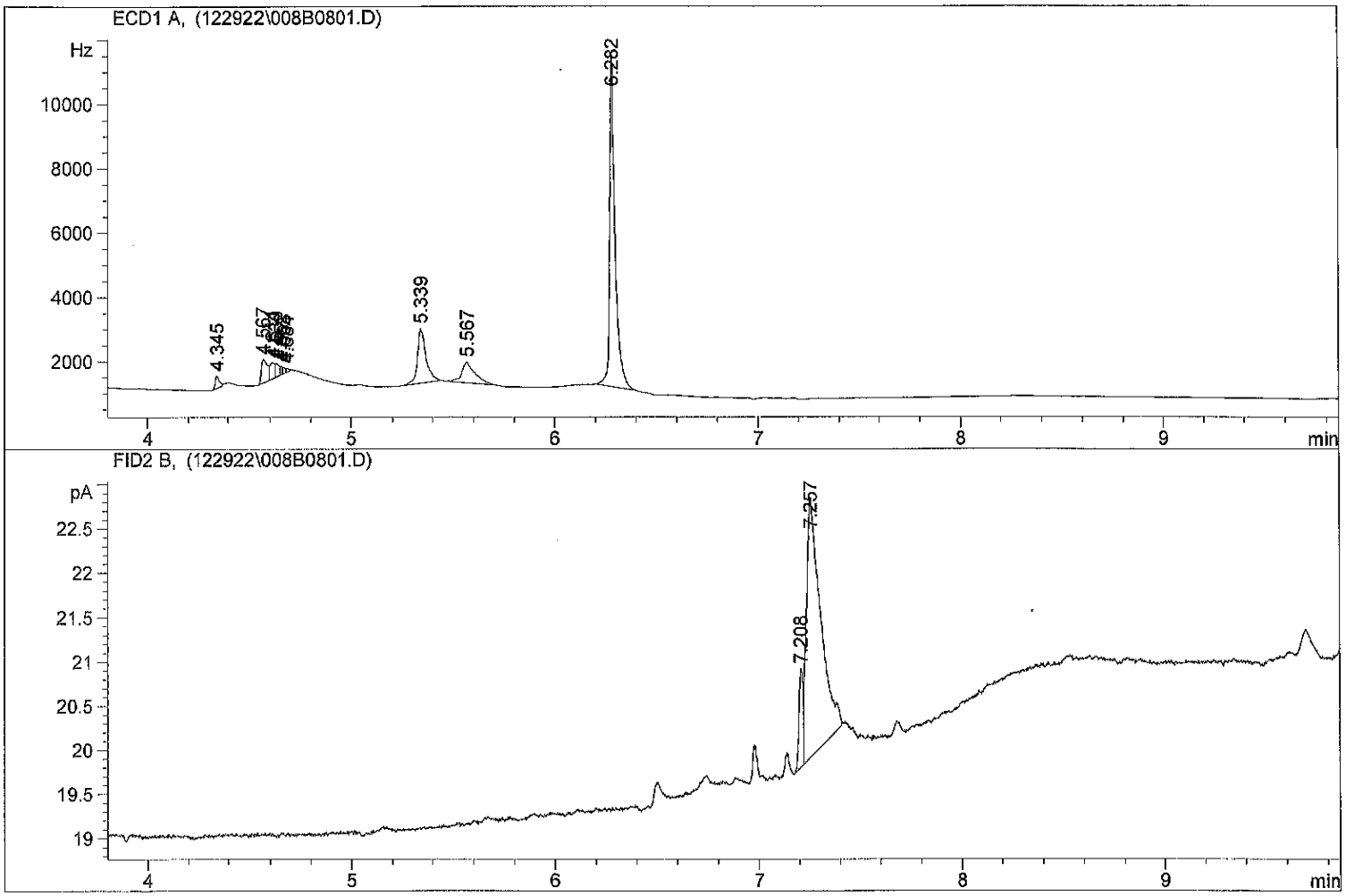

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 7:03:33 PM | Seq. Line : | 7 |
| Sample Name | : 22L0329 24 | Location : | Vial 7 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



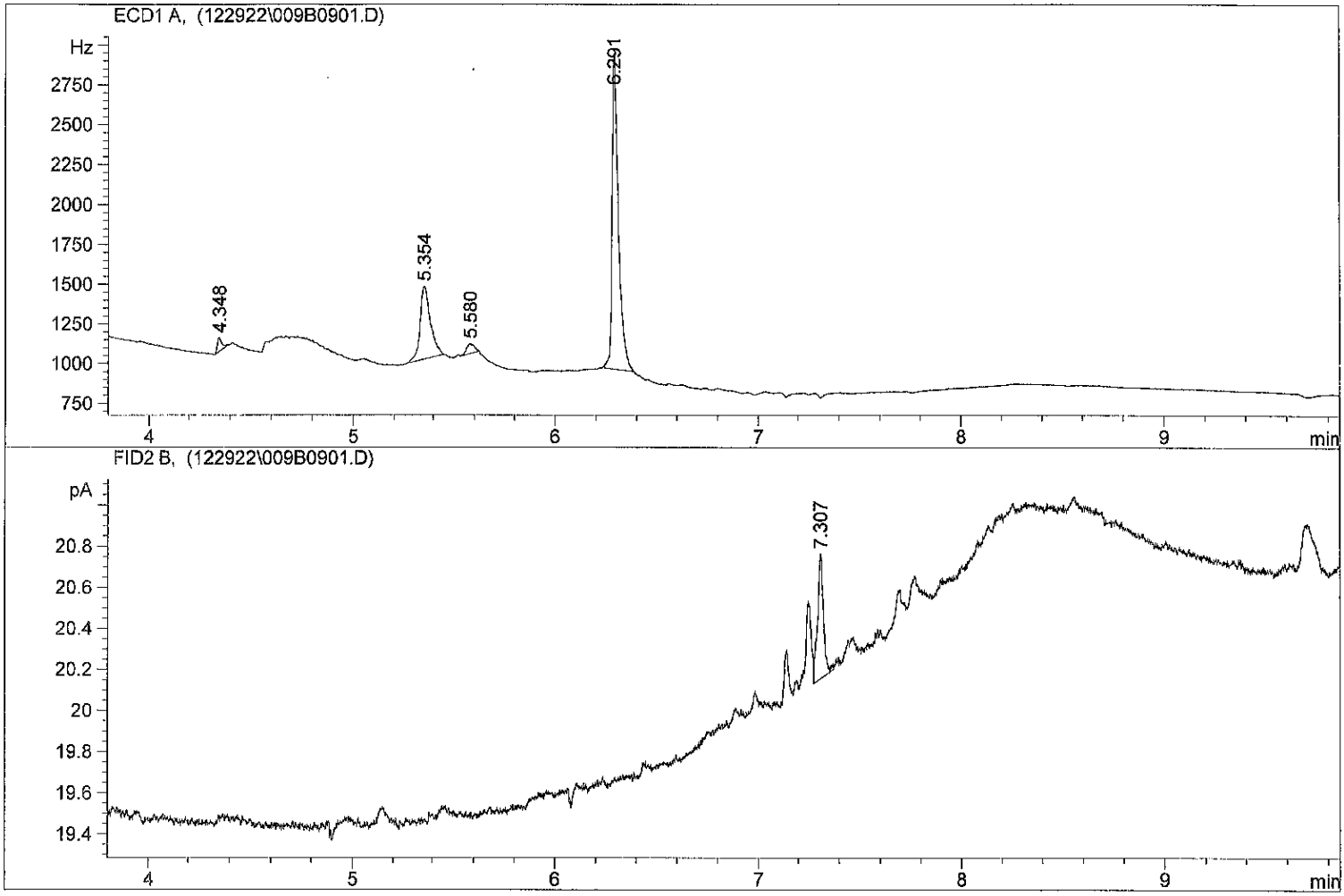

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 7:18:27 PM | Seq. Line : | 8 |
| Sample Name | : 22L0329 25 | Location : | Vial 8 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



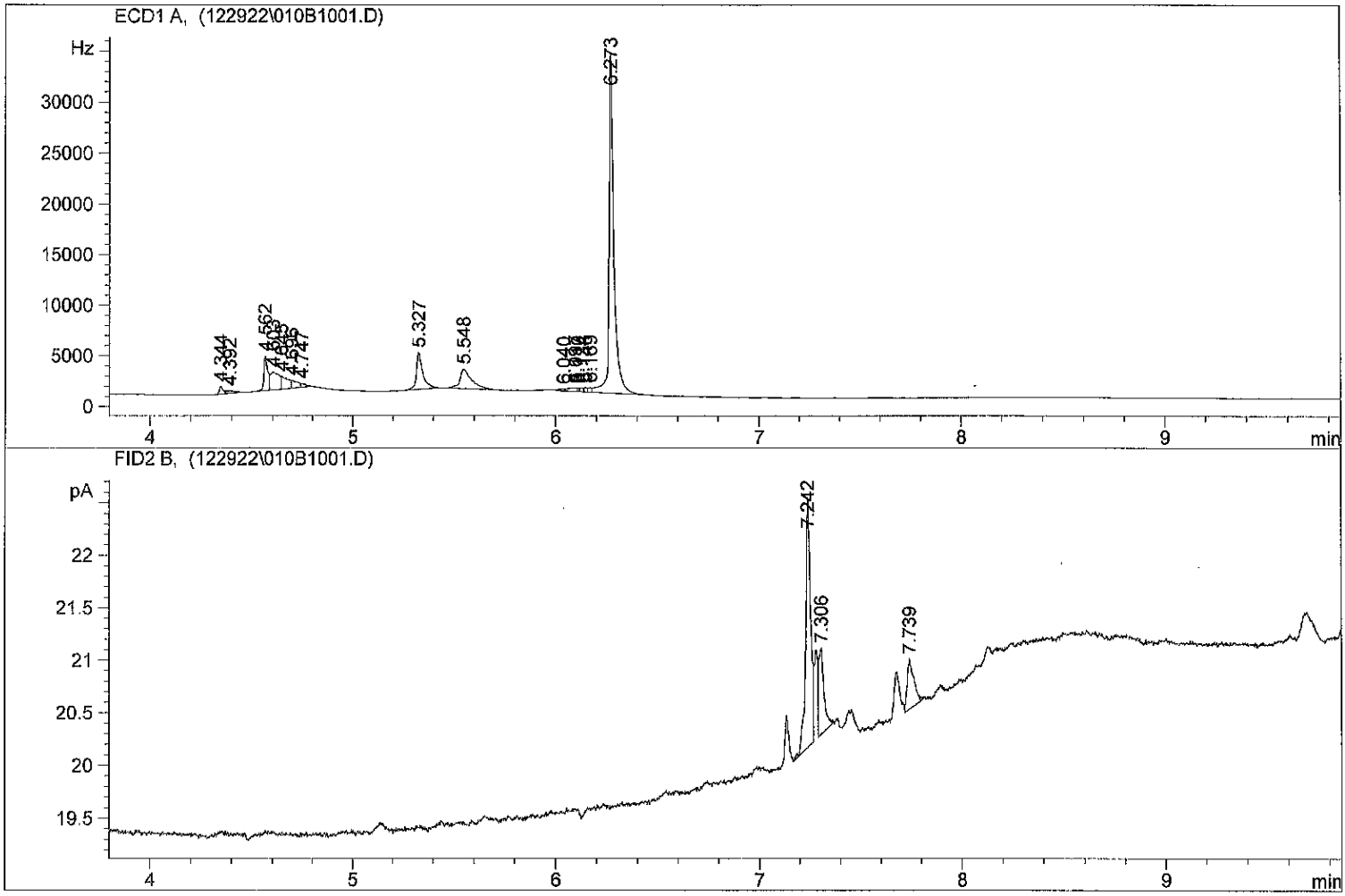

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 7:33:19 PM | Seq. Line : | 9 |
| Sample Name | : 22L0329 26 | Location : | Vial 9 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



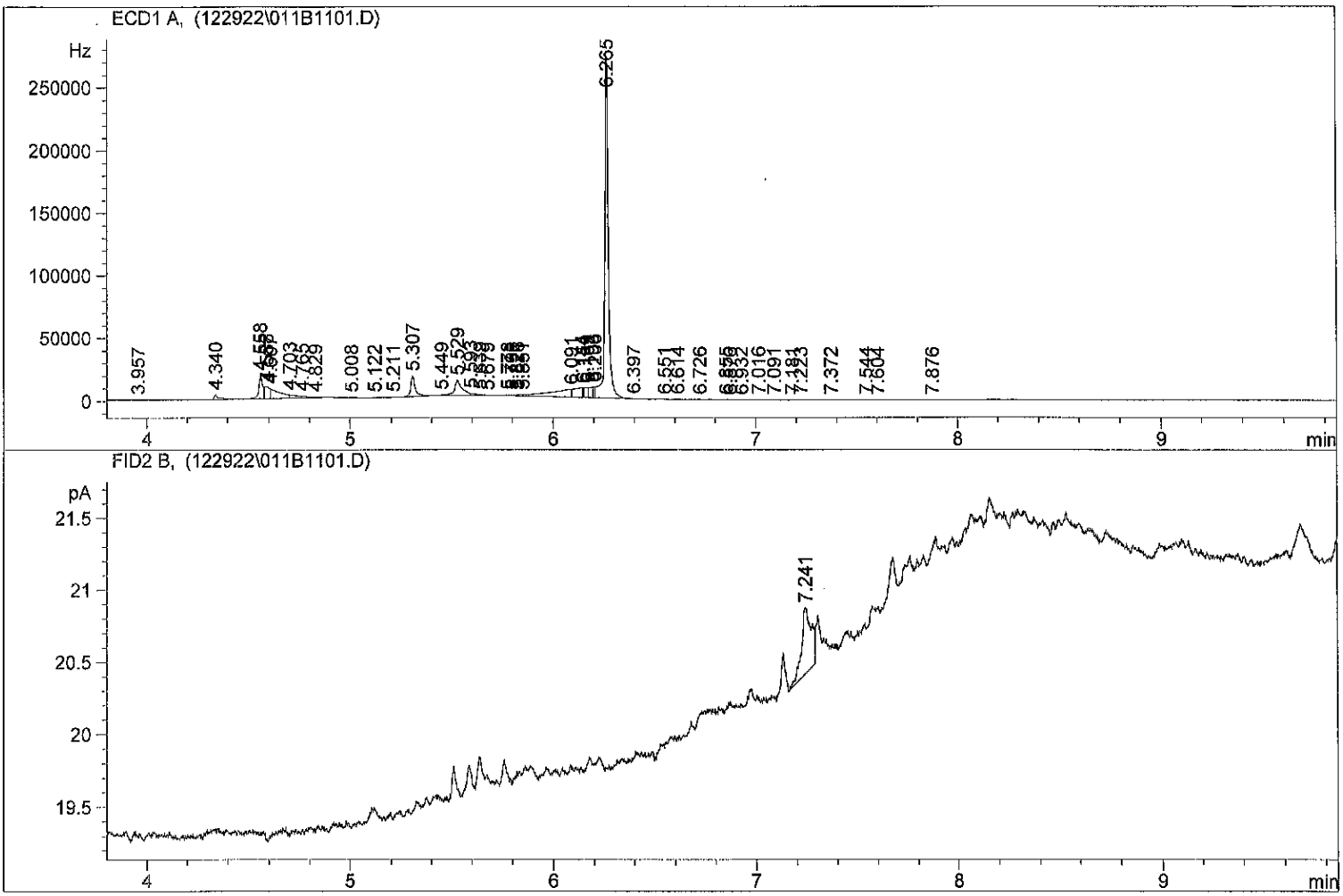

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 7:48:12 PM | Seq. Line : | 10 |
| Sample Name | : 22L0329 27 | Location : | Vial 10 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



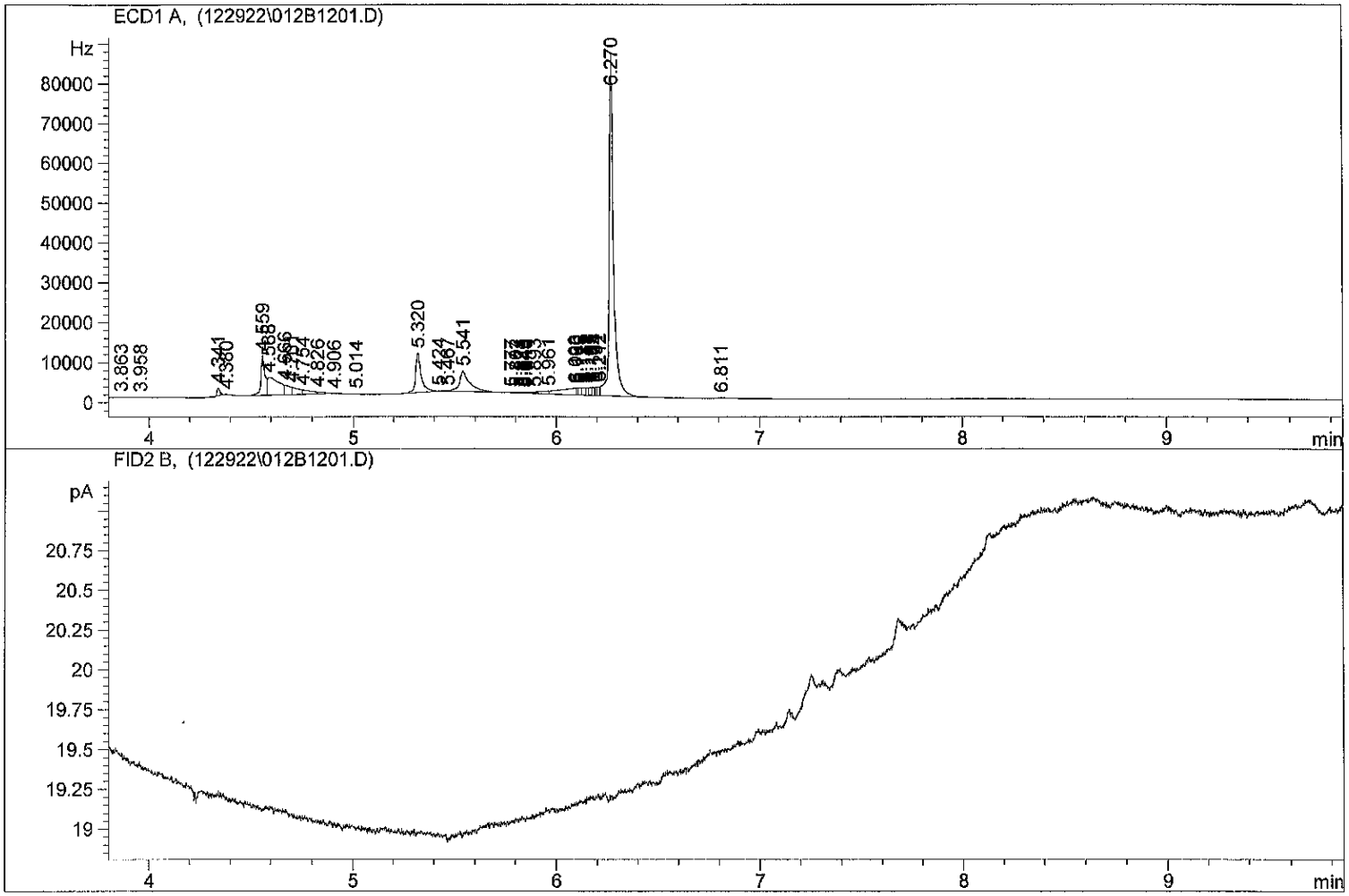

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 8:03:04 PM | Seq. Line : | 11 |
| Sample Name | : 22L0329 28 | Location : | Vial 11 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



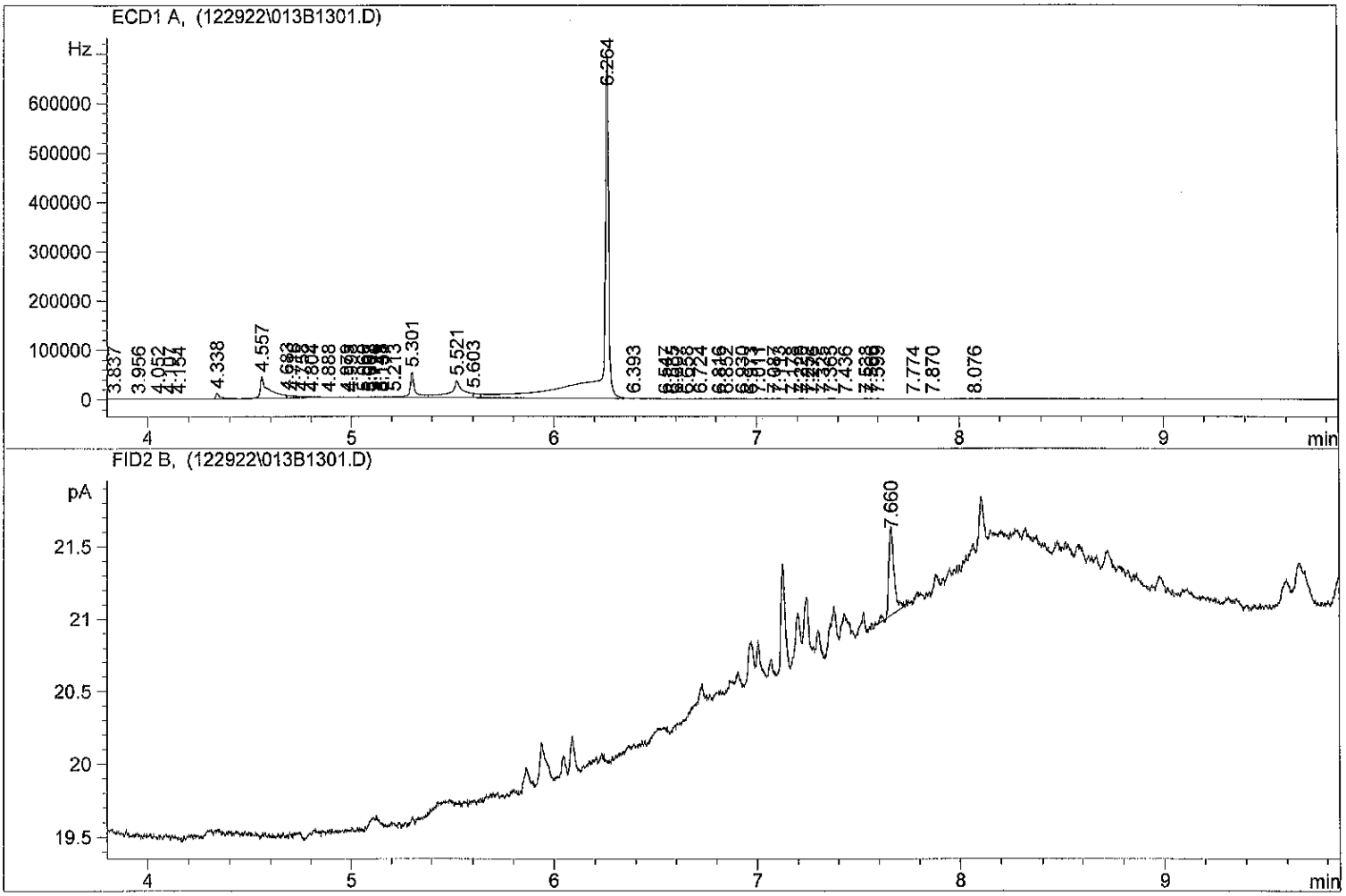

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 8:17:54 PM | Seq. Line : | 12 |
| Sample Name | : 22L0329 29 | Location : | Vial 12 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



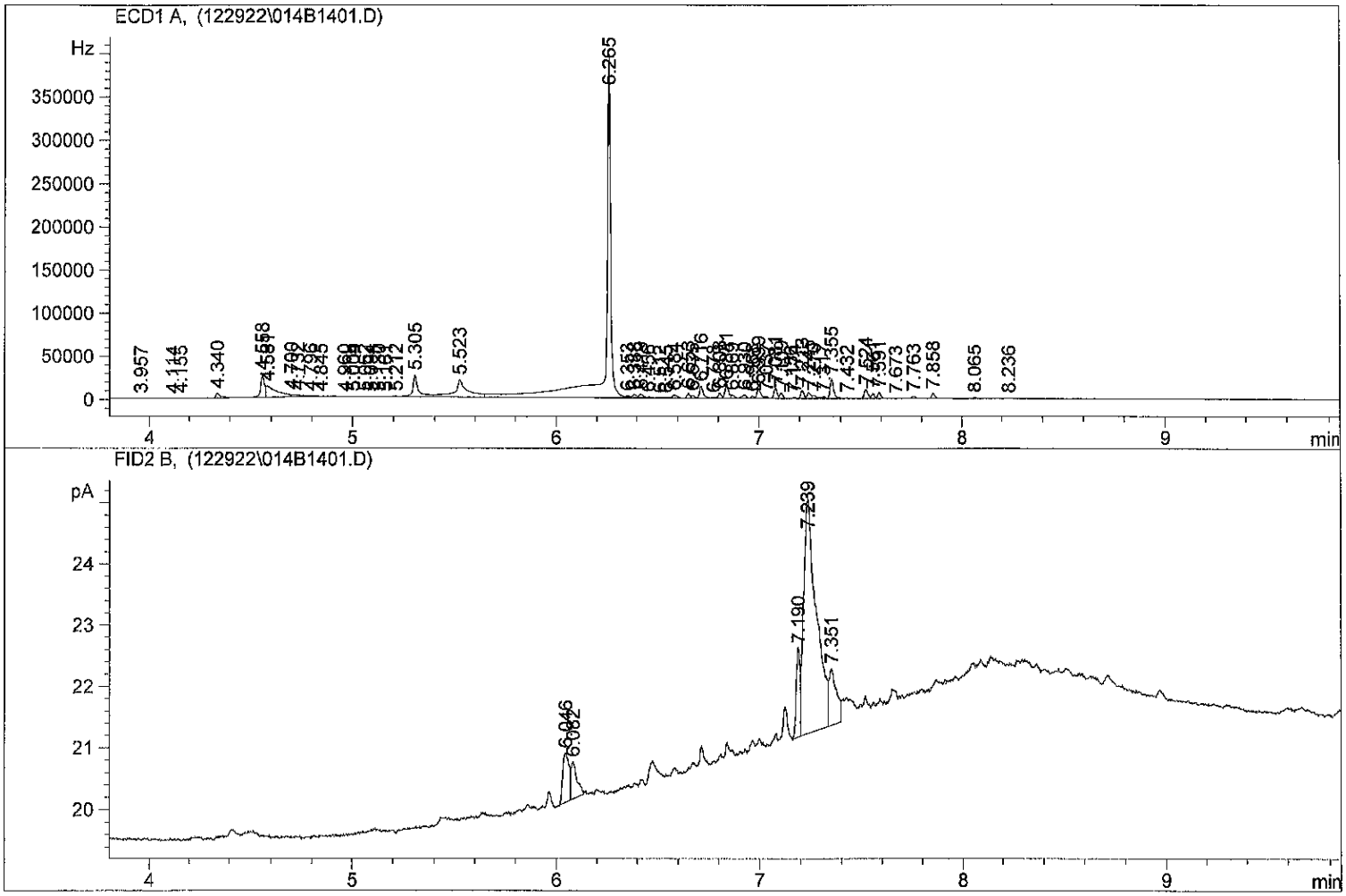

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 8:32:47 PM | Seq. Line : | 13 |
| Sample Name | : 22L0329 30 | Location : | Vial 13 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



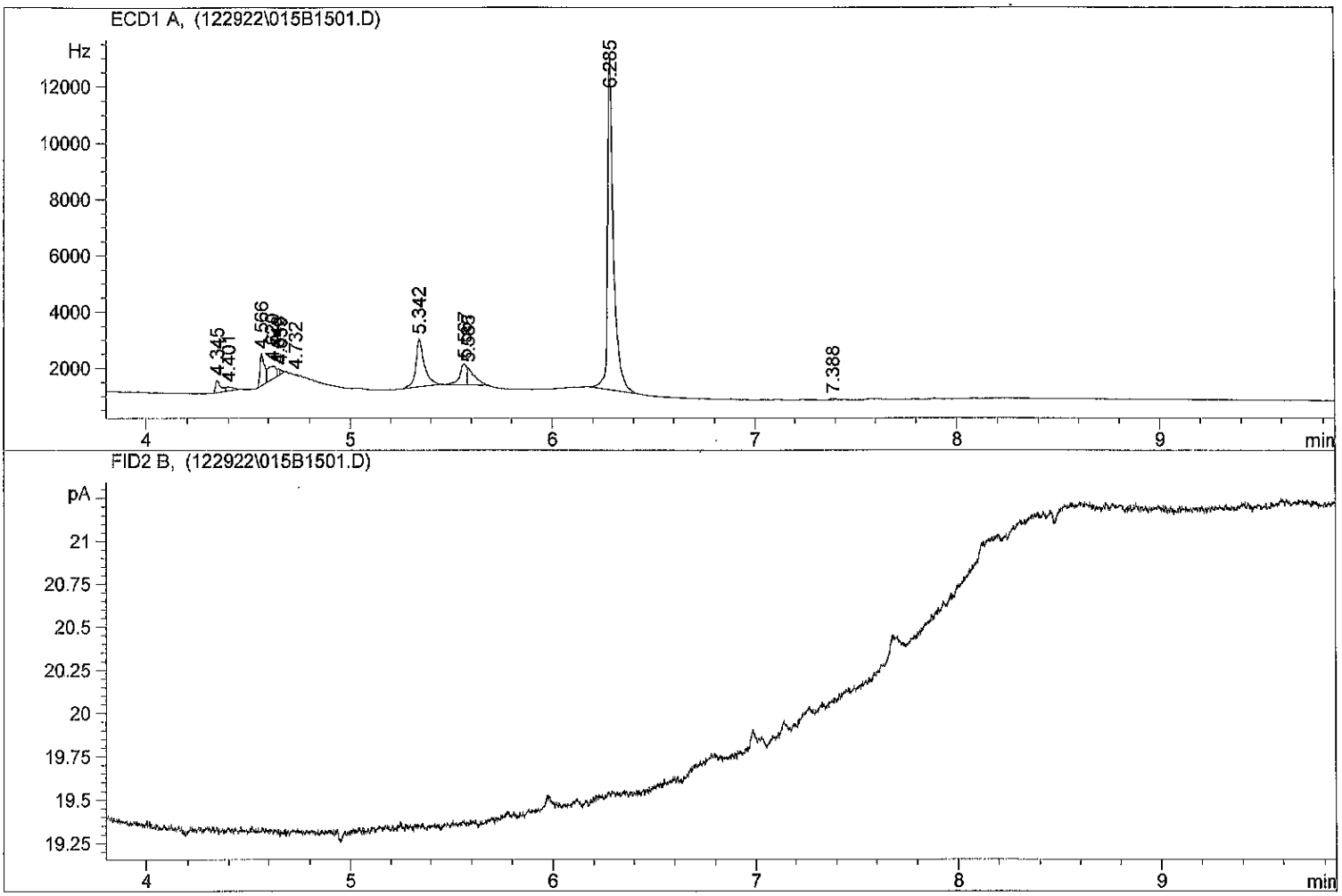

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 8:47:41 PM | Seq. Line | : 14 |
| Sample Name | : 22L0329 31 | Location | : Vial 14 |
| Acq. Operator | : CR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



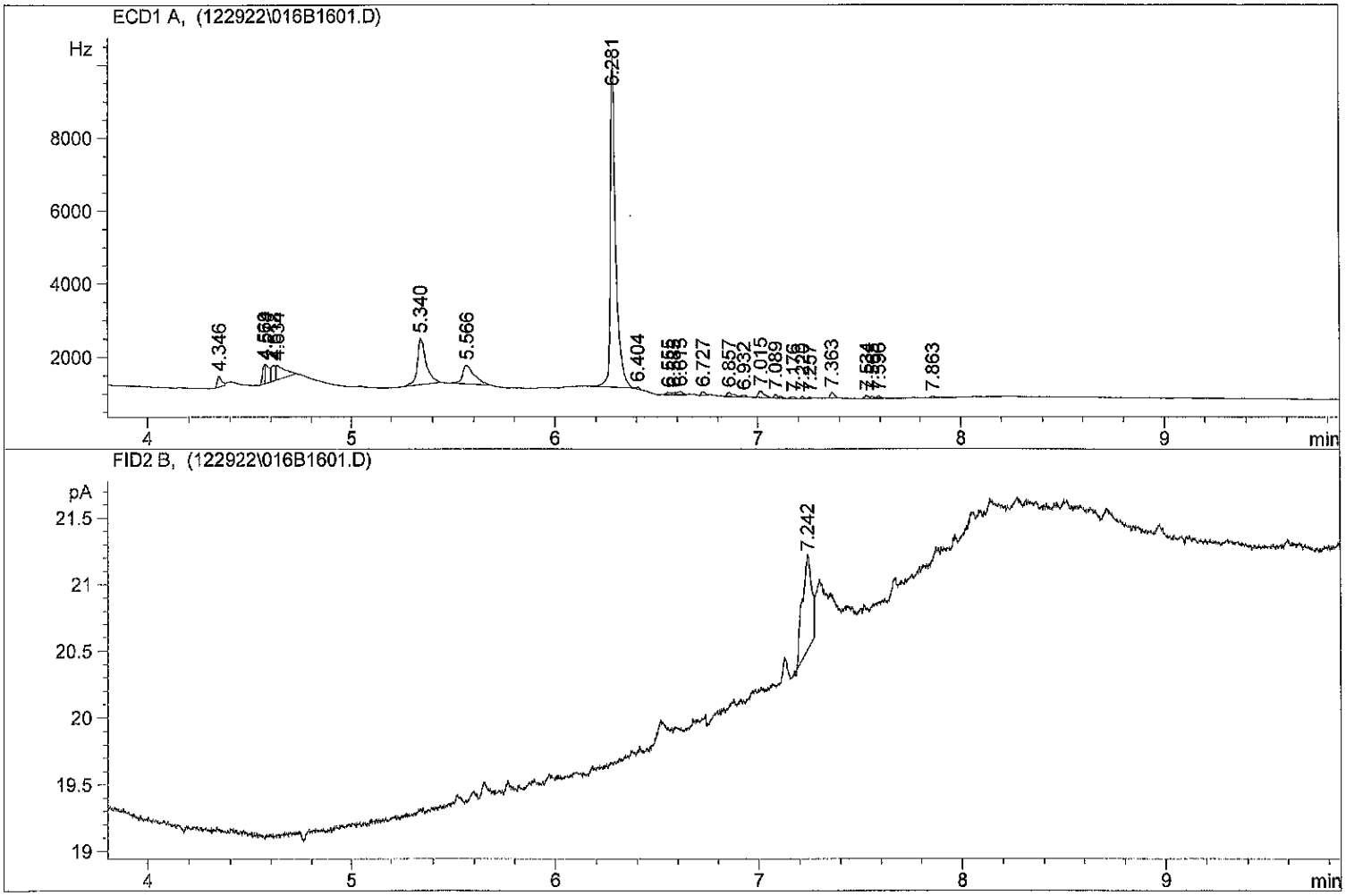

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 9:02:34 PM | Seq. Line : | 15 |
| Sample Name | : 22L0329 32 | Location : | Vial 15 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



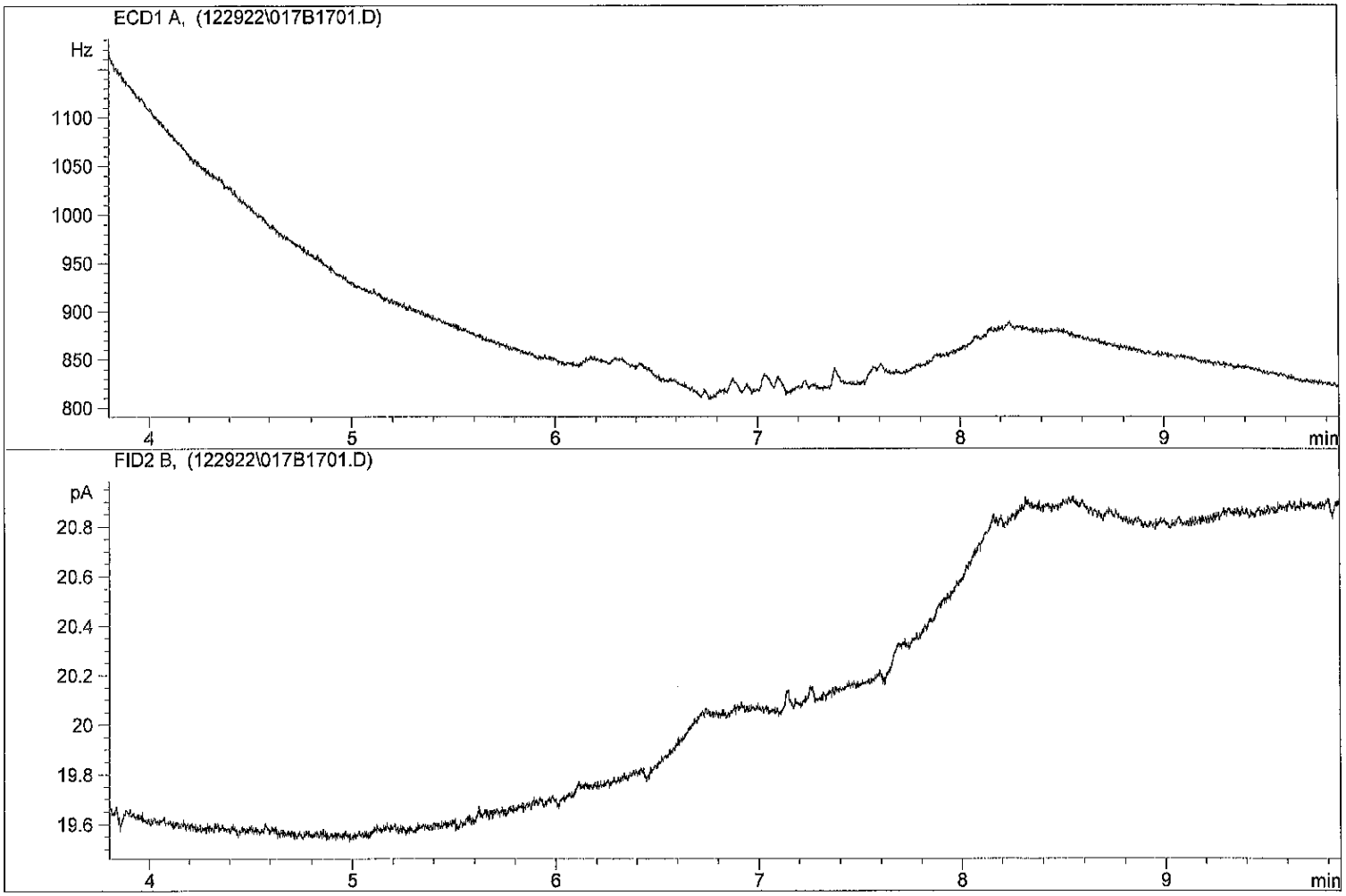

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 9:17:27 PM | Seq. Line : | 16 |
| Sample Name | : 22L0329 33 | Location : | Vial 16 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



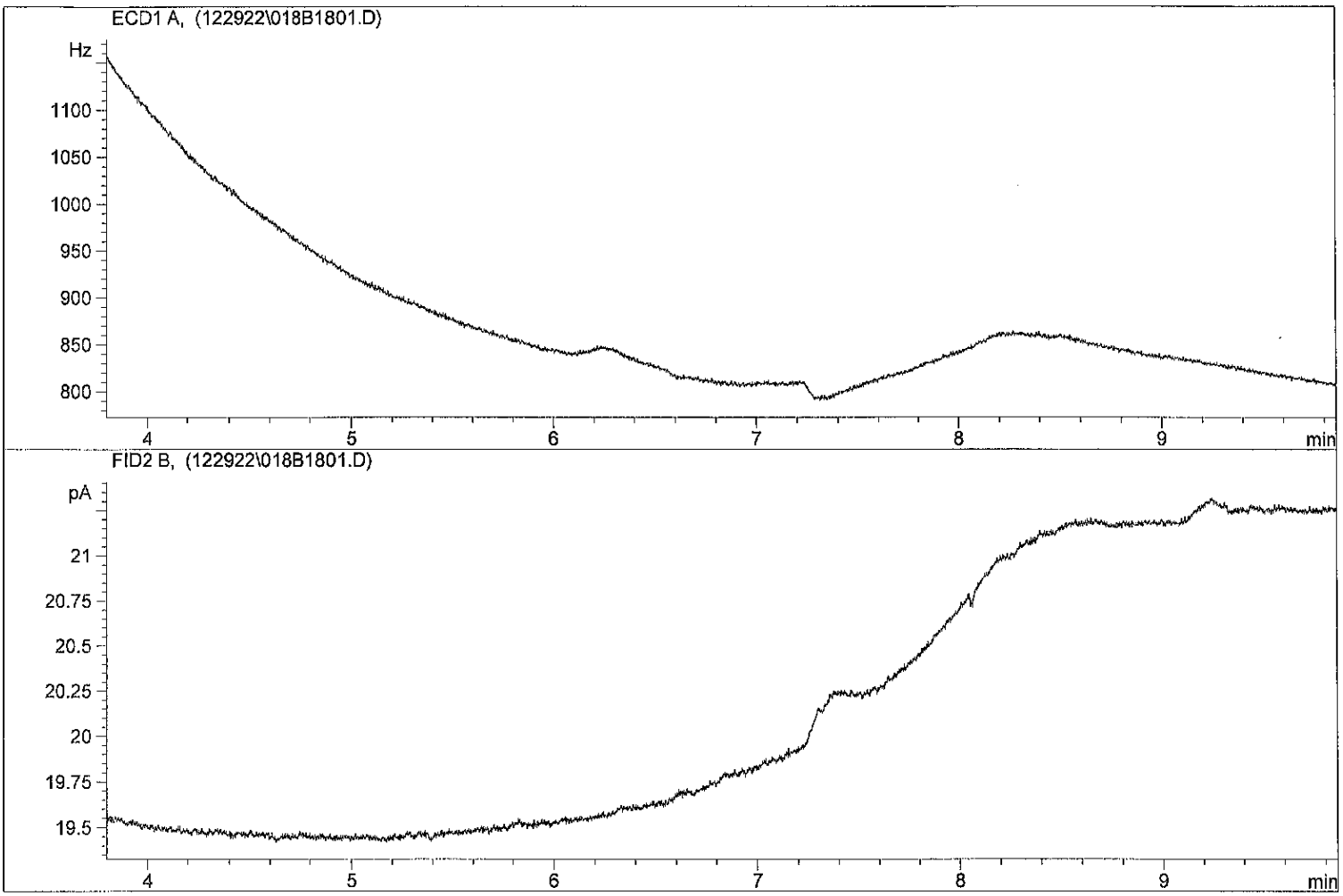

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 9:32:22 PM | Seq. Line : | 17 |
| Sample Name | : 22L0329 34 | Location : | Vial 17 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



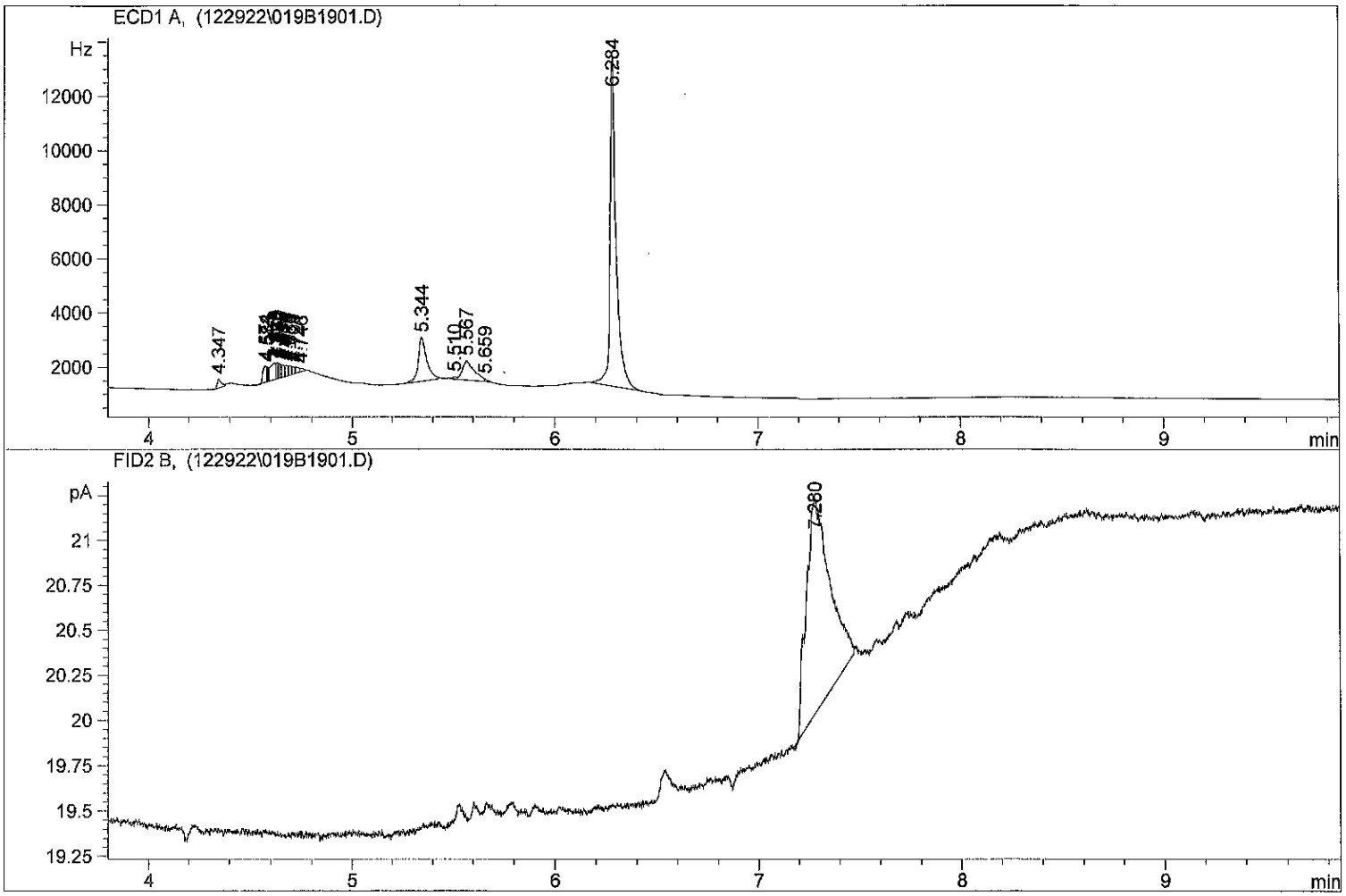

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 9:47:18 PM | Seq. Line : | 18 |
| Sample Name | : 22L0329 35 | Location : | Vial 18 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



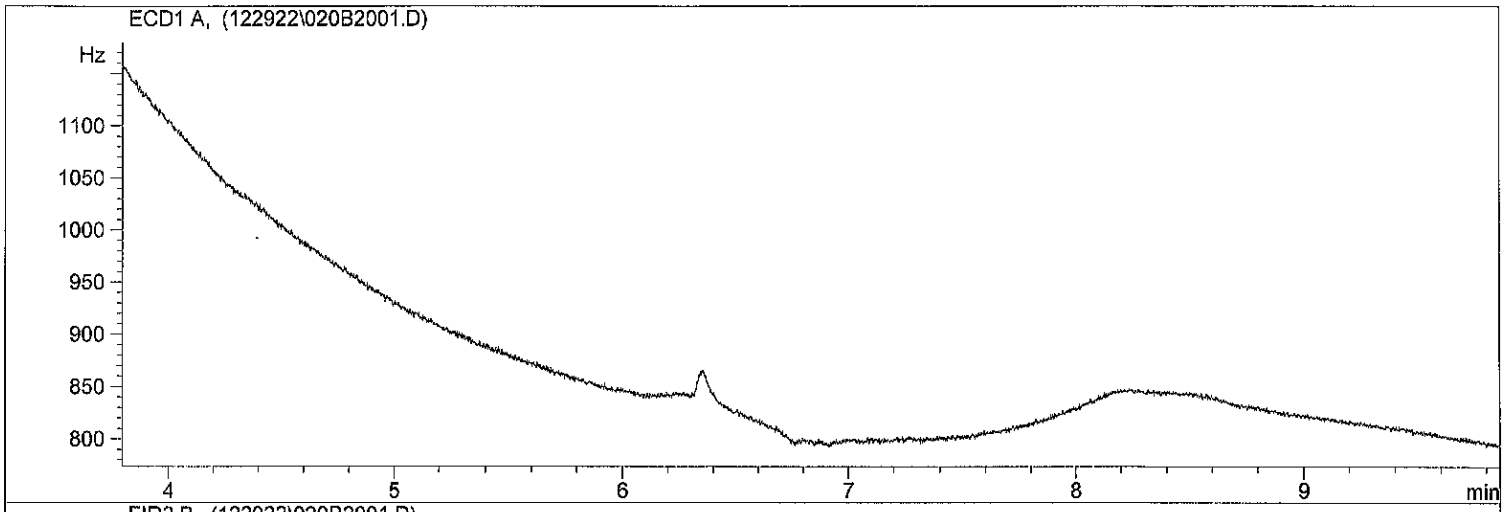

*** End of Report ***

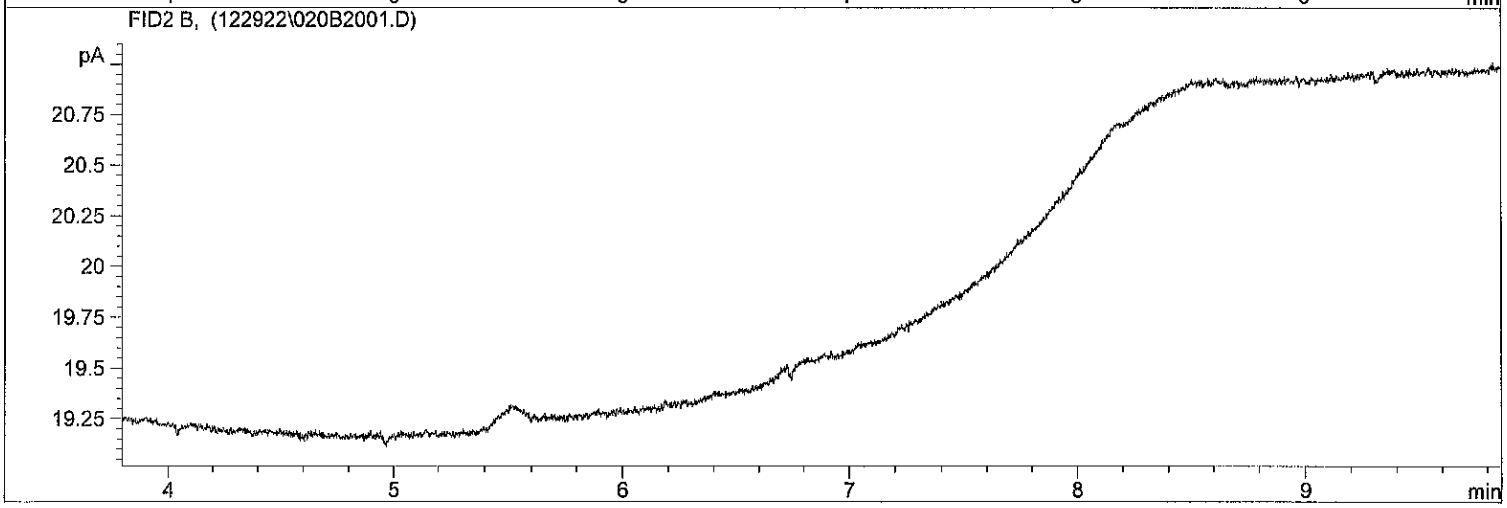
| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 10:02:10 PM | Seq. Line | : 19 |
| Sample Name | : 22L0329 36 | Location | : Vial 19 |
| Acq. Operator | : CR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

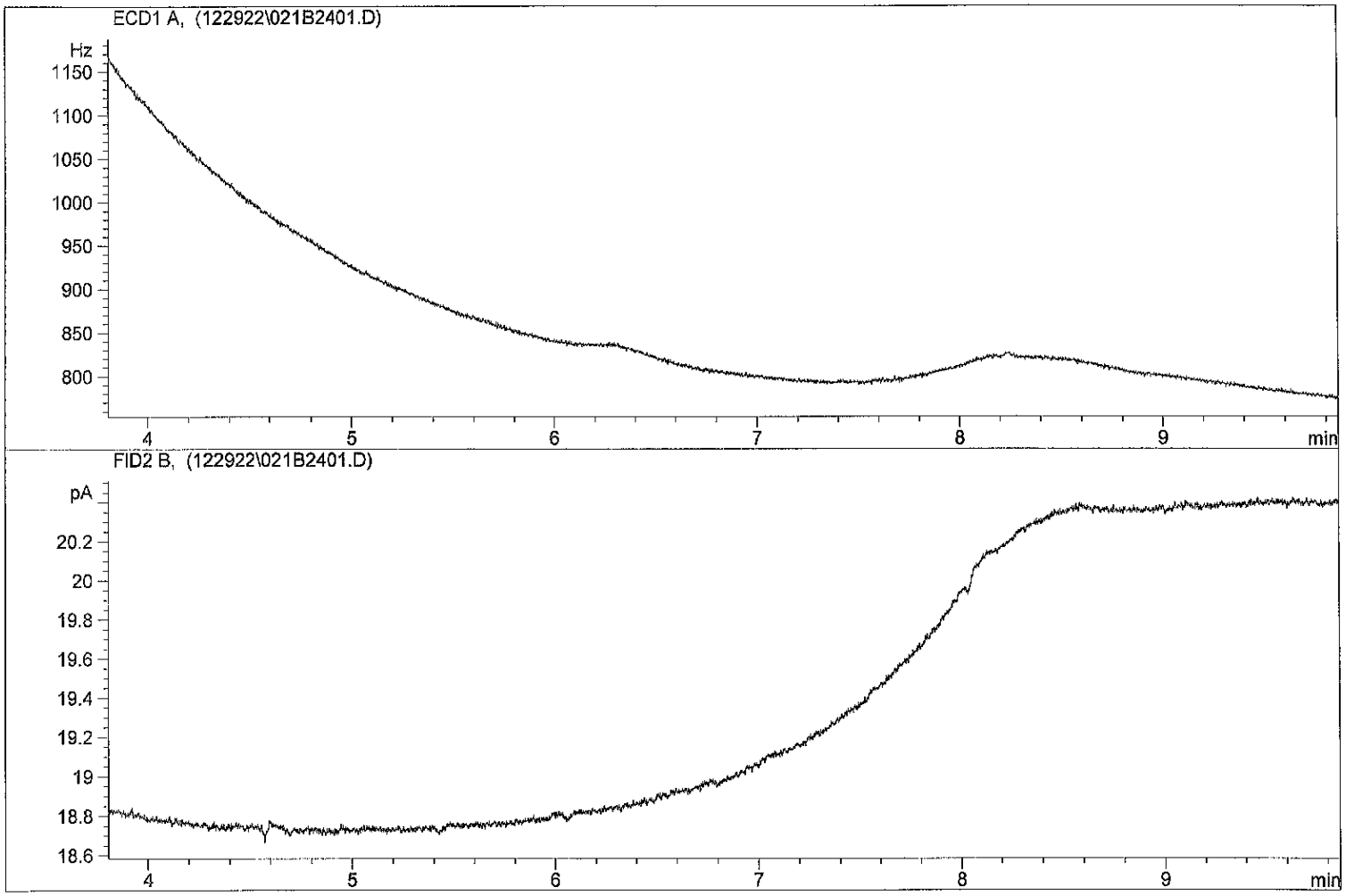
| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 10:17:07 PM | Seq. Line | : 20 |
| Sample Name | : 22L0329 37 | Location | : Vial 20 |
| Acq. Operator | : CR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



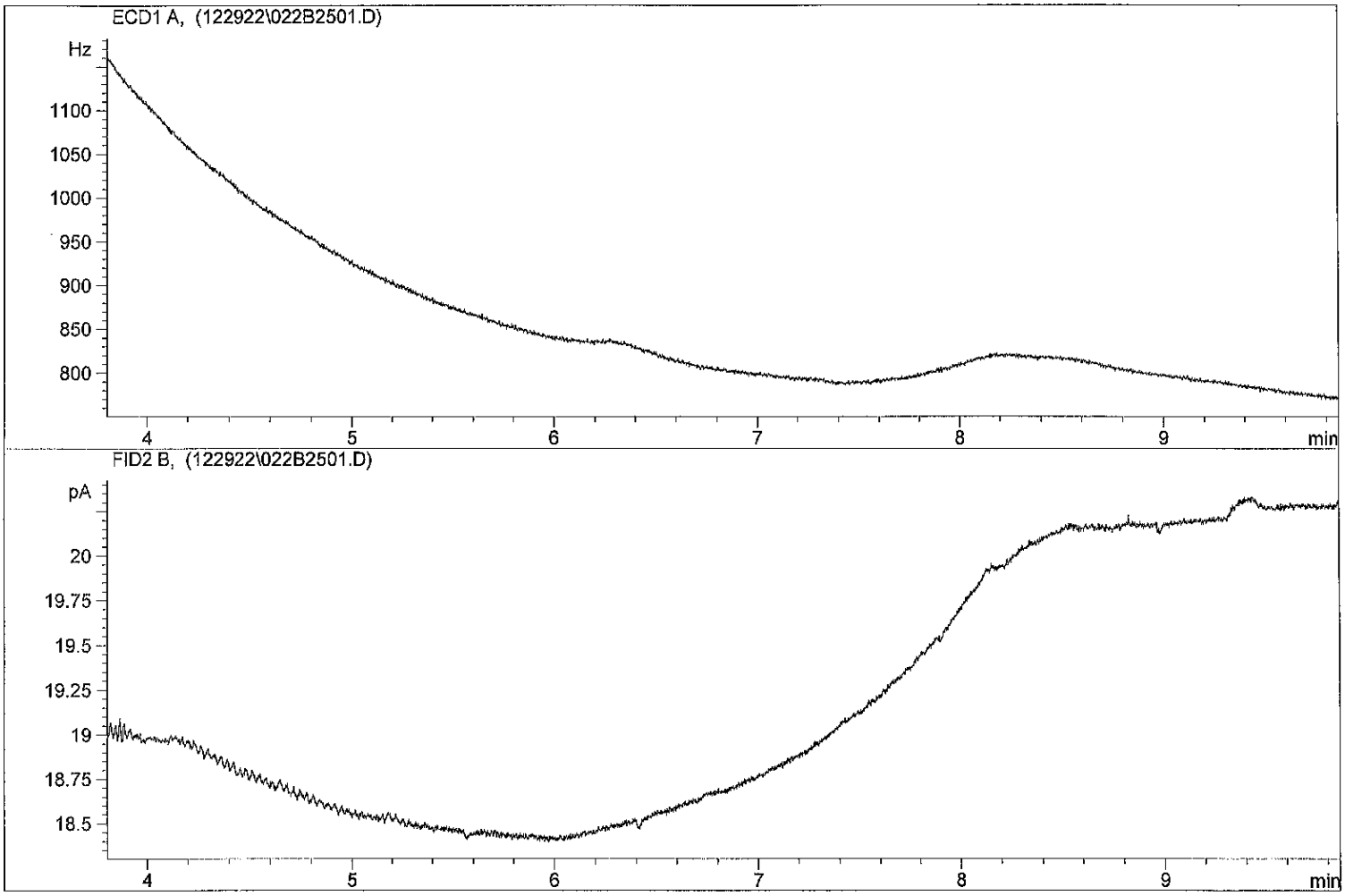

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 11:16:38 PM | Seq. Line : | 24 |
| Sample Name | : 22L0329 38 | Location : | Vial 21 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



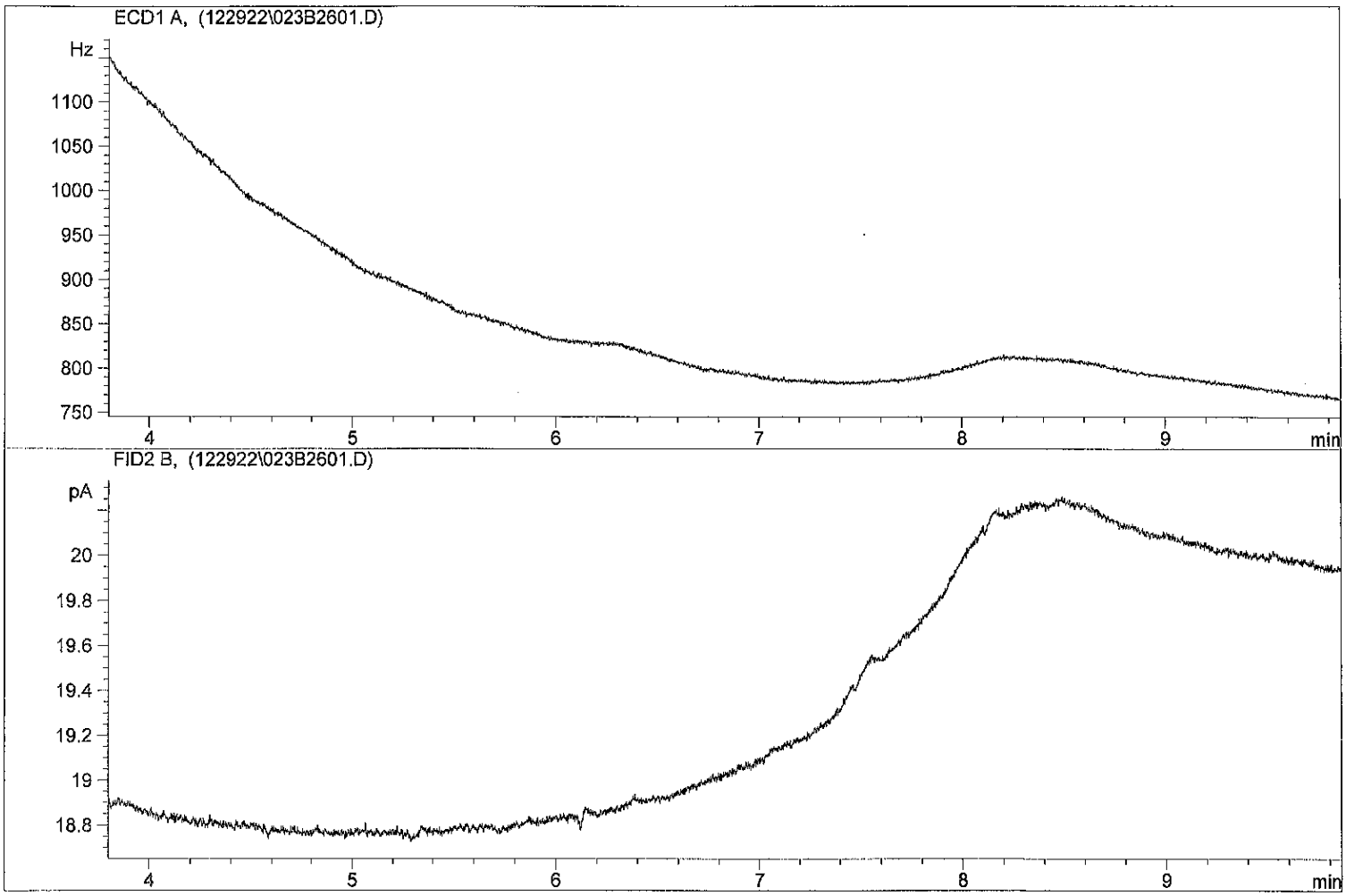

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 11:31:30 PM | Seq. Line : | 25 |
| Sample Name | : 22L0329 39 | Location : | Vial 22 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 11:46:25 PM | Seq. Line : | 26 |
| Sample Name | : 22L0329 40 | Location : | Vial 23 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

Analytical Resources, LLC
Analytical Chemists and Consultants

# PREPARATION BATCH SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0730 Batch Matrix: Solid | Preparation: | EPA 3546 (Microwave) |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-SC754A | 22L0329-41 | 01102331ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754B | 22L0329-42 | 01102332ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754C | 22L0329-43 | 01102333ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754D | 22L0329-44 | 01102334ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754E | 22L0329-45 | 01102337ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754F | 22L0329-46 | 01102338ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754G | 22L0329-47 | 01102339ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754H | 22L0329-48 | 01102340ECD7.D | 01/03/23 10:30 | |
| Blank | BKL0730-BLK1 | 01102327ECD7.D | 01/03/23 10:30 | |
| LCS | BKL0730-BS1 | 01102328ECD7.D | 01/03/23 10:30 | |
| LCS Dup | BKL0730-BSD1 | 01102329ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754D | BKL0730-MS1 | 01102335ECD7.D | 01/03/23 10:30 | |
| LDW22-SC754D | BKL0730-MSD1 | 01102336ECD7.D | 01/03/23 10:30 | |
| Reference | BKL0730-SRM1 | 01102330ECD7.D | 01/03/23 10:30 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## ORGANICS PREPARATION BENCH SHEET

Batch: BKL0730

**Prepared using: EPA 3546 (Microwave)**

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

**Matrix: Solid** **Date Prepared:** 01/03/23 **Balance ID:** B146462614 **Set Up By:** CTO 12/30/22

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

**The following standards may be missing from this batch!**

| Designator | Description |
|---|---|
| QLS 5 | QLS Spike |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-41 B | 70.4 | (17.76) | 17.82 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-42 B | 66.8 | (18.72) | 18.36 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-43 B | 70.5 | (17.73) | 17.77 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-44 B | 73.9 | (16.91) | 16.94 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-45 B | 72.8 | (17.17) | 17.12 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-46 B | 73.2 | (17.08) | 17.08 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-47 B | 73.5 | (17.02) | 17.03 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | |
| 22L0329-48 B | 67.2 | (18.62) | 18.64 | 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 |
|---|---|---|---|---|---|---|---|---|---|
| BKL0730-BLK1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0730-BS1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0730-BSD1 | 100.0 | (12.50) | 12.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | (10g Actual Wt.) |
| BKL0730-MS1 | 73.9 | (16.91) | 16.94 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use 22L0329-44 |
| BKL0730-MSD1 | 73.9 | (16.91) | 16.94 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use 22L0329-44 |
| BKL0730-SRM1 | 100.0 | ~~(12.50)~~ (2.50) | 2.50 | 5mL | 5mL | 2mL | 2.5 ____ | 1.0 ____ | Use K010816 |

+1g DI WATER

01/03/23 — Client ID verified By — Date

Preparation Reviewed By — Date

01/03/23 10:30 — Extraction Date and Time

Printed: 12/30/2022 1:53:38PM

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## ORGANICS PREPARATION BENCH SHEET

Batch: BKL0730

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

### Prep Steps

**Microwave**
1 (2) 3
CR 01/03/23
Analyst/Date

**KD**
**100°C**
**Hexane Exchange**
**(2 X 20 mL)**
1 2 3 4 (5) 6
CP 1/6/22
Analyst/Date

**TurboVap**
**Pre Cleanups**
1 2 3 (4) 5
ZH 1/9/23
Analyst/Date

**TurboVap**
**Post Cleanups**
1 2 (3) 4 5
ZH 1/9/23
Analyst/Date

**Vialing**
ZH 1/9/23
Analyst/Date

### Reagents Used

| Station/Reagent | Standard ID |
|---|---|
| **Microwave** Analyst: CR Date: 01/03/23 | |
| Neutral Glass Wool | K011684 |
| 1:1 Hexane/Acetone | K011642 |
| Hexane | K011373 |
| Anhydrous Sodium Sulfate | K011753 |
| **KD** Analyst: CP Date: 1/6/22 | |
| Anhydrous Sodium Sulfate | |
| Hexane | K011373 |
| **Vialing** Analyst: ZH Date: 1/9/23 | |
| Hexane | K011373 |
| Concentrated Sulfuric Acid | K010364 |
| Silica Gel (SPE) Darts | K011573 |
| Sodium Sulfite | K010363 |
| Tetrabutylammonium hydrogensulfate (TBAS) | K011885 |

### Surrogates & Spike Standards Used

| Type | Vial ID / Standard ID | Vol uL | Analyst | Witness |
|---|---|---|---|---|
| **Surrogate** 2µg/mL | N K011752 Exp Date: 1/23/2023 | 50µL | CR | ✓ |
| **Spike** 20µg/mL | 1 K008150 Exp Date: 3/5/2023 | 63µL | CR | ✓ |

**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: BKL0730

**Prepared using: EPA 3546 (Microwave)**

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

**WO Comments**

**22L0329:** <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,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

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

Printed: 12/30/2022 1:53:38PM

3099F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB  Extraction Batch BKL0730

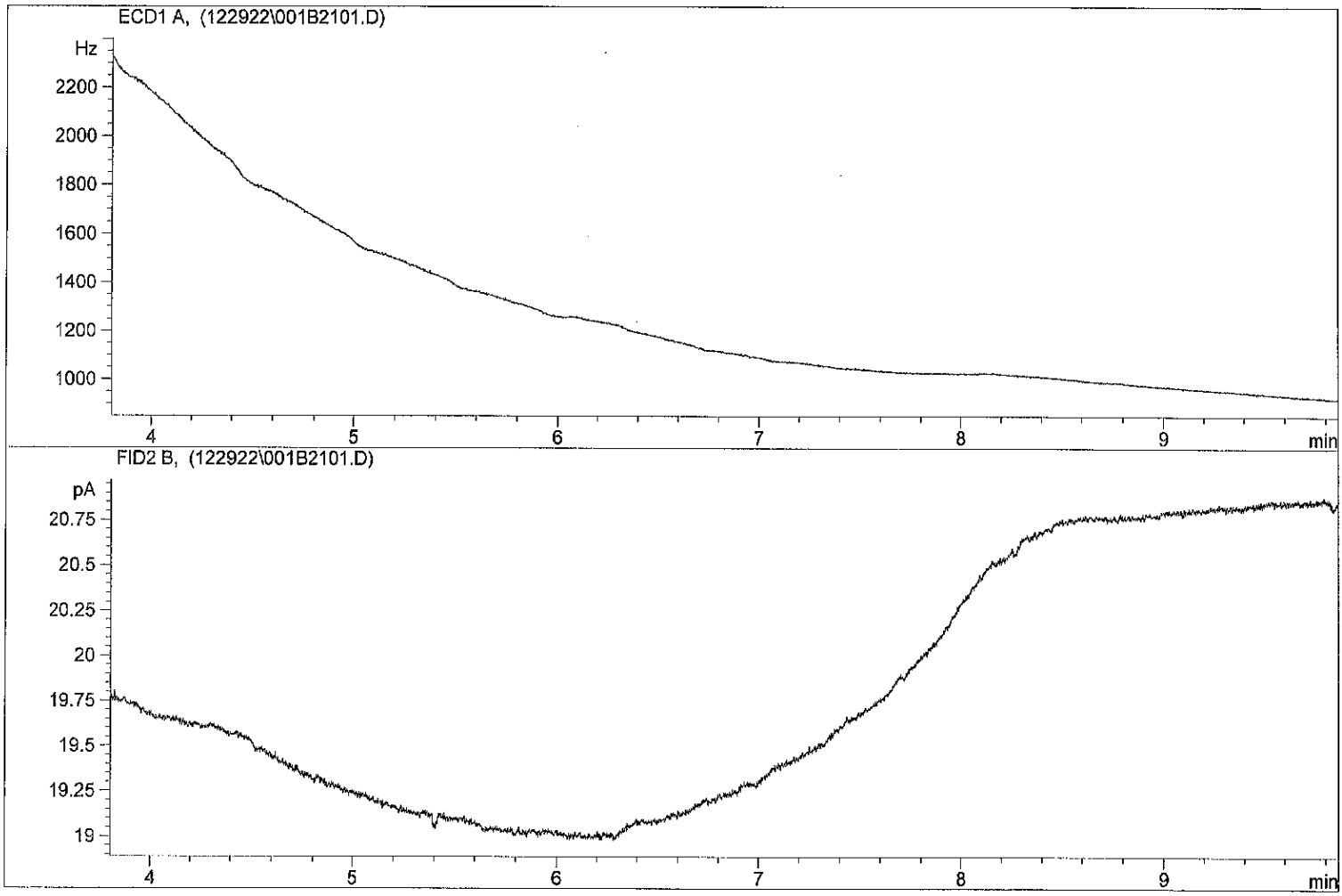
Total Solids Batch: BCL0642  Work Order(s): 22L0329 41-48

| Screens: Soil/Sediment/Solid/Other: | Analyst/Date |
|---|---|
| [X] No Anomalies (standard soil/wet sediment/sand/gravel)= | CR 12/29/22 |
| [X] Standing Water Decanted (Not shared)= 41-44, 46-48 | CR 12/29/22 |
| [ ] Standing Water Homogenized (Shared samples)= | |
| [ ] Clay/Clumps (Difficult to homogenize)= | |
| [ ] Rocks (%+size)? | |
| [ ] Organics (Leaves/sticks/grass)= | |
| [ ] Oily, obvious fuel/sulfur odors= | |
| [ ] Received in 32oz jar(s)=Homogenized in Pyrex dish= | |
| [X] Previously Frozen = 41-48 | CR 12/29/22 |
| [ ] 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 12/29/22 |
| [X] Multiple Jars Y / N | CR 12/29/22 |
| [ ] Sample Pre-Screens indicate analyte activity= | |
| [ ] Sample weights/volumes reduced based on Pre-Screen= | |

3056F

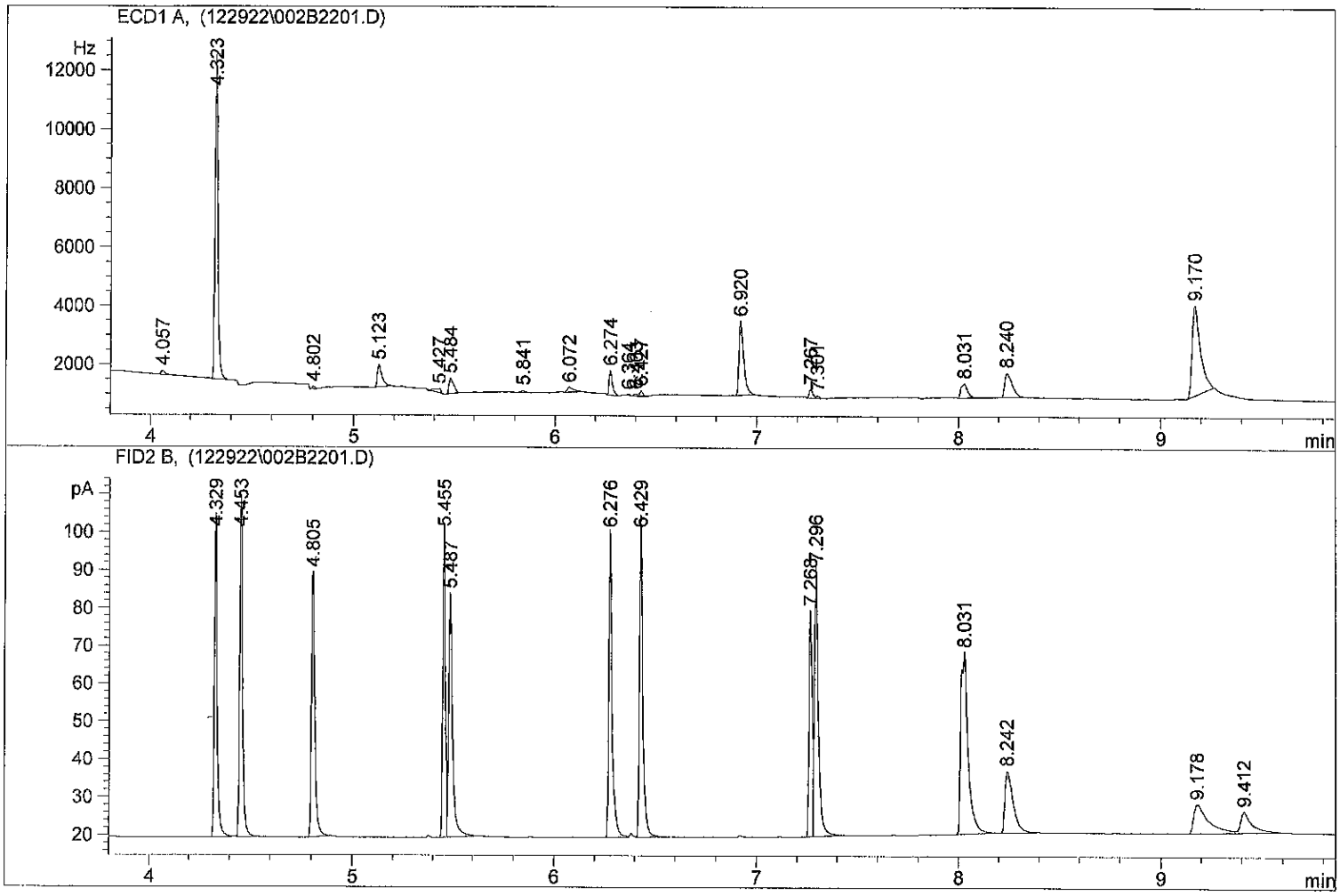
Data File C:\HPCHEM\2\DATA\122922\001B2101.D Sample Name: DCM RINSE

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 10:32:00 PM | Seq. Line : | 21 |
| Sample Name | : DCM RINSE | Location : | Vial 1 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



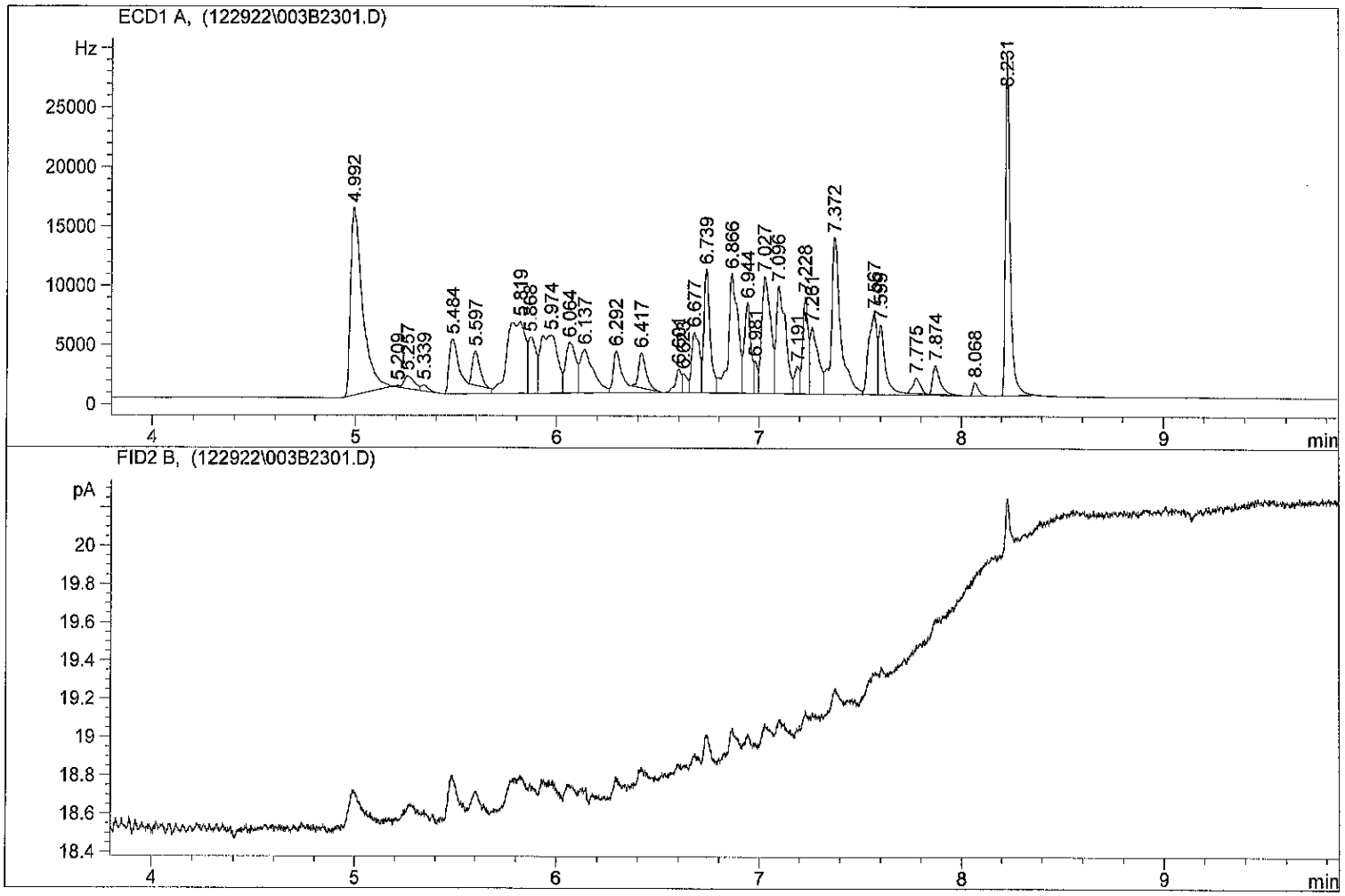

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 10:46:52 PM | Seq. Line : | 22 |
| Sample Name | : PNA STD 10PPM | Location : | Vial 2 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



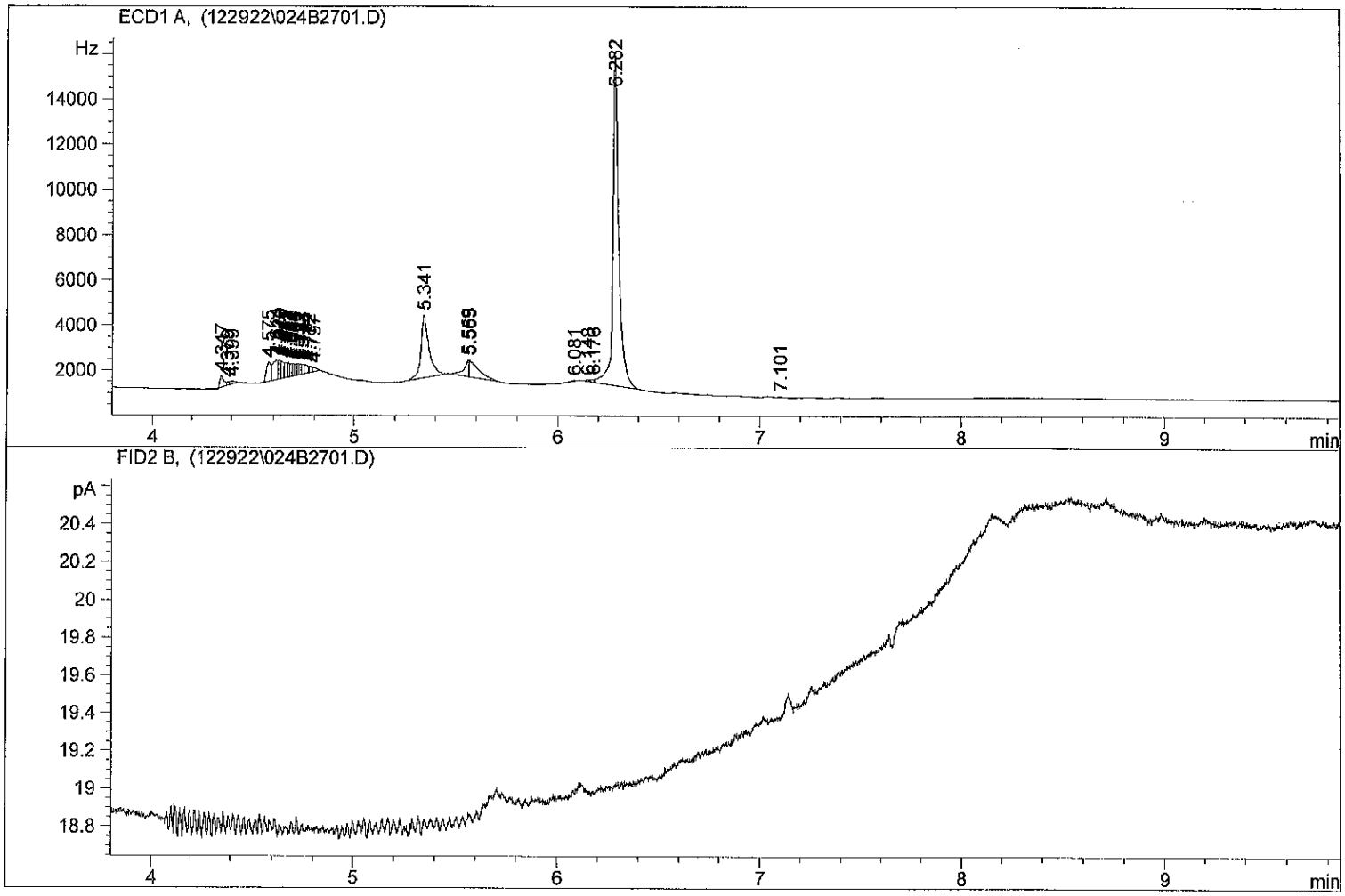

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/29/2022 11:01:45 PM | Seq. Line : | 23 |
| Sample Name | : AR1660 1PPM | Location : | Vial 3 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



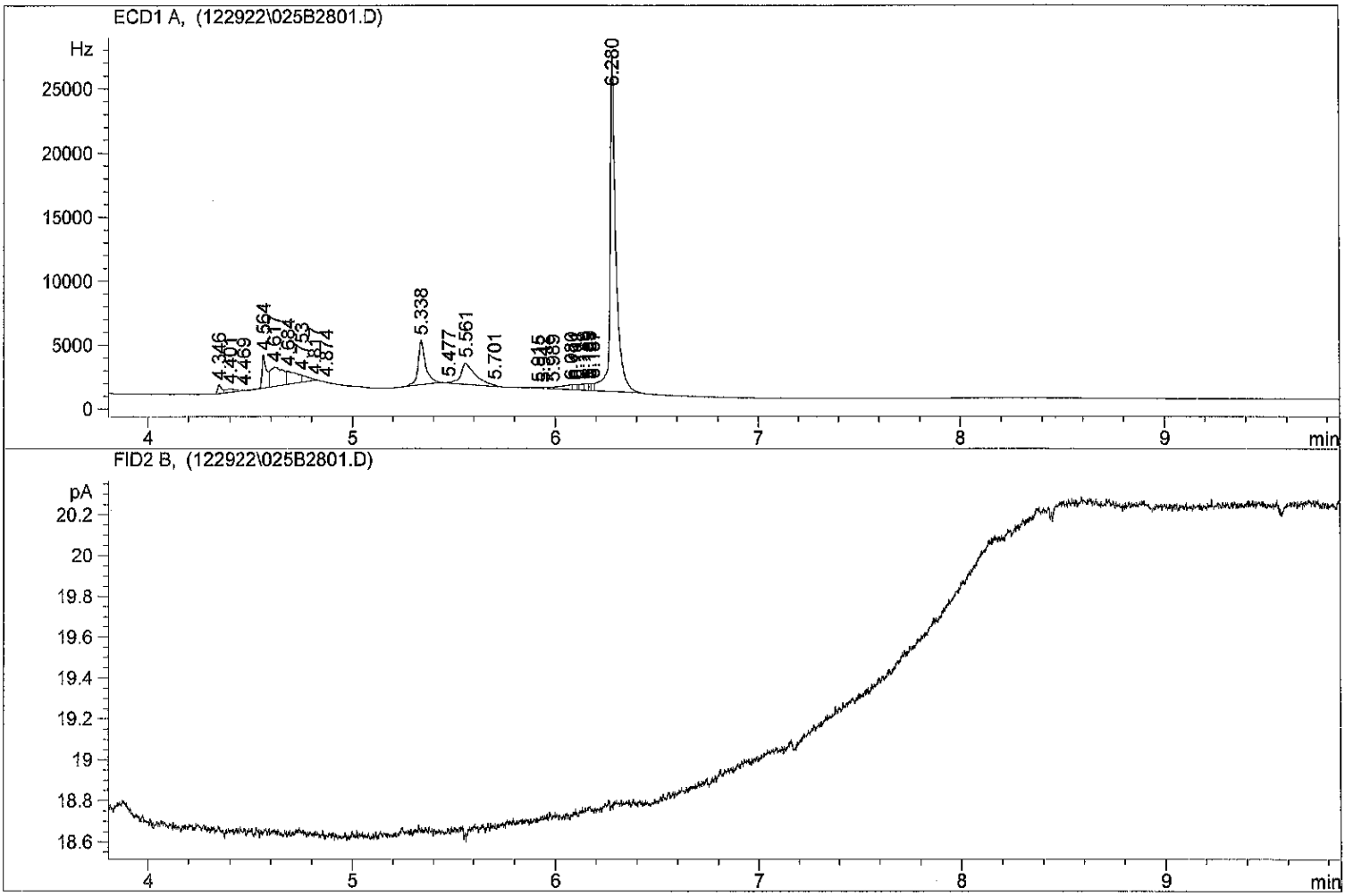

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 12:01:18 AM | Seq. Line | : 27 |
| Sample Name | : 22L0329 41 | Location | : Vial 24 |
| Acq. Operator | : CR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



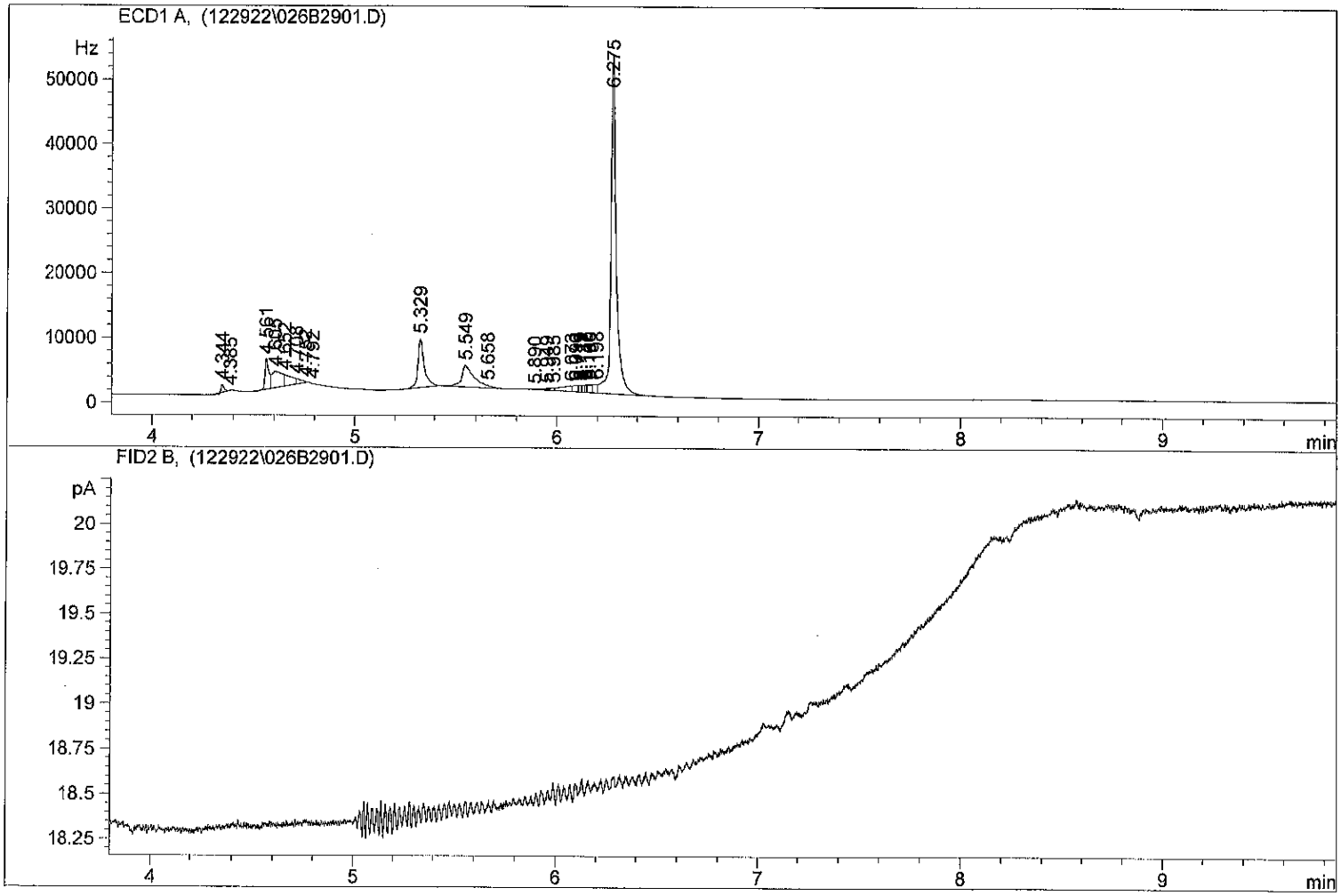

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 12:16:12 AM | Seq. Line : | 28 |
| Sample Name | : 22L0329 42 | Location : | Vial 25 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



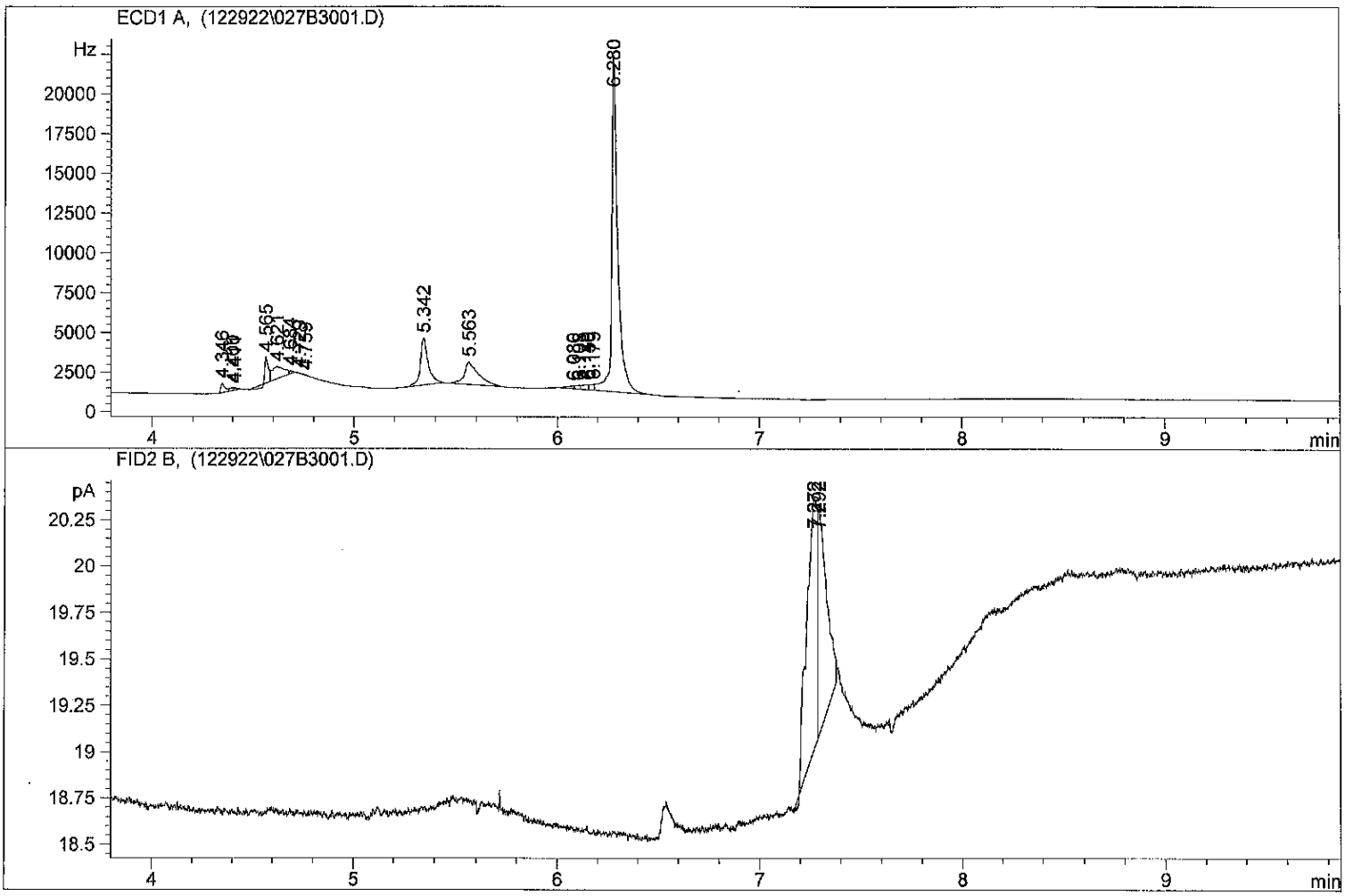

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 12:31:06 AM | Seq. Line | : 29 |
| Sample Name | : 22L0329 43 | Location | : Vial 26 |
| Acq. Operator | : CR | Inj | : 1 |
| | | Inj Volume | : 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume | : 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



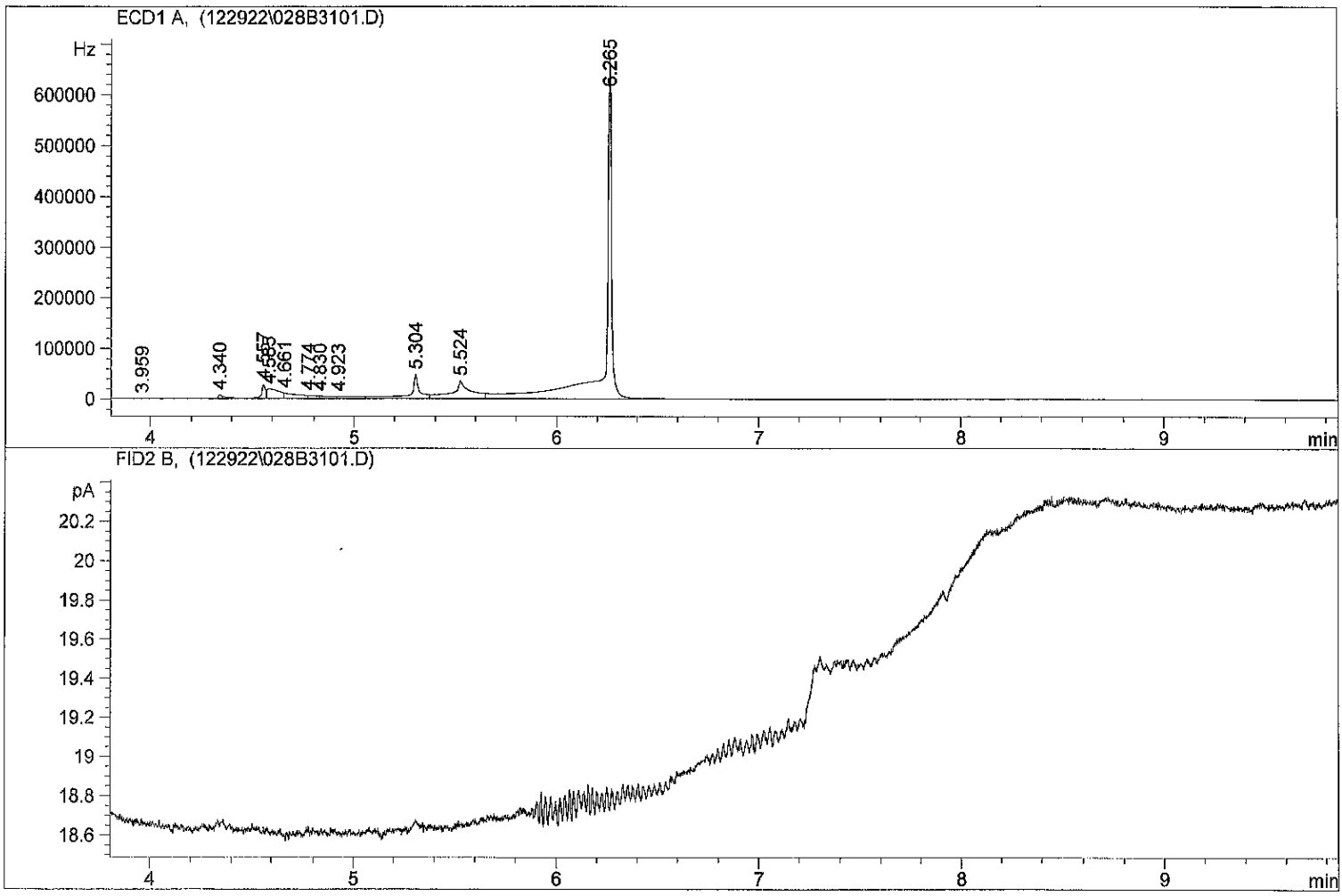

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 12:46:01 AM | Seq. Line : | 30 |
| Sample Name | : 22L0329 44 | Location : | Vial 27 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



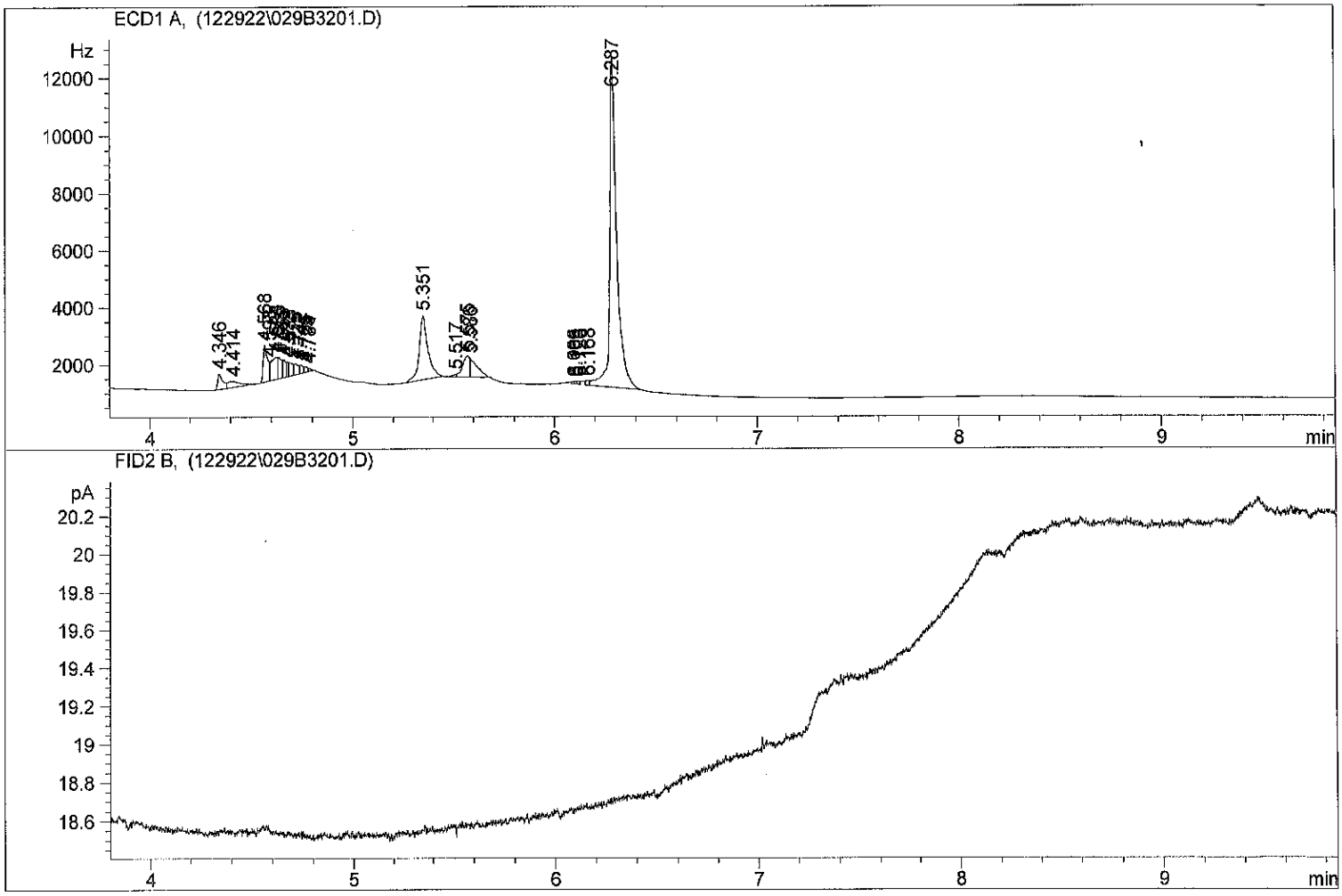

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 1:00:55 AM | Seq. Line : | 31 |
| Sample Name | : 22L0329 45 | Location : | Vial 28 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



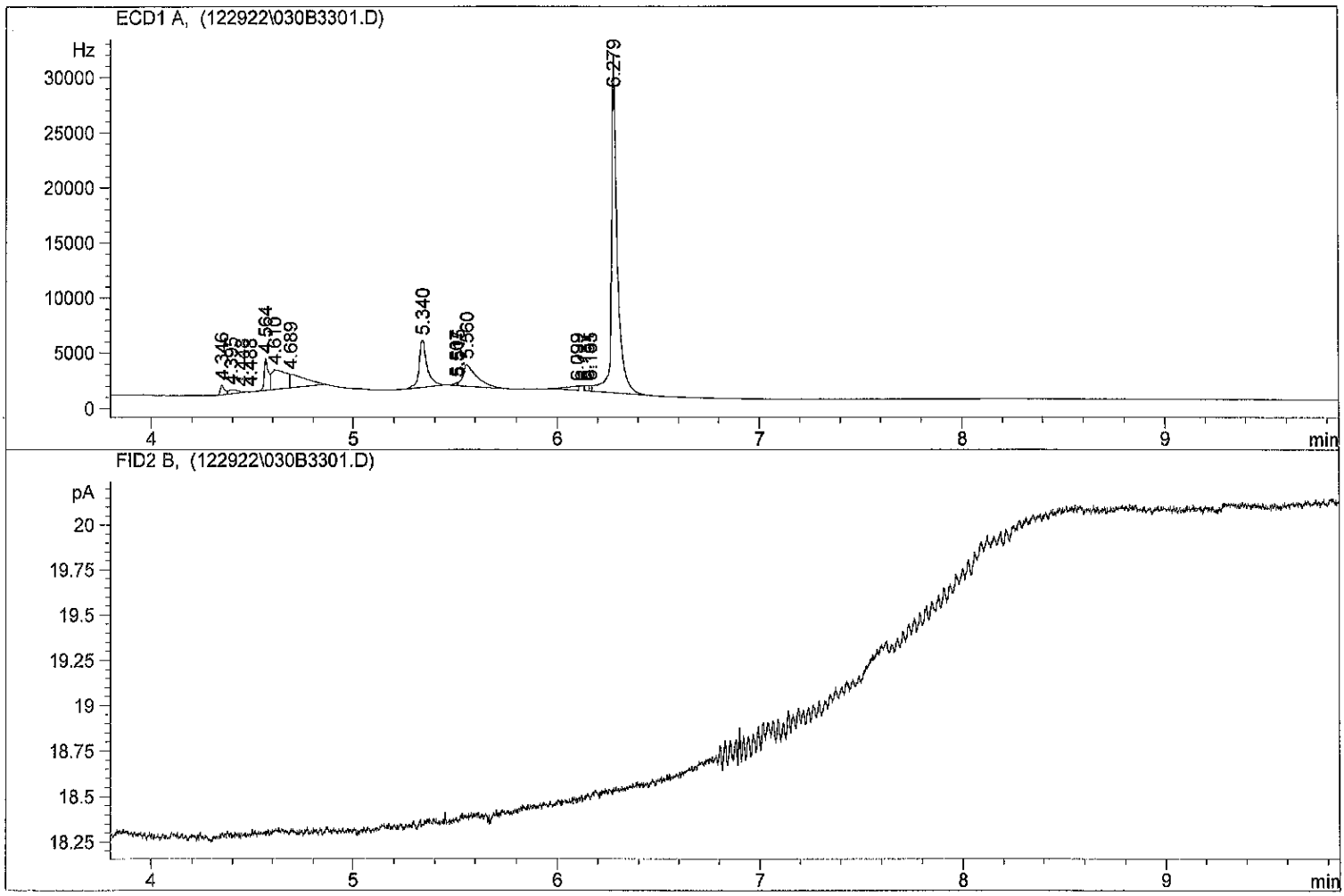

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 1:15:50 AM | Seq. Line : | 32 |
| Sample Name | : 22L0329 46 | Location : | Vial 29 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |



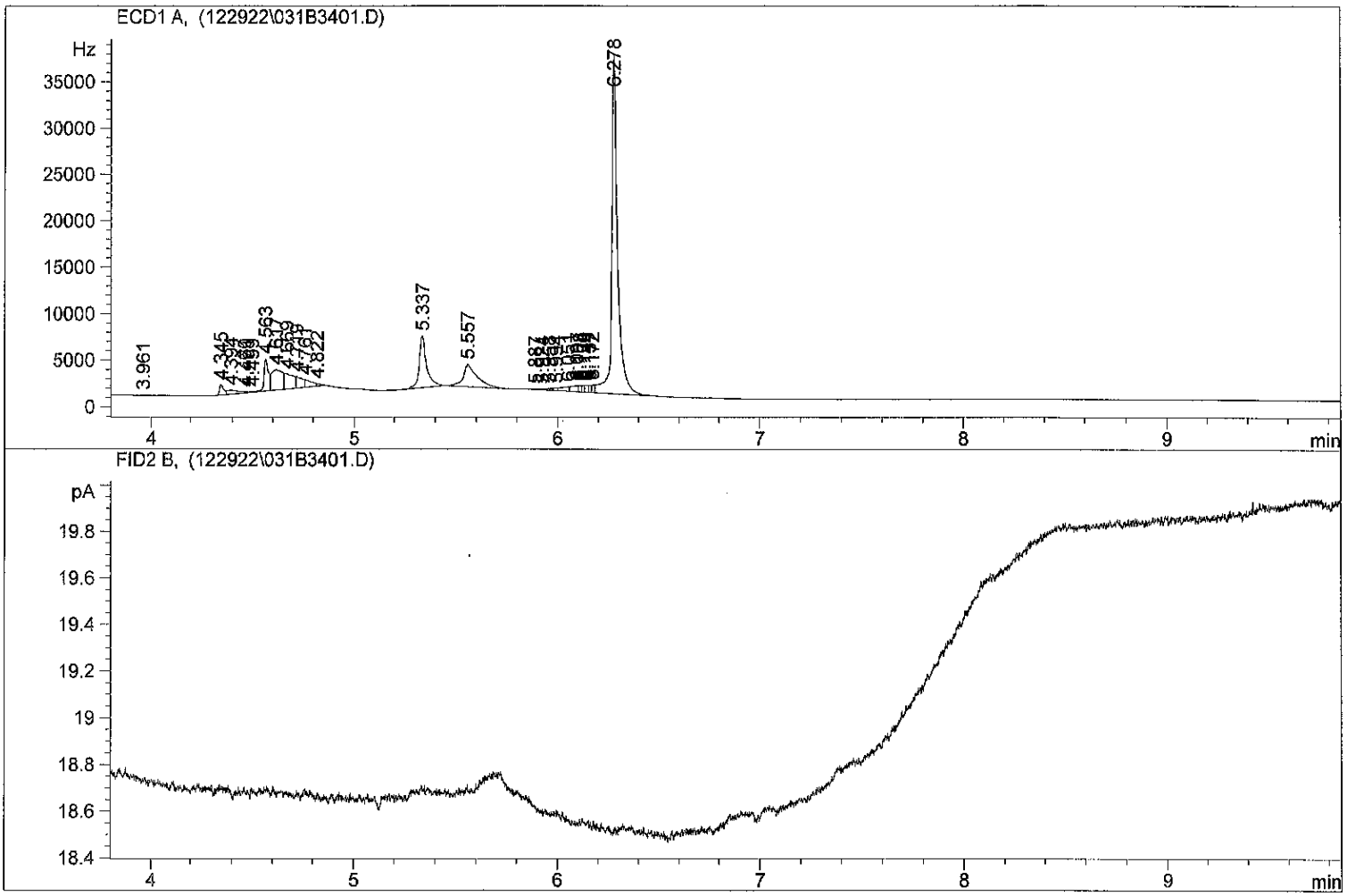

*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 1:30:45 AM | Seq. Line : | 33 |
| Sample Name | : 22L0329 47 | Location : | Vial 30 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

| | | | |
|---|---|---|---|
| Injection Date | : 12/30/2022 1:45:41 AM | Seq. Line : | 34 |
| Sample Name | : 22L0329 48 | Location : | Vial 31 |
| Acq. Operator | : CR | Inj : | 1 |
| | | Inj Volume : | 2 µl |
| Different Inj Volume from Sequence ! | | Actual Inj Volume : | 1 µl |
| Sequence File | : C:\HPCHEM\2\SEQUENCE\122922.S | | |
| Method | : C:\HPCHEM\2\METHODS\SCREEN.M | | |
| Last changed | : 10/18/2022 7:53:49 AM by DM | | |




*** End of Report ***

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0062 | 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-SC765E | 22L0329-32 | 01072392ECD7.D | 01/06/2023 | |
| Reference | BKL0728-SRM1 | 01072378ECD7.D | 01/06/2023 | |
| Matrix Spike Dup | BKL0728-MSD1 | 010723991ECD7.D | 01/06/2023 | |
| Matrix Spike | BKL0728-MS1 | 010723990ECD7.D | 01/06/2023 | |
| LCS Dup | BKL0728-BSD1 | 01072377ECD7.D | 01/06/2023 | |
| LCS | BKL0728-BS1 | 01072376ECD7.D | 01/06/2023 | |
| Blank | BKL0728-BLK1 | 01072375ECD7.D | 01/06/2023 | |
| LDW22-IT791G | 22L0329-21 | 01072379ECD7.D | 01/06/2023 | |
| LDW22-SC781G | 22L0329-27 | 01072385ECD7.D | 01/06/2023 | |
| LDW22-SC781F | 22L0329-26 | 01072384ECD7.D | 01/06/2023 | |
| LDW22-SC781E | 22L0329-25 | 01072383ECD7.D | 01/06/2023 | |
| LDW22-SC781H | 22L0329-28 | 01112365ECD7.D | 01/06/2023 | |
| LDW22-SC781C | 22L0329-23 | 01072381ECD7.D | 01/06/2023 | |
| LDW22-SC781B | 22L0329-22 | 01072380ECD7.D | 01/06/2023 | |
| LDW22-SC765D | 22L0329-31 | 01112366ECD7.D | 01/06/2023 | |
| LDW22-SC765C | 22L0329-30 | 01072388ECD7.D | 01/06/2023 | |
| LDW22-SC765B | 22L0329-29 | 01072387ECD7.D | 01/06/2023 | |
| LDW22-SC757H | 22L0329-40 | 010723993ECD7.D | 01/06/2023 | |
| LDW22-SC757E | 22L0329-37 | 01072397ECD7.D | 01/06/2023 | |
| LDW22-SC757G | 22L0329-39 | 010723992ECD7.D | 01/06/2023 | |
| LDW22-SC757F | 22L0329-38 | 01072398ECD7.D | 01/06/2023 | |
| LDW22-SC757C | 22L0329-35 | 01072395ECD7.D | 01/06/2023 | |
| LDW22-SC757D | 22L0329-36 | 01072396ECD7.D | 01/06/2023 | |
| LDW22-SC757B | 22L0329-34 | 01072394ECD7.D | 01/06/2023 | |
| LDW22-SC757A | 22L0329-33 | 01072393ECD7.D | 01/06/2023 | |
| LDW22-SC781D | 22L0329-24 | 01072382ECD7.D | 01/06/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0062

**Matrix: Solid** **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/6/2023 3:30:07PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-21 | B | LDW22-IT791G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-22 | B | LDW22-SC781B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-23 | B | LDW22-SC781C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-24 | B | LDW22-SC781D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-25 | B | LDW22-SC781E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-26 | B | LDW22-SC781F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-27 | B | LDW22-SC781G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-28 | B | LDW22-SC781H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-29 | B | LDW22-SC765B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-30 | B | LDW22-SC765C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-31 | B | LDW22-SC765D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-32 | B | LDW22-SC765E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-33 | B | LDW22-SC757A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-34 | B | LDW22-SC757B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-35 | B | LDW22-SC757C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-36 | B | LDW22-SC757D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-37 | B | LDW22-SC757E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-38 | B | LDW22-SC757F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-39 | B | LDW22-SC757G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-40 | B | LDW22-SC757H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| BKL0728-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0062

**Matrix: Solid** **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/6/2023 3:30:07PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| BKL0728-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0063 | Cleanup Type: | Sulfur |
| Cleanup Method: | EPA 3660B Sulfur Cleanup - uL | Analysis: | EPA 8082A |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-SC765C | 22L0329-30 | 01072388ECD7.D | 01/06/2023 | |
| Blank | BKL0728-BLK1 | 01072375ECD7.D | 01/06/2023 | |
| LCS Dup | BKL0728-BSD1 | 01072377ECD7.D | 01/06/2023 | |
| LDW22-SC781C | 22L0329-23 | 01072381ECD7.D | 01/06/2023 | |
| Matrix Spike Dup | BKL0728-MSD1 | 010723991ECD7.D | 01/06/2023 | |
| LCS | BKL0728-BS1 | 01072376ECD7.D | 01/06/2023 | |
| LDW22-SC781H | 22L0329-28 | 01112365ECD7.D | 01/06/2023 | |
| LDW22-SC781B | 22L0329-22 | 01072380ECD7.D | 01/06/2023 | |
| LDW22-SC781D | 22L0329-24 | 01072382ECD7.D | 01/06/2023 | |
| LDW22-SC781E | 22L0329-25 | 01072383ECD7.D | 01/06/2023 | |
| LDW22-SC781F | 22L0329-26 | 01072384ECD7.D | 01/06/2023 | |
| Matrix Spike | BKL0728-MS1 | 010723990ECD7.D | 01/06/2023 | |
| Reference | BKL0728-SRM1 | 01072378ECD7.D | 01/06/2023 | |
| LDW22-IT791G | 22L0329-21 | 01072379ECD7.D | 01/06/2023 | |
| LDW22-SC765D | 22L0329-31 | 01112366ECD7.D | 01/06/2023 | |
| LDW22-SC765B | 22L0329-29 | 01072387ECD7.D | 01/06/2023 | |
| LDW22-SC757A | 22L0329-33 | 01072393ECD7.D | 01/06/2023 | |
| LDW22-SC757B | 22L0329-34 | 01072394ECD7.D | 01/06/2023 | |
| LDW22-SC757C | 22L0329-35 | 01072395ECD7.D | 01/06/2023 | |
| LDW22-SC757D | 22L0329-36 | 01072396ECD7.D | 01/06/2023 | |
| LDW22-SC757E | 22L0329-37 | 01072397ECD7.D | 01/06/2023 | |
| LDW22-SC757F | 22L0329-38 | 01072398ECD7.D | 01/06/2023 | |
| LDW22-SC757G | 22L0329-39 | 010723992ECD7.D | 01/06/2023 | |
| LDW22-SC757H | 22L0329-40 | 010723993ECD7.D | 01/06/2023 | |
| LDW22-SC765E | 22L0329-32 | 01072392ECD7.D | 01/06/2023 | |
| LDW22-SC781G | 22L0329-27 | 01072385ECD7.D | 01/06/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0063

**Matrix: Solid** **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/6/2023 3:31:29PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-21 | B | LDW22-IT791G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-22 | B | LDW22-SC781B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-23 | B | LDW22-SC781C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-24 | B | LDW22-SC781D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-25 | B | LDW22-SC781E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-26 | B | LDW22-SC781F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-27 | B | LDW22-SC781G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-28 | B | LDW22-SC781H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-29 | B | LDW22-SC765B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-30 | B | LDW22-SC765C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-31 | B | LDW22-SC765D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-32 | B | LDW22-SC765E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-33 | B | LDW22-SC757A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-34 | B | LDW22-SC757B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-35 | B | LDW22-SC757C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-36 | B | LDW22-SC757D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-37 | B | LDW22-SC757E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-38 | B | LDW22-SC757F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-39 | B | LDW22-SC757G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-40 | B | LDW22-SC757H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| BKL0728-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0063

**Matrix: Solid** **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/6/2023 3:31:29PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| BKL0728-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0064 | 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-SC765C | 22L0329-30 | 01072388ECD7.D | 01/06/2023 | |
| LDW22-SC757E | 22L0329-37 | 01072397ECD7.D | 01/06/2023 | |
| LDW22-SC757F | 22L0329-38 | 01072398ECD7.D | 01/06/2023 | |
| LDW22-SC757G | 22L0329-39 | 010723992ECD7.D | 01/06/2023 | |
| LDW22-SC781H | 22L0329-28 | 01112365ECD7.D | 01/06/2023 | |
| LDW22-SC781G | 22L0329-27 | 01072385ECD7.D | 01/06/2023 | |
| LDW22-SC765B | 22L0329-29 | 01072387ECD7.D | 01/06/2023 | |
| LDW22-SC781E | 22L0329-25 | 01072383ECD7.D | 01/06/2023 | |
| LDW22-SC765E | 22L0329-32 | 01072392ECD7.D | 01/06/2023 | |
| LDW22-SC781C | 22L0329-23 | 01072381ECD7.D | 01/06/2023 | |
| LDW22-SC757H | 22L0329-40 | 010723993ECD7.D | 01/06/2023 | |
| LDW22-SC781D | 22L0329-24 | 01072382ECD7.D | 01/06/2023 | |
| LDW22-SC765D | 22L0329-31 | 01112366ECD7.D | 01/06/2023 | |
| Matrix Spike | BKL0728-MS1 | 010723990ECD7.D | 01/06/2023 | |
| Blank | BKL0728-BLK1 | 01072375ECD7.D | 01/06/2023 | |
| LDW22-SC781F | 22L0329-26 | 01072384ECD7.D | 01/06/2023 | |
| Reference | BKL0728-SRM1 | 01072378ECD7.D | 01/06/2023 | |
| LDW22-SC757B | 22L0329-34 | 01072394ECD7.D | 01/06/2023 | |
| LDW22-SC757A | 22L0329-33 | 01072393ECD7.D | 01/06/2023 | |
| LDW22-IT791G | 22L0329-21 | 01072379ECD7.D | 01/06/2023 | |
| LDW22-SC757C | 22L0329-35 | 01072395ECD7.D | 01/06/2023 | |
| LCS | BKL0728-BS1 | 01072376ECD7.D | 01/06/2023 | |
| LCS Dup | BKL0728-BSD1 | 01072377ECD7.D | 01/06/2023 | |
| LDW22-SC781B | 22L0329-22 | 01072380ECD7.D | 01/06/2023 | |
| Matrix Spike Dup | BKL0728-MSD1 | 010723991ECD7.D | 01/06/2023 | |
| LDW22-SC757D | 22L0329-36 | 01072396ECD7.D | 01/06/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0064

**Matrix: Solid** **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/6/2023 3:32:52PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-21 | B | LDW22-IT791G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-22 | B | LDW22-SC781B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-23 | B | LDW22-SC781C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-24 | B | LDW22-SC781D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-25 | B | LDW22-SC781E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-26 | B | LDW22-SC781F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-27 | B | LDW22-SC781G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-28 | B | LDW22-SC781H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-29 | B | LDW22-SC765B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-30 | B | LDW22-SC765C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-31 | B | LDW22-SC765D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-32 | B | LDW22-SC765E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-33 | B | LDW22-SC757A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-34 | B | LDW22-SC757B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-35 | B | LDW22-SC757C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-36 | B | LDW22-SC757D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-37 | B | LDW22-SC757E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-38 | B | LDW22-SC757F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-39 | B | LDW22-SC757G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| 22L0329-40 | B | LDW22-SC757H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/6/2023 | ZH | |
| BKL0728-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0064

**Matrix: Solid** **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/6/2023 3:32:52PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| BKL0728-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |
| BKL0728-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/6/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0071 | 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 |
|---|---|---|---|---|
| Matrix Spike | BKL0687-MS1 | 01092377ECD7.D | 01/09/2023 | |
| LDW22-IT799D | 22L0329-04 | 01092362ECD7.D | 01/09/2023 | |
| LDW22-IT799E | 22L0329-05 | 01092363ECD7.D | 01/09/2023 | |
| LDW22-IT799F | 22L0329-06 | 01092364ECD7.D | 01/09/2023 | |
| LDW22-SC788B | 22L0329-07 | 01092365ECD7.D | 01/09/2023 | |
| LDW22-SC788D | 22L0329-09 | 01092367ECD7.D | 01/09/2023 | |
| LDW22-IT791E | 22L0329-19 | 01092381ECD7.D | 01/09/2023 | |
| LDW22-SC788E | 22L0329-10 | 01092368ECD7.D | 01/09/2023 | |
| LDW22-SC788E-FD | 22L0329-11 | 01092371ECD7.D | 01/09/2023 | |
| LDW22-SC788F | 22L0329-12 | 01102321ECD7.D | 01/09/2023 | |
| LDW22-SC788G | 22L0329-13 | 01102322ECD7.D | 01/09/2023 | |
| LDW22-IT799C | 22L0329-03 | 01092361ECD7.D | 01/09/2023 | |
| LDW22-SC788C | 22L0329-08 | 01092366ECD7.D | 01/09/2023 | |
| Reference | BKL0687-SRM1 | 01092358ECD7.D | 01/09/2023 | |
| LDW22-IT799A | 22L0329-01 | 01092359ECD7.D | 01/09/2023 | |
| Matrix Spike Dup | BKL0687-MSD1 | 01092378ECD7.D | 01/09/2023 | |
| LDW22-IT799B | 22L0329-02 | 01092360ECD7.D | 01/09/2023 | |
| LCS Dup | BKL0687-BSD1 | 01092357ECD7.D | 01/09/2023 | |
| LCS | BKL0687-BS1 | 01092356ECD7.D | 01/09/2023 | |
| Blank | BKL0687-BLK1 | 01092355ECD7.D | 01/09/2023 | |
| LDW22-IT791A | 22L0329-15 | 01092375ECD7.D | 01/09/2023 | |
| LDW22-IT791B | 22L0329-16 | 01092376ECD7.D | 01/09/2023 | |
| LDW22-IT791C | 22L0329-17 | 01092379ECD7.D | 01/09/2023 | |
| LDW22-IT791D | 22L0329-18 | 01092380ECD7.D | 01/09/2023 | |
| LDW22-IT791F | 22L0329-20 | 01092382ECD7.D | 01/09/2023 | |
| LDW22-SC788H | 22L0329-14 | 01092374ECD7.D | 01/09/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0071

**Matrix: Solid** **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/9/2023 9:13:46AM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-01 | B | LDW22-IT799A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-02 | B | LDW22-IT799B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-03 | A | LDW22-IT799C | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-04 | A | LDW22-IT799D | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-05 | A | LDW22-IT799E | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-06 | B | LDW22-IT799F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-07 | A | LDW22-SC788B | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-08 | A | LDW22-SC788C | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-09 | B | LDW22-SC788D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-10 | A | LDW22-SC788E | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-11 | B | LDW22-SC788E-FD | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-12 | B | LDW22-SC788F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-13 | B | LDW22-SC788G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-14 | B | LDW22-SC788H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-15 | B | LDW22-IT791A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-16 | B | LDW22-IT791B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-17 | B | LDW22-IT791C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-18 | B | LDW22-IT791D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-19 | B | LDW22-IT791E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-20 | B | LDW22-IT791F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| BKL0687-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0071

**Matrix: Solid** **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/9/2023 9:13:46AM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| BKL0687-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0072 | 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 Dup | BKL0687-MSD1 | 01092378ECD7.D | 01/09/2023 | |
| LDW22-IT791F | 22L0329-20 | 01092382ECD7.D | 01/09/2023 | |
| LDW22-IT791A | 22L0329-15 | 01092375ECD7.D | 01/09/2023 | |
| LDW22-IT791B | 22L0329-16 | 01092376ECD7.D | 01/09/2023 | |
| LDW22-IT791C | 22L0329-17 | 01092379ECD7.D | 01/09/2023 | |
| LDW22-IT791D | 22L0329-18 | 01092380ECD7.D | 01/09/2023 | |
| LDW22-IT791E | 22L0329-19 | 01092381ECD7.D | 01/09/2023 | |
| LDW22-SC788E-FD | 22L0329-11 | 01092371ECD7.D | 01/09/2023 | |
| Matrix Spike | BKL0687-MS1 | 01092377ECD7.D | 01/09/2023 | |
| LCS Dup | BKL0687-BSD1 | 01092357ECD7.D | 01/09/2023 | |
| LCS | BKL0687-BS1 | 01092356ECD7.D | 01/09/2023 | |
| LDW22-SC788H | 22L0329-14 | 01092374ECD7.D | 01/09/2023 | |
| Reference | BKL0687-SRM1 | 01092358ECD7.D | 01/09/2023 | |
| LDW22-SC788F | 22L0329-12 | 01102321ECD7.D | 01/09/2023 | |
| LDW22-SC788G | 22L0329-13 | 01102322ECD7.D | 01/09/2023 | |
| LDW22-IT799A | 22L0329-01 | 01092359ECD7.D | 01/09/2023 | |
| LDW22-SC788E | 22L0329-10 | 01092368ECD7.D | 01/09/2023 | |
| LDW22-SC788D | 22L0329-09 | 01092367ECD7.D | 01/09/2023 | |
| LDW22-SC788C | 22L0329-08 | 01092366ECD7.D | 01/09/2023 | |
| LDW22-SC788B | 22L0329-07 | 01092365ECD7.D | 01/09/2023 | |
| LDW22-IT799F | 22L0329-06 | 01092364ECD7.D | 01/09/2023 | |
| LDW22-IT799E | 22L0329-05 | 01092363ECD7.D | 01/09/2023 | |
| LDW22-IT799D | 22L0329-04 | 01092362ECD7.D | 01/09/2023 | |
| LDW22-IT799C | 22L0329-03 | 01092361ECD7.D | 01/09/2023 | |
| LDW22-IT799B | 22L0329-02 | 01092360ECD7.D | 01/09/2023 | |
| Blank | BKL0687-BLK1 | 01092355ECD7.D | 01/09/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0072

**Matrix: Solid** **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/9/2023 9:15:02AM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-01 | B | LDW22-IT799A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-02 | B | LDW22-IT799B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-03 | A | LDW22-IT799C | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-04 | A | LDW22-IT799D | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-05 | A | LDW22-IT799E | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-06 | B | LDW22-IT799F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-07 | A | LDW22-SC788B | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-08 | A | LDW22-SC788C | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-09 | B | LDW22-SC788D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-10 | A | LDW22-SC788E | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-11 | B | LDW22-SC788E-FD | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-12 | B | LDW22-SC788F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-13 | B | LDW22-SC788G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-14 | B | LDW22-SC788H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-15 | B | LDW22-IT791A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-16 | B | LDW22-IT791B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-17 | B | LDW22-IT791C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-18 | B | LDW22-IT791D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-19 | B | LDW22-IT791E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-20 | B | LDW22-IT791F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| BKL0687-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0072

**Matrix: Solid** **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/9/2023 9:15:02AM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| BKL0687-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0073 | 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-IT791C | 22L0329-17 | 01092379ECD7.D | 01/09/2023 | |
| LDW22-SC788G | 22L0329-13 | 01102322ECD7.D | 01/09/2023 | |
| Blank | BKL0687-BLK1 | 01092355ECD7.D | 01/09/2023 | |
| LCS Dup | BKL0687-BSD1 | 01092357ECD7.D | 01/09/2023 | |
| Matrix Spike | BKL0687-MS1 | 01092377ECD7.D | 01/09/2023 | |
| LDW22-SC788E-FD | 22L0329-11 | 01092371ECD7.D | 01/09/2023 | |
| Reference | BKL0687-SRM1 | 01092358ECD7.D | 01/09/2023 | |
| LDW22-IT799E | 22L0329-05 | 01092363ECD7.D | 01/09/2023 | |
| Matrix Spike Dup | BKL0687-MSD1 | 01092378ECD7.D | 01/09/2023 | |
| LDW22-IT799A | 22L0329-01 | 01092359ECD7.D | 01/09/2023 | |
| LCS | BKL0687-BS1 | 01092356ECD7.D | 01/09/2023 | |
| LDW22-SC788F | 22L0329-12 | 01102321ECD7.D | 01/09/2023 | |
| LDW22-IT791B | 22L0329-16 | 01092376ECD7.D | 01/09/2023 | |
| LDW22-IT791E | 22L0329-19 | 01092381ECD7.D | 01/09/2023 | |
| LDW22-IT791D | 22L0329-18 | 01092380ECD7.D | 01/09/2023 | |
| LDW22-SC788B | 22L0329-07 | 01092365ECD7.D | 01/09/2023 | |
| LDW22-IT791F | 22L0329-20 | 01092382ECD7.D | 01/09/2023 | |
| LDW22-SC788E | 22L0329-10 | 01092368ECD7.D | 01/09/2023 | |
| LDW22-IT799B | 22L0329-02 | 01092360ECD7.D | 01/09/2023 | |
| LDW22-IT799C | 22L0329-03 | 01092361ECD7.D | 01/09/2023 | |
| LDW22-IT799D | 22L0329-04 | 01092362ECD7.D | 01/09/2023 | |
| LDW22-SC788H | 22L0329-14 | 01092374ECD7.D | 01/09/2023 | |
| LDW22-IT799F | 22L0329-06 | 01092364ECD7.D | 01/09/2023 | |
| LDW22-SC788C | 22L0329-08 | 01092366ECD7.D | 01/09/2023 | |
| LDW22-SC788D | 22L0329-09 | 01092367ECD7.D | 01/09/2023 | |
| LDW22-IT791A | 22L0329-15 | 01092375ECD7.D | 01/09/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0073

**Matrix: Solid** **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/9/2023 9:16:15AM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-01 | B | LDW22-IT799A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-02 | B | LDW22-IT799B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-03 | A | LDW22-IT799C | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-04 | A | LDW22-IT799D | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-05 | A | LDW22-IT799E | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-06 | B | LDW22-IT799F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-07 | A | LDW22-SC788B | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-08 | A | LDW22-SC788C | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-09 | B | LDW22-SC788D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-10 | A | LDW22-SC788E | A 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-11 | B | LDW22-SC788E-FD | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-12 | B | LDW22-SC788F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-13 | B | LDW22-SC788G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-14 | B | LDW22-SC788H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-15 | B | LDW22-IT791A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-16 | B | LDW22-IT791B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-17 | B | LDW22-IT791C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-18 | B | LDW22-IT791D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-19 | B | LDW22-IT791E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| 22L0329-20 | B | LDW22-IT791F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | DDM | |
| BKL0687-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |

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# CLEANUP BENCH SHEET

CLA0073

**Matrix: Solid** **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/9/2023 9:16:15AM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| BKL0687-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |
| BKL0687-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/9/2023 | DDM | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0082 | 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-SC754F | 22L0329-46 | 01102338ECD7.D | 01/09/2023 | |
| Reference | BKL0730-SRM1 | 01102330ECD7.D | 01/09/2023 | |
| Matrix Spike Dup | BKL0730-MSD1 | 01102336ECD7.D | 01/09/2023 | |
| LDW22-SC754G | 22L0329-47 | 01102339ECD7.D | 01/09/2023 | |
| LDW22-SC754B | 22L0329-42 | 01102332ECD7.D | 01/09/2023 | |
| LDW22-SC754E | 22L0329-45 | 01102337ECD7.D | 01/09/2023 | |
| LDW22-SC754D | 22L0329-44 | 01102334ECD7.D | 01/09/2023 | |
| LDW22-SC754C | 22L0329-43 | 01102333ECD7.D | 01/09/2023 | |
| LDW22-SC754A | 22L0329-41 | 01102331ECD7.D | 01/09/2023 | |
| LDW22-SC754H | 22L0329-48 | 01102340ECD7.D | 01/09/2023 | |
| LCS Dup | BKL0730-BSD1 | 01102329ECD7.D | 01/09/2023 | |
| LCS | BKL0730-BS1 | 01102328ECD7.D | 01/09/2023 | |
| Blank | BKL0730-BLK1 | 01102327ECD7.D | 01/09/2023 | |
| Matrix Spike | BKL0730-MS1 | 01102335ECD7.D | 01/09/2023 | |

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# CLEANUP BENCH SHEET

CLA0082

**Matrix: Solid** **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/9/2023 2:44:03PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-41 | B | LDW22-SC754A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-42 | B | LDW22-SC754B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-43 | B | LDW22-SC754C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-44 | B | LDW22-SC754D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-45 | B | LDW22-SC754E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-46 | B | LDW22-SC754F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-47 | B | LDW22-SC754G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-48 | B | LDW22-SC754H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| BKL0730-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0083 | Cleanup Type: | Sulfur |
| Cleanup Method: | EPA 3660B Sulfur Cleanup - uL | Analysis: | EPA 8082A |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-SC754E | 22L0329-45 | 01102337ECD7.D | 01/09/2023 | |
| LDW22-SC754H | 22L0329-48 | 01102340ECD7.D | 01/09/2023 | |
| LDW22-SC754F | 22L0329-46 | 01102338ECD7.D | 01/09/2023 | |
| LDW22-SC754D | 22L0329-44 | 01102334ECD7.D | 01/09/2023 | |
| LDW22-SC754C | 22L0329-43 | 01102333ECD7.D | 01/09/2023 | |
| LDW22-SC754A | 22L0329-41 | 01102331ECD7.D | 01/09/2023 | |
| LDW22-SC754G | 22L0329-47 | 01102339ECD7.D | 01/09/2023 | |
| Reference | BKL0730-SRM1 | 01102330ECD7.D | 01/09/2023 | |
| LDW22-SC754B | 22L0329-42 | 01102332ECD7.D | 01/09/2023 | |
| Blank | BKL0730-BLK1 | 01102327ECD7.D | 01/09/2023 | |
| LCS | BKL0730-BS1 | 01102328ECD7.D | 01/09/2023 | |
| LCS Dup | BKL0730-BSD1 | 01102329ECD7.D | 01/09/2023 | |
| Matrix Spike | BKL0730-MS1 | 01102335ECD7.D | 01/09/2023 | |
| Matrix Spike Dup | BKL0730-MSD1 | 01102336ECD7.D | 01/09/2023 | |

**Analytical Resources, LLC**
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# CLEANUP BENCH SHEET

CLA0083

**Matrix: Solid** **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/9/2023 2:44:45PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-41 | B | LDW22-SC754A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-42 | B | LDW22-SC754B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-43 | B | LDW22-SC754C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-44 | B | LDW22-SC754D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-45 | B | LDW22-SC754E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-46 | B | LDW22-SC754F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-47 | B | LDW22-SC754G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-48 | B | LDW22-SC754H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| BKL0730-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BATCH SUMMARY

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Cleanup Batch: | CLA0084 | 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 |
|---|---|---|---|---|
| Matrix Spike Dup | BKL0730-MSD1 | 01102336ECD7.D | 01/09/2023 | |
| Matrix Spike | BKL0730-MS1 | 01102335ECD7.D | 01/09/2023 | |
| LCS Dup | BKL0730-BSD1 | 01102329ECD7.D | 01/09/2023 | |
| LCS | BKL0730-BS1 | 01102328ECD7.D | 01/09/2023 | |
| Blank | BKL0730-BLK1 | 01102327ECD7.D | 01/09/2023 | |
| Reference | BKL0730-SRM1 | 01102330ECD7.D | 01/09/2023 | |
| LDW22-SC754G | 22L0329-47 | 01102339ECD7.D | 01/09/2023 | |
| LDW22-SC754F | 22L0329-46 | 01102338ECD7.D | 01/09/2023 | |
| LDW22-SC754E | 22L0329-45 | 01102337ECD7.D | 01/09/2023 | |
| LDW22-SC754D | 22L0329-44 | 01102334ECD7.D | 01/09/2023 | |
| LDW22-SC754H | 22L0329-48 | 01102340ECD7.D | 01/09/2023 | |
| LDW22-SC754C | 22L0329-43 | 01102333ECD7.D | 01/09/2023 | |
| LDW22-SC754A | 22L0329-41 | 01102331ECD7.D | 01/09/2023 | |
| LDW22-SC754B | 22L0329-42 | 01102332ECD7.D | 01/09/2023 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CLEANUP BENCH SHEET

CLA0084

**Matrix: Solid** **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/9/2023 2:45:23PM**

| Lab Number | Sample Container | Sample Name | Extract Container | Initial (uL) | Final (uL) | Analysis | Clean Up Date | Cleaned By | Cleanup Comments |
|---|---|---|---|---|---|---|---|---|---|
| 22L0329-41 | B | LDW22-SC754A | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-42 | B | LDW22-SC754B | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-43 | B | LDW22-SC754C | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-44 | B | LDW22-SC754D | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-45 | B | LDW22-SC754E | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-46 | B | LDW22-SC754F | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-47 | B | LDW22-SC754G | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| 22L0329-48 | B | LDW22-SC754H | B 01 | 2.5 | 2.5 | 8082A PCB Solid 4 | 1/9/2023 | ZH | |
| BKL0730-BLK1 | - | Blank | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-BS1 | - | LCS | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-BSD1 | - | LCS Dup | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-MS1 | - | Matrix Spike | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-MSD1 | - | Matrix Spike Dup | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |
| BKL0730-SRM1 | - | Reference | - | 2.5 | 2.5 | - | 1/9/2023 | ZH | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 8082A

**Blank**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Laboratory ID: | BKL0687-BLK1 | File ID: | 01092355ECD7.D |
| Sampled: | N/A | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 04:02 |
| Solids: | | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 12.5 g / 2.5 mL |
| Batch: | BKL0687 | Sequence: | SLA0129 | 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 | 6.74 | 84.2 | 40 - 126 | |
| Tetrachlorometaxylene | 8.0000 | 5.78 | 72.3 | 44 - 120 | |
| Decachlorobiphenyl [2C] | 8.0000 | 7.16 | 89.5 | 40 - 126 | |
| Tetrachlorometaxylene [2C] | 8.0000 | 5.36 | 67.0 | 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: /230109.b/01092355ECD7.D
Data file 2: /230109.b/230109.b/01092355ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0687-BLK1
Client ID:
Injection Date: 10-JAN-2023 04:02
Report Date: 01/13/2023 16:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 205794 | 5.706 | -0.007 | 131685 | 28.9 | 26.8 | 7.5 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 385902 | 14.126 | -0.011 | 325934 | 33.7 | 35.8 | 6.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 502405 | 12.2 |
| Hexabromobiphenyl | 798898 | 1249807 | 56.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 358355 | 43.9 |
| Hexabromobiphenyl | 362541 | 641381 | 76.9 |

* 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-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) = 142840 Col1 Total PCB = 0.0 ppm*

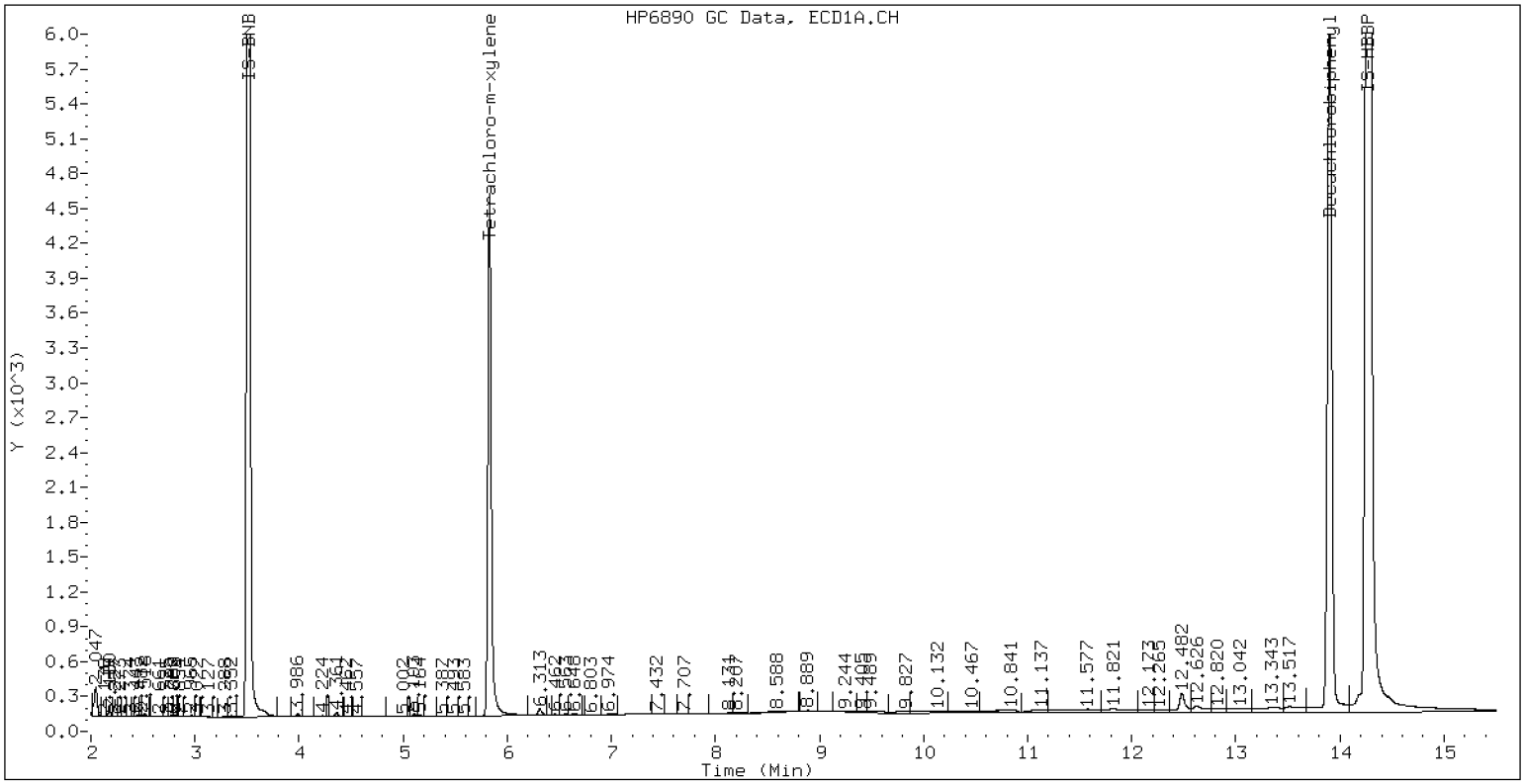
Total PCB Area Col2 (5.813 - 14.037) = 24192 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

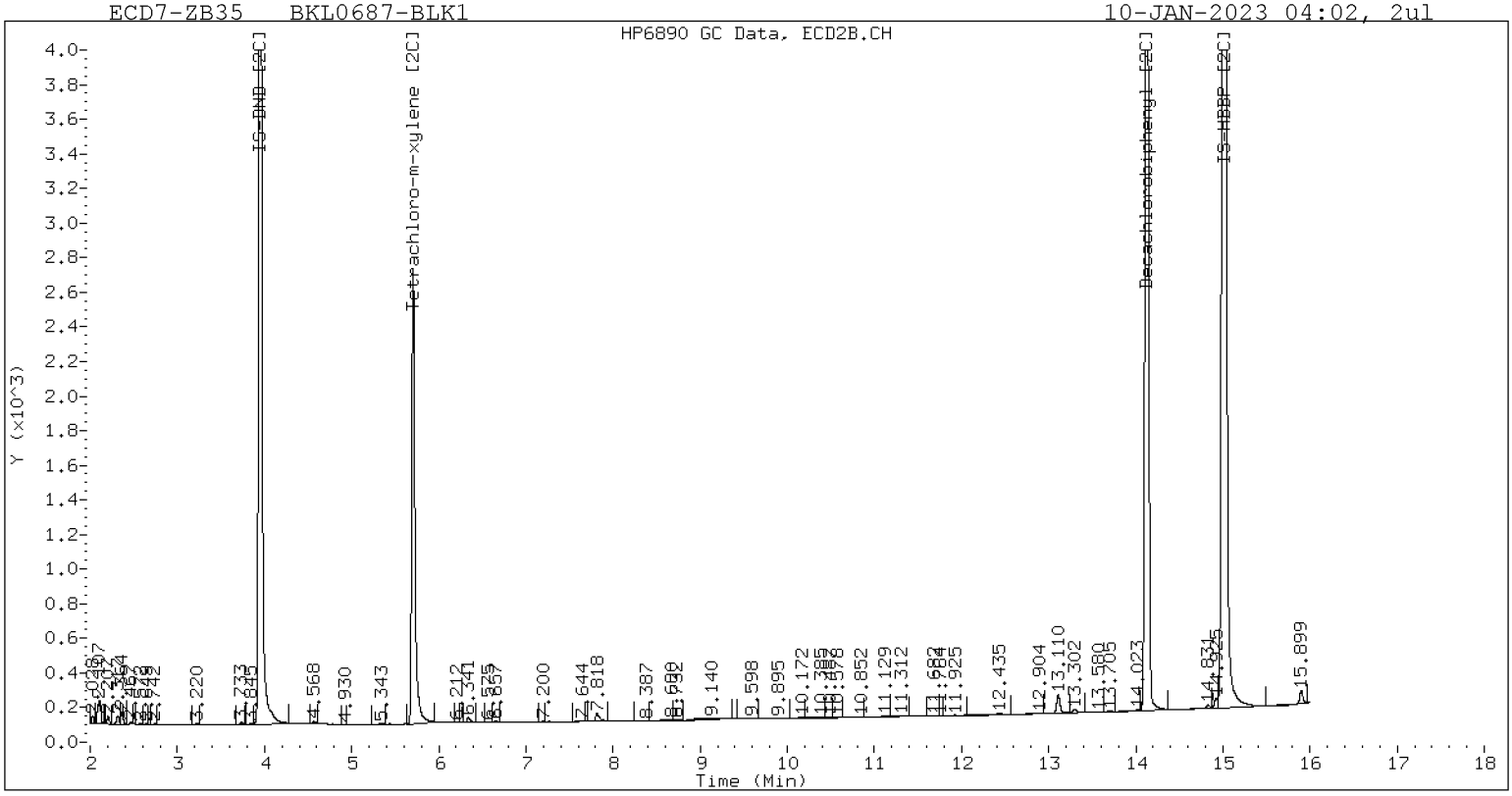
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0687-BLK1 10-JAN-2023 04:02, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0687-BLK1 10-JAN-2023 04:02, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 8082A

**Blank**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Laboratory ID: | BKL0728-BLK1 | File ID: | 01072375ECD7.D |
| Sampled: | N/A | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 11:37 |
| Solids: | | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 12.5 g / 2.5 mL |
| Batch: | BKL0728 | Sequence: | SLA0099 | 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 | 7.89 | 98.6 | 40 - 126 | |
| Tetrachlorometaxylene | 8.0000 | 6.50 | 81.3 | 44 - 120 | |
| Decachlorobiphenyl [2C] | 8.0000 | 8.03 | 100 | 40 - 126 | |
| Tetrachlorometaxylene [2C] | 8.0000 | 6.10 | 76.3 | 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: /230107.b/01072375ECD7.D
Data file 2: /230107.b/230107.b/01072375ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0723-BLK1
Client ID:
Injection Date: 08-JAN-2023 11:37
Report Date: 01/11/2023 16:23
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.002 | 232107 | 5.707 | -0.002 | 147108 | 32.5 | 30.5 | 6.4 | Tetrachloro-m-xylene |
| 13.901 | -0.002 | 401648 | 14.126 | -0.002 | 356636 | 39.4 | 40.2 | 1.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 503790 | 12.5 |
| Hexabromobiphenyl | 798898 | 1110780 | 39.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 351859 | 41.3 |
| Hexabromobiphenyl | 362541 | 625514 | 72.5 |

* 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 | --- | | | 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 (5.932 - 13.803) = 120233 Col1 Total PCB = 0.0 ppm*

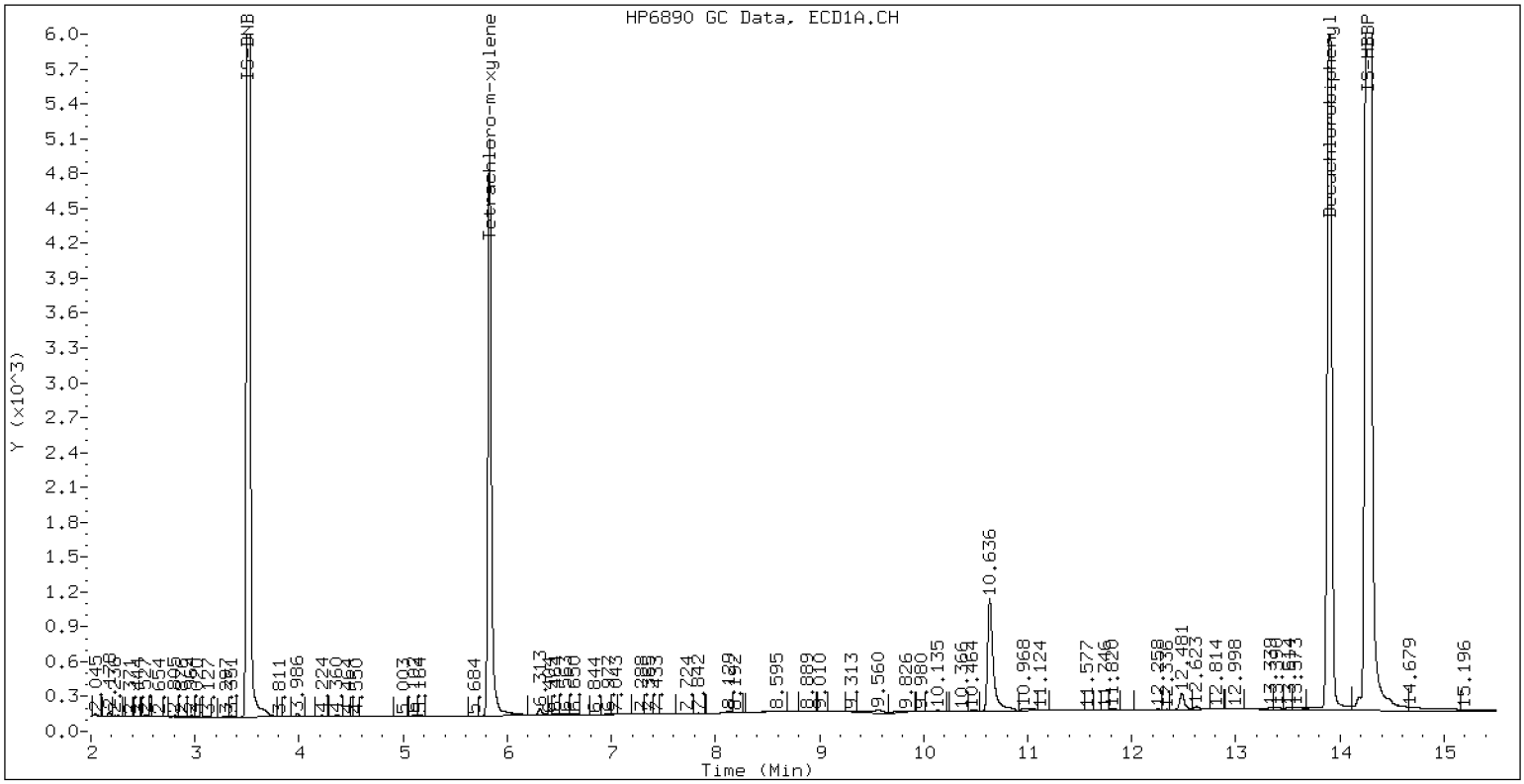
Total PCB Area Col2 (5.809 - 14.028) = 71776 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

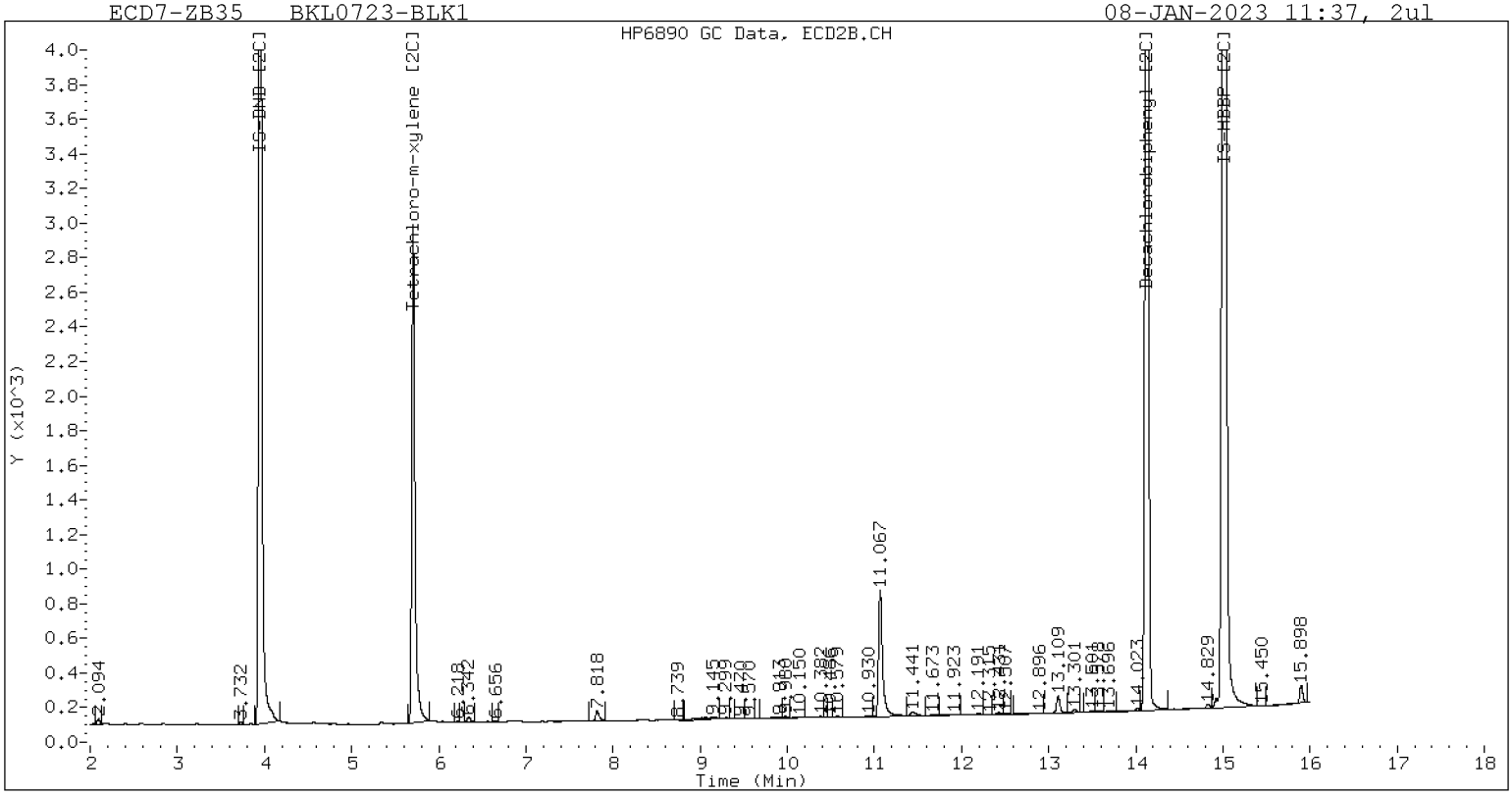
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0723-BLK1 08-JAN-2023 11:37, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0723-BLK1 08-JAN-2023 11:37, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 8082A

**Blank**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Laboratory ID: | BKL0730-BLK1 | File ID: | 01102327ECD7.D |
| Sampled: | N/A | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 01:37 |
| Solids: | | Preparation: | EPA 3546 (Microwave) | Initial/Final: | 12.5 g / 2.5 mL |
| Batch: | BKL0730 | Sequence: | SLA0156 | 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 | 8.24 | 103 | 40 - 126 | |
| Tetrachlorometaxylene | 8.0000 | 6.75 | 84.3 | 44 - 120 | |
| Decachlorobiphenyl [2C] | 8.0000 | 7.91 | 98.9 | 40 - 126 | |
| Tetrachlorometaxylene [2C] | 8.0000 | 6.26 | 78.2 | 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: /230110.b/01102327ECD7.D
Data file 2: /230110.b/230110.b/01102327ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0730-BLK1
Client ID:
Injection Date: 11-JAN-2023 01:37
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 217015 | 5.707 | -0.001 | 147194 | 33.7 | 31.3 | 7.5 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 336602 | 14.128 | -0.000 | 314937 | 41.2 | 39.6 | 4.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 454033 | 1.4 |
| Hexabromobiphenyl | 798898 | 891751 | 11.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 343096 | 37.7 |
| Hexabromobiphenyl | 362541 | 560765 | 54.7 |

* 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 | --- | | | 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) = 24299 Col1 Total PCB = 0.0 ppm*

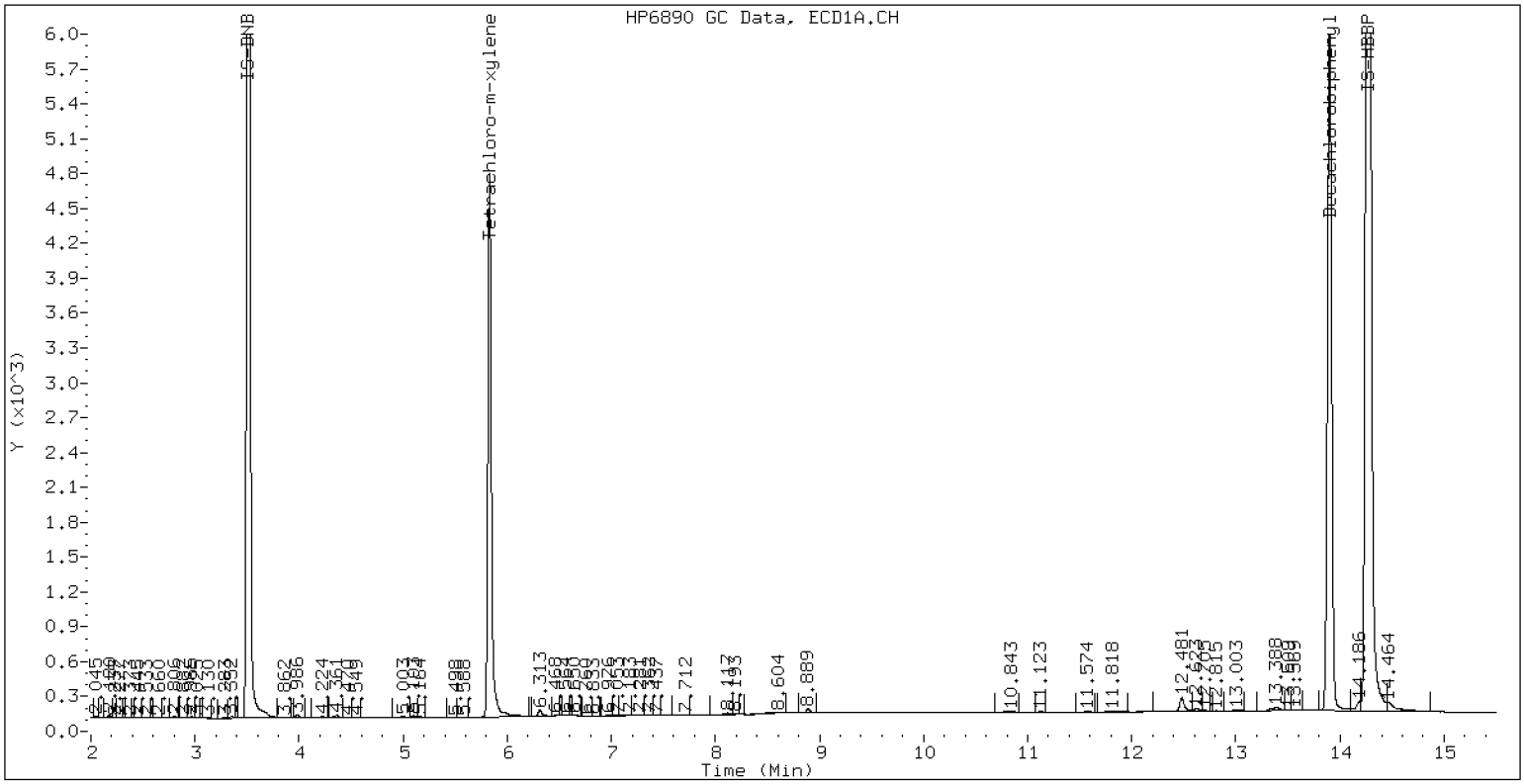
Total PCB Area Col2 (5.807 - 14.028) = 12320 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

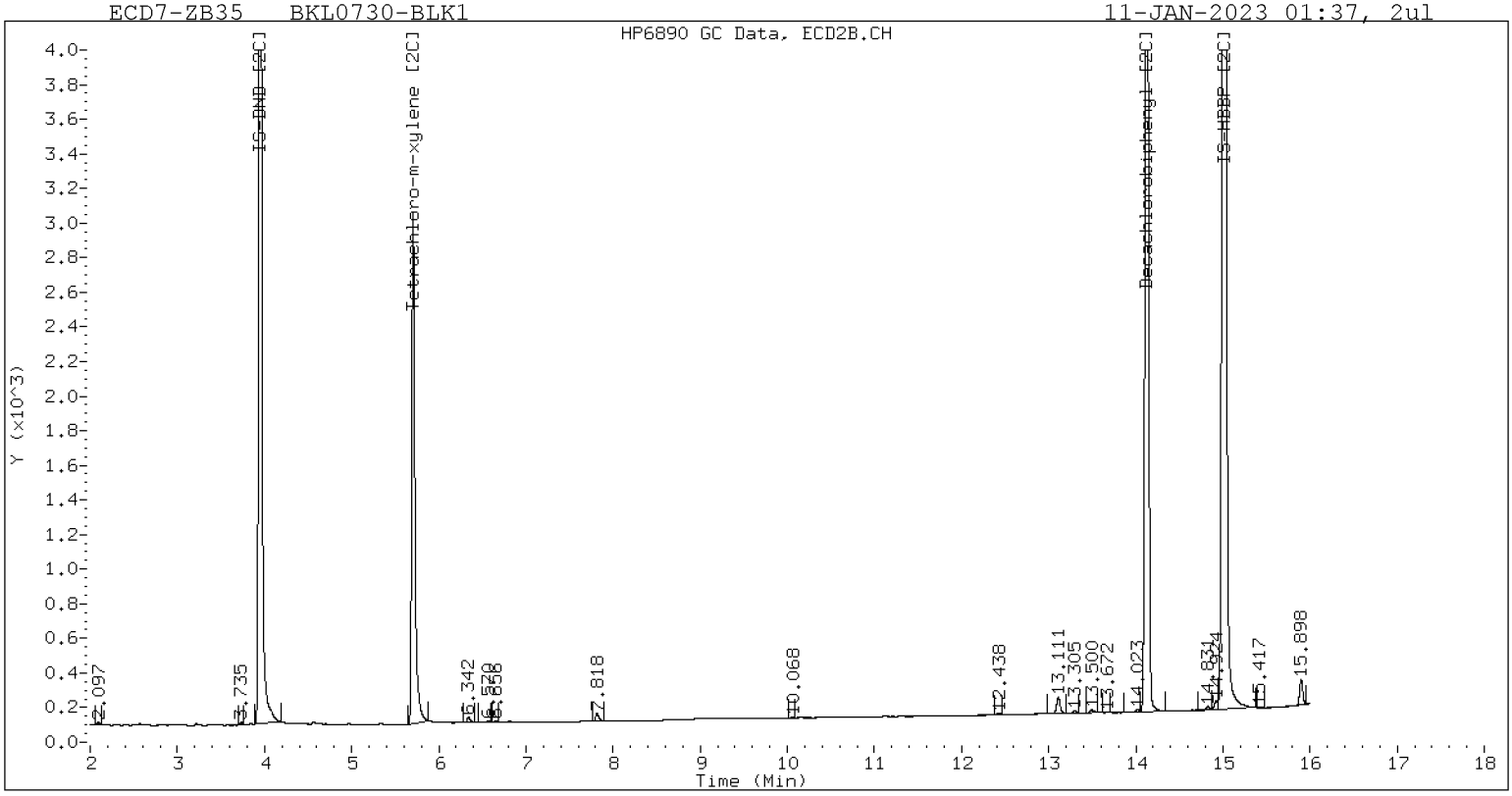
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0730-BLK1 11-JAN-2023 01:37, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0730-BLK1 11-JAN-2023 01:37, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/10/23 04:23 |
| Batch: | BKL0687 | Laboratory ID: | BKL0687-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 | 89.9 | | 89.2 | 56 - 120 |
| Aroclor 1260 | 101 | 94.0 | | 93.3 | 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 | 89.8 | | 89.1 | 0.129 | 30 | 56 - 120 |
| Aroclor 1260 | 101 | 93.3 | | 92.6 | 0.707 | 30 | 58 - 120 |

* Indicates values outside of QC limits

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

Data file 1: /230109.b/01092356ECD7.D
Data file 2: /230109.b/230109.b/01092356ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0687-BS1
Client ID:
Injection Date: 10-JAN-2023 04:23
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 236653 | 5.706 | -0.007 | 145481 | 32.1 | 29.1 | 9.7 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 410731 | 14.126 | -0.011 | 364889 | 36.6 | 38.7 | 5.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 520728 | 16.3 |
| Hexabromobiphenyl | 798898 | 1225840 | 53.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 364522 | 46.3 |
| Hexabromobiphenyl | 362541 | 663391 | 83.0 |

* 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-1016 | 1 | 7.286 | -0.008 | 75658 | 435.6 | 1 | 7.269 | -0.006 | 74819 | 401.4 |
| Aroclor-1016 | 2 | 7.670 | -0.015 | 255900 | 456.3 | 2 | 7.864 | -0.006 | 173902 | 432.6 |
| Aroclor-1016 | 3 | 7.805 | -0.012 | 106953 | 420.9 | 3 | 8.064 | -0.007 | 70381 | 407.7 |
| Aroclor-1016 | 4 | 8.419 | -0.011 | 78617 | 485.3 | 4 | 8.234 | -0.007 | 41667 | 459.0 |
| Total Col1Ave (4 peaks): 449.5 | | | | | | Total Col2Ave (4 peaks): 425.2 RPD = 6 | | | | |
| Corrected Ave (3 peaks): 437.6 | | | | | | Corrected Ave (3 peaks): 413.9 RPD = 6 | | | | |
| 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 | 11.054 | -0.009 | 200896 | 450.2 | 1 | 11.660 | -0.009 | 159954 | 456.8 |
| Aroclor-1260 | 2 | 11.371 | -0.007 | 216276 | 468.6 | 2 | 11.924 | -0.009 | 394777 | 449.3 |
| Aroclor-1260 | 3 | 11.743 | -0.009 | 566407 | 467.1 | 3 | 12.442 | -0.009 | 111647 | 477.1 |
| Aroclor-1260 | 4 | 12.147 | -0.011 | 300907 | 487.3 | 4 | 12.507 | -0.010 | 278167 | 474.9 |
| Aroclor-1260 | 5 | 12.253 | -0.009 | 120504 | 476.7 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): 470.0 | | | | | | Total Col2Ave (4 peaks): 464.5 RPD = 1 | | | | |
| Corrected Ave (4 peaks): 465.7 | | | | | | Corrected Ave (3 peaks): 460.3 RPD = 1 | | | | |
| 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) = 5415526 Col1 Total PCB = 1.1 ppm*

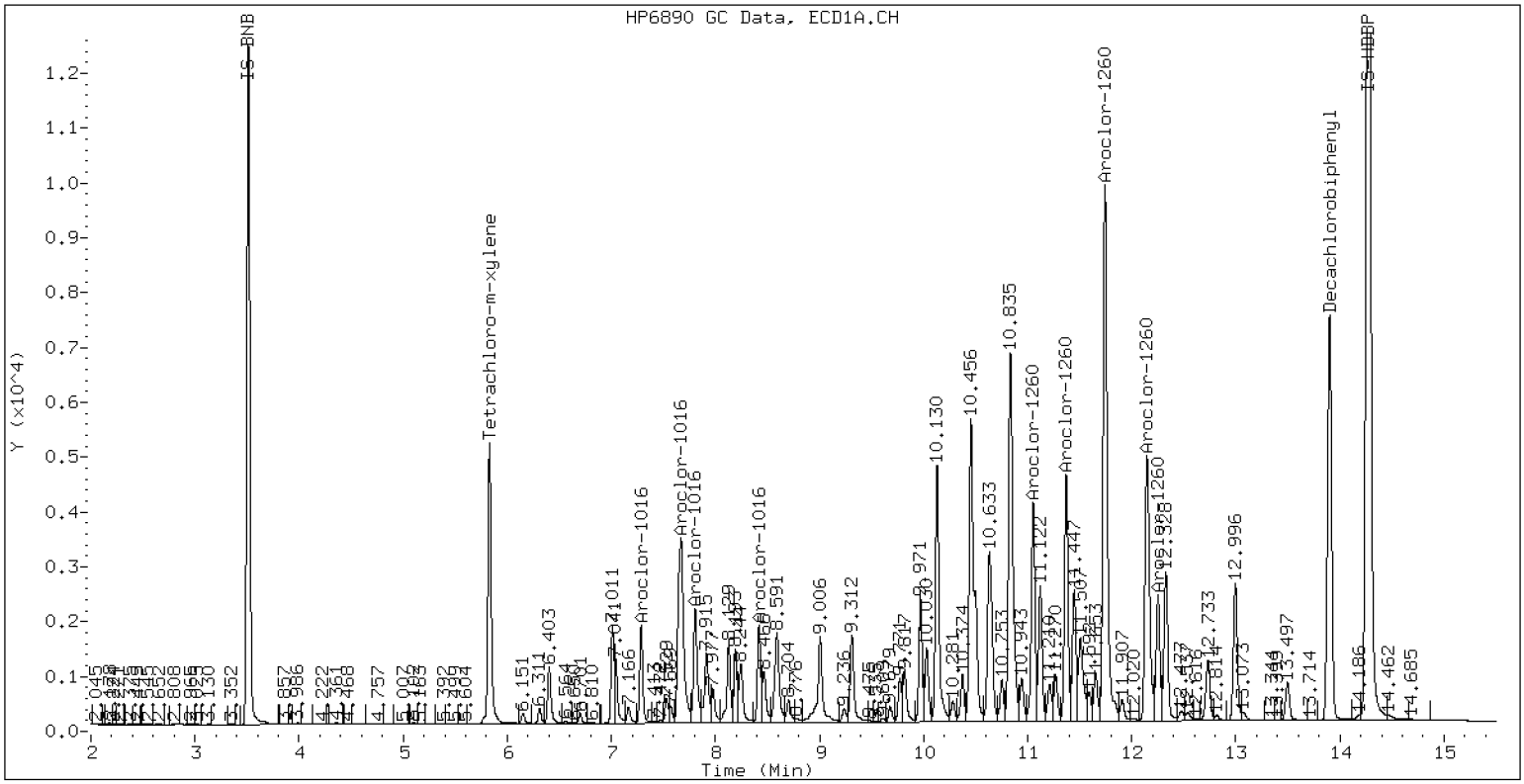
Total PCB Area Col2 (5.813 - 14.037) = 3587654 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

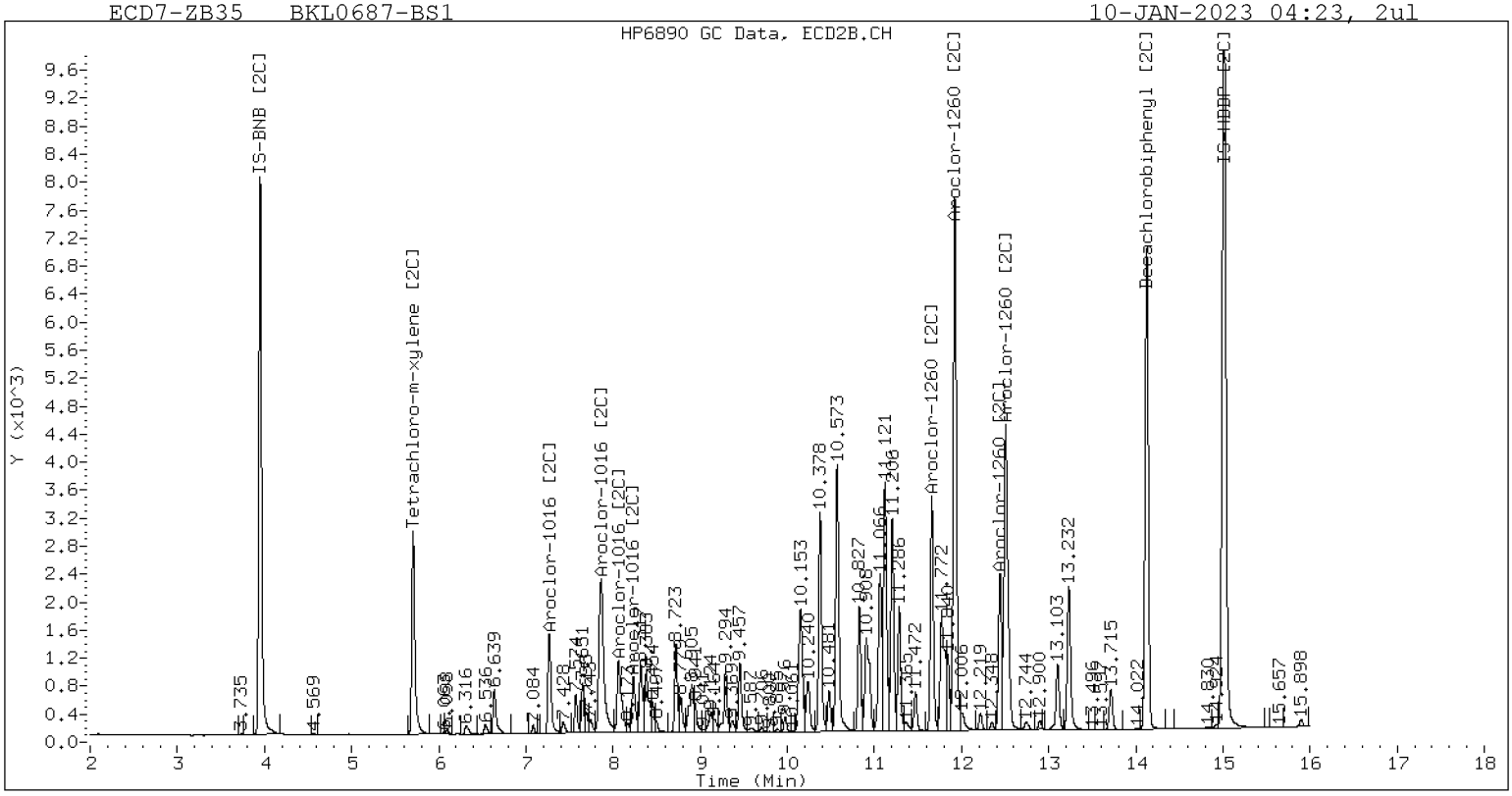
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0687-BS1 10-JAN-2023 04:23, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0687-BS1 10-JAN-2023 04:23, 2ul




ZB-35 Manual Integration: NO

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

Data file 1: /230109.b/01092357ECD7.D
Data file 2: /230109.b/230109.b/01092357ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0687-BSD1
Client ID:
Injection Date: 10-JAN-2023 04:44
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 232915 | 5.707 | -0.007 | 145138 | 31.8 | 29.3 | 8.3 | Tetrachloro-m-xylene |
| 13.902 | -0.005 | 421303 | 14.126 | -0.011 | 374331 | 37.2 | 39.2 | 5.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 516830 | 15.5 |
| Hexabromobiphenyl | 798898 | 1234236 | 54.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 361846 | 45.3 |
| Hexabromobiphenyl | 362541 | 673221 | 85.7 |

* 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 | 7.286 | -0.008 | 74687 | 433.2 | 1 | 7.269 | -0.006 | 73896 | 399.4 |
| Aroclor-1016 | 2 | 7.669 | -0.016 | 254581 | 457.4 | 2 | 7.864 | -0.007 | 171729 | 430.4 |
| Aroclor-1016 | 3 | 7.806 | -0.012 | 105780 | 419.4 | 3 | 8.064 | -0.006 | 69728 | 406.9 |
| Aroclor-1016 | 4 | 8.419 | -0.011 | 78099 | 485.7 | 4 | 8.234 | -0.007 | 41614 | 461.8 |
| Total Col1Ave (4 peaks): 448.9 | | | | | | Total Col2Ave (4 peaks): 424.6 RPD = 6 | | | | |
| Corrected Ave (3 peaks): 436.7 | | | | | | Corrected Ave (3 peaks): 412.2 RPD = 6 | | | | |
| 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 | 11.053 | -0.009 | 199798 | 444.7 | 1 | 11.660 | -0.009 | 159160 | 447.9 |
| Aroclor-1260 | 2 | 11.370 | -0.007 | 215935 | 464.7 | 2 | 11.923 | -0.010 | 393816 | 441.6 |
| Aroclor-1260 | 3 | 11.743 | -0.009 | 566040 | 463.6 | 3 | 12.442 | -0.009 | 111332 | 468.9 |
| Aroclor-1260 | 4 | 12.147 | -0.012 | 300046 | 482.6 | 4 | 12.507 | -0.009 | 277490 | 466.8 |
| Aroclor-1260 | 5 | 12.253 | -0.009 | 121595 | 477.7 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): 466.7 | | | | | | Total Col2Ave (4 peaks): 456.3 RPD = 2 | | | | |
| Corrected Ave (4 peaks): 462.7 | | | | | | Corrected Ave (3 peaks): 452.1 RPD = 2 | | | | |
| 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) = 5403411 Col1 Total PCB = 1.1 ppm*

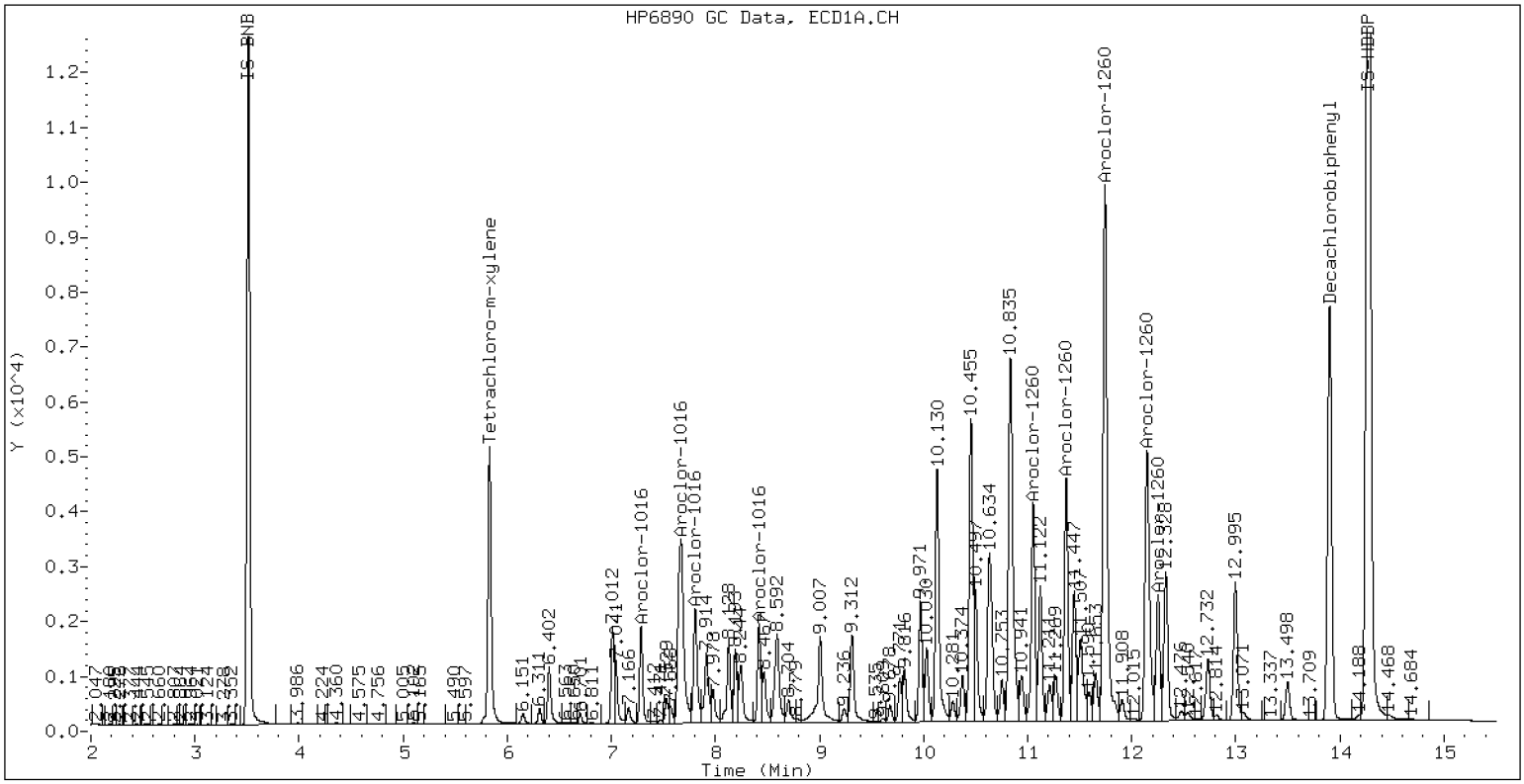
Total PCB Area Col2 (5.813 - 14.037) = 3566522 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

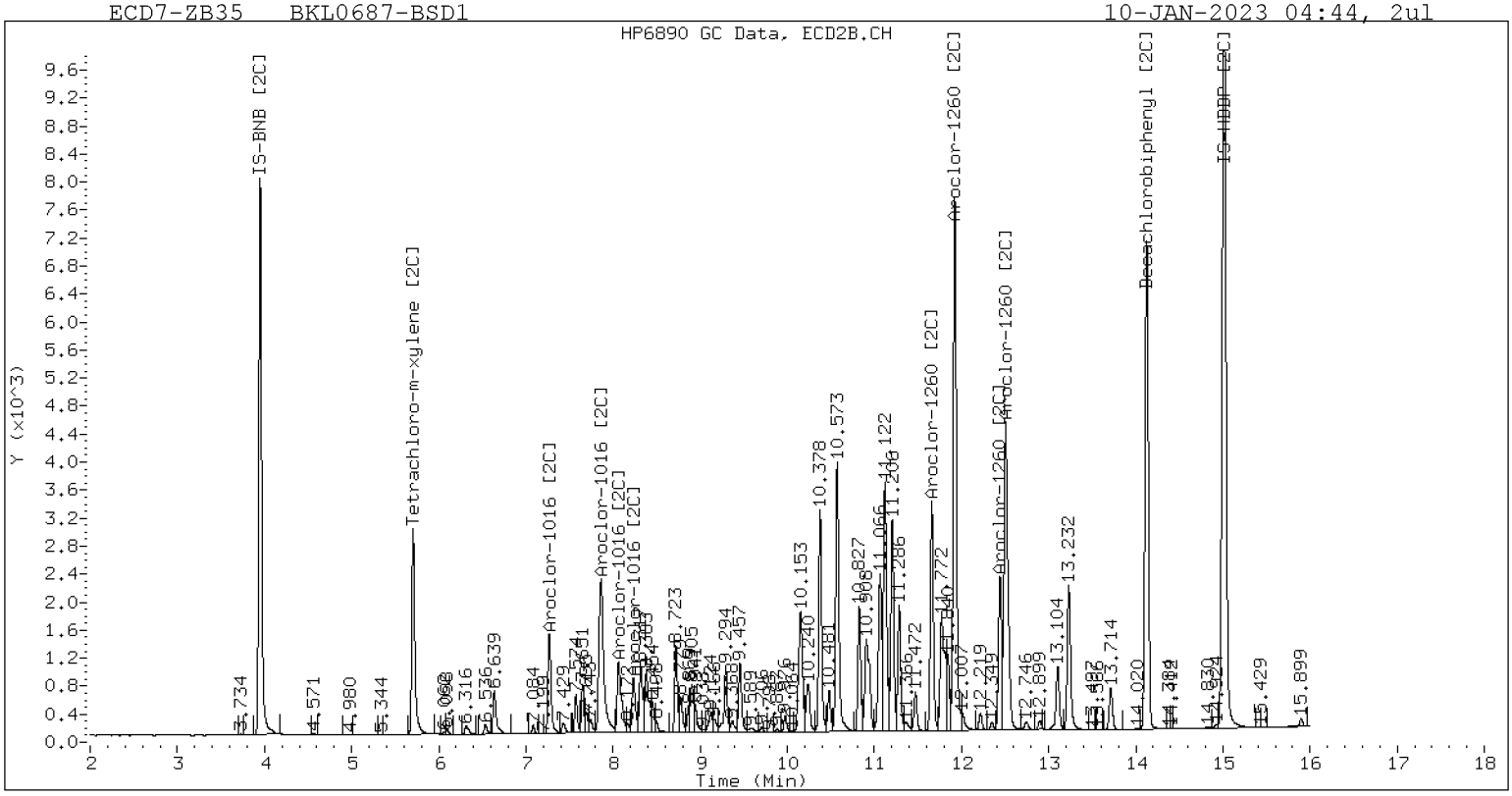
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0687-BSD1 10-JAN-2023 04:44, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0687-BSD1 10-JAN-2023 04:44, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/08/23 11:58 |
| Batch: | BKL0728 | Laboratory ID: | BKL0728-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 | 98.4 | | 97.6 | 56 - 120 |
| Aroclor 1260 | 101 | 111 | | 110 | 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 | 92.5 | | 91.7 | 6.23 | 30 | 56 - 120 |
| Aroclor 1260 | 101 | 100 | | 99.2 | 10.1 | 30 | 58 - 120 |

* Indicates values outside of QC limits

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

Data file 1: /230107.b/01072376ECD7.D
Data file 2: /230107.b/230107.b/01072376ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0723-BS1
Client ID:
Injection Date: 08-JAN-2023 11:58
Report Date: 01/11/2023 16:23
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.002 | 240456 | 5.707 | -0.002 | 148643 | 33.4 | 30.7 | 8.4 | Tetrachloro-m-xylene |
| 13.902 | -0.001 | 413521 | 14.126 | -0.002 | 371834 | 40.4 | 41.6 | 2.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 508471 | 13.6 |
| Hexabromobiphenyl | 798898 | 1117702 | 39.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 353265 | 41.8 |
| Hexabromobiphenyl | 362541 | 630071 | 73.8 |

* 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-1016 | 1 | 7.287 | -0.003 | 80572 | 475.0 | 1 | 7.269 | -0.002 | 80106 | 443.5 |
| Aroclor-1016 | 2 | 7.668 | -0.010 | 274673 | 501.6 | 2 | 7.865 | -0.008 | 186731 | 479.4 |
| Aroclor-1016 | 3 | 7.805 | -0.008 | 113435 | 457.1 | 3 | 8.063 | -0.007 | 75861 | 453.5 |
| Aroclor-1016 | 4 | 8.418 | -0.006 | 84500 | 534.1 | 4 | 8.234 | -0.009 | 45489 | 517.1 |
| Total Col1Ave (4 peaks): | | | | | 492.0 | Total Col2Ave (4 peaks): | | | | 473.4 RPD = 4 |
| Corrected Ave (3 peaks): | | | | | 477.9 | Corrected Ave (3 peaks): | | | | 458.8 RPD = 4 |
| Aroclor-1221 | 1 | 4.757 | -0.003 | 607 | 14.4 | 1 | 4.981 | -0.006 | 343 | 11.5 |
| Aroclor-1221 | 2 | 6.152 | -0.007 | 10750 | 145.2 | 2 | 6.316 | -0.006 | 7763 | 136.6 |
| Aroclor-1221 | 3 | 6.403 | -0.006 | 52507 | 307.4 | 3 | 6.639 | -0.007 | 33877 | 354.3 |
| Total Col1Ave (3 peaks): | | | | | 155.7 | Total Col2Ave (3 peaks): | | | | 167.5 RPD = 7 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.757 | -0.004 | 607 | 24.0 | 1 | 4.981 | -0.009 | 343 | 20.0 |
| Aroclor-1232 | 2 | 6.152 | -0.008 | 10750 | 201.2 | 2 | 7.269 | -0.007 | 80106 | 913.1 |
| Aroclor-1232 | 3 | 7.668 | -0.015 | 274673 | 1144.6 | 3 | 7.865 | -0.012 | 186731 | 1088.8 |
| Aroclor-1232 | 4 | 8.590 | -0.015 | 111315 | 1093.3 | 4 | 8.723 | -0.010 | 58776 | 1264.0 |
| Total Col1Ave (4 peaks): | | | | | 615.8 | Total Col2Ave (4 peaks): | | | | 821.5 RPD = 29 |
| Corrected Ave (3 peaks): | | | | | 439.5 | Corrected Ave (3 peaks): | | | | 674.0 RPD = 42* |
| Aroclor-1242 | 1 | 7.287 | -0.004 | 80572 | 559.1 | 1 | 7.269 | -0.002 | 80106 | 535.8 |
| Aroclor-1242 | 2 | 7.668 | -0.014 | 274673 | 600.2 | 2 | 7.865 | -0.008 | 186731 | 588.3 |
| Aroclor-1242 | 3 | 8.418 | -0.007 | 84500 | 641.8 | 3 | 9.164 | -0.016 | 11336 | 110.7 |
| Aroclor-1242 | 4 | 9.006 | -0.015 | 111668 | 408.5 | 4 | 9.588 | -0.018 | 5936 | 48.2 |
| Total Col1Ave (4 peaks): | | | | | 552.4 | Total Col2Ave (4 peaks): | | | | 320.8 RPD = 53* |
| Corrected Ave (3 peaks): | | | | | 522.6 | Corrected Ave (3 peaks): | | | | 231.6 RPD = 77* |
| Aroclor-1248 | 1 | 8.418 | -0.007 | 84500 | 386.5 | 1 | 8.318 | -0.005 | 56193 | 389.4 |
| Aroclor-1248 | 2 | 8.590 | -0.012 | 111315 | 398.8 | 2 | 8.723 | -0.005 | 58776 | 387.2 |
| Aroclor-1248 | 3 | 9.006 | -0.013 | 111668 | 222.4 | 3 | 9.164 | -0.015 | 11336 | 61.4 |
| Aroclor-1248 | 4 | 9.310 | -0.003 | 93649 | 380.7 | 4 | 9.588 | -0.014 | 5936 | 27.4 |
| Total Col1Ave (4 peaks): | | | | | 347.1 | Total Col2Ave (4 peaks): | | | | 216.3 RPD = 46* |
| Corrected Ave (3 peaks): | | | | | 329.9 | Corrected Ave (3 peaks): | | | | 158.7 RPD = 70* |
| Aroclor-1254 | 1 | 9.310 | -0.006 | 93649 | 209.2 | 1 | 9.456 | -0.005 | 52523 | 230.6 |
| Aroclor-1254 | 2 | --- | | | 0.0 | 2 | 9.975 | -0.005 | 10818 | 59.1 |
| Aroclor-1254 | 3 | 9.678 | -0.007 | 15234 | 53.9 | 3 | 10.153 | 0.020 | 122185 | 310.4 |
| Aroclor-1254 | 4 | 9.814 | -0.010 | 55099 | 100.0 | 4 | 10.377 | -0.005 | 161000 | 395.0 |
| Aroclor-1254 | 5 | 10.129 | -0.062 | 257224 | 680.8 | 5 | 10.572 | -0.006 | 216033 | 1098.8 |
| Total Col1Ave (4 peaks): | | | | | 261.0 | Total Col2Ave (5 peaks): | | | | 418.8 RPD = 46* |
| Corrected Ave (3 peaks): | | | | | 121.0 | Corrected Ave (4 peaks): | | | | 248.8 RPD = 69* |
| Aroclor-1260 | 1 | 11.053 | -0.006 | 215868 | 530.6 | 1 | 11.659 | -0.004 | 172812 | 519.6 |
| Aroclor-1260 | 2 | 11.369 | -0.006 | 232220 | 551.9 | 2 | 11.922 | -0.006 | 424513 | 508.7 |
| Aroclor-1260 | 3 | 11.742 | -0.007 | 587684 | 531.5 | 3 | 12.442 | -0.004 | 122064 | 549.3 |
| Aroclor-1260 | 4 | 12.145 | -0.009 | 326368 | 579.6 | 4 | 12.506 | -0.006 | 299449 | 538.3 |
| Aroclor-1260 | 5 | 12.253 | -0.005 | 132028 | 572.8 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 553.3 | Total Col2Ave (4 peaks): | | | | 528.9 RPD = 4 |
| Corrected Ave (4 peaks): | | | | | 546.7 | Corrected Ave (3 peaks): | | | | 522.2 RPD = 5 |
| Aroclor-1262 | 1 | 10.834 | -0.014 | 432893 | 1158.2 | 1 | 11.206 | -0.011 | 156298 | 326.2 |
| Aroclor-1262 | 2 | 12.253 | -0.010 | 132028 | 227.2 | 2 | 11.659 | -0.011 | 172812 | 416.5 |
| Aroclor-1262 | 3 | 12.326 | -0.011 | 159431 | 256.9 | 3 | 12.442 | -0.010 | 122064 | 266.7 |
| Aroclor-1262 | 4 | 12.995 | -0.010 | 147195 | 295.5 | 4 | 12.506 | -0.014 | 299449 | 417.7 |
| Total Col1Ave (4 peaks): | | | | | 484.5 | Total Col2Ave (4 peaks): | | | | 356.8 RPD = 30 |
| Corrected Ave (3 peaks): | | | | | 259.9 | Corrected Ave (3 peaks): | | | | 336.5 RPD = 26 |
| Aroclor-1268 | 1 | 12.253 | -0.010 | 132028 | 84.4 | 1 | 12.442 | -0.008 | 122064 | 102.6 |
| Aroclor-1268 | 2 | 12.326 | -0.009 | 159431 | 104.2 | 2 | 12.506 | -0.012 | 299449 | 245.6 |
| Aroclor-1268 | 3 | 12.732 | 0.016 | 70691 | 56.4 | 3 | 12.899 | -0.011 | 5979 | 13.2 |
| Aroclor-1268 | 4 | 13.496 | -0.009 | 41847 | 10.9 | 4 | 13.714 | -0.012 | 33361 | 10.3 |
| Total Col1Ave (4 peaks): | | | | | 64.0 | Total Col2Ave (4 peaks): | | | | 92.9 RPD = 37 |

Corrected Ave (3 peaks): 50.6 Corrected Ave (3 peaks): 42.0 RPD = 18

Total PCB Area Col1 (5.932 - 13.803) = 5831175 Col1 Total PCB = 1.2 ppm*

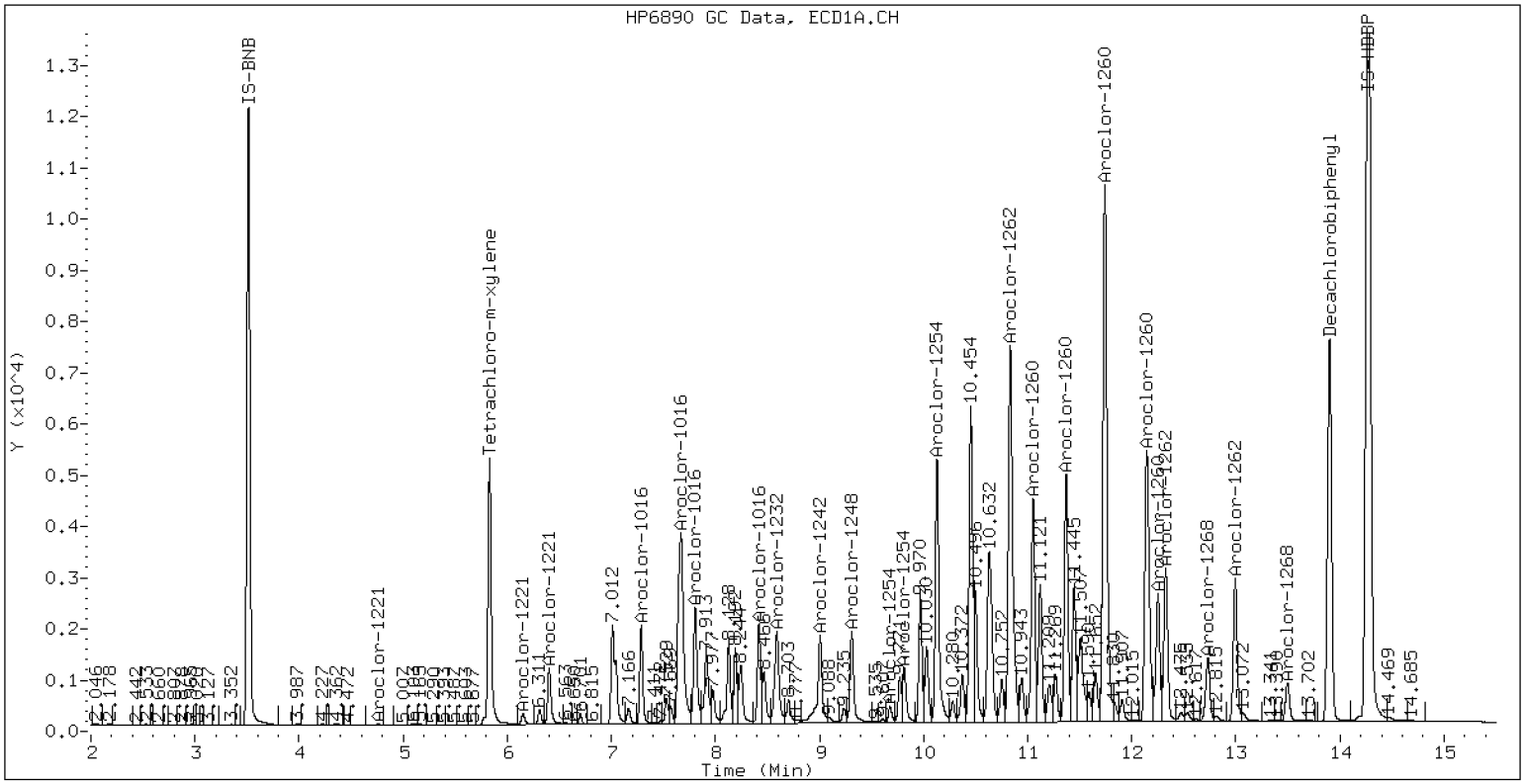
Total PCB Area Col2 (5.809 - 14.028) = 3877136 Col2 Total PCB = 1.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

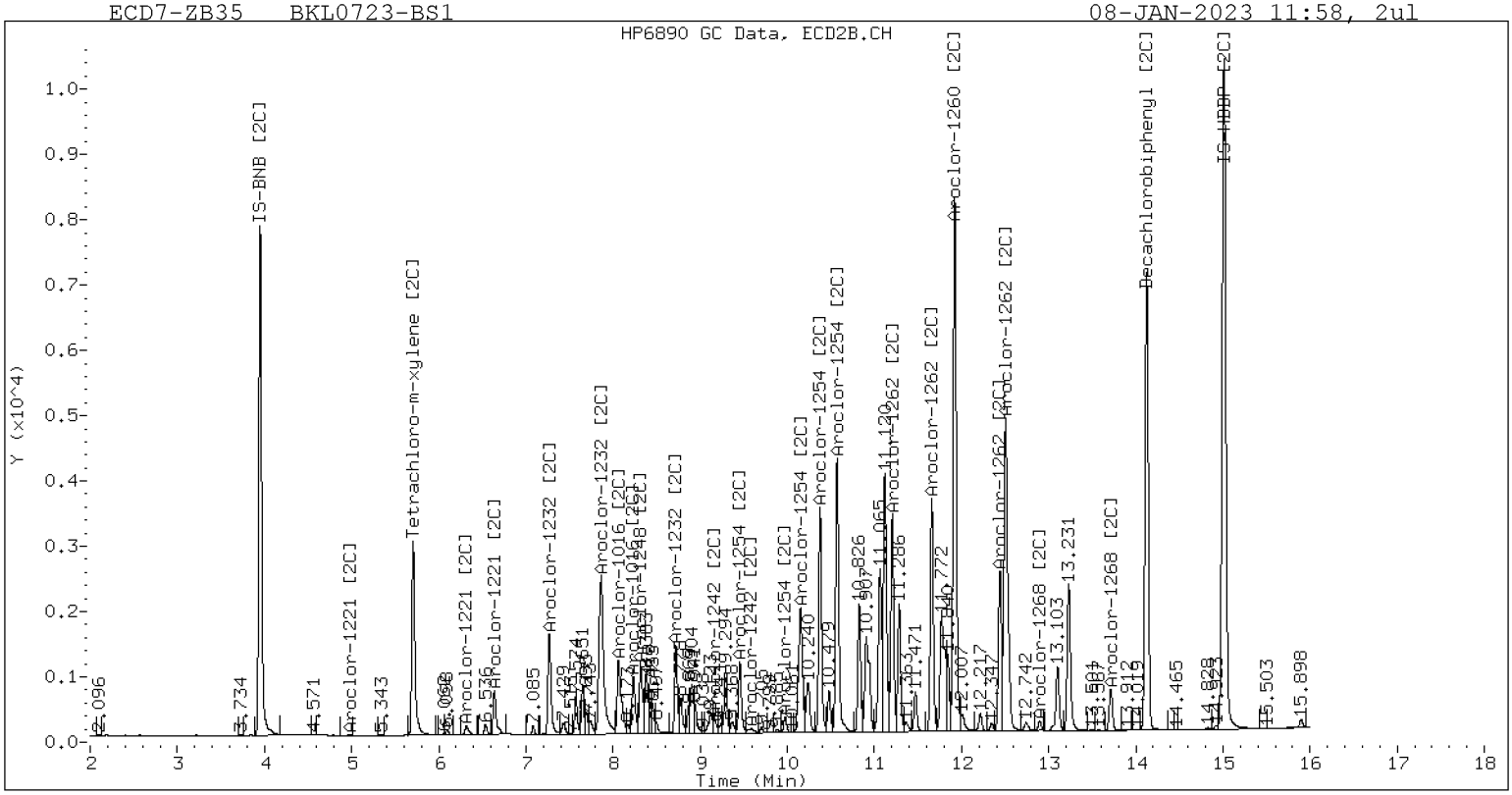
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0723-BS1 08-JAN-2023 11:58, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0723-BS1 08-JAN-2023 11:58, 2ul




ZB-35 Manual Integration: NO

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

Data file 1: /230107.b/01072377ECD7.D
Data file 2: /230107.b/230107.b/01072377ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0723-BSD1
Client ID:
Injection Date: 08-JAN-2023 12:19
Report Date: 01/11/2023 16:23
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.001 | 244036 | 5.708 | -0.001 | 150310 | 33.9 | 31.2 | 8.2 | Tetrachloro-m-xylene |
| 13.901 | -0.002 | 406517 | 14.127 | -0.001 | 358787 | 39.1 | 39.6 | 1.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 508135 | 13.5 |
| Hexabromobiphenyl | 798898 | 1133059 | 41.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 351360 | 41.1 |
| Hexabromobiphenyl | 362541 | 637747 | 75.9 |

* 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 | 7.287 | -0.003 | 77253 | 455.8 | 1 | 7.270 | -0.002 | 74989 | 417.4 |
| Aroclor-1016 | 2 | 7.670 | -0.009 | 256543 | 468.8 | 2 | 7.864 | -0.008 | 173167 | 446.9 |
| Aroclor-1016 | 3 | 7.805 | -0.008 | 106585 | 429.8 | 3 | 8.064 | -0.007 | 69324 | 416.6 |
| Aroclor-1016 | 4 | 8.418 | -0.006 | 78208 | 494.7 | 4 | 8.234 | -0.008 | 40769 | 466.0 |
| Total Col1Ave (4 peaks): | | | | 462.3 | | Total Col2Ave (4 peaks): | | | 436.7 | RPD = 6 |
| Corrected Ave (3 peaks): | | | | 451.5 | | Corrected Ave (3 peaks): | | | 427.0 | RPD = 6 |
| Aroclor-1221 | 1 | 4.757 | -0.004 | 548 | 13.0 | 1 | --- | | | 0.0 |
| Aroclor-1221 | 2 | 6.152 | -0.006 | 10320 | 139.5 | 2 | 6.317 | -0.005 | 7415 | 131.2 |
| Aroclor-1221 | 3 | 6.404 | -0.005 | 50282 | 294.5 | 3 | 6.639 | -0.006 | 32629 | 343.1 |
| Total Col1Ave (3 peaks): | | | | 149.0 | | Col2Ave: <3 Quant Peaks | | | | |
| Aroclor-1232 | 1 | 4.757 | -0.005 | 548 | 21.7 | 1 | --- | | | 0.0 |
| Aroclor-1232 | 2 | 6.152 | -0.007 | 10320 | 193.3 | 2 | 7.270 | -0.007 | 74989 | 859.4 |
| Aroclor-1232 | 3 | 7.670 | -0.014 | 256543 | 1069.8 | 3 | 7.864 | -0.012 | 173167 | 1015.2 |
| Aroclor-1232 | 4 | 8.591 | -0.014 | 102827 | 1010.6 | 4 | 8.724 | -0.010 | 53130 | 1148.8 |
| Total Col1Ave (4 peaks): | | | | 573.8 | | Total Col2Ave (3 peaks): | | | 1007.8 | RPD = 55* |
| Corrected Ave (3 peaks): | | | | 408.5 | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1242 | 1 | 7.287 | -0.004 | 77253 | 536.4 | 1 | 7.270 | -0.002 | 74989 | 504.3 |
| Aroclor-1242 | 2 | 7.670 | -0.012 | 256543 | 561.0 | 2 | 7.864 | -0.008 | 173167 | 548.6 |
| Aroclor-1242 | 3 | 8.418 | -0.007 | 78208 | 594.4 | 3 | 9.164 | -0.016 | 9518 | 93.5 |
| Aroclor-1242 | 4 | 9.005 | -0.015 | 109580 | 401.1 | 4 | 9.589 | -0.017 | 3868 | 31.6 |
| Total Col1Ave (4 peaks): | | | | 523.2 | | Total Col2Ave (4 peaks): | | | 294.5 | RPD = 56* |
| Corrected Ave (3 peaks): | | | | 499.5 | | Corrected Ave (3 peaks): | | | 209.8 | RPD = 82* |
| Aroclor-1248 | 1 | 8.418 | -0.007 | 78208 | 358.0 | 1 | 8.317 | -0.006 | 51639 | 359.8 |
| Aroclor-1248 | 2 | 8.591 | -0.011 | 102827 | 368.6 | 2 | 8.724 | -0.004 | 53130 | 351.9 |
| Aroclor-1248 | 3 | 9.005 | -0.014 | 109580 | 218.4 | 3 | 9.164 | -0.015 | 9518 | 51.8 |
| Aroclor-1248 | 4 | 9.311 | -0.002 | 85703 | 348.6 | 4 | 9.589 | -0.013 | 3868 | 17.9 |
| Total Col1Ave (4 peaks): | | | | 323.4 | | Total Col2Ave (4 peaks): | | | 195.4 | RPD = 49* |
| Corrected Ave (3 peaks): | | | | 308.3 | | Corrected Ave (3 peaks): | | | 140.6 | RPD = 75* |
| Aroclor-1254 | 1 | 9.311 | -0.004 | 85703 | 191.6 | 1 | 9.457 | -0.004 | 47741 | 210.7 |
| Aroclor-1254 | 2 | --- | | | 0.0 | 2 | 9.976 | -0.004 | 10108 | 55.5 |
| Aroclor-1254 | 3 | 9.678 | -0.007 | 14428 | 51.1 | 3 | 10.154 | 0.020 | 111083 | 283.7 |
| Aroclor-1254 | 4 | 9.815 | -0.009 | 49850 | 90.5 | 4 | 10.378 | -0.005 | 145941 | 360.0 |
| Aroclor-1254 | 5 | 10.130 | -0.062 | 234578 | 621.3 | 5 | 10.573 | -0.005 | 197183 | 1008.4 |
| Total Col1Ave (4 peaks): | | | | 238.6 | | Total Col2Ave (5 peaks): | | | 383.7 | RPD = 47* |
| Corrected Ave (3 peaks): | | | | 111.0 | | Corrected Ave (4 peaks): | | | 227.5 | RPD = 69* |
| Aroclor-1260 | 1 | 11.053 | -0.006 | 196494 | 476.4 | 1 | 11.660 | -0.003 | 156575 | 465.1 |
| Aroclor-1260 | 2 | 11.370 | -0.006 | 211111 | 494.9 | 2 | 11.924 | -0.004 | 387757 | 459.0 |
| Aroclor-1260 | 3 | 11.742 | -0.007 | 555895 | 496.0 | 3 | 12.443 | -0.003 | 111123 | 494.0 |
| Aroclor-1260 | 4 | 12.146 | -0.007 | 296657 | 519.7 | 4 | 12.508 | -0.003 | 272759 | 484.4 |
| Aroclor-1260 | 5 | 12.253 | -0.005 | 119943 | 513.3 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 500.1 | | Total Col2Ave (4 peaks): | | | 475.6 | RPD = 5 |
| Corrected Ave (4 peaks): | | | | 495.2 | | Corrected Ave (3 peaks): | | | 469.5 | RPD = 5 |
| Aroclor-1262 | 1 | 10.833 | -0.015 | 393659 | 1038.9 | 1 | 11.207 | -0.010 | 141944 | 292.7 |
| Aroclor-1262 | 2 | 12.253 | -0.010 | 119943 | 203.6 | 2 | 11.660 | -0.010 | 156575 | 372.8 |
| Aroclor-1262 | 3 | 12.328 | -0.009 | 145304 | 231.0 | 3 | 12.443 | -0.009 | 111123 | 239.9 |
| Aroclor-1262 | 4 | 12.995 | -0.010 | 136427 | 270.2 | 4 | 12.508 | -0.011 | 272759 | 375.9 |
| Total Col1Ave (4 peaks): | | | | 435.9 | | Total Col2Ave (4 peaks): | | | 320.3 | RPD = 31 |
| Corrected Ave (3 peaks): | | | | 234.9 | | Corrected Ave (3 peaks): | | | 301.8 | RPD = 25 |
| Aroclor-1268 | 1 | 12.253 | -0.010 | 119943 | 75.7 | 1 | 12.443 | -0.007 | 111123 | 92.3 |
| Aroclor-1268 | 2 | 12.328 | -0.007 | 145304 | 93.7 | 2 | 12.508 | -0.009 | 272759 | 221.0 |
| Aroclor-1268 | 3 | 12.732 | 0.016 | 64162 | 50.5 | 3 | 12.900 | -0.010 | 5275 | 11.5 |
| Aroclor-1268 | 4 | 13.496 | -0.009 | 40259 | 10.4 | 4 | 13.715 | -0.011 | 30603 | 9.3 |
| Total Col1Ave (4 peaks): | | | | 57.6 | | Total Col2Ave (4 peaks): | | | 83.5 | RPD = 37 |
| Corrected Ave (3 peaks): | | | | 45.5 | | Corrected Ave (3 peaks): | | | 37.7 | RPD = 19 |

Total PCB Area Col1 (5.932 - 13.803) = 5359966 Col1 Total PCB = 1.1 ppm*

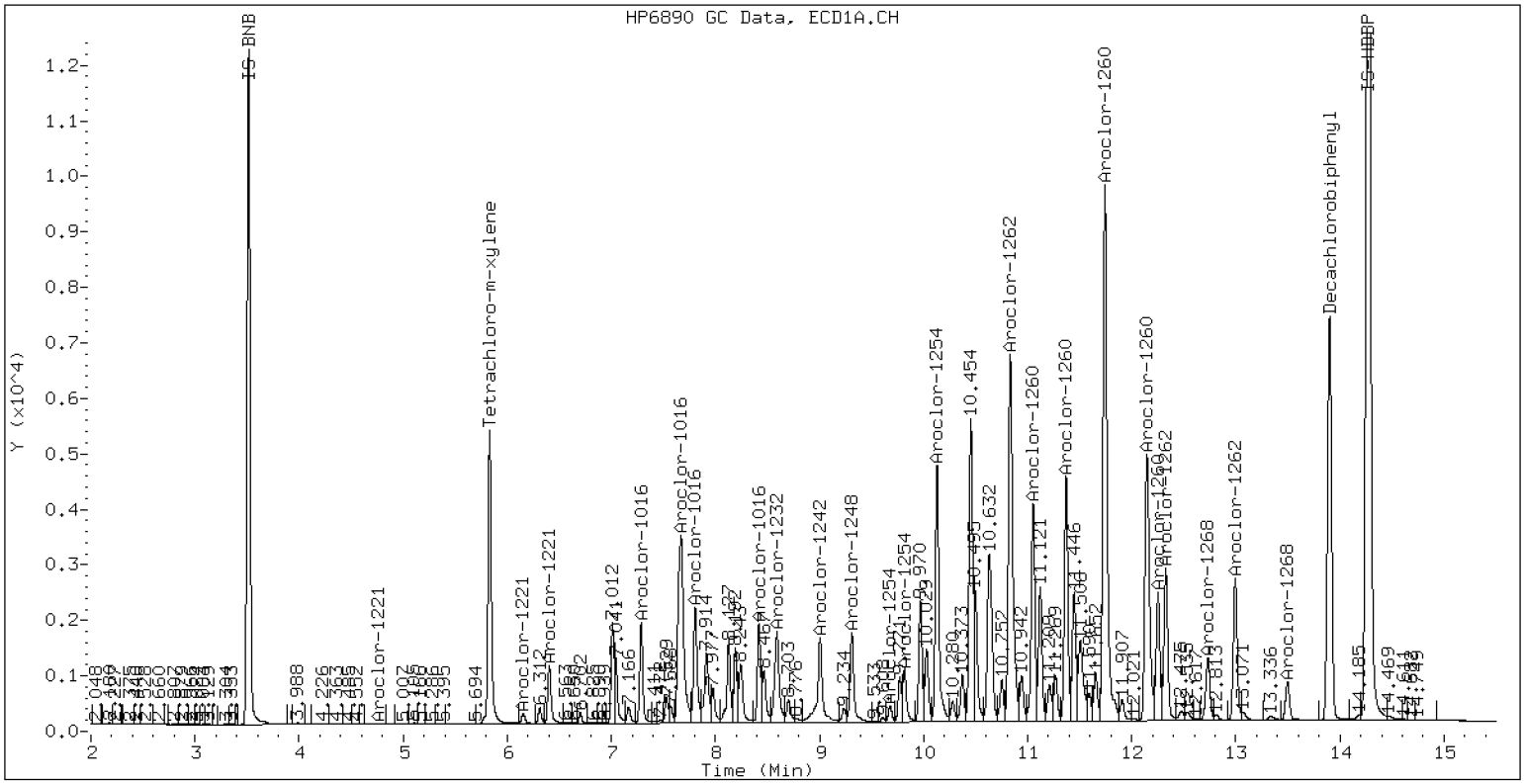
Total PCB Area Col2 (5.809 - 14.028) = 3522387 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

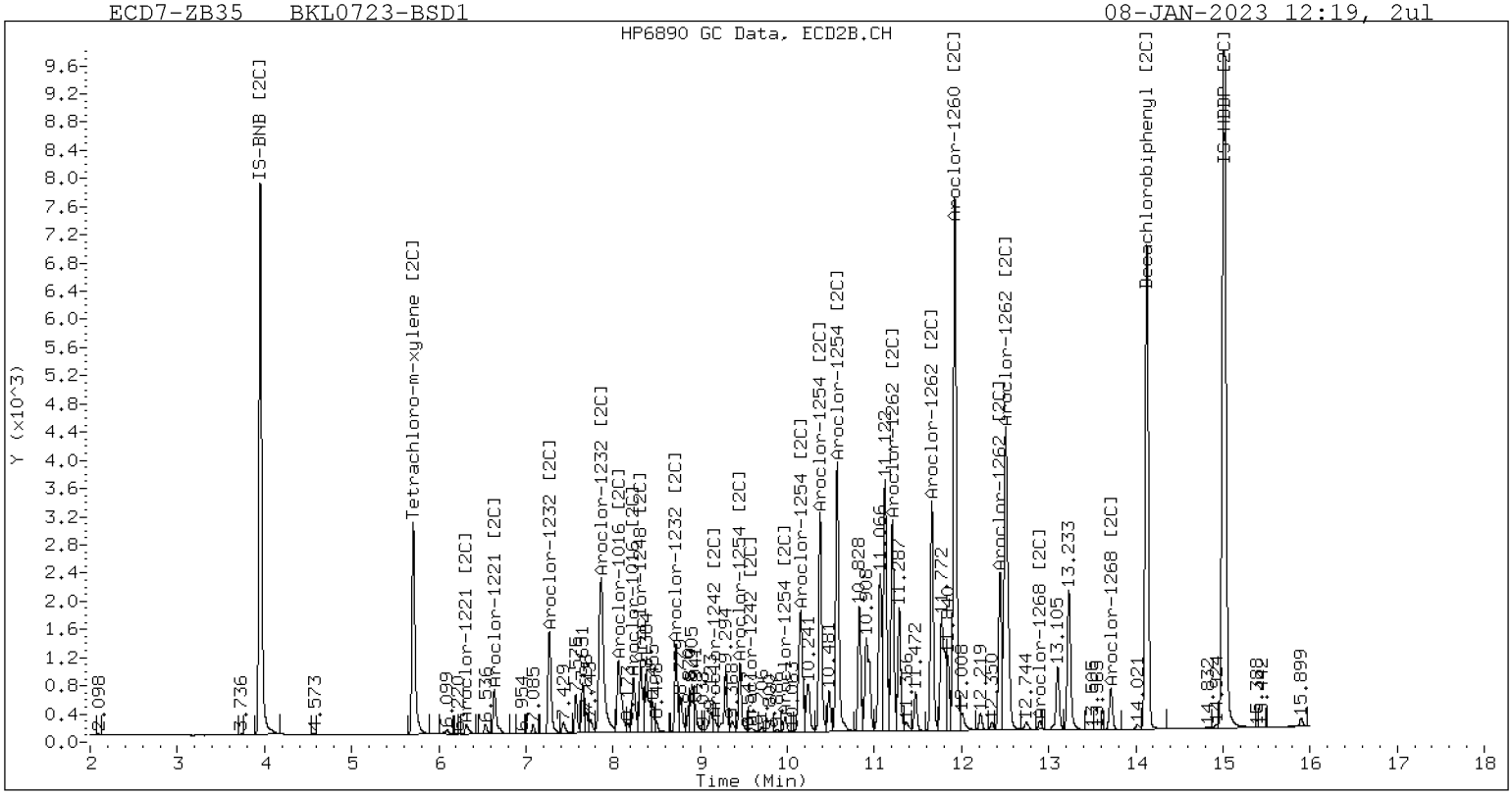
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0723-BSD1 08-JAN-2023 12:19, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0723-BSD1 08-JAN-2023 12:19, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/11/23 01:58 |
| Batch: | BKL0730 | Laboratory ID: | BKL0730-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 | 89.7 | | 89.0 | 56 - 120 |
| Aroclor 1260 | 101 | 101 | | 100 | 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 | 86.1 | | 85.4 | 4.11 | 30 | 56 - 120 |
| Aroclor 1260 | 101 | 93.6 | | 92.8 | 7.62 | 30 | 58 - 120 |

* Indicates values outside of QC limits

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

Data file 1: /230110.b/01102328ECD7.D
Data file 2: /230110.b/230110.b/01102328ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0730-BS1
Client ID:
Injection Date: 11-JAN-2023 01:58
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 220304 | 5.708 | 0.000 | 147160 | 32.8 | 29.7 | 10.0 | Tetrachloro-m-xylene |
| 13.901 | -0.006 | 329546 | 14.127 | -0.001 | 300911 | 38.9 | 35.9 | 8.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 473980 | 5.9 |
| Hexabromobiphenyl | 798898 | 924133 | 15.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 361654 | 45.2 |
| Hexabromobiphenyl | 362541 | 590519 | 62.9 |

* 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 | 7.287 | -0.007 | 68482 | 433.1 | 1 | 7.269 | -0.002 | 72876 | 394.1 |
| Aroclor-1016 | 2 | 7.670 | -0.015 | 232766 | 456.0 | 2 | 7.865 | -0.007 | 172048 | 431.4 |
| Aroclor-1016 | 3 | 7.805 | -0.012 | 97207 | 420.2 | 3 | 8.064 | -0.007 | 69038 | 403.1 |
| Aroclor-1016 | 4 | 8.418 | -0.011 | 71528 | 485.0 | 4 | 8.235 | -0.006 | 41083 | 456.2 |
| Total Col1Ave (4 peaks): | | | | 448.6 | | Total Col2Ave (4 peaks): | | | 421.2 | RPD = 6 |
| Corrected Ave (3 peaks): | | | | 436.5 | | Corrected Ave (3 peaks): | | | 409.5 | RPD = 6 |
| Aroclor-1221 | 1 | 4.757 | -0.003 | 607 | 15.5 | 1 | 4.982 | -0.005 | 334 | 10.9 |
| Aroclor-1221 | 2 | 6.152 | -0.006 | 9045 | 131.0 | 2 | 6.317 | -0.005 | 7308 | 125.6 |
| Aroclor-1221 | 3 | 6.403 | -0.006 | 45022 | 282.7 | 3 | 6.639 | -0.007 | 32169 | 328.6 |
| Total Col1Ave (3 peaks): | | | | 143.1 | | Total Col2Ave (3 peaks): | | | 155.1 | RPD = 8 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.757 | -0.004 | 607 | 25.7 | 1 | 4.982 | -0.007 | 334 | 19.0 |
| Aroclor-1232 | 2 | 6.152 | -0.007 | 9045 | 181.6 | 2 | 7.269 | -0.008 | 72876 | 811.4 |
| Aroclor-1232 | 3 | 7.670 | -0.014 | 232766 | 1040.6 | 3 | 7.865 | -0.012 | 172048 | 979.9 |
| Aroclor-1232 | 4 | 8.592 | -0.014 | 93708 | 987.4 | 4 | 8.724 | -0.010 | 53819 | 1130.5 |
| Total Col1Ave (4 peaks): | | | | 558.8 | | Total Col2Ave (4 peaks): | | | 735.2 | RPD = 27 |
| Corrected Ave (3 peaks): | | | | 398.2 | | Corrected Ave (3 peaks): | | | 603.4 | RPD = 41* |
| Aroclor-1242 | 1 | 7.287 | -0.008 | 68482 | 509.7 | 1 | 7.269 | -0.001 | 72876 | 476.1 |
| Aroclor-1242 | 2 | 7.670 | -0.015 | 232766 | 545.7 | 2 | 7.865 | -0.008 | 172048 | 529.5 |
| Aroclor-1242 | 3 | 8.418 | -0.011 | 71528 | 582.8 | 3 | 9.165 | -0.012 | 9994 | 95.3 |
| Aroclor-1242 | 4 | 9.006 | -0.025 | 101830 | 399.6 | 4 | 9.589 | -0.017 | 5193 | 41.2 |
| Total Col1Ave (4 peaks): | | | | 509.5 | | Total Col2Ave (4 peaks): | | | 285.5 | RPD = 56* |
| Corrected Ave (3 peaks): | | | | 485.0 | | Corrected Ave (3 peaks): | | | 204.2 | RPD = 81* |
| Aroclor-1248 | 1 | 8.418 | -0.009 | 71528 | 351.0 | 1 | 8.318 | -0.002 | 51976 | 351.8 |
| Aroclor-1248 | 2 | 8.592 | -0.012 | 93708 | 360.1 | 2 | 8.724 | -0.003 | 53819 | 346.3 |
| Aroclor-1248 | 3 | 9.006 | -0.016 | 101830 | 217.5 | 3 | 9.165 | -0.009 | 9994 | 52.9 |
| Aroclor-1248 | 4 | 9.312 | 0.000 | 79045 | 344.7 | 4 | 9.589 | -0.007 | 5193 | 23.4 |
| Total Col1Ave (4 peaks): | | | | 318.3 | | Total Col2Ave (4 peaks): | | | 193.6 | RPD = 49* |
| Corrected Ave (3 peaks): | | | | 304.4 | | Corrected Ave (3 peaks): | | | 140.9 | RPD = 73* |
| Aroclor-1254 | 1 | 9.312 | -0.010 | 79045 | 189.4 | 1 | 9.457 | -0.005 | 48236 | 206.9 |
| Aroclor-1254 | 2 | --- | | | 0.0 | 2 | 9.977 | -0.004 | 10674 | 56.9 |
| Aroclor-1254 | 3 | 9.678 | -0.016 | 14588 | 55.3 | 3 | 10.153 | 0.020 | 111426 | 276.5 |
| Aroclor-1254 | 4 | 9.815 | -0.015 | 45957 | 89.4 | 4 | 10.378 | -0.004 | 144899 | 347.2 |
| Aroclor-1254 | 5 | 10.130 | -0.059 | 213555 | 606.4 | 5 | 10.573 | -0.007 | 195139 | 969.5 |
| Total Col1Ave (4 peaks): | | | | 235.1 | | Total Col2Ave (5 peaks): | | | 371.4 | RPD = 45* |
| Corrected Ave (3 peaks): | | | | 111.4 | | Corrected Ave (4 peaks): | | | 221.9 | RPD = 66* |
| Aroclor-1260 | 1 | 11.053 | -0.009 | 172706 | 513.4 | 1 | 11.660 | -0.002 | 148870 | 477.6 |
| Aroclor-1260 | 2 | 11.370 | -0.007 | 178324 | 512.6 | 2 | 11.924 | -0.002 | 359881 | 460.1 |
| Aroclor-1260 | 3 | 11.742 | -0.010 | 447649 | 489.7 | 3 | 12.443 | -0.001 | 102685 | 493.0 |
| Aroclor-1260 | 4 | 12.146 | -0.012 | 236635 | 508.3 | 4 | 12.507 | -0.004 | 253956 | 487.1 |
| Aroclor-1260 | 5 | 12.253 | -0.008 | 95290 | 500.0 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 504.8 | | Total Col2Ave (4 peaks): | | | 479.4 | RPD = 5 |
| Corrected Ave (4 peaks): | | | | 502.6 | | Corrected Ave (3 peaks): | | | 474.9 | RPD = 6 |
| Aroclor-1262 | 1 | 10.834 | -0.014 | 349589 | 1131.2 | 1 | 11.206 | -0.012 | 137741 | 306.8 |
| Aroclor-1262 | 2 | 12.253 | -0.010 | 95290 | 198.3 | 2 | 11.660 | -0.010 | 148870 | 382.8 |
| Aroclor-1262 | 3 | 12.327 | -0.010 | 115850 | 225.8 | 3 | 12.443 | -0.009 | 102685 | 239.4 |
| Aroclor-1262 | 4 | 12.996 | -0.009 | 114365 | 277.7 | 4 | 12.507 | -0.013 | 253956 | 377.9 |
| Total Col1Ave (4 peaks): | | | | 458.3 | | Total Col2Ave (4 peaks): | | | 326.7 | RPD = 34 |
| Corrected Ave (3 peaks): | | | | 233.9 | | Corrected Ave (3 peaks): | | | 308.0 | RPD = 27 |
| Aroclor-1268 | 1 | 12.253 | -0.009 | 95290 | 73.7 | 1 | 12.443 | -0.007 | 102685 | 92.1 |
| Aroclor-1268 | 2 | 12.327 | -0.008 | 115850 | 91.6 | 2 | 12.507 | -0.011 | 253956 | 222.2 |
| Aroclor-1268 | 3 | 12.733 | 0.017 | 53268 | 51.4 | 3 | 12.900 | -0.010 | 5079 | 12.0 |
| Aroclor-1268 | 4 | 13.497 | -0.008 | 32682 | 10.3 | 4 | 13.714 | -0.012 | 26429 | 8.7 |
| Total Col1Ave (4 peaks): | | | | 56.7 | | Total Col2Ave (4 peaks): | | | 83.7 | RPD = 38 |

Corrected Ave (3 peaks): 45.1 Corrected Ave (3 peaks): 37.6 RPD = 18

Total PCB Area Col1 (5.936 - 13.808) = 4664202 Col1 Total PCB = 1.0 ppm*

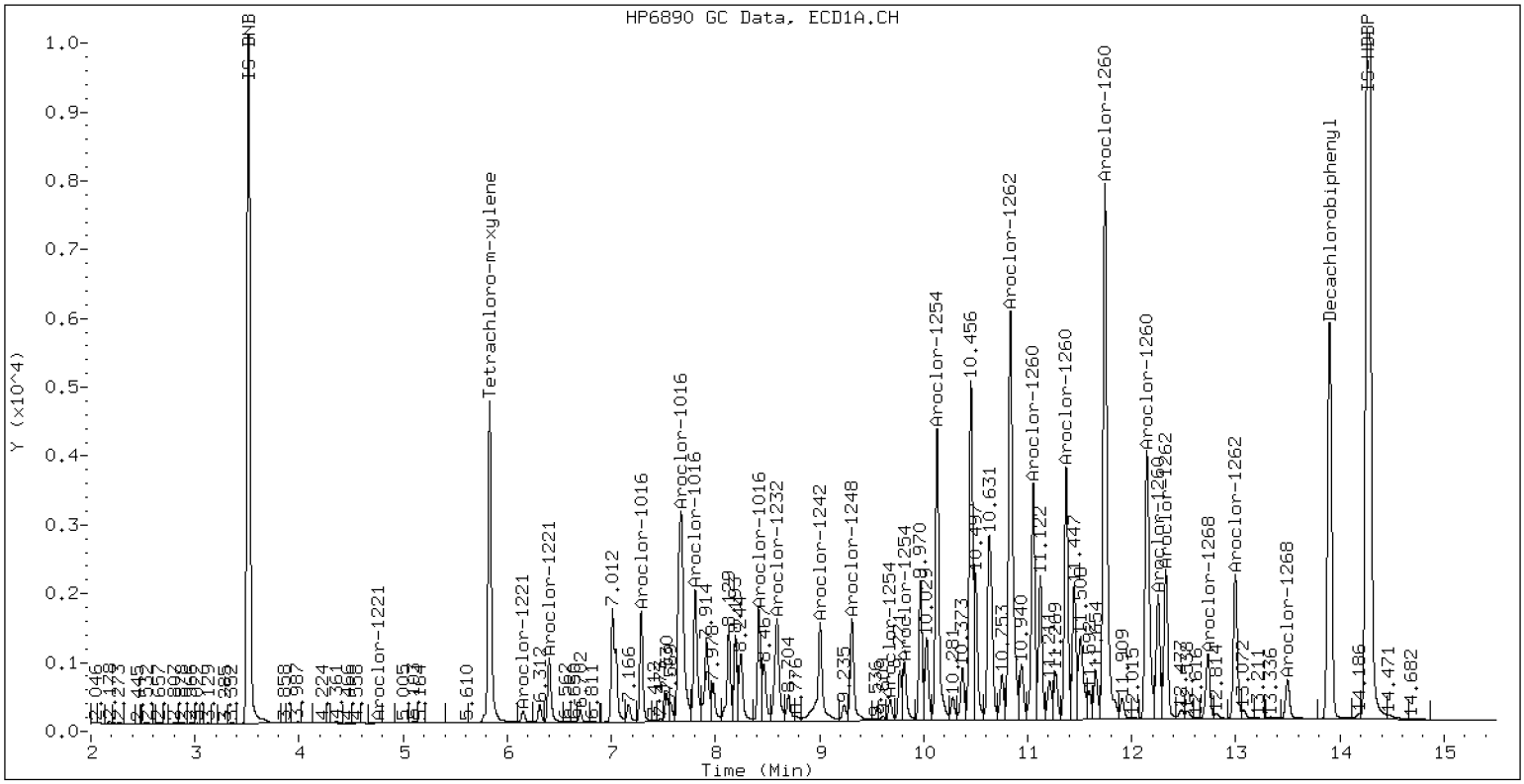
Total PCB Area Col2 (5.807 - 14.028) = 3413063 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

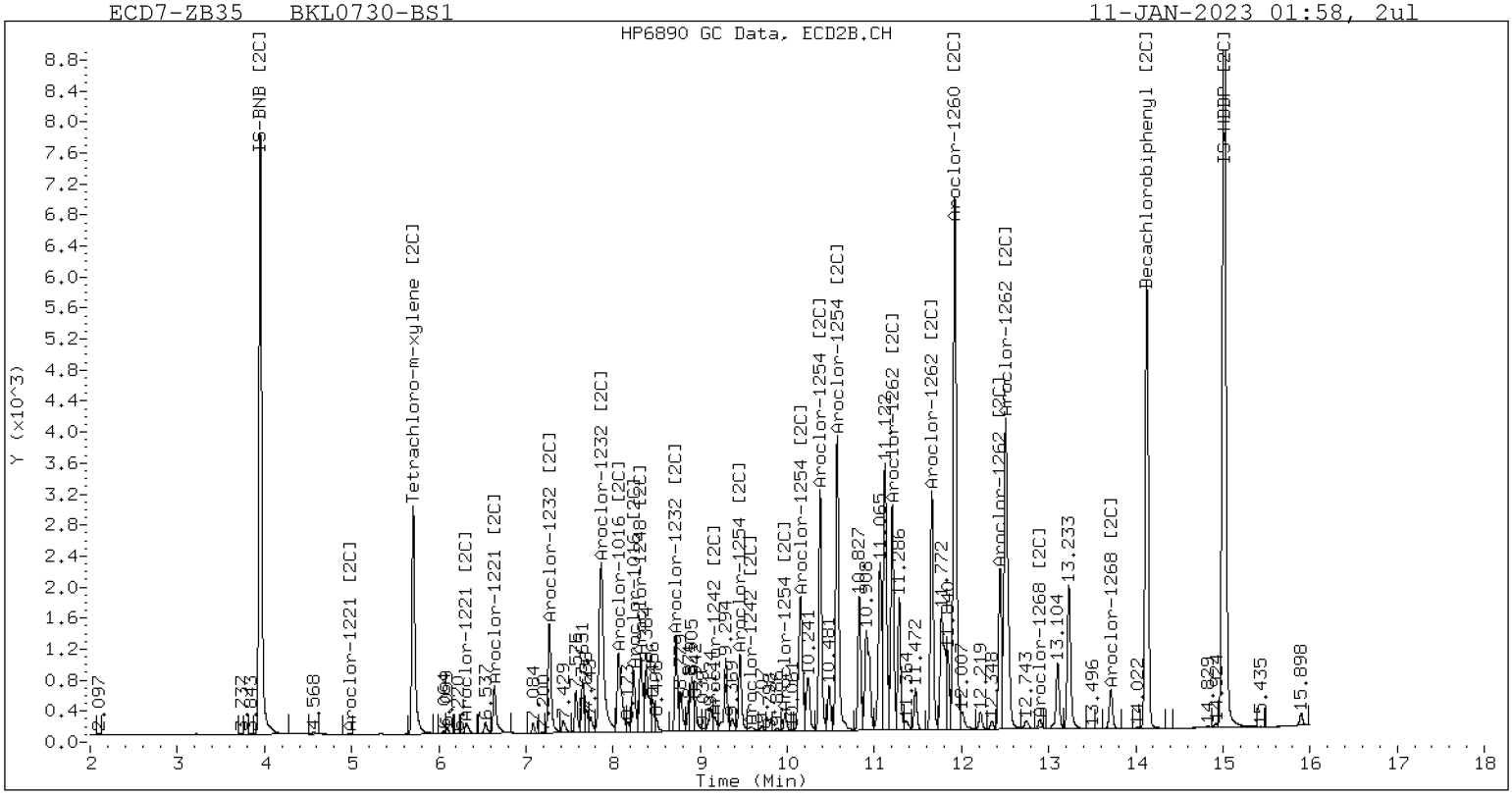
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0730-BS1 11-JAN-2023 01:58, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0730-BS1 11-JAN-2023 01:58, 2ul




ZB-35 Manual Integration: NO

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

Data file 1: /230110.b/01102329ECD7.D
Data file 2: /230110.b/230110.b/01102329ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0730-BSD1
Client ID:
Injection Date: 11-JAN-2023 02:19
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 207511 | 5.706 | -0.001 | 139826 | 30.9 | 28.3 | 8.7 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 331557 | 14.127 | -0.001 | 301576 | 37.2 | 34.9 | 6.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 474253 | 5.9 |
| Hexabromobiphenyl | 798898 | 972948 | 21.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 360235 | 44.6 |
| Hexabromobiphenyl | 362541 | 608175 | 67.8 |

* 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-1016 | 1 | 7.287 | -0.008 | 65561 | 414.4 | 1 | 7.269 | -0.002 | 70645 | 383.6 |
| Aroclor-1016 | 2 | 7.670 | -0.015 | 222817 | 436.3 | 2 | 7.865 | -0.006 | 165856 | 417.5 |
| Aroclor-1016 | 3 | 7.806 | -0.012 | 93493 | 403.9 | 3 | 8.065 | -0.006 | 67490 | 395.6 |
| Aroclor-1016 | 4 | 8.418 | -0.011 | 68995 | 467.6 | 4 | 8.235 | -0.006 | 40036 | 446.3 |
| Total Col1Ave (4 peaks): | | | | 430.6 | | Total Col2Ave (4 peaks): | | | 410.8 | RPD = 5 |
| Corrected Ave (3 peaks): | | | | 418.2 | | Corrected Ave (3 peaks): | | | 398.9 | RPD = 5 |
| Aroclor-1221 | 1 | 4.757 | -0.003 | 497 | 12.7 | 1 | 4.985 | -0.002 | 245 | 8.1 |
| Aroclor-1221 | 2 | 6.151 | -0.007 | 7433 | 107.6 | 2 | 6.316 | -0.005 | 6886 | 118.8 |
| Aroclor-1221 | 3 | 6.403 | -0.006 | 40818 | 256.2 | 3 | 6.639 | -0.007 | 30209 | 309.8 |
| Total Col1Ave (3 peaks): | | | | 125.5 | | Total Col2Ave (3 peaks): | | | 145.6 | RPD = 15 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.757 | -0.004 | 497 | 21.1 | 1 | 4.985 | -0.004 | 245 | 14.0 |
| Aroclor-1232 | 2 | 6.151 | -0.008 | 7433 | 149.1 | 2 | 7.269 | -0.008 | 70645 | 789.7 |
| Aroclor-1232 | 3 | 7.670 | -0.014 | 222817 | 995.5 | 3 | 7.865 | -0.011 | 165856 | 948.4 |
| Aroclor-1232 | 4 | 8.593 | -0.013 | 90331 | 951.2 | 4 | 8.724 | -0.010 | 52137 | 1099.5 |
| Total Col1Ave (4 peaks): | | | | 529.2 | | Total Col2Ave (4 peaks): | | | 712.9 | RPD = 30 |
| Corrected Ave (3 peaks): | | | | 373.8 | | Corrected Ave (3 peaks): | | | 584.0 | RPD = 44* |
| Aroclor-1242 | 1 | 7.287 | -0.008 | 65561 | 487.7 | 1 | 7.269 | -0.001 | 70645 | 463.4 |
| Aroclor-1242 | 2 | 7.670 | -0.016 | 222817 | 522.1 | 2 | 7.865 | -0.007 | 165856 | 512.5 |
| Aroclor-1242 | 3 | 8.418 | -0.012 | 68995 | 561.8 | 3 | 9.165 | -0.012 | 9970 | 95.5 |
| Aroclor-1242 | 4 | 9.007 | -0.024 | 98706 | 387.1 | 4 | 9.588 | -0.017 | 4137 | 33.0 |
| Total Col1Ave (4 peaks): | | | | 489.7 | | Total Col2Ave (4 peaks): | | | 276.1 | RPD = 56* |
| Corrected Ave (3 peaks): | | | | 465.6 | | Corrected Ave (3 peaks): | | | 197.3 | RPD = 81* |
| Aroclor-1248 | 1 | 8.418 | -0.009 | 68995 | 338.4 | 1 | 8.318 | -0.003 | 50730 | 344.7 |
| Aroclor-1248 | 2 | 8.593 | -0.012 | 90331 | 347.0 | 2 | 8.724 | -0.004 | 52137 | 336.8 |
| Aroclor-1248 | 3 | 9.007 | -0.016 | 98706 | 210.8 | 3 | 9.165 | -0.009 | 9970 | 53.0 |
| Aroclor-1248 | 4 | 9.312 | 0.000 | 76824 | 334.8 | 4 | 9.588 | -0.008 | 4137 | 18.7 |
| Total Col1Ave (4 peaks): | | | | 307.7 | | Total Col2Ave (4 peaks): | | | 188.3 | RPD = 48* |
| Corrected Ave (3 peaks): | | | | 294.6 | | Corrected Ave (3 peaks): | | | 136.2 | RPD = 74* |
| Aroclor-1254 | 1 | 9.312 | -0.009 | 76824 | 184.0 | 1 | 9.457 | -0.004 | 46771 | 201.4 |
| Aroclor-1254 | 2 | --- | | | 0.0 | 2 | 9.977 | -0.004 | 10210 | 54.7 |
| Aroclor-1254 | 3 | 9.678 | -0.017 | 14071 | 53.4 | 3 | 10.153 | 0.020 | 107010 | 266.6 |
| Aroclor-1254 | 4 | 9.816 | -0.015 | 44492 | 86.5 | 4 | 10.378 | -0.005 | 140376 | 337.7 |
| Aroclor-1254 | 5 | 10.130 | -0.059 | 207870 | 589.9 | 5 | 10.573 | -0.008 | 188793 | 941.7 |
| Total Col1Ave (4 peaks): | | | | 228.4 | | Total Col2Ave (5 peaks): | | | 360.4 | RPD = 45* |
| Corrected Ave (3 peaks): | | | | 108.0 | | Corrected Ave (4 peaks): | | | 215.1 | RPD = 66* |
| Aroclor-1260 | 1 | 11.053 | -0.009 | 169475 | 478.5 | 1 | 11.659 | -0.003 | 144295 | 449.5 |
| Aroclor-1260 | 2 | 11.370 | -0.007 | 175907 | 480.2 | 2 | 11.923 | -0.003 | 348728 | 432.9 |
| Aroclor-1260 | 3 | 11.742 | -0.009 | 442253 | 459.5 | 3 | 12.442 | -0.002 | 99609 | 464.3 |
| Aroclor-1260 | 4 | 12.146 | -0.013 | 228042 | 465.3 | 4 | 12.507 | -0.004 | 245874 | 457.9 |
| Aroclor-1260 | 5 | 12.253 | -0.008 | 91329 | 455.2 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 467.8 | | Total Col2Ave (4 peaks): | | | 451.1 | RPD = 4 |
| Corrected Ave (4 peaks): | | | | 464.6 | | Corrected Ave (3 peaks): | | | 446.7 | RPD = 4 |
| Aroclor-1262 | 1 | 10.834 | -0.014 | 342692 | 1053.3 | 1 | 11.207 | -0.010 | 133700 | 289.1 |
| Aroclor-1262 | 2 | 12.253 | -0.009 | 91329 | 180.5 | 2 | 11.659 | -0.011 | 144295 | 360.3 |
| Aroclor-1262 | 3 | 12.327 | -0.010 | 109868 | 203.4 | 3 | 12.442 | -0.009 | 99609 | 225.5 |
| Aroclor-1262 | 4 | 12.995 | -0.010 | 110610 | 255.1 | 4 | 12.507 | -0.013 | 245874 | 355.3 |
| Total Col1Ave (4 peaks): | | | | 423.1 | | Total Col2Ave (4 peaks): | | | 307.5 | RPD = 32 |
| Corrected Ave (3 peaks): | | | | 213.0 | | Corrected Ave (3 peaks): | | | 290.0 | RPD = 31 |
| Aroclor-1268 | 1 | 12.253 | -0.009 | 91329 | 67.1 | 1 | 12.442 | -0.007 | 99609 | 86.8 |
| Aroclor-1268 | 2 | 12.327 | -0.008 | 109868 | 82.5 | 2 | 12.507 | -0.011 | 245874 | 208.9 |
| Aroclor-1268 | 3 | 12.734 | 0.017 | 50221 | 46.0 | 3 | 12.899 | -0.010 | 5007 | 11.5 |
| Aroclor-1268 | 4 | 13.497 | -0.008 | 31977 | 9.6 | 4 | 13.716 | -0.010 | 26767 | 8.5 |
| Total Col1Ave (4 peaks): | | | | 51.3 | | Total Col2Ave (4 peaks): | | | 78.9 | RPD = 42* |

Corrected Ave (3 peaks): 40.9 Corrected Ave (3 peaks): 35.6 RPD = 14

Total PCB Area Col1 (5.936 - 13.808) = 4527827 Col1 Total PCB = 1.0 ppm*

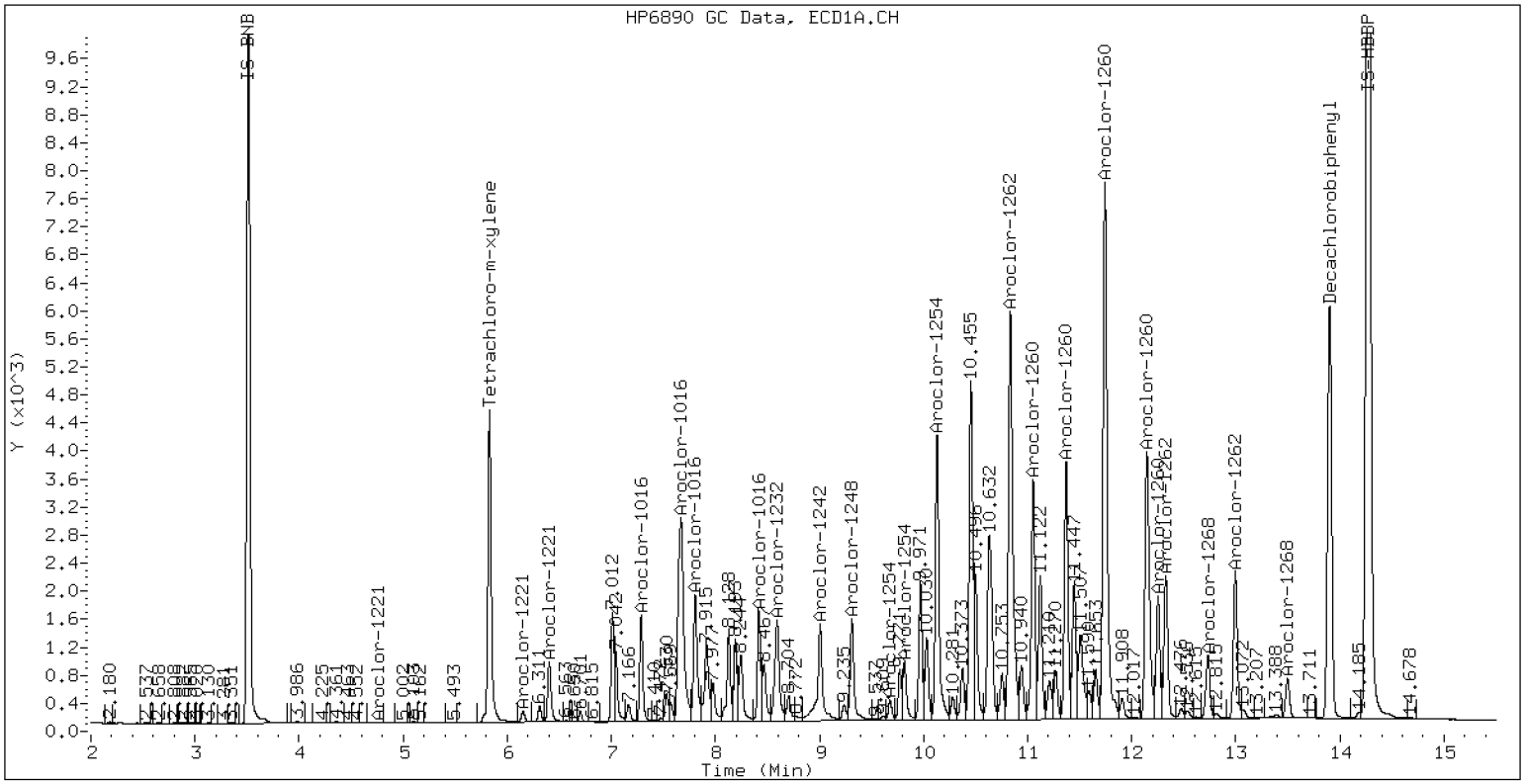
Total PCB Area Col2 (5.807 - 14.028) = 3319420 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

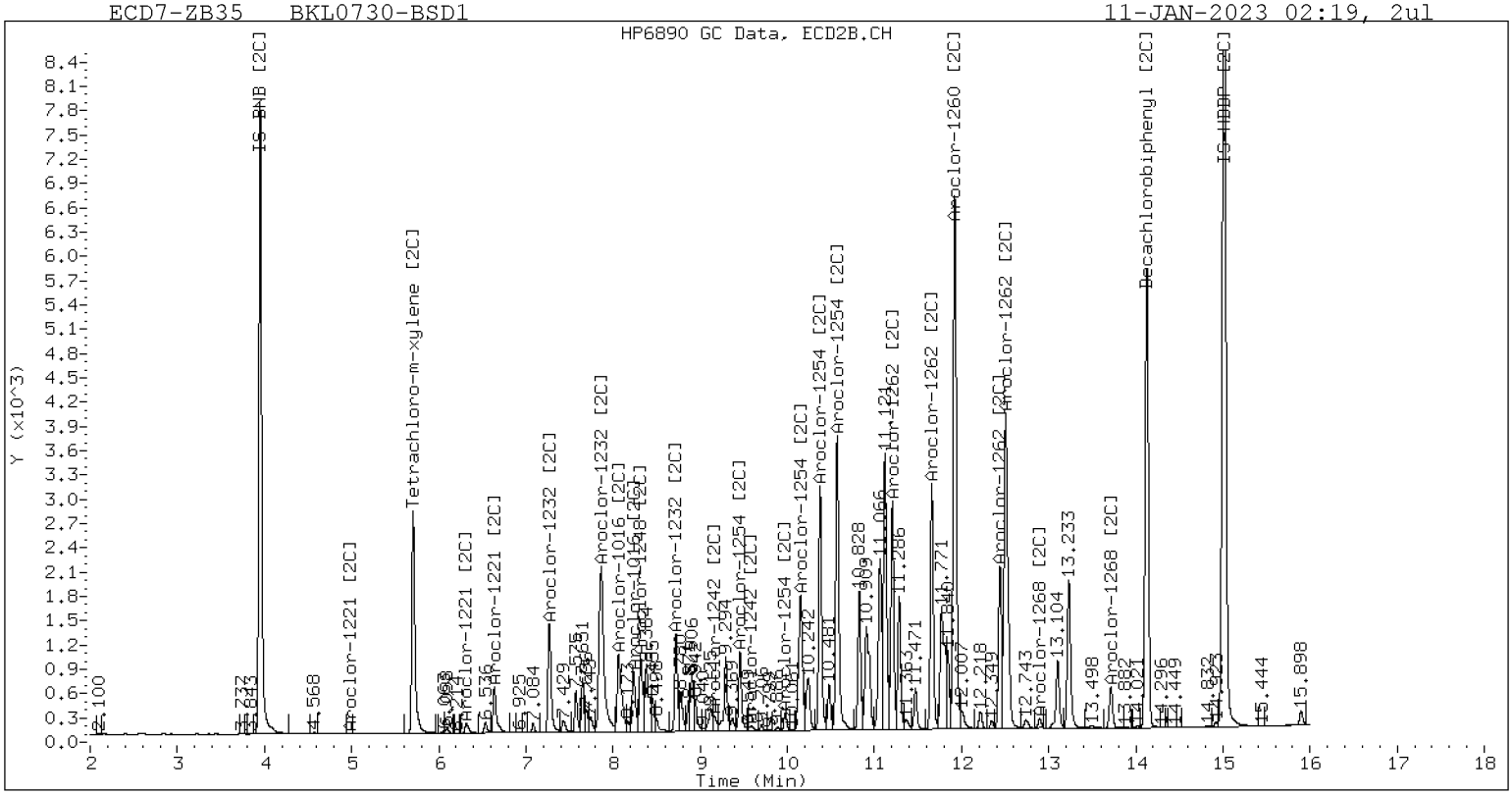
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0730-BSD1 11-JAN-2023 02:19, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0730-BSD1 11-JAN-2023 02:19, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT791B**

# MS / MS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/10/23 11:46 |
| Batch: | BKL0687 | Laboratory ID: | BKL0687-MS1 |
| Preparation: | EPA 3546 (Microwave) | Sequence Name: | Matrix Spike |
| Initial/Final: | 13.97 g / 2.5 mL | Source Sample: | LDW22-IT791B |

| 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 | 89.5 | | 88.6 | 56 - 120 |
| Aroclor 1260 [2C] | 101 | 6.9 | | 111 | | 103 | 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, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT791B**

# MS / MS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/10/23 12:07 |
| Batch: | BKL0687 | Laboratory ID: | BKL0687-MSD1 |
| Preparation: | EPA 3546 (Microwave) | Sequence Name: | Matrix Spike Dup |
| Initial/Final: | 13.97 g / 2.5 mL | Source Sample: | LDW22-IT791B |

| COMPOUND | SPIKE ADDED (ug/kg dry) | MSD CONCENTRATION (ug/kg dry) | Q | MSD % REC. # | % RPD # | QC LIMITS | |
|---|---|---|---|---|---|---|---|
| | | | | | | RPD | REC. |
| Aroclor 1016 | 101 | 96.0 | | 95.0 | 7.06 | 30 | 56 - 120 |
| Aroclor 1260 [2C] | 101 | 115 | | 107 | 3.40 | 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: /230109.b/01092377ECD7.D
Data file 2: /230109.b/230109.b/01092377ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0687-MS1
Client ID:
Injection Date: 10-JAN-2023 11:46
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 217494 | 5.706 | -0.007 | 138179 | 30.9 | 28.1 | 9.5 | Tetrachloro-m-xylene |
| 13.899 | -0.008 | 308202 | 14.126 | -0.011 | 248751 | 43.9 | 37.8 | 14.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 497154 | 11.1 |
| Hexabromobiphenyl | 798898 | 765501 | -4.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 359063 | 44.1 |
| Hexabromobiphenyl | 362541 | 463194 | 27.8 |

* 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-1016 | 1 | 7.286 | -0.009 | 70227 | 423.5 | 1 | 7.268 | -0.007 | 71140 | 387.5 |
| Aroclor-1016 | 2 | 7.668 | -0.017 | 241410 | 450.9 | 2 | 7.864 | -0.007 | 168798 | 426.3 |
| Aroclor-1016 | 3 | 7.805 | -0.013 | 99695 | 410.9 | 3 | 8.063 | -0.007 | 68302 | 401.7 |
| Aroclor-1016 | 4 | 8.417 | -0.012 | 77993 | 504.2 | 4 | 8.233 | -0.008 | 41088 | 459.5 |
| Total Col1Ave (4 peaks): 447.4 | | | | | | Total Col2Ave (4 peaks): 418.8 RPD = 7 | | | | |
| Corrected Ave (3 peaks): 428.4 | | | | | | Corrected Ave (3 peaks): 405.2 RPD = 6 | | | | |
| 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 | 11.051 | -0.011 | 173206 | 621.6 | 1 | 11.659 | -0.010 | 145082 | 593.4 |
| Aroclor-1260 | 2 | 11.369 | -0.009 | 175669 | 609.6 | 2 | 11.921 | -0.012 | 328964 | 536.2 |
| Aroclor-1260 | 3 | 11.740 | -0.011 | 413237 | 545.7 | 3 | 12.440 | -0.011 | 90654 | 554.9 |
| Aroclor-1260 | 4 | 12.143 | -0.015 | 218758 | 567.3 | 4 | 12.505 | -0.012 | 218336 | 533.8 |
| Aroclor-1260 | 5 | 12.251 | -0.010 | 84161 | 533.1 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): 575.5 | | | | | | Total Col2Ave (4 peaks): 554.6 RPD = 4 | | | | |
| Corrected Ave (4 peaks): 563.9 | | | | | | Corrected Ave (3 peaks): 541.6 RPD = 4 | | | | |
| 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) = 5003104 Col1 Total PCB = 1.1 ppm*

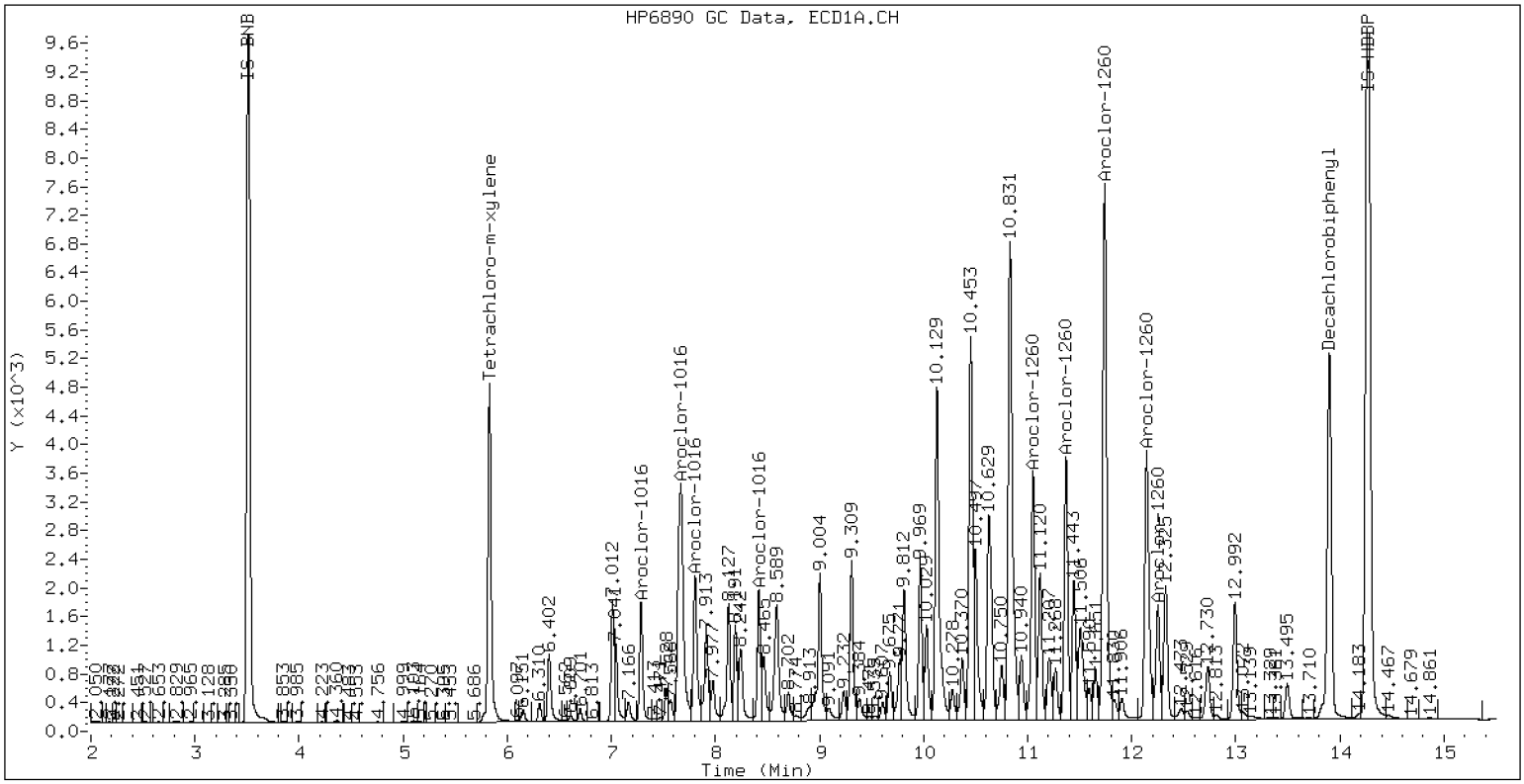
Total PCB Area Col2 (5.813 - 14.037) = 3428794 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

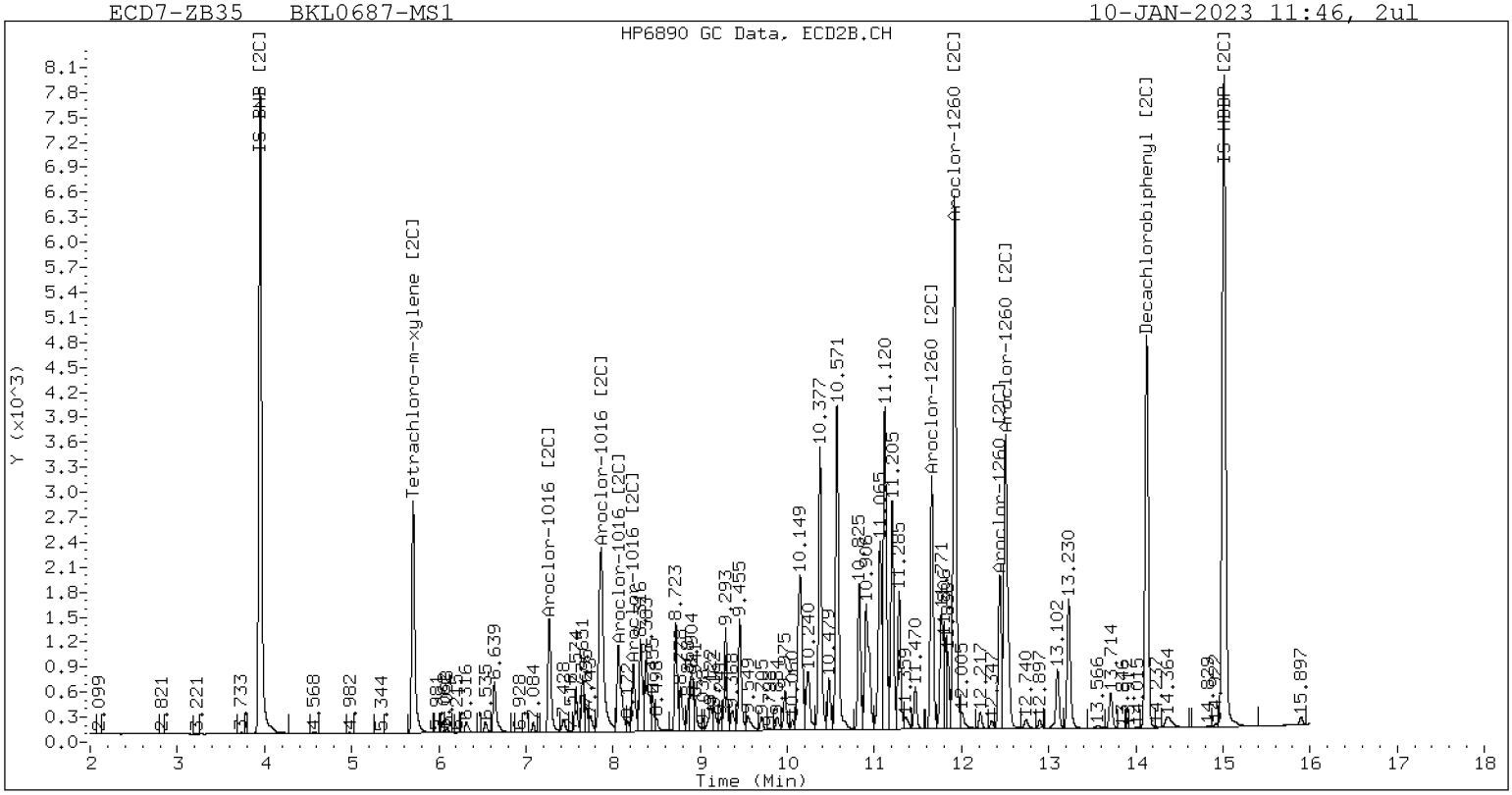
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0687-MS1 10-JAN-2023 11:46, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0687-MS1 10-JAN-2023 11:46, 2ul




ZB-35 Manual Integration: NO

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

Data file 1: /230109.b/01092378ECD7.D
Data file 2: /230109.b/230109.b/01092378ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0687-MSD1
Client ID:
Injection Date: 10-JAN-2023 12:07
Report Date: 01/13/2023 16:04
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 |
| 5.829 | -0.007 | 224433 | 5.706 | -0.008 | 140918 | 32.1 | 29.2 | 9.5 | Tetrachloro-m-xylene |
| 13.899 | -0.008 | 346827 | 14.125 | -0.012 | 260134 | 46.9 | 37.9 | 21.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 493798 | 10.3 |
| Hexabromobiphenyl | 798898 | 807510 | 1.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 352397 | 41.5 |
| Hexabromobiphenyl | 362541 | 483749 | 33.4 |

* 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 | -0.008 | 74069 | 449.7 | 1 | 7.268 | -0.007 | 75223 | 417.5 |
| Aroclor-1016 | 2 | 7.668 | -0.017 | 255649 | 480.7 | 2 | 7.863 | -0.007 | 177689 | 457.3 |
| Aroclor-1016 | 3 | 7.804 | -0.014 | 104748 | 434.7 | 3 | 8.062 | -0.008 | 72069 | 431.9 |
| Aroclor-1016 | 4 | 8.416 | -0.013 | 85320 | 555.4 | 4 | 8.233 | -0.008 | 43336 | 493.8 |
| Total Col1Ave (4 peaks): | | | | | 480.1 | Total Col2Ave (4 peaks): | | | | 450.1 RPD = 6 |
| Corrected Ave (3 peaks): | | | | | 455.0 | Corrected Ave (3 peaks): | | | | 435.5 RPD = 4 |
| 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 | 11.051 | -0.011 | 184830 | 628.8 | 1 | 11.659 | -0.011 | 156902 | 614.5 |
| Aroclor-1260 | 2 | 11.368 | -0.010 | 191731 | 630.7 | 2 | 11.921 | -0.012 | 354615 | 553.4 |
| Aroclor-1260 | 3 | 11.740 | -0.012 | 447958 | 560.8 | 3 | 12.440 | -0.012 | 98560 | 577.6 |
| Aroclor-1260 | 4 | 12.142 | -0.016 | 239159 | 587.9 | 4 | 12.504 | -0.013 | 234730 | 549.5 |
| Aroclor-1260 | 5 | 12.251 | -0.010 | 92447 | 555.2 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 592.7 | Total Col2Ave (4 peaks): | | | | 573.8 RPD = 3 |
| Corrected Ave (4 peaks): | | | | | 583.2 | Corrected Ave (3 peaks): | | | | 560.2 RPD = 4 |
| 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) = 5522948 Col1 Total PCB = 1.2 ppm*

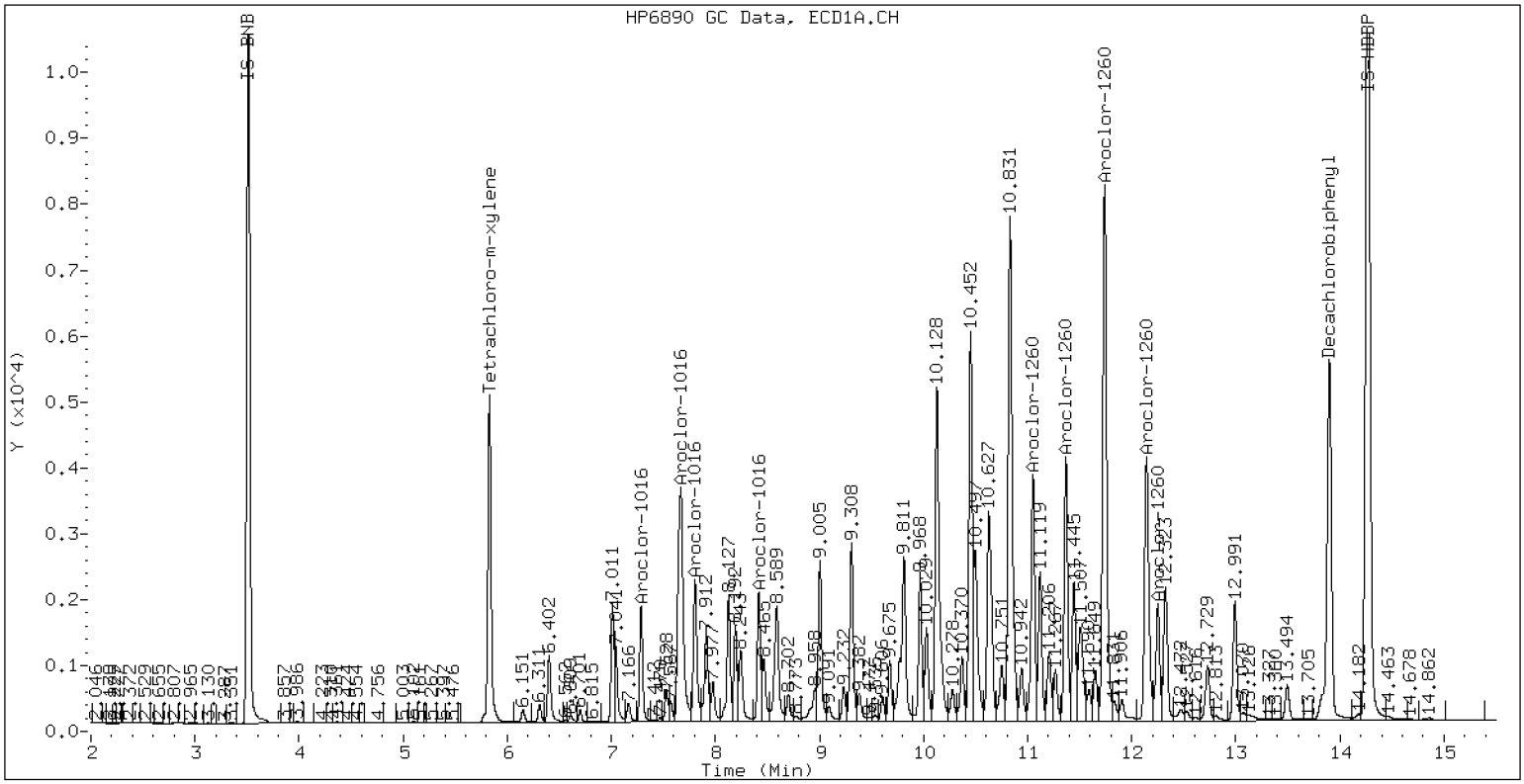
Total PCB Area Col2 (5.813 - 14.037) = 3737291 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

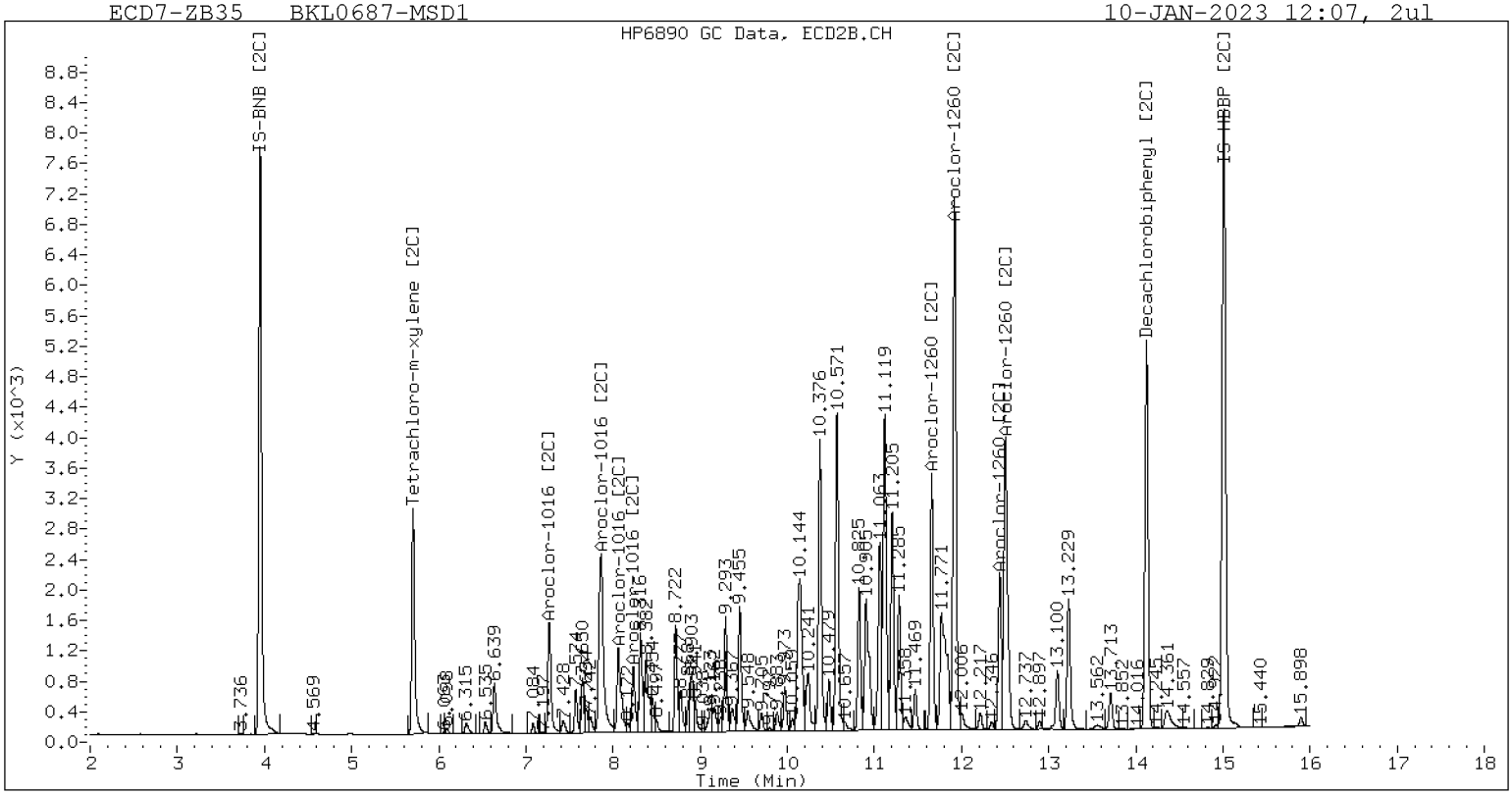
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0687-MSD1 10-JAN-2023 12:07, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0687-MSD1 10-JAN-2023 12:07, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC757F**

# MS / MS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/08/23 20:03 |
| Batch: | BKL0728 | Laboratory ID: | BKL0728-MS1 |
| Preparation: | EPA 3546 (Microwave) | Sequence Name: | Matrix Spike |
| Initial/Final: | 14.34 g / 2.5 mL | Source Sample: | LDW22-SC757F |

| 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 | 79.8 | | 79.0 | 56 - 120 |
| Aroclor 1260 | 101 | ND | U | 88.8 | | 87.9 | 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, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC757F**

# MS / MS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/08/23 20:24 |
| Batch: | BKL0728 | Laboratory ID: | BKL0728-MSD1 |
| Preparation: | EPA 3546 (Microwave) | Sequence Name: | Matrix Spike Dup |
| Initial/Final: | 14.34 g / 2.5 mL | Source Sample: | LDW22-SC757F |

| COMPOUND | SPIKE ADDED (ug/kg dry) | MSD CONCENTRATION (ug/kg dry) | Q | MSD % REC. # | % RPD # | QC LIMITS | |
|---|---|---|---|---|---|---|---|
| | | | | | | RPD | REC. |
| Aroclor 1016 | 101 | 84.6 | | 83.8 | 5.80 | 30 | 56 - 120 |
| Aroclor 1260 | 101 | 91.3 | | 90.6 | 2.75 | 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: /230107.b/010723990ECD7.D
Data file 2: /230107.b/230107.b/010723990ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0728-MS1
Client ID:
Injection Date: 08-JAN-2023 20:03
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.003 | 200064 | 5.707 | -0.002 | 128975 | 27.8 | 27.1 | 2.5 | Tetrachloro-m-xylene |
| 13.899 | -0.005 | 347490 | 14.125 | -0.003 | 307796 | 37.2 | 36.5 | 1.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 507080 | 13.3 |
| Hexabromobiphenyl | 798898 | 1019175 | 27.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 346593 | 39.1 |
| Hexabromobiphenyl | 362541 | 593758 | 63.8 |

* 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-1016 | 1 | 7.286 | -0.004 | 70977 | 419.6 | 1 | 7.269 | -0.003 | 64121 | 361.8 |
| Aroclor-1016 | 2 | 7.667 | -0.012 | 218457 | 400.0 | 2 | 7.863 | -0.009 | 148897 | 389.6 |
| Aroclor-1016 | 3 | 7.805 | -0.008 | 88607 | 358.0 | 3 | 8.063 | -0.008 | 59194 | 360.6 |
| Aroclor-1016 | 4 | 8.418 | -0.007 | 66152 | 419.3 | 4 | 8.234 | -0.009 | 35346 | 409.5 |
| Total Col1Ave (4 peaks): | | | | | 399.2 | Total Col2Ave (4 peaks): | | | | 380.4 RPD = 5 |
| Corrected Ave (3 peaks): | | | | | 392.5 | Corrected Ave (3 peaks): | | | | 370.7 RPD = 6 |
| Aroclor-1221 | 1 | 4.761 | 0.001 | 955 | 22.8 | 1 | 4.979 | -0.008 | 182 | 6.2 |
| Aroclor-1221 | 2 | 6.151 | -0.007 | 7898 | 107.0 | 2 | 6.317 | -0.004 | 4758 | 85.3 |
| Aroclor-1221 | 3 | 6.402 | -0.006 | 41591 | 244.1 | 3 | 6.638 | -0.007 | 27938 | 297.8 |
| Total Col1Ave (3 peaks): | | | | | 124.6 | Total Col2Ave (3 peaks): | | | | 129.8 RPD = 4 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.761 | 0.000 | 955 | 37.9 | 1 | 4.979 | -0.010 | 182 | 10.8 |
| Aroclor-1232 | 2 | 6.151 | -0.008 | 7898 | 148.2 | 2 | 7.269 | -0.008 | 64121 | 745.0 |
| Aroclor-1232 | 3 | 7.667 | -0.016 | 218457 | 912.9 | 3 | 7.863 | -0.013 | 148897 | 884.9 |
| Aroclor-1232 | 4 | 8.590 | -0.016 | 85662 | 843.7 | 4 | 8.723 | -0.011 | 45486 | 997.0 |
| Total Col1Ave (4 peaks): | | | | | 485.7 | Total Col2Ave (4 peaks): | | | | 659.4 RPD = 30 |
| Corrected Ave (3 peaks): | | | | | 343.3 | Corrected Ave (3 peaks): | | | | 546.9 RPD = 46* |
| Aroclor-1242 | 1 | 7.286 | -0.004 | 70977 | 493.8 | 1 | 7.269 | -0.003 | 64121 | 437.1 |
| Aroclor-1242 | 2 | 7.667 | -0.014 | 218457 | 478.7 | 2 | 7.863 | -0.009 | 148897 | 478.2 |
| Aroclor-1242 | 3 | 8.418 | -0.008 | 66152 | 503.8 | 3 | 9.162 | -0.018 | 8683 | 86.4 |
| Aroclor-1242 | 4 | 9.005 | -0.016 | 66078 | 242.4 | 4 | 9.584 | -0.022 | 4501 | 37.3 |
| Total Col1Ave (4 peaks): | | | | | 429.7 | Total Col2Ave (4 peaks): | | | | 259.7 RPD = 49* |
| Corrected Ave (3 peaks): | | | | | 405.0 | Corrected Ave (3 peaks): | | | | 186.9 RPD = 74* |
| Aroclor-1248 | 1 | 8.418 | -0.007 | 66152 | 303.4 | 1 | 8.316 | -0.006 | 42800 | 302.3 |
| Aroclor-1248 | 2 | 8.590 | -0.013 | 85662 | 307.7 | 2 | 8.723 | -0.006 | 45486 | 305.4 |
| Aroclor-1248 | 3 | 9.005 | -0.014 | 66078 | 132.0 | 3 | 9.162 | -0.016 | 8683 | 47.9 |
| Aroclor-1248 | 4 | 9.308 | -0.005 | 69886 | 284.9 | 4 | 9.584 | -0.018 | 4501 | 21.2 |
| Total Col1Ave (4 peaks): | | | | | 257.0 | Total Col2Ave (4 peaks): | | | | 169.2 RPD = 41* |
| Corrected Ave (3 peaks): | | | | | 240.1 | Corrected Ave (3 peaks): | | | | 123.8 RPD = 64* |
| Aroclor-1254 | 1 | 9.308 | -0.003 | 69886 | 156.5 | 1 | 9.455 | -0.006 | 40355 | 180.6 |
| Aroclor-1254 | 2 | --- | | | 0.0 | 2 | 9.974 | -0.006 | 8859 | 49.3 |
| Aroclor-1254 | 3 | 9.675 | -0.003 | 13589 | 48.2 | 3 | 10.151 | 0.018 | 93204 | 241.3 |
| Aroclor-1254 | 4 | 9.812 | -0.003 | 42349 | 77.0 | 4 | 10.377 | -0.006 | 123247 | 308.2 |
| Aroclor-1254 | 5 | 10.128 | -0.040 | 195808 | 519.7 | 5 | 10.571 | -0.007 | 164272 | 851.6 |
| Total Col1Ave (4 peaks): | | | | | 200.4 | Total Col2Ave (5 peaks): | | | | 326.2 RPD = 48* |
| Corrected Ave (3 peaks): | | | | | 93.9 | Corrected Ave (4 peaks): | | | | 194.9 RPD = 70* |
| Aroclor-1260 | 1 | 11.050 | -0.010 | 163514 | 440.8 | 1 | 11.658 | -0.005 | 129663 | 413.7 |
| Aroclor-1260 | 2 | 11.367 | -0.009 | 171963 | 448.2 | 2 | 11.920 | -0.009 | 322079 | 409.5 |
| Aroclor-1260 | 3 | 11.737 | -0.013 | 431097 | 427.6 | 3 | 12.439 | -0.007 | 93102 | 444.6 |
| Aroclor-1260 | 4 | 12.140 | -0.014 | 237070 | 461.8 | 4 | 12.504 | -0.008 | 221350 | 422.2 |
| Aroclor-1260 | 5 | 12.250 | -0.007 | 93099 | 443.0 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 444.3 | Total Col2Ave (4 peaks): | | | | 422.5 RPD = 5 |
| Corrected Ave (4 peaks): | | | | | 439.9 | Corrected Ave (3 peaks): | | | | 415.1 RPD = 6 |
| Aroclor-1262 | 1 | 10.829 | -0.019 | 324684 | 952.6 | 1 | 11.205 | -0.012 | 116240 | 257.5 |
| Aroclor-1262 | 2 | 12.250 | -0.013 | 93099 | 175.7 | 2 | 11.658 | -0.012 | 129663 | 331.6 |
| Aroclor-1262 | 3 | 12.324 | -0.013 | 111816 | 197.6 | 3 | 12.439 | -0.013 | 93102 | 215.9 |
| Aroclor-1262 | 4 | 12.990 | -0.015 | 106015 | 233.4 | 4 | 12.504 | -0.016 | 221350 | 327.6 |
| Total Col1Ave (4 peaks): | | | | | 389.8 | Total Col2Ave (4 peaks): | | | | 283.1 RPD = 32 |
| Corrected Ave (3 peaks): | | | | | 202.2 | Corrected Ave (3 peaks): | | | | 267.0 RPD = 28 |
| Aroclor-1268 | 1 | 12.250 | -0.012 | 93099 | 65.3 | 1 | 12.439 | -0.011 | 93102 | 83.1 |
| Aroclor-1268 | 2 | 12.324 | -0.011 | 111816 | 80.2 | 2 | 12.504 | -0.014 | 221350 | 192.6 |
| Aroclor-1268 | 3 | 12.727 | 0.010 | 50239 | 43.9 | 3 | 12.898 | -0.012 | 4630 | 10.9 |
| Aroclor-1268 | 4 | 13.492 | -0.013 | 32277 | 9.2 | 4 | 13.712 | -0.015 | 25074 | 8.2 |
| Total Col1Ave (4 peaks): | | | | | 49.7 | Total Col2Ave (4 peaks): | | | | 73.7 RPD = 39 |

Corrected Ave (3 peaks): 39.5 Corrected Ave (3 peaks): 34.0 RPD = 15

Total PCB Area Col1 (5.933 - 13.804) = 4436183 Col1 Total PCB = 0.9 ppm*

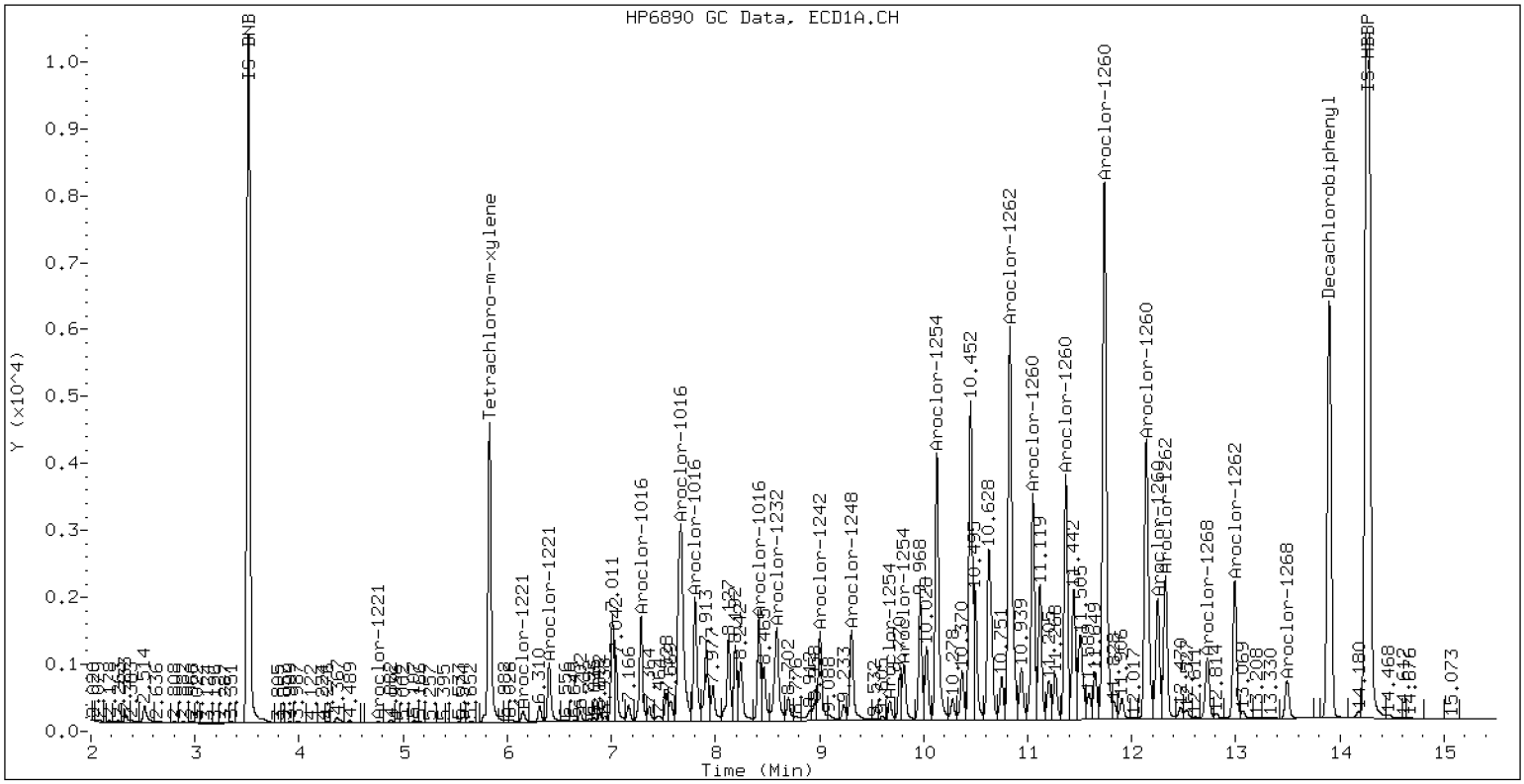
Total PCB Area Col2 (5.809 - 14.028) = 2979429 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

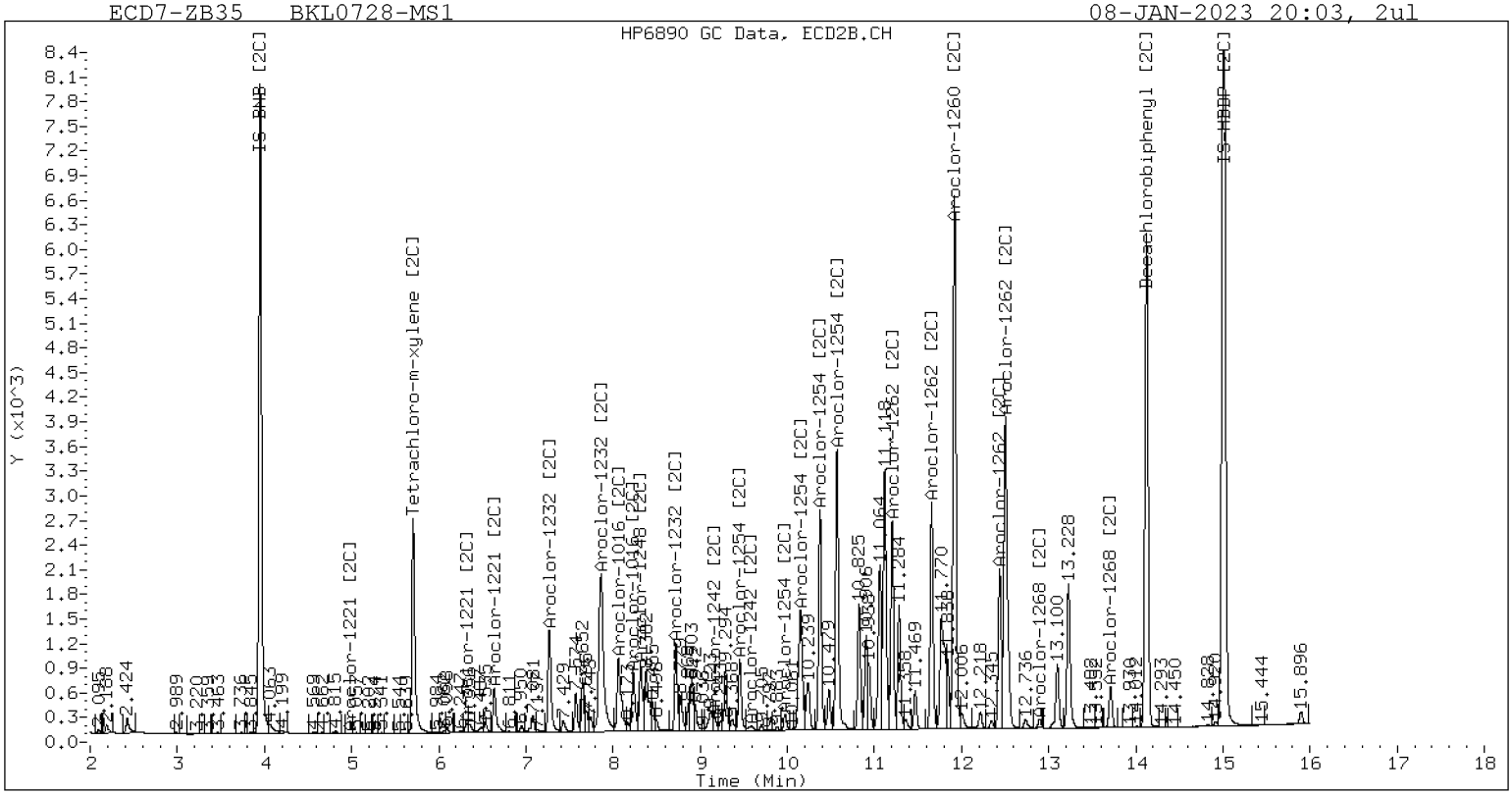
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0728-MS1 08-JAN-2023 20:03, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0728-MS1 08-JAN-2023 20:03, 2ul




ZB-35 Manual Integration: NO

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

Data file 1: /230107.b/010723991ECD7.D
Data file 2: /230107.b/230107.b/010723991ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0728-MSD1
Client ID:
Injection Date: 08-JAN-2023 20:24
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.003 | 214331 | 5.707 | -0.002 | 138452 | 29.9 | 28.5 | 4.7 | Tetrachloro-m-xylene |
| 13.897 | -0.007 | 364297 | 14.124 | -0.004 | 317624 | 37.3 | 36.7 | 1.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 506101 | 13.1 |
| Hexabromobiphenyl | 798898 | 1066066 | 33.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 354359 | 42.3 |
| Hexabromobiphenyl | 362541 | 609670 | 68.2 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.286 | -0.005 | 74987 | 444.2 | 1 | 7.269 | -0.003 | 68750 | 379.5 |
| Aroclor-1016 | 2 | 7.667 | -0.013 | 232274 | 426.1 | 2 | 7.863 | -0.009 | 159875 | 409.2 |
| Aroclor-1016 | 3 | 7.804 | -0.009 | 94116 | 381.0 | 3 | 8.062 | -0.008 | 62996 | 375.4 |
| Aroclor-1016 | 4 | 8.417 | -0.008 | 69441 | 441.0 | 4 | 8.233 | -0.010 | 37692 | 427.1 |
| Total Col1Ave (4 peaks): | | | | 423.1 | | Total Col2Ave (4 peaks): | | | 397.8 | RPD = 6 |
| Corrected Ave (3 peaks): | | | | 416.1 | | Corrected Ave (3 peaks): | | | 388.0 | RPD = 7 |
| Aroclor-1221 | 1 | 4.761 | 0.001 | 1181 | 28.2 | 1 | 4.982 | -0.005 | 234 | 7.8 |
| Aroclor-1221 | 2 | 6.151 | -0.008 | 8767 | 119.0 | 2 | 6.317 | -0.005 | 5295 | 92.9 |
| Aroclor-1221 | 3 | 6.402 | -0.006 | 44779 | 263.4 | 3 | 6.639 | -0.007 | 30308 | 316.0 |
| Total Col1Ave (3 peaks): | | | | 136.8 | | Total Col2Ave (3 peaks): | | | 138.9 | RPD = 1 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.761 | 0.000 | 1181 | 46.9 | 1 | 4.982 | -0.007 | 234 | 13.6 |
| Aroclor-1232 | 2 | 6.151 | -0.008 | 8767 | 164.8 | 2 | 7.269 | -0.008 | 68750 | 781.3 |
| Aroclor-1232 | 3 | 7.667 | -0.016 | 232274 | 972.5 | 3 | 7.863 | -0.013 | 159875 | 929.3 |
| Aroclor-1232 | 4 | 8.589 | -0.016 | 90763 | 895.7 | 4 | 8.723 | -0.011 | 48163 | 1032.6 |
| Total Col1Ave (4 peaks): | | | | 520.0 | | Total Col2Ave (4 peaks): | | | 689.2 | RPD = 28 |
| Corrected Ave (3 peaks): | | | | 369.1 | | Corrected Ave (3 peaks): | | | 574.7 | RPD = 44* |
| Aroclor-1242 | 1 | 7.286 | -0.005 | 74987 | 522.7 | 1 | 7.269 | -0.003 | 68750 | 458.4 |
| Aroclor-1242 | 2 | 7.667 | -0.015 | 232274 | 510.0 | 2 | 7.863 | -0.009 | 159875 | 502.2 |
| Aroclor-1242 | 3 | 8.417 | -0.008 | 69441 | 529.9 | 3 | 9.161 | -0.019 | 9178 | 89.4 |
| Aroclor-1242 | 4 | 9.005 | -0.016 | 70793 | 260.2 | 4 | 9.584 | -0.022 | 4767 | 38.6 |
| Total Col1Ave (4 peaks): | | | | 455.7 | | Total Col2Ave (4 peaks): | | | 272.1 | RPD = 50* |
| Corrected Ave (3 peaks): | | | | 431.0 | | Corrected Ave (3 peaks): | | | 195.5 | RPD = 75* |
| Aroclor-1248 | 1 | 8.417 | -0.008 | 69441 | 319.1 | 1 | 8.317 | -0.005 | 45400 | 313.6 |
| Aroclor-1248 | 2 | 8.589 | -0.013 | 90763 | 326.7 | 2 | 8.723 | -0.005 | 48163 | 316.3 |
| Aroclor-1248 | 3 | 9.005 | -0.014 | 70793 | 141.6 | 3 | 9.161 | -0.017 | 9178 | 49.6 |
| Aroclor-1248 | 4 | 9.308 | -0.005 | 75494 | 308.3 | 4 | 9.584 | -0.018 | 4767 | 21.9 |
| Total Col1Ave (4 peaks): | | | | 273.9 | | Total Col2Ave (4 peaks): | | | 175.4 | RPD = 44* |
| Corrected Ave (3 peaks): | | | | 256.4 | | Corrected Ave (3 peaks): | | | 128.4 | RPD = 67* |
| Aroclor-1254 | 1 | 9.308 | -0.003 | 75494 | 169.4 | 1 | 9.456 | -0.006 | 42442 | 185.8 |
| Aroclor-1254 | 2 | --- | | | 0.0 | 2 | 9.974 | -0.006 | 9170 | 49.9 |
| Aroclor-1254 | 3 | 9.675 | -0.004 | 14748 | 52.4 | 3 | 10.152 | 0.018 | 98010 | 248.2 |
| Aroclor-1254 | 4 | 9.810 | -0.004 | 45060 | 82.1 | 4 | 10.376 | -0.006 | 128285 | 313.7 |
| Aroclor-1254 | 5 | 10.127 | -0.041 | 206360 | 548.7 | 5 | 10.570 | -0.008 | 170649 | 865.3 |
| Total Col1Ave (4 peaks): | | | | 213.2 | | Total Col2Ave (5 peaks): | | | 332.6 | RPD = 44* |
| Corrected Ave (3 peaks): | | | | 101.3 | | Corrected Ave (4 peaks): | | | 199.4 | RPD = 65* |
| Aroclor-1260 | 1 | 11.051 | -0.009 | 171855 | 442.9 | 1 | 11.658 | -0.005 | 134715 | 418.6 |
| Aroclor-1260 | 2 | 11.366 | -0.009 | 178540 | 444.9 | 2 | 11.920 | -0.009 | 331543 | 410.6 |
| Aroclor-1260 | 3 | 11.738 | -0.013 | 520319 | 493.4 | 3 | 12.437 | -0.009 | 133190 | 619.4 |
| Aroclor-1260 | 4 | 12.140 | -0.013 | 247536 | 460.9 | 4 | 12.503 | -0.009 | 231946 | 430.9 |
| Aroclor-1260 | 5 | 12.249 | -0.008 | 96958 | 441.0 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 456.6 | | Total Col2Ave (4 peaks): | | | 469.9 | RPD = 3 |
| Corrected Ave (4 peaks): | | | | 447.4 | | Corrected Ave (3 peaks): | | | 420.0 | RPD = 6 |
| Aroclor-1262 | 1 | 10.829 | -0.019 | 338826 | 950.4 | 1 | 11.204 | -0.013 | 120794 | 260.6 |
| Aroclor-1262 | 2 | 12.249 | -0.014 | 96958 | 174.9 | 2 | 11.658 | -0.012 | 134715 | 335.5 |
| Aroclor-1262 | 3 | 12.324 | -0.013 | 116642 | 197.1 | 3 | 12.437 | -0.015 | 133190 | 300.7 |
| Aroclor-1262 | 4 | 12.989 | -0.016 | 128984 | 271.5 | 4 | 12.503 | -0.017 | 231946 | 334.3 |
| Total Col1Ave (4 peaks): | | | | 398.5 | | Total Col2Ave (4 peaks): | | | 307.8 | RPD = 26 |
| Corrected Ave (3 peaks): | | | | 214.5 | | Corrected Ave (3 peaks): | | | 298.6 | RPD = 33 |
| Aroclor-1268 | 1 | 12.249 | -0.014 | 96958 | 65.0 | 1 | 12.437 | -0.013 | 133190 | 115.7 |
| Aroclor-1268 | 2 | 12.324 | -0.012 | 116642 | 79.9 | 2 | 12.503 | -0.015 | 231946 | 196.6 |
| Aroclor-1268 | 3 | 12.727 | 0.010 | 52379 | 43.8 | 3 | 12.897 | -0.013 | 4966 | 11.3 |
| Aroclor-1268 | 4 | 13.491 | -0.014 | 40998 | 11.2 | 4 | 13.710 | -0.017 | 39432 | 12.5 |
| Total Col1Ave (4 peaks): | | | | 50.0 | | Total Col2Ave (4 peaks): | | | 84.0 | RPD = 51* |

Corrected Ave (3 peaks): 40.0 Corrected Ave (3 peaks): 46.5 RPD = 15

Total PCB Area Col1 (5.933 - 13.804) = 4874763 Col1 Total PCB = 1.0 ppm*

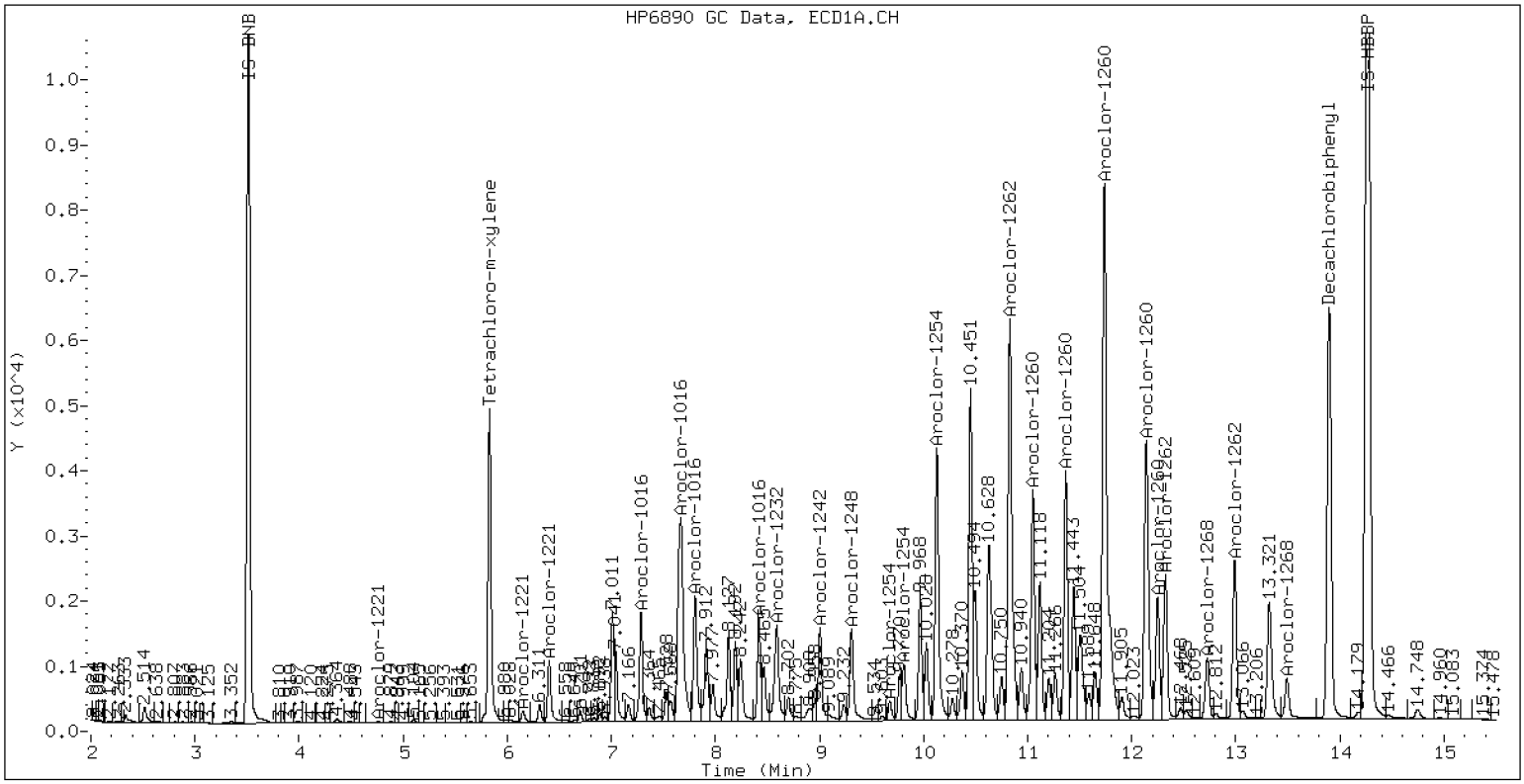
Total PCB Area Col2 (5.809 - 14.028) = 3165770 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

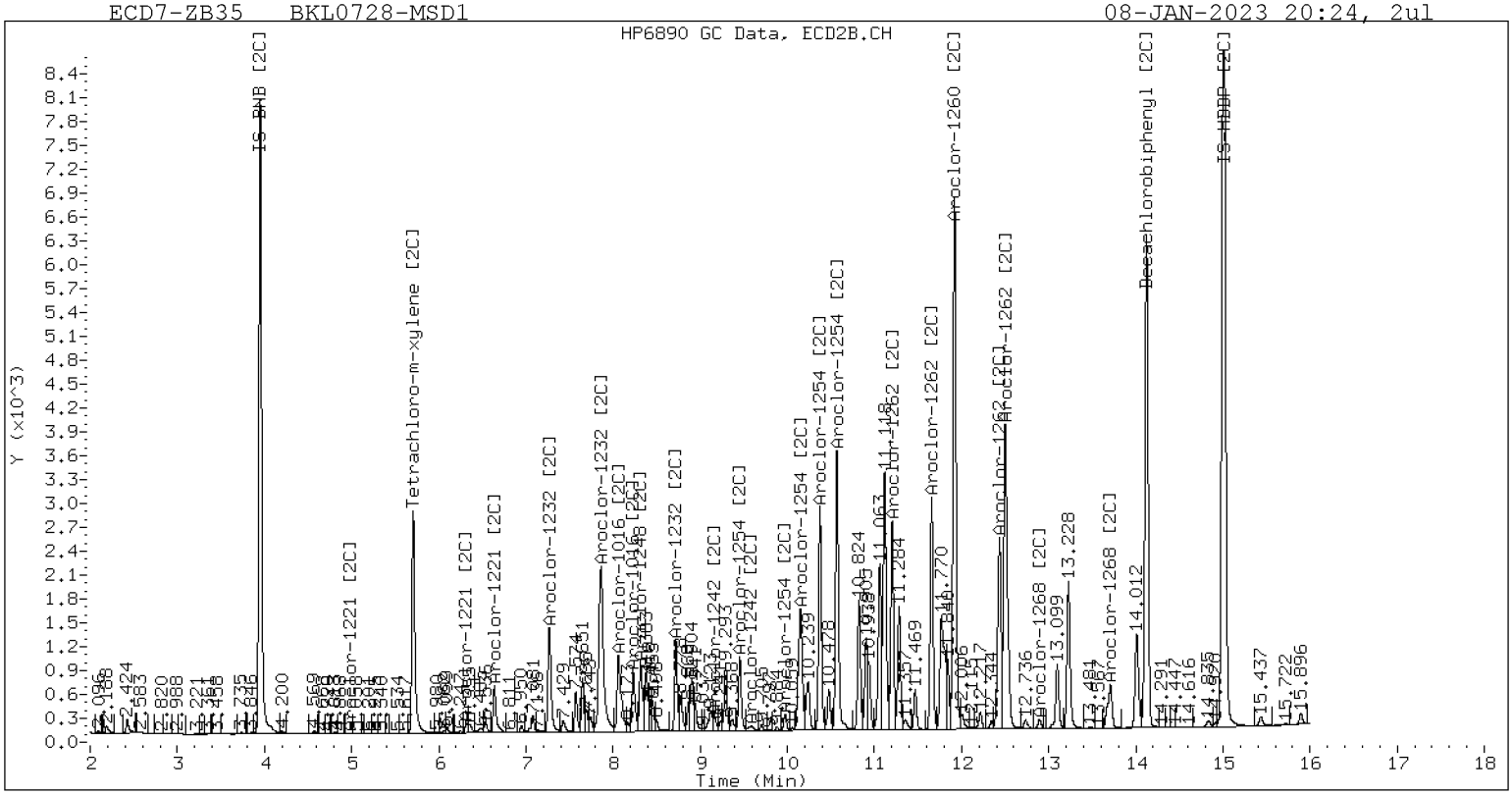
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0728-MSD1 08-JAN-2023 20:24, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0728-MSD1 08-JAN-2023 20:24, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC754D**

# MS / MS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/11/23 04:26 |
| Batch: | BKL0730 | Laboratory ID: | BKL0730-MS1 |
| Preparation: | EPA 3546 (Microwave) | Sequence Name: | Matrix Spike |
| Initial/Final: | 16.94 g / 2.5 mL | Source Sample: | LDW22-SC754D |

| 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 | 75.8 | | 75.3 | 56 - 120 |
| Aroclor 1260 | 101 | ND | U | 82.9 | | 82.1 | 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, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC754D**

# MS / MS DUPLICATE RECOVERY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/11/23 04:47 |
| Batch: | BKL0730 | Laboratory ID: | BKL0730-MSD1 |
| Preparation: | EPA 3546 (Microwave) | Sequence Name: | Matrix Spike Dup |
| Initial/Final: | 16.94 g / 2.5 mL | Source Sample: | LDW22-SC754D |

| COMPOUND | SPIKE ADDED (ug/kg dry) | MSD CONCENTRATION (ug/kg dry) | Q | MSD % REC. # | % RPD # | QC LIMITS | |
|---|---|---|---|---|---|---|---|
| | | | | | | RPD | REC. |
| Aroclor 1016 | 101 | 73.2 | | 72.7 | 3.49 | 30 | 56 - 120 |
| Aroclor 1260 | 101 | 84.0 | | 83.2 | 1.34 | 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: /230110.b/01102335ECD7.D
Data file 2: /230110.b/230110.b/01102335ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0730-MS1
Client ID:
Injection Date: 11-JAN-2023 04:26
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 195451 | 5.705 | -0.003 | 139876 | 29.7 | 30.8 | 3.5 | Tetrachloro-m-xylene |
| 13.896 | -0.012 | 221961 | 14.124 | -0.004 | 228623 | 36.8 | 33.2 | 10.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 464545 | 3.8 |
| Hexabromobiphenyl | 798898 | 657648 | -17.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 331812 | 33.2 |
| Hexabromobiphenyl | 362541 | 485350 | 33.9 |

* 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 | 7.284 | -0.010 | 66550 | 429.5 | 1 | 7.268 | -0.004 | 69618 | 410.4 |
| Aroclor-1016 | 2 | 7.661 | -0.023 | 194945 | 389.7 | 2 | 7.857 | -0.014 | 144694 | 395.5 |
| Aroclor-1016 | 3 | 7.799 | -0.019 | 74052 | 326.6 | 3 | 8.057 | -0.013 | 55898 | 355.7 |
| Aroclor-1016 | 4 | 8.413 | -0.017 | 53799 | 372.2 | 4 | 8.227 | -0.014 | 33613 | 406.8 |
| Total Col1Ave (4 peaks): | | | | 379.5 | | Total Col2Ave (4 peaks): | | | 392.1 | RPD = 3 |
| Corrected Ave (3 peaks): | | | | 362.8 | | Corrected Ave (3 peaks): | | | 386.0 | RPD = 6 |
| Aroclor-1221 | 1 | 4.760 | -0.000 | 1822 | 47.4 | 1 | 4.974 | -0.014 | 1582 | 56.5 |
| Aroclor-1221 | 2 | 6.148 | -0.010 | 8984 | 132.8 | 2 | 6.317 | -0.005 | 5600 | 104.9 |
| Aroclor-1221 | 3 | 6.400 | -0.009 | 44122 | 282.7 | 3 | 6.637 | -0.009 | 32210 | 358.6 |
| Total Col1Ave (3 peaks): | | | | 154.3 | | Total Col2Ave (3 peaks): | | | 173.3 | RPD = 12 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.760 | -0.001 | 1822 | 78.8 | 1 | 4.974 | -0.016 | 1582 | 98.0 |
| Aroclor-1232 | 2 | 6.148 | -0.011 | 8984 | 184.0 | 2 | 7.268 | -0.009 | 69618 | 844.9 |
| Aroclor-1232 | 3 | 7.661 | -0.022 | 194945 | 889.2 | 3 | 7.857 | -0.019 | 144694 | 898.2 |
| Aroclor-1232 | 4 | 8.583 | -0.022 | 60237 | 647.6 | 4 | 8.719 | -0.015 | 42243 | 967.2 |
| Total Col1Ave (4 peaks): | | | | 449.9 | | Total Col2Ave (4 peaks): | | | 702.1 | RPD = 44* |
| Corrected Ave (3 peaks): | | | | 303.5 | | Corrected Ave (3 peaks): | | | 613.7 | RPD = 68* |
| Aroclor-1242 | 1 | 7.284 | -0.010 | 66550 | 505.4 | 1 | 7.268 | -0.002 | 69618 | 495.7 |
| Aroclor-1242 | 2 | 7.661 | -0.024 | 194945 | 466.3 | 2 | 7.857 | -0.015 | 144694 | 485.4 |
| Aroclor-1242 | 3 | 8.413 | -0.017 | 53799 | 447.3 | 3 | 9.151 | -0.026 | 8065 | 83.9 |
| Aroclor-1242 | 4 | 9.001 | -0.030 | 42851 | 171.6 | 4 | 9.573 | -0.032 | 3851 | 33.3 |
| Total Col1Ave (4 peaks): | | | | 397.6 | | Total Col2Ave (4 peaks): | | | 274.6 | RPD = 37 |
| Corrected Ave (3 peaks): | | | | 361.7 | | Corrected Ave (3 peaks): | | | 200.8 | RPD = 57* |
| Aroclor-1248 | 1 | 8.413 | -0.015 | 53799 | 269.3 | 1 | 8.314 | -0.006 | 38797 | 286.2 |
| Aroclor-1248 | 2 | 8.583 | -0.021 | 60237 | 236.2 | 2 | 8.719 | -0.008 | 42243 | 296.3 |
| Aroclor-1248 | 3 | 9.001 | -0.022 | 42851 | 93.4 | 3 | 9.151 | -0.024 | 8065 | 46.5 |
| Aroclor-1248 | 4 | 9.302 | -0.009 | 46081 | 205.0 | 4 | 9.573 | -0.023 | 3851 | 18.9 |
| Total Col1Ave (4 peaks): | | | | 201.0 | | Total Col2Ave (4 peaks): | | | 162.0 | RPD = 21 |
| Corrected Ave (3 peaks): | | | | 178.2 | | Corrected Ave (3 peaks): | | | 117.2 | RPD = 41* |
| Aroclor-1254 | 1 | 9.302 | -0.019 | 46081 | 112.7 | 1 | 9.451 | -0.011 | 33236 | 155.4 |
| Aroclor-1254 | 2 | 9.373 | -0.029 | 1014 | 6.4 | 2 | 9.969 | -0.012 | 7631 | 44.4 |
| Aroclor-1254 | 3 | 9.667 | -0.027 | 9755 | 37.8 | 3 | 10.148 | 0.014 | 67960 | 183.8 |
| Aroclor-1254 | 4 | 9.800 | -0.031 | 29842 | 59.3 | 4 | 10.373 | -0.010 | 99533 | 260.0 |
| Aroclor-1254 | 5 | 10.123 | -0.066 | 127797 | 370.2 | 5 | 10.566 | -0.014 | 124028 | 671.6 |
| Total Col1Ave (5 peaks): | | | | 117.3 | | Total Col2Ave (5 peaks): | | | 263.0 | RPD = 77* |
| Corrected Ave (4 peaks): | | | | 54.0 | | Corrected Ave (4 peaks): | | | 160.9 | RPD = 99* |
| Aroclor-1260 | 1 | 11.047 | -0.015 | 100381 | 419.3 | 1 | 11.655 | -0.008 | 94860 | 370.3 |
| Aroclor-1260 | 2 | 11.363 | -0.015 | 103090 | 416.4 | 2 | 11.916 | -0.010 | 243186 | 378.3 |
| Aroclor-1260 | 3 | 11.733 | -0.019 | 266662 | 409.9 | 3 | 12.435 | -0.010 | 72022 | 420.7 |
| Aroclor-1260 | 4 | 12.134 | -0.025 | 141132 | 426.0 | 4 | 12.499 | -0.011 | 158454 | 369.7 |
| Aroclor-1260 | 5 | 12.246 | -0.015 | 54886 | 404.7 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 415.3 | | Total Col2Ave (4 peaks): | | | 384.8 | RPD = 8 |
| Corrected Ave (4 peaks): | | | | 412.6 | | Corrected Ave (3 peaks): | | | 372.8 | RPD = 10 |
| Aroclor-1262 | 1 | 10.822 | -0.026 | 201965 | 918.3 | 1 | 11.201 | -0.017 | 86021 | 233.1 |
| Aroclor-1262 | 2 | 12.246 | -0.016 | 54886 | 160.5 | 2 | 11.655 | -0.016 | 94860 | 296.8 |
| Aroclor-1262 | 3 | 12.320 | -0.016 | 65421 | 179.2 | 3 | 12.435 | -0.017 | 72022 | 204.3 |
| Aroclor-1262 | 4 | 12.987 | -0.018 | 62149 | 212.1 | 4 | 12.499 | -0.020 | 158454 | 286.9 |
| Total Col1Ave (4 peaks): | | | | 367.5 | | Total Col2Ave (4 peaks): | | | 255.3 | RPD = 36 |
| Corrected Ave (3 peaks): | | | | 183.9 | | Corrected Ave (3 peaks): | | | 241.4 | RPD = 27 |
| Aroclor-1268 | 1 | 12.246 | -0.016 | 54886 | 59.7 | 1 | 12.435 | -0.015 | 72022 | 78.6 |
| Aroclor-1268 | 2 | 12.320 | -0.015 | 65421 | 72.7 | 2 | 12.499 | -0.018 | 158454 | 168.7 |
| Aroclor-1268 | 3 | 12.723 | 0.007 | 30731 | 41.7 | 3 | 12.896 | -0.014 | 3698 | 10.6 |
| Aroclor-1268 | 4 | 13.490 | -0.015 | 17500 | 7.8 | 4 | 13.709 | -0.017 | 19561 | 7.8 |
| Total Col1Ave (4 peaks): | | | | 45.4 | | Total Col2Ave (4 peaks): | | | 66.4 | RPD = 38 |

Corrected Ave (3 peaks): 36.4 Corrected Ave (3 peaks): 32.3 RPD = 12

Total PCB Area Col1 (5.936 - 13.808) = 3056655 Col1 Total PCB = 0.7 ppm*

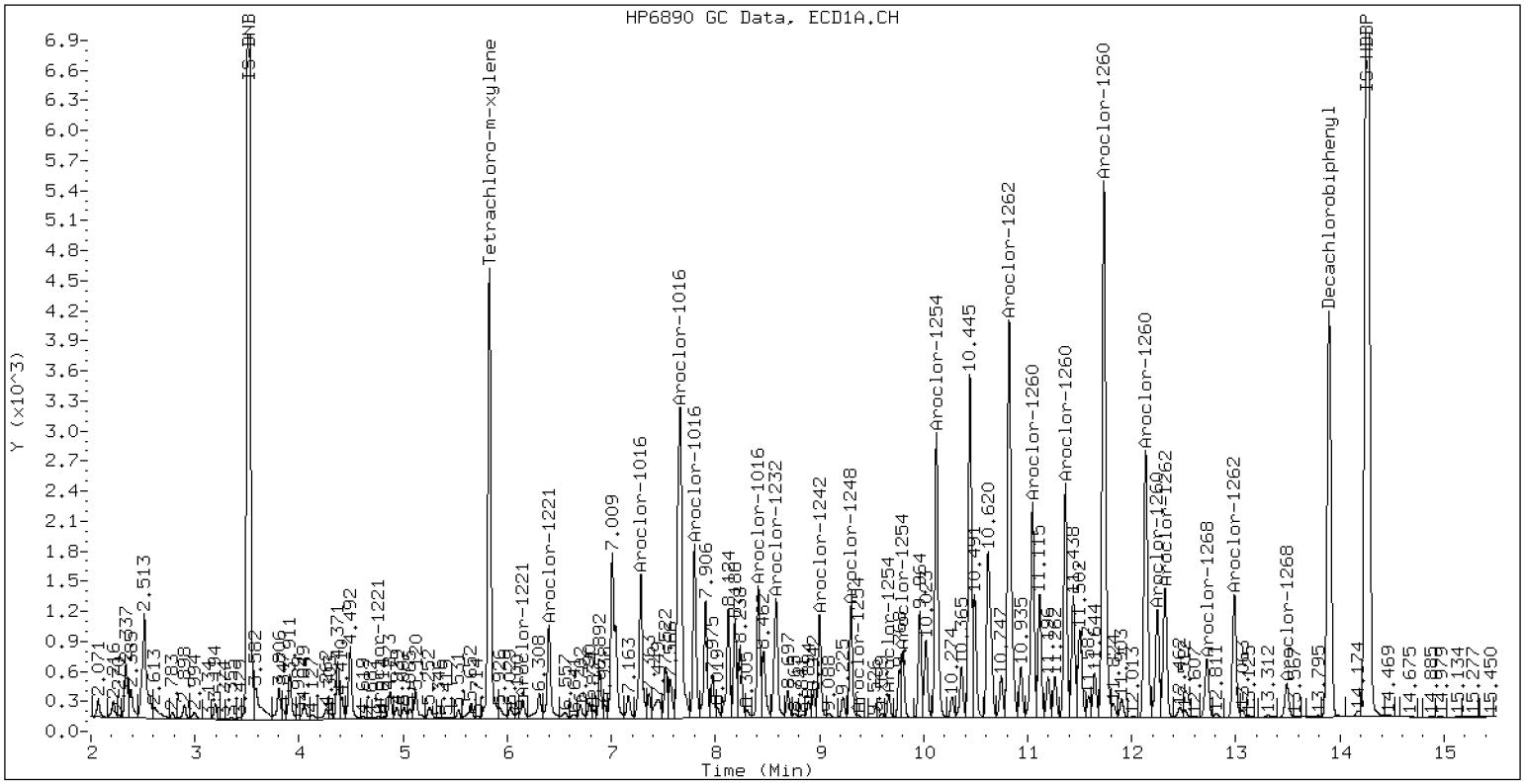
Total PCB Area Col2 (5.807 - 14.028) = 2462265 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

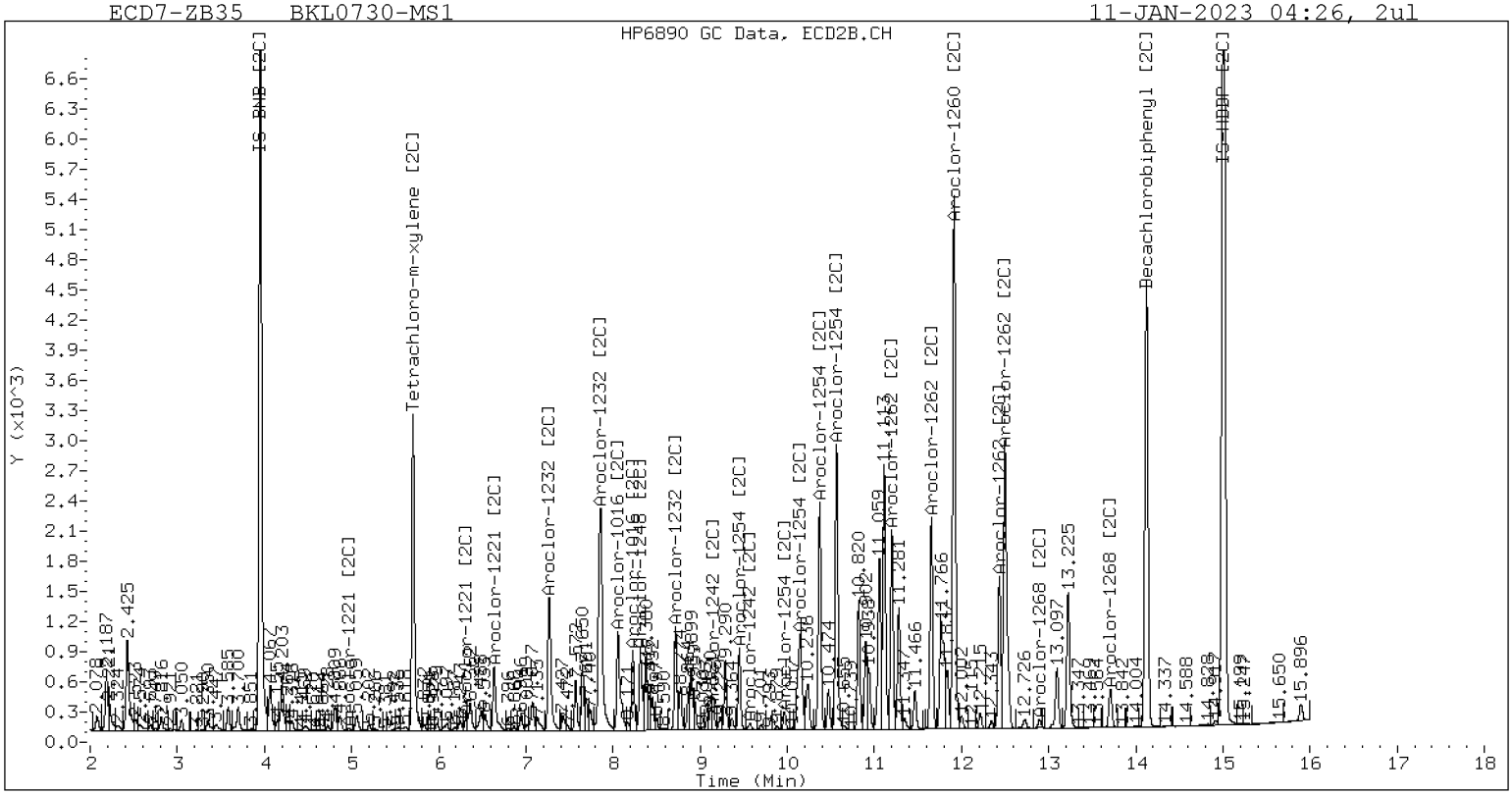
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0730-MS1 11-JAN-2023 04:26, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0730-MS1 11-JAN-2023 04:26, 2ul




ZB-35 Manual Integration: NO

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

Data file 1: /230110.b/01102336ECD7.D
Data file 2: /230110.b/230110.b/01102336ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0730-MSD1
Client ID:
Injection Date: 11-JAN-2023 04:47
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.827 | -0.009 | 181819 | 5.703 | -0.004 | 134850 | 29.1 | 31.3 | 7.5 | Tetrachloro-m-xylene |
| 13.896 | -0.011 | 215425 | 14.123 | -0.005 | 224220 | 37.3 | 34.0 | 9.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 441431 | -1.4 |
| Hexabromobiphenyl | 798898 | 630465 | -21.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 314116 | 26.1 |
| Hexabromobiphenyl | 362541 | 464627 | 28.2 |

* 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 | 7.283 | -0.011 | 54555 | 370.5 | 1 | 7.267 | -0.005 | 62208 | 387.3 |
| Aroclor-1016 | 2 | 7.660 | -0.025 | 185278 | 389.7 | 2 | 7.857 | -0.015 | 137384 | 396.6 |
| Aroclor-1016 | 3 | 7.798 | -0.020 | 70334 | 326.5 | 3 | 8.057 | -0.014 | 53261 | 358.1 |
| Aroclor-1016 | 4 | 8.412 | -0.017 | 52078 | 379.2 | 4 | 8.227 | -0.015 | 32512 | 415.7 |
| Total Col1Ave (4 peaks): | | | | | 366.5 | Total Col2Ave (4 peaks): | | | | 389.4 RPD = 6 |
| Corrected Ave (3 peaks): | | | | | 358.7 | Corrected Ave (3 peaks): | | | | 380.7 RPD = 6 |
| Aroclor-1221 | 1 | 4.756 | -0.004 | 659 | 18.1 | 1 | 4.986 | -0.001 | 391 | 14.7 |
| Aroclor-1221 | 2 | 6.148 | -0.010 | 7609 | 118.4 | 2 | 6.313 | -0.009 | 8718 | 172.6 |
| Aroclor-1221 | 3 | 6.399 | -0.010 | 38809 | 261.7 | 3 | 6.635 | -0.011 | 26821 | 315.4 |
| Total Col1Ave (3 peaks): | | | | | 132.7 | Total Col2Ave (3 peaks): | | | | 167.6 RPD = 23 |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.756 | -0.005 | 659 | 30.0 | 1 | 4.986 | -0.003 | 391 | 25.6 |
| Aroclor-1232 | 2 | 6.148 | -0.011 | 7609 | 164.0 | 2 | 7.267 | -0.010 | 62208 | 797.5 |
| Aroclor-1232 | 3 | 7.660 | -0.024 | 185278 | 889.3 | 3 | 7.857 | -0.020 | 137384 | 900.9 |
| Aroclor-1232 | 4 | 8.582 | -0.024 | 57850 | 654.5 | 4 | 8.719 | -0.015 | 41086 | 993.7 |
| Total Col1Ave (4 peaks): | | | | | 434.5 | Total Col2Ave (4 peaks): | | | | 679.4 RPD = 44* |
| Corrected Ave (3 peaks): | | | | | 282.8 | Corrected Ave (3 peaks): | | | | 574.7 RPD = 68* |
| Aroclor-1242 | 1 | 7.283 | -0.011 | 54555 | 436.0 | 1 | 7.267 | -0.004 | 62208 | 467.9 |
| Aroclor-1242 | 2 | 7.660 | -0.025 | 185278 | 466.4 | 2 | 7.857 | -0.016 | 137384 | 486.8 |
| Aroclor-1242 | 3 | 8.412 | -0.017 | 52078 | 455.6 | 3 | 9.150 | -0.027 | 7658 | 84.1 |
| Aroclor-1242 | 4 | 9.000 | -0.031 | 39679 | 167.2 | 4 | 9.572 | -0.033 | 3589 | 32.8 |
| Total Col1Ave (4 peaks): | | | | | 381.3 | Total Col2Ave (4 peaks): | | | | 267.9 RPD = 35 |
| Corrected Ave (3 peaks): | | | | | 352.9 | Corrected Ave (3 peaks): | | | | 194.9 RPD = 58* |
| Aroclor-1248 | 1 | 8.412 | -0.015 | 52078 | 274.4 | 1 | 8.314 | -0.007 | 37351 | 291.1 |
| Aroclor-1248 | 2 | 8.582 | -0.022 | 57850 | 238.7 | 2 | 8.719 | -0.009 | 41086 | 304.4 |
| Aroclor-1248 | 3 | 9.000 | -0.022 | 39679 | 91.0 | 3 | 9.150 | -0.024 | 7658 | 46.6 |
| Aroclor-1248 | 4 | 9.301 | -0.010 | 44209 | 207.0 | 4 | 9.572 | -0.024 | 3589 | 18.6 |
| Total Col1Ave (4 peaks): | | | | | 202.8 | Total Col2Ave (4 peaks): | | | | 165.2 RPD = 20 |
| Corrected Ave (3 peaks): | | | | | 178.9 | Corrected Ave (3 peaks): | | | | 118.8 RPD = 40* |
| Aroclor-1254 | 1 | 9.301 | -0.020 | 44209 | 113.7 | 1 | 9.450 | -0.011 | 32371 | 159.8 |
| Aroclor-1254 | 2 | 9.373 | -0.028 | 960 | 6.4 | 2 | 9.969 | -0.012 | 7219 | 44.3 |
| Aroclor-1254 | 3 | 9.666 | -0.028 | 9696 | 39.5 | 3 | 10.148 | 0.014 | 67234 | 192.1 |
| Aroclor-1254 | 4 | 9.800 | -0.031 | 28376 | 59.3 | 4 | 10.372 | -0.010 | 96946 | 267.5 |
| Aroclor-1254 | 5 | 10.123 | -0.066 | 124306 | 379.0 | 5 | 10.565 | -0.015 | 121411 | 694.5 |
| Total Col1Ave (5 peaks): | | | | | 119.6 | Total Col2Ave (5 peaks): | | | | 271.6 RPD = 78* |
| Corrected Ave (4 peaks): | | | | | 54.7 | Corrected Ave (4 peaks): | | | | 165.9 RPD = 101* |
| Aroclor-1260 | 1 | 11.046 | -0.016 | 97936 | 426.8 | 1 | 11.655 | -0.008 | 92573 | 377.5 |
| Aroclor-1260 | 2 | 11.362 | -0.015 | 100546 | 423.6 | 2 | 11.915 | -0.011 | 236303 | 384.0 |
| Aroclor-1260 | 3 | 11.732 | -0.020 | 258029 | 413.7 | 3 | 12.435 | -0.009 | 69683 | 425.2 |
| Aroclor-1260 | 4 | 12.133 | -0.025 | 136627 | 430.2 | 4 | 12.499 | -0.012 | 154090 | 375.6 |
| Aroclor-1260 | 5 | 12.246 | -0.015 | 53316 | 410.1 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 420.9 | Total Col2Ave (4 peaks): | | | | 390.6 RPD = 7 |
| Corrected Ave (4 peaks): | | | | | 418.5 | Corrected Ave (3 peaks): | | | | 379.0 RPD = 10 |
| Aroclor-1262 | 1 | 10.822 | -0.027 | 197193 | 935.3 | 1 | 11.201 | -0.016 | 83757 | 237.1 |
| Aroclor-1262 | 2 | 12.246 | -0.016 | 53316 | 162.7 | 2 | 11.655 | -0.016 | 92573 | 302.5 |
| Aroclor-1262 | 3 | 12.319 | -0.017 | 63480 | 181.3 | 3 | 12.435 | -0.016 | 69683 | 206.5 |
| Aroclor-1262 | 4 | 12.986 | -0.019 | 60554 | 215.5 | 4 | 12.499 | -0.021 | 154090 | 291.5 |
| Total Col1Ave (4 peaks): | | | | | 373.7 | Total Col2Ave (4 peaks): | | | | 259.4 RPD = 36 |
| Corrected Ave (3 peaks): | | | | | 186.5 | Corrected Ave (3 peaks): | | | | 245.0 RPD = 27 |
| Aroclor-1268 | 1 | 12.246 | -0.016 | 53316 | 60.4 | 1 | 12.435 | -0.014 | 69683 | 79.5 |
| Aroclor-1268 | 2 | 12.319 | -0.016 | 63480 | 73.6 | 2 | 12.499 | -0.019 | 154090 | 171.3 |
| Aroclor-1268 | 3 | 12.723 | 0.006 | 29695 | 42.0 | 3 | 12.896 | -0.014 | 3733 | 11.2 |
| Aroclor-1268 | 4 | 13.489 | -0.016 | 16998 | 7.9 | 4 | 13.709 | -0.017 | 19369 | 8.1 |
| Total Col1Ave (4 peaks): | | | | | 46.0 | Total Col2Ave (4 peaks): | | | | 67.5 RPD = 38 |

Corrected Ave (3 peaks): 36.8 Corrected Ave (3 peaks): 32.9 RPD = 11

Total PCB Area Col1 (5.936 - 13.808) = 2856925 Col1 Total PCB = 0.7 ppm*

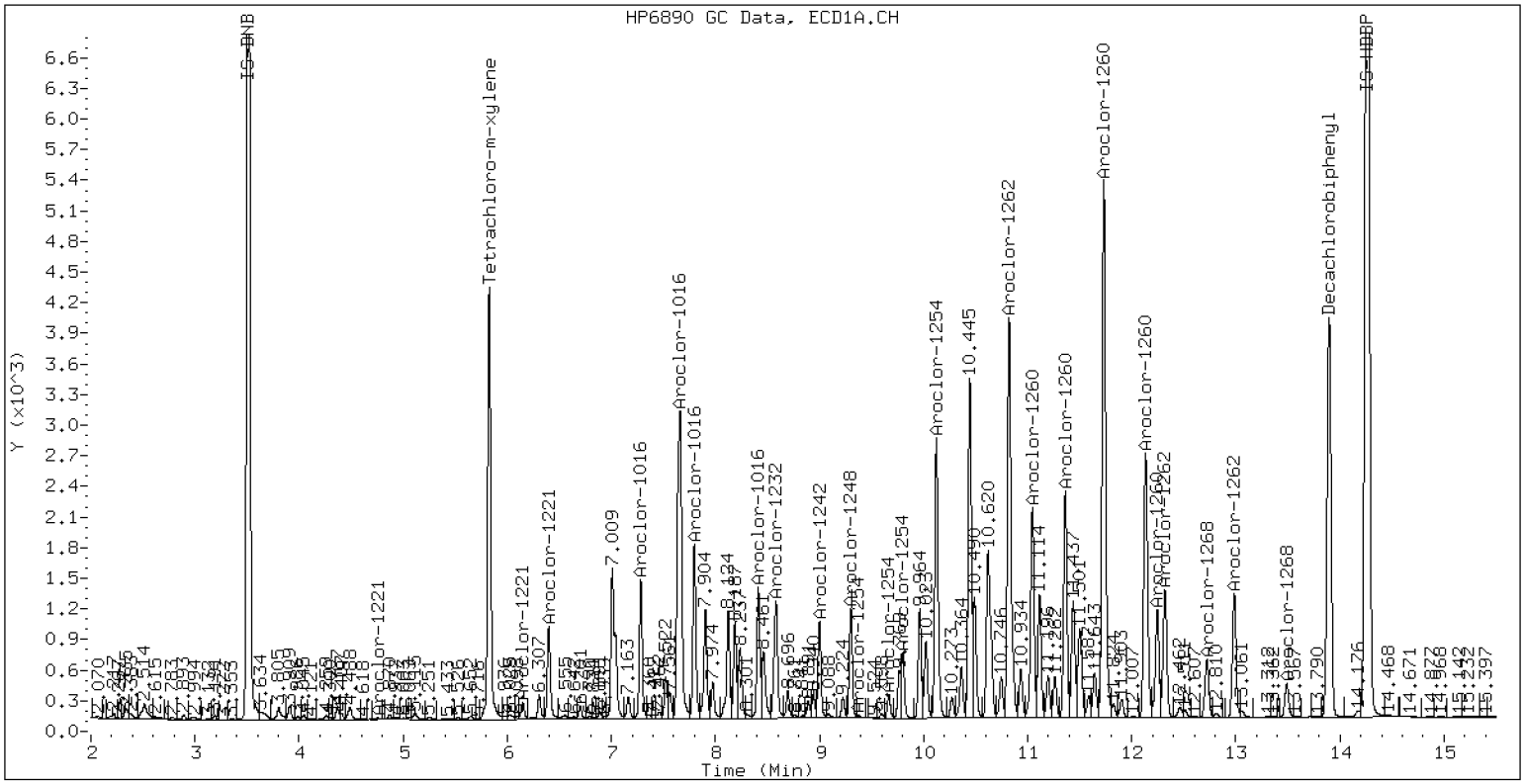
Total PCB Area Col2 (5.807 - 14.028) = 2321642 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

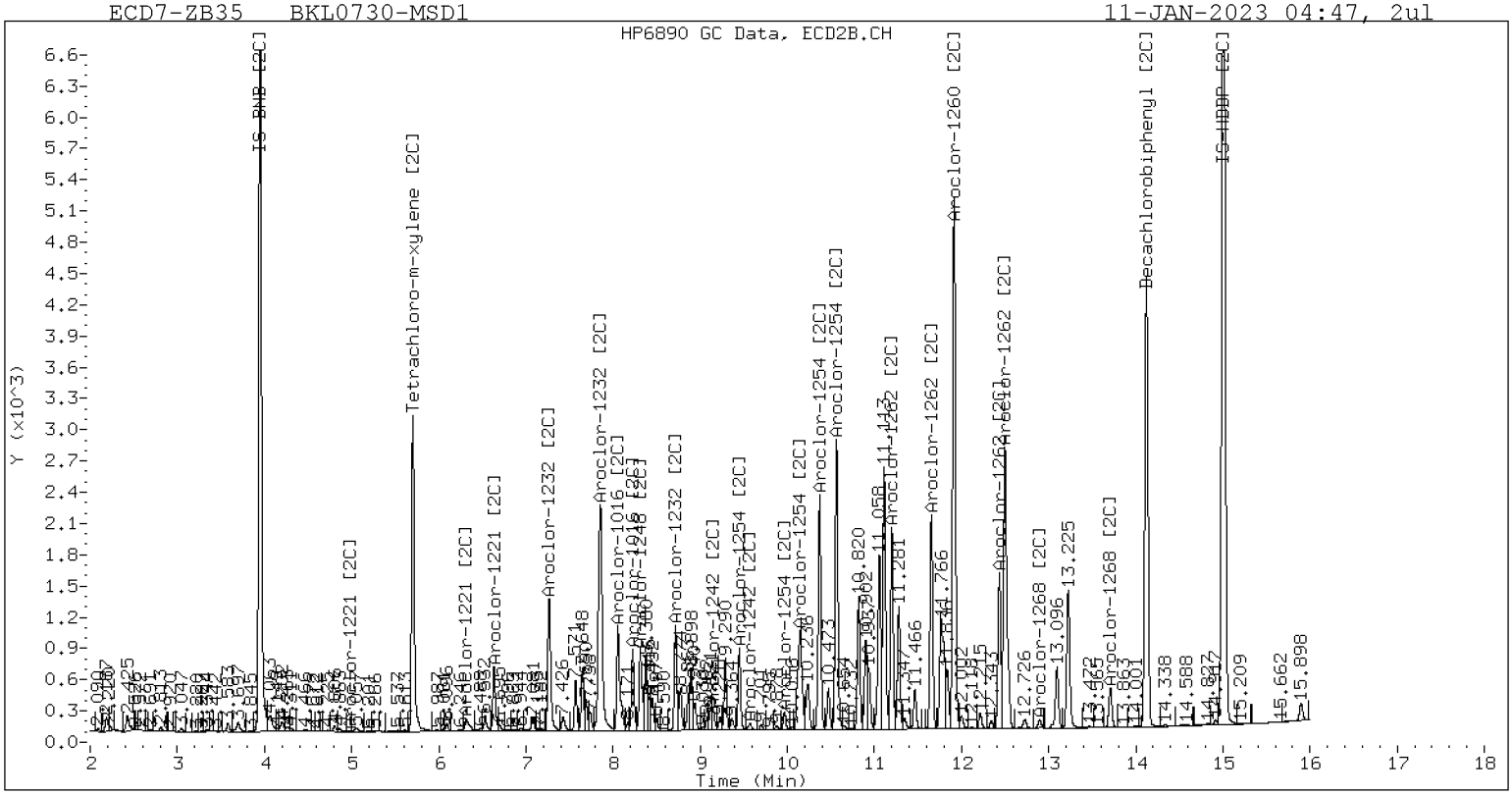
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0730-MSD1 11-JAN-2023 04:47, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0730-MSD1 11-JAN-2023 04:47, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# STANDARD REFERENCE MATERIAL RECOVERY

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Matrix:** Solid
**Laboratory ID:** BKL0687-SRM1
**Batch:** BKL0687
**Initial/Final:** 2.5 g / 2.5 mL
**Preparation:** EPA 3546 (Microwave)
**Analyzed:** 01/10/2023 5:05
**Standard ID:** K010816
**Expires:** 05/17/2023
**Standard Lot#:** PSRM0165
**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 | 111 | 2.9 | 20.0 | | 103 | 38 - 167 |
| Aroclor 1260 [2C] | 108.00 | 107 | 2.9 | 20.0 | | 99.4 | 38 - 167 |

* Values outside of QC limits

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

Data file 1: /230109.b/01092358ECD7.D
Data file 2: /230109.b/230109.b/01092358ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0687-SRM1
Client ID:
Injection Date: 10-JAN-2023 05:05
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 217571 | 5.706 | -0.007 | 144819 | 29.8 | 29.4 | 1.4 | Tetrachloro-m-xylene |
| 13.896 | -0.012 | 278294 | 14.123 | -0.014 | 266394 | 36.6 | 33.8 | 7.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 515143 | 15.1 |
| Hexabromobiphenyl | 798898 | 830619 | 4.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 359340 | 44.3 |
| Hexabromobiphenyl | 362541 | 555352 | 53.2 |

* 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 | --- | | | 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 | 11.047 | -0.015 | 36247 | 119.9 | 1 | 11.655 | -0.014 | 30652 | 104.6 |
| Aroclor-1260 | 2 | 11.360 | -0.018 | 29776 | 95.2 | 2 | 11.915 | -0.018 | 72778 | 98.9 |
| Aroclor-1260 | 3 | 11.731 | -0.021 | 92937 | 113.1 | 3 | 12.434 | -0.018 | 25059 | 127.9 |
| Aroclor-1260 | 4 | 12.131 | -0.027 | 49157 | 117.5 | 4 | 12.499 | -0.017 | 48112 | 98.1 |
| Aroclor-1260 | 5 | 12.246 | -0.016 | 19057 | 111.3 | NS | --- | | | ---- |
| | Total Col1Ave (5 peaks): 111.4 | | | | | Total Col2Ave (4 peaks): 107.4 RPD = 4 | | | | |
| | Corrected Ave (4 peaks): 109.3 | | | | | Corrected Ave (3 peaks): 100.5 RPD = 8 | | | | |
| 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) = 1039045 Col1 Total PCB = 0.2 ppm*

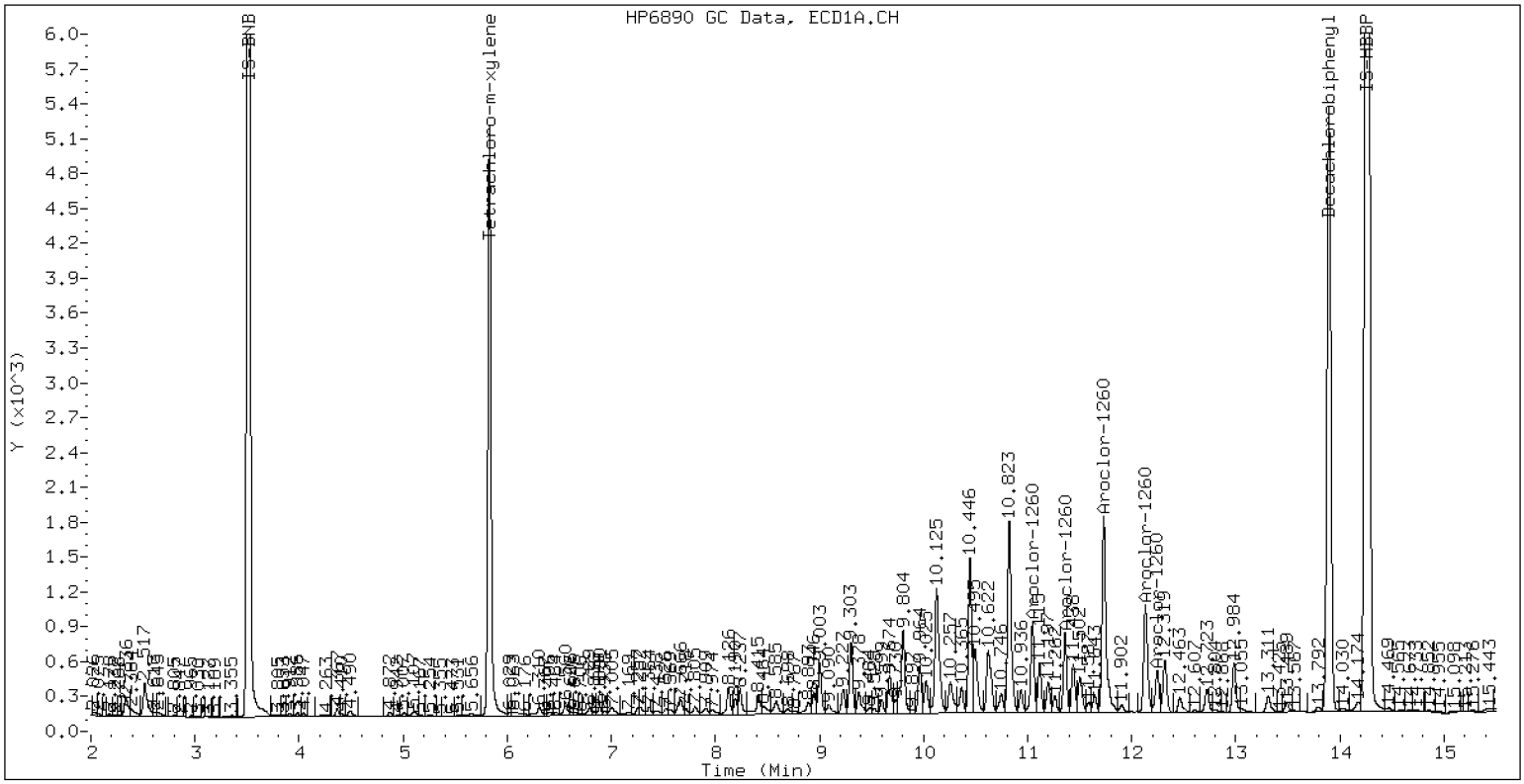
Total PCB Area Col2 (5.813 - 14.037) = 779919 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

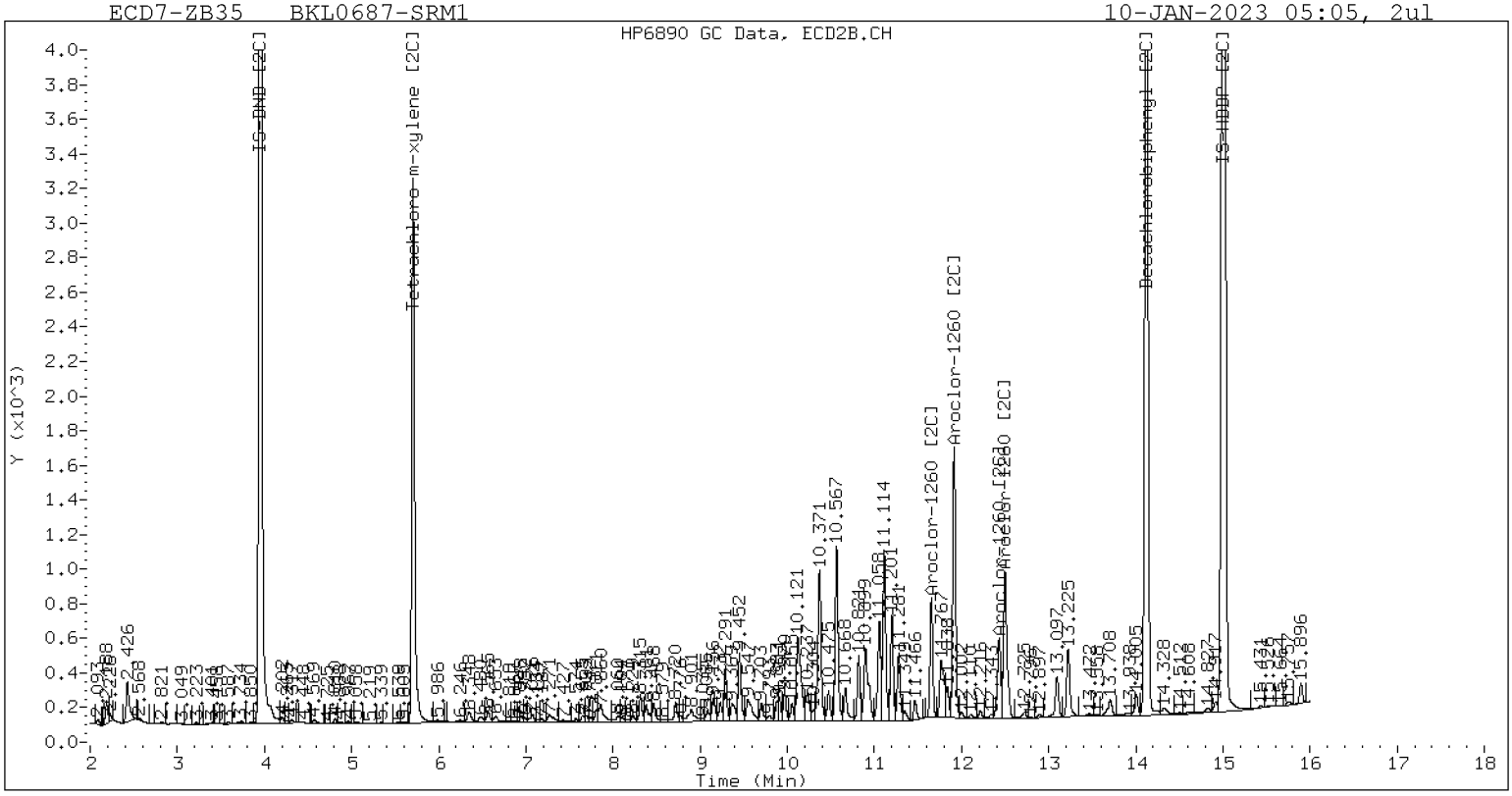
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0687-SRM1 10-JAN-2023 05:05, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0687-SRM1 10-JAN-2023 05:05, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# STANDARD REFERENCE MATERIAL RECOVERY

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Matrix:** Solid
**Laboratory ID:** BKL0728-SRM1
**Batch:** BKL0728
**Initial/Final:** 2.5 g / 2.5 mL
**Preparation:** EPA 3546 (Microwave)
**Analyzed:** 01/08/2023 12:40
**Standard ID:** K010816
**Expires:** 05/17/2023
**Standard Lot#:** PSRM0165
**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 | 118 | 2.9 | 20.0 | | 110 | 38 - 167 |
| Aroclor 1260 [2C] | 108.00 | 111 | 2.9 | 20.0 | | 103 | 38 - 167 |

* Values outside of QC limits

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

Data file 1: /230107.b/01072378ECD7.D
Data file 2: /230107.b/230107.b/01072378ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0723-SRM1
Client ID:
Injection Date: 08-JAN-2023 12:40
Report Date: 01/11/2023 16:23
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.004 | 217156 | 5.706 | -0.003 | 144447 | 30.2 | 31.1 | 3.0 | Tetrachloro-m-xylene |
| 13.895 | -0.008 | 273486 | 14.123 | -0.005 | 256197 | 37.9 | 34.3 | 10.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 507663 | 13.4 |
| Hexabromobiphenyl | 798898 | 786836 | -1.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 338633 | 35.9 |
| Hexabromobiphenyl | 362541 | 526775 | 45.3 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.320 | 0.030 | 1267 | 7.5 | 1 | 7.274 | 0.002 | 5110 | 29.5 |
| Aroclor-1016 | 2 | 7.664 | -0.014 | 7826 | 14.3 | 2 | 7.859 | -0.014 | 8229 | 22.0 |
| Aroclor-1016 | 3 | 7.806 | -0.007 | 3871 | 15.6 | 3 | 8.060 | -0.011 | 2710 | 16.9 |
| Aroclor-1016 | 4 | 8.413 | -0.011 | 9889 | 62.6 | 4 | 8.229 | -0.014 | 1873 | 22.2 |
| Total Col1Ave (4 peaks): | | | | 25.0 | | Total Col2Ave (4 peaks): | | | 22.7 | RPD = 10 |
| Corrected Ave (3 peaks): | | | | 12.5 | | Corrected Ave (3 peaks): | | | 20.4 | RPD = 48* |
| Aroclor-1221 | 1 | 4.720 | -0.040 | 327 | 7.8 | 1 | 4.966 | -0.021 | 304 | 10.6 |
| Aroclor-1221 | 2 | 6.139 | -0.020 | 394 | 5.3 | 2 | 6.359 | 0.037 | 6720 | 123.4 |
| Aroclor-1221 | 3 | 6.409 | -0.000 | 833 | 4.9 | 3 | 6.654 | 0.009 | 2876 | 31.4 |
| Total Col1Ave (3 peaks): | | | | 6.0 | | Total Col2Ave (3 peaks): | | | 55.1 | RPD = 161* |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.720 | -0.042 | 327 | 12.9 | 1 | 4.966 | -0.023 | 304 | 18.5 |
| Aroclor-1232 | 2 | 6.139 | -0.020 | 394 | 7.4 | 2 | 7.274 | -0.003 | 5110 | 60.8 |
| Aroclor-1232 | 3 | 7.664 | -0.019 | 7826 | 32.7 | 3 | 7.859 | -0.017 | 8229 | 50.1 |
| Aroclor-1232 | 4 | 8.582 | -0.023 | 6811 | 67.0 | 4 | 8.719 | -0.015 | 4951 | 111.1 |
| Total Col1Ave (4 peaks): | | | | 30.0 | | Total Col2Ave (4 peaks): | | | 60.1 | RPD = 67* |
| Corrected Ave (3 peaks): | | | | 17.7 | | Corrected Ave (3 peaks): | | | 43.1 | RPD = 84* |
| Aroclor-1242 | 1 | 7.320 | 0.030 | 1267 | 8.8 | 1 | 7.274 | 0.002 | 5110 | 35.7 |
| Aroclor-1242 | 2 | 7.664 | -0.017 | 7826 | 17.1 | 2 | 7.859 | -0.014 | 8229 | 27.0 |
| Aroclor-1242 | 3 | 8.413 | -0.012 | 9889 | 75.2 | 3 | 9.154 | -0.026 | 7788 | 79.3 |
| Aroclor-1242 | 4 | 9.001 | -0.020 | 19361 | 70.9 | 4 | 9.546 | -0.060 | 11627 | 98.6 |
| Total Col1Ave (4 peaks): | | | | 43.0 | | Total Col2Ave (4 peaks): | | | 60.2 | RPD = 33 |
| Corrected Ave (3 peaks): | | | | 32.3 | | Corrected Ave (3 peaks): | | | 47.3 | RPD = 38 |
| Aroclor-1248 | 1 | 8.413 | -0.012 | 9889 | 45.3 | 1 | 8.314 | -0.008 | 6590 | 47.6 |
| Aroclor-1248 | 2 | 8.582 | -0.020 | 6811 | 24.4 | 2 | 8.719 | -0.009 | 4951 | 34.0 |
| Aroclor-1248 | 3 | 9.001 | -0.018 | 19361 | 38.6 | 3 | 9.154 | -0.025 | 7788 | 44.0 |
| Aroclor-1248 | 4 | 9.302 | -0.011 | 27553 | 112.2 | 4 | 9.546 | -0.056 | 11627 | 56.0 |
| Total Col1Ave (4 peaks): | | | | 55.1 | | Total Col2Ave (4 peaks): | | | 45.4 | RPD = 19 |
| Corrected Ave (3 peaks): | | | | 36.1 | | Corrected Ave (3 peaks): | | | 41.9 | RPD = 15 |
| Aroclor-1254 | 1 | 9.302 | -0.014 | 27553 | 61.6 | 1 | 9.450 | -0.011 | 18351 | 84.1 |
| Aroclor-1254 | 2 | 9.377 | -0.017 | 10295 | 59.2 | 2 | 9.970 | -0.011 | 7425 | 42.3 |
| Aroclor-1254 | 3 | 9.671 | -0.013 | 16722 | 59.2 | 3 | 10.120 | -0.014 | 35049 | 92.9 |
| Aroclor-1254 | 4 | 9.803 | -0.021 | 38574 | 70.1 | 4 | 10.371 | -0.012 | 45558 | 116.6 |
| Aroclor-1254 | 5 | 10.124 | -0.067 | 61846 | 164.0 | 5 | 10.566 | -0.012 | 46143 | 244.8 |
| Total Col1Ave (5 peaks): | | | | 82.8 | | Total Col2Ave (5 peaks): | | | 116.1 | RPD = 33 |
| Corrected Ave (4 peaks): | | | | 62.5 | | Corrected Ave (4 peaks): | | | 84.0 | RPD = 29 |
| Aroclor-1260 | 1 | 11.045 | -0.013 | 35827 | 125.1 | 1 | 11.654 | -0.009 | 29895 | 107.5 |
| Aroclor-1260 | 2 | 11.359 | -0.016 | 29707 | 100.3 | 2 | 11.915 | -0.013 | 72272 | 103.6 |
| Aroclor-1260 | 3 | 11.732 | -0.017 | 97532 | 125.3 | 3 | 12.433 | -0.012 | 23940 | 128.8 |
| Aroclor-1260 | 4 | 12.132 | -0.022 | 48568 | 122.5 | 4 | 12.498 | -0.013 | 47967 | 103.1 |
| Aroclor-1260 | 5 | 12.245 | -0.012 | 19333 | 119.1 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 118.5 | | Total Col2Ave (4 peaks): | | | 110.8 | RPD = 7 |
| Corrected Ave (4 peaks): | | | | 116.8 | | Corrected Ave (3 peaks): | | | 104.7 | RPD = 11 |
| Aroclor-1262 | 1 | 10.822 | -0.026 | 79931 | 303.8 | 1 | 11.200 | -0.017 | 27204 | 67.9 |
| Aroclor-1262 | 2 | 12.245 | -0.018 | 19333 | 47.3 | 2 | 11.654 | -0.016 | 29895 | 86.2 |
| Aroclor-1262 | 3 | 12.319 | -0.018 | 23857 | 54.6 | 3 | 12.433 | -0.018 | 23940 | 62.6 |
| Aroclor-1262 | 4 | 12.984 | -0.021 | 21741 | 62.0 | 4 | 12.498 | -0.021 | 47967 | 80.0 |
| Total Col1Ave (4 peaks): | | | | 116.9 | | Total Col2Ave (4 peaks): | | | 74.2 | RPD = 45* |
| Corrected Ave (3 peaks): | | | | 54.6 | | Corrected Ave (3 peaks): | | | 70.2 | RPD = 25 |
| Aroclor-1268 | 1 | 12.245 | -0.017 | 19333 | 17.6 | 1 | 12.433 | -0.016 | 23940 | 24.1 |
| Aroclor-1268 | 2 | 12.319 | -0.016 | 23857 | 22.2 | 2 | 12.498 | -0.019 | 47967 | 47.0 |
| Aroclor-1268 | 3 | 12.722 | 0.006 | 11155 | 12.6 | 3 | 12.895 | -0.015 | 1000 | 2.6 |
| Aroclor-1268 | 4 | 13.488 | -0.017 | 4371 | 1.6 | 4 | 13.708 | -0.018 | 6222 | 2.3 |
| Total Col1Ave (4 peaks): | | | | 13.5 | | Total Col2Ave (4 peaks): | | | 19.0 | RPD = 34 |

Corrected Ave (3 peaks): 10.6 Corrected Ave (3 peaks): 9.7 RPD = 9

Total PCB Area Col1 (5.932 - 13.803) = 1045985 Col1 Total PCB = 0.2 ppm*

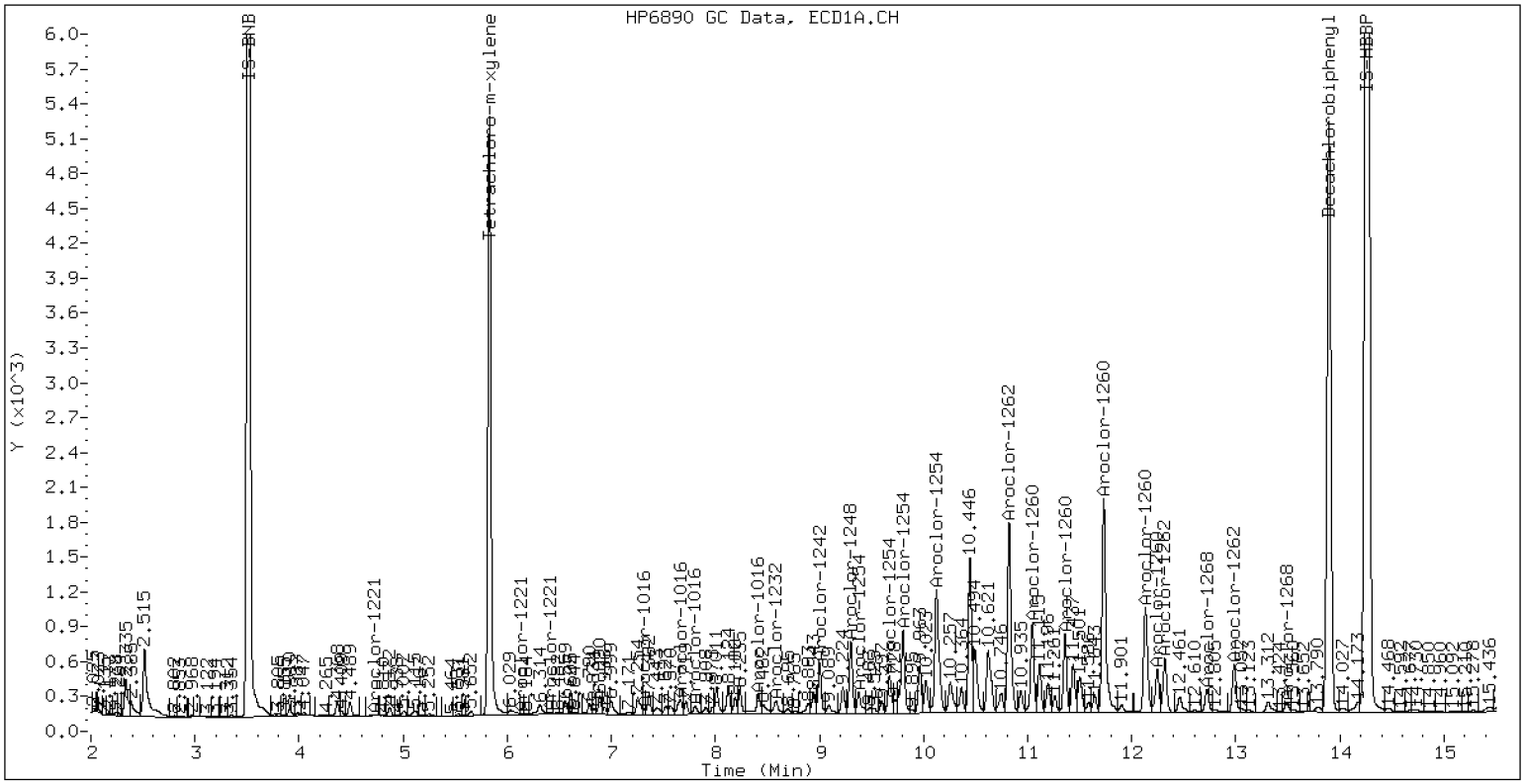
Total PCB Area Col2 (5.809 - 14.028) = 800975 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

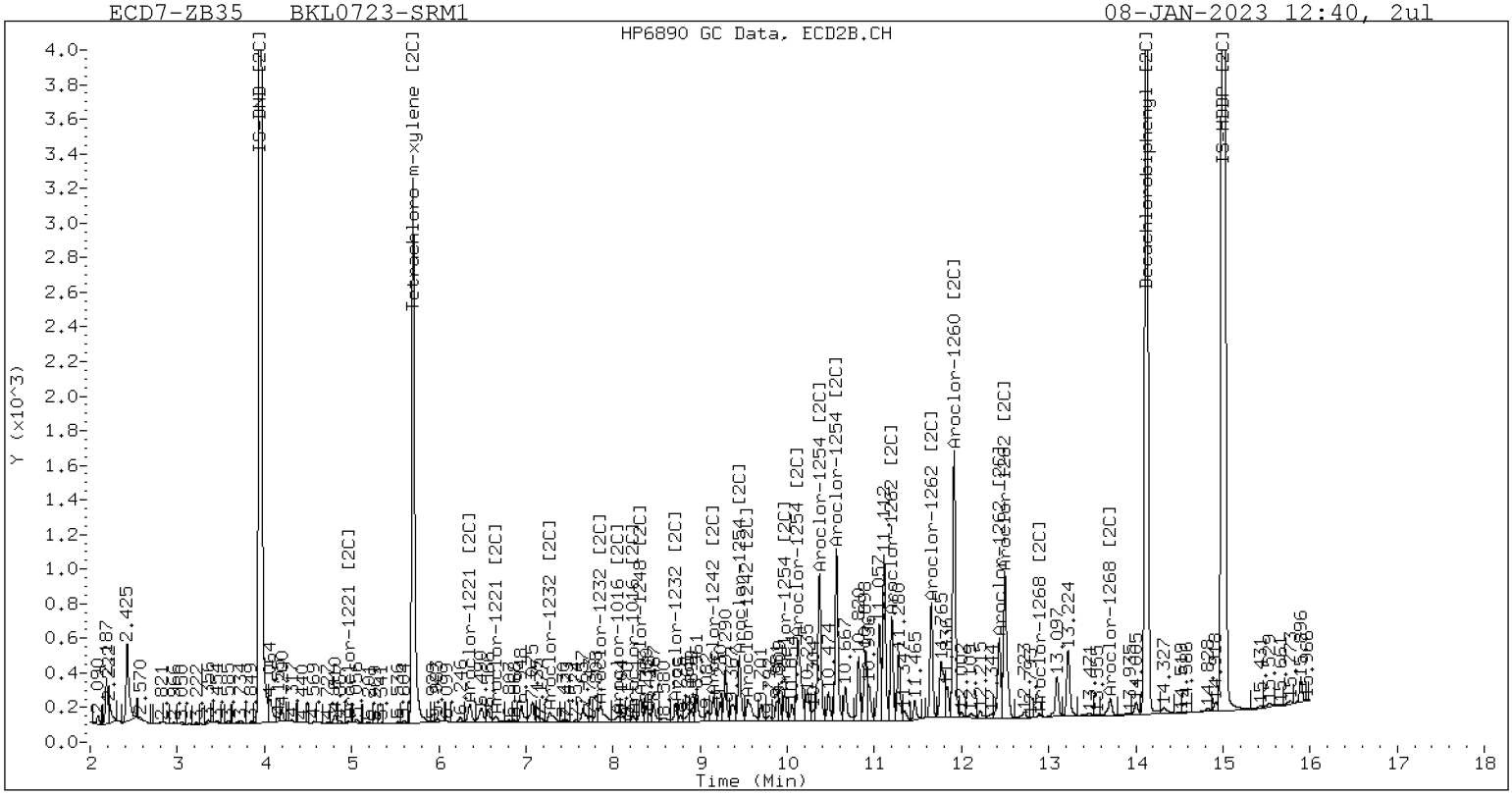
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0723-SRM1 08-JAN-2023 12:40, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0723-SRM1 08-JAN-2023 12:40, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# STANDARD REFERENCE MATERIAL RECOVERY

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Matrix:** Solid
**Laboratory ID:** BKL0730-SRM1
**Batch:** BKL0730
**Initial/Final:** 2.5 g / 2.5 mL
**Preparation:** EPA 3546 (Microwave)
**Analyzed:** 01/11/2023 2:40
**Standard ID:** K010816
**Expires:** 05/17/2023
**Standard Lot#:** PSRM0165
**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 | 118 | 2.9 | 20.0 | | 109 | 38 - 167 |
| Aroclor 1260 [2C] | 108.00 | 112 | 2.9 | 20.0 | | 104 | 38 - 167 |

* Values outside of QC limits

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

Data file 1: /230110.b/01102330ECD7.D
Data file 2: /230110.b/230110.b/01102330ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BKL0730-SRM1
Client ID:
Injection Date: 11-JAN-2023 02:40
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.829 | -0.007 | 188353 | 5.705 | -0.002 | 131845 | 28.5 | 28.1 | 1.4 | Tetrachloro-m-xylene |
| 13.895 | -0.012 | 229594 | 14.123 | -0.005 | 223171 | 33.8 | 30.1 | 11.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 466130 | 4.1 |
| Hexabromobiphenyl | 798898 | 741853 | -7.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 342074 | 37.3 |
| Hexabromobiphenyl | 362541 | 522264 | 44.1 |

* 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-1016 | 1 | 7.321 | 0.027 | 933 | 6.0 | 1 | 7.272 | 0.000 | 4211 | 24.1 |
| Aroclor-1016 | 2 | 7.665 | -0.020 | 7710 | 15.4 | 2 | 7.860 | -0.012 | 7420 | 19.7 |
| Aroclor-1016 | 3 | 7.805 | -0.013 | 4142 | 18.2 | 3 | 8.060 | -0.011 | 2729 | 16.8 |
| Aroclor-1016 | 4 | 8.414 | -0.015 | 9986 | 68.9 | 4 | 8.228 | -0.013 | 1765 | 20.7 |
| Total Col1Ave (4 peaks): | | | | 27.1 | | Total Col2Ave (4 peaks): | | | 20.3 | RPD = 29 |
| Corrected Ave (3 peaks): | | | | 13.2 | | Corrected Ave (3 peaks): | | | 19.1 | RPD = 37 |
| Aroclor-1221 | 1 | 4.720 | -0.040 | 122 | 3.2 | 1 | 4.968 | -0.019 | 676 | 23.4 |
| Aroclor-1221 | 2 | 6.182 | 0.023 | 640 | 9.4 | 2 | 6.357 | 0.036 | 4607 | 83.7 |
| Aroclor-1221 | 3 | 6.409 | -0.000 | 1611 | 10.3 | 3 | 6.655 | 0.010 | 1593 | 17.2 |
| Total Col1Ave (3 peaks): | | | | 7.6 | | Total Col2Ave (3 peaks): | | | 41.5 | RPD = 138* |
| Corrected Ave: < 3 Peaks | | | | | | Corrected Ave: < 3 Peaks | | | | |
| Aroclor-1232 | 1 | 4.720 | -0.041 | 122 | 5.3 | 1 | 4.968 | -0.022 | 676 | 40.6 |
| Aroclor-1232 | 2 | 6.182 | 0.022 | 640 | 13.1 | 2 | 7.272 | -0.005 | 4211 | 49.6 |
| Aroclor-1232 | 3 | 7.665 | -0.019 | 7710 | 35.0 | 3 | 7.860 | -0.016 | 7420 | 44.7 |
| Aroclor-1232 | 4 | 8.584 | -0.021 | 7291 | 78.1 | 4 | 8.720 | -0.014 | 5202 | 115.5 |
| Total Col1Ave (4 peaks): | | | | 32.9 | | Total Col2Ave (4 peaks): | | | 62.6 | RPD = 62* |
| Corrected Ave (3 peaks): | | | | 17.8 | | Corrected Ave (3 peaks): | | | 45.0 | RPD = 87* |
| Aroclor-1242 | 1 | 7.321 | 0.027 | 933 | 7.1 | 1 | 7.272 | 0.002 | 4211 | 29.1 |
| Aroclor-1242 | 2 | 7.665 | -0.020 | 7710 | 18.4 | 2 | 7.860 | -0.013 | 7420 | 24.1 |
| Aroclor-1242 | 3 | 8.414 | -0.015 | 9986 | 82.7 | 3 | 9.156 | -0.021 | 7649 | 77.1 |
| Aroclor-1242 | 4 | 9.002 | -0.029 | 18677 | 74.5 | 4 | 9.546 | -0.059 | 11671 | 97.9 |
| Total Col1Ave (4 peaks): | | | | 45.7 | | Total Col2Ave (4 peaks): | | | 57.1 | RPD = 22 |
| Corrected Ave (3 peaks): | | | | 33.3 | | Corrected Ave (3 peaks): | | | 43.5 | RPD = 26 |
| Aroclor-1248 | 1 | 8.414 | -0.013 | 9986 | 49.8 | 1 | 8.315 | -0.006 | 6439 | 46.1 |
| Aroclor-1248 | 2 | 8.584 | -0.020 | 7291 | 28.5 | 2 | 8.720 | -0.007 | 5202 | 35.4 |
| Aroclor-1248 | 3 | 9.002 | -0.020 | 18677 | 40.6 | 3 | 9.156 | -0.019 | 7649 | 42.8 |
| Aroclor-1248 | 4 | 9.303 | -0.009 | 27129 | 120.3 | 4 | 9.546 | -0.050 | 11671 | 55.6 |
| Total Col1Ave (4 peaks): | | | | 59.8 | | Total Col2Ave (4 peaks): | | | 45.0 | RPD = 28 |
| Corrected Ave (3 peaks): | | | | 39.6 | | Corrected Ave (3 peaks): | | | 41.4 | RPD = 4 |
| Aroclor-1254 | 1 | 9.303 | -0.018 | 27129 | 66.1 | 1 | 9.451 | -0.010 | 18574 | 84.2 |
| Aroclor-1254 | 2 | 9.378 | -0.024 | 11041 | 69.2 | 2 | 9.970 | -0.011 | 8930 | 50.4 |
| Aroclor-1254 | 3 | 9.673 | -0.022 | 17119 | 66.0 | 3 | 10.120 | -0.013 | 35158 | 92.2 |
| Aroclor-1254 | 4 | 9.804 | -0.027 | 36936 | 73.1 | 4 | 10.371 | -0.011 | 45587 | 115.5 |
| Aroclor-1254 | 5 | 10.125 | -0.065 | 59269 | 171.1 | 5 | 10.566 | -0.014 | 46184 | 242.6 |
| Total Col1Ave (5 peaks): | | | | 89.1 | | Total Col2Ave (5 peaks): | | | 117.0 | RPD = 27 |
| Corrected Ave (4 peaks): | | | | 68.6 | | Corrected Ave (4 peaks): | | | 85.6 | RPD = 22 |
| Aroclor-1260 | 1 | 11.047 | -0.016 | 34525 | 127.9 | 1 | 11.654 | -0.008 | 29443 | 106.8 |
| Aroclor-1260 | 2 | 11.359 | -0.018 | 28118 | 100.7 | 2 | 11.915 | -0.010 | 73077 | 105.6 |
| Aroclor-1260 | 3 | 11.731 | -0.020 | 89622 | 122.1 | 3 | 12.434 | -0.010 | 24123 | 131.0 |
| Aroclor-1260 | 4 | 12.132 | -0.026 | 45657 | 122.2 | 4 | 12.499 | -0.011 | 48542 | 105.3 |
| Aroclor-1260 | 5 | 12.245 | -0.016 | 18040 | 117.9 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 118.2 | | Total Col2Ave (4 peaks): | | | 112.2 | RPD = 5 |
| Corrected Ave (4 peaks): | | | | 115.7 | | Corrected Ave (3 peaks): | | | 105.9 | RPD = 9 |
| Aroclor-1262 | 1 | 10.823 | -0.025 | 78546 | 316.6 | 1 | 11.201 | -0.017 | 27467 | 69.2 |
| Aroclor-1262 | 2 | 12.245 | -0.018 | 18040 | 46.8 | 2 | 11.654 | -0.016 | 29443 | 85.6 |
| Aroclor-1262 | 3 | 12.319 | -0.018 | 22223 | 54.0 | 3 | 12.434 | -0.017 | 24123 | 63.6 |
| Aroclor-1262 | 4 | 12.985 | -0.020 | 22744 | 68.8 | 4 | 12.499 | -0.021 | 48542 | 81.7 |
| Total Col1Ave (4 peaks): | | | | 121.5 | | Total Col2Ave (4 peaks): | | | 75.0 | RPD = 47* |
| Corrected Ave (3 peaks): | | | | 56.5 | | Corrected Ave (3 peaks): | | | 71.5 | RPD = 23 |
| Aroclor-1268 | 1 | 12.245 | -0.017 | 18040 | 17.4 | 1 | 12.434 | -0.015 | 24123 | 24.5 |
| Aroclor-1268 | 2 | 12.319 | -0.016 | 22223 | 21.9 | 2 | 12.499 | -0.018 | 48542 | 48.0 |
| Aroclor-1268 | 3 | 12.723 | 0.007 | 10317 | 12.4 | 3 | 12.896 | -0.013 | 2023 | 5.4 |
| Aroclor-1268 | 4 | 13.491 | -0.015 | 4518 | 1.8 | 4 | 13.709 | -0.018 | 6572 | 2.4 |
| Total Col1Ave (4 peaks): | | | | 13.4 | | Total Col2Ave (4 peaks): | | | 20.1 | RPD = 40* |

Corrected Ave (3 peaks): 10.5 Corrected Ave (3 peaks): 10.8 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 1012260 Col1 Total PCB = 0.2 ppm*

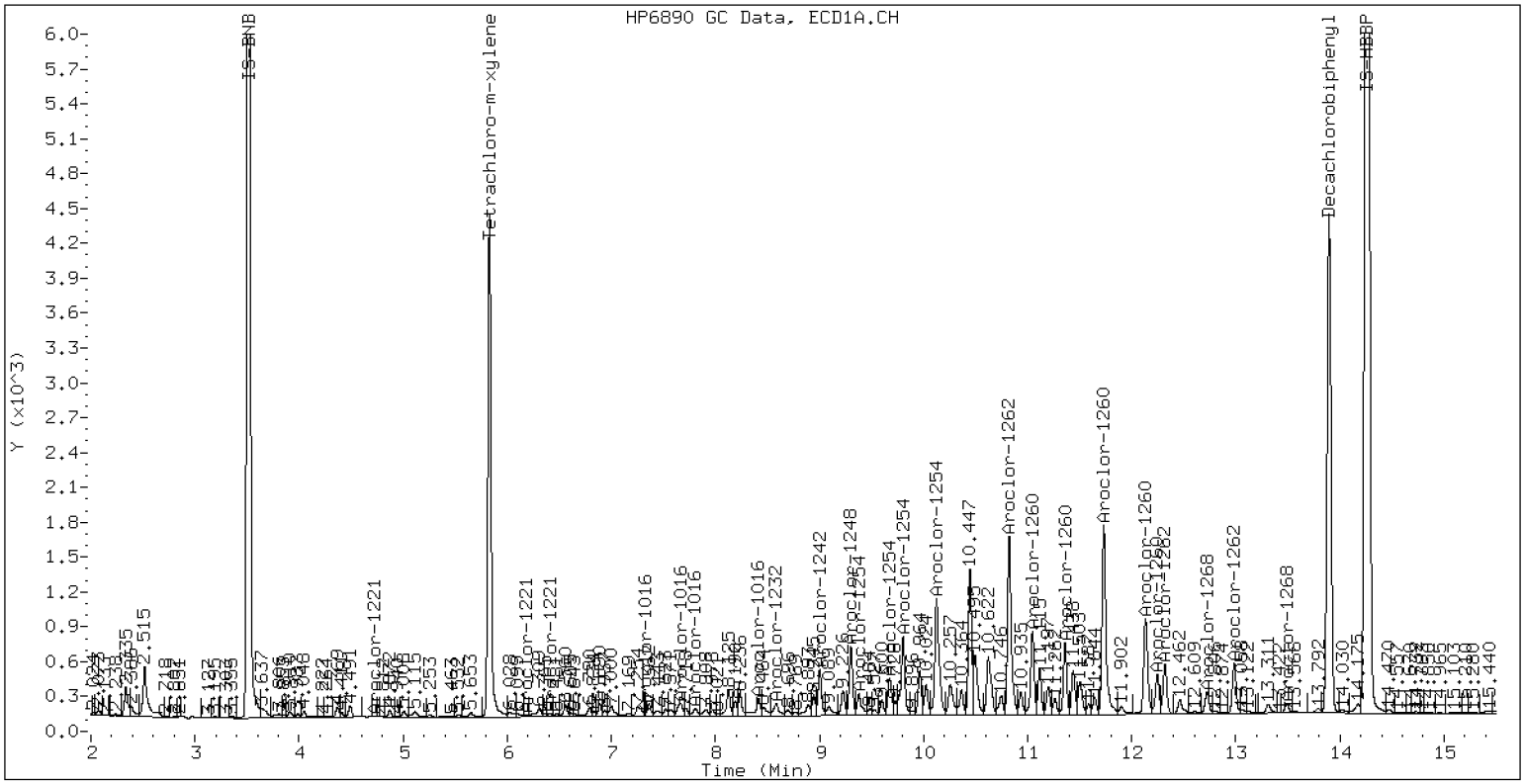
Total PCB Area Col2 (5.807 - 14.028) = 780804 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

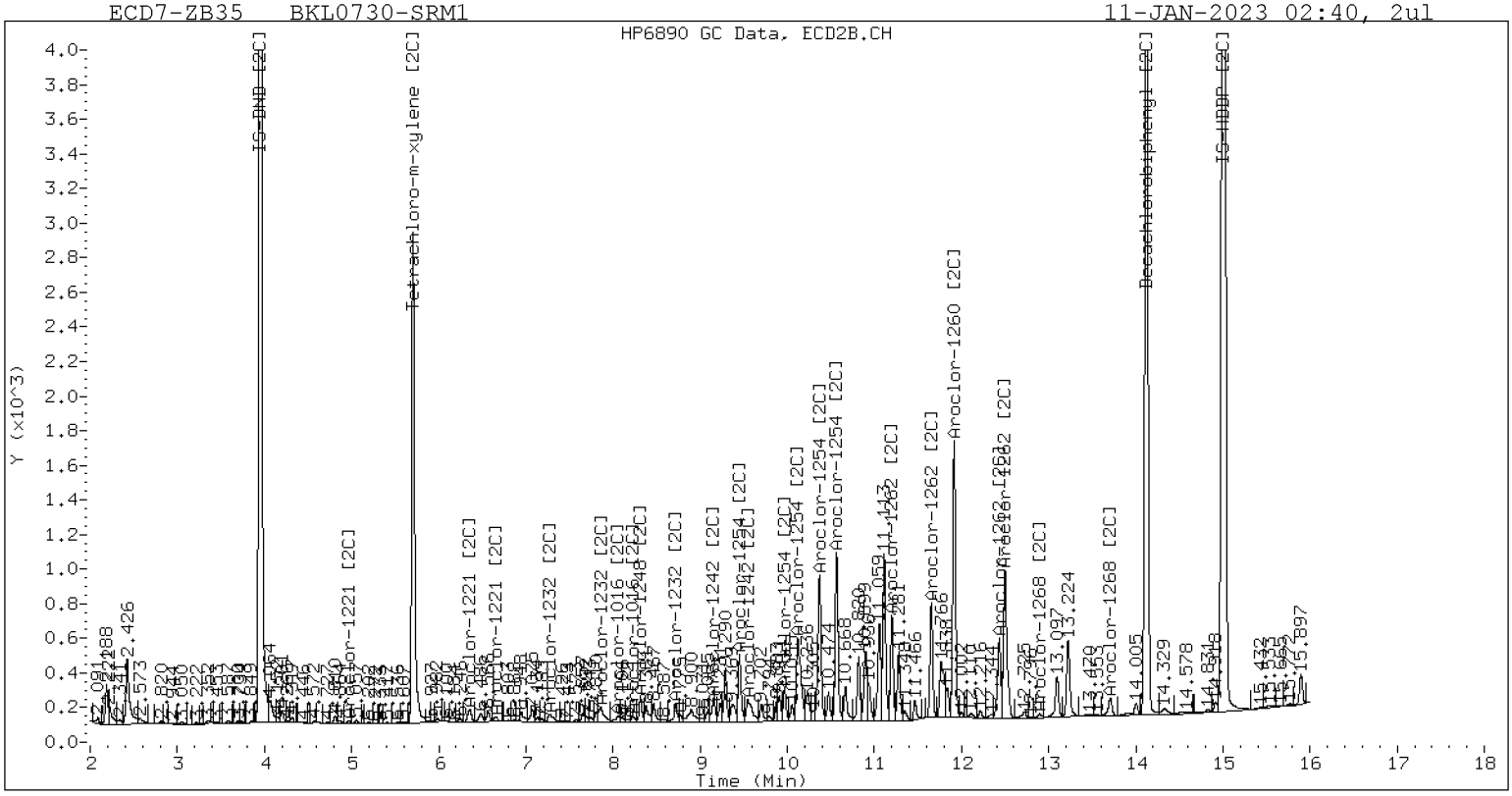
# PCB Dual Column Chromatograms

ECD7-ZB5 BKL0730-SRM1 11-JAN-2023 02:40, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 BKL0730-SRM1 11-JAN-2023 02:40, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 | | | | | | | 250 | 3.710383E-02 | | | | |
| Aroclor-1262 (1) | | | | | | | 250 | 2.675294E-02 | | | | |
| Aroclor-1262 (2) | | | | | | | 250 | 4.159274E-02 | | | | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 (3) | | | | | | | 250 | 4.441976E-02 | | | | |
| Aroclor-1262 (4) | | | | | | | 250 | 0.0356499 | | | | |
| Aroclor 1268 | | | | | | | | | 250 | 0.1462909 | | |
| 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 | | |

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# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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) | |

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# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 | | 0.0 | | | 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 | | 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) | |

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# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

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# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 [2C] | | | | | | | 250 | 6.566399E-02 | | | | |
| Aroclor-1262 (1) [2C] | | | | | | | 250 | 6.082829E-02 | | | | |
| Aroclor-1262 (2) [2C] | | | | | | | 250 | 5.268389E-02 | | | | |

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# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 (3) [2C] | | | | | | | 250 | 5.811375E-02 | | | | |
| Aroclor-1262 (4) [2C] | | | | | | | 250 | 9.103002E-02 | | | | |
| Aroclor 1268 [2C] | | | | | | | | | 250 | 0.1941199 | | |
| 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 | | |

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# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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) | |

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**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 [2C] | | 0.0 | | | 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 [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) | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

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## 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 

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ZB5 Col | | | | | ZB35 Col | | | |
| 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*

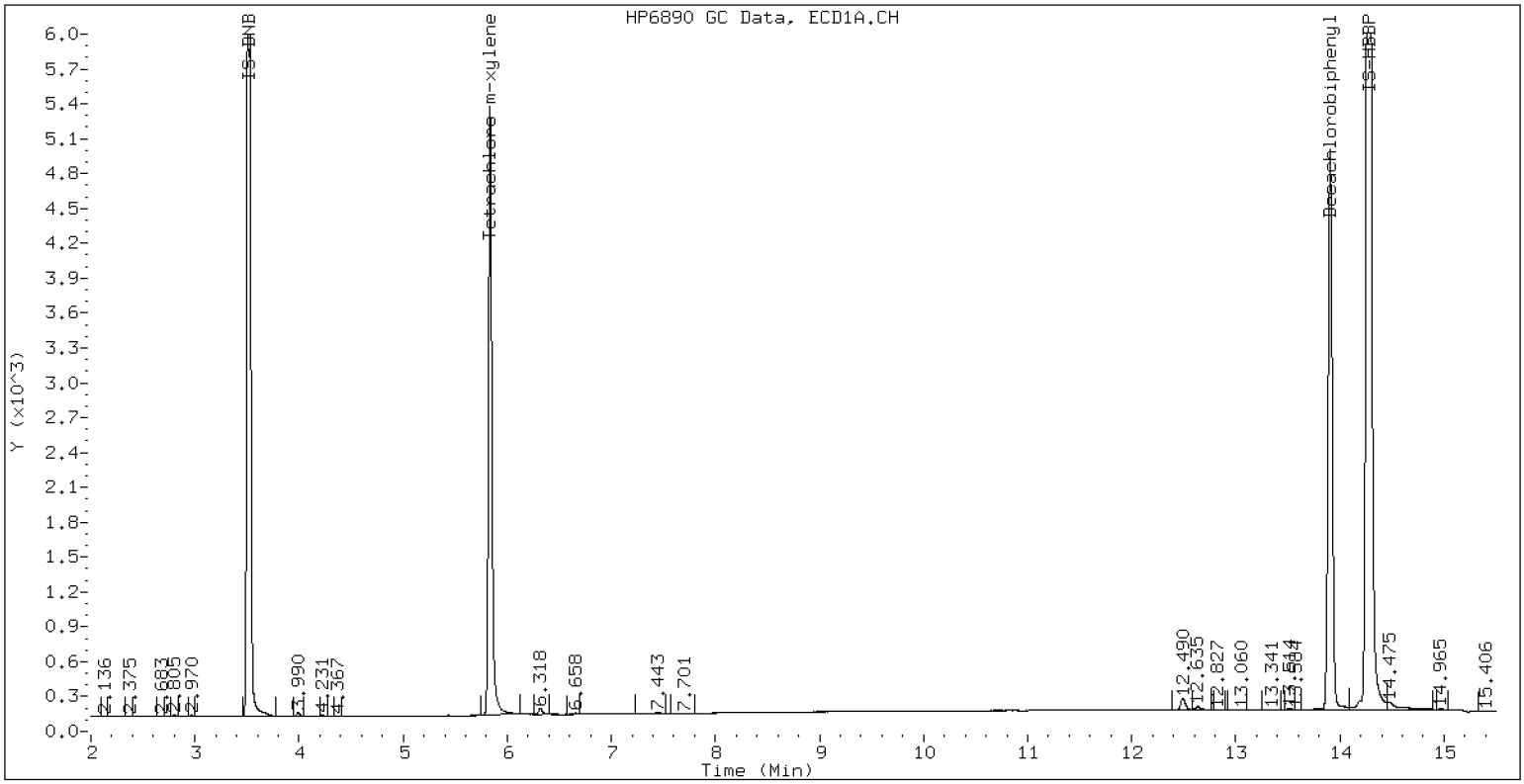
Total PCB Area Col2 (5.936 - 13.808) = 6305 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

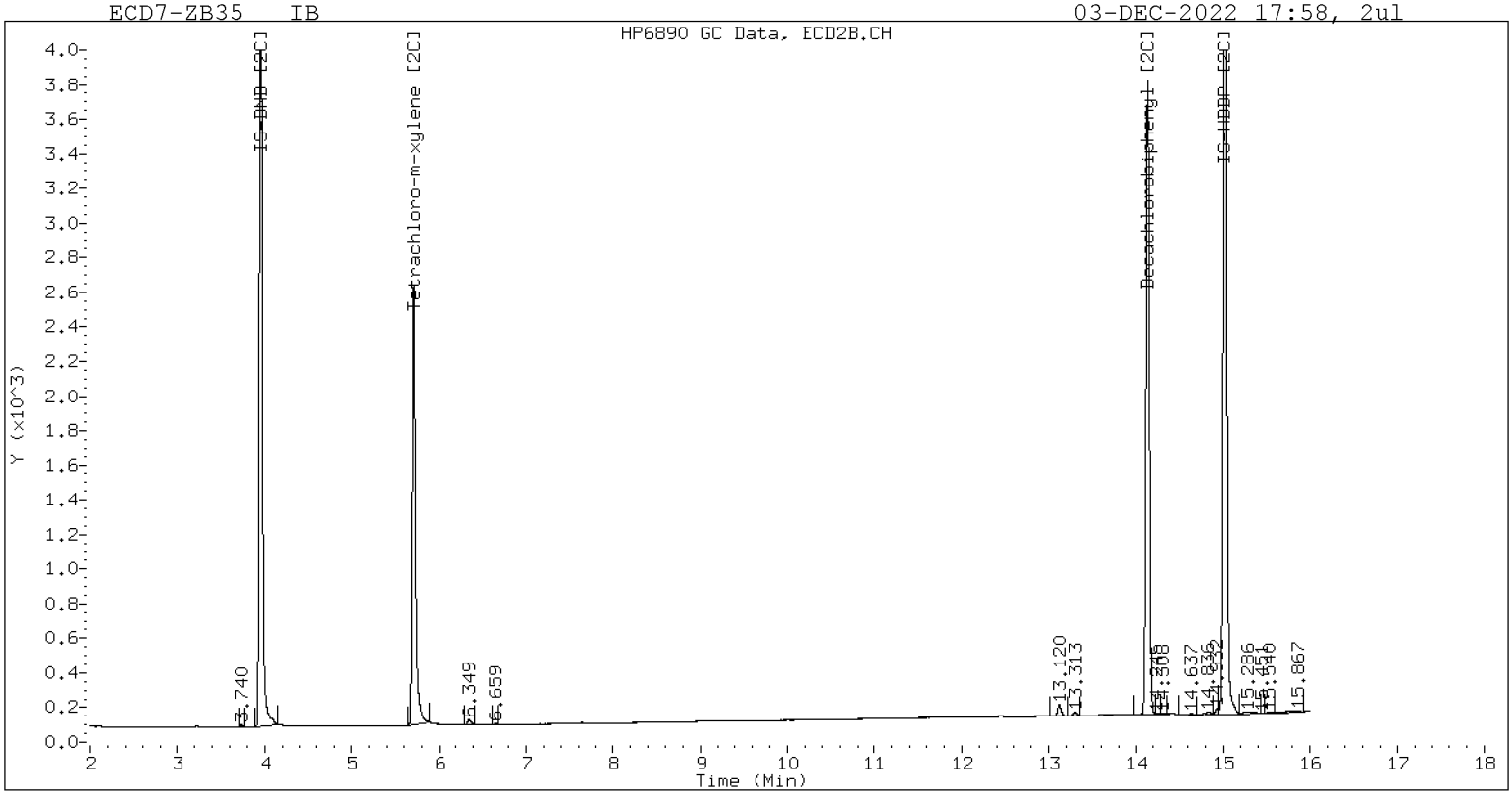
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| 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*

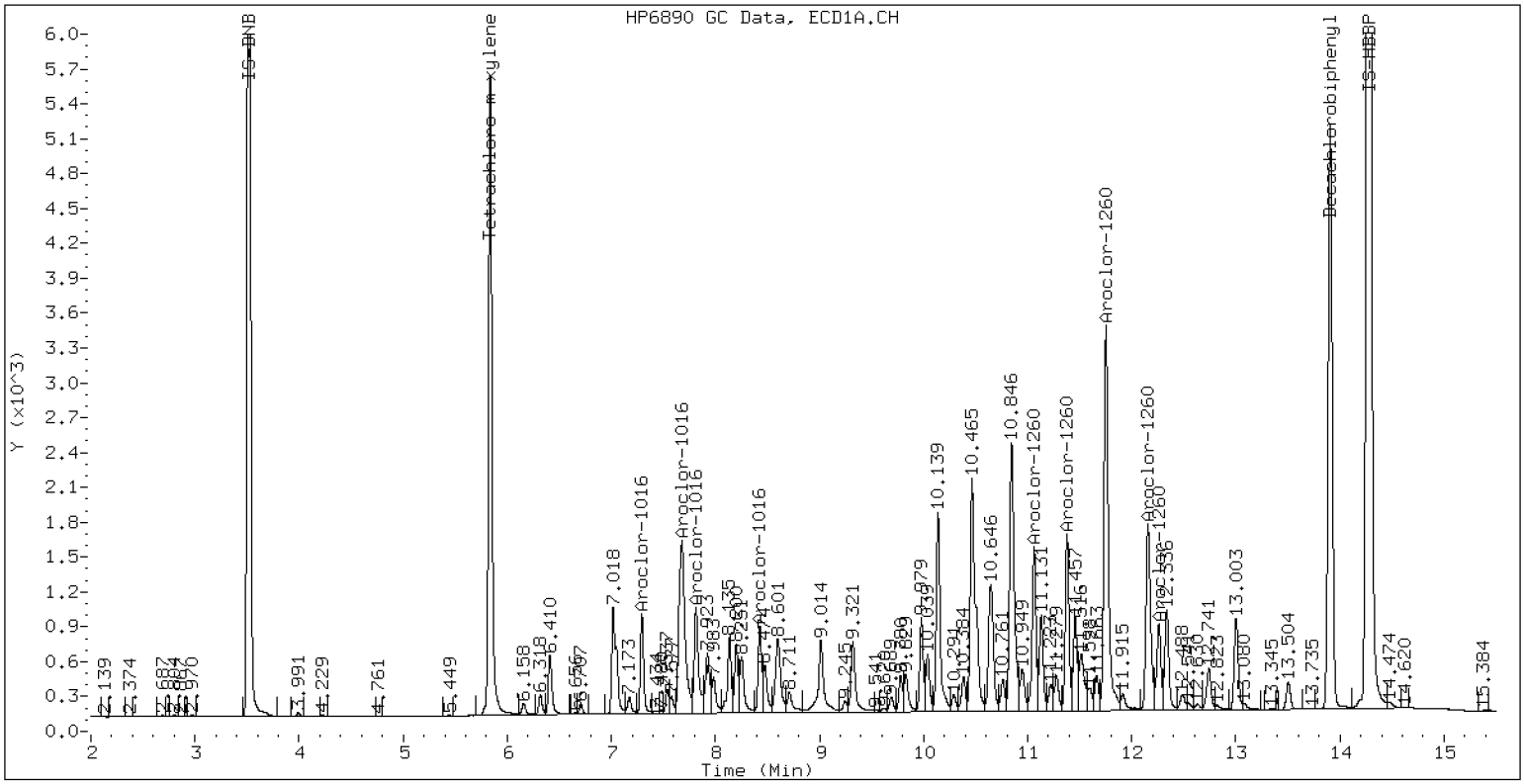
Total PCB Area Col2 (5.936 - 13.808) = 1168134 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

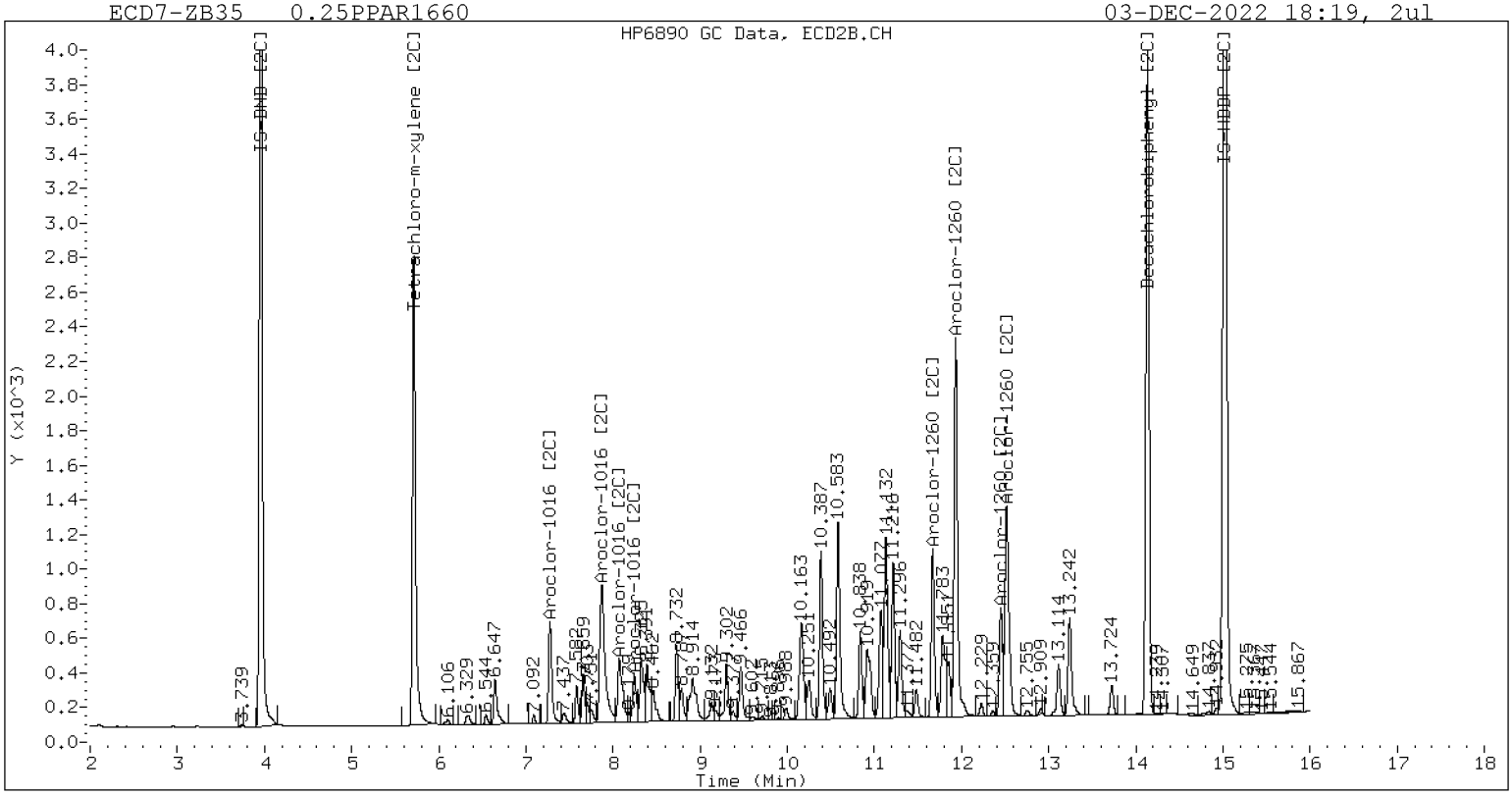
# PCB Dual Column Chromatograms

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ZB5 Col | | | | | ZB35 Col | | | |
| 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*

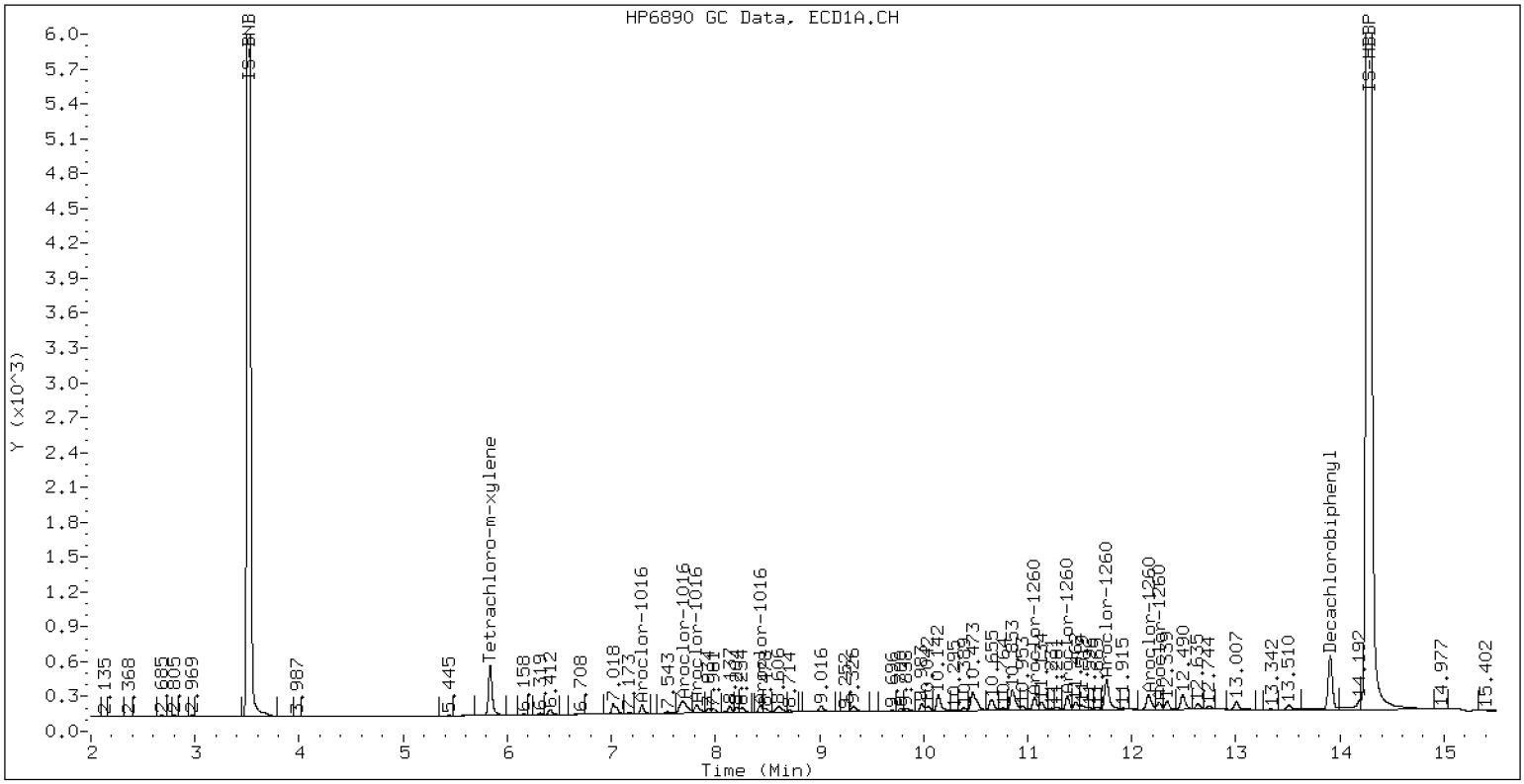
Total PCB Area Col2 (5.936 - 13.808) = 100527 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

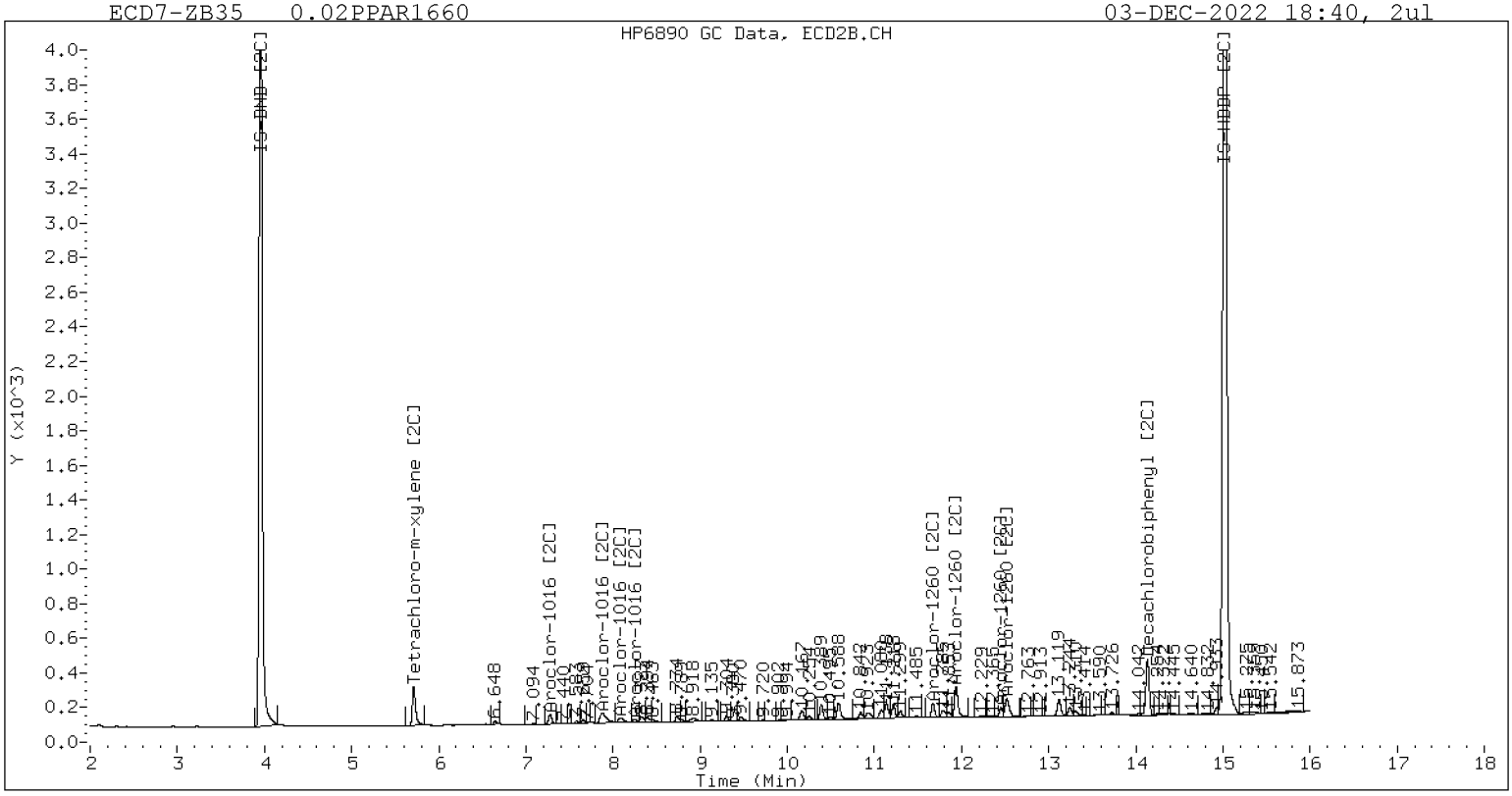
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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*

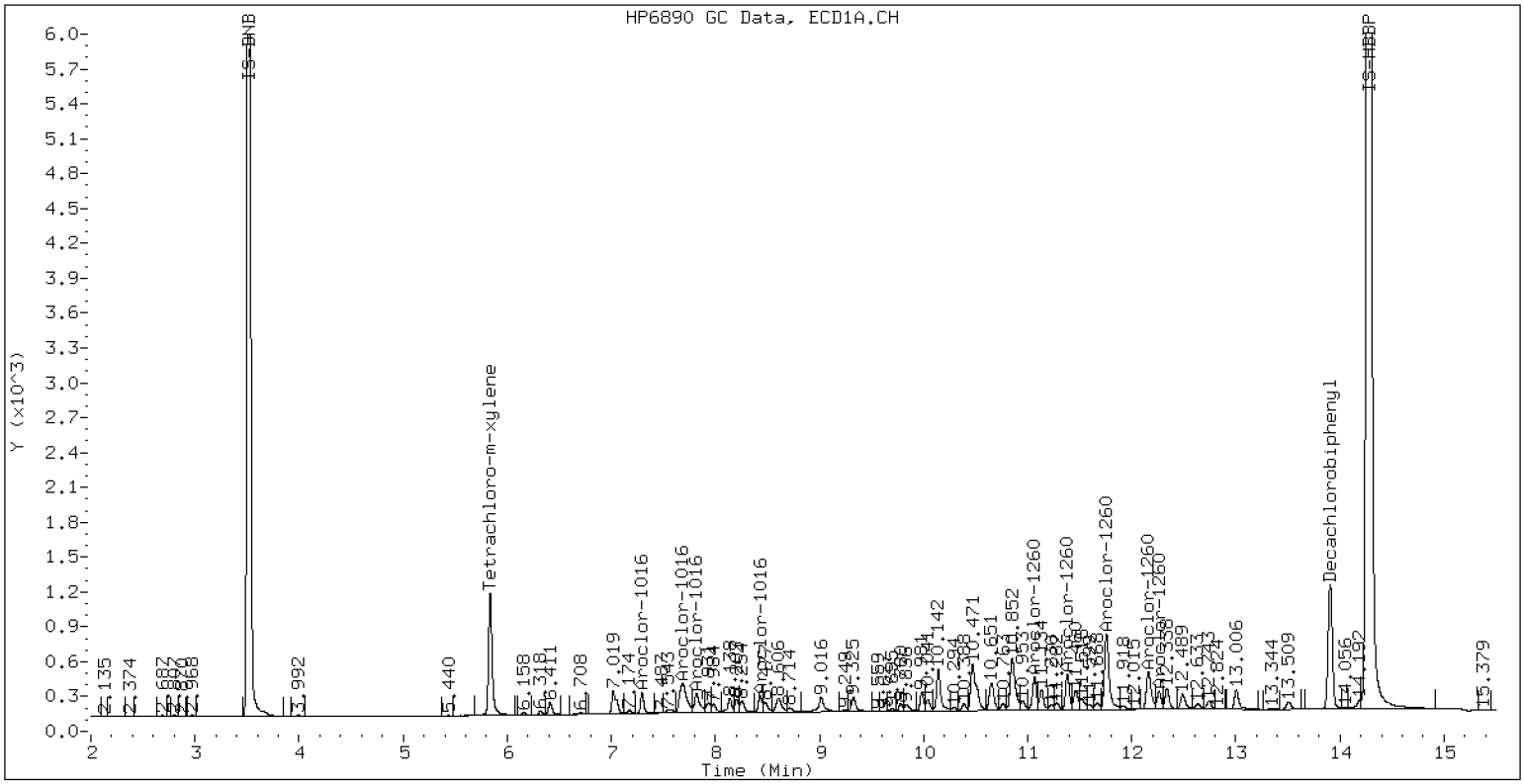
Total PCB Area Col2 (5.936 - 13.808) = 253240 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

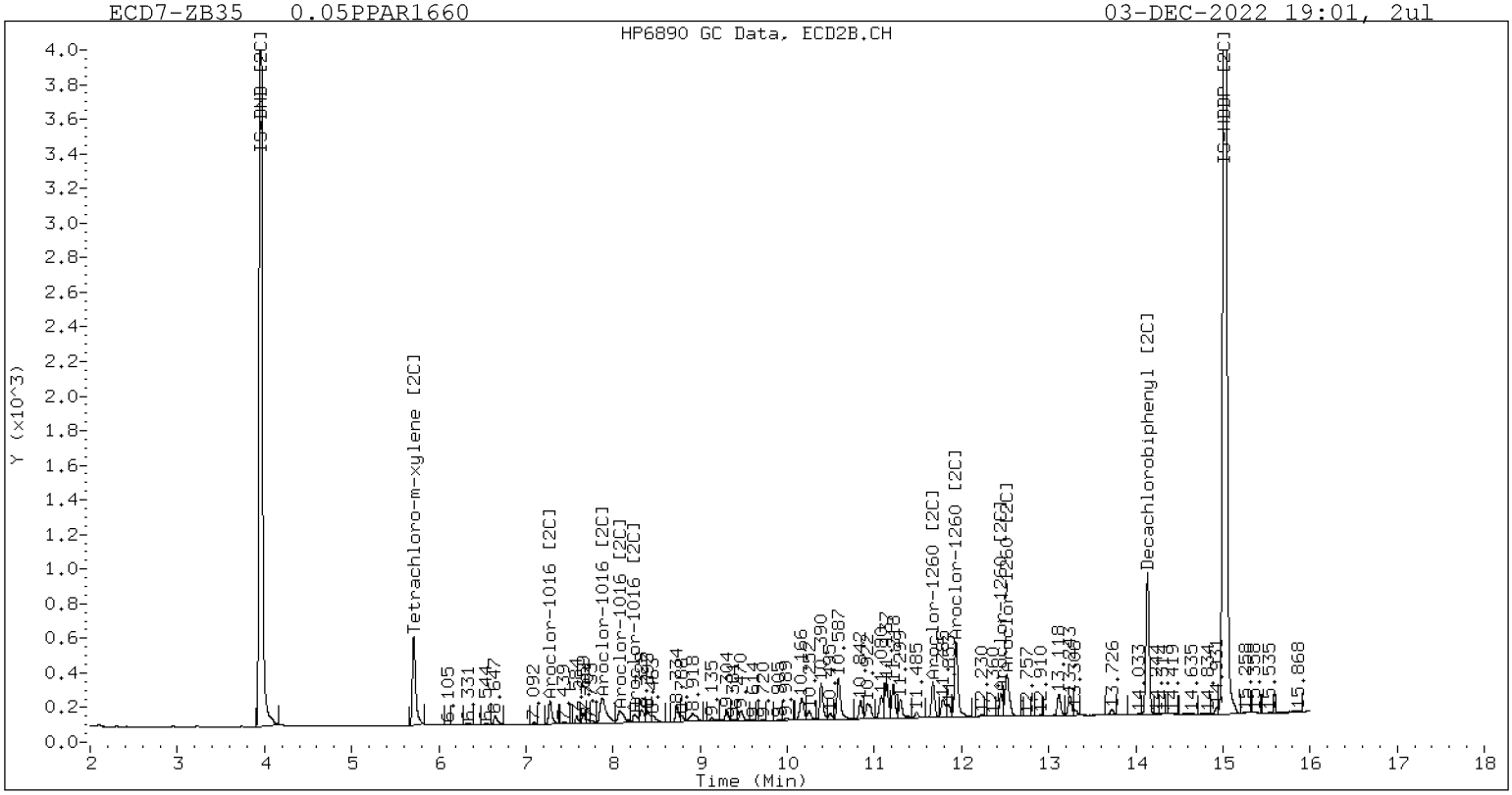
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| 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*

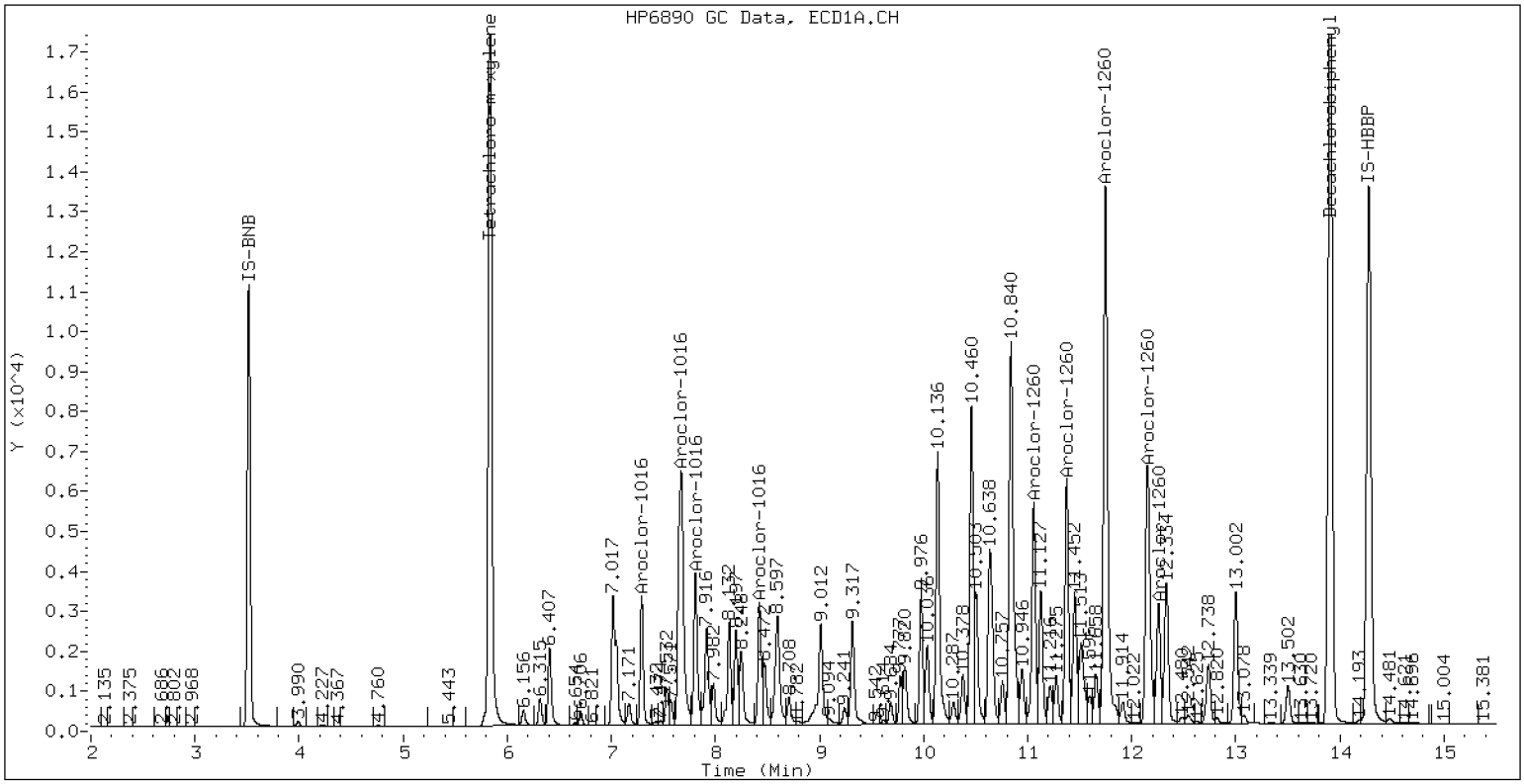
Total PCB Area Col2 (5.936 - 13.808) = 4426537 Col2 Total PCB = 2.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

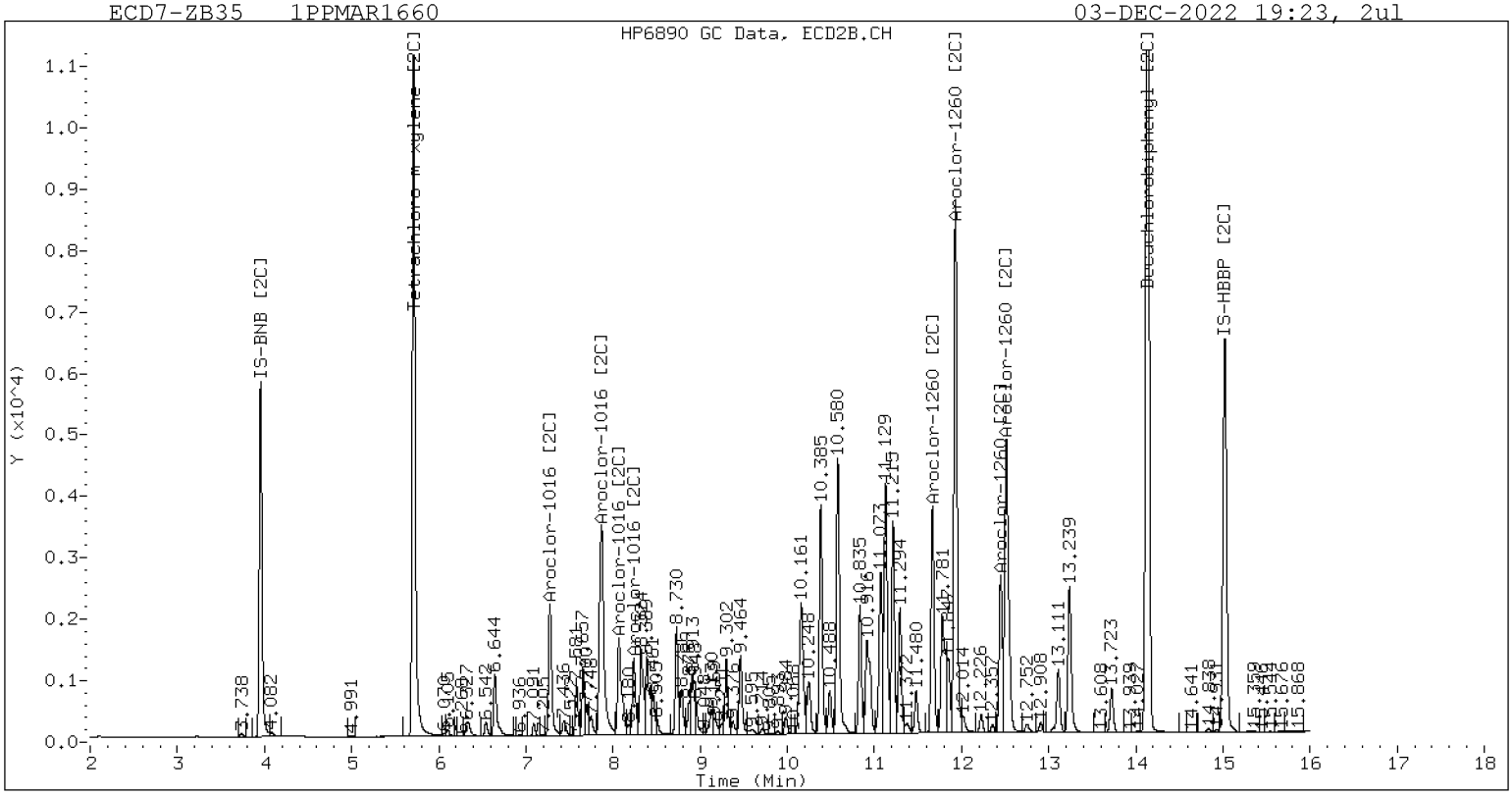
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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%)

| | ZB5 Col | | | | ZB35 Col | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | 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*

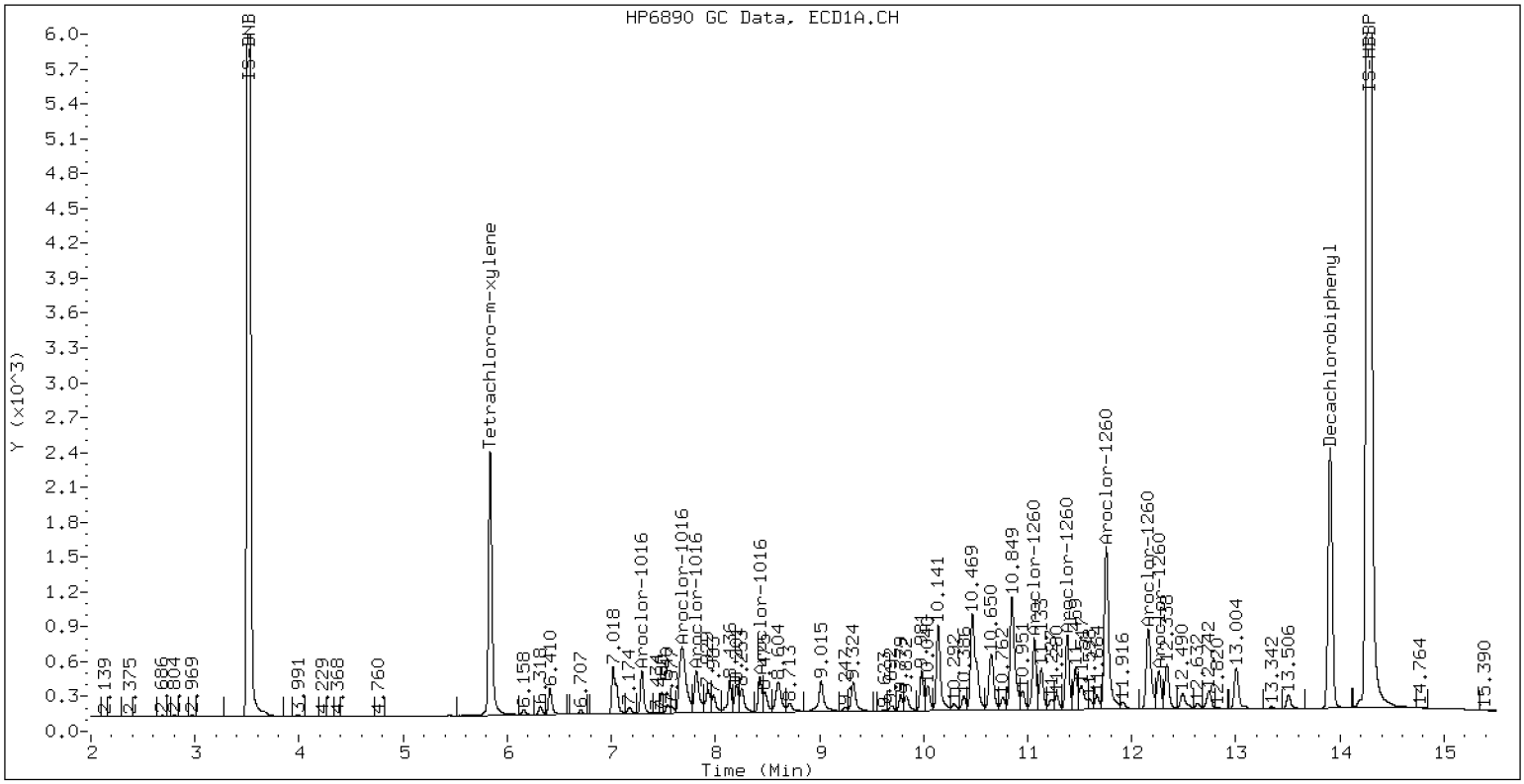
Total PCB Area Col2 (5.936 - 13.808) = 523507 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

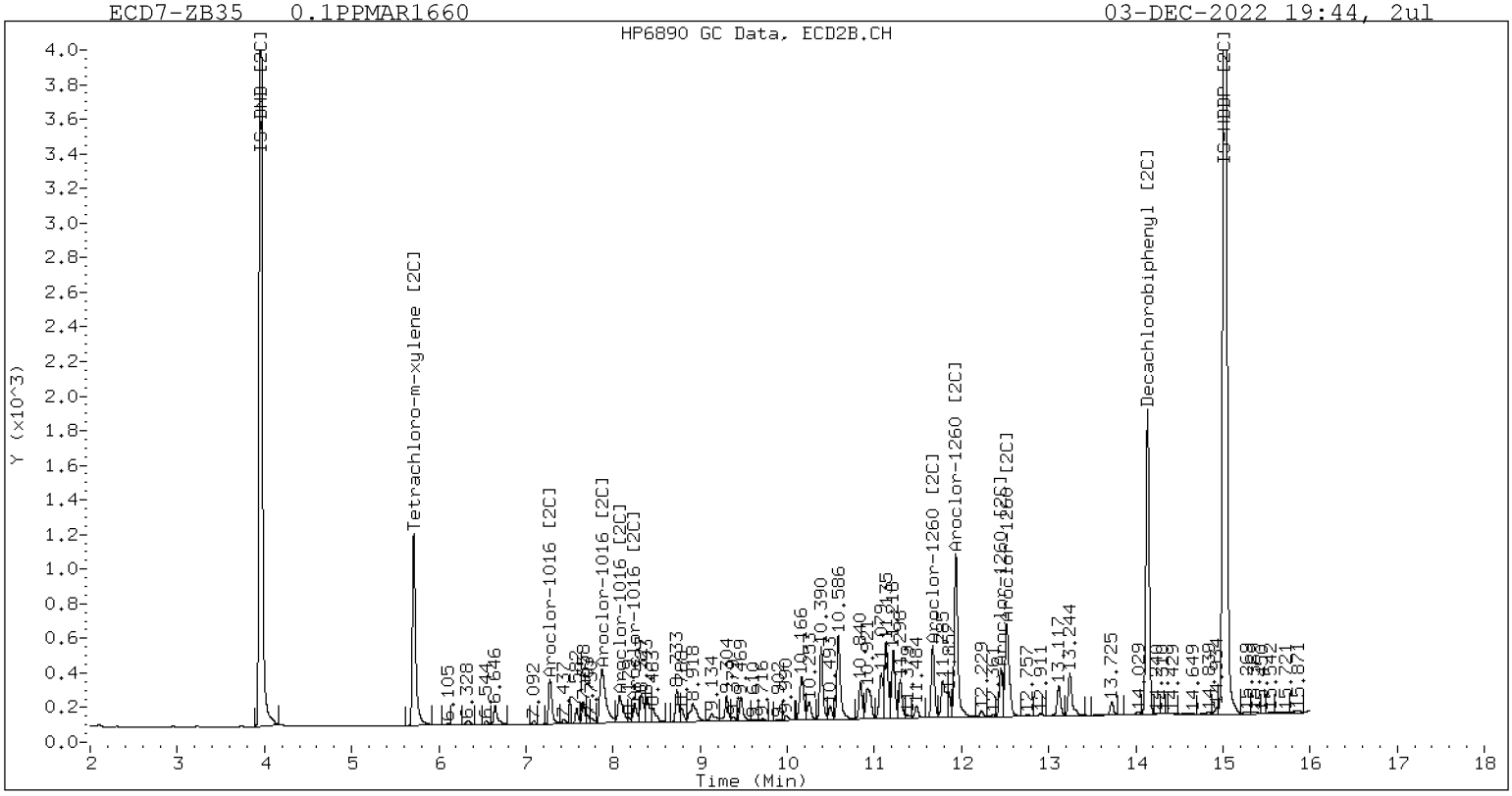
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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*

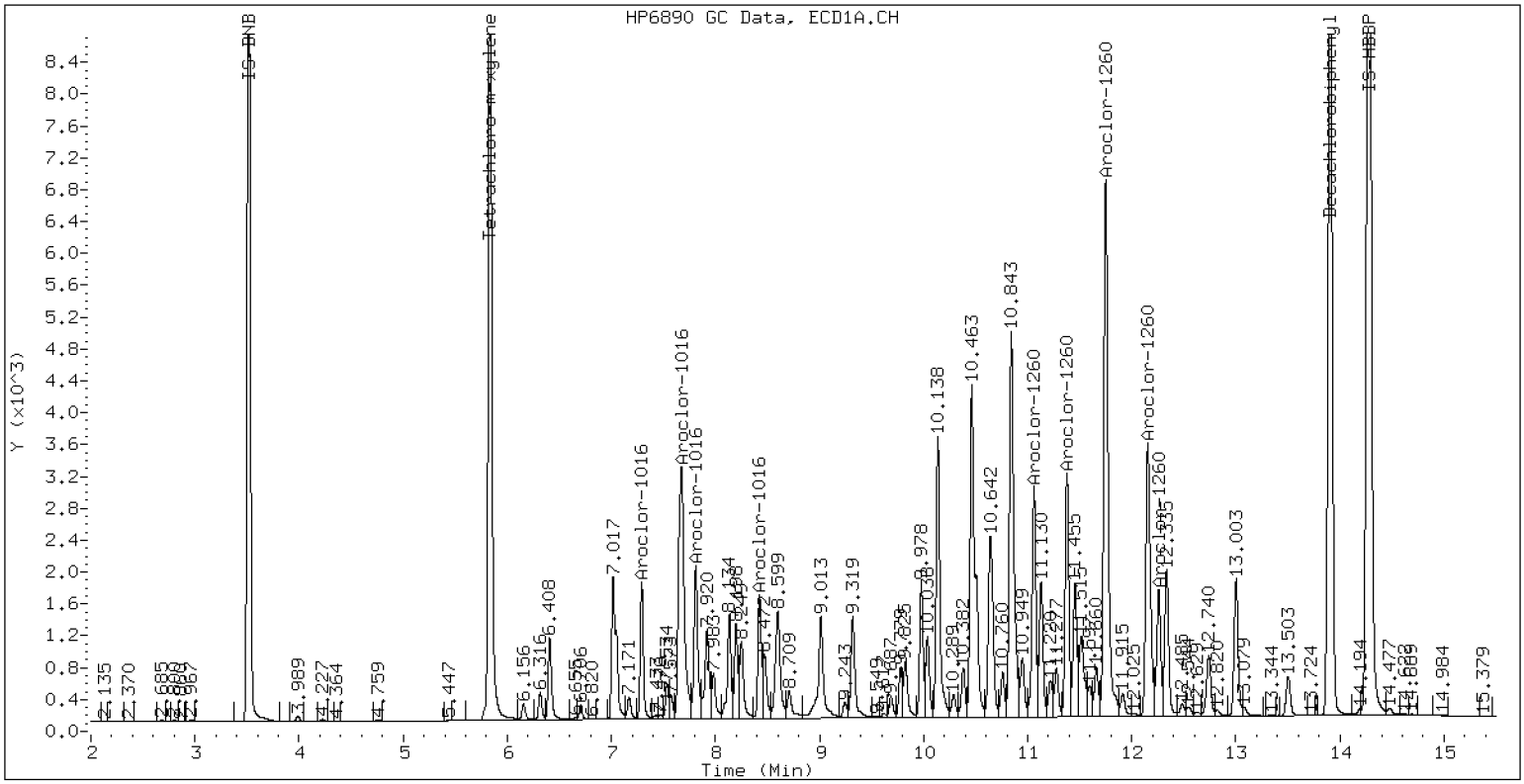
Total PCB Area Col2 (5.936 - 13.808) = 2352394 Col2 Total PCB = 1.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

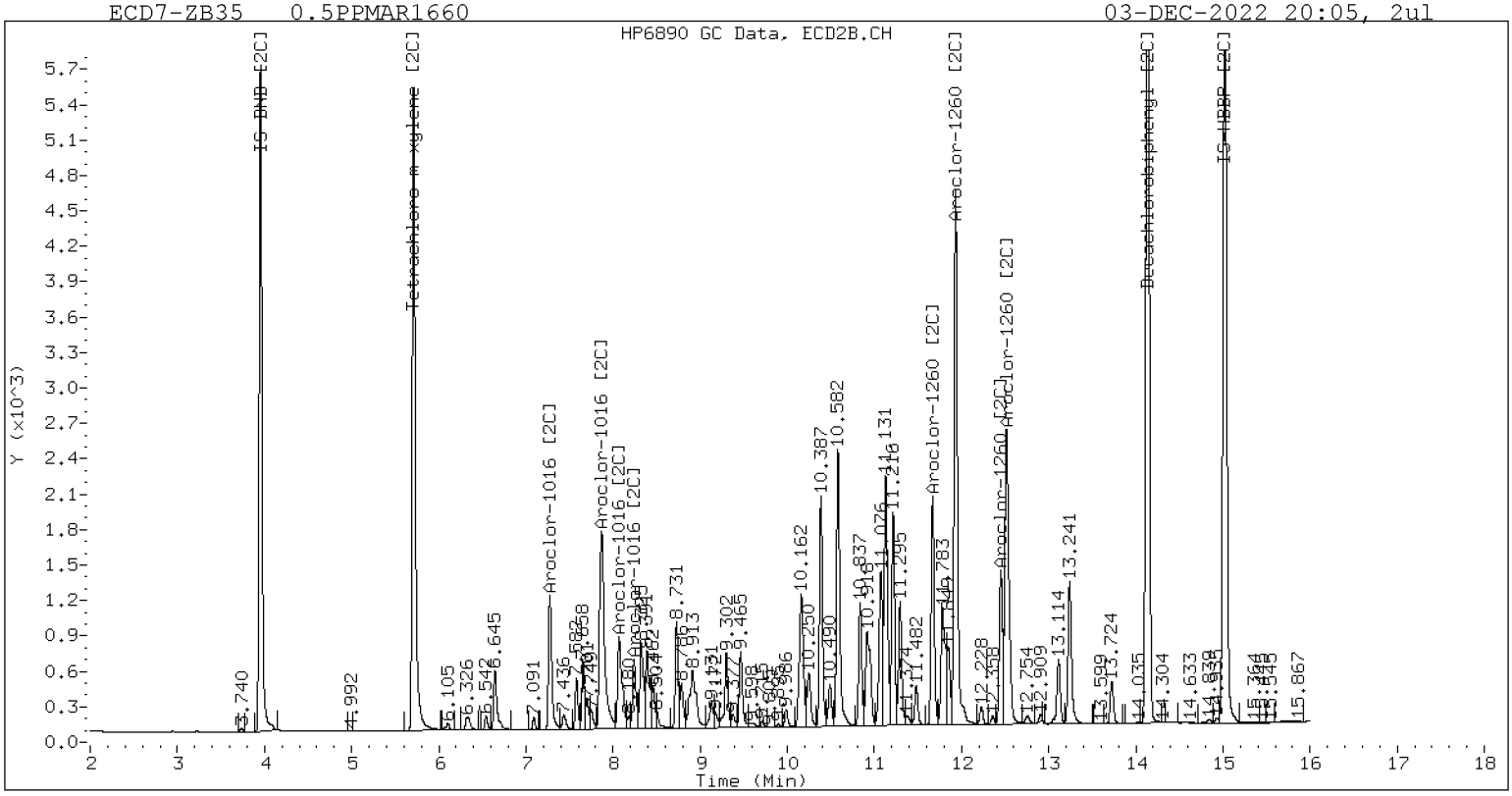
# PCB Dual Column Chromatograms

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ZB5 Col | | | | | ZB35 Col | | | |
| 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*

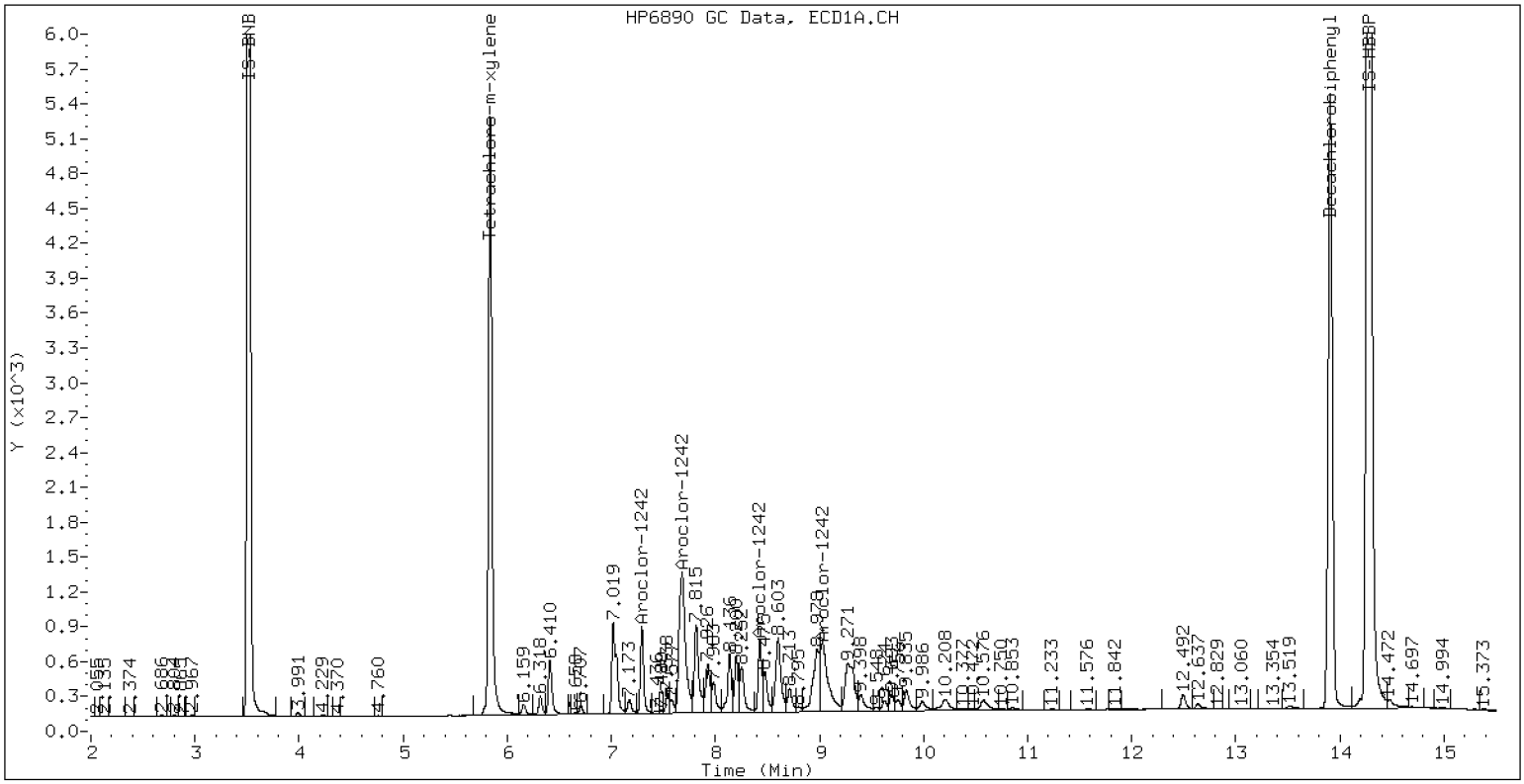
Total PCB Area Col2 (5.936 - 13.808) = 407128 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

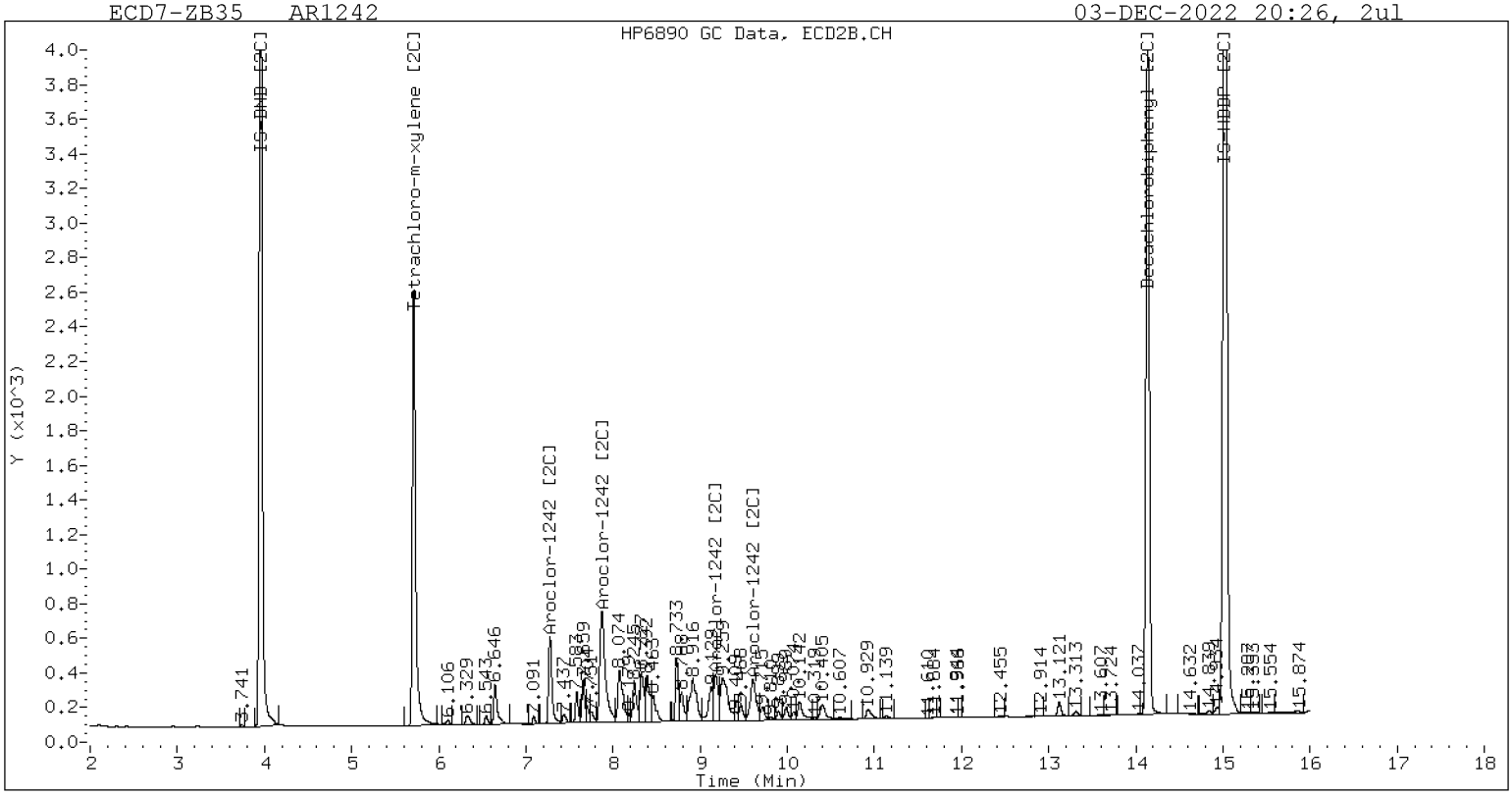
# PCB Dual Column Chromatograms

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




ZB-5 Manual Integration: YES

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

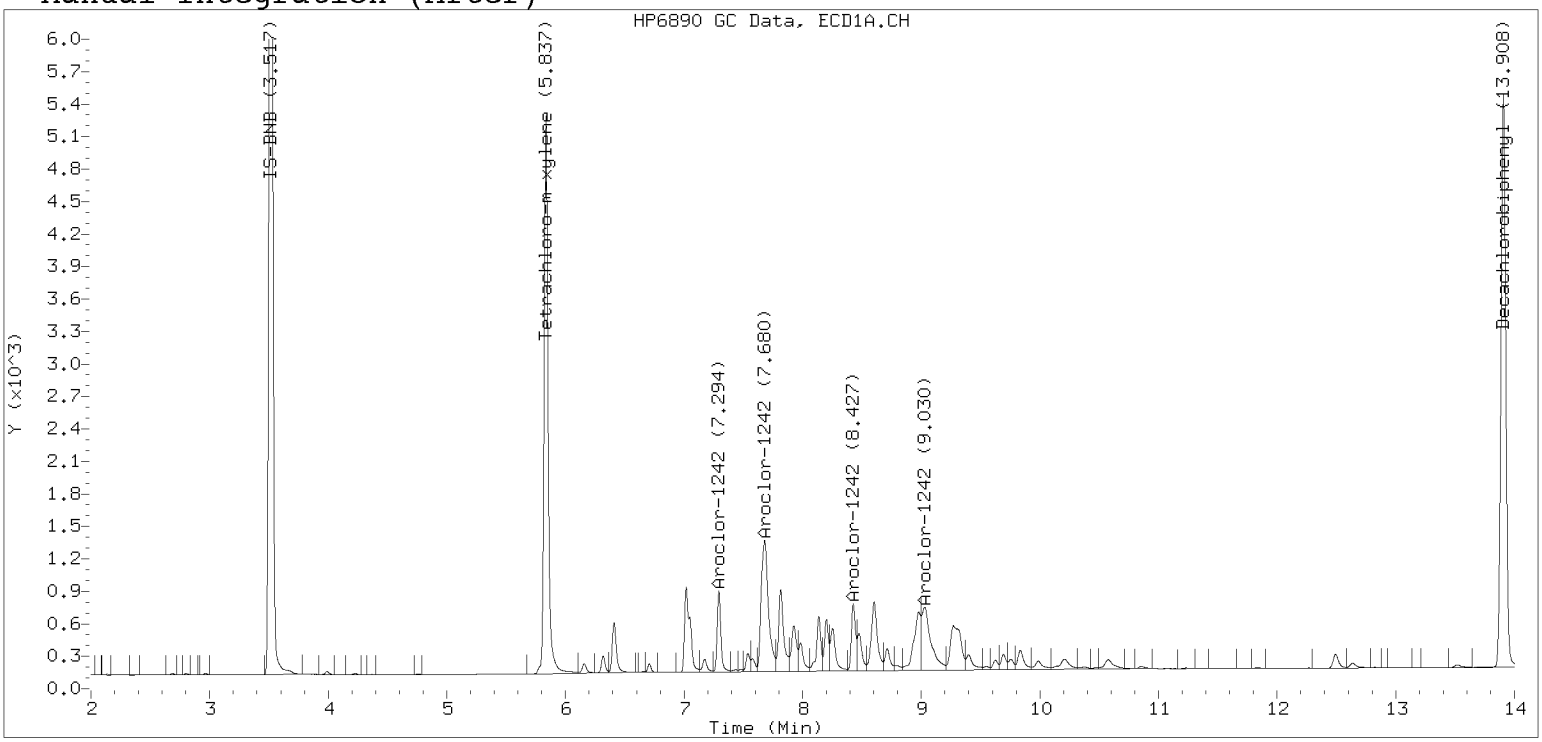



ZB-35 Manual Integration: YES

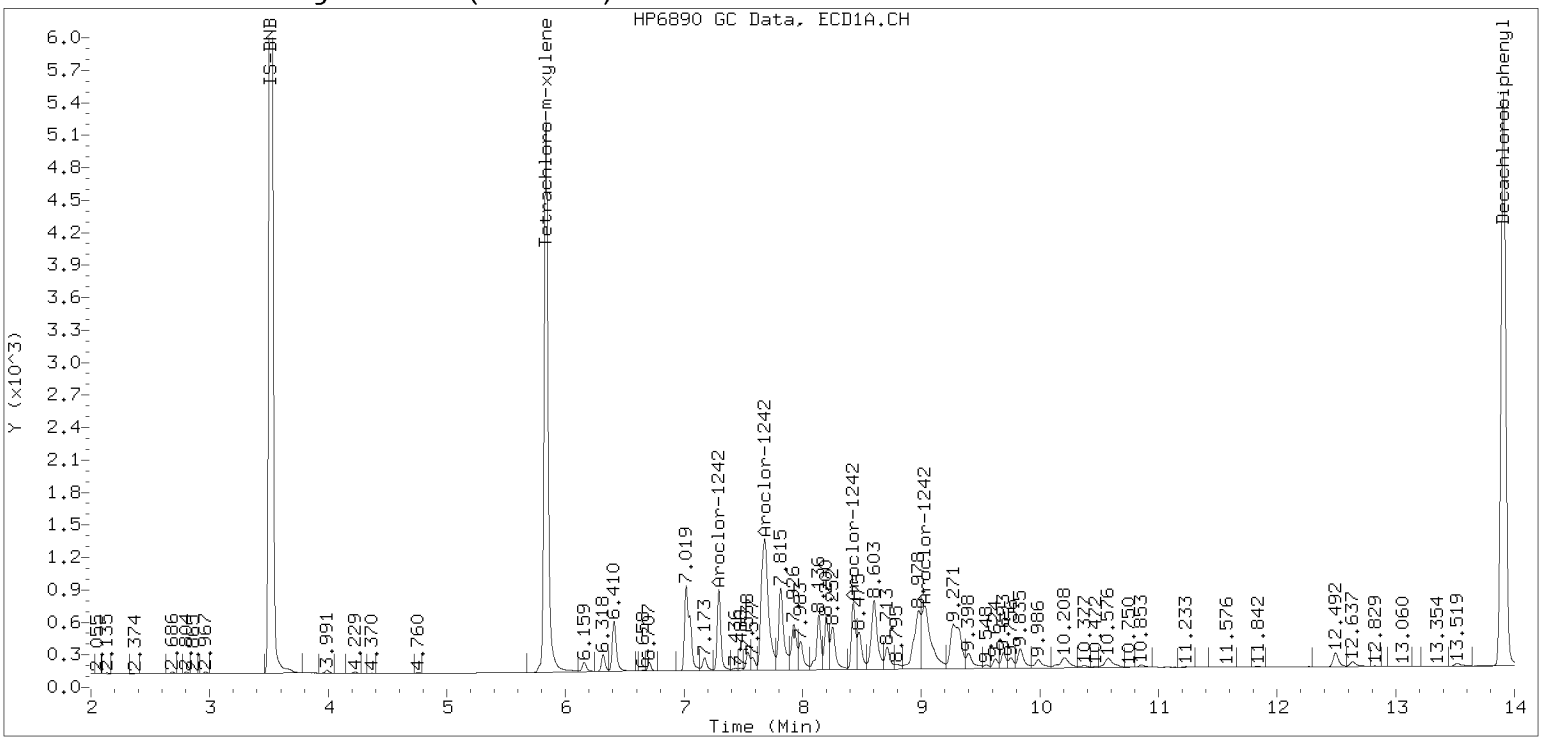
Manual Peak Adjustment, ZB-5

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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*

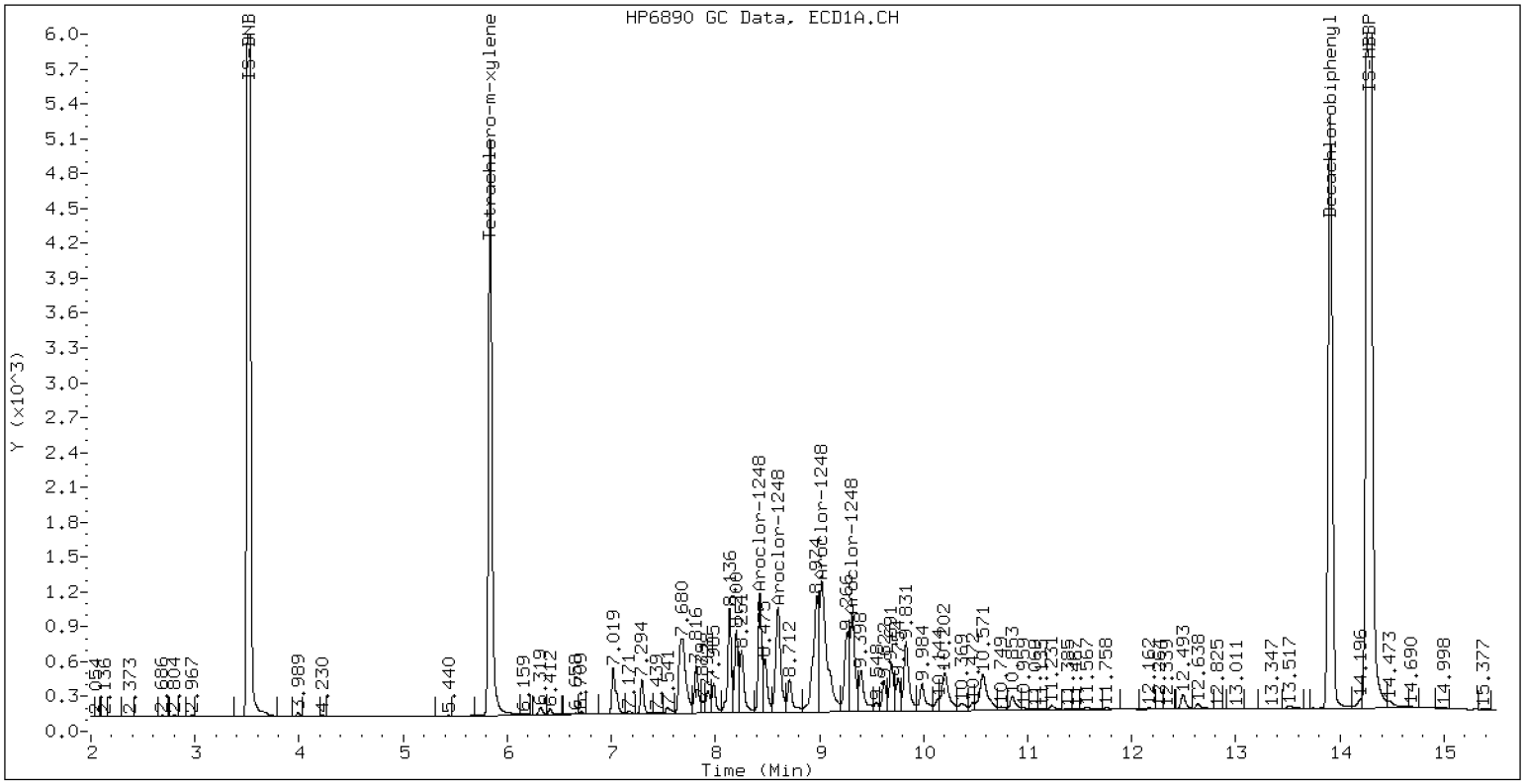
Total PCB Area Col2 (5.936 - 13.808) = 514558 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

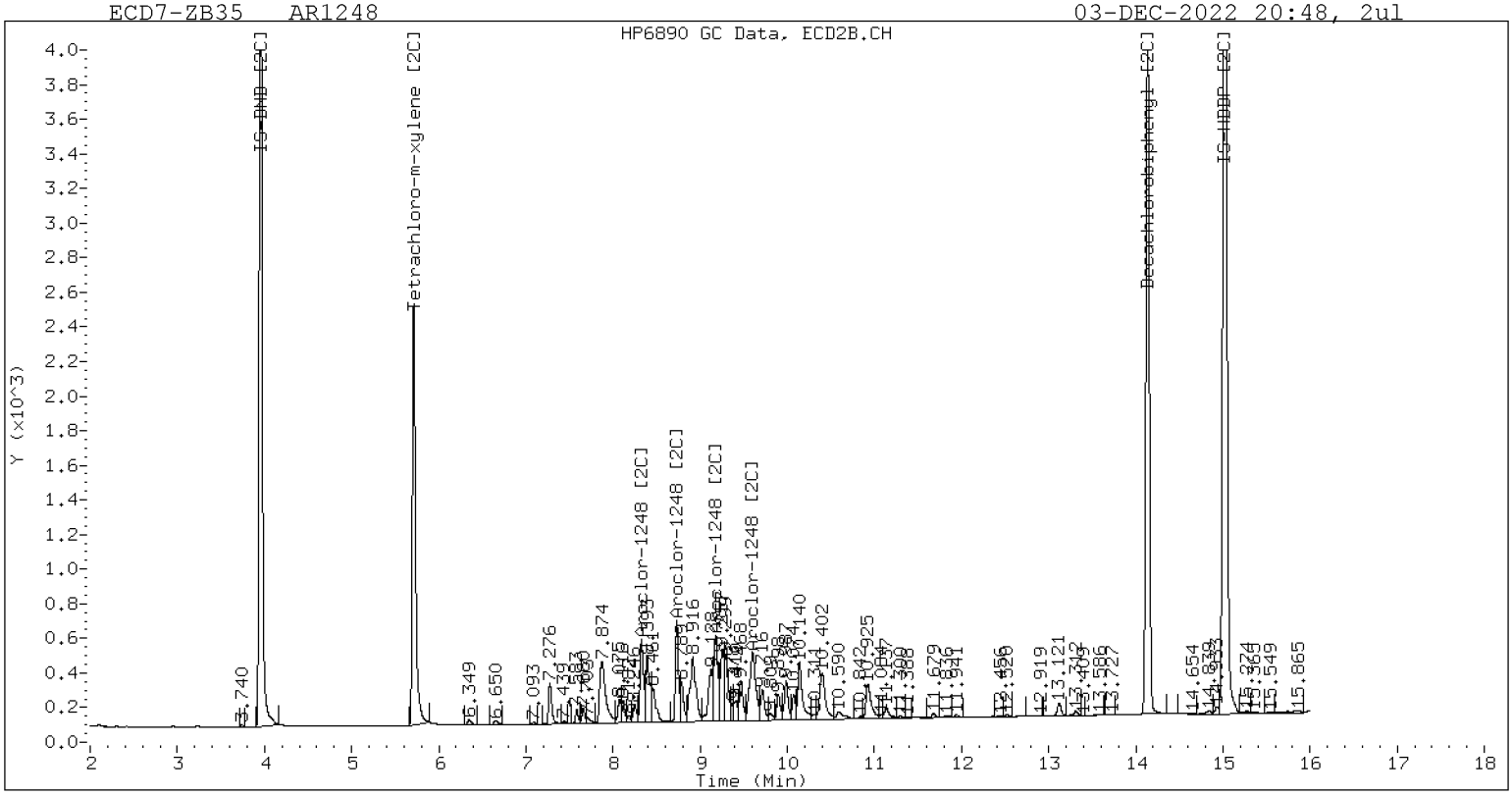
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | ZB5 Col | | | | | ZB35 Col | | | | |
| 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*

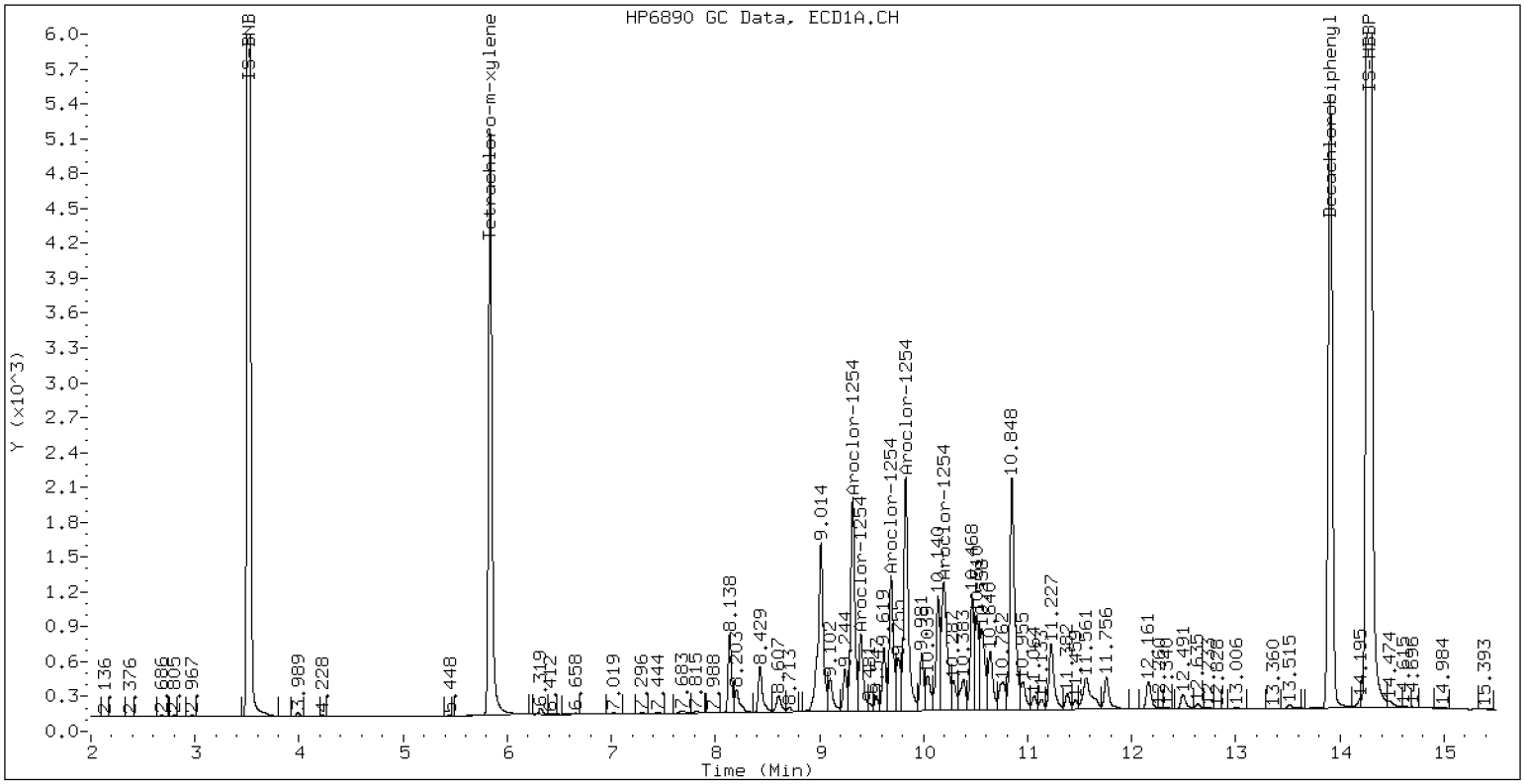
Total PCB Area Col2 (5.936 - 13.808) = 697760 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

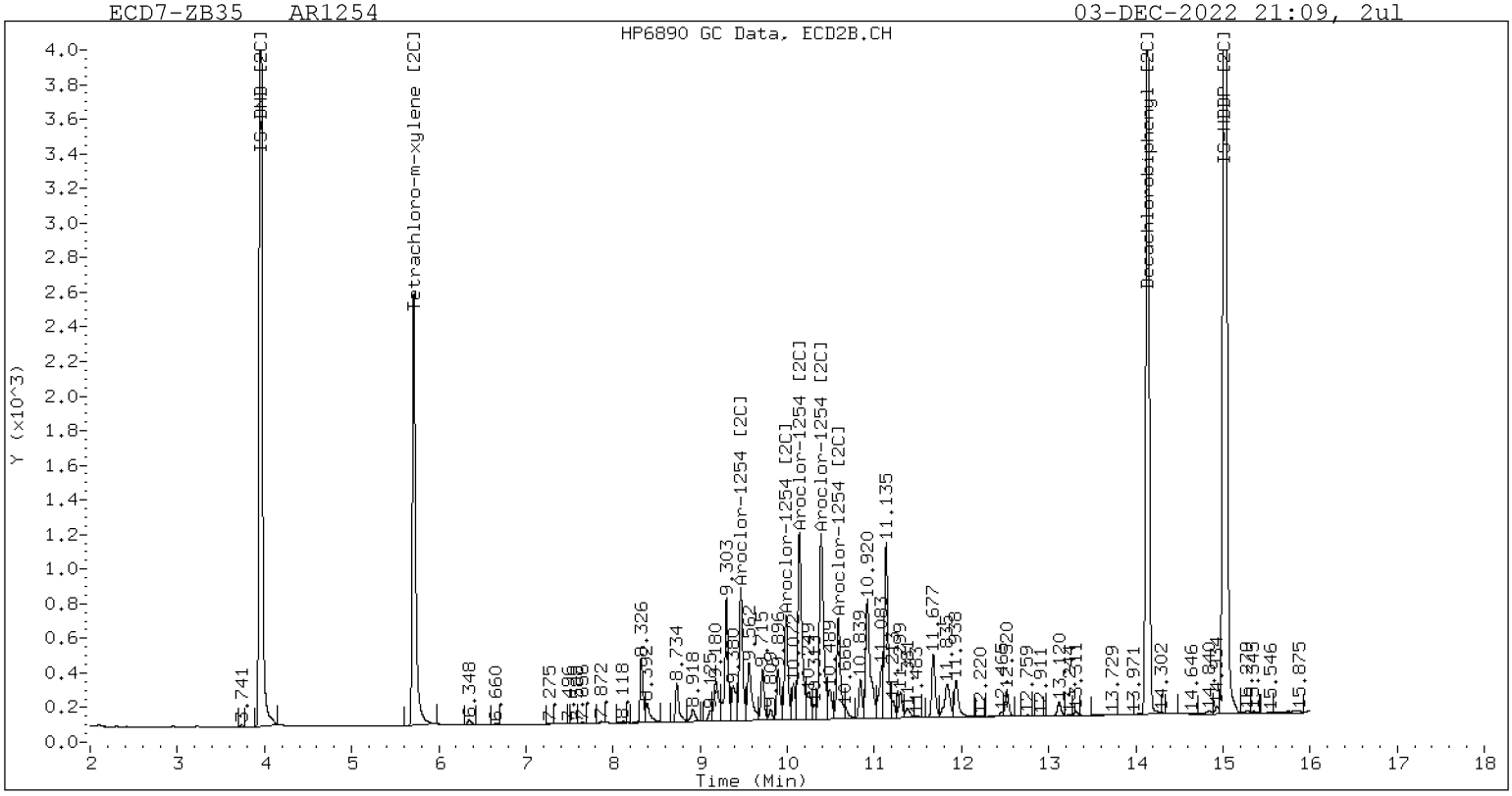
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ZB5 Col | | | | | ZB35 Col | | | |
| 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*

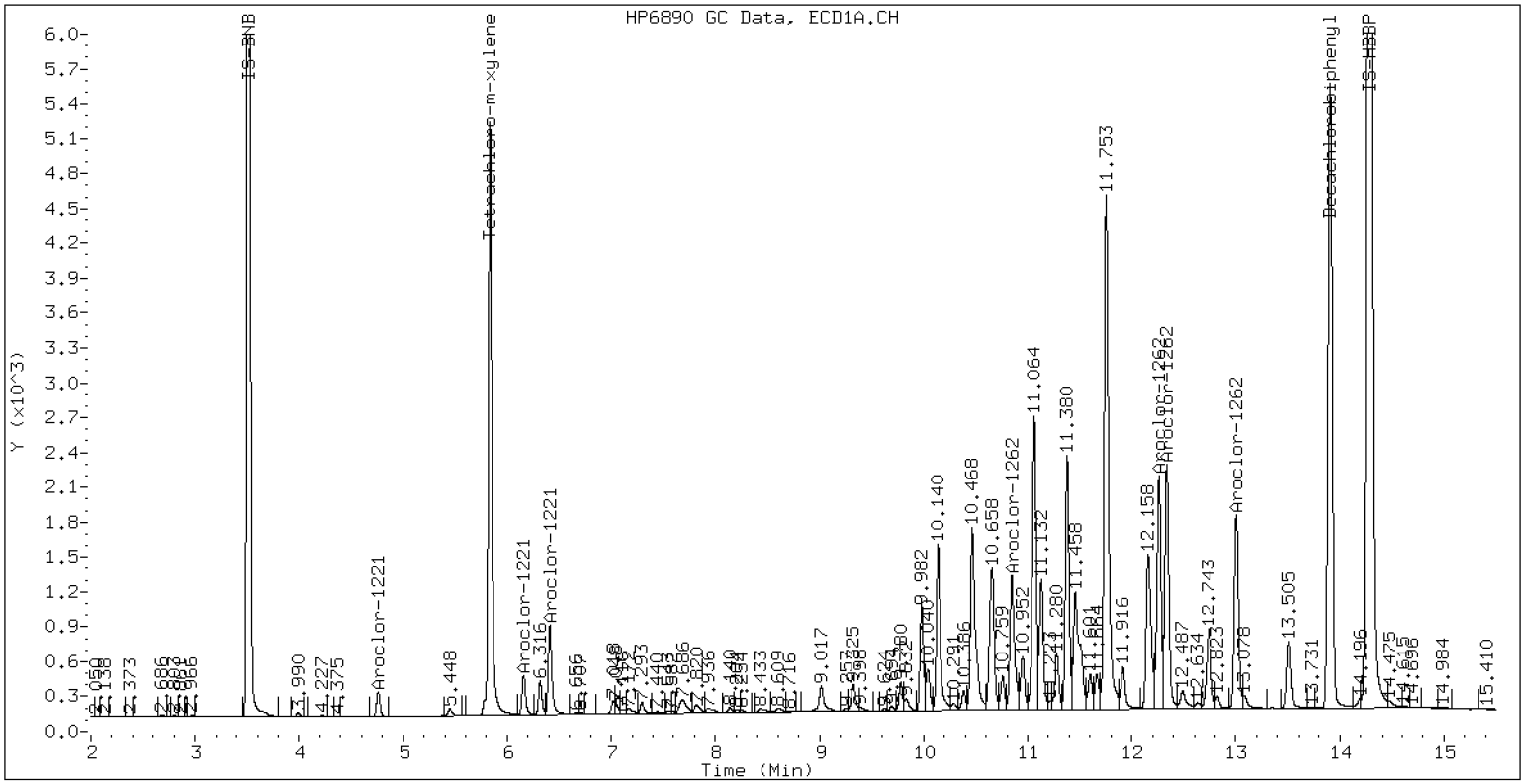
Total PCB Area Col2 (5.936 - 13.808) = 1073324 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

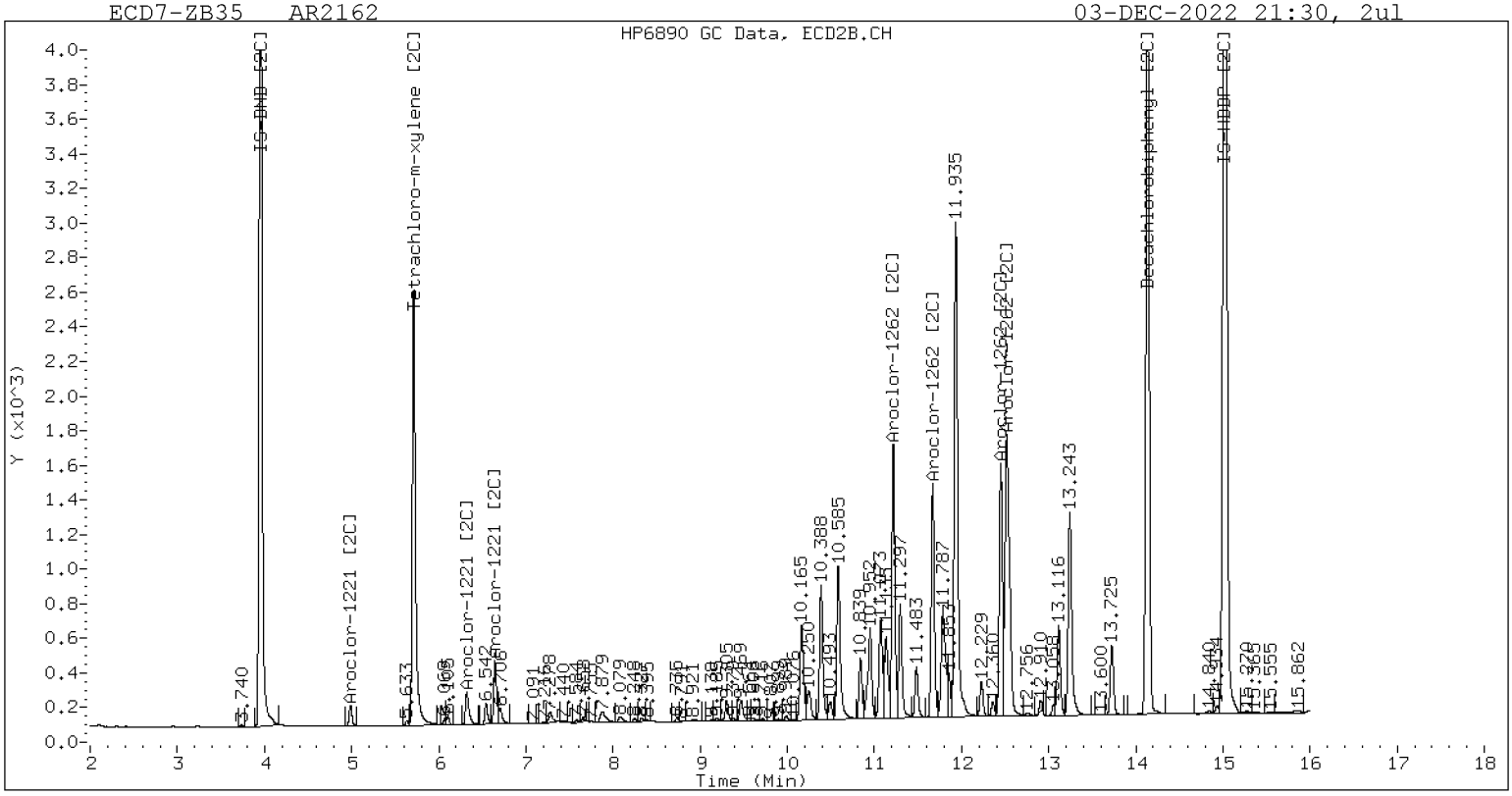
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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*

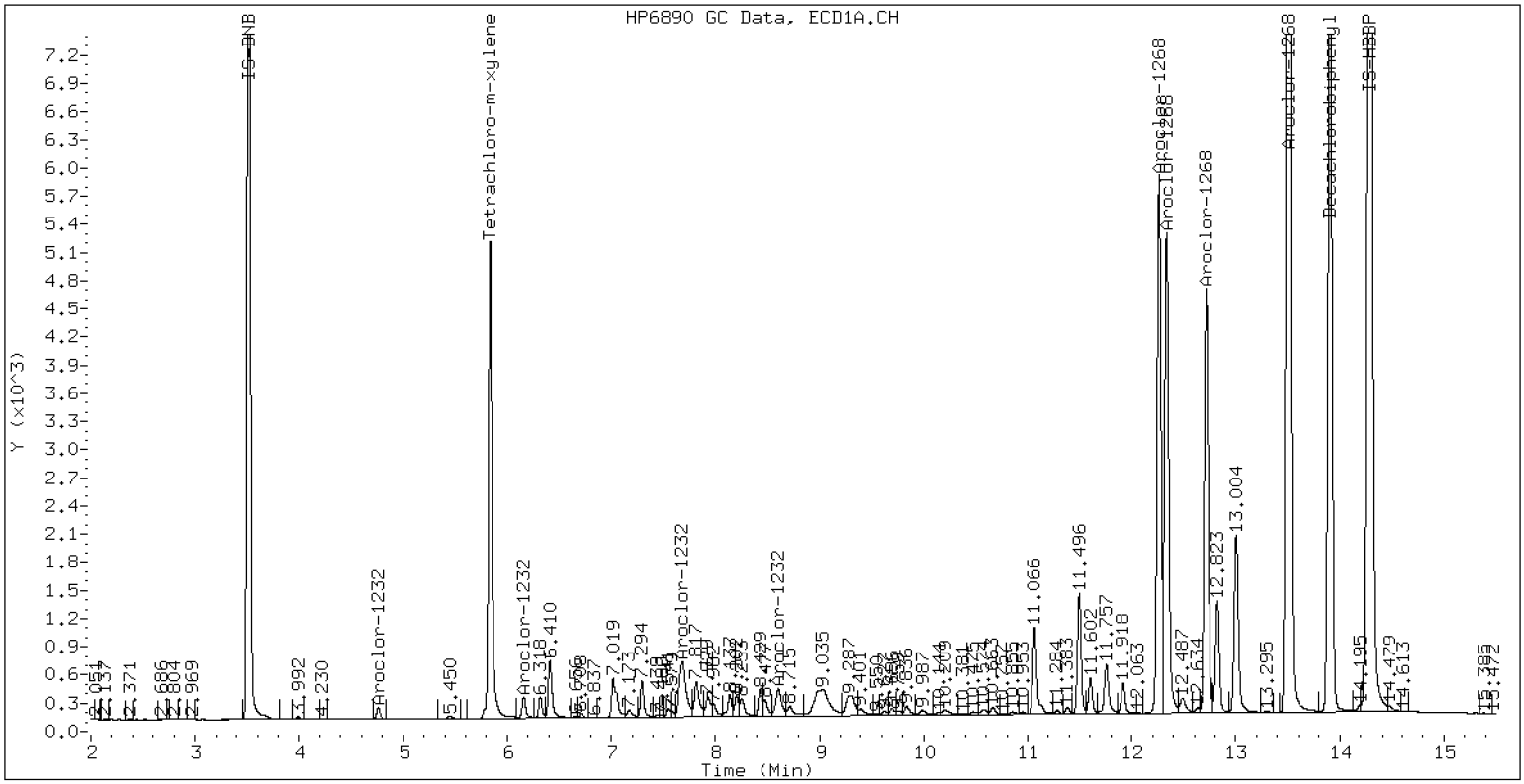
Total PCB Area Col2 (5.936 - 13.808) = 1468669 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

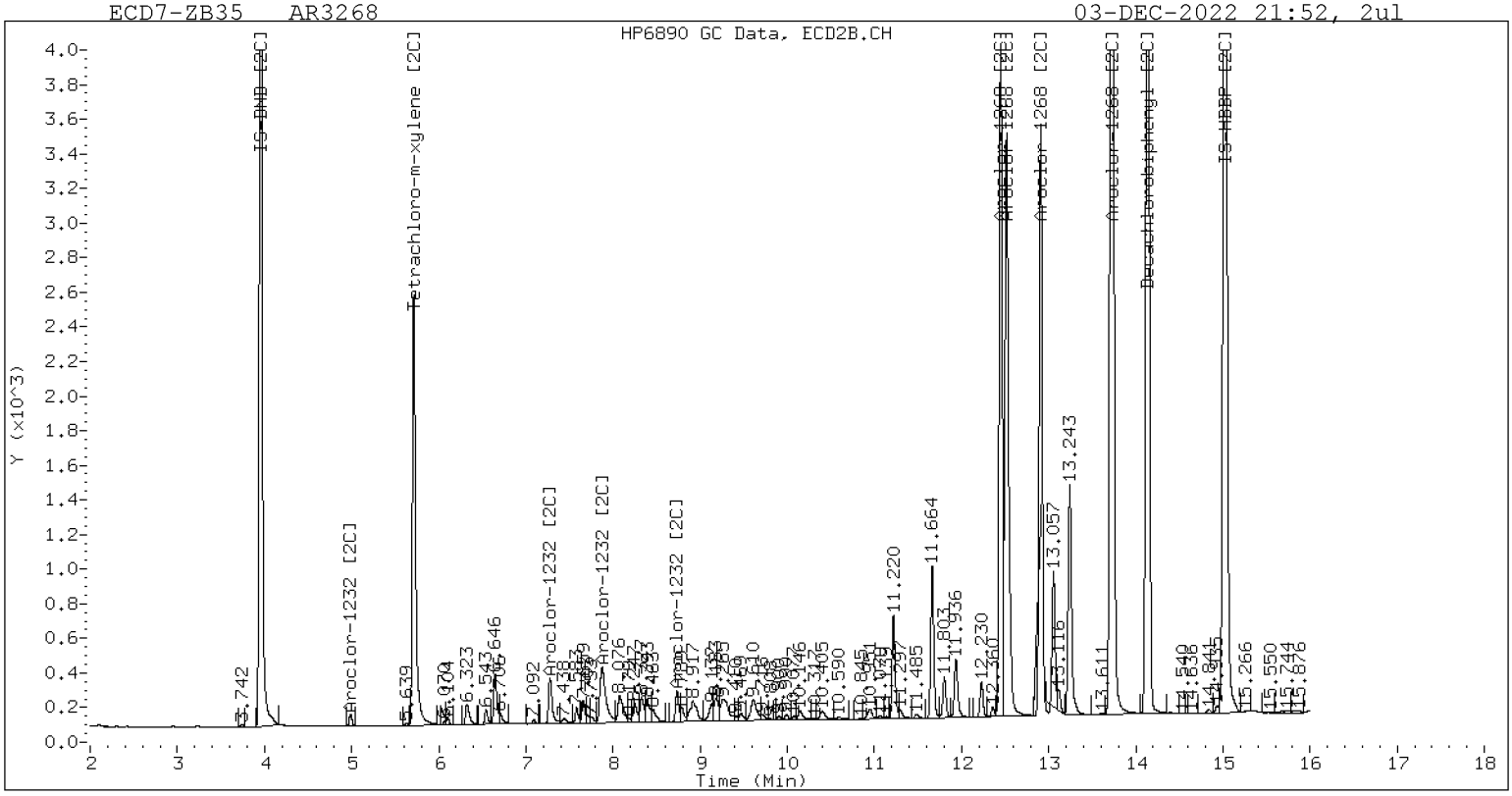
# PCB Dual Column Chromatograms

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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*

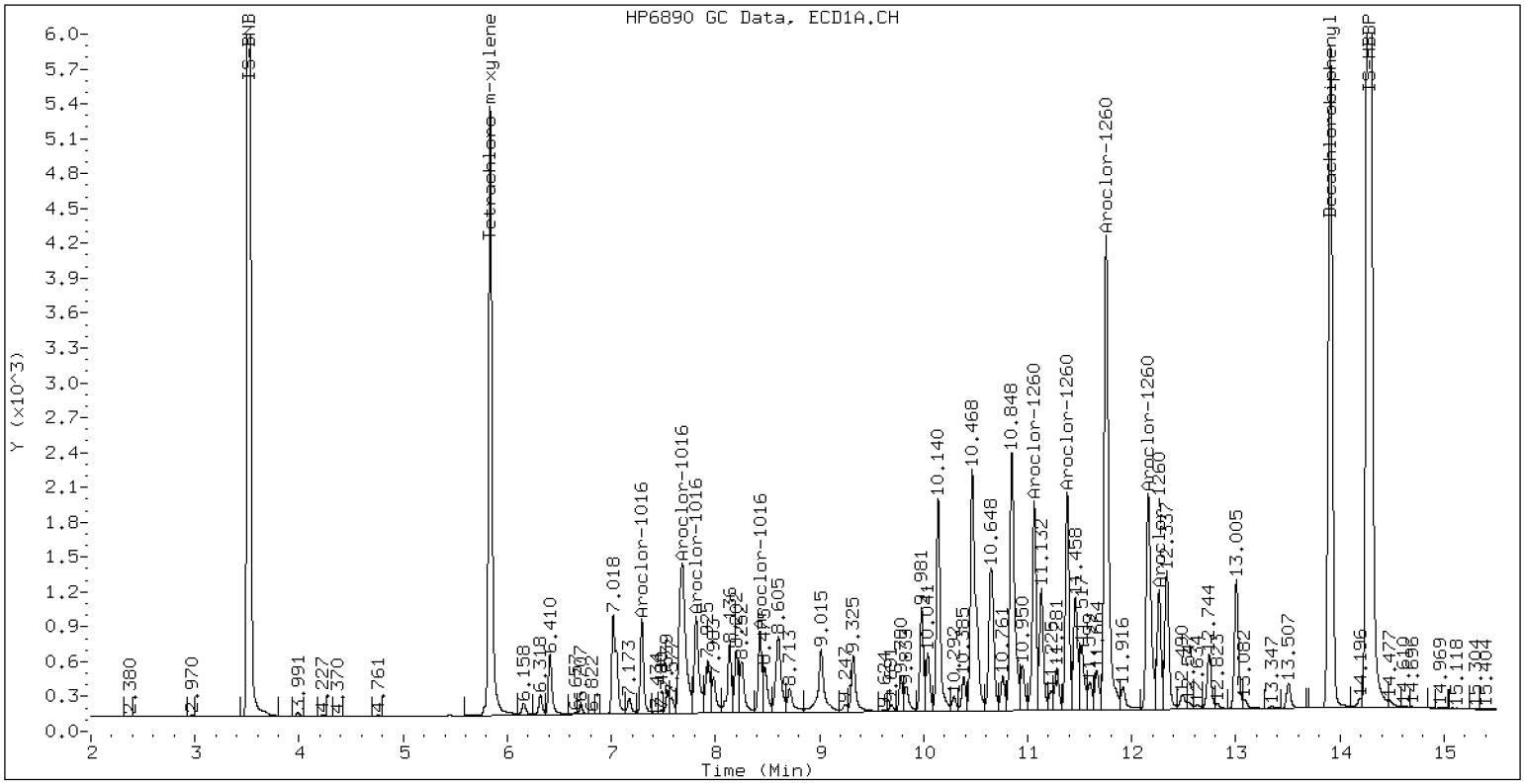
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

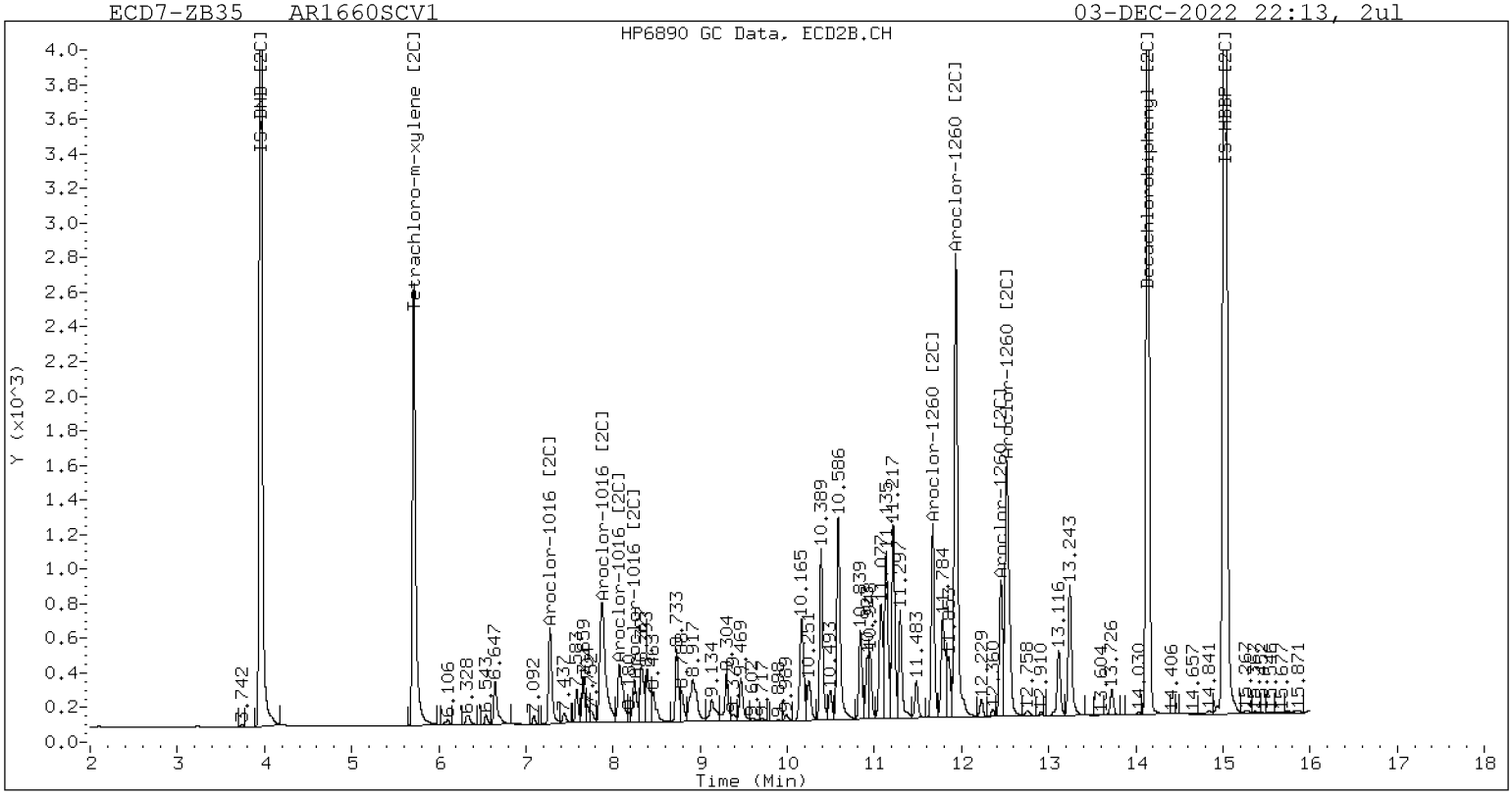
# PCB Dual Column Chromatograms

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

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | ZB5 Col RT | Shift | Area | Amount | Peak# | ZB35 Col 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*

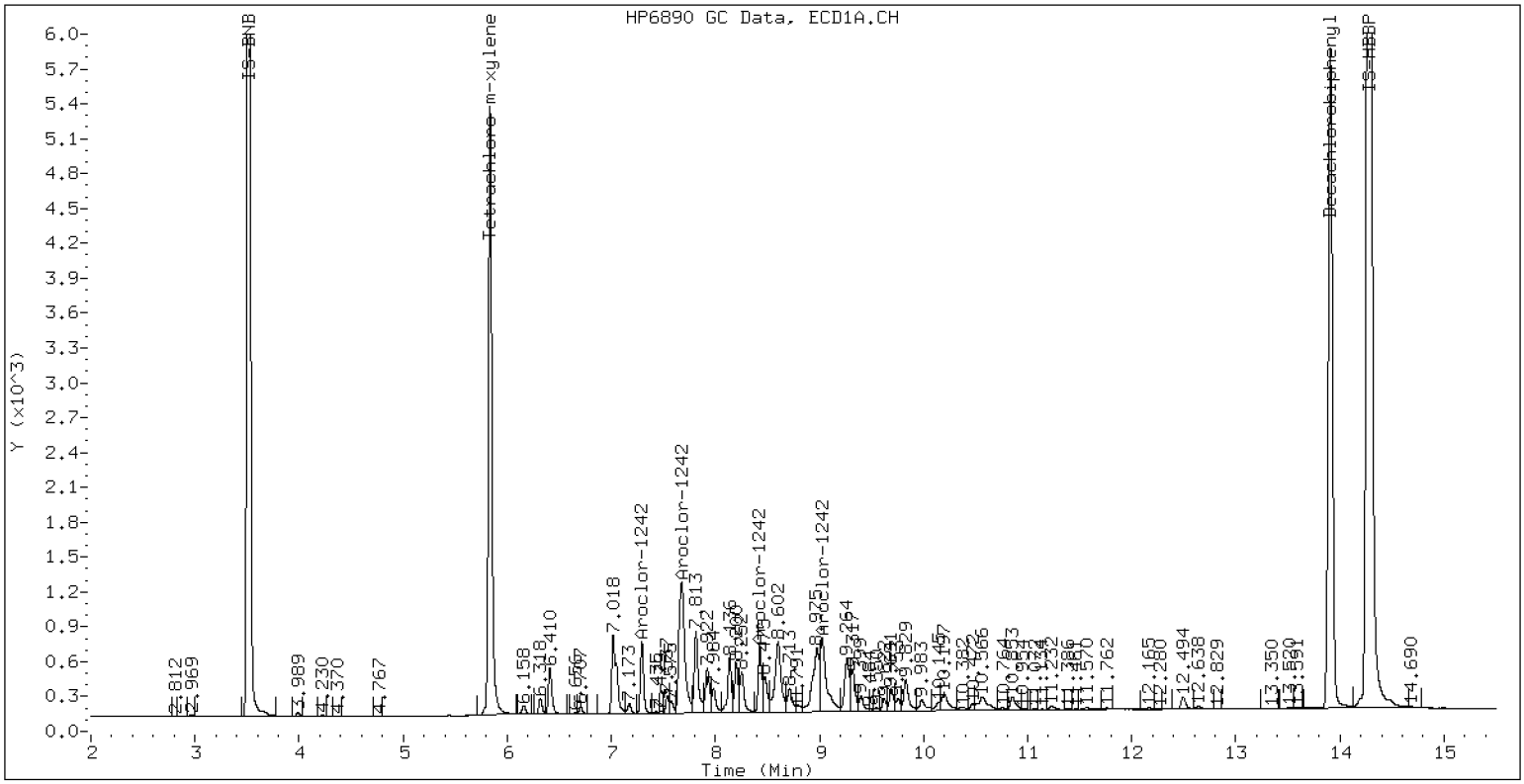
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

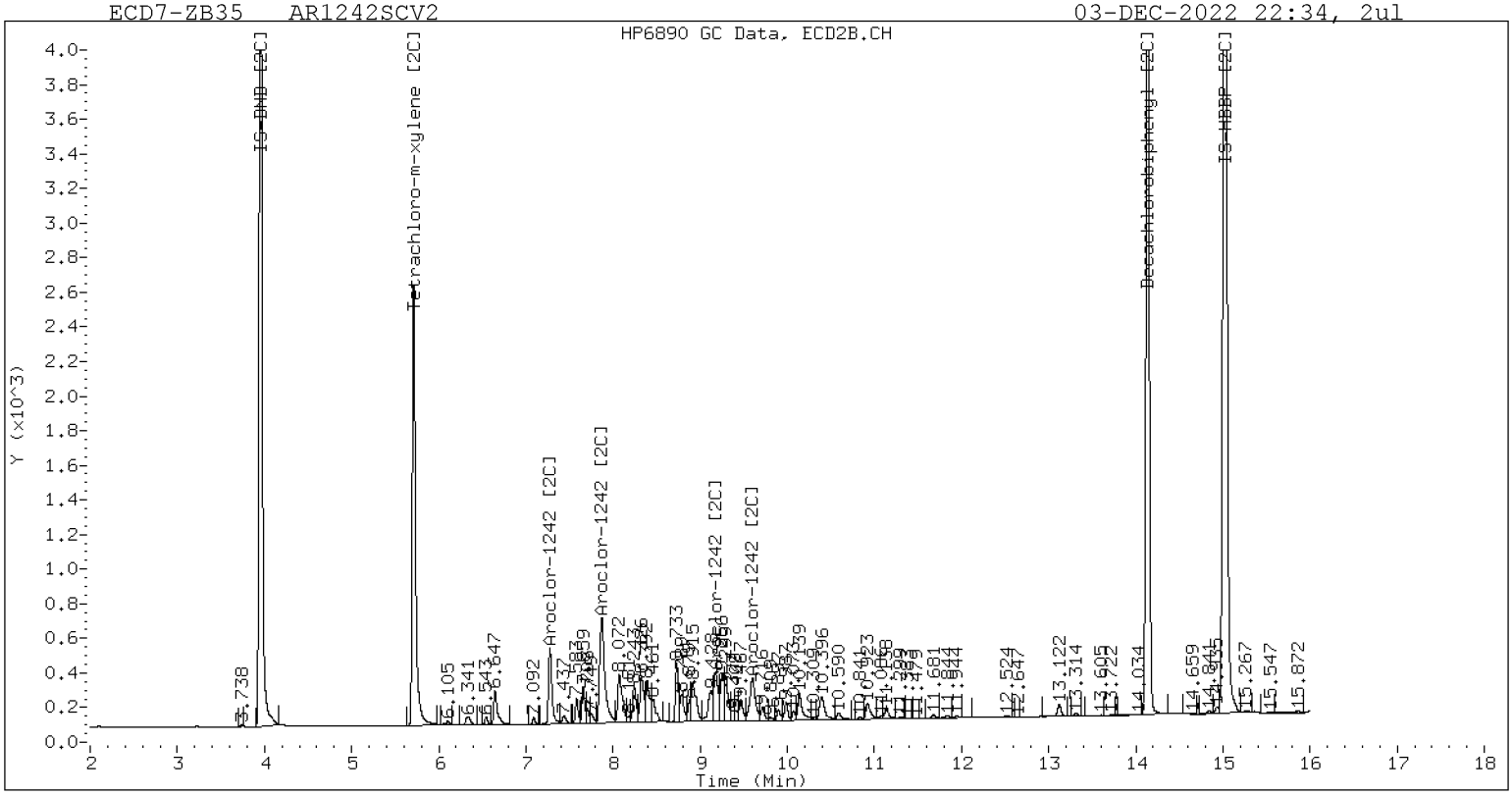
# PCB Dual Column Chromatograms

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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*

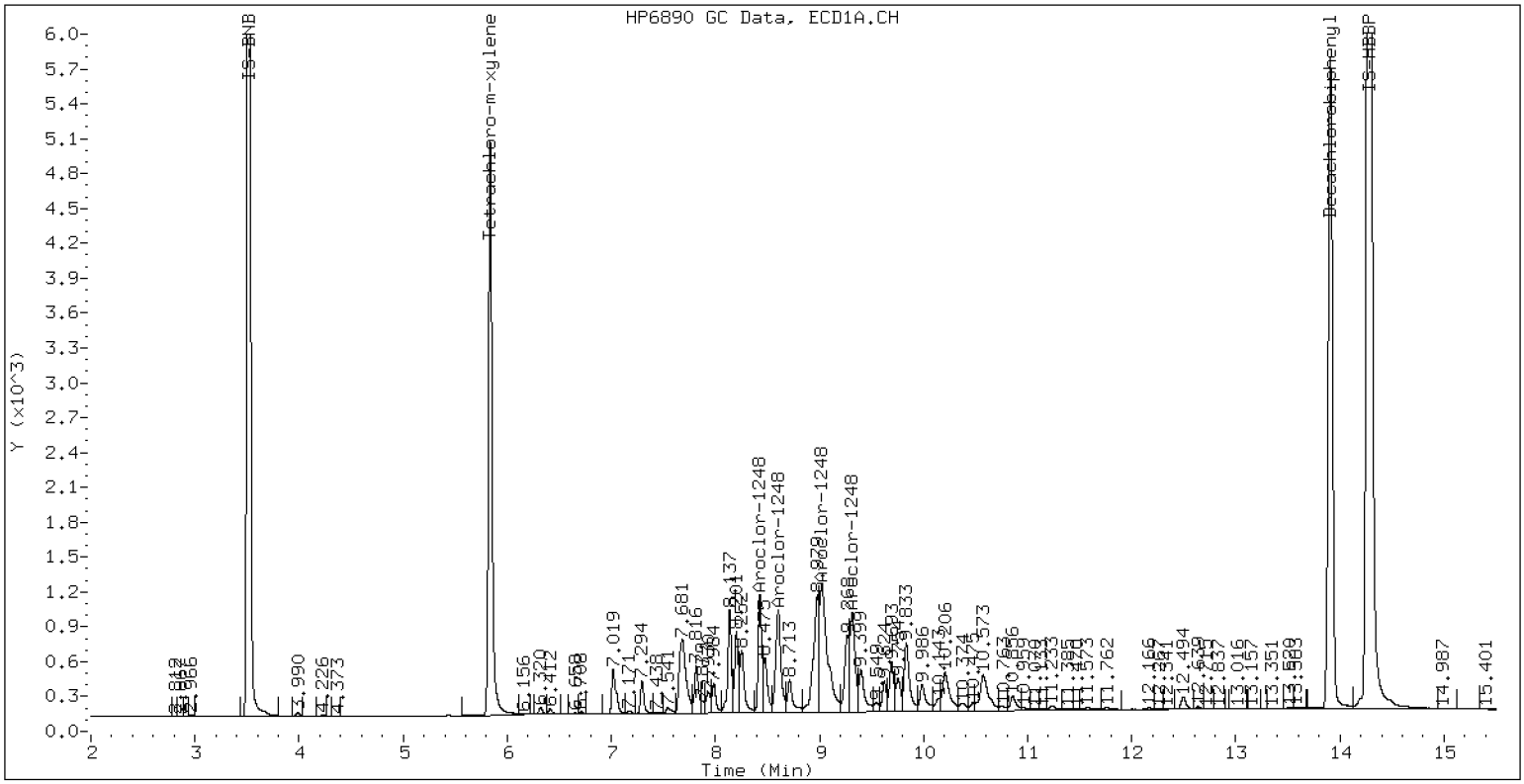
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

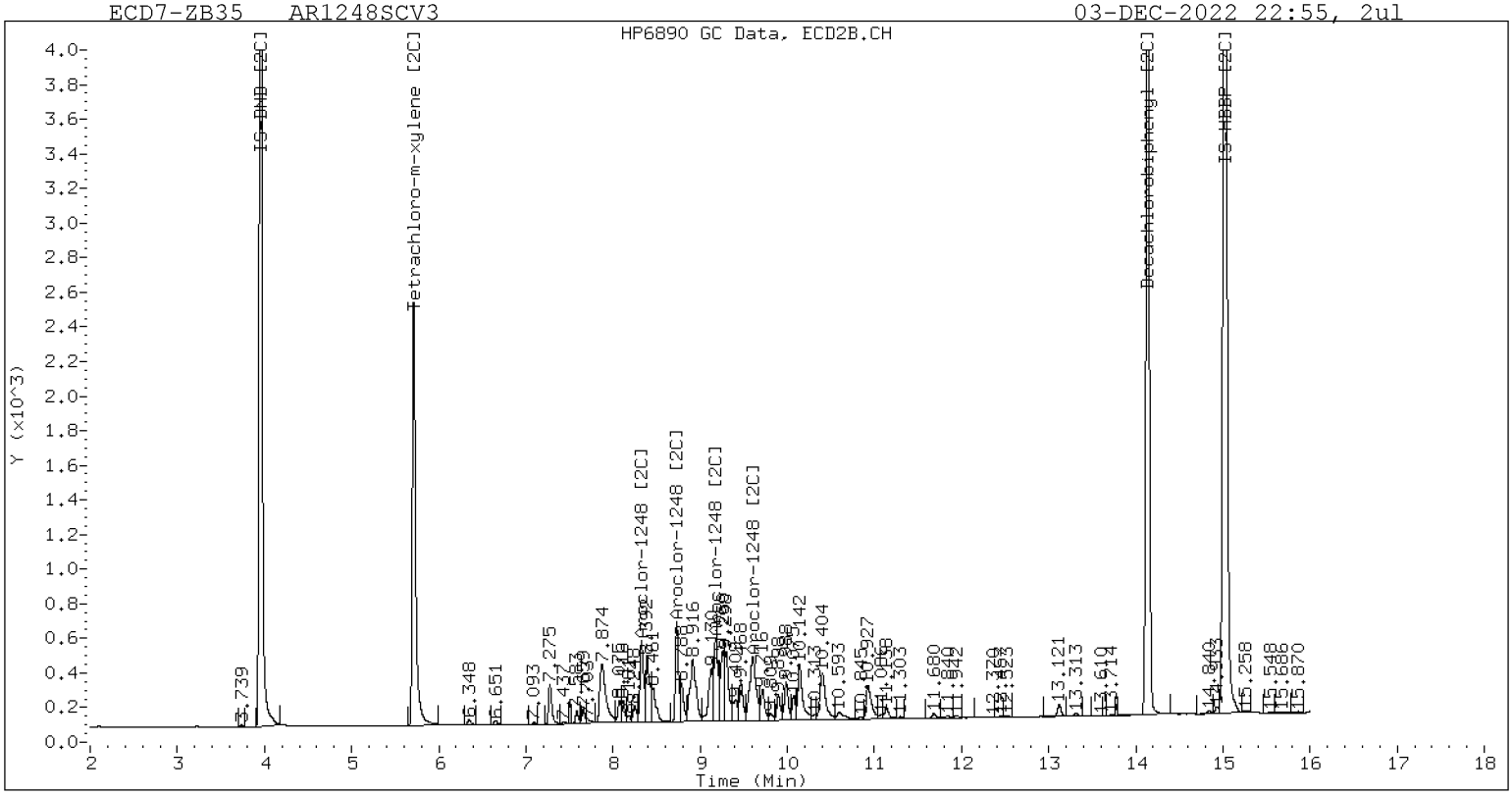
# PCB Dual Column Chromatograms

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | ZB5 Col | | | | | ZB35 Col | | | | |
| 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*

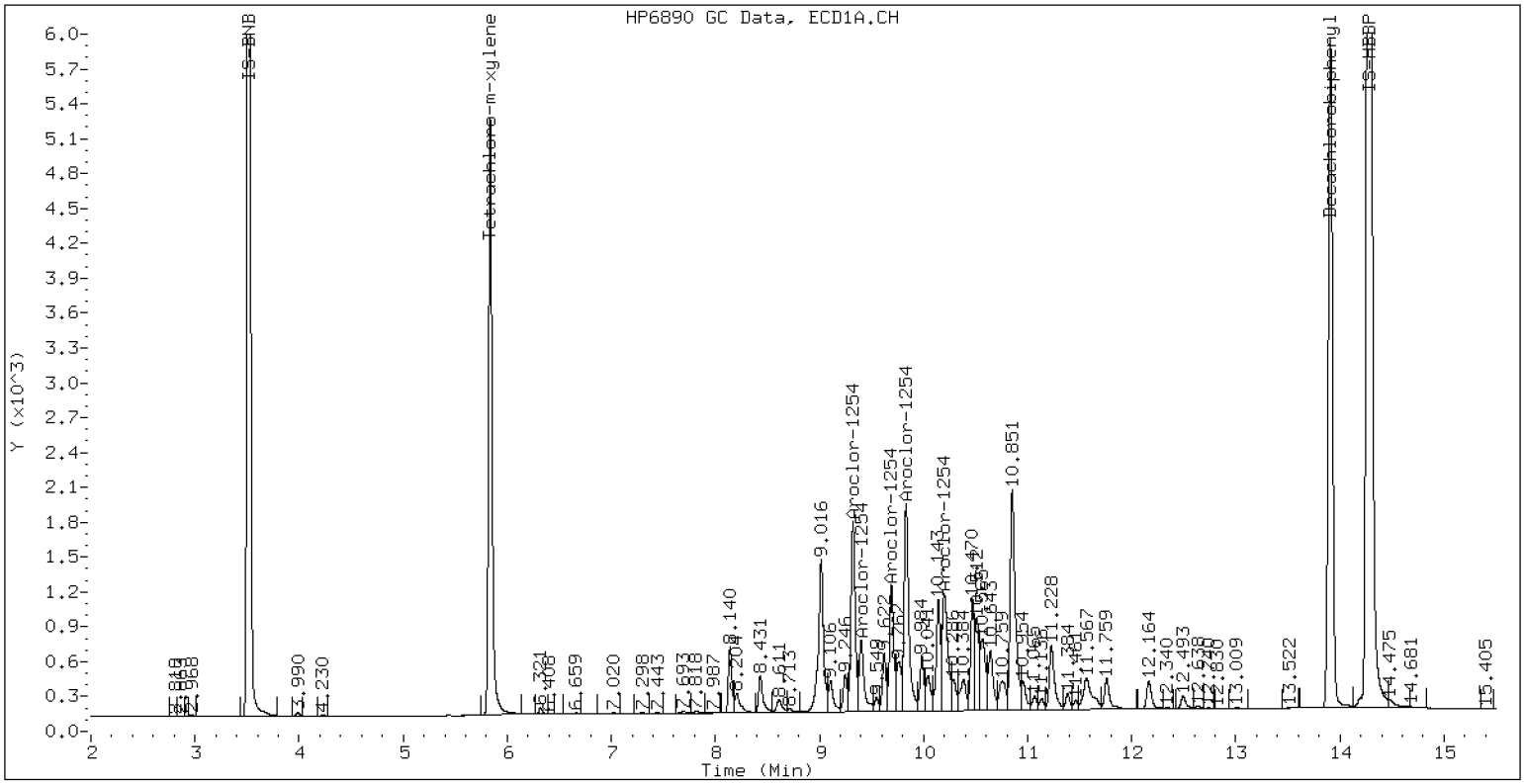
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

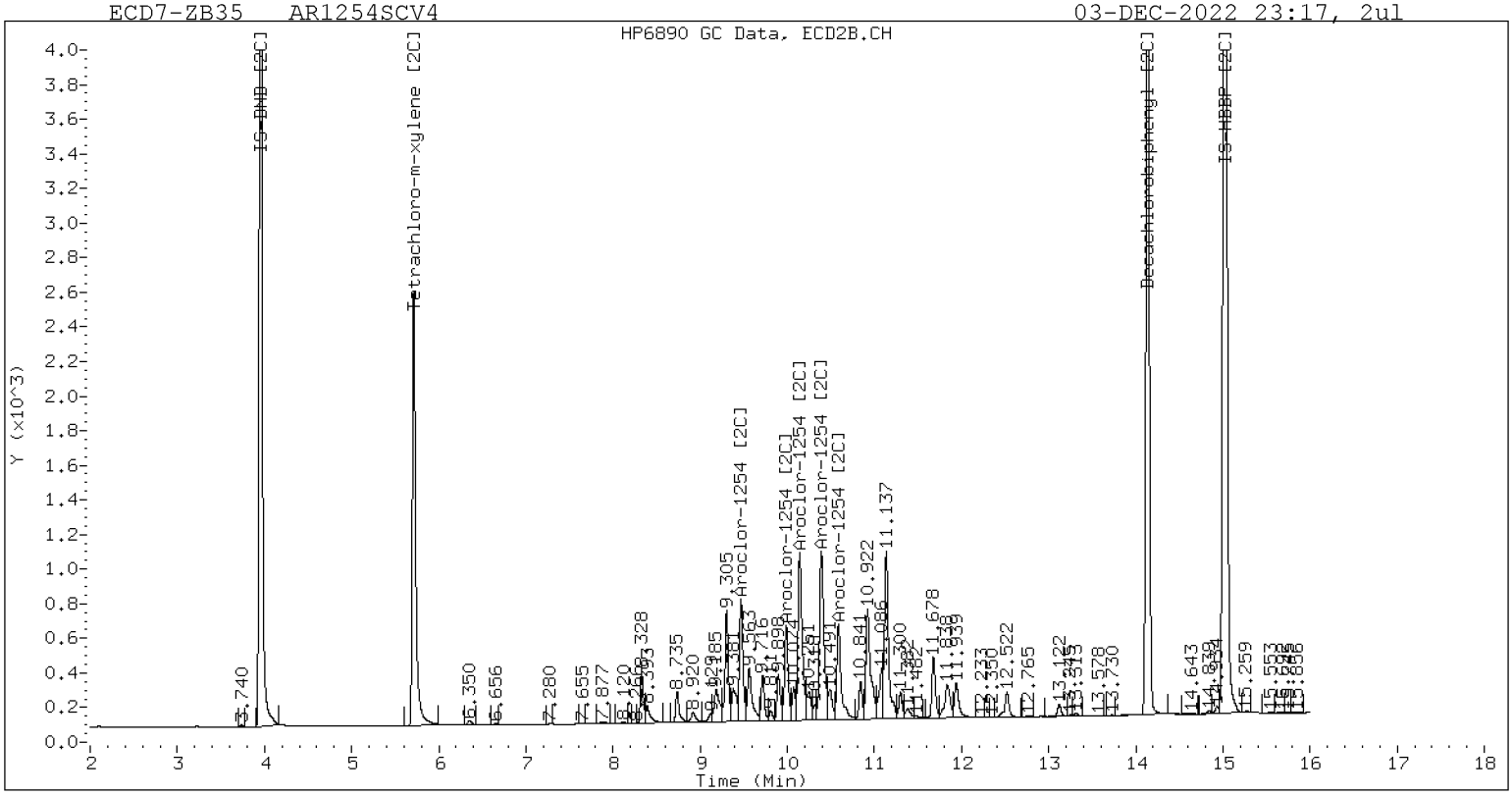
# PCB Dual Column Chromatograms

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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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*

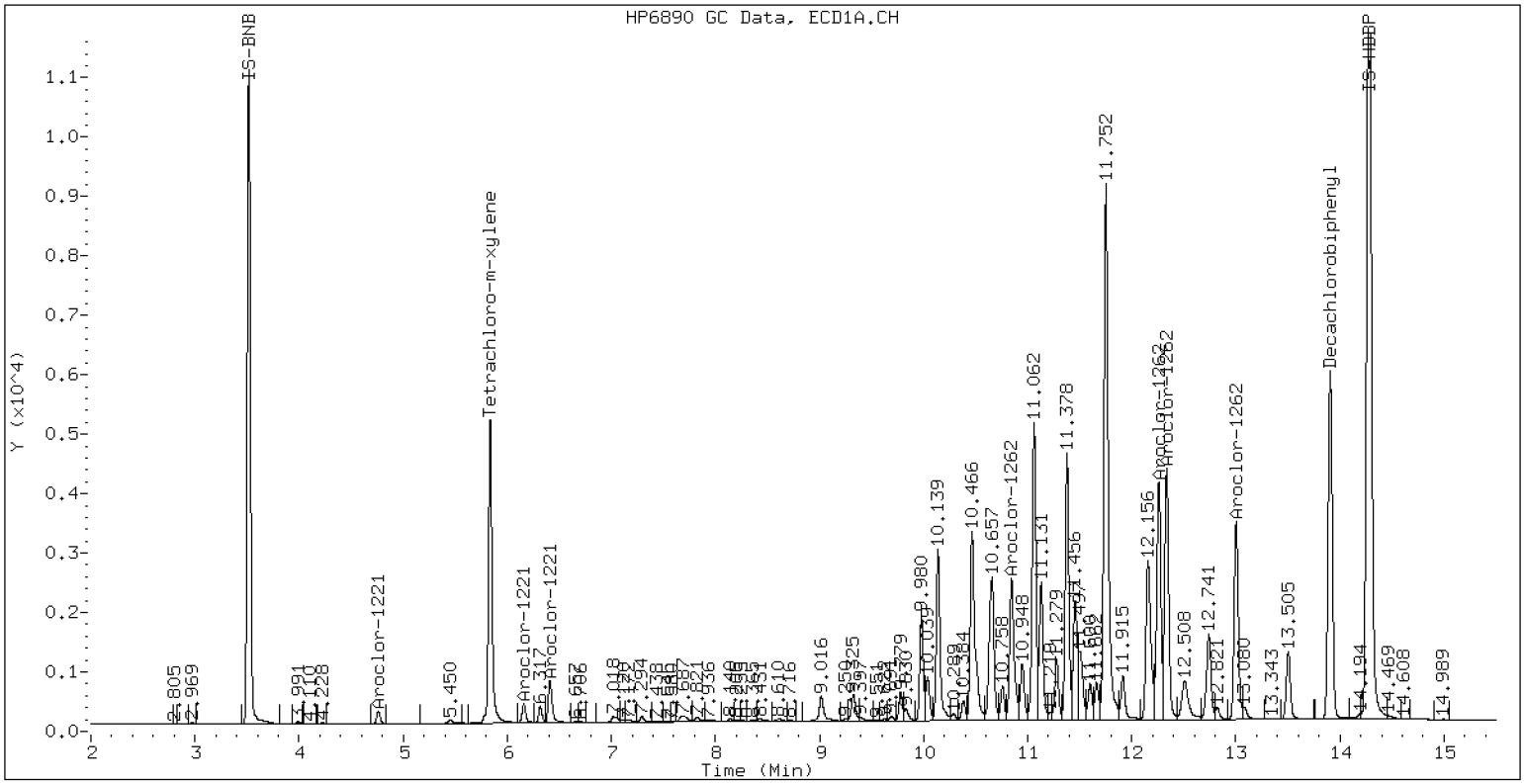
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

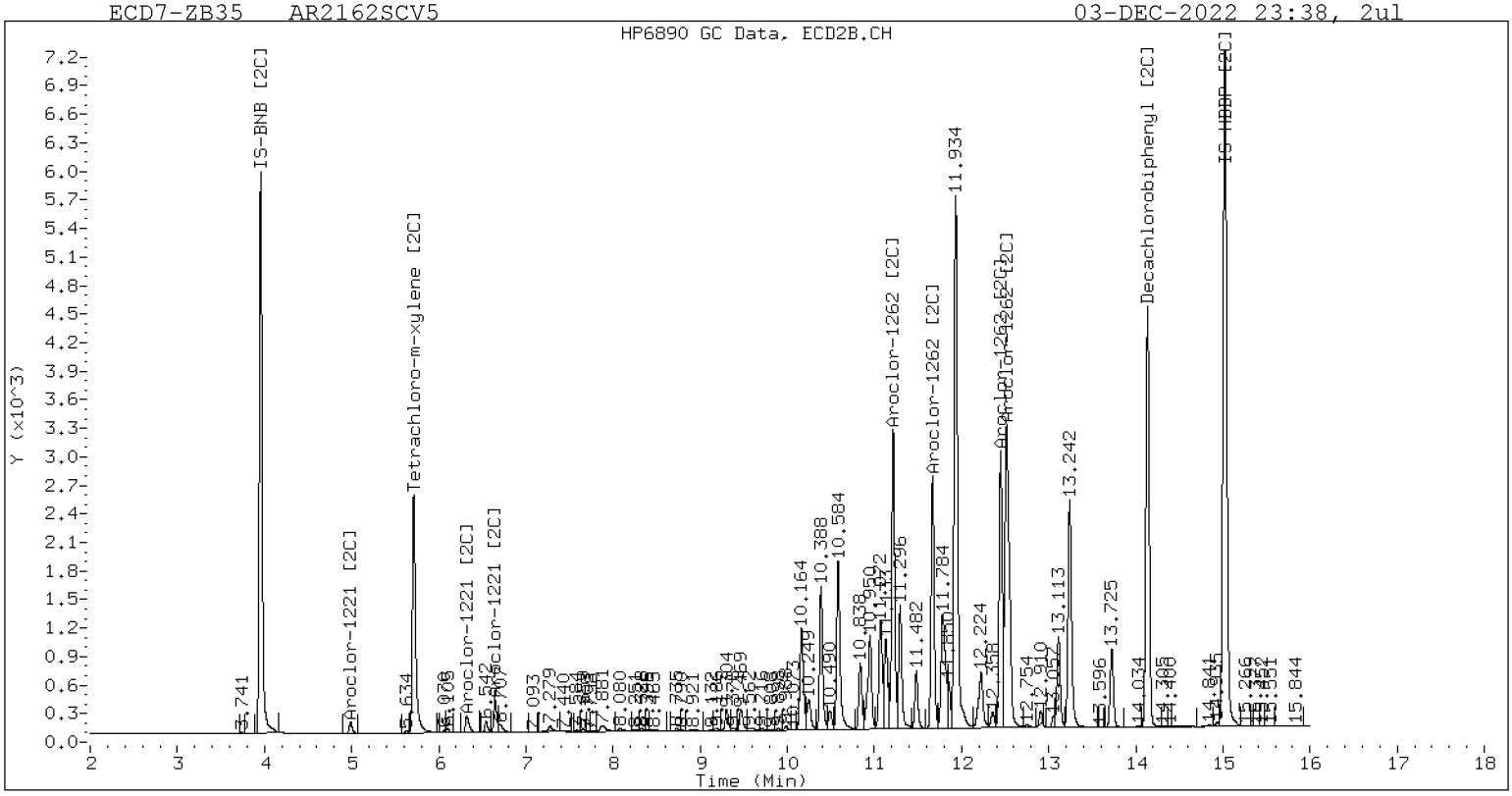
# PCB Dual Column Chromatograms

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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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*

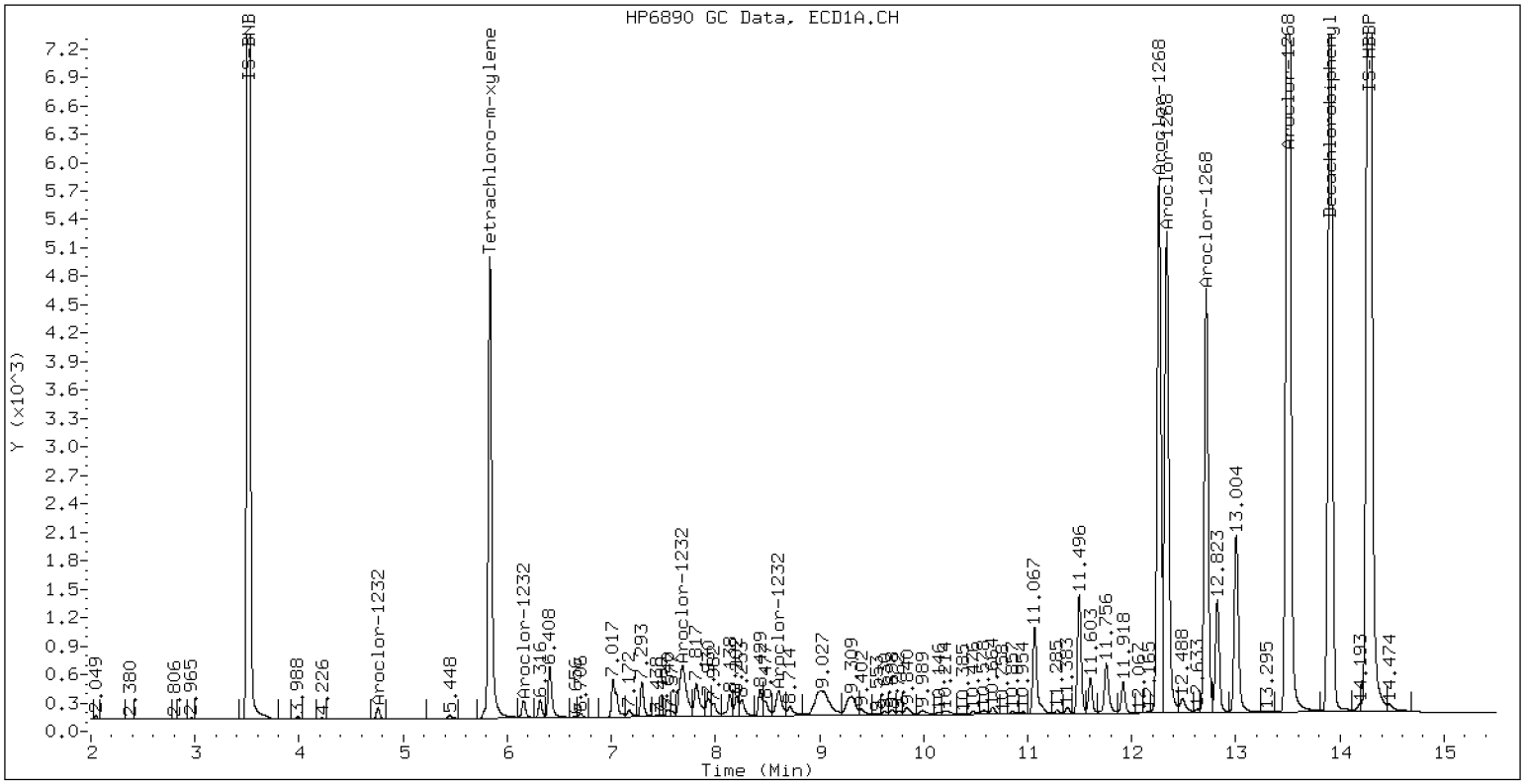
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

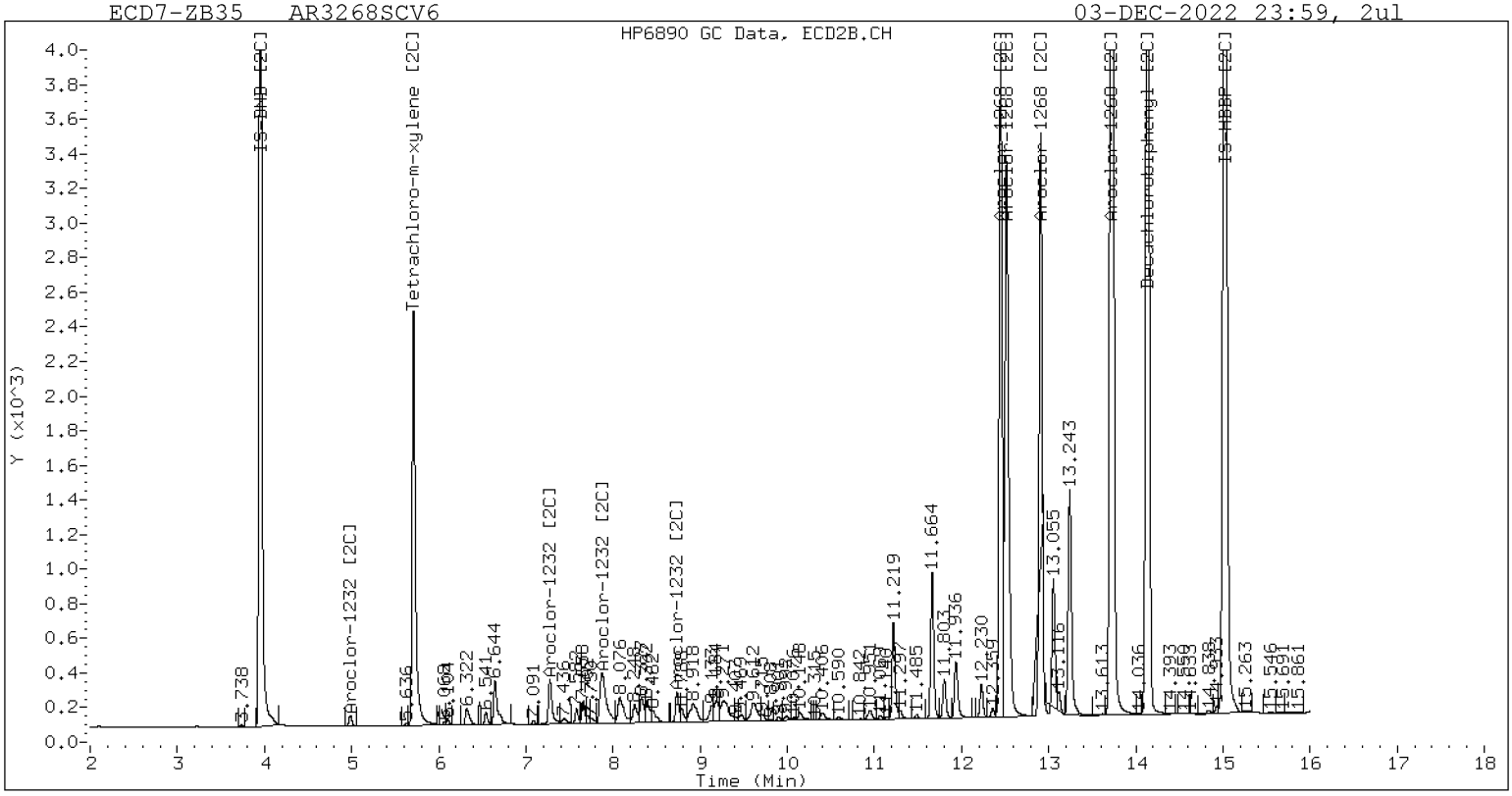
# PCB Dual Column Chromatograms

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
**Client:** Anchor QEA, LLC
**Calibration:** FL00010
**Sequence:** SKL0048

**SDG:** 22L0329
**Project:** AOC4 UR Phase 3
**Laboratory ID:** SKL0048-SCV1
**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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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*

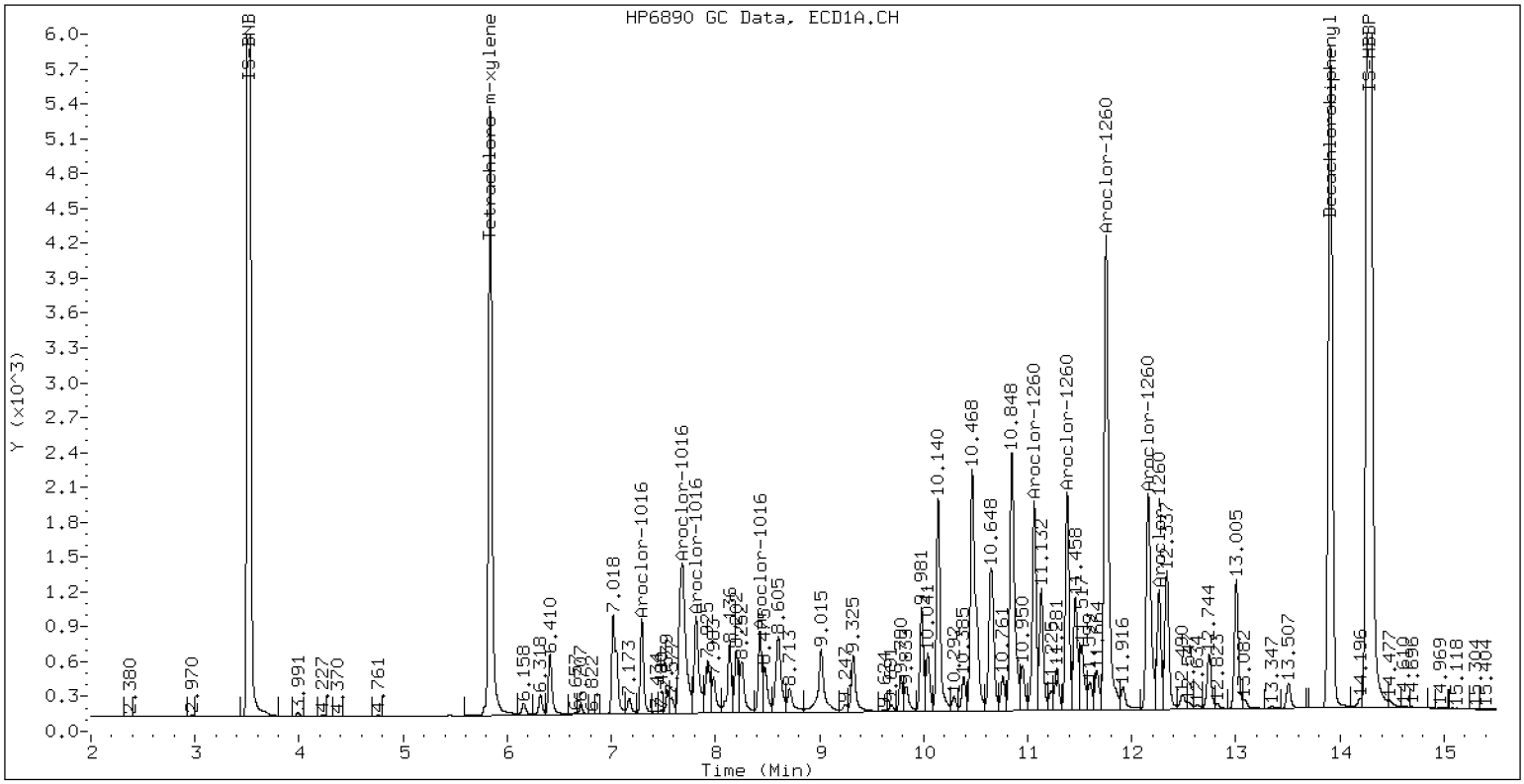
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

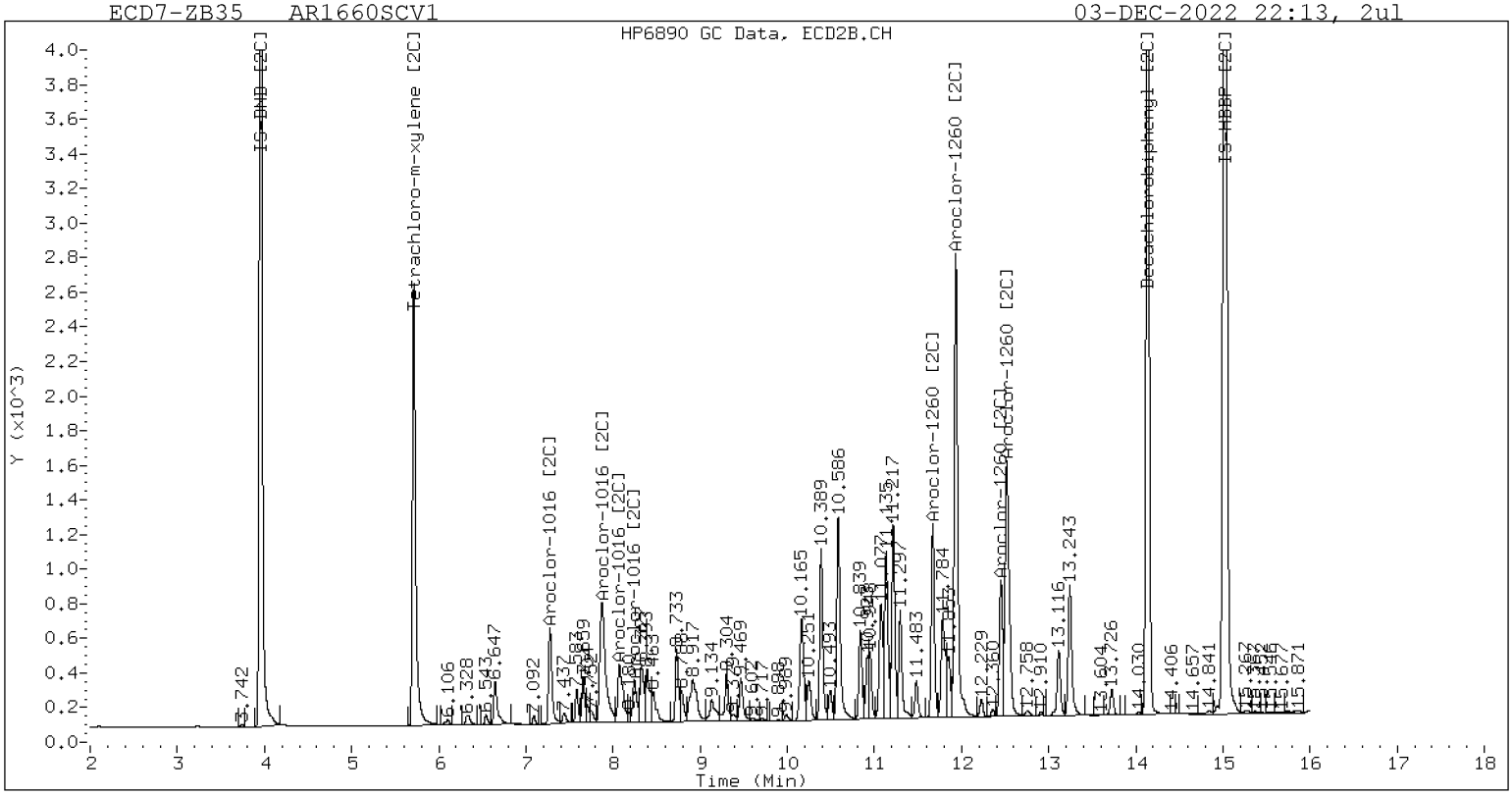
# PCB Dual Column Chromatograms

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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SECOND-SOURCE CALIBRATION VERIFICATION

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**Client:** Anchor QEA, LLC
**Calibration:** FL00010
**Sequence:** SKL0048

**SDG:** 22L0329
**Project:** AOC4 UR Phase 3
**Laboratory ID:** SKL0048-SCV2
**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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | ZB5 Col RT | Shift | Area | Amount | Peak# | ZB35 Col 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*

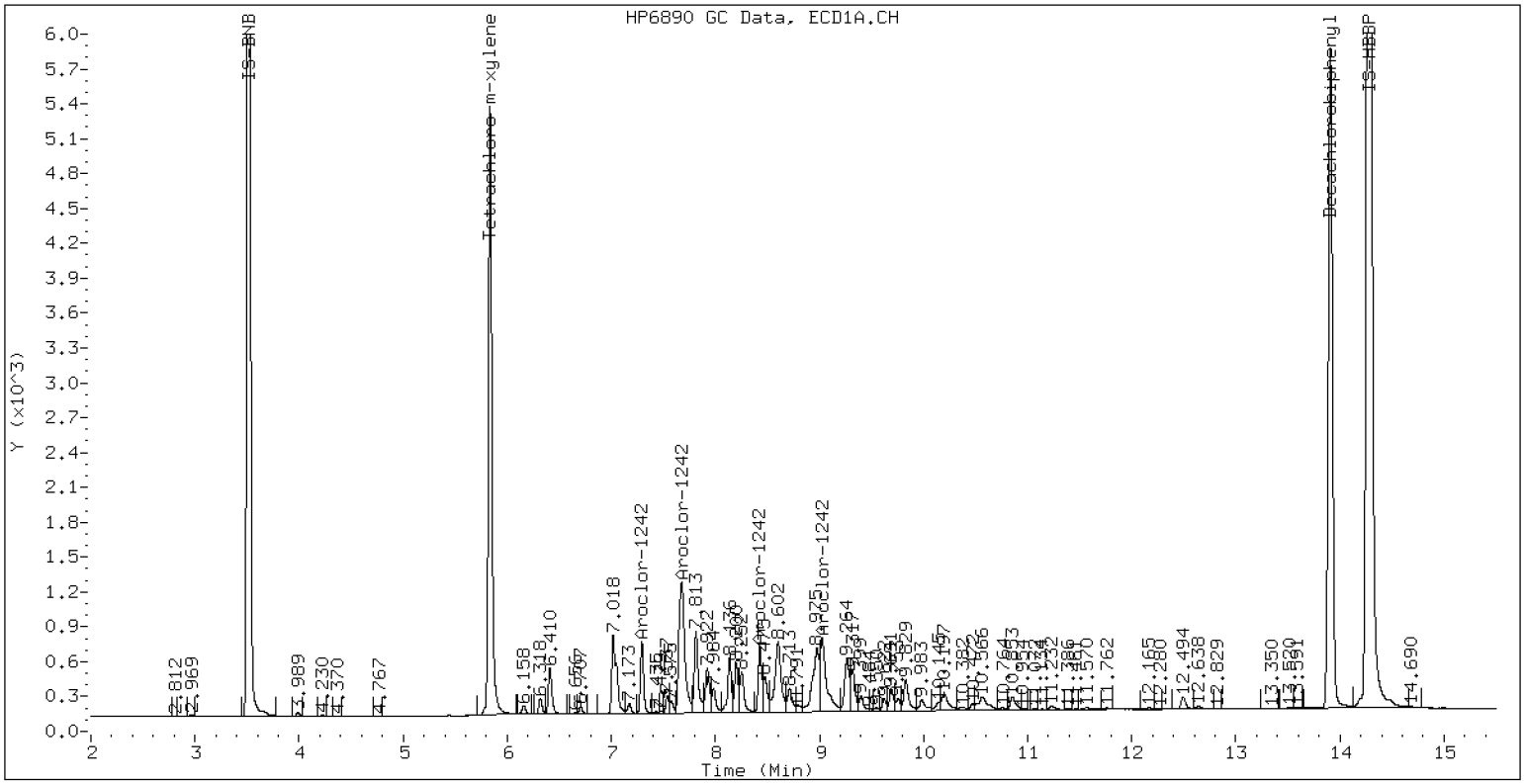
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

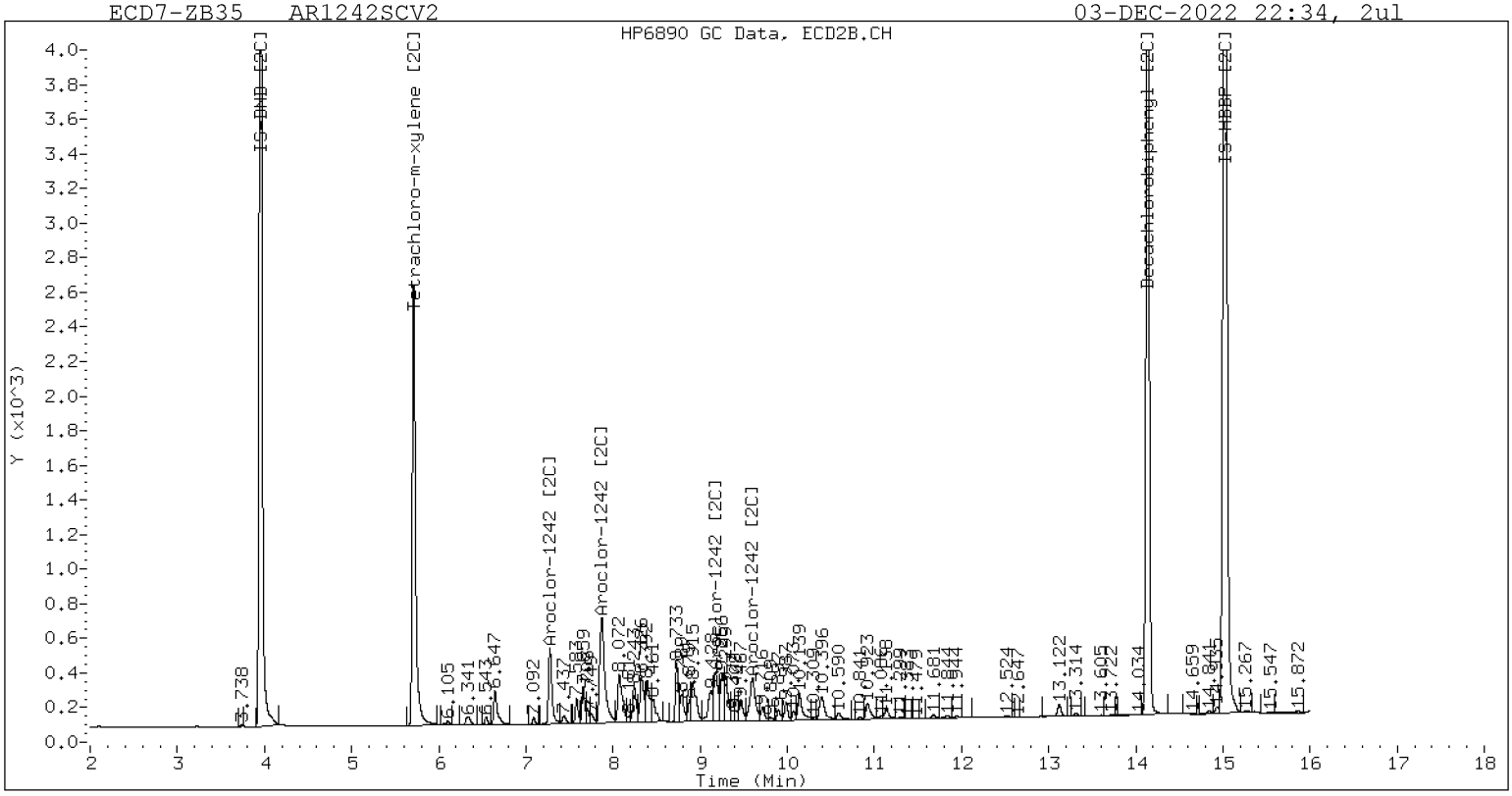
# PCB Dual Column Chromatograms

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 CALIBRATION VERIFICATION

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**Client:** Anchor QEA, LLC
**Calibration:** FL00010
**Sequence:** SKL0048

**SDG:** 22L0329
**Project:** AOC4 UR Phase 3
**Laboratory ID:** SKL0048-SCV3
**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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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*

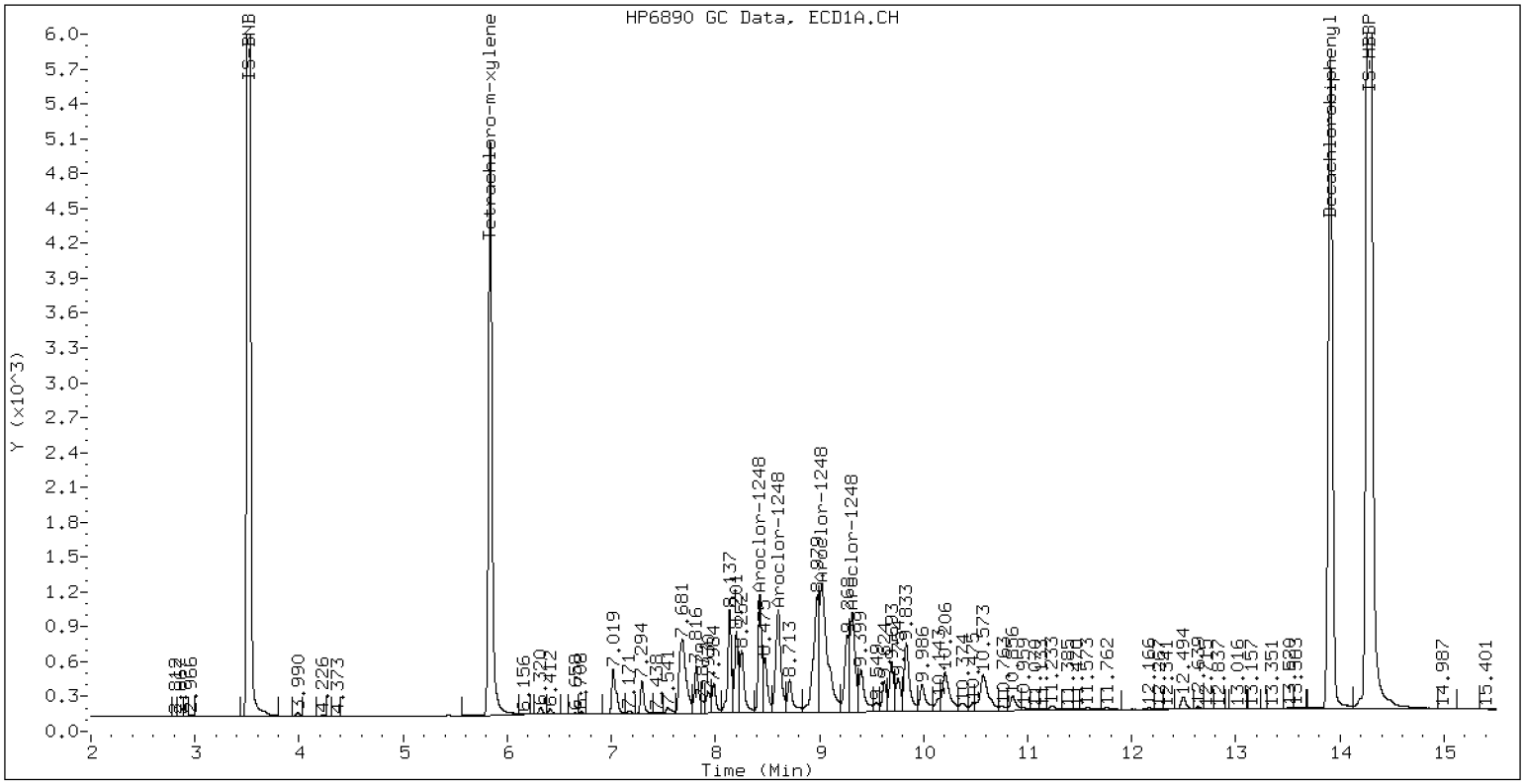
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

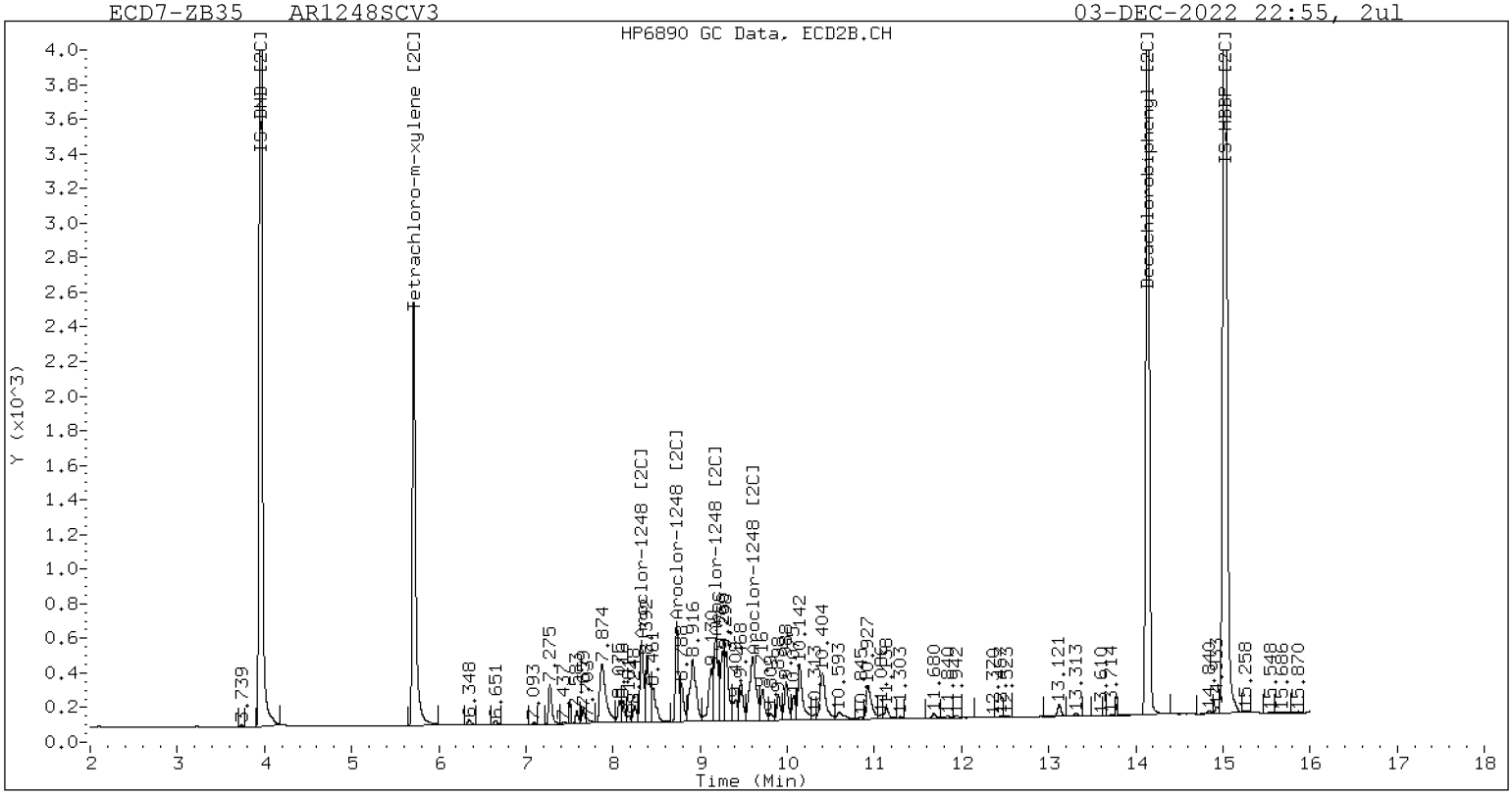
# PCB Dual Column Chromatograms

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 CALIBRATION VERIFICATION

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**Client:** Anchor QEA, LLC
**Calibration:** FL00010
**Sequence:** SKL0048

**SDG:** 22L0329
**Project:** AOC4 UR Phase 3
**Laboratory ID:** SKL0048-SCV4
**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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | ZB5 Col | | | | | ZB35 Col | | | | |
| 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*

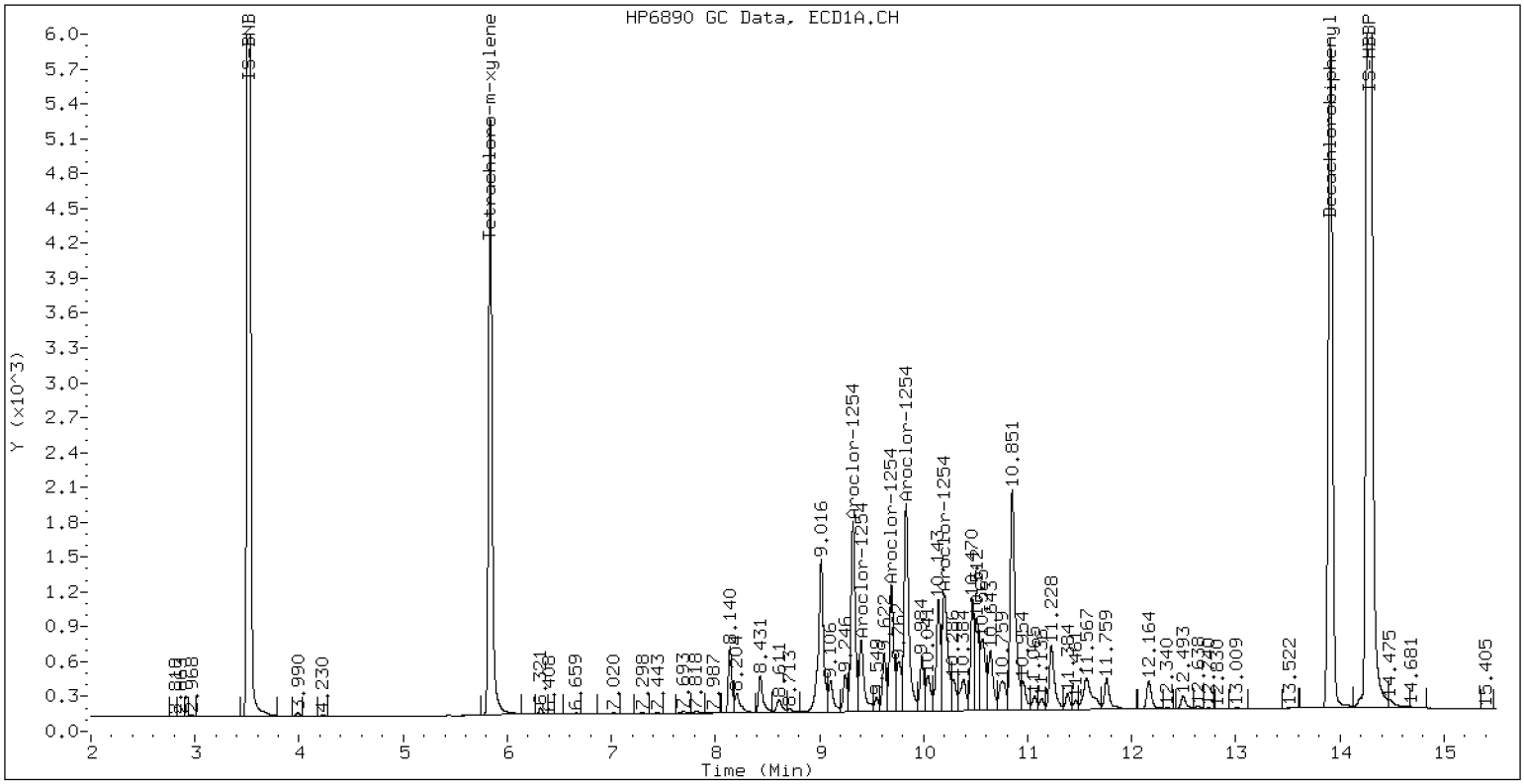
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

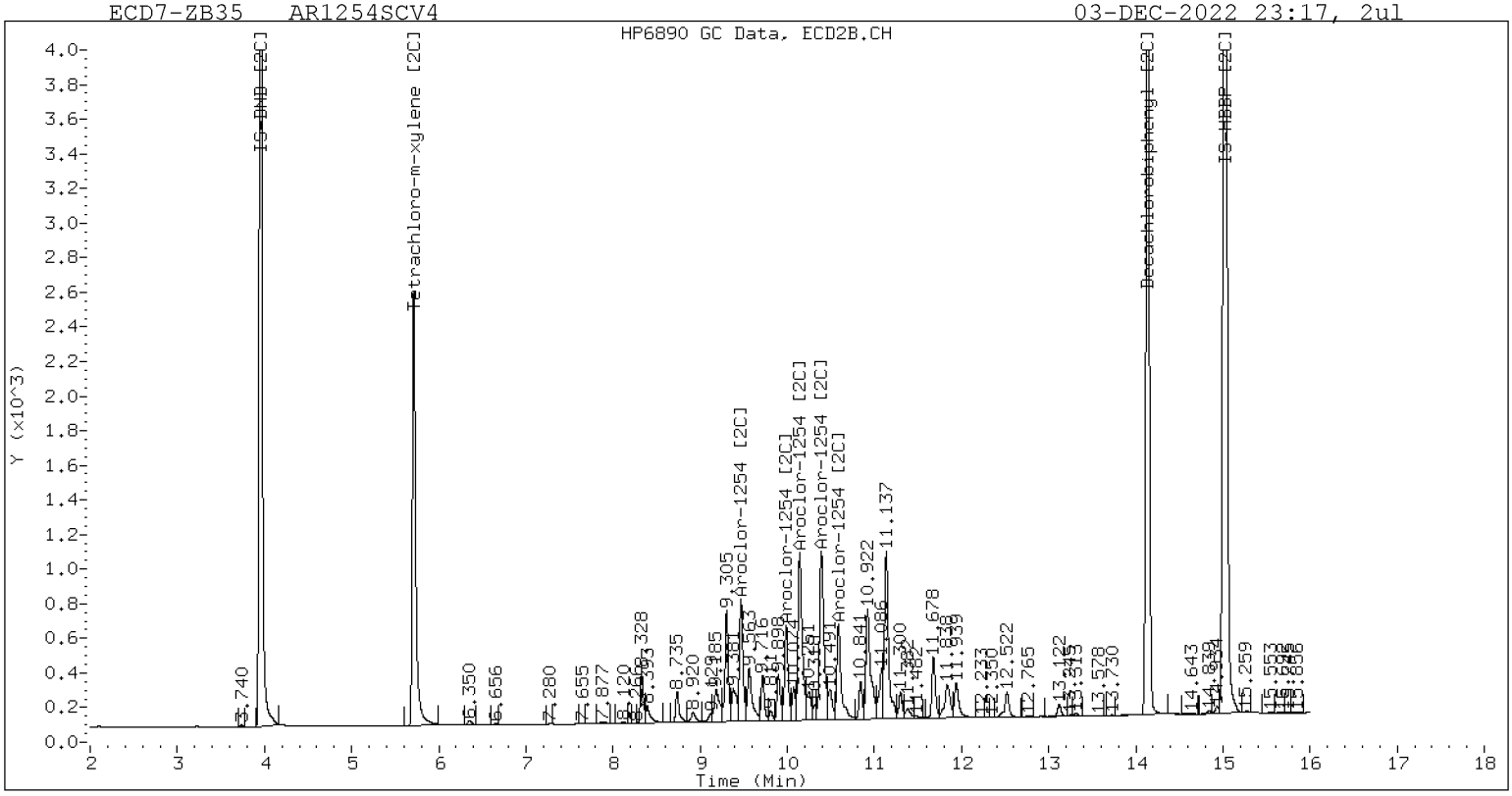
# PCB Dual Column Chromatograms

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 CALIBRATION VERIFICATION

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**Client:** Anchor QEA, LLC
**Calibration:** FL00010
**Sequence:** SKL0048

**SDG:** 22L0329
**Project:** AOC4 UR Phase 3
**Laboratory ID:** SKL0048-SCV5
**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 |
| Aroclor 1262 | 500.00 | 469 | -6.2 | 20.00 |
| Aroclor 1262 [2C] | 500.00 | 464 | -7.1 | 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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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*

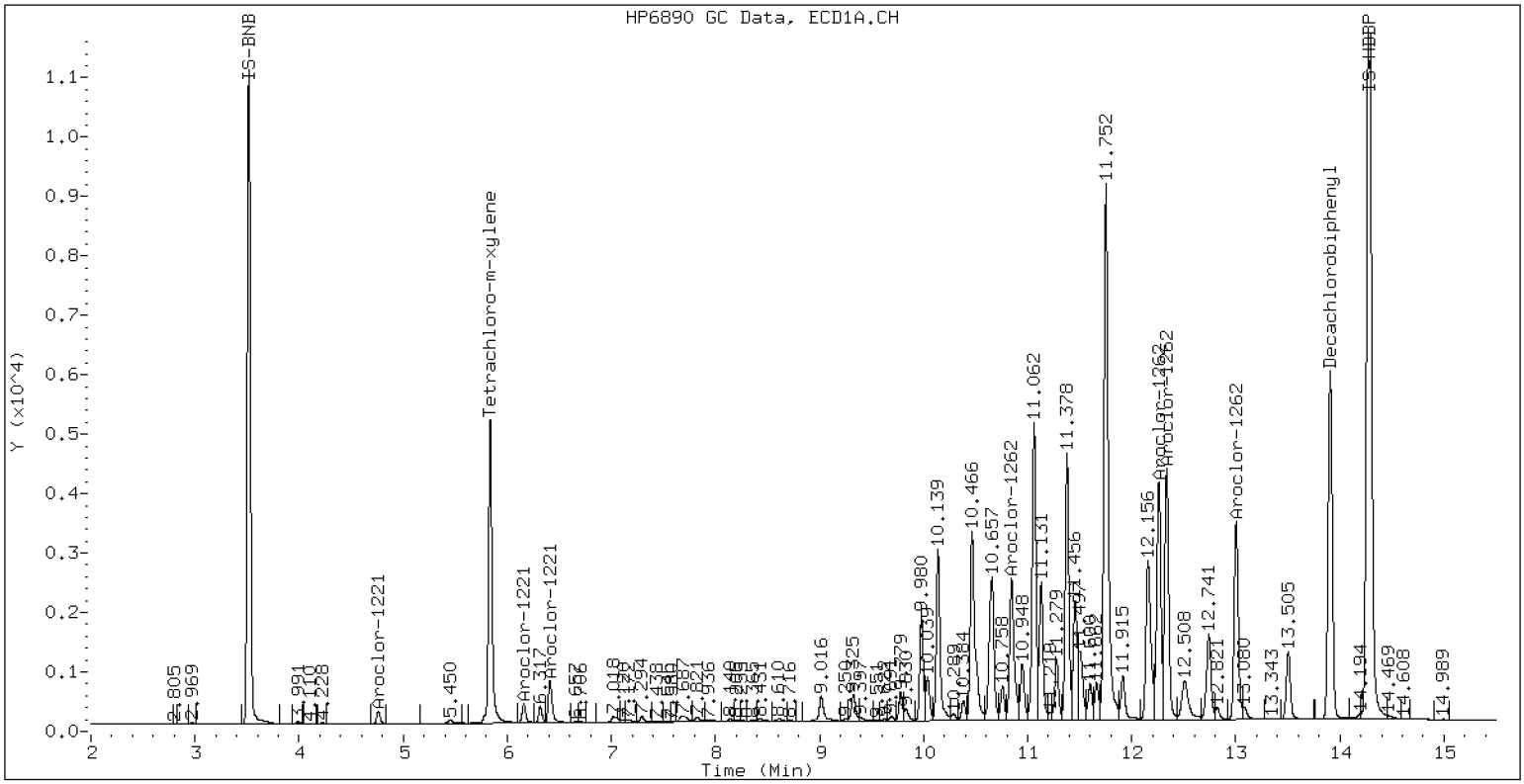
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

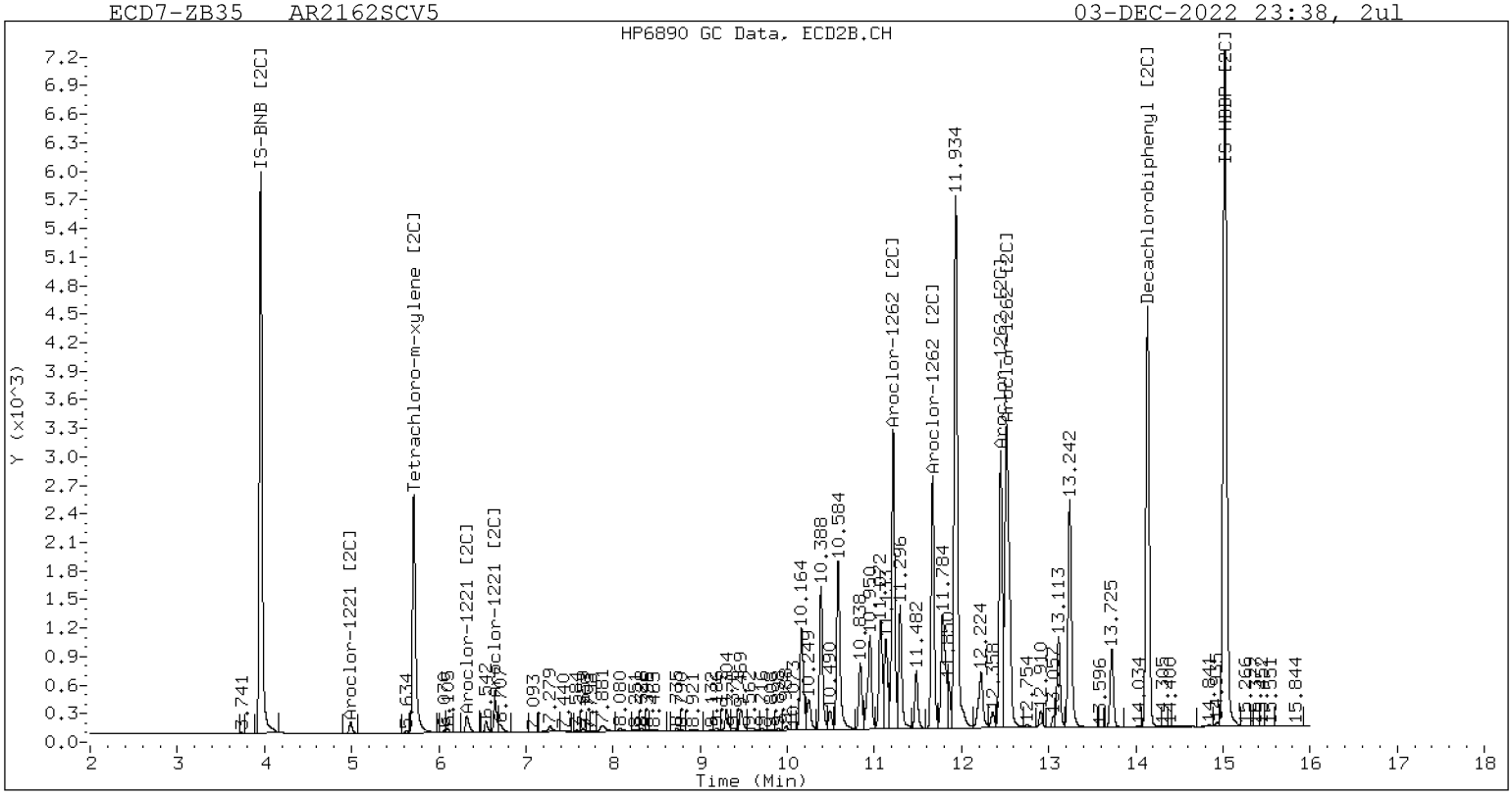
# PCB Dual Column Chromatograms

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 CALIBRATION VERIFICATION

## EPA 8082A

**Laboratory:** Analytical Resources, LLC
**Client:** Anchor QEA, LLC
**Calibration:** FL00010
**Sequence:** SKL0048

**SDG:** 22L0329
**Project:** AOC4 UR Phase 3
**Laboratory ID:** SKL0048-SCV6
**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 |
| Aroclor 1268 | 250.00 | 231 | -7.5 | 20.00 |
| Aroclor 1268 [2C] | 250.00 | 228 | -8.9 | 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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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*

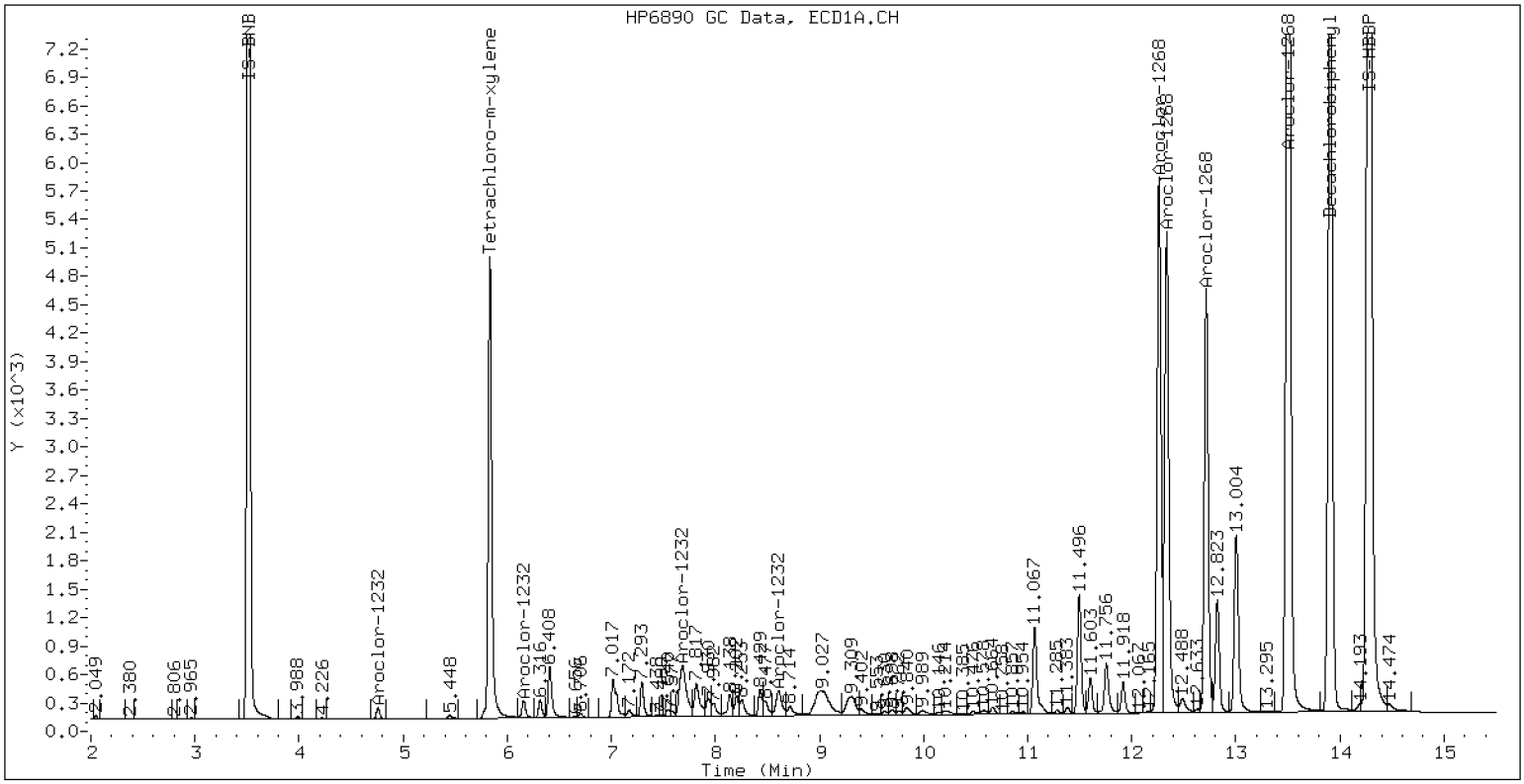
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

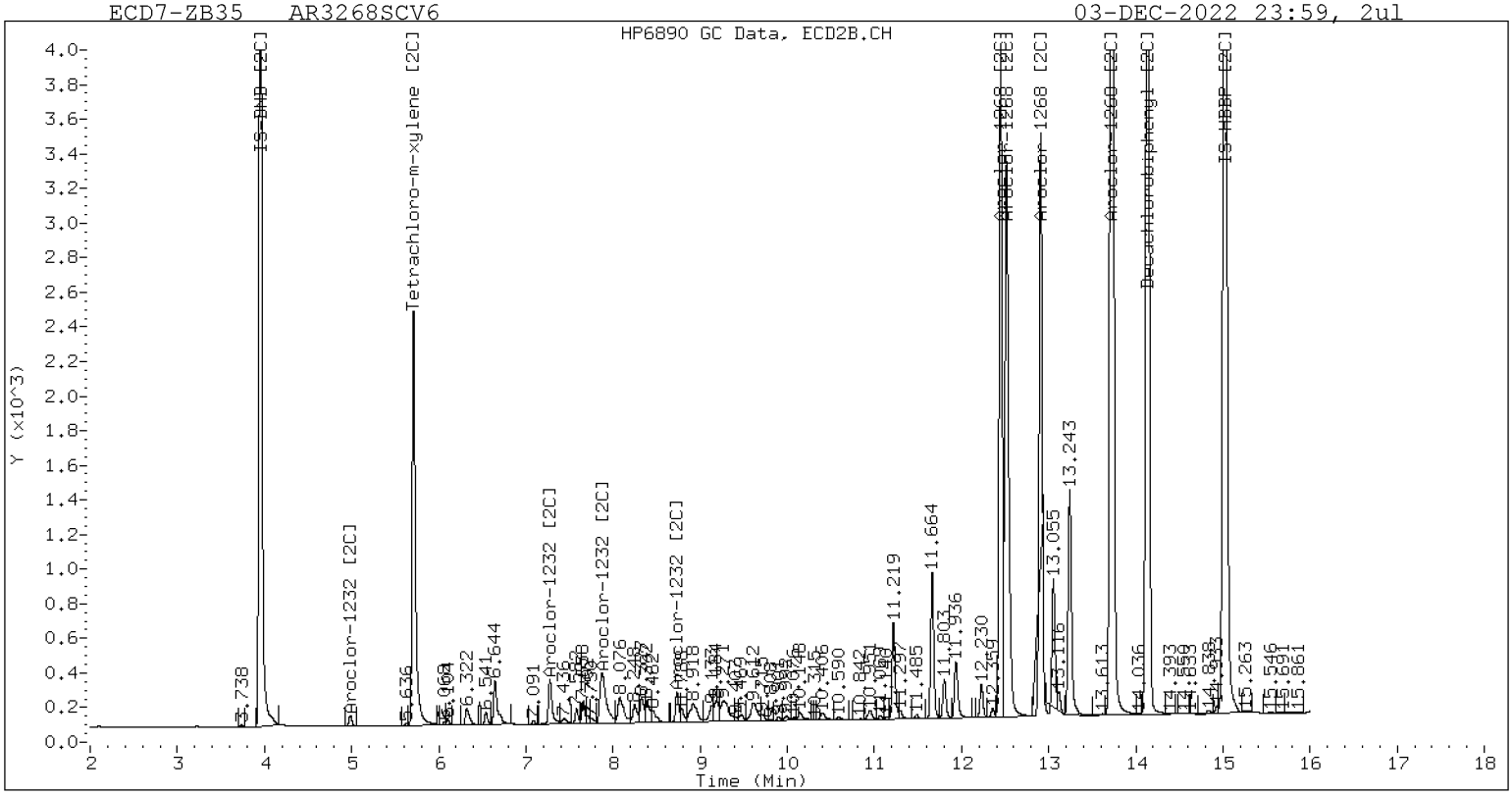
# PCB Dual Column Chromatograms

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: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092302ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/09/23 |
| Lab Sample ID: | SLA0129-ICV1 | Injection Time: | 09:24 |
| Sequence Name: | AR1254ICV1 | | |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN | ICV | LIMIT |
| Aroclor 1254 | A | 250.00 | 286 | 0.0576965 | 0.0668078 | | 14.4 | +/-20 |
| Aroclor-1254 (1) | A | 250.00 | 292 | 0.0704377 | 0.0824052 | | | |
| Aroclor-1254 (2) | A | 250.00 | 280 | 0.0273935 | 0.0307014 | | | |
| Aroclor-1254 (3) | A | 250.00 | 259 | 0.0444885 | 0.0460314 | | | |
| Aroclor-1254 (4) | A | 250.00 | 298 | 0.0867185 | 0.1032987 | | | |
| Aroclor-1254 (5) | A | 250.00 | 301 | 0.0594444 | 0.0716021 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 291 | 0.0638047 | 0.0745795 | | 16.5 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 280 | 0.0515798 | 0.0578349 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 288 | 0.0414689 | 0.0478304 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 288 | 0.0891370 | 0.1026113 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 303 | 0.0923140 | 0.1117753 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 297 | 0.0445236 | 0.0528458 | | | |
| Decachlorobiphenyl | A | 40.000 | 41.4 | 0.7333327 | 0.7581264 | | 3.4 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 39.2 | 1.1336710 | 1.1107310 | | -2.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.8 | 1.1358180 | 1.1582610 | | 2.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 38.7 | 1.0966080 | 1.0616640 | | -3.2 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092302ECD7.D
Data file 2: /230109.b/230109.b/01092302ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254I-CV1
Client ID:
Injection Date: 09-JAN-2023 09:24
Report Date: 01/14/2023 11:52
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 266054 | 5.706 | -0.007 | 173814 | 39.2 | 38.7 | 1.2 | Tetrachloro-m-xylene |
| 13.905 | -0.003 | 463191 | 14.127 | -0.010 | 361004 | 41.4 | 40.8 | 1.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 479061 | 7.0 |
| Hexabromobiphenyl | 798898 | 1221936 | 53.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 327437 | 31.5 |
| Hexabromobiphenyl | 362541 | 623355 | 71.9 |

* 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-1254 | 1 | 9.313 | -0.008 | 123366 | 292.5 | 1 | 9.458 | -0.009 | 59179 | 280.3 |
| Aroclor-1254 | 2 | 9.391 | -0.010 | 45962 | 280.2 | 2 | 9.978 | -0.009 | 48942 | 288.4 |
| Aroclor-1254 | 3 | 9.682 | -0.012 | 68912 | 258.7 | 3 | 10.130 | -0.009 | 104996 | 287.8 |
| Aroclor-1254 | 4 | 9.821 | -0.010 | 154645 | 297.8 | 4 | 10.380 | -0.009 | 114373 | 302.7 |
| Aroclor-1254 | 5 | 10.184 | -0.006 | 107193 | 301.1 | 5 | 10.576 | -0.011 | 54074 | 296.7 |

Total Col1Ave (5 peaks): 286.1 Total Col2Ave (5 peaks): 291.2 RPD = 2
Corrected Ave (4 peaks): 282.3 Corrected Ave (4 peaks): 288.3 RPD = 2

Total PCB Area Col1 (5.936 - 13.808) = 1587253 Col1 Total PCB = 0.3 ppm*

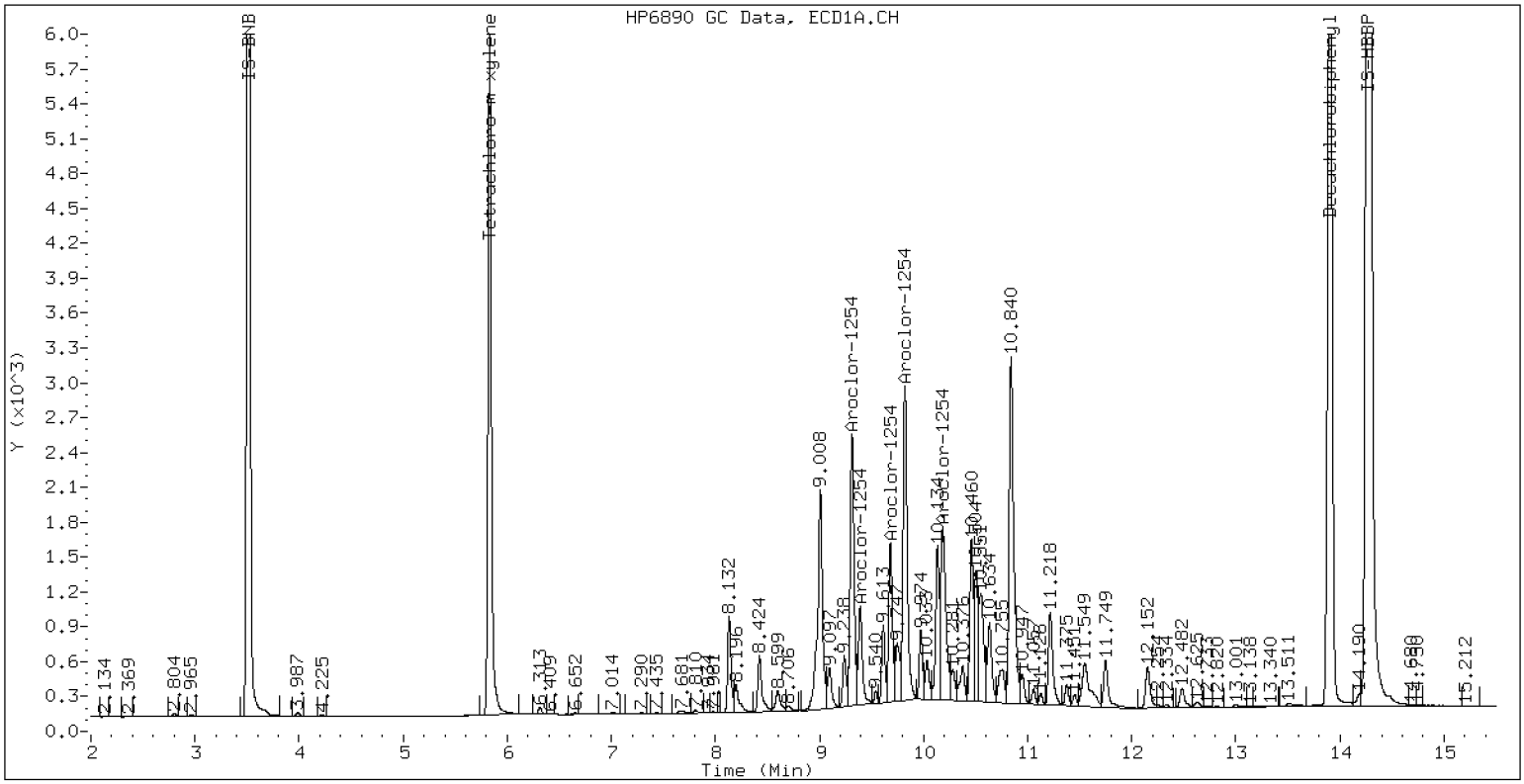
Total PCB Area Col2 (5.813 - 14.037) = 1014483 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

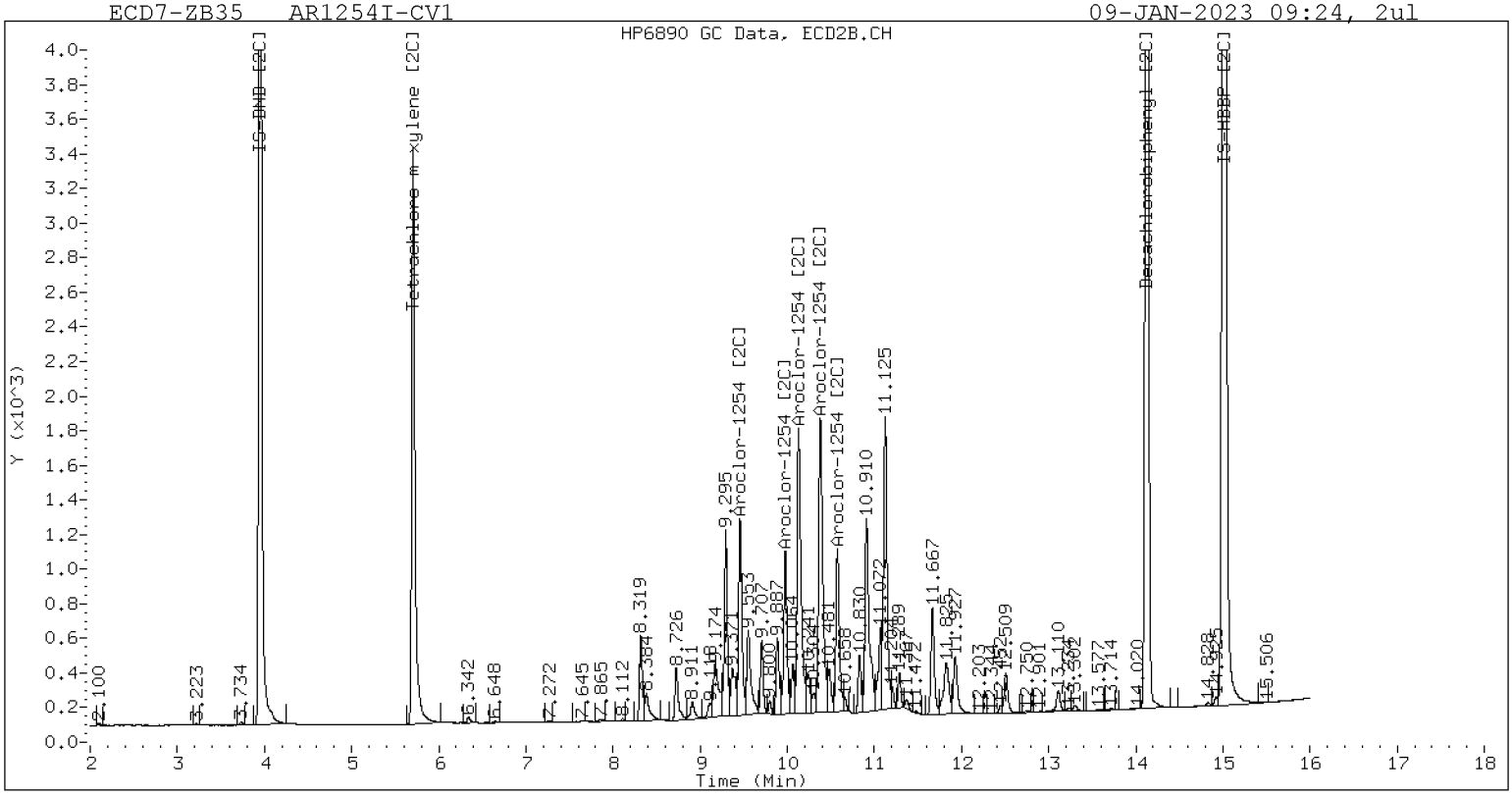
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254I-CV1 09-JAN-2023 09:24, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254I-CV1 09-JAN-2023 09:24, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092303ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/09/23 |
| Lab Sample ID: | SLA0129-ICV2 | Injection Time: | 09:46 |
| Sequence Name: | AR1660ICV2 | | |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN | ICV | LIMIT |
| Aroclor 1016 | A | 250.00 | 279 | 0.0441939 | 0.0490148 | | 11.5 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 275 | 0.0266860 | 0.0293171 | | 9.9 | |
| Aroclor-1016 (2) | A | 250.00 | 274 | 0.0861572 | 0.0943600 | | 9.5 | |
| Aroclor-1016 (3) | A | 250.00 | 281 | 0.0390425 | 0.0439524 | | 12.6 | |
| Aroclor-1016 (4) | A | 250.00 | 286 | 0.0248899 | 0.0284298 | | 14.2 | |
| Aroclor 1016 [2C] | A | 250.00 | 259 | 0.0467310 | 0.0481720 | | 3.4 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 258 | 0.0409030 | 0.0421515 | | 3.1 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 257 | 0.0882154 | 0.0908271 | | 3.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 255 | 0.0378846 | 0.0386974 | | 2.1 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 264 | 0.0199212 | 0.0210121 | | 5.5 | |
| Aroclor 1260 | A | 250.00 | 237 | 0.0390342 | 0.0370330 | | -5.3 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 229 | 0.0291201 | 0.0266767 | | -8.4 | |
| Aroclor-1260 (2) | A | 250.00 | 236 | 0.0301181 | 0.0284217 | | -5.6 | |
| Aroclor-1260 (3) | A | 250.00 | 239 | 0.0791351 | 0.0757573 | | -4.3 | |
| Aroclor-1260 (4) | A | 250.00 | 238 | 0.0403003 | 0.0384324 | | -4.6 | |
| Aroclor-1260 (5) | A | 250.00 | 241 | 0.0164974 | 0.0158768 | | -3.8 | |
| Aroclor 1260 [2C] | A | 250.00 | 241 | 0.0617619 | 0.0597157 | | -3.7 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 236 | 0.0422283 | 0.0398746 | | -5.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 241 | 0.1059643 | 0.1021597 | | -3.6 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 239 | 0.0282173 | 0.0269709 | | -4.4 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 247 | 0.0706376 | 0.0698574 | | -1.1 | |
| Decachlorobiphenyl | A | 40.000 | 39.7 | 0.7333327 | 0.7286194 | | -0.6 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 43.1 | 1.1336710 | 1.2201620 | | 7.6 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.0 | 1.1358180 | 1.1638560 | | 2.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 41.8 | 1.0966080 | 1.1455400 | | 4.5 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230109.b/01092303ECD7.D
Data file 2: /230109.b/230109.b/01092303ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-ICV2
Client ID:
Injection Date: 09-JAN-2023 09:46
Report Date: 01/14/2023 11:52
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 289545 | 5.708 | -0.005 | 188537 | 43.1 | 41.8 | 3.0 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 466190 | 14.128 | -0.009 | 366077 | 39.7 | 41.0 | 3.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 474601 | 6.0 |
| Hexabromobiphenyl | 798898 | 1279653 | 60.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 329167 | 32.1 |
| Hexabromobiphenyl | 362541 | 629076 | 73.5 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.288 | -0.007 | 43481 | 274.6 | 1 | 7.270 | -0.005 | 43359 | 257.6 |
| Aroclor-1016 | 2 | 7.674 | -0.010 | 139948 | 273.8 | 2 | 7.869 | -0.001 | 93429 | 257.4 |
| Aroclor-1016 | 3 | 7.809 | -0.009 | 65187 | 281.4 | 3 | 8.068 | -0.002 | 39806 | 255.4 |
| Aroclor-1016 | 4 | 8.421 | -0.008 | 42165 | 285.6 | 4 | 8.239 | -0.002 | 21614 | 263.7 |
| Total Col1Ave (4 peaks): | | | | | 278.9 | Total Col2Ave (4 peaks): | | | | 258.5 RPD = 8 |
| Corrected Ave (3 peaks): | | | | | 276.6 | Corrected Ave (3 peaks): | | | | 256.8 RPD = 7 |
| Aroclor-1260 | 1 | 11.056 | -0.006 | 106678 | 229.0 | 1 | 11.662 | -0.007 | 78388 | 236.1 |
| Aroclor-1260 | 2 | 11.373 | -0.004 | 113656 | 235.9 | 2 | 11.926 | -0.006 | 200832 | 241.0 |
| Aroclor-1260 | 3 | 11.746 | -0.006 | 302947 | 239.3 | 3 | 12.444 | -0.008 | 53021 | 239.0 |
| Aroclor-1260 | 4 | 12.149 | -0.009 | 153688 | 238.4 | 4 | 12.509 | -0.007 | 137330 | 247.2 |
| Aroclor-1260 | 5 | 12.255 | -0.006 | 63490 | 240.6 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 236.7 | Total Col2Ave (4 peaks): | | | | 240.8 RPD = 2 |
| Corrected Ave (4 peaks): | | | | | 235.7 | Corrected Ave (3 peaks): | | | | 238.7 RPD = 1 |

Total PCB Area Col1 (5.936 - 13.808) = 2930602 Col1 Total PCB = 0.6 ppm*

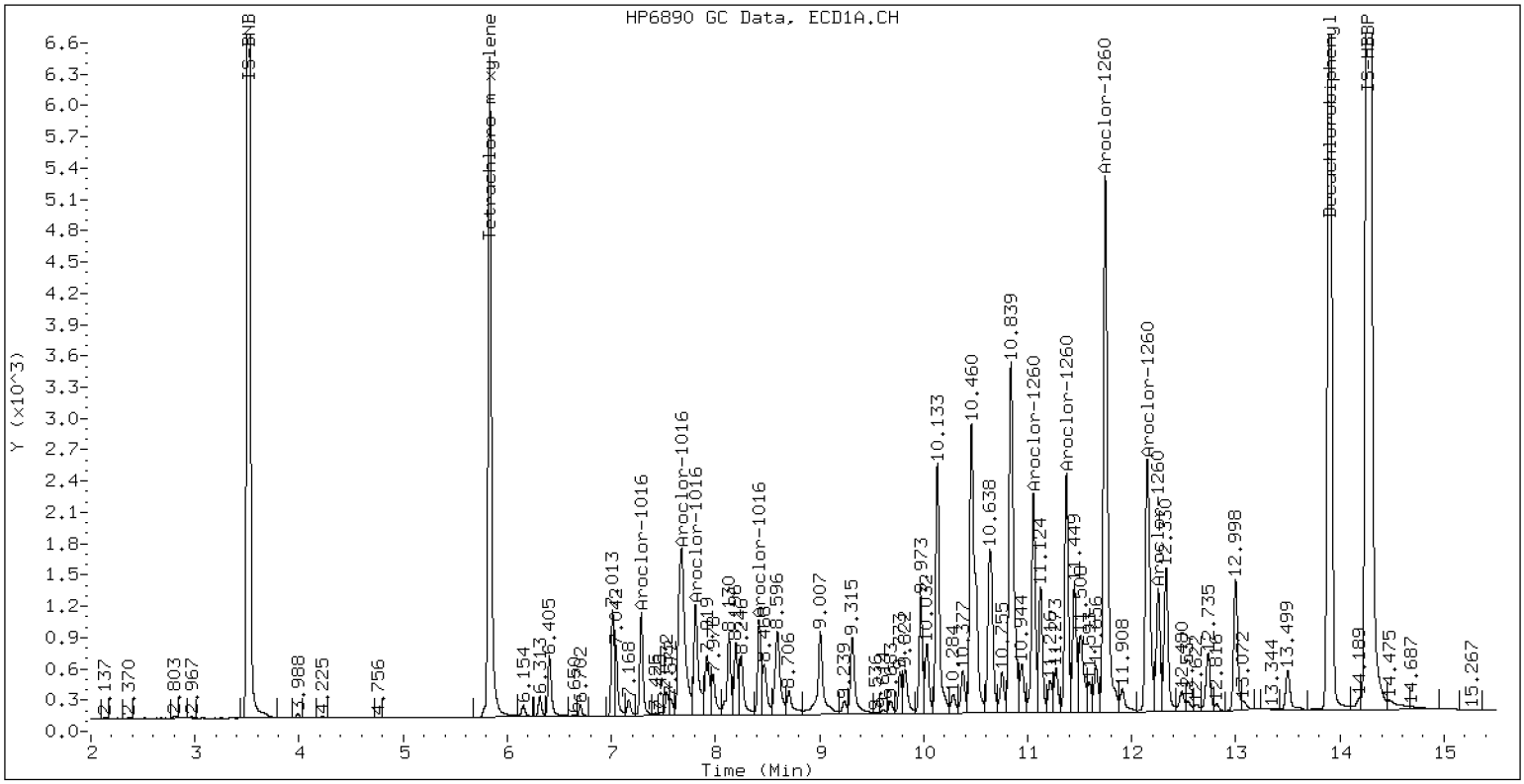
Total PCB Area Col2 (5.813 - 14.037) = 1817490 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

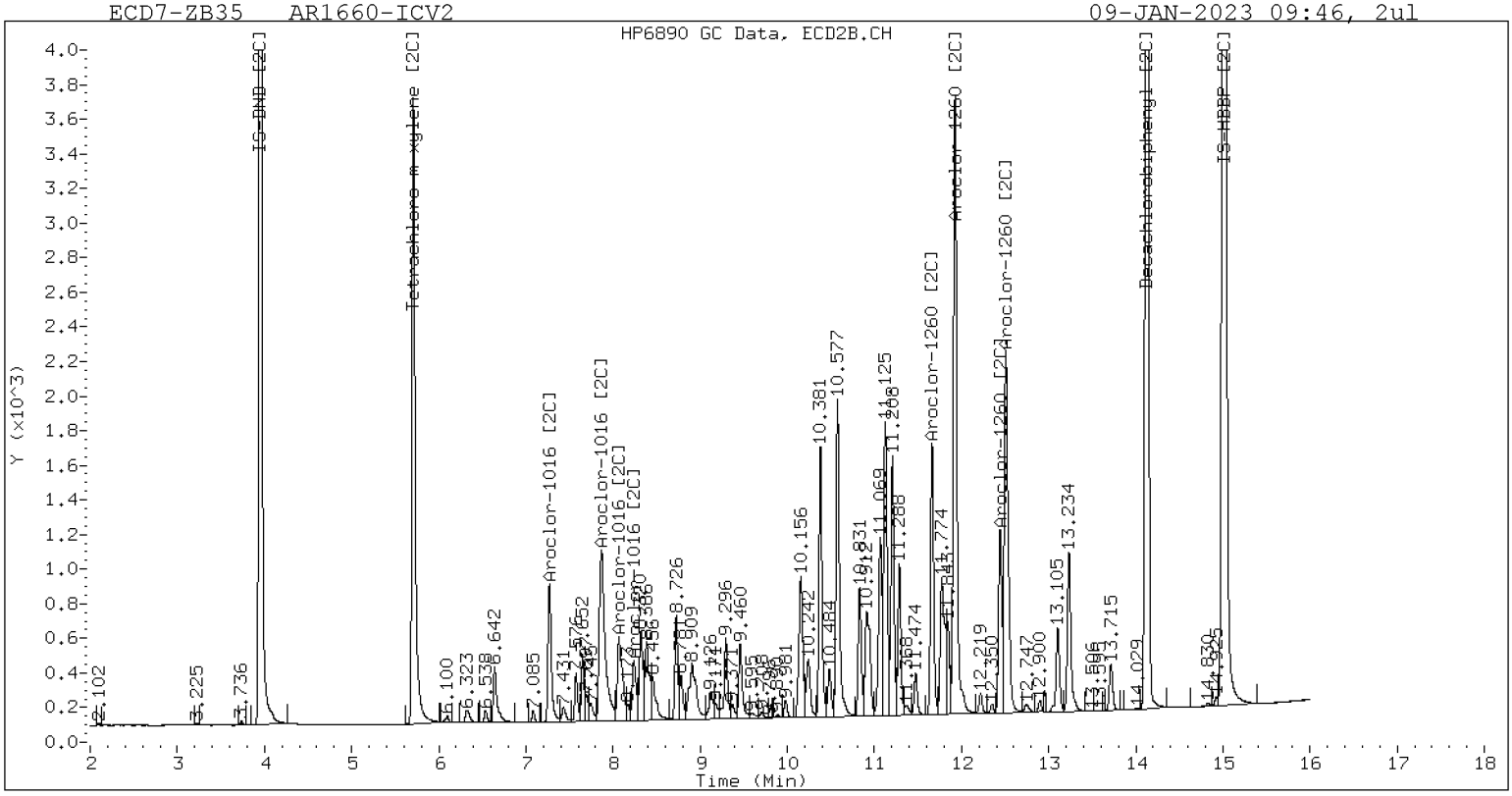
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-ICV2 09-JAN-2023 09:46, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-ICV2 09-JAN-2023 09:46, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112302ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0136-ICV1 | Injection Time: | 09:17 |
| Sequence Name: | AR1254ICV1 | | |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN | ICV | LIMIT |
| Aroclor 1254 | A | 250.00 | 297 | 0.0576965 | 0.0689019 | | 19.0 | +/-20 |
| Aroclor-1254 (1) | A | 250.00 | 289 | 0.0704377 | 0.0813890 | | | |
| Aroclor-1254 (2) | A | 250.00 | 333 | 0.0273935 | 0.0365350 | | | |
| Aroclor-1254 (3) | A | 250.00 | 232 | 0.0444885 | 0.0413666 | | | |
| Aroclor-1254 (4) | A | 250.00 | 317 | 0.0867185 | 0.1100772 | | | |
| Aroclor-1254 (5) | A | 250.00 | 316 | 0.0594444 | 0.0751419 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 297 | 0.0638047 | 0.0753843 | | 18.7 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 280 | 0.0515798 | 0.0576991 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 301 | 0.0414689 | 0.0499004 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 276 | 0.0891370 | 0.0982815 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 311 | 0.0923140 | 0.1147953 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 316 | 0.0445236 | 0.0562451 | | | |
| Decachlorobiphenyl | A | 40.000 | 42.9 | 0.7333327 | 0.7858020 | | 7.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 37.1 | 1.1336710 | 1.0525280 | | -7.3 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.3 | 1.1358180 | 1.1731150 | | 3.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 36.5 | 1.0966080 | 1.0007470 | | -8.8 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230111.b/01112302ECD7.D
Data file 2: /230111.b/230111.b/01112302ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 11-JAN-2023 09:17
Report Date: 01/12/2023 12:15
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.000 | 202961 | 5.707 | -0.000 | 154827 | 37.1 | 36.5 | 1.7 | Tetrachloro-m-xylene |
| 13.906 | 0.002 | 342137 | 14.128 | -0.000 | 347858 | 42.9 | 41.3 | 3.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 385664 | -13.8 |
| Hexabromobiphenyl | 798898 | 870797 | 9.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 309423 | 24.2 |
| Hexabromobiphenyl | 362541 | 593050 | 63.6 |

* 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-1254 | 1 | 9.316 | 0.000 | 98090 | 288.9 | 1 | 9.461 | 0.000 | 55792 | 279.7 |
| Aroclor-1254 | 2 | 9.394 | 0.001 | 44032 | 333.4 | 2 | 9.981 | 0.000 | 48251 | 300.8 |
| Aroclor-1254 | 3 | 9.686 | 0.000 | 49855 | 232.5 | 3 | 10.133 | 0.000 | 95033 | 275.6 |
| Aroclor-1254 | 4 | 9.825 | 0.000 | 132665 | 317.3 | 4 | 10.383 | 0.000 | 111001 | 310.9 |
| Aroclor-1254 | 5 | 10.191 | 0.000 | 90561 | 316.0 | 5 | 10.580 | 0.000 | 54386 | 315.8 |

Total Col1Ave (5 peaks): 297.6 Total Col2Ave (5 peaks): 296.6 RPD = 0

Corrected Ave (4 peaks): 288.7 Corrected Ave (4 peaks): 291.8 RPD = 1

CalAmt %D: 19.0 CalAmt %D: 18.6

Total PCB Area Col1 (5.932 - 13.804) = 1380601 Col1 Total PCB = 0.4 ppm*

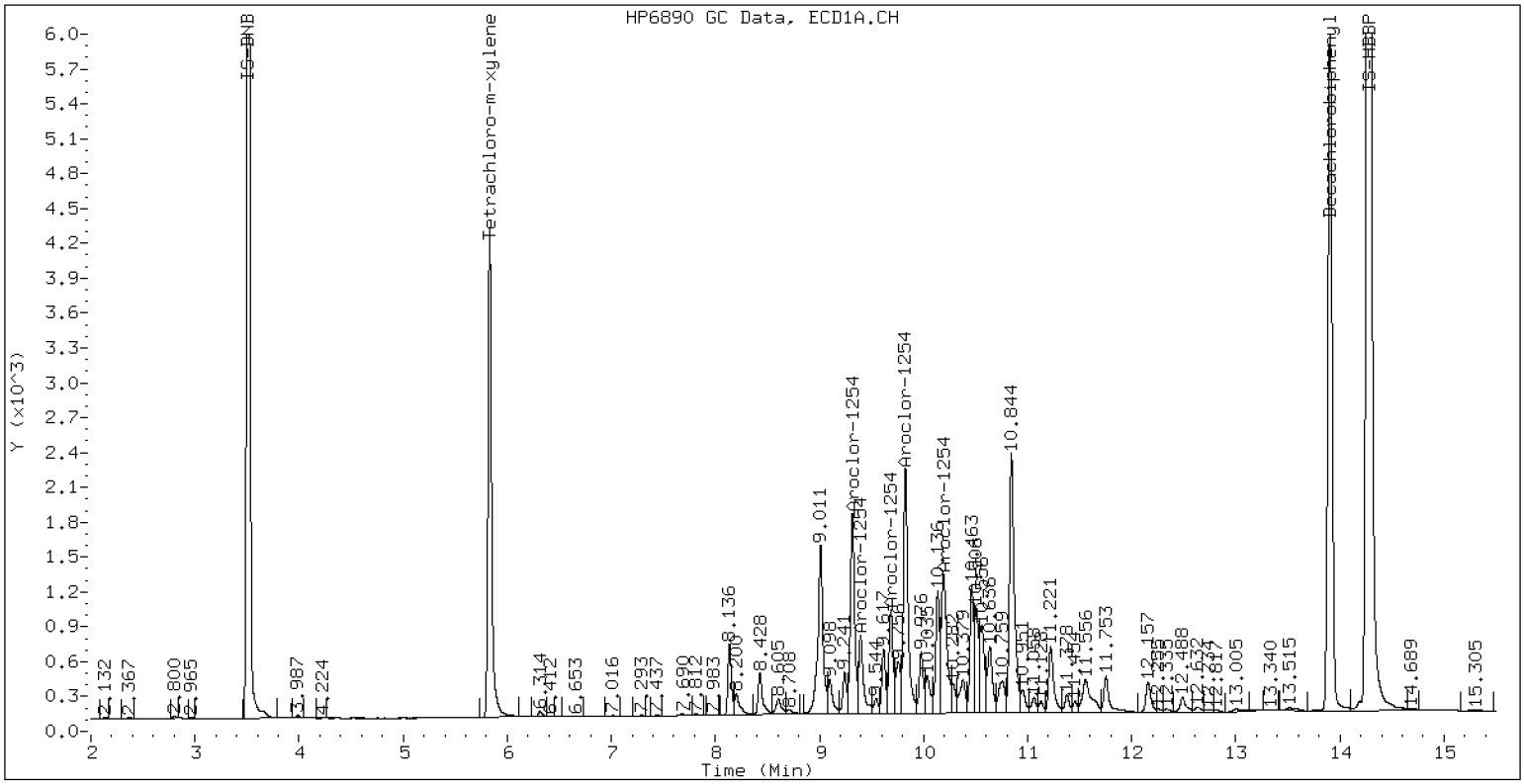
Total PCB Area Col2 (5.807 - 14.028) = 1001360 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

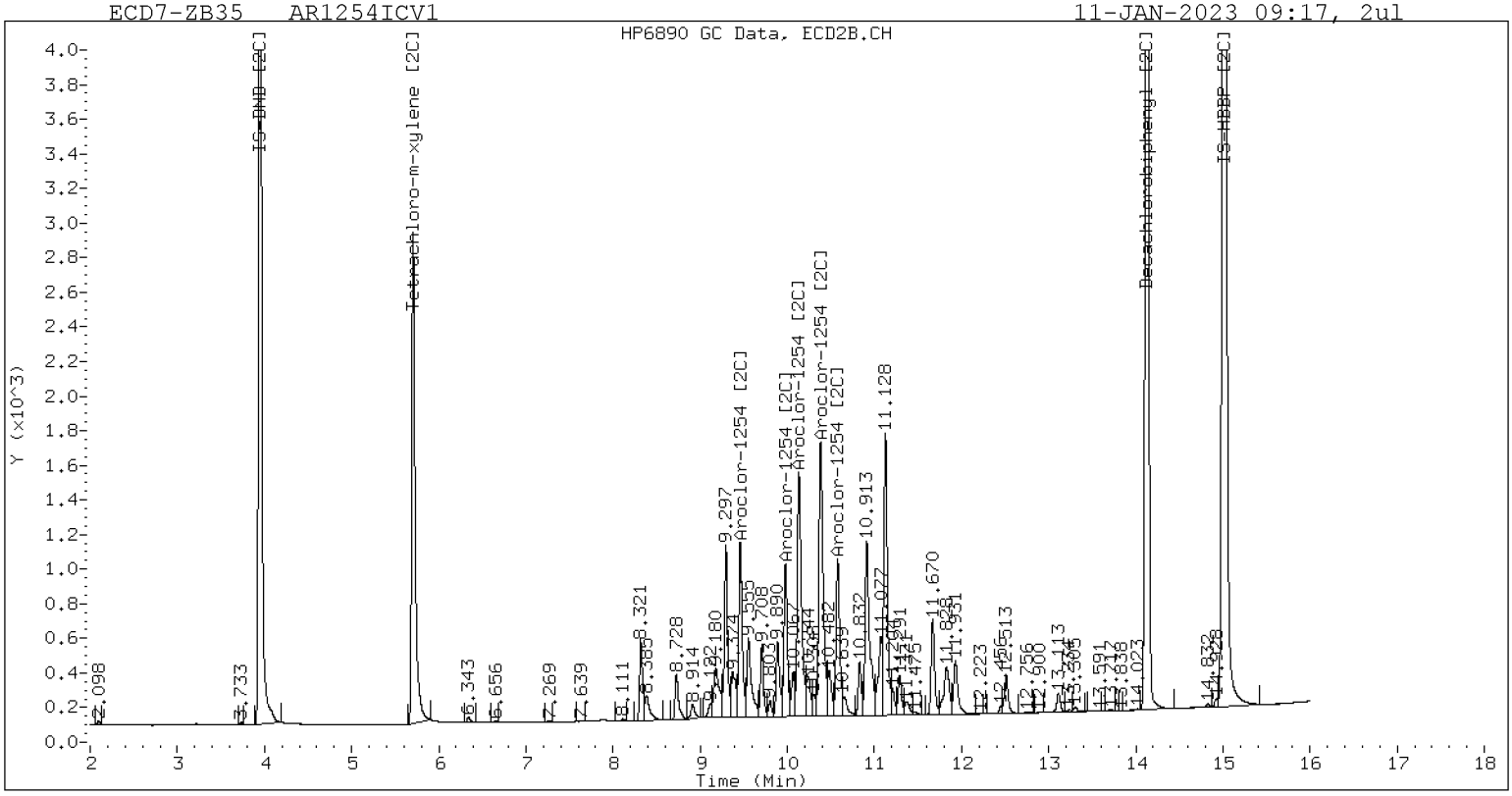
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 11-JAN-2023 09:17, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 11-JAN-2023 09:17, 2ul

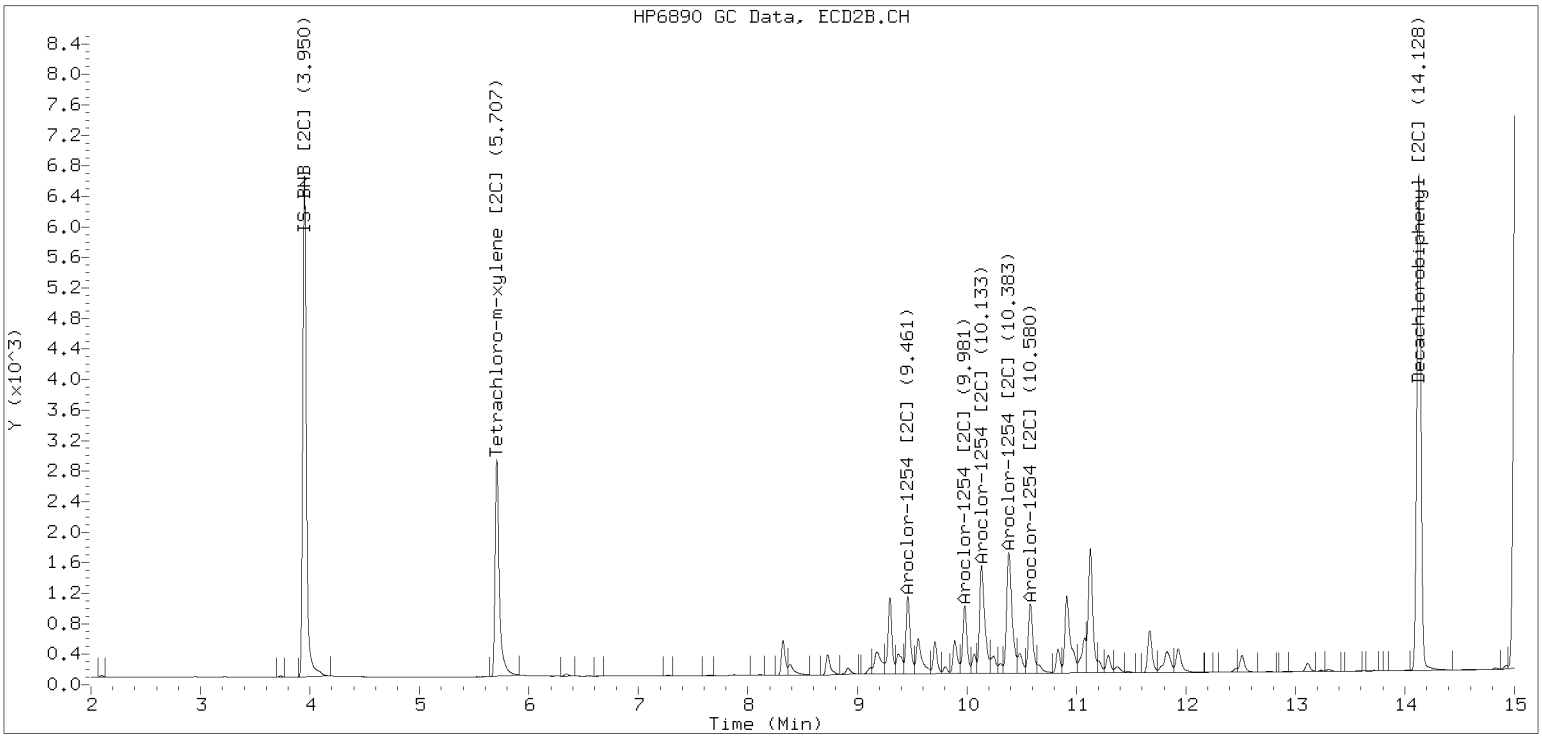



ZB-35 Manual Integration: YES

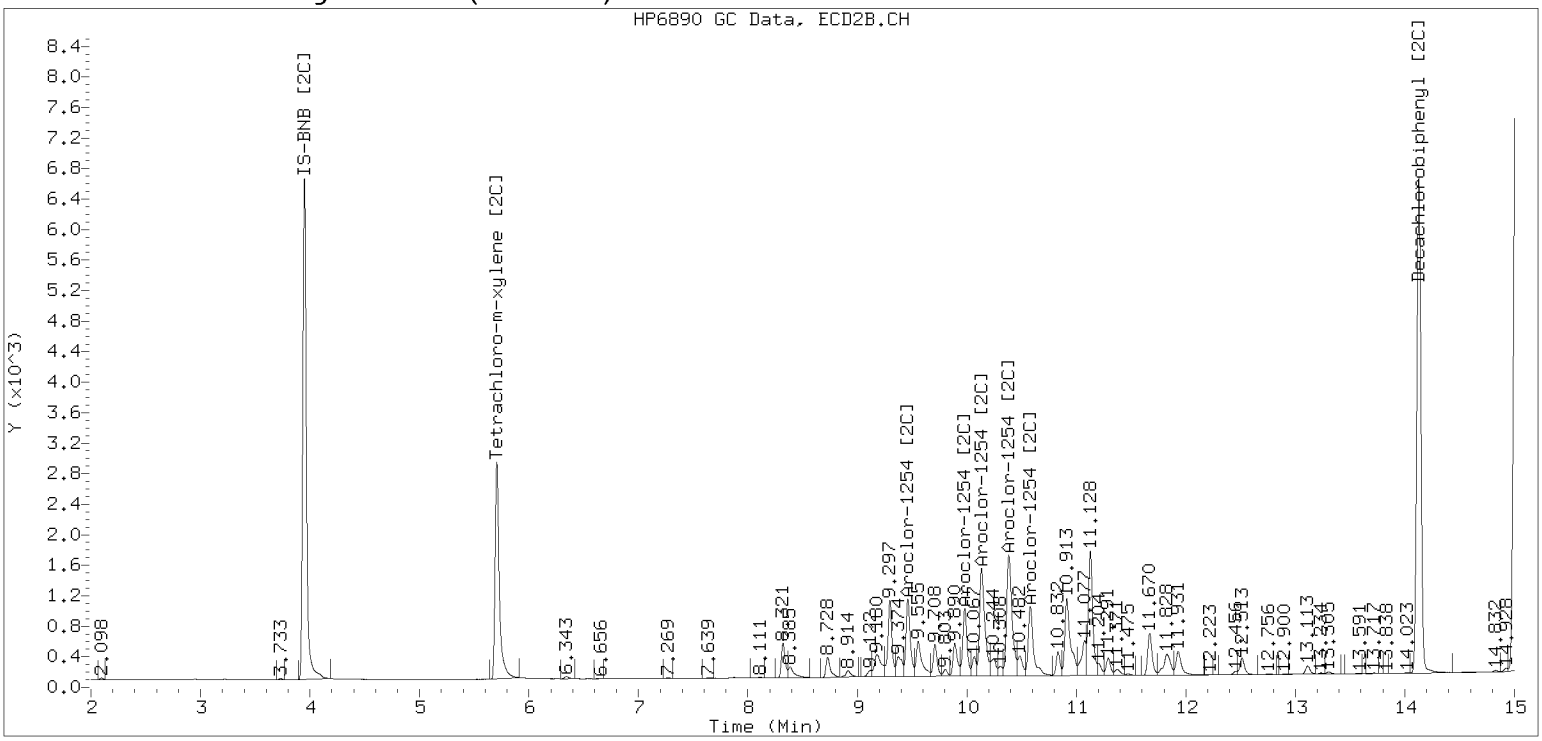
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230111.b/230111.b/01112302ECD7.D  Injection Date: 11-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112303ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0136-ICV2 | Injection Time: | 09:38 |
| Sequence Name: | AR1660ICV2 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | ICV | ICAL | ICV | MIN | ICV | LIMIT |
| Aroclor 1016 | A | 250.00 | 280 | 0.0441939 | 0.0487883 | | 11.8 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 272 | 0.0266860 | 0.0290887 | | 8.8 | |
| Aroclor-1016 (2) | A | 250.00 | 267 | 0.0861572 | 0.0919870 | | 6.8 | |
| Aroclor-1016 (3) | A | 250.00 | 290 | 0.0390425 | 0.0452911 | | 16.0 | |
| Aroclor-1016 (4) | A | 250.00 | 289 | 0.0248899 | 0.0287865 | | 15.6 | |
| Aroclor 1016 [2C] | A | 250.00 | 255 | 0.0467310 | 0.0472963 | | 2.0 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 253 | 0.0409030 | 0.0413782 | | 1.2 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 250 | 0.0882154 | 0.0882621 | | 0.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 255 | 0.0378846 | 0.0386567 | | 2.0 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 262 | 0.0199212 | 0.0208880 | | 4.8 | |
| Aroclor 1260 | A | 250.00 | 263 | 0.0390342 | 0.0409163 | | 5.0 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 255 | 0.0291201 | 0.0297148 | | 2.0 | |
| Aroclor-1260 (2) | A | 250.00 | 263 | 0.0301181 | 0.0317126 | | 5.2 | |
| Aroclor-1260 (3) | A | 250.00 | 264 | 0.0791351 | 0.0834798 | | 5.6 | |
| Aroclor-1260 (4) | A | 250.00 | 259 | 0.0403003 | 0.0417049 | | 3.6 | |
| Aroclor-1260 (5) | A | 250.00 | 272 | 0.0164974 | 0.0179696 | | 8.8 | |
| Aroclor 1260 [2C] | A | 250.00 | 230 | 0.0617619 | 0.0563793 | | -7.9 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 228 | 0.0422283 | 0.0385407 | | -8.8 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 222 | 0.1059643 | 0.0939518 | | -11.2 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 236 | 0.0282173 | 0.0266887 | | -5.6 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 235 | 0.0706376 | 0.0663359 | | -6.0 | |
| Decachlorobiphenyl | A | 40.000 | 42.9 | 0.7333327 | 0.7863606 | | 7.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.4 | 1.1336710 | 1.1738220 | | 3.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.2 | 1.1358180 | 1.1685280 | | 3.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.8 | 1.0966080 | 1.1199840 | | 2.0 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230111.b/01112303ECD7.D
Data file 2: /230111.b/230111.b/01112303ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 11-JAN-2023 09:38
Report Date: 01/12/2023 12:15
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.000 | 208823 | 5.708 | 0.001 | 159414 | 41.4 | 40.9 | 1.4 | Tetrachloro-m-xylene |
| 13.904 | -0.000 | 329178 | 14.129 | 0.001 | 318178 | 42.9 | 41.2 | 4.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 355800 | -20.5 |
| Hexabromobiphenyl | 798898 | 837219 | 4.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 284672 | 14.3 |
| Hexabromobiphenyl | 362541 | 544579 | 50.2 |

* 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 | 7.290 | -0.005 | 32343 | 272.5 | 1 | 7.270 | -0.000 | 36810 | 252.9 |
| Aroclor-1016 | 2 | 7.679 | -0.005 | 102278 | 266.9 | 2 | 7.872 | 0.001 | 78518 | 250.1 |
| Aroclor-1016 | 3 | 7.812 | -0.005 | 50358 | 290.0 | 3 | 8.071 | -0.000 | 34389 | 255.1 |
| Aroclor-1016 | 4 | 8.424 | -0.005 | 32007 | 289.1 | 4 | 8.242 | -0.000 | 18582 | 262.1 |

Total Col1Ave (4 peaks): 279.6 Total Col2Ave (4 peaks): 255.1 RPD = 9
Corrected Ave (3 peaks): 276.2 Corrected Ave (3 peaks): 252.7 RPD = 9

CalAmt %D: 11.9 CalAmt %D: 2.0

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.058 | -0.004 | 77743 | 255.1 | 1 | 11.663 | 0.001 | 65589 | 228.2 |
| Aroclor-1260 | 2 | 11.374 | -0.003 | 82970 | 263.2 | 2 | 11.926 | 0.000 | 159888 | 221.7 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 218409 | 263.7 | 3 | 12.446 | 0.001 | 45419 | 236.5 |
| Aroclor-1260 | 4 | 12.153 | -0.005 | 109113 | 258.7 | 4 | 12.511 | 0.001 | 112891 | 234.8 |
| Aroclor-1260 | 5 | 12.257 | -0.005 | 47014 | 272.3 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 262.6 Total Col2Ave (4 peaks): 230.3 RPD = 13
Corrected Ave (4 peaks): 260.2 Corrected Ave (3 peaks): 228.2 RPD = 13

CalAmt %D: 5.0 CalAmt %D: -7.9

Total PCB Area Col1 (5.932 - 13.804) = 2202416 Col1 Total PCB = 0.6 ppm*

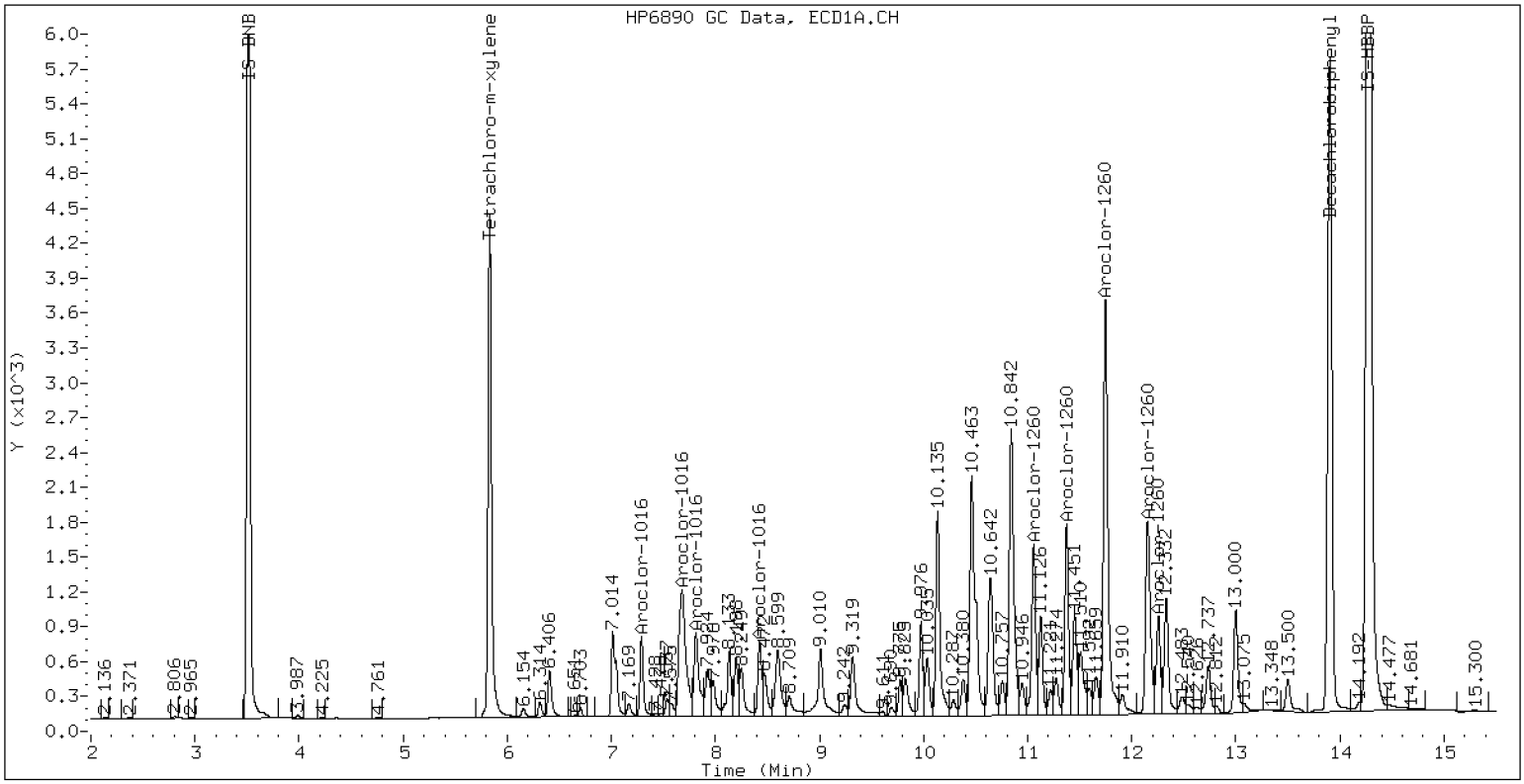
Total PCB Area Col2 (5.807 - 14.028) = 1530749 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

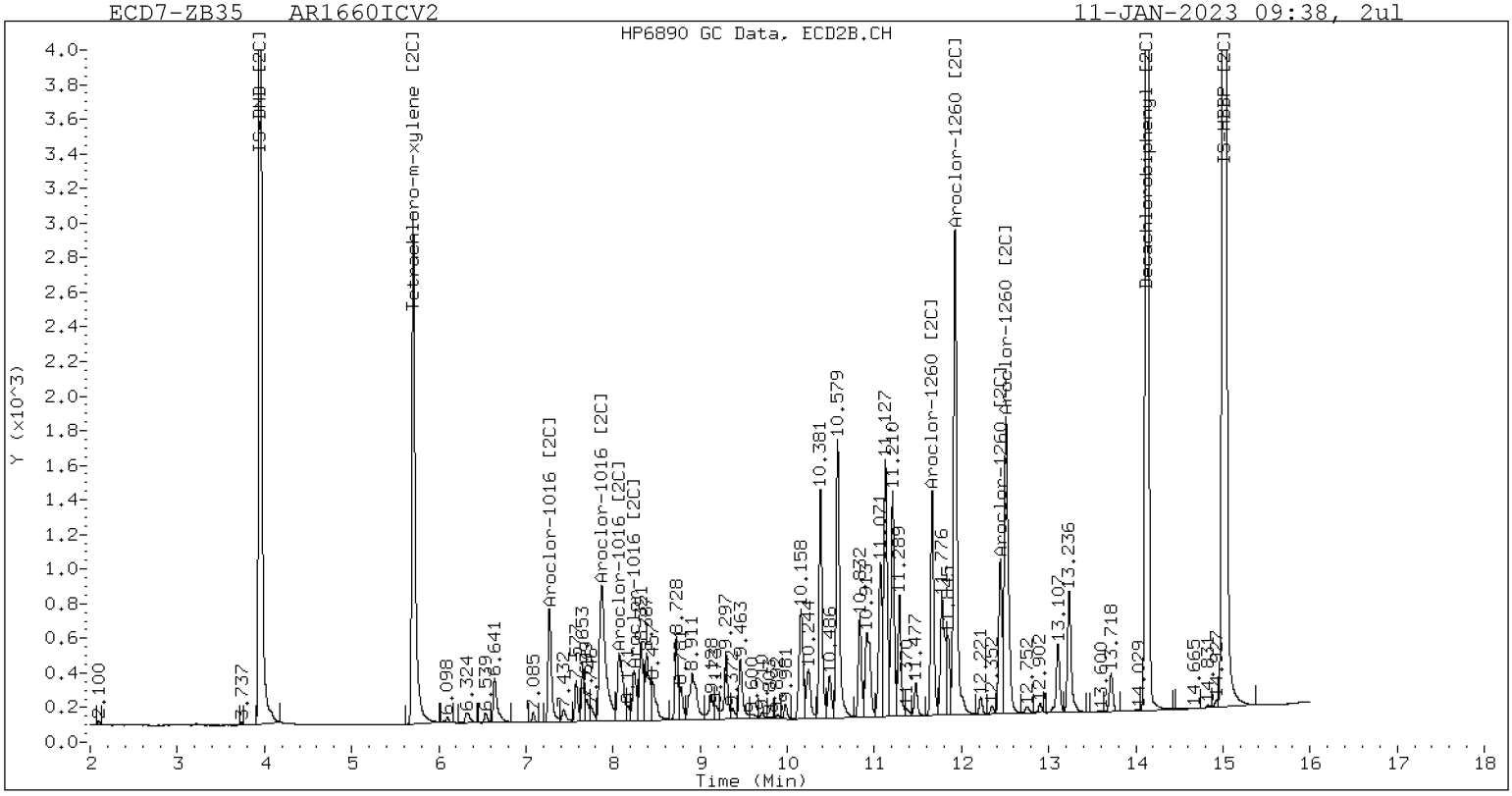
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 11-JAN-2023 09:38, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 11-JAN-2023 09:38, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102302ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0156-ICV1 | Injection Time: | 16:50 |
| Sequence Name: | AR1254ICV1 | | |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN | ICV | LIMIT |
| Aroclor 1254 | A | 250.00 | 299 | 0.0576965 | 0.0689764 | | 19.8 | +/-20 |
| Aroclor-1254 (1) | A | 250.00 | 287 | 0.0704377 | 0.0808038 | | | |
| Aroclor-1254 (2) | A | 250.00 | 339 | 0.0273935 | 0.0371420 | | | |
| Aroclor-1254 (3) | A | 250.00 | 244 | 0.0444885 | 0.0434584 | | | |
| Aroclor-1254 (4) | A | 250.00 | 314 | 0.0867185 | 0.1089958 | | | |
| Aroclor-1254 (5) | A | 250.00 | 313 | 0.0594444 | 0.0744819 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 300 | 0.0638047 | 0.0756310 | | 20.1 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 277 | 0.0515798 | 0.0570930 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 296 | 0.0414689 | 0.0491172 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 273 | 0.0891370 | 0.0973915 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 302 | 0.0923140 | 0.1116427 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 353 | 0.0445236 | 0.0629106 | | | |
| Decachlorobiphenyl | A | 40.000 | 42.6 | 0.7333327 | 0.7811302 | | 6.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 37.2 | 1.1336710 | 1.0543560 | | -7.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.3 | 1.1358180 | 1.2024940 | | 5.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 36.5 | 1.0966080 | 1.0012200 | | -8.8 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230110.b/01102302ECD7.D
Data file 2: /230110.b/230110.b/01102302ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 10-JAN-2023 16:50
Report Date: 01/13/2023 12:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 213235 | 5.707 | -0.000 | 154314 | 37.2 | 36.5 | 1.8 | Tetrachloro-m-xylene |
| 13.903 | -0.004 | 331878 | 14.127 | -0.001 | 315811 | 42.6 | 42.3 | 0.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 404484 | -9.6 |
| Hexabromobiphenyl | 798898 | 849738 | 6.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 308252 | 23.7 |
| Hexabromobiphenyl | 362541 | 525260 | 44.9 |

* 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 | 102137 | 286.8 | 1 | 9.461 | -0.001 | 54997 | 276.7 |
| Aroclor-1254 | 2 | 9.394 | -0.008 | 46948 | 339.0 | 2 | 9.980 | -0.001 | 47314 | 296.1 |
| Aroclor-1254 | 3 | 9.685 | -0.010 | 54932 | 244.2 | 3 | 10.133 | -0.001 | 93816 | 273.2 |
| Aroclor-1254 | 4 | 9.824 | -0.007 | 137772 | 314.2 | 4 | 10.382 | -0.001 | 107544 | 302.3 |
| Aroclor-1254 | 5 | 10.191 | 0.001 | 94146 | 313.2 | 5 | 10.578 | -0.002 | 60601 | 353.2 |

Total Col1Ave (5 peaks): 299.5 Total Col2Ave (5 peaks): 300.3 RPD = 0

Corrected Ave (4 peaks): 289.6 Corrected Ave (4 peaks): 287.1 RPD = 1

CalAmt %D: 19.8 CalAmt %D: 20.1

Total PCB Area Col1 (5.936 - 13.808) = 1448108 Col1 Total PCB = 0.4 ppm*

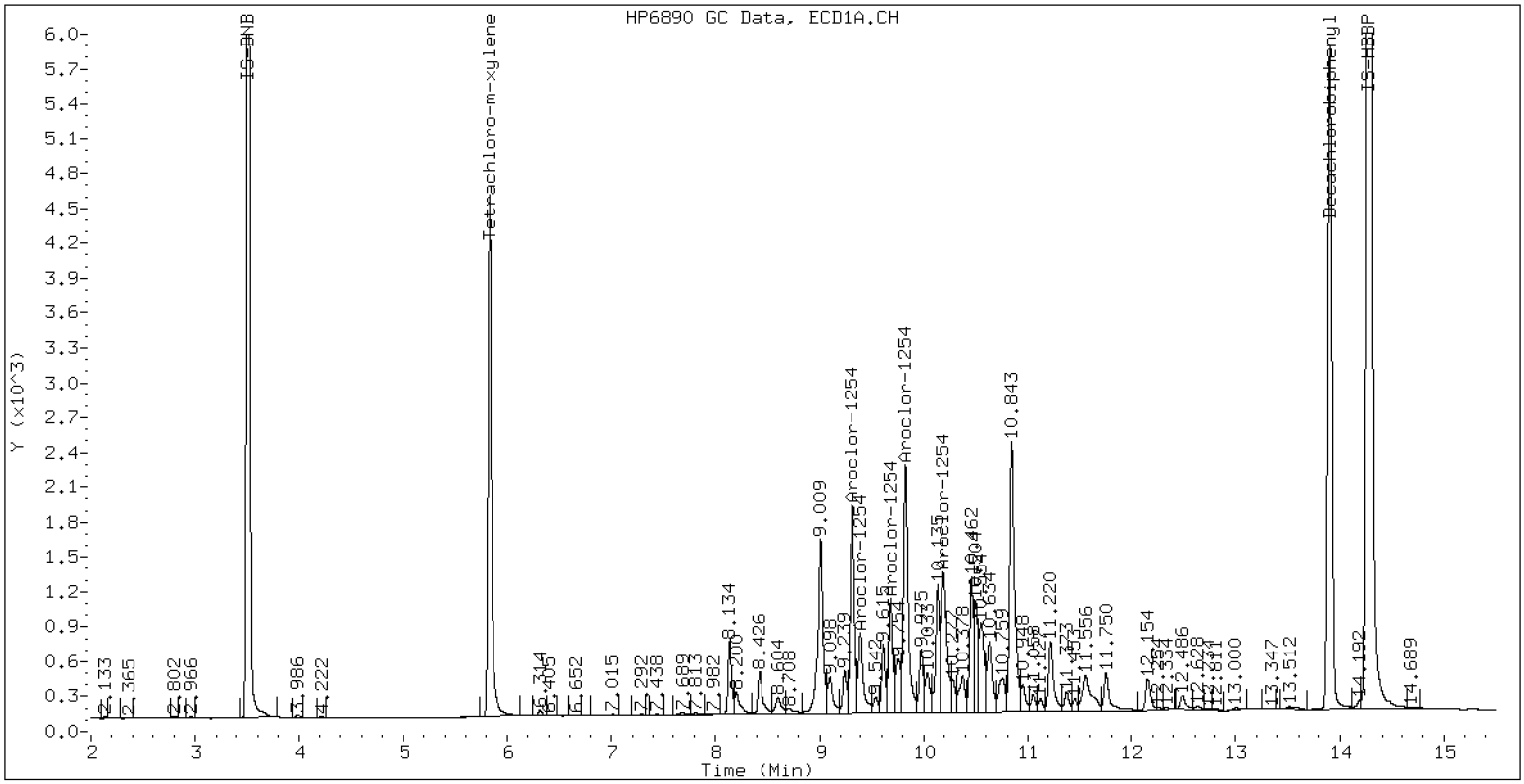
Total PCB Area Col2 (5.807 - 14.028) = 987378 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

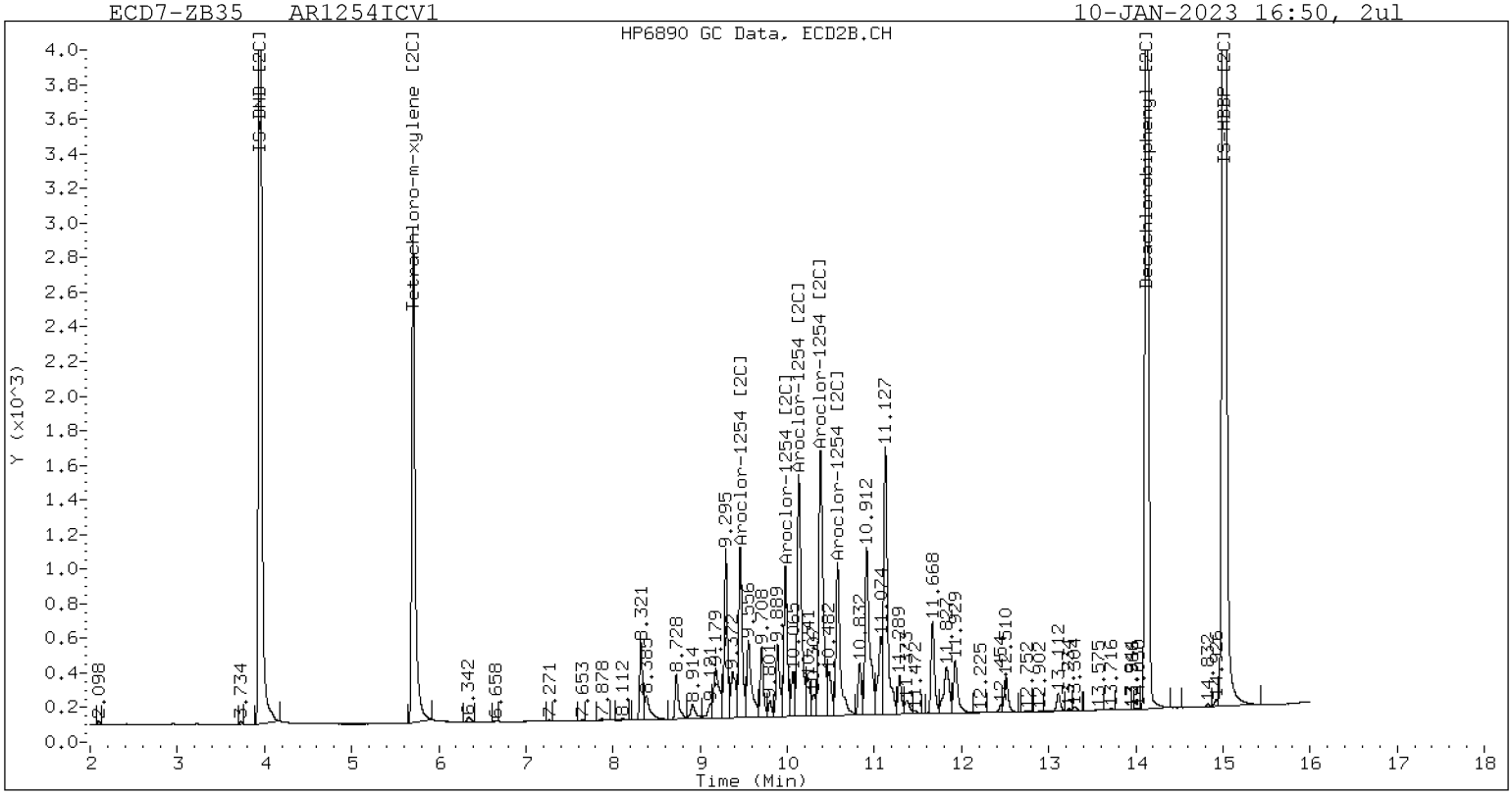
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 10-JAN-2023 16:50, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 10-JAN-2023 16:50, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102303ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0156-ICV2 | Injection Time: | 17:11 |
| Sequence Name: | AR1660ICV2 | | |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN | ICV | LIMIT |
| Aroclor 1016 | A | 250.00 | 277 | 0.0441939 | 0.0484464 | | 10.8 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 270 | 0.0266860 | 0.0288789 | | 8.0 | |
| Aroclor-1016 (2) | A | 250.00 | 266 | 0.0861572 | 0.0915673 | | 6.4 | |
| Aroclor-1016 (3) | A | 250.00 | 290 | 0.0390425 | 0.0452163 | | 16.0 | |
| Aroclor-1016 (4) | A | 250.00 | 282 | 0.0248899 | 0.0281228 | | 12.8 | |
| Aroclor 1016 [2C] | A | 250.00 | 248 | 0.0467310 | 0.0461378 | | -0.9 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 246 | 0.0409030 | 0.0403068 | | -1.6 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 245 | 0.0882154 | 0.0864713 | | -2.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 250 | 0.0378846 | 0.0378404 | | 0.0 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 250 | 0.0199212 | 0.0199326 | | 0.0 | |
| Aroclor 1260 | A | 250.00 | 280 | 0.0390342 | 0.0436698 | | 11.8 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 273 | 0.0291201 | 0.0318053 | | 9.2 | |
| Aroclor-1260 (2) | A | 250.00 | 282 | 0.0301181 | 0.0339846 | | 12.8 | |
| Aroclor-1260 (3) | A | 250.00 | 283 | 0.0791351 | 0.0895828 | | 13.2 | |
| Aroclor-1260 (4) | A | 250.00 | 273 | 0.0403003 | 0.0440354 | | 9.2 | |
| Aroclor-1260 (5) | A | 250.00 | 287 | 0.0164974 | 0.0189406 | | 14.8 | |
| Aroclor 1260 [2C] | A | 250.00 | 254 | 0.0617619 | 0.0629221 | | 1.7 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 249 | 0.0422283 | 0.0421160 | | -0.4 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 253 | 0.1059643 | 0.1071508 | | 1.2 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 254 | 0.0282173 | 0.0286380 | | 1.6 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 261 | 0.0706376 | 0.0737835 | | 4.4 | |
| Decachlorobiphenyl | A | 40.000 | 42.0 | 0.7333327 | 0.7705197 | | 5.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.5 | 1.1336710 | 1.1772400 | | 3.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.8 | 1.1358180 | 1.1878790 | | 4.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 39.9 | 1.0966080 | 1.0949220 | | -0.3 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230110.b/01102303ECD7.D
Data file 2: /230110.b/230110.b/01102303ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 10-JAN-2023 17:11
Report Date: 01/13/2023 12:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 223449 | 5.707 | 0.000 | 159107 | 41.5 | 39.9 | 3.9 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 322622 | 14.127 | -0.001 | 300322 | 42.0 | 41.8 | 0.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 379615 | -15.2 |
| Hexabromobiphenyl | 798898 | 837414 | 4.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 290627 | 16.7 |
| Hexabromobiphenyl | 362541 | 505644 | 39.5 |

* 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 | 7.289 | -0.006 | 34259 | 270.5 | 1 | 7.271 | -0.001 | 36607 | 246.4 |
| Aroclor-1016 | 2 | 7.679 | -0.005 | 108626 | 265.7 | 2 | 7.873 | 0.001 | 78534 | 245.1 |
| Aroclor-1016 | 3 | 7.812 | -0.006 | 53640 | 289.5 | 3 | 8.070 | -0.000 | 34367 | 249.7 |
| Aroclor-1016 | 4 | 8.423 | -0.007 | 33362 | 282.5 | 4 | 8.242 | 0.000 | 18103 | 250.1 |
| Total Col1Ave (4 peaks): | | | | 277.1 | | Total Col2Ave (4 peaks): | | | 247.8 | RPD = 11 |
| Corrected Ave (3 peaks): | | | | 272.9 | | Corrected Ave (3 peaks): | | | 247.0 | RPD = 10 |
| CalAmt %D: | | | | 10.8 | | CalAmt %D: | | | -0.9 | |
| Aroclor-1260 | 1 | 11.058 | -0.005 | 83232 | 273.1 | 1 | 11.662 | -0.000 | 66549 | 249.3 |
| Aroclor-1260 | 2 | 11.373 | -0.004 | 88935 | 282.1 | 2 | 11.927 | 0.001 | 169313 | 252.8 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 234431 | 283.0 | 3 | 12.444 | -0.000 | 45252 | 253.7 |
| Aroclor-1260 | 4 | 12.151 | -0.007 | 115237 | 273.2 | 4 | 12.510 | -0.000 | 116588 | 261.1 |
| Aroclor-1260 | 5 | 12.256 | -0.005 | 49566 | 287.0 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 279.7 | | Total Col2Ave (4 peaks): | | | 254.2 | RPD = 10 |
| Corrected Ave (4 peaks): | | | | 277.8 | | Corrected Ave (3 peaks): | | | 252.0 | RPD = 10 |
| CalAmt %D: | | | | 11.9 | | CalAmt %D: | | | 1.7 | |

Total PCB Area Col1 (5.936 - 13.808) = 2334196 Col1 Total PCB = 0.6 ppm*

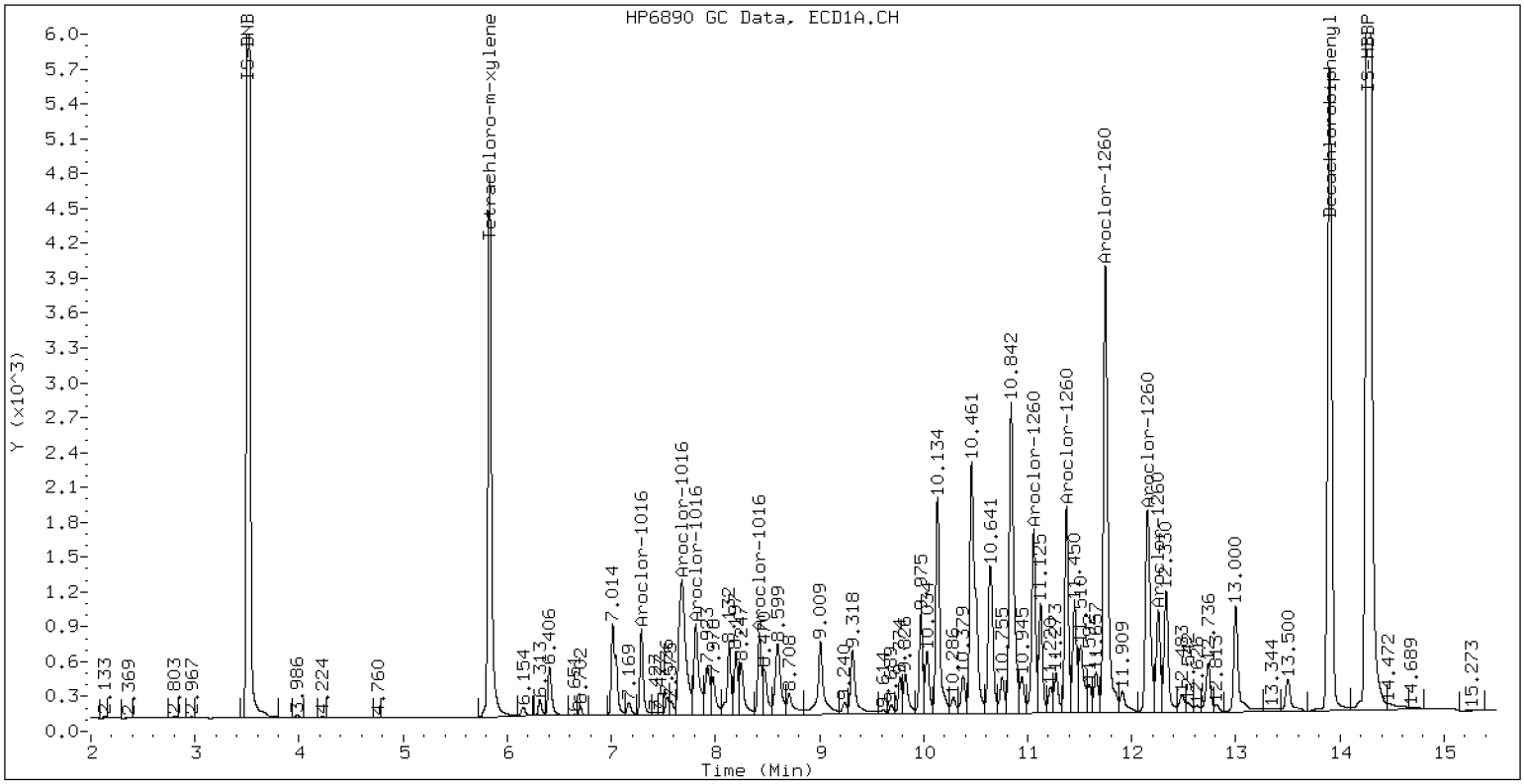
Total PCB Area Col2 (5.807 - 14.028) = 1550493 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

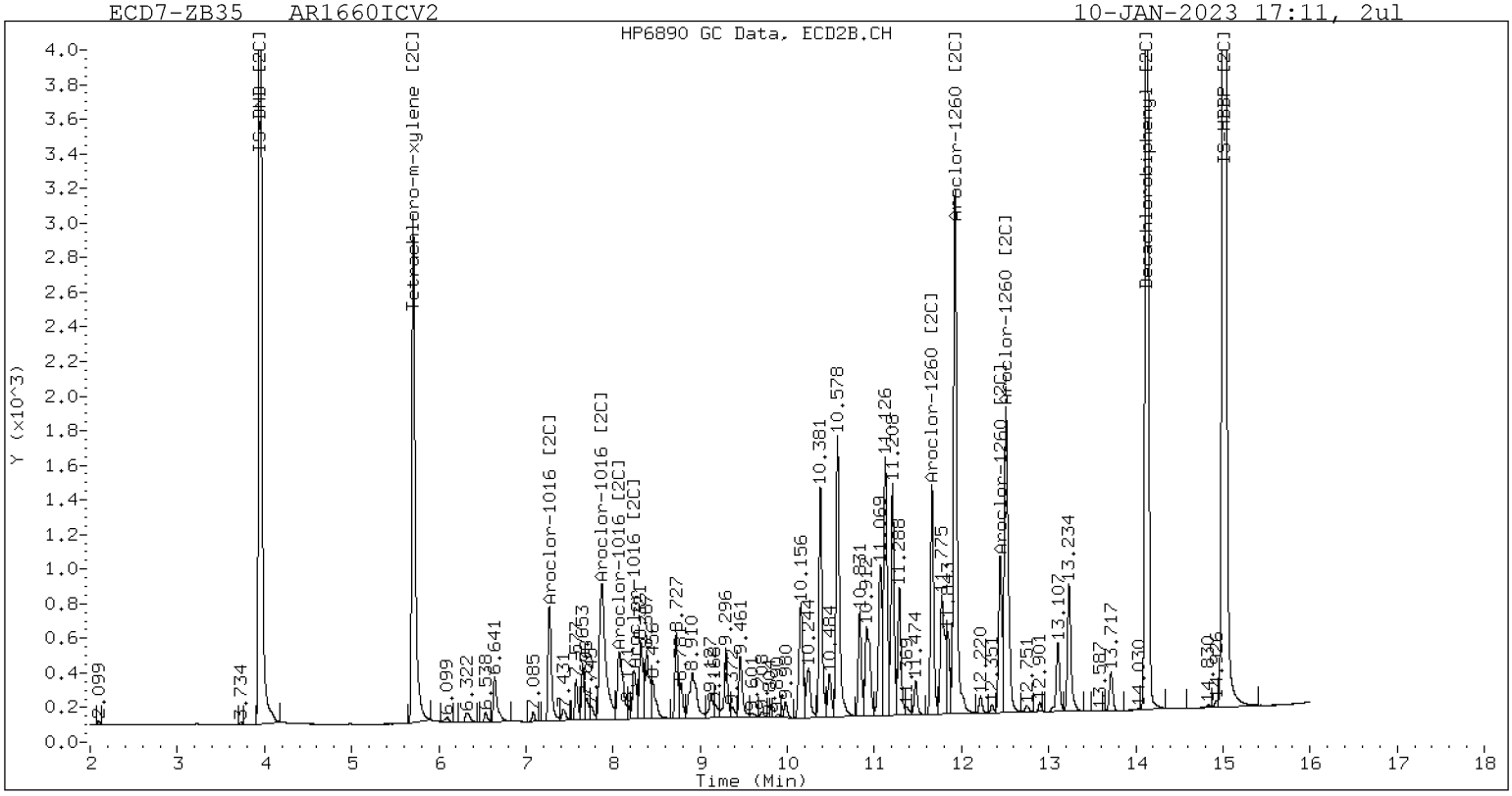
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 10-JAN-2023 17:11, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 10-JAN-2023 17:11, 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: | 22L0329 |
| 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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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*

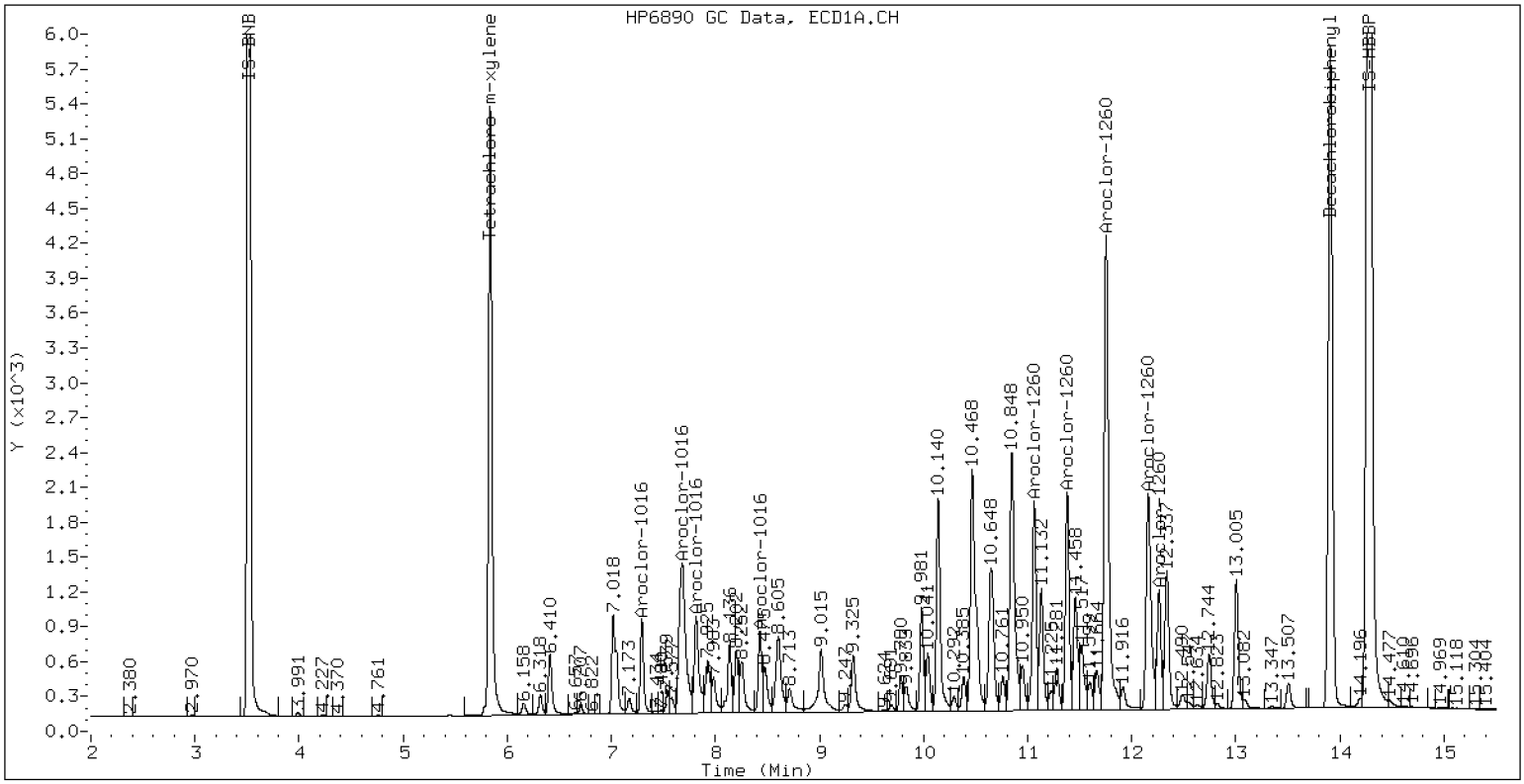
Total PCB Area Col2 (5.936 - 13.808) = 1275603 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

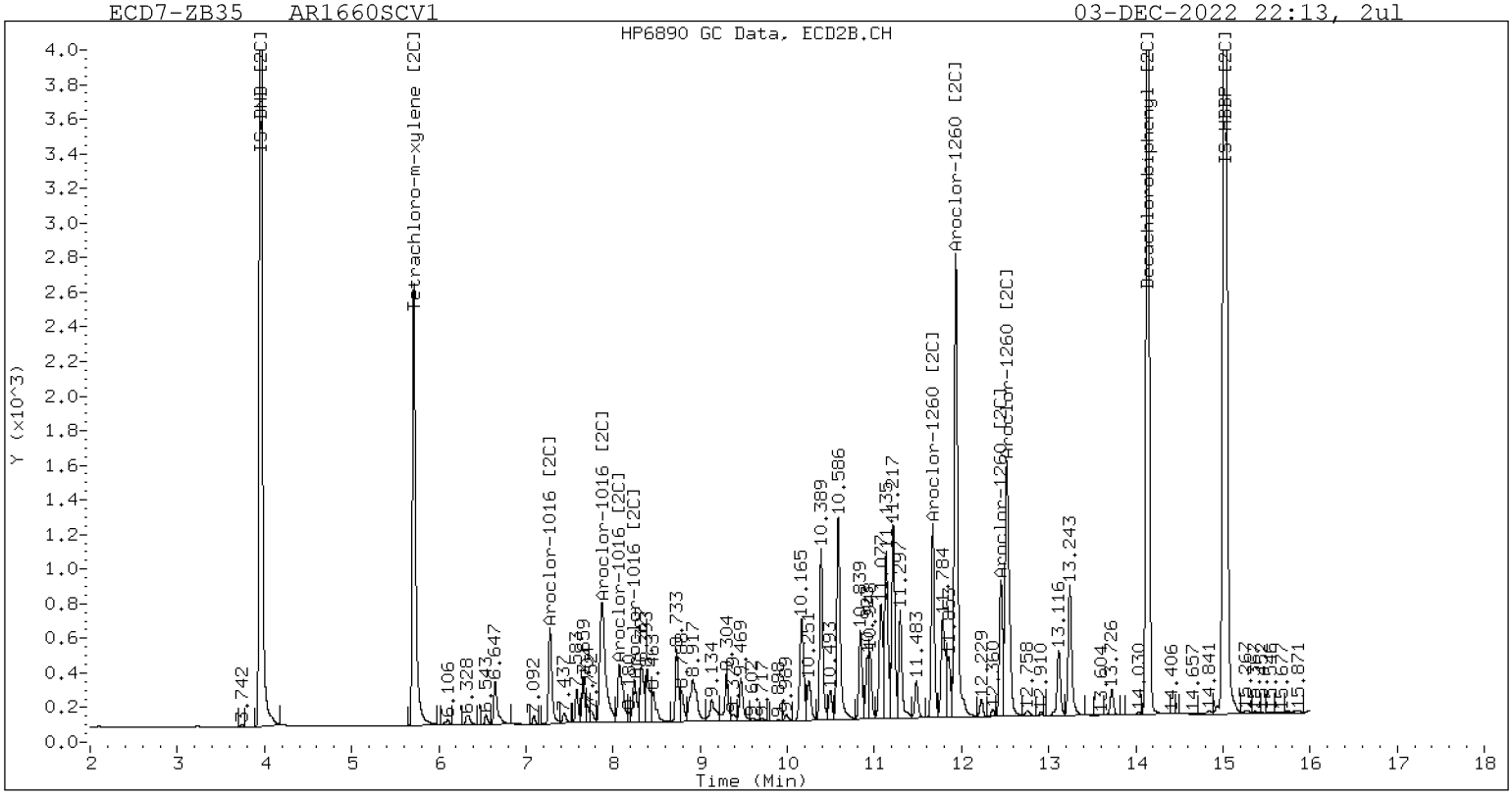
# PCB Dual Column Chromatograms

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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SECOND-SOURCE
# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | ZB5 Col RT | Shift | Area | Amount | Peak# | ZB35 Col 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*

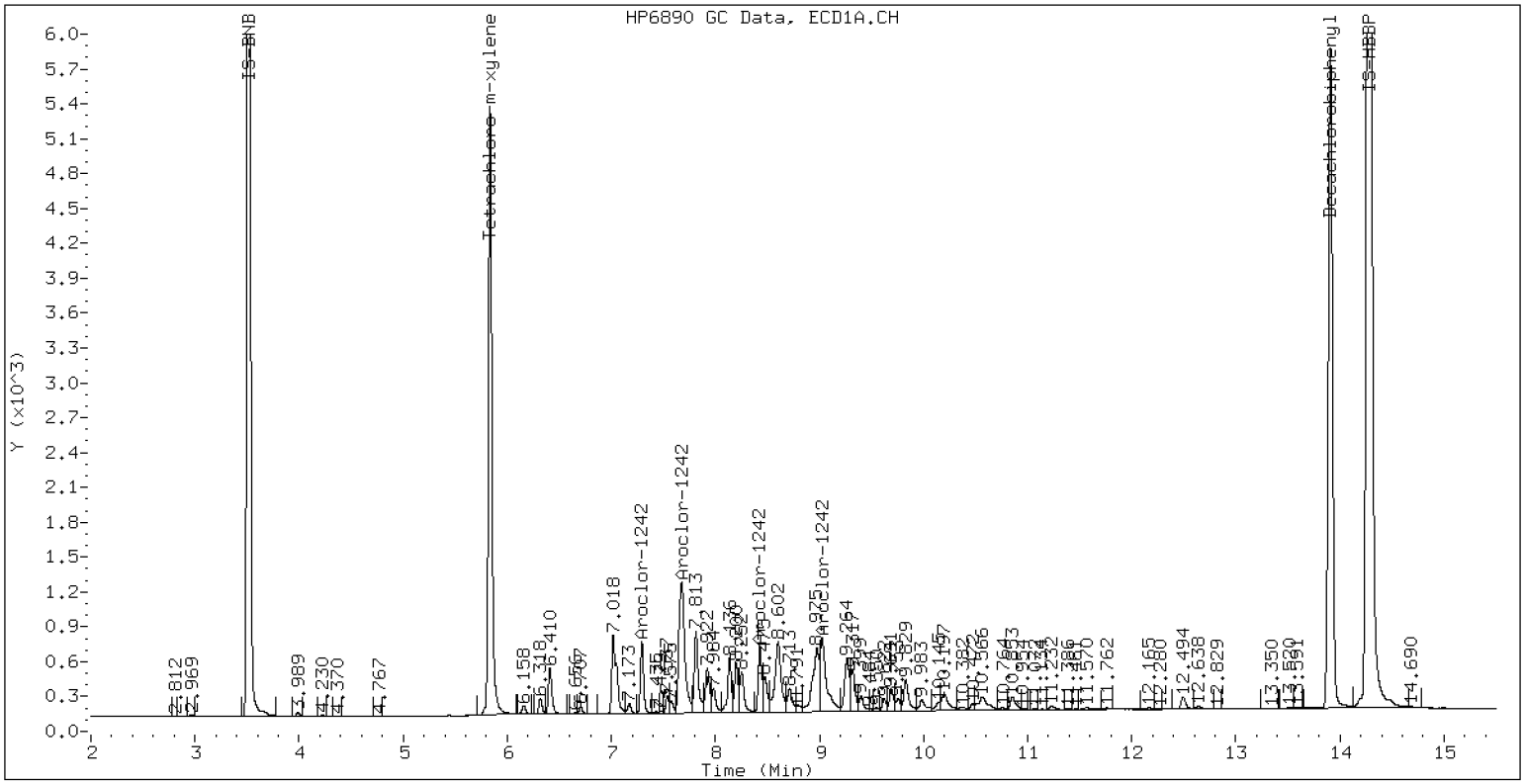
Total PCB Area Col2 (5.936 - 13.808) = 398143 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

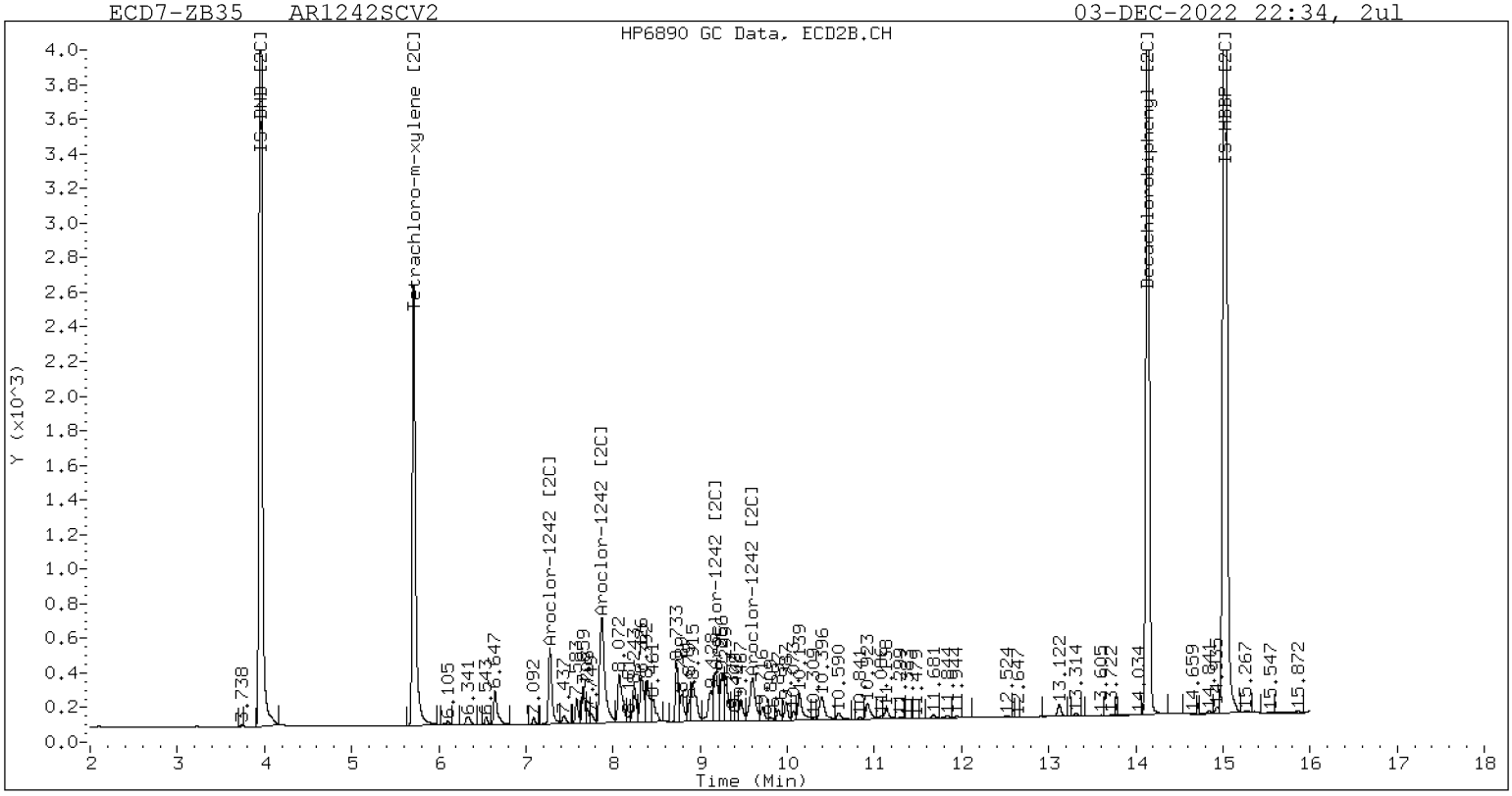
# PCB Dual Column Chromatograms

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: | 22L0329 |
| 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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | 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*

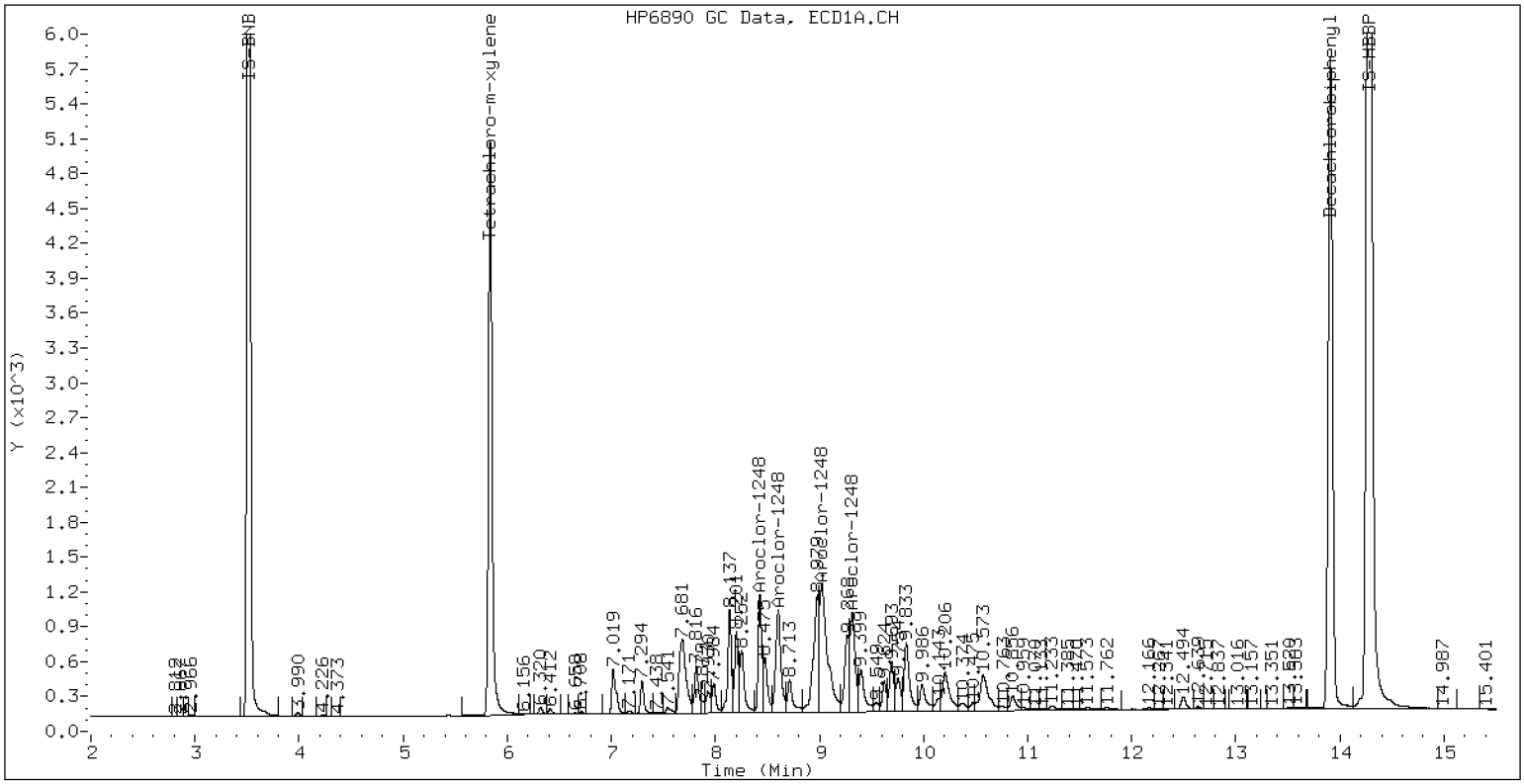
Total PCB Area Col2 (5.936 - 13.808) = 508870 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

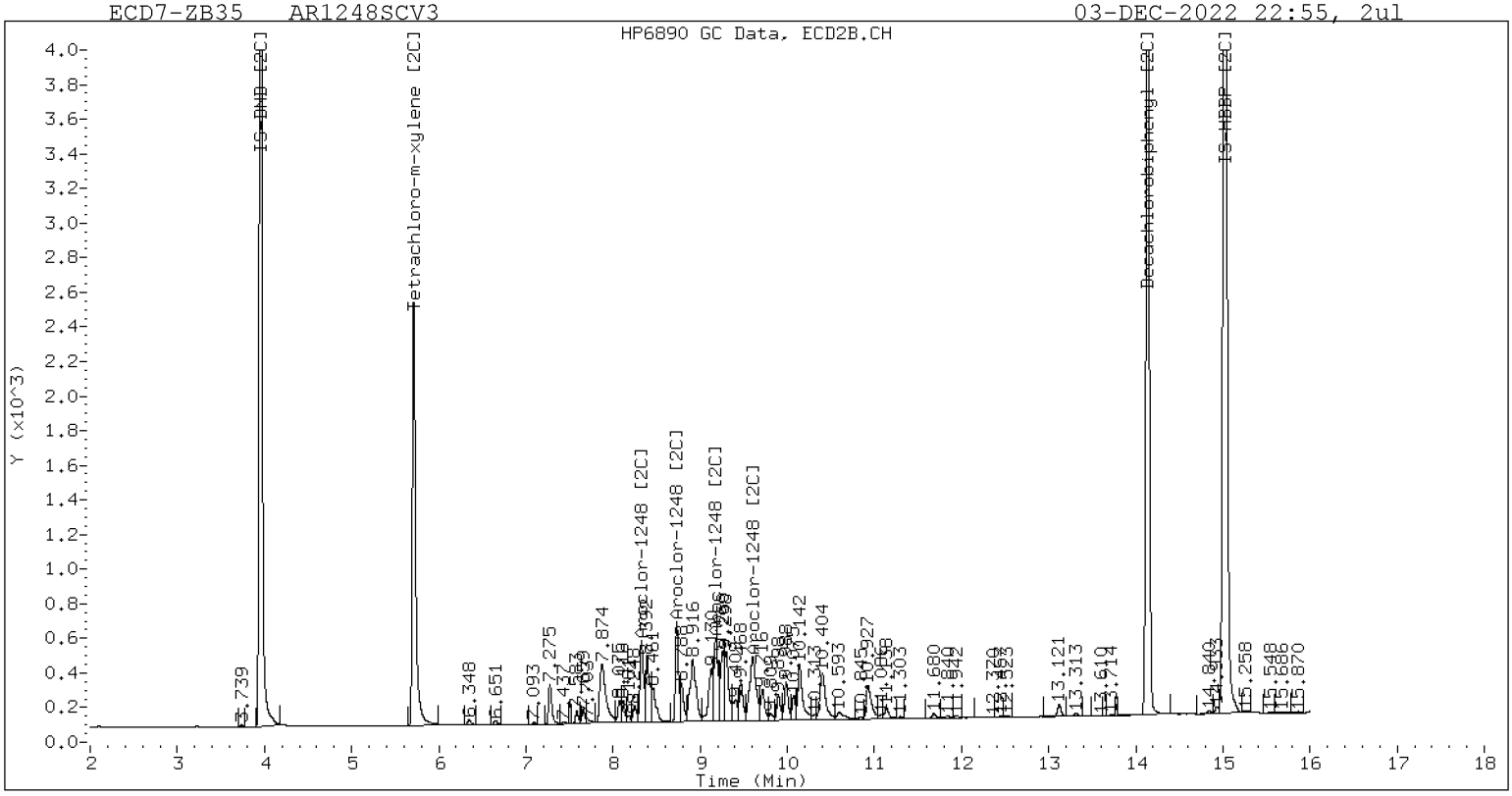
# PCB Dual Column Chromatograms

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: | 22L0329 |
| 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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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%)

| Aroclor | Peak# | RT | Shift | Area | Amount | Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| | ZB5 Col | | | | | ZB35 Col | | | | |
| 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*

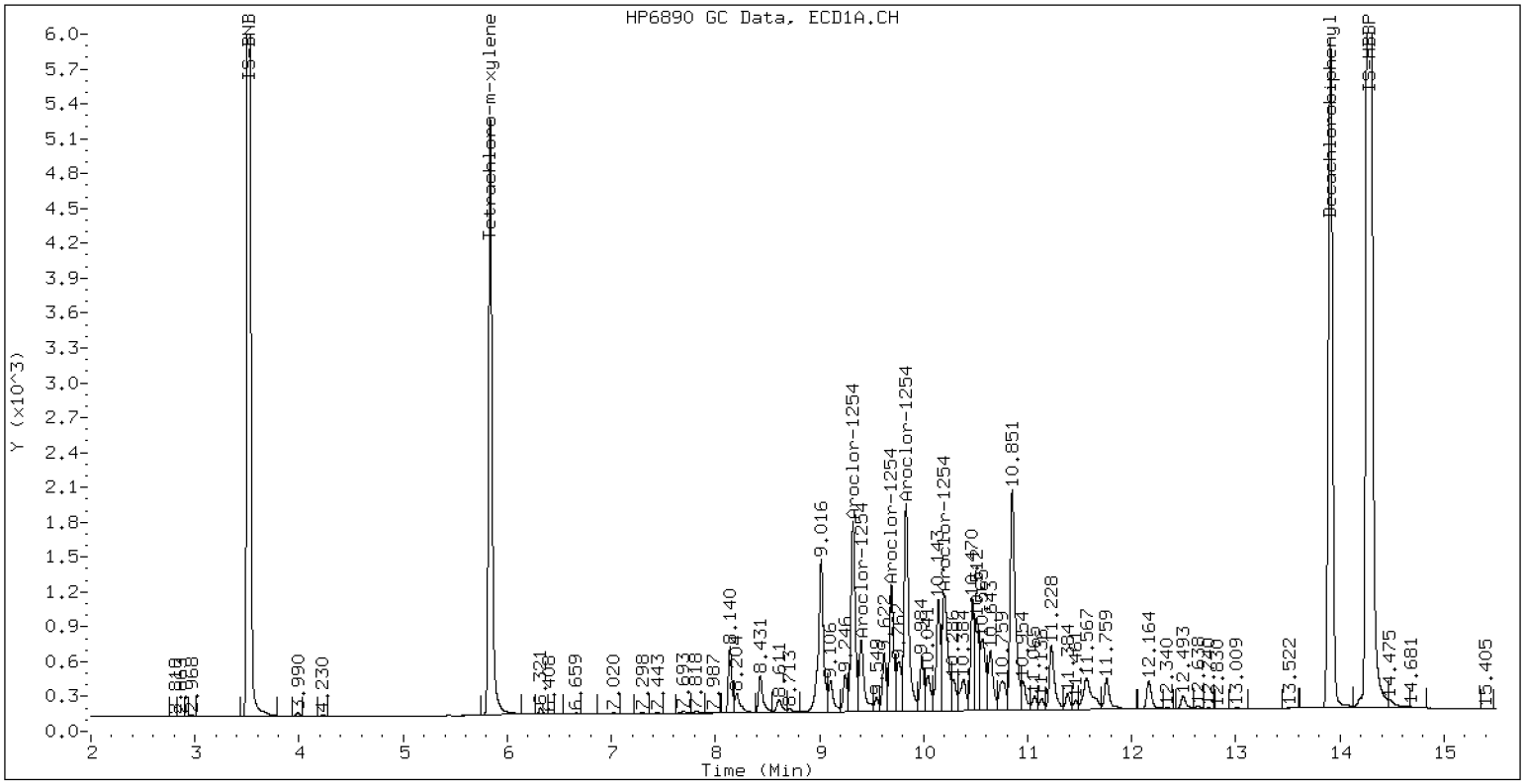
Total PCB Area Col2 (5.936 - 13.808) = 664781 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

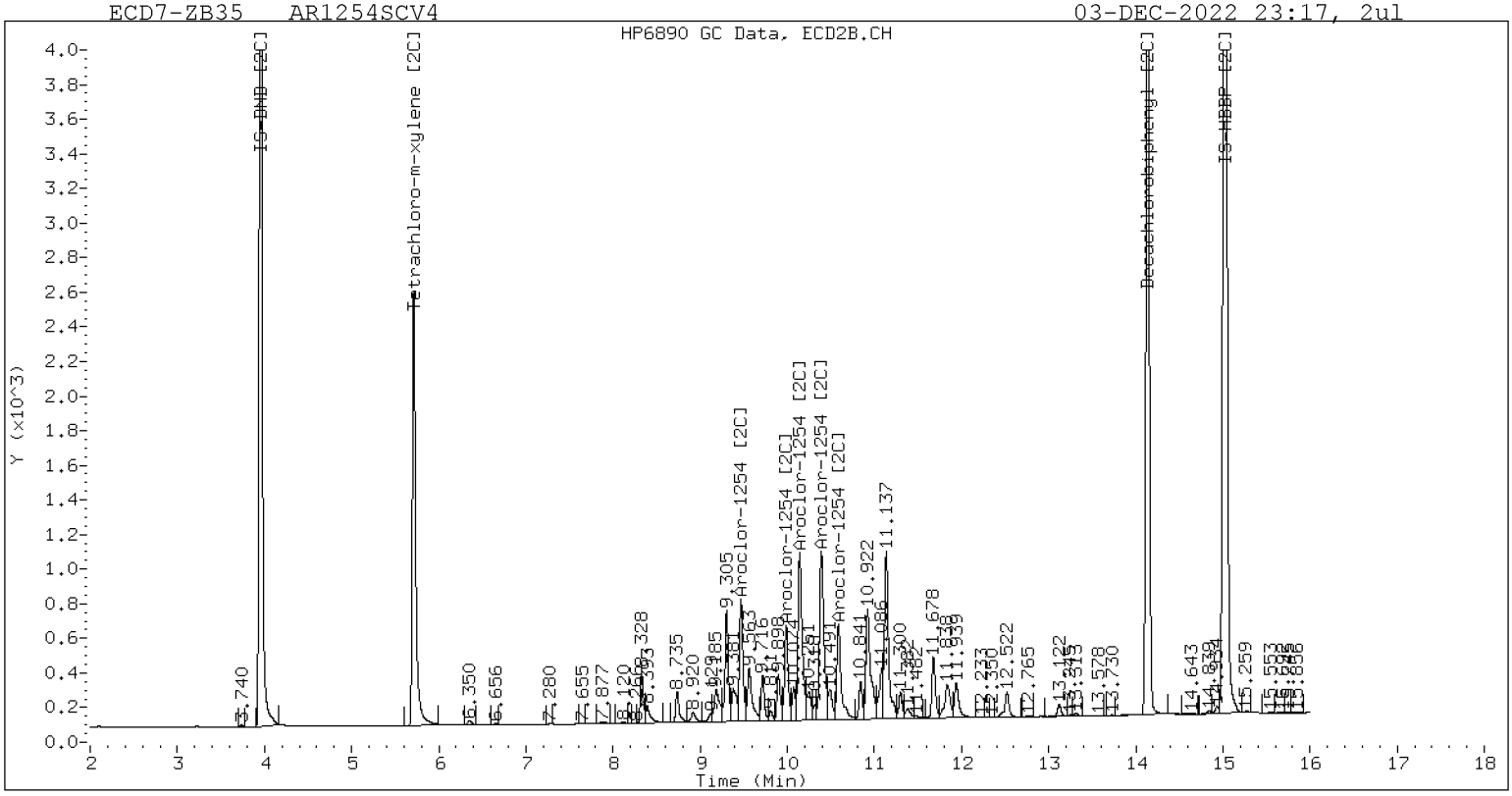
# PCB Dual Column Chromatograms

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: | 22L0329 |
| 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 |
| Aroclor 1262 | A | 500.00 | 469 | 0.0371038 | 0.0347825 | | -6.2 | +/-20 |
| Aroclor 1262 [2C] | A | 500.00 | 464 | 0.0656640 | 0.0610321 | | -7.1 | +/-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 RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 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*

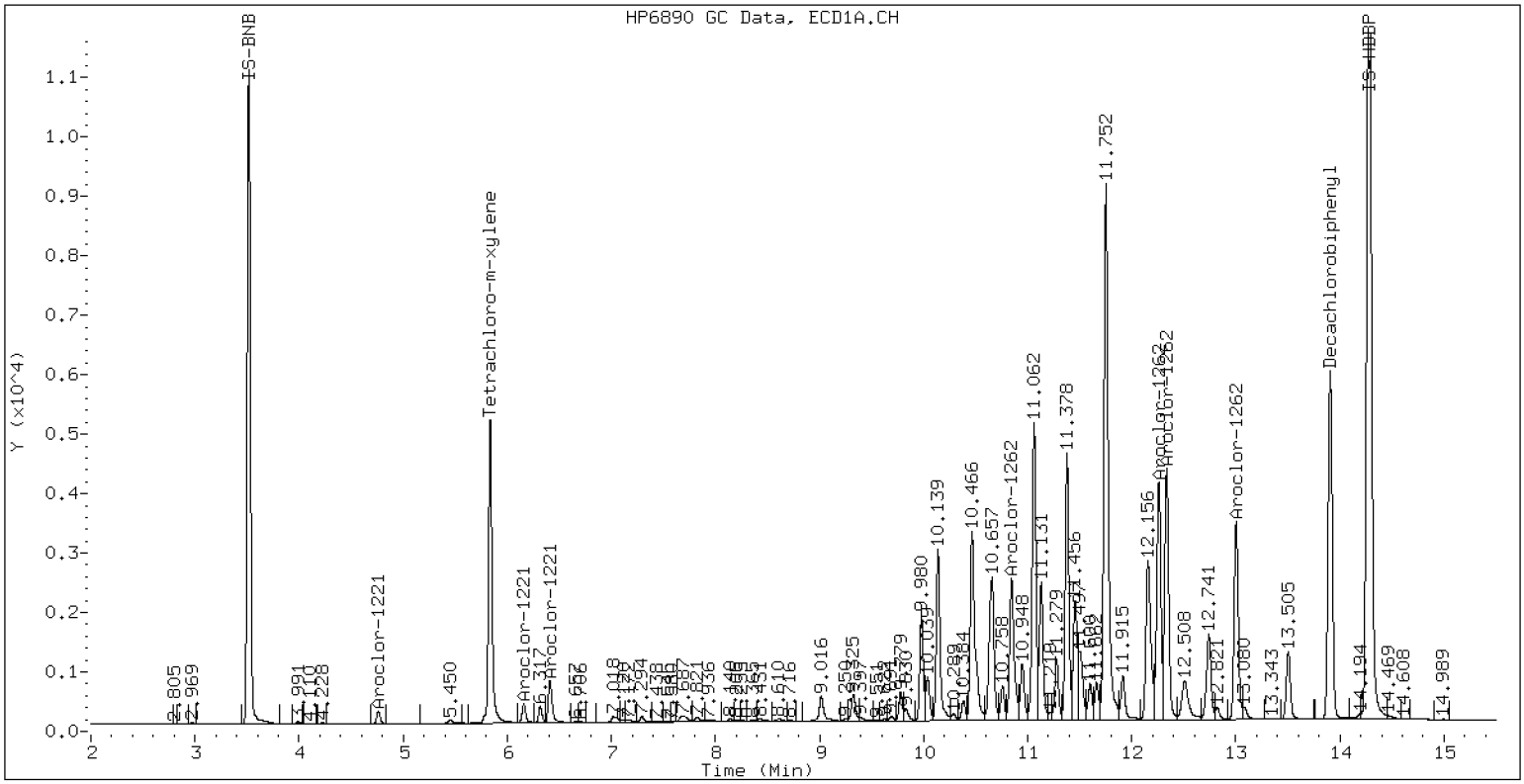
Total PCB Area Col2 (5.936 - 13.808) = 2063978 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

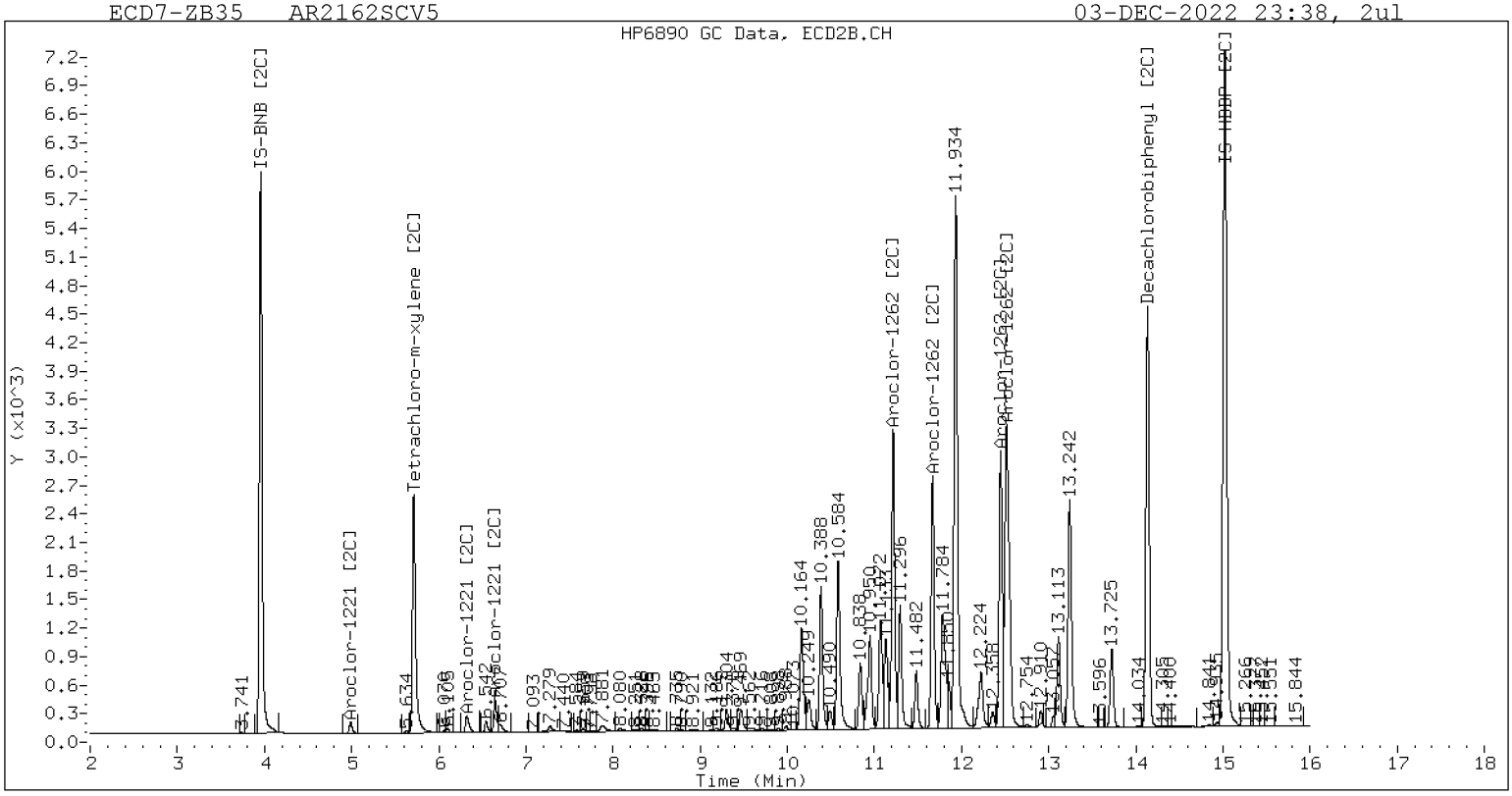
# PCB Dual Column Chromatograms

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: | 22L0329 |
| 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 |
| Aroclor 1268 | A | 250.00 | 231 | 0.1462909 | 0.1351224 | | -7.5 | +/-20 |
| Aroclor 1268 [2C] | A | 250.00 | 228 | 0.1941199 | 0.1796657 | | -8.9 | +/-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 RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 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*

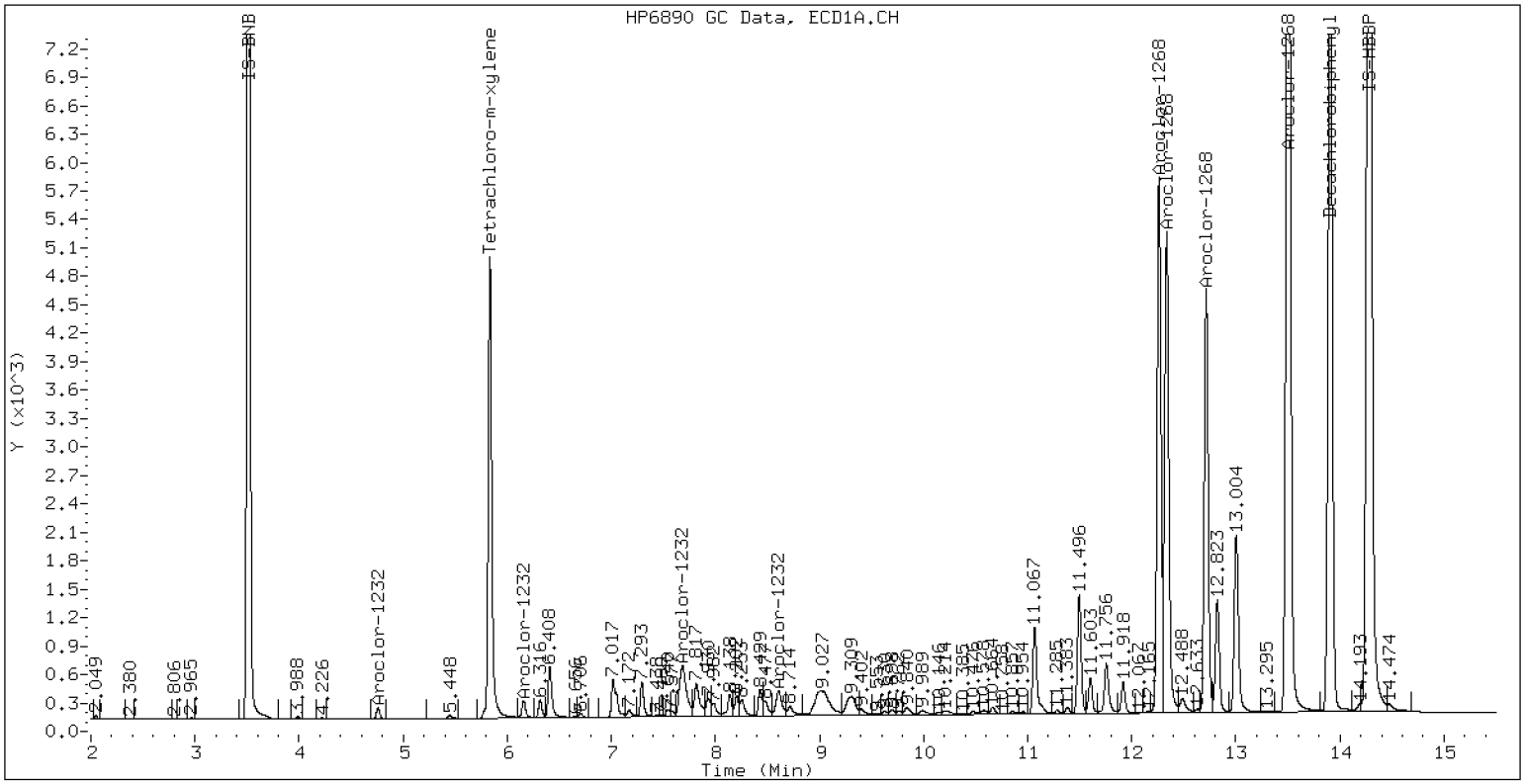
Total PCB Area Col2 (5.936 - 13.808) = 1423323 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

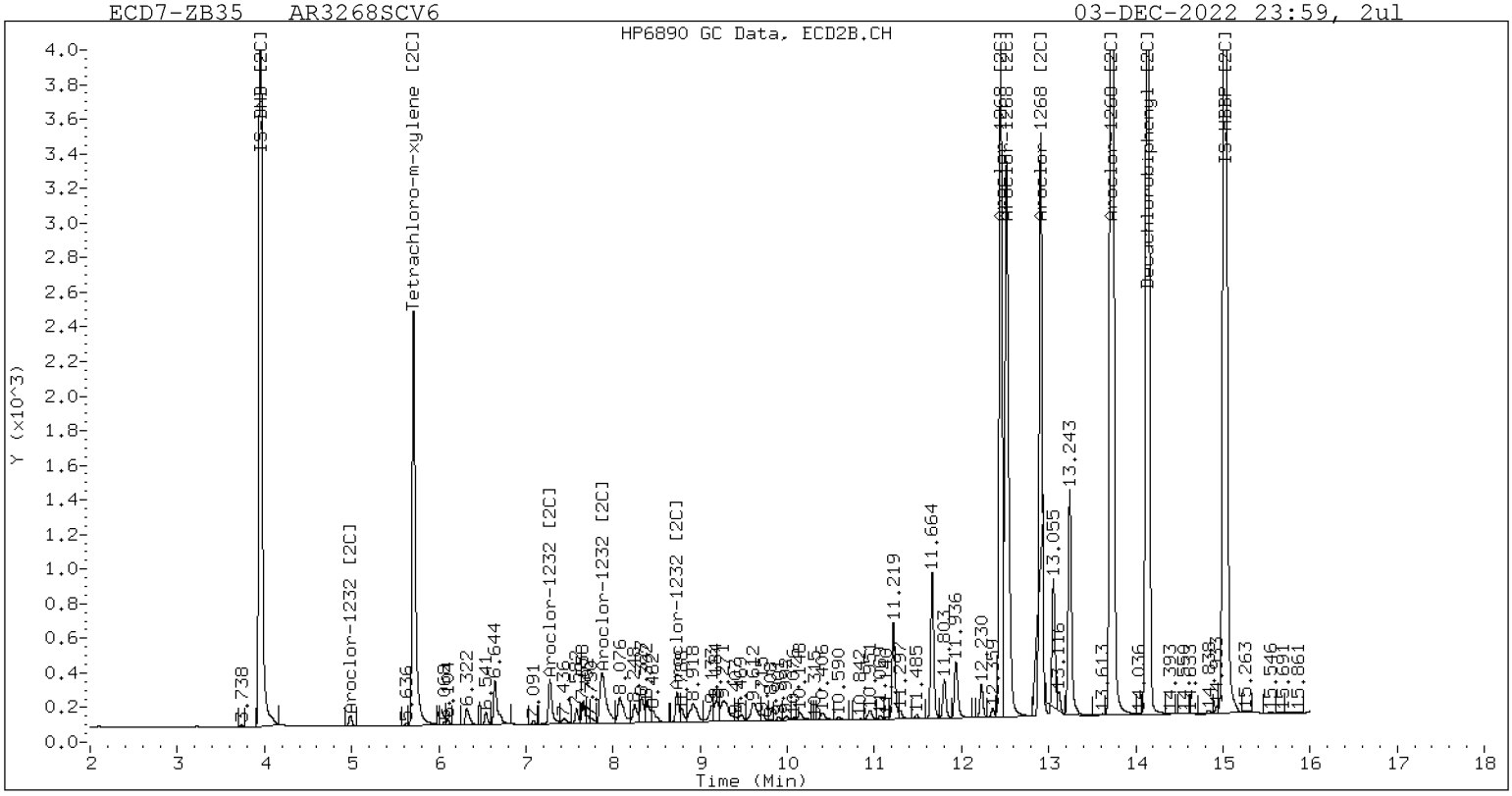
# PCB Dual Column Chromatograms

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**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072339ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/07/23 |
| Lab Sample ID: | SLA0099-CCV5 | Injection Time: | 22:58 |
| Sequence Name: | AR1254CCV5 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1254 | A | 250.00 | 275 | 0.0576965 | 0.0627122 | | 10.2 | +/-20 |
| Aroclor-1254 (1) | A | 250.00 | 270 | | 0.0759843 | | | |
| Aroclor-1254 (2) | A | 250.00 | 304 | | 0.0333343 | | | |
| Aroclor-1254 (3) | A | 250.00 | 270 | | 0.0479707 | | | |
| Aroclor-1254 (4) | A | 250.00 | 270 | | 0.0937486 | | | |
| Aroclor-1254 (5) | A | 250.00 | 263 | | 0.0625232 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 273 | 0.0638047 | 0.0698045 | | 9.2 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 269 | | 0.0555609 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 273 | | 0.0453233 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 276 | | 0.0982832 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 275 | | 0.1014152 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 272 | | 0.0484401 | | | |
| Decachlorobiphenyl | A | 40.000 | 40.0 | 0.7333327 | 0.7325221 | | 0.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 37.8 | 1.1336710 | 1.0723730 | | -5.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.9 | 1.1358180 | 1.1909160 | | 4.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.2 | 1.0966080 | 1.0193820 | | -7.0 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230107.b/01072339ECD7.D
Data file 2: /230107.b/230107.b/01072339ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 07-JAN-2023 22:58
Report Date: 01/11/2023 15:12
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | 0.000 | 235054 | 5.710 | 0.001 | 160653 | 37.8 | 37.2 | 1.7 | Tetrachloro-m-xylene |
| 13.904 | 0.000 | 264728 | 14.129 | 0.001 | 280503 | 40.0 | 41.9 | 4.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 438381 | -2.1 |
| Hexabromobiphenyl | 798898 | 722785 | -9.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 315197 | 26.5 |
| Hexabromobiphenyl | 362541 | 471071 | 29.9 |

* 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-1254 | 1 | 9.316 | 0.005 | 104094 | 269.7 | 1 | 9.462 | 0.001 | 54727 | 269.3 |
| Aroclor-1254 | 2 | 9.396 | 0.008 | 45666 | 304.2 | 2 | 9.982 | 0.002 | 44643 | 273.2 |
| Aroclor-1254 | 3 | 9.687 | 0.008 | 65717 | 269.6 | 3 | 10.135 | 0.002 | 96808 | 275.7 |
| Aroclor-1254 | 4 | 9.825 | 0.010 | 128430 | 270.3 | 4 | 10.384 | 0.001 | 99893 | 274.6 |
| Aroclor-1254 | 5 | 10.195 | 0.028 | 85653 | 262.9 | 5 | 10.579 | 0.001 | 47713 | 272.0 |

Total Col1Ave (5 peaks): 275.3 Total Col2Ave (5 peaks): 273.0 RPD = 1

Corrected Ave (4 peaks): 268.1 Corrected Ave (4 peaks): 272.3 RPD = 2

CalAmt %D: 10.1 CalAmt %D: 9.2

Total PCB Area Col1 (5.933 - 13.804) = 1376809 Col1 Total PCB = 0.3 ppm*

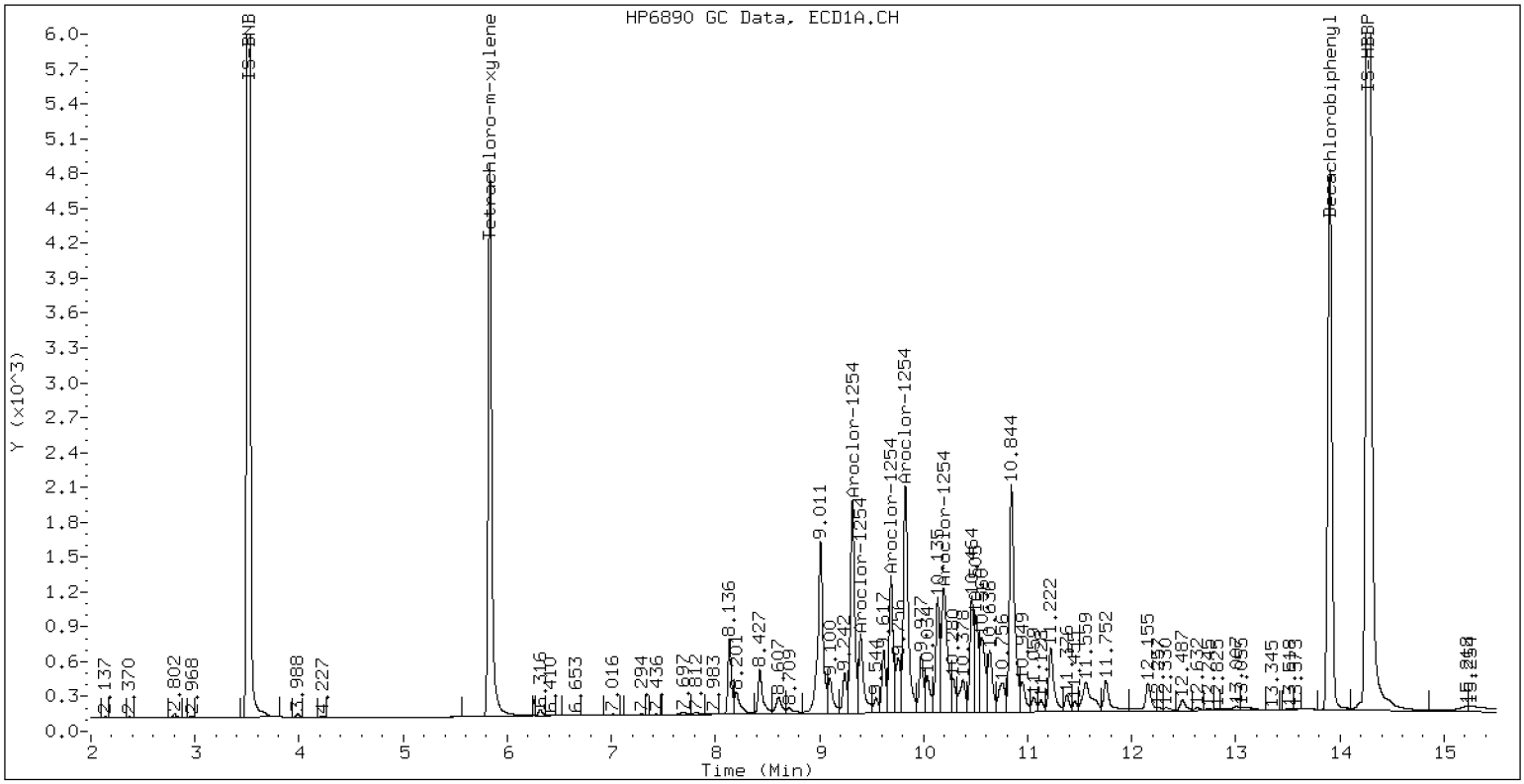
Total PCB Area Col2 (5.809 - 14.028) = 935532 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

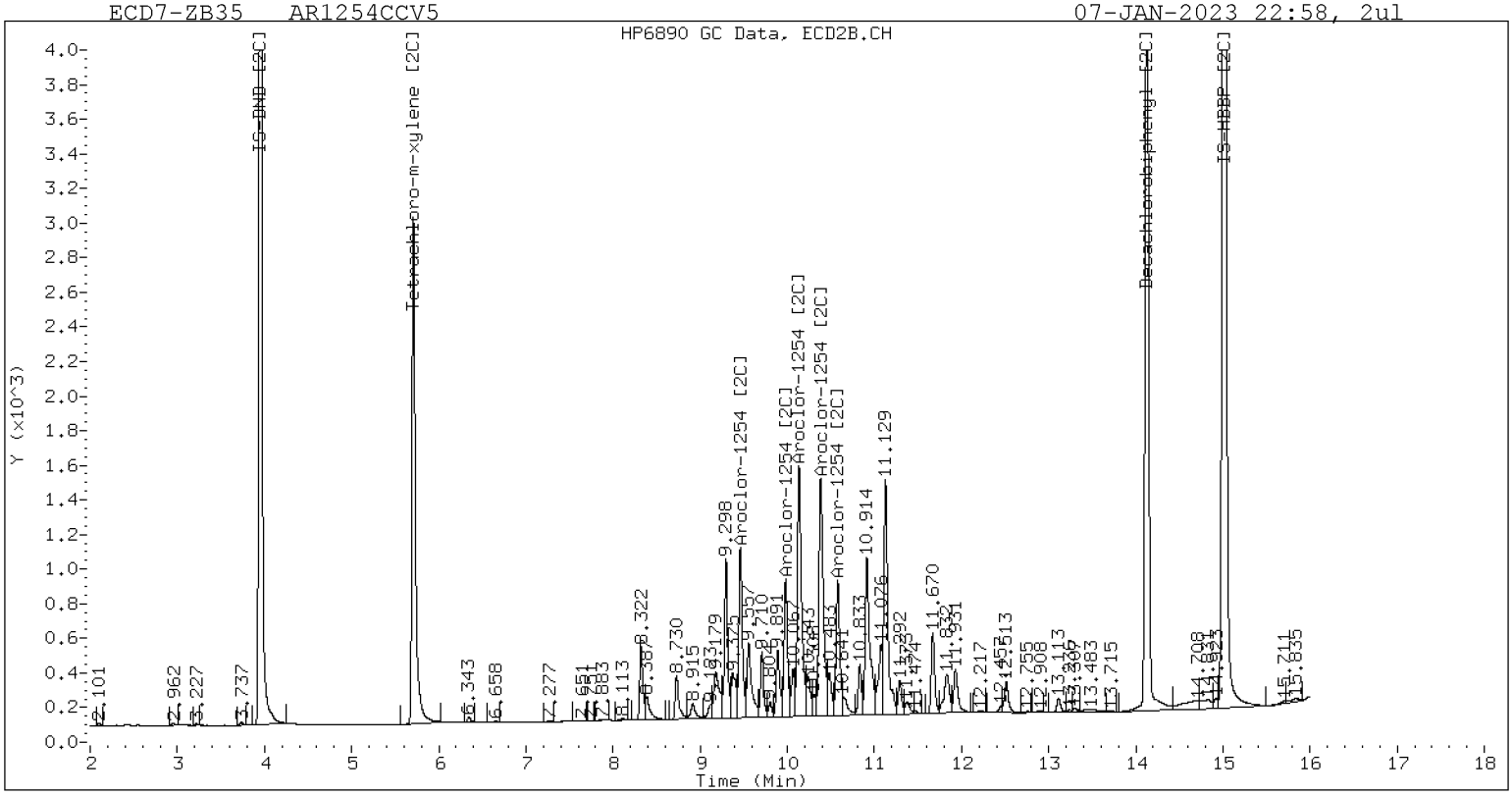
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 07-JAN-2023 22:58, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 07-JAN-2023 22:58, 2ul

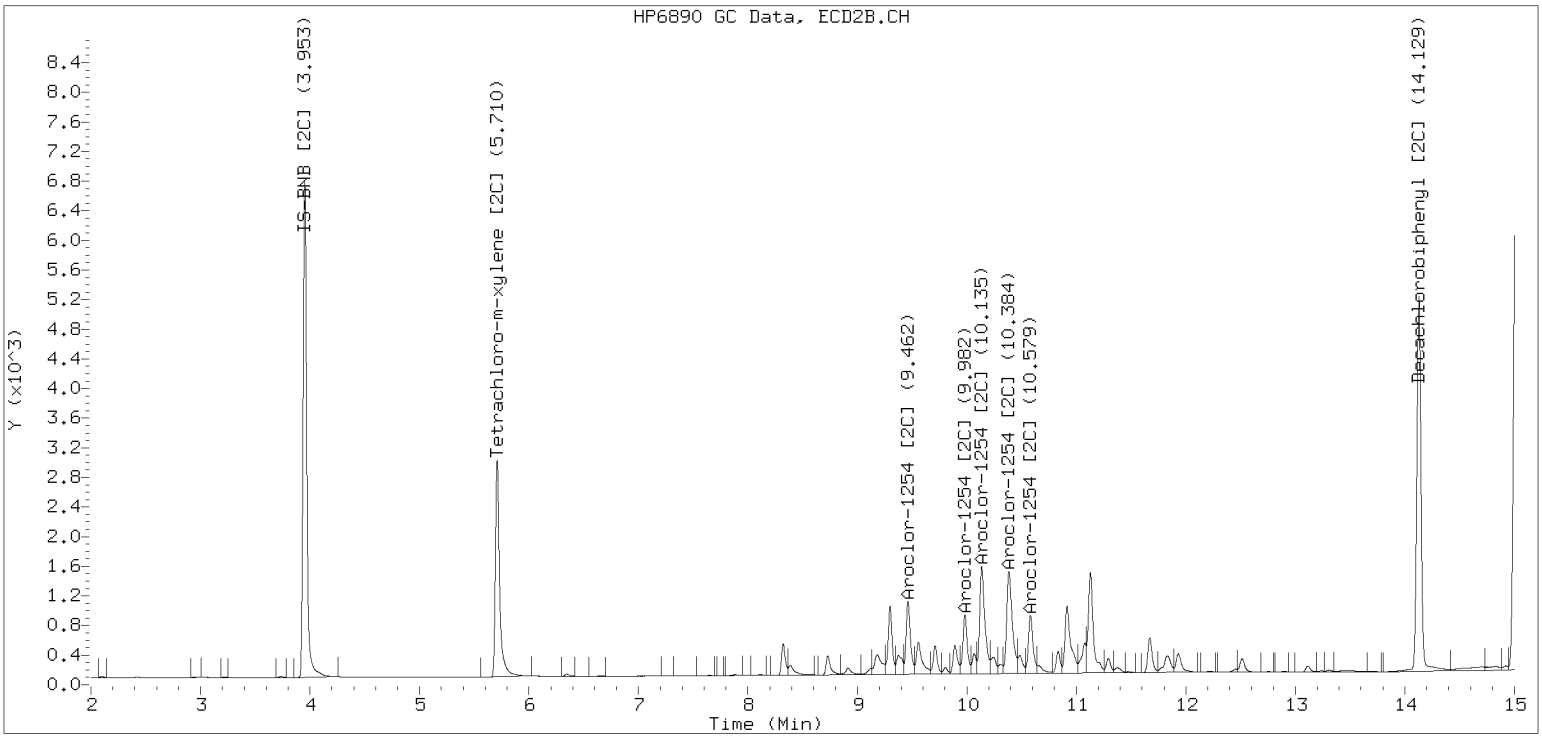



ZB-35 Manual Integration: YES

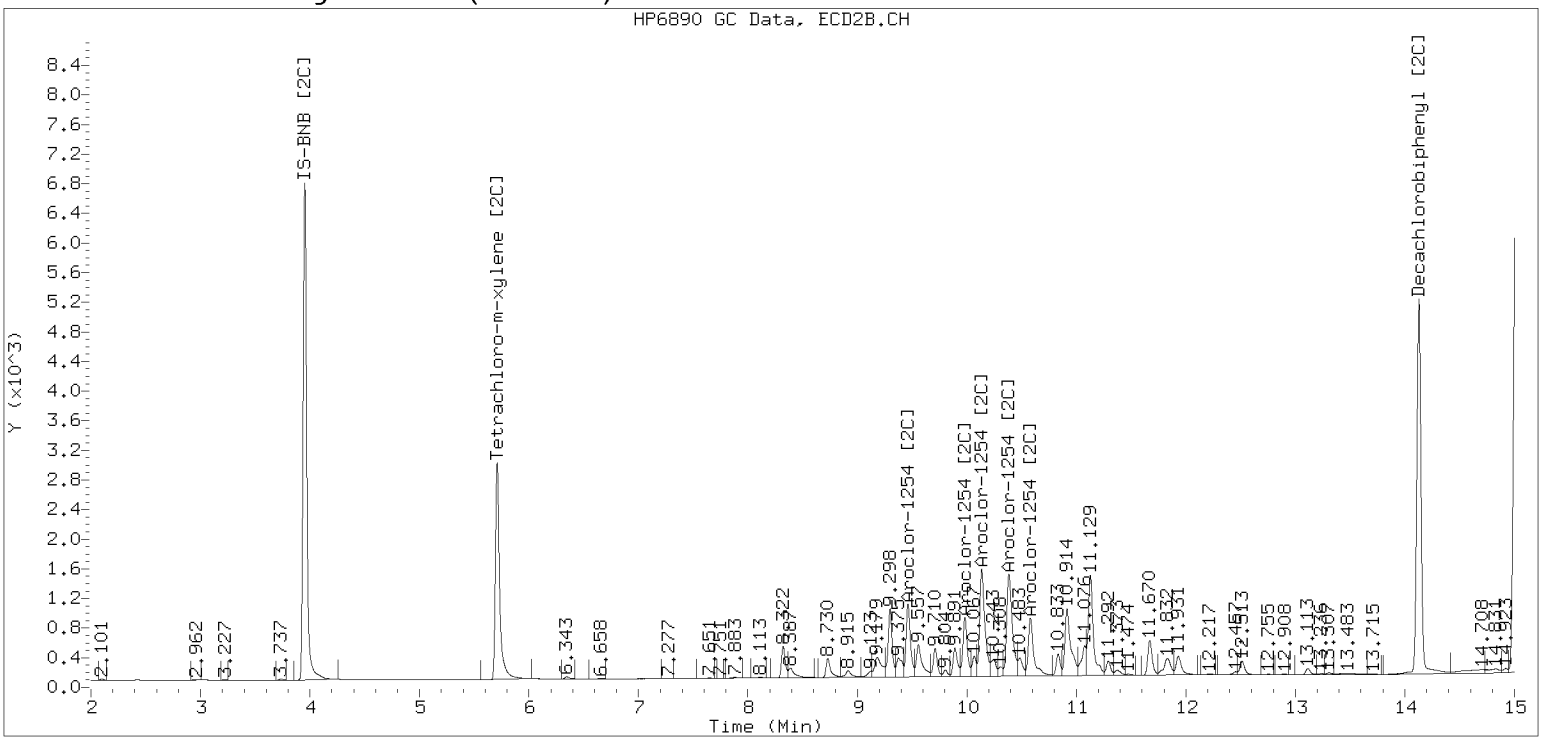
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072339ECD7.D  Injection Date: 07-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072340ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/07/23 |
| Lab Sample ID: | SLA0099-CCV6 | Injection Time: | 23:19 |
| 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 | 267 | 0.0441939 | 0.0468508 | | 6.8 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 266 | 0.0266860 | 0.0284225 | | 6.4 | |
| Aroclor-1016 (2) | A | 250.00 | 258 | 0.0861572 | 0.0890849 | | 3.2 | |
| Aroclor-1016 (3) | A | 250.00 | 278 | 0.0390425 | 0.0433875 | | 11.2 | |
| Aroclor-1016 (4) | A | 250.00 | 266 | 0.0248899 | 0.0265081 | | 6.4 | |
| Aroclor 1016 [2C] | A | 250.00 | 247 | 0.0467310 | 0.0463983 | | -1.1 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 248 | 0.0409030 | 0.0405414 | | -0.8 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 250 | 0.0882154 | 0.0884104 | | 0.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 243 | 0.0378846 | 0.0368692 | | -2.8 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 248 | 0.0199212 | 0.0197722 | | -0.8 | |
| Aroclor 1260 | A | 250.00 | 269 | 0.0390342 | 0.0420910 | | 7.6 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 267 | 0.0291201 | 0.0311492 | | 6.8 | |
| Aroclor-1260 (2) | A | 250.00 | 270 | 0.0301181 | 0.0325299 | | 8.0 | |
| Aroclor-1260 (3) | A | 250.00 | 271 | 0.0791351 | 0.0858796 | | 8.4 | |
| Aroclor-1260 (4) | A | 250.00 | 267 | 0.0403003 | 0.0430520 | | 6.8 | |
| Aroclor-1260 (5) | A | 250.00 | 270 | 0.0164974 | 0.0178445 | | 8.0 | |
| Aroclor 1260 [2C] | A | 250.00 | 260 | 0.0617619 | 0.0648188 | | 3.8 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 256 | 0.0422283 | 0.0432833 | | 2.4 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 265 | 0.1059643 | 0.1124237 | | 6.0 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 251 | 0.0282173 | 0.0283536 | | 0.4 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 266 | 0.0706376 | 0.0752145 | | 6.4 | |
| Decachlorobiphenyl | A | 40.000 | 41.6 | 0.7333327 | 0.7623524 | | 4.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.8 | 1.1336710 | 1.1834330 | | 4.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.6 | 1.1358180 | 1.1824720 | | 4.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.9 | 1.0966080 | 1.1225350 | | 2.3 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230107.b/01072340ECD7.D
Data file 2: /230107.b/230107.b/01072340ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 07-JAN-2023 23:19
Report Date: 01/11/2023 15:12
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.002 | 267644 | 5.708 | -0.001 | 180131 | 41.8 | 40.9 | 2.0 | Tetrachloro-m-xylene |
| 13.904 | -0.000 | 352296 | 14.128 | 0.000 | 319890 | 41.6 | 41.6 | 0.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 452318 | 1.0 |
| Hexabromobiphenyl | 798898 | 924234 | 15.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 320936 | 28.8 |
| Hexabromobiphenyl | 362541 | 541053 | 49.2 |

* 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-1016 | 1 | 7.289 | -0.001 | 40175 | 266.3 | 1 | 7.271 | -0.001 | 40660 | 247.8 |
| Aroclor-1016 | 2 | 7.679 | -0.001 | 125921 | 258.5 | 2 | 7.872 | -0.001 | 88669 | 250.6 |
| Aroclor-1016 | 3 | 7.812 | -0.001 | 61328 | 277.8 | 3 | 8.071 | 0.000 | 36977 | 243.3 |
| Aroclor-1016 | 4 | 8.424 | -0.001 | 37469 | 266.3 | 4 | 8.242 | -0.001 | 19830 | 248.1 |
| Total Col1Ave (4 peaks): | | | | 267.2 | | Total Col2Ave (4 peaks): | | | 247.4 | RPD = 8 |
| Corrected Ave (3 peaks): | | | | 263.7 | | Corrected Ave (3 peaks): | | | 246.4 | RPD = 7 |
| CalAmt %D: | | | | 6.9 | | CalAmt %D: | | | -1.0 | |
| Aroclor-1260 | 1 | 11.059 | -0.001 | 89966 | 267.4 | 1 | 11.663 | 0.000 | 73183 | 256.2 |
| Aroclor-1260 | 2 | 11.375 | -0.001 | 93954 | 270.0 | 2 | 11.928 | -0.001 | 190085 | 265.2 |
| Aroclor-1260 | 3 | 11.749 | -0.001 | 248040 | 271.3 | 3 | 12.446 | 0.001 | 47940 | 251.2 |
| Aroclor-1260 | 4 | 12.154 | 0.001 | 124344 | 267.1 | 4 | 12.511 | -0.000 | 127172 | 266.2 |
| Aroclor-1260 | 5 | 12.257 | 0.000 | 51539 | 270.4 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 269.2 | | Total Col2Ave (4 peaks): | | | 259.7 | RPD = 4 |
| Corrected Ave (4 peaks): | | | | 268.7 | | Corrected Ave (3 peaks): | | | 257.6 | RPD = 4 |
| CalAmt %D: | | | | 7.7 | | CalAmt %D: | | | 3.9 | |

Total PCB Area Col1 (5.933 - 13.804) = 2512208 Col1 Total PCB = 0.6 ppm*

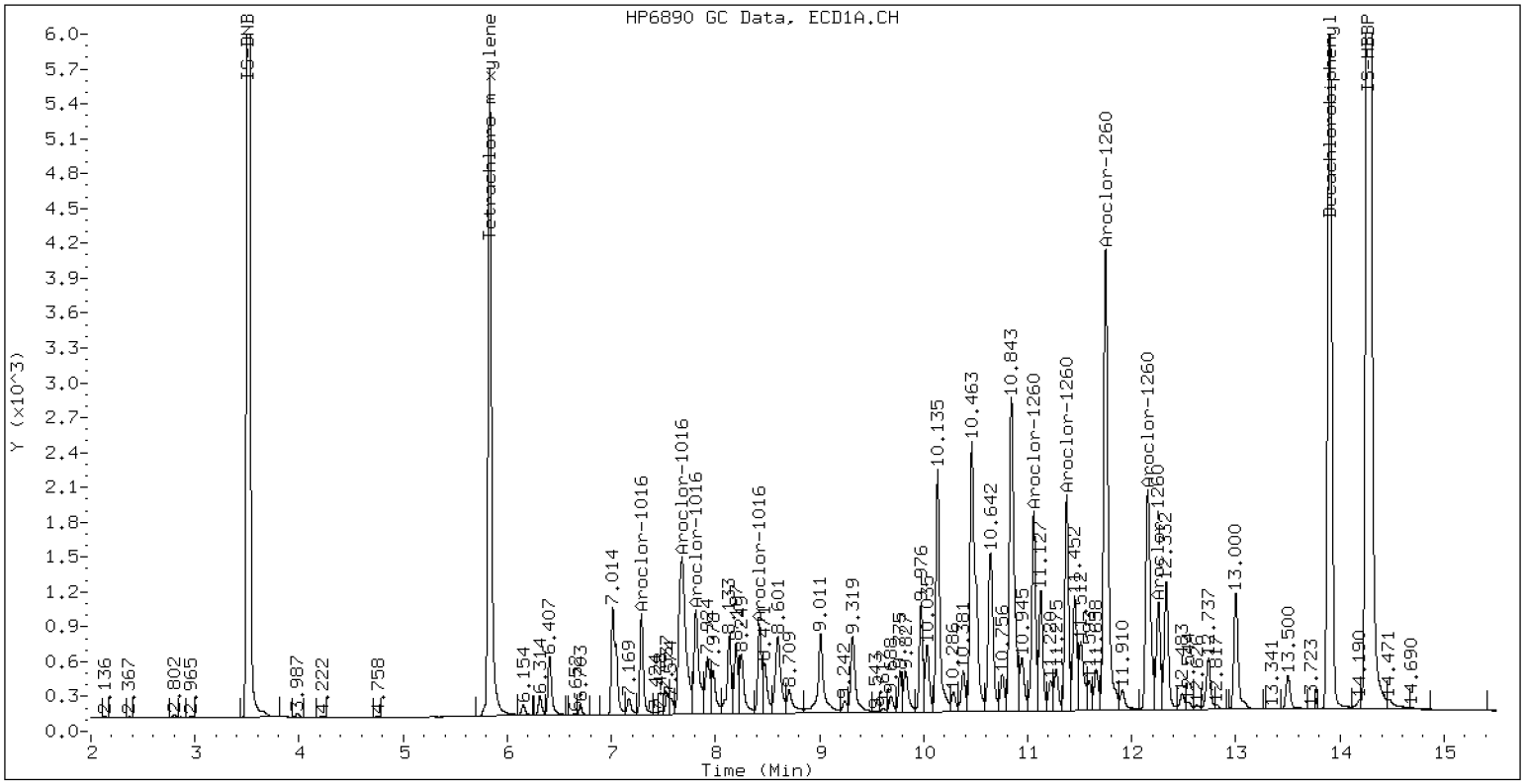
Total PCB Area Col2 (5.809 - 14.028) = 1697698 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

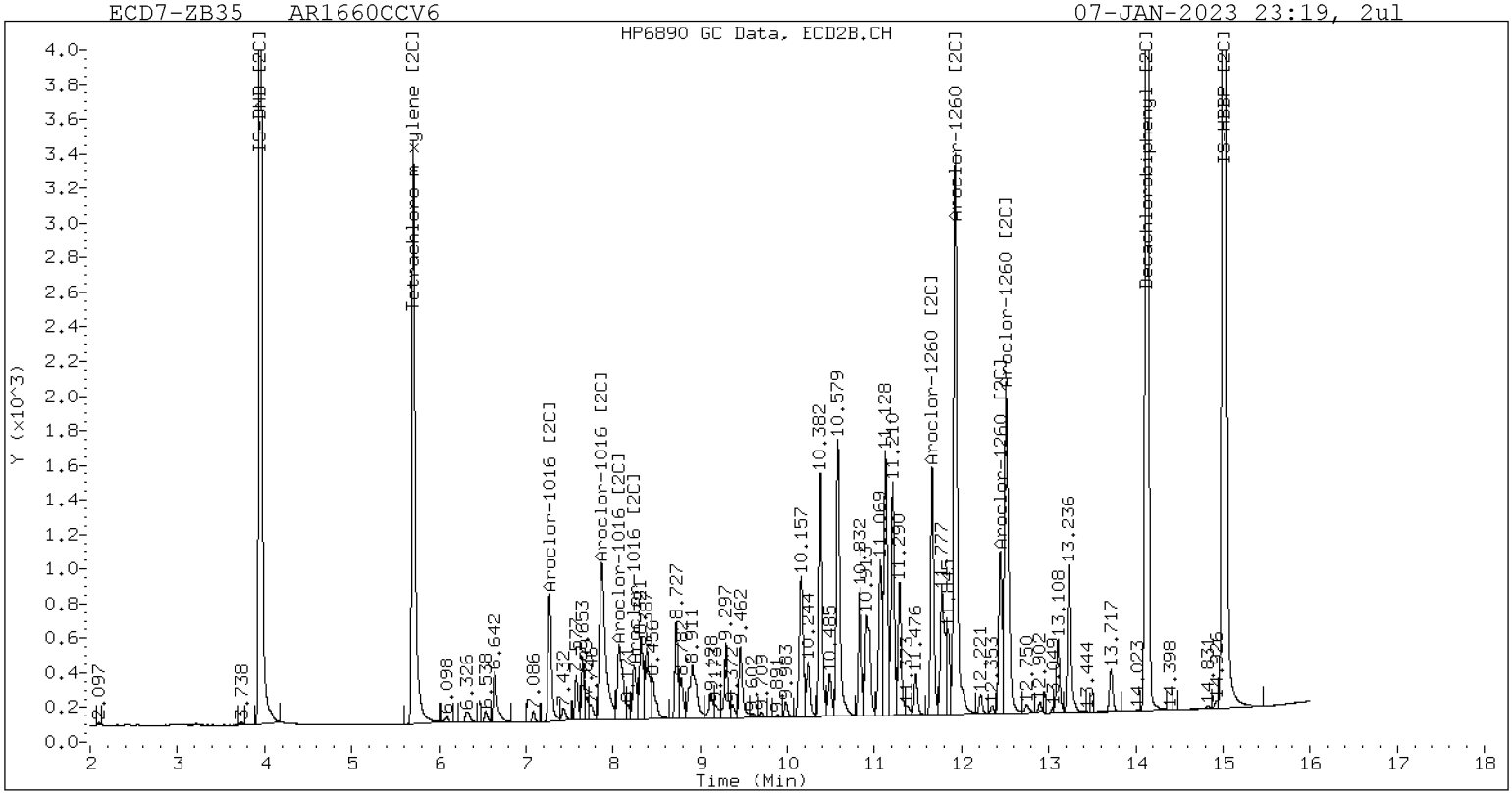
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 07-JAN-2023 23:19, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 07-JAN-2023 23:19, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072353ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCV7 | Injection Time: | 03:53 |
| Sequence Name: | AR1248CCV7 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1248 | A | 250.00 | 266 | 0.0490062 | 0.0503704 | | 6.5 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 272 | | 0.0373769 | | | |
| Aroclor-1248 (2) | A | 250.00 | 282 | | 0.0496087 | | | |
| Aroclor-1248 (3) | A | 250.00 | 219 | | 0.0693528 | | | |
| Aroclor-1248 (4) | A | 250.00 | 292 | | 0.0451431 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 263 | 0.0394876 | 0.0416786 | | 5.1 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 254 | | 0.0331715 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 257 | | 0.0352942 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 267 | | 0.0446459 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 273 | | 0.0536027 | | | |
| Decachlorobiphenyl | A | 40.000 | 40.8 | 0.7333327 | 0.7474328 | | 2.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 36.8 | 1.1336710 | 1.0430080 | | -8.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 43.1 | 1.1358180 | 1.2240980 | | 7.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 36.1 | 1.0966080 | 0.9889712 | | -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: /230107.b/01072353ECD7.D
Data file 2: /230107.b/230107.b/01072353ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 08-JAN-2023 03:53
Report Date: 01/11/2023 15:13
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | -0.000 | 233189 | 5.710 | 0.001 | 158629 | 36.8 | 36.1 | 2.0 | Tetrachloro-m-xylene |
| 13.904 | 0.000 | 293728 | 14.128 | 0.000 | 280037 | 40.8 | 43.1 | 5.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 447147 | -0.1 |
| Hexabromobiphenyl | 798898 | 785965 | -1.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 320796 | 28.8 |
| Hexabromobiphenyl | 362541 | 457540 | 26.2 |

* 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-1248 | 1 | 8.424 | -0.000 | 52228 | 271.7 | 1 | 8.322 | -0.001 | 33254 | 253.7 |
| Aroclor-1248 | 2 | 8.599 | -0.003 | 69320 | 282.4 | 2 | 8.729 | 0.000 | 35382 | 256.7 |
| Aroclor-1248 | 3 | 9.018 | -0.001 | 96909 | 219.5 | 3 | 9.176 | -0.003 | 44757 | 266.9 |
| Aroclor-1248 | 4 | 9.313 | 0.000 | 63080 | 291.6 | 4 | 9.600 | -0.002 | 53736 | 273.0 |

Total Col1Ave (4 peaks): 266.3 Total Col2Ave (4 peaks): 262.6 RPD = 1

Corrected Ave (3 peaks): 257.8 Corrected Ave (3 peaks): 259.1 RPD = 0

CalAmt %D: 6.5 CalAmt %D: 5.0

Total PCB Area Col1 (5.933 - 13.804) = 1072861 Col1 Total PCB = 0.3 ppm*

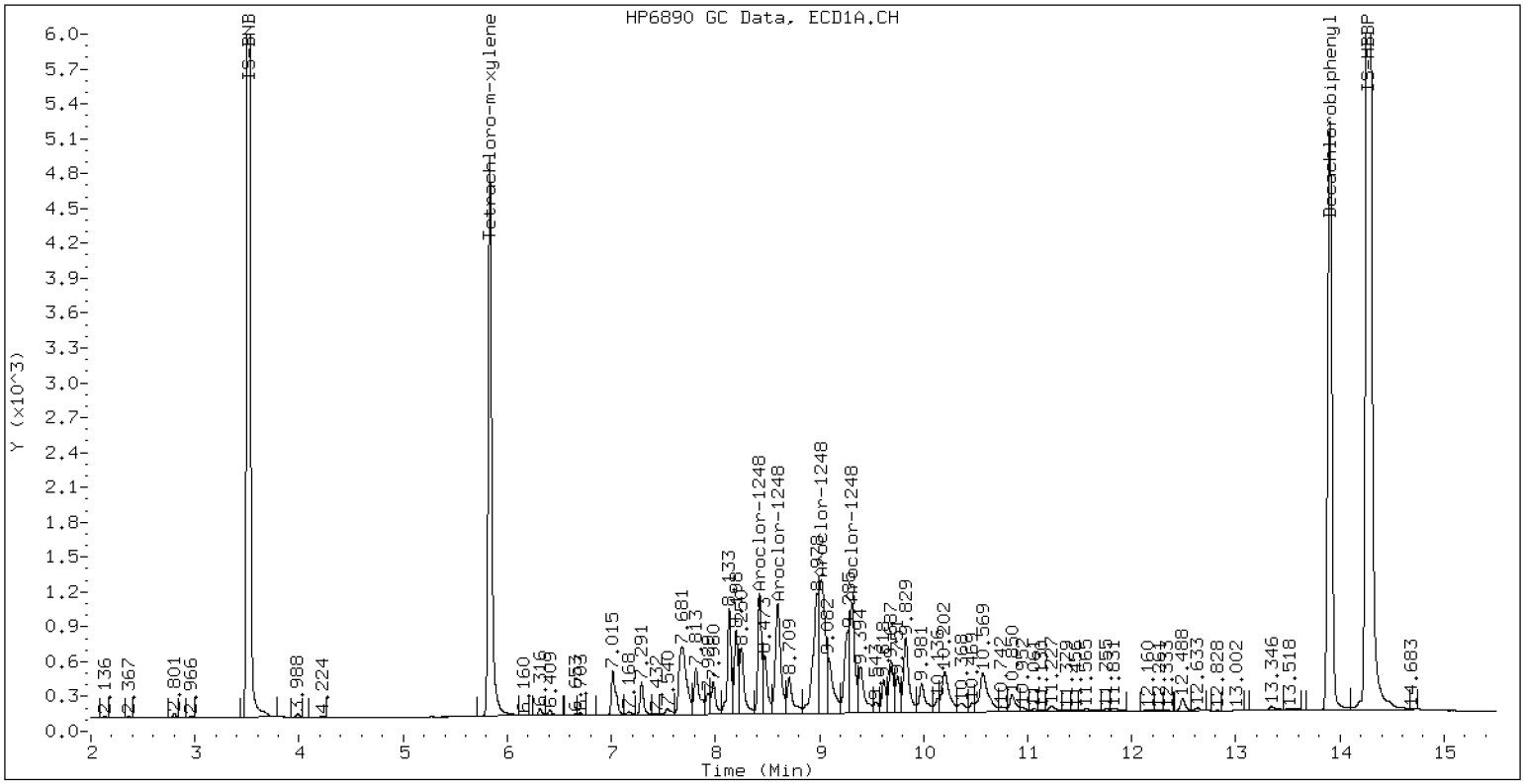
Total PCB Area Col2 (5.809 - 14.028) = 694327 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

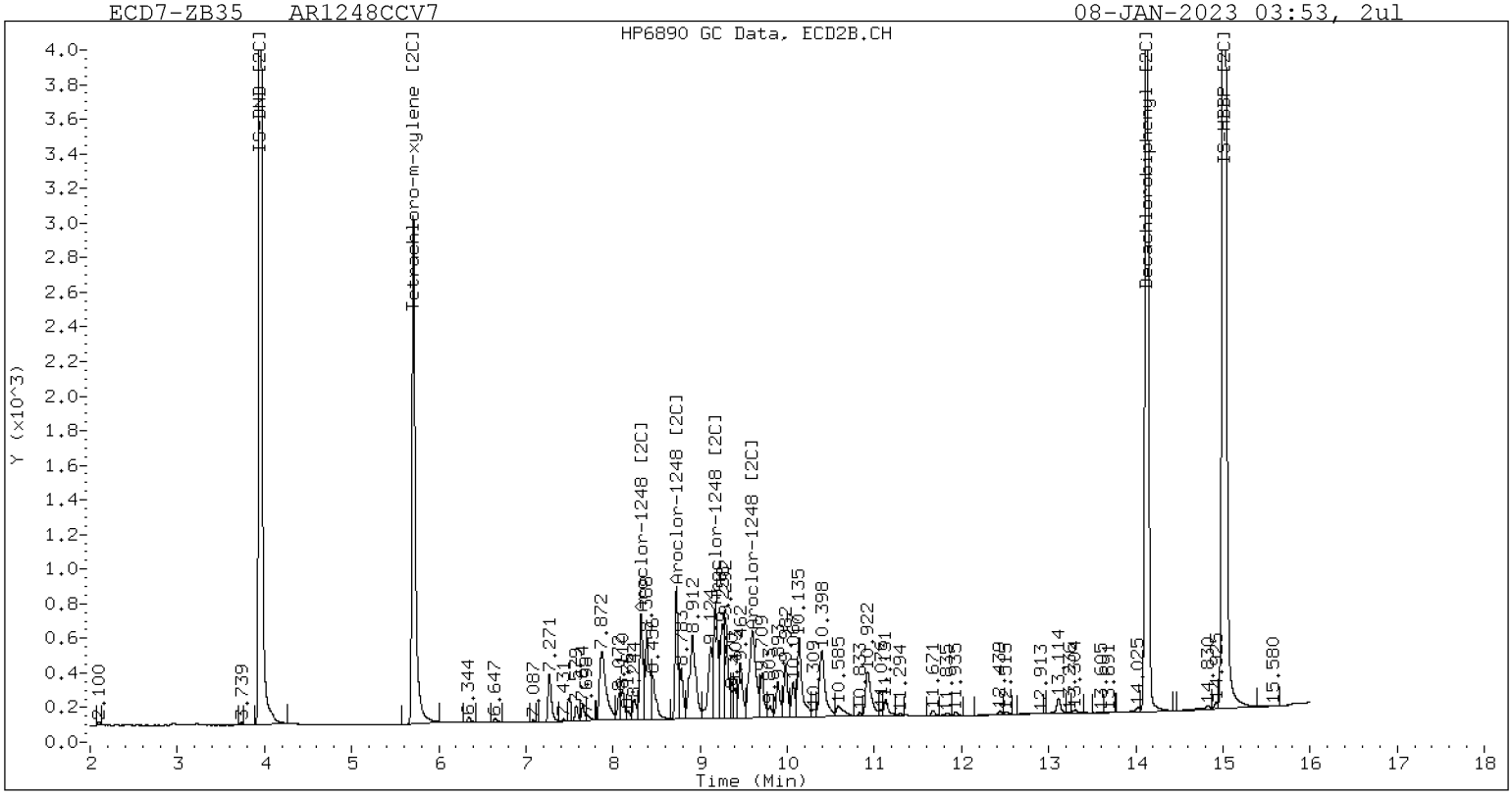
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 08-JAN-2023 03:53, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV7 08-JAN-2023 03:53, 2ul

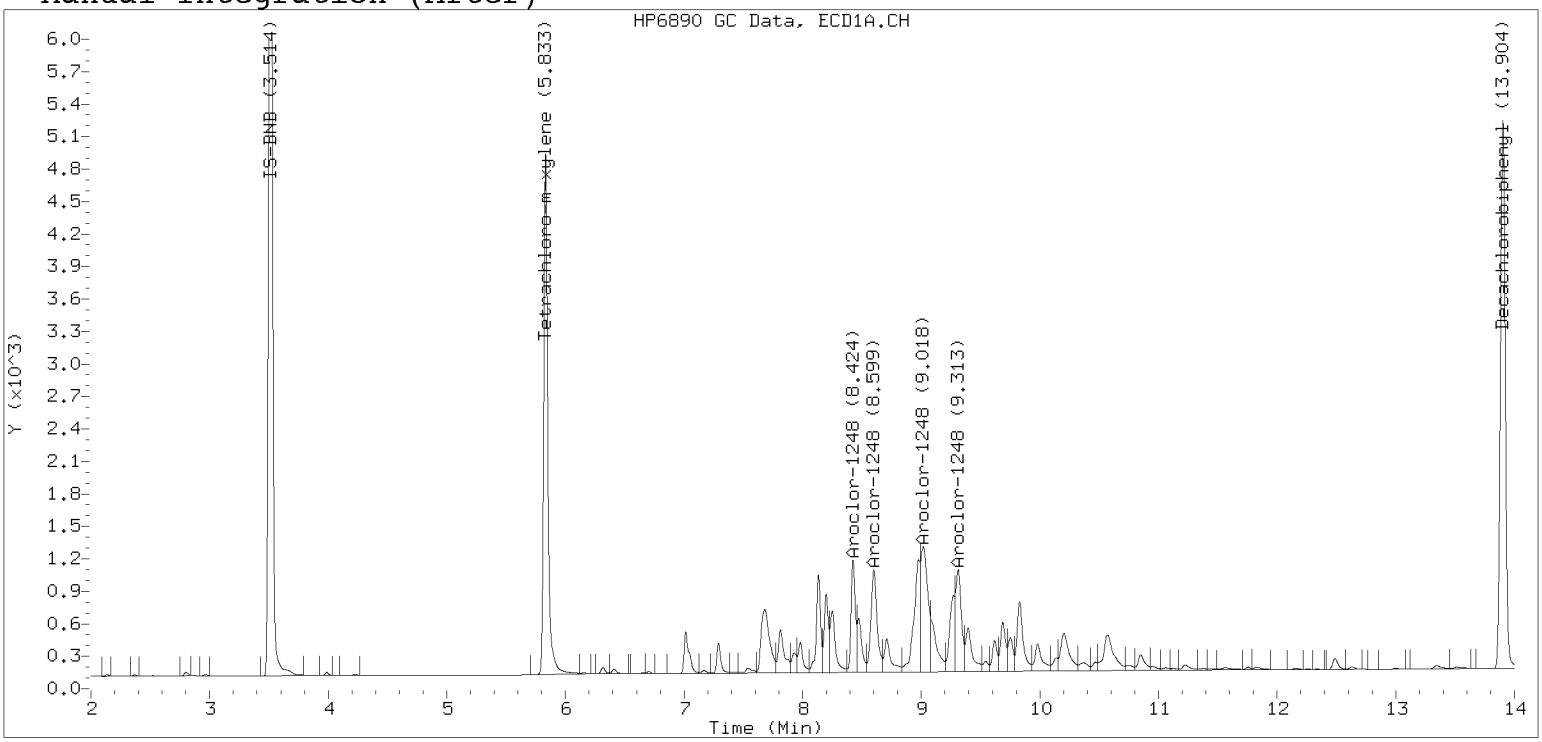



ZB-35 Manual Integration: NO

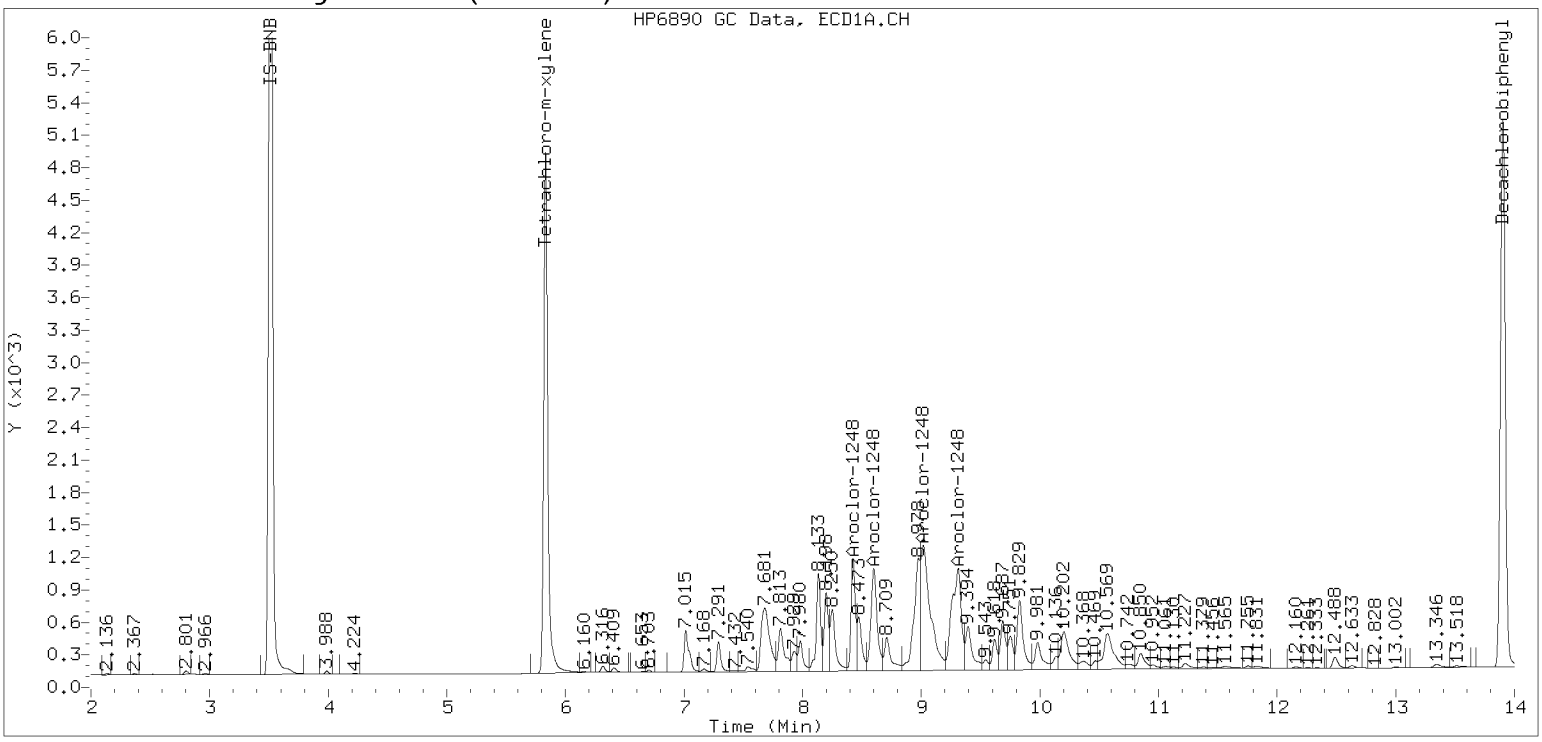
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072353ECD7.D  Injection Date: 08-JAN-2023 03:53

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072354ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCV8 | Injection Time: | 04:14 |
| 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 | 275 | 0.0441939 | 0.0481848 | | 9.8 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 268 | 0.0266860 | 0.0286448 | | 7.2 | |
| Aroclor-1016 (2) | A | 250.00 | 267 | 0.0861572 | 0.0919919 | | 6.8 | |
| Aroclor-1016 (3) | A | 250.00 | 283 | 0.0390425 | 0.0442545 | | 13.2 | |
| Aroclor-1016 (4) | A | 250.00 | 280 | 0.0248899 | 0.0278479 | | 12.0 | |
| Aroclor 1016 [2C] | A | 250.00 | 252 | 0.0467310 | 0.0472363 | | 0.8 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 248 | 0.0409030 | 0.0406299 | | -0.8 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 256 | 0.0882154 | 0.0901585 | | 2.4 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 251 | 0.0378846 | 0.0379980 | | 0.4 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 253 | 0.0199212 | 0.0201589 | | 1.2 | |
| Aroclor 1260 | A | 250.00 | 297 | 0.0390342 | 0.0465194 | | 19.0 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 302 | 0.0291201 | 0.0352172 | | 20.8 | |
| Aroclor-1260 (2) | A | 250.00 | 310 | 0.0301181 | 0.0372965 | | 24.0 | |
| Aroclor-1260 (3) | A | 250.00 | 300 | 0.0791351 | 0.0950407 | | 20.0 | |
| Aroclor-1260 (4) | A | 250.00 | 285 | 0.0403003 | 0.0459262 | | 14.0 | |
| Aroclor-1260 (5) | A | 250.00 | 290 | 0.0164974 | 0.0191163 | | 16.0 | |
| Aroclor 1260 [2C] | A | 250.00 | 266 | 0.0617619 | 0.0665385 | | 6.5 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 275 | 0.0422283 | 0.0464340 | | 10.0 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 275 | 0.1059643 | 0.1166548 | | 10.0 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 251 | 0.0282173 | 0.0283435 | | 0.4 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 264 | 0.0706376 | 0.0747214 | | 5.6 | |
| Decachlorobiphenyl | A | 40.000 | 44.0 | 0.7333327 | 0.8065121 | | 10.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.6 | 1.1336710 | 1.1805170 | | 4.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.5 | 1.1358180 | 1.1506360 | | 1.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 39.9 | 1.0966080 | 1.0947340 | | -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: /230107.b/01072354ECD7.D
Data file 2: /230107.b/230107.b/01072354ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 08-JAN-2023 04:14
Report Date: 01/11/2023 15:13
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.001 | 267576 | 5.709 | -0.000 | 176227 | 41.7 | 39.9 | 4.2 | Tetrachloro-m-xylene |
| 13.903 | -0.001 | 345315 | 14.128 | -0.000 | 288713 | 44.0 | 40.5 | 8.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 453320 | 1.3 |
| Hexabromobiphenyl | 798898 | 856317 | 7.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 321954 | 29.3 |
| Hexabromobiphenyl | 362541 | 501832 | 38.4 |

* 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 | 7.289 | -0.001 | 40579 | 268.4 | 1 | 7.270 | -0.001 | 40878 | 248.3 |
| Aroclor-1016 | 2 | 7.678 | -0.002 | 130318 | 266.9 | 2 | 7.872 | -0.001 | 90709 | 255.5 |
| Aroclor-1016 | 3 | 7.813 | -0.000 | 62692 | 283.4 | 3 | 8.070 | -0.001 | 38230 | 250.7 |
| Aroclor-1016 | 4 | 8.423 | -0.002 | 39450 | 279.7 | 4 | 8.242 | -0.001 | 20282 | 253.0 |
| Total Col1Ave (4 peaks): | | | | 274.6 | | Total Col2Ave (4 peaks): | | | 251.9 | RPD = 9 |
| Corrected Ave (3 peaks): | | | | 271.7 | | Corrected Ave (3 peaks): | | | 250.7 | RPD = 8 |
| CalAmt %D: | | | | 9.8 | | CalAmt %D: | | | 0.8 | |
| Aroclor-1260 | 1 | 11.057 | -0.002 | 94241 | 302.3 | 1 | 11.663 | 0.000 | 72819 | 274.9 |
| Aroclor-1260 | 2 | 11.373 | -0.002 | 99805 | 309.6 | 2 | 11.927 | -0.001 | 182941 | 275.2 |
| Aroclor-1260 | 3 | 11.748 | -0.002 | 254328 | 300.2 | 3 | 12.445 | -0.001 | 44449 | 251.1 |
| Aroclor-1260 | 4 | 12.153 | -0.001 | 122898 | 284.9 | 4 | 12.511 | -0.000 | 117180 | 264.5 |
| Aroclor-1260 | 5 | 12.256 | -0.001 | 51155 | 289.7 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 297.4 | | Total Col2Ave (4 peaks): | | | 266.4 | RPD = 11 |
| Corrected Ave (4 peaks): | | | | 294.3 | | Corrected Ave (3 peaks): | | | 263.5 | RPD = 11 |
| CalAmt %D: | | | | 18.9 | | CalAmt %D: | | | 6.6 | |

Total PCB Area Col1 (5.933 - 13.804) = 2578357 Col1 Total PCB = 0.6 ppm*

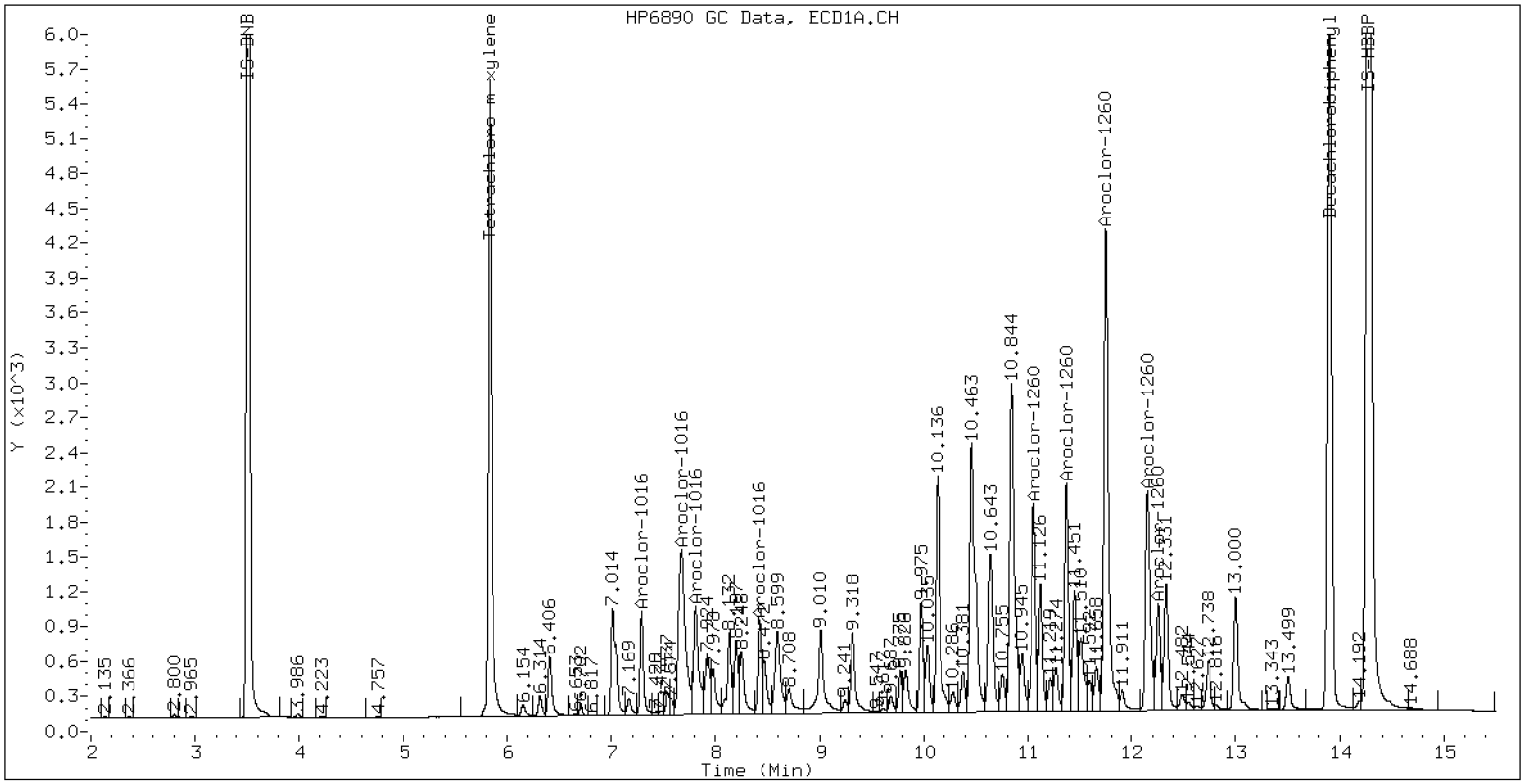
Total PCB Area Col2 (5.809 - 14.028) = 1713251 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

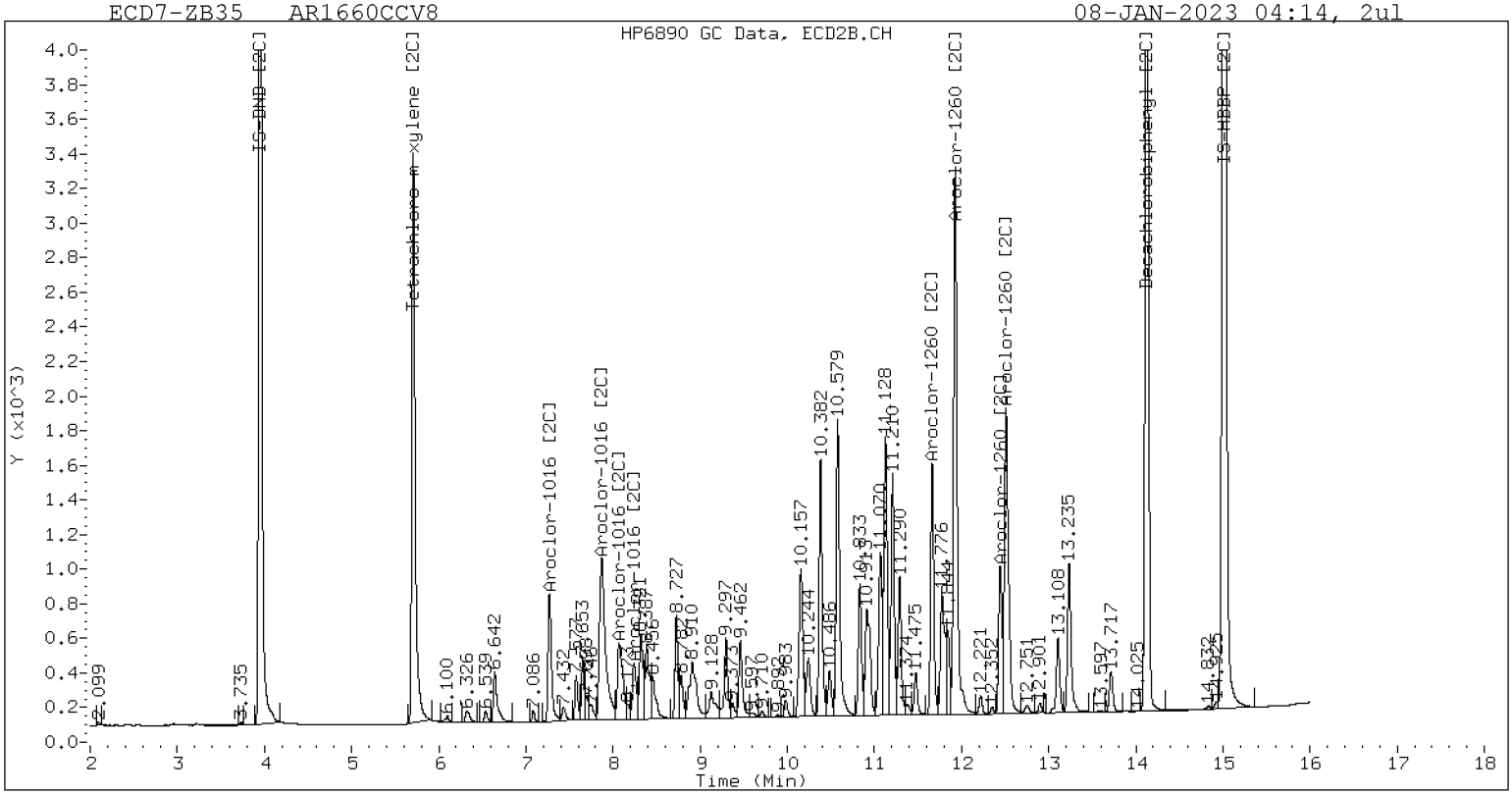
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 08-JAN-2023 04:14, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 08-JAN-2023 04:14, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072373ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCV9 | Injection Time: | 10:55 |
| 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 | 253 | 0.0396000 | 0.0397392 | | 1.3 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 269 | | 0.0244362 | | | |
| Aroclor-1242 (2) | A | 250.00 | 264 | | 0.0760495 | | | |
| Aroclor-1242 (3) | A | 250.00 | 270 | | 0.0223335 | | | |
| Aroclor-1242 (4) | A | 250.00 | 210 | | 0.0361377 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 265 | 0.0391981 | 0.0414367 | | 6.0 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 259 | | 0.0351240 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 263 | | 0.0756755 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 264 | | 0.0244502 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 274 | | 0.0304971 | | | |
| Decachlorobiphenyl | A | 40.000 | 38.6 | 0.7333327 | 0.7070243 | | -3.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 39.4 | 1.1336710 | 1.1153490 | | -1.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.7 | 1.1358180 | 1.1547190 | | 1.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 38.2 | 1.0966080 | 1.0484500 | | -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: /230107.b/01072373ECD7.D
Data file 2: /230107.b/230107.b/01072373ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 08-JAN-2023 10:55
Report Date: 01/11/2023 15:13
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | -0.000 | 249943 | 5.709 | 0.000 | 166811 | 39.4 | 38.2 | 2.9 | Tetrachloro-m-xylene |
| 13.903 | -0.001 | 326279 | 14.129 | 0.000 | 312755 | 38.6 | 40.7 | 5.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 448188 | 0.1 |
| Hexabromobiphenyl | 798898 | 922964 | 15.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 318205 | 27.7 |
| Hexabromobiphenyl | 362541 | 541699 | 49.4 |

* 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-1242 | 1 | 7.291 | 0.000 | 34225 | 269.4 | 1 | 7.272 | 0.000 | 34927 | 259.3 |
| Aroclor-1242 | 2 | 7.682 | 0.000 | 106514 | 264.1 | 2 | 7.873 | 0.000 | 75251 | 263.2 |
| Aroclor-1242 | 3 | 8.425 | 0.000 | 31280 | 269.5 | 3 | 9.180 | 0.000 | 24313 | 263.6 |
| Aroclor-1242 | 4 | 9.021 | 0.000 | 50614 | 210.0 | 4 | 9.606 | 0.000 | 30326 | 273.6 |

Total Col1Ave (4 peaks): 253.3 Total Col2Ave (4 peaks): 264.9 RPD = 5

Corrected Ave (3 peaks): 247.8 Corrected Ave (3 peaks): 262.1 RPD = 6

CalAmt %D: 1.3 CalAmt %D: 6.0

Total PCB Area Col1 (5.933 - 13.804) = 843396 Col1 Total PCB = 0.2 ppm*

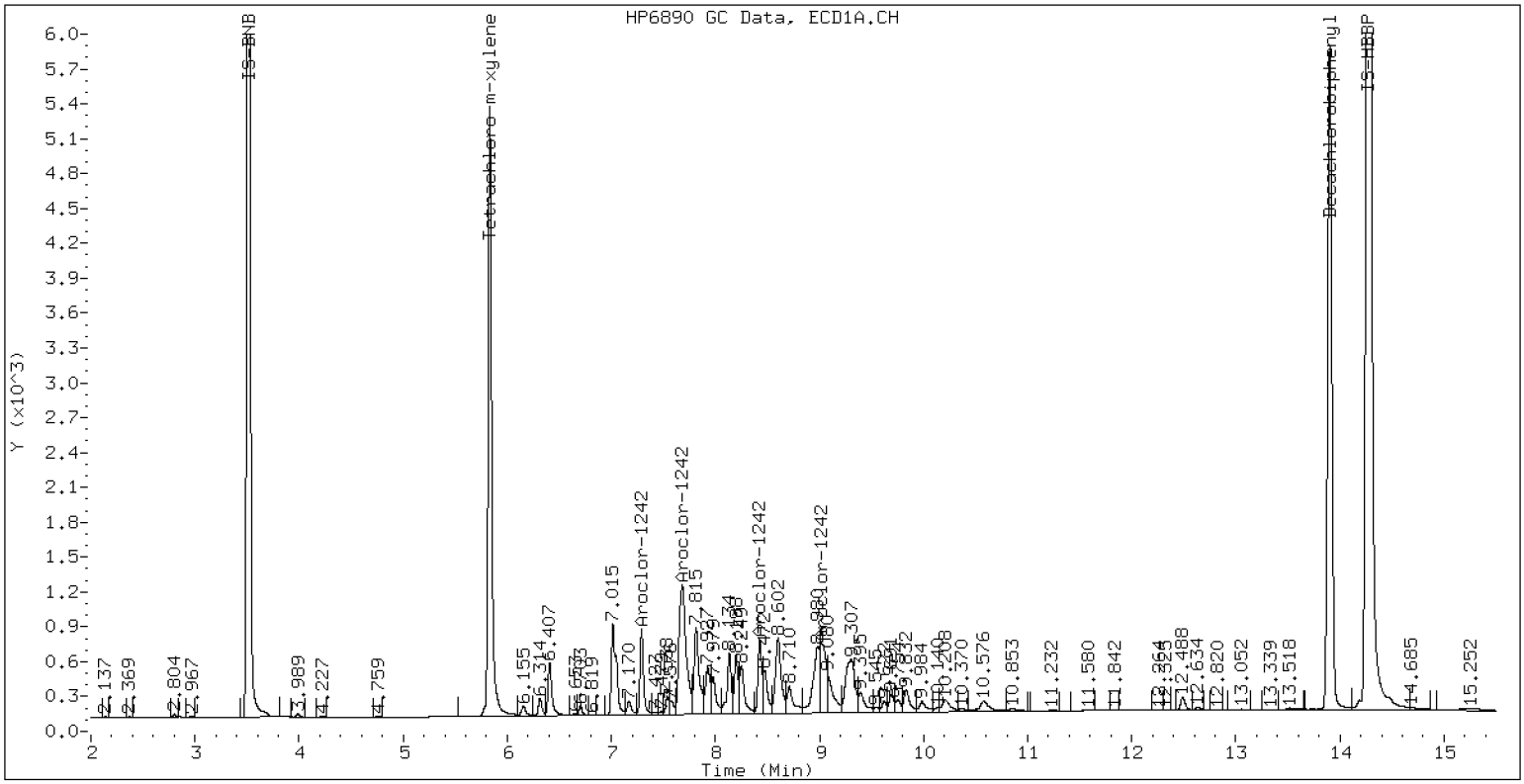
Total PCB Area Col2 (5.809 - 14.028) = 545209 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

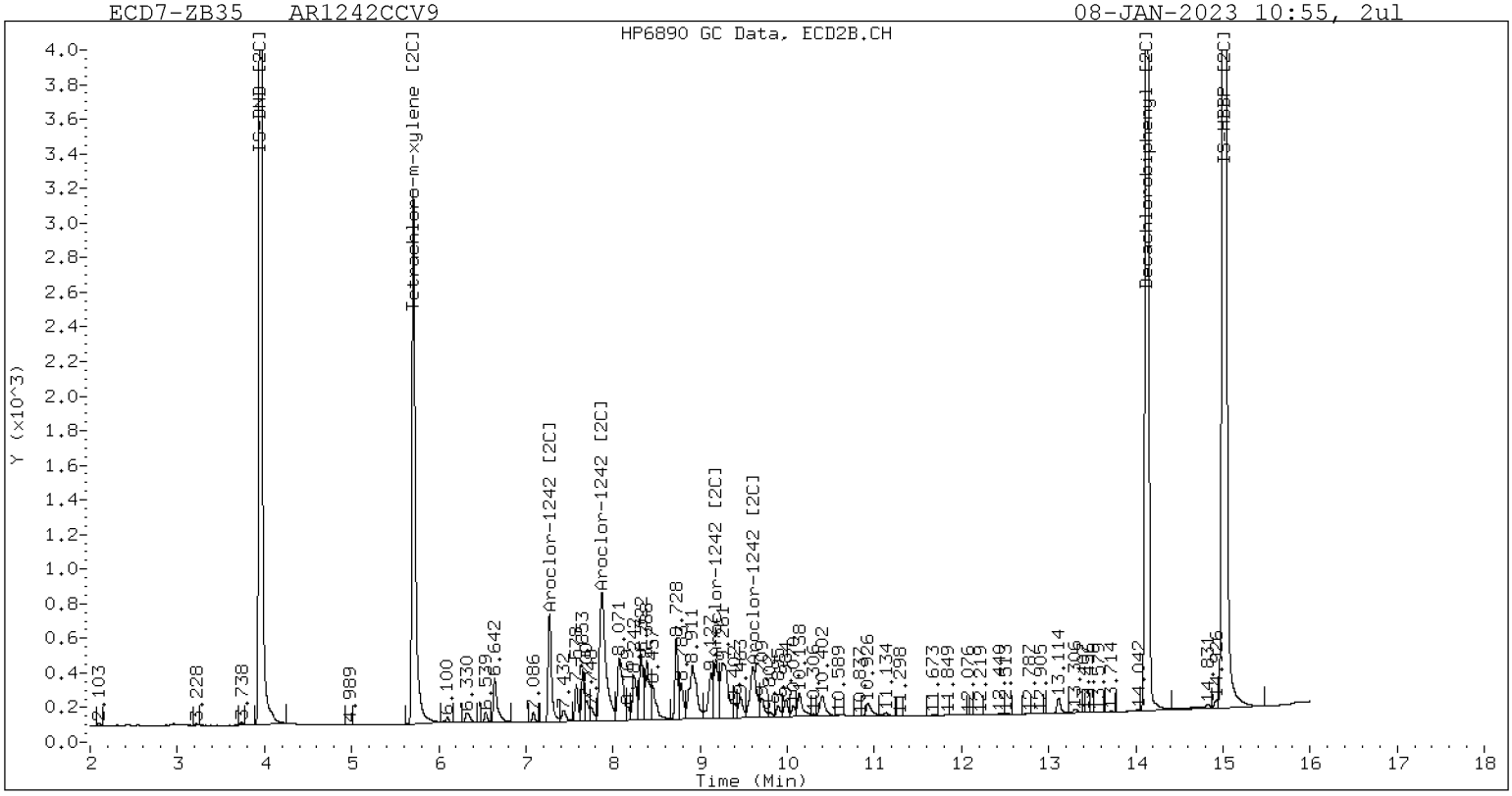
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 08-JAN-2023 10:55, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242CCV9 08-JAN-2023 10:55, 2ul

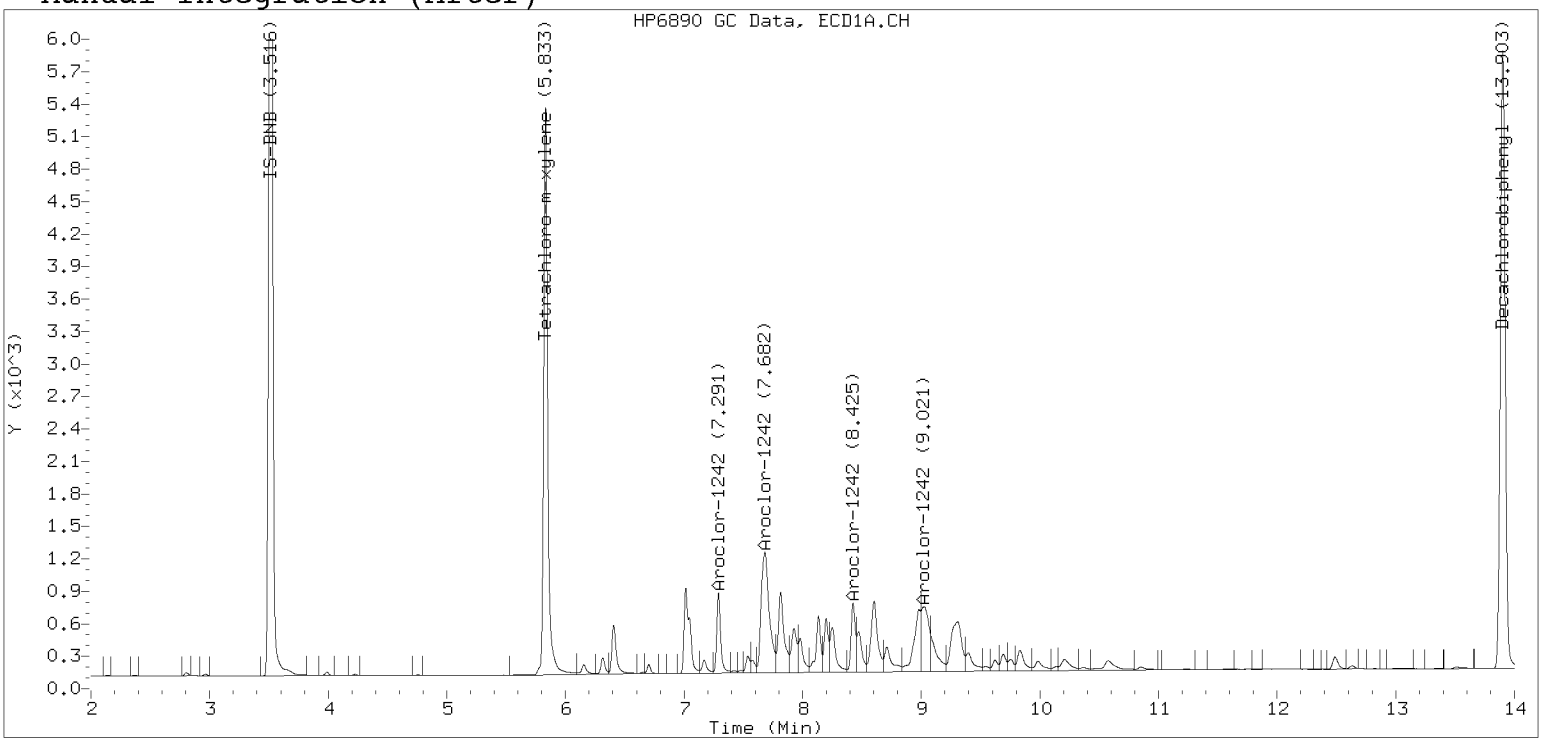



ZB-35 Manual Integration: NO

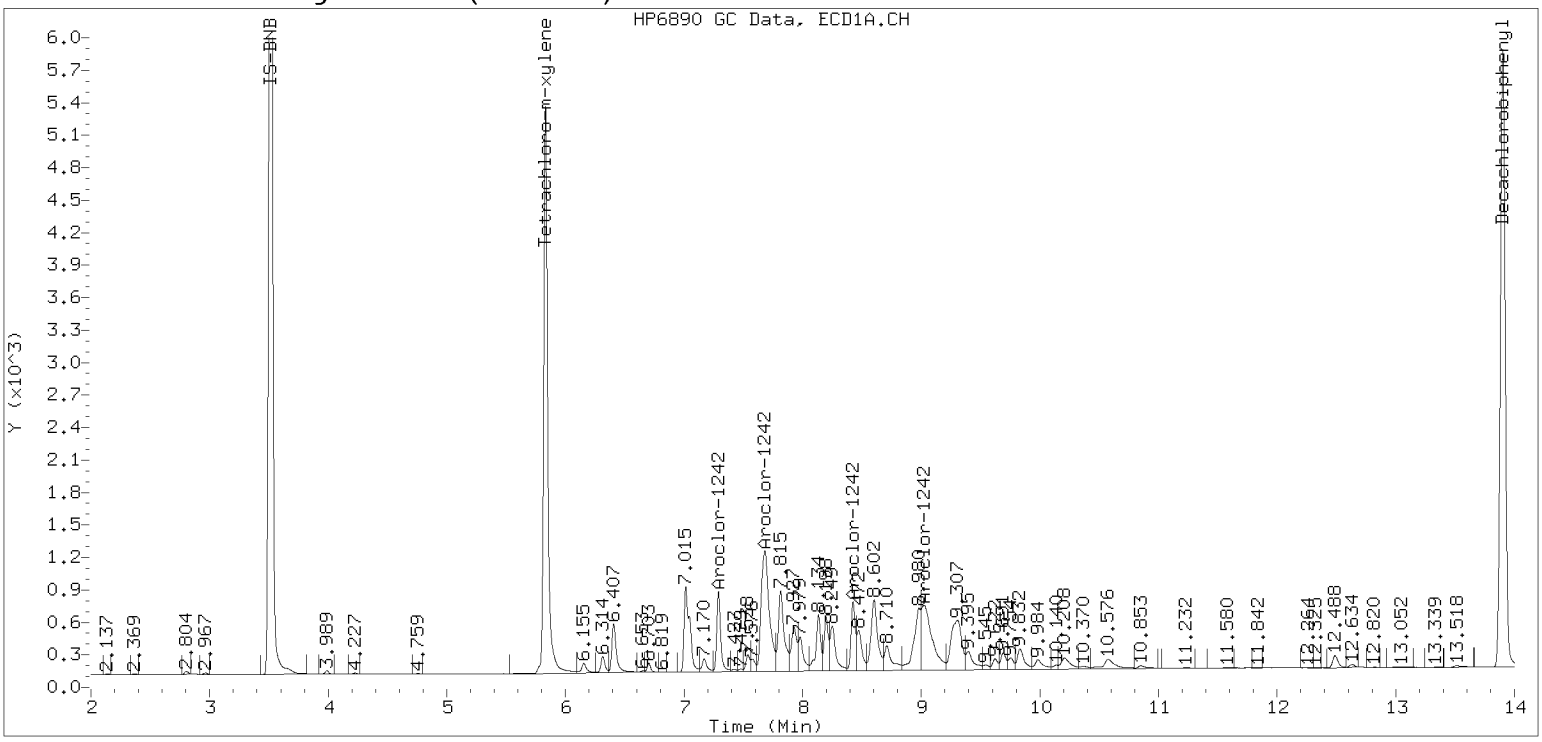
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230107.b/01072373ECD7.D  Injection Date: 08-JAN-2023 10:55

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072374ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCVA | Injection Time: | 11:16 |
| 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 | 273 | 0.0441939 | 0.0478954 | | 9.3 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 269 | 0.0266860 | 0.0287075 | | 7.6 | |
| Aroclor-1016 (2) | A | 250.00 | 264 | 0.0861572 | 0.0910315 | | 5.6 | |
| Aroclor-1016 (3) | A | 250.00 | 284 | 0.0390425 | 0.0443709 | | 13.6 | |
| Aroclor-1016 (4) | A | 250.00 | 276 | 0.0248899 | 0.0274716 | | 10.4 | |
| Aroclor 1016 [2C] | A | 250.00 | 254 | 0.0467310 | 0.0474299 | | 1.5 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 250 | 0.0409030 | 0.0408852 | | 0.0 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 256 | 0.0882154 | 0.0902128 | | 2.4 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 252 | 0.0378846 | 0.0381567 | | 0.8 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 257 | 0.0199212 | 0.0204649 | | 2.8 | |
| Aroclor 1260 | A | 250.00 | 263 | 0.0390342 | 0.0412118 | | 5.2 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 257 | 0.0291201 | 0.0299922 | | 2.8 | |
| Aroclor-1260 (2) | A | 250.00 | 262 | 0.0301181 | 0.0315892 | | 4.8 | |
| Aroclor-1260 (3) | A | 250.00 | 266 | 0.0791351 | 0.0842674 | | 6.4 | |
| Aroclor-1260 (4) | A | 250.00 | 265 | 0.0403003 | 0.0427086 | | 6.0 | |
| Aroclor-1260 (5) | A | 250.00 | 265 | 0.0164974 | 0.0175017 | | 6.0 | |
| Aroclor 1260 [2C] | A | 250.00 | 254 | 0.0617619 | 0.0632984 | | 1.4 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 251 | 0.0422283 | 0.0424027 | | 0.4 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 259 | 0.1059643 | 0.1098939 | | 3.6 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 244 | 0.0282173 | 0.0275263 | | -2.4 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 260 | 0.0706376 | 0.0733707 | | 4.0 | |
| Decachlorobiphenyl | A | 40.000 | 39.3 | 0.7333327 | 0.7213772 | | -1.8 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.9 | 1.1336710 | 1.1879460 | | 4.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.5 | 1.1358180 | 1.1779270 | | 3.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.6 | 1.0966080 | 1.1124240 | | 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: /230107.b/01072374ECD7.D
Data file 2: /230107.b/230107.b/01072374ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 08-JAN-2023 11:16
Report Date: 01/11/2023 15:13
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.001 | 284073 | 5.708 | -0.001 | 187869 | 41.9 | 40.6 | 3.2 | Tetrachloro-m-xylene |
| 13.902 | -0.002 | 386805 | 14.127 | -0.001 | 351778 | 39.3 | 41.5 | 5.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 478259 | 6.8 |
| Hexabromobiphenyl | 798898 | 1072407 | 34.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 337765 | 35.6 |
| Hexabromobiphenyl | 362541 | 597283 | 64.7 |

* 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 | 7.289 | -0.001 | 42905 | 268.9 | 1 | 7.271 | -0.001 | 43155 | 249.9 |
| Aroclor-1016 | 2 | 7.678 | -0.002 | 136052 | 264.1 | 2 | 7.872 | -0.001 | 95221 | 255.7 |
| Aroclor-1016 | 3 | 7.812 | -0.001 | 66315 | 284.1 | 3 | 8.070 | -0.001 | 40275 | 251.8 |
| Aroclor-1016 | 4 | 8.423 | -0.002 | 41058 | 275.9 | 4 | 8.242 | -0.001 | 21601 | 256.8 |

Total Col1Ave (4 peaks): 273.3 Total Col2Ave (4 peaks): 253.5 RPD = 7
Corrected Ave (3 peaks): 269.7 Corrected Ave (3 peaks): 252.4 RPD = 7

CalAmt %D: 9.3 CalAmt %D: 1.4

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.058 | -0.002 | 100512 | 257.5 | 1 | 11.662 | -0.001 | 79145 | 251.0 |
| Aroclor-1260 | 2 | 11.374 | -0.002 | 105864 | 262.2 | 2 | 11.926 | -0.002 | 205118 | 259.3 |
| Aroclor-1260 | 3 | 11.748 | -0.003 | 282403 | 266.2 | 3 | 12.444 | -0.002 | 51378 | 243.9 |
| Aroclor-1260 | 4 | 12.153 | -0.001 | 143128 | 264.9 | 4 | 12.510 | -0.001 | 136947 | 259.7 |
| Aroclor-1260 | 5 | 12.256 | -0.001 | 58653 | 265.2 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 263.2 Total Col2Ave (4 peaks): 253.5 RPD = 4
Corrected Ave (4 peaks): 262.5 Corrected Ave (3 peaks): 251.4 RPD = 4

CalAmt %D: 5.3 CalAmt %D: 1.4

Total PCB Area Col1 (5.933 - 13.804) = 2786933 Col1 Total PCB = 0.6 ppm*

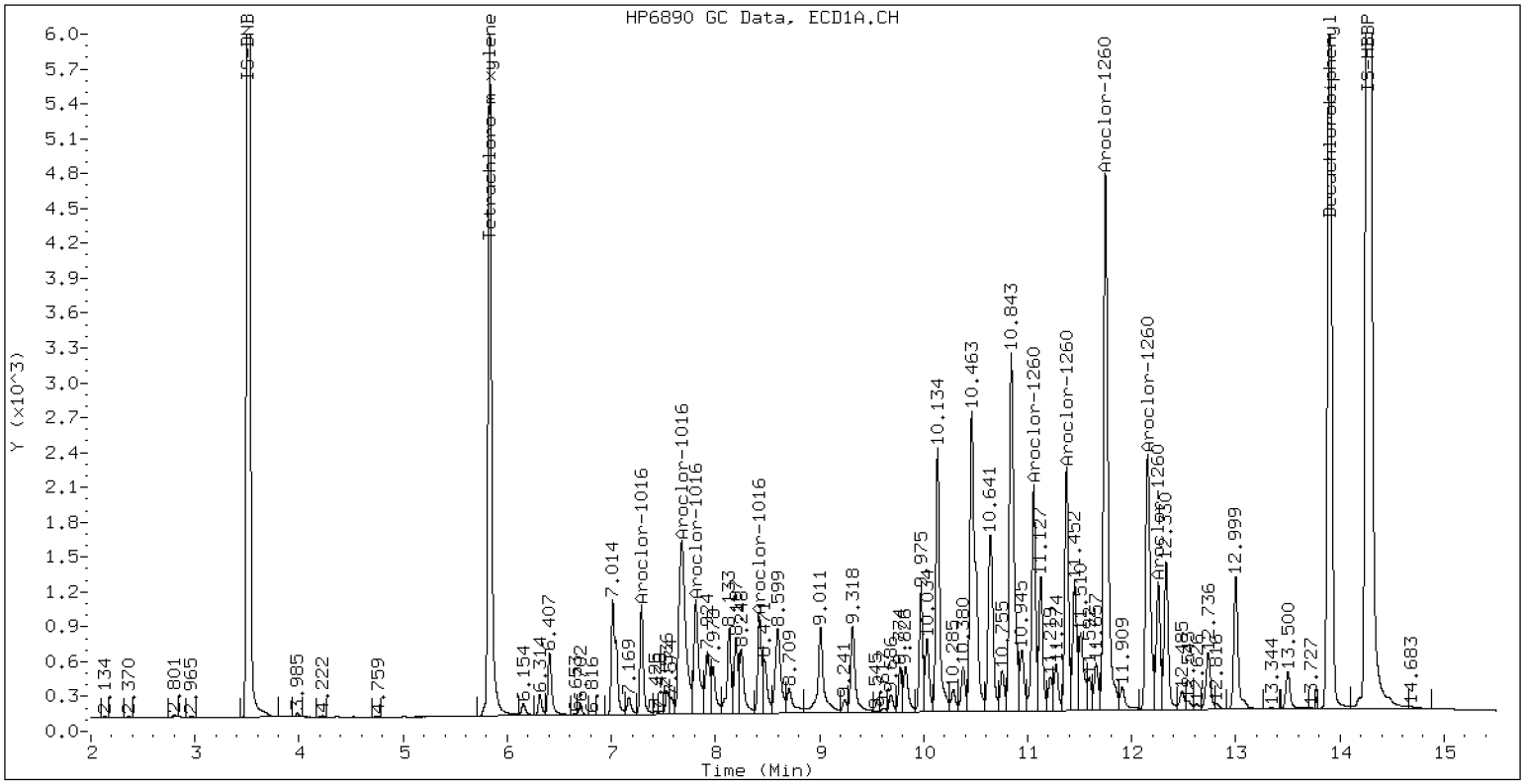
Total PCB Area Col2 (5.809 - 14.028) = 1840764 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

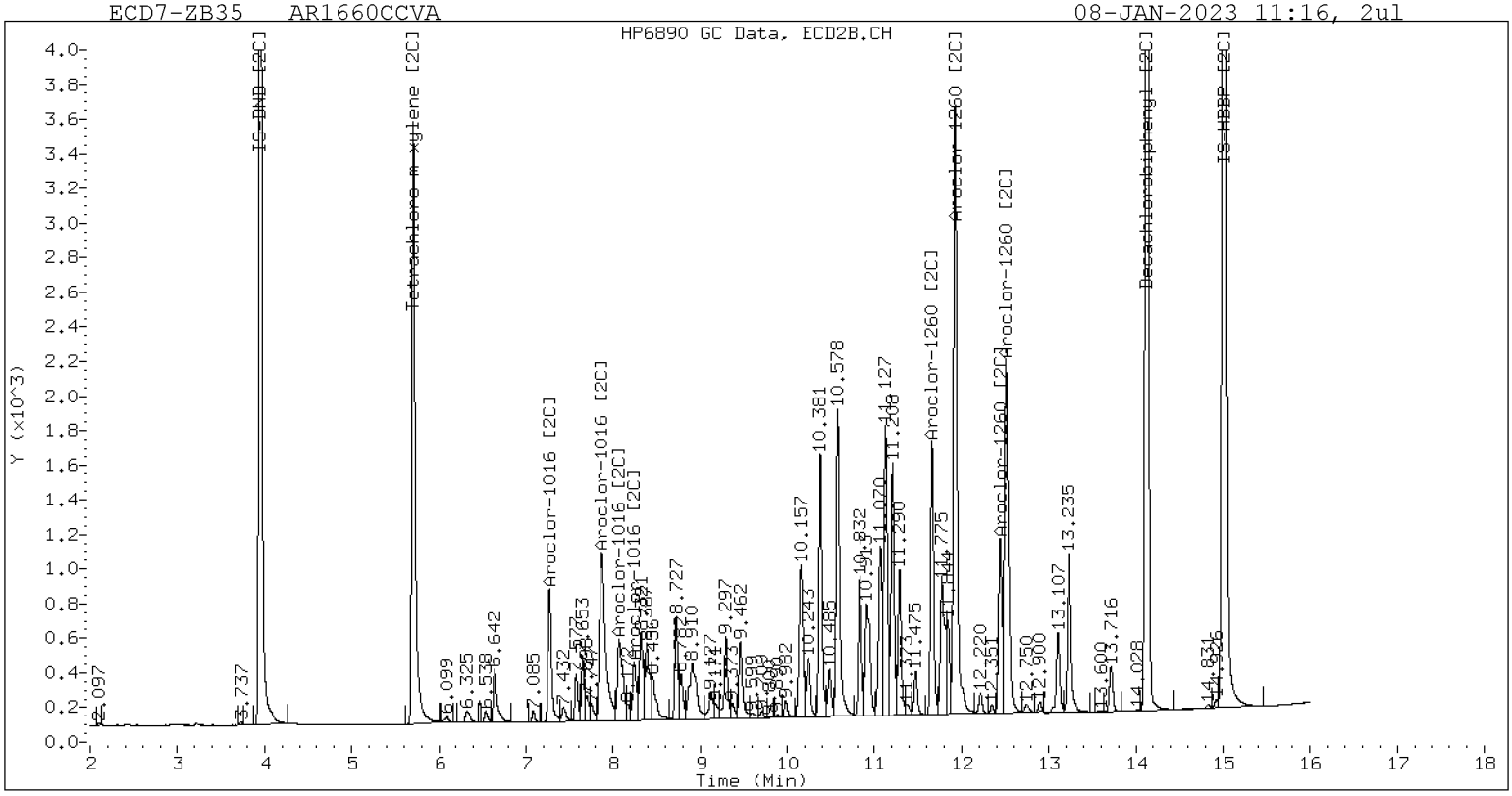
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 08-JAN-2023 11:16, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA 08-JAN-2023 11:16, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072389ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCVB | Injection Time: | 16:32 |
| Sequence Name: | AR1254CCVB | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1254 | A | 250.00 | 279 | 0.0576965 | 0.0639701 | | 11.8 | +/-20 |
| Aroclor-1254 (1) | A | 250.00 | 272 | | 0.0766416 | | | |
| Aroclor-1254 (2) | A | 250.00 | 300 | | 0.0329140 | | | |
| Aroclor-1254 (3) | A | 250.00 | 271 | | 0.0482008 | | | |
| Aroclor-1254 (4) | A | 250.00 | 279 | | 0.0967995 | | | |
| Aroclor-1254 (5) | A | 250.00 | 275 | | 0.0652945 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 278 | 0.0638047 | 0.0711271 | | 11.4 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 275 | | 0.0567122 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 280 | | 0.0465034 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 278 | | 0.0992756 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 280 | | 0.1034952 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 279 | | 0.0496491 | | | |
| Decachlorobiphenyl | A | 40.000 | 40.6 | 0.7333327 | 0.7438271 | | 1.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.1 | 1.1336710 | 1.0795140 | | -4.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.6 | 1.1358180 | 1.1798530 | | 4.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.6 | 1.0966080 | 1.0305720 | | -6.0 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230107.b/01072389ECD7.D
Data file 2: /230107.b/230107.b/01072389ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCVB
Client ID:
Injection Date: 08-JAN-2023 16:32
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.002 | 247003 | 5.707 | -0.002 | 166897 | 38.1 | 37.6 | 1.3 | Tetrachloro-m-xylene |
| 13.903 | -0.001 | 287857 | 14.129 | 0.000 | 288143 | 40.6 | 41.6 | 2.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 457619 | 2.2 |
| Hexabromobiphenyl | 798898 | 773989 | -3.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 323892 | 30.0 |
| Hexabromobiphenyl | 362541 | 488439 | 34.7 |

* 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-1254 | 1 | 9.316 | 0.005 | 109602 | 272.0 | 1 | 9.461 | 0.000 | 57402 | 274.9 |
| Aroclor-1254 | 2 | 9.394 | 0.006 | 47069 | 300.4 | 2 | 9.980 | 0.000 | 47069 | 280.4 |
| Aroclor-1254 | 3 | 9.685 | 0.006 | 68930 | 270.9 | 3 | 10.133 | 0.000 | 100483 | 278.4 |
| Aroclor-1254 | 4 | 9.824 | 0.009 | 138429 | 279.1 | 4 | 10.383 | 0.000 | 104754 | 280.3 |
| Aroclor-1254 | 5 | 10.191 | 0.024 | 93375 | 274.6 | 5 | 10.578 | 0.000 | 50253 | 278.8 |

Total Col1Ave (5 peaks): 279.4 Total Col2Ave (5 peaks): 278.5 RPD = 0

Corrected Ave (4 peaks): 274.1 Corrected Ave (4 peaks): 278.1 RPD = 1

CalAmt %D: 11.8 CalAmt %D: 11.4

Total PCB Area Col1 (5.933 - 13.804) = 1428612 Col1 Total PCB = 0.3 ppm*

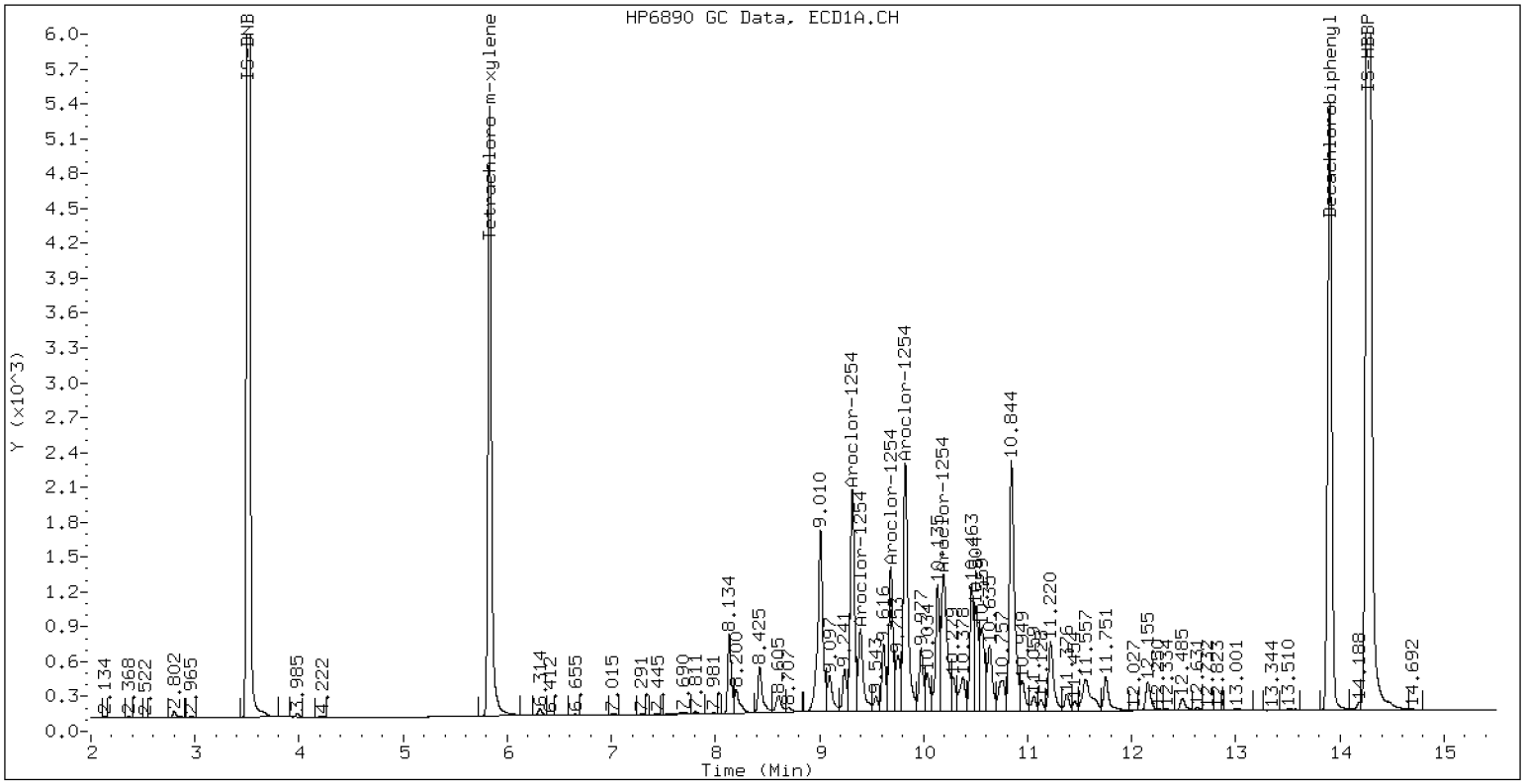
Total PCB Area Col2 (5.809 - 14.028) = 973048 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

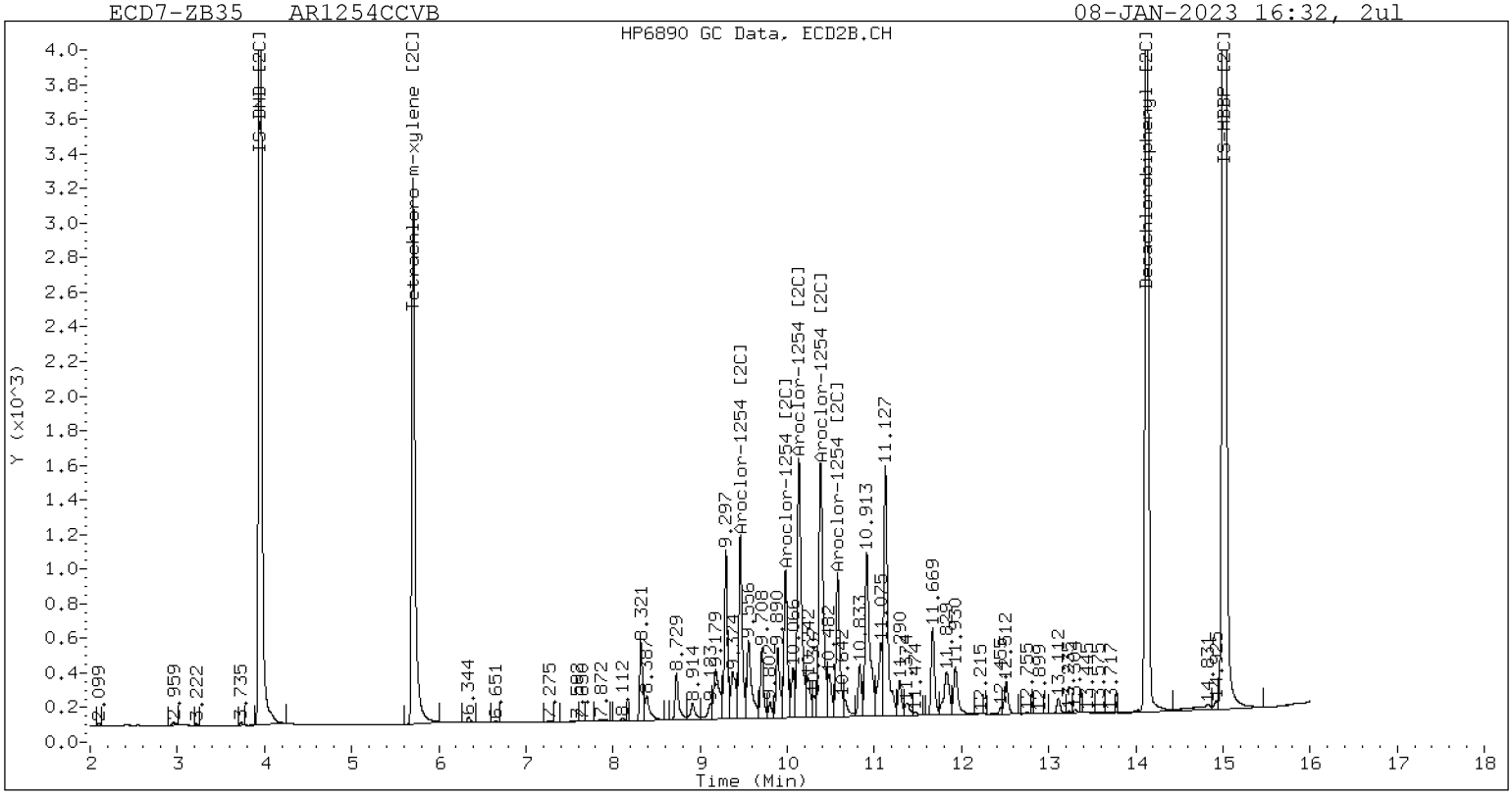
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCVB 08-JAN-2023 16:32, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCVB 08-JAN-2023 16:32, 2ul

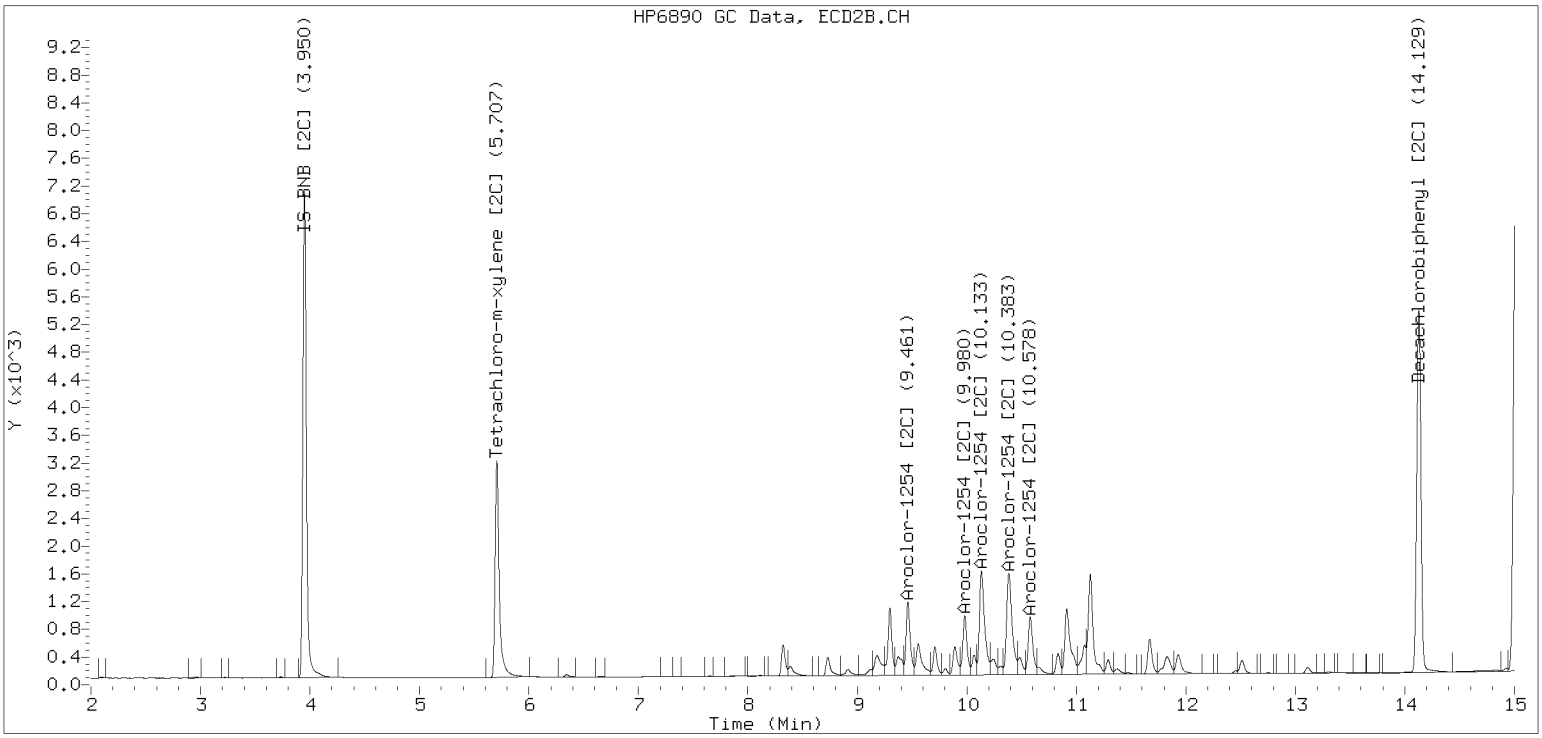



ZB-35 Manual Integration: YES

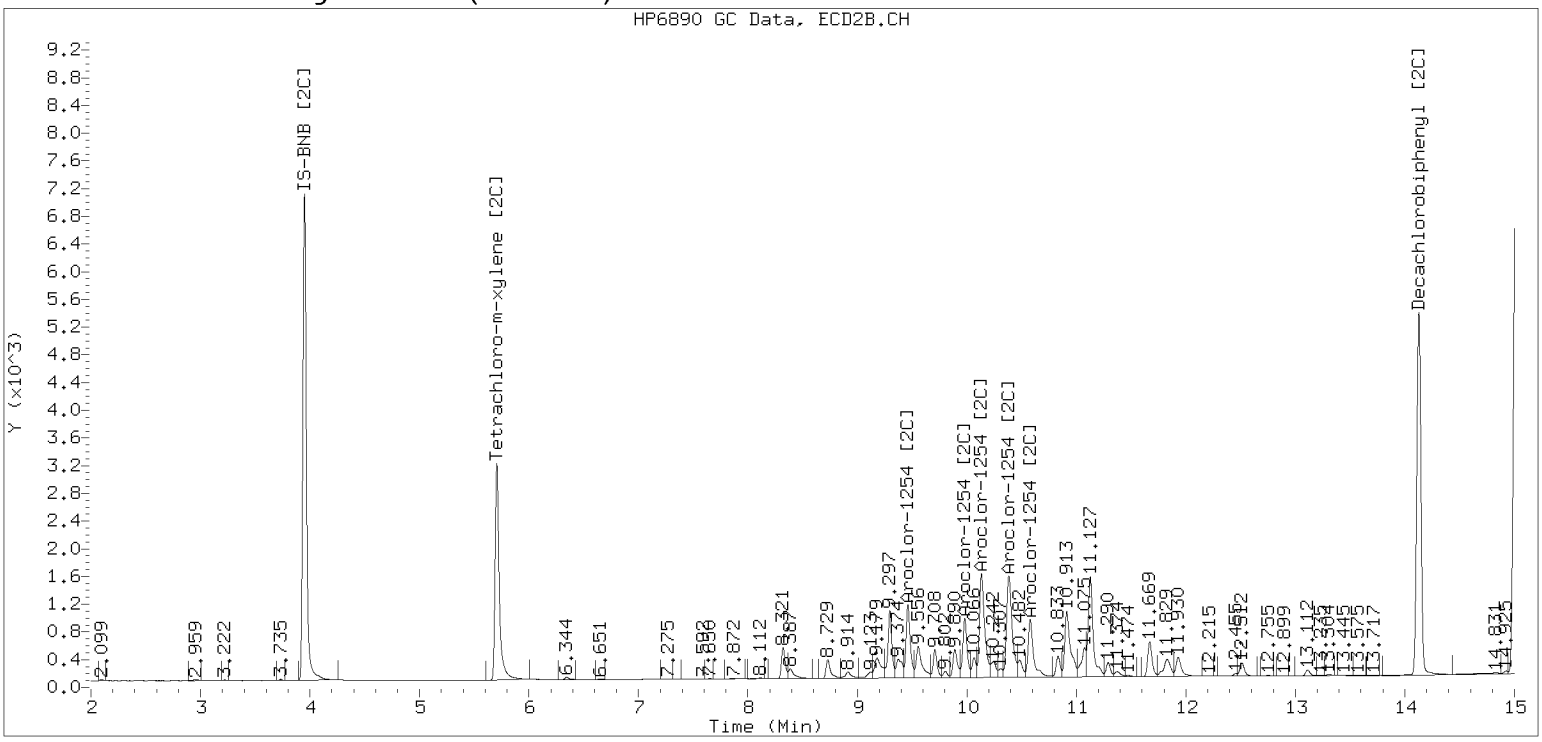
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230107.b/230107.b/01072389ECD7.D  Injection Date: 08-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01072390ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCVC | Injection Time: | 16:53 |
| 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 | 276 | 0.0441939 | 0.0483197 | | 10.2 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 270 | 0.0266860 | 0.0288308 | | 8.0 | |
| Aroclor-1016 (2) | A | 250.00 | 268 | 0.0861572 | 0.0922052 | | 7.2 | |
| Aroclor-1016 (3) | A | 250.00 | 284 | 0.0390425 | 0.0443148 | | 13.6 | |
| Aroclor-1016 (4) | A | 250.00 | 280 | 0.0248899 | 0.0279279 | | 12.0 | |
| Aroclor 1016 [2C] | A | 250.00 | 257 | 0.0467310 | 0.0481667 | | 2.8 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 254 | 0.0409030 | 0.0415479 | | 1.6 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 260 | 0.0882154 | 0.0918093 | | 4.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 254 | 0.0378846 | 0.0385704 | | 1.6 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 260 | 0.0199212 | 0.0207391 | | 4.0 | |
| Aroclor 1260 | A | 250.00 | 281 | 0.0390342 | 0.0438846 | | 12.2 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 279 | 0.0291201 | 0.0324994 | | 11.6 | |
| Aroclor-1260 (2) | A | 250.00 | 281 | 0.0301181 | 0.0338562 | | 12.4 | |
| Aroclor-1260 (3) | A | 250.00 | 283 | 0.0791351 | 0.0895301 | | 13.2 | |
| Aroclor-1260 (4) | A | 250.00 | 279 | 0.0403003 | 0.0449977 | | 11.6 | |
| Aroclor-1260 (5) | A | 250.00 | 281 | 0.0164974 | 0.0185395 | | 12.4 | |
| Aroclor 1260 [2C] | A | 250.00 | 265 | 0.0617619 | 0.0661263 | | 6.0 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 264 | 0.0422283 | 0.0445353 | | 5.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 271 | 0.1059643 | 0.1147959 | | 8.4 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 255 | 0.0282173 | 0.0288157 | | 2.0 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 270 | 0.0706376 | 0.0763583 | | 8.0 | |
| Decachlorobiphenyl | A | 40.000 | 41.6 | 0.7333327 | 0.7618376 | | 4.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 42.3 | 1.1336710 | 1.1979460 | | 5.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.2 | 1.1358180 | 1.1974570 | | 5.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 41.1 | 1.0966080 | 1.1281350 | | 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: /230107.b/01072390ECD7.D
Data file 2: /230107.b/230107.b/01072390ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVC
Client ID:
Injection Date: 08-JAN-2023 16:53
Report Date: 01/11/2023 15:14
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | -0.000 | 285724 | 5.709 | -0.000 | 188900 | 42.3 | 41.1 | 2.7 | Tetrachloro-m-xylene |
| 13.903 | -0.001 | 369604 | 14.128 | 0.000 | 337014 | 41.6 | 42.2 | 1.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 477023 | 6.6 |
| Hexabromobiphenyl | 798898 | 970296 | 21.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 334889 | 34.4 |
| Hexabromobiphenyl | 362541 | 562883 | 55.3 |

* 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 | -0.001 | 42978 | 270.1 | 1 | 7.271 | -0.001 | 43481 | 253.9 |
| Aroclor-1016 | 2 | 7.677 | -0.003 | 137450 | 267.5 | 2 | 7.871 | -0.001 | 96081 | 260.2 |
| Aroclor-1016 | 3 | 7.812 | -0.001 | 66060 | 283.8 | 3 | 8.070 | -0.001 | 40365 | 254.5 |
| Aroclor-1016 | 4 | 8.424 | -0.001 | 41632 | 280.5 | 4 | 8.242 | -0.001 | 21704 | 260.3 |

Total Col1Ave (4 peaks): 275.5 Total Col2Ave (4 peaks): 257.2 RPD = 7
Corrected Ave (3 peaks): 272.7 Corrected Ave (3 peaks): 256.2 RPD = 6

CalAmt %D: 10.2 CalAmt %D: 2.9

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.058 | -0.002 | 98544 | 279.0 | 1 | 11.664 | 0.001 | 78338 | 263.7 |
| Aroclor-1260 | 2 | 11.375 | -0.000 | 102658 | 281.0 | 2 | 11.928 | -0.001 | 201927 | 270.8 |
| Aroclor-1260 | 3 | 11.749 | -0.002 | 271471 | 282.8 | 3 | 12.445 | -0.000 | 50687 | 255.3 |
| Aroclor-1260 | 4 | 12.152 | -0.002 | 136441 | 279.1 | 4 | 12.512 | 0.000 | 134315 | 270.2 |
| Aroclor-1260 | 5 | 12.256 | -0.000 | 56215 | 280.9 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 280.6 Total Col2Ave (4 peaks): 265.0 RPD = 6
Corrected Ave (4 peaks): 280.0 Corrected Ave (3 peaks): 263.1 RPD = 6

CalAmt %D: 12.2 CalAmt %D: 6.0

Total PCB Area Col1 (5.933 - 13.804) = 2732830 Col1 Total PCB = 0.6 ppm*

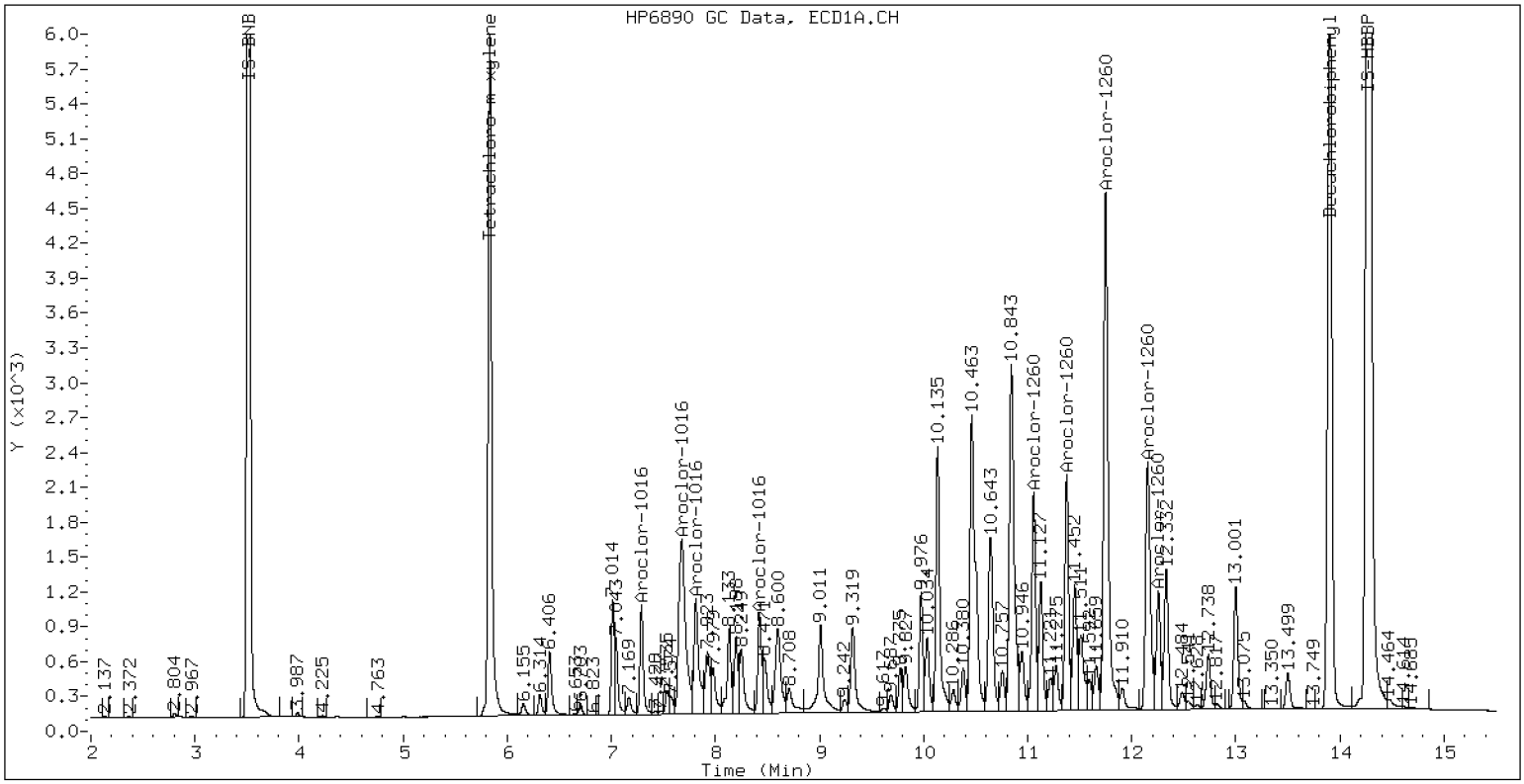
Total PCB Area Col2 (5.809 - 14.028) = 1830654 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

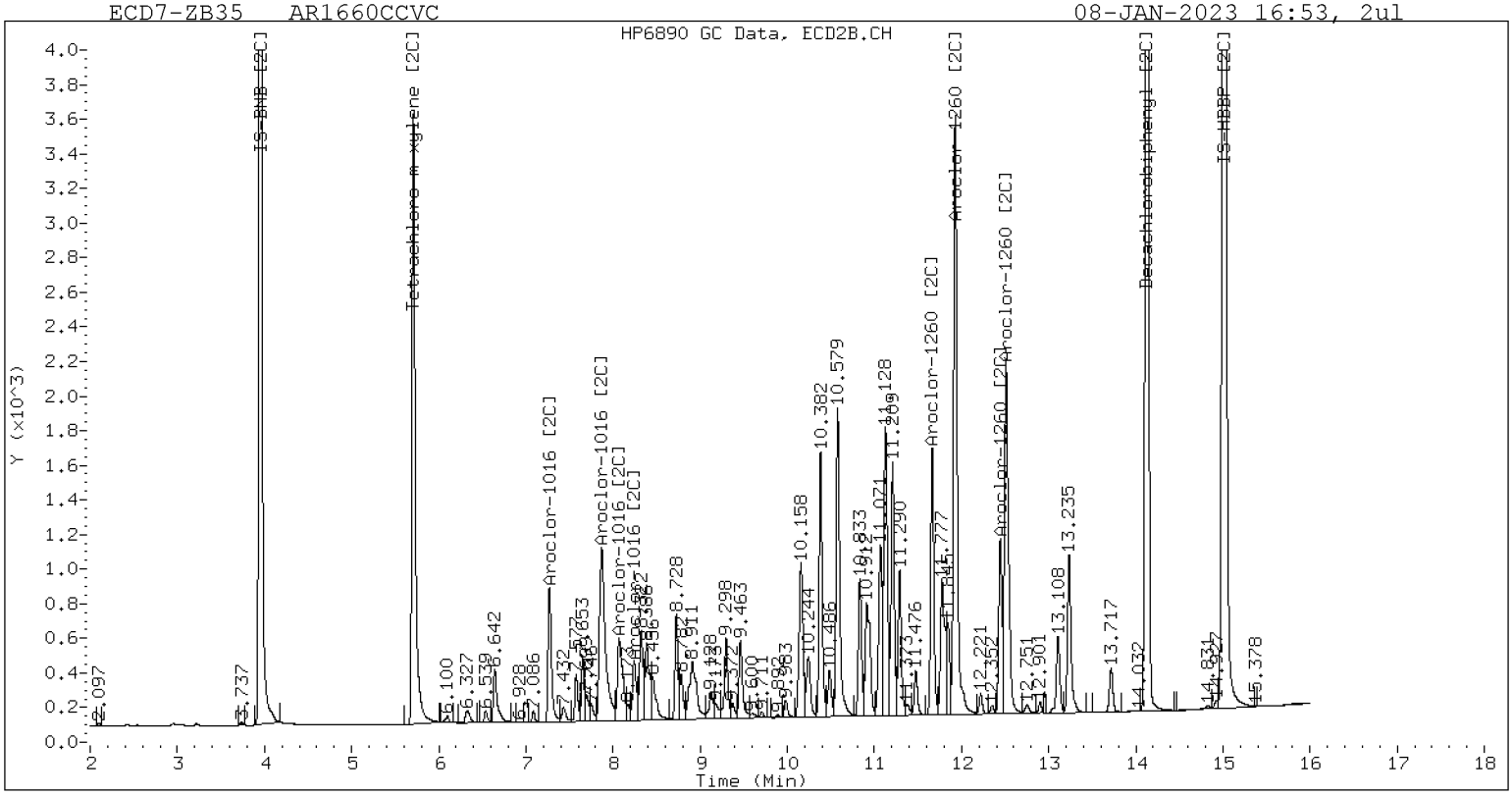
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVC 08-JAN-2023 16:53, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVC 08-JAN-2023 16:53, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 010723994ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCVD | Injection Time: | 21:27 |
| Sequence Name: | AR1248CCVD | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1248 | A | 250.00 | 275 | 0.0490062 | 0.0523369 | | 10.0 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 274 | | 0.0376843 | | | |
| Aroclor-1248 (2) | A | 250.00 | 286 | | 0.0502180 | | | |
| Aroclor-1248 (3) | A | 250.00 | 235 | | 0.0741888 | | | |
| Aroclor-1248 (4) | A | 250.00 | 305 | | 0.0472567 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 271 | 0.0394876 | 0.0429421 | | 8.2 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 262 | | 0.0342489 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 263 | | 0.0361367 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 273 | | 0.0456686 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 284 | | 0.0557140 | | | |
| Decachlorobiphenyl | A | 40.000 | 39.4 | 0.7333327 | 0.7224665 | | -1.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.3 | 1.1336710 | 1.0856290 | | -4.3 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 39.6 | 1.1358180 | 1.1231440 | | -1.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.6 | 1.0966080 | 1.0300390 | | -6.0 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230107.b/010723994ECD7.D
Data file 2: /230107.b/230107.b/010723994ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCVD
Client ID:
Injection Date: 08-JAN-2023 21:27
Report Date: 01/11/2023 16:13
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | 0.001 | 244716 | 5.710 | 0.001 | 163339 | 38.3 | 37.6 | 1.9 | Tetrachloro-m-xylene |
| 13.904 | 0.000 | 411643 | 14.129 | 0.001 | 341911 | 39.4 | 39.6 | 0.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 450828 | 0.7 |
| Hexabromobiphenyl | 798898 | 1139549 | 42.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 317151 | 27.3 |
| Hexabromobiphenyl | 362541 | 608846 | 67.9 |

* 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 | 8.425 | 0.000 | 53091 | 273.9 | 1 | 8.323 | 0.000 | 33944 | 262.0 |
| Aroclor-1248 | 2 | 8.603 | 0.000 | 70749 | 285.9 | 2 | 8.728 | 0.000 | 35815 | 262.8 |
| Aroclor-1248 | 3 | 9.019 | 0.000 | 104520 | 234.8 | 3 | 9.178 | 0.000 | 45262 | 273.1 |
| Aroclor-1248 | 4 | 9.313 | 0.000 | 66577 | 305.2 | 4 | 9.602 | 0.000 | 55218 | 283.8 |

Total Col1Ave (4 peaks): 274.9 Total Col2Ave (4 peaks): 270.4 RPD = 2

Corrected Ave (3 peaks): 264.8 Corrected Ave (3 peaks): 266.0 RPD = 0

CalAmt %D: 10.0 CalAmt %D: 8.2

Total PCB Area Col1 (5.932 - 13.803) = 1116521 Col1 Total PCB = 0.3 ppm*

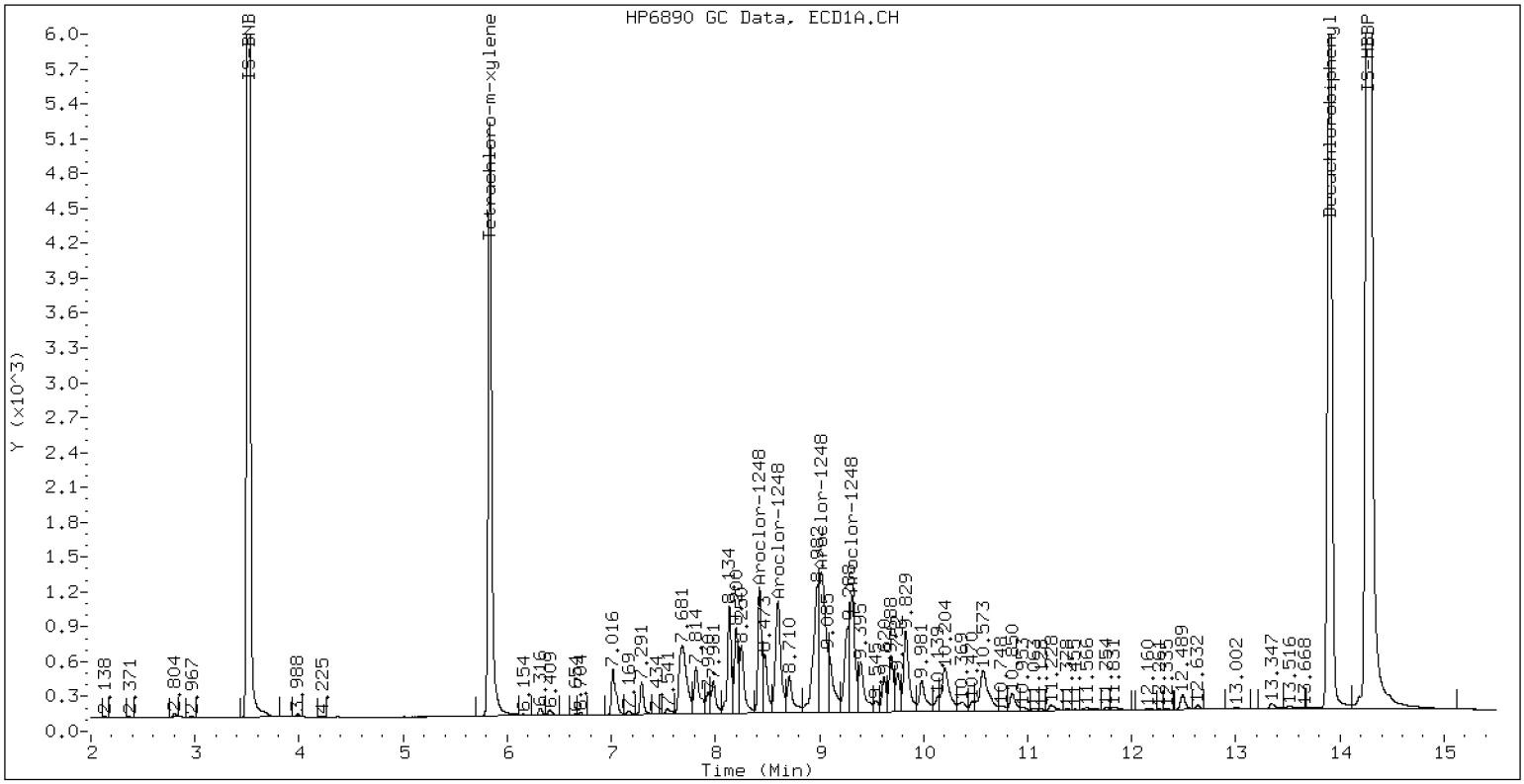
Total PCB Area Col2 (5.809 - 14.028) = 723111 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

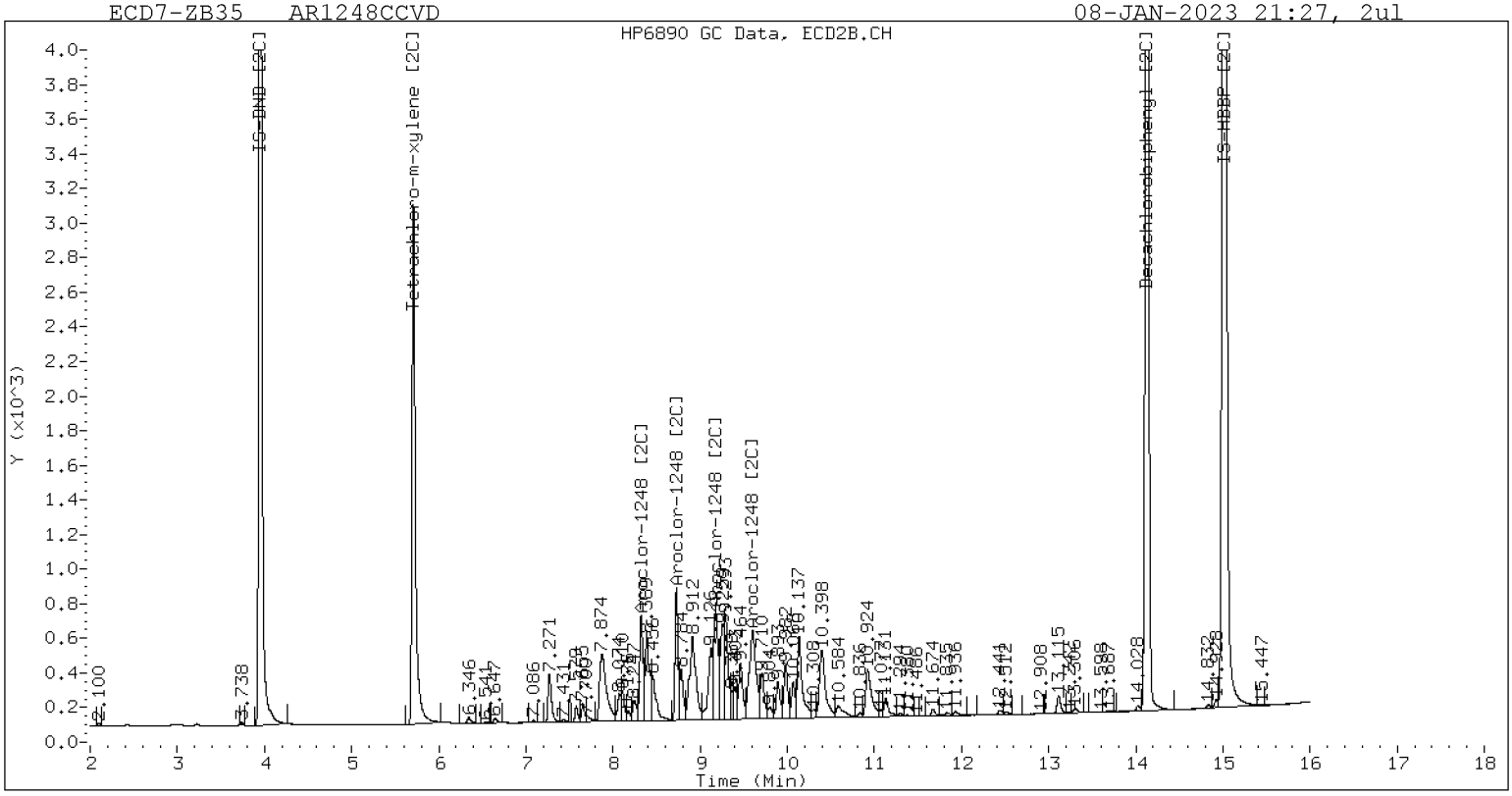
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCVD 08-JAN-2023 21:27, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCVD 08-JAN-2023 21:27, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 010723995ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0099 | Injection Date: | 01/08/23 |
| Lab Sample ID: | SLA0099-CCVE | Injection Time: | 21:48 |
| Sequence Name: | AR1660CCVE | | |

| | | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1016 | A | 250.00 | 280 | 0.0441939 | 0.0489582 | | 11.8 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 273 | 0.0266860 | 0.0291012 | | 9.2 | |
| Aroclor-1016 (2) | A | 250.00 | 270 | 0.0861572 | 0.0931360 | | 8.0 | |
| Aroclor-1016 (3) | A | 250.00 | 290 | 0.0390425 | 0.0452387 | | 16.0 | |
| Aroclor-1016 (4) | A | 250.00 | 285 | 0.0248899 | 0.0283570 | | 14.0 | |
| Aroclor 1016 [2C] | A | 250.00 | 255 | 0.0467310 | 0.0477771 | | 1.8 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 252 | 0.0409030 | 0.0412869 | | 0.8 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 258 | 0.0882154 | 0.0911412 | | 3.2 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 253 | 0.0378846 | 0.0383426 | | 1.2 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 255 | 0.0199212 | 0.0203378 | | 2.0 | |
| Aroclor 1260 | A | 250.00 | 236 | 0.0390342 | 0.0368119 | | -5.6 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 232 | 0.0291201 | 0.0269804 | | -7.2 | |
| Aroclor-1260 (2) | A | 250.00 | 236 | 0.0301181 | 0.0283759 | | -5.6 | |
| Aroclor-1260 (3) | A | 250.00 | 236 | 0.0791351 | 0.0748297 | | -5.6 | |
| Aroclor-1260 (4) | A | 250.00 | 236 | 0.0403003 | 0.0380188 | | -5.6 | |
| Aroclor-1260 (5) | A | 250.00 | 240 | 0.0164974 | 0.0158544 | | -4.0 | |
| Aroclor 1260 [2C] | A | 250.00 | 245 | 0.0617619 | 0.0612120 | | -1.9 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 241 | 0.0422283 | 0.0407276 | | -3.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 250 | 0.1059643 | 0.1060419 | | 0.0 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 238 | 0.0282173 | 0.0268979 | | -4.8 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 252 | 0.0706376 | 0.0711805 | | 0.8 | |
| Decachlorobiphenyl | A | 40.000 | 39.4 | 0.7333327 | 0.7217189 | | -1.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 42.9 | 1.1336710 | 1.2158640 | | 7.3 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.6 | 1.1358180 | 1.1544990 | | 1.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 41.0 | 1.0966080 | 1.1254540 | | 2.5 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230107.b/010723995ECD7.D
Data file 2: /230107.b/230107.b/010723995ECD7.D
Method: \\target\share\chem4\ecd7.i\230107.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVE
Client ID:
Injection Date: 08-JAN-2023 21:48
Report Date: 01/11/2023 16:13
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | 0.000 | 291214 | 5.709 | 0.000 | 188805 | 42.9 | 41.1 | 4.4 | Tetrachloro-m-xylene |
| 13.903 | 0.000 | 461641 | 14.128 | 0.000 | 380505 | 39.4 | 40.7 | 3.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 479024 | 7.0 |
| Hexabromobiphenyl | 798898 | 1279282 | 60.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 335518 | 34.7 |
| Hexabromobiphenyl | 362541 | 659169 | 81.8 |

* 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# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.290 | 0.000 | 43563 | 272.6 | 1 | 7.272 | 0.000 | 43289 | 252.3 |
| Aroclor-1016 | 2 | 7.679 | 0.000 | 139420 | 270.3 | 2 | 7.873 | 0.000 | 95561 | 258.3 |
| Aroclor-1016 | 3 | 7.813 | 0.000 | 67720 | 289.7 | 3 | 8.071 | 0.000 | 40202 | 253.0 |
| Aroclor-1016 | 4 | 8.424 | 0.000 | 42449 | 284.8 | 4 | 8.243 | 0.000 | 21324 | 255.2 |

Total Col1Ave (4 peaks): 279.3 Total Col2Ave (4 peaks): 254.7 RPD = 9
Corrected Ave (3 peaks): 275.9 Corrected Ave (3 peaks): 253.5 RPD = 8

CalAmt %D: 11.7 CalAmt %D: 1.9

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.059 | 0.000 | 107861 | 231.6 | 1 | 11.663 | 0.000 | 83895 | 241.1 |
| Aroclor-1260 | 2 | 11.375 | 0.000 | 113440 | 235.5 | 2 | 11.928 | 0.000 | 218436 | 250.2 |
| Aroclor-1260 | 3 | 11.749 | 0.000 | 299151 | 236.4 | 3 | 12.446 | 0.000 | 55407 | 238.3 |
| Aroclor-1260 | 4 | 12.154 | 0.000 | 151990 | 235.8 | 4 | 12.511 | 0.000 | 146625 | 251.9 |
| Aroclor-1260 | 5 | 12.257 | 0.000 | 63382 | 240.3 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 235.9 Total Col2Ave (4 peaks): 245.4 RPD = 4
Corrected Ave (4 peaks): 234.9 Corrected Ave (3 peaks): 243.2 RPD = 3

CalAmt %D: -5.6 CalAmt %D: -1.8

Total PCB Area Col1 (5.932 - 13.803) = 2971986 Col1 Total PCB = 0.6 ppm*

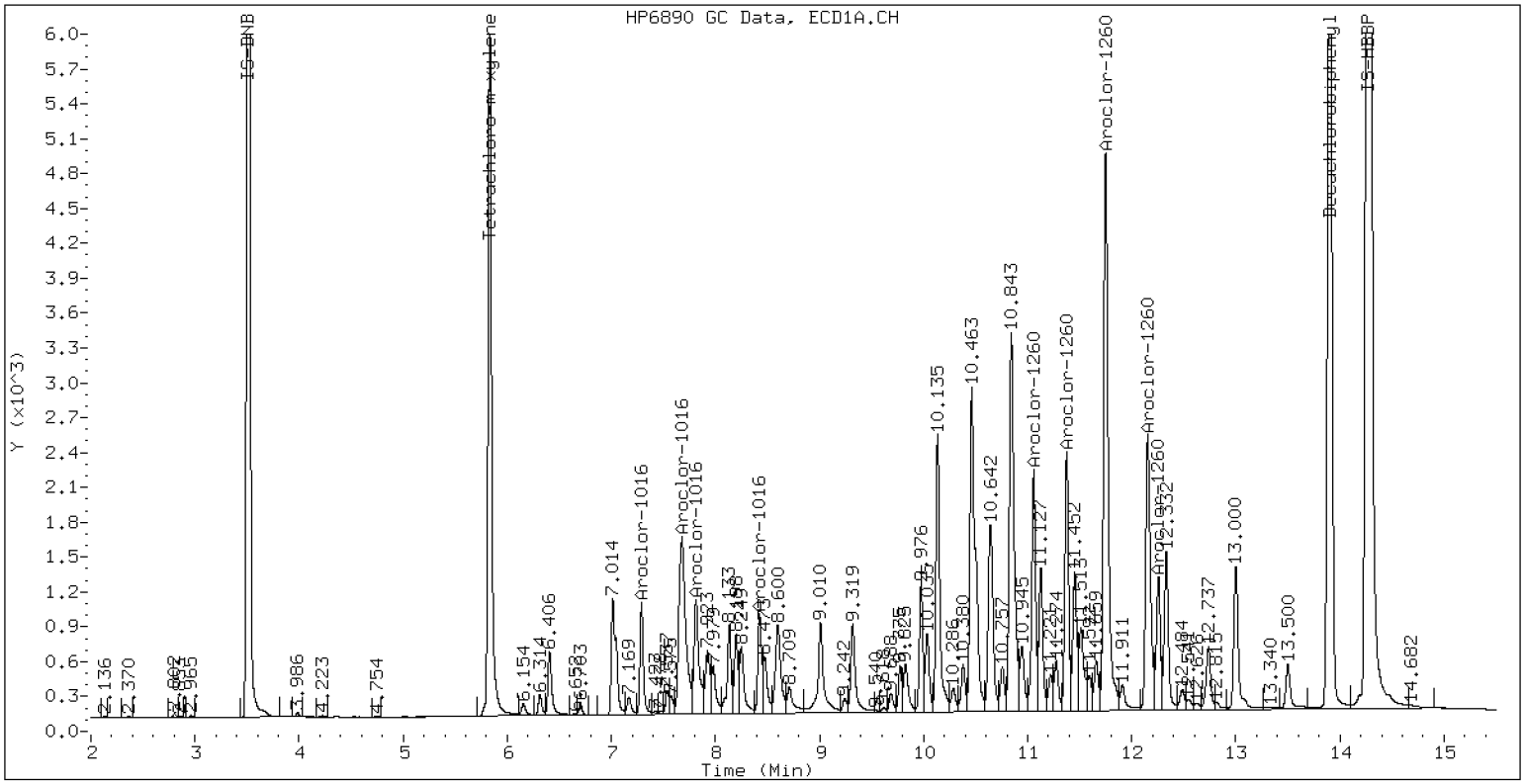
Total PCB Area Col2 (5.809 - 14.028) = 1926037 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

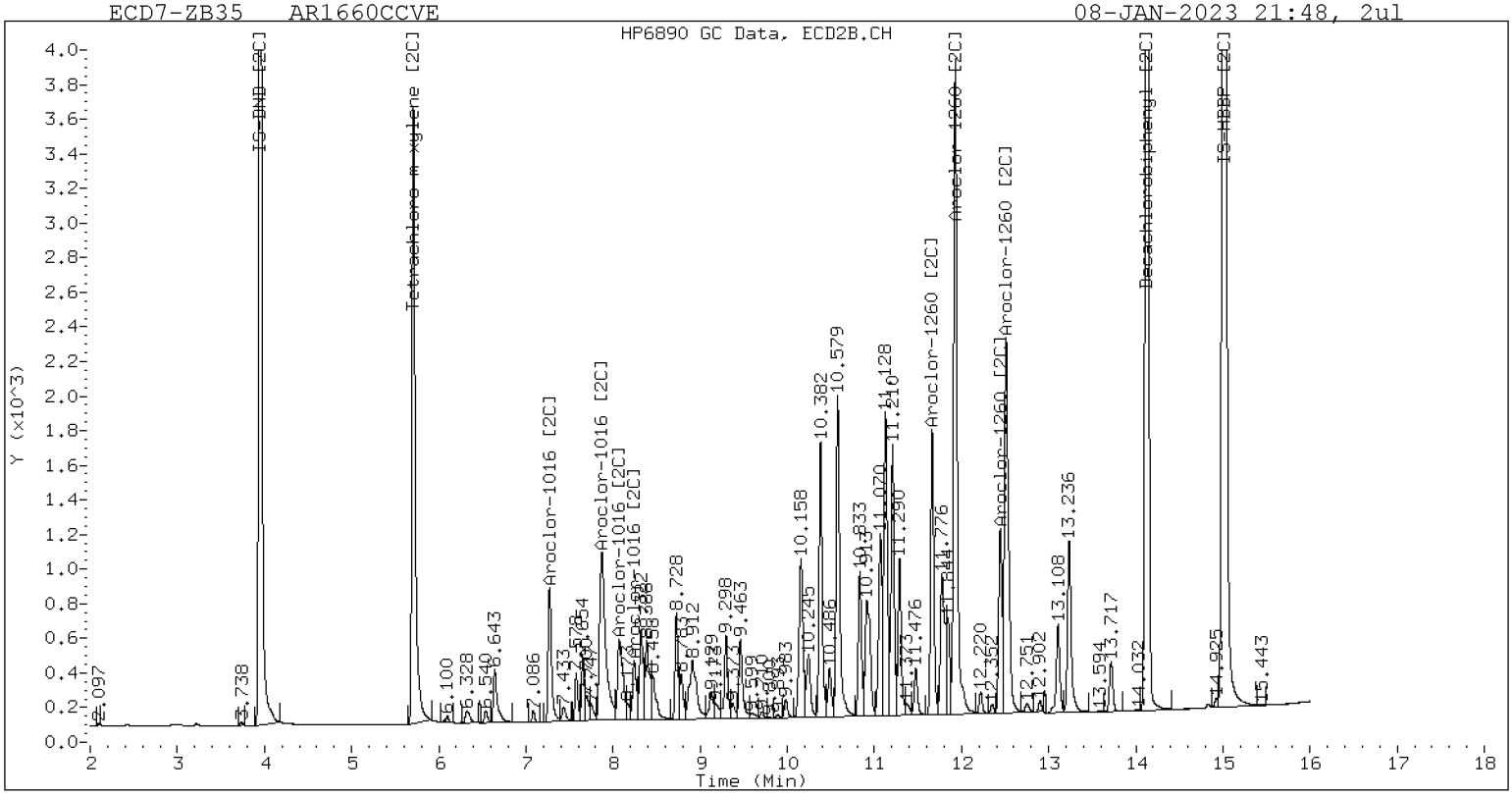
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVE 08-JAN-2023 21:48, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVE 08-JAN-2023 21:48, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092318ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/09/23 |
| Lab Sample ID: | SLA0129-CCV1 | Injection Time: | 15:02 |
| Sequence Name: | AR1248CCV1 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1248 | A | 250.00 | 272 | 0.0490062 | 0.0538685 | | 8.8 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 259 | | 0.0356471 | | | |
| Aroclor-1248 (2) | A | 250.00 | 265 | | 0.0465024 | | | |
| Aroclor-1248 (3) | A | 250.00 | 285 | | 0.0901357 | | | |
| Aroclor-1248 (4) | A | 250.00 | 279 | | 0.0431888 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 269 | 0.0394876 | 0.0427904 | | 7.7 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 262 | | 0.0342840 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 253 | | 0.0347401 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 282 | | 0.0471610 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 280 | | 0.0549765 | | | |
| Decachlorobiphenyl | A | 40.000 | 39.5 | 0.7333327 | 0.7236410 | | -1.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 37.3 | 1.1336710 | 1.0580100 | | -6.7 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 39.2 | 1.1358180 | 1.1138000 | | -1.9 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.1 | 1.0966080 | 1.0160300 | | -7.3 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092318ECD7.D
Data file 2: /230109.b/230109.b/01092318ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248-CCV1
Client ID:
Injection Date: 09-JAN-2023 15:02
Report Date: 01/14/2023 11:52
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 239141 | 5.708 | -0.006 | 160393 | 37.3 | 37.1 | 0.7 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 416641 | 14.127 | -0.010 | 348943 | 39.5 | 39.2 | 0.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 452058 | 1.0 |
| Hexabromobiphenyl | 798898 | 1151513 | 44.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 315725 | 26.7 |
| Hexabromobiphenyl | 362541 | 626581 | 72.8 |

* 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 | 8.425 | -0.003 | 50358 | 259.1 | 1 | 8.322 | -0.005 | 33826 | 262.3 |
| Aroclor-1248 | 2 | 8.602 | -0.002 | 65693 | 264.7 | 2 | 8.728 | -0.004 | 34276 | 252.7 |
| Aroclor-1248 | 3 | 9.015 | -0.008 | 127333 | 285.2 | 3 | 9.177 | -0.001 | 46531 | 282.0 |
| Aroclor-1248 | 4 | 9.308 | -0.003 | 61012 | 279.0 | 4 | 9.601 | -0.001 | 54242 | 280.0 |

Total Col1Ave (4 peaks): 272.0 Total Col2Ave (4 peaks): 269.2 RPD = 1

Corrected Ave (3 peaks): 267.6 Corrected Ave (3 peaks): 265.0 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 990566 Col1 Total PCB = 0.2 ppm*

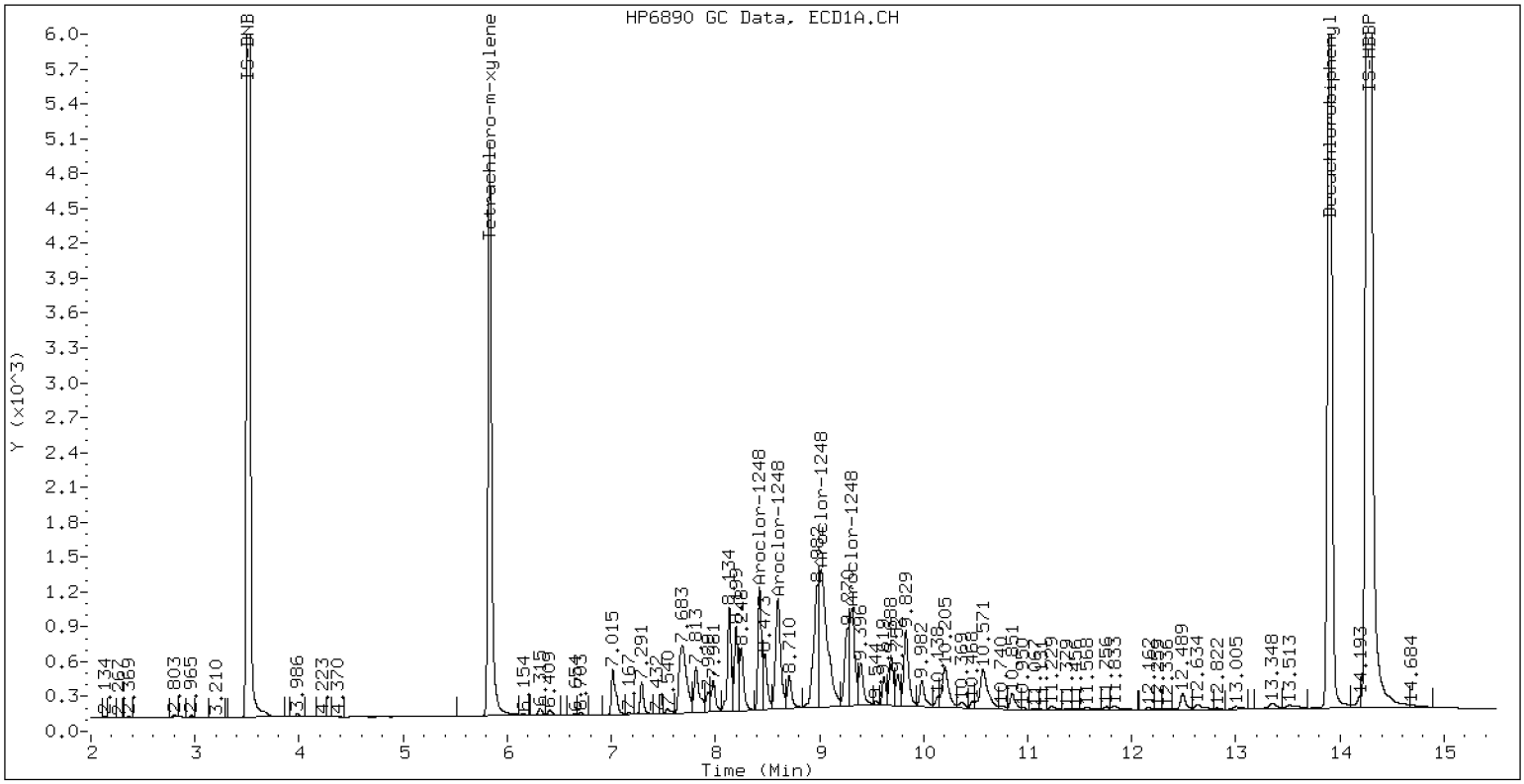
Total PCB Area Col2 (5.813 - 14.037) = 714178 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

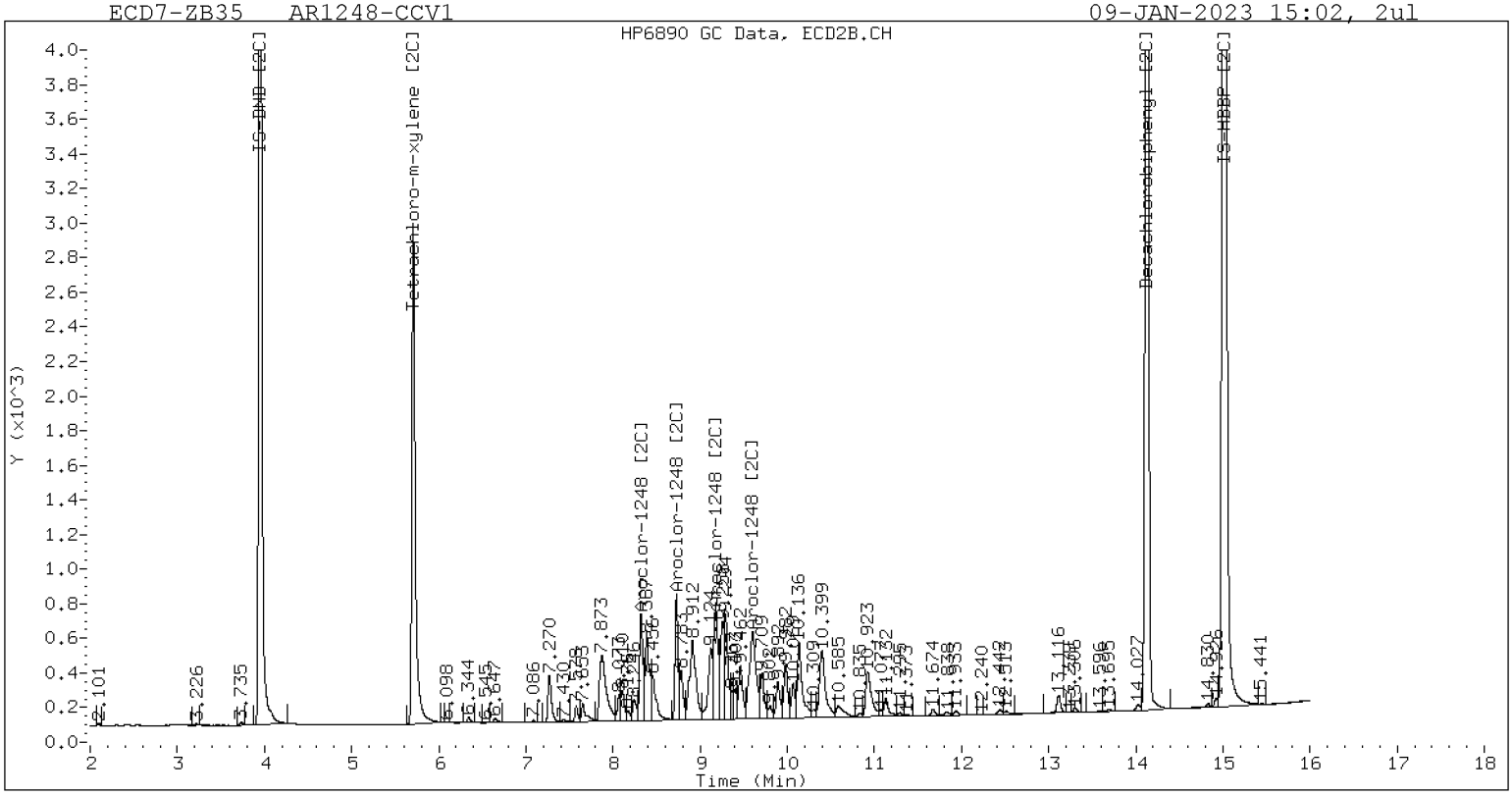
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248-CCV1 09-JAN-2023 15:02, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248-CCV1 09-JAN-2023 15:02, 2ul

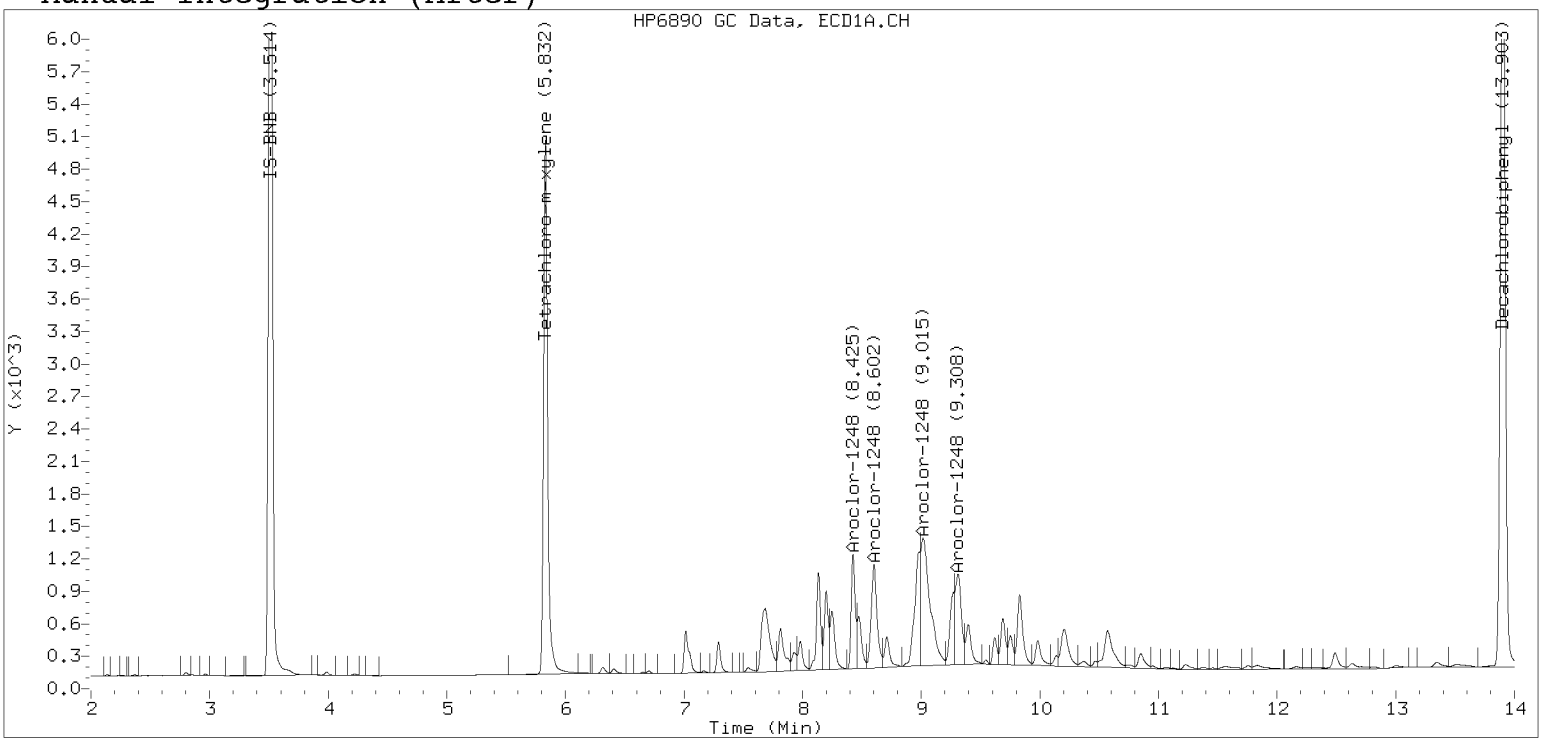



ZB-35 Manual Integration: NO

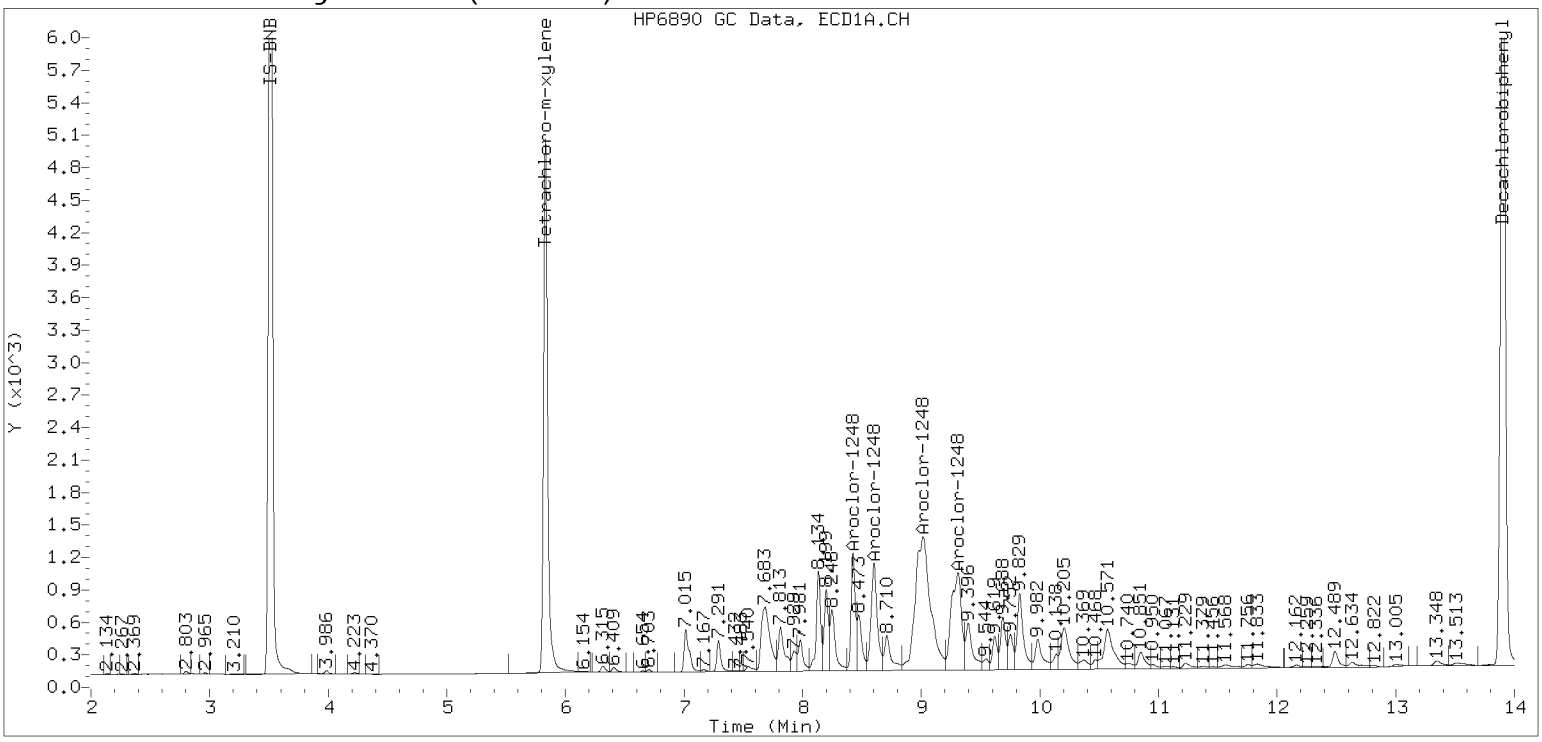
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092318ECD7.D  Injection Date: 09-JAN-2023 15:02

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092319ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/09/23 |
| Lab Sample ID: | SLA0129-CCV2 | Injection Time: | 15:23 |
| 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 | 273 | 0.0441939 | 0.0477978 | | 9.1 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 267 | 0.0266860 | 0.0285433 | | 7.0 | |
| Aroclor-1016 (2) | A | 250.00 | 264 | 0.0861572 | 0.0908512 | | 5.4 | |
| Aroclor-1016 (3) | A | 250.00 | 283 | 0.0390425 | 0.0442334 | | 13.3 | |
| Aroclor-1016 (4) | A | 250.00 | 277 | 0.0248899 | 0.0275633 | | 10.7 | |
| Aroclor 1016 [2C] | A | 250.00 | 252 | 0.0467310 | 0.0469608 | | 0.6 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 248 | 0.0409030 | 0.0405621 | | -0.8 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 252 | 0.0882154 | 0.0889378 | | 0.8 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 251 | 0.0378846 | 0.0379611 | | 0.2 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 256 | 0.0199212 | 0.0203824 | | 2.3 | |
| Aroclor 1260 | A | 250.00 | 240 | 0.0390342 | 0.0374701 | | -4.1 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 229 | 0.0291201 | 0.0267242 | | -8.2 | |
| Aroclor-1260 (2) | A | 250.00 | 238 | 0.0301181 | 0.0286350 | | -4.9 | |
| Aroclor-1260 (3) | A | 250.00 | 243 | 0.0791351 | 0.0768425 | | -2.9 | |
| Aroclor-1260 (4) | A | 250.00 | 240 | 0.0403003 | 0.0387387 | | -3.9 | |
| Aroclor-1260 (5) | A | 250.00 | 249 | 0.0164974 | 0.0164103 | | -0.5 | |
| Aroclor 1260 [2C] | A | 250.00 | 230 | 0.0617619 | 0.0574419 | | -7.9 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 222 | 0.0422283 | 0.0375411 | | -11.1 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 234 | 0.1059643 | 0.0991637 | | -6.4 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 226 | 0.0282173 | 0.0254593 | | -9.8 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 239 | 0.0706376 | 0.0676036 | | -4.3 | |
| Decachlorobiphenyl | A | 40.000 | 40.6 | 0.7333327 | 0.7445515 | | 1.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.7 | 1.1336710 | 1.1806860 | | 4.1 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.1 | 1.1358180 | 1.1392230 | | 0.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.3 | 1.0966080 | 1.1048770 | | 0.8 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092319ECD7.D
Data file 2: /230109.b/230109.b/01092319ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-CCV2
Client ID:
Injection Date: 09-JAN-2023 15:23
Report Date: 01/14/2023 11:52
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | -0.004 | 276813 | 5.709 | -0.005 | 180454 | 41.7 | 40.3 | 3.3 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 451257 | 14.127 | -0.010 | 366716 | 40.6 | 40.1 | 1.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 468902 | 4.7 |
| Hexabromobiphenyl | 798898 | 1212158 | 51.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 326650 | 31.1 |
| Hexabromobiphenyl | 362541 | 643800 | 77.6 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.290 | -0.005 | 41825 | 267.4 | 1 | 7.272 | -0.003 | 41405 | 247.9 |
| Aroclor-1016 | 2 | 7.681 | -0.004 | 133126 | 263.6 | 2 | 7.873 | 0.003 | 90786 | 252.0 |
| Aroclor-1016 | 3 | 7.813 | -0.005 | 64816 | 283.2 | 3 | 8.071 | 0.001 | 38750 | 250.5 |
| Aroclor-1016 | 4 | 8.424 | -0.005 | 40389 | 276.9 | 4 | 8.242 | 0.001 | 20806 | 255.8 |
| Total Col1Ave (4 peaks): | | | | | 272.8 | Total Col2Ave (4 peaks): | | | | 251.6 RPD = 8 |
| Corrected Ave (3 peaks): | | | | | 269.3 | Corrected Ave (3 peaks): | | | | 250.2 RPD = 7 |
| Aroclor-1260 | 1 | 11.058 | -0.004 | 101231 | 229.4 | 1 | 11.663 | -0.006 | 75528 | 222.3 |
| Aroclor-1260 | 2 | 11.375 | -0.002 | 108469 | 237.7 | 2 | 11.927 | -0.006 | 199505 | 234.0 |
| Aroclor-1260 | 3 | 11.749 | -0.003 | 291079 | 242.8 | 3 | 12.445 | -0.007 | 51221 | 225.6 |
| Aroclor-1260 | 4 | 12.154 | -0.004 | 146742 | 240.3 | 4 | 12.511 | -0.006 | 136010 | 239.3 |
| Aroclor-1260 | 5 | 12.257 | -0.005 | 62162 | 248.7 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 239.8 | Total Col2Ave (4 peaks): | | | | 230.3 RPD = 4 |
| Corrected Ave (4 peaks): | | | | | 237.5 | Corrected Ave (3 peaks): | | | | 227.3 RPD = 4 |

Total PCB Area Col1 (5.936 - 13.808) = 2827931 Col1 Total PCB = 0.6 ppm*

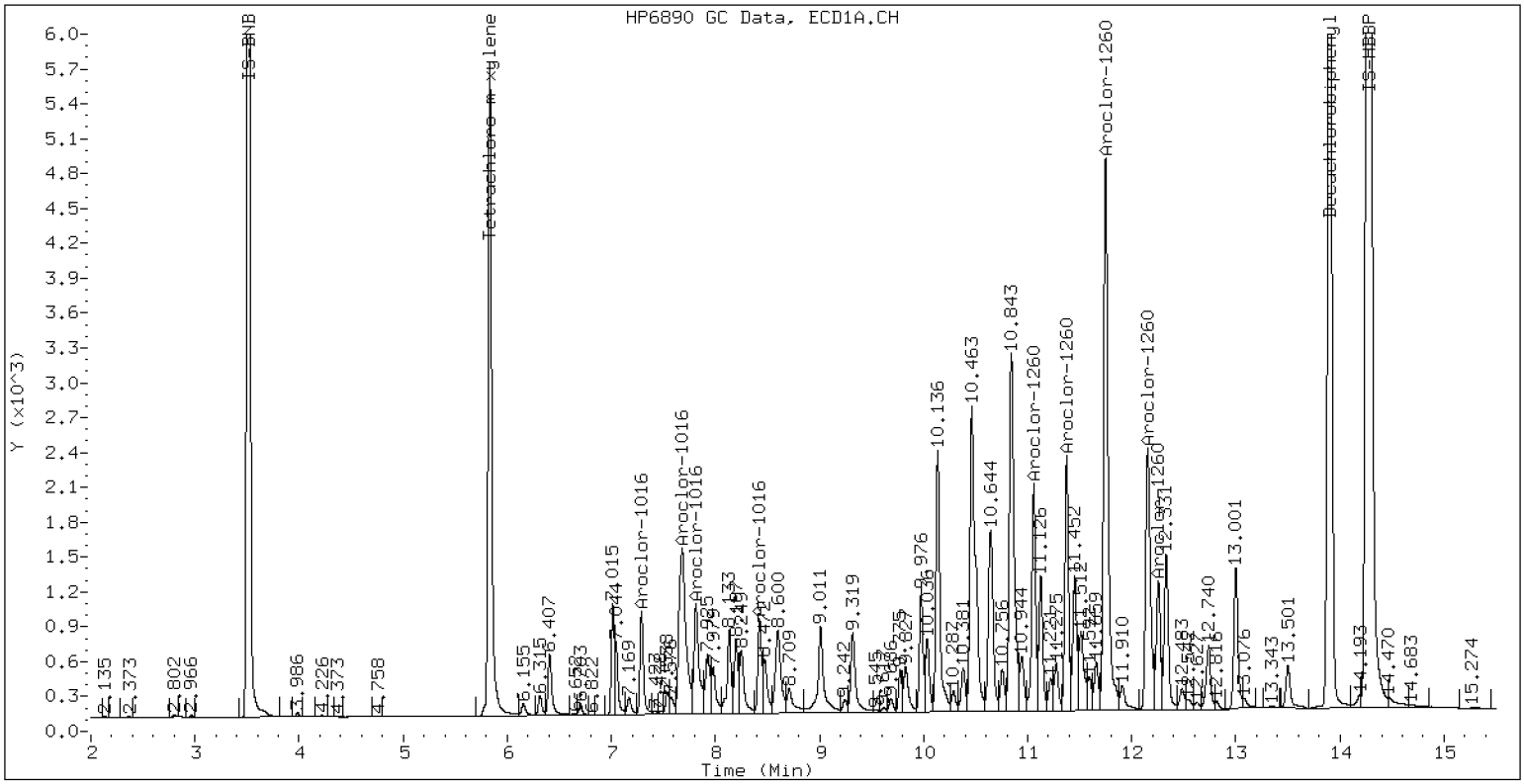
Total PCB Area Col2 (5.813 - 14.037) = 1778330 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

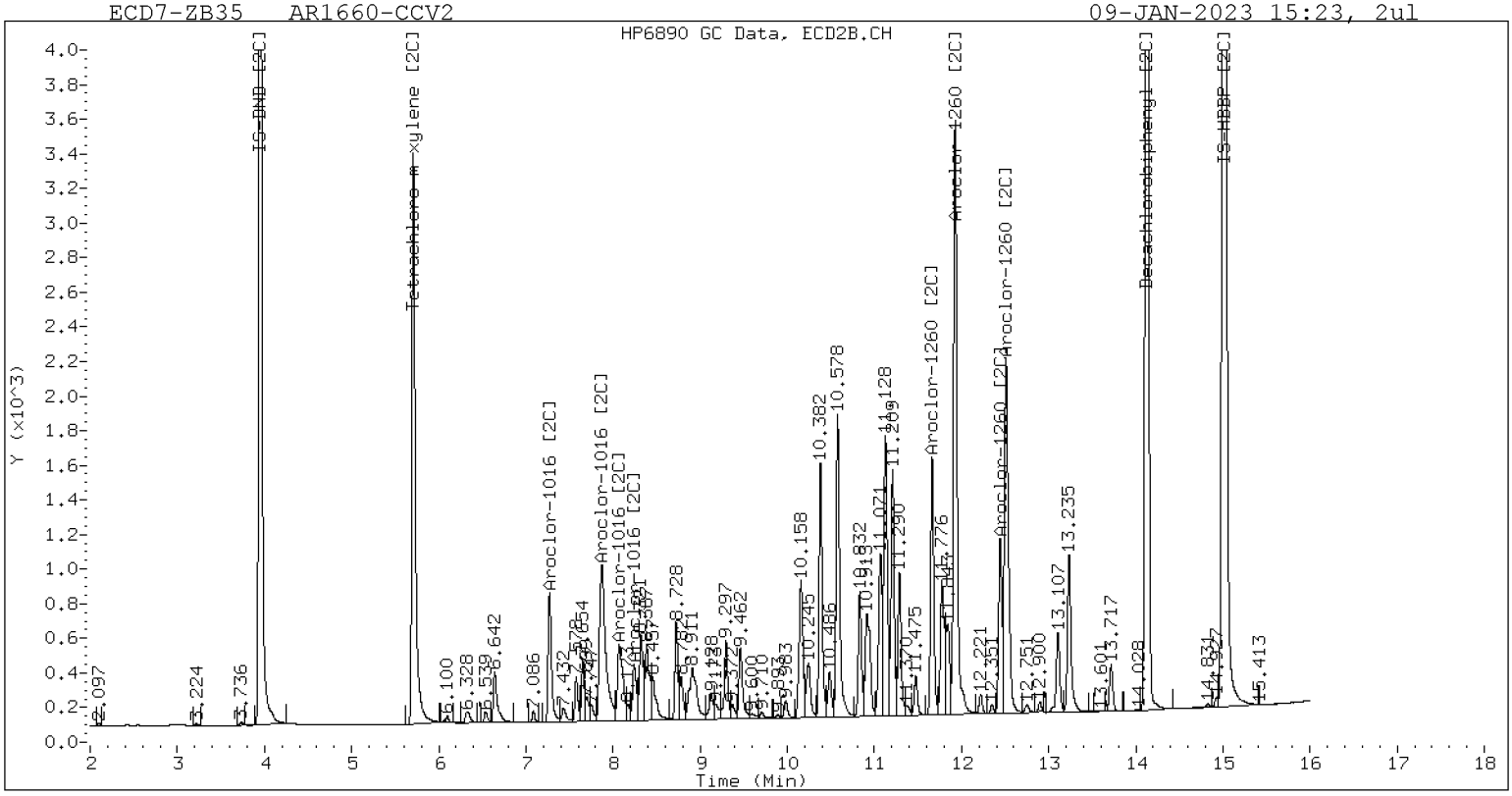
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-CCV2 09-JAN-2023 15:23, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-CCV2 09-JAN-2023 15:23, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092332ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/09/23 |
| Lab Sample ID: | SLA0129-CCV3 | Injection Time: | 19:57 |
| 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 | 267 | 0.0396000 | 0.0422981 | | 6.9 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 263 | | 0.0238233 | | | |
| Aroclor-1242 (2) | A | 250.00 | 256 | | 0.0738284 | | | |
| Aroclor-1242 (3) | A | 250.00 | 259 | | 0.0214483 | | | |
| Aroclor-1242 (4) | A | 250.00 | 291 | | 0.0500925 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 260 | 0.0391981 | 0.0407017 | | 4.2 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 257 | | 0.0348467 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 258 | | 0.0741538 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 262 | | 0.0243255 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 264 | | 0.0294808 | | | |
| Decachlorobiphenyl | A | 40.000 | 40.8 | 0.7333327 | 0.7471032 | | 1.9 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 39.0 | 1.1336710 | 1.1042940 | | -2.6 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.4 | 1.1358180 | 1.2031480 | | 5.9 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.5 | 1.0966080 | 1.0283100 | | -6.2 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092332ECD7.D
Data file 2: /230109.b/230109.b/01092332ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242-CCV3
Client ID:
Injection Date: 09-JAN-2023 19:57
Report Date: 01/14/2023 11:52
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.834 | -0.003 | 246690 | 5.710 | -0.004 | 164073 | 39.0 | 37.5 | 3.8 | Tetrachloro-m-xylene |
| 13.903 | -0.004 | 213707 | 14.127 | -0.010 | 230670 | 40.8 | 42.4 | 3.9 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 446783 | -0.2 |
| Hexabromobiphenyl | 798898 | 572095 | -28.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 319112 | 28.1 |
| Hexabromobiphenyl | 362541 | 383444 | 5.8 |

* 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-1242 | 1 | 7.290 | -0.005 | 33262 | 262.7 | 1 | 7.272 | -0.005 | 34750 | 257.3 |
| Aroclor-1242 | 2 | 7.679 | -0.006 | 103079 | 256.4 | 2 | 7.872 | -0.002 | 73948 | 257.9 |
| Aroclor-1242 | 3 | 8.424 | -0.005 | 29946 | 258.9 | 3 | 9.177 | -0.001 | 24258 | 262.3 |
| Aroclor-1242 | 4 | 9.023 | -0.008 | 69939 | 291.1 | 4 | 9.602 | -0.004 | 29399 | 264.4 |

Total Col1Ave (4 peaks): 267.3 Total Col2Ave (4 peaks): 260.5 RPD = 3
Corrected Ave (3 peaks): 259.3 Corrected Ave (3 peaks): 259.2 RPD = 0

Total PCB Area Col1 (5.936 - 13.808) = 787002 Col1 Total PCB = 0.2 ppm*

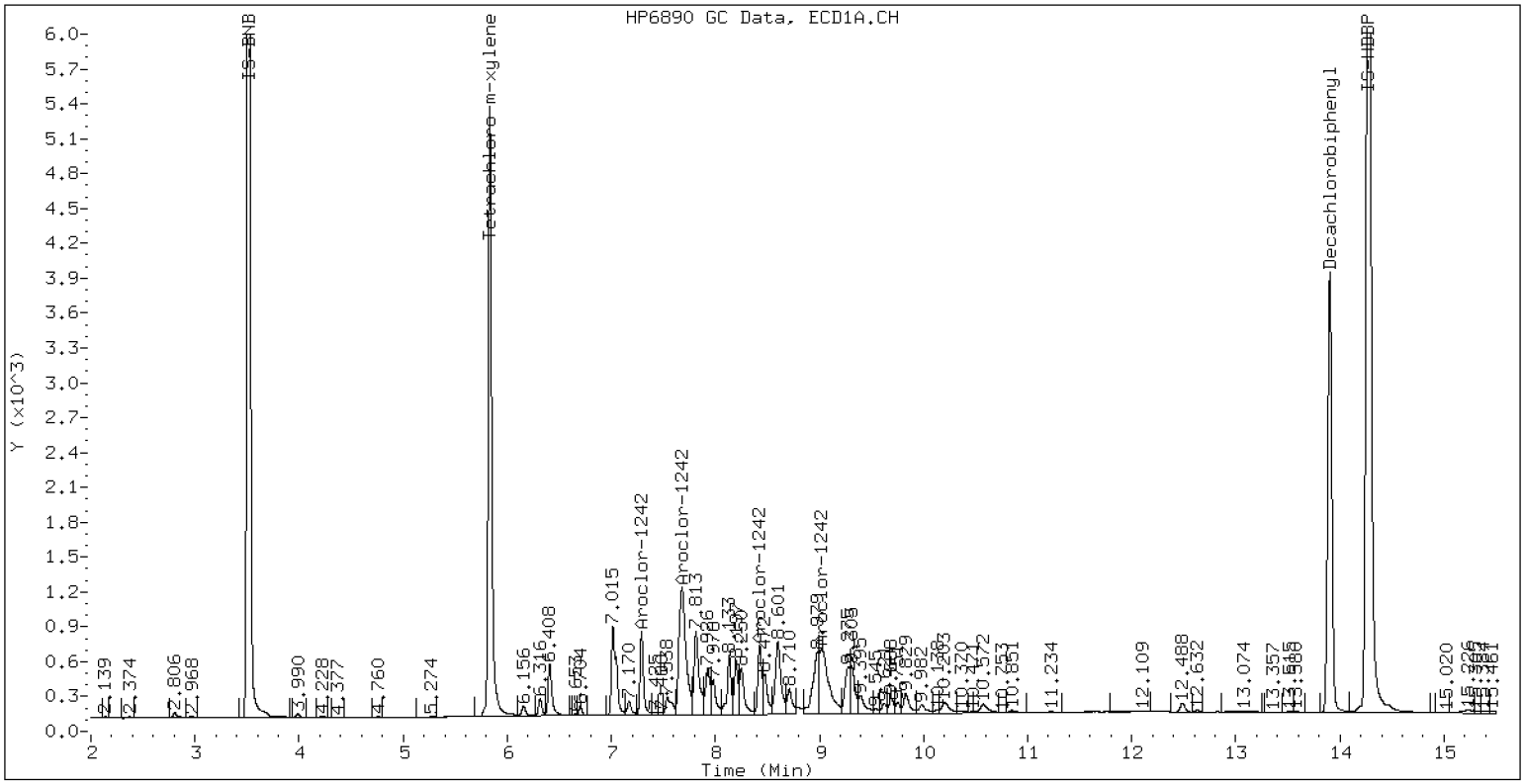
Total PCB Area Col2 (5.813 - 14.037) = 539053 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

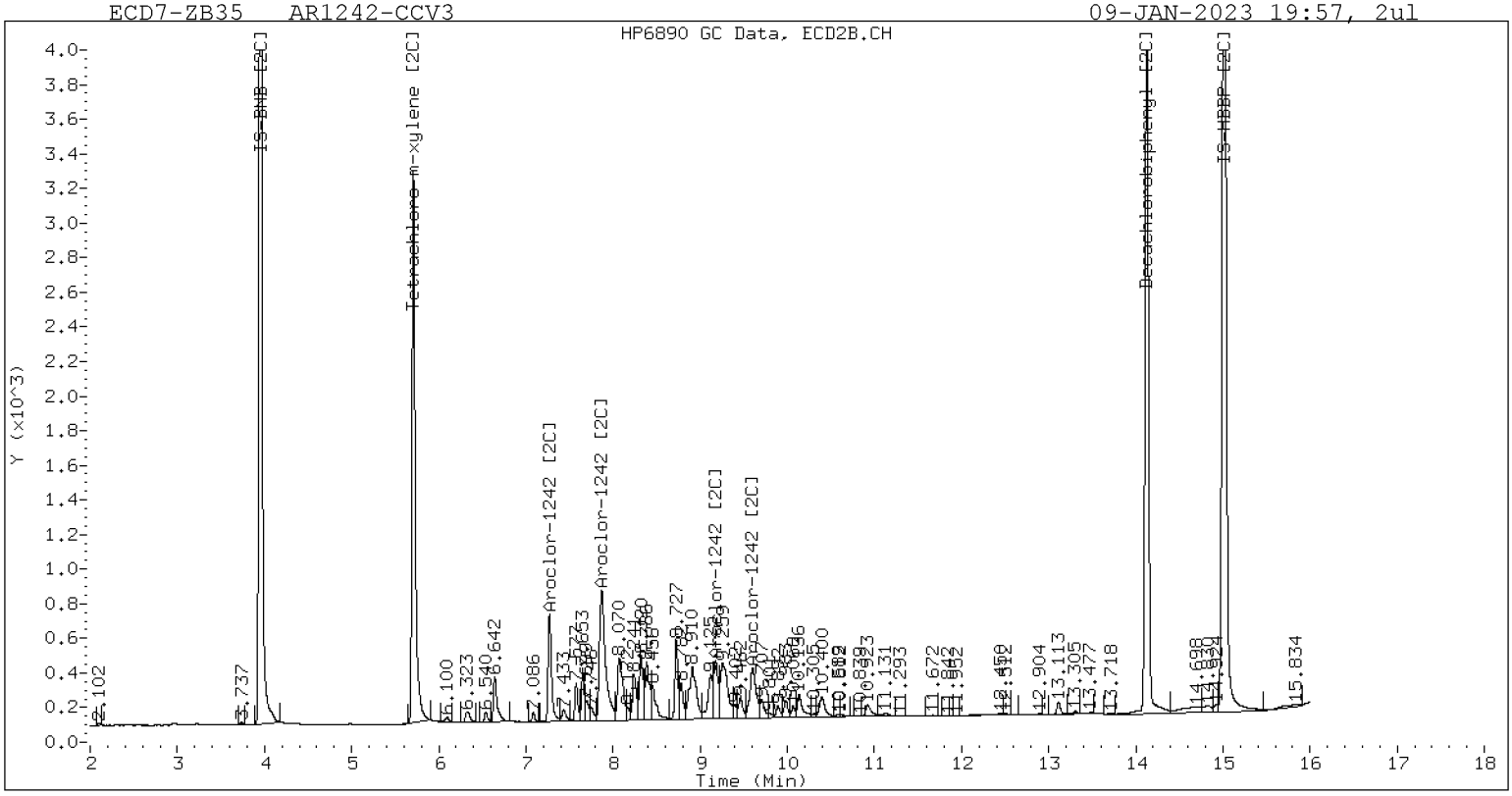
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242-CCV3 09-JAN-2023 19:57, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242-CCV3 09-JAN-2023 19:57, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092333ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/09/23 |
| Lab Sample ID: | SLA0129-CCV4 | Injection Time: | 20:19 |
| 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 | 273 | 0.0441939 | 0.0481376 | | 9.1 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 272 | 0.0266860 | 0.0290571 | | 8.9 | |
| Aroclor-1016 (2) | A | 250.00 | 270 | 0.0861572 | 0.0928979 | | 7.8 | |
| Aroclor-1016 (3) | A | 250.00 | 281 | 0.0390425 | 0.0438286 | | 12.3 | |
| Aroclor-1016 (4) | A | 250.00 | 269 | 0.0248899 | 0.0267668 | | 7.5 | |
| Aroclor 1016 [2C] | A | 250.00 | 260 | 0.0467310 | 0.0484559 | | 3.9 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 259 | 0.0409030 | 0.0423468 | | 3.5 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 260 | 0.0882154 | 0.0915760 | | 3.8 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 256 | 0.0378846 | 0.0388136 | | 2.5 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 265 | 0.0199212 | 0.0210871 | | 5.9 | |
| Aroclor 1260 | A | 250.00 | 294 | 0.0390342 | 0.0461726 | | 17.8 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 301 | 0.0291201 | 0.0350377 | | 20.3 | |
| Aroclor-1260 (2) | A | 250.00 | 312 | 0.0301181 | 0.0375559 | | 24.7 | |
| Aroclor-1260 (3) | A | 250.00 | 298 | 0.0791351 | 0.0942365 | | 19.1 | |
| Aroclor-1260 (4) | A | 250.00 | 283 | 0.0403003 | 0.0456060 | | 13.2 | |
| Aroclor-1260 (5) | A | 250.00 | 279 | 0.0164974 | 0.0184270 | | 11.7 | |
| Aroclor 1260 [2C] | A | 250.00 | 288 | 0.0617619 | 0.0716406 | | 15.1 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 286 | 0.0422283 | 0.0483557 | | 14.5 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 295 | 0.1059643 | 0.1251615 | | 18.1 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 281 | 0.0282173 | 0.0317339 | | 12.5 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 288 | 0.0706376 | 0.0813112 | | 15.1 | |
| Decachlorobiphenyl | A | 40.000 | 42.9 | 0.7333327 | 0.7868561 | | 7.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 43.5 | 1.1336710 | 1.2328650 | | 8.7 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.4 | 1.1358180 | 1.2036430 | | 6.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 42.1 | 1.0966080 | 1.1532200 | | 5.2 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092333ECD7.D
Data file 2: /230109.b/230109.b/01092333ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-CCV4
Client ID:
Injection Date: 09-JAN-2023 20:19
Report Date: 01/14/2023 11:52
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 286630 | 5.707 | -0.006 | 190298 | 43.5 | 42.1 | 3.4 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 272277 | 14.127 | -0.010 | 262021 | 42.9 | 42.4 | 1.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 464982 | 3.9 |
| Hexabromobiphenyl | 798898 | 692063 | -13.4 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 330029 | 32.5 |
| Hexabromobiphenyl | 362541 | 435380 | 20.1 |

* 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 | -0.005 | 42222 | 272.2 | 1 | 7.271 | -0.004 | 43674 | 258.8 |
| Aroclor-1016 | 2 | 7.676 | -0.008 | 134987 | 269.6 | 2 | 7.870 | -0.001 | 94446 | 259.5 |
| Aroclor-1016 | 3 | 7.811 | -0.007 | 63686 | 280.6 | 3 | 8.069 | -0.001 | 40030 | 256.1 |
| Aroclor-1016 | 4 | 8.422 | -0.007 | 38894 | 268.9 | 4 | 8.240 | -0.001 | 21748 | 264.6 |
| Total Col1Ave (4 peaks): | | | | | 272.8 | Total Col2Ave (4 peaks): | | | | 259.8 RPD = 5 |
| Corrected Ave (3 peaks): | | | | | 270.2 | Corrected Ave (3 peaks): | | | | 258.2 RPD = 5 |
| Aroclor-1260 | 1 | 11.057 | -0.005 | 75776 | 300.8 | 1 | 11.662 | -0.007 | 65791 | 286.3 |
| Aroclor-1260 | 2 | 11.374 | -0.004 | 81222 | 311.7 | 2 | 11.925 | -0.007 | 170290 | 295.3 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 203805 | 297.7 | 3 | 12.443 | -0.008 | 43176 | 281.2 |
| Aroclor-1260 | 4 | 12.151 | -0.007 | 98632 | 282.9 | 4 | 12.509 | -0.007 | 110629 | 287.8 |
| Aroclor-1260 | 5 | 12.255 | -0.007 | 39852 | 279.2 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 294.5 | Total Col2Ave (4 peaks): | | | | 287.6 RPD = 2 |
| Corrected Ave (4 peaks): | | | | | 290.2 | Corrected Ave (3 peaks): | | | | 285.1 RPD = 2 |

Total PCB Area Col1 (5.936 - 13.808) = 2214314 Col1 Total PCB = 0.5 ppm*

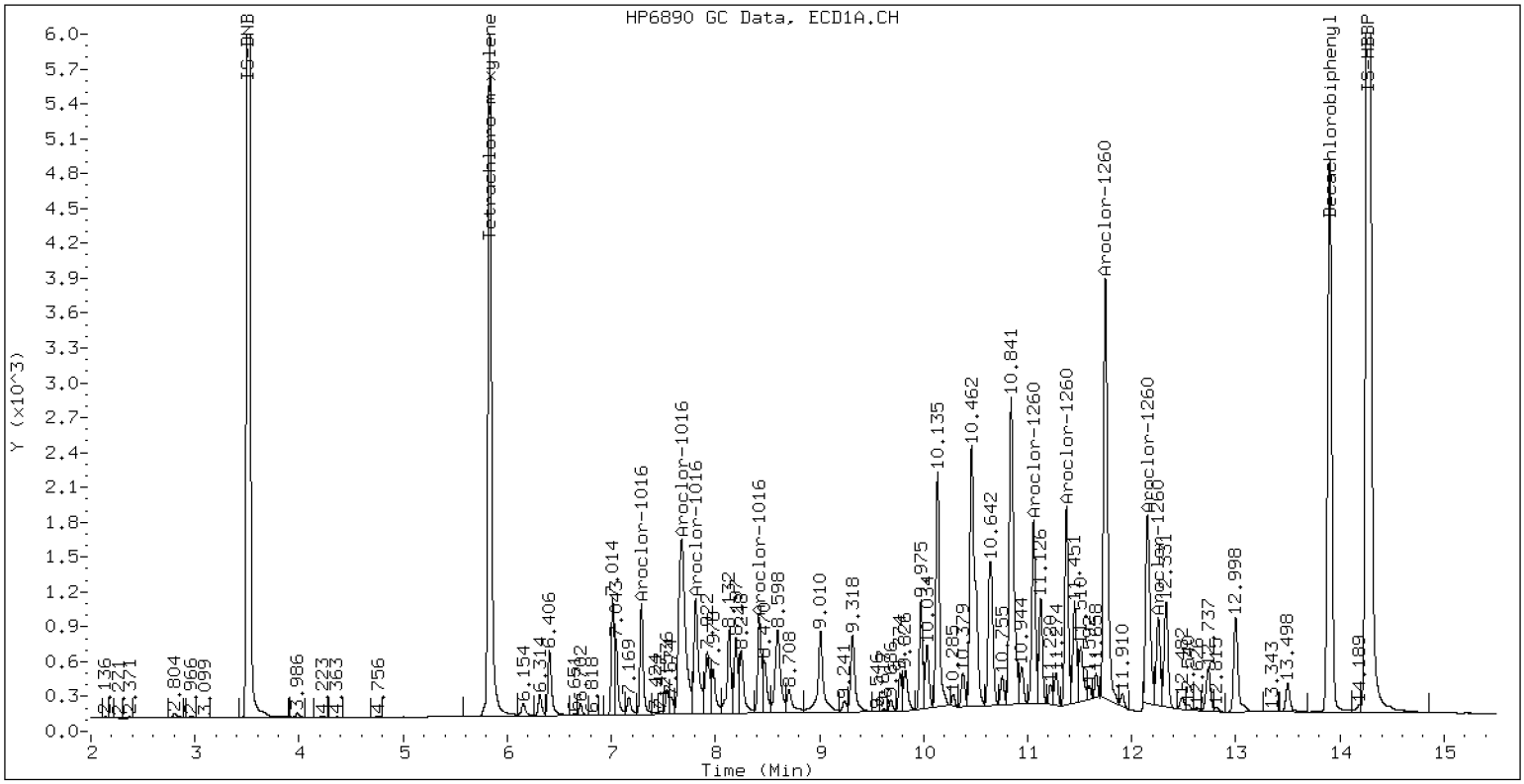
Total PCB Area Col2 (5.813 - 14.037) = 1631519 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

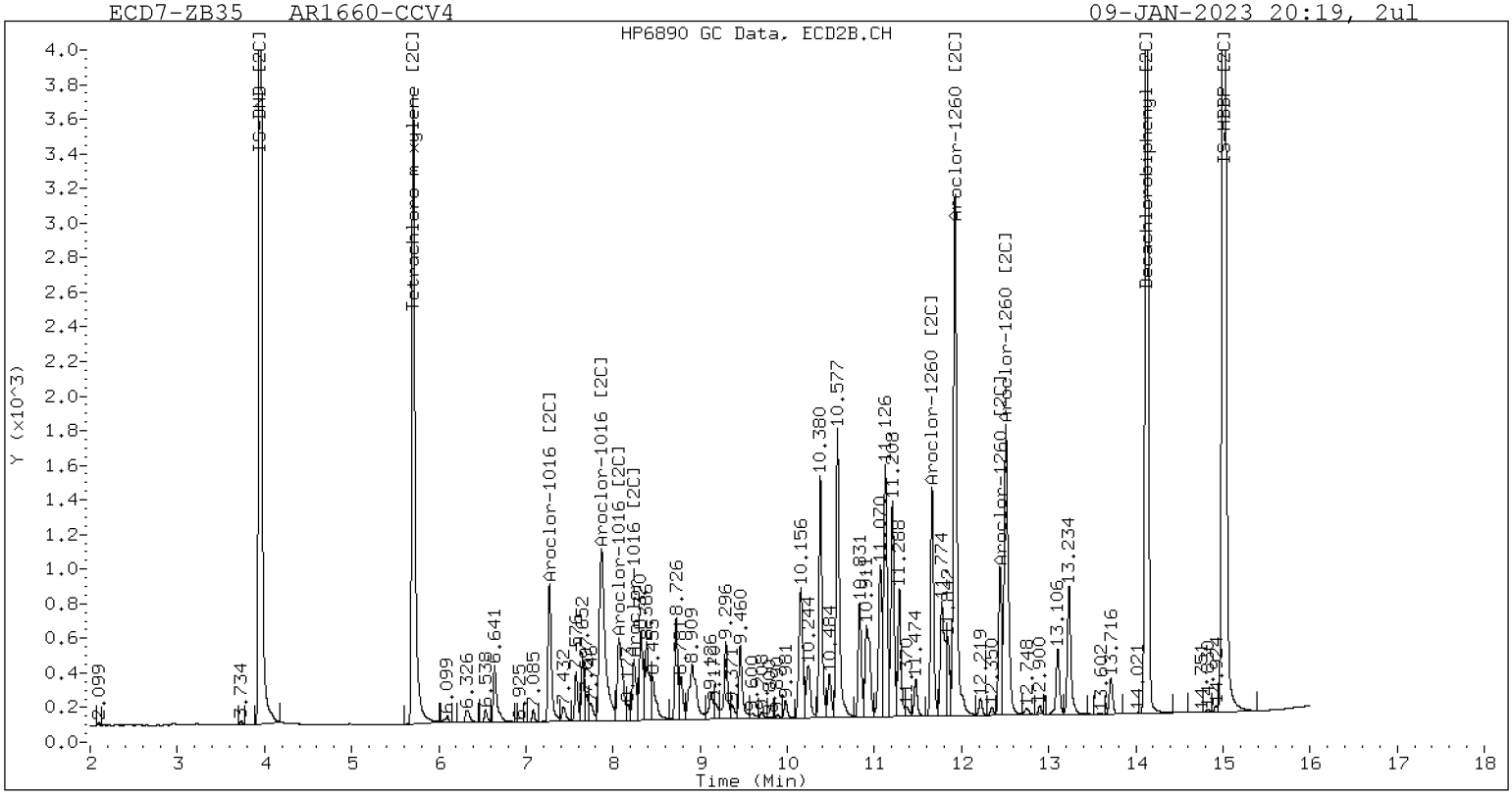
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-CCV4 09-JAN-2023 20:19, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-CCV4 09-JAN-2023 20:19, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092344ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCV5 | Injection Time: | 00:10 |
| Sequence Name: | AR1254CCV5 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1254 | A | 250.00 | 307 | 0.0576965 | 0.0702425 | | 22.7 | +/-20 * |
| Aroclor-1254 (1) | A | 250.00 | 292 | | 0.0821977 | | | |
| Aroclor-1254 (2) | A | 250.00 | 337 | | 0.0369560 | | | |
| Aroclor-1254 (3) | A | 250.00 | 281 | | 0.0499783 | | | |
| Aroclor-1254 (4) | A | 250.00 | 311 | | 0.1077159 | | | |
| Aroclor-1254 (5) | A | 250.00 | 313 | | 0.0743647 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 288 | 0.0638047 | 0.0733482 | | 15.2 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 275 | | 0.0567209 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 290 | | 0.0481334 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 280 | | 0.0998073 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 294 | | 0.1083874 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 301 | | 0.0536922 | | | |
| Decachlorobiphenyl | A | 40.000 | 42.0 | 0.7333327 | 0.7699744 | | 5.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.7 | 1.1336710 | 1.0964820 | | -3.3 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.6 | 1.1358180 | 1.1811320 | | 4.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.7 | 1.0966080 | 1.0341720 | | -5.7 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092344ECD7.D
Data file 2: /230109.b/230109.b/01092344ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254-CCV5
Client ID:
Injection Date: 10-JAN-2023 00:10
Report Date: 01/13/2023 16:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 263972 | 5.708 | -0.005 | 176845 | 38.7 | 37.7 | 2.5 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 395706 | 14.128 | -0.009 | 328667 | 42.0 | 41.6 | 1.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 481489 | 7.6 |
| Hexabromobiphenyl | 798898 | 1027842 | 28.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 342003 | 37.3 |
| Hexabromobiphenyl | 362541 | 556529 | 53.5 |

* 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-1254 | 1 | 9.316 | -0.005 | 123679 | 291.7 | 1 | 9.462 | -0.005 | 60621 | 274.9 |
| Aroclor-1254 | 2 | 9.396 | -0.006 | 55606 | 337.3 | 2 | 9.981 | -0.005 | 51443 | 290.2 |
| Aroclor-1254 | 3 | 9.685 | -0.009 | 75200 | 280.8 | 3 | 10.135 | -0.005 | 106670 | 279.9 |
| Aroclor-1254 | 4 | 9.825 | -0.006 | 162075 | 310.5 | 4 | 10.384 | -0.005 | 115840 | 293.5 |
| Aroclor-1254 | 5 | 10.192 | 0.003 | 111893 | 312.7 | 5 | 10.580 | -0.007 | 57384 | 301.5 |

Total Col1Ave (5 peaks): 306.6 Total Col2Ave (5 peaks): 288.0 RPD = 6
Corrected Ave (4 peaks): 299.0 Corrected Ave (4 peaks): 284.6 RPD = 5

Total PCB Area Col1 (5.936 - 13.808) = 1711786 Col1 Total PCB = 0.4 ppm*

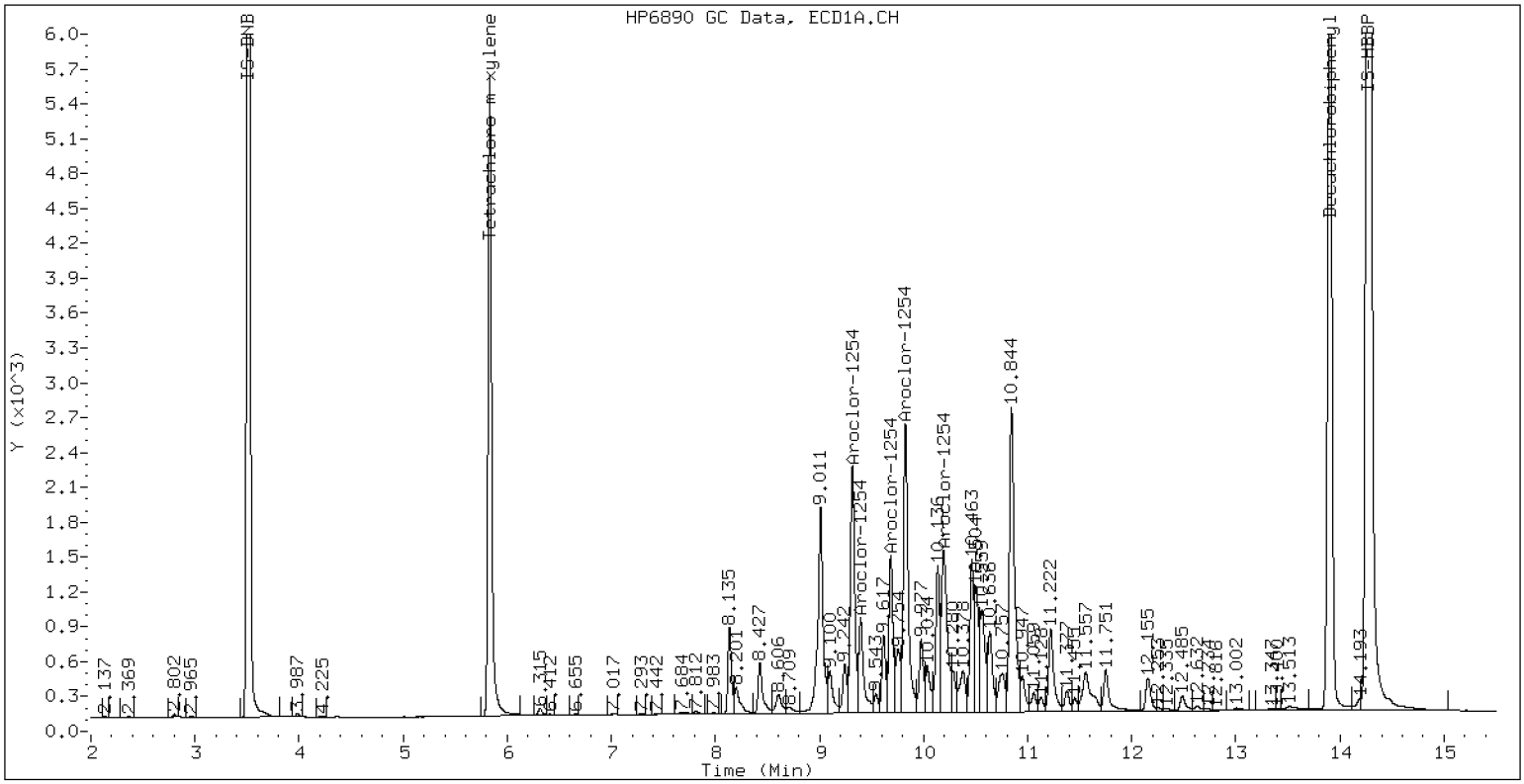
Total PCB Area Col2 (5.813 - 14.037) = 1071990 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

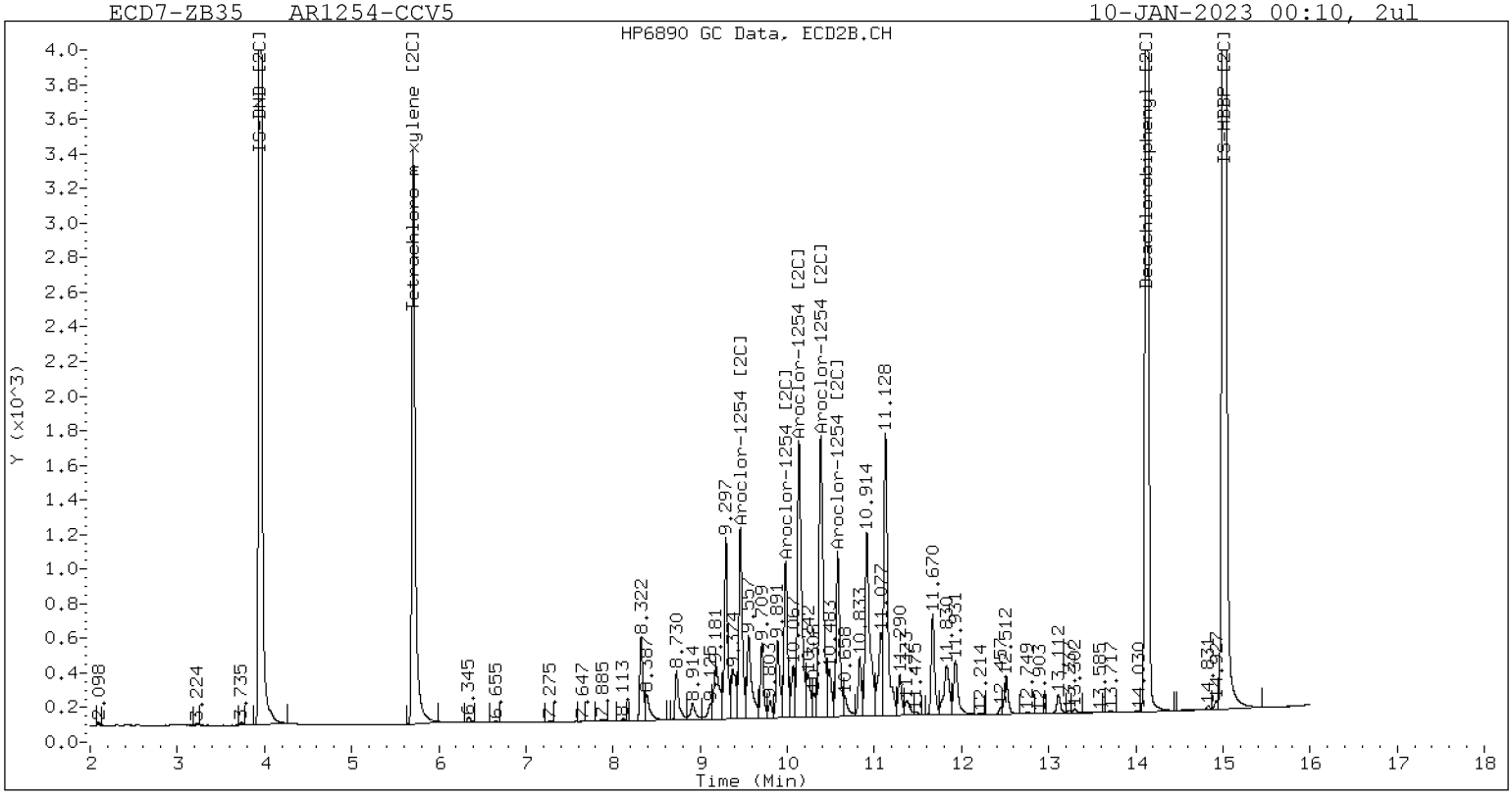
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254-CCV5 10-JAN-2023 00:10, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254-CCV5 10-JAN-2023 00:10, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092345ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCV6 | Injection Time: | 00:31 |
| 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 | 276 | 0.0441939 | 0.0484764 | | 10.6 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 272 | 0.0266860 | 0.0290561 | | 8.9 | |
| Aroclor-1016 (2) | A | 250.00 | 268 | 0.0861572 | 0.0924571 | | 7.3 | |
| Aroclor-1016 (3) | A | 250.00 | 285 | 0.0390425 | 0.0444916 | | 14.0 | |
| Aroclor-1016 (4) | A | 250.00 | 280 | 0.0248899 | 0.0279010 | | 12.1 | |
| Aroclor 1016 [2C] | A | 250.00 | 246 | 0.0467310 | 0.0460616 | | -1.5 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 248 | 0.0409030 | 0.0405177 | | -0.9 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 247 | 0.0882154 | 0.0872830 | | -1.1 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 243 | 0.0378846 | 0.0367659 | | -3.0 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 247 | 0.0199212 | 0.0196798 | | -1.2 | |
| Aroclor 1260 | A | 250.00 | 259 | 0.0390342 | 0.0405147 | | 3.6 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 261 | 0.0291201 | 0.0303490 | | 4.2 | |
| Aroclor-1260 (2) | A | 250.00 | 265 | 0.0301181 | 0.0319673 | | 6.1 | |
| Aroclor-1260 (3) | A | 250.00 | 262 | 0.0791351 | 0.0829085 | | 4.8 | |
| Aroclor-1260 (4) | A | 250.00 | 251 | 0.0403003 | 0.0404669 | | 0.4 | |
| Aroclor-1260 (5) | A | 250.00 | 256 | 0.0164974 | 0.0168818 | | 2.3 | |
| Aroclor 1260 [2C] | A | 250.00 | 258 | 0.0617619 | 0.0643203 | | 3.1 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 251 | 0.0422283 | 0.0423996 | | 0.4 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 263 | 0.1059643 | 0.1116426 | | 5.4 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 252 | 0.0282173 | 0.0284844 | | 0.9 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 265 | 0.0706376 | 0.0747545 | | 5.8 | |
| Decachlorobiphenyl | A | 40.000 | 42.3 | 0.7333327 | 0.7757008 | | 5.8 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 43.1 | 1.1336710 | 1.2210720 | | 7.7 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.5 | 1.1358180 | 1.1798260 | | 3.9 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 41.1 | 1.0966080 | 1.1278200 | | 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: /230109.b/01092345ECD7.D
Data file 2: /230109.b/230109.b/01092345ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-CCV6
Client ID:
Injection Date: 10-JAN-2023 00:31
Report Date: 01/13/2023 16:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 298698 | 5.707 | -0.006 | 195564 | 43.1 | 41.1 | 4.6 | Tetrachloro-m-xylene |
| 13.904 | -0.004 | 427185 | 14.127 | -0.010 | 346378 | 42.3 | 41.5 | 1.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 489239 | 9.3 |
| Hexabromobiphenyl | 798898 | 1101417 | 37.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 346800 | 39.2 |
| Hexabromobiphenyl | 362541 | 587168 | 62.0 |

* 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 | 7.290 | -0.005 | 44423 | 272.2 | 1 | 7.271 | -0.004 | 43911 | 247.6 |
| Aroclor-1016 | 2 | 7.677 | -0.007 | 141355 | 268.3 | 2 | 7.872 | 0.001 | 94593 | 247.4 |
| Aroclor-1016 | 3 | 7.812 | -0.006 | 68022 | 284.9 | 3 | 8.070 | -0.001 | 39845 | 242.6 |
| Aroclor-1016 | 4 | 8.424 | -0.006 | 42657 | 280.2 | 4 | 8.241 | 0.000 | 21328 | 247.0 |
| Total Col1Ave (4 peaks): | | | | | 276.4 | Total Col2Ave (4 peaks): | | | | 246.1 RPD = 12 |
| Corrected Ave (3 peaks): | | | | | 273.6 | Corrected Ave (3 peaks): | | | | 245.6 RPD = 11 |
| Aroclor-1260 | 1 | 11.058 | -0.004 | 104459 | 260.6 | 1 | 11.662 | -0.007 | 77799 | 251.0 |
| Aroclor-1260 | 2 | 11.374 | -0.003 | 110029 | 265.3 | 2 | 11.927 | -0.006 | 204853 | 263.4 |
| Aroclor-1260 | 3 | 11.749 | -0.003 | 285365 | 261.9 | 3 | 12.444 | -0.007 | 52266 | 252.4 |
| Aroclor-1260 | 4 | 12.153 | -0.005 | 139284 | 251.0 | 4 | 12.510 | -0.006 | 137167 | 264.6 |
| Aroclor-1260 | 5 | 12.257 | -0.005 | 58106 | 255.8 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 258.9 | Total Col2Ave (4 peaks): | | | | 257.8 RPD = 0 |
| Corrected Ave (4 peaks): | | | | | 257.3 | Corrected Ave (3 peaks): | | | | 255.6 RPD = 1 |

Total PCB Area Col1 (5.936 - 13.808) = 2885590 Col1 Total PCB = 0.6 ppm*

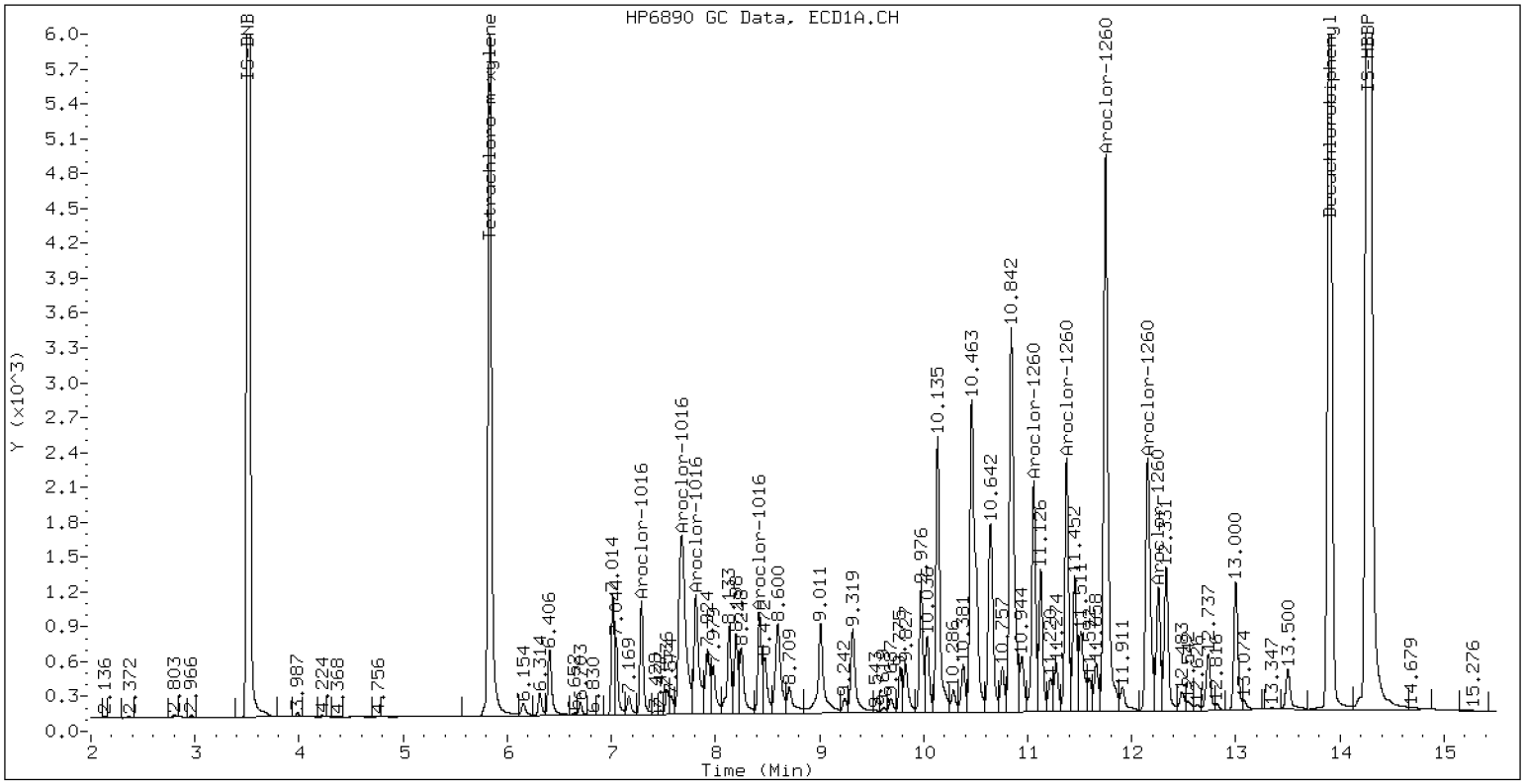
Total PCB Area Col2 (5.813 - 14.037) = 1833667 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

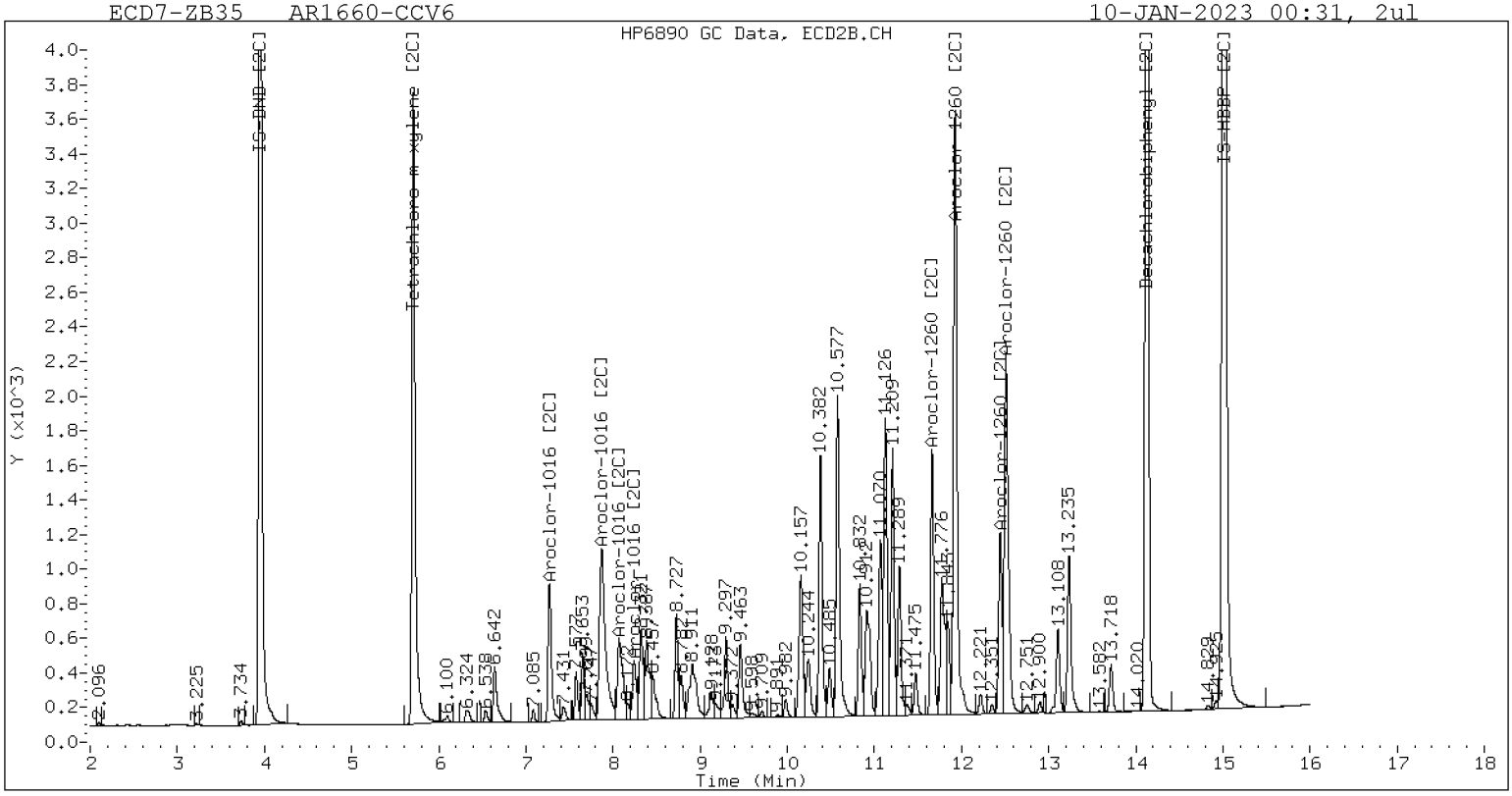
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-CCV6 10-JAN-2023 00:31, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-CCV6 10-JAN-2023 00:31, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092353ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCV7 | Injection Time: | 03:20 |
| 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 | 286 | 0.0490062 | 0.0571647 | | 14.5 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 268 | | 0.0369040 | | | |
| Aroclor-1248 (2) | A | 250.00 | 282 | | 0.0494647 | | | |
| Aroclor-1248 (3) | A | 250.00 | 311 | | 0.0982210 | | | |
| Aroclor-1248 (4) | A | 250.00 | 285 | | 0.0440690 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 263 | 0.0394876 | 0.0417450 | | 5.2 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 259 | | 0.0338763 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 247 | | 0.0339885 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 273 | | 0.0456795 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 272 | | 0.0534357 | | | |
| Decachlorobiphenyl | A | 40.000 | 38.2 | 0.7333327 | 0.6998433 | | -4.6 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.1 | 1.1336710 | 1.0811750 | | -4.6 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.8 | 1.1358180 | 1.1589710 | | 2.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.0 | 1.0966080 | 1.0155270 | | -7.4 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092353ECD7.D
Data file 2: /230109.b/230109.b/01092353ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248-CCV7
Client ID:
Injection Date: 10-JAN-2023 03:20
Report Date: 01/13/2023 16:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 253435 | 5.709 | -0.005 | 167989 | 38.1 | 37.0 | 2.9 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 357776 | 14.129 | -0.008 | 333913 | 38.2 | 40.8 | 6.7 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 468814 | 4.7 |
| Hexabromobiphenyl | 798898 | 1022446 | 28.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 330841 | 32.8 |
| Hexabromobiphenyl | 362541 | 576223 | 58.9 |

* 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 | 8.424 | -0.004 | 54066 | 268.2 | 1 | 8.322 | -0.004 | 35024 | 259.1 |
| Aroclor-1248 | 2 | 8.600 | -0.004 | 72468 | 281.6 | 2 | 8.728 | -0.005 | 35140 | 247.2 |
| Aroclor-1248 | 3 | 9.015 | -0.007 | 143898 | 310.8 | 3 | 9.177 | -0.000 | 47227 | 273.1 |
| Aroclor-1248 | 4 | 9.310 | -0.001 | 64563 | 284.6 | 4 | 9.601 | -0.001 | 55246 | 272.2 |

Total Col1Ave (4 peaks): 286.3 Total Col2Ave (4 peaks): 262.9 RPD = 9

Corrected Ave (3 peaks): 278.1 Corrected Ave (3 peaks): 259.5 RPD = 7

Total PCB Area Col1 (5.936 - 13.808) = 1132007 Col1 Total PCB = 0.3 ppm*

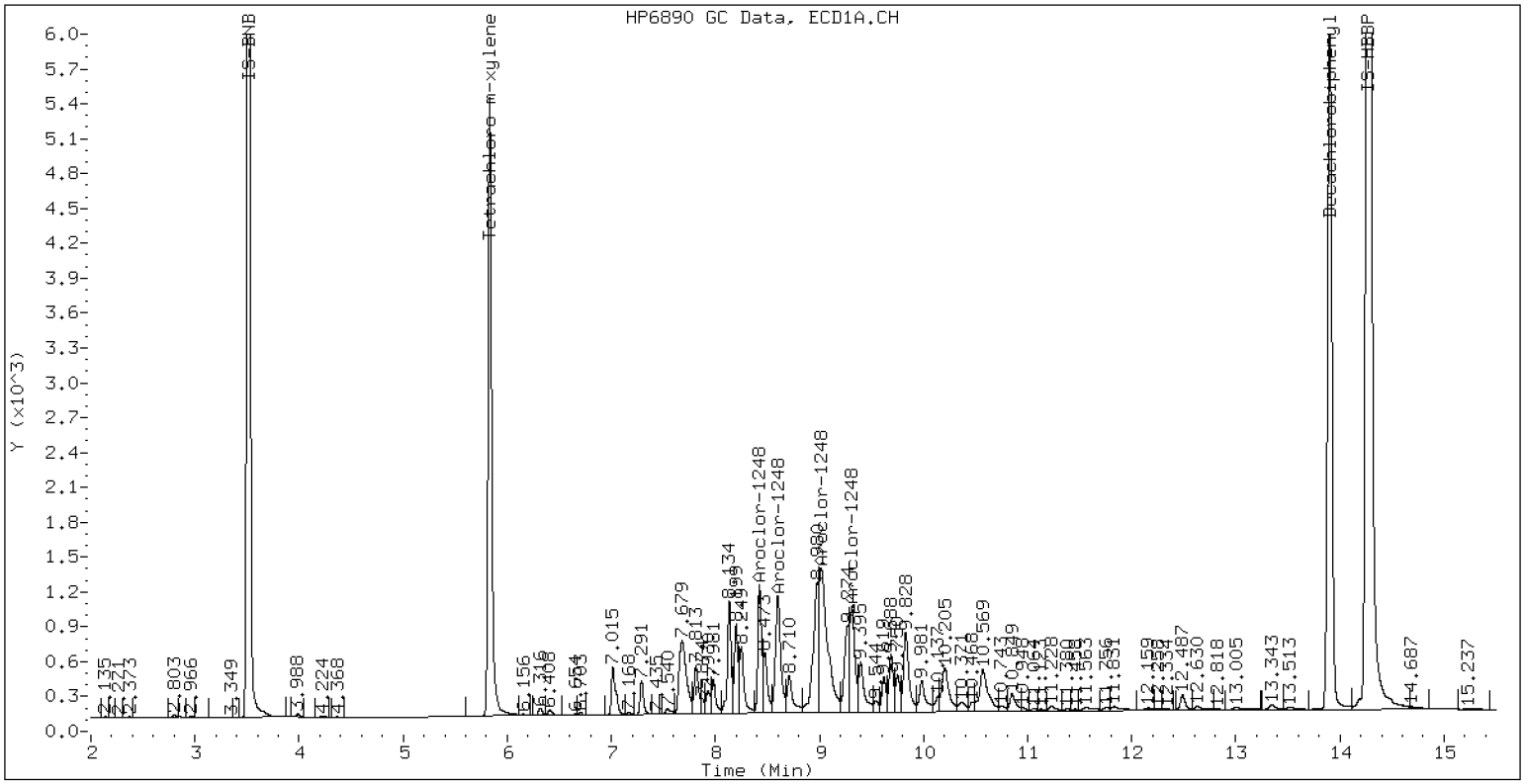
Total PCB Area Col2 (5.813 - 14.037) = 724167 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

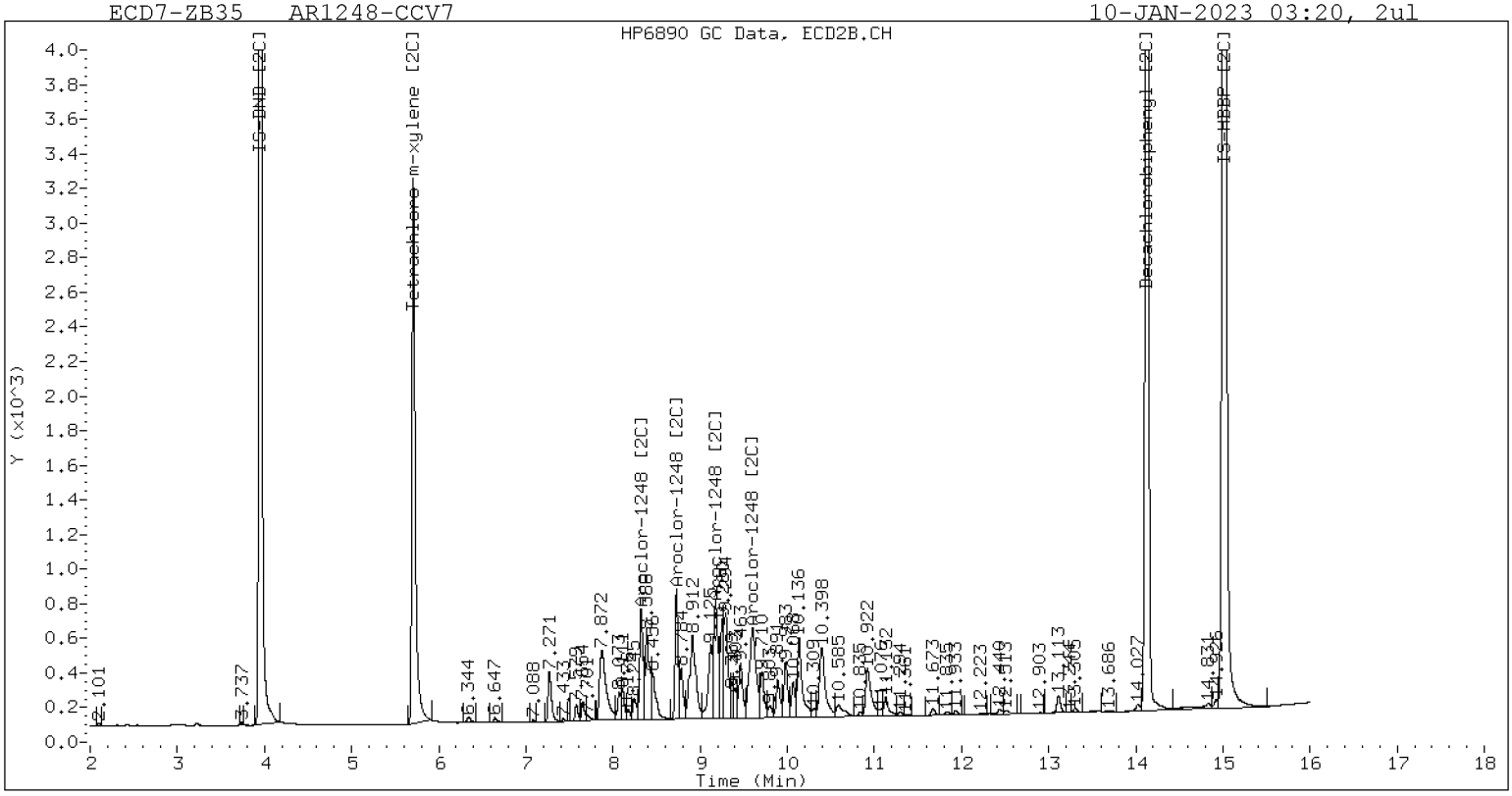
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248-CCV7 10-JAN-2023 03:20, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248-CCV7 10-JAN-2023 03:20, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092354ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCV8 | Injection Time: | 03:41 |
| 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 | 278 | 0.0441939 | 0.0488013 | | 11.3 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 271 | 0.0266860 | 0.0289807 | | 8.6 | |
| Aroclor-1016 (2) | A | 250.00 | 270 | 0.0861572 | 0.0930672 | | 8.0 | |
| Aroclor-1016 (3) | A | 250.00 | 288 | 0.0390425 | 0.0449911 | | 15.2 | |
| Aroclor-1016 (4) | A | 250.00 | 283 | 0.0248899 | 0.0281660 | | 13.2 | |
| Aroclor 1016 [2C] | A | 250.00 | 257 | 0.0467310 | 0.0480505 | | 2.9 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 255 | 0.0409030 | 0.0417235 | | 2.0 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 258 | 0.0882154 | 0.0909288 | | 3.1 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 256 | 0.0378846 | 0.0387699 | | 2.3 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 261 | 0.0199212 | 0.0207800 | | 4.3 | |
| Aroclor 1260 | A | 250.00 | 261 | 0.0390342 | 0.0408497 | | 4.4 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 254 | 0.0291201 | 0.0295930 | | 1.6 | |
| Aroclor-1260 (2) | A | 250.00 | 263 | 0.0301181 | 0.0317062 | | 5.3 | |
| Aroclor-1260 (3) | A | 250.00 | 266 | 0.0791351 | 0.0840808 | | 6.2 | |
| Aroclor-1260 (4) | A | 250.00 | 257 | 0.0403003 | 0.0413585 | | 2.6 | |
| Aroclor-1260 (5) | A | 250.00 | 265 | 0.0164974 | 0.0175097 | | 6.1 | |
| Aroclor 1260 [2C] | A | 250.00 | 251 | 0.0617619 | 0.0626991 | | 0.5 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 243 | 0.0422283 | 0.0410758 | | -2.7 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 257 | 0.1059643 | 0.1087793 | | 2.7 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 246 | 0.0282173 | 0.0277408 | | -1.7 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 259 | 0.0706376 | 0.0732007 | | 3.6 | |
| Decachlorobiphenyl | A | 40.000 | 39.4 | 0.7333327 | 0.7217319 | | -1.6 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 42.9 | 1.1336710 | 1.2144510 | | 7.1 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.5 | 1.1358180 | 1.1788580 | | 3.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.7 | 1.0966080 | 1.1160920 | | 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: /230109.b/01092354ECD7.D
Data file 2: /230109.b/230109.b/01092354ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-CCV8
Client ID:
Injection Date: 10-JAN-2023 03:41
Report Date: 01/13/2023 16:17
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 293828 | 5.708 | -0.005 | 190993 | 42.9 | 40.7 | 5.1 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 412901 | 14.127 | -0.010 | 366556 | 39.4 | 41.5 | 5.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 483886 | 8.1 |
| Hexabromobiphenyl | 798898 | 1144195 | 43.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 342253 | 37.4 |
| Hexabromobiphenyl | 362541 | 621883 | 71.5 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.289 | -0.005 | 43823 | 271.5 | 1 | 7.271 | -0.004 | 44625 | 255.0 |
| Aroclor-1016 | 2 | 7.677 | -0.007 | 140731 | 270.1 | 2 | 7.872 | 0.002 | 97252 | 257.7 |
| Aroclor-1016 | 3 | 7.812 | -0.005 | 68033 | 288.1 | 3 | 8.071 | 0.001 | 41466 | 255.8 |
| Aroclor-1016 | 4 | 8.423 | -0.006 | 42591 | 282.9 | 4 | 8.242 | 0.001 | 22225 | 260.8 |
| Total Col1Ave (4 peaks): | | | | | 278.1 | Total Col2Ave (4 peaks): | | | | 257.3 RPD = 8 |
| Corrected Ave (3 peaks): | | | | | 274.8 | Corrected Ave (3 peaks): | | | | 256.2 RPD = 7 |
| Aroclor-1260 | 1 | 11.059 | -0.003 | 105813 | 254.1 | 1 | 11.663 | -0.006 | 79826 | 243.2 |
| Aroclor-1260 | 2 | 11.374 | -0.003 | 113369 | 263.2 | 2 | 11.927 | -0.005 | 211400 | 256.6 |
| Aroclor-1260 | 3 | 11.748 | -0.004 | 300640 | 265.6 | 3 | 12.444 | -0.007 | 53911 | 245.8 |
| Aroclor-1260 | 4 | 12.153 | -0.006 | 147882 | 256.6 | 4 | 12.511 | -0.006 | 142257 | 259.1 |
| Aroclor-1260 | 5 | 12.256 | -0.005 | 62608 | 265.3 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 261.0 | Total Col2Ave (4 peaks): | | | | 251.2 RPD = 4 |
| Corrected Ave (4 peaks): | | | | | 259.8 | Corrected Ave (3 peaks): | | | | 248.5 RPD = 4 |

Total PCB Area Col1 (5.936 - 13.808) = 2941644 Col1 Total PCB = 0.6 ppm*

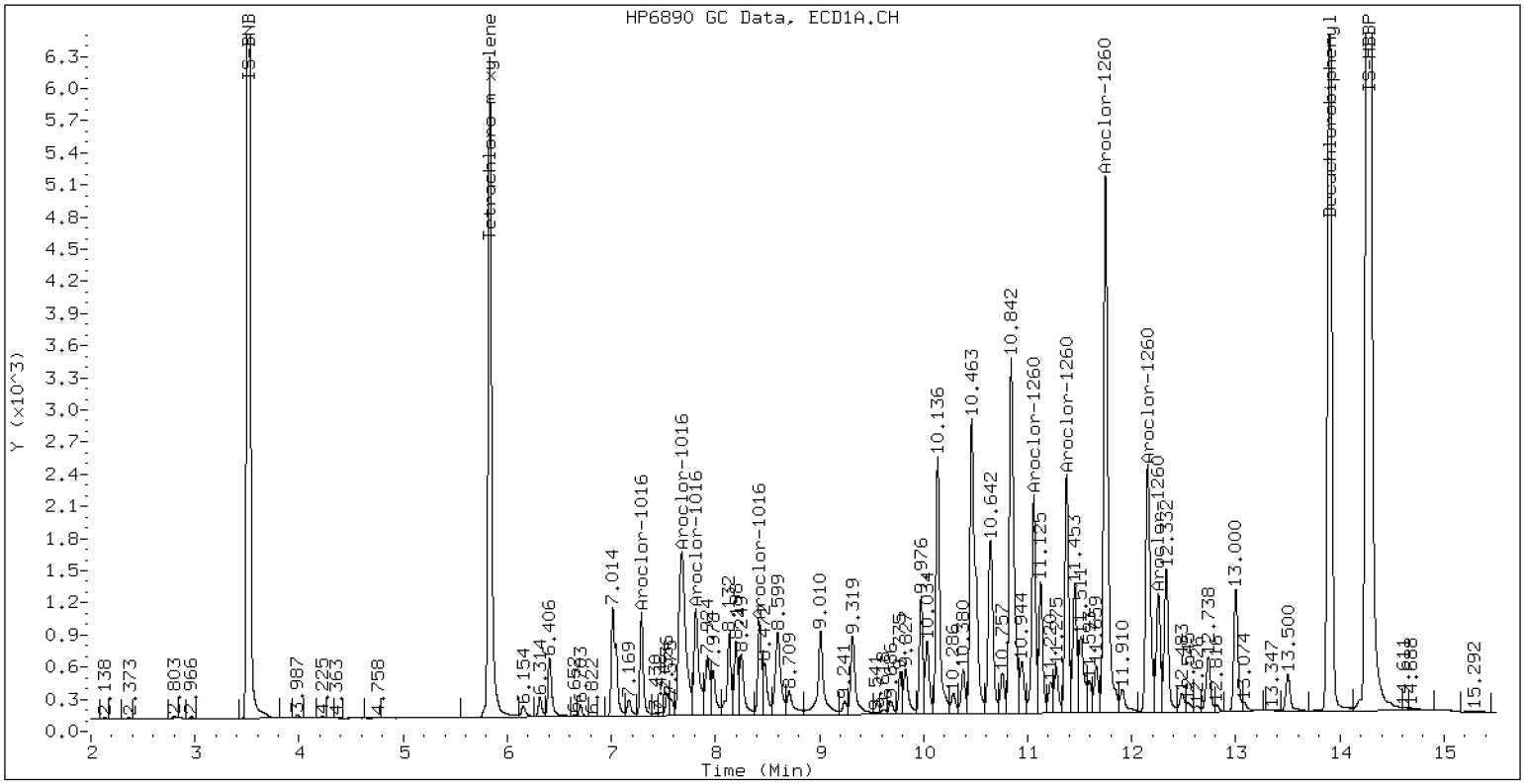
Total PCB Area Col2 (5.813 - 14.037) = 1887814 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

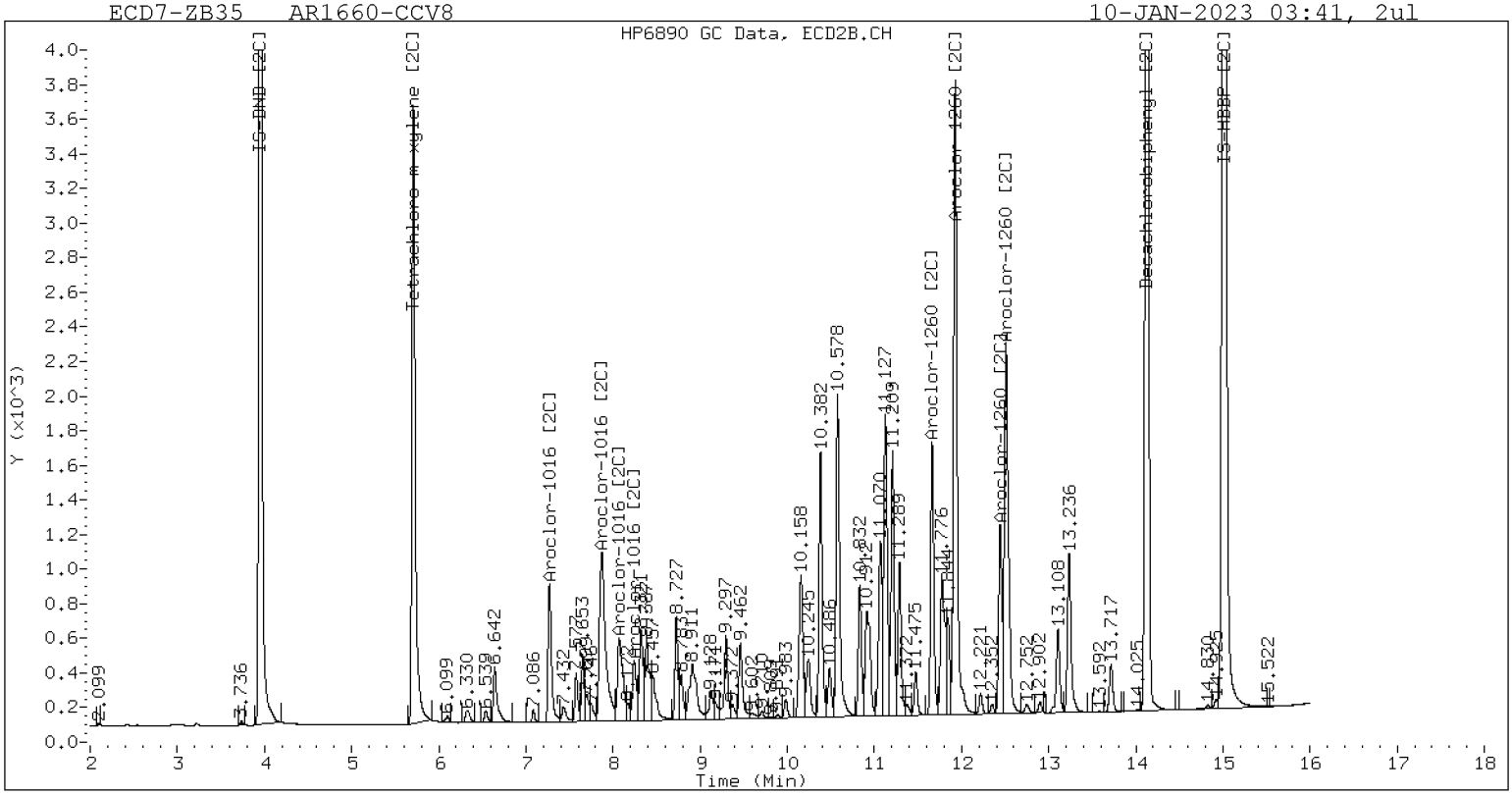
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-CCV8 10-JAN-2023 03:41, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-CCV8 10-JAN-2023 03:41, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092369ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCV9 | Injection Time: | 08:57 |
| 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 | 271 | 0.0396000 | 0.0428510 | | 8.4 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 263 | | 0.0238861 | | | |
| Aroclor-1242 (2) | A | 250.00 | 259 | | 0.0745888 | | | |
| Aroclor-1242 (3) | A | 250.00 | 265 | | 0.0219490 | | | |
| Aroclor-1242 (4) | A | 250.00 | 296 | | 0.0509802 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 254 | 0.0391981 | 0.0397522 | | 1.6 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 250 | | 0.0338520 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 253 | | 0.0727359 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 255 | | 0.0236657 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 258 | | 0.0287553 | | | |
| Decachlorobiphenyl | A | 40.000 | 42.1 | 0.7333327 | 0.7718605 | | 5.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.6 | 1.1336710 | 1.0926840 | | -3.6 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 44.2 | 1.1358180 | 1.2547880 | | 10.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.0 | 1.0966080 | 1.0132010 | | -7.6 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092369ECD7.D
Data file 2: /230109.b/230109.b/01092369ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242C-CCV9
Client ID:
Injection Date: 10-JAN-2023 08:57
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 240710 | 5.707 | -0.007 | 160374 | 38.6 | 37.0 | 4.2 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 209454 | 14.127 | -0.010 | 225678 | 42.1 | 44.2 | 4.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 440585 | -1.6 |
| Hexabromobiphenyl | 798898 | 542725 | -32.1 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 316569 | 27.1 |
| Hexabromobiphenyl | 362541 | 359707 | -0.8 |

* 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# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 1 | 7.289 | -0.006 | 32887 | 263.3 | 1 | 7.270 | -0.007 | 33489 | 250.0 |
| Aroclor-1242 | 2 | 7.678 | -0.007 | 102696 | 259.0 | 2 | 7.871 | -0.003 | 71956 | 253.0 |
| Aroclor-1242 | 3 | 8.424 | -0.006 | 30220 | 264.9 | 3 | 9.174 | -0.004 | 23412 | 255.1 |
| Aroclor-1242 | 4 | 9.021 | -0.010 | 70191 | 296.3 | 4 | 9.602 | -0.004 | 28447 | 257.9 |

Total Col1Ave (4 peaks): 270.9 Total Col2Ave (4 peaks): 254.0 RPD = 6

Corrected Ave (3 peaks): 262.4 Corrected Ave (3 peaks): 252.7 RPD = 4

Total PCB Area Col1 (5.936 - 13.808) = 825477 Col1 Total PCB = 0.2 ppm*

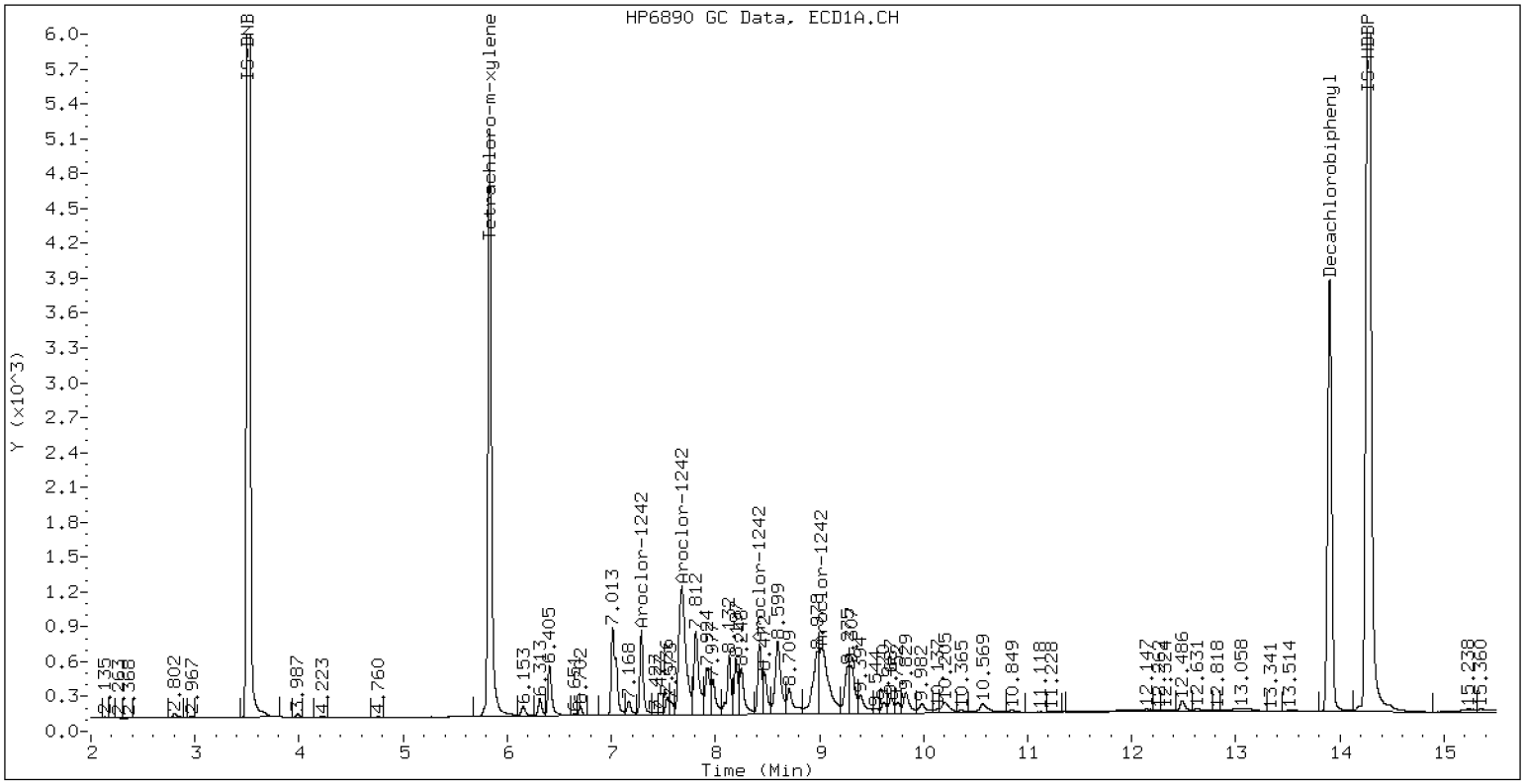
Total PCB Area Col2 (5.813 - 14.037) = 516487 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

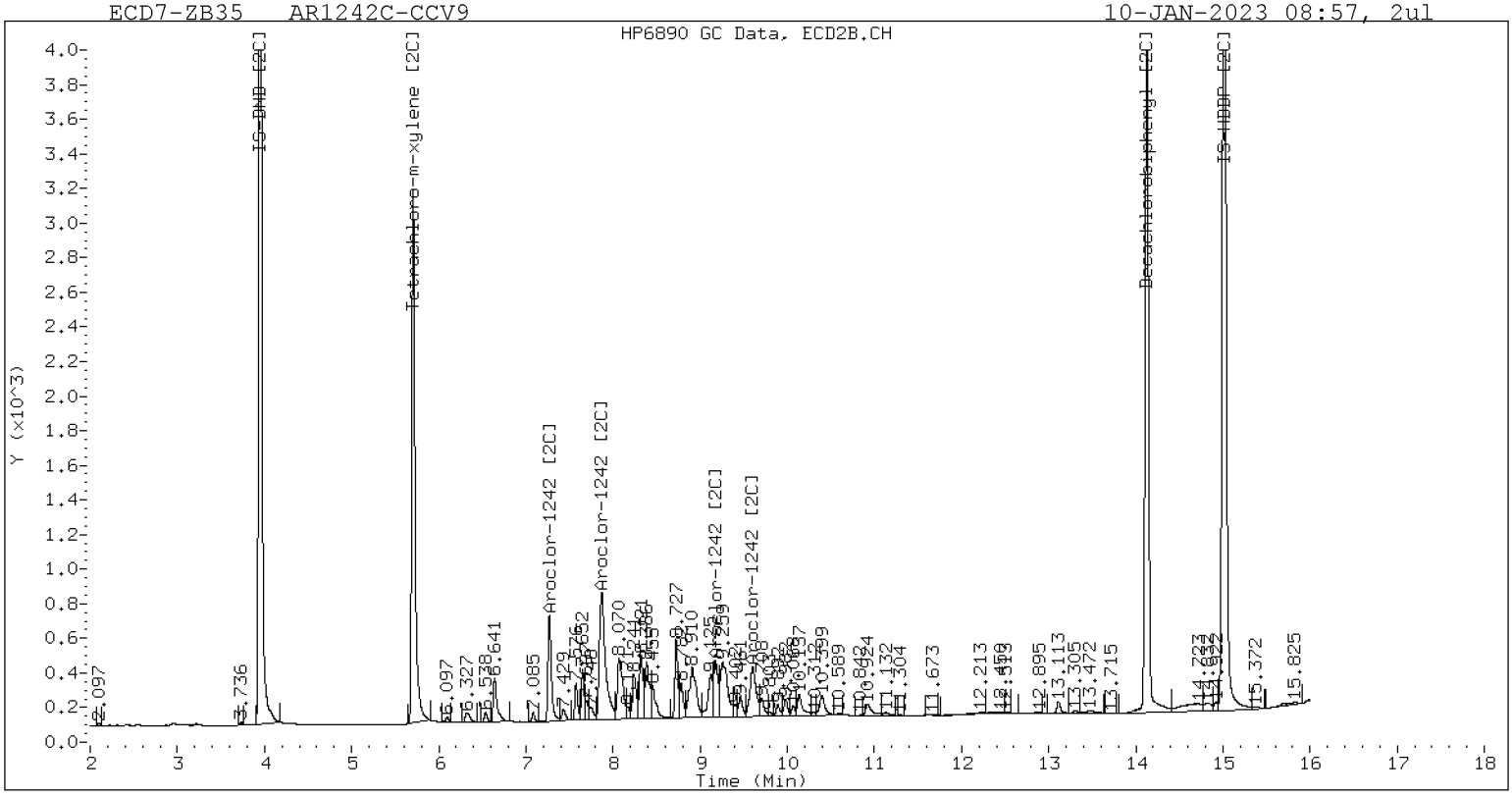
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242C-CCV9 10-JAN-2023 08:57, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242C-CCV9 10-JAN-2023 08:57, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092370ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCVA | Injection Time: | 09:18 |
| Sequence Name: | AR1660CCVA | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1016 | A | 250.00 | 271 | 0.0441939 | 0.0476063 | | 8.3 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 265 | 0.0266860 | 0.0282598 | | 5.9 | |
| Aroclor-1016 (2) | A | 250.00 | 265 | 0.0861572 | 0.0912079 | | 5.9 | |
| Aroclor-1016 (3) | A | 250.00 | 280 | 0.0390425 | 0.0437233 | | 12.0 | |
| Aroclor-1016 (4) | A | 250.00 | 274 | 0.0248899 | 0.0272344 | | 9.4 | |
| Aroclor 1016 [2C] | A | 250.00 | 247 | 0.0467310 | 0.0460658 | | -1.3 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 244 | 0.0409030 | 0.0399823 | | -2.3 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 247 | 0.0882154 | 0.0873174 | | -1.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 244 | 0.0378846 | 0.0369359 | | -2.5 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 251 | 0.0199212 | 0.0200276 | | 0.5 | |
| Aroclor 1260 | A | 250.00 | 297 | 0.0390342 | 0.0460176 | | 18.6 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 302 | 0.0291201 | 0.0352213 | | 21.0 | |
| Aroclor-1260 (2) | A | 250.00 | 301 | 0.0301181 | 0.0362151 | | 20.2 | |
| Aroclor-1260 (3) | A | 250.00 | 288 | 0.0791351 | 0.0912163 | | 15.3 | |
| Aroclor-1260 (4) | A | 250.00 | 298 | 0.0403003 | 0.0481030 | | 19.4 | |
| Aroclor-1260 (5) | A | 250.00 | 293 | 0.0164974 | 0.0193322 | | 17.2 | |
| Aroclor 1260 [2C] | A | 250.00 | 296 | 0.0617619 | 0.0735362 | | 18.5 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 286 | 0.0422283 | 0.0482252 | | 14.2 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 299 | 0.1059643 | 0.1265778 | | 19.5 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 298 | 0.0282173 | 0.0336099 | | 19.1 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 303 | 0.0706376 | 0.0857319 | | 21.4 | |
| Decachlorobiphenyl | A | 40.000 | 43.7 | 0.7333327 | 0.8013265 | | 9.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.4 | 1.1336710 | 1.1745290 | | 3.6 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.4 | 1.1358180 | 1.1766330 | | 3.6 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.1 | 1.0966080 | 1.0999530 | | 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: /230109.b/01092370ECD7.D
Data file 2: /230109.b/230109.b/01092370ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-CCVA
Client ID:
Injection Date: 10-JAN-2023 09:18
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 254006 | 5.707 | -0.006 | 171233 | 41.4 | 40.1 | 3.2 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 247442 | 14.127 | -0.010 | 228614 | 43.7 | 41.4 | 5.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 432524 | -3.4 |
| Hexabromobiphenyl | 798898 | 617581 | -22.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 311346 | 25.0 |
| Hexabromobiphenyl | 362541 | 388590 | 7.2 |

* 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-1016 | 1 | 7.289 | -0.006 | 38197 | 264.7 | 1 | 7.270 | -0.005 | 38901 | 244.4 |
| Aroclor-1016 | 2 | 7.677 | -0.008 | 123280 | 264.7 | 2 | 7.871 | 0.000 | 84956 | 247.5 |
| Aroclor-1016 | 3 | 7.811 | -0.007 | 59098 | 280.0 | 3 | 8.069 | -0.001 | 35937 | 243.7 |
| Aroclor-1016 | 4 | 8.422 | -0.007 | 36811 | 273.5 | 4 | 8.240 | -0.001 | 19486 | 251.3 |
| Total Col1Ave (4 peaks): | | | | | 270.7 | Total Col2Ave (4 peaks): | | | | 246.7 RPD = 9 |
| Corrected Ave (3 peaks): | | | | | 267.6 | Corrected Ave (3 peaks): | | | | 245.2 RPD = 9 |
| Aroclor-1260 | 1 | 11.056 | -0.006 | 67975 | 302.4 | 1 | 11.662 | -0.007 | 58562 | 285.5 |
| Aroclor-1260 | 2 | 11.373 | -0.005 | 69893 | 300.6 | 2 | 11.925 | -0.007 | 153709 | 298.6 |
| Aroclor-1260 | 3 | 11.746 | -0.006 | 176042 | 288.2 | 3 | 12.443 | -0.008 | 40814 | 297.8 |
| Aroclor-1260 | 4 | 12.150 | -0.008 | 92836 | 298.4 | 4 | 12.509 | -0.007 | 104108 | 303.4 |
| Aroclor-1260 | 5 | 12.255 | -0.007 | 37310 | 293.0 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 296.5 | Total Col2Ave (4 peaks): | | | | 296.3 RPD = 0 |
| Corrected Ave (4 peaks): | | | | | 295.0 | Corrected Ave (3 peaks): | | | | 294.0 RPD = 0 |

Total PCB Area Col1 (5.936 - 13.808) = 2031481 Col1 Total PCB = 0.5 ppm*

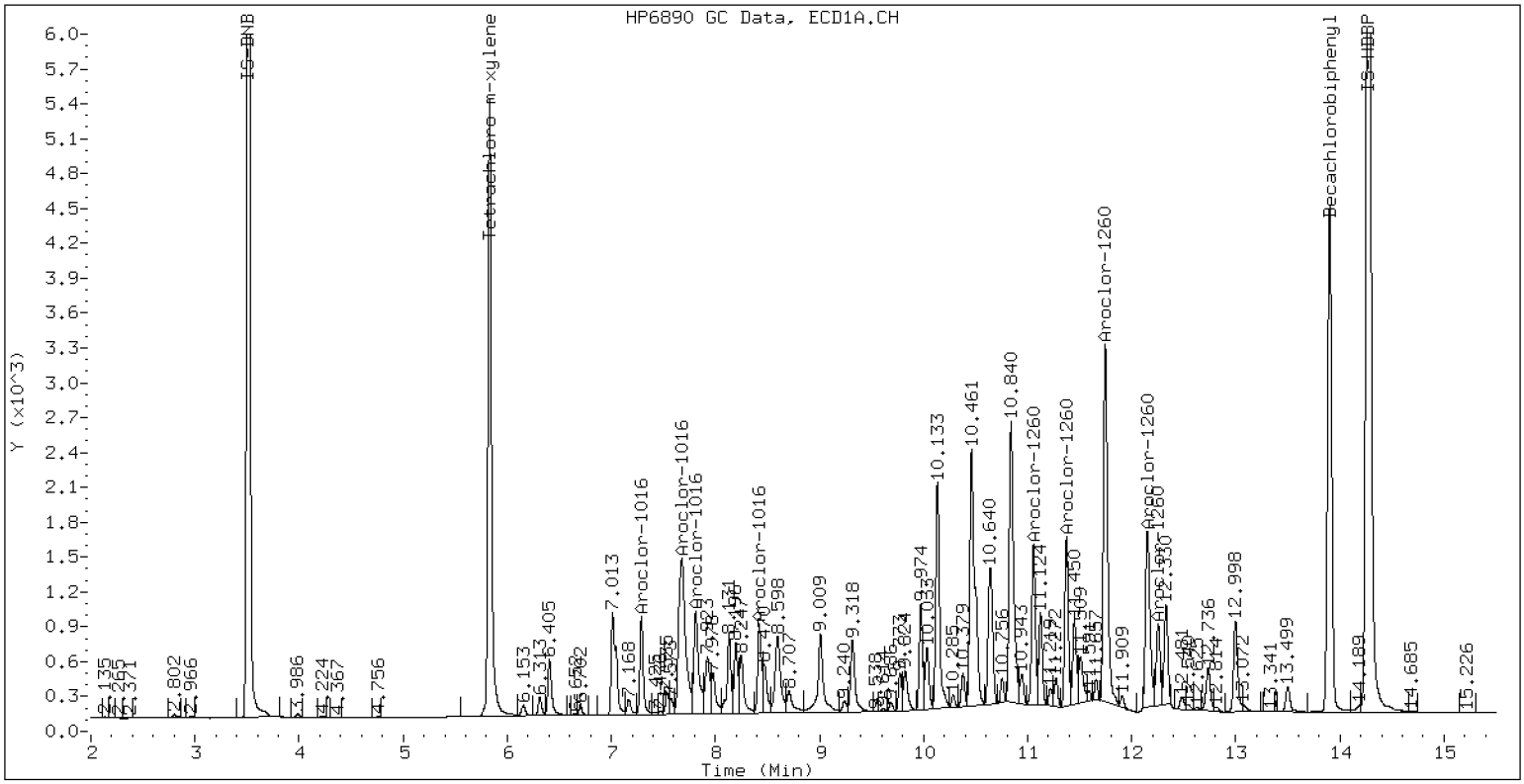
Total PCB Area Col2 (5.813 - 14.037) = 1491569 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

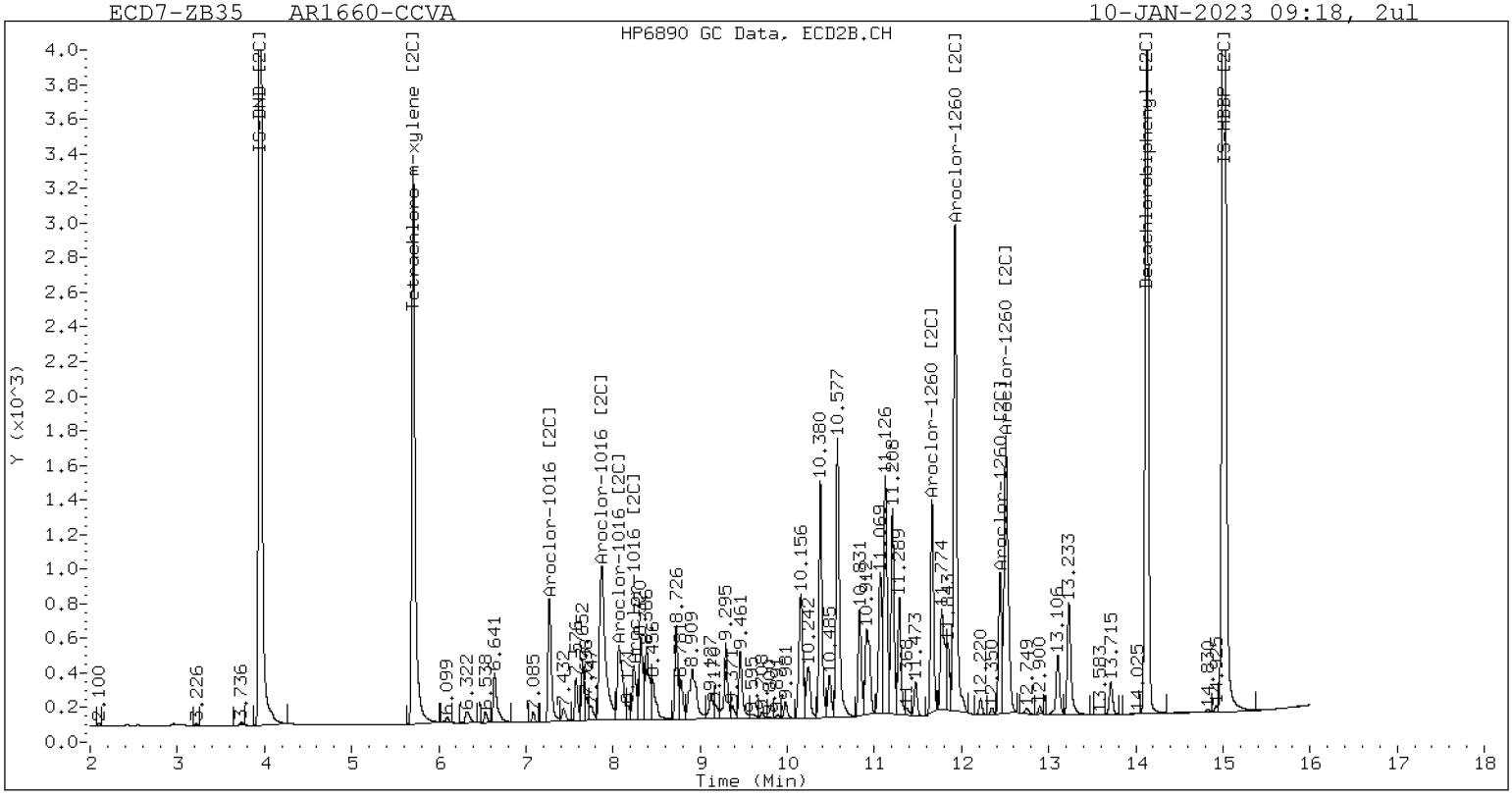
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-CCVA 10-JAN-2023 09:18, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-CCVA 10-JAN-2023 09:18, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092383ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCVB | Injection Time: | 13:52 |
| Sequence Name: | AR1254CCVB | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1242 | A | 250.00 | 273 | 0.0396000 | 0.0427404 | | 9.1 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 274 | | 0.0248409 | | | |
| Aroclor-1242 (2) | A | 250.00 | 268 | | 0.0771950 | | | |
| Aroclor-1242 (3) | A | 250.00 | 286 | | 0.0237132 | | | |
| Aroclor-1242 (4) | A | 250.00 | 263 | | 0.0452127 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 275 | 0.0391981 | 0.0426220 | | 10.0 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 261 | | 0.0353722 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 267 | | 0.0766502 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 285 | | 0.0264448 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 287 | | 0.0320209 | | | |
| Decachlorobiphenyl | A | 40.000 | 38.9 | 0.7333327 | 0.7136538 | | -2.7 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 39.6 | 1.1336710 | 1.1213250 | | -1.1 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.9 | 1.1358180 | 1.2195290 | | 7.4 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 38.3 | 1.0966080 | 1.0504100 | | -4.2 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230109.b/01092383ECD7.D
Data file 2: /230109.b/230109.b/01092383ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242-CCVB
Client ID:
Injection Date: 10-JAN-2023 13:52
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 249622 | 5.707 | -0.006 | 165741 | 39.6 | 38.3 | 3.2 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 350009 | 14.127 | -0.010 | 300617 | 38.9 | 42.9 | 9.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 445227 | -0.5 |
| Hexabromobiphenyl | 798898 | 980893 | 22.8 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 315574 | 26.7 |
| Hexabromobiphenyl | 362541 | 493005 | 36.0 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 1 | 7.289 | -0.006 | 34562 | 273.9 | 1 | 7.270 | -0.007 | 34883 | 261.2 |
| Aroclor-1242 | 2 | 7.681 | -0.004 | 107404 | 268.1 | 2 | 7.872 | -0.002 | 75590 | 266.6 |
| Aroclor-1242 | 3 | 8.424 | -0.006 | 32993 | 286.2 | 3 | 9.177 | -0.001 | 26079 | 285.1 |
| Aroclor-1242 | 4 | 9.016 | -0.015 | 62906 | 262.8 | 4 | 9.607 | 0.002 | 31578 | 287.2 |

Total Col1Ave (4 peaks): 272.7 Total Col2Ave (4 peaks): 275.0 RPD = 1

Corrected Ave (3 peaks): 268.2 Corrected Ave (3 peaks): 271.0 RPD = 1

Total PCB Area Col1 (5.936 - 13.808) = 887772 Col1 Total PCB = 0.2 ppm*

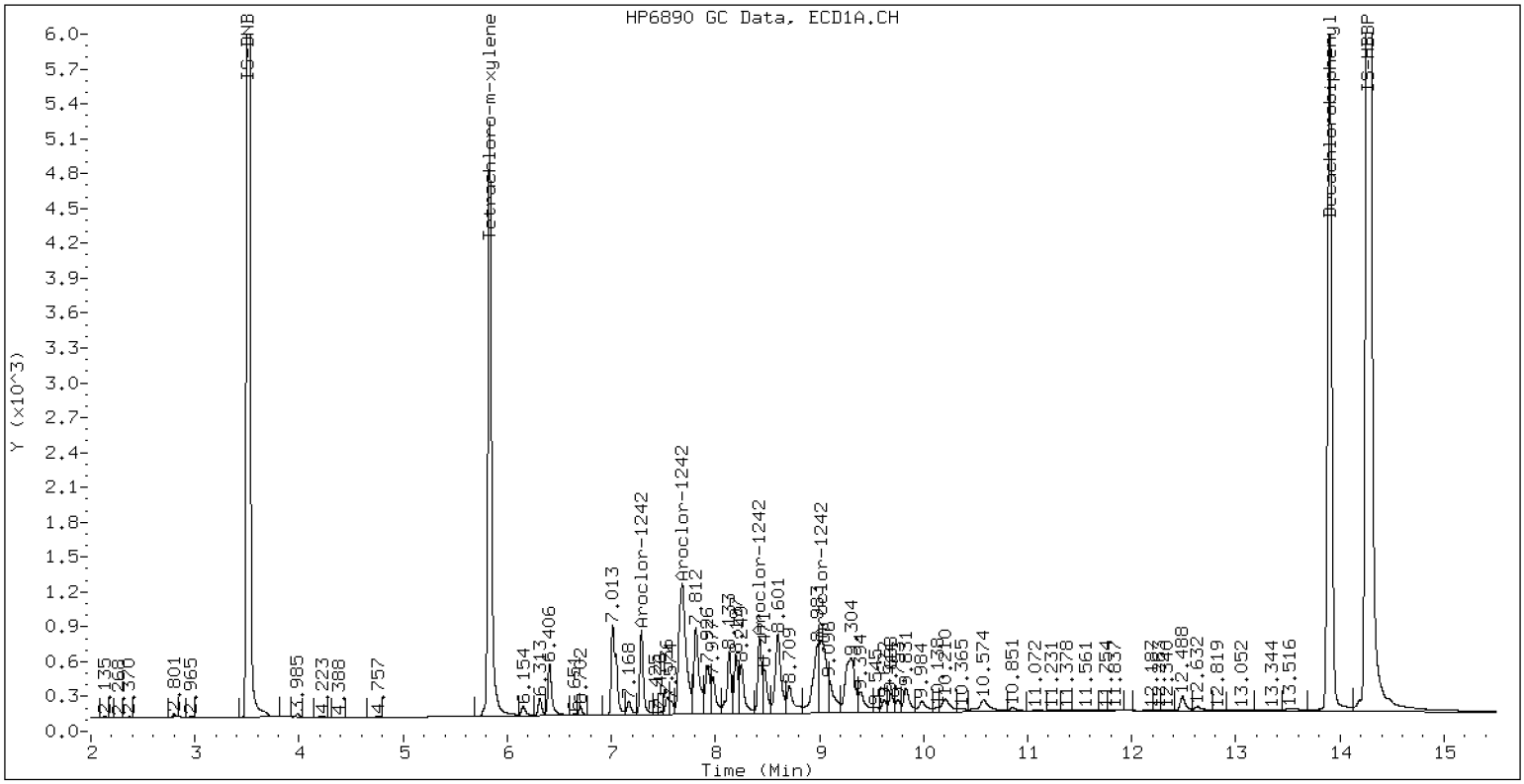
Total PCB Area Col2 (5.813 - 14.037) = 561945 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

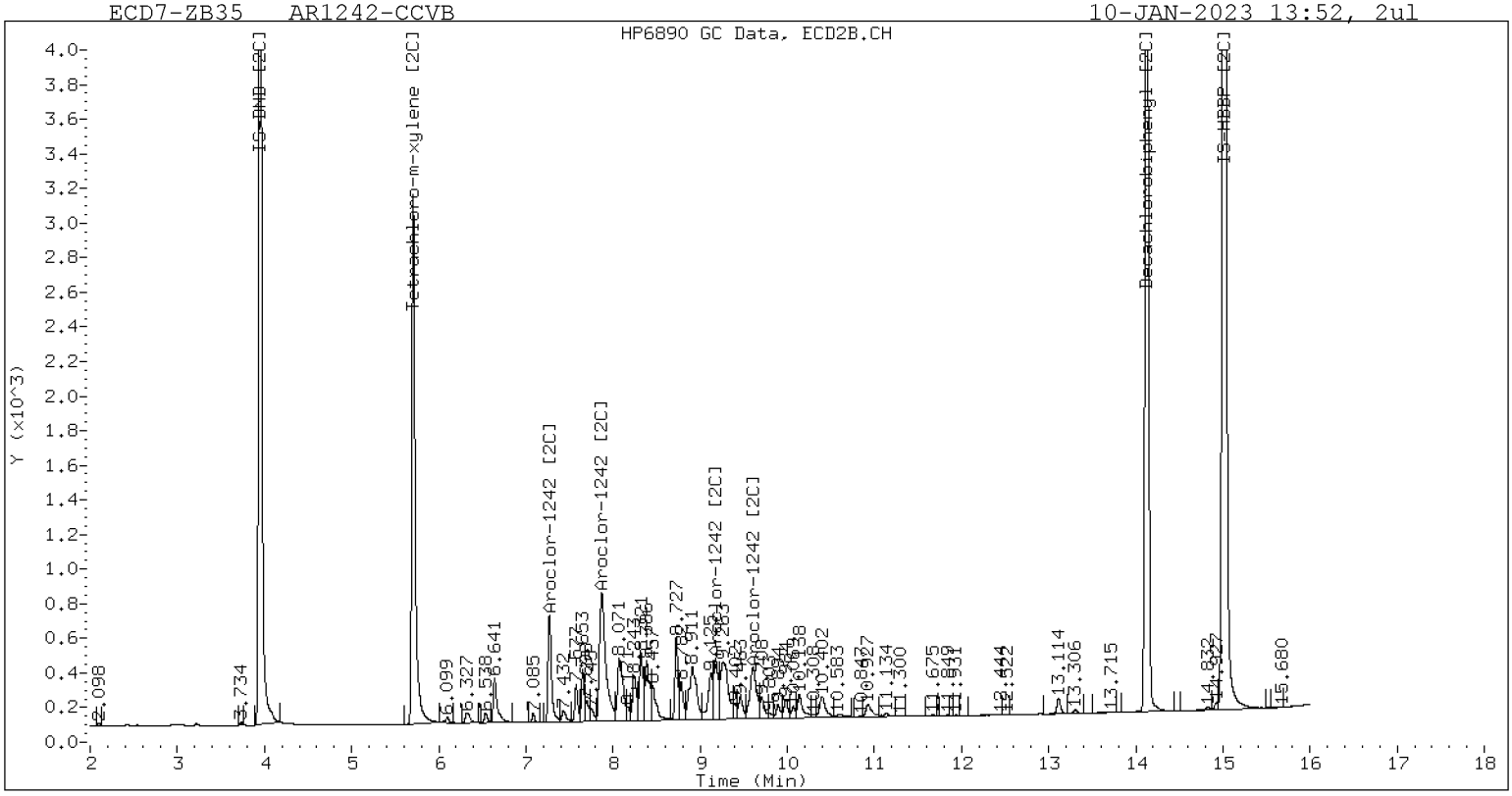
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242-CCVB 10-JAN-2023 13:52, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242-CCVB 10-JAN-2023 13:52, 2ul

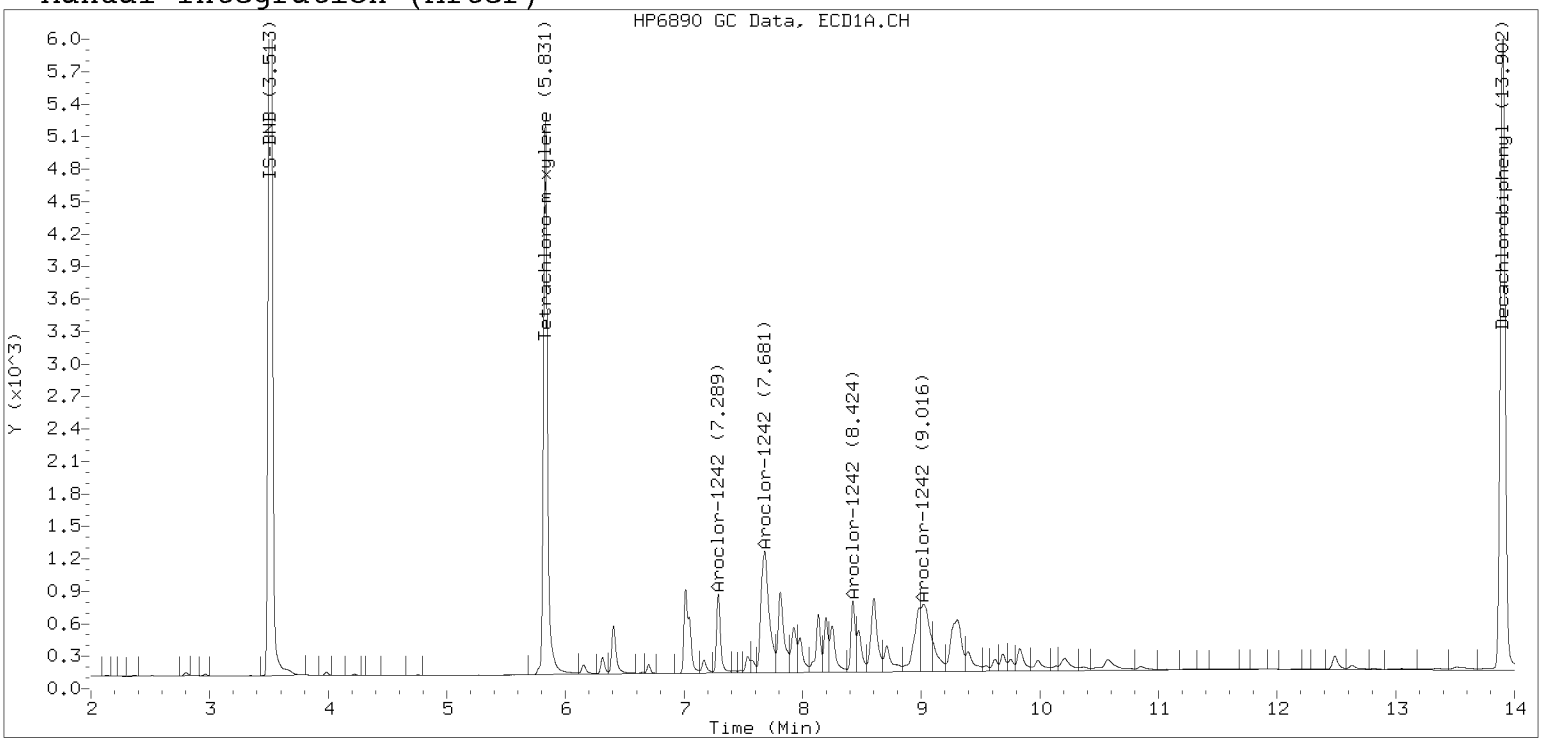



ZB-35 Manual Integration: NO

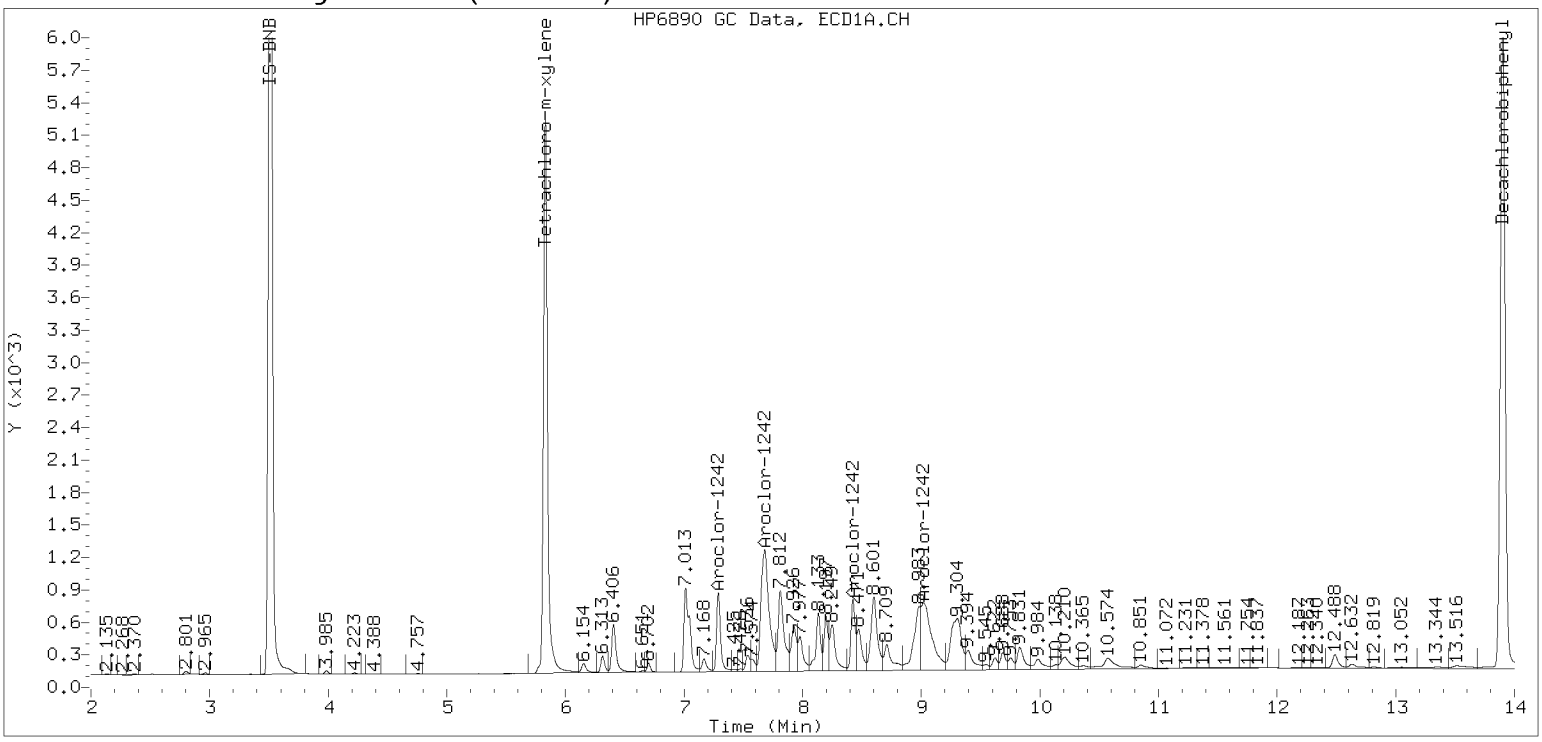
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230109.b/01092383ECD7.D  Injection Date: 10-JAN-2023 13:52

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01092384ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0129 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0129-CCVC | Injection Time: | 14:13 |
| 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 | 274 | 0.0441939 | 0.0480882 | | 9.8 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 267 | 0.0266860 | 0.0284921 | | 6.8 | |
| Aroclor-1016 (2) | A | 250.00 | 265 | 0.0861572 | 0.0913451 | | 6.0 | |
| Aroclor-1016 (3) | A | 250.00 | 286 | 0.0390425 | 0.0446140 | | 14.3 | |
| Aroclor-1016 (4) | A | 250.00 | 280 | 0.0248899 | 0.0279014 | | 12.1 | |
| Aroclor 1016 [2C] | A | 250.00 | 253 | 0.0467310 | 0.0471526 | | 1.1 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 249 | 0.0409030 | 0.0406608 | | -0.6 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 253 | 0.0882154 | 0.0892109 | | 1.1 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 252 | 0.0378846 | 0.0381792 | | 0.8 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 258 | 0.0199212 | 0.0205596 | | 3.2 | |
| Aroclor 1260 | A | 250.00 | 277 | 0.0390342 | 0.0432665 | | 10.7 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 278 | 0.0291201 | 0.0323572 | | 11.1 | |
| Aroclor-1260 (2) | A | 250.00 | 282 | 0.0301181 | 0.0340238 | | 13.0 | |
| Aroclor-1260 (3) | A | 250.00 | 280 | 0.0791351 | 0.0885721 | | 11.9 | |
| Aroclor-1260 (4) | A | 250.00 | 268 | 0.0403003 | 0.0431336 | | 7.0 | |
| Aroclor-1260 (5) | A | 250.00 | 276 | 0.0164974 | 0.0182458 | | 10.6 | |
| Aroclor 1260 [2C] | A | 250.00 | 277 | 0.0617619 | 0.0691789 | | 10.9 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 273 | 0.0422283 | 0.0461344 | | 9.2 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 285 | 0.1059643 | 0.1207500 | | 14.0 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 270 | 0.0282173 | 0.0304883 | | 8.0 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 281 | 0.0706376 | 0.0793428 | | 12.3 | |
| Decachlorobiphenyl | A | 40.000 | 40.2 | 0.7333327 | 0.7368751 | | 0.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.0 | 1.1336710 | 1.1632170 | | 2.6 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.4 | 1.1358180 | 1.2051800 | | 6.1 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.0 | 1.0966080 | 1.0966040 | | -0.0003 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230109.b/01092384ECD7.D
Data file 2: /230109.b/230109.b/01092384ECD7.D
Method: \\target\share\chem4\ecd7.i\230109.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660-CCVC
Client ID:
Injection Date: 10-JAN-2023 14:13
Report Date: 01/13/2023 16:04
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.006 | 262769 | 5.707 | -0.006 | 174206 | 41.0 | 40.0 | 2.6 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 349970 | 14.127 | -0.010 | 301985 | 40.2 | 42.4 | 5.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 451797 | 0.9 |
| Hexabromobiphenyl | 798898 | 949876 | 18.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 317719 | 27.5 |
| Hexabromobiphenyl | 362541 | 501145 | 38.2 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.289 | -0.005 | 40227 | 266.9 | 1 | 7.270 | -0.005 | 40371 | 248.5 |
| Aroclor-1016 | 2 | 7.678 | -0.007 | 128967 | 265.1 | 2 | 7.871 | 0.000 | 88575 | 252.8 |
| Aroclor-1016 | 3 | 7.812 | -0.006 | 62989 | 285.7 | 3 | 8.070 | 0.000 | 37907 | 251.9 |
| Aroclor-1016 | 4 | 8.422 | -0.007 | 39393 | 280.2 | 4 | 8.241 | 0.000 | 20413 | 258.0 |
| Total Col1Ave (4 peaks): | | | | | 274.5 | Total Col2Ave (4 peaks): | | | | 252.8 RPD = 8 |
| Corrected Ave (3 peaks): | | | | | 270.7 | Corrected Ave (3 peaks): | | | | 251.1 RPD = 8 |
| Aroclor-1260 | 1 | 11.056 | -0.006 | 96048 | 277.8 | 1 | 11.663 | -0.007 | 72250 | 273.1 |
| Aroclor-1260 | 2 | 11.373 | -0.004 | 100995 | 282.4 | 2 | 11.926 | -0.006 | 189104 | 284.9 |
| Aroclor-1260 | 3 | 11.746 | -0.005 | 262914 | 279.8 | 3 | 12.444 | -0.007 | 47747 | 270.1 |
| Aroclor-1260 | 4 | 12.150 | -0.008 | 128036 | 267.6 | 4 | 12.509 | -0.007 | 124257 | 280.8 |
| Aroclor-1260 | 5 | 12.256 | -0.006 | 54160 | 276.5 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | | 276.8 | Total Col2Ave (4 peaks): | | | | 277.2 RPD = 0 |
| Corrected Ave (4 peaks): | | | | | 275.4 | Corrected Ave (3 peaks): | | | | 274.7 RPD = 0 |

Total PCB Area Col1 (5.936 - 13.808) = 2671793 Col1 Total PCB = 0.6 ppm*

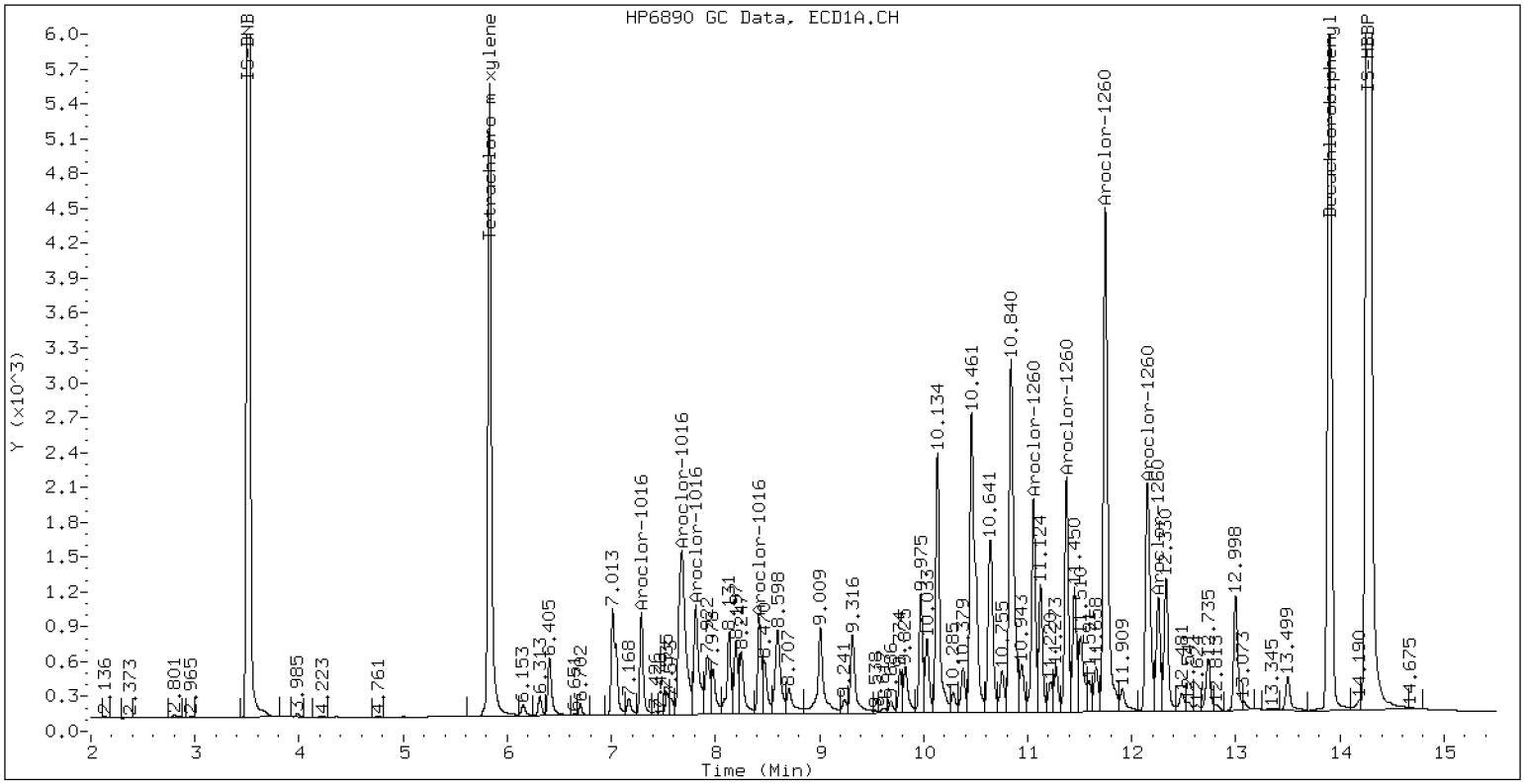
Total PCB Area Col2 (5.813 - 14.037) = 1707668 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

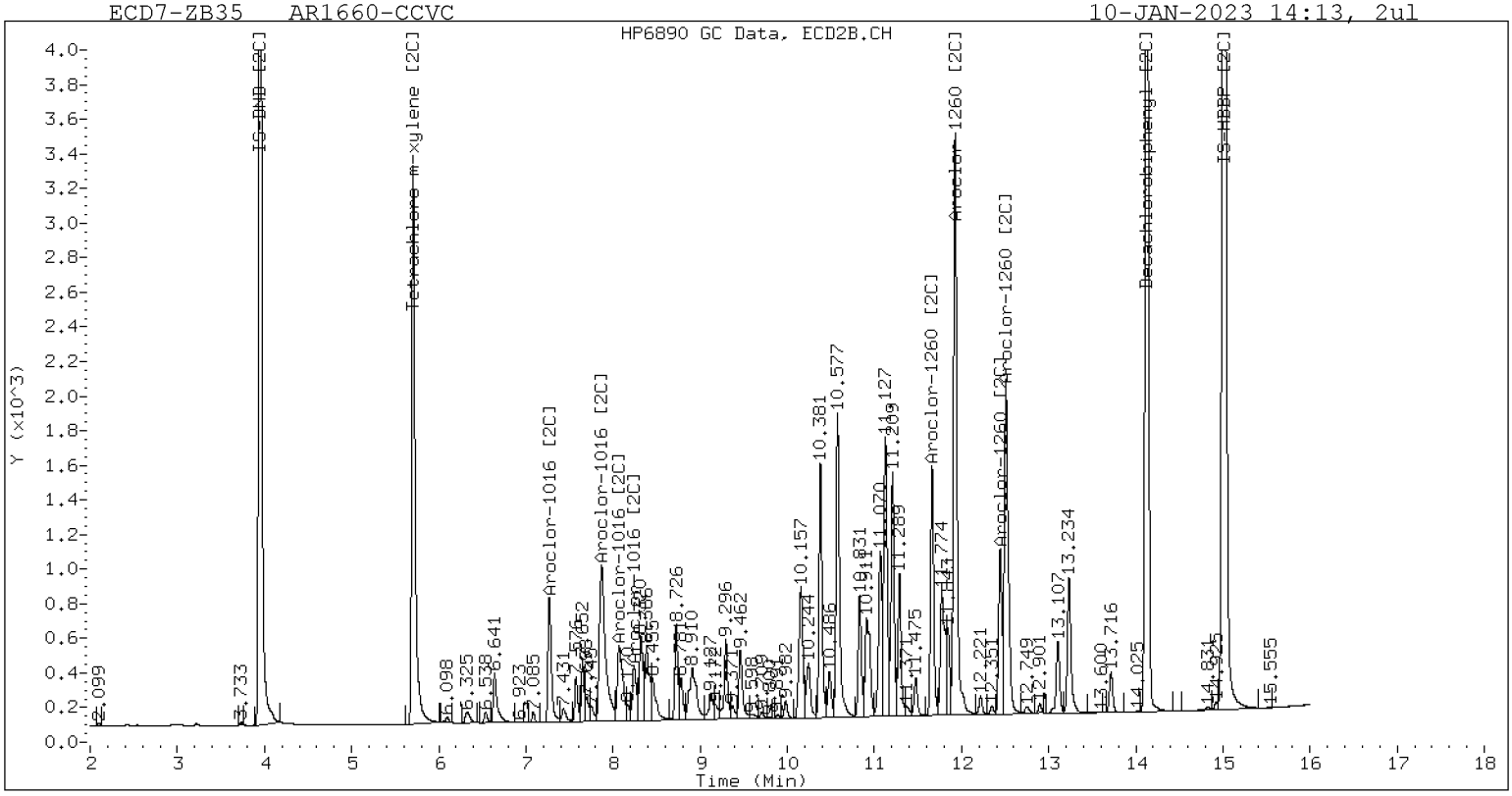
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660-CCVC 10-JAN-2023 14:13, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660-CCVC 10-JAN-2023 14:13, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112317ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0136-CCV1 | Injection Time: | 14:33 |
| Sequence Name: | AR1248CCV1 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1248 | A | 250.00 | 257 | 0.0490062 | 0.0517989 | | 2.9 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 263 | | 0.0362450 | | | |
| Aroclor-1248 (2) | A | 250.00 | 279 | | 0.0489669 | | | |
| Aroclor-1248 (3) | A | 250.00 | 289 | | 0.0913629 | | | |
| Aroclor-1248 (4) | A | 250.00 | 198 | | 0.0306208 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 257 | 0.0394876 | 0.0408733 | | 2.7 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 260 | | 0.0339747 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 219 | | 0.0301110 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 279 | | 0.0466475 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 269 | | 0.0527601 | | | |
| Decachlorobiphenyl | A | 40.000 | 42.0 | 0.7333327 | 0.7706385 | | 5.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 36.5 | 1.1336710 | 1.0354590 | | -8.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.7 | 1.1358180 | 1.1557380 | | 1.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 36.2 | 1.0966080 | 0.9923164 | | -9.5 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230111.b/01112317ECD7.D
Data file 2: /230111.b/230111.b/01112317ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 11-JAN-2023 14:33
Report Date: 01/12/2023 12:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.830 | -0.001 | 195302 | 5.707 | 0.000 | 148262 | 36.5 | 36.2 | 0.9 | Tetrachloro-m-xylene |
| 13.903 | -0.001 | 233925 | 14.128 | -0.001 | 251566 | 42.0 | 40.7 | 3.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 377228 | -15.7 |
| Hexabromobiphenyl | 798898 | 607094 | -24.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 298820 | 20.0 |
| Hexabromobiphenyl | 362541 | 435334 | 20.1 |

* 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-1248 | 1 | 8.424 | -0.003 | 42727 | 263.4 | 1 | 8.321 | 0.000 | 31726 | 259.9 |
| Aroclor-1248 | 2 | 8.600 | -0.005 | 57724 | 278.7 | 2 | 8.727 | 0.000 | 28118 | 219.0 |
| Aroclor-1248 | 3 | 9.016 | -0.007 | 107702 | 289.1 | 3 | 9.175 | 0.000 | 43560 | 278.9 |
| Aroclor-1248 | 4 | 9.309 | -0.002 | 36097 | 197.8 | 4 | 9.599 | 0.000 | 49268 | 268.7 |

Total Col1Ave (4 peaks): 257.3 Total Col2Ave (4 peaks): 256.6 RPD = 0

Corrected Ave (3 peaks): 246.7 Corrected Ave (3 peaks): 249.2 RPD = 1

CalAmt %D: 2.9 CalAmt %D: 2.7

Total PCB Area Col1 (5.932 - 13.804) = 886272 Col1 Total PCB = 0.2 ppm*

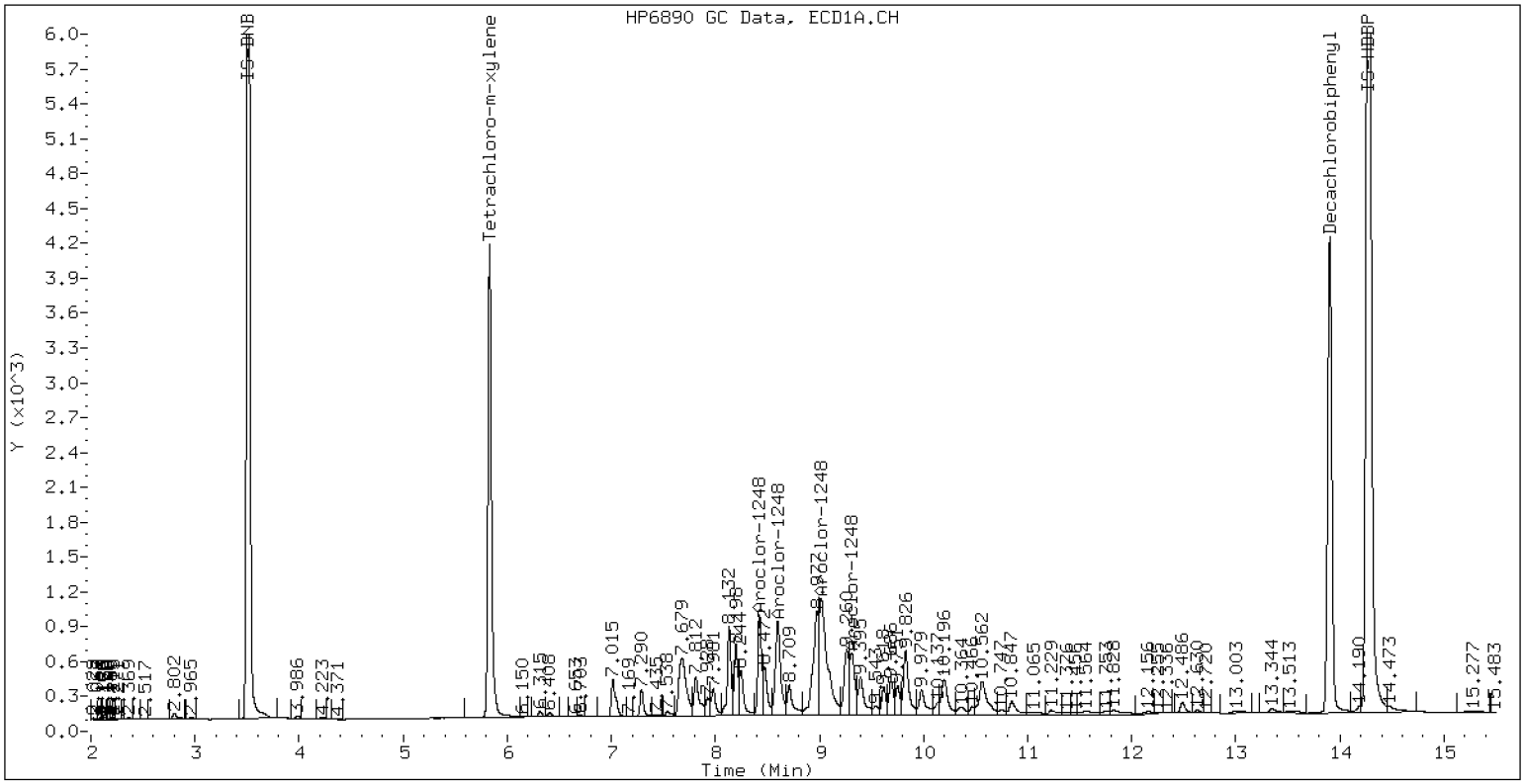
Total PCB Area Col2 (5.807 - 14.028) = 633909 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

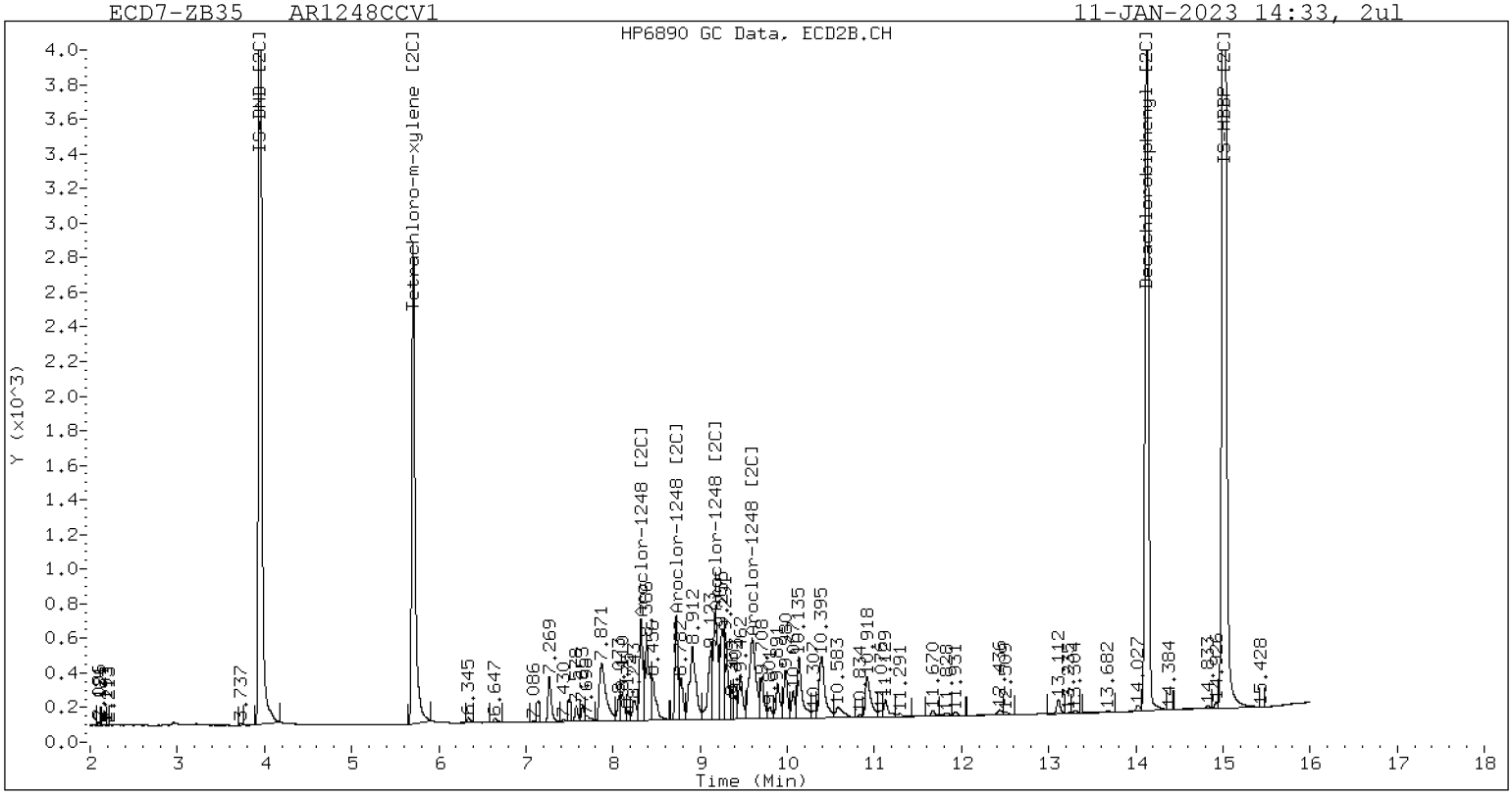
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 11-JAN-2023 14:33, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 11-JAN-2023 14:33, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112318ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0136-CCV2 | Injection Time: | 14:54 |
| 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 | 278 | 0.0441939 | 0.0485943 | | 11.3 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 272 | 0.0266860 | 0.0290229 | | 8.8 | |
| Aroclor-1016 (2) | A | 250.00 | 266 | 0.0861572 | 0.0918442 | | 6.4 | |
| Aroclor-1016 (3) | A | 250.00 | 288 | 0.0390425 | 0.0449547 | | 15.2 | |
| Aroclor-1016 (4) | A | 250.00 | 287 | 0.0248899 | 0.0285556 | | 14.8 | |
| Aroclor 1016 [2C] | A | 250.00 | 252 | 0.0467310 | 0.0465069 | | 0.6 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 251 | 0.0409030 | 0.0410600 | | 0.4 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 245 | 0.0882154 | 0.0863852 | | -2.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 249 | 0.0378846 | 0.0377953 | | -0.4 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 261 | 0.0199212 | 0.0207872 | | 4.4 | |
| Aroclor 1260 | A | 250.00 | 303 | 0.0390342 | 0.0472752 | | 21.3 | +/-20 * |
| Aroclor-1260 (1) | A | 250.00 | 301 | 0.0291201 | 0.0350870 | | 20.4 | |
| Aroclor-1260 (2) | A | 250.00 | 306 | 0.0301181 | 0.0368999 | | 22.4 | |
| Aroclor-1260 (3) | A | 250.00 | 305 | 0.0791351 | 0.0964340 | | 22.0 | |
| Aroclor-1260 (4) | A | 250.00 | 296 | 0.0403003 | 0.0476576 | | 18.4 | |
| Aroclor-1260 (5) | A | 250.00 | 308 | 0.0164974 | 0.0202975 | | 23.2 | |
| Aroclor 1260 [2C] | A | 250.00 | 254 | 0.0617619 | 0.0623147 | | 1.6 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 253 | 0.0422283 | 0.0428107 | | 1.2 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 247 | 0.1059643 | 0.1049019 | | -1.2 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 260 | 0.0282173 | 0.0293175 | | 4.0 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 256 | 0.0706376 | 0.0722287 | | 2.4 | |
| Decachlorobiphenyl | A | 40.000 | 43.7 | 0.7333327 | 0.8010452 | | 9.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.2 | 1.1336710 | 1.1683590 | | 3.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.9 | 1.1358180 | 1.1903590 | | 4.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 39.8 | 1.0966080 | 1.0906350 | | -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: /230111.b/01112318ECD7.D
Data file 2: /230111.b/230111.b/01112318ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 11-JAN-2023 14:54
Report Date: 01/12/2023 12:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.001 | 216039 | 5.707 | 0.000 | 160783 | 41.2 | 39.8 | 3.6 | Tetrachloro-m-xylene |
| 13.902 | -0.002 | 269923 | 14.128 | -0.000 | 274764 | 43.7 | 41.9 | 4.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 369816 | -17.4 |
| Hexabromobiphenyl | 798898 | 673927 | -15.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 294843 | 18.4 |
| Hexabromobiphenyl | 362541 | 461649 | 27.3 |

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

| Aroclor | ZB5 Col Peak# | RT | Shift | Area | Amount | ZB35 Col Peak# | RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.289 | -0.005 | 33541 | 271.9 | 1 | 7.271 | 0.000 | 37832 | 251.0 |
| Aroclor-1016 | 2 | 7.678 | -0.006 | 106142 | 266.5 | 2 | 7.871 | -0.000 | 79594 | 244.8 |
| Aroclor-1016 | 3 | 7.813 | -0.005 | 51953 | 287.9 | 3 | 8.070 | -0.001 | 34824 | 249.4 |
| Aroclor-1016 | 4 | 8.424 | -0.005 | 33001 | 286.8 | 4 | 8.241 | -0.001 | 19153 | 260.9 |

Total Col1Ave (4 peaks): 278.3 Total Col2Ave (4 peaks): 251.5 RPD = 10
Corrected Ave (3 peaks): 275.1 Corrected Ave (3 peaks): 248.4 RPD = 10

CalAmt %D: 11.3 CalAmt %D: 0.6

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.057 | -0.006 | 73894 | 301.2 | 1 | 11.662 | -0.000 | 61761 | 253.4 |
| Aroclor-1260 | 2 | 11.372 | -0.005 | 77712 | 306.3 | 2 | 11.926 | 0.000 | 151337 | 247.5 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 203092 | 304.6 | 3 | 12.445 | 0.001 | 42295 | 259.7 |
| Aroclor-1260 | 4 | 12.152 | -0.006 | 100368 | 295.6 | 4 | 12.509 | -0.001 | 104201 | 255.6 |
| Aroclor-1260 | 5 | 12.256 | -0.006 | 42747 | 307.6 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 303.1 Total Col2Ave (4 peaks): 254.1 RPD = 18
Corrected Ave (4 peaks): 302.0 Corrected Ave (3 peaks): 252.2 RPD = 18

CalAmt %D: 21.2 CalAmt %D: 1.6

Total PCB Area Col1 (5.932 - 13.804) = 2125879 Col1 Total PCB = 0.6 ppm*

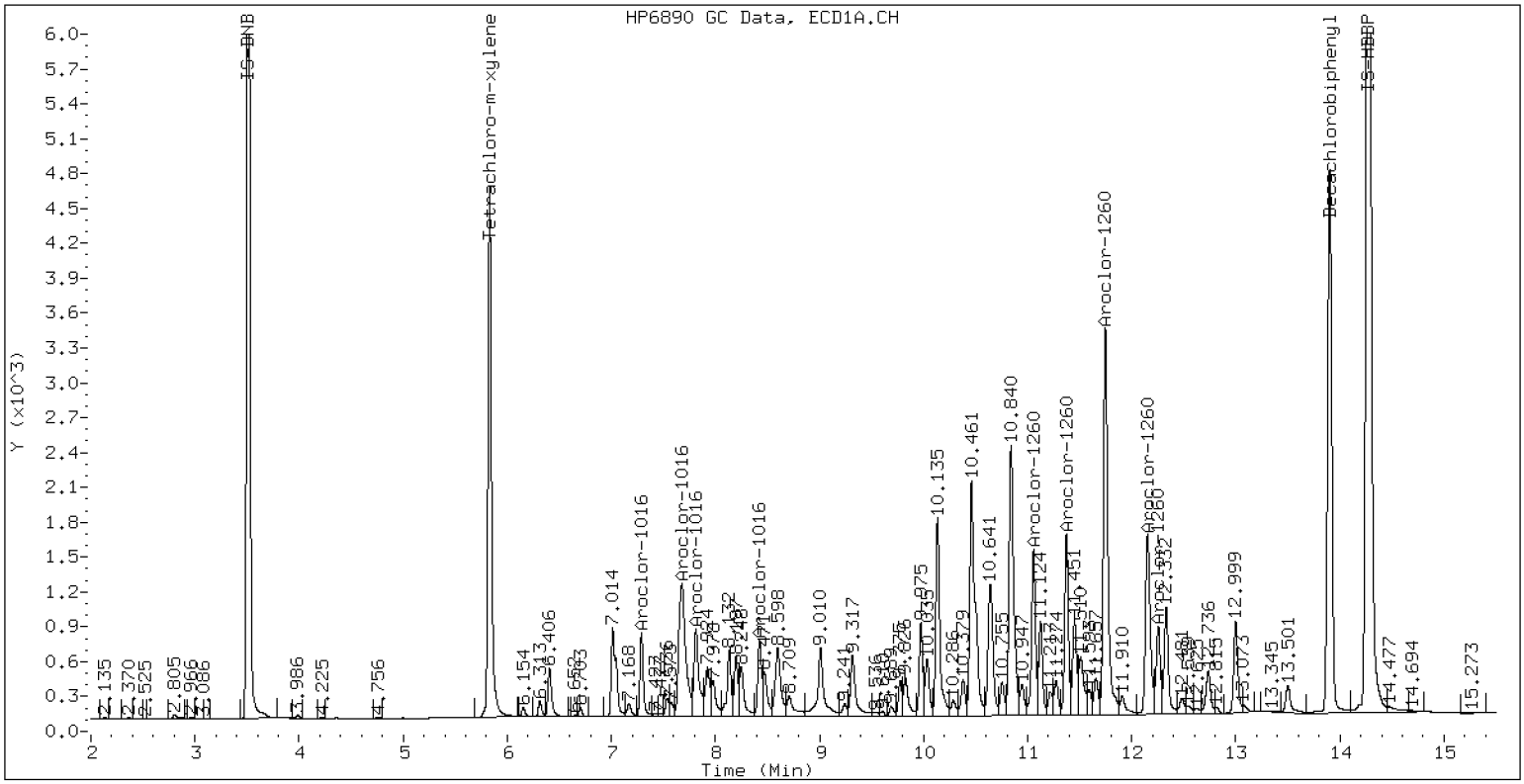
Total PCB Area Col2 (5.807 - 14.028) = 1478089 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

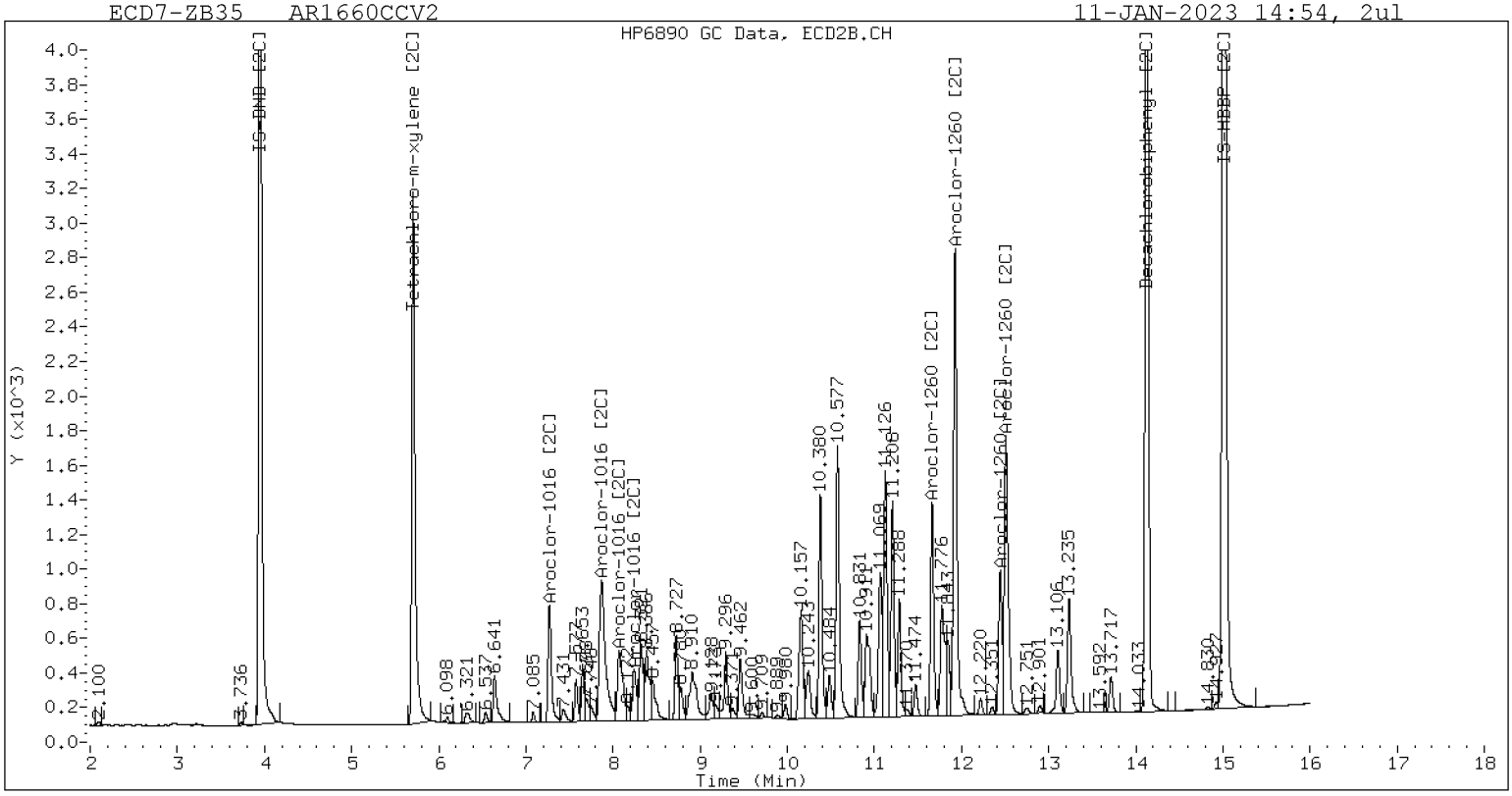
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 11-JAN-2023 14:54, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 11-JAN-2023 14:54, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112328ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0136-CCV3 | Injection Time: | 18:24 |
| 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 | 282 | 0.0396000 | 0.0444015 | | 12.6 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 267 | | 0.0242407 | | | |
| Aroclor-1242 (2) | A | 250.00 | 260 | | 0.0748016 | | | |
| Aroclor-1242 (3) | A | 250.00 | 275 | | 0.0228138 | | | |
| Aroclor-1242 (4) | A | 250.00 | 324 | | 0.0557500 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 269 | 0.0391981 | 0.0414700 | | 7.5 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 253 | | 0.0342393 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 257 | | 0.0739476 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 280 | | 0.0259347 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 285 | | 0.0317583 | | | |
| Decachlorobiphenyl | A | 40.000 | 40.9 | 0.7333327 | 0.7497097 | | 2.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.6 | 1.1336710 | 1.0950880 | | -3.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.0 | 1.1358180 | 1.1368990 | | 0.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.1 | 1.0966080 | 1.0183290 | | -7.3 | +/-20 |

* Values outside of QC limits

* Values outside of QC limits

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

Data file 1: /230111.b/01112328ECD7.D
Data file 2: /230111.b/230111.b/01112328ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 11-JAN-2023 18:24
Report Date: 01/12/2023 12:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | 0.000 | 212925 | 5.708 | 0.001 | 156231 | 38.6 | 37.1 | 3.9 | Tetrachloro-m-xylene |
| 13.904 | 0.000 | 360267 | 14.128 | -0.000 | 332514 | 40.9 | 40.0 | 2.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 388873 | -13.1 |
| Hexabromobiphenyl | 798898 | 961084 | 20.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 306838 | 23.2 |
| Hexabromobiphenyl | 362541 | 584949 | 61.3 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 1 | 7.290 | 0.000 | 29458 | 267.3 | 1 | 7.272 | 0.000 | 32831 | 252.8 |
| Aroclor-1242 | 2 | 7.682 | 0.000 | 90901 | 259.7 | 2 | 7.875 | 0.000 | 70906 | 257.2 |
| Aroclor-1242 | 3 | 8.425 | 0.000 | 27724 | 275.3 | 3 | 9.179 | 0.000 | 24868 | 279.6 |
| Aroclor-1242 | 4 | 9.018 | 0.000 | 67749 | 324.0 | 4 | 9.604 | 0.000 | 30452 | 284.9 |

Total Col1Ave (4 peaks): 281.6 Total Col2Ave (4 peaks): 268.6 RPD = 5

Corrected Ave (3 peaks): 267.4 Corrected Ave (3 peaks): 263.2 RPD = 2

CalAmt %D: 12.6 CalAmt %D: 7.5

Total PCB Area Col1 (5.932 - 13.804) = 765422 Col1 Total PCB = 0.2 ppm*

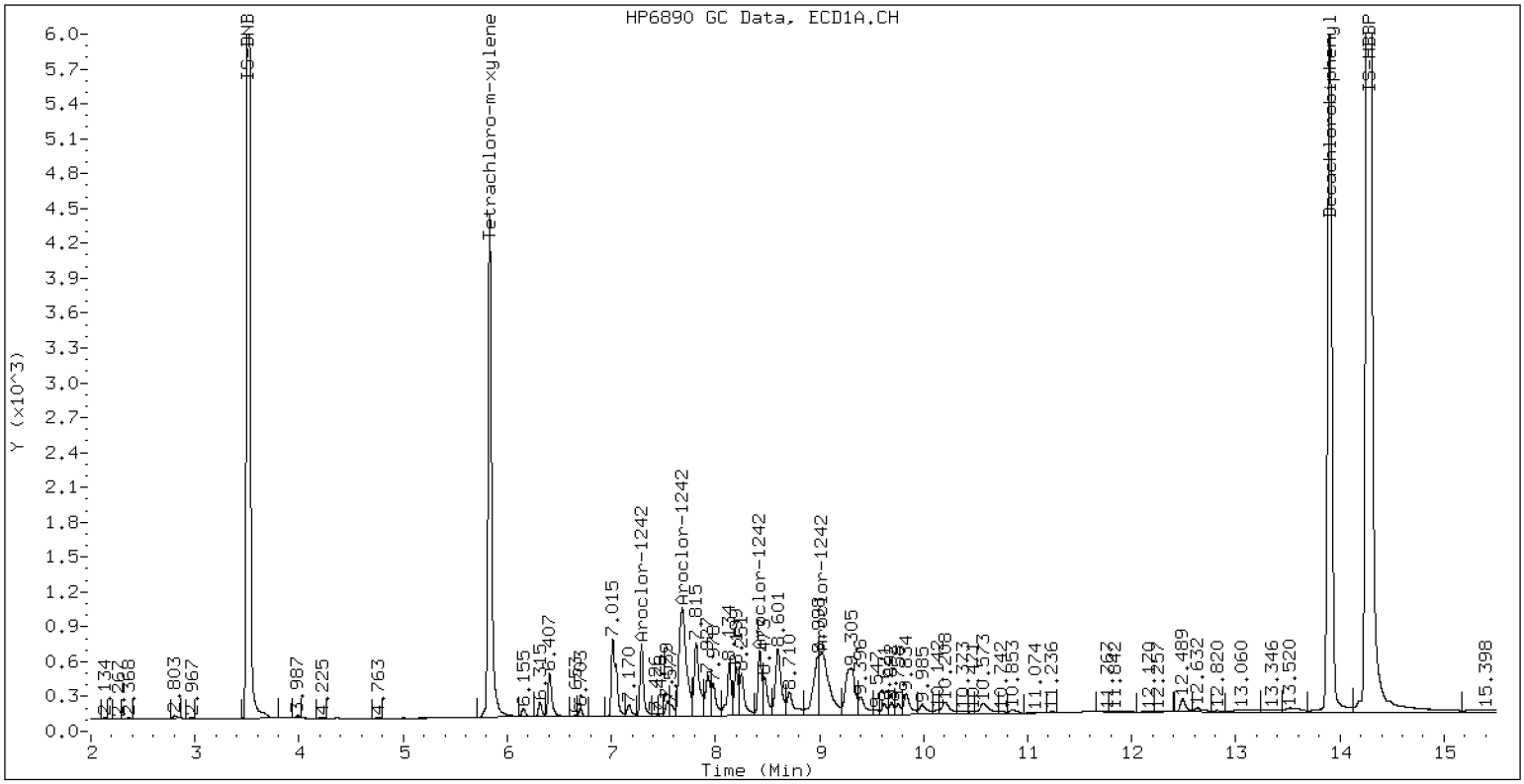
Total PCB Area Col2 (5.807 - 14.028) = 532955 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

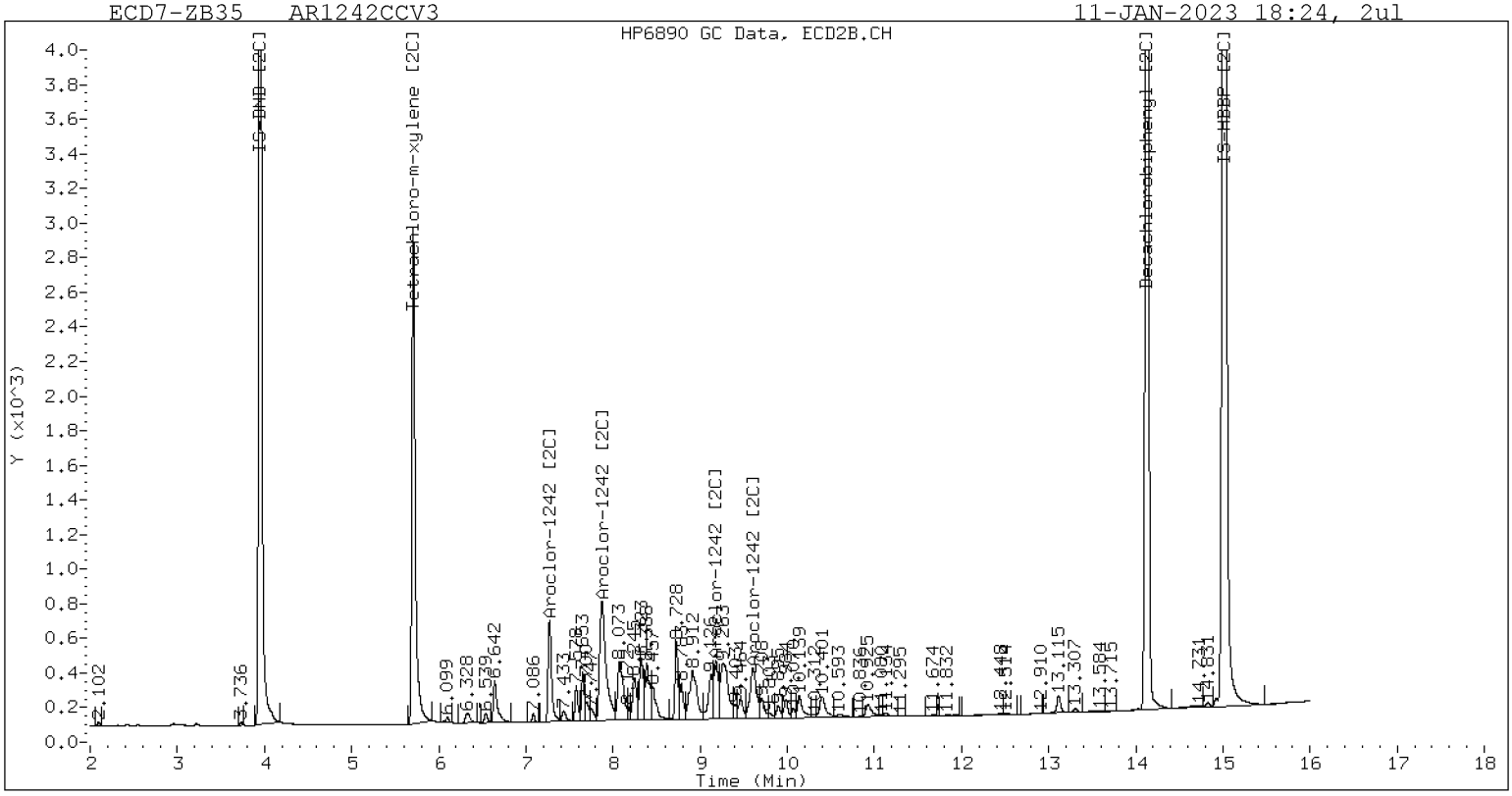
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 11-JAN-2023 18:24, 2ul




ZB-5 Manual Integration: YES

ECD7-ZB35 AR1242CCV3 11-JAN-2023 18:24, 2ul

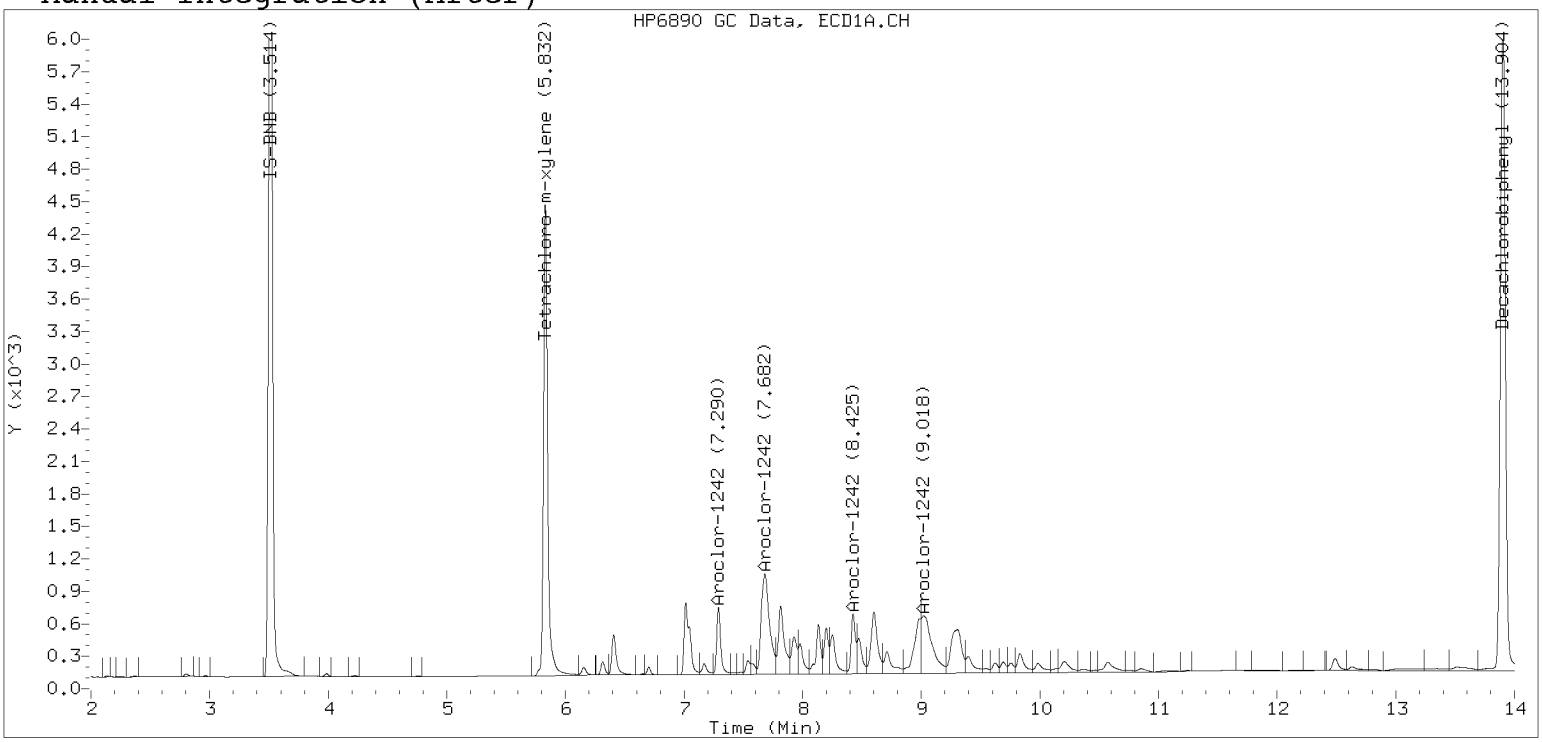



ZB-35 Manual Integration: NO

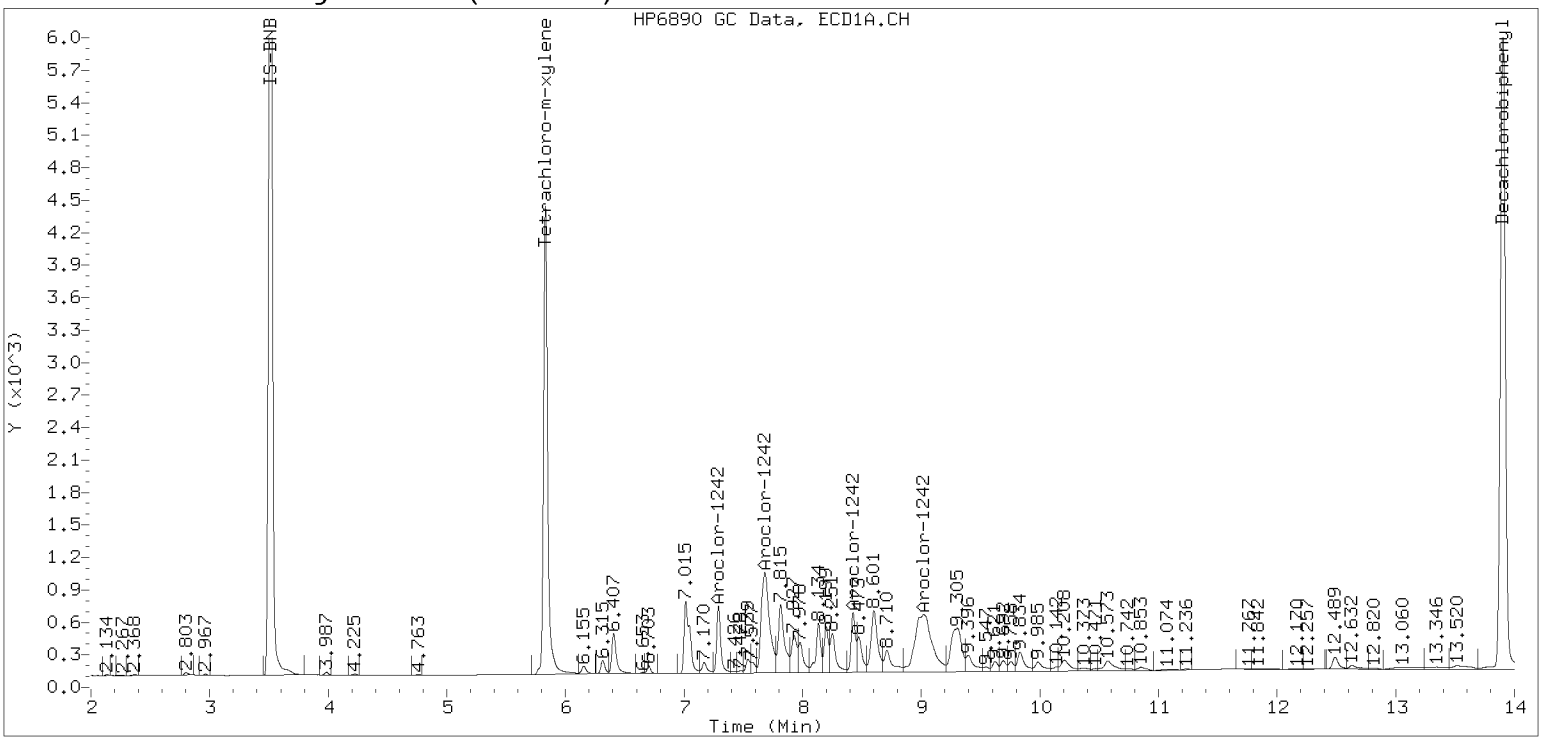
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230111.b/01112328ECD7.D  Injection Date: 11-JAN-2023 18:24

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112329ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0136-CCV4 | Injection Time: | 18:46 |
| 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 | 280 | 0.0441939 | 0.0489795 | | 12.1 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 276 | 0.0266860 | 0.0294644 | | 10.4 | |
| Aroclor-1016 (2) | A | 250.00 | 268 | 0.0861572 | 0.0925598 | | 7.2 | |
| Aroclor-1016 (3) | A | 250.00 | 291 | 0.0390425 | 0.0453831 | | 16.4 | |
| Aroclor-1016 (4) | A | 250.00 | 286 | 0.0248899 | 0.0285110 | | 14.4 | |
| Aroclor 1016 [2C] | A | 250.00 | 251 | 0.0467310 | 0.0464613 | | 0.3 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 250 | 0.0409030 | 0.0409522 | | 0.0 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 244 | 0.0882154 | 0.0862967 | | -2.4 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 251 | 0.0378846 | 0.0380569 | | 0.4 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 258 | 0.0199212 | 0.0205394 | | 3.2 | |
| Aroclor 1260 | A | 250.00 | 252 | 0.0390342 | 0.0393405 | | 0.9 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 249 | 0.0291201 | 0.0289804 | | -0.4 | |
| Aroclor-1260 (2) | A | 250.00 | 255 | 0.0301181 | 0.0307673 | | 2.0 | |
| Aroclor-1260 (3) | A | 250.00 | 254 | 0.0791351 | 0.0804159 | | 1.6 | |
| Aroclor-1260 (4) | A | 250.00 | 245 | 0.0403003 | 0.0395371 | | -2.0 | |
| Aroclor-1260 (5) | A | 250.00 | 258 | 0.0164974 | 0.0170017 | | 3.2 | |
| Aroclor 1260 [2C] | A | 250.00 | 230 | 0.0617619 | 0.0563763 | | -7.9 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 226 | 0.0422283 | 0.0382361 | | -9.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 222 | 0.1059643 | 0.0941411 | | -11.2 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 238 | 0.0282173 | 0.0268235 | | -4.8 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 235 | 0.0706376 | 0.0663044 | | -6.0 | |
| Decachlorobiphenyl | A | 40.000 | 43.3 | 0.7333327 | 0.7946871 | | 8.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 42.0 | 1.1336710 | 1.1892280 | | 5.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.9 | 1.1358180 | 1.1616880 | | 2.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.4 | 1.0966080 | 1.1089400 | | 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: /230111.b/01112329ECD7.D
Data file 2: /230111.b/230111.b/01112329ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 11-JAN-2023 18:46
Report Date: 01/12/2023 12:16
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.001 | 226916 | 5.707 | 0.000 | 166871 | 42.0 | 40.4 | 3.7 | Tetrachloro-m-xylene |
| 13.902 | -0.002 | 361047 | 14.128 | 0.000 | 325646 | 43.3 | 40.9 | 5.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 381619 | -14.7 |
| Hexabromobiphenyl | 798898 | 908652 | 13.7 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 300956 | 20.8 |
| Hexabromobiphenyl | 362541 | 560643 | 54.6 |

* 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 | 7.289 | -0.005 | 35138 | 276.0 | 1 | 7.270 | 0.000 | 38515 | 250.3 |
| Aroclor-1016 | 2 | 7.679 | -0.006 | 110383 | 268.6 | 2 | 7.871 | 0.000 | 81161 | 244.6 |
| Aroclor-1016 | 3 | 7.812 | -0.006 | 54122 | 290.6 | 3 | 8.071 | 0.000 | 35792 | 251.1 |
| Aroclor-1016 | 4 | 8.423 | -0.007 | 34001 | 286.4 | 4 | 8.242 | 0.000 | 19317 | 257.8 |

Total Col1Ave (4 peaks): 280.4 Total Col2Ave (4 peaks): 250.9 RPD = 11
Corrected Ave (3 peaks): 277.0 Corrected Ave (3 peaks): 248.7 RPD = 11

CalAmt %D: 12.2 CalAmt %D: 0.4

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.057 | -0.005 | 82291 | 248.8 | 1 | 11.663 | 0.000 | 66990 | 226.4 |
| Aroclor-1260 | 2 | 11.374 | -0.004 | 87365 | 255.4 | 2 | 11.926 | 0.000 | 164936 | 222.1 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 228344 | 254.0 | 3 | 12.444 | 0.000 | 46995 | 237.7 |
| Aroclor-1260 | 4 | 12.153 | -0.005 | 112267 | 245.3 | 4 | 12.510 | 0.000 | 116166 | 234.7 |
| Aroclor-1260 | 5 | 12.256 | -0.005 | 48277 | 257.6 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 252.2 Total Col2Ave (4 peaks): 230.2 RPD = 9
Corrected Ave (4 peaks): 250.9 Corrected Ave (3 peaks): 227.7 RPD = 10

CalAmt %D: 0.9 CalAmt %D: -7.9

Total PCB Area Col1 (5.932 - 13.804) = 2321218 Col1 Total PCB = 0.6 ppm*

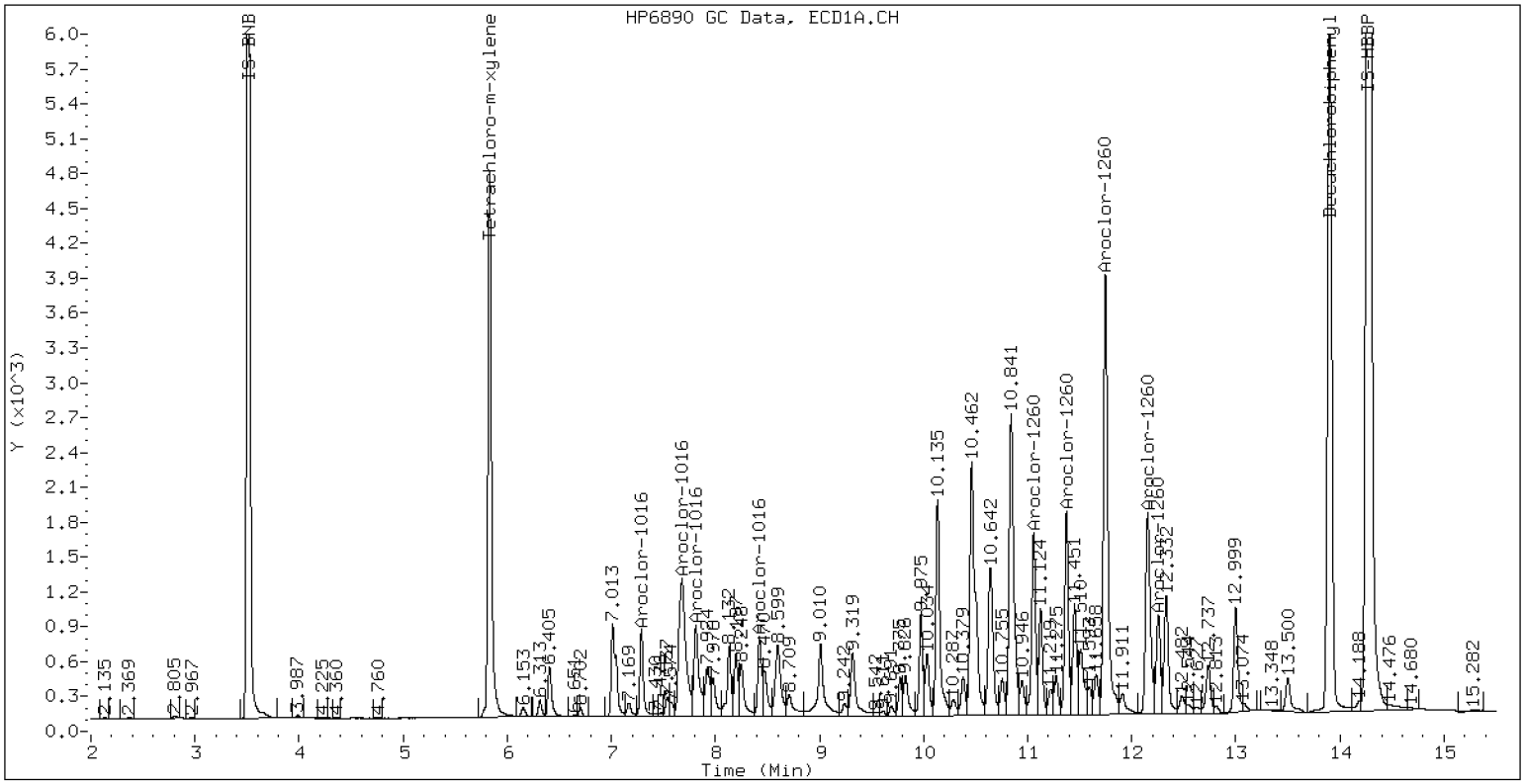
Total PCB Area Col2 (5.807 - 14.028) = 1590371 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

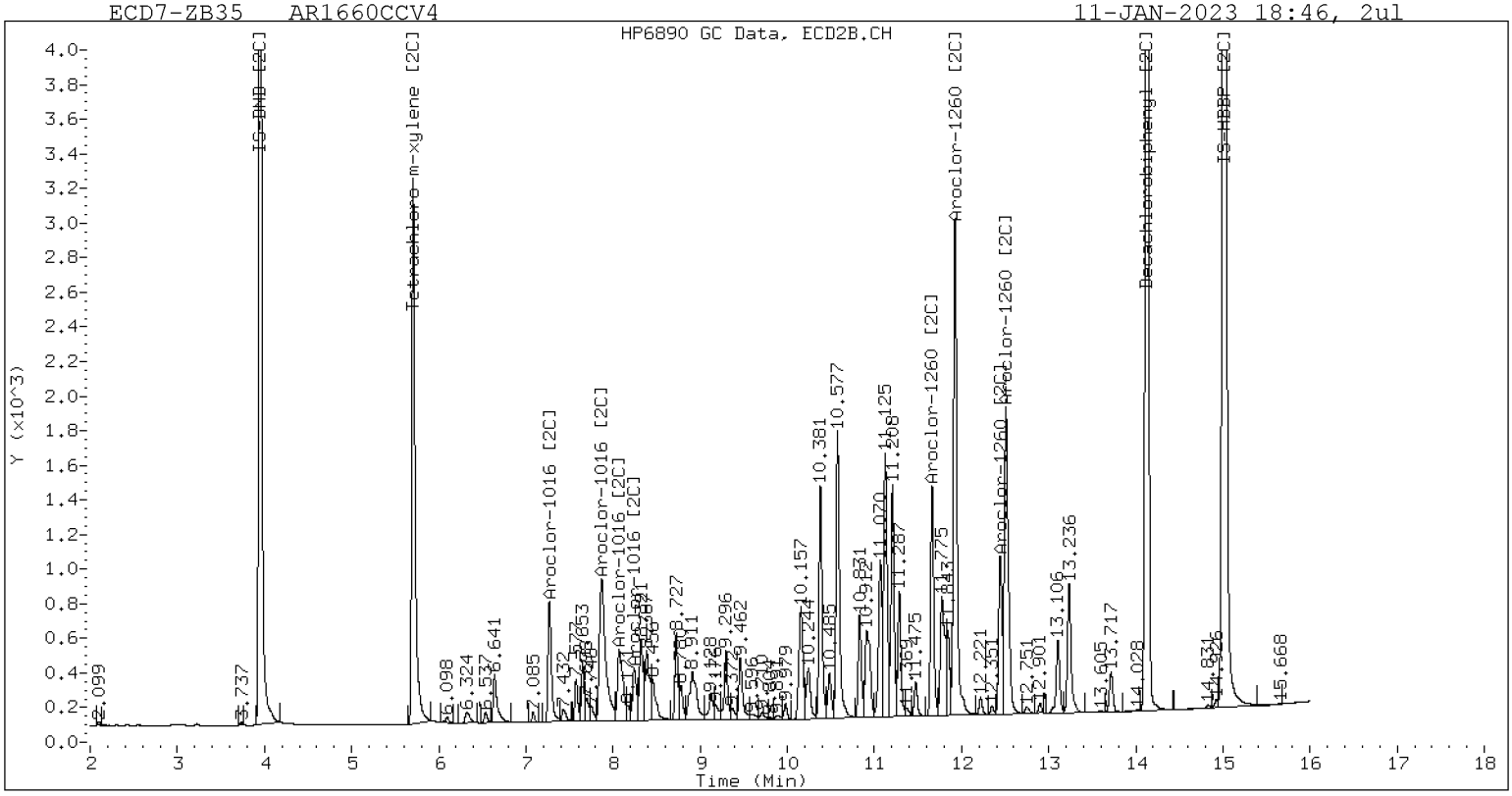
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 11-JAN-2023 18:46, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 11-JAN-2023 18:46, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112346ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/12/23 |
| Lab Sample ID: | SLA0136-CCV5 | Injection Time: | 00:43 |
| 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 | 264 | 0.0576965 | 0.0607882 | | 5.5 | +/-20 |
| Aroclor-1254 (1) | A | 250.00 | 264 | | 0.0742619 | | | |
| Aroclor-1254 (2) | A | 250.00 | 302 | | 0.0330591 | | | |
| Aroclor-1254 (3) | A | 250.00 | 208 | | 0.0370514 | | | |
| Aroclor-1254 (4) | A | 250.00 | 275 | | 0.0953882 | | | |
| Aroclor-1254 (5) | A | 250.00 | 270 | | 0.0641801 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 271 | 0.0638047 | 0.0688199 | | 8.2 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 260 | | 0.0536210 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 273 | | 0.0452890 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 255 | | 0.0909504 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 281 | | 0.1036571 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 284 | | 0.0505818 | | | |
| Decachlorobiphenyl | A | 40.000 | 41.4 | 0.7333327 | 0.7593584 | | 3.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 37.0 | 1.1336710 | 1.0485130 | | -7.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.5 | 1.1358180 | 1.2068060 | | 6.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 36.8 | 1.0966080 | 1.0099540 | | -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: /230111.b/01112346ECD7.D
Data file 2: /230111.b/230111.b/01112346ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 12-JAN-2023 00:43
Report Date: 01/14/2023 13:22
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | 0.000 | 221329 | 5.707 | -0.001 | 167002 | 37.0 | 36.8 | 0.4 | Tetrachloro-m-xylene |
| 13.902 | -0.000 | 229682 | 14.126 | -0.001 | 268448 | 41.4 | 42.5 | 2.6 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 422177 | -5.7 |
| Hexabromobiphenyl | 798898 | 604937 | -24.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 330712 | 32.8 |
| Hexabromobiphenyl | 362541 | 444890 | 22.7 |

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

| Aroclor | Peak# | ZB5 Col RT | Shift | Area | Amount | Peak# | ZB35 Col RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1254 | 1 | 9.314 | -0.002 | 97974 | 263.6 | 1 | 9.460 | 0.000 | 55416 | 259.9 |
| Aroclor-1254 | 2 | 9.393 | -0.002 | 43615 | 301.7 | 2 | 9.979 | 0.000 | 46805 | 273.0 |
| Aroclor-1254 | 3 | 9.684 | -0.001 | 48882 | 208.2 | 3 | 10.132 | 0.000 | 93995 | 255.1 |
| Aroclor-1254 | 4 | 9.822 | -0.003 | 125846 | 275.0 | 4 | 10.380 | 0.000 | 107127 | 280.7 |
| Aroclor-1254 | 5 | 10.186 | -0.006 | 84673 | 269.9 | 5 | 10.577 | 0.000 | 52275 | 284.0 |

Total Col1Ave (5 peaks): 263.7 Total Col2Ave (5 peaks): 270.5 RPD = 3

Corrected Ave (4 peaks): 254.2 Corrected Ave (4 peaks): 267.2 RPD = 5

CalAmt %D: 5.5 CalAmt %D: 8.2

Total PCB Area Col1 (5.931 - 13.802) = 1257284 Col1 Total PCB = 0.3 ppm*

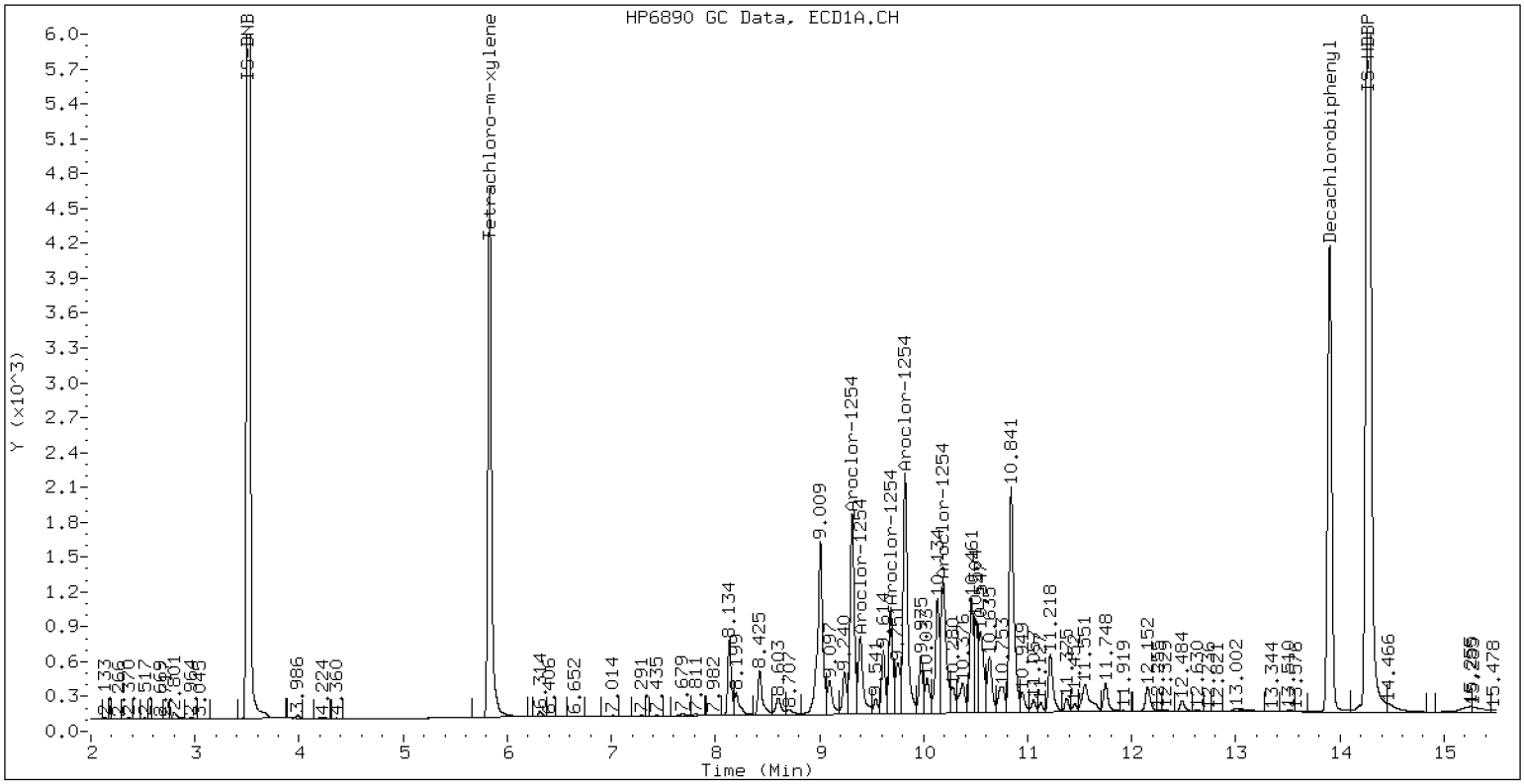
Total PCB Area Col2 (5.807 - 14.027) = 972424 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

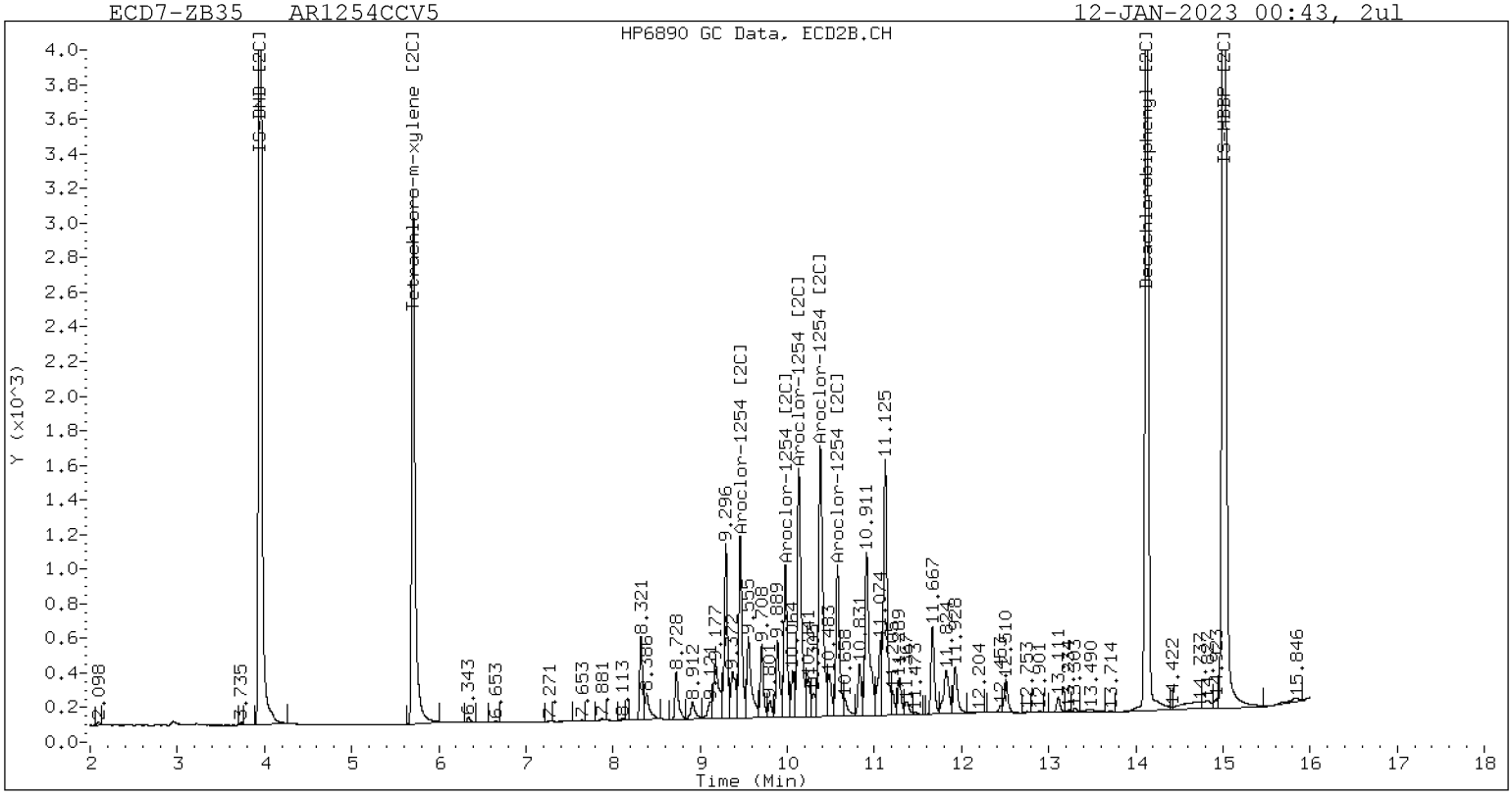
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 12-JAN-2023 00:43, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 12-JAN-2023 00:43, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112347ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/12/23 |
| Lab Sample ID: | SLA0136-CCV6 | Injection Time: | 01:04 |
| Sequence Name: | AR1660CCV6 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1016 | A | 250.00 | 277 | 0.0441939 | 0.0484368 | | 10.6 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 273 | 0.0266860 | 0.0291073 | | 9.2 | |
| Aroclor-1016 (2) | A | 250.00 | 268 | 0.0861572 | 0.0923963 | | 7.2 | |
| Aroclor-1016 (3) | A | 250.00 | 284 | 0.0390425 | 0.0442901 | | 13.6 | |
| Aroclor-1016 (4) | A | 250.00 | 281 | 0.0248899 | 0.0279536 | | 12.4 | |
| Aroclor 1016 [2C] | A | 250.00 | 254 | 0.0467310 | 0.0469357 | | 1.6 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 254 | 0.0409030 | 0.0415867 | | 1.6 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 247 | 0.0882154 | 0.0871976 | | -1.2 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 250 | 0.0378846 | 0.0378169 | | 0.0 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 265 | 0.0199212 | 0.0211413 | | 6.0 | |
| Aroclor 1260 | A | 250.00 | 319 | 0.0390342 | 0.0497256 | | 27.8 | +/-20 * |
| Aroclor-1260 (1) | A | 250.00 | 326 | 0.0291201 | 0.0380255 | | 30.4 | |
| Aroclor-1260 (2) | A | 250.00 | 325 | 0.0301181 | 0.0391694 | | 30.0 | |
| Aroclor-1260 (3) | A | 250.00 | 317 | 0.0791351 | 0.1004971 | | 26.8 | |
| Aroclor-1260 (4) | A | 250.00 | 308 | 0.0403003 | 0.0497262 | | 23.2 | |
| Aroclor-1260 (5) | A | 250.00 | 321 | 0.0164974 | 0.0212096 | | 28.4 | |
| Aroclor 1260 [2C] | A | 250.00 | 263 | 0.0617619 | 0.0643563 | | 5.2 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 263 | 0.0422283 | 0.0444217 | | 5.2 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 255 | 0.1059643 | 0.1079725 | | 2.0 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 271 | 0.0282173 | 0.0305917 | | 8.4 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 263 | 0.0706376 | 0.0744394 | | 5.2 | |
| Decachlorobiphenyl | A | 40.000 | 44.4 | 0.7333327 | 0.8132054 | | 11.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 42.3 | 1.1336710 | 1.1983000 | | 5.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.3 | 1.1358180 | 1.1739830 | | 3.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 41.6 | 1.0966080 | 1.1401370 | | 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: /230111.b/01112347ECD7.D
Data file 2: /230111.b/230111.b/01112347ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 12-JAN-2023 01:04
Report Date: 01/14/2023 13:22
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | 0.000 | 238796 | 5.707 | -0.000 | 176431 | 42.3 | 41.6 | 1.7 | Tetrachloro-m-xylene |
| 13.902 | 0.000 | 262077 | 14.127 | 0.000 | 268662 | 44.4 | 41.3 | 7.0 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 398558 | -11.0 |
| Hexabromobiphenyl | 798898 | 644553 | -19.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 309491 | 24.2 |
| Hexabromobiphenyl | 362541 | 457693 | 26.2 |

* 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-1016 | 1 | 7.289 | -0.000 | 36253 | 272.7 | 1 | 7.271 | -0.000 | 40221 | 254.2 |
| Aroclor-1016 | 2 | 7.677 | -0.002 | 115079 | 268.1 | 2 | 7.871 | 0.000 | 84334 | 247.1 |
| Aroclor-1016 | 3 | 7.812 | 0.000 | 55163 | 283.6 | 3 | 8.069 | -0.001 | 36575 | 249.6 |
| Aroclor-1016 | 4 | 8.422 | -0.000 | 34816 | 280.8 | 4 | 8.241 | -0.000 | 20447 | 265.3 |

Total Col1Ave (4 peaks): 276.3 Total Col2Ave (4 peaks): 254.0 RPD = 8
Corrected Ave (3 peaks): 273.9 Corrected Ave (3 peaks): 250.3 RPD = 9

CalAmt %D: 10.5 CalAmt %D: 1.6

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.057 | -0.001 | 76592 | 326.5 | 1 | 11.661 | -0.000 | 63536 | 263.0 |
| Aroclor-1260 | 2 | 11.373 | -0.001 | 78896 | 325.1 | 2 | 11.924 | -0.001 | 154432 | 254.7 |
| Aroclor-1260 | 3 | 11.745 | -0.002 | 202424 | 317.5 | 3 | 12.443 | -0.001 | 43755 | 271.0 |
| Aroclor-1260 | 4 | 12.151 | -0.002 | 100160 | 308.5 | 4 | 12.508 | -0.002 | 106470 | 263.5 |
| Aroclor-1260 | 5 | 12.255 | -0.001 | 42721 | 321.4 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 319.8 Total Col2Ave (4 peaks): 263.1 RPD = 19
Corrected Ave (4 peaks): 318.1 Corrected Ave (3 peaks): 260.4 RPD = 20

CalAmt %D: 27.9 CalAmt %D: 5.2

Total PCB Area Col1 (5.931 - 13.802) = 2211917 Col1 Total PCB = 0.6 ppm*

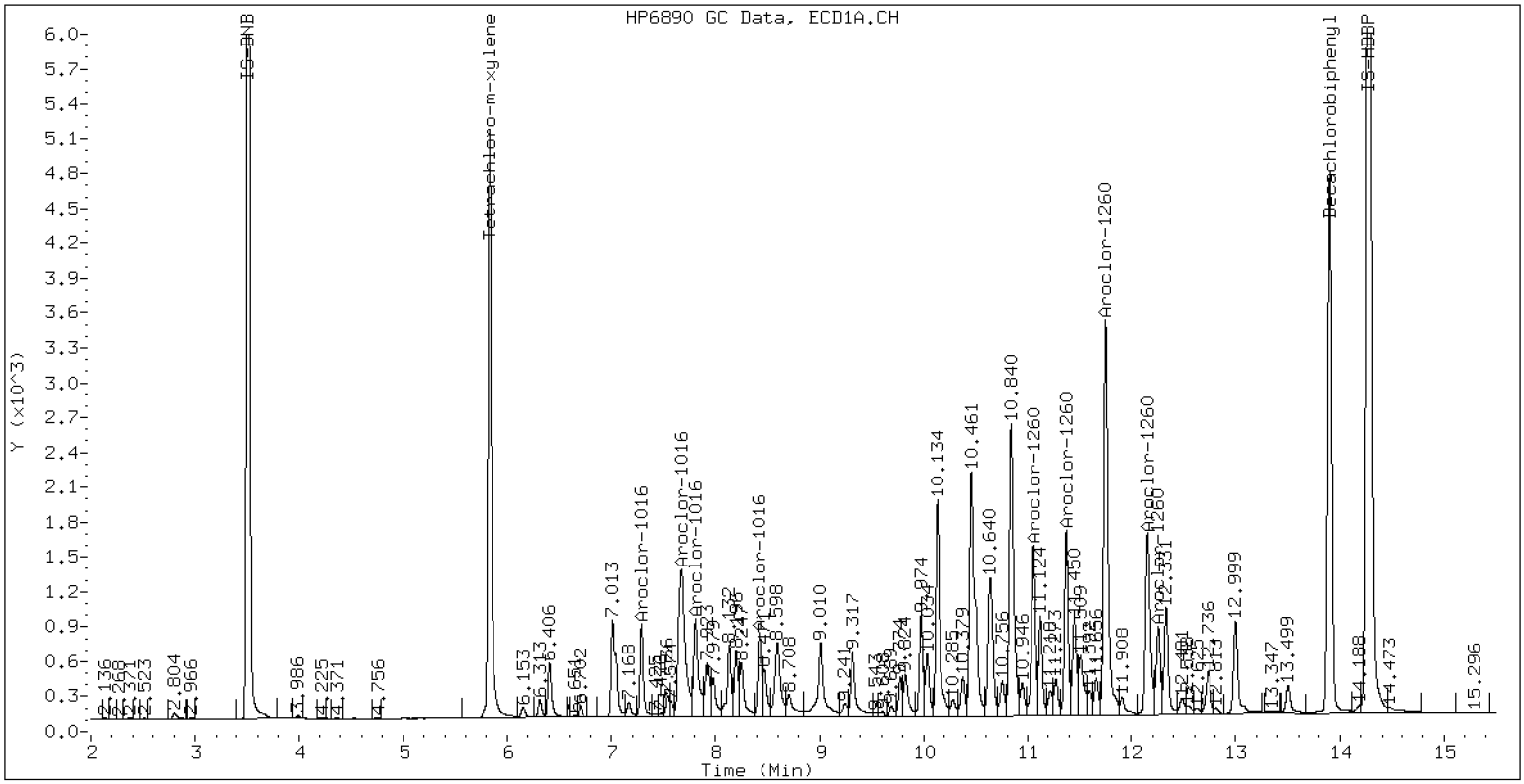
Total PCB Area Col2 (5.807 - 14.027) = 1533610 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

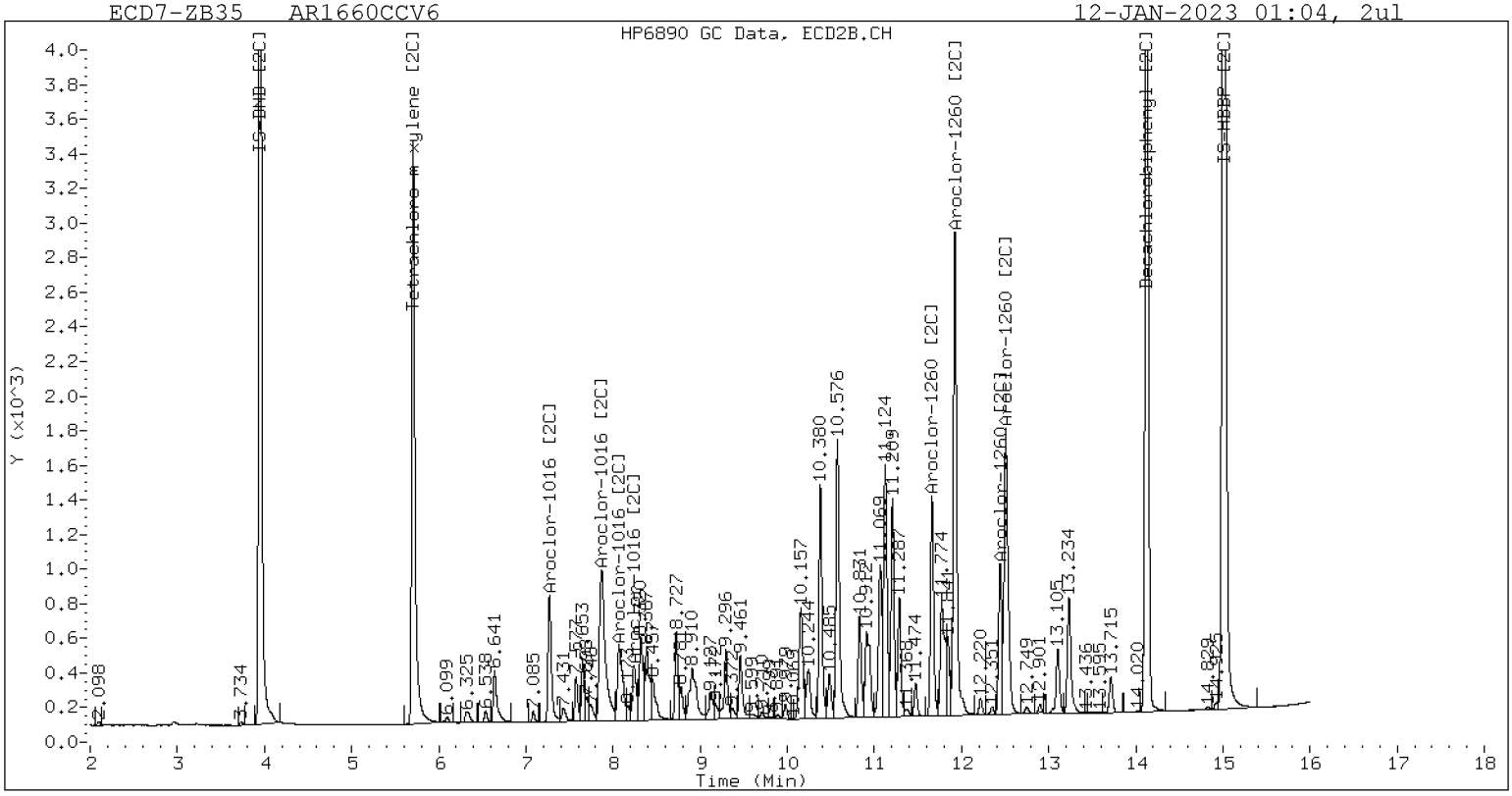
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 12-JAN-2023 01:04, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 12-JAN-2023 01:04, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112359ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/12/23 |
| Lab Sample ID: | SLA0136-CCV7 | Injection Time: | 05:17 |
| Sequence Name: | AR1248CCV7 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1248 | A | 250.00 | 277 | 0.0490062 | 0.0562444 | | 10.8 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 283 | | 0.0389967 | | | |
| Aroclor-1248 (2) | A | 250.00 | 302 | | 0.0529896 | | | |
| Aroclor-1248 (3) | A | 250.00 | 322 | | 0.1018439 | | | |
| Aroclor-1248 (4) | A | 250.00 | 201 | | 0.0311476 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 268 | 0.0394876 | 0.0426593 | | 7.1 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 273 | | 0.0356515 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 227 | | 0.0311569 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 290 | | 0.0485874 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 281 | | 0.0552417 | | | |
| Decachlorobiphenyl | A | 40.000 | 41.6 | 0.7333327 | 0.7630693 | | 4.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 37.3 | 1.1336710 | 1.0564740 | | -6.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.0 | 1.1358180 | 1.1643490 | | 2.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.7 | 1.0966080 | 1.0331250 | | -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: /230111.b/01112359ECD7.D
Data file 2: /230111.b/230111.b/01112359ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 12-JAN-2023 05:17
Report Date: 01/14/2023 13:22
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | 0.000 | 214022 | 5.708 | 0.000 | 161417 | 37.3 | 37.7 | 1.1 | Tetrachloro-m-xylene |
| 13.902 | 0.000 | 310673 | 14.127 | -0.000 | 303083 | 41.6 | 41.0 | 1.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 405163 | -9.5 |
| Hexabromobiphenyl | 798898 | 814272 | 1.9 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 312483 | 25.4 |
| Hexabromobiphenyl | 362541 | 520605 | 43.6 |

* 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 (ZB5 Col) | Shift | Area | Amount | Peak# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1248 | 1 | 8.423 | -0.001 | 49375 | 283.4 | 1 | 8.321 | 0.000 | 34814 | 272.7 |
| Aroclor-1248 | 2 | 8.599 | -0.001 | 67092 | 301.6 | 2 | 8.727 | 0.000 | 30425 | 226.6 |
| Aroclor-1248 | 3 | 9.018 | 0.002 | 128948 | 322.3 | 3 | 9.174 | 0.000 | 47446 | 290.5 |
| Aroclor-1248 | 4 | 9.310 | 0.000 | 39437 | 201.2 | 4 | 9.598 | 0.000 | 53944 | 281.4 |

Total Col1Ave (4 peaks): 277.1 Total Col2Ave (4 peaks): 267.8 RPD = 3

Corrected Ave (3 peaks): 262.1 Corrected Ave (3 peaks): 260.2 RPD = 1

CalAmt %D: 10.9 CalAmt %D: 7.1

Total PCB Area Col1 (5.931 - 13.802) = 1054779 Col1 Total PCB = 0.3 ppm*

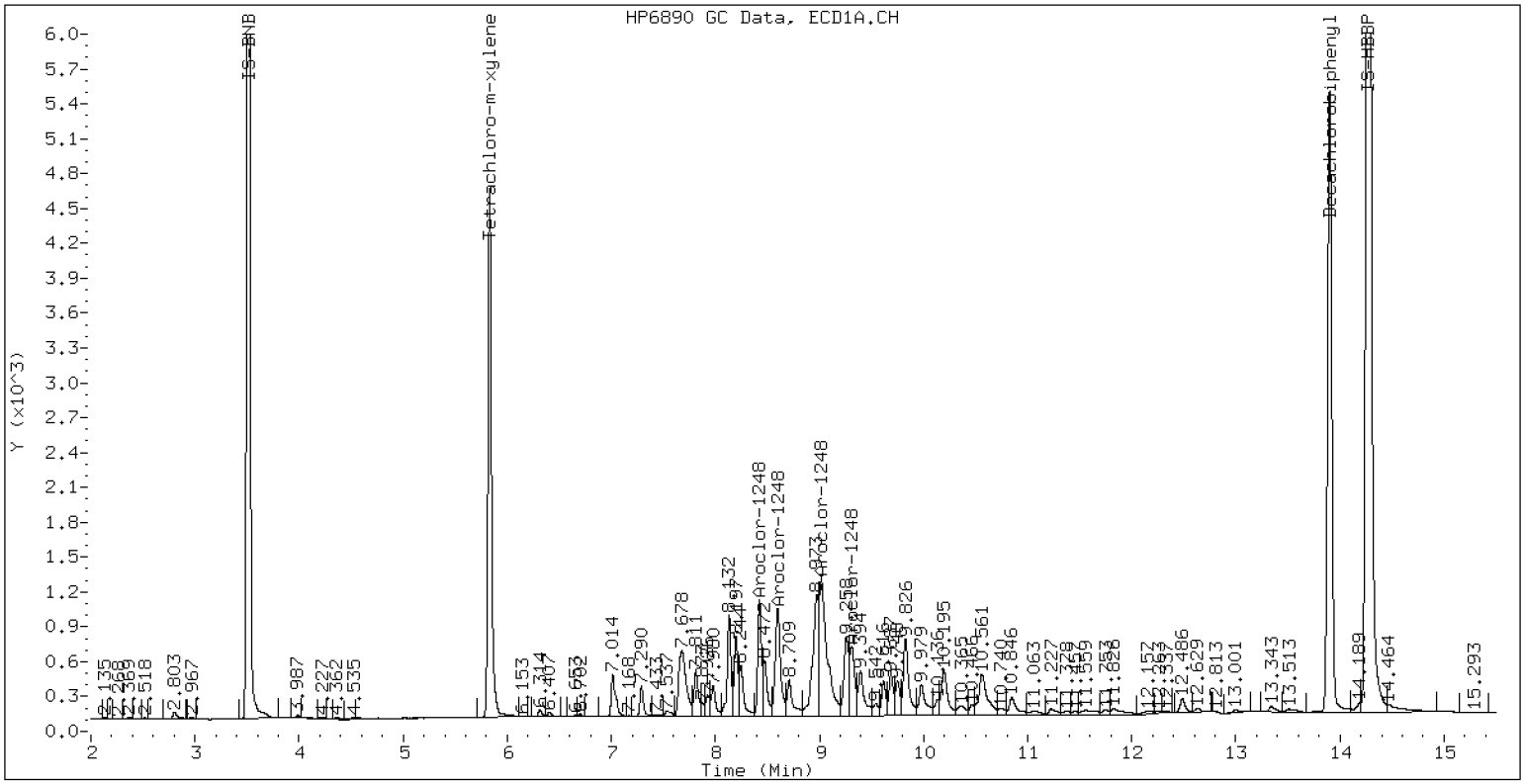
Total PCB Area Col2 (5.807 - 14.027) = 691493 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

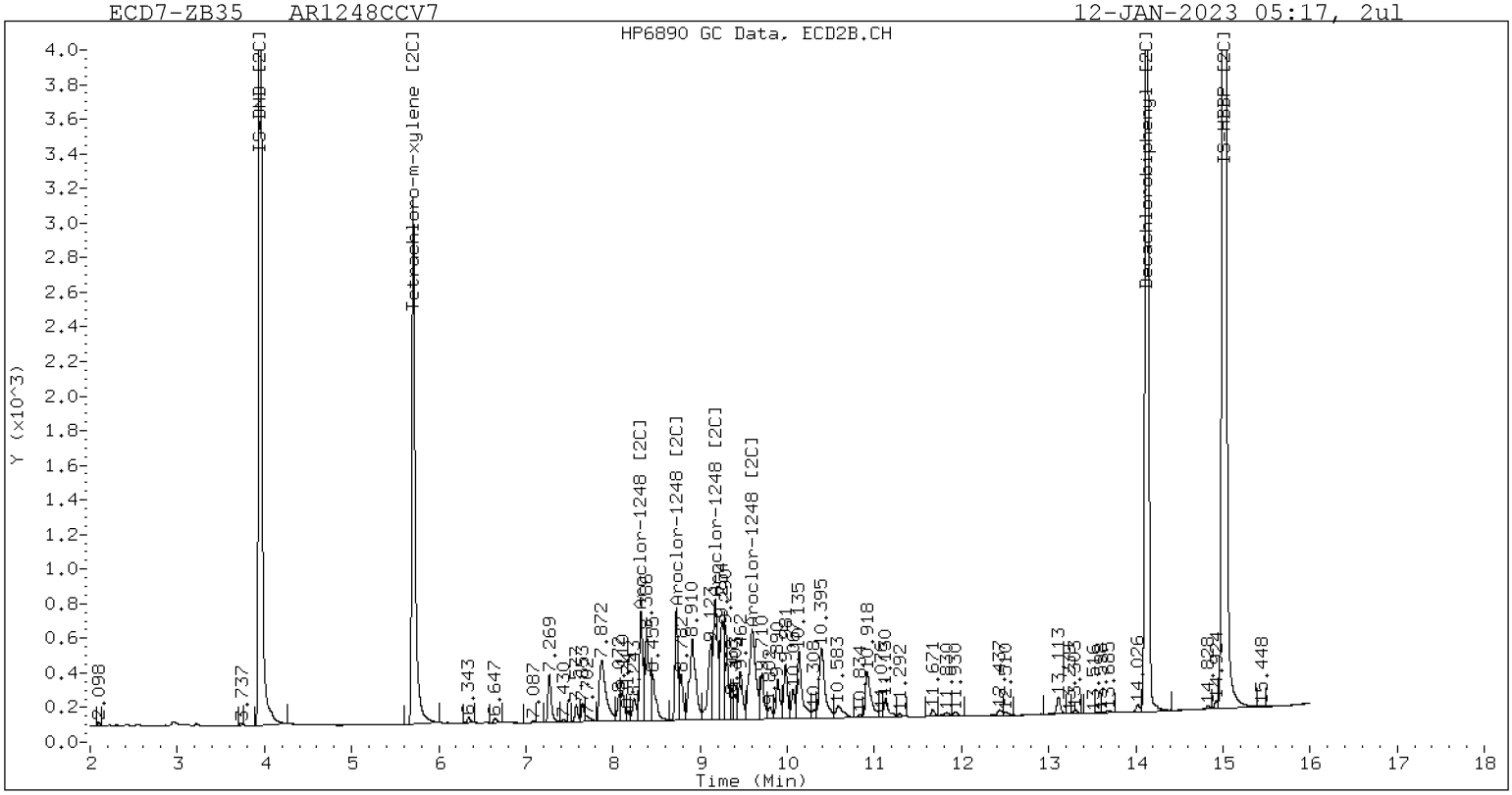
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 12-JAN-2023 05:17, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 12-JAN-2023 05:17, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112360ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/12/23 |
| Lab Sample ID: | SLA0136-CCV8 | Injection Time: | 05:38 |
| 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 | 284 | 0.0441939 | 0.0495915 | | 13.4 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 275 | 0.0266860 | 0.0293753 | | 10.0 | |
| Aroclor-1016 (2) | A | 250.00 | 273 | 0.0861572 | 0.0941452 | | 9.2 | |
| Aroclor-1016 (3) | A | 250.00 | 291 | 0.0390425 | 0.0454537 | | 16.4 | |
| Aroclor-1016 (4) | A | 250.00 | 295 | 0.0248899 | 0.0293920 | | 18.0 | |
| Aroclor 1016 [2C] | A | 250.00 | 257 | 0.0467310 | 0.0473682 | | 2.6 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 253 | 0.0409030 | 0.0413374 | | 1.2 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 250 | 0.0882154 | 0.0881882 | | 0.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 255 | 0.0378846 | 0.0386293 | | 2.0 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 268 | 0.0199212 | 0.0213178 | | 7.2 | |
| Aroclor 1260 | A | 250.00 | 288 | 0.0390342 | 0.0447861 | | 15.0 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 289 | 0.0291201 | 0.0336195 | | 15.6 | |
| Aroclor-1260 (2) | A | 250.00 | 292 | 0.0301181 | 0.0351303 | | 16.8 | |
| Aroclor-1260 (3) | A | 250.00 | 287 | 0.0791351 | 0.0909342 | | 14.8 | |
| Aroclor-1260 (4) | A | 250.00 | 280 | 0.0403003 | 0.0450953 | | 12.0 | |
| Aroclor-1260 (5) | A | 250.00 | 290 | 0.0164974 | 0.0191512 | | 16.0 | |
| Aroclor 1260 [2C] | A | 250.00 | 252 | 0.0617619 | 0.0616769 | | 0.9 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 253 | 0.0422283 | 0.0427318 | | 1.2 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 243 | 0.1059643 | 0.1030720 | | -2.8 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 260 | 0.0282173 | 0.0293841 | | 4.0 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 253 | 0.0706376 | 0.0715196 | | 1.2 | |
| Decachlorobiphenyl | A | 40.000 | 43.0 | 0.7333327 | 0.7888086 | | 7.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.9 | 1.1336710 | 1.1865730 | | 4.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.6 | 1.1358180 | 1.1826410 | | 4.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.5 | 1.0966080 | 1.1105490 | | 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: /230111.b/01112360ECD7.D
Data file 2: /230111.b/230111.b/01112360ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 12-JAN-2023 05:38
Report Date: 01/14/2023 13:22
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | 0.000 | 239298 | 5.707 | -0.000 | 173289 | 41.9 | 40.5 | 3.3 | Tetrachloro-m-xylene |
| 13.902 | -0.000 | 318937 | 14.128 | 0.001 | 306835 | 43.0 | 41.6 | 3.3 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 403343 | -9.9 |
| Hexabromobiphenyl | 798898 | 808655 | 1.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 312078 | 25.3 |
| Hexabromobiphenyl | 362541 | 518898 | 43.1 |

* 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 | 37026 | 275.2 | 1 | 7.270 | -0.001 | 40314 | 252.7 |
| Aroclor-1016 | 2 | 7.677 | -0.002 | 118665 | 273.2 | 2 | 7.870 | -0.000 | 86005 | 249.9 |
| Aroclor-1016 | 3 | 7.811 | -0.001 | 57292 | 291.1 | 3 | 8.070 | 0.000 | 37673 | 254.9 |
| Aroclor-1016 | 4 | 8.422 | -0.001 | 37047 | 295.2 | 4 | 8.240 | -0.001 | 20790 | 267.5 |

Total Col1Ave (4 peaks): 283.7 Total Col2Ave (4 peaks): 256.3 RPD = 10
Corrected Ave (3 peaks): 279.8 Corrected Ave (3 peaks): 252.5 RPD = 10

CalAmt %D: 13.5 CalAmt %D: 2.5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.056 | -0.001 | 84958 | 288.6 | 1 | 11.662 | 0.001 | 69292 | 253.0 |
| Aroclor-1260 | 2 | 11.372 | -0.002 | 88776 | 291.6 | 2 | 11.925 | -0.000 | 167137 | 243.2 |
| Aroclor-1260 | 3 | 11.745 | -0.002 | 229795 | 287.3 | 3 | 12.443 | -0.001 | 47648 | 260.3 |
| Aroclor-1260 | 4 | 12.151 | -0.003 | 113958 | 279.7 | 4 | 12.509 | -0.000 | 115973 | 253.1 |
| Aroclor-1260 | 5 | 12.254 | -0.002 | 48396 | 290.2 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 287.5 Total Col2Ave (4 peaks): 252.4 RPD = 13
Corrected Ave (4 peaks): 286.5 Corrected Ave (3 peaks): 249.8 RPD = 14

CalAmt %D: 15.0 CalAmt %D: 1.0

Total PCB Area Col1 (5.931 - 13.802) = 2414946 Col1 Total PCB = 0.6 ppm*

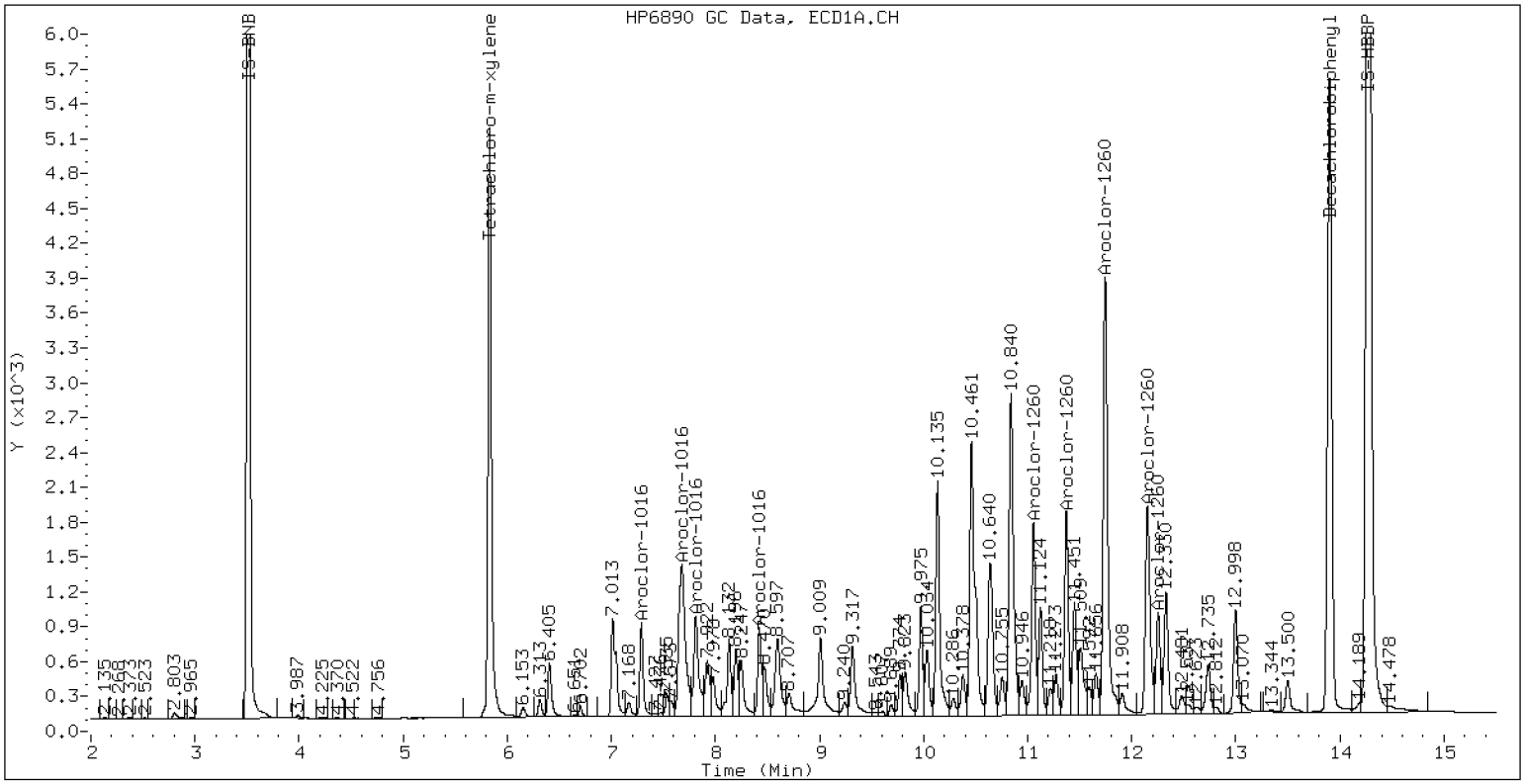
Total PCB Area Col2 (5.807 - 14.027) = 1636225 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

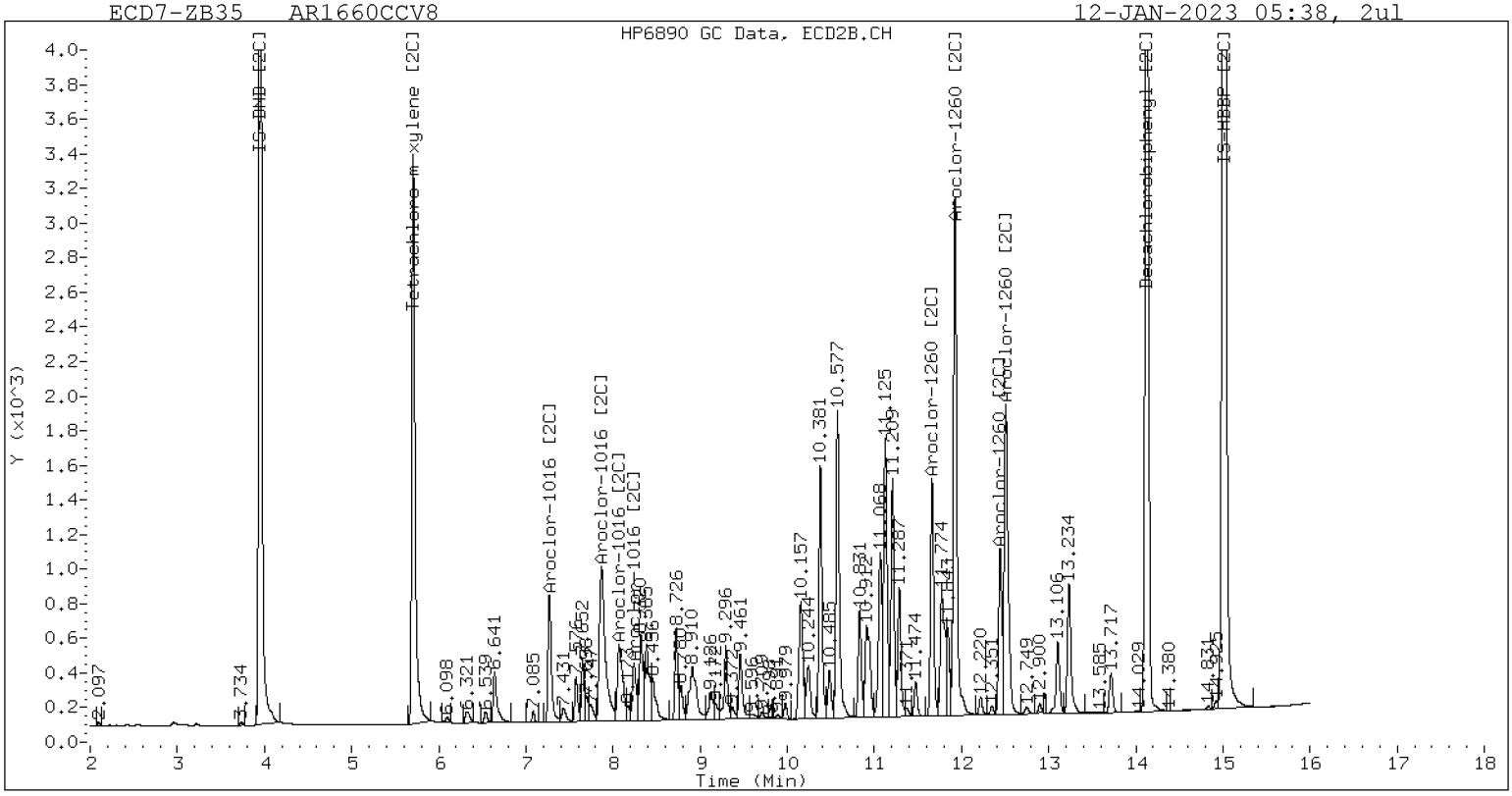
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 12-JAN-2023 05:38, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 12-JAN-2023 05:38, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112374ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/12/23 |
| Lab Sample ID: | SLA0136-CCV9 | Injection Time: | 10:33 |
| Sequence Name: | AR1242CCV9 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1242 | A | 250.00 | 287 | 0.0396000 | 0.0453334 | | 14.9 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 270 | | 0.0245075 | | | |
| Aroclor-1242 (2) | A | 250.00 | 266 | | 0.0765524 | | | |
| Aroclor-1242 (3) | A | 250.00 | 283 | | 0.0234507 | | | |
| Aroclor-1242 (4) | A | 250.00 | 330 | | 0.0568230 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 275 | 0.0391981 | 0.0422874 | | 9.8 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 257 | | 0.0347896 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 262 | | 0.0751991 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 286 | | 0.0265318 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 293 | | 0.0326292 | | | |
| Decachlorobiphenyl | A | 40.000 | 39.6 | 0.7333327 | 0.7263718 | | -1.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.8 | 1.1336710 | 1.1003940 | | -3.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 39.7 | 1.1358180 | 1.1270300 | | -0.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 38.2 | 1.0966080 | 1.0485860 | | -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: /230111.b/01112374ECD7.D
Data file 2: /230111.b/230111.b/01112374ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 12-JAN-2023 10:33
Report Date: 01/14/2023 13:23
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | 0.001 | 228898 | 5.709 | 0.001 | 166580 | 38.8 | 38.2 | 1.5 | Tetrachloro-m-xylene |
| 13.903 | 0.001 | 362587 | 14.128 | 0.001 | 346786 | 39.6 | 39.7 | 0.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 416029 | -7.1 |
| Hexabromobiphenyl | 798898 | 998351 | 25.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 317723 | 27.6 |
| Hexabromobiphenyl | 362541 | 615398 | 69.7 |

* 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# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 1 | 7.290 | -0.001 | 31862 | 270.2 | 1 | 7.272 | 0.000 | 34542 | 256.9 |
| Aroclor-1242 | 2 | 7.680 | -0.002 | 99525 | 265.8 | 2 | 7.873 | 0.000 | 74664 | 261.6 |
| Aroclor-1242 | 3 | 8.425 | -0.001 | 30488 | 283.0 | 3 | 9.179 | 0.000 | 26343 | 286.0 |
| Aroclor-1242 | 4 | 9.019 | 0.001 | 73875 | 330.3 | 4 | 9.605 | 0.000 | 32397 | 292.7 |

Total Col1Ave (4 peaks): 287.3 Total Col2Ave (4 peaks): 274.3 RPD = 5

Corrected Ave (3 peaks): 273.0 Corrected Ave (3 peaks): 268.2 RPD = 2

CalAmt %D: 14.9 CalAmt %D: 9.7

Total PCB Area Col1 (5.931 - 13.802) = 836025 Col1 Total PCB = 0.2 ppm*

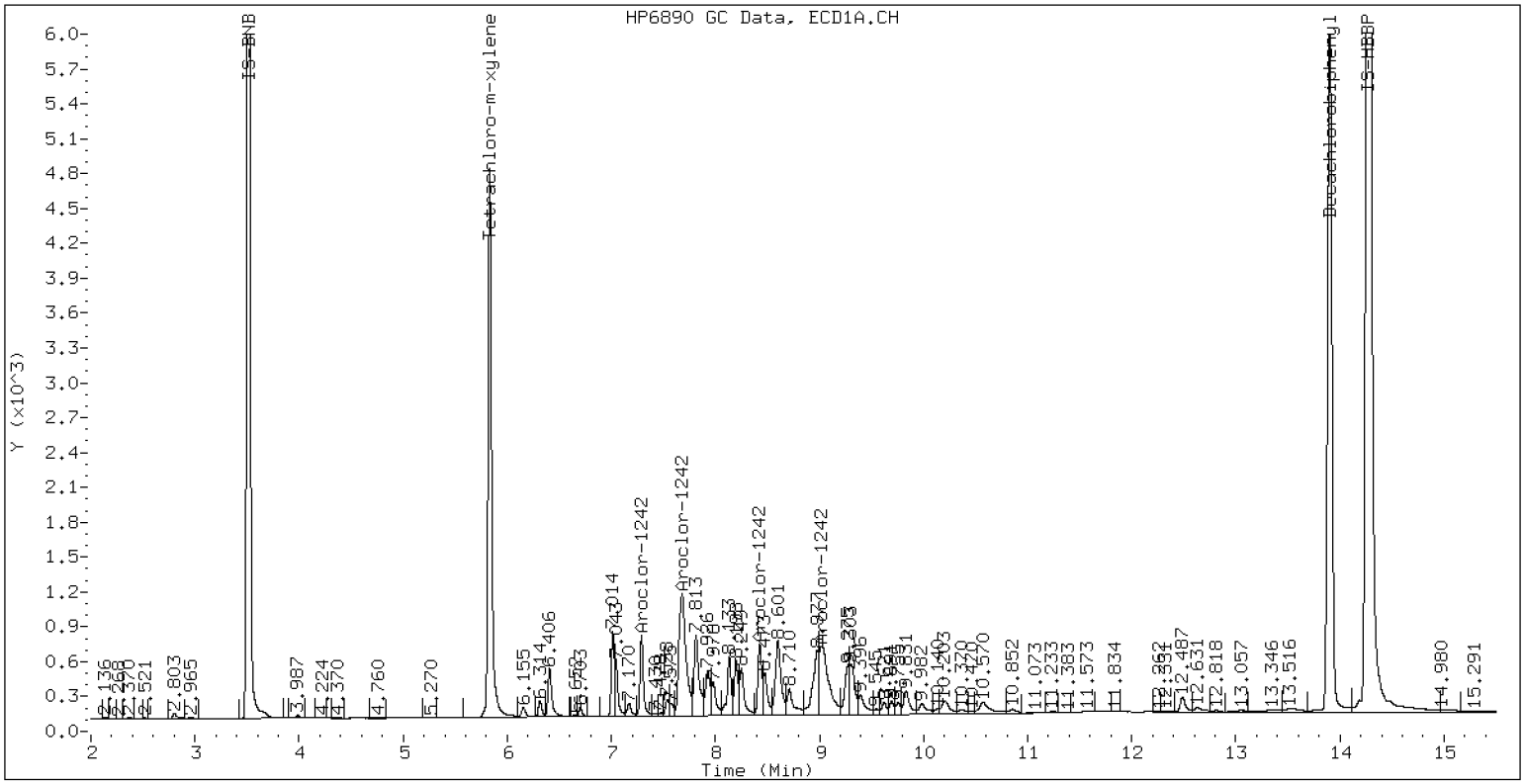
Total PCB Area Col2 (5.807 - 14.027) = 561180 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

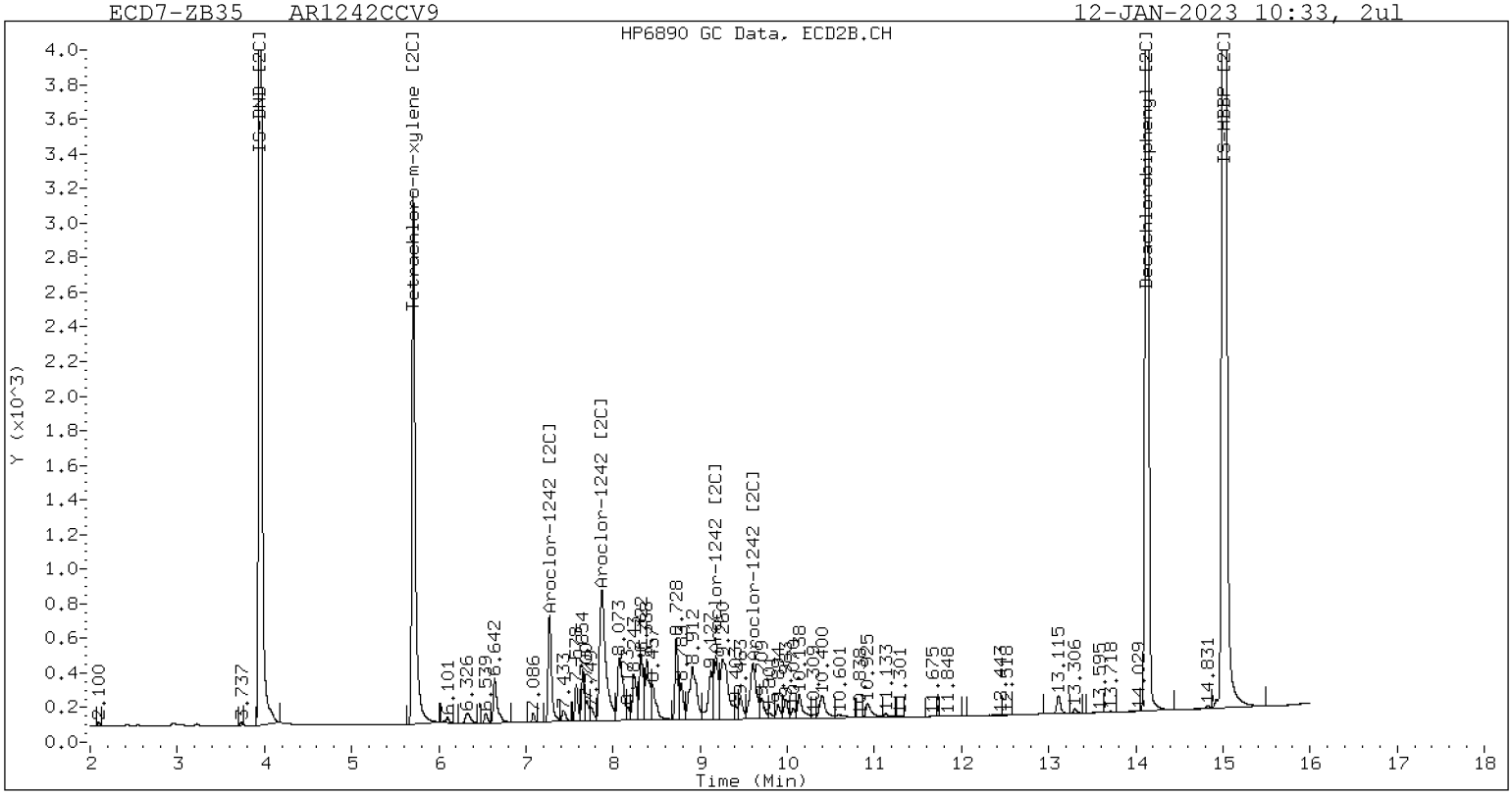
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 12-JAN-2023 10:33, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV9 12-JAN-2023 10:33, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01112375ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0136 | Injection Date: | 01/12/23 |
| Lab Sample ID: | SLA0136-CCVA | Injection Time: | 10:54 |
| Sequence Name: | AR1660CCVA | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1016 | A | 250.00 | 282 | 0.0441939 | 0.0492889 | | 12.9 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 272 | 0.0266860 | 0.0290696 | | 8.8 | |
| Aroclor-1016 (2) | A | 250.00 | 271 | 0.0861572 | 0.0933278 | | 8.4 | |
| Aroclor-1016 (3) | A | 250.00 | 290 | 0.0390425 | 0.0453148 | | 16.0 | |
| Aroclor-1016 (4) | A | 250.00 | 296 | 0.0248899 | 0.0294433 | | 18.4 | |
| Aroclor 1016 [2C] | A | 250.00 | 257 | 0.0467310 | 0.0475834 | | 2.9 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 252 | 0.0409030 | 0.0412267 | | 0.8 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 251 | 0.0882154 | 0.0886282 | | 0.4 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 257 | 0.0378846 | 0.0390081 | | 2.8 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 269 | 0.0199212 | 0.0214705 | | 7.6 | |
| Aroclor 1260 | A | 250.00 | 270 | 0.0390342 | 0.0420692 | | 7.8 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 266 | 0.0291201 | 0.0309902 | | 6.4 | |
| Aroclor-1260 (2) | A | 250.00 | 272 | 0.0301181 | 0.0328297 | | 8.8 | |
| Aroclor-1260 (3) | A | 250.00 | 271 | 0.0791351 | 0.0858990 | | 8.4 | |
| Aroclor-1260 (4) | A | 250.00 | 263 | 0.0403003 | 0.0423975 | | 5.2 | |
| Aroclor-1260 (5) | A | 250.00 | 276 | 0.0164974 | 0.0182296 | | 10.4 | |
| Aroclor 1260 [2C] | A | 250.00 | 229 | 0.0617619 | 0.0559215 | | -8.4 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 226 | 0.0422283 | 0.0382373 | | -9.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 219 | 0.1059643 | 0.0927219 | | -12.4 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 238 | 0.0282173 | 0.0268148 | | -4.8 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 233 | 0.0706376 | 0.0659118 | | -6.8 | |
| Decachlorobiphenyl | A | 40.000 | 42.3 | 0.7333327 | 0.7748461 | | 5.8 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.4 | 1.1336710 | 1.1742500 | | 3.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.1 | 1.1358180 | 1.1400580 | | 0.3 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.4 | 1.0966080 | 1.1063700 | | 1.0 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230111.b/01112375ECD7.D
Data file 2: /230111.b/230111.b/01112375ECD7.D
Method: \\target\share\chem4\ecd7.i\230111.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 12-JAN-2023 10:54
Report Date: 01/14/2023 13:23
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | 0.001 | 240777 | 5.707 | 0.000 | 173783 | 41.4 | 40.4 | 2.6 | Tetrachloro-m-xylene |
| 13.901 | -0.001 | 366983 | 14.127 | 0.000 | 344570 | 42.3 | 40.1 | 5.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 410095 | -8.4 |
| Hexabromobiphenyl | 798898 | 947241 | 18.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 314150 | 26.1 |
| Hexabromobiphenyl | 362541 | 604478 | 66.7 |

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

| Aroclor | Peak# | ZB5 Col RT | Shift | Area | Amount | Peak# | ZB35 Col RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | 1 | 7.289 | -0.000 | 37254 | 272.3 | 1 | 7.271 | 0.000 | 40473 | 252.0 |
| Aroclor-1016 | 2 | 7.677 | -0.002 | 119604 | 270.8 | 2 | 7.871 | 0.000 | 87008 | 251.2 |
| Aroclor-1016 | 3 | 7.812 | 0.000 | 58073 | 290.2 | 3 | 8.070 | 0.000 | 38295 | 257.4 |
| Aroclor-1016 | 4 | 8.423 | -0.000 | 37733 | 295.7 | 4 | 8.242 | 0.000 | 21078 | 269.4 |
| Total Col1Ave (4 peaks): | | | | 282.3 | | Total Col2Ave (4 peaks): | | | 257.5 | RPD = 9 |
| Corrected Ave (3 peaks): | | | | 277.8 | | Corrected Ave (3 peaks): | | | 253.5 | RPD = 9 |
| CalAmt %D: | | | | 12.9 | | CalAmt %D: | | | 3.0 | |
| Aroclor-1260 | 1 | 11.055 | -0.002 | 91735 | 266.1 | 1 | 11.662 | 0.000 | 72230 | 226.4 |
| Aroclor-1260 | 2 | 11.372 | -0.001 | 97180 | 272.5 | 2 | 11.925 | 0.000 | 175151 | 218.8 |
| Aroclor-1260 | 3 | 11.746 | -0.001 | 254272 | 271.4 | 3 | 12.445 | 0.000 | 50653 | 237.6 |
| Aroclor-1260 | 4 | 12.152 | -0.001 | 125502 | 263.0 | 4 | 12.509 | 0.000 | 124507 | 233.3 |
| Aroclor-1260 | 5 | 12.255 | -0.001 | 53962 | 276.3 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 269.8 | | Total Col2Ave (4 peaks): | | | 229.0 | RPD = 16 |
| Corrected Ave (4 peaks): | | | | 268.2 | | Corrected Ave (3 peaks): | | | 226.1 | RPD = 17 |
| CalAmt %D: | | | | 7.9 | | CalAmt %D: | | | -8.4 | |

Total PCB Area Col1 (5.931 - 13.802) = 2565415 Col1 Total PCB = 0.7 ppm*

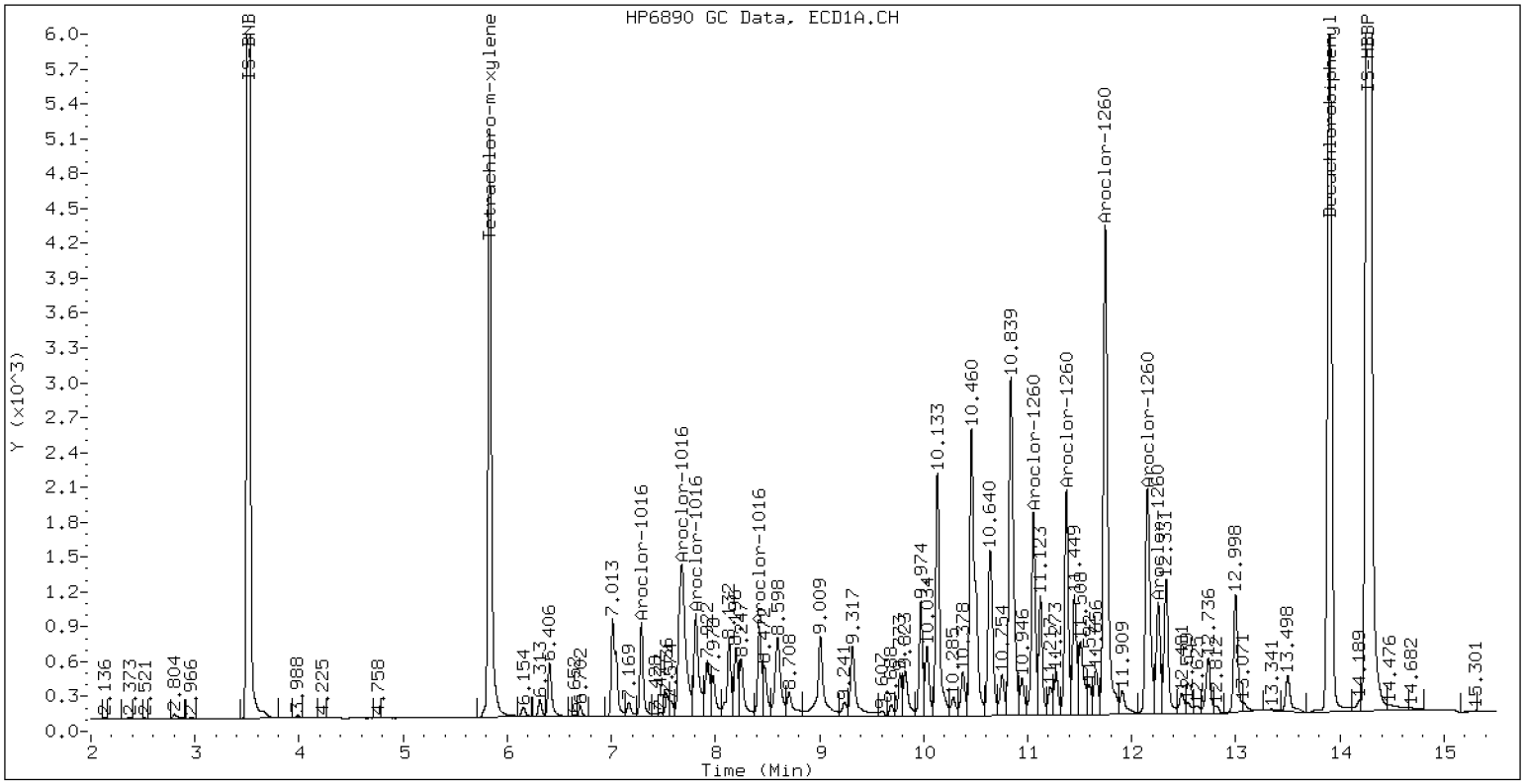
Total PCB Area Col2 (5.807 - 14.027) = 1703605 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

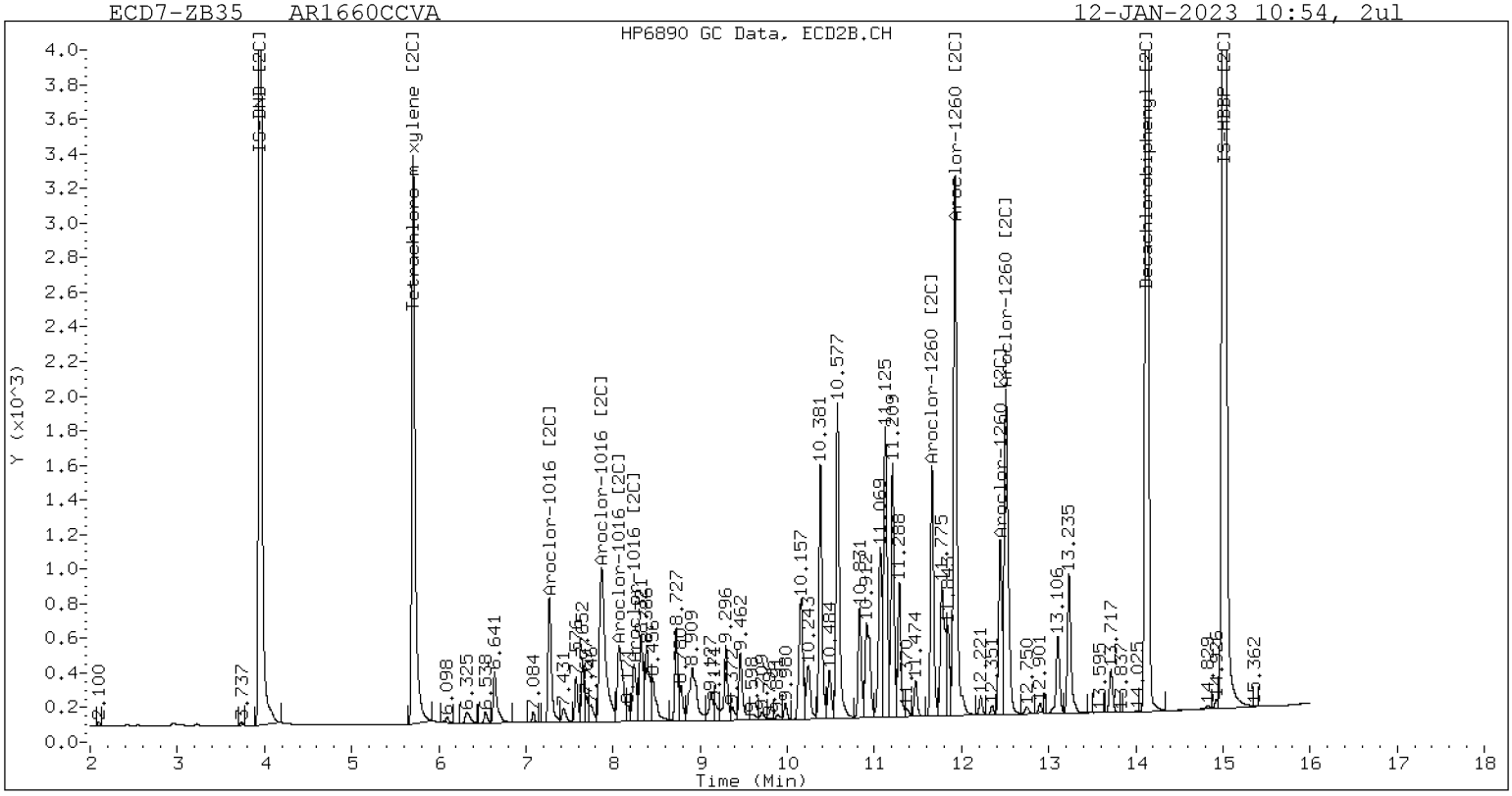
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 12-JAN-2023 10:54, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA 12-JAN-2023 10:54, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102319ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0156-CCV1 | Injection Time: | 22:48 |
| Sequence Name: | AR1248CCV1 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1248 | A | 250.00 | 244 | 0.0490062 | 0.0492313 | | -2.4 | +/-20 |
| Aroclor-1248 (1) | A | 250.00 | 245 | | 0.0336680 | | | |
| Aroclor-1248 (2) | A | 250.00 | 258 | | 0.0453224 | | | |
| Aroclor-1248 (3) | A | 250.00 | 277 | | 0.0875868 | | | |
| Aroclor-1248 (4) | A | 250.00 | 196 | | 0.0303481 | | | |
| Aroclor 1248 [2C] | A | 250.00 | 240 | 0.0394876 | 0.0379647 | | -4.2 | +/-20 |
| Aroclor-1248 (1) [2C] | A | 250.00 | 245 | | 0.0320495 | | | |
| Aroclor-1248 (2) [2C] | A | 250.00 | 216 | | 0.0296314 | | | |
| Aroclor-1248 (3) [2C] | A | 250.00 | 254 | | 0.0423991 | | | |
| Aroclor-1248 (4) [2C] | A | 250.00 | 243 | | 0.0477786 | | | |
| Decachlorobiphenyl | A | 40.000 | 41.1 | 0.7333327 | 0.7530315 | | 2.8 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 36.3 | 1.1336710 | 1.0295130 | | -9.3 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 40.2 | 1.1358180 | 1.1417190 | | 0.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 36.1 | 1.0966080 | 0.9908177 | | -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: /230110.b/01102319ECD7.D
Data file 2: /230110.b/230110.b/01102319ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 10-JAN-2023 22:48
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 205012 | 5.709 | 0.002 | 151445 | 36.3 | 36.1 | 0.5 | Tetrachloro-m-xylene |
| 13.901 | -0.006 | 167920 | 14.126 | -0.002 | 191331 | 41.1 | 40.2 | 2.1 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 398270 | -11.0 |
| Hexabromobiphenyl | 798898 | 445984 | -44.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 305697 | 22.7 |
| Hexabromobiphenyl | 362541 | 335163 | -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# | ZB5 Col RT | Shift | Area | Amount | Peak# | ZB35 Col RT | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1248 | 1 | 8.423 | -0.004 | 41903 | 244.7 | 1 | 8.321 | 0.000 | 30617 | 245.2 |
| Aroclor-1248 | 2 | 8.599 | -0.005 | 56408 | 258.0 | 2 | 8.728 | 0.000 | 28307 | 215.5 |
| Aroclor-1248 | 3 | 9.017 | -0.006 | 109010 | 277.2 | 3 | 9.175 | 0.000 | 40504 | 253.5 |
| Aroclor-1248 | 4 | 9.308 | -0.003 | 37771 | 196.0 | 4 | 9.596 | 0.000 | 45643 | 243.4 |

Total Col1Ave (4 peaks): 244.0 Total Col2Ave (4 peaks): 239.4 RPD = 2

Corrected Ave (3 peaks): 232.9 Corrected Ave (3 peaks): 234.7 RPD = 1

CalAmt %D: -2.4 CalAmt %D: -4.2

Total PCB Area Col1 (5.936 - 13.808) = 837239 Col1 Total PCB = 0.2 ppm*

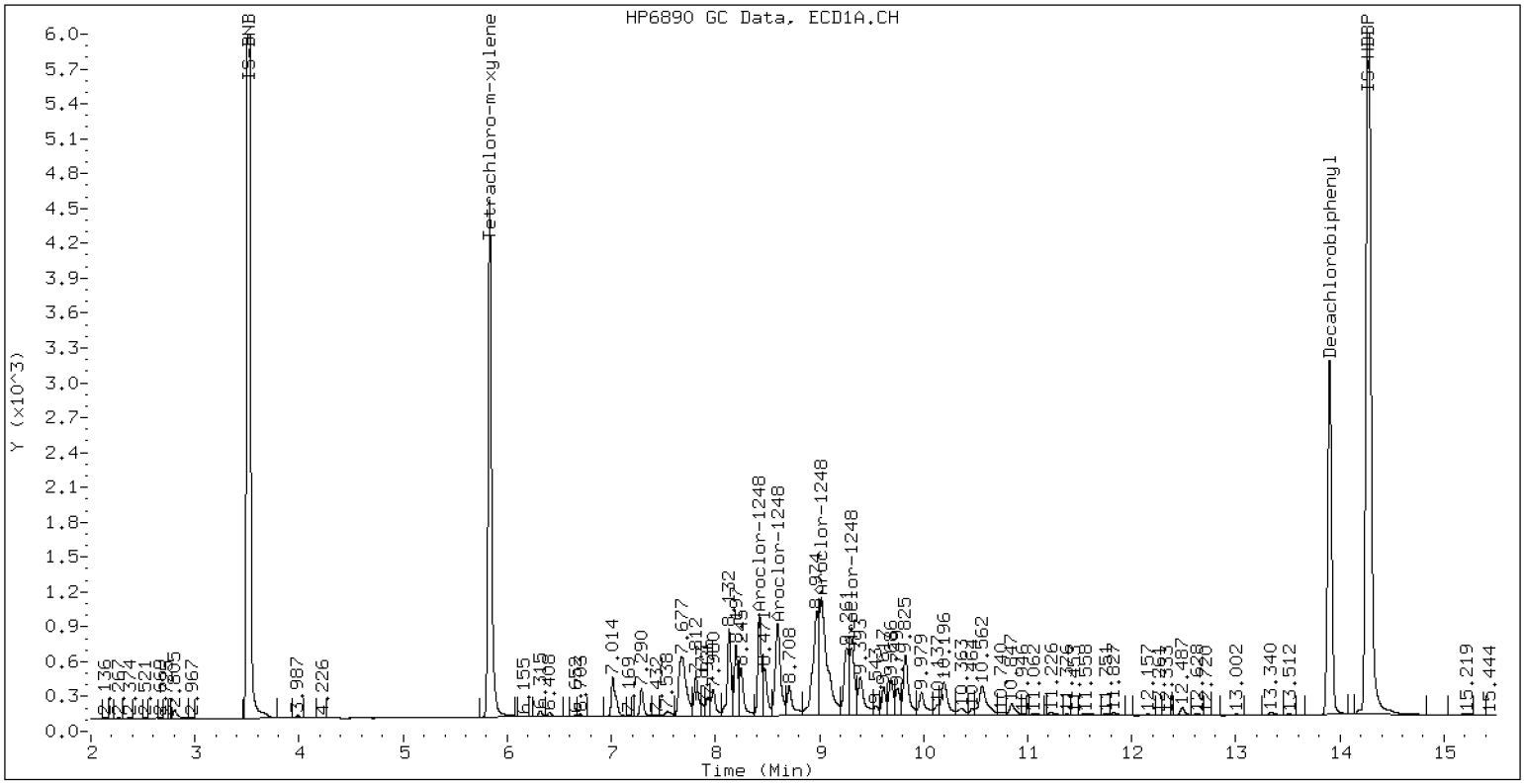
Total PCB Area Col2 (5.807 - 14.028) = 591657 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

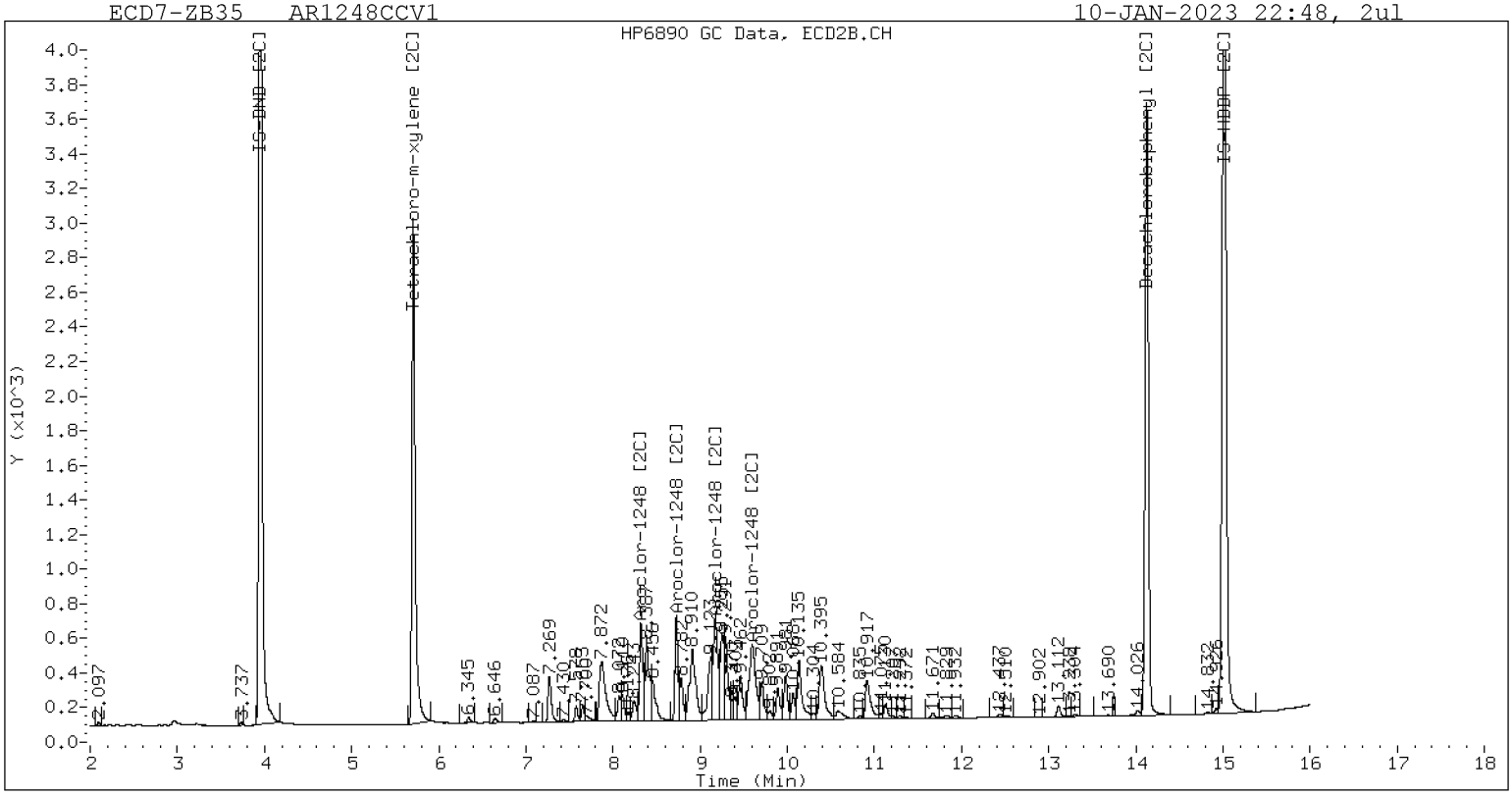
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 10-JAN-2023 22:48, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 10-JAN-2023 22:48, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102320ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/10/23 |
| Lab Sample ID: | SLA0156-CCV2 | Injection Time: | 23:09 |
| 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 | 273 | 0.0441939 | 0.0479325 | | 9.2 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 269 | 0.0266860 | 0.0286960 | | 7.6 | |
| Aroclor-1016 (2) | A | 250.00 | 265 | 0.0861572 | 0.0914562 | | 6.0 | |
| Aroclor-1016 (3) | A | 250.00 | 283 | 0.0390425 | 0.0441959 | | 13.2 | |
| Aroclor-1016 (4) | A | 250.00 | 275 | 0.0248899 | 0.0273817 | | 10.0 | |
| Aroclor 1016 [2C] | A | 250.00 | 248 | 0.0467310 | 0.0459982 | | -0.9 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 245 | 0.0409030 | 0.0400316 | | -2.0 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 245 | 0.0882154 | 0.0864483 | | -2.0 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 245 | 0.0378846 | 0.0370977 | | -2.0 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 256 | 0.0199212 | 0.0204152 | | 2.4 | |
| Aroclor 1260 | A | 250.00 | 352 | 0.0390342 | 0.0548035 | | 40.9 | +/-20 * |
| Aroclor-1260 (1) | A | 250.00 | 378 | 0.0291201 | 0.0439837 | | 51.2 | |
| Aroclor-1260 (2) | A | 250.00 | 370 | 0.0301181 | 0.0445437 | | 48.0 | |
| Aroclor-1260 (3) | A | 250.00 | 349 | 0.0791351 | 0.1104764 | | 39.6 | |
| Aroclor-1260 (4) | A | 250.00 | 327 | 0.0403003 | 0.0527540 | | 30.8 | |
| Aroclor-1260 (5) | A | 250.00 | 337 | 0.0164974 | 0.0222599 | | 34.8 | |
| Aroclor 1260 [2C] | A | 250.00 | 296 | 0.0617619 | 0.0730583 | | 18.2 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 289 | 0.0422283 | 0.0488392 | | 15.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 295 | 0.1059643 | 0.1251618 | | 18.0 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 300 | 0.0282173 | 0.0338724 | | 20.0 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 298 | 0.0706376 | 0.0843596 | | 19.2 | |
| Decachlorobiphenyl | A | 40.000 | 44.2 | 0.7333327 | 0.8110180 | | 10.5 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.3 | 1.1336710 | 1.1717280 | | 3.3 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.3 | 1.1358180 | 1.2009670 | | 5.8 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 39.5 | 1.0966080 | 1.0829010 | | -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: /230110.b/01102320ECD7.D
Data file 2: /230110.b/230110.b/01102320ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 10-JAN-2023 23:09
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.832 | -0.004 | 230524 | 5.708 | 0.001 | 163112 | 41.3 | 39.5 | 4.6 | Tetrachloro-m-xylene |
| 13.902 | -0.006 | 212052 | 14.128 | 0.000 | 225628 | 44.2 | 42.3 | 4.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 393477 | -12.1 |
| Hexabromobiphenyl | 798898 | 522928 | -34.5 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 301250 | 20.9 |
| Hexabromobiphenyl | 362541 | 375744 | 3.6 |

* 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 | 7.290 | -0.005 | 35285 | 268.8 | 1 | 7.271 | -0.000 | 37686 | 244.7 |
| Aroclor-1016 | 2 | 7.677 | -0.007 | 112456 | 265.4 | 2 | 7.872 | 0.000 | 81383 | 245.0 |
| Aroclor-1016 | 3 | 7.812 | -0.006 | 54344 | 283.0 | 3 | 8.070 | -0.001 | 34924 | 244.8 |
| Aroclor-1016 | 4 | 8.423 | -0.006 | 33669 | 275.0 | 4 | 8.241 | -0.000 | 19219 | 256.2 |

Total Col1Ave (4 peaks): 273.1 Total Col2Ave (4 peaks): 247.7 RPD = 10
Corrected Ave (3 peaks): 269.7 Corrected Ave (3 peaks): 244.8 RPD = 10

CalAmt %D: 9.2 CalAmt %D: -0.9

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.057 | -0.005 | 71876 | 377.6 | 1 | 11.663 | 0.001 | 57347 | 289.1 |
| Aroclor-1260 | 2 | 11.374 | -0.004 | 72791 | 369.7 | 2 | 11.926 | 0.000 | 146965 | 295.3 |
| Aroclor-1260 | 3 | 11.747 | -0.004 | 180535 | 349.0 | 3 | 12.444 | -0.000 | 39773 | 300.1 |
| Aroclor-1260 | 4 | 12.150 | -0.008 | 86208 | 327.3 | 4 | 12.510 | -0.001 | 99055 | 298.6 |
| Aroclor-1260 | 5 | 12.254 | -0.007 | 36376 | 337.3 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 352.2 Total Col2Ave (4 peaks): 295.8 RPD = 17
Corrected Ave (4 peaks): 345.8 Corrected Ave (3 peaks): 294.3 RPD = 16

CalAmt %D: 40.9 CalAmt %D: 18.3

Total PCB Area Col1 (5.936 - 13.808) = 2058958 Col1 Total PCB = 0.5 ppm*

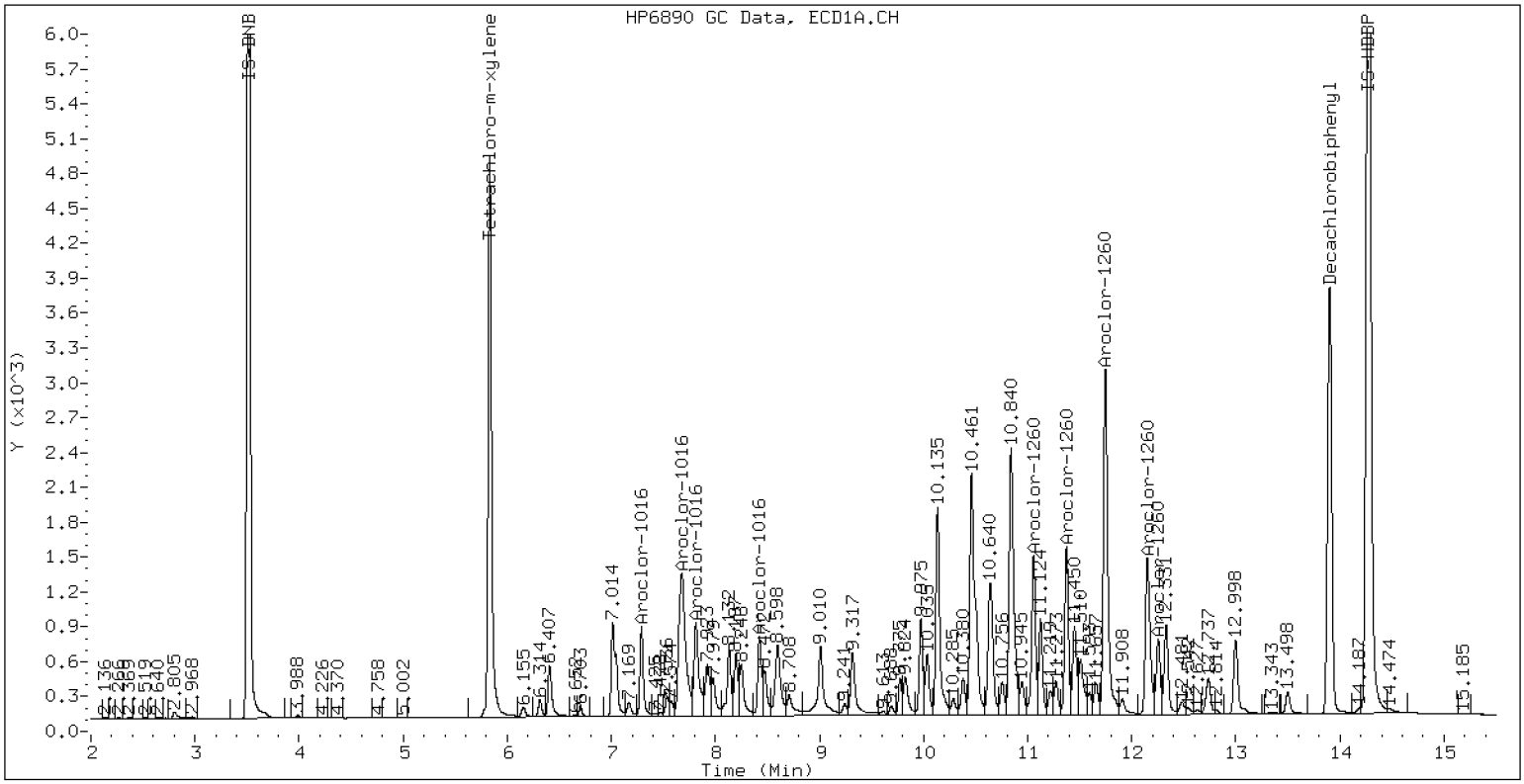
Total PCB Area Col2 (5.807 - 14.028) = 1422390 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

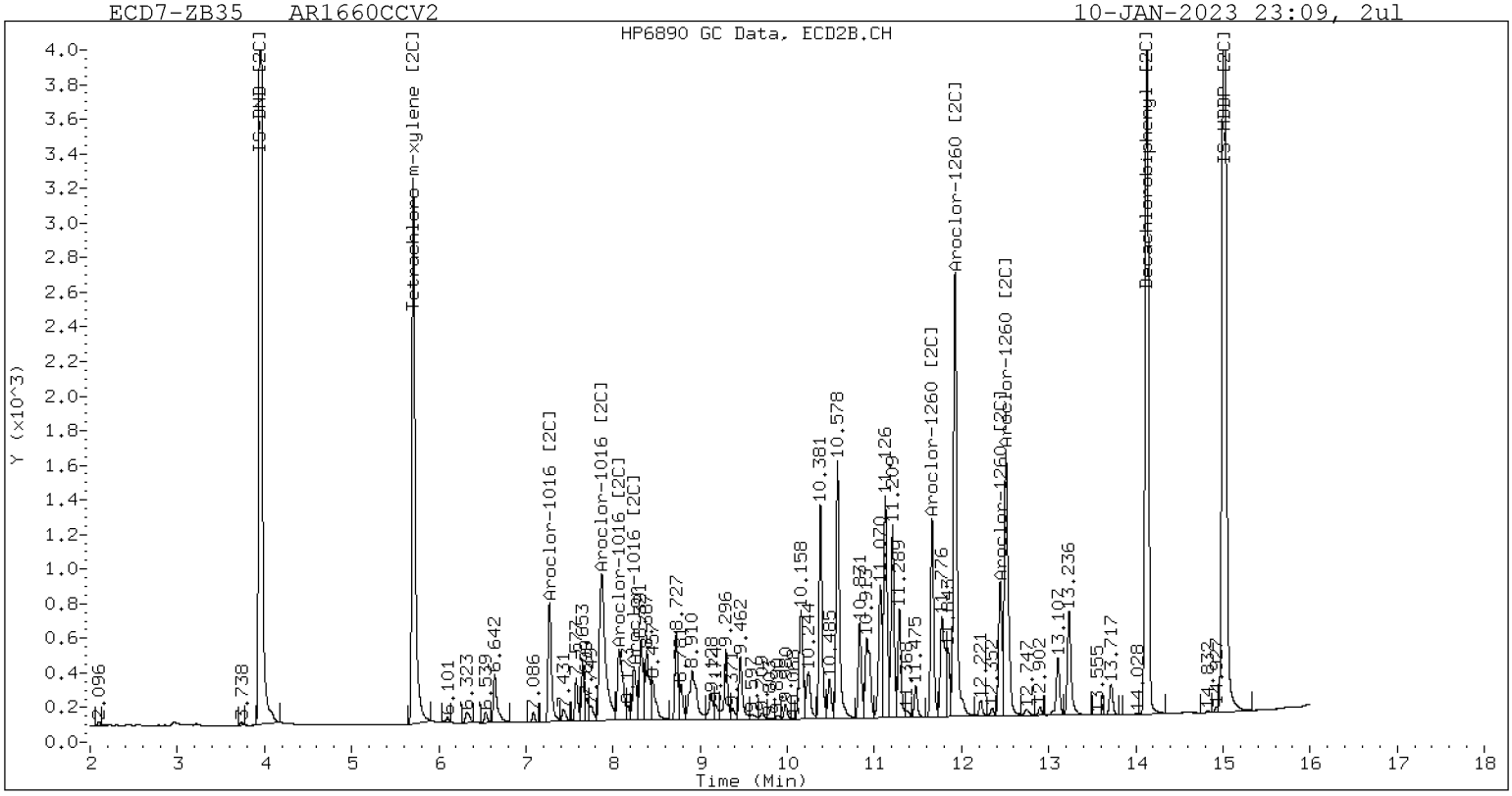
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 10-JAN-2023 23:09, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 10-JAN-2023 23:09, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102325ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0156-CCV3 | Injection Time: | 00:55 |
| 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 | 283 | 0.0396000 | 0.0447444 | | 13.3 | +/-20 |
| Aroclor-1242 (1) | A | 250.00 | 268 | | 0.0243237 | | | |
| Aroclor-1242 (2) | A | 250.00 | 262 | | 0.0755834 | | | |
| Aroclor-1242 (3) | A | 250.00 | 277 | | 0.0229195 | | | |
| Aroclor-1242 (4) | A | 250.00 | 326 | | 0.0561510 | | | |
| Aroclor 1242 [2C] | A | 250.00 | 271 | 0.0391981 | 0.0420340 | | 8.5 | +/-20 |
| Aroclor-1242 (1) [2C] | A | 250.00 | 258 | | 0.0349188 | | | |
| Aroclor-1242 (2) [2C] | A | 250.00 | 263 | | 0.0755291 | | | |
| Aroclor-1242 (3) [2C] | A | 250.00 | 281 | | 0.0261083 | | | |
| Aroclor-1242 (4) [2C] | A | 250.00 | 283 | | 0.0315798 | | | |
| Decachlorobiphenyl | A | 40.000 | 42.5 | 0.7333327 | 0.7788057 | | 6.3 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.6 | 1.1336710 | 1.0948260 | | -3.5 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 43.6 | 1.1358180 | 1.2367640 | | 9.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.7 | 1.0966080 | 1.0338940 | | -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: /230110.b/01102325ECD7.D
Data file 2: /230110.b/230110.b/01102325ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 11-JAN-2023 00:55
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 228921 | 5.708 | 0.000 | 163837 | 38.6 | 37.7 | 2.4 | Tetrachloro-m-xylene |
| 13.902 | -0.005 | 278020 | 14.128 | 0.000 | 282054 | 42.5 | 43.6 | 2.5 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 418187 | -6.6 |
| Hexabromobiphenyl | 798898 | 713965 | -10.6 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 316932 | 27.2 |
| Hexabromobiphenyl | 362541 | 456116 | 25.8 |

* 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# | RT (ZB35 Col) | Shift | Area | Amount |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 1 | 7.290 | -0.005 | 31787 | 268.2 | 1 | 7.270 | 0.000 | 34584 | 257.8 |
| Aroclor-1242 | 2 | 7.680 | -0.005 | 98775 | 262.5 | 2 | 7.873 | 0.000 | 74805 | 262.7 |
| Aroclor-1242 | 3 | 8.424 | -0.005 | 29952 | 276.6 | 3 | 9.177 | 0.000 | 25858 | 281.5 |
| Aroclor-1242 | 4 | 9.026 | -0.005 | 73380 | 326.4 | 4 | 9.605 | 0.000 | 31277 | 283.3 |

Total Col1Ave (4 peaks): 283.4 Total Col2Ave (4 peaks): 271.3 RPD = 4

Corrected Ave (3 peaks): 269.1 Corrected Ave (3 peaks): 267.3 RPD = 1

CalAmt %D: 13.4 CalAmt %D: 8.5

Total PCB Area Col1 (5.936 - 13.808) = 819453 Col1 Total PCB = 0.2 ppm*

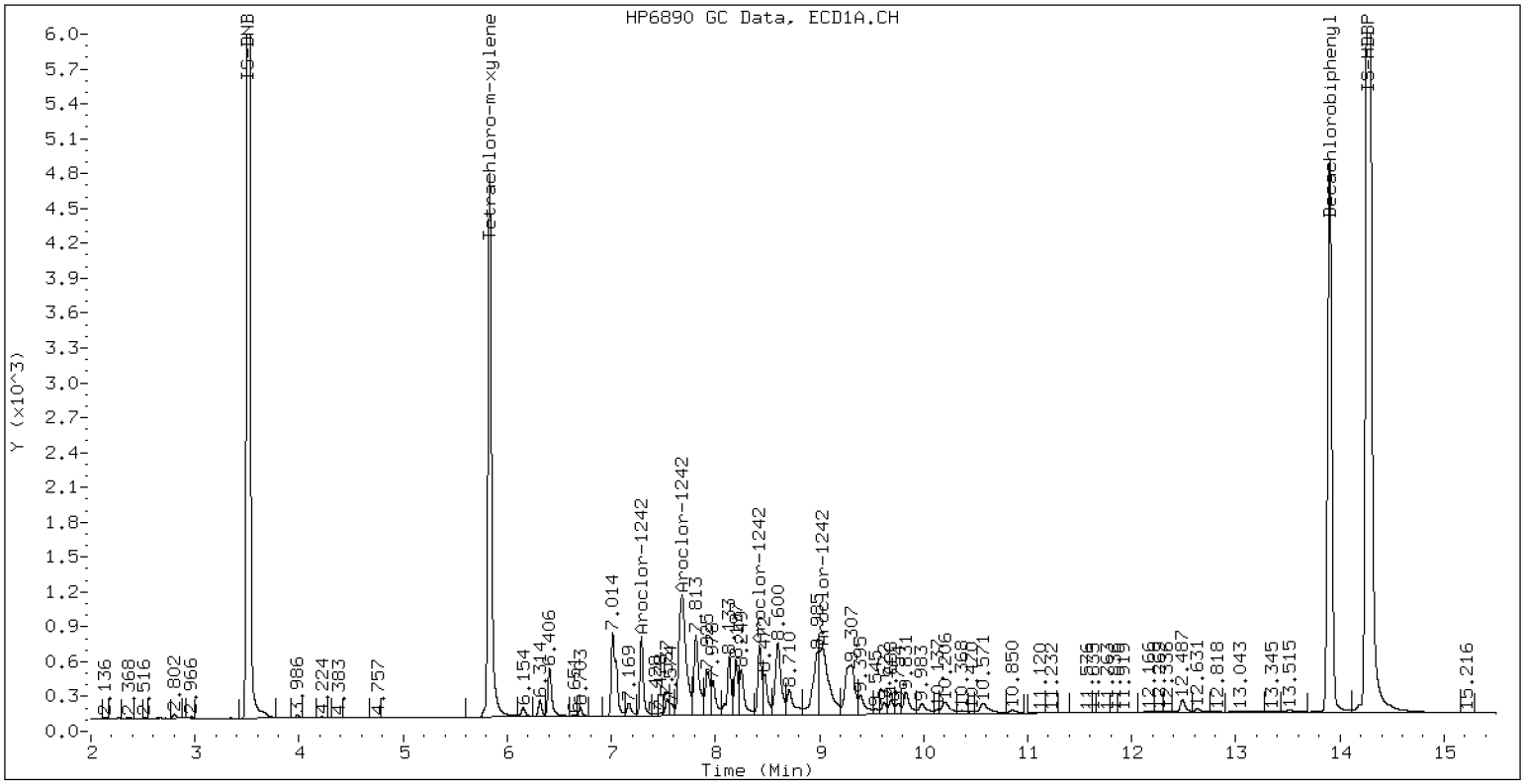
Total PCB Area Col2 (5.807 - 14.028) = 555237 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

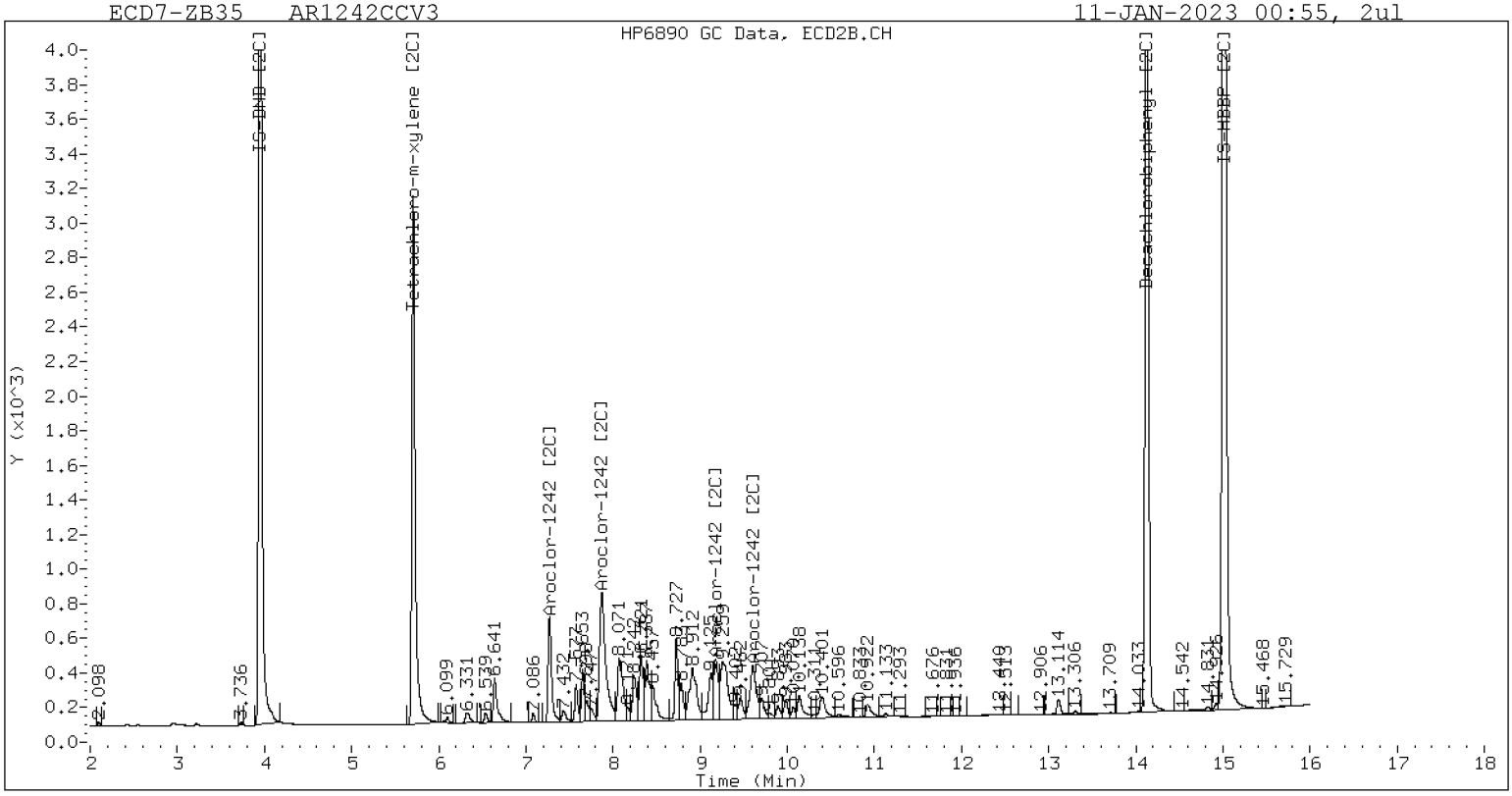
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 11-JAN-2023 00:55, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 11-JAN-2023 00:55, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102326ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0156-CCV4 | Injection Time: | 01:16 |
| Sequence Name: | AR1660CCV4 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1016 | A | 250.00 | 277 | 0.0441939 | 0.0485218 | | 10.9 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 272 | 0.0266860 | 0.0290422 | | 8.8 | |
| Aroclor-1016 (2) | A | 250.00 | 267 | 0.0861572 | 0.0919755 | | 6.8 | |
| Aroclor-1016 (3) | A | 250.00 | 287 | 0.0390425 | 0.0448665 | | 14.8 | |
| Aroclor-1016 (4) | A | 250.00 | 283 | 0.0248899 | 0.0282031 | | 13.2 | |
| Aroclor 1016 [2C] | A | 250.00 | 249 | 0.0467310 | 0.0463255 | | -0.4 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 248 | 0.0409030 | 0.0405816 | | -0.8 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 246 | 0.0882154 | 0.0868903 | | -1.6 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 247 | 0.0378846 | 0.0374785 | | -1.2 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 255 | 0.0199212 | 0.0203518 | | 2.0 | |
| Aroclor 1260 | A | 250.00 | 305 | 0.0390342 | 0.0473274 | | 22.1 | +/-20 * |
| Aroclor-1260 (1) | A | 250.00 | 297 | 0.0291201 | 0.0346338 | | 18.8 | |
| Aroclor-1260 (2) | A | 250.00 | 300 | 0.0301181 | 0.0361745 | | 20.0 | |
| Aroclor-1260 (3) | A | 250.00 | 302 | 0.0791351 | 0.0955035 | | 20.8 | |
| Aroclor-1260 (4) | A | 250.00 | 304 | 0.0403003 | 0.0490207 | | 21.6 | |
| Aroclor-1260 (5) | A | 250.00 | 323 | 0.0164974 | 0.0213042 | | 29.2 | |
| Aroclor 1260 [2C] | A | 250.00 | 273 | 0.0617619 | 0.0674260 | | 9.0 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 268 | 0.0422283 | 0.0452863 | | 7.2 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 272 | 0.1059643 | 0.1151554 | | 8.8 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 273 | 0.0282173 | 0.0308621 | | 9.2 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 277 | 0.0706376 | 0.0784002 | | 10.8 | |
| Decachlorobiphenyl | A | 40.000 | 45.1 | 0.7333327 | 0.8276837 | | 12.8 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.9 | 1.1336710 | 1.1869320 | | 4.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 42.4 | 1.1358180 | 1.2046300 | | 6.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 40.1 | 1.0966080 | 1.1006010 | | 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: /230110.b/01102326ECD7.D
Data file 2: /230110.b/230110.b/01102326ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 11-JAN-2023 01:16
Report Date: 01/13/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | ZB5 Col Shift | ZB5 Col Response | ZB35 Col RT | ZB35 Col Shift | ZB35 Col Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.833 | -0.003 | 238990 | 5.709 | 0.002 | 167298 | 41.9 | 40.1 | 4.2 | Tetrachloro-m-xylene |
| 13.902 | -0.005 | 299977 | 14.128 | -0.000 | 278431 | 45.1 | 42.4 | 6.2 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 402702 | -10.0 |
| Hexabromobiphenyl | 798898 | 724859 | -9.3 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 304012 | 22.0 |
| Hexabromobiphenyl | 362541 | 462268 | 27.5 |

* 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 | 7.290 | -0.005 | 36548 | 272.1 | 1 | 7.272 | 0.000 | 38554 | 248.0 |
| Aroclor-1016 | 2 | 7.679 | -0.006 | 115746 | 266.9 | 2 | 7.872 | 0.000 | 82549 | 246.2 |
| Aroclor-1016 | 3 | 7.813 | -0.004 | 56462 | 287.3 | 3 | 8.071 | 0.000 | 35606 | 247.3 |
| Aroclor-1016 | 4 | 8.424 | -0.006 | 35492 | 283.3 | 4 | 8.242 | 0.001 | 19335 | 255.4 |

Total Col1Ave (4 peaks): 277.4 Total Col2Ave (4 peaks): 249.3 RPD = 11
Corrected Ave (3 peaks): 274.1 Corrected Ave (3 peaks): 247.2 RPD = 10

CalAmt %D: 11.0 CalAmt %D: -0.3

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1260 | 1 | 11.058 | -0.004 | 78452 | 297.3 | 1 | 11.662 | -0.000 | 65420 | 268.1 |
| Aroclor-1260 | 2 | 11.374 | -0.004 | 81942 | 300.3 | 2 | 11.926 | -0.000 | 166352 | 271.7 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 216333 | 301.7 | 3 | 12.444 | 0.000 | 44583 | 273.4 |
| Aroclor-1260 | 4 | 12.152 | -0.007 | 111041 | 304.1 | 4 | 12.510 | -0.000 | 113256 | 277.5 |
| Aroclor-1260 | 5 | 12.256 | -0.005 | 48258 | 322.8 | NS | --- | | | ---- |

Total Col1Ave (5 peaks): 305.3 Total Col2Ave (4 peaks): 272.7 RPD = 11
Corrected Ave (4 peaks): 300.9 Corrected Ave (3 peaks): 271.1 RPD = 10

CalAmt %D: 22.1 CalAmt %D: 9.1

Total PCB Area Col1 (5.936 - 13.808) = 2307866 Col1 Total PCB = 0.6 ppm*

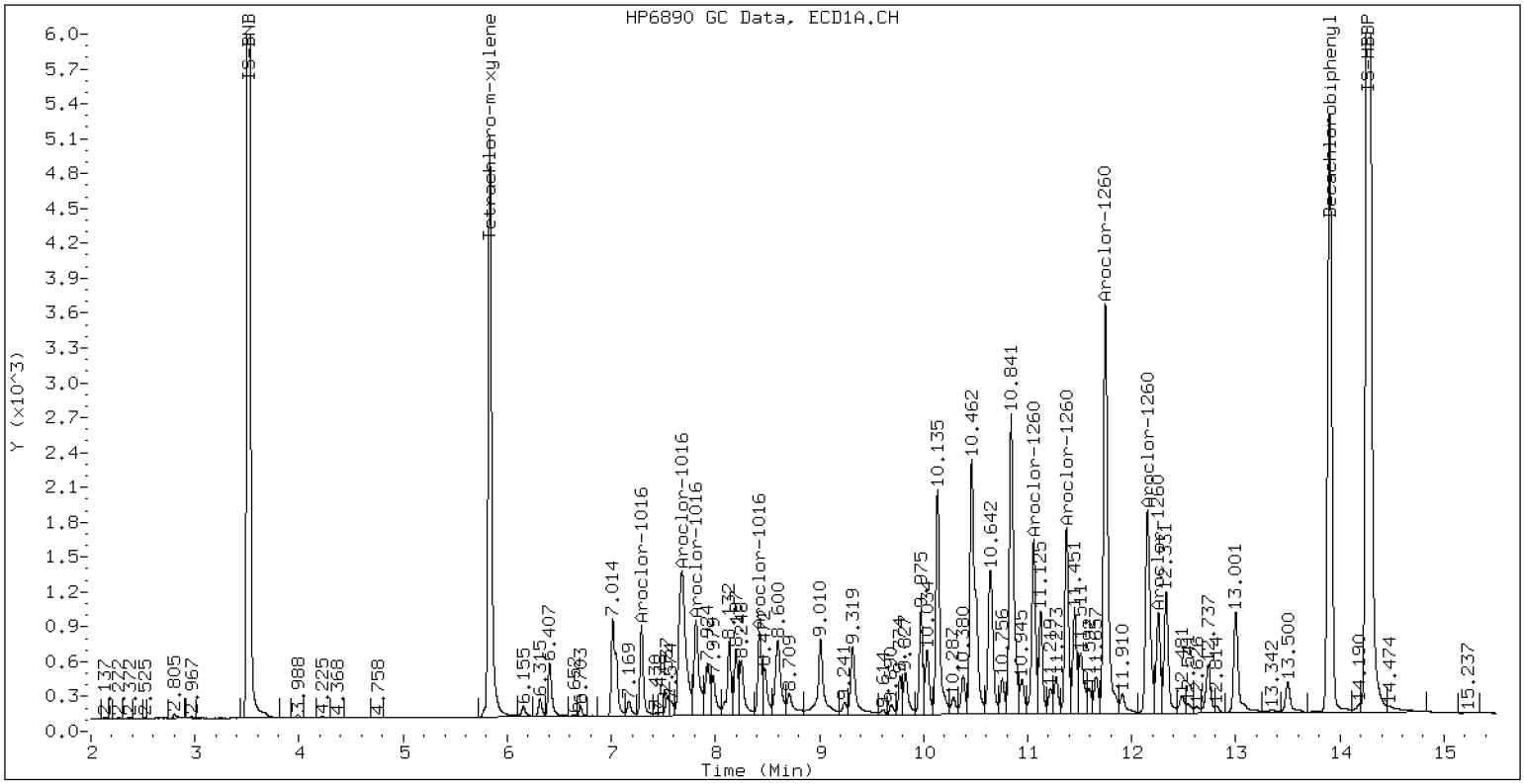
Total PCB Area Col2 (5.807 - 14.028) = 1565106 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

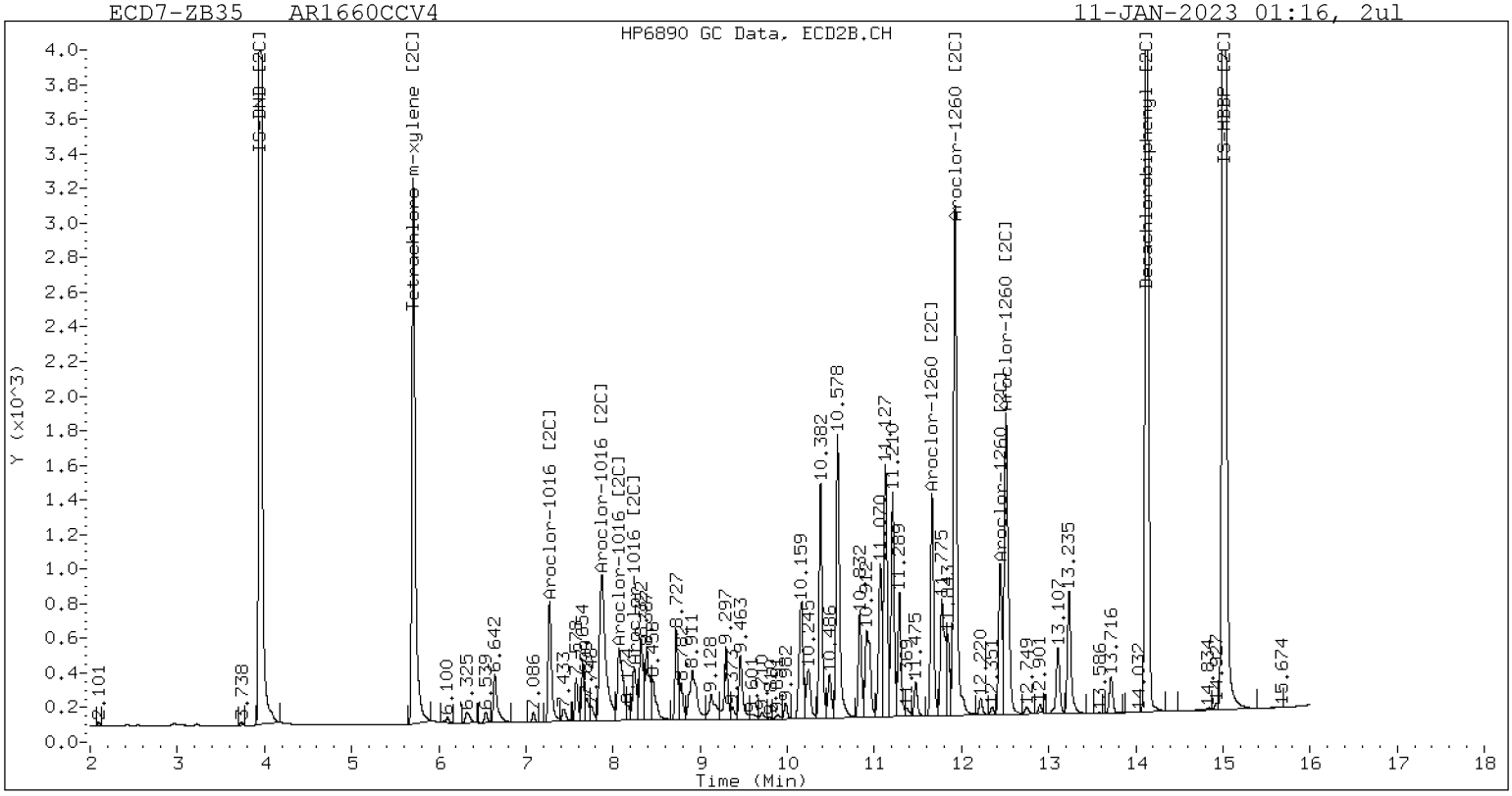
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 11-JAN-2023 01:16, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 11-JAN-2023 01:16, 2ul




ZB-35 Manual Integration: NO

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102341ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0156-CCV5 | Injection Time: | 06:32 |
| Sequence Name: | AR1254CCV5 | | |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR (RRF) | | | % DRIFT/DIFF | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN | CCV | LIMIT |
| Aroclor 1254 | A | 250.00 | 307 | 0.0576965 | 0.0709217 | | 23.0 | +/-20 * |
| Aroclor-1254 (1) | A | 250.00 | 297 | | 0.0837710 | | | |
| Aroclor-1254 (2) | A | 250.00 | 349 | | 0.0382346 | | | |
| Aroclor-1254 (3) | A | 250.00 | 245 | | 0.0436690 | | | |
| Aroclor-1254 (4) | A | 250.00 | 323 | | 0.1120792 | | | |
| Aroclor-1254 (5) | A | 250.00 | 323 | | 0.0768549 | | | |
| Aroclor 1254 [2C] | A | 250.00 | 300 | 0.0638047 | 0.0763025 | | 19.9 | +/-20 |
| Aroclor-1254 (1) [2C] | A | 250.00 | 284 | | 0.0586246 | | | |
| Aroclor-1254 (2) [2C] | A | 250.00 | 306 | | 0.0507771 | | | |
| Aroclor-1254 (3) [2C] | A | 250.00 | 283 | | 0.1009268 | | | |
| Aroclor-1254 (4) [2C] | A | 250.00 | 312 | | 0.1153269 | | | |
| Aroclor-1254 (5) [2C] | A | 250.00 | 314 | | 0.0558574 | | | |
| Decachlorobiphenyl | A | 40.000 | 39.2 | 0.7333327 | 0.7186425 | | -2.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 38.0 | 1.1336710 | 1.0781230 | | -5.0 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.6 | 1.1358180 | 1.1799930 | | 4.0 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 37.8 | 1.0966080 | 1.0354500 | | -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: /230110.b/01102341ECD7.D
Data file 2: /230110.b/230110.b/01102341ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 11-JAN-2023 06:32
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 231211 | 5.708 | 0.001 | 164520 | 38.0 | 37.8 | 0.7 | Tetrachloro-m-xylene |
| 13.904 | -0.004 | 359470 | 14.128 | 0.001 | 343437 | 39.2 | 41.6 | 5.8 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 428914 | -4.2 |
| Hexabromobiphenyl | 798898 | 1000414 | 25.2 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 317775 | 27.6 |
| Hexabromobiphenyl | 362541 | 582100 | 60.6 |

* 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-1254 | 1 | 9.316 | -0.005 | 112283 | 297.3 | 1 | 9.462 | 0.000 | 58217 | 284.1 |
| Aroclor-1254 | 2 | 9.395 | -0.007 | 51248 | 348.9 | 2 | 9.981 | 0.000 | 50424 | 306.1 |
| Aroclor-1254 | 3 | 9.685 | -0.009 | 58532 | 245.4 | 3 | 10.134 | 0.000 | 100225 | 283.1 |
| Aroclor-1254 | 4 | 9.824 | -0.007 | 150226 | 323.1 | 4 | 10.382 | 0.000 | 114525 | 312.3 |
| Aroclor-1254 | 5 | 10.192 | 0.002 | 103013 | 323.2 | 5 | 10.580 | 0.000 | 55469 | 313.6 |

Total Col1Ave (5 peaks): 307.6 Total Col2Ave (5 peaks): 299.9 RPD = 3

Corrected Ave (4 peaks): 297.3 Corrected Ave (4 peaks): 296.4 RPD = 0

CalAmt %D: 23.0 CalAmt %D: 19.9

Total PCB Area Col1 (5.936 - 13.808) = 1564652 Col1 Total PCB = 0.4 ppm*

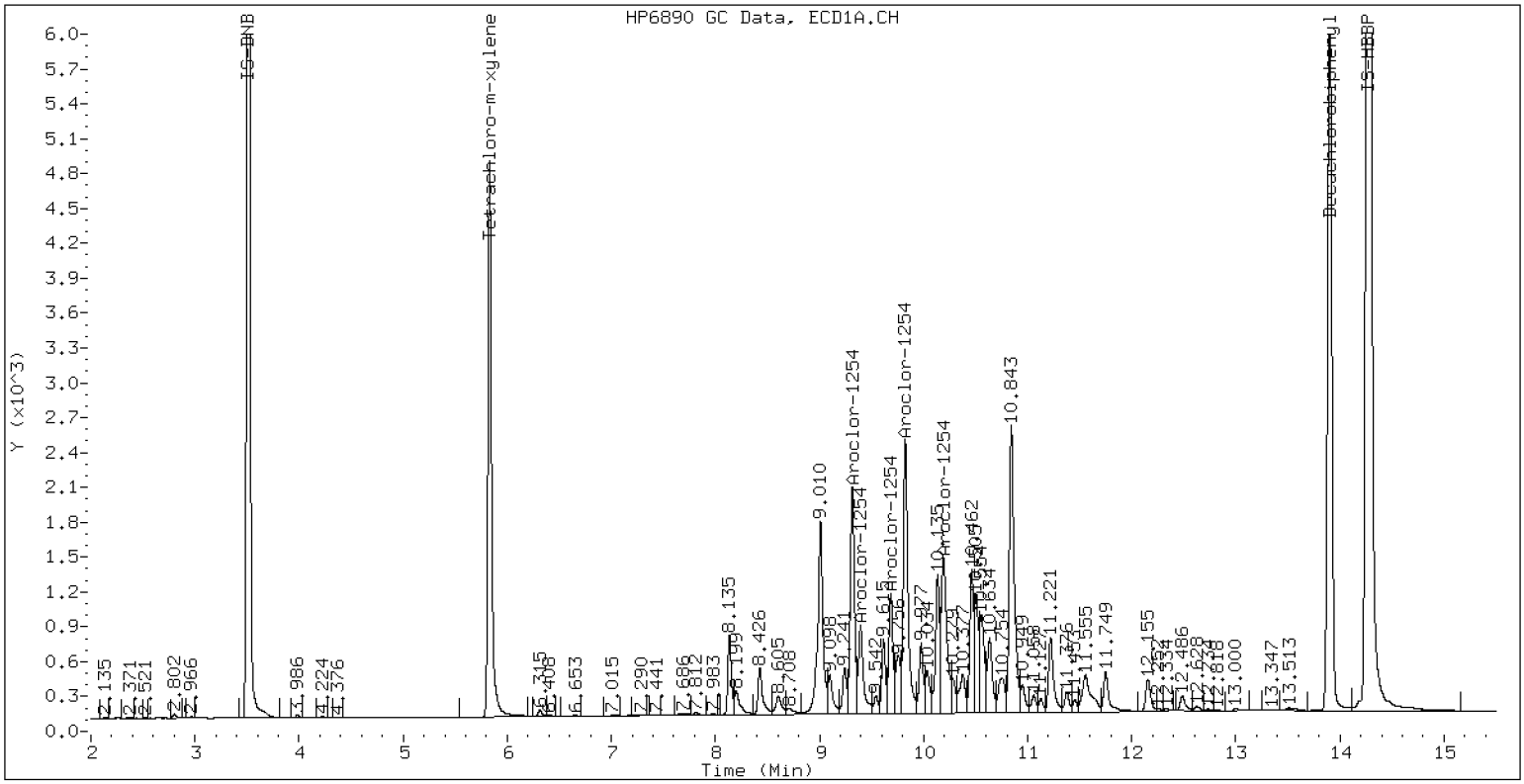
Total PCB Area Col2 (5.807 - 14.028) = 1043420 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

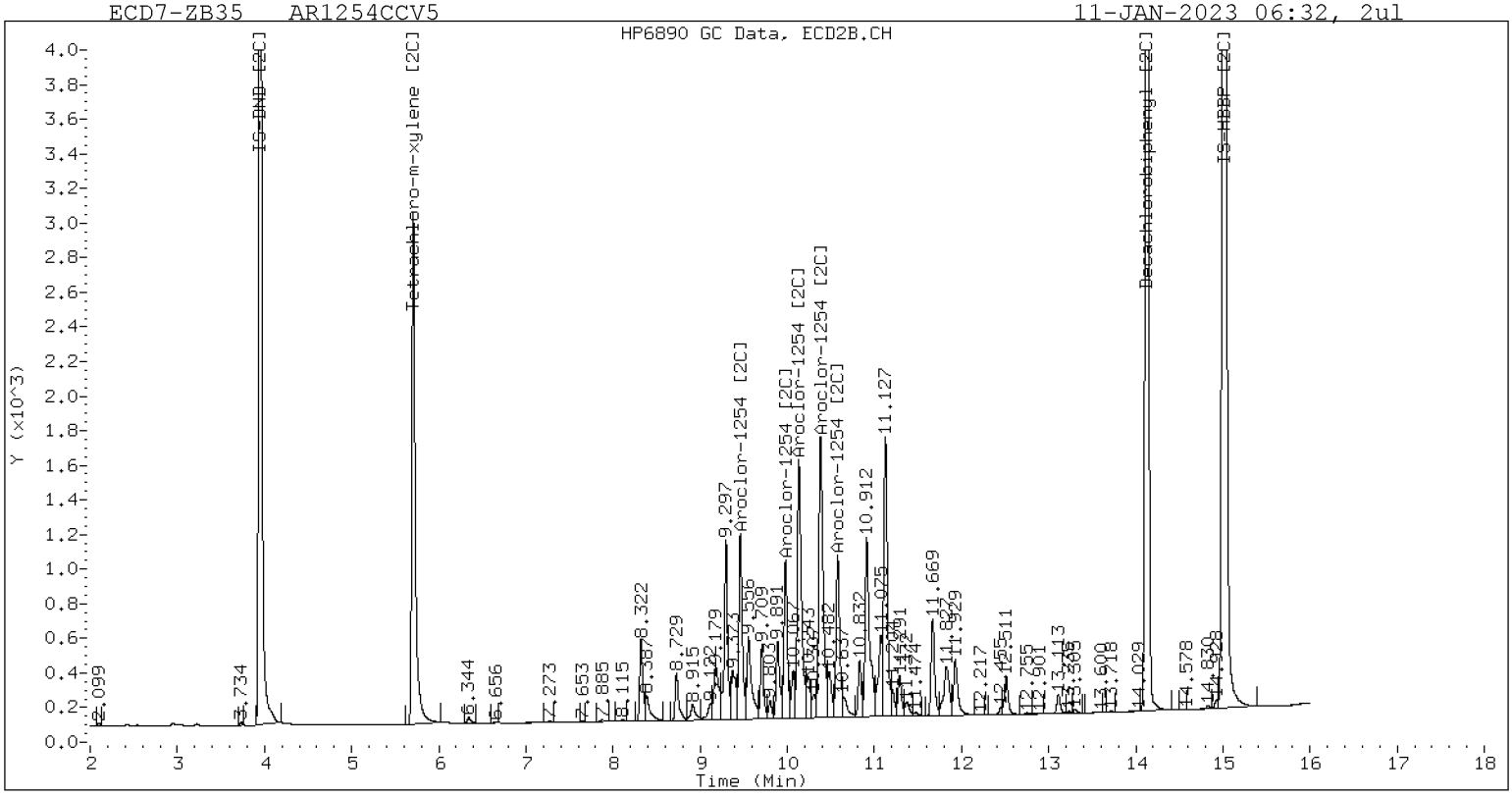
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 11-JAN-2023 06:32, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 11-JAN-2023 06:32, 2ul

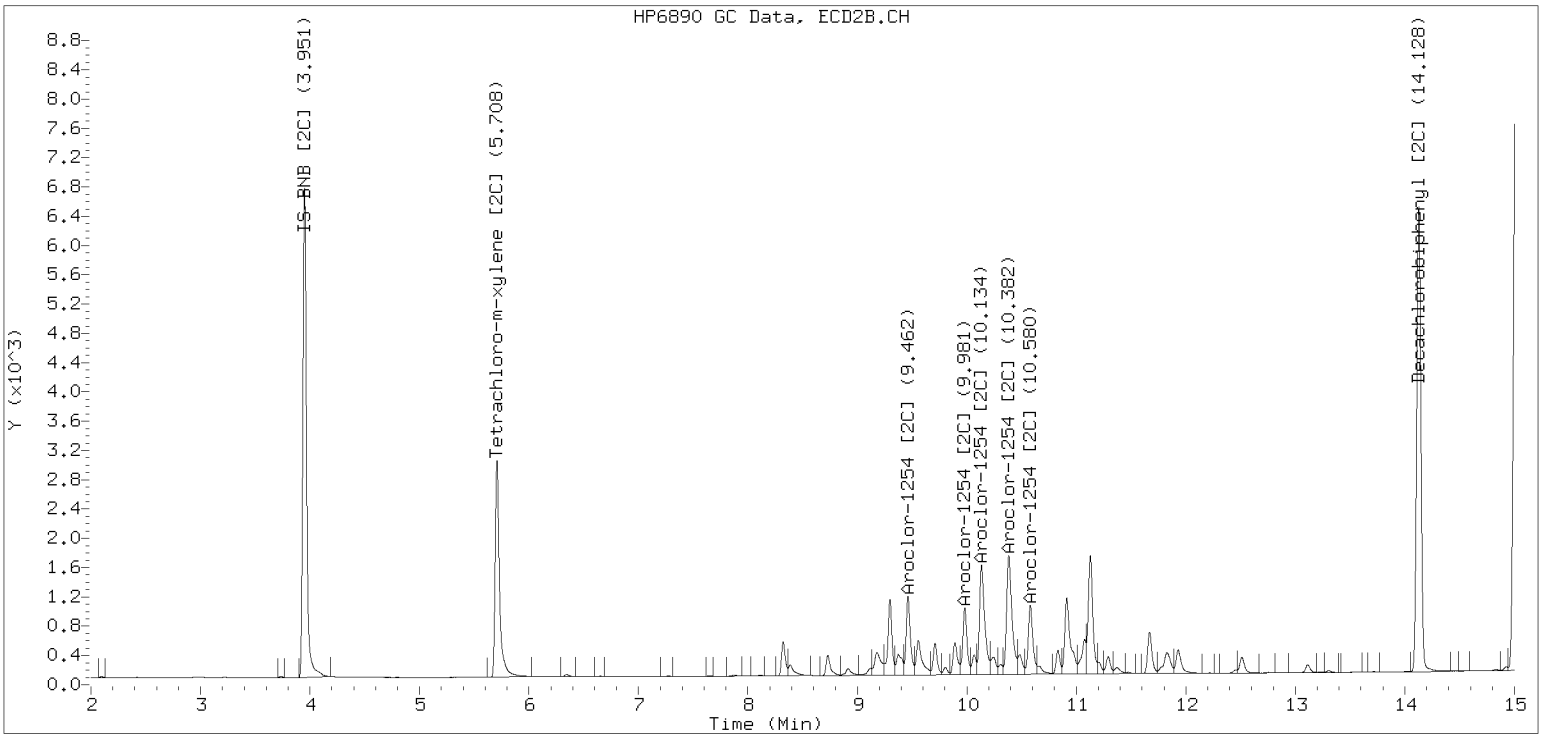



ZB-35 Manual Integration: YES

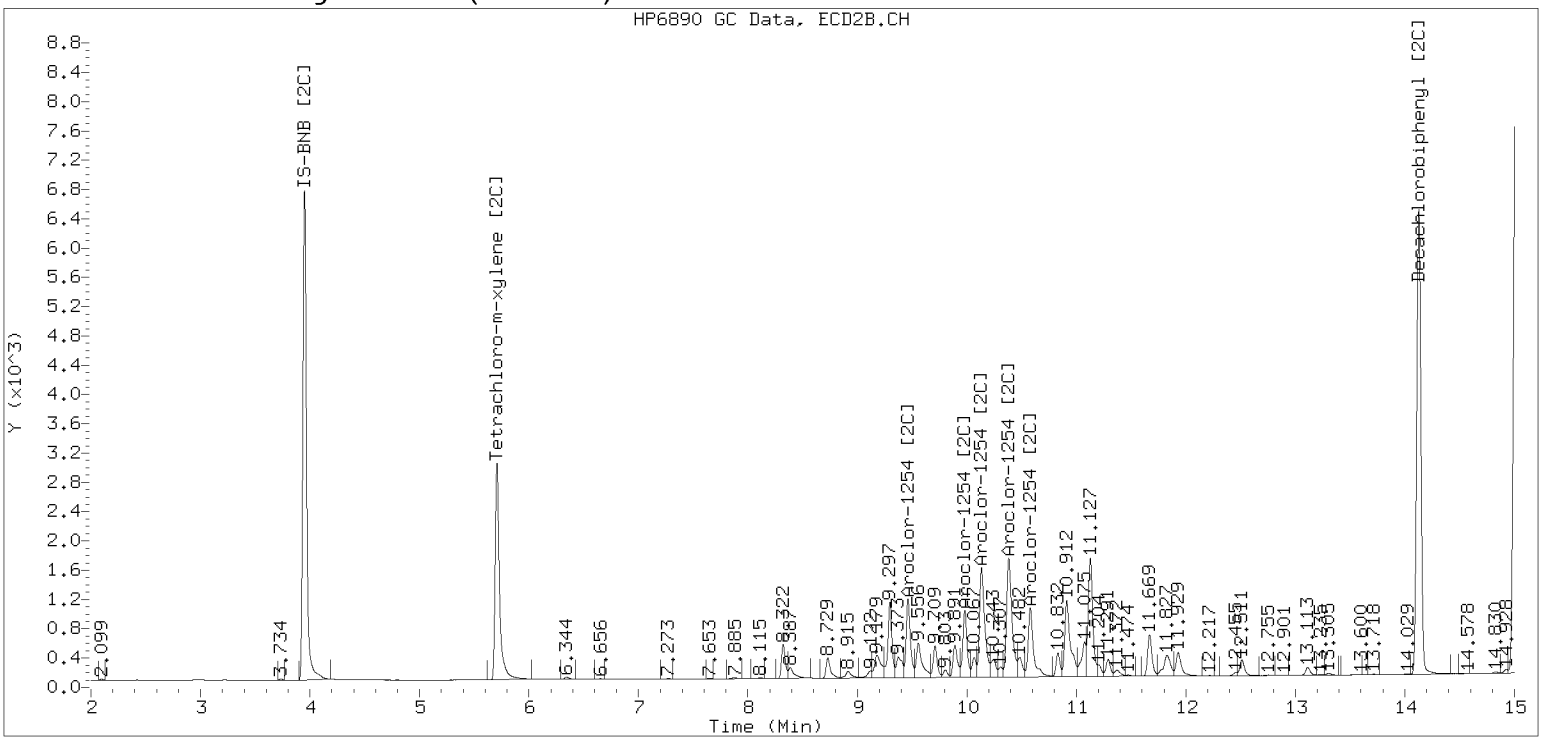
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230110.b/230110.b/01102341ECD7.D  Injection Date: 11-JAN-2023

Manual Integration (After)




Processed Integration (Before)



**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# CONTINUING CALIBRATION CHECK
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | ECD7 | Calibration: | FL00010 |
| Lab File ID: | 01102342ECD7.D | Calibration Date: | 12/03/2022 |
| Sequence: | SLA0156 | Injection Date: | 01/11/23 |
| Lab Sample ID: | SLA0156-CCV6 | Injection Time: | 06:53 |
| 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 | 279 | 0.0441939 | 0.0488494 | | 11.6 | +/-20 |
| Aroclor-1016 (1) | A | 250.00 | 270 | 0.0266860 | 0.0288033 | | 8.0 | |
| Aroclor-1016 (2) | A | 250.00 | 270 | 0.0861572 | 0.0929615 | | 8.0 | |
| Aroclor-1016 (3) | A | 250.00 | 288 | 0.0390425 | 0.0450037 | | 15.2 | |
| Aroclor-1016 (4) | A | 250.00 | 288 | 0.0248899 | 0.0286291 | | 15.2 | |
| Aroclor 1016 [2C] | A | 250.00 | 250 | 0.0467310 | 0.0464263 | | 0.0 | +/-20 |
| Aroclor-1016 (1) [2C] | A | 250.00 | 246 | 0.0409030 | 0.0402270 | | -1.6 | |
| Aroclor-1016 (2) [2C] | A | 250.00 | 247 | 0.0882154 | 0.0871150 | | -1.2 | |
| Aroclor-1016 (3) [2C] | A | 250.00 | 249 | 0.0378846 | 0.0378001 | | -0.4 | |
| Aroclor-1016 (4) [2C] | A | 250.00 | 258 | 0.0199212 | 0.0205632 | | 3.2 | |
| Aroclor 1260 | A | 250.00 | 269 | 0.0390342 | 0.0420542 | | 7.8 | +/-20 |
| Aroclor-1260 (1) | A | 250.00 | 263 | 0.0291201 | 0.0305996 | | 5.2 | |
| Aroclor-1260 (2) | A | 250.00 | 271 | 0.0301181 | 0.0326991 | | 8.4 | |
| Aroclor-1260 (3) | A | 250.00 | 273 | 0.0791351 | 0.0863261 | | 9.2 | |
| Aroclor-1260 (4) | A | 250.00 | 263 | 0.0403003 | 0.0423892 | | 5.2 | |
| Aroclor-1260 (5) | A | 250.00 | 277 | 0.0164974 | 0.0182569 | | 10.8 | |
| Aroclor 1260 [2C] | A | 250.00 | 242 | 0.0617619 | 0.0596835 | | -3.3 | +/-20 |
| Aroclor-1260 (1) [2C] | A | 250.00 | 236 | 0.0422283 | 0.0398008 | | -5.6 | |
| Aroclor-1260 (2) [2C] | A | 250.00 | 239 | 0.1059643 | 0.1012927 | | -4.4 | |
| Aroclor-1260 (3) [2C] | A | 250.00 | 244 | 0.0282173 | 0.0275141 | | -2.4 | |
| Aroclor-1260 (4) [2C] | A | 250.00 | 248 | 0.0706376 | 0.0701263 | | -0.8 | |
| Decachlorobiphenyl | A | 40.000 | 41.6 | 0.7333327 | 0.7630012 | | 4.0 | +/-20 |
| Tetrachlorometaxylene | A | 40.000 | 41.5 | 1.1336710 | 1.1761500 | | 3.8 | +/-20 |
| Decachlorobiphenyl [2C] | A | 40.000 | 41.4 | 1.1358180 | 1.1769790 | | 3.5 | +/-20 |
| Tetrachlorometaxylene [2C] | A | 40.000 | 39.8 | 1.0966080 | 1.0904420 | | -0.5 | +/-20 |

* Values outside of QC limits

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

Data file 1: /230110.b/01102342ECD7.D
Data file 2: /230110.b/230110.b/01102342ECD7.D
Method: \\target\share\chem4\ecd7.i\230110.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 11-JAN-2023 06:53
Report Date: 01/13/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

| ZB5 Col RT | Shift | Response | ZB35 Col RT | Shift | Response | ZB5 on col | ZB35 on col | RPD | Compound/Flag |
|---|---|---|---|---|---|---|---|---|---|
| 5.831 | -0.005 | 244180 | 5.707 | 0.000 | 167427 | 41.5 | 39.8 | 4.2 | Tetrachloro-m-xylene |
| 13.903 | -0.005 | 359575 | 14.128 | 0.000 | 329221 | 41.6 | 41.4 | 0.4 | Decachlorobiphenyl |

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 447645 | 415219 | -7.2 |
| Hexabromobiphenyl | 798898 | 942528 | 18.0 |

Column 2

| Standard Cpnd | Standard Area* | Sample Area | %D |
|---|---|---|---|
| Bromo-Nitrobenzene | 249094 | 307081 | 23.3 |
| Hexabromobiphenyl | 362541 | 559434 | 54.3 |

* 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 | -0.005 | 37374 | 269.8 | 1 | 7.271 | 0.000 | 38603 | 245.9 |
| Aroclor-1016 | 2 | 7.679 | -0.005 | 120623 | 269.7 | 2 | 7.872 | 0.000 | 83598 | 246.9 |
| Aroclor-1016 | 3 | 7.811 | -0.006 | 58395 | 288.2 | 3 | 8.071 | 0.000 | 36274 | 249.4 |
| Aroclor-1016 | 4 | 8.422 | -0.007 | 37148 | 287.6 | 4 | 8.241 | 0.000 | 19733 | 258.1 |
| Total Col1Ave (4 peaks): | | | | 278.8 | | Total Col2Ave (4 peaks): | | | 250.1 | RPD = 11 |
| Corrected Ave (3 peaks): | | | | 275.7 | | Corrected Ave (3 peaks): | | | 247.4 | RPD = 11 |
| CalAmt %D: | | | | 11.5 | | CalAmt %D: | | | 0.0 | |
| Aroclor-1260 | 1 | 11.056 | -0.006 | 90128 | 262.7 | 1 | 11.662 | 0.000 | 69581 | 235.6 |
| Aroclor-1260 | 2 | 11.373 | -0.004 | 96312 | 271.4 | 2 | 11.926 | 0.000 | 177083 | 239.0 |
| Aroclor-1260 | 3 | 11.747 | -0.005 | 254265 | 272.7 | 3 | 12.444 | 0.000 | 48101 | 243.8 |
| Aroclor-1260 | 4 | 12.152 | -0.006 | 124853 | 263.0 | 4 | 12.510 | 0.000 | 122597 | 248.2 |
| Aroclor-1260 | 5 | 12.255 | -0.007 | 53774 | 276.7 | NS | --- | | | ---- |
| Total Col1Ave (5 peaks): | | | | 269.3 | | Total Col2Ave (4 peaks): | | | 241.6 | RPD = 11 |
| Corrected Ave (4 peaks): | | | | 267.5 | | Corrected Ave (3 peaks): | | | 239.5 | RPD = 11 |
| CalAmt %D: | | | | 7.7 | | CalAmt %D: | | | -3.3 | |

Total PCB Area Col1 (5.936 - 13.808) = 2533843 Col1 Total PCB = 0.6 ppm*

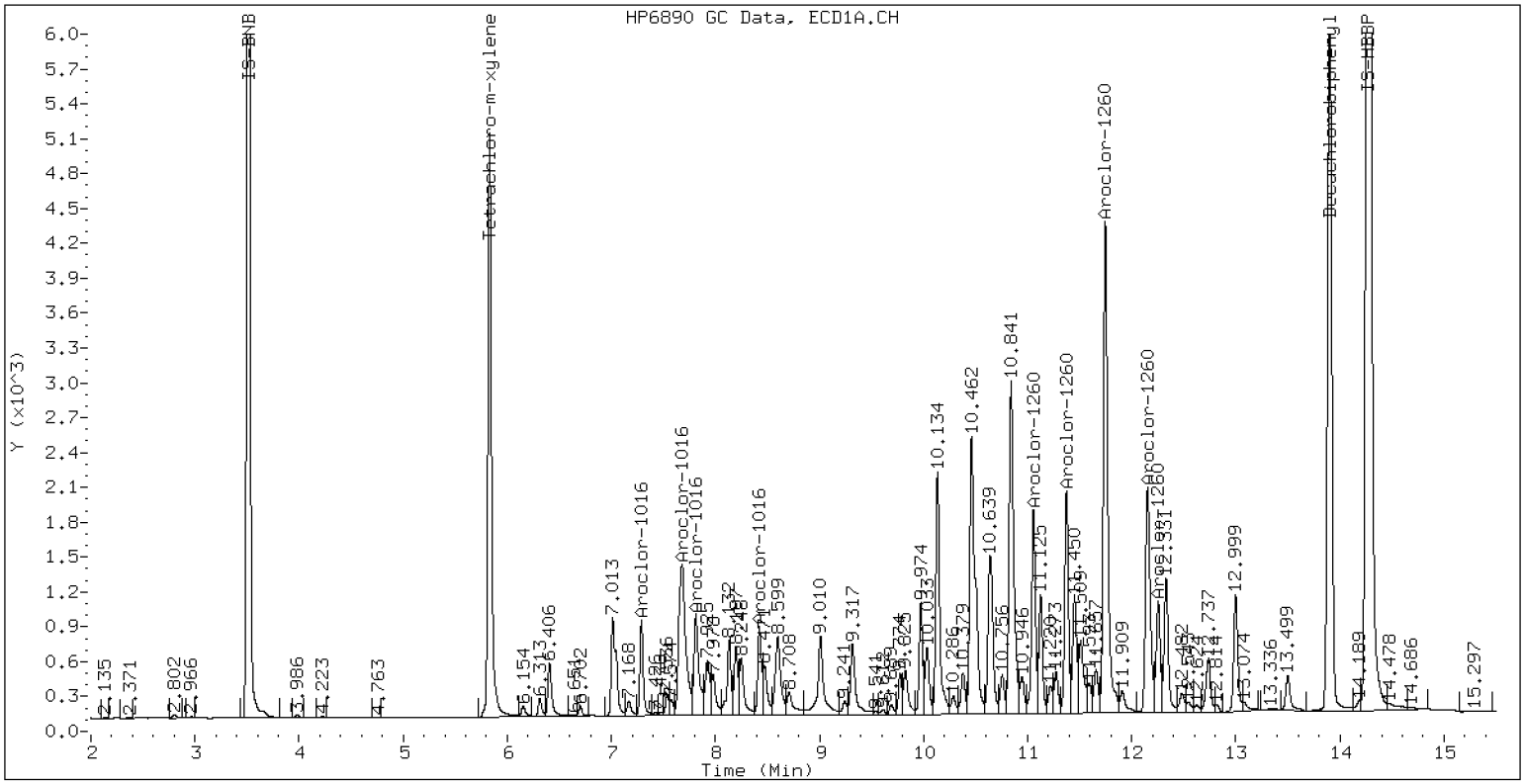
Total PCB Area Col2 (5.807 - 14.028) = 1641469 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

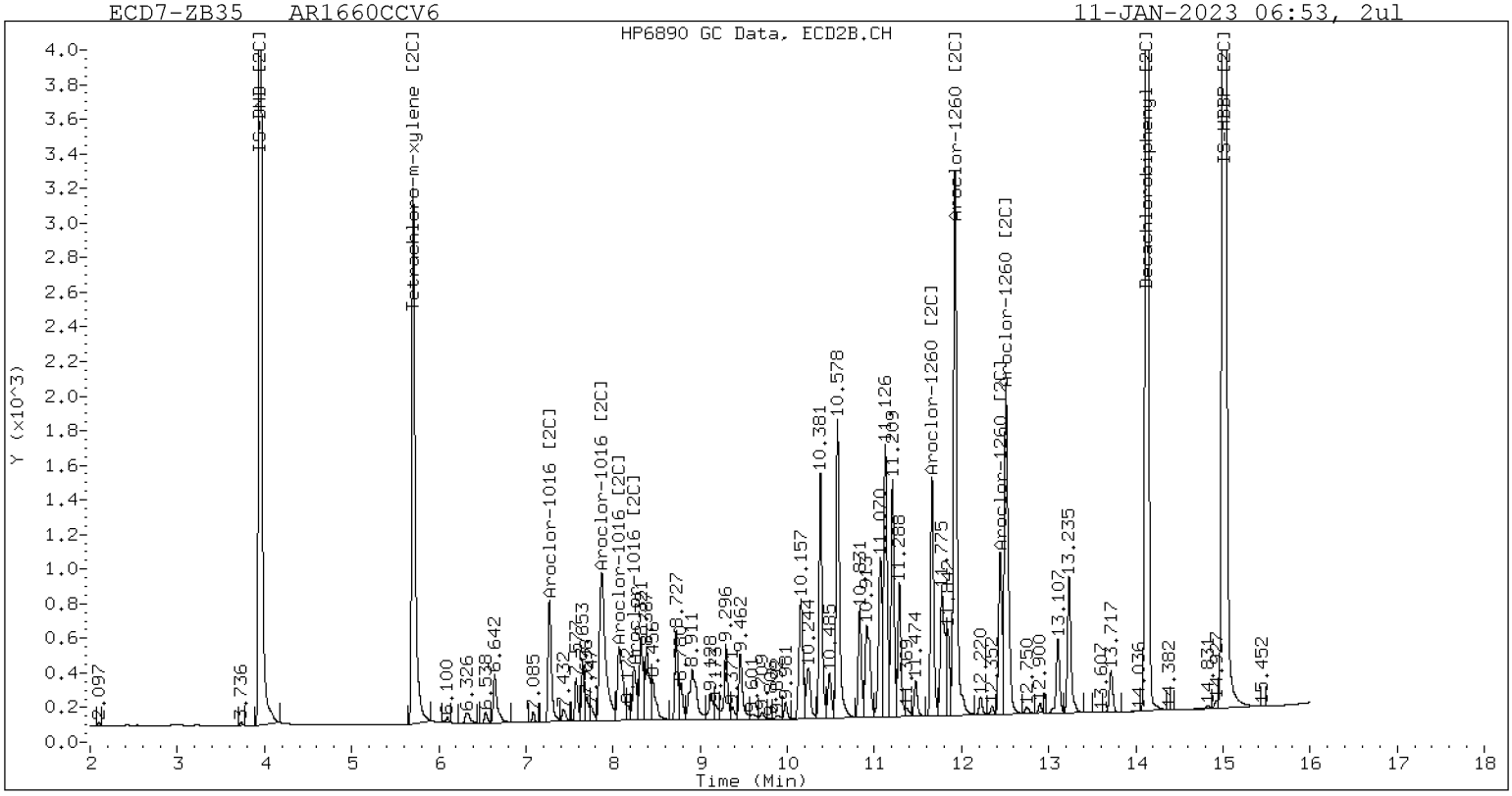
# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 11-JAN-2023 06:53, 2ul




ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 11-JAN-2023 06:53, 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: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

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 

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

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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## Dual Column

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Sample Name | Lab Sample ID | Column 1 File ID | Column 2 File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|---|
| Calibration Check | SLA0099-CCV5 | 01072339ECD7.D | 01072339ECD7.D | NA | 01/07/23 22:58 |
| Calibration Check | SLA0099-CCV6 | 01072340ECD7.D | 01072340ECD7.D | NA | 01/07/23 23:19 |
| Calibration Check | SLA0099-CCV7 | 01072353ECD7.D | 01072353ECD7.D | NA | 01/08/23 03:53 |
| Calibration Check | SLA0099-CCV8 | 01072354ECD7.D | 01072354ECD7.D | NA | 01/08/23 04:14 |
| Calibration Check | SLA0099-CCV9 | 01072373ECD7.D | 01072373ECD7.D | NA | 01/08/23 10:55 |
| Calibration Check | SLA0099-CCVA | 01072374ECD7.D | 01072374ECD7.D | NA | 01/08/23 11:16 |
| Blank | BKL0728-BLK1 | 01072375ECD7.D | 01072375ECD7.D | Solid | 01/08/23 11:37 |
| LCS | BKL0728-BS1 | 01072376ECD7.D | 01072376ECD7.D | Solid | 01/08/23 11:58 |
| LCS Dup | BKL0728-BSD1 | 01072377ECD7.D | 01072377ECD7.D | Solid | 01/08/23 12:19 |
| Reference | BKL0728-SRM1 | 01072378ECD7.D | 01072378ECD7.D | Solid | 01/08/23 12:40 |
| LDW22-IT791G | 22L0329-21 | 01072379ECD7.D | 01072379ECD7.D | Solid | 01/08/23 13:01 |
| LDW22-SC781B | 22L0329-22 | 01072380ECD7.D | 01072380ECD7.D | Solid | 01/08/23 13:22 |
| LDW22-SC781C | 22L0329-23 | 01072381ECD7.D | 01072381ECD7.D | Solid | 01/08/23 13:44 |
| LDW22-SC781D | 22L0329-24 | 01072382ECD7.D | 01072382ECD7.D | Solid | 01/08/23 14:05 |
| LDW22-SC781E | 22L0329-25 | 01072383ECD7.D | 01072383ECD7.D | Solid | 01/08/23 14:26 |
| LDW22-SC781F | 22L0329-26 | 01072384ECD7.D | 01072384ECD7.D | Solid | 01/08/23 14:47 |
| LDW22-SC781G | 22L0329-27 | 01072385ECD7.D | 01072385ECD7.D | Solid | 01/08/23 15:08 |
| LDW22-SC765B | 22L0329-29 | 01072387ECD7.D | 01072387ECD7.D | Solid | 01/08/23 15:50 |
| LDW22-SC765C | 22L0329-30 | 01072388ECD7.D | 01072388ECD7.D | Solid | 01/08/23 16:11 |
| Calibration Check | SLA0099-CCVB | 01072389ECD7.D | 01072389ECD7.D | NA | 01/08/23 16:32 |
| Calibration Check | SLA0099-CCVC | 01072390ECD7.D | 01072390ECD7.D | NA | 01/08/23 16:53 |
| LDW22-SC765E | 22L0329-32 | 01072392ECD7.D | 01072392ECD7.D | Solid | 01/08/23 17:35 |
| LDW22-SC757A | 22L0329-33 | 01072393ECD7.D | 01072393ECD7.D | Solid | 01/08/23 17:56 |
| LDW22-SC757B | 22L0329-34 | 01072394ECD7.D | 01072394ECD7.D | Solid | 01/08/23 18:18 |
| LDW22-SC757C | 22L0329-35 | 01072395ECD7.D | 01072395ECD7.D | Solid | 01/08/23 18:39 |
| LDW22-SC757D | 22L0329-36 | 01072396ECD7.D | 01072396ECD7.D | Solid | 01/08/23 19:00 |
| LDW22-SC757E | 22L0329-37 | 01072397ECD7.D | 01072397ECD7.D | Solid | 01/08/23 19:21 |
| LDW22-SC757F | 22L0329-38 | 01072398ECD7.D | 01072398ECD7.D | Solid | 01/08/23 19:42 |
| LDW22-SC757F | BKL0728-MS1 | 010723990ECD7.D | 010723990ECD7.D | Solid | 01/08/23 20:03 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## Dual Column

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Sample Name | Lab Sample ID | Column 1 File ID | Column 2 File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|---|
| LDW22-SC757F | BKL0728-MSD1 | 010723991ECD7.D | 010723991ECD7.D | Solid | 01/08/23 20:24 |
| LDW22-SC757G | 22L0329-39 | 010723992ECD7.D | 010723992ECD7.D | Solid | 01/08/23 20:45 |
| LDW22-SC757H | 22L0329-40 | 010723993ECD7.D | 010723993ECD7.D | Solid | 01/08/23 21:06 |
| Calibration Check | SLA0099-CCVD | 010723994ECD7.D | 010723994ECD7.D | NA | 01/08/23 21:27 |
| Calibration Check | SLA0099-CCVE | 010723995ECD7.D | 010723995ECD7.D | NA | 01/08/23 21:48 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0099**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/11/2023 3:23:04PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| SLA0099-ICV1 | QC | | 1 | | K006957 | K006953 | | |
| SLA0099-ICV2 | QC | | 2 | | K006954 | K006953 | | |
| BLA0091-BLK1 | QC | | 3 | | | K006953 | | |
| BLA0091-BS1 | QC | | 4 | | | K006953 | | |
| BLA0091-BSD1 | QC | | 5 | | | K006953 | | |
| 23A0059-01 | PCB (20 ug/kg) or (MTCA 0. | C 01 | 6 | | | K006953 | The Boeing Company [NBF - Central Puget S | |
| BLA0086-BLK1 | QC | | 7 | | | K006953 | | |
| BLA0086-BS1 | QC | | 8 | | | K006953 | | |
| BLA0086-BSD1 | QC | | 9 | | | K006953 | | |
| 22L0665-01 | 8082A PCB Water 0.01 | D 01 | 10 | | | K006953 | The Boeing Company [BDS Stormwaters] | |
| 22L0665-02 | 8082A PCB Water 0.01 | D 01 | 11 | | | K006953 | The Boeing Company [BDS Stormwaters] | |
| 22L0665-03 | 8082A PCB Water 0.01 | D 01 | 12 | | | K006953 | The Boeing Company [BDS Stormwaters] | |
| SLA0099-CCV1 | QC | | 13 | | K006956 | K006953 | | |
| SLA0099-CCV2 | QC | | 14 | | K006954 | K006953 | | |
| 22L0665-04 | 8082A PCB Water 0.01 | D 01 | 15 | | | K006953 | The Boeing Company [BDS Stormwaters] | |
| 22L0665-05 | 8082A PCB Water 0.01 | D 01 | 16 | | | K006953 | The Boeing Company [BDS Stormwaters] | |
| 23A0003-01 | 8082A PCB Water 0.01 | I 01 | 17 | | | K006953 | DH Environmental Inc | |
| 23A0065-01 | 8.3 PCBs 0.01 ug/L or 20 ug/ | B 01 | 18 | | | K006953 | Nucor Steel Corporation | |
| SLA0099-CCV3 | QC | | 19 | | K006955 | K006953 | | |
| SLA0099-CCV4 | QC | | 20 | | K006954 | K006953 | | |
| BKL0582-BLK1 | QC | | 21 | | | K006953 | | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0099**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/11/2023 3:23:04PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| BKL0582-BS1 | QC | | 22 | | | K006953 | | |
| BKL0582-BSD1 | QC | | 23 | | | K006953 | | |
| BKL0582-SRM1 | QC | | 24 | | | K006953 | | |
| 22L0307-21 | 8082A PCB Solid 4 | B 01 | 25 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-22 | 8082A PCB Solid 4 | B 01 | 26 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-23 | 8082A PCB Solid 4 | B 01 | 27 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-24 | 8082A PCB Solid 4 | B 01 | 28 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-25 | 8082A PCB Solid 4 | B 01 | 29 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-26 | 8082A PCB Solid 4 | B 01 | 30 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-27 | 8082A PCB Solid 4 | B 01 | 31 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-28 | 8082A PCB Solid 4 | B 01 | 32 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-29 | 8082A PCB Solid 4 | C 01 | 33 | | | K006953 | Anchor QEA, LLC | |
| SLA0099-CCV5 | QC | | 34 | | K006957 | K006953 | | |
| SLA0099-CCV6 | QC | | 35 | | K006954 | K006953 | | |
| 22L0307-31 | 8082A PCB Solid 4 | C 01 | 36 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-32 | 8082A PCB Solid 4 | C 01 | 37 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-33 | 8082A PCB Solid 4 | C 01 | 38 | | | K006953 | Anchor QEA, LLC | |
| BKL0582-MS1 | QC | | 39 | | | K006953 | | |
| BKL0582-MSD1 | QC | | 40 | | | K006953 | | |
| 22L0307-34 | 8082A PCB Solid 4 | C 01 | 41 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-35 | 8082A PCB Solid 4 | B 02 | 42 | | | K006953 | Anchor QEA, LLC | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0099**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/11/2023 3:23:04PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| 22L0307-36 | 8082A PCB Solid 4 | B 01 | 43 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-38 | 8082A PCB Solid 4 | B 01 | 44 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-39 | 8082A PCB Solid 4 | B 01 | 45 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-40 | 8082A PCB Solid 4 | B 01 | 46 | | | K006953 | Anchor QEA, LLC | |
| SLA0099-CCV7 | QC | | 47 | | K006956 | K006953 | | |
| SLA0099-CCV8 | QC | | 48 | | K006954 | K006953 | | |
| BKL0596-BLK1 | QC | | 49 | | | K006953 | | |
| BKL0596-BS1 | QC | | 50 | | | K006953 | | |
| BKL0596-MRL1 | QC | | 51 | | | K006953 | | |
| BKL0596-MRL2 | QC | | 52 | | | K006953 | | |
| 22L0529-03 | 8.3 PCBs 0.01 ug/L or 20 ug/ | B 01 | 53 | | | K006953 | Spectra Laboratories | Version |
| BKL0584-BLK1 | QC | | 54 | | | K006953 | | |
| BKL0584-BS1 | QC | | 55 | | | K006953 | | |
| BKL0584-BSD1 | QC | | 56 | | | K006953 | | |
| BKL0584-MRL1 | QC | | 57 | | | K006953 | | |
| BKL0584-SRM1 | QC | | 58 | | | K006953 | | |
| 22L0307-61 | 8082A PCB Solid 4 | B 01 | 59 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-63 | 8082A PCB Solid 4 | B 01 | 60 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-65 | 8082A PCB Solid 4 | B 01 | 61 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-66 | 8082A PCB Solid 4 | B 01 | 62 | | | K006953 | Anchor QEA, LLC | |
| BKL0584-MS1 | QC | | 63 | | | K006953 | | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0099**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/11/2023 3:23:04PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| BKL0584-MSD1 | QC | | 64 | | | K006953 | | |
| SLA0099-CCV9 | QC | | 65 | | K006955 | K006953 | | |
| SLA0099-CCVA | QC | | 66 | | K006954 | K006953 | | |
| BKL0728-BLK1 | QC | | 67 | | | K006953 | | |
| BKL0728-BS1 | QC | | 68 | | | K006953 | | |
| BKL0728-BSD1 | QC | | 69 | | | K006953 | | |
| BKL0728-SRM1 | QC | | 70 | | | K006953 | | |
| 22L0329-21 | 8082A PCB Solid 4 | B 01 | 71 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-22 | 8082A PCB Solid 4 | B 01 | 72 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-23 | 8082A PCB Solid 4 | B 01 | 73 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-24 | 8082A PCB Solid 4 | B 01 | 74 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-25 | 8082A PCB Solid 4 | B 01 | 75 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-26 | 8082A PCB Solid 4 | B 01 | 76 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-27 | 8082A PCB Solid 4 | B 01 | 77 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-29 | 8082A PCB Solid 4 | B 01 | 78 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-30 | 8082A PCB Solid 4 | B 01 | 79 | | | K006953 | Anchor QEA, LLC | |
| SLA0099-CCVB | QC | | 80 | | K006957 | K006953 | | |
| SLA0099-CCVC | QC | | 81 | | K006954 | K006953 | | |
| 22L0329-32 | 8082A PCB Solid 4 | B 01 | 82 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-33 | 8082A PCB Solid 4 | B 01 | 83 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-34 | 8082A PCB Solid 4 | B 01 | 84 | | | K006953 | Anchor QEA, LLC | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0099**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/11/2023 3:23:04PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| 22L0329-35 | 8082A PCB Solid 4 | B 01 | 85 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-36 | 8082A PCB Solid 4 | B 01 | 86 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-37 | 8082A PCB Solid 4 | B 01 | 87 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-38 | 8082A PCB Solid 4 | B 01 | 88 | | | K006953 | Anchor QEA, LLC | |
| BKL0728-MS1 | QC | | 89 | | | K006953 | | |
| BKL0728-MSD1 | QC | | 90 | | | K006953 | | |
| 22L0329-39 | 8082A PCB Solid 4 | B 01 | 91 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-40 | 8082A PCB Solid 4 | B 01 | 92 | | | K006953 | Anchor QEA, LLC | |
| SLA0099-CCVD | QC | | 93 | | K006956 | K006953 | | |
| SLA0099-CCVE | QC | | 94 | | K006954 | K006953 | | |

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 1 | 07-JAN-2023 09:16 | 01072301ECD7.D | 1 | DDTS | |
| 2 | 07-JAN-2023 09:37 | 01072302ECD7.D | 1 | AR1254ICV1 | |
| 3 | 07-JAN-2023 09:58 | 01072303ECD7.D | 1 | AR1660ICV2 | |
| 4 | 07-JAN-2023 10:19 | 01072304ECD7.D | 1 | BLA0091-BLK1 | |
| 5 | 07-JAN-2023 10:40 | 01072305ECD7.D | 1 | BLA0091-BS1 | |
| 6 | 07-JAN-2023 11:01 | 01072306ECD7.D | 1 | BLA0091-BSD1 | |
| 7 | 07-JAN-2023 11:22 | 01072307ECD7.D | 1 | 23A0059-01 | |
| 8 | 07-JAN-2023 11:43 | 01072308ECD7.D | 1 | BLA0086-BLK1 | |
| 9 | 07-JAN-2023 12:04 | 01072309ECD7.D | 1 | BLA0086-BS1 | |
| 10 | 07-JAN-2023 12:25 | 01072310ECD7.D | 1 | BLA0086-BSD1 | |
| 11 | 07-JAN-2023 12:46 | 01072311ECD7.D | 1 | 22L0665-01 | |
| 12 | 07-JAN-2023 13:07 | 01072312ECD7.D | 1 | 22L0665-02 | |
| 13 | 07-JAN-2023 13:28 | 01072313ECD7.D | 1 | 22L0665-03 | |
| 14 | 07-JAN-2023 13:49 | 01072314ECD7.D | 1 | AR1248CCV1 | |
| 15 | 07-JAN-2023 14:10 | 01072315ECD7.D | 1 | AR1660CCV2 | |
| 16 | 07-JAN-2023 14:53 | 01072316ECD7.D | 1 | RINSE | |
| 17 | 07-JAN-2023 15:14 | 01072317ECD7.D | 1 | RINSE | |
| 18 | 07-JAN-2023 15:35 | 01072318ECD7.D | 1 | RINSE | |
| 19 | 07-JAN-2023 15:56 | 01072319ECD7.D | 1 | 22L0665-04 | |
| 20 | 07-JAN-2023 16:17 | 01072320ECD7.D | 1 | 22L0665-05 | |
| 21 | 07-JAN-2023 16:38 | 01072321ECD7.D | 1 | 23A0003-01 | |
| 22 | 07-JAN-2023 16:59 | 01072322ECD7.D | 1 | 23A0065-01 | |
| 23 | 07-JAN-2023 17:21 | 01072323ECD7.D | 1 | AR1242CCV3 | |
| 24 | 07-JAN-2023 17:42 | 01072324ECD7.D | 1 | AR1660CCV4 | |
| 25 | 07-JAN-2023 18:03 | 01072325ECD7.D | 1 | BKL0582-BLK1 | |
| 26 | 07-JAN-2023 18:24 | 01072326ECD7.D | 1 | BKL0582-BS1 | |
| 27 | 07-JAN-2023 18:45 | 01072327ECD7.D | 1 | BKL0582-BSD1 | |
| 28 | 07-JAN-2023 19:06 | 01072328ECD7.D | 1 | BKL0582-SRM1 | |
| 29 | 07-JAN-2023 19:27 | 01072329ECD7.D | 1 | 22L0307-21 | |
| 30 | 07-JAN-2023 19:48 | 01072330ECD7.D | 1 | 22L0307-22 | |
| 31 | 07-JAN-2023 20:09 | 01072331ECD7.D | 1 | 22L0307-23 | |
| 32 | 07-JAN-2023 20:30 | 01072332ECD7.D | 1 | 22L0307-24 | |
| 33 | 07-JAN-2023 20:51 | 01072333ECD7.D | 1 | 22L0307-25 | |
| 34 | 07-JAN-2023 21:12 | 01072334ECD7.D | 1 | 22L0307-26 | |
| 35 | 07-JAN-2023 21:33 | 01072335ECD7.D | 1 | 22L0307-27 | |
| 36 | 07-JAN-2023 21:54 | 01072336ECD7.D | 1 | 22L0307-28 | |
| 37 | 07-JAN-2023 22:15 | 01072337ECD7.D | 1 | 22L0307-29 | |
| 38 | 07-JAN-2023 22:37 | 01072338ECD7.D | 1 | 22L0307-30 | |
| 39 | 07-JAN-2023 22:58 | 01072339ECD7.D | 1 | AR1254CCV5 | |
| 40 | 07-JAN-2023 23:19 | 01072340ECD7.D | 1 | AR1660CCV6 | |
| 41 | 07-JAN-2023 23:40 | 01072341ECD7.D | 1 | 22L0307-31 | |
| 42 | 08-JAN-2023 00:01 | 01072342ECD7.D | 1 | 22L0307-32 | |
| 43 | 08-JAN-2023 00:22 | 01072343ECD7.D | 1 | 22L0307-33 | |
| 44 | 08-JAN-2023 00:43 | 01072344ECD7.D | 1 | BKL0582-MS1 | |
| 45 | 08-JAN-2023 01:04 | 01072345ECD7.D | 1 | BKL0582-MSD1 | |
| 46 | 08-JAN-2023 01:25 | 01072346ECD7.D | 1 | 22L0307-34 | |
| 47 | 08-JAN-2023 01:46 | 01072347ECD7.D | 1 | 22L0307-35 | |
| 48 | 08-JAN-2023 02:07 | 01072348ECD7.D | 1 | 22L0307-36 | |
| 49 | 08-JAN-2023 02:28 | 01072349ECD7.D | 1 | 22L0307-37 | |
| 50 | 08-JAN-2023 02:50 | 01072350ECD7.D | 1 | 22L0307-38 | |

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 51 | 08-JAN-2023 03:11 | 01072351ECD7.D | 1 | 22L0307-39 | |
| 52 | 08-JAN-2023 03:32 | 01072352ECD7.D | 1 | 22L0307-40 | |
| 53 | 08-JAN-2023 03:53 | 01072353ECD7.D | 1 | AR1248CCV7 | |
| 54 | 08-JAN-2023 04:14 | 01072354ECD7.D | 1 | AR1660CCV8 | |
| 55 | 08-JAN-2023 04:35 | 01072355ECD7.D | 1 | BKL0596-BLK1 | |
| 56 | 08-JAN-2023 04:56 | 01072356ECD7.D | 1 | BKL0596-BS1 | |
| 57 | 08-JAN-2023 05:17 | 01072357ECD7.D | 1 | BKL0596-MRL1 | |
| 58 | 08-JAN-2023 05:38 | 01072358ECD7.D | 1 | BKL0596-MRL2 | |
| 59 | 08-JAN-2023 05:59 | 01072359ECD7.D | 1 | 22L0529-03 | |
| 60 | 08-JAN-2023 06:21 | 01072360ECD7.D | 1 | BKL0584-BLK1 | |
| 61 | 08-JAN-2023 06:42 | 01072361ECD7.D | 1 | BKL0584-BS1 | |
| 62 | 08-JAN-2023 07:03 | 01072362ECD7.D | 1 | BKL0584-BSD1 | |
| 63 | 08-JAN-2023 07:24 | 01072363ECD7.D | 1 | BKL0584-MRL1 | |
| 64 | 08-JAN-2023 07:45 | 01072364ECD7.D | 1 | BKL0584-SRM1 | |
| 65 | 08-JAN-2023 08:06 | 01072365ECD7.D | 1 | 22L0307-61 | |
| 66 | 08-JAN-2023 08:27 | 01072366ECD7.D | 1 | 22L0307-62 | |
| 67 | 08-JAN-2023 08:48 | 01072367ECD7.D | 1 | 22L0307-63 | |
| 68 | 08-JAN-2023 09:09 | 01072368ECD7.D | 1 | 22L0307-64 | |
| 69 | 08-JAN-2023 09:30 | 01072369ECD7.D | 1 | 22L0307-65 | |
| 70 | 08-JAN-2023 09:52 | 01072370ECD7.D | 1 | 22L0307-66 | |
| 71 | 08-JAN-2023 10:13 | 01072371ECD7.D | 1 | BKL0584-MS1 | |
| 72 | 08-JAN-2023 10:34 | 01072372ECD7.D | 1 | BKL0584-MSD1 | |
| 73 | 08-JAN-2023 10:55 | 01072373ECD7.D | 1 | AR1242CCV9 | |
| 74 | 08-JAN-2023 11:16 | 01072374ECD7.D | 1 | AR1660CCVA | |
| 75 | 08-JAN-2023 11:37 | 01072375ECD7.D | 1 | BKL0723-BLK1 | |
| 76 | 08-JAN-2023 11:58 | 01072376ECD7.D | 1 | BKL0723-BS1 | |
| 77 | 08-JAN-2023 12:19 | 01072377ECD7.D | 1 | BKL0723-BSD1 | |
| 78 | 08-JAN-2023 12:40 | 01072378ECD7.D | 1 | BKL0723-SRM1 | |
| 79 | 08-JAN-2023 13:01 | 01072379ECD7.D | 1 | 22L0329-21 | |
| 80 | 08-JAN-2023 13:22 | 01072380ECD7.D | 1 | 22L0329-22 | |
| 81 | 08-JAN-2023 13:44 | 01072381ECD7.D | 1 | 22L0329-23 | |
| 82 | 08-JAN-2023 14:05 | 01072382ECD7.D | 1 | 22L0329-24 | |
| 83 | 08-JAN-2023 14:26 | 01072383ECD7.D | 1 | 22L0329-25 | |
| 84 | 08-JAN-2023 14:47 | 01072384ECD7.D | 1 | 22L0329-26 | |
| 85 | 08-JAN-2023 15:08 | 01072385ECD7.D | 1 | 22L0329-27 | |
| 86 | 08-JAN-2023 15:29 | 01072386ECD7.D | 1 | 22L0329-28 | |
| 87 | 08-JAN-2023 15:50 | 01072387ECD7.D | 1 | 22L0329-29 | |
| 88 | 08-JAN-2023 16:11 | 01072388ECD7.D | 1 | 22L0329-30 | |
| 89 | 08-JAN-2023 16:32 | 01072389ECD7.D | 1 | AR1254CCVB | |
| 90 | 08-JAN-2023 16:53 | 01072390ECD7.D | 1 | AR1660CCVC | |
| 91 | 08-JAN-2023 17:14 | 01072391ECD7.D | 1 | 22L0329-31 | |
| 92 | 08-JAN-2023 17:35 | 01072392ECD7.D | 1 | 22L0329-32 | |
| 93 | 08-JAN-2023 17:56 | 01072393ECD7.D | 1 | 22L0329-33 | |
| 94 | 08-JAN-2023 18:18 | 01072394ECD7.D | 1 | 22L0329-34 | |
| 95 | 08-JAN-2023 18:39 | 01072395ECD7.D | 1 | 22L0329-35 | |
| 96 | 08-JAN-2023 19:00 | 01072396ECD7.D | 1 | 22L0329-36 | |
| 97 | 08-JAN-2023 19:21 | 01072397ECD7.D | 1 | 22L0329-37 | |
| 98 | 08-JAN-2023 19:42 | 01072398ECD7.D | 1 | 22L0329-38 | |
| 99 | 08-JAN-2023 20:03 | 010723990ECD7.D | 1 | BKL0728-MS1 | |
| 100 | 08-JAN-2023 20:24 | 010723991ECD7.D | 1 | BKL0728-MSD1 | |

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 101 | 08-JAN-2023 20:45 | 010723992ECD7.D | 1 | 22L0329-39 | |
| 102 | 08-JAN-2023 21:06 | 010723993ECD7.D | 1 | 22L0329-40 | |
| 103 | 08-JAN-2023 21:27 | 010723995ECD7.D | 1 | AR1248CCVD | |
| 104 | 08-JAN-2023 21:48 | 010723996ECD7.D | 1 | AR1660CCVE | |

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

ARI Job No.: DDTS  Method: PCB.m  Instrument: ecd7.i  Date: 07-JAN-2023

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0916 | 01072301ECD7.D | DDTS | | 1 | NO MANUAL INTEGRATION |
| 0937 | 01072302ECD7.D | AR1254ICV1 | | 1 | NO MANUAL INTEGRATION |
| 0958 | 01072303ECD7.D | AR1660ICV2 | | 1 | NO MANUAL INTEGRATION |
| 1019 | 01072304ECD7.D | BLA0091-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1040 | 01072305ECD7.D | BLA0091-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1101 | 01072306ECD7.D | BLA0091-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1122 | 01072307ECD7.D | 23A0059-01 | | 1 | NO MANUAL INTEGRATION |
| 1143 | 01072308ECD7.D | BLA0086-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1204 | 01072309ECD7.D | BLA0086-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1225 | 01072310ECD7.D | BLA0086-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1246 | 01072311ECD7.D | 22L0665-01 | | 1 | Aroclor-1254, IS-HBBP, Decachlorobiphenyl, |
| 1307 | 01072312ECD7.D | 22L0665-02 | | 1 | NO MANUAL INTEGRATION |
| 1328 | 01072313ECD7.D | 22L0665-03 | | 1 | NO MANUAL INTEGRATION |
| 1349 | 01072314ECD7.D | AR1248CCV1 | | 1 | NO MANUAL INTEGRATION |
| 1410 | 01072315ECD7.D | AR1660CCV2 | | 1 | NO MANUAL INTEGRATION |
| 1453 | 01072316ECD7.D | RINSE | | 1 | NO MANUAL INTEGRATION |
| 1514 | 01072317ECD7.D | RINSE | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1535 | 01072318ECD7.D | RINSE | | 1 | NO MANUAL INTEGRATION |
| 1556 | 01072319ECD7.D | 22L0665-04 | | 1 | NO MANUAL INTEGRATION |
| 1617 | 01072320ECD7.D | 22L0665-05 | | 1 | NO MANUAL INTEGRATION |
| 1638 | 01072321ECD7.D | 23A0003-01 | | 1 | NO MANUAL INTEGRATION |
| 1659 | 01072322ECD7.D | 23A0065-01 | | 1 | NO MANUAL INTEGRATION |
| 1721 | 01072323ECD7.D | AR1242CCV3 | | 1 | Aroclor-1242, |
| 1742 | 01072324ECD7.D | AR1660CCV4 | | 1 | NO MANUAL INTEGRATION |
| 1803 | 01072325ECD7.D | BKL0582-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1824 | 01072326ECD7.D | BKL0582-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1845 | 01072327ECD7.D | BKL0582-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1906 | 01072328ECD7.D | BKL0582-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1927 | 01072329ECD7.D | 22L0307-21 | | 1 | Aroclor-1254, |
| 1948 | 01072330ECD7.D | 22L0307-22 | | 1 | NO MANUAL INTEGRATION |
| 2009 | 01072331ECD7.D | 22L0307-23 | | 1 | NO MANUAL INTEGRATION |
| 2030 | 01072332ECD7.D | 22L0307-24 | | 1 | NO MANUAL INTEGRATION |
| 2051 | 01072333ECD7.D | 22L0307-25 | | 1 | NO MANUAL INTEGRATION |
| 2112 | 01072334ECD7.D | 22L0307-26 | | 1 | NO MANUAL INTEGRATION |
| 2133 | 01072335ECD7.D | 22L0307-27 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 2154 | 01072336ECD7.D | 22L0307-28 | | 1 | NO MANUAL INTEGRATION |
| 2215 | 01072337ECD7.D | 22L0307-29 | | 1 | Aroclor-1254, |
| 2237 | 01072338ECD7.D | 22L0307-30 | | 1 | NO MANUAL INTEGRATION |
| 2258 | 01072339ECD7.D | AR1254CCV5 | | 1 | NO MANUAL INTEGRATION |
| 2319 | 01072340ECD7.D | AR1660CCV6 | | 1 | NO MANUAL INTEGRATION |
| 2340 | 01072341ECD7.D | 22L0307-31 | | 1 | NO MANUAL INTEGRATION |
| 0001 | 01072342ECD7.D | 22L0307-32 | | 1 | NO MANUAL INTEGRATION |
| 0022 | 01072343ECD7.D | 22L0307-33 | | 1 | NO MANUAL INTEGRATION |
| 0043 | 01072344ECD7.D | BKL0582-MS1 | | 1 | NO MANUAL INTEGRATION |
| 0104 | 01072345ECD7.D | BKL0582-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 0125 | 01072346ECD7.D | 22L0307-34 | | 1 | NO MANUAL INTEGRATION |
| 0146 | 01072347ECD7.D | 22L0307-35 | | 1 | Aroclor-1248, Aroclor-1254, Aroclor-1260, IS-HBBP, Decachlorobiphenyl, |
| 0207 | 01072348ECD7.D | 22L0307-36 | | 1 | Aroclor-1254, |
| 0228 | 01072349ECD7.D | 22L0307-37 | | 1 | NO MANUAL INTEGRATION |
| 0250 | 01072350ECD7.D | 22L0307-38 | | 1 | NO MANUAL INTEGRATION |
| 0311 | 01072351ECD7.D | 22L0307-39 | | 1 | NO MANUAL INTEGRATION |
| 0332 | 01072352ECD7.D | 22L0307-40 | | 1 | NO MANUAL INTEGRATION |
| 0353 | 01072353ECD7.D | AR1248CCV7 | | 1 | Aroclor-1248, |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0414 | 01072354ECD7.D | AR1660CCV8 | | 1 | NO MANUAL INTEGRATION |
| 0435 | 01072355ECD7.D | BKL0596-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0456 | 01072356ECD7.D | BKL0596-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0517 | 01072357ECD7.D | BKL0596-MRL1 | | 1 | NO MANUAL INTEGRATION |
| 0538 | 01072358ECD7.D | BKL0596-MRL2 | | 1 | NO MANUAL INTEGRATION |
| 0559 | 01072359ECD7.D | 22L0529-03 | | 1 | NO MANUAL INTEGRATION |
| 0621 | 01072360ECD7.D | BKL0584-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0642 | 01072361ECD7.D | BKL0584-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0703 | 01072362ECD7.D | BKL0584-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0724 | 01072363ECD7.D | BKL0584-MRL1 | | 1 | NO MANUAL INTEGRATION |
| 0745 | 01072364ECD7.D | BKL0584-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 0806 | 01072365ECD7.D | 22L0307-61 | | 1 | NO MANUAL INTEGRATION |
| 0827 | 01072366ECD7.D | 22L0307-62 | | 1 | NO MANUAL INTEGRATION |
| 0848 | 01072367ECD7.D | 22L0307-63 | | 1 | Aroclor-1254, |
| 0909 | 01072368ECD7.D | 22L0307-64 | | 1 | NO MANUAL INTEGRATION |
| 0930 | 01072369ECD7.D | 22L0307-65 | | 1 | NO MANUAL INTEGRATION |
| 0952 | 01072370ECD7.D | 22L0307-66 | | 1 | NO MANUAL INTEGRATION |
| 1013 | 01072371ECD7.D | BKL0584-MS1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1034 | 01072372ECD7.D | BKL0584-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1055 | 01072373ECD7.D | AR1242CCV9 | | 1 | Aroclor-1242, |
| 1116 | 01072374ECD7.D | AR1660CCVA | | 1 | NO MANUAL INTEGRATION |
| 1137 | 01072375ECD7.D | BKL0723-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1158 | 01072376ECD7.D | BKL0723-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1219 | 01072377ECD7.D | BKL0723-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1240 | 01072378ECD7.D | BKL0723-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1301 | 01072379ECD7.D | 22L0329-21 | | 1 | NO MANUAL INTEGRATION |
| 1322 | 01072380ECD7.D | 22L0329-22 | | 1 | Aroclor-1248, Aroclor-1254, Aroclor-1260, |
| 1344 | 01072381ECD7.D | 22L0329-23 | | 1 | Aroclor-1248, |
| 1405 | 01072382ECD7.D | 22L0329-24 | | 1 | NO MANUAL INTEGRATION |
| 1426 | 01072383ECD7.D | 22L0329-25 | | 1 | Aroclor-1254, |
| 1447 | 01072384ECD7.D | 22L0329-26 | | 1 | Aroclor-1254, |
| 1508 | 01072385ECD7.D | 22L0329-27 | | 1 | NO MANUAL INTEGRATION |
| 1529 | 01072386ECD7.D | 22L0329-28 | | 1 | NO MANUAL INTEGRATION |
| 1550 | 01072387ECD7.D | 22L0329-29 | | 1 | Aroclor-1254, |
| 1611 | 01072388ECD7.D | 22L0329-30 | | 1 | NO MANUAL INTEGRATION |
| 1632 | 01072389ECD7.D | AR1254CCVB | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1653 | 01072390ECD7.D | AR1660CCVC | | 1 | NO MANUAL INTEGRATION |
| 1714 | 01072391ECD7.D | 22L0329-31 | | 1 | NO MANUAL INTEGRATION |
| 1735 | 01072392ECD7.D | 22L0329-32 | | 1 | Aroclor-1254, Aroclor-1260, |
| 1756 | 01072393ECD7.D | 22L0329-33 | | 1 | NO MANUAL INTEGRATION |
| 1818 | 01072394ECD7.D | 22L0329-34 | | 1 | NO MANUAL INTEGRATION |
| 1839 | 01072395ECD7.D | 22L0329-35 | | 1 | NO MANUAL INTEGRATION |
| 1900 | 01072396ECD7.D | 22L0329-36 | | 1 | NO MANUAL INTEGRATION |
| 1921 | 01072397ECD7.D | 22L0329-37 | | 1 | NO MANUAL INTEGRATION |
| 1942 | 01072398ECD7.D | 22L0329-38 | | 1 | NO MANUAL INTEGRATION |
| 2003 | 010723990ECD7.D | BKL0728-MS1 | | 1 | NO MANUAL INTEGRATION |
| 2024 | 010723991ECD7.D | BKL0728-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 2045 | 010723992ECD7.D | 22L0329-39 | | 1 | NO MANUAL INTEGRATION |
| 2106 | 010723993ECD7.D | 22L0329-40 | | 1 | NO MANUAL INTEGRATION |
| 2127 | 010723995ECD7.D | AR1248CCVD | | 1 | Aroclor-1248, |
| 2148 | 010723996ECD7.D | AR1660CCVE | | 1 | NO MANUAL INTEGRATION |
| 0916 | 01072301ECD7.D | DDTS | | 1 | NO MANUAL INTEGRATION |
| 0937 | 01072302ECD7.D | AR1254ICV1 | | 1 | NO MANUAL INTEGRATION |
| 0958 | 01072303ECD7.D | AR1660ICV2 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1019 | 01072304ECD7.D | BLA0091-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1040 | 01072305ECD7.D | BLA0091-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1101 | 01072306ECD7.D | BLA0091-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1122 | 01072307ECD7.D | 23A0059-01 | | 1 | NO MANUAL INTEGRATION |
| 1143 | 01072308ECD7.D | BLA0086-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1204 | 01072309ECD7.D | BLA0086-BS1 | | 1 | Aroclor-1016 [2C], Aroclor-1232 [2C], Aroclor-1242 [2C], |
| 1225 | 01072310ECD7.D | BLA0086-BSD1 | | 1 | Aroclor-1016 [2C], Aroclor-1232 [2C], Aroclor-1242 [2C], |
| 1246 | 01072311ECD7.D | 22L0665-01 | | 1 | Aroclor-1254 [2C], |
| 1307 | 01072312ECD7.D | 22L0665-02 | | 1 | NO MANUAL INTEGRATION |
| 1328 | 01072313ECD7.D | 22L0665-03 | | 1 | NO MANUAL INTEGRATION |
| 1349 | 01072314ECD7.D | AR1248CCV1 | | 1 | NO MANUAL INTEGRATION |
| 1410 | 01072315ECD7.D | AR1660CCV2 | | 1 | NO MANUAL INTEGRATION |
| 1453 | 01072316ECD7.D | RINSE | | 1 | NO MANUAL INTEGRATION |
| 1514 | 01072317ECD7.D | RINSE | | 1 | NO MANUAL INTEGRATION |
| 1535 | 01072318ECD7.D | RINSE | | 1 | NO MANUAL INTEGRATION |
| 1556 | 01072319ECD7.D | 22L0665-04 | | 1 | NO MANUAL INTEGRATION |
| 1617 | 01072320ECD7.D | 22L0665-05 | | 1 | NO MANUAL INTEGRATION |
| 1638 | 01072321ECD7.D | 23A0003-01 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1659 | 01072322ECD7.D | 23A0065-01 | | 1 | NO MANUAL INTEGRATION |
| 1721 | 01072323ECD7.D | AR1242CCV3 | | 1 | NO MANUAL INTEGRATION |
| 1742 | 01072324ECD7.D | AR1660CCV4 | | 1 | NO MANUAL INTEGRATION |
| 1803 | 01072325ECD7.D | BKL0582-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1824 | 01072326ECD7.D | BKL0582-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1845 | 01072327ECD7.D | BKL0582-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1906 | 01072328ECD7.D | BKL0582-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1927 | 01072329ECD7.D | 22L0307-21 | | 1 | NO MANUAL INTEGRATION |
| 1948 | 01072330ECD7.D | 22L0307-22 | | 1 | NO MANUAL INTEGRATION |
| 2009 | 01072331ECD7.D | 22L0307-23 | | 1 | NO MANUAL INTEGRATION |
| 2030 | 01072332ECD7.D | 22L0307-24 | | 1 | NO MANUAL INTEGRATION |
| 2051 | 01072333ECD7.D | 22L0307-25 | | 1 | NO MANUAL INTEGRATION |
| 2112 | 01072334ECD7.D | 22L0307-26 | | 1 | NO MANUAL INTEGRATION |
| 2133 | 01072335ECD7.D | 22L0307-27 | | 1 | NO MANUAL INTEGRATION |
| 2154 | 01072336ECD7.D | 22L0307-28 | | 1 | NO MANUAL INTEGRATION |
| 2215 | 01072337ECD7.D | 22L0307-29 | | 1 | Aroclor-1248 [2C], |
| 2237 | 01072338ECD7.D | 22L0307-30 | | 1 | NO MANUAL INTEGRATION |
| 2258 | 01072339ECD7.D | AR1254CCV5 | | 1 | Aroclor-1254 [2C], |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 2319 | 01072340ECD7.D | AR1660CCV6 | | 1 | NO MANUAL INTEGRATION |
| 2340 | 01072341ECD7.D | 22L0307-31 | | 1 | NO MANUAL INTEGRATION |
| 0001 | 01072342ECD7.D | 22L0307-32 | | 1 | NO MANUAL INTEGRATION |
| 0022 | 01072343ECD7.D | 22L0307-33 | | 1 | NO MANUAL INTEGRATION |
| 0043 | 01072344ECD7.D | BKL0582-MS1 | | 1 | NO MANUAL INTEGRATION |
| 0104 | 01072345ECD7.D | BKL0582-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 0125 | 01072346ECD7.D | 22L0307-34 | | 1 | NO MANUAL INTEGRATION |
| 0146 | 01072347ECD7.D | 22L0307-35 | | 1 | Aroclor-1248 [2C], |
| 0207 | 01072348ECD7.D | 22L0307-36 | | 1 | Aroclor-1248 [2C], |
| 0228 | 01072349ECD7.D | 22L0307-37 | | 1 | NO MANUAL INTEGRATION |
| 0250 | 01072350ECD7.D | 22L0307-38 | | 1 | NO MANUAL INTEGRATION |
| 0311 | 01072351ECD7.D | 22L0307-39 | | 1 | NO MANUAL INTEGRATION |
| 0332 | 01072352ECD7.D | 22L0307-40 | | 1 | NO MANUAL INTEGRATION |
| 0353 | 01072353ECD7.D | AR1248CCV7 | | 1 | NO MANUAL INTEGRATION |
| 0414 | 01072354ECD7.D | AR1660CCV8 | | 1 | NO MANUAL INTEGRATION |
| 0435 | 01072355ECD7.D | BKL0596-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0456 | 01072356ECD7.D | BKL0596-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0517 | 01072357ECD7.D | BKL0596-MRL1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0538 | 01072358ECD7.D | BKL0596-MRL2 | | 1 | NO MANUAL INTEGRATION |
| 0559 | 01072359ECD7.D | 22L0529-03 | | 1 | NO MANUAL INTEGRATION |
| 0621 | 01072360ECD7.D | BKL0584-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0642 | 01072361ECD7.D | BKL0584-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0703 | 01072362ECD7.D | BKL0584-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0724 | 01072363ECD7.D | BKL0584-MRL1 | | 1 | NO MANUAL INTEGRATION |
| 0745 | 01072364ECD7.D | BKL0584-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 0806 | 01072365ECD7.D | 22L0307-61 | | 1 | Aroclor-1248 [2C], |
| 0827 | 01072366ECD7.D | 22L0307-62 | | 1 | NO MANUAL INTEGRATION |
| 0848 | 01072367ECD7.D | 22L0307-63 | | 1 | Aroclor-1248 [2C], |
| 0909 | 01072368ECD7.D | 22L0307-64 | | 1 | NO MANUAL INTEGRATION |
| 0930 | 01072369ECD7.D | 22L0307-65 | | 1 | Aroclor-1248 [2C], |
| 0952 | 01072370ECD7.D | 22L0307-66 | | 1 | Aroclor-1248 [2C], |
| 1013 | 01072371ECD7.D | BKL0584-MS1 | | 1 | NO MANUAL INTEGRATION |
| 1034 | 01072372ECD7.D | BKL0584-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1055 | 01072373ECD7.D | AR1242CCV9 | | 1 | NO MANUAL INTEGRATION |
| 1116 | 01072374ECD7.D | AR1660CCVA | | 1 | NO MANUAL INTEGRATION |
| 1137 | 01072375ECD7.D | BKL0723-BLK1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1158 | 01072376ECD7.D | BKL0723-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1219 | 01072377ECD7.D | BKL0723-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1240 | 01072378ECD7.D | BKL0723-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1301 | 01072379ECD7.D | 22L0329-21 | | 1 | NO MANUAL INTEGRATION |
| 1322 | 01072380ECD7.D | 22L0329-22 | | 1 | Aroclor-1248 [2C], Aroclor-1254 [2C], |
| 1344 | 01072381ECD7.D | 22L0329-23 | | 1 | Aroclor-1248 [2C], Aroclor-1254 [2C], |
| 1405 | 01072382ECD7.D | 22L0329-24 | | 1 | Aroclor-1248 [2C], Aroclor-1254 [2C], |
| 1426 | 01072383ECD7.D | 22L0329-25 | | 1 | Aroclor-1248 [2C], Aroclor-1254 [2C], |
| 1447 | 01072384ECD7.D | 22L0329-26 | | 1 | Aroclor-1248 [2C], |
| 1508 | 01072385ECD7.D | 22L0329-27 | | 1 | Aroclor-1248 [2C], |
| 1529 | 01072386ECD7.D | 22L0329-28 | | 1 | NO MANUAL INTEGRATION |
| 1550 | 01072387ECD7.D | 22L0329-29 | | 1 | Aroclor-1248 [2C], |
| 1611 | 01072388ECD7.D | 22L0329-30 | | 1 | Aroclor-1248 [2C], |
| 1632 | 01072389ECD7.D | AR1254CCVB | | 1 | Aroclor-1254 [2C], |
| 1653 | 01072390ECD7.D | AR1660CCVC | | 1 | NO MANUAL INTEGRATION |
| 1714 | 01072391ECD7.D | 22L0329-31 | | 1 | NO MANUAL INTEGRATION |
| 1735 | 01072392ECD7.D | 22L0329-32 | | 1 | Aroclor-1248 [2C], |
| 1756 | 01072393ECD7.D | 22L0329-33 | | 1 | Aroclor-1248 [2C], |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230107.b\230107.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1818 | 01072394ECD7.D | 22L0329-34 | | 1 | Aroclor-1248 [2C], |
| 1839 | 01072395ECD7.D | 22L0329-35 | | 1 | NO MANUAL INTEGRATION |
| 1900 | 01072396ECD7.D | 22L0329-36 | | 1 | NO MANUAL INTEGRATION |
| 1921 | 01072397ECD7.D | 22L0329-37 | | 1 | NO MANUAL INTEGRATION |
| 1942 | 01072398ECD7.D | 22L0329-38 | | 1 | NO MANUAL INTEGRATION |
| 2003 | 010723990ECD7.D | BKL0728-MS1 | | 1 | NO MANUAL INTEGRATION |
| 2024 | 010723991ECD7.D | BKL0728-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 2045 | 010723992ECD7.D | 22L0329-39 | | 1 | NO MANUAL INTEGRATION |
| 2106 | 010723993ECD7.D | 22L0329-40 | | 1 | NO MANUAL INTEGRATION |
| 2127 | 010723994ECD7.D | AR1248CCVD | | 1 | NO MANUAL INTEGRATION |
| 2148 | 010723995ECD7.D | AR1660CCVE | | 1 | NO MANUAL INTEGRATION |

Security Status Report

Date: 11-Jan-2023 16:17

| | | |
|---|---|---|
| 01072301ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072302ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072303ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072304ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072305ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072306ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072307ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072308ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072309ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072310ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072311ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072312ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072313ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072314ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072315ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072316ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072317ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072318ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072319ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072320ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072321ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072322ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072323ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072324ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072325ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072326ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072327ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072328ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072329ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072330ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072331ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072332ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
| 01072333ECD7.D | Data Locked | richardl, 11-Jan-2023 16:17 |
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Security Status Report

Date: 11-Jan-2023 16:23

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**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## Dual Column

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Sample Name | Lab Sample ID | Column 1 File ID | Column 2 File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|---|
| Initial Cal Check | SLA0129-ICV1 | 01092302ECD7.D | 01092302ECD7.D | NA | 01/09/23 09:24 |
| Initial Cal Check | SLA0129-ICV2 | 01092303ECD7.D | 01092303ECD7.D | NA | 01/09/23 09:46 |
| Calibration Check | SLA0129-CCV1 | 01092318ECD7.D | 01092318ECD7.D | NA | 01/09/23 15:02 |
| Calibration Check | SLA0129-CCV2 | 01092319ECD7.D | 01092319ECD7.D | NA | 01/09/23 15:23 |
| Calibration Check | SLA0129-CCV3 | 01092332ECD7.D | 01092332ECD7.D | NA | 01/09/23 19:57 |
| Calibration Check | SLA0129-CCV4 | 01092333ECD7.D | 01092333ECD7.D | NA | 01/09/23 20:19 |
| Calibration Check | SLA0129-CCV5 | 01092344ECD7.D | 01092344ECD7.D | NA | 01/10/23 00:10 |
| Calibration Check | SLA0129-CCV6 | 01092345ECD7.D | 01092345ECD7.D | NA | 01/10/23 00:31 |
| Calibration Check | SLA0129-CCV7 | 01092353ECD7.D | 01092353ECD7.D | NA | 01/10/23 03:20 |
| Calibration Check | SLA0129-CCV8 | 01092354ECD7.D | 01092354ECD7.D | NA | 01/10/23 03:41 |
| Blank | BKL0687-BLK1 | 01092355ECD7.D | 01092355ECD7.D | Solid | 01/10/23 04:02 |
| LCS | BKL0687-BS1 | 01092356ECD7.D | 01092356ECD7.D | Solid | 01/10/23 04:23 |
| LCS Dup | BKL0687-BSD1 | 01092357ECD7.D | 01092357ECD7.D | Solid | 01/10/23 04:44 |
| Reference | BKL0687-SRM1 | 01092358ECD7.D | 01092358ECD7.D | Solid | 01/10/23 05:05 |
| LDW22-IT799A | 22L0329-01 | 01092359ECD7.D | 01092359ECD7.D | Solid | 01/10/23 05:26 |
| LDW22-IT799B | 22L0329-02 | 01092360ECD7.D | 01092360ECD7.D | Solid | 01/10/23 05:47 |
| LDW22-IT799C | 22L0329-03 | 01092361ECD7.D | 01092361ECD7.D | Solid | 01/10/23 06:08 |
| LDW22-IT799D | 22L0329-04 | 01092362ECD7.D | 01092362ECD7.D | Solid | 01/10/23 06:29 |
| LDW22-IT799E | 22L0329-05 | 01092363ECD7.D | 01092363ECD7.D | Solid | 01/10/23 06:51 |
| LDW22-IT799F | 22L0329-06 | 01092364ECD7.D | 01092364ECD7.D | Solid | 01/10/23 07:12 |
| LDW22-SC788B | 22L0329-07 | 01092365ECD7.D | 01092365ECD7.D | Solid | 01/10/23 07:33 |
| LDW22-SC788C | 22L0329-08 | 01092366ECD7.D | 01092366ECD7.D | Solid | 01/10/23 07:54 |
| LDW22-SC788D | 22L0329-09 | 01092367ECD7.D | 01092367ECD7.D | Solid | 01/10/23 08:15 |
| LDW22-SC788E | 22L0329-10 | 01092368ECD7.D | 01092368ECD7.D | Solid | 01/10/23 08:36 |
| Calibration Check | SLA0129-CCV9 | 01092369ECD7.D | 01092369ECD7.D | NA | 01/10/23 08:57 |
| Calibration Check | SLA0129-CCVA | 01092370ECD7.D | 01092370ECD7.D | NA | 01/10/23 09:18 |
| LDW22-SC788E-FD | 22L0329-11 | 01092371ECD7.D | 01092371ECD7.D | Solid | 01/10/23 09:39 |
| LDW22-SC788H | 22L0329-14 | 01092374ECD7.D | 01092374ECD7.D | Solid | 01/10/23 10:42 |
| LDW22-IT791A | 22L0329-15 | 01092375ECD7.D | 01092375ECD7.D | Solid | 01/10/23 11:04 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## Dual Column

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Sample Name | Lab Sample ID | Column 1 File ID | Column 2 File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|---|
| LDW22-IT791B | 22L0329-16 | 01092376ECD7.D | 01092376ECD7.D | Solid | 01/10/23 11:25 |
| LDW22-IT791B | BKL0687-MS1 | 01092377ECD7.D | 01092377ECD7.D | Solid | 01/10/23 11:46 |
| LDW22-IT791B | BKL0687-MSD1 | 01092378ECD7.D | 01092378ECD7.D | Solid | 01/10/23 12:07 |
| LDW22-IT791C | 22L0329-17 | 01092379ECD7.D | 01092379ECD7.D | Solid | 01/10/23 12:28 |
| LDW22-IT791D | 22L0329-18 | 01092380ECD7.D | 01092380ECD7.D | Solid | 01/10/23 12:49 |
| LDW22-IT791E | 22L0329-19 | 01092381ECD7.D | 01092381ECD7.D | Solid | 01/10/23 13:10 |
| LDW22-IT791F | 22L0329-20 | 01092382ECD7.D | 01092382ECD7.D | Solid | 01/10/23 13:31 |
| Calibration Check | SLA0129-CCVB | 01092383ECD7.D | 01092383ECD7.D | NA | 01/10/23 13:52 |
| Calibration Check | SLA0129-CCVC | 01092384ECD7.D | 01092384ECD7.D | NA | 01/10/23 14:13 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

Printed: 1/13/2023 4:23:31PM

# ANALYSIS SEQUENCE

**SLA0129**

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

| Lab Number | Sample Name | Analysis | Container | Order | STD ID | ISTD ID | Analyzed | Comments |
|---|---|---|---|---|---|---|---|---|
| SLA0129-ICV1 | AR1254ICV1 | QC | | 1 | K006957 | K006953 | | |
| SLA0129-ICV2 | AR1660ICV2 | QC | | 2 | K006954 | K006953 | | |
| BKL0583-BLK1 | Blank | QC | | 3 | | K006953 | | |
| BKL0583-BS1 | LCS | QC | | 4 | | K006953 | | |
| BKL0583-BSD1 | LCS Dup | QC | | 5 | | K006953 | | |
| BKL0583-SRM1 | Reference | QC | | 6 | | K006953 | | |
| 22L0307-41 | LDW22-SC804G | 8082A PCB Solid 4 | B 01 | 7 | | K006953 | | |
| 22L0307-42 | LDW22-SC804H | 8082A PCB Solid 4 | B 01 | 8 | | K006953 | | |
| 22L0307-43 | LDW22-SC752A | 8082A PCB Solid 4 | B 01 | 9 | | K006953 | | |
| 22L0307-44 | LDW22-SC752B | 8082A PCB Solid 4 | B 01 | 10 | | K006953 | | |
| 22L0307-45 | LDW22-SC752C | 8082A PCB Solid 4 | B 01 | 11 | | K006953 | | |
| 22L0307-46 | LDW22-SC752D | 8082A PCB Solid 4 | B 01 | 12 | | K006953 | | |
| 22L0307-47 | LDW22-SC752E | 8082A PCB Solid 4 | B 01 | 13 | | K006953 | | |
| 22L0307-48 | LDW22-SC752F | 8082A PCB Solid 4 | B 01 | 14 | | K006953 | | |
| 22L0307-49 | LDW22-SC752G | 8082A PCB Solid 4 | B 01 | 15 | | K006953 | | |
| 22L0307-50 | LDW22-SC752H | 8082A PCB Solid 4 | B 01 | 16 | | K006953 | | |
| BKL0583-MS1 | Matrix Spike | QC | | 17 | | K006953 | | |
| BKL0583-MSD1 | Matrix Spike Dup | QC | | 18 | | K006953 | | |
| 22L0307-51 | LDW22-SC752B-FD | 8082A PCB Solid 4 | B 01 | 19 | | K006953 | | |
| 22L0307-52 | LDW22-SC800A | 8082A PCB Solid 4 | B 01 | 20 | | K006953 | | |
| 22L0307-53 | LDW22-SC800B | 8082A PCB Solid 4 | B 01 | 21 | | K006953 | | |
| 22L0307-54 | LDW22-SC800C | 8082A PCB Solid 4 | B 01 | 22 | | K006953 | | |

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## ANALYSIS SEQUENCE

**SLA0129**

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

| Lab Number | Sample Name | Analysis | Container | Order | STD ID | ISTD ID | Analyzed | Comments |
|---|---|---|---|---|---|---|---|---|
| 22L0307-55 | LDW22-SC800D | 8082A PCB Solid 4 | B 01 | 23 | | K006953 | | |
| 22L0307-56 | LDW22-SC800E | 8082A PCB Solid 4 | B 01 | 24 | | K006953 | | |
| 22L0307-58 | LDW22-SC800G | 8082A PCB Solid 4 | B 01 | 25 | | K006953 | | |
| 22L0307-59 | LDW22-SC800H | 8082A PCB Solid 4 | B 01 | 26 | | K006953 | | |
| SLA0129-CCV1 | AR1248CCV1 | QC | | 27 | K006956 | K006953 | | |
| SLA0129-CCV2 | AR1660CCV2 | QC | | 28 | K006954 | K006953 | | |
| 22L0473-11 | LDW21-IT632A | 8082A PCB Solid 4 | A 01 | 29 | | K006953 | | |
| 22L0246-01 | LDW22-SC778B | 8082A PCB Solid 4 | B 01 | 30 | | K006953 | | |
| 22L0246-18 | LDW22-SC779D | 8082A PCB Solid 4 | B 01 | 31 | | K006953 | | |
| 22L0246-19 | LDW22-SC779D-FD | 8082A PCB Solid 4 | B 01 | 32 | | K006953 | | |
| 22L0246-20 | LDW22-SC779E | 8082A PCB Solid 4 | B 01 | 33 | | K006953 | | |
| 22L0246-28 | LDW22-SC777C | 8082A PCB Solid 4 | B 01 | 34 | | K006953 | | |
| 22L0246-29 | LDW22-SC777D | 8082A PCB Solid 4 | B 01 | 35 | | K006953 | | |
| SLA0129-CCV3 | AR1242CCV3 | QC | | 36 | K006955 | K006953 | | |
| SLA0129-CCV4 | AR1660CCV4 | QC | | 37 | K006954 | K006953 | | |
| 22L0246-35 | LDW22-SC759C | 8082A PCB Solid 4 | B 01 | 38 | | K006953 | | |
| 22L0246-36 | LDW22-SC759D | 8082A PCB Solid 4 | B 01 | 39 | | K006953 | | |
| 22L0246-34 | LDW22-SC777I | 8082A PCB Solid 4 | B 01 | 40 | | K006953 | | |
| 22L0246-04 | LDW22-SC778D | 8082A PCB Solid 4 | B 01 | 41 | | K006953 | | |
| 22L0246-02 | LDW22-SC778C | 8082A PCB Solid 4 | B 01 | 42 | | K006953 | | |
| 22L0246-03 | LDW22-SC778C-FD | 8082A PCB Solid 4 | B 01 | 43 | | K006953 | | |
| SLA0129-CCV5 | AR1254CCV5 | QC | | 44 | K006957 | K006953 | | |

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## ANALYSIS SEQUENCE

**SLA0129**

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

| Lab Number | Sample Name | Analysis | Container | Order | STD ID | ISTD ID | Analyzed | Comments |
|---|---|---|---|---|---|---|---|---|
| SLA0129-CCV6 | AR1660CCV6 | QC | | 45 | K006954 | K006953 | | |
| BKL0687-BLK1 | Blank | QC | | 46 | | K006953 | | |
| BKL0687-BS1 | LCS | QC | | 47 | | K006953 | | |
| BKL0687-BSD1 | LCS Dup | QC | | 48 | | K006953 | | |
| BKL0687-SRM1 | Reference | QC | | 49 | | K006953 | | |
| 22L0329-01 | LDW22-IT799A | 8082A PCB Solid 4 | B 01 | 50 | | K006953 | | |
| 22L0329-02 | LDW22-IT799B | 8082A PCB Solid 4 | B 01 | 51 | | K006953 | | |
| 22L0329-03 | LDW22-IT799C | 8082A PCB Solid 4 | A 01 | 52 | | K006953 | | |
| 22L0329-04 | LDW22-IT799D | 8082A PCB Solid 4 | A 01 | 53 | | K006953 | | |
| 22L0329-05 | LDW22-IT799E | 8082A PCB Solid 4 | A 01 | 54 | | K006953 | | |
| 22L0329-06 | LDW22-IT799F | 8082A PCB Solid 4 | B 01 | 55 | | K006953 | | |
| 22L0329-07 | LDW22-SC788B | 8082A PCB Solid 4 | A 01 | 56 | | K006953 | | |
| 22L0329-08 | LDW22-SC788C | 8082A PCB Solid 4 | A 01 | 57 | | K006953 | | |
| 22L0329-09 | LDW22-SC788D | 8082A PCB Solid 4 | B 01 | 58 | | K006953 | | |
| 22L0329-10 | LDW22-SC788E | 8082A PCB Solid 4 | A 01 | 59 | | K006953 | | |
| SLA0129-CCV7 | AR1248CCV7 | QC | | 60 | K006956 | K006953 | | |
| SLA0129-CCV8 | AR1660CCV8 | QC | | 61 | K006954 | K006953 | | |
| 22L0329-11 | LDW22-SC788E-FD | 8082A PCB Solid 4 | B 01 | 62 | | K006953 | | |
| 22L0329-14 | LDW22-SC788H | 8082A PCB Solid 4 | B 01 | 63 | | K006953 | | |
| 22L0329-15 | LDW22-IT791A | 8082A PCB Solid 4 | B 01 | 64 | | K006953 | | |
| 22L0329-16 | LDW22-IT791B | 8082A PCB Solid 4 | B 01 | 65 | | K006953 | | |
| BKL0687-MS1 | Matrix Spike | QC | | 66 | | K006953 | | |

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## ANALYSIS SEQUENCE

**SLA0129**

Instrument: ECD7 Element Column ID:
Calibration ID: FL00010

| Lab Number | Sample Name | Analysis | Container | Order | STD ID | ISTD ID | Analyzed | Comments |
|---|---|---|---|---|---|---|---|---|
| BKL0687-MSD1 | Matrix Spike Dup | QC | | 67 | | K006953 | | |
| 22L0329-17 | LDW22-IT791C | 8082A PCB Solid 4 | B 01 | 68 | | K006953 | | |
| 22L0329-18 | LDW22-IT791D | 8082A PCB Solid 4 | B 01 | 69 | | K006953 | | |
| 22L0329-19 | LDW22-IT791E | 8082A PCB Solid 4 | B 01 | 70 | | K006953 | | |
| 22L0329-20 | LDW22-IT791F | 8082A PCB Solid 4 | B 01 | 71 | | K006953 | | |
| SLA0129-CCV9 | AR1242CCV9 | QC | | 72 | K006955 | K006953 | | |
| SLA0129-CCVA | AR1660CCVA | QC | | 73 | K006954 | K006953 | | |

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230109.b

ARI Job No.: AR12  Method: PCB.m  Instrument: ecd7.i  Date: 09-JAN-2023

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0924 | 01092302ECD7.D | AR1254I-CV1 | | 1 | NO MANUAL INTEGRATION |
| 0946 | 01092303ECD7.D | AR1660-ICV2 | | 1 | NO MANUAL INTEGRATION |
| 1007 | 01092304ECD7.D | BKL0583-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1028 | 01092305ECD7.D | BKL0583-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1049 | 01092306ECD7.D | BKL0583-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1110 | 01092307ECD7.D | BKL0583-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1131 | 01092308ECD7.D | 22L0307-41 | | 1 | NO MANUAL INTEGRATION |
| 1152 | 01092309ECD7.D | 22L0307-42 | | 1 | NO MANUAL INTEGRATION |
| 1213 | 01092310ECD7.D | 22L0307-43 | | 1 | NO MANUAL INTEGRATION |
| 1234 | 01092311ECD7.D | 22L0307-44 | | 1 | NO MANUAL INTEGRATION |
| 1255 | 01092312ECD7.D | 22L0307-45 | | 1 | NO MANUAL INTEGRATION |
| 1317 | 01092313ECD7.D | 22L0307-46 | | 1 | NO MANUAL INTEGRATION |
| 1338 | 01092314ECD7.D | 22L0307-47 | | 1 | NO MANUAL INTEGRATION |
| 1359 | 01092315ECD7.D | 22L0307-48 | | 1 | NO MANUAL INTEGRATION |
| 1420 | 01092316ECD7.D | 22L0307-49 | | 1 | NO MANUAL INTEGRATION |
| 1441 | 01092317ECD7.D | 22L0307-50 | | 1 | NO MANUAL INTEGRATION |
| 1502 | 01092318ECD7.D | AR1248-CCV1 | | 1 | Aroclor-1248, |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230109.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1523 | 01092319ECD7.D | AR1660-CCV2 | | 1 | NO MANUAL INTEGRATION |
| 1544 | 01092320ECD7.D | BKL0583-MS1 | | 1 | NO MANUAL INTEGRATION |
| 1605 | 01092321ECD7.D | BKL0583-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1627 | 01092322ECD7.D | 22L0307-51 | | 1 | NO MANUAL INTEGRATION |
| 1648 | 01092323ECD7.D | 22L0307-52 | | 1 | Aroclor-1254, |
| 1709 | 01092324ECD7.D | 22L0307-53 | | 1 | NO MANUAL INTEGRATION |
| 1730 | 01092325ECD7.D | 22L0307-54 | | 1 | NO MANUAL INTEGRATION |
| 1751 | 01092326ECD7.D | 22L0307-55 | | 1 | Aroclor-1254, |
| 1812 | 01092327ECD7.D | 22L0307-56 | | 1 | Aroclor-1254, |
| 1833 | 01092328ECD7.D | 22L0307-57 | | 1 | Aroclor-1254, |
| 1854 | 01092329ECD7.D | 22L0307-58 | | 1 | Aroclor-1254, |
| 1915 | 01092330ECD7.D | 22L0307-59 | | 1 | Aroclor-1254, |
| 1936 | 01092331ECD7.D | 22L0307-60 | | 1 | NO MANUAL INTEGRATION |
| 1957 | 01092332ECD7.D | AR1242-CCV3 | | 1 | NO MANUAL INTEGRATION |
| 2019 | 01092333ECD7.D | AR1660-CCV4 | | 1 | NO MANUAL INTEGRATION |
| 2040 | 01092334ECD7.D | 22L0633-01 | | 1 | NO MANUAL INTEGRATION |
| 2101 | 01092335ECD7.D | 22L0473-11 | | 10 | NO MANUAL INTEGRATION |
| 2122 | 01092336ECD7.D | 22L0246-01 | | 10 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230109.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 2143 | 01092337ECD7.D | 22L0246-18 | | 5 | NO MANUAL INTEGRATION |
| 2204 | 01092338ECD7.D | 22L0246-19 | | 5 | NO MANUAL INTEGRATION |
| 2225 | 01092339ECD7.D | 22L0246-20 | | 10 | NO MANUAL INTEGRATION |
| 2246 | 01092340ECD7.D | 22L0246-21 | | 5 | NO MANUAL INTEGRATION |
| 2307 | 01092341ECD7.D | 22L0246-22 | | 5 | NO MANUAL INTEGRATION |
| 2328 | 01092342ECD7.D | 22L0246-28 | | 5 | Decachlorobiphenyl, |
| 2349 | 01092343ECD7.D | 22L0246-29 | | 5 | NO MANUAL INTEGRATION |
| 0010 | 01092344ECD7.D | AR1254-CCV5 | | 1 | NO MANUAL INTEGRATION |
| 0031 | 01092345ECD7.D | AR1660-CCV6 | | 1 | NO MANUAL INTEGRATION |
| 0052 | 01092346ECD7.D | 22L0246-35 | | 5 | NO MANUAL INTEGRATION |
| 0113 | 01092347ECD7.D | 22L0246-36 | | 5 | NO MANUAL INTEGRATION |
| 0134 | 01092348ECD7.D | 22L0246-34 | | 5 | NO MANUAL INTEGRATION |
| 0156 | 01092349ECD7.D | 22L0246-01 | | 10 | NO MANUAL INTEGRATION |
| 0217 | 01092350ECD7.D | 22L0246-04 | | 5 | NO MANUAL INTEGRATION |
| 0238 | 01092351ECD7.D | 22L0246-02 | | 5 | NO MANUAL INTEGRATION |
| 0259 | 01092352ECD7.D | 22L0246-03 | | 5 | NO MANUAL INTEGRATION |
| 0320 | 01092353ECD7.D | AR1248-CCV7 | | 1 | NO MANUAL INTEGRATION |
| 0341 | 01092354ECD7.D | AR1660-CCV8 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230109.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0402 | 01092355ECD7.D | BKL0687-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0423 | 01092356ECD7.D | BKL0687-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0444 | 01092357ECD7.D | BKL0687-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0505 | 01092358ECD7.D | BKL0687-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 0526 | 01092359ECD7.D | 22L0329-01 | | 1 | NO MANUAL INTEGRATION |
| 0547 | 01092360ECD7.D | 22L0329-02 | | 1 | Aroclor-1254, |
| 0608 | 01092361ECD7.D | 22L0329-03 | | 1 | NO MANUAL INTEGRATION |
| 0629 | 01092362ECD7.D | 22L0329-04 | | 1 | Aroclor-1254, |
| 0651 | 01092363ECD7.D | 22L0329-05 | | 1 | NO MANUAL INTEGRATION |
| 0712 | 01092364ECD7.D | 22L0329-06 | | 1 | Aroclor-1254, |
| 0733 | 01092365ECD7.D | 22L0329-07 | | 1 | Aroclor-1254, |
| 0754 | 01092366ECD7.D | 22L0329-08 | | 1 | Aroclor-1254, |
| 0815 | 01092367ECD7.D | 22L0329-09 | | 1 | Aroclor-1254, |
| 0836 | 01092368ECD7.D | 22L0329-10 | | 1 | Aroclor-1254, |
| 0857 | 01092369ECD7.D | AR1242C-CCV9 | | 1 | NO MANUAL INTEGRATION |
| 0918 | 01092370ECD7.D | AR1660-CCVA | | 1 | NO MANUAL INTEGRATION |
| 0939 | 01092371ECD7.D | 22L0329-11 | | 1 | Aroclor-1254, |
| 1000 | 01092372ECD7.D | 22L0329-12 | | 1 | Aroclor-1254, |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230109.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1021 | 01092373ECD7.D | 22L0329-13 | | 1 | NO MANUAL INTEGRATION |
| 1042 | 01092374ECD7.D | 22L0329-14 | | 1 | Aroclor-1254, |
| 1104 | 01092375ECD7.D | 22L0329-15 | | 1 | NO MANUAL INTEGRATION |
| 1125 | 01092376ECD7.D | 22L0329-16 | | 1 | NO MANUAL INTEGRATION |
| 1146 | 01092377ECD7.D | BKL0687-MS1 | | 1 | NO MANUAL INTEGRATION |
| 1207 | 01092378ECD7.D | BKL0687-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1228 | 01092379ECD7.D | 22L0329-17 | | 1 | NO MANUAL INTEGRATION |
| 1249 | 01092380ECD7.D | 22L0329-18 | | 1 | NO MANUAL INTEGRATION |
| 1310 | 01092381ECD7.D | 22L0329-19 | | 1 | NO MANUAL INTEGRATION |
| 1331 | 01092382ECD7.D | 22L0329-20 | | 1 | NO MANUAL INTEGRATION |
| 1352 | 01092383ECD7.D | AR1242-CCVB | | 1 | Aroclor-1242, |
| 1413 | 01092384ECD7.D | AR1660-CCVC | | 1 | NO MANUAL INTEGRATION |

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230109.b

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 1 | 09-JAN-2023 09:24 | 01092302ECD7.D | 1 | AR1254I-CV1 | |
| 2 | 09-JAN-2023 09:46 | 01092303ECD7.D | 1 | AR1660-ICV2 | |
| 3 | 09-JAN-2023 10:07 | 01092304ECD7.D | 1 | BKL0583-BLK1 | |
| 4 | 09-JAN-2023 10:28 | 01092305ECD7.D | 1 | BKL0583-BS1 | |
| 5 | 09-JAN-2023 10:49 | 01092306ECD7.D | 1 | BKL0583-BSD1 | |
| 6 | 09-JAN-2023 11:10 | 01092307ECD7.D | 1 | BKL0583-SRM1 | |
| 7 | 09-JAN-2023 11:31 | 01092308ECD7.D | 1 | 22L0307-41 | |
| 8 | 09-JAN-2023 11:52 | 01092309ECD7.D | 1 | 22L0307-42 | |
| 9 | 09-JAN-2023 12:13 | 01092310ECD7.D | 1 | 22L0307-43 | |
| 10 | 09-JAN-2023 12:34 | 01092311ECD7.D | 1 | 22L0307-44 | |
| 11 | 09-JAN-2023 12:55 | 01092312ECD7.D | 1 | 22L0307-45 | |
| 12 | 09-JAN-2023 13:17 | 01092313ECD7.D | 1 | 22L0307-46 | |
| 13 | 09-JAN-2023 13:38 | 01092314ECD7.D | 1 | 22L0307-47 | |
| 14 | 09-JAN-2023 13:59 | 01092315ECD7.D | 1 | 22L0307-48 | |
| 15 | 09-JAN-2023 14:20 | 01092316ECD7.D | 1 | 22L0307-49 | |
| 16 | 09-JAN-2023 14:41 | 01092317ECD7.D | 1 | 22L0307-50 | |
| 17 | 09-JAN-2023 15:02 | 01092318ECD7.D | 1 | AR1248-CCV1 | |
| 18 | 09-JAN-2023 15:23 | 01092319ECD7.D | 1 | AR1660-CCV2 | |
| 19 | 09-JAN-2023 15:44 | 01092320ECD7.D | 1 | BKL0583-MS1 | |
| 20 | 09-JAN-2023 16:05 | 01092321ECD7.D | 1 | BKL0583-MSD1 | |
| 21 | 09-JAN-2023 16:27 | 01092322ECD7.D | 1 | 22L0307-51 | |
| 22 | 09-JAN-2023 16:48 | 01092323ECD7.D | 1 | 22L0307-52 | |
| 23 | 09-JAN-2023 17:09 | 01092324ECD7.D | 1 | 22L0307-53 | |
| 24 | 09-JAN-2023 17:30 | 01092325ECD7.D | 1 | 22L0307-54 | |
| 25 | 09-JAN-2023 17:51 | 01092326ECD7.D | 1 | 22L0307-55 | |
| 26 | 09-JAN-2023 18:12 | 01092327ECD7.D | 1 | 22L0307-56 | |
| 27 | 09-JAN-2023 18:33 | 01092328ECD7.D | 1 | 22L0307-57 | |
| 28 | 09-JAN-2023 18:54 | 01092329ECD7.D | 1 | 22L0307-58 | |
| 29 | 09-JAN-2023 19:15 | 01092330ECD7.D | 1 | 22L0307-59 | |
| 30 | 09-JAN-2023 19:36 | 01092331ECD7.D | 1 | 22L0307-60 | |
| 31 | 09-JAN-2023 19:57 | 01092332ECD7.D | 1 | AR1242-CCV3 | |
| 32 | 09-JAN-2023 20:19 | 01092333ECD7.D | 1 | AR1660-CCV4 | |
| 33 | 09-JAN-2023 20:40 | 01092334ECD7.D | 1 | 22L0633-01 | |
| 34 | 09-JAN-2023 21:01 | 01092335ECD7.D | 10 | 22L0473-11 | |
| 35 | 09-JAN-2023 21:22 | 01092336ECD7.D | 10 | 22L0246-01 | |
| 36 | 09-JAN-2023 21:43 | 01092337ECD7.D | 5 | 22L0246-18 | |
| 37 | 09-JAN-2023 22:04 | 01092338ECD7.D | 5 | 22L0246-19 | |
| 38 | 09-JAN-2023 22:25 | 01092339ECD7.D | 10 | 22L0246-20 | |
| 39 | 09-JAN-2023 22:46 | 01092340ECD7.D | 5 | 22L0246-21 | |
| 40 | 09-JAN-2023 23:07 | 01092341ECD7.D | 5 | 22L0246-22 | |
| 41 | 09-JAN-2023 23:28 | 01092342ECD7.D | 5 | 22L0246-28 | |
| 42 | 09-JAN-2023 23:49 | 01092343ECD7.D | 5 | 22L0246-29 | |
| 43 | 10-JAN-2023 00:10 | 01092344ECD7.D | 1 | AR1254-CCV5 | |
| 44 | 10-JAN-2023 00:31 | 01092345ECD7.D | 1 | AR1660-CCV6 | |
| 45 | 10-JAN-2023 00:52 | 01092346ECD7.D | 5 | 22L0246-35 | |
| 46 | 10-JAN-2023 01:13 | 01092347ECD7.D | 5 | 22L0246-36 | |
| 47 | 10-JAN-2023 01:34 | 01092348ECD7.D | 5 | 22L0246-34 | |
| 48 | 10-JAN-2023 01:56 | 01092349ECD7.D | 10 | 22L0246-01 | |
| 49 | 10-JAN-2023 02:17 | 01092350ECD7.D | 5 | 22L0246-04 | |
| 50 | 10-JAN-2023 02:38 | 01092351ECD7.D | 5 | 22L0246-02 | |

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 51 | 10-JAN-2023 02:59 | 01092352ECD7.D | 5 | 22L0246-03 | |
| 52 | 10-JAN-2023 03:20 | 01092353ECD7.D | 1 | AR1248-CCV7 | |
| 53 | 10-JAN-2023 03:41 | 01092354ECD7.D | 1 | AR1660-CCV8 | |
| 54 | 10-JAN-2023 04:02 | 01092355ECD7.D | 1 | BKL0687-BLK1 | |
| 55 | 10-JAN-2023 04:23 | 01092356ECD7.D | 1 | BKL0687-BS1 | |
| 56 | 10-JAN-2023 04:44 | 01092357ECD7.D | 1 | BKL0687-BSD1 | |
| 57 | 10-JAN-2023 05:05 | 01092358ECD7.D | 1 | BKL0687-SRM1 | |
| 58 | 10-JAN-2023 05:26 | 01092359ECD7.D | 1 | 22L0329-01 | |
| 59 | 10-JAN-2023 05:47 | 01092360ECD7.D | 1 | 22L0329-02 | |
| 60 | 10-JAN-2023 06:08 | 01092361ECD7.D | 1 | 22L0329-03 | |
| 61 | 10-JAN-2023 06:29 | 01092362ECD7.D | 1 | 22L0329-04 | |
| 62 | 10-JAN-2023 06:51 | 01092363ECD7.D | 1 | 22L0329-05 | |
| 63 | 10-JAN-2023 07:12 | 01092364ECD7.D | 1 | 22L0329-06 | |
| 64 | 10-JAN-2023 07:33 | 01092365ECD7.D | 1 | 22L0329-07 | |
| 65 | 10-JAN-2023 07:54 | 01092366ECD7.D | 1 | 22L0329-08 | |
| 66 | 10-JAN-2023 08:15 | 01092367ECD7.D | 1 | 22L0329-09 | |
| 67 | 10-JAN-2023 08:36 | 01092368ECD7.D | 1 | 22L0329-10 | |
| 68 | 10-JAN-2023 08:57 | 01092369ECD7.D | 1 | AR1242C-CCV9 | |
| 69 | 10-JAN-2023 09:18 | 01092370ECD7.D | 1 | AR1660-CCVA | |
| 70 | 10-JAN-2023 09:39 | 01092371ECD7.D | 1 | 22L0329-11 | |
| 71 | 10-JAN-2023 10:00 | 01092372ECD7.D | 1 | 22L0329-12 | |
| 72 | 10-JAN-2023 10:21 | 01092373ECD7.D | 1 | 22L0329-13 | |
| 73 | 10-JAN-2023 10:42 | 01092374ECD7.D | 1 | 22L0329-14 | |
| 74 | 10-JAN-2023 11:04 | 01092375ECD7.D | 1 | 22L0329-15 | |
| 75 | 10-JAN-2023 11:25 | 01092376ECD7.D | 1 | 22L0329-16 | |
| 76 | 10-JAN-2023 11:46 | 01092377ECD7.D | 1 | BKL0687-MS1 | |
| 77 | 10-JAN-2023 12:07 | 01092378ECD7.D | 1 | BKL0687-MSD1 | |
| 78 | 10-JAN-2023 12:28 | 01092379ECD7.D | 1 | 22L0329-17 | |
| 79 | 10-JAN-2023 12:49 | 01092380ECD7.D | 1 | 22L0329-18 | |
| 80 | 10-JAN-2023 13:10 | 01092381ECD7.D | 1 | 22L0329-19 | |
| 81 | 10-JAN-2023 13:31 | 01092382ECD7.D | 1 | 22L0329-20 | |
| 82 | 10-JAN-2023 13:52 | 01092383ECD7.D | 1 | AR1242-CCVB | |
| 83 | 10-JAN-2023 14:13 | 01092384ECD7.D | 1 | AR1660-CCVC | |

Security Status Report

Date: 13-Jan-2023 16:21

| | | |
|---|---|---|
| 01092302ECD7.D | Data Locked | yev, 13- |
| 01092303ECD7.D | Data Locked | yev, 13- |
| 01092304ECD7.D | Data Locked | yev, 13- |
| 01092305ECD7.D | Data Locked | yev, 13- |
| 01092306ECD7.D | Data Locked | yev, 13- |
| 01092307ECD7.D | Data Locked | yev, 13- |
| 01092308ECD7.D | Data Locked | yev, 13- |
| 01092309ECD7.D | Data Locked | yev, 13- |
| 01092310ECD7.D | Data Locked | yev, 13- |
| 01092311ECD7.D | Data Locked | yev, 13- |
| 01092312ECD7.D | Data Locked | yev, 13- |
| 01092313ECD7.D | Data Locked | yev, 13- |
| 01092314ECD7.D | Data Locked | yev, 13- |
| 01092315ECD7.D | Data Locked | yev, 13- |
| 01092316ECD7.D | Data Locked | yev, 13- |
| 01092317ECD7.D | Data Locked | yev, 13- |
| 01092318ECD7.D | Data Locked | yev, 13- |
| 01092319ECD7.D | Data Locked | yev, 13- |
| 01092320ECD7.D | Data Locked | yev, 13- |
| 01092321ECD7.D | Data Locked | yev, 13- |
| 01092322ECD7.D | Data Locked | yev, 13- |
| 01092323ECD7.D | Data Locked | yev, 13- |
| 01092324ECD7.D | Data Locked | yev, 13- |
| 01092325ECD7.D | Data Locked | yev, 13- |
| 01092326ECD7.D | Data Locked | yev, 13- |
| 01092327ECD7.D | Data Locked | yev, 13- |
| 01092328ECD7.D | Data Locked | yev, 13- |
| 01092329ECD7.D | Data Locked | yev, 13- |
| 01092330ECD7.D | Data Locked | yev, 13- |
| 01092331ECD7.D | Data Locked | yev, 13- |
| 01092332ECD7.D | Data Locked | yev, 13- |
| 01092333ECD7.D | Data Locked | yev, 13- |
| 01092334ECD7.D | Data Locked | yev, 13- |
| 01092335ECD7.D | Data Locked | yev, 13- |
| 01092336ECD7.D | Data Locked | yev, 13- |
| 01092337ECD7.D | Data Locked | yev, 13- |
| 01092338ECD7.D | Data Locked | yev, 13- |
| 01092339ECD7.D | Data Locked | yev, 13- |
| 01092340ECD7.D | Data Locked | yev, 13- |
| 01092341ECD7.D | Data Locked | yev, 13- |
| 01092342ECD7.D | Data Locked | yev, 13- |
| 01092343ECD7.D | Data Locked | yev, 13- |
| 01092344ECD7.D | Data Locked | yev, 13- |
| 01092345ECD7.D | Data Locked | yev, 13- |
| 01092346ECD7.D | Data Locked | yev, 13- |
| 01092347ECD7.D | Data Locked | yev, 13- |
| 01092348ECD7.D | Data Locked | yev, 13- |
| 01092349ECD7.D | Data Locked | yev, 13- |
| 01092350ECD7.D | Data Locked | yev, 13- |
| 01092351ECD7.D | Data Locked | yev, 13- |
| 01092352ECD7.D | Data Locked | yev, 13- |
| 01092353ECD7.D | Data Locked | yev, 13- |
| 01092354ECD7.D | Data Locked | yev, 13- |
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| 01092356ECD7.D | Data Locked | yev, 13- |
| 01092357ECD7.D | Data Locked | yev, 13- |
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| 01092359ECD7.D | Data Locked | yev, 13- |
| 01092360ECD7.D | Data Locked | yev, 13- |
| 01092361ECD7.D | Data Locked | yev, 13- |
| 01092362ECD7.D | Data Locked | yev, 13- |

| | | |
|---|---|---|
| 01092363ECD7.D | Data Locked | yev, 13- |
| 01092364ECD7.D | Data Locked | yev, 13- |
| 01092365ECD7.D | Data Locked | yev, 13- |
| 01092366ECD7.D | Data Locked | yev, 13- |
| 01092367ECD7.D | Data Locked | yev, 13- |
| 01092368ECD7.D | Data Locked | yev, 13- |
| 01092369ECD7.D | Data Locked | yev, 13- |
| 01092370ECD7.D | Data Locked | yev, 13- |
| 01092371ECD7.D | Data Locked | yev, 13- |
| 01092372ECD7.D | Data Locked | yev, 13- |
| 01092373ECD7.D | Data Locked | yev, 13- |
| 01092374ECD7.D | Data Locked | yev, 13- |
| 01092375ECD7.D | Data Locked | yev, 13- |
| 01092376ECD7.D | Data Locked | yev, 13- |
| 01092377ECD7.D | Data Locked | yev, 13- |
| 01092378ECD7.D | Data Locked | yev, 13- |
| 01092379ECD7.D | Data Locked | yev, 13- |
| 01092380ECD7.D | Data Locked | yev, 13- |
| 01092381ECD7.D | Data Locked | yev, 13- |
| 01092382ECD7.D | Data Locked | yev, 13- |
| 01092383ECD7.D | Data Locked | yev, 13- |
| 01092384ECD7.D | Data Locked | yev, 13- |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## Dual Column

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0136 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Sample Name | Lab Sample ID | Column 1 File ID | Column 2 File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|---|
| Initial Cal Check | SLA0136-ICV1 | 01112302ECD7.D | 01112302ECD7.D | NA | 01/11/23 09:17 |
| Initial Cal Check | SLA0136-ICV2 | 01112303ECD7.D | 01112303ECD7.D | NA | 01/11/23 09:38 |
| Calibration Check | SLA0136-CCV1 | 01112317ECD7.D | 01112317ECD7.D | NA | 01/11/23 14:33 |
| Calibration Check | SLA0136-CCV2 | 01112318ECD7.D | 01112318ECD7.D | NA | 01/11/23 14:54 |
| Calibration Check | SLA0136-CCV3 | 01112328ECD7.D | 01112328ECD7.D | NA | 01/11/23 18:24 |
| Calibration Check | SLA0136-CCV4 | 01112329ECD7.D | 01112329ECD7.D | NA | 01/11/23 18:46 |
| Calibration Check | SLA0136-CCV5 | 01112346ECD7.D | 01112346ECD7.D | NA | 01/12/23 00:43 |
| Calibration Check | SLA0136-CCV6 | 01112347ECD7.D | 01112347ECD7.D | NA | 01/12/23 01:04 |
| Calibration Check | SLA0136-CCV7 | 01112359ECD7.D | 01112359ECD7.D | NA | 01/12/23 05:17 |
| Calibration Check | SLA0136-CCV8 | 01112360ECD7.D | 01112360ECD7.D | NA | 01/12/23 05:38 |
| LDW22-SC781H | 22L0329-28 | 01112365ECD7.D | 01112365ECD7.D | Solid | 01/12/23 07:23 |
| LDW22-SC765D | 22L0329-31 | 01112366ECD7.D | 01112366ECD7.D | Solid | 01/12/23 07:45 |
| Calibration Check | SLA0136-CCV9 | 01112374ECD7.D | 01112374ECD7.D | NA | 01/12/23 10:33 |
| Calibration Check | SLA0136-CCVA | 01112375ECD7.D | 01112375ECD7.D | NA | 01/12/23 10:54 |

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# ANALYSIS SEQUENCE

**SLA0136**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/14/2023 1:58:19PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| SLA0136-ICV1 | QC | | 1 | | K006957 | K006953 | | |
| SLA0136-ICV2 | QC | | 2 | | K006954 | K006953 | | |
| BLA0069-BLK1 | QC | | 3 | | | K006953 | | |
| BLA0069-BS1 | QC | | 4 | | | K006953 | | |
| BLA0069-BSD1 | QC | | 5 | | | K006953 | | |
| BLA0069-SRM1 | QC | | 6 | | | K006953 | | |
| 22L0459-01 | 8082A PCB Solid 4 | A 03 | 7 | | | K006953 | Anchor QEA, LLC | |
| 22L0459-02 | 8082A PCB Solid 4 | A 03 | 8 | | | K006953 | Anchor QEA, LLC | |
| 22L0459-03 | 8082A PCB Solid 4 | A 03 | 9 | | | K006953 | Anchor QEA, LLC | |
| BLA0069-MS1 | QC | | 10 | | | K006953 | | |
| BLA0069-MSD1 | QC | | 11 | | | K006953 | | |
| 22L0459-04 | 8082A PCB Solid 4 | A 03 | 12 | | | K006953 | Anchor QEA, LLC | |
| 22L0459-05 | 8082A PCB Solid 4 | A 03 | 13 | | | K006953 | Anchor QEA, LLC | |
| 22L0459-07 | 8082A PCB Solid 4 | A 03 | 14 | | | K006953 | Anchor QEA, LLC | |
| SLA0136-CCV1 | QC | | 15 | | K006956 | K006953 | | |
| SLA0136-CCV2 | QC | | 16 | | K006954 | K006953 | | |
| BKL0612-BLK1 | QC | | 17 | | | K006953 | | |
| BKL0612-BS1 | QC | | 18 | | | K006953 | | |
| BKL0612-BSD1 | QC | | 19 | | | K006953 | | |
| 22L0416-01 | PCB (20 ug/kg) or (MTCA 0. | A 03 | 20 | | | K006953 | Integral Consulting, Inc. | Use this one |
| BKL0612-MS1 | QC | | 21 | | | K006953 | | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0136**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/14/2023 1:58:19PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| BKL0612-MSD1 | QC | | 22 | | | K006953 | | |
| 22L0416-69 | PCB (20 ug/kg) or (MTCA 0. | A 03 | 23 | | | K006953 | Integral Consulting, Inc. | Use this one |
| SLA0136-CCV3 | QC | | 24 | | K006955 | K006953 | | |
| SLA0136-CCV4 | QC | | 25 | | K006954 | K006953 | | |
| BLA0063-BLK1 | QC | | 26 | | | K006953 | | |
| BLA0063-BS1 | QC | | 27 | | | K006953 | | |
| BLA0063-BSD1 | QC | | 28 | | | K006953 | | |
| BLA0063-SRM1 | QC | | 29 | | | K006953 | | |
| 22L0383-01 | 8082A PCB Solid 4 | A 04 | 30 | | | K006953 | Anchor QEA, LLC | |
| 22L0383-02 | 8082A PCB Solid 4 | A 04 | 31 | | | K006953 | Anchor QEA, LLC | |
| 22L0383-03 | 8082A PCB Solid 4 | A 04 | 32 | | | K006953 | Anchor QEA, LLC | |
| BLA0063-MS1 | QC | | 33 | | | K006953 | | |
| BLA0063-MSD1 | QC | | 34 | | | K006953 | | |
| 22L0383-04 | 8082A PCB Solid 4 | A 04 | 35 | | | K006953 | Anchor QEA, LLC | |
| 22L0383-05 | 8082A PCB Solid 4 | A 04 | 36 | | | K006953 | Anchor QEA, LLC | |
| 22L0383-06 | 8082A PCB Solid 4 | A 04 | 37 | | | K006953 | Anchor QEA, LLC | |
| 22L0383-07 | 8082A PCB Solid 4 | A 04 | 38 | | | K006953 | Anchor QEA, LLC | |
| 22L0383-08 | 8082A PCB Solid 4 | A 04 | 39 | | | K006953 | Anchor QEA, LLC | |
| SLA0136-CCV5 | QC | | 40 | | K006957 | K006953 | | |
| SLA0136-CCV6 | QC | | 41 | | K006954 | K006953 | | |
| 22L0417-03 | 8082A PCB Solid 4 | A 03 | 42 | | | K006953 | Anchor QEA, LLC | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0136**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/14/2023 1:58:19PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| 22L0417-04 | 8082A PCB Solid 4 | A 03 | 43 | | | K006953 | Anchor QEA, LLC | |
| 22L0417-05 | 8082A PCB Solid 4 | A 03 | 44 | | | K006953 | Anchor QEA, LLC | |
| 22L0417-06 | 8082A PCB Solid 4 | A 03 | 45 | | | K006953 | Anchor QEA, LLC | |
| 22L0417-07 | 8082A PCB Solid 4 | A 03 | 46 | | | K006953 | Anchor QEA, LLC | |
| 22L0417-09 | 8082A PCB Solid 4 | A 03 | 47 | | | K006953 | Anchor QEA, LLC | |
| BLA0202-BLK1 | QC | | 48 | | | K006953 | | |
| BLA0202-BS1 | QC | | 49 | | | K006953 | | |
| BLA0202-BSD1 | QC | | 50 | | | K006953 | | |
| 23A0127-01 | 8082A PCB | A 01 | 51 | | | K006953 | The Boeing Company [Auburn] | |
| SLA0136-CCV7 | QC | | 52 | | K006956 | K006953 | | |
| SLA0136-CCV8 | QC | | 53 | | K006954 | K006953 | | |
| 22L0307-30 | 8082A PCB Solid 4 | C 01 | 54 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-37 | 8082A PCB Solid 4 | B 01 | 55 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-62 | 8082A PCB Solid 4 | B 01 | 56 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-64 | 8082A PCB Solid 4 | B 01 | 57 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-28 | 8082A PCB Solid 4 | B 01 | 58 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-31 | 8082A PCB Solid 4 | B 01 | 59 | | | K006953 | Anchor QEA, LLC | |
| BKL0732-BLK1 | QC | | 60 | | | K006953 | | |
| BKL0732-BS1 | QC | | 61 | | | K006953 | | |
| BKL0732-BSD1 | QC | | 62 | | | K006953 | | |
| 22L0642-01 | 8082A PCB Water 0.01 | L 01 | 63 | | | K006953 | Aspect Consulting, LLC. | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0136**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/14/2023 1:58:19PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| 22L0642-03 | 8082A PCB Water 0.01 | L 01 | 64 | | | K006953 | Aspect Consulting, LLC. | |
| 22L0642-05 | 8082A PCB Water 0.01 | L 01 | 65 | | | K006953 | Aspect Consulting, LLC. | |
| 22L0642-07 | 8082A PCB Water 0.01 | L 01 | 66 | | | K006953 | Aspect Consulting, LLC. | |
| SLA0136-CCV9 | QC | | 67 | | K006955 | K006953 | | |
| SLA0136-CCVA | QC | | 68 | | K006954 | K006953 | | |

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 1 | 11-JAN-2023 08:56 | 01112301ECD7.D | 1 | DDTS | |
| 2 | 11-JAN-2023 09:17 | 01112302ECD7.D | 1 | AR1254ICV1 | |
| 3 | 11-JAN-2023 09:38 | 01112303ECD7.D | 1 | AR1660ICV2 | |
| 4 | 11-JAN-2023 09:59 | 01112304ECD7.D | 1 | BLA0069-BLK1 | |
| 5 | 11-JAN-2023 10:20 | 01112305ECD7.D | 1 | BLA0069-BS1 | |
| 6 | 11-JAN-2023 10:41 | 01112306ECD7.D | 1 | BLA0069-BSD1 | |
| 7 | 11-JAN-2023 11:02 | 01112307ECD7.D | 1 | BLA0069-SRM1 | |
| 8 | 11-JAN-2023 11:23 | 01112308ECD7.D | 1 | 22L0459-01 | |
| 9 | 11-JAN-2023 11:44 | 01112309ECD7.D | 1 | 22L0459-02 | |
| 10 | 11-JAN-2023 12:05 | 01112310ECD7.D | 1 | 22L0459-03 | |
| 11 | 11-JAN-2023 12:26 | 01112311ECD7.D | 1 | BLA0069-MS1 | |
| 12 | 11-JAN-2023 12:47 | 01112312ECD7.D | 1 | BLA0069-MSD1 | |
| 13 | 11-JAN-2023 13:08 | 01112313ECD7.D | 1 | 22L0459-04 | |
| 14 | 11-JAN-2023 13:29 | 01112314ECD7.D | 1 | 22L0459-05 | |
| 15 | 11-JAN-2023 13:51 | 01112315ECD7.D | 1 | 22L0459-06 | |
| 16 | 11-JAN-2023 14:12 | 01112316ECD7.D | 1 | 22L0459-07 | |
| 17 | 11-JAN-2023 14:33 | 01112317ECD7.D | 1 | AR1248CCV1 | |
| 18 | 11-JAN-2023 14:54 | 01112318ECD7.D | 1 | AR1660CCV2 | |
| 19 | 11-JAN-2023 15:15 | 01112319ECD7.D | 1 | BKL0612-BLK1 | |
| 20 | 11-JAN-2023 15:36 | 01112320ECD7.D | 1 | BKL0612-BS1 | |
| 21 | 11-JAN-2023 15:57 | 01112321ECD7.D | 1 | BKL0612-BSD1 | |
| 22 | 11-JAN-2023 16:18 | 01112322ECD7.D | 1 | 22L416-01 | |
| 23 | 11-JAN-2023 16:39 | 01112323ECD7.D | 1 | 22L416-61 | |
| 24 | 11-JAN-2023 17:00 | 01112324ECD7.D | 1 | BKL0612-MS1 | |
| 25 | 11-JAN-2023 17:21 | 01112325ECD7.D | 1 | BKL0612-MSD1 | |
| 26 | 11-JAN-2023 17:42 | 01112326ECD7.D | 1 | 22L416-69 | |
| 27 | 11-JAN-2023 18:03 | 01112327ECD7.D | 1 | 22L416-82 | |
| 28 | 11-JAN-2023 18:24 | 01112328ECD7.D | 1 | AR1242CCV3 | |
| 29 | 11-JAN-2023 18:46 | 01112329ECD7.D | 1 | AR1660CCV4 | |
| 30 | 11-JAN-2023 19:07 | 01112330ECD7.D | 1 | BLA0063-BLK1 | |
| 31 | 11-JAN-2023 19:28 | 01112331ECD7.D | 1 | BLA0063-BS1 | |
| 32 | 11-JAN-2023 19:49 | 01112332ECD7.D | 1 | BLA0063-BSD1 | |
| 33 | 11-JAN-2023 20:10 | 01112333ECD7.D | 1 | BLA0063-SRM1 | |
| 34 | 11-JAN-2023 20:31 | 01112334ECD7.D | 1 | 22L0383-01 | |
| 35 | 11-JAN-2023 20:52 | 01112335ECD7.D | 1 | 22L0383-02 | |
| 36 | 11-JAN-2023 21:13 | 01112336ECD7.D | 1 | 22L0383-03 | |
| 37 | 11-JAN-2023 21:34 | 01112337ECD7.D | 1 | BLA0063-MS1 | |
| 38 | 11-JAN-2023 21:55 | 01112338ECD7.D | 1 | BLA0063-MSD1 | |
| 39 | 11-JAN-2023 22:16 | 01112339ECD7.D | 1 | 22L0383-04 | |
| 40 | 11-JAN-2023 22:37 | 01112340ECD7.D | 1 | 22L0383-05 | |
| 41 | 11-JAN-2023 22:58 | 01112341ECD7.D | 1 | 22L0383-06 | |
| 42 | 11-JAN-2023 23:19 | 01112342ECD7.D | 1 | 22L0383-07 | |
| 43 | 11-JAN-2023 23:40 | 01112343ECD7.D | 1 | 22L0383-08 | |
| 44 | 12-JAN-2023 00:01 | 01112344ECD7.D | 1 | 22L0417-01 | |
| 45 | 12-JAN-2023 00:22 | 01112345ECD7.D | 1 | 22L0417-02 | |
| 46 | 12-JAN-2023 00:43 | 01112346ECD7.D | 1 | AR1254CCV5 | |
| 47 | 12-JAN-2023 01:04 | 01112347ECD7.D | 1 | AR1660CCV6 | |
| 48 | 12-JAN-2023 01:25 | 01112348ECD7.D | 1 | 22L0417-03 | |
| 49 | 12-JAN-2023 01:46 | 01112349ECD7.D | 1 | 22L0417-04 | |
| 50 | 12-JAN-2023 02:08 | 01112350ECD7.D | 1 | 22L0417-05 | |

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 51 | 12-JAN-2023 02:29 | 01112351ECD7.D | 1 | 22L0417-06 | |
| 52 | 12-JAN-2023 02:50 | 01112352ECD7.D | 1 | 22L0417-07 | |
| 53 | 12-JAN-2023 03:11 | 01112353ECD7.D | 1 | 22L0417-08 | |
| 54 | 12-JAN-2023 03:32 | 01112354ECD7.D | 1 | 22L0417-09 | |
| 55 | 12-JAN-2023 03:53 | 01112355ECD7.D | 1 | BLA0202-BLK1 | |
| 56 | 12-JAN-2023 04:14 | 01112356ECD7.D | 1 | BLA0202-BS1 | |
| 57 | 12-JAN-2023 04:35 | 01112357ECD7.D | 1 | BLA0202-BSD1 | |
| 58 | 12-JAN-2023 04:56 | 01112358ECD7.D | 1 | 23A0127-01 | |
| 59 | 12-JAN-2023 05:17 | 01112359ECD7.D | 1 | AR1248CCV7 | |
| 60 | 12-JAN-2023 05:38 | 01112360ECD7.D | 1 | AR1660CCV8 | |
| 61 | 12-JAN-2023 05:59 | 01112361ECD7.D | 5 | 22L0307-30RE1 | |
| 62 | 12-JAN-2023 06:20 | 01112362ECD7.D | 5 | 22L0307-37RE1 | |
| 63 | 12-JAN-2023 06:41 | 01112363ECD7.D | 5 | 22L0307-62RE1 | |
| 64 | 12-JAN-2023 07:02 | 01112364ECD7.D | 5 | 22L0307-64RE1 | |
| 65 | 12-JAN-2023 07:23 | 01112365ECD7.D | 5 | 22L0329-28RE1 | |
| 66 | 12-JAN-2023 07:45 | 01112366ECD7.D | 5 | 22L0329-31RE1 | |
| 67 | 12-JAN-2023 08:06 | 01112367ECD7.D | 1 | BKL0732-BLK1 | |
| 68 | 12-JAN-2023 08:27 | 01112368ECD7.D | 1 | BKL0732-BS1 | |
| 69 | 12-JAN-2023 08:48 | 01112369ECD7.D | 1 | BKL0732-BSD1 | |
| 70 | 12-JAN-2023 09:09 | 01112370ECD7.D | 1 | 22L0642-01 | |
| 71 | 12-JAN-2023 09:30 | 01112371ECD7.D | 1 | 22L0642-03 | |
| 72 | 12-JAN-2023 09:51 | 01112372ECD7.D | 1 | 22L0642-05 | |
| 73 | 12-JAN-2023 10:12 | 01112373ECD7.D | 1 | 22L0642-07 | |
| 74 | 12-JAN-2023 10:33 | 01112374ECD7.D | 1 | AR1242CCV9 | |
| 75 | 12-JAN-2023 10:54 | 01112375ECD7.D | 1 | AR1660CCVA | |
| 76 | 12-JAN-2023 11:15 | 01112376ECD7.D | 1 | DCMRINSE | |

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b

ARI Job No.: DDTS  Method: PCB.m  Instrument: ecd7.i  Date: 11-JAN-2023

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0856 | 01112301ECD7.D | DDTS | | 1 | NO MANUAL INTEGRATION |
| 0917 | 01112302ECD7.D | AR1254ICV1 | | 1 | NO MANUAL INTEGRATION |
| 0938 | 01112303ECD7.D | AR1660ICV2 | | 1 | NO MANUAL INTEGRATION |
| 0959 | 01112304ECD7.D | BLA0069-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1020 | 01112305ECD7.D | BLA0069-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1041 | 01112306ECD7.D | BLA0069-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1102 | 01112307ECD7.D | BLA0069-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1123 | 01112308ECD7.D | 22L0459-01 | | 1 | Aroclor-1254, |
| 1144 | 01112309ECD7.D | 22L0459-02 | | 1 | Aroclor-1254, |
| 1205 | 01112310ECD7.D | 22L0459-03 | | 1 | Aroclor-1254, |
| 1226 | 01112311ECD7.D | BLA0069-MS1 | | 1 | Aroclor-1254, |
| 1247 | 01112312ECD7.D | BLA0069-MSD1 | | 1 | Aroclor-1254, |
| 1308 | 01112313ECD7.D | 22L0459-04 | | 1 | Aroclor-1254, |
| 1329 | 01112314ECD7.D | 22L0459-05 | | 1 | Aroclor-1254, |
| 1351 | 01112315ECD7.D | 22L0459-06 | | 1 | NO MANUAL INTEGRATION |
| 1412 | 01112316ECD7.D | 22L0459-07 | | 1 | Aroclor-1254, |
| 1433 | 01112317ECD7.D | AR1248CCV1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1454 | 01112318ECD7.D | AR1660CCV2 | | 1 | NO MANUAL INTEGRATION |
| 1515 | 01112319ECD7.D | BKL0612-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1536 | 01112320ECD7.D | BKL0612-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1557 | 01112321ECD7.D | BKL0612-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1618 | 01112322ECD7.D | 22L416-01 | | 1 | NO MANUAL INTEGRATION |
| 1639 | 01112323ECD7.D | 22L416-61 | | 1 | NO MANUAL INTEGRATION |
| 1700 | 01112324ECD7.D | BKL0612-MS1 | | 1 | NO MANUAL INTEGRATION |
| 1721 | 01112325ECD7.D | BKL0612-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1742 | 01112326ECD7.D | 22L416-69 | | 1 | NO MANUAL INTEGRATION |
| 1803 | 01112327ECD7.D | 22L416-82 | | 1 | NO MANUAL INTEGRATION |
| 1824 | 01112328ECD7.D | AR1242CCV3 | | 1 | Aroclor-1242, |
| 1846 | 01112329ECD7.D | AR1660CCV4 | | 1 | NO MANUAL INTEGRATION |
| 1907 | 01112330ECD7.D | BLA0063-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1928 | 01112331ECD7.D | BLA0063-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1949 | 01112332ECD7.D | BLA0063-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 2010 | 01112333ECD7.D | BLA0063-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 2031 | 01112334ECD7.D | 22L0383-01 | | 1 | Aroclor-1248, Aroclor-1254, |
| 2052 | 01112335ECD7.D | 22L0383-02 | | 1 | Aroclor-1254, |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 2113 | 01112336ECD7.D | 22L0383-03 | | 1 | Aroclor-1254, |
| 2134 | 01112337ECD7.D | BLA0063-MS1 | | 1 | NO MANUAL INTEGRATION |
| 2155 | 01112338ECD7.D | BLA0063-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 2216 | 01112339ECD7.D | 22L0383-04 | | 1 | Aroclor-1254, |
| 2237 | 01112340ECD7.D | 22L0383-05 | | 1 | Aroclor-1254, |
| 2258 | 01112341ECD7.D | 22L0383-06 | | 1 | Aroclor-1254, |
| 2319 | 01112342ECD7.D | 22L0383-07 | | 1 | Aroclor-1254, |
| 2340 | 01112343ECD7.D | 22L0383-08 | | 1 | Aroclor-1254, |
| 0001 | 01112344ECD7.D | 22L0417-01 | | 1 | NO MANUAL INTEGRATION |
| 0022 | 01112345ECD7.D | 22L0417-02 | | 1 | NO MANUAL INTEGRATION |
| 0043 | 01112346ECD7.D | AR1254CCV5 | | 1 | NO MANUAL INTEGRATION |
| 0104 | 01112347ECD7.D | AR1660CCV6 | | 1 | NO MANUAL INTEGRATION |
| 0125 | 01112348ECD7.D | 22L0417-03 | | 1 | Aroclor-1254, |
| 0146 | 01112349ECD7.D | 22L0417-04 | | 1 | Aroclor-1254, |
| 0208 | 01112350ECD7.D | 22L0417-05 | | 1 | Aroclor-1254, |
| 0229 | 01112351ECD7.D | 22L0417-06 | | 1 | Aroclor-1254, |
| 0250 | 01112352ECD7.D | 22L0417-07 | | 1 | Aroclor-1254, |
| 0311 | 01112353ECD7.D | 22L0417-08 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0332 | 01112354ECD7.D | 22L0417-09 | | 1 | Aroclor-1254, |
| 0353 | 01112355ECD7.D | BLA0202-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0414 | 01112356ECD7.D | BLA0202-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0435 | 01112357ECD7.D | BLA0202-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0456 | 01112358ECD7.D | 23A0127-01 | | 1 | NO MANUAL INTEGRATION |
| 0517 | 01112359ECD7.D | AR1248CCV7 | | 1 | NO MANUAL INTEGRATION |
| 0538 | 01112360ECD7.D | AR1660CCV8 | | 1 | NO MANUAL INTEGRATION |
| 0559 | 01112361ECD7.D | 22L0307-30RE1 | | 5 | Aroclor-1248, |
| 0620 | 01112362ECD7.D | 22L0307-37RE1 | | 5 | Aroclor-1254, |
| 0641 | 01112363ECD7.D | 22L0307-62RE1 | | 5 | NO MANUAL INTEGRATION |
| 0702 | 01112364ECD7.D | 22L0307-64RE1 | | 5 | NO MANUAL INTEGRATION |
| 0723 | 01112365ECD7.D | 22L0329-28RE1 | | 5 | NO MANUAL INTEGRATION |
| 0745 | 01112366ECD7.D | 22L0329-31RE1 | | 5 | NO MANUAL INTEGRATION |
| 0806 | 01112367ECD7.D | BKL0732-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0827 | 01112368ECD7.D | BKL0732-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0848 | 01112369ECD7.D | BKL0732-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0909 | 01112370ECD7.D | 22L0642-01 | | 1 | NO MANUAL INTEGRATION |
| 0930 | 01112371ECD7.D | 22L0642-03 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0951 | 01112372ECD7.D | 22L0642-05 | | 1 | NO MANUAL INTEGRATION |
| 1012 | 01112373ECD7.D | 22L0642-07 | | 1 | NO MANUAL INTEGRATION |
| 1033 | 01112374ECD7.D | AR1242CCV9 | | 1 | NO MANUAL INTEGRATION |
| 1054 | 01112375ECD7.D | AR1660CCVA | | 1 | NO MANUAL INTEGRATION |
| 1115 | 01112376ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |
| 0856 | 01112301ECD7.D | DDTS | | 1 | NO MANUAL INTEGRATION |
| 0917 | 01112302ECD7.D | AR1254ICV1 | | 1 | Aroclor-1254 [2C], |
| 0938 | 01112303ECD7.D | AR1660ICV2 | | 1 | NO MANUAL INTEGRATION |
| 0959 | 01112304ECD7.D | BLA0069-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1020 | 01112305ECD7.D | BLA0069-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1041 | 01112306ECD7.D | BLA0069-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1102 | 01112307ECD7.D | BLA0069-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1123 | 01112308ECD7.D | 22L0459-01 | | 1 | Aroclor-1248 [2C], |
| 1144 | 01112309ECD7.D | 22L0459-02 | | 1 | Aroclor-1248 [2C], |
| 1205 | 01112310ECD7.D | 22L0459-03 | | 1 | Aroclor-1248 [2C], |
| 1226 | 01112311ECD7.D | BLA0069-MS1 | | 1 | Aroclor-1248 [2C], |
| 1247 | 01112312ECD7.D | BLA0069-MSD1 | | 1 | Aroclor-1248 [2C], |
| 1308 | 01112313ECD7.D | 22L0459-04 | | 1 | Aroclor-1248 [2C], |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1329 | 01112314ECD7.D | 22L0459-05 | | 1 | Aroclor-1248 [2C], |
| 1351 | 01112315ECD7.D | 22L0459-06 | | 1 | NO MANUAL INTEGRATION |
| 1412 | 01112316ECD7.D | 22L0459-07 | | 1 | Aroclor-1248 [2C], |
| 1433 | 01112317ECD7.D | AR1248CCV1 | | 1 | NO MANUAL INTEGRATION |
| 1454 | 01112318ECD7.D | AR1660CCV2 | | 1 | NO MANUAL INTEGRATION |
| 1515 | 01112319ECD7.D | BKL0612-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1536 | 01112320ECD7.D | BKL0612-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1557 | 01112321ECD7.D | BKL0612-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1618 | 01112322ECD7.D | 22L416-01 | | 1 | NO MANUAL INTEGRATION |
| 1639 | 01112323ECD7.D | 22L416-61 | | 1 | NO MANUAL INTEGRATION |
| 1700 | 01112324ECD7.D | BKL0612-MS1 | | 1 | NO MANUAL INTEGRATION |
| 1721 | 01112325ECD7.D | BKL0612-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1742 | 01112326ECD7.D | 22L416-69 | | 1 | NO MANUAL INTEGRATION |
| 1803 | 01112327ECD7.D | 22L416-82 | | 1 | NO MANUAL INTEGRATION |
| 1824 | 01112328ECD7.D | AR1242CCV3 | | 1 | NO MANUAL INTEGRATION |
| 1846 | 01112329ECD7.D | AR1660CCV4 | | 1 | NO MANUAL INTEGRATION |
| 1907 | 01112330ECD7.D | BLA0063-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1928 | 01112331ECD7.D | BLA0063-BS1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1949 | 01112332ECD7.D | BLA0063-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 2010 | 01112333ECD7.D | BLA0063-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 2031 | 01112334ECD7.D | 22L0383-01 | | 1 | Aroclor-1248 [2C], |
| 2052 | 01112335ECD7.D | 22L0383-02 | | 1 | Aroclor-1248 [2C], |
| 2113 | 01112336ECD7.D | 22L0383-03 | | 1 | Aroclor-1248 [2C], |
| 2134 | 01112337ECD7.D | BLA0063-MS1 | | 1 | NO MANUAL INTEGRATION |
| 2155 | 01112338ECD7.D | BLA0063-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 2216 | 01112339ECD7.D | 22L0383-04 | | 1 | NO MANUAL INTEGRATION |
| 2237 | 01112340ECD7.D | 22L0383-05 | | 1 | Aroclor-1248 [2C], |
| 2258 | 01112341ECD7.D | 22L0383-06 | | 1 | Aroclor-1248 [2C], |
| 2319 | 01112342ECD7.D | 22L0383-07 | | 1 | Aroclor-1248 [2C], |
| 2340 | 01112343ECD7.D | 22L0383-08 | | 1 | Aroclor-1248 [2C], |
| 0001 | 01112344ECD7.D | 22L0417-01 | | 1 | NO MANUAL INTEGRATION |
| 0022 | 01112345ECD7.D | 22L0417-02 | | 1 | NO MANUAL INTEGRATION |
| 0043 | 01112346ECD7.D | AR1254CCV5 | | 1 | NO MANUAL INTEGRATION |
| 0104 | 01112347ECD7.D | AR1660CCV6 | | 1 | NO MANUAL INTEGRATION |
| 0125 | 01112348ECD7.D | 22L0417-03 | | 1 | Aroclor-1248 [2C], |
| 0146 | 01112349ECD7.D | 22L0417-04 | | 1 | Aroclor-1248 [2C], |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0208 | 01112350ECD7.D | 22L0417-05 | | 1 | Aroclor-1248 [2C], |
| 0229 | 01112351ECD7.D | 22L0417-06 | | 1 | Aroclor-1248 [2C], |
| 0250 | 01112352ECD7.D | 22L0417-07 | | 1 | Aroclor-1248 [2C], |
| 0311 | 01112353ECD7.D | 22L0417-08 | | 1 | NO MANUAL INTEGRATION |
| 0332 | 01112354ECD7.D | 22L0417-09 | | 1 | Aroclor-1248 [2C], |
| 0353 | 01112355ECD7.D | BLA0202-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0414 | 01112356ECD7.D | BLA0202-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0435 | 01112357ECD7.D | BLA0202-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0456 | 01112358ECD7.D | 23A0127-01 | | 1 | NO MANUAL INTEGRATION |
| 0517 | 01112359ECD7.D | AR1248CCV7 | | 1 | NO MANUAL INTEGRATION |
| 0538 | 01112360ECD7.D | AR1660CCV8 | | 1 | NO MANUAL INTEGRATION |
| 0559 | 01112361ECD7.D | 22L0307-30RE1 | | 5 | Aroclor-1248 [2C], |
| 0620 | 01112362ECD7.D | 22L0307-37RE1 | | 5 | Aroclor-1248 [2C], |
| 0641 | 01112363ECD7.D | 22L0307-62RE1 | | 5 | Aroclor-1248 [2C], |
| 0702 | 01112364ECD7.D | 22L0307-64RE1 | | 5 | Aroclor-1248 [2C], |
| 0723 | 01112365ECD7.D | 22L0329-28RE1 | | 5 | Aroclor-1248 [2C], |
| 0745 | 01112366ECD7.D | 22L0329-31RE1 | | 5 | Aroclor-1248 [2C], |
| 0806 | 01112367ECD7.D | BKL0732-BLK1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230111.b\230111.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0827 | 01112368ECD7.D | BKL0732-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0848 | 01112369ECD7.D | BKL0732-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0909 | 01112370ECD7.D | 22L0642-01 | | 1 | NO MANUAL INTEGRATION |
| 0930 | 01112371ECD7.D | 22L0642-03 | | 1 | NO MANUAL INTEGRATION |
| 0951 | 01112372ECD7.D | 22L0642-05 | | 1 | NO MANUAL INTEGRATION |
| 1012 | 01112373ECD7.D | 22L0642-07 | | 1 | NO MANUAL INTEGRATION |
| 1033 | 01112374ECD7.D | AR1242CCV9 | | 1 | NO MANUAL INTEGRATION |
| 1054 | 01112375ECD7.D | AR1660CCVA | | 1 | NO MANUAL INTEGRATION |
| 1115 | 01112376ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |

Security Status Report

Date: 14-Jan-2023 14:00

| | | |
|---|---|---|
| 01112301ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112302ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112303ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112304ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112305ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112306ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112307ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112308ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112309ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112310ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112311ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112312ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112313ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112314ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112315ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112316ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112317ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112318ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112319ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112320ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112321ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112322ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112323ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112324ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112325ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112326ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112327ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112328ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112329ECD7.D | Data Locked | richardl, 14-Jan-2023 10:39 |
| 01112330ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112331ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112332ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112333ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112334ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112335ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112336ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112337ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112338ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112339ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112340ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112341ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112342ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112343ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112344ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |

| | | |
|---|---|---|
| 01112345ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112346ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112347ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112348ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112349ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112350ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112351ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112352ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112353ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112354ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112355ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112356ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112357ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112358ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112359ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112360ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112361ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112362ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112363ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112364ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112365ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112366ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112367ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112368ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112369ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112370ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112371ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112372ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112373ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112374ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |
| 01112375ECD7.D | Data Locked | richardl, 14-Jan-2023 14:00 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

## Dual Column

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Sample Name | Lab Sample ID | Column 1 File ID | Column 2 File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|---|
| Initial Cal Check | SLA0156-ICV1 | 01102302ECD7.D | 01102302ECD7.D | NA | 01/10/23 16:50 |
| Initial Cal Check | SLA0156-ICV2 | 01102303ECD7.D | 01102303ECD7.D | NA | 01/10/23 17:11 |
| Calibration Check | SLA0156-CCV1 | 01102319ECD7.D | 01102319ECD7.D | NA | 01/10/23 22:48 |
| Calibration Check | SLA0156-CCV2 | 01102320ECD7.D | 01102320ECD7.D | NA | 01/10/23 23:09 |
| LDW22-SC788F | 22L0329-12 | 01102321ECD7.D | 01102321ECD7.D | Solid | 01/10/23 23:31 |
| LDW22-SC788G | 22L0329-13 | 01102322ECD7.D | 01102322ECD7.D | Solid | 01/10/23 23:52 |
| Calibration Check | SLA0156-CCV3 | 01102325ECD7.D | 01102325ECD7.D | NA | 01/11/23 00:55 |
| Calibration Check | SLA0156-CCV4 | 01102326ECD7.D | 01102326ECD7.D | NA | 01/11/23 01:16 |
| Blank | BKL0730-BLK1 | 01102327ECD7.D | 01102327ECD7.D | Solid | 01/11/23 01:37 |
| LCS | BKL0730-BS1 | 01102328ECD7.D | 01102328ECD7.D | Solid | 01/11/23 01:58 |
| LCS Dup | BKL0730-BSD1 | 01102329ECD7.D | 01102329ECD7.D | Solid | 01/11/23 02:19 |
| Reference | BKL0730-SRM1 | 01102330ECD7.D | 01102330ECD7.D | Solid | 01/11/23 02:40 |
| LDW22-SC754A | 22L0329-41 | 01102331ECD7.D | 01102331ECD7.D | Solid | 01/11/23 03:01 |
| LDW22-SC754B | 22L0329-42 | 01102332ECD7.D | 01102332ECD7.D | Solid | 01/11/23 03:22 |
| LDW22-SC754C | 22L0329-43 | 01102333ECD7.D | 01102333ECD7.D | Solid | 01/11/23 03:44 |
| LDW22-SC754D | 22L0329-44 | 01102334ECD7.D | 01102334ECD7.D | Solid | 01/11/23 04:05 |
| LDW22-SC754D | BKL0730-MS1 | 01102335ECD7.D | 01102335ECD7.D | Solid | 01/11/23 04:26 |
| LDW22-SC754D | BKL0730-MSD1 | 01102336ECD7.D | 01102336ECD7.D | Solid | 01/11/23 04:47 |
| LDW22-SC754E | 22L0329-45 | 01102337ECD7.D | 01102337ECD7.D | Solid | 01/11/23 05:08 |
| LDW22-SC754F | 22L0329-46 | 01102338ECD7.D | 01102338ECD7.D | Solid | 01/11/23 05:29 |
| LDW22-SC754G | 22L0329-47 | 01102339ECD7.D | 01102339ECD7.D | Solid | 01/11/23 05:50 |
| LDW22-SC754H | 22L0329-48 | 01102340ECD7.D | 01102340ECD7.D | Solid | 01/11/23 06:11 |
| Calibration Check | SLA0156-CCV5 | 01102341ECD7.D | 01102341ECD7.D | NA | 01/11/23 06:32 |
| Calibration Check | SLA0156-CCV6 | 01102342ECD7.D | 01102342ECD7.D | NA | 01/11/23 06:53 |

**Analytical Resources, LLC**
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# ANALYSIS SEQUENCE

**SLA0156**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/13/2023 2:28:54PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| SLA0156-ICV1 | QC | | 1 | | K006957 | K006953 | | |
| SLA0156-ICV2 | QC | | 2 | | K006954 | K006953 | | |
| BKL0613-BLK1 | QC | | 3 | | | K006953 | | |
| BKL0613-BS1 | QC | | 4 | | | K006953 | | |
| BKL0613-BSD1 | QC | | 5 | | | K006953 | | |
| BKL0613-SRM1 | QC | | 6 | | | K006953 | | |
| BKL0613-MS1 | QC | | 7 | | | K006953 | | |
| BKL0613-MSD1 | QC | | 8 | | | K006953 | | |
| BKL0613-MS2 | QC | | 9 | | | K006953 | | |
| BKL0613-MSD2 | QC | | 10 | | | K006953 | | |
| 22L0473-01 | 8082A PCB Solid 4 | A 02 | 11 | | | K006953 | Anchor QEA, LLC | |
| 22L0473-02 | 8082A PCB Solid 4 | A 02 | 12 | | | K006953 | Anchor QEA, LLC | |
| 22L0473-04 | 8082A PCB Solid 4 | A 02 | 13 | | | K006953 | Anchor QEA, LLC | |
| 22L0492-12 | 8082A PCB Solid 4 | A 01 | 14 | | | K006953 | Windward Environmental, LLC | |
| 22L0492-14 | 8082A PCB Solid 4 | A 01 | 15 | | | K006953 | Windward Environmental, LLC | |
| 22L0492-17 | 8082A PCB Solid 4 | A 01 | 16 | | | K006953 | Windward Environmental, LLC | |
| 22L0492-18 | 8082A PCB Solid 4 | A 01 | 17 | | | K006953 | Windward Environmental, LLC | |
| SLA0156-CCV1 | QC | | 18 | | K006956 | K006953 | | |
| SLA0156-CCV2 | QC | | 19 | | K006954 | K006953 | | |
| 22L0329-12 | 8082A PCB Solid 4 | B 01 | 20 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-13 | 8082A PCB Solid 4 | B 01 | 21 | | | K006953 | Anchor QEA, LLC | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0156**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/13/2023 2:28:54PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|
| 22L0307-57 | 8082A PCB Solid 4 | B 01 | 22 | | | K006953 | Anchor QEA, LLC | |
| 22L0307-60 | 8082A PCB Solid 4 | B 01 | 23 | | | K006953 | Anchor QEA, LLC | |
| SLA0156-CCV3 | QC | | 24 | | K006955 | K006953 | | |
| SLA0156-CCV4 | QC | | 25 | | K006954 | K006953 | | |
| BKL0730-BLK1 | QC | | 26 | | | K006953 | | |
| BKL0730-BS1 | QC | | 27 | | | K006953 | | |
| BKL0730-BSD1 | QC | | 28 | | | K006953 | | |
| BKL0730-SRM1 | QC | | 29 | | | K006953 | | |
| 22L0329-41 | 8082A PCB Solid 4 | B 01 | 30 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-42 | 8082A PCB Solid 4 | B 01 | 31 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-43 | 8082A PCB Solid 4 | B 01 | 32 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-44 | 8082A PCB Solid 4 | B 01 | 33 | | | K006953 | Anchor QEA, LLC | |
| BKL0730-MS1 | QC | | 34 | | | K006953 | | |
| BKL0730-MSD1 | QC | | 35 | | | K006953 | | |
| 22L0329-45 | 8082A PCB Solid 4 | B 01 | 36 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-46 | 8082A PCB Solid 4 | B 01 | 37 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-47 | 8082A PCB Solid 4 | B 01 | 38 | | | K006953 | Anchor QEA, LLC | |
| 22L0329-48 | 8082A PCB Solid 4 | B 01 | 39 | | | K006953 | Anchor QEA, LLC | |
| SLA0156-CCV5 | QC | | 40 | | K006957 | K006953 | | |
| SLA0156-CCV6 | QC | | 41 | | K006954 | K006953 | | |

Samples Loaded By Date

Data Processed By Date

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS SEQUENCE

**SLA0156**

Instrument: ECD7
Calibration ID: FL00010

**Printed: 1/13/2023 2:28:54PM**

| Lab Number | Analysis | Container | Order | Position | STD ID | ISTD ID | Client | Comments |
|---|---|---|---|---|---|---|---|---|

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b

| | Inject Date/Time | Filename | DF | LabID | ClientID |
|---|---|---|---|---|---|
| 1 | 10-JAN-2023 16:29 | 01102301.D | 1 | DDTS | |
| 2 | 10-JAN-2023 16:50 | 01102302.D | 1 | AR1254ICV1 | |
| 3 | 10-JAN-2023 17:11 | 01102303.D | 1 | AR1660ICV2 | |
| 4 | 10-JAN-2023 17:32 | 01102304.D | 1 | BKL0613-BLK1 | |
| 5 | 10-JAN-2023 17:53 | 01102305.D | 1 | BKL0613-BS1 | |
| 6 | 10-JAN-2023 18:14 | 01102306.D | 1 | BKL0613-BSD1 | |
| 7 | 10-JAN-2023 18:35 | 01102307.D | 1 | BKL0613-SRM1 | |
| 8 | 10-JAN-2023 18:56 | 01102308.D | 1 | BKL0613-MS1 | |
| 9 | 10-JAN-2023 19:18 | 01102309.D | 1 | BKL0613-MSD1 | |
| 10 | 10-JAN-2023 19:39 | 01102310.D | 1 | BKL0613-MS2 | |
| 11 | 10-JAN-2023 20:00 | 01102311.D | 1 | BKL0613-MSD2 | |
| 12 | 10-JAN-2023 20:21 | 01102312.D | 1 | 22L0473-01 | |
| 13 | 10-JAN-2023 20:42 | 01102313.D | 1 | 22L0473-02 | |
| 14 | 10-JAN-2023 21:03 | 01102314.D | 1 | 22L0473-04 | |
| 15 | 10-JAN-2023 21:24 | 01102315.D | 1 | 22L0492-12 | |
| 16 | 10-JAN-2023 21:45 | 01102316.D | 1 | 22L0492-14 | |
| 17 | 10-JAN-2023 22:06 | 01102317.D | 1 | 22L0492-17 | |
| 18 | 10-JAN-2023 22:27 | 01102318.D | 1 | 22L0492-18 | |
| 19 | 10-JAN-2023 22:48 | 01102319.D | 1 | AR1248CCV1 | |
| 20 | 10-JAN-2023 23:09 | 01102320.D | 1 | AR1660CCV2 | |
| 21 | 10-JAN-2023 23:31 | 01102321.D | 5 | 22L0329-12RE1 | |
| 22 | 10-JAN-2023 23:52 | 01102322.D | 100 | 22L0329-13RE | |
| 23 | 11-JAN-2023 00:13 | 01102323.D | 5 | 22L0329-57RE1 | |
| 24 | 11-JAN-2023 00:34 | 01102324.D | 5 | 22L0329-60RE1 | |
| 25 | 11-JAN-2023 00:55 | 01102325.D | 1 | AR1242CCV3 | |
| 26 | 11-JAN-2023 01:16 | 01102326.D | 1 | AR1660CCV4 | |
| 27 | 11-JAN-2023 01:37 | 01102327.D | 1 | BKL0730-BLK1 | |
| 28 | 11-JAN-2023 01:58 | 01102328.D | 1 | BKL0730-BS1 | |
| 29 | 11-JAN-2023 02:19 | 01102329.D | 1 | BKL0730-BSD1 | |
| 30 | 11-JAN-2023 02:40 | 01102330.D | 1 | BKL0730-SRM1 | |
| 31 | 11-JAN-2023 03:01 | 01102331.D | 1 | 22L0329-41 | |
| 32 | 11-JAN-2023 03:22 | 01102332.D | 1 | 22L0329-42 | |
| 33 | 11-JAN-2023 03:44 | 01102333.D | 1 | 22L0329-43 | |
| 34 | 11-JAN-2023 04:05 | 01102334.D | 1 | 22L0329-44 | |
| 35 | 11-JAN-2023 04:26 | 01102335.D | 1 | BKL0730-MS1 | |
| 36 | 11-JAN-2023 04:47 | 01102336.D | 1 | BKL0730-MSD1 | |
| 37 | 11-JAN-2023 05:08 | 01102337.D | 1 | 22L0329-45 | |
| 38 | 11-JAN-2023 05:29 | 01102338.D | 1 | 22L0329-46 | |
| 39 | 11-JAN-2023 05:50 | 01102339.D | 1 | 22L0329-47 | |
| 40 | 11-JAN-2023 06:11 | 01102340.D | 1 | 22L0329-48 | |
| 41 | 11-JAN-2023 06:32 | 01102341.D | 1 | AR1254CCV5 | |
| 42 | 11-JAN-2023 06:53 | 01102342.D | 1 | AR1660CCV6 | |
| 43 | 11-JAN-2023 07:14 | 01102343.D | 1 | DCMRINSE | |
| 44 | 11-JAN-2023 07:35 | 01102344.D | 1 | DCMRINSE | |
| 45 | 11-JAN-2023 07:56 | 01102345.D | 1 | DCMRINSE | |

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b

ARI Job No.: DDTS  Method: PCB.m  Instrument: ecd7.i  Date: 10-JAN-2023

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1629 | 01102301ECD7.D | DDTS | | 1 | NO MANUAL INTEGRATION |
| 1650 | 01102302ECD7.D | AR1254ICV1 | | 1 | NO MANUAL INTEGRATION |
| 1711 | 01102303ECD7.D | AR1660ICV2 | | 1 | NO MANUAL INTEGRATION |
| 1732 | 01102304ECD7.D | BKL0613-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1753 | 01102305ECD7.D | BKL0613-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1814 | 01102306ECD7.D | BKL0613-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1835 | 01102307ECD7.D | BKL0613-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1856 | 01102308ECD7.D | BKL0613-MS1 | | 1 | NO MANUAL INTEGRATION |
| 1918 | 01102309ECD7.D | BKL0613-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1939 | 01102310ECD7.D | BKL0613-MS2 | | 1 | NO MANUAL INTEGRATION |
| 2000 | 01102311ECD7.D | BKL0613-MSD2 | | 1 | NO MANUAL INTEGRATION |
| 2021 | 01102312ECD7.D | 22L0473-01 | | 1 | Aroclor-1260, |
| 2042 | 01102313ECD7.D | 22L0473-02 | | 1 | Aroclor-1254, |
| 2103 | 01102314ECD7.D | 22L0473-04 | | 1 | Aroclor-1254, |
| 2124 | 01102315ECD7.D | 22L0492-12 | | 1 | NO MANUAL INTEGRATION |
| 2145 | 01102316ECD7.D | 22L0492-14 | | 1 | NO MANUAL INTEGRATION |
| 2206 | 01102317ECD7.D | 22L0492-17 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 2227 | 01102318ECD7.D | 22L0492-18 | | 1 | NO MANUAL INTEGRATION |
| 2248 | 01102319ECD7.D | AR1248CCV1 | | 1 | NO MANUAL INTEGRATION |
| 2309 | 01102320ECD7.D | AR1660CCV2 | | 1 | NO MANUAL INTEGRATION |
| 2331 | 01102321ECD7.D | 22L0329-12RE1 | | 5 | NO MANUAL INTEGRATION |
| 2352 | 01102322ECD7.D | 22L0329-13RE | | 100 | Aroclor-1254, Aroclor-1260, |
| 0013 | 01102323ECD7.D | 22L0329-57RE1 | | 5 | Aroclor-1254, |
| 0034 | 01102324ECD7.D | 22L0329-60RE1 | | 5 | NO MANUAL INTEGRATION |
| 0055 | 01102325ECD7.D | AR1242CCV3 | | 1 | NO MANUAL INTEGRATION |
| 0116 | 01102326ECD7.D | AR1660CCV4 | | 1 | NO MANUAL INTEGRATION |
| 0137 | 01102327ECD7.D | BKL0730-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0158 | 01102328ECD7.D | BKL0730-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0219 | 01102329ECD7.D | BKL0730-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0240 | 01102330ECD7.D | BKL0730-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 0301 | 01102331ECD7.D | 22L0329-41 | | 1 | Aroclor-1254, |
| 0322 | 01102332ECD7.D | 22L0329-42 | | 1 | Aroclor-1254, |
| 0344 | 01102333ECD7.D | 22L0329-43 | | 1 | NO MANUAL INTEGRATION |
| 0405 | 01102334ECD7.D | 22L0329-44 | | 1 | NO MANUAL INTEGRATION |
| 0426 | 01102335ECD7.D | BKL0730-MS1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0447 | 01102336ECD7.D | BKL0730-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 0508 | 01102337ECD7.D | 22L0329-45 | | 1 | NO MANUAL INTEGRATION |
| 0529 | 01102338ECD7.D | 22L0329-46 | | 1 | NO MANUAL INTEGRATION |
| 0550 | 01102339ECD7.D | 22L0329-47 | | 1 | NO MANUAL INTEGRATION |
| 0611 | 01102340ECD7.D | 22L0329-48 | | 1 | NO MANUAL INTEGRATION |
| 0632 | 01102341ECD7.D | AR1254CCV5 | | 1 | NO MANUAL INTEGRATION |
| 0653 | 01102342ECD7.D | AR1660CCV6 | | 1 | NO MANUAL INTEGRATION |
| 0714 | 01102343ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |
| 0735 | 01102344ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |
| 0756 | 01102345ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |
| 1629 | 01102301ECD7.D | DDTS | | 1 | NO MANUAL INTEGRATION |
| 1650 | 01102302ECD7.D | AR1254ICV1 | | 1 | NO MANUAL INTEGRATION |
| 1711 | 01102303ECD7.D | AR1660ICV2 | | 1 | NO MANUAL INTEGRATION |
| 1732 | 01102304ECD7.D | BKL0613-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 1753 | 01102305ECD7.D | BKL0613-BS1 | | 1 | NO MANUAL INTEGRATION |
| 1814 | 01102306ECD7.D | BKL0613-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 1835 | 01102307ECD7.D | BKL0613-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 1856 | 01102308ECD7.D | BKL0613-MS1 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b\230110.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 1918 | 01102309ECD7.D | BKL0613-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 1939 | 01102310ECD7.D | BKL0613-MS2 | | 1 | NO MANUAL INTEGRATION |
| 2000 | 01102311ECD7.D | BKL0613-MSD2 | | 1 | NO MANUAL INTEGRATION |
| 2021 | 01102312ECD7.D | 22L0473-01 | | 1 | NO MANUAL INTEGRATION |
| 2042 | 01102313ECD7.D | 22L0473-02 | | 1 | NO MANUAL INTEGRATION |
| 2103 | 01102314ECD7.D | 22L0473-04 | | 1 | NO MANUAL INTEGRATION |
| 2124 | 01102315ECD7.D | 22L0492-12 | | 1 | NO MANUAL INTEGRATION |
| 2145 | 01102316ECD7.D | 22L0492-14 | | 1 | NO MANUAL INTEGRATION |
| 2206 | 01102317ECD7.D | 22L0492-17 | | 1 | Aroclor-1254 [2C], |
| 2227 | 01102318ECD7.D | 22L0492-18 | | 1 | NO MANUAL INTEGRATION |
| 2248 | 01102319ECD7.D | AR1248CCV1 | | 1 | NO MANUAL INTEGRATION |
| 2309 | 01102320ECD7.D | AR1660CCV2 | | 1 | NO MANUAL INTEGRATION |
| 2331 | 01102321ECD7.D | 22L0329-12RE1 | | 5 | Aroclor-1248 [2C], |
| 2352 | 01102322ECD7.D | 22L0329-13RE | | 100 | NO MANUAL INTEGRATION |
| 0013 | 01102323ECD7.D | 22L0329-57RE1 | | 5 | NO MANUAL INTEGRATION |
| 0034 | 01102324ECD7.D | 22L0329-60RE1 | | 5 | Aroclor-1248 [2C], |
| 0055 | 01102325ECD7.D | AR1242CCV3 | | 1 | NO MANUAL INTEGRATION |
| 0116 | 01102326ECD7.D | AR1660CCV4 | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b\230110.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0137 | 01102327ECD7.D | BKL0730-BLK1 | | 1 | NO MANUAL INTEGRATION |
| 0158 | 01102328ECD7.D | BKL0730-BS1 | | 1 | NO MANUAL INTEGRATION |
| 0219 | 01102329ECD7.D | BKL0730-BSD1 | | 1 | NO MANUAL INTEGRATION |
| 0240 | 01102330ECD7.D | BKL0730-SRM1 | | 1 | NO MANUAL INTEGRATION |
| 0301 | 01102331ECD7.D | 22L0329-41 | | 1 | Aroclor-1248 [2C], |
| 0322 | 01102332ECD7.D | 22L0329-42 | | 1 | NO MANUAL INTEGRATION |
| 0344 | 01102333ECD7.D | 22L0329-43 | | 1 | NO MANUAL INTEGRATION |
| 0405 | 01102334ECD7.D | 22L0329-44 | | 1 | NO MANUAL INTEGRATION |
| 0426 | 01102335ECD7.D | BKL0730-MS1 | | 1 | NO MANUAL INTEGRATION |
| 0447 | 01102336ECD7.D | BKL0730-MSD1 | | 1 | NO MANUAL INTEGRATION |
| 0508 | 01102337ECD7.D | 22L0329-45 | | 1 | NO MANUAL INTEGRATION |
| 0529 | 01102338ECD7.D | 22L0329-46 | | 1 | NO MANUAL INTEGRATION |
| 0550 | 01102339ECD7.D | 22L0329-47 | | 1 | NO MANUAL INTEGRATION |
| 0611 | 01102340ECD7.D | 22L0329-48 | | 1 | NO MANUAL INTEGRATION |
| 0632 | 01102341ECD7.D | AR1254CCV5 | | 1 | Aroclor-1254 [2C], |
| 0653 | 01102342ECD7.D | AR1660CCV6 | | 1 | NO MANUAL INTEGRATION |
| 0714 | 01102343ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |
| 0735 | 01102344ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |

# MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230110.b\230110.b

| Time | Filename | LabID | ClientId | DF | Manually Integrated Compounds |
|---|---|---|---|---|---|
| 0756 | 01102345ECD7.D | DCMRINSE | | 1 | NO MANUAL INTEGRATION |

Security Status Report

Date: 13-Jan-2023 14:26

| | | |
|---|---|---|
| 01102301ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102302ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102303ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102304ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102305ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102306ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102307ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102308ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102309ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102310ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102311ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102312ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102313ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102314ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102315ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102316ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102317ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102318ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102319ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102320ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102321ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102322ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102323ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102324ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102325ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102326ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102327ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102328ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102329ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102330ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102331ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102332ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102333ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102334ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102335ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102336ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102337ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102338ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102339ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102340ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102341ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102342ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102343ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102344ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |

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|           01102345ECD7.D|               Data Locked|             richardl, 13-Jan-2023 14:26|
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Security Status Report

Date: 13-Jan-2023 16:05

| | | |
|---|---|---|
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| 01102302ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102303ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102304ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102305ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102306ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102307ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102308ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102309ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102310ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102311ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102312ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102313ECD7.D | Data Locked | richardl, 13-Jan-2023 16:05 |
| 01102314ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102315ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102316ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102317ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102318ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102319ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102320ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
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| 01102322ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
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| 01102324ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
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| 01102326ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102327ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102328ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102329ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102330ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102331ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
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| 01102335ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102336ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102337ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102338ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102339ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
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| 01102341ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102342ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102343ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |
| 01102344ECD7.D | Data Locked | richardl, 13-Jan-2023 14:26 |

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|           01102345ECD7.D|               Data Locked|             richardl, 13-Jan-2023 14:26|
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**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| 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 (Water)** | | | 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 (Water)** | | | 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 (Water)** | | | 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 (Water)** | | | 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 (Water)** | | | 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 (Water)** | | | 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 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0099-CCV5 (Solid)** | | | Lab File ID: 01072339ECD7.D | | | | Analyzed: 01/07/23 22:58 | |
| Decachlorobiphenyl | 40.000 | 100 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 94.5 | 80 - 120 | 5.833 | 5.835333 | -0.0023 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 105 | 80 - 120 | 14.129 | 14.13533 | -0.0063 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 93.0 | 80 - 120 | 5.709 | 5.712333 | -0.0033 | N/A | |
| **SLA0099-CCV6 (Solid)** | | | Lab File ID: 01072340ECD7.D | | | | Analyzed: 01/07/23 23:19 | |
| Decachlorobiphenyl | 40.000 | 104 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 105 | 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 | 102 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0099-CCV7 (Solid)** | | | Lab File ID: 01072353ECD7.D | | | | Analyzed: 01/08/23 03:53 | |
| Decachlorobiphenyl | 40.000 | 102 | 80 - 120 | 13.904 | 13.90667 | -0.0027 | N/A | |
| Tetrachlorometaxylene | 40.000 | 92.0 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 108 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 90.3 | 80 - 120 | 5.709 | 5.712333 | -0.0033 | N/A | |
| **SLA0099-CCV8 (Solid)** | | | Lab File ID: 01072354ECD7.D | | | | Analyzed: 01/08/23 04:14 | |
| Decachlorobiphenyl | 40.000 | 110 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 101 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 99.8 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **SLA0099-CCV9 (Solid)** | | | Lab File ID: 01072373ECD7.D | | | | Analyzed: 01/08/23 10:55 | |
| Decachlorobiphenyl | 40.000 | 96.5 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 98.5 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 102 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 95.5 | 80 - 120 | 5.709 | 5.712333 | -0.0033 | N/A | |
| **SLA0099-CCVA (Solid)** | | | Lab File ID: 01072374ECD7.D | | | | Analyzed: 01/08/23 11:16 | |
| Decachlorobiphenyl | 40.000 | 98.3 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 105 | 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 | 102 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | 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 |
|---|---|---|---|---|---|---|---|---|
| **BKL0728-BLK1 (Solid)** | | | Lab File ID: 01072375ECD7.D | | | | Analyzed: 01/08/23 11:37 | |
| Decachlorobiphenyl | 8.0000 | 98.6 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 81.3 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 100 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 76.3 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0728-BS1 (Solid)** | | | Lab File ID: 01072376ECD7.D | | | | Analyzed: 01/08/23 11:58 | |
| Decachlorobiphenyl | 8.0000 | 101 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 83.4 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 104 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 76.7 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0728-BSD1 (Solid)** | | | Lab File ID: 01072377ECD7.D | | | | Analyzed: 01/08/23 12:19 | |
| Decachlorobiphenyl | 8.0000 | 97.8 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 84.7 | 44 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 99.1 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 78.0 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **BKL0728-SRM1 (Solid)** | | | Lab File ID: 01072378ECD7.D | | | | Analyzed: 01/08/23 12:40 | |
| Decachlorobiphenyl | 40.000 | 94.8 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 40.000 | 75.5 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 85.6 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 77.8 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-21 (Solid)** | | | Lab File ID: 01072379ECD7.D | | | | Analyzed: 01/08/23 13:01 | |
| Decachlorobiphenyl | 7.9707 | 99.4 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9707 | 79.1 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9707 | 94.8 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9707 | 77.5 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-22 (Solid)** | | | Lab File ID: 01072380ECD7.D | | | | Analyzed: 01/08/23 13:22 | |
| Decachlorobiphenyl | 7.9945 | 95.8 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 7.9945 | 62.9 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9945 | 86.9 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9945 | 72.8 | 44 - 120 | 5.701 | 5.712333 | -0.0113 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-23 (Solid)** | | | Lab File ID: 01072381ECD7.D | | | | Analyzed: 01/08/23 13:44 | |
| Decachlorobiphenyl | 7.9490 | 94.4 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 7.9490 | 59.7 | 44 - 120 | 5.824 | 5.835333 | -0.0113 | N/A | |
| Decachlorobiphenyl [2C] | 7.9490 | 87.2 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9490 | 70.4 | 44 - 120 | 5.7 | 5.712333 | -0.0123 | N/A | |
| **22L0329-24 (Solid)** | | | Lab File ID: 01072382ECD7.D | | | | Analyzed: 01/08/23 14:05 | |
| Decachlorobiphenyl | 7.9726 | 94.8 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 7.9726 | 54.8 | 44 - 120 | 5.823 | 5.835333 | -0.0123 | N/A | |
| Decachlorobiphenyl [2C] | 7.9726 | 87.7 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9726 | 66.1 | 44 - 120 | 5.7 | 5.712333 | -0.0123 | N/A | |
| **22L0329-25 (Solid)** | | | Lab File ID: 01072383ECD7.D | | | | Analyzed: 01/08/23 14:26 | |
| Decachlorobiphenyl | 7.9989 | 97.8 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9989 | 66.6 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9989 | 89.8 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9989 | 76.2 | 44 - 120 | 5.702 | 5.712333 | -0.0103 | N/A | |
| **22L0329-26 (Solid)** | | | Lab File ID: 01072384ECD7.D | | | | Analyzed: 01/08/23 14:47 | |
| Decachlorobiphenyl | 7.9871 | 90.1 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 7.9871 | 62.1 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9871 | 83.0 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9871 | 68.3 | 44 - 120 | 5.702 | 5.712333 | -0.0103 | N/A | |
| **22L0329-27 (Solid)** | | | Lab File ID: 01072385ECD7.D | | | | Analyzed: 01/08/23 15:08 | |
| Decachlorobiphenyl | 8.0014 | 90.4 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 8.0014 | 59.9 | 44 - 120 | 5.824 | 5.835333 | -0.0113 | N/A | |
| Decachlorobiphenyl [2C] | 8.0014 | 82.1 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0014 | 69.3 | 44 - 120 | 5.7 | 5.712333 | -0.0123 | N/A | |
| **22L0329-29 (Solid)** | | | Lab File ID: 01072387ECD7.D | | | | Analyzed: 01/08/23 15:50 | |
| Decachlorobiphenyl | 7.9794 | 97.7 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9794 | 80.7 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 7.9794 | 94.2 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9794 | 80.6 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-30 (Solid)** | | | Lab File ID: 01072388ECD7.D | | | | Analyzed: 01/08/23 16:11 | |
| Decachlorobiphenyl | 7.9751 | 95.8 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 7.9751 | 70.7 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9751 | 89.1 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9751 | 77.9 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |
| **SLA0099-CCVB (Solid)** | | | Lab File ID: 01072389ECD7.D | | | | Analyzed: 01/08/23 16:32 | |
| Decachlorobiphenyl | 40.000 | 102 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 95.3 | 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 | 94.0 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0099-CCVC (Solid)** | | | Lab File ID: 01072390ECD7.D | | | | Analyzed: 01/08/23 16:53 | |
| Decachlorobiphenyl | 40.000 | 104 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 106 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 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 | |
| **22L0329-32 (Solid)** | | | Lab File ID: 01072392ECD7.D | | | | Analyzed: 01/08/23 17:35 | |
| Decachlorobiphenyl | 7.9771 | 98.1 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9771 | 76.1 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9771 | 102 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9771 | 78.3 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **22L0329-33 (Solid)** | | | Lab File ID: 01072393ECD7.D | | | | Analyzed: 01/08/23 17:56 | |
| Decachlorobiphenyl | 7.9720 | 95.5 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9720 | 65.7 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9720 | 88.5 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9720 | 73.2 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |
| **22L0329-34 (Solid)** | | | Lab File ID: 01072394ECD7.D | | | | Analyzed: 01/08/23 18:18 | |
| Decachlorobiphenyl | 7.9724 | 98.0 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9724 | 71.7 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9724 | 92.0 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9724 | 75.7 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-35 (Solid)** | | | Lab File ID: 01072395ECD7.D | | | | Analyzed: 01/08/23 18:39 | |
| Decachlorobiphenyl | 7.9852 | 101 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9852 | 77.5 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 7.9852 | 99.6 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9852 | 74.4 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **22L0329-36 (Solid)** | | | Lab File ID: 01072396ECD7.D | | | | Analyzed: 01/08/23 19:00 | |
| Decachlorobiphenyl | 7.9985 | 99.4 | 40 - 126 | 13.897 | 13.90667 | -0.0097 | N/A | |
| Tetrachlorometaxylene | 7.9985 | 73.9 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 7.9985 | 93.3 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9985 | 71.7 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **22L0329-37 (Solid)** | | | Lab File ID: 01072397ECD7.D | | | | Analyzed: 01/08/23 19:21 | |
| Decachlorobiphenyl | 7.9969 | 96.9 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9969 | 71.9 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9969 | 92.4 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9969 | 73.6 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-38 (Solid)** | | | Lab File ID: 01072398ECD7.D | | | | Analyzed: 01/08/23 19:42 | |
| Decachlorobiphenyl | 7.9804 | 96.4 | 40 - 126 | 13.897 | 13.90667 | -0.0097 | N/A | |
| Tetrachlorometaxylene | 7.9804 | 76.6 | 44 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 7.9804 | 93.6 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9804 | 74.4 | 44 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **BKL0728-MS1 (Solid)** | | | Lab File ID: 010723990ECD7.D | | | | Analyzed: 01/08/23 20:03 | |
| Decachlorobiphenyl | 7.9971 | 93.0 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9971 | 69.6 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 7.9971 | 91.3 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9971 | 67.9 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0728-MSD1 (Solid)** | | | Lab File ID: 010723991ECD7.D | | | | Analyzed: 01/08/23 20:24 | |
| Decachlorobiphenyl | 7.9971 | 93.2 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9971 | 74.7 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9971 | 91.7 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9971 | 71.3 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-39 (Solid)** | | | Lab File ID: 010723992ECD7.D | | | | Analyzed: 01/08/23 20:45 | |
| Decachlorobiphenyl | 7.9843 | 97.7 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9843 | 78.4 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9843 | 98.3 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9843 | 75.2 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-40 (Solid)** | | | Lab File ID: 010723993ECD7.D | | | | Analyzed: 01/08/23 21:06 | |
| Decachlorobiphenyl | 7.9941 | 94.4 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9941 | 74.3 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 7.9941 | 95.0 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9941 | 71.0 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0099-CCVD (Solid)** | | | Lab File ID: 010723994ECD7.D | | | | Analyzed: 01/08/23 21:27 | |
| Decachlorobiphenyl | 40.000 | 98.5 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 95.8 | 80 - 120 | 5.833 | 5.835333 | -0.0023 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 99.0 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 94.0 | 80 - 120 | 5.71 | 5.712333 | -0.0023 | N/A | |
| **SLA0099-CCVE (Solid)** | | | Lab File ID: 010723995ECD7.D | | | | Analyzed: 01/08/23 21:48 | |
| Decachlorobiphenyl | 40.000 | 98.5 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 107 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 102 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 103 | 80 - 120 | 5.709 | 5.712333 | -0.0033 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0129-ICV1 (Solid)** | | | Lab File ID: 01092302ECD7.D | | | | Analyzed: 01/09/23 09:24 | |
| Decachlorobiphenyl | 40.000 | 103 | 80 - 120 | 13.904 | 13.90667 | -0.0027 | N/A | |
| Tetrachlorometaxylene | 40.000 | 98.0 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 102 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 96.8 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **SLA0129-ICV2 (Solid)** | | | Lab File ID: 01092303ECD7.D | | | | Analyzed: 01/09/23 09:46 | |
| Decachlorobiphenyl | 40.000 | 99.4 | 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 | 102 | 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 | |
| **SLA0129-CCV1 (Solid)** | | | Lab File ID: 01092318ECD7.D | | | | Analyzed: 01/09/23 15:02 | |
| Decachlorobiphenyl | 40.000 | 98.7 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 93.3 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 98.1 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 92.7 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0129-CCV2 (Solid)** | | | Lab File ID: 01092319ECD7.D | | | | Analyzed: 01/09/23 15:23 | |
| Decachlorobiphenyl | 40.000 | 102 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 100 | 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 | |
| **SLA0129-CCV3 (Solid)** | | | Lab File ID: 01092332ECD7.D | | | | Analyzed: 01/09/23 19:57 | |
| Decachlorobiphenyl | 40.000 | 102 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 97.4 | 80 - 120 | 5.833 | 5.835333 | -0.0023 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 93.8 | 80 - 120 | 5.709 | 5.712333 | -0.0033 | N/A | |
| **SLA0129-CCV4 (Solid)** | | | Lab File ID: 01092333ECD7.D | | | | Analyzed: 01/09/23 20:19 | |
| Decachlorobiphenyl | 40.000 | 107 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 109 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 105 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0129-CCV5 (Solid)** | | | Lab File ID: 01092344ECD7.D | | | | Analyzed: 01/10/23 00:10 | |
| Decachlorobiphenyl | 40.000 | 105 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 96.7 | 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 | 94.3 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **SLA0129-CCV6 (Solid)** | | | Lab File ID: 01092345ECD7.D | | | | Analyzed: 01/10/23 00:31 | |
| Decachlorobiphenyl | 40.000 | 106 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 108 | 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 | 103 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0129-CCV7 (Solid)** | | | Lab File ID: 01092353ECD7.D | | | | Analyzed: 01/10/23 03:20 | |
| Decachlorobiphenyl | 40.000 | 95.4 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 95.4 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 102 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 92.6 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **SLA0129-CCV8 (Solid)** | | | Lab File ID: 01092354ECD7.D | | | | Analyzed: 01/10/23 03:41 | |
| Decachlorobiphenyl | 40.000 | 98.4 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 107 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 104 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 102 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **BKL0687-BLK1 (Solid)** | | | Lab File ID: 01092355ECD7.D | | | | Analyzed: 01/10/23 04:02 | |
| Decachlorobiphenyl | 8.0000 | 84.2 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 72.3 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 89.5 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 67.0 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0687-BS1 (Solid)** | | | Lab File ID: 01092356ECD7.D | | | | Analyzed: 01/10/23 04:23 | |
| Decachlorobiphenyl | 8.0000 | 91.4 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 80.2 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 96.9 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 72.8 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **BKL0687-BSD1 (Solid)** | | | Lab File ID: 01092357ECD7.D | | | | Analyzed: 01/10/23 04:44 | |
| Decachlorobiphenyl | 8.0000 | 93.1 | 40 - 126 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 79.5 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 97.9 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 73.2 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0687-SRM1 (Solid)** | | | Lab File ID: 01092358ECD7.D | | | | Analyzed: 01/10/23 05:05 | |
| Decachlorobiphenyl | 40.000 | 91.4 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 40.000 | 74.5 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 84.5 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 73.5 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-01 (Solid)** | | | Lab File ID: 01092359ECD7.D | | | | Analyzed: 01/10/23 05:26 | |
| Decachlorobiphenyl | 7.9874 | 88.6 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9874 | 77.5 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 7.9874 | 85.7 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9874 | 76.1 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-02 (Solid)** | | | Lab File ID: 01092360ECD7.D | | | | Analyzed: 01/10/23 05:47 | |
| Decachlorobiphenyl | 8.0020 | 92.8 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 8.0020 | 55.9 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 8.0020 | 90.8 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0020 | 65.9 | 44 - 120 | 5.702 | 5.712333 | -0.0103 | N/A | |
| **22L0329-03 (Solid)** | | | Lab File ID: 01092361ECD7.D | | | | Analyzed: 01/10/23 06:08 | |
| Decachlorobiphenyl | 7.9926 | 88.9 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9926 | 48.2 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 7.9926 | 86.1 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9926 | 73.0 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **22L0329-04 (Solid)** | | | Lab File ID: 01092362ECD7.D | | | | Analyzed: 01/10/23 06:29 | |
| Decachlorobiphenyl | 7.9884 | 90.3 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9884 | 61.4 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9884 | 87.3 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9884 | 71.1 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-05 (Solid)** | | | Lab File ID: 01092363ECD7.D | | | | Analyzed: 01/10/23 06:51 | |
| Decachlorobiphenyl | 7.9957 | 88.9 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9957 | 69.5 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 7.9957 | 87.5 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9957 | 68.2 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-06 (Solid)** | | | Lab File ID: 01092364ECD7.D | | | | Analyzed: 01/10/23 07:12 | |
| Decachlorobiphenyl | 7.9801 | 93.1 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9801 | 72.5 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 7.9801 | 91.8 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9801 | 74.1 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-07 (Solid)** | | | Lab File ID: 01092365ECD7.D | | | | Analyzed: 01/10/23 07:33 | |
| Decachlorobiphenyl | 7.9873 | 83.4 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9873 | 59.5 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9873 | 78.4 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9873 | 65.4 | 44 - 120 | 5.701 | 5.712333 | -0.0113 | N/A | |
| **22L0329-08 (Solid)** | | | Lab File ID: 01092366ECD7.D | | | | Analyzed: 01/10/23 07:54 | |
| Decachlorobiphenyl | 7.9797 | 87.9 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9797 | 52.7 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9797 | 86.6 | 40 - 126 | 14.119 | 14.13533 | -0.0163 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9797 | 59.9 | 44 - 120 | 5.701 | 5.712333 | -0.0113 | N/A | |
| **22L0329-09 (Solid)** | | | Lab File ID: 01092367ECD7.D | | | | Analyzed: 01/10/23 08:15 | |
| Decachlorobiphenyl | 7.9762 | 89.5 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9762 | 57.7 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9762 | 86.2 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9762 | 65.7 | 44 - 120 | 5.701 | 5.712333 | -0.0113 | N/A | |
| **22L0329-10 (Solid)** | | | Lab File ID: 01092368ECD7.D | | | | Analyzed: 01/10/23 08:36 | |
| Decachlorobiphenyl | 7.9794 | 94.5 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9794 | 57.2 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9794 | 91.1 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9794 | 66.3 | 44 - 120 | 5.7 | 5.712333 | -0.0123 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0129-CCV9 (Solid)** | | | Lab File ID: 01092369ECD7.D | | | | Analyzed: 01/10/23 08:57 | |
| Decachlorobiphenyl | 40.000 | 105 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 96.4 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 110 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 92.4 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **SLA0129-CCVA (Solid)** | | | Lab File ID: 01092370ECD7.D | | | | Analyzed: 01/10/23 09:18 | |
| Decachlorobiphenyl | 40.000 | 109 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 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 | 100 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **22L0329-11 (Solid)** | | | Lab File ID: 01092371ECD7.D | | | | Analyzed: 01/10/23 09:39 | |
| Decachlorobiphenyl | 7.9861 | 86.1 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9861 | 55.9 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9861 | 80.4 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9861 | 65.7 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |
| **22L0329-14 (Solid)** | | | Lab File ID: 01092374ECD7.D | | | | Analyzed: 01/10/23 10:42 | |
| Decachlorobiphenyl | 7.9894 | 91.9 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 7.9894 | 59.0 | 44 - 120 | 5.825 | 5.835333 | -0.0103 | N/A | |
| Decachlorobiphenyl [2C] | 7.9894 | 87.8 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9894 | 67.6 | 44 - 120 | 5.701 | 5.712333 | -0.0113 | N/A | |
| **22L0329-15 (Solid)** | | | Lab File ID: 01092375ECD7.D | | | | Analyzed: 01/10/23 11:04 | |
| Decachlorobiphenyl | 8.0006 | 92.6 | 40 - 126 | 13.893 | 13.90667 | -0.0137 | N/A | |
| Tetrachlorometaxylene | 8.0006 | 73.7 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 8.0006 | 82.8 | 40 - 126 | 14.12 | 14.13533 | -0.0153 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0006 | 73.4 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-16 (Solid)** | | | Lab File ID: 01092376ECD7.D | | | | Analyzed: 01/10/23 11:25 | |
| Decachlorobiphenyl | 7.9941 | 108 | 40 - 126 | 13.898 | 13.90667 | -0.0087 | N/A | |
| Tetrachlorometaxylene | 7.9941 | 70.8 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9941 | 89.7 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9941 | 66.8 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **BKL0687-MS1 (Solid)** | | | Lab File ID: 01092377ECD7.D | | | | Analyzed: 01/10/23 11:46 | |
| Decachlorobiphenyl | 7.9998 | 110 | 40 - 126 | 13.899 | 13.90667 | -0.0077 | N/A | |
| Tetrachlorometaxylene | 7.9998 | 77.2 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9998 | 94.6 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9998 | 70.2 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0687-MSD1 (Solid)** | | | Lab File ID: 01092378ECD7.D | | | | Analyzed: 01/10/23 12:07 | |
| Decachlorobiphenyl | 7.9998 | 117 | 40 - 126 | 13.899 | 13.90667 | -0.0077 | N/A | |
| Tetrachlorometaxylene | 7.9998 | 80.2 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9998 | 94.7 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9998 | 72.9 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-17 (Solid)** | | | Lab File ID: 01092379ECD7.D | | | | Analyzed: 01/10/23 12:28 | |
| Decachlorobiphenyl | 7.9959 | 98.6 | 40 - 126 | 13.9 | 13.90667 | -0.0067 | N/A | |
| Tetrachlorometaxylene | 7.9959 | 72.7 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9959 | 95.4 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9959 | 69.0 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-18 (Solid)** | | | Lab File ID: 01092380ECD7.D | | | | Analyzed: 01/10/23 12:49 | |
| Decachlorobiphenyl | 7.9778 | 97.4 | 40 - 126 | 13.9 | 13.90667 | -0.0067 | N/A | |
| Tetrachlorometaxylene | 7.9778 | 72.6 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9778 | 97.7 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9778 | 67.8 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-19 (Solid)** | | | Lab File ID: 01092381ECD7.D | | | | Analyzed: 01/10/23 13:10 | |
| Decachlorobiphenyl | 7.9814 | 92.9 | 40 - 126 | 13.9 | 13.90667 | -0.0067 | N/A | |
| Tetrachlorometaxylene | 7.9814 | 72.5 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9814 | 96.7 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9814 | 69.1 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-20 (Solid)** | | | Lab File ID: 01092382ECD7.D | | | | Analyzed: 01/10/23 13:31 | |
| Decachlorobiphenyl | 7.9994 | 86.2 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 7.9994 | 70.1 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 7.9994 | 91.6 | 40 - 126 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9994 | 66.1 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0129-CCVB (Solid)** | | | Lab File ID: 01092383ECD7.D | | | | Analyzed: 01/10/23 13:52 | |
| Decachlorobiphenyl | 40.000 | 97.3 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 98.9 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 107 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 95.8 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0129-CCVC (Solid)** | | | Lab File ID: 01092384ECD7.D | | | | Analyzed: 01/10/23 14:13 | |
| Decachlorobiphenyl | 40.000 | 100 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 103 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 100 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0136 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0136-ICV1 (Solid)** | | | Lab File ID: 01112302ECD7.D | | | | Analyzed: 01/11/23 09:17 | |
| Decachlorobiphenyl | 40.000 | 107 | 80 - 120 | 13.905 | 13.90667 | -0.0017 | N/A | |
| Tetrachlorometaxylene | 40.000 | 92.8 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 103 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 91.3 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **SLA0136-ICV2 (Solid)** | | | Lab File ID: 01112303ECD7.D | | | | Analyzed: 01/11/23 09:38 | |
| Decachlorobiphenyl | 40.000 | 107 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 103 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 102 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0136-CCV1 (Solid)** | | | Lab File ID: 01112317ECD7.D | | | | Analyzed: 01/11/23 14:33 | |
| Decachlorobiphenyl | 40.000 | 105 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 91.3 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 102 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 90.5 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0136-CCV2 (Solid)** | | | Lab File ID: 01112318ECD7.D | | | | Analyzed: 01/11/23 14:54 | |
| Decachlorobiphenyl | 40.000 | 109 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 103 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 105 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 99.5 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **SLA0136-CCV3 (Solid)** | | | Lab File ID: 01112328ECD7.D | | | | Analyzed: 01/11/23 18:24 | |
| Decachlorobiphenyl | 40.000 | 102 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 96.5 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 100 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 92.8 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0136-CCV4 (Solid)** | | | Lab File ID: 01112329ECD7.D | | | | Analyzed: 01/11/23 18:46 | |
| Decachlorobiphenyl | 40.000 | 108 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 105 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 102 | 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 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0136 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0136-CCV5 (Solid)** | | | Lab File ID: 01112346ECD7.D | | | | Analyzed: 01/12/23 00:43 | |
| Decachlorobiphenyl | 40.000 | 104 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 92.5 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 80 - 120 | 14.125 | 14.13533 | -0.0103 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 92.0 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **SLA0136-CCV6 (Solid)** | | | Lab File ID: 01112347ECD7.D | | | | Analyzed: 01/12/23 01:04 | |
| Decachlorobiphenyl | 40.000 | 111 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 106 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 103 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 104 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0136-CCV7 (Solid)** | | | Lab File ID: 01112359ECD7.D | | | | Analyzed: 01/12/23 05:17 | |
| Decachlorobiphenyl | 40.000 | 104 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 93.3 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 103 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 94.3 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0136-CCV8 (Solid)** | | | Lab File ID: 01112360ECD7.D | | | | Analyzed: 01/12/23 05:38 | |
| Decachlorobiphenyl | 40.000 | 108 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 105 | 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 | 101 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **22L0329-28 (Solid)** | | | Lab File ID: 01112365ECD7.D | | | | Analyzed: 01/12/23 07:23 | |
| Decachlorobiphenyl | 7.9823 | 105 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9823 | 69.7 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9823 | 91.1 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9823 | 77.3 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **22L0329-31 (Solid)** | | | Lab File ID: 01112366ECD7.D | | | | Analyzed: 01/12/23 07:45 | |
| Decachlorobiphenyl | 7.9710 | 110 | 40 - 126 | 13.894 | 13.90667 | -0.0127 | N/A | |
| Tetrachlorometaxylene | 7.9710 | 81.3 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9710 | 91.8 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9710 | 85.7 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0136 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0136-CCV9 (Solid)** | | | Lab File ID: 01112374ECD7.D | | | | Analyzed: 01/12/23 10:33 | |
| Decachlorobiphenyl | 40.000 | 99.0 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 97.0 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 99.3 | 80 - 120 | 14.128 | 14.13533 | -0.0073 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 95.5 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **SLA0136-CCVA (Solid)** | | | Lab File ID: 01112375ECD7.D | | | | Analyzed: 01/12/23 10:54 | |
| Decachlorobiphenyl | 40.000 | 106 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 100 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 101 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0156-ICV1 (Solid)** | | | Lab File ID: 01102302ECD7.D | | | | Analyzed: 01/10/23 16:50 | |
| Decachlorobiphenyl | 40.000 | 107 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 93.0 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 91.3 | 80 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **SLA0156-ICV2 (Solid)** | | | Lab File ID: 01102303ECD7.D | | | | Analyzed: 01/10/23 17:11 | |
| Decachlorobiphenyl | 40.000 | 105 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 80 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 105 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 99.8 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0156-CCV1 (Solid)** | | | Lab File ID: 01102319ECD7.D | | | | Analyzed: 01/10/23 22:48 | |
| Decachlorobiphenyl | 40.000 | 103 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 90.8 | 80 - 120 | 5.832 | 5.835333 | -0.0033 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 101 | 80 - 120 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 90.3 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **SLA0156-CCV2 (Solid)** | | | Lab File ID: 01102320ECD7.D | | | | Analyzed: 01/10/23 23:09 | |
| Decachlorobiphenyl | 40.000 | 111 | 80 - 120 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 40.000 | 103 | 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 | 98.8 | 80 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **22L0329-12 (Solid)** | | | Lab File ID: 01102321ECD7.D | | | | Analyzed: 01/10/23 23:31 | |
| Decachlorobiphenyl | 7.9800 | 110 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9800 | 77.9 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 7.9800 | 96.5 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9800 | 83.6 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-13 (Solid)** | | | Lab File ID: 01102322ECD7.D | | | | Analyzed: 01/10/23 23:52 | |
| Decachlorobiphenyl | 7.9997 | | 40 - 126 | 13.899 | 13.90667 | -0.0077 | N/A | D1 |
| Tetrachlorometaxylene | 7.9997 | | 44 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | D1 |
| Decachlorobiphenyl [2C] | 7.9997 | | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | D1 |
| Tetrachlorometaxylene [2C] | 7.9997 | | 44 - 120 | 5.708 | 5.712333 | -0.0043 | N/A | D1 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | 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 |
|---|---|---|---|---|---|---|---|---|
| **SLA0156-CCV3 (Solid)** | | | Lab File ID: 01102325ECD7.D | | | | Analyzed: 01/11/23 00:55 | |
| Decachlorobiphenyl | 40.000 | 106 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 96.5 | 80 - 120 | 5.831 | 5.835333 | -0.0043 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 109 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 94.3 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **SLA0156-CCV4 (Solid)** | | | Lab File ID: 01102326ECD7.D | | | | Analyzed: 01/11/23 01:16 | |
| Decachlorobiphenyl | 40.000 | 113 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 105 | 80 - 120 | 5.833 | 5.835333 | -0.0023 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 106 | 80 - 120 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 100 | 80 - 120 | 5.709 | 5.712333 | -0.0033 | N/A | |
| **BKL0730-BLK1 (Solid)** | | | Lab File ID: 01102327ECD7.D | | | | Analyzed: 01/11/23 01:37 | |
| Decachlorobiphenyl | 8.0000 | 103 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 84.3 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 98.9 | 40 - 126 | 14.127 | 14.13533 | -0.0083 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 78.2 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0730-BS1 (Solid)** | | | Lab File ID: 01102328ECD7.D | | | | Analyzed: 01/11/23 01:58 | |
| Decachlorobiphenyl | 8.0000 | 97.3 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 82.0 | 44 - 120 | 5.83 | 5.835333 | -0.0053 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 89.7 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 74.2 | 44 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |
| **BKL0730-BSD1 (Solid)** | | | Lab File ID: 01102329ECD7.D | | | | Analyzed: 01/11/23 02:19 | |
| Decachlorobiphenyl | 8.0000 | 92.9 | 40 - 126 | 13.901 | 13.90667 | -0.0057 | N/A | |
| Tetrachlorometaxylene | 8.0000 | 77.2 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 8.0000 | 87.3 | 40 - 126 | 14.126 | 14.13533 | -0.0093 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0000 | 70.8 | 44 - 120 | 5.706 | 5.712333 | -0.0063 | N/A | |
| **BKL0730-SRM1 (Solid)** | | | Lab File ID: 01102330ECD7.D | | | | Analyzed: 01/11/23 02:40 | |
| Decachlorobiphenyl | 40.000 | 84.4 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 40.000 | 71.3 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 40.000 | 75.2 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 40.000 | 70.3 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-41 (Solid)** | | | Lab File ID: 01102331ECD7.D | | | | Analyzed: 01/11/23 03:01 | |
| Decachlorobiphenyl | 7.9734 | 80.7 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9734 | 61.8 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9734 | 72.1 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9734 | 66.9 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |
| **22L0329-42 (Solid)** | | | Lab File ID: 01102332ECD7.D | | | | Analyzed: 01/11/23 03:22 | |
| Decachlorobiphenyl | 7.9387 | 89.2 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9387 | 66.8 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9387 | 79.5 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9387 | 73.6 | 44 - 120 | 5.702 | 5.712333 | -0.0103 | N/A | |
| **22L0329-43 (Solid)** | | | Lab File ID: 01102333ECD7.D | | | | Analyzed: 01/11/23 03:44 | |
| Decachlorobiphenyl | 7.9811 | 93.7 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9811 | 66.9 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9811 | 83.1 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9811 | 74.1 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |
| **22L0329-44 (Solid)** | | | Lab File ID: 01102334ECD7.D | | | | Analyzed: 01/11/23 04:05 | |
| Decachlorobiphenyl | 7.9870 | 89.1 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9870 | 68.6 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9870 | 81.3 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9870 | 73.8 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |
| **BKL0730-MS1 (Solid)** | | | Lab File ID: 01102335ECD7.D | | | | Analyzed: 01/11/23 04:26 | |
| Decachlorobiphenyl | 7.9870 | 92.0 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9870 | 74.2 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 7.9870 | 82.9 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9870 | 76.9 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **BKL0730-MSD1 (Solid)** | | | Lab File ID: 01102336ECD7.D | | | | Analyzed: 01/11/23 04:47 | |
| Decachlorobiphenyl | 7.9870 | 93.2 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9870 | 72.7 | 44 - 120 | 5.826 | 5.835333 | -0.0093 | N/A | |
| Decachlorobiphenyl [2C] | 7.9870 | 85.0 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9870 | 78.3 | 44 - 120 | 5.703 | 5.712333 | -0.0093 | N/A | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# SURROGATE RECOVERY AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG/WO: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0329-45 (Solid)** | | | Lab File ID: 01102337ECD7.D | | | | Analyzed: 01/11/23 05:08 | |
| Decachlorobiphenyl | 7.9966 | 90.2 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 7.9966 | 73.7 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9966 | 84.1 | 40 - 126 | 14.123 | 14.13533 | -0.0123 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9966 | 75.4 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **22L0329-46 (Solid)** | | | Lab File ID: 01102338ECD7.D | | | | Analyzed: 01/11/23 05:29 | |
| Decachlorobiphenyl | 8.0016 | 85.5 | 40 - 126 | 13.896 | 13.90667 | -0.0107 | N/A | |
| Tetrachlorometaxylene | 8.0016 | 70.3 | 44 - 120 | 5.828 | 5.835333 | -0.0073 | N/A | |
| Decachlorobiphenyl [2C] | 8.0016 | 78.9 | 40 - 126 | 14.124 | 14.13533 | -0.0113 | N/A | |
| Tetrachlorometaxylene [2C] | 8.0016 | 70.7 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **22L0329-47 (Solid)** | | | Lab File ID: 01102339ECD7.D | | | | Analyzed: 01/11/23 05:50 | |
| Decachlorobiphenyl | 7.9945 | 82.5 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9945 | 66.7 | 44 - 120 | 5.829 | 5.835333 | -0.0063 | N/A | |
| Decachlorobiphenyl [2C] | 7.9945 | 78.1 | 40 - 126 | 14.122 | 14.13533 | -0.0133 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9945 | 67.9 | 44 - 120 | 5.705 | 5.712333 | -0.0073 | N/A | |
| **22L0329-48 (Solid)** | | | Lab File ID: 01102340ECD7.D | | | | Analyzed: 01/11/23 06:11 | |
| Decachlorobiphenyl | 7.9893 | 82.6 | 40 - 126 | 13.895 | 13.90667 | -0.0117 | N/A | |
| Tetrachlorometaxylene | 7.9893 | 64.4 | 44 - 120 | 5.827 | 5.835333 | -0.0083 | N/A | |
| Decachlorobiphenyl [2C] | 7.9893 | 76.2 | 40 - 126 | 14.121 | 14.13533 | -0.0143 | N/A | |
| Tetrachlorometaxylene [2C] | 7.9893 | 69.6 | 44 - 120 | 5.704 | 5.712333 | -0.0083 | N/A | |
| **SLA0156-CCV5 (Solid)** | | | Lab File ID: 01102341ECD7.D | | | | Analyzed: 01/11/23 06:32 | |
| Decachlorobiphenyl | 40.000 | 98.0 | 80 - 120 | 13.903 | 13.90667 | -0.0037 | N/A | |
| Tetrachlorometaxylene | 40.000 | 95.0 | 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 | 5.708 | 5.712333 | -0.0043 | N/A | |
| **SLA0156-CCV6 (Solid)** | | | Lab File ID: 01102342ECD7.D | | | | Analyzed: 01/11/23 06:53 | |
| Decachlorobiphenyl | 40.000 | 104 | 80 - 120 | 13.902 | 13.90667 | -0.0047 | N/A | |
| Tetrachlorometaxylene | 40.000 | 104 | 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 | 99.5 | 80 - 120 | 5.707 | 5.712333 | -0.0053 | N/A | |

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**Analytical Chemists and Consultants**

# INTERNAL STANDARD AREA AND RT SUMMARY
## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 )** | | (Water) | | 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 )** | | (Water) | | 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 )** | | (Water) | | 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 )** | | (Water) | | 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 )** | | (Water) | | 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 )** | | (Water) | | 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 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Blank (BKL0728-BLK1 )** | | (Solid) | | Lab File ID: 01072375ECD7.D | | | | Analyzed: 01/08/23 11:37 | |
| 1-Bromo-2-Nitrobenzene | 503790 | 3.513 | 452318 | 3.513 | 111 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 1110780 | 14.272 | 924234 | 14.276 | 120 | 50 - 200 | -0.004 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 351859 | 3.95 | 320936 | 3.95 | 110 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 625514 | 15.014 | 541053 | 15.015 | 116 | 50 - 200 | -0.001 | +/-0.50 | |
| **LCS (BKL0728-BS1 )** | | (Solid) | | Lab File ID: 01072376ECD7.D | | | | Analyzed: 01/08/23 11:58 | |
| 1-Bromo-2-Nitrobenzene | 508471 | 3.514 | 452318 | 3.513 | 112 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 1117702 | 14.275 | 924234 | 14.276 | 121 | 50 - 200 | -0.001 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 353265 | 3.95 | 320936 | 3.95 | 110 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 630071 | 15.013 | 541053 | 15.015 | 116 | 50 - 200 | -0.002 | +/-0.50 | |
| **LCS Dup (BKL0728-BSD1 )** | | (Solid) | | Lab File ID: 01072377ECD7.D | | | | Analyzed: 01/08/23 12:19 | |
| 1-Bromo-2-Nitrobenzene | 508135 | 3.515 | 452318 | 3.513 | 112 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 1133059 | 14.274 | 924234 | 14.276 | 123 | 50 - 200 | -0.002 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 351360 | 3.952 | 320936 | 3.95 | 109 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 637747 | 15.014 | 541053 | 15.015 | 118 | 50 - 200 | -0.001 | +/-0.50 | |
| **Reference (BKL0728-SRM1 )** | | (Solid) | | Lab File ID: 01072378ECD7.D | | | | Analyzed: 01/08/23 12:40 | |
| 1-Bromo-2-Nitrobenzene | 507663 | 3.514 | 452318 | 3.513 | 112 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 786836 | 14.26 | 924234 | 14.276 | 85 | 50 - 200 | -0.016 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 338633 | 3.951 | 320936 | 3.95 | 106 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 526775 | 15.007 | 541053 | 15.015 | 97 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-IT791G (22L0329-21 )** | | (Solid) | | Lab File ID: 01072379ECD7.D | | | | Analyzed: 01/08/23 13:01 | |
| 1-Bromo-2-Nitrobenzene | 498401 | 3.514 | 452318 | 3.513 | 110 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 935841 | 14.266 | 924234 | 14.276 | 101 | 50 - 200 | -0.010 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 348497 | 3.951 | 320936 | 3.95 | 109 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 577473 | 15.01 | 541053 | 15.015 | 107 | 50 - 200 | -0.005 | +/-0.50 | |
| **LDW22-SC781B (22L0329-22 )** | | (Solid) | | Lab File ID: 01072380ECD7.D | | | | Analyzed: 01/08/23 13:22 | |
| 1-Bromo-2-Nitrobenzene | 491874 | 3.513 | 452318 | 3.513 | 109 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 541016 | 14.257 | 924234 | 14.276 | 59 | 50 - 200 | -0.019 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 310730 | 3.95 | 320936 | 3.95 | 97 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 405517 | 15.005 | 541053 | 15.015 | 75 | 50 - 200 | -0.010 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-SC781C (22L0329-23 )** | | (Solid) | | Lab File ID: 01072381ECD7.D | | | | Analyzed: 01/08/23 13:44 | |
| 1-Bromo-2-Nitrobenzene | 462334 | 3.513 | 452318 | 3.513 | 102 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 492534 | 14.258 | 924234 | 14.276 | 53 | 50 - 200 | -0.018 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 290895 | 3.95 | 320936 | 3.95 | 91 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 368321 | 15.003 | 541053 | 15.015 | 68 | 50 - 200 | -0.012 | +/-0.50 | |
| **LDW22-SC781D (22L0329-24 )** | | (Solid) | | Lab File ID: 01072382ECD7.D | | | | Analyzed: 01/08/23 14:05 | |
| 1-Bromo-2-Nitrobenzene | 479626 | 3.513 | 452318 | 3.513 | 106 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 465432 | 14.256 | 924234 | 14.276 | 50 | 50 - 200 | -0.020 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 297114 | 3.95 | 320936 | 3.95 | 93 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 352294 | 15.005 | 541053 | 15.015 | 65 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-SC781E (22L0329-25 )** | | (Solid) | | Lab File ID: 01072383ECD7.D | | | | Analyzed: 01/08/23 14:26 | |
| 1-Bromo-2-Nitrobenzene | 445119 | 3.514 | 452318 | 3.513 | 98 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 564058 | 14.259 | 924234 | 14.276 | 61 | 50 - 200 | -0.017 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 292807 | 3.951 | 320936 | 3.95 | 91 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 416983 | 15.007 | 541053 | 15.015 | 77 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC781F (22L0329-26 )** | | (Solid) | | Lab File ID: 01072384ECD7.D | | | | Analyzed: 01/08/23 14:47 | |
| 1-Bromo-2-Nitrobenzene | 406199 | 3.515 | 452318 | 3.513 | 90 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 491615 | 14.257 | 924234 | 14.276 | 53 | 50 - 200 | -0.019 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 277891 | 3.951 | 320936 | 3.95 | 87 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 375028 | 15.004 | 541053 | 15.015 | 69 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-SC781G (22L0329-27 )** | | (Solid) | | Lab File ID: 01072385ECD7.D | | | | Analyzed: 01/08/23 15:08 | |
| 1-Bromo-2-Nitrobenzene | 451778 | 3.513 | 452318 | 3.513 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 484250 | 14.258 | 924234 | 14.276 | 52 | 50 - 200 | -0.018 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 287125 | 3.95 | 320936 | 3.95 | 89 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 376479 | 15.004 | 541053 | 15.015 | 70 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-SC765B (22L0329-29 )** | | (Solid) | | Lab File ID: 01072387ECD7.D | | | | Analyzed: 01/08/23 15:50 | |
| 1-Bromo-2-Nitrobenzene | 471205 | 3.514 | 452318 | 3.513 | 104 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 657494 | 14.261 | 924234 | 14.276 | 71 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 329100 | 3.951 | 320936 | 3.95 | 103 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 454683 | 15.006 | 541053 | 15.015 | 84 | 50 - 200 | -0.009 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-SC765C (22L0329-30 )** | | (Solid) | | Lab File ID: 01072388ECD7.D | | | | Analyzed: 01/08/23 16:11 | |
| 1-Bromo-2-Nitrobenzene | 465151 | 3.515 | 452318 | 3.513 | 103 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 501079 | 14.258 | 924234 | 14.276 | 54 | 50 - 200 | -0.018 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 306079 | 3.952 | 320936 | 3.95 | 95 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 369192 | 15.004 | 541053 | 15.015 | 68 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-SC765E (22L0329-32 )** | | (Solid) | | Lab File ID: 01072392ECD7.D | | | | Analyzed: 01/08/23 17:35 | |
| 1-Bromo-2-Nitrobenzene | 468131 | 3.514 | 452318 | 3.513 | 103 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 595407 | 14.261 | 924234 | 14.276 | 64 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 321504 | 3.952 | 320936 | 3.95 | 100 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 436035 | 15.007 | 541053 | 15.015 | 81 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC757A (22L0329-33 )** | | (Solid) | | Lab File ID: 01072393ECD7.D | | | | Analyzed: 01/08/23 17:56 | |
| 1-Bromo-2-Nitrobenzene | 458247 | 3.514 | 452318 | 3.513 | 101 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 498523 | 14.259 | 924234 | 14.276 | 54 | 50 - 200 | -0.017 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 304078 | 3.951 | 320936 | 3.95 | 95 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 371830 | 15.005 | 541053 | 15.015 | 69 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-SC757B (22L0329-34 )** | | (Solid) | | Lab File ID: 01072394ECD7.D | | | | Analyzed: 01/08/23 18:18 | |
| 1-Bromo-2-Nitrobenzene | 476748 | 3.513 | 452318 | 3.513 | 105 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 542964 | 14.258 | 924234 | 14.276 | 59 | 50 - 200 | -0.018 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 317798 | 3.951 | 320936 | 3.95 | 99 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 394208 | 15.005 | 541053 | 15.015 | 73 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-SC757C (22L0329-35 )** | | (Solid) | | Lab File ID: 01072395ECD7.D | | | | Analyzed: 01/08/23 18:39 | |
| 1-Bromo-2-Nitrobenzene | 479877 | 3.515 | 452318 | 3.513 | 106 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 818207 | 14.265 | 924234 | 14.276 | 89 | 50 - 200 | -0.011 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 341325 | 3.952 | 320936 | 3.95 | 106 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 521033 | 15.009 | 541053 | 15.015 | 96 | 50 - 200 | -0.006 | +/-0.50 | |
| **LDW22-SC757D (22L0329-36 )** | | (Solid) | | Lab File ID: 01072396ECD7.D | | | | Analyzed: 01/08/23 19:00 | |
| 1-Bromo-2-Nitrobenzene | 494027 | 3.515 | 452318 | 3.513 | 109 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 870383 | 14.265 | 924234 | 14.276 | 94 | 50 - 200 | -0.011 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 334681 | 3.952 | 320936 | 3.95 | 104 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 533961 | 15.009 | 541053 | 15.015 | 99 | 50 - 200 | -0.006 | +/-0.50 | |

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**Analytical Chemists and Consultants**

# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0099 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-SC757E (22L0329-37 )** | | (Solid) | | Lab File ID: 01072397ECD7.D | | | Analyzed: 01/08/23 19:21 | | |
| 1-Bromo-2-Nitrobenzene | 530350 | 3.514 | 452318 | 3.513 | 117 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 961866 | 14.265 | 924234 | 14.276 | 104 | 50 - 200 | -0.011 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 348072 | 3.951 | 320936 | 3.95 | 108 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 573270 | 15.009 | 541053 | 15.015 | 106 | 50 - 200 | -0.006 | +/-0.50 | |
| **LDW22-SC757F (22L0329-38 )** | | (Solid) | | Lab File ID: 01072398ECD7.D | | | Analyzed: 01/08/23 19:42 | | |
| 1-Bromo-2-Nitrobenzene | 509005 | 3.516 | 452318 | 3.513 | 113 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl | 1007749 | 14.266 | 924234 | 14.276 | 109 | 50 - 200 | -0.010 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 356670 | 3.953 | 320936 | 3.95 | 111 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 601164 | 15.009 | 541053 | 15.015 | 111 | 50 - 200 | -0.006 | +/-0.50 | |
| **Matrix Spike (BKL0728-MS1 )** | | (Solid) | | Lab File ID: 010723990ECD7.D | | | Analyzed: 01/08/23 20:03 | | |
| 1-Bromo-2-Nitrobenzene | 507080 | 3.515 | 452318 | 3.513 | 112 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 1019175 | 14.269 | 924234 | 14.276 | 110 | 50 - 200 | -0.007 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 346593 | 3.951 | 320936 | 3.95 | 108 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 593758 | 15.01 | 541053 | 15.015 | 110 | 50 - 200 | -0.005 | +/-0.50 | |
| **Matrix Spike Dup (BKL0728-MSD1 )** | | (Solid) | | Lab File ID: 010723991ECD7.D | | | Analyzed: 01/08/23 20:24 | | |
| 1-Bromo-2-Nitrobenzene | 506101 | 3.515 | 452318 | 3.513 | 112 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 1066066 | 14.268 | 924234 | 14.276 | 115 | 50 - 200 | -0.008 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 354359 | 3.951 | 320936 | 3.95 | 110 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 609670 | 15.009 | 541053 | 15.015 | 113 | 50 - 200 | -0.006 | +/-0.50 | |
| **LDW22-SC757G (22L0329-39 )** | | (Solid) | | Lab File ID: 010723992ECD7.D | | | Analyzed: 01/08/23 20:45 | | |
| 1-Bromo-2-Nitrobenzene | 495953 | 3.513 | 452318 | 3.513 | 110 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 1069641 | 14.269 | 924234 | 14.276 | 116 | 50 - 200 | -0.007 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 348628 | 3.95 | 320936 | 3.95 | 109 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 605058 | 15.009 | 541053 | 15.015 | 112 | 50 - 200 | -0.006 | +/-0.50 | |
| **LDW22-SC757H (22L0329-40 )** | | (Solid) | | Lab File ID: 010723993ECD7.D | | | Analyzed: 01/08/23 21:06 | | |
| 1-Bromo-2-Nitrobenzene | 502288 | 3.515 | 452318 | 3.513 | 111 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 1121978 | 14.267 | 924234 | 14.276 | 121 | 50 - 200 | -0.009 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 355187 | 3.951 | 320936 | 3.95 | 111 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 617751 | 15.009 | 541053 | 15.015 | 114 | 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: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Initial Cal Check (SLA0129-ICV1 )** | | (Solid) | Lab File ID: 01092302ECD7.D | | | | Analyzed: 01/09/23 09:24 | | |
| 1-Bromo-2-Nitrobenzene | 479061 | 3.514 | 479061 | 3.514 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 1221936 | 14.276 | 1221936 | 14.276 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 327437 | 3.95 | 327437 | 3.95 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 623355 | 15.015 | 623355 | 15.015 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| **Initial Cal Check (SLA0129-ICV2 )** | | (Solid) | Lab File ID: 01092303ECD7.D | | | | Analyzed: 01/09/23 09:46 | | |
| 1-Bromo-2-Nitrobenzene | 474601 | 3.515 | 479061 | 3.514 | 99 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 1279653 | 14.275 | 1221936 | 14.276 | 105 | 50 - 200 | -0.001 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 329167 | 3.952 | 327437 | 3.95 | 101 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 629076 | 15.014 | 623355 | 15.015 | 101 | 50 - 200 | -0.001 | +/-0.50 | |
| **Blank (BKL0687-BLK1 )** | | (Solid) | Lab File ID: 01092355ECD7.D | | | | Analyzed: 01/10/23 04:02 | | |
| 1-Bromo-2-Nitrobenzene | 502405 | 3.514 | 479061 | 3.514 | 105 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 1249807 | 14.274 | 1221936 | 14.276 | 102 | 50 - 200 | -0.002 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 358355 | 3.95 | 327437 | 3.95 | 109 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 641381 | 15.013 | 623355 | 15.015 | 103 | 50 - 200 | -0.002 | +/-0.50 | |
| **LCS (BKL0687-BS1 )** | | (Solid) | Lab File ID: 01092356ECD7.D | | | | Analyzed: 01/10/23 04:23 | | |
| 1-Bromo-2-Nitrobenzene | 520728 | 3.514 | 479061 | 3.514 | 109 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 1225840 | 14.274 | 1221936 | 14.276 | 100 | 50 - 200 | -0.002 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 364522 | 3.95 | 327437 | 3.95 | 111 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 663391 | 15.012 | 623355 | 15.015 | 106 | 50 - 200 | -0.003 | +/-0.50 | |
| **LCS Dup (BKL0687-BSD1 )** | | (Solid) | Lab File ID: 01092357ECD7.D | | | | Analyzed: 01/10/23 04:44 | | |
| 1-Bromo-2-Nitrobenzene | 516830 | 3.514 | 479061 | 3.514 | 108 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 1234236 | 14.273 | 1221936 | 14.276 | 101 | 50 - 200 | -0.003 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 361846 | 3.95 | 327437 | 3.95 | 111 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 673221 | 15.013 | 623355 | 15.015 | 108 | 50 - 200 | -0.002 | +/-0.50 | |
| **Reference (BKL0687-SRM1 )** | | (Solid) | Lab File ID: 01092358ECD7.D | | | | Analyzed: 01/10/23 05:05 | | |
| 1-Bromo-2-Nitrobenzene | 515143 | 3.515 | 479061 | 3.514 | 108 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 830619 | 14.261 | 1221936 | 14.276 | 68 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 359340 | 3.951 | 327437 | 3.95 | 110 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 555352 | 15.007 | 623355 | 15.015 | 89 | 50 - 200 | -0.008 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-IT799A (22L0329-01 )** | | (Solid) | | Lab File ID: 01092359ECD7.D | | | | Analyzed: 01/10/23 05:26 | |
| 1-Bromo-2-Nitrobenzene | 514199 | 3.514 | 479061 | 3.514 | 107 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 725031 | 14.262 | 1221936 | 14.276 | 59 | 50 - 200 | -0.014 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 361089 | 3.949 | 327437 | 3.95 | 110 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 477862 | 15.005 | 623355 | 15.015 | 77 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-IT799B (22L0329-02 )** | | (Solid) | | Lab File ID: 01092360ECD7.D | | | | Analyzed: 01/10/23 05:47 | |
| 1-Bromo-2-Nitrobenzene | 534197 | 3.513 | 479061 | 3.514 | 112 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 383972 | 14.257 | 1221936 | 14.276 | 31 | 50 - 200 | -0.019 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 328578 | 3.949 | 327437 | 3.95 | 100 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 286947 | 15.005 | 623355 | 15.015 | 46 | 50 - 200 | -0.010 | +/-0.50 | * |
| **LDW22-IT799C (22L0329-03 )** | | (Solid) | | Lab File ID: 01092361ECD7.D | | | | Analyzed: 01/10/23 06:08 | |
| 1-Bromo-2-Nitrobenzene | 735195 | 3.513 | 479061 | 3.514 | 153 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 430664 | 14.258 | 1221936 | 14.276 | 35 | 50 - 200 | -0.018 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 346082 | 3.951 | 327437 | 3.95 | 106 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 316017 | 15.005 | 623355 | 15.015 | 51 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-IT799D (22L0329-04 )** | | (Solid) | | Lab File ID: 01092362ECD7.D | | | | Analyzed: 01/10/23 06:29 | |
| 1-Bromo-2-Nitrobenzene | 571860 | 3.514 | 479061 | 3.514 | 119 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 488125 | 14.261 | 1221936 | 14.276 | 40 | 50 - 200 | -0.015 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 345768 | 3.952 | 327437 | 3.95 | 106 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 343787 | 15.007 | 623355 | 15.015 | 55 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-IT799E (22L0329-05 )** | | (Solid) | | Lab File ID: 01092363ECD7.D | | | | Analyzed: 01/10/23 06:51 | |
| 1-Bromo-2-Nitrobenzene | 504396 | 3.515 | 479061 | 3.514 | 105 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 541922 | 14.262 | 1221936 | 14.276 | 44 | 50 - 200 | -0.014 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 351573 | 3.952 | 327437 | 3.95 | 107 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 373858 | 15.007 | 623355 | 15.015 | 60 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-IT799F (22L0329-06 )** | | (Solid) | | Lab File ID: 01092364ECD7.D | | | | Analyzed: 01/10/23 07:12 | |
| 1-Bromo-2-Nitrobenzene | 499592 | 3.515 | 479061 | 3.514 | 104 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 509148 | 14.259 | 1221936 | 14.276 | 42 | 50 - 200 | -0.017 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 340309 | 3.952 | 327437 | 3.95 | 104 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 354589 | 15.005 | 623355 | 15.015 | 57 | 50 - 200 | -0.010 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-SC788B (22L0329-07 )** | | (Solid) | | Lab File ID: 01092365ECD7.D | | | | Analyzed: 01/10/23 07:33 | |
| 1-Bromo-2-Nitrobenzene | 488662 | 3.513 | 479061 | 3.514 | 102 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 489041 | 14.259 | 1221936 | 14.276 | 40 | 50 - 200 | -0.017 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 321747 | 3.949 | 327437 | 3.95 | 98 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 374592 | 15.005 | 623355 | 15.015 | 60 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-SC788C (22L0329-08 )** | | (Solid) | | Lab File ID: 01092366ECD7.D | | | | Analyzed: 01/10/23 07:54 | |
| 1-Bromo-2-Nitrobenzene | 462895 | 3.514 | 479061 | 3.514 | 97 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 424446 | 14.256 | 1221936 | 14.276 | 35 | 50 - 200 | -0.020 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 308915 | 3.951 | 327437 | 3.95 | 94 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 328309 | 15.004 | 623355 | 15.015 | 53 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-SC788D (22L0329-09 )** | | (Solid) | | Lab File ID: 01092367ECD7.D | | | | Analyzed: 01/10/23 08:15 | |
| 1-Bromo-2-Nitrobenzene | 458664 | 3.513 | 479061 | 3.514 | 96 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 434234 | 14.258 | 1221936 | 14.276 | 36 | 50 - 200 | -0.018 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 306934 | 3.95 | 327437 | 3.95 | 94 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 331708 | 15.003 | 623355 | 15.015 | 53 | 50 - 200 | -0.012 | +/-0.50 | |
| **LDW22-SC788E (22L0329-10 )** | | (Solid) | | Lab File ID: 01092368ECD7.D | | | | Analyzed: 01/10/23 08:36 | |
| 1-Bromo-2-Nitrobenzene | 476189 | 3.513 | 479061 | 3.514 | 99 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 428098 | 14.258 | 1221936 | 14.276 | 35 | 50 - 200 | -0.018 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 314074 | 3.949 | 327437 | 3.95 | 96 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 331502 | 15.004 | 623355 | 15.015 | 53 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-SC788E-FD (22L0329-11 )** | | (Solid) | | Lab File ID: 01092371ECD7.D | | | | Analyzed: 01/10/23 09:39 | |
| 1-Bromo-2-Nitrobenzene | 466688 | 3.516 | 479061 | 3.514 | 97 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 462848 | 14.257 | 1221936 | 14.276 | 38 | 50 - 200 | -0.019 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 309048 | 3.953 | 327437 | 3.95 | 94 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 352518 | 15.004 | 623355 | 15.015 | 57 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-SC788H (22L0329-14 )** | | (Solid) | | Lab File ID: 01092374ECD7.D | | | | Analyzed: 01/10/23 10:42 | |
| 1-Bromo-2-Nitrobenzene | 447024 | 3.512 | 479061 | 3.514 | 93 | 50 - 200 | -0.002 | +/-0.50 | |
| Hexabromobiphenyl | 481880 | 14.257 | 1221936 | 14.276 | 39 | 50 - 200 | -0.019 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 298983 | 3.949 | 327437 | 3.95 | 91 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 357241 | 15.004 | 623355 | 15.015 | 57 | 50 - 200 | -0.011 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-IT791A (22L0329-15 )** | | (Solid) | | Lab File ID: 01092375ECD7.D | | | | Analyzed: 01/10/23 11:04 | |
| 1-Bromo-2-Nitrobenzene | 474893 | 3.513 | 479061 | 3.514 | 99 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 503486 | 14.257 | 1221936 | 14.276 | 41 | 50 - 200 | -0.019 | +/-0.50 | * |
| 1-Bromo-2-Nitrobenzene [2C] | 341289 | 3.95 | 327437 | 3.95 | 104 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 349256 | 15.004 | 623355 | 15.015 | 56 | 50 - 200 | -0.011 | +/-0.50 | |
| **LDW22-IT791B (22L0329-16 )** | | (Solid) | | Lab File ID: 01092376ECD7.D | | | | Analyzed: 01/10/23 11:25 | |
| 1-Bromo-2-Nitrobenzene | 487388 | 3.514 | 479061 | 3.514 | 102 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 663643 | 14.268 | 1221936 | 14.276 | 54 | 50 - 200 | -0.008 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 350086 | 3.952 | 327437 | 3.95 | 107 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 421768 | 15.011 | 623355 | 15.015 | 68 | 50 - 200 | -0.004 | +/-0.50 | |
| **Matrix Spike (BKL0687-MS1 )** | | (Solid) | | Lab File ID: 01092377ECD7.D | | | | Analyzed: 01/10/23 11:46 | |
| 1-Bromo-2-Nitrobenzene | 497154 | 3.513 | 479061 | 3.514 | 104 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 765501 | 14.269 | 1221936 | 14.276 | 63 | 50 - 200 | -0.007 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 359063 | 3.95 | 327437 | 3.95 | 110 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 463194 | 15.012 | 623355 | 15.015 | 74 | 50 - 200 | -0.003 | +/-0.50 | |
| **Matrix Spike Dup (BKL0687-MSD1 )** | | (Solid) | | Lab File ID: 01092378ECD7.D | | | | Analyzed: 01/10/23 12:07 | |
| 1-Bromo-2-Nitrobenzene | 493798 | 3.513 | 479061 | 3.514 | 103 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 807510 | 14.268 | 1221936 | 14.276 | 66 | 50 - 200 | -0.008 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 352397 | 3.95 | 327437 | 3.95 | 108 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 483749 | 15.01 | 623355 | 15.015 | 78 | 50 - 200 | -0.005 | +/-0.50 | |
| **LDW22-IT791C (22L0329-17 )** | | (Solid) | | Lab File ID: 01092379ECD7.D | | | | Analyzed: 01/10/23 12:28 | |
| 1-Bromo-2-Nitrobenzene | 484692 | 3.513 | 479061 | 3.514 | 101 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 869347 | 14.271 | 1221936 | 14.276 | 71 | 50 - 200 | -0.005 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 349222 | 3.95 | 327437 | 3.95 | 107 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 487947 | 15.012 | 623355 | 15.015 | 78 | 50 - 200 | -0.003 | +/-0.50 | |
| **LDW22-IT791D (22L0329-18 )** | | (Solid) | | Lab File ID: 01092380ECD7.D | | | | Analyzed: 01/10/23 12:49 | |
| 1-Bromo-2-Nitrobenzene | 492859 | 3.512 | 479061 | 3.514 | 103 | 50 - 200 | -0.002 | +/-0.50 | |
| Hexabromobiphenyl | 914738 | 14.269 | 1221936 | 14.276 | 75 | 50 - 200 | -0.007 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 354859 | 3.95 | 327437 | 3.95 | 108 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 496384 | 15.011 | 623355 | 15.015 | 80 | 50 - 200 | -0.004 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0129 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LDW22-IT791E (22L0329-19 )** | | (Solid) | | Lab File ID: 01092381ECD7.D | | | | Analyzed: 01/10/23 13:10 | |
| 1-Bromo-2-Nitrobenzene | 497624 | 3.513 | 479061 | 3.514 | 104 | 50 - 200 | -0.001 | +/-0.50 | |
| Hexabromobiphenyl | 950566 | 14.271 | 1221936 | 14.276 | 78 | 50 - 200 | -0.005 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 350693 | 3.951 | 327437 | 3.95 | 107 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 508153 | 15.011 | 623355 | 15.015 | 82 | 50 - 200 | -0.004 | +/-0.50 | |
| **LDW22-IT791F (22L0329-20 )** | | (Solid) | | Lab File ID: 01092382ECD7.D | | | | Analyzed: 01/10/23 13:31 | |
| 1-Bromo-2-Nitrobenzene | 494768 | 3.515 | 479061 | 3.514 | 103 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 1009765 | 14.272 | 1221936 | 14.276 | 83 | 50 - 200 | -0.004 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 355879 | 3.953 | 327437 | 3.95 | 109 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 530642 | 15.011 | 623355 | 15.015 | 85 | 50 - 200 | -0.004 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0136 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Initial Cal Check (SLA0136-ICV1 )** | | (Solid) | | Lab File ID: 01112302ECD7.D | | | | Analyzed: 01/11/23 09:17 | |
| 1-Bromo-2-Nitrobenzene | 385664 | 3.513 | 385664 | 3.513 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 870797 | 14.278 | 870797 | 14.278 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 309423 | 3.949 | 309423 | 3.949 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 593050 | 15.016 | 593050 | 15.016 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| **Initial Cal Check (SLA0136-ICV2 )** | | (Solid) | | Lab File ID: 01112303ECD7.D | | | | Analyzed: 01/11/23 09:38 | |
| 1-Bromo-2-Nitrobenzene | 355800 | 3.514 | 385664 | 3.513 | 92 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 837219 | 14.276 | 870797 | 14.278 | 96 | 50 - 200 | -0.002 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 284672 | 3.952 | 309423 | 3.949 | 92 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 544579 | 15.015 | 593050 | 15.016 | 92 | 50 - 200 | -0.001 | +/-0.50 | |
| **LDW22-SC781H (22L0329-28 )** | | (Solid) | | Lab File ID: 01112365ECD7.D | | | | Analyzed: 01/12/23 07:23 | |
| 1-Bromo-2-Nitrobenzene | 404629 | 3.515 | 385664 | 3.513 | 105 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 533309 | 14.26 | 870797 | 14.278 | 61 | 50 - 200 | -0.018 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 288148 | 3.952 | 309423 | 3.949 | 93 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 403200 | 15.006 | 593050 | 15.016 | 68 | 50 - 200 | -0.010 | +/-0.50 | |
| **LDW22-SC765D (22L0329-31 )** | | (Solid) | | Lab File ID: 01112366ECD7.D | | | | Analyzed: 01/12/23 07:45 | |
| 1-Bromo-2-Nitrobenzene | 398972 | 3.514 | 385664 | 3.513 | 103 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 548497 | 14.26 | 870797 | 14.278 | 63 | 50 - 200 | -0.018 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 297117 | 3.95 | 309423 | 3.949 | 96 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 426230 | 15.006 | 593050 | 15.016 | 72 | 50 - 200 | -0.010 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Initial Cal Check (SLA0156-ICV1 )** | | (Solid) | Lab File ID: 01102302ECD7.D | | | | Analyzed: 01/10/23 16:50 | | |
| 1-Bromo-2-Nitrobenzene | 404484 | 3.513 | 404484 | 3.513 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 849738 | 14.277 | 849738 | 14.277 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 308252 | 3.949 | 308252 | 3.949 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 525260 | 15.014 | 525260 | 15.014 | 100 | 50 - 200 | 0.000 | +/-0.50 | |
| **Initial Cal Check (SLA0156-ICV2 )** | | (Solid) | Lab File ID: 01102303ECD7.D | | | | Analyzed: 01/10/23 17:11 | | |
| 1-Bromo-2-Nitrobenzene | 379615 | 3.513 | 404484 | 3.513 | 94 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 837414 | 14.277 | 849738 | 14.277 | 99 | 50 - 200 | 0.000 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 290627 | 3.951 | 308252 | 3.949 | 94 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 505644 | 15.015 | 525260 | 15.014 | 96 | 50 - 200 | 0.001 | +/-0.50 | |
| **LDW22-SC788F (22L0329-12 )** | | (Solid) | Lab File ID: 01102321ECD7.D | | | | Analyzed: 01/10/23 23:31 | | |
| 1-Bromo-2-Nitrobenzene | 412401 | 3.515 | 404484 | 3.513 | 102 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 512825 | 14.261 | 849738 | 14.277 | 60 | 50 - 200 | -0.016 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 303190 | 3.952 | 308252 | 3.949 | 98 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 386844 | 15.006 | 525260 | 15.014 | 74 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC788G (22L0329-13 )** | | (Solid) | Lab File ID: 01102322ECD7.D | | | | Analyzed: 01/10/23 23:52 | | |
| 1-Bromo-2-Nitrobenzene | 457769 | 3.514 | 404484 | 3.513 | 113 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 712748 | 14.269 | 849738 | 14.277 | 84 | 50 - 200 | -0.008 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 348449 | 3.952 | 308252 | 3.949 | 113 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 492812 | 15.011 | 525260 | 15.014 | 94 | 50 - 200 | -0.003 | +/-0.50 | |
| **Blank (BKL0730-BLK1 )** | | (Solid) | Lab File ID: 01102327ECD7.D | | | | Analyzed: 01/11/23 01:37 | | |
| 1-Bromo-2-Nitrobenzene | 454033 | 3.514 | 404484 | 3.513 | 112 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 891751 | 14.272 | 849738 | 14.277 | 105 | 50 - 200 | -0.005 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 343096 | 3.951 | 308252 | 3.949 | 111 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 560765 | 15.014 | 525260 | 15.014 | 107 | 50 - 200 | 0.000 | +/-0.50 | |
| **LCS (BKL0730-BS1 )** | | (Solid) | Lab File ID: 01102328ECD7.D | | | | Analyzed: 01/11/23 01:58 | | |
| 1-Bromo-2-Nitrobenzene | 473980 | 3.514 | 404484 | 3.513 | 117 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 924133 | 14.271 | 849738 | 14.277 | 109 | 50 - 200 | -0.006 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 361654 | 3.952 | 308252 | 3.949 | 117 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 590519 | 15.014 | 525260 | 15.014 | 112 | 50 - 200 | 0.000 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **LCS Dup (BKL0730-BSD1 )** | | (Solid) | | Lab File ID: 01102329ECD7.D | | | | Analyzed: 01/11/23 02:19 | |
| 1-Bromo-2-Nitrobenzene | 474253 | 3.513 | 404484 | 3.513 | 117 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 972948 | 14.272 | 849738 | 14.277 | 114 | 50 - 200 | -0.005 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 360235 | 3.95 | 308252 | 3.949 | 117 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 608175 | 15.014 | 525260 | 15.014 | 116 | 50 - 200 | 0.000 | +/-0.50 | |
| **Reference (BKL0730-SRM1 )** | | (Solid) | | Lab File ID: 01102330ECD7.D | | | | Analyzed: 01/11/23 02:40 | |
| 1-Bromo-2-Nitrobenzene | 466130 | 3.515 | 404484 | 3.513 | 115 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 741853 | 14.263 | 849738 | 14.277 | 87 | 50 - 200 | -0.014 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 342074 | 3.951 | 308252 | 3.949 | 111 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 522264 | 15.008 | 525260 | 15.014 | 99 | 50 - 200 | -0.006 | +/-0.50 | |
| **LDW22-SC754A (22L0329-41 )** | | (Solid) | | Lab File ID: 01102331ECD7.D | | | | Analyzed: 01/11/23 03:01 | |
| 1-Bromo-2-Nitrobenzene | 458346 | 3.514 | 404484 | 3.513 | 113 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 555257 | 14.26 | 849738 | 14.277 | 65 | 50 - 200 | -0.017 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 322261 | 3.951 | 308252 | 3.949 | 105 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 427550 | 15.006 | 525260 | 15.014 | 81 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC754B (22L0329-42 )** | | (Solid) | | Lab File ID: 01102332ECD7.D | | | | Analyzed: 01/11/23 03:22 | |
| 1-Bromo-2-Nitrobenzene | 455685 | 3.513 | 404484 | 3.513 | 113 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 598819 | 14.26 | 849738 | 14.277 | 70 | 50 - 200 | -0.017 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 313907 | 3.951 | 308252 | 3.949 | 102 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 450833 | 15.006 | 525260 | 15.014 | 86 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC754C (22L0329-43 )** | | (Solid) | | Lab File ID: 01102333ECD7.D | | | | Analyzed: 01/11/23 03:44 | |
| 1-Bromo-2-Nitrobenzene | 466824 | 3.514 | 404484 | 3.513 | 115 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 597256 | 14.261 | 849738 | 14.277 | 70 | 50 - 200 | -0.016 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 327433 | 3.95 | 308252 | 3.949 | 106 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 454022 | 15.006 | 525260 | 15.014 | 86 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC754D (22L0329-44 )** | | (Solid) | | Lab File ID: 01102334ECD7.D | | | | Analyzed: 01/11/23 04:05 | |
| 1-Bromo-2-Nitrobenzene | 474533 | 3.513 | 404484 | 3.513 | 117 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 624363 | 14.262 | 849738 | 14.277 | 73 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 326448 | 3.95 | 308252 | 3.949 | 106 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 463332 | 15.006 | 525260 | 15.014 | 88 | 50 - 200 | -0.008 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## EPA 8082A

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0156 | Instrument: | ECD7 |
| | | Calibration: | FL00010 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BKL0730-MS1 )** | | (Solid) | | Lab File ID: 01102335ECD7.D | | | | Analyzed: 01/11/23 04:26 | |
| 1-Bromo-2-Nitrobenzene | 464545 | 3.515 | 404484 | 3.513 | 115 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 657648 | 14.264 | 849738 | 14.277 | 77 | 50 - 200 | -0.013 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 331812 | 3.952 | 308252 | 3.949 | 108 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 485350 | 15.008 | 525260 | 15.014 | 92 | 50 - 200 | -0.006 | +/-0.50 | |
| **Matrix Spike Dup (BKL0730-MSD1 )** | | (Solid) | | Lab File ID: 01102336ECD7.D | | | | Analyzed: 01/11/23 04:47 | |
| 1-Bromo-2-Nitrobenzene | 441431 | 3.513 | 404484 | 3.513 | 109 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 630465 | 14.263 | 849738 | 14.277 | 74 | 50 - 200 | -0.014 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 314116 | 3.95 | 308252 | 3.949 | 102 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 464627 | 15.007 | 525260 | 15.014 | 88 | 50 - 200 | -0.007 | +/-0.50 | |
| **LDW22-SC754E (22L0329-45 )** | | (Solid) | | Lab File ID: 01102337ECD7.D | | | | Analyzed: 01/11/23 05:08 | |
| 1-Bromo-2-Nitrobenzene | 470287 | 3.513 | 404484 | 3.513 | 116 | 50 - 200 | 0.000 | +/-0.50 | |
| Hexabromobiphenyl | 723582 | 14.262 | 849738 | 14.277 | 85 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 331894 | 3.95 | 308252 | 3.949 | 108 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 501539 | 15.007 | 525260 | 15.014 | 95 | 50 - 200 | -0.007 | +/-0.50 | |
| **LDW22-SC754F (22L0329-46 )** | | (Solid) | | Lab File ID: 01102338ECD7.D | | | | Analyzed: 01/11/23 05:29 | |
| 1-Bromo-2-Nitrobenzene | 459147 | 3.515 | 404484 | 3.513 | 114 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 646138 | 14.262 | 849738 | 14.277 | 76 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 329461 | 3.952 | 308252 | 3.949 | 107 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 475907 | 15.006 | 525260 | 15.014 | 91 | 50 - 200 | -0.008 | +/-0.50 | |
| **LDW22-SC754G (22L0329-47 )** | | (Solid) | | Lab File ID: 01102339ECD7.D | | | | Analyzed: 01/11/23 05:50 | |
| 1-Bromo-2-Nitrobenzene | 464632 | 3.515 | 404484 | 3.513 | 115 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl | 714205 | 14.262 | 849738 | 14.277 | 84 | 50 - 200 | -0.015 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 339206 | 3.952 | 308252 | 3.949 | 110 | 50 - 200 | 0.003 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 508844 | 15.007 | 525260 | 15.014 | 97 | 50 - 200 | -0.007 | +/-0.50 | |
| **LDW22-SC754H (22L0329-48 )** | | (Solid) | | Lab File ID: 01102340ECD7.D | | | | Analyzed: 01/11/23 06:11 | |
| 1-Bromo-2-Nitrobenzene | 462674 | 3.514 | 404484 | 3.513 | 114 | 50 - 200 | 0.001 | +/-0.50 | |
| Hexabromobiphenyl | 665003 | 14.26 | 849738 | 14.277 | 78 | 50 - 200 | -0.017 | +/-0.50 | |
| 1-Bromo-2-Nitrobenzene [2C] | 322212 | 3.951 | 308252 | 3.949 | 105 | 50 - 200 | 0.002 | +/-0.50 | |
| Hexabromobiphenyl [2C] | 484246 | 15.007 | 525260 | 15.014 | 92 | 50 - 200 | -0.007 | +/-0.50 | |

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# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-22 | File ID: | 01072380ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 13:22 |
| Solids: | 61.71 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.41 | 8.427 | 0.017 | 215752.5 | 147 | 6.3 |
| | 2 | 8.311 | 8.326 | 0.015 | 114197.5 | 138 | |
| Aroclor 1254 | 1 | 9.298 | 9.318 | 0.02 | 302612.4 | 171 | 6.2 |
| | * 2 | 9.448 | 9.466 | 0.018 | 221469.6 | 182 | |
| Aroclor 1260 | 1 | 11.041 | 11.0625 | 0.0215 | 78982.4 | 61.0 | 7.3 |
| | * 2 | 11.652 | 11.66983 | 0.0178 | 95972.5 | 65.6 | |

* Column used for quantitation

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# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-23 | File ID: | 01072381ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 13:44 |
| Solids: | 59.09 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.409 | 8.427 | 0.018 | 185841.5 | 123 | 32.1 |
| | * 2 | 8.311 | 8.326 | 0.015 | 108274.8 | 170 | |
| Aroclor 1254 | * 1 | 9.298 | 9.318 | 0.02 | 326885.2 | 192 | 7. |
| | 2 | 9.447 | 9.466 | 0.019 | 222822.2 | 179 | |
| Aroclor 1260 | * 1 | 11.042 | 11.0625 | 0.0205 | 102700.4 | 96.8 | 15.5 |
| | 2 | 11.652 | 11.66983 | 0.0178 | 105437.5 | 82.9 | |

* Column used for quantitation

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# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-24 | File ID: | 01072382ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 14:05 |
| Solids: | 60.77 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.408 | 8.427 | 0.019 | 190450.5 | 133 | 2.3 |
| | 2 | 8.31 | 8.326 | 0.016 | 103313.3 | 130 | |
| Aroclor 1254 | 1 | 9.297 | 9.318 | 0.021 | 330527.2 | 173 | 2.3 |
| | * 2 | 9.447 | 9.466 | 0.019 | 207881.8 | 177 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 98973.2 | 90.0 | .3 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 115798.3 | 90.3 | |

* Column used for quantitation

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**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-25 | File ID: | 01072383ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 14:26 |
| Solids: | 60.57 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.411 | 8.427 | 0.016 | 12249 | 9.5 | 15.9 |
| | 2 | 8.312 | 8.326 | 0.014 | 5740.75 | 8.1 | |
| Aroclor 1254 | * 1 | 9.299 | 9.318 | 0.019 | 20646.4 | 12.8 | 13.3 |
| | 2 | 9.449 | 9.466 | 0.017 | 13103.2 | 11.2 | |
| Aroclor 1260 | * 1 | 11.043 | 11.0625 | 0.0195 | 8306.6 | 6.9 | 30. |
| | 2 | 11.654 | 11.66983 | 0.0158 | 6672.75 | 5.1 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-26 | File ID: | 01072384ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 14:47 |
| Solids: | 57.17 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.409 | 8.427 | 0.018 | 39471.25 | 32.9 | 17.5 |
| | 2 | 8.311 | 8.326 | 0.015 | 20281 | 27.6 | |
| Aroclor 1254 | * 1 | 9.297 | 9.318 | 0.021 | 72873 | 49.7 | 18.2 |
| | 2 | 9.447 | 9.466 | 0.019 | 46498 | 41.4 | |
| Aroclor 1260 | * 1 | 11.041 | 11.0625 | 0.0215 | 19289.8 | 17.8 | 16.4 |
| | 2 | 11.651 | 11.66983 | 0.0188 | 19585.25 | 15.1 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-27 | File ID: | 01072385ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 15:08 |
| Solids: | 58.73 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.409 | 8.427 | 0.018 | 64106.75 | 47.8 | 14.1 |
| | 2 | 8.311 | 8.326 | 0.015 | 32531 | 41.5 | |
| Aroclor 1254 | * 1 | 9.296 | 9.318 | 0.022 | 115846.6 | 71.1 | 3.1 |
| | 2 | 9.448 | 9.466 | 0.018 | 80688.8 | 68.9 | |
| Aroclor 1260 | * 1 | 11.041 | 11.0625 | 0.0215 | 35344.8 | 32.1 | 14.4 |
| | 2 | 11.651 | 11.66983 | 0.0188 | 37993.5 | 27.8 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-29 | File ID: | 01072387ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 15:50 |
| Solids: | 82.94 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.414 | 8.427 | 0.013 | 9683.25 | 7.2 | 1.4 |
| | * 2 | 8.315 | 8.326 | 0.011 | 5281.25 | 7.3 | |
| Aroclor 1254 | 1 | 9.302 | 9.318 | 0.016 | 12078.2 | 7.3 | 33.1 |
| | * 2 | 9.452 | 9.466 | 0.014 | 13203.4 | 10.2 | |
| Aroclor 1260 | * 1 | 11.046 | 11.0625 | 0.0165 | 10328.4 | 6.6 | 6.2 |
| | 2 | 11.655 | 11.66983 | 0.0148 | 9580 | 6.2 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-30 | File ID: | 01072388ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 16:11 |
| Solids: | 55.36 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.41 | 8.427 | 0.017 | 56624.5 | 41.2 | 18.9 |
| | 2 | 8.312 | 8.326 | 0.014 | 28301.75 | 34.1 | |
| Aroclor 1254 | 1 | 9.298 | 9.318 | 0.02 | 102176.8 | 60.7 | 21.6 |
| | * 2 | 9.448 | 9.466 | 0.018 | 91902.2 | 75.4 | |
| Aroclor 1260 | * 1 | 11.043 | 11.0625 | 0.0195 | 87985.2 | 73.1 | 9.6 |
| | 2 | 11.652 | 11.66983 | 0.0178 | 91295.5 | 66.4 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-32 | File ID: | 01072392ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 17:35 |
| Solids: | 77.43 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.414 | 8.427 | 0.013 | 8507 | 6.4 | 15.1 |
| | 2 | 8.315 | 8.326 | 0.011 | 3997.5 | 5.5 | |
| Aroclor 1254 | 1 | 9.302 | 9.318 | 0.016 | 15737.4 | 9.1 | 8.4 |
| | * 2 | 9.451 | 9.466 | 0.015 | 12654 | 9.9 | |
| Aroclor 1260 | 1 | 11.046 | 11.0625 | 0.0165 | 11472 | 8.1 | 14.9 |
| | * 2 | 11.654 | 11.66983 | 0.0158 | 13809 | 9.4 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-33 | File ID: | 01072393ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 17:56 |
| Solids: | 70.59 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.41 | 8.427 | 0.017 | 53005.25 | 39.1 | 27.3 |
| | 2 | 8.312 | 8.326 | 0.014 | 22446 | 29.7 | |
| Aroclor 1254 | 1 | 9.298 | 9.318 | 0.02 | 99712 | 59.5 | 20.5 |
| | * 2 | 9.448 | 9.466 | 0.018 | 88361.2 | 73.1 | |
| Aroclor 1260 | * 1 | 11.043 | 11.0625 | 0.0195 | 84549.4 | 70.0 | 6. |
| | 2 | 11.652 | 11.66983 | 0.0178 | 92029.75 | 65.9 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-34 | File ID: | 01072394ECD7.D |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/08/23 18:18 |
| Solids: | 72.63 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0099 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.412 | 8.427 | 0.015 | 11581.5 | 5.6 | 7.4 |
| | 2 | 8.313 | 8.326 | 0.013 | 4331.5 | 5.2 | |
| Aroclor 1254 | 1 | 9.3 | 9.318 | 0.018 | 21211.8 | 12.1 | 20.1 |
| | * 2 | 9.449 | 9.466 | 0.017 | 18637.6 | 14.8 | |
| Aroclor 1260 | * 1 | 11.043 | 11.0625 | 0.0195 | 20143 | 15.4 | 2. |
| | 2 | 11.652 | 11.66983 | 0.0178 | 21742.75 | 15.1 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-01 | File ID: | 01092359ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 05:26 |
| Solids: | 81.35 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1254 | 1 | 9.303 | 9.318 | 0.015 | 13870 | 7.5 | 1.3 |
| | * 2 | 9.454 | 9.466 | 0.012 | 11039.8 | 7.6 | |
| Aroclor 1260 | 1 | 11.046 | 11.0625 | 0.0165 | 8472.4 | 4.7 | 8.2 |
| | * 2 | 11.654 | 11.66983 | 0.0158 | 8048.25 | 5.1 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-02 | File ID: | 01092360ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 05:47 |
| Solids: | 82.00 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.41 | 8.427 | 0.017 | 106550.8 | 66.1 | 1.2 |
| | * 2 | 8.311 | 8.326 | 0.015 | 54339.5 | 65.3 | |
| Aroclor 1254 | 1 | 9.297 | 9.318 | 0.021 | 156037.2 | 79.7 | 14. |
| | * 2 | 9.448 | 9.466 | 0.018 | 121241.4 | 91.7 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 42399 | 44.2 | 11.7 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 50116.25 | 49.7 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-03 | File ID: | 01092361ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 06:08 |
| Solids: | 75.69 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.413 | 8.427 | 0.014 | 28469 | 19.8 | 47.7 |
| | * 2 | 8.313 | 8.326 | 0.013 | 37438.25 | 32.2 | |
| Aroclor 1254 | 1 | 9.3 | 9.318 | 0.018 | 205517.4 | 77.5 | 39.8 |
| | * 2 | 9.45 | 9.466 | 0.016 | 161664.6 | 116 | |
| Aroclor 1260 | 1 | 11.043 | 11.0625 | 0.0195 | 58270 | 55.7 | 12.5 |
| | * 2 | 11.652 | 11.66983 | 0.0178 | 72267.25 | 63.1 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-04 | File ID: | 01092362ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 06:29 |
| Solids: | 72.78 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.414 | 8.427 | 0.013 | 11963 | 11.7 | 11.3 |
| | * 2 | 8.314 | 8.326 | 0.012 | 11234.5 | 13.1 | |
| Aroclor 1254 | 1 | 9.301 | 9.318 | 0.017 | 99126.4 | 47.3 | 9.1 |
| | * 2 | 9.451 | 9.466 | 0.015 | 72629 | 51.8 | |
| Aroclor 1260 | 1 | 11.044 | 11.0625 | 0.0185 | 27340.8 | 22.8 | 18.3 |
| | * 2 | 11.654 | 11.66983 | 0.0158 | 33526 | 27.4 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-05 | File ID: | 01092363ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 06:51 |
| Solids: | 74.98 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.415 | 8.427 | 0.012 | 19746 | 14.7 | 27. |
| | 2 | 8.315 | 8.326 | 0.011 | 9880 | 11.2 | |
| Aroclor 1254 | * 1 | 9.302 | 9.318 | 0.016 | 85687.2 | 48.8 | 22.3 |
| | 2 | 9.452 | 9.466 | 0.014 | 55604.8 | 39.0 | |
| Aroclor 1260 | 1 | 11.045 | 11.0625 | 0.0175 | 25282.4 | 19.0 | 5.6 |
| | * 2 | 11.655 | 11.66983 | 0.0148 | 27095.25 | 20.1 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-06 | File ID: | 01092364ECD7.D |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 07:12 |
| Solids: | 70.36 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.411 | 8.427 | 0.016 | 13910 | 13.0 | 15.6 |
| | * 2 | 8.312 | 8.326 | 0.014 | 12772 | 15.2 | |
| Aroclor 1254 | 1 | 9.298 | 9.318 | 0.02 | 68914.2 | 37.5 | 5.2 |
| | * 2 | 9.448 | 9.466 | 0.018 | 53963.4 | 39.5 | |
| Aroclor 1260 | 1 | 11.044 | 11.0625 | 0.0185 | 23245.8 | 18.8 | 8.7 |
| | * 2 | 11.652 | 11.66983 | 0.0178 | 26367.25 | 20.5 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-07 | File ID: | 01092365ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 07:33 |
| Solids: | 56.96 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.408 | 8.427 | 0.019 | 67248.75 | 33.0 | 4. |
| | 2 | 8.311 | 8.326 | 0.015 | 23453.25 | 31.7 | |
| Aroclor 1254 | 1 | 9.297 | 9.318 | 0.021 | 111146.6 | 62.1 | 19.5 |
| | * 2 | 9.447 | 9.466 | 0.019 | 97532.8 | 75.5 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 62151.4 | 52.5 | .4 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 70259.75 | 52.3 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-08 | File ID: | 01092366ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 07:54 |
| Solids: | 58.56 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.408 | 8.427 | 0.019 | 179883.3 | 83.3 | 12.6 |
| | 2 | 8.31 | 8.326 | 0.016 | 58968.25 | 73.4 | |
| Aroclor 1254 | 1 | 9.296 | 9.318 | 0.022 | 312411.6 | 185 | 4.7 |
| | * 2 | 9.446 | 9.466 | 0.02 | 263165.4 | 194 | |
| Aroclor 1260 | 1 | 11.041 | 11.0625 | 0.0215 | 125887.8 | 123 | 4.8 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 154125.8 | 129 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-09 | File ID: | 01092367ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 08:15 |
| Solids: | 55.92 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.409 | 8.427 | 0.018 | 127207.8 | 64.3 | 25.7 |
| | * 2 | 8.31 | 8.326 | 0.016 | 45285.25 | 83.3 | |
| Aroclor 1254 | 1 | 9.296 | 9.318 | 0.022 | 173827.4 | 104 | 21.5 |
| | * 2 | 9.447 | 9.466 | 0.019 | 180777.6 | 129 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 176014.2 | 181 | 1.7 |
| | * 2 | 11.65 | 11.66983 | 0.0198 | 208673.5 | 178 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-10 | File ID: | 01092368ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 08:36 |
| Solids: | 54.75 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.409 | 8.427 | 0.018 | 147485 | 69.0 | 27.9 |
| | * 2 | 8.31 | 8.326 | 0.016 | 51440.25 | 91.4 | |
| Aroclor 1254 | 1 | 9.297 | 9.318 | 0.021 | 247997 | 144 | 2.1 |
| | * 2 | 9.446 | 9.466 | 0.02 | 204467.2 | 147 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 97670.2 | 96.4 | 3.7 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 119607.8 | 100 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-11 | File ID: | 01092371ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 09:39 |
| Solids: | 54.92 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.41 | 8.427 | 0.017 | 66243 | 63.6 | 24.1 |
| | * 2 | 8.311 | 8.326 | 0.015 | 44824.5 | 81.0 | |
| Aroclor 1254 | 1 | 9.297 | 9.318 | 0.021 | 217170.2 | 129 | 8.9 |
| | * 2 | 9.447 | 9.466 | 0.019 | 176611.6 | 141 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 83908.6 | 76.4 | 1.7 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 99320.25 | 77.7 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-14 | File ID: | 01092374ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 10:42 |
| Solids: | 60.79 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.409 | 8.427 | 0.018 | 50852.75 | 38.0 | .3 |
| | * 2 | 8.311 | 8.326 | 0.015 | 20545.75 | 38.1 | |
| Aroclor 1254 | 1 | 9.297 | 9.318 | 0.021 | 104310.8 | 63.0 | 7.7 |
| | * 2 | 9.448 | 9.466 | 0.018 | 71315.4 | 58.3 | |
| Aroclor 1260 | 1 | 11.042 | 11.0625 | 0.0205 | 39992 | 36.0 | 2.2 |
| | * 2 | 11.651 | 11.66983 | 0.0188 | 45445.75 | 35.2 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-15 | File ID: | 01092375ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 11:04 |
| Solids: | 80.90 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1254 | 1 | 9.301 | 9.318 | 0.017 | 102598.8 | 59.5 | 9.3 |
| | * 2 | 9.451 | 9.466 | 0.015 | 74741.2 | 54.2 | |
| Aroclor 1260 | 1 | 11.044 | 11.0625 | 0.0185 | 28340.8 | 23.6 | 3.3 |
| | * 2 | 11.653 | 11.66983 | 0.0168 | 30000 | 24.4 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-16 | File ID: | 01092376ECD7.D |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 11:25 |
| Solids: | 89.48 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0129 | | |
| 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 | 36996.2 | 20.4 | 8.9 |
| | * 2 | 9.456 | 9.466 | 0.01 | 31683.6 | 22.3 | |
| Aroclor 1260 | 1 | 11.051 | 11.0625 | 0.0115 | 8845 | 5.6 | 20.8 |
| | * 2 | 11.66 | 11.66983 | 0.00983 | 10304.5 | 6.9 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-28 | File ID: | 01112365ECD7.D |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/12/23 07:23 |
| Solids: | 59.77 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0136 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.411 | 8.427 | 0.016 | 58210 | 138 | 24.2 |
| | * 2 | 8.312 | 8.326 | 0.014 | 30290 | 176 | |
| Aroclor 1254 | 1 | 9.299 | 9.318 | 0.019 | 112244.2 | 333 | 12.1 |
| | * 2 | 9.449 | 9.466 | 0.017 | 89268.6 | 376 | |
| Aroclor 1260 | 1 | 11.043 | 11.0625 | 0.0195 | 37265.8 | 147 | . |
| | * 2 | 11.653 | 11.66983 | 0.0168 | 43545.5 | 147 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-31 | File ID: | 01112366ECD7.D |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/31/22 11:42 | Analyzed: | 01/12/23 07:45 |
| Solids: | 65.07 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0728 | Sequence: | SLA0136 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.412 | 8.427 | 0.015 | 51278.25 | 126 | 14.7 |
| | * 2 | 8.313 | 8.326 | 0.013 | 23107 | 146 | |
| Aroclor 1254 | 1 | 9.301 | 9.318 | 0.017 | 95755.4 | 264 | 37.5 |
| | * 2 | 9.45 | 9.466 | 0.016 | 90825.6 | 386 | |
| Aroclor 1260 | 1 | 11.044 | 11.0625 | 0.0185 | 102199.8 | 381 | .3 |
| | * 2 | 11.653 | 11.66983 | 0.0168 | 117693 | 382 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-12 | File ID: | 01102321ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 23:31 |
| Solids: | 59.73 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0156 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | * 1 | 8.412 | 8.427 | 0.015 | 88739.25 | 370 | 24.2 |
| | 2 | 8.314 | 8.326 | 0.012 | 46345 | 290 | |
| Aroclor 1254 | 1 | 9.3 | 9.318 | 0.018 | 157688.8 | 523 | 3. |
| | * 2 | 9.45 | 9.466 | 0.016 | 132100 | 539 | |
| Aroclor 1260 | 1 | 11.044 | 11.0625 | 0.0185 | 53629 | 217 | 7.5 |
| | * 2 | 11.654 | 11.66983 | 0.0158 | 65636.5 | 234 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-13 | File ID: | 01102322ECD7.D |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/30/22 16:34 | Analyzed: | 01/10/23 23:52 |
| Solids: | 59.30 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0687 | Sequence: | SLA0156 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1254 | 1 | 9.311 | 9.318 | 0.007 | 118834.6 | 3900 | 65.4 |
| | * 2 | 9.456 | 9.466 | 0.01 | 173653.8 | 7690 | |
| Aroclor 1260 | 1 | 11.052 | 11.0625 | 0.0105 | 342034.4 | 19100 | 13.4 |
| | * 2 | 11.658 | 11.66983 | 0.0118 | 323981.3 | 16700 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-41 | File ID: | 01102331ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 03:01 |
| Solids: | 70.38 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0730 | Sequence: | SLA0156 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1248 | 1 | 8.411 | 8.427 | 0.016 | 31709.75 | 16.1 | 17.6 |
| | * 2 | 8.313 | 8.326 | 0.013 | 14800 | 19.2 | |
| Aroclor 1254 | 1 | 9.299 | 9.318 | 0.019 | 46381.8 | 27.6 | 27.5 |
| | * 2 | 9.449 | 9.466 | 0.017 | 46700.6 | 36.4 | |
| Aroclor 1260 | 1 | 11.044 | 11.0625 | 0.0185 | 36860 | 27.3 | 6.8 |
| | * 2 | 11.652 | 11.66983 | 0.0178 | 39612.5 | 25.5 | |

* Column used for quantitation

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# DUAL COLUMN CONFIRMATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Matrix: | Sediment | Laboratory ID: | 22L0329-42 | File ID: | 01102332ECD7.D |
| Sampled: | 12/13/22 15:28 | Prepared: | 01/03/23 10:30 | Analyzed: | 01/11/23 03:22 |
| Solids: | 66.79 | Preparation: | EPA 3546 (Microwave) | Instrument: | ECD7 |
| Batch: | BKL0730 | Sequence: | SLA0156 | | |
| GC Column(1): | ZB5 | | | GC Column(2): | ZB35 |

| COMPOUND | COL | RT | EXP RT | RT DIFF | AREA | CONC | RPD |
|---|---|---|---|---|---|---|---|
| Aroclor 1254 | 1 | 9.3 | 9.318 | 0.018 | 16336 | 8.2 | 26.5 |
| | * 2 | 9.45 | 9.466 | 0.016 | 13397.2 | 10.7 | |
| Aroclor 1260 | 1 | 11.045 | 11.0625 | 0.0175 | 10090.2 | 7.0 | 7.4 |
| | * 2 | 11.654 | 11.66983 | 0.0158 | 10221.5 | 6.5 | |

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: EPA 8082A**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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-IT799A 22L0329-01 | 12/13/22 08:13 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 05:26 | 11 | 40 | |
| LDW22-IT799B 22L0329-02 | 12/13/22 08:13 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 05:47 | 11 | 40 | |
| LDW22-IT799C 22L0329-03 | 12/13/22 08:13 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 06:08 | 11 | 40 | |
| LDW22-IT799D 22L0329-04 | 12/13/22 08:13 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 06:29 | 11 | 40 | |
| LDW22-IT799E 22L0329-05 | 12/13/22 08:13 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 06:51 | 11 | 40 | |
| LDW22-IT799F 22L0329-06 | 12/13/22 08:13 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 07:12 | 11 | 40 | |
| LDW22-SC788B 22L0329-07 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 07:33 | 11 | 40 | |
| LDW22-SC788C 22L0329-08 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 07:54 | 11 | 40 | |
| LDW22-SC788D 22L0329-09 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 08:15 | 11 | 40 | |
| LDW22-SC788E 22L0329-10 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 08:36 | 11 | 40 | |
| LDW22-SC788E-FD 22L0329-11 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 09:39 | 11 | 40 | |
| LDW22-SC788F 22L0329-12 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 23:31 | 11 | 40 | |
| LDW22-SC788G 22L0329-13 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 23:52 | 11 | 40 | |
| LDW22-SC788H 22L0329-14 | 12/13/22 10:28 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 10:42 | 11 | 40 | |
| LDW22-IT791A 22L0329-15 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 11:04 | 11 | 40 | |
| LDW22-IT791B 22L0329-16 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 11:25 | 11 | 40 | |
| LDW22-IT791C 22L0329-17 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 12:28 | 11 | 40 | |
| LDW22-IT791D 22L0329-18 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 12:49 | 11 | 40 | |
| LDW22-IT791E 22L0329-19 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 13:10 | 11 | 40 | |
| LDW22-IT791F 22L0329-20 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 13:31 | 11 | 40 | |
| LDW22-IT791G 22L0329-21 | 12/13/22 09:50 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 13:01 | 8 | 40 | |
| LDW22-SC781B 22L0329-22 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 13:22 | 8 | 40 | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: EPA 8082A**

Laboratory: Analytical Resources, LLC SDG: 22L0329

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-SC781C 22L0329-23 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 13:44 | 8 | 40 | |
| LDW22-SC781D 22L0329-24 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 14:05 | 8 | 40 | |
| LDW22-SC781E 22L0329-25 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 14:26 | 8 | 40 | |
| LDW22-SC781F 22L0329-26 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 14:47 | 8 | 40 | |
| LDW22-SC781G 22L0329-27 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/08/23 15:08 | 8 | 40 | |
| LDW22-SC781H 22L0329-28 | 12/13/22 11:00 | 12/13/22 16:54 | 12/31/22 11:42 | 18 | 365 | 01/12/23 07:23 | 12 | 40 | |
| LDW22-SC765B 22L0329-29 | 12/13/22 12:14 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 15:50 | 8 | 40 | |
| LDW22-SC765C 22L0329-30 | 12/13/22 12:14 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 16:11 | 8 | 40 | |
| LDW22-SC765D 22L0329-31 | 12/13/22 12:14 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/12/23 07:45 | 12 | 40 | |
| LDW22-SC765E 22L0329-32 | 12/13/22 12:14 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 17:35 | 8 | 40 | |
| LDW22-SC757A 22L0329-33 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 17:56 | 8 | 40 | |
| LDW22-SC757B 22L0329-34 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 18:18 | 8 | 40 | |
| LDW22-SC757C 22L0329-35 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 18:39 | 8 | 40 | |
| LDW22-SC757D 22L0329-36 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 19:00 | 8 | 40 | |
| LDW22-SC757E 22L0329-37 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 19:21 | 8 | 40 | |
| LDW22-SC757F 22L0329-38 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 19:42 | 8 | 40 | |
| LDW22-SC757G 22L0329-39 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 20:45 | 8 | 40 | |
| LDW22-SC757H 22L0329-40 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 21:06 | 8 | 40 | |
| LDW22-SC754A 22L0329-41 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 03:01 | 8 | 40 | |
| LDW22-SC754B 22L0329-42 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 03:22 | 8 | 40 | |
| LDW22-SC754C 22L0329-43 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 03:44 | 8 | 40 | |
| LDW22-SC754D 22L0329-44 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 04:05 | 8 | 40 | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: EPA 8082A**

Laboratory: Analytical Resources, LLC SDG: 22L0329

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-SC754E 22L0329-45 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 05:08 | 8 | 40 | |
| LDW22-SC754F 22L0329-46 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 05:29 | 8 | 40 | |
| LDW22-SC754G 22L0329-47 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 05:50 | 8 | 40 | |
| LDW22-SC754H 22L0329-48 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 06:11 | 8 | 40 | |
| Matrix Spike BKL0687-MS1 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 11:46 | 11 | 40 | |
| Matrix Spike Dup BKL0687-MSD1 | 12/13/22 09:50 | 12/13/22 16:54 | 12/30/22 16:34 | 17 | 365 | 01/10/23 12:07 | 11 | 40 | |
| Matrix Spike BKL0728-MS1 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 20:03 | 8 | 40 | |
| Matrix Spike Dup BKL0728-MSD1 | 12/13/22 13:36 | 12/13/22 16:54 | 12/31/22 11:42 | 17 | 365 | 01/08/23 20:24 | 8 | 40 | |
| Matrix Spike BKL0730-MS1 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 04:26 | 8 | 40 | |
| Matrix Spike Dup BKL0730-MSD1 | 12/13/22 15:28 | 12/13/22 16:54 | 01/03/23 10:30 | 20 | 365 | 01/11/23 04:47 | 8 | 40 | |

* Indicates hold time exceedance.

Analytical Resources, LLC
Analytical Chemists and Consultants

# METHOD DETECTION AND REPORTING LIMITS

## EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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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New Haven, CT 06513
USA

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Fax (203)786-5287
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**

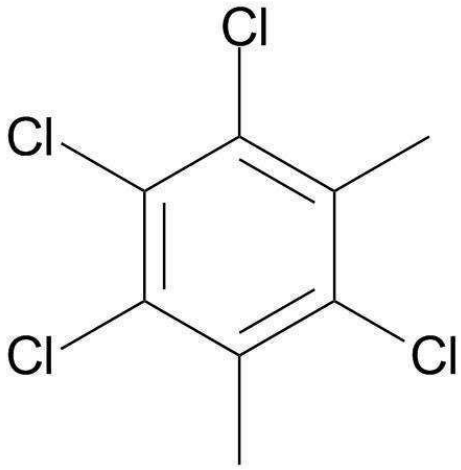
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

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.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

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

EXPIRED AccuStandard

**AccuStandard**
125 Market Street
New Haven, CT 06513
(203) 786-5290

# CERTIFICATE OF PRODUCT DATA

**PRODUCT:** C-209N
**EXPIRATION:** Jul 28, 2015
**DESCRIPTION:** 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
**LOT #:** 990521LB-AC
**SOLVENT:** N/A

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*

* I 1768 A

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 Resources, Incorporated**
Analytical Chemists and Consultants

# 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 | **Lot Number:** | CL14017 |
| **Description:** | Aroclor 1221 | **Certification Date:** | August 20, 2019 |
| **Storage:** | 4 °C | **Expiration Date:** | August 31, 2027 |
| **Provided As:** | 1 mL in 2 mL Ampoule in Isooctane | | |

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

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Certicate No. 2427.03

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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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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:

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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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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.

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## Certified Reference Material

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| | | | |
|---|---|---|---|
| **Catalog No.:** | AL0-101471 | **Lot Number:** | CL15384 |
| **Description:** | Aroclor 1248 | **Certification Date:** | June 19, 2020 |
| **Storage:** | 4 °C | **Expiration Date:** | June 30, 2028 |
| **Provided As:** | 1 mL in 2 mL Ampoule in Isooctane | | |

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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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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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)

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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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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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## 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

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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 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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## 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% |

J006465

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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

**J012591**

AROCLOR 1016
Expires 2/28/2029
*Prepared By Joshua Rains 11/26/2021*

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

| Component | CAS # | Certified Value µg/mL | Expanded Uncertainty |
|---|---|---|---|
| Aroclor 1016 | 12674-11-2 | 1000 | ± 0.310% |

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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:**

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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 L Gill
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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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
Rec'd
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)

K 1255

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**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
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

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.

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

Agilent
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 |

| Component Name | CERTIFIED VALUES 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 ISO17034 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

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.

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:**

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
Page: 1 of 1

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CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

# 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% |

K5829

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Reference Material Producer
Certificate No. 2427.02

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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

IL11110613_us

# Certificate of Analysis

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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
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Chemical Testing Laboratory
Certificate No. 2427.03

IL111106/3_US

# Certificate of Analysis

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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 | **Lot Number:** | CL18021 |
| **Description:** | Aroclor 1260 | **Certification Date:** | February 14, 2022 |
| **Storage:** | 4 °C | **Expiration Date:** | February 28, 2030 |
| **Provided As:** | 1 mL in 2 mL Ampoule in Hexane | | |

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

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

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

IL6469101B_US

# Certificate of Analysis



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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)

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

IL5469101B_us

Recipient Copy

# CHAIN-OF-CUSTODY RECORD

COC No. 15546

Order Number: CB014961

Date Shipped: 11/17/2022

AirBill No(s): 519204142414

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

| Sample ID | Sigma ID | Qty | Description/Remarks | → Catalogue Number |
|---|---|---|---|---|
| Ka1085 – PSRM0164 | SR0431 | 1 | PUGET SOUND SEDIMENT RM | PS-SRM |
| KO 10816 PSRM0165 | SR0431 | 1 | PUGET SOUND SEDIMENT RM | PS-SRM |
| KO1081 7 PSRM0166 | SR0431 | 1 | PUGET SOUND SEDIMENT RM | PS-SRM |

11/17/2022

PUGET SOUND SRM FOR THE LOCKHEED WEST SEATTLE SF SITE 5-YEAR REVIEW MONITORING.

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) 11/17/2022 | Received by: (Signature) Phillip | Date/Time 10:22 11/18/22 |
|---|---|---|---|
| Custody Seal(s): Present/Absent | Remarks: | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Date/Time |

*Report No. 00, 9/11/2014*

*SMP Version 3.3*

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-07 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-077 |
| % Solids: | 55.96 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 20:29 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.049 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 13.4 | 20 | 0.06 | 0.34 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-08 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-065 |
| % Solids: | 57.39 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:21 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.069 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 16.6 | 20 | 0.06 | 0.33 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-09 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-066 |
| % Solids: | 56.86 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:25 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.06 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 16.9 | 20 | 0.06 | 0.33 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-10 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-067 |
| % Solids: | 54.40 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:29 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.057 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 15.8 | 20 | 0.07 | 0.35 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788E-FD**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-11 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-068 |
| % Solids: | 55.91 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:34 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.086 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 14.4 | 20 | 0.06 | 0.33 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-12 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-069 |
| % Solids: | 59.80 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:38 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.019 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 17.2 | 20 | 0.06 | 0.33 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-13 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-070 |
| % Solids: | 60.06 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:43 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.027 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 26.0 | 20 | 0.06 | 0.32 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## EPA 6020B UCT-KED
Total Metals

**LDW22-SC788H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-14 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/27/22 10:02 | File ID: | XDT_m2230109-071 |
| % Solids: | 59.83 | Preparation: | SWN EPA 3050B | Analyzed: | 01/09/23 19:47 |
| Batch: | BKL0608 | Sequence: | SLA0097 | Initial/Final: | 1.017 g Wet / 50 mL |
| Instrument: | ICPMS2 | | | Calibration: | GA00024 |

| CAS NO. | Analyte | Concentration (mg/kg dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 28.9 | 20 | 0.06 | 0.33 | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# PREPARATION BATCH SUMMARY

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0608 Batch Matrix: Solid
Preparation: SWN EPA 3050B

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-SC788B | 22L0329-07 | XDT_m2230109-077 | 12/27/22 10:02 | |
| LDW22-SC788C | 22L0329-08 | XDT_m2230109-065 | 12/27/22 10:02 | |
| LDW22-SC788D | 22L0329-09 | XDT_m2230109-066 | 12/27/22 10:02 | |
| LDW22-SC788E | 22L0329-10 | XDT_m2230109-067 | 12/27/22 10:02 | |
| LDW22-SC788E-FD | 22L0329-11 | XDT_m2230109-068 | 12/27/22 10:02 | |
| LDW22-SC788F | 22L0329-12 | XDT_m2230109-069 | 12/27/22 10:02 | |
| LDW22-SC788G | 22L0329-13 | XDT_m2230109-070 | 12/27/22 10:02 | |
| LDW22-SC788H | 22L0329-14 | XDT_m2230109-071 | 12/27/22 10:02 | |
| Blank | BKL0608-BLK1 | XDT_m2230109-026 | 12/27/22 10:02 | |
| LCS | BKL0608-BS1 | XDT_m2230109-027 | 12/27/22 10:02 | |
| LDW22-SC788B | BKL0608-DUP1 | XDT_m2230109-078 | 12/27/22 10:02 | |
| LDW22-SC788B | BKL0608-MS1 | XDT_m2230109-079 | 12/27/22 10:02 | |
| LDW22-SC788B | BKL0608-MSD1 | XDT_m2230109-080 | 12/27/22 10:02 | |

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# Digestion Log

Analyst: AR Date: 12/29/22 Time: 1449-1940 Balance ID: BAL10

Matrix: Soil Block ID: 8 Block Temp: 90°C Thermometer: 70-4

| ARI Sample ID | Btl # | pH<2 | Prep Code: SWN Initial Wt (g) Vol (mL) | Prep Code: SWN Final Vol (mL) | Prep Code: Initial Wt (g) Vol (mL) | Prep Code: Final Vol (mL) | Comments |
|---|---|---|---|---|---|---|---|
| 22L199-43 | A | | 1.022 | 50 | 1 | | |
| -44 | | | 1.020 | | | | |
| -45 | | | 1.082 | | | | |
| -46 | | | 1.073 | | | | |
| -47 | | | 1.063 | | | | |
| 22L329-07 | B | | 1.049 | | | | |
| -08 | | | ~~1.057~~ (1) | | | | |
| -09 | A | | 1.060 | | AR | 12/29/22 | |
| -10 | B | | 1.057 | | | | |
| -11 | A | | 1.086 | | | | |
| -12 | | | 1.019 | | | | |
| -13 | | | 1.027 | | | | |
| -14 | | | 1.017 | | | | |
| 22L459-01 | C | | 1.071 | | | | |
| -02 | D | | 1.051 | | | | |
| -03 | C | | 1.079 | | | | |
| -04 | | | 1.057 | | | | |
| -05 | | | 1.070 | | | | |
| -06 | D | | 1.046 | | | | |
| -07 | C | | 1.087 | | | | |
| BKL1018-blk | — | | — | | | | 22L329-07 |
| -bs | — | | — | | | | |
| -dup | — | | 1.048 | | | | |
| -MS | — | | 1.048 | | | | |
| -MSD | — | | 1.045 | | | | |
| -SRM | — | | 1.003 | | | | |

Chemical/Reagent ID:

$HNO_3$: K115016 1:1 $HNO_3$: K117816 HCl: — $H_2O_2$: K100516

Tube Lot#: 22080605 Boiling Chip Lot#: — (DoD Only)

5061F
Version 007

(1) 1.069

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 6020B UCT-KED

Total Metals

**Blank**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0608
Laboratory ID: BKL0608-BLK1
Prepared: 12/27/22 10:02
Matrix: Solid
Preparation: SWN EPA 3050B
Analyzed: 01/09/23 15:59
Sequence: SLA0097
Calibration: GA00024
Instrument: ICPMS2

| CAS NO. | Analyte | Concentration (mg/kg wet) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic-75a | ND | 20 | 0.04 | 0.20 | U |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY

## EPA 6020B UCT-KED

Total Metals

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/09/23 16:03 |
| Batch: | BKL0608 | Laboratory ID: | BKL0608-BS1 |
| Preparation: | SWN EPA 3050B | Sequence Name: | LCS |
| Initial/Final: | 1 g / 50 mL | | |

| COMPOUND | SPIKE ADDED (mg/kg wet) | LCS CONCENTRATION (mg/kg wet) | Q | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|
| Arsenic-75a | 25.0 | 25.2 | | 101 | 80 - 120 |

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW22-SC788B

# DUPLICATES

## EPA 6020B UCT-KED

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0608-DUP1
Batch: BKL0608
Lab Source ID: 22L0329-07
Preparation: SWN EPA 3050B
Initial/Final: 1.048 g / 50 mL
Source Sample Name: LDW22-SC788B
% Solids: 55.96

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Arsenic-75a | 20 | 13.4 | 13.1 | 1.95 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC788B**

# MS / MS DUPLICATE RECOVERY
## EPA 6020B UCT-KED
Total Metals

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/09/23 20:38 |
| Batch: | BKL0608 | Laboratory ID: | BKL0608-MS1 |
| Preparation: | SWN EPA 3050B | Sequence Name: | Matrix Spike |
| Initial/Final: | 1.048 g / 50 mL | Source Sample: | LDW22-SC788B |

| COMPOUND | SPIKE ADDED (mg/kg dry) | SAMPLE CONCENTRATION (mg/kg dry) | Q | MS CONCENTRATION (mg/kg dry) | Q | MS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Arsenic-75a | 42.6 | 13.4 | | 54.9 | | 97.5 | 75 - 125 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC788B**

# MS / MS DUPLICATE RECOVERY
## EPA 6020B UCT-KED
Total Metals

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/09/23 20:42 |
| Batch: | BKL0608 | Laboratory ID: | BKL0608-MSD1 |
| Preparation: | SWN EPA 3050B | Sequence Name: | Matrix Spike Dup |
| Initial/Final: | 1.045 g / 50 mL | Source Sample: | LDW22-SC788B |

| COMPOUND | SPIKE ADDED (mg/kg dry) | MSD CONCENTRATION (mg/kg dry) | Q | MSD % REC. # | % RPD # | QC LIMITS | |
|---|---|---|---|---|---|---|---|
| | | | | | | RPD | REC. |
| Arsenic-75a | 42.7 | 55.3 | | 98.2 | 0.761 | 20 | 75 - 125 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Calibration: | GA00024 | Instrument: | ICPMS2 |
| Calibration Date: | 01/09/2023 14:07 | | |

| 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 |
| Arsenic-75a | 0 | 0 | 0.2 | 265 | 10 | 222.4 | 20 | 213.25 | 50 | 212.82 | 100 | 214.32 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Calibration: | GA00024 | Instrument: | ICPMS2 |
| Calibration Date: | 01/09/2023 14:07 | | |

| COMPOUND | Mean RF | RF RSD | Linear COD | Quad COD | COD Limit | Q |
|---|---|---|---|---|---|---|
| Arsenic-75a | 187.965 | 50.1 | 1.0000 | | 0.998 | |

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** SLAØØ97 **Cal:** GAØØØ24

*All corrections made by analyst unless otherwise noted.* MB 1/9/23

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | SEQ-CAL1 | LØ293 | | |
| | | -CAL2 | LØ149 | | |
| | | -CAL3 | LØ15Ø | | |
| | | -CAL4 | LØ151 | | |
| | | -CAL5 | LØ294 | | |
| | | -CAL6 | LØ153 | | |
| | | -IBL1 | — | | |
| | | -ICV1 | LØ243 | | |
| | | -ICB1 | LØ293 | | |
| | | -CCV1 | LØ294 | | |
| | | -CCB1 | LØ293 | | |
| | | -CRL1 | LØ149 | | |
| | | -IFA1 | K11871 | | Cr53? |
| | | -IFB1 | K11683 | | |
| | | -HCV1 | LØ232 | | |
| | | -HCV2 | LØ233 | | |
| | | -IBL2 | — | | |
| | | -CCV2 | | | |
| | | -CCB2 | | | |
| | | BKLØ6Ø8-BLK1 | SWN | 20 | |
| | | -BS1 | | | |
| | | BKLØØ8Ø-BLK2 | | | Ø6 only |
| | | -BS2 | | | |
| | | 22LØ454-13 | REN | | Cu only |

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# ICP/MS 02 SAMPLE RUN LOG

## PE Nexion ICP-MS Serial No. 81DN1050201

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.* MB 1/9/23

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | 22LØ454-14 | REN | 5 | Cu only |
| | | ↓ -Ø2 | ↓ | 10 | ↓ |
| | | 22LØ475-Ø1 | ↓ | ↓ | Zn only |
| | | 22LØ476-Ø1 | ↓ | ↓ | ↓ |
| | | SEQ-IBL3 | | | |
| | | -CCV3 | | | |
| | | ↓ -CCB3 | | | |
| | | BLAØ187-BLK1 | REN | | |
| | | ↓ -BS1 | ↓ | | |
| 197→192 | | BLAØ197-BLK1 | ↓ | | |
| ↓ | | ↓ -BS1 | ↓ | | |
| | | 23AØØ66-ØIRE1 | ↓ | 5 | Mn only |
| | | 23AØ137-Ø1 | ↓ | ↓ | |
| | | 23AØ116-Ø1 | ↓ | 2 | |
| | | 22LØ199-43 | SWN | 20 | Sc↑ - Not Needed |
| | | ↓ -44 | ↓ | ↓ | ↓ ↓ |
| | | SEQ-IBL4 | | | |
| | | -CCV4 | | | |
| | | ↓ -CCB4 | | | |
| | | BLAØ157-BLK1 | REN | | (Mn = ½RL) No Mn |
| | | ↓ -BS1 | ↓ | | ↓ |
| | | 23AØØØ4-Ø1 | ↓ | 2 | |
| | | -Ø2 | ↓ | ↓ | |
| | | ↓ -Ø3 | ↓ | ↓ | |

Analytical Resources, Incorporated
Analytical Chemists and Consultants

# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | 23AØØØ4-Ø4 | REN | 2 | |
| | | 22LØ199-45 | SWN | 20 | Sc↑ - Not Needed |
| | | -46 | | | |
| | | -47 | | | |
| | | SEQ-IBL5 | | | |
| | | -CCV5 | | | |
| | | -CCB5 | | | |
| | ✓ | BLAØ157-BLK1 | REN | | Wrong sample run |
| | | BLAØ194-BLK1 | | | |
| | | -BS1 | | | |
| | | 22LØ329-Ø8 | SWN | 20 | |
| | | -Ø9 | | | Sc↑ - Not Needed |
| | | -1Ø | | | |
| | | -11 | | | |
| | | -12 | | | |
| | | -13 | | | Sc↑ - Not Needed |
| | | -14 | | | |
| | | SEQ-CCV6 | | | |
| | | -CCB6 | | | |
| | ✓ | -CAL1 | | | |
| | | -CCV7 | | | |
| | | -CCB7 | | | |
| | | 22LØ329-Ø7 | SWN | 20 | Sc↑ No Cr |
| | | BKLØ6Ø8-DUP1 | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MS **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | BKLØ6Ø8-MS1 | SWN | 20 | Sc↑ No Cr |
| | | -MSD1 | | | |
| | | -PS1 | | | 60 mL K7409 |
| | | 22HØ525-Ø1 | | | - Not Needed |
| | | -Ø2 | | | |
| | | -Ø3 | | | Tb sl. noisy - %R + Analytes OK |
| | | -Ø4 | | | |
| | | -Ø5 | | | |
| | | SEQ-CCV8 | | | |
| | | -CCB8 | | | |
| | | BKLØØØ6-SRL2 | SWN | 250 | Zn only |
| | | 22IØØS2-25 | | 50 | |
| | | BKLØØØ6-DUP2 | | | |
| | | -MS2 | | | Sc↑ - Not Needed / Zn %R↑ |
| | | -MSD2 | | | |
| | | -PS2 | | | 60 mL K7409 |
| | | 22HØ525-1Ø | | 20 | Sc↑ - Not Needed |
| | | -11 | | | |
| | | -12 | | | |
| | | -13 | | | |
| | | SEQ-CCV9 | | | |
| | | -CCB9 | | | |
| | | BKLØØ35-SRL2 | SWN | 250 | Zn only |
| | | 22IØ188-Ø2 | | 50 | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.* MB 1/9/23

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | BKLØØ35-DUP2 | SWN | 50 | Zn only |
| | | -MS2 | | | Zn %R↑ |
| | | -MSD2 | | | |
| | | -PS2 | | | 60uL K7409 |
| | | 22HØ525-14 | | 20 | Sc↑ - Not Needed |
| | | -15 19 | | | |
| | | -2Ø | | | |
| | | -21 | | | |
| | | SEQ-CCVA | | | |
| | | -CCBA | | | |
| | | 22LØ516-Ø1 | REN | 10 | Zn↑/Sc,Tb noisy; Cd,Cu,Ni only |
| | | SEQ-IBL6 | | | |
| | | BKLØØ8Ø-SRL2 | SWN | 250 | Pb,Zn only |
| | | 22IØ188-2Ø | | 50 | |
| | | BKLØØ8Ø-DUP2 | | | |
| | | -MS2 | | | |
| | | -MSD2 | | | Zn %R↑ |
| | | -PS2 | | | 60uL K7409 |
| | | -SRM2 | | 100 | Pb only |
| | | SEQ-IBL7 | | | |
| | | -CCVB | | | |
| | | -CCBB | | | |
| | | BKLØ683-SRL2 | SWN | 250 | Zn only |
| | | 22JØØ97-31 | | 50 | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexlon ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | BKLØ683-DUP2 | SWN | 50 | Zn only |
| | | -MS2 | | | |
| | | -MSD2 | | | |
| | | -PS2 | | | 60.ul K7409 |
| | | 22HØ525-22 | | 20 | Sc↑ - Not Needed |
| | | -23 | | | |
| | | -24 | | | |
| | | -31 | | | |
| | | SEQ-CCVC | | | Ni62sl. noisy - Not Needed |
| | | -CCBC | | | |
| | ✓ | -CAL1 | | | |
| | | -CCVD | | | |
| | | -CCBD | | | |
| | | 22HØ525-32 | SWN | 20 | Sc↑ - Not Needed |
| | | -33 | | | Pb noisy No Pb |
| | | -34 | | | |
| | | -35 | | | |
| | | -36 | | | |
| | | -38 | | | |
| | | -39 | | | |
| | | 22HØ529-Ø2 | | | |
| | | -12 | | | |
| | | -13 | | | |
| | | SEQ-CCVE | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | SEQ-CCBE | | | |
| | | 22HΦ529-14 | SWN | 20 | Sc↑ - Not Needed |
| | | -15 | | | |
| | | -16 | | | Cu↑ / Zn almost↑ No Cu, Zn |
| | | -17 | | | |
| | | -18 | | | |
| | | -22 | | | |
| | | -23 | | | |
| | | -24 | | | |
| | | -25 | | | |
| | | -26 | | | |
| | | SEQ-CCVF | | | |
| | | ↓ -CCBF | | | |
| | | 22HΦ529-3Φ | SWN | 20 | Sc↑ - Not Needed / Cu, Zn↑ No Cu, Zn |
| | | -31 | | | |
| | | -32 | | | |
| | | -33 | | | Sc↑ - Not Needed |
| | | 22IΦΦ52-Φ1 | | | |
| | | -Φ2 | | | |
| | | -Φ3 | | | |
| | | -Φ5 | | | |
| | | -Φ6 | | | |
| | | -11 | | | |
| | | SEQ-CCVG | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexlon ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MS **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | SEQ-CCBG | | | |
| | | 22LØ428-ØIRE1 | REN | | Co only |
| | | 23AØØØ9-Ø4 | | | |
| | | -Ø6 | | | |
| | | -Ø8 | | | |
| | | -1Ø | | | |
| | | -12 | | | |
| | | -Ø2 | | | |
| | | BLAØ194-DUP1 | | | |
| | | -MS1 | | | |
| | | 22IØØS2-13 | SWN | 20 | Sc↑ - Not Needed |
| | | SEQ-CCVH | | | |
| | | -CCBH | | | |
| | ✓ | -CAL1 | | | |
| | | -CCVI | | | |
| | | -CCBI | | | |
| | | 23AØØØ9-Ø1 | REN | | |
| | | -Ø3 | | | |
| | | -Ø5 | | | |
| | | -Ø7 | | | |
| | | -Ø9 | | | |
| | | -11 | | | |
| | | 22LØ612-Ø1 | | | |
| | | ~~BKL~~ MS 1/9/23 | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | BLAΦ157-DUP1 | REN | | |
| | | ↓ -MS1 | ↓ | | Mn STL |
| | | SEQ-IBL8 | | | (Sc, Tb sli. noisy) |
| | | -CCVJ | | | |
| | | ↓ -CCBJ | | | |
| | | 23AΦΦ1Φ-Φ1 | REN | | |
| | | 23AΦΦ13-Φ1 | | 2 | |
| | | 23AΦΦ16-Φ1 | | 5 | Zn ND No Zn |
| | | ↓ -Φ2 | | | Zn↑ No Zn |
| | | 22LΦ522-Φ1 | | 2 | |
| | | 22LΦ536-Φ2 | | | Zn↑ No Zn |
| | | ↓ -Φ1 | | | ↓ ↓ |
| | ✓ | BLAΦ187-DUP1 | | | Wrong QC Source |
| | ✓ | ↓ -MS1 | ↓ | | ↓ |
| | | SEQ-IBL9 | | | (Cr53↑) |
| | | -CCVK | | | |
| | | ↓ -CCBK | | | |
| | | 22LΦ523-Φ1 | REN | | |
| | | 22LΦ54Φ-Φ1 | | | |
| | | 22LΦ542-Φ1 | | | |
| | | 22LΦ543-Φ1 | | | |
| | | -Φ2 | | | |
| | | ↓ -Φ3 | | 2 | |
| | | 22LΦ545-Φ1 | ↓ | ↓ | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/9/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | 22LØ546-Ø1 | REN | | |
| | | ↓ -Ø2 | ↓ | | |
| | | 22LØ547-Ø1 | ↓ | | Zn↑ No Zn |
| | | SEQ-CCVL | | | |
| | | ↓ -CCBL | | | |
| | | 22LØ549-Ø1 | REN | | |
| | | ↓ -Ø2 | ↓ | | |
| | | 22LØ55Ø-Ø1 | ↓ | 2 | |
| | | 22LØ551-Ø1 | ↓ | | |
| | | 22LØ552-Ø1 | ↓ | 2 | |
| | | 22LØ553-Ø1 | ↓ | | |
| | | 22LØ554-Ø1 | ↓ | | |
| | | ↓ -Ø2 | ↓ | | |
| | | 22LØ555-Ø1 | ↓ | | |
| | | 22LØ556-Ø1 | ↓ | | |
| | | SEQ-CCVM | | | |
| | | ↓ -CCBM | | | Tb sl. noisy - %R ✓ Analytes OK |
| | | Rinse/DI | | | |
| | | | | | |
| | | | | | |
| | | MB 1/9/23 | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# Performance Check Report

**Sample ID: STD Performance Check**
Sample Date/Time: Monday, January 09, 2023 12:54:15
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.4860
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|
| | Be | 9.0 | 7877.3 | 7877.305 | 91.424 | 1.2 | Standard |
| | In | 114.9 | 64643.5 | 64643.462 | 238.075 | 0.4 | Standard |
| | U | 238.1 | 47383.8 | 47383.787 | 156.287 | 0.3 | Standard |
| ⌈ | CeO | 155.9 | 932.5 | 0.015 | 0.000 | 2.9 | Standard |
| \| > | Ce | 139.9 | 62250.8 | 62250.803 | 118.292 | 0.2 | Standard |
| ⌊ | Ce++ | 70.0 | 1513.6 | 0.024 | 0.000 | 2.0 | Standard |
| | Bkgd | 220.0 | 0.3 | 0.267 | 0.224 | 83.9 | Standard |

## Current Conditions File Data

| Current Value | Description |
|---|---|
| 1.03 | Nebulizer Gas Flow STD/KED [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 18.00 | Plasma Gas Flow |
| -11.25 | Deflector Voltage |
| 1600.00 | ICP RF Power |
| -1600.00 | Analog Stage Voltage |
| 1050.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset STD [QRO] |
| -8.00 | Cell Rod Offset STD [CRO] |
| 12.00 | Discriminator Threshold |
| -4.00 | Cell Entrance/Exit Voltage STD |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.03 | DRC Mode NEB |
| -10.00 | DRC Mode QRO |
| -3.00 | DRC Mode CRO |
| -7.00 | DRC Mode Cell Entrance/Exit Voltage |
| 0.60 | Cell Gas A |
| 0.00 | Cell Gas B |
| 250.00 | Axial Field Voltage |
| -16.50 | KED Mode CRO |
| -12.00 | KED Mode QRO |
| -4.00 | KED Mode Cell Entrance Voltage |
| -39.00 | KED Mode Cell Exit Voltage |
| 0.00 | KED Cell Gas A |
| 5.00 | KED Cell Gas B |
| 0.00 | KED RPa |
| 0.25 | KED RPq |
| 475.00 | KED Mode Axial Field Voltage |

# SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 1/9/2023 12:54:12 PM
End Time: 1/9/2023 1:04:05 PM

STD Performance Check - [Passed]  Optimum value(s): N/A
Obtained Intensity (Be 9): 7877.30
Obtained Intensity (In 115): 64643.46
Obtained Intensity (U 238): 47383.79
Obtained Intensity (Bkgd 220): 0.27
Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1513.61 / 62250.80)
Obtained Formula (CeO 156 / Ce 140): 0.015 (=932.50 / 62250.80)
Obtained RSD (Be 9): 0.0116
Obtained RSD (In 115): 0.0037
Obtained RSD (U 238): 0.0033

Torch Alignment - [Passed]

| Vertical | Horizontal | Intensity |
|---|---|---|
| -0.18 mm | -0.18 mm | 63018.69 |

Nebulizer Gas Flow STD/KED [NEB] - [Passed]  Optimum value(s): 1.03
Obtained Intensity (In 115): 63716.78
Obtained Formula (CeO 156 / Ce 140): 0.0186 (=1036.04 / 55570.87)

Mass Calibration and Resolution - [Passed]  Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.706)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.701)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.704)

QID STD/DRC -  Optimum value(s): Correlation Coefficient = 0.985; Intercept = -12.91

KED Mode QID -  Optimum value(s): Correlation Coefficient = 0.985; Intercept = -12.98

# SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 1/9/2023 12:54:12 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 1
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 7877.30
                Obtained Intensity (In 115): 64643.46
                Obtained Intensity (U 238): 47383.79
                Obtained Intensity (Bkgd 220): 0.27
                Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1513.61 / 62250.80)
                Obtained Formula (CeO 156 / Ce 140): 0.015 (=932.50 / 62250.80)
                Obtained RSD (Be 9): 0.0116
                Obtained RSD (In 115): 0.0037
                Obtained RSD (U 238): 0.0033

[Passed]  Optimum value(s): N/A

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        -0.18 mm     -0.18 mm       63018.69

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 1/1.1/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.025

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 63716.78
                Obtained Formula (CeO 156 / Ce 140): 0.0186 (=1036.04 / 55570.87)
[Passed]  Optimum value(s): 1.03
```

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.

MassCal File: Default.tun

Iterations: 6

Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution

Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.696)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.706)

Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.701)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.704)

[Passed] Optimum value(s): N/A

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.985; Intercept = -12.91

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -13 | 35977.2 |
| Mg | 24 | 41 | -12.5 | 38259.2 |
| In | 115 | 41 | -10 | 69818.2 |
| Ce | 140 | 41 | -8 | 65670.6 |
| Pb | 208 | 41 | -7 | 31510.7 |
| U | 238 | 41 | -7 | 53463.9 |

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.985; Intercept = -12.98

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -13 | 26320.2 |
| Mg | 24 | 41 | -12.5 | 22105.1 |
| In | 115 | 41 | -11 | 41058.9 |
| Ce | 140 | 41 | -8.5 | 49850.8 |
| Pb | 208 | 41 | -6 | 26324.2 |
| U | 238 | 41 | -6.5 | 39065.3 |

End Time: 1/9/2023 1:04:05 PM

# Performance Check Report

**Sample ID: STD Performance Check**
Sample Date/Time: Monday, January 09, 2023 13:08:10
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.4868
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|
| | Be | 9.0 | 8379.1 | 8379.057 | 171.401 | 2.0 | Standard |
| | In | 114.9 | 68481.0 | 68481.031 | 817.063 | 1.2 | Standard |
| | U | 238.1 | 52863.0 | 52863.045 | 803.864 | 1.5 | Standard |
| ⌈ | CeO | 155.9 | 1122.3 | 0.018 | 0.001 | 5.9 | Standard |
| \| > | Ce | 139.9 | 62978.9 | 62978.856 | 462.492 | 0.7 | Standard |
| ⌊ | Ce++ | 70.0 | 1527.0 | 0.024 | 0.001 | 3.5 | Standard |
| | Bkgd | 220.0 | 0.0 | 0.033 | 0.075 | 223.6 | Standard |

## Current Conditions File Data

| Current Value | Description |
|---|---|
| 1.03 | Nebulizer Gas Flow STD/KED [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 18.00 | Plasma Gas Flow |
| -11.25 | Deflector Voltage |
| 1600.00 | ICP RF Power |
| -1600.00 | Analog Stage Voltage |
| 1050.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset STD [QRO] |
| -8.00 | Cell Rod Offset STD [CRO] |
| 12.00 | Discriminator Threshold |
| -4.00 | Cell Entrance/Exit Voltage STD |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.03 | DRC Mode NEB |
| -10.00 | DRC Mode QRO |
| -3.00 | DRC Mode CRO |
| -7.00 | DRC Mode Cell Entrance/Exit Voltage |
| 0.60 | Cell Gas A |
| 0.00 | Cell Gas B |
| 250.00 | Axial Field Voltage |
| -16.50 | KED Mode CRO |
| -12.00 | KED Mode QRO |
| -4.00 | KED Mode Cell Entrance Voltage |
| -39.00 | KED Mode Cell Exit Voltage |
| 0.00 | KED Cell Gas A |
| 5.00 | KED Cell Gas B |
| 0.00 | KED RPa |
| 0.25 | KED RPq |
| 475.00 | KED Mode Axial Field Voltage |

# SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 1/9/2023 1:04:32 PM
End Time: 1/9/2023 1:10:14 PM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.993; Intercept = -13.78

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.94

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 8379.06
Obtained Intensity (In 115): 68481.03
Obtained Intensity (U 238): 52863.04
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1527.02 / 62978.86)
Obtained Formula (CeO 156 / Ce 140): 0.018 (=1122.31 / 62978.86)
Obtained RSD (Be 9): 0.0205
Obtained RSD (In 115): 0.0119
Obtained RSD (U 238): 0.0152

# SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 1/9/2023 1:04:32 PM

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.993; Intercept = -13.78

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -13.5 | 35909.1 |
| Mg | 24 | 41 | -12.5 | 35175.3 |
| In | 115 | 41 | -9.5 | 69677.5 |
| Ce | 140 | 41 | -8 | 64091.4 |
| Pb | 208 | 41 | -7 | 32328.5 |
| U | 238 | 41 | -7 | 53078.4 |

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.94

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -13 | 26997.5 |
| Mg | 24 | 41 | -13 | 23399.1 |
| In | 115 | 41 | -9.5 | 41203.3 |
| Ce | 140 | 41 | -8.5 | 49706.3 |
| Pb | 208 | 41 | -6 | 25041.9 |
| U | 238 | 41 | -5.5 | 39177.6 |

STD Performance Check

Optimization Settings:

Method: STD Performance Check.mth.

Intensity Criterion: Be 9 > 2000

Intensity Criterion: In 115 > 40000

Intensity Criterion: U 238 > 30000

Intensity Criterion: Bkgd 220 <= 1

Formula Criterion: Ce++ 70 / Ce 140 <= 0.03

Formula Criterion: CeO 156 / Ce 140 <= 0.025

RSD Criterion: Be 9.0122 < 0.05

RSD Criterion: In 114.904 < 0.05

RSD Criterion: U 238.05 < 0.05

```
Optimization Results:
Initial Try
        Obtained Intensity (Be 9): 8379.06
        Obtained Intensity (In 115): 68481.03
        Obtained Intensity (U 238): 52863.04
        Obtained Intensity (Bkgd 220): 0.03
        Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1527.02 / 62978.86)
        Obtained Formula (CeO 156 / Ce 140): 0.018 (=1122.31 / 62978.86)
        Obtained RSD (Be 9): 0.0205
        Obtained RSD (In 115): 0.0119
        Obtained RSD (U 238): 0.0152

[Passed]  Optimum value(s): N/A

End Time: 1/9/2023 1:10:14 PM
```

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:07:08**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | | 34196 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | | 3578521 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | | 476701 | 2 | Standard |
| | **Cr** | **52** | | ug/L | | | | 18596 | 1 | Standard |
| | **Cr** | **53** | | ug/L | | | | 133 | 1 | Standard |
| | **Mn** | **55** | | ug/L | | | | 801 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | | 24444 | 3 | KED |
| | **Ni** | **60** | | ug/L | | | | 86 | 11 | KED |
| | **Ni** | **62** | | ug/L | | | | 16 | 33 | KED |
| | **Cu** | **63** | | ug/L | | | | 67 | 30 | KED |
| | **Cu** | **65** | | ug/L | | | | 42 | 18 | KED |
| | **Zn** | **66** | | ug/L | | | | 67 | 9 | KED |
| | **Zn** | **67** | | ug/L | | | | 11 | 16 | KED |
| | **As** | **75** | | ug/L | | | | 6 | 31 | KED |
| | **Y** | **89** | | ug/L | | | | 230853 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | | 65 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | | 6387 | 3 | KED |
| | **Cd** | **111** | | ug/L | | | | 5 | 39 | KED |
| | **Cd** | **114** | | ug/L | | | | 2 | 124 | KED |
| > | **Tb** | **159** | | ug/L | | | | 540555 | 4 | Standard |
| | **Pb** | **208** | | ug/L | | | | 256 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:11:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 38817 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3519195 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 468423 | 2 | Standard |
| | **Cr** | **52** | **0.500** | ug/L | 0.019 | 3 | 18596 | 28651 | 2 | Standard |
| | **Cr** | **53** | **0.500** | ug/L | 0.029 | 5 | 133 | 1223 | 3 | Standard |
| | **Mn** | **55** | **0.500** | ug/L | 0.014 | 2 | 801 | 14624 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 25182 | 0 | KED |
| | **Ni** | **60** | **0.500** | ug/L | 0.049 | 9 | 86 | 570 | 9 | KED |
| | **Ni** | **62** | **0.500** | ug/L | 0.083 | 16 | 16 | 80 | 13 | KED |
| | **Cu** | **63** | **0.500** | ug/L | 0.007 | 1 | 67 | 1772 | 0 | KED |
| | **Cu** | **65** | **0.500** | ug/L | 0.033 | 6 | 42 | 893 | 6 | KED |
| | **Zn** | **66** | **6.000** | ug/L | 0.046 | 0 | 67 | 2886 | 1 | KED |
| | **Zn** | **67** | **6.000** | ug/L | 0.125 | 2 | 11 | 431 | 2 | KED |
| | **As** | **75** | **0.200** | ug/L | 0.030 | 15 | 6 | 53 | 13 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 226304 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 56 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6656 | 0 | KED |
| | **Cd** | **111** | **0.100** | ug/L | 0.024 | 23 | 5 | 28 | 19 | KED |
| | **Cd** | **114** | **0.100** | ug/L | 0.012 | 12 | 2 | 67 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 542831 | 1 | Standard |
| | **Pb** | **208** | **0.100** | ug/L | 0.004 | 4 | 256 | 4784 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:15:54**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 40740 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3494818 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 484571 | 1 | Standard |
| | **Cr** | **52** | **9.997** | ug/L | 0.321 | 3 | 18596 | 213767 | 1 | Standard |
| | **Cr** | **53** | **10.000** | ug/L | 0.185 | 1 | 133 | 22750 | 0 | Standard |
| | **Mn** | **55** | **10.000** | ug/L | 0.123 | 1 | 801 | 285680 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24916 | 2 | KED |
| | **Ni** | **60** | **10.005** | ug/L | 0.114 | 1 | 86 | 11813 | 1 | KED |
| | **Ni** | **62** | **10.008** | ug/L | 0.089 | 0 | 16 | 1878 | 3 | KED |
| | **Cu** | **63** | **10.000** | ug/L | 0.065 | 0 | 67 | 34340 | 1 | KED |
| | **Cu** | **65** | **10.000** | ug/L | 0.127 | 1 | 42 | 16678 | 3 | KED |
| | **Zn** | **66** | **9.957** | ug/L | 0.196 | 1 | 67 | 4640 | 3 | KED |
| | **Zn** | **67** | **10.390** | ug/L | 0.697 | 6 | 11 | 817 | 6 | KED |
| | **As** | **75** | **10.000** | ug/L | 0.279 | 2 | 6 | 2224 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 234638 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 53 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6682 | 0 | KED |
| | **Cd** | **111** | **10.000** | ug/L | 0.277 | 2 | 5 | 2504 | 2 | KED |
| | **Cd** | **114** | **10.000** | ug/L | 0.078 | 0 | 2 | 5990 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 554130 | 2 | Standard |
| | **Pb** | **208** | **10.000** | ug/L | 0.377 | 3 | 256 | 471120 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:20:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 40191 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3565622 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 474697 | 0 | Standard |
| | **Cr** | **52** | **19.981** | ug/L | 0.115 | 0 | 18596 | 398674 | 0 | Standard |
| | **Cr** | **53** | **19.978** | ug/L | 0.466 | 2 | 133 | 44199 | 1 | Standard |
| | **Mn** | **55** | **20.053** | ug/L | 0.173 | 0 | 801 | 566409 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24027 | 1 | KED |
| | **Ni** | **60** | **19.894** | ug/L | 0.131 | 0 | 86 | 22107 | 2 | KED |
| | **Ni** | **62** | **19.997** | ug/L | 0.520 | 2 | 16 | 3600 | 1 | KED |
| | **Cu** | **63** | **19.840** | ug/L | 0.073 | 0 | 67 | 63613 | 1 | KED |
| | **Cu** | **65** | **20.006** | ug/L | 0.337 | 1 | 42 | 32170 | 1 | KED |
| | **Zn** | **66** | **20.047** | ug/L | 0.483 | 2 | 67 | 9001 | 2 | KED |
| | **Zn** | **67** | **19.880** | ug/L | 0.213 | 1 | 11 | 1472 | 2 | KED |
| | **As** | **75** | **19.980** | ug/L | 0.259 | 1 | 6 | 4265 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 228603 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 46 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6656 | 0 | KED |
| | **Cd** | **111** | **19.922** | ug/L | 0.068 | 0 | 5 | 4888 | 0 | KED |
| | **Cd** | **114** | **20.022** | ug/L | 0.697 | 3 | 2 | 11995 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 552228 | 3 | Standard |
| | **Pb** | **208** | **19.967** | ug/L | 0.583 | 2 | 256 | 931044 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:25:18**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32467 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3716177 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 460271 | 2 | Standard |
| | **Cr** | **52** | **50.013** | ug/L | 0.707 | 1 | 18596 | 941666 | 1 | Standard |
| | **Cr** | **53** | **49.979** | ug/L | 1.016 | 2 | 133 | 106774 | 0 | Standard |
| | **Mn** | **55** | **49.849** | ug/L | 0.789 | 1 | 801 | 1343516 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24452 | 2 | KED |
| | **Ni** | **60** | **49.596** | ug/L | 1.137 | 2 | 86 | 53766 | 0 | KED |
| | **Ni** | **62** | **49.792** | ug/L | 1.643 | 3 | 16 | 8911 | 1 | KED |
| | **Cu** | **63** | **49.904** | ug/L | 1.627 | 3 | 67 | 161111 | 2 | KED |
| | **Cu** | **65** | **49.750** | ug/L | 1.209 | 2 | 42 | 79340 | 0 | KED |
| | **Zn** | **66** | **49.629** | ug/L | 1.262 | 2 | 67 | 21819 | 1 | KED |
| | **Zn** | **67** | **49.833** | ug/L | 0.789 | 1 | 11 | 3681 | 3 | KED |
| | **As** | **75** | **49.840** | ug/L | 1.170 | 2 | 6 | 10641 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 227806 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 61 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6472 | 2 | KED |
| | **Cd** | **111** | **49.806** | ug/L | 1.334 | 2 | 5 | 11645 | 0 | KED |
| | **Cd** | **114** | **49.760** | ug/L | 1.337 | 2 | 2 | 28297 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 551403 | 3 | Standard |
| | **Pb** | **208** | **49.596** | ug/L | 1.314 | 2 | 256 | 2219143 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:31:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 38647 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3776465 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 467709 | 4 | Standard |
| | **Cr** | **52** | **99.772** | ug/L | 1.970 | 1 | 18596 | 1875966 | 2 | Standard |
| | **Cr** | **53** | **100.062** | ug/L | 3.731 | 3 | 133 | 217453 | 2 | Standard |
| | **Mn** | **55** | **99.560** | ug/L | 1.432 | 1 | 801 | 2686216 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23908 | 1 | KED |
| | **Ni** | **60** | **100.265** | ug/L | 1.751 | 1 | 86 | 107154 | 0 | KED |
| | **Ni** | **62** | **100.063** | ug/L | 2.075 | 2 | 16 | 17535 | 0 | KED |
| | **Cu** | **63** | **100.256** | ug/L | 1.256 | 1 | 67 | 319195 | 0 | KED |
| | **Cu** | **65** | **100.250** | ug/L | 2.886 | 2 | 42 | 157597 | 1 | KED |
| | **Zn** | **66** | **99.534** | ug/L | 2.599 | 2 | 67 | 42077 | 0 | KED |
| | **Zn** | **67** | **100.044** | ug/L | 3.822 | 3 | 11 | 7222 | 2 | KED |
| | **As** | **75** | **100.610** | ug/L | 3.167 | 3 | 6 | 21432 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 227537 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 95 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6490 | 1 | KED |
| | **Cd** | **111** | **100.087** | ug/L | 1.769 | 1 | 5 | 23533 | 0 | KED |
| | **Cd** | **114** | **100.040** | ug/L | 3.583 | 3 | 2 | 57119 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 552023 | 4 | Standard |
| | **Pb** | **208** | **100.690** | ug/L | 2.955 | 2 | 256 | 4615322 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:38:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32272 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3564314 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 456612 | 3 | Standard |
| | **Cr** | **52** | **0.033** | ug/L | 0.021 | 64 | 18596 | 18403 | 1 | Standard |
| | **Cr** | **53** | **-0.007** | ug/L | 0.002 | 35 | 133 | 113 | 7 | Standard |
| | **Mn** | **55** | **-0.001** | ug/L | 0.000 | 33 | 801 | 744 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24027 | 0 | KED |
| | **Ni** | **60** | **-0.005** | ug/L | 0.009 | 197 | 86 | 80 | 12 | KED |
| | **Ni** | **62** | **-0.027** | ug/L | 0.011 | 40 | 16 | 11 | 16 | KED |
| | **Cu** | **63** | **-0.004** | ug/L | 0.002 | 40 | 67 | 53 | 10 | KED |
| | **Cu** | **65** | **-0.009** | ug/L | 0.004 | 43 | 42 | 27 | 21 | KED |
| | **Zn** | **66** | **0.013** | ug/L | 0.056 | 417 | 67 | 71 | 32 | KED |
| | **Zn** | **67** | **0.038** | ug/L | 0.015 | 38 | 11 | 13 | 7 | KED |
| | **As** | **75** | **0.017** | ug/L | 0.013 | 75 | 6 | 10 | 26 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 220679 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 65 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6633 | 3 | KED |
| | **Cd** | **111** | **-0.007** | ug/L | 0.005 | 61 | 5 | 3 | 31 | KED |
| | **Cd** | **114** | **-0.000** | ug/L | 0.002 | 1234 | 2 | 2 | 39 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 536786 | 3 | Standard |
| | **Pb** | **208** | **-0.000** | ug/L | 0.000 | 101 | 256 | 243 | 5 | Standard |

## Sample Information

Sample Date/Time: Monday, January 09, 2023 14:31:44
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

## Calibration

| Analyte | Mass | **r Corr Coef** | Slope | Std 1 Conc | Std 2 Conc | Std 3 Conc | Std 4 Conc | Std 5 Conc |
|---|---|---|---|---|---|---|---|---|
| C | 13 | | | | | | | |
| Cl | 37 | | | | | | | |
| Sc | 45 | | | | | | | |
| Cr | 52 | **1.0000** | 0.040 | 0.50 | 10 | 20 | 50 | 100 |
| Cr | 53 | **1.0000** | 0.005 | 0.50 | 10 | 20 | 50 | 100 |
| Mn | 55 | **1.0000** | 0.058 | 0.50 | 10 | 20 | 50 | 100 |
| Ge | 72 | | | | | | | |
| Ni | 60 | **0.9999** | 0.045 | 0.50 | 10 | 20 | 50 | 100 |
| Ni | 62 | **1.0000** | 0.007 | 0.50 | 10 | 20 | 50 | 100 |
| Cu | 63 | **1.0000** | 0.133 | 0.50 | 10 | 20 | 50 | 100 |
| Cu | 65 | **1.0000** | 0.066 | 0.50 | 10 | 20 | 50 | 100 |
| Zn | 66 | **0.9999** | 0.018 | 6.00 | 10 | 20 | 50 | 100 |
| Zn | 67 | **1.0000** | 0.003 | 6.00 | 10 | 20 | 50 | 100 |
| As | 75 | **0.9999** | 0.009 | 0.20 | 10 | 20 | 50 | 100 |
| Y | 89 | | | | | | | |
| Kr | 83 | | | | | | | |
| In-1 | 115 | | | | | | | |
| Cd | 111 | **1.0000** | 0.036 | 0.10 | 10 | 20 | 50 | 100 |
| Cd | 114 | **1.0000** | 0.088 | 0.10 | 10 | 20 | 50 | 100 |
| Tb | 159 | | | | | | | |
| Pb | 208 | **0.9999** | 0.083 | 0.10 | 10 | 20 | 50 | 100 |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-ICV1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:45:59**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 40786 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3843677 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 480771 | 2 | Standard |
| | **Cr** | **52** | **49.787** | ug/L | 0.809 | 1 | 18596 | 972046 | 2 | Standard |
| | **Cr** | **53** | **49.470** | ug/L | 0.879 | 1 | 133 | 110654 | 2 | Standard |
| | **Mn** | **55** | **50.598** | ug/L | 0.758 | 1 | 801 | 1404133 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24498 | 2 | KED |
| | **Ni** | **60** | **50.483** | ug/L | 0.573 | 1 | 86 | 55341 | 2 | KED |
| | **Ni** | **62** | **51.318** | ug/L | 0.367 | 0 | 16 | 9224 | 1 | KED |
| | **Cu** | **63** | **50.128** | ug/L | 1.072 | 2 | 67 | 163576 | 2 | KED |
| | **Cu** | **65** | **50.843** | ug/L | 0.690 | 1 | 42 | 81935 | 1 | KED |
| | **Zn** | **66** | **49.855** | ug/L | 1.360 | 2 | 67 | 21628 | 0 | KED |
| | **Zn** | **67** | **47.602** | ug/L | 0.296 | 0 | 11 | 3528 | 1 | KED |
| | **As** | **75** | **47.022** | ug/L | 1.054 | 2 | 6 | 10268 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 234516 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 62 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6662 | 1 | KED |
| | **Cd** | **111** | **50.117** | ug/L | 1.037 | 2 | 5 | 12099 | 1 | KED |
| | **Cd** | **114** | **49.409** | ug/L | 0.747 | 1 | 2 | 28971 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 565959 | 4 | Standard |
| | **Pb** | **208** | **49.764** | ug/L | 2.005 | 4 | 256 | 2338061 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-ICB1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:53:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32454 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3485295 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 466733 | 1 | Standard |
| \| | **Cr** | **52** | **0.007** | ug/L | 0.031 | 434 | 18596 | 18334 | 1 | Standard |
| \| | **Cr** | **53** | **-0.003** | ug/L | 0.002 | 69 | 133 | 124 | 4 | Standard |
| ⌊ | **Mn** | **55** | **-0.001** | ug/L | 0.001 | 215 | 801 | 766 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23033 | 1 | KED |
| \| | **Ni** | **60** | **0.006** | ug/L | 0.018 | 298 | 86 | 87 | 21 | KED |
| \| | **Ni** | **62** | **0.005** | ug/L | 0.042 | 773 | 16 | 16 | 43 | KED |
| \| | **Cu** | **63** | **-0.004** | ug/L | 0.003 | 72 | 67 | 52 | 14 | KED |
| \| | **Cu** | **65** | **-0.005** | ug/L | 0.003 | 59 | 42 | 31 | 15 | KED |
| \| | **Zn** | **66** | **0.008** | ug/L | 0.010 | 120 | 67 | 66 | 4 | KED |
| \| | **Zn** | **67** | **-0.001** | ug/L | 0.086 | 11541 | 11 | 10 | 56 | KED |
| ⌊ | **As** | **75** | **0.009** | ug/L | 0.008 | 85 | 6 | 8 | 17 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 229503 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 43 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6370 | 2 | KED |
| \| | **Cd** | **111** | **-0.012** | ug/L | 0.006 | 50 | 5 | 2 | 65 | KED |
| ⌊ | **Cd** | **114** | **-0.001** | ug/L | 0.004 | 355 | 2 | 1 | 111 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 542547 | 3 | Standard |
| ⌊ | **Pb** | **208** | **-0.000** | ug/L | 0.000 | 174 | 256 | 249 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 14:57:32**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 31531 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3763953 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 466768 | 2 | Standard |
| | **Cr** | **52** | **50.184** | ug/L | 1.833 | 3 | 18596 | 950918 | 2 | Standard |
| | **Cr** | **53** | **49.150** | ug/L | 0.936 | 1 | 133 | 106710 | 0 | Standard |
| | **Mn** | **55** | **50.141** | ug/L | 0.727 | 1 | 801 | 1350699 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23938 | 3 | KED |
| | **Ni** | **60** | **49.815** | ug/L | 0.710 | 1 | 86 | 53346 | 3 | KED |
| | **Ni** | **62** | **48.460** | ug/L | 0.830 | 1 | 16 | 8512 | 3 | KED |
| | **Cu** | **63** | **48.874** | ug/L | 1.270 | 2 | 67 | 155835 | 4 | KED |
| | **Cu** | **65** | **48.695** | ug/L | 1.588 | 3 | 42 | 76641 | 2 | KED |
| | **Zn** | **66** | **49.464** | ug/L | 1.551 | 3 | 67 | 20963 | 2 | KED |
| | **Zn** | **67** | **47.809** | ug/L | 0.769 | 1 | 11 | 3464 | 5 | KED |
| | **As** | **75** | **49.303** | ug/L | 0.930 | 1 | 6 | 10520 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 227527 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 61 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6443 | 0 | KED |
| | **Cd** | **111** | **48.789** | ug/L | 0.450 | 0 | 5 | 11394 | 0 | KED |
| | **Cd** | **114** | **49.216** | ug/L | 0.940 | 1 | 2 | 27911 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 554668 | 3 | Standard |
| | **Pb** | **208** | **49.212** | ug/L | 1.696 | 3 | 256 | 2266949 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:04:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32390 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3476432 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 453367 | 1 | Standard |
| | **Cr** | **52** | **0.010** | ug/L | 0.013 | 135 | 18596 | 17857 | 0 | Standard |
| | **Cr** | **53** | **-0.007** | ug/L | 0.004 | 59 | 133 | 111 | 9 | Standard |
| | **Mn** | **55** | **-0.002** | ug/L | 0.001 | 60 | 801 | 721 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22661 | 3 | KED |
| | **Ni** | **60** | **0.008** | ug/L | 0.020 | 251 | 86 | 87 | 19 | KED |
| | **Ni** | **62** | **0.012** | ug/L | 0.054 | 446 | 16 | 17 | 48 | KED |
| | **Cu** | **63** | **-0.003** | ug/L | 0.002 | 62 | 67 | 54 | 13 | KED |
| | **Cu** | **65** | **-0.009** | ug/L | 0.006 | 72 | 42 | 26 | 37 | KED |
| | **Zn** | **66** | **-0.020** | ug/L | 0.016 | 82 | 67 | 54 | 14 | KED |
| | **Zn** | **67** | **-0.007** | ug/L | 0.028 | 412 | 11 | 10 | 21 | KED |
| | **As** | **75** | **0.003** | ug/L | 0.010 | 348 | 6 | 6 | 34 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 220617 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 68 | 37 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6506 | 2 | KED |
| | **Cd** | **111** | **-0.012** | ug/L | 0.003 | 20 | 5 | 2 | 24 | KED |
| | **Cd** | **114** | **-0.001** | ug/L | 0.003 | 337 | 2 | 1 | 101 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 535661 | 4 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.001 | 6530 | 256 | 253 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CRL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:09:12**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 35948 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3574068 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 463765 | 1 | Standard |
| \| | **Cr** | **52** | **0.523** | ug/L | 0.027 | 5 | 18596 | 27754 | 2 | Standard |
| \| | **Cr** | **53** | **0.510** | ug/L | 0.033 | 6 | 133 | 1229 | 7 | Standard |
| ⌊ | **Mn** | **55** | **0.519** | ug/L | 0.015 | 2 | 801 | 14652 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23422 | 2 | KED |
| \| | **Ni** | **60** | **0.418** | ug/L | 0.031 | 7 | 86 | 520 | 6 | KED |
| \| | **Ni** | **62** | **0.511** | ug/L | 0.040 | 7 | 16 | 103 | 7 | KED |
| \| | **Cu** | **63** | **0.509** | ug/L | 0.016 | 3 | 67 | 1653 | 3 | KED |
| \| | **Cu** | **65** | **0.500** | ug/L | 0.013 | 2 | 42 | 810 | 0 | KED |
| \| | **Zn** | **66** | **6.233** | ug/L | 0.466 | 7 | 67 | 2642 | 7 | KED |
| \| | **Zn** | **67** | **5.398** | ug/L | 0.365 | 6 | 11 | 392 | 7 | KED |
| ⌊ | **As** | **75** | **0.208** | ug/L | 0.013 | 6 | 6 | 49 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 232415 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 60 | 6 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6420 | 2 | KED |
| \| | **Cd** | **111** | **0.097** | ug/L | 0.014 | 13 | 5 | 27 | 12 | KED |
| ⌊ | **Cd** | **114** | **0.088** | ug/L | 0.015 | 17 | 2 | 51 | 13 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 540991 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.103** | ug/L | 0.008 | 7 | 256 | 4883 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IFA1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:16:35**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 133365 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 9574072 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 478682 | 1 | Standard |
| | **Cr** | **52** | **0.792** | ug/L | 0.020 | 2 | 18596 | 33775 | 2 | Standard |
| | **Cr** | **53** | **4.268** | ug/L | 0.040 | 0 | 133 | 9627 | 0 | Standard |
| | **Mn** | **55** | **0.093** | ug/L | 0.001 | 0 | 801 | 3384 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22875 | 0 | KED |
| | **Ni** | **60** | **0.027** | ug/L | 0.005 | 17 | 86 | 107 | 4 | KED |
| | **Ni** | **62** | **0.101** | ug/L | 0.060 | 59 | 16 | 32 | 31 | KED |
| | **Cu** | **63** | **0.022** | ug/L | 0.006 | 26 | 67 | 130 | 14 | KED |
| | **Cu** | **65** | **0.019** | ug/L | 0.006 | 29 | 42 | 68 | 12 | KED |
| | **Zn** | **66** | **0.180** | ug/L | 0.031 | 17 | 67 | 135 | 9 | KED |
| | **Zn** | **67** | **0.121** | ug/L | 0.075 | 61 | 11 | 19 | 26 | KED |
| | **As** | **75** | **0.030** | ug/L | 0.010 | 33 | 6 | 12 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 228373 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 122 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6624 | 0 | KED |
| | **Cd** | **111** | **0.034** | ug/L | 0.018 | 53 | 5 | 13 | 32 | KED |
| | **Cd** | **114** | **0.050** | ug/L | 0.017 | 33 | 2 | 31 | 31 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 559407 | 2 | Standard |
| | **Pb** | **208** | **0.027** | ug/L | 0.002 | 7 | 256 | 1519 | 6 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IFB1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:20:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 138783 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 9966369 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 485486 | 2 | Standard |
| \| | **Cr** | **52** | **20.026** | ug/L | 0.174 | 0 | 18596 | 406193 | 2 | Standard |
| \| | **Cr** | **53** | **23.495** | ug/L | 0.073 | 0 | 133 | 53138 | 2 | Standard |
| ⌊ | **Mn** | **55** | **19.655** | ug/L | 0.115 | 0 | 801 | 551293 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23742 | 0 | KED |
| \| | **Ni** | **60** | **20.042** | ug/L | 0.397 | 1 | 86 | 21341 | 2 | KED |
| \| | **Ni** | **62** | **19.764** | ug/L | 0.554 | 2 | 16 | 3453 | 3 | KED |
| \| | **Cu** | **63** | **19.545** | ug/L | 0.202 | 1 | 67 | 61861 | 1 | KED |
| \| | **Cu** | **65** | **19.953** | ug/L | 0.161 | 0 | 42 | 31194 | 1 | KED |
| \| | **Zn** | **66** | **18.915** | ug/L | 0.159 | 0 | 67 | 7995 | 0 | KED |
| \| | **Zn** | **67** | **16.667** | ug/L | 1.048 | 6 | 11 | 1204 | 5 | KED |
| ⌊ | **As** | **75** | **19.326** | ug/L | 0.115 | 0 | 6 | 4095 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 229966 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 137 | 27 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6521 | 0 | KED |
| \| | **Cd** | **111** | **18.736** | ug/L | 0.428 | 2 | 5 | 4431 | 1 | KED |
| ⌊ | **Cd** | **114** | **18.778** | ug/L | 0.504 | 2 | 2 | 10778 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 573723 | 2 | Standard |
| ⌊ | **Pb** | **208** | **0.023** | ug/L | 0.001 | 5 | 256 | 1349 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-HCV1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:25:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 39074 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3856935 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 456409 | 3 | Standard |
| \| | **Cr** | **52** | **193.343** | ug/L | 2.966 | 1 | 18596 | 3531440 | 1 | Standard |
| \| | **Cr** | **53** | **198.015** | ug/L | 5.129 | 2 | 133 | 419899 | 1 | Standard |
| ⌊ | **Mn** | **55** | **191.807** | ug/L | 3.718 | 1 | 801 | 5049101 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 22512 | 1 | KED |
| \| | **Ni** | **60** | **199.073** | ug/L | 3.055 | 1 | 86 | 200278 | 1 | KED |
| \| | **Ni** | **62** | **192.794** | ug/L | 2.871 | 1 | 16 | 31802 | 0 | KED |
| \| | **Cu** | **63** | **191.523** | ug/L | 1.939 | 1 | 67 | 574163 | 0 | KED |
| \| | **Cu** | **65** | **193.460** | ug/L | 4.472 | 2 | 42 | 286399 | 1 | KED |
| \| | **Zn** | **66** | **188.006** | ug/L | 2.903 | 1 | 67 | 74799 | 0 | KED |
| \| | **Zn** | **67** | **186.011** | ug/L | 2.602 | 1 | 11 | 12639 | 0 | KED |
| ⌊ | **As** | **75** | **195.717** | ug/L | 2.015 | 1 | 6 | 39265 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 223300 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 142 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6273 | 2 | KED |
| \| | **Cd** | **111** | **190.924** | ug/L | 4.507 | 2 | 5 | 43380 | 0 | KED |
| ⌊ | **Cd** | **114** | **194.680** | ug/L | 5.687 | 2 | 2 | 107437 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 552314 | 3 | Standard |
| ⌊ | **Pb** | **208** | **195.436** | ug/L | 5.153 | 2 | 256 | 8964706 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-HCV2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:30:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 38343 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3744087 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 417544 | 5 | Standard |
| | **Cr** | **52** | **294.258** | ug/L | 9.636 | 3 | 18596 | 4904389 | 2 | Standard |
| | **Cr** | **53** | **299.702** | ug/L | 5.314 | 1 | 133 | 581328 | 4 | Standard |
| | **Mn** | **55** | **290.052** | ug/L | 11.115 | 3 | 801 | 6979432 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22282 | 0 | KED |
| | **Ni** | **60** | **287.935** | ug/L | 4.653 | 1 | 86 | 286696 | 1 | KED |
| | **Ni** | **62** | **289.121** | ug/L | 9.466 | 3 | 16 | 47202 | 3 | KED |
| | **Cu** | **63** | **283.347** | ug/L | 3.513 | 1 | 67 | 840765 | 0 | KED |
| | **Cu** | **65** | **277.320** | ug/L | 6.276 | 2 | 42 | 406371 | 2 | KED |
| | **Zn** | **66** | **273.038** | ug/L | 5.484 | 2 | 67 | 107507 | 2 | KED |
| | **Zn** | **67** | **275.612** | ug/L | 6.869 | 2 | 11 | 18534 | 2 | KED |
| | **As** | **75** | **290.018** | ug/L | 2.768 | 0 | 6 | 57589 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 203066 | 6 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 189 | 25 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6115 | 1 | KED |
| | **Cd** | **111** | **277.844** | ug/L | 0.889 | 0 | 5 | 61559 | 0 | KED |
| | **Cd** | **114** | **281.147** | ug/L | 1.593 | 0 | 2 | 151309 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 511728 | 6 | Standard |
| | **Pb** | **208** | **296.866** | ug/L | 18.243 | 6 | 256 | 12588201 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:37:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 38232 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3767099 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 473134 | 1 | Standard |
| | **Cr** | **52** | **0.028** | ug/L | 0.012 | 41 | 18596 | 18982 | 0 | Standard |
| | **Cr** | **53** | **0.058** | ug/L | 0.007 | 12 | 133 | 258 | 5 | Standard |
| | **Mn** | **55** | **-0.003** | ug/L | 0.001 | 43 | 801 | 721 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24085 | 0 | KED |
| | **Ni** | **60** | **-0.061** | ug/L | 0.008 | 12 | 86 | 19 | 43 | KED |
| | **Ni** | **62** | **-0.056** | ug/L | 0.013 | 22 | 16 | 6 | 34 | KED |
| | **Cu** | **63** | **0.018** | ug/L | 0.002 | 10 | 67 | 124 | 4 | KED |
| | **Cu** | **65** | **0.013** | ug/L | 0.009 | 64 | 42 | 62 | 21 | KED |
| | **Zn** | **66** | **0.014** | ug/L | 0.039 | 272 | 67 | 72 | 22 | KED |
| | **Zn** | **67** | **0.020** | ug/L | 0.015 | 74 | 11 | 12 | 8 | KED |
| | **As** | **75** | **0.014** | ug/L | 0.012 | 83 | 6 | 9 | 25 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 226205 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 48 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6471 | 1 | KED |
| | **Cd** | **111** | **-0.014** | ug/L | 0.004 | 30 | 5 | 1 | 50 | KED |
| | **Cd** | **114** | **0.001** | ug/L | 0.002 | 152 | 2 | 3 | 34 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 546900 | 2 | Standard |
| | **Pb** | **208** | **0.001** | ug/L | 0.000 | 22 | 256 | 295 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:43:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 33964 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3844252 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 480369 | 1 | Standard |
| \| | **Cr** | **52** | **48.855** | ug/L | 0.513 | 1 | 18596 | 953430 | 1 | Standard |
| \| | **Cr** | **53** | **49.077** | ug/L | 0.428 | 0 | 133 | 109674 | 0 | Standard |
| ⌊ | **Mn** | **55** | **50.517** | ug/L | 0.452 | 0 | 801 | 1400700 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 24890 | 0 | KED |
| \| | **Ni** | **60** | **49.269** | ug/L | 0.541 | 1 | 86 | 54872 | 1 | KED |
| \| | **Ni** | **62** | **49.893** | ug/L | 1.722 | 3 | 16 | 9113 | 3 | KED |
| \| | **Cu** | **63** | **49.049** | ug/L | 0.590 | 1 | 67 | 162640 | 1 | KED |
| \| | **Cu** | **65** | **49.669** | ug/L | 0.938 | 1 | 42 | 81338 | 1 | KED |
| \| | **Zn** | **66** | **50.175** | ug/L | 0.106 | 0 | 67 | 22123 | 0 | KED |
| \| | **Zn** | **67** | **50.188** | ug/L | 1.538 | 3 | 11 | 3779 | 3 | KED |
| ⌊ | **As** | **75** | **49.548** | ug/L | 0.333 | 0 | 6 | 10996 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 235771 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 59 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6848 | 2 | KED |
| \| | **Cd** | **111** | **49.936** | ug/L | 1.831 | 3 | 5 | 12386 | 0 | KED |
| ⌊ | **Cd** | **114** | **50.024** | ug/L | 2.132 | 4 | 2 | 30130 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 563345 | 3 | Standard |
| ⌊ | **Pb** | **208** | **49.922** | ug/L | 1.242 | 2 | 256 | 2335962 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:50:40**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 33015 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3704542 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 474926 | 1 | Standard |
| | **Cr** | **52** | **-0.002** | ug/L | 0.027 | 1536 | 18596 | 18496 | 3 | Standard |
| | **Cr** | **53** | **0.034** | ug/L | 0.005 | 15 | 133 | 207 | 4 | Standard |
| | **Mn** | **55** | **-0.003** | ug/L | 0.001 | 54 | 801 | 726 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24129 | 0 | KED |
| | **Ni** | **60** | **-0.009** | ug/L | 0.004 | 46 | 86 | 75 | 5 | KED |
| | **Ni** | **62** | **0.005** | ug/L | 0.011 | 219 | 16 | 17 | 11 | KED |
| | **Cu** | **63** | **-0.003** | ug/L | 0.002 | 62 | 67 | 56 | 11 | KED |
| | **Cu** | **65** | **-0.008** | ug/L | 0.004 | 50 | 42 | 29 | 19 | KED |
| | **Zn** | **66** | **-0.004** | ug/L | 0.022 | 568 | 67 | 64 | 13 | KED |
| | **Zn** | **67** | **-0.024** | ug/L | 0.025 | 103 | 11 | 9 | 20 | KED |
| | **As** | **75** | **-0.005** | ug/L | 0.015 | 305 | 6 | 5 | 57 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 233305 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 44 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6405 | 1 | KED |
| | **Cd** | **111** | **-0.007** | ug/L | 0.010 | 153 | 5 | 3 | 68 | KED |
| | **Cd** | **114** | **0.001** | ug/L | 0.007 | 679 | 2 | 2 | 132 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 547515 | 2 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.001 | 160 | 256 | 233 | 16 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-BLK1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 15:59:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | 13 | | ug/L | | | 34196 | 46324 | 2 | Standard |
| | Cl | 37 | | ug/L | | | 3578521 | 3738945 | 3 | Standard |
| > | Sc | 45 | | ug/L | | | 476701 | 484141 | 3 | Standard |
| | Cr | 52 | 0.059 | ug/L | 0.011 | 18 | 18596 | 20016 | 3 | Standard |
| | Cr | 53 | 0.032 | ug/L | 0.004 | 13 | 133 | 206 | 1 | Standard |
| | Mn | 55 | 0.003 | ug/L | 0.003 | 90 | 801 | 893 | 4 | Standard |
| > | Ge | 72 | | ug/L | | | 24444 | 24924 | 1 | KED |
| | Ni | 60 | -0.064 | ug/L | 0.005 | 8 | 86 | 17 | 33 | KED |
| | Ni | 62 | -0.068 | ug/L | 0.012 | 18 | 16 | 4 | 49 | KED |
| | Cu | 63 | -0.009 | ug/L | 0.001 | 5 | 67 | 39 | 5 | KED |
| | Cu | 65 | -0.012 | ug/L | 0.003 | 26 | 42 | 24 | 22 | KED |
| | Zn | 66 | -0.059 | ug/L | 0.014 | 22 | 67 | 42 | 14 | KED |
| | Zn | 67 | -0.054 | ug/L | 0.026 | 48 | 11 | 7 | 25 | KED |
| | As | 75 | -0.006 | ug/L | 0.008 | 129 | 6 | 5 | 35 | KED |
| | Y | 89 | | ug/L | | | 230853 | 233132 | 3 | Standard |
| | Kr | 83 | | ug/L | | | 65 | 46 | 20 | Standard |
| > | In-1 | 115 | | ug/L | | | 6387 | 7032 | 1 | KED |
| | Cd | 111 | -0.016 | ug/L | 0.002 | 14 | 5 | 1 | 34 | KED |
| | Cd | 114 | 0.000 | ug/L | 0.006 | 1324 | 2 | 2 | 134 | KED |
| > | Tb | 159 | | ug/L | | | 540555 | 554009 | 4 | Standard |
| | Pb | 208 | -0.002 | ug/L | 0.000 | 15 | 256 | 178 | 12 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-BS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:03:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 40988 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3629257 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 459012 | 2 | Standard |
| | **Cr** | **52** | **26.943** | ug/L | 0.797 | 2 | 18596 | 510278 | 0 | Standard |
| | **Cr** | **53** | **26.559** | ug/L | 0.543 | 2 | 133 | 56774 | 2 | Standard |
| | **Mn** | **55** | **27.237** | ug/L | 0.754 | 2 | 801 | 721705 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23613 | 0 | KED |
| | **Ni** | **60** | **26.460** | ug/L | 0.460 | 1 | 86 | 27993 | 1 | KED |
| | **Ni** | **62** | **26.261** | ug/L | 0.868 | 3 | 16 | 4557 | 2 | KED |
| | **Cu** | **63** | **26.325** | ug/L | 0.339 | 1 | 67 | 82836 | 0 | KED |
| | **Cu** | **65** | **27.041** | ug/L | 0.490 | 1 | 42 | 42027 | 1 | KED |
| | **Zn** | **66** | **81.867** | ug/L | 1.187 | 1 | 67 | 34202 | 0 | KED |
| | **Zn** | **67** | **76.445** | ug/L | 1.246 | 1 | 11 | 5455 | 1 | KED |
| | **As** | **75** | **25.218** | ug/L | 0.451 | 1 | 6 | 5312 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 225975 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 60 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6475 | 1 | KED |
| | **Cd** | **111** | **25.974** | ug/L | 0.726 | 2 | 5 | 6097 | 1 | KED |
| | **Cd** | **114** | **25.913** | ug/L | 0.100 | 0 | 2 | 14770 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 535290 | 2 | Standard |
| | **Pb** | **208** | **27.333** | ug/L | 0.697 | 2 | 256 | 1215549 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-BLK2**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:15:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 40306 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3599694 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 457934 | 2 | Standard |
| | **Cr** | **52** | **0.020** | ug/L | 0.033 | 168 | 18596 | 18217 | 1 | Standard |
| | **Cr** | **53** | **0.022** | ug/L | 0.003 | 15 | 133 | 175 | 3 | Standard |
| | **Mn** | **55** | **0.006** | ug/L | 0.001 | 10 | 801 | 938 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23903 | 1 | KED |
| | **Ni** | **60** | **-0.070** | ug/L | 0.004 | 5 | 86 | 9 | 40 | KED |
| | **Ni** | **62** | **-0.070** | ug/L | 0.011 | 15 | 16 | 3 | 50 | KED |
| | **Cu** | **63** | **-0.004** | ug/L | 0.002 | 41 | 67 | 53 | 10 | KED |
| | **Cu** | **65** | **-0.012** | ug/L | 0.004 | 31 | 42 | 23 | 26 | KED |
| | **Zn** | **66** | **-0.037** | ug/L | 0.020 | 54 | 67 | 50 | 15 | KED |
| | **Zn** | **67** | **-0.049** | ug/L | 0.025 | 51 | 11 | 7 | 25 | KED |
| | **As** | **75** | **0.001** | ug/L | 0.006 | 855 | 6 | 6 | 18 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 222370 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 43 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6482 | 2 | KED |
| | **Cd** | **111** | **-0.008** | ug/L | 0.006 | 75 | 5 | 3 | 45 | KED |
| | **Cd** | **114** | **0.001** | ug/L | 0.002 | 169 | 2 | 3 | 37 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 532770 | 2 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.001 | 121 | 256 | 218 | 18 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-BS2**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:20:12**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 39701 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3641610 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 482467 | 1 | Standard |
| \| | **Cr** | **52** | **27.183** | ug/L | 0.195 | 0 | 18596 | 541167 | 1 | Standard |
| \| | **Cr** | **53** | **27.154** | ug/L | 0.144 | 0 | 133 | 61017 | 2 | Standard |
| ⌊ | **Mn** | **55** | **27.761** | ug/L | 0.471 | 1 | 801 | 773317 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23902 | 1 | KED |
| \| | **Ni** | **60** | **27.923** | ug/L | 0.516 | 1 | 86 | 29896 | 0 | KED |
| \| | **Ni** | **62** | **27.174** | ug/L | 0.913 | 3 | 16 | 4775 | 4 | KED |
| \| | **Cu** | **63** | **26.665** | ug/L | 0.528 | 1 | 67 | 84932 | 2 | KED |
| \| | **Cu** | **65** | **27.045** | ug/L | 0.587 | 2 | 42 | 42543 | 1 | KED |
| \| | **Zn** | **66** | **84.993** | ug/L | 2.024 | 2 | 67 | 35935 | 1 | KED |
| \| | **Zn** | **67** | **77.004** | ug/L | 1.713 | 2 | 11 | 5563 | 3 | KED |
| ⌊ | **As** | **75** | **25.553** | ug/L | 0.662 | 2 | 6 | 5447 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 234135 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 66 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6720 | 1 | KED |
| \| | **Cd** | **111** | **25.939** | ug/L | 0.364 | 1 | 5 | 6320 | 1 | KED |
| ⌊ | **Cd** | **114** | **26.196** | ug/L | 0.419 | 1 | 2 | 15495 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 544321 | 3 | Standard |
| ⌊ | **Pb** | **208** | **28.164** | ug/L | 1.019 | 3 | 256 | 1273060 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0454-13**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:24:35**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 34600 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3567331 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 449997 | 1 | Standard |
| | **Cr** | **52** | **0.008** | ug/L | 0.027 | 351 | 18596 | 17692 | 3 | Standard |
| | **Cr** | **53** | **0.027** | ug/L | 0.006 | 22 | 133 | 183 | 6 | Standard |
| | **Mn** | **55** | **0.002** | ug/L | 0.003 | 160 | 801 | 801 | 7 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23602 | 1 | KED |
| | **Ni** | **60** | **0.016** | ug/L | 0.008 | 49 | 86 | 100 | 9 | KED |
| | **Ni** | **62** | **0.103** | ug/L | 0.029 | 28 | 16 | 33 | 14 | KED |
| | **Cu** | **63** | **37.085** | ug/L | 0.056 | 0 | 67 | 116624 | 1 | KED |
| | **Cu** | **65** | **37.112** | ug/L | 0.436 | 1 | 42 | 57637 | 0 | KED |
| | **Zn** | **66** | **0.486** | ug/L | 0.058 | 11 | 67 | 267 | 10 | KED |
| | **Zn** | **67** | **0.416** | ug/L | 0.009 | 2 | 11 | 40 | 2 | KED |
| | **As** | **75** | **0.011** | ug/L | 0.014 | 131 | 6 | 8 | 35 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 221057 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 59 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6612 | 0 | KED |
| | **Cd** | **111** | **-0.014** | ug/L | 0.011 | 75 | 5 | 1 | 132 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.002 | 62 | 2 | 0 | 224 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 521310 | 3 | Standard |
| | **Pb** | **208** | **0.087** | ug/L | 0.004 | 4 | 256 | 3998 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0454-14**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:28:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 37032 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3612709 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 461936 | 0 | Standard |
| | **Cr** | **52** | **0.078** | ug/L | 0.017 | 21 | 18596 | 19452 | 1 | Standard |
| | **Cr** | **53** | **0.124** | ug/L | 0.008 | 6 | 133 | 394 | 4 | Standard |
| | **Mn** | **55** | **0.214** | ug/L | 0.006 | 2 | 801 | 6472 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23448 | 2 | KED |
| | **Ni** | **60** | **0.007** | ug/L | 0.004 | 61 | 86 | 90 | 3 | KED |
| | **Ni** | **62** | **0.160** | ug/L | 0.059 | 37 | 16 | 43 | 21 | KED |
| | **Cu** | **63** | **57.999** | ug/L | 2.111 | 3 | 67 | 181076 | 2 | KED |
| | **Cu** | **65** | **57.765** | ug/L | 2.160 | 3 | 42 | 89070 | 2 | KED |
| | **Zn** | **66** | **1.330** | ug/L | 0.104 | 7 | 67 | 614 | 5 | KED |
| | **Zn** | **67** | **1.213** | ug/L | 0.248 | 20 | 11 | 96 | 15 | KED |
| | **As** | **75** | **0.104** | ug/L | 0.008 | 7 | 6 | 28 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 223875 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 55 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6464 | 2 | KED |
| | **Cd** | **111** | **-0.006** | ug/L | 0.008 | 134 | 5 | 3 | 50 | KED |
| | **Cd** | **114** | **0.002** | ug/L | 0.003 | 167 | 2 | 3 | 54 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 531880 | 4 | Standard |
| | **Pb** | **208** | **0.610** | ug/L | 0.026 | 4 | 256 | 27175 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0454-02**
**Sample Dil Factor: 10**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:33:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 36675 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3628064 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 473048 | 1 | Standard |
| | **Cr** | **52** | **0.048** | ug/L | 0.014 | 28 | 18596 | 19353 | 0 | Standard |
| | **Cr** | **53** | **0.057** | ug/L | 0.010 | 18 | 133 | 258 | 7 | Standard |
| | **Mn** | **55** | **0.018** | ug/L | 0.002 | 12 | 801 | 1282 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24540 | 2 | KED |
| | **Ni** | **60** | **-0.014** | ug/L | 0.006 | 47 | 86 | 71 | 11 | KED |
| | **Ni** | **62** | **0.134** | ug/L | 0.011 | 8 | 16 | 40 | 7 | KED |
| | **Cu** | **63** | **54.182** | ug/L | 1.116 | 2 | 67 | 177056 | 0 | KED |
| | **Cu** | **65** | **55.386** | ug/L | 2.140 | 3 | 42 | 89354 | 0 | KED |
| | **Zn** | **66** | **4.384** | ug/L | 0.306 | 6 | 67 | 1965 | 4 | KED |
| | **Zn** | **67** | **3.472** | ug/L | 0.369 | 10 | 11 | 267 | 7 | KED |
| | **As** | **75** | **0.016** | ug/L | 0.007 | 43 | 6 | 10 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 231963 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 52 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6706 | 1 | KED |
| | **Cd** | **111** | **-0.011** | ug/L | 0.006 | 52 | 5 | 2 | 57 | KED |
| | **Cd** | **114** | **0.001** | ug/L | 0.004 | 442 | 2 | 2 | 73 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 547136 | 2 | Standard |
| | **Pb** | **208** | **0.038** | ug/L | 0.001 | 3 | 256 | 1983 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0475-01**
**Sample Dil Factor: 10**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:37:43**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 35647 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3575993 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 454965 | 2 | Standard |
| | **Cr** | **52** | **0.074** | ug/L | 0.017 | 23 | 18596 | 19081 | 0 | Standard |
| | **Cr** | **53** | **0.093** | ug/L | 0.003 | 3 | 133 | 324 | 0 | Standard |
| | **Mn** | **55** | **0.460** | ug/L | 0.011 | 2 | 801 | 12835 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23475 | 0 | KED |
| | **Ni** | **60** | **-0.015** | ug/L | 0.018 | 114 | 86 | 66 | 27 | KED |
| | **Ni** | **62** | **0.000** | ug/L | 0.055 | 28890 | 16 | 15 | 59 | KED |
| | **Cu** | **63** | **0.467** | ug/L | 0.034 | 7 | 67 | 1525 | 6 | KED |
| | **Cu** | **65** | **0.506** | ug/L | 0.051 | 10 | 42 | 822 | 9 | KED |
| | **Zn** | **66** | **60.664** | ug/L | 1.748 | 2 | 67 | 25213 | 2 | KED |
| | **Zn** | **67** | **52.682** | ug/L | 0.456 | 0 | 11 | 3741 | 1 | KED |
| | **As** | **75** | **0.065** | ug/L | 0.006 | 8 | 6 | 20 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 221691 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 52 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6478 | 1 | KED |
| | **Cd** | **111** | **0.120** | ug/L | 0.009 | 7 | 5 | 33 | 4 | KED |
| | **Cd** | **114** | **0.137** | ug/L | 0.039 | 28 | 2 | 80 | 26 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 518561 | 3 | Standard |
| | **Pb** | **208** | **0.030** | ug/L | 0.003 | 8 | 256 | 1544 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0476-01**
**Sample Dil Factor: 10**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:42:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 36008 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3564717 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 466106 | 4 | Standard |
| | **Cr** | **52** | **0.071** | ug/L | 0.035 | 48 | 18596 | 19499 | 4 | Standard |
| | **Cr** | **53** | **0.082** | ug/L | 0.001 | 1 | 133 | 307 | 3 | Standard |
| | **Mn** | **55** | **0.419** | ug/L | 0.004 | 1 | 801 | 12045 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23777 | 1 | KED |
| | **Ni** | **60** | **-0.035** | ug/L | 0.005 | 13 | 86 | 46 | 11 | KED |
| | **Ni** | **62** | **-0.016** | ug/L | 0.022 | 136 | 16 | 13 | 28 | KED |
| | **Cu** | **63** | **0.424** | ug/L | 0.025 | 5 | 67 | 1408 | 6 | KED |
| | **Cu** | **65** | **0.439** | ug/L | 0.026 | 5 | 42 | 727 | 4 | KED |
| | **Zn** | **66** | **57.739** | ug/L | 2.119 | 3 | 67 | 24303 | 2 | KED |
| | **Zn** | **67** | **51.530** | ug/L | 1.622 | 3 | 11 | 3706 | 3 | KED |
| | **As** | **75** | **0.044** | ug/L | 0.020 | 44 | 6 | 15 | 25 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 225384 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 45 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6319 | 0 | KED |
| | **Cd** | **111** | **0.103** | ug/L | 0.011 | 10 | 5 | 28 | 8 | KED |
| | **Cd** | **114** | **0.170** | ug/L | 0.019 | 10 | 2 | 96 | 10 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 530176 | 5 | Standard |
| | **Pb** | **208** | **0.027** | ug/L | 0.001 | 4 | 256 | 1418 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:46:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 33771 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3526406 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 447002 | 1 | Standard |
| | **Cr** | **52** | **0.010** | ug/L | 0.022 | 214 | 18596 | 17617 | 0 | Standard |
| | **Cr** | **53** | **0.008** | ug/L | 0.000 | 4 | 133 | 142 | 1 | Standard |
| | **Mn** | **55** | **-0.008** | ug/L | 0.000 | 5 | 801 | 558 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23310 | 1 | KED |
| | **Ni** | **60** | **-0.066** | ug/L | 0.002 | 2 | 86 | 13 | 14 | KED |
| | **Ni** | **62** | **-0.070** | ug/L | 0.011 | 16 | 16 | 3 | 50 | KED |
| | **Cu** | **63** | **-0.007** | ug/L | 0.002 | 30 | 67 | 42 | 15 | KED |
| | **Cu** | **65** | **-0.017** | ug/L | 0.005 | 29 | 42 | 13 | 55 | KED |
| | **Zn** | **66** | **-0.080** | ug/L | 0.019 | 23 | 67 | 31 | 24 | KED |
| | **Zn** | **67** | **-0.056** | ug/L | 0.015 | 27 | 11 | 6 | 15 | KED |
| | **As** | **75** | **0.004** | ug/L | 0.004 | 100 | 6 | 7 | 11 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 216880 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 54 | 24 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6437 | 1 | KED |
| | **Cd** | **111** | **-0.010** | ug/L | 0.000 | 1 | 5 | 2 | 0 | KED |
| | **Cd** | **114** | **0.006** | ug/L | 0.003 | 57 | 2 | 5 | 33 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 514991 | 3 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.001 | 36 | 256 | 182 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:51:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 31671 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3735267 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 451697 | 0 | Standard |
| \| | **Cr** | **52** | **49.270** | ug/L | 1.157 | 2 | 18596 | 904130 | 2 | Standard |
| \| | **Cr** | **53** | **49.738** | ug/L | 0.169 | 0 | 133 | 104529 | 1 | Standard |
| ⌊ | **Mn** | **55** | **50.464** | ug/L | 0.445 | 0 | 801 | 1315691 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23403 | 1 | KED |
| \| | **Ni** | **60** | **49.983** | ug/L | 1.151 | 2 | 86 | 52338 | 2 | KED |
| \| | **Ni** | **62** | **49.539** | ug/L | 0.997 | 2 | 16 | 8506 | 1 | KED |
| \| | **Cu** | **63** | **48.754** | ug/L | 1.515 | 3 | 67 | 151947 | 1 | KED |
| \| | **Cu** | **65** | **49.050** | ug/L | 0.947 | 1 | 42 | 75517 | 1 | KED |
| \| | **Zn** | **66** | **50.197** | ug/L | 1.427 | 2 | 67 | 20804 | 1 | KED |
| \| | **Zn** | **67** | **49.599** | ug/L | 0.379 | 0 | 11 | 3512 | 1 | KED |
| ⌊ | **As** | **75** | **49.586** | ug/L | 0.877 | 1 | 6 | 10345 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 223742 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 54 | 17 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6419 | 1 | KED |
| \| | **Cd** | **111** | **49.647** | ug/L | 0.891 | 1 | 5 | 11551 | 1 | KED |
| ⌊ | **Cd** | **114** | **50.339** | ug/L | 0.757 | 1 | 2 | 28440 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 523439 | 4 | Standard |
| ⌊ | **Pb** | **208** | **51.000** | ug/L | 1.813 | 3 | 256 | 2216343 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 16:59:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32521 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3548973 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 448574 | 1 | Standard |
| | **Cr** | **52** | **0.014** | ug/L | 0.007 | 49 | 18596 | 17744 | 1 | Standard |
| | **Cr** | **53** | **0.001** | ug/L | 0.005 | 711 | 133 | 126 | 9 | Standard |
| | **Mn** | **55** | **-0.004** | ug/L | 0.002 | 49 | 801 | 656 | 6 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24308 | 1 | KED |
| | **Ni** | **60** | **0.013** | ug/L | 0.016 | 120 | 86 | 100 | 18 | KED |
| | **Ni** | **62** | **-0.004** | ug/L | 0.043 | 1205 | 16 | 15 | 49 | KED |
| | **Cu** | **63** | **-0.005** | ug/L | 0.003 | 56 | 67 | 50 | 20 | KED |
| | **Cu** | **65** | **-0.015** | ug/L | 0.006 | 37 | 42 | 18 | 47 | KED |
| | **Zn** | **66** | **0.015** | ug/L | 0.022 | 142 | 67 | 73 | 14 | KED |
| | **Zn** | **67** | **-0.043** | ug/L | 0.013 | 30 | 11 | 8 | 13 | KED |
| | **As** | **75** | **-0.001** | ug/L | 0.008 | 1396 | 6 | 6 | 25 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 219778 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 47 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6729 | 2 | KED |
| | **Cd** | **111** | **-0.014** | ug/L | 0.004 | 28 | 5 | 1 | 50 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.002 | 62 | 2 | 0 | 224 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 518077 | 4 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 54 | 256 | 219 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0187-BLK1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:06:08**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 39209 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3528331 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 448579 | 2 | Standard |
| | **Cr** | **52** | **0.275** | ug/L | 0.033 | 11 | 18596 | 22415 | 3 | Standard |
| | **Cr** | **53** | **0.248** | ug/L | 0.016 | 6 | 133 | 641 | 5 | Standard |
| | **Mn** | **55** | **0.311** | ug/L | 0.006 | 2 | 801 | 8803 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23782 | 0 | KED |
| | **Ni** | **60** | **-0.062** | ug/L | 0.012 | 19 | 86 | 18 | 68 | KED |
| | **Ni** | **62** | **-0.070** | ug/L | 0.000 | 0 | 16 | 3 | 0 | KED |
| | **Cu** | **63** | **0.012** | ug/L | 0.002 | 13 | 67 | 104 | 4 | KED |
| | **Cu** | **65** | **0.004** | ug/L | 0.004 | 82 | 42 | 48 | 12 | KED |
| | **Zn** | **66** | **0.394** | ug/L | 0.040 | 10 | 67 | 231 | 7 | KED |
| | **Zn** | **67** | **0.332** | ug/L | 0.146 | 44 | 11 | 34 | 30 | KED |
| | **As** | **75** | **0.005** | ug/L | 0.010 | 192 | 6 | 7 | 28 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 221360 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 42 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6672 | 1 | KED |
| | **Cd** | **111** | **-0.015** | ug/L | 0.004 | 28 | 5 | 1 | 69 | KED |
| | **Cd** | **114** | **0.002** | ug/L | 0.003 | 195 | 2 | 3 | 56 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 517458 | 3 | Standard |
| | **Pb** | **208** | **0.001** | ug/L | 0.000 | 30 | 256 | 269 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0187-BS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:10:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 42130 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3799089 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 469683 | 3 | Standard |
| | **Cr** | **52** | **25.810** | ug/L | 0.522 | 2 | 18596 | 501122 | 3 | Standard |
| | **Cr** | **53** | **25.728** | ug/L | 0.279 | 1 | 133 | 56291 | 4 | Standard |
| | **Mn** | **55** | **26.271** | ug/L | 0.102 | 0 | 801 | 712608 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23159 | 0 | KED |
| | **Ni** | **60** | **26.840** | ug/L | 0.383 | 1 | 86 | 27849 | 1 | KED |
| | **Ni** | **62** | **25.964** | ug/L | 0.743 | 2 | 16 | 4420 | 3 | KED |
| | **Cu** | **63** | **25.595** | ug/L | 0.865 | 3 | 67 | 78981 | 2 | KED |
| | **Cu** | **65** | **26.199** | ug/L | 0.371 | 1 | 42 | 39936 | 0 | KED |
| | **Zn** | **66** | **88.484** | ug/L | 1.498 | 1 | 67 | 36256 | 2 | KED |
| | **Zn** | **67** | **80.444** | ug/L | 0.941 | 1 | 11 | 5629 | 0 | KED |
| | **As** | **75** | **25.560** | ug/L | 0.154 | 0 | 6 | 5280 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 229560 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 53 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6571 | 3 | KED |
| | **Cd** | **111** | **25.362** | ug/L | 0.860 | 3 | 5 | 6040 | 1 | KED |
| | **Cd** | **114** | **25.591** | ug/L | 0.979 | 3 | 2 | 14792 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 547406 | 3 | Standard |
| | **Pb** | **208** | **26.145** | ug/L | 0.822 | 3 | 256 | 1188596 | 0 | Standard |

BLA0192

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: ~~BLA0197~~-BLK1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:14:54**

MB 1/9/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 41552 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3541733 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 442805 | 0 | Standard |
| | **Cr** | **52** | **0.112** | ug/L | 0.011 | 9 | 18596 | 19252 | 1 | Standard |
| | **Cr** | **53** | **0.064** | ug/L | 0.008 | 13 | 133 | 256 | 6 | Standard |
| | **Mn** | **55** | **0.255** | ug/L | 0.004 | 1 | 801 | 7246 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23525 | 0 | KED |
| | **Ni** | **60** | **-0.062** | ug/L | 0.007 | 12 | 86 | 18 | 41 | KED |
| | **Ni** | **62** | **-0.067** | ug/L | 0.028 | 41 | 16 | 4 | 107 | KED |
| | **Cu** | **63** | **0.020** | ug/L | 0.005 | 24 | 67 | 128 | 12 | KED |
| | **Cu** | **65** | **0.010** | ug/L | 0.008 | 80 | 42 | 55 | 21 | KED |
| | **Zn** | **66** | **0.354** | ug/L | 0.082 | 23 | 67 | 212 | 16 | KED |
| | **Zn** | **67** | **0.356** | ug/L | 0.207 | 58 | 11 | 36 | 39 | KED |
| | **As** | **75** | **0.014** | ug/L | 0.013 | 89 | 6 | 9 | 28 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 217530 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 43 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6417 | 0 | KED |
| | **Cd** | **111** | **-0.014** | ug/L | 0.004 | 30 | 5 | 1 | 50 | KED |
| | **Cd** | **114** | **0.001** | ug/L | 0.002 | 266 | 2 | 2 | 35 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 506188 | 4 | Standard |
| | **Pb** | **208** | **0.003** | ug/L | 0.000 | 14 | 256 | 370 | 7 | Standard |

BLA0192

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: ~~BLA0197~~-BS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:19:16**

MB 1/9/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 41327 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3591995 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 447825 | 2 | Standard |
| | **Cr** | **52** | **25.477** | ug/L | 0.581 | 2 | 18596 | 471780 | 1 | Standard |
| | **Cr** | **53** | **25.000** | ug/L | 0.317 | 1 | 133 | 52141 | 1 | Standard |
| | **Mn** | **55** | **25.902** | ug/L | 0.729 | 2 | 801 | 669814 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23216 | 1 | KED |
| | **Ni** | **60** | **25.895** | ug/L | 0.592 | 2 | 86 | 26933 | 1 | KED |
| | **Ni** | **62** | **25.597** | ug/L | 0.549 | 2 | 16 | 4367 | 0 | KED |
| | **Cu** | **63** | **25.953** | ug/L | 0.718 | 2 | 67 | 80280 | 1 | KED |
| | **Cu** | **65** | **26.341** | ug/L | 1.148 | 4 | 42 | 40236 | 2 | KED |
| | **Zn** | **66** | **84.556** | ug/L | 1.267 | 1 | 67 | 34729 | 1 | KED |
| | **Zn** | **67** | **77.096** | ug/L | 0.585 | 0 | 11 | 5409 | 2 | KED |
| | **As** | **75** | **25.243** | ug/L | 0.242 | 0 | 6 | 5228 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 218917 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 53 | 37 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6535 | 2 | KED |
| | **Cd** | **111** | **25.386** | ug/L | 0.620 | 2 | 5 | 6013 | 1 | KED |
| | **Cd** | **114** | **25.184** | ug/L | 0.843 | 3 | 2 | 14481 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 513669 | 5 | Standard |
| | **Pb** | **208** | **26.686** | ug/L | 1.146 | 4 | 256 | 1137609 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0066-01RE1**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:23:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 128320 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3899699 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 471371 | 1 | Standard |
| | **Cr** | **52** | **1.942** | ug/L | 0.077 | 3 | 18596 | 54862 | 3 | Standard |
| | **Cr** | **53** | **1.683** | ug/L | 0.014 | 0 | 133 | 3819 | 2 | Standard |
| | **Mn** | **55** | **4.635** | ug/L | 0.121 | 2 | 801 | 126852 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22635 | 0 | KED |
| | **Ni** | **60** | **1.911** | ug/L | 0.046 | 2 | 86 | 2012 | 2 | KED |
| | **Ni** | **62** | **1.892** | ug/L | 0.136 | 7 | 16 | 328 | 6 | KED |
| | **Cu** | **63** | **0.109** | ug/L | 0.007 | 6 | 67 | 389 | 4 | KED |
| | **Cu** | **65** | **0.096** | ug/L | 0.021 | 21 | 42 | 182 | 17 | KED |
| | **Zn** | **66** | **2.203** | ug/L | 0.080 | 3 | 67 | 942 | 3 | KED |
| | **Zn** | **67** | **1.778** | ug/L | 0.239 | 13 | 11 | 132 | 13 | KED |
| | **As** | **75** | **0.061** | ug/L | 0.013 | 21 | 6 | 18 | 14 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 228937 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 53 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6449 | 1 | KED |
| | **Cd** | **111** | **0.021** | ug/L | 0.015 | 68 | 5 | 10 | 35 | KED |
| | **Cd** | **114** | **0.026** | ug/L | 0.005 | 17 | 2 | 17 | 15 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 543167 | 2 | Standard |
| | **Pb** | **208** | **0.026** | ug/L | 0.003 | 10 | 256 | 1450 | 10 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0137-01**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:28:23**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 96191 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3946369 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 453601 | 2 | Standard |
| | **Cr** | **52** | **1.686** | ug/L | 0.011 | 0 | 18596 | 48165 | 2 | Standard |
| | **Cr** | **53** | **1.482** | ug/L | 0.026 | 1 | 133 | 3249 | 1 | Standard |
| | **Mn** | **55** | **13.578** | ug/L | 0.114 | 0 | 801 | 356016 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22388 | 1 | KED |
| | **Ni** | **60** | **3.108** | ug/L | 0.106 | 3 | 86 | 3187 | 2 | KED |
| | **Ni** | **62** | **2.909** | ug/L | 0.116 | 3 | 16 | 492 | 2 | KED |
| | **Cu** | **63** | **0.069** | ug/L | 0.006 | 9 | 67 | 269 | 8 | KED |
| | **Cu** | **65** | **0.058** | ug/L | 0.021 | 36 | 42 | 123 | 24 | KED |
| | **Zn** | **66** | **2.525** | ug/L | 0.109 | 4 | 67 | 1059 | 3 | KED |
| | **Zn** | **67** | **2.272** | ug/L | 0.159 | 6 | 11 | 163 | 5 | KED |
| | **As** | **75** | **0.071** | ug/L | 0.015 | 20 | 6 | 20 | 13 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 219523 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 66 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6311 | 1 | KED |
| | **Cd** | **111** | **-0.004** | ug/L | 0.010 | 258 | 5 | 4 | 58 | KED |
| | **Cd** | **114** | **0.020** | ug/L | 0.008 | 39 | 2 | 13 | 33 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 521367 | 4 | Standard |
| | **Pb** | **208** | **0.016** | ug/L | 0.001 | 8 | 256 | 921 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0116-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:35:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 42286 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 6769644 | 5 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 455103 | 2 | Standard |
| | **Cr** | **52** | **9.415** | ug/L | 0.110 | 1 | 18596 | 188397 | 1 | Standard |
| | **Cr** | **53** | **13.672** | ug/L | 0.254 | 1 | 133 | 29035 | 0 | Standard |
| | **Mn** | **55** | **2.705** | ug/L | 0.011 | 0 | 801 | 71786 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22687 | 1 | KED |
| | **Ni** | **60** | **1.130** | ug/L | 0.013 | 1 | 86 | 1225 | 1 | KED |
| | **Ni** | **62** | **1.199** | ug/L | 0.101 | 8 | 16 | 214 | 8 | KED |
| | **Cu** | **63** | **12.837** | ug/L | 0.290 | 2 | 67 | 38843 | 2 | KED |
| | **Cu** | **65** | **13.081** | ug/L | 0.273 | 2 | 42 | 19556 | 2 | KED |
| | **Zn** | **66** | **15.132** | ug/L | 0.450 | 2 | 67 | 6125 | 2 | KED |
| | **Zn** | **67** | **13.574** | ug/L | 0.531 | 3 | 11 | 939 | 4 | KED |
| | **As** | **75** | **0.177** | ug/L | 0.018 | 9 | 6 | 42 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 218368 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 53 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6402 | 2 | KED |
| | **Cd** | **111** | **0.077** | ug/L | 0.039 | 51 | 5 | 22 | 39 | KED |
| | **Cd** | **114** | **0.091** | ug/L | 0.011 | 12 | 2 | 53 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 525642 | 3 | Standard |
| | **Pb** | **208** | **0.223** | ug/L | 0.005 | 2 | 256 | 9982 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0199-43**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:40:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 66452 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3763365 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 611241 | 2 | Standard |
| | **Cr** | **52** | **16.933** | ug/L | 0.258 | 1 | 18596 | 435999 | 0 | Standard |
| | **Cr** | **53** | **17.179** | ug/L | 0.589 | 3 | 133 | 48939 | 1 | Standard |
| | **Mn** | **55** | **127.440** | ug/L | 2.565 | 2 | 801 | 4493412 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23695 | 0 | KED |
| | **Ni** | **60** | **16.170** | ug/L | 0.085 | 0 | 86 | 17200 | 0 | KED |
| | **Ni** | **62** | **16.034** | ug/L | 0.534 | 3 | 16 | 2798 | 2 | KED |
| | **Cu** | **63** | **27.746** | ug/L | 0.719 | 2 | 67 | 87600 | 1 | KED |
| | **Cu** | **65** | **28.337** | ug/L | 0.119 | 0 | 42 | 44195 | 0 | KED |
| | **Zn** | **66** | **73.163** | ug/L | 1.042 | 1 | 67 | 30679 | 0 | KED |
| | **Zn** | **67** | **69.432** | ug/L | 1.436 | 2 | 11 | 4974 | 3 | KED |
| | **As** | **75** | **6.161** | ug/L | 0.063 | 1 | 6 | 1307 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 479642 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 123 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6451 | 2 | KED |
| | **Cd** | **111** | **0.462** | ug/L | 0.073 | 15 | 5 | 113 | 16 | KED |
| | **Cd** | **114** | **0.505** | ug/L | 0.062 | 12 | 2 | 288 | 9 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 565155 | 2 | Standard |
| | **Pb** | **208** | **27.443** | ug/L | 0.865 | 3 | 256 | 1288329 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0199-44**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:45:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 69320 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3768320 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 617526 | 2 | Standard |
| | **Cr** | **52** | **18.193** | ug/L | 0.813 | 4 | 18596 | 471175 | 1 | Standard |
| | **Cr** | **53** | **18.077** | ug/L | 0.316 | 1 | 133 | 52029 | 1 | Standard |
| | **Mn** | **55** | **152.752** | ug/L | 4.505 | 2 | 801 | 5439600 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23382 | 2 | KED |
| | **Ni** | **60** | **16.185** | ug/L | 0.422 | 2 | 86 | 16982 | 0 | KED |
| | **Ni** | **62** | **15.897** | ug/L | 0.602 | 3 | 16 | 2737 | 2 | KED |
| | **Cu** | **63** | **31.055** | ug/L | 0.883 | 2 | 67 | 96720 | 1 | KED |
| | **Cu** | **65** | **30.788** | ug/L | 0.597 | 1 | 42 | 47367 | 0 | KED |
| | **Zn** | **66** | **82.110** | ug/L | 1.153 | 1 | 67 | 33964 | 0 | KED |
| | **Zn** | **67** | **79.507** | ug/L | 1.505 | 1 | 11 | 5617 | 2 | KED |
| | **As** | **75** | **7.629** | ug/L | 0.257 | 3 | 6 | 1595 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 495011 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 163 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6401 | 3 | KED |
| | **Cd** | **111** | **0.698** | ug/L | 0.078 | 11 | 5 | 166 | 8 | KED |
| | **Cd** | **114** | **0.684** | ug/L | 0.028 | 4 | 2 | 387 | 4 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 566643 | 2 | Standard |
| | **Pb** | **208** | **31.706** | ug/L | 0.515 | 1 | 256 | 1492807 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:49:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 34163 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3515432 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 450842 | 1 | Standard |
| | **Cr** | **52** | **-0.002** | ug/L | 0.023 | 920 | 18596 | 17537 | 0 | Standard |
| | **Cr** | **53** | **0.022** | ug/L | 0.005 | 22 | 133 | 173 | 4 | Standard |
| | **Mn** | **55** | **-0.006** | ug/L | 0.001 | 9 | 801 | 608 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23839 | 1 | KED |
| | **Ni** | **60** | **-0.068** | ug/L | 0.003 | 5 | 86 | 11 | 33 | KED |
| | **Ni** | **62** | **-0.081** | ug/L | 0.000 | 0 | 16 | 1 | | KED |
| | **Cu** | **63** | **-0.009** | ug/L | 0.002 | 25 | 67 | 38 | 17 | KED |
| | **Cu** | **65** | **-0.016** | ug/L | 0.005 | 29 | 42 | 16 | 46 | KED |
| | **Zn** | **66** | **-0.077** | ug/L | 0.015 | 19 | 67 | 33 | 18 | KED |
| | **Zn** | **67** | **-0.066** | ug/L | 0.042 | 62 | 11 | 6 | 45 | KED |
| | **As** | **75** | **0.003** | ug/L | 0.008 | 255 | 6 | 7 | 23 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 217262 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 62 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6522 | 1 | KED |
| | **Cd** | **111** | **-0.012** | ug/L | 0.009 | 75 | 5 | 2 | 98 | KED |
| | **Cd** | **114** | **0.005** | ug/L | 0.003 | 64 | 2 | 5 | 35 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 513292 | 4 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.001 | 258 | 256 | 253 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 17:54:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 34194 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3833938 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 446495 | 6 | Standard |
| | **Cr** | **52** | **51.567** | ug/L | 3.317 | 6 | 18596 | 932054 | 0 | Standard |
| | **Cr** | **53** | **51.414** | ug/L | 3.131 | 6 | 133 | 106540 | 1 | Standard |
| | **Mn** | **55** | **52.127** | ug/L | 3.076 | 5 | 801 | 1340471 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23571 | 0 | KED |
| | **Ni** | **60** | **50.219** | ug/L | 1.180 | 2 | 86 | 52961 | 1 | KED |
| | **Ni** | **62** | **48.372** | ug/L | 0.939 | 1 | 16 | 8366 | 1 | KED |
| | **Cu** | **63** | **48.438** | ug/L | 0.151 | 0 | 67 | 152102 | 0 | KED |
| | **Cu** | **65** | **49.305** | ug/L | 1.738 | 3 | 42 | 76453 | 2 | KED |
| | **Zn** | **66** | **49.398** | ug/L | 1.088 | 2 | 67 | 20626 | 1 | KED |
| | **Zn** | **67** | **48.694** | ug/L | 2.729 | 5 | 11 | 3472 | 4 | KED |
| | **As** | **75** | **49.088** | ug/L | 0.913 | 1 | 6 | 10316 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 223167 | 6 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 59 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6401 | 1 | KED |
| | **Cd** | **111** | **50.253** | ug/L | 0.858 | 1 | 5 | 11658 | 0 | KED |
| | **Cd** | **114** | **50.336** | ug/L | 1.378 | 2 | 2 | 28352 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 526560 | 6 | Standard |
| | **Pb** | **208** | **51.699** | ug/L | 3.626 | 7 | 256 | 2256037 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:01:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32578 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3603989 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 439943 | 1 | Standard |
| \| | **Cr** | **52** | **0.040** | ug/L | 0.020 | 49 | 18596 | 17864 | 2 | Standard |
| \| | **Cr** | **53** | **0.016** | ug/L | 0.006 | 34 | 133 | 156 | 8 | Standard |
| ⌊ | **Mn** | **55** | **-0.004** | ug/L | 0.001 | 21 | 801 | 649 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23232 | 0 | KED |
| \| | **Ni** | **60** | **0.001** | ug/L | 0.007 | 652 | 86 | 83 | 9 | KED |
| \| | **Ni** | **62** | **-0.021** | ug/L | 0.045 | 208 | 16 | 12 | 63 | KED |
| \| | **Cu** | **63** | **-0.004** | ug/L | 0.003 | 89 | 67 | 53 | 17 | KED |
| \| | **Cu** | **65** | **-0.004** | ug/L | 0.006 | 161 | 42 | 34 | 27 | KED |
| \| | **Zn** | **66** | **0.007** | ug/L | 0.006 | 91 | 67 | 66 | 2 | KED |
| \| | **Zn** | **67** | **0.036** | ug/L | 0.056 | 157 | 11 | 13 | 28 | KED |
| ⌊ | **As** | **75** | **-0.002** | ug/L | 0.007 | 298 | 6 | 5 | 24 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 221338 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 48 | 35 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6543 | 3 | KED |
| \| | **Cd** | **111** | **-0.015** | ug/L | 0.005 | 30 | 5 | 1 | 69 | KED |
| ⌊ | **Cd** | **114** | **-0.002** | ug/L | 0.002 | 82 | 2 | 1 | 90 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 508567 | 4 | Standard |
| ⌊ | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 12 | 256 | 212 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0157-BLK1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:07:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 39642 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3539808 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 451725 | 2 | Standard |
| | **Cr** | **52** | **0.044** | ug/L | 0.030 | 68 | 18596 | 18413 | 2 | Standard |
| | **Cr** | **53** | **0.040** | ug/L | 0.005 | 11 | 133 | 211 | 6 | Standard |
| | **Mn** | **55** | **0.253** | ug/L | 0.007 | 2 | 801 | 7340 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23246 | 1 | KED |
| | **Ni** | **60** | **-0.057** | ug/L | 0.003 | 5 | 86 | 22 | 14 | KED |
| | **Ni** | **62** | **-0.085** | ug/L | 0.006 | 7 | 16 | 1 | 86 | KED |
| | **Cu** | **63** | **0.009** | ug/L | 0.006 | 68 | 67 | 91 | 19 | KED |
| | **Cu** | **65** | **0.004** | ug/L | 0.007 | 167 | 42 | 46 | 22 | KED |
| | **Zn** | **66** | **0.356** | ug/L | 0.026 | 7 | 67 | 210 | 6 | KED |
| | **Zn** | **67** | **0.542** | ug/L | 0.120 | 22 | 11 | 48 | 17 | KED |
| | **As** | **75** | **0.006** | ug/L | 0.016 | 283 | 6 | 7 | 42 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 222484 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 52 | 27 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6683 | 5 | KED |
| | **Cd** | **111** | **-0.011** | ug/L | 0.005 | 42 | 5 | 2 | 43 | KED |
| | **Cd** | **114** | **0.005** | ug/L | 0.006 | 122 | 2 | 5 | 63 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 518735 | 4 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.001 | 783 | 256 | 249 | 10 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0157-BS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:11:32**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 41334 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3805467 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 454853 | 1 | Standard |
| | **Cr** | **52** | **25.874** | ug/L | 0.169 | 0 | 18596 | 486479 | 0 | Standard |
| | **Cr** | **53** | **25.719** | ug/L | 0.453 | 1 | 133 | 54478 | 0 | Standard |
| | **Mn** | **55** | **26.421** | ug/L | 0.669 | 2 | 801 | 693883 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23571 | 1 | KED |
| | **Ni** | **60** | **25.897** | ug/L | 0.541 | 2 | 86 | 27348 | 1 | KED |
| | **Ni** | **62** | **25.724** | ug/L | 1.192 | 4 | 16 | 4454 | 2 | KED |
| | **Cu** | **63** | **25.508** | ug/L | 0.759 | 2 | 67 | 80106 | 1 | KED |
| | **Cu** | **65** | **25.690** | ug/L | 1.346 | 5 | 42 | 39835 | 3 | KED |
| | **Zn** | **66** | **83.757** | ug/L | 1.000 | 1 | 67 | 34926 | 0 | KED |
| | **Zn** | **67** | **77.185** | ug/L | 2.084 | 2 | 11 | 5496 | 1 | KED |
| | **As** | **75** | **25.316** | ug/L | 0.740 | 2 | 6 | 5321 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 224136 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 53 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6641 | 2 | KED |
| | **Cd** | **111** | **25.310** | ug/L | 0.517 | 2 | 5 | 6093 | 0 | KED |
| | **Cd** | **114** | **25.441** | ug/L | 0.821 | 3 | 2 | 14868 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 529839 | 2 | Standard |
| | **Pb** | **208** | **26.424** | ug/L | 0.536 | 2 | 256 | 1163265 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0004-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:18:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 52120 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3717556 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 458766 | 2 | Standard |
| | **Cr** | **52** | **5.196** | ug/L | 0.082 | 1 | 18596 | 112821 | 1 | Standard |
| | **Cr** | **53** | **5.211** | ug/L | 0.044 | 0 | 133 | 11239 | 3 | Standard |
| | **Mn** | **55** | **50.704** | ug/L | 1.097 | 2 | 801 | 1342296 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 21598 | 1 | KED |
| | **Ni** | **60** | **0.420** | ug/L | 0.011 | 2 | 86 | 481 | 3 | KED |
| | **Ni** | **62** | **0.514** | ug/L | 0.098 | 19 | 16 | 95 | 16 | KED |
| | **Cu** | **63** | **6.687** | ug/L | 0.128 | 1 | 67 | 19289 | 0 | KED |
| | **Cu** | **65** | **6.865** | ug/L | 0.168 | 2 | 42 | 9788 | 2 | KED |
| | **Zn** | **66** | **2.268** | ug/L | 0.018 | 0 | 67 | 924 | 1 | KED |
| | **Zn** | **67** | **2.464** | ug/L | 0.429 | 17 | 11 | 170 | 17 | KED |
| | **As** | **75** | **0.075** | ug/L | 0.016 | 21 | 6 | 20 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 219630 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 49 | 30 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6088 | 2 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.003 | 164 | 5 | 4 | 12 | KED |
| | **Cd** | **114** | **-0.001** | ug/L | 0.004 | 253 | 2 | 1 | 125 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 514211 | 3 | Standard |
| | **Pb** | **208** | **0.007** | ug/L | 0.001 | 13 | 256 | 543 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0004-02**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:22:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | 13 | | ug/L | | | 34196 | 49679 | 0 | Standard |
| | Cl | 37 | | ug/L | | | 3578521 | 3628783 | 1 | Standard |
| > | Sc | 45 | | ug/L | | | 476701 | 449656 | 1 | Standard |
| | Cr | 52 | 5.723 | ug/L | 0.097 | 1 | 18596 | 120038 | 1 | Standard |
| | Cr | 53 | 5.631 | ug/L | 0.063 | 1 | 133 | 11890 | 0 | Standard |
| | Mn | 55 | 39.052 | ug/L | 0.281 | 0 | 801 | 1013747 | 1 | Standard |
| > | Ge | 72 | | ug/L | | | 24444 | 21432 | 1 | KED |
| | Ni | 60 | 0.419 | ug/L | 0.022 | 5 | 86 | 476 | 2 | KED |
| | Ni | 62 | 0.373 | ug/L | 0.007 | 1 | 16 | 73 | 3 | KED |
| | Cu | 63 | 6.740 | ug/L | 0.137 | 2 | 67 | 19299 | 3 | KED |
| | Cu | 65 | 6.888 | ug/L | 0.127 | 1 | 42 | 9743 | 1 | KED |
| | Zn | 66 | 2.619 | ug/L | 0.064 | 2 | 67 | 1050 | 1 | KED |
| | Zn | 67 | 2.686 | ug/L | 0.213 | 7 | 11 | 183 | 5 | KED |
| | As | 75 | 0.087 | ug/L | 0.030 | 34 | 6 | 22 | 25 | KED |
| | Y | 89 | | ug/L | | | 230853 | 220785 | 0 | Standard |
| | Kr | 83 | | ug/L | | | 65 | 53 | 21 | Standard |
| > | In-1 | 115 | | ug/L | | | 6387 | 6043 | 2 | KED |
| | Cd | 111 | -0.004 | ug/L | 0.008 | 180 | 5 | 3 | 43 | KED |
| | Cd | 114 | 0.009 | ug/L | 0.010 | 103 | 2 | 7 | 71 | KED |
| > | Tb | 159 | | ug/L | | | 540555 | 520913 | 3 | Standard |
| | Pb | 208 | 0.006 | ug/L | 0.000 | 5 | 256 | 500 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0004-03**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:27:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 48101 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3726634 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 473626 | 3 | Standard |
| | **Cr** | **52** | **3.205** | ug/L | 0.017 | 0 | 18596 | 78947 | 3 | Standard |
| | **Cr** | **53** | **3.220** | ug/L | 0.032 | 0 | 133 | 7217 | 2 | Standard |
| | **Mn** | **55** | **23.513** | ug/L | 0.521 | 2 | 801 | 643057 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 21959 | 1 | KED |
| | **Ni** | **60** | **0.282** | ug/L | 0.013 | 4 | 86 | 354 | 3 | KED |
| | **Ni** | **62** | **0.288** | ug/L | 0.115 | 39 | 16 | 60 | 28 | KED |
| | **Cu** | **63** | **4.808** | ug/L | 0.042 | 0 | 67 | 14118 | 1 | KED |
| | **Cu** | **65** | **4.893** | ug/L | 0.053 | 1 | 42 | 7103 | 1 | KED |
| | **Zn** | **66** | **1.526** | ug/L | 0.053 | 3 | 67 | 652 | 2 | KED |
| | **Zn** | **67** | **1.503** | ug/L | 0.053 | 3 | 11 | 109 | 3 | KED |
| | **As** | **75** | **0.057** | ug/L | 0.016 | 27 | 6 | 17 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 230023 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 63 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6063 | 0 | KED |
| | **Cd** | **111** | **-0.003** | ug/L | 0.014 | 439 | 5 | 4 | 74 | KED |
| | **Cd** | **114** | **0.003** | ug/L | 0.008 | 251 | 2 | 3 | 109 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 538690 | 5 | Standard |
| | **Pb** | **208** | **0.005** | ug/L | 0.000 | 4 | 256 | 490 | 6 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0004-04**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:31:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 45359 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3645273 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 456507 | 2 | Standard |
| | **Cr** | **52** | **10.658** | ug/L | 0.237 | 2 | 18596 | 211542 | 0 | Standard |
| | **Cr** | **53** | **10.722** | ug/L | 0.233 | 2 | 133 | 22865 | 0 | Standard |
| | **Mn** | **55** | **18.150** | ug/L | 0.368 | 2 | 801 | 478593 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23223 | 0 | KED |
| | **Ni** | **60** | **0.231** | ug/L | 0.033 | 14 | 86 | 321 | 10 | KED |
| | **Ni** | **62** | **0.288** | ug/L | 0.049 | 17 | 16 | 64 | 13 | KED |
| | **Cu** | **63** | **4.304** | ug/L | 0.056 | 1 | 67 | 13375 | 1 | KED |
| | **Cu** | **65** | **4.326** | ug/L | 0.052 | 1 | 42 | 6646 | 0 | KED |
| | **Zn** | **66** | **1.728** | ug/L | 0.105 | 6 | 67 | 772 | 5 | KED |
| | **Zn** | **67** | **1.558** | ug/L | 0.144 | 9 | 11 | 120 | 8 | KED |
| | **As** | **75** | **0.082** | ug/L | 0.020 | 23 | 6 | 23 | 17 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 219292 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 55 | 29 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6323 | 3 | KED |
| | **Cd** | **111** | **0.000** | ug/L | 0.017 | 83528 | 5 | 5 | 78 | KED |
| | **Cd** | **114** | **0.003** | ug/L | 0.008 | 286 | 2 | 3 | 114 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 531283 | 4 | Standard |
| | **Pb** | **208** | **0.015** | ug/L | 0.002 | 13 | 256 | 913 | 6 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0199-45**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:36:40**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 70058 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3637459 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 635528 | 1 | Standard |
| | **Cr** | **52** | **17.392** | ug/L | 0.227 | 1 | 18596 | 465010 | 1 | Standard |
| | **Cr** | **53** | **17.623** | ug/L | 0.483 | 2 | 133 | 52208 | 1 | Standard |
| | **Mn** | **55** | **160.671** | ug/L | 2.032 | 1 | 801 | 5890866 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23859 | 0 | KED |
| | **Ni** | **60** | **16.352** | ug/L | 0.237 | 1 | 86 | 17514 | 1 | KED |
| | **Ni** | **62** | **16.461** | ug/L | 0.326 | 1 | 16 | 2892 | 2 | KED |
| | **Cu** | **63** | **33.327** | ug/L | 0.431 | 1 | 67 | 105954 | 1 | KED |
| | **Cu** | **65** | **33.695** | ug/L | 0.413 | 1 | 42 | 52909 | 1 | KED |
| | **Zn** | **66** | **86.654** | ug/L | 0.617 | 0 | 67 | 36579 | 0 | KED |
| | **Zn** | **67** | **83.844** | ug/L | 1.749 | 2 | 11 | 6045 | 1 | KED |
| | **As** | **75** | **8.322** | ug/L | 0.033 | 0 | 6 | 1775 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 521221 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 161 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6607 | 1 | KED |
| | **Cd** | **111** | **0.659** | ug/L | 0.055 | 8 | 5 | 162 | 7 | KED |
| | **Cd** | **114** | **0.635** | ug/L | 0.046 | 7 | 2 | 371 | 7 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 564800 | 3 | Standard |
| | **Pb** | **208** | **34.919** | ug/L | 1.034 | 2 | 256 | 1638220 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0199-46**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:41:03**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 59212 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3584051 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 515810 | 1 | Standard |
| | **Cr** | **52** | **7.975** | ug/L | 0.135 | 1 | 18596 | 183951 | 1 | Standard |
| | **Cr** | **53** | **8.019** | ug/L | 0.009 | 0 | 133 | 19366 | 1 | Standard |
| | **Mn** | **55** | **95.320** | ug/L | 1.296 | 1 | 801 | 2836800 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24090 | 2 | KED |
| | **Ni** | **60** | **7.584** | ug/L | 0.251 | 3 | 86 | 8243 | 1 | KED |
| | **Ni** | **62** | **7.343** | ug/L | 0.132 | 1 | 16 | 1311 | 1 | KED |
| | **Cu** | **63** | **8.569** | ug/L | 0.255 | 2 | 67 | 27547 | 1 | KED |
| | **Cu** | **65** | **8.679** | ug/L | 0.320 | 3 | 42 | 13786 | 2 | KED |
| | **Zn** | **66** | **21.916** | ug/L | 0.540 | 2 | 67 | 9389 | 2 | KED |
| | **Zn** | **67** | **21.562** | ug/L | 0.469 | 2 | 11 | 1578 | 4 | KED |
| | **As** | **75** | **1.961** | ug/L | 0.094 | 4 | 6 | 427 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 373430 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 94 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6941 | 1 | KED |
| | **Cd** | **111** | **0.021** | ug/L | 0.009 | 41 | 5 | 10 | 20 | KED |
| | **Cd** | **114** | **0.017** | ug/L | 0.002 | 11 | 2 | 13 | 8 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 549187 | 3 | Standard |
| | **Pb** | **208** | **1.732** | ug/L | 0.047 | 2 | 256 | 79268 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0199-47**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:45:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 63904 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3613111 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 550867 | 2 | Standard |
| | **Cr** | **52** | **10.244** | ug/L | 0.277 | 2 | 18596 | 246160 | 0 | Standard |
| | **Cr** | **53** | **10.394** | ug/L | 0.194 | 1 | 133 | 26755 | 1 | Standard |
| | **Mn** | **55** | **120.380** | ug/L | 2.215 | 1 | 801 | 3825738 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23807 | 1 | KED |
| | **Ni** | **60** | **10.450** | ug/L | 0.390 | 3 | 86 | 11195 | 3 | KED |
| | **Ni** | **62** | **10.383** | ug/L | 0.366 | 3 | 16 | 1826 | 2 | KED |
| | **Cu** | **63** | **14.395** | ug/L | 0.288 | 1 | 67 | 45696 | 1 | KED |
| | **Cu** | **65** | **14.764** | ug/L | 0.348 | 2 | 42 | 23152 | 2 | KED |
| | **Zn** | **66** | **31.439** | ug/L | 0.047 | 0 | 67 | 13283 | 1 | KED |
| | **Zn** | **67** | **32.124** | ug/L | 1.023 | 3 | 11 | 2317 | 1 | KED |
| | **As** | **75** | **3.101** | ug/L | 0.137 | 4 | 6 | 664 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 436727 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 113 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6507 | 3 | KED |
| | **Cd** | **111** | **0.060** | ug/L | 0.014 | 23 | 5 | 19 | 20 | KED |
| | **Cd** | **114** | **0.066** | ug/L | 0.015 | 23 | 2 | 39 | 19 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 553912 | 2 | Standard |
| | **Pb** | **208** | **3.949** | ug/L | 0.116 | 2 | 256 | 181927 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:49:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 34318 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3409550 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 432607 | 4 | Standard |
| | **Cr** | **52** | **0.009** | ug/L | 0.018 | 193 | 18596 | 17031 | 3 | Standard |
| | **Cr** | **53** | **-0.008** | ug/L | 0.005 | 58 | 133 | 105 | 12 | Standard |
| | **Mn** | **55** | **-0.005** | ug/L | 0.002 | 37 | 801 | 601 | 11 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23146 | 2 | KED |
| | **Ni** | **60** | **-0.072** | ug/L | 0.003 | 3 | 86 | 6 | 41 | KED |
| | **Ni** | **62** | **-0.055** | ug/L | 0.006 | 11 | 16 | 6 | 17 | KED |
| | **Cu** | **63** | **-0.009** | ug/L | 0.004 | 49 | 67 | 38 | 36 | KED |
| | **Cu** | **65** | **-0.010** | ug/L | 0.005 | 50 | 42 | 25 | 31 | KED |
| | **Zn** | **66** | **-0.060** | ug/L | 0.005 | 7 | 67 | 39 | 5 | KED |
| | **Zn** | **67** | **-0.056** | ug/L | 0.055 | 99 | 11 | 6 | 56 | KED |
| | **As** | **75** | **-0.001** | ug/L | 0.002 | 277 | 6 | 6 | 7 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 214375 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 47 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6502 | 0 | KED |
| | **Cd** | **111** | **-0.014** | ug/L | 0.004 | 29 | 5 | 1 | 50 | KED |
| | **Cd** | **114** | **-0.000** | ug/L | 0.002 | 3546 | 2 | 2 | 51 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 506379 | 4 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.001 | 58 | 256 | 203 | 13 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 18:54:12**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32517 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3662022 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 476701 | 446496 | 1 | Standard |
| \| | **Cr** | **52** | **49.851** | ug/L | 0.660 | 1 | 18596 | 904026 | 2 | Standard |
| \| | **Cr** | **53** | **50.064** | ug/L | 0.356 | 0 | 133 | 103994 | 0 | Standard |
| ⌊ | **Mn** | **55** | **50.804** | ug/L | 0.221 | 0 | 801 | 1309319 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 24444 | 23908 | 1 | KED |
| \| | **Ni** | **60** | **49.752** | ug/L | 0.225 | 0 | 86 | 53223 | 0 | KED |
| \| | **Ni** | **62** | **48.525** | ug/L | 0.989 | 2 | 16 | 8513 | 0 | KED |
| \| | **Cu** | **63** | **49.312** | ug/L | 0.891 | 1 | 67 | 157066 | 2 | KED |
| \| | **Cu** | **65** | **49.737** | ug/L | 0.837 | 1 | 42 | 78237 | 1 | KED |
| \| | **Zn** | **66** | **49.992** | ug/L | 0.544 | 1 | 67 | 21175 | 2 | KED |
| \| | **Zn** | **67** | **48.552** | ug/L | 1.196 | 2 | 11 | 3512 | 3 | KED |
| ⌊ | **As** | **75** | **49.436** | ug/L | 1.091 | 2 | 6 | 10538 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 224268 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 50 | 44 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6387 | 6358 | 2 | KED |
| \| | **Cd** | **111** | **51.283** | ug/L | 1.073 | 2 | 5 | 11817 | 2 | KED |
| ⌊ | **Cd** | **114** | **51.173** | ug/L | 1.494 | 2 | 2 | 28630 | 2 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 540555 | 530844 | 4 | Standard |
| ⌊ | **Pb** | **208** | **50.179** | ug/L | 1.775 | 3 | 256 | 2211516 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:01:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 33265 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3460889 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 453529 | 3 | Standard |
| | **Cr** | **52** | **-0.014** | ug/L | 0.017 | 118 | 18596 | 17427 | 2 | Standard |
| | **Cr** | **53** | **-0.006** | ug/L | 0.004 | 61 | 133 | 114 | 9 | Standard |
| | **Mn** | **55** | **-0.003** | ug/L | 0.000 | 18 | 801 | 695 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23194 | 1 | KED |
| | **Ni** | **60** | **-0.000** | ug/L | 0.010 | 10709 | 86 | 81 | 14 | KED |
| | **Ni** | **62** | **0.012** | ug/L | 0.023 | 183 | 16 | 17 | 22 | KED |
| | **Cu** | **63** | **-0.000** | ug/L | 0.004 | 3024 | 67 | 64 | 20 | KED |
| | **Cu** | **65** | **-0.006** | ug/L | 0.006 | 101 | 42 | 31 | 27 | KED |
| | **Zn** | **66** | **0.013** | ug/L | 0.011 | 83 | 67 | 69 | 6 | KED |
| | **Zn** | **67** | **-0.010** | ug/L | 0.014 | 145 | 11 | 10 | 10 | KED |
| | **As** | **75** | **0.004** | ug/L | 0.008 | 200 | 6 | 7 | 23 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 220971 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 54 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6714 | 0 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.016 | 631 | 5 | 4 | 80 | KED |
| | **Cd** | **114** | **0.002** | ug/L | 0.006 | 260 | 2 | 3 | 87 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 520970 | 4 | Standard |
| | **Pb** | **208** | **-0.000** | ug/L | 0.000 | 221 | 256 | 240 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0157-BLK1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:06:45**

DEL

WRONG SAMPLE

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 16821 | 75 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 1790505 | 63 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 752041 | 100 | Standard |
| | **Cr** | **52** | **1.900** | ug/L | 4.611 | 242 | 18596 | 6857 | 82 | Standard |
| | **Cr** | **53** | **0.768** | ug/L | 1.396 | 181 | 133 | 86 | 42 | Standard |
| | **Mn** | **55** | **0.137** | ug/L | 0.273 | 198 | 801 | 428 | 77 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 3065 | 151 | KED |
| | **Ni** | **60** | **-0.074** | ug/L | 0.009 | 11 | 86 | 1 | 173 | KED |
| | **Ni** | **62** | **1.496** | ug/L | 1.898 | 126 | 16 | 5 | 21 | KED |
| | **Cu** | **63** | **-0.017** | ug/L | 0.006 | 33 | 67 | 3 | 173 | KED |
| | **Cu** | **65** | **0.105** | ug/L | 0.133 | 126 | 42 | 5 | 43 | KED |
| | **Zn** | **66** | **0.498** | ug/L | 0.792 | 158 | 67 | 4 | 24 | KED |
| | **Zn** | **67** | **0.924** | ug/L | 1.679 | 181 | 11 | 2 | 114 | KED |
| | **As** | **75** | **0.663** | ug/L | 0.755 | 113 | 6 | 3 | 37 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 394957 | 96 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 22 | 28 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 16359 | 33 | KED |
| | **Cd** | **111** | **-0.014** | ug/L | 0.003 | 21 | 5 | 4 | 61 | KED |
| | **Cd** | **114** | **-0.000** | ug/L | 0.001 | 238 | 2 | 5 | 35 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 963931 | 94 | Standard |
| | **Pb** | **208** | **-0.005** | ug/L | 0.001 | 16 | 256 | 102 | 87 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0194-BLK1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:12:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 41079 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3520747 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 464742 | 3 | Standard |
| | **Cr** | **52** | **0.201** | ug/L | 0.041 | 20 | 18596 | 21837 | 2 | Standard |
| | **Cr** | **53** | **0.167** | ug/L | 0.023 | 13 | 133 | 491 | 12 | Standard |
| | **Mn** | **55** | **0.237** | ug/L | 0.001 | 0 | 801 | 7134 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 25501 | 3 | KED |
| | **Ni** | **60** | **-0.062** | ug/L | 0.004 | 7 | 86 | 19 | 30 | KED |
| | **Ni** | **62** | **-0.044** | ug/L | 0.023 | 52 | 16 | 8 | 44 | KED |
| | **Cu** | **63** | **0.016** | ug/L | 0.002 | 9 | 67 | 126 | 4 | KED |
| | **Cu** | **65** | **0.016** | ug/L | 0.009 | 54 | 42 | 71 | 24 | KED |
| | **Zn** | **66** | **0.268** | ug/L | 0.062 | 23 | 67 | 190 | 11 | KED |
| | **Zn** | **67** | **0.152** | ug/L | 0.131 | 86 | 11 | 23 | 41 | KED |
| | **As** | **75** | **0.005** | ug/L | 0.016 | 298 | 6 | 8 | 41 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 227722 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 51 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6664 | 1 | KED |
| | **Cd** | **111** | **-0.013** | ug/L | 0.002 | 17 | 5 | 2 | 24 | KED |
| | **Cd** | **114** | **0.003** | ug/L | 0.005 | 206 | 2 | 3 | 78 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 530064 | 5 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 50 | 256 | 213 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0194-BS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:16:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 39904 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3458447 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 438870 | 1 | Standard |
| | **Cr** | **52** | **25.837** | ug/L | 0.294 | 1 | 18596 | 468710 | 0 | Standard |
| | **Cr** | **53** | **25.575** | ug/L | 0.569 | 2 | 133 | 52273 | 1 | Standard |
| | **Mn** | **55** | **26.545** | ug/L | 0.560 | 2 | 801 | 672686 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23248 | 1 | KED |
| | **Ni** | **60** | **25.740** | ug/L | 0.545 | 2 | 86 | 26816 | 2 | KED |
| | **Ni** | **62** | **25.194** | ug/L | 0.463 | 1 | 16 | 4306 | 2 | KED |
| | **Cu** | **63** | **25.339** | ug/L | 0.372 | 1 | 67 | 78501 | 0 | KED |
| | **Cu** | **65** | **25.260** | ug/L | 0.417 | 1 | 42 | 38652 | 0 | KED |
| | **Zn** | **66** | **83.867** | ug/L | 0.715 | 0 | 67 | 34497 | 1 | KED |
| | **Zn** | **67** | **76.190** | ug/L | 2.598 | 3 | 11 | 5352 | 2 | KED |
| | **As** | **75** | **25.305** | ug/L | 0.503 | 1 | 6 | 5247 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 217213 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 52 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6373 | 1 | KED |
| | **Cd** | **111** | **25.446** | ug/L | 0.445 | 1 | 5 | 5879 | 1 | KED |
| | **Cd** | **114** | **25.308** | ug/L | 0.126 | 0 | 2 | 14197 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 512477 | 3 | Standard |
| | **Pb** | **208** | **26.331** | ug/L | 1.081 | 4 | 256 | 1120439 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-08**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:21:11**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 60244 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3656693 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 594488 | 1 | Standard |
| | **Cr** | **52** | **17.337** | ug/L | 0.394 | 2 | 18596 | 433600 | 0 | Standard |
| | **Cr** | **53** | **17.472** | ug/L | 0.262 | 1 | 133 | 48424 | 0 | Standard |
| | **Mn** | **55** | **134.485** | ug/L | 2.769 | 2 | 801 | 4612397 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23792 | 1 | KED |
| | **Ni** | **60** | **13.835** | ug/L | 0.453 | 3 | 86 | 14785 | 2 | KED |
| | **Ni** | **62** | **14.007** | ug/L | 0.205 | 1 | 16 | 2457 | 2 | KED |
| | **Cu** | **63** | **38.392** | ug/L | 0.222 | 0 | 67 | 121698 | 1 | KED |
| | **Cu** | **65** | **38.461** | ug/L | 0.833 | 2 | 42 | 60204 | 0 | KED |
| | **Zn** | **66** | **86.178** | ug/L | 0.125 | 0 | 67 | 36275 | 1 | KED |
| | **Zn** | **67** | **80.688** | ug/L | 1.246 | 1 | 11 | 5802 | 2 | KED |
| | **As** | **75** | **10.154** | ug/L | 0.096 | 0 | 6 | 2159 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 460643 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 139 | 27 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6546 | 3 | KED |
| | **Cd** | **111** | **0.721** | ug/L | 0.068 | 9 | 5 | 175 | 6 | KED |
| | **Cd** | **114** | **0.718** | ug/L | 0.013 | 1 | 2 | 416 | 4 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 548464 | 2 | Standard |
| | **Pb** | **208** | **35.527** | ug/L | 0.786 | 2 | 256 | 1618886 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-09**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:25:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 56919 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3556256 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 601764 | 2 | Standard |
| | **Cr** | **52** | **16.599** | ug/L | 0.229 | 1 | 18596 | 421249 | 1 | Standard |
| | **Cr** | **53** | **16.552** | ug/L | 0.285 | 1 | 133 | 46446 | 2 | Standard |
| | **Mn** | **55** | **133.471** | ug/L | 2.197 | 1 | 801 | 4633196 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22860 | 0 | KED |
| | **Ni** | **60** | **13.374** | ug/L | 0.223 | 1 | 86 | 13738 | 1 | KED |
| | **Ni** | **62** | **13.345** | ug/L | 0.677 | 5 | 16 | 2249 | 4 | KED |
| | **Cu** | **63** | **34.735** | ug/L | 0.513 | 1 | 67 | 105798 | 1 | KED |
| | **Cu** | **65** | **35.323** | ug/L | 0.943 | 2 | 42 | 53134 | 2 | KED |
| | **Zn** | **66** | **86.650** | ug/L | 0.283 | 0 | 67 | 35045 | 0 | KED |
| | **Zn** | **67** | **82.066** | ug/L | 1.598 | 1 | 11 | 5669 | 1 | KED |
| | **As** | **75** | **10.165** | ug/L | 0.128 | 1 | 6 | 2076 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 478052 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 148 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6232 | 1 | KED |
| | **Cd** | **111** | **0.488** | ug/L | 0.053 | 10 | 5 | 115 | 10 | KED |
| | **Cd** | **114** | **0.490** | ug/L | 0.075 | 15 | 2 | 270 | 14 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 549101 | 3 | Standard |
| | **Pb** | **208** | **38.274** | ug/L | 1.023 | 2 | 256 | 1745600 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-10**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:29:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 63292 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3578320 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 623910 | 2 | Standard |
| | **Cr** | **52** | **14.592** | ug/L | 0.162 | 1 | 18596 | 386910 | 2 | Standard |
| | **Cr** | **53** | **14.748** | ug/L | 0.305 | 2 | 133 | 42917 | 0 | Standard |
| | **Mn** | **55** | **138.686** | ug/L | 2.155 | 1 | 801 | 4991891 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23056 | 0 | KED |
| | **Ni** | **60** | **13.735** | ug/L | 0.256 | 1 | 86 | 14228 | 1 | KED |
| | **Ni** | **62** | **13.935** | ug/L | 0.442 | 3 | 16 | 2369 | 3 | KED |
| | **Cu** | **63** | **36.729** | ug/L | 0.276 | 0 | 67 | 112834 | 0 | KED |
| | **Cu** | **65** | **36.835** | ug/L | 1.267 | 3 | 42 | 55888 | 3 | KED |
| | **Zn** | **66** | **87.180** | ug/L | 2.546 | 2 | 67 | 35563 | 3 | KED |
| | **Zn** | **67** | **82.657** | ug/L | 2.237 | 2 | 11 | 5759 | 2 | KED |
| | **As** | **75** | **9.091** | ug/L | 0.111 | 1 | 6 | 1874 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 499088 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 149 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6372 | 1 | KED |
| | **Cd** | **111** | **0.520** | ug/L | 0.032 | 6 | 5 | 125 | 6 | KED |
| | **Cd** | **114** | **0.490** | ug/L | 0.020 | 4 | 2 | 276 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 554006 | 3 | Standard |
| | **Pb** | **208** | **33.375** | ug/L | 1.324 | 3 | 256 | 1535253 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-11**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:34:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 59050 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3640863 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 618718 | 2 | Standard |
| | **Cr** | **52** | **15.400** | ug/L | 0.311 | 2 | 18596 | 403518 | 1 | Standard |
| | **Cr** | **53** | **15.761** | ug/L | 0.457 | 2 | 133 | 45465 | 1 | Standard |
| | **Mn** | **55** | **139.850** | ug/L | 4.418 | 3 | 801 | 4990014 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23532 | 1 | KED |
| | **Ni** | **60** | **13.510** | ug/L | 0.180 | 1 | 86 | 14285 | 1 | KED |
| | **Ni** | **62** | **13.871** | ug/L | 0.389 | 2 | 16 | 2407 | 3 | KED |
| | **Cu** | **63** | **34.436** | ug/L | 0.668 | 1 | 67 | 107959 | 1 | KED |
| | **Cu** | **65** | **34.980** | ug/L | 0.480 | 1 | 42 | 54164 | 0 | KED |
| | **Zn** | **66** | **83.494** | ug/L | 1.475 | 1 | 67 | 34760 | 1 | KED |
| | **Zn** | **67** | **76.965** | ug/L | 1.599 | 2 | 11 | 5473 | 1 | KED |
| | **As** | **75** | **8.742** | ug/L | 0.335 | 3 | 6 | 1839 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 507741 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 184 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6429 | 0 | KED |
| | **Cd** | **111** | **0.432** | ug/L | 0.012 | 2 | 5 | 105 | 2 | KED |
| | **Cd** | **114** | **0.447** | ug/L | 0.038 | 8 | 2 | 255 | 8 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 558215 | 3 | Standard |
| | **Pb** | **208** | **35.267** | ug/L | 1.067 | 3 | 256 | 1634976 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-12**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:38:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 56543 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3632245 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 587014 | 2 | Standard |
| | **Cr** | **52** | **16.797** | ug/L | 0.373 | 2 | 18596 | 415513 | 0 | Standard |
| | **Cr** | **53** | **16.881** | ug/L | 0.045 | 0 | 133 | 46213 | 2 | Standard |
| | **Mn** | **55** | **130.264** | ug/L | 1.249 | 0 | 801 | 4411714 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23738 | 2 | KED |
| | **Ni** | **60** | **14.560** | ug/L | 0.307 | 2 | 86 | 15522 | 2 | KED |
| | **Ni** | **62** | **14.274** | ug/L | 0.524 | 3 | 16 | 2497 | 3 | KED |
| | **Cu** | **63** | **30.243** | ug/L | 0.104 | 0 | 67 | 95660 | 1 | KED |
| | **Cu** | **65** | **31.315** | ug/L | 0.401 | 1 | 42 | 48915 | 1 | KED |
| | **Zn** | **66** | **82.033** | ug/L | 0.978 | 1 | 67 | 34451 | 1 | KED |
| | **Zn** | **67** | **76.450** | ug/L | 3.827 | 5 | 11 | 5482 | 3 | KED |
| | **As** | **75** | **10.489** | ug/L | 0.043 | 0 | 6 | 2225 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 461535 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 128 | 0 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6654 | 2 | KED |
| | **Cd** | **111** | **1.720** | ug/L | 0.065 | 3 | 5 | 419 | 2 | KED |
| | **Cd** | **114** | **1.865** | ug/L | 0.057 | 3 | 2 | 1094 | 4 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 554053 | 3 | Standard |
| | **Pb** | **208** | **36.639** | ug/L | 1.103 | 3 | 256 | 1685881 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-13**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:43:05**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 65154 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3626843 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 629046 | 1 | Standard |
| | **Cr** | **52** | **20.117** | ug/L | 0.178 | 0 | 18596 | 528531 | 0 | Standard |
| | **Cr** | **53** | **20.235** | ug/L | 0.204 | 1 | 133 | 59321 | 0 | Standard |
| | **Mn** | **55** | **142.259** | ug/L | 0.858 | 0 | 801 | 5163724 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23518 | 1 | KED |
| | **Ni** | **60** | **13.818** | ug/L | 0.137 | 0 | 86 | 14599 | 0 | KED |
| | **Ni** | **62** | **14.464** | ug/L | 0.101 | 0 | 16 | 2507 | 1 | KED |
| | **Cu** | **63** | **35.520** | ug/L | 0.472 | 1 | 67 | 111290 | 0 | KED |
| | **Cu** | **65** | **35.309** | ug/L | 0.310 | 0 | 42 | 54653 | 2 | KED |
| | **Zn** | **66** | **122.246** | ug/L | 2.120 | 1 | 67 | 50841 | 2 | KED |
| | **Zn** | **67** | **114.573** | ug/L | 2.982 | 2 | 11 | 8136 | 1 | KED |
| | **As** | **75** | **16.031** | ug/L | 0.085 | 0 | 6 | 3366 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 503262 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 146 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6335 | 1 | KED |
| | **Cd** | **111** | **0.538** | ug/L | 0.042 | 7 | 5 | 128 | 7 | KED |
| | **Cd** | **114** | **0.500** | ug/L | 0.073 | 14 | 2 | 281 | 15 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 577652 | 2 | Standard |
| | **Pb** | **208** | **24.104** | ug/L | 0.455 | 1 | 256 | 1157040 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-14**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:47:22**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 64618 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3633882 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 632674 | 2 | Standard |
| | **Cr** | **52** | **16.277** | ug/L | 0.479 | 2 | 18596 | 434662 | 0 | Standard |
| | **Cr** | **53** | **16.211** | ug/L | 0.494 | 3 | 133 | 47818 | 1 | Standard |
| | **Mn** | **55** | **138.679** | ug/L | 2.152 | 1 | 801 | 5061415 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 24375 | 2 | KED |
| | **Ni** | **60** | **14.954** | ug/L | 0.656 | 4 | 86 | 16358 | 2 | KED |
| | **Ni** | **62** | **14.942** | ug/L | 1.029 | 6 | 16 | 2682 | 5 | KED |
| | **Cu** | **63** | **26.292** | ug/L | 0.156 | 0 | 67 | 85399 | 1 | KED |
| | **Cu** | **65** | **26.647** | ug/L | 0.260 | 0 | 42 | 42747 | 1 | KED |
| | **Zn** | **66** | **138.610** | ug/L | 2.611 | 1 | 67 | 59718 | 1 | KED |
| | **Zn** | **67** | **127.419** | ug/L | 2.032 | 1 | 11 | 9377 | 0 | KED |
| | **As** | **75** | **17.583** | ug/L | 0.054 | 0 | 6 | 3825 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 521900 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 155 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6306 | 2 | KED |
| | **Cd** | **111** | **0.325** | ug/L | 0.047 | 14 | 5 | 79 | 14 | KED |
| | **Cd** | **114** | **0.332** | ug/L | 0.049 | 14 | 2 | 186 | 14 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 576562 | 3 | Standard |
| | **Pb** | **208** | **12.845** | ug/L | 0.398 | 3 | 256 | 615287 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 19:54:29**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32638 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3701223 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 444103 | 3 | Standard |
| | **Cr** | **52** | **49.924** | ug/L | 1.716 | 3 | 18596 | 899713 | 1 | Standard |
| | **Cr** | **53** | **49.732** | ug/L | 1.785 | 3 | 133 | 102672 | 1 | Standard |
| | **Mn** | **55** | **50.971** | ug/L | 1.393 | 2 | 801 | 1305748 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 23058 | 2 | KED |
| | **Ni** | **60** | **51.823** | ug/L | 1.036 | 1 | 86 | 53450 | 1 | KED |
| | **Ni** | **62** | **49.941** | ug/L | 1.151 | 2 | 16 | 8447 | 1 | KED |
| | **Cu** | **63** | **49.863** | ug/L | 0.950 | 1 | 67 | 153141 | 2 | KED |
| | **Cu** | **65** | **51.087** | ug/L | 0.316 | 0 | 42 | 77512 | 3 | KED |
| | **Zn** | **66** | **51.632** | ug/L | 1.628 | 3 | 67 | 21081 | 2 | KED |
| | **Zn** | **67** | **50.378** | ug/L | 2.106 | 4 | 11 | 3512 | 2 | KED |
| | **As** | **75** | **50.278** | ug/L | 1.045 | 2 | 6 | 10333 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 218382 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 62 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6314 | 2 | KED |
| | **Cd** | **111** | **48.776** | ug/L | 0.388 | 0 | 5 | 11161 | 1 | KED |
| | **Cd** | **114** | **49.344** | ug/L | 1.214 | 2 | 2 | 27415 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 525081 | 3 | Standard |
| | **Pb** | **208** | **49.848** | ug/L | 1.346 | 2 | 256 | 2174207 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:01:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 34196 | 32926 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3578521 | 3501742 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 476701 | 432263 | 1 | Standard |
| | **Cr** | **52** | **0.012** | ug/L | 0.020 | 163 | 18596 | 17078 | 2 | Standard |
| | **Cr** | **53** | **-0.003** | ug/L | 0.006 | 166 | 133 | 113 | 9 | Standard |
| | **Mn** | **55** | **-0.001** | ug/L | 0.002 | 200 | 801 | 704 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 24444 | 22126 | 3 | KED |
| | **Ni** | **60** | **0.004** | ug/L | 0.002 | 42 | 86 | 82 | 1 | KED |
| | **Ni** | **62** | **0.025** | ug/L | 0.004 | 15 | 16 | 19 | 0 | KED |
| | **Cu** | **63** | **-0.003** | ug/L | 0.001 | 44 | 67 | 52 | 11 | KED |
| | **Cu** | **65** | **-0.009** | ug/L | 0.006 | 62 | 42 | 25 | 35 | KED |
| | **Zn** | **66** | **0.052** | ug/L | 0.009 | 17 | 67 | 81 | 2 | KED |
| | **Zn** | **67** | **0.008** | ug/L | 0.049 | 623 | 11 | 10 | 26 | KED |
| | **As** | **75** | **0.007** | ug/L | 0.008 | 111 | 6 | 7 | 20 | KED |
| | **Y** | **89** | | ug/L | | | 230853 | 214650 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 65 | 48 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6387 | 6124 | 1 | KED |
| | **Cd** | **111** | **-0.013** | ug/L | 0.007 | 55 | 5 | 1 | 86 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.004 | 189 | 2 | 1 | 205 | KED |
| > | **Tb** | **159** | | ug/L | | | 540555 | 503661 | 3 | Standard |
| | **Pb** | **208** | **0.001** | ug/L | 0.001 | 185 | 256 | 267 | 17 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:09:08**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | | 28744 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | | 3416101 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | | 429622 | 3 | Standard |
| | **Cr** | **52** | | ug/L | | | | 16425 | 4 | Standard |
| | **Cr** | **53** | | ug/L | | | | 102 | 7 | Standard |
| | **Mn** | **55** | | ug/L | | | | 567 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | | 22652 | 1 | KED |
| | **Ni** | **60** | | ug/L | | | | 20 | 14 | KED |
| | **Ni** | **62** | | ug/L | | | | 7 | 43 | KED |
| | **Cu** | **63** | | ug/L | | | | 30 | 27 | KED |
| | **Cu** | **65** | | ug/L | | | | 24 | 16 | KED |
| | **Zn** | **66** | | ug/L | | | | 40 | 9 | KED |
| | **Zn** | **67** | | ug/L | | | | 3 | 50 | KED |
| | **As** | **75** | | ug/L | | | | 5 | 28 | KED |
| | **Y** | **89** | | ug/L | | | | 208501 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | | 52 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | | 6222 | 2 | KED |
| | **Cd** | **111** | | ug/L | | | | 2 | 65 | KED |
| | **Cd** | **114** | | ug/L | | | | 6 | 56 | KED |
| > | **Tb** | **159** | | ug/L | | | | 498579 | 3 | Standard |
| | **Pb** | **208** | | ug/L | | | | 109 | 9 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV7**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:13:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 29859 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3661261 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 435471 | 0 | Standard |
| | **Cr** | **52** | **50.114** | ug/L | 0.158 | 0 | 16425 | 885897 | 1 | Standard |
| | **Cr** | **53** | **49.291** | ug/L | 0.496 | 1 | 102 | 99854 | 1 | Standard |
| | **Mn** | **55** | **50.383** | ug/L | 0.864 | 1 | 567 | 1266400 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22408 | 1 | KED |
| | **Ni** | **60** | **49.499** | ug/L | 0.077 | 0 | 20 | 49572 | 0 | KED |
| | **Ni** | **62** | **48.829** | ug/L | 0.938 | 1 | 7 | 8023 | 2 | KED |
| | **Cu** | **63** | **49.002** | ug/L | 0.811 | 1 | 30 | 146247 | 1 | KED |
| | **Cu** | **65** | **49.258** | ug/L | 0.800 | 1 | 24 | 72600 | 0 | KED |
| | **Zn** | **66** | **49.366** | ug/L | 1.218 | 2 | 40 | 19573 | 1 | KED |
| | **Zn** | **67** | **48.417** | ug/L | 1.239 | 2 | 3 | 3275 | 2 | KED |
| | **As** | **75** | **49.357** | ug/L | 0.162 | 0 | 5 | 9861 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 213698 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 64 | 25 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6210 | 2 | KED |
| | **Cd** | **111** | **49.427** | ug/L | 1.386 | 2 | 2 | 11118 | 0 | KED |
| | **Cd** | **114** | **49.346** | ug/L | 0.471 | 0 | 6 | 26977 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 514046 | 3 | Standard |
| | **Pb** | **208** | **49.918** | ug/L | 1.570 | 3 | 109 | 2130878 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB7**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:20:38**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 29334 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3436340 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 429622 | 444026 | 1 | Standard |
| \| | **Cr** | **52** | **0.009** | ug/L | 0.022 | 261 | 16425 | 17127 | 3 | Standard |
| \| | **Cr** | **53** | **-0.002** | ug/L | 0.007 | 296 | 102 | 100 | 15 | Standard |
| ⌊ | **Mn** | **55** | **-0.001** | ug/L | 0.000 | 35 | 567 | 559 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 22652 | 22579 | 4 | KED |
| \| | **Ni** | **60** | **-0.000** | ug/L | 0.003 | 24895 | 20 | 20 | 19 | KED |
| \| | **Ni** | **62** | **0.017** | ug/L | 0.055 | 322 | 7 | 10 | 84 | KED |
| \| | **Cu** | **63** | **0.002** | ug/L | 0.002 | 88 | 30 | 36 | 15 | KED |
| \| | **Cu** | **65** | **-0.004** | ug/L | 0.003 | 92 | 24 | 18 | 26 | KED |
| \| | **Zn** | **66** | **0.003** | ug/L | 0.025 | 858 | 40 | 41 | 27 | KED |
| \| | **Zn** | **67** | **0.020** | ug/L | 0.045 | 226 | 3 | 5 | 57 | KED |
| ⌊ | **As** | **75** | **0.006** | ug/L | 0.006 | 102 | 5 | 7 | 20 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 221357 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 46 | 26 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6222 | 6373 | 3 | KED |
| \| | **Cd** | **111** | **-0.002** | ug/L | 0.004 | 271 | 2 | 1 | 50 | KED |
| ⌊ | **Cd** | **114** | **-0.007** | ug/L | 0.002 | 27 | 6 | 3 | 37 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 498579 | 514436 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.000** | ug/L | 0.000 | 254 | 109 | 118 | 8 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-07**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:29:28**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 56516 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3553139 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 575188 | 3 | Standard |
| | **Cr** | **52** | **15.845** | ug/L | 0.536 | 3 | 16425 | 384713 | 1 | Standard |
| | **Cr** | **53** | **16.068** | ug/L | 0.410 | 2 | 102 | 43056 | 1 | Standard |
| | **Mn** | **55** | **125.453** | ug/L | 2.425 | 1 | 567 | 4162523 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22372 | 2 | KED |
| | **Ni** | **60** | **15.044** | ug/L | 0.432 | 2 | 20 | 15051 | 1 | KED |
| | **Ni** | **62** | **15.287** | ug/L | 0.601 | 3 | 7 | 2512 | 4 | KED |
| | **Cu** | **63** | **28.458** | ug/L | 0.361 | 1 | 30 | 84797 | 0 | KED |
| | **Cu** | **65** | **28.531** | ug/L | 1.116 | 3 | 24 | 41976 | 2 | KED |
| | **Zn** | **66** | **68.994** | ug/L | 1.609 | 2 | 40 | 27293 | 1 | KED |
| | **Zn** | **67** | **67.023** | ug/L | 0.916 | 1 | 3 | 4525 | 0 | KED |
| | **As** | **75** | **7.850** | ug/L | 0.270 | 3 | 5 | 1570 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 443638 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 119 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6174 | 3 | KED |
| | **Cd** | **111** | **0.381** | ug/L | 0.021 | 5 | 2 | 87 | 2 | KED |
| | **Cd** | **114** | **0.360** | ug/L | 0.011 | 2 | 6 | 202 | 5 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 538315 | 3 | Standard |
| | **Pb** | **208** | **23.369** | ug/L | 0.578 | 2 | 109 | 1044851 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-DUP1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:33:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 66731 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3687017 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 599474 | 1 | Standard |
| | **Cr** | **52** | **15.661** | ug/L | 0.207 | 1 | 16425 | 396920 | 3 | Standard |
| | **Cr** | **53** | **15.614** | ug/L | 0.046 | 0 | 102 | 43639 | 2 | Standard |
| | **Mn** | **55** | **131.560** | ug/L | 1.987 | 1 | 567 | 4550041 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22468 | 1 | KED |
| | **Ni** | **60** | **15.446** | ug/L | 0.587 | 3 | 20 | 15520 | 3 | KED |
| | **Ni** | **62** | **15.490** | ug/L | 0.213 | 1 | 7 | 2557 | 2 | KED |
| | **Cu** | **63** | **27.634** | ug/L | 0.583 | 2 | 30 | 82700 | 1 | KED |
| | **Cu** | **65** | **28.322** | ug/L | 0.858 | 3 | 24 | 41865 | 2 | KED |
| | **Zn** | **66** | **69.905** | ug/L | 1.277 | 1 | 40 | 27776 | 1 | KED |
| | **Zn** | **67** | **63.629** | ug/L | 1.285 | 2 | 3 | 4316 | 2 | KED |
| | **As** | **75** | **7.691** | ug/L | 0.234 | 3 | 5 | 1545 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 474080 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 147 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6146 | 3 | KED |
| | **Cd** | **111** | **0.309** | ug/L | 0.030 | 9 | 2 | 71 | 11 | KED |
| | **Cd** | **114** | **0.262** | ug/L | 0.029 | 10 | 6 | 148 | 10 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 568919 | 3 | Standard |
| | **Pb** | **208** | **23.536** | ug/L | 1.045 | 4 | 109 | 1111642 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-MS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:38:14**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 49621 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3573766 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 605872 | 0 | Standard |
| | **Cr** | **52** | **37.753** | ug/L | 0.366 | 0 | 16425 | 934225 | 1 | Standard |
| | **Cr** | **53** | **38.300** | ug/L | 0.526 | 1 | 102 | 107979 | 1 | Standard |
| | **Mn** | **55** | **151.129** | ug/L | 3.838 | 2 | 567 | 5283429 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 23482 | 2 | KED |
| | **Ni** | **60** | **42.936** | ug/L | 0.663 | 1 | 20 | 45072 | 3 | KED |
| | **Ni** | **62** | **40.852** | ug/L | 0.468 | 1 | 7 | 7034 | 2 | KED |
| | **Cu** | **63** | **53.652** | ug/L | 1.545 | 2 | 30 | 167737 | 0 | KED |
| | **Cu** | **65** | **53.211** | ug/L | 0.716 | 1 | 24 | 82181 | 1 | KED |
| | **Zn** | **66** | **149.858** | ug/L | 1.793 | 1 | 40 | 62182 | 1 | KED |
| | **Zn** | **67** | **141.073** | ug/L | 2.418 | 1 | 3 | 9993 | 0 | KED |
| | **As** | **75** | **32.212** | ug/L | 0.648 | 2 | 5 | 6745 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 480323 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 147 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6528 | 3 | KED |
| | **Cd** | **111** | **25.322** | ug/L | 0.788 | 3 | 2 | 5987 | 0 | KED |
| | **Cd** | **114** | **25.581** | ug/L | 0.542 | 2 | 6 | 14699 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 562590 | 3 | Standard |
| | **Pb** | **208** | **52.086** | ug/L | 1.736 | 3 | 109 | 2433264 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-MSD1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:42:37**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 51210 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3553843 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 572917 | 0 | Standard |
| | **Cr** | **52** | **36.222** | ug/L | 0.135 | 0 | 16425 | 848456 | 0 | Standard |
| | **Cr** | **53** | **35.920** | ug/L | 0.617 | 1 | 102 | 95764 | 1 | Standard |
| | **Mn** | **55** | **146.009** | ug/L | 3.613 | 2 | 567 | 4825927 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22850 | 0 | KED |
| | **Ni** | **60** | **41.240** | ug/L | 0.070 | 0 | 20 | 42118 | 0 | KED |
| | **Ni** | **62** | **40.282** | ug/L | 0.358 | 0 | 7 | 6750 | 1 | KED |
| | **Cu** | **63** | **52.781** | ug/L | 0.999 | 1 | 30 | 160615 | 1 | KED |
| | **Cu** | **65** | **52.457** | ug/L | 0.655 | 1 | 24 | 78841 | 0 | KED |
| | **Zn** | **66** | **144.558** | ug/L | 5.010 | 3 | 40 | 58366 | 2 | KED |
| | **Zn** | **67** | **134.641** | ug/L | 2.230 | 1 | 3 | 9283 | 1 | KED |
| | **As** | **75** | **32.365** | ug/L | 0.123 | 0 | 5 | 6595 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 441470 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 144 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6163 | 1 | KED |
| | **Cd** | **111** | **25.041** | ug/L | 0.665 | 2 | 2 | 5592 | 1 | KED |
| | **Cd** | **114** | **25.434** | ug/L | 0.431 | 1 | 6 | 13801 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 528633 | 1 | Standard |
| | **Pb** | **208** | **45.923** | ug/L | 0.635 | 1 | 109 | 2017204 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-PS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:47:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 62256 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3593992 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 604297 | 1 | Standard |
| | **Cr** | **52** | **35.146** | ug/L | 0.497 | 1 | 16425 | 868970 | 0 | Standard |
| | **Cr** | **53** | **34.853** | ug/L | 0.689 | 1 | 102 | 98000 | 0 | Standard |
| | **Mn** | **55** | **145.248** | ug/L | 3.608 | 2 | 567 | 5063387 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22724 | 0 | KED |
| | **Ni** | **60** | **39.759** | ug/L | 0.861 | 2 | 20 | 40380 | 1 | KED |
| | **Ni** | **62** | **39.478** | ug/L | 0.441 | 1 | 7 | 6578 | 0 | KED |
| | **Cu** | **63** | **53.091** | ug/L | 0.912 | 1 | 30 | 160675 | 1 | KED |
| | **Cu** | **65** | **52.275** | ug/L | 0.887 | 1 | 24 | 78136 | 1 | KED |
| | **Zn** | **66** | **143.214** | ug/L | 4.054 | 2 | 40 | 57509 | 2 | KED |
| | **Zn** | **67** | **134.466** | ug/L | 1.527 | 1 | 3 | 9220 | 0 | KED |
| | **As** | **75** | **31.882** | ug/L | 0.181 | 0 | 5 | 6461 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 460324 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 155 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6167 | 2 | KED |
| | **Cd** | **111** | **24.963** | ug/L | 0.560 | 2 | 2 | 5577 | 0 | KED |
| | **Cd** | **114** | **25.236** | ug/L | 0.413 | 1 | 6 | 13700 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 559426 | 2 | Standard |
| | **Pb** | **208** | **46.822** | ug/L | 1.181 | 2 | 109 | 2175996 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-01**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:53:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 45749 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3498496 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 651206 | 3 | Standard |
| | **Cr** | **52** | **18.755** | ug/L | 0.271 | 1 | 16425 | 511211 | 2 | Standard |
| | **Cr** | **53** | **18.982** | ug/L | 0.326 | 1 | 102 | 57575 | 2 | Standard |
| | **Mn** | **55** | **240.141** | ug/L | 7.543 | 3 | 567 | 9016365 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22764 | 1 | KED |
| | **Ni** | **60** | **18.758** | ug/L | 0.351 | 1 | 20 | 19093 | 0 | KED |
| | **Ni** | **62** | **18.914** | ug/L | 0.488 | 2 | 7 | 3160 | 2 | KED |
| | **Cu** | **63** | **125.257** | ug/L | 1.724 | 1 | 30 | 379693 | 1 | KED |
| | **Cu** | **65** | **124.296** | ug/L | 1.123 | 0 | 24 | 186099 | 2 | KED |
| | **Zn** | **66** | **156.708** | ug/L | 4.505 | 2 | 40 | 63026 | 2 | KED |
| | **Zn** | **67** | **146.245** | ug/L | 4.366 | 2 | 3 | 10042 | 1 | KED |
| | **As** | **75** | **3.481** | ug/L | 0.084 | 2 | 5 | 711 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 562581 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 188 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6563 | 1 | KED |
| | **Cd** | **111** | **0.279** | ug/L | 0.008 | 2 | 2 | 68 | 2 | KED |
| | **Cd** | **114** | **0.244** | ug/L | 0.050 | 20 | 6 | 148 | 18 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 560464 | 4 | Standard |
| | **Pb** | **208** | **46.637** | ug/L | 1.465 | 3 | 109 | 2170223 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-02**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 20:57:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 40393 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3485697 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 622694 | 3 | Standard |
| | **Cr** | **52** | **12.029** | ug/L | 0.336 | 2 | 16425 | 321953 | 0 | Standard |
| | **Cr** | **53** | **12.127** | ug/L | 0.204 | 1 | 102 | 35226 | 1 | Standard |
| | **Mn** | **55** | **175.195** | ug/L | 2.895 | 1 | 567 | 6291969 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22202 | 1 | KED |
| | **Ni** | **60** | **19.391** | ug/L | 0.629 | 3 | 20 | 19250 | 2 | KED |
| | **Ni** | **62** | **19.390** | ug/L | 0.707 | 3 | 7 | 3160 | 3 | KED |
| | **Cu** | **63** | **20.741** | ug/L | 0.344 | 1 | 30 | 61341 | 0 | KED |
| | **Cu** | **65** | **20.499** | ug/L | 0.671 | 3 | 24 | 29943 | 2 | KED |
| | **Zn** | **66** | **50.672** | ug/L | 0.477 | 0 | 40 | 19908 | 1 | KED |
| | **Zn** | **67** | **56.914** | ug/L | 2.087 | 3 | 3 | 3814 | 3 | KED |
| | **As** | **75** | **2.726** | ug/L | 0.144 | 5 | 5 | 544 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 544333 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 180 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6420 | 3 | KED |
| | **Cd** | **111** | **0.060** | ug/L | 0.009 | 15 | 2 | 16 | 15 | KED |
| | **Cd** | **114** | **0.068** | ug/L | 0.002 | 3 | 6 | 45 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 564914 | 4 | Standard |
| | **Pb** | **208** | **5.801** | ug/L | 0.211 | 3 | 109 | 272205 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-03**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:01:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | 13 | | ug/L | | | 28744 | 38378 | 4 | Standard |
| | Cl | 37 | | ug/L | | | 3416101 | 3497347 | 0 | Standard |
| > | Sc | 45 | | ug/L | | | 429622 | 587945 | 5 | Standard |
| | Cr | 52 | 11.106 | ug/L | 0.145 | 1 | 16425 | 282483 | 4 | Standard |
| | Cr | 53 | 11.278 | ug/L | 0.136 | 1 | 102 | 30945 | 4 | Standard |
| | Mn | 55 | 184.428 | ug/L | 1.446 | 0 | 567 | 6255542 | 4 | Standard |
| > | Ge | 72 | | ug/L | | | 22652 | 23117 | 1 | KED |
| | Ni | 60 | 19.800 | ug/L | 0.357 | 1 | 20 | 20466 | 0 | KED |
| | Ni | 62 | 18.886 | ug/L | 0.325 | 1 | 7 | 3205 | 1 | KED |
| | Cu | 63 | 14.566 | ug/L | 0.200 | 1 | 30 | 44865 | 0 | KED |
| | Cu | 65 | 14.840 | ug/L | 0.327 | 2 | 24 | 22582 | 1 | KED |
| | Zn | 66 | 42.893 | ug/L | 0.275 | 0 | 40 | 17552 | 0 | KED |
| | Zn | 67 | 47.729 | ug/L | 1.499 | 3 | 3 | 3331 | 3 | KED |
| | As | 75 | 1.773 | ug/L | 0.138 | 7 | 5 | 371 | 6 | KED |
| | Y | 89 | | ug/L | | | 208501 | 507399 | 5 | Standard |
| | Kr | 83 | | ug/L | | | 52 | 130 | 4 | Standard |
| > | In-1 | 115 | | ug/L | | | 6222 | 6403 | 1 | KED |
| | Cd | 111 | 0.033 | ug/L | 0.005 | 14 | 2 | 9 | 11 | KED |
| | Cd | 114 | 0.036 | ug/L | 0.014 | 38 | 6 | 27 | 26 | KED |
| > | Tb | 159 | | ug/L | | | 498579 | 554384 | 7 | Standard |
| | Pb | 208 | 2.503 | ug/L | 0.143 | 5 | 109 | 115104 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-04**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:06:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 38069 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3499645 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 587504 | 0 | Standard |
| | **Cr** | **52** | **10.627** | ug/L | 0.165 | 1 | 16425 | 271110 | 0 | Standard |
| | **Cr** | **53** | **10.796** | ug/L | 0.062 | 0 | 102 | 29614 | 1 | Standard |
| | **Mn** | **55** | **193.924** | ug/L | 1.395 | 0 | 567 | 6573200 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 23355 | 1 | KED |
| | **Ni** | **60** | **17.849** | ug/L | 0.903 | 5 | 20 | 18638 | 4 | KED |
| | **Ni** | **62** | **17.934** | ug/L | 1.118 | 6 | 7 | 3073 | 4 | KED |
| | **Cu** | **63** | **15.555** | ug/L | 0.558 | 3 | 30 | 48397 | 2 | KED |
| | **Cu** | **65** | **15.709** | ug/L | 0.420 | 2 | 24 | 24146 | 1 | KED |
| | **Zn** | **66** | **41.452** | ug/L | 1.634 | 3 | 40 | 17132 | 2 | KED |
| | **Zn** | **67** | **49.096** | ug/L | 1.766 | 3 | 3 | 3461 | 2 | KED |
| | **As** | **75** | **1.882** | ug/L | 0.019 | 1 | 5 | 397 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 516913 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 130 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6347 | 0 | KED |
| | **Cd** | **111** | **0.058** | ug/L | 0.023 | 39 | 2 | 15 | 33 | KED |
| | **Cd** | **114** | **0.030** | ug/L | 0.012 | 39 | 6 | 23 | 27 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 547977 | 2 | Standard |
| | **Pb** | **208** | **2.582** | ug/L | 0.092 | 3 | 109 | 117635 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-05**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:10:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 38499 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3436714 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 590895 | 2 | Standard |
| | **Cr** | **52** | **15.120** | ug/L | 0.334 | 2 | 16425 | 378345 | 1 | Standard |
| | **Cr** | **53** | **15.430** | ug/L | 0.338 | 2 | 102 | 42491 | 0 | Standard |
| | **Mn** | **55** | **205.866** | ug/L | 6.296 | 3 | 567 | 7014591 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22189 | 1 | KED |
| | **Ni** | **60** | **22.496** | ug/L | 0.436 | 1 | 20 | 22319 | 2 | KED |
| | **Ni** | **62** | **22.373** | ug/L | 0.156 | 0 | 7 | 3643 | 0 | KED |
| | **Cu** | **63** | **18.515** | ug/L | 0.284 | 1 | 30 | 54732 | 0 | KED |
| | **Cu** | **65** | **19.133** | ug/L | 0.416 | 2 | 24 | 27941 | 2 | KED |
| | **Zn** | **66** | **44.452** | ug/L | 0.524 | 1 | 40 | 17460 | 2 | KED |
| | **Zn** | **67** | **51.710** | ug/L | 1.353 | 2 | 3 | 3465 | 3 | KED |
| | **As** | **75** | **2.303** | ug/L | 0.131 | 5 | 5 | 460 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 595323 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 174 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6152 | 1 | KED |
| | **Cd** | **111** | **0.066** | ug/L | 0.004 | 5 | 2 | 16 | 3 | KED |
| | **Cd** | **114** | **0.053** | ug/L | 0.008 | 14 | 6 | 35 | 9 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 541074 | 2 | Standard |
| | **Pb** | **208** | **2.982** | ug/L | 0.051 | 1 | 109 | 134137 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV8**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:17:43**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 31168 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3666992 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 434741 | 1 | Standard |
| | **Cr** | **52** | **49.633** | ug/L | 0.354 | 0 | 16425 | 876078 | 1 | Standard |
| | **Cr** | **53** | **48.647** | ug/L | 0.128 | 0 | 102 | 98379 | 0 | Standard |
| | **Mn** | **55** | **50.118** | ug/L | 0.284 | 0 | 567 | 1257482 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21515 | 0 | KED |
| | **Ni** | **60** | **50.869** | ug/L | 1.612 | 3 | 20 | 48910 | 2 | KED |
| | **Ni** | **62** | **49.716** | ug/L | 0.488 | 0 | 7 | 7842 | 0 | KED |
| | **Cu** | **63** | **49.663** | ug/L | 0.771 | 1 | 30 | 142306 | 1 | KED |
| | **Cu** | **65** | **50.203** | ug/L | 0.431 | 0 | 24 | 71050 | 0 | KED |
| | **Zn** | **66** | **50.312** | ug/L | 1.544 | 3 | 40 | 19152 | 2 | KED |
| | **Zn** | **67** | **50.148** | ug/L | 1.547 | 3 | 3 | 3257 | 2 | KED |
| | **As** | **75** | **50.676** | ug/L | 1.209 | 2 | 5 | 9721 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 214811 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 42 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5999 | 0 | KED |
| | **Cd** | **111** | **50.210** | ug/L | 1.210 | 2 | 2 | 10913 | 1 | KED |
| | **Cd** | **114** | **49.810** | ug/L | 0.928 | 1 | 6 | 26302 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 506574 | 4 | Standard |
| | **Pb** | **208** | **50.439** | ug/L | 1.660 | 3 | 109 | 2121582 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB8**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:24:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 28231 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3328721 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 425027 | 1 | Standard |
| | **Cr** | **52** | **0.008** | ug/L | 0.013 | 172 | 16425 | 16378 | 2 | Standard |
| | **Cr** | **53** | **-0.008** | ug/L | 0.001 | 7 | 102 | 85 | 2 | Standard |
| | **Mn** | **55** | **0.003** | ug/L | 0.002 | 60 | 567 | 630 | 6 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21828 | 2 | KED |
| | **Ni** | **60** | **-0.006** | ug/L | 0.003 | 54 | 20 | 13 | 20 | KED |
| | **Ni** | **62** | **-0.002** | ug/L | 0.013 | 526 | 7 | 6 | 31 | KED |
| | **Cu** | **63** | **0.003** | ug/L | 0.003 | 73 | 30 | 39 | 18 | KED |
| | **Cu** | **65** | **-0.006** | ug/L | 0.005 | 91 | 24 | 15 | 45 | KED |
| | **Zn** | **66** | **-0.021** | ug/L | 0.017 | 81 | 40 | 31 | 23 | KED |
| | **Zn** | **67** | **0.050** | ug/L | 0.043 | 86 | 3 | 6 | 41 | KED |
| | **As** | **75** | **0.003** | ug/L | 0.009 | 333 | 5 | 6 | 27 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 214115 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 46 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6043 | 3 | KED |
| | **Cd** | **111** | **0.009** | ug/L | 0.007 | 80 | 2 | 4 | 35 | KED |
| | **Cd** | **114** | **-0.007** | ug/L | 0.002 | 31 | 6 | 3 | 36 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 492267 | 4 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.000 | 84 | 109 | 121 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0006-SRL2**
**Sample Dil Factor: 250**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:30:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 32769 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3360007 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 460983 | 0 | Standard |
| | **Cr** | **52** | **1.583** | ug/L | 0.060 | 3 | 16425 | 46696 | 2 | Standard |
| | **Cr** | **53** | **1.632** | ug/L | 0.026 | 1 | 102 | 3606 | 1 | Standard |
| | **Mn** | **55** | **42.753** | ug/L | 1.270 | 2 | 567 | 1137555 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22965 | 0 | KED |
| | **Ni** | **60** | **1.333** | ug/L | 0.025 | 1 | 20 | 1388 | 1 | KED |
| | **Ni** | **62** | **1.267** | ug/L | 0.140 | 11 | 7 | 220 | 11 | KED |
| | **Cu** | **63** | **14.384** | ug/L | 0.366 | 2 | 30 | 44016 | 2 | KED |
| | **Cu** | **65** | **14.049** | ug/L | 0.360 | 2 | 24 | 21239 | 2 | KED |
| | **Zn** | **66** | **15.638** | ug/L | 0.369 | 2 | 40 | 6383 | 1 | KED |
| | **Zn** | **67** | **14.604** | ug/L | 1.019 | 6 | 3 | 1015 | 6 | KED |
| | **As** | **75** | **0.432** | ug/L | 0.040 | 9 | 5 | 94 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 244204 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 57 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6214 | 2 | KED |
| | **Cd** | **111** | **0.030** | ug/L | 0.014 | 46 | 2 | 8 | 32 | KED |
| | **Cd** | **114** | **0.009** | ug/L | 0.007 | 74 | 6 | 12 | 33 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 522653 | 1 | Standard |
| | **Pb** | **208** | **1.706** | ug/L | 0.047 | 2 | 109 | 74177 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-25**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:35:21**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 36950 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3348458 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 510986 | 7 | Standard |
| | **Cr** | **52** | **6.947** | ug/L | 0.043 | 0 | 16425 | 160957 | 7 | Standard |
| | **Cr** | **53** | **7.168** | ug/L | 0.192 | 2 | 102 | 17133 | 6 | Standard |
| | **Mn** | **55** | **178.843** | ug/L | 4.747 | 2 | 567 | 5272051 | 7 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 23785 | 0 | KED |
| | **Ni** | **60** | **6.559** | ug/L | 0.122 | 1 | 20 | 6990 | 1 | KED |
| | **Ni** | **62** | **6.405** | ug/L | 0.201 | 3 | 7 | 1123 | 3 | KED |
| | **Cu** | **63** | **67.232** | ug/L | 0.661 | 0 | 30 | 212973 | 0 | KED |
| | **Cu** | **65** | **68.661** | ug/L | 0.726 | 1 | 24 | 107421 | 1 | KED |
| | **Zn** | **66** | **72.988** | ug/L | 1.411 | 1 | 40 | 30702 | 2 | KED |
| | **Zn** | **67** | **68.701** | ug/L | 0.862 | 1 | 3 | 4932 | 1 | KED |
| | **As** | **75** | **2.125** | ug/L | 0.044 | 2 | 5 | 456 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 341924 | 8 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 93 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6622 | 0 | KED |
| | **Cd** | **111** | **0.084** | ug/L | 0.013 | 16 | 2 | 22 | 14 | KED |
| | **Cd** | **114** | **0.074** | ug/L | 0.021 | 27 | 6 | 50 | 23 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 513382 | 4 | Standard |
| | **Pb** | **208** | **8.266** | ug/L | 0.131 | 1 | 109 | 352917 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0006-DUP2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:43:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 36621 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3415109 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 512853 | 0 | Standard |
| | **Cr** | **52** | **7.818** | ug/L | 0.090 | 1 | 16425 | 179309 | 1 | Standard |
| | **Cr** | **53** | **7.839** | ug/L | 0.067 | 0 | 102 | 18804 | 0 | Standard |
| | **Mn** | **55** | **178.327** | ug/L | 0.620 | 0 | 567 | 5276760 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22261 | 1 | KED |
| | **Ni** | **60** | **7.337** | ug/L | 0.237 | 3 | 20 | 7318 | 4 | KED |
| | **Ni** | **62** | **7.469** | ug/L | 0.418 | 5 | 7 | 1224 | 4 | KED |
| | **Cu** | **63** | **69.282** | ug/L | 1.307 | 1 | 30 | 205405 | 2 | KED |
| | **Cu** | **65** | **69.871** | ug/L | 1.987 | 2 | 24 | 102322 | 3 | KED |
| | **Zn** | **66** | **72.792** | ug/L | 2.608 | 3 | 40 | 28649 | 2 | KED |
| | **Zn** | **67** | **69.269** | ug/L | 2.416 | 3 | 3 | 4653 | 2 | KED |
| | **As** | **75** | **2.067** | ug/L | 0.092 | 4 | 5 | 415 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 351106 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 85 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6056 | 2 | KED |
| | **Cd** | **111** | **0.110** | ug/L | 0.017 | 15 | 2 | 26 | 12 | KED |
| | **Cd** | **114** | **0.092** | ug/L | 0.007 | 7 | 6 | 55 | 9 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 515225 | 2 | Standard |
| | **Pb** | **208** | **8.991** | ug/L | 0.195 | 2 | 109 | 384911 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0006-MS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:47:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 37342 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3421286 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 545832 | 2 | Standard |
| | **Cr** | **52** | **16.844** | ug/L | 0.214 | 1 | 16425 | 387035 | 2 | Standard |
| | **Cr** | **53** | **17.296** | ug/L | 0.400 | 2 | 102 | 44008 | 4 | Standard |
| | **Mn** | **55** | **188.393** | ug/L | 2.013 | 1 | 567 | 5932891 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 23435 | 1 | KED |
| | **Ni** | **60** | **18.073** | ug/L | 0.295 | 1 | 20 | 18939 | 0 | KED |
| | **Ni** | **62** | **17.883** | ug/L | 0.504 | 2 | 7 | 3078 | 4 | KED |
| | **Cu** | **63** | **94.704** | ug/L | 0.501 | 0 | 30 | 295568 | 1 | KED |
| | **Cu** | **65** | **93.552** | ug/L | 1.277 | 1 | 24 | 144177 | 0 | KED |
| | **Zn** | **66** | **113.829** | ug/L | 1.122 | 0 | 40 | 47157 | 2 | KED |
| | **Zn** | **67** | **106.321** | ug/L | 1.945 | 1 | 3 | 7518 | 0 | KED |
| | **As** | **75** | **11.912** | ug/L | 0.292 | 2 | 5 | 2493 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 378246 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 108 | 29 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6483 | 1 | KED |
| | **Cd** | **111** | **10.808** | ug/L | 0.116 | 1 | 2 | 2540 | 1 | KED |
| | **Cd** | **114** | **10.789** | ug/L | 0.238 | 2 | 6 | 6163 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 536548 | 4 | Standard |
| | **Pb** | **208** | **19.974** | ug/L | 0.587 | 2 | 109 | 889971 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0006-MSD2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:52:05**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 35329 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3495278 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 522864 | 1 | Standard |
| | **Cr** | **52** | **16.917** | ug/L | 0.371 | 2 | 16425 | 372252 | 0 | Standard |
| | **Cr** | **53** | **16.807** | ug/L | 0.219 | 1 | 102 | 40957 | 0 | Standard |
| | **Mn** | **55** | **238.098** | ug/L | 1.706 | 0 | 567 | 7182666 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22411 | 0 | KED |
| | **Ni** | **60** | **18.652** | ug/L | 0.610 | 3 | 20 | 18692 | 2 | KED |
| | **Ni** | **62** | **18.196** | ug/L | 0.861 | 4 | 7 | 2993 | 3 | KED |
| | **Cu** | **63** | **82.278** | ug/L | 0.226 | 0 | 30 | 245569 | 0 | KED |
| | **Cu** | **65** | **83.327** | ug/L | 1.156 | 1 | 24 | 122823 | 1 | KED |
| | **Zn** | **66** | **110.875** | ug/L | 0.742 | 0 | 40 | 43923 | 1 | KED |
| | **Zn** | **67** | **102.047** | ug/L | 1.523 | 1 | 3 | 6901 | 0 | KED |
| | **As** | **75** | **11.943** | ug/L | 0.416 | 3 | 5 | 2390 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 358541 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 104 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6163 | 2 | KED |
| | **Cd** | **111** | **10.573** | ug/L | 0.308 | 2 | 2 | 2363 | 3 | KED |
| | **Cd** | **114** | **10.864** | ug/L | 0.378 | 3 | 6 | 5898 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 520646 | 3 | Standard |
| | **Pb** | **208** | **19.540** | ug/L | 0.709 | 3 | 109 | 844780 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0006-PS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 21:56:28**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 37694 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3351546 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 501226 | 0 | Standard |
| | **Cr** | **52** | **29.835** | ug/L | 0.469 | 1 | 16425 | 614753 | 0 | Standard |
| | **Cr** | **53** | **30.188** | ug/L | 0.539 | 1 | 102 | 70427 | 1 | Standard |
| | **Mn** | **55** | **207.563** | ug/L | 3.241 | 1 | 567 | 6002068 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22603 | 1 | KED |
| | **Ni** | **60** | **32.510** | ug/L | 0.503 | 1 | 20 | 32844 | 0 | KED |
| | **Ni** | **62** | **32.863** | ug/L | 1.409 | 4 | 7 | 5446 | 2 | KED |
| | **Cu** | **63** | **95.182** | ug/L | 0.392 | 0 | 30 | 286536 | 2 | KED |
| | **Cu** | **65** | **96.112** | ug/L | 0.528 | 0 | 24 | 142877 | 1 | KED |
| | **Zn** | **66** | **157.316** | ug/L | 1.130 | 0 | 40 | 62835 | 1 | KED |
| | **Zn** | **67** | **149.266** | ug/L | 4.233 | 2 | 3 | 10177 | 1 | KED |
| | **As** | **75** | **27.545** | ug/L | 0.331 | 1 | 5 | 5553 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 344555 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 106 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6294 | 1 | KED |
| | **Cd** | **111** | **25.870** | ug/L | 0.585 | 2 | 2 | 5900 | 1 | KED |
| | **Cd** | **114** | **26.669** | ug/L | 0.790 | 2 | 6 | 14777 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 516235 | 2 | Standard |
| | **Pb** | **208** | **34.752** | ug/L | 0.928 | 2 | 109 | 1490377 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-10**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:01:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 38446 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3480483 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 652384 | 1 | Standard |
| | **Cr** | **52** | **17.095** | ug/L | 0.249 | 1 | 16425 | 469094 | 0 | Standard |
| | **Cr** | **53** | **17.086** | ug/L | 0.463 | 2 | 102 | 51957 | 3 | Standard |
| | **Mn** | **55** | **193.596** | ug/L | 2.404 | 1 | 567 | 7286013 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22245 | 0 | KED |
| | **Ni** | **60** | **19.278** | ug/L | 0.200 | 1 | 20 | 19178 | 1 | KED |
| | **Ni** | **62** | **19.381** | ug/L | 0.597 | 3 | 7 | 3165 | 3 | KED |
| | **Cu** | **63** | **20.587** | ug/L | 0.358 | 1 | 30 | 61012 | 1 | KED |
| | **Cu** | **65** | **21.248** | ug/L | 0.326 | 1 | 24 | 31104 | 1 | KED |
| | **Zn** | **66** | **45.102** | ug/L | 0.757 | 1 | 40 | 17758 | 1 | KED |
| | **Zn** | **67** | **52.733** | ug/L | 1.076 | 2 | 3 | 3542 | 2 | KED |
| | **As** | **75** | **2.549** | ug/L | 0.049 | 1 | 5 | 510 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 557040 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 171 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6171 | 1 | KED |
| | **Cd** | **111** | **0.065** | ug/L | 0.012 | 19 | 2 | 16 | 17 | KED |
| | **Cd** | **114** | **0.066** | ug/L | 0.027 | 41 | 6 | 42 | 33 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 529246 | 2 | Standard |
| | **Pb** | **208** | **3.695** | ug/L | 0.059 | 1 | 109 | 162599 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-11**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:05:38**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 42791 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3466894 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 650540 | 1 | Standard |
| | **Cr** | **52** | **15.716** | ug/L | 0.190 | 1 | 16425 | 432050 | 1 | Standard |
| | **Cr** | **53** | **15.968** | ug/L | 0.243 | 1 | 102 | 48416 | 0 | Standard |
| | **Mn** | **55** | **184.105** | ug/L | 1.087 | 0 | 567 | 6909882 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21567 | 1 | KED |
| | **Ni** | **60** | **20.114** | ug/L | 0.322 | 1 | 20 | 19396 | 0 | KED |
| | **Ni** | **62** | **19.687** | ug/L | 0.170 | 0 | 7 | 3117 | 0 | KED |
| | **Cu** | **63** | **22.237** | ug/L | 0.274 | 1 | 30 | 63899 | 2 | KED |
| | **Cu** | **65** | **22.166** | ug/L | 0.219 | 0 | 24 | 31458 | 0 | KED |
| | **Zn** | **66** | **47.707** | ug/L | 1.217 | 2 | 40 | 18209 | 2 | KED |
| | **Zn** | **67** | **55.199** | ug/L | 0.943 | 1 | 3 | 3594 | 2 | KED |
| | **As** | **75** | **2.320** | ug/L | 0.019 | 0 | 5 | 451 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 565908 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 193 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5930 | 1 | KED |
| | **Cd** | **111** | **0.069** | ug/L | 0.022 | 32 | 2 | 16 | 26 | KED |
| | **Cd** | **114** | **0.067** | ug/L | 0.014 | 21 | 6 | 41 | 16 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 532526 | 3 | Standard |
| | **Pb** | **208** | **3.611** | ug/L | 0.105 | 2 | 109 | 159795 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-12**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:10:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 46762 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3514699 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 657737 | 1 | Standard |
| | **Cr** | **52** | **15.292** | ug/L | 0.230 | 1 | 16425 | 425747 | 1 | Standard |
| | **Cr** | **53** | **15.671** | ug/L | 0.664 | 4 | 102 | 48032 | 2 | Standard |
| | **Mn** | **55** | **162.071** | ug/L | 3.855 | 2 | 567 | 6149178 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22750 | 3 | KED |
| | **Ni** | **60** | **14.946** | ug/L | 0.272 | 1 | 20 | 15204 | 1 | KED |
| | **Ni** | **62** | **14.794** | ug/L | 0.156 | 1 | 7 | 2472 | 2 | KED |
| | **Cu** | **63** | **17.092** | ug/L | 0.581 | 3 | 30 | 51776 | 2 | KED |
| | **Cu** | **65** | **16.919** | ug/L | 0.602 | 3 | 24 | 25325 | 3 | KED |
| | **Zn** | **66** | **38.504** | ug/L | 0.217 | 0 | 40 | 15512 | 3 | KED |
| | **Zn** | **67** | **46.345** | ug/L | 1.745 | 3 | 3 | 3181 | 0 | KED |
| | **As** | **75** | **2.334** | ug/L | 0.152 | 6 | 5 | 478 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 570365 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 186 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6281 | 0 | KED |
| | **Cd** | **111** | **0.054** | ug/L | 0.013 | 23 | 2 | 14 | 19 | KED |
| | **Cd** | **114** | **0.063** | ug/L | 0.013 | 21 | 6 | 41 | 17 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 548942 | 2 | Standard |
| | **Pb** | **208** | **3.450** | ug/L | 0.034 | 0 | 109 | 157495 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-13**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:14:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 49197 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3536734 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 736691 | 2 | Standard |
| | **Cr** | **52** | **16.899** | ug/L | 0.162 | 0 | 16425 | 523984 | 1 | Standard |
| | **Cr** | **53** | **17.048** | ug/L | 0.037 | 0 | 102 | 58537 | 2 | Standard |
| | **Mn** | **55** | **148.796** | ug/L | 3.862 | 2 | 567 | 6322531 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22423 | 0 | KED |
| | **Ni** | **60** | **17.273** | ug/L | 0.087 | 0 | 20 | 17322 | 0 | KED |
| | **Ni** | **62** | **16.912** | ug/L | 0.384 | 2 | 7 | 2785 | 2 | KED |
| | **Cu** | **63** | **21.968** | ug/L | 0.559 | 2 | 30 | 65620 | 1 | KED |
| | **Cu** | **65** | **22.166** | ug/L | 0.325 | 1 | 24 | 32709 | 1 | KED |
| | **Zn** | **66** | **52.695** | ug/L | 1.145 | 2 | 40 | 20906 | 1 | KED |
| | **Zn** | **67** | **56.418** | ug/L | 2.065 | 3 | 3 | 3820 | 4 | KED |
| | **As** | **75** | **2.308** | ug/L | 0.110 | 4 | 5 | 466 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 650855 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 234 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6018 | 1 | KED |
| | **Cd** | **111** | **0.083** | ug/L | 0.010 | 12 | 2 | 20 | 11 | KED |
| | **Cd** | **114** | **0.071** | ug/L | 0.031 | 43 | 6 | 43 | 35 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 558397 | 3 | Standard |
| | **Pb** | **208** | **4.136** | ug/L | 0.144 | 3 | 109 | 191889 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV9**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:21:55**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 31157 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3618929 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 420383 | 1 | Standard |
| | **Cr** | **52** | **50.546** | ug/L | 0.344 | 0 | 16425 | 862360 | 1 | Standard |
| | **Cr** | **53** | **50.605** | ug/L | 0.635 | 1 | 102 | 98943 | 0 | Standard |
| | **Mn** | **55** | **51.822** | ug/L | 0.433 | 0 | 567 | 1257198 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21487 | 0 | KED |
| | **Ni** | **60** | **49.839** | ug/L | 0.606 | 1 | 20 | 47863 | 1 | KED |
| | **Ni** | **62** | **50.795** | ug/L | 0.424 | 0 | 7 | 8002 | 1 | KED |
| | **Cu** | **63** | **50.219** | ug/L | 1.292 | 2 | 30 | 143718 | 2 | KED |
| | **Cu** | **65** | **50.642** | ug/L | 0.674 | 1 | 24 | 71577 | 0 | KED |
| | **Zn** | **66** | **50.420** | ug/L | 0.518 | 1 | 40 | 19170 | 0 | KED |
| | **Zn** | **67** | **49.883** | ug/L | 1.347 | 2 | 3 | 3236 | 2 | KED |
| | **As** | **75** | **49.815** | ug/L | 0.436 | 0 | 5 | 9543 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 206034 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 57 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5930 | 3 | KED |
| | **Cd** | **111** | **51.069** | ug/L | 1.784 | 3 | 2 | 10963 | 0 | KED |
| | **Cd** | **114** | **51.210** | ug/L | 1.494 | 2 | 6 | 26715 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 492587 | 3 | Standard |
| | **Pb** | **208** | **52.062** | ug/L | 1.589 | 3 | 109 | 2129489 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB9**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:29:02**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 28002 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3314931 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 398335 | 1 | Standard |
| | **Cr** | **52** | **0.028** | ug/L | 0.003 | 9 | 16425 | 15674 | 2 | Standard |
| | **Cr** | **53** | **-0.001** | ug/L | 0.004 | 389 | 102 | 93 | 7 | Standard |
| | **Mn** | **55** | **0.002** | ug/L | 0.001 | 33 | 567 | 571 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21763 | 3 | KED |
| | **Ni** | **60** | **-0.002** | ug/L | 0.009 | 361 | 20 | 17 | 48 | KED |
| | **Ni** | **62** | **-0.026** | ug/L | 0.019 | 71 | 7 | 3 | 91 | KED |
| | **Cu** | **63** | **0.003** | ug/L | 0.005 | 158 | 30 | 38 | 39 | KED |
| | **Cu** | **65** | **-0.006** | ug/L | 0.000 | 5 | 24 | 15 | 0 | KED |
| | **Zn** | **66** | **-0.001** | ug/L | 0.040 | 3843 | 40 | 38 | 40 | KED |
| | **Zn** | **67** | **0.052** | ug/L | 0.047 | 91 | 3 | 6 | 41 | KED |
| | **As** | **75** | **0.007** | ug/L | 0.007 | 107 | 5 | 6 | 20 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 197792 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 36 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5775 | 2 | KED |
| | **Cd** | **111** | **0.011** | ug/L | 0.010 | 84 | 2 | 4 | 44 | KED |
| | **Cd** | **114** | **-0.005** | ug/L | 0.007 | 122 | 6 | 3 | 89 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 467450 | 3 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.000 | 90 | 109 | 118 | 14 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0035-SRL2**
**Sample Dil Factor: 250**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:33:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 32522 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3288169 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 434060 | 3 | Standard |
| | **Cr** | **52** | **2.227** | ug/L | 0.006 | 0 | 16425 | 55098 | 3 | Standard |
| | **Cr** | **53** | **2.306** | ug/L | 0.045 | 1 | 102 | 4753 | 1 | Standard |
| | **Mn** | **55** | **28.582** | ug/L | 0.336 | 1 | 567 | 716090 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21449 | 0 | KED |
| | **Ni** | **60** | **1.817** | ug/L | 0.047 | 2 | 20 | 1760 | 1 | KED |
| | **Ni** | **62** | **1.688** | ug/L | 0.120 | 7 | 7 | 272 | 6 | KED |
| | **Cu** | **63** | **7.117** | ug/L | 0.053 | 0 | 30 | 20357 | 1 | KED |
| | **Cu** | **65** | **6.974** | ug/L | 0.091 | 1 | 24 | 9858 | 0 | KED |
| | **Zn** | **66** | **16.720** | ug/L | 0.258 | 1 | 40 | 6371 | 0 | KED |
| | **Zn** | **67** | **15.287** | ug/L | 0.614 | 4 | 3 | 992 | 3 | KED |
| | **As** | **75** | **0.342** | ug/L | 0.036 | 10 | 5 | 70 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 231742 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 55 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5879 | 2 | KED |
| | **Cd** | **111** | **0.037** | ug/L | 0.026 | 68 | 2 | 10 | 56 | KED |
| | **Cd** | **114** | **0.019** | ug/L | 0.017 | 92 | 6 | 16 | 55 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 487241 | 4 | Standard |
| | **Pb** | **208** | **4.696** | ug/L | 0.134 | 2 | 109 | 190102 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0188-02**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:37:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 41956 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3378365 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 523593 | 1 | Standard |
| | **Cr** | **52** | **9.601** | ug/L | 0.139 | 1 | 16425 | 220265 | 2 | Standard |
| | **Cr** | **53** | **9.731** | ug/L | 0.119 | 1 | 102 | 23798 | 0 | Standard |
| | **Mn** | **55** | **116.999** | ug/L | 1.175 | 1 | 567 | 3534573 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22536 | 2 | KED |
| | **Ni** | **60** | **8.262** | ug/L | 0.071 | 0 | 20 | 8337 | 1 | KED |
| | **Ni** | **62** | **8.396** | ug/L | 0.447 | 5 | 7 | 1392 | 3 | KED |
| | **Cu** | **63** | **33.005** | ug/L | 0.501 | 1 | 30 | 99053 | 0 | KED |
| | **Cu** | **65** | **33.527** | ug/L | 0.980 | 2 | 24 | 49693 | 1 | KED |
| | **Zn** | **66** | **76.153** | ug/L | 1.565 | 2 | 40 | 30340 | 0 | KED |
| | **Zn** | **67** | **71.244** | ug/L | 0.828 | 1 | 3 | 4845 | 1 | KED |
| | **As** | **75** | **1.754** | ug/L | 0.040 | 2 | 5 | 358 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 371244 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 113 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6324 | 0 | KED |
| | **Cd** | **111** | **0.174** | ug/L | 0.020 | 11 | 2 | 42 | 10 | KED |
| | **Cd** | **114** | **0.135** | ug/L | 0.014 | 10 | 6 | 82 | 10 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 531146 | 4 | Standard |
| | **Pb** | **208** | **21.617** | ug/L | 0.789 | 3 | 109 | 953333 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0035-DUP2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:42:11**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 36772 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3375995 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 506211 | 2 | Standard |
| | **Cr** | **52** | **9.658** | ug/L | 0.262 | 2 | 16425 | 214004 | 1 | Standard |
| | **Cr** | **53** | **9.833** | ug/L | 0.190 | 1 | 102 | 23243 | 1 | Standard |
| | **Mn** | **55** | **115.608** | ug/L | 0.960 | 0 | 567 | 3376336 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21583 | 2 | KED |
| | **Ni** | **60** | **8.330** | ug/L | 0.283 | 3 | 20 | 8047 | 2 | KED |
| | **Ni** | **62** | **8.533** | ug/L | 0.304 | 3 | 7 | 1355 | 1 | KED |
| | **Cu** | **63** | **32.897** | ug/L | 0.837 | 2 | 30 | 94547 | 1 | KED |
| | **Cu** | **65** | **32.633** | ug/L | 0.827 | 2 | 24 | 46333 | 2 | KED |
| | **Zn** | **66** | **76.416** | ug/L | 1.804 | 2 | 40 | 29159 | 1 | KED |
| | **Zn** | **67** | **74.310** | ug/L | 1.930 | 2 | 3 | 4839 | 0 | KED |
| | **As** | **75** | **2.318** | ug/L | 0.044 | 1 | 5 | 451 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 352283 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 80 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5976 | 0 | KED |
| | **Cd** | **111** | **0.176** | ug/L | 0.012 | 6 | 2 | 40 | 5 | KED |
| | **Cd** | **114** | **0.154** | ug/L | 0.002 | 1 | 6 | 87 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 501836 | 3 | Standard |
| | **Pb** | **208** | **24.170** | ug/L | 0.734 | 3 | 109 | 1007279 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0035-MS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:46:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 37051 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3404997 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 517829 | 2 | Standard |
| | **Cr** | **52** | **18.596** | ug/L | 0.572 | 3 | 16425 | 403231 | 2 | Standard |
| | **Cr** | **53** | **19.040** | ug/L | 0.162 | 0 | 102 | 45936 | 2 | Standard |
| | **Mn** | **55** | **125.449** | ug/L | 2.341 | 1 | 567 | 3747523 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21663 | 1 | KED |
| | **Ni** | **60** | **19.261** | ug/L | 0.741 | 3 | 20 | 18655 | 2 | KED |
| | **Ni** | **62** | **19.277** | ug/L | 0.893 | 4 | 7 | 3065 | 3 | KED |
| | **Cu** | **63** | **43.535** | ug/L | 1.449 | 3 | 30 | 125582 | 2 | KED |
| | **Cu** | **65** | **43.738** | ug/L | 0.461 | 1 | 24 | 62326 | 0 | KED |
| | **Zn** | **66** | **122.251** | ug/L | 2.016 | 1 | 40 | 46805 | 1 | KED |
| | **Zn** | **67** | **112.199** | ug/L | 2.697 | 2 | 3 | 7333 | 1 | KED |
| | **As** | **75** | **11.299** | ug/L | 0.229 | 2 | 5 | 2186 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 359585 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 100 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6035 | 1 | KED |
| | **Cd** | **111** | **10.763** | ug/L | 0.428 | 3 | 2 | 2354 | 2 | KED |
| | **Cd** | **114** | **10.472** | ug/L | 0.051 | 0 | 6 | 5569 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 515767 | 1 | Standard |
| | **Pb** | **208** | **33.474** | ug/L | 0.743 | 2 | 109 | 1434462 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0035-MSD2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:50:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 38200 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3305780 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 507760 | 1 | Standard |
| | **Cr** | **52** | **18.989** | ug/L | 0.239 | 1 | 16425 | 403464 | 2 | Standard |
| | **Cr** | **53** | **19.177** | ug/L | 0.198 | 1 | 102 | 45364 | 1 | Standard |
| | **Mn** | **55** | **126.628** | ug/L | 2.487 | 1 | 567 | 3710520 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21739 | 2 | KED |
| | **Ni** | **60** | **19.423** | ug/L | 0.589 | 3 | 20 | 18877 | 2 | KED |
| | **Ni** | **62** | **19.445** | ug/L | 0.250 | 1 | 7 | 3103 | 1 | KED |
| | **Cu** | **63** | **47.219** | ug/L | 0.743 | 1 | 30 | 136689 | 0 | KED |
| | **Cu** | **65** | **47.803** | ug/L | 0.325 | 0 | 24 | 68356 | 2 | KED |
| | **Zn** | **66** | **110.906** | ug/L | 2.740 | 2 | 40 | 42603 | 0 | KED |
| | **Zn** | **67** | **104.372** | ug/L | 0.788 | 0 | 3 | 6847 | 2 | KED |
| | **As** | **75** | **11.433** | ug/L | 0.269 | 2 | 5 | 2219 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 346328 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 99 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5908 | 2 | KED |
| | **Cd** | **111** | **10.936** | ug/L | 0.366 | 3 | 2 | 2341 | 1 | KED |
| | **Cd** | **114** | **10.925** | ug/L | 0.395 | 3 | 6 | 5683 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 511473 | 4 | Standard |
| | **Pb** | **208** | **32.254** | ug/L | 1.247 | 3 | 109 | 1369407 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0035-PS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 22:55:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 40597 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3372676 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 493028 | 5 | Standard |
| | **Cr** | **52** | **32.816** | ug/L | 1.248 | 3 | 16425 | 662415 | 2 | Standard |
| | **Cr** | **53** | **32.977** | ug/L | 1.155 | 3 | 102 | 75571 | 2 | Standard |
| | **Mn** | **55** | **143.695** | ug/L | 5.791 | 4 | 567 | 4081614 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22147 | 2 | KED |
| | **Ni** | **60** | **33.665** | ug/L | 0.675 | 2 | 20 | 33319 | 1 | KED |
| | **Ni** | **62** | **34.126** | ug/L | 1.096 | 3 | 7 | 5540 | 0 | KED |
| | **Cu** | **63** | **59.760** | ug/L | 1.464 | 2 | 30 | 176208 | 0 | KED |
| | **Cu** | **65** | **58.879** | ug/L | 2.549 | 4 | 24 | 85715 | 1 | KED |
| | **Zn** | **66** | **159.591** | ug/L | 3.387 | 2 | 40 | 62446 | 1 | KED |
| | **Zn** | **67** | **145.748** | ug/L | 4.209 | 2 | 3 | 9736 | 1 | KED |
| | **As** | **75** | **27.034** | ug/L | 0.535 | 1 | 5 | 5339 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 354766 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 93 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5998 | 1 | KED |
| | **Cd** | **111** | **26.090** | ug/L | 0.416 | 1 | 2 | 5670 | 1 | KED |
| | **Cd** | **114** | **26.836** | ug/L | 0.291 | 1 | 6 | 14171 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 497269 | 5 | Standard |
| | **Pb** | **208** | **49.898** | ug/L | 1.924 | 3 | 109 | 2059278 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-14**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:00:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 47045 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3385921 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 685268 | 1 | Standard |
| | **Cr** | **52** | **17.143** | ug/L | 0.182 | 1 | 16425 | 494085 | 0 | Standard |
| | **Cr** | **53** | **17.234** | ug/L | 0.104 | 0 | 102 | 55042 | 1 | Standard |
| | **Mn** | **55** | **190.275** | ug/L | 4.153 | 2 | 567 | 7522792 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21537 | 1 | KED |
| | **Ni** | **60** | **22.392** | ug/L | 0.505 | 2 | 20 | 21558 | 0 | KED |
| | **Ni** | **62** | **22.420** | ug/L | 1.356 | 6 | 7 | 3542 | 4 | KED |
| | **Cu** | **63** | **26.419** | ug/L | 0.610 | 2 | 30 | 75777 | 0 | KED |
| | **Cu** | **65** | **26.161** | ug/L | 0.468 | 1 | 24 | 37070 | 1 | KED |
| | **Zn** | **66** | **51.423** | ug/L | 1.774 | 3 | 40 | 19591 | 2 | KED |
| | **Zn** | **67** | **58.095** | ug/L | 4.014 | 6 | 3 | 3775 | 5 | KED |
| | **As** | **75** | **2.599** | ug/L | 0.149 | 5 | 5 | 504 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 614899 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 228 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6106 | 1 | KED |
| | **Cd** | **111** | **0.075** | ug/L | 0.024 | 32 | 2 | 18 | 28 | KED |
| | **Cd** | **114** | **0.070** | ug/L | 0.021 | 30 | 6 | 44 | 26 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 527436 | 2 | Standard |
| | **Pb** | **208** | **4.237** | ug/L | 0.141 | 3 | 109 | 185694 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-19**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:04:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 51540 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3417436 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 564025 | 1 | Standard |
| | **Cr** | **52** | **14.222** | ug/L | 0.329 | 2 | 16425 | 341054 | 1 | Standard |
| | **Cr** | **53** | **14.421** | ug/L | 0.326 | 2 | 102 | 37926 | 1 | Standard |
| | **Mn** | **55** | **216.875** | ug/L | 2.984 | 1 | 567 | 7057307 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21188 | 3 | KED |
| | **Ni** | **60** | **13.438** | ug/L | 0.171 | 1 | 20 | 12735 | 2 | KED |
| | **Ni** | **62** | **13.466** | ug/L | 0.205 | 1 | 7 | 2097 | 4 | KED |
| | **Cu** | **63** | **44.581** | ug/L | 1.445 | 3 | 30 | 125710 | 1 | KED |
| | **Cu** | **65** | **44.501** | ug/L | 1.227 | 2 | 24 | 61985 | 1 | KED |
| | **Zn** | **66** | **131.471** | ug/L | 2.034 | 1 | 40 | 49247 | 5 | KED |
| | **Zn** | **67** | **124.551** | ug/L | 3.138 | 2 | 3 | 7958 | 1 | KED |
| | **As** | **75** | **3.635** | ug/L | 0.097 | 2 | 5 | 691 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 460766 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 131 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5719 | 2 | KED |
| | **Cd** | **111** | **0.290** | ug/L | 0.013 | 4 | 2 | 62 | 4 | KED |
| | **Cd** | **114** | **0.264** | ug/L | 0.028 | 10 | 6 | 139 | 12 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 516331 | 2 | Standard |
| | **Pb** | **208** | **18.472** | ug/L | 0.421 | 2 | 109 | 792412 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-20**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:08:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 48665 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3418241 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 629297 | 1 | Standard |
| | **Cr** | **52** | **16.157** | ug/L | 0.154 | 0 | 16425 | 428984 | 0 | Standard |
| | **Cr** | **53** | **16.497** | ug/L | 0.022 | 0 | 102 | 48391 | 1 | Standard |
| | **Mn** | **55** | **304.586** | ug/L | 3.680 | 1 | 567 | 11057174 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21670 | 2 | KED |
| | **Ni** | **60** | **18.043** | ug/L | 0.081 | 0 | 20 | 17486 | 2 | KED |
| | **Ni** | **62** | **18.602** | ug/L | 0.486 | 2 | 7 | 2959 | 2 | KED |
| | **Cu** | **63** | **41.576** | ug/L | 0.481 | 1 | 30 | 119983 | 1 | KED |
| | **Cu** | **65** | **41.644** | ug/L | 0.583 | 1 | 24 | 59354 | 1 | KED |
| | **Zn** | **66** | **139.453** | ug/L | 3.679 | 2 | 40 | 53387 | 0 | KED |
| | **Zn** | **67** | **136.309** | ug/L | 2.978 | 2 | 3 | 8911 | 1 | KED |
| | **As** | **75** | **4.190** | ug/L | 0.060 | 1 | 5 | 814 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 559884 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 187 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5842 | 3 | KED |
| | **Cd** | **111** | **0.345** | ug/L | 0.071 | 20 | 2 | 74 | 19 | KED |
| | **Cd** | **114** | **0.248** | ug/L | 0.052 | 20 | 6 | 134 | 21 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 523748 | 4 | Standard |
| | **Pb** | **208** | **27.593** | ug/L | 1.163 | 4 | 109 | 1199697 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-21**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:13:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 49977 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3370637 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 598748 | 1 | Standard |
| | **Cr** | **52** | **15.427** | ug/L | 0.163 | 1 | 16425 | 390813 | 2 | Standard |
| | **Cr** | **53** | **15.516** | ug/L | 0.049 | 0 | 102 | 43314 | 1 | Standard |
| | **Mn** | **55** | **292.092** | ug/L | 2.013 | 0 | 567 | 10089737 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21885 | 2 | KED |
| | **Ni** | **60** | **18.065** | ug/L | 0.325 | 1 | 20 | 17678 | 1 | KED |
| | **Ni** | **62** | **17.753** | ug/L | 0.483 | 2 | 7 | 2852 | 1 | KED |
| | **Cu** | **63** | **29.005** | ug/L | 0.782 | 2 | 30 | 84544 | 2 | KED |
| | **Cu** | **65** | **28.871** | ug/L | 0.678 | 2 | 24 | 41558 | 0 | KED |
| | **Zn** | **66** | **127.421** | ug/L | 3.498 | 2 | 40 | 49268 | 1 | KED |
| | **Zn** | **67** | **122.468** | ug/L | 4.460 | 3 | 3 | 8083 | 1 | KED |
| | **As** | **75** | **3.292** | ug/L | 0.078 | 2 | 5 | 647 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 520524 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 174 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6022 | 2 | KED |
| | **Cd** | **111** | **0.200** | ug/L | 0.026 | 12 | 2 | 45 | 9 | KED |
| | **Cd** | **114** | **0.187** | ug/L | 0.028 | 15 | 6 | 105 | 13 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 515472 | 2 | Standard |
| | **Pb** | **208** | **18.841** | ug/L | 0.627 | 3 | 109 | 806722 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVA**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:20:17**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 30212 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3551990 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 429622 | 419381 | 2 | Standard |
| \| | **Cr** | **52** | **50.352** | ug/L | 0.880 | 1 | 16425 | 856958 | 1 | Standard |
| \| | **Cr** | **53** | **50.200** | ug/L | 0.153 | 0 | 102 | 97928 | 1 | Standard |
| ⌊ | **Mn** | **55** | **50.613** | ug/L | 0.637 | 1 | 567 | 1224861 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 22652 | 21189 | 1 | KED |
| \| | **Ni** | **60** | **50.310** | ug/L | 1.260 | 2 | 20 | 47635 | 1 | KED |
| \| | **Ni** | **62** | **49.288** | ug/L | 0.553 | 1 | 7 | 7656 | 1 | KED |
| \| | **Cu** | **63** | **49.978** | ug/L | 0.477 | 0 | 30 | 141036 | 0 | KED |
| \| | **Cu** | **65** | **49.692** | ug/L | 0.477 | 0 | 24 | 69255 | 0 | KED |
| \| | **Zn** | **66** | **49.994** | ug/L | 1.216 | 2 | 40 | 18748 | 3 | KED |
| \| | **Zn** | **67** | **49.241** | ug/L | 0.933 | 1 | 3 | 3150 | 1 | KED |
| ⌊ | **As** | **75** | **49.268** | ug/L | 0.469 | 0 | 5 | 9307 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 204002 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 70 | 9 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6222 | 5743 | 1 | KED |
| \| | **Cd** | **111** | **50.781** | ug/L | 1.134 | 2 | 2 | 10566 | 1 | KED |
| ⌊ | **Cd** | **114** | **51.216** | ug/L | 1.216 | 2 | 6 | 25889 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 498579 | 487080 | 4 | Standard |
| ⌊ | **Pb** | **208** | **51.990** | ug/L | 2.142 | 4 | 109 | 2101826 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBA**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:27:25**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 30670 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3321596 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 432054 | 3 | Standard |
| | **Cr** | **52** | **-0.008** | ug/L | 0.016 | 207 | 16425 | 16384 | 3 | Standard |
| | **Cr** | **53** | **-0.006** | ug/L | 0.002 | 29 | 102 | 91 | 1 | Standard |
| | **Mn** | **55** | **0.001** | ug/L | 0.002 | 180 | 567 | 594 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21902 | 2 | KED |
| | **Ni** | **60** | **-0.002** | ug/L | 0.005 | 300 | 20 | 17 | 26 | KED |
| | **Ni** | **62** | **-0.030** | ug/L | 0.007 | 24 | 7 | 2 | 43 | KED |
| | **Cu** | **63** | **0.001** | ug/L | 0.005 | 408 | 30 | 33 | 43 | KED |
| | **Cu** | **65** | **-0.004** | ug/L | 0.002 | 57 | 24 | 17 | 19 | KED |
| | **Zn** | **66** | **-0.018** | ug/L | 0.017 | 96 | 40 | 32 | 17 | KED |
| | **Zn** | **67** | **0.040** | ug/L | 0.091 | 227 | 3 | 6 | 96 | KED |
| | **As** | **75** | **0.001** | ug/L | 0.007 | 626 | 5 | 5 | 20 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 205788 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 50 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6189 | 2 | KED |
| | **Cd** | **111** | **0.000** | ug/L | 0.003 | 3125 | 2 | 2 | 24 | KED |
| | **Cd** | **114** | **-0.011** | ug/L | 0.002 | 20 | 6 | 1 | 106 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 481385 | 5 | Standard |
| | **Pb** | **208** | **0.001** | ug/L | 0.000 | 70 | 109 | 132 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0516-01**
**Sample Dil Factor: 10**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:31:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 126290 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3454727 | 5 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 418378 | 9 | Standard |
| | **Cr** | **52** | **75.268** | ug/L | 3.264 | 4 | 16425 | 1266804 | 5 | Standard |
| | **Cr** | **53** | **74.725** | ug/L | 3.083 | 4 | 102 | 144995 | 5 | Standard |
| | **Mn** | **55** | **14.440** | ug/L | 0.534 | 3 | 567 | 348285 | 6 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21749 | 0 | KED |
| | **Ni** | **60** | **1.755** | ug/L | 0.054 | 3 | 20 | 1724 | 2 | KED |
| | **Ni** | **62** | **1.664** | ug/L | 0.111 | 6 | 7 | 272 | 6 | KED |
| | **Cu** | **63** | **3.591** | ug/L | 0.047 | 1 | 30 | 10428 | 1 | KED |
| | **Cu** | **65** | **3.646** | ug/L | 0.108 | 2 | 24 | 5238 | 3 | KED |
| | **Zn** | **66** | **281.671** | ug/L | 1.980 | 0 | 40 | 108232 | 0 | KED |
| | **Zn** | **67** | **255.077** | ug/L | 1.242 | 0 | 3 | 16737 | 0 | KED |
| | **As** | **75** | **0.097** | ug/L | 0.016 | 16 | 5 | 24 | 12 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 205690 | 8 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 57 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6083 | 1 | KED |
| | **Cd** | **111** | **1.673** | ug/L | 0.043 | 2 | 2 | 370 | 1 | KED |
| | **Cd** | **114** | **1.728** | ug/L | 0.037 | 2 | 6 | 931 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 480759 | 10 | Standard |
| | **Pb** | **208** | **0.293** | ug/L | 0.022 | 7 | 109 | 11740 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:36:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 31900 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3492233 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 409879 | 1 | Standard |
| | **Cr** | **52** | **0.053** | ug/L | 0.038 | 71 | 16425 | 16528 | 2 | Standard |
| | **Cr** | **53** | **0.005** | ug/L | 0.004 | 69 | 102 | 107 | 8 | Standard |
| | **Mn** | **55** | **0.007** | ug/L | 0.001 | 11 | 567 | 697 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 20922 | 2 | KED |
| | **Ni** | **60** | **-0.009** | ug/L | 0.001 | 16 | 20 | 10 | 10 | KED |
| | **Ni** | **62** | **-0.005** | ug/L | 0.006 | 141 | 7 | 6 | 17 | KED |
| | **Cu** | **63** | **0.004** | ug/L | 0.001 | 29 | 30 | 38 | 10 | KED |
| | **Cu** | **65** | **-0.006** | ug/L | 0.003 | 57 | 24 | 14 | 32 | KED |
| | **Zn** | **66** | **0.017** | ug/L | 0.016 | 95 | 40 | 43 | 15 | KED |
| | **Zn** | **67** | **0.065** | ug/L | 0.033 | 50 | 3 | 7 | 25 | KED |
| | **As** | **75** | **0.001** | ug/L | 0.003 | 408 | 5 | 5 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 203292 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 36 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5742 | 1 | KED |
| | **Cd** | **111** | **0.002** | ug/L | 0.005 | 228 | 2 | 2 | 43 | KED |
| | **Cd** | **114** | **-0.008** | ug/L | 0.002 | 26 | 6 | 2 | 42 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 472001 | 3 | Standard |
| | **Pb** | **208** | **0.003** | ug/L | 0.001 | 23 | 109 | 206 | 8 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-SRL2**
**Sample Dil Factor: 250**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:40:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 32649 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3253034 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 425265 | 2 | Standard |
| | **Cr** | **52** | **1.020** | ug/L | 0.057 | 5 | 16425 | 33527 | 0 | Standard |
| | **Cr** | **53** | **1.047** | ug/L | 0.050 | 4 | 102 | 2168 | 2 | Standard |
| | **Mn** | **55** | **16.483** | ug/L | 0.400 | 2 | 567 | 404781 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21135 | 2 | KED |
| | **Ni** | **60** | **1.249** | ug/L | 0.076 | 6 | 20 | 1198 | 6 | KED |
| | **Ni** | **62** | **1.369** | ug/L | 0.016 | 1 | 7 | 219 | 3 | KED |
| | **Cu** | **63** | **2.217** | ug/L | 0.146 | 6 | 30 | 6266 | 5 | KED |
| | **Cu** | **65** | **2.332** | ug/L | 0.053 | 2 | 24 | 3263 | 2 | KED |
| | **Zn** | **66** | **8.665** | ug/L | 0.286 | 3 | 40 | 3270 | 1 | KED |
| | **Zn** | **67** | **9.194** | ug/L | 0.677 | 7 | 3 | 589 | 5 | KED |
| | **As** | **75** | **0.351** | ug/L | 0.048 | 13 | 5 | 71 | 12 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 227322 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 49 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5764 | 2 | KED |
| | **Cd** | **111** | **0.020** | ug/L | 0.013 | 65 | 2 | 6 | 45 | KED |
| | **Cd** | **114** | **0.007** | ug/L | 0.005 | 65 | 6 | 9 | 21 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 479840 | 4 | Standard |
| | **Pb** | **208** | **1.033** | ug/L | 0.041 | 3 | 109 | 41262 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0188-20**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:44:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 35033 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3290985 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 460960 | 3 | Standard |
| | **Cr** | **52** | **4.655** | ug/L | 0.147 | 3 | 16425 | 103020 | 1 | Standard |
| | **Cr** | **53** | **4.734** | ug/L | 0.129 | 2 | 102 | 10245 | 2 | Standard |
| | **Mn** | **55** | **73.655** | ug/L | 1.474 | 2 | 567 | 1958308 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21056 | 0 | KED |
| | **Ni** | **60** | **6.295** | ug/L | 0.208 | 3 | 20 | 5940 | 3 | KED |
| | **Ni** | **62** | **6.385** | ug/L | 0.212 | 3 | 7 | 991 | 3 | KED |
| | **Cu** | **63** | **10.561** | ug/L | 0.269 | 2 | 30 | 29640 | 2 | KED |
| | **Cu** | **65** | **10.862** | ug/L | 0.403 | 3 | 24 | 15061 | 3 | KED |
| | **Zn** | **66** | **41.147** | ug/L | 0.658 | 1 | 40 | 15339 | 1 | KED |
| | **Zn** | **67** | **39.417** | ug/L | 0.431 | 1 | 3 | 2506 | 0 | KED |
| | **As** | **75** | **1.738** | ug/L | 0.078 | 4 | 5 | 331 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 316930 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 67 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5954 | 1 | KED |
| | **Cd** | **111** | **0.076** | ug/L | 0.008 | 10 | 2 | 18 | 7 | KED |
| | **Cd** | **114** | **0.036** | ug/L | 0.018 | 49 | 6 | 25 | 37 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 497293 | 3 | Standard |
| | **Pb** | **208** | **4.808** | ug/L | 0.170 | 3 | 109 | 198630 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-DUP2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:49:16**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 35797 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3347294 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 459784 | 2 | Standard |
| | **Cr** | **52** | **4.687** | ug/L | 0.074 | 1 | 16425 | 103402 | 1 | Standard |
| | **Cr** | **53** | **4.694** | ug/L | 0.242 | 5 | 102 | 10129 | 2 | Standard |
| | **Mn** | **55** | **67.591** | ug/L | 1.759 | 2 | 567 | 1792809 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 20840 | 1 | KED |
| | **Ni** | **60** | **5.902** | ug/L | 0.233 | 3 | 20 | 5511 | 2 | KED |
| | **Ni** | **62** | **5.724** | ug/L | 0.104 | 1 | 7 | 880 | 0 | KED |
| | **Cu** | **63** | **9.320** | ug/L | 0.277 | 2 | 30 | 25885 | 1 | KED |
| | **Cu** | **65** | **9.390** | ug/L | 0.165 | 1 | 24 | 12890 | 2 | KED |
| | **Zn** | **66** | **34.822** | ug/L | 0.615 | 1 | 40 | 12851 | 0 | KED |
| | **Zn** | **67** | **33.653** | ug/L | 1.167 | 3 | 3 | 2118 | 2 | KED |
| | **As** | **75** | **1.178** | ug/L | 0.060 | 5 | 5 | 224 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 306749 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 53 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5876 | 1 | KED |
| | **Cd** | **111** | **0.060** | ug/L | 0.030 | 49 | 2 | 14 | 43 | KED |
| | **Cd** | **114** | **0.048** | ug/L | 0.003 | 5 | 6 | 31 | 3 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 496358 | 3 | Standard |
| | **Pb** | **208** | **4.089** | ug/L | 0.201 | 4 | 109 | 168581 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-MS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:53:38**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 32912 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3334208 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 460075 | 0 | Standard |
| | **Cr** | **52** | **14.502** | ug/L | 0.227 | 1 | 16425 | 283308 | 0 | Standard |
| | **Cr** | **53** | **14.394** | ug/L | 0.123 | 0 | 102 | 30880 | 0 | Standard |
| | **Mn** | **55** | **85.617** | ug/L | 0.808 | 0 | 567 | 2272998 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22261 | 0 | KED |
| | **Ni** | **60** | **17.596** | ug/L | 0.226 | 1 | 20 | 17518 | 1 | KED |
| | **Ni** | **62** | **17.788** | ug/L | 0.481 | 2 | 7 | 2907 | 2 | KED |
| | **Cu** | **63** | **23.105** | ug/L | 0.450 | 1 | 30 | 68515 | 1 | KED |
| | **Cu** | **65** | **23.387** | ug/L | 0.390 | 1 | 24 | 34259 | 1 | KED |
| | **Zn** | **66** | **73.872** | ug/L | 0.615 | 0 | 40 | 29080 | 0 | KED |
| | **Zn** | **67** | **68.976** | ug/L | 2.399 | 3 | 3 | 4634 | 2 | KED |
| | **As** | **75** | **10.929** | ug/L | 0.298 | 2 | 5 | 2173 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 321571 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 80 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6050 | 2 | KED |
| | **Cd** | **111** | **10.585** | ug/L | 0.306 | 2 | 2 | 2321 | 0 | KED |
| | **Cd** | **114** | **10.567** | ug/L | 0.408 | 3 | 6 | 5630 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 489777 | 2 | Standard |
| | **Pb** | **208** | **16.220** | ug/L | 0.252 | 1 | 109 | 660173 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-MSD2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Monday, January 09, 2023 23:58:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 36814 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3384829 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 485303 | 2 | Standard |
| | **Cr** | **52** | **15.001** | ug/L | 0.399 | 2 | 16425 | 308396 | 0 | Standard |
| | **Cr** | **53** | **15.038** | ug/L | 0.548 | 3 | 102 | 34013 | 1 | Standard |
| | **Mn** | **55** | **85.300** | ug/L | 2.050 | 2 | 567 | 2387898 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 20951 | 1 | KED |
| | **Ni** | **60** | **17.724** | ug/L | 0.140 | 0 | 20 | 16607 | 1 | KED |
| | **Ni** | **62** | **17.576** | ug/L | 0.488 | 2 | 7 | 2704 | 3 | KED |
| | **Cu** | **63** | **21.632** | ug/L | 0.349 | 1 | 30 | 60372 | 1 | KED |
| | **Cu** | **65** | **21.864** | ug/L | 0.938 | 4 | 24 | 30129 | 2 | KED |
| | **Zn** | **66** | **93.011** | ug/L | 0.536 | 0 | 40 | 34452 | 1 | KED |
| | **Zn** | **67** | **87.834** | ug/L | 1.832 | 2 | 3 | 5552 | 0 | KED |
| | **As** | **75** | **10.987** | ug/L | 0.175 | 1 | 5 | 2056 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 341865 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 95 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5681 | 1 | KED |
| | **Cd** | **111** | **10.926** | ug/L | 0.240 | 2 | 2 | 2250 | 1 | KED |
| | **Cd** | **114** | **10.884** | ug/L | 0.257 | 2 | 6 | 5447 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 513014 | 3 | Standard |
| | **Pb** | **208** | **15.431** | ug/L | 0.552 | 3 | 109 | 657413 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-PS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:02:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 34964 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3410599 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 471137 | 4 | Standard |
| | **Cr** | **52** | **28.571** | ug/L | 0.438 | 1 | 16425 | 553986 | 3 | Standard |
| | **Cr** | **53** | **28.824** | ug/L | 0.722 | 2 | 102 | 63172 | 2 | Standard |
| | **Mn** | **55** | **98.487** | ug/L | 1.472 | 1 | 567 | 2676206 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22225 | 0 | KED |
| | **Ni** | **60** | **33.168** | ug/L | 0.412 | 1 | 20 | 32952 | 1 | KED |
| | **Ni** | **62** | **32.724** | ug/L | 0.076 | 0 | 7 | 5334 | 1 | KED |
| | **Cu** | **63** | **37.813** | ug/L | 0.889 | 2 | 30 | 111950 | 2 | KED |
| | **Cu** | **65** | **37.570** | ug/L | 0.919 | 2 | 24 | 54941 | 3 | KED |
| | **Zn** | **66** | **127.206** | ug/L | 0.351 | 0 | 40 | 49970 | 1 | KED |
| | **Zn** | **67** | **116.589** | ug/L | 2.888 | 2 | 3 | 7819 | 2 | KED |
| | **As** | **75** | **27.269** | ug/L | 0.153 | 0 | 5 | 5406 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 328580 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 61 | 34 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6056 | 0 | KED |
| | **Cd** | **111** | **26.468** | ug/L | 0.294 | 1 | 2 | 5809 | 1 | KED |
| | **Cd** | **114** | **26.604** | ug/L | 0.576 | 2 | 6 | 14186 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 500325 | 5 | Standard |
| | **Pb** | **208** | **32.342** | ug/L | 1.456 | 4 | 109 | 1342547 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0080-SRM2**
**Sample Dil Factor: 100**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:06:41**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 35447 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3348515 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 447131 | 1 | Standard |
| | **Cr** | **52** | **49.665** | ug/L | 0.304 | 0 | 16425 | 901623 | 1 | Standard |
| | **Cr** | **53** | **50.854** | ug/L | 0.480 | 0 | 102 | 105764 | 0 | Standard |
| | **Mn** | **55** | **121.689** | ug/L | 1.435 | 1 | 567 | 3139587 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21066 | 1 | KED |
| | **Ni** | **60** | **80.835** | ug/L | 2.018 | 2 | 20 | 76082 | 1 | KED |
| | **Ni** | **62** | **79.740** | ug/L | 1.739 | 2 | 7 | 12310 | 2 | KED |
| | **Cu** | **63** | **33.104** | ug/L | 0.818 | 2 | 30 | 92880 | 2 | KED |
| | **Cu** | **65** | **32.435** | ug/L | 0.364 | 1 | 24 | 44951 | 1 | KED |
| | **Zn** | **66** | **37.528** | ug/L | 0.917 | 2 | 40 | 13996 | 1 | KED |
| | **Zn** | **67** | **40.835** | ug/L | 0.481 | 1 | 3 | 2598 | 2 | KED |
| | **As** | **75** | **19.282** | ug/L | 0.217 | 1 | 5 | 3625 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 277281 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 57 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5979 | 0 | KED |
| | **Cd** | **111** | **36.909** | ug/L | 0.575 | 1 | 2 | 7996 | 1 | KED |
| | **Cd** | **114** | **37.227** | ug/L | 0.378 | 1 | 6 | 19594 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 510486 | 3 | Standard |
| | **Pb** | **208** | **62.318** | ug/L | 2.363 | 3 | 109 | 2641194 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL7**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:11:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 33038 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3265330 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 429622 | 418822 | 1 | Standard |
| \| | **Cr** | **52** | **-0.007** | ug/L | 0.019 | 282 | 16425 | 15899 | 2 | Standard |
| \| | **Cr** | **53** | **-0.002** | ug/L | 0.003 | 170 | 102 | 96 | 4 | Standard |
| ⌊ | **Mn** | **55** | **0.008** | ug/L | 0.001 | 12 | 567 | 740 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 22652 | 21130 | 3 | KED |
| \| | **Ni** | **60** | **-0.011** | ug/L | 0.003 | 29 | 20 | 8 | 35 | KED |
| \| | **Ni** | **62** | **-0.025** | ug/L | 0.007 | 26 | 7 | 3 | 34 | KED |
| \| | **Cu** | **63** | **0.009** | ug/L | 0.003 | 27 | 30 | 53 | 11 | KED |
| \| | **Cu** | **65** | **0.006** | ug/L | 0.004 | 70 | 24 | 30 | 21 | KED |
| \| | **Zn** | **66** | **0.020** | ug/L | 0.019 | 95 | 40 | 45 | 12 | KED |
| \| | **Zn** | **67** | **0.015** | ug/L | 0.077 | 501 | 3 | 4 | 107 | KED |
| ⌊ | **As** | **75** | **-0.001** | ug/L | 0.014 | 1141 | 5 | 5 | 48 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 206765 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 49 | 19 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6222 | 5914 | 1 | KED |
| \| | **Cd** | **111** | **-0.001** | ug/L | 0.005 | 507 | 2 | 1 | 50 | KED |
| ⌊ | **Cd** | **114** | **-0.006** | ug/L | 0.004 | 70 | 6 | 3 | 57 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 498579 | 474330 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.006** | ug/L | 0.001 | 13 | 109 | 322 | 12 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVB**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:15:28**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 31549 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3523562 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 415244 | 3 | Standard |
| | **Cr** | **52** | **50.902** | ug/L | 0.792 | 1 | 16425 | 857459 | 2 | Standard |
| | **Cr** | **53** | **50.076** | ug/L | 1.593 | 3 | 102 | 96651 | 1 | Standard |
| | **Mn** | **55** | **51.084** | ug/L | 0.995 | 1 | 567 | 1223740 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21010 | 2 | KED |
| | **Ni** | **60** | **50.376** | ug/L | 1.711 | 3 | 20 | 47281 | 2 | KED |
| | **Ni** | **62** | **51.105** | ug/L | 2.184 | 4 | 7 | 7866 | 2 | KED |
| | **Cu** | **63** | **49.628** | ug/L | 1.217 | 2 | 30 | 138831 | 1 | KED |
| | **Cu** | **65** | **49.448** | ug/L | 0.855 | 1 | 24 | 68323 | 1 | KED |
| | **Zn** | **66** | **51.617** | ug/L | 1.455 | 2 | 40 | 19182 | 1 | KED |
| | **Zn** | **67** | **49.608** | ug/L | 0.941 | 1 | 3 | 3146 | 1 | KED |
| | **As** | **75** | **49.810** | ug/L | 1.132 | 2 | 5 | 9328 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 208760 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 55 | 24 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5663 | 0 | KED |
| | **Cd** | **111** | **50.579** | ug/L | 1.079 | 2 | 2 | 10380 | 2 | KED |
| | **Cd** | **114** | **51.126** | ug/L | 0.563 | 1 | 6 | 25490 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 480987 | 4 | Standard |
| | **Pb** | **208** | **52.441** | ug/L | 1.187 | 2 | 109 | 2094890 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBB**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:22:35**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 29608 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3285009 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 429622 | 397909 | 0 | Standard |
| \| | **Cr** | **52** | **-0.002** | ug/L | 0.018 | 788 | 16425 | 15176 | 1 | Standard |
| \| | **Cr** | **53** | **-0.008** | ug/L | 0.003 | 36 | 102 | 80 | 6 | Standard |
| ⌊ | **Mn** | **55** | **-0.001** | ug/L | 0.001 | 126 | 567 | 501 | 6 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 22652 | 20223 | 3 | KED |
| \| | **Ni** | **60** | **-0.009** | ug/L | 0.001 | 13 | 20 | 10 | 10 | KED |
| \| | **Ni** | **62** | **-0.012** | ug/L | 0.019 | 155 | 7 | 5 | 57 | KED |
| \| | **Cu** | **63** | **0.000** | ug/L | 0.003 | 1022 | 30 | 27 | 27 | KED |
| \| | **Cu** | **65** | **-0.004** | ug/L | 0.007 | 172 | 24 | 16 | 53 | KED |
| \| | **Zn** | **66** | **-0.023** | ug/L | 0.010 | 41 | 40 | 27 | 10 | KED |
| \| | **Zn** | **67** | **0.018** | ug/L | 0.021 | 117 | 3 | 4 | 24 | KED |
| ⌊ | **As** | **75** | **0.002** | ug/L | 0.020 | 815 | 5 | 5 | 62 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 194885 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 38 | 15 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6222 | 5602 | 2 | KED |
| \| | **Cd** | **111** | **0.003** | ug/L | 0.007 | 265 | 2 | 2 | 57 | KED |
| ⌊ | **Cd** | **114** | **-0.010** | ug/L | 0.002 | 22 | 6 | 1 | 86 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 498579 | 452147 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.000** | ug/L | 0.000 | 111 | 109 | 111 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0683-SRL2**
**Sample Dil Factor: 250**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:26:59**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 34922 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3348788 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 429622 | 449099 | 0 | Standard |
| \| | **Cr** | **52** | **1.330** | ug/L | 0.039 | 2 | 16425 | 40962 | 2 | Standard |
| \| | **Cr** | **53** | **1.358** | ug/L | 0.030 | 2 | 102 | 2940 | 1 | Standard |
| ⌊ | **Mn** | **55** | **29.261** | ug/L | 0.539 | 1 | 567 | 758777 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 22652 | 20964 | 1 | KED |
| \| | **Ni** | **60** | **1.621** | ug/L | 0.083 | 5 | 20 | 1536 | 4 | KED |
| \| | **Ni** | **62** | **1.623** | ug/L | 0.156 | 9 | 7 | 256 | 10 | KED |
| \| | **Cu** | **63** | **2.921** | ug/L | 0.066 | 2 | 30 | 8182 | 1 | KED |
| \| | **Cu** | **65** | **3.025** | ug/L | 0.092 | 3 | 24 | 4192 | 2 | KED |
| \| | **Zn** | **66** | **12.272** | ug/L | 0.389 | 3 | 40 | 4581 | 3 | KED |
| \| | **Zn** | **67** | **12.200** | ug/L | 1.184 | 9 | 3 | 774 | 8 | KED |
| ⌊ | **As** | **75** | **0.295** | ug/L | 0.013 | 4 | 5 | 60 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 243670 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 61 | 6 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6222 | 5749 | 3 | KED |
| \| | **Cd** | **111** | **0.030** | ug/L | 0.013 | 44 | 2 | 8 | 35 | KED |
| ⌊ | **Cd** | **114** | **0.035** | ug/L | 0.006 | 16 | 6 | 23 | 12 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 498579 | 500269 | 4 | Standard |
| ⌊ | **Pb** | **208** | **1.550** | ug/L | 0.043 | 2 | 109 | 64498 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22J0097-31**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:31:22**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 39535 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3356703 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 479478 | 1 | Standard |
| | **Cr** | **52** | **5.988** | ug/L | 0.067 | 1 | 16425 | 132683 | 1 | Standard |
| | **Cr** | **53** | **6.005** | ug/L | 0.103 | 1 | 102 | 13494 | 2 | Standard |
| | **Mn** | **55** | **126.181** | ug/L | 2.053 | 1 | 567 | 3491219 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 20909 | 2 | KED |
| | **Ni** | **60** | **8.197** | ug/L | 0.089 | 1 | 20 | 7674 | 1 | KED |
| | **Ni** | **62** | **8.210** | ug/L | 0.344 | 4 | 7 | 1263 | 1 | KED |
| | **Cu** | **63** | **14.457** | ug/L | 0.350 | 2 | 30 | 40263 | 0 | KED |
| | **Cu** | **65** | **14.441** | ug/L | 0.055 | 0 | 24 | 19879 | 2 | KED |
| | **Zn** | **66** | **59.092** | ug/L | 2.281 | 3 | 40 | 21843 | 1 | KED |
| | **Zn** | **67** | **55.515** | ug/L | 1.719 | 3 | 3 | 3504 | 3 | KED |
| | **As** | **75** | **1.308** | ug/L | 0.060 | 4 | 5 | 249 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 322274 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 73 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5662 | 1 | KED |
| | **Cd** | **111** | **0.148** | ug/L | 0.014 | 9 | 2 | 32 | 10 | KED |
| | **Cd** | **114** | **0.138** | ug/L | 0.041 | 29 | 6 | 74 | 25 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 494083 | 4 | Standard |
| | **Pb** | **208** | **7.331** | ug/L | 0.314 | 4 | 109 | 300671 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0683-DUP2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:35:45**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 41675 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3408444 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 483118 | 3 | Standard |
| | **Cr** | **52** | **6.064** | ug/L | 0.060 | 0 | 16425 | 135147 | 2 | Standard |
| | **Cr** | **53** | **6.182** | ug/L | 0.042 | 0 | 102 | 13992 | 3 | Standard |
| | **Mn** | **55** | **134.781** | ug/L | 1.835 | 1 | 567 | 3756019 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21760 | 0 | KED |
| | **Ni** | **60** | **7.953** | ug/L | 0.084 | 1 | 20 | 7751 | 1 | KED |
| | **Ni** | **62** | **7.725** | ug/L | 0.349 | 4 | 7 | 1238 | 4 | KED |
| | **Cu** | **63** | **14.760** | ug/L | 0.041 | 0 | 30 | 42799 | 0 | KED |
| | **Cu** | **65** | **15.084** | ug/L | 0.311 | 2 | 24 | 21608 | 2 | KED |
| | **Zn** | **66** | **60.944** | ug/L | 1.187 | 1 | 40 | 23461 | 2 | KED |
| | **Zn** | **67** | **59.377** | ug/L | 1.213 | 2 | 3 | 3900 | 2 | KED |
| | **As** | **75** | **1.547** | ug/L | 0.061 | 3 | 5 | 305 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 332178 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 74 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 6094 | 2 | KED |
| | **Cd** | **111** | **0.128** | ug/L | 0.010 | 7 | 2 | 30 | 9 | KED |
| | **Cd** | **114** | **0.127** | ug/L | 0.011 | 8 | 6 | 75 | 5 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 502605 | 2 | Standard |
| | **Pb** | **208** | **7.113** | ug/L | 0.179 | 2 | 109 | 297064 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0683-MS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:40:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 40716 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3511424 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 504591 | 1 | Standard |
| | **Cr** | **52** | **16.094** | ug/L | 0.104 | 0 | 16425 | 342721 | 1 | Standard |
| | **Cr** | **53** | **16.277** | ug/L | 0.403 | 2 | 102 | 38275 | 1 | Standard |
| | **Mn** | **55** | **135.860** | ug/L | 2.804 | 2 | 567 | 3954824 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 22057 | 0 | KED |
| | **Ni** | **60** | **18.688** | ug/L | 0.479 | 2 | 20 | 18433 | 2 | KED |
| | **Ni** | **62** | **18.273** | ug/L | 0.076 | 0 | 7 | 2959 | 0 | KED |
| | **Cu** | **63** | **24.922** | ug/L | 0.315 | 1 | 30 | 73229 | 1 | KED |
| | **Cu** | **65** | **25.258** | ug/L | 0.179 | 0 | 24 | 36659 | 0 | KED |
| | **Zn** | **66** | **90.053** | ug/L | 0.819 | 0 | 40 | 35118 | 0 | KED |
| | **Zn** | **67** | **83.877** | ug/L | 2.281 | 2 | 3 | 5583 | 2 | KED |
| | **As** | **75** | **11.217** | ug/L | 0.121 | 1 | 5 | 2210 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 349782 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 86 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5892 | 0 | KED |
| | **Cd** | **111** | **10.592** | ug/L | 0.146 | 1 | 2 | 2263 | 0 | KED |
| | **Cd** | **114** | **10.765** | ug/L | 0.086 | 0 | 6 | 5588 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 515423 | 4 | Standard |
| | **Pb** | **208** | **17.577** | ug/L | 0.477 | 2 | 109 | 752437 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0683-MSD2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:44:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 39126 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3486444 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 482324 | 2 | Standard |
| | **Cr** | **52** | **15.556** | ug/L | 0.284 | 1 | 16425 | 317229 | 2 | Standard |
| | **Cr** | **53** | **15.536** | ug/L | 0.343 | 2 | 102 | 34926 | 1 | Standard |
| | **Mn** | **55** | **134.850** | ug/L | 1.275 | 0 | 567 | 3753412 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21584 | 3 | KED |
| | **Ni** | **60** | **18.719** | ug/L | 1.065 | 5 | 20 | 18043 | 2 | KED |
| | **Ni** | **62** | **18.213** | ug/L | 0.565 | 3 | 7 | 2884 | 1 | KED |
| | **Cu** | **63** | **23.531** | ug/L | 1.141 | 4 | 30 | 67586 | 1 | KED |
| | **Cu** | **65** | **23.837** | ug/L | 0.672 | 2 | 24 | 33833 | 0 | KED |
| | **Zn** | **66** | **86.113** | ug/L | 1.343 | 1 | 40 | 32852 | 2 | KED |
| | **Zn** | **67** | **82.952** | ug/L | 3.165 | 3 | 3 | 5399 | 0 | KED |
| | **As** | **75** | **10.761** | ug/L | 0.444 | 4 | 5 | 2073 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 330446 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 88 | 25 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5946 | 3 | KED |
| | **Cd** | **111** | **10.366** | ug/L | 0.442 | 4 | 2 | 2232 | 0 | KED |
| | **Cd** | **114** | **10.383** | ug/L | 0.401 | 3 | 6 | 5435 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 498626 | 5 | Standard |
| | **Pb** | **208** | **17.243** | ug/L | 0.649 | 3 | 109 | 713675 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0683-PS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:48:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 39631 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3480784 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 475060 | 3 | Standard |
| | **Cr** | **52** | **29.015** | ug/L | 0.275 | 0 | 16425 | 567116 | 2 | Standard |
| | **Cr** | **53** | **29.339** | ug/L | 0.944 | 3 | 102 | 64838 | 0 | Standard |
| | **Mn** | **55** | **148.145** | ug/L | 2.566 | 1 | 567 | 4059387 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21218 | 3 | KED |
| | **Ni** | **60** | **34.525** | ug/L | 2.219 | 6 | 20 | 32700 | 3 | KED |
| | **Ni** | **62** | **33.620** | ug/L | 2.261 | 6 | 7 | 5224 | 3 | KED |
| | **Cu** | **63** | **40.486** | ug/L | 0.677 | 1 | 30 | 114374 | 2 | KED |
| | **Cu** | **65** | **40.412** | ug/L | 1.213 | 3 | 24 | 56368 | 1 | KED |
| | **Zn** | **66** | **140.509** | ug/L | 5.328 | 3 | 40 | 52641 | 0 | KED |
| | **Zn** | **67** | **127.382** | ug/L | 4.135 | 3 | 3 | 8149 | 0 | KED |
| | **As** | **75** | **26.881** | ug/L | 0.424 | 1 | 5 | 5086 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 323490 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 71 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5889 | 1 | KED |
| | **Cd** | **111** | **26.119** | ug/L | 0.324 | 1 | 2 | 5574 | 1 | KED |
| | **Cd** | **114** | **25.931** | ug/L | 0.461 | 1 | 6 | 13443 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 489147 | 3 | Standard |
| | **Pb** | **208** | **34.790** | ug/L | 1.298 | 3 | 109 | 1413058 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-22**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:53:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 46647 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3405859 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 594943 | 1 | Standard |
| | **Cr** | **52** | **15.424** | ug/L | 0.093 | 0 | 16425 | 388245 | 1 | Standard |
| | **Cr** | **53** | **15.517** | ug/L | 0.102 | 0 | 102 | 43042 | 1 | Standard |
| | **Mn** | **55** | **249.521** | ug/L | 2.460 | 0 | 567 | 8564244 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21286 | 3 | KED |
| | **Ni** | **60** | **18.460** | ug/L | 0.346 | 1 | 20 | 17569 | 2 | KED |
| | **Ni** | **62** | **18.434** | ug/L | 0.495 | 2 | 7 | 2882 | 5 | KED |
| | **Cu** | **63** | **24.700** | ug/L | 0.423 | 1 | 30 | 70032 | 3 | KED |
| | **Cu** | **65** | **24.571** | ug/L | 0.725 | 2 | 24 | 34400 | 2 | KED |
| | **Zn** | **66** | **101.763** | ug/L | 1.283 | 1 | 40 | 38282 | 2 | KED |
| | **Zn** | **67** | **101.524** | ug/L | 3.165 | 3 | 3 | 6525 | 6 | KED |
| | **As** | **75** | **2.650** | ug/L | 0.046 | 1 | 5 | 508 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 486889 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 164 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5878 | 1 | KED |
| | **Cd** | **111** | **0.097** | ug/L | 0.012 | 12 | 2 | 22 | 12 | KED |
| | **Cd** | **114** | **0.139** | ug/L | 0.014 | 9 | 6 | 78 | 7 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 522849 | 3 | Standard |
| | **Pb** | **208** | **16.496** | ug/L | 0.527 | 3 | 109 | 716386 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-23**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 00:57:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 49707 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3375822 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 631410 | 2 | Standard |
| | **Cr** | **52** | **16.254** | ug/L | 0.332 | 2 | 16425 | 432749 | 0 | Standard |
| | **Cr** | **53** | **16.355** | ug/L | 0.094 | 0 | 102 | 48134 | 2 | Standard |
| | **Mn** | **55** | **361.561** | ug/L | 7.156 | 1 | 567 | 13166082 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21940 | 3 | KED |
| | **Ni** | **60** | **19.399** | ug/L | 1.182 | 6 | 20 | 19009 | 3 | KED |
| | **Ni** | **62** | **20.068** | ug/L | 0.721 | 3 | 7 | 3230 | 0 | KED |
| | **Cu** | **63** | **36.371** | ug/L | 1.353 | 3 | 30 | 106211 | 0 | KED |
| | **Cu** | **65** | **36.300** | ug/L | 1.330 | 3 | 24 | 52357 | 0 | KED |
| | **Zn** | **66** | **146.723** | ug/L | 5.535 | 3 | 40 | 56849 | 1 | KED |
| | **Zn** | **67** | **147.496** | ug/L | 5.946 | 4 | 3 | 9758 | 2 | KED |
| | **As** | **75** | **3.885** | ug/L | 0.174 | 4 | 5 | 764 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 578449 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 203 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5878 | 2 | KED |
| | **Cd** | **111** | **0.286** | ug/L | 0.048 | 16 | 2 | 62 | 13 | KED |
| | **Cd** | **114** | **0.254** | ug/L | 0.036 | 14 | 6 | 137 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 511039 | 3 | Standard |
| | **Pb** | **208** | **24.627** | ug/L | 0.893 | 3 | 109 | 1044983 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-24**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:01:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 46574 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3379169 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 620291 | 2 | Standard |
| | **Cr** | **52** | **16.437** | ug/L | 0.163 | 0 | 16425 | 429814 | 2 | Standard |
| | **Cr** | **53** | **16.626** | ug/L | 0.381 | 2 | 102 | 48058 | 0 | Standard |
| | **Mn** | **55** | **310.654** | ug/L | 1.107 | 0 | 567 | 11117349 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 20581 | 1 | KED |
| | **Ni** | **60** | **18.856** | ug/L | 0.425 | 2 | 20 | 17354 | 1 | KED |
| | **Ni** | **62** | **18.790** | ug/L | 0.725 | 3 | 7 | 2839 | 3 | KED |
| | **Cu** | **63** | **42.128** | ug/L | 0.806 | 1 | 30 | 115476 | 1 | KED |
| | **Cu** | **65** | **43.333** | ug/L | 0.599 | 1 | 24 | 58666 | 0 | KED |
| | **Zn** | **66** | **139.400** | ug/L | 1.715 | 1 | 40 | 50705 | 1 | KED |
| | **Zn** | **67** | **136.427** | ug/L | 3.426 | 2 | 3 | 8471 | 1 | KED |
| | **As** | **75** | **4.058** | ug/L | 0.128 | 3 | 5 | 749 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 559074 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 189 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5607 | 3 | KED |
| | **Cd** | **111** | **0.260** | ug/L | 0.013 | 5 | 2 | 54 | 7 | KED |
| | **Cd** | **114** | **0.305** | ug/L | 0.045 | 14 | 6 | 156 | 12 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 504952 | 3 | Standard |
| | **Pb** | **208** | **32.193** | ug/L | 1.171 | 3 | 109 | 1349703 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-31**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:06:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 48674 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3409450 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 586958 | 3 | Standard |
| | **Cr** | **52** | **14.692** | ug/L | 0.342 | 2 | 16425 | 365754 | 0 | Standard |
| | **Cr** | **53** | **14.966** | ug/L | 0.221 | 1 | 102 | 40948 | 1 | Standard |
| | **Mn** | **55** | **241.038** | ug/L | 5.247 | 2 | 567 | 8159092 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21147 | 1 | KED |
| | **Ni** | **60** | **14.830** | ug/L | 0.291 | 1 | 20 | 14029 | 3 | KED |
| | **Ni** | **62** | **15.157** | ug/L | 0.503 | 3 | 7 | 2355 | 4 | KED |
| | **Cu** | **63** | **47.502** | ug/L | 0.903 | 1 | 30 | 133772 | 1 | KED |
| | **Cu** | **65** | **47.669** | ug/L | 1.367 | 2 | 24 | 66297 | 2 | KED |
| | **Zn** | **66** | **146.123** | ug/L | 4.631 | 3 | 40 | 54602 | 3 | KED |
| | **Zn** | **67** | **139.180** | ug/L | 2.017 | 1 | 3 | 8881 | 2 | KED |
| | **As** | **75** | **3.995** | ug/L | 0.157 | 3 | 5 | 758 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 485316 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 172 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5895 | 2 | KED |
| | **Cd** | **111** | **0.240** | ug/L | 0.017 | 7 | 2 | 53 | 4 | KED |
| | **Cd** | **114** | **0.266** | ug/L | 0.009 | 3 | 6 | 144 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 512635 | 3 | Standard |
| | **Pb** | **208** | **21.533** | ug/L | 0.668 | 3 | 109 | 916743 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVC**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:13:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 30368 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3570879 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 429622 | 419169 | 3 | Standard |
| | **Cr** | **52** | **50.270** | ug/L | 1.224 | 2 | 16425 | 854922 | 0 | Standard |
| | **Cr** | **53** | **50.770** | ug/L | 1.391 | 2 | 102 | 98937 | 0 | Standard |
| | **Mn** | **55** | **50.084** | ug/L | 1.680 | 3 | 567 | 1210902 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 22652 | 21180 | 2 | KED |
| | **Ni** | **60** | **51.753** | ug/L | 1.036 | 2 | 20 | 48976 | 1 | KED |
| | **Ni** | **62** | **51.052** | ug/L | 2.579 | 5 | 7 | 7929 | 6 | KED |
| | **Cu** | **63** | **50.944** | ug/L | 0.989 | 1 | 30 | 143703 | 2 | KED |
| | **Cu** | **65** | **51.042** | ug/L | 0.865 | 1 | 24 | 71101 | 1 | KED |
| | **Zn** | **66** | **51.780** | ug/L | 1.563 | 3 | 40 | 19408 | 4 | KED |
| | **Zn** | **67** | **50.621** | ug/L | 1.036 | 2 | 3 | 3238 | 4 | KED |
| | **As** | **75** | **50.796** | ug/L | 1.125 | 2 | 5 | 9592 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 202177 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 60 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 6222 | 5749 | 3 | KED |
| | **Cd** | **111** | **50.886** | ug/L | 1.092 | 2 | 2 | 10596 | 1 | KED |
| | **Cd** | **114** | **50.648** | ug/L | 2.013 | 3 | 6 | 25613 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 498579 | 476193 | 3 | Standard |
| | **Pb** | **208** | **53.265** | ug/L | 1.057 | 1 | 109 | 2106985 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBC**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:20:27**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 28744 | 31339 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3416101 | 3285110 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 429622 | 418292 | 0 | Standard |
| \| | **Cr** | **52** | **0.003** | ug/L | 0.016 | 599 | 16425 | 16035 | 0 | Standard |
| \| | **Cr** | **53** | **-0.010** | ug/L | 0.004 | 37 | 102 | 80 | 9 | Standard |
| ⌊ | **Mn** | **55** | **0.001** | ug/L | 0.001 | 74 | 567 | 580 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 22652 | 21236 | 2 | KED |
| \| | **Ni** | **60** | **-0.003** | ug/L | 0.006 | 182 | 20 | 15 | 38 | KED |
| \| | **Ni** | **62** | **-0.017** | ug/L | 0.018 | 106 | 7 | 4 | 65 | KED |
| \| | **Cu** | **63** | **-0.000** | ug/L | 0.001 | 16499 | 30 | 28 | 11 | KED |
| \| | **Cu** | **65** | **-0.002** | ug/L | 0.001 | 60 | 24 | 20 | 5 | KED |
| \| | **Zn** | **66** | **-0.021** | ug/L | 0.022 | 107 | 40 | 30 | 28 | KED |
| \| | **Zn** | **67** | **0.014** | ug/L | 0.047 | 331 | 3 | 4 | 65 | KED |
| ⌊ | **As** | **75** | **0.004** | ug/L | 0.008 | 242 | 5 | 6 | 27 | KED |
| | **Y** | **89** | | ug/L | | | 208501 | 206206 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 52 | 48 | 18 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 6222 | 6125 | 1 | KED |
| \| | **Cd** | **111** | **0.006** | ug/L | 0.006 | 110 | 2 | 3 | 41 | KED |
| ⌊ | **Cd** | **114** | **-0.009** | ug/L | 0.003 | 36 | 6 | 1 | 108 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 498579 | 482087 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.000** | ug/L | 0.000 | 80 | 109 | 119 | 12 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:24:45**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | | 31215 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | | 3324914 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | | 423672 | 1 | Standard |
| | **Cr** | **52** | | ug/L | | | | 16311 | 0 | Standard |
| | **Cr** | **53** | | ug/L | | | | 93 | 12 | Standard |
| | **Mn** | **55** | | ug/L | | | | 527 | 6 | Standard |
| > | **Ge** | **72** | | ug/L | | | | 20993 | 1 | KED |
| | **Ni** | **60** | | ug/L | | | | 13 | 55 | KED |
| | **Ni** | **62** | | ug/L | | | | 8 | 13 | KED |
| | **Cu** | **63** | | ug/L | | | | 34 | 20 | KED |
| | **Cu** | **65** | | ug/L | | | | 19 | 33 | KED |
| | **Zn** | **66** | | ug/L | | | | 36 | 29 | KED |
| | **Zn** | **67** | | ug/L | | | | 4 | 24 | KED |
| | **As** | **75** | | ug/L | | | | 5 | 65 | KED |
| | **Y** | **89** | | ug/L | | | | 210865 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | | 43 | 25 | Standard |
| > | **In-1** | **115** | | ug/L | | | | 5860 | 1 | KED |
| | **Cd** | **111** | | ug/L | | | | 2 | 65 | KED |
| | **Cd** | **114** | | ug/L | | | | 6 | 64 | KED |
| > | **Tb** | **159** | | ug/L | | | | 480478 | 3 | Standard |
| | **Pb** | **208** | | ug/L | | | | 115 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVD**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:29:08**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 30410 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3533632 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 415267 | 1 | Standard |
| | **Cr** | **52** | **50.339** | ug/L | 0.745 | 1 | 16311 | 848570 | 2 | Standard |
| | **Cr** | **53** | **50.964** | ug/L | 0.136 | 0 | 93 | 98439 | 2 | Standard |
| | **Mn** | **55** | **51.220** | ug/L | 0.873 | 1 | 527 | 1227305 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20455 | 1 | KED |
| | **Ni** | **60** | **52.423** | ug/L | 1.522 | 2 | 13 | 47904 | 1 | KED |
| | **Ni** | **62** | **50.669** | ug/L | 0.498 | 0 | 8 | 7599 | 1 | KED |
| | **Cu** | **63** | **50.445** | ug/L | 1.112 | 2 | 34 | 137412 | 1 | KED |
| | **Cu** | **65** | **52.156** | ug/L | 0.999 | 1 | 19 | 70164 | 1 | KED |
| | **Zn** | **66** | **52.910** | ug/L | 1.068 | 2 | 36 | 19145 | 0 | KED |
| | **Zn** | **67** | **50.709** | ug/L | 3.410 | 6 | 4 | 3132 | 6 | KED |
| | **As** | **75** | **51.420** | ug/L | 0.890 | 1 | 5 | 9376 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 201534 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 54 | 27 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5660 | 2 | KED |
| | **Cd** | **111** | **51.014** | ug/L | 1.517 | 2 | 2 | 10458 | 1 | KED |
| | **Cd** | **114** | **51.849** | ug/L | 2.429 | 4 | 6 | 25813 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 479037 | 3 | Standard |
| | **Pb** | **208** | **53.159** | ug/L | 1.813 | 3 | 115 | 2114474 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBD**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:36:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 31165 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3329784 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 423672 | 426875 | 1 | Standard |
| \| | **Cr** | **52** | **-0.005** | ug/L | 0.012 | 246 | 16311 | 16356 | 2 | Standard |
| \| | **Cr** | **53** | **-0.002** | ug/L | 0.004 | 173 | 93 | 89 | 8 | Standard |
| ⌊ | **Mn** | **55** | **0.001** | ug/L | 0.002 | 284 | 527 | 544 | 6 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 20993 | 20742 | 3 | KED |
| \| | **Ni** | **60** | **-0.002** | ug/L | 0.004 | 217 | 13 | 12 | 36 | KED |
| \| | **Ni** | **62** | **-0.037** | ug/L | 0.007 | 17 | 8 | 2 | 43 | KED |
| \| | **Cu** | **63** | **-0.002** | ug/L | 0.006 | 299 | 34 | 28 | 52 | KED |
| \| | **Cu** | **65** | **-0.002** | ug/L | 0.003 | 200 | 19 | 17 | 29 | KED |
| \| | **Zn** | **66** | **-0.004** | ug/L | 0.025 | 715 | 36 | 34 | 24 | KED |
| \| | **Zn** | **67** | **-0.009** | ug/L | 0.002 | 19 | 4 | 3 | 0 | KED |
| ⌊ | **As** | **75** | **0.000** | ug/L | 0.006 | 2281 | 5 | 5 | 22 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 208508 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 39 | 12 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5860 | 5855 | 1 | KED |
| \| | **Cd** | **111** | **-0.006** | ug/L | 0.000 | 1 | 2 | 0 | | KED |
| ⌊ | **Cd** | **114** | **-0.007** | ug/L | 0.004 | 58 | 6 | 2 | 90 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 480478 | 486295 | 4 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.001 | 79 | 115 | 144 | 14 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-32**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:40:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 47430 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3368037 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 601779 | 0 | Standard |
| | **Cr** | **52** | **16.522** | ug/L | 0.372 | 2 | 16311 | 419148 | 1 | Standard |
| | **Cr** | **53** | **16.646** | ug/L | 0.181 | 1 | 93 | 46679 | 0 | Standard |
| | **Mn** | **55** | **327.325** | ug/L | 7.378 | 2 | 527 | 11363166 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21197 | 3 | KED |
| | **Ni** | **60** | **16.507** | ug/L | 0.507 | 3 | 13 | 15641 | 3 | KED |
| | **Ni** | **62** | **16.177** | ug/L | 0.634 | 3 | 8 | 2518 | 1 | KED |
| | **Cu** | **63** | **51.946** | ug/L | 1.767 | 3 | 34 | 146561 | 0 | KED |
| | **Cu** | **65** | **52.307** | ug/L | 2.288 | 4 | 19 | 72866 | 1 | KED |
| | **Zn** | **66** | **195.429** | ug/L | 7.415 | 3 | 36 | 73139 | 0 | KED |
| | **Zn** | **67** | **181.352** | ug/L | 1.323 | 0 | 4 | 11598 | 2 | KED |
| | **As** | **75** | **8.616** | ug/L | 0.464 | 5 | 5 | 1631 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 532450 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 184 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5959 | 1 | KED |
| | **Cd** | **111** | **0.320** | ug/L | 0.013 | 3 | 2 | 71 | 3 | KED |
| | **Cd** | **114** | **0.335** | ug/L | 0.034 | 10 | 6 | 182 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 513542 | 3 | Standard |
| | **Pb** | **208** | **31.833** | ug/L | 1.256 | 3 | 115 | 1357412 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-33**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:45:02**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 46760 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3370349 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 616916 | 7 | Standard |
| | **Cr** | **52** | **18.433** | ug/L | 0.905 | 4 | 16311 | 475752 | 4 | Standard |
| | **Cr** | **53** | **18.375** | ug/L | 0.837 | 4 | 93 | 52704 | 3 | Standard |
| | **Mn** | **55** | **328.329** | ug/L | 21.549 | 6 | 527 | 11648759 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21133 | 1 | KED |
| | **Ni** | **60** | **17.603** | ug/L | 0.206 | 1 | 13 | 16631 | 0 | KED |
| | **Ni** | **62** | **17.939** | ug/L | 0.688 | 3 | 8 | 2784 | 2 | KED |
| | **Cu** | **63** | **39.902** | ug/L | 0.541 | 1 | 34 | 112315 | 1 | KED |
| | **Cu** | **65** | **41.396** | ug/L | 1.102 | 2 | 19 | 57544 | 2 | KED |
| | **Zn** | **66** | **129.299** | ug/L | 0.136 | 0 | 36 | 48294 | 1 | KED |
| | **Zn** | **67** | **135.131** | ug/L | 3.443 | 2 | 4 | 8617 | 2 | KED |
| | **As** | **75** | **4.152** | ug/L | 0.070 | 1 | 5 | 787 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 562736 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 194 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5645 | 2 | KED |
| | **Cd** | **111** | **0.253** | ug/L | 0.012 | 4 | 2 | 53 | 5 | KED |
| | **Cd** | **114** | **0.258** | ug/L | 0.028 | 10 | 6 | 134 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 509158 | 8 | Standard |
| | **Pb** | **208** | **26.696** | ug/L | 1.971 | 7 | 115 | 1125158 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-34**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:49:25**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 53033 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3435881 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 639136 | 2 | Standard |
| | **Cr** | **52** | **15.610** | ug/L | 0.268 | 1 | 16311 | 421929 | 1 | Standard |
| | **Cr** | **53** | **15.992** | ug/L | 0.334 | 2 | 93 | 47629 | 2 | Standard |
| | **Mn** | **55** | **366.184** | ug/L | 3.439 | 0 | 527 | 13500947 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20959 | 1 | KED |
| | **Ni** | **60** | **19.547** | ug/L | 0.592 | 3 | 13 | 18311 | 1 | KED |
| | **Ni** | **62** | **18.803** | ug/L | 0.613 | 3 | 8 | 2894 | 2 | KED |
| | **Cu** | **63** | **33.498** | ug/L | 0.229 | 0 | 34 | 93520 | 0 | KED |
| | **Cu** | **65** | **34.601** | ug/L | 0.928 | 2 | 19 | 47696 | 1 | KED |
| | **Zn** | **66** | **135.814** | ug/L | 2.312 | 1 | 36 | 50306 | 2 | KED |
| | **Zn** | **67** | **129.502** | ug/L | 4.251 | 3 | 4 | 8192 | 4 | KED |
| | **As** | **75** | **3.670** | ug/L | 0.067 | 1 | 5 | 690 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 586010 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 198 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5826 | 3 | KED |
| | **Cd** | **111** | **0.237** | ug/L | 0.042 | 17 | 2 | 52 | 13 | KED |
| | **Cd** | **114** | **0.226** | ug/L | 0.040 | 17 | 6 | 122 | 16 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 509025 | 4 | Standard |
| | **Pb** | **208** | **22.278** | ug/L | 0.970 | 4 | 115 | 941331 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-35**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:53:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 53495 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3442905 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 649120 | 1 | Standard |
| | **Cr** | **52** | **16.129** | ug/L | 0.165 | 1 | 16311 | 441961 | 0 | Standard |
| | **Cr** | **53** | **16.446** | ug/L | 0.311 | 1 | 93 | 49740 | 0 | Standard |
| | **Mn** | **55** | **352.484** | ug/L | 7.758 | 2 | 527 | 13197249 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21571 | 0 | KED |
| | **Ni** | **60** | **19.398** | ug/L | 0.279 | 1 | 13 | 18708 | 1 | KED |
| | **Ni** | **62** | **19.245** | ug/L | 1.152 | 5 | 8 | 3049 | 5 | KED |
| | **Cu** | **63** | **33.397** | ug/L | 0.874 | 2 | 34 | 95960 | 2 | KED |
| | **Cu** | **65** | **34.057** | ug/L | 0.866 | 2 | 19 | 48327 | 2 | KED |
| | **Zn** | **66** | **119.194** | ug/L | 1.225 | 1 | 36 | 45446 | 1 | KED |
| | **Zn** | **67** | **115.284** | ug/L | 4.312 | 3 | 4 | 7506 | 4 | KED |
| | **As** | **75** | **3.665** | ug/L | 0.052 | 1 | 5 | 710 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 596151 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 217 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5762 | 3 | KED |
| | **Cd** | **111** | **0.243** | ug/L | 0.016 | 6 | 2 | 53 | 7 | KED |
| | **Cd** | **114** | **0.257** | ug/L | 0.014 | 5 | 6 | 136 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 512855 | 1 | Standard |
| | **Pb** | **208** | **23.389** | ug/L | 0.661 | 2 | 115 | 996579 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-36**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 01:58:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 51564 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3466463 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 618270 | 1 | Standard |
| | **Cr** | **52** | **15.229** | ug/L | 0.337 | 2 | 16311 | 398784 | 1 | Standard |
| | **Cr** | **53** | **15.418** | ug/L | 0.190 | 1 | 93 | 44429 | 0 | Standard |
| | **Mn** | **55** | **235.788** | ug/L | 5.491 | 2 | 527 | 8409526 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20958 | 0 | KED |
| | **Ni** | **60** | **22.558** | ug/L | 0.091 | 0 | 13 | 21134 | 0 | KED |
| | **Ni** | **62** | **21.853** | ug/L | 0.428 | 1 | 8 | 3362 | 1 | KED |
| | **Cu** | **63** | **27.442** | ug/L | 0.702 | 2 | 34 | 76617 | 2 | KED |
| | **Cu** | **65** | **28.159** | ug/L | 0.302 | 1 | 19 | 38827 | 0 | KED |
| | **Zn** | **66** | **103.456** | ug/L | 2.217 | 2 | 36 | 38326 | 1 | KED |
| | **Zn** | **67** | **102.675** | ug/L | 1.600 | 1 | 4 | 6494 | 1 | KED |
| | **As** | **75** | **2.435** | ug/L | 0.090 | 3 | 5 | 460 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 490363 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 172 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5712 | 2 | KED |
| | **Cd** | **111** | **0.113** | ug/L | 0.040 | 35 | 2 | 25 | 33 | KED |
| | **Cd** | **114** | **0.114** | ug/L | 0.007 | 6 | 6 | 63 | 7 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 520040 | 1 | Standard |
| | **Pb** | **208** | **15.939** | ug/L | 0.349 | 2 | 115 | 688799 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-38**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:02:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 56130 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3449843 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 655524 | 3 | Standard |
| | **Cr** | **52** | **15.694** | ug/L | 0.226 | 1 | 16311 | 434877 | 2 | Standard |
| | **Cr** | **53** | **15.833** | ug/L | 0.337 | 2 | 93 | 48350 | 1 | Standard |
| | **Mn** | **55** | **251.145** | ug/L | 6.787 | 2 | 527 | 9492078 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 22152 | 2 | KED |
| | **Ni** | **60** | **21.680** | ug/L | 0.609 | 2 | 13 | 21461 | 1 | KED |
| | **Ni** | **62** | **21.291** | ug/L | 0.602 | 2 | 8 | 3462 | 2 | KED |
| | **Cu** | **63** | **24.189** | ug/L | 0.437 | 1 | 34 | 71367 | 0 | KED |
| | **Cu** | **65** | **24.245** | ug/L | 0.176 | 0 | 19 | 35335 | 1 | KED |
| | **Zn** | **66** | **49.693** | ug/L | 1.295 | 2 | 36 | 19470 | 0 | KED |
| | **Zn** | **67** | **56.025** | ug/L | 2.006 | 3 | 4 | 3745 | 1 | KED |
| | **As** | **75** | **2.313** | ug/L | 0.089 | 3 | 5 | 462 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 583850 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 213 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5981 | 1 | KED |
| | **Cd** | **111** | **0.069** | ug/L | 0.010 | 14 | 2 | 17 | 11 | KED |
| | **Cd** | **114** | **0.056** | ug/L | 0.020 | 36 | 6 | 35 | 28 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 530328 | 2 | Standard |
| | **Pb** | **208** | **4.009** | ug/L | 0.093 | 2 | 115 | 176724 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0525-39**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:06:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 52735 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3391437 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 626958 | 1 | Standard |
| | **Cr** | **52** | **14.503** | ug/L | 0.069 | 0 | 16311 | 386284 | 1 | Standard |
| | **Cr** | **53** | **14.505** | ug/L | 0.222 | 1 | 93 | 42393 | 1 | Standard |
| | **Mn** | **55** | **240.178** | ug/L | 4.785 | 1 | 527 | 8686024 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21421 | 1 | KED |
| | **Ni** | **60** | **18.640** | ug/L | 0.499 | 2 | 13 | 17847 | 1 | KED |
| | **Ni** | **62** | **19.561** | ug/L | 0.726 | 3 | 8 | 3076 | 2 | KED |
| | **Cu** | **63** | **22.002** | ug/L | 0.417 | 1 | 34 | 62784 | 0 | KED |
| | **Cu** | **65** | **22.445** | ug/L | 0.957 | 4 | 19 | 31621 | 2 | KED |
| | **Zn** | **66** | **46.606** | ug/L | 1.024 | 2 | 36 | 17664 | 1 | KED |
| | **Zn** | **67** | **53.270** | ug/L | 0.470 | 0 | 4 | 3446 | 1 | KED |
| | **As** | **75** | **2.073** | ug/L | 0.084 | 4 | 5 | 401 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 578527 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 182 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5952 | 2 | KED |
| | **Cd** | **111** | **0.065** | ug/L | 0.021 | 32 | 2 | 16 | 25 | KED |
| | **Cd** | **114** | **0.054** | ug/L | 0.013 | 23 | 6 | 34 | 20 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 530871 | 3 | Standard |
| | **Pb** | **208** | **3.832** | ug/L | 0.120 | 3 | 115 | 169043 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-02**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:11:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 50097 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3416962 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 579814 | 3 | Standard |
| | **Cr** | **52** | **13.140** | ug/L | 0.413 | 3 | 16311 | 325653 | 2 | Standard |
| | **Cr** | **53** | **13.489** | ug/L | 0.346 | 2 | 93 | 36455 | 1 | Standard |
| | **Mn** | **55** | **210.954** | ug/L | 3.243 | 1 | 527 | 7054531 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21340 | 1 | KED |
| | **Ni** | **60** | **14.865** | ug/L | 0.177 | 1 | 13 | 14185 | 1 | KED |
| | **Ni** | **62** | **15.054** | ug/L | 0.633 | 4 | 8 | 2360 | 3 | KED |
| | **Cu** | **63** | **17.656** | ug/L | 0.427 | 2 | 34 | 50196 | 1 | KED |
| | **Cu** | **65** | **17.539** | ug/L | 0.382 | 2 | 19 | 24626 | 0 | KED |
| | **Zn** | **66** | **37.973** | ug/L | 1.030 | 2 | 36 | 14343 | 1 | KED |
| | **Zn** | **67** | **43.334** | ug/L | 1.166 | 2 | 4 | 2794 | 4 | KED |
| | **As** | **75** | **2.114** | ug/L | 0.086 | 4 | 5 | 407 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 504175 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 146 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5735 | 2 | KED |
| | **Cd** | **111** | **0.062** | ug/L | 0.016 | 25 | 2 | 14 | 19 | KED |
| | **Cd** | **114** | **0.071** | ug/L | 0.019 | 27 | 6 | 41 | 21 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 507146 | 3 | Standard |
| | **Pb** | **208** | **3.376** | ug/L | 0.111 | 3 | 115 | 142276 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-12**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:15:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 59899 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3412739 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 621114 | 0 | Standard |
| | **Cr** | **52** | **14.759** | ug/L | 0.388 | 2 | 16311 | 389062 | 2 | Standard |
| | **Cr** | **53** | **15.083** | ug/L | 0.258 | 1 | 93 | 43672 | 2 | Standard |
| | **Mn** | **55** | **219.746** | ug/L | 5.425 | 2 | 527 | 7875162 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20560 | 0 | KED |
| | **Ni** | **60** | **19.248** | ug/L | 0.084 | 0 | 13 | 17694 | 0 | KED |
| | **Ni** | **62** | **19.239** | ug/L | 0.382 | 1 | 8 | 2905 | 2 | KED |
| | **Cu** | **63** | **21.316** | ug/L | 0.161 | 0 | 34 | 58394 | 0 | KED |
| | **Cu** | **65** | **21.715** | ug/L | 0.462 | 2 | 19 | 29378 | 1 | KED |
| | **Zn** | **66** | **46.140** | ug/L | 1.378 | 2 | 36 | 16790 | 3 | KED |
| | **Zn** | **67** | **52.541** | ug/L | 1.287 | 2 | 4 | 3262 | 2 | KED |
| | **As** | **75** | **2.213** | ug/L | 0.064 | 2 | 5 | 411 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 563606 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 180 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5618 | 1 | KED |
| | **Cd** | **111** | **0.069** | ug/L | 0.005 | 7 | 2 | 16 | 5 | KED |
| | **Cd** | **114** | **0.047** | ug/L | 0.010 | 20 | 6 | 29 | 16 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 517401 | 1 | Standard |
| | **Pb** | **208** | **3.772** | ug/L | 0.088 | 2 | 115 | 162252 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-13**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:20:28**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 56661 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3307978 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 586636 | 1 | Standard |
| | **Cr** | **52** | **15.760** | ug/L | 0.120 | 0 | 16311 | 390865 | 2 | Standard |
| | **Cr** | **53** | **15.567** | ug/L | 0.186 | 1 | 93 | 42563 | 1 | Standard |
| | **Mn** | **55** | **228.346** | ug/L | 2.803 | 1 | 527 | 7727400 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20967 | 0 | KED |
| | **Ni** | **60** | **16.033** | ug/L | 0.324 | 2 | 13 | 15030 | 1 | KED |
| | **Ni** | **62** | **15.699** | ug/L | 0.381 | 2 | 8 | 2419 | 1 | KED |
| | **Cu** | **63** | **158.739** | ug/L | 3.297 | 2 | 34 | 443279 | 2 | KED |
| | **Cu** | **65** | **157.610** | ug/L | 3.790 | 2 | 19 | 217311 | 1 | KED |
| | **Zn** | **66** | **119.814** | ug/L | 0.740 | 0 | 36 | 44402 | 0 | KED |
| | **Zn** | **67** | **117.694** | ug/L | 0.712 | 0 | 4 | 7447 | 0 | KED |
| | **As** | **75** | **3.950** | ug/L | 0.136 | 3 | 5 | 743 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 490065 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 151 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5856 | 0 | KED |
| | **Cd** | **111** | **0.150** | ug/L | 0.016 | 10 | 2 | 33 | 9 | KED |
| | **Cd** | **114** | **0.120** | ug/L | 0.044 | 36 | 6 | 68 | 33 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 499582 | 4 | Standard |
| | **Pb** | **208** | **17.333** | ug/L | 0.748 | 4 | 115 | 718816 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:27:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 32965 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3611272 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 423672 | 441521 | 1 | Standard |
| \| | **Cr** | **52** | **51.036** | ug/L | 0.636 | 1 | 16311 | 914511 | 1 | Standard |
| \| | **Cr** | **53** | **51.230** | ug/L | 0.666 | 1 | 93 | 105210 | 2 | Standard |
| ⌊ | **Mn** | **55** | **51.491** | ug/L | 0.290 | 0 | 527 | 1312008 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 20993 | 21313 | 1 | KED |
| \| | **Ni** | **60** | **50.124** | ug/L | 0.848 | 1 | 13 | 47731 | 1 | KED |
| \| | **Ni** | **62** | **50.043** | ug/L | 1.188 | 2 | 8 | 7818 | 0 | KED |
| \| | **Cu** | **63** | **49.092** | ug/L | 0.841 | 1 | 34 | 139333 | 0 | KED |
| \| | **Cu** | **65** | **50.442** | ug/L | 1.435 | 2 | 19 | 70693 | 1 | KED |
| \| | **Zn** | **66** | **51.093** | ug/L | 0.763 | 1 | 36 | 19267 | 2 | KED |
| \| | **Zn** | **67** | **50.557** | ug/L | 0.661 | 1 | 4 | 3254 | 1 | KED |
| ⌊ | **As** | **75** | **49.405** | ug/L | 1.132 | 2 | 5 | 9386 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 215921 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 60 | 5 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5860 | 6118 | 2 | KED |
| \| | **Cd** | **111** | **50.653** | ug/L | 1.044 | 2 | 2 | 11225 | 0 | KED |
| ⌊ | **Cd** | **114** | **50.722** | ug/L | 0.820 | 1 | 6 | 27308 | 1 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 480478 | 497473 | 4 | Standard |
| ⌊ | **Pb** | **208** | **53.836** | ug/L | 1.820 | 3 | 115 | 2223547 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:34:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 30093 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3264181 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 404319 | 0 | Standard |
| | **Cr** | **52** | **-0.006** | ug/L | 0.024 | 395 | 16311 | 15466 | 1 | Standard |
| | **Cr** | **53** | **-0.000** | ug/L | 0.006 | 1340 | 93 | 88 | 13 | Standard |
| | **Mn** | **55** | **0.004** | ug/L | 0.000 | 10 | 527 | 602 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20183 | 2 | KED |
| | **Ni** | **60** | **-0.000** | ug/L | 0.002 | 2748 | 13 | 13 | 14 | KED |
| | **Ni** | **62** | **-0.028** | ug/L | 0.013 | 46 | 8 | 3 | 50 | KED |
| | **Cu** | **63** | **-0.003** | ug/L | 0.004 | 171 | 34 | 26 | 47 | KED |
| | **Cu** | **65** | **-0.004** | ug/L | 0.002 | 66 | 19 | 13 | 20 | KED |
| | **Zn** | **66** | **-0.039** | ug/L | 0.015 | 39 | 36 | 20 | 24 | KED |
| | **Zn** | **67** | **-0.018** | ug/L | 0.065 | 365 | 4 | 3 | 124 | KED |
| | **As** | **75** | **0.012** | ug/L | 0.002 | 19 | 5 | 7 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 198781 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 51 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5576 | 1 | KED |
| | **Cd** | **111** | **-0.003** | ug/L | 0.010 | 364 | 2 | 1 | 124 | KED |
| | **Cd** | **114** | **-0.008** | ug/L | 0.004 | 47 | 6 | 1 | 101 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 458416 | 1 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.000 | 158 | 115 | 112 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-14**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:39:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 53197 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3384197 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 619722 | 2 | Standard |
| | **Cr** | **52** | **14.181** | ug/L | 0.276 | 1 | 16311 | 373894 | 2 | Standard |
| | **Cr** | **53** | **14.477** | ug/L | 0.071 | 0 | 93 | 41824 | 1 | Standard |
| | **Mn** | **55** | **251.992** | ug/L | 0.481 | 0 | 527 | 9009600 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21749 | 2 | KED |
| | **Ni** | **60** | **16.085** | ug/L | 0.374 | 2 | 13 | 15637 | 0 | KED |
| | **Ni** | **62** | **16.292** | ug/L | 0.561 | 3 | 8 | 2603 | 3 | KED |
| | **Cu** | **63** | **82.253** | ug/L | 1.968 | 2 | 34 | 238173 | 1 | KED |
| | **Cu** | **65** | **83.079** | ug/L | 2.891 | 3 | 19 | 118773 | 0 | KED |
| | **Zn** | **66** | **85.056** | ug/L | 2.781 | 3 | 36 | 32690 | 0 | KED |
| | **Zn** | **67** | **85.857** | ug/L | 0.420 | 0 | 4 | 5637 | 2 | KED |
| | **As** | **75** | **3.251** | ug/L | 0.179 | 5 | 5 | 635 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 524566 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 171 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5843 | 2 | KED |
| | **Cd** | **111** | **0.126** | ug/L | 0.020 | 15 | 2 | 28 | 16 | KED |
| | **Cd** | **114** | **0.129** | ug/L | 0.030 | 23 | 6 | 72 | 19 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 510610 | 3 | Standard |
| | **Pb** | **208** | **9.229** | ug/L | 0.316 | 3 | 115 | 391442 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-15**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:43:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 51865 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3366801 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 620310 | 2 | Standard |
| | **Cr** | **52** | **15.786** | ug/L | 0.255 | 1 | 16311 | 413795 | 1 | Standard |
| | **Cr** | **53** | **15.909** | ug/L | 0.372 | 2 | 93 | 45977 | 1 | Standard |
| | **Mn** | **55** | **279.736** | ug/L | 5.804 | 2 | 527 | 10007123 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21035 | 1 | KED |
| | **Ni** | **60** | **17.930** | ug/L | 0.280 | 1 | 13 | 16862 | 1 | KED |
| | **Ni** | **62** | **18.359** | ug/L | 0.316 | 1 | 8 | 2836 | 0 | KED |
| | **Cu** | **63** | **147.537** | ug/L | 2.988 | 2 | 34 | 413272 | 2 | KED |
| | **Cu** | **65** | **151.990** | ug/L | 3.177 | 2 | 19 | 210210 | 0 | KED |
| | **Zn** | **66** | **166.818** | ug/L | 3.578 | 2 | 36 | 61992 | 0 | KED |
| | **Zn** | **67** | **157.778** | ug/L | 3.633 | 2 | 4 | 10012 | 0 | KED |
| | **As** | **75** | **3.962** | ug/L | 0.091 | 2 | 5 | 748 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 527866 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 186 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5743 | 1 | KED |
| | **Cd** | **111** | **0.183** | ug/L | 0.020 | 11 | 2 | 40 | 11 | KED |
| | **Cd** | **114** | **0.137** | ug/L | 0.032 | 23 | 6 | 75 | 22 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 505546 | 4 | Standard |
| | **Pb** | **208** | **18.854** | ug/L | 0.585 | 3 | 115 | 791521 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-16**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:47:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 66838 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3396536 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 614888 | 1 | Standard |
| | **Cr** | **52** | **16.477** | ug/L | 0.220 | 1 | 16311 | 427204 | 1 | Standard |
| | **Cr** | **53** | **16.367** | ug/L | 0.362 | 2 | 93 | 46902 | 2 | Standard |
| | **Mn** | **55** | **344.942** | ug/L | 3.316 | 0 | 527 | 12235528 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21055 | 2 | KED |
| | **Ni** | **60** | **17.420** | ug/L | 0.048 | 0 | 13 | 16399 | 2 | KED |
| | **Ni** | **62** | **17.887** | ug/L | 0.303 | 1 | 8 | 2766 | 1 | KED |
| | **Cu** | **63** | **299.634** | ug/L | 4.088 | 1 | 34 | 840080 | 1 | KED |
| | **Cu** | **65** | **303.440** | ug/L | 4.792 | 1 | 19 | 420097 | 1 | KED |
| | **Zn** | **66** | **267.295** | ug/L | 5.754 | 2 | 36 | 99429 | 2 | KED |
| | **Zn** | **67** | **251.381** | ug/L | 4.551 | 1 | 4 | 15972 | 3 | KED |
| | **As** | **75** | **7.441** | ug/L | 0.100 | 1 | 5 | 1402 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 524948 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 177 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5742 | 1 | KED |
| | **Cd** | **111** | **0.235** | ug/L | 0.015 | 6 | 2 | 51 | 4 | KED |
| | **Cd** | **114** | **0.264** | ug/L | 0.049 | 18 | 6 | 139 | 18 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 510693 | 3 | Standard |
| | **Pb** | **208** | **31.171** | ug/L | 1.169 | 3 | 115 | 1321876 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-17**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:52:16**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 60756 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3487794 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 658659 | 1 | Standard |
| | **Cr** | **52** | **19.231** | ug/L | 0.104 | 0 | 16311 | 529891 | 1 | Standard |
| | **Cr** | **53** | **19.629** | ug/L | 0.337 | 1 | 93 | 60229 | 2 | Standard |
| | **Mn** | **55** | **312.870** | ug/L | 3.636 | 1 | 527 | 11889927 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20872 | 1 | KED |
| | **Ni** | **60** | **20.331** | ug/L | 0.362 | 1 | 13 | 18971 | 2 | KED |
| | **Ni** | **62** | **20.419** | ug/L | 0.229 | 1 | 8 | 3129 | 1 | KED |
| | **Cu** | **63** | **174.617** | ug/L | 5.353 | 3 | 34 | 485202 | 1 | KED |
| | **Cu** | **65** | **177.058** | ug/L | 1.385 | 0 | 19 | 243025 | 1 | KED |
| | **Zn** | **66** | **172.556** | ug/L | 6.360 | 3 | 36 | 63623 | 2 | KED |
| | **Zn** | **67** | **171.433** | ug/L | 3.933 | 2 | 4 | 10794 | 0 | KED |
| | **As** | **75** | **3.678** | ug/L | 0.143 | 3 | 5 | 689 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 578852 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 184 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5582 | 2 | KED |
| | **Cd** | **111** | **0.298** | ug/L | 0.068 | 22 | 2 | 62 | 24 | KED |
| | **Cd** | **114** | **0.265** | ug/L | 0.039 | 14 | 6 | 135 | 13 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 532396 | 1 | Standard |
| | **Pb** | **208** | **43.157** | ug/L | 1.236 | 2 | 115 | 1909113 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-18**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 02:56:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 58924 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3370048 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 617373 | 0 | Standard |
| | **Cr** | **52** | **21.832** | ug/L | 0.177 | 0 | 16311 | 560643 | 1 | Standard |
| | **Cr** | **53** | **21.714** | ug/L | 0.394 | 1 | 93 | 62433 | 2 | Standard |
| | **Mn** | **55** | **265.880** | ug/L | 1.343 | 0 | 527 | 9470337 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21074 | 1 | KED |
| | **Ni** | **60** | **21.377** | ug/L | 0.131 | 0 | 13 | 20140 | 1 | KED |
| | **Ni** | **62** | **21.451** | ug/L | 0.056 | 0 | 8 | 3319 | 1 | KED |
| | **Cu** | **63** | **128.660** | ug/L | 0.628 | 0 | 34 | 361106 | 1 | KED |
| | **Cu** | **65** | **130.741** | ug/L | 1.364 | 1 | 19 | 181193 | 0 | KED |
| | **Zn** | **66** | **227.423** | ug/L | 0.447 | 0 | 36 | 84680 | 1 | KED |
| | **Zn** | **67** | **215.190** | ug/L | 5.001 | 2 | 4 | 13680 | 1 | KED |
| | **As** | **75** | **3.876** | ug/L | 0.103 | 2 | 5 | 733 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 554098 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 175 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5813 | 0 | KED |
| | **Cd** | **111** | **0.338** | ug/L | 0.039 | 11 | 2 | 73 | 11 | KED |
| | **Cd** | **114** | **0.341** | ug/L | 0.006 | 1 | 6 | 180 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 501633 | 3 | Standard |
| | **Pb** | **208** | **67.113** | ug/L | 2.232 | 3 | 115 | 2795636 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-22**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:01:02**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 55879 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3391724 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 584864 | 1 | Standard |
| | **Cr** | **52** | **17.323** | ug/L | 0.138 | 0 | 16311 | 426093 | 2 | Standard |
| | **Cr** | **53** | **17.444** | ug/L | 0.175 | 1 | 93 | 47536 | 1 | Standard |
| | **Mn** | **55** | **256.429** | ug/L | 4.069 | 1 | 527 | 8650925 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21016 | 0 | KED |
| | **Ni** | **60** | **15.312** | ug/L | 0.363 | 2 | 13 | 14388 | 1 | KED |
| | **Ni** | **62** | **15.874** | ug/L | 0.508 | 3 | 8 | 2452 | 3 | KED |
| | **Cu** | **63** | **64.773** | ug/L | 0.745 | 1 | 34 | 181300 | 0 | KED |
| | **Cu** | **65** | **64.950** | ug/L | 1.139 | 1 | 19 | 89777 | 1 | KED |
| | **Zn** | **66** | **164.267** | ug/L | 1.606 | 0 | 36 | 61003 | 0 | KED |
| | **Zn** | **67** | **156.623** | ug/L | 1.698 | 1 | 4 | 9932 | 1 | KED |
| | **As** | **75** | **4.273** | ug/L | 0.070 | 1 | 5 | 805 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 476907 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 163 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5596 | 2 | KED |
| | **Cd** | **111** | **0.273** | ug/L | 0.027 | 10 | 2 | 57 | 11 | KED |
| | **Cd** | **114** | **0.279** | ug/L | 0.035 | 12 | 6 | 143 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 497986 | 2 | Standard |
| | **Pb** | **208** | **22.666** | ug/L | 0.532 | 2 | 115 | 937763 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-23**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:05:25**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 57831 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3420381 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 598825 | 2 | Standard |
| | **Cr** | **52** | **25.556** | ug/L | 0.604 | 2 | 16311 | 632401 | 1 | Standard |
| | **Cr** | **53** | **25.854** | ug/L | 0.428 | 1 | 93 | 72062 | 2 | Standard |
| | **Mn** | **55** | **295.355** | ug/L | 4.829 | 1 | 527 | 10200949 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21303 | 3 | KED |
| | **Ni** | **60** | **17.800** | ug/L | 0.779 | 4 | 13 | 16947 | 4 | KED |
| | **Ni** | **62** | **17.679** | ug/L | 0.306 | 1 | 8 | 2765 | 2 | KED |
| | **Cu** | **63** | **69.250** | ug/L | 2.212 | 3 | 34 | 196362 | 2 | KED |
| | **Cu** | **65** | **69.809** | ug/L | 0.421 | 0 | 19 | 97819 | 3 | KED |
| | **Zn** | **66** | **177.891** | ug/L | 3.546 | 1 | 36 | 66932 | 2 | KED |
| | **Zn** | **67** | **188.821** | ug/L | 0.844 | 0 | 4 | 12138 | 4 | KED |
| | **As** | **75** | **4.955** | ug/L | 0.133 | 2 | 5 | 945 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 515122 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 168 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5688 | 2 | KED |
| | **Cd** | **111** | **0.332** | ug/L | 0.019 | 5 | 2 | 70 | 3 | KED |
| | **Cd** | **114** | **0.302** | ug/L | 0.037 | 12 | 6 | 157 | 11 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 507345 | 2 | Standard |
| | **Pb** | **208** | **35.143** | ug/L | 0.833 | 2 | 115 | 1481052 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-24**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:09:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 56409 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3493037 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 588963 | 2 | Standard |
| | **Cr** | **52** | **16.558** | ug/L | 0.195 | 1 | 16311 | 411058 | 1 | Standard |
| | **Cr** | **53** | **16.775** | ug/L | 0.056 | 0 | 93 | 46038 | 1 | Standard |
| | **Mn** | **55** | **268.768** | ug/L | 7.479 | 2 | 527 | 9129249 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21042 | 0 | KED |
| | **Ni** | **60** | **17.956** | ug/L | 0.120 | 0 | 13 | 16893 | 0 | KED |
| | **Ni** | **62** | **17.686** | ug/L | 0.379 | 2 | 8 | 2734 | 1 | KED |
| | **Cu** | **63** | **38.342** | ug/L | 0.262 | 0 | 34 | 107475 | 1 | KED |
| | **Cu** | **65** | **38.931** | ug/L | 0.301 | 0 | 19 | 53892 | 1 | KED |
| | **Zn** | **66** | **112.545** | ug/L | 2.026 | 1 | 36 | 41861 | 2 | KED |
| | **Zn** | **67** | **140.182** | ug/L | 1.154 | 0 | 4 | 8901 | 0 | KED |
| | **As** | **75** | **3.268** | ug/L | 0.158 | 4 | 5 | 618 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 498858 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 129 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5514 | 1 | KED |
| | **Cd** | **111** | **0.256** | ug/L | 0.041 | 16 | 2 | 53 | 16 | KED |
| | **Cd** | **114** | **0.276** | ug/L | 0.032 | 11 | 6 | 139 | 10 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 508471 | 5 | Standard |
| | **Pb** | **208** | **26.628** | ug/L | 1.257 | 4 | 115 | 1123426 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-25**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:14:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 55168 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3440549 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 635485 | 1 | Standard |
| | **Cr** | **52** | **16.070** | ug/L | 0.229 | 1 | 16311 | 431248 | 2 | Standard |
| | **Cr** | **53** | **16.360** | ug/L | 0.150 | 0 | 93 | 48452 | 1 | Standard |
| | **Mn** | **55** | **334.114** | ug/L | 9.380 | 2 | 527 | 12247891 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20516 | 2 | KED |
| | **Ni** | **60** | **17.893** | ug/L | 0.574 | 3 | 13 | 16407 | 1 | KED |
| | **Ni** | **62** | **17.766** | ug/L | 0.354 | 1 | 8 | 2677 | 2 | KED |
| | **Cu** | **63** | **43.485** | ug/L | 0.688 | 1 | 34 | 118813 | 0 | KED |
| | **Cu** | **65** | **44.186** | ug/L | 1.622 | 3 | 19 | 59607 | 2 | KED |
| | **Zn** | **66** | **145.151** | ug/L | 3.640 | 2 | 36 | 52615 | 1 | KED |
| | **Zn** | **67** | **137.829** | ug/L | 4.325 | 3 | 4 | 8530 | 1 | KED |
| | **As** | **75** | **3.428** | ug/L | 0.128 | 3 | 5 | 632 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 577981 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 187 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5625 | 1 | KED |
| | **Cd** | **111** | **0.293** | ug/L | 0.023 | 7 | 2 | 61 | 6 | KED |
| | **Cd** | **114** | **0.273** | ug/L | 0.018 | 6 | 6 | 141 | 6 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 518871 | 1 | Standard |
| | **Pb** | **208** | **30.997** | ug/L | 0.795 | 2 | 115 | 1336219 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-26**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:18:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 58886 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3401391 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 611363 | 1 | Standard |
| | **Cr** | **52** | **14.816** | ug/L | 0.184 | 1 | 16311 | 384341 | 2 | Standard |
| | **Cr** | **53** | **14.908** | ug/L | 0.240 | 1 | 93 | 42493 | 2 | Standard |
| | **Mn** | **55** | **330.629** | ug/L | 5.954 | 1 | 527 | 11660014 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21424 | 0 | KED |
| | **Ni** | **60** | **17.286** | ug/L | 0.269 | 1 | 13 | 16560 | 1 | KED |
| | **Ni** | **62** | **17.264** | ug/L | 0.386 | 2 | 8 | 2717 | 2 | KED |
| | **Cu** | **63** | **35.504** | ug/L | 0.371 | 1 | 34 | 101332 | 1 | KED |
| | **Cu** | **65** | **35.814** | ug/L | 0.192 | 0 | 19 | 50476 | 0 | KED |
| | **Zn** | **66** | **132.881** | ug/L | 1.609 | 1 | 36 | 50317 | 1 | KED |
| | **Zn** | **67** | **126.361** | ug/L | 3.197 | 2 | 4 | 8170 | 2 | KED |
| | **As** | **75** | **3.639** | ug/L | 0.152 | 4 | 5 | 700 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 564808 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 184 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 6013 | 1 | KED |
| | **Cd** | **111** | **0.239** | ug/L | 0.025 | 10 | 2 | 54 | 10 | KED |
| | **Cd** | **114** | **0.229** | ug/L | 0.033 | 14 | 6 | 127 | 14 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 514463 | 3 | Standard |
| | **Pb** | **208** | **24.244** | ug/L | 0.723 | 2 | 115 | 1035773 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVF**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:26:05**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 31867 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3553555 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 411155 | 2 | Standard |
| | **Cr** | **52** | **50.318** | ug/L | 0.946 | 1 | 16311 | 839634 | 0 | Standard |
| | **Cr** | **53** | **50.103** | ug/L | 0.527 | 1 | 93 | 95819 | 2 | Standard |
| | **Mn** | **55** | **51.220** | ug/L | 0.354 | 0 | 527 | 1215524 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20963 | 1 | KED |
| | **Ni** | **60** | **51.785** | ug/L | 0.802 | 1 | 13 | 48508 | 1 | KED |
| | **Ni** | **62** | **51.093** | ug/L | 0.143 | 0 | 8 | 7854 | 1 | KED |
| | **Cu** | **63** | **50.499** | ug/L | 0.978 | 1 | 34 | 140988 | 1 | KED |
| | **Cu** | **65** | **50.551** | ug/L | 0.872 | 1 | 19 | 69697 | 0 | KED |
| | **Zn** | **66** | **51.345** | ug/L | 1.017 | 1 | 36 | 19046 | 2 | KED |
| | **Zn** | **67** | **51.179** | ug/L | 1.281 | 2 | 4 | 3241 | 3 | KED |
| | **As** | **75** | **50.172** | ug/L | 1.082 | 2 | 5 | 9376 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 197236 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 57 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5407 | 1 | KED |
| | **Cd** | **111** | **51.898** | ug/L | 0.494 | 0 | 2 | 10169 | 0 | KED |
| | **Cd** | **114** | **53.497** | ug/L | 0.373 | 0 | 6 | 25468 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 467036 | 3 | Standard |
| | **Pb** | **208** | **53.906** | ug/L | 1.877 | 3 | 115 | 2090397 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBF**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:33:12**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 31022 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3277195 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 423672 | 397897 | 0 | Standard |
| \| | **Cr** | **52** | **0.014** | ug/L | 0.027 | 190 | 16311 | 15541 | 1 | Standard |
| \| | **Cr** | **53** | **0.001** | ug/L | 0.008 | 597 | 93 | 90 | 16 | Standard |
| ⌊ | **Mn** | **55** | **0.008** | ug/L | 0.001 | 11 | 527 | 672 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 20993 | 20621 | 1 | KED |
| \| | **Ni** | **60** | **-0.000** | ug/L | 0.002 | 509 | 13 | 13 | 14 | KED |
| \| | **Ni** | **62** | **-0.008** | ug/L | 0.029 | 375 | 8 | 6 | 62 | KED |
| \| | **Cu** | **63** | **0.006** | ug/L | 0.004 | 60 | 34 | 50 | 20 | KED |
| \| | **Cu** | **65** | **0.007** | ug/L | 0.003 | 43 | 19 | 29 | 15 | KED |
| \| | **Zn** | **66** | **0.059** | ug/L | 0.039 | 65 | 36 | 57 | 25 | KED |
| \| | **Zn** | **67** | **0.032** | ug/L | 0.064 | 198 | 4 | 6 | 62 | KED |
| ⌊ | **As** | **75** | **-0.007** | ug/L | 0.004 | 61 | 5 | 4 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 197843 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 52 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5860 | 5695 | 1 | KED |
| \| | **Cd** | **111** | **-0.003** | ug/L | 0.003 | 95 | 2 | 1 | 34 | KED |
| ⌊ | **Cd** | **114** | **-0.006** | ug/L | 0.004 | 74 | 6 | 3 | 69 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 480478 | 452103 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.004** | ug/L | 0.000 | 3 | 115 | 251 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-30**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:37:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 59152 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3435177 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 584804 | 3 | Standard |
| | **Cr** | **52** | **17.182** | ug/L | 0.410 | 2 | 16311 | 422604 | 2 | Standard |
| | **Cr** | **53** | **17.075** | ug/L | 0.172 | 1 | 93 | 46541 | 4 | Standard |
| | **Mn** | **55** | **378.718** | ug/L | 6.523 | 1 | 527 | 12778607 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20917 | 1 | KED |
| | **Ni** | **60** | **17.923** | ug/L | 0.525 | 2 | 13 | 16759 | 2 | KED |
| | **Ni** | **62** | **20.533** | ug/L | 0.531 | 2 | 8 | 3153 | 2 | KED |
| | **Cu** | **63** | **1040.504** | ug/L | 9.440 | 0 | 34 | 2898097 | 0 | KED |
| | **Cu** | **65** | **1018.154** | ug/L | 12.658 | 1 | 19 | 1400619 | 2 | KED |
| | **Zn** | **66** | **428.838** | ug/L | 5.562 | 1 | 36 | 158462 | 2 | KED |
| | **Zn** | **67** | **391.434** | ug/L | 4.387 | 1 | 4 | 24700 | 1 | KED |
| | **As** | **75** | **10.788** | ug/L | 0.234 | 2 | 5 | 2016 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 490076 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 137 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5735 | 2 | KED |
| | **Cd** | **111** | **0.409** | ug/L | 0.051 | 12 | 2 | 87 | 13 | KED |
| | **Cd** | **114** | **0.403** | ug/L | 0.045 | 11 | 6 | 209 | 12 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 493534 | 5 | Standard |
| | **Pb** | **208** | **47.526** | ug/L | 2.114 | 4 | 115 | 1946023 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-31**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:41:59**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 48190 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3410039 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 583149 | 2 | Standard |
| | **Cr** | **52** | **15.209** | ug/L | 0.071 | 0 | 16311 | 375698 | 1 | Standard |
| | **Cr** | **53** | **15.306** | ug/L | 0.087 | 0 | 93 | 41609 | 2 | Standard |
| | **Mn** | **55** | **230.551** | ug/L | 5.553 | 2 | 527 | 7755480 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20832 | 1 | KED |
| | **Ni** | **60** | **18.975** | ug/L | 0.540 | 2 | 13 | 17669 | 1 | KED |
| | **Ni** | **62** | **19.450** | ug/L | 0.749 | 3 | 8 | 2976 | 4 | KED |
| | **Cu** | **63** | **157.229** | ug/L | 3.198 | 2 | 34 | 436143 | 1 | KED |
| | **Cu** | **65** | **161.552** | ug/L | 1.613 | 0 | 19 | 221341 | 1 | KED |
| | **Zn** | **66** | **103.568** | ug/L | 3.204 | 3 | 36 | 38133 | 2 | KED |
| | **Zn** | **67** | **101.228** | ug/L | 3.595 | 3 | 4 | 6363 | 2 | KED |
| | **As** | **75** | **2.563** | ug/L | 0.065 | 2 | 5 | 481 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 512499 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 184 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5524 | 3 | KED |
| | **Cd** | **111** | **0.132** | ug/L | 0.012 | 9 | 2 | 28 | 10 | KED |
| | **Cd** | **114** | **0.120** | ug/L | 0.021 | 17 | 6 | 64 | 13 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 497159 | 3 | Standard |
| | **Pb** | **208** | **23.966** | ug/L | 0.629 | 2 | 115 | 989627 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-32**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:46:21**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 42321 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3344335 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 528839 | 1 | Standard |
| | **Cr** | **52** | **10.027** | ug/L | 0.221 | 2 | 16311 | 231560 | 2 | Standard |
| | **Cr** | **53** | **10.334** | ug/L | 0.090 | 0 | 93 | 25513 | 1 | Standard |
| | **Mn** | **55** | **167.397** | ug/L | 2.556 | 1 | 527 | 5107822 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21127 | 0 | KED |
| | **Ni** | **60** | **17.028** | ug/L | 0.561 | 3 | 13 | 16083 | 2 | KED |
| | **Ni** | **62** | **17.093** | ug/L | 0.584 | 3 | 8 | 2652 | 2 | KED |
| | **Cu** | **63** | **13.831** | ug/L | 0.497 | 3 | 34 | 38938 | 2 | KED |
| | **Cu** | **65** | **13.620** | ug/L | 0.392 | 2 | 19 | 18938 | 2 | KED |
| | **Zn** | **66** | **40.743** | ug/L | 1.194 | 2 | 36 | 15237 | 2 | KED |
| | **Zn** | **67** | **43.857** | ug/L | 0.767 | 1 | 4 | 2799 | 0 | KED |
| | **As** | **75** | **1.862** | ug/L | 0.046 | 2 | 5 | 356 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 443516 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 123 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5736 | 2 | KED |
| | **Cd** | **111** | **0.040** | ug/L | 0.005 | 12 | 2 | 10 | 9 | KED |
| | **Cd** | **114** | **0.027** | ug/L | 0.008 | 29 | 6 | 19 | 20 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 499603 | 3 | Standard |
| | **Pb** | **208** | **3.572** | ug/L | 0.155 | 4 | 115 | 148265 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22H0529-33**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:50:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 46571 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3435162 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 538074 | 0 | Standard |
| | **Cr** | **52** | **10.112** | ug/L | 0.182 | 1 | 16311 | 237442 | 1 | Standard |
| | **Cr** | **53** | **10.327** | ug/L | 0.033 | 0 | 93 | 25939 | 0 | Standard |
| | **Mn** | **55** | **186.104** | ug/L | 3.535 | 1 | 527 | 5776941 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20762 | 2 | KED |
| | **Ni** | **60** | **17.434** | ug/L | 0.532 | 3 | 13 | 16174 | 0 | KED |
| | **Ni** | **62** | **16.741** | ug/L | 1.597 | 9 | 8 | 2549 | 6 | KED |
| | **Cu** | **63** | **14.629** | ug/L | 0.298 | 2 | 34 | 40468 | 1 | KED |
| | **Cu** | **65** | **14.902** | ug/L | 0.346 | 2 | 19 | 20356 | 0 | KED |
| | **Zn** | **66** | **42.271** | ug/L | 2.748 | 6 | 36 | 15515 | 3 | KED |
| | **Zn** | **67** | **46.612** | ug/L | 1.609 | 3 | 4 | 2922 | 2 | KED |
| | **As** | **75** | **1.735** | ug/L | 0.090 | 5 | 5 | 326 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 494575 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 135 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5511 | 4 | KED |
| | **Cd** | **111** | **0.042** | ug/L | 0.016 | 36 | 2 | 10 | 24 | KED |
| | **Cd** | **114** | **0.035** | ug/L | 0.014 | 40 | 6 | 23 | 34 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 497846 | 2 | Standard |
| | **Pb** | **208** | **2.333** | ug/L | 0.078 | 3 | 115 | 96587 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-01**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:55:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 47978 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3428684 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 547385 | 1 | Standard |
| | **Cr** | **52** | **11.305** | ug/L | 0.195 | 1 | 16311 | 267509 | 0 | Standard |
| | **Cr** | **53** | **11.410** | ug/L | 0.102 | 0 | 93 | 29141 | 0 | Standard |
| | **Mn** | **55** | **204.057** | ug/L | 5.069 | 2 | 527 | 6442844 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20835 | 0 | KED |
| | **Ni** | **60** | **16.911** | ug/L | 0.304 | 1 | 13 | 15754 | 1 | KED |
| | **Ni** | **62** | **17.067** | ug/L | 0.392 | 2 | 8 | 2612 | 2 | KED |
| | **Cu** | **63** | **18.217** | ug/L | 0.318 | 1 | 34 | 50577 | 1 | KED |
| | **Cu** | **65** | **18.414** | ug/L | 0.250 | 1 | 19 | 25249 | 1 | KED |
| | **Zn** | **66** | **82.995** | ug/L | 0.667 | 0 | 36 | 30574 | 0 | KED |
| | **Zn** | **67** | **81.424** | ug/L | 3.657 | 4 | 4 | 5121 | 4 | KED |
| | **As** | **75** | **3.418** | ug/L | 0.173 | 5 | 5 | 640 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 488291 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 158 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5655 | 2 | KED |
| | **Cd** | **111** | **0.114** | ug/L | 0.023 | 19 | 2 | 25 | 17 | KED |
| | **Cd** | **114** | **0.124** | ug/L | 0.011 | 9 | 6 | 67 | 9 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 503350 | 3 | Standard |
| | **Pb** | **208** | **9.375** | ug/L | 0.348 | 3 | 115 | 391984 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-02**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 03:59:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 52623 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3421904 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 558781 | 2 | Standard |
| | **Cr** | **52** | **12.347** | ug/L | 0.072 | 0 | 16311 | 296308 | 1 | Standard |
| | **Cr** | **53** | **12.436** | ug/L | 0.215 | 1 | 93 | 32408 | 1 | Standard |
| | **Mn** | **55** | **191.830** | ug/L | 0.459 | 0 | 527 | 6184482 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20928 | 1 | KED |
| | **Ni** | **60** | **19.637** | ug/L | 0.053 | 0 | 13 | 18374 | 2 | KED |
| | **Ni** | **62** | **18.816** | ug/L | 0.175 | 0 | 8 | 2892 | 2 | KED |
| | **Cu** | **63** | **17.874** | ug/L | 0.477 | 2 | 34 | 49839 | 2 | KED |
| | **Cu** | **65** | **18.632** | ug/L | 0.936 | 5 | 19 | 25647 | 3 | KED |
| | **Zn** | **66** | **65.456** | ug/L | 0.326 | 0 | 36 | 24229 | 1 | KED |
| | **Zn** | **67** | **68.077** | ug/L | 3.169 | 4 | 4 | 4300 | 4 | KED |
| | **As** | **75** | **2.141** | ug/L | 0.093 | 4 | 5 | 404 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 499188 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 168 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5564 | 0 | KED |
| | **Cd** | **111** | **0.095** | ug/L | 0.011 | 11 | 2 | 21 | 11 | KED |
| | **Cd** | **114** | **0.077** | ug/L | 0.015 | 19 | 6 | 43 | 17 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 493587 | 3 | Standard |
| | **Pb** | **208** | **13.795** | ug/L | 0.345 | 2 | 115 | 565609 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-03**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:03:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 46348 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3429129 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 552050 | 1 | Standard |
| | **Cr** | **52** | **10.564** | ug/L | 0.091 | 0 | 16311 | 253507 | 1 | Standard |
| | **Cr** | **53** | **10.535** | ug/L | 0.259 | 2 | 93 | 27140 | 0 | Standard |
| | **Mn** | **55** | **171.028** | ug/L | 1.826 | 1 | 527 | 5446801 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21205 | 2 | KED |
| | **Ni** | **60** | **18.315** | ug/L | 0.616 | 3 | 13 | 17357 | 2 | KED |
| | **Ni** | **62** | **17.864** | ug/L | 0.425 | 2 | 8 | 2783 | 3 | KED |
| | **Cu** | **63** | **15.363** | ug/L | 0.470 | 3 | 34 | 43403 | 2 | KED |
| | **Cu** | **65** | **15.543** | ug/L | 0.283 | 1 | 19 | 21694 | 3 | KED |
| | **Zn** | **66** | **47.926** | ug/L | 1.605 | 3 | 36 | 17984 | 3 | KED |
| | **Zn** | **67** | **50.322** | ug/L | 2.412 | 4 | 4 | 3221 | 3 | KED |
| | **As** | **75** | **2.000** | ug/L | 0.068 | 3 | 5 | 383 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 613016 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 153 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5884 | 1 | KED |
| | **Cd** | **111** | **0.040** | ug/L | 0.004 | 8 | 2 | 10 | 5 | KED |
| | **Cd** | **114** | **0.044** | ug/L | 0.010 | 21 | 6 | 29 | 15 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 508235 | 3 | Standard |
| | **Pb** | **208** | **5.068** | ug/L | 0.178 | 3 | 115 | 213993 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-05**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:08:16**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 49808 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3433582 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 580459 | 0 | Standard |
| | **Cr** | **52** | **15.332** | ug/L | 0.186 | 1 | 16311 | 376823 | 1 | Standard |
| | **Cr** | **53** | **15.527** | ug/L | 0.094 | 0 | 93 | 42009 | 1 | Standard |
| | **Mn** | **55** | **259.850** | ug/L | 4.345 | 1 | 527 | 8701827 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20813 | 1 | KED |
| | **Ni** | **60** | **21.054** | ug/L | 0.414 | 1 | 13 | 19587 | 0 | KED |
| | **Ni** | **62** | **20.511** | ug/L | 1.219 | 5 | 8 | 3133 | 4 | KED |
| | **Cu** | **63** | **23.716** | ug/L | 0.404 | 1 | 34 | 65772 | 2 | KED |
| | **Cu** | **65** | **23.758** | ug/L | 0.203 | 0 | 19 | 32534 | 1 | KED |
| | **Zn** | **66** | **82.527** | ug/L | 1.292 | 1 | 36 | 30366 | 0 | KED |
| | **Zn** | **67** | **86.803** | ug/L | 1.844 | 2 | 4 | 5453 | 1 | KED |
| | **As** | **75** | **2.533** | ug/L | 0.052 | 2 | 5 | 475 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 470527 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 176 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5527 | 2 | KED |
| | **Cd** | **111** | **0.145** | ug/L | 0.019 | 12 | 2 | 31 | 10 | KED |
| | **Cd** | **114** | **0.143** | ug/L | 0.030 | 21 | 6 | 75 | 19 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 492355 | 2 | Standard |
| | **Pb** | **208** | **19.863** | ug/L | 0.670 | 3 | 115 | 812292 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-06**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:12:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 55628 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3495838 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 619912 | 1 | Standard |
| | **Cr** | **52** | **17.326** | ug/L | 0.276 | 1 | 16311 | 451626 | 0 | Standard |
| | **Cr** | **53** | **17.477** | ug/L | 0.170 | 0 | 93 | 50486 | 2 | Standard |
| | **Mn** | **55** | **296.129** | ug/L | 1.479 | 0 | 527 | 10590734 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20654 | 1 | KED |
| | **Ni** | **60** | **21.316** | ug/L | 0.309 | 1 | 13 | 19680 | 0 | KED |
| | **Ni** | **62** | **20.963** | ug/L | 1.167 | 5 | 8 | 3178 | 4 | KED |
| | **Cu** | **63** | **35.930** | ug/L | 1.052 | 2 | 34 | 98840 | 2 | KED |
| | **Cu** | **65** | **36.339** | ug/L | 0.848 | 2 | 19 | 49367 | 1 | KED |
| | **Zn** | **66** | **128.330** | ug/L | 1.419 | 1 | 36 | 46845 | 1 | KED |
| | **Zn** | **67** | **123.723** | ug/L | 5.019 | 4 | 4 | 7710 | 3 | KED |
| | **As** | **75** | **3.622** | ug/L | 0.116 | 3 | 5 | 672 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 534098 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 182 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5439 | 0 | KED |
| | **Cd** | **111** | **0.341** | ug/L | 0.010 | 2 | 2 | 69 | 2 | KED |
| | **Cd** | **114** | **0.343** | ug/L | 0.038 | 10 | 6 | 170 | 10 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 501504 | 4 | Standard |
| | **Pb** | **208** | **42.916** | ug/L | 1.362 | 3 | 115 | 1786980 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-11**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:17:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 53324 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3531376 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 549194 | 1 | Standard |
| | **Cr** | **52** | **9.678** | ug/L | 0.051 | 0 | 16311 | 232837 | 1 | Standard |
| | **Cr** | **53** | **9.817** | ug/L | 0.167 | 1 | 93 | 25171 | 1 | Standard |
| | **Mn** | **55** | **167.741** | ug/L | 0.708 | 0 | 527 | 5314942 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21306 | 0 | KED |
| | **Ni** | **60** | **17.268** | ug/L | 0.496 | 2 | 13 | 16450 | 2 | KED |
| | **Ni** | **62** | **16.962** | ug/L | 0.027 | 0 | 8 | 2655 | 0 | KED |
| | **Cu** | **63** | **14.075** | ug/L | 0.122 | 0 | 34 | 39965 | 0 | KED |
| | **Cu** | **65** | **14.496** | ug/L | 0.308 | 2 | 19 | 20330 | 2 | KED |
| | **Zn** | **66** | **45.175** | ug/L | 0.389 | 0 | 36 | 17034 | 0 | KED |
| | **Zn** | **67** | **46.107** | ug/L | 1.742 | 3 | 4 | 2967 | 3 | KED |
| | **As** | **75** | **1.786** | ug/L | 0.028 | 1 | 5 | 344 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 541666 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 123 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5660 | 0 | KED |
| | **Cd** | **111** | **0.030** | ug/L | 0.005 | 17 | 2 | 8 | 13 | KED |
| | **Cd** | **114** | **0.039** | ug/L | 0.005 | 12 | 6 | 25 | 9 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 508493 | 3 | Standard |
| | **Pb** | **208** | **5.829** | ug/L | 0.221 | 3 | 115 | 246247 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVG**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:24:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 31687 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3528087 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 404925 | 2 | Standard |
| | **Cr** | **52** | **51.520** | ug/L | 1.179 | 2 | 16311 | 846326 | 2 | Standard |
| | **Cr** | **53** | **51.090** | ug/L | 1.275 | 2 | 93 | 96187 | 1 | Standard |
| | **Mn** | **55** | **51.365** | ug/L | 0.640 | 1 | 527 | 1200132 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 19951 | 1 | KED |
| | **Ni** | **60** | **51.930** | ug/L | 1.507 | 2 | 13 | 46286 | 1 | KED |
| | **Ni** | **62** | **51.456** | ug/L | 0.981 | 1 | 8 | 7527 | 1 | KED |
| | **Cu** | **63** | **51.766** | ug/L | 0.343 | 0 | 34 | 137551 | 0 | KED |
| | **Cu** | **65** | **52.294** | ug/L | 1.483 | 2 | 19 | 68610 | 1 | KED |
| | **Zn** | **66** | **50.951** | ug/L | 1.349 | 2 | 36 | 17982 | 1 | KED |
| | **Zn** | **67** | **53.035** | ug/L | 1.493 | 2 | 4 | 3195 | 2 | KED |
| | **As** | **75** | **51.477** | ug/L | 0.884 | 1 | 5 | 9157 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 201459 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 40 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5557 | 1 | KED |
| | **Cd** | **111** | **51.054** | ug/L | 0.731 | 1 | 2 | 10280 | 0 | KED |
| | **Cd** | **114** | **51.070** | ug/L | 0.654 | 1 | 6 | 24983 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 460335 | 3 | Standard |
| | **Pb** | **208** | **54.571** | ug/L | 1.494 | 2 | 115 | 2086351 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBG**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:31:41**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 30209 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3262902 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 394751 | 1 | Standard |
| | **Cr** | **52** | **-0.013** | ug/L | 0.019 | 145 | 16311 | 14995 | 3 | Standard |
| | **Cr** | **53** | **-0.004** | ug/L | 0.005 | 124 | 93 | 79 | 10 | Standard |
| | **Mn** | **55** | **0.008** | ug/L | 0.001 | 10 | 527 | 679 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 19446 | 2 | KED |
| | **Ni** | **60** | **-0.002** | ug/L | 0.001 | 54 | 13 | 10 | 10 | KED |
| | **Ni** | **62** | **-0.027** | ug/L | 0.014 | 52 | 8 | 3 | 50 | KED |
| | **Cu** | **63** | **0.004** | ug/L | 0.001 | 29 | 34 | 43 | 9 | KED |
| | **Cu** | **65** | **0.007** | ug/L | 0.007 | 97 | 19 | 27 | 32 | KED |
| | **Zn** | **66** | **0.060** | ug/L | 0.028 | 46 | 36 | 53 | 16 | KED |
| | **Zn** | **67** | **0.070** | ug/L | 0.035 | 49 | 4 | 8 | 26 | KED |
| | **As** | **75** | **0.005** | ug/L | 0.015 | 270 | 5 | 6 | 38 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 195241 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 55 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5455 | 1 | KED |
| | **Cd** | **111** | **0.009** | ug/L | 0.010 | 112 | 2 | 3 | 50 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.006 | 194 | 6 | 4 | 68 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 441897 | 3 | Standard |
| | **Pb** | **208** | **0.004** | ug/L | 0.000 | 7 | 115 | 248 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0428-01RE1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:36:05**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 42631 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3444399 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 426178 | 3 | Standard |
| | **Cr** | **52** | **0.392** | ug/L | 0.015 | 3 | 16311 | 23064 | 2 | Standard |
| | **Cr** | **53** | **0.443** | ug/L | 0.005 | 1 | 93 | 971 | 2 | Standard |
| | **Mn** | **55** | **3.009** | ug/L | 0.051 | 1 | 527 | 74487 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20143 | 1 | KED |
| | **Ni** | **60** | **1.065** | ug/L | 0.036 | 3 | 13 | 972 | 5 | KED |
| | **Ni** | **62** | **1.083** | ug/L | 0.077 | 7 | 8 | 167 | 5 | KED |
| | **Cu** | **63** | **0.981** | ug/L | 0.020 | 2 | 34 | 2663 | 1 | KED |
| | **Cu** | **65** | **1.006** | ug/L | 0.056 | 5 | 19 | 1350 | 4 | KED |
| | **Zn** | **66** | **1.912** | ug/L | 0.101 | 5 | 36 | 714 | 3 | KED |
| | **Zn** | **67** | **4.395** | ug/L | 0.285 | 6 | 4 | 271 | 4 | KED |
| | **As** | **75** | **0.518** | ug/L | 0.012 | 2 | 5 | 98 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 199294 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 42 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5564 | 1 | KED |
| | **Cd** | **111** | **0.016** | ug/L | 0.013 | 82 | 2 | 5 | 50 | KED |
| | **Cd** | **114** | **0.004** | ug/L | 0.005 | 118 | 6 | 7 | 28 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 456420 | 3 | Standard |
| | **Pb** | **208** | **0.085** | ug/L | 0.004 | 4 | 115 | 3335 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-04**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:40:22**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 43313 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3511711 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 408571 | 1 | Standard |
| | **Cr** | **52** | **0.315** | ug/L | 0.031 | 9 | 16311 | 20852 | 1 | Standard |
| | **Cr** | **53** | **0.265** | ug/L | 0.007 | 2 | 93 | 593 | 3 | Standard |
| | **Mn** | **55** | **0.906** | ug/L | 0.017 | 1 | 527 | 21852 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21157 | 2 | KED |
| | **Ni** | **60** | **0.142** | ug/L | 0.007 | 4 | 13 | 147 | 6 | KED |
| | **Ni** | **62** | **0.052** | ug/L | 0.065 | 125 | 8 | 16 | 63 | KED |
| | **Cu** | **63** | **0.346** | ug/L | 0.001 | 0 | 34 | 1010 | 2 | KED |
| | **Cu** | **65** | **0.344** | ug/L | 0.036 | 10 | 19 | 497 | 7 | KED |
| | **Zn** | **66** | **11.768** | ug/L | 0.181 | 1 | 36 | 4432 | 0 | KED |
| | **Zn** | **67** | **10.259** | ug/L | 0.103 | 1 | 4 | 659 | 1 | KED |
| | **As** | **75** | **0.204** | ug/L | 0.020 | 9 | 5 | 44 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 197090 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 48 | 35 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5935 | 2 | KED |
| | **Cd** | **111** | **-0.007** | ug/L | 0.003 | 34 | 2 | 0 | 86 | KED |
| | **Cd** | **114** | **-0.005** | ug/L | 0.002 | 53 | 6 | 3 | 30 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 453850 | 3 | Standard |
| | **Pb** | **208** | **0.013** | ug/L | 0.002 | 12 | 115 | 611 | 8 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-06**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:44:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 44977 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3501369 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 421978 | 2 | Standard |
| | **Cr** | **52** | **0.360** | ug/L | 0.023 | 6 | 16311 | 22285 | 0 | Standard |
| | **Cr** | **53** | **0.297** | ug/L | 0.019 | 6 | 93 | 676 | 7 | Standard |
| | **Mn** | **55** | **3.485** | ug/L | 0.101 | 2 | 527 | 85322 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 19998 | 3 | KED |
| | **Ni** | **60** | **7.257** | ug/L | 0.093 | 1 | 13 | 6495 | 2 | KED |
| | **Ni** | **62** | **6.752** | ug/L | 0.358 | 5 | 8 | 997 | 7 | KED |
| | **Cu** | **63** | **0.232** | ug/L | 0.011 | 4 | 34 | 650 | 8 | KED |
| | **Cu** | **65** | **0.240** | ug/L | 0.008 | 3 | 19 | 333 | 5 | KED |
| | **Zn** | **66** | **63.310** | ug/L | 0.842 | 1 | 36 | 22397 | 4 | KED |
| | **Zn** | **67** | **53.537** | ug/L | 1.707 | 3 | 4 | 3232 | 3 | KED |
| | **As** | **75** | **0.161** | ug/L | 0.021 | 13 | 5 | 34 | 14 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 205077 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 56 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5431 | 0 | KED |
| | **Cd** | **111** | **0.007** | ug/L | 0.014 | 191 | 2 | 3 | 78 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.005 | 190 | 6 | 4 | 48 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 473744 | 2 | Standard |
| | **Pb** | **208** | **0.012** | ug/L | 0.000 | 3 | 115 | 591 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-08**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:49:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 43123 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3441339 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 412563 | 2 | Standard |
| | **Cr** | **52** | **0.510** | ug/L | 0.034 | 6 | 16311 | 24261 | 0 | Standard |
| | **Cr** | **53** | **0.468** | ug/L | 0.027 | 5 | 93 | 989 | 6 | Standard |
| | **Mn** | **55** | **0.793** | ug/L | 0.020 | 2 | 527 | 19380 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20785 | 3 | KED |
| | **Ni** | **60** | **0.191** | ug/L | 0.011 | 5 | 13 | 191 | 8 | KED |
| | **Ni** | **62** | **0.250** | ug/L | 0.015 | 5 | 8 | 46 | 8 | KED |
| | **Cu** | **63** | **0.724** | ug/L | 0.027 | 3 | 34 | 2035 | 1 | KED |
| | **Cu** | **65** | **0.738** | ug/L | 0.035 | 4 | 19 | 1027 | 3 | KED |
| | **Zn** | **66** | **7.272** | ug/L | 0.105 | 1 | 36 | 2704 | 2 | KED |
| | **Zn** | **67** | **6.462** | ug/L | 0.402 | 6 | 4 | 408 | 2 | KED |
| | **As** | **75** | **0.273** | ug/L | 0.007 | 2 | 5 | 56 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 201406 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 43 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5575 | 5 | KED |
| | **Cd** | **111** | **-0.001** | ug/L | 0.005 | 524 | 2 | 1 | 50 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.006 | 215 | 6 | 4 | 64 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 456293 | 3 | Standard |
| | **Pb** | **208** | **0.021** | ug/L | 0.002 | 9 | 115 | 910 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-10**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:53:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 45626 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3490064 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 425522 | 1 | Standard |
| | **Cr** | **52** | **0.326** | ug/L | 0.044 | 13 | 16311 | 21897 | 2 | Standard |
| | **Cr** | **53** | **0.265** | ug/L | 0.006 | 2 | 93 | 617 | 2 | Standard |
| | **Mn** | **55** | **3.196** | ug/L | 0.022 | 0 | 527 | 78986 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20100 | 1 | KED |
| | **Ni** | **60** | **0.064** | ug/L | 0.010 | 15 | 13 | 71 | 10 | KED |
| | **Ni** | **62** | **0.028** | ug/L | 0.021 | 72 | 8 | 12 | 24 | KED |
| | **Cu** | **63** | **0.310** | ug/L | 0.027 | 8 | 34 | 860 | 6 | KED |
| | **Cu** | **65** | **0.298** | ug/L | 0.002 | 0 | 19 | 412 | 1 | KED |
| | **Zn** | **66** | **45.064** | ug/L | 0.540 | 1 | 36 | 16029 | 0 | KED |
| | **Zn** | **67** | **40.680** | ug/L | 1.053 | 2 | 4 | 2470 | 1 | KED |
| | **As** | **75** | **0.179** | ug/L | 0.009 | 5 | 5 | 37 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 213329 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 53 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5514 | 3 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.003 | 115 | 2 | 1 | 34 | KED |
| | **Cd** | **114** | **-0.010** | ug/L | 0.004 | 38 | 6 | 1 | 177 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 470093 | 3 | Standard |
| | **Pb** | **208** | **0.019** | ug/L | 0.002 | 9 | 115 | 857 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-12**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 04:57:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 44946 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3455689 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 437008 | 2 | Standard |
| | **Cr** | **52** | **0.337** | ug/L | 0.023 | 6 | 16311 | 22679 | 2 | Standard |
| | **Cr** | **53** | **0.326** | ug/L | 0.015 | 4 | 93 | 757 | 5 | Standard |
| | **Mn** | **55** | **0.690** | ug/L | 0.017 | 2 | 527 | 17930 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20974 | 2 | KED |
| | **Ni** | **60** | **0.102** | ug/L | 0.008 | 7 | 13 | 109 | 7 | KED |
| | **Ni** | **62** | **0.099** | ug/L | 0.035 | 35 | 8 | 23 | 24 | KED |
| | **Cu** | **63** | **0.424** | ug/L | 0.021 | 4 | 34 | 1218 | 4 | KED |
| | **Cu** | **65** | **0.418** | ug/L | 0.024 | 5 | 19 | 596 | 3 | KED |
| | **Zn** | **66** | **7.903** | ug/L | 0.399 | 5 | 36 | 2962 | 4 | KED |
| | **Zn** | **67** | **7.218** | ug/L | 0.111 | 1 | 4 | 460 | 1 | KED |
| | **As** | **75** | **0.174** | ug/L | 0.027 | 15 | 5 | 38 | 10 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 211915 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 51 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 6000 | 1 | KED |
| | **Cd** | **111** | **0.007** | ug/L | 0.005 | 65 | 2 | 3 | 25 | KED |
| | **Cd** | **114** | **-0.011** | ug/L | 0.002 | 22 | 6 | 0 | 171 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 479164 | 4 | Standard |
| | **Pb** | **208** | **0.017** | ug/L | 0.000 | 0 | 115 | 806 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:02:16**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 45110 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3443551 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 417979 | 1 | Standard |
| | **Cr** | **52** | **0.375** | ug/L | 0.038 | 10 | 16311 | 22342 | 2 | Standard |
| | **Cr** | **53** | **0.281** | ug/L | 0.011 | 3 | 93 | 637 | 2 | Standard |
| | **Mn** | **55** | **2.606** | ug/L | 0.064 | 2 | 527 | 63354 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 21028 | 1 | KED |
| | **Ni** | **60** | **0.074** | ug/L | 0.008 | 10 | 13 | 83 | 8 | KED |
| | **Ni** | **62** | **0.095** | ug/L | 0.010 | 11 | 8 | 22 | 8 | KED |
| | **Cu** | **63** | **0.256** | ug/L | 0.021 | 8 | 34 | 751 | 9 | KED |
| | **Cu** | **65** | **0.234** | ug/L | 0.004 | 1 | 19 | 342 | 2 | KED |
| | **Zn** | **66** | **33.084** | ug/L | 1.015 | 3 | 36 | 12325 | 4 | KED |
| | **Zn** | **67** | **29.232** | ug/L | 0.562 | 1 | 4 | 1858 | 2 | KED |
| | **As** | **75** | **0.182** | ug/L | 0.034 | 18 | 5 | 39 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 202459 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 46 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5801 | 3 | KED |
| | **Cd** | **111** | **0.008** | ug/L | 0.008 | 102 | 2 | 3 | 43 | KED |
| | **Cd** | **114** | **-0.000** | ug/L | 0.006 | 1274 | 6 | 6 | 52 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 466298 | 3 | Standard |
| | **Pb** | **208** | **0.014** | ug/L | 0.001 | 6 | 115 | 671 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0194-DUP1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:06:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 43166 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3402239 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 405812 | 2 | Standard |
| | **Cr** | **52** | **0.275** | ug/L | 0.035 | 12 | 16311 | 20079 | 4 | Standard |
| | **Cr** | **53** | **0.251** | ug/L | 0.008 | 3 | 93 | 562 | 4 | Standard |
| | **Mn** | **55** | **2.686** | ug/L | 0.020 | 0 | 527 | 63381 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20144 | 1 | KED |
| | **Ni** | **60** | **0.073** | ug/L | 0.011 | 14 | 13 | 79 | 12 | KED |
| | **Ni** | **62** | **0.032** | ug/L | 0.038 | 119 | 8 | 12 | 45 | KED |
| | **Cu** | **63** | **0.215** | ug/L | 0.010 | 4 | 34 | 610 | 3 | KED |
| | **Cu** | **65** | **0.233** | ug/L | 0.024 | 10 | 19 | 326 | 8 | KED |
| | **Zn** | **66** | **32.752** | ug/L | 0.270 | 0 | 36 | 11686 | 0 | KED |
| | **Zn** | **67** | **29.639** | ug/L | 0.252 | 0 | 4 | 1805 | 1 | KED |
| | **As** | **75** | **0.181** | ug/L | 0.013 | 7 | 5 | 37 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 195397 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 39 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5407 | 5 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.006 | 293 | 2 | 1 | 69 | KED |
| | **Cd** | **114** | **-0.005** | ug/L | 0.002 | 47 | 6 | 3 | 30 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 454083 | 3 | Standard |
| | **Pb** | **208** | **0.018** | ug/L | 0.001 | 3 | 115 | 792 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0194-MS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:10:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 44935 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3413687 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 422486 | 2 | Standard |
| | **Cr** | **52** | **26.224** | ug/L | 0.446 | 1 | 16311 | 457512 | 2 | Standard |
| | **Cr** | **53** | **26.167** | ug/L | 0.154 | 0 | 93 | 51463 | 2 | Standard |
| | **Mn** | **55** | **29.351** | ug/L | 0.192 | 0 | 527 | 715952 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20835 | 2 | KED |
| | **Ni** | **60** | **27.225** | ug/L | 0.470 | 1 | 13 | 25357 | 3 | KED |
| | **Ni** | **62** | **26.437** | ug/L | 0.757 | 2 | 8 | 4041 | 2 | KED |
| | **Cu** | **63** | **26.793** | ug/L | 0.609 | 2 | 34 | 74371 | 2 | KED |
| | **Cu** | **65** | **27.151** | ug/L | 0.331 | 1 | 19 | 37219 | 2 | KED |
| | **Zn** | **66** | **116.996** | ug/L | 1.777 | 1 | 36 | 43077 | 0 | KED |
| | **Zn** | **67** | **101.333** | ug/L | 1.295 | 1 | 4 | 6371 | 0 | KED |
| | **As** | **75** | **25.380** | ug/L | 0.158 | 0 | 5 | 4717 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 204387 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 43 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5640 | 2 | KED |
| | **Cd** | **111** | **25.629** | ug/L | 0.682 | 2 | 2 | 5237 | 1 | KED |
| | **Cd** | **114** | **26.041** | ug/L | 0.854 | 3 | 6 | 12925 | 1 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 464989 | 4 | Standard |
| | **Pb** | **208** | **28.426** | ug/L | 0.628 | 2 | 115 | 1097790 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22I0052-13**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:16:43**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 47332 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3394381 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 552435 | 1 | Standard |
| | **Cr** | **52** | **13.580** | ug/L | 0.004 | 0 | 16311 | 320085 | 1 | Standard |
| | **Cr** | **53** | **13.637** | ug/L | 0.082 | 0 | 93 | 35130 | 1 | Standard |
| | **Mn** | **55** | **236.366** | ug/L | 3.294 | 1 | 527 | 7533823 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20359 | 0 | KED |
| | **Ni** | **60** | **16.711** | ug/L | 0.524 | 3 | 13 | 15211 | 2 | KED |
| | **Ni** | **62** | **16.754** | ug/L | 0.410 | 2 | 8 | 2506 | 3 | KED |
| | **Cu** | **63** | **20.630** | ug/L | 0.269 | 1 | 34 | 55958 | 0 | KED |
| | **Cu** | **65** | **21.249** | ug/L | 0.423 | 1 | 19 | 28469 | 2 | KED |
| | **Zn** | **66** | **81.556** | ug/L | 0.785 | 0 | 36 | 29359 | 1 | KED |
| | **Zn** | **67** | **79.298** | ug/L | 2.556 | 3 | 4 | 4873 | 2 | KED |
| | **As** | **75** | **2.533** | ug/L | 0.089 | 3 | 5 | 465 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 434604 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 134 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5604 | 1 | KED |
| | **Cd** | **111** | **0.072** | ug/L | 0.017 | 23 | 2 | 16 | 21 | KED |
| | **Cd** | **114** | **0.094** | ug/L | 0.017 | 17 | 6 | 52 | 16 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 483462 | 3 | Standard |
| | **Pb** | **208** | **13.761** | ug/L | 0.427 | 3 | 115 | 552558 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVH**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:23:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 31957 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3585631 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 423672 | 409489 | 0 | Standard |
| \| | **Cr** | **52** | **50.693** | ug/L | 0.190 | 0 | 16311 | 842585 | 0 | Standard |
| \| | **Cr** | **53** | **50.544** | ug/L | 0.742 | 1 | 93 | 96273 | 2 | Standard |
| ⌊ | **Mn** | **55** | **51.688** | ug/L | 0.528 | 1 | 527 | 1221587 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 20993 | 20128 | 1 | KED |
| \| | **Ni** | **60** | **50.808** | ug/L | 1.186 | 2 | 13 | 45692 | 1 | KED |
| \| | **Ni** | **62** | **51.630** | ug/L | 1.221 | 2 | 8 | 7618 | 1 | KED |
| \| | **Cu** | **63** | **50.907** | ug/L | 0.634 | 1 | 34 | 136481 | 1 | KED |
| \| | **Cu** | **65** | **51.460** | ug/L | 0.862 | 1 | 19 | 68124 | 1 | KED |
| \| | **Zn** | **66** | **52.014** | ug/L | 1.795 | 3 | 36 | 18519 | 2 | KED |
| \| | **Zn** | **67** | **50.908** | ug/L | 1.421 | 2 | 4 | 3094 | 1 | KED |
| ⌊ | **As** | **75** | **50.147** | ug/L | 1.061 | 2 | 5 | 8998 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 198783 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 50 | 18 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5860 | 5383 | 1 | KED |
| \| | **Cd** | **111** | **51.761** | ug/L | 1.423 | 2 | 2 | 10094 | 1 | KED |
| ⌊ | **Cd** | **114** | **51.677** | ug/L | 0.549 | 1 | 6 | 24486 | 0 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 480478 | 464608 | 3 | Standard |
| ⌊ | **Pb** | **208** | **54.638** | ug/L | 1.841 | 3 | 115 | 2107830 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBH**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:30:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 31215 | 30927 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3324914 | 3324282 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 423672 | 419721 | 2 | Standard |
| | **Cr** | **52** | **-0.028** | ug/L | 0.018 | 64 | 16311 | 15685 | 0 | Standard |
| | **Cr** | **53** | **-0.005** | ug/L | 0.003 | 61 | 93 | 81 | 10 | Standard |
| | **Mn** | **55** | **0.004** | ug/L | 0.000 | 12 | 527 | 611 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 20993 | 20536 | 2 | KED |
| | **Ni** | **60** | **-0.002** | ug/L | 0.008 | 463 | 13 | 12 | 55 | KED |
| | **Ni** | **62** | **-0.024** | ug/L | 0.020 | 84 | 8 | 4 | 65 | KED |
| | **Cu** | **63** | **0.006** | ug/L | 0.005 | 88 | 34 | 48 | 29 | KED |
| | **Cu** | **65** | **0.001** | ug/L | 0.006 | 529 | 19 | 20 | 41 | KED |
| | **Zn** | **66** | **0.058** | ug/L | 0.016 | 27 | 36 | 56 | 10 | KED |
| | **Zn** | **67** | **0.074** | ug/L | 0.068 | 91 | 4 | 8 | 44 | KED |
| | **As** | **75** | **-0.001** | ug/L | 0.009 | 984 | 5 | 5 | 28 | KED |
| | **Y** | **89** | | ug/L | | | 210865 | 198820 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 43 | 48 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5860 | 5658 | 2 | KED |
| | **Cd** | **111** | **0.005** | ug/L | 0.008 | 147 | 2 | 3 | 45 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.010 | 291 | 6 | 4 | 112 | KED |
| > | **Tb** | **159** | | ug/L | | | 480478 | 462212 | 3 | Standard |
| | **Pb** | **208** | **0.004** | ug/L | 0.000 | 6 | 115 | 255 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:35:21**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | | 33587 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | | 3318464 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | | 408513 | 1 | Standard |
| | **Cr** | **52** | | ug/L | | | | 15747 | 1 | Standard |
| | **Cr** | **53** | | ug/L | | | | 81 | 12 | Standard |
| | **Mn** | **55** | | ug/L | | | | 555 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | | 19427 | 2 | KED |
| | **Ni** | **60** | | ug/L | | | | 13 | 24 | KED |
| | **Ni** | **62** | | ug/L | | | | 8 | 35 | KED |
| | **Cu** | **63** | | ug/L | | | | 28 | 30 | KED |
| | **Cu** | **65** | | ug/L | | | | 17 | 48 | KED |
| | **Zn** | **66** | | ug/L | | | | 33 | 6 | KED |
| | **Zn** | **67** | | ug/L | | | | 3 | 50 | KED |
| | **As** | **75** | | ug/L | | | | 5 | 5 | KED |
| | **Y** | **89** | | ug/L | | | | 199932 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | | 55 | 34 | Standard |
| > | **In-1** | **115** | | ug/L | | | | 5415 | 1 | KED |
| | **Cd** | **111** | | ug/L | | | | 1 | 132 | KED |
| | **Cd** | **114** | | ug/L | | | | 1 | 100 | KED |
| > | **Tb** | **159** | | ug/L | | | | 457409 | 3 | Standard |
| | **Pb** | **208** | | ug/L | | | | 92 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:39:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 30970 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3596620 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 394965 | 1 | Standard |
| | **Cr** | **52** | **51.509** | ug/L | 0.397 | 0 | 15747 | 825564 | 1 | Standard |
| | **Cr** | **53** | **51.719** | ug/L | 0.617 | 1 | 81 | 94996 | 0 | Standard |
| | **Mn** | **55** | **51.863** | ug/L | 0.740 | 1 | 555 | 1182141 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20111 | 0 | KED |
| | **Ni** | **60** | **51.495** | ug/L | 0.793 | 1 | 13 | 46277 | 0 | KED |
| | **Ni** | **62** | **49.693** | ug/L | 1.333 | 2 | 8 | 7328 | 2 | KED |
| | **Cu** | **63** | **49.772** | ug/L | 0.361 | 0 | 28 | 133322 | 0 | KED |
| | **Cu** | **65** | **51.551** | ug/L | 0.455 | 0 | 17 | 68194 | 0 | KED |
| | **Zn** | **66** | **49.789** | ug/L | 0.975 | 1 | 33 | 17718 | 2 | KED |
| | **Zn** | **67** | **50.902** | ug/L | 2.069 | 4 | 3 | 3091 | 3 | KED |
| | **As** | **75** | **49.446** | ug/L | 0.718 | 1 | 5 | 8866 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 189958 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 65 | 3 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5403 | 2 | KED |
| | **Cd** | **111** | **50.937** | ug/L | 1.476 | 2 | 1 | 9967 | 0 | KED |
| | **Cd** | **114** | **51.669** | ug/L | 1.325 | 2 | 1 | 24561 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 448132 | 1 | Standard |
| | **Pb** | **208** | **55.044** | ug/L | 1.318 | 2 | 92 | 2049277 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:46:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 31277 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3347711 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 408513 | 407725 | 2 | Standard |
| \| | **Cr** | **52** | **-0.010** | ug/L | 0.028 | 283 | 15747 | 15562 | 4 | Standard |
| \| | **Cr** | **53** | **0.006** | ug/L | 0.003 | 57 | 81 | 92 | 8 | Standard |
| ⌊ | **Mn** | **55** | **0.004** | ug/L | 0.001 | 31 | 555 | 639 | 5 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 19427 | 20045 | 0 | KED |
| \| | **Ni** | **60** | **-0.001** | ug/L | 0.012 | 990 | 13 | 12 | 82 | KED |
| \| | **Ni** | **62** | **-0.023** | ug/L | 0.027 | 115 | 8 | 5 | 78 | KED |
| \| | **Cu** | **63** | **0.010** | ug/L | 0.005 | 52 | 28 | 57 | 26 | KED |
| \| | **Cu** | **65** | **0.007** | ug/L | 0.014 | 195 | 17 | 27 | 68 | KED |
| \| | **Zn** | **66** | **0.065** | ug/L | 0.014 | 21 | 33 | 57 | 9 | KED |
| \| | **Zn** | **67** | **0.177** | ug/L | 0.113 | 63 | 3 | 14 | 45 | KED |
| ⌊ | **As** | **75** | **0.005** | ug/L | 0.014 | 266 | 5 | 6 | 40 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 200193 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 40 | 26 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5415 | 5910 | 2 | KED |
| \| | **Cd** | **111** | **-0.007** | ug/L | 0.003 | 38 | 1 | 0 | 86 | KED |
| ⌊ | **Cd** | **114** | **0.001** | ug/L | 0.004 | 663 | 1 | 2 | 96 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 457409 | 454753 | 4 | Standard |
| ⌊ | **Pb** | **208** | **0.004** | ug/L | 0.001 | 15 | 92 | 238 | 9 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:51:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 46306 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3350138 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 427778 | 3 | Standard |
| | **Cr** | **52** | **0.369** | ug/L | 0.027 | 7 | 15747 | 22773 | 1 | Standard |
| | **Cr** | **53** | **0.309** | ug/L | 0.016 | 5 | 81 | 697 | 1 | Standard |
| | **Mn** | **55** | **3.057** | ug/L | 0.038 | 1 | 555 | 76004 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20924 | 1 | KED |
| | **Ni** | **60** | **0.076** | ug/L | 0.011 | 14 | 13 | 85 | 11 | KED |
| | **Ni** | **62** | **0.083** | ug/L | 0.025 | 29 | 8 | 21 | 18 | KED |
| | **Cu** | **63** | **0.332** | ug/L | 0.020 | 5 | 28 | 956 | 5 | KED |
| | **Cu** | **65** | **0.354** | ug/L | 0.027 | 7 | 17 | 506 | 7 | KED |
| | **Zn** | **66** | **38.381** | ug/L | 1.158 | 3 | 33 | 14219 | 3 | KED |
| | **Zn** | **67** | **32.496** | ug/L | 0.686 | 2 | 3 | 2054 | 1 | KED |
| | **As** | **75** | **0.233** | ug/L | 0.008 | 3 | 5 | 48 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208192 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5647 | 1 | KED |
| | **Cd** | **111** | **-0.000** | ug/L | 0.009 | 1856 | 1 | 1 | 100 | KED |
| | **Cd** | **114** | **0.011** | ug/L | 0.017 | 155 | 1 | 7 | 115 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 477111 | 5 | Standard |
| | **Pb** | **208** | **0.077** | ug/L | 0.005 | 6 | 92 | 3142 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-03**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 05:55:38**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 46846 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3317272 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 432261 | 2 | Standard |
| | **Cr** | **52** | **0.379** | ug/L | 0.031 | 8 | 15747 | 23190 | 1 | Standard |
| | **Cr** | **53** | **0.309** | ug/L | 0.011 | 3 | 81 | 706 | 3 | Standard |
| | **Mn** | **55** | **1.417** | ug/L | 0.041 | 2 | 555 | 35926 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 19961 | 1 | KED |
| | **Ni** | **60** | **0.170** | ug/L | 0.007 | 3 | 13 | 165 | 2 | KED |
| | **Ni** | **62** | **0.129** | ug/L | 0.039 | 30 | 8 | 27 | 21 | KED |
| | **Cu** | **63** | **0.436** | ug/L | 0.019 | 4 | 28 | 1188 | 2 | KED |
| | **Cu** | **65** | **0.457** | ug/L | 0.017 | 3 | 17 | 617 | 1 | KED |
| | **Zn** | **66** | **13.524** | ug/L | 0.232 | 1 | 33 | 4802 | 2 | KED |
| | **Zn** | **67** | **11.651** | ug/L | 0.589 | 5 | 3 | 705 | 5 | KED |
| | **As** | **75** | **0.211** | ug/L | 0.039 | 18 | 5 | 42 | 14 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208898 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 55 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5739 | 1 | KED |
| | **Cd** | **111** | **0.010** | ug/L | 0.009 | 92 | 1 | 4 | 48 | KED |
| | **Cd** | **114** | **0.002** | ug/L | 0.004 | 145 | 1 | 3 | 57 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 477446 | 5 | Standard |
| | **Pb** | **208** | **0.020** | ug/L | 0.002 | 8 | 92 | 885 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-05**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:00:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 44371 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3429934 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 428994 | 1 | Standard |
| | **Cr** | **52** | **0.417** | ug/L | 0.019 | 4 | 15747 | 23668 | 1 | Standard |
| | **Cr** | **53** | **0.383** | ug/L | 0.006 | 1 | 81 | 848 | 2 | Standard |
| | **Mn** | **55** | **3.518** | ug/L | 0.061 | 1 | 555 | 87646 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20983 | 1 | KED |
| | **Ni** | **60** | **0.130** | ug/L | 0.028 | 21 | 13 | 136 | 20 | KED |
| | **Ni** | **62** | **0.099** | ug/L | 0.017 | 16 | 8 | 24 | 12 | KED |
| | **Cu** | **63** | **0.275** | ug/L | 0.035 | 12 | 28 | 800 | 11 | KED |
| | **Cu** | **65** | **0.272** | ug/L | 0.012 | 4 | 17 | 393 | 4 | KED |
| | **Zn** | **66** | **70.741** | ug/L | 1.695 | 2 | 33 | 26245 | 1 | KED |
| | **Zn** | **67** | **60.426** | ug/L | 1.594 | 2 | 3 | 3827 | 2 | KED |
| | **As** | **75** | **0.153** | ug/L | 0.036 | 23 | 5 | 34 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208047 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 48 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5847 | 3 | KED |
| | **Cd** | **111** | **0.014** | ug/L | 0.010 | 68 | 1 | 5 | 39 | KED |
| | **Cd** | **114** | **0.008** | ug/L | 0.010 | 129 | 1 | 6 | 90 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 476371 | 3 | Standard |
| | **Pb** | **208** | **0.042** | ug/L | 0.003 | 6 | 92 | 1751 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-07**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:04:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 44292 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3326408 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 417133 | 2 | Standard |
| | **Cr** | **52** | **0.389** | ug/L | 0.034 | 8 | 15747 | 22542 | 1 | Standard |
| | **Cr** | **53** | **0.356** | ug/L | 0.018 | 5 | 81 | 773 | 4 | Standard |
| | **Mn** | **55** | **1.427** | ug/L | 0.011 | 0 | 555 | 34909 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20974 | 1 | KED |
| | **Ni** | **60** | **0.234** | ug/L | 0.034 | 14 | 13 | 233 | 12 | KED |
| | **Ni** | **62** | **0.182** | ug/L | 0.022 | 12 | 8 | 36 | 7 | KED |
| | **Cu** | **63** | **0.647** | ug/L | 0.016 | 2 | 28 | 1837 | 1 | KED |
| | **Cu** | **65** | **0.645** | ug/L | 0.013 | 2 | 17 | 907 | 0 | KED |
| | **Zn** | **66** | **6.556** | ug/L | 0.285 | 4 | 33 | 2463 | 2 | KED |
| | **Zn** | **67** | **5.972** | ug/L | 0.570 | 9 | 3 | 381 | 8 | KED |
| | **As** | **75** | **0.237** | ug/L | 0.013 | 5 | 5 | 49 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208530 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 35 | 40 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5857 | 2 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.010 | 465 | 1 | 1 | 124 | KED |
| | **Cd** | **114** | **0.004** | ug/L | 0.005 | 141 | 1 | 3 | 70 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 465131 | 3 | Standard |
| | **Pb** | **208** | **0.024** | ug/L | 0.001 | 3 | 92 | 1003 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-09**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:08:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 42517 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3268332 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 413982 | 2 | Standard |
| | **Cr** | **52** | **0.391** | ug/L | 0.010 | 2 | 15747 | 22402 | 2 | Standard |
| | **Cr** | **53** | **0.378** | ug/L | 0.004 | 1 | 81 | 810 | 2 | Standard |
| | **Mn** | **55** | **3.774** | ug/L | 0.036 | 0 | 555 | 90700 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20046 | 1 | KED |
| | **Ni** | **60** | **0.089** | ug/L | 0.013 | 14 | 13 | 93 | 13 | KED |
| | **Ni** | **62** | **0.050** | ug/L | 0.027 | 53 | 8 | 15 | 24 | KED |
| | **Cu** | **63** | **0.268** | ug/L | 0.015 | 5 | 28 | 743 | 3 | KED |
| | **Cu** | **65** | **0.269** | ug/L | 0.023 | 8 | 17 | 372 | 7 | KED |
| | **Zn** | **66** | **52.618** | ug/L | 1.257 | 2 | 33 | 18658 | 1 | KED |
| | **Zn** | **67** | **47.176** | ug/L | 1.333 | 2 | 3 | 2857 | 4 | KED |
| | **As** | **75** | **0.166** | ug/L | 0.017 | 10 | 5 | 34 | 10 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 204081 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 39 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5718 | 1 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.007 | 326 | 1 | 1 | 91 | KED |
| | **Cd** | **114** | **0.006** | ug/L | 0.007 | 107 | 1 | 5 | 66 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 454421 | 4 | Standard |
| | **Pb** | **208** | **0.043** | ug/L | 0.002 | 3 | 92 | 1718 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0009-11**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:13:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 45620 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3260661 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 423807 | 2 | Standard |
| | **Cr** | **52** | **0.383** | ug/L | 0.051 | 13 | 15747 | 22795 | 2 | Standard |
| | **Cr** | **53** | **0.354** | ug/L | 0.030 | 8 | 81 | 781 | 4 | Standard |
| | **Mn** | **55** | **1.233** | ug/L | 0.013 | 1 | 555 | 30721 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20930 | 5 | KED |
| | **Ni** | **60** | **0.134** | ug/L | 0.015 | 11 | 13 | 139 | 10 | KED |
| | **Ni** | **62** | **0.124** | ug/L | 0.033 | 26 | 8 | 27 | 20 | KED |
| | **Cu** | **63** | **0.382** | ug/L | 0.016 | 4 | 28 | 1092 | 2 | KED |
| | **Cu** | **65** | **0.404** | ug/L | 0.017 | 4 | 17 | 574 | 9 | KED |
| | **Zn** | **66** | **8.639** | ug/L | 0.140 | 1 | 33 | 3227 | 3 | KED |
| | **Zn** | **67** | **7.793** | ug/L | 0.585 | 7 | 3 | 495 | 5 | KED |
| | **As** | **75** | **0.173** | ug/L | 0.024 | 13 | 5 | 37 | 10 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 205177 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 42 | 38 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5979 | 0 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.003 | 109 | 1 | 1 | 34 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.002 | 62 | 1 | 0 | 154 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 474826 | 3 | Standard |
| | **Pb** | **208** | **0.020** | ug/L | 0.001 | 6 | 92 | 900 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0612-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:17:27**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 57890 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3606158 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 473375 | 2 | Standard |
| | **Cr** | **52** | **1.614** | ug/L | 0.067 | 4 | 15747 | 48662 | 0 | Standard |
| | **Cr** | **53** | **1.814** | ug/L | 0.025 | 1 | 81 | 4083 | 2 | Standard |
| | **Mn** | **55** | **235.781** | ug/L | 4.900 | 2 | 555 | 6437196 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20609 | 0 | KED |
| | **Ni** | **60** | **3.552** | ug/L | 0.325 | 9 | 13 | 3285 | 9 | KED |
| | **Ni** | **62** | **3.715** | ug/L | 0.144 | 3 | 8 | 569 | 3 | KED |
| | **Cu** | **63** | **4.040** | ug/L | 0.058 | 1 | 28 | 11115 | 0 | KED |
| | **Cu** | **65** | **4.237** | ug/L | 0.092 | 2 | 17 | 5759 | 2 | KED |
| | **Zn** | **66** | **7.227** | ug/L | 0.044 | 0 | 33 | 2666 | 1 | KED |
| | **Zn** | **67** | **9.392** | ug/L | 0.362 | 3 | 3 | 587 | 4 | KED |
| | **As** | **75** | **0.432** | ug/L | 0.039 | 8 | 5 | 84 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 224064 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 41 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5487 | 2 | KED |
| | **Cd** | **111** | **0.280** | ug/L | 0.029 | 10 | 1 | 57 | 8 | KED |
| | **Cd** | **114** | **0.268** | ug/L | 0.046 | 17 | 1 | 131 | 15 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 486470 | 3 | Standard |
| | **Pb** | **208** | **0.683** | ug/L | 0.022 | 3 | 92 | 27689 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0157-DUP1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:22:14**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 54314 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3693854 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 458604 | 2 | Standard |
| | **Cr** | **52** | **1.555** | ug/L | 0.067 | 4 | 15747 | 46059 | 2 | Standard |
| | **Cr** | **53** | **1.708** | ug/L | 0.052 | 3 | 81 | 3728 | 0 | Standard |
| | **Mn** | **55** | **229.361** | ug/L | 5.344 | 2 | 555 | 6066297 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 19572 | 2 | KED |
| | **Ni** | **60** | **3.456** | ug/L | 0.068 | 1 | 13 | 3035 | 2 | KED |
| | **Ni** | **62** | **3.407** | ug/L | 0.142 | 4 | 8 | 496 | 3 | KED |
| | **Cu** | **63** | **4.107** | ug/L | 0.103 | 2 | 28 | 10729 | 0 | KED |
| | **Cu** | **65** | **4.106** | ug/L | 0.126 | 3 | 17 | 5303 | 4 | KED |
| | **Zn** | **66** | **6.959** | ug/L | 0.240 | 3 | 33 | 2439 | 4 | KED |
| | **Zn** | **67** | **9.027** | ug/L | 0.310 | 3 | 3 | 536 | 1 | KED |
| | **As** | **75** | **0.454** | ug/L | 0.019 | 4 | 5 | 84 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208496 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 49 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5597 | 1 | KED |
| | **Cd** | **111** | **0.310** | ug/L | 0.018 | 5 | 1 | 64 | 6 | KED |
| | **Cd** | **114** | **0.283** | ug/L | 0.017 | 5 | 1 | 141 | 6 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 466932 | 4 | Standard |
| | **Pb** | **208** | **0.661** | ug/L | 0.018 | 2 | 92 | 25707 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0157-MS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:28:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | | **13** | | ug/L | | | 33587 | 48512 | 2 | Standard |
| | **Cl** | | **37** | | ug/L | | | 3318464 | 3728660 | 0 | Standard |
| > | **Sc** | | **45** | | ug/L | | | 408513 | 452065 | 2 | Standard |
| | **Cr** | | **52** | **25.566** | ug/L | 0.743 | 2 | 15747 | 477531 | 0 | Standard |
| | **Cr** | | **53** | **25.252** | ug/L | 0.699 | 2 | 81 | 53110 | 0 | Standard |
| | **Mn** | STL | **55** | **253.723** | ug/L | 2.833 | 1 | 555 | 6616659 | 2 | Standard |
| > | **Ge** | | **72** | | ug/L | | | 19427 | 19338 | 1 | KED |
| | **Ni** | | **60** | **31.412** | ug/L | 0.405 | 1 | 13 | 27147 | 0 | KED |
| | **Ni** | | **62** | **31.206** | ug/L | 0.733 | 2 | 8 | 4429 | 3 | KED |
| | **Cu** | | **63** | **30.265** | ug/L | 0.252 | 0 | 28 | 77959 | 0 | KED |
| | **Cu** | | **65** | **30.490** | ug/L | 0.053 | 0 | 17 | 38789 | 1 | KED |
| | **Zn** | | **66** | **84.055** | ug/L | 2.072 | 2 | 33 | 28736 | 2 | KED |
| | **Zn** | | **67** | **81.619** | ug/L | 1.242 | 1 | 3 | 4763 | 0 | KED |
| | **As** | | **75** | **25.683** | ug/L | 0.180 | 0 | 5 | 4430 | 0 | KED |
| | **Y** | | **89** | | ug/L | | | 199932 | 212169 | 0 | Standard |
| | **Kr** | | **83** | | ug/L | | | 55 | 62 | 16 | Standard |
| > | **In-1** | | **115** | | ug/L | | | 5415 | 5409 | 1 | KED |
| | **Cd** | | **111** | **25.302** | ug/L | 0.634 | 2 | 1 | 4958 | 0 | KED |
| | **Cd** | | **114** | **25.162** | ug/L | 0.568 | 2 | 1 | 11977 | 0 | KED |
| > | **Tb** | | **159** | | ug/L | | | 457409 | 465004 | 3 | Standard |
| | **Pb** | | **208** | **28.627** | ug/L | 1.065 | 3 | 92 | 1105250 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL8**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:32:18**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 31245 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3504213 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 393571 | 6 | Standard |
| | **Cr** | **52** | **0.021** | ug/L | 0.015 | 71 | 15747 | 15493 | 4 | Standard |
| | **Cr** | **53** | **0.024** | ug/L | 0.012 | 50 | 81 | 120 | 13 | Standard |
| | **Mn** | **55** | **0.021** | ug/L | 0.005 | 21 | 555 | 1014 | 12 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20139 | 1 | KED |
| | **Ni** | **60** | **-0.006** | ug/L | 0.003 | 57 | 13 | 8 | 32 | KED |
| | **Ni** | **62** | **-0.019** | ug/L | 0.001 | 2 | 8 | 5 | 0 | KED |
| | **Cu** | **63** | **0.005** | ug/L | 0.000 | 4 | 28 | 41 | 0 | KED |
| | **Cu** | **65** | **-0.003** | ug/L | 0.002 | 80 | 17 | 13 | 20 | KED |
| | **Zn** | **66** | **0.009** | ug/L | 0.004 | 44 | 33 | 38 | 5 | KED |
| | **Zn** | **67** | **-0.002** | ug/L | 0.054 | 2197 | 3 | 3 | 86 | KED |
| | **As** | **75** | **-0.005** | ug/L | 0.008 | 170 | 5 | 4 | 32 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 191989 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 42 | 33 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5524 | 3 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.003 | 168 | 1 | 1 | 34 | KED |
| | **Cd** | **114** | **-0.001** | ug/L | 0.002 | 144 | 1 | 1 | 90 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 446015 | 6 | Standard |
| | **Pb** | **208** | **0.005** | ug/L | 0.001 | 17 | 92 | 279 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVJ**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:36:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 33647 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3707357 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 435452 | 1 | Standard |
| | **Cr** | **52** | **50.081** | ug/L | 0.953 | 1 | 15747 | 885200 | 0 | Standard |
| | **Cr** | **53** | **50.410** | ug/L | 0.762 | 1 | 81 | 102075 | 1 | Standard |
| | **Mn** | **55** | **51.436** | ug/L | 0.123 | 0 | 555 | 1292705 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20607 | 4 | KED |
| | **Ni** | **60** | **51.134** | ug/L | 0.755 | 1 | 13 | 47074 | 3 | KED |
| | **Ni** | **62** | **51.624** | ug/L | 1.291 | 2 | 8 | 7796 | 2 | KED |
| | **Cu** | **63** | **51.331** | ug/L | 0.752 | 1 | 28 | 140827 | 3 | KED |
| | **Cu** | **65** | **51.481** | ug/L | 1.532 | 2 | 17 | 69742 | 3 | KED |
| | **Zn** | **66** | **51.087** | ug/L | 0.927 | 1 | 33 | 18618 | 2 | KED |
| | **Zn** | **67** | **51.512** | ug/L | 2.299 | 4 | 3 | 3201 | 1 | KED |
| | **As** | **75** | **50.374** | ug/L | 0.634 | 1 | 5 | 9252 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 211392 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 59 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5800 | 1 | KED |
| | **Cd** | **111** | **51.708** | ug/L | 0.765 | 1 | 1 | 10866 | 0 | KED |
| | **Cd** | **114** | **51.413** | ug/L | 0.327 | 0 | 1 | 26249 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 489522 | 3 | Standard |
| | **Pb** | **208** | **54.269** | ug/L | 1.446 | 2 | 92 | 2206418 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBJ**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:43:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 30478 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3570448 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 408513 | 400324 | 2 | Standard |
| \| | **Cr** | **52** | **0.018** | ug/L | 0.023 | 132 | 15747 | 15709 | 2 | Standard |
| \| | **Cr** | **53** | **0.009** | ug/L | 0.004 | 38 | 81 | 96 | 6 | Standard |
| ⌊ | **Mn** | **55** | **0.005** | ug/L | 0.004 | 70 | 555 | 666 | 13 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 19427 | 20049 | 2 | KED |
| \| | **Ni** | **60** | **0.000** | ug/L | 0.004 | 2477 | 13 | 13 | 28 | KED |
| \| | **Ni** | **62** | **-0.028** | ug/L | 0.014 | 51 | 8 | 4 | 49 | KED |
| \| | **Cu** | **63** | **0.005** | ug/L | 0.002 | 45 | 28 | 43 | 13 | KED |
| \| | **Cu** | **65** | **0.007** | ug/L | 0.004 | 61 | 17 | 26 | 21 | KED |
| \| | **Zn** | **66** | **0.094** | ug/L | 0.028 | 29 | 33 | 67 | 13 | KED |
| \| | **Zn** | **67** | **0.082** | ug/L | 0.102 | 124 | 3 | 8 | 68 | KED |
| ⌊ | **As** | **75** | **-0.000** | ug/L | 0.010 | 4987 | 5 | 5 | 36 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 193790 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 43 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5415 | 5596 | 0 | KED |
| \| | **Cd** | **111** | **-0.003** | ug/L | 0.003 | 79 | 1 | 1 | 43 | KED |
| ⌊ | **Cd** | **114** | **-0.000** | ug/L | 0.004 | 2086 | 1 | 1 | 107 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 457409 | 448177 | 4 | Standard |
| ⌊ | **Pb** | **208** | **0.006** | ug/L | 0.004 | 62 | 92 | 317 | 41 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0010-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:48:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 43568 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3501110 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 394796 | 11 | Standard |
| | **Cr** | **52** | **0.233** | ug/L | 0.079 | 34 | 15747 | 18788 | 4 | Standard |
| | **Cr** | **53** | **0.250** | ug/L | 0.025 | 9 | 81 | 533 | 3 | Standard |
| | **Mn** | **55** | **2.655** | ug/L | 0.126 | 4 | 555 | 60792 | 6 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 19575 | 1 | KED |
| | **Ni** | **60** | **0.144** | ug/L | 0.004 | 2 | 13 | 139 | 2 | KED |
| | **Ni** | **62** | **0.101** | ug/L | 0.022 | 21 | 8 | 22 | 14 | KED |
| | **Cu** | **63** | **1.064** | ug/L | 0.041 | 3 | 28 | 2803 | 4 | KED |
| | **Cu** | **65** | **1.064** | ug/L | 0.043 | 4 | 17 | 1386 | 4 | KED |
| | **Zn** | **66** | **17.834** | ug/L | 0.454 | 2 | 33 | 6198 | 1 | KED |
| | **Zn** | **67** | **15.570** | ug/L | 0.963 | 6 | 3 | 923 | 6 | KED |
| | **As** | **75** | **0.094** | ug/L | 0.015 | 15 | 5 | 21 | 11 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 194758 | 8 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 43 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5410 | 1 | KED |
| | **Cd** | **111** | **0.031** | ug/L | 0.017 | 54 | 1 | 7 | 42 | KED |
| | **Cd** | **114** | **0.033** | ug/L | 0.010 | 30 | 1 | 17 | 27 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 441334 | 12 | Standard |
| | **Pb** | **208** | **0.124** | ug/L | 0.009 | 6 | 92 | 4600 | 6 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0013-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:52:29**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 40764 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 4278838 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 442684 | 2 | Standard |
| | **Cr** | **52** | **1.525** | ug/L | 0.047 | 3 | 15747 | 43948 | 0 | Standard |
| | **Cr** | **53** | **2.149** | ug/L | 0.050 | 2 | 81 | 4507 | 1 | Standard |
| | **Mn** | **55** | **7.713** | ug/L | 0.072 | 0 | 555 | 197603 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20179 | 1 | KED |
| | **Ni** | **60** | **0.875** | ug/L | 0.042 | 4 | 13 | 802 | 3 | KED |
| | **Ni** | **62** | **0.835** | ug/L | 0.044 | 5 | 8 | 132 | 5 | KED |
| | **Cu** | **63** | **4.024** | ug/L | 0.175 | 4 | 28 | 10835 | 2 | KED |
| | **Cu** | **65** | **4.146** | ug/L | 0.092 | 2 | 17 | 5519 | 2 | KED |
| | **Zn** | **66** | **35.740** | ug/L | 1.453 | 4 | 33 | 12767 | 3 | KED |
| | **Zn** | **67** | **34.458** | ug/L | 1.173 | 3 | 3 | 2100 | 1 | KED |
| | **As** | **75** | **0.583** | ug/L | 0.019 | 3 | 5 | 110 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 212904 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 51 | 25 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5491 | 0 | KED |
| | **Cd** | **111** | **0.037** | ug/L | 0.010 | 28 | 1 | 9 | 21 | KED |
| | **Cd** | **114** | **0.043** | ug/L | 0.024 | 56 | 1 | 22 | 51 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 480657 | 4 | Standard |
| | **Pb** | **208** | **1.292** | ug/L | 0.059 | 4 | 92 | 51630 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0016-01**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 06:56:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 112973 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3436786 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 438051 | 2 | Standard |
| | **Cr** | **52** | **0.757** | ug/L | 0.017 | 2 | 15747 | 30093 | 2 | Standard |
| | **Cr** | **53** | **0.633** | ug/L | 0.018 | 2 | 81 | 1375 | 3 | Standard |
| | **Mn** | **55** | **137.991** | ug/L | 2.605 | 1 | 555 | 3486652 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21068 | 2 | KED |
| | **Ni** | **60** | **22.080** | ug/L | 0.986 | 4 | 13 | 20782 | 2 | KED |
| | **Ni** | **62** | **21.694** | ug/L | 0.462 | 2 | 8 | 3356 | 2 | KED |
| | **Cu** | **63** | **6.877** | ug/L | 0.269 | 3 | 28 | 19311 | 1 | KED |
| | **Cu** | **65** | **6.946** | ug/L | 0.280 | 4 | 17 | 9635 | 1 | KED |
| | **Zn** | **66** | **2.584** | ug/L | 0.087 | 3 | 33 | 997 | 2 | KED |
| | **Zn** | **67** | **2.439** | ug/L | 0.281 | 11 | 3 | 159 | 13 | KED |
| | **As** | **75** | **0.432** | ug/L | 0.023 | 5 | 5 | 86 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 204220 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 43 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5520 | 2 | KED |
| | **Cd** | **111** | **0.006** | ug/L | 0.010 | 160 | 1 | 3 | 62 | KED |
| | **Cd** | **114** | **0.006** | ug/L | 0.008 | 136 | 1 | 4 | 82 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 463321 | 4 | Standard |
| | **Pb** | **208** | **0.022** | ug/L | 0.002 | 10 | 92 | 930 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0016-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:01:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 62082 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3812204 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 426637 | 2 | Standard |
| | **Cr** | **52** | **1.955** | ug/L | 0.045 | 2 | 15747 | 49656 | 2 | Standard |
| | **Cr** | **53** | **2.166** | ug/L | 0.032 | 1 | 81 | 4377 | 2 | Standard |
| | **Mn** | **55** | **244.340** | ug/L | 2.654 | 1 | 555 | 6013502 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21093 | 1 | KED |
| | **Ni** | **60** | **3.642** | ug/L | 0.207 | 5 | 13 | 3443 | 3 | KED |
| | **Ni** | **62** | **3.751** | ug/L | 0.088 | 2 | 8 | 588 | 3 | KED |
| | **Cu** | **63** | **17.431** | ug/L | 0.298 | 1 | 28 | 48980 | 0 | KED |
| | **Cu** | **65** | **17.903** | ug/L | 0.199 | 1 | 17 | 24848 | 1 | KED |
| | **Zn** | **66** | **1001.272** | ug/L | 14.385 | 1 | 33 | 372960 | 0 | KED |
| | **Zn** | **67** | **872.911** | ug/L | 18.856 | 2 | 3 | 55528 | 1 | KED |
| | **As** | **75** | **0.516** | ug/L | 0.018 | 3 | 5 | 102 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 212826 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 54 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5979 | 0 | KED |
| | **Cd** | **111** | **0.122** | ug/L | 0.025 | 20 | 1 | 28 | 20 | KED |
| | **Cd** | **114** | **0.119** | ug/L | 0.007 | 5 | 1 | 64 | 4 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 470457 | 4 | Standard |
| | **Pb** | **208** | **1.411** | ug/L | 0.063 | 4 | 92 | 55174 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0522-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:05:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 41811 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3669736 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 422121 | 3 | Standard |
| | **Cr** | **52** | **1.264** | ug/L | 0.080 | 6 | 15747 | 37501 | 0 | Standard |
| | **Cr** | **53** | **1.465** | ug/L | 0.055 | 3 | 81 | 2956 | 0 | Standard |
| | **Mn** | **55** | **14.832** | ug/L | 0.130 | 0 | 555 | 361686 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20665 | 1 | KED |
| | **Ni** | **60** | **0.888** | ug/L | 0.101 | 11 | 13 | 833 | 10 | KED |
| | **Ni** | **62** | **0.865** | ug/L | 0.056 | 6 | 8 | 139 | 6 | KED |
| | **Cu** | **63** | **5.761** | ug/L | 0.141 | 2 | 28 | 15883 | 2 | KED |
| | **Cu** | **65** | **5.782** | ug/L | 0.155 | 2 | 17 | 7873 | 1 | KED |
| | **Zn** | **66** | **82.513** | ug/L | 3.369 | 4 | 33 | 30136 | 2 | KED |
| | **Zn** | **67** | **75.416** | ug/L | 2.102 | 2 | 3 | 4703 | 1 | KED |
| | **As** | **75** | **0.226** | ug/L | 0.050 | 21 | 5 | 46 | 18 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 205975 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 49 | 37 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5674 | 1 | KED |
| | **Cd** | **111** | **0.052** | ug/L | 0.007 | 14 | 1 | 12 | 11 | KED |
| | **Cd** | **114** | **0.047** | ug/L | 0.004 | 9 | 1 | 25 | 7 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 471462 | 4 | Standard |
| | **Pb** | **208** | **1.899** | ug/L | 0.082 | 4 | 92 | 74386 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0536-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:10:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 73362 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3547350 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 470934 | 2 | Standard |
| | **Cr** | **52** | **2.684** | ug/L | 0.054 | 2 | 15747 | 68510 | 3 | Standard |
| | **Cr** | **53** | **2.756** | ug/L | 0.007 | 0 | 81 | 6125 | 2 | Standard |
| | **Mn** | **55** | **61.284** | ug/L | 1.402 | 2 | 555 | 1665396 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20630 | 2 | KED |
| | **Ni** | **60** | **1.355** | ug/L | 0.091 | 6 | 13 | 1263 | 7 | KED |
| | **Ni** | **62** | **1.282** | ug/L | 0.068 | 5 | 8 | 202 | 5 | KED |
| | **Cu** | **63** | **12.971** | ug/L | 0.255 | 1 | 28 | 35655 | 0 | KED |
| | **Cu** | **65** | **12.556** | ug/L | 0.187 | 1 | 17 | 17054 | 3 | KED |
| | **Zn** | **66** | **378.690** | ug/L | 9.701 | 2 | 33 | 137965 | 1 | KED |
| | **Zn** | **67** | **338.156** | ug/L | 1.487 | 0 | 3 | 21045 | 1 | KED |
| | **As** | **75** | **2.786** | ug/L | 0.023 | 0 | 5 | 517 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 234872 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 28 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5776 | 2 | KED |
| | **Cd** | **111** | **0.177** | ug/L | 0.017 | 9 | 1 | 39 | 11 | KED |
| | **Cd** | **114** | **0.169** | ug/L | 0.030 | 17 | 1 | 87 | 17 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 489149 | 4 | Standard |
| | **Pb** | **208** | **2.696** | ug/L | 0.105 | 3 | 92 | 109586 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0536-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:14:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 72363 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 44785837 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 359597 | 2 | Standard |
| | **Cr** | **52** | **3.344** | ug/L | 0.117 | 3 | 15747 | 61729 | 1 | Standard |
| | **Cr** | **53** | **23.770** | ug/L | 0.726 | 3 | 81 | 39771 | 0 | Standard |
| | **Mn** | **55** | **92.855** | ug/L | 2.112 | 2 | 555 | 1926060 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 15011 | 1 | KED |
| | **Ni** | **60** | **2.392** | ug/L | 0.089 | 3 | 13 | 1614 | 3 | KED |
| | **Ni** | **62** | **3.682** | ug/L | 0.185 | 5 | 8 | 411 | 6 | KED |
| | **Cu** | **63** | **10.188** | ug/L | 0.137 | 1 | 28 | 20384 | 0 | KED |
| | **Cu** | **65** | **10.045** | ug/L | 0.129 | 1 | 17 | 9928 | 1 | KED |
| | **Zn** | **66** | **280.800** | ug/L | 1.862 | 0 | 33 | 74465 | 0 | KED |
| | **Zn** | **67** | **249.620** | ug/L | 5.261 | 2 | 3 | 11303 | 0 | KED |
| | **As** | **75** | **1.175** | ug/L | 0.026 | 2 | 5 | 161 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 184503 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 2614 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 4193 | 1 | KED |
| | **Cd** | **111** | **0.313** | ug/L | 0.094 | 30 | 1 | 48 | 27 | KED |
| | **Cd** | **114** | **0.206** | ug/L | 0.047 | 23 | 1 | 77 | 21 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 427012 | 2 | Standard |
| | **Pb** | **208** | **3.212** | ug/L | 0.059 | 1 | 92 | 114017 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0187-DUP1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:18:53**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 46050 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 9472557 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 435361 | 1 | Standard |
| | **Cr** | **52** | **17.479** | ug/L | 0.342 | 1 | 15747 | 319825 | 0 | Standard |
| | **Cr** | **53** | **24.854** | ug/L | 0.557 | 2 | 81 | 50357 | 0 | Standard |
| | **Mn** | **55** | **5.347** | ug/L | 0.027 | 0 | 555 | 134867 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20069 | 1 | KED |
| | **Ni** | **60** | **2.259** | ug/L | 0.040 | 1 | 13 | 2038 | 0 | KED |
| | **Ni** | **62** | **2.565** | ug/L | 0.192 | 7 | 8 | 385 | 6 | KED |
| | **Cu** | **63** | **24.786** | ug/L | 0.410 | 1 | 28 | 66263 | 1 | KED |
| | **Cu** | **65** | **25.388** | ug/L | 0.459 | 1 | 17 | 33518 | 0 | KED |
| | **Zn** | **66** | **28.456** | ug/L | 0.652 | 2 | 33 | 10118 | 0 | KED |
| | **Zn** | **67** | **24.653** | ug/L | 0.449 | 1 | 3 | 1496 | 3 | KED |
| | **As** | **75** | **0.335** | ug/L | 0.028 | 8 | 5 | 65 | 7 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 200814 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 66 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5541 | 2 | KED |
| | **Cd** | **111** | **0.149** | ug/L | 0.051 | 34 | 1 | 31 | 29 | KED |
| | **Cd** | **114** | **0.164** | ug/L | 0.030 | 18 | 1 | 81 | 14 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 486106 | 3 | Standard |
| | **Pb** | **208** | **0.426** | ug/L | 0.016 | 3 | 92 | 17305 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0187-MS1**
**Sample Dil Factor:**
**Comments:**

DEL

**Sample Date/Time: Tuesday, January 10, 2023 07:23:40**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 43978 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 9366230 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 443408 | 1 | Standard |
| | **Cr** | **52** | **42.648** | ug/L | 0.410 | 0 | 15747 | 770251 | 0 | Standard |
| | **Cr** | **53** | **46.223** | ug/L | 0.694 | 1 | 81 | 95321 | 0 | Standard |
| | **Mn** | **55** | **29.447** | ug/L | 0.709 | 2 | 555 | 753736 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20923 | 1 | KED |
| | **Ni** | **60** | **28.103** | ug/L | 0.049 | 0 | 13 | 26283 | 1 | KED |
| | **Ni** | **62** | **28.328** | ug/L | 1.230 | 4 | 8 | 4351 | 5 | KED |
| | **Cu** | **63** | **50.240** | ug/L | 0.859 | 1 | 28 | 139981 | 0 | KED |
| | **Cu** | **65** | **51.238** | ug/L | 1.188 | 2 | 17 | 70506 | 2 | KED |
| | **Zn** | **66** | **103.825** | ug/L | 0.413 | 0 | 33 | 38400 | 1 | KED |
| | **Zn** | **67** | **93.942** | ug/L | 0.765 | 0 | 3 | 5933 | 2 | KED |
| | **As** | **75** | **26.513** | ug/L | 0.322 | 1 | 5 | 4948 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 207839 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 124 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5581 | 0 | KED |
| | **Cd** | **111** | **24.586** | ug/L | 0.446 | 1 | 1 | 4973 | 1 | KED |
| | **Cd** | **114** | **24.953** | ug/L | 0.544 | 2 | 1 | 12260 | 2 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 491432 | 3 | Standard |
| | **Pb** | **208** | **24.910** | ug/L | 0.610 | 2 | 92 | 1016845 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL9**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:28:03**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 32672 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3853976 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 408513 | 430854 | 1 | Standard |
| \| | **Cr** | **52** | **0.085** | ug/L | 0.023 | 26 | 15747 | 18067 | 0 | Standard |
| \| | **Cr** | **53** | **0.678** | ug/L | 0.020 | 2 | 81 | 1442 | 4 | Standard |
| ⌊ | **Mn** | **55** | **0.011** | ug/L | 0.001 | 5 | 555 | 868 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 19427 | 21760 | 0 | KED |
| \| | **Ni** | **60** | **-0.012** | ug/L | 0.001 | 9 | 13 | 3 | 34 | KED |
| \| | **Ni** | **62** | **0.010** | ug/L | 0.014 | 142 | 8 | 10 | 20 | KED |
| \| | **Cu** | **63** | **0.008** | ug/L | 0.003 | 35 | 28 | 55 | 15 | KED |
| \| | **Cu** | **65** | **0.003** | ug/L | 0.003 | 98 | 17 | 24 | 19 | KED |
| \| | **Zn** | **66** | **0.019** | ug/L | 0.016 | 81 | 33 | 45 | 13 | KED |
| \| | **Zn** | **67** | **0.090** | ug/L | 0.044 | 49 | 3 | 10 | 28 | KED |
| ⌊ | **As** | **75** | **-0.002** | ug/L | 0.012 | 766 | 5 | 5 | 41 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208753 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 52 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5415 | 5908 | 3 | KED |
| \| | **Cd** | **111** | **0.005** | ug/L | 0.014 | 282 | 1 | 3 | 96 | KED |
| ⌊ | **Cd** | **114** | **0.001** | ug/L | 0.005 | 800 | 1 | 2 | 120 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 457409 | 488977 | 4 | Standard |
| ⌊ | **Pb** | **208** | **0.004** | ug/L | 0.001 | 18 | 92 | 252 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVK**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:32:27**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 32829 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3828910 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 436149 | 1 | Standard |
| | **Cr** | **52** | **51.140** | ug/L | 0.501 | 0 | 15747 | 905169 | 0 | Standard |
| | **Cr** | **53** | **51.343** | ug/L | 0.769 | 1 | 81 | 104141 | 1 | Standard |
| | **Mn** | **55** | **52.117** | ug/L | 0.697 | 1 | 555 | 1311988 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21735 | 0 | KED |
| | **Ni** | **60** | **51.373** | ug/L | 0.445 | 0 | 13 | 49899 | 0 | KED |
| | **Ni** | **62** | **49.701** | ug/L | 0.941 | 1 | 8 | 7922 | 1 | KED |
| | **Cu** | **63** | **51.021** | ug/L | 0.847 | 1 | 28 | 147707 | 1 | KED |
| | **Cu** | **65** | **50.777** | ug/L | 0.663 | 1 | 17 | 72594 | 1 | KED |
| | **Zn** | **66** | **51.553** | ug/L | 0.870 | 1 | 33 | 19827 | 1 | KED |
| | **Zn** | **67** | **51.114** | ug/L | 0.391 | 0 | 3 | 3355 | 0 | KED |
| | **As** | **75** | **51.747** | ug/L | 0.321 | 0 | 5 | 10028 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 216510 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 43 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5938 | 1 | KED |
| | **Cd** | **111** | **50.998** | ug/L | 1.121 | 2 | 1 | 10972 | 1 | KED |
| | **Cd** | **114** | **52.391** | ug/L | 1.022 | 1 | 1 | 27378 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 499124 | 3 | Standard |
| | **Pb** | **208** | **51.954** | ug/L | 1.190 | 2 | 92 | 2154016 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBK**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:39:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 29955 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3570965 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 408513 | 408860 | 0 | Standard |
| \| | **Cr** | **52** | **0.054** | ug/L | 0.022 | 40 | 15747 | 16648 | 3 | Standard |
| \| | **Cr** | **53** | **0.267** | ug/L | 0.010 | 3 | 81 | 587 | 2 | Standard |
| ⌊ | **Mn** | **55** | **0.006** | ug/L | 0.002 | 26 | 555 | 699 | 5 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 19427 | 20392 | 1 | KED |
| \| | **Ni** | **60** | **0.014** | ug/L | 0.020 | 143 | 13 | 26 | 68 | KED |
| \| | **Ni** | **62** | **0.015** | ug/L | 0.054 | 365 | 8 | 10 | 73 | KED |
| \| | **Cu** | **63** | **0.028** | ug/L | 0.031 | 110 | 28 | 105 | 79 | KED |
| \| | **Cu** | **65** | **0.029** | ug/L | 0.048 | 168 | 17 | 56 | 114 | KED |
| \| | **Zn** | **66** | **0.124** | ug/L | 0.090 | 72 | 33 | 80 | 40 | KED |
| \| | **Zn** | **67** | **0.204** | ug/L | 0.110 | 53 | 3 | 16 | 40 | KED |
| ⌊ | **As** | **75** | **0.016** | ug/L | 0.029 | 181 | 5 | 8 | 64 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 198779 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 48 | 15 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5415 | 5592 | 0 | KED |
| \| | **Cd** | **111** | **0.006** | ug/L | 0.015 | 253 | 1 | 3 | 96 | KED |
| ⌊ | **Cd** | **114** | **0.001** | ug/L | 0.006 | 585 | 1 | 2 | 121 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 457409 | 461457 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.004** | ug/L | 0.000 | 12 | 92 | 231 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0523-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:43:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 45919 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3930683 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 461672 | 1 | Standard |
| | **Cr** | **52** | **1.132** | ug/L | 0.015 | 1 | 15747 | 38604 | 0 | Standard |
| | **Cr** | **53** | **1.662** | ug/L | 0.036 | 2 | 81 | 3656 | 2 | Standard |
| | **Mn** | **55** | **23.634** | ug/L | 0.452 | 1 | 555 | 629960 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21545 | 1 | KED |
| | **Ni** | **60** | **1.088** | ug/L | 0.025 | 2 | 13 | 1061 | 1 | KED |
| | **Ni** | **62** | **1.049** | ug/L | 0.062 | 5 | 8 | 174 | 3 | KED |
| | **Cu** | **63** | **6.072** | ug/L | 0.166 | 2 | 28 | 17448 | 1 | KED |
| | **Cu** | **65** | **6.011** | ug/L | 0.162 | 2 | 17 | 8532 | 1 | KED |
| | **Zn** | **66** | **159.680** | ug/L | 4.687 | 2 | 33 | 60776 | 1 | KED |
| | **Zn** | **67** | **149.875** | ug/L | 4.288 | 2 | 3 | 9741 | 1 | KED |
| | **As** | **75** | **0.263** | ug/L | 0.020 | 7 | 5 | 56 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 224900 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 38 | 30 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5836 | 0 | KED |
| | **Cd** | **111** | **0.074** | ug/L | 0.013 | 17 | 1 | 17 | 15 | KED |
| | **Cd** | **114** | **0.077** | ug/L | 0.013 | 17 | 1 | 41 | 16 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 503216 | 4 | Standard |
| | **Pb** | **208** | **3.582** | ug/L | 0.144 | 4 | 92 | 149711 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0540-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:48:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 46915 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 4029684 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 440839 | 0 | Standard |
| | **Cr** | **52** | **1.798** | ug/L | 0.065 | 3 | 15747 | 48562 | 1 | Standard |
| | **Cr** | **53** | **2.240** | ug/L | 0.023 | 1 | 81 | 4675 | 1 | Standard |
| | **Mn** | **55** | **2.963** | ug/L | 0.008 | 0 | 555 | 75955 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21408 | 1 | KED |
| | **Ni** | **60** | **0.714** | ug/L | 0.029 | 4 | 13 | 697 | 2 | KED |
| | **Ni** | **62** | **0.618** | ug/L | 0.044 | 7 | 8 | 106 | 5 | KED |
| | **Cu** | **63** | **5.598** | ug/L | 0.102 | 1 | 28 | 15986 | 0 | KED |
| | **Cu** | **65** | **5.418** | ug/L | 0.098 | 1 | 17 | 7646 | 2 | KED |
| | **Zn** | **66** | **63.085** | ug/L | 0.539 | 0 | 33 | 23886 | 1 | KED |
| | **Zn** | **67** | **59.096** | ug/L | 3.677 | 6 | 3 | 3817 | 4 | KED |
| | **As** | **75** | **0.369** | ug/L | 0.025 | 6 | 5 | 76 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 216759 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 47 | 30 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5856 | 4 | KED |
| | **Cd** | **111** | **0.055** | ug/L | 0.018 | 33 | 1 | 13 | 29 | KED |
| | **Cd** | **114** | **0.043** | ug/L | 0.012 | 27 | 1 | 24 | 26 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 496838 | 2 | Standard |
| | **Pb** | **208** | **0.929** | ug/L | 0.016 | 1 | 92 | 38464 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0542-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:52:43**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 49286 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 5333242 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 439861 | 2 | Standard |
| | **Cr** | **52** | **1.950** | ug/L | 0.041 | 2 | 15747 | 51102 | 1 | Standard |
| | **Cr** | **53** | **3.265** | ug/L | 0.103 | 3 | 81 | 6758 | 1 | Standard |
| | **Mn** | **55** | **12.410** | ug/L | 0.336 | 2 | 555 | 315353 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20670 | 1 | KED |
| | **Ni** | **60** | **1.364** | ug/L | 0.023 | 1 | 13 | 1273 | 1 | KED |
| | **Ni** | **62** | **1.339** | ug/L | 0.067 | 5 | 8 | 211 | 4 | KED |
| | **Cu** | **63** | **10.573** | ug/L | 0.133 | 1 | 28 | 29136 | 2 | KED |
| | **Cu** | **65** | **10.670** | ug/L | 0.129 | 1 | 17 | 14521 | 1 | KED |
| | **Zn** | **66** | **133.560** | ug/L | 1.550 | 1 | 33 | 48786 | 0 | KED |
| | **Zn** | **67** | **123.167** | ug/L | 4.343 | 3 | 3 | 7682 | 3 | KED |
| | **As** | **75** | **0.796** | ug/L | 0.032 | 4 | 5 | 152 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 211968 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 41 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5794 | 2 | KED |
| | **Cd** | **111** | **0.099** | ug/L | 0.016 | 16 | 1 | 22 | 12 | KED |
| | **Cd** | **114** | **0.094** | ug/L | 0.018 | 18 | 1 | 50 | 16 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 487729 | 5 | Standard |
| | **Pb** | **208** | **6.348** | ug/L | 0.343 | 5 | 92 | 256922 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0543-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 07:57:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 43851 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3700060 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 416761 | 1 | Standard |
| | **Cr** | **52** | **0.414** | ug/L | 0.031 | 7 | 15747 | 22932 | 1 | Standard |
| | **Cr** | **53** | **0.604** | ug/L | 0.007 | 1 | 81 | 1251 | 1 | Standard |
| | **Mn** | **55** | **5.422** | ug/L | 0.105 | 1 | 555 | 130903 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21262 | 0 | KED |
| | **Ni** | **60** | **0.229** | ug/L | 0.031 | 13 | 13 | 232 | 13 | KED |
| | **Ni** | **62** | **0.207** | ug/L | 0.097 | 46 | 8 | 41 | 37 | KED |
| | **Cu** | **63** | **1.698** | ug/L | 0.016 | 0 | 28 | 4839 | 1 | KED |
| | **Cu** | **65** | **1.709** | ug/L | 0.026 | 1 | 17 | 2409 | 2 | KED |
| | **Zn** | **66** | **14.587** | ug/L | 0.267 | 1 | 33 | 5514 | 1 | KED |
| | **Zn** | **67** | **12.104** | ug/L | 0.438 | 3 | 3 | 780 | 2 | KED |
| | **As** | **75** | **0.183** | ug/L | 0.023 | 12 | 5 | 40 | 11 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 205769 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 26 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5761 | 2 | KED |
| | **Cd** | **111** | **0.098** | ug/L | 0.017 | 17 | 1 | 22 | 17 | KED |
| | **Cd** | **114** | **0.112** | ug/L | 0.025 | 22 | 1 | 59 | 22 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 474819 | 3 | Standard |
| | **Pb** | **208** | **4.591** | ug/L | 0.202 | 4 | 92 | 181072 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0543-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:01:29**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 42423 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3617262 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 417780 | 0 | Standard |
| | **Cr** | **52** | **0.323** | ug/L | 0.031 | 9 | 15747 | 21471 | 1 | Standard |
| | **Cr** | **53** | **0.436** | ug/L | 0.020 | 4 | 81 | 928 | 3 | Standard |
| | **Mn** | **55** | **1.800** | ug/L | 0.016 | 0 | 555 | 43955 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20962 | 1 | KED |
| | **Ni** | **60** | **0.100** | ug/L | 0.017 | 16 | 13 | 107 | 14 | KED |
| | **Ni** | **62** | **0.100** | ug/L | 0.040 | 40 | 8 | 24 | 24 | KED |
| | **Cu** | **63** | **0.621** | ug/L | 0.022 | 3 | 28 | 1762 | 2 | KED |
| | **Cu** | **65** | **0.559** | ug/L | 0.051 | 9 | 17 | 788 | 8 | KED |
| | **Zn** | **66** | **10.897** | ug/L | 0.233 | 2 | 33 | 4069 | 0 | KED |
| | **Zn** | **67** | **9.377** | ug/L | 0.287 | 3 | 3 | 596 | 2 | KED |
| | **As** | **75** | **0.184** | ug/L | 0.005 | 2 | 5 | 39 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 205922 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 38 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5856 | 2 | KED |
| | **Cd** | **111** | **0.035** | ug/L | 0.009 | 24 | 1 | 9 | 17 | KED |
| | **Cd** | **114** | **0.032** | ug/L | 0.020 | 62 | 1 | 18 | 54 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 470943 | 2 | Standard |
| | **Pb** | **208** | **1.244** | ug/L | 0.030 | 2 | 92 | 48750 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0543-03**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:05:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 40565 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3655989 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 416430 | 2 | Standard |
| | **Cr** | **52** | **0.559** | ug/L | 0.050 | 8 | 15747 | 25316 | 1 | Standard |
| | **Cr** | **53** | **0.678** | ug/L | 0.034 | 4 | 81 | 1394 | 3 | Standard |
| | **Mn** | **55** | **5.240** | ug/L | 0.099 | 1 | 555 | 126440 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21519 | 0 | KED |
| | **Ni** | **60** | **0.332** | ug/L | 0.035 | 10 | 13 | 333 | 10 | KED |
| | **Ni** | **62** | **0.256** | ug/L | 0.033 | 12 | 8 | 49 | 10 | KED |
| | **Cu** | **63** | **1.494** | ug/L | 0.034 | 2 | 28 | 4311 | 2 | KED |
| | **Cu** | **65** | **1.489** | ug/L | 0.065 | 4 | 17 | 2125 | 4 | KED |
| | **Zn** | **66** | **12.349** | ug/L | 0.306 | 2 | 33 | 4730 | 2 | KED |
| | **Zn** | **67** | **11.283** | ug/L | 0.427 | 3 | 3 | 736 | 3 | KED |
| | **As** | **75** | **0.157** | ug/L | 0.026 | 16 | 5 | 35 | 14 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 200972 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 36 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6130 | 2 | KED |
| | **Cd** | **111** | **0.017** | ug/L | 0.009 | 52 | 1 | 6 | 36 | KED |
| | **Cd** | **114** | **0.013** | ug/L | 0.005 | 38 | 1 | 9 | 32 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 469615 | 5 | Standard |
| | **Pb** | **208** | **2.025** | ug/L | 0.047 | 2 | 92 | 79080 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0545-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:10:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 38911 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3496197 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 439207 | 1 | Standard |
| | **Cr** | **52** | **2.993** | ug/L | 0.029 | 0 | 15747 | 69300 | 2 | Standard |
| | **Cr** | **53** | **3.177** | ug/L | 0.105 | 3 | 81 | 6570 | 2 | Standard |
| | **Mn** | **55** | **50.355** | ug/L | 1.701 | 3 | 555 | 1275969 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21059 | 1 | KED |
| | **Ni** | **60** | **3.909** | ug/L | 0.102 | 2 | 13 | 3691 | 1 | KED |
| | **Ni** | **62** | **3.952** | ug/L | 0.096 | 2 | 8 | 618 | 1 | KED |
| | **Cu** | **63** | **111.264** | ug/L | 3.415 | 3 | 28 | 311963 | 1 | KED |
| | **Cu** | **65** | **112.206** | ug/L | 3.498 | 3 | 17 | 155363 | 1 | KED |
| | **Zn** | **66** | **85.157** | ug/L | 2.201 | 2 | 33 | 31703 | 1 | KED |
| | **Zn** | **67** | **75.845** | ug/L | 0.627 | 0 | 3 | 4821 | 1 | KED |
| | **As** | **75** | **0.921** | ug/L | 0.038 | 4 | 5 | 178 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 230715 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 50 | 30 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5835 | 2 | KED |
| | **Cd** | **111** | **0.114** | ug/L | 0.035 | 30 | 1 | 26 | 25 | KED |
| | **Cd** | **114** | **0.100** | ug/L | 0.017 | 16 | 1 | 53 | 15 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 474970 | 4 | Standard |
| | **Pb** | **208** | **10.334** | ug/L | 0.248 | 2 | 92 | 407679 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0546-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:14:38**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 47491 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3761871 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 435530 | 1 | Standard |
| | **Cr** | **52** | **0.359** | ug/L | 0.009 | 2 | 15747 | 23021 | 1 | Standard |
| | **Cr** | **53** | **0.738** | ug/L | 0.025 | 3 | 81 | 1581 | 4 | Standard |
| | **Mn** | **55** | **13.529** | ug/L | 0.234 | 1 | 555 | 340575 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21065 | 1 | KED |
| | **Ni** | **60** | **1.278** | ug/L | 0.104 | 8 | 13 | 1216 | 7 | KED |
| | **Ni** | **62** | **1.140** | ug/L | 0.028 | 2 | 8 | 184 | 1 | KED |
| | **Cu** | **63** | **6.402** | ug/L | 0.170 | 2 | 28 | 17987 | 2 | KED |
| | **Cu** | **65** | **6.410** | ug/L | 0.096 | 1 | 17 | 8896 | 1 | KED |
| | **Zn** | **66** | **213.261** | ug/L | 2.813 | 1 | 33 | 79385 | 2 | KED |
| | **Zn** | **67** | **187.414** | ug/L | 3.654 | 1 | 3 | 11914 | 3 | KED |
| | **As** | **75** | **0.315** | ug/L | 0.038 | 11 | 5 | 64 | 12 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 213847 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 40 | 33 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5934 | 1 | KED |
| | **Cd** | **111** | **0.052** | ug/L | 0.004 | 7 | 1 | 13 | 7 | KED |
| | **Cd** | **114** | **0.059** | ug/L | 0.016 | 26 | 1 | 32 | 23 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 487352 | 3 | Standard |
| | **Pb** | **208** | **0.254** | ug/L | 0.009 | 3 | 92 | 10381 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0546-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:18:55**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 50965 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3717283 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 482502 | 1 | Standard |
| | **Cr** | **52** | **0.524** | ug/L | 0.016 | 3 | 15747 | 28665 | 1 | Standard |
| | **Cr** | **53** | **0.733** | ug/L | 0.018 | 2 | 81 | 1740 | 2 | Standard |
| | **Mn** | **55** | **10.486** | ug/L | 0.272 | 2 | 555 | 292470 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21934 | 1 | KED |
| | **Ni** | **60** | **0.705** | ug/L | 0.077 | 10 | 13 | 704 | 9 | KED |
| | **Ni** | **62** | **0.641** | ug/L | 0.026 | 4 | 8 | 112 | 4 | KED |
| | **Cu** | **63** | **8.029** | ug/L | 0.155 | 1 | 28 | 23479 | 0 | KED |
| | **Cu** | **65** | **7.974** | ug/L | 0.179 | 2 | 17 | 11519 | 1 | KED |
| | **Zn** | **66** | **141.640** | ug/L | 1.393 | 0 | 33 | 54906 | 1 | KED |
| | **Zn** | **67** | **123.924** | ug/L | 3.182 | 2 | 3 | 8203 | 3 | KED |
| | **As** | **75** | **0.600** | ug/L | 0.042 | 7 | 5 | 123 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 223391 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5799 | 2 | KED |
| | **Cd** | **111** | **0.090** | ug/L | 0.015 | 16 | 1 | 20 | 13 | KED |
| | **Cd** | **114** | **0.099** | ug/L | 0.023 | 23 | 1 | 52 | 21 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 503616 | 3 | Standard |
| | **Pb** | **208** | **1.647** | ug/L | 0.029 | 1 | 92 | 69013 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0547-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:24:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 61706 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 9362251 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 444137 | 3 | Standard |
| | **Cr** | **52** | **1.398** | ug/L | 0.064 | 4 | 15747 | 41819 | 0 | Standard |
| | **Cr** | **53** | **4.986** | ug/L | 0.196 | 3 | 81 | 10369 | 0 | Standard |
| | **Mn** | **55** | **2.608** | ug/L | 0.141 | 5 | 555 | 67358 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 19551 | 1 | KED |
| | **Ni** | **60** | **3.834** | ug/L | 0.047 | 1 | 13 | 3361 | 1 | KED |
| | **Ni** | **62** | **4.014** | ug/L | 0.292 | 7 | 8 | 582 | 6 | KED |
| | **Cu** | **63** | **70.251** | ug/L | 2.226 | 3 | 28 | 182861 | 1 | KED |
| | **Cu** | **65** | **71.953** | ug/L | 1.881 | 2 | 17 | 92499 | 0 | KED |
| | **Zn** | **66** | **488.968** | ug/L | 3.227 | 0 | 33 | 168857 | 1 | KED |
| | **Zn** | **67** | **433.856** | ug/L | 7.914 | 1 | 3 | 25587 | 2 | KED |
| | **As** | **75** | **1.428** | ug/L | 0.102 | 7 | 5 | 253 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 211673 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 57 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5528 | 0 | KED |
| | **Cd** | **111** | **0.759** | ug/L | 0.037 | 4 | 1 | 153 | 4 | KED |
| | **Cd** | **114** | **0.784** | ug/L | 0.047 | 6 | 1 | 383 | 6 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 493334 | 3 | Standard |
| | **Pb** | **208** | **0.507** | ug/L | 0.019 | 3 | 92 | 20847 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVL**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:32:29**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 31794 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3712270 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 425363 | 4 | Standard |
| | **Cr** | **52** | **51.087** | ug/L | 0.419 | 0 | 15747 | 881752 | 3 | Standard |
| | **Cr** | **53** | **51.068** | ug/L | 0.505 | 0 | 81 | 101022 | 4 | Standard |
| | **Mn** | **55** | **51.893** | ug/L | 1.017 | 1 | 555 | 1273383 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20738 | 1 | KED |
| | **Ni** | **60** | **50.850** | ug/L | 1.099 | 2 | 13 | 47115 | 0 | KED |
| | **Ni** | **62** | **50.492** | ug/L | 1.292 | 2 | 8 | 7676 | 1 | KED |
| | **Cu** | **63** | **49.409** | ug/L | 1.167 | 2 | 28 | 136462 | 2 | KED |
| | **Cu** | **65** | **49.846** | ug/L | 1.107 | 2 | 17 | 67981 | 0 | KED |
| | **Zn** | **66** | **50.636** | ug/L | 1.107 | 2 | 33 | 18577 | 0 | KED |
| | **Zn** | **67** | **50.325** | ug/L | 1.843 | 3 | 3 | 3150 | 2 | KED |
| | **As** | **75** | **49.995** | ug/L | 1.497 | 2 | 5 | 9242 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 208978 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 56 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5699 | 1 | KED |
| | **Cd** | **111** | **49.602** | ug/L | 1.197 | 2 | 1 | 10242 | 1 | KED |
| | **Cd** | **114** | **50.166** | ug/L | 1.564 | 3 | 1 | 25164 | 3 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 485359 | 5 | Standard |
| | **Pb** | **208** | **52.206** | ug/L | 2.038 | 3 | 92 | 2102625 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBL**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:39:37**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 30209 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3596592 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 403045 | 1 | Standard |
| | **Cr** | **52** | **0.029** | ug/L | 0.008 | 26 | 15747 | 16008 | 1 | Standard |
| | **Cr** | **53** | **0.128** | ug/L | 0.003 | 2 | 81 | 320 | 3 | Standard |
| | **Mn** | **55** | **0.003** | ug/L | 0.002 | 52 | 555 | 625 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21913 | 2 | KED |
| | **Ni** | **60** | **-0.006** | ug/L | 0.002 | 38 | 13 | 9 | 20 | KED |
| | **Ni** | **62** | **-0.011** | ug/L | 0.019 | 177 | 8 | 7 | 43 | KED |
| | **Cu** | **63** | **0.010** | ug/L | 0.003 | 31 | 28 | 62 | 16 | KED |
| | **Cu** | **65** | **0.006** | ug/L | 0.002 | 32 | 17 | 27 | 7 | KED |
| | **Zn** | **66** | **0.062** | ug/L | 0.039 | 62 | 33 | 61 | 21 | KED |
| | **Zn** | **67** | **0.071** | ug/L | 0.113 | 159 | 3 | 8 | 81 | KED |
| | **As** | **75** | **0.002** | ug/L | 0.013 | 746 | 5 | 6 | 40 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 192600 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 52 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5970 | 3 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.005 | 238 | 1 | 1 | 69 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.002 | 125 | 1 | 1 | 112 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 456893 | 4 | Standard |
| | **Pb** | **208** | **0.004** | ug/L | 0.001 | 16 | 92 | 231 | 12 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0549-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:44:00**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 48055 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3704542 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 438676 | 2 | Standard |
| | **Cr** | **52** | **0.848** | ug/L | 0.037 | 4 | 15747 | 31725 | 3 | Standard |
| | **Cr** | **53** | **0.882** | ug/L | 0.022 | 2 | 81 | 1885 | 4 | Standard |
| | **Mn** | **55** | **9.261** | ug/L | 0.077 | 0 | 555 | 234950 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20753 | 1 | KED |
| | **Ni** | **60** | **0.527** | ug/L | 0.021 | 4 | 13 | 502 | 3 | KED |
| | **Ni** | **62** | **0.474** | ug/L | 0.098 | 20 | 8 | 80 | 16 | KED |
| | **Cu** | **63** | **3.779** | ug/L | 0.027 | 0 | 28 | 10474 | 1 | KED |
| | **Cu** | **65** | **3.721** | ug/L | 0.081 | 2 | 17 | 5094 | 1 | KED |
| | **Zn** | **66** | **188.434** | ug/L | 2.218 | 1 | 33 | 69096 | 1 | KED |
| | **Zn** | **67** | **168.431** | ug/L | 1.290 | 0 | 3 | 10547 | 1 | KED |
| | **As** | **75** | **0.184** | ug/L | 0.018 | 9 | 5 | 39 | 7 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 218062 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 59 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5739 | 4 | KED |
| | **Cd** | **111** | **0.064** | ug/L | 0.018 | 29 | 1 | 15 | 25 | KED |
| | **Cd** | **114** | **0.044** | ug/L | 0.019 | 41 | 1 | 24 | 42 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 490148 | 3 | Standard |
| | **Pb** | **208** | **3.069** | ug/L | 0.058 | 1 | 92 | 125048 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0549-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:48:23**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 43657 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3658474 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 422079 | 0 | Standard |
| | **Cr** | **52** | **1.009** | ug/L | 0.012 | 1 | 15747 | 33228 | 0 | Standard |
| | **Cr** | **53** | **1.017** | ug/L | 0.028 | 2 | 81 | 2078 | 2 | Standard |
| | **Mn** | **55** | **5.766** | ug/L | 0.126 | 2 | 555 | 140969 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20820 | 1 | KED |
| | **Ni** | **60** | **0.448** | ug/L | 0.012 | 2 | 13 | 431 | 3 | KED |
| | **Ni** | **62** | **0.379** | ug/L | 0.028 | 7 | 8 | 66 | 4 | KED |
| | **Cu** | **63** | **3.316** | ug/L | 0.038 | 1 | 28 | 9223 | 0 | KED |
| | **Cu** | **65** | **3.327** | ug/L | 0.104 | 3 | 17 | 4574 | 3 | KED |
| | **Zn** | **66** | **167.344** | ug/L | 3.320 | 1 | 33 | 61575 | 3 | KED |
| | **Zn** | **67** | **148.651** | ug/L | 4.591 | 3 | 3 | 9337 | 2 | KED |
| | **As** | **75** | **0.150** | ug/L | 0.021 | 14 | 5 | 33 | 13 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 207357 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 36 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5774 | 4 | KED |
| | **Cd** | **111** | **0.046** | ug/L | 0.025 | 55 | 1 | 11 | 41 | KED |
| | **Cd** | **114** | **0.039** | ug/L | 0.010 | 27 | 1 | 21 | 22 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 474673 | 2 | Standard |
| | **Pb** | **208** | **1.989** | ug/L | 0.047 | 2 | 92 | 78518 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0550-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:52:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 40883 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3612005 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 453549 | 3 | Standard |
| | **Cr** | **52** | **0.188** | ug/L | 0.036 | 19 | 15747 | 20862 | 0 | Standard |
| | **Cr** | **53** | **0.284** | ug/L | 0.020 | 7 | 81 | 689 | 7 | Standard |
| | **Mn** | **55** | **3.705** | ug/L | 0.107 | 2 | 555 | 97489 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21244 | 4 | KED |
| | **Ni** | **60** | **0.315** | ug/L | 0.034 | 10 | 13 | 312 | 7 | KED |
| | **Ni** | **62** | **0.253** | ug/L | 0.065 | 25 | 8 | 48 | 20 | KED |
| | **Cu** | **63** | **2.226** | ug/L | 0.073 | 3 | 28 | 6323 | 3 | KED |
| | **Cu** | **65** | **2.248** | ug/L | 0.119 | 5 | 17 | 3155 | 1 | KED |
| | **Zn** | **66** | **31.792** | ug/L | 0.338 | 1 | 33 | 11968 | 5 | KED |
| | **Zn** | **67** | **27.264** | ug/L | 1.079 | 3 | 3 | 1752 | 7 | KED |
| | **As** | **75** | **0.102** | ug/L | 0.013 | 13 | 5 | 24 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 218574 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6221 | 4 | KED |
| | **Cd** | **111** | **0.013** | ug/L | 0.005 | 38 | 1 | 5 | 21 | KED |
| | **Cd** | **114** | **0.008** | ug/L | 0.005 | 69 | 1 | 6 | 44 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 499761 | 5 | Standard |
| | **Pb** | **208** | **1.312** | ug/L | 0.060 | 4 | 92 | 54495 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0551-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 08:57:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 48956 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3670526 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 457755 | 1 | Standard |
| | **Cr** | **52** | **0.579** | ug/L | 0.029 | 4 | 15747 | 28204 | 1 | Standard |
| | **Cr** | **53** | **0.753** | ug/L | 0.013 | 1 | 81 | 1691 | 0 | Standard |
| | **Mn** | **55** | **8.170** | ug/L | 0.125 | 1 | 555 | 216381 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21408 | 0 | KED |
| | **Ni** | **60** | **0.531** | ug/L | 0.016 | 2 | 13 | 522 | 3 | KED |
| | **Ni** | **62** | **0.512** | ug/L | 0.114 | 22 | 8 | 89 | 20 | KED |
| | **Cu** | **63** | **5.284** | ug/L | 0.208 | 3 | 28 | 15094 | 4 | KED |
| | **Cu** | **65** | **5.326** | ug/L | 0.048 | 0 | 17 | 7516 | 0 | KED |
| | **Zn** | **66** | **47.155** | ug/L | 0.820 | 1 | 33 | 17864 | 1 | KED |
| | **Zn** | **67** | **41.932** | ug/L | 0.491 | 1 | 3 | 2712 | 1 | KED |
| | **As** | **75** | **0.392** | ug/L | 0.012 | 2 | 5 | 80 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 214863 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 45 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5966 | 1 | KED |
| | **Cd** | **111** | **0.052** | ug/L | 0.017 | 32 | 1 | 13 | 28 | KED |
| | **Cd** | **114** | **0.033** | ug/L | 0.016 | 48 | 1 | 19 | 44 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 484836 | 4 | Standard |
| | **Pb** | **208** | **0.777** | ug/L | 0.036 | 4 | 92 | 31375 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0552-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:01:32**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 39475 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3612996 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 426365 | 1 | Standard |
| | **Cr** | **52** | **0.835** | ug/L | 0.036 | 4 | 15747 | 30608 | 0 | Standard |
| | **Cr** | **53** | **0.926** | ug/L | 0.036 | 3 | 81 | 1918 | 1 | Standard |
| | **Mn** | **55** | **14.974** | ug/L | 0.375 | 2 | 555 | 368797 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21161 | 2 | KED |
| | **Ni** | **60** | **0.644** | ug/L | 0.031 | 4 | 13 | 622 | 3 | KED |
| | **Ni** | **62** | **0.566** | ug/L | 0.087 | 15 | 8 | 96 | 11 | KED |
| | **Cu** | **63** | **2.848** | ug/L | 0.120 | 4 | 28 | 8052 | 1 | KED |
| | **Cu** | **65** | **2.912** | ug/L | 0.087 | 2 | 17 | 4068 | 1 | KED |
| | **Zn** | **66** | **100.665** | ug/L | 3.149 | 3 | 33 | 37638 | 0 | KED |
| | **Zn** | **67** | **88.356** | ug/L | 4.563 | 5 | 3 | 5639 | 3 | KED |
| | **As** | **75** | **0.185** | ug/L | 0.033 | 17 | 5 | 40 | 17 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 211332 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 39 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5813 | 2 | KED |
| | **Cd** | **111** | **0.039** | ug/L | 0.012 | 32 | 1 | 10 | 23 | KED |
| | **Cd** | **114** | **0.028** | ug/L | 0.000 | 1 | 1 | 16 | 3 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 480481 | 4 | Standard |
| | **Pb** | **208** | **1.376** | ug/L | 0.051 | 3 | 92 | 54960 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0553-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:05:55**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 46289 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3604765 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 431442 | 4 | Standard |
| | **Cr** | **52** | **0.351** | ug/L | 0.033 | 9 | 15747 | 22652 | 2 | Standard |
| | **Cr** | **53** | **0.326** | ug/L | 0.004 | 1 | 81 | 739 | 4 | Standard |
| | **Mn** | **55** | **3.398** | ug/L | 0.051 | 1 | 555 | 85136 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20824 | 1 | KED |
| | **Ni** | **60** | **0.288** | ug/L | 0.042 | 14 | 13 | 282 | 14 | KED |
| | **Ni** | **62** | **0.208** | ug/L | 0.058 | 27 | 8 | 40 | 21 | KED |
| | **Cu** | **63** | **1.501** | ug/L | 0.033 | 2 | 28 | 4192 | 1 | KED |
| | **Cu** | **65** | **1.475** | ug/L | 0.078 | 5 | 17 | 2038 | 5 | KED |
| | **Zn** | **66** | **72.333** | ug/L | 1.028 | 1 | 33 | 26636 | 1 | KED |
| | **Zn** | **67** | **64.667** | ug/L | 1.018 | 1 | 3 | 4065 | 0 | KED |
| | **As** | **75** | **0.156** | ug/L | 0.007 | 4 | 5 | 34 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 210937 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 55 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6126 | 1 | KED |
| | **Cd** | **111** | **0.019** | ug/L | 0.005 | 26 | 1 | 6 | 17 | KED |
| | **Cd** | **114** | **0.025** | ug/L | 0.007 | 26 | 1 | 15 | 24 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 483078 | 6 | Standard |
| | **Pb** | **208** | **0.320** | ug/L | 0.013 | 3 | 92 | 12936 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0554-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:10:18**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 49934 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3799721 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 432185 | 2 | Standard |
| | **Cr** | **52** | **1.215** | ug/L | 0.011 | 0 | 15747 | 37569 | 2 | Standard |
| | **Cr** | **53** | **1.492** | ug/L | 0.032 | 2 | 81 | 3081 | 1 | Standard |
| | **Mn** | **55** | **64.166** | ug/L | 0.454 | 0 | 555 | 1600218 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20626 | 2 | KED |
| | **Ni** | **60** | **33.597** | ug/L | 0.744 | 2 | 13 | 30963 | 0 | KED |
| | **Ni** | **62** | **33.669** | ug/L | 1.644 | 4 | 8 | 5092 | 2 | KED |
| | **Cu** | **63** | **67.036** | ug/L | 2.008 | 2 | 28 | 184076 | 0 | KED |
| | **Cu** | **65** | **68.135** | ug/L | 1.385 | 2 | 17 | 92419 | 1 | KED |
| | **Zn** | **66** | **24.753** | ug/L | 0.855 | 3 | 33 | 9048 | 1 | KED |
| | **Zn** | **67** | **23.377** | ug/L | 1.425 | 6 | 3 | 1457 | 4 | KED |
| | **As** | **75** | **0.502** | ug/L | 0.062 | 12 | 5 | 97 | 12 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 207457 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5885 | 0 | KED |
| | **Cd** | **111** | **0.296** | ug/L | 0.049 | 16 | 1 | 65 | 15 | KED |
| | **Cd** | **114** | **0.311** | ug/L | 0.000 | 0 | 1 | 163 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 471305 | 3 | Standard |
| | **Pb** | **208** | **8.164** | ug/L | 0.264 | 3 | 92 | 319597 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0554-02**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:14:41**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 52582 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3867292 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 421927 | 0 | Standard |
| | **Cr** | **52** | **0.693** | ug/L | 0.036 | 5 | 15747 | 27915 | 2 | Standard |
| | **Cr** | **53** | **1.351** | ug/L | 0.019 | 1 | 81 | 2732 | 1 | Standard |
| | **Mn** | **55** | **1.707** | ug/L | 0.006 | 0 | 555 | 42111 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20767 | 0 | KED |
| | **Ni** | **60** | **4.146** | ug/L | 0.119 | 2 | 13 | 3860 | 2 | KED |
| | **Ni** | **62** | **3.982** | ug/L | 0.216 | 5 | 8 | 614 | 5 | KED |
| | **Cu** | **63** | **10.911** | ug/L | 0.310 | 2 | 28 | 30203 | 2 | KED |
| | **Cu** | **65** | **11.248** | ug/L | 0.323 | 2 | 17 | 15378 | 2 | KED |
| | **Zn** | **66** | **3.154** | ug/L | 0.147 | 4 | 33 | 1193 | 5 | KED |
| | **Zn** | **67** | **3.077** | ug/L | 0.337 | 10 | 3 | 196 | 10 | KED |
| | **As** | **75** | **0.191** | ug/L | 0.030 | 15 | 5 | 40 | 12 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 205403 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5667 | 2 | KED |
| | **Cd** | **111** | **0.023** | ug/L | 0.018 | 76 | 1 | 6 | 51 | KED |
| | **Cd** | **114** | **0.038** | ug/L | 0.012 | 32 | 1 | 20 | 28 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 467988 | 4 | Standard |
| | **Pb** | **208** | **1.871** | ug/L | 0.054 | 2 | 92 | 72798 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0555-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:18:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 96660 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3971335 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 451429 | 1 | Standard |
| | **Cr** | **52** | **1.150** | ug/L | 0.035 | 3 | 15747 | 38092 | 3 | Standard |
| | **Cr** | **53** | **1.552** | ug/L | 0.047 | 2 | 81 | 3344 | 1 | Standard |
| | **Mn** | **55** | **8.873** | ug/L | 0.064 | 0 | 555 | 231663 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20656 | 2 | KED |
| | **Ni** | **60** | **0.913** | ug/L | 0.085 | 9 | 13 | 856 | 8 | KED |
| | **Ni** | **62** | **0.927** | ug/L | 0.100 | 10 | 8 | 149 | 11 | KED |
| | **Cu** | **63** | **6.054** | ug/L | 0.031 | 0 | 28 | 16682 | 1 | KED |
| | **Cu** | **65** | **6.111** | ug/L | 0.056 | 0 | 17 | 8318 | 1 | KED |
| | **Zn** | **66** | **75.267** | ug/L | 1.409 | 1 | 33 | 27485 | 0 | KED |
| | **Zn** | **67** | **67.567** | ug/L | 1.891 | 2 | 3 | 4212 | 2 | KED |
| | **As** | **75** | **0.291** | ug/L | 0.007 | 2 | 5 | 58 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 223499 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 44 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5889 | 4 | KED |
| | **Cd** | **111** | **0.312** | ug/L | 0.039 | 12 | 1 | 68 | 15 | KED |
| | **Cd** | **114** | **0.291** | ug/L | 0.019 | 6 | 1 | 153 | 8 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 504449 | 3 | Standard |
| | **~~Pb~~** | **208** | **1.158** | ug/L | 0.042 | 3 | 92 | 48617 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0556-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:24:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 46977 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3685710 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 431243 | 2 | Standard |
| | **Cr** | **52** | **0.594** | ug/L | 0.039 | 6 | 15747 | 26807 | 0 | Standard |
| | **Cr** | **53** | **0.628** | ug/L | 0.011 | 1 | 81 | 1343 | 2 | Standard |
| | **Mn** | **55** | **8.247** | ug/L | 0.180 | 2 | 555 | 205701 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20826 | 3 | KED |
| | **Ni** | **60** | **0.449** | ug/L | 0.032 | 7 | 13 | 432 | 7 | KED |
| | **Ni** | **62** | **0.390** | ug/L | 0.111 | 28 | 8 | 68 | 26 | KED |
| | **Cu** | **63** | **3.462** | ug/L | 0.052 | 1 | 28 | 9632 | 3 | KED |
| | **Cu** | **65** | **3.540** | ug/L | 0.271 | 7 | 17 | 4860 | 5 | KED |
| | **Zn** | **66** | **27.728** | ug/L | 0.943 | 3 | 33 | 10227 | 1 | KED |
| | **Zn** | **67** | **25.657** | ug/L | 0.798 | 3 | 3 | 1616 | 6 | KED |
| | **As** | **75** | **0.995** | ug/L | 0.084 | 8 | 5 | 190 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 204874 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6070 | 2 | KED |
| | **Cd** | **111** | **0.093** | ug/L | 0.007 | 7 | 1 | 22 | 4 | KED |
| | **Cd** | **114** | **0.097** | ug/L | 0.009 | 9 | 1 | 53 | 6 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 472358 | 5 | Standard |
| | **Pb** | **208** | **0.518** | ug/L | 0.020 | 3 | 92 | 20382 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVM**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:32:32**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 32341 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3720716 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 432297 | 0 | Standard |
| | **Cr** | **52** | **50.387** | ug/L | 0.595 | 1 | 15747 | 884217 | 0 | Standard |
| | **Cr** | **53** | **50.590** | ug/L | 0.950 | 1 | 81 | 101714 | 1 | Standard |
| | **Mn** | **55** | **51.878** | ug/L | 0.507 | 0 | 555 | 1294415 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20405 | 2 | KED |
| | **Ni** | **60** | **51.402** | ug/L | 1.519 | 2 | 13 | 46852 | 1 | KED |
| | **Ni** | **62** | **50.393** | ug/L | 0.834 | 1 | 8 | 7539 | 1 | KED |
| | **Cu** | **63** | **50.650** | ug/L | 1.654 | 3 | 28 | 137594 | 1 | KED |
| | **Cu** | **65** | **51.154** | ug/L | 1.806 | 3 | 17 | 68635 | 2 | KED |
| | **Zn** | **66** | **52.407** | ug/L | 1.052 | 2 | 33 | 18916 | 0 | KED |
| | **Zn** | **67** | **53.199** | ug/L | 1.702 | 3 | 3 | 3277 | 2 | KED |
| | **As** | **75** | **50.923** | ug/L | 1.316 | 2 | 5 | 9262 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 212038 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 61 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5559 | 1 | KED |
| | **Cd** | **111** | **51.396** | ug/L | 1.370 | 2 | 1 | 10352 | 2 | KED |
| | **Cd** | **114** | **52.425** | ug/L | 0.541 | 1 | 1 | 25650 | 0 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 485110 | 3 | Standard |
| | **Pb** | **208** | **52.470** | ug/L | 0.920 | 1 | 92 | 2114500 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBM**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:39:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 30305 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3488814 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 399208 | 3 | Standard |
| | **Cr** | **52** | **0.043** | ug/L | 0.033 | 77 | 15747 | 16054 | 1 | Standard |
| | **Cr** | **53** | **0.055** | ug/L | 0.020 | 35 | 81 | 181 | 24 | Standard |
| | **Mn** | **55** | **0.002** | ug/L | 0.002 | 82 | 555 | 585 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20942 | 2 | KED |
| | **Ni** | **60** | **-0.003** | ug/L | 0.006 | 223 | 13 | 12 | 45 | KED |
| | **Ni** | **62** | **-0.000** | ug/L | 0.018 | 7708 | 8 | 8 | 32 | KED |
| | **Cu** | **63** | **0.008** | ug/L | 0.003 | 38 | 28 | 53 | 16 | KED |
| | **Cu** | **65** | **0.012** | ug/L | 0.006 | 48 | 17 | 35 | 24 | KED |
| | **Zn** | **66** | **0.086** | ug/L | 0.017 | 19 | 33 | 67 | 9 | KED |
| | **Zn** | **67** | **0.205** | ug/L | 0.103 | 50 | 3 | 17 | 40 | KED |
| | **As** | **75** | **0.008** | ug/L | 0.002 | 28 | 5 | 6 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 198604 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 46 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5528 | 1 | KED |
| | **Cd** | **111** | **-0.003** | ug/L | 0.007 | 216 | 1 | 1 | 114 | KED |
| | **Cd** | **114** | **0.001** | ug/L | 0.005 | 415 | 1 | 2 | 92 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 453333 | 6 | Standard |
| | **Pb** | **208** | **0.004** | ug/L | 0.000 | 9 | 92 | 241 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: RINSE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:44:03**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 41751 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3685451 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 494551 | 1 | Standard |
| | **Cr** | **52** | **0.037** | ug/L | 0.016 | 43 | 15747 | 19786 | 0 | Standard |
| | **Cr** | **53** | **0.047** | ug/L | 0.002 | 3 | 81 | 205 | 3 | Standard |
| | **Mn** | **55** | **0.035** | ug/L | 0.003 | 7 | 555 | 1667 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 22437 | 1 | KED |
| | **Ni** | **60** | **-0.000** | ug/L | 0.005 | 2250 | 13 | 15 | 33 | KED |
| | **Ni** | **62** | **-0.027** | ug/L | 0.007 | 24 | 8 | 5 | 21 | KED |
| | **Cu** | **63** | **0.009** | ug/L | 0.006 | 69 | 28 | 59 | 29 | KED |
| | **Cu** | **65** | **0.010** | ug/L | 0.004 | 36 | 17 | 34 | 17 | KED |
| | **Zn** | **66** | **0.103** | ug/L | 0.064 | 62 | 33 | 79 | 30 | KED |
| | **Zn** | **67** | **0.114** | ug/L | 0.061 | 53 | 3 | 12 | 32 | KED |
| | **As** | **75** | **-0.007** | ug/L | 0.007 | 99 | 5 | 4 | 34 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 231674 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 62 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6516 | 1 | KED |
| | **Cd** | **111** | **0.002** | ug/L | 0.004 | 167 | 1 | 2 | 33 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.002 | 99 | 1 | 1 | 107 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 519465 | 4 | Standard |
| | **Pb** | **208** | **0.015** | ug/L | 0.001 | 6 | 92 | 762 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: RINSE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:48:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 40339 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3620868 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 480278 | 1 | Standard |
| | **Cr** | **52** | **0.046** | ug/L | 0.036 | 78 | 15747 | 19388 | 3 | Standard |
| | **Cr** | **53** | **0.036** | ug/L | 0.008 | 22 | 81 | 176 | 9 | Standard |
| | **Mn** | **55** | **0.039** | ug/L | 0.002 | 4 | 555 | 1738 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 22088 | 0 | KED |
| | **Ni** | **60** | **0.003** | ug/L | 0.013 | 471 | 13 | 17 | 69 | KED |
| | **Ni** | **62** | **-0.011** | ug/L | 0.011 | 103 | 8 | 7 | 25 | KED |
| | **Cu** | **63** | **0.008** | ug/L | 0.004 | 57 | 28 | 54 | 22 | KED |
| | **Cu** | **65** | **0.012** | ug/L | 0.006 | 54 | 17 | 36 | 26 | KED |
| | **Zn** | **66** | **0.086** | ug/L | 0.018 | 20 | 33 | 71 | 10 | KED |
| | **Zn** | **67** | **0.097** | ug/L | 0.032 | 32 | 3 | 10 | 20 | KED |
| | **As** | **75** | **-0.013** | ug/L | 0.005 | 37 | 5 | 3 | 31 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 229084 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 60 | 23 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6421 | 3 | KED |
| | **Cd** | **111** | **-0.001** | ug/L | 0.009 | 643 | 1 | 1 | 100 | KED |
| | **Cd** | **114** | **0.004** | ug/L | 0.004 | 100 | 1 | 4 | 48 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 507860 | 1 | Standard |
| | **Pb** | **208** | **0.014** | ug/L | 0.001 | 5 | 92 | 683 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: RINSE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:52:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 40713 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3552995 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 493899 | 3 | Standard |
| | **Cr** | **52** | **0.050** | ug/L | 0.032 | 64 | 15747 | 20010 | 0 | Standard |
| | **Cr** | **53** | **0.027** | ug/L | 0.003 | 12 | 81 | 159 | 8 | Standard |
| | **Mn** | **55** | **0.037** | ug/L | 0.001 | 1 | 555 | 1731 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 22242 | 1 | KED |
| | **Ni** | **60** | **0.001** | ug/L | 0.009 | 694 | 13 | 16 | 53 | KED |
| | **Ni** | **62** | **-0.038** | ug/L | 0.014 | 35 | 8 | 3 | 69 | KED |
| | **Cu** | **63** | **0.009** | ug/L | 0.001 | 7 | 28 | 60 | 1 | KED |
| | **Cu** | **65** | **0.002** | ug/L | 0.004 | 227 | 17 | 22 | 26 | KED |
| | **Zn** | **66** | **0.050** | ug/L | 0.029 | 57 | 33 | 58 | 20 | KED |
| | **Zn** | **67** | **0.096** | ug/L | 0.061 | 63 | 3 | 10 | 36 | KED |
| | **As** | **75** | **-0.009** | ug/L | 0.001 | 14 | 5 | 4 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 231256 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 48 | 34 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 6375 | 2 | KED |
| | **Cd** | **111** | **-0.003** | ug/L | 0.002 | 81 | 1 | 1 | 34 | KED |
| | **Cd** | **114** | **-0.001** | ug/L | 0.003 | 351 | 1 | 1 | 114 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 521797 | 4 | Standard |
| | **Pb** | **208** | **0.014** | ug/L | 0.002 | 11 | 92 | 690 | 6 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: DI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 09:57:12**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 32105 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3332714 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 417881 | 0 | Standard |
| | **Cr** | **52** | **-0.060** | ug/L | 0.008 | 13 | 15747 | 15111 | 1 | Standard |
| | **Cr** | **53** | **0.026** | ug/L | 0.001 | 5 | 81 | 134 | 2 | Standard |
| | **Mn** | **55** | **-0.011** | ug/L | 0.001 | 5 | 555 | 296 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 21293 | 0 | KED |
| | **Ni** | **60** | **-0.004** | ug/L | 0.001 | 30 | 13 | 10 | 10 | KED |
| | **Ni** | **62** | **-0.038** | ug/L | 0.007 | 18 | 8 | 3 | 34 | KED |
| | **Cu** | **63** | **-0.001** | ug/L | 0.002 | 202 | 28 | 27 | 23 | KED |
| | **Cu** | **65** | **-0.003** | ug/L | 0.004 | 135 | 17 | 14 | 37 | KED |
| | **Zn** | **66** | **-0.020** | ug/L | 0.019 | 94 | 33 | 29 | 24 | KED |
| | **Zn** | **67** | **0.063** | ug/L | 0.016 | 25 | 3 | 8 | 13 | KED |
| | **As** | **75** | **-0.009** | ug/L | 0.006 | 69 | 5 | 3 | 33 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 196948 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 52 | 33 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5849 | 3 | KED |
| | **Cd** | **111** | **0.004** | ug/L | 0.008 | 205 | 1 | 2 | 57 | KED |
| | **Cd** | **114** | **0.006** | ug/L | 0.004 | 69 | 1 | 4 | 43 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 459690 | 3 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 30 | 92 | 71 | 9 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: DI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 10:01:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 30783 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3362908 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 408513 | 390990 | 3 | Standard |
| \| | **Cr** | **52** | **-0.002** | ug/L | 0.041 | 1789 | 15747 | 15021 | 0 | Standard |
| \| | **Cr** | **53** | **0.034** | ug/L | 0.005 | 15 | 81 | 140 | 6 | Standard |
| ⌊ | **Mn** | **55** | **-0.011** | ug/L | 0.001 | 7 | 555 | 287 | 5 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 19427 | 21419 | 1 | KED |
| \| | **Ni** | **60** | **-0.003** | ug/L | 0.004 | 104 | 13 | 11 | 28 | KED |
| \| | **Ni** | **62** | **-0.030** | ug/L | 0.025 | 85 | 8 | 4 | 89 | KED |
| \| | **Cu** | **63** | **-0.001** | ug/L | 0.001 | 164 | 28 | 29 | 13 | KED |
| \| | **Cu** | **65** | **-0.005** | ug/L | 0.001 | 17 | 17 | 12 | 9 | KED |
| \| | **Zn** | **66** | **-0.012** | ug/L | 0.001 | 7 | 33 | 32 | 0 | KED |
| \| | **Zn** | **67** | **0.033** | ug/L | 0.046 | 136 | 3 | 6 | 45 | KED |
| ⌊ | **As** | **75** | **-0.008** | ug/L | 0.007 | 86 | 5 | 3 | 34 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 190097 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 41 | 14 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 5415 | 5938 | 3 | KED |
| \| | **Cd** | **111** | **0.003** | ug/L | 0.004 | 114 | 1 | 2 | 33 | KED |
| ⌊ | **Cd** | **114** | **-0.002** | ug/L | 0.002 | 139 | 1 | 1 | 93 | KED |
| ⌈> | **Tb** | **159** | | ug/L | | | 457409 | 443814 | 6 | Standard |
| ⌊ | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 17 | 92 | 50 | 18 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: DI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Tuesday, January 10, 2023 10:05:59**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\010923.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 33587 | 30788 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3318464 | 3338058 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 408513 | 390633 | 1 | Standard |
| | **Cr** | **52** | **-0.027** | ug/L | 0.014 | 52 | 15747 | 14630 | 0 | Standard |
| | **Cr** | **53** | **0.027** | ug/L | 0.007 | 26 | 81 | 127 | 10 | Standard |
| | **Mn** | **55** | **-0.011** | ug/L | 0.001 | 9 | 555 | 274 | 8 | Standard |
| > | **Ge** | **72** | | ug/L | | | 19427 | 20550 | 2 | KED |
| | **Ni** | **60** | **-0.006** | ug/L | 0.005 | 84 | 13 | 8 | 58 | KED |
| | **Ni** | **62** | **-0.028** | ug/L | 0.029 | 103 | 8 | 4 | 98 | KED |
| | **Cu** | **63** | **0.000** | ug/L | 0.002 | 627 | 28 | 31 | 18 | KED |
| | **Cu** | **65** | **-0.006** | ug/L | 0.003 | 41 | 17 | 9 | 40 | KED |
| | **Zn** | **66** | **-0.021** | ug/L | 0.010 | 46 | 33 | 27 | 10 | KED |
| | **Zn** | **67** | **0.007** | ug/L | 0.018 | 268 | 3 | 4 | 24 | KED |
| | **As** | **75** | **-0.006** | ug/L | 0.005 | 79 | 5 | 4 | 22 | KED |
| | **Y** | **89** | | ug/L | | | 199932 | 187294 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 55 | 36 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 5415 | 5409 | 3 | KED |
| | **Cd** | **111** | **0.006** | ug/L | 0.003 | 40 | 1 | 3 | 17 | KED |
| | **Cd** | **114** | **0.004** | ug/L | 0.004 | 103 | 1 | 3 | 52 | KED |
| > | **Tb** | **159** | | ug/L | | | 457409 | 440470 | 3 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 12 | 92 | 58 | 9 | Standard |

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**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Calibration: | GA00033 | Instrument: | ICPMS2 |
| Calibration Date: | 01/12/2023 15:38 | | |

| 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 |
| Arsenic-75a | 0 | 0 | 0.2 | 245 | 10 | 216.8 | 20 | 211.9 | 50 | 205.22 | 100 | 204.41 |

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**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Calibration: | GA00033 | Instrument: | ICPMS2 |
| Calibration Date: | 01/12/2023 15:38 | | |

| COMPOUND | Mean RF | RF RSD | Linear COD | Quad COD | COD Limit | Q |
|---|---|---|---|---|---|---|
| Arsenic-75a | 180.555 | 49.7 | 0.9999 | | 0.998 | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexlon ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/12/23 **Analyst:** MS **Sequence:** SLAØ147 **Cal:** GAØØØ33

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | SEQ-CAL1 | LØ439 | | |
| | | -CAL2 | LØ149 | | |
| | | -CAL3 | LØ15Ø | | |
| | | -CAL4 | LØ151 | | |
| | | -CAL5 | LØ44Ø | | |
| | | -CAL6 | LØ152 | | |
| | | -IBL1 | — | | |
| | | -ICV1 | LØ243 | | |
| | | -ICB1 | LØ439 | | |
| | | -CCV1 | LØ44Ø | | |
| | | -CCB1 | LØ439 | | |
| | ✓ | -CRL1 | — | | std mode noisy-Multiple ↑ |
| | | -CRL1 | LØ149 | | |
| | | -IFA1 | LØ394 | | $Cr^{53}$ ↑ |
| | | -IFB1 | LO395 | | |
| | | -HCV1 | LØ232 | | |
| | | -HCV2 | LØ233 | | Zn↓ - Zn<200 |
| | | -IBL2 | — | | |
| | | -CCV2 | | | |
| | | -CCB2 | | | |
| | | BLAØ278-BLK1 | REN | | |
| | | -BS1 | | | |
| | | 23AØ19Ø-Ø1 | | 2 | |
| | | 23AØ192-Ø1 | | 5 | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/12/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | 23AΦ192-Φ2 | REN | 5 | |
| | | 22LΦ435-Φ1 | | | Be only |
| | | BLAΦΦ15-DUP3 | | | |
| | | -MS3 | | | |
| | | -MSD3 | | | |
| | | SEQ-IBL3 | | | |
| | ✓ | -CCV3 | | | Ge sl. noisy |
| | | -CCV3 | | | |
| | | -CCB3 | | | |
| | | 23AΦ192-Φ3 | REN | | Zn↑ Zn NR |
| | | -Φ4 | | | |
| | | 23AΦ191-Φ1 | | | |
| | | BLAΦ278-DUP1 | | | |
| | | -MS1 | | | |
| | | -MSD1 | | | |
| | | 23AΦ126-Φ1 | | 2 | |
| | | -Φ2 | | | |
| | | -Φ3 | | | |
| | | 23AΦ192-Φ3RE1 | | 5 | Zn only |
| | | SEQ-CCV4 | | | |
| | | -CCB4 | | | |
| | ✓ | -CAL1 | | | Ba, Be, Ni, Se Removed |
| | | -CCV5 | | | |
| | | -CCB5 | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/2/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.* MB 1/2/23

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | BKLØ6Ø8-BLK2 | SWN | 20 | Ag only |
| | | ↓ -BS2 | ↓ | ↓ | ↓ |
| | | BLAØ224-BLK1 | ↓ | ↓ | Pb > ½RL |
| | | ↓ -BS1 | ↓ | ↓ | ↓ |
| | | 22KØ328-17RE1 | ↓ | ↓ | Cu, Zn ↑ / Pb > 10x BLK cont. / Cu, Zn NR |
| | | BLAØ224-DUP1 | ↓ | ↓ | / Cr Pb RPD↑ / ↓ |
| | | ↓ -MS1 | ↓ | ↓ | / ~~Pb %R↓~~ Pb STL / ↓ |
| | | ↓ -MSD1 | ↓ | ↓ | ↓ / ~~Pb %R↑~~ ↓ ↓ |
| | | 22LØ383-Ø2 | ↓ | 50 | Ag, Cr only |
| | | SEQ-IBL4 | ↓ | ↓ | ↓ |
| | | ↓ -CCV6 | ↓ | ↓ | ↓ |
| | | ↓ -CCB6 | ↓ | ↓ | Ge noisy - %R & Analytes OK |
| | | 22KØ328-17RE2 | SWN | 100 | Cu, Zn only |
| | | BLAØ224-DUP2 | ↓ | ↓ | Cu, Zn RPD↑ ↓ |
| | | ↓ -MS2 | ↓ | ↓ | Cu STL / Zn %R↑ ↓ |
| | | ↓ -MSD2 | ↓ | ↓ | ↓ ↓ ↓ |
| | | 22LØ329-Ø7 | ↓ | 50 | In st. noisy - %R & Analytes OK / Ag, Cr only |
| | | BKLØ6Ø8-DUP2 | ↓ | ↓ | ↓ |
| | | ↓ -MS2 | ↓ | ↓ | Ag %R↓ ↓ |
| | | ↓ -MSD2 | ↓ | ↓ | ↓ |
| | | ↓ -PS2 | ↓ | ↓ | 60 uL K7409 ↓ |
| | | SEQ-IBL5 | ↓ | ↓ | ↓ |
| | | ↓ -CCV7 | ↓ | ↓ | ↓ |
| | | ↓ -CCB7 | ↓ | ↓ | ↓ |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/12/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.* MB 1/12/23

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | ✓ | 22L0383-03 | SWN | 2050 | Ag, Cr only |
| | | -04 | | 50 | |
| | | -05 | | | |
| | | -06 | | | |
| | | -07 | | | |
| | | -08 | | | |
| | | 22L0417-01 | | | |
| | | -02 | | | |
| | | -03 | | | |
| | | SEQ-IBL6 | | | |
| | | -CCV8 | | | Sc, In, Tb noisy |
| | | -CCB8 | | | |
| | | BLA0516-BLK1 | SWN | 20 | |
| | | -BS1 | | | |
| | ✓ | 22L0417-04 | | 50 | Ag, Cr only |
| | | -05 | | | |
| | | -06 | | | |
| | | -07 | | | |
| | | -08 | | | |
| | | -09 | | | |
| | ok ✓ | 23A0109-01 | | | Zn only |
| | | SEQ-IBL7 | | | |
| | | -CCV9 | | | |
| | | -CCB9 | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexlon ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/12/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | 22L0617-01 | REN | 2 | Cr only |
| | | 22L0459-01 | SWN | 20 | |
| | | -02 | | | |
| | | -03 | | | |
| | | -04 | | | |
| | | -05 | | | |
| | | -06 | | | |
| | | -07 | | | |
| | | 23A0114-01 | | | |
| | | SEQ-IBL8 | | | |
| | | -CCVA | | | |
| | | -CCBA | | | |
| | ✓ | -CAL1 | | | |
| | | -CCVB | | | |
| | | -CCBB | | | |
| | | 22L0589-01 | REN | 5 | Zn only |
| | | 22L0599-01 | | | Co only |
| | | 22L0598-01 | | | Cr only |
| | | BLA0234-DUP2 | | | |
| | | -MS2 | | | |
| | | 23A0011-01 | SWN | 20 | |
| | | BLA0156-DUP1 | | | |
| | | -MS1 | | | |
| | | -MSD1 | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/12/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.* MB 1/12/23

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | SEQ-IBL9 | | | |
| | | -CCVC | | | Ag sl. noisy~ Value OK |
| | | -CCBC | | | Sc, In sl. noisy-%R + Analytes OK |
| | | 22L0649-01 | REN | | Ge↓ Pb only |
| | ✓ | 22L0650-01 | | | Sc, Ge, In⁻¹, In, Tb↓/Zn↑/(Salty!) |
| | ✓ | 22L0651-01 | | | |
| | | 22L0653-01 | | | |
| | | 22L0655-01 | | 5 | |
| | | 22L0656-01 | | | |
| | | 22L0660-03 | | | |
| | | -05 | | 2 | |
| | | 23A0011-02 | SWN | 20 | |
| | | SEQ-IBLA | | | (Cr53↑) |
| | | -CCVD | | | Cu↑/Ge sl. noisy As sl. noisy |
| | | -CCBD | | | Ge↓/Cr53↑ |
| | ✓ | 23A0011-03 | SWN | 20 | |
| | | -04 | | | |
| | | -05 | | | |
| | | -06 | | | |
| | | -07 | | | |
| | | -08 | | | |
| | | -09 | | | |
| | | -10 | | | |
| | | -11 | | | |

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# ICP/MS 02 SAMPLE RUN LOG

**PE Nexion ICP-MS Serial No. 81DN1050201**

**Analysis Date:** 1/12/23 **Analyst:** MB **Sequence:** — **Cal:** —

*All corrections made by analyst unless otherwise noted.*

| Edit Label | Delete Data | ARI Sample ID | Prep Code | Dilution | Comments |
|---|---|---|---|---|---|
| | | SEQ-IBLB | | | ($Cr^{53}$ ↑ / Sc, Tb sl. noisy) |
| | | -CCVE | | | $Cu^{63}$ ↑ |
| | | -CCBE | | | Ge ↓ / $Cr^{53}$ ↑ |
| | ✓ | 23AΦΦ11-12 | SWN | 20 | |
| | | -13 | | | Ge ↓ |
| | | -14 | | | Ge sl. noisy |
| | | -15 | | | |
| | | -16 | | | |
| | | -17 | | | |
| | | -18 | | | |
| | | -19 | | | |
| | | -2Φ | | | |
| | | SEQ-IBLC | | | |
| | | -CCVF | | | Cu ↑ / Ge sl. noisy / Zn, Cr sl. noisy |
| | | -CCBF | | | Ge ↓ |
| | | Rinse/DI | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | MB 1/12/23 | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# Performance Check Report

**Sample ID: STD Performance Check**
Sample Date/Time: Thursday, January 12, 2023 13:29:15
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.4937
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|
| | Be | 9.0 | 10029.7 | 10029.654 | 152.363 | 1.5 | Standard |
| | In | 114.9 | 67914.8 | 67914.794 | 571.230 | 0.8 | Standard |
| | U | 238.1 | 56679.5 | 56679.485 | 209.441 | 0.4 | Standard |
| ⌈ | CeO | 155.9 | 1090.6 | 0.017 | 0.001 | 3.8 | Standard |
| \| > | Ce | 139.9 | 64240.5 | 64240.521 | 447.105 | 0.7 | Standard |
| ⌊ | Ce++ | 70.0 | 1636.3 | 0.025 | 0.001 | 2.6 | Standard |
| | Bkgd | 220.0 | 0.1 | 0.067 | 0.091 | 136.9 | Standard |

## Current Conditions File Data

| Current Value | Description |
|---|---|
| 1.04 | Nebulizer Gas Flow STD/KED [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 18.00 | Plasma Gas Flow |
| -11.25 | Deflector Voltage |
| 1600.00 | ICP RF Power |
| -1637.00 | Analog Stage Voltage |
| 1200.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset STD [QRO] |
| -8.00 | Cell Rod Offset STD [CRO] |
| 12.00 | Discriminator Threshold |
| -4.00 | Cell Entrance/Exit Voltage STD |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.04 | DRC Mode NEB |
| -10.00 | DRC Mode QRO |
| -3.00 | DRC Mode CRO |
| -7.00 | DRC Mode Cell Entrance/Exit Voltage |
| 0.60 | Cell Gas A |
| 0.00 | Cell Gas B |
| 250.00 | Axial Field Voltage |
| -16.50 | KED Mode CRO |
| -12.00 | KED Mode QRO |
| -4.00 | KED Mode Cell Entrance Voltage |
| -39.00 | KED Mode Cell Exit Voltage |
| 0.00 | KED Cell Gas A |
| 5.00 | KED Cell Gas B |
| 0.00 | KED RPa |
| 0.25 | KED RPq |
| 475.00 | KED Mode Axial Field Voltage |

# SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 1/12/2023 1:29:07 PM
End Time: 1/12/2023 1:39:52 PM

STD Performance Check - [Passed]  Optimum value(s): N/A
Obtained Intensity (Be 9): 10029.65
Obtained Intensity (In 115): 67914.79
Obtained Intensity (U 238): 56679.49
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (Ce++ 70 / Ce 140): 0.025 (=1636.29 / 64240.52)
Obtained Formula (CeO 156 / Ce 140): 0.017 (=1090.58 / 64240.52)
Obtained RSD (Be 9): 0.0152
Obtained RSD (In 115): 0.0084
Obtained RSD (U 238): 0.0037

Torch Alignment - [Passed]

| Vertical | Horizontal | Intensity |
|---|---|---|
| 0.13 mm | -0.48 mm | 68683.71 |

Nebulizer Gas Flow STD/KED [NEB] - [Passed]  Optimum value(s): 1.04
Obtained Intensity (In 115): 66953.53
Obtained Formula (CeO 156 / Ce 140): 0.0214 (=1325.06 / 62034.40)

Mass Calibration and Resolution - [Passed]  Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.711)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.710)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.713)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

QID STD/DRC -  Optimum value(s): Correlation Coefficient = 0.971; Intercept = -12.04

KED Mode QID -  Optimum value(s): Correlation Coefficient = 0.999; Intercept = -12.96

# SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 1/12/2023 1:29:07 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 1
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 10029.65
                Obtained Intensity (In 115): 67914.79
                Obtained Intensity (U 238): 56679.49
                Obtained Intensity (Bkgd 220): 0.07
                Obtained Formula (Ce++ 70 / Ce 140): 0.025 (=1636.29 / 64240.52)
                Obtained Formula (CeO 156 / Ce 140): 0.017 (=1090.58 / 64240.52)
                Obtained RSD (Be 9): 0.0152
                Obtained RSD (In 115): 0.0084
                Obtained RSD (U 238): 0.0037

[Passed]  Optimum value(s): N/A

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        0.13 mm     -0.48 mm       68683.71

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 1/1.1/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.025

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 66953.53
                Obtained Formula (CeO 156 / Ce 140): 0.0214 (=1325.06 / 62034.40)
[Passed]  Optimum value(s): 1.04
```

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.

MassCal File: Default.tun

Iterations: 6

Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution

Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.711)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.710)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.713)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

[Passed] Optimum value(s): N/A

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.971; Intercept = -12.04

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -12.5 | 44541.3 |
| Mg | 24 | 41 | -12.5 | 43269.4 |
| In | 115 | 41 | -10.5 | 70079.5 |
| Ce | 140 | 41 | -8 | 67262 |
| Pb | 208 | 41 | -7 | 32885.8 |
| U | 238 | 41 | -7 | 59620.2 |

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.999; Intercept = -12.96

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -13 | 32104 |
| Mg | 24 | 41 | -13 | 25891.4 |
| In | 115 | 41 | -9.5 | 45091 |
| Ce | 140 | 41 | -8.5 | 50798.2 |
| Pb | 208 | 41 | -6.5 | 25486.7 |
| U | 238 | 41 | -7 | 40798.2 |

End Time: 1/12/2023 1:39:52 PM

# SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 1/12/2023 1:39:58 PM
End Time: 1/12/2023 1:41:04 PM

QID STD/DRC -  Optimum value(s): Correlation Coefficient = 0.990; Intercept = -12.64

# SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 1/12/2023 1:39:58 PM

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.990; Intercept = -12.64

| Analyte | Mass | Points | DAC | MaxIntensity |
|---|---|---|---|---|
| Li | 7 | 41 | -13 | 45103.1 |
| Mg | 24 | 41 | -13 | 41540.3 |
| In | 115 | 41 | -10 | 68130.1 |
| Ce | 140 | 41 | -8 | 64272.3 |
| Pb | 208 | 41 | -7 | 34810.4 |
| U | 238 | 41 | -7 | 60403.4 |

End Time: 1/12/2023 1:41:04 PM

# Performance Check Report

**Sample ID: STD Performance Check**
Sample Date/Time: Thursday, January 12, 2023 13:41:30
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.4944
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|
| | Be | 9.0 | 10265.9 | 10265.889 | 220.644 | 2.1 | Standard |
| | In | 114.9 | 70299.7 | 70299.659 | 1278.193 | 1.8 | Standard |
| | U | 238.1 | 59821.7 | 59821.731 | 506.916 | 0.8 | Standard |
| ⌈ | CeO | 155.9 | 1201.4 | 0.018 | 0.000 | 1.6 | Standard |
| \| > | Ce | 139.9 | 66719.9 | 66719.871 | 1041.898 | 1.6 | Standard |
| ⌊ | Ce++ | 70.0 | 1704.8 | 0.026 | 0.001 | 3.1 | Standard |
| | Bkgd | 220.0 | 0.0 | 0.000 | 0.000 | | Standard |

### Current Conditions File Data

| Current Value | Description |
|---|---|
| 1.04 | Nebulizer Gas Flow STD/KED [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 18.00 | Plasma Gas Flow |
| -11.25 | Deflector Voltage |
| 1600.00 | ICP RF Power |
| -1637.00 | Analog Stage Voltage |
| 1200.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset STD [QRO] |
| -8.00 | Cell Rod Offset STD [CRO] |
| 12.00 | Discriminator Threshold |
| -4.00 | Cell Entrance/Exit Voltage STD |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.04 | DRC Mode NEB |
| -10.00 | DRC Mode QRO |
| -3.00 | DRC Mode CRO |
| -7.00 | DRC Mode Cell Entrance/Exit Voltage |
| 0.60 | Cell Gas A |
| 0.00 | Cell Gas B |
| 250.00 | Axial Field Voltage |
| -16.50 | KED Mode CRO |
| -12.00 | KED Mode QRO |
| -4.00 | KED Mode Cell Entrance Voltage |
| -39.00 | KED Mode Cell Exit Voltage |
| 0.00 | KED Cell Gas A |
| 5.00 | KED Cell Gas B |
| 0.00 | KED RPa |
| 0.25 | KED RPq |
| 475.00 | KED Mode Axial Field Voltage |

# SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 1/12/2023 1:41:29 PM
End Time: 1/12/2023 1:43:34 PM

STD Performance Check - [Passed]  Optimum value(s): N/A
Obtained Intensity (Be 9): 10265.89
Obtained Intensity (In 115): 70299.66
Obtained Intensity (U 238): 59821.73
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (Ce++ 70 / Ce 140): 0.026 (=1704.77 / 66719.87)
Obtained Formula (CeO 156 / Ce 140): 0.018 (=1201.38 / 66719.87)
Obtained RSD (Be 9): 0.0215
Obtained RSD (In 115): 0.0182
Obtained RSD (U 238): 0.0085

# SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 1/12/2023 1:41:29 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 1
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 10265.89
                Obtained Intensity (In 115): 70299.66
                Obtained Intensity (U 238): 59821.73
                Obtained Intensity (Bkgd 220): 0.00
                Obtained Formula (Ce++ 70 / Ce 140): 0.026 (=1704.77 / 66719.87)
                Obtained Formula (CeO 156 / Ce 140): 0.018 (=1201.38 / 66719.87)
                Obtained RSD (Be 9): 0.0215
                Obtained RSD (In 115): 0.0182
                Obtained RSD (U 238): 0.0085

[Passed]  Optimum value(s): N/A

End Time: 1/12/2023 1:43:34 PM
```

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 15:38:29**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | | 766222 | 1 | Standard |
| | **Be** | **9** | | ug/L | | | | 7 | 86 | Standard |
| | **C** | **13** | | ug/L | | | | 36839 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | | 4390964 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | | 538647 | 2 | Standard |
| | **Cr** | **52** | | ug/L | | | | 15443 | 1 | Standard |
| | **Cr** | **53** | | ug/L | | | | 178 | 9 | Standard |
| > | **Ge** | **72** | | ug/L | | | | 26915 | 2 | KED |
| | **Ni** | **60** | | ug/L | | | | 40 | 32 | KED |
| | **Ni** | **62** | | ug/L | | | | 6 | 31 | KED |
| | **Cu** | **63** | | ug/L | | | | 46 | 45 | KED |
| | **Cu** | **65** | | ug/L | | | | 30 | 32 | KED |
| | **Zn** | **66** | | ug/L | | | | 35 | 25 | KED |
| | **Zn** | **67** | | ug/L | | | | 6 | 41 | KED |
| | **As** | **75** | | ug/L | | | | 7 | 6 | KED |
| | **Se** | **78** | | ug/L | | | | 14 | 13 | KED |
| | **Y** | **89** | | ug/L | | | | 287925 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | | 53 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | | 7687 | 1 | KED |
| | **Cd** | **111** | | ug/L | | | | 4 | 13 | KED |
| | **Cd** | **114** | | ug/L | | | | 7 | 53 | KED |
| > | **In** | **115** | | ug/L | | | | 427037 | 1 | Standard |
| | **Ag** | **107** | | ug/L | | | | 100 | 9 | Standard |
| | **Ba** | **135** | | ug/L | | | | 78 | 14 | Standard |
| | **Ba** | **137** | | ug/L | | | | 142 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | | 675781 | 1 | Standard |
| | **Pb** | **208** | | ug/L | | | | 179 | 10 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 15:43:14**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 749267 | 1 | Standard |
| | **Be** | **9** | **0.200** | ug/L | 0.011 | 5 | 7 | 1612 | 6 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 43986 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4242289 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 530824 | 2 | Standard |
| | **Cr** | **52** | **0.500** | ug/L | 0.005 | 0 | 15443 | 25265 | 3 | Standard |
| | **Cr** | **53** | **0.500** | ug/L | 0.015 | 2 | 178 | 1291 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27192 | 0 | KED |
| | **Ni** | **60** | **0.500** | ug/L | 0.011 | 2 | 40 | 610 | 2 | KED |
| | **Ni** | **62** | **0.500** | ug/L | 0.048 | 9 | 6 | 102 | 9 | KED |
| | **Cu** | **63** | **0.500** | ug/L | 0.035 | 6 | 46 | 1698 | 6 | KED |
| | **Cu** | **65** | **0.500** | ug/L | 0.029 | 5 | 30 | 777 | 5 | KED |
| | **Zn** | **66** | **6.000** | ug/L | 0.212 | 3 | 35 | 2756 | 3 | KED |
| | **Zn** | **67** | **6.000** | ug/L | 0.177 | 2 | 6 | 375 | 2 | KED |
| | **As** | **75** | **0.200** | ug/L | 0.043 | 21 | 7 | 49 | 18 | KED |
| | **Se** | **78** | **0.500** | ug/L | 0.285 | 56 | 14 | 26 | 25 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 280451 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 62 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7828 | 1 | KED |
| | **Cd** | **111** | **0.100** | ug/L | 0.011 | 10 | 4 | 26 | 7 | KED |
| | **Cd** | **114** | **0.100** | ug/L | 0.018 | 17 | 7 | 53 | 16 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 408494 | 3 | Standard |
| | **Ag** | **107** | **0.200** | ug/L | 0.005 | 2 | 100 | 3027 | 1 | Standard |
| | **Ba** | **135** | **0.500** | ug/L | 0.020 | 3 | 78 | 1998 | 3 | Standard |
| | **Ba** | **137** | **0.500** | ug/L | 0.013 | 2 | 142 | 3333 | 5 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 674031 | 1 | Standard |
| | **Pb** | **208** | **0.100** | ug/L | 0.003 | 2 | 179 | 5101 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 15:47:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 726427 | 3 | Standard |
| | **Be** | **9** | **10.000** | ug/L | 0.253 | 2 | 7 | 76651 | 5 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 51352 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4190483 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 532341 | 4 | Standard |
| | **Cr** | **52** | **9.999** | ug/L | 0.187 | 1 | 15443 | 206546 | 3 | Standard |
| | **Cr** | **53** | **10.000** | ug/L | 0.218 | 2 | 178 | 22267 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 28378 | 0 | KED |
| | **Ni** | **60** | **9.998** | ug/L | 0.097 | 0 | 40 | 11085 | 0 | KED |
| | **Ni** | **62** | **9.998** | ug/L | 0.084 | 0 | 6 | 1840 | 1 | KED |
| | **Cu** | **63** | **9.999** | ug/L | 0.309 | 3 | 46 | 32912 | 3 | KED |
| | **Cu** | **65** | **10.001** | ug/L | 0.168 | 1 | 30 | 16195 | 2 | KED |
| | **Zn** | **66** | **9.900** | ug/L | 0.160 | 1 | 35 | 4595 | 2 | KED |
| | **Zn** | **67** | **10.332** | ug/L | 0.567 | 5 | 6 | 736 | 6 | KED |
| | **As** | **75** | **10.000** | ug/L | 0.255 | 2 | 7 | 2168 | 1 | KED |
| | **Se** | **78** | **10.000** | ug/L | 0.425 | 4 | 14 | 259 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 276328 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 50 | 29 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 8004 | 1 | KED |
| | **Cd** | **111** | **10.000** | ug/L | 0.474 | 4 | 4 | 2540 | 3 | KED |
| | **Cd** | **114** | **10.000** | ug/L | 0.555 | 5 | 7 | 6059 | 4 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 416644 | 4 | Standard |
| | **Ag** | **107** | **10.000** | ug/L | 0.400 | 4 | 100 | 144529 | 3 | Standard |
| | **Ba** | **135** | **9.999** | ug/L | 0.286 | 2 | 78 | 37533 | 2 | Standard |
| | **Ba** | **137** | **10.000** | ug/L | 0.174 | 1 | 142 | 65461 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 673759 | 2 | Standard |
| | **Pb** | **208** | **10.000** | ug/L | 0.088 | 0 | 179 | 469128 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 15:52:56**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 731224 | 2 | Standard |
| | **Be** | **9** | **19.828** | ug/L | 0.413 | 2 | 7 | 147874 | 4 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 50965 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4351704 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 532438 | 4 | Standard |
| | **Cr** | **52** | **19.904** | ug/L | 0.578 | 2 | 15443 | 388864 | 2 | Standard |
| | **Cr** | **53** | **19.938** | ug/L | 0.316 | 1 | 178 | 43675 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27720 | 2 | KED |
| | **Ni** | **60** | **19.997** | ug/L | 0.505 | 2 | 40 | 21599 | 1 | KED |
| | **Ni** | **62** | **19.909** | ug/L | 0.247 | 1 | 6 | 3509 | 1 | KED |
| | **Cu** | **63** | **20.014** | ug/L | 0.556 | 2 | 46 | 64461 | 1 | KED |
| | **Cu** | **65** | **20.022** | ug/L | 0.111 | 0 | 30 | 31775 | 2 | KED |
| | **Zn** | **66** | **19.955** | ug/L | 1.073 | 5 | 35 | 8944 | 3 | KED |
| | **Zn** | **67** | **20.129** | ug/L | 1.214 | 6 | 6 | 1420 | 4 | KED |
| | **As** | **75** | **20.009** | ug/L | 0.388 | 1 | 7 | 4238 | 0 | KED |
| | **Se** | **78** | **19.846** | ug/L | 1.116 | 5 | 14 | 473 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 278139 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 61 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7809 | 2 | KED |
| | **Cd** | **111** | **20.065** | ug/L | 0.750 | 3 | 4 | 5034 | 1 | KED |
| | **Cd** | **114** | **20.075** | ug/L | 0.723 | 3 | 7 | 12040 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 417883 | 3 | Standard |
| | **Ag** | **107** | **20.000** | ug/L | 0.234 | 1 | 100 | 290050 | 3 | Standard |
| | **Ba** | **135** | **19.967** | ug/L | 0.193 | 0 | 78 | 74637 | 2 | Standard |
| | **Ba** | **137** | **20.008** | ug/L | 0.261 | 1 | 142 | 131442 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 675064 | 3 | Standard |
| | **Pb** | **208** | **19.889** | ug/L | 0.555 | 2 | 179 | 913755 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 15:58:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 729892 | 0 | Standard |
| | **Be** | **9** | **49.807** | ug/L | 1.480 | 2 | 7 | 363595 | 2 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 36503 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4508448 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 518676 | 0 | Standard |
| | **Cr** | **52** | **50.024** | ug/L | 0.139 | 0 | 15443 | 932387 | 0 | Standard |
| | **Cr** | **53** | **50.171** | ug/L | 0.545 | 1 | 178 | 108701 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26921 | 0 | KED |
| | **Ni** | **60** | **50.007** | ug/L | 1.069 | 2 | 40 | 52448 | 2 | KED |
| | **Ni** | **62** | **49.996** | ug/L | 1.299 | 2 | 6 | 8545 | 2 | KED |
| | **Cu** | **63** | **49.727** | ug/L | 0.842 | 1 | 46 | 151403 | 1 | KED |
| | **Cu** | **65** | **49.896** | ug/L | 1.306 | 2 | 30 | 76068 | 2 | KED |
| | **Zn** | **66** | **49.471** | ug/L | 0.458 | 0 | 35 | 20489 | 1 | KED |
| | **Zn** | **67** | **50.214** | ug/L | 1.966 | 3 | 6 | 3502 | 3 | KED |
| | **As** | **75** | **49.986** | ug/L | 0.365 | 0 | 7 | 10261 | 0 | KED |
| | **Se** | **78** | **49.769** | ug/L | 1.081 | 2 | 14 | 1107 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 278053 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 71 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7760 | 1 | KED |
| | **Cd** | **111** | **49.820** | ug/L | 0.448 | 0 | 4 | 12202 | 1 | KED |
| | **Cd** | **114** | **50.128** | ug/L | 0.558 | 1 | 7 | 30266 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 411040 | 2 | Standard |
| | **Ag** | **107** | **49.673** | ug/L | 1.849 | 3 | 100 | 685761 | 2 | Standard |
| | **Ba** | **135** | **49.992** | ug/L | 0.277 | 0 | 78 | 183585 | 1 | Standard |
| | **Ba** | **137** | **49.997** | ug/L | 1.127 | 2 | 142 | 322732 | 0 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 668197 | 0 | Standard |
| | **Pb** | **208** | **49.923** | ug/L | 0.474 | 0 | 179 | 2254160 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:04:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 713212 | 5 | Standard |
| | **Be** | **9** | **100.604** | ug/L | 4.435 | 4 | 7 | 731261 | 2 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 48732 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4602583 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 515531 | 4 | Standard |
| | **Cr** | **52** | **100.414** | ug/L | 1.880 | 1 | 15443 | 1870008 | 2 | Standard |
| | **Cr** | **53** | **100.284** | ug/L | 1.948 | 1 | 178 | 217722 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26421 | 5 | KED |
| | **Ni** | **60** | **100.292** | ug/L | 0.781 | 0 | 40 | 104183 | 4 | KED |
| | **Ni** | **62** | **99.672** | ug/L | 1.206 | 1 | 6 | 16539 | 6 | KED |
| | **Cu** | **63** | **100.022** | ug/L | 0.630 | 0 | 46 | 299031 | 4 | KED |
| | **Cu** | **65** | **99.987** | ug/L | 1.502 | 1 | 30 | 149502 | 4 | KED |
| | **Zn** | **66** | **99.769** | ug/L | 0.432 | 0 | 35 | 40215 | 5 | KED |
| | **Zn** | **67** | **99.939** | ug/L | 0.753 | 0 | 6 | 6821 | 5 | KED |
| | **As** | **75** | **100.343** | ug/L | 0.670 | 0 | 7 | 20441 | 4 | KED |
| | **Se** | **78** | **100.816** | ug/L | 2.914 | 2 | 14 | 2247 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 275194 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 104 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7735 | 1 | KED |
| | **Cd** | **111** | **99.727** | ug/L | 2.090 | 2 | 4 | 24127 | 3 | KED |
| | **Cd** | **114** | **99.307** | ug/L | 1.276 | 1 | 7 | 58421 | 2 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 407347 | 3 | Standard |
| | **Ag** | **107** | **100.118** | ug/L | 1.666 | 1 | 100 | 1375217 | 2 | Standard |
| | **Ba** | **135** | **100.456** | ug/L | 1.112 | 1 | 78 | 371077 | 2 | Standard |
| | **Ba** | **137** | **100.613** | ug/L | 1.898 | 1 | 142 | 656815 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 671322 | 4 | Standard |
| | **Pb** | **208** | **99.871** | ug/L | 2.608 | 2 | 179 | 4507633 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:12:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 736268 | 0 | Standard |
| | **Be** | **9** | **0.002** | ug/L | 0.001 | 63 | 7 | 20 | 41 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 35959 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4365430 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 533734 | 1 | Standard |
| | **Cr** | **52** | **0.003** | ug/L | 0.027 | 835 | 15443 | 15359 | 1 | Standard |
| | **Cr** | **53** | **-0.008** | ug/L | 0.008 | 92 | 178 | 158 | 11 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26679 | 2 | KED |
| | **Ni** | **60** | **0.003** | ug/L | 0.012 | 383 | 40 | 43 | 31 | KED |
| | **Ni** | **62** | **0.023** | ug/L | 0.016 | 70 | 6 | 10 | 26 | KED |
| | **Cu** | **63** | **-0.007** | ug/L | 0.001 | 16 | 46 | 26 | 14 | KED |
| | **Cu** | **65** | **-0.011** | ug/L | 0.001 | 5 | 30 | 13 | 7 | KED |
| | **Zn** | **66** | **-0.029** | ug/L | 0.003 | 9 | 35 | 23 | 4 | KED |
| | **Zn** | **67** | **-0.072** | ug/L | 0.029 | 39 | 6 | 1 | 100 | KED |
| | **As** | **75** | **0.006** | ug/L | 0.001 | 15 | 7 | 8 | 3 | KED |
| | **Se** | **78** | **0.009** | ug/L | 0.100 | 1163 | 14 | 14 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 279770 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 62 | 26 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7380 | 1 | KED |
| | **Cd** | **111** | **0.005** | ug/L | 0.003 | 54 | 4 | 5 | 10 | KED |
| | **Cd** | **114** | **-0.006** | ug/L | 0.007 | 106 | 7 | 3 | 100 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 428595 | 0 | Standard |
| | **Ag** | **107** | **0.006** | ug/L | 0.001 | 19 | 100 | 191 | 8 | Standard |
| | **Ba** | **135** | **-0.014** | ug/L | 0.001 | 8 | 78 | 22 | 19 | Standard |
| | **Ba** | **137** | **-0.015** | ug/L | 0.001 | 9 | 142 | 39 | 24 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 676243 | 1 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.000 | 202 | 179 | 183 | 3 | Standard |

## Sample Information

Sample Date/Time: Thursday, January 12, 2023 16:04:52
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

## Calibration

| Analyte | Mass | **r Corr Coef** | Slope | Std 1 Conc | Std 2 Conc | Std 3 Conc | Std 4 Conc | Std 5 Conc |
|---|---|---|---|---|---|---|---|---|
| Li | 6 | | | | | | | |
| Be | 9 | **0.9999** | 0.010 | 0.20 | 10 | 20 | 50 | 100 |
| C | 13 | | | | | | | |
| Cl | 37 | | | | | | | |
| Sc | 45 | | | | | | | |
| Cr | 52 | **1.0000** | 0.036 | 0.50 | 10 | 20 | 50 | 100 |
| Cr | 53 | **1.0000** | 0.004 | 0.50 | 10 | 20 | 50 | 100 |
| Ge | 72 | | | | | | | |
| Ni | 60 | **1.0000** | 0.039 | 0.50 | 10 | 20 | 50 | 100 |
| Ni | 62 | **1.0000** | 0.006 | 0.50 | 10 | 20 | 50 | 100 |
| Cu | 63 | **1.0000** | 0.113 | 0.50 | 10 | 20 | 50 | 100 |
| Cu | 65 | **1.0000** | 0.057 | 0.50 | 10 | 20 | 50 | 100 |
| Zn | 66 | **0.9999** | 0.015 | 6.00 | 10 | 20 | 50 | 100 |
| Zn | 67 | **1.0000** | 0.003 | 6.00 | 10 | 20 | 50 | 100 |
| As | 75 | **1.0000** | 0.008 | 0.20 | 10 | 20 | 50 | 100 |
| Se | 78 | **0.9999** | 0.001 | 0.50 | 10 | 20 | 50 | 100 |
| Y | 89 | | | | | | | |
| Kr | 83 | | | | | | | |
| In-1 | 115 | | | | | | | |
| Cd | 111 | **1.0000** | 0.031 | 0.10 | 10 | 20 | 50 | 100 |
| Cd | 114 | **0.9999** | 0.076 | 0.10 | 10 | 20 | 50 | 100 |
| In | 115 | | | | | | | |
| Ag | 107 | **1.0000** | 0.034 | 0.20 | 10 | 20 | 50 | 100 |
| Ba | 135 | **1.0000** | 0.009 | 0.50 | 10 | 20 | 50 | 100 |
| Ba | 137 | **0.9999** | 0.016 | 0.50 | 10 | 20 | 50 | 100 |
| Tb | 159 | | | | | | | |
| Pb | 208 | **1.0000** | 0.067 | 0.10 | 10 | 20 | 50 | 100 |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-ICV1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:22:14**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 723248 | 2 | Standard |
| | **Be** | **9** | **48.744** | ug/L | 1.978 | 4 | 7 | 359631 | 2 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 45004 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4607556 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 540750 | 0 | Standard |
| | **Cr** | **52** | **48.230** | ug/L | 0.312 | 0 | 15443 | 950640 | 0 | Standard |
| | **Cr** | **53** | **47.767** | ug/L | 0.486 | 1 | 178 | 108928 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27213 | 1 | KED |
| | **Ni** | **60** | **50.194** | ug/L | 0.501 | 0 | 40 | 53741 | 2 | KED |
| | **Ni** | **62** | **51.001** | ug/L | 0.978 | 1 | 6 | 8717 | 3 | KED |
| | **Cu** | **63** | **51.067** | ug/L | 1.952 | 3 | 46 | 157351 | 5 | KED |
| | **Cu** | **65** | **49.922** | ug/L | 0.218 | 0 | 30 | 76904 | 1 | KED |
| | **Zn** | **66** | **49.356** | ug/L | 1.404 | 2 | 35 | 20511 | 4 | KED |
| | **Zn** | **67** | **49.227** | ug/L | 1.067 | 2 | 6 | 3464 | 3 | KED |
| | **As** | **75** | **46.819** | ug/L | 1.219 | 2 | 7 | 9830 | 3 | KED |
| | **Se** | **78** | **75.627** | ug/L | 1.604 | 2 | 14 | 1741 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 286645 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 67 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7769 | 3 | KED |
| | **Cd** | **111** | **48.479** | ug/L | 1.614 | 3 | 4 | 11772 | 0 | KED |
| | **Cd** | **114** | **49.075** | ug/L | 1.551 | 3 | 7 | 28980 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 414887 | 2 | Standard |
| | **Ag** | **107** | **51.614** | ug/L | 1.838 | 3 | 100 | 722029 | 1 | Standard |
| | **Ba** | **135** | **49.986** | ug/L | 0.973 | 1 | 78 | 188105 | 1 | Standard |
| | **Ba** | **137** | **49.370** | ug/L | 0.827 | 1 | 142 | 328400 | 0 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 683207 | 1 | Standard |
| | **Pb** | **208** | **49.679** | ug/L | 0.774 | 1 | 179 | 2283329 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-ICB1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:29:42**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 737243 | 4 | Standard |
| | **Be** | **9** | **0.001** | ug/L | 0.001 | 131 | 7 | 13 | 57 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 36247 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4218819 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 530596 | 3 | Standard |
| | **Cr** | **52** | **-0.015** | ug/L | 0.019 | 123 | 15443 | 14922 | 4 | Standard |
| | **Cr** | **53** | **-0.011** | ug/L | 0.007 | 59 | 178 | 150 | 8 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27228 | 1 | KED |
| | **Ni** | **60** | **-0.005** | ug/L | 0.004 | 85 | 40 | 36 | 10 | KED |
| | **Ni** | **62** | **0.022** | ug/L | 0.027 | 126 | 6 | 10 | 44 | KED |
| | **Cu** | **63** | **-0.003** | ug/L | 0.003 | 78 | 46 | 36 | 20 | KED |
| | **Cu** | **65** | **-0.010** | ug/L | 0.006 | 57 | 30 | 15 | 57 | KED |
| | **Zn** | **66** | **-0.041** | ug/L | 0.012 | 28 | 35 | 19 | 26 | KED |
| | **Zn** | **67** | **-0.064** | ug/L | 0.016 | 25 | 6 | 2 | 43 | KED |
| | **As** | **75** | **-0.003** | ug/L | 0.011 | 411 | 7 | 6 | 37 | KED |
| | **Se** | **78** | **0.195** | ug/L | 0.148 | 75 | 14 | 19 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 279472 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 49 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7526 | 4 | KED |
| | **Cd** | **111** | **0.006** | ug/L | 0.008 | 141 | 4 | 5 | 36 | KED |
| | **Cd** | **114** | **-0.007** | ug/L | 0.002 | 29 | 7 | 3 | 39 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 421908 | 2 | Standard |
| | **Ag** | **107** | **0.002** | ug/L | 0.002 | 96 | 100 | 129 | 22 | Standard |
| | **Ba** | **135** | **-0.016** | ug/L | 0.001 | 3 | 78 | 17 | 12 | Standard |
| | **Ba** | **137** | **-0.017** | ug/L | 0.000 | 2 | 142 | 23 | 12 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 677616 | 3 | Standard |
| | **Pb** | **208** | **-0.002** | ug/L | 0.000 | 21 | 179 | 109 | 13 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:34:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 742923 | 5 | Standard |
| | **Be** | **9** | **50.327** | ug/L | 2.569 | 5 | 7 | 381003 | 2 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 37063 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4719746 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 537726 | 2 | Standard |
| | **Cr** | **52** | **49.689** | ug/L | 0.696 | 1 | 15443 | 973468 | 2 | Standard |
| | **Cr** | **53** | **48.975** | ug/L | 0.844 | 1 | 178 | 111082 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26820 | 0 | KED |
| | **Ni** | **60** | **49.906** | ug/L | 1.030 | 2 | 40 | 52657 | 2 | KED |
| | **Ni** | **62** | **51.599** | ug/L | 1.017 | 1 | 6 | 8691 | 2 | KED |
| | **Cu** | **63** | **50.685** | ug/L | 0.550 | 1 | 46 | 153862 | 1 | KED |
| | **Cu** | **65** | **50.870** | ug/L | 0.461 | 0 | 30 | 77231 | 0 | KED |
| | **Zn** | **66** | **51.051** | ug/L | 0.549 | 1 | 35 | 20904 | 0 | KED |
| | **Zn** | **67** | **50.195** | ug/L | 1.088 | 2 | 6 | 3481 | 2 | KED |
| | **As** | **75** | **50.369** | ug/L | 0.256 | 0 | 7 | 10420 | 0 | KED |
| | **Se** | **78** | **50.272** | ug/L | 1.706 | 3 | 14 | 1145 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 283205 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 56 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7646 | 0 | KED |
| | **Cd** | **111** | **49.825** | ug/L | 0.237 | 0 | 4 | 11915 | 0 | KED |
| | **Cd** | **114** | **50.089** | ug/L | 1.191 | 2 | 7 | 29123 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 422832 | 2 | Standard |
| | **Ag** | **107** | **49.918** | ug/L | 0.752 | 1 | 100 | 712071 | 3 | Standard |
| | **Ba** | **135** | **49.645** | ug/L | 0.980 | 1 | 78 | 190412 | 1 | Standard |
| | **Ba** | **137** | **48.553** | ug/L | 0.649 | 1 | 142 | 329209 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 690687 | 2 | Standard |
| | **Pb** | **208** | **49.577** | ug/L | 1.142 | 2 | 179 | 2303180 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:41:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 722010 | 3 | Standard |
| | **Be** | **9** | **0.000** | ug/L | 0.001 | 194 | 7 | 10 | 57 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 36002 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4269003 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 522125 | 2 | Standard |
| | **Cr** | **52** | **0.014** | ug/L | 0.018 | 129 | 15443 | 15234 | 3 | Standard |
| | **Cr** | **53** | **-0.005** | ug/L | 0.004 | 89 | 178 | 163 | 8 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26696 | 3 | KED |
| | **Ni** | **60** | **-0.004** | ug/L | 0.018 | 501 | 40 | 36 | 46 | KED |
| | **Ni** | **62** | **0.008** | ug/L | 0.017 | 211 | 6 | 8 | 35 | KED |
| | **Cu** | **63** | **-0.006** | ug/L | 0.003 | 44 | 46 | 28 | 24 | KED |
| | **Cu** | **65** | **-0.010** | ug/L | 0.004 | 36 | 30 | 15 | 33 | KED |
| | **Zn** | **66** | **-0.038** | ug/L | 0.006 | 15 | 35 | 19 | 14 | KED |
| | **Zn** | **67** | **-0.053** | ug/L | 0.060 | 113 | 6 | 3 | 124 | KED |
| | **As** | **75** | **0.004** | ug/L | 0.006 | 148 | 7 | 7 | 18 | KED |
| | **Se** | **78** | **0.083** | ug/L | 0.056 | 67 | 14 | 16 | 11 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 276339 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 58 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7913 | 0 | KED |
| | **Cd** | **111** | **-0.006** | ug/L | 0.004 | 68 | 4 | 2 | 33 | KED |
| | **Cd** | **114** | **-0.004** | ug/L | 0.004 | 84 | 7 | 4 | 44 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 427221 | 1 | Standard |
| | **Ag** | **107** | **0.004** | ug/L | 0.001 | 30 | 100 | 151 | 11 | Standard |
| | **Ba** | **135** | **-0.016** | ug/L | 0.001 | 6 | 78 | 17 | 22 | Standard |
| | **Ba** | **137** | **-0.017** | ug/L | 0.001 | 4 | 142 | 28 | 17 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 680907 | 1 | Standard |
| | **Pb** | **208** | **-0.002** | ug/L | 0.000 | 4 | 179 | 109 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CRL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:52:12**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 656771 | 2 | Standard |
| | Be | 9 | 0.326 | ug/L | 0.168 | 51 | 7 | 2183 | 50 | Standard |
| | C | 13 | | ug/L | | | 36839 | 38142 | 3 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 4104418 | 0 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 466133 | 2 | Standard |
| | Cr | 52 | 0.608 | ug/L | 0.139 | 22 | 15443 | 23564 | 12 | Standard |
| | Cr | 53 | 0.571 | ug/L | 0.133 | 23 | 178 | 1280 | 23 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 27287 | 1 | KED |
| | Ni | 60 | 0.450 | ug/L | 0.014 | 3 | 40 | 523 | 1 | KED |
| | Ni | 62 | 0.482 | ug/L | 0.093 | 19 | 6 | 89 | 16 | KED |
| | Cu | 63 | 0.489 | ug/L | 0.025 | 5 | 46 | 1558 | 4 | KED |
| | Cu | 65 | 0.498 | ug/L | 0.046 | 9 | 30 | 800 | 8 | KED |
| | Zn | 66 | 6.214 | ug/L | 0.168 | 2 | 35 | 2619 | 1 | KED |
| | Zn | 67 | 5.322 | ug/L | 0.495 | 9 | 6 | 381 | 7 | KED |
| | As | 75 | 0.175 | ug/L | 0.020 | 11 | 7 | 43 | 9 | KED |
| | Se | 78 | 0.611 | ug/L | 0.189 | 30 | 14 | 28 | 14 | KED |
| | Y | 89 | | ug/L | | | 287925 | 253370 | 5 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 55 | 17 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7742 | 3 | KED |
| | Cd | 111 | 0.088 | ug/L | 0.030 | 33 | 4 | 25 | 24 | KED |
| | Cd | 114 | 0.102 | ug/L | 0.013 | 12 | 7 | 67 | 13 | KED |
| > | In | 115 | | ug/L | | | 427037 | 383929 | 5 | Standard |
| | Ag | 107 | 0.317 | ug/L | 0.190 | 59 | 100 | 4279 | 64 | Standard |
| | Ba | 135 | 0.579 | ug/L | 0.162 | 27 | 78 | 2104 | 32 | Standard |
| | Ba | 137 | 0.581 | ug/L | 0.175 | 30 | 142 | 3744 | 35 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 620663 | 1 | Standard |
| | Pb | 208 | 0.213 | ug/L | 0.194 | 90 | 179 | 9168 | 91 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CRL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 16:57:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 748071 | 2 | Standard |
| | **Be** | **9** | **0.211** | ug/L | 0.013 | 6 | 7 | 1615 | 3 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 40355 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4193727 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 530437 | 0 | Standard |
| | **Cr** | **52** | **0.485** | ug/L | 0.011 | 2 | 15443 | 24429 | 1 | Standard |
| | **Cr** | **53** | **0.477** | ug/L | 0.017 | 3 | 178 | 1241 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 28066 | 0 | KED |
| | **Ni** | **60** | **0.469** | ug/L | 0.025 | 5 | 40 | 559 | 4 | KED |
| | **Ni** | **62** | **0.514** | ug/L | 0.060 | 11 | 6 | 97 | 10 | KED |
| | **Cu** | **63** | **0.504** | ug/L | 0.030 | 5 | 46 | 1650 | 5 | KED |
| | **Cu** | **65** | **0.485** | ug/L | 0.022 | 4 | 30 | 802 | 5 | KED |
| | **Zn** | **66** | **6.073** | ug/L | 0.091 | 1 | 35 | 2635 | 1 | KED |
| | **Zn** | **67** | **5.280** | ug/L | 0.630 | 11 | 6 | 389 | 12 | KED |
| | **As** | **75** | **0.197** | ug/L | 0.027 | 13 | 7 | 50 | 10 | KED |
| | **Se** | **78** | **0.453** | ug/L | 0.097 | 21 | 14 | 25 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 278460 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 61 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 8362 | 3 | KED |
| | **Cd** | **111** | **0.102** | ug/L | 0.005 | 5 | 4 | 31 | 3 | KED |
| | **Cd** | **114** | **0.057** | ug/L | 0.036 | 62 | 7 | 44 | 53 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 424954 | 0 | Standard |
| | **Ag** | **107** | **0.198** | ug/L | 0.007 | 3 | 100 | 2940 | 3 | Standard |
| | **Ba** | **135** | **0.466** | ug/L | 0.020 | 4 | 78 | 1872 | 4 | Standard |
| | **Ba** | **137** | **0.474** | ug/L | 0.009 | 1 | 142 | 3369 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 677576 | 0 | Standard |
| | **Pb** | **208** | **0.101** | ug/L | 0.004 | 4 | 179 | 4788 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IFA1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:03:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 718001 | 4 | Standard |
| | **Be** | **9** | **0.007** | ug/L | 0.001 | 7 | 7 | 60 | 8 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 152416 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 11106228 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 521469 | 2 | Standard |
| | **Cr** | **52** | **0.855** | ug/L | 0.065 | 7 | 15443 | 30933 | 4 | Standard |
| | **Cr** | **53** | **5.173** | ug/L | 0.093 | 1 | 178 | 11529 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 25636 | 0 | KED |
| | **Ni** | **60** | **0.080** | ug/L | 0.021 | 25 | 40 | 119 | 17 | KED |
| | **Ni** | **62** | **0.172** | ug/L | 0.037 | 21 | 6 | 34 | 16 | KED |
| | **Cu** | **63** | **0.030** | ug/L | 0.003 | 9 | 46 | 132 | 5 | KED |
| | **Cu** | **65** | **0.021** | ug/L | 0.005 | 22 | 30 | 59 | 11 | KED |
| | **Zn** | **66** | **0.164** | ug/L | 0.054 | 32 | 35 | 97 | 20 | KED |
| | **Zn** | **67** | **0.274** | ug/L | 0.133 | 48 | 6 | 24 | 35 | KED |
| | **As** | **75** | **0.042** | ug/L | 0.016 | 37 | 7 | 15 | 20 | KED |
| | **Se** | **78** | **0.001** | ug/L | 0.165 | 13622 | 14 | 13 | 26 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 271550 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 155 | 11 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7385 | 0 | KED |
| | **Cd** | **111** | **0.072** | ug/L | 0.017 | 23 | 4 | 20 | 18 | KED |
| | **Cd** | **114** | **0.051** | ug/L | 0.010 | 18 | 7 | 35 | 14 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 402111 | 1 | Standard |
| | **Ag** | **107** | **0.002** | ug/L | 0.000 | 17 | 100 | 128 | 4 | Standard |
| | **Ba** | **135** | **0.107** | ug/L | 0.007 | 6 | 78 | 464 | 4 | Standard |
| | **Ba** | **137** | **0.097** | ug/L | 0.006 | 5 | 142 | 760 | 5 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 666208 | 0 | Standard |
| | **Pb** | **208** | **0.039** | ug/L | 0.002 | 4 | 179 | 1920 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IFB1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:08:02**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 754940 | 4 | Standard |
| | **Be** | **9** | **0.009** | ug/L | 0.002 | 25 | 7 | 74 | 20 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 155346 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 11279472 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 546424 | 1 | Standard |
| | **Cr** | **52** | **20.114** | ug/L | 0.159 | 0 | 15443 | 409774 | 2 | Standard |
| | **Cr** | **53** | **23.800** | ug/L | 0.457 | 1 | 178 | 54939 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 25178 | 0 | KED |
| | **Ni** | **60** | **19.801** | ug/L | 0.696 | 3 | 40 | 19633 | 3 | KED |
| | **Ni** | **62** | **20.389** | ug/L | 0.581 | 2 | 6 | 3227 | 2 | KED |
| | **Cu** | **63** | **20.045** | ug/L | 0.196 | 0 | 46 | 57147 | 0 | KED |
| | **Cu** | **65** | **19.809** | ug/L | 0.285 | 1 | 30 | 28248 | 0 | KED |
| | **Zn** | **66** | **18.638** | ug/L | 0.539 | 2 | 35 | 7185 | 2 | KED |
| | **Zn** | **67** | **16.366** | ug/L | 0.703 | 4 | 6 | 1069 | 4 | KED |
| | **As** | **75** | **19.371** | ug/L | 0.266 | 1 | 7 | 3766 | 0 | KED |
| | **Se** | **78** | **0.174** | ug/L | 0.213 | 122 | 14 | 17 | 26 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 283023 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 151 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7179 | 1 | KED |
| | **Cd** | **111** | **19.129** | ug/L | 0.542 | 2 | 4 | 4296 | 2 | KED |
| | **Cd** | **114** | **19.523** | ug/L | 0.409 | 2 | 7 | 10661 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 416515 | 2 | Standard |
| | **Ag** | **107** | **17.960** | ug/L | 0.364 | 2 | 100 | 252344 | 0 | Standard |
| | **Ba** | **135** | **0.163** | ug/L | 0.016 | 9 | 78 | 692 | 7 | Standard |
| | **Ba** | **137** | **0.156** | ug/L | 0.004 | 2 | 142 | 1181 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 680350 | 0 | Standard |
| | **Pb** | **208** | **0.030** | ug/L | 0.001 | 3 | 179 | 1565 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-HCV1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:12:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 736104 | 3 | Standard |
| | **Be** | **9** | **192.473** | ug/L | 12.052 | 6 | 7 | 1444090 | 3 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 45357 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4758617 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 533601 | 2 | Standard |
| | **Cr** | **52** | **186.142** | ug/L | 2.925 | 1 | 15443 | 3575992 | 1 | Standard |
| | **Cr** | **53** | **190.179** | ug/L | 4.221 | 2 | 178 | 427444 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 25750 | 2 | KED |
| | **Ni** | **60** | **195.673** | ug/L | 4.904 | 2 | 40 | 198121 | 4 | KED |
| | **Ni** | **62** | **198.567** | ug/L | 6.951 | 3 | 6 | 32073 | 1 | KED |
| | **Cu** | **63** | **194.450** | ug/L | 2.158 | 1 | 46 | 566486 | 1 | KED |
| | **Cu** | **65** | **192.066** | ug/L | 5.620 | 2 | 30 | 279761 | 1 | KED |
| | **Zn** | **66** | **191.901** | ug/L | 1.364 | 0 | 35 | 75350 | 2 | KED |
| | **Zn** | **67** | **184.222** | ug/L | 4.506 | 2 | 6 | 12242 | 0 | KED |
| | **As** | **75** | **194.717** | ug/L | 4.923 | 2 | 7 | 38643 | 1 | KED |
| | **Se** | **78** | **192.348** | ug/L | 5.594 | 2 | 14 | 4165 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 279563 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 152 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7432 | 2 | KED |
| | **Cd** | **111** | **190.949** | ug/L | 3.911 | 2 | 4 | 44366 | 0 | KED |
| | **Cd** | **114** | **191.473** | ug/L | 3.725 | 1 | 7 | 108186 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 399005 | 0 | Standard |
| | **Ag** | **107** | **187.804** | ug/L | 7.054 | 3 | 100 | 2527569 | 3 | Standard |
| | **Ba** | **135** | **198.567** | ug/L | 2.621 | 1 | 78 | 718620 | 1 | Standard |
| | **Ba** | **137** | **196.219** | ug/L | 4.618 | 2 | 142 | 1255189 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 668490 | 1 | Standard |
| | **Pb** | **208** | **191.380** | ug/L | 2.134 | 1 | 179 | 8607461 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-HCV2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:17:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 652161 | 2 | Standard |
| | **Be** | **9** | **280.443** | ug/L | 10.612 | 3 | 7 | 1865952 | 1 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 42926 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4485595 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 483774 | 0 | Standard |
| | **Cr** | **52** | **271.705** | ug/L | 1.900 | 0 | 15443 | 4726941 | 0 | Standard |
| | **Cr** | **53** | **281.441** | ug/L | 4.455 | 1 | 178 | 573401 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 24482 | 1 | KED |
| | **Ni** | **60** | **279.435** | ug/L | 2.275 | 0 | 40 | 268943 | 0 | KED |
| | **Ni** | **62** | **282.643** | ug/L | 6.114 | 2 | 6 | 43418 | 0 | KED |
| | **Cu** | **63** | **280.622** | ug/L | 2.606 | 0 | 46 | 777463 | 2 | KED |
| | **Cu** | **65** | **280.193** | ug/L | 5.619 | 2 | 30 | 388162 | 2 | KED |
| | **Zn** | **66** | **266.331** | ug/L | 4.999 | 1 | 35 | 99398 | 0 | KED |
| | **Zn** | **67** | **265.169** | ug/L | 3.422 | 1 | 6 | 16759 | 1 | KED |
| | **As** | **75** | **282.877** | ug/L | 3.980 | 1 | 7 | 53394 | 2 | KED |
| | **Se** | **78** | **274.011** | ug/L | 2.250 | 0 | 14 | 5639 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 251302 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 184 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7051 | 2 | KED |
| | **Cd** | **111** | **277.136** | ug/L | 1.593 | 0 | 4 | 61096 | 1 | KED |
| | **Cd** | **114** | **278.310** | ug/L | 0.980 | 0 | 7 | 149213 | 2 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 366036 | 1 | Standard |
| | **Ag** | **107** | **277.920** | ug/L | 8.281 | 2 | 100 | 3430580 | 1 | Standard |
| | **Ba** | **135** | **297.845** | ug/L | 10.648 | 3 | 78 | 988530 | 2 | Standard |
| | **Ba** | **137** | **295.803** | ug/L | 4.573 | 1 | 142 | 1735576 | 0 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 628981 | 0 | Standard |
| | **Pb** | **208** | **278.405** | ug/L | 4.639 | 1 | 179 | 11780280 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:24:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 747005 | 5 | Standard |
| | **Be** | **9** | **0.002** | ug/L | 0.001 | 50 | 7 | 24 | 30 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 38276 | 5 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4316077 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 512347 | 1 | Standard |
| | **Cr** | **52** | **-0.002** | ug/L | 0.024 | 1340 | 15443 | 14662 | 4 | Standard |
| | **Cr** | **53** | **0.048** | ug/L | 0.004 | 8 | 178 | 273 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27629 | 0 | KED |
| | **Ni** | **60** | **-0.009** | ug/L | 0.002 | 22 | 40 | 31 | 6 | KED |
| | **Ni** | **62** | **-0.016** | ug/L | 0.013 | 80 | 6 | 4 | 49 | KED |
| | **Cu** | **63** | **0.007** | ug/L | 0.004 | 66 | 46 | 68 | 19 | KED |
| | **Cu** | **65** | **0.008** | ug/L | 0.004 | 55 | 30 | 43 | 15 | KED |
| | **Zn** | **66** | **0.016** | ug/L | 0.018 | 116 | 35 | 43 | 18 | KED |
| | **Zn** | **67** | **-0.029** | ug/L | 0.040 | 137 | 6 | 5 | 57 | KED |
| | **As** | **75** | **0.012** | ug/L | 0.010 | 79 | 7 | 10 | 21 | KED |
| | **Se** | **78** | **0.156** | ug/L | 0.148 | 95 | 14 | 18 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 269305 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 49 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7673 | 1 | KED |
| | **Cd** | **111** | **0.001** | ug/L | 0.005 | 351 | 4 | 4 | 24 | KED |
| | **Cd** | **114** | **-0.004** | ug/L | 0.002 | 45 | 7 | 4 | 21 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 407833 | 3 | Standard |
| | **Ag** | **107** | **0.011** | ug/L | 0.003 | 25 | 100 | 246 | 12 | Standard |
| | **Ba** | **135** | **-0.009** | ug/L | 0.001 | 12 | 78 | 43 | 11 | Standard |
| | **Ba** | **137** | **-0.009** | ug/L | 0.002 | 21 | 142 | 78 | 16 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 659136 | 3 | Standard |
| | **Pb** | **208** | **0.002** | ug/L | 0.001 | 37 | 179 | 264 | 16 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:31:37**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 700762 | 4 | Standard |
| | **Be** | **9** | **50.701** | ug/L | 1.876 | 3 | 7 | 362263 | 0 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 36589 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4502376 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 509474 | 2 | Standard |
| | **Cr** | **52** | **49.500** | ug/L | 1.246 | 2 | 15443 | 918861 | 3 | Standard |
| | **Cr** | **53** | **48.560** | ug/L | 0.840 | 1 | 178 | 104311 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26935 | 3 | KED |
| | **Ni** | **60** | **48.822** | ug/L | 0.450 | 0 | 40 | 51736 | 3 | KED |
| | **Ni** | **62** | **49.377** | ug/L | 0.248 | 0 | 6 | 8352 | 2 | KED |
| | **Cu** | **63** | **49.488** | ug/L | 0.643 | 1 | 46 | 150850 | 2 | KED |
| | **Cu** | **65** | **49.072** | ug/L | 0.826 | 1 | 30 | 74799 | 1 | KED |
| | **Zn** | **66** | **49.918** | ug/L | 0.531 | 1 | 35 | 20525 | 2 | KED |
| | **Zn** | **67** | **49.585** | ug/L | 1.805 | 3 | 6 | 3456 | 6 | KED |
| | **As** | **75** | **49.253** | ug/L | 0.678 | 1 | 7 | 10233 | 3 | KED |
| | **Se** | **78** | **50.539** | ug/L | 1.047 | 2 | 14 | 1155 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 269792 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 63 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7664 | 2 | KED |
| | **Cd** | **111** | **48.714** | ug/L | 0.897 | 1 | 4 | 11675 | 0 | KED |
| | **Cd** | **114** | **49.761** | ug/L | 1.328 | 2 | 7 | 28995 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 399414 | 1 | Standard |
| | **Ag** | **107** | **50.179** | ug/L | 1.272 | 2 | 100 | 675919 | 1 | Standard |
| | **Ba** | **135** | **49.236** | ug/L | 1.174 | 2 | 78 | 178368 | 0 | Standard |
| | **Ba** | **137** | **48.882** | ug/L | 0.574 | 1 | 142 | 313060 | 0 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 653942 | 2 | Standard |
| | **Pb** | **208** | **50.390** | ug/L | 1.272 | 2 | 179 | 2216288 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB2**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:39:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 741448 | 5 | Standard |
| | **Be** | **9** | **0.002** | ug/L | 0.001 | 39 | 7 | 19 | 22 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 37172 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4322135 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 522985 | 1 | Standard |
| | **Cr** | **52** | **-0.017** | ug/L | 0.010 | 61 | 15443 | 14675 | 2 | Standard |
| | **Cr** | **53** | **0.024** | ug/L | 0.010 | 39 | 178 | 227 | 8 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 25564 | 1 | KED |
| | **Ni** | **60** | **0.088** | ug/L | 0.030 | 33 | 40 | 126 | 22 | KED |
| | **Ni** | **62** | **0.062** | ug/L | 0.025 | 40 | 6 | 16 | 24 | KED |
| | **Cu** | **63** | **-0.007** | ug/L | 0.003 | 42 | 46 | 25 | 31 | KED |
| | **Cu** | **65** | **-0.007** | ug/L | 0.003 | 40 | 30 | 18 | 23 | KED |
| | **Zn** | **66** | **-0.054** | ug/L | 0.012 | 22 | 35 | 12 | 37 | KED |
| | **Zn** | **67** | **-0.043** | ug/L | 0.001 | 1 | 6 | 3 | 0 | KED |
| | **As** | **75** | **0.013** | ug/L | 0.006 | 46 | 7 | 9 | 11 | KED |
| | **Se** | **78** | **0.079** | ug/L | 0.053 | 67 | 14 | 15 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 272704 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 57 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7549 | 1 | KED |
| | **Cd** | **111** | **-0.006** | ug/L | 0.006 | 97 | 4 | 2 | 57 | KED |
| | **Cd** | **114** | **-0.009** | ug/L | 0.000 | 0 | 7 | 1 | 4 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 419302 | 2 | Standard |
| | **Ag** | **107** | **0.003** | ug/L | 0.001 | 43 | 100 | 140 | 10 | Standard |
| | **Ba** | **135** | **-0.016** | ug/L | 0.003 | 17 | 78 | 15 | 68 | Standard |
| | **Ba** | **137** | **-0.016** | ug/L | 0.001 | 5 | 142 | 31 | 18 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 663059 | 2 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 20 | 179 | 140 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0278-BLK1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:44:54**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 698385 | 3 | Standard |
| | Be | 9 | 0.002 | ug/L | 0.001 | 43 | 7 | 20 | 31 | Standard |
| | C | 13 | | ug/L | | | 36839 | 46187 | 3 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 4126614 | 1 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 507665 | 0 | Standard |
| | Cr | 52 | 0.071 | ug/L | 0.012 | 17 | 15443 | 15841 | 0 | Standard |
| | Cr | 53 | 0.069 | ug/L | 0.004 | 5 | 178 | 315 | 3 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 27613 | 1 | KED |
| | Ni | 60 | 0.049 | ug/L | 0.007 | 13 | 40 | 95 | 8 | KED |
| | Ni | 62 | 0.051 | ug/L | 0.047 | 93 | 6 | 15 | 49 | KED |
| | Cu | 63 | 0.016 | ug/L | 0.009 | 54 | 46 | 97 | 26 | KED |
| | Cu | 65 | 0.017 | ug/L | 0.002 | 13 | 30 | 57 | 5 | KED |
| | Zn | 66 | 0.355 | ug/L | 0.085 | 24 | 35 | 186 | 20 | KED |
| | Zn | 67 | 0.327 | ug/L | 0.026 | 7 | 6 | 30 | 6 | KED |
| | As | 75 | 0.007 | ug/L | 0.007 | 112 | 7 | 8 | 19 | KED |
| | Se | 78 | 0.102 | ug/L | 0.208 | 205 | 14 | 17 | 28 | KED |
| | Y | 89 | | ug/L | | | 287925 | 264276 | 1 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 50 | 10 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7826 | 1 | KED |
| | Cd | 111 | -0.013 | ug/L | 0.004 | 29 | 4 | 0 | 100 | KED |
| | Cd | 114 | -0.009 | ug/L | 0.002 | 21 | 7 | 2 | 49 | KED |
| > | In | 115 | | ug/L | | | 427037 | 402739 | 0 | Standard |
| | Ag | 107 | 0.001 | ug/L | 0.000 | 24 | 100 | 111 | 4 | Standard |
| | Ba | 135 | 0.003 | ug/L | 0.001 | 46 | 78 | 85 | 6 | Standard |
| | Ba | 137 | 0.001 | ug/L | 0.005 | 415 | 142 | 142 | 21 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 640887 | 1 | Standard |
| | Pb | 208 | 0.010 | ug/L | 0.001 | 11 | 179 | 596 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0278-BS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:49:38**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 756313 | 6 | Standard |
| | Be | 9 | 24.839 | ug/L | 1.944 | 7 | 7 | 191133 | 1 | Standard |
| | C | 13 | | ug/L | | | 36839 | 50372 | 2 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 4653719 | 3 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 534856 | 2 | Standard |
| | Cr | 52 | 25.209 | ug/L | 0.613 | 2 | 15443 | 498614 | 0 | Standard |
| | Cr | 53 | 25.103 | ug/L | 0.517 | 2 | 178 | 56688 | 0 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 26441 | 3 | KED |
| | Ni | 60 | 25.543 | ug/L | 0.553 | 2 | 40 | 26578 | 2 | KED |
| | Ni | 62 | 25.712 | ug/L | 0.870 | 3 | 6 | 4274 | 5 | KED |
| | Cu | 63 | 25.658 | ug/L | 0.488 | 1 | 46 | 76775 | 1 | KED |
| | Cu | 65 | 25.695 | ug/L | 0.949 | 3 | 30 | 38448 | 2 | KED |
| | Zn | 66 | 83.015 | ug/L | 2.524 | 3 | 35 | 33467 | 0 | KED |
| | Zn | 67 | 75.479 | ug/L | 1.681 | 2 | 6 | 5154 | 1 | KED |
| | As | 75 | 25.364 | ug/L | 0.448 | 1 | 7 | 5174 | 1 | KED |
| | Se | 78 | 79.972 | ug/L | 1.092 | 1 | 14 | 1787 | 2 | KED |
| | Y | 89 | | ug/L | | | 287925 | 281313 | 3 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 69 | 6 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7690 | 1 | KED |
| | Cd | 111 | 25.173 | ug/L | 0.544 | 2 | 4 | 6056 | 1 | KED |
| | Cd | 114 | 25.601 | ug/L | 0.534 | 2 | 7 | 14975 | 1 | KED |
| > | In | 115 | | ug/L | | | 427037 | 417015 | 0 | Standard |
| | Ag | 107 | 25.348 | ug/L | 0.395 | 1 | 100 | 356619 | 1 | Standard |
| | Ba | 135 | 25.035 | ug/L | 0.284 | 1 | 78 | 94755 | 1 | Standard |
| | Ba | 137 | 24.931 | ug/L | 0.409 | 1 | 142 | 166790 | 1 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 680427 | 2 | Standard |
| | Pb | 208 | 25.262 | ug/L | 0.634 | 2 | 179 | 1156205 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0190-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 17:55:16**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 711999 | 5 | Standard |
| | Be | 9 | 0.002 | ug/L | 0.001 | 52 | 7 | 20 | 32 | Standard |
| | C | 13 | | ug/L | | | 36839 | 45262 | 4 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 7656947 | 0 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 521033 | 4 | Standard |
| | Cr | 52 | 114.804 | ug/L | 1.127 | 0 | 15443 | 2159254 | 3 | Standard |
| | Cr | 53 | 117.686 | ug/L | 1.322 | 1 | 178 | 258324 | 4 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 25518 | 0 | KED |
| | Ni | 60 | 2.234 | ug/L | 0.069 | 3 | 40 | 2279 | 2 | KED |
| | Ni | 62 | 2.492 | ug/L | 0.032 | 1 | 6 | 405 | 2 | KED |
| | Cu | 63 | 9.237 | ug/L | 0.108 | 1 | 46 | 26715 | 0 | KED |
| | Cu | 65 | 9.073 | ug/L | 0.240 | 2 | 30 | 13127 | 1 | KED |
| | Zn | 66 | 39.651 | ug/L | 0.373 | 0 | 35 | 15455 | 0 | KED |
| | Zn | 67 | 35.497 | ug/L | 0.696 | 1 | 6 | 2344 | 2 | KED |
| | As | 75 | 0.127 | ug/L | 0.017 | 13 | 7 | 31 | 9 | KED |
| | Se | 78 | 0.097 | ug/L | 0.090 | 92 | 14 | 15 | 11 | KED |
| | Y | 89 | | ug/L | | | 287925 | 272874 | 4 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 81 | 25 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7486 | 3 | KED |
| | Cd | 111 | 0.109 | ug/L | 0.005 | 4 | 4 | 29 | 5 | KED |
| | Cd | 114 | 0.103 | ug/L | 0.003 | 3 | 7 | 65 | 4 | KED |
| > | In | 115 | | ug/L | | | 427037 | 392017 | 2 | Standard |
| | Ag | 107 | 0.016 | ug/L | 0.007 | 44 | 100 | 302 | 27 | Standard |
| | Ba | 135 | 2.518 | ug/L | 0.033 | 1 | 78 | 9023 | 1 | Standard |
| | Ba | 137 | 2.482 | ug/L | 0.083 | 3 | 142 | 15719 | 1 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 661703 | 4 | Standard |
| | Pb | 208 | 0.245 | ug/L | 0.010 | 4 | 179 | 11059 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0192-01**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:01:02**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 717874 | 4 | Standard |
| | **Be** | **9** | **0.002** | ug/L | 0.001 | 35 | 7 | 19 | 20 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 42818 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 8140731 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 511276 | 1 | Standard |
| | **Cr** | **52** | **1.833** | ug/L | 0.018 | 0 | 15443 | 48269 | 1 | Standard |
| | **Cr** | **53** | **6.371** | ug/L | 0.141 | 2 | 178 | 13881 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26563 | 1 | KED |
| | **Ni** | **60** | **1.292** | ug/L | 0.035 | 2 | 40 | 1389 | 3 | KED |
| | **Ni** | **62** | **1.349** | ug/L | 0.133 | 9 | 6 | 231 | 9 | KED |
| | **Cu** | **63** | **0.742** | ug/L | 0.011 | 1 | 46 | 2277 | 0 | KED |
| | **Cu** | **65** | **0.729** | ug/L | 0.029 | 4 | 30 | 1126 | 3 | KED |
| | **Zn** | **66** | **62.328** | ug/L | 0.962 | 1 | 35 | 25269 | 1 | KED |
| | **Zn** | **67** | **55.942** | ug/L | 2.340 | 4 | 6 | 3840 | 3 | KED |
| | **As** | **75** | **0.228** | ug/L | 0.019 | 8 | 7 | 53 | 5 | KED |
| | **Se** | **78** | **0.467** | ug/L | 0.083 | 17 | 14 | 24 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 265515 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 46 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7487 | 3 | KED |
| | **Cd** | **111** | **0.035** | ug/L | 0.022 | 63 | 4 | 12 | 39 | KED |
| | **Cd** | **114** | **0.026** | ug/L | 0.010 | 38 | 7 | 21 | 24 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 387575 | 1 | Standard |
| | **Ag** | **107** | **-0.000** | ug/L | 0.002 | 718 | 100 | 87 | 27 | Standard |
| | **Ba** | **135** | **2.562** | ug/L | 0.020 | 0 | 78 | 9076 | 0 | Standard |
| | **Ba** | **137** | **2.605** | ug/L | 0.082 | 3 | 142 | 16310 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 650380 | 1 | Standard |
| | **Pb** | **208** | **0.231** | ug/L | 0.004 | 1 | 179 | 10276 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0192-02**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:05:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 730988 | 1 | Standard |
| | **Be** | **9** | **0.002** | ug/L | 0.001 | 47 | 7 | 19 | 29 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 42041 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 5770322 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 523298 | 1 | Standard |
| | **Cr** | **52** | **1.233** | ug/L | 0.036 | 2 | 15443 | 38141 | 2 | Standard |
| | **Cr** | **53** | **3.754** | ug/L | 0.091 | 2 | 178 | 8445 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26451 | 0 | KED |
| | **Ni** | **60** | **0.953** | ug/L | 0.074 | 7 | 40 | 1030 | 6 | KED |
| | **Ni** | **62** | **1.010** | ug/L | 0.146 | 14 | 6 | 174 | 14 | KED |
| | **Cu** | **63** | **1.717** | ug/L | 0.004 | 0 | 46 | 5185 | 1 | KED |
| | **Cu** | **65** | **1.679** | ug/L | 0.030 | 1 | 30 | 2543 | 0 | KED |
| | **Zn** | **66** | **92.026** | ug/L | 2.400 | 2 | 35 | 37139 | 3 | KED |
| | **Zn** | **67** | **80.522** | ug/L | 3.120 | 3 | 6 | 5503 | 3 | KED |
| | **As** | **75** | **0.244** | ug/L | 0.036 | 14 | 7 | 56 | 12 | KED |
| | **Se** | **78** | **0.202** | ug/L | 0.146 | 71 | 14 | 18 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 276939 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 55 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7259 | 1 | KED |
| | **Cd** | **111** | **0.058** | ug/L | 0.014 | 23 | 4 | 17 | 20 | KED |
| | **Cd** | **114** | **0.031** | ug/L | 0.007 | 21 | 7 | 23 | 16 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 406438 | 1 | Standard |
| | **Ag** | **107** | **0.002** | ug/L | 0.001 | 46 | 100 | 121 | 8 | Standard |
| | **Ba** | **135** | **1.861** | ug/L | 0.064 | 3 | 78 | 6933 | 1 | Standard |
| | **Ba** | **137** | **1.870** | ug/L | 0.037 | 1 | 142 | 12317 | 0 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 676477 | 2 | Standard |
| | **Pb** | **208** | **0.694** | ug/L | 0.033 | 4 | 179 | 31735 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0435-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:12:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 706457 | 3 | Standard |
| | **Be** | **9** | **0.001** | ug/L | 0.000 | 10 | 7 | 17 | 6 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 57678 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4380616 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 628947 | 1 | Standard |
| | **Cr** | **52** | **0.655** | ug/L | 0.024 | 3 | 15443 | 32806 | 1 | Standard |
| | **Cr** | **53** | **1.120** | ug/L | 0.010 | 0 | 178 | 3174 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27674 | 7 | KED |
| | **Ni** | **60** | **0.554** | ug/L | 0.043 | 7 | 40 | 642 | 5 | KED |
| | **Ni** | **62** | **0.535** | ug/L | 0.167 | 31 | 6 | 99 | 27 | KED |
| | **Cu** | **63** | **0.255** | ug/L | 0.033 | 13 | 46 | 840 | 5 | KED |
| | **Cu** | **65** | **0.268** | ug/L | 0.028 | 10 | 30 | 448 | 2 | KED |
| | **Zn** | **66** | **0.262** | ug/L | 0.026 | 9 | 35 | 147 | 11 | KED |
| | **Zn** | **67** | **0.798** | ug/L | 0.217 | 27 | 6 | 63 | 17 | KED |
| | **As** | **75** | **1.038** | ug/L | 0.093 | 9 | 7 | 227 | 2 | KED |
| | **Se** | **78** | **0.283** | ug/L | 0.053 | 18 | 14 | 21 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 267618 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 55 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7450 | 0 | KED |
| | **Cd** | **111** | **0.009** | ug/L | 0.002 | 26 | 4 | 6 | 9 | KED |
| | **Cd** | **114** | **0.009** | ug/L | 0.004 | 40 | 7 | 12 | 17 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 391168 | 2 | Standard |
| | **Ag** | **107** | **0.016** | ug/L | 0.002 | 10 | 100 | 299 | 5 | Standard |
| | **Ba** | **135** | **4.602** | ug/L | 0.020 | 0 | 78 | 16397 | 2 | Standard |
| | **Ba** | **137** | **4.528** | ug/L | 0.099 | 2 | 142 | 28519 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 639111 | 1 | Standard |
| | **Pb** | **208** | **0.018** | ug/L | 0.001 | 5 | 179 | 945 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0015-DUP3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:17:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 710228 | 1 | Standard |
| | **Be** | **9** | **0.000** | ug/L | 0.001 | 213 | 7 | 10 | 65 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 58341 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4432878 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 645303 | 1 | Standard |
| | **Cr** | **52** | **0.669** | ug/L | 0.026 | 3 | 15443 | 33984 | 1 | Standard |
| | **Cr** | **53** | **1.136** | ug/L | 0.026 | 2 | 178 | 3300 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26091 | 1 | KED |
| | **Ni** | **60** | **0.658** | ug/L | 0.076 | 11 | 40 | 713 | 8 | KED |
| | **Ni** | **62** | **0.661** | ug/L | 0.019 | 2 | 6 | 114 | 2 | KED |
| | **Cu** | **63** | **0.174** | ug/L | 0.011 | 6 | 46 | 558 | 4 | KED |
| | **Cu** | **65** | **0.169** | ug/L | 0.001 | 0 | 30 | 278 | 2 | KED |
| | **Zn** | **66** | **0.155** | ug/L | 0.012 | 8 | 35 | 95 | 4 | KED |
| | **Zn** | **67** | **0.767** | ug/L | 0.029 | 3 | 6 | 58 | 4 | KED |
| | **As** | **75** | **1.197** | ug/L | 0.050 | 4 | 7 | 247 | 4 | KED |
| | **Se** | **78** | **0.173** | ug/L | 0.076 | 43 | 14 | 17 | 10 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 270448 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 50 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7204 | 2 | KED |
| | **Cd** | **111** | **-0.005** | ug/L | 0.004 | 89 | 4 | 2 | 33 | KED |
| | **Cd** | **114** | **-0.005** | ug/L | 0.005 | 98 | 7 | 4 | 67 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 389102 | 2 | Standard |
| | **Ag** | **107** | **-0.001** | ug/L | 0.001 | 172 | 100 | 80 | 19 | Standard |
| | **Ba** | **135** | **4.722** | ug/L | 0.084 | 1 | 78 | 16728 | 1 | Standard |
| | **Ba** | **137** | **4.814** | ug/L | 0.188 | 3 | 142 | 30134 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 647892 | 1 | Standard |
| | **Pb** | **208** | **0.015** | ug/L | 0.001 | 7 | 179 | 808 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0015-MS3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:22:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 724025 | 4 | Standard |
| | **Be** | **9** | **24.450** | ug/L | 0.915 | 3 | 7 | 180504 | 0 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 60891 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4584220 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 665408 | 3 | Standard |
| | **Cr** | **52** | **20.498** | ug/L | 0.360 | 1 | 15443 | 507991 | 1 | Standard |
| | **Cr** | **53** | **20.820** | ug/L | 0.211 | 1 | 178 | 58550 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 25546 | 2 | KED |
| | **Ni** | **60** | **25.638** | ug/L | 0.744 | 2 | 40 | 25777 | 2 | KED |
| | **Ni** | **62** | **26.237** | ug/L | 1.180 | 4 | 6 | 4210 | 3 | KED |
| | **Cu** | **63** | **24.969** | ug/L | 0.529 | 2 | 46 | 72191 | 0 | KED |
| | **Cu** | **65** | **24.639** | ug/L | 0.706 | 2 | 30 | 35634 | 2 | KED |
| | **Zn** | **66** | **76.143** | ug/L | 2.049 | 2 | 35 | 29669 | 1 | KED |
| | **Zn** | **67** | **71.738** | ug/L | 4.010 | 5 | 6 | 4731 | 3 | KED |
| | **As** | **75** | **26.241** | ug/L | 0.970 | 3 | 7 | 5172 | 2 | KED |
| | **Se** | **78** | **75.372** | ug/L | 0.782 | 1 | 14 | 1628 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 275379 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 80 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 6905 | 1 | KED |
| | **Cd** | **111** | **25.029** | ug/L | 0.276 | 1 | 4 | 5407 | 1 | KED |
| | **Cd** | **114** | **25.332** | ug/L | 0.848 | 3 | 7 | 13302 | 2 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 397838 | 1 | Standard |
| | **Ag** | **107** | **23.808** | ug/L | 0.418 | 1 | 100 | 319621 | 3 | Standard |
| | **Ba** | **135** | **29.935** | ug/L | 0.518 | 1 | 78 | 108059 | 1 | Standard |
| | **Ba** | **137** | **30.215** | ug/L | 0.351 | 1 | 142 | 192831 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 658846 | 3 | Standard |
| | **Pb** | **208** | **25.017** | ug/L | 0.703 | 2 | 179 | 1108444 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0015-MSD3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:27:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 677222 | 4 | Standard |
| | **Be** | **9** | **24.529** | ug/L | 1.184 | 4 | 7 | 169448 | 4 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 55239 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4386594 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 615458 | 1 | Standard |
| | **Cr** | **52** | **20.328** | ug/L | 0.299 | 1 | 15443 | 466215 | 0 | Standard |
| | **Cr** | **53** | **20.669** | ug/L | 0.346 | 1 | 178 | 53761 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 23951 | 0 | KED |
| | **Ni** | **60** | **25.491** | ug/L | 0.353 | 1 | 40 | 24035 | 1 | KED |
| | **Ni** | **62** | **24.795** | ug/L | 0.500 | 2 | 6 | 3732 | 1 | KED |
| | **Cu** | **63** | **24.124** | ug/L | 0.092 | 0 | 46 | 65420 | 1 | KED |
| | **Cu** | **65** | **24.713** | ug/L | 0.467 | 1 | 30 | 33519 | 1 | KED |
| | **Zn** | **66** | **74.839** | ug/L | 0.603 | 0 | 35 | 27353 | 1 | KED |
| | **Zn** | **67** | **69.452** | ug/L | 1.699 | 2 | 6 | 4298 | 1 | KED |
| | **As** | **75** | **25.678** | ug/L | 0.514 | 2 | 7 | 4746 | 1 | KED |
| | **Se** | **78** | **72.989** | ug/L | 3.409 | 4 | 14 | 1479 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 250881 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 78 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 6736 | 2 | KED |
| | **Cd** | **111** | **24.354** | ug/L | 0.377 | 1 | 4 | 5131 | 1 | KED |
| | **Cd** | **114** | **24.377** | ug/L | 0.729 | 2 | 7 | 12485 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 370625 | 0 | Standard |
| | **Ag** | **107** | **22.849** | ug/L | 0.474 | 2 | 100 | 285700 | 1 | Standard |
| | **Ba** | **135** | **30.658** | ug/L | 0.282 | 0 | 78 | 103113 | 0 | Standard |
| | **Ba** | **137** | **30.167** | ug/L | 0.539 | 1 | 142 | 179340 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 616557 | 1 | Standard |
| | **Pb** | **208** | **24.987** | ug/L | 0.730 | 2 | 179 | 1036244 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:31:59**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 742626 | 0 | Standard |
| | **Be** | **9** | **-0.000** | ug/L | 0.000 | 518 | 7 | 6 | 31 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 40869 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4240211 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 527506 | 2 | Standard |
| | **Cr** | **52** | **-0.001** | ug/L | 0.024 | 1862 | 15443 | 15091 | 1 | Standard |
| | **Cr** | **53** | **0.046** | ug/L | 0.007 | 14 | 178 | 277 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27124 | 3 | KED |
| | **Ni** | **60** | **0.018** | ug/L | 0.006 | 35 | 40 | 59 | 8 | KED |
| | **Ni** | **62** | **0.026** | ug/L | 0.021 | 80 | 6 | 11 | 28 | KED |
| | **Cu** | **63** | **-0.001** | ug/L | 0.001 | 92 | 46 | 45 | 7 | KED |
| | **Cu** | **65** | **-0.000** | ug/L | 0.006 | 1355 | 30 | 29 | 26 | KED |
| | **Zn** | **66** | **0.001** | ug/L | 0.019 | 1447 | 35 | 36 | 18 | KED |
| | **Zn** | **67** | **0.054** | ug/L | 0.059 | 109 | 6 | 10 | 36 | KED |
| | **As** | **75** | **0.009** | ug/L | 0.007 | 75 | 7 | 9 | 18 | KED |
| | **Se** | **78** | **0.051** | ug/L | 0.200 | 392 | 14 | 15 | 29 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 280009 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 66 | 26 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7908 | 2 | KED |
| | **Cd** | **111** | **-0.006** | ug/L | 0.004 | 69 | 4 | 2 | 33 | KED |
| | **Cd** | **114** | **-0.004** | ug/L | 0.005 | 112 | 7 | 4 | 58 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 418765 | 1 | Standard |
| | **Ag** | **107** | **0.001** | ug/L | 0.000 | 25 | 100 | 106 | 1 | Standard |
| | **Ba** | **135** | **-0.008** | ug/L | 0.002 | 29 | 78 | 45 | 20 | Standard |
| | **Ba** | **137** | **-0.009** | ug/L | 0.003 | 34 | 142 | 81 | 23 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 662254 | 1 | Standard |
| | **Pb** | **208** | **-0.000** | ug/L | 0.000 | 109 | 179 | 165 | 8 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV3**
**Sample Dil Factor:**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 18:36:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 728565 | 1 | Standard |
| | **Be** | **9** | **50.252** | ug/L | 2.139 | 4 | 7 | 373626 | 3 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 38459 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4527669 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 508033 | 2 | Standard |
| | **Cr** | **52** | **49.888** | ug/L | 1.304 | 2 | 15443 | 923057 | 1 | Standard |
| | **Cr** | **53** | **49.329** | ug/L | 1.277 | 2 | 178 | 105672 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27580 | 6 | KED |
| | **Ni** | **60** | **47.092** | ug/L | 3.898 | 8 | 40 | 50914 | 2 | KED |
| | **Ni** | **62** | **47.114** | ug/L | 4.640 | 9 | 6 | 8126 | 3 | KED |
| | **Cu** | **63** | **47.405** | ug/L | 3.398 | 7 | 46 | 147506 | 0 | KED |
| | **Cu** | **65** | **46.225** | ug/L | 3.953 | 8 | 30 | 71909 | 3 | KED |
| | **Zn** | **66** | **47.968** | ug/L | 4.242 | 8 | 35 | 20120 | 1 | KED |
| | **Zn** | **67** | **46.577** | ug/L | 3.995 | 8 | 6 | 3312 | 5 | KED |
| | **As** | **75** | **47.199** | ug/L | 3.794 | 8 | 7 | 10006 | 1 | KED |
| | **Se** | **78** | **47.409** | ug/L | 4.675 | 9 | 14 | 1106 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 268980 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 58 | 20 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7507 | 2 | KED |
| | **Cd** | **111** | **50.186** | ug/L | 0.872 | 1 | 4 | 11786 | 3 | KED |
| | **Cd** | **114** | **50.793** | ug/L | 1.152 | 2 | 7 | 29006 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 397823 | 1 | Standard |
| | **Ag** | **107** | **50.203** | ug/L | 0.173 | 0 | 100 | 673712 | 1 | Standard |
| | **Ba** | **135** | **49.164** | ug/L | 0.027 | 0 | 78 | 177449 | 1 | Standard |
| | **Ba** | **137** | **48.555** | ug/L | 0.256 | 0 | 142 | 309758 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 652802 | 1 | Standard |
| | **Pb** | **208** | **49.739** | ug/L | 0.370 | 0 | 179 | 2184826 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:44:12**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 736842 | 4 | Standard |
| | **Be** | **9** | **49.412** | ug/L | 2.337 | 4 | 7 | 371385 | 4 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 38351 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4665353 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 509755 | 2 | Standard |
| | **Cr** | **52** | **49.905** | ug/L | 1.404 | 2 | 15443 | 926825 | 4 | Standard |
| | **Cr** | **53** | **49.796** | ug/L | 0.695 | 1 | 178 | 107059 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27111 | 3 | KED |
| | **Ni** | **60** | **47.602** | ug/L | 1.645 | 3 | 40 | 50730 | 0 | KED |
| | **Ni** | **62** | **47.989** | ug/L | 1.963 | 4 | 6 | 8163 | 1 | KED |
| | **Cu** | **63** | **47.807** | ug/L | 2.336 | 4 | 46 | 146588 | 3 | KED |
| | **Cu** | **65** | **47.183** | ug/L | 1.487 | 3 | 30 | 72358 | 0 | KED |
| | **Zn** | **66** | **48.816** | ug/L | 2.360 | 4 | 35 | 20184 | 1 | KED |
| | **Zn** | **67** | **48.579** | ug/L | 3.288 | 6 | 6 | 3401 | 4 | KED |
| | **As** | **75** | **47.839** | ug/L | 2.013 | 4 | 7 | 9995 | 1 | KED |
| | **Se** | **78** | **48.143** | ug/L | 1.969 | 4 | 14 | 1108 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 273441 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 70 | 12 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7552 | 2 | KED |
| | **Cd** | **111** | **50.028** | ug/L | 0.959 | 1 | 4 | 11813 | 1 | KED |
| | **Cd** | **114** | **49.797** | ug/L | 0.862 | 1 | 7 | 28598 | 2 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 399410 | 2 | Standard |
| | **Ag** | **107** | **50.754** | ug/L | 1.338 | 2 | 100 | 684195 | 5 | Standard |
| | **Ba** | **135** | **48.909** | ug/L | 0.212 | 0 | 78 | 177218 | 2 | Standard |
| | **Ba** | **137** | **49.294** | ug/L | 0.446 | 0 | 142 | 315682 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 657885 | 3 | Standard |
| | **Pb** | **208** | **49.804** | ug/L | 1.175 | 2 | 179 | 2203545 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB3**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:51:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 735602 | 3 | Standard |
| | **Be** | **9** | **0.000** | ug/L | 0.000 | 141 | 7 | 8 | 13 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 37393 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4308048 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 514699 | 2 | Standard |
| | **Cr** | **52** | **0.020** | ug/L | 0.029 | 146 | 15443 | 15112 | 1 | Standard |
| | **Cr** | **53** | **0.024** | ug/L | 0.008 | 35 | 178 | 221 | 8 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27806 | 4 | KED |
| | **Ni** | **60** | **0.041** | ug/L | 0.014 | 34 | 40 | 86 | 14 | KED |
| | **Ni** | **62** | **0.027** | ug/L | 0.033 | 119 | 6 | 12 | 48 | KED |
| | **Cu** | **63** | **-0.008** | ug/L | 0.003 | 45 | 46 | 24 | 43 | KED |
| | **Cu** | **65** | **-0.010** | ug/L | 0.001 | 14 | 30 | 16 | 17 | KED |
| | **Zn** | **66** | **-0.046** | ug/L | 0.007 | 15 | 35 | 17 | 22 | KED |
| | **Zn** | **67** | **-0.019** | ug/L | 0.073 | 387 | 6 | 5 | 88 | KED |
| | **As** | **75** | **0.008** | ug/L | 0.005 | 64 | 7 | 9 | 13 | KED |
| | **Se** | **78** | **0.048** | ug/L | 0.181 | 374 | 14 | 15 | 24 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 272565 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 52 | 18 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7545 | 0 | KED |
| | **Cd** | **111** | **-0.006** | ug/L | 0.006 | 97 | 4 | 2 | 57 | KED |
| | **Cd** | **114** | **-0.012** | ug/L | 0.002 | 14 | 7 | 0 | 190 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 409371 | 2 | Standard |
| | **Ag** | **107** | **0.002** | ug/L | 0.001 | 47 | 100 | 118 | 9 | Standard |
| | **Ba** | **135** | **-0.016** | ug/L | 0.002 | 10 | 78 | 14 | 39 | Standard |
| | **Ba** | **137** | **-0.015** | ug/L | 0.001 | 5 | 142 | 41 | 9 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 648574 | 2 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 17 | 179 | 120 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0192-03**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 18:57:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 743289 | 1 | Standard |
| | **Be** | **9** | **0.002** | ug/L | 0.001 | 62 | 7 | 19 | 40 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 53109 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 10966788 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 536108 | 2 | Standard |
| | **Cr** | **52** | **4.617** | ug/L | 0.165 | 3 | 15443 | 104069 | 0 | Standard |
| | **Cr** | **53** | **11.935** | ug/L | 0.244 | 2 | 178 | 27116 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 25689 | 1 | KED |
| | **Ni** | **60** | **3.114** | ug/L | 0.095 | 3 | 40 | 3183 | 2 | KED |
| | **Ni** | **62** | **3.410** | ug/L | 0.166 | 4 | 6 | 556 | 4 | KED |
| | **Cu** | **63** | **3.220** | ug/L | 0.085 | 2 | 46 | 9403 | 2 | KED |
| | **Cu** | **65** | **3.178** | ug/L | 0.073 | 2 | 30 | 4647 | 1 | KED |
| | **Zn** | **66** | **297.201** | ug/L | 3.485 | 1 | 35 | 116396 | 0 | KED |
| | **Zn** | **67** | **266.434** | ug/L | 2.015 | 0 | 6 | 17670 | 1 | KED |
| | **As** | **75** | **0.770** | ug/L | 0.054 | 7 | 7 | 159 | 6 | KED |
| | **Se** | **78** | **0.676** | ug/L | 0.216 | 31 | 14 | 28 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 274130 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 54 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7037 | 3 | KED |
| | **Cd** | **111** | **0.181** | ug/L | 0.033 | 18 | 4 | 43 | 19 | KED |
| | **Cd** | **114** | **0.196** | ug/L | 0.020 | 10 | 7 | 111 | 6 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 395664 | 1 | Standard |
| | **Ag** | **107** | **0.003** | ug/L | 0.001 | 19 | 100 | 139 | 7 | Standard |
| | **Ba** | **135** | **10.427** | ug/L | 0.148 | 1 | 78 | 37483 | 0 | Standard |
| | **Ba** | **137** | **10.515** | ug/L | 0.164 | 1 | 142 | 66816 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 663937 | 0 | Standard |
| | **Pb** | **208** | **0.603** | ug/L | 0.021 | 3 | 179 | 27104 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0192-04**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:02:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 756237 | 0 | Standard |
| | **Be** | **9** | **0.001** | ug/L | 0.001 | 66 | 7 | 15 | 34 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 52548 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 9592443 | 4 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 531020 | 0 | Standard |
| | **Cr** | **52** | **3.052** | ug/L | 0.114 | 3 | 15443 | 73332 | 3 | Standard |
| | **Cr** | **53** | **9.671** | ug/L | 0.103 | 1 | 178 | 21797 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26077 | 1 | KED |
| | **Ni** | **60** | **1.244** | ug/L | 0.072 | 5 | 40 | 1315 | 6 | KED |
| | **Ni** | **62** | **1.368** | ug/L | 0.139 | 10 | 6 | 230 | 9 | KED |
| | **Cu** | **63** | **2.226** | ug/L | 0.060 | 2 | 46 | 6614 | 4 | KED |
| | **Cu** | **65** | **2.196** | ug/L | 0.086 | 3 | 30 | 3269 | 3 | KED |
| | **Zn** | **66** | **61.347** | ug/L | 0.686 | 1 | 35 | 24418 | 1 | KED |
| | **Zn** | **67** | **57.036** | ug/L | 2.611 | 4 | 6 | 3845 | 5 | KED |
| | **As** | **75** | **0.363** | ug/L | 0.019 | 5 | 7 | 80 | 6 | KED |
| | **Se** | **78** | **0.231** | ug/L | 0.244 | 105 | 14 | 19 | 28 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 271267 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 66 | 15 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7361 | 0 | KED |
| | **Cd** | **111** | **0.015** | ug/L | 0.003 | 17 | 4 | 7 | 7 | KED |
| | **Cd** | **114** | **-0.001** | ug/L | 0.007 | 847 | 7 | 6 | 58 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 395943 | 0 | Standard |
| | **Ag** | **107** | **-0.001** | ug/L | 0.001 | 180 | 100 | 84 | 18 | Standard |
| | **Ba** | **135** | **10.874** | ug/L | 0.176 | 1 | 78 | 39115 | 1 | Standard |
| | **Ba** | **137** | **10.615** | ug/L | 0.106 | 1 | 142 | 67503 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 662287 | 2 | Standard |
| | **Pb** | **208** | **0.312** | ug/L | 0.010 | 3 | 179 | 14092 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0191-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:07:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 726244 | 4 | Standard |
| | Be | 9 | 0.000 | ug/L | 0.000 | 227 | 7 | 8 | 44 | Standard |
| | C | 13 | | ug/L | | | 36839 | 50246 | 1 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 8156909 | 1 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 514478 | 1 | Standard |
| | Cr | 52 | 1.264 | ug/L | 0.038 | 2 | 15443 | 38057 | 1 | Standard |
| | Cr | 53 | 6.893 | ug/L | 0.206 | 2 | 178 | 15099 | 2 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 26365 | 4 | KED |
| | Ni | 60 | 0.892 | ug/L | 0.046 | 5 | 40 | 963 | 2 | KED |
| | Ni | 62 | 0.838 | ug/L | 0.093 | 11 | 6 | 145 | 10 | KED |
| | Cu | 63 | 0.312 | ug/L | 0.004 | 1 | 46 | 977 | 5 | KED |
| | Cu | 65 | 0.315 | ug/L | 0.016 | 5 | 30 | 498 | 1 | KED |
| | Zn | 66 | 8.826 | ug/L | 0.246 | 2 | 35 | 3579 | 2 | KED |
| | Zn | 67 | 9.563 | ug/L | 0.420 | 4 | 6 | 657 | 4 | KED |
| | As | 75 | 0.265 | ug/L | 0.019 | 7 | 7 | 60 | 7 | KED |
| | Se | 78 | 0.333 | ug/L | 0.180 | 53 | 14 | 21 | 15 | KED |
| | Y | 89 | | ug/L | | | 287925 | 264846 | 1 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 50 | 17 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7399 | 0 | KED |
| | Cd | 111 | -0.002 | ug/L | 0.005 | 228 | 4 | 3 | 31 | KED |
| | Cd | 114 | -0.004 | ug/L | 0.005 | 133 | 7 | 4 | 59 | KED |
| > | In | 115 | | ug/L | | | 427037 | 381624 | 1 | Standard |
| | Ag | 107 | -0.002 | ug/L | 0.001 | 55 | 100 | 67 | 19 | Standard |
| | Ba | 135 | 11.702 | ug/L | 0.226 | 1 | 78 | 40560 | 0 | Standard |
| | Ba | 137 | 11.512 | ug/L | 0.182 | 1 | 142 | 70545 | 1 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 642539 | 3 | Standard |
| | Pb | 208 | 0.061 | ug/L | 0.002 | 3 | 179 | 2803 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0278-DUP1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:14:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 736408 | 3 | Standard |
| | Be | 9 | 0.000 | ug/L | 0.001 | 789 | 7 | 8 | 93 | Standard |
| | C | 13 | | ug/L | | | 36839 | 50347 | 0 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 8267196 | 1 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 518876 | 0 | Standard |
| | Cr | 52 | 1.246 | ug/L | 0.020 | 1 | 15443 | 38055 | 0 | Standard |
| | Cr | 53 | 6.802 | ug/L | 0.124 | 1 | 178 | 15032 | 1 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 24954 | 1 | KED |
| | Ni | 60 | 0.870 | ug/L | 0.033 | 3 | 40 | 890 | 1 | KED |
| | Ni | 62 | 0.871 | ug/L | 0.020 | 2 | 6 | 142 | 3 | KED |
| | Cu | 63 | 0.315 | ug/L | 0.016 | 5 | 46 | 933 | 5 | KED |
| | Cu | 65 | 0.312 | ug/L | 0.035 | 11 | 30 | 468 | 10 | KED |
| | Zn | 66 | 9.225 | ug/L | 0.273 | 2 | 35 | 3540 | 1 | KED |
| | Zn | 67 | 9.587 | ug/L | 0.529 | 5 | 6 | 623 | 3 | KED |
| | As | 75 | 0.304 | ug/L | 0.016 | 5 | 7 | 65 | 6 | KED |
| | Se | 78 | 0.315 | ug/L | 0.106 | 33 | 14 | 19 | 9 | KED |
| | Y | 89 | | ug/L | | | 287925 | 265094 | 1 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 59 | 12 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7034 | 1 | KED |
| | Cd | 111 | 0.007 | ug/L | 0.003 | 36 | 4 | 5 | 10 | KED |
| | Cd | 114 | 0.003 | ug/L | 0.008 | 289 | 7 | 8 | 49 | KED |
| > | In | 115 | | ug/L | | | 427037 | 391374 | 1 | Standard |
| | Ag | 107 | -0.002 | ug/L | 0.002 | 78 | 100 | 66 | 29 | Standard |
| | Ba | 135 | 11.016 | ug/L | 0.055 | 0 | 78 | 39169 | 1 | Standard |
| | Ba | 137 | 10.952 | ug/L | 0.220 | 2 | 142 | 68825 | 0 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 641278 | 0 | Standard |
| | Pb | 208 | 0.064 | ug/L | 0.003 | 4 | 179 | 2909 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0278-MS1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:19:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 751827 | 4 | Standard |
| | Be | 9 | 23.654 | ug/L | 0.867 | 3 | 7 | 181365 | 1 | Standard |
| | C | 13 | | ug/L | | | 36839 | 53210 | 1 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 8403110 | 3 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 532874 | 2 | Standard |
| | Cr | 52 | 25.916 | ug/L | 0.336 | 1 | 15443 | 510384 | 1 | Standard |
| | Cr | 53 | 28.549 | ug/L | 0.427 | 1 | 178 | 64213 | 1 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 25773 | 1 | KED |
| | Ni | 60 | 25.810 | ug/L | 0.508 | 1 | 40 | 26187 | 2 | KED |
| | Ni | 62 | 26.931 | ug/L | 0.355 | 1 | 6 | 4361 | 1 | KED |
| | Cu | 63 | 25.545 | ug/L | 0.198 | 0 | 46 | 74535 | 1 | KED |
| | Cu | 65 | 25.150 | ug/L | 0.081 | 0 | 30 | 36709 | 2 | KED |
| | Zn | 66 | 84.706 | ug/L | 1.272 | 1 | 35 | 33306 | 1 | KED |
| | Zn | 67 | 78.523 | ug/L | 1.671 | 2 | 6 | 5228 | 0 | KED |
| | As | 75 | 25.367 | ug/L | 0.346 | 1 | 7 | 5045 | 0 | KED |
| | Se | 78 | 75.121 | ug/L | 2.309 | 3 | 14 | 1637 | 1 | KED |
| | Y | 89 | | ug/L | | | 287925 | 279350 | 1 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 88 | 25 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7021 | 2 | KED |
| | Cd | 111 | 24.919 | ug/L | 0.192 | 0 | 4 | 5475 | 2 | KED |
| | Cd | 114 | 24.417 | ug/L | 0.132 | 0 | 7 | 13043 | 2 | KED |
| > | In | 115 | | ug/L | | | 427037 | 388670 | 0 | Standard |
| | Ag | 107 | 24.614 | ug/L | 0.249 | 1 | 100 | 322795 | 1 | Standard |
| | Ba | 135 | 37.012 | ug/L | 0.098 | 0 | 78 | 130535 | 1 | Standard |
| | Ba | 137 | 37.464 | ug/L | 0.705 | 1 | 142 | 233568 | 2 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 664809 | 2 | Standard |
| | Pb | 208 | 24.608 | ug/L | 0.631 | 2 | 179 | 1100344 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0278-MSD1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:23:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 726911 | 4 | Standard |
| | Be | 9 | 24.199 | ug/L | 1.182 | 4 | 7 | 179387 | 3 | Standard |
| | C | 13 | | ug/L | | | 36839 | 53507 | 1 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 8166185 | 2 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 527968 | 3 | Standard |
| | Cr | 52 | 25.897 | ug/L | 0.178 | 0 | 15443 | 505351 | 2 | Standard |
| | Cr | 53 | 28.119 | ug/L | 0.479 | 1 | 178 | 62671 | 3 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 25855 | 1 | KED |
| | Ni | 60 | 25.915 | ug/L | 0.714 | 2 | 40 | 26372 | 1 | KED |
| | Ni | 62 | 26.849 | ug/L | 1.297 | 4 | 6 | 4360 | 3 | KED |
| | Cu | 63 | 25.871 | ug/L | 0.515 | 1 | 46 | 75715 | 0 | KED |
| | Cu | 65 | 25.410 | ug/L | 0.498 | 1 | 30 | 37195 | 0 | KED |
| | Zn | 66 | 85.468 | ug/L | 1.679 | 1 | 35 | 33708 | 0 | KED |
| | Zn | 67 | 80.826 | ug/L | 3.280 | 4 | 6 | 5398 | 3 | KED |
| | As | 75 | 25.584 | ug/L | 0.447 | 1 | 7 | 5105 | 0 | KED |
| | Se | 78 | 76.238 | ug/L | 3.545 | 4 | 14 | 1666 | 3 | KED |
| | Y | 89 | | ug/L | | | 287925 | 271289 | 2 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 93 | 16 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7249 | 2 | KED |
| | Cd | 111 | 24.571 | ug/L | 0.730 | 2 | 4 | 5570 | 2 | KED |
| | Cd | 114 | 24.579 | ug/L | 0.313 | 1 | 7 | 13551 | 1 | KED |
| > | In | 115 | | ug/L | | | 427037 | 391727 | 1 | Standard |
| | Ag | 107 | 24.401 | ug/L | 0.433 | 1 | 100 | 322486 | 2 | Standard |
| | Ba | 135 | 37.405 | ug/L | 0.312 | 0 | 78 | 132960 | 2 | Standard |
| | Ba | 137 | 37.285 | ug/L | 0.793 | 2 | 142 | 234224 | 1 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 663708 | 2 | Standard |
| | Pb | 208 | 24.736 | ug/L | 0.443 | 1 | 179 | 1104347 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0126-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:32:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 912346 | 1 | Standard |
| | Be | 9 | 0.018 | ug/L | 0.003 | 16 | 7 | 179 | 15 | Standard |
| | C | 13 | | ug/L | | | 36839 | 67964 | 2 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 4919248 | 2 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 602487 | 1 | Standard |
| | Cr | 52 | 5.314 | ug/L | 0.101 | 1 | 15443 | 132053 | 1 | Standard |
| | Cr | 53 | 5.457 | ug/L | 0.128 | 2 | 178 | 14039 | 0 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 25000 | 1 | KED |
| | Ni | 60 | 0.398 | ug/L | 0.026 | 6 | 40 | 429 | 5 | KED |
| | Ni | 62 | 0.356 | ug/L | 0.044 | 12 | 6 | 62 | 9 | KED |
| | Cu | 63 | 6.924 | ug/L | 0.075 | 1 | 46 | 19629 | 1 | KED |
| | Cu | 65 | 6.852 | ug/L | 0.059 | 0 | 30 | 9720 | 1 | KED |
| | Zn | 66 | 2.973 | ug/L | 0.136 | 4 | 35 | 1165 | 4 | KED |
| | Zn | 67 | 2.941 | ug/L | 0.392 | 13 | 6 | 196 | 12 | KED |
| | As | 75 | 0.077 | ug/L | 0.036 | 47 | 7 | 21 | 32 | KED |
| | Se | 78 | 0.073 | ug/L | 0.106 | 146 | 14 | 14 | 14 | KED |
| | Y | 89 | | ug/L | | | 287925 | 293961 | 1 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 58 | 17 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 7037 | 0 | KED |
| | Cd | 111 | 0.069 | ug/L | 0.027 | 38 | 4 | 19 | 31 | KED |
| | Cd | 114 | 0.071 | ug/L | 0.019 | 26 | 7 | 44 | 23 | KED |
| > | In | 115 | | ug/L | | | 427037 | 407246 | 1 | Standard |
| | Ag | 107 | -0.001 | ug/L | 0.001 | 90 | 100 | 87 | 9 | Standard |
| | Ba | 135 | 1.533 | ug/L | 0.038 | 2 | 78 | 5737 | 1 | Standard |
| | Ba | 137 | 1.576 | ug/L | 0.005 | 0 | 142 | 10425 | 1 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 667021 | 1 | Standard |
| | Pb | 208 | 0.009 | ug/L | 0.001 | 12 | 179 | 565 | 8 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0126-02**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:37:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 780703 | 0 | Standard |
| | Be | 9 | 0.001 | ug/L | 0.000 | 27 | 7 | 18 | 15 | Standard |
| | C | 13 | | ug/L | | | 36839 | 55740 | 2 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 4760158 | 2 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 586311 | 0 | Standard |
| | Cr | 52 | 8.624 | ug/L | 0.091 | 1 | 15443 | 198112 | 0 | Standard |
| | Cr | 53 | 8.735 | ug/L | 0.167 | 1 | 178 | 21755 | 0 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 24887 | 1 | KED |
| | Ni | 60 | 0.239 | ug/L | 0.025 | 10 | 40 | 271 | 8 | KED |
| | Ni | 62 | 0.386 | ug/L | 0.048 | 12 | 6 | 66 | 10 | KED |
| | Cu | 63 | 6.676 | ug/L | 0.168 | 2 | 46 | 18839 | 2 | KED |
| | Cu | 65 | 6.520 | ug/L | 0.102 | 1 | 30 | 9211 | 2 | KED |
| | Zn | 66 | 1.565 | ug/L | 0.173 | 11 | 35 | 626 | 9 | KED |
| | Zn | 67 | 1.404 | ug/L | 0.311 | 22 | 6 | 96 | 19 | KED |
| | As | 75 | 0.052 | ug/L | 0.006 | 10 | 7 | 16 | 7 | KED |
| | Se | 78 | 0.168 | ug/L | 0.098 | 58 | 14 | 16 | 12 | KED |
| | Y | 89 | | ug/L | | | 287925 | 287175 | 0 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 53 | 10 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 6838 | 2 | KED |
| | Cd | 111 | 0.010 | ug/L | 0.005 | 50 | 4 | 5 | 16 | KED |
| | Cd | 114 | -0.006 | ug/L | 0.004 | 56 | 7 | 3 | 56 | KED |
| > | In | 115 | | ug/L | | | 427037 | 398019 | 0 | Standard |
| | Ag | 107 | -0.002 | ug/L | 0.001 | 52 | 100 | 67 | 20 | Standard |
| | Ba | 135 | 1.604 | ug/L | 0.025 | 1 | 78 | 5862 | 1 | Standard |
| | Ba | 137 | 1.630 | ug/L | 0.032 | 1 | 142 | 10535 | 1 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 646052 | 1 | Standard |
| | Pb | 208 | 0.011 | ug/L | 0.001 | 11 | 179 | 642 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0126-03**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:42:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | Li | 6 | | ug/L | | | 766222 | 821976 | 2 | Standard |
| | Be | 9 | 0.000 | ug/L | 0.000 | 4384 | 7 | 8 | 48 | Standard |
| | C | 13 | | ug/L | | | 36839 | 58274 | 2 | Standard |
| | Cl | 37 | | ug/L | | | 4390964 | 4796965 | 2 | Standard |
| > | Sc | 45 | | ug/L | | | 538647 | 575786 | 2 | Standard |
| | Cr | 52 | 4.265 | ug/L | 0.110 | 2 | 15443 | 104523 | 1 | Standard |
| | Cr | 53 | 4.287 | ug/L | 0.028 | 0 | 178 | 10584 | 2 | Standard |
| > | Ge | 72 | | ug/L | | | 26915 | 25056 | 1 | KED |
| | Ni | 60 | 0.274 | ug/L | 0.020 | 7 | 40 | 307 | 6 | KED |
| | Ni | 62 | 0.351 | ug/L | 0.047 | 13 | 6 | 61 | 10 | KED |
| | Cu | 63 | 5.490 | ug/L | 0.069 | 1 | 46 | 15606 | 0 | KED |
| | Cu | 65 | 5.463 | ug/L | 0.205 | 3 | 30 | 7772 | 2 | KED |
| | Zn | 66 | 1.111 | ug/L | 0.083 | 7 | 35 | 457 | 7 | KED |
| | Zn | 67 | 1.127 | ug/L | 0.174 | 15 | 6 | 79 | 14 | KED |
| | As | 75 | 0.049 | ug/L | 0.010 | 19 | 7 | 16 | 10 | KED |
| | Se | 78 | 0.183 | ug/L | 0.089 | 48 | 14 | 17 | 11 | KED |
| | Y | 89 | | ug/L | | | 287925 | 288859 | 2 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 62 | 10 | Standard |
| > | In-1 | 115 | | ug/L | | | 7687 | 6945 | 1 | KED |
| | Cd | 111 | -0.003 | ug/L | 0.005 | 208 | 4 | 3 | 34 | KED |
| | Cd | 114 | -0.006 | ug/L | 0.000 | 4 | 7 | 3 | 2 | KED |
| > | In | 115 | | ug/L | | | 427037 | 393264 | 2 | Standard |
| | Ag | 107 | -0.004 | ug/L | 0.001 | 25 | 100 | 41 | 32 | Standard |
| | Ba | 135 | 1.978 | ug/L | 0.036 | 1 | 78 | 7125 | 0 | Standard |
| | Ba | 137 | 1.934 | ug/L | 0.053 | 2 | 142 | 12318 | 2 | Standard |
| > | Tb | 159 | | ug/L | | | 675781 | 642706 | 3 | Standard |
| | Pb | 208 | 0.008 | ug/L | 0.002 | 19 | 179 | 516 | 9 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0192-03RE1**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:47:32**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 774703 | 3 | Standard |
| | **Be** | **9** | **0.001** | ug/L | 0.001 | 59 | 7 | 15 | 33 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 43423 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 6080299 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 538459 | 1 | Standard |
| | **Cr** | **52** | **1.046** | ug/L | 0.063 | 6 | 15443 | 35630 | 2 | Standard |
| | **Cr** | **53** | **3.161** | ug/L | 0.048 | 1 | 178 | 7344 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27407 | 3 | KED |
| | **Ni** | **60** | **0.698** | ug/L | 0.047 | 6 | 40 | 792 | 3 | KED |
| | **Ni** | **62** | **0.658** | ug/L | 0.090 | 13 | 6 | 120 | 9 | KED |
| | **Cu** | **63** | **0.726** | ug/L | 0.010 | 1 | 46 | 2298 | 4 | KED |
| | **Cu** | **65** | **0.702** | ug/L | 0.032 | 4 | 30 | 1120 | 6 | KED |
| | **Zn** | **66** | **71.328** | ug/L | 2.504 | 3 | 35 | 29811 | 1 | KED |
| | **Zn** | **67** | **65.341** | ug/L | 2.161 | 3 | 6 | 4625 | 1 | KED |
| | **As** | **75** | **0.160** | ug/L | 0.025 | 15 | 7 | 40 | 11 | KED |
| | **Se** | **78** | **0.004** | ug/L | 0.105 | 2356 | 14 | 14 | 13 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 280000 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 48 | 23 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7155 | 0 | KED |
| | **Cd** | **111** | **0.048** | ug/L | 0.015 | 30 | 4 | 14 | 22 | KED |
| | **Cd** | **114** | **0.044** | ug/L | 0.019 | 43 | 7 | 30 | 34 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 400380 | 0 | Standard |
| | **Ag** | **107** | **-0.002** | ug/L | 0.000 | 20 | 100 | 60 | 11 | Standard |
| | **Ba** | **135** | **2.101** | ug/L | 0.026 | 1 | 78 | 7701 | 0 | Standard |
| | **Ba** | **137** | **2.077** | ug/L | 0.031 | 1 | 142 | 13464 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 646508 | 1 | Standard |
| | **Pb** | **208** | **0.139** | ug/L | 0.005 | 3 | 179 | 6207 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 19:53:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 797678 | 4 | Standard |
| | **Be** | **9** | **50.420** | ug/L | 3.534 | 7 | 7 | 409745 | 2 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 40863 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4839629 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 566405 | 2 | Standard |
| | **Cr** | **52** | **48.841** | ug/L | 1.149 | 2 | 15443 | 1007853 | 0 | Standard |
| | **Cr** | **53** | **48.106** | ug/L | 1.945 | 4 | 178 | 114842 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 26784 | 1 | KED |
| | **Ni** | **60** | **51.196** | ug/L | 0.675 | 1 | 40 | 53944 | 1 | KED |
| | **Ni** | **62** | **51.771** | ug/L | 1.197 | 2 | 6 | 8707 | 1 | KED |
| | **Cu** | **63** | **52.533** | ug/L | 0.204 | 0 | 46 | 159260 | 1 | KED |
| | **Cu** | **65** | **51.399** | ug/L | 0.336 | 0 | 30 | 77929 | 1 | KED |
| | **Zn** | **66** | **51.373** | ug/L | 1.302 | 2 | 35 | 21006 | 2 | KED |
| | **Zn** | **67** | **50.463** | ug/L | 2.336 | 4 | 6 | 3493 | 3 | KED |
| | **As** | **75** | **49.584** | ug/L | 0.472 | 0 | 7 | 10244 | 1 | KED |
| | **Se** | **78** | **50.237** | ug/L | 0.659 | 1 | 14 | 1142 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 295022 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 65 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7443 | 1 | KED |
| | **Cd** | **111** | **51.461** | ug/L | 0.271 | 0 | 4 | 11979 | 1 | KED |
| | **Cd** | **114** | **50.886** | ug/L | 0.898 | 1 | 7 | 28802 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 424855 | 1 | Standard |
| | **Ag** | **107** | **49.020** | ug/L | 0.600 | 1 | 100 | 702505 | 1 | Standard |
| | **Ba** | **135** | **47.893** | ug/L | 0.836 | 1 | 78 | 184584 | 0 | Standard |
| | **Ba** | **137** | **47.266** | ug/L | 1.177 | 2 | 142 | 321984 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 673995 | 1 | Standard |
| | **Pb** | **208** | **50.717** | ug/L | 1.557 | 3 | 179 | 2299094 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:00:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| > | **Li** | **6** | | ug/L | | | 766222 | 774985 | 5 | Standard |
| | **Be** | **9** | **-0.000** | ug/L | 0.000 | 240 | 7 | 6 | 45 | Standard |
| | **C** | **13** | | ug/L | | | 36839 | 41009 | 7 | Standard |
| | **Cl** | **37** | | ug/L | | | 4390964 | 4455865 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 538647 | 545509 | 2 | Standard |
| | **Cr** | **52** | **0.008** | ug/L | 0.035 | 422 | 15443 | 15802 | 5 | Standard |
| | **Cr** | **53** | **0.044** | ug/L | 0.003 | 5 | 178 | 281 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26915 | 27073 | 3 | KED |
| | **Ni** | **60** | **-0.009** | ug/L | 0.013 | 147 | 40 | 31 | 41 | KED |
| | **Ni** | **62** | **0.026** | ug/L | 0.039 | 148 | 6 | 11 | 57 | KED |
| | **Cu** | **63** | **-0.007** | ug/L | 0.002 | 26 | 46 | 24 | 26 | KED |
| | **Cu** | **65** | **-0.011** | ug/L | 0.001 | 11 | 30 | 13 | 15 | KED |
| | **Zn** | **66** | **-0.051** | ug/L | 0.017 | 33 | 35 | 14 | 45 | KED |
| | **Zn** | **67** | **-0.038** | ug/L | 0.055 | 145 | 6 | 4 | 89 | KED |
| | **As** | **75** | **0.011** | ug/L | 0.005 | 45 | 7 | 9 | 7 | KED |
| | **Se** | **78** | **-0.027** | ug/L | 0.086 | 317 | 14 | 13 | 10 | KED |
| | **Y** | **89** | | ug/L | | | 287925 | 286699 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 53 | 19 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7687 | 7508 | 1 | KED |
| | **Cd** | **111** | **-0.012** | ug/L | 0.002 | 19 | 4 | 1 | 43 | KED |
| | **Cd** | **114** | **-0.007** | ug/L | 0.002 | 25 | 7 | 3 | 34 | KED |
| > | **In** | **115** | | ug/L | | | 427037 | 419721 | 1 | Standard |
| | **Ag** | **107** | **-0.000** | ug/L | 0.001 | 311 | 100 | 94 | 14 | Standard |
| | **Ba** | **135** | **-0.015** | ug/L | 0.001 | 5 | 78 | 19 | 17 | Standard |
| | **Ba** | **137** | **-0.016** | ug/L | 0.001 | 4 | 142 | 30 | 16 | Standard |
| > | **Tb** | **159** | | ug/L | | | 675781 | 661696 | 3 | Standard |
| | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 32 | 179 | 116 | 13 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:09:54**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | | 38749 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | | 4373298 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | | 544532 | 2 | Standard |
| | **Cr** | **52** | | ug/L | | | | 15553 | 1 | Standard |
| | **Cr** | **53** | | ug/L | | | | 269 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | | 26846 | 0 | KED |
| | **Cu** | **63** | | ug/L | | | | 27 | 28 | KED |
| | **Cu** | **65** | | ug/L | | | | 13 | 69 | KED |
| | **Zn** | **66** | | ug/L | | | | 22 | 24 | KED |
| | **Zn** | **67** | | ug/L | | | | 3 | 86 | KED |
| | **As** | **75** | | ug/L | | | | 6 | 4 | KED |
| | **Y** | **89** | | ug/L | | | | 285357 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | | 53 | 21 | Standard |
| > | **In-1** | **115** | | ug/L | | | | 7783 | 3 | KED |
| | **Cd** | **111** | | ug/L | | | | 3 | 41 | KED |
| | **Cd** | **114** | | ug/L | | | | 5 | 67 | KED |
| > | **In** | **115** | | ug/L | | | | 420460 | 0 | Standard |
| | **Ag** | **107** | | ug/L | | | | 62 | 16 | Standard |
| > | **Tb** | **159** | | ug/L | | | | 655044 | 1 | Standard |
| | **Pb** | **208** | | ug/L | | | | 75 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:14:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 38090 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4577464 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 545775 | 1 | Standard |
| \| | **Cr** | **52** | **48.528** | ug/L | 0.983 | 2 | 15553 | 965437 | 3 | Standard |
| ⌊ | **Cr** | **53** | **48.032** | ug/L | 0.311 | 0 | 269 | 110639 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26812 | 0 | KED |
| \| | **Cu** | **63** | **51.540** | ug/L | 0.266 | 0 | 27 | 156393 | 1 | KED |
| \| | **Cu** | **65** | **51.032** | ug/L | 0.859 | 1 | 13 | 77432 | 1 | KED |
| \| | **Zn** | **66** | **52.777** | ug/L | 0.848 | 1 | 22 | 21590 | 1 | KED |
| \| | **Zn** | **67** | **49.918** | ug/L | 1.646 | 3 | 3 | 3458 | 3 | KED |
| ⌊ | **As** | **75** | **50.482** | ug/L | 0.469 | 0 | 6 | 10440 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 282671 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 63 | 19 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7197 | 1 | KED |
| \| | **Cd** | **111** | **50.185** | ug/L | 0.807 | 1 | 3 | 11294 | 1 | KED |
| ⌊ | **Cd** | **114** | **50.894** | ug/L | 1.155 | 2 | 5 | 27850 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 412709 | 1 | Standard |
| ⌊ | **Ag** | **107** | **49.501** | ug/L | 0.808 | 1 | 62 | 689142 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 665426 | 1 | Standard |
| ⌊ | **Pb** | **208** | **50.709** | ug/L | 1.267 | 2 | 75 | 2269930 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:21:20**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 39198 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4343461 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 536172 | 3 | Standard |
| \| | **Cr** | **52** | **0.020** | ug/L | 0.031 | 155 | 15553 | 15682 | 2 | Standard |
| ⌊ | **Cr** | **53** | **-0.020** | ug/L | 0.009 | 43 | 269 | 220 | 7 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26546 | 1 | KED |
| \| | **Cu** | **63** | **-0.001** | ug/L | 0.001 | 102 | 27 | 23 | 16 | KED |
| \| | **Cu** | **65** | **0.004** | ug/L | 0.005 | 108 | 13 | 20 | 35 | KED |
| \| | **Zn** | **66** | **-0.018** | ug/L | 0.008 | 41 | 22 | 14 | 19 | KED |
| \| | **Zn** | **67** | **0.020** | ug/L | 0.059 | 301 | 3 | 5 | 78 | KED |
| ⌊ | **As** | **75** | **0.014** | ug/L | 0.008 | 56 | 6 | 9 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 284792 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 52 | 2 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7757 | 1 | KED |
| \| | **Cd** | **111** | **-0.008** | ug/L | 0.008 | 105 | 3 | 1 | 124 | KED |
| ⌊ | **Cd** | **114** | **-0.007** | ug/L | 0.003 | 50 | 5 | 1 | 123 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 427056 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.001** | ug/L | 0.000 | 20 | 62 | 85 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 653515 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 61 | 75 | 101 | 15 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-BLK2**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:26:45**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 58344 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4263896 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 539725 | 4 | Standard |
| \| | **Cr** | **52** | **0.088** | ug/L | 0.010 | 11 | 15553 | 17122 | 3 | Standard |
| ⌊ | **Cr** | **53** | **0.015** | ug/L | 0.006 | 40 | 269 | 302 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26368 | 2 | KED |
| \| | **Cu** | **63** | **0.025** | ug/L | 0.007 | 30 | 27 | 101 | 24 | KED |
| \| | **Cu** | **65** | **0.023** | ug/L | 0.003 | 13 | 13 | 47 | 12 | KED |
| \| | **Zn** | **66** | **0.405** | ug/L | 0.020 | 4 | 22 | 184 | 5 | KED |
| \| | **Zn** | **67** | **0.347** | ug/L | 0.049 | 14 | 3 | 27 | 10 | KED |
| ⌊ | **As** | **75** | **0.003** | ug/L | 0.007 | 233 | 6 | 7 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 285701 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 59 | 21 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7662 | 0 | KED |
| \| | **Cd** | **111** | **0.003** | ug/L | 0.009 | 319 | 3 | 4 | 53 | KED |
| ⌊ | **Cd** | **114** | **-0.006** | ug/L | 0.004 | 59 | 5 | 2 | 99 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 420772 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.001** | ug/L | 0.000 | 7 | 62 | 77 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 646587 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.036** | ug/L | 0.003 | 7 | 75 | 1635 | 6 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-BS2**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:31:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 53484 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4386594 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 558105 | 1 | Standard |
| \| | **Cr** | **52** | **25.966** | ug/L | 0.498 | 1 | 15553 | 535527 | 1 | Standard |
| ⌊ | **Cr** | **53** | **25.514** | ug/L | 0.088 | 0 | 269 | 60231 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27120 | 2 | KED |
| \| | **Cu** | **63** | **27.463** | ug/L | 0.347 | 1 | 27 | 84289 | 1 | KED |
| \| | **Cu** | **65** | **26.770** | ug/L | 0.670 | 2 | 13 | 41107 | 4 | KED |
| \| | **Zn** | **66** | **83.393** | ug/L | 1.396 | 1 | 22 | 34502 | 3 | KED |
| \| | **Zn** | **67** | **75.694** | ug/L | 1.250 | 1 | 3 | 5300 | 1 | KED |
| ⌊ | **As** | **75** | **25.103** | ug/L | 0.196 | 0 | 6 | 5255 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 290322 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 66 | 28 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7965 | 1 | KED |
| \| | **Cd** | **111** | **25.705** | ug/L | 0.249 | 0 | 3 | 6404 | 0 | KED |
| ⌊ | **Cd** | **114** | **25.842** | ug/L | 1.013 | 3 | 5 | 15652 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 428519 | 1 | Standard |
| ⌊ | **Ag** | **107** | **26.572** | ug/L | 0.397 | 1 | 62 | 384078 | 0 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 672287 | 2 | Standard |
| ⌊ | **Pb** | **208** | **27.254** | ug/L | 0.735 | 2 | 75 | 1232199 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-BLK1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:35:27**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 48169 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4350216 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 538380 | 4 | Standard |
| \| | **Cr** | **52** | **0.043** | ug/L | 0.014 | 32 | 15553 | 16207 | 3 | Standard |
| ⌊ | **Cr** | **53** | **-0.006** | ug/L | 0.009 | 145 | 269 | 252 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 28199 | 1 | KED |
| \| | **Cu** | **63** | **0.084** | ug/L | 0.003 | 3 | 27 | 297 | 4 | KED |
| \| | **Cu** | **65** | **0.098** | ug/L | 0.010 | 9 | 13 | 170 | 10 | KED |
| \| | **Zn** | **66** | **0.546** | ug/L | 0.041 | 7 | 22 | 257 | 5 | KED |
| \| | **Zn** | **67** | **0.591** | ug/L | 0.046 | 7 | 3 | 46 | 6 | KED |
| ⌊ | **As** | **75** | **0.012** | ug/L | 0.015 | 128 | 6 | 9 | 33 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 280586 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 48 | 17 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7833 | 3 | KED |
| \| | **Cd** | **111** | **0.004** | ug/L | 0.010 | 256 | 3 | 4 | 53 | KED |
| ⌊ | **Cd** | **114** | **-0.002** | ug/L | 0.004 | 212 | 5 | 4 | 44 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 417966 | 4 | Standard |
| ⌊ | **Ag** | **107** | **0.004** | ug/L | 0.001 | 22 | 62 | 123 | 9 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 659631 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.056** | ug/L | 0.001 | 2 | 75 | 2541 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-BS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:39:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 48048 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4388511 | 5 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 554424 | 1 | Standard |
| \| | **Cr** | **52** | **24.971** | ug/L | 0.344 | 1 | 15553 | 512202 | 0 | Standard |
| ⌊ | **Cr** | **53** | **25.143** | ug/L | 0.669 | 2 | 269 | 58957 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27851 | 1 | KED |
| \| | **Cu** | **63** | **26.906** | ug/L | 0.774 | 2 | 27 | 84802 | 1 | KED |
| \| | **Cu** | **65** | **26.106** | ug/L | 0.472 | 1 | 13 | 41151 | 0 | KED |
| \| | **Zn** | **66** | **83.282** | ug/L | 2.233 | 2 | 22 | 35371 | 1 | KED |
| \| | **Zn** | **67** | **76.524** | ug/L | 2.580 | 3 | 3 | 5502 | 2 | KED |
| ⌊ | **As** | **75** | **24.940** | ug/L | 0.578 | 2 | 6 | 5360 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 292300 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 58 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7574 | 1 | KED |
| \| | **Cd** | **111** | **25.372** | ug/L | 0.645 | 2 | 3 | 6010 | 0 | KED |
| ⌊ | **Cd** | **114** | **25.419** | ug/L | 0.331 | 1 | 5 | 14645 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 430116 | 2 | Standard |
| ⌊ | **Ag** | **107** | **25.708** | ug/L | 0.722 | 2 | 62 | 372868 | 0 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 665828 | 1 | Standard |
| ⌊ | **Pb** | **208** | **26.796** | ug/L | 0.226 | 0 | 75 | 1200306 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22K0328-17RE1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:44:08**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 59818 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4538044 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 630380 | 4 | Standard |
| \| | **Cr** | **52** | **30.718** | ug/L | 0.356 | 1 | 15553 | 712212 | 3 | Standard |
| ⌊ | **Cr** | **53** | **30.618** | ug/L | 0.333 | 1 | 269 | 81549 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27906 | 2 | KED |
| \| | **Cu** | **63** | **625.494** | ug/L | 3.218 | 0 | 27 | 1975205 | 3 | KED |
| \| | **Cu** | **65** | **616.225** | ug/L | 7.088 | 1 | 13 | 973065 | 2 | KED |
| \| | **Zn** | **66** | **228.517** | ug/L | 3.276 | 1 | 22 | 97205 | 1 | KED |
| \| | **Zn** | **67** | **205.127** | ug/L | 3.059 | 1 | 3 | 14773 | 1 | KED |
| ⌊ | **As** | **75** | **8.548** | ug/L | 0.146 | 1 | 6 | 1845 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 467923 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 109 | 4 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7679 | 2 | KED |
| \| | **Cd** | **111** | **0.393** | ug/L | 0.013 | 3 | 3 | 97 | 0 | KED |
| ⌊ | **Cd** | **114** | **0.380** | ug/L | 0.045 | 11 | 5 | 227 | 8 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 422799 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.172** | ug/L | 0.010 | 6 | 62 | 2512 | 7 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 678316 | 4 | Standard |
| ⌊ | **Pb** | **208** | **126.420** | ug/L | 2.040 | 1 | 75 | 5767564 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-DUP1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:52:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 52083 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4550764 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 612694 | 2 | Standard |
| | **Cr** | **52** | **20.329** | ug/L | 0.225 | 1 | 15553 | 464034 | 1 | Standard |
| | **Cr** | **53** | **20.621** | ug/L | 0.348 | 1 | 269 | 53484 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 27804 | 2 | KED |
| | **Cu** | **63** | **508.763** | ug/L | 8.302 | 1 | 27 | 1600281 | 0 | KED |
| | **Cu** | **65** | **507.261** | ug/L | 19.060 | 3 | 13 | 797685 | 1 | KED |
| | **Zn** | **66** | **181.592** | ug/L | 4.780 | 2 | 22 | 76952 | 0 | KED |
| | **Zn** | **67** | **164.663** | ug/L | 9.360 | 5 | 3 | 11809 | 3 | KED |
| | **As** | **75** | **7.027** | ug/L | 0.136 | 1 | 6 | 1512 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 424552 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 96 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 8047 | 0 | KED |
| | **Cd** | **111** | **0.234** | ug/L | 0.039 | 16 | 3 | 62 | 15 | KED |
| | **Cd** | **114** | **0.253** | ug/L | 0.046 | 18 | 5 | 160 | 17 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 430369 | 2 | Standard |
| | **Ag** | **107** | **0.166** | ug/L | 0.008 | 5 | 62 | 2477 | 5 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 687911 | 1 | Standard |
| | **Pb** | **208** | **56.232** | ug/L | 0.929 | 1 | 75 | 2602104 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-MS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 20:56:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 54071 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4522522 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 601568 | 3 | Standard |
| | **Cr** | **52** | **55.490** | ug/L | 1.179 | 2 | 15553 | 1213691 | 1 | Standard |
| | **Cr** | **53** | **55.449** | ug/L | 0.626 | 1 | 269 | 140724 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26612 | 2 | KED |
| | **Cu** | **63** | **722.262** | ug/L | 15.212 | 2 | 27 | 2174287 | 1 | KED |
| | **Cu** | **65** | **704.624** | ug/L | 10.041 | 1 | 13 | 1061278 | 3 | KED |
| | **Zn** | **66** | **345.772** | ug/L | 8.173 | 2 | 22 | 140217 | 0 | KED |
| | **Zn** | **67** | **315.466** | ug/L | 6.638 | 2 | 3 | 21660 | 0 | KED |
| | **As** | **75** | **33.178** | ug/L | 0.463 | 1 | 6 | 6811 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 436240 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 104 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7811 | 2 | KED |
| | **Cd** | **111** | **25.431** | ug/L | 0.099 | 0 | 3 | 6214 | 2 | KED |
| | **Cd** | **114** | **25.308** | ug/L | 0.774 | 3 | 5 | 15035 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 414417 | 3 | Standard |
| | **Ag** | **107** | **22.208** | ug/L | 0.571 | 2 | 62 | 310498 | 4 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 668577 | 4 | Standard |
| | **Pb** STL | **208** | **100.793** | ug/L | 3.673 | 3 | 75 | 4529260 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-MSD1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:01:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 54832 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4588147 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 602445 | 3 | Standard |
| | **Cr** | **52** | **54.715** | ug/L | 1.595 | 2 | 15553 | 1198428 | 0 | Standard |
| | **Cr** | **53** | **55.188** | ug/L | 1.650 | 2 | 269 | 140190 | 0 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26816 | 3 | KED |
| | **Cu** | **63** | **939.535** | ug/L | 18.345 | 1 | 27 | 2849594 | 1 | KED |
| | **Cu** | **65** | **928.960** | ug/L | 18.348 | 1 | 13 | 1409026 | 1 | KED |
| | **Zn** | **66** | **390.414** | ug/L | 10.384 | 2 | 22 | 159533 | 2 | KED |
| | **Zn** | **67** | **346.776** | ug/L | 6.381 | 1 | 3 | 23992 | 1 | KED |
| | **As** | **75** | **34.162** | ug/L | 0.429 | 1 | 6 | 7066 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 450820 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 120 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7527 | 2 | KED |
| | **Cd** | **111** | **26.005** | ug/L | 0.515 | 1 | 3 | 6124 | 3 | KED |
| | **Cd** | **114** | **25.560** | ug/L | 0.289 | 1 | 5 | 14635 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 423255 | 2 | Standard |
| | **Ag** | **107** | **24.480** | ug/L | 0.381 | 1 | 62 | 349489 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 674491 | 1 | Standard |
| | **Pb** STL | **208** | **218.951** | ug/L | 2.288 | 1 | 75 | 9934463 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-02**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:06:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56723 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4159333 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 587519 | 0 | Standard |
| \| | **Cr** | **52** | **7.317** | ug/L | 0.137 | 1 | 15553 | 170901 | 0 | Standard |
| ⌊ | **Cr** | **53** | **7.251** | ug/L | 0.060 | 0 | 269 | 18226 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27201 | 1 | KED |
| \| | **Cu** | **63** | **18.141** | ug/L | 0.091 | 0 | 27 | 55865 | 1 | KED |
| \| | **Cu** | **65** | **17.904** | ug/L | 0.282 | 1 | 13 | 27570 | 1 | KED |
| \| | **Zn** | **66** | **37.705** | ug/L | 0.130 | 0 | 22 | 15655 | 1 | KED |
| \| | **Zn** | **67** | **36.393** | ug/L | 1.331 | 3 | 3 | 2557 | 2 | KED |
| ⌊ | **As** | **75** | **3.565** | ug/L | 0.196 | 5 | 6 | 754 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 395815 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 96 | 6 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7594 | 1 | KED |
| \| | **Cd** | **111** | **0.187** | ug/L | 0.008 | 4 | 3 | 47 | 4 | KED |
| ⌊ | **Cd** | **114** | **0.165** | ug/L | 0.018 | 10 | 5 | 100 | 9 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 413871 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.226** | ug/L | 0.010 | 4 | 62 | 3209 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 665549 | 2 | Standard |
| ⌊ | **Pb** | **208** | **14.605** | ug/L | 0.308 | 2 | 75 | 653828 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL4**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:11:19**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 40021 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4088119 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 508293 | 4 | Standard |
| | **Cr** | **52** | **-0.004** | ug/L | 0.005 | 110 | 15553 | 14442 | 3 | Standard |
| | **Cr** | **53** | **-0.039** | ug/L | 0.007 | 19 | 269 | 169 | 12 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 27199 | 1 | KED |
| | **Cu** | **63** | **0.013** | ug/L | 0.005 | 37 | 27 | 66 | 20 | KED |
| | **Cu** | **65** | **0.013** | ug/L | 0.005 | 42 | 13 | 33 | 25 | KED |
| | **Zn** | **66** | **0.030** | ug/L | 0.034 | 112 | 22 | 34 | 39 | KED |
| | **Zn** | **67** | **0.035** | ug/L | 0.056 | 158 | 3 | 6 | 62 | KED |
| | **As** | **75** | **0.002** | ug/L | 0.010 | 498 | 6 | 7 | 26 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 273023 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 50 | 30 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7546 | 2 | KED |
| | **Cd** | **111** | **0.003** | ug/L | 0.005 | 153 | 3 | 4 | 26 | KED |
| | **Cd** | **114** | **-0.001** | ug/L | 0.008 | 826 | 5 | 4 | 96 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 404873 | 2 | Standard |
| | **Ag** | **107** | **0.001** | ug/L | 0.000 | 54 | 62 | 67 | 4 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 639841 | 3 | Standard |
| | **Pb** | **208** | **0.003** | ug/L | 0.001 | 17 | 75 | 211 | 10 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:15:40**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 37536 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4468572 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 526216 | 0 | Standard |
| \| | **Cr** | **52** | **50.086** | ug/L | 0.096 | 0 | 15553 | 960071 | 0 | Standard |
| ⌊ | **Cr** | **53** | **48.565** | ug/L | 1.097 | 2 | 269 | 107850 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26172 | 0 | KED |
| \| | **Cu** | **63** | **50.453** | ug/L | 1.540 | 3 | 27 | 149439 | 3 | KED |
| \| | **Cu** | **65** | **50.109** | ug/L | 1.000 | 1 | 13 | 74224 | 1 | KED |
| \| | **Zn** | **66** | **50.529** | ug/L | 0.840 | 1 | 22 | 20178 | 1 | KED |
| \| | **Zn** | **67** | **50.007** | ug/L | 2.585 | 5 | 3 | 3381 | 5 | KED |
| ⌊ | **As** | **75** | **49.682** | ug/L | 1.024 | 2 | 6 | 10030 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 280982 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 62 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7450 | 2 | KED |
| \| | **Cd** | **111** | **49.386** | ug/L | 1.072 | 2 | 3 | 11504 | 2 | KED |
| ⌊ | **Cd** | **114** | **49.889** | ug/L | 0.552 | 1 | 5 | 28263 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 405587 | 0 | Standard |
| ⌊ | **Ag** | **107** | **50.003** | ug/L | 1.269 | 2 | 62 | 684015 | 1 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 669733 | 2 | Standard |
| ⌊ | **Pb** | **208** | **49.523** | ug/L | 1.541 | 3 | 75 | 2230270 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:22:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36786 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4128223 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 495649 | 4 | Standard |
| \| | **Cr** | **52** | **-0.012** | ug/L | 0.021 | 178 | 15553 | 13948 | 5 | Standard |
| ⌊ | **Cr** | **53** | **-0.031** | ug/L | 0.011 | 35 | 269 | 179 | 9 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25635 | 8 | KED |
| \| | **Cu** | **63** | **0.002** | ug/L | 0.002 | 83 | 27 | 33 | 18 | KED |
| \| | **Cu** | **65** | **0.000** | ug/L | 0.003 | 4036 | 13 | 13 | 28 | KED |
| \| | **Zn** | **66** | **-0.021** | ug/L | 0.015 | 71 | 22 | 13 | 49 | KED |
| \| | **Zn** | **67** | **-0.015** | ug/L | 0.021 | 133 | 3 | 2 | 43 | KED |
| ⌊ | **As** | **75** | **-0.002** | ug/L | 0.011 | 508 | 6 | 6 | 31 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 260328 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 56 | 39 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7633 | 2 | KED |
| \| | **Cd** | **111** | **0.003** | ug/L | 0.003 | 86 | 3 | 4 | 13 | KED |
| ⌊ | **Cd** | **114** | **-0.004** | ug/L | 0.004 | 91 | 5 | 3 | 71 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 396829 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 60 | 62 | 85 | 16 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 622410 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 34 | 75 | 111 | 12 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22K0328-17RE2**
**Sample Dil Factor: 100**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:29:53**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 41066 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4040656 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 521480 | 4 | Standard |
| \| | **Cr** | **52** | **7.178** | ug/L | 0.171 | 2 | 15553 | 149015 | 2 | Standard |
| ⌊ | **Cr** | **53** | **6.972** | ug/L | 0.061 | 0 | 269 | 15562 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27101 | 1 | KED |
| \| | **Cu** | **63** | **132.008** | ug/L | 2.047 | 1 | 27 | 404801 | 1 | KED |
| \| | **Cu** | **65** | **128.587** | ug/L | 3.154 | 2 | 13 | 197202 | 2 | KED |
| \| | **Zn** | **66** | **48.286** | ug/L | 1.349 | 2 | 22 | 19962 | 1 | KED |
| \| | **Zn** | **67** | **43.417** | ug/L | 0.051 | 0 | 3 | 3040 | 1 | KED |
| ⌊ | **As** | **75** | **1.807** | ug/L | 0.051 | 2 | 6 | 384 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 302337 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 55 | 19 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7683 | 2 | KED |
| \| | **Cd** | **111** | **0.052** | ug/L | 0.023 | 43 | 3 | 15 | 35 | KED |
| ⌊ | **Cd** | **114** | **0.081** | ug/L | 0.024 | 30 | 5 | 52 | 25 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 403033 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.034** | ug/L | 0.002 | 5 | 62 | 516 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 643082 | 3 | Standard |
| ⌊ | **Pb** | **208** | **26.174** | ug/L | 0.638 | 2 | 75 | 1131774 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-DUP2**
**Sample Dil Factor: 100**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:35:35**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 40896 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4209745 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 544099 | 1 | Standard |
| \| | **Cr** | **52** | **4.555** | ug/L | 0.105 | 2 | 15553 | 104382 | 0 | Standard |
| ⌊ | **Cr** | **53** | **4.627** | ug/L | 0.056 | 1 | 269 | 10870 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27314 | 0 | KED |
| \| | **Cu** | **63** | **106.361** | ug/L | 1.782 | 1 | 27 | 328728 | 1 | KED |
| \| | **Cu** | **65** | **103.471** | ug/L | 0.440 | 0 | 13 | 159937 | 0 | KED |
| \| | **Zn** | **66** | **38.887** | ug/L | 0.321 | 0 | 22 | 16213 | 1 | KED |
| \| | **Zn** | **67** | **35.086** | ug/L | 3.256 | 9 | 3 | 2475 | 8 | KED |
| ⌊ | **As** | **75** | **1.434** | ug/L | 0.021 | 1 | 6 | 308 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 311440 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 55 | 36 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7335 | 0 | KED |
| \| | **Cd** | **111** | **0.044** | ug/L | 0.004 | 8 | 3 | 13 | 7 | KED |
| ⌊ | **Cd** | **114** | **0.058** | ug/L | 0.007 | 12 | 5 | 37 | 10 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 417332 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.034** | ug/L | 0.003 | 7 | 62 | 538 | 6 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 662956 | 1 | Standard |
| ⌊ | **Pb** | **208** | **11.947** | ug/L | 0.077 | 0 | 75 | 532912 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-MS2**
**Sample Dil Factor: 100**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:40:11**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | | **13** | | ug/L | | | 38749 | 39206 | 1 | Standard |
| | **Cl** | | **37** | | ug/L | | | 4373298 | 4159145 | 1 | Standard |
| > | **Sc** | | **45** | | ug/L | | | 544532 | 532512 | 2 | Standard |
| | **Cr** | | **52** | **12.346** | ug/L | 0.273 | 2 | 15553 | 250877 | 2 | Standard |
| | **Cr** | | **53** | **12.477** | ug/L | 0.306 | 2 | 269 | 28224 | 0 | Standard |
| > | **Ge** | | **72** | | ug/L | | | 26846 | 26192 | 3 | KED |
| | **Cu** | | **63** | **147.418** | ug/L | 3.298 | 2 | 27 | 436861 | 3 | KED |
| | **Cu** | STL | **65** | **147.599** | ug/L | 1.055 | 0 | 13 | 218801 | 4 | KED |
| | **Zn** | | **66** | **75.691** | ug/L | 0.641 | 0 | 22 | 30244 | 4 | KED |
| | **Zn** | | **67** | **67.692** | ug/L | 0.763 | 1 | 3 | 4578 | 2 | KED |
| | **As** | | **75** | **7.086** | ug/L | 0.043 | 0 | 6 | 1437 | 3 | KED |
| | **Y** | | **89** | | ug/L | | | 285357 | 308191 | 3 | Standard |
| | **Kr** | | **83** | | ug/L | | | 53 | 43 | 12 | Standard |
| > | **In-1** | | **115** | | ug/L | | | 7783 | 7669 | 0 | KED |
| | **Cd** | | **111** | **5.352** | ug/L | 0.085 | 1 | 3 | 1286 | 1 | KED |
| | **Cd** | | **114** | **5.364** | ug/L | 0.158 | 2 | 5 | 3134 | 3 | KED |
| > | **In** | | **115** | | ug/L | | | 420460 | 409085 | 1 | Standard |
| | **Ag** | | **107** | **4.642** | ug/L | 0.090 | 1 | 62 | 64122 | 3 | Standard |
| > | **Tb** | | **159** | | ug/L | | | 655044 | 660032 | 0 | Standard |
| | **Pb** | | **208** | **20.323** | ug/L | 0.216 | 1 | 75 | 902548 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0224-MSD2**
**Sample Dil Factor: 100**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:44:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 40441 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4154293 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 532392 | 1 | Standard |
| | **Cr** | **52** | **12.089** | ug/L | 0.164 | 1 | 15553 | 245978 | 1 | Standard |
| | **Cr** | **53** | **11.987** | ug/L | 0.180 | 1 | 269 | 27130 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26927 | 1 | KED |
| | **Cu** | **63** | **193.480** | ug/L | 1.283 | 0 | 27 | 589500 | 1 | KED |
| | **Cu** STL | **65** | **190.848** | ug/L | 3.571 | 1 | 13 | 290760 | 1 | KED |
| | **Zn** | **66** | **81.654** | ug/L | 2.093 | 2 | 22 | 33524 | 0 | KED |
| | **Zn** | **67** | **75.581** | ug/L | 1.074 | 1 | 3 | 5254 | 0 | KED |
| | **As** | **75** | **7.058** | ug/L | 0.061 | 0 | 6 | 1471 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 304519 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 59 | 23 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7192 | 0 | KED |
| | **Cd** | **111** | **5.338** | ug/L | 0.010 | 0 | 3 | 1203 | 0 | KED |
| | **Cd** | **114** | **5.468** | ug/L | 0.079 | 1 | 5 | 2995 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 404357 | 1 | Standard |
| | **Ag** | **107** | **5.268** | ug/L | 0.109 | 2 | 62 | 71900 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 651761 | 1 | Standard |
| | **Pb** | **208** | **44.437** | ug/L | 1.189 | 2 | 75 | 1948094 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0329-07**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:50:11**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 52306 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4081899 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 548187 | 5 | Standard |
| \| | **Cr** | **52** | **7.168** | ug/L | 0.230 | 3 | 15553 | 156410 | 3 | Standard |
| ⌊ | **Cr** | **53** | **7.206** | ug/L | 0.184 | 2 | 269 | 16891 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25393 | 2 | KED |
| \| | **Cu** | **63** | **11.641** | ug/L | 0.408 | 3 | 27 | 33458 | 1 | KED |
| \| | **Cu** | **65** | **11.573** | ug/L | 0.095 | 0 | 13 | 16642 | 1 | KED |
| \| | **Zn** | **66** | **28.810** | ug/L | 0.627 | 2 | 22 | 11169 | 1 | KED |
| \| | **Zn** | **67** | **27.355** | ug/L | 1.159 | 4 | 3 | 1795 | 3 | KED |
| ⌊ | **As** | **75** | **3.151** | ug/L | 0.108 | 3 | 6 | 623 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 347765 | 6 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 85 | 5 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 6922 | 1 | KED |
| \| | **Cd** | **111** | **0.163** | ug/L | 0.028 | 16 | 3 | 38 | 14 | KED |
| ⌊ | **Cd** | **114** | **0.143** | ug/L | 0.012 | 8 | 5 | 80 | 7 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 388044 | 6 | Standard |
| ⌊ | **Ag** | **107** | **0.102** | ug/L | 0.004 | 4 | 62 | 1388 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 626347 | 5 | Standard |
| ⌊ | **Pb** | **208** | **9.590** | ug/L | 0.373 | 3 | 75 | 403678 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-DUP2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:54:32**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56654 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4140206 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 565534 | 3 | Standard |
| \| | **Cr** | **52** | **6.880** | ug/L | 0.101 | 1 | 15553 | 155647 | 3 | Standard |
| ⌊ | **Cr** | **53** | **6.903** | ug/L | 0.140 | 2 | 269 | 16715 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26727 | 2 | KED |
| \| | **Cu** | **63** | **11.309** | ug/L | 0.277 | 2 | 27 | 34218 | 1 | KED |
| \| | **Cu** | **65** | **11.224** | ug/L | 0.162 | 1 | 13 | 16985 | 1 | KED |
| \| | **Zn** | **66** | **29.153** | ug/L | 0.564 | 1 | 22 | 11898 | 3 | KED |
| \| | **Zn** | **67** | **27.713** | ug/L | 1.286 | 4 | 3 | 1913 | 2 | KED |
| ⌊ | **As** | **75** | **3.031** | ug/L | 0.089 | 2 | 6 | 630 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 372250 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 82 | 4 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7042 | 1 | KED |
| \| | **Cd** | **111** | **0.134** | ug/L | 0.025 | 18 | 3 | 32 | 16 | KED |
| ⌊ | **Cd** | **114** | **0.119** | ug/L | 0.021 | 17 | 5 | 68 | 15 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 402781 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.127** | ug/L | 0.004 | 3 | 62 | 1788 | 5 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 655706 | 4 | Standard |
| ⌊ | **Pb** | **208** | **9.556** | ug/L | 0.304 | 3 | 75 | 421264 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-MS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 21:58:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 49665 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4147913 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 566335 | 2 | Standard |
| | **Cr** | **52** | **17.391** | ug/L | 0.146 | 0 | 15553 | 369320 | 2 | Standard |
| | **Cr** | **53** | **17.603** | ug/L | 0.033 | 0 | 269 | 42253 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26383 | 1 | KED |
| | **Cu** | **63** | **22.722** | ug/L | 0.522 | 2 | 27 | 67847 | 1 | KED |
| | **Cu** | **65** | **21.723** | ug/L | 0.080 | 0 | 13 | 32443 | 1 | KED |
| | **Zn** | **66** | **64.950** | ug/L | 1.280 | 1 | 22 | 26143 | 3 | KED |
| | **Zn** | **67** | **60.522** | ug/L | 1.350 | 2 | 3 | 4124 | 2 | KED |
| | **As** | **75** | **13.473** | ug/L | 0.228 | 1 | 6 | 2746 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 376628 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 106 | 14 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7429 | 1 | KED |
| | **Cd** | **111** | **10.553** | ug/L | 0.254 | 2 | 3 | 2453 | 0 | KED |
| | **Cd** | **114** | **10.505** | ug/L | 0.509 | 4 | 5 | 5936 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 406320 | 1 | Standard |
| | **Ag** | **107** | **6.759** | ug/L | 0.286 | 4 | 62 | 92685 | 4 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 649924 | 2 | Standard |
| | **Pb** | **208** | **21.579** | ug/L | 0.231 | 1 | 75 | 943455 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-MSD2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:03:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 51634 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4163448 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 579776 | 2 | Standard |
| | **Cr** | **52** | **16.288** | ug/L | 0.447 | 2 | 15553 | 355071 | 2 | Standard |
| | **Cr** | **53** | **16.376** | ug/L | 0.205 | 1 | 269 | 40264 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26560 | 1 | KED |
| | **Cu** | **63** | **21.273** | ug/L | 0.148 | 0 | 27 | 63961 | 1 | KED |
| | **Cu** | **65** | **21.046** | ug/L | 0.238 | 1 | 13 | 31646 | 2 | KED |
| | **Zn** | **66** | **61.193** | ug/L | 0.490 | 0 | 22 | 24793 | 0 | KED |
| | **Zn** | **67** | **57.157** | ug/L | 3.039 | 5 | 3 | 3919 | 4 | KED |
| | **As** | **75** | **13.207** | ug/L | 0.243 | 1 | 6 | 2710 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 378405 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 97 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7502 | 2 | KED |
| | **Cd** | **111** | **10.307** | ug/L | 0.486 | 4 | 3 | 2419 | 3 | KED |
| | **Cd** | **114** | **10.440** | ug/L | 0.165 | 1 | 5 | 5959 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 408727 | 0 | Standard |
| | **Ag** | **107** | **6.457** | ug/L | 0.171 | 2 | 62 | 89082 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 661492 | 3 | Standard |
| | **Pb** | **208** | **17.934** | ug/L | 0.192 | 1 | 75 | 798005 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BKL0608-PS2**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:07:28**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 54508 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4094284 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 553666 | 1 | Standard |
| \| | **Cr** | **52** | **29.162** | ug/L | 0.821 | 2 | 15553 | 594670 | 2 | Standard |
| ⌊ | **Cr** | **53** | **28.887** | ug/L | 0.221 | 0 | 269 | 67610 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25823 | 1 | KED |
| \| | **Cu** | **63** | **36.999** | ug/L | 0.476 | 1 | 27 | 108123 | 0 | KED |
| \| | **Cu** | **65** | **36.150** | ug/L | 0.384 | 1 | 13 | 52839 | 2 | KED |
| \| | **Zn** | **66** | **108.472** | ug/L | 1.184 | 1 | 22 | 42713 | 0 | KED |
| \| | **Zn** | **67** | **99.032** | ug/L | 3.509 | 3 | 3 | 6602 | 3 | KED |
| ⌊ | **As** | **75** | **27.259** | ug/L | 0.296 | 1 | 6 | 5432 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 352534 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 78 | 23 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7346 | 2 | KED |
| \| | **Cd** | **111** | **24.525** | ug/L | 0.598 | 2 | 3 | 5633 | 0 | KED |
| ⌊ | **Cd** | **114** | **24.686** | ug/L | 0.837 | 3 | 5 | 13786 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 388260 | 1 | Standard |
| ⌊ | **Ag** | **107** | **24.730** | ug/L | 0.294 | 1 | 62 | 323895 | 0 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 639770 | 1 | Standard |
| ⌊ | **Pb** | **208** | **34.257** | ug/L | 0.350 | 1 | 75 | 1474423 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL5**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:12:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36839 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4095249 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 530483 | 1 | Standard |
| \| | **Cr** | **52** | **-0.007** | ug/L | 0.027 | 407 | 15553 | 15023 | 2 | Standard |
| ⌊ | **Cr** | **53** | **-0.049** | ug/L | 0.007 | 14 | 269 | 153 | 11 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26635 | 0 | KED |
| \| | **Cu** | **63** | **0.001** | ug/L | 0.003 | 577 | 27 | 29 | 29 | KED |
| \| | **Cu** | **65** | **0.003** | ug/L | 0.007 | 192 | 13 | 19 | 51 | KED |
| \| | **Zn** | **66** | **0.011** | ug/L | 0.013 | 111 | 22 | 26 | 18 | KED |
| \| | **Zn** | **67** | **0.038** | ug/L | 0.043 | 114 | 3 | 6 | 45 | KED |
| ⌊ | **As** | **75** | **0.006** | ug/L | 0.003 | 58 | 6 | 7 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 270822 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 52 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7660 | 2 | KED |
| \| | **Cd** | **111** | **0.000** | ug/L | 0.006 | 4051 | 3 | 3 | 41 | KED |
| ⌊ | **Cd** | **114** | **-0.000** | ug/L | 0.010 | 8951 | 5 | 5 | 104 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 408643 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 45 | 62 | 89 | 13 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 653541 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.003** | ug/L | 0.001 | 24 | 75 | 186 | 13 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV7**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:16:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 37304 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4355176 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 514960 | 1 | Standard |
| | **Cr** | **52** | **49.230** | ug/L | 0.760 | 1 | 15553 | 923596 | 0 | Standard |
| | **Cr** | **53** | **48.806** | ug/L | 0.881 | 1 | 269 | 106065 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 27456 | 2 | KED |
| | **Cu** | **63** | **49.496** | ug/L | 1.074 | 2 | 27 | 153765 | 1 | KED |
| | **Cu** | **65** | **49.781** | ug/L | 0.719 | 1 | 13 | 77339 | 0 | KED |
| | **Zn** | **66** | **50.474** | ug/L | 2.107 | 4 | 22 | 21133 | 2 | KED |
| | **Zn** | **67** | **50.097** | ug/L | 0.545 | 1 | 3 | 3553 | 2 | KED |
| | **As** | **75** | **49.587** | ug/L | 1.253 | 2 | 6 | 10498 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 271859 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 67 | 23 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7770 | 1 | KED |
| | **Cd** | **111** | **49.405** | ug/L | 1.261 | 2 | 3 | 12004 | 2 | KED |
| | **Cd** | **114** | **48.909** | ug/L | 0.552 | 1 | 5 | 28897 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 400172 | 0 | Standard |
| | **Ag** | **107** | **49.600** | ug/L | 2.125 | 4 | 62 | 669463 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 653597 | 1 | Standard |
| | **Pb** | **208** | **49.392** | ug/L | 0.668 | 1 | 75 | 2171614 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB7**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:23:40**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 37227 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4064930 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 517403 | 1 | Standard |
| \| | **Cr** | **52** | **-0.013** | ug/L | 0.012 | 91 | 15553 | 14542 | 0 | Standard |
| ⌊ | **Cr** | **53** | **-0.040** | ug/L | 0.006 | 15 | 269 | 170 | 7 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26453 | 1 | KED |
| \| | **Cu** | **63** | **-0.001** | ug/L | 0.003 | 224 | 27 | 24 | 31 | KED |
| \| | **Cu** | **65** | **0.001** | ug/L | 0.004 | 843 | 13 | 14 | 45 | KED |
| \| | **Zn** | **66** | **-0.018** | ug/L | 0.005 | 26 | 22 | 14 | 15 | KED |
| \| | **Zn** | **67** | **-0.009** | ug/L | 0.031 | 352 | 3 | 3 | 69 | KED |
| ⌊ | **As** | **75** | **0.011** | ug/L | 0.014 | 125 | 6 | 9 | 32 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 268155 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 53 | 8 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7549 | 1 | KED |
| \| | **Cd** | **111** | **0.002** | ug/L | 0.007 | 394 | 3 | 3 | 43 | KED |
| ⌊ | **Cd** | **114** | **-0.002** | ug/L | 0.005 | 254 | 5 | 4 | 66 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 405009 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.003** | ug/L | 0.001 | 44 | 62 | 97 | 16 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 648893 | 0 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 7 | 75 | 132 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-03**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:28:01**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 52486 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4185966 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 595746 | 1 | Standard |
| \| | **Cr** | **52** | **6.949** | ug/L | 0.202 | 2 | 15553 | 165404 | 1 | Standard |
| ⌊ | **Cr** | **53** | **6.894** | ug/L | 0.063 | 0 | 269 | 17585 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26789 | 0 | KED |
| \| | **Cu** | **63** | **16.441** | ug/L | 0.185 | 1 | 27 | 49865 | 1 | KED |
| \| | **Cu** | **65** | **16.110** | ug/L | 0.467 | 2 | 13 | 24435 | 3 | KED |
| \| | **Zn** | **66** | **34.697** | ug/L | 0.753 | 2 | 22 | 14188 | 1 | KED |
| \| | **Zn** | **67** | **34.001** | ug/L | 0.357 | 1 | 3 | 2354 | 1 | KED |
| ⌊ | **As** | **75** | **3.372** | ug/L | 0.023 | 0 | 6 | 703 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 395348 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 105 | 7 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7484 | 0 | KED |
| \| | **Cd** | **111** | **0.159** | ug/L | 0.019 | 12 | 3 | 40 | 11 | KED |
| ⌊ | **Cd** | **114** | **0.158** | ug/L | 0.020 | 12 | 5 | 95 | 12 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 408149 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.155** | ug/L | 0.006 | 4 | 62 | 2197 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 664935 | 1 | Standard |
| ⌊ | **Pb** | **208** | **12.429** | ug/L | 0.419 | 3 | 75 | 555848 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-04**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:32:22**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 52091 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4125301 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 579430 | 2 | Standard |
| \| | **Cr** | **52** | **6.637** | ug/L | 0.184 | 2 | 15553 | 154367 | 0 | Standard |
| ⌊ | **Cr** | **53** | **6.679** | ug/L | 0.086 | 1 | 269 | 16579 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27136 | 1 | KED |
| \| | **Cu** | **63** | **14.598** | ug/L | 0.320 | 2 | 27 | 44839 | 0 | KED |
| \| | **Cu** | **65** | **14.559** | ug/L | 0.492 | 3 | 13 | 22360 | 1 | KED |
| \| | **Zn** | **66** | **29.722** | ug/L | 0.436 | 1 | 22 | 12315 | 2 | KED |
| \| | **Zn** | **67** | **29.111** | ug/L | 0.311 | 1 | 3 | 2042 | 2 | KED |
| ⌊ | **As** | **75** | **2.767** | ug/L | 0.039 | 1 | 6 | 585 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 387793 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 89 | 3 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7550 | 2 | KED |
| \| | **Cd** | **111** | **0.119** | ug/L | 0.051 | 42 | 3 | 31 | 37 | KED |
| ⌊ | **Cd** | **114** | **0.116** | ug/L | 0.015 | 13 | 5 | 72 | 14 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 403752 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.119** | ug/L | 0.005 | 4 | 62 | 1681 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 657238 | 1 | Standard |
| ⌊ | **Pb** | **208** | **11.588** | ug/L | 0.119 | 1 | 75 | 512408 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-05**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 22:36:43**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 54529 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4125689 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 619919 | 2 | Standard |
| \| | **Cr** | **52** | **4.836** | ug/L | 0.088 | 1 | 15553 | 125184 | 1 | Standard |
| ⌊ | **Cr** | **53** | **4.812** | ug/L | 0.141 | 2 | 269 | 12864 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27151 | 0 | KED |
| \| | **Cu** | **63** | **11.973** | ug/L | 0.117 | 0 | 27 | 36813 | 1 | KED |
| \| | **Cu** | **65** | **11.559** | ug/L | 0.283 | 2 | 13 | 17771 | 2 | KED |
| \| | **Zn** | **66** | **23.455** | ug/L | 0.500 | 2 | 22 | 9728 | 1 | KED |
| \| | **Zn** | **67** | **22.482** | ug/L | 0.560 | 2 | 3 | 1579 | 2 | KED |
| ⌊ | **As** | **75** | **2.667** | ug/L | 0.072 | 2 | 6 | 565 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 424982 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 103 | 10 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7880 | 2 | KED |
| \| | **Cd** | **111** | **0.095** | ug/L | 0.042 | 43 | 3 | 26 | 37 | KED |
| ⌊ | **Cd** | **114** | **0.106** | ug/L | 0.020 | 18 | 5 | 69 | 15 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 402296 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.081** | ug/L | 0.001 | 1 | 62 | 1158 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 667523 | 2 | Standard |
| ⌊ | **Pb** | **208** | **6.754** | ug/L | 0.112 | 1 | 75 | 303322 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-06**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 22:41:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56804 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4059046 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 588587 | 1 | Standard |
| | **Cr** | **52** | **6.401** | ug/L | 0.122 | 1 | 15553 | 151889 | 0 | Standard |
| | **Cr** | **53** | **6.278** | ug/L | 0.090 | 1 | 269 | 15851 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26556 | 1 | KED |
| | **Cu** | **63** | **11.701** | ug/L | 0.125 | 1 | 27 | 35186 | 1 | KED |
| | **Cu** | **65** | **11.603** | ug/L | 0.232 | 2 | 13 | 17451 | 3 | KED |
| | **Zn** | **66** | **25.377** | ug/L | 0.432 | 1 | 22 | 10295 | 2 | KED |
| | **Zn** | **67** | **24.536** | ug/L | 1.090 | 4 | 3 | 1684 | 3 | KED |
| | **As** | **75** | **2.348** | ug/L | 0.044 | 1 | 6 | 487 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 387027 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 100 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 6923 | 3 | KED |
| | **Cd** | **111** | **0.102** | ug/L | 0.033 | 32 | 3 | 25 | 26 | KED |
| | **Cd** | **114** | **0.102** | ug/L | 0.015 | 15 | 5 | 58 | 14 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 409233 | 1 | Standard |
| | **Ag** | **107** | **0.074** | ug/L | 0.003 | 3 | 62 | 1077 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 664330 | 1 | Standard |
| | **Pb** | **208** | **6.613** | ug/L | 0.085 | 1 | 75 | 295621 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-07**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 22:45:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 60680 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4035321 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 579426 | 4 | Standard |
| | **Cr** | **52** | **6.015** | ug/L | 0.158 | 2 | 15553 | 141424 | 3 | Standard |
| | **Cr** | **53** | **5.985** | ug/L | 0.047 | 0 | 269 | 14885 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 27245 | 0 | KED |
| | **Cu** | **63** | **11.035** | ug/L | 0.049 | 0 | 27 | 34044 | 0 | KED |
| | **Cu** | **65** | **10.972** | ug/L | 0.277 | 2 | 13 | 16927 | 1 | KED |
| | **Zn** | **66** | **23.826** | ug/L | 0.801 | 3 | 22 | 9915 | 2 | KED |
| | **Zn** | **67** | **23.410** | ug/L | 0.640 | 2 | 3 | 1649 | 2 | KED |
| | **As** | **75** | **2.593** | ug/L | 0.137 | 5 | 6 | 551 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 379005 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 79 | 22 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7739 | 3 | KED |
| | **Cd** | **111** | **0.071** | ug/L | 0.002 | 3 | 3 | 20 | 2 | KED |
| | **Cd** | **114** | **0.099** | ug/L | 0.034 | 34 | 5 | 63 | 29 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 398872 | 2 | Standard |
| | **Ag** | **107** | **0.075** | ug/L | 0.004 | 4 | 62 | 1064 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 654145 | 4 | Standard |
| | **Pb** | **208** | **6.833** | ug/L | 0.156 | 2 | 75 | 300594 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0383-08**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 22:49:45**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56095 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4039382 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 593524 | 3 | Standard |
| | **Cr** | **52** | **6.557** | ug/L | 0.201 | 3 | 15553 | 156402 | 2 | Standard |
| | **Cr** | **53** | **6.721** | ug/L | 0.202 | 3 | 269 | 17077 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26847 | 2 | KED |
| | **Cu** | **63** | **12.300** | ug/L | 0.048 | 0 | 27 | 37391 | 2 | KED |
| | **Cu** | **65** | **12.453** | ug/L | 0.258 | 2 | 13 | 18928 | 1 | KED |
| | **Zn** | **66** | **25.064** | ug/L | 0.397 | 1 | 22 | 10276 | 1 | KED |
| | **Zn** | **67** | **23.814** | ug/L | 0.927 | 3 | 3 | 1653 | 3 | KED |
| | **As** | **75** | **2.853** | ug/L | 0.083 | 2 | 6 | 596 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 390968 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 91 | 7 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7682 | 3 | KED |
| | **Cd** | **111** | **0.083** | ug/L | 0.010 | 11 | 3 | 23 | 10 | KED |
| | **Cd** | **114** | **0.097** | ug/L | 0.002 | 2 | 5 | 62 | 4 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 407703 | 3 | Standard |
| | **Ag** | **107** | **0.059** | ug/L | 0.005 | 8 | 62 | 874 | 7 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 654443 | 3 | Standard |
| | **Pb** | **208** | **6.672** | ug/L | 0.168 | 2 | 75 | 293704 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-01**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 22:54:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 54389 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4146586 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 584545 | 0 | Standard |
| \| | **Cr** | **52** | **8.267** | ug/L | 0.250 | 3 | 15553 | 189993 | 3 | Standard |
| ⌊ | **Cr** | **53** | **8.266** | ug/L | 0.050 | 0 | 269 | 20633 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26591 | 1 | KED |
| \| | **Cu** | **63** | **14.592** | ug/L | 0.282 | 1 | 27 | 43935 | 2 | KED |
| \| | **Cu** | **65** | **14.409** | ug/L | 0.106 | 0 | 13 | 21693 | 0 | KED |
| \| | **Zn** | **66** | **30.495** | ug/L | 0.469 | 1 | 22 | 12380 | 1 | KED |
| \| | **Zn** | **67** | **30.572** | ug/L | 0.175 | 0 | 3 | 2101 | 1 | KED |
| ⌊ | **As** | **75** | **3.567** | ug/L | 0.149 | 4 | 6 | 737 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 382481 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 114 | 7 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7481 | 2 | KED |
| \| | **Cd** | **111** | **0.242** | ug/L | 0.048 | 19 | 3 | 60 | 19 | KED |
| ⌊ | **Cd** | **114** | **0.235** | ug/L | 0.044 | 18 | 5 | 139 | 16 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 406173 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.238** | ug/L | 0.010 | 4 | 62 | 3321 | 5 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 653525 | 2 | Standard |
| ⌊ | **Pb** | **208** | **11.402** | ug/L | 0.210 | 1 | 75 | 501224 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-02**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 22:58:27**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56879 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4074313 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 602582 | 1 | Standard |
| \| | **Cr** | **52** | **7.837** | ug/L | 0.180 | 2 | 15553 | 186517 | 1 | Standard |
| ⌊ | **Cr** | **53** | **7.826** | ug/L | 0.153 | 1 | 269 | 20149 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27005 | 2 | KED |
| \| | **Cu** | **63** | **15.025** | ug/L | 0.291 | 1 | 27 | 45927 | 0 | KED |
| \| | **Cu** | **65** | **14.810** | ug/L | 0.190 | 1 | 13 | 22642 | 1 | KED |
| \| | **Zn** | **66** | **29.168** | ug/L | 0.059 | 0 | 22 | 12028 | 2 | KED |
| \| | **Zn** | **67** | **27.448** | ug/L | 1.384 | 5 | 3 | 1915 | 3 | KED |
| ⌊ | **As** | **75** | **3.653** | ug/L | 0.051 | 1 | 6 | 767 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 437650 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 102 | 3 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7893 | 2 | KED |
| \| | **Cd** | **111** | **0.237** | ug/L | 0.035 | 14 | 3 | 62 | 15 | KED |
| ⌊ | **Cd** | **114** | **0.223** | ug/L | 0.020 | 8 | 5 | 139 | 6 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 410369 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.142** | ug/L | 0.004 | 2 | 62 | 2027 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 666554 | 0 | Standard |
| ⌊ | **Pb** | **208** | **6.842** | ug/L | 0.107 | 1 | 75 | 306881 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-03**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:02:47**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56229 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4006597 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 580872 | 3 | Standard |
| \| | **Cr** | **52** | **7.519** | ug/L | 0.129 | 1 | 15553 | 173192 | 3 | Standard |
| ⌊ | **Cr** | **53** | **7.432** | ug/L | 0.183 | 2 | 269 | 18457 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27450 | 1 | KED |
| \| | **Cu** | **63** | **16.587** | ug/L | 0.225 | 1 | 27 | 51545 | 1 | KED |
| \| | **Cu** | **65** | **16.180** | ug/L | 0.321 | 1 | 13 | 25142 | 1 | KED |
| \| | **Zn** | **66** | **33.754** | ug/L | 0.623 | 1 | 22 | 14143 | 1 | KED |
| \| | **Zn** | **67** | **33.382** | ug/L | 0.296 | 0 | 3 | 2368 | 0 | KED |
| ⌊ | **As** | **75** | **3.150** | ug/L | 0.107 | 3 | 6 | 673 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 380605 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 103 | 10 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7655 | 1 | KED |
| \| | **Cd** | **111** | **0.155** | ug/L | 0.015 | 9 | 3 | 40 | 9 | KED |
| ⌊ | **Cd** | **114** | **0.141** | ug/L | 0.006 | 4 | 5 | 87 | 4 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 404767 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.130** | ug/L | 0.003 | 2 | 62 | 1841 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 656289 | 2 | Standard |
| ⌊ | **Pb** | **208** | **14.388** | ug/L | 0.242 | 1 | 75 | 635403 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL6**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:07:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36339 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3831932 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 495567 | 3 | Standard |
| \| | **Cr** | **52** | **-0.007** | ug/L | 0.014 | 198 | 15553 | 14021 | 2 | Standard |
| ⌊ | **Cr** | **53** | **-0.045** | ug/L | 0.008 | 17 | 269 | 150 | 8 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25394 | 4 | KED |
| \| | **Cu** | **63** | **0.003** | ug/L | 0.002 | 59 | 27 | 36 | 13 | KED |
| \| | **Cu** | **65** | **0.009** | ug/L | 0.003 | 29 | 13 | 26 | 12 | KED |
| \| | **Zn** | **66** | **0.006** | ug/L | 0.027 | 475 | 22 | 23 | 48 | KED |
| \| | **Zn** | **67** | **0.068** | ug/L | 0.113 | 167 | 3 | 8 | 96 | KED |
| ⌊ | **As** | **75** | **-0.005** | ug/L | 0.005 | 112 | 6 | 5 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 265361 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 69 | 10 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7707 | 1 | KED |
| \| | **Cd** | **111** | **0.000** | ug/L | 0.002 | 1559 | 3 | 3 | 15 | KED |
| ⌊ | **Cd** | **114** | **-0.003** | ug/L | 0.003 | 95 | 5 | 3 | 48 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 390605 | 3 | Standard |
| ⌊ | **Ag** | **107** | **-0.000** | ug/L | 0.002 | 1056 | 62 | 56 | 36 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 635599 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 3 | 75 | 134 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV8**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:11:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 35526 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4224985 | 5 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 479870 | 9 | Standard |
| | **Cr** | **52** | **50.916** | ug/L | 2.183 | 4 | 15553 | 887365 | 5 | Standard |
| | **Cr** | **53** | **50.089** | ug/L | 1.999 | 3 | 269 | 101173 | 6 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26435 | 2 | KED |
| | **Cu** | **63** | **50.109** | ug/L | 0.178 | 0 | 27 | 149908 | 2 | KED |
| | **Cu** | **65** | **49.720** | ug/L | 0.803 | 1 | 13 | 74410 | 4 | KED |
| | **Zn** | **66** | **52.399** | ug/L | 0.353 | 0 | 22 | 21137 | 3 | KED |
| | **Zn** | **67** | **51.286** | ug/L | 0.590 | 1 | 3 | 3502 | 3 | KED |
| | **As** | **75** | **50.454** | ug/L | 0.887 | 1 | 6 | 10287 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 248763 | 11 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 62 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7471 | 3 | KED |
| | **Cd** | **111** | **50.358** | ug/L | 1.400 | 2 | 3 | 11758 | 1 | KED |
| | **Cd** | **114** | **51.071** | ug/L | 1.096 | 2 | 5 | 29000 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 379388 | 10 | Standard |
| | **Ag** | **107** | **50.865** | ug/L | 2.691 | 5 | 62 | 648784 | 7 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 608103 | 11 | Standard |
| | **Pb** | **208** | **52.527** | ug/L | 4.446 | 8 | 75 | 2135289 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB8**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:18:35**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36729 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3919579 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 509496 | 1 | Standard |
| \| | **Cr** | **52** | **0.002** | ug/L | 0.030 | 1597 | 15553 | 14581 | 2 | Standard |
| ⌊ | **Cr** | **53** | **-0.046** | ug/L | 0.003 | 6 | 269 | 153 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26377 | 1 | KED |
| \| | **Cu** | **63** | **0.003** | ug/L | 0.002 | 48 | 27 | 36 | 10 | KED |
| \| | **Cu** | **65** | **0.005** | ug/L | 0.002 | 30 | 13 | 21 | 10 | KED |
| \| | **Zn** | **66** | **-0.009** | ug/L | 0.009 | 108 | 22 | 18 | 21 | KED |
| \| | **Zn** | **67** | **0.038** | ug/L | 0.015 | 40 | 3 | 6 | 17 | KED |
| ⌊ | **As** | **75** | **0.007** | ug/L | 0.006 | 84 | 6 | 8 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 255912 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 54 | 10 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7324 | 2 | KED |
| \| | **Cd** | **111** | **0.005** | ug/L | 0.005 | 96 | 3 | 4 | 24 | KED |
| ⌊ | **Cd** | **114** | **-0.005** | ug/L | 0.008 | 166 | 5 | 2 | 176 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 402465 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.000 | 19 | 62 | 80 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 630364 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 12 | 75 | 128 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0156-BLK1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:22:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 49652 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4047237 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 531657 | 0 | Standard |
| \| | **Cr** | **52** | **0.045** | ug/L | 0.024 | 54 | 15553 | 16043 | 3 | Standard |
| ⌊ | **Cr** | **53** | **-0.035** | ug/L | 0.003 | 8 | 269 | 184 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26760 | 2 | KED |
| \| | **Cu** | **63** | **0.003** | ug/L | 0.002 | 51 | 27 | 37 | 12 | KED |
| \| | **Cu** | **65** | **0.004** | ug/L | 0.004 | 86 | 13 | 20 | 28 | KED |
| \| | **Zn** | **66** | **0.076** | ug/L | 0.046 | 60 | 22 | 53 | 37 | KED |
| \| | **Zn** | **67** | **0.076** | ug/L | 0.110 | 144 | 3 | 8 | 81 | KED |
| ⌊ | **As** | **75** | **-0.005** | ug/L | 0.011 | 236 | 6 | 5 | 40 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 283575 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 55 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7670 | 3 | KED |
| \| | **Cd** | **111** | **0.010** | ug/L | 0.015 | 153 | 3 | 5 | 60 | KED |
| ⌊ | **Cd** | **114** | **-0.003** | ug/L | 0.003 | 98 | 5 | 3 | 50 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 407471 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 38 | 62 | 82 | 11 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 655656 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.005** | ug/L | 0.001 | 10 | 75 | 311 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0156-BS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:27:18**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 43263 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3942299 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 512874 | 2 | Standard |
| \| | **Cr** | **52** | **25.967** | ug/L | 0.150 | 0 | 15553 | 492182 | 2 | Standard |
| ⌊ | **Cr** | **53** | **25.451** | ug/L | 0.393 | 1 | 269 | 55211 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26880 | 1 | KED |
| \| | **Cu** | **63** | **27.556** | ug/L | 0.565 | 2 | 27 | 83818 | 0 | KED |
| \| | **Cu** | **65** | **27.604** | ug/L | 0.686 | 2 | 13 | 41992 | 1 | KED |
| \| | **Zn** | **66** | **83.947** | ug/L | 1.221 | 1 | 22 | 34422 | 3 | KED |
| \| | **Zn** | **67** | **78.106** | ug/L | 0.884 | 1 | 3 | 5421 | 1 | KED |
| ⌊ | **As** | **75** | **25.722** | ug/L | 0.300 | 1 | 6 | 5336 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 267401 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 59 | 6 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7470 | 4 | KED |
| \| | **Cd** | **111** | **26.312** | ug/L | 0.414 | 1 | 3 | 6145 | 3 | KED |
| ⌊ | **Cd** | **114** | **26.798** | ug/L | 0.740 | 2 | 5 | 15212 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 398732 | 4 | Standard |
| ⌊ | **Ag** | **107** | **26.234** | ug/L | 0.772 | 2 | 62 | 352580 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 628792 | 2 | Standard |
| ⌊ | **Pb** | **208** | **27.408** | ug/L | 0.137 | 0 | 75 | 1159486 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-04**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:31:38**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 53466 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4025362 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 585019 | 3 | Standard |
| | **Cr** | **52** | **6.321** | ug/L | 0.038 | 0 | 15553 | 149297 | 3 | Standard |
| | **Cr** | **53** | **6.320** | ug/L | 0.082 | 1 | 269 | 15858 | 4 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26891 | 0 | KED |
| | **Cu** | **63** | **14.874** | ug/L | 0.275 | 1 | 27 | 45285 | 2 | KED |
| | **Cu** | **65** | **14.779** | ug/L | 0.577 | 3 | 13 | 22500 | 3 | KED |
| | **Zn** | **66** | **31.637** | ug/L | 0.079 | 0 | 22 | 12989 | 0 | KED |
| | **Zn** | **67** | **30.864** | ug/L | 0.846 | 2 | 3 | 2145 | 2 | KED |
| | **As** | **75** | **3.145** | ug/L | 0.038 | 1 | 6 | 658 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 379820 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 95 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7578 | 0 | KED |
| | **Cd** | **111** | **0.137** | ug/L | 0.011 | 7 | 3 | 35 | 6 | KED |
| | **Cd** | **114** | **0.154** | ug/L | 0.004 | 2 | 5 | 94 | 2 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 400979 | 4 | Standard |
| | **Ag** | **107** | **0.114** | ug/L | 0.006 | 5 | 62 | 1599 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 650205 | 1 | Standard |
| | **Pb** | **208** | **13.279** | ug/L | 0.197 | 1 | 75 | 581033 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-05**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 23:35:59**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 56806 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4115784 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 620696 | 4 | Standard |
| \| | **Cr** | **52** | **6.940** | ug/L | 0.137 | 1 | 15553 | 172114 | 2 | Standard |
| ⌊ | **Cr** | **53** | **6.857** | ug/L | 0.194 | 2 | 269 | 18217 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26952 | 2 | KED |
| \| | **Cu** | **63** | **16.011** | ug/L | 0.051 | 0 | 27 | 48858 | 3 | KED |
| \| | **Cu** | **65** | **16.017** | ug/L | 0.297 | 1 | 13 | 24438 | 2 | KED |
| \| | **Zn** | **66** | **31.845** | ug/L | 0.188 | 0 | 22 | 13103 | 2 | KED |
| \| | **Zn** | **67** | **30.898** | ug/L | 1.174 | 3 | 3 | 2154 | 6 | KED |
| ⌊ | **As** | **75** | **2.995** | ug/L | 0.067 | 2 | 6 | 628 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 399458 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 83 | 5 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7773 | 2 | KED |
| \| | **Cd** | **111** | **0.128** | ug/L | 0.009 | 7 | 3 | 34 | 7 | KED |
| ⌊ | **Cd** | **114** | **0.121** | ug/L | 0.016 | 13 | 5 | 77 | 10 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 408767 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.116** | ug/L | 0.007 | 6 | 62 | 1661 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 664814 | 0 | Standard |
| ⌊ | **Pb** | **208** | **10.509** | ug/L | 0.145 | 1 | 75 | 470122 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-06**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:40:20**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 59828 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4038712 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 598763 | 1 | Standard |
| \| | **Cr** | **52** | **7.257** | ug/L | 0.101 | 1 | 15553 | 172897 | 1 | Standard |
| ⌊ | **Cr** | **53** | **7.051** | ug/L | 0.129 | 1 | 269 | 18071 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26975 | 2 | KED |
| \| | **Cu** | **63** | **14.796** | ug/L | 0.045 | 0 | 27 | 45188 | 1 | KED |
| \| | **Cu** | **65** | **14.492** | ug/L | 0.389 | 2 | 13 | 22130 | 2 | KED |
| \| | **Zn** | **66** | **26.811** | ug/L | 0.380 | 1 | 22 | 11043 | 1 | KED |
| \| | **Zn** | **67** | **26.938** | ug/L | 0.940 | 3 | 3 | 1878 | 3 | KED |
| ⌊ | **As** | **75** | **2.868** | ug/L | 0.119 | 4 | 6 | 603 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 395776 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 109 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7439 | 0 | KED |
| \| | **Cd** | **111** | **0.068** | ug/L | 0.015 | 22 | 3 | 19 | 18 | KED |
| ⌊ | **Cd** | **114** | **0.086** | ug/L | 0.010 | 12 | 5 | 53 | 10 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 407337 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.092** | ug/L | 0.008 | 8 | 62 | 1325 | 7 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 667255 | 1 | Standard |
| ⌊ | **Pb** | **208** | **6.726** | ug/L | 0.059 | 0 | 75 | 302000 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-07**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 23:44:41**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 59067 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4029906 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 568459 | 1 | Standard |
| | **Cr** | **52** | **6.125** | ug/L | 0.088 | 1 | 15553 | 141068 | 0 | Standard |
| | **Cr** | **53** | **6.104** | ug/L | 0.018 | 0 | 269 | 14890 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 26771 | 4 | KED |
| | **Cu** | **63** | **14.547** | ug/L | 0.153 | 1 | 27 | 44080 | 3 | KED |
| | **Cu** | **65** | **14.386** | ug/L | 0.199 | 1 | 13 | 21803 | 4 | KED |
| | **Zn** | **66** | **31.250** | ug/L | 0.427 | 1 | 22 | 12770 | 3 | KED |
| | **Zn** | **67** | **31.464** | ug/L | 0.589 | 1 | 3 | 2176 | 3 | KED |
| | **As** | **75** | **3.325** | ug/L | 0.034 | 1 | 6 | 692 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 380537 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 109 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 7610 | 0 | KED |
| | **Cd** | **111** | **0.132** | ug/L | 0.028 | 21 | 3 | 34 | 18 | KED |
| | **Cd** | **114** | **0.143** | ug/L | 0.008 | 5 | 5 | 88 | 6 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 394964 | 1 | Standard |
| | **Ag** | **107** | **0.117** | ug/L | 0.005 | 4 | 62 | 1623 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 643597 | 3 | Standard |
| | **Pb** | **208** | **10.807** | ug/L | 0.265 | 2 | 75 | 467762 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-08**
**Sample Dil Factor: 50**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:49:02**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 54798 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3982832 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 544532 | 551445 | 5 | Standard |
| | **Cr** | **52** | **6.150** | ug/L | 0.052 | 0 | 15553 | 137308 | 5 | Standard |
| | **Cr** | **53** | **6.127** | ug/L | 0.076 | 1 | 269 | 14498 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 26846 | 25958 | 1 | KED |
| | **Cu** | **63** | **13.542** | ug/L | 0.064 | 0 | 27 | 39803 | 0 | KED |
| | **Cu** | **65** | **13.341** | ug/L | 0.023 | 0 | 13 | 19609 | 1 | KED |
| | **Zn** | **66** | **27.645** | ug/L | 0.439 | 1 | 22 | 10959 | 2 | KED |
| | **Zn** | **67** | **26.390** | ug/L | 0.521 | 1 | 3 | 1771 | 2 | KED |
| | **As** | **75** | **3.032** | ug/L | 0.134 | 4 | 6 | 613 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 369798 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 106 | 28 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7783 | 6932 | 2 | KED |
| | **Cd** | **111** | **0.139** | ug/L | 0.025 | 18 | 3 | 33 | 18 | KED |
| | **Cd** | **114** | **0.128** | ug/L | 0.004 | 3 | 5 | 72 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 420460 | 384182 | 2 | Standard |
| | **Ag** | **107** | **0.105** | ug/L | 0.005 | 4 | 62 | 1413 | 5 | Standard |
| > | **Tb** | **159** | | ug/L | | | 655044 | 629662 | 5 | Standard |
| | **Pb** | **208** | **10.782** | ug/L | 0.311 | 2 | 75 | 456311 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0417-09**
**Sample Dil Factor: 50**
**Comments:**

DEL

**Sample Date/Time: Thursday, January 12, 2023 23:53:22**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 51162 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3817844 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 533813 | 3 | Standard |
| \| | **Cr** | **52** | **6.480** | ug/L | 0.148 | 2 | 15553 | 139238 | 1 | Standard |
| ⌊ | **Cr** | **53** | **6.428** | ug/L | 0.158 | 2 | 269 | 14705 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25497 | 0 | KED |
| \| | **Cu** | **63** | **10.900** | ug/L | 0.173 | 1 | 27 | 31475 | 2 | KED |
| \| | **Cu** | **65** | **10.705** | ug/L | 0.126 | 1 | 13 | 15458 | 1 | KED |
| \| | **Zn** | **66** | **25.172** | ug/L | 0.197 | 0 | 22 | 9803 | 0 | KED |
| \| | **Zn** | **67** | **24.199** | ug/L | 1.199 | 4 | 3 | 1595 | 4 | KED |
| ⌊ | **As** | **75** | **2.537** | ug/L | 0.084 | 3 | 6 | 505 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 349814 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 84 | 18 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7504 | 3 | KED |
| \| | **Cd** | **111** | **0.088** | ug/L | 0.031 | 35 | 3 | 23 | 27 | KED |
| ⌊ | **Cd** | **114** | **0.086** | ug/L | 0.012 | 13 | 5 | 54 | 13 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 380063 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.058** | ug/L | 0.003 | 5 | 62 | 802 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 617271 | 3 | Standard |
| ⌊ | **Pb** | **208** | **6.085** | ug/L | 0.207 | 3 | 75 | 252609 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0109-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Thursday, January 12, 2023 23:58:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 53472 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4251725 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 525307 | 1 | Standard |
| \| | **Cr** | **52** | **0.664** | ug/L | 0.007 | 1 | 15553 | 27504 | 2 | Standard |
| ⌊ | **Cr** | **53** | **0.670** | ug/L | 0.002 | 0 | 269 | 1742 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26076 | 1 | KED |
| \| | **Cu** | **63** | **0.847** | ug/L | 0.005 | 0 | 27 | 2526 | 1 | KED |
| \| | **Cu** | **65** | **0.851** | ug/L | 0.041 | 4 | 13 | 1269 | 6 | KED |
| \| | **Zn** | **66** | **90.466** | ug/L | 1.574 | 1 | 22 | 35984 | 3 | KED |
| \| | **Zn** | **67** | **79.556** | ug/L | 2.594 | 3 | 3 | 5355 | 2 | KED |
| ⌊ | **As** | **75** | **0.179** | ug/L | 0.022 | 12 | 6 | 42 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 277517 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 52 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7716 | 1 | KED |
| \| | **Cd** | **111** | **0.015** | ug/L | 0.006 | 42 | 3 | 6 | 20 | KED |
| ⌊ | **Cd** | **114** | **0.006** | ug/L | 0.008 | 152 | 5 | 8 | 56 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 408183 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 65 | 62 | 91 | 24 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 651123 | 2 | Standard |
| ⌊ | **Pb** | **208** | **0.209** | ug/L | 0.007 | 3 | 75 | 9224 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL7**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:02:23**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36360 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3997174 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 498419 | 2 | Standard |
| \| | **Cr** | **52** | **0.025** | ug/L | 0.016 | 64 | 15553 | 14681 | 3 | Standard |
| ⌊ | **Cr** | **53** | **-0.044** | ug/L | 0.009 | 19 | 269 | 153 | 9 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26912 | 2 | KED |
| \| | **Cu** | **63** | **0.002** | ug/L | 0.003 | 130 | 27 | 34 | 22 | KED |
| \| | **Cu** | **65** | **0.003** | ug/L | 0.002 | 68 | 13 | 19 | 20 | KED |
| \| | **Zn** | **66** | **0.035** | ug/L | 0.023 | 64 | 22 | 36 | 26 | KED |
| \| | **Zn** | **67** | **0.018** | ug/L | 0.016 | 89 | 3 | 5 | 21 | KED |
| ⌊ | **As** | **75** | **0.001** | ug/L | 0.006 | 429 | 6 | 7 | 17 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 261002 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 50 | 27 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7450 | 2 | KED |
| \| | **Cd** | **111** | **0.002** | ug/L | 0.011 | 568 | 3 | 3 | 66 | KED |
| ⌊ | **Cd** | **114** | **-0.001** | ug/L | 0.004 | 643 | 5 | 5 | 44 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 396586 | 3 | Standard |
| ⌊ | **Ag** | **107** | **-0.001** | ug/L | 0.001 | 174 | 62 | 50 | 28 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 626483 | 2 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 15 | 75 | 102 | 5 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCV9**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:06:44**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36672 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4316291 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 511301 | 2 | Standard |
| \| | **Cr** | **52** | **49.012** | ug/L | 0.382 | 0 | 15553 | 913204 | 2 | Standard |
| ⌊ | **Cr** | **53** | **48.314** | ug/L | 0.583 | 1 | 269 | 104271 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26405 | 2 | KED |
| \| | **Cu** | **63** | **50.561** | ug/L | 0.825 | 1 | 27 | 151067 | 1 | KED |
| \| | **Cu** | **65** | **49.197** | ug/L | 0.297 | 0 | 13 | 73529 | 2 | KED |
| \| | **Zn** | **66** | **51.137** | ug/L | 0.663 | 1 | 22 | 20599 | 0 | KED |
| \| | **Zn** | **67** | **50.578** | ug/L | 2.748 | 5 | 3 | 3449 | 5 | KED |
| ⌊ | **As** | **75** | **50.144** | ug/L | 0.397 | 0 | 6 | 10213 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 272897 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 72 | 16 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7333 | 3 | KED |
| \| | **Cd** | **111** | **49.644** | ug/L | 0.938 | 1 | 3 | 11380 | 2 | KED |
| ⌊ | **Cd** | **114** | **50.823** | ug/L | 1.091 | 2 | 5 | 28329 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 393449 | 1 | Standard |
| ⌊ | **Ag** | **107** | **50.091** | ug/L | 1.157 | 2 | 62 | 664666 | 1 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 641370 | 1 | Standard |
| ⌊ | **Pb** | **208** | **50.311** | ug/L | 0.479 | 0 | 75 | 2170796 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCB9**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:13:50**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36826 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3987550 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 504336 | 2 | Standard |
| \| | **Cr** | **52** | **-0.007** | ug/L | 0.010 | 133 | 15553 | 14271 | 3 | Standard |
| ⌊ | **Cr** | **53** | **-0.046** | ug/L | 0.008 | 16 | 269 | 152 | 9 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27248 | 1 | KED |
| \| | **Cu** | **63** | **0.002** | ug/L | 0.001 | 94 | 27 | 33 | 14 | KED |
| \| | **Cu** | **65** | **0.002** | ug/L | 0.004 | 263 | 13 | 16 | 37 | KED |
| \| | **Zn** | **66** | **0.004** | ug/L | 0.021 | 575 | 22 | 24 | 37 | KED |
| \| | **Zn** | **67** | **0.017** | ug/L | 0.041 | 238 | 3 | 5 | 57 | KED |
| ⌊ | **As** | **75** | **0.007** | ug/L | 0.007 | 100 | 6 | 8 | 18 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 264099 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 50 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7648 | 2 | KED |
| \| | **Cd** | **111** | **-0.006** | ug/L | 0.000 | 3 | 3 | 1 | | KED |
| ⌊ | **Cd** | **114** | **-0.005** | ug/L | 0.004 | 71 | 5 | 2 | 94 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 398241 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.002 | 111 | 62 | 80 | 28 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 630972 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 34 | 75 | 133 | 16 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0617-01**
**Sample Dil Factor: 2**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:18:11**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 47064 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4534693 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 549368 | 1 | Standard |
| \| | **Cr** | **52** | **0.237** | ug/L | 0.016 | 6 | 15553 | 20368 | 3 | Standard |
| ⌊ | **Cr** | **53** | **0.833** | ug/L | 0.019 | 2 | 269 | 2197 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25886 | 1 | KED |
| \| | **Cu** | **63** | **1.130** | ug/L | 0.037 | 3 | 27 | 3337 | 3 | KED |
| \| | **Cu** | **65** | **1.144** | ug/L | 0.041 | 3 | 13 | 1689 | 4 | KED |
| \| | **Zn** | **66** | **7.873** | ug/L | 0.158 | 2 | 22 | 3127 | 1 | KED |
| \| | **Zn** | **67** | **7.977** | ug/L | 0.539 | 6 | 3 | 536 | 6 | KED |
| ⌊ | **As** | **75** | **0.368** | ug/L | 0.024 | 6 | 6 | 80 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 274074 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 71 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7297 | 1 | KED |
| \| | **Cd** | **111** | **0.068** | ug/L | 0.015 | 22 | 3 | 18 | 19 | KED |
| ⌊ | **Cd** | **114** | **0.067** | ug/L | 0.008 | 11 | 5 | 42 | 10 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 392136 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.003** | ug/L | 0.001 | 46 | 62 | 94 | 18 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 634971 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.109** | ug/L | 0.004 | 3 | 75 | 4746 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-01**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:22:26**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | 13 | | ug/L | | | 38749 | 72977 | 0 | Standard |
| | Cl | 37 | | ug/L | | | 4373298 | 4143195 | 1 | Standard |
| ⌈> | Sc | 45 | | ug/L | | | 544532 | 658125 | 3 | Standard |
| \| | Cr | 52 | 14.868 | ug/L | 0.120 | 0 | 15553 | 369611 | 2 | Standard |
| ⌊ | Cr | 53 | 14.847 | ug/L | 0.145 | 0 | 269 | 41460 | 2 | Standard |
| ⌈> | Ge | 72 | | ug/L | | | 26846 | 26175 | 1 | KED |
| \| | Cu | 63 | 39.536 | ug/L | 0.772 | 1 | 27 | 117105 | 1 | KED |
| \| | Cu | 65 | 39.264 | ug/L | 0.608 | 1 | 13 | 58163 | 0 | KED |
| \| | Zn | 66 | 80.232 | ug/L | 1.222 | 1 | 22 | 32028 | 1 | KED |
| \| | Zn | 67 | 75.426 | ug/L | 2.439 | 3 | 3 | 5098 | 2 | KED |
| ⌊ | As | 75 | 7.887 | ug/L | 0.201 | 2 | 6 | 1597 | 1 | KED |
| | Y | 89 | | ug/L | | | 285357 | 530306 | 3 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 178 | 10 | Standard |
| ⌈> | In-1 | 115 | | ug/L | | | 7783 | 7541 | 3 | KED |
| \| | Cd | 111 | 0.356 | ug/L | 0.006 | 1 | 3 | 87 | 3 | KED |
| ⌊ | Cd | 114 | 0.358 | ug/L | 0.018 | 4 | 5 | 210 | 1 | KED |
| ⌈> | In | 115 | | ug/L | | | 420460 | 385122 | 2 | Standard |
| ⌊ | Ag | 107 | 0.369 | ug/L | 0.001 | 0 | 62 | 4846 | 2 | Standard |
| ⌈> | Tb | 159 | | ug/L | | | 655044 | 642915 | 0 | Standard |
| ⌊ | Pb | 208 | 30.676 | ug/L | 0.698 | 2 | 75 | 1326826 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-02**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:26:47**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 71590 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4069742 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 670780 | 2 | Standard |
| \| | **Cr** | **52** | **15.483** | ug/L | 0.553 | 3 | 15553 | 391494 | 3 | Standard |
| ⌊ | **Cr** | **53** | **15.301** | ug/L | 0.300 | 1 | 269 | 43543 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26063 | 1 | KED |
| \| | **Cu** | **63** | **34.663** | ug/L | 0.509 | 1 | 27 | 102253 | 2 | KED |
| \| | **Cu** | **65** | **34.424** | ug/L | 0.643 | 1 | 13 | 50775 | 1 | KED |
| \| | **Zn** | **66** | **71.864** | ug/L | 1.503 | 2 | 22 | 28564 | 1 | KED |
| \| | **Zn** | **67** | **69.749** | ug/L | 1.463 | 2 | 3 | 4694 | 1 | KED |
| ⌊ | **As** | **75** | **6.920** | ug/L | 0.216 | 3 | 6 | 1396 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 560482 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 203 | 15 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7444 | 2 | KED |
| \| | **Cd** | **111** | **0.233** | ug/L | 0.027 | 11 | 3 | 57 | 10 | KED |
| ⌊ | **Cd** | **114** | **0.247** | ug/L | 0.022 | 8 | 5 | 145 | 8 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 389388 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.206** | ug/L | 0.003 | 1 | 62 | 2765 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 650082 | 2 | Standard |
| ⌊ | **Pb** | **208** | **18.511** | ug/L | 0.362 | 1 | 75 | 809383 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-03**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:31:08**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | 13 | | ug/L | | | 38749 | 66749 | 1 | Standard |
| | Cl | 37 | | ug/L | | | 4373298 | 4230078 | 1 | Standard |
| ⌈> | Sc | 45 | | ug/L | | | 544532 | 673159 | 1 | Standard |
| \| | Cr | 52 | 17.045 | ug/L | 0.208 | 1 | 15553 | 430687 | 2 | Standard |
| ⌊ | Cr | 53 | 17.143 | ug/L | 0.269 | 1 | 269 | 48915 | 1 | Standard |
| ⌈> | Ge | 72 | | ug/L | | | 26846 | 25002 | 1 | KED |
| \| | Cu | 63 | 49.632 | ug/L | 0.630 | 1 | 27 | 140441 | 1 | KED |
| \| | Cu | 65 | 50.140 | ug/L | 1.284 | 2 | 13 | 70946 | 2 | KED |
| \| | Zn | 66 | 92.130 | ug/L | 0.417 | 0 | 22 | 35130 | 1 | KED |
| \| | Zn | 67 | 90.547 | ug/L | 1.009 | 1 | 3 | 5846 | 2 | KED |
| ⌊ | As | 75 | 8.720 | ug/L | 0.228 | 2 | 6 | 1686 | 2 | KED |
| | Y | 89 | | ug/L | | | 285357 | 553448 | 1 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 200 | 6 | Standard |
| ⌈> | In-1 | 115 | | ug/L | | | 7783 | 6861 | 1 | KED |
| \| | Cd | 111 | 0.443 | ug/L | 0.016 | 3 | 3 | 98 | 4 | KED |
| ⌊ | Cd | 114 | 0.386 | ug/L | 0.022 | 5 | 5 | 206 | 6 | KED |
| ⌈> | In | 115 | | ug/L | | | 420460 | 395930 | 2 | Standard |
| ⌊ | Ag | 107 | 0.382 | ug/L | 0.012 | 3 | 62 | 5162 | 3 | Standard |
| ⌈> | Tb | 159 | | ug/L | | | 655044 | 649479 | 2 | Standard |
| ⌊ | Pb | 208 | 37.301 | ug/L | 0.941 | 2 | 75 | 1629254 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-04**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:35:28**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 72845 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4164828 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 657705 | 1 | Standard |
| \| | **Cr** | **52** | **15.822** | ug/L | 0.092 | 0 | 15553 | 391904 | 0 | Standard |
| ⌊ | **Cr** | **53** | **15.461** | ug/L | 0.038 | 0 | 269 | 43139 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25421 | 1 | KED |
| \| | **Cu** | **63** | **37.476** | ug/L | 0.659 | 1 | 27 | 107808 | 0 | KED |
| \| | **Cu** | **65** | **37.760** | ug/L | 0.522 | 1 | 13 | 54324 | 0 | KED |
| \| | **Zn** | **66** | **70.565** | ug/L | 2.072 | 2 | 22 | 27357 | 2 | KED |
| \| | **Zn** | **67** | **68.488** | ug/L | 3.076 | 4 | 3 | 4494 | 2 | KED |
| ⌊ | **As** | **75** | **7.334** | ug/L | 0.336 | 4 | 6 | 1443 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 545124 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 198 | 4 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 6778 | 2 | KED |
| \| | **Cd** | **111** | **0.216** | ug/L | 0.050 | 23 | 3 | 48 | 18 | KED |
| ⌊ | **Cd** | **114** | **0.250** | ug/L | 0.020 | 8 | 5 | 133 | 5 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 383859 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.173** | ug/L | 0.004 | 2 | 62 | 2292 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 643852 | 0 | Standard |
| ⌊ | **Pb** | **208** | **18.395** | ug/L | 0.363 | 1 | 75 | 796810 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-05**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:39:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | 13 | | ug/L | | | 38749 | 67396 | 2 | Standard |
| | Cl | 37 | | ug/L | | | 4373298 | 4006597 | 0 | Standard |
| ⌈> | Sc | 45 | | ug/L | | | 544532 | 643355 | 0 | Standard |
| \| | Cr | 52 | 16.637 | ug/L | 0.076 | 0 | 15553 | 402189 | 1 | Standard |
| ⌊ | Cr | 53 | 16.616 | ug/L | 0.097 | 0 | 269 | 45327 | 1 | Standard |
| ⌈> | Ge | 72 | | ug/L | | | 26846 | 26711 | 1 | KED |
| \| | Cu | 63 | 40.962 | ug/L | 1.045 | 2 | 27 | 123822 | 2 | KED |
| \| | Cu | 65 | 40.188 | ug/L | 0.810 | 2 | 13 | 60753 | 2 | KED |
| \| | Zn | 66 | 73.945 | ug/L | 0.940 | 1 | 22 | 30131 | 2 | KED |
| \| | Zn | 67 | 74.393 | ug/L | 3.497 | 4 | 3 | 5133 | 5 | KED |
| ⌊ | As | 75 | 7.826 | ug/L | 0.136 | 1 | 6 | 1618 | 1 | KED |
| | Y | 89 | | ug/L | | | 285357 | 532549 | 0 | Standard |
| | Kr | 83 | | ug/L | | | 53 | 182 | 7 | Standard |
| ⌈> | In-1 | 115 | | ug/L | | | 7783 | 7533 | 3 | KED |
| \| | Cd | 111 | 0.313 | ug/L | 0.047 | 14 | 3 | 77 | 15 | KED |
| ⌊ | Cd | 114 | 0.351 | ug/L | 0.060 | 17 | 5 | 206 | 17 | KED |
| ⌈> | In | 115 | | ug/L | | | 420460 | 380510 | 2 | Standard |
| ⌊ | Ag | 107 | 0.296 | ug/L | 0.011 | 3 | 62 | 3851 | 2 | Standard |
| ⌈> | Tb | 159 | | ug/L | | | 655044 | 635723 | 2 | Standard |
| ⌊ | Pb | 208 | 23.069 | ug/L | 0.369 | 1 | 75 | 986534 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-06**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:44:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 70639 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4019679 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 632138 | 1 | Standard |
| \| | **Cr** | **52** | **19.085** | ug/L | 0.190 | 0 | 15553 | 450607 | 1 | Standard |
| ⌊ | **Cr** | **53** | **18.801** | ug/L | 0.116 | 0 | 269 | 50348 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26652 | 1 | KED |
| \| | **Cu** | **63** | **37.555** | ug/L | 0.360 | 0 | 27 | 113273 | 1 | KED |
| \| | **Cu** | **65** | **37.503** | ug/L | 0.703 | 1 | 13 | 56561 | 1 | KED |
| \| | **Zn** | **66** | **75.292** | ug/L | 1.421 | 1 | 22 | 30613 | 3 | KED |
| \| | **Zn** | **67** | **73.483** | ug/L | 0.956 | 1 | 3 | 5058 | 3 | KED |
| ⌊ | **As** | **75** | **8.520** | ug/L | 0.158 | 1 | 6 | 1756 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 537396 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 187 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7214 | 1 | KED |
| \| | **Cd** | **111** | **0.773** | ug/L | 0.040 | 5 | 3 | 177 | 6 | KED |
| ⌊ | **Cd** | **114** | **0.742** | ug/L | 0.047 | 6 | 5 | 412 | 6 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 362560 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.597** | ug/L | 0.019 | 3 | 62 | 7351 | 0 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 610940 | 2 | Standard |
| ⌊ | **Pb** | **208** | **23.192** | ug/L | 0.561 | 2 | 75 | 952953 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0459-07**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:48:31**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 69329 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4096844 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 655849 | 0 | Standard |
| \| | **Cr** | **52** | **14.483** | ug/L | 0.420 | 2 | 15553 | 359271 | 1 | Standard |
| ⌊ | **Cr** | **53** | **14.667** | ug/L | 0.379 | 2 | 269 | 40821 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25212 | 1 | KED |
| \| | **Cu** | **63** | **28.624** | ug/L | 0.432 | 1 | 27 | 81679 | 1 | KED |
| \| | **Cu** | **65** | **28.235** | ug/L | 0.782 | 2 | 13 | 40290 | 2 | KED |
| \| | **Zn** | **66** | **59.738** | ug/L | 2.456 | 4 | 22 | 22972 | 3 | KED |
| \| | **Zn** | **67** | **59.815** | ug/L | 0.816 | 1 | 3 | 3895 | 1 | KED |
| ⌊ | **As** | **75** | **7.277** | ug/L | 0.157 | 2 | 6 | 1420 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 517667 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 173 | 12 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7219 | 3 | KED |
| \| | **Cd** | **111** | **0.185** | ug/L | 0.043 | 23 | 3 | 45 | 23 | KED |
| ⌊ | **Cd** | **114** | **0.199** | ug/L | 0.020 | 10 | 5 | 114 | 12 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 386149 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.141** | ug/L | 0.005 | 3 | 62 | 1897 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 634912 | 3 | Standard |
| ⌊ | **Pb** | **208** | **13.707** | ug/L | 0.381 | 2 | 75 | 585256 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0114-01**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:53:16**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 62477 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4204356 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 610805 | 2 | Standard |
| \| | **Cr** | **52** | **24.594** | ug/L | 0.502 | 2 | 15553 | 555950 | 1 | Standard |
| ⌊ | **Cr** | **53** | **24.467** | ug/L | 0.478 | 1 | 269 | 63226 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26862 | 2 | KED |
| \| | **Cu** | **63** | **14.099** | ug/L | 0.185 | 1 | 27 | 42872 | 1 | KED |
| \| | **Cu** | **65** | **13.970** | ug/L | 0.214 | 1 | 13 | 21241 | 1 | KED |
| \| | **Zn** | **66** | **28.106** | ug/L | 1.284 | 4 | 22 | 11520 | 2 | KED |
| \| | **Zn** | **67** | **26.574** | ug/L | 0.438 | 1 | 3 | 1846 | 4 | KED |
| ⌊ | **As** | **75** | **2.921** | ug/L | 0.062 | 2 | 6 | 611 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 439271 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 107 | 17 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 6728 | 7 | KED |
| \| | **Cd** | **111** | **1.831** | ug/L | 0.103 | 5 | 3 | 387 | 5 | KED |
| ⌊ | **Cd** | **114** | **1.884** | ug/L | 0.090 | 4 | 5 | 966 | 3 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 392864 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.077** | ug/L | 0.002 | 2 | 62 | 1085 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 639905 | 0 | Standard |
| ⌊ | **Pb** | **208** | **2.081** | ug/L | 0.034 | 1 | 75 | 89673 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL8**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 00:57:37**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 38762 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4156920 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 530557 | 2 | Standard |
| \| | **Cr** | **52** | **-0.017** | ug/L | 0.034 | 203 | 15553 | 14829 | 4 | Standard |
| ⌊ | **Cr** | **53** | **-0.051** | ug/L | 0.007 | 13 | 269 | 148 | 10 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 26467 | 1 | KED |
| \| | **Cu** | **63** | **0.005** | ug/L | 0.001 | 26 | 27 | 43 | 11 | KED |
| \| | **Cu** | **65** | **0.002** | ug/L | 0.001 | 50 | 13 | 17 | 11 | KED |
| \| | **Zn** | **66** | **0.001** | ug/L | 0.022 | 2190 | 22 | 22 | 38 | KED |
| \| | **Zn** | **67** | **0.028** | ug/L | 0.054 | 192 | 3 | 5 | 66 | KED |
| ⌊ | **As** | **75** | **0.001** | ug/L | 0.006 | 448 | 6 | 6 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 274458 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 43 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7291 | 1 | KED |
| \| | **Cd** | **111** | **0.002** | ug/L | 0.011 | 486 | 3 | 3 | 66 | KED |
| ⌊ | **Cd** | **114** | **-0.005** | ug/L | 0.005 | 104 | 5 | 2 | 118 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 403342 | 2 | Standard |
| ⌊ | **Ag** | **107** | **-0.001** | ug/L | 0.000 | 73 | 62 | 53 | 7 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 634978 | 2 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 29 | 75 | 119 | 13 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVA**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:01:58**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 36941 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 4241056 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 491854 | 1 | Standard |
| \| | **Cr** | **52** | **48.909** | ug/L | 0.365 | 0 | 15553 | 876567 | 1 | Standard |
| ⌊ | **Cr** | **53** | **48.932** | ug/L | 0.186 | 0 | 269 | 101579 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 27005 | 1 | KED |
| \| | **Cu** | **63** | **50.299** | ug/L | 0.608 | 1 | 27 | 153705 | 0 | KED |
| \| | **Cu** | **65** | **50.446** | ug/L | 1.057 | 2 | 13 | 77085 | 0 | KED |
| \| | **Zn** | **66** | **51.460** | ug/L | 1.028 | 1 | 22 | 21201 | 1 | KED |
| \| | **Zn** | **67** | **49.722** | ug/L | 3.731 | 7 | 3 | 3466 | 6 | KED |
| ⌊ | **As** | **75** | **50.507** | ug/L | 0.836 | 1 | 6 | 10519 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 258083 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 61 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7585 | 4 | KED |
| \| | **Cd** | **111** | **49.198** | ug/L | 1.406 | 2 | 3 | 11662 | 2 | KED |
| ⌊ | **Cd** | **114** | **49.843** | ug/L | 1.539 | 3 | 5 | 28724 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 374286 | 2 | Standard |
| ⌊ | **Ag** | **107** | **50.397** | ug/L | 1.078 | 2 | 62 | 636219 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 611327 | 2 | Standard |
| ⌊ | **Pb** | **208** | **51.361** | ug/L | 1.233 | 2 | 75 | 2111582 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBA**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:09:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 38749 | 37649 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 4373298 | 3929096 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 544532 | 490369 | 3 | Standard |
| \| | **Cr** | **52** | **0.013** | ug/L | 0.020 | 157 | 15553 | 14225 | 2 | Standard |
| ⌊ | **Cr** | **53** | **-0.048** | ug/L | 0.006 | 12 | 269 | 143 | 5 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 26846 | 25652 | 3 | KED |
| \| | **Cu** | **63** | **0.001** | ug/L | 0.002 | 181 | 27 | 29 | 16 | KED |
| \| | **Cu** | **65** | **0.001** | ug/L | 0.002 | 294 | 13 | 14 | 27 | KED |
| \| | **Zn** | **66** | **-0.011** | ug/L | 0.018 | 167 | 22 | 17 | 44 | KED |
| \| | **Zn** | **67** | **-0.017** | ug/L | 0.015 | 90 | 3 | 2 | 43 | KED |
| ⌊ | **As** | **75** | **0.010** | ug/L | 0.017 | 164 | 6 | 8 | 40 | KED |
| | **Y** | **89** | | ug/L | | | 285357 | 254848 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 53 | 57 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7783 | 7394 | 1 | KED |
| \| | **Cd** | **111** | **-0.001** | ug/L | 0.005 | 705 | 3 | 3 | 34 | KED |
| ⌊ | **Cd** | **114** | **0.004** | ug/L | 0.009 | 238 | 5 | 7 | 67 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 420460 | 384427 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 50 | 62 | 86 | 15 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 655044 | 608130 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.002** | ug/L | 0.000 | 8 | 75 | 142 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:13:25**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | | 37442 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | | 3935892 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | | 508823 | 2 | Standard |
| \| | **Cr** | **52** | | ug/L | | | | 14729 | 6 | Standard |
| ⌊ | **Cr** | **53** | | ug/L | | | | 130 | 7 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | | 25706 | 1 | KED |
| \| | **Cu** | **63** | | ug/L | | | | 35 | 27 | KED |
| \| | **Cu** | **65** | | ug/L | | | | 25 | 8 | KED |
| \| | **Zn** | **66** | | ug/L | | | | 24 | 27 | KED |
| \| | **Zn** | **67** | | ug/L | | | | 1 | 100 | KED |
| ⌊ | **As** | **75** | | ug/L | | | | 7 | 31 | KED |
| | **Y** | **89** | | ug/L | | | | 261919 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | | 60 | 21 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | | 7141 | 2 | KED |
| \| | **Cd** | **111** | | ug/L | | | | 2 | 88 | KED |
| ⌊ | **Cd** | **114** | | ug/L | | | | 3 | 53 | KED |
| ⌈> | **In** | **115** | | ug/L | | | | 388851 | 1 | Standard |
| ⌊ | **Ag** | **107** | | ug/L | | | | 59 | 17 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | | 618478 | 3 | Standard |
| ⌊ | **Pb** | **208** | | ug/L | | | | 110 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVB**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:17:46**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 36715 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4413335 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 510308 | 0 | Standard |
| \| | **Cr** | **52** | **48.998** | ug/L | 0.866 | 1 | 14729 | 911310 | 1 | Standard |
| ⌊ | **Cr** | **53** | **48.576** | ug/L | 0.667 | 1 | 130 | 104493 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 26154 | 1 | KED |
| \| | **Cu** | **63** | **50.235** | ug/L | 0.586 | 1 | 35 | 148687 | 1 | KED |
| \| | **Cu** | **65** | **51.149** | ug/L | 0.650 | 1 | 25 | 75722 | 1 | KED |
| \| | **Zn** | **66** | **50.229** | ug/L | 1.046 | 2 | 24 | 20045 | 0 | KED |
| \| | **Zn** | **67** | **51.080** | ug/L | 1.527 | 2 | 1 | 3448 | 1 | KED |
| ⌊ | **As** | **75** | **49.972** | ug/L | 1.219 | 2 | 7 | 10080 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 270031 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 61 | 42 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7337 | 2 | KED |
| \| | **Cd** | **111** | **49.964** | ug/L | 1.111 | 2 | 2 | 11461 | 0 | KED |
| ⌊ | **Cd** | **114** | **50.588** | ug/L | 1.636 | 3 | 3 | 28214 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 385244 | 0 | Standard |
| ⌊ | **Ag** | **107** | **49.982** | ug/L | 0.499 | 0 | 59 | 649505 | 0 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 624778 | 1 | Standard |
| ⌊ | **Pb** | **208** | **51.071** | ug/L | 0.732 | 1 | 110 | 2146504 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBB**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:24:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 36949 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3972336 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 499059 | 2 | Standard |
| \| | **Cr** | **52** | **0.001** | ug/L | 0.023 | 3783 | 14729 | 14453 | 2 | Standard |
| ⌊ | **Cr** | **53** | **0.002** | ug/L | 0.007 | 399 | 130 | 132 | 13 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 25513 | 0 | KED |
| \| | **Cu** | **63** | **-0.001** | ug/L | 0.004 | 473 | 35 | 33 | 32 | KED |
| \| | **Cu** | **65** | **-0.007** | ug/L | 0.002 | 34 | 25 | 15 | 21 | KED |
| \| | **Zn** | **66** | **-0.017** | ug/L | 0.008 | 43 | 24 | 17 | 16 | KED |
| \| | **Zn** | **67** | **0.058** | ug/L | 0.050 | 85 | 1 | 5 | 57 | KED |
| ⌊ | **As** | **75** | **-0.005** | ug/L | 0.005 | 118 | 7 | 6 | 16 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 263928 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 60 | 10 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7415 | 4 | KED |
| \| | **Cd** | **111** | **0.009** | ug/L | 0.005 | 60 | 2 | 5 | 28 | KED |
| ⌊ | **Cd** | **114** | **-0.000** | ug/L | 0.006 | 1350 | 3 | 3 | 90 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 394530 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 21 | 59 | 92 | 9 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 617557 | 2 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.001 | 102 | 110 | 136 | 21 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0589-01**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:29:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 38442 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4802930 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 493824 | 0 | Standard |
| | **Cr** | **52** | **0.068** | ug/L | 0.012 | 18 | 14729 | 15499 | 1 | Standard |
| | **Cr** | **53** | **1.444** | ug/L | 0.008 | 0 | 130 | 3129 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 26269 | 1 | KED |
| | **Cu** | **63** | **5.134** | ug/L | 0.089 | 1 | 35 | 15294 | 1 | KED |
| | **Cu** | **65** | **5.195** | ug/L | 0.120 | 2 | 25 | 7748 | 2 | KED |
| | **Zn** | **66** | **100.778** | ug/L | 1.264 | 1 | 24 | 40372 | 0 | KED |
| | **Zn** | **67** | **90.197** | ug/L | 1.362 | 1 | 1 | 6117 | 2 | KED |
| | **As** | **75** | **0.126** | ug/L | 0.009 | 7 | 7 | 33 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 251499 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 52 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7206 | 2 | KED |
| | **Cd** | **111** | **0.181** | ug/L | 0.047 | 25 | 2 | 43 | 26 | KED |
| | **Cd** | **114** | **0.135** | ug/L | 0.007 | 5 | 3 | 77 | 4 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 380307 | 2 | Standard |
| | **Ag** | **107** | **0.000** | ug/L | 0.001 | 168 | 59 | 63 | 12 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 607704 | 2 | Standard |
| | **Pb** | **208** | **0.022** | ug/L | 0.001 | 5 | 110 | 991 | 7 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0599-01**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:33:34**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 42049 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4122124 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 522443 | 2 | Standard |
| | **Cr** | **52** | **0.531** | ug/L | 0.008 | 1 | 14729 | 25077 | 1 | Standard |
| | **Cr** | **53** | **0.573** | ug/L | 0.017 | 2 | 130 | 1393 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 26189 | 1 | KED |
| | **Cu** | **63** | **60.624** | ug/L | 0.446 | 0 | 35 | 179671 | 0 | KED |
| | **Cu** | **65** | **60.455** | ug/L | 0.625 | 1 | 25 | 89619 | 2 | KED |
| | **Zn** | **66** | **11.494** | ug/L | 0.043 | 0 | 24 | 4613 | 1 | KED |
| | **Zn** | **67** | **11.084** | ug/L | 0.266 | 2 | 1 | 751 | 3 | KED |
| | **As** | **75** | **0.173** | ug/L | 0.014 | 7 | 7 | 42 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 277232 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 50 | 4 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7502 | 2 | KED |
| | **Cd** | **111** | **0.134** | ug/L | 0.011 | 8 | 2 | 34 | 5 | KED |
| | **Cd** | **114** | **0.141** | ug/L | 0.011 | 7 | 3 | 84 | 7 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 400662 | 2 | Standard |
| | **Ag** | **107** | **0.007** | ug/L | 0.001 | 16 | 59 | 153 | 11 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 632816 | 2 | Standard |
| | **Pb** | **208** | **1.137** | ug/L | 0.004 | 0 | 110 | 48514 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0598-01**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:37:55**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 44723 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4942584 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 560897 | 2 | Standard |
| | **Cr** | **52** | **0.224** | ug/L | 0.024 | 10 | 14729 | 20737 | 1 | Standard |
| | **Cr** | **53** | **0.823** | ug/L | 0.014 | 1 | 130 | 2086 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 24925 | 1 | KED |
| | **Cu** | **63** | **0.273** | ug/L | 0.010 | 3 | 35 | 804 | 2 | KED |
| | **Cu** | **65** | **0.282** | ug/L | 0.021 | 7 | 25 | 422 | 8 | KED |
| | **Zn** | **66** | **44.377** | ug/L | 0.059 | 0 | 24 | 16882 | 0 | KED |
| | **Zn** | **67** | **39.983** | ug/L | 1.568 | 3 | 1 | 2574 | 4 | KED |
| | **As** | **75** | **0.154** | ug/L | 0.009 | 5 | 7 | 36 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 273005 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 57 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7166 | 1 | KED |
| | **Cd** | **111** | **3.119** | ug/L | 0.084 | 2 | 2 | 701 | 1 | KED |
| | **Cd** | **114** | **3.019** | ug/L | 0.015 | 0 | 3 | 1648 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 384801 | 0 | Standard |
| | **Ag** | **107** | **0.013** | ug/L | 0.023 | 179 | 59 | 223 | 131 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 628686 | 2 | Standard |
| | **Pb** | **208** | **0.009** | ug/L | 0.001 | 7 | 110 | 487 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0234-DUP2**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:42:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 45443 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 5098913 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 566549 | 1 | Standard |
| \| | **Cr** | **52** | **0.202** | ug/L | 0.023 | 11 | 14729 | 20504 | 3 | Standard |
| ⌊ | **Cr** | **53** | **0.869** | ug/L | 0.021 | 2 | 130 | 2218 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 24480 | 1 | KED |
| \| | **Cu** | **63** | **0.560** | ug/L | 0.007 | 1 | 35 | 1585 | 2 | KED |
| \| | **Cu** | **65** | **0.541** | ug/L | 0.025 | 4 | 25 | 773 | 4 | KED |
| \| | **Zn** | **66** | **44.532** | ug/L | 1.228 | 2 | 24 | 16636 | 1 | KED |
| \| | **Zn** | **67** | **38.883** | ug/L | 1.015 | 2 | 1 | 2458 | 3 | KED |
| ⌊ | **As** | **75** | **0.129** | ug/L | 0.032 | 25 | 7 | 31 | 21 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 276551 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 55 | 15 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 6738 | 4 | KED |
| \| | **Cd** | **111** | **2.950** | ug/L | 0.224 | 7 | 2 | 622 | 3 | KED |
| ⌊ | **Cd** | **114** | **3.082** | ug/L | 0.037 | 1 | 3 | 1582 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 388616 | 1 | Standard |
| ⌊ | **Ag** | **107** | **-0.001** | ug/L | 0.001 | 78 | 59 | 50 | 15 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 614278 | 0 | Standard |
| ⌊ | **Pb** | **208** | **0.026** | ug/L | 0.001 | 2 | 110 | 1179 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0234-MS2**
**Sample Dil Factor: 5**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:46:30**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 46579 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 5205995 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 585842 | 1 | Standard |
| \| | **Cr** | **52** | **4.985** | ug/L | 0.072 | 1 | 14729 | 121680 | 1 | Standard |
| ⌊ | **Cr** | **53** | **5.605** | ug/L | 0.089 | 1 | 130 | 13976 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 25944 | 2 | KED |
| \| | **Cu** | **63** | **5.524** | ug/L | 0.091 | 1 | 35 | 16251 | 3 | KED |
| \| | **Cu** | **65** | **5.461** | ug/L | 0.106 | 1 | 25 | 8040 | 1 | KED |
| \| | **Zn** | **66** | **61.173** | ug/L | 0.705 | 1 | 24 | 24214 | 2 | KED |
| \| | **Zn** | **67** | **55.774** | ug/L | 1.116 | 2 | 1 | 3736 | 3 | KED |
| ⌊ | **As** | **75** | **5.494** | ug/L | 0.056 | 1 | 7 | 1106 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 282433 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 59 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 6981 | 2 | KED |
| \| | **Cd** | **111** | **8.325** | ug/L | 0.225 | 2 | 2 | 1819 | 0 | KED |
| ⌊ | **Cd** | **114** | **8.119** | ug/L | 0.183 | 2 | 3 | 4311 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 392445 | 0 | Standard |
| ⌊ | **Ag** | **107** | **5.044** | ug/L | 0.045 | 0 | 59 | 66829 | 1 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 623053 | 1 | Standard |
| ⌊ | **Pb** | **208** | **5.460** | ug/L | 0.102 | 1 | 110 | 228934 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-01**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:51:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 45653 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4503757 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 594232 | 3 | Standard |
| \| | **Cr** | **52** | **11.014** | ug/L | 0.173 | 1 | 14729 | 251847 | 3 | Standard |
| ⌊ | **Cr** | **53** | **11.069** | ug/L | 0.174 | 1 | 130 | 27837 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 27333 | 1 | KED |
| \| | **Cu** | **63** | **5.728** | ug/L | 0.189 | 3 | 35 | 17753 | 3 | KED |
| \| | **Cu** | **65** | **5.616** | ug/L | 0.116 | 2 | 25 | 8712 | 1 | KED |
| \| | **Zn** | **66** | **23.642** | ug/L | 0.613 | 2 | 24 | 9874 | 2 | KED |
| \| | **Zn** | **67** | **22.033** | ug/L | 0.709 | 3 | 1 | 1555 | 1 | KED |
| ⌊ | **As** | **75** | **3.152** | ug/L | 0.082 | 2 | 7 | 671 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 382320 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 80 | 14 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7074 | 2 | KED |
| \| | **Cd** | **111** | **0.275** | ug/L | 0.034 | 12 | 2 | 63 | 13 | KED |
| ⌊ | **Cd** | **114** | **0.241** | ug/L | 0.028 | 11 | 3 | 133 | 9 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 394194 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.038** | ug/L | 0.001 | 1 | 59 | 563 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 631270 | 2 | Standard |
| ⌊ | **Pb** | **208** | **3.484** | ug/L | 0.035 | 0 | 110 | 148050 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0156-DUP1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:55:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 59254 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4442140 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 585555 | 5 | Standard |
| \| | **Cr** | **52** | **12.213** | ug/L | 0.408 | 3 | 14729 | 273094 | 1 | Standard |
| ⌊ | **Cr** | **53** | **12.236** | ug/L | 0.368 | 3 | 130 | 30286 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 25367 | 3 | KED |
| \| | **Cu** | **63** | **5.747** | ug/L | 0.235 | 4 | 35 | 16518 | 2 | KED |
| \| | **Cu** | **65** | **5.638** | ug/L | 0.208 | 3 | 25 | 8113 | 2 | KED |
| \| | **Zn** | **66** | **24.602** | ug/L | 1.108 | 4 | 24 | 9528 | 1 | KED |
| \| | **Zn** | **67** | **22.676** | ug/L | 2.435 | 10 | 1 | 1483 | 7 | KED |
| ⌊ | **As** | **75** | **3.414** | ug/L | 0.035 | 1 | 7 | 674 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 388054 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 87 | 11 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7029 | 1 | KED |
| \| | **Cd** | **111** | **0.300** | ug/L | 0.042 | 13 | 2 | 68 | 12 | KED |
| ⌊ | **Cd** | **114** | **0.233** | ug/L | 0.021 | 9 | 3 | 128 | 6 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 389091 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.034** | ug/L | 0.002 | 6 | 59 | 511 | 9 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 626607 | 4 | Standard |
| ⌊ | **Pb** | **208** | **3.645** | ug/L | 0.067 | 1 | 110 | 153710 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0156-MS1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 01:59:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 50551 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4268292 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 537994 | 10 | Standard |
| \| | **Cr** | **52** | **35.889** | ug/L | 2.722 | 7 | 14729 | 704248 | 3 | Standard |
| ⌊ | **Cr** | **53** | **35.125** | ug/L | 2.064 | 5 | 130 | 79387 | 5 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 26474 | 1 | KED |
| \| | **Cu** | **63** | **32.363** | ug/L | 0.330 | 1 | 35 | 96987 | 2 | KED |
| \| | **Cu** | **65** | **31.680** | ug/L | 0.761 | 2 | 25 | 47492 | 3 | KED |
| \| | **Zn** | **66** | **108.063** | ug/L | 1.936 | 1 | 24 | 43635 | 2 | KED |
| \| | **Zn** | **67** | **102.906** | ug/L | 0.762 | 0 | 1 | 7032 | 1 | KED |
| ⌊ | **As** | **75** | **28.220** | ug/L | 0.940 | 3 | 7 | 5767 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 363356 | 7 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 78 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 6765 | 2 | KED |
| \| | **Cd** | **111** | **25.993** | ug/L | 1.007 | 3 | 2 | 5496 | 1 | KED |
| ⌊ | **Cd** | **114** | **26.533** | ug/L | 0.741 | 2 | 3 | 13644 | 0 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 368164 | 8 | Standard |
| ⌊ | **Ag** | **107** | **27.136** | ug/L | 0.954 | 3 | 59 | 336461 | 5 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 601491 | 9 | Standard |
| ⌊ | **Pb** | **208** | **31.698** | ug/L | 2.239 | 7 | 110 | 1277123 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: BLA0156-MSD1**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:04:11**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 59088 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4472030 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 595374 | 4 | Standard |
| | **Cr** | **52** | **34.707** | ug/L | 1.599 | 4 | 14729 | 757228 | 0 | Standard |
| | **Cr** | **53** | **34.439** | ug/L | 0.681 | 1 | 130 | 86436 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 25650 | 1 | KED |
| | **Cu** | **63** | **32.314** | ug/L | 1.101 | 3 | 35 | 93796 | 2 | KED |
| | **Cu** | **65** | **31.444** | ug/L | 0.588 | 1 | 25 | 45656 | 0 | KED |
| | **Zn** | **66** | **106.965** | ug/L | 3.418 | 3 | 24 | 41833 | 2 | KED |
| | **Zn** | **67** | **98.850** | ug/L | 3.877 | 3 | 1 | 6543 | 2 | KED |
| | **As** | **75** | **28.502** | ug/L | 0.393 | 1 | 7 | 5642 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 386735 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 100 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7217 | 1 | KED |
| | **Cd** | **111** | **26.235** | ug/L | 0.146 | 0 | 2 | 5922 | 1 | KED |
| | **Cd** | **114** | **26.057** | ug/L | 0.397 | 1 | 3 | 14300 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 400037 | 0 | Standard |
| | **Ag** | **107** | **25.145** | ug/L | 0.334 | 1 | 59 | 339354 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 639732 | 2 | Standard |
| | **Pb** | **208** | **30.810** | ug/L | 0.715 | 2 | 110 | 1325751 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBL9**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:08:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 37579 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4226620 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 508932 | 3 | Standard |
| \| | **Cr** | **52** | **-0.001** | ug/L | 0.029 | 1980 | 14729 | 14695 | 1 | Standard |
| ⌊ | **Cr** | **53** | **0.015** | ug/L | 0.006 | 37 | 130 | 162 | 8 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 26176 | 1 | KED |
| \| | **Cu** | **63** | **0.002** | ug/L | 0.001 | 94 | 35 | 40 | 9 | KED |
| \| | **Cu** | **65** | **0.004** | ug/L | 0.002 | 50 | 25 | 32 | 10 | KED |
| \| | **Zn** | **66** | **0.029** | ug/L | 0.031 | 105 | 24 | 36 | 33 | KED |
| \| | **Zn** | **67** | **0.047** | ug/L | 0.044 | 93 | 1 | 5 | 57 | KED |
| ⌊ | **As** | **75** | **0.003** | ug/L | 0.009 | 354 | 7 | 8 | 21 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 267714 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 48 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7055 | 1 | KED |
| \| | **Cd** | **111** | **-0.003** | ug/L | 0.009 | 336 | 2 | 2 | 89 | KED |
| ⌊ | **Cd** | **114** | **-0.004** | ug/L | 0.003 | 97 | 3 | 1 | 107 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 391615 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.000 | 9 | 59 | 85 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 605337 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.001 | 78 | 110 | 143 | 18 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVC**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:12:54**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 37469 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4484147 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 521346 | 1 | Standard |
| \| | **Cr** | **52** | **48.840** | ug/L | 0.589 | 1 | 14729 | 928245 | 3 | Standard |
| ⌊ | **Cr** | **53** | **48.803** | ug/L | 0.862 | 1 | 130 | 107282 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 25686 | 2 | KED |
| \| | **Cu** | **63** | **52.052** | ug/L | 2.244 | 4 | 35 | 151225 | 2 | KED |
| \| | **Cu** | **65** | **51.017** | ug/L | 1.014 | 1 | 25 | 74157 | 1 | KED |
| \| | **Zn** | **66** | **51.527** | ug/L | 1.495 | 2 | 24 | 20189 | 1 | KED |
| \| | **Zn** | **67** | **51.229** | ug/L | 2.273 | 4 | 1 | 3395 | 2 | KED |
| ⌊ | **As** | **75** | **50.581** | ug/L | 1.271 | 2 | 7 | 10019 | 1 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 269800 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 59 | 9 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 6859 | 3 | KED |
| \| | **Cd** | **111** | **50.752** | ug/L | 1.548 | 3 | 2 | 10880 | 0 | KED |
| ⌊ | **Cd** | **114** | **51.846** | ug/L | 1.975 | 3 | 3 | 27022 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 390224 | 3 | Standard |
| ⌊ | **Ag** | **107** | **49.666** | ug/L | 1.906 | 3 | 59 | 654111 | 6 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 616224 | 2 | Standard |
| ⌊ | **Pb** | **208** | **52.541** | ug/L | 0.685 | 1 | 110 | 2178067 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBC**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:20:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 37791 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4195550 | 6 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 512500 | 6 | Standard |
| \| | **Cr** | **52** | **-0.024** | ug/L | 0.017 | 71 | 14729 | 14380 | 4 | Standard |
| ⌊ | **Cr** | **53** | **0.010** | ug/L | 0.004 | 40 | 130 | 152 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 26166 | 3 | KED |
| \| | **Cu** | **63** | **-0.003** | ug/L | 0.001 | 41 | 35 | 26 | 18 | KED |
| \| | **Cu** | **65** | **-0.010** | ug/L | 0.007 | 72 | 25 | 10 | 97 | KED |
| \| | **Zn** | **66** | **-0.025** | ug/L | 0.014 | 55 | 24 | 15 | 33 | KED |
| \| | **Zn** | **67** | **0.018** | ug/L | 0.016 | 86 | 1 | 3 | 34 | KED |
| ⌊ | **As** | **75** | **0.002** | ug/L | 0.005 | 208 | 7 | 8 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 259581 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 51 | 6 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7309 | 2 | KED |
| \| | **Cd** | **111** | **0.004** | ug/L | 0.004 | 101 | 2 | 3 | 25 | KED |
| ⌊ | **Cd** | **114** | **-0.001** | ug/L | 0.005 | 392 | 3 | 3 | 96 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 385183 | 6 | Standard |
| ⌊ | **Ag** | **107** | **0.002** | ug/L | 0.001 | 48 | 59 | 89 | 11 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 605144 | 5 | Standard |
| ⌊ | **Pb** | **208** | **0.002** | ug/L | 0.000 | 10 | 110 | 172 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0649-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:24:23**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 52198 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4309630 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 528643 | 1 | Standard |
| | **Cr** | **52** | **0.587** | ug/L | 0.016 | 2 | 14729 | 26421 | 1 | Standard |
| | **Cr** | **53** | **0.631** | ug/L | 0.033 | 5 | 130 | 1539 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 17720 | 4 | KED |
| | **Cu** | **63** | **5.095** | ug/L | 0.026 | 0 | 35 | 10241 | 4 | KED |
| | **Cu** | **65** | **5.036** | ug/L | 0.167 | 3 | 25 | 5062 | 1 | KED |
| | **Zn** | **66** | **144.937** | ug/L | 2.890 | 1 | 24 | 39150 | 3 | KED |
| | **Zn** | **67** | **130.544** | ug/L | 3.240 | 2 | 1 | 5968 | 3 | KED |
| | **As** | **75** | **0.099** | ug/L | 0.022 | 22 | 7 | 18 | 20 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 271388 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 46 | 32 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7298 | 1 | KED |
| | **Cd** | **111** | **0.030** | ug/L | 0.020 | 64 | 2 | 9 | 44 | KED |
| | **Cd** | **114** | **-0.003** | ug/L | 0.008 | 281 | 3 | 2 | 188 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 396781 | 1 | Standard |
| | **Ag** | **107** | **0.003** | ug/L | 0.001 | 23 | 59 | 107 | 8 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 614748 | 0 | Standard |
| | **Pb** | **208** | **0.845** | ug/L | 0.006 | 0 | 110 | 35055 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0650-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:27:37**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 30577 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 165047941 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 199389 | 0 | Standard |
| | **Cr** | **52** | **3.411** | ug/L | 0.116 | 3 | 14729 | 30157 | 2 | Standard |
| | **Cr** | **53** | **178.366** | ug/L | 4.710 | 2 | 130 | 149791 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 4933 | 5 | KED |
| | **Cu** | **63** | **41.904** | ug/L | 0.596 | 1 | 35 | 23386 | 3 | KED |
| | **Cu** | **65** | **41.010** | ug/L | 0.987 | 2 | 25 | 11450 | 5 | KED |
| | **Zn** | **66** | **277.106** | ug/L | 4.750 | 1 | 24 | 20834 | 4 | KED |
| | **Zn** | **67** | **243.223** | ug/L | 5.930 | 2 | 1 | 3096 | 5 | KED |
| | **As** | **75** | **33.526** | ug/L | 0.761 | 2 | 7 | 1275 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 103481 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 99405 | 2 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 2312 | 1 | KED |
| | **Cd** | **111** | **2.856** | ug/L | 0.137 | 4 | 2 | 207 | 3 | KED |
| | **Cd** | **114** | **2.885** | ug/L | 0.062 | 2 | 3 | 508 | 2 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 132655 | 0 | Standard |
| | **Ag** | **107** | **0.032** | ug/L | 0.004 | 12 | 59 | 164 | 11 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 234489 | 0 | Standard |
| | **Pb** | **208** | **22.254** | ug/L | 0.056 | 0 | 110 | 351114 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0651-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:30:52**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 45352 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 169288153 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 255833 | 1 | Standard |
| | **Cr** | **52** | **3.670** | ug/L | 0.077 | 2 | 14729 | 41074 | 2 | Standard |
| | **Cr** | **53** | **187.927** | ug/L | 0.484 | 0 | 130 | 202497 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 5921 | 8 | KED |
| | **Cu** | **63** | **16.501** | ug/L | 0.947 | 5 | 35 | 11029 | 2 | KED |
| | **Cu** | **65** | **15.559** | ug/L | 0.893 | 5 | 25 | 5202 | 2 | KED |
| | **Zn** | **66** | **261.060** | ug/L | 11.764 | 4 | 24 | 23510 | 4 | KED |
| | **Zn** | **67** | **231.963** | ug/L | 10.543 | 4 | 1 | 3536 | 3 | KED |
| | **As** | **75** | **1.241** | ug/L | 0.049 | 3 | 7 | 58 | 10 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 118340 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 77878 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 2826 | 1 | KED |
| | **Cd** | **111** | **1.299** | ug/L | 0.123 | 9 | 2 | 115 | 8 | KED |
| | **Cd** | **114** | **1.390** | ug/L | 0.039 | 2 | 3 | 300 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 153146 | 2 | Standard |
| | **Ag** | **107** | **0.031** | ug/L | 0.004 | 14 | 59 | 182 | 12 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 269428 | 1 | Standard |
| | **Pb** | **208** | **2.532** | ug/L | 0.013 | 0 | 110 | 45941 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0653-01**
**Sample Dil Factor:**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 02:34:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 57362 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 8704843 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 509002 | 1 | Standard |
| | **Cr** | **52** | **0.617** | ug/L | 0.015 | 2 | 14729 | 26003 | 0 | Standard |
| | **Cr** | **53** | **11.552** | ug/L | 0.309 | 2 | 130 | 24892 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 21951 | 3 | KED |
| | **Cu** | **63** | **3.512** | ug/L | 0.107 | 3 | 35 | 8748 | 2 | KED |
| | **Cu** | **65** | **3.452** | ug/L | 0.097 | 2 | 25 | 4307 | 1 | KED |
| | **Zn** | **66** | **98.644** | ug/L | 2.283 | 2 | 24 | 33008 | 1 | KED |
| | **Zn** | **67** | **89.339** | ug/L | 2.802 | 3 | 1 | 5061 | 3 | KED |
| | **As** | **75** | **0.302** | ug/L | 0.035 | 11 | 7 | 57 | 12 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 271049 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 273 | 16 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 8507 | 0 | KED |
| | **Cd** | **111** | **0.022** | ug/L | 0.005 | 25 | 2 | 9 | 15 | KED |
| | **Cd** | **114** | **0.031** | ug/L | 0.008 | 27 | 3 | 24 | 22 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 378730 | 0 | Standard |
| | **Ag** | **107** | **0.020** | ug/L | 0.000 | 2 | 59 | 313 | 2 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 667228 | 1 | Standard |
| | **Pb** | **208** | **0.312** | ug/L | 0.004 | 1 | 110 | 14112 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0655-01**
**Sample Dil Factor: 5**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 02:37:21**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 39868 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 5185019 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 511299 | 2 | Standard |
| \| | **Cr** | **52** | **1.716** | ug/L | 0.045 | 2 | 14729 | 46258 | 3 | Standard |
| ⌊ | **Cr** | **53** | **6.982** | ug/L | 0.138 | 1 | 130 | 15161 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 20726 | 3 | KED |
| \| | **Cu** | **63** | **9.961** | ug/L | 0.234 | 2 | 35 | 23376 | 1 | KED |
| \| | **Cu** | **65** | **9.909** | ug/L | 0.143 | 1 | 25 | 11645 | 4 | KED |
| \| | **Zn** | **66** | **34.946** | ug/L | 0.866 | 2 | 24 | 11062 | 5 | KED |
| \| | **Zn** | **67** | **32.365** | ug/L | 1.419 | 4 | 1 | 1731 | 3 | KED |
| ⌊ | **As** | **75** | **0.444** | ug/L | 0.064 | 14 | 7 | 77 | 15 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 274307 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 85 | 5 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8181 | 0 | KED |
| \| | **Cd** | **111** | **0.166** | ug/L | 0.036 | 21 | 2 | 45 | 20 | KED |
| ⌊ | **Cd** | **114** | **0.158** | ug/L | 0.007 | 4 | 3 | 102 | 4 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 390169 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.011** | ug/L | 0.001 | 12 | 59 | 205 | 9 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 664665 | 3 | Standard |
| ⌊ | **Pb** | **208** | **2.474** | ug/L | 0.052 | 2 | 110 | 110703 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0656-01**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:40:36**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 55641 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 5643750 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 542343 | 1 | Standard |
| \| | **Cr** | **52** | **5.295** | ug/L | 0.065 | 1 | 14729 | 118656 | 0 | Standard |
| ⌊ | **Cr** | **53** | **9.381** | ug/L | 0.109 | 1 | 130 | 21559 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19287 | 6 | KED |
| \| | **Cu** | **63** | **10.974** | ug/L | 0.570 | 5 | 35 | 23930 | 3 | KED |
| \| | **Cu** | **65** | **11.154** | ug/L | 0.451 | 4 | 25 | 12173 | 3 | KED |
| \| | **Zn** | **66** | **81.935** | ug/L | 2.893 | 3 | 24 | 24068 | 3 | KED |
| \| | **Zn** | **67** | **76.896** | ug/L | 0.311 | 0 | 1 | 3829 | 6 | KED |
| ⌊ | **As** | **75** | **2.560** | ug/L | 0.222 | 8 | 7 | 385 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 282365 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 83 | 19 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7766 | 1 | KED |
| \| | **Cd** | **111** | **0.147** | ug/L | 0.035 | 23 | 2 | 38 | 19 | KED |
| ⌊ | **Cd** | **114** | **0.216** | ug/L | 0.007 | 3 | 3 | 131 | 4 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 368381 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.016** | ug/L | 0.000 | 2 | 59 | 254 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 643998 | 1 | Standard |
| ⌊ | **Pb** | **208** | **3.843** | ug/L | 0.074 | 1 | 110 | 166575 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0660-03**
**Sample Dil Factor:**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 02:43:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 49743 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 6933263 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 474534 | 5 | Standard |
| \| | **Cr** | **52** | **7.179** | ug/L | 0.093 | 1 | 14729 | 135846 | 3 | Standard |
| ⌊ | **Cr** | **53** | **13.846** | ug/L | 0.351 | 2 | 130 | 27761 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18190 | 5 | KED |
| \| | **Cu** | **63** | **12.306** | ug/L | 0.232 | 1 | 35 | 25338 | 3 | KED |
| \| | **Cu** | **65** | **12.143** | ug/L | 0.526 | 4 | 25 | 12501 | 2 | KED |
| \| | **Zn** | **66** | **40.722** | ug/L | 0.518 | 1 | 24 | 11304 | 4 | KED |
| \| | **Zn** | **67** | **39.781** | ug/L | 0.409 | 1 | 1 | 1868 | 5 | KED |
| ⌊ | **As** | **75** | **0.994** | ug/L | 0.062 | 6 | 7 | 144 | 8 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 253107 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 79 | 9 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7807 | 2 | KED |
| \| | **Cd** | **111** | **0.055** | ug/L | 0.004 | 7 | 2 | 16 | 6 | KED |
| ⌊ | **Cd** | **114** | **0.041** | ug/L | 0.027 | 66 | 3 | 27 | 55 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 358658 | 4 | Standard |
| ⌊ | **Ag** | **107** | **0.006** | ug/L | 0.001 | 15 | 59 | 132 | 10 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 633858 | 4 | Standard |
| ⌊ | **Pb** | **208** | **2.266** | ug/L | 0.051 | 2 | 110 | 96682 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 22L0660-05**
**Sample Dil Factor: 2**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 02:47:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 43598 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 5660116 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 472702 | 1 | Standard |
| | **Cr** | **52** | **5.309** | ug/L | 0.033 | 0 | 14729 | 103674 | 2 | Standard |
| | **Cr** | **53** | **9.709** | ug/L | 0.059 | 0 | 130 | 19443 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 18264 | 2 | KED |
| | **Cu** | **63** | **18.389** | ug/L | 0.250 | 1 | 35 | 38030 | 2 | KED |
| | **Cu** | **65** | **18.083** | ug/L | 0.408 | 2 | 25 | 18710 | 3 | KED |
| | **Zn** | **66** | **77.192** | ug/L | 1.957 | 2 | 24 | 21512 | 4 | KED |
| | **Zn** | **67** | **75.648** | ug/L | 1.709 | 2 | 1 | 3566 | 1 | KED |
| | **As** | **75** | **0.942** | ug/L | 0.021 | 2 | 7 | 137 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 272650 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 66 | 8 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7798 | 3 | KED |
| | **Cd** | **111** | **0.093** | ug/L | 0.035 | 37 | 2 | 25 | 29 | KED |
| | **Cd** | **114** | **0.059** | ug/L | 0.017 | 28 | 3 | 39 | 27 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 366860 | 2 | Standard |
| | **Ag** | **107** | **0.012** | ug/L | 0.003 | 22 | 59 | 208 | 18 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 639361 | 2 | Standard |
| | **Pb** | **208** | **7.042** | ug/L | 0.156 | 2 | 110 | 302945 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-02**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 02:50:21**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 36285 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4142953 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 500147 | 1 | Standard |
| \| | **Cr** | **52** | **11.202** | ug/L | 0.168 | 1 | 14729 | 215380 | 2 | Standard |
| ⌊ | **Cr** | **53** | **13.137** | ug/L | 0.116 | 0 | 130 | 27794 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18934 | 5 | KED |
| \| | **Cu** | **63** | **5.699** | ug/L | 0.204 | 3 | 35 | 12221 | 3 | KED |
| \| | **Cu** | **65** | **5.673** | ug/L | 0.216 | 3 | 25 | 6087 | 2 | KED |
| \| | **Zn** | **66** | **23.320** | ug/L | 0.600 | 2 | 24 | 6742 | 3 | KED |
| \| | **Zn** | **67** | **22.829** | ug/L | 0.348 | 1 | 1 | 1117 | 7 | KED |
| ⌊ | **As** | **75** | **3.422** | ug/L | 0.050 | 1 | 7 | 504 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 355571 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 88 | 8 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8031 | 1 | KED |
| \| | **Cd** | **111** | **0.224** | ug/L | 0.005 | 2 | 2 | 59 | 0 | KED |
| ⌊ | **Cd** | **114** | **0.251** | ug/L | 0.005 | 2 | 3 | 157 | 2 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 374091 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.036** | ug/L | 0.001 | 1 | 59 | 512 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 659107 | 1 | Standard |
| ⌊ | **Pb** | **208** | **3.075** | ug/L | 0.013 | 0 | 110 | 136460 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBLA**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:53:43**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 29247 | 6 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3751040 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 425826 | 5 | Standard |
| | **Cr** | **52** | **0.074** | ug/L | 0.027 | 36 | 14729 | 13457 | 6 | Standard |
| | **Cr** | **53** | **2.237** | ug/L | 0.088 | 3 | 130 | 4115 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 18506 | 2 | KED |
| | **Cu** | **63** | **0.005** | ug/L | 0.006 | 116 | 35 | 35 | 30 | KED |
| | **Cu** | **65** | **-0.002** | ug/L | 0.003 | 142 | 25 | 15 | 18 | KED |
| | **Zn** | **66** | **0.016** | ug/L | 0.010 | 61 | 24 | 22 | 9 | KED |
| | **Zn** | **67** | **0.050** | ug/L | 0.038 | 74 | 1 | 3 | 50 | KED |
| | **As** | **75** | **-0.007** | ug/L | 0.007 | 100 | 7 | 4 | 22 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 232884 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 50 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7932 | 0 | KED |
| | **Cd** | **111** | **-0.003** | ug/L | 0.006 | 228 | 2 | 2 | 57 | KED |
| | **Cd** | **114** | **0.000** | ug/L | 0.004 | 1664 | 3 | 4 | 54 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 353903 | 4 | Standard |
| | **Ag** | **107** | **-0.001** | ug/L | 0.001 | 53 | 59 | 41 | 18 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 602381 | 3 | Standard |
| | **Pb** | **208** | **0.002** | ug/L | 0.000 | 20 | 110 | 185 | 8 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVD**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 02:57:04**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 30052 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4070988 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 452826 | 0 | Standard |
| | **Cr** | **52** | **50.727** | ug/L | 1.547 | 3 | 14729 | 836686 | 2 | Standard |
| | **Cr** | **53** | **52.295** | ug/L | 0.883 | 1 | 130 | 99817 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 18086 | 7 | KED |
| | **Cu** | **63** | **56.383** | ug/L | 2.935 | 5 | 35 | 115130 | 1 | KED |
| | **Cu** | **65** | **55.544** | ug/L | 1.834 | 3 | 25 | 56783 | 4 | KED |
| | **Zn** | **66** | **53.327** | ug/L | 2.812 | 5 | 24 | 14692 | 4 | KED |
| | **Zn** | **67** | **52.875** | ug/L | 2.045 | 3 | 1 | 2466 | 5 | KED |
| | **As** | **75** | **52.460** | ug/L | 0.760 | 1 | 7 | 7316 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 253844 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 66 | 28 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 8068 | 1 | KED |
| | **Cd** | **111** | **48.291** | ug/L | 0.715 | 1 | 2 | 12185 | 2 | KED |
| | **Cd** | **114** | **48.229** | ug/L | 0.306 | 0 | 3 | 29590 | 1 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 365899 | 0 | Standard |
| | **Ag** | **107** | **52.142** | ug/L | 1.599 | 3 | 59 | 643600 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 632630 | 1 | Standard |
| | **Pb** | **208** | **48.210** | ug/L | 1.087 | 2 | 110 | 2051604 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBD**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:03:09**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 28889 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3758010 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 434363 | 2 | Standard |
| | **Cr** | **52** | **0.069** | ug/L | 0.006 | 9 | 14729 | 13649 | 2 | Standard |
| | **Cr** | **53** | **1.505** | ug/L | 0.014 | 0 | 130 | 2865 | 3 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 16729 | 4 | KED |
| | **Cu** | **63** | **-0.002** | ug/L | 0.003 | 138 | 35 | 19 | 36 | KED |
| | **Cu** | **65** | **-0.008** | ug/L | 0.008 | 91 | 25 | 8 | 86 | KED |
| | **Zn** | **66** | **-0.019** | ug/L | 0.032 | 173 | 24 | 11 | 72 | KED |
| | **Zn** | **67** | **0.103** | ug/L | 0.075 | 72 | 1 | 5 | 57 | KED |
| | **As** | **75** | **0.002** | ug/L | 0.013 | 616 | 7 | 5 | 28 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 239890 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 57 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 8221 | 2 | KED |
| | **Cd** | **111** | **0.008** | ug/L | 0.005 | 65 | 2 | 5 | 26 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.003 | 168 | 3 | 3 | 74 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 356058 | 2 | Standard |
| | **Ag** | **107** | **0.001** | ug/L | 0.000 | 59 | 59 | 60 | 8 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 609431 | 3 | Standard |
| | **Pb** | **208** | **0.002** | ug/L | 0.000 | 21 | 110 | 177 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-03**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:06:31**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 45819 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3834492 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 469497 | 2 | Standard |
| | **Cr** | **52** | **10.906** | ug/L | 0.077 | 0 | 14729 | 197174 | 2 | Standard |
| | **Cr** | **53** | **11.800** | ug/L | 0.157 | 1 | 130 | 23443 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 17884 | 5 | KED |
| | **Cu** | **63** | **5.331** | ug/L | 0.239 | 4 | 35 | 10794 | 2 | KED |
| | **Cu** | **65** | **5.383** | ug/L | 0.231 | 4 | 25 | 5456 | 2 | KED |
| | **Zn** | **66** | **21.944** | ug/L | 0.638 | 2 | 24 | 5995 | 5 | KED |
| | **Zn** | **67** | **20.799** | ug/L | 0.616 | 2 | 1 | 960 | 4 | KED |
| | **As** | **75** | **3.018** | ug/L | 0.056 | 1 | 7 | 421 | 7 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 334065 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 70 | 10 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7687 | 3 | KED |
| | **Cd** | **111** | **0.212** | ug/L | 0.027 | 12 | 2 | 53 | 13 | KED |
| | **Cd** | **114** | **0.201** | ug/L | 0.043 | 21 | 3 | 121 | 23 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 355257 | 3 | Standard |
| | **Ag** | **107** | **0.029** | ug/L | 0.002 | 8 | 59 | 403 | 6 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 622980 | 1 | Standard |
| | **Pb** | **208** | **3.035** | ug/L | 0.018 | 0 | 110 | 127329 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-04**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 03:09:52**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 52362 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3894152 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 484566 | 3 | Standard |
| \| | **Cr** | **52** | **10.859** | ug/L | 0.259 | 2 | 14729 | 202630 | 2 | Standard |
| ⌊ | **Cr** | **53** | **11.969** | ug/L | 0.316 | 2 | 130 | 24530 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19083 | 3 | KED |
| \| | **Cu** | **63** | **16.042** | ug/L | 0.548 | 3 | 35 | 34636 | 1 | KED |
| \| | **Cu** | **65** | **16.055** | ug/L | 0.573 | 3 | 25 | 17341 | 1 | KED |
| \| | **Zn** | **66** | **25.283** | ug/L | 0.451 | 1 | 24 | 7370 | 2 | KED |
| \| | **Zn** | **67** | **23.090** | ug/L | 1.121 | 4 | 1 | 1137 | 1 | KED |
| ⌊ | **As** | **75** | **3.567** | ug/L | 0.159 | 4 | 7 | 529 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 353434 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 83 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8028 | 2 | KED |
| \| | **Cd** | **111** | **0.285** | ug/L | 0.025 | 8 | 2 | 74 | 6 | KED |
| ⌊ | **Cd** | **114** | **0.255** | ug/L | 0.016 | 6 | 3 | 159 | 5 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 366434 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.036** | ug/L | 0.003 | 9 | 59 | 504 | 8 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 626646 | 1 | Standard |
| ⌊ | **Pb** | **208** | **3.339** | ug/L | 0.084 | 2 | 110 | 140876 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-05**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 03:13:13**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 47432 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3761227 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 467605 | 1 | Standard |
| \| | **Cr** | **52** | **11.771** | ug/L | 0.130 | 1 | 14729 | 210887 | 0 | Standard |
| ⌊ | **Cr** | **53** | **12.713** | ug/L | 0.419 | 3 | 130 | 25141 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18384 | 4 | KED |
| \| | **Cu** | **63** | **12.197** | ug/L | 0.165 | 1 | 35 | 25403 | 5 | KED |
| \| | **Cu** | **65** | **12.137** | ug/L | 0.253 | 2 | 25 | 12639 | 4 | KED |
| \| | **Zn** | **66** | **24.866** | ug/L | 0.404 | 1 | 24 | 6982 | 3 | KED |
| \| | **Zn** | **67** | **22.291** | ug/L | 1.656 | 7 | 1 | 1056 | 3 | KED |
| ⌊ | **As** | **75** | **3.295** | ug/L | 0.069 | 2 | 7 | 472 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 330589 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 78 | 18 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7620 | 3 | KED |
| \| | **Cd** | **111** | **0.203** | ug/L | 0.028 | 13 | 2 | 51 | 12 | KED |
| ⌊ | **Cd** | **114** | **0.241** | ug/L | 0.028 | 11 | 3 | 144 | 14 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 349395 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.035** | ug/L | 0.001 | 3 | 59 | 464 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 615718 | 0 | Standard |
| ⌊ | **Pb** | **208** | **3.303** | ug/L | 0.063 | 1 | 110 | 136910 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-06**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:16:33**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 52437 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3863136 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 505134 | 2 | Standard |
| \| | **Cr** | **52** | **11.420** | ug/L | 0.297 | 2 | 14729 | 221504 | 4 | Standard |
| ⌊ | **Cr** | **53** | **12.124** | ug/L | 0.188 | 1 | 130 | 25913 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18893 | 6 | KED |
| \| | **Cu** | **63** | **6.031** | ug/L | 0.265 | 4 | 35 | 12897 | 2 | KED |
| \| | **Cu** | **65** | **5.983** | ug/L | 0.364 | 6 | 25 | 6398 | 0 | KED |
| \| | **Zn** | **66** | **24.325** | ug/L | 0.964 | 3 | 24 | 7018 | 5 | KED |
| \| | **Zn** | **67** | **23.434** | ug/L | 0.627 | 2 | 1 | 1142 | 4 | KED |
| ⌊ | **As** | **75** | **3.313** | ug/L | 0.181 | 5 | 7 | 487 | 7 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 352138 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 97 | 10 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8010 | 1 | KED |
| \| | **Cd** | **111** | **0.246** | ug/L | 0.041 | 16 | 2 | 64 | 15 | KED |
| ⌊ | **Cd** | **114** | **0.225** | ug/L | 0.021 | 9 | 3 | 141 | 10 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 367636 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.038** | ug/L | 0.002 | 4 | 59 | 531 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 639905 | 2 | Standard |
| ⌊ | **Pb** | **208** | **3.630** | ug/L | 0.063 | 1 | 110 | 156341 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-07**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:19:54**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 35287 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3824908 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 489545 | 3 | Standard |
| \| | **Cr** | **52** | **10.545** | ug/L | 0.371 | 3 | 14729 | 199139 | 0 | Standard |
| ⌊ | **Cr** | **53** | **11.345** | ug/L | 0.099 | 0 | 130 | 23505 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19198 | 4 | KED |
| \| | **Cu** | **63** | **5.450** | ug/L | 0.110 | 2 | 35 | 11860 | 3 | KED |
| \| | **Cu** | **65** | **5.338** | ug/L | 0.111 | 2 | 25 | 5814 | 3 | KED |
| \| | **Zn** | **66** | **22.152** | ug/L | 0.101 | 0 | 24 | 6501 | 4 | KED |
| \| | **Zn** | **67** | **23.516** | ug/L | 1.377 | 5 | 1 | 1164 | 1 | KED |
| ⌊ | **As** | **75** | **2.963** | ug/L | 0.090 | 3 | 7 | 444 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 348017 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 82 | 12 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7935 | 5 | KED |
| \| | **Cd** | **111** | **0.254** | ug/L | 0.018 | 7 | 2 | 66 | 9 | KED |
| ⌊ | **Cd** | **114** | **0.244** | ug/L | 0.008 | 3 | 3 | 151 | 6 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 362649 | 0 | Standard |
| ⌊ | **Ag** | **107** | **0.031** | ug/L | 0.001 | 2 | 59 | 434 | 2 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 631352 | 2 | Standard |
| ⌊ | **Pb** | **208** | **3.366** | ug/L | 0.068 | 2 | 110 | 143039 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-08**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 03:23:15**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 35039 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3810338 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 495239 | 3 | Standard |
| \| | **Cr** | **52** | **10.704** | ug/L | 0.108 | 1 | 14729 | 204441 | 3 | Standard |
| ⌊ | **Cr** | **53** | **11.590** | ug/L | 0.037 | 0 | 130 | 24291 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19125 | 3 | KED |
| \| | **Cu** | **63** | **5.851** | ug/L | 0.138 | 2 | 35 | 12682 | 2 | KED |
| \| | **Cu** | **65** | **5.854** | ug/L | 0.148 | 2 | 25 | 6351 | 2 | KED |
| \| | **Zn** | **66** | **22.654** | ug/L | 0.431 | 1 | 24 | 6619 | 1 | KED |
| \| | **Zn** | **67** | **22.374** | ug/L | 1.264 | 5 | 1 | 1106 | 8 | KED |
| ⌊ | **As** | **75** | **3.196** | ug/L | 0.096 | 2 | 7 | 476 | 6 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 338897 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 85 | 4 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8043 | 5 | KED |
| \| | **Cd** | **111** | **0.248** | ug/L | 0.023 | 9 | 2 | 65 | 12 | KED |
| ⌊ | **Cd** | **114** | **0.249** | ug/L | 0.054 | 21 | 3 | 155 | 15 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 361753 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.036** | ug/L | 0.001 | 3 | 59 | 497 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 627931 | 1 | Standard |
| ⌊ | **Pb** | **208** | **3.308** | ug/L | 0.012 | 0 | 110 | 139838 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-09**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 03:26:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 49957 | 4 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3732248 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 473410 | 4 | Standard |
| \| | **Cr** | **52** | **11.968** | ug/L | 0.309 | 2 | 14729 | 216719 | 3 | Standard |
| ⌊ | **Cr** | **53** | **12.680** | ug/L | 0.206 | 1 | 130 | 25384 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18438 | 4 | KED |
| \| | **Cu** | **63** | **5.579** | ug/L | 0.003 | 0 | 35 | 11664 | 4 | KED |
| \| | **Cu** | **65** | **5.613** | ug/L | 0.227 | 4 | 25 | 5867 | 2 | KED |
| \| | **Zn** | **66** | **23.488** | ug/L | 0.373 | 1 | 24 | 6615 | 3 | KED |
| \| | **Zn** | **67** | **21.846** | ug/L | 1.634 | 7 | 1 | 1039 | 6 | KED |
| ⌊ | **As** | **75** | **3.054** | ug/L | 0.160 | 5 | 7 | 438 | 0 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 326903 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 74 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7590 | 0 | KED |
| \| | **Cd** | **111** | **0.235** | ug/L | 0.015 | 6 | 2 | 58 | 6 | KED |
| ⌊ | **Cd** | **114** | **0.265** | ug/L | 0.034 | 12 | 3 | 156 | 12 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 351981 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.037** | ug/L | 0.005 | 13 | 59 | 488 | 9 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 613500 | 1 | Standard |
| ⌊ | **Pb** | **208** | **3.541** | ug/L | 0.019 | 0 | 110 | 146255 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-10**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:29:57**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 56251 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3907703 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 506726 | 2 | Standard |
| \| | **Cr** | **52** | **12.065** | ug/L | 0.186 | 1 | 14729 | 233829 | 1 | Standard |
| ⌊ | **Cr** | **53** | **12.746** | ug/L | 0.278 | 2 | 130 | 27313 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18287 | 4 | KED |
| \| | **Cu** | **63** | **9.579** | ug/L | 0.357 | 3 | 35 | 19823 | 1 | KED |
| \| | **Cu** | **65** | **9.657** | ug/L | 0.209 | 2 | 25 | 10004 | 2 | KED |
| \| | **Zn** | **66** | **26.844** | ug/L | 0.364 | 1 | 24 | 7497 | 3 | KED |
| \| | **Zn** | **67** | **25.602** | ug/L | 0.571 | 2 | 1 | 1209 | 5 | KED |
| ⌊ | **As** | **75** | **3.222** | ug/L | 0.058 | 1 | 7 | 459 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 362772 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 84 | 19 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7660 | 3 | KED |
| \| | **Cd** | **111** | **0.277** | ug/L | 0.030 | 10 | 2 | 69 | 8 | KED |
| ⌊ | **Cd** | **114** | **0.239** | ug/L | 0.020 | 8 | 3 | 143 | 9 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 368635 | 4 | Standard |
| ⌊ | **Ag** | **107** | **0.111** | ug/L | 0.005 | 4 | 59 | 1442 | 5 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 636185 | 3 | Standard |
| ⌊ | **Pb** | **208** | **3.671** | ug/L | 0.056 | 1 | 110 | 157172 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-11**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:33:18**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 53431 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3782257 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 477294 | 1 | Standard |
| \| | **Cr** | **52** | **9.806** | ug/L | 0.132 | 1 | 14729 | 181660 | 2 | Standard |
| ⌊ | **Cr** | **53** | **10.342** | ug/L | 0.149 | 1 | 130 | 20901 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19228 | 3 | KED |
| \| | **Cu** | **63** | **5.378** | ug/L | 0.118 | 2 | 35 | 11727 | 4 | KED |
| \| | **Cu** | **65** | **5.396** | ug/L | 0.134 | 2 | 25 | 5886 | 1 | KED |
| \| | **Zn** | **66** | **23.235** | ug/L | 0.251 | 1 | 24 | 6830 | 4 | KED |
| \| | **Zn** | **67** | **22.465** | ug/L | 0.166 | 0 | 1 | 1116 | 4 | KED |
| ⌊ | **As** | **75** | **3.058** | ug/L | 0.056 | 1 | 7 | 459 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 337631 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 83 | 6 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7769 | 0 | KED |
| \| | **Cd** | **111** | **0.275** | ug/L | 0.009 | 3 | 2 | 69 | 4 | KED |
| ⌊ | **Cd** | **114** | **0.253** | ug/L | 0.034 | 13 | 3 | 153 | 12 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 356054 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.034** | ug/L | 0.002 | 5 | 59 | 465 | 6 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 617888 | 2 | Standard |
| ⌊ | **Pb** | **208** | **3.470** | ug/L | 0.050 | 1 | 110 | 144322 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBLB**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:36:39**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 29827 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3549098 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 427770 | 6 | Standard |
| | **Cr** | **52** | **0.050** | ug/L | 0.002 | 3 | 14729 | 13154 | 6 | Standard |
| | **Cr** | **53** | **0.767** | ug/L | 0.042 | 5 | 130 | 1488 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 19184 | 3 | KED |
| | **Cu** | **63** | **0.004** | ug/L | 0.005 | 130 | 35 | 34 | 30 | KED |
| | **Cu** | **65** | **-0.005** | ug/L | 0.001 | 20 | 25 | 13 | 7 | KED |
| | **Zn** | **66** | **0.029** | ug/L | 0.040 | 135 | 24 | 27 | 44 | KED |
| | **Zn** | **67** | **0.049** | ug/L | 0.041 | 83 | 1 | 3 | 50 | KED |
| | **As** | **75** | **0.001** | ug/L | 0.014 | 1315 | 7 | 5 | 36 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 232348 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 42 | 6 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7944 | 3 | KED |
| | **Cd** | **111** | **0.010** | ug/L | 0.007 | 68 | 2 | 5 | 28 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.003 | 180 | 3 | 3 | 74 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 351005 | 3 | Standard |
| | **Ag** | **107** | **-0.001** | ug/L | 0.002 | 130 | 59 | 40 | 43 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 591446 | 6 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.001 | 293 | 110 | 113 | 17 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:40:01**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 32239 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4033391 | 2 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 462611 | 0 | Standard |
| | **Cr** | **52** | **50.473** | ug/L | 0.748 | 1 | 14729 | 850626 | 1 | Standard |
| | **Cr** | **53** | **50.391** | ug/L | 0.491 | 0 | 130 | 98269 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 18506 | 5 | KED |
| | **Cu** | **63** | **55.410** | ug/L | 2.789 | 5 | 35 | 115830 | 0 | KED |
| | **Cu** | **65** | **54.895** | ug/L | 1.413 | 2 | 25 | 57447 | 3 | KED |
| | **Zn** | **66** | **50.816** | ug/L | 0.279 | 0 | 24 | 14348 | 5 | KED |
| | **Zn** | **67** | **51.885** | ug/L | 1.576 | 3 | 1 | 2477 | 4 | KED |
| | **As** | **75** | **51.142** | ug/L | 1.266 | 2 | 7 | 7294 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 254210 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 46 | 29 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7967 | 3 | KED |
| | **Cd** | **111** | **48.010** | ug/L | 0.504 | 1 | 2 | 11962 | 3 | KED |
| | **Cd** | **114** | **47.306** | ug/L | 0.817 | 1 | 3 | 28658 | 3 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 370041 | 2 | Standard |
| | **Ag** | **107** | **51.551** | ug/L | 1.686 | 3 | 59 | 643125 | 1 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 628484 | 1 | Standard |
| | **Pb** | **208** | **49.578** | ug/L | 0.461 | 0 | 110 | 2096185 | 0 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:46:06**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 32559 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3777445 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 465322 | 2 | Standard |
| | **Cr** | **52** | **0.044** | ug/L | 0.022 | 50 | 14729 | 14202 | 3 | Standard |
| | **Cr** | **53** | **0.627** | ug/L | 0.009 | 1 | 130 | 1347 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 16137 | 5 | KED |
| | **Cu** | **63** | **-0.006** | ug/L | 0.002 | 41 | 35 | 11 | 33 | KED |
| | **Cu** | **65** | **-0.008** | ug/L | 0.005 | 67 | 25 | 8 | 49 | KED |
| | **Zn** | **66** | **-0.030** | ug/L | 0.011 | 36 | 24 | 8 | 35 | KED |
| | **Zn** | **67** | **0.017** | ug/L | 0.003 | 14 | 1 | 1 | | KED |
| | **As** | **75** | **0.001** | ug/L | 0.021 | 1914 | 7 | 4 | 52 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 244745 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 54 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7782 | 1 | KED |
| | **Cd** | **111** | **-0.002** | ug/L | 0.006 | 260 | 2 | 2 | 57 | KED |
| | **Cd** | **114** | **-0.002** | ug/L | 0.004 | 219 | 3 | 3 | 74 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 369783 | 1 | Standard |
| | **Ag** | **107** | **0.000** | ug/L | 0.001 | 241 | 59 | 62 | 22 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 609718 | 3 | Standard |
| | **Pb** | **208** | **-0.000** | ug/L | 0.001 | 236 | 110 | 90 | 42 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-12**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:49:28**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 53767 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3931066 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 498640 | 3 | Standard |
| \| | **Cr** | **52** | **8.863** | ug/L | 0.079 | 0 | 14729 | 172903 | 3 | Standard |
| ⌊ | **Cr** | **53** | **9.494** | ug/L | 0.035 | 0 | 130 | 20062 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18465 | 5 | KED |
| \| | **Cu** | **63** | **33.966** | ug/L | 1.270 | 3 | 35 | 70915 | 3 | KED |
| \| | **Cu** | **65** | **34.172** | ug/L | 0.705 | 2 | 25 | 35696 | 3 | KED |
| \| | **Zn** | **66** | **20.170** | ug/L | 0.655 | 3 | 24 | 5688 | 2 | KED |
| \| | **Zn** | **67** | **18.470** | ug/L | 2.287 | 12 | 1 | 877 | 6 | KED |
| ⌊ | **As** | **75** | **2.871** | ug/L | 0.135 | 4 | 7 | 413 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 358018 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 81 | 8 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7671 | 0 | KED |
| \| | **Cd** | **111** | **0.200** | ug/L | 0.051 | 25 | 2 | 51 | 23 | KED |
| ⌊ | **Cd** | **114** | **0.219** | ug/L | 0.037 | 16 | 3 | 131 | 16 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 368835 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.027** | ug/L | 0.004 | 15 | 59 | 387 | 9 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 627256 | 5 | Standard |
| ⌊ | **Pb** | **208** | **2.747** | ug/L | 0.057 | 2 | 110 | 115959 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-13**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:52:48**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 38251 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3984346 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 524918 | 1 | Standard |
| | **Cr** | **52** | **8.661** | ug/L | 0.135 | 1 | 14729 | 178221 | 2 | Standard |
| | **Cr** | **53** | **9.148** | ug/L | 0.249 | 2 | 130 | 20346 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 17528 | 4 | KED |
| | **Cu** | **63** | **4.315** | ug/L | 0.128 | 2 | 35 | 8577 | 3 | KED |
| | **Cu** | **65** | **4.441** | ug/L | 0.057 | 1 | 25 | 4421 | 3 | KED |
| | **Zn** | **66** | **20.119** | ug/L | 0.741 | 3 | 24 | 5394 | 6 | KED |
| | **Zn** | **67** | **18.542** | ug/L | 0.633 | 3 | 1 | 839 | 2 | KED |
| | **As** | **75** | **2.882** | ug/L | 0.059 | 2 | 7 | 394 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 360591 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 84 | 17 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7899 | 5 | KED |
| | **Cd** | **111** | **0.227** | ug/L | 0.028 | 12 | 2 | 59 | 15 | KED |
| | **Cd** | **114** | **0.213** | ug/L | 0.029 | 13 | 3 | 131 | 11 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 383690 | 2 | Standard |
| | **Ag** | **107** | **0.032** | ug/L | 0.002 | 5 | 59 | 473 | 5 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 641290 | 2 | Standard |
| | **Pb** | **208** | **2.975** | ug/L | 0.073 | 2 | 110 | 128419 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-14**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:56:09**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 54349 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3857211 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 478592 | 2 | Standard |
| \| | **Cr** | **52** | **9.996** | ug/L | 0.060 | 0 | 14729 | 185391 | 1 | Standard |
| ⌊ | **Cr** | **53** | **10.499** | ug/L | 0.068 | 0 | 130 | 21279 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18997 | 6 | KED |
| \| | **Cu** | **63** | **4.685** | ug/L | 0.105 | 2 | 35 | 10088 | 5 | KED |
| \| | **Cu** | **65** | **4.745** | ug/L | 0.078 | 1 | 25 | 5115 | 5 | KED |
| \| | **Zn** | **66** | **20.524** | ug/L | 0.834 | 4 | 24 | 5952 | 4 | KED |
| \| | **Zn** | **67** | **19.569** | ug/L | 0.835 | 4 | 1 | 960 | 7 | KED |
| ⌊ | **As** | **75** | **2.910** | ug/L | 0.090 | 3 | 7 | 432 | 9 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 337270 | 0 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 66 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7899 | 2 | KED |
| \| | **Cd** | **111** | **0.217** | ug/L | 0.006 | 2 | 2 | 56 | 0 | KED |
| ⌊ | **Cd** | **114** | **0.251** | ug/L | 0.030 | 12 | 3 | 154 | 14 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 355643 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.030** | ug/L | 0.004 | 13 | 59 | 419 | 13 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 612011 | 2 | Standard |
| ⌊ | **Pb** | **208** | **3.192** | ug/L | 0.070 | 2 | 110 | 131486 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-15**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 03:59:30**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 53372 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3994721 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 519026 | 4 | Standard |
| \| | **Cr** | **52** | **10.036** | ug/L | 0.274 | 2 | 14729 | 201777 | 4 | Standard |
| ⌊ | **Cr** | **53** | **10.138** | ug/L | 0.424 | 4 | 130 | 22272 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18455 | 4 | KED |
| \| | **Cu** | **63** | **5.127** | ug/L | 0.149 | 2 | 35 | 10723 | 1 | KED |
| \| | **Cu** | **65** | **5.120** | ug/L | 0.171 | 3 | 25 | 5361 | 2 | KED |
| \| | **Zn** | **66** | **22.713** | ug/L | 0.793 | 3 | 24 | 6411 | 7 | KED |
| \| | **Zn** | **67** | **20.811** | ug/L | 1.364 | 6 | 1 | 991 | 4 | KED |
| ⌊ | **As** | **75** | **2.945** | ug/L | 0.100 | 3 | 7 | 424 | 7 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 356728 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 82 | 17 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7733 | 2 | KED |
| \| | **Cd** | **111** | **0.236** | ug/L | 0.035 | 14 | 2 | 60 | 13 | KED |
| ⌊ | **Cd** | **114** | **0.244** | ug/L | 0.013 | 5 | 3 | 147 | 3 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 376766 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.032** | ug/L | 0.002 | 6 | 59 | 466 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 633262 | 4 | Standard |
| ⌊ | **Pb** | **208** | **3.272** | ug/L | 0.072 | 2 | 110 | 139425 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-16**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 04:02:51**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 52834 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4116039 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 539603 | 1 | Standard |
| \| | **Cr** | **52** | **12.719** | ug/L | 0.089 | 0 | 14729 | 261725 | 1 | Standard |
| ⌊ | **Cr** | **53** | **13.270** | ug/L | 0.335 | 2 | 130 | 30288 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18879 | 4 | KED |
| \| | **Cu** | **63** | **5.949** | ug/L | 0.168 | 2 | 35 | 12723 | 2 | KED |
| \| | **Cu** | **65** | **5.963** | ug/L | 0.094 | 1 | 25 | 6385 | 3 | KED |
| \| | **Zn** | **66** | **78.769** | ug/L | 1.874 | 2 | 24 | 22668 | 2 | KED |
| \| | **Zn** | **67** | **72.928** | ug/L | 1.118 | 1 | 1 | 3555 | 5 | KED |
| ⌊ | **As** | **75** | **5.791** | ug/L | 0.022 | 0 | 7 | 848 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 395646 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 88 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7626 | 0 | KED |
| \| | **Cd** | **111** | **0.297** | ug/L | 0.034 | 11 | 2 | 73 | 11 | KED |
| ⌊ | **Cd** | **114** | **0.273** | ug/L | 0.056 | 20 | 3 | 162 | 20 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 367750 | 3 | Standard |
| ⌊ | **Ag** | **107** | **0.050** | ug/L | 0.002 | 4 | 59 | 670 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 637006 | 2 | Standard |
| ⌊ | **Pb** | **208** | **4.624** | ug/L | 0.136 | 2 | 110 | 198180 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-17**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:06:12**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 54653 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4105182 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 540722 | 5 | Standard |
| \| | **Cr** | **52** | **12.079** | ug/L | 0.261 | 2 | 14729 | 250020 | 7 | Standard |
| ⌊ | **Cr** | **53** | **12.334** | ug/L | 0.102 | 0 | 130 | 28218 | 5 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18467 | 4 | KED |
| \| | **Cu** | **63** | **12.927** | ug/L | 0.210 | 1 | 35 | 27030 | 3 | KED |
| \| | **Cu** | **65** | **12.837** | ug/L | 0.435 | 3 | 25 | 13419 | 1 | KED |
| \| | **Zn** | **66** | **37.834** | ug/L | 0.644 | 1 | 24 | 10664 | 3 | KED |
| \| | **Zn** | **67** | **34.194** | ug/L | 0.931 | 2 | 1 | 1631 | 6 | KED |
| ⌊ | **As** | **75** | **4.757** | ug/L | 0.133 | 2 | 7 | 682 | 2 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 383562 | 5 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 83 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7490 | 2 | KED |
| \| | **Cd** | **111** | **0.223** | ug/L | 0.014 | 6 | 2 | 55 | 5 | KED |
| ⌊ | **Cd** | **114** | **0.244** | ug/L | 0.011 | 4 | 3 | 142 | 6 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 372779 | 4 | Standard |
| ⌊ | **Ag** | **107** | **0.039** | ug/L | 0.001 | 3 | 59 | 551 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 635151 | 5 | Standard |
| ⌊ | **Pb** | **208** | **3.619** | ug/L | 0.061 | 1 | 110 | 154695 | 4 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-18**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 04:09:33**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 54613 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4079084 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 526219 | 1 | Standard |
| \| | **Cr** | **52** | **12.488** | ug/L | 0.084 | 0 | 14729 | 250854 | 0 | Standard |
| ⌊ | **Cr** | **53** | **12.578** | ug/L | 0.117 | 0 | 130 | 28000 | 0 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18889 | 4 | KED |
| \| | **Cu** | **63** | **6.138** | ug/L | 0.168 | 2 | 35 | 13141 | 4 | KED |
| \| | **Cu** | **65** | **6.195** | ug/L | 0.211 | 3 | 25 | 6637 | 4 | KED |
| \| | **Zn** | **66** | **42.290** | ug/L | 1.568 | 3 | 24 | 12181 | 0 | KED |
| \| | **Zn** | **67** | **39.628** | ug/L | 2.292 | 5 | 1 | 1931 | 5 | KED |
| ⌊ | **As** | **75** | **5.686** | ug/L | 0.144 | 2 | 7 | 833 | 3 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 379360 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 75 | 16 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7611 | 0 | KED |
| \| | **Cd** | **111** | **0.278** | ug/L | 0.058 | 21 | 2 | 69 | 20 | KED |
| ⌊ | **Cd** | **114** | **0.245** | ug/L | 0.024 | 9 | 3 | 145 | 9 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 361300 | 2 | Standard |
| ⌊ | **Ag** | **107** | **0.046** | ug/L | 0.002 | 3 | 59 | 615 | 4 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 617962 | 1 | Standard |
| ⌊ | **Pb** | **208** | **4.088** | ug/L | 0.040 | 0 | 110 | 170065 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-19**
**Sample Dil Factor: 20**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:12:54**

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 56444 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4097287 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 547304 | 3 | Standard |
| \| | **Cr** | **52** | **13.736** | ug/L | 0.108 | 0 | 14729 | 285364 | 2 | Standard |
| ⌊ | **Cr** | **53** | **13.895** | ug/L | 0.313 | 2 | 130 | 32145 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19026 | 4 | KED |
| \| | **Cu** | **63** | **6.791** | ug/L | 0.865 | 12 | 35 | 14675 | 15 | KED |
| \| | **Cu** | **65** | **6.865** | ug/L | 0.893 | 13 | 25 | 7422 | 15 | KED |
| \| | **Zn** | **66** | **41.984** | ug/L | 0.316 | 0 | 24 | 12192 | 3 | KED |
| \| | **Zn** | **67** | **38.124** | ug/L | 1.189 | 3 | 1 | 1873 | 5 | KED |
| ⌊ | **As** | **75** | **6.127** | ug/L | 0.050 | 0 | 7 | 904 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 386678 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 95 | 26 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7577 | 0 | KED |
| \| | **Cd** | **111** | **0.258** | ug/L | 0.024 | 9 | 2 | 64 | 8 | KED |
| ⌊ | **Cd** | **114** | **0.276** | ug/L | 0.002 | 0 | 3 | 163 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 362836 | 1 | Standard |
| ⌊ | **Ag** | **107** | **0.053** | ug/L | 0.003 | 4 | 59 | 700 | 3 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 623269 | 1 | Standard |
| ⌊ | **Pb** | **208** | **4.395** | ug/L | 0.070 | 1 | 110 | 184415 | 2 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: 23A0011-20**
**Sample Dil Factor: 20**
**Comments:**

DEL

**Sample Date/Time: Friday, January 13, 2023 04:16:14**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 55971 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4208511 | 1 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 547082 | 2 | Standard |
| | **Cr** | **52** | **12.921** | ug/L | 0.209 | 1 | 14729 | 269332 | 3 | Standard |
| | **Cr** | **53** | **13.120** | ug/L | 0.362 | 2 | 130 | 30354 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 19148 | 4 | KED |
| | **Cu** | **63** | **5.286** | ug/L | 0.206 | 3 | 35 | 11464 | 0 | KED |
| | **Cu** | **65** | **5.335** | ug/L | 0.267 | 5 | 25 | 5790 | 0 | KED |
| | **Zn** | **66** | **34.872** | ug/L | 0.775 | 2 | 24 | 10189 | 2 | KED |
| | **Zn** | **67** | **34.124** | ug/L | 0.857 | 2 | 1 | 1687 | 3 | KED |
| | **As** | **75** | **4.450** | ug/L | 0.163 | 3 | 7 | 662 | 4 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 379850 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 97 | 5 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 8187 | 0 | KED |
| | **Cd** | **111** | **0.225** | ug/L | 0.012 | 5 | 2 | 60 | 5 | KED |
| | **Cd** | **114** | **0.213** | ug/L | 0.035 | 16 | 3 | 136 | 16 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 373826 | 2 | Standard |
| | **Ag** | **107** | **0.042** | ug/L | 0.002 | 3 | 59 | 590 | 5 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 623887 | 2 | Standard |
| | **Pb** | **208** | **3.505** | ug/L | 0.016 | 0 | 110 | 147227 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-IBLC**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:19:36**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 36131 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4029611 | 0 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 494404 | 3 | Standard |
| | **Cr** | **52** | **0.012** | ug/L | 0.017 | 144 | 14729 | 14511 | 1 | Standard |
| | **Cr** | **53** | **0.347** | ug/L | 0.023 | 6 | 130 | 848 | 2 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 18504 | 5 | KED |
| | **Cu** | **63** | **0.006** | ug/L | 0.004 | 65 | 35 | 38 | 18 | KED |
| | **Cu** | **65** | **-0.003** | ug/L | 0.013 | 518 | 25 | 15 | 90 | KED |
| | **Zn** | **66** | **0.002** | ug/L | 0.011 | 489 | 24 | 18 | 15 | KED |
| | **Zn** | **67** | **0.093** | ug/L | 0.087 | 92 | 1 | 5 | 66 | KED |
| | **As** | **75** | **-0.002** | ug/L | 0.006 | 254 | 7 | 5 | 19 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 259304 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 52 | 9 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7531 | 2 | KED |
| | **Cd** | **111** | **0.003** | ug/L | 0.004 | 111 | 2 | 3 | 25 | KED |
| | **Cd** | **114** | **0.006** | ug/L | 0.015 | 236 | 3 | 7 | 111 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 393904 | 3 | Standard |
| | **Ag** | **107** | **-0.002** | ug/L | 0.000 | 15 | 59 | 33 | 11 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 621123 | 1 | Standard |
| | **Pb** | **208** | **0.000** | ug/L | 0.001 | 160 | 110 | 131 | 24 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCVF**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:22:57**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 35362 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4231043 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 493577 | 4 | Standard |
| | **Cr** | **52** | **49.083** | ug/L | 0.661 | 1 | 14729 | 882835 | 4 | Standard |
| | **Cr** | **53** | **49.041** | ug/L | 0.657 | 1 | 130 | 102047 | 5 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 18460 | 6 | KED |
| | **Cu** | **63** | **59.107** | ug/L | 1.870 | 3 | 35 | 123328 | 2 | KED |
| | **Cu** | **65** | **57.581** | ug/L | 2.332 | 4 | 25 | 60067 | 1 | KED |
| | **Zn** | **66** | **54.866** | ug/L | 1.313 | 2 | 24 | 15441 | 3 | KED |
| | **Zn** | **67** | **54.256** | ug/L | 1.386 | 2 | 1 | 2586 | 6 | KED |
| | **As** | **75** | **52.208** | ug/L | 0.255 | 0 | 7 | 7433 | 5 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 257094 | 3 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 67 | 13 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7549 | 2 | KED |
| | **Cd** | **111** | **49.823** | ug/L | 0.725 | 1 | 2 | 11761 | 0 | KED |
| | **Cd** | **114** | **49.496** | ug/L | 0.980 | 1 | 3 | 28407 | 0 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 378296 | 3 | Standard |
| | **Ag** | **107** | **50.703** | ug/L | 1.395 | 2 | 59 | 646808 | 3 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 611644 | 3 | Standard |
| | **Pb** | **208** | **51.216** | ug/L | 0.698 | 1 | 110 | 2107525 | 3 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CCBF**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:29:02**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 35789 | 0 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3974937 | 3 | Standard |
| > | **Sc** | **45** | | ug/L | | | 508823 | 486489 | 3 | Standard |
| | **Cr** | **52** | **0.014** | ug/L | 0.012 | 85 | 14729 | 14330 | 2 | Standard |
| | **Cr** | **53** | **0.335** | ug/L | 0.010 | 2 | 130 | 809 | 1 | Standard |
| > | **Ge** | **72** | | ug/L | | | 25706 | 17916 | 4 | KED |
| | **Cu** | **63** | **-0.002** | ug/L | 0.003 | 147 | 35 | 20 | 32 | KED |
| | **Cu** | **65** | **-0.003** | ug/L | 0.001 | 36 | 25 | 14 | 7 | KED |
| | **Zn** | **66** | **-0.019** | ug/L | 0.016 | 79 | 24 | 12 | 39 | KED |
| | **Zn** | **67** | **0.027** | ug/L | 0.064 | 233 | 1 | 2 | 114 | KED |
| | **As** | **75** | **0.002** | ug/L | 0.008 | 309 | 7 | 5 | 21 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 251168 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 40 | 23 | Standard |
| > | **In-1** | **115** | | ug/L | | | 7141 | 7509 | 2 | KED |
| | **Cd** | **111** | **0.001** | ug/L | 0.010 | 1174 | 2 | 3 | 69 | KED |
| | **Cd** | **114** | **0.003** | ug/L | 0.009 | 290 | 3 | 5 | 89 | KED |
| > | **In** | **115** | | ug/L | | | 388851 | 376371 | 2 | Standard |
| | **Ag** | **107** | **0.001** | ug/L | 0.001 | 94 | 59 | 64 | 10 | Standard |
| > | **Tb** | **159** | | ug/L | | | 618478 | 609475 | 2 | Standard |
| | **Pb** | **208** | **-0.000** | ug/L | 0.000 | 49 | 110 | 93 | 9 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: RINSE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:32:24**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 39255 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4167603 | 4 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 558656 | 4 | Standard |
| \| | **Cr** | **52** | **0.071** | ug/L | 0.014 | 20 | 14729 | 17591 | 4 | Standard |
| ⌊ | **Cr** | **53** | **0.267** | ug/L | 0.009 | 3 | 130 | 771 | 3 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18375 | 5 | KED |
| \| | **Cu** | **63** | **0.006** | ug/L | 0.003 | 52 | 35 | 38 | 20 | KED |
| \| | **Cu** | **65** | **-0.005** | ug/L | 0.003 | 57 | 25 | 12 | 22 | KED |
| \| | **Zn** | **66** | **-0.005** | ug/L | 0.036 | 778 | 24 | 16 | 65 | KED |
| \| | **Zn** | **67** | **0.026** | ug/L | 0.027 | 103 | 1 | 2 | 43 | KED |
| ⌊ | **As** | **75** | **-0.003** | ug/L | 0.012 | 416 | 7 | 4 | 33 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 290172 | 4 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 52 | 21 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8085 | 0 | KED |
| \| | **Cd** | **111** | **-0.003** | ug/L | 0.002 | 78 | 2 | 2 | 21 | KED |
| ⌊ | **Cd** | **114** | **0.002** | ug/L | 0.000 | 5 | 3 | 5 | 0 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 408997 | 4 | Standard |
| ⌊ | **Ag** | **107** | **0.000** | ug/L | 0.002 | 387 | 59 | 68 | 33 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 658175 | 3 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 49 | 110 | 161 | 14 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: RINSE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:35:45**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 38182 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4187240 | 2 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 583490 | 1 | Standard |
| \| | **Cr** | **52** | **0.040** | ug/L | 0.010 | 25 | 14729 | 17719 | 2 | Standard |
| ⌊ | **Cr** | **53** | **0.243** | ug/L | 0.007 | 3 | 130 | 747 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19517 | 4 | KED |
| \| | **Cu** | **63** | **0.001** | ug/L | 0.005 | 862 | 35 | 27 | 34 | KED |
| \| | **Cu** | **65** | **-0.004** | ug/L | 0.004 | 89 | 25 | 14 | 30 | KED |
| \| | **Zn** | **66** | **-0.006** | ug/L | 0.004 | 78 | 24 | 17 | 11 | KED |
| \| | **Zn** | **67** | **0.047** | ug/L | 0.039 | 82 | 1 | 3 | 50 | KED |
| ⌊ | **As** | **75** | **-0.001** | ug/L | 0.004 | 492 | 7 | 5 | 13 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 296408 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 69 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8165 | 4 | KED |
| \| | **Cd** | **111** | **0.005** | ug/L | 0.009 | 198 | 2 | 4 | 53 | KED |
| ⌊ | **Cd** | **114** | **0.002** | ug/L | 0.000 | 13 | 3 | 5 | 1 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 417711 | 1 | Standard |
| ⌊ | **Ag** | **107** | **-0.000** | ug/L | 0.001 | 317 | 59 | 58 | 31 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 665365 | 1 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 63 | 110 | 144 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: RINSE**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:39:07**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 39750 | 3 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 4218484 | 0 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 579532 | 1 | Standard |
| \| | **Cr** | **52** | **0.048** | ug/L | 0.017 | 35 | 14729 | 17768 | 2 | Standard |
| ⌊ | **Cr** | **53** | **0.221** | ug/L | 0.001 | 0 | 130 | 688 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 19411 | 4 | KED |
| \| | **Cu** | **63** | **0.005** | ug/L | 0.004 | 76 | 35 | 37 | 20 | KED |
| \| | **Cu** | **65** | **-0.003** | ug/L | 0.003 | 94 | 25 | 15 | 18 | KED |
| \| | **Zn** | **66** | **-0.012** | ug/L | 0.015 | 123 | 24 | 15 | 33 | KED |
| \| | **Zn** | **67** | **0.023** | ug/L | 0.045 | 194 | 1 | 2 | 86 | KED |
| ⌊ | **As** | **75** | **-0.002** | ug/L | 0.013 | 764 | 7 | 5 | 36 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 304191 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 65 | 1 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 8096 | 2 | KED |
| \| | **Cd** | **111** | **0.001** | ug/L | 0.006 | 553 | 2 | 3 | 41 | KED |
| ⌊ | **Cd** | **114** | **-0.001** | ug/L | 0.008 | 838 | 3 | 3 | 137 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 426597 | 1 | Standard |
| ⌊ | **Ag** | **107** | **-0.001** | ug/L | 0.000 | 28 | 59 | 46 | 10 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 670699 | 0 | Standard |
| ⌊ | **Pb** | **208** | **0.001** | ug/L | 0.000 | 48 | 110 | 150 | 9 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: DI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:42:27**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 37932 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3835604 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 490492 | 1 | Standard |
| \| | **Cr** | **52** | **-0.034** | ug/L | 0.024 | 70 | 14729 | 13610 | 3 | Standard |
| ⌊ | **Cr** | **53** | **0.263** | ug/L | 0.011 | 4 | 130 | 669 | 2 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18256 | 4 | KED |
| \| | **Cu** | **63** | **0.004** | ug/L | 0.005 | 127 | 35 | 33 | 28 | KED |
| \| | **Cu** | **65** | **-0.003** | ug/L | 0.005 | 170 | 25 | 15 | 33 | KED |
| \| | **Zn** | **66** | **0.120** | ug/L | 0.040 | 33 | 24 | 50 | 21 | KED |
| \| | **Zn** | **67** | **0.133** | ug/L | 0.008 | 5 | 1 | 7 | 0 | KED |
| ⌊ | **As** | **75** | **0.001** | ug/L | 0.011 | 1112 | 7 | 5 | 25 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 249996 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 48 | 20 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7163 | 0 | KED |
| \| | **Cd** | **111** | **-0.000** | ug/L | 0.007 | 86975 | 2 | 2 | 57 | KED |
| ⌊ | **Cd** | **114** | **0.002** | ug/L | 0.004 | 180 | 3 | 4 | 44 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 378838 | 2 | Standard |
| ⌊ | **Ag** | **107** | **-0.001** | ug/L | 0.001 | 42 | 59 | 40 | 20 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 596430 | 1 | Standard |
| ⌊ | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 11 | 110 | 57 | 11 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: DI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:45:49**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 39350 | 2 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3901739 | 3 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 494241 | 2 | Standard |
| \| | **Cr** | **52** | **-0.037** | ug/L | 0.013 | 34 | 14729 | 13657 | 3 | Standard |
| ⌊ | **Cr** | **53** | **0.275** | ug/L | 0.012 | 4 | 130 | 698 | 1 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 17631 | 2 | KED |
| \| | **Cu** | **63** | **0.003** | ug/L | 0.004 | 109 | 35 | 31 | 21 | KED |
| \| | **Cu** | **65** | **0.000** | ug/L | 0.009 | 2201 | 25 | 17 | 49 | KED |
| \| | **Zn** | **66** | **0.031** | ug/L | 0.044 | 143 | 24 | 25 | 48 | KED |
| \| | **Zn** | **67** | **0.027** | ug/L | 0.024 | 87 | 1 | 2 | 43 | KED |
| ⌊ | **As** | **75** | **0.002** | ug/L | 0.014 | 633 | 7 | 5 | 33 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 248488 | 2 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 51 | 13 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7183 | 3 | KED |
| \| | **Cd** | **111** | **0.013** | ug/L | 0.006 | 50 | 2 | 5 | 28 | KED |
| ⌊ | **Cd** | **114** | **0.004** | ug/L | 0.011 | 241 | 3 | 6 | 97 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 378376 | 2 | Standard |
| ⌊ | **Ag** | **107** | **-0.002** | ug/L | 0.000 | 2 | 59 | 30 | 0 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 587861 | 2 | Standard |
| ⌊ | **Pb** | **208** | **-0.001** | ug/L | 0.000 | 5 | 110 | 58 | 1 | Standard |

# ICP-MS Quantitative Analysis - Summary Report

**Sample ID: DI**
**Sample Dil Factor:**
**Comments:**
**Sample Date/Time: Friday, January 13, 2023 04:49:10**
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\011223A.cal

| | Analyte | Mass | Conc. Mean | Units | Conc. SD | Conc. RSD | Blank Intens. | Meas. Intens. | Intens. RSD | Mode |
|---|---|---|---|---|---|---|---|---|---|---|
| | **C** | **13** | | ug/L | | | 37442 | 40232 | 1 | Standard |
| | **Cl** | **37** | | ug/L | | | 3935892 | 3860857 | 1 | Standard |
| ⌈> | **Sc** | **45** | | ug/L | | | 508823 | 494660 | 2 | Standard |
| \| | **Cr** | **52** | **-0.040** | ug/L | 0.017 | 41 | 14729 | 13612 | 2 | Standard |
| ⌊ | **Cr** | **53** | **0.262** | ug/L | 0.018 | 6 | 130 | 673 | 4 | Standard |
| ⌈> | **Ge** | **72** | | ug/L | | | 25706 | 18347 | 4 | KED |
| \| | **Cu** | **63** | **0.001** | ug/L | 0.004 | 367 | 35 | 27 | 33 | KED |
| \| | **Cu** | **65** | **-0.003** | ug/L | 0.008 | 225 | 25 | 14 | 52 | KED |
| \| | **Zn** | **66** | **0.039** | ug/L | 0.014 | 35 | 24 | 28 | 13 | KED |
| \| | **Zn** | **67** | **0.094** | ug/L | 0.084 | 88 | 1 | 5 | 66 | KED |
| ⌊ | **As** | **75** | **0.007** | ug/L | 0.009 | 124 | 7 | 6 | 17 | KED |
| | **Y** | **89** | | ug/L | | | 261919 | 251181 | 1 | Standard |
| | **Kr** | **83** | | ug/L | | | 60 | 47 | 24 | Standard |
| ⌈> | **In-1** | **115** | | ug/L | | | 7141 | 7421 | 3 | KED |
| \| | **Cd** | **111** | **0.002** | ug/L | 0.008 | 373 | 2 | 3 | 56 | KED |
| ⌊ | **Cd** | **114** | **-0.001** | ug/L | 0.007 | 531 | 3 | 3 | 125 | KED |
| ⌈> | **In** | **115** | | ug/L | | | 388851 | 371104 | 1 | Standard |
| ⌊ | **Ag** | **107** | **-0.002** | ug/L | 0.001 | 29 | 59 | 35 | 18 | Standard |
| ⌈> | **Tb** | **159** | | ug/L | | | 618478 | 591821 | 0 | Standard |
| ⌊ | **Pb** | **208** | **-0.002** | ug/L | 0.000 | 2 | 110 | 40 | 4 | Standard |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00024
Control Limt: +/- 10.00%
Sequence: SLA0097

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| SLA0097-ICV1 | Arsenic-75a | 50.000 | 47.0 | 94.0 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV1 | Arsenic-75a | 50.000 | 49.3 | 98.6 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV2 | Arsenic-75a | 50.000 | 49.5 | 99.1 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV3 | Arsenic-75a | 50.000 | 49.6 | 99.2 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV4 | Arsenic-75a | 50.000 | 49.1 | 98.2 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV5 | Arsenic-75a | 50.000 | 49.4 | 98.9 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV6 | Arsenic-75a | 50.000 | 50.3 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV7 | Arsenic-75a | 50.000 | 49.4 | 98.7 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV8 | Arsenic-75a | 50.000 | 50.7 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCV9 | Arsenic-75a | 50.000 | 49.8 | 99.6 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVA | Arsenic-75a | 50.000 | 49.3 | 98.5 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVB | Arsenic-75a | 50.000 | 49.8 | 99.6 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVC | Arsenic-75a | 50.000 | 50.8 | 102 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVD | Arsenic-75a | 50.000 | 51.4 | 103 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVE | Arsenic-75a | 50.000 | 49.4 | 98.8 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVF | Arsenic-75a | 50.000 | 50.2 | 100 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVG | Arsenic-75a | 50.000 | 51.5 | 103 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVH | Arsenic-75a | 50.000 | 50.1 | 100 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVI | Arsenic-75a | 50.000 | 49.4 | 98.9 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVJ | Arsenic-75a | 50.000 | 50.4 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVK | Arsenic-75a | 50.000 | 51.7 | 103 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVL | Arsenic-75a | 50.000 | 50.0 | 100 | ug/L | PA 6020B UCT-KE |
| SLA0097-CCVM | Arsenic-75a | 50.000 | 50.9 | 102 | ug/L | PA 6020B UCT-KE |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00033
Control Limt: +/- 10.00%
Sequence: SLA0147

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| SLA0147-ICV1 | Arsenic-75a | 50.000 | 46.8 | 93.6 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV1 | Arsenic-75a | 50.000 | 50.4 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV2 | Arsenic-75a | 50.000 | 49.3 | 98.5 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV3 | Arsenic-75a | 50.000 | 47.8 | 95.7 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV4 | Arsenic-75a | 50.000 | 49.6 | 99.2 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV5 | Arsenic-75a | 50.000 | 50.5 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV6 | Arsenic-75a | 50.000 | 49.7 | 99.4 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV7 | Arsenic-75a | 50.000 | 49.6 | 99.2 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV8 | Arsenic-75a | 50.000 | 50.5 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCV9 | Arsenic-75a | 50.000 | 50.1 | 100 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCVA | Arsenic-75a | 50.000 | 50.5 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCVB | Arsenic-75a | 50.000 | 50.0 | 99.9 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCVC | Arsenic-75a | 50.000 | 50.6 | 101 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCVD | Arsenic-75a | 50.000 | 52.5 | 105 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCVE | Arsenic-75a | 50.000 | 51.1 | 102 | ug/L | PA 6020B UCT-KE |
| SLA0147-CCVF | Arsenic-75a | 50.000 | 52.2 | 104 | ug/L | PA 6020B UCT-KE |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INSTRUMENT BLANKS
## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLA0097

SDG: 22L0329
Project: AOC4 UR Phase 3
Calibration: GA00024
Date Analyzed: 01/09/23 14:38

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C |
|---|---|---|---|---|---|---|
| SLA0097-IBL1 | Arsenic-75a | 0.0170 | 0.0373 | 0.200 | ug/L | |
| SLA0097-ICB1 | Arsenic-75a | 0.00900 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB1 | Arsenic-75a | 0.00300 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL2 | Arsenic-75a | 0.0140 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB2 | Arsenic-75a | -0.00500 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL3 | Arsenic-75a | 0.00400 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB3 | Arsenic-75a | -0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL4 | Arsenic-75a | 0.00300 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB4 | Arsenic-75a | -0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL5 | Arsenic-75a | -0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB5 | Arsenic-75a | 0.00400 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB6 | Arsenic-75a | 0.00700 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB7 | Arsenic-75a | 0.00600 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB8 | Arsenic-75a | 0.00300 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCB9 | Arsenic-75a | 0.00700 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBA | Arsenic-75a | 0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL6 | Arsenic-75a | 0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL7 | Arsenic-75a | -0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBB | Arsenic-75a | 0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBC | Arsenic-75a | 0.00400 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBD | Arsenic-75a | 0.00 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBE | Arsenic-75a | 0.0120 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBF | Arsenic-75a | -0.00700 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBG | Arsenic-75a | 0.00500 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBH | Arsenic-75a | -0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBI | Arsenic-75a | 0.00500 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL8 | Arsenic-75a | -0.00500 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBJ | Arsenic-75a | 0.00 | 0.0373 | 0.200 | ug/L | |
| SLA0097-IBL9 | Arsenic-75a | -0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBK | Arsenic-75a | 0.0160 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBL | Arsenic-75a | 0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0097-CCBM | Arsenic-75a | 0.00800 | 0.0373 | 0.200 | ug/L | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INSTRUMENT BLANKS
## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLA0147

SDG: 22L0329
Project: AOC4 UR Phase 3
Calibration: GA00033
Date Analyzed: 01/12/23 16:12

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C |
|---|---|---|---|---|---|---|
| SLA0147-IBL1 | Arsenic-75a | 0.00600 | 0.0373 | 0.200 | ug/L | |
| SLA0147-ICB1 | Arsenic-75a | -0.00300 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB1 | Arsenic-75a | 0.00400 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL2 | Arsenic-75a | 0.0120 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB2 | Arsenic-75a | 0.0130 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL3 | Arsenic-75a | 0.00900 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB3 | Arsenic-75a | 0.00800 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB4 | Arsenic-75a | 0.0110 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB5 | Arsenic-75a | 0.0140 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL4 | Arsenic-75a | 0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB6 | Arsenic-75a | -0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL5 | Arsenic-75a | 0.00600 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB7 | Arsenic-75a | 0.0110 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL6 | Arsenic-75a | -0.00500 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB8 | Arsenic-75a | 0.00700 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL7 | Arsenic-75a | 0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCB9 | Arsenic-75a | 0.00700 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL8 | Arsenic-75a | 0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCBA | Arsenic-75a | 0.0100 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCBB | Arsenic-75a | -0.00500 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBL9 | Arsenic-75a | 0.00300 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCBC | Arsenic-75a | 0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBLA | Arsenic-75a | -0.00700 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCBD | Arsenic-75a | 0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBLB | Arsenic-75a | 0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCBE | Arsenic-75a | 0.00100 | 0.0373 | 0.200 | ug/L | |
| SLA0147-IBLC | Arsenic-75a | -0.00200 | 0.0373 | 0.200 | ug/L | |
| SLA0147-CCBF | Arsenic-75a | 0.00200 | 0.0373 | 0.200 | ug/L | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| CAL 0 | SLA0097-CAL1 | XDT_m2230109-006 | NA | 01/09/23 14:07 |
| CAL 1 - LOW CHECK | SLA0097-CAL2 | XDT_m2230109-007 | NA | 01/09/23 14:11 |
| CAL 2 | SLA0097-CAL3 | XDT_m2230109-008 | NA | 01/09/23 14:15 |
| CAL 3 | SLA0097-CAL4 | XDT_m2230109-009 | NA | 01/09/23 14:20 |
| CAL 4 | SLA0097-CAL5 | XDT_m2230109-010 | NA | 01/09/23 14:25 |
| CAL 5 | SLA0097-CAL6 | XDT_m2230109-011 | NA | 01/09/23 14:31 |
| RINSE | SLA0097-IBL1 | XDT_m2230109-012 | NA | 01/09/23 14:38 |
| Initial Cal Check | SLA0097-ICV1 | XDT_m2230109-014 | NA | 01/09/23 14:45 |
| Initial Cal Blank | SLA0097-ICB1 | XDT_m2230109-015 | NA | 01/09/23 14:53 |
| Calibration Check | SLA0097-CCV1 | XDT_m2230109-016 | NA | 01/09/23 14:57 |
| Calibration Blank | SLA0097-CCB1 | XDT_m2230109-017 | NA | 01/09/23 15:04 |
| Instrument RL Check | SLA0097-CRL1 | XDT_m2230109-018 | NA | 01/09/23 15:09 |
| Interference Check A | SLA0097-IFA1 | XDT_m2230109-019 | NA | 01/09/23 15:16 |
| Interference Check B | SLA0097-IFB1 | XDT_m2230109-020 | NA | 01/09/23 15:20 |
| LR200 | SLA0097-HCV1 | XDT_m2230109-021 | NA | 01/09/23 15:25 |
| LR300 | SLA0097-HCV2 | XDT_m2230109-022 | NA | 01/09/23 15:30 |
| Instrument Blank | SLA0097-IBL2 | XDT_m2230109-023 | NA | 01/09/23 15:37 |
| Calibration Check | SLA0097-CCV2 | XDT_m2230109-024 | NA | 01/09/23 15:43 |
| Calibration Blank | SLA0097-CCB2 | XDT_m2230109-025 | NA | 01/09/23 15:50 |
| Blank | BKL0608-BLK1 | XDT_m2230109-026 | Solid | 01/09/23 15:59 |
| LCS | BKL0608-BS1 | XDT_m2230109-027 | Solid | 01/09/23 16:03 |
| Instrument Blank | SLA0097-IBL3 | XDT_m2230109-035 | NA | 01/09/23 16:46 |
| Calibration Check | SLA0097-CCV3 | XDT_m2230109-036 | NA | 01/09/23 16:51 |
| Calibration Blank | SLA0097-CCB3 | XDT_m2230109-037 | NA | 01/09/23 16:59 |
| ZZZZZ | 22L0199-43 | XDT_m2230109-045 | Solid | 01/09/23 17:40 |
| ZZZZZ | 22L0199-44 | XDT_m2230109-046 | Solid | 01/09/23 17:45 |
| Instrument Blank | SLA0097-IBL4 | XDT_m2230109-047 | NA | 01/09/23 17:49 |
| Calibration Check | SLA0097-CCV4 | XDT_m2230109-048 | NA | 01/09/23 17:54 |
| Calibration Blank | SLA0097-CCB4 | XDT_m2230109-049 | NA | 01/09/23 18:01 |

Analytical Resources, LLC
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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | BLA0157-BLK1 | XDT_m2230109-050 | Water | 01/09/23 18:07 |
| ZZZZZ | BLA0157-BS1 | XDT_m2230109-051 | Water | 01/09/23 18:11 |
| ZZZZZ | 22L0199-45 | XDT_m2230109-056 | Solid | 01/09/23 18:36 |
| ZZZZZ | 22L0199-46 | XDT_m2230109-057 | Solid | 01/09/23 18:41 |
| ZZZZZ | 22L0199-47 | XDT_m2230109-058 | Solid | 01/09/23 18:45 |
| Instrument Blank | SLA0097-IBL5 | XDT_m2230109-059 | NA | 01/09/23 18:49 |
| Calibration Check | SLA0097-CCV5 | XDT_m2230109-060 | NA | 01/09/23 18:54 |
| Calibration Blank | SLA0097-CCB5 | XDT_m2230109-061 | NA | 01/09/23 19:01 |
| LDW22-SC788C | 22L0329-08 | XDT_m2230109-065 | Solid | 01/09/23 19:21 |
| LDW22-SC788D | 22L0329-09 | XDT_m2230109-066 | Solid | 01/09/23 19:25 |
| LDW22-SC788E | 22L0329-10 | XDT_m2230109-067 | Solid | 01/09/23 19:29 |
| LDW22-SC788E-FD | 22L0329-11 | XDT_m2230109-068 | Solid | 01/09/23 19:34 |
| LDW22-SC788F | 22L0329-12 | XDT_m2230109-069 | Solid | 01/09/23 19:38 |
| LDW22-SC788G | 22L0329-13 | XDT_m2230109-070 | Solid | 01/09/23 19:43 |
| LDW22-SC788H | 22L0329-14 | XDT_m2230109-071 | Solid | 01/09/23 19:47 |
| Calibration Check | SLA0097-CCV6 | XDT_m2230109-072 | NA | 01/09/23 19:54 |
| Calibration Blank | SLA0097-CCB6 | XDT_m2230109-073 | NA | 01/09/23 20:01 |
| Calibration Check | SLA0097-CCV7 | XDT_m2230109-075 | NA | 01/09/23 20:13 |
| Calibration Blank | SLA0097-CCB7 | XDT_m2230109-076 | NA | 01/09/23 20:20 |
| LDW22-SC788B | 22L0329-07 | XDT_m2230109-077 | Solid | 01/09/23 20:29 |
| LDW22-SC788B | BKL0608-DUP1 | XDT_m2230109-078 | Solid | 01/09/23 20:33 |
| LDW22-SC788B | BKL0608-MS1 | XDT_m2230109-079 | Solid | 01/09/23 20:38 |
| LDW22-SC788B | BKL0608-MSD1 | XDT_m2230109-080 | Solid | 01/09/23 20:42 |
| ZZZZZ | 22H0525-01 | XDT_m2230109-082 | Solid | 01/09/23 20:53 |
| ZZZZZ | 22H0525-01 | XDT_m2230109-082 | Solid | 01/09/23 20:53 |
| ZZZZZ | 22H0525-01 | XDT_m2230109-082 | Solid | 01/09/23 20:53 |
| ZZZZZ | 22H0525-01 | XDT_m2230109-082 | Solid | 01/09/23 20:53 |
| ZZZZZ | 22H0525-02 | XDT_m2230109-083 | Solid | 01/09/23 20:57 |
| ZZZZZ | 22H0525-02 | XDT_m2230109-083 | Solid | 01/09/23 20:57 |

Analytical Resources, LLC
Analytical Chemists and Consultants

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22H0525-02 | XDT_m2230109-083 | Solid | 01/09/23 20:57 |
| ZZZZZ | 22H0525-02 | XDT_m2230109-083 | Solid | 01/09/23 20:57 |
| ZZZZZ | 22H0525-03 | XDT_m2230109-084 | Solid | 01/09/23 21:01 |
| ZZZZZ | 22H0525-03 | XDT_m2230109-084 | Solid | 01/09/23 21:01 |
| ZZZZZ | 22H0525-03 | XDT_m2230109-084 | Solid | 01/09/23 21:01 |
| ZZZZZ | 22H0525-03 | XDT_m2230109-084 | Solid | 01/09/23 21:01 |
| ZZZZZ | 22H0525-04 | XDT_m2230109-085 | Solid | 01/09/23 21:06 |
| ZZZZZ | 22H0525-04 | XDT_m2230109-085 | Solid | 01/09/23 21:06 |
| ZZZZZ | 22H0525-04 | XDT_m2230109-085 | Solid | 01/09/23 21:06 |
| ZZZZZ | 22H0525-04 | XDT_m2230109-085 | Solid | 01/09/23 21:06 |
| ZZZZZ | 22H0525-05 | XDT_m2230109-086 | Solid | 01/09/23 21:10 |
| ZZZZZ | 22H0525-05 | XDT_m2230109-086 | Solid | 01/09/23 21:10 |
| ZZZZZ | 22H0525-05 | XDT_m2230109-086 | Solid | 01/09/23 21:10 |
| ZZZZZ | 22H0525-05 | XDT_m2230109-086 | Solid | 01/09/23 21:10 |
| Calibration Check | SLA0097-CCV8 | XDT_m2230109-087 | NA | 01/09/23 21:17 |
| Calibration Blank | SLA0097-CCB8 | XDT_m2230109-088 | NA | 01/09/23 21:24 |
| ZZZZZ | 22I0052-25 | XDT_m2230109-090 | Solid | 01/09/23 21:35 |
| ZZZZZ | 22H0525-10 | XDT_m2230109-095 | Solid | 01/09/23 22:01 |
| ZZZZZ | 22H0525-10 | XDT_m2230109-095 | Solid | 01/09/23 22:01 |
| ZZZZZ | 22H0525-10 | XDT_m2230109-095 | Solid | 01/09/23 22:01 |
| ZZZZZ | 22H0525-10 | XDT_m2230109-095 | Solid | 01/09/23 22:01 |
| ZZZZZ | 22H0525-11 | XDT_m2230109-096 | Solid | 01/09/23 22:05 |
| ZZZZZ | 22H0525-11 | XDT_m2230109-096 | Solid | 01/09/23 22:05 |
| ZZZZZ | 22H0525-11 | XDT_m2230109-096 | Solid | 01/09/23 22:05 |
| ZZZZZ | 22H0525-11 | XDT_m2230109-096 | Solid | 01/09/23 22:05 |
| ZZZZZ | 22H0525-12 | XDT_m2230109-097 | Solid | 01/09/23 22:10 |
| ZZZZZ | 22H0525-12 | XDT_m2230109-097 | Solid | 01/09/23 22:10 |
| ZZZZZ | 22H0525-12 | XDT_m2230109-097 | Solid | 01/09/23 22:10 |
| ZZZZZ | 22H0525-12 | XDT_m2230109-097 | Solid | 01/09/23 22:10 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22H0525-13 | XDT_m2230109-098 | Solid | 01/09/23 22:14 |
| ZZZZZ | 22H0525-13 | XDT_m2230109-098 | Solid | 01/09/23 22:14 |
| ZZZZZ | 22H0525-13 | XDT_m2230109-098 | Solid | 01/09/23 22:14 |
| ZZZZZ | 22H0525-13 | XDT_m2230109-098 | Solid | 01/09/23 22:14 |
| Calibration Check | SLA0097-CCV9 | XDT_m2230109-099 | NA | 01/09/23 22:21 |
| Calibration Blank | SLA0097-CCB9 | XDT_m2230109-100 | NA | 01/09/23 22:29 |
| ZZZZZ | 22I0188-02 | XDT_m2230109-102 | Solid | 01/09/23 22:37 |
| ZZZZZ | 22H0525-14 | XDT_m2230109-107 | Solid | 01/09/23 23:00 |
| ZZZZZ | 22H0525-14 | XDT_m2230109-107 | Solid | 01/09/23 23:00 |
| ZZZZZ | 22H0525-14 | XDT_m2230109-107 | Solid | 01/09/23 23:00 |
| ZZZZZ | 22H0525-14 | XDT_m2230109-107 | Solid | 01/09/23 23:00 |
| ZZZZZ | 22H0525-19 | XDT_m2230109-108 | Solid | 01/09/23 23:04 |
| ZZZZZ | 22H0525-19 | XDT_m2230109-108 | Solid | 01/09/23 23:04 |
| ZZZZZ | 22H0525-19 | XDT_m2230109-108 | Solid | 01/09/23 23:04 |
| ZZZZZ | 22H0525-19 | XDT_m2230109-108 | Solid | 01/09/23 23:04 |
| ZZZZZ | 22H0525-20 | XDT_m2230109-109 | Solid | 01/09/23 23:08 |
| ZZZZZ | 22H0525-20 | XDT_m2230109-109 | Solid | 01/09/23 23:08 |
| ZZZZZ | 22H0525-20 | XDT_m2230109-109 | Solid | 01/09/23 23:08 |
| ZZZZZ | 22H0525-20 | XDT_m2230109-109 | Solid | 01/09/23 23:08 |
| ZZZZZ | 22H0525-21 | XDT_m2230109-110 | Solid | 01/09/23 23:13 |
| ZZZZZ | 22H0525-21 | XDT_m2230109-110 | Solid | 01/09/23 23:13 |
| ZZZZZ | 22H0525-21 | XDT_m2230109-110 | Solid | 01/09/23 23:13 |
| ZZZZZ | 22H0525-21 | XDT_m2230109-110 | Solid | 01/09/23 23:13 |
| Calibration Check | SLA0097-CCVA | XDT_m2230109-111 | NA | 01/09/23 23:20 |
| Calibration Blank | SLA0097-CCBA | XDT_m2230109-112 | NA | 01/09/23 23:27 |
| Instrument Blank | SLA0097-IBL6 | XDT_m2230109-114 | NA | 01/09/23 23:36 |
| ZZZZZ | 22I0188-20 | XDT_m2230109-116 | Solid | 01/09/23 23:44 |
| Instrument Blank | SLA0097-IBL7 | XDT_m2230109-122 | NA | 01/10/23 00:11 |
| Calibration Check | SLA0097-CCVB | XDT_m2230109-123 | NA | 01/10/23 00:15 |

Analytical Resources, LLC
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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| Calibration Blank | SLA0097-CCBB | XDT_m2230109-124 | NA | 01/10/23 00:22 |
| ZZZZZ | 22J0097-31 | XDT_m2230109-126 | Solid | 01/10/23 00:31 |
| ZZZZZ | 22H0525-22 | XDT_m2230109-131 | Solid | 01/10/23 00:53 |
| ZZZZZ | 22H0525-22 | XDT_m2230109-131 | Solid | 01/10/23 00:53 |
| ZZZZZ | 22H0525-22 | XDT_m2230109-131 | Solid | 01/10/23 00:53 |
| ZZZZZ | 22H0525-22 | XDT_m2230109-131 | Solid | 01/10/23 00:53 |
| ZZZZZ | 22H0525-23 | XDT_m2230109-132 | Solid | 01/10/23 00:57 |
| ZZZZZ | 22H0525-23 | XDT_m2230109-132 | Solid | 01/10/23 00:57 |
| ZZZZZ | 22H0525-23 | XDT_m2230109-132 | Solid | 01/10/23 00:57 |
| ZZZZZ | 22H0525-23 | XDT_m2230109-132 | Solid | 01/10/23 00:57 |
| ZZZZZ | 22H0525-24 | XDT_m2230109-133 | Solid | 01/10/23 01:01 |
| ZZZZZ | 22H0525-24 | XDT_m2230109-133 | Solid | 01/10/23 01:01 |
| ZZZZZ | 22H0525-24 | XDT_m2230109-133 | Solid | 01/10/23 01:01 |
| ZZZZZ | 22H0525-24 | XDT_m2230109-133 | Solid | 01/10/23 01:01 |
| ZZZZZ | 22H0525-31 | XDT_m2230109-134 | Solid | 01/10/23 01:06 |
| ZZZZZ | 22H0525-31 | XDT_m2230109-134 | Solid | 01/10/23 01:06 |
| ZZZZZ | 22H0525-31 | XDT_m2230109-134 | Solid | 01/10/23 01:06 |
| ZZZZZ | 22H0525-31 | XDT_m2230109-134 | Solid | 01/10/23 01:06 |
| Calibration Check | SLA0097-CCVC | XDT_m2230109-135 | NA | 01/10/23 01:13 |
| Calibration Blank | SLA0097-CCBC | XDT_m2230109-136 | NA | 01/10/23 01:20 |
| Calibration Check | SLA0097-CCVD | XDT_m2230109-138 | NA | 01/10/23 01:29 |
| Calibration Blank | SLA0097-CCBD | XDT_m2230109-139 | NA | 01/10/23 01:36 |
| ZZZZZ | 22H0525-32 | XDT_m2230109-140 | Solid | 01/10/23 01:40 |
| ZZZZZ | 22H0525-32 | XDT_m2230109-140 | Solid | 01/10/23 01:40 |
| ZZZZZ | 22H0525-32 | XDT_m2230109-140 | Solid | 01/10/23 01:40 |
| ZZZZZ | 22H0525-32 | XDT_m2230109-140 | Solid | 01/10/23 01:40 |
| ZZZZZ | 22H0525-33 | XDT_m2230109-141 | Solid | 01/10/23 01:45 |
| ZZZZZ | 22H0525-33 | XDT_m2230109-141 | Solid | 01/10/23 01:45 |
| ZZZZZ | 22H0525-33 | XDT_m2230109-141 | Solid | 01/10/23 01:45 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22H0525-33 | XDT_m2230109-141 | Solid | 01/10/23 01:45 |
| ZZZZZ | 22H0525-34 | XDT_m2230109-142 | Solid | 01/10/23 01:49 |
| ZZZZZ | 22H0525-34 | XDT_m2230109-142 | Solid | 01/10/23 01:49 |
| ZZZZZ | 22H0525-34 | XDT_m2230109-142 | Solid | 01/10/23 01:49 |
| ZZZZZ | 22H0525-34 | XDT_m2230109-142 | Solid | 01/10/23 01:49 |
| ZZZZZ | 22H0525-35 | XDT_m2230109-143 | Solid | 01/10/23 01:53 |
| ZZZZZ | 22H0525-35 | XDT_m2230109-143 | Solid | 01/10/23 01:53 |
| ZZZZZ | 22H0525-35 | XDT_m2230109-143 | Solid | 01/10/23 01:53 |
| ZZZZZ | 22H0525-35 | XDT_m2230109-143 | Solid | 01/10/23 01:53 |
| ZZZZZ | 22H0525-36 | XDT_m2230109-144 | Solid | 01/10/23 01:58 |
| ZZZZZ | 22H0525-36 | XDT_m2230109-144 | Solid | 01/10/23 01:58 |
| ZZZZZ | 22H0525-36 | XDT_m2230109-144 | Solid | 01/10/23 01:58 |
| ZZZZZ | 22H0525-36 | XDT_m2230109-144 | Solid | 01/10/23 01:58 |
| ZZZZZ | 22H0525-38 | XDT_m2230109-145 | Solid | 01/10/23 02:02 |
| ZZZZZ | 22H0525-38 | XDT_m2230109-145 | Solid | 01/10/23 02:02 |
| ZZZZZ | 22H0525-38 | XDT_m2230109-145 | Solid | 01/10/23 02:02 |
| ZZZZZ | 22H0525-38 | XDT_m2230109-145 | Solid | 01/10/23 02:02 |
| ZZZZZ | 22H0525-39 | XDT_m2230109-146 | Solid | 01/10/23 02:06 |
| ZZZZZ | 22H0525-39 | XDT_m2230109-146 | Solid | 01/10/23 02:06 |
| ZZZZZ | 22H0525-39 | XDT_m2230109-146 | Solid | 01/10/23 02:06 |
| ZZZZZ | 22H0525-39 | XDT_m2230109-146 | Solid | 01/10/23 02:06 |
| ZZZZZ | 22H0529-02 | XDT_m2230109-147 | Solid | 01/10/23 02:11 |
| ZZZZZ | 22H0529-02 | XDT_m2230109-147 | Solid | 01/10/23 02:11 |
| ZZZZZ | 22H0529-02 | XDT_m2230109-147 | Solid | 01/10/23 02:11 |
| ZZZZZ | 22H0529-02 | XDT_m2230109-147 | Solid | 01/10/23 02:11 |
| ZZZZZ | 22H0529-12 | XDT_m2230109-148 | Solid | 01/10/23 02:15 |
| ZZZZZ | 22H0529-12 | XDT_m2230109-148 | Solid | 01/10/23 02:15 |
| ZZZZZ | 22H0529-12 | XDT_m2230109-148 | Solid | 01/10/23 02:15 |
| ZZZZZ | 22H0529-12 | XDT_m2230109-148 | Solid | 01/10/23 02:15 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22H0529-13 | XDT_m2230109-149 | Solid | 01/10/23 02:20 |
| ZZZZZ | 22H0529-13 | XDT_m2230109-149 | Solid | 01/10/23 02:20 |
| ZZZZZ | 22H0529-13 | XDT_m2230109-149 | Solid | 01/10/23 02:20 |
| ZZZZZ | 22H0529-13 | XDT_m2230109-149 | Solid | 01/10/23 02:20 |
| Calibration Check | SLA0097-CCVE | XDT_m2230109-150 | NA | 01/10/23 02:27 |
| Calibration Blank | SLA0097-CCBE | XDT_m2230109-151 | NA | 01/10/23 02:34 |
| ZZZZZ | 22H0529-14 | XDT_m2230109-152 | Solid | 01/10/23 02:39 |
| ZZZZZ | 22H0529-14 | XDT_m2230109-152 | Solid | 01/10/23 02:39 |
| ZZZZZ | 22H0529-14 | XDT_m2230109-152 | Solid | 01/10/23 02:39 |
| ZZZZZ | 22H0529-14 | XDT_m2230109-152 | Solid | 01/10/23 02:39 |
| ZZZZZ | 22H0529-15 | XDT_m2230109-153 | Solid | 01/10/23 02:43 |
| ZZZZZ | 22H0529-15 | XDT_m2230109-153 | Solid | 01/10/23 02:43 |
| ZZZZZ | 22H0529-15 | XDT_m2230109-153 | Solid | 01/10/23 02:43 |
| ZZZZZ | 22H0529-15 | XDT_m2230109-153 | Solid | 01/10/23 02:43 |
| ZZZZZ | 22H0529-16 | XDT_m2230109-154 | Solid | 01/10/23 02:47 |
| ZZZZZ | 22H0529-16 | XDT_m2230109-154 | Solid | 01/10/23 02:47 |
| ZZZZZ | 22H0529-17 | XDT_m2230109-155 | Solid | 01/10/23 02:52 |
| ZZZZZ | 22H0529-17 | XDT_m2230109-155 | Solid | 01/10/23 02:52 |
| ZZZZZ | 22H0529-17 | XDT_m2230109-155 | Solid | 01/10/23 02:52 |
| ZZZZZ | 22H0529-17 | XDT_m2230109-155 | Solid | 01/10/23 02:52 |
| ZZZZZ | 22H0529-18 | XDT_m2230109-156 | Solid | 01/10/23 02:56 |
| ZZZZZ | 22H0529-18 | XDT_m2230109-156 | Solid | 01/10/23 02:56 |
| ZZZZZ | 22H0529-18 | XDT_m2230109-156 | Solid | 01/10/23 02:56 |
| ZZZZZ | 22H0529-18 | XDT_m2230109-156 | Solid | 01/10/23 02:56 |
| ZZZZZ | 22H0529-22 | XDT_m2230109-157 | Solid | 01/10/23 03:01 |
| ZZZZZ | 22H0529-22 | XDT_m2230109-157 | Solid | 01/10/23 03:01 |
| ZZZZZ | 22H0529-22 | XDT_m2230109-157 | Solid | 01/10/23 03:01 |
| ZZZZZ | 22H0529-22 | XDT_m2230109-157 | Solid | 01/10/23 03:01 |
| ZZZZZ | 22H0529-23 | XDT_m2230109-158 | Solid | 01/10/23 03:05 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22H0529-23 | XDT_m2230109-158 | Solid | 01/10/23 03:05 |
| ZZZZZ | 22H0529-23 | XDT_m2230109-158 | Solid | 01/10/23 03:05 |
| ZZZZZ | 22H0529-23 | XDT_m2230109-158 | Solid | 01/10/23 03:05 |
| ZZZZZ | 22H0529-24 | XDT_m2230109-159 | Solid | 01/10/23 03:09 |
| ZZZZZ | 22H0529-24 | XDT_m2230109-159 | Solid | 01/10/23 03:09 |
| ZZZZZ | 22H0529-24 | XDT_m2230109-159 | Solid | 01/10/23 03:09 |
| ZZZZZ | 22H0529-24 | XDT_m2230109-159 | Solid | 01/10/23 03:09 |
| ZZZZZ | 22H0529-25 | XDT_m2230109-160 | Solid | 01/10/23 03:14 |
| ZZZZZ | 22H0529-25 | XDT_m2230109-160 | Solid | 01/10/23 03:14 |
| ZZZZZ | 22H0529-25 | XDT_m2230109-160 | Solid | 01/10/23 03:14 |
| ZZZZZ | 22H0529-25 | XDT_m2230109-160 | Solid | 01/10/23 03:14 |
| ZZZZZ | 22H0529-26 | XDT_m2230109-161 | Solid | 01/10/23 03:18 |
| ZZZZZ | 22H0529-26 | XDT_m2230109-161 | Solid | 01/10/23 03:18 |
| ZZZZZ | 22H0529-26 | XDT_m2230109-161 | Solid | 01/10/23 03:18 |
| ZZZZZ | 22H0529-26 | XDT_m2230109-161 | Solid | 01/10/23 03:18 |
| Calibration Check | SLA0097-CCVF | XDT_m2230109-162 | NA | 01/10/23 03:26 |
| Calibration Blank | SLA0097-CCBF | XDT_m2230109-163 | NA | 01/10/23 03:33 |
| ZZZZZ | 22H0529-30 | XDT_m2230109-164 | Solid | 01/10/23 03:37 |
| ZZZZZ | 22H0529-30 | XDT_m2230109-164 | Solid | 01/10/23 03:37 |
| ZZZZZ | 22H0529-31 | XDT_m2230109-165 | Solid | 01/10/23 03:41 |
| ZZZZZ | 22H0529-31 | XDT_m2230109-165 | Solid | 01/10/23 03:41 |
| ZZZZZ | 22H0529-31 | XDT_m2230109-165 | Solid | 01/10/23 03:41 |
| ZZZZZ | 22H0529-31 | XDT_m2230109-165 | Solid | 01/10/23 03:41 |
| ZZZZZ | 22H0529-32 | XDT_m2230109-166 | Solid | 01/10/23 03:46 |
| ZZZZZ | 22H0529-32 | XDT_m2230109-166 | Solid | 01/10/23 03:46 |
| ZZZZZ | 22H0529-32 | XDT_m2230109-166 | Solid | 01/10/23 03:46 |
| ZZZZZ | 22H0529-32 | XDT_m2230109-166 | Solid | 01/10/23 03:46 |
| ZZZZZ | 22H0529-33 | XDT_m2230109-167 | Solid | 01/10/23 03:50 |
| ZZZZZ | 22H0529-33 | XDT_m2230109-167 | Solid | 01/10/23 03:50 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22H0529-33 | XDT_m2230109-167 | Solid | 01/10/23 03:50 |
| ZZZZZ | 22H0529-33 | XDT_m2230109-167 | Solid | 01/10/23 03:50 |
| ZZZZZ | 22I0052-01 | XDT_m2230109-168 | Solid | 01/10/23 03:55 |
| ZZZZZ | 22I0052-01 | XDT_m2230109-168 | Solid | 01/10/23 03:55 |
| ZZZZZ | 22I0052-01 | XDT_m2230109-168 | Solid | 01/10/23 03:55 |
| ZZZZZ | 22I0052-01 | XDT_m2230109-168 | Solid | 01/10/23 03:55 |
| ZZZZZ | 22I0052-02 | XDT_m2230109-169 | Solid | 01/10/23 03:59 |
| ZZZZZ | 22I0052-02 | XDT_m2230109-169 | Solid | 01/10/23 03:59 |
| ZZZZZ | 22I0052-02 | XDT_m2230109-169 | Solid | 01/10/23 03:59 |
| ZZZZZ | 22I0052-02 | XDT_m2230109-169 | Solid | 01/10/23 03:59 |
| ZZZZZ | 22I0052-03 | XDT_m2230109-170 | Solid | 01/10/23 04:03 |
| ZZZZZ | 22I0052-03 | XDT_m2230109-170 | Solid | 01/10/23 04:03 |
| ZZZZZ | 22I0052-03 | XDT_m2230109-170 | Solid | 01/10/23 04:03 |
| ZZZZZ | 22I0052-03 | XDT_m2230109-170 | Solid | 01/10/23 04:03 |
| ZZZZZ | 22I0052-05 | XDT_m2230109-171 | Solid | 01/10/23 04:08 |
| ZZZZZ | 22I0052-05 | XDT_m2230109-171 | Solid | 01/10/23 04:08 |
| ZZZZZ | 22I0052-05 | XDT_m2230109-171 | Solid | 01/10/23 04:08 |
| ZZZZZ | 22I0052-05 | XDT_m2230109-171 | Solid | 01/10/23 04:08 |
| ZZZZZ | 22I0052-06 | XDT_m2230109-172 | Solid | 01/10/23 04:12 |
| ZZZZZ | 22I0052-06 | XDT_m2230109-172 | Solid | 01/10/23 04:12 |
| ZZZZZ | 22I0052-06 | XDT_m2230109-172 | Solid | 01/10/23 04:12 |
| ZZZZZ | 22I0052-06 | XDT_m2230109-172 | Solid | 01/10/23 04:12 |
| ZZZZZ | 22I0052-11 | XDT_m2230109-173 | Solid | 01/10/23 04:17 |
| ZZZZZ | 22I0052-11 | XDT_m2230109-173 | Solid | 01/10/23 04:17 |
| ZZZZZ | 22I0052-11 | XDT_m2230109-173 | Solid | 01/10/23 04:17 |
| ZZZZZ | 22I0052-11 | XDT_m2230109-173 | Solid | 01/10/23 04:17 |
| Calibration Check | SLA0097-CCVG | XDT_m2230109-174 | NA | 01/10/23 04:24 |
| Calibration Blank | SLA0097-CCBG | XDT_m2230109-175 | NA | 01/10/23 04:31 |
| ZZZZZ | 22I0052-13 | XDT_m2230109-185 | Solid | 01/10/23 05:16 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0097 | Instrument: | ICPMS2 |
| | | Calibration: | GA00024 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22I0052-13 | XDT_m2230109-185 | Solid | 01/10/23 05:16 |
| ZZZZZ | 22I0052-13 | XDT_m2230109-185 | Solid | 01/10/23 05:16 |
| ZZZZZ | 22I0052-13 | XDT_m2230109-185 | Solid | 01/10/23 05:16 |
| Calibration Check | SLA0097-CCVH | XDT_m2230109-186 | NA | 01/10/23 05:23 |
| Calibration Blank | SLA0097-CCBH | XDT_m2230109-187 | NA | 01/10/23 05:30 |
| Calibration Check | SLA0097-CCVI | XDT_m2230109-189 | NA | 01/10/23 05:39 |
| Calibration Blank | SLA0097-CCBI | XDT_m2230109-190 | NA | 01/10/23 05:46 |
| ZZZZZ | 22L0612-01 | XDT_m2230109-197 | Water | 01/10/23 06:17 |
| ZZZZZ | BLA0157-DUP1 | XDT_m2230109-198 | Water | 01/10/23 06:22 |
| ZZZZZ | BLA0157-MS1 | XDT_m2230109-199 | Water | 01/10/23 06:28 |
| Instrument Blank | SLA0097-IBL8 | XDT_m2230109-200 | NA | 01/10/23 06:32 |
| Calibration Check | SLA0097-CCVJ | XDT_m2230109-201 | NA | 01/10/23 06:36 |
| Calibration Blank | SLA0097-CCBJ | XDT_m2230109-202 | NA | 01/10/23 06:43 |
| Instrument Blank | SLA0097-IBL9 | XDT_m2230109-212 | NA | 01/10/23 07:28 |
| Calibration Check | SLA0097-CCVK | XDT_m2230109-213 | NA | 01/10/23 07:32 |
| Calibration Blank | SLA0097-CCBK | XDT_m2230109-214 | NA | 01/10/23 07:39 |
| Calibration Check | SLA0097-CCVL | XDT_m2230109-225 | NA | 01/10/23 08:32 |
| Calibration Blank | SLA0097-CCBL | XDT_m2230109-226 | NA | 01/10/23 08:39 |
| Calibration Check | SLA0097-CCVM | XDT_m2230109-237 | NA | 01/10/23 09:32 |
| Calibration Blank | SLA0097-CCBM | XDT_m2230109-238 | NA | 01/10/23 09:39 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0147 | Instrument: | ICPMS2 |
| | | Calibration: | GA00033 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| CAL 0 | SLA0147-CAL1 | XDT_m2230112-006 | NA | 01/12/23 15:38 |
| CAL 1 - LOW CHECK | SLA0147-CAL2 | XDT_m2230112-007 | NA | 01/12/23 15:43 |
| CAL 2 | SLA0147-CAL3 | XDT_m2230112-008 | NA | 01/12/23 15:47 |
| CAL 3 | SLA0147-CAL4 | XDT_m2230112-009 | NA | 01/12/23 15:52 |
| CAL 4 | SLA0147-CAL5 | XDT_m2230112-010 | NA | 01/12/23 15:58 |
| CAL 5 | SLA0147-CAL6 | XDT_m2230112-011 | NA | 01/12/23 16:04 |
| RINSE | SLA0147-IBL1 | XDT_m2230112-012 | NA | 01/12/23 16:12 |
| Initial Cal Check | SLA0147-ICV1 | XDT_m2230112-014 | NA | 01/12/23 16:22 |
| Initial Cal Blank | SLA0147-ICB1 | XDT_m2230112-015 | NA | 01/12/23 16:29 |
| Calibration Check | SLA0147-CCV1 | XDT_m2230112-016 | NA | 01/12/23 16:34 |
| Calibration Blank | SLA0147-CCB1 | XDT_m2230112-017 | NA | 01/12/23 16:41 |
| Instrument RL Check | SLA0147-CRL1 | XDT_m2230112-019 | NA | 01/12/23 16:57 |
| Interference Check A | SLA0147-IFA1 | XDT_m2230112-020 | NA | 01/12/23 17:03 |
| Interference Check B | SLA0147-IFB1 | XDT_m2230112-021 | NA | 01/12/23 17:08 |
| LR200 | SLA0147-HCV1 | XDT_m2230112-022 | NA | 01/12/23 17:12 |
| LR300 | SLA0147-HCV2 | XDT_m2230112-023 | NA | 01/12/23 17:17 |
| Instrument Blank | SLA0147-IBL2 | XDT_m2230112-024 | NA | 01/12/23 17:24 |
| Calibration Check | SLA0147-CCV2 | XDT_m2230112-025 | NA | 01/12/23 17:31 |
| Calibration Blank | SLA0147-CCB2 | XDT_m2230112-026 | NA | 01/12/23 17:39 |
| Instrument Blank | SLA0147-IBL3 | XDT_m2230112-036 | NA | 01/12/23 18:31 |
| Calibration Check | SLA0147-CCV3 | XDT_m2230112-038 | NA | 01/12/23 18:44 |
| Calibration Blank | SLA0147-CCB3 | XDT_m2230112-039 | NA | 01/12/23 18:51 |
| Calibration Check | SLA0147-CCV4 | XDT_m2230112-050 | NA | 01/12/23 19:53 |
| Calibration Blank | SLA0147-CCB4 | XDT_m2230112-051 | NA | 01/12/23 20:00 |
| Calibration Check | SLA0147-CCV5 | XDT_m2230112-053 | NA | 01/12/23 20:14 |
| Calibration Blank | SLA0147-CCB5 | XDT_m2230112-054 | NA | 01/12/23 20:21 |
| ZZZZZ | BLA0224-BLK1 | XDT_m2230112-057 | Solid | 01/12/23 20:35 |
| ZZZZZ | BLA0224-BS1 | XDT_m2230112-058 | Solid | 01/12/23 20:39 |
| ZZZZZ | 22K0328-17RE1 | XDT_m2230112-059 | Solid | 01/12/23 20:44 |

Analytical Resources, LLC
Analytical Chemists and Consultants

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0147 | Instrument: | ICPMS2 |
| | | Calibration: | GA00033 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22K0328-17RE1 | XDT_m2230112-059 | Solid | 01/12/23 20:44 |
| ZZZZZ | 22K0328-17RE1 | XDT_m2230112-059 | Solid | 01/12/23 20:44 |
| ZZZZZ | BLA0224-DUP1 | XDT_m2230112-060 | Solid | 01/12/23 20:52 |
| ZZZZZ | BLA0224-MS1 | XDT_m2230112-061 | Solid | 01/12/23 20:56 |
| ZZZZZ | BLA0224-MSD1 | XDT_m2230112-062 | Solid | 01/12/23 21:01 |
| Instrument Blank | SLA0147-IBL4 | XDT_m2230112-064 | NA | 01/12/23 21:11 |
| Calibration Check | SLA0147-CCV6 | XDT_m2230112-065 | NA | 01/12/23 21:15 |
| Calibration Blank | SLA0147-CCB6 | XDT_m2230112-066 | NA | 01/12/23 21:22 |
| ZZZZZ | 22K0328-17RE2 | XDT_m2230112-067 | Solid | 01/12/23 21:29 |
| ZZZZZ | 22K0328-17RE2 | XDT_m2230112-067 | Solid | 01/12/23 21:29 |
| Instrument Blank | SLA0147-IBL5 | XDT_m2230112-076 | NA | 01/12/23 22:12 |
| Calibration Check | SLA0147-CCV7 | XDT_m2230112-077 | NA | 01/12/23 22:16 |
| Calibration Blank | SLA0147-CCB7 | XDT_m2230112-078 | NA | 01/12/23 22:23 |
| Instrument Blank | SLA0147-IBL6 | XDT_m2230112-088 | NA | 01/12/23 23:07 |
| Calibration Check | SLA0147-CCV8 | XDT_m2230112-089 | NA | 01/12/23 23:11 |
| Calibration Blank | SLA0147-CCB8 | XDT_m2230112-090 | NA | 01/12/23 23:18 |
| Instrument Blank | SLA0147-IBL7 | XDT_m2230112-100 | NA | 01/13/23 00:02 |
| Calibration Check | SLA0147-CCV9 | XDT_m2230112-101 | NA | 01/13/23 00:06 |
| Calibration Blank | SLA0147-CCB9 | XDT_m2230112-102 | NA | 01/13/23 00:13 |
| ZZZZZ | 22L0459-01 | XDT_m2230112-104 | Solid | 01/13/23 00:22 |
| ZZZZZ | 22L0459-01 | XDT_m2230112-104 | Solid | 01/13/23 00:22 |
| ZZZZZ | 22L0459-01 | XDT_m2230112-104 | Solid | 01/13/23 00:22 |
| ZZZZZ | 22L0459-01 | XDT_m2230112-104 | Solid | 01/13/23 00:22 |
| ZZZZZ | 22L0459-02 | XDT_m2230112-105 | Solid | 01/13/23 00:26 |
| ZZZZZ | 22L0459-02 | XDT_m2230112-105 | Solid | 01/13/23 00:26 |
| ZZZZZ | 22L0459-02 | XDT_m2230112-105 | Solid | 01/13/23 00:26 |
| ZZZZZ | 22L0459-02 | XDT_m2230112-105 | Solid | 01/13/23 00:26 |
| ZZZZZ | 22L0459-03 | XDT_m2230112-106 | Solid | 01/13/23 00:31 |
| ZZZZZ | 22L0459-03 | XDT_m2230112-106 | Solid | 01/13/23 00:31 |

Analytical Resources, LLC
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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0147 | Instrument: | ICPMS2 |
| | | Calibration: | GA00033 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| ZZZZZ | 22L0459-03 | XDT_m2230112-106 | Solid | 01/13/23 00:31 |
| ZZZZZ | 22L0459-03 | XDT_m2230112-106 | Solid | 01/13/23 00:31 |
| ZZZZZ | 22L0459-04 | XDT_m2230112-107 | Solid | 01/13/23 00:35 |
| ZZZZZ | 22L0459-04 | XDT_m2230112-107 | Solid | 01/13/23 00:35 |
| ZZZZZ | 22L0459-04 | XDT_m2230112-107 | Solid | 01/13/23 00:35 |
| ZZZZZ | 22L0459-04 | XDT_m2230112-107 | Solid | 01/13/23 00:35 |
| ZZZZZ | 22L0459-05 | XDT_m2230112-108 | Solid | 01/13/23 00:39 |
| ZZZZZ | 22L0459-05 | XDT_m2230112-108 | Solid | 01/13/23 00:39 |
| ZZZZZ | 22L0459-05 | XDT_m2230112-108 | Solid | 01/13/23 00:39 |
| ZZZZZ | 22L0459-05 | XDT_m2230112-108 | Solid | 01/13/23 00:39 |
| ZZZZZ | 22L0459-06 | XDT_m2230112-109 | Solid | 01/13/23 00:44 |
| ZZZZZ | 22L0459-06 | XDT_m2230112-109 | Solid | 01/13/23 00:44 |
| ZZZZZ | 22L0459-06 | XDT_m2230112-109 | Solid | 01/13/23 00:44 |
| ZZZZZ | 22L0459-06 | XDT_m2230112-109 | Solid | 01/13/23 00:44 |
| ZZZZZ | 22L0459-07 | XDT_m2230112-110 | Solid | 01/13/23 00:48 |
| ZZZZZ | 22L0459-07 | XDT_m2230112-110 | Solid | 01/13/23 00:48 |
| ZZZZZ | 22L0459-07 | XDT_m2230112-110 | Solid | 01/13/23 00:48 |
| ZZZZZ | 22L0459-07 | XDT_m2230112-110 | Solid | 01/13/23 00:48 |
| Instrument Blank | SLA0147-IBL8 | XDT_m2230112-112 | NA | 01/13/23 00:57 |
| Calibration Check | SLA0147-CCVA | XDT_m2230112-113 | NA | 01/13/23 01:01 |
| Calibration Blank | SLA0147-CCBA | XDT_m2230112-114 | NA | 01/13/23 01:09 |
| Calibration Check | SLA0147-CCVB | XDT_m2230112-116 | NA | 01/13/23 01:17 |
| Calibration Blank | SLA0147-CCBB | XDT_m2230112-117 | NA | 01/13/23 01:24 |
| ZZZZZ | 23A0011-01 | XDT_m2230112-123 | Solid | 01/13/23 01:51 |
| Instrument Blank | SLA0147-IBL9 | XDT_m2230112-127 | NA | 01/13/23 02:08 |
| Calibration Check | SLA0147-CCVC | XDT_m2230112-128 | NA | 01/13/23 02:12 |
| Calibration Blank | SLA0147-CCBC | XDT_m2230112-129 | NA | 01/13/23 02:20 |
| Instrument Blank | SLA0147-IBLA | XDT_m2230112-139 | NA | 01/13/23 02:53 |
| Calibration Check | SLA0147-CCVD | XDT_m2230112-140 | NA | 01/13/23 02:57 |

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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 6020B UCT-KED

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0147 | Instrument: | ICPMS2 |
| | | Calibration: | GA00033 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| Calibration Blank | SLA0147-CCBD | XDT_m2230112-141 | NA | 01/13/23 03:03 |
| Instrument Blank | SLA0147-IBLB | XDT_m2230112-151 | NA | 01/13/23 03:36 |
| Calibration Check | SLA0147-CCVE | XDT_m2230112-152 | NA | 01/13/23 03:40 |
| Calibration Blank | SLA0147-CCBE | XDT_m2230112-153 | NA | 01/13/23 03:46 |
| Instrument Blank | SLA0147-IBLC | XDT_m2230112-163 | NA | 01/13/23 04:19 |
| Calibration Check | SLA0147-CCVF | XDT_m2230112-164 | NA | 01/13/23 04:22 |
| Calibration Blank | SLA0147-CCBF | XDT_m2230112-165 | NA | 01/13/23 04:29 |

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# ICP INTERFERENCE CHECK SAMPLE

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00024
Sequence: SLA0097
Standard ID: K011871

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| SLA0097-IFA1 | Arsenic-75a | 0 | 0.0300 | | ug/L |

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ICP INTERFERENCE CHECK SAMPLE

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00024
Sequence: SLA0097
Standard ID: K011871

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| SLA0097-IFB1 | Arsenic-75a | 20.000 | 19.326 | 96.6 | ug/L |

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ICP INTERFERENCE CHECK SAMPLE

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00033
Sequence: SLA0147
Standard ID: L000394

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| SLA0147-IFA1 | Arsenic-75a | 0 | 0.0420 | | ug/L |

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ICP INTERFERENCE CHECK SAMPLE

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00033
Sequence: SLA0147
Standard ID: L000394

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| SLA0147-IFB1 | Arsenic-75a | 20.000 | 19.371 | 96.9 | ug/L |

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

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**Analytical Chemists and Consultants**

# DETECTION LEVEL STANDARD
## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00024
Sequence: SLA0097
Lab Sample ID: SLA0097-CRL1

| Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|
| Arsenic-75a | 0.20000 | 0.208 | 104 | ug/L | 50 - 150 |

* Values outside of QC limits

**Analytical Resources, LLC**
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# DETECTION LEVEL STANDARD
## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: ICPMS2
Calibration: GA00033
Sequence: SLA0147
Lab Sample ID: SLA0147-CRL1

| Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|
| Arsenic-75a | 0.20000 | 0.197 | 98.5 | ug/L | 50 - 150 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# HIGH-CONCENTRATION CALIBRATION VERIFICATION

## EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Calibration:** GA00024
**Laboratory ID:** SLA0097-HCV1
**Sequence:** SLA0097
**Standard ID:** L000232

| ANALYTE | EXPECTED (ug/L) | FOUND (ug/L) | % DRIFT | QC LIMIT |
|---|---|---|---|---|
| Arsenic-75a | 200.00 | 196 | -2.1 | 10.00 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# HIGH-CONCENTRATION CALIBRATION VERIFICATION

## EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Calibration:** GA00024
**Laboratory ID:** SLA0097-HCV2
**Sequence:** SLA0097
**Standard ID:** L000233

| ANALYTE | EXPECTED (ug/L) | FOUND (ug/L) | % DRIFT | QC LIMIT |
|---|---|---|---|---|
| Arsenic-75a | 300.00 | 290 | -3.3 | 10.00 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# HIGH-CONCENTRATION CALIBRATION VERIFICATION

## EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Calibration:** GA00033
**Laboratory ID:** SLA0147-HCV1
**Sequence:** SLA0147
**Standard ID:** L000232

| ANALYTE | EXPECTED (ug/L) | FOUND (ug/L) | % DRIFT | QC LIMIT |
|---|---|---|---|---|
| Arsenic-75a | 200.00 | 195 | -2.6 | 10.00 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# HIGH-CONCENTRATION CALIBRATION VERIFICATION

## EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Calibration:** GA00033
**Laboratory ID:** SLA0147-HCV2
**Sequence:** SLA0147
**Standard ID:** L000233

| ANALYTE | EXPECTED (ug/L) | FOUND (ug/L) | % DRIFT | QC LIMIT |
|---|---|---|---|---|
| Arsenic-75a | 300.00 | 283 | -5.7 | 10.00 |

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

## Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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-SC788B 22L0329-07 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 20:29 | 27 | 180 | |
| LDW22-SC788C 22L0329-08 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:21 | 27 | 180 | |
| LDW22-SC788D 22L0329-09 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:25 | 27 | 180 | |
| LDW22-SC788E 22L0329-10 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:29 | 27 | 180 | |
| LDW22-SC788E-FD 22L0329-11 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:34 | 27 | 180 | |
| LDW22-SC788F 22L0329-12 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:38 | 27 | 180 | |
| LDW22-SC788G 22L0329-13 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:43 | 27 | 180 | |
| LDW22-SC788H 22L0329-14 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 19:47 | 27 | 180 | |
| Duplicate BKL0608-DUP1 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 20:33 | 27 | 180 | |
| Matrix Spike BKL0608-MS1 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 20:38 | 27 | 180 | |
| Matrix Spike Dup BKL0608-MSD1 | 12/13/22 10:28 | 12/13/22 16:54 | 12/27/22 10:02 | 13 | 180 | 01/09/23 20:42 | 27 | 180 | |

* Indicates hold time exceedance.

Analytical Resources, LLC
Analytical Chemists and Consultants

# METHOD DETECTION AND REPORTING LIMITS

## EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Instrument: ICPMS2

| Analyte | MDL | RL | Units |
|---|---|---|---|
| Arsenic-75a | 0.04 | 0.20 | mg/kg |

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

# CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 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: | CGCU10 |
| Lot Number: | P2-CU682108 |
| Matrix: | 3% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Copper |
| Starting Material: | Cu Metal |
| Starting Material Lot#: | 2095 |
| Starting Material Purity: | 99.9996% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10013 ± 30 µg/mL

**Density:** 1.032 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

**Assay Method #2** **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **10007 ± 46 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.007542 | M | Eu | < | 0.000942 | O | Na | | 0.001434 | M | Se | < | 0.016971 | M | Zn | < | 0.005657 |
| O | Al | < | 0.000609 | O | Fe | | 0.008700 | M | Nb | < | 0.000942 | O | Si | | 0.003052 | M | Zr | < | 0.000942 |
| M | As | < | 0.010371 | M | Ga | < | 0.000942 | M | Nd | < | 0.000942 | M | Sm | < | 0.000942 | | | | |
| M | Au | < | 0.001885 | M | Gd | < | 0.000942 | M | Ni | | 0.003781 | M | Sn | < | 0.005657 | | | | |
| O | B | | 0.003663 | M | Ge | < | 0.005657 | M | Os | < | 0.000942 | M | Sr | < | 0.000942 | | | | |
| M | Ba | | 0.004253 | M | Hf | < | 0.000942 | O | P | < | 0.031668 | M | Ta | < | 0.000942 | | | | |
| M | Be | < | 0.000942 | O | Hg | < | 0.007064 | M | Pb | | 0.005789 | M | Tb | < | 0.000942 | | | | |
| M | Bi | < | 0.000942 | M | Ho | < | 0.000942 | M | Pd | < | 0.000942 | M | Te | < | 0.004714 | | | | |
| O | Ca | | 0.002304 | M | In | < | 0.000942 | M | Pr | < | 0.000942 | M | Th | < | 0.000942 | | | | |
| M | Cd | < | 0.000942 | M | Ir | < | 0.000942 | M | Pt | < | 0.000942 | O | Ti | < | 0.002801 | | | | |
| M | Ce | < | 0.000942 | O | K | | 0.000763 | M | Rb | < | 0.000942 | M | Tl | < | 0.000942 | | | | |
| M | Co | | 0.001890 | M | La | < | 0.000942 | M | Re | < | 0.000942 | M | Tm | < | 0.000942 | | | | |
| M | Cr | < | 0.005657 | O | Li | < | 0.000243 | i | Rh | < | | M | U | < | 0.000942 | | | | |
| M | Cs | < | 0.000942 | M | Lu | < | 0.000942 | M | Ru | < | 0.039588 | M | V | < | 0.003771 | | | | |
| s | Cu | < | | O | Mg | | 0.000320 | O | S | | 0.007174 | M | W | < | 0.005657 | | | | |
| M | Dy | < | 0.000942 | O | Mn | | 0.000793 | M | Sb | < | 0.001885 | M | Y | < | 0.000942 | | | | |
| M | Er | < | 0.000942 | M | Mo | < | 0.005657 | M | Sc | < | 0.000942 | M | Yb | < | 0.000942 | | | | |

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 -** 63.55 +2 6 Cu(H2O)62+

**Chemical Compatibility -**Stable in HCl, HNO3, H2SO4, HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

**Cu Containing Samples (Preparation and Solution) -**Metal (soluble in HNO3 ); Oxides ( Soluble in HCl ); Ores ( Dissolve in HCl / HNO3).

**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 63 amu | 10 ppt | n/a | 40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca |
| ICP-OES 219.958 nm | 0.01/.002 µg/mL | 1 | Th, Ta, Nb, U, Hf |
| ICP-OES 224.700 nm | 0.01/.001 µg/mL | 1 | Pb, Ir, Ni, W |
| ICP-OES 324.754 nm | 0.06/.001 µg/mL | | Nb, U, Th, Mo, Hf |

## 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 24, 2019

- 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 24, 2023**

- 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
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
CEO, Senior Technical Director

# Certificate of Analysis

Refine your results. Redefine your industry.

300 Technology Drive
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F: 540-585-3012
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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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGPB10 |
| Lot Number: | S2-PB713228 |
| Matrix: | 0.5% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Lead |
| Starting Material: | Lead Nitrate |
| Starting Material Lot#: | 2343 |
| Starting Material Purity: | 99.9995% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10042 ± 31 µg/mL

**Density:** 1.015 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

**Assay Method #2** **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.000310 | M | Eu | < | 0.000310 | M | Na | | 0.001470 | M | Se | < | 0.009100 | O | Zn | | 0.006155 |
| O | Al | | 0.017098 | O | Fe | | 0.002496 | M | Nb | < | 0.000310 | O | Si | | 0.003761 | O | Zr | < | 0.001700 |
| M | As | < | 0.003100 | M | Ga | < | 0.000310 | M | Nd | < | 0.000310 | M | Sm | < | 0.000310 | | | | |
| M | Au | < | 0.000910 | M | Gd | < | 0.000310 | O | Ni | | 0.001709 | M | Sn | < | 0.001300 | | | | |
| O | B | < | 0.005600 | M | Ge | < | 0.002200 | M | Os | < | 0.000310 | O | Sr | | 0.000444 | | | | |
| O | Ba | | 0.007865 | M | Hf | < | 0.000310 | O | P | < | 0.038000 | M | Ta | < | 0.000310 | | | | |
| O | Be | < | 0.000320 | M | Hg | < | 0.002200 | s | Pb | < | | M | Tb | < | 0.000610 | | | | |
| M | Bi | < | 0.028000 | M | Ho | < | 0.000310 | M | Pd | < | 0.000610 | M | Te | < | 0.000310 | | | | |
| O | Ca | | 0.019834 | M | In | < | 0.000310 | M | Pr | < | 0.000310 | M | Th | < | 0.000310 | | | | |
| O | Cd | < | 0.000630 | M | Ir | < | 0.000310 | M | Pt | < | 0.000910 | O | Ti | | 0.005129 | | | | |
| M | Ce | | 0.004787 | O | K | | 0.008207 | M | Rb | < | 0.006700 | M | Tl | < | 0.016000 | | | | |
| M | Co | < | 0.000610 | M | La | < | 0.001900 | M | Re | < | 0.000310 | M | Tm | < | 0.000310 | | | | |
| O | Cr | < | 0.001500 | O | Li | < | 0.000110 | O | Rh | < | 0.007700 | M | U | < | 0.000310 | | | | |
| M | Cs | < | 0.006100 | M | Lu | < | 0.000310 | M | Ru | < | 0.001300 | M | V | < | 0.001600 | | | | |
| M | Cu | < | 0.001600 | O | Mg | | 0.003317 | O | S | < | 0.052000 | M | W | < | 0.000910 | | | | |
| M | Dy | < | 0.000310 | O | Mn | < | 0.001600 | O | Sb | < | 0.015000 | M | Y | < | 0.000310 | | | | |
| M | Er | < | 0.000310 | M | Mo | < | 0.000610 | O | Sc | < | 0.000630 | M | Yb | < | 0.000310 | | | | |

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 -** 207.20 +2 6 Pb(H2O)6+2

**Chemical Compatibility -** Soluble in HCl, HF and HNO3. Avoid H2SO4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

**Pb Containing Samples (Preparation and Solution) -**Metal (Best dissolved in 1:1 H2O / HNO3 ); Oxides (The many different Pb oxides are soluble in HNO3 with the exception of PbO2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H2O / HNO3 ); Organic Matrices (Dry ash and dissolve in dilute HCl).

**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 208 amu | 5 ppt | n/a | 192Pt16O, 192Os16O |
| ICP-OES 168.215 nm | 0.03 / 0.003 µg/mL | 1 | Co |
| ICP-OES 217.000 nm | 0.09 / 0.03 µg/mL | 1 | W, Ir, Hf, Sb, Th |
| ICP-OES 220.353 nm | 0.04 / 0.006 µg/mL | 1 | Bi, Nb |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

January 10, 2022

- 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**

- **January 10, 2027**

- 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:**

Thomas Kozikowski
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

300 Technology Drive
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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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGZN10 |
| Lot Number: | S2-ZN711249 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Zinc |
| Starting Material: | Zinc Metal |
| Starting Material Lot#: | 2349 |
| Starting Material Purity: | 99.9988% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9992 ± 30 µg/mL

**Density:** 1.029 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

| | |
|---|---|
| **Assay Method #1** | **9981 ± 56 µg/mL**<br>ICP Assay NIST SRM 3168a Lot Number: 120629 |
| **Assay Method #2** | **9987 ± 32 µg/mL**<br>EDTA NIST SRM 928 Lot Number: 928 |
| **Assay Method #3** | **10002 ± 32 µg/mL**<br>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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.002000 | M | Eu | < | 0.000500 | O | Na | | 0.008713 | M | Se | < | 0.048000 | s | Zn | < | |
| O | Al | < | 0.011000 | O | Fe | | 0.015467 | M | Nb | < | 0.000500 | O | Si | | 0.007842 | M | Zr | < | 0.000500 |
| O | As | < | 0.012000 | M | Ga | < | 0.004900 | M | Nd | < | 0.000500 | M | Sm | < | 0.000500 | | | | |
| M | Au | < | 0.006500 | M | Gd | < | 0.000500 | O | Ni | | 0.003049 | M | Sn | | 0.002614 | | | | |
| O | B | < | 0.019000 | M | Ge | < | 0.009100 | M | Os | < | 0.000500 | M | Sr | < | 0.000500 | | | | |
| M | Ba | < | 0.000500 | M | Hf | < | 0.000500 | O | P | < | 0.059000 | M | Ta | < | 0.000500 | | | | |
| O | Be | < | 0.000230 | O | Hg | < | 0.003800 | M | Pb | | 0.016774 | M | Tb | < | 0.000500 | | | | |
| M | Bi | < | 0.002400 | M | Ho | < | 0.000500 | M | Pd | < | 0.001000 | M | Te | < | 0.017000 | | | | |
| O | Ca | | 0.052283 | M | In | < | 0.003500 | M | Pr | < | 0.000500 | M | Th | < | 0.000500 | | | | |
| O | Cd | | 0.000588 | M | Ir | < | 0.001000 | M | Pt | < | 0.000500 | M | Ti | < | 0.002000 | | | | |
| M | Ce | < | 0.000500 | O | K | | 0.017209 | M | Rb | < | 0.002500 | M | Tl | < | 0.000500 | | | | |
| M | Co | | 0.000653 | M | La | < | 0.000500 | M | Re | < | 0.000500 | M | Tm | < | 0.000500 | | | | |
| O | Cr | | 0.001089 | O | Li | < | 0.000230 | M | Rh | < | 0.000500 | M | U | < | 0.000500 | | | | |
| M | Cs | < | 0.000500 | M | Lu | < | 0.000500 | M | Ru | < | 0.005000 | M | V | < | 0.000500 | | | | |
| O | Cu | | 0.001938 | O | Mg | | 0.000871 | O | S | < | 0.048000 | M | W | < | 0.001000 | | | | |
| M | Dy | < | 0.000500 | O | Mn | | 0.000172 | M | Sb | < | 0.004300 | M | Y | < | 0.000500 | | | | |
| M | Er | < | 0.000500 | M | Mo | < | 0.001500 | O | Sc | < | 0.000900 | M | Yb | < | 0.000500 | | | | |

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 -** 65.39 +2 4 Zn(OH)(aq)1+

**Chemical Compatibility -**Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

**Zn Containing Samples (Preparation and Solution) -**Metal (soluble in HNO3 ); Oxides ( Soluble in HCl ); Ores ( Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)

**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 66 amu | 7 ppt | N/A | 50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2 |
| ICP-OES 202.548 nm | 0.004/0.0002 µg/mL | 1 | Nb, Cu, Co, Hf |
| ICP-OES 206.200 nm | 0.006/0.0006 µg/mL | 1 | Sb, Ta, Bi, Os |
| ICP-OES 213.856 nm | 0.002/0.0004 µg/mL | 1 | Ni, Cu, V |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

November 22, 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 22, 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

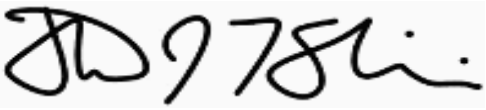
- Sealed TCT Bag Open Date: _____

- 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 Approved By:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGSE10 |
| Lot Number: | S2-SE711004 |
| Matrix: | 3% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Selenium |
| Starting Material: | Se Metal |
| Starting Material Lot#: | 1962 |
| Starting Material Purity: | 99.9991% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9955 ± 61 µg/mL

**Density:** 1.035 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

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 | < | 0.002242 | M | Eu | < | 0.000373 | O | Na | | 0.013654 | s | Se | < | | O | Zn | | 0.002374 |
| M | Al | | 0.004450 | M | Fe | | 0.008478 | O | Nb | < | 0.002975 | O | Si | | 0.006249 | M | Zr | < | 0.001868 |
| O | As | < | 0.022040 | M | Ga | < | 0.000373 | M | Nd | < | 0.000373 | M | Sm | < | 0.000373 | | | | |
| M | Au | < | 0.000373 | M | Gd | < | 0.000373 | O | Ni | | 0.001843 | M | Sn | | 0.000847 | | | | |
| O | B | < | 0.007714 | M | Ge | < | 0.002616 | M | Os | < | 0.000373 | M | Sr | < | 0.001121 | | | | |
| M | Ba | < | 0.001495 | M | Hf | < | 0.000373 | O | P | < | 0.022040 | M | Ta | < | 0.000373 | | | | |
| M | Be | < | 0.001495 | M | Hg | < | 0.002240 | M | Pb | | 0.006358 | M | Tb | < | 0.006353 | | | | |
| M | Bi | < | 0.000373 | M | Ho | < | 0.000373 | M | Pd | < | 0.000373 | M | Te | < | 0.012707 | | | | |
| O | Ca | | 0.006530 | M | In | < | 0.000373 | M | Pr | < | 0.001495 | M | Th | < | 0.002990 | | | | |
| M | Cd | | 0.001165 | M | Ir | < | 0.000373 | M | Pt | < | 0.000373 | M | Ti | < | 0.003363 | | | | |
| M | Ce | < | 0.000373 | O | K | | 0.001999 | M | Rb | < | 0.001868 | M | Tl | | 0.008584 | | | | |
| M | Co | < | 0.000373 | M | La | < | 0.001121 | M | Re | < | 0.000373 | M | Tm | < | 0.000373 | | | | |
| M | Cr | | 0.002861 | O | Li | | 0.000062 | M | Rh | < | 0.000373 | M | U | < | 0.000373 | | | | |
| M | Cs | < | 0.001121 | M | Lu | < | 0.000373 | M | Ru | < | 0.001493 | M | V | < | 0.000747 | | | | |
| M | Cu | < | 0.000747 | O | Mg | | 0.001156 | O | S | | 0.024591 | M | W | < | 0.002242 | | | | |
| M | Dy | < | 0.000373 | M | Mn | < | 0.000373 | M | Sb | < | 0.002242 | M | Y | < | 0.000373 | | | | |
| M | Er | < | 0.000373 | O | Mo | < | 0.003195 | M | Sc | < | 0.001121 | M | Yb | < | 0.000373 | | | | |

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 -** 78.96 +4 6 $H_2SeO_3$

**Chemical Compatibility -**Soluble in HCl, $HNO_3$,$H_3PO_4$, $H_2SO_4$ and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

**Stability -** 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% $HNO_3$ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% $HNO_3$ / LDPE container.

**Se Containing Samples (Preparation and Solution) -**Metal (soluble in $HNO_3$); Oxides ( readily soluble in water); Minerals and alloys (acid digestion with $HNO_3$or $HNO_3$ / HF ); Organic Matrices (acid digestion with hot concentrated $H_2SO_4$ accompanied by the careful dropwise addition of $H_2O_2$ until clear).

**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 82 amu | 200 ppt | N/A | 12C35Cl2 |
| ICP-OES 196.026 nm | 0.08/0.006 µg/mL | 1 | Fe |
| ICP-OES 203.985 nm | 0.2/0.05 µg/mL | 1 | Sb, Ir, Cr, Ta |
| ICP-OES 206.279 nm | 0.3/0.16 µg/mL | 1 | Cr, Pt |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

November 17, 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 17, 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

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGMO10 |
| Lot Number: | S2-MO706255 |
| Matrix: | H2O<br>tr. NH4OH |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Molybdenum |
| Starting Material: | Ammonium Molybdate |
| Starting Material Lot#: | 2361 |
| Starting Material Purity: | 99.9893% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10026 ± 47 µg/mL

**Density:** 1.011 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

**Assay Method #2** **10020 ± 65 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.000590 | M | Eu | < | 0.000300 | M | Na | | 0.008739 | M | Se | < | 0.008000 | M | Zn | | 0.005942 |
| M | Al | | 0.005592 | M | Fe | < | 0.006500 | M | Nb | < | 0.029000 | i | Si | < | | M | Zr | < | 0.001800 |
| M | As | < | 0.002100 | M | Ga | < | 0.000300 | i | Nd | < | | M | Sm | < | 0.000300 | | | | |
| M | Au | < | 0.000300 | M | Gd | < | 0.000300 | M | Ni | < | 0.008000 | M | Sn | < | 0.008900 | | | | |
| M | B | < | 0.003300 | M | Ge | < | 0.000300 | M | Os | < | 0.000590 | M | Sr | | 0.001747 | | | | |
| M | Ba | | 0.016778 | M | Hf | < | 0.001800 | i | P | < | | M | Ta | < | 0.004200 | | | | |
| M | Be | < | 0.000890 | M | Hg | < | 0.003300 | M | Pb | < | 0.000300 | M | Tb | < | 0.000300 | | | | |
| M | Bi | < | 0.000890 | M | Ho | < | 0.000300 | M | Pd | < | 0.001800 | M | Te | < | 0.021000 | | | | |
| O | Ca | | 0.062920 | M | In | < | 0.032000 | M | Pr | < | 0.013000 | M | Th | < | 0.000300 | | | | |
| O | Cd | < | 0.026000 | M | Ir | < | 0.000300 | M | Pt | < | 0.000300 | O | Ti | < | 0.032000 | | | | |
| M | Ce | < | 0.008300 | M | K | | 1.293372 | M | Rb | | 0.045442 | M | Tl | | 0.012584 | | | | |
| M | Co | | 0.005942 | M | La | < | 0.000300 | M | Re | < | 0.000300 | M | Tm | < | 0.000300 | | | | |
| M | Cr | | 0.005243 | O | Li | | 0.000594 | M | Rh | < | 0.000300 | M | U | < | 0.005300 | | | | |
| M | Cs | | 0.005243 | M | Lu | < | 0.000300 | M | Ru | < | 0.079000 | M | V | < | 0.000890 | | | | |
| M | Cu | | 0.022371 | M | Mg | | 0.005592 | i | S | < | | M | W | | 0.873900 | | | | |
| M | Dy | < | 0.000300 | M | Mn | < | 0.005900 | M | Sb | | 0.015031 | M | Y | < | 0.000300 | | | | |
| M | Er | < | 0.000300 | s | Mo | < | | M | Sc | < | 0.001200 | M | Yb | < | 0.000300 | | | | |

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 -** 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

**Chemical Compatibility -**Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

**Stability -** 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

**Mo Containing Samples (Preparation and Solution) -**Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl ).

**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 95 amu | 3 ppt | n/a | 40Ar39K16O,79Br16O,190Os2+,190Pt2+ |
| ICP-OES 202.030 nm | 0.008 / 0.0002 µg/mL | 1 | Os, Hf |
| ICP-OES 203.844 nm | 0.012 / 0.002 µg/mL | 1 | |
| ICP-OES 204.598 nm | 0.012 / 0.001 µg/mL | 1 | Ir, Ta |

## 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

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

July 04, 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

- **July 04, 2025**

- 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

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGTL10 |
| Lot Number: | T2-TL714687 |
| Matrix: | 5% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Thallium |
| Starting Material: | TlNO3 |
| Starting Material Lot#: | 2118 |
| Starting Material Purity: | 99.9998% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10030 ± 42 µg/mL

**Density:** 1.036 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

**Assay Method #2** **10010 ± 65 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.000200 | M | Eu | < | 0.000200 | O | Na | | 0.002489 | M | Se | < | 0.011019 | O | Zn | | 0.002298 |
| O | Al | < | 0.004184 | O | Fe | < | 0.002824 | M | Nb | < | 0.000200 | O | Si | | 0.003760 | M | Zr | < | 0.000200 |
| M | As | < | 0.002003 | M | Ga | < | 0.000200 | M | Nd | < | 0.000200 | M | Sm | < | 0.000200 | | | | |
| O | Au | < | 0.002824 | M | Gd | < | 0.000200 | M | Ni | | 0.001724 | M | Sn | < | 0.000601 | | | | |
| O | B | < | 0.004184 | M | Ge | < | 0.000801 | M | Os | < | 0.000198 | O | Sr | < | 0.000313 | | | | |
| M | Ba | < | 0.000400 | M | Hf | < | 0.000200 | O | P | < | 0.010460 | M | Ta | < | 0.000200 | | | | |
| O | Be | < | 0.000104 | M | Hg | < | 0.000794 | M | Pb | | 0.000811 | M | Tb | < | 0.000200 | | | | |
| M | Bi | < | 0.005209 | M | Ho | < | 0.000200 | M | Pd | < | 0.000400 | M | Te | < | 0.005008 | | | | |
| O | Ca | | 0.002436 | M | In | < | 0.000200 | M | Pr | < | 0.000200 | M | Th | < | 0.000200 | | | | |
| M | Cd | | 0.001318 | M | Ir | < | 0.000198 | M | Pt | < | 0.000801 | O | Ti | < | 0.001255 | | | | |
| M | Ce | < | 0.000200 | O | K | | 0.006175 | M | Rb | < | 0.000200 | s | Tl | < | | | | | |
| M | Co | < | 0.000601 | M | La | < | 0.000200 | M | Re | < | 0.000200 | M | Tm | < | 0.000200 | | | | |
| M | Cr | < | 0.000801 | O | Li | < | 0.000177 | M | Rh | < | 0.000200 | M | U | < | 0.000200 | | | | |
| M | Cs | < | 0.003606 | M | Lu | < | 0.000200 | M | Ru | < | 0.000397 | M | V | < | 0.002203 | | | | |
| M | Cu | < | 0.001001 | O | Mg | | 0.000529 | O | S | < | 0.015690 | M | W | < | 0.000601 | | | | |
| M | Dy | < | 0.000200 | M | Mn | < | 0.000801 | M | Sb | < | 0.000400 | M | Y | < | 0.000200 | | | | |
| M | Er | < | 0.000200 | M | Mo | < | 0.001202 | O | Sc | < | 0.000711 | M | Yb | < | 0.000200 | | | | |

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 -** 204.38 +1 6 Tl(H2O)61+

**Chemical Compatibility -** Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

**Tl Containing Samples )Preparation and Solution) -**Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).

**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 205 amu | 2 ppt | N/A | 189Os16O |
| ICP-OES 190.864 nm | 0.04 / 0.004 µg/mL | 1 | V, Ti |
| ICP-OES 276.787 nm | 0.1 / 0.01 µg/mL | 1 | Ta, V, Fe, Cr |
| ICP-OES 351.924 nm | 0.2 / 0.02 µg/mL | 1 | Th, Ce, Zr |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

February 08, 2022

- 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

- **February 08, 2027**

- 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

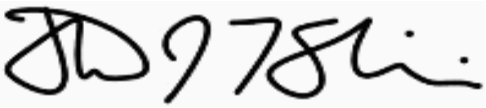
- Sealed TCT Bag Open Date: _____

- 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:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGCD10 |
| Lot Number: | S2-CD710508 |
| Matrix: | 3% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Cadmium |
| Starting Material: | Cd Metal |
| Starting Material Lot#: | 1953 |
| Starting Material Purity: | 99.9995% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10008 ± 30 µg/mL

**Density:** 1.029 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #2** **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

**Assay Method #3** **10003 ± 30 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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.

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O | Ag | < | 0.003200 | O | Eu | < | 0.002500 | O | Na | | 0.005499 | M | Se | < | 0.005700 | O | Zn | < | 0.001100 |
| O | Al | | 0.008903 | O | Fe | | 0.000602 | M | Nb | < | 0.000400 | O | Si | | 0.016758 | O | Zr | < | 0.002600 |
| M | As | < | 0.003600 | M | Ga | < | 0.001200 | M | Nd | < | 0.000800 | M | Sm | < | 0.000400 | | | | |
| M | Au | < | 0.000810 | M | Gd | < | 0.000400 | M | Ni | < | 0.003600 | M | Sn | < | 0.003200 | | | | |
| O | B | | 0.004189 | O | Ge | < | 0.012000 | M | Os | < | 0.000810 | O | Sr | < | 0.000330 | | | | |
| M | Ba | < | 0.002400 | M | Hf | < | 0.000400 | O | P | < | 0.022000 | M | Ta | < | 0.000800 | | | | |
| M | Be | < | 0.000400 | M | Hg | < | 0.001700 | M | Pb | < | 0.002400 | M | Tb | < | 0.000400 | | | | |
| M | Bi | < | 0.000400 | M | Ho | < | 0.000400 | M | Pd | < | 0.001200 | M | Te | < | 0.008000 | | | | |
| O | Ca | | 0.011259 | O | In | < | 0.013000 | M | Pr | < | 0.000400 | M | Th | < | 0.000400 | | | | |
| s | Cd | < | | M | Ir | < | 0.000410 | M | Pt | < | 0.000400 | O | Ti | | 0.000602 | | | | |
| M | Ce | < | 0.000400 | O | K | | 0.005237 | M | Rb | < | 0.004400 | M | Tl | | 0.000523 | | | | |
| M | Co | < | 0.000400 | M | La | < | 0.000400 | M | Re | < | 0.000400 | M | Tm | < | 0.000400 | | | | |
| O | Cr | < | 0.005100 | O | Li | < | 0.000054 | M | Rh | < | 0.000400 | M | U | < | 0.000400 | | | | |
| M | Cs | < | 0.002400 | M | Lu | < | 0.000400 | M | Ru | < | 0.002500 | M | V | < | 0.002000 | | | | |
| O | Cu | < | 0.004800 | O | Mg | | 0.000288 | O | S | < | 0.022000 | M | W | < | 0.000400 | | | | |
| M | Dy | < | 0.000400 | O | Mn | < | 0.000860 | O | Sb | < | 0.018000 | M | Y | < | 0.000400 | | | | |
| M | Er | < | 0.000400 | M | Mo | < | 0.001600 | O | Sc | < | 0.000430 | M | Yb | < | 0.000400 | | | | |

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 -** 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

**Chemical Compatibility -**Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

**Cd Containing Samples (Preparation and Solution) -**Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

**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 111 amu | 11 ppt | n/a | 95Mo16O |
| ICP-OES 214.438 nm | 0.003 / 0.0003 µg/mL | 1 | Pt, Ir |
| ICP-OES 226.502 nm | 0.003 / 0.0003 µg/mL | 1 | Ir |
| ICP-OES 228.802 nm | 0.003 / 0.0003 µg/mL | 1 | Co, Ir, As, Pt |

## 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 01, 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 01, 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 Approved By:**

Michael Booth
Director, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

Refine your results. Redefine your industry.

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F: 540-585-3012
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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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGMN10 |
| Lot Number: | S2-MN704240 |
| Matrix: | 3% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Manganese |
| Starting Material: | Mn Metal |
| Starting Material Lot#: | 2275 |
| Starting Material Purity: | 99.9909% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10011 ± 30 µg/mL

**Density:** 1.035 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

**Assay Method #2** **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **10024 ± 47 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.001500 | M | Eu | < | 0.000730 | O | Na | | 0.176097 | M | Se | < | 0.006600 | M | Zn | | 0.009925 |
| O | Al | | 0.004322 | M | Fe | < | 0.650000 | M | Nb | < | 0.000730 | O | Si | | 0.097654 | M | Zr | < | 0.000730 |
| M | As | < | 0.008000 | M | Ga | | 0.004322 | M | Nd | < | 0.001500 | M | Sm | < | 0.000730 | | | | |
| M | Au | < | 0.000730 | M | Gd | < | 0.000730 | M | Ni | | 0.024013 | M | Sn | < | 0.002200 | | | | |
| M | B | | 0.068838 | M | Ge | < | 0.004400 | M | Os | < | 0.000730 | O | Sr | | 0.000928 | | | | |
| M | Ba | < | 0.001500 | M | Hf | < | 0.000730 | i | P | < | | M | Ta | < | 0.000730 | | | | |
| M | Be | < | 0.000730 | M | Hg | < | 0.002200 | M | Pb | | 0.007364 | M | Tb | < | 0.000730 | | | | |
| M | Bi | < | 0.003000 | M | Ho | < | 0.000730 | M | Pd | < | 0.000730 | M | Te | < | 0.019000 | | | | |
| O | Ca | | 0.062434 | M | In | < | 0.003000 | M | Pr | < | 0.000730 | M | Th | < | 0.000730 | | | | |
| M | Cd | < | 0.001500 | M | Ir | < | 0.000730 | M | Pt | < | 0.000730 | O | Ti | < | 0.006500 | | | | |
| M | Ce | < | 0.007300 | O | K | | 0.006403 | M | Rb | < | 0.006600 | M | Tl | < | 0.000730 | | | | |
| O | Co | | 0.014728 | M | La | < | 0.003000 | M | Re | < | 0.000730 | M | Tm | < | 0.000730 | | | | |
| O | Cr | | 0.272151 | O | Li | | 0.000416 | M | Rh | < | 0.003000 | M | U | < | 0.001500 | | | | |
| M | Cs | < | 0.000730 | M | Lu | < | 0.000730 | M | Ru | < | 0.004400 | M | V | < | 0.000730 | | | | |
| O | Cu | | 0.007684 | O | Mg | | 0.320177 | i | S | < | | M | W | < | 0.004400 | | | | |
| M | Dy | < | 0.001500 | s | Mn | < | | M | Sb | < | 0.021000 | O | Y | | 0.001360 | | | | |
| M | Er | < | 0.001500 | M | Mo | | 0.010245 | O | Sc | < | 0.004100 | M | Yb | < | 0.000730 | | | | |

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 -** 54.94 +2 6 Mn(H2O)62+

**Chemical Compatibility -**Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3/LDPE container.

**Mn Containing Samples (Preparation and Solution) -**Metal (Soluble in dilute acids ); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H2SO4 and heat to SO3 fumes - dense white fumes).

**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 55 amu | 10 ppt | n/a | 40Ar14N1H,39K16 O,37Cl18O,40Ar15 N,38Ar17O,36Ar18O 1H ,38Ar16O1H,37Cl17 O1H,23Na32S |
| ICP-OES 257.610 nm | 0.0014 / 0.00002 µg/mL | 1 | Ce, W, Re |
| ICP-OES 259.373 nm | 0.0016 / 0.00002 µg/mL | 1 | U, Ta, Mo, Fe, Nb |
| ICP-OES 260.569 nm | 0.0021 / 0.00002 µg/mL | 1 | Co |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

April 17, 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

- **April 17, 2025**

- 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

INORGANIC VENTURES
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# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGSB10 |
| Lot Number: | R2-SB688559 |
| Matrix: | 3% (v/v) HNO3<br>3% (w/v) tartaric acid |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Antimony |
| Starting Material: | Antimony Metal |
| Starting Material Lot#: | 1857 |
| Starting Material Purity: | 99.9894% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10003 ± 47 µg/mL

**Density:** 1.061 g/mL (measured at 20 ± 4 ºC)

**Assay Information:**

**Assay Method #1** **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = coverage factor = 2
$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = 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 | < | 0.000200 | M | Eu | < | 0.000300 | O | Na | | 0.140000 | M | Se | < | 0.007300 | O | Zn | | 0.005000 |
| M | Al | | 0.003200 | O | Fe | | 0.060000 | M | Nb | < | 0.000100 | O | Si | | 0.150000 | O | Zr | < | 0.006300 |
| M | As | < | 0.004400 | M | Ga | < | 0.000400 | M | Nd | < | 0.000100 | M | Sm | < | 0.000100 | | | | |
| M | Au | < | 0.000210 | M | Gd | < | 0.000100 | O | Ni | | 0.004800 | M | Sn | < | 0.001800 | | | | |
| M | B | < | 0.011000 | M | Ge | < | 0.000600 | M | Os | < | 0.000110 | O | Sr | | 0.000750 | | | | |
| O | Ba | < | 0.004900 | M | Hf | < | 0.000100 | O | P | | 0.540000 | M | Ta | | 0.003300 | | | | |
| M | Be | < | 0.000400 | M | Hg | < | 0.000110 | M | Pb | < | 0.000400 | M | Tb | < | 0.000100 | | | | |
| M | Bi | < | 0.000200 | M | Ho | < | 0.000100 | M | Pd | < | 0.000210 | M | Te | < | 0.000600 | | | | |
| O | Ca | | 0.110000 | M | In | < | 0.000100 | M | Pr | < | 0.001600 | M | Th | < | 0.000100 | | | | |
| M | Cd | < | 0.000200 | M | Ir | < | 0.000110 | M | Pt | < | 0.000600 | M | Ti | < | 0.002800 | | | | |
| M | Ce | | 0.006500 | O | K | | 0.020000 | M | Rb | < | 0.001000 | M | Tl | < | 0.000100 | | | | |
| M | Co | < | 0.000200 | O | La | < | 0.016000 | M | Re | < | 0.000100 | M | Tm | < | 0.000100 | | | | |
| M | Cr | | 0.006900 | O | Li | < | 0.000430 | M | Rh | < | 0.000300 | M | U | < | 0.000100 | | | | |
| M | Cs | < | 0.000200 | M | Lu | < | 0.000100 | M | Ru | < | 0.000310 | M | V | < | 0.000800 | | | | |
| M | Cu | < | 0.000600 | O | Mg | | 0.021000 | n | S | < | | M | W | < | 0.000200 | | | | |
| M | Dy | < | 0.000100 | O | Mn | | 0.001900 | s | Sb | < | | M | Y | < | 0.000100 | | | | |
| M | Er | < | 0.000100 | M | Mo | < | 0.000500 | O | Sc | < | 0.002300 | M | Yb | < | 0.000100 | | | | |

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 -** 121.75 +3 6 Sb(O)C4H4O6-1

**Chemical Compatibility -**Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

**Sb Containing Samples (Preparation and Solution) -**Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides ( Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

**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 121 amu | 5 ppt | N/A | 105Pd16O, 89Y16O2 |
| ICP-OES 206.833 nm | 0.03/0.003 µg/mL | 1 | Ta, Cr, Ge, Hf |
| ICP-OES 217.581 nm | 0.05/0.005 µg/mL | 1 | Nb, W, Re, Fe |
| ICP-OES 231.147 nm | 0.06/0.006 µg/mL | 1 | Ni, Co, Pt |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

April 30, 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**

- **April 30, 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
Manager, Quality Control

Michael L Booth

**Certifying Officer:**

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGAS10 |
| Lot Number: | T2-AS718260 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Arsenic |
| Starting Material: | As Metal |
| Starting Material Lot#: | 2208 |
| Starting Material Purity: | 99.9971% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10060 ± 40 µg/mL

**Density:** 1.037 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

**Assay Method #2** **10055 ± 76 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.003200 | M | Eu | < | 0.000530 | O | Na | | 0.032544 | M | Se | < | 0.006300 | O | Zn | | 0.001952 |
| M | Al | | 0.007593 | O | Fe | | 0.001475 | O | Nb | < | 0.012000 | O | Si | | 0.238658 | O | Zr | < | 0.004100 |
| s | As | < | | M | Ga | < | 0.000530 | M | Nd | < | 0.000530 | M | Sm | < | 0.000530 | | | | |
| M | Au | < | 0.003100 | M | Gd | < | 0.000530 | M | Ni | < | 0.002100 | M | Sn | < | 0.000530 | | | | |
| M | B | | 0.026035 | M | Ge | < | 0.001600 | M | Os | < | 0.000520 | M | Sr | < | 0.000530 | | | | |
| M | Ba | < | 0.000530 | M | Hf | < | 0.000530 | O | P | < | 0.043000 | M | Ta | < | 0.000530 | | | | |
| O | Be | < | 0.000360 | M | Hg | < | 0.001600 | M | Pb | < | 0.002100 | M | Tb | < | 0.000530 | | | | |
| M | Bi | < | 0.000530 | M | Ho | < | 0.000530 | M | Pd | < | 0.001100 | M | Te | < | 0.004700 | | | | |
| O | Ca | | 0.004339 | M | In | < | 0.023000 | M | Pr | < | 0.005300 | M | Th | < | 0.000530 | | | | |
| M | Cd | < | 0.001100 | M | Ir | < | 0.000520 | M | Pt | < | 0.000530 | O | Ti | < | 0.002300 | | | | |
| M | Ce | < | 0.000530 | O | K | | 0.002061 | M | Rb | < | 0.000530 | M | Tl | < | 0.000530 | | | | |
| M | Co | < | 0.000530 | M | La | < | 0.001100 | M | Re | < | 0.000530 | M | Tm | < | 0.000530 | | | | |
| O | Cr | < | 0.001800 | O | Li | < | 0.000120 | M | Rh | < | 0.000530 | M | U | < | 0.000530 | | | | |
| M | Cs | < | 0.005300 | M | Lu | < | 0.000530 | M | Ru | < | 0.000520 | M | V | < | 0.002700 | | | | |
| M | Cu | < | 0.001600 | O | Mg | | 0.000154 | O | S | | 0.028205 | M | W | < | 0.012000 | | | | |
| M | Dy | < | 0.000530 | O | Mn | | 0.000154 | M | Sb | < | 0.000530 | M | Y | < | 0.000530 | | | | |
| M | Er | < | 0.000530 | M | Mo | < | 0.000530 | O | Sc | < | 0.001700 | M | Yb | < | 0.000530 | | | | |

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 -** 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

**Chemical Compatibility -** Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

**Stability -** 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

**As Containing Samples (Preparation and Solution) -** Metal (soluble in 1:1 H2O / HNO3 ); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

**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 75 amu | 20 ppt | N/A | 40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+ |
| ICP-OES 189.042 nm | 0.05/0.005 µg/mL | 1 | Cr |
| ICP-OES 193.696 nm | 0.1/0.01 µg/mL | 1 | V, Ge |
| ICP-OES 228.812 nm | 0.1/0.01 µg/mL | 1 | Cd, Pt, Ir, Co |

## 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

May 10, 2022

- 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

- **May 10, 2027**

- 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGBA10 |
| Lot Number: | R2-BA692576 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Barium |
| Starting Material: | Barium Nitrate |
| Starting Material Lot#: | 1969 |
| Starting Material Purity: | 99.9982% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10022 ± 30 µg/mL

**Density:** 1.025 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10018 ± 50 µg/mL**
ICP Assay NIST SRM 3104a Lot Number: 140909

**Assay Method #2** **10023 ± 31 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

**Assay Method #3** **10023 ± 30 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.000410 | O | Eu | < | 0.005200 | O | Na | | 0.004610 | M | Se | < | 0.003700 | O | Zn | | 0.000658 |
| M | Al | < | 0.003100 | O | Fe | | 0.015707 | M | Nb | < | 0.000210 | O | Si | | 0.005573 | M | Zr | < | 0.001300 |
| M | As | < | 0.001300 | M | Ga | < | 0.000210 | M | Nd | < | 0.000210 | O | Sm | < | 0.021000 | | | | |
| M | Au | < | 0.001300 | M | Gd | < | 0.000210 | M | Ni | < | 0.000810 | M | Sn | < | 0.000410 | | | | |
| O | B | < | 0.005200 | M | Ge | < | 0.002500 | M | Os | < | 0.000410 | O | Sr | | 0.003850 | | | | |
| s | Ba | < | | M | Hf | < | 0.000810 | O | P | < | 0.026000 | M | Ta | < | 0.000410 | | | | |
| O | Be | < | 0.000320 | M | Hg | < | 0.000210 | M | Pb | < | 0.002300 | M | Tb | < | 0.000210 | | | | |
| M | Bi | < | 0.000210 | M | Ho | < | 0.000210 | M | Pd | < | 0.000210 | M | Te | < | 0.001900 | | | | |
| O | Ca | | 0.007093 | M | In | < | 0.000210 | M | Pr | < | 0.000210 | M | Th | < | 0.000210 | | | | |
| M | Cd | < | 0.000210 | M | Ir | < | 0.000210 | M | Pt | < | 0.000210 | M | Ti | < | 0.002100 | | | | |
| M | Ce | < | 0.001300 | O | K | | 0.035467 | M | Rb | < | 0.002100 | M | Tl | < | 0.000210 | | | | |
| M | Co | < | 0.000410 | O | La | < | 0.005200 | M | Re | < | 0.000210 | M | Tm | < | 0.000410 | | | | |
| M | Cr | < | 0.001700 | O | Li | < | 0.000630 | M | Rh | < | 0.000210 | M | U | < | 0.000210 | | | | |
| M | Cs | < | 0.003300 | M | Lu | < | 0.001700 | M | Ru | < | 0.000210 | O | V | < | 0.005200 | | | | |
| M | Cu | < | 0.001300 | O | Mg | | 0.000861 | O | S | | 0.268539 | M | W | < | 0.000410 | | | | |
| M | Dy | < | 0.000210 | M | Mn | < | 0.000410 | M | Sb | < | 0.001300 | O | Y | < | 0.005200 | | | | |
| M | Er | < | 0.001300 | M | Mo | < | 0.000410 | M | Sc | < | 0.000410 | M | Yb | < | 0.001300 | | | | |

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 -** 137.33 +2 6 Ba(H2O)6+2

**Chemical Compatibility -** Soluble in HCl, and HNO3. Avoid H2SO4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO3 / LDPE container.

**Ba Containing Samples (Preparation and Solution) -**Metal(is best dissolved in diluted HNO3 ); Ores( Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent BaSO4 precipitate ); Organic Matrices (dry ash and dissolve in dilute HCl.)

**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 138 amu | 1 ppt | N/A | 122Sn16O, 122Te16O |
| ICP-OES 230.424 nm | 0.004/0.0005 µg/mL | 1 | Mo, Ir, Co |
| ICP-OES 233.527 nm | 0.004/0.0003 µg/mL | 1 | |
| ICP-OES 455.403 nm | 0.002/0.0001 µg/mL | 1 | Zr, 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

May 11, 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**

- **May 11, 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
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

# CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 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: | CGBE10 |
| Lot Number: | R2-BE692992 |
| Matrix: | 6% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Beryllium |
| Starting Material: | Beryllium Acetate |
| Starting Material Lot#: | 2281 |
| Starting Material Purity: | 99.9998% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10032 ± 41 µg/mL

**Density:** 1.128 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

**Assay Method #2** **10025 ± 51 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.001100 | M | Eu | < | 0.000270 | O | Na | | 0.040962 | M | Se | < | 0.005000 | M | Zn | | 0.013054 |
| O | Al | | 0.016205 | O | Fe | | 0.015754 | M | Nb | < | 0.000270 | O | Si | | 0.024307 | O | Zr | < | 0.001900 |
| M | As | < | 0.002900 | M | Ga | < | 0.000270 | M | Nd | < | 0.000270 | M | Sm | < | 0.000270 | | | | |
| M | Au | < | 0.000520 | M | Gd | < | 0.000270 | M | Ni | < | 0.003700 | M | Sn | < | 0.000790 | | | | |
| M | B | < | 0.091000 | M | Ge | < | 0.000270 | M | Os | < | 0.000260 | M | Sr | | 0.000630 | | | | |
| M | Ba | | 0.002700 | M | Hf | < | 0.000270 | O | P | < | 0.066000 | M | Ta | < | 0.000270 | | | | |
| s | Be | < | | M | Hg | < | 0.000520 | M | Pb | < | 0.000270 | M | Tb | < | 0.000270 | | | | |
| M | Bi | < | 0.000530 | M | Ho | < | 0.000270 | M | Pd | < | 0.000520 | M | Te | < | 0.003700 | | | | |
| O | Ca | | 0.072022 | M | In | < | 0.000790 | M | Pr | < | 0.000270 | M | Th | < | 0.000270 | | | | |
| M | Cd | < | 0.000790 | M | Ir | < | 0.000260 | M | Pt | < | 0.000270 | O | Ti | < | 0.000400 | | | | |
| M | Ce | < | 0.000270 | O | K | | 0.045014 | M | Rb | < | 0.000270 | M | Tl | < | 0.000790 | | | | |
| O | Co | < | 0.003200 | M | La | < | 0.000270 | M | Re | < | 0.000270 | M | Tm | < | 0.000270 | | | | |
| O | Cr | < | 0.001800 | O | Li | < | 0.000660 | M | Rh | < | 0.001100 | M | U | < | 0.000270 | | | | |
| M | Cs | | 0.001440 | M | Lu | < | 0.000270 | M | Ru | < | 0.000260 | M | V | < | 0.000790 | | | | |
| M | Cu | < | 0.002100 | O | Mg | | 0.016205 | i | S | < | | M | W | < | 0.000530 | | | | |
| M | Dy | < | 0.000270 | M | Mn | | 0.001215 | M | Sb | < | 0.000270 | M | Y | < | 0.000270 | | | | |
| M | Er | < | 0.000270 | M | Mo | < | 0.000530 | O | Sc | < | 0.000930 | M | Yb | < | 0.000270 | | | | |

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 -** 9.01 +2 4 $Be(H_2O)_4^{+2}$

**Chemical Compatibility -**Soluble in HCl, $HNO_3$, $H_2SO_4$ and HF aqueous matrices. Stable with all metals and inorganic anions.

**Stability -** 2-100 ppb levels stable for months in 1 % $HNO_3$ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % $HNO_3$ / LDPE container.

**Be Containing Samples (Preparation and Solution) -** Meta l(is best dissolved in diluted $H_2SO_4$ ); BeO (boiling nitric, hydrochloric, or sulfuric acids or $KHSO_4$ fusion); Ores ($H_2SO_4$/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

**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 9 amu | 4 ppt | N/A | |
| ICP-OES 234.861 nm | 0.0003/0.00016 µg/mL | 1 | Fe, Ta, Mo |
| ICP-OES 313.042 nm | 0.0003/0.00009 µg/mL | 1 | V, Ce, U |
| ICP-OES 313.107 nm | 0.0007/0.0005 µg/mL | 1 | Ce, Th, Tm |

## 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, PERIOD OF VALIDITY AND REVISION HISTORY

### 11.1 Certification Issue Date

May 13, 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

- **May 13, 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.

### 11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

**Certificate Approved By:**

Michael Booth
Director, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

# CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 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: | CGCO10 |
| Lot Number: | R2-CO695285 |
| Matrix: | 3% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Cobalt |
| Starting Material: | Co Metal |
| Starting Material Lot#: | 2326 |
| Starting Material Purity: | 99.9934% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10012 ± 31 µg/mL

**Density:** 1.056 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

**Assay Method #2** **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **10000 ± 35 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | | 0.014660 | M | Eu | < | 0.000590 | O | Na | | 0.007534 | M | Se | < | 0.019000 | M | Zn | | 0.003461 |
| M | Al | < | 0.024000 | M | Fe | | 0.050905 | M | Nb | < | 0.000590 | O | Si | | 0.075340 | M | Zr | < | 0.001200 |
| i | As | < | | M | Ga | < | 0.000590 | M | Nd | < | 0.000590 | M | Sm | < | 0.000590 | | | | |
| M | Au | < | 0.004100 | M | Gd | < | 0.000590 | O | Ni | | 0.427608 | M | Sn | < | 0.001200 | | | | |
| M | B | < | 0.031000 | M | Ge | < | 0.003000 | M | Os | < | 0.000590 | O | Sr | < | 0.000260 | | | | |
| M | Ba | < | 0.000590 | M | Hf | < | 0.000590 | n | P | < | | M | Ta | < | 0.001200 | | | | |
| O | Be | < | 0.001300 | M | Hg | < | 0.001800 | M | Pb | | 0.003257 | M | Tb | < | 0.000590 | | | | |
| M | Bi | < | 0.003000 | M | Ho | < | 0.000590 | M | Pd | < | 0.000590 | M | Te | < | 0.005300 | | | | |
| O | Ca | | 0.010588 | M | In | < | 0.001200 | M | Pr | < | 0.000590 | M | Th | < | 0.000590 | | | | |
| M | Cd | < | 0.004700 | M | Ir | < | 0.001200 | M | Pt | < | 0.002400 | M | Ti | < | 0.014000 | | | | |
| M | Ce | < | 0.000590 | O | K | | 0.008144 | M | Rb | < | 0.000590 | M | Tl | | 0.002647 | | | | |
| s | Co | < | | M | La | < | 0.000590 | M | Re | < | 0.000590 | M | Tm | < | 0.000590 | | | | |
| M | Cr | < | 0.021000 | O | Li | < | 0.000130 | M | Rh | < | 0.000590 | M | U | < | 0.000590 | | | | |
| M | Cs | < | 0.002400 | M | Lu | < | 0.000590 | M | Ru | < | 0.007100 | O | V | < | 0.000880 | | | | |
| M | Cu | | 0.189369 | O | Mg | | 0.001893 | n | S | < | | M | W | < | 0.000590 | | | | |
| M | Dy | < | 0.000590 | M | Mn | < | 0.001800 | M | Sb | < | 0.003600 | M | Y | < | 0.000590 | | | | |
| M | Er | < | 0.000590 | M | Mo | < | 0.002400 | O | Sc | < | 0.001600 | M | Yb | < | 0.000590 | | | | |

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 -** 58.93 +2 6 Co(H2O)62+

**Chemical Compatibility -**Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

**Co Containing Samples (Preparation and Solution) -** Metal (soluble in HNO3 ); Oxides ( Soluble in HCl ); Ores (dissolve in HCl / HNO3).

**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 59 amu | 2 ppt | n/a | 42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl |
| ICP-OES 228.616 nm | 0.01/0.001 µg/mL | 1 | |
| ICP-OES 237.862 nm | 0.01/0.002 µg/mL | 1 | W, Re, Al, Ta |
| ICP-OES 238.892 nm | 0.01/0.002 µg/mL | 1 | Fe, W, Ta |

## 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 04, 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 04, 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

# Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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: | CGAG10 |
| Lot Number: | S2-AG712977 |
| Matrix: | 7% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Silver |
| Starting Material: | Ag Shot |
| Starting Material Lot#: | 2289 |
| Starting Material Purity: | 99.9951% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10051 ± 30 µg/mL

**Density:** 1.056 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

**Assay Method #2** **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

**Assay Method #3** **10049 ± 31 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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.

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| s | Ag | < | | M | Eu | < | 0.000260 | O | Na | | 0.003811 | M | Se | < | 0.003900 | O | Zn | | 0.048146 |
| M | Al | | 0.002688 | O | Fe | | 0.006419 | M | Nb | < | 0.000260 | O | Si | | 0.005215 | M | Zr | < | 0.000260 |
| M | As | < | 0.001100 | M | Ga | < | 0.000260 | M | Nd | < | 0.000260 | M | Sm | < | 0.000260 | | | | |
| M | Au | < | 0.000260 | M | Gd | < | 0.000260 | O | Ni | | 0.001765 | M | Sn | | 0.020060 | | | | |
| O | B | < | 0.004300 | M | Ge | < | 0.002300 | M | Os | < | 0.001100 | O | Sr | < | 0.000110 | | | | |
| M | Ba | < | 0.000520 | M | Hf | < | 0.000260 | O | P | < | 0.017000 | M | Ta | < | 0.000260 | | | | |
| O | Be | < | 0.001100 | M | Hg | < | 0.000770 | M | Pb | < | 0.003600 | M | Tb | < | 0.000260 | | | | |
| M | Bi | | 0.004814 | M | Ho | < | 0.000260 | M | Pd | | 0.044134 | M | Te | < | 0.009000 | | | | |
| O | Ca | | 0.005215 | M | In | | 0.003691 | M | Pr | < | 0.000260 | M | Th | < | 0.000260 | | | | |
| M | Cd | < | 0.000260 | M | Ir | < | 0.000520 | M | Pt | < | 0.001100 | O | Ti | < | 0.000440 | | | | |
| M | Ce | < | 0.002100 | O | K | < | 0.008700 | M | Rb | < | 0.001100 | M | Tl | < | 0.004100 | | | | |
| O | Co | < | 0.000330 | M | La | < | 0.000260 | M | Re | < | 0.000260 | M | Tm | < | 0.000260 | | | | |
| O | Cr | < | 0.002500 | O | Li | < | 0.000110 | M | Rh | < | 0.000520 | M | U | < | 0.000260 | | | | |
| M | Cs | < | 0.002600 | M | Lu | < | 0.000260 | M | Ru | < | 0.000260 | M | V | < | 0.000260 | | | | |
| O | Cu | | 0.357085 | O | Mg | | 0.001203 | O | S | < | 0.017000 | M | W | < | 0.000260 | | | | |
| M | Dy | < | 0.000260 | O | Mn | < | 0.000220 | M | Sb | < | 0.014000 | M | Y | < | 0.000260 | | | | |
| M | Er | < | 0.000260 | M | Mo | < | 0.000260 | O | Sc | < | 0.000220 | M | Yb | < | 0.000260 | | | | |

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 -** 107.87 +1 6 $Ag(H_2O)_6^+$

**Chemical Compatibility -**Stable in $HNO_3$, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [ $AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

**Stability -** 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% $HNO_3$ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% $HNO_3$ / LDPE container.

**Ag Containing Samples (Preparation and Solution) -**Metal (Soluble in $HNO_3$); Oxides (Soluble in $HNO_3$); Ores (Digestion with conc. $HNO_3$).

**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 107 amu | 1 ppt | N/A | 91Zr16O |
| ICP-OES 243.779 nm | 0.12/0.01 µg/mL | 1 | Mn, Th, Ni, Rh |
| ICP-OES 328.068 nm | 0.007/0.0007 µg/mL | 1 | Ce, Rh, V |
| ICP-OES 338.289 nm | 0.013/0.001 µg/mL | 1 | Ce, Cr, Th |

## 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

December 28, 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

- **December 28, 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

# Certificate of Analysis

Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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: | CGCR(3)10 |
| Lot Number: | S2-CR709784 |
| Matrix: | 10% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Chromium |
| Starting Material: | Cr Metal |
| Starting Material Lot#: | 2328 |
| Starting Material Purity: | 99.9951% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10027 ± 41 µg/mL

**Density:** 1.072 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

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 | < | 0.001700 | M | Eu | < | 0.003400 | O | Na | | 0.090372 | M | Se | < | 0.012000 | O | Zn | < | 0.006100 |
| M | Al | | 0.034916 | O | Fe | | 0.246471 | M | Nb | < | 0.017000 | n | Si | < | | M | Zr | < | 0.007800 |
| M | As | < | 0.028000 | O | Ga | < | 0.013000 | M | Nd | < | 0.013000 | M | Sm | < | 0.006900 | | | | |
| M | Au | < | 0.001700 | M | Gd | < | 0.000560 | M | Ni | | 0.016020 | M | Sn | | 0.006983 | | | | |
| O | B | < | 0.025000 | O | Ge | < | 0.014000 | M | Os | < | 0.000560 | M | Sr | | 0.006367 | | | | |
| M | Ba | < | 0.008900 | M | Hf | < | 0.000560 | i | P | < | | M | Ta | < | 0.000560 | | | | |
| M | Be | < | 0.013000 | M | Hg | < | 0.001700 | M | Pb | | 0.010064 | M | Tb | < | 0.000560 | | | | |
| M | Bi | < | 0.002300 | M | Ho | < | 0.000560 | M | Pd | < | 0.021000 | M | Te | < | 0.010000 | | | | |
| O | Ca | | 0.075995 | M | In | < | 0.000560 | M | Pr | < | 0.001700 | M | Th | < | 0.000560 | | | | |
| M | Cd | < | 0.000560 | M | Ir | < | 0.000560 | M | Pt | < | 0.001200 | O | Ti | | 0.013555 | | | | |
| M | Ce | < | 0.001200 | O | K | | 0.043132 | i | Rb | < | | M | Tl | < | 0.000560 | | | | |
| M | Co | < | 0.002600 | M | La | < | 0.001200 | M | Re | < | 0.001200 | O | Tm | < | 0.013000 | | | | |
| s | Cr | < | | O | Li | | 0.000390 | M | Rh | < | 0.095000 | M | U | < | 0.000560 | | | | |
| M | Cs | < | 0.007800 | M | Lu | < | 0.000560 | M | Ru | < | 0.087000 | O | V | | 0.014993 | | | | |
| O | Cu | | 0.007599 | O | Mg | | 0.000883 | i | S | < | | M | W | < | 0.049000 | | | | |
| M | Dy | < | 0.000560 | M | Mn | | 0.008626 | M | Sb | < | 0.003400 | M | Y | < | 0.001700 | | | | |
| M | Er | < | 0.019000 | M | Mo | < | 0.032000 | M | Sc | | 0.003080 | M | Yb | < | 0.000560 | | | | |

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 -** 52.00 +3 6 $Cr(H_2O)_6^{3+}$

**Chemical Compatibility -**Stable in HCl, $HNO_3$, $H_2SO_4$, HF, $H_3PO_4$. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% $HNO_3$ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% $HNO_3$ / LDPE container.

**Cr3 Containing Samples (Preparation and Solution) -**Metal (soluble in HCl ); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with $Na_2CO_3$ and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with $Na_2O_2$ or NaOH and $KNO_3$ or NaOH and $Na_2O_2$. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

**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 52 amu | 40 ppt | N/A | 36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon. |
| ICP-OES 205.552 nm | 0.006/0.0008 µg/mL | 1 | Os |
| ICP-OES 276.654 nm | 0.01/0.001 µg/mL | 1 | Cu, Ta, V |
| ICP-OES 284.325 nm | 0.008/0.0007 µg/mL | 1 | |

## 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

October 26, 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

- **October 26, 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 Approved By:**

Michael Booth
Director, Quality Control

**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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGNI10 |
| Lot Number: | P2-NI686384 |
| Matrix: | 3% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Nickel |
| Starting Material: | Ni Metal |
| Starting Material Lot#: | 2277 and 2282 |
| Starting Material Purity: | 99.9992% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9979 ± 30 µg/mL

**Density:** 1.038 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

**Assay Method #2** **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **9993 ± 33 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | | 0.002606 | M | Eu | < | 0.001100 | O | Na | | 0.004965 | O | Se | < | 0.067000 | M | Zn | | 0.006578 |
| M | Al | < | 0.013000 | O | Fe | | 0.018618 | M | Nb | < | 0.001100 | O | Si | | 0.010923 | M | Zr | < | 0.001100 |
| O | As | < | 0.067000 | M | Ga | < | 0.001100 | M | Nd | < | 0.001100 | M | Sm | < | 0.001100 | | | | |
| M | Au | < | 0.002100 | M | Gd | < | 0.001100 | s | Ni | < | | M | Sn | < | 0.016000 | | | | |
| M | B | < | 0.017000 | M | Ge | < | 0.004200 | M | Os | | 0.002110 | O | Sr | < | 0.000940 | | | | |
| M | Ba | < | 0.001100 | M | Hf | < | 0.001100 | i | P | < | | M | Ta | < | 0.001100 | | | | |
| O | Be | < | 0.000410 | M | Hg | | 0.014895 | M | Pb | | 0.006578 | M | Tb | < | 0.001100 | | | | |
| M | Bi | < | 0.004200 | M | Ho | < | 0.001100 | M | Pd | < | 0.001100 | M | Te | < | 0.015000 | | | | |
| O | Ca | | 0.003351 | M | In | < | 0.001100 | M | Pr | < | 0.001100 | M | Th | < | 0.001100 | | | | |
| M | Cd | | 0.001365 | M | Ir | | 0.004716 | M | Pt | < | 0.001100 | M | Ti | < | 0.004200 | | | | |
| M | Ce | < | 0.001100 | O | K | | 0.004716 | M | Rb | < | 0.001100 | M | Tl | < | 0.001100 | | | | |
| O | Co | | 0.017377 | M | La | < | 0.001100 | M | Re | | 0.001737 | M | Tm | < | 0.001100 | | | | |
| O | Cr | < | 0.006700 | O | Li | < | 0.000140 | M | Rh | < | 0.006300 | M | U | < | 0.001100 | | | | |
| M | Cs | < | 0.007300 | M | Lu | < | 0.001100 | M | Ru | < | 0.019000 | M | V | < | 0.002100 | | | | |
| M | Cu | | 0.004096 | O | Mg | | 0.000372 | i | S | < | | M | W | < | 0.006300 | | | | |
| M | Dy | < | 0.001100 | O | Mn | < | 0.001900 | M | Sb | | 0.005833 | O | Y | < | 0.000540 | | | | |
| M | Er | < | 0.001100 | M | Mo | < | 0.008400 | M | Sc | < | 0.002100 | M | Yb | < | 0.001100 | | | | |

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 -** 58.69 +2 6 Ni(H2O)62+

**Chemical Compatibility -**Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

**Ni Containing Samples (Preparation and Solution) -**Metal (Soluble in HNO3 ); Oxides ( Soluble in HCl ); Ores (Dissolve in HCl / HNO3).

**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 60 amu | 100 ppt | n/a | 43Ca16O1H , 44Ca16O, 23Na37Cl |
| ICP-OES 221.647 nm | 0.01 / 0.0009 µg/mL | 1 | Si |
| ICP-OES 231.604 nm | 0.02 / 0.002 µg/mL | 1 | Sb, Ta, Co |
| ICP-OES 232.003 nm | 0.02 / 0.006 µg/mL | 1 | Cr, Re, Os, Nb, Ag, Pt, Fe |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

December 02, 2019

- 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

- **December 02, 2023**

- 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
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
CEO, Senior Technical Director

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGV10 |
| Lot Number: | S2-V711005 |
| Matrix: | 7% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Vanadium |
| Starting Material: | Vanadium Pentoxide |
| Starting Material Lot#: | 1782 |
| Starting Material Purity: | 99.9877% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10014 ± 30 µg/mL

**Density:** 1.104 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

**Assay Method #2** **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.000110 | M | Eu | < | 0.000110 | O | Na | | 0.120000 | M | Se | < | 0.009400 | M | Zn | | 0.009400 |
| O | Al | | 0.120000 | O | Fe | | 0.460000 | M | Nb | < | 0.001300 | O | Si | | 0.270000 | M | Zr | < | 0.002900 |
| M | As | < | 0.000210 | M | Ga | < | 0.009300 | M | Nd | < | 0.000610 | M | Sm | < | 0.000110 | | | | |
| M | Au | < | 0.004700 | M | Gd | < | 0.000110 | M | Ni | | 0.012000 | M | Sn | | 0.003900 | | | | |
| M | B | | 0.051000 | M | Ge | < | 0.000410 | M | Os | < | 0.000110 | O | Sr | | 0.007100 | | | | |
| M | Ba | | 0.003600 | M | Hf | < | 0.000110 | O | P | < | 0.034000 | M | Ta | < | 0.000110 | | | | |
| O | Be | < | 0.000560 | M | Hg | < | 0.000410 | M | Pb | | 0.001400 | M | Tb | < | 0.000110 | | | | |
| M | Bi | < | 0.000210 | M | Ho | < | 0.000110 | M | Pd | < | 0.000410 | M | Te | < | 0.000110 | | | | |
| O | Ca | | 0.730000 | M | In | < | 0.000110 | M | Pr | < | 0.000110 | M | Th | < | 0.000210 | | | | |
| M | Cd | < | 0.000610 | M | Ir | < | 0.000110 | M | Pt | < | 0.000110 | M | Ti | | 0.017000 | | | | |
| M | Ce | < | 0.000610 | M | K | | 0.052000 | M | Rb | < | 0.000310 | M | Tl | < | 0.000110 | | | | |
| M | Co | < | 0.001300 | M | La | < | 0.000410 | M | Re | | 0.001700 | M | Tm | < | 0.000110 | | | | |
| O | Cr | | 0.170000 | M | Li | < | 0.000810 | M | Rh | < | 0.000110 | M | U | < | 0.000410 | | | | |
| M | Cs | | 0.005600 | M | Lu | < | 0.000110 | M | Ru | < | 0.000110 | s | V | < | | | | | |
| M | Cu | < | 0.001300 | M | Mg | | 0.053000 | i | S | < | | M | W | | 0.002000 | | | | |
| M | Dy | < | 0.000110 | M | Mn | | 0.007900 | M | Sb | | 0.078000 | M | Y | < | 0.000110 | | | | |
| M | Er | < | 0.000110 | M | Mo | | 0.094000 | M | Sc | < | 0.000410 | M | Yb | < | 0.000110 | | | | |

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 -** 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

**Chemical Compatibility -**Soluble in HCl, $HNO_3$, $H_2SO_4$, HF, $H_3PO_4$ and strong basic media. Stable with most metals and inorganic anions in acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% $HNO_3$ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% $HNO_3$ / LDPE container.

**V Containing Samples (Preparation and Solution) -**Metal (Fusion with NaOH or KOH in Ni0 or $Na_2CO_3$ / $KNO_3$ ); Oxides ($V_2O_3$ - use HCl, $V_2O_4$ - use HCl or $HNO_3$, $V_2O_5$ - use concentrated acids); Ores ($Na_2CO_3$ / $KNO_3$ in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to $V_2O_5$ above) .

**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 51 amu | 4 ppt | N/A | 34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2 |
| ICP-OES 290.882 nm | 0.008 / 0.0008 µg/mL | 1 | Hf, Nb |
| ICP-OES 292.402 nm | 0.006 / 0.001 µg/mL | 1 | Th |
| ICP-OES 309.311 nm | 0.005 / 0.001 µg/mL | 1 | Mg, U, Th |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

December 28, 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

- **December 28, 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 Approved By:**

Thomas Kozikowski
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

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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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGAL10 |
| Lot Number: | T2-AL716102 |
| Matrix: | 7% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Aluminum |
| Starting Material: | Aluminum Nitrate Nonahydrate |
| Starting Material Lot#: | 2460 |
| Starting Material Purity: | 99.9938% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10049 ± 31 µg/mL

**Density:** 1.087 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

**Assay Method #2** **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **10049 ± 35 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.002100 | M | Eu | < | 0.002100 | O | Na | | 0.352819 | M | Se | < | 0.005200 | M | Zn | | 0.006018 |
| s | Al | < | | O | Fe | | 0.074714 | M | Nb | < | 0.000520 | O | Si | | 0.017848 | O | Zr | | 0.004358 |
| M | As | | 0.008716 | O | Ga | | 0.112072 | M | Nd | < | 0.000520 | M | Sm | < | 0.000520 | | | | |
| M | Au | < | 0.008400 | M | Gd | < | 0.001100 | O | Ni | < | 0.006000 | M | Sn | | 0.000747 | | | | |
| O | B | < | 0.014000 | M | Ge | < | 0.005200 | M | Os | < | 0.000650 | O | Sr | | 0.000518 | | | | |
| O | Ba | | 0.012867 | M | Hf | < | 0.004100 | n | P | < | | M | Ta | < | 0.000520 | | | | |
| O | Be | < | 0.000270 | M | Hg | < | 0.002000 | M | Pb | | 0.002282 | M | Tb | < | 0.000520 | | | | |
| M | Bi | | 0.001930 | M | Ho | < | 0.000520 | M | Pd | < | 0.000520 | M | Te | < | 0.001100 | | | | |
| O | Ca | | 0.076790 | M | In | < | 0.002100 | M | Pr | < | 0.000520 | M | Th | < | 0.000520 | | | | |
| M | Cd | < | 0.000520 | M | Ir | < | 0.000650 | M | Pt | < | 0.000520 | O | Ti | | 0.001930 | | | | |
| M | Ce | < | 0.001100 | O | K | | 0.043583 | M | Rb | < | 0.000520 | M | Tl | < | 0.000520 | | | | |
| O | Co | < | 0.005400 | M | La | < | 0.002100 | M | Re | < | 0.000520 | M | Tm | < | 0.000520 | | | | |
| O | Cr | | 0.006018 | O | Li | | 0.000112 | M | Rh | < | 0.000520 | M | U | < | 0.000520 | | | | |
| M | Cs | | 0.000643 | M | Lu | < | 0.000520 | M | Ru | < | 0.002000 | M | V | | 0.001286 | | | | |
| O | Cu | < | 0.008300 | O | Mg | | 0.068488 | i | S | < | | M | W | < | 0.009800 | | | | |
| M | Dy | < | 0.002100 | O | Mn | | 0.000913 | M | Sb | < | 0.003100 | M | Y | < | 0.001100 | | | | |
| M | Er | < | 0.000520 | M | Mo | | 0.005396 | O | Sc | < | 0.000950 | M | Yb | < | 0.000520 | | | | |

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 -** 26.98 +3 6 Al(H2O)6+3

**Chemical Compatibility -**Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

**Al Containing Samples (Preparation and Solution) -**Metal (Best dissolved in HCl / HNO3 ); a- Al2O3 (Na2CO3 fusion in Pt0);

**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 27 amu | 30 ppt | N/A | 12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+ |
| ICP-OES 167.078 nm | 0.1/0.009 µg/mL | 1 | Fe |
| ICP-OES 394.401 nm | 0.05/0.006 µg/mL | 1 | U, Ce |
| ICP-OES 396.152 nm | 0.03/0.006 µg/mL | 1 | Mo, Zr, Ce |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

March 22, 2022

- 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

- **March 22, 2027**

- 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

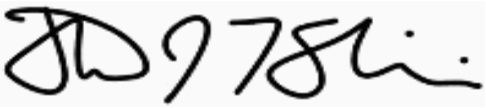
- Sealed TCT Bag Open Date: _____

- 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:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGK10 |
| Lot Number: | S2-K711973 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Potassium |
| Starting Material: | KNO3 |
| Starting Material Lot#: | 2313 |
| Starting Material Purity: | 99.9971% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9992 ± 30 µg/mL

**Density:** 1.024 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **9987 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

**Assay Method #2** **10004 ± 84 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

**Assay Method #3** **10007 ± 45 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.001400 | M | Eu | < | 0.000660 | O | Na | | 0.246220 | M | Se | < | 0.007900 | O | Zn | | 0.018056 |
| O | Al | | 0.001592 | O | Fe | | 0.005909 | M | Nb | < | 0.000660 | O | Si | | 0.011490 | O | Zr | < | 0.001600 |
| M | As | < | 0.005300 | M | Ga | < | 0.000660 | M | Nd | < | 0.000660 | M | Sm | < | 0.000660 | | | | |
| M | Au | < | 0.002000 | M | Gd | < | 0.000660 | O | Ni | < | 0.004900 | M | Sn | < | 0.000660 | | | | |
| O | B | < | 0.005600 | M | Ge | < | 0.002000 | M | Os | < | 0.003300 | O | Sr | | 0.000055 | | | | |
| O | Ba | < | 0.000860 | M | Hf | < | 0.000660 | O | P | < | 0.032000 | M | Ta | < | 0.000660 | | | | |
| O | Be | < | 0.000082 | M | Hg | < | 0.002000 | M | Pb | < | 0.002300 | M | Tb | < | 0.000660 | | | | |
| M | Bi | < | 0.006600 | M | Ho | < | 0.000660 | M | Pd | < | 0.000660 | M | Te | < | 0.017000 | | | | |
| O | Ca | | 0.031187 | M | In | < | 0.000660 | M | Pr | < | 0.000660 | M | Th | < | 0.000660 | | | | |
| O | Cd | < | 0.000450 | M | Ir | < | 0.000660 | M | Pt | < | 0.002700 | M | Ti | < | 0.000660 | | | | |
| M | Ce | < | 0.000660 | s | K | < | | M | Rb | | 0.476026 | M | Tl | < | 0.000660 | | | | |
| O | Co | < | 0.000780 | M | La | < | 0.000660 | M | Re | < | 0.000660 | M | Tm | < | 0.000660 | | | | |
| O | Cr | | 0.000541 | O | Li | < | 0.000084 | M | Rh | < | 0.000660 | M | U | < | 0.000660 | | | | |
| M | Cs | < | 0.000660 | M | Lu | < | 0.000660 | M | Ru | < | 0.000660 | O | V | < | 0.001100 | | | | |
| M | Cu | < | 0.002700 | O | Mg | | 0.006237 | O | S | | 0.027905 | M | W | < | 0.000660 | | | | |
| M | Dy | < | 0.000660 | O | Mn | | 0.000476 | M | Sb | < | 0.000660 | M | Y | < | 0.000660 | | | | |
| M | Er | < | 0.000660 | M | Mo | < | 0.000660 | O | Sc | < | 0.000340 | O | Yb | < | 0.000270 | | | | |

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 -** 39.10 +1 (6) K+(aq)

**Chemical Compatibility -**Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

**K Containing Samples (Preparation and Solution) -** Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion )

**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 39 amu | 10 ppt | n/a | 38ArH, 23Na16O, 78Se |
| ICP-OES 404.721 nm | 1.1 / 0.05 µg/mL | 1 | U, Ce |
| ICP-OES 766.490 nm | 0.4 / 0.001 µg/mL | 1 | 2nd order radiation from R.E.s on some optical designs |
| ICP-OES 771.531 nm | 1.0 / 0.03 µg/mL | 1 | 2nd order radiation from R.E.s on some optical designs |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

December 10, 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

- **December 10, 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

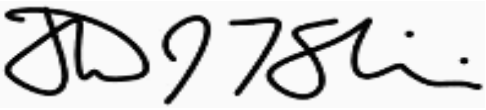
- Sealed TCT Bag Open Date: _____

- 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 Approved By:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

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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: | CGMG10 |
| Lot Number: | S2-MG704239 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Magnesium |
| Starting Material: | Magnesium Metal |
| Starting Material Lot#: | 2168 |
| Starting Material Purity: | 99.9984% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10053 ± 30 µg/mL

**Density:** 1.053 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

**Assay Method #2** **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **10033 ± 26 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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.

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O | Ag | | 0.002106 | M | Eu | < | 0.000910 | O | Na | | 0.071075 | O | Se | < | 0.048000 | O | Zn | | 0.003299 |
| M | Al | | 0.003553 | M | Fe | | 0.002538 | M | Nb | < | 0.000460 | O | Si | < | 0.032000 | O | Zr | < | 0.002700 |
| M | As | < | 0.001400 | M | Ga | < | 0.000460 | M | Nd | < | 0.000910 | M | Sm | < | 0.000460 | | | | |
| M | Au | < | 0.001400 | M | Gd | < | 0.000460 | O | Ni | < | 0.001600 | M | Sn | < | 0.002300 | | | | |
| O | B | | 0.006853 | M | Ge | < | 0.001400 | M | Os | < | 0.000460 | O | Sr | | 0.000279 | | | | |
| O | Ba | | 0.000964 | M | Hf | < | 0.000460 | O | P | | 0.015230 | M | Ta | < | 0.000460 | | | | |
| O | Be | < | 0.000120 | M | Hg | < | 0.000460 | M | Pb | < | 0.000460 | M | Tb | < | 0.000460 | | | | |
| M | Bi | < | 0.000460 | M | Ho | < | 0.000460 | M | Pd | < | 0.003200 | M | Te | < | 0.007300 | | | | |
| O | Ca | | 0.053306 | M | In | < | 0.000460 | M | Pr | < | 0.000460 | M | Th | < | 0.000460 | | | | |
| O | Cd | < | 0.000360 | M | Ir | < | 0.000460 | M | Pt | < | 0.001900 | O | Ti | < | 0.001700 | | | | |
| M | Ce | < | 0.002300 | M | K | | 0.048229 | M | Rb | | 0.002411 | M | Tl | | 0.003046 | | | | |
| M | Co | < | 0.000910 | M | La | < | 0.002800 | M | Re | < | 0.000460 | M | Tm | < | 0.000460 | | | | |
| M | Cr | < | 0.002300 | O | Li | | 0.027922 | M | Rh | < | 0.000460 | M | U | < | 0.000460 | | | | |
| M | Cs | | 0.001040 | M | Lu | < | 0.000460 | M | Ru | < | 0.000460 | M | V | < | 0.000460 | | | | |
| O | Cu | < | 0.003000 | s | Mg | < | | O | S | < | 0.190000 | M | W | < | 0.000460 | | | | |
| M | Dy | < | 0.000460 | O | Mn | | 0.015230 | M | Sb | | 0.020814 | O | Y | < | 0.000720 | | | | |
| M | Er | < | 0.000460 | M | Mo | < | 0.000910 | O | Sc | < | 0.000480 | M | Yb | < | 0.000460 | | | | |

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 -** 24.31 +2 6 Mg(H2O)6+2

**Chemical Compatibility -**Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.

**Mg Containing Samples (Preparation and Solution) -**Metal (Best dissolved in diluted HNO3 ); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

**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 24 amu | 42 ppt | n/a | 7Li17O, 48Ti+2 , 48Ca+2 |
| ICP-OES 279.553 nm | 0.0002 / 0.00003 µg/mL | 1 | Th |
| ICP-OES 280.270 nm | 0.0003 / 0.00005 µg/mL | 1 | U, V |
| ICP-OES 285.213 nm | 0.002 / 0.00003 µg/mL | 1 | U, Hf, Cr, Zr |

## 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**

April 23, 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**

- **April 23, 2025**

- 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

# Certificate of Analysis

Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
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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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGCA10 |
| Lot Number: | T2-CA716103 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Calcium |
| Starting Material: | CaCO3 |
| Starting Material Lot#: | 2472 |
| Starting Material Purity: | 99.9950% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10005 ± 30 µg/mL

**Density:** 1.039 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

**Assay Method #2** **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

**Assay Method #3** **10005 ± 31 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.001200 | M | Eu | < | 0.001200 | O | Na | | 0.006112 | M | Se | < | 0.024000 | M | Zn | | 0.005362 |
| M | Al | | 0.065419 | O | Fe | | 0.009115 | M | Nb | < | 0.001200 | O | Si | | 0.139417 | O | Zr | < | 0.006700 |
| O | As | < | 0.013000 | M | Ga | < | 0.015000 | M | Nd | < | 0.020000 | M | Sm | < | 0.001200 | | | | |
| M | Au | < | 0.017000 | M | Gd | < | 0.004800 | O | Ni | | 0.000793 | M | Sn | < | 0.003600 | | | | |
| O | B | | 0.001179 | M | Ge | < | 0.003600 | M | Os | < | 0.001200 | M | Sr | | 0.081505 | | | | |
| O | Ba | | 0.002788 | M | Hf | < | 0.001200 | O | P | < | 0.041000 | M | Ta | < | 0.001200 | | | | |
| O | Be | < | 0.000410 | M | Hg | < | 0.004800 | M | Pb | | 0.001608 | M | Tb | < | 0.001200 | | | | |
| M | Bi | | 0.001608 | M | Ho | < | 0.001200 | M | Pd | < | 0.001200 | M | Te | < | 0.003600 | | | | |
| s | Ca | < | | M | In | < | 0.001200 | M | Pr | | 0.000257 | M | Th | < | 0.001200 | | | | |
| O | Cd | < | 0.001300 | M | Ir | < | 0.001200 | M | Pt | < | 0.003600 | O | Ti | < | 0.001900 | | | | |
| M | Ce | | 0.001029 | O | K | | 0.009759 | M | Rb | < | 0.001200 | M | Tl | < | 0.001200 | | | | |
| O | Co | | 0.000418 | M | La | | 0.001823 | M | Re | < | 0.001200 | M | Tm | < | 0.001200 | | | | |
| O | Cr | | 0.003324 | O | Li | < | 0.007300 | M | Rh | < | 0.001200 | M | U | | 0.002144 | | | | |
| M | Cs | | 0.007399 | M | Lu | | 0.000128 | M | Ru | < | 0.001200 | M | V | | 0.001286 | | | | |
| O | Cu | < | 0.011000 | M | Mg | | 1.286934 | O | S | | 0.055767 | O | W | < | 0.024000 | | | | |
| M | Dy | < | 0.002400 | O | Mn | | 0.004611 | M | Sb | < | 0.009600 | O | Y | | 0.000536 | | | | |
| M | Er | < | 0.002400 | M | Mo | | 0.003539 | O | Sc | < | 0.001400 | M | Yb | < | 0.001200 | | | | |

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 -** 40.08 +2 6 Ca(H2O)6+2

**Chemical Compatibility -** Soluble in HCl and HNO3. Avoid H2SO4, v F, v 3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.

**Ca Containing Samples )Preparation and Solution) -**Metal ( best dissolved in diluted HNO3 ); Ores ( Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.

**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 44 amu | 1200 ppt | n/a | 16O212C, 28Si16O, 88Sr |
| ICP-OES 393.366 nm | 0.0002 / 0.00004 µg/mL | 1 | U, Ce |
| ICP-OES 396.847 nm | 0.0005 / 0.00006 µg/mL | 1 | Th |
| ICP-OES 422.673 nm | 0.01 / 0.001 µg/mL | 1 | Ge |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

March 14, 2022

- 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

- **March 14, 2027**

- 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:**

Thomas Kozikowski
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# 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: | Single Analyte Custom Grade Solution |
| Catalog Number: | CGNA10 |
| Lot Number: | T2-NA717221 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 10 000 µg/mL ea:<br>Sodium |
| Starting Material: | Na2CO3 |
| Starting Material Lot#: | 2358 and 2453 |
| Starting Material Purity: | 99.9977% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9977 ± 30 µg/mL

**Density:** 1.033 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

**Assay Method #2** **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

**Assay Method #3** **9987 ± 31 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**k** = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

**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 | < | 0.000930 | M | Eu | < | 0.000930 | s | Na | < | | M | Se | < | 0.003800 | O | Zn | | 0.000138 |
| M | Al | | 0.004409 | O | Fe | | 0.002393 | M | Nb | < | 0.000930 | O | Si | | 0.056696 | O | Zr | < | 0.003200 |
| O | As | < | 0.023000 | M | Ga | < | 0.000930 | M | Nd | < | 0.000930 | M | Sm | < | 0.000930 | | | | |
| O | Au | < | 0.004100 | M | Gd | < | 0.000930 | O | Ni | < | 0.003000 | M | Sn | < | 0.002800 | | | | |
| O | B | | 0.001385 | M | Ge | < | 0.004700 | M | Os | < | 0.000930 | O | Sr | | 0.000251 | | | | |
| M | Ba | | 0.004031 | M | Hf | < | 0.000930 | O | P | | 0.010205 | M | Ta | < | 0.000930 | | | | |
| O | Be | < | 0.000130 | M | Hg | < | 0.000930 | M | Pb | < | 0.000930 | M | Tb | < | 0.000930 | | | | |
| M | Bi | < | 0.000930 | M | Ho | < | 0.000930 | M | Pd | < | 0.000930 | M | Te | < | 0.001900 | | | | |
| O | Ca | | 0.176388 | M | In | < | 0.000930 | M | Pr | < | 0.000930 | M | Th | | 0.000352 | | | | |
| O | Cd | < | 0.000860 | M | Ir | < | 0.000930 | M | Pt | < | 0.000930 | O | Ti | | 0.000592 | | | | |
| M | Ce | < | 0.001900 | O | K | | 0.302380 | M | Rb | < | 0.000930 | M | Tl | < | 0.000930 | | | | |
| O | Co | < | 0.001800 | O | La | < | 0.002100 | M | Re | < | 0.000930 | M | Tm | < | 0.000930 | | | | |
| M | Cr | < | 0.002800 | O | Li | | 0.000031 | M | Rh | < | 0.000930 | M | U | < | 0.000930 | | | | |
| M | Cs | < | 0.000930 | M | Lu | < | 0.000930 | M | Ru | < | 0.001900 | O | V | < | 0.001600 | | | | |
| O | Cu | < | 0.003900 | O | Mg | | 0.026458 | O | S | | 0.040317 | O | W | < | 0.028000 | | | | |
| M | Dy | < | 0.000930 | O | Mn | < | 0.000740 | M | Sb | < | 0.000930 | O | Y | < | 0.000860 | | | | |
| M | Er | < | 0.000930 | O | Mo | < | 0.003600 | O | Sc | < | 0.000610 | O | Yb | < | 0.000250 | | | | |

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 -** 22.99 +1 (6) Na+(aq) largely ionic in nature

**Chemical Compatibility -**Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

**Na Containing Samples (Preparation and Solution) -** Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

**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 23 amu | 310 ppt | n/a | 46Ti+2 , 46Ca+2 |
| ICP-OES 330.237 nm | 2.0 / 0.09 µg/mL | 1 | Pd, Zn |
| ICP-OES 588.995 nm | 0.03 / 0.006 µg/mL | 1 | 2nd order radiation from R.E.s on some optical designs |
| ICP-OES 589.595 nm | 0.07 / 0.00009 µg/mL | 1 | 2nd order radiation from R.E.s on some optical designs |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

April 20, 2022

- 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

- **April 20, 2027**

- 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

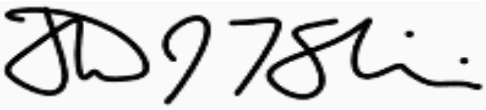
- Sealed TCT Bag Open Date: _____

- 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:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

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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: | CGU1 |
| Lot Number: | S2-U707914 |
| Matrix: | 2% (v/v) HNO3 |
| Value / Analyte(s): | 1 000 µg/mL ea:<br>Uranium |
| Starting Material: | Uranyl Nitrate Hexahydrate |
| Starting Material Lot#: | P2-2322 |
| Starting Material Purity: | 99.9997% |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 999 ± 5 µg/mL

**Density:** 1.010 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

**Assay Method #1** **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

**Assay Method #2** **1001 ± 6 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = 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

**Certified Abundance:**

**IV's Certified Abundance**

| Isotope | Atom % |
|---|---|
| Uranium 238U | 99.8 ± 0.1 |
| Uranium 235U | 0.19 ± 0.05 |

## 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 | < | 0.000270 | M | Eu | < | 0.000270 | M | Na | < | 0.011000 | M | Se | < | 0.009300 | M | Zn | | 0.002358 |
| M | Al | < | 0.011000 | M | Fe | | 0.003222 | M | Nb | < | 0.000270 | M | Si | < | 0.160000 | M | Zr | < | 0.001100 |
| M | As | < | 0.002400 | M | Ga | < | 0.000270 | M | Nd | < | 0.000270 | M | Sm | < | 0.000270 | | | | |
| M | Au | < | 0.000270 | M | Gd | < | 0.000270 | M | Ni | < | 0.020000 | M | Sn | < | 0.011000 | | | | |
| M | B | < | 0.000270 | M | Ge | < | 0.000800 | M | Os | < | 0.001900 | M | Sr | < | 0.000270 | | | | |
| M | Ba | < | 0.003800 | M | Hf | < | 0.000270 | i | P | < | | M | Ta | < | 0.000270 | | | | |
| M | Be | < | 0.000270 | M | Hg | < | 0.000540 | M | Pb | < | 0.002200 | M | Tb | < | 0.000270 | | | | |
| M | Bi | < | 0.000270 | M | Ho | < | 0.000270 | M | Pd | < | 0.000540 | M | Te | < | 0.003800 | | | | |
| M | Ca | < | 0.140000 | M | In | < | 0.000270 | M | Pr | < | 0.000270 | M | Th | | 0.000129 | | | | |
| M | Cd | < | 0.000270 | M | Ir | < | 0.000270 | M | Pt | < | 0.000270 | M | Ti | < | 0.002700 | | | | |
| M | Ce | < | 0.000540 | O | K | < | 0.250000 | M | Rb | < | 0.000800 | M | Tl | < | 0.000270 | | | | |
| M | Co | < | 0.000800 | M | La | | 0.000117 | M | Re | < | 0.064000 | M | Tm | < | 0.000270 | | | | |
| M | Cr | | 0.000943 | M | Li | < | 0.003000 | M | Rh | < | 0.000270 | s | U | < | | | | | |
| M | Cs | | 0.000106 | M | Lu | < | 0.000270 | M | Ru | < | 0.000540 | M | V | < | 0.000540 | | | | |
| M | Cu | < | 0.001100 | M | Mg | < | 0.003000 | i | S | < | | M | W | < | 0.000540 | | | | |
| M | Dy | < | 0.000270 | M | Mn | < | 0.006900 | M | Sb | < | 0.000270 | M | Y | < | 0.000270 | | | | |
| M | Er | < | 0.000270 | M | Mo | < | 0.006400 | M | Sc | < | 0.000540 | M | Yb | < | 0.000270 | | | | |

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 -** 238.03 +6 8 UO22+(uranyl)

**Chemical Compatibility -** Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.

**Stability -** 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

**U Containing Samples (Preparation and Solution) -**Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)

**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 238 amu | 2 ppt | N/A | 206Pb16O2 |
| ICP-OES 263.553 nm | 0.3 / 0.01 µg/mL | 1 | Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru |
| ICP-OES 367.007 nm | 0.3 / 0.02 µg/mL | 1 | Th, Ce |
| ICP-OES 385.958 nm | 0.3 / 0.01 µg/mL | 1 | Th, Fe |

## 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

August 28, 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

- **August 28, 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 Approved By:**

Michael Booth
Director, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

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## 1.0 ACCREDITATION / REGISTRATION

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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: | AR-ICVMS-2 |
| Lot Number: | T2-MEB719895 |
| Matrix: | 3% (v/v) HNO3<br>tr. HF |
| Value / Analyte(s): | 2.5 µg/mL ea:<br>Molybdenum, Antimony |

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ANALYTE | CERTIFIED VALUE | ANALYTE | CERTIFIED VALUE |
|---|---|---|---|
| **Antimony, Sb** | **2.499 ± 0.015 µg/mL** | **Molybdenum, Mo** | **2.500 ± 0.017 µg/mL** |

**Density:** 1.014 g/mL (measured at 20 ± 4 ºC)

### Assay Information:

| ANALYTE | METHOD | NIST SRM# | SRM LOT# |
|---|---|---|---|
| Mo | ICP Assay | 3134 | 130418 |
| Mo | Calculated | | See Sec. 4.2 |
| Sb | ICP Assay | 3102a | 140911 |
| Sb | Calculated | | See Sec. 4.2 |

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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = 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**

**HF Note:** This standard should not be prepared or stored in glass.

## 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

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- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 06, 2022

- 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

- **June 06, 2027**

- 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:**

Thomas Kozikowski
Manager, Quality Control

**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

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## 1.0 ACCREDITATION / REGISTRATION

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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: | AR-ICVMS-3 |
| Lot Number: | T2-MEB719896 |
| Matrix: | 7% (v/v) HNO3 |
| Value / Analyte(s): | 250 µg/mL ea: |

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:
Thorium, Thallium,
Uranium, Vanadium,
Zinc, Manganese,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Barium,
Beryllium, Nickel,
Lead, Silver

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ANALYTE | CERTIFIED VALUE | ANALYTE | CERTIFIED VALUE |
|---|---|---|---|
| Aluminum, Al | 250.0 ± 0.9 µg/mL | Arsenic, As | 2.500 ± 0.018 µg/mL |
| Barium, Ba | 2.501 ± 0.013 µg/mL | Beryllium, Be | 2.501 ± 0.015 µg/mL |
| Cadmium, Cd | 2.501 ± 0.013 µg/mL | Calcium, Ca | 250.0 ± 1.3 µg/mL |
| Chromium, Cr | 2.500 ± 0.015 µg/mL | Cobalt, Co | 2.500 ± 0.014 µg/mL |
| Copper, Cu | 2.500 ± 0.014 µg/mL | Iron, Fe | 250.0 ± 1.0 µg/mL |
| Lead, Pb | 2.500 ± 0.013 µg/mL | Magnesium, Mg | 250.0 ± 1.3 µg/mL |
| Manganese, Mn | 2.500 ± 0.014 µg/mL | Nickel, Ni | 2.500 ± 0.014 µg/mL |
| Potassium, K | 250.0 ± 1.2 µg/mL | Selenium, Se | 4.002 ± 0.024 µg/mL |
| Silver, Ag | 2.501 ± 0.017 µg/mL | Sodium, Na | 250.0 ± 1.2 µg/mL |
| Thallium, Tl | 2.500 ± 0.017 µg/mL | Thorium, Th | 2.499 ± 0.013 µg/mL |
| Uranium, U | 2.501 ± 0.015 µg/mL | Vanadium, V | 2.500 ± 0.014 µg/mL |
| Zinc, Zn | 2.500 ± 0.014 µg/mL | | |

**Density:** 1.042 g/mL (measured at 20 ± 4 ºC)

## Assay Information:

| ANALYTE | METHOD | NIST SRM# | SRM LOT# |
|---|---|---|---|
| Ag | ICP Assay | 3151 | 160729 |
| Ag | Volhard | 999c | 999c |
| Ag | Calculated | | See Sec. 4.2 |
| Al | ICP Assay | 3101a | 140903 |
| Al | EDTA | 928 | 928 |
| As | ICP Assay | 3103a | 100818 |
| Ba | ICP Assay | 3104a | 140909 |
| Ba | Calculated | | See Sec. 4.2 |
| Ba | Gravimetric | | See Sec. 4.2 |
| Be | ICP Assay | 3105a | 090514 |
| Be | Calculated | | See Sec. 4.2 |
| Ca | ICP Assay | 3109a | 130213 |
| Ca | EDTA | 928 | 928 |
| Cd | ICP Assay | 3108 | 130116 |
| Cd | EDTA | 928 | 928 |
| Cd | Calculated | | See Sec. 4.2 |
| Co | ICP Assay | 3113 | 190630 |
| Co | EDTA | 928 | 928 |
| Co | Calculated | | See Sec. 4.2 |
| Cr | ICP Assay | 3112a | 170630 |
| Cr | Calculated | | See Sec. 4.2 |
| Cu | ICP Assay | 3114 | 121207 |
| Cu | EDTA | 928 | 928 |
| Cu | Calculated | | See Sec. 4.2 |
| Fe | ICP Assay | 3126a | 140812 |
| Fe | EDTA | 928 | 928 |
| K | ICP Assay | 3141a | 140813 |
| K | Gravimetric | | See Sec. 4.2 |
| Mg | ICP Assay | 3131a | 140110 |
| Mg | EDTA | 928 | 928 |
| Mn | ICP Assay | 3132 | 050429 |
| Mn | EDTA | 928 | 928 |
| Mn | Calculated | | See Sec. 4.2 |
| Na | ICP Assay | 3152a | 120715 |
| Na | Gravimetric | | See Sec. 4.2 |
| Ni | ICP Assay | 3136 | 120619 |
| Ni | EDTA | 928 | 928 |
| Ni | Calculated | | See Sec. 4.2 |
| Pb | ICP Assay | 3128 | 101026 |
| Pb | EDTA | 928 | 928 |
| Pb | Calculated | | See Sec. 4.2 |
| Se | ICP Assay | 3149 | 100901 |
| Se | Calculated | | See Sec. 4.2 |
| Th | EDTA | 928 | 928 |
| Th | Calculated | | See Sec. 4.2 |
| Tl | ICP Assay | 3158 | 151215 |
| Tl | Calculated | | See Sec. 4.2 |
| U | ICP Assay | 3164 | 080521 |
| U | Calculated | | See Sec. 4.2 |

| | | | |
|---|---|---|---|
| V | ICP Assay | 3165 | 160906 |
| V | EDTA | 928 | 928 |
| Zn | ICP Assay | 3168a | 120629 |
| Zn | EDTA | 928 | 928 |
| Zn | Calculated | | See Sec. 4.2 |

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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = 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

**Certified Abundance:**

**IV's Certified Abundance**

| Isotope | Atom % |
|---|---|
| Uranium 238U | 99.8 ± 0.1 |
| Uranium 235U | 0.19 ± 0.05 |

## 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**

**Note**: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

## 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

June 06, 2022

- 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

- **June 06, 2027**

- 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

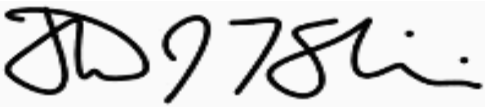
- Sealed TCT Bag Open Date: _____

- 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:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

# Certificate of Analysis

Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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: Multi Analyte Custom Grade Solution

Catalog Number: AR-6020ICS-0A10

Lot Number: T2-MEB719898

Matrix: 1.4% (v/v) HNO3

Value / Analyte(s):

1 000 µg/mL ea:
Chloride,

200 µg/mL ea:
Carbon,

100 µg/mL ea:
Calcium, Aluminum,
Iron, Potassium,
Magnesium, Sodium,
Phosphorus, Sulfur,

2 µg/mL ea:
Titanium, Molybdenum

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ANALYTE | CERTIFIED VALUE | ANALYTE | CERTIFIED VALUE |
|---|---|---|---|
| **Aluminum, Al** | **100.0 ± 0.4 µg/mL** | **Calcium, Ca** | **100.0 ± 0.5 µg/mL** |
| **Carbon, C** | **200.1 ± 0.5 µg/mL** | **Chloride, Cl** | **1 000 ± 5 µg/mL** |
| **Iron, Fe** | **100.0 ± 0.5 µg/mL** | **Magnesium, Mg** | **100.0 ± 0.5 µg/mL** |
| **Molybdenum, Mo** | **2.001 ± 0.014 µg/mL** | **Phosphorus, P** | **100.0 ± 0.6 µg/mL** |
| **Potassium, K** | **100.0 ± 0.5 µg/mL** | **Sodium, Na** | **100.0 ± 0.5 µg/mL** |
| **Sulfur, S** | **100.0 ± 0.5 µg/mL** | **Titanium, Ti** | **2.001 ± 0.015 µg/mL** |

**Density:** 1.009 g/mL (measured at 20 ± 4 ºC)

**Assay Information:**

| ANALYTE | METHOD | NIST SRM# | SRM LOT# |
|---|---|---|---|
| Al | ICP Assay | 3101a | 140903 |
| Al | EDTA | 928 | 928 |
| C | Acidimetric | 84L | 84L |
| Ca | ICP Assay | 3109a | 130213 |
| Ca | EDTA | 928 | 928 |
| Cl | Acidimetric | 84L | 84L |
| Fe | ICP Assay | 3126a | 140812 |
| Fe | EDTA | 928 | 928 |
| K | ICP Assay | 3141a | 140813 |
| K | Gravimetric | | See Sec. 4.2 |
| Mg | ICP Assay | 3131a | 140110 |
| Mg | EDTA | 928 | 928 |
| Mo | ICP Assay | 3134 | 130418 |
| Na | ICP Assay | 3152a | 120715 |
| Na | Gravimetric | | See Sec. 4.2 |
| P | ICP Assay | 3139a | 060717 |
| P | Acidimetric | 84L | 84L |
| S | Acidimetric | 84L | 84L |
| S | ICP Assay | traceable to 3154 | P2-S680745 |
| Ti | ICP Assay | 3162a | 130925 |

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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ 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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$**

$k$ = 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

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 07, 2022

- 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

- **June 07, 2027**

- 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

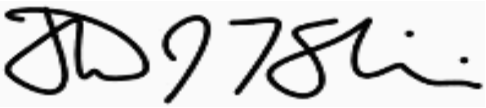
- Sealed TCT Bag Open Date: _____

- 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:**

Thomas Kozikowski
Manager, Quality Control



**Certifying Officer:**

Paul Gaines
Chairman / Senior Technical Director

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-IT799A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-01 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 80.86 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 80.86 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-IT799B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-02 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 81.49 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 81.49 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-IT799C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-03 B | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 75.16 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 75.16 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-IT799D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-04 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 71.37 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 71.37 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-IT799E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-05 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 68.42 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 68.42 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-IT799F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-06 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 68.51 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 68.51 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC788B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-07 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 55.96 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 55.96 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC788C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-08 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 57.39 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 57.39 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC788D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-09 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 56.86 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 56.86 | 1 | 0.04 | 0.04 | |

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**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC788E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-10 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 54.40 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 54.40 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC788E-FD**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-11 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 55.91 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 55.91 | 1 | 0.04 | 0.04 | |

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# Form I
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**LDW22-SC788F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-12 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 59.80 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 59.80 | 1 | 0.04 | 0.04 | |

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# Form I
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**LDW22-SC788G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-13 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 60.06 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 60.06 | 1 | 0.04 | 0.04 | |

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**LDW22-SC788H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-14 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 59.83 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 59.83 | 1 | 0.04 | 0.04 | |

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**LDW22-IT791A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-15 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 80.33 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 80.33 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-IT791B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-16 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 88.73 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 88.73 | 1 | 0.04 | 0.04 | |

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# Form I
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**LDW22-IT791C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-17 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 86.38 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 86.38 | 1 | 0.04 | 0.04 | |

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# Form I
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**LDW22-IT791D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-18 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 81.16 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 81.16 | 1 | 0.04 | 0.04 | |

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**LDW22-IT791E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-19 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 77.66 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 77.66 | 1 | 0.04 | 0.04 | |

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**LDW22-IT791F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-20 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:03 | File ID: | |
| % Solids: | 75.89 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0542 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 75.89 | 1 | 0.04 | 0.04 | |

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**LDW22-IT791G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-21 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 71.13 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 71.13 | 1 | 0.04 | 0.04 | |

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**LDW22-SC781B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-22 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 62.33 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 62.33 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
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**LDW22-SC781C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-23 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 59.29 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 59.29 | 1 | 0.04 | 0.04 | |

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# Form I
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**LDW22-SC781D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-24 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 59.52 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 59.52 | 1 | 0.04 | 0.04 | |

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**LDW22-SC781E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-25 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 59.32 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 59.32 | 1 | 0.04 | 0.04 | |

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**LDW22-SC781F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-26 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 57.34 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 57.34 | 1 | 0.04 | 0.04 | |

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**LDW22-SC781G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-27 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 58.35 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 58.35 | 1 | 0.04 | 0.04 | |

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**LDW22-SC781H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-28 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 59.46 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 59.46 | 1 | 0.04 | 0.04 | |

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**LDW22-SC765B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-29 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 81.43 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 81.43 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
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**LDW22-SC765C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-30 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 53.40 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 53.40 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
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**LDW22-SC765D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-31 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 64.90 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 64.90 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
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**LDW22-SC765E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-32 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 78.61 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 78.61 | 1 | 0.04 | 0.04 | |

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**LDW22-SC757A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-33 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 70.18 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 70.18 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC757B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-34 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 71.62 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 71.62 | 1 | 0.04 | 0.04 | |

**Analytical Resources, LLC**
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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC757C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-35 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 79.05 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 79.05 | 1 | 0.04 | 0.04 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC757D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-36 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 79.96 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 79.96 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC757E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-37 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 81.45 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 81.45 | 1 | 0.04 | 0.04 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC757F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-38 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 86.73 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 86.73 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC757G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-39 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 83.36 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 83.36 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC757H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-40 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/21/22 13:06 | File ID: | |
| % Solids: | 80.41 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:11 |
| Batch: | BKL0543 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 80.41 | 1 | 0.04 | 0.04 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC754A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-41 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 68.25 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 68.25 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC754B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-42 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 65.94 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 65.94 | 1 | 0.04 | 0.04 | |

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**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC754C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-43 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 71.47 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 71.47 | 1 | 0.04 | 0.04 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC754D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-44 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 71.93 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 71.93 | 1 | 0.04 | 0.04 | |

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**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# SM 2540 G-97

**LDW22-SC754E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-45 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 73.92 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 73.92 | 1 | 0.04 | 0.04 | |

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**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC754F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-46 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 69.75 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 69.75 | 1 | 0.04 | 0.04 | |

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# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC754G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-47 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 75.69 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 75.69 | 1 | 0.04 | 0.04 | |

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**Analytical Chemists and Consultants**

# Form I
## INORGANIC ANALYSIS DATA SHEET
## SM 2540 G-97

**LDW22-SC754H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-48 C | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/21/22 13:10 | File ID: | |
| % Solids: | 66.34 | Preparation: | No Prep Wet Chem | Analyzed: | 12/21/22 13:12 |
| Batch: | BKL0544 | Sequence: | | Initial/Final: | 5 g Wet / 5 g |
| Instrument: | BAL2 | | | Calibration: | |

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | 66.34 | 1 | 0.04 | 0.04 | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# PREPARATION BATCH SUMMARY

## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0542
Batch Matrix: Solid
Preparation: No Prep Wet Chem

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-IT799A | 22L0329-01 | | 12/21/22 13:03 | |
| LDW22-IT799B | 22L0329-02 | | 12/21/22 13:03 | |
| LDW22-IT799C | 22L0329-03 | | 12/21/22 13:03 | |
| LDW22-IT799D | 22L0329-04 | | 12/21/22 13:03 | |
| LDW22-IT799E | 22L0329-05 | | 12/21/22 13:03 | |
| LDW22-IT799F | 22L0329-06 | | 12/21/22 13:03 | |
| LDW22-SC788B | 22L0329-07 | | 12/21/22 13:03 | |
| LDW22-SC788C | 22L0329-08 | | 12/21/22 13:03 | |
| LDW22-SC788D | 22L0329-09 | | 12/21/22 13:03 | |
| LDW22-SC788E | 22L0329-10 | | 12/21/22 13:03 | |
| LDW22-SC788E-FD | 22L0329-11 | | 12/21/22 13:03 | |
| LDW22-SC788F | 22L0329-12 | | 12/21/22 13:03 | |
| LDW22-SC788G | 22L0329-13 | | 12/21/22 13:03 | |
| LDW22-SC788H | 22L0329-14 | | 12/21/22 13:03 | |
| LDW22-IT791A | 22L0329-15 | | 12/21/22 13:03 | |
| LDW22-IT791B | 22L0329-16 | | 12/21/22 13:03 | |
| LDW22-IT791C | 22L0329-17 | | 12/21/22 13:03 | |
| LDW22-IT791D | 22L0329-18 | | 12/21/22 13:03 | |
| LDW22-IT791E | 22L0329-19 | | 12/21/22 13:03 | |
| LDW22-IT791F | 22L0329-20 | | 12/21/22 13:03 | |
| Blank | BKL0542-BLK1 | | 12/21/22 13:03 | |
| LDW22-IT799A | BKL0542-DUP1 | | 12/21/22 13:03 | |
| LDW22-IT799A | BKL0542-DUP2 | | 12/21/22 13:03 | |

**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:** | BKL0542 |
| **Date:** | 12/21/2022 13:12 |
| **Analyst:** | UW |

**Instrumentation**

| | | | |
|---|---|---|---|
| **Drying Ovens:** | 1 | **Analytical Balance:** | BAL2 |
| **Muffle Furnace:** | 2 | | |

| **Batch drying time** | | | | | |
|---|---|---|---|---|---|
| record times as mm/dd/yy hh:mm | | TS (%) calculated as: | **Oven Temps, °C** | | TVS (mg/kg dry wt) calculated as: |
| **date/time in oven:** | 12/21/2022 15:05 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp | 99 | Final ash wt (g) = (min ash wt - tare wt) |
| **date/time out:** | 12/22/2022 12:25 | TS = (Final Dry Wt)/ (grams Sample-Tare) | Dry Cycle 1 | 112 | TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000 |
| **elapsed hrs =** | 21.3 OK | | Dry Cycle 2 | | if ash wt > dry wt, "Chk for Err" |
| | | | Dry Cycle 3 | | 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:** | | 12/21/22 13:25 | 12/21/22 13:50 | 12/22/22 13:40 | | | | | | | |
| **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) | (%) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BKL0542-BLK1 | 1 | 0.8171 | 0.0000 | 0.8170 | | | -0.0001 | 0.01% | | | | | | | | |
| 22L0329-01 | 2 | 0.7993 | 8.5090 | 7.0336 | | | 6.2343 | 80.86% | | | | | | | | |
| BKL0542-DUP1 | 3 | 0.9014 | 7.8140 | 6.4731 | | | 5.5717 | 80.60% | RPD=0.3 | | | | | | | |
| BKL0542-DUP2 | 4 | 0.7959 | 9.7293 | 7.9470 | | | 7.1511 | 80.05% | RSD=0.5 | | | | | | | |
| 22L0329-02 | 5 | 0.8167 | 7.5954 | 6.3405 | | | 5.5238 | 81.49% | | | | | | | | |
| 22L0329-03 | 6 | 0.8131 | 6.6828 | 5.2249 | | | 4.4118 | 75.16% | | | | | | | | |
| 22L0329-04 | 7 | 0.8136 | 7.6328 | 5.6808 | | | 4.8672 | 71.37% | | | | | | | | |
| 22L0329-05 | 8 | 0.8111 | 7.7367 | 5.5498 | | | 4.7387 | 68.42% | | | | | | | | |
| 22L0329-06 | 9 | 0.8028 | 7.9439 | 5.6950 | | | 4.8922 | 68.51% | | | | | | | | |
| 22L0329-07 | 10 | 0.8165 | 7.7865 | 4.7171 | | | 3.9006 | 55.96% | | | | | | | | |
| 22L0329-08 | 11 | 0.8142 | 7.3478 | 4.5636 | | | 3.7494 | 57.39% | | | | | | | | |
| 22L0329-09 | 12 | 0.8245 | 7.6580 | 4.7098 | | | 3.8853 | 56.86% | | | | | | | | |
| 22L0329-10 | 13 | 0.8001 | 6.3810 | 3.8359 | | | 3.0358 | 54.40% | | | | | | | | |
| 22L0329-11 | 14 | 0.8238 | 7.4990 | 4.5559 | | | 3.7321 | 55.91% | | | | | | | | |
| 22L0329-12 | 15 | 0.8062 | 9.0068 | 5.7102 | | | 4.9040 | 59.80% | | | | | | | | |
| 22L0329-13 | 16 | 0.8224 | 8.0795 | 5.1807 | | | 4.3583 | 60.06% | | | | | | | | |
| 22L0329-14 | 17 | 0.8231 | 7.0134 | 4.5267 | | | 3.7036 | 59.83% | | | | | | | | |
| 22L0329-15 | 18 | 0.8088 | 8.5558 | 7.0320 | | | 6.2232 | 80.33% | | | | | | | | |
| 22L0329-16 | 19 | 0.8224 | 6.8597 | 6.1791 | | | 5.3567 | 88.73% | | | | | | | | |
| 22L0329-17 | 20 | 0.8003 | 6.5402 | 5.7583 | | | 4.9580 | 86.38% | | | | | | | | |
| 22L0329-18 | 21 | 0.7911 | 8.4368 | 6.9967 | | | 6.2056 | 81.16% | | | | | | | | |
| 22L0329-19 | 22 | 0.8176 | 7.7135 | 6.1732 | | | 5.3556 | 77.66% | | | | | | | | |
| 22L0329-20 | 23 | 0.8045 | 9.8446 | 7.6646 | | | 6.8601 | 75.89% | | | | | | | | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# PREPARATION BATCH SUMMARY

## SM 2540 G-97

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0543 Batch Matrix: Solid | Preparation: | No Prep Wet Chem |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-IT791G | 22L0329-21 | | 12/21/22 13:06 | |
| LDW22-SC781B | 22L0329-22 | | 12/21/22 13:06 | |
| LDW22-SC781C | 22L0329-23 | | 12/21/22 13:06 | |
| LDW22-SC781D | 22L0329-24 | | 12/21/22 13:06 | |
| LDW22-SC781E | 22L0329-25 | | 12/21/22 13:06 | |
| LDW22-SC781F | 22L0329-26 | | 12/21/22 13:06 | |
| LDW22-SC781G | 22L0329-27 | | 12/21/22 13:06 | |
| LDW22-SC781H | 22L0329-28 | | 12/21/22 13:06 | |
| LDW22-SC765B | 22L0329-29 | | 12/21/22 13:06 | |
| LDW22-SC765C | 22L0329-30 | | 12/21/22 13:06 | |
| LDW22-SC765D | 22L0329-31 | | 12/21/22 13:06 | |
| LDW22-SC765E | 22L0329-32 | | 12/21/22 13:06 | |
| LDW22-SC757A | 22L0329-33 | | 12/21/22 13:06 | |
| LDW22-SC757B | 22L0329-34 | | 12/21/22 13:06 | |
| LDW22-SC757C | 22L0329-35 | | 12/21/22 13:06 | |
| LDW22-SC757D | 22L0329-36 | | 12/21/22 13:06 | |
| LDW22-SC757E | 22L0329-37 | | 12/21/22 13:06 | |
| LDW22-SC757F | 22L0329-38 | | 12/21/22 13:06 | |
| LDW22-SC757G | 22L0329-39 | | 12/21/22 13:06 | |
| LDW22-SC757H | 22L0329-40 | | 12/21/22 13:06 | |
| Blank | BKL0543-BLK1 | | 12/21/22 13:06 | |
| LDW22-IT791G | BKL0543-DUP1 | | 12/21/22 13:06 | |
| LDW22-IT791G | BKL0543-DUP2 | | 12/21/22 13:06 | |

**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:** | BKL0543 |
| **Date:** | 12/21/2022 13:11 |
| **Analyst:** | UW |

**Instrumentation**

| | | | |
|---|---|---|---|
| **Drying Ovens:** | 1 | **Analytical Balance:** | BAL2 |
| **Muffle Furnace:** | 2 | | |

| **Batch drying time** | | | | | |
|---|---|---|---|---|---|
| record times as mm/dd/yy hh:mm | | TS (%) calculated as: | **Oven Temps, °C** | | TVS (mg/kg dry wt) calculated as: |
| **date/time in oven:** | 12/21/2022 15:05 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp | 99 | Final ash wt (g) = (min ash wt - tare wt) |
| **date/time out:** | 12/22/2022 12:25 | TS = (Final Dry Wt)/ (grams Sample-Tare) | Dry Cycle 1 | 112 | TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000 |
| **elapsed hrs =** | 21.3 OK | | Dry Cycle 2 | | if ash wt > dry wt, "Chk for Err" |
| | | | Dry Cycle 3 | | 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:** | | 12/21/22 13:33 | 12/21/22 14:15 | 12/22/22 13:33 | | | | | | | |
| **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) | (%) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BKL0543-BLK1 | 24 | 0.8091 | 0.0000 | 0.8089 | | | -0.0002 | 0.02% | | | | | | | | |
| 22L0329-21 | 25 | 0.8000 | 7.7024 | 5.7099 | | | 4.9099 | 71.13% | | | | | | | | |
| BKL0543-DUP1 | 26 | 0.8096 | 8.5581 | 6.3167 | | | 5.5071 | 71.07% | RPD=0.1 | | | | | | | |
| BKL0543-DUP2 | 27 | 0.8360 | 7.0099 | 5.2324 | | | 4.3964 | 71.21% | RSD=0.1 | | | | | | | |
| 22L0329-22 | 28 | 0.7975 | 7.3652 | 4.8913 | | | 4.0938 | 62.33% | | | | | | | | |
| 22L0329-23 | 29 | 0.7882 | 6.3334 | 4.0761 | | | 3.2879 | 59.29% | | | | | | | | |
| 22L0329-24 | 30 | 0.8332 | 7.3148 | 4.6912 | | | 3.8580 | 59.52% | | | | | | | | |
| 22L0329-25 | 31 | 0.7784 | 6.5272 | 4.1885 | | | 3.4101 | 59.32% | | | | | | | | |
| 22L0329-26 | 32 | 0.8162 | 7.8977 | 4.8767 | | | 4.0605 | 57.34% | | | | | | | | |
| 22L0329-27 | 33 | 0.8036 | 7.8865 | 4.9363 | | | 4.1327 | 58.35% | | | | | | | | |
| 22L0329-28 | 34 | 0.8274 | 6.9586 | 4.4732 | | | 3.6458 | 59.46% | | | | | | | | |
| 22L0329-29 | 35 | 0.7974 | 9.5529 | 7.9266 | | | 7.1292 | 81.43% | | | | | | | | |
| 22L0329-30 | 36 | 0.8282 | 7.8837 | 4.5956 | | | 3.7674 | 53.40% | | | | | | | | |
| 22L0329-31 | 37 | 0.8361 | 8.9166 | 6.0803 | | | 5.2442 | 64.90% | | | | | | | | |
| 22L0329-32 | 38 | 0.8345 | 8.6528 | 6.9808 | | | 6.1463 | 78.61% | | | | | | | | |
| 22L0329-33 | 39 | 0.8208 | 7.9662 | 5.8352 | | | 5.0144 | 70.18% | | | | | | | | |
| 22L0329-34 | 40 | 0.8111 | 9.4745 | 7.0157 | | | 6.2046 | 71.62% | | | | | | | | |
| 22L0329-35 | 41 | 0.8252 | 9.8015 | 7.9211 | | | 7.0959 | 79.05% | | | | | | | | |
| 22L0329-36 | 42 | 0.8006 | 8.9127 | 7.2870 | | | 6.4864 | 79.96% | | | | | | | | |
| 22L0329-37 | 43 | 0.8312 | 8.0761 | 6.7322 | | | 5.9010 | 81.45% | | | | | | | | |
| 22L0329-38 | 44 | 0.8292 | 6.2560 | 5.5356 | | | 4.7064 | 86.73% | | | | | | | | |
| 22L0329-39 | 45 | 0.7886 | 7.9816 | 6.7850 | | | 5.9964 | 83.36% | | | | | | | | |
| 22L0329-40 | 46 | 0.7965 | 9.7660 | 8.0088 | | | 7.2123 | 80.41% | | | | | | | | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# PREPARATION BATCH SUMMARY

## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0544
Batch Matrix: Solid
Preparation: No Prep Wet Chem

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-SC754A | 22L0329-41 | | 12/21/22 13:10 | |
| LDW22-SC754B | 22L0329-42 | | 12/21/22 13:10 | |
| LDW22-SC754C | 22L0329-43 | | 12/21/22 13:10 | |
| LDW22-SC754D | 22L0329-44 | | 12/21/22 13:10 | |
| LDW22-SC754E | 22L0329-45 | | 12/21/22 13:10 | |
| LDW22-SC754F | 22L0329-46 | | 12/21/22 13:10 | |
| LDW22-SC754G | 22L0329-47 | | 12/21/22 13:10 | |
| LDW22-SC754H | 22L0329-48 | | 12/21/22 13:10 | |
| Blank | BKL0544-BLK1 | | 12/21/22 13:10 | |
| LDW22-SC754A | BKL0544-DUP1 | | 12/21/22 13:10 | |
| LDW22-SC754A | BKL0544-DUP2 | | 12/21/22 13:10 | |

**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:** | BKL0544 |
| **Date:** | 12/21/2022 13:12 |
| **Analyst:** | UW |

**Instrumentation**

| | | | |
|---|---|---|---|
| **Drying Ovens:** | 1 | **Analytical Balance:** | BAL2 |
| **Muffle Furnace:** | 2 | | |

| **Batch drying time** | | | | | |
|---|---|---|---|---|---|
| record times as mm/dd/yy hh:mm | | TS (%) calculated as: | **Oven Temps, °C** | | TVS (mg/kg dry wt) calculated as: |
| **date/time in oven:** | 12/21/2022 15:20 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp | 105 | Final ash wt (g) = (min ash wt - tare wt) |
| **date/time out:** | 12/22/2022 13:30 | TS = (Final Dry Wt)/ (grams Sample-Tare) | Dry Cycle 1 | 112 | TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000 |
| **elapsed hrs =** | 22.2 OK | | Dry Cycle 2 | | if ash wt > dry wt, "Chk for Err" |
| | | | Dry Cycle 3 | | 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:** | | 12/21/22 13:40 | 12/21/22 15:05 | 12/22/22 14:10 | | | | | | | |
| **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) | (%) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BKL0544-BLK1 | 47 | 0.8290 | 0.0000 | 0.8289 | | | -0.0001 | 0.01% | | | | | | | | |
| 22L0329-41 | 48 | 0.8040 | 7.9603 | 5.6881 | | | 4.8841 | 68.25% | | | | | | | | |
| BKL0544-DUP1 | 49 | 0.8446 | 8.2088 | 5.8602 | | | 5.0156 | 68.11% | RPD=0.2 | | | | | | | |
| BKL0544-DUP2 | 50 | 0.8558 | 7.4842 | 5.3781 | | | 4.5223 | 68.23% | RSD=0.1 | | | | | | | |
| 22L0329-42 | 51 | 0.8423 | 7.5311 | 5.2530 | | | 4.4107 | 65.94% | | | | | | | | |
| 22L0329-43 | 52 | 0.7773 | 9.8044 | 7.2292 | | | 6.4519 | 71.47% | | | | | | | | |
| 22L0329-44 | 53 | 0.8333 | 8.7850 | 6.5533 | | | 5.7200 | 71.93% | | | | | | | | |
| 22L0329-45 | 54 | 0.8176 | 8.5008 | 6.4967 | | | 5.6791 | 73.92% | | | | | | | | |
| 22L0329-46 | 55 | 0.8405 | 8.0095 | 5.8406 | | | 5.0001 | 69.75% | | | | | | | | |
| 22L0329-47 | 56 | 0.8176 | 9.1584 | 7.1305 | | | 6.3129 | 75.69% | | | | | | | | |
| 22L0329-48 | 57 | 0.8207 | 7.3575 | 5.1574 | | | 4.3367 | 66.34% | | | | | | | | |

**TOTAL SOLIDS (TS) BENCHSHEET for Solid samples**

**Method: Total Solids, Metals Correction**

dry at 104°C (12-24 hr)

| | |
|---|---|
| **Batch:** | BKL0589 |
| **Date:** | 12/27/2022 16:56 |
| **Analyst:** | AR |

**Instrumentation** **Drying Oven:** OVEN 07 **Analytical Balance:** BAL10

**Batch drying time**

record times as mm/dd/yy hh:mm

| | | | | |
|---|---|---|---|---|
| **date/time in oven:** | 12/27/2022 18:21 | Temp in: | 103 | °C |
| **date/time out:** | 12/28/2022 15:51 | Temp out: | 102 | °C |
| **elapsed hrs =** | 21.5 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22L0302-01** | 1.0260 | 10.0510 | 8.0800 | | | 7.0540 | 78.16% | |
| **22L0318-01** | 1.0330 | 10.0180 | 9.2990 | | | 8.2660 | 92.00% | |
| **22L0318-02** | 1.0530 | 10.0590 | 9.4060 | | | 8.3530 | 92.75% | |
| **22L0318-03** | 1.0400 | 10.0490 | 9.2940 | | | 8.2540 | 91.62% | |
| **22L0318-04** | 1.0340 | 10.0600 | 9.4600 | | | 8.4260 | 93.35% | |
| **22L0318-05** | 1.0390 | 10.0260 | 9.3930 | | | 8.3540 | 92.96% | |
| **22L0318-06** | 1.0290 | 10.0450 | 9.3610 | | | 8.3320 | 92.41% | |
| **22L0318-07** | 1.0270 | 10.0830 | 9.3530 | | | 8.3260 | 91.94% | |
| **22L0318-08** | 1.0370 | 10.0890 | 9.2320 | | | 8.1950 | 90.53% | |
| **22L0318-09** | 1.0460 | 10.0270 | 9.4080 | | | 8.3620 | 93.11% | |
| **22L0329-07** | 1.0170 | 10.0950 | 6.0430 | | | 5.0260 | 55.36% | |
| **22L0329-10** | 1.0510 | 10.0590 | 6.0720 | | | 5.0210 | 55.74% | |
| **22L0329-11** | 1.0170 | 10.0680 | 6.0270 | | | 5.0100 | 55.35% | |
| **22L0329-12** | 1.0450 | 10.0910 | 6.4760 | | | 5.4310 | 60.04% | |
| **22L0329-13** | 1.0250 | 10.0050 | 6.3590 | | | 5.3340 | 59.40% | |
| **22L0329-14** | 1.0490 | 10.0130 | 6.4650 | | | 5.4160 | 60.42% | |
| **22L0378-01** | 1.0460 | 10.0430 | 9.5630 | | | 8.5170 | 94.66% | |
| **22L0378-02** | 1.0410 | 10.0230 | 9.3450 | | | 8.3040 | 92.45% | |
| **22L0378-03** | 1.0460 | 10.0910 | 9.5650 | | | 8.5190 | 94.18% | |
| **22L0378-04** | 1.0340 | 10.0120 | 9.4160 | | | 8.3820 | 93.36% | |
| **22L0378-05** | 1.0400 | 10.0190 | 9.4370 | | | 8.3970 | 93.52% | |
| **22L0378-06** | 1.0370 | 10.0880 | 9.3330 | | | 8.2960 | 91.66% | |
| **22L0378-07** | 1.0330 | 10.0530 | 9.3050 | | | 8.2720 | 91.71% | |
| **22L0378-08** | 1.0430 | 10.0300 | 9.4560 | | | 8.4130 | 93.61% | |
| **22L0378-09** | 1.0200 | 10.0630 | 9.1620 | | | 8.1420 | 90.04% | |
| **22L0408-01** | 1.0540 | 10.0410 | 10.0260 | | | 8.9720 | 99.83% | |
| **22L0409-01** | 1.0380 | 10.0750 | 10.0750 | | | 9.0370 | 100.00% | |
| **22L0410-01** | 1.0200 | 10.0270 | 10.0240 | | | 9.0040 | 99.97% | |
| **22L0411-01** | 1.0390 | 10.0770 | 9.7420 | | | 8.7030 | 96.29% | |
| **22L0412-01** | 1.0340 | 10.0970 | 8.8610 | | | 7.8270 | 86.36% | |
| **22L0413-01** | 1.0270 | 10.0540 | 10.0510 | | | 9.0240 | 99.97% | |
| **22L0414-02** | 1.0380 | 10.0290 | 9.2730 | | | 8.2350 | 91.59% | |
| **22L0415-01** | 1.0330 | 10.0430 | 10.0380 | | | 9.0050 | 99.94% | |

**TOTAL SOLIDS (TS) BENCHSHEET for Solid samples**

**Method: Total Solids, Metals Correction**

dry at 104°C (12-24 hr)

| | |
|---|---|
| **Batch:** | BKL0674 |
| **Date:** | 12/29/2022 15:12 |
| **Analyst:** | AR |

**Instrumentation**

| | | | |
|---|---|---|---|
| **Drying Oven:** | OVEN 07 | **Analytical Balance:** | BAL10 |

**Batch drying time**

record times as mm/dd/yy hh:mm

| | | | | |
|---|---|---|---|---|
| **date/time in oven:** | 12/28/2022 20:02 | Temp in: | 104 | °C |
| **date/time out:** | 12/29/2022 15:12 | Temp out: | 103 | °C |
| **elapsed hrs =** | 19.2 | 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 |
|---|---|---|---|---|---|---|---|---|
| **22I0188-02** | 1.0444 | 10.0260 | 5.0930 | | | 4.0486 | 45.08% | |
| **22I0188-03** | 1.0150 | 10.0020 | 5.9300 | | | 4.9150 | 54.69% | |
| **22I0188-04** | 0.9940 | 10.0150 | 6.2870 | | | 5.2930 | 58.67% | |
| **22I0188-05** | 1.0200 | 10.0350 | 7.1370 | | | 6.1170 | 67.85% | |
| **22I0188-06** | 1.0150 | 10.0190 | 7.0440 | | | 6.0290 | 66.96% | |
| **22I0188-07** | 1.0480 | 10.0220 | 6.5570 | | | 5.5090 | 61.39% | |
| **22I0188-08** | 1.0210 | 10.0190 | 6.7860 | | | 5.7650 | 64.07% | |
| **22I0188-09** | 1.0170 | 10.0860 | 6.8780 | | | 5.8610 | 64.63% | |
| **22I0188-10** | 1.0000 | 10.0800 | 6.2900 | | | 5.2900 | 58.26% | |
| **22I0188-11** | 1.0590 | 10.0750 | 7.2800 | | | 6.2210 | 69.00% | |
| **22I0188-13** | 1.0640 | 10.0780 | 6.2510 | | | 5.1870 | 57.54% | |
| **22I0188-16** | 1.0270 | 10.0140 | 6.0290 | | | 5.0020 | 55.66% | |
| **22I0188-17** | 1.0580 | 10.0480 | 8.6870 | | | 7.6290 | 84.86% | |
| **22I0188-18** | 1.0490 | 10.0690 | 8.5360 | | | 7.4870 | 83.00% | |
| **22J0097-01** | 1.0590 | 10.0600 | 7.6440 | | | 6.5850 | 73.16% | |
| **22J0097-02** | 1.0490 | 10.0520 | 9.0600 | | | 8.0110 | 88.98% | |
| **22L0329-08** | 1.0240 | 10.0300 | 6.2640 | | | 5.2400 | 58.18% | |
| **22L0329-09** | 1.0280 | 10.0460 | 6.0860 | | | 5.0580 | 56.09% | |
| **22L0493-01** | 1.0170 | 10.0860 | 9.1850 | | | 8.1680 | 90.07% | |
| **22L0493-02** | 1.0420 | 10.0890 | 8.8510 | | | 7.8090 | 86.32% | |
| **22L0493-03** | 1.0370 | 10.0640 | 8.8850 | | | 7.8480 | 86.94% | |
| **22L0493-04** | 1.0240 | 10.0490 | 9.0630 | | | 8.0390 | 89.07% | |
| **22L0493-05** | 1.0220 | 10.0090 | 8.7330 | | | 7.7110 | 85.80% | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## SM 2540 G-97

TotalAnalytes

**Blank**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0542
Laboratory ID: BKL0542-BLK1
Prepared: 12/21/22 13:03
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 12/21/22 13:12
Sequence:
Calibration:
Instrument: BAL2

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | ND | 1 | 0.04 | 0.04 | U |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## SM 2540 G-97

TotalAnalytes

**Blank**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0543
Laboratory ID: BKL0543-BLK1
Prepared: 12/21/22 13:06
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 12/21/22 13:11
Sequence:
Calibration:
Instrument: BAL2

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | ND | 1 | 0.04 | 0.04 | U |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## SM 2540 G-97

TotalAnalytes

**Blank**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Batch: BKL0544
Laboratory ID: BKL0544-BLK1
Prepared: 12/21/22 13:10
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 12/21/22 13:12
Sequence:
Calibration:
Instrument: BAL2

| CAS NO. | Analyte | Concentration (%) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Solids | ND | 1 | 0.04 | 0.04 | U |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT799A**

# DUPLICATES
## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0542-DUP1
Batch: BKL0542
Lab Source ID: 22L0329-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW22-IT799A
% Solids: 80.86

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Solids | 20 | 80.86 | 80.60 | 0.323 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT799A**

# DUPLICATES
## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0542-DUP2
Batch: BKL0542
Lab Source ID: 22L0329-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW22-IT799A
% Solids: 80.86

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Solids | 20 | 80.86 | 80.05 | 1.01 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT791G**

# DUPLICATES
## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0543-DUP1
Batch: BKL0543
Lab Source ID: 22L0329-21
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW22-IT791G
% Solids: 71.13

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Solids | 20 | 71.13 | 71.07 | 0.0846 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT791G**

# DUPLICATES
## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0543-DUP2
Batch: BKL0543
Lab Source ID: 22L0329-21
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW22-IT791G
% Solids: 71.13

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Solids | 20 | 71.13 | 71.21 | 0.107 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC754A**

# DUPLICATES
## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0544-DUP1
Batch: BKL0544
Lab Source ID: 22L0329-41
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW22-SC754A
% Solids: 68.25

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Solids | 20 | 68.25 | 68.11 | 0.207 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC754A**

# DUPLICATES
## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0544-DUP2
Batch: BKL0544
Lab Source ID: 22L0329-41
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW22-SC754A
% Solids: 68.25

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Solids | 20 | 68.25 | 68.23 | 0.0335 | |

*: 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

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: SM 2540 G-97**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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-IT799A 22L0329-01 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT799B 22L0329-02 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT799C 22L0329-03 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT799D 22L0329-04 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT799E 22L0329-05 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT799F 22L0329-06 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788B 22L0329-07 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788C 22L0329-08 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788D 22L0329-09 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788E 22L0329-10 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788E-FD 22L0329-11 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788F 22L0329-12 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788G 22L0329-13 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC788H 22L0329-14 | 12/13/22 10:28 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791A 22L0329-15 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791B 22L0329-16 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791C 22L0329-17 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791D 22L0329-18 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791E 22L0329-19 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791F 22L0329-20 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-IT791G 22L0329-21 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC781B 22L0329-22 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: SM 2540 G-97**

Laboratory: Analytical Resources, LLC SDG: 22L0329

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-SC781C 22L0329-23 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC781D 22L0329-24 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC781E 22L0329-25 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC781F 22L0329-26 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC781G 22L0329-27 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC781H 22L0329-28 | 12/13/22 11:00 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC765B 22L0329-29 | 12/13/22 12:14 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC765C 22L0329-30 | 12/13/22 12:14 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC765D 22L0329-31 | 12/13/22 12:14 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC765E 22L0329-32 | 12/13/22 12:14 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757A 22L0329-33 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757B 22L0329-34 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757C 22L0329-35 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757D 22L0329-36 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757E 22L0329-37 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757F 22L0329-38 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757G 22L0329-39 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC757H 22L0329-40 | 12/13/22 13:36 | 12/13/22 16:54 | 12/21/22 13:06 | 7 | 28 | 12/21/22 13:11 | 8 | 28 | |
| LDW22-SC754A 22L0329-41 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC754B 22L0329-42 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC754C 22L0329-43 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC754D 22L0329-44 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: SM 2540 G-97**

Laboratory: Analytical Resources, LLC SDG: 22L0329

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-SC754E 22L0329-45 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC754F 22L0329-46 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC754G 22L0329-47 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| LDW22-SC754H 22L0329-48 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| Duplicate BKL0542-DUP1 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| Duplicate BKL0542-DUP2 | 12/13/22 08:13 | 12/13/22 16:54 | 12/21/22 13:03 | 8 | 28 | 12/21/22 13:12 | 8 | 28 | |
| Duplicate BKL0543-DUP1 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| Duplicate BKL0543-DUP2 | 12/13/22 09:50 | 12/13/22 16:54 | 12/21/22 13:06 | 8 | 28 | 12/21/22 13:11 | 8 | 28 | |
| Duplicate BKL0544-DUP1 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |
| Duplicate BKL0544-DUP2 | 12/13/22 15:28 | 12/13/22 16:54 | 12/21/22 13:10 | 7 | 28 | 12/21/22 13:12 | 8 | 28 | |

* Indicates hold time exceedance.

Analytical Resources, LLC
Analytical Chemists and Consultants

# METHOD DETECTION AND REPORTING LIMITS

## SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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-IT799A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-01 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-135 |
| % Solids: | 80.86 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 17:53 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5182 g Wet / 0.5182 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.19 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT799B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-02 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-159 |
| % Solids: | 81.49 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 19:24 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5156 g Wet / 0.5156 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.61 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT799C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-03 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-167 |
| % Solids: | 75.16 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 19:55 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5246 g Wet / 0.5246 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.22 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT799D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-04 B | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-173 |
| % Solids: | 71.37 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 20:25 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.508 g Wet / 0.508 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.44 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT799E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-05 B | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-179 |
| % Solids: | 68.42 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 20:56 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5286 g Wet / 0.5286 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.34 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT799F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-06 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 08:13 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-186 |
| % Solids: | 68.51 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 21:26 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.6139 g Wet / 0.6139 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.34 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-07 B | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-193 |
| % Solids: | 55.96 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 21:57 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5345 g Wet / 0.5345 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.55 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-08 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-198 |
| % Solids: | 57.39 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 22:27 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5462 g Wet / 0.5462 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.62 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-09 B | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-218 |
| % Solids: | 56.86 | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 23:59 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5462 g Wet / 0.5462 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.92 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-10 B | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-223 |
| % Solids: | 54.40 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 00:29 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.2562 g Wet / 0.2562 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.83 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788E-FD**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-11 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-231 |
| % Solids: | 55.91 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 01:00 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.2417 g Wet / 0.2417 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 2.88 | 1 | 0.02 | 0.02 | |

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**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-12 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-238 |
| % Solids: | 59.80 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 01:30 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.221 g Wet / 0.221 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.18 | 1 | 0.02 | 0.02 | |

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**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-13 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-243 |
| % Solids: | 60.06 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 02:01 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5013 g Wet / 0.5013 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.69 | 1 | 0.02 | 0.02 | |

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**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC788H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-14 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 10:28 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-251 |
| % Solids: | 59.83 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 02:32 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.339 g Wet / 0.339 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.73 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-15 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-257 |
| % Solids: | 80.33 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 03:02 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5713 g Wet / 0.5713 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.56 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-16 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-265 |
| % Solids: | 88.73 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 03:32 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5071 g Wet / 0.5071 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 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-17 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-271 |
| % Solids: | 86.38 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 04:03 |
| Batch: | BKL0650 | Sequence: | SKL0336 | 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 | 0.07 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-18 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-277 |
| % Solids: | 81.16 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 04:34 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5981 g Wet / 0.5981 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.02 | 1 | 0.02 | 0.02 | U |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-19 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-295 |
| % Solids: | 77.66 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 06:05 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5928 g Wet / 0.5928 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.04 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-20 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 10:40 | File ID: | CubeData_01032023@1005-300 |
| % Solids: | 75.89 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 06:36 |
| Batch: | BKL0650 | Sequence: | SKL0336 | Initial/Final: | 0.5516 g Wet / 0.5516 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.02 | 1 | 0.02 | 0.02 | U |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-IT791G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-21 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 09:50 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-335 |
| % Solids: | 71.13 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 09:08 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5347 g Wet / 0.5347 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.36 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-22 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-353 |
| % Solids: | 62.33 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 10:40 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5039 g Wet / 0.5039 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.56 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-23 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-366 |
| % Solids: | 59.29 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 12:12 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5267 g Wet / 0.5267 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.92 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-24 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-373 |
| % Solids: | 59.52 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 12:42 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5124 g Wet / 0.5124 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.98 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-25 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-379 |
| % Solids: | 59.32 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 13:13 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5276 g Wet / 0.5276 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 2.90 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-26 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-387 |
| % Solids: | 57.34 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 13:43 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5159 g Wet / 0.5159 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 3.79 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-27 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-393 |
| % Solids: | 58.35 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 14:14 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.505 g Wet / 0.505 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 3.41 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC781H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-28 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 11:00 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-398 |
| % Solids: | 59.46 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 14:44 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5221 g Wet / 0.5221 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 3.13 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC765B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-29 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-404 |
| % Solids: | 81.43 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 15:15 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.516 g Wet / 0.516 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.43 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC765C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-30 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-437 |
| % Solids: | 53.40 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 18:18 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5617 g Wet / 0.5617 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 2.02 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC765D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-31 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-445 |
| % Solids: | 64.90 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 18:48 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5329 g Wet / 0.5329 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.48 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC765E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-32 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 12:14 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-451 |
| % Solids: | 78.61 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 19:19 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.6367 g Wet / 0.6367 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.35 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC757A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-33 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-457 |
| % Solids: | 70.18 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 19:49 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5637 g Wet / 0.5637 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-SC757B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-34 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-465 |
| % Solids: | 71.62 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 20:20 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.6546 g Wet / 0.6546 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.71 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC757C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-35 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-472 |
| % Solids: | 79.05 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 20:50 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.554 g Wet / 0.554 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-SC757D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-36 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-479 |
| % Solids: | 79.96 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 21:20 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.565 g Wet / 0.565 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 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC757E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-37 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-487 |
| % Solids: | 81.45 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 21:51 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5318 g Wet / 0.5318 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.14 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC757F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-38 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-492 |
| % Solids: | 86.73 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 22:22 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5113 g Wet / 0.5113 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.02 | 1 | 0.02 | 0.02 | U |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC757G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-39 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-497 |
| % Solids: | 83.36 | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 22:52 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5388 g Wet / 0.5388 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.02 | 1 | 0.02 | 0.02 | U |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC757H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-40 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 13:36 | Prepared: | 12/29/22 12:30 | File ID: | CubeData_01032023@1005-518 |
| % Solids: | 80.41 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 00:24 |
| Batch: | BKL0651 | Sequence: | SKL0336 | Initial/Final: | 0.5084 g Wet / 0.5084 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.02 | 1 | 0.02 | 0.02 | U |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754A**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-41 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-549 |
| % Solids: | 68.25 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 02:57 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5253 g Wet / 0.5253 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.73 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754B**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-42 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-572 |
| % Solids: | 65.94 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 04:28 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.6393 g Wet / 0.6393 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 1.06 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754C**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-43 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-576 |
| % Solids: | 71.47 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 04:59 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5041 g Wet / 0.5041 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.57 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754D**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-44 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-595 |
| % Solids: | 71.93 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 06:31 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5382 g Wet / 0.5382 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.45 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754E**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-45 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-603 |
| % Solids: | 73.92 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 07:01 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5387 g Wet / 0.5387 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.29 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754F**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-46 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-608 |
| % Solids: | 69.75 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 07:32 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5232 g Wet / 0.5232 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.48 | 1 | 0.02 | 0.02 | |

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# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754G**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-47 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-614 |
| % Solids: | 75.69 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 08:02 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5087 g Wet / 0.5087 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.29 | 1 | 0.02 | 0.02 | |

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**Analytical Chemists and Consultants**

# Form I
# INORGANIC ANALYSIS DATA SHEET
# EPA 9060A m

**LDW22-SC754H**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | | |
| Client: | Anchor QEA, LLC | | | | |
| Project: | AOC4 UR Phase 3 | | | | |
| Matrix: | Sediment | Laboratory ID: | 22L0329-48 A | SDG: | 22L0329 |
| Sampled: | 12/13/22 15:28 | Prepared: | 12/30/22 08:30 | File ID: | CubeData_01032023@1005-620 |
| % Solids: | 66.34 | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 08:33 |
| Batch: | BKL0652 | Sequence: | SKL0336 | Initial/Final: | 0.5359 g Wet / 0.5359 g |
| Instrument: | TOC Cube | | | Calibration: | FD00070 |

| CAS NO. | Analyte | Concentration (% dry) | Dilution Factor | MDL | MRL | Q |
|---|---|---|---|---|---|---|
| | Total Organic Carbon | 0.76 | 1 | 0.02 | 0.02 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# PREPARATION BATCH SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0650 Batch Matrix: Solid | Preparation: | Plumb 1981 |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-IT799A | 22L0329-01 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799B | 22L0329-02 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799C | 22L0329-03 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799D | 22L0329-04 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799E | 22L0329-05 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799F | 22L0329-06 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788B | 22L0329-07 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788C | 22L0329-08 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788D | 22L0329-09 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788E | 22L0329-10 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788E-FD | 22L0329-11 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788F | 22L0329-12 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788G | 22L0329-13 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-SC788H | 22L0329-14 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT791A | 22L0329-15 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT791B | 22L0329-16 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT791C | 22L0329-17 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT791D | 22L0329-18 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT791E | 22L0329-19 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT791F | 22L0329-20 | eData_01032023@1005- | 12/29/22 10:40 | |
| Blank | BKL0650-BLK1 | eData_01032023@1005- | 12/29/22 10:40 | |
| LCS | BKL0650-BS1 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799A | BKL0650-DUP1 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799A | BKL0650-DUP2 | eData_01042023@1301- | 01/04/23 10:39 | |
| MRL Check | BKL0650-MRL1 | eData_01032023@1005- | 12/29/22 10:40 | |
| LDW22-IT799A | BKL0650-MS1 | eData_01032023@1005- | 12/29/22 10:40 | |
| Reference | BKL0650-SRM1 | eData_01032023@1005- | 12/29/22 10:40 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# PREPARATION BATCH SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0651 Batch Matrix: Solid | Preparation: | Plumb 1981 |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-IT791G | 22L0329-21 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781B | 22L0329-22 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781C | 22L0329-23 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781D | 22L0329-24 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781E | 22L0329-25 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781F | 22L0329-26 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781G | 22L0329-27 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC781H | 22L0329-28 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC765B | 22L0329-29 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC765C | 22L0329-30 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC765D | 22L0329-31 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC765E | 22L0329-32 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757A | 22L0329-33 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757B | 22L0329-34 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757C | 22L0329-35 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757D | 22L0329-36 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757E | 22L0329-37 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757F | 22L0329-38 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757G | 22L0329-39 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-SC757H | 22L0329-40 | eData_01032023@1005- | 12/29/22 12:30 | |
| Blank | BKL0651-BLK1 | eData_01032023@1005- | 12/29/22 12:30 | |
| LCS | BKL0651-BS1 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-IT791G | BKL0651-DUP1 | eData_01032023@1005- | 12/29/22 12:30 | |
| MRL Check | BKL0651-MRL1 | eData_01032023@1005- | 12/29/22 12:30 | |
| LDW22-IT791G | BKL0651-MS1 | eData_01032023@1005- | 12/29/22 12:30 | |
| Reference | BKL0651-SRM1 | eData_01032023@1005- | 12/29/22 12:30 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# PREPARATION BATCH SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0652 Batch Matrix: Solid | Preparation: | Plumb 1981 |

| SAMPLE NAME | LAB SAMPLE ID | LAB FILE ID | DATE PREPARED | OBSERVATIONS |
|---|---|---|---|---|
| LDW22-SC754A | 22L0329-41 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754B | 22L0329-42 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754C | 22L0329-43 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754D | 22L0329-44 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754E | 22L0329-45 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754F | 22L0329-46 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754G | 22L0329-47 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754H | 22L0329-48 | eData_01032023@1005- | 12/30/22 08:30 | |
| Blank | BKL0652-BLK1 | eData_01032023@1005- | 12/30/22 08:30 | |
| LCS | BKL0652-BS1 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754A | BKL0652-DUP1 | eData_01032023@1005- | 12/30/22 08:30 | |
| MRL Check | BKL0652-MRL1 | eData_01032023@1005- | 12/30/22 08:30 | |
| LDW22-SC754A | BKL0652-MS1 | eData_01032023@1005- | 12/30/22 08:30 | |
| Reference | BKL0652-SRM1 | eData_01032023@1005- | 12/30/22 08:30 | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 9060A m

TotalAnalytes

**Blank**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0650 | Laboratory ID: | BKL0650-BLK1 | Prepared: | 12/29/22 10:40 |
| Matrix: | Solid | Preparation: | Plumb 1981 | Analyzed: | 12/30/22 13:49 |
| Sequence: | SKL0336 | 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 9060A m

TotalAnalytes

**Blank**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0651 | Laboratory ID: | BKL0651-BLK1 | Prepared: | 12/29/22 12:30 |
| Matrix: | Solid | Preparation: | Plumb 1981 | Analyzed: | 12/31/22 07:37 |
| Sequence: | SKL0336 | 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# Form I

## METHOD BLANK DATA SHEET

## EPA 9060A m

TotalAnalytes

**Blank**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | | | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | | | Project: | AOC4 UR Phase 3 |
| Batch: | BKL0652 | Laboratory ID: | BKL0652-BLK1 | Prepared: | 12/30/22 08:30 |
| Matrix: | Solid | Preparation: | Plumb 1981 | Analyzed: | 01/01/23 01:25 |
| Sequence: | SKL0336 | 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 12/30/22 14:19 |
| Batch: | BKL0650 | Laboratory ID: | BKL0650-BS1 |
| Preparation: | Plumb 1981 | Sequence Name: | LCS |
| Initial/Final: | 0.0191 g / 0.0191 g | | |

| COMPOUND | SPIKE ADDED (% wet) | LCS CONCENTRATION (% wet) | Q | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|
| Total Organic Carbon | 44.4 | 45.1 | | 101 | 80 - 120 |

* Indicates values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 12/31/22 08:07 |
| Batch: | BKL0651 | Laboratory ID: | BKL0651-BS1 |
| Preparation: | Plumb 1981 | Sequence Name: | LCS |
| Initial/Final: | 0.0194 g / 0.0194 g | | |

| COMPOUND | SPIKE ADDED (% wet) | LCS CONCENTRATION (% wet) | Q | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|
| Total Organic Carbon | 44.4 | 44.4 | | 99.8 | 80 - 120 |

* Indicates values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# LCS / LCS DUPLICATE RECOVERY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/01/23 01:56 |
| Batch: | BKL0652 | Laboratory ID: | BKL0652-BS1 |
| Preparation: | Plumb 1981 | Sequence Name: | LCS |
| Initial/Final: | 0.0213 g / 0.0213 g | | |

| COMPOUND | SPIKE ADDED (% wet) | LCS CONCENTRATION (% wet) | Q | LCS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|
| Total Organic Carbon | 44.4 | 44.4 | | 100 | 80 - 120 |

* Indicates values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT799A**

# DUPLICATES

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0650-DUP1
Batch: BKL0650
Lab Source ID: 22L0329-01
Preparation: Plumb 1981
Initial/Final: 0.5137 g / 0.5137 g
Source Sample Name: LDW22-IT799A
% Solids: 80.86

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Organic Carbon | 20 | 0.19 | 0.37 | 65.8 | * |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT799A**

# DUPLICATES

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Laboratory ID: | BKL0650-DUP2 |
| Batch: | BKL0650 | Lab Source ID: | 22L0329-01 |
| Preparation: | Plumb 1981 | Initial/Final: | 0.5045 g / 0.5045 g |
| Source Sample Name: | LDW22-IT799A | % Solids: | 80.86 |

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Organic Carbon | 20 | 0.19 | 0.22 | 17.1 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT791G**

# DUPLICATES

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0651-DUP1
Batch: BKL0651
Lab Source ID: 22L0329-21
Preparation: Plumb 1981
Initial/Final: 0.5093 g / 0.5093 g
Source Sample Name: LDW22-IT791G
% Solids: 71.13

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Organic Carbon | 20 | 0.36 | 0.37 | 2.68 | |

*: 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

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW22-SC754A

# DUPLICATES

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Matrix: Solid
Laboratory ID: BKL0652-DUP1
Batch: BKL0652
Lab Source ID: 22L0329-41
Preparation: Plumb 1981
Initial/Final: 0.5723 g / 0.5723 g
Source Sample Name: LDW22-SC754A
% Solids: 68.25

| ANALYTE | CONTROL LIMIT | SAMPLE CONCENTRATION | DUPLICATE CONCENTRATION | RPD % | Q |
|---|---|---|---|---|---|
| Total Organic Carbon | 20 | 0.73 | 0.74 | 1.59 | |

*: 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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT799A**

# MS / MS DUPLICATE RECOVERY
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 12/30/22 18:54 |
| Batch: | BKL0650 | Laboratory ID: | BKL0650-MS1 |
| Preparation: | Plumb 1981 | Sequence Name: | Matrix Spike |
| Initial/Final: | 0.5148 g / 0.5148 g | Source Sample: | LDW22-IT799A |

| COMPOUND | SPIKE ADDED (% dry) | SAMPLE CONCENTRATION (% dry) | Q | MS CONCENTRATION (% dry) | Q | MS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 0.897 | 0.19 | | 1.09 | | 101 | 75 - 125 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-IT791G**

# MS / MS DUPLICATE RECOVERY
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 12/31/22 10:09 |
| Batch: | BKL0651 | Laboratory ID: | BKL0651-MS1 |
| Preparation: | Plumb 1981 | Sequence Name: | Matrix Spike |
| Initial/Final: | 0.5463 g / 0.5463 g | Source Sample: | LDW22-IT791G |

| COMPOUND | SPIKE ADDED (% dry) | SAMPLE CONCENTRATION (% dry) | Q | MS CONCENTRATION (% dry) | Q | MS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 0.904 | 0.36 | | 1.31 | | 105 | 75 - 125 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

**LDW22-SC754A**

# MS / MS DUPLICATE RECOVERY
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Matrix: | Solid | Analyzed: | 01/01/23 03:58 |
| Batch: | BKL0652 | Laboratory ID: | BKL0652-MS1 |
| Preparation: | Plumb 1981 | Sequence Name: | Matrix Spike |
| Initial/Final: | 0.5116 g / 0.5116 g | Source Sample: | LDW22-SC754A |

| COMPOUND | SPIKE ADDED (% dry) | SAMPLE CONCENTRATION (% dry) | Q | MS CONCENTRATION (% dry) | Q | MS % REC. # | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 1.12 | 0.73 | | 1.90 | | 105 | 75 - 125 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
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# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SKL0336 | Instrument: | TOC Cube |
| | | Calibration: | FD00070 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| LDW22-SC757H | 22L0329-40 | CubeData_01032023@1005-518 | Solid | 01/01/23 00:24 |
| MRL Check | BKL0652-MRL1 | CubeData_01032023@1005-525 | Solid | 01/01/23 00:55 |
| Blank | BKL0652-BLK1 | CubeData_01032023@1005-531 | Solid | 01/01/23 01:25 |
| LCS | BKL0652-BS1 | CubeData_01032023@1005-537 | Solid | 01/01/23 01:56 |
| Reference | BKL0652-SRM1 | CubeData_01032023@1005-543 | Solid | 01/01/23 02:26 |
| LDW22-SC754A | 22L0329-41 | CubeData_01032023@1005-549 | Solid | 01/01/23 02:57 |
| LDW22-SC754A | BKL0652-DUP1 | CubeData_01032023@1005-557 | Solid | 01/01/23 03:27 |
| LDW22-SC754A | BKL0652-MS1 | CubeData_01032023@1005-565 | Solid | 01/01/23 03:58 |
| LDW22-SC754B | 22L0329-42 | CubeData_01032023@1005-572 | Solid | 01/01/23 04:28 |
| LDW22-SC754C | 22L0329-43 | CubeData_01032023@1005-576 | Solid | 01/01/23 04:59 |
| Calibration Check | SKL0336-CCVE | CubeData_01032023@1005-583 | NA | 01/01/23 05:30 |
| Calibration Blank | SKL0336-CCBE | CubeData_01032023@1005-589 | NA | 01/01/23 06:00 |
| LDW22-SC754D | 22L0329-44 | CubeData_01032023@1005-595 | Solid | 01/01/23 06:31 |
| LDW22-SC754E | 22L0329-45 | CubeData_01032023@1005-603 | Solid | 01/01/23 07:01 |
| LDW22-SC754F | 22L0329-46 | CubeData_01032023@1005-608 | Solid | 01/01/23 07:32 |
| LDW22-SC754G | 22L0329-47 | CubeData_01032023@1005-614 | Solid | 01/01/23 08:02 |
| LDW22-SC754H | 22L0329-48 | CubeData_01032023@1005-620 | Solid | 01/01/23 08:33 |
| Calibration Check | SKL0336-CCVF | CubeData_01032023@1005-061 | NA | 01/01/23 11:35 |
| Calibration Blank | SKL0336-CCBF | CubeData_01032023@1005-071 | NA | 01/01/23 12:05 |
| Calibration Check | SKL0336-CCVG | CubeData_01032023@1005-136 | NA | 01/01/23 15:07 |
| Calibration Blank | SKL0336-CCBG | CubeData_01032023@1005-147 | NA | 01/01/23 15:38 |
| Initial Cal Check | SKL0336-ICV1 | CubeData_01032023@1005-040 | NA | 12/28/22 15:57 |
| Initial Cal Blank | SKL0336-ICB1 | CubeData_01032023@1005-047 | NA | 12/28/22 16:28 |
| Calibration Check | SKL0336-CCV1 | CubeData_01032023@1005-160 | NA | 12/28/22 22:02 |
| Calibration Blank | SKL0336-CCB1 | CubeData_01032023@1005-166 | NA | 12/28/22 22:33 |
| Calibration Check | SKL0336-CCV2 | CubeData_01032023@1005-237 | NA | 12/29/22 04:09 |
| Calibration Blank | SKL0336-CCB2 | CubeData_01032023@1005-244 | NA | 12/29/22 04:39 |
| Calibration Check | SKL0336-CCV3 | CubeData_01032023@1005-314 | NA | 12/29/22 10:16 |
| Calibration Blank | SKL0336-CCB3 | CubeData_01032023@1005-321 | NA | 12/29/22 10:47 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SKL0336 | Instrument: | TOC Cube |
| | | Calibration: | FD00070 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| Calibration Check | SKL0336-CCV4 | CubeData_01032023@1005-386 | NA | 12/29/22 16:24 |
| Calibration Blank | SKL0336-CCB4 | CubeData_01032023@1005-392 | NA | 12/29/22 16:54 |
| Calibration Check | SKL0336-CCV5 | CubeData_01032023@1005-458 | NA | 12/29/22 22:30 |
| Calibration Blank | SKL0336-CCB5 | CubeData_01032023@1005-466 | NA | 12/29/22 23:01 |
| Calibration Check | SKL0336-CCV6 | CubeData_01032023@1005-536 | NA | 12/30/22 04:38 |
| Calibration Blank | SKL0336-CCB6 | CubeData_01032023@1005-542 | NA | 12/30/22 05:09 |
| Calibration Check | SKL0336-CCV7 | CubeData_01032023@1005-615 | NA | 12/30/22 10:45 |
| Calibration Blank | SKL0336-CCB7 | CubeData_01032023@1005-619 | NA | 12/30/22 11:16 |
| MRL Check | BKL0650-MRL1 | CubeData_01032023@1005-039 | Solid | 12/30/22 13:18 |
| Blank | BKL0650-BLK1 | CubeData_01032023@1005-048 | Solid | 12/30/22 13:49 |
| LCS | BKL0650-BS1 | CubeData_01032023@1005-060 | Solid | 12/30/22 14:19 |
| Reference | BKL0650-SRM1 | CubeData_01032023@1005-070 | Solid | 12/30/22 14:50 |
| Calibration Check | SKL0336-CCV8 | CubeData_01032023@1005-111 | NA | 12/30/22 16:52 |
| Calibration Blank | SKL0336-CCB8 | CubeData_01032023@1005-124 | NA | 12/30/22 17:23 |
| LDW22-IT799A | 22L0329-01 | CubeData_01032023@1005-135 | Solid | 12/30/22 17:53 |
| LDW22-IT799A | BKL0650-DUP1 | CubeData_01032023@1005-145 | Solid | 12/30/22 18:24 |
| LDW22-IT799A | BKL0650-MS1 | CubeData_01032023@1005-153 | Solid | 12/30/22 18:54 |
| LDW22-IT799B | 22L0329-02 | CubeData_01032023@1005-159 | Solid | 12/30/22 19:24 |
| LDW22-IT799C | 22L0329-03 | CubeData_01032023@1005-167 | Solid | 12/30/22 19:55 |
| LDW22-IT799D | 22L0329-04 | CubeData_01032023@1005-173 | Solid | 12/30/22 20:25 |
| LDW22-IT799E | 22L0329-05 | CubeData_01032023@1005-179 | Solid | 12/30/22 20:56 |
| LDW22-IT799F | 22L0329-06 | CubeData_01032023@1005-186 | Solid | 12/30/22 21:26 |
| LDW22-SC788B | 22L0329-07 | CubeData_01032023@1005-193 | Solid | 12/30/22 21:57 |
| LDW22-SC788C | 22L0329-08 | CubeData_01032023@1005-198 | Solid | 12/30/22 22:27 |
| Calibration Check | SKL0336-CCV9 | CubeData_01032023@1005-205 | NA | 12/30/22 22:58 |
| Calibration Blank | SKL0336-CCB9 | CubeData_01032023@1005-210 | NA | 12/30/22 23:29 |
| LDW22-SC788D | 22L0329-09 | CubeData_01032023@1005-218 | Solid | 12/30/22 23:59 |
| LDW22-SC788E | 22L0329-10 | CubeData_01032023@1005-223 | Solid | 12/31/22 00:29 |
| LDW22-SC788E-FD | 22L0329-11 | CubeData_01032023@1005-231 | Solid | 12/31/22 01:00 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# ANALYSIS BATCH (SEQUENCE) SUMMARY

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SKL0336 | Instrument: | TOC Cube |
| | | Calibration: | FD00070 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| LDW22-SC788F | 22L0329-12 | CubeData_01032023@1005-238 | Solid | 12/31/22 01:30 |
| LDW22-SC788G | 22L0329-13 | CubeData_01032023@1005-243 | Solid | 12/31/22 02:01 |
| LDW22-SC788H | 22L0329-14 | CubeData_01032023@1005-251 | Solid | 12/31/22 02:32 |
| LDW22-IT791A | 22L0329-15 | CubeData_01032023@1005-257 | Solid | 12/31/22 03:02 |
| LDW22-IT791B | 22L0329-16 | CubeData_01032023@1005-265 | Solid | 12/31/22 03:32 |
| LDW22-IT791C | 22L0329-17 | CubeData_01032023@1005-271 | Solid | 12/31/22 04:03 |
| LDW22-IT791D | 22L0329-18 | CubeData_01032023@1005-277 | Solid | 12/31/22 04:34 |
| Calibration Check | SKL0336-CCVA | CubeData_01032023@1005-283 | NA | 12/31/22 05:04 |
| Calibration Blank | SKL0336-CCBA | CubeData_01032023@1005-288 | NA | 12/31/22 05:35 |
| LDW22-IT791E | 22L0329-19 | CubeData_01032023@1005-295 | Solid | 12/31/22 06:05 |
| LDW22-IT791F | 22L0329-20 | CubeData_01032023@1005-300 | Solid | 12/31/22 06:36 |
| MRL Check | BKL0651-MRL1 | CubeData_01032023@1005-307 | Solid | 12/31/22 07:06 |
| Blank | BKL0651-BLK1 | CubeData_01032023@1005-315 | Solid | 12/31/22 07:37 |
| LCS | BKL0651-BS1 | CubeData_01032023@1005-320 | Solid | 12/31/22 08:07 |
| Reference | BKL0651-SRM1 | CubeData_01032023@1005-327 | Solid | 12/31/22 08:38 |
| LDW22-IT791G | 22L0329-21 | CubeData_01032023@1005-335 | Solid | 12/31/22 09:08 |
| LDW22-IT791G | BKL0651-DUP1 | CubeData_01032023@1005-341 | Solid | 12/31/22 09:39 |
| LDW22-IT791G | BKL0651-MS1 | CubeData_01032023@1005-346 | Solid | 12/31/22 10:09 |
| LDW22-SC781B | 22L0329-22 | CubeData_01032023@1005-353 | Solid | 12/31/22 10:40 |
| Calibration Check | SKL0336-CCVB | CubeData_01032023@1005-358 | NA | 12/31/22 11:11 |
| Calibration Blank | SKL0336-CCBB | CubeData_01032023@1005-364 | NA | 12/31/22 11:41 |
| LDW22-SC781C | 22L0329-23 | CubeData_01032023@1005-366 | Solid | 12/31/22 12:12 |
| LDW22-SC781D | 22L0329-24 | CubeData_01032023@1005-373 | Solid | 12/31/22 12:42 |
| LDW22-SC781E | 22L0329-25 | CubeData_01032023@1005-379 | Solid | 12/31/22 13:13 |
| LDW22-SC781F | 22L0329-26 | CubeData_01032023@1005-387 | Solid | 12/31/22 13:43 |
| LDW22-SC781G | 22L0329-27 | CubeData_01032023@1005-393 | Solid | 12/31/22 14:14 |
| LDW22-SC781H | 22L0329-28 | CubeData_01032023@1005-398 | Solid | 12/31/22 14:44 |
| LDW22-SC765B | 22L0329-29 | CubeData_01032023@1005-404 | Solid | 12/31/22 15:15 |
| Calibration Check | SKL0336-CCVC | CubeData_01032023@1005-425 | NA | 12/31/22 17:17 |

Analytical Resources, LLC
Analytical Chemists and Consultants

# ANALYSIS BATCH (SEQUENCE) SUMMARY

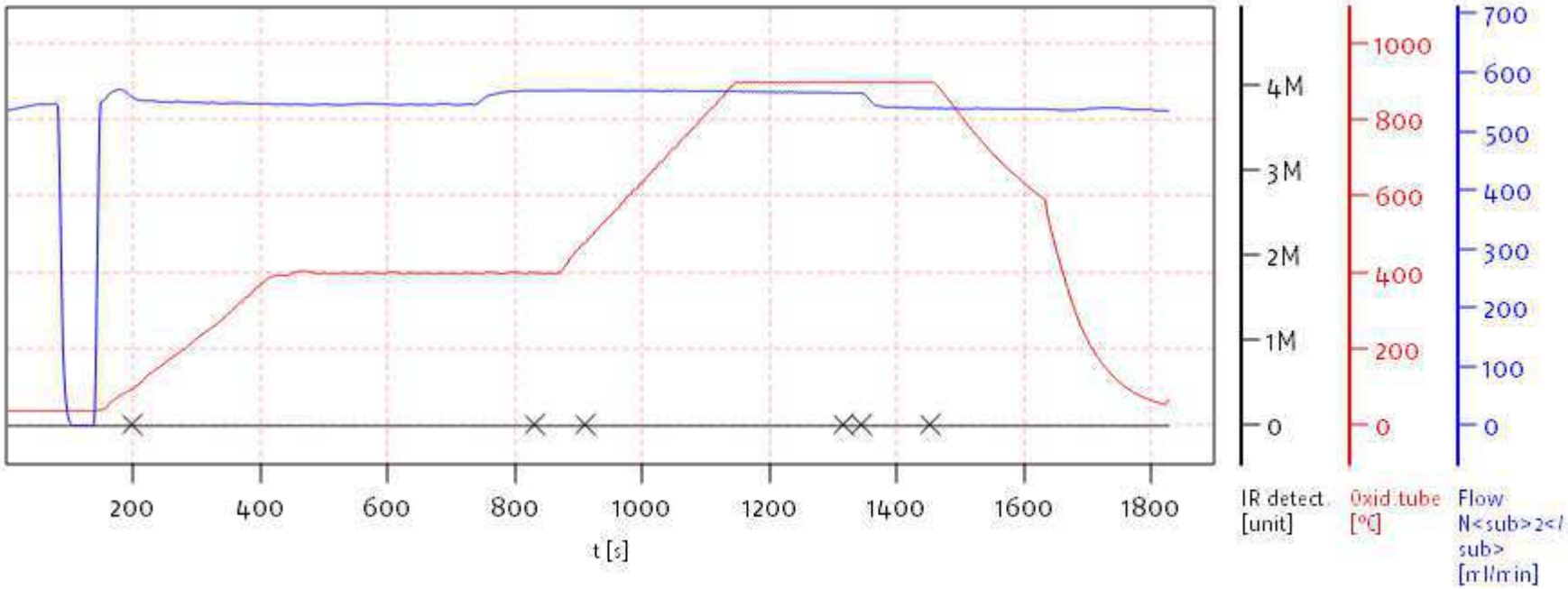
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SKL0336 | Instrument: | TOC Cube |
| | | Calibration: | FD00070 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| Calibration Blank | SKL0336-CCBC | CubeData_01032023@1005-431 | NA | 12/31/22 17:48 |
| LDW22-SC765C | 22L0329-30 | CubeData_01032023@1005-437 | Solid | 12/31/22 18:18 |
| LDW22-SC765D | 22L0329-31 | CubeData_01032023@1005-445 | Solid | 12/31/22 18:48 |
| LDW22-SC765E | 22L0329-32 | CubeData_01032023@1005-451 | Solid | 12/31/22 19:19 |
| LDW22-SC757A | 22L0329-33 | CubeData_01032023@1005-457 | Solid | 12/31/22 19:49 |
| LDW22-SC757B | 22L0329-34 | CubeData_01032023@1005-465 | Solid | 12/31/22 20:20 |
| LDW22-SC757C | 22L0329-35 | CubeData_01032023@1005-472 | Solid | 12/31/22 20:50 |
| LDW22-SC757D | 22L0329-36 | CubeData_01032023@1005-479 | Solid | 12/31/22 21:20 |
| LDW22-SC757E | 22L0329-37 | CubeData_01032023@1005-487 | Solid | 12/31/22 21:51 |
| LDW22-SC757F | 22L0329-38 | CubeData_01032023@1005-492 | Solid | 12/31/22 22:22 |
| LDW22-SC757G | 22L0329-39 | CubeData_01032023@1005-497 | Solid | 12/31/22 22:52 |
| Calibration Check | SKL0336-CCVD | CubeData_01032023@1005-504 | NA | 12/31/22 23:23 |
| Calibration Blank | SKL0336-CCBD | CubeData_01032023@1005-511 | NA | 12/31/22 23:53 |

# 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 | 12/28/2022 2:26 PM | bl | 0.000 | 8 478 | 0.000 | 0.000 | 1 876 | 3 414 | 0.000 | 0.000 | 1.0000 | 1.0000 |




Name:

Access: soliTOC superuser

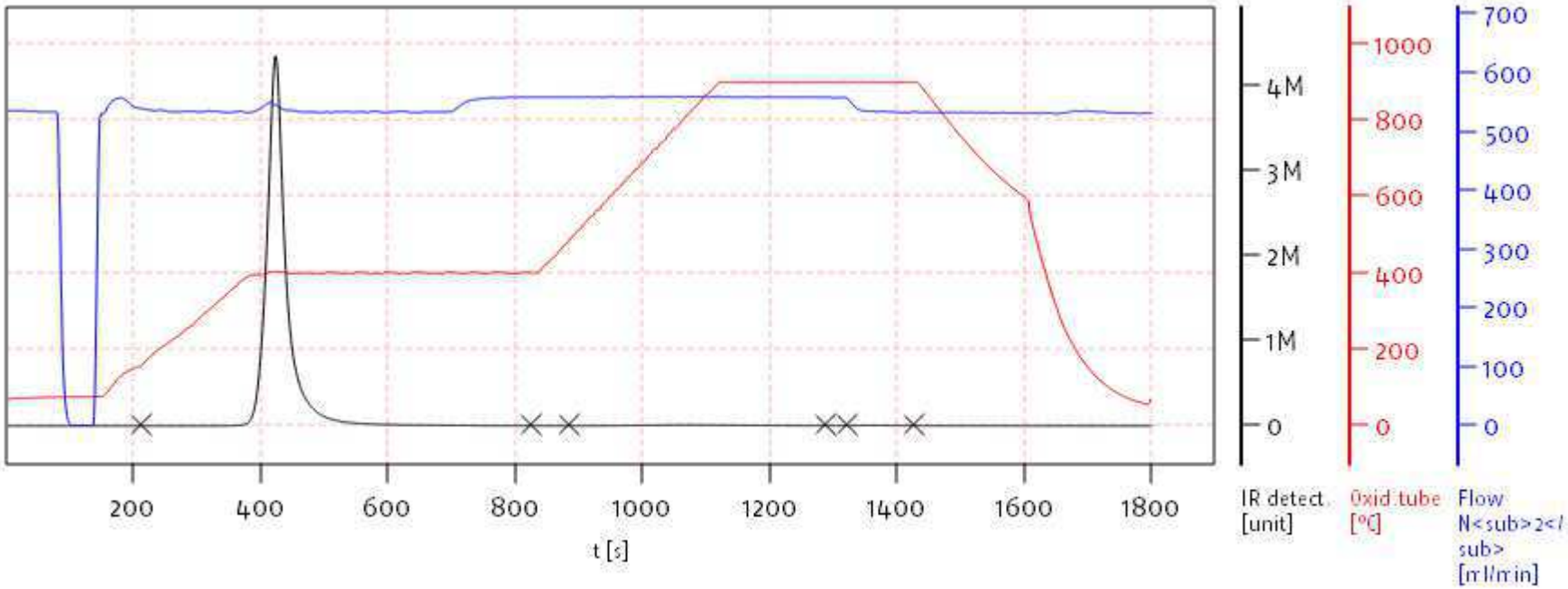
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 2 | Dfactor | 19.10 | | CARBON | 12/28/2022 2:56 PM | bl | 44.446 | 5 792 157 | 44.924 | 0.000 | 17 756 | 85 597 | 44.446 | 0.479 | 0.9511 | 1.0000 |




Name:

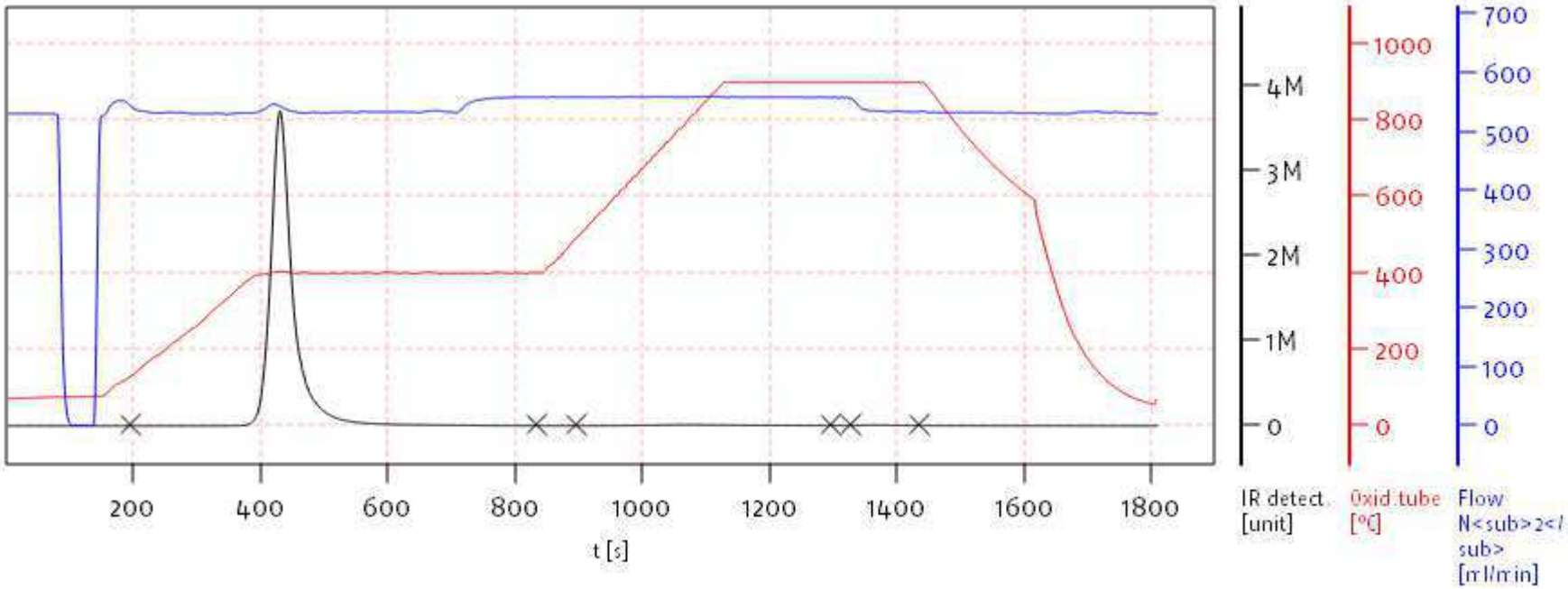
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 3 | Dfactor | 19.00 | | CARBON | 12/28/2022 3:27 PM | bl | 44.446 | 5 663 509 | 45.027 | 0.000 | 24 903 | 97 934 | 44.446 | 0.582 | 0.9677 | 1.0000 |




Name:

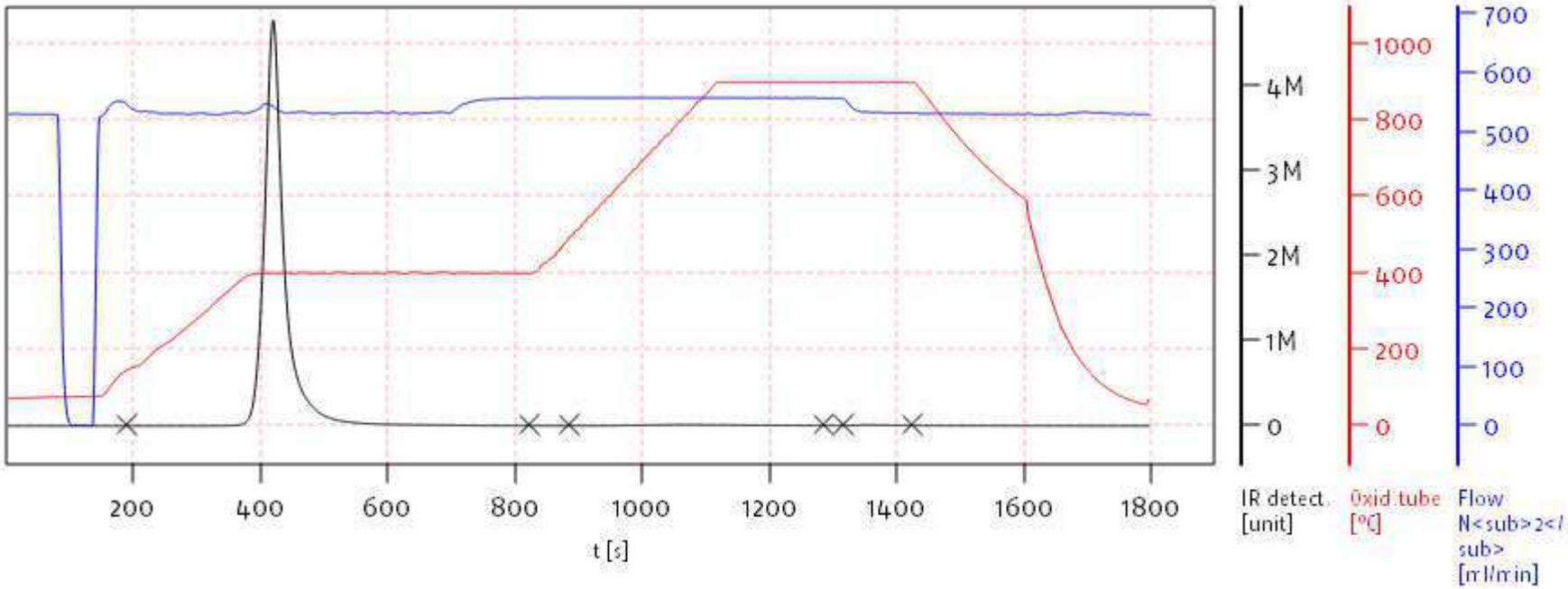
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 4 | SKL0336-ICV1 | 21.60 | | CARBON | 12/28/2022 3:57 PM | bl | 44.523 | 6 501448 | 45.056 | 0.001 | 26 669 | 100 954 | 44.522 | 0.533 | 0.9594 | 1.0000 |




Name:

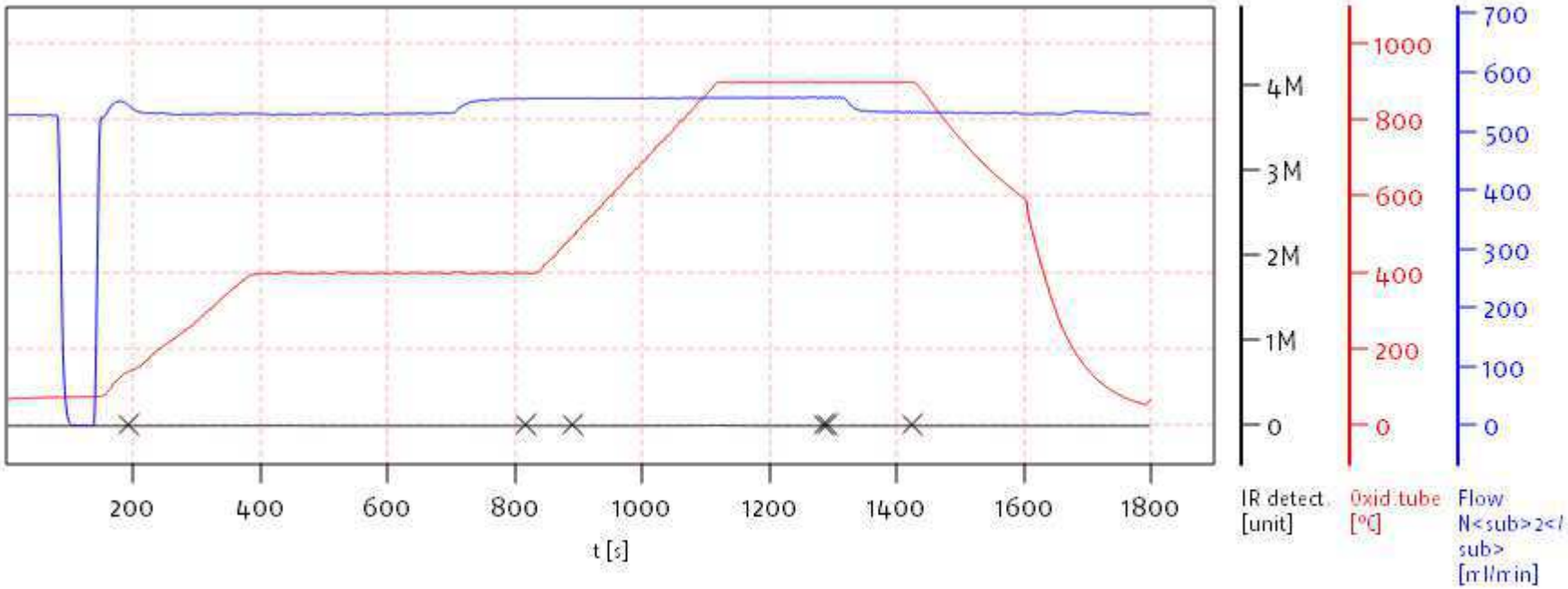
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 5 | SKL0336-ICB1 | 538.20 | | CARBON | 12/28/2022 4:28 PM | bl,C2u | 0.000 | 16 336 | 0.000 | 0.000 | 992 | 16 586 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

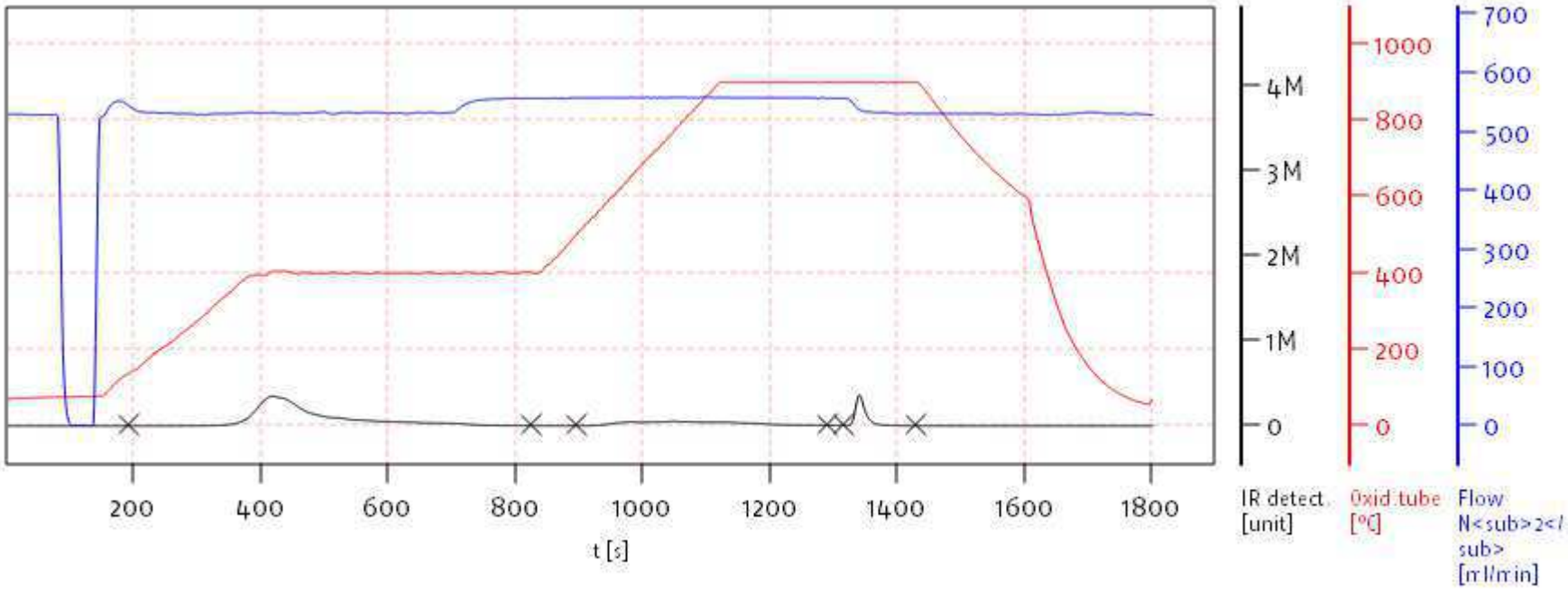
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6 | 22L0307-51 | 513.50 | | CARBON | 12/28/2022 4:58 PM | bl | 0.517 | 1 576 030 | 0.639 | 0.068 | 253 460 | 433 029 | 0.448 | 0.123 | 0.9594 | 1.0000 |




Name:

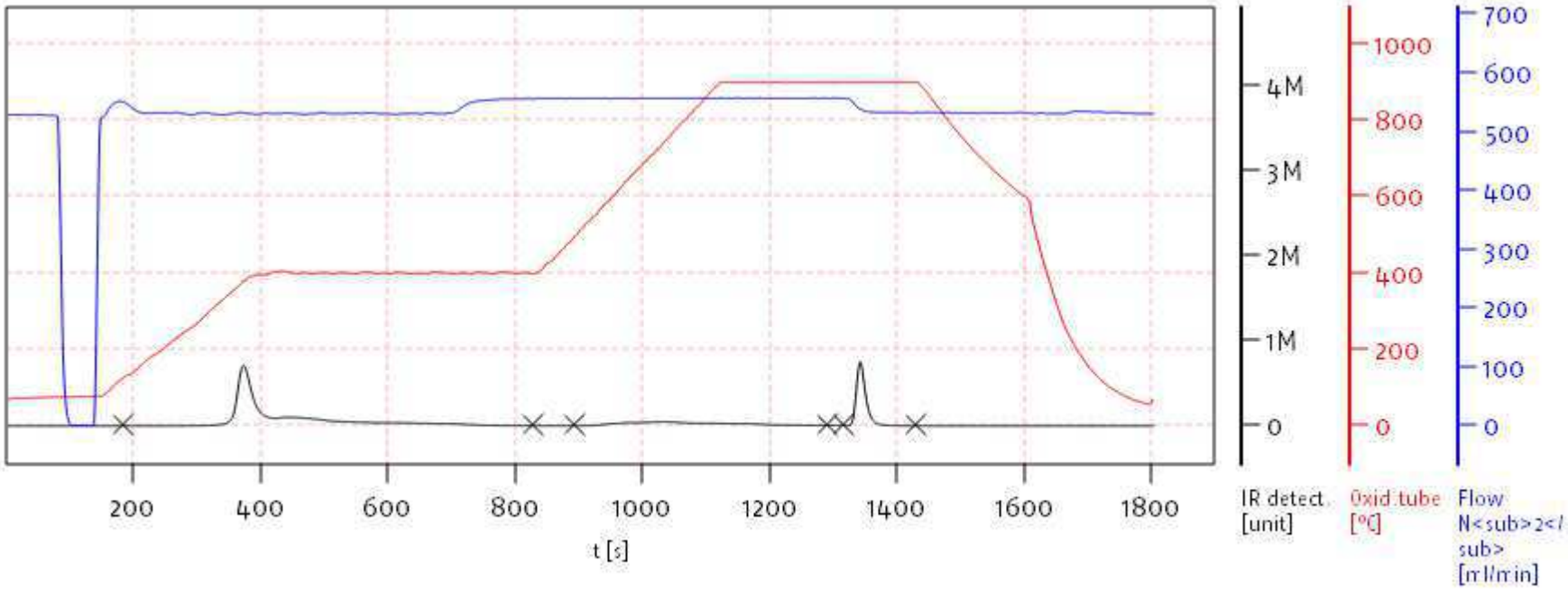
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 7 | 22L0307-52 | 206.60 | | CARBON | 12/28/2022 5:28 PM | bl | 1.340 | 1 411 575 | 1.583 | 0.344 | 485 920 | 350 334 | 0.996 | 0.243 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

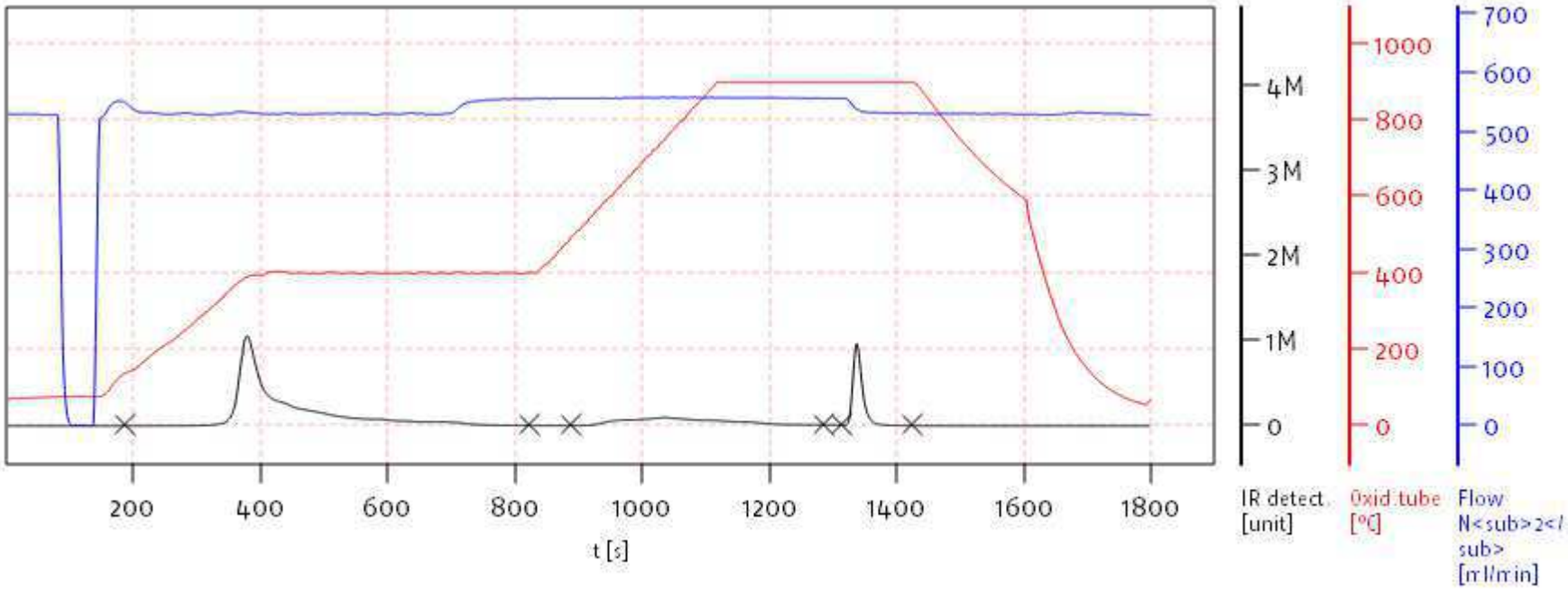
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 8 | 22L0307-53 | 510.80 | | CARBON | 12/28/2022 5:59 PM | bl | 0.990 | 2 796 609 | 1.195 | 0.184 | 634 878 | 703 238 | 0.805 | 0.205 | 0.9594 | 1.0000 |




Name:

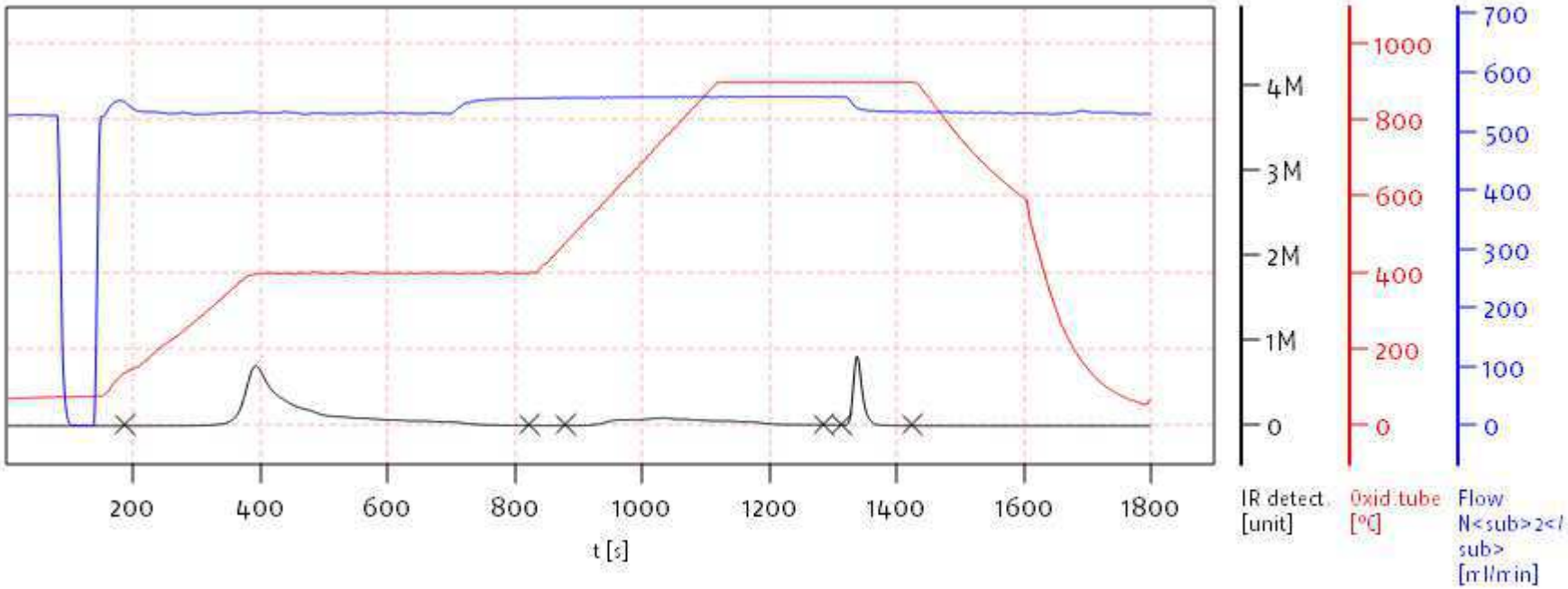
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 9 | 22L0307-54 | 511.80 | | CARBON | 12/28/2022 6:29 PM | bl | 0.862 | 2 476 874 | 1.065 | 0.151 | 524 802 | 699 052 | 0.711 | 0.203 | 0.9594 | 1.0000 |




Name:

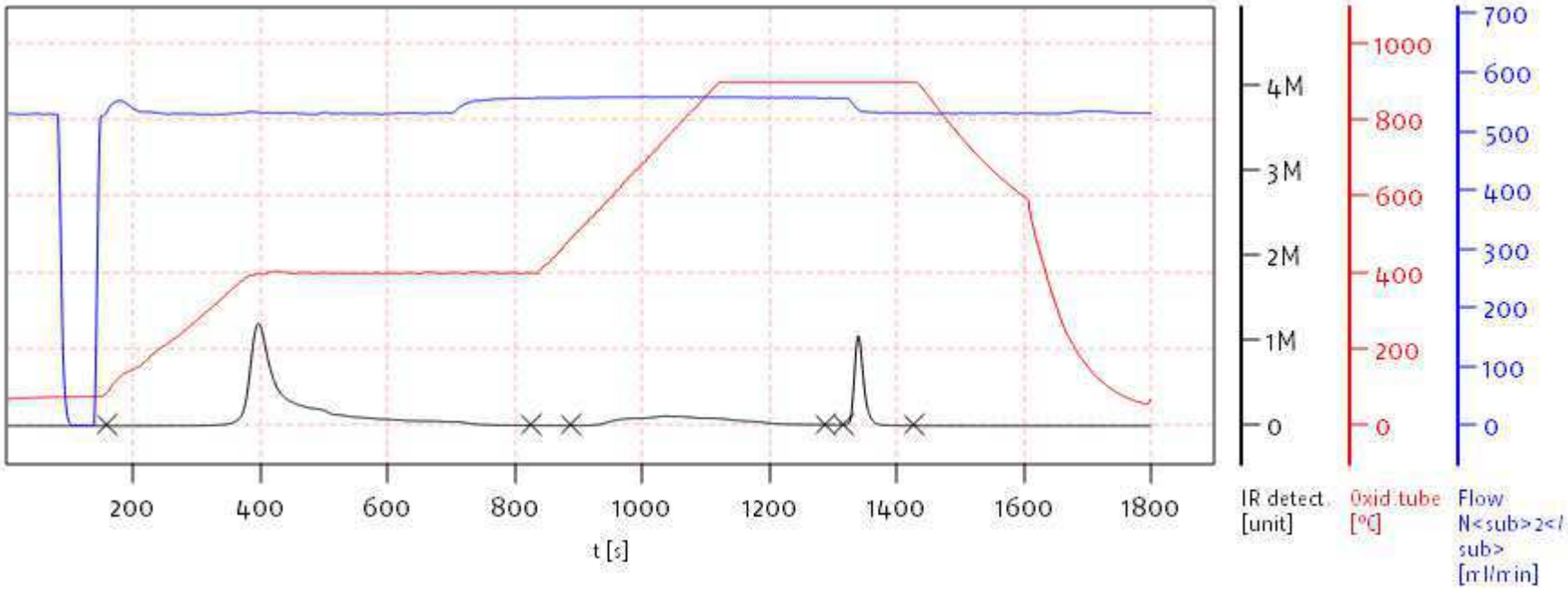
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 10 | 22L0307-55 | 510.30 | | CARBON | 12/28/2022 7:00 PM | bl | 1.085 | 3 066 894 | 1.342 | 0.200 | 686 890 | 873 634 | 0.885 | 0.257 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

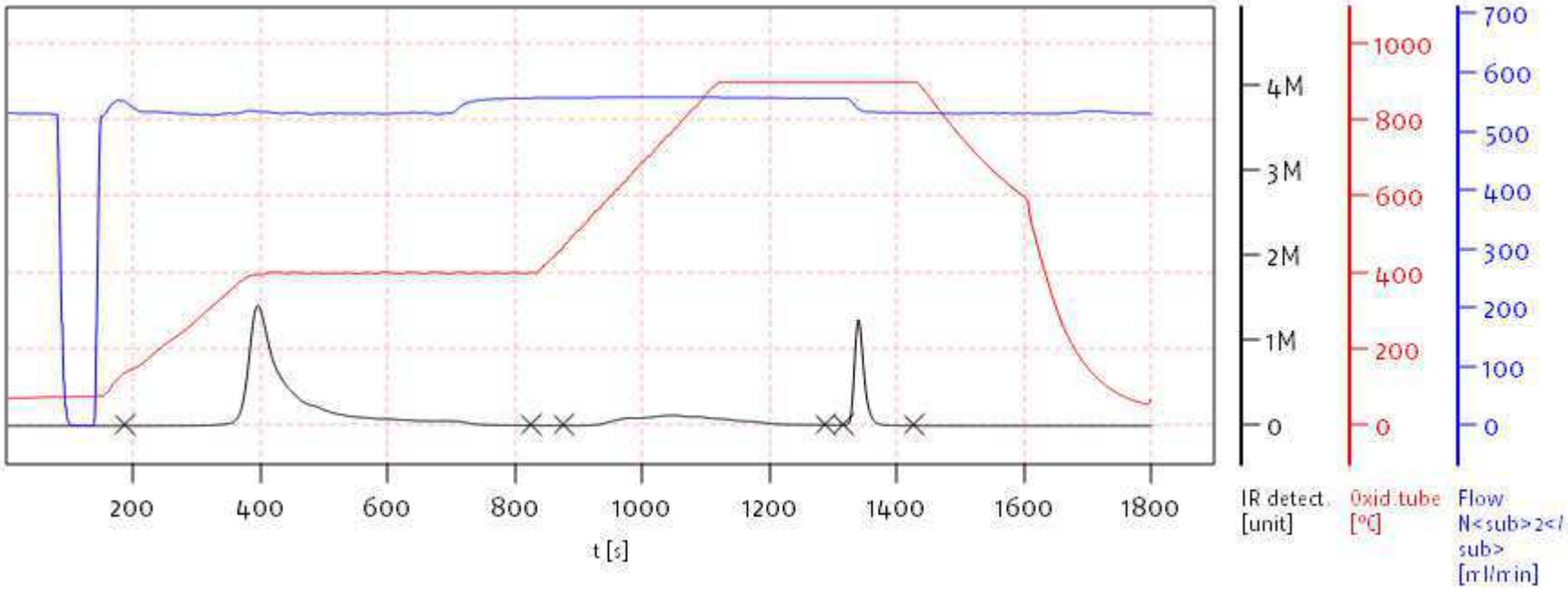
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 11 | 22L0307-56 | 504.50 | | CARBON | 12/28/2022 7:30 PM | bl | 1.356 | 3 794 415 | 1.620 | 0.246 | 829 669 | 888 171 | 1.109 | 0.264 | 0.9594 | 1.0000 |




Name:

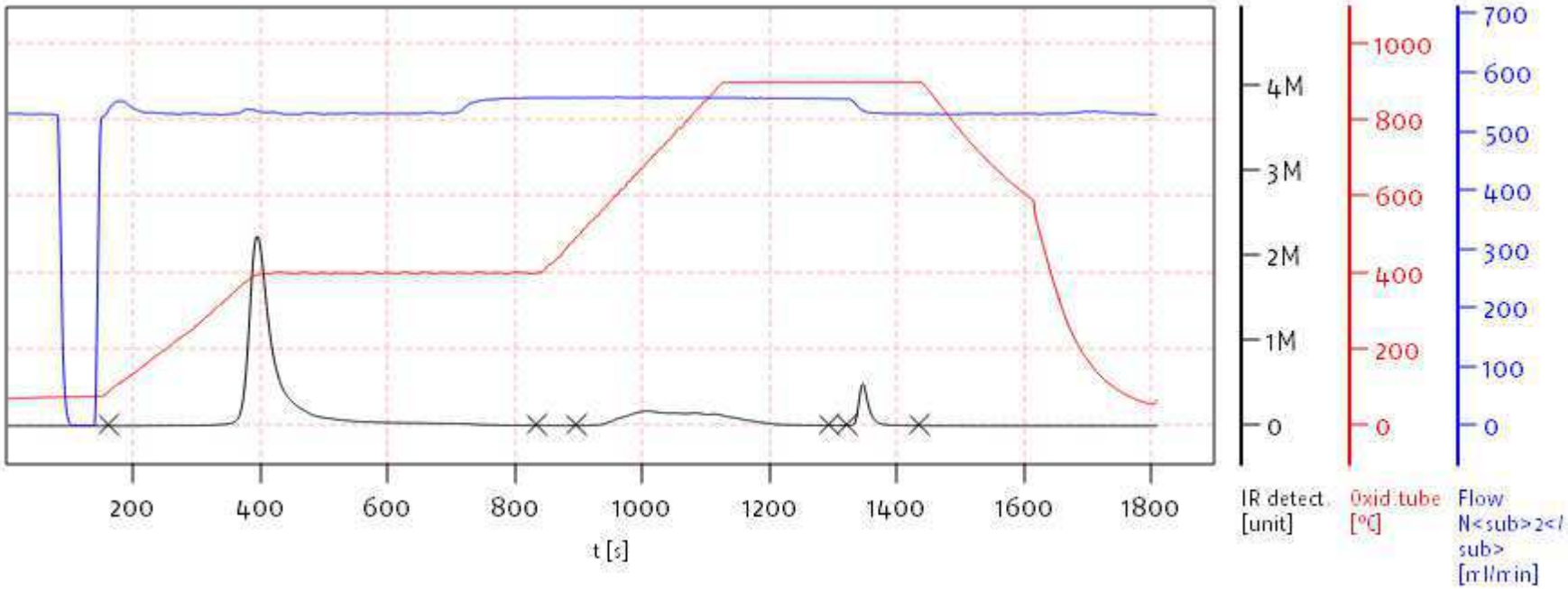
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 12 | 22L0307-57 | 502.40 | | CARBON | 12/28/2022 8:01 PM | bl | 1.268 | 3 984 731 | 1.625 | 0.098 | 343 337 | 1 185 420 | 1.170 | 0.357 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

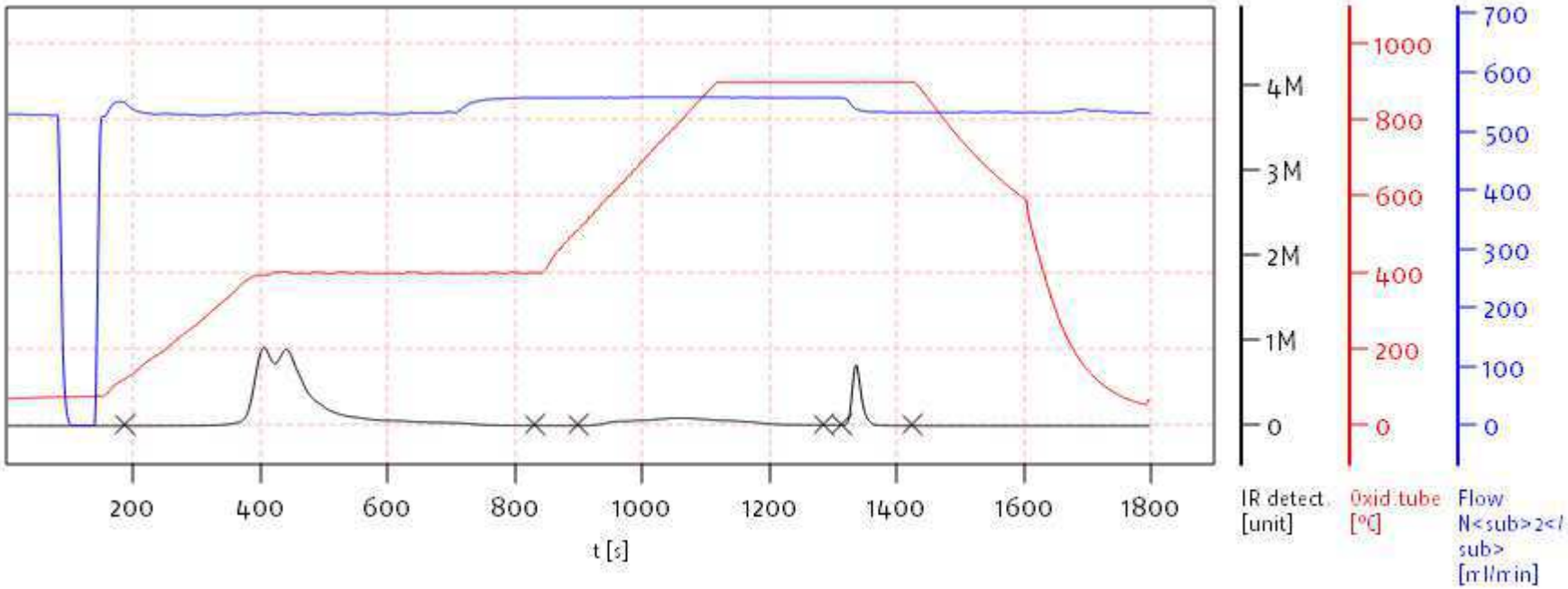
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 13 | 22L0307-58 | 505.00 | | CARBON | 12/28/2022 8:31 PM | bl | 1.154 | 3 494 981 | 1.354 | 0.134 | 464 042 | 678 247 | 1.020 | 0.200 | 0.9594 | 1.0000 |




Name:

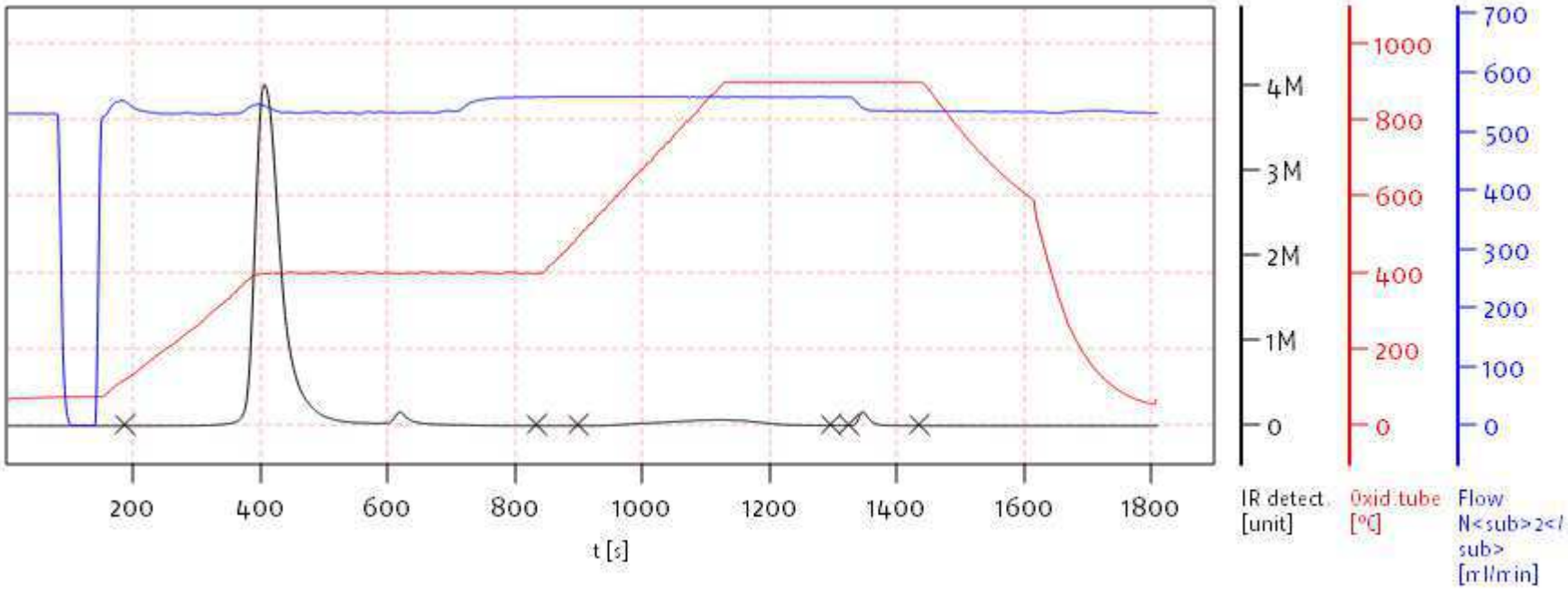
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 | 22L0307-59 | 533.40 | | CARBON | 12/28/2022 9:01 PM | bl | 2.103 | 7 477 145 | 2.234 | 0.028 | 123 903 | 477 355 | 2.075 | 0.131 | 0.9594 | 1.0000 |




Name:

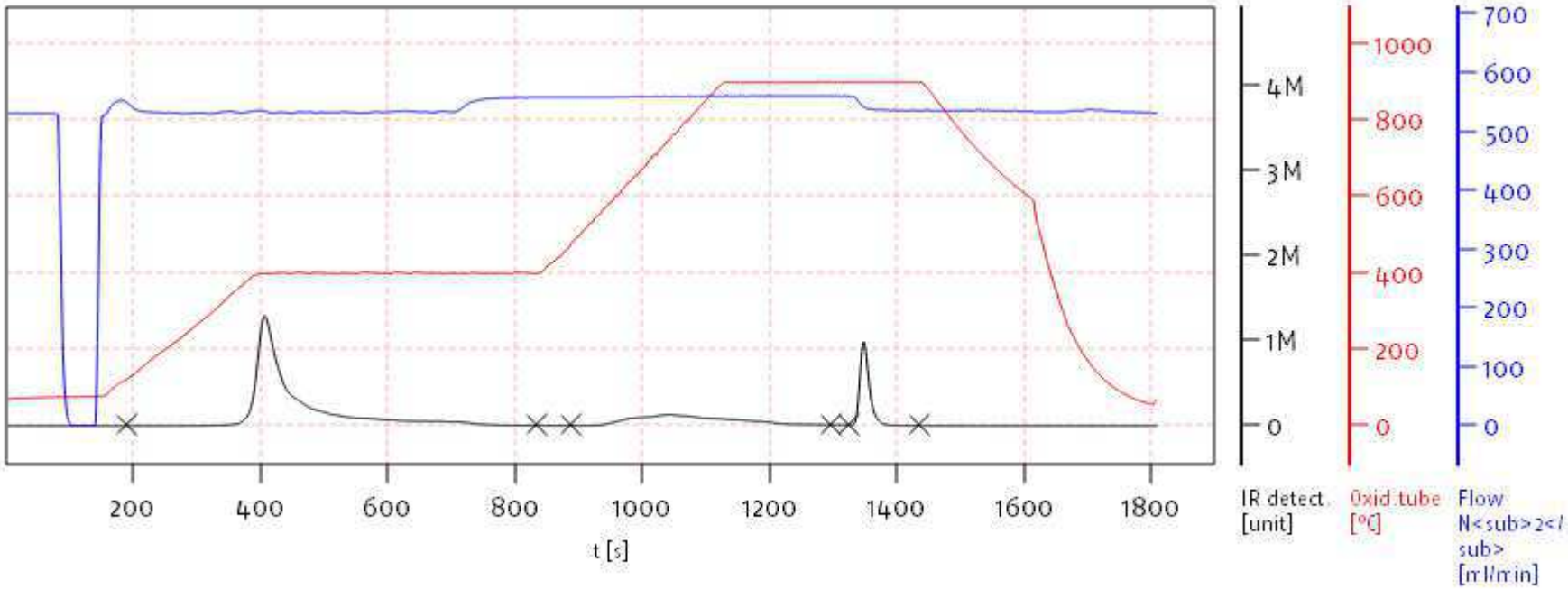
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 15 | 22L0307-60 | 515.50 | | CARBON | 12/28/2022 9:32 PM | bl | 1.062 | 3 058 738 | 1.332 | 0.188 | 653 728 | 924 826 | 0.874 | 0.270 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

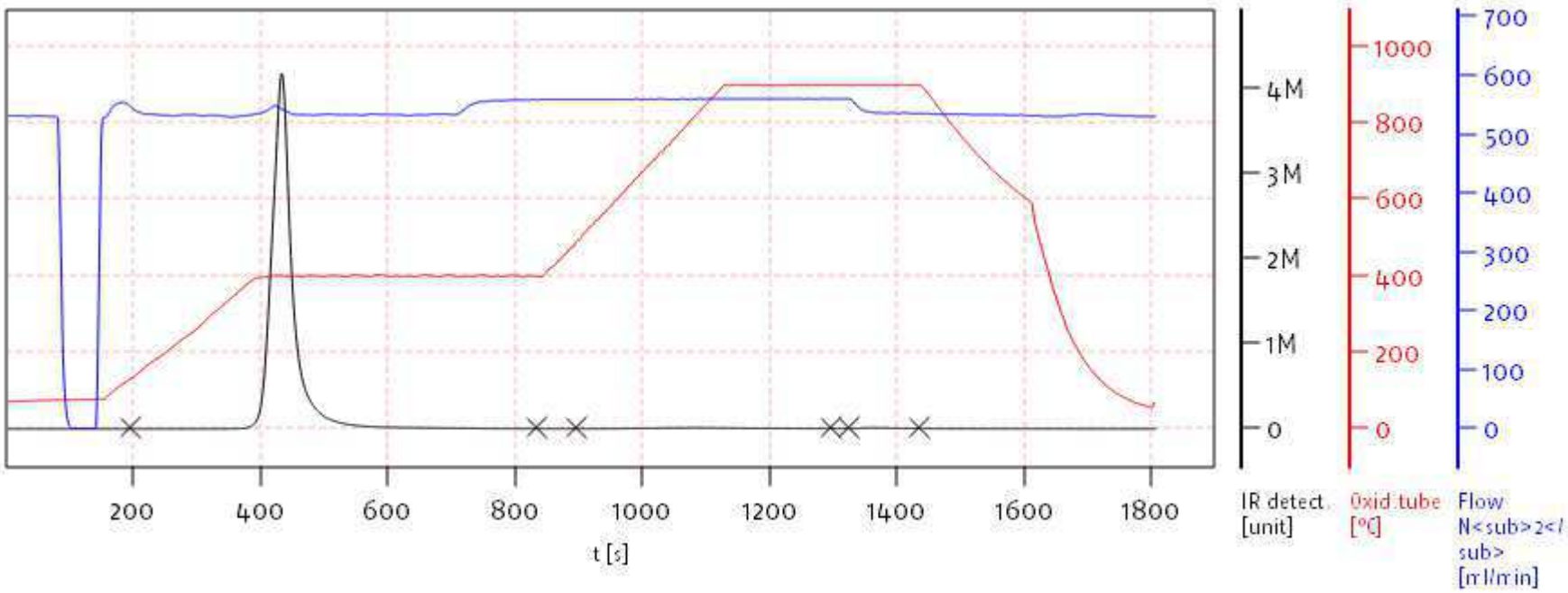
Date: Tue Jan 3 07:07:46 2023

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 | SKL0336-CCV1 | 19.70 | | CARBON | 12/28/2022 10:02 PM | bl | 44.126 | 5 874 829 | 44.681 | 0.035 | 30 950 | 97 177 | 44.092 | 0.555 | 0.9594 | 1.0000 |




Name:

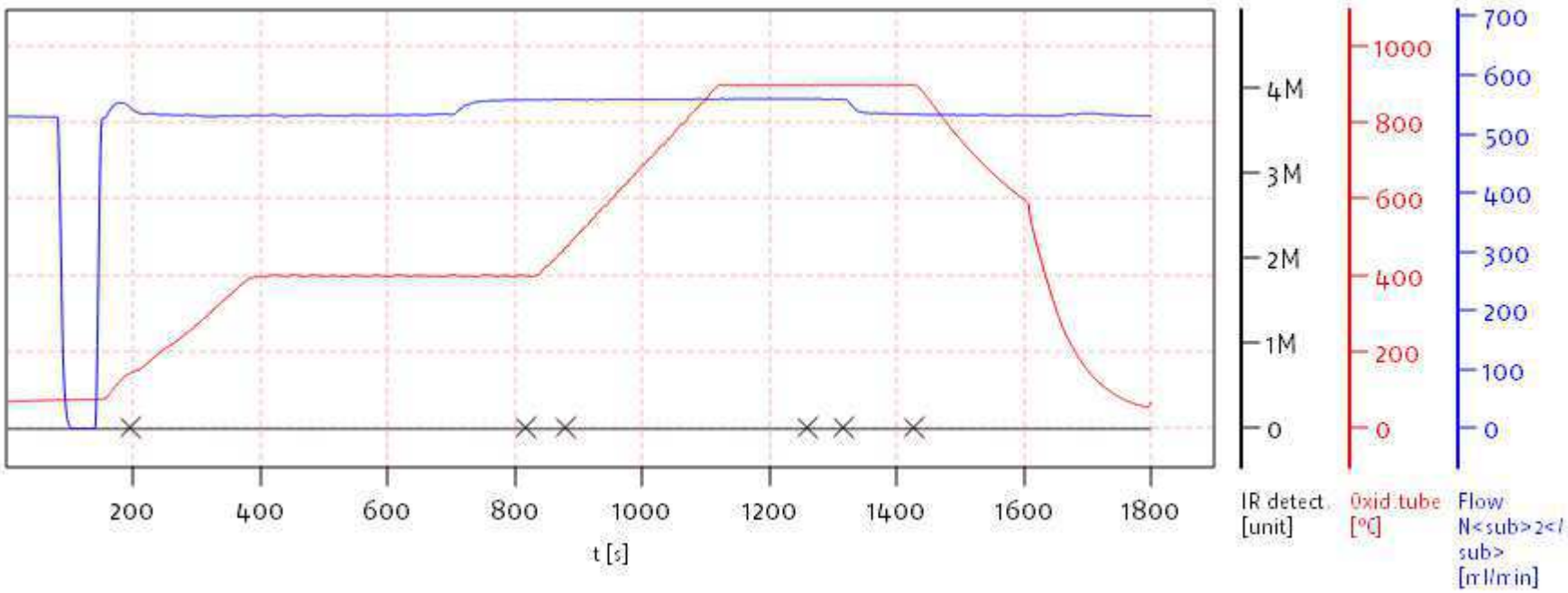
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 17 | SKL0336-CCB1 | 512.00 | | CARBON | 12/28/2022 10:33 PM | bl,C3u,C2u | 0.000 | 4 468 | 0.000 | 0.000 | 710 | 713 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

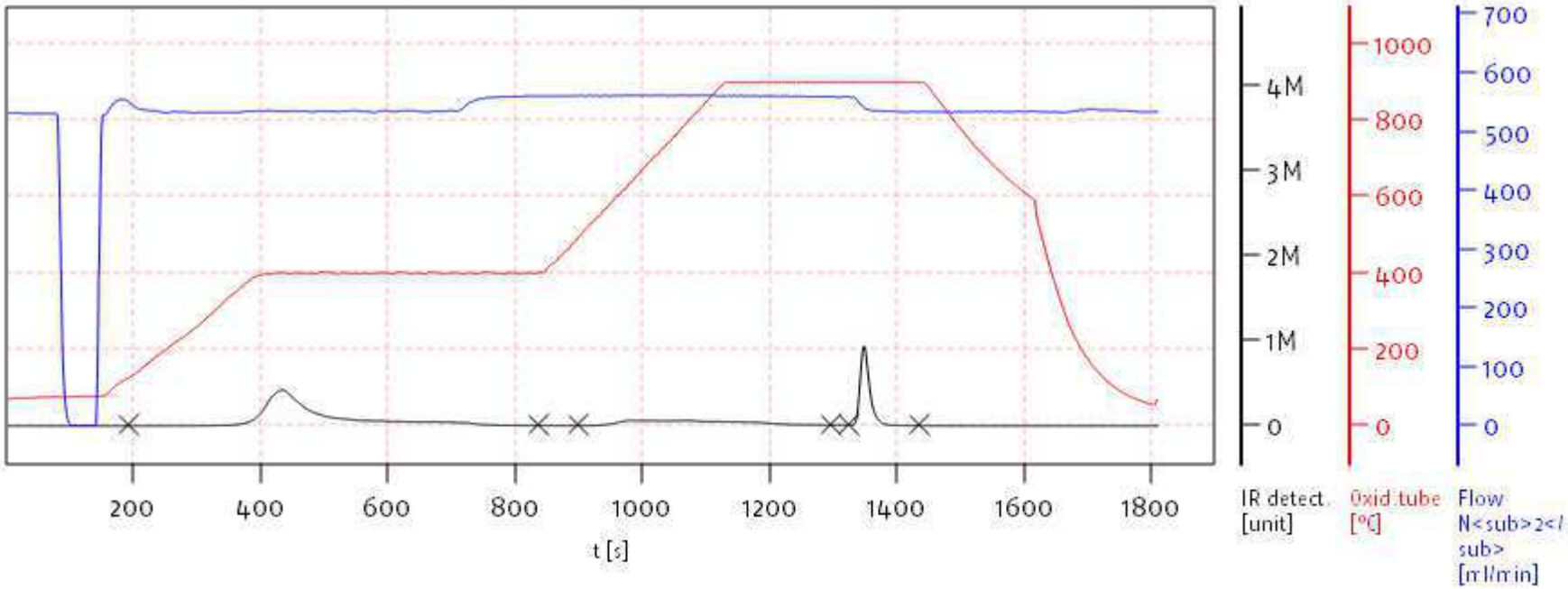
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 18 | 22L0307-61 | 531.80 | | CARBON | 12/28/2022 11:03 PM | bl | 0.626 | 1 642 239 | 0.780 | 0.174 | 625 649 | 555 991 | 0.451 | 0.154 | 0.9594 | 1.0000 |




Name:

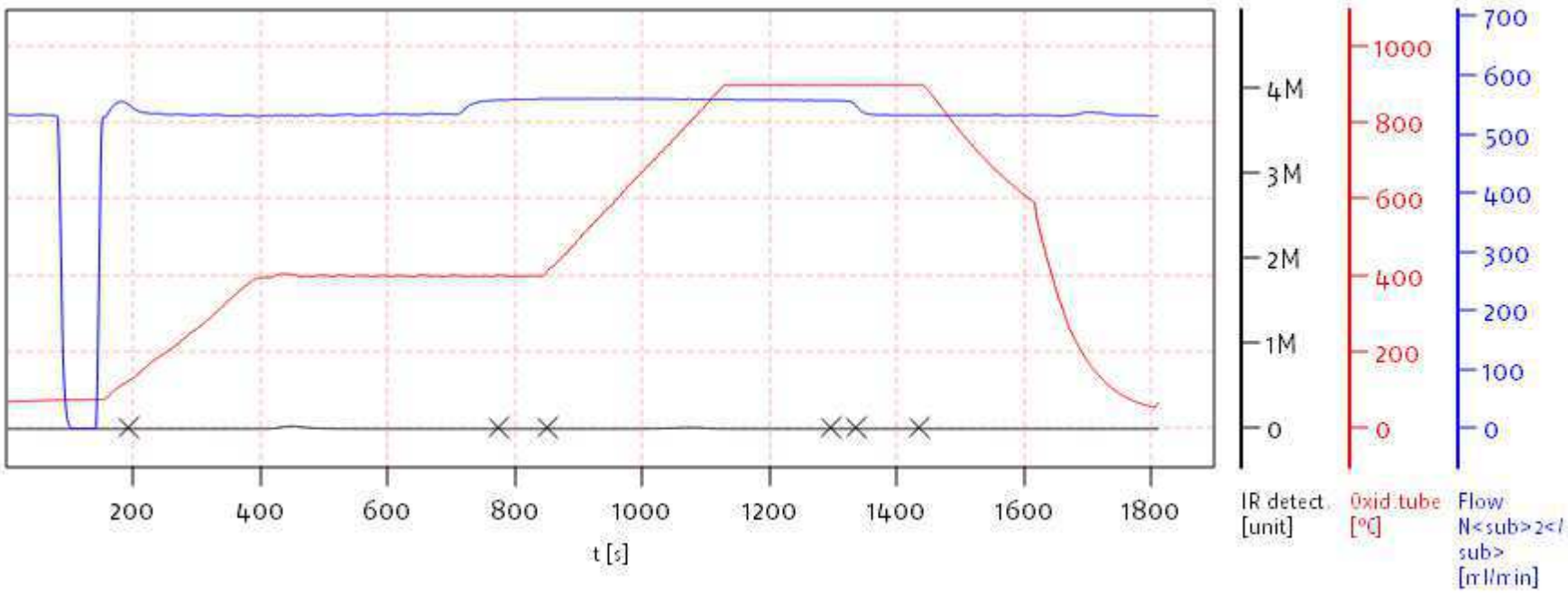
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 19 | BKL0587-MRL1 | 510.20 | | CARBON | 12/28/2022 11:34 PM | bl,C2u | 0.010 | 60 063 | 0.013 | 0.000 | 430 | 35 567 | 0.010 | 0.003 | 0.9594 | 1.0000 |




Name:

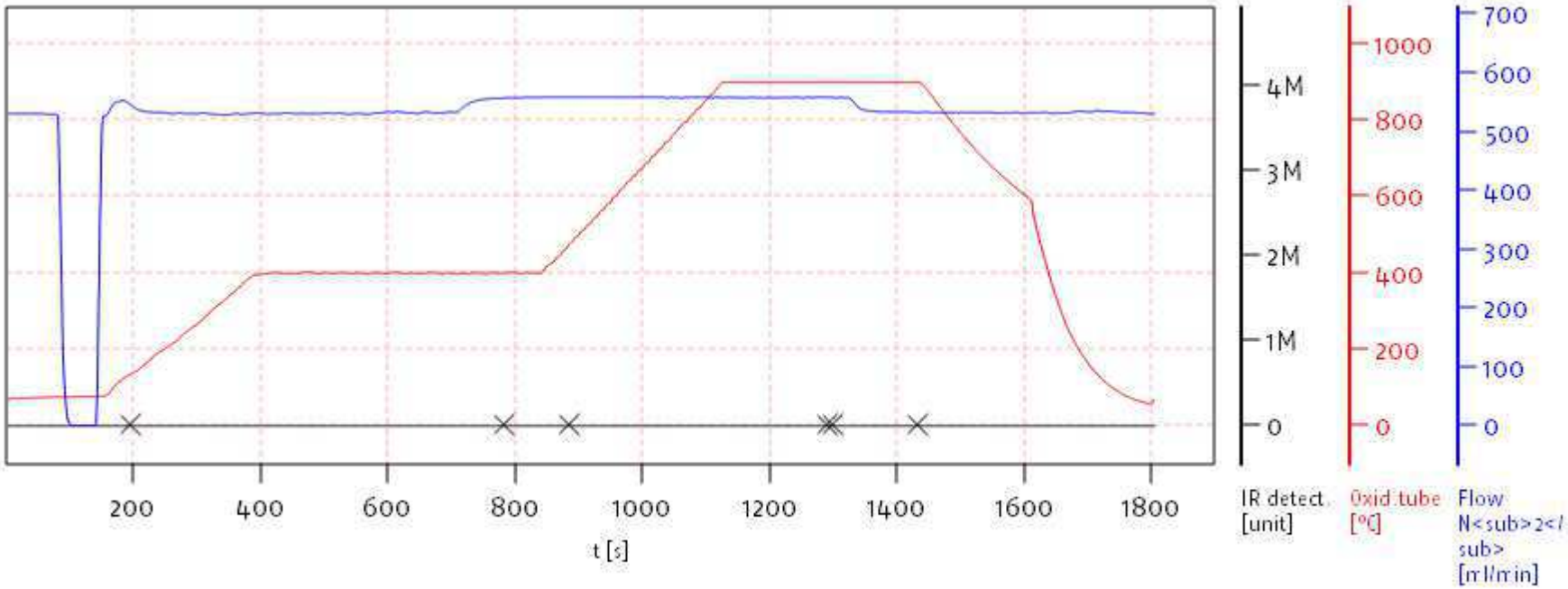
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 20 | BKL0587-BLK1 | 512.80 | | CARBON | 12/29/2022 12:04 AM | bl,C3u,C2u | 0.000 | 5 080 | 0.000 | 0.000 | 641 | 2 237 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

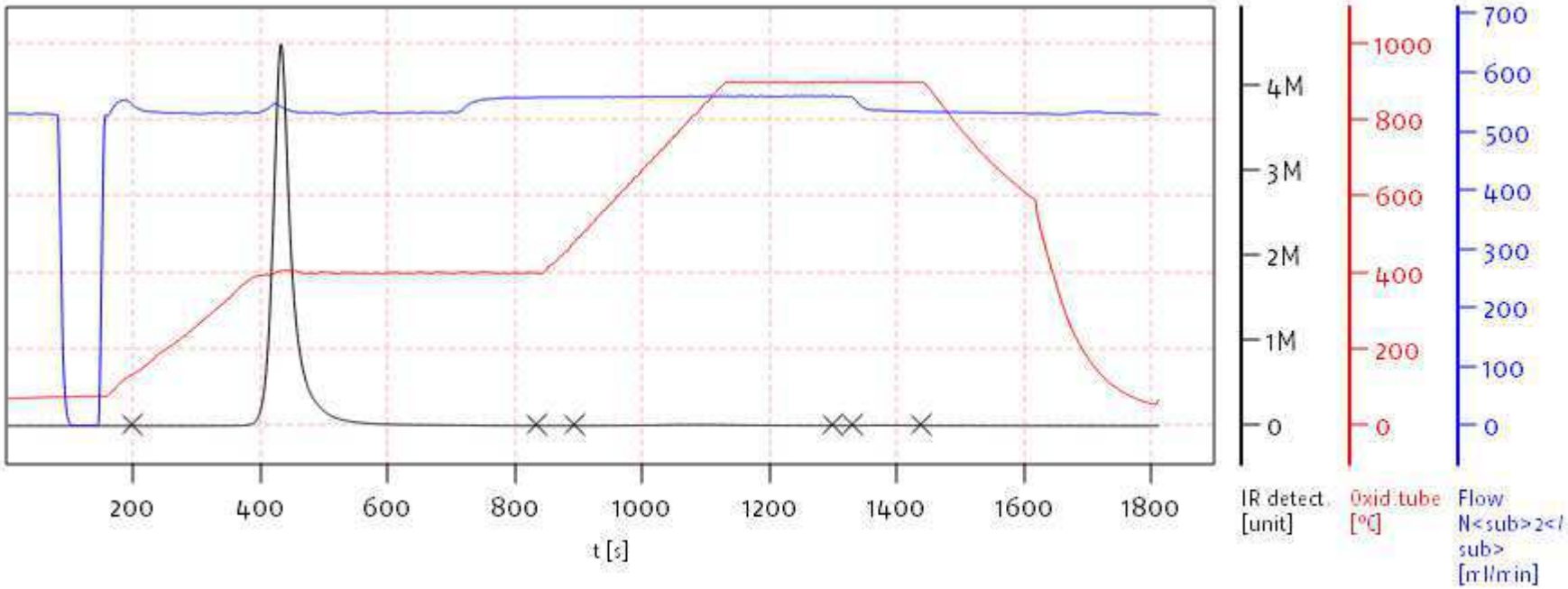
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 21 | BKL0587-BS1 | 19.90 | | CARBON | 12/29/2022 12:35 AM | bl | 44.656 | 6 009 876 | 45.212 | 0.000 | 20 894 | 98 026 | 44.656 | 0.556 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

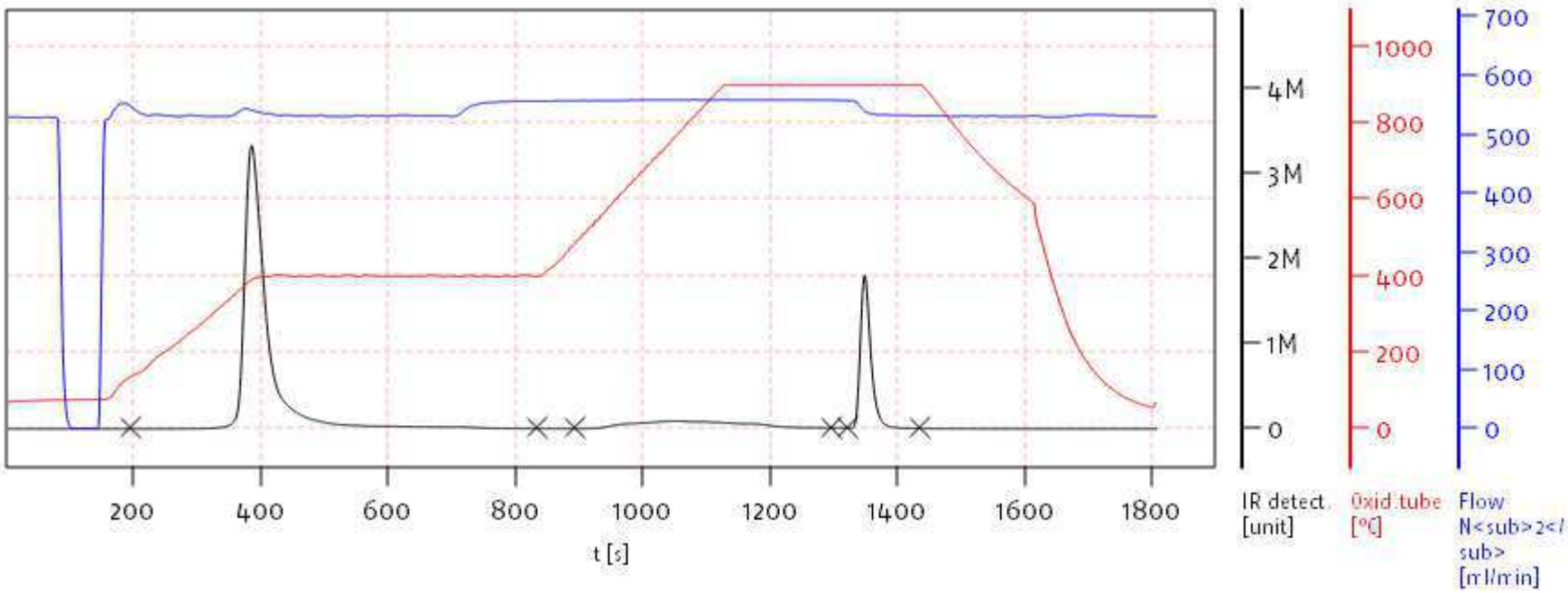
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 22 | BKL0587-SRM1 | 312.00 | | CARBON | 12/29/2022 1:06 AM | bl | 3.016 | 5 024 035 | 3.374 | 0.637 | 1 309 591 | 748 752 | 2.379 | 0.358 | 0.9594 | 1.0000 |




Name:

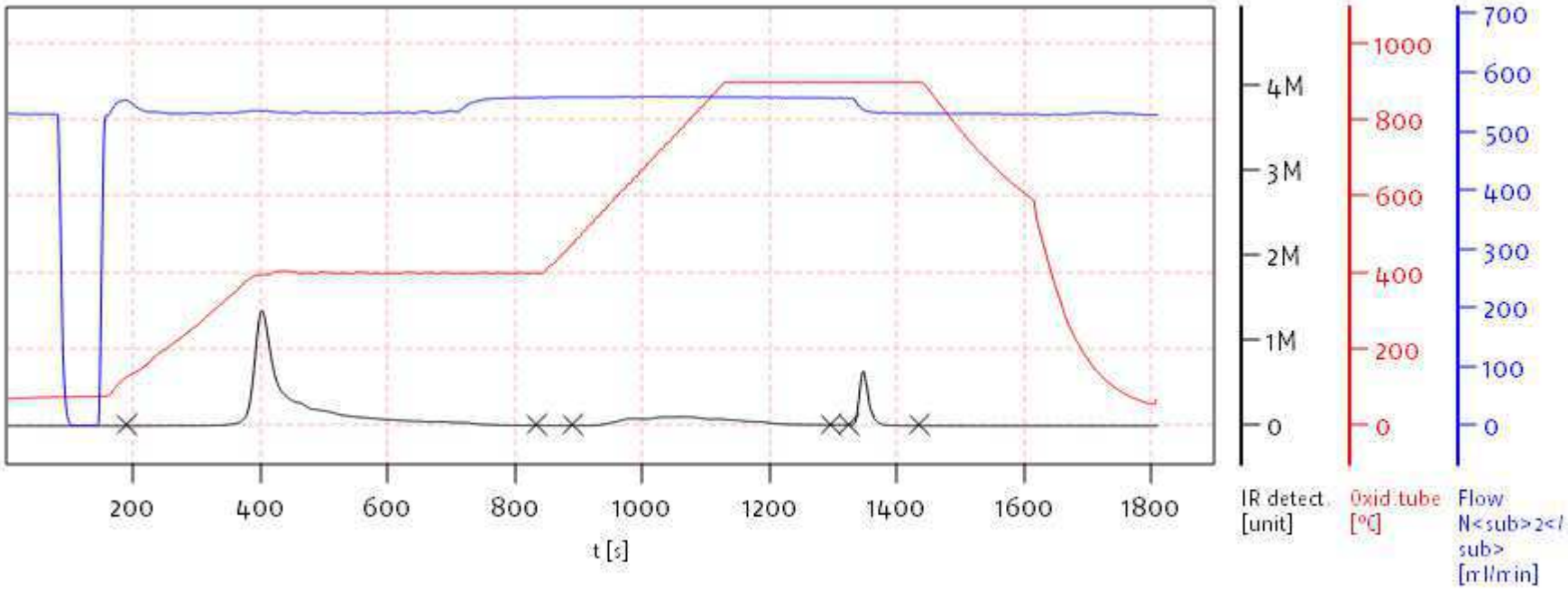
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 23 | 22L0307-62 | 539.60 | | CARBON | 12/29/2022 1:36 AM | bl | 0.945 | 3 045 637 | 1.173 | 0.114 | 424 214 | 821 013 | 0.831 | 0.228 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

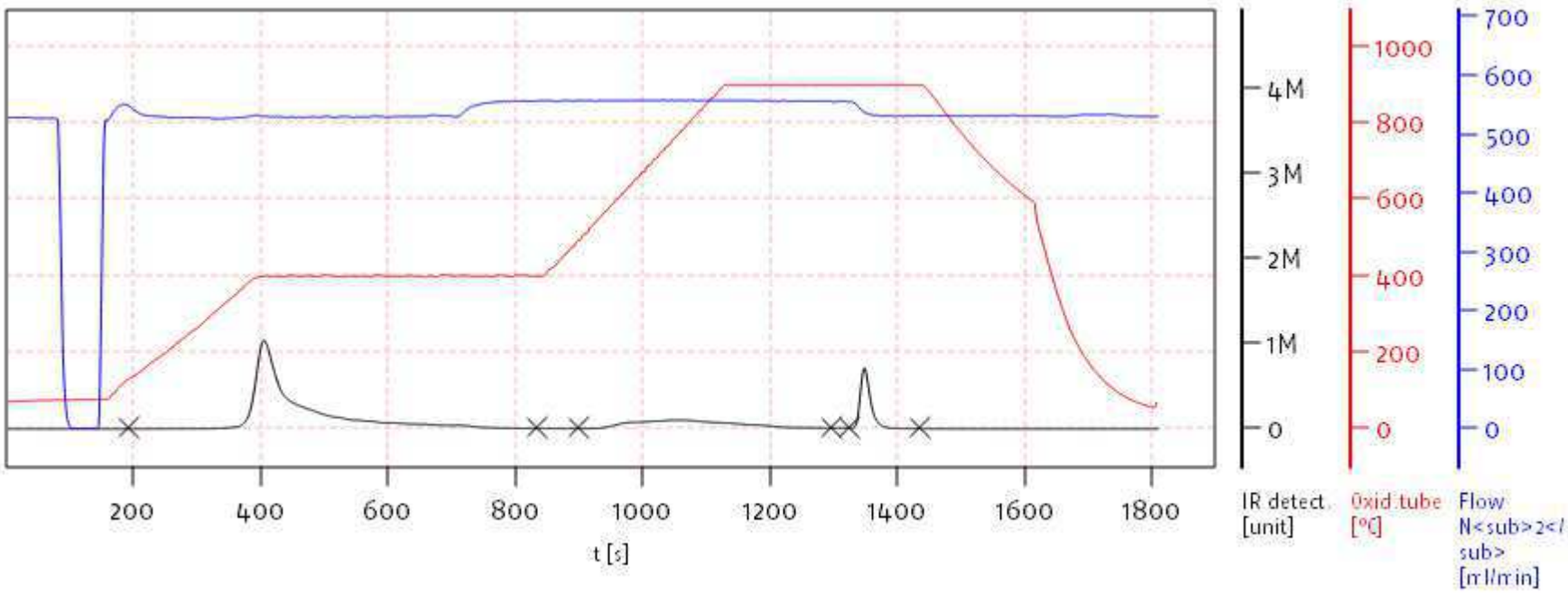
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 24 | BKL0587-DUP1 | 504.10 | | CARBON | 12/29/2022 2:07 AM | bl | 0.955 | 2 765 977 | 1.185 | 0.148 | 508 583 | 774 381 | 0.807 | 0.230 | 0.9594 | 1.0000 |




Name:

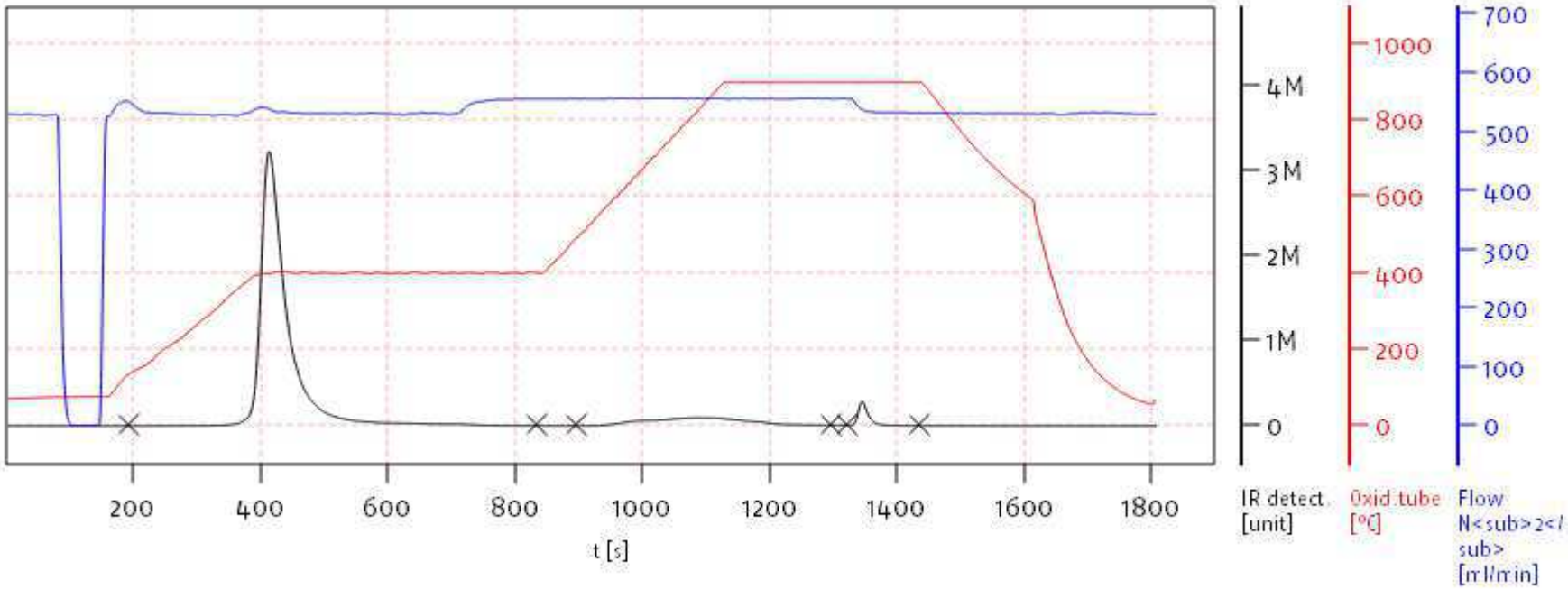
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 25 | BKL0587-MS1 | 523.60 | 0.0083 | CARBON | 12/29/2022 2:37 AM | bl | 1.680 | 5 761 308 | 1.879 | 0.053 | 206 236 | 698 891 | 1.627 | 0.199 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

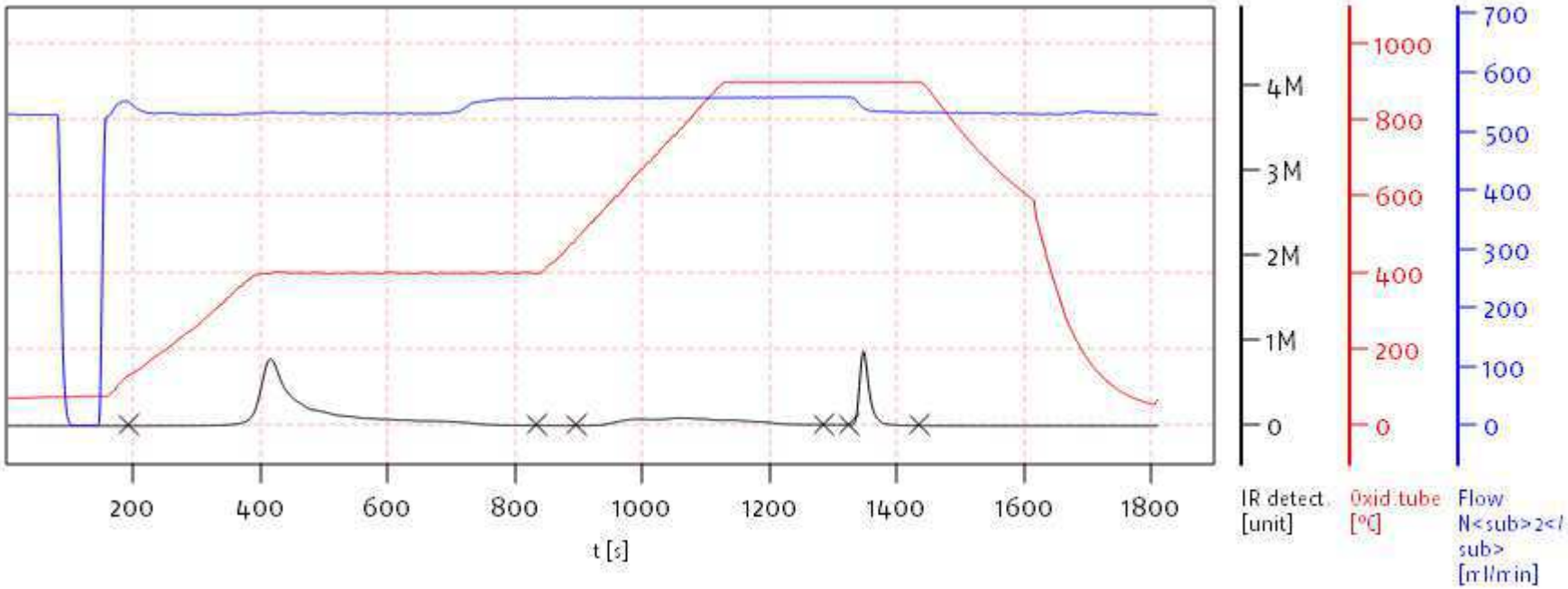
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 26 | 22L0307-63 | 514.30 | | CARBON | 12/29/2022 3:08 AM | bl | 0.861 | 2 410 205 | 1.074 | 0.173 | 600 570 | 733 979 | 0.688 | 0.213 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

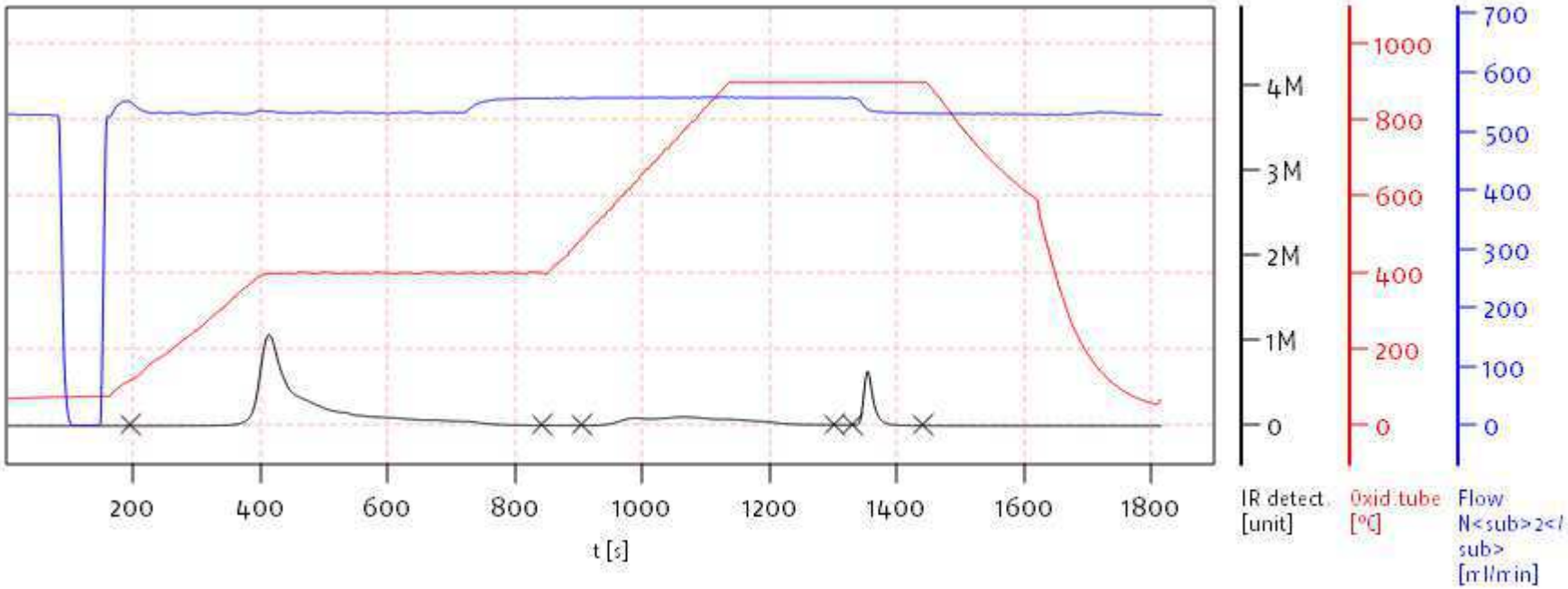
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 27 | 22L0307-64 | 556.30 | | CARBON | 12/29/2022 3:38 AM | bl | 0.948 | 3 143 742 | 1.171 | 0.115 | 441 163 | 829 711 | 0.832 | 0.224 | 0.9594 | 1.0000 |




Name:

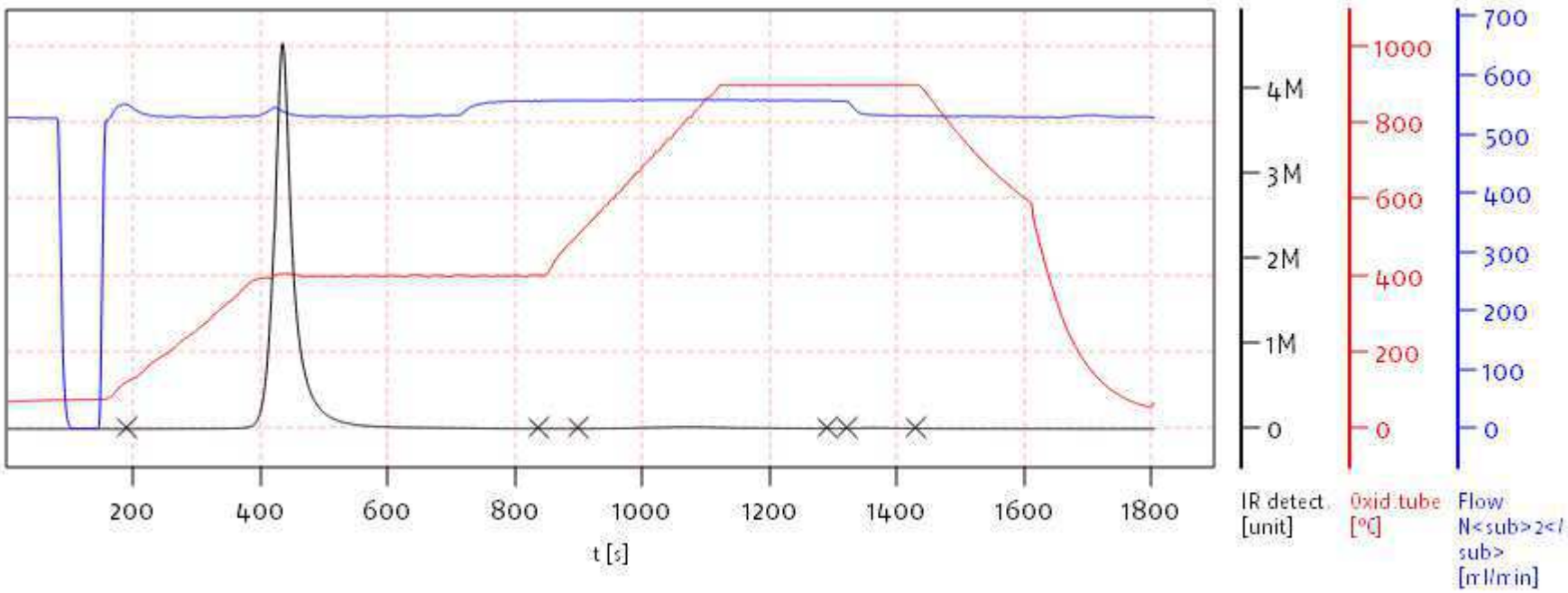
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | 28 | SKL0336-CCV2 | 20.90 | | CARBON | 12/29/2022 4:09 AM | bl | 44.122 | 6 230 850 | 45.047 | 0.032 | 30 812 | 151 468 | 44.090 | 0.925 | 0.9594 | 1.0000 |




Name:

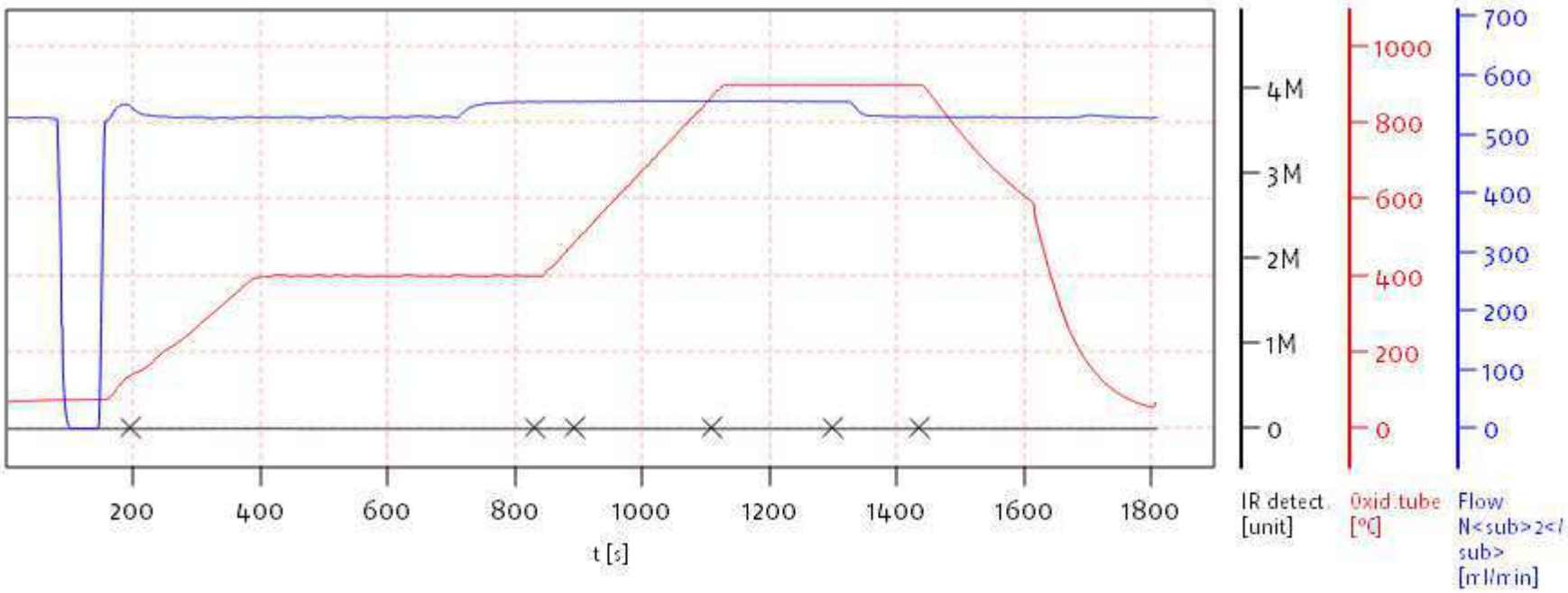
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 29 | SKL0336-CCB2 | 506.50 | | CARBON | 12/29/2022 4:39 AM | bl,C3u,C2u | 0.000 | 12 516 | 0.000 | 0.000 | 620 | 121 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

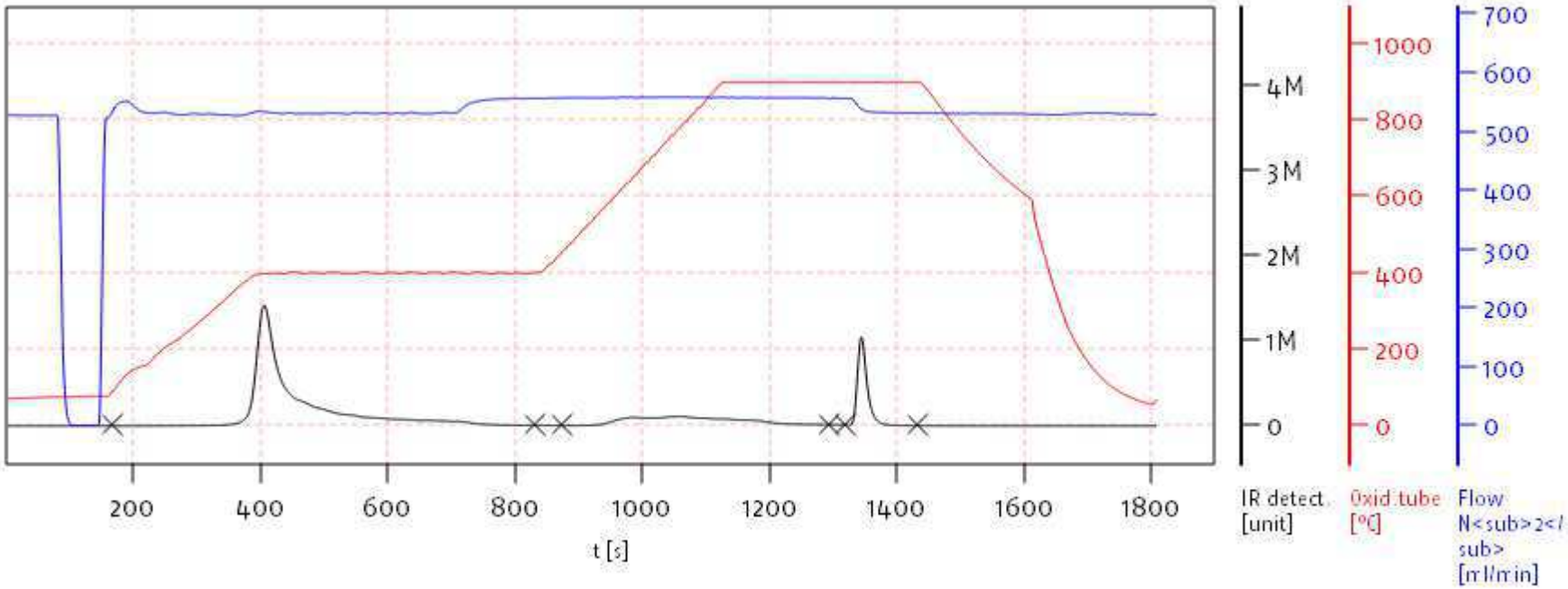
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 30 | 22L0307-65 | 540.60 | | CARBON | 12/29/2022 5:10 AM | bl | 1.104 | 3 338 181 | 1.355 | 0.194 | 704 009 | 903 607 | 0.910 | 0.251 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

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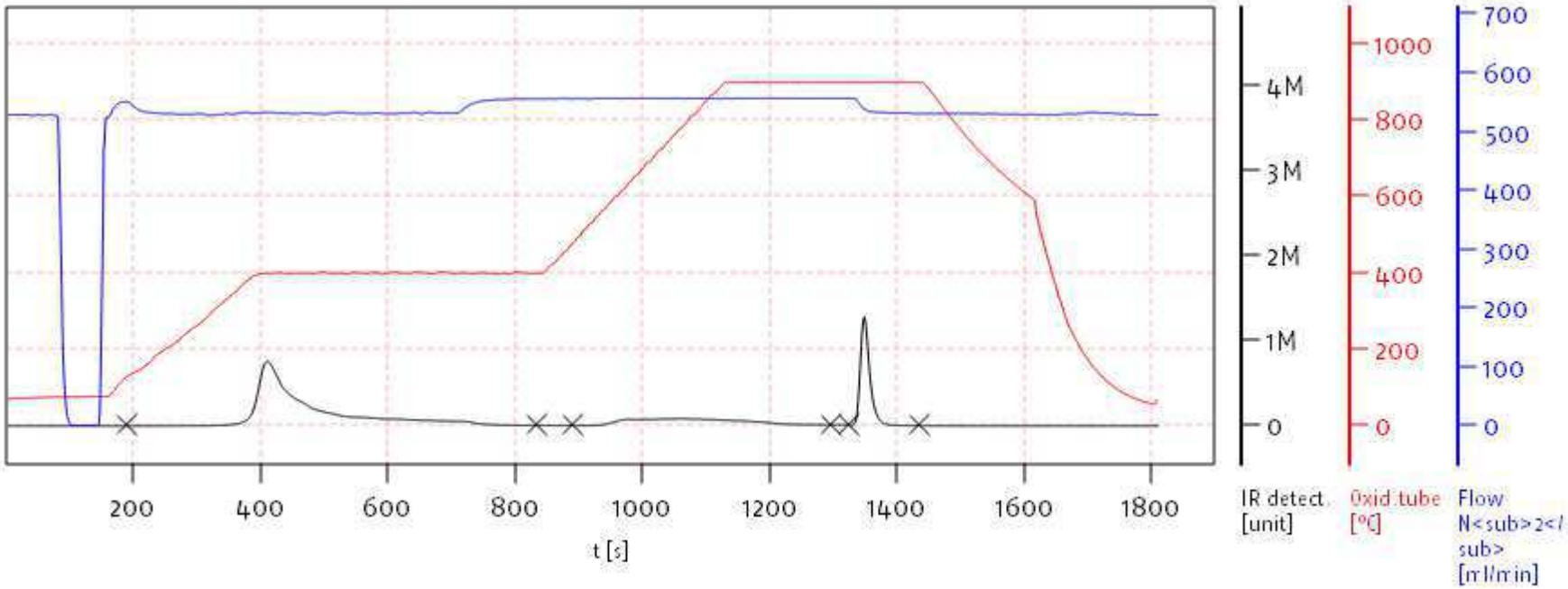
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | 31 | 22L0307-66 | 527.40 | | CARBON | 12/29/2022 5:40 AM | bl | 0.944 | 2 530 940 | 1.153 | 0.239 | 840 943 | 736 911 | 0.705 | 0.209 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

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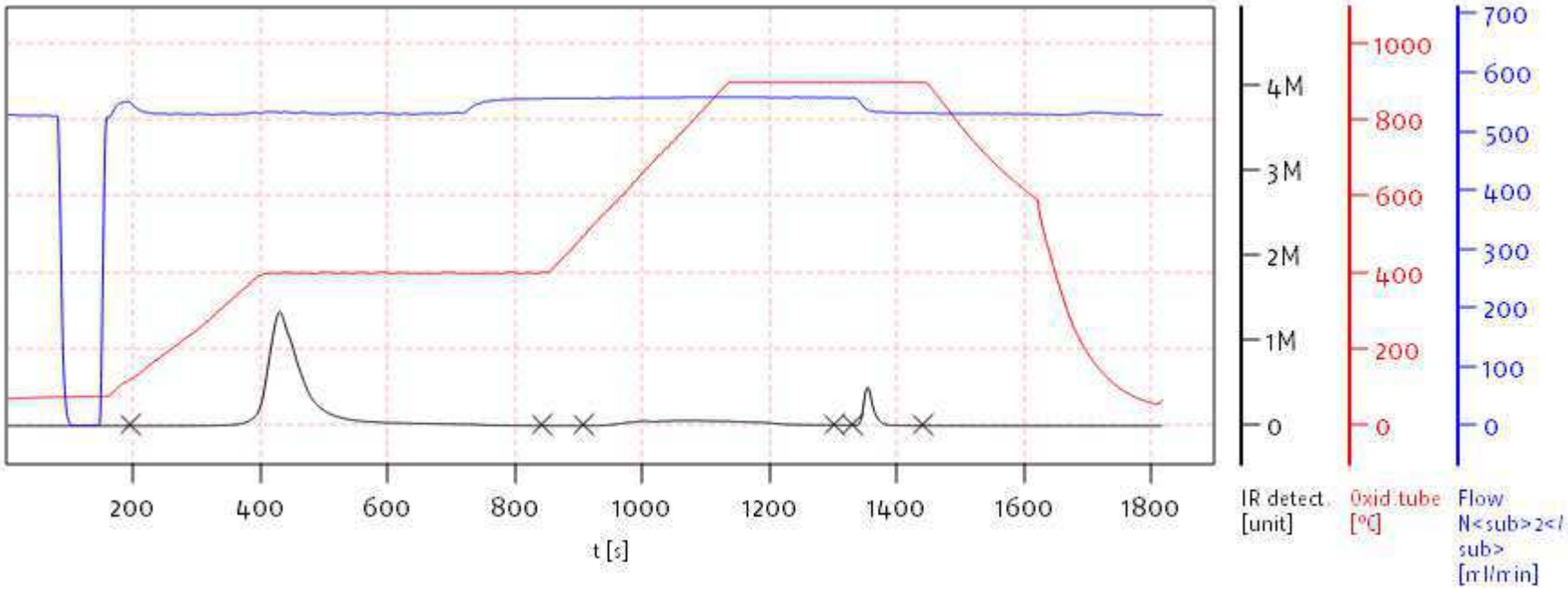
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 32 | 22L0473-01 | 503.10 | | CARBON | 12/29/2022 6:11 AM | bl | 1.033 | 3 234 454 | 1.188 | 0.086 | 305 690 | 531 582 | 0.947 | 0.155 | 0.9594 | 1.0000 |

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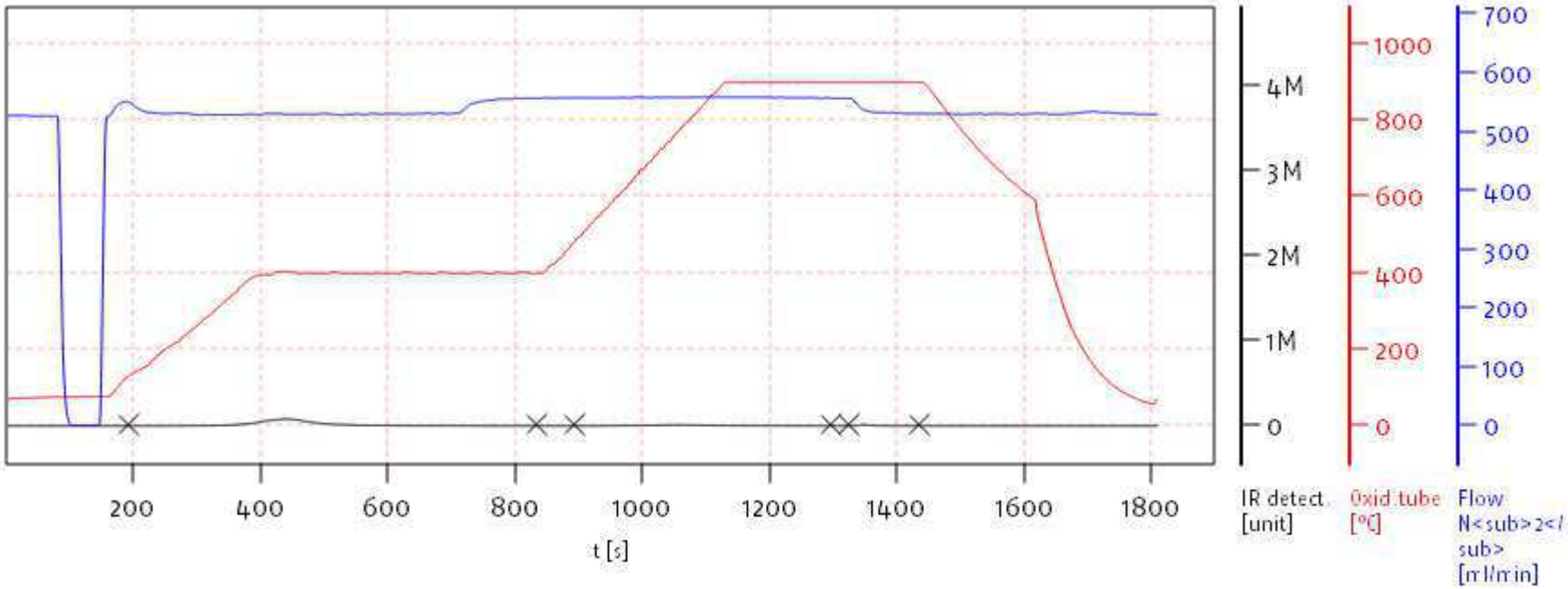
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | 33 | 22L0473-02 | 602.50 | | CARBON | 12/29/2022 6:42 AM | bl | 0.077 | 336 916 | 0.084 | 0.000 | 11 911 | 56 956 | 0.077 | 0.008 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

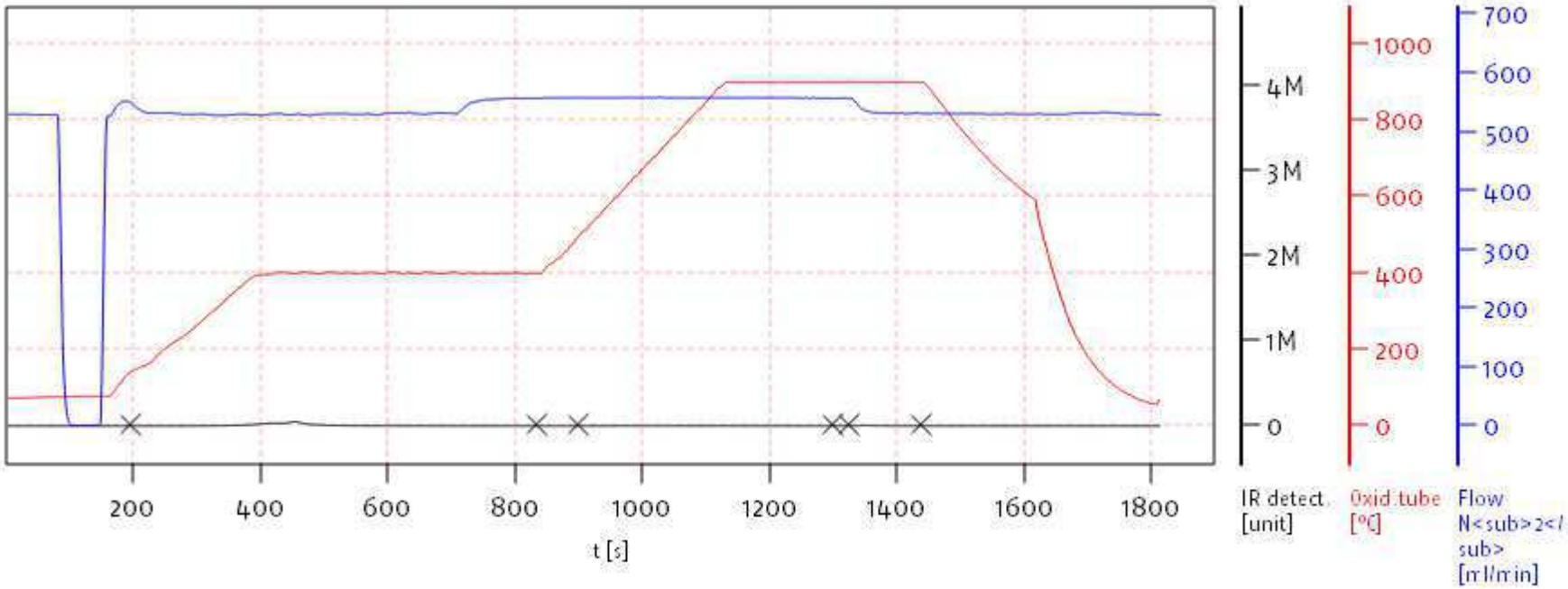
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | 34 | 22L0473-03 | 518.70 | | CARBON | 12/29/2022 7:12 AM | bl | 0.036 | 150 749 | 0.036 | 0.000 | 6 582 | 10 982 | 0.036 | 0.000 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

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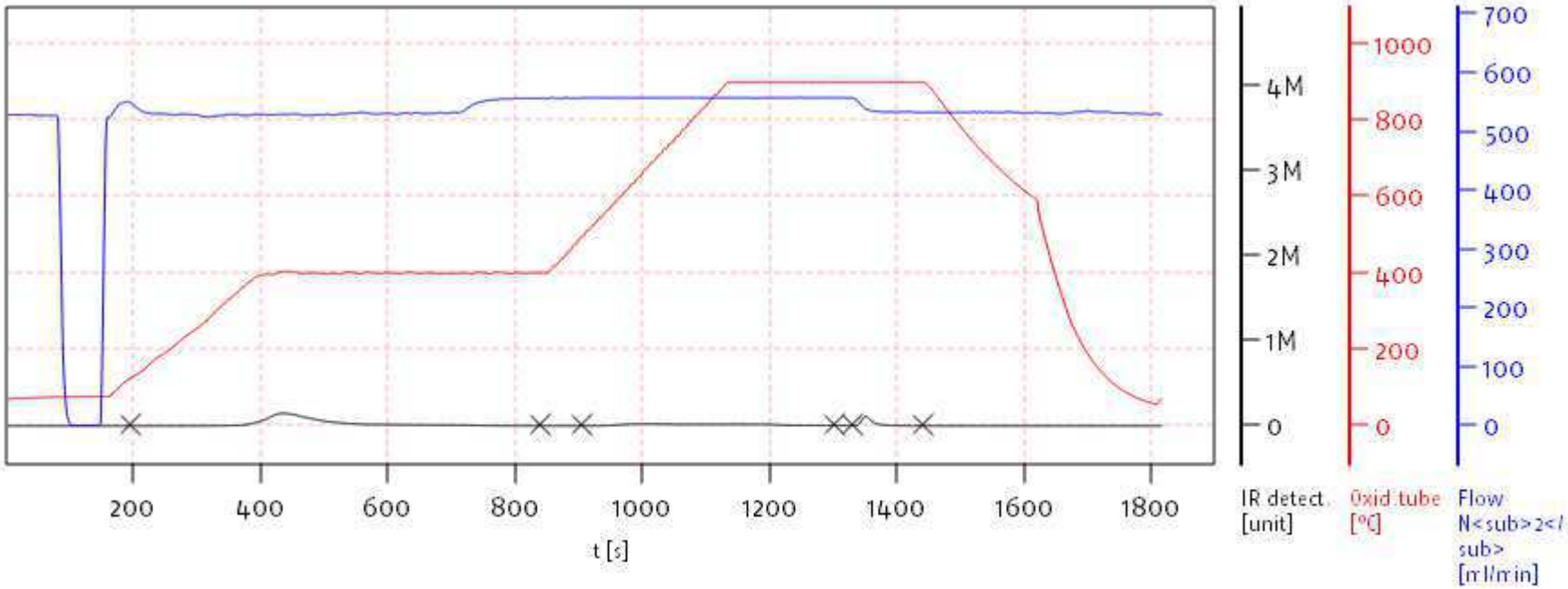
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 35 | 22L0473-04 | 510.20 | | CARBON | 12/29/2022 7:43 AM | bl | 0.188 | 608 799 | 0.243 | 0.019 | 88 153 | 205 537 | 0.170 | 0.054 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

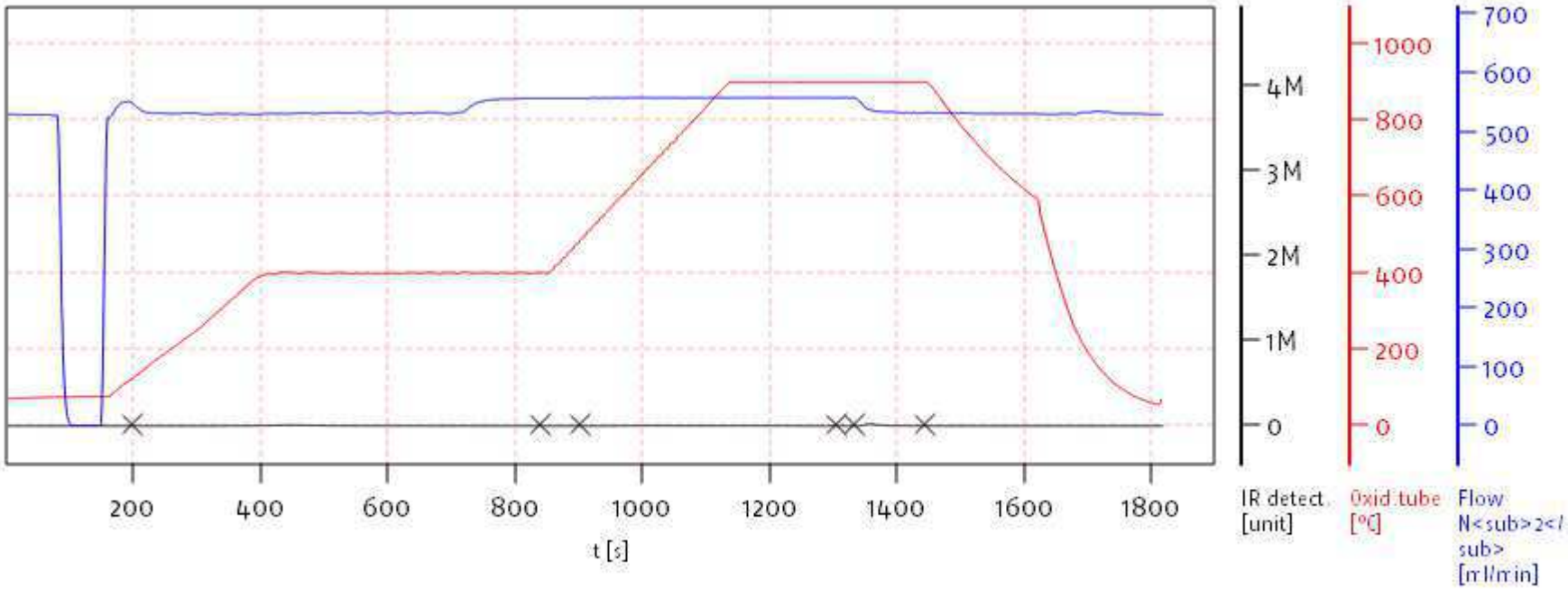
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 36 | 22L0473-05 | 580.50 | | CARBON | 12/29/2022 8:14 AM | bl | 0.005 | 45 087 | 0.006 | 0.000 | 22 282 | 29 927 | 0.005 | 0.001 | 0.9594 | 1.0000 |




Name:

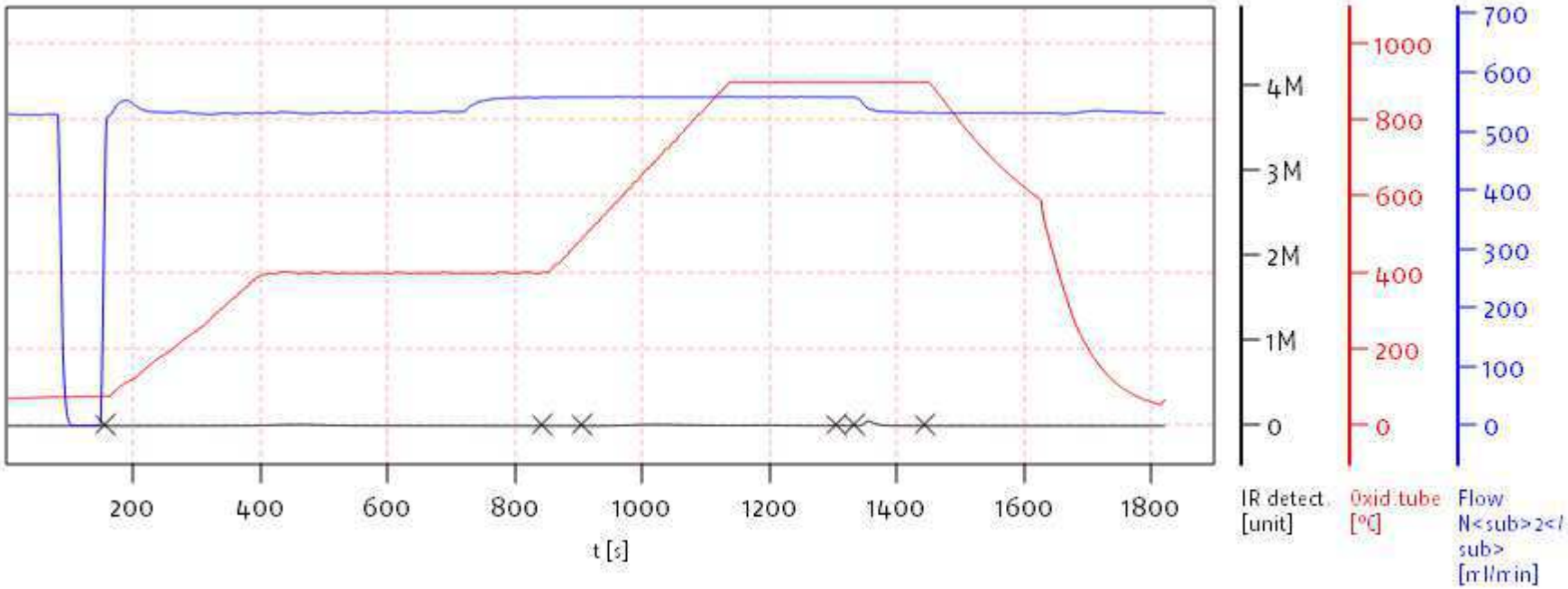
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | 37 | 22L0473-06 | 510.20 | | CARBON | 12/29/2022 8:44 AM | bl | 0.021 | 81 154 | 0.043 | 0.006 | 44 751 | 97 425 | 0.016 | 0.022 | 0.9594 | 1.0000 |




Name:

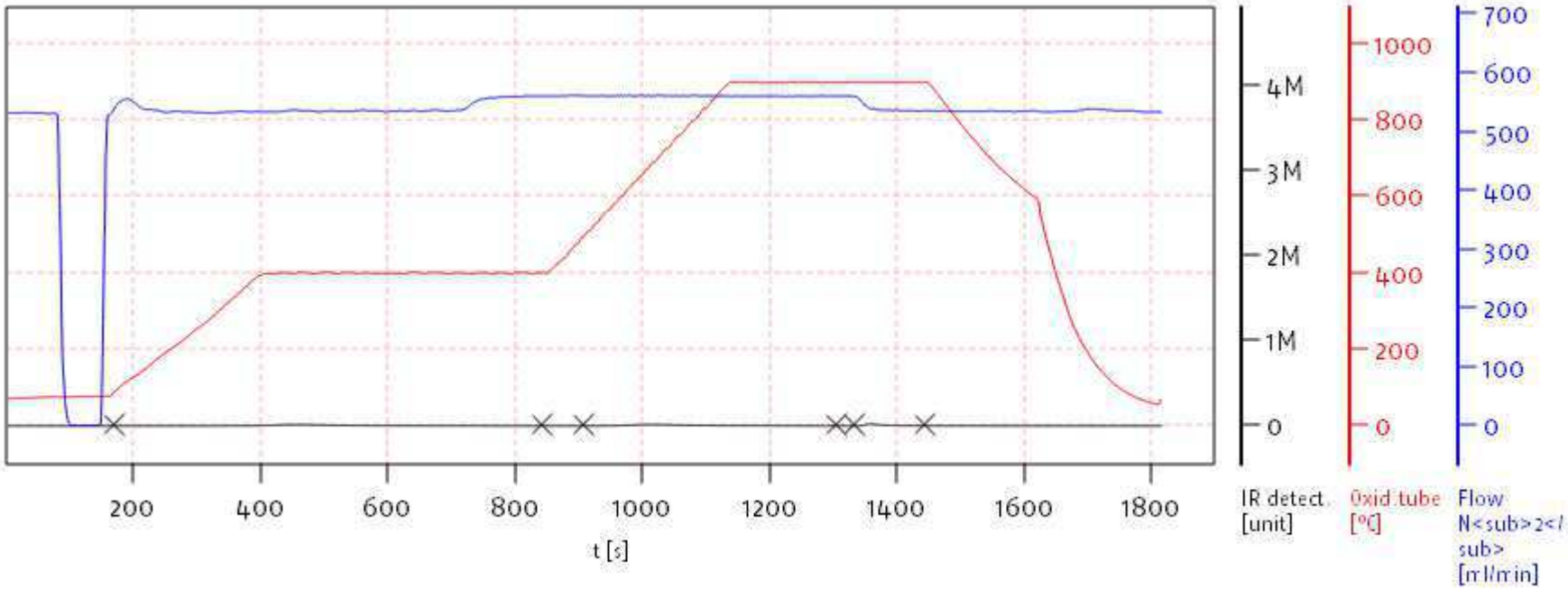
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 38 | 22L0473-07 | 539.20 | | CARBON | 12/29/2022 9:15 AM | bl | 0.015 | 79 645 | 0.027 | 0.000 | 27 321 | 70 453 | 0.015 | 0.013 | 0.9594 | 1.0000 |




Name:

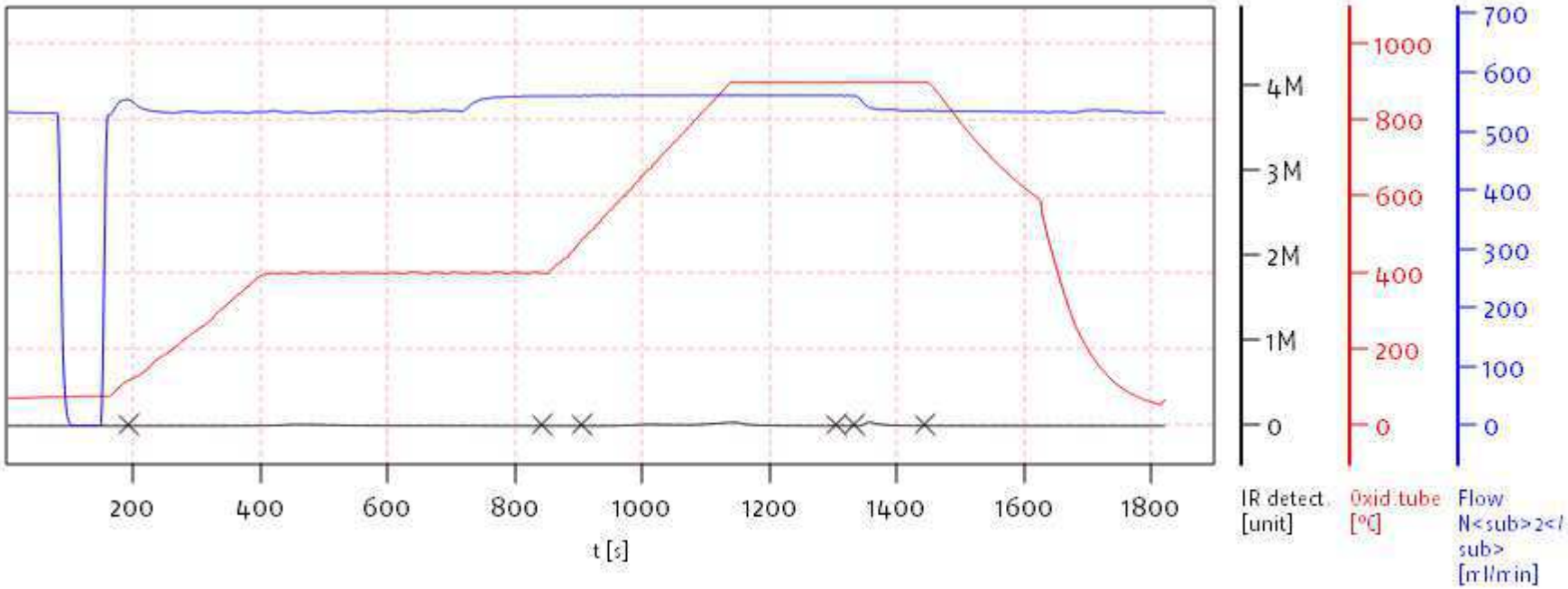
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 39 | 22L0473-08 | 656.50 | | CARBON | 12/29/2022 9:46 AM | bl | 0.018 | 82 729 | 0.049 | 0.005 | 47 366 | 160 533 | 0.013 | 0.032 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

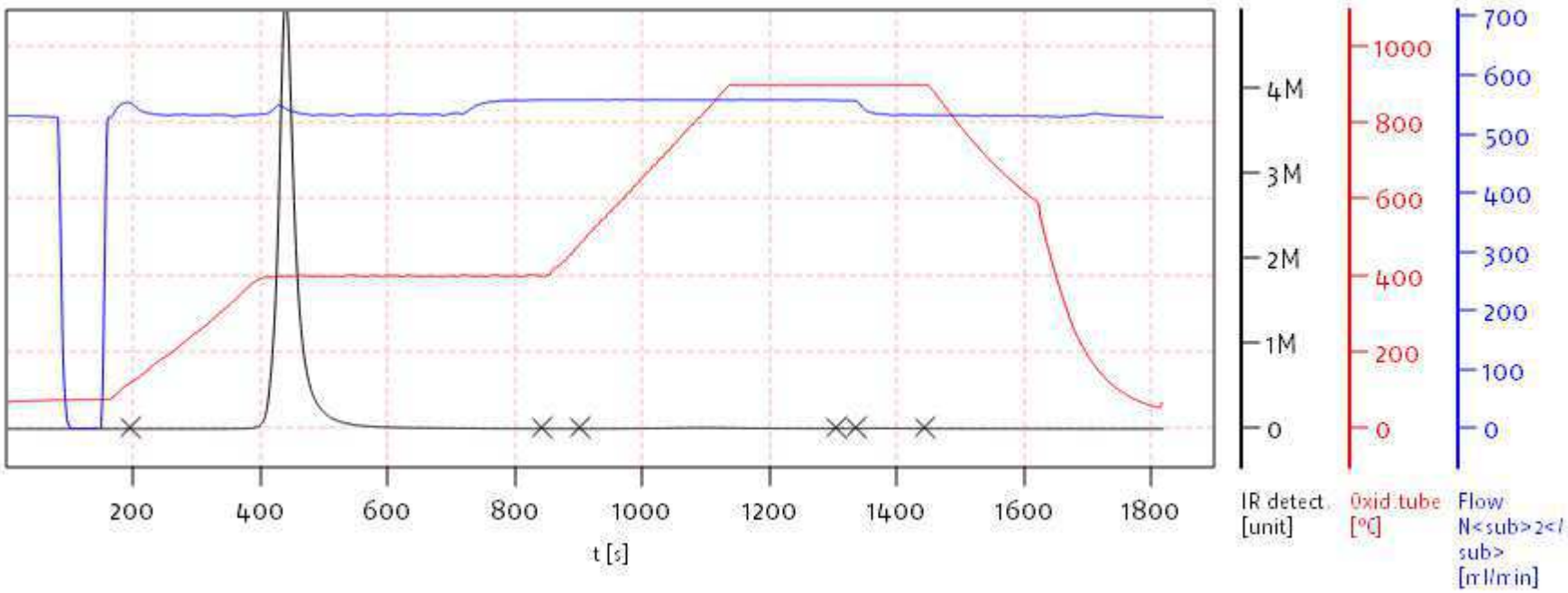
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | 40 | SKL0336-CCV3 | 20.70 | | CARBON | 12/29/2022 10:16 AM | bl | 44.803 | 6 270 918 | 45.289 | 0.000 | 19 363 | 91 414 | 44.803 | 0.485 | 0.9594 | 1.0000 |




Name:

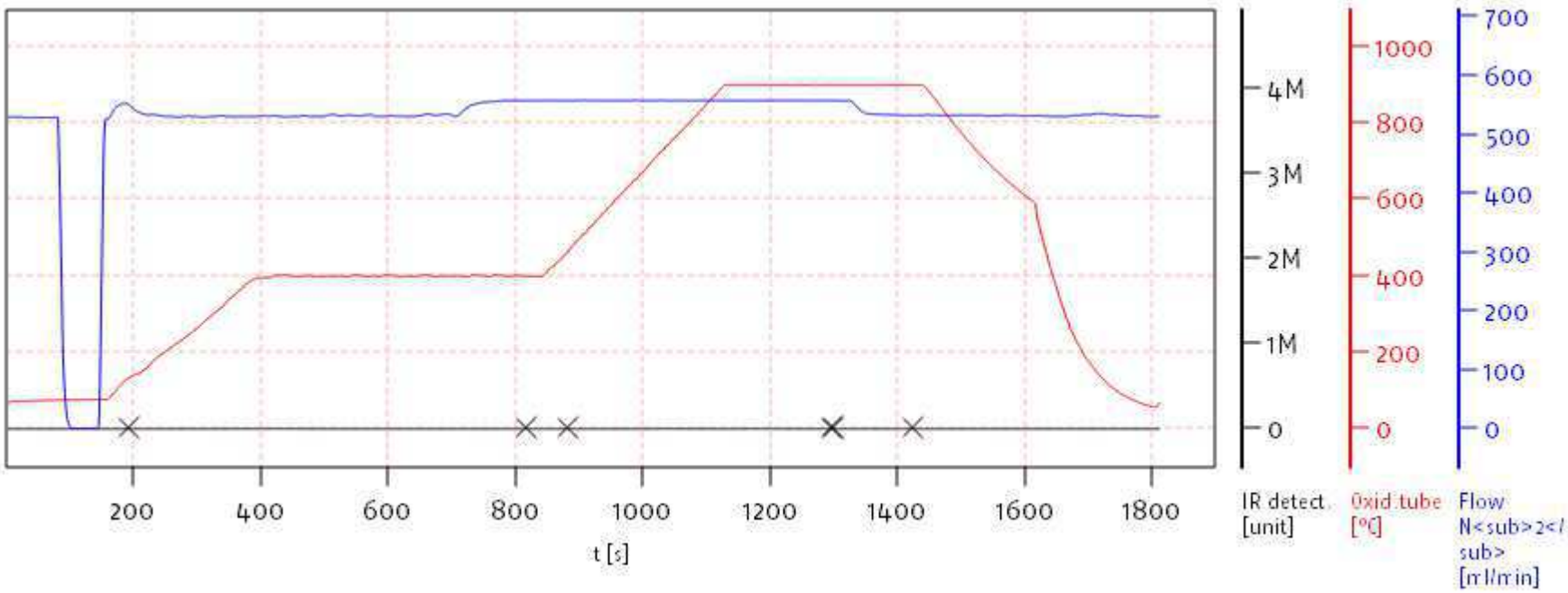
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 41 | SKL0336-CCB3 | 510.40 | | CARBON | 12/29/2022 10:47 AM | bl,C2u | 0.000 | 8 103 | 0.000 | 0.000 | 1 725 | 9 839 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

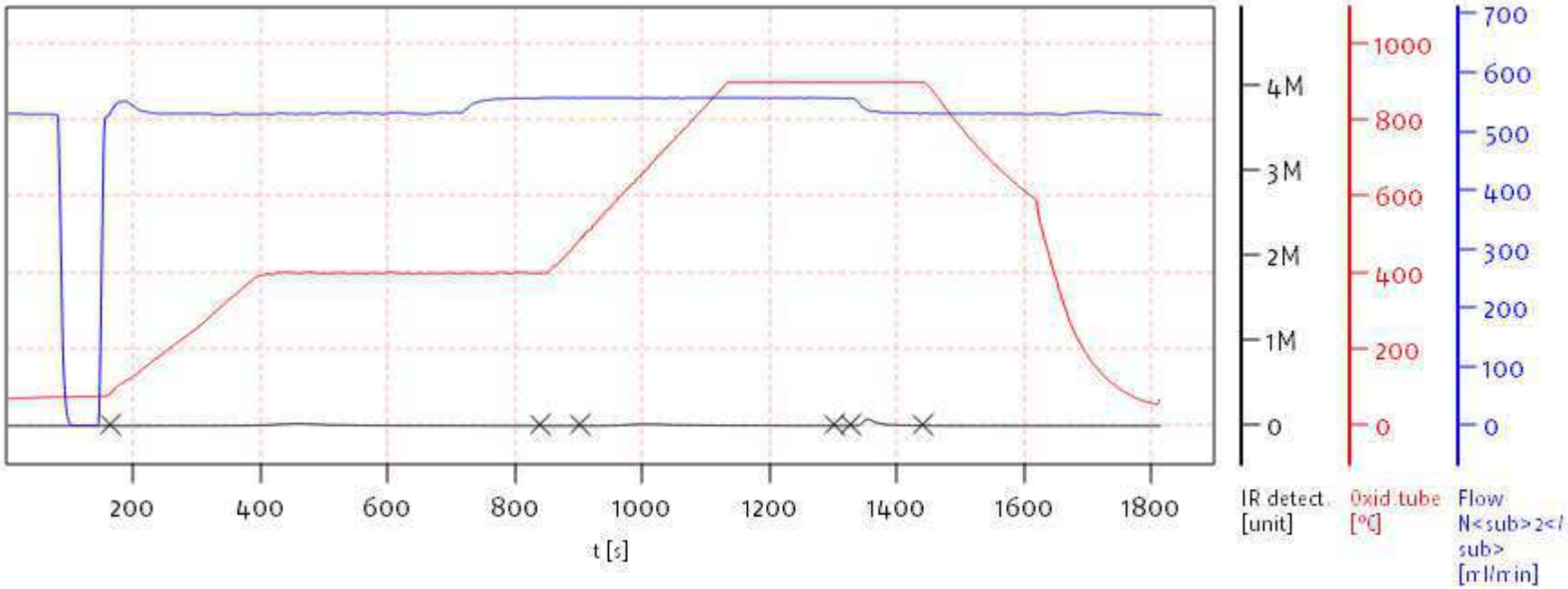
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | 42 | 22L0473-09 | 660.10 | | CARBON | 12/29/2022 11:18 AM | bl | 0.037 | 129 314 | 0.053 | 0.014 | 84 922 | 96 508 | 0.023 | 0.016 | 0.9594 | 1.0000 |




Name:

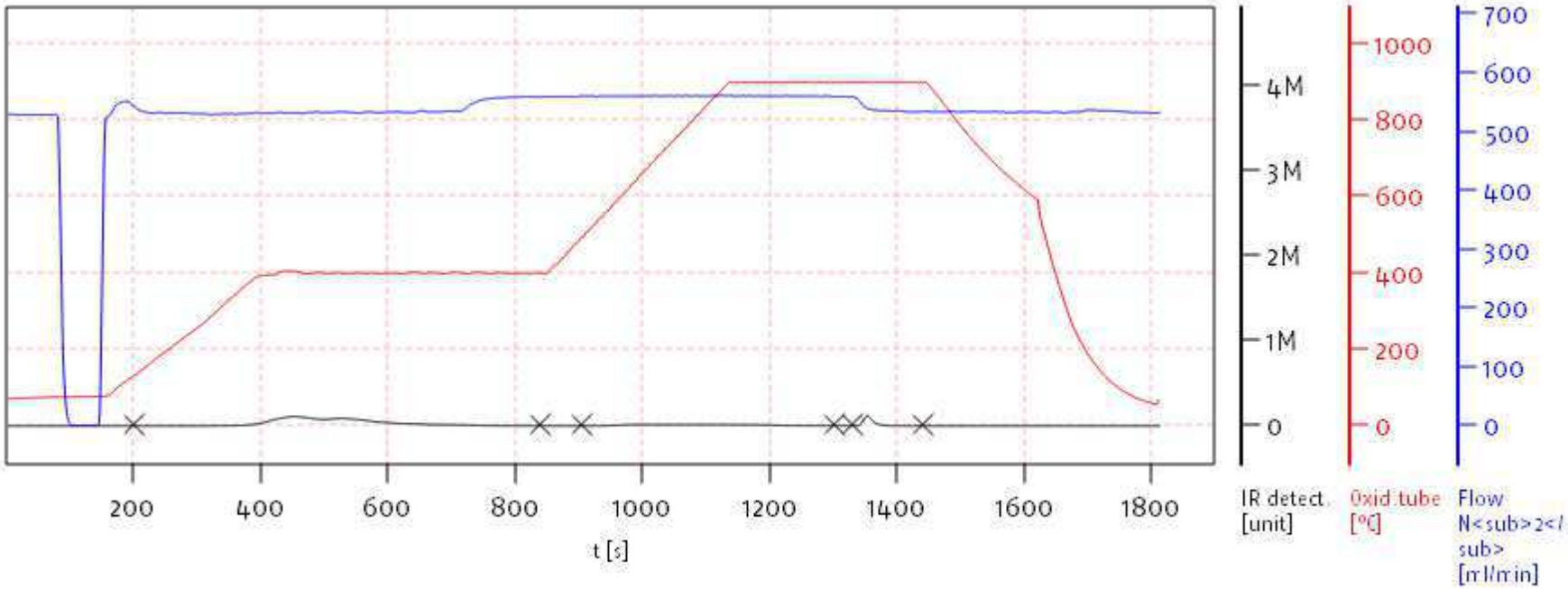
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 43 | 43 | 22L0473-10 | 532.20 | | CARBON | 12/29/2022 11:48 AM | bl | 0.206 | 705 498 | 0.238 | 0.016 | 82 130 | 137 333 | 0.189 | 0.032 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

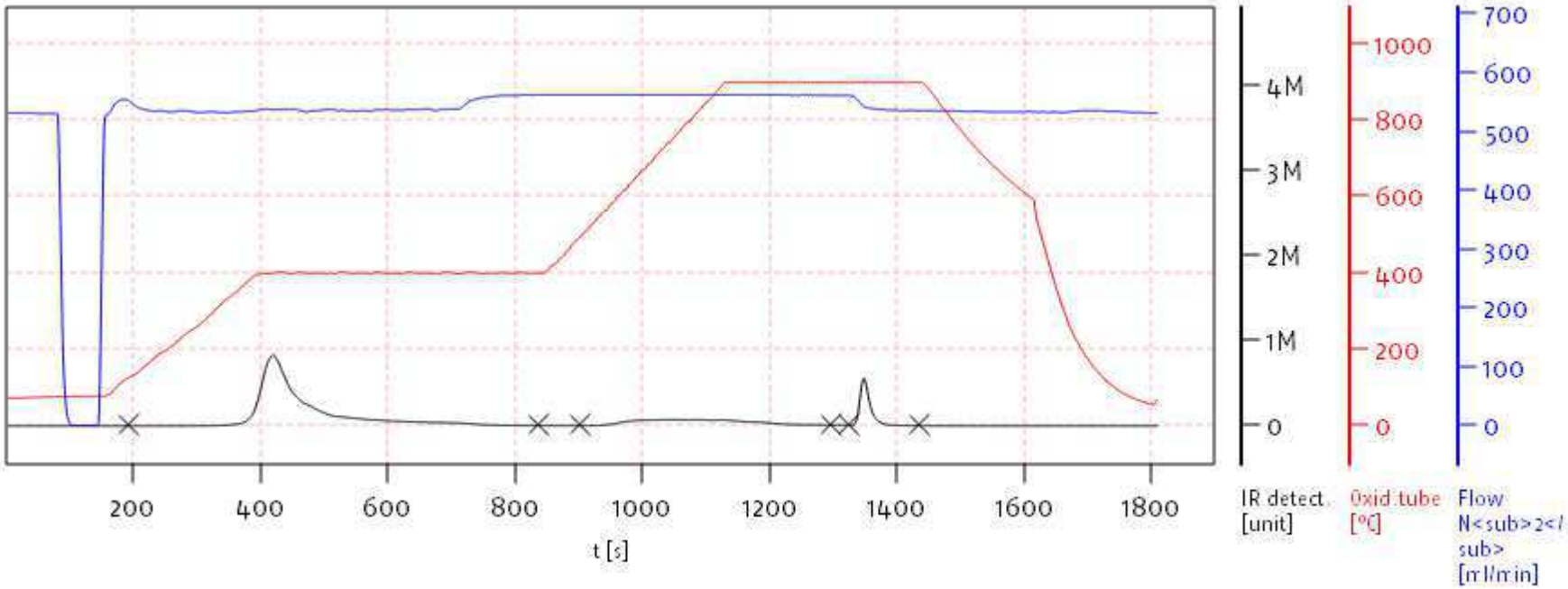
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | 44 | 22L0473-11 | 518.70 | | CARBON | 12/29/2022 12:19 PM | bl | 0.809 | 2 467 152 | 0.990 | 0.110 | 395 819 | 632 832 | 0.699 | 0.181 | 0.9594 | 1.0000 |




Name:

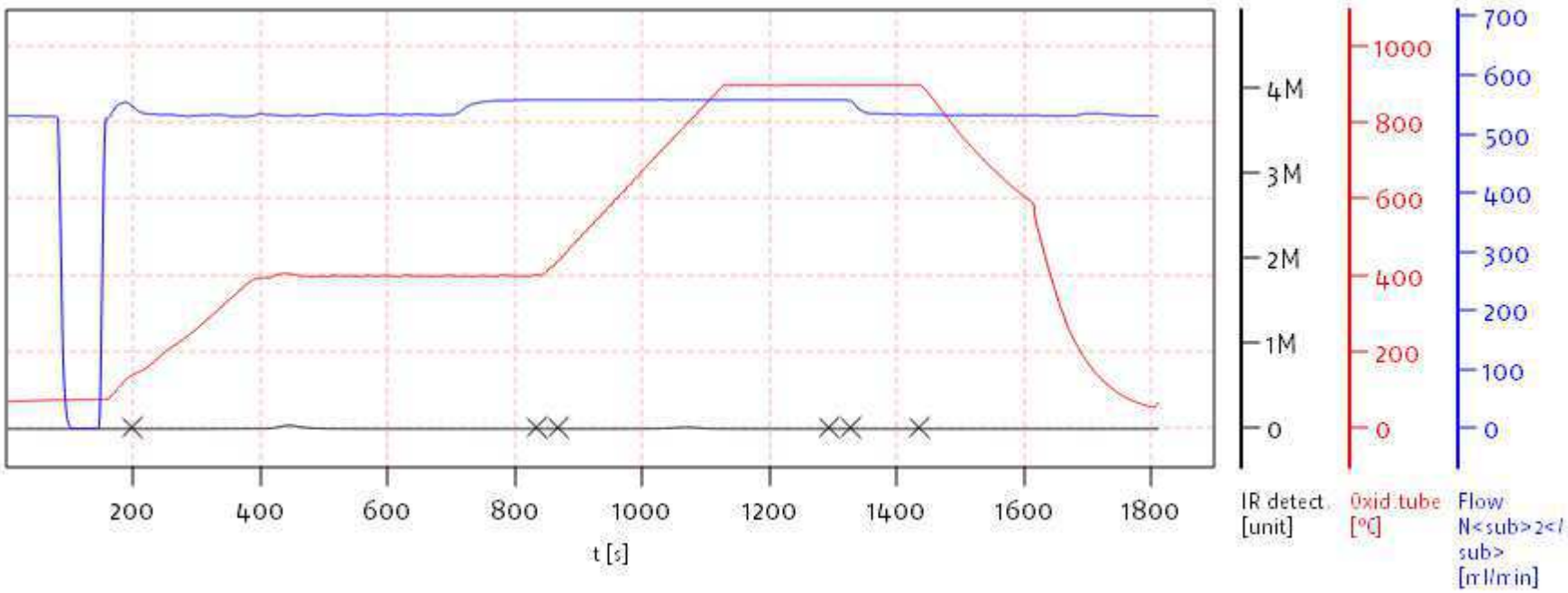
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 45 | BKL0599-MRL1 | 542.10 | | CARBON | 12/29/2022 12:49 PM | bl,C2u | 0.014 | 77 667 | 0.017 | 0.000 | 223 | 38 532 | 0.014 | 0.003 | 0.9594 | 1.0000 |




Name:

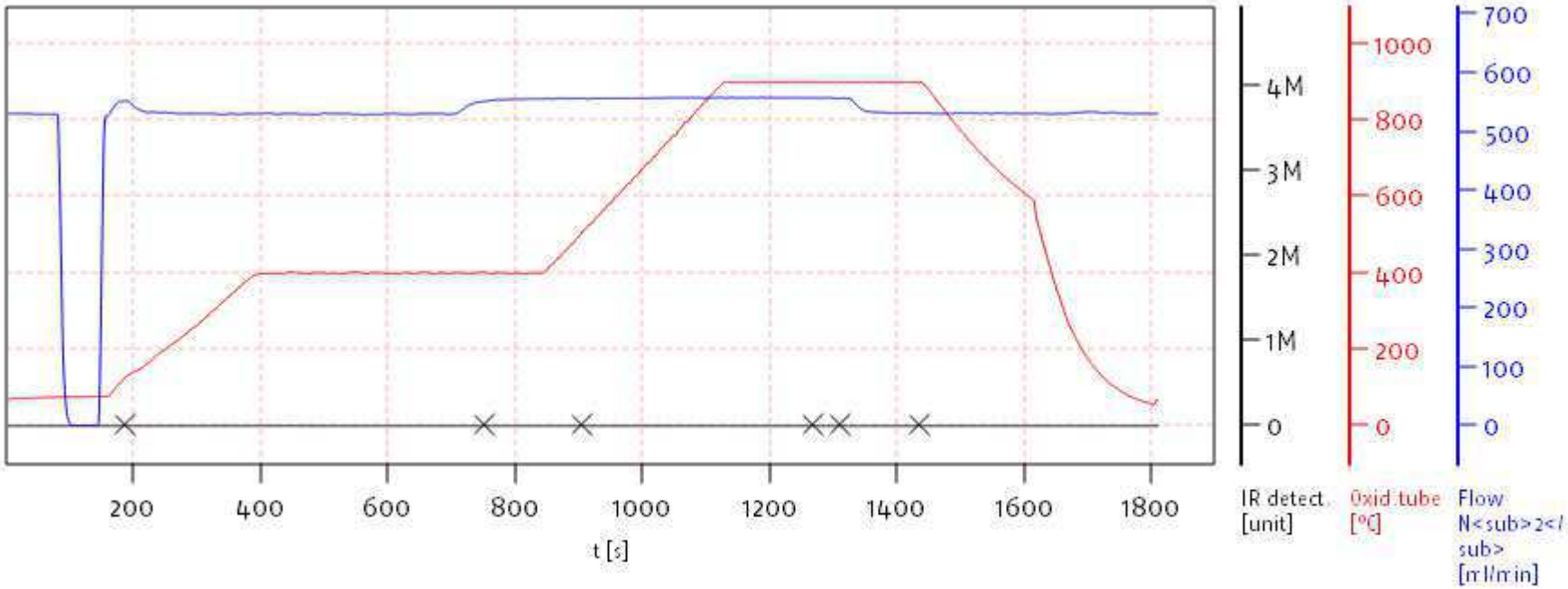
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 46 | BKL0599-BLK1 | 511.70 | | CARBON | 12/29/2022 1:20 PM | bl,C3u,C2u | 0.000 | 6 122 | 0.000 | 0.000 | 351 | 2 112 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

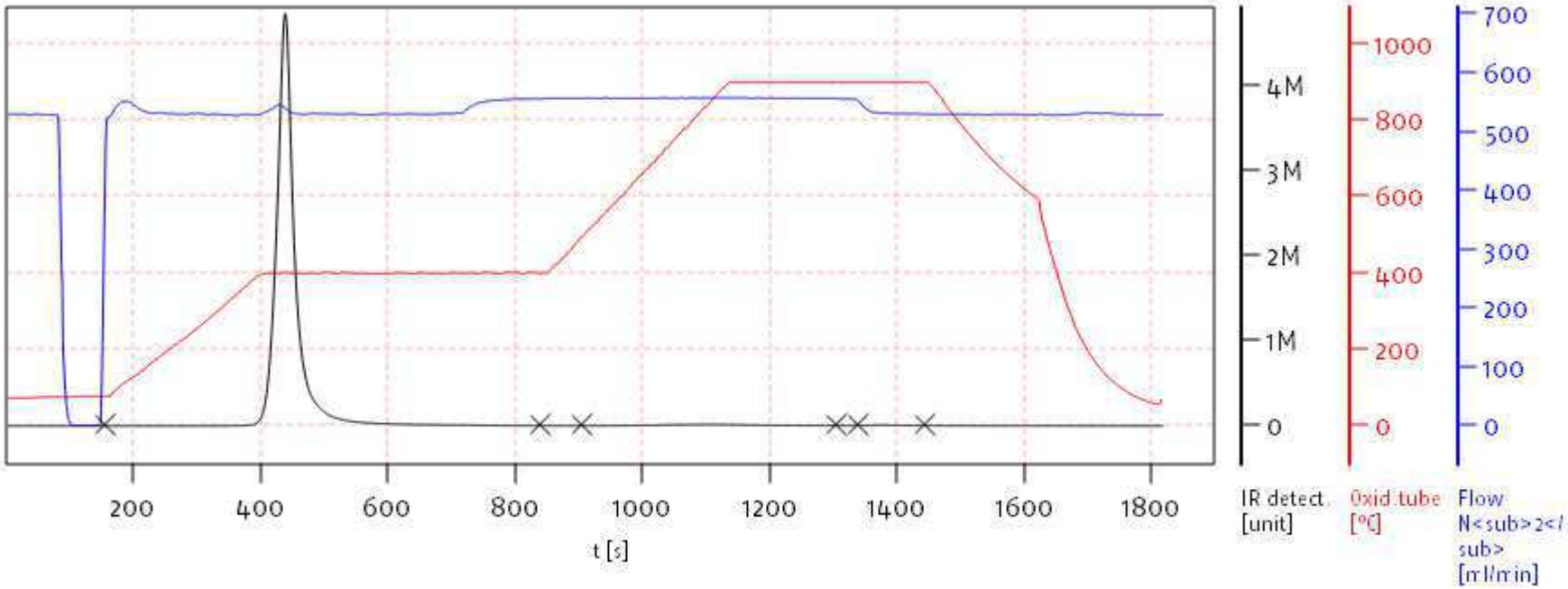
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 47 | BKL0599-BS1 | 20.20 | | CARBON | 12/29/2022 1:51 PM | bl | 44.477 | 6 075 734 | 45.184 | 0.000 | 25 270 | 118 801 | 44.477 | 0.707 | 0.9594 | 1.0000 |




Name:

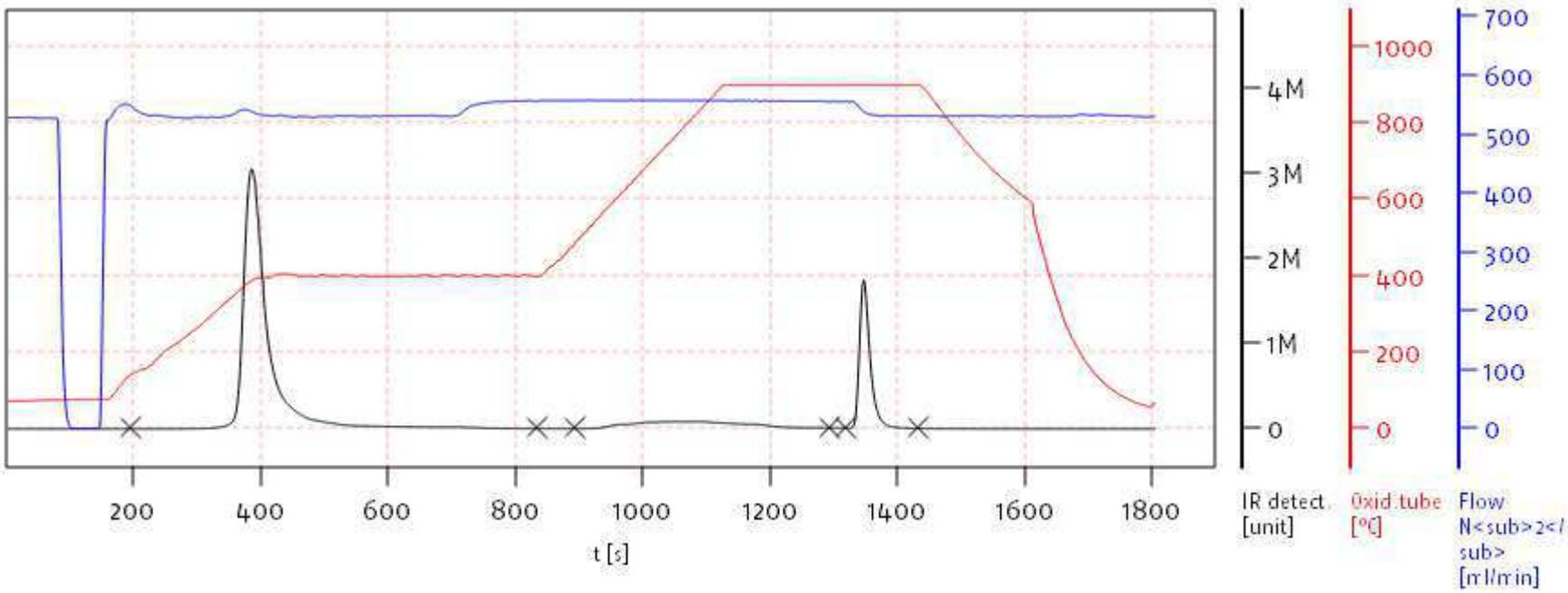
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | 48 | BKL0599-SRM1 | 305.50 | | CARBON | 12/29/2022 2:21 PM | bl | 3.038 | 4 961 714 | 3.387 | 0.638 | 1 286 356 | 716 864 | 2.399 | 0.350 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

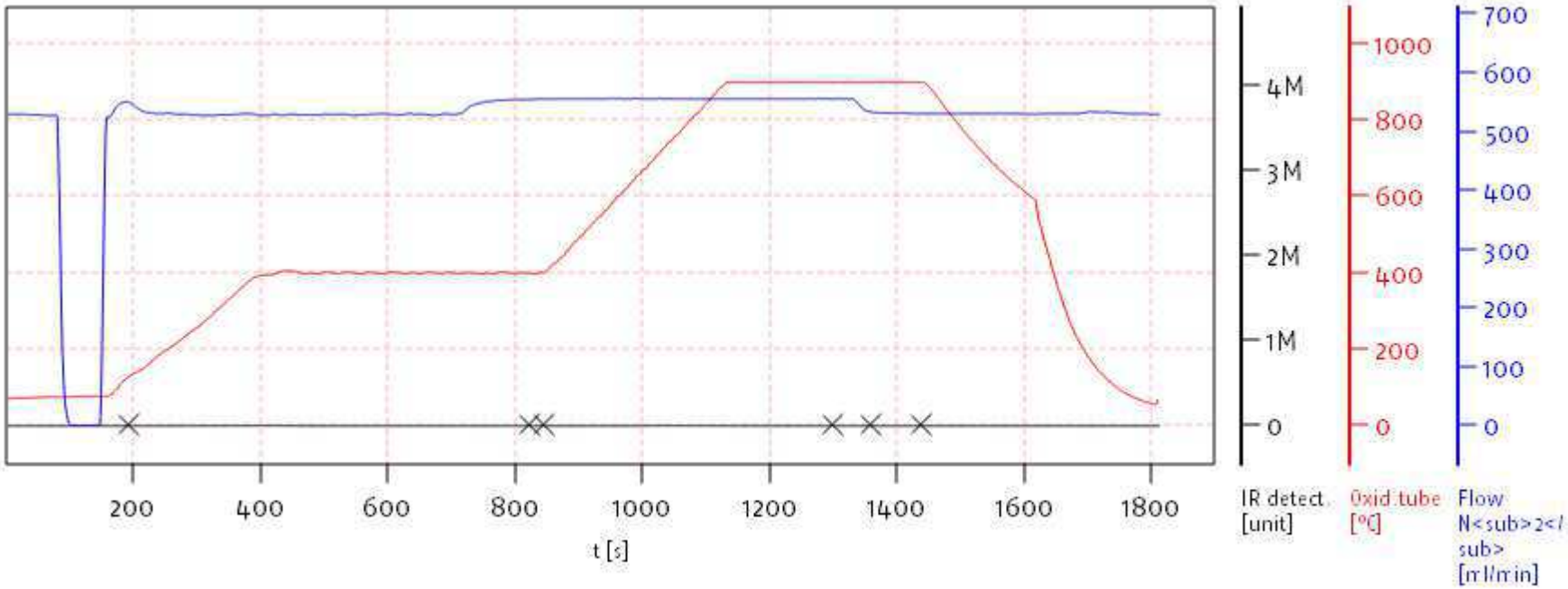
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 49 | 49 | BLANK | 1.00 | | CARBON | 12/29/2022 2:52 PM | bl | 0.000 | 14 067 | 0.000 | 0.000 | 385 | 12 446 | 0.000 | 0.000 | 0.9594 | 1.0000 |




Name:

Access: soliTOC superuser

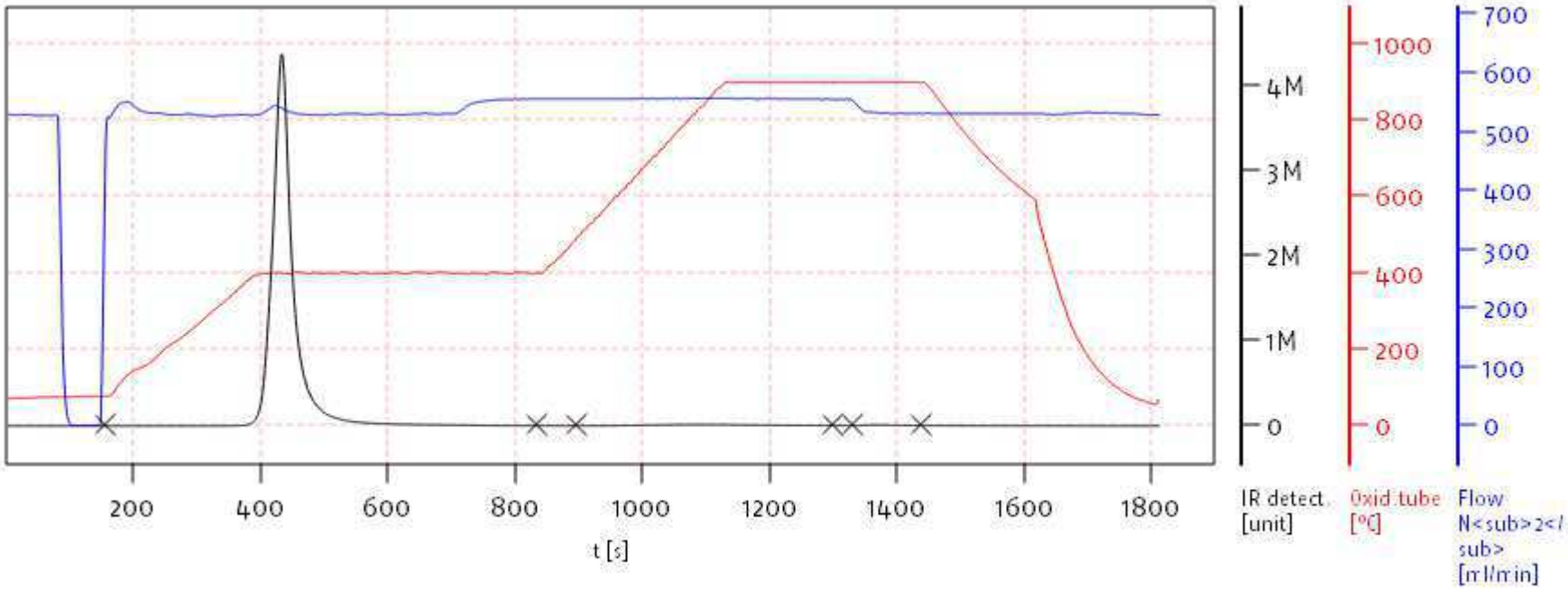
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 50 | Dfactor | 20.30 | | CARBON | 12/29/2022 3:22 PM | bl | 44.488 | 6 071 553 | 45.253 | 0.042 | 32 074 | 126 811 | 44.446 | 0.765 | 0.9642 | 1.0000 |




Name:

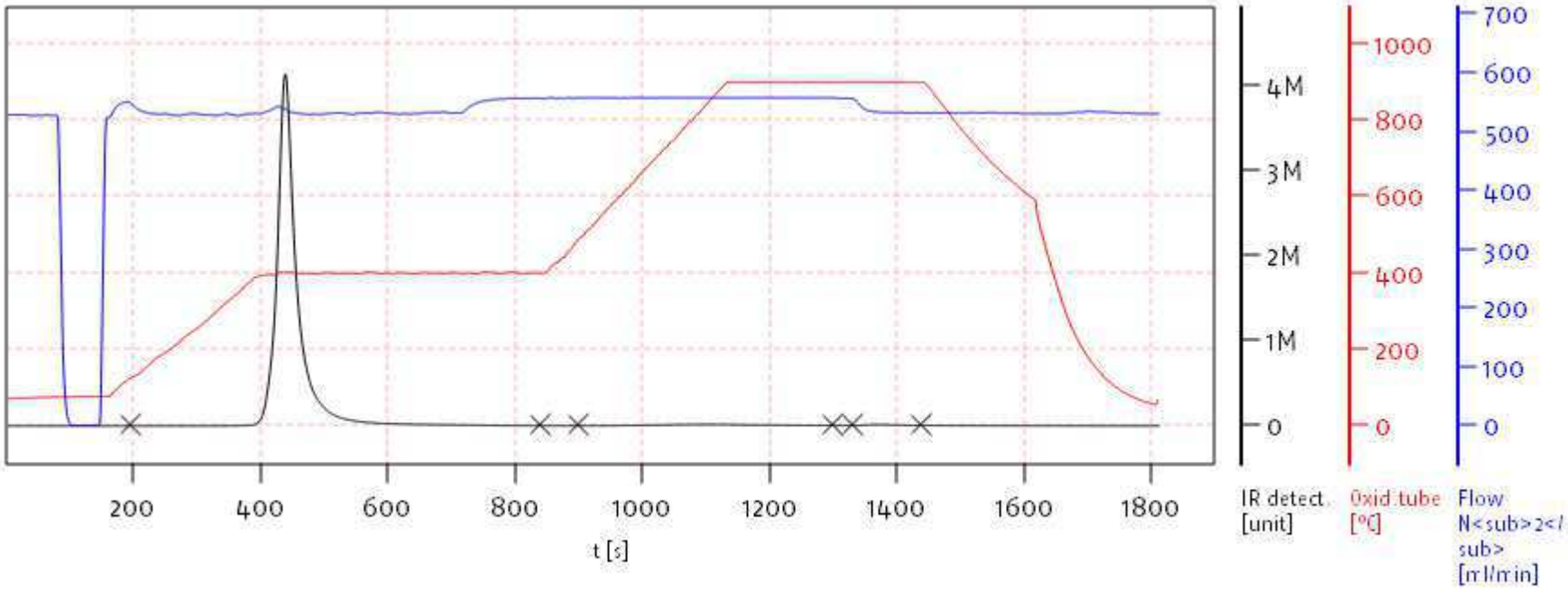
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 51 | Dfactor | 19.40 | | CARBON | 12/29/2022 3:53 PM | bl | 44.532 | 5 648 968 | 45.396 | 0.086 | 37 352 | 134 792 | 44.446 | 0.864 | 0.9907 | 1.0000 |




Name:

Access: soliTOC superuser

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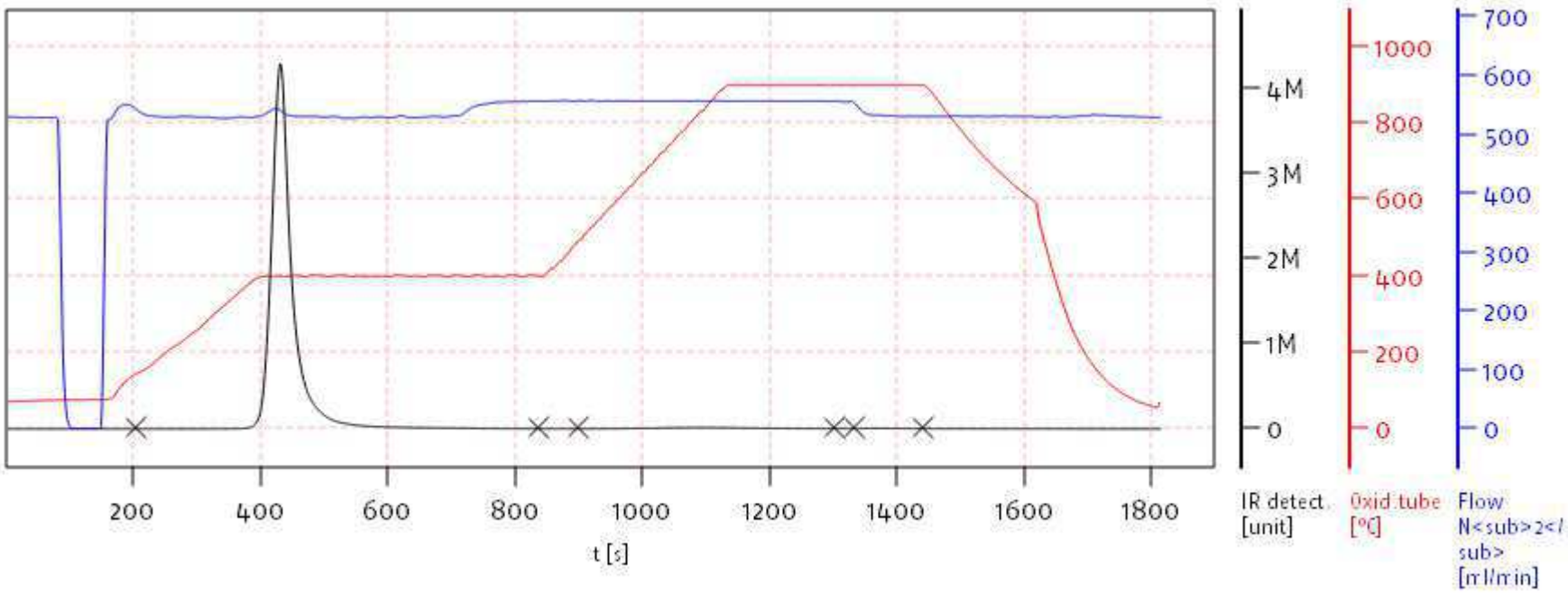
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | 52 | SKL0336-CCV4 | 19.90 | | CARBON | 12/29/2022 4:24 PM | bl | 45.486 | 6 008 854 | 46.126 | 0.000 | 19 204 | 108 821 | 45.486 | 0.640 | 0.9774 | 1.0000 |




Name:

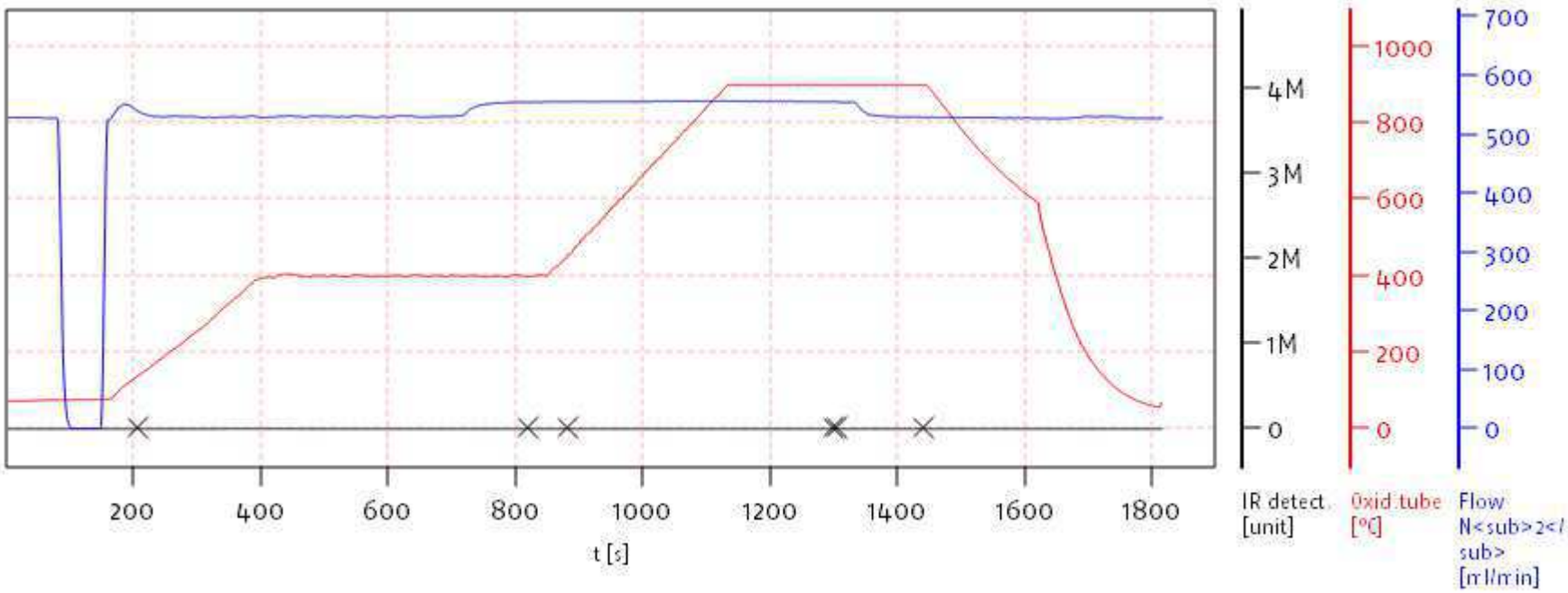
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 53 | 53 | SKL0336-CCB4 | 515.10 | | CARBON | 12/29/2022 4:54 PM | bl,C3u,C2u | 0.000 | 8 905 | 0.000 | 0.000 | 1 135 | 209 | 0.000 | 0.000 | 0.9774 | 1.0000 |




Name:

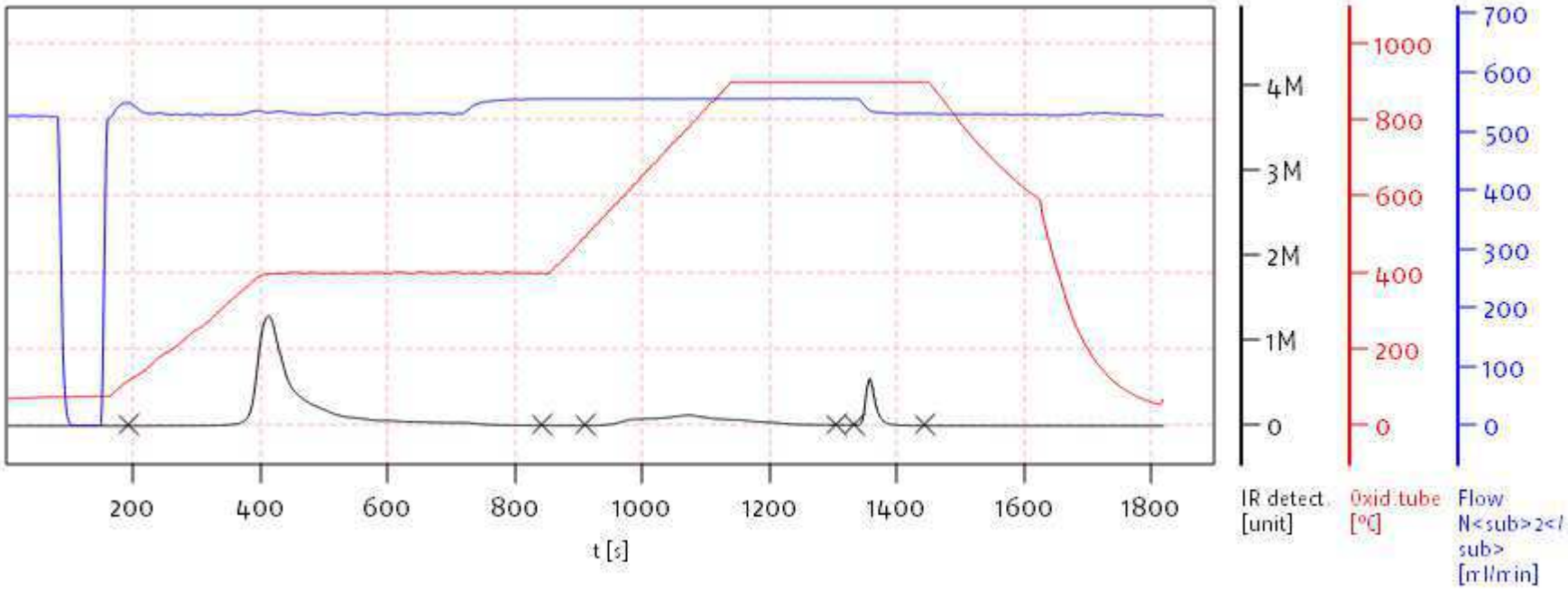
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 | 54 | 22L0383-01 | 530.50 | | CARBON | 12/29/2022 5:25 PM | bl | 1.051 | 3 340 156 | 1.287 | 0.106 | 388 705 | 835 873 | 0.945 | 0.236 | 0.9774 | 1.0000 |




Name:

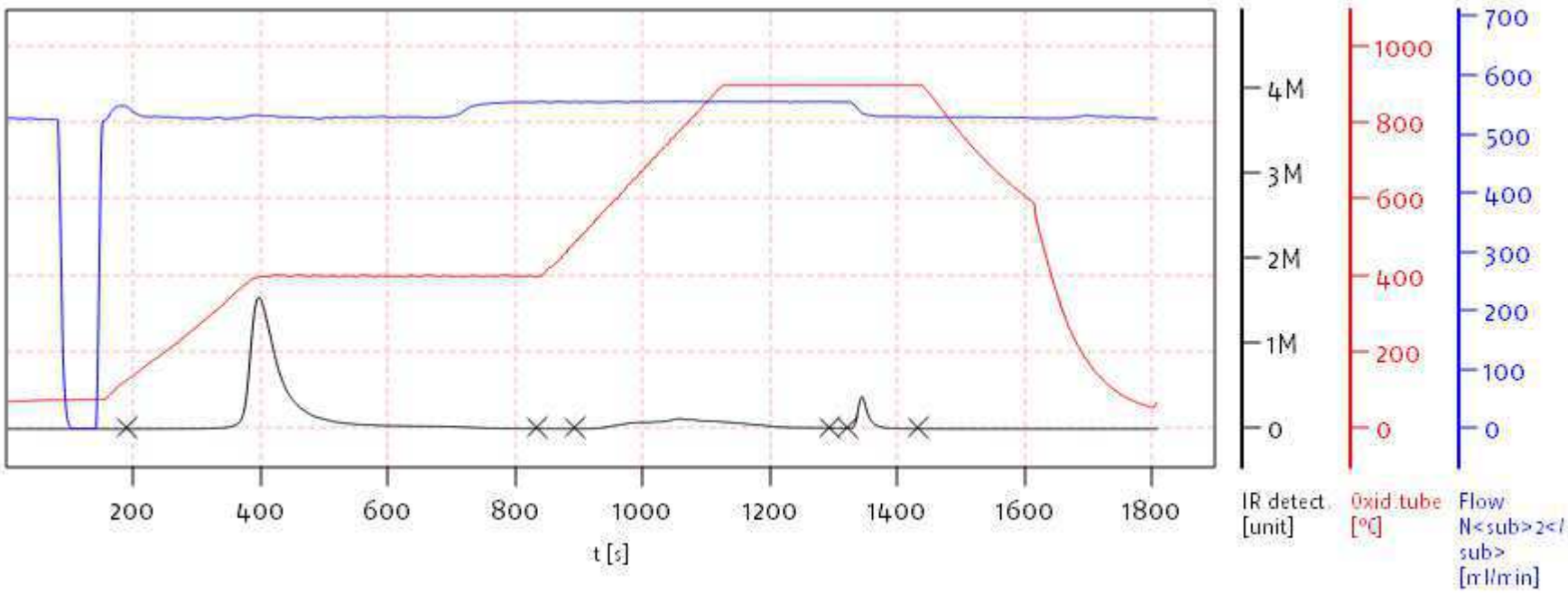
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | 55 | BKL0599-DUP1 | 526.90 | | CARBON | 12/29/2022 5:56 PM | bl | 1.054 | 3 447 169 | 1.279 | 0.072 | 270 814 | 793 040 | 0.982 | 0.225 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

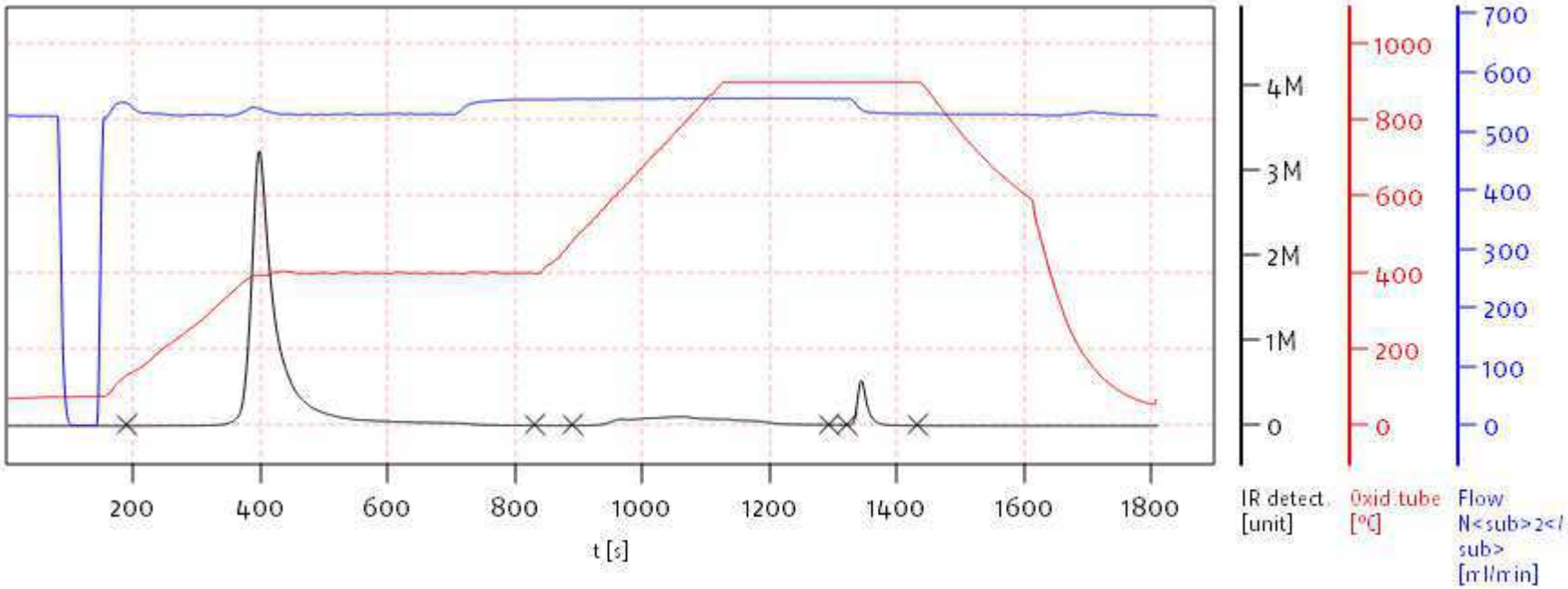
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | 56 | BKL0599-MS1 | 514.40 | 0.0077 | CARBON | 12/29/2022 6:26 PM | bl | 1.761 | 5 663 480 | 2.005 | 0.103 | 368 136 | 837 398 | 1.658 | 0.244 | 0.9774 | 1.0000 |




Name:

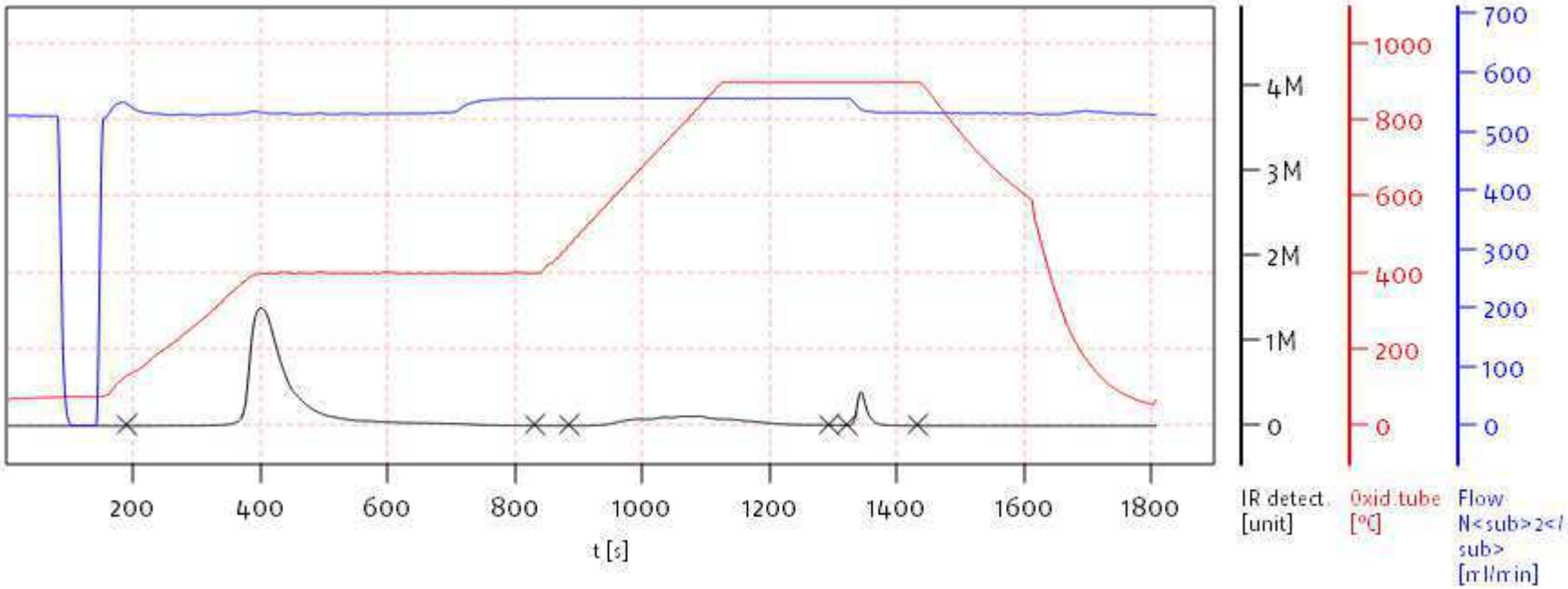
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 57 | 57 | 22L0383-02 | 514.70 | | CARBON | 12/29/2022 6:57 PM | bl | 1.141 | 3 645 618 | 1.376 | 0.077 | 283 261 | 808 295 | 1.064 | 0.235 | 0.9774 | 1.0000 |




Name:

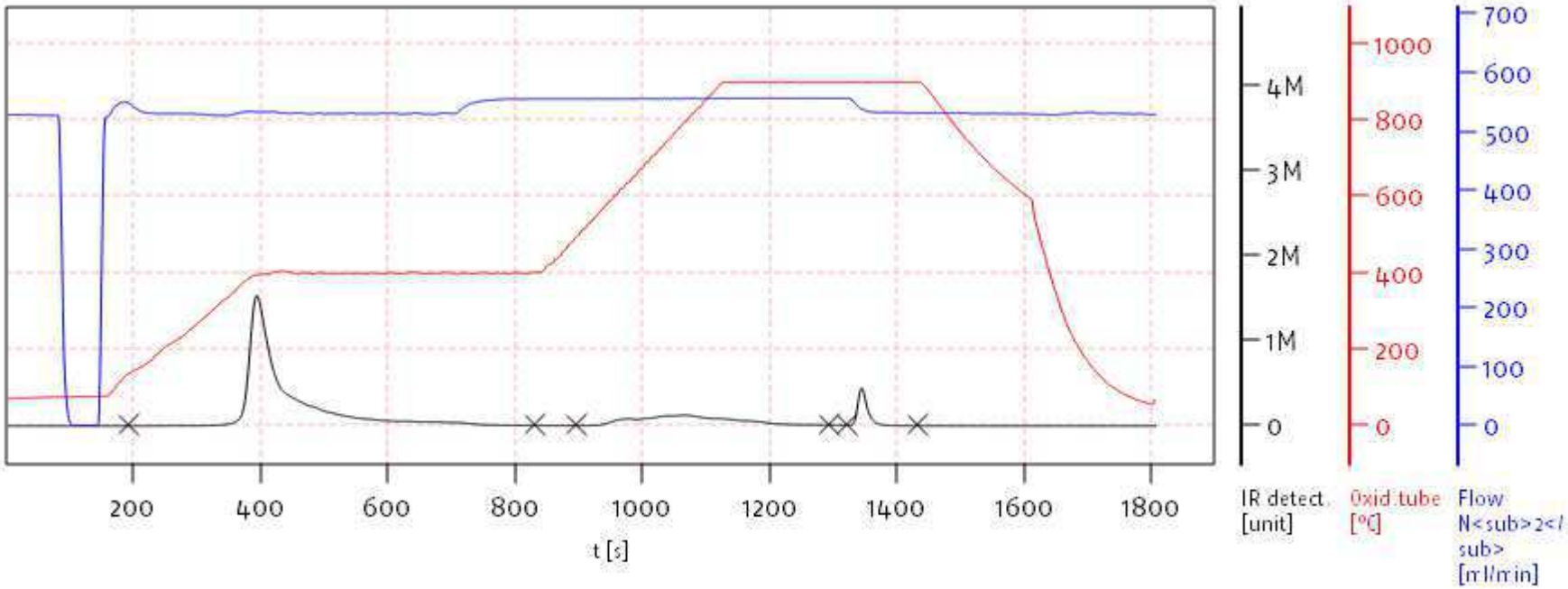
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 | 58 | 22L0383-03 | 521.30 | | CARBON | 12/29/2022 7:27 PM | bl | 1.085 | 3 485 611 | 1.339 | 0.081 | 300 520 | 879 129 | 1.004 | 0.253 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

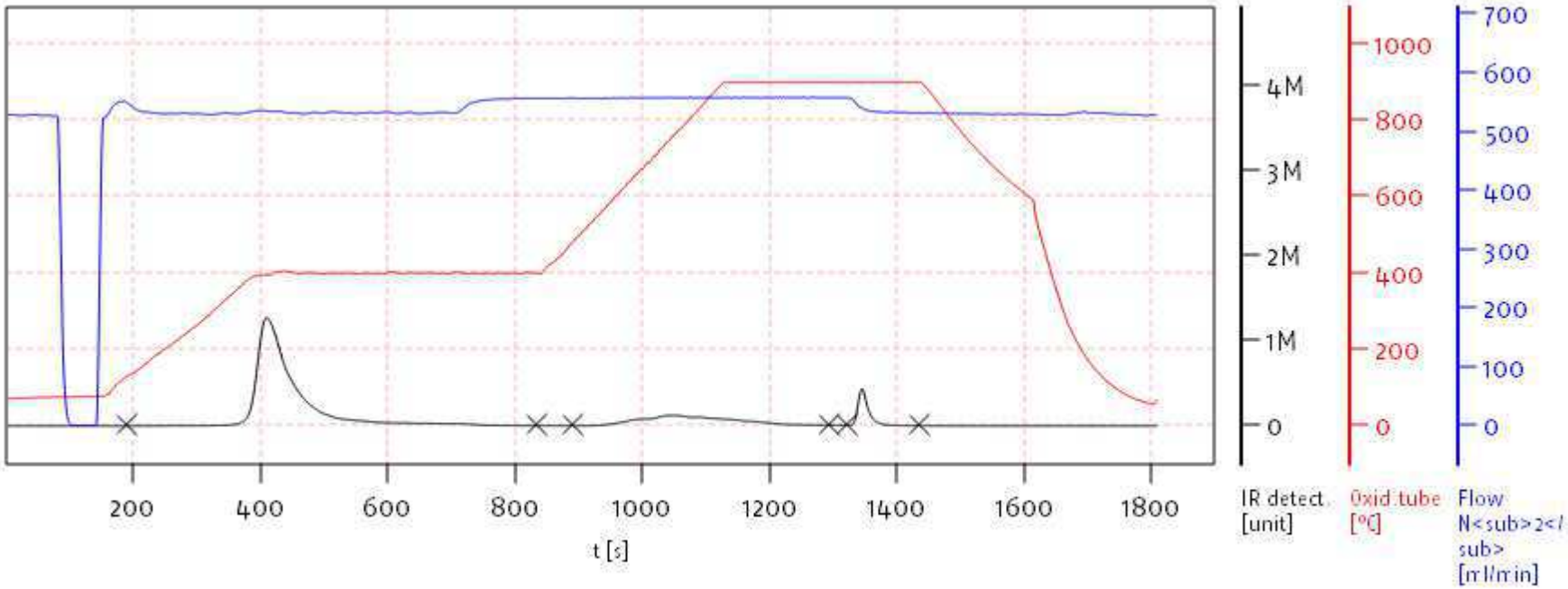
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59 | 59 | 22L0383-04 | 533.60 | | CARBON | 12/29/2022 7:58 PM | bl | 0.977 | 3 174 085 | 1.204 | 0.085 | 317 850 | 808 806 | 0.893 | 0.227 | 0.9774 | 1.0000 |




Name:

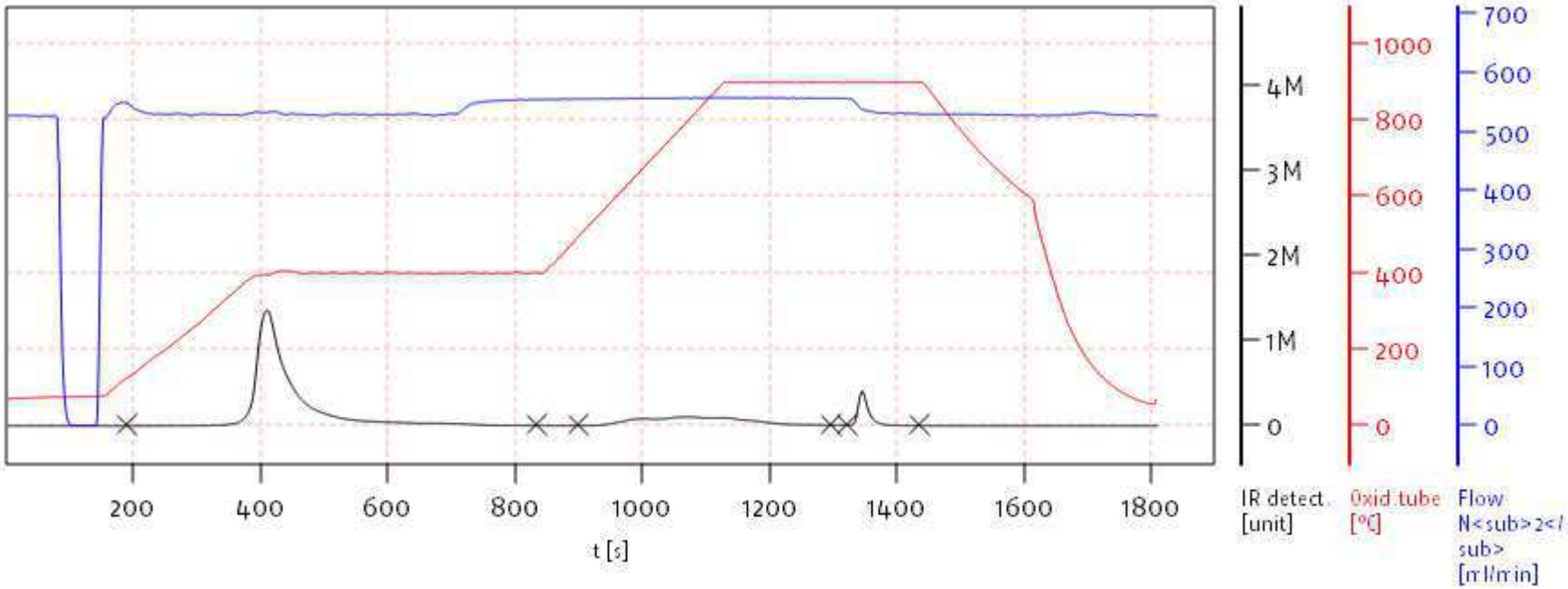
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 60 | 22L0383-05 | 512.90 | | CARBON | 12/29/2022 8:28 PM | bl | 1.019 | 3 208 439 | 1.256 | 0.081 | 293 878 | 812 113 | 0.939 | 0.237 | 0.9774 | 1.0000 |




Name:

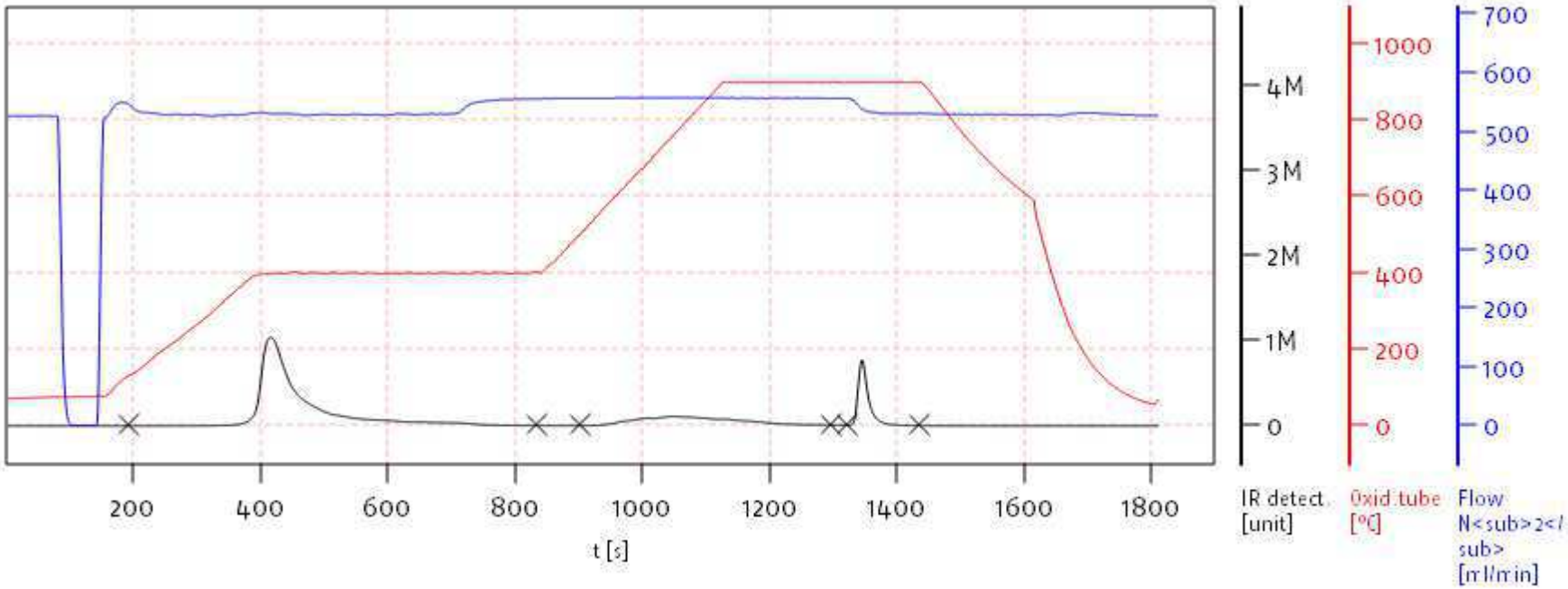
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | 61 | 22L0383-06 | 512.90 | | CARBON | 12/29/2022 8:59 PM | bl | 0.975 | 2 792 391 | 1.208 | 0.160 | 555 017 | 796 339 | 0.816 | 0.232 | 0.9774 | 1.0000 |




Name:

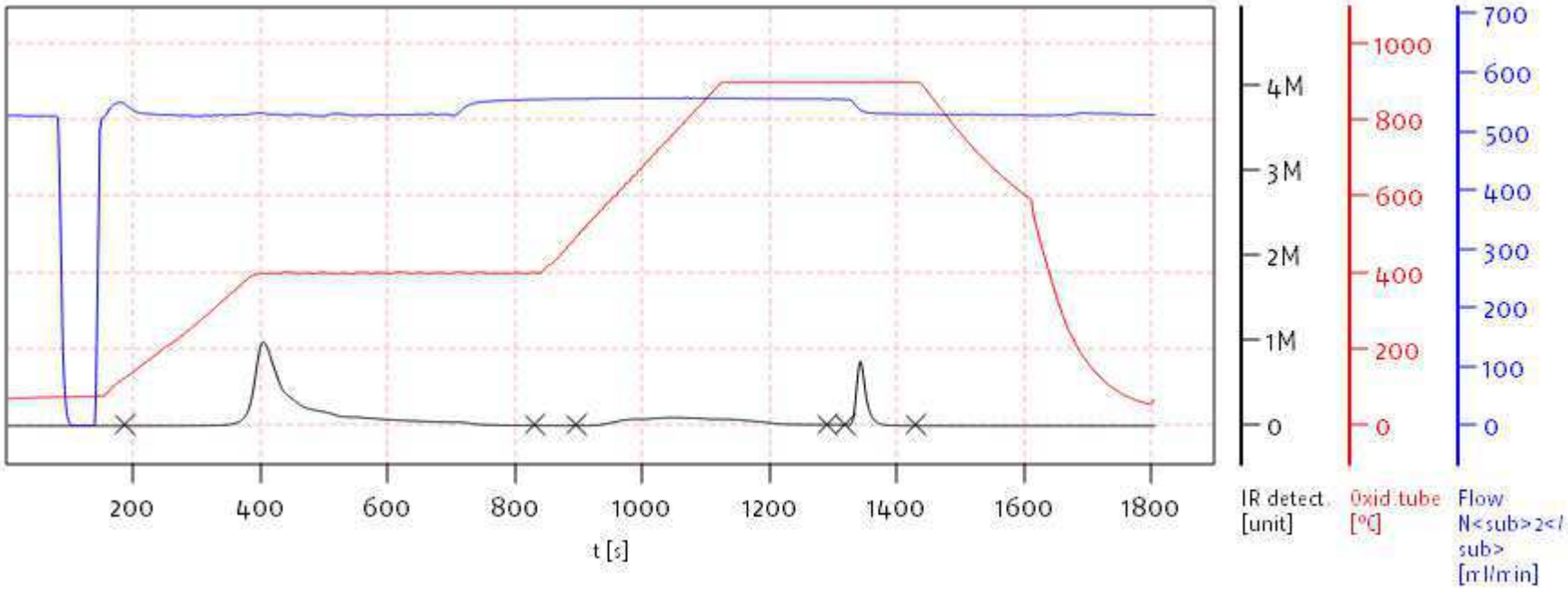
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | 62 | 22L0383-07 | 505.70 | | CARBON | 12/29/2022 9:29 PM | bl | 0.962 | 2 751 206 | 1.197 | 0.147 | 505 449 | 794 926 | 0.815 | 0.235 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

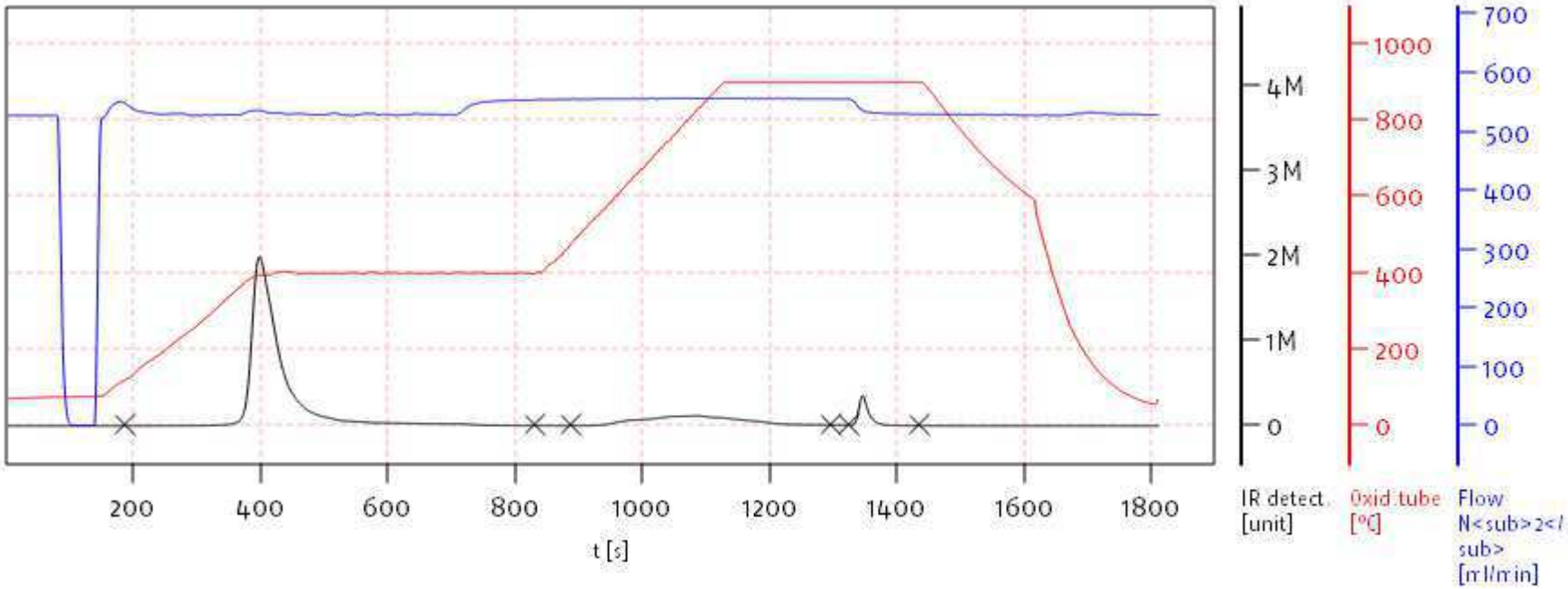
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63 | 63 | 22L0383-08 | 550.00 | | CARBON | 12/29/2022 10:00 PM | bl | 1.136 | 3 931 260 | 1.369 | 0.062 | 245 905 | 854 228 | 1.074 | 0.233 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

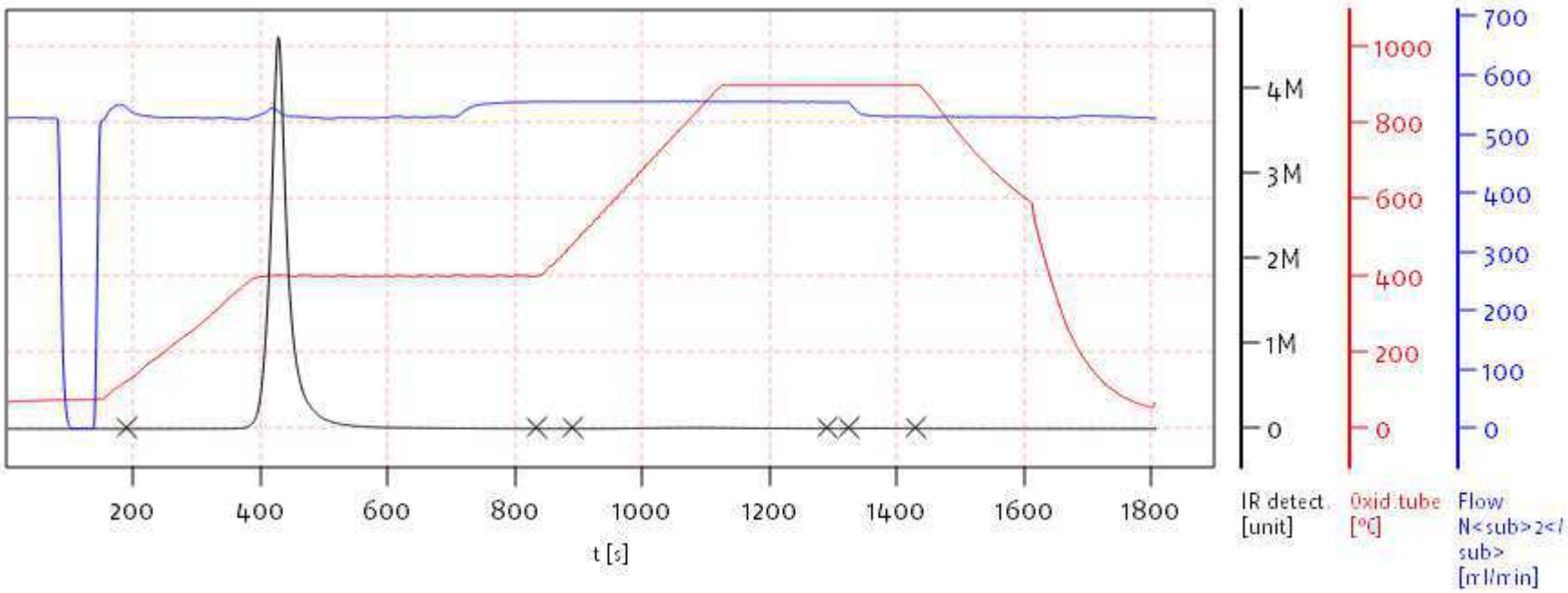
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 | 64 | SKL0336-CCV5 | 19.20 | | CARBON | 12/29/2022 10:30 PM | bl | 45.251 | 5 768 684 | 45.852 | 0.000 | 20 849 | 101 047 | 45.251 | 0.601 | 0.9774 | 1.0000 |




Name:

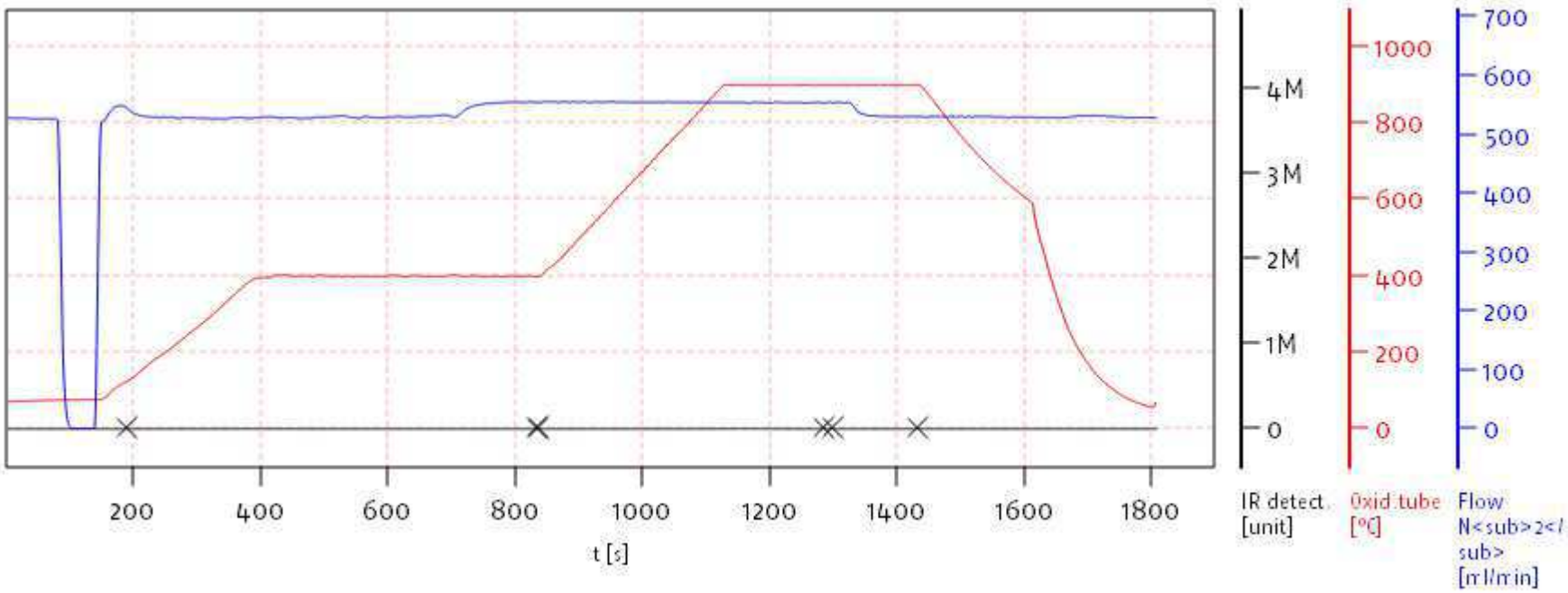
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | 65 | SKL0336-CCB5 | 526.20 | | CARBON | 12/29/2022 11:01 PM | bl,C2u | 0.000 | 5 957 | 0.000 | 0.000 | 963 | 7 715 | 0.000 | 0.000 | 0.9774 | 1.0000 |




Name:

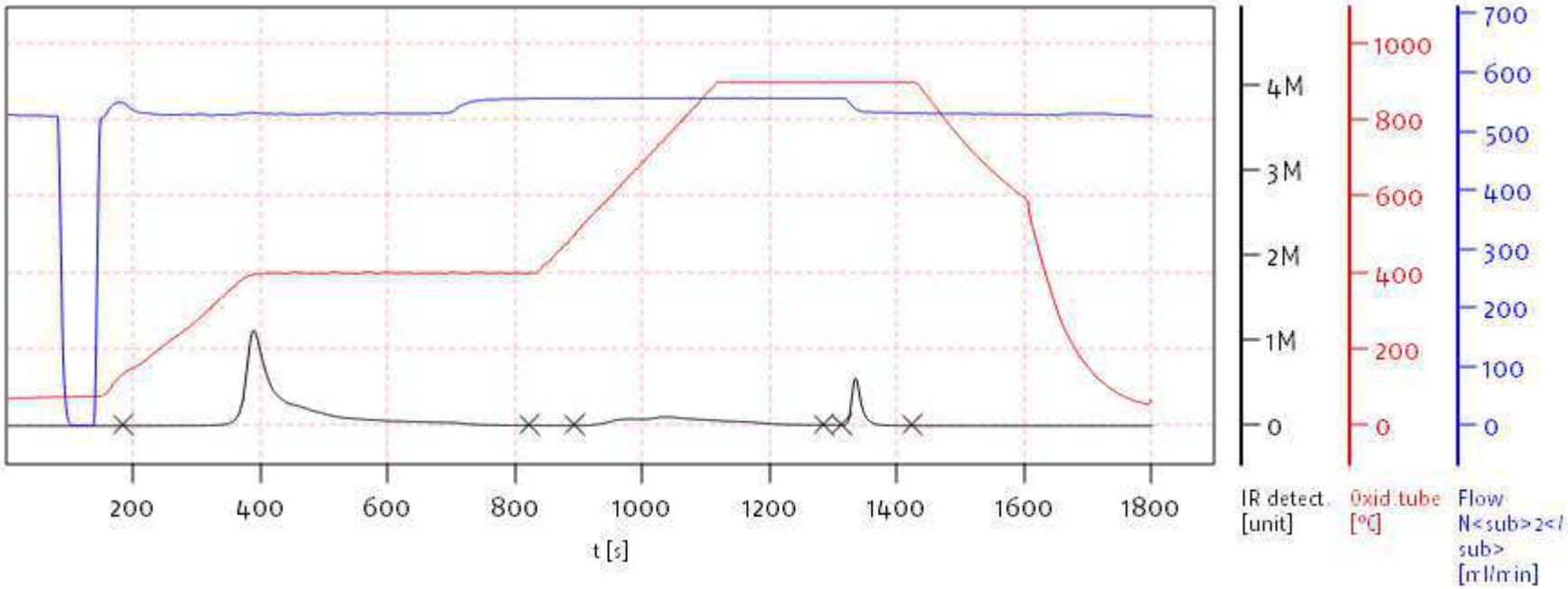
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66 | 66 | 22L0417-01 | 501.80 | | CARBON | 12/29/2022 11:31 PM | bl | 0.939 | 2 776 504 | 1.160 | 0.110 | 381 880 | 741 948 | 0.829 | 0.221 | 0.9774 | 1.0000 |




Name:

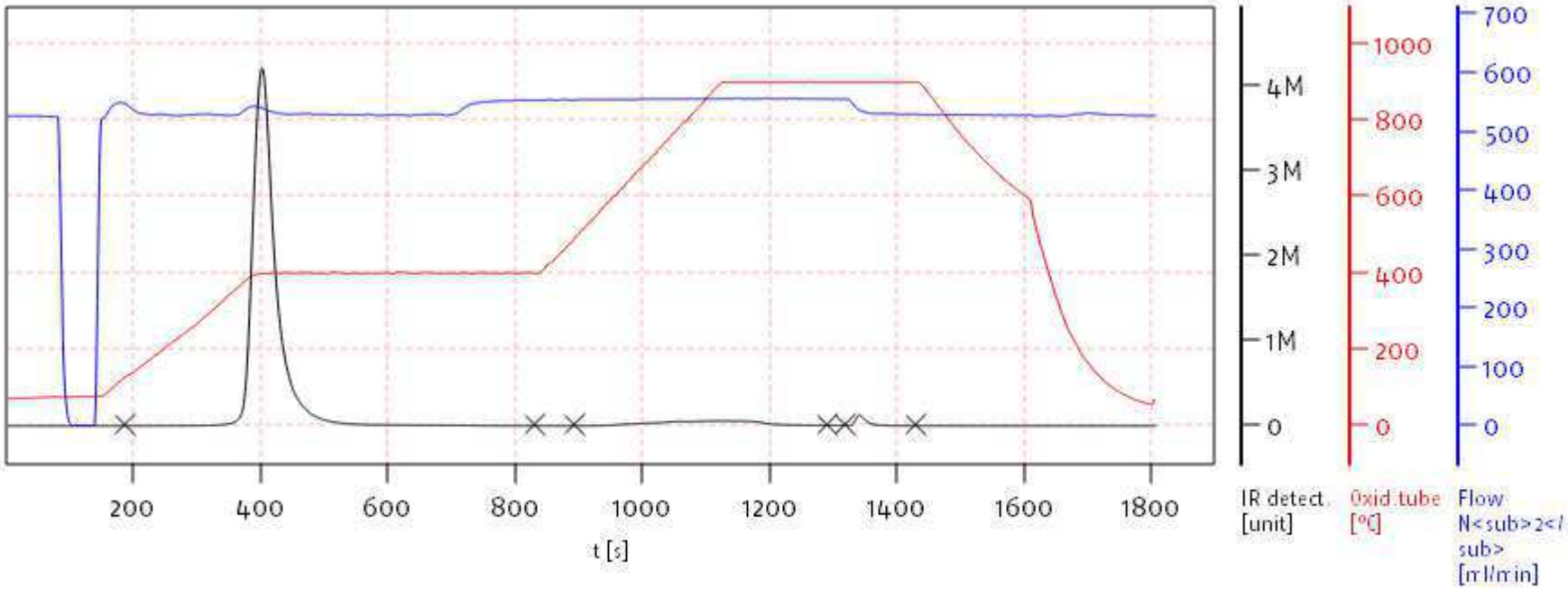
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 67 | 67 | 22L0417-02 | 525.70 | | CARBON | 12/30/2022 12:02 AM | bl | 1.908 | 6 581 365 | 2.030 | 0.021 | 97 977 | 441 929 | 1.887 | 0.122 | 0.9774 | 1.0000 |




Name:

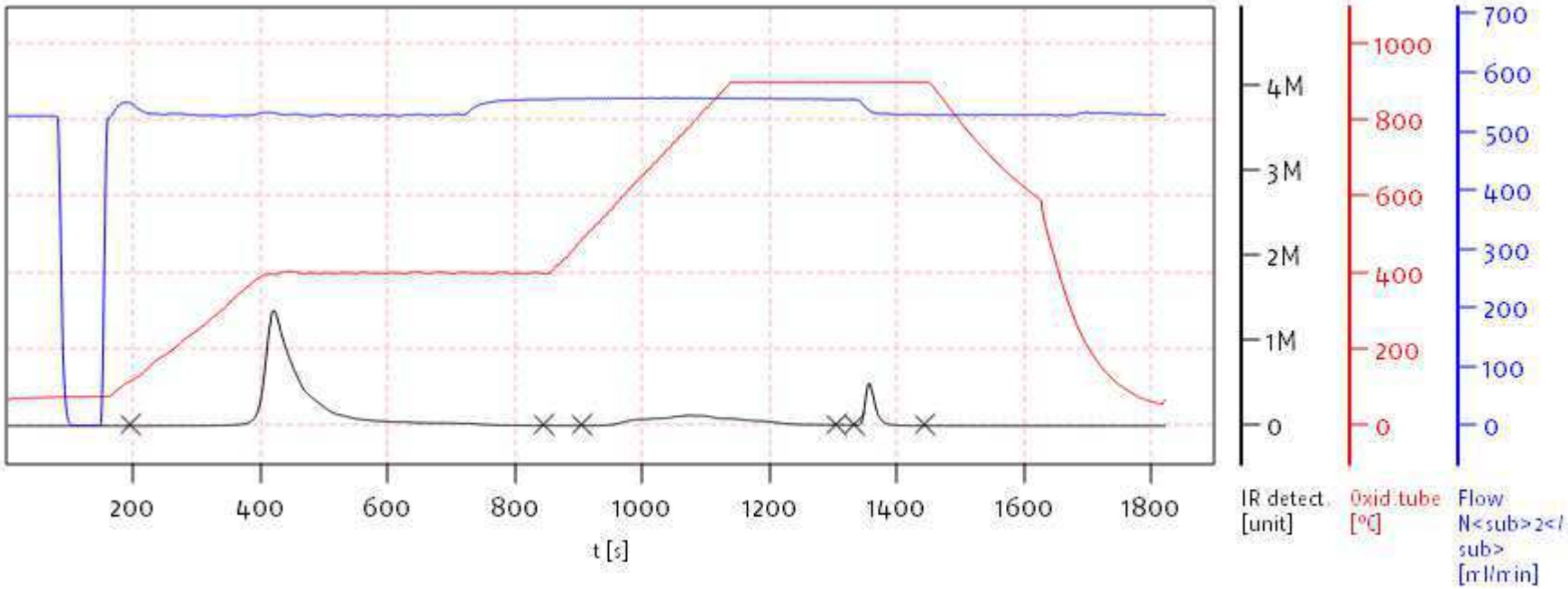
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68 | 68 | 22L0417-03 | 525.80 | | CARBON | 12/30/2022 12:33 AM | bl | 1.036 | 3 293 495 | 1.282 | 0.096 | 352 622 | 862 415 | 0.940 | 0.246 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

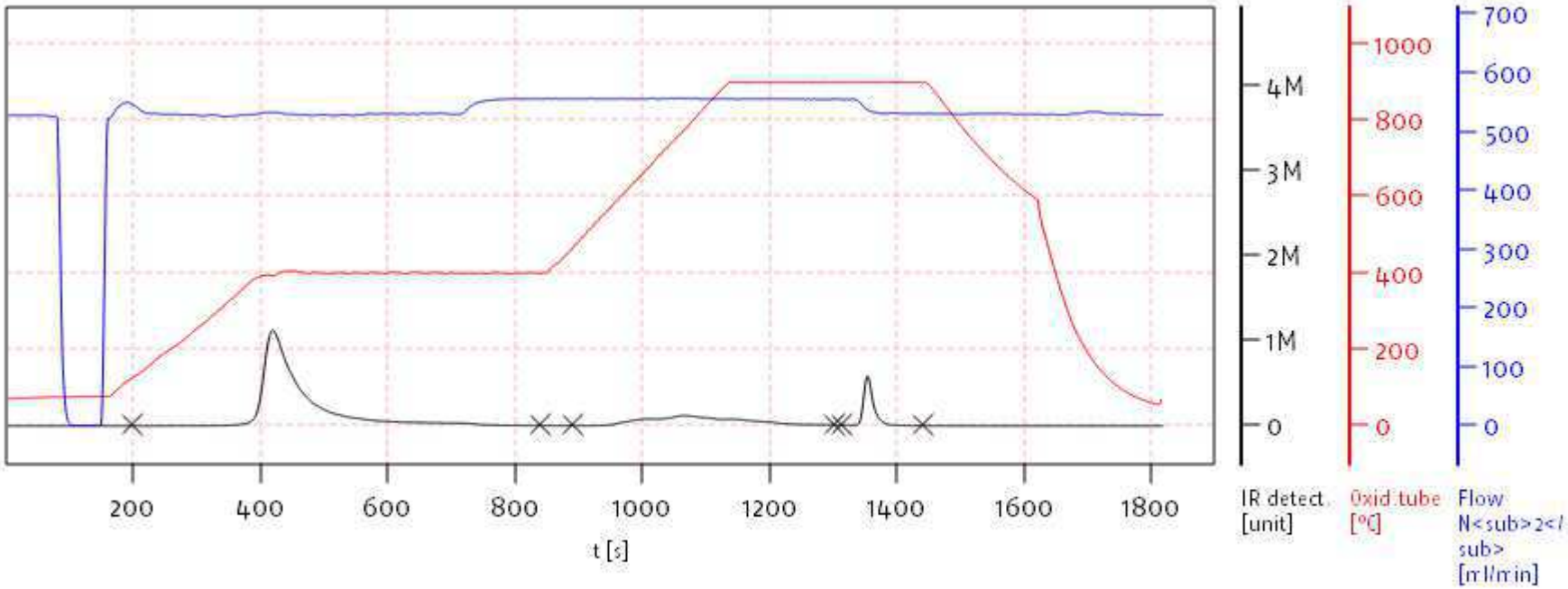
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | 69 | 22L0417-04 | 510.20 | | CARBON | 12/30/2022 1:03 AM | bl | 0.981 | 2 945 531 | 1.218 | 0.115 | 405 637 | 807 116 | 0.866 | 0.237 | 0.9774 | 1.0000 |




Name:

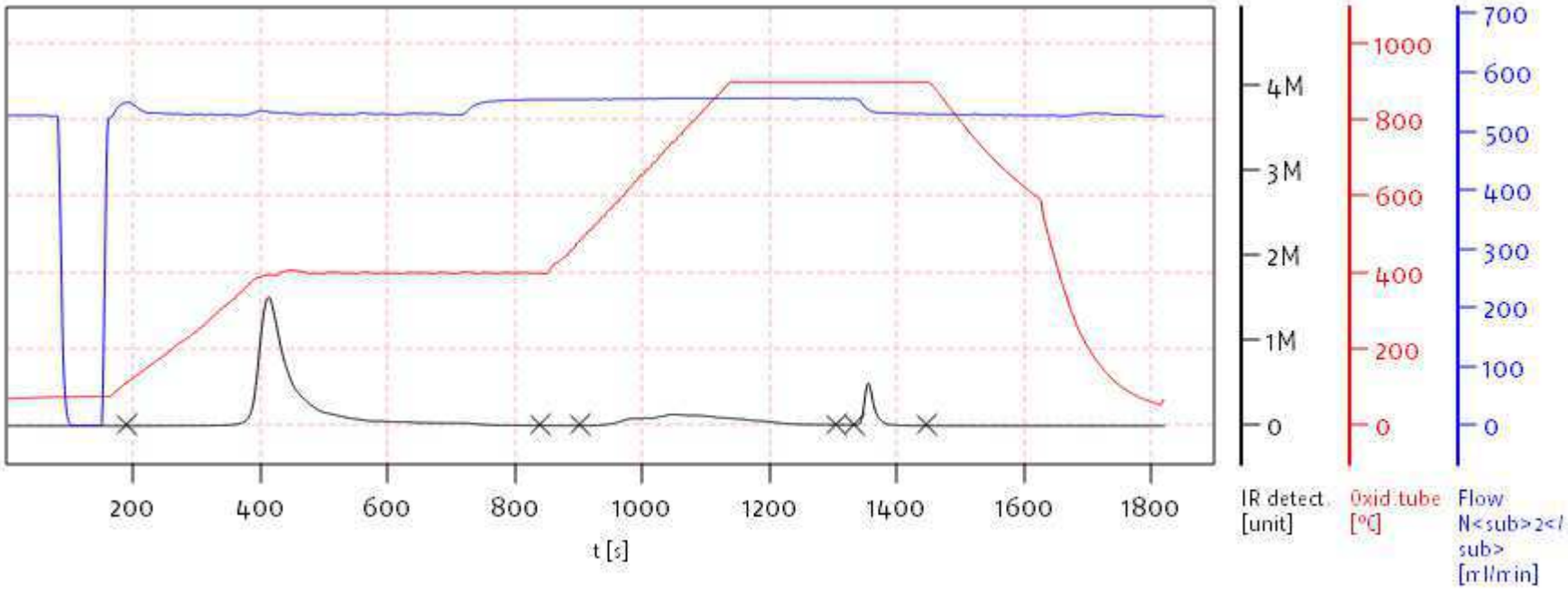
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 70 | 22L0417-05 | 537.20 | | CARBON | 12/30/2022 1:34 AM | bl | 1.063 | 3 475 552 | 1.333 | 0.092 | 345 430 | 963 171 | 0.971 | 0.270 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

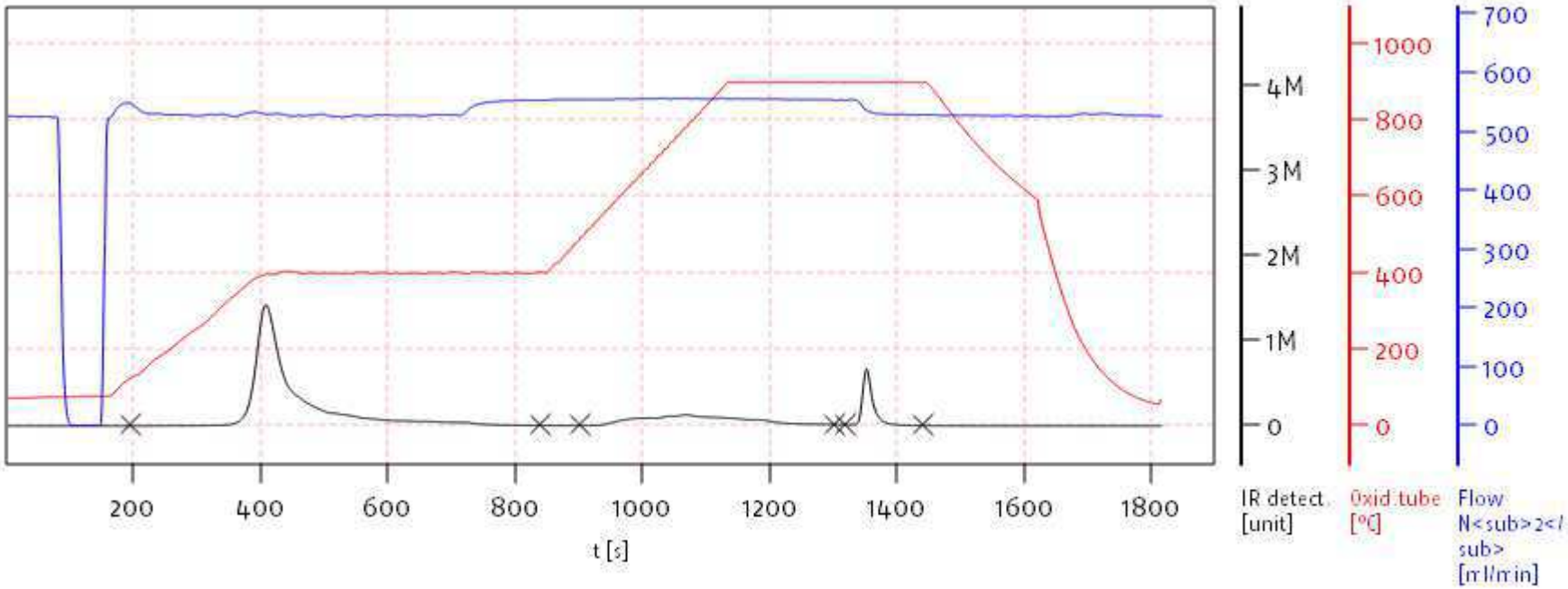
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71 | 71 | 22L0417-06 | 536.00 | | CARBON | 12/30/2022 2:05 AM | bl | 1.120 | 3 528 412 | 1.394 | 0.132 | 482 377 | 973 695 | 0.989 | 0.274 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

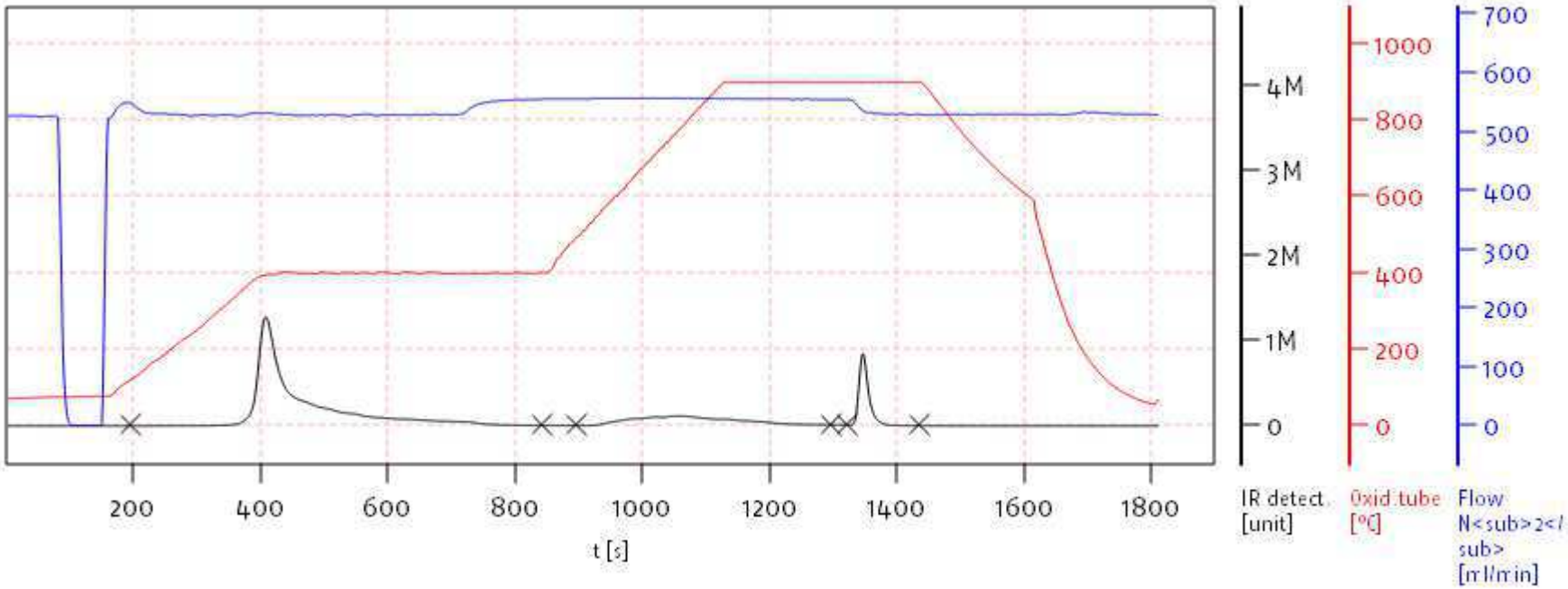
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72 | 72 | 22L0417-07 | 522.50 | | CARBON | 12/30/2022 2:35 AM | bl | 1.088 | 3 227 152 | 1.338 | 0.161 | 571 561 | 870 140 | 0.927 | 0.250 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

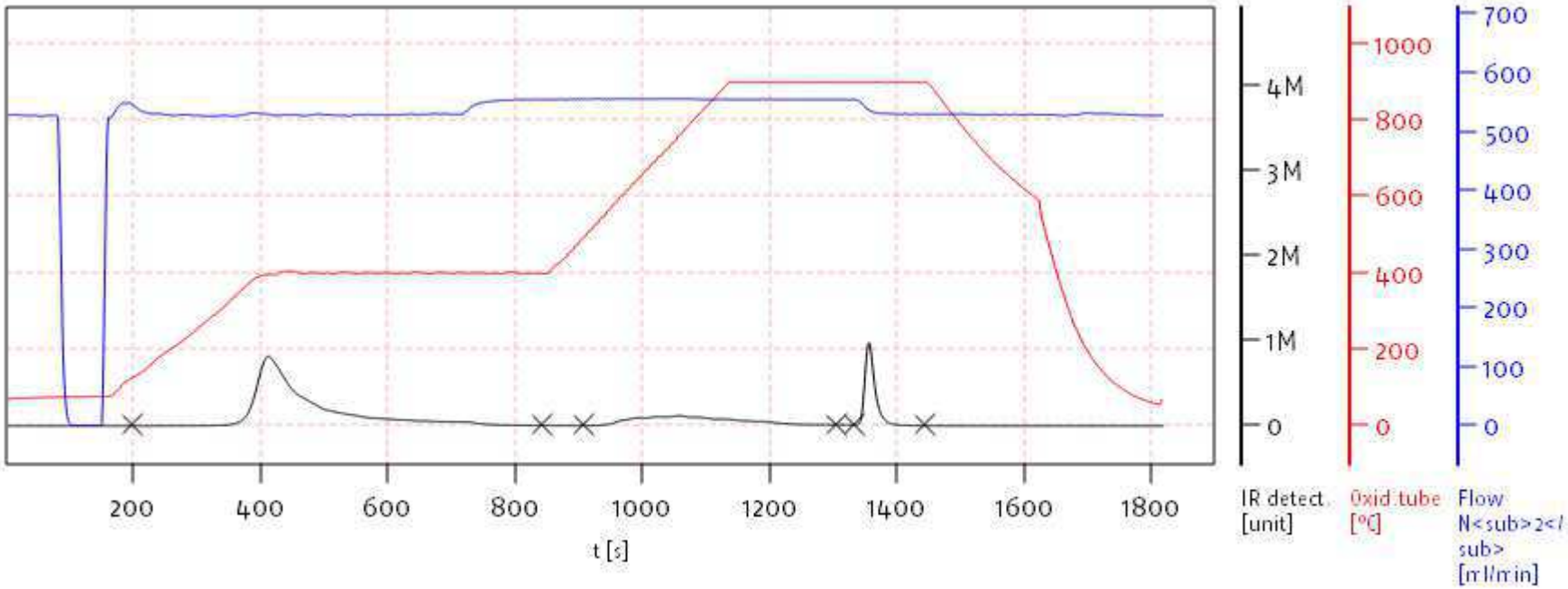
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | 73 | 22L0417-08 | 514.40 | | CARBON | 12/30/2022 3:06 AM | bl | 1.060 | 2 953 173 | 1.313 | 0.199 | 688 000 | 868 121 | 0.861 | 0.253 | 0.9774 | 1.0000 |




Name:

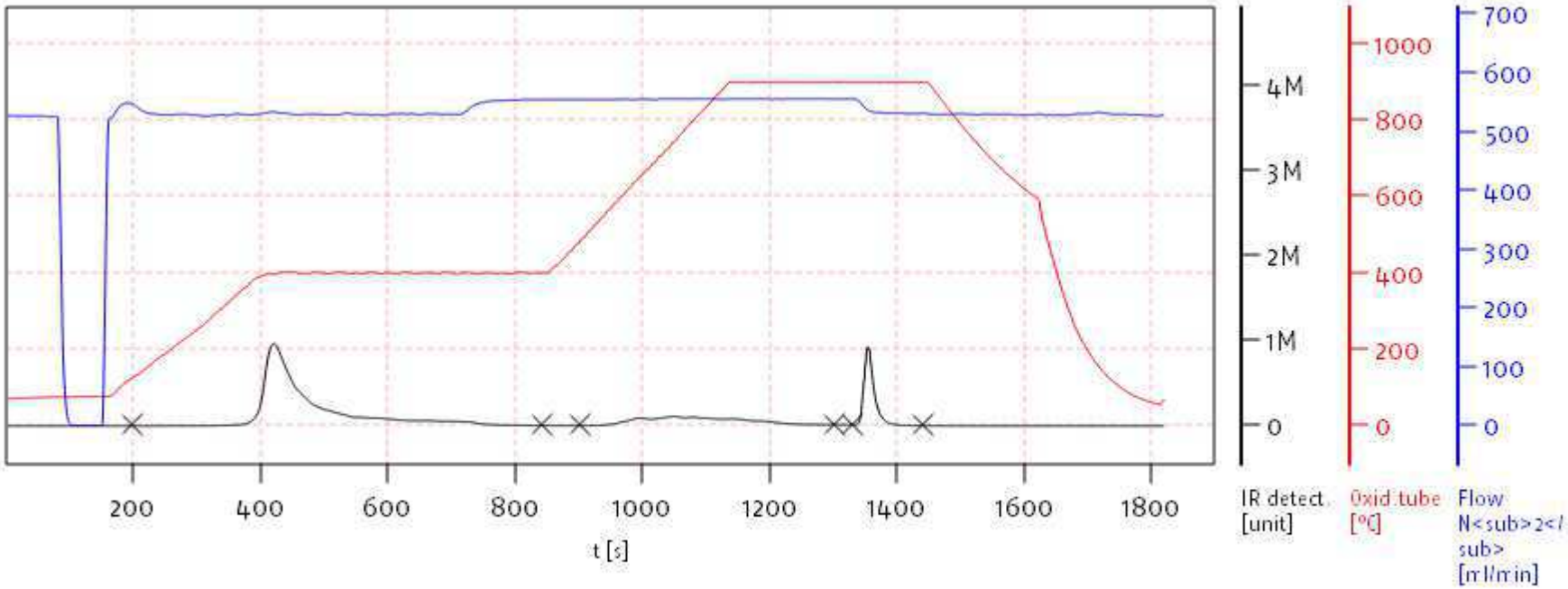
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 74 | 74 | 22L0417-09 | 556.60 | | CARBON | 12/30/2022 3:37 AM | bl | 0.946 | 2 861 405 | 1.171 | 0.175 | 656 235 | 836 164 | 0.771 | 0.225 | 0.9774 | 1.0000 |




Name:

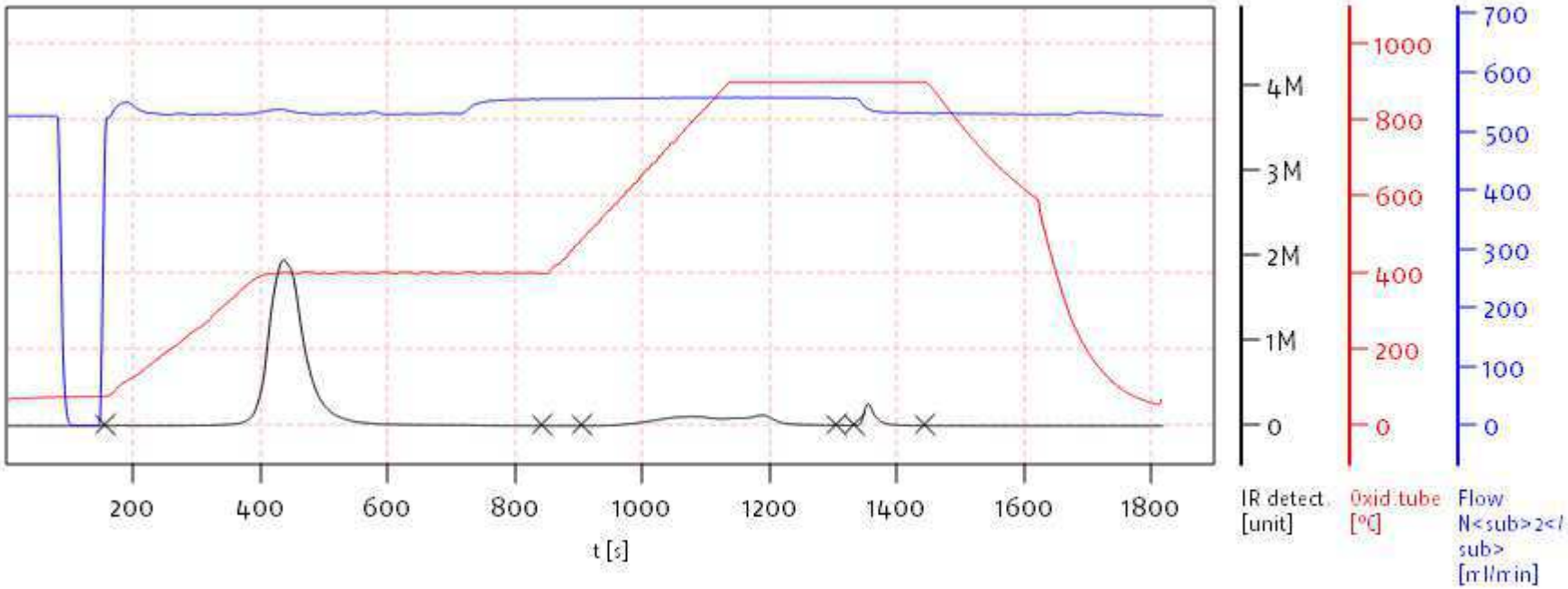
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | 75 | 22L0492-17 | 516.20 | | CARBON | 12/30/2022 4:07 AM | bl | 1.479 | 4 882 583 | 1.722 | 0.056 | 211 950 | 836 440 | 1.423 | 0.243 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

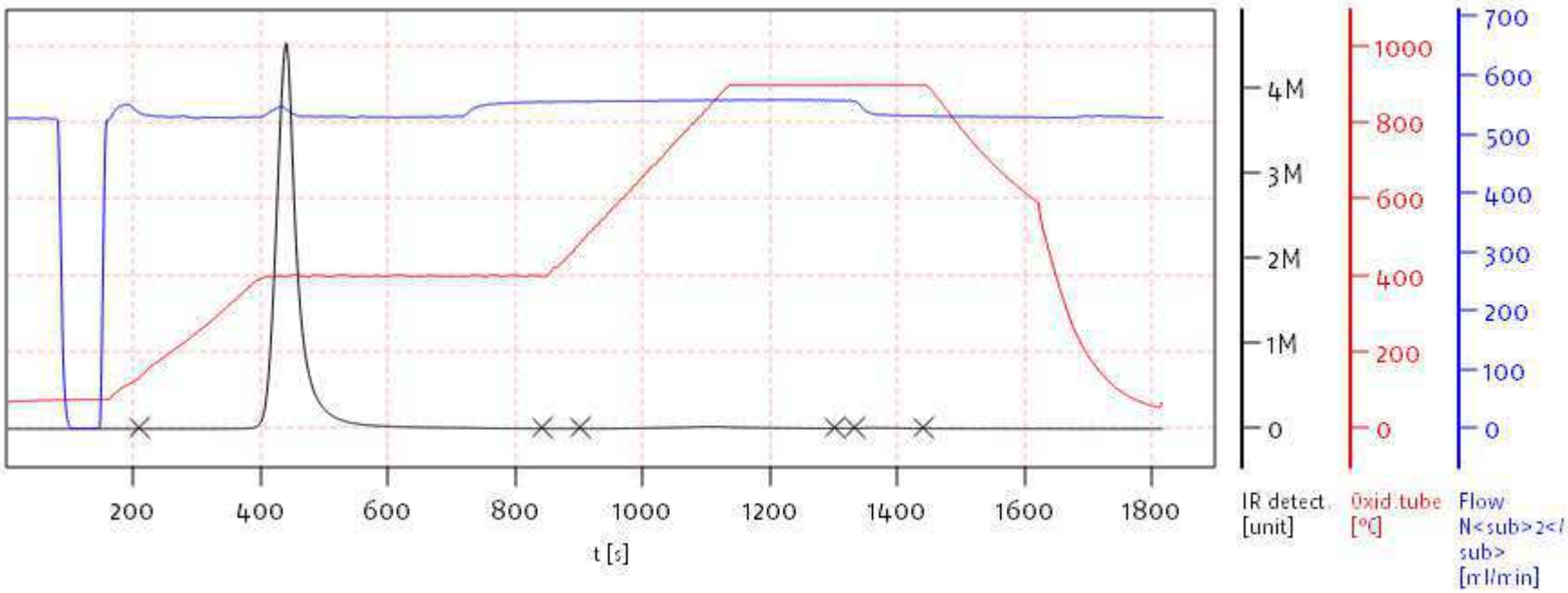
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 76 | 76 | SKL0336-CCV6 | 22.50 | | CARBON | 12/30/2022 4:38 AM | bl | 45.006 | 6 712 219 | 45.991 | 0.047 | 33 362 | 169 589 | 44.959 | 0.984 | 0.9774 | 1.0000 |




Name:

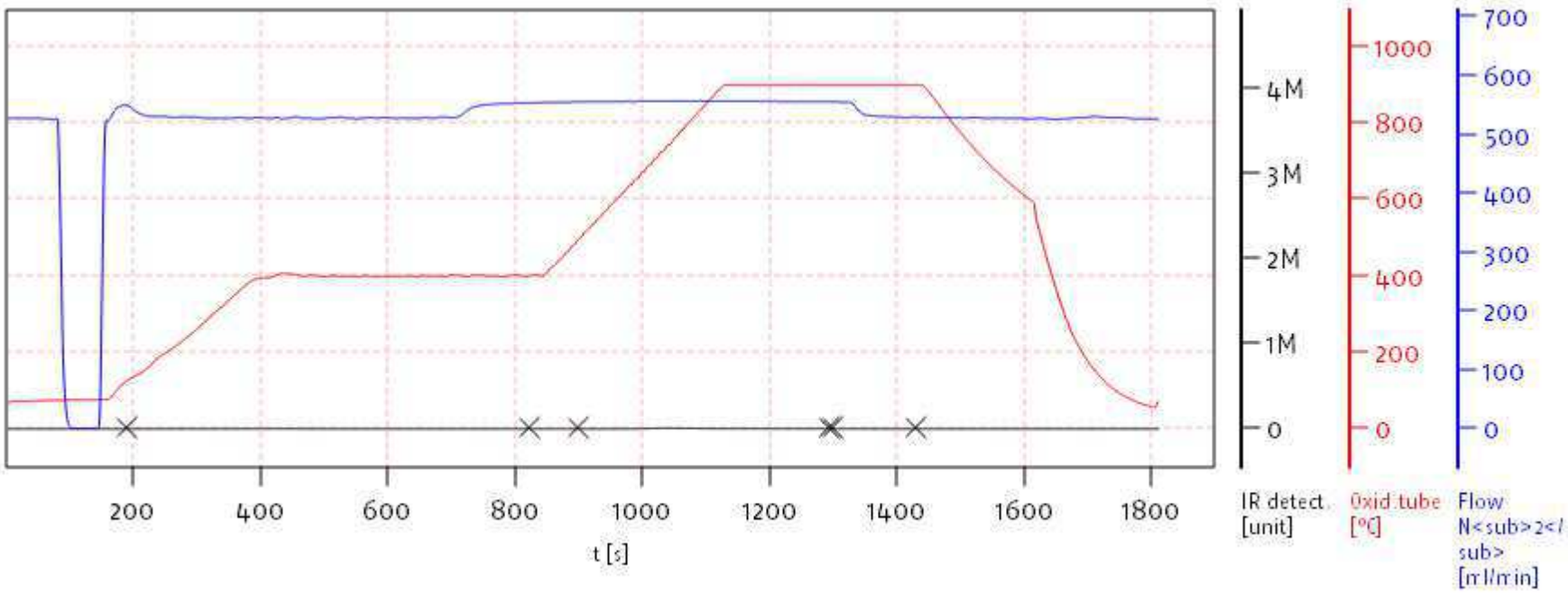
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 77 | 77 | SKL0336-CCB6 | 508.40 | | CARBON | 12/30/2022 5:09 AM | bl | 0.000 | 9 608 | 0.004 | 0.000 | 3 866 | 39 806 | 0.000 | 0.004 | 0.9774 | 1.0000 |




Name:

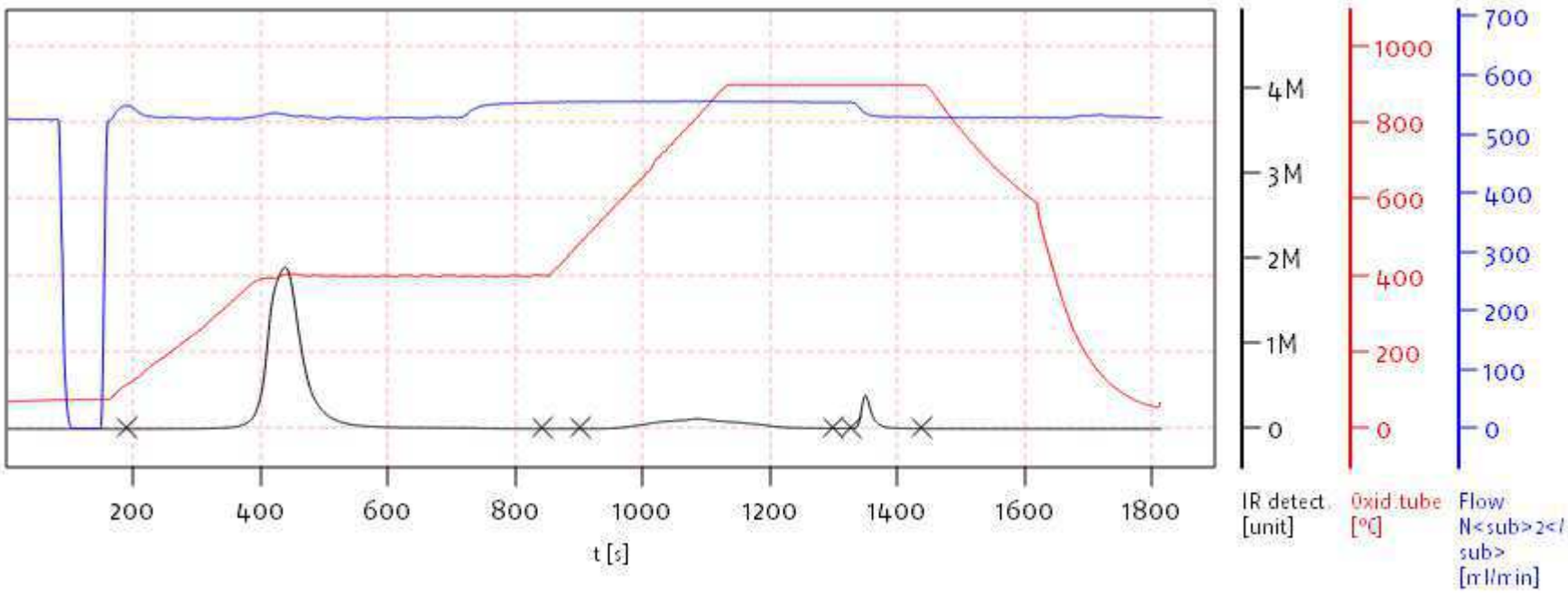
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78 | 78 | BKL0599-DUP2 | 538.20 | | CARBON | 12/30/2022 5:39 AM | bl | 1.340 | 4 525 617 | 1.540 | 0.075 | 287 997 | 721 652 | 1.265 | 0.200 | 0.9774 | 1.0000 |




Name:

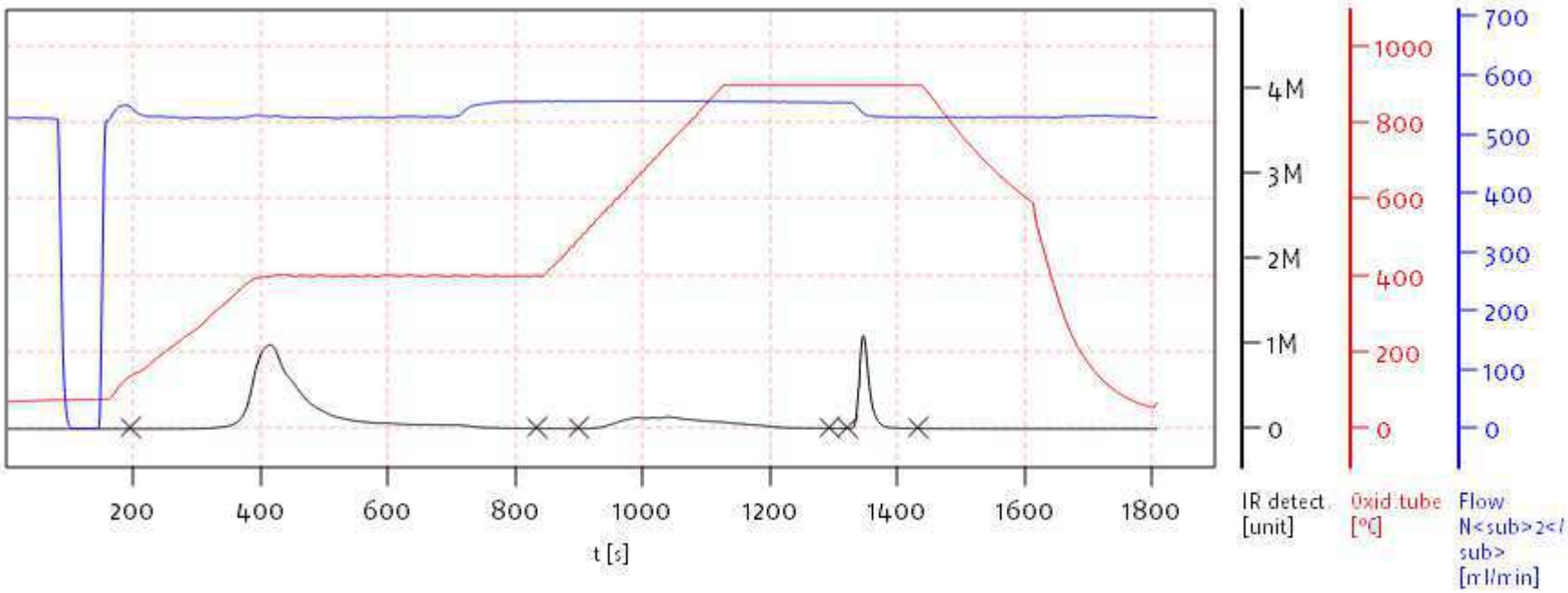
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 79 | 79 | BKL0599-DUP3 | 512.60 | | CARBON | 12/30/2022 6:10 AM | bl | 1.239 | 3 475 726 | 1.518 | 0.221 | 758 207 | 951 296 | 1.018 | 0.279 | 0.9774 | 1.0000 |




Name:

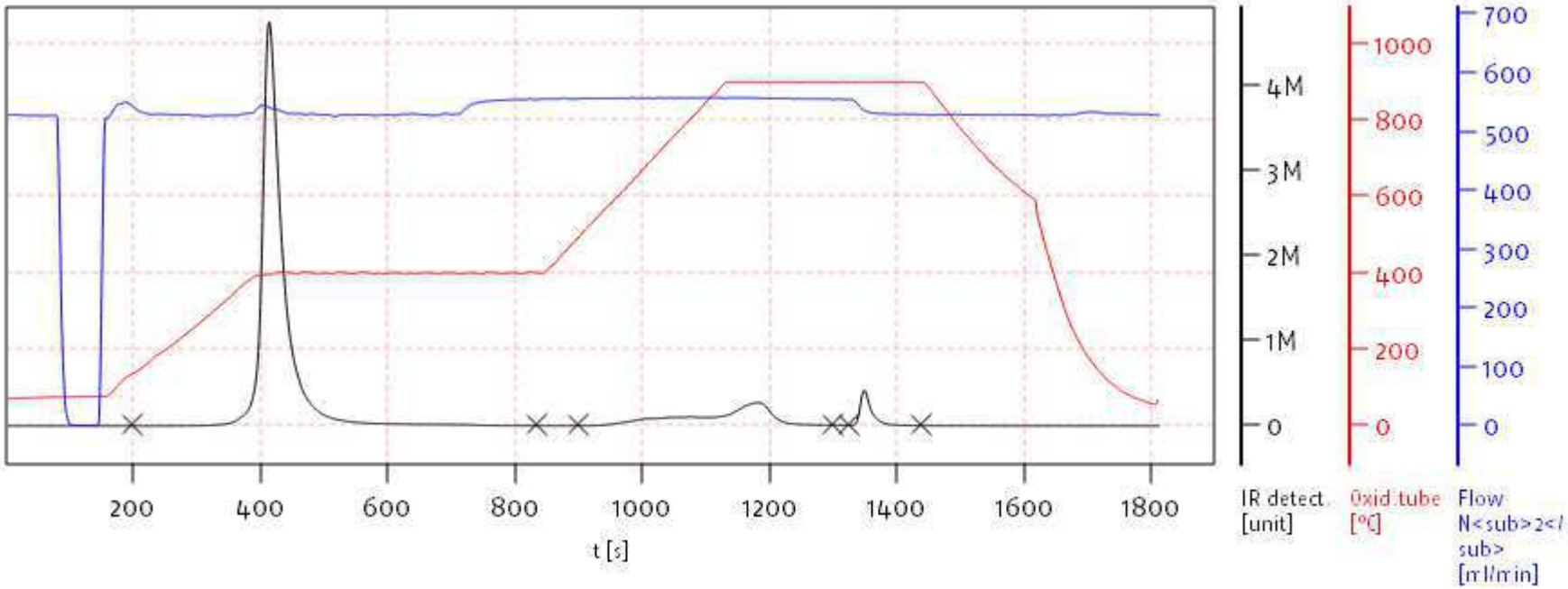
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 80 | BKL0599-MS2 | 530.50 | 0.0074 | CARBON | 12/30/2022 6:40 AM | bl | 2.009 | 6 762 198 | 2.370 | 0.088 | 327 572 | 1 263 888 | 1.921 | 0.361 | 0.9774 | 1.0000 |




Name:

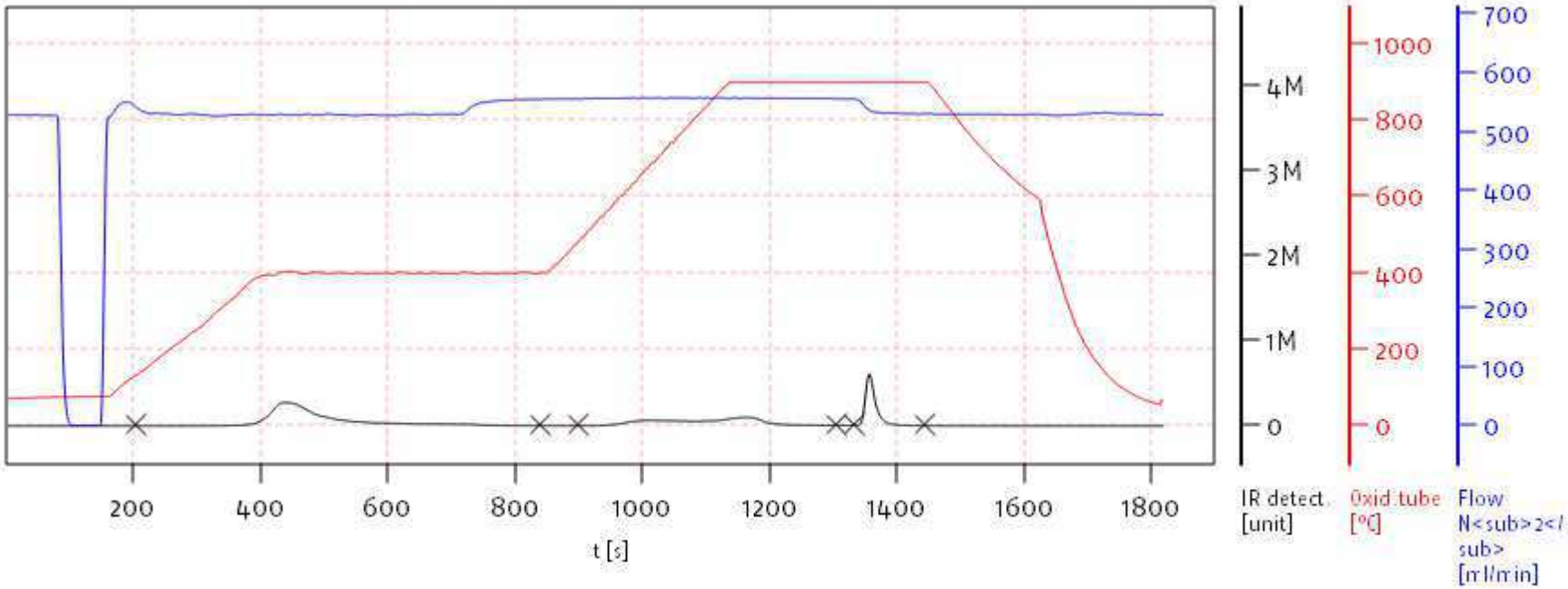
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 81 | 81 | 22L0492-18 | 500.40 | | CARBON | 12/30/2022 7:11 AM | bl | 0.448 | 1 096 735 | 0.635 | 0.125 | 429 558 | 631 029 | 0.324 | 0.187 | 0.9774 | 1.0000 |




Name:

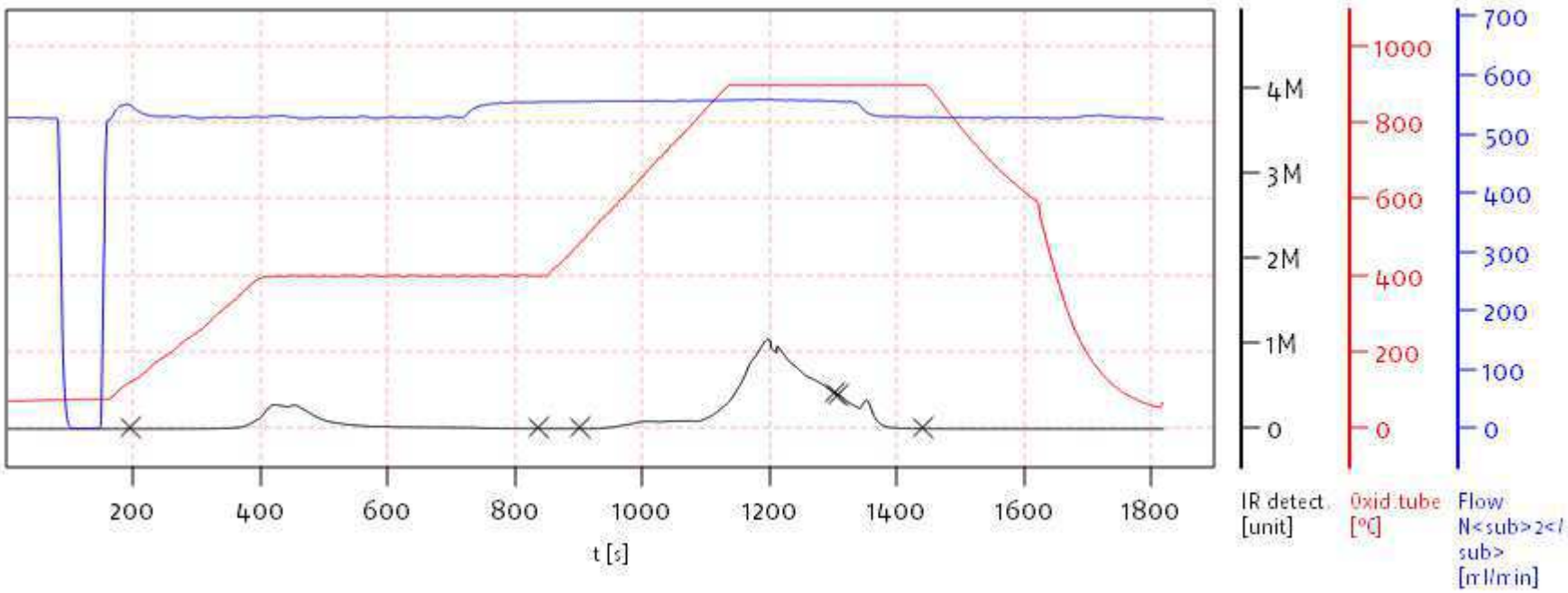
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | 82 | 22K0328-20RE1 | 542.00 | | CARBON | 12/30/2022 7:42 AM | bl | 0.526 | 1 230 274 | 1.984 | 0.190 | 690 477 | 5 131 194 | 0.336 | 1.458 | 0.9774 | 1.0000 |




Name:

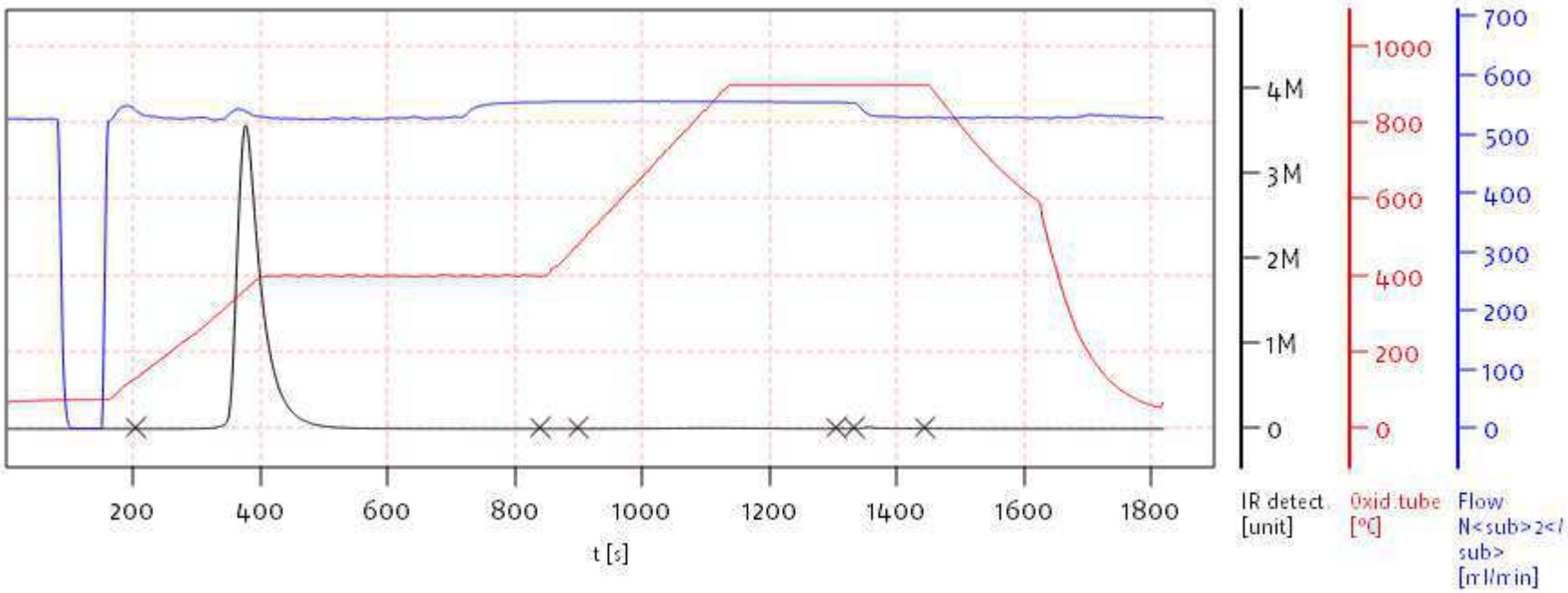
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83 | 83 | 22K0447-01RE1 | 209.80 | | CARBON | 12/30/2022 8:12 AM | bl | 4.260 | 5 933 259 | 4.288 | 0.000 | 26 832 | 63 908 | 4.260 | 0.028 | 0.9774 | 1.0000 |




Name:

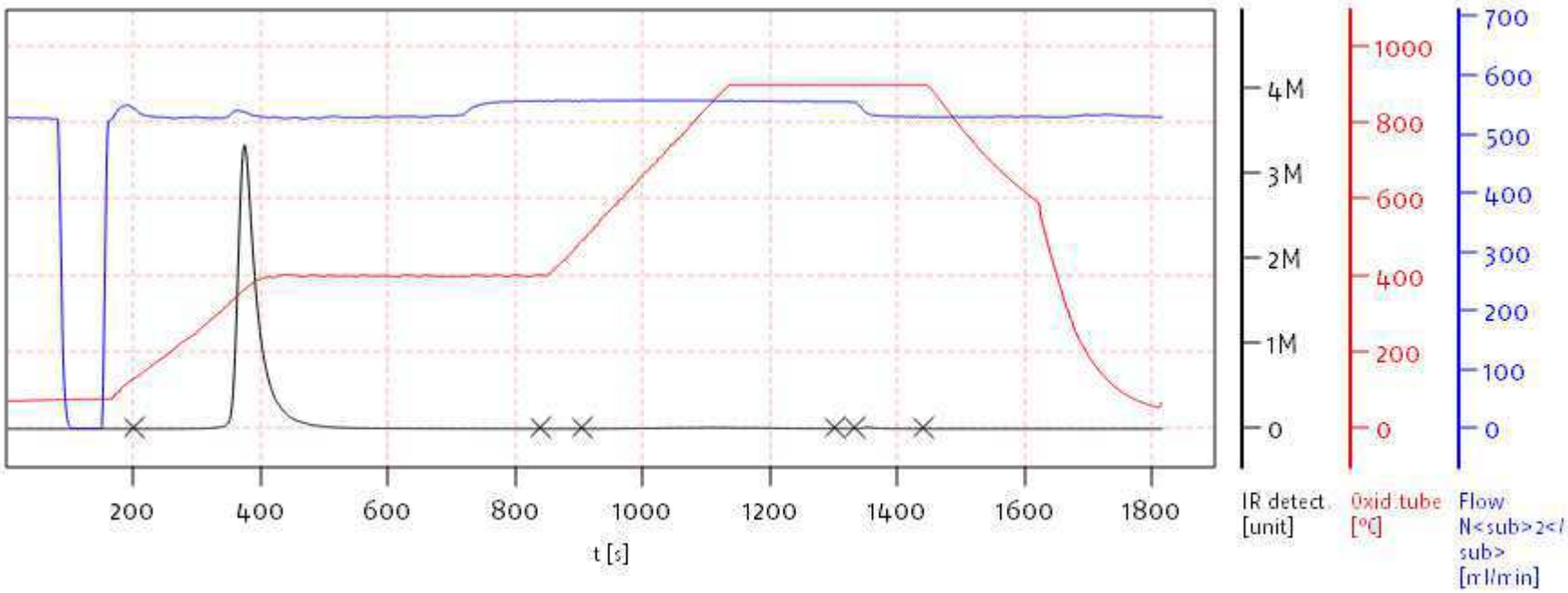
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 84 | 84 | 22K0447-02RE1 | 194.10 | | CARBON | 12/30/2022 8:43 AM | bl | 3.497 | 4 512 574 | 3.560 | 0.000 | 19 897 | 105 295 | 3.497 | 0.063 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

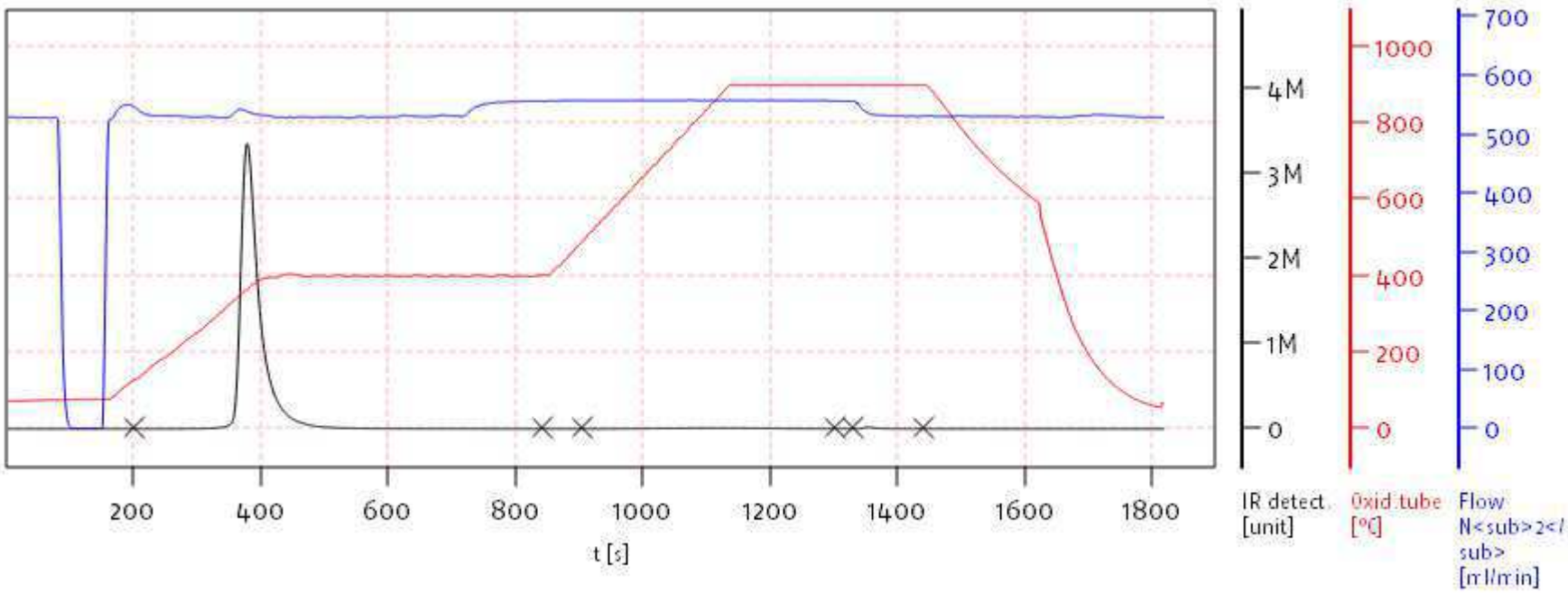
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | 85 | 22L0137-17RE1 | 213.20 | | CARBON | 12/30/2022 9:14 AM | bl | 3.048 | 4 320 825 | 3.080 | 0.000 | 17 875 | 70 526 | 3.048 | 0.032 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

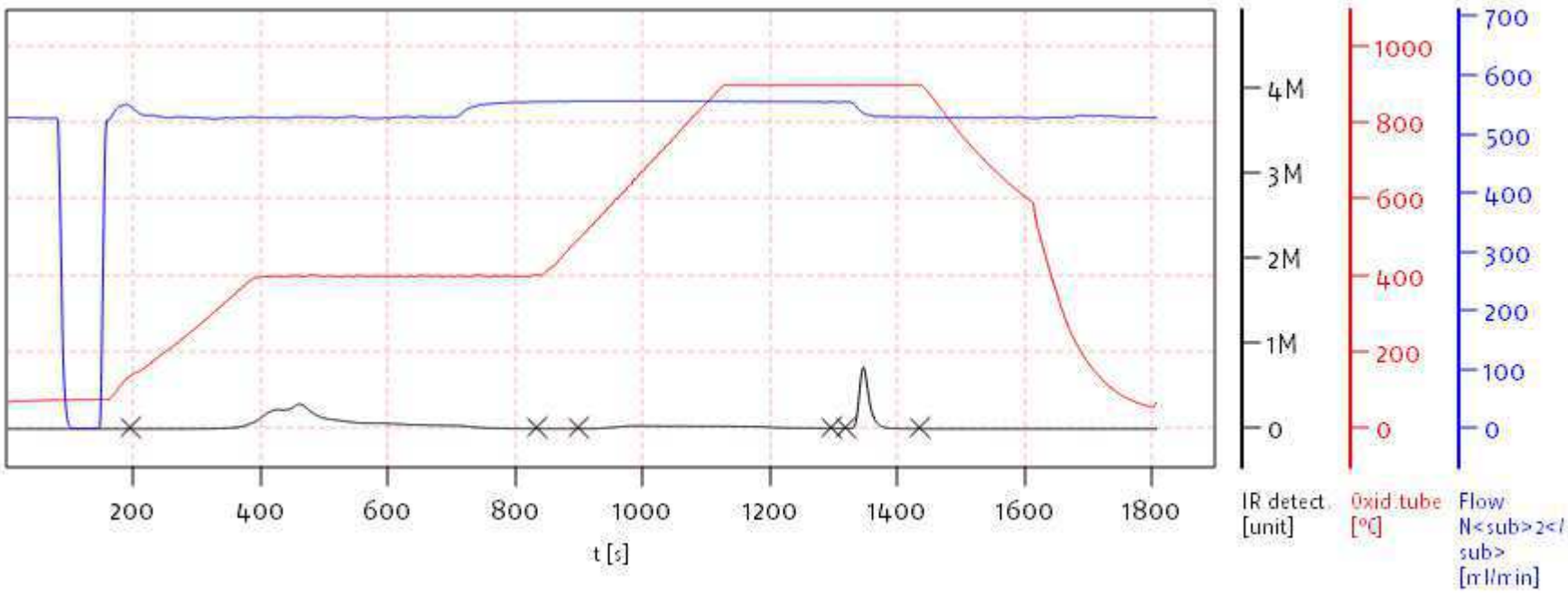
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86 | 86 | BKL0503-DUP2 | 503.30 | | CARBON | 12/30/2022 9:44 AM | bl | 0.573 | 1 451 063 | 0.664 | 0.144 | 495 993 | 323 969 | 0.428 | 0.091 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

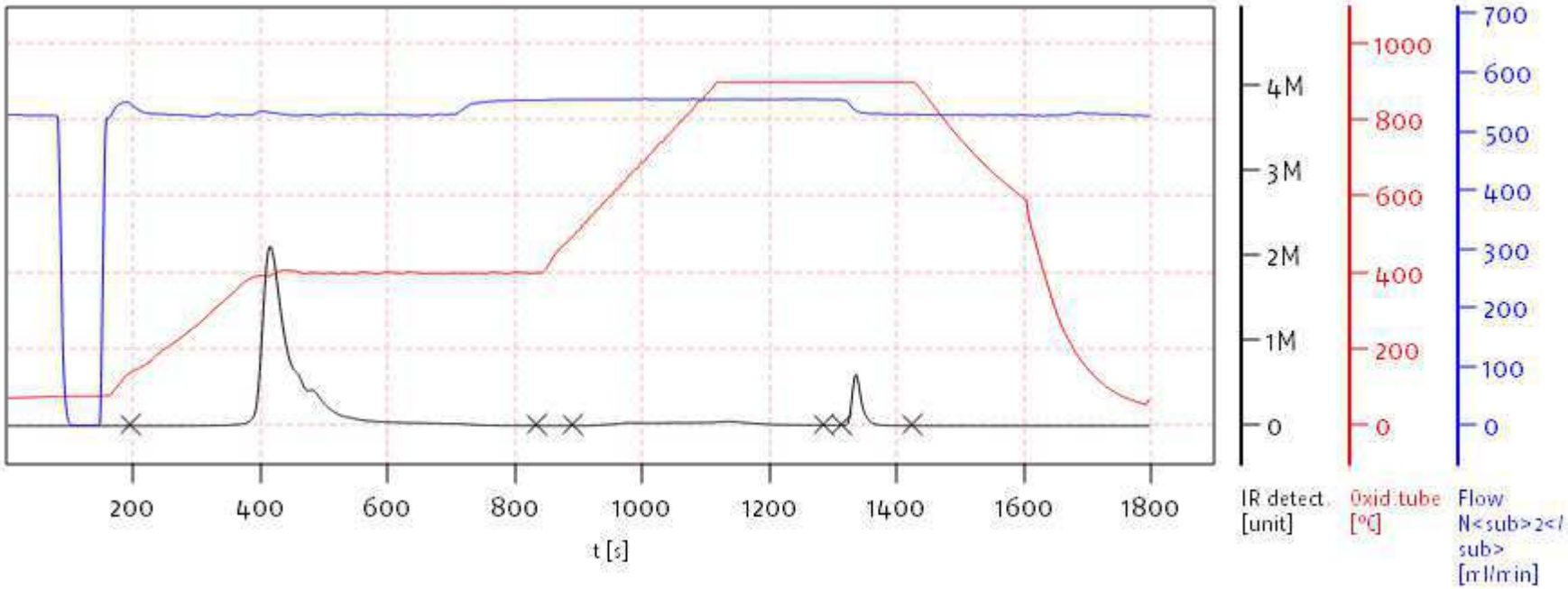
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 87 | 87 | BKL0503-MS2 | 511.80 | 0.0081 | CARBON | 12/30/2022 10:15 AM | bl | 1.378 | 4 302 208 | 1.483 | 0.114 | 402 234 | 375 823 | 1.264 | 0.106 | 0.9774 | 1.0000 |




Name:

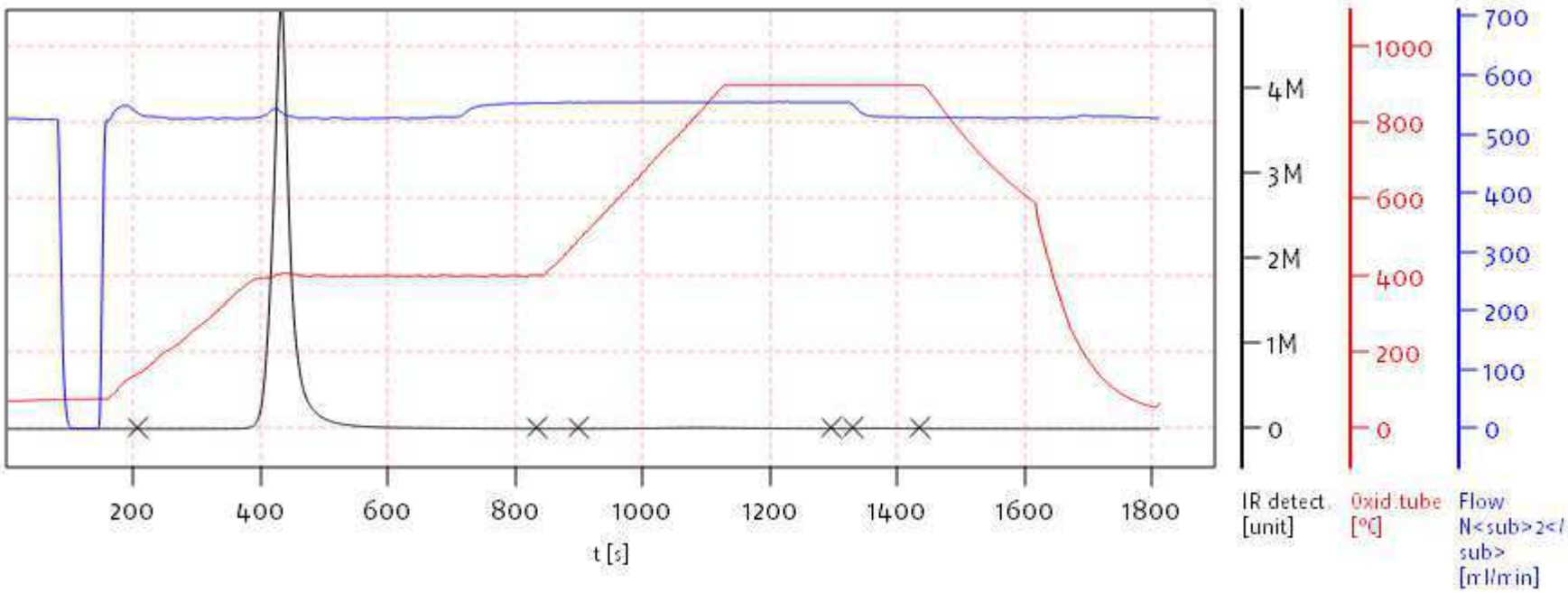
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 88 | 88 | SKL0336-CCV7 | 19.80 | | CARBON | 12/30/2022 10:45 AM | bl | 46.118 | 6 061 556 | 46.639 | 0.000 | 19 488 | 93 189 | 46.118 | 0.521 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

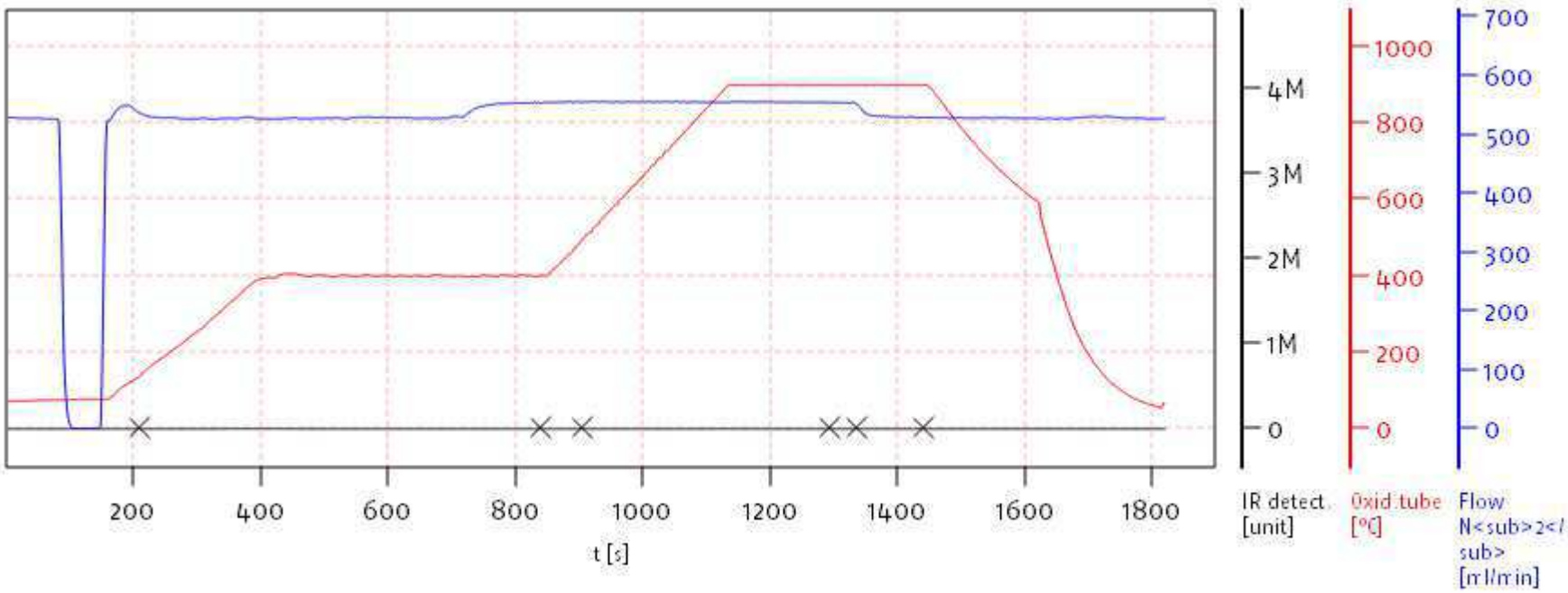
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 89 | 89 | SKL0336-CCB7 | 527.20 | | CARBON | 12/30/2022 11:16 AM | bl,C2u | 0.000 | 9 254 | 0.000 | 0.000 | 702 | 4 532 | 0.000 | 0.000 | 0.9774 | 1.0000 |




Name:

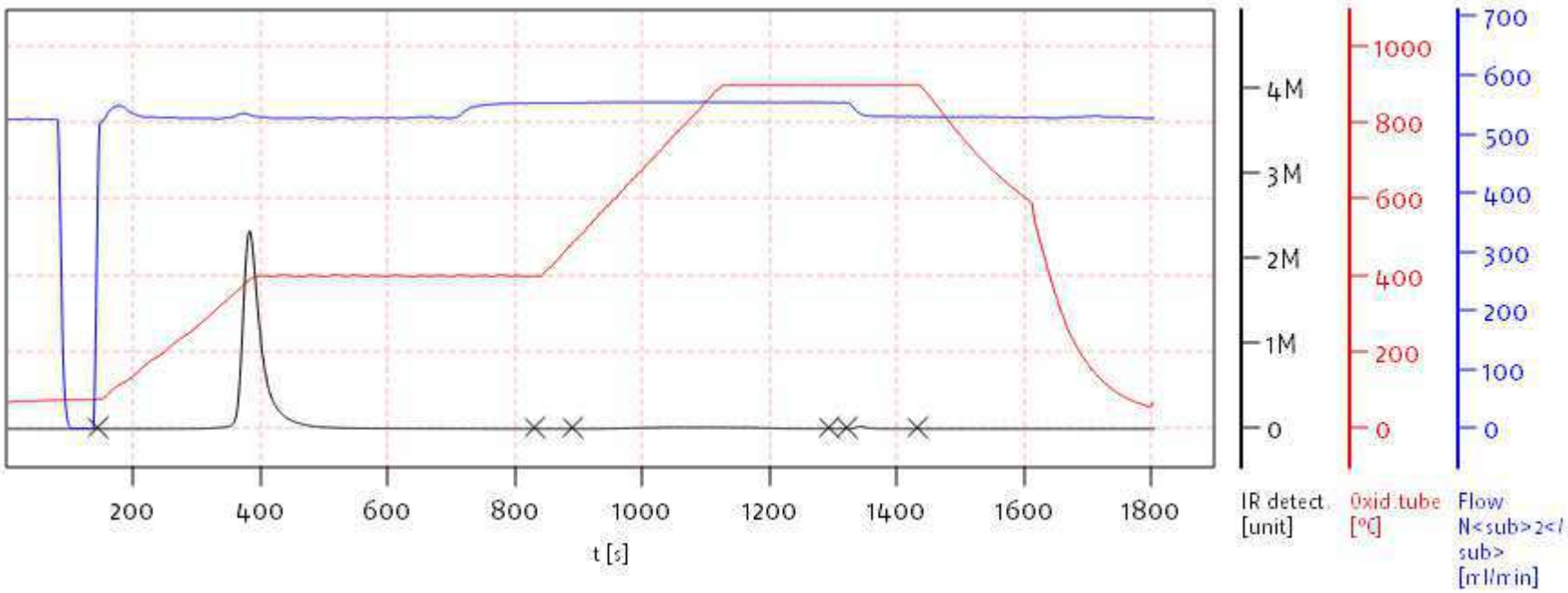
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90 | 1 | 22L0246-32RE1 | 201.00 | | CARBON | 12/30/2022 11:47 AM | bl | 2.232 | 2 991 164 | 2.320 | 0.000 | 22 517 | 141 451 | 2.232 | 0.089 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

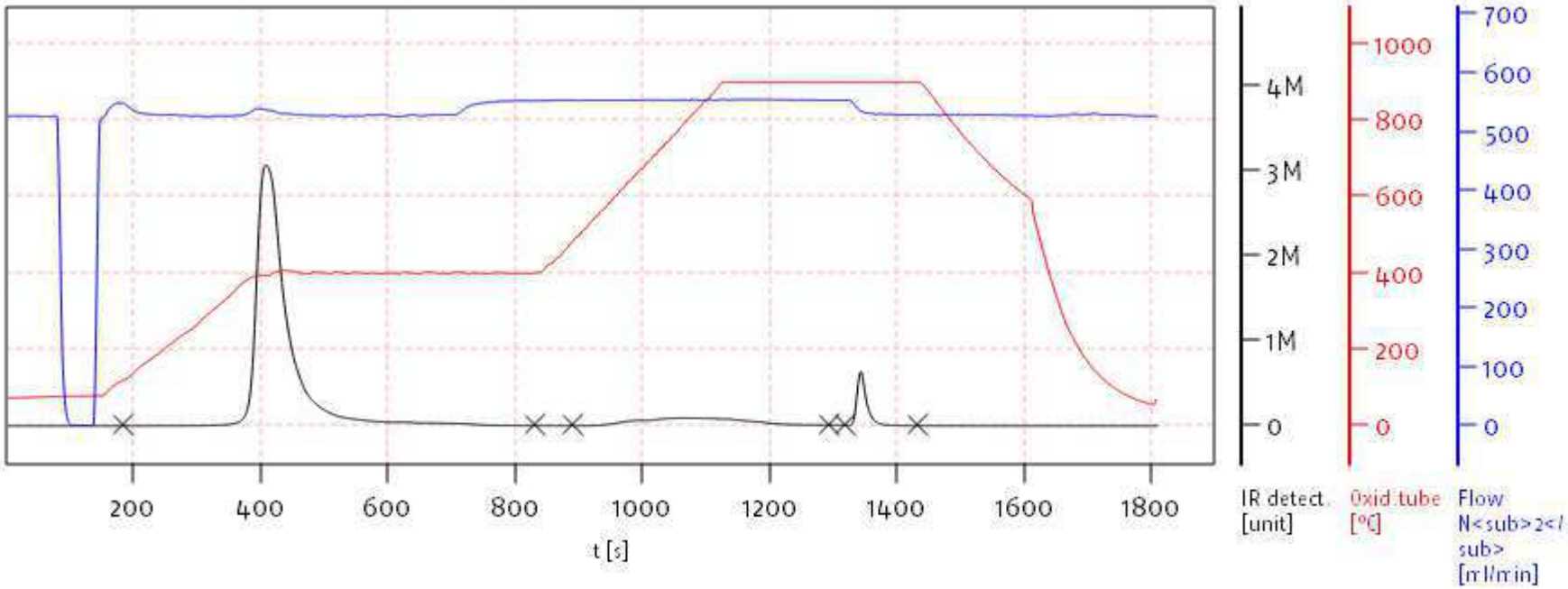
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 | 2 | BKL0385-MS2 | 508.50 | 0.0084 | CARBON | 12/30/2022 12:17 PM | bl | 2.025 | 6 424 375 | 2.236 | 0.122 | 425 995 | 719 774 | 1.904 | 0.211 | 0.9774 | 1.0000 |




Name:

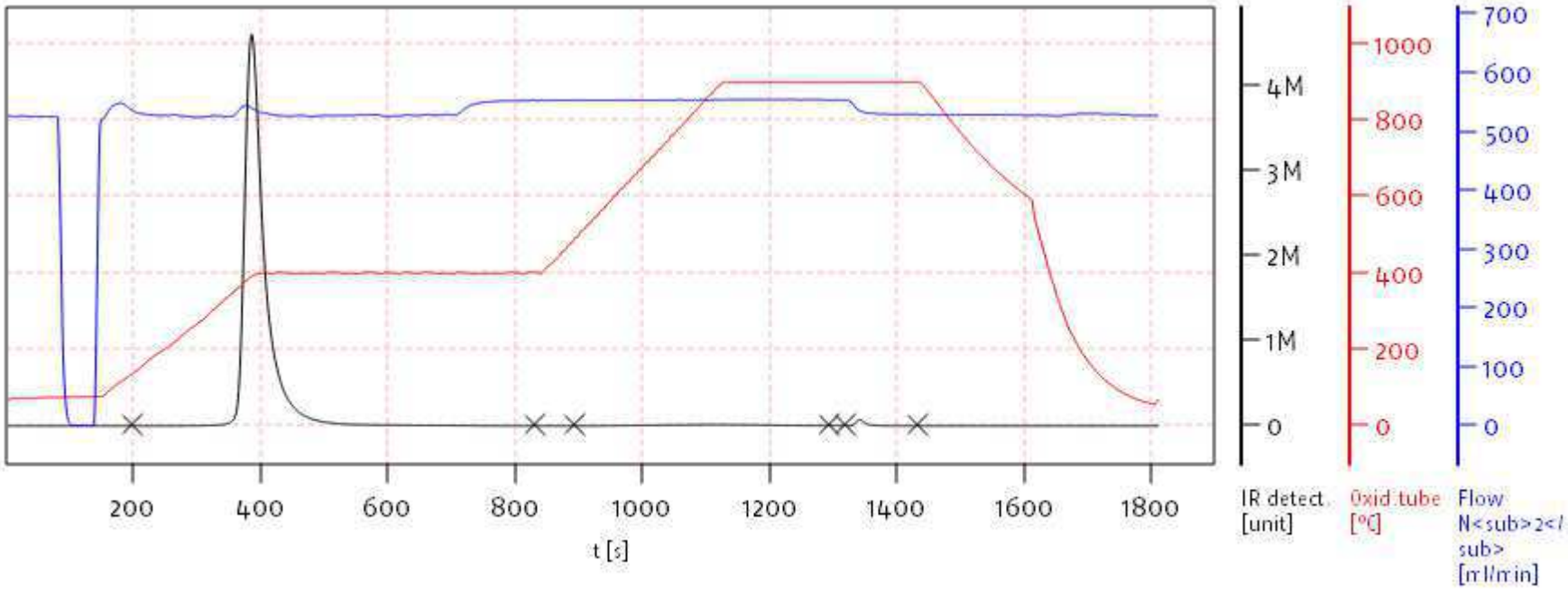
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 92 | 3 | BKL0300-MS2 | 203.00 | 0.0085 | CARBON | 12/30/2022 12:48 PM | bl | 4.684 | 6 287 310 | 4.749 | 0.017 | 49 399 | 111 420 | 4.666 | 0.065 | 0.9774 | 1.0000 |




Name:

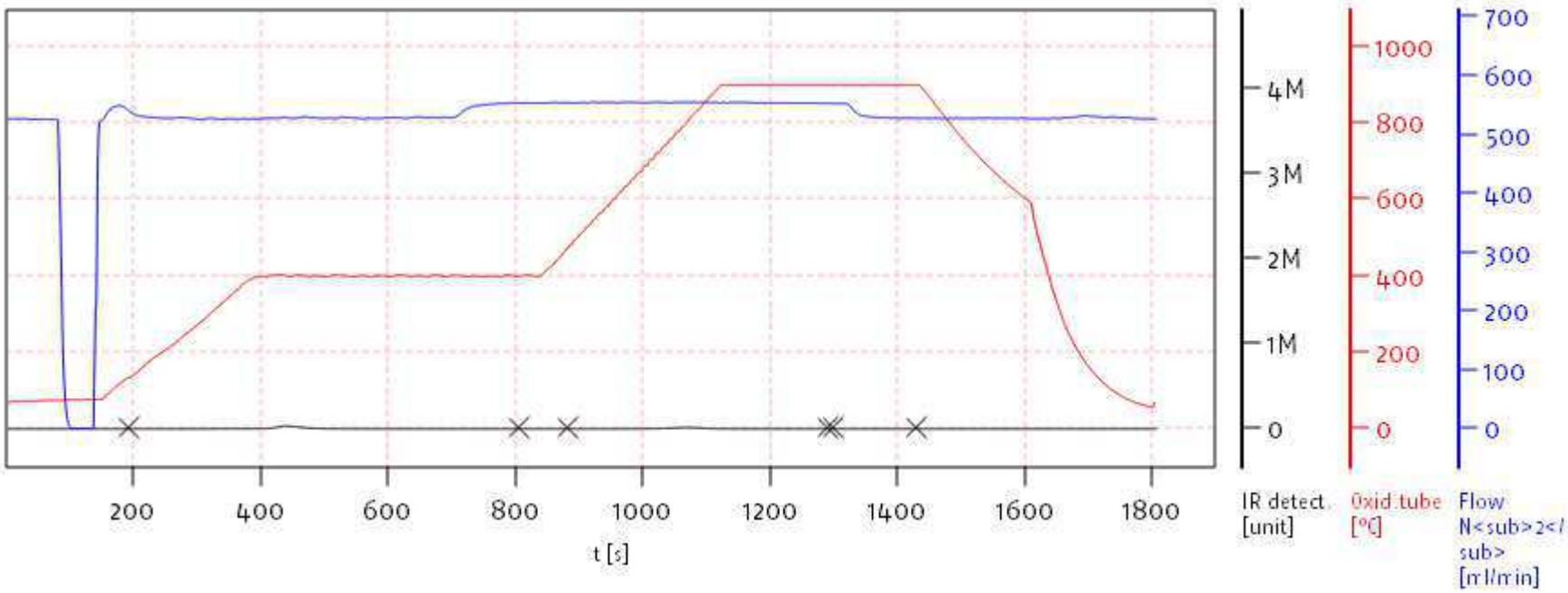
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93 | 4 | BKL0650-MRL1 | 505.40 | | CARBON | 12/30/2022 1:18 PM | bl,C2u | 0.013 | 69 320 | 0.016 | 0.000 | 612 | 36 409 | 0.013 | 0.003 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

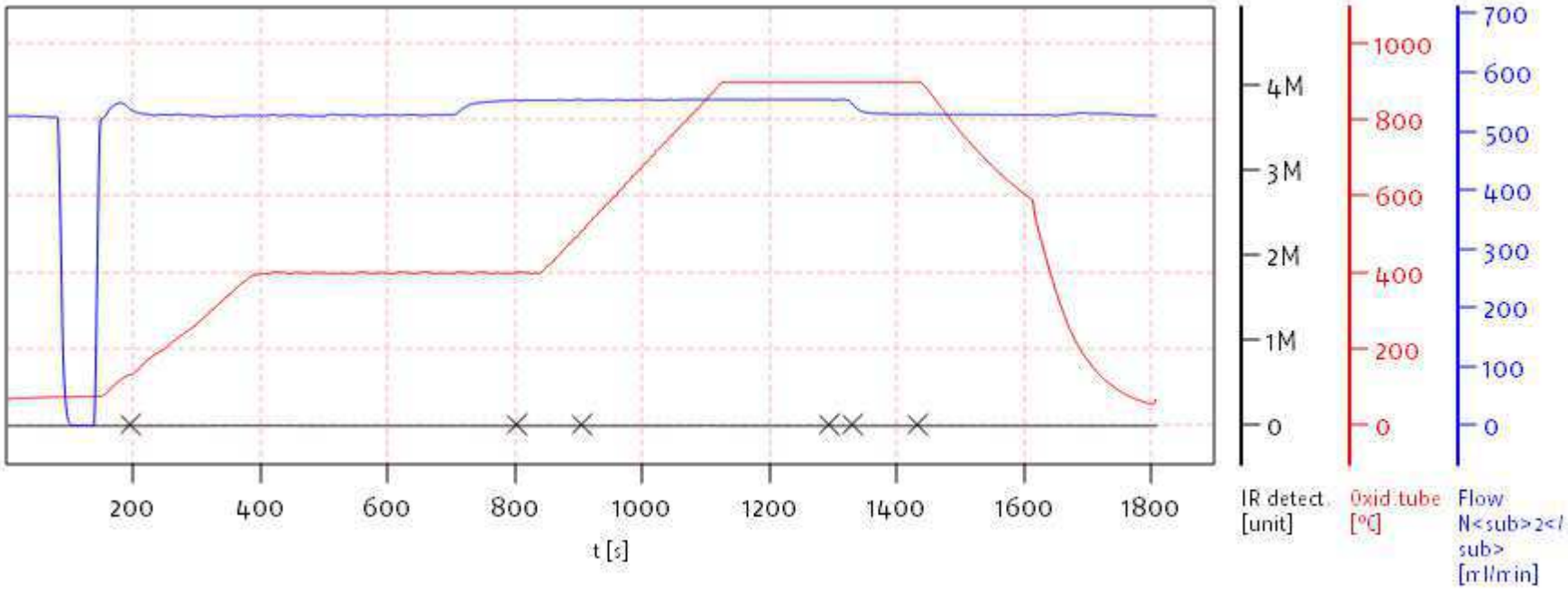
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 94 | 5 | BKL0650-BLK1 | 516.90 | | CARBON | 12/30/2022 1:49 PM | bl,C2u | 0.000 | 10 665 | 0.000 | 0.000 | 474 | 4 779 | 0.000 | 0.000 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

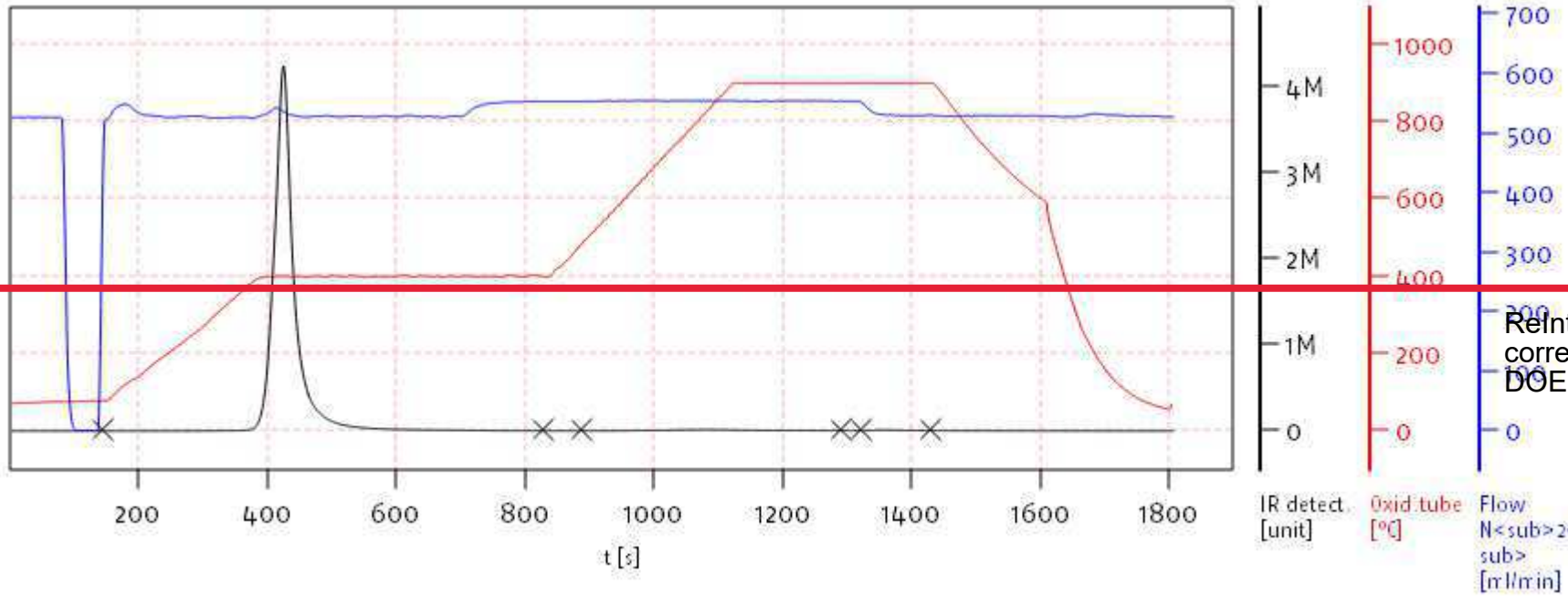
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95 | 6 | BKL0650-BS1 | 191.00 | | CARBON | 12/30/2022 2:19 PM | bl | 4.508 | 5 715 005 | 4.570 | 0.001 | 28 228 | 103 151 | 4.506 | 0.062 | 0.9774 | 1.0000 |




Reintegrated with correct weight DOE 01/03/23

Name:

Access: soliTOC superuser

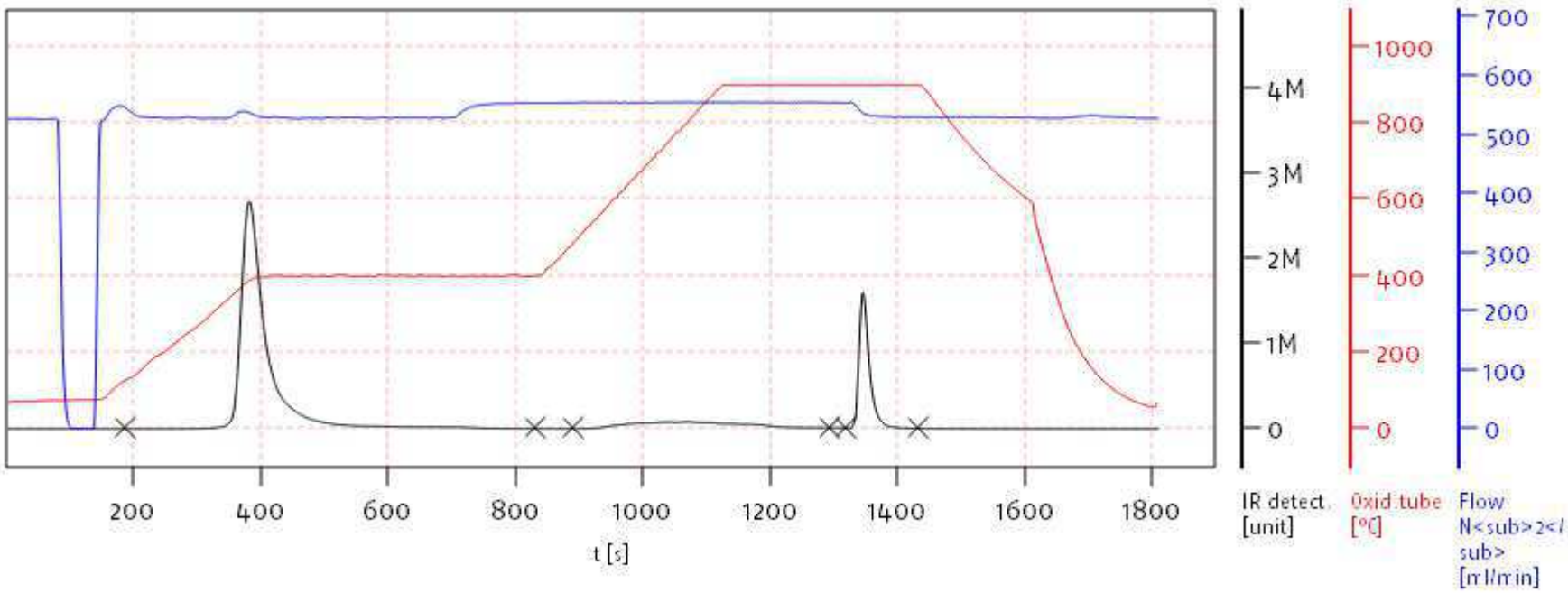
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 7 | BKL0650-SRM1 | 285.30 | | CARBON | 12/30/2022 2:50 PM | bl | 3.042 | 4 609 625 | 3.402 | 0.612 | 1 154 220 | 688 728 | 2.431 | 0.359 | 0.9774 | 1.0000 |




Name:

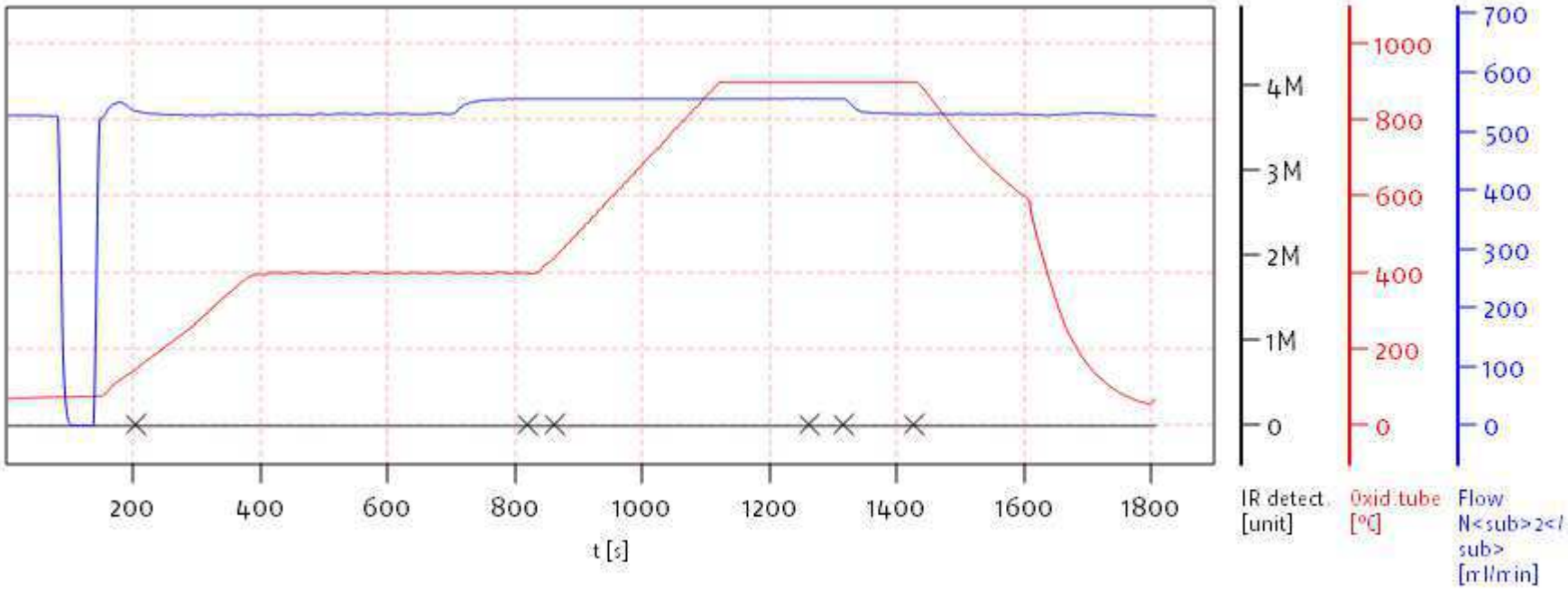
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 97 | 8 | BLANK | 1.00 | | CARBON | 12/30/2022 3:20 PM | bl | 0.000 | 4 983 | 0.000 | 0.000 | 560 | 822 | 0.000 | 0.000 | 0.9774 | 1.0000 |




Name:

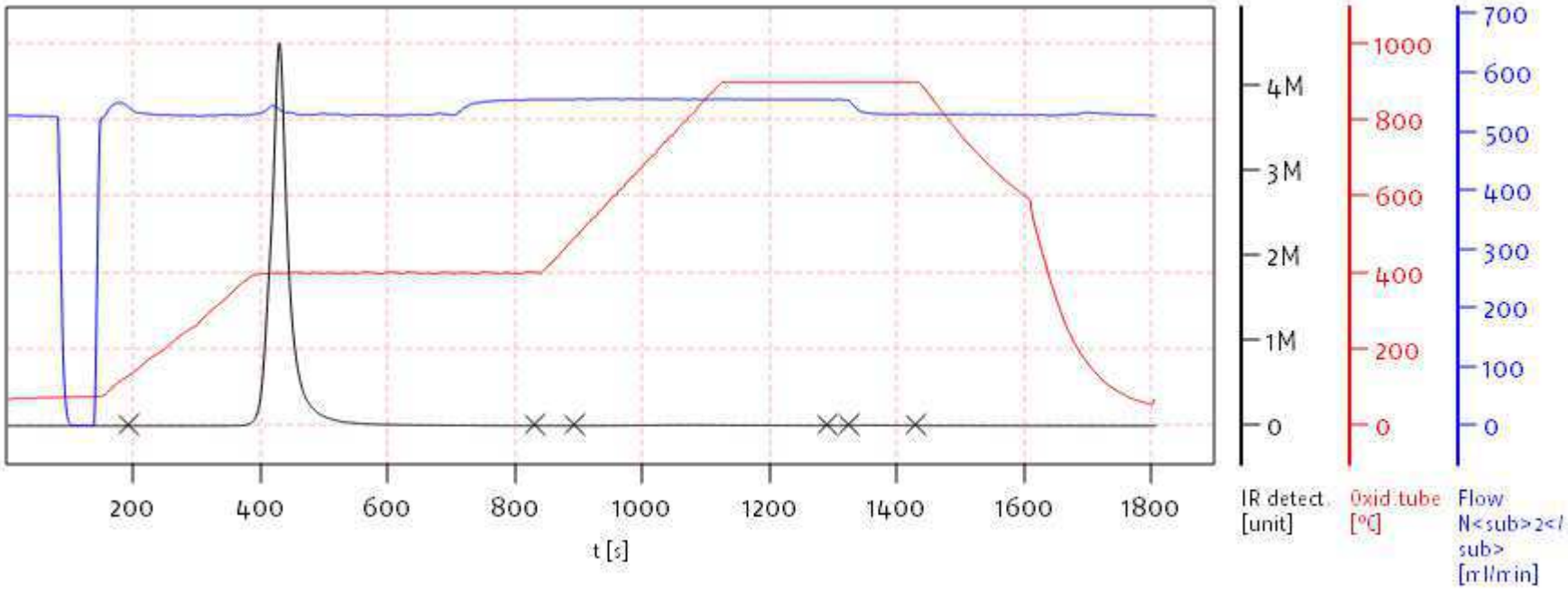
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 98 | 9 | Dfactor | 18.50 | | CARBON | 12/30/2022 3:51 PM | bl | 44.446 | 5 599 692 | 44.903 | 0.000 | 21 143 | 81 236 | 44.446 | 0.458 | 0.9531 | 1.0000 |




Name:

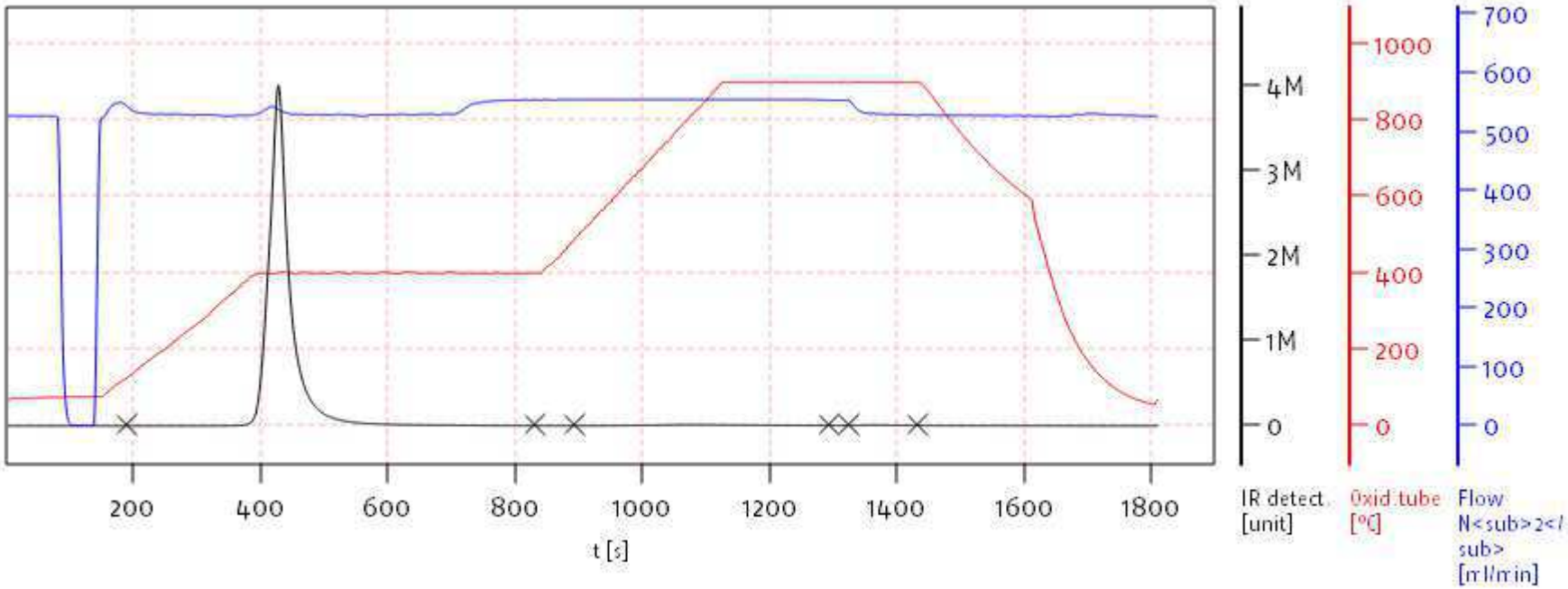
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99 | 10 | Dfactor | 19.20 | | CARBON | 12/30/2022 4:22 PM | bl | 44.458 | 5 705 068 | 45.092 | 0.012 | 28 017 | 105 190 | 44.446 | 0.634 | 0.9708 | 1.0000 |




Name:

Access: soliTOC superuser

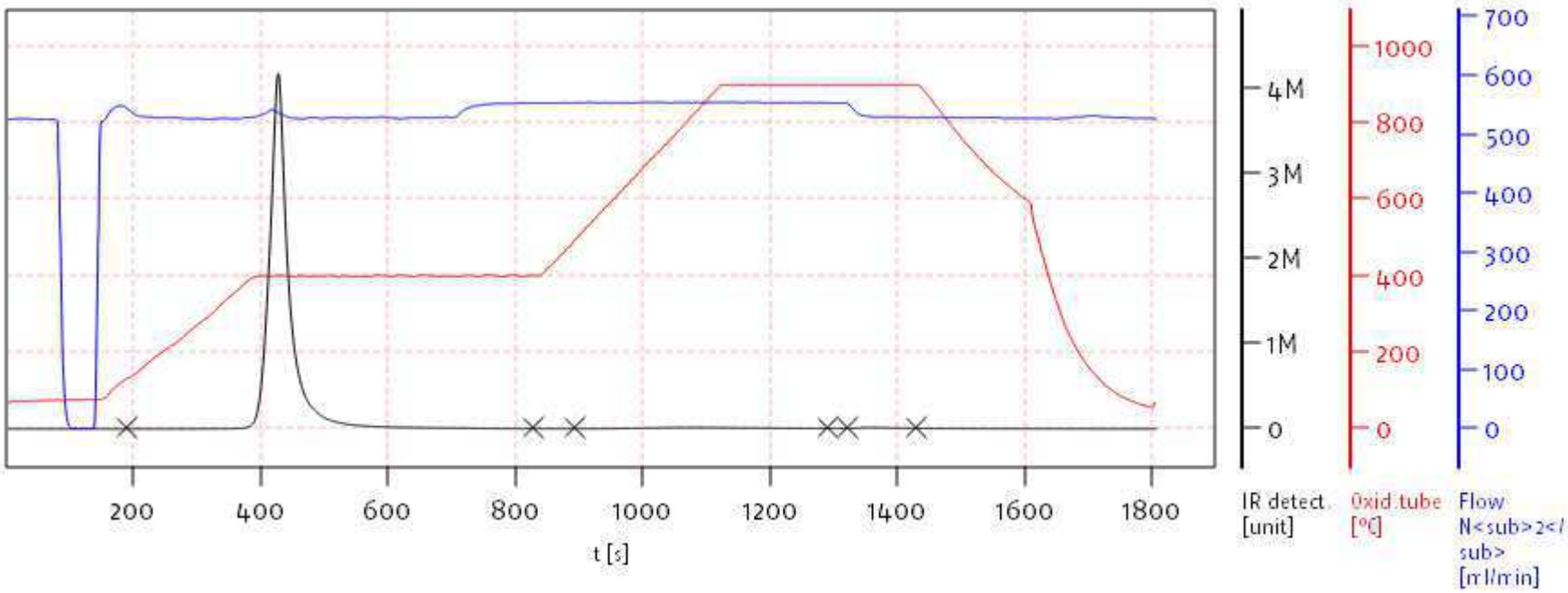
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 11 | SKL0336-CCV8 | 19.00 | | CARBON | 12/30/2022 4:52 PM | bl | 43.776 | 5 599 287 | 44.606 | 0.102 | 39 002 | 128 357 | 43.675 | 0.830 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

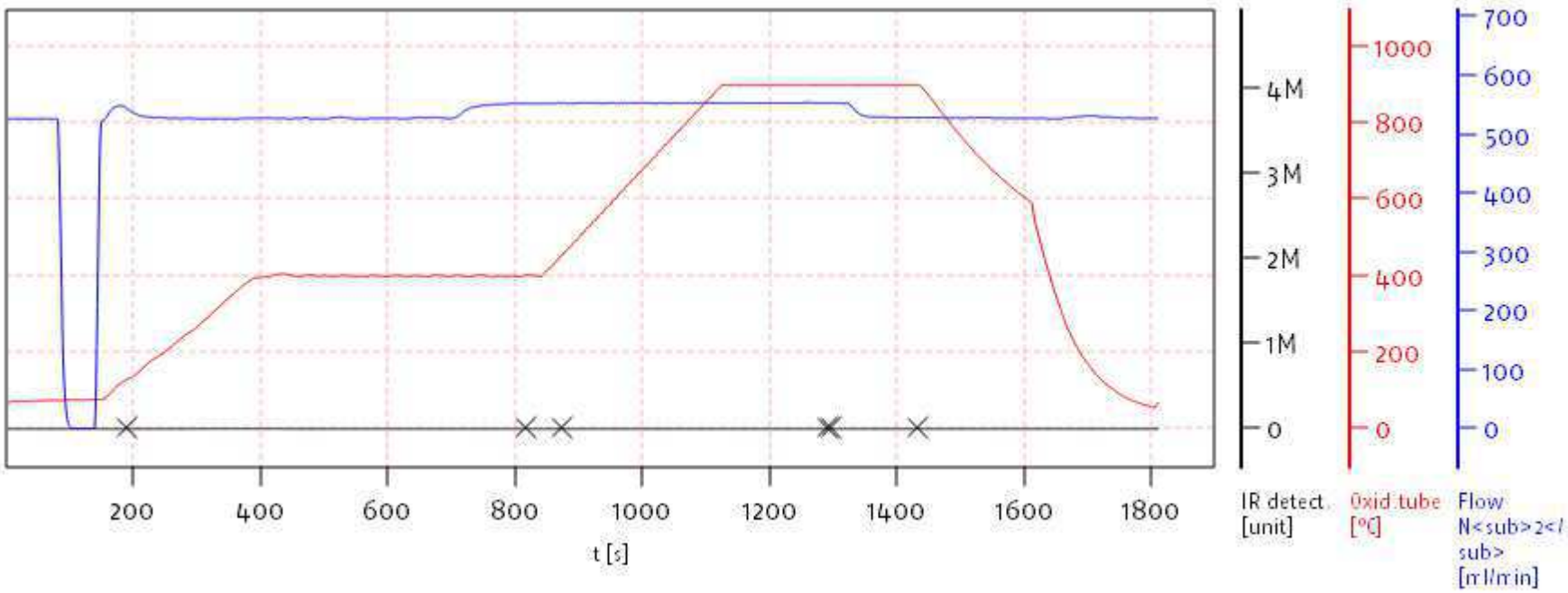
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 | 12 | SKL0336-CCB8 | 508.00 | | CARBON | 12/30/2022 5:23 PM | bl,C3u,C2u | 0.000 | 10 601 | 0.000 | 0.000 | 1 270 | 233 | 0.000 | 0.000 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

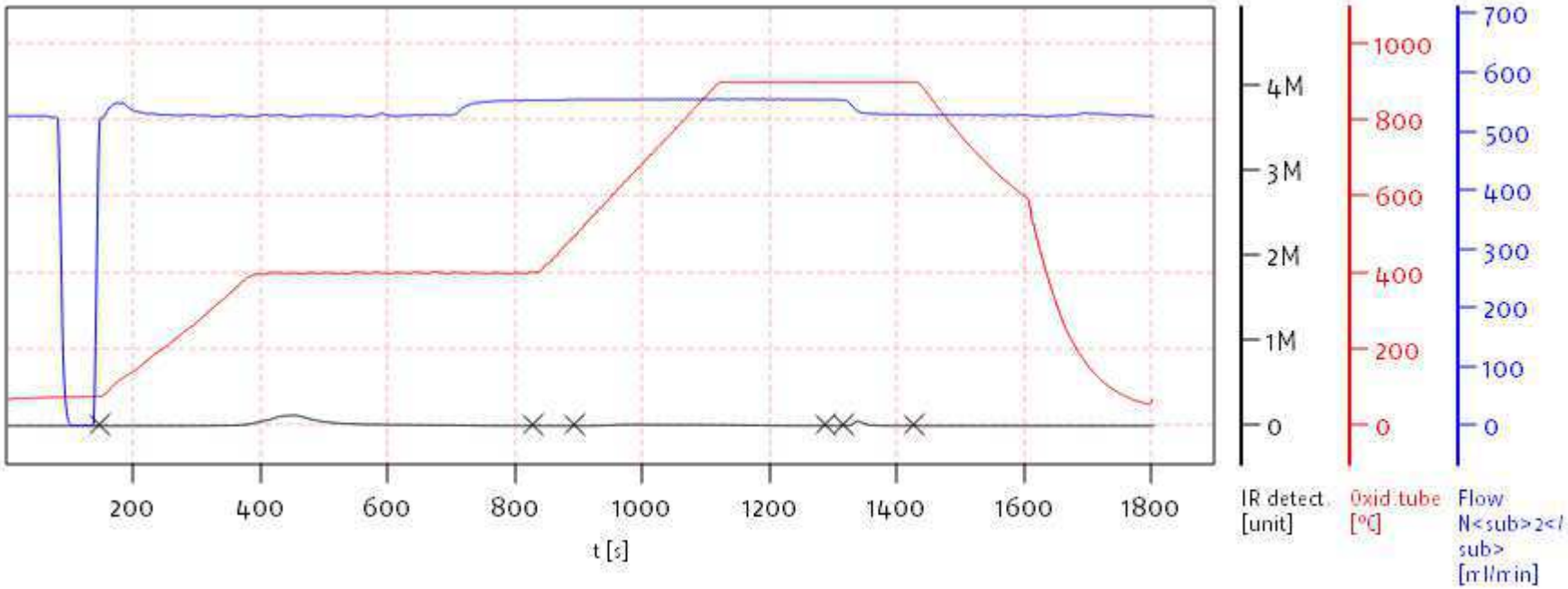
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 102 | 13 | 22L0329-01 | 518.20 | | CARBON | 12/30/2022 5:53 PM | bl | 0.150 | 531 470 | 0.177 | 0.005 | 42 849 | 116 986 | 0.145 | 0.027 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

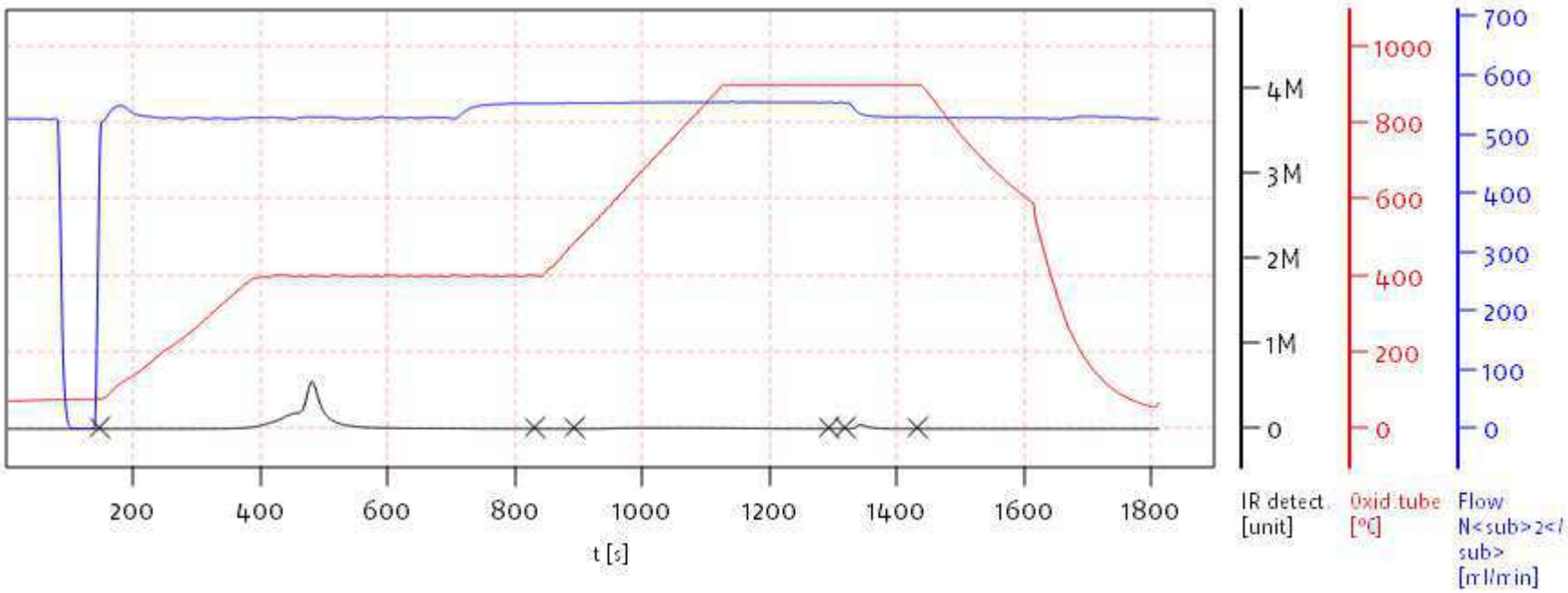
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | 14 | BKL0650-DUP1 | 513.70 | | CARBON | 12/30/2022 6:24 PM | bl | 0.297 | 1 034 967 | 0.317 | 0.004 | 41 051 | 94 719 | 0.292 | 0.021 | 0.9619 | 1.0000 |




Name:

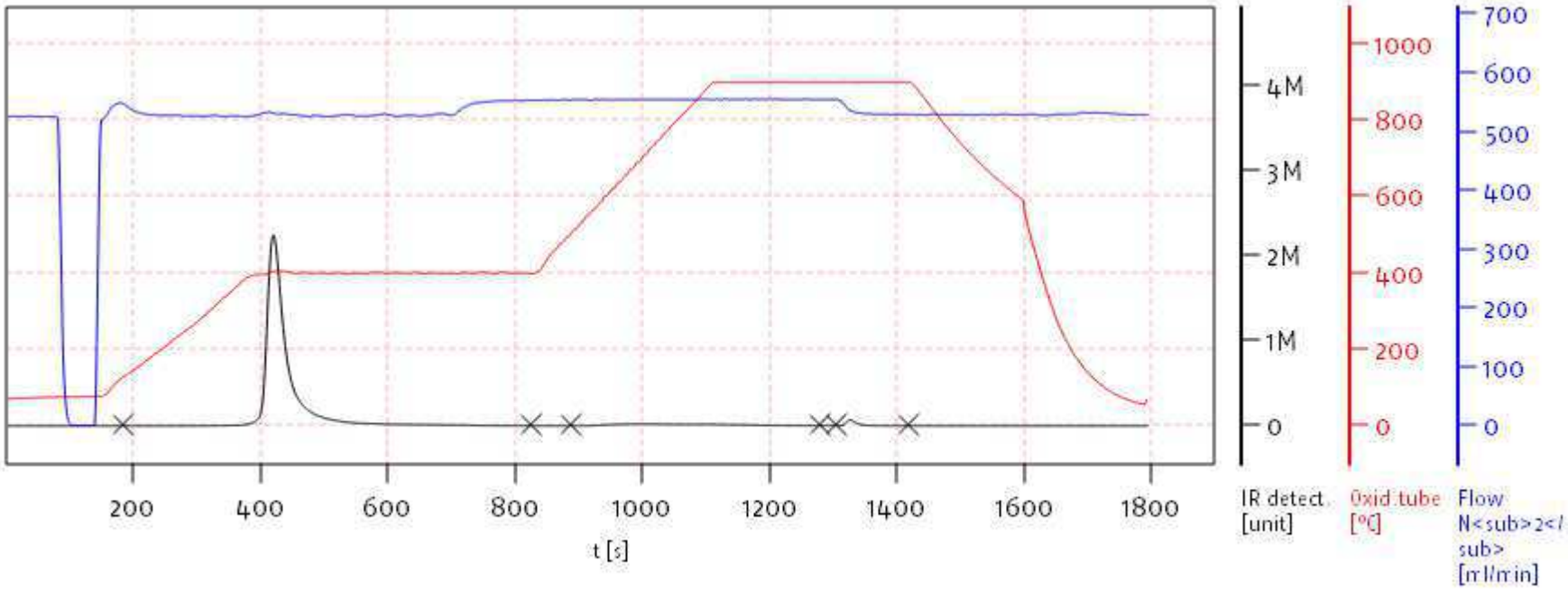
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 104 | 15 | BKL0650-MS1 | 514.80 | 0.0084 | CARBON | 12/30/2022 6:54 PM | bl | 0.881 | 3 045474 | 0.926 | 0.008 | 52 341 | 174 645 | 0.873 | 0.045 | 0.9619 | 1.0000 |




Name:

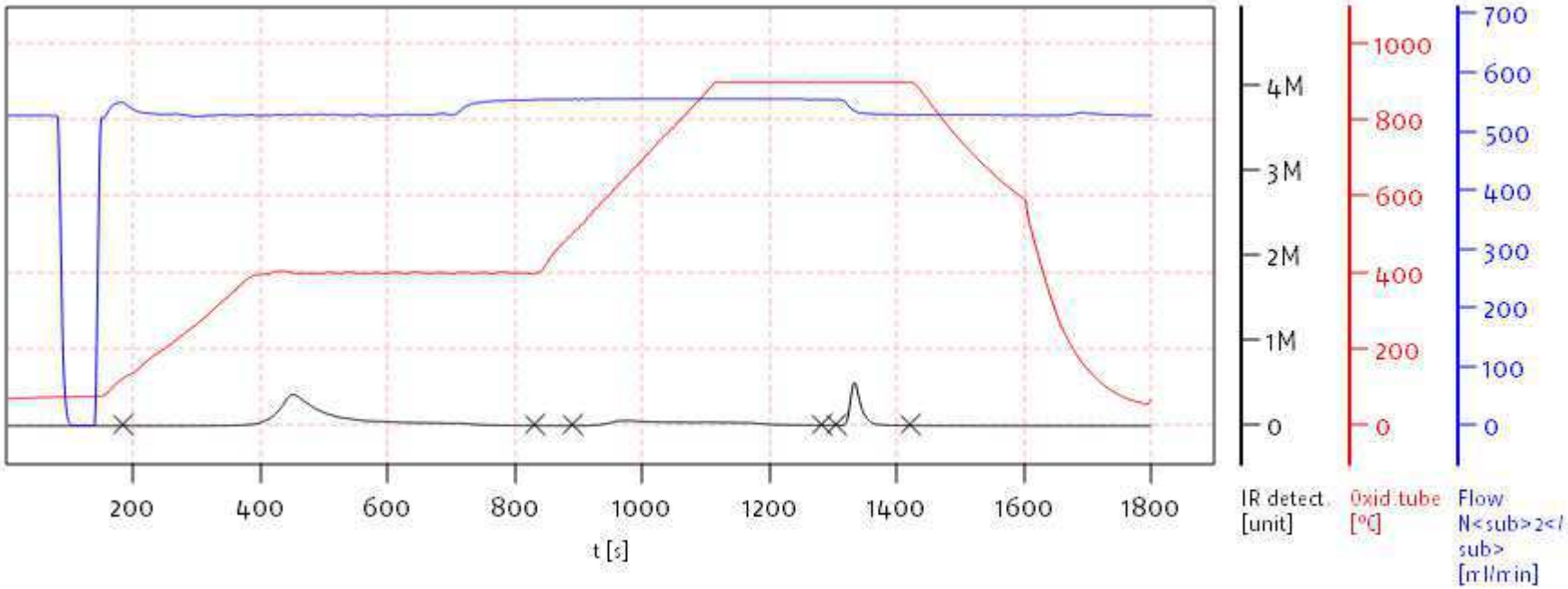
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 105 | 16 | 22L0329-02 | 515.60 | | CARBON | 12/30/2022 7:24 PM | bl | 0.494 | 1 362 305 | 0.623 | 0.108 | 386 919 | 454 739 | 0.386 | 0.129 | 0.9619 | 1.0000 |




Name:

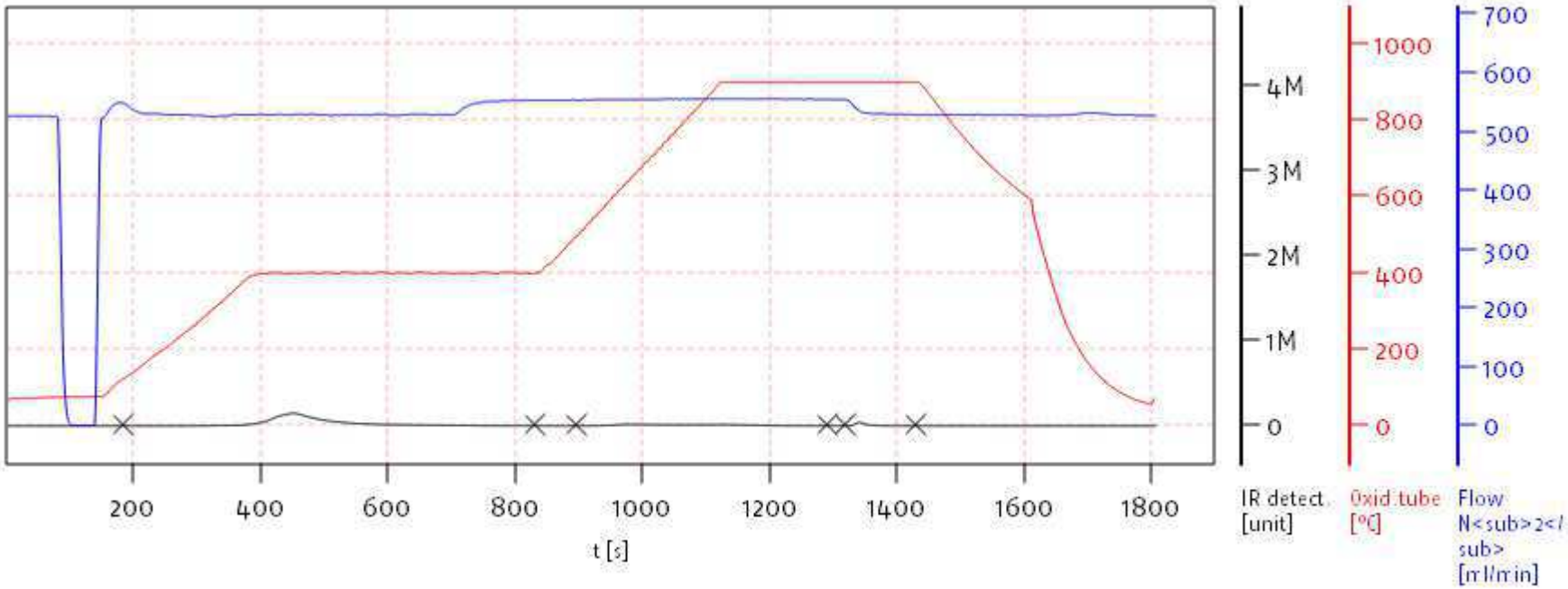
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106 | 17 | 22L0329-03 | 524.60 | | CARBON | 12/30/2022 7:55 PM | bl | 0.165 | 603 459 | 0.195 | 0.002 | 32 020 | 127 095 | 0.164 | 0.030 | 0.9619 | 1.0000 |




Name:

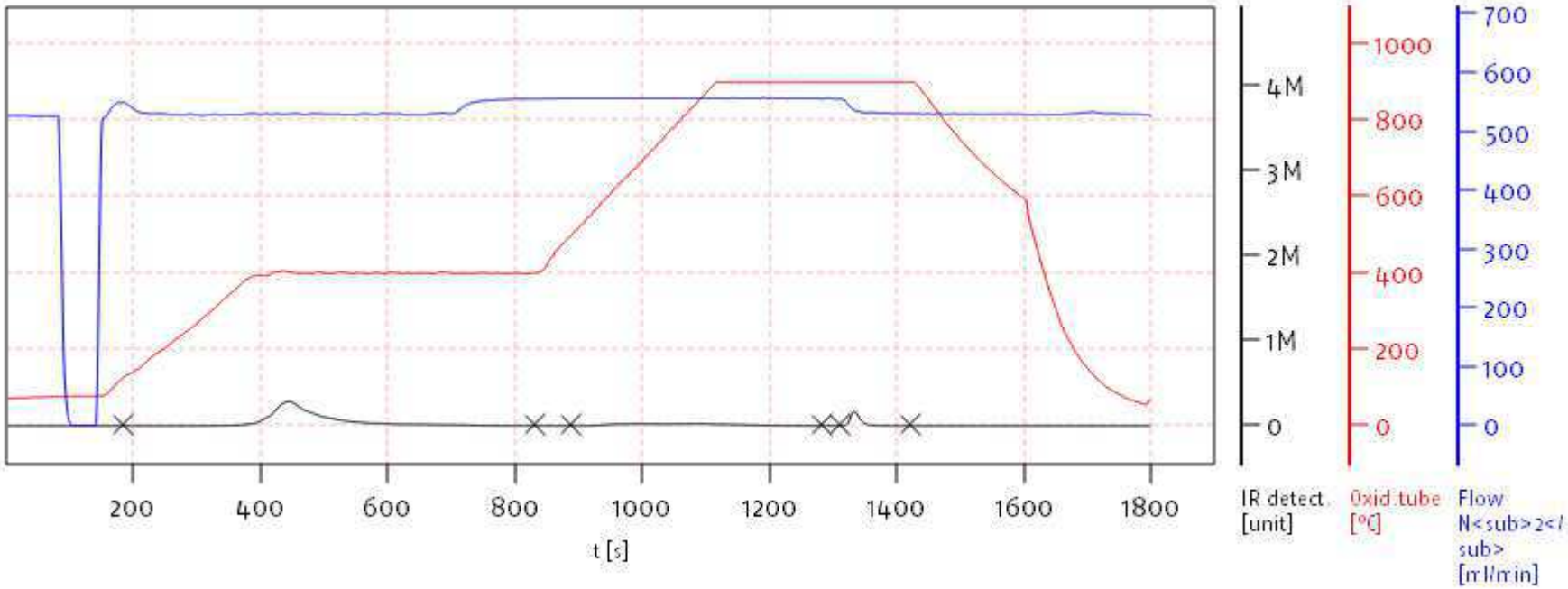
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 | 18 | 22L0329-04 | 508.00 | | CARBON | 12/30/2022 8:25 PM | bl | 0.315 | 1 008 067 | 0.367 | 0.027 | 114 928 | 198 185 | 0.288 | 0.052 | 0.9619 | 1.0000 |




Name:

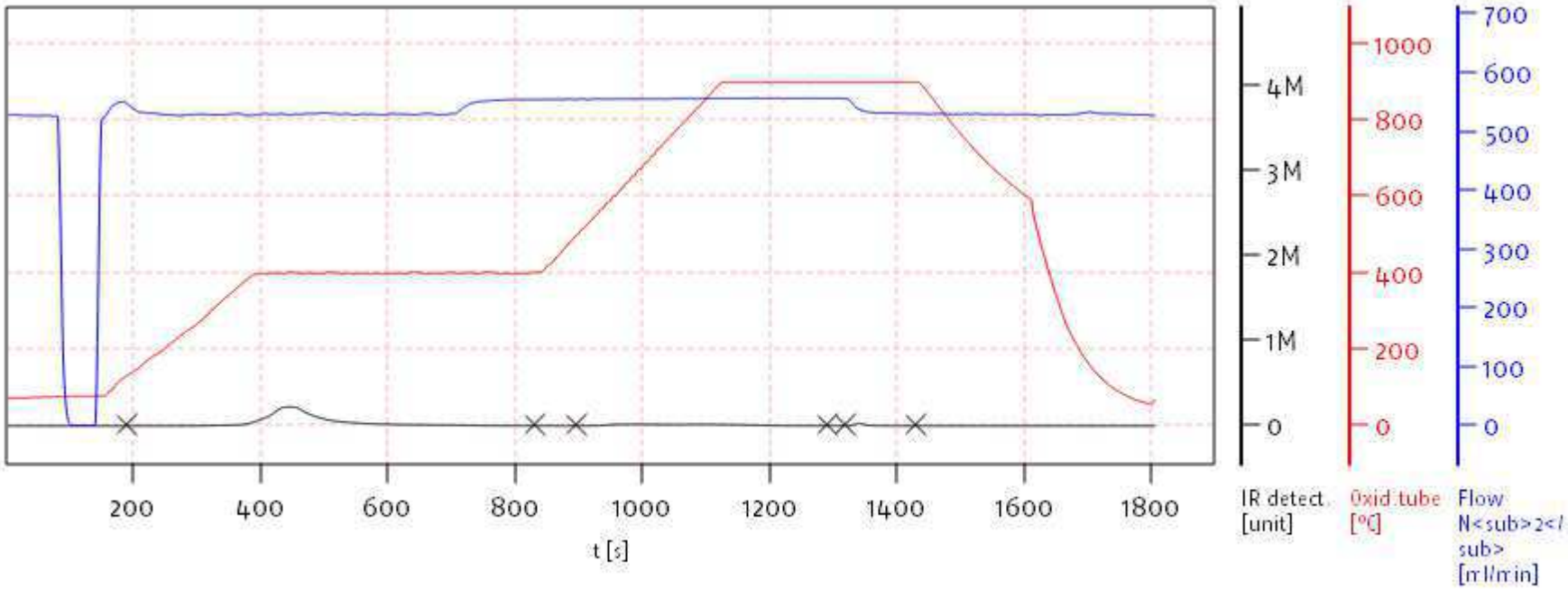
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 108 | 19 | 22L0329-05 | 528.60 | | CARBON | 12/30/2022 8:56 PM | bl | 0.236 | 863 536 | 0.272 | 0.000 | 21 883 | 149 709 | 0.236 | 0.036 | 0.9619 | 1.0000 |




Name:

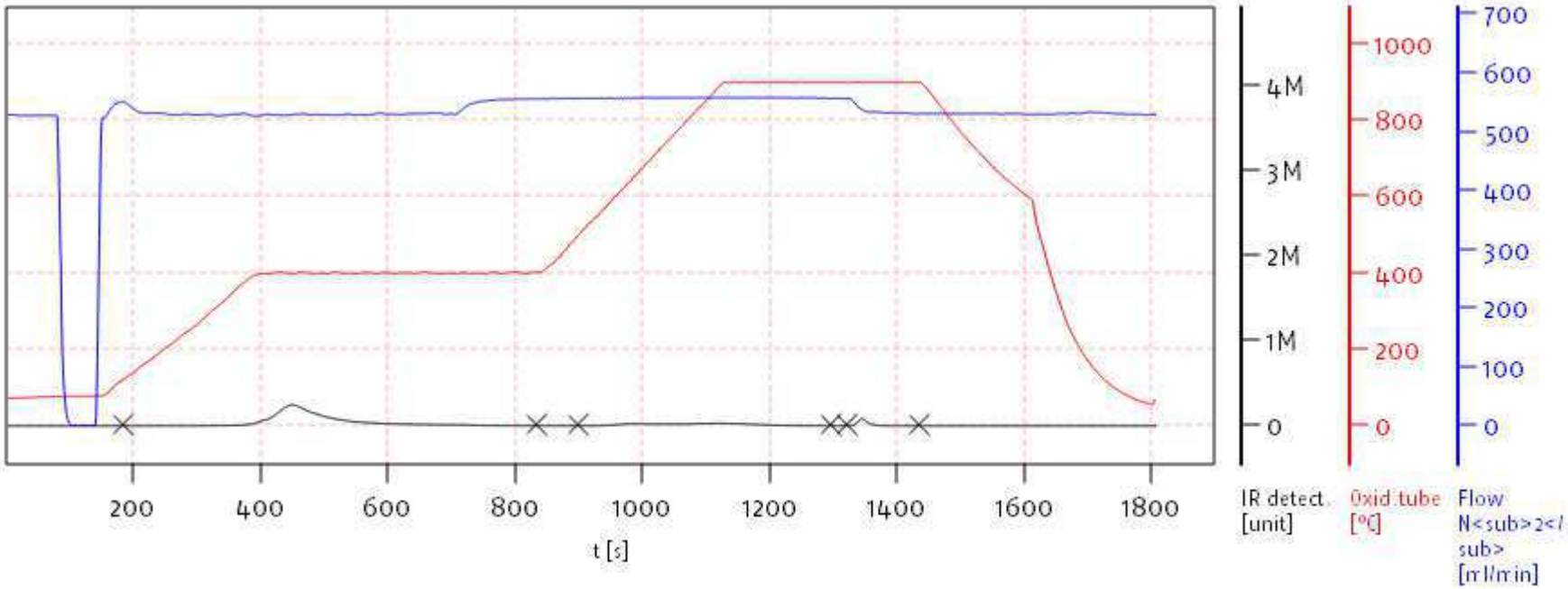
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109 | 20 | 22L0329-06 | 613.90 | | CARBON | 12/30/2022 9:26 PM | bl | 0.233 | 954 400 | 0.283 | 0.008 | 57 736 | 223 398 | 0.225 | 0.050 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

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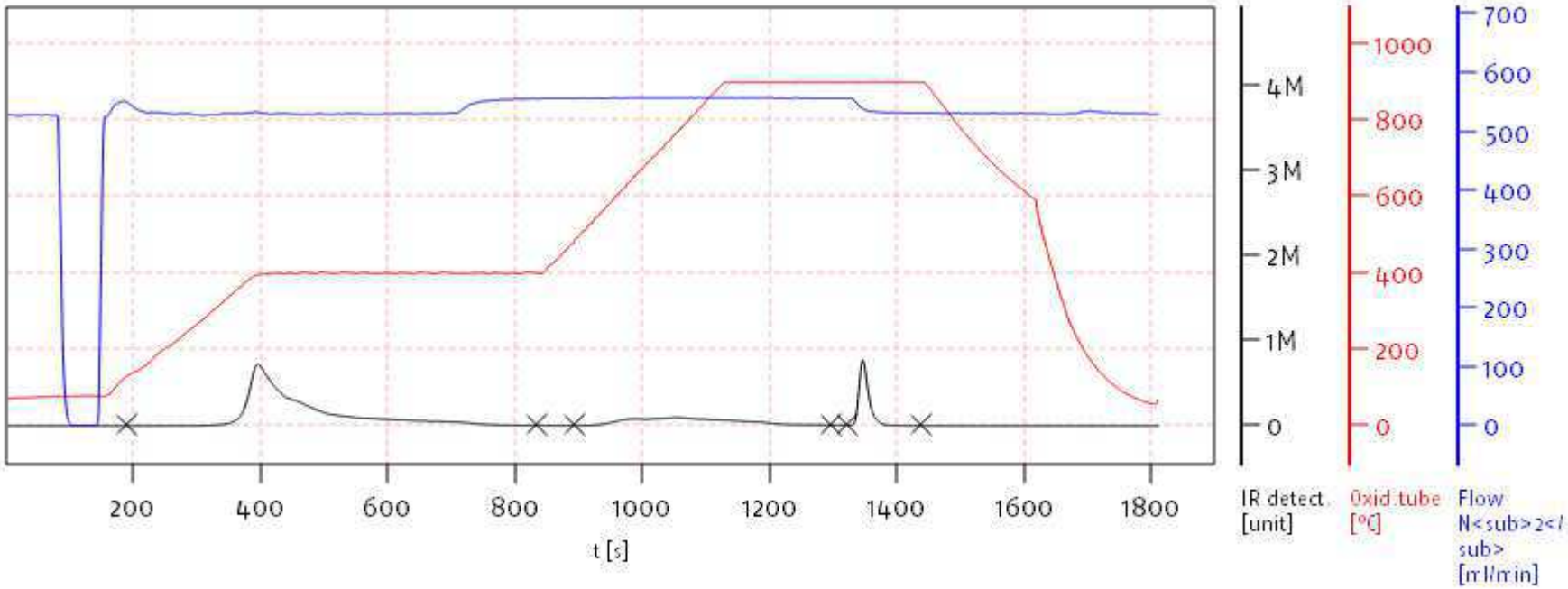
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110 | 21 | 22L0329-07 | 534.50 | | CARBON | 12/30/2022 9:57 PM | bl | 0.866 | 2 621 611 | 1.078 | 0.143 | 518 883 | 760 664 | 0.723 | 0.213 | 0.9619 | 1.0000 |




Name:

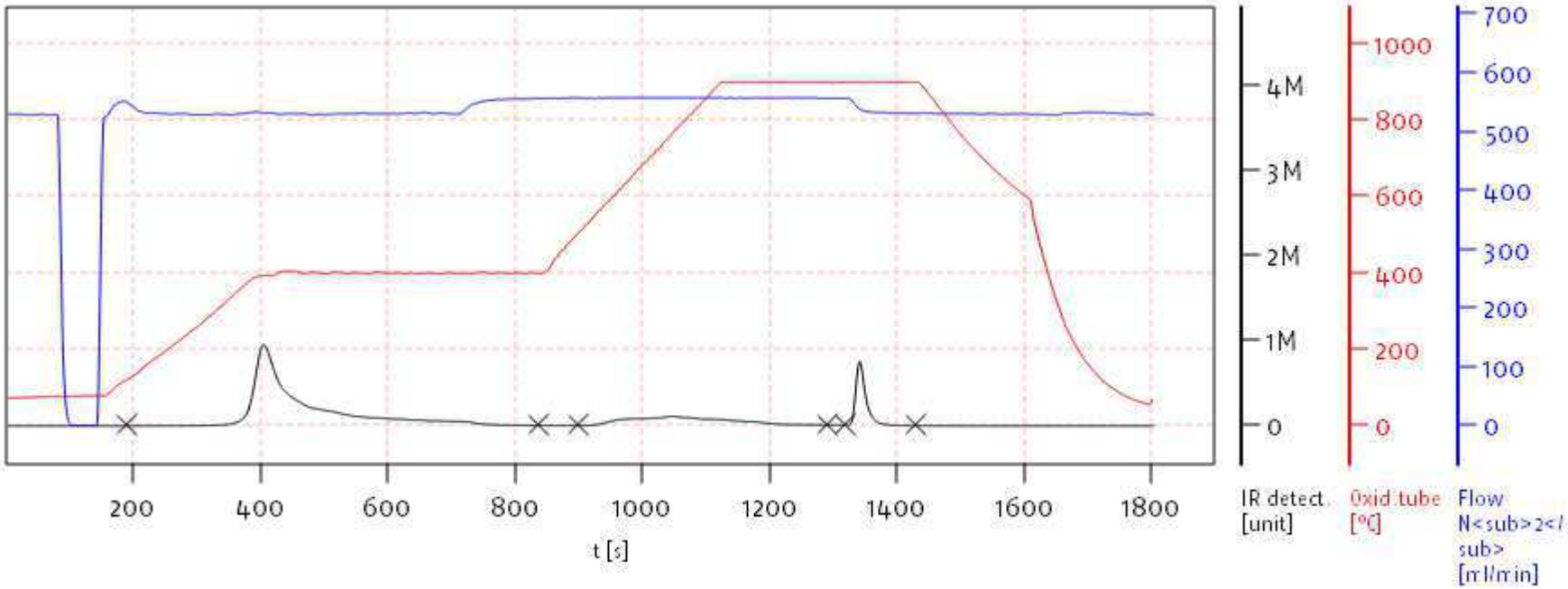
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 22 | 22L0329-08 | 546.20 | | CARBON | 12/30/2022 10:27 PM | bl | 0.927 | 2 902 928 | 1.147 | 0.142 | 528 790 | 805 202 | 0.784 | 0.221 | 0.9619 | 1.0000 |




Name:

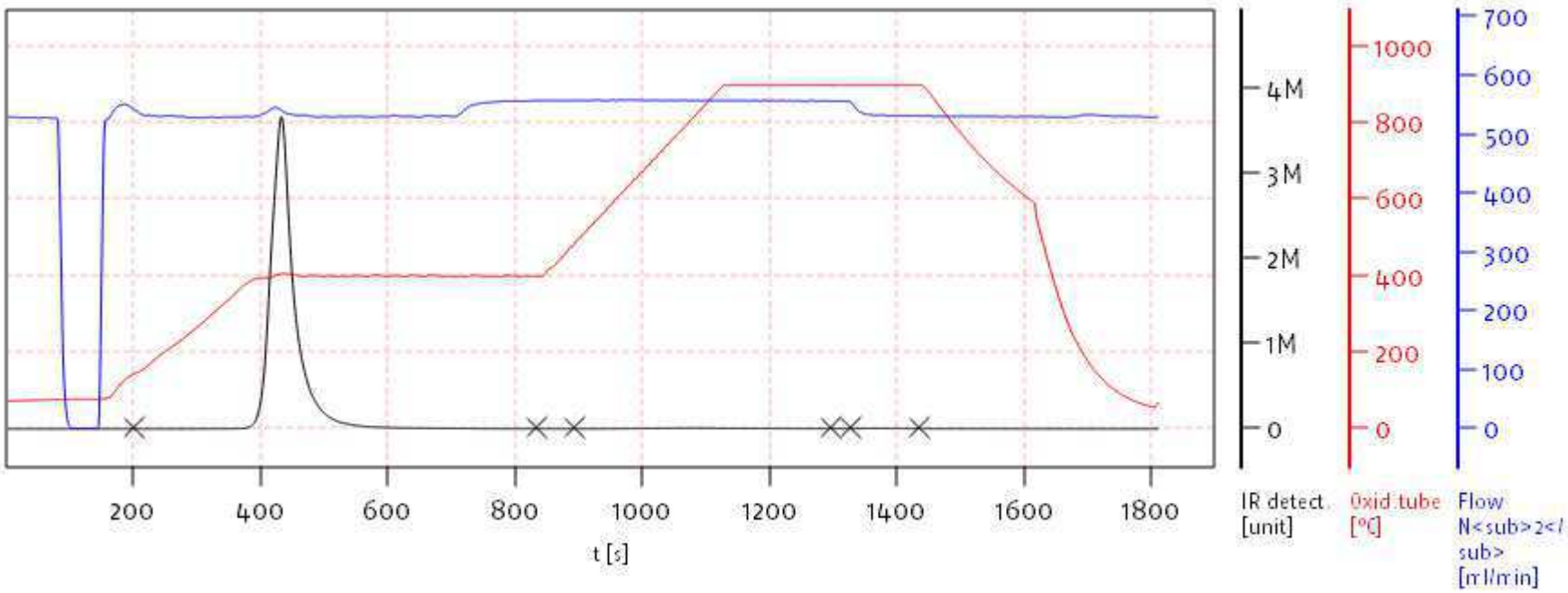
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 112 | 23 | SKL0336-CCV9 | 19.60 | | CARBON | 12/30/2022 10:58 PM | bl | 44.389 | 5 869 243 | 44.777 | 0.000 | 18 812 | 75 632 | 44.389 | 0.388 | 0.9619 | 1.0000 |




Name:

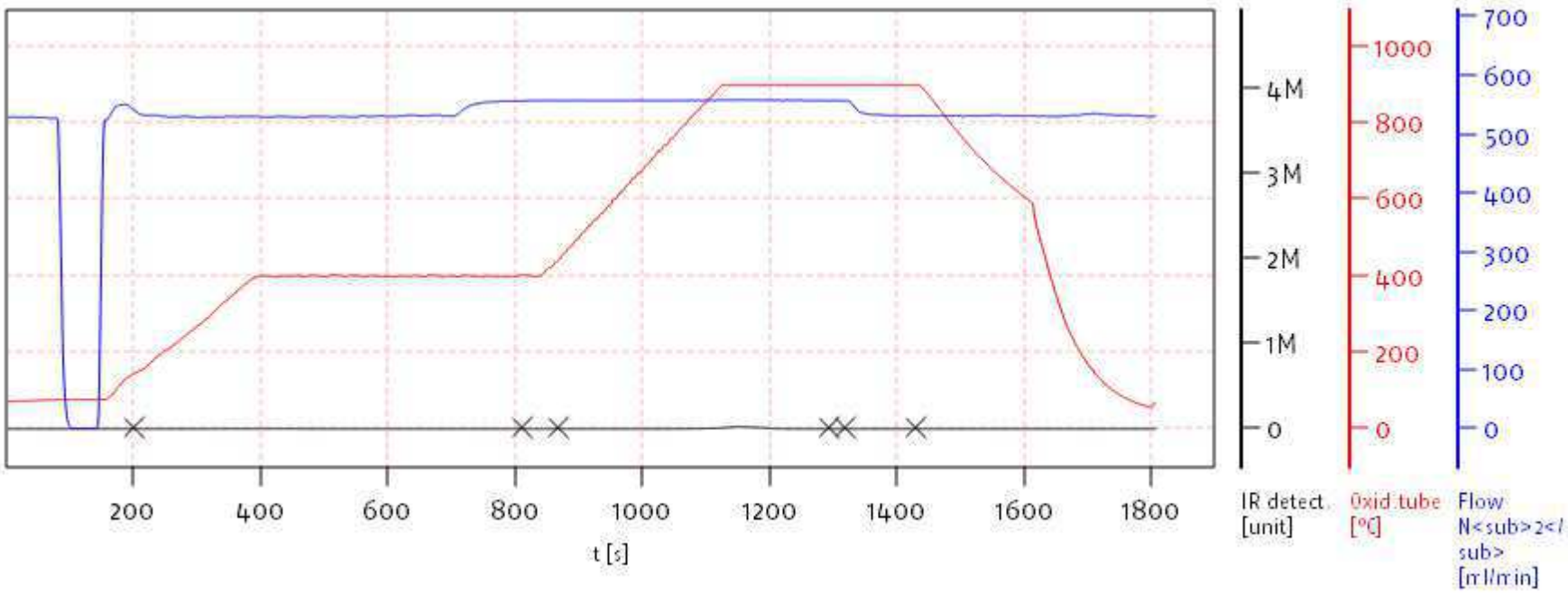
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 113 | 24 | SKL0336-CCB9 | 507.20 | | CARBON | 12/30/2022 11:29 PM | bl,C2u | 0.000 | 9 554 | 0.011 | 0.000 | 529 | 64 066 | 0.000 | 0.011 | 0.9619 | 1.0000 |




Name:

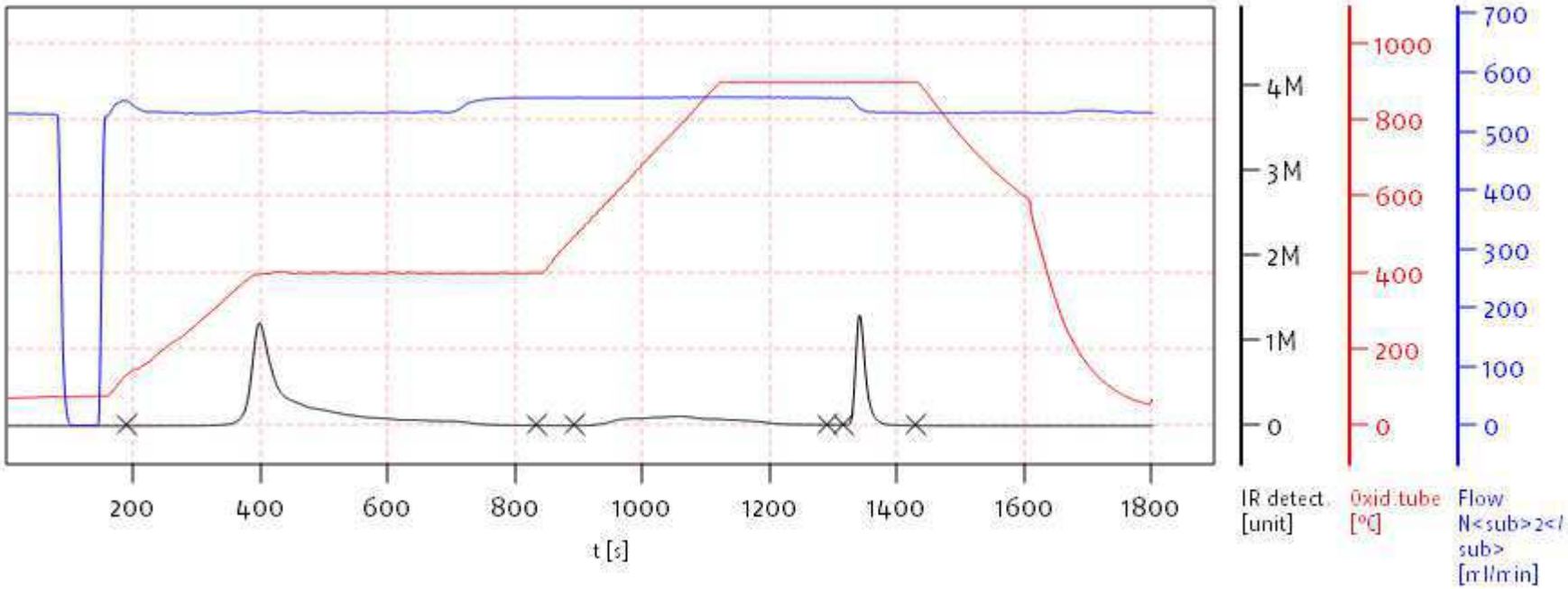
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114 | 25 | 22L0329-09 | 546.20 | | CARBON | 12/30/2022 11:59 PM | bl | 1.091 | 3 111 915 | 1.325 | 0.250 | 908 740 | 853 014 | 0.841 | 0.234 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

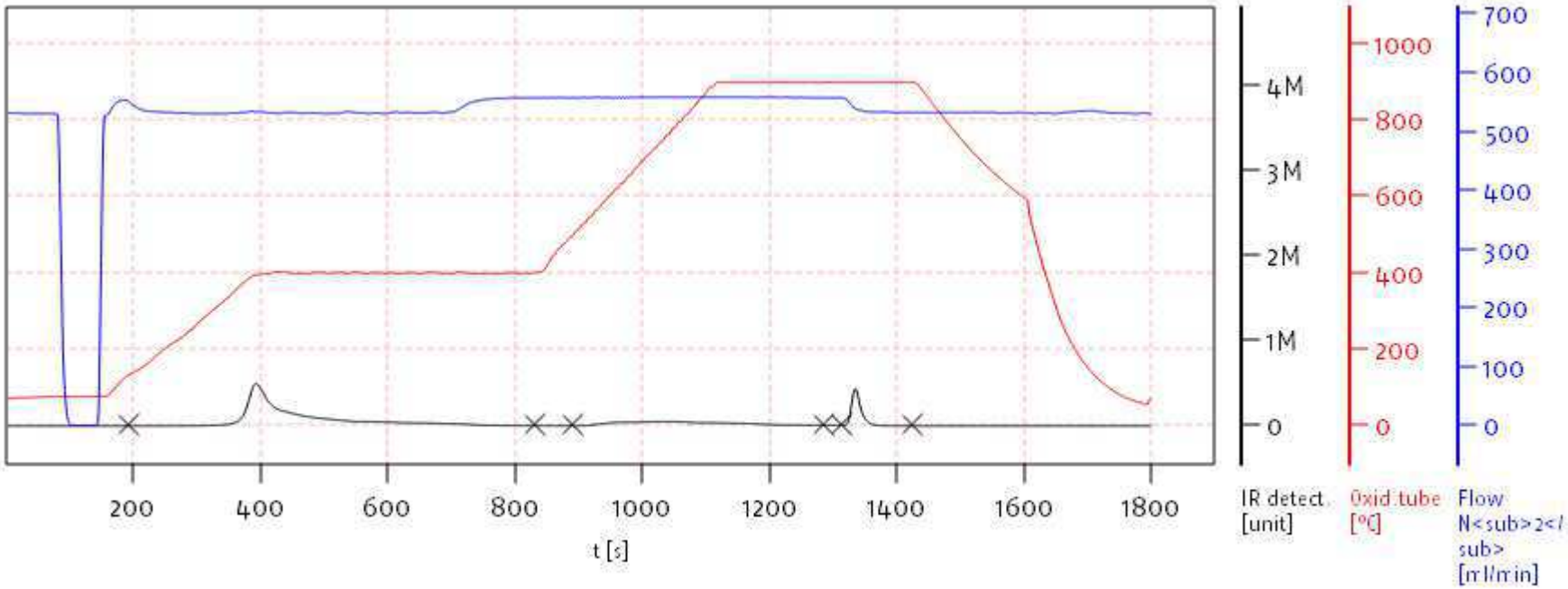
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 115 | 26 | 22L0329-10 | 256.20 | | CARBON | 12/31/2022 12:29 AM | bl | 0.995 | 1 470 989 | 1.231 | 0.155 | 283 108 | 417 586 | 0.840 | 0.236 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

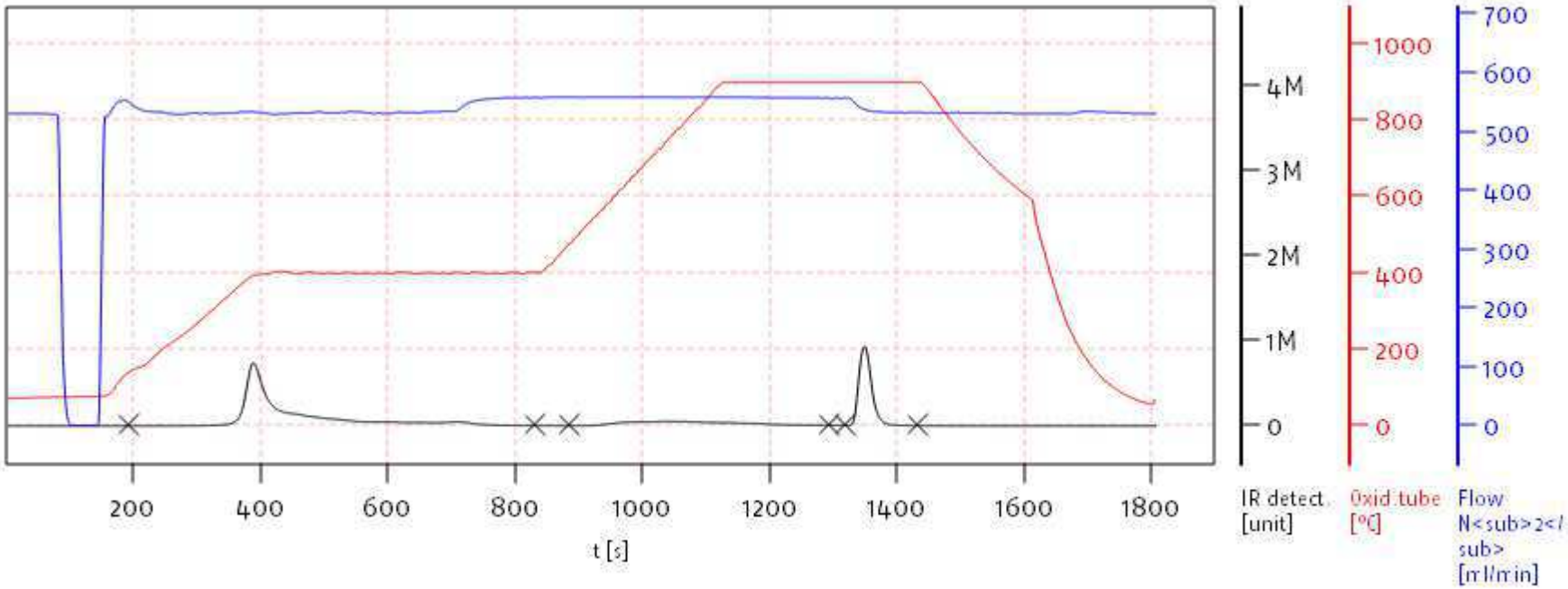
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 116 | 27 | 22L0329-11 | 241.70 | | CARBON | 12/31/2022 1:00 AM | bl | 1.612 | 1 810 491 | 1.874 | 0.513 | 827 096 | 435 226 | 1.099 | 0.262 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

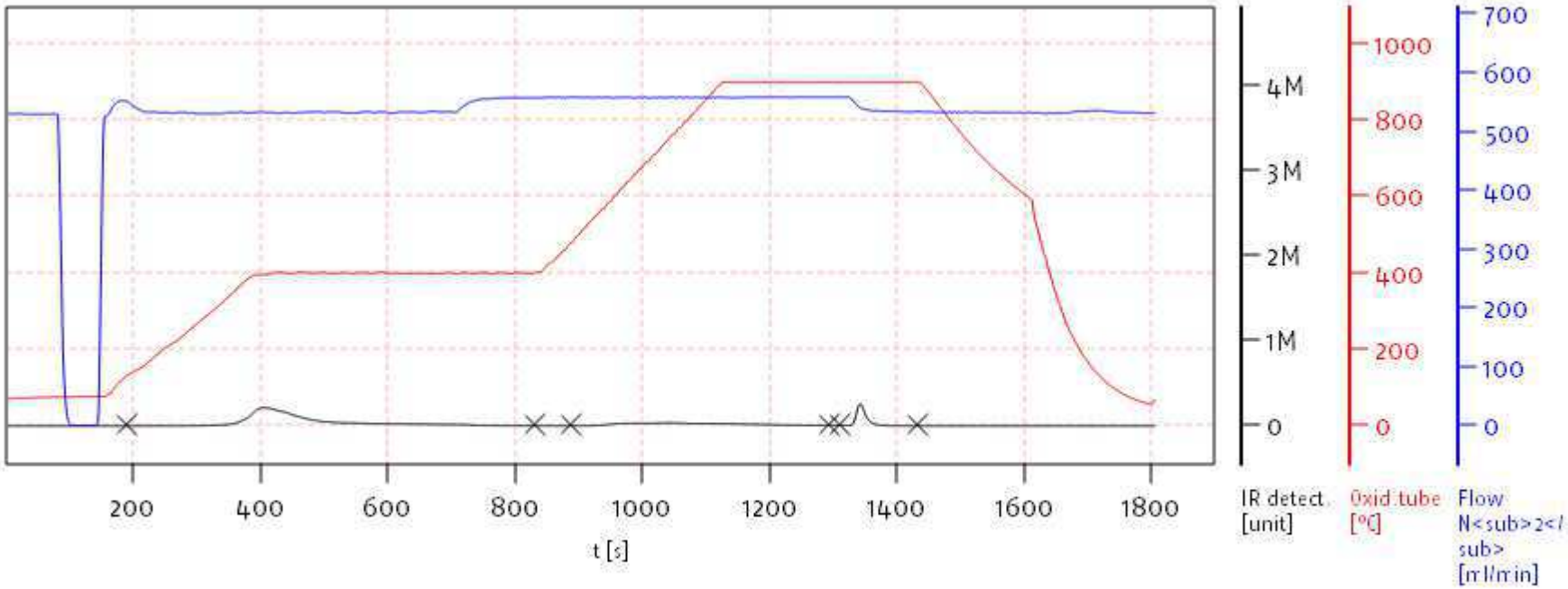
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 117 | 28 | 22L0329-12 | 221.00 | | CARBON | 12/31/2022 1:30 AM | bl | 0.704 | 917 724 | 0.890 | 0.103 | 173 951 | 291 739 | 0.600 | 0.186 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

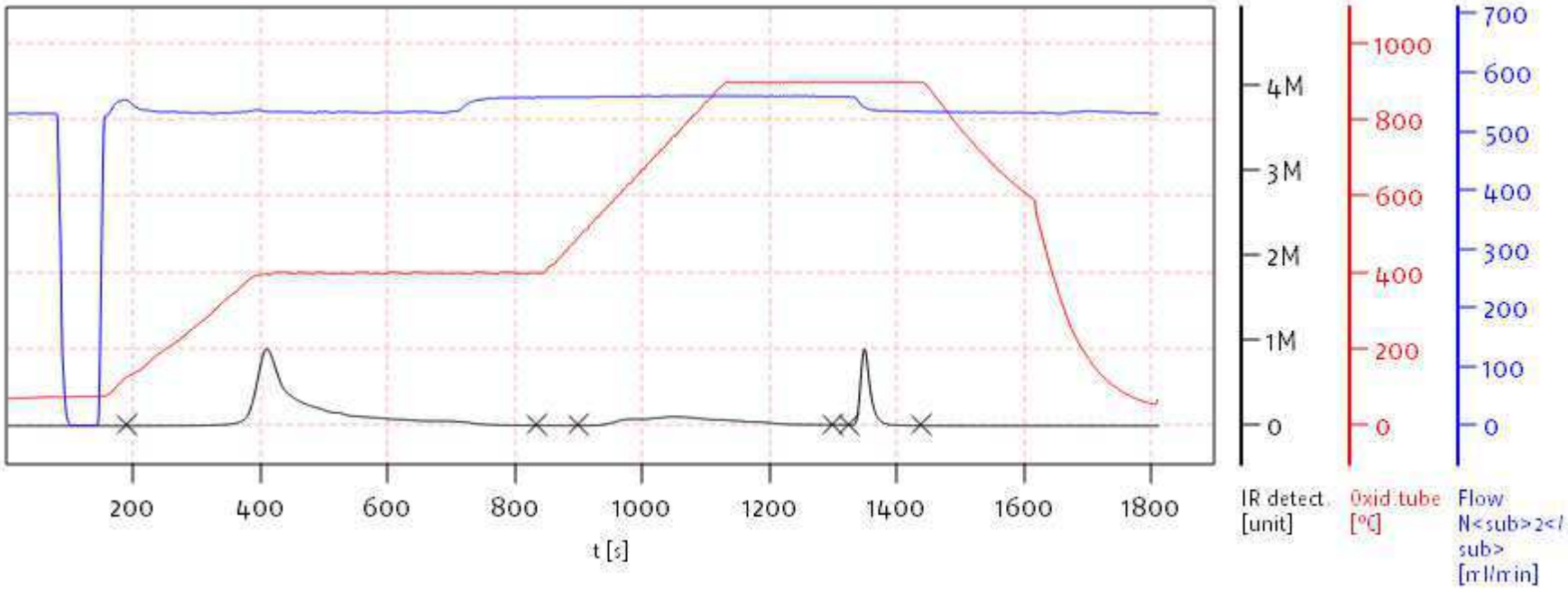
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 118 | 29 | 22L0329-13 | 501.30 | | CARBON | 12/31/2022 2:01 AM | bl | 1.013 | 2 821 698 | 1.248 | 0.183 | 618 261 | 787 868 | 0.830 | 0.235 | 0.9619 | 1.0000 |




Name:

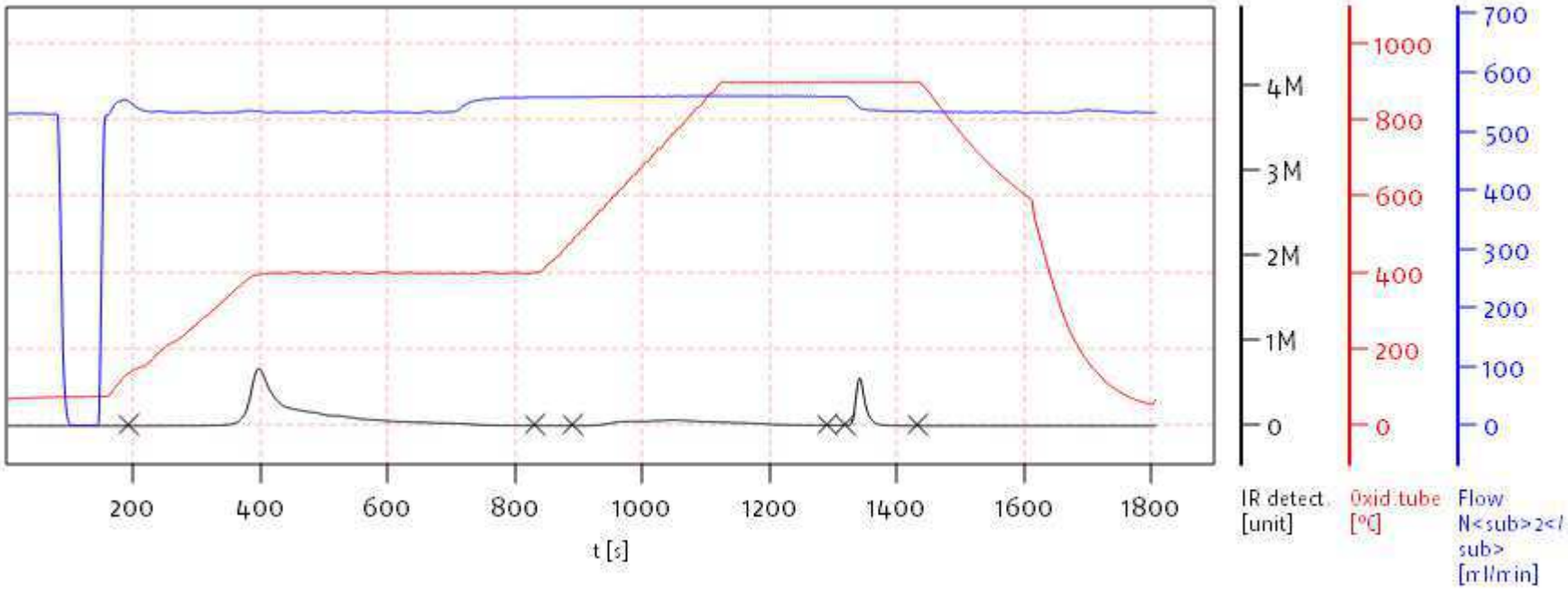
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 119 | 30 | 22L0329-14 | 339.00 | | CARBON | 12/31/2022 2:32 AM | bl | 1.034 | 2 022 757 | 1.249 | 0.157 | 370 905 | 497 776 | 0.877 | 0.215 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

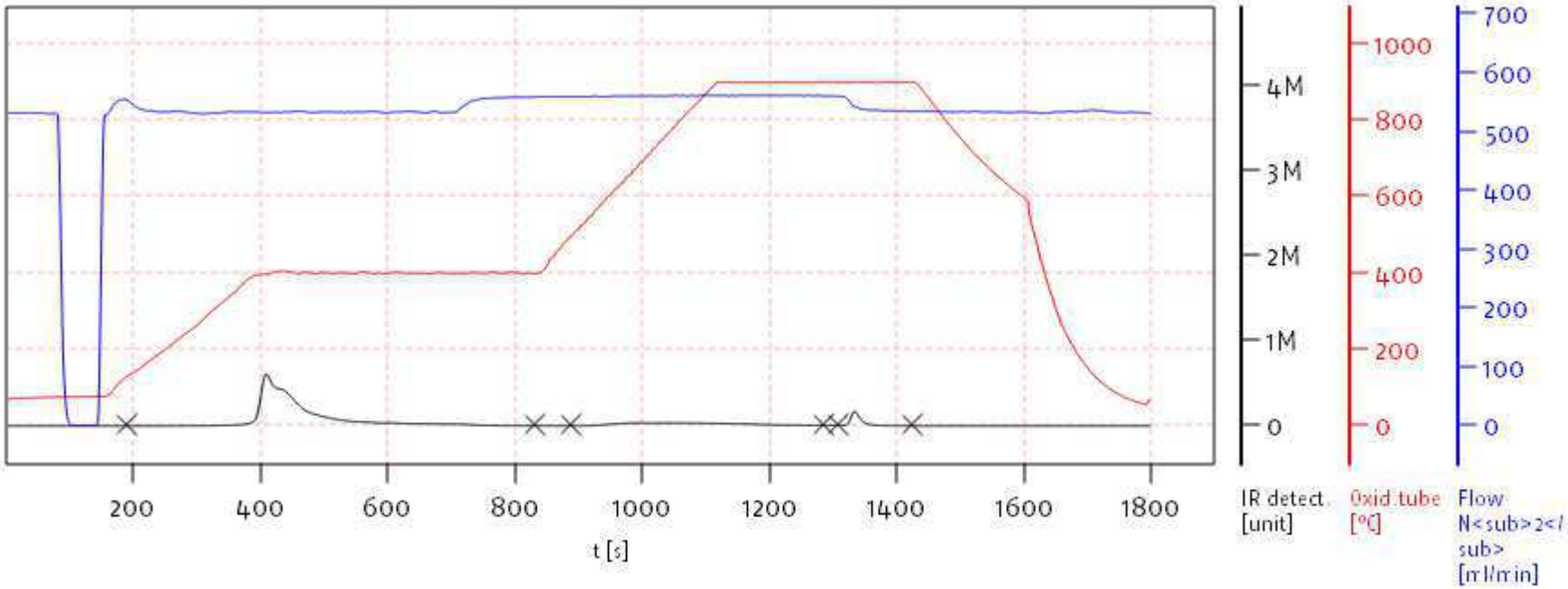
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120 | 31 | 22L0329-15 | 571.30 | | CARBON | 12/31/2022 3:02 AM | bl | 0.450 | 1 653 653 | 0.527 | 0.026 | 122 804 | 308 545 | 0.424 | 0.076 | 0.9619 | 1.0000 |




Name:

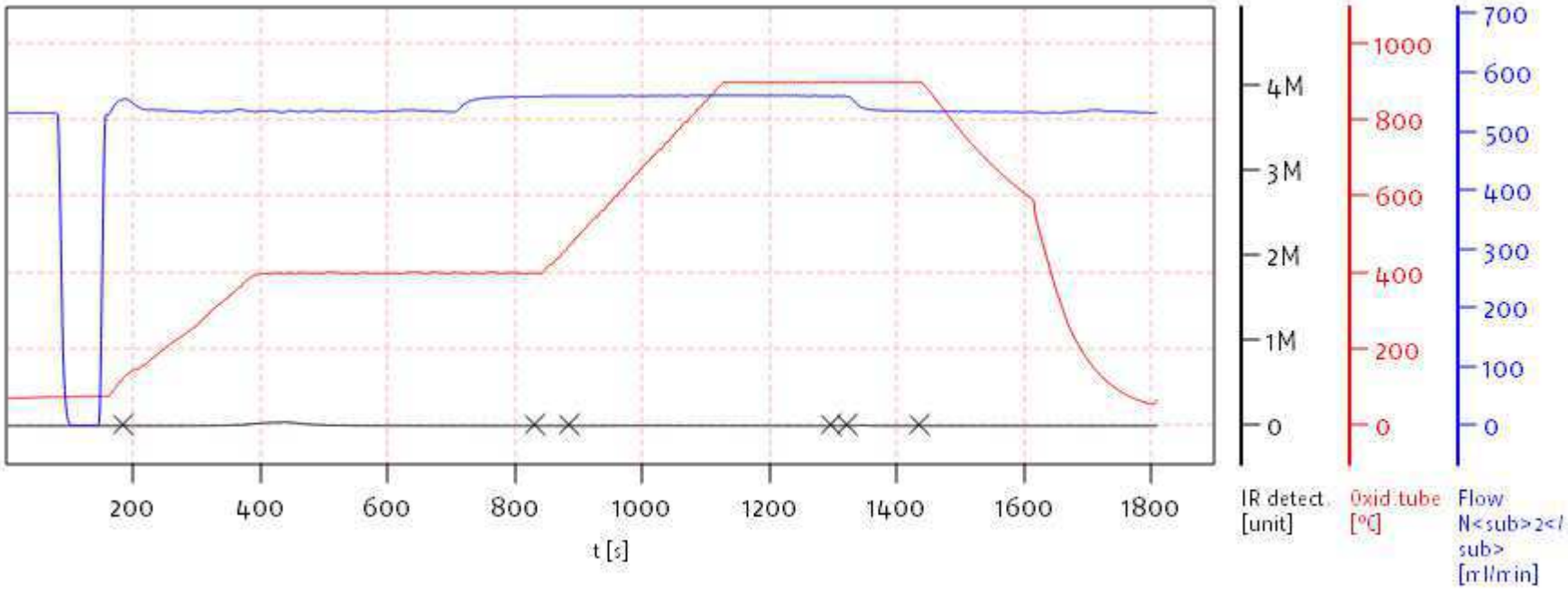
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 32 | 22L0329-16 | 507.10 | | CARBON | 12/31/2022 3:32 AM | bl | 0.043 | 174 384 | 0.043 | 0.000 | 5 954 | 18 736 | 0.043 | 0.000 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

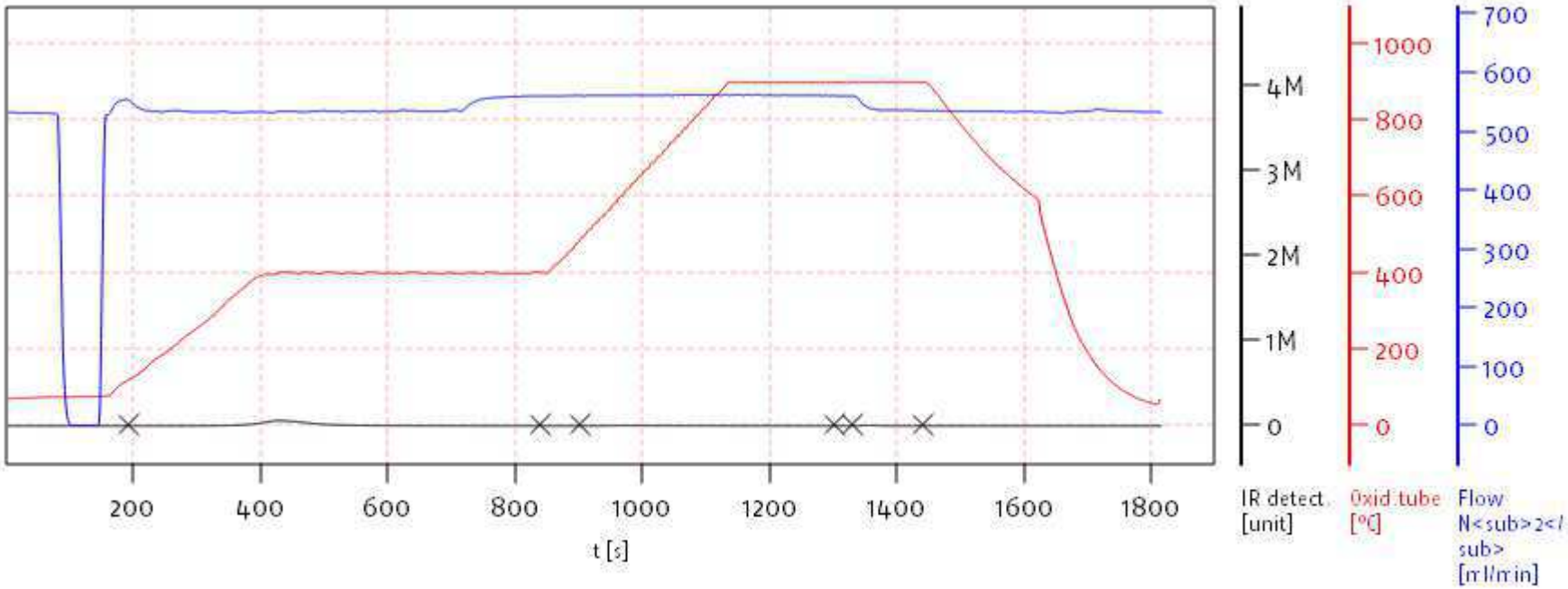
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 122 | 33 | 22L0329-17 | 513.30 | | CARBON | 12/31/2022 4:03 AM | bl | 0.061 | 237 886 | 0.061 | 0.000 | 6 649 | 22 472 | 0.061 | 0.000 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

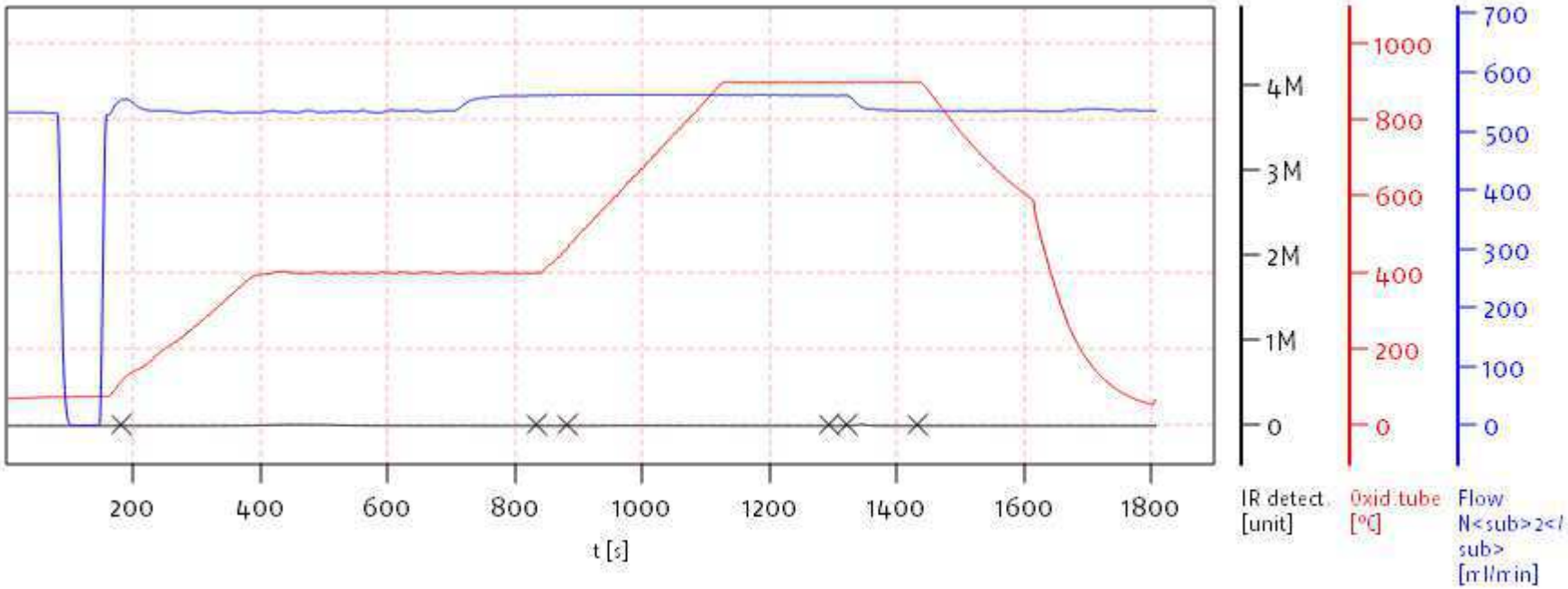
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123 | 34 | 22L0329-18 | 598.10 | | CARBON | 12/31/2022 4:34 AM | bl | 0.013 | 77 820 | 0.013 | 0.000 | 11 840 | 19 189 | 0.013 | 0.000 | 0.9619 | 1.0000 |




Name:

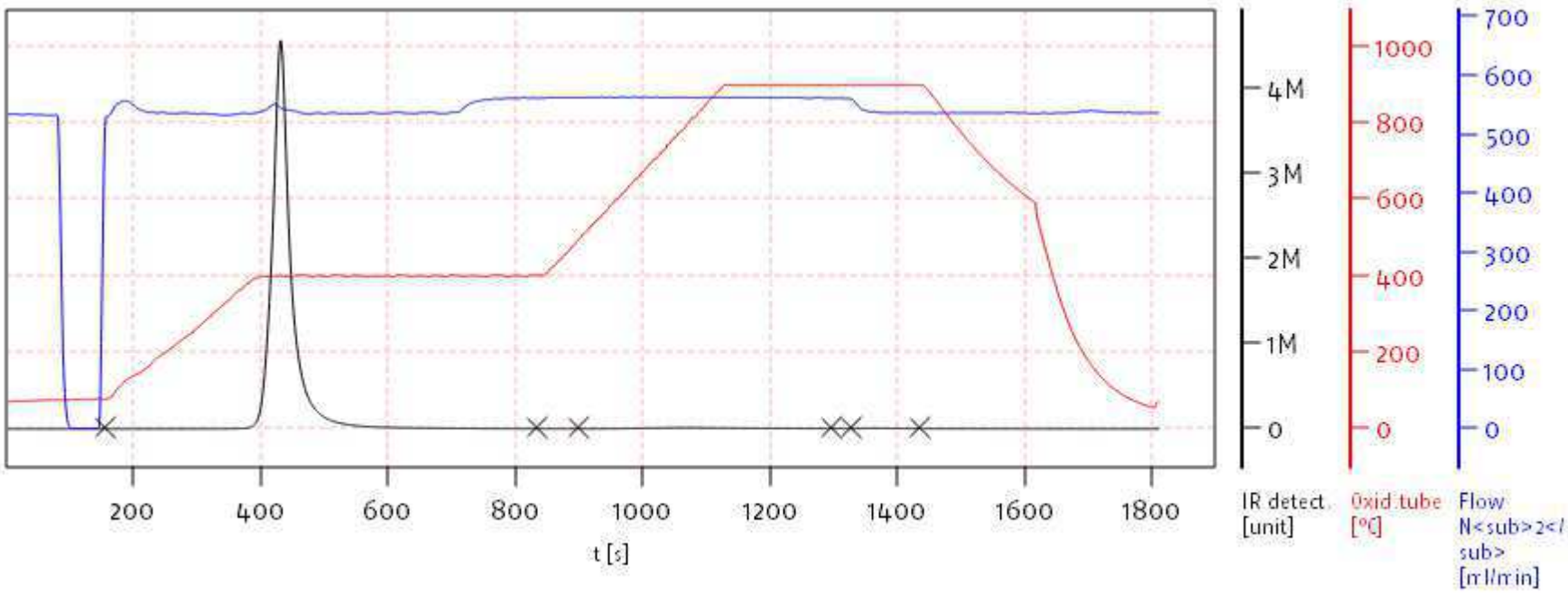
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 124 | 35 | SKL0336-CCVA | 19.50 | | CARBON | 12/31/2022 5:04 AM | bl | 44.664 | 5 875 431 | 45.266 | 0.000 | 22 023 | 102 349 | 44.664 | 0.602 | 0.9619 | 1.0000 |




Name:

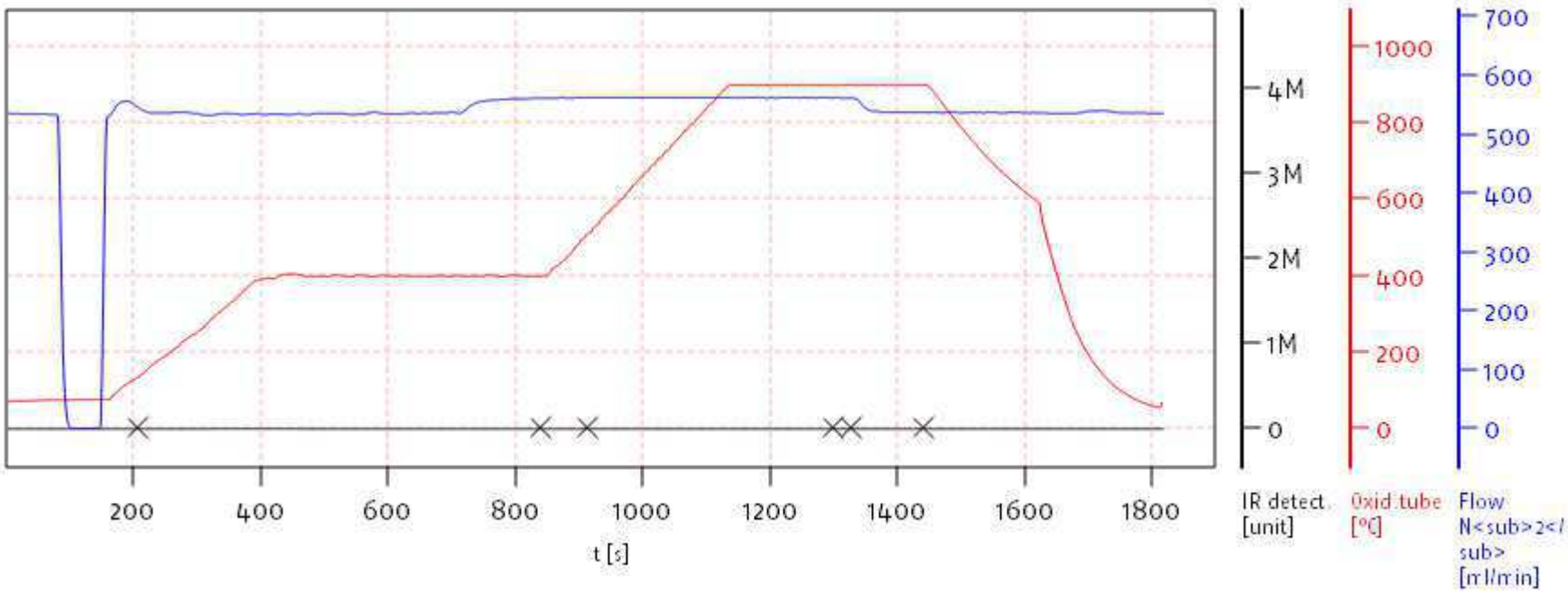
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 36 | SKL0336-CCBA | 508.40 | | CARBON | 12/31/2022 5:35 AM | bl,C3u,C2u | 0.000 | 9 800 | 0.000 | 0.000 | 554 | 177 | 0.000 | 0.000 | 0.9619 | 1.0000 |




Name:

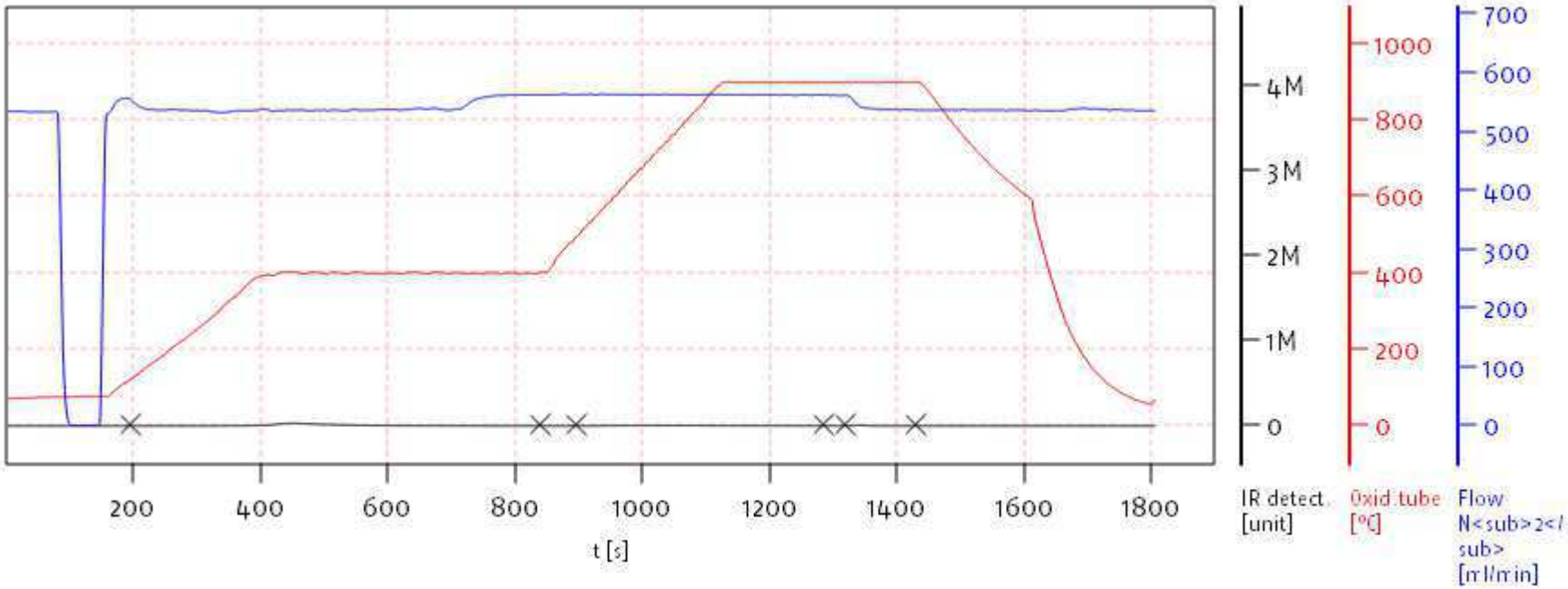
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 126 | 37 | 22L0329-19 | 592.80 | | CARBON | 12/31/2022 6:05 AM | bl | 0.028 | 138 363 | 0.032 | 0.000 | 7 518 | 40 045 | 0.028 | 0.004 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

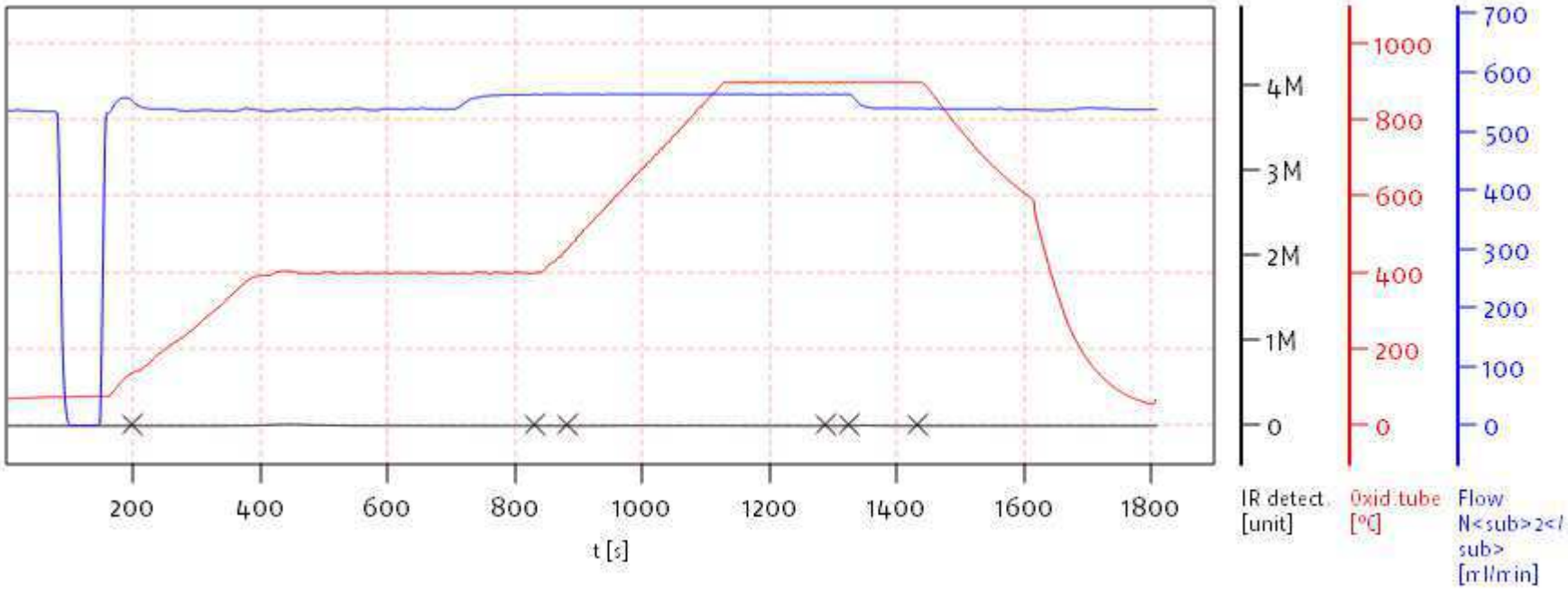
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 127 | 38 | 22L0329-20 | 551.60 | | CARBON | 12/31/2022 6:36 AM | bl | 0.012 | 71 600 | 0.012 | 0.000 | 6 762 | 18 798 | 0.012 | 0.000 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

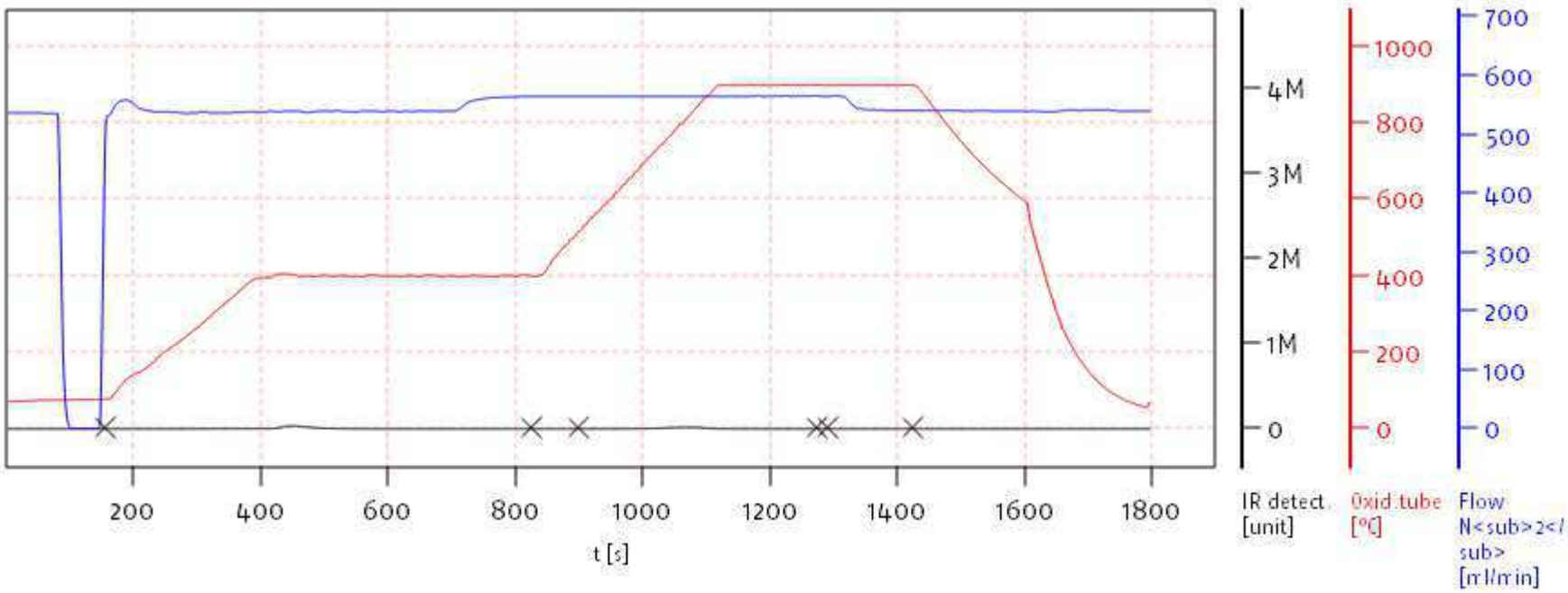
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 128 | 39 | BKL0651-MRL1 | 541.30 | | CARBON | 12/31/2022 7:06 AM | bl,C2u | 0.015 | 81 393 | 0.022 | 0.000 | 585 | 52 060 | 0.015 | 0.007 | 0.9619 | 1.0000 |




Name:

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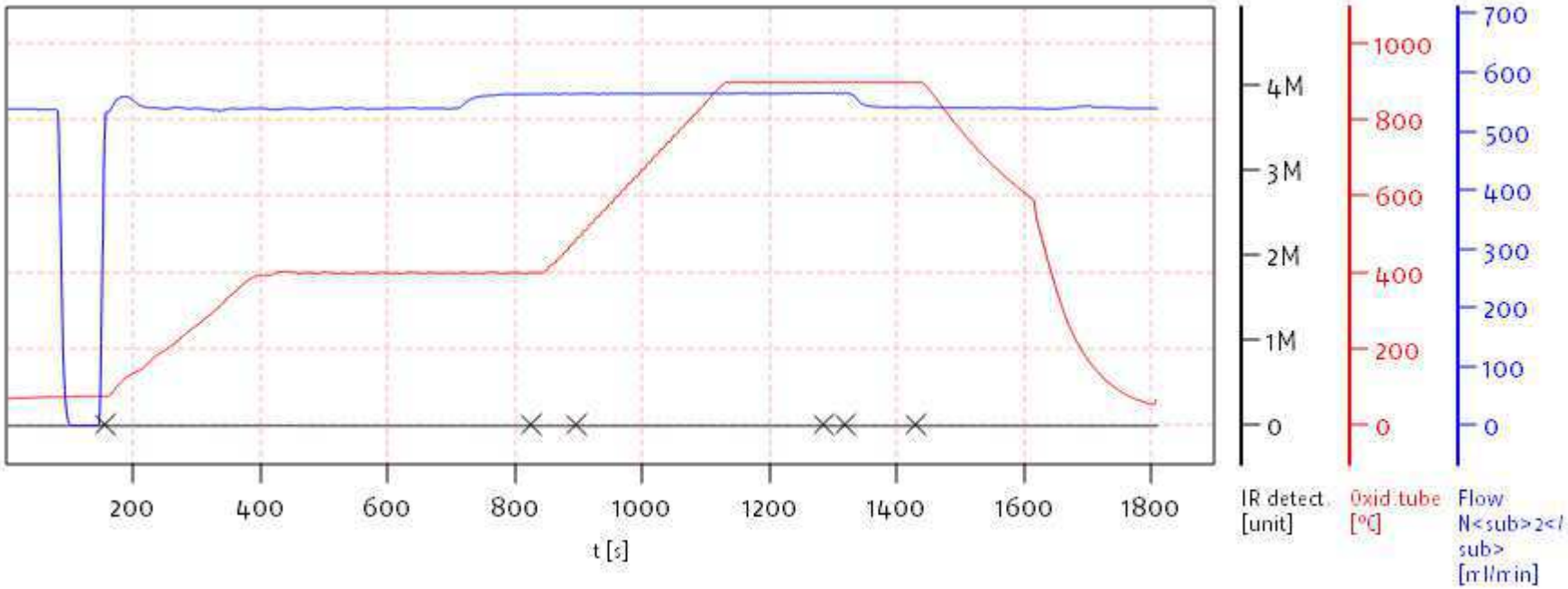
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 129 | 40 | BKL0651-BLK1 | 520.80 | | CARBON | 12/31/2022 7:37 AM | bl,C2u | 0.000 | 9 085 | 0.000 | 0.000 | 342 | 5 285 | 0.000 | 0.000 | 0.9619 | 1.0000 |




Name:

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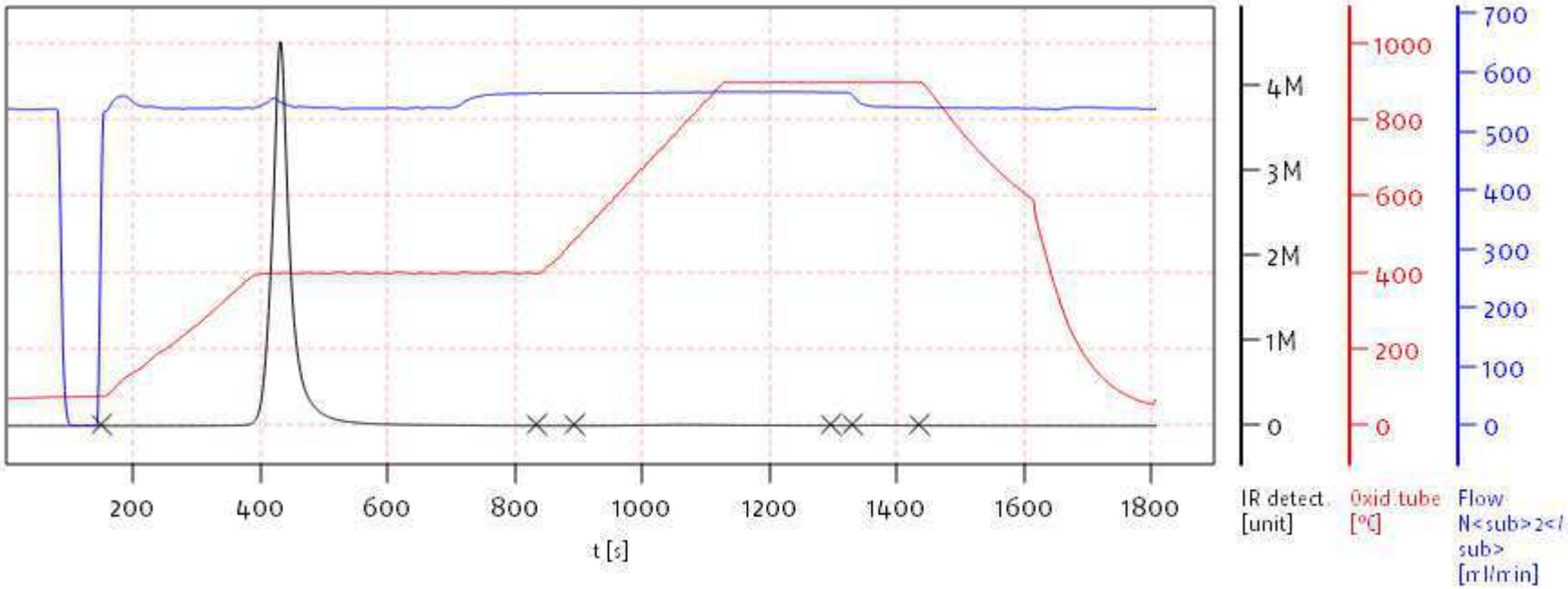
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 130 | 41 | BKL0651-BS1 | 19.40 | | CARBON | 12/31/2022 8:07 AM | bl | 44.366 | 5 806 715 | 44.931 | 0.000 | 21 895 | 97 256 | 44.366 | 0.564 | 0.9619 | 1.0000 |




Name:

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soliTOC V2.0.2 (31015f9) 2018-11-19
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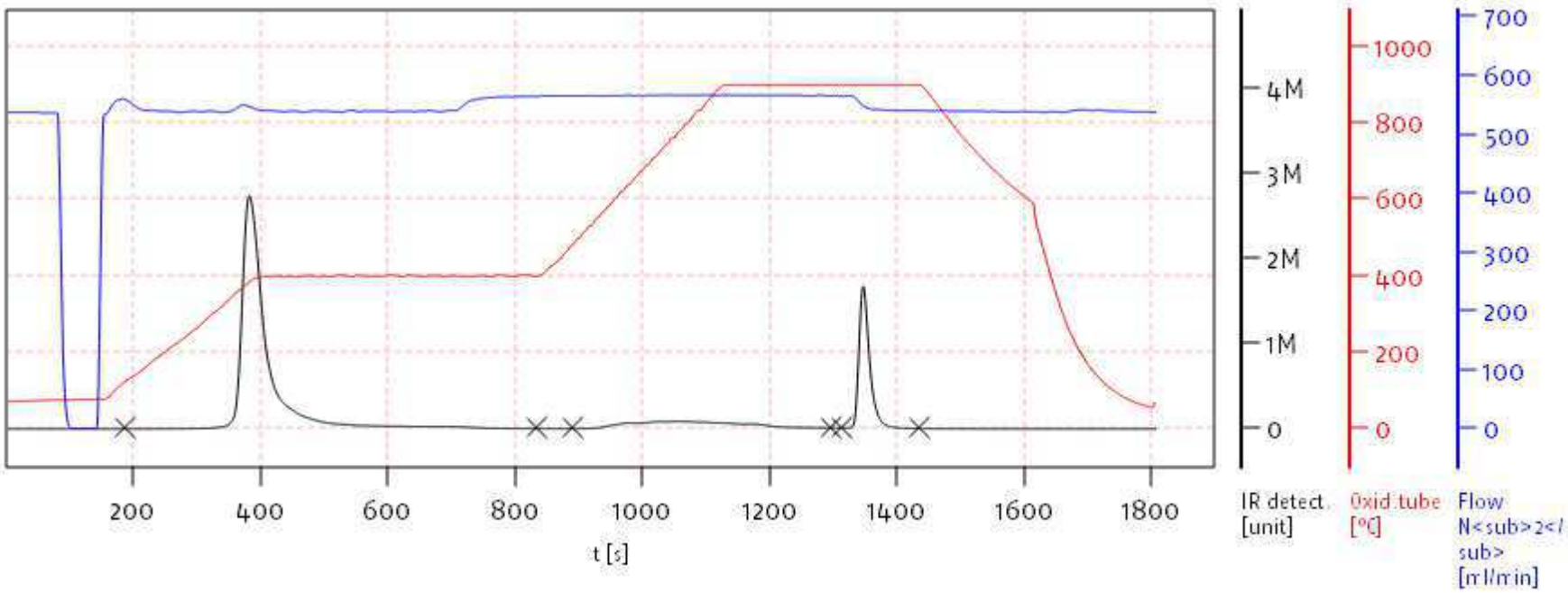
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 | BKL0651-SRM1 | 285.60 | | CARBON | 12/31/2022 8:38 AM | bl | 2.988 | 4 496 099 | 3.372 | 0.658 | 1 240 705 | 734 282 | 2.330 | 0.384 | 0.9619 | 1.0000 |




Name:

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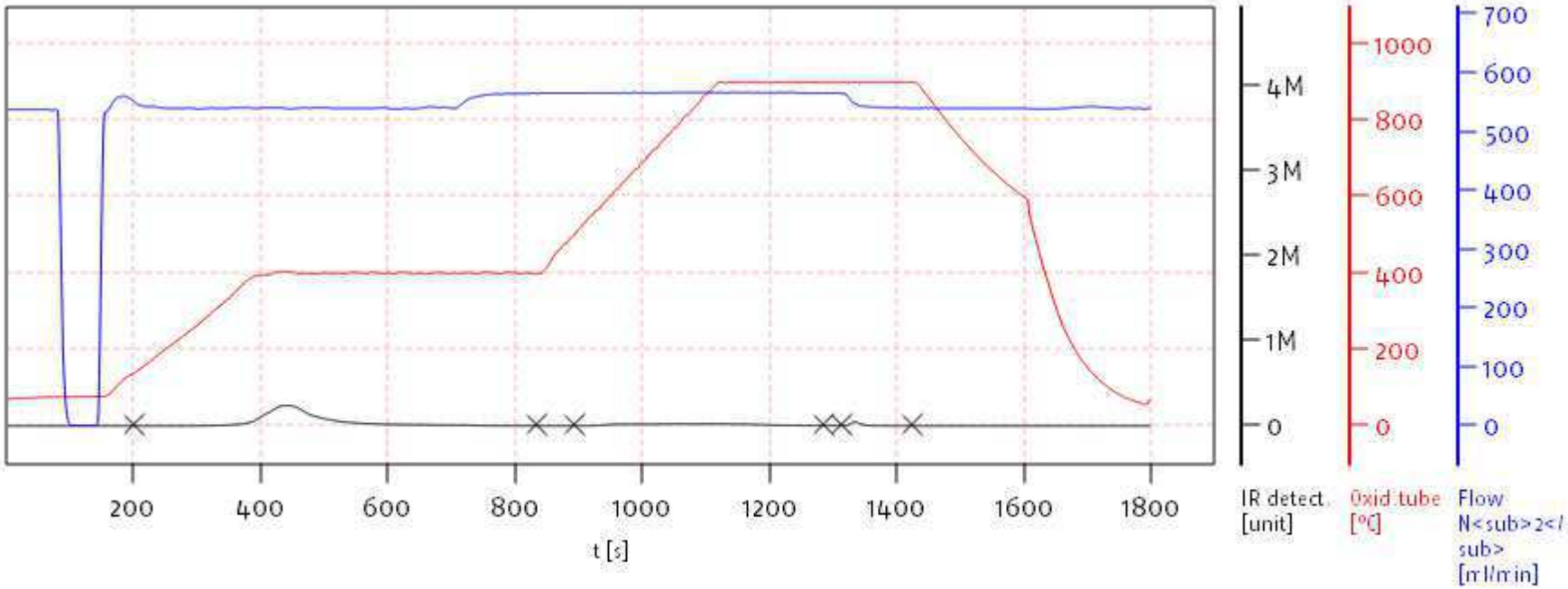
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 132 | 43 | 22L0329-21 | 534.70 | | CARBON | 12/31/2022 9:08 AM | bl | 0.258 | 945 095 | 0.312 | 0.002 | 34 300 | 212 798 | 0.256 | 0.054 | 0.9619 | 1.0000 |




Name:

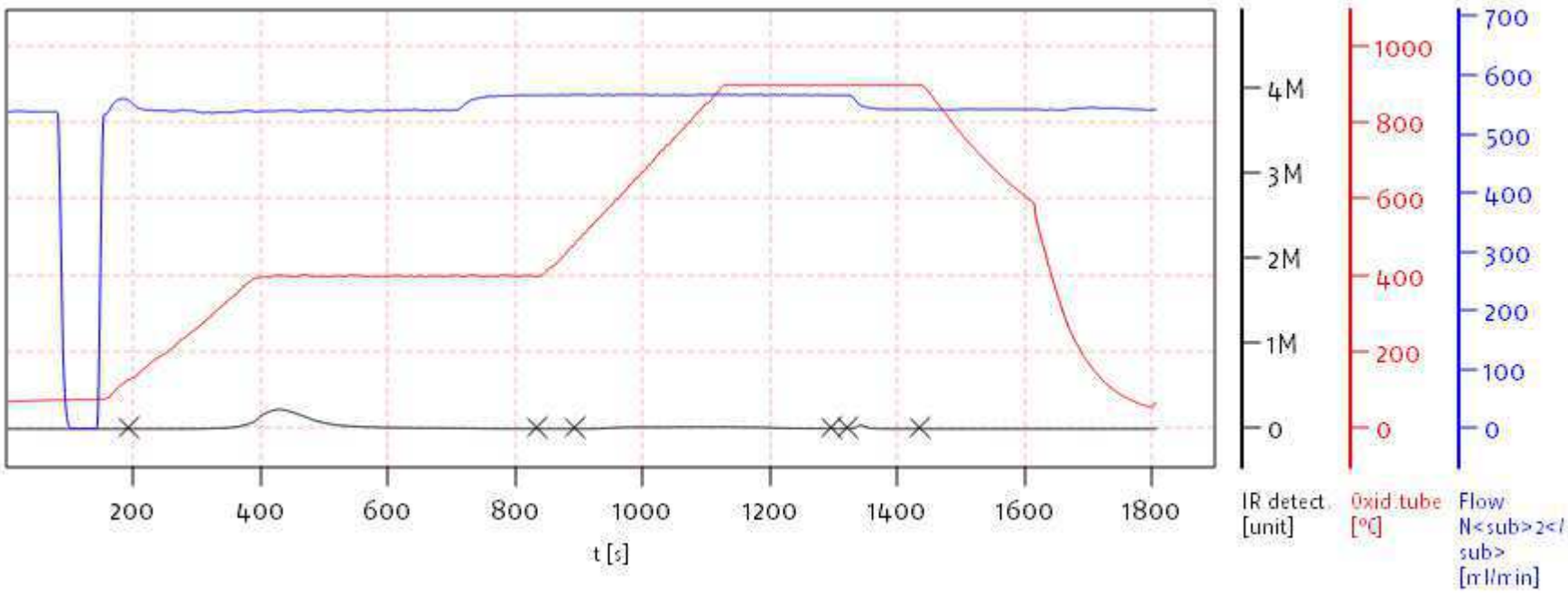
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 133 | 44 | BKL0651-DUP1 | 509.30 | | CARBON | 12/31/2022 9:39 AM | bl | 0.265 | 928 894 | 0.320 | 0.001 | 29 447 | 208 309 | 0.264 | 0.055 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

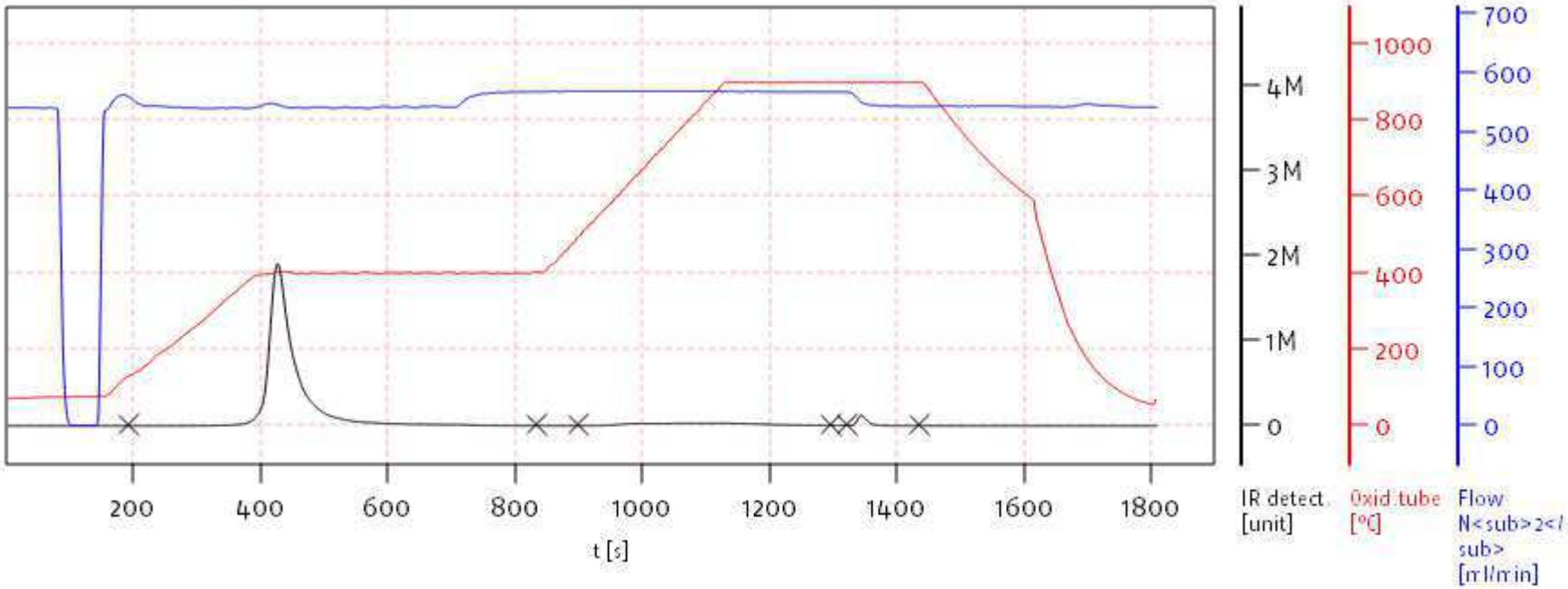
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 134 | 45 | BKL0651-MS1 | 546.30 | 0.0079 | CARBON | 12/31/2022 10:09 AM | bl | 0.932 | 3 381 307 | 1.006 | 0.017 | 88 143 | 286 964 | 0.914 | 0.074 | 0.9619 | 1.0000 |




Name:

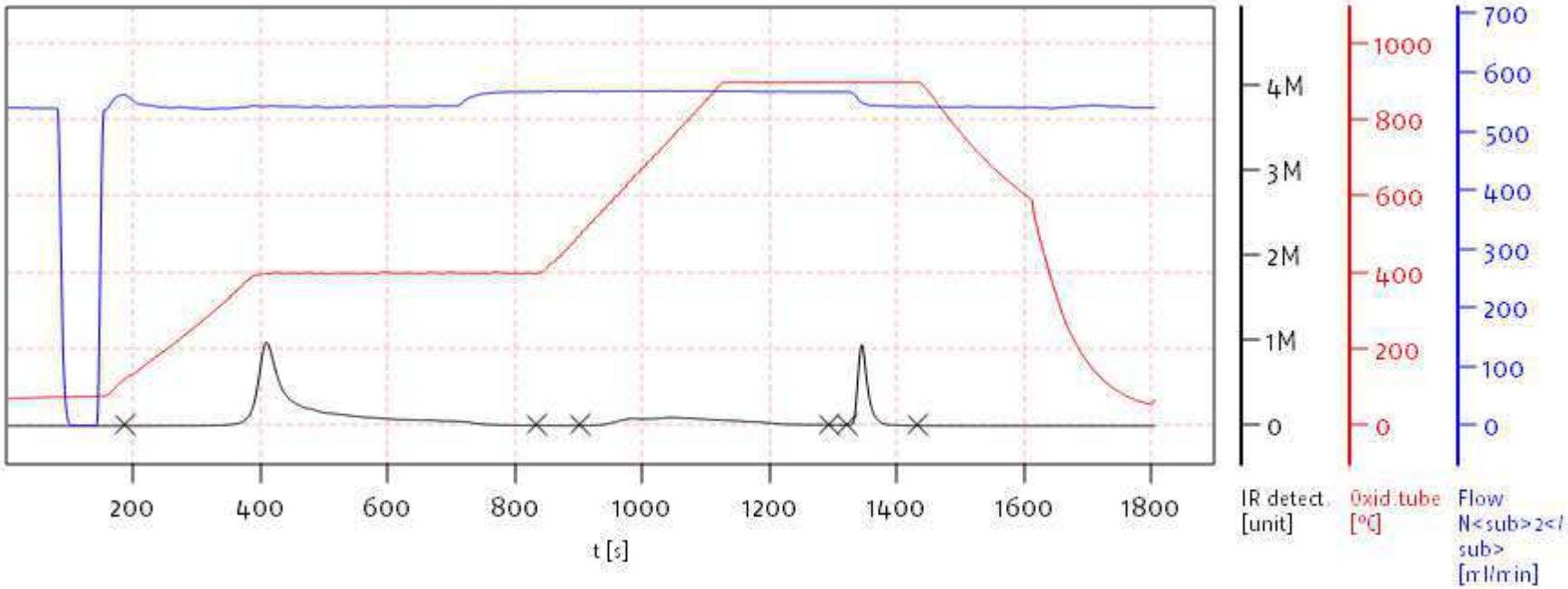
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 135 | 46 | 22L0329-22 | 503.90 | | CARBON | 12/31/2022 10:40 AM | bl | 0.974 | 2 662 419 | 1.199 | 0.195 | 662 448 | 757 820 | 0.779 | 0.225 | 0.9619 | 1.0000 |




Name:

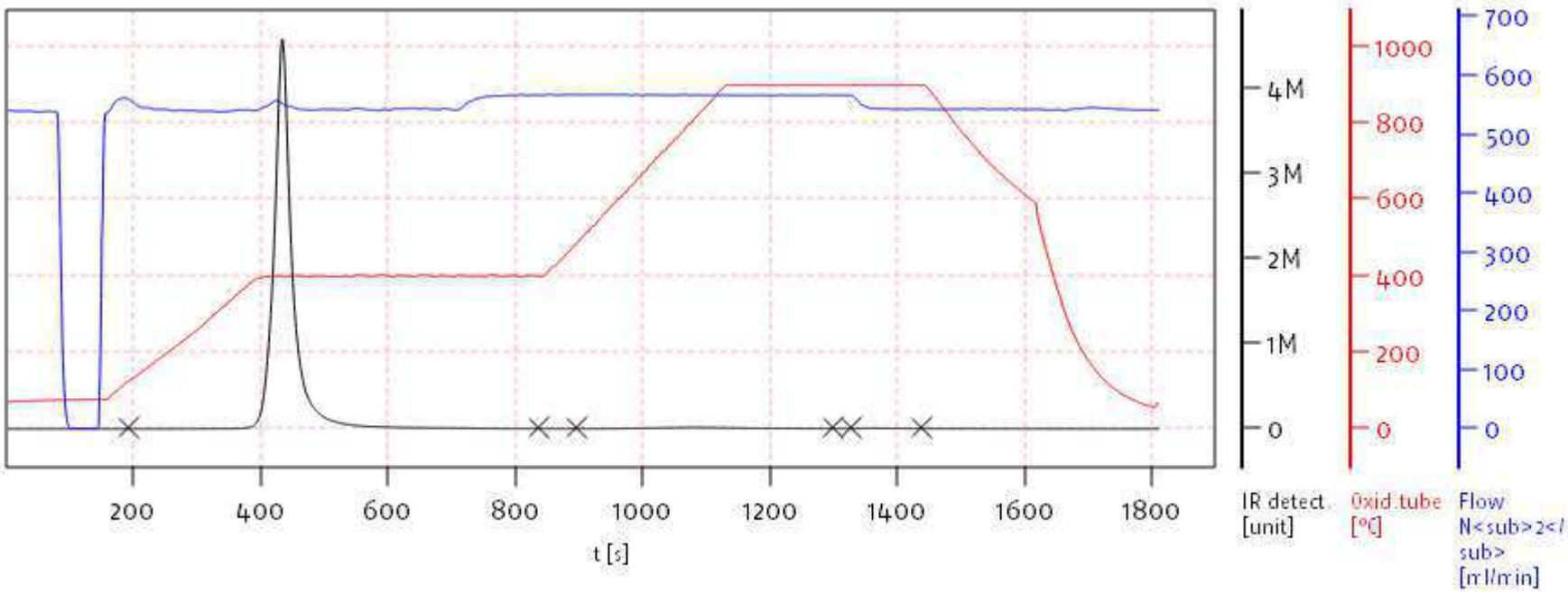
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 136 | 47 | SKL0336-CCVB | 19.30 | | CARBON | 12/31/2022 11:11 AM | bl | 44.262 | 5 763 356 | 44.972 | 0.000 | 21 763 | 115 129 | 44.262 | 0.711 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

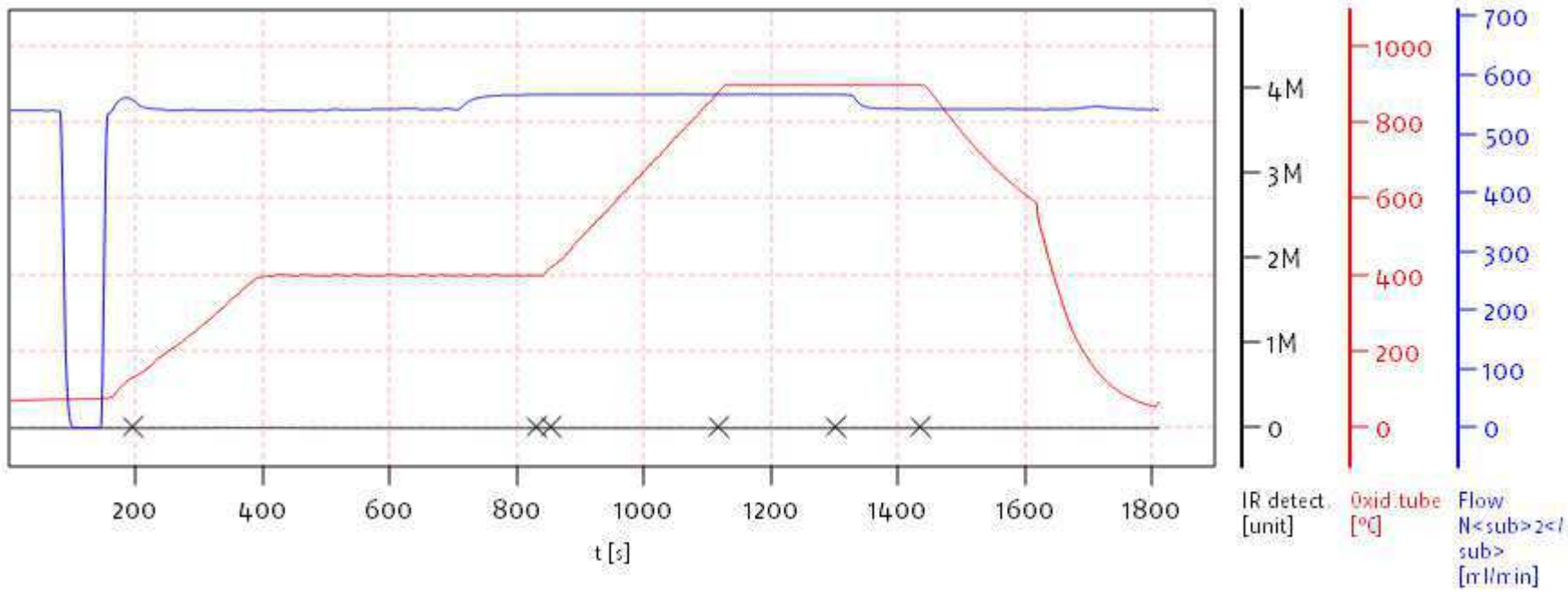
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 137 | 48 | SKL0336-CCBB | 537.60 | | CARBON | 12/31/2022 11:41 AM | bl,C3u,C2u | 0.000 | 14 989 | 0.000 | 0.000 | 624 | 369 | 0.000 | 0.000 | 0.9619 | 1.0000 |




Name:

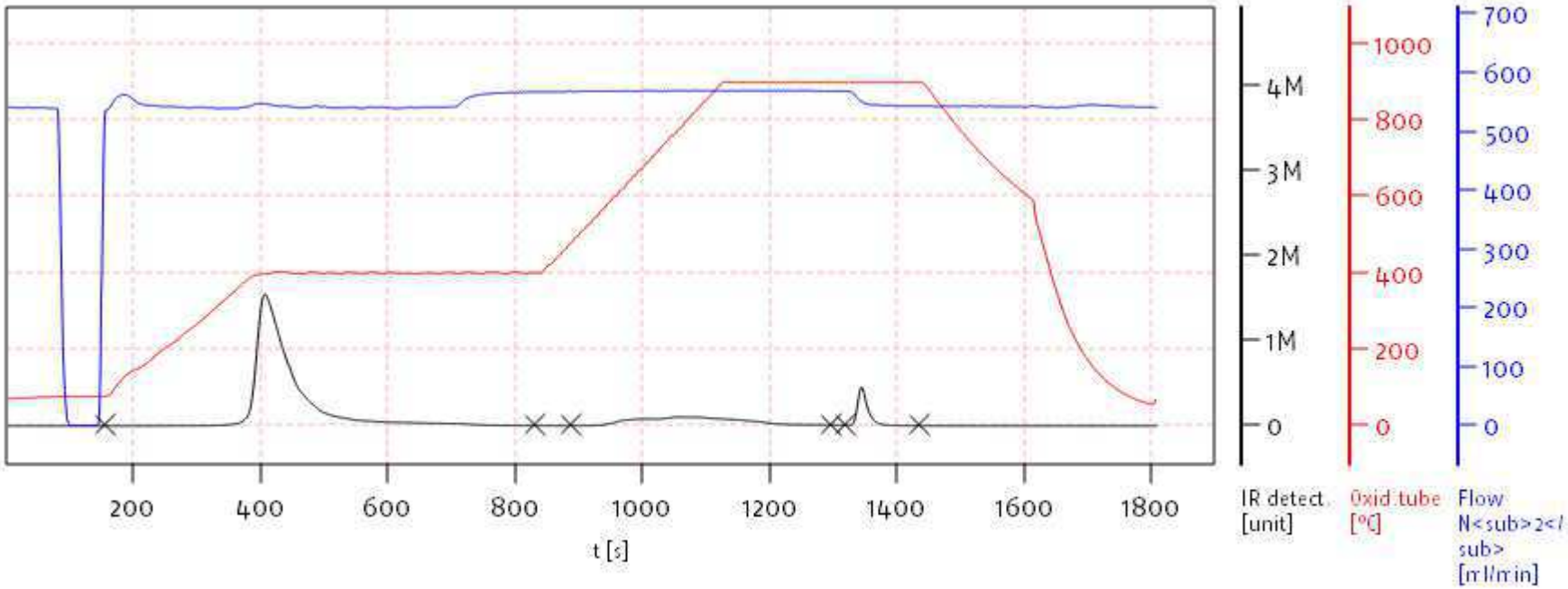
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 138 | 49 | 22L0329-23 | 526.70 | | CARBON | 12/31/2022 12:12 PM | bl | 1.136 | 3 736 415 | 1.363 | 0.087 | 321 930 | 801 042 | 1.049 | 0.228 | 0.9619 | 1.0000 |




Name:

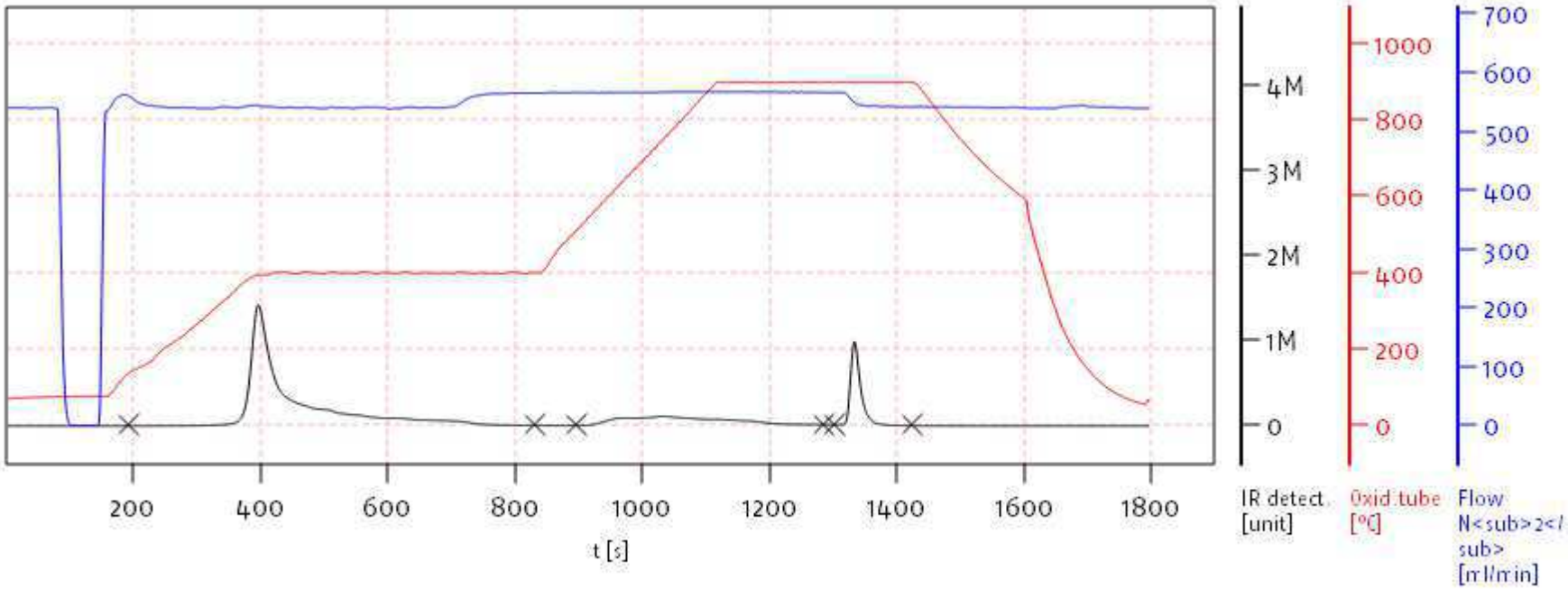
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 139 | 50 | 22L0329-24 | 512.40 | | CARBON | 12/31/2022 12:42 PM | bl | 1.181 | 3 389 869 | 1.437 | 0.204 | 701 481 | 872 703 | 0.977 | 0.256 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

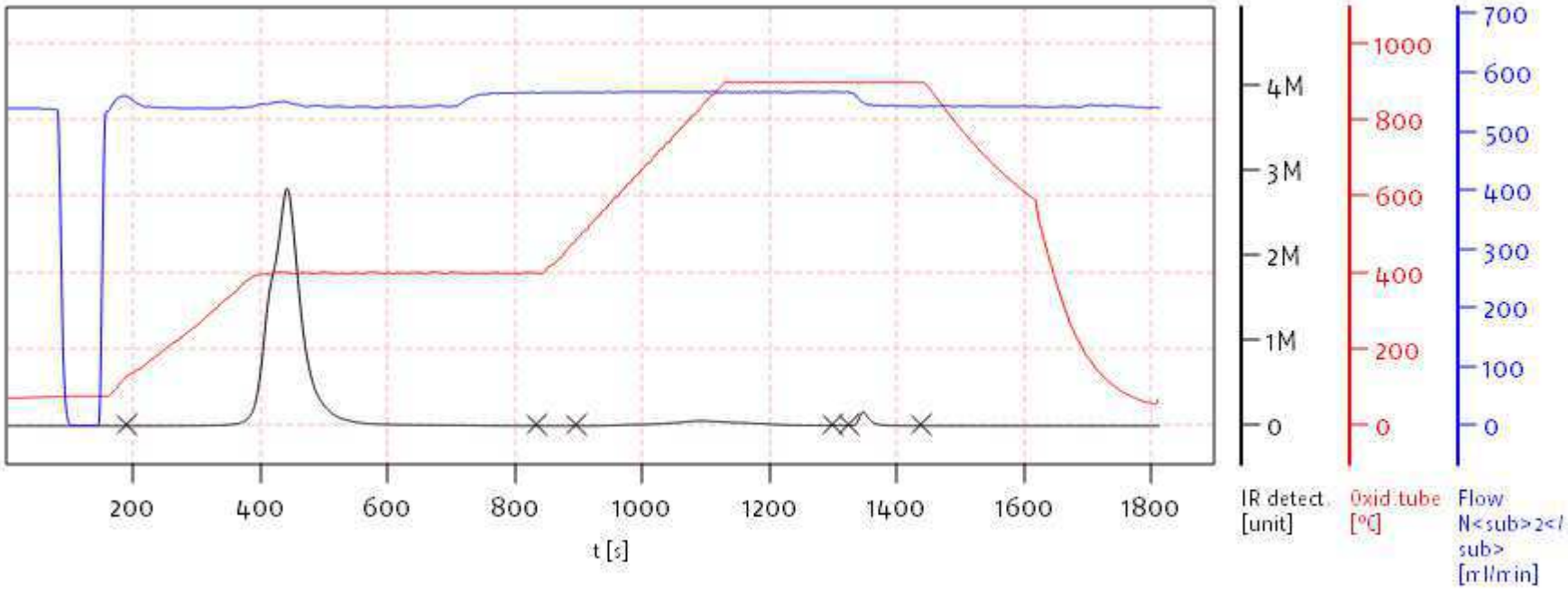
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 140 | 51 | 22L0329-25 | 527.60 | | CARBON | 12/31/2022 1:13 PM | bl | 1.722 | 6 032 597 | 1.814 | 0.027 | 118 871 | 339 551 | 1.695 | 0.092 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

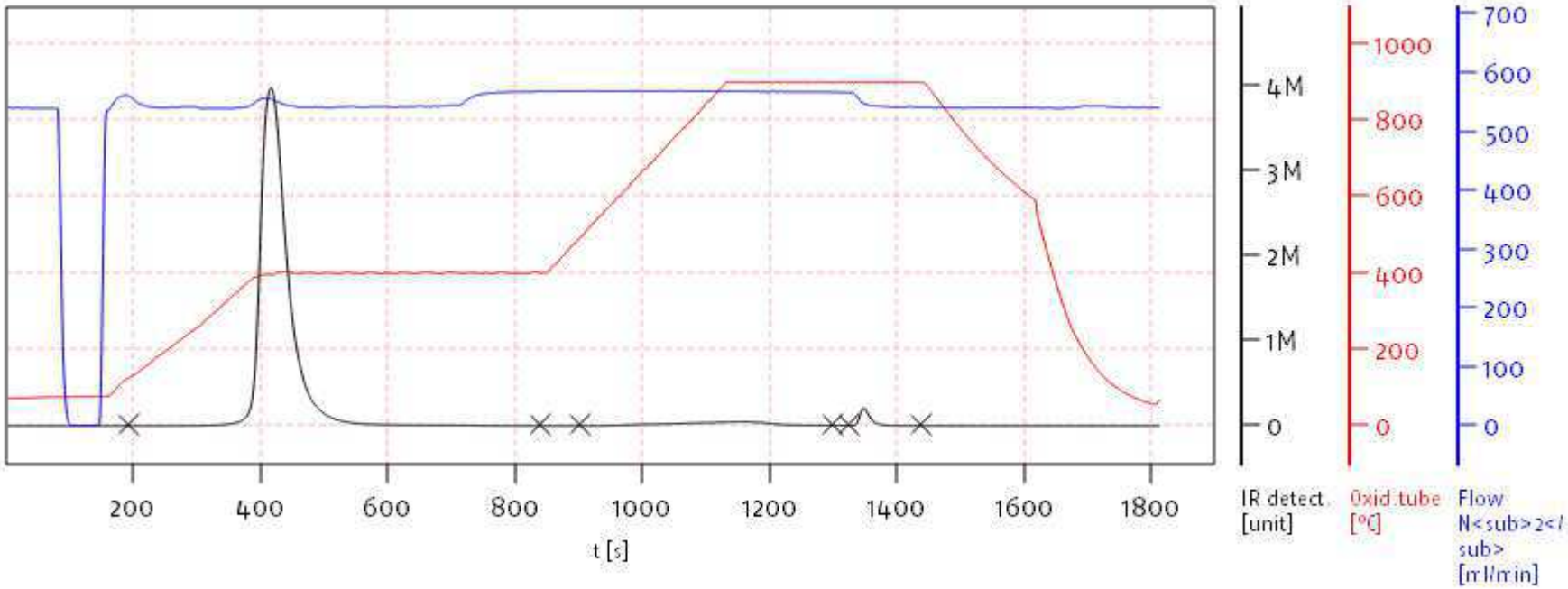
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 141 | 52 | 22L0329-26 | 515.90 | | CARBON | 12/31/2022 1:43 PM | bl | 2.171 | 7 416 684 | 2.259 | 0.038 | 153 467 | 320 089 | 2.133 | 0.088 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

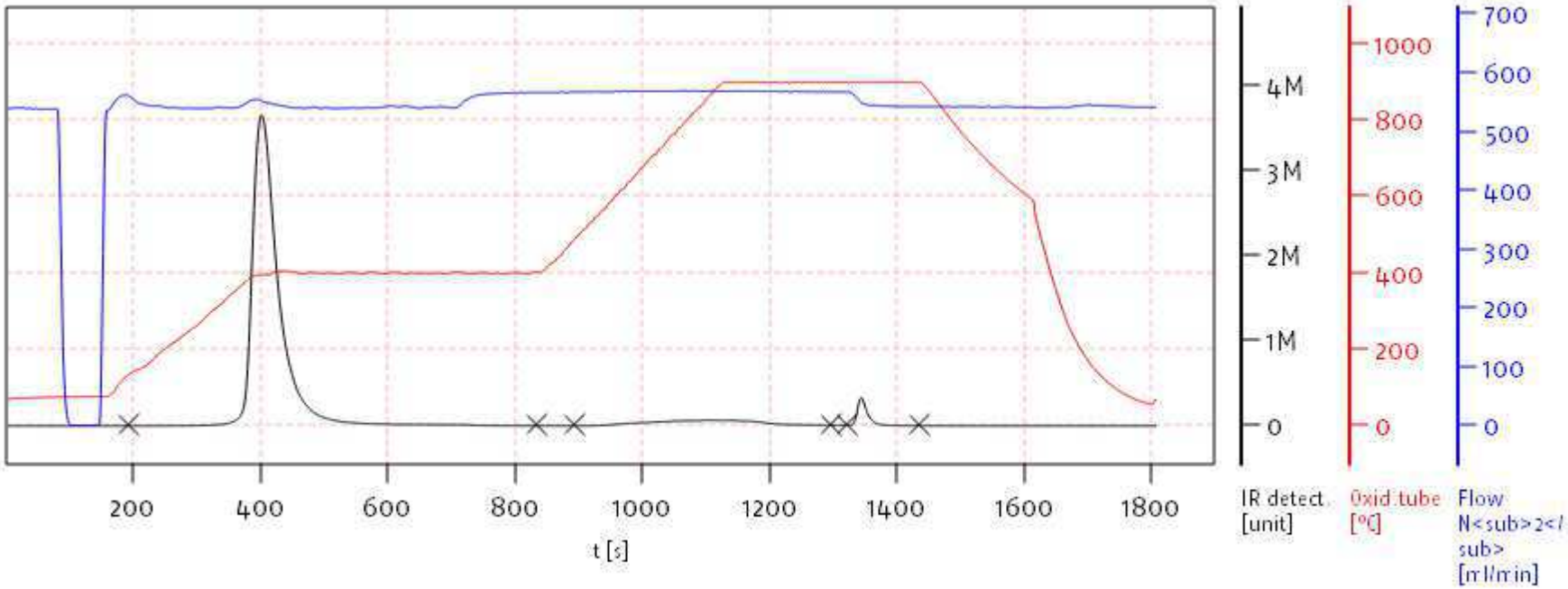
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 142 | 53 | 22L0329-27 | 505.00 | | CARBON | 12/31/2022 2:14 PM | bl | 1.989 | 6 556 551 | 2.142 | 0.063 | 233 415 | 524 881 | 1.925 | 0.153 | 0.9619 | 1.0000 |




Name:

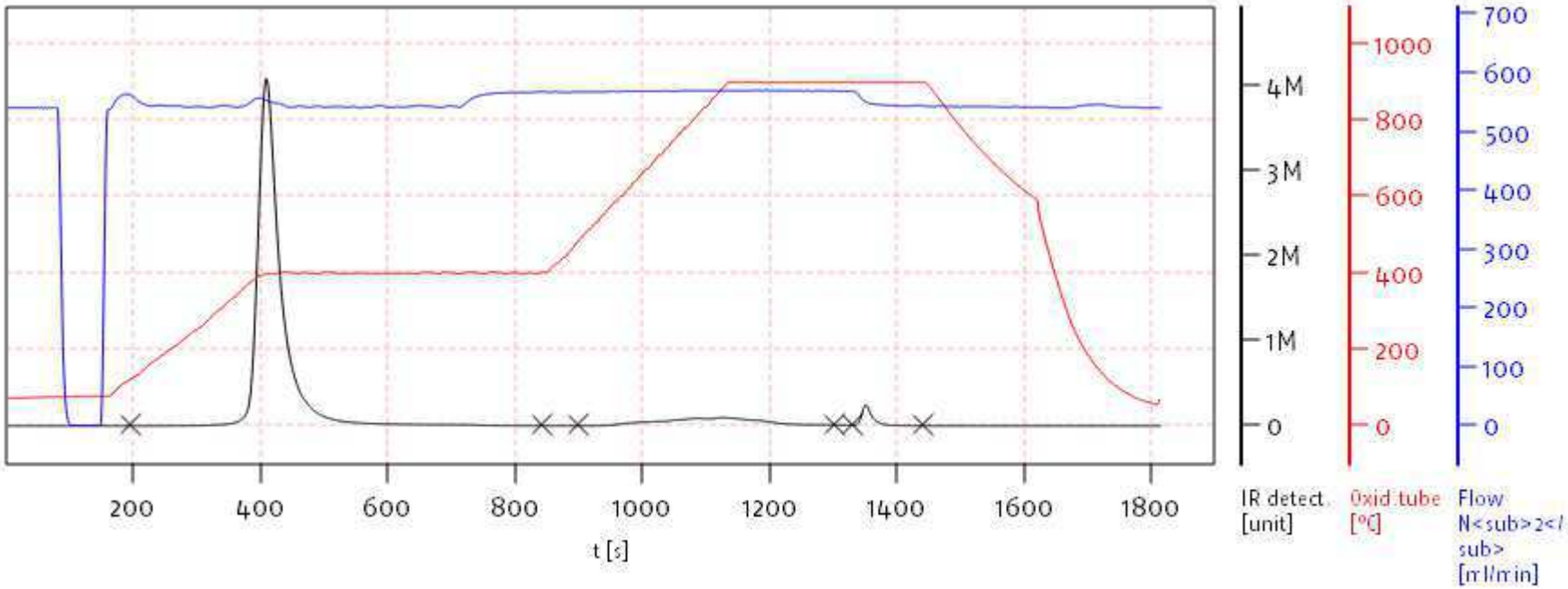
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 143 | 54 | 22L0329-28 | 522.10 | | CARBON | 12/31/2022 2:44 PM | bl | 1.863 | 6 395 374 | 2.054 | 0.046 | 182 984 | 671 039 | 1.816 | 0.191 | 0.9619 | 1.0000 |




Name:

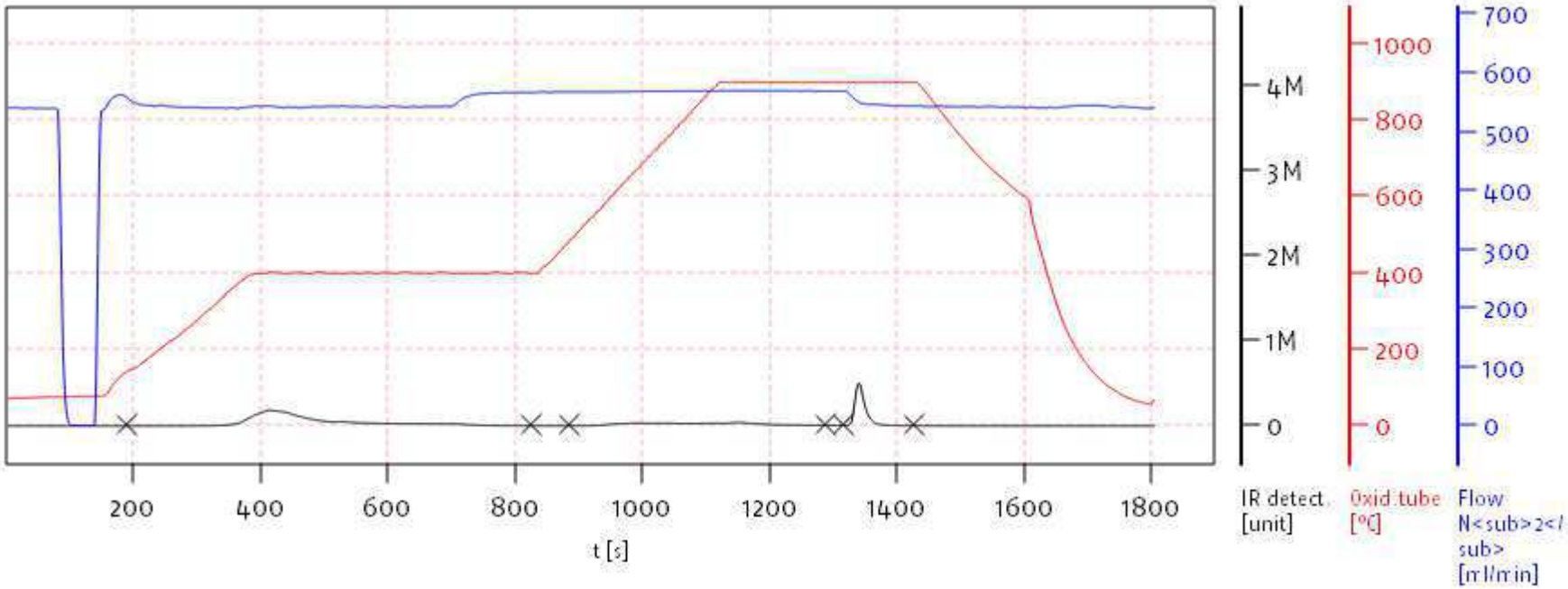
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 144 | 55 | 22L0329-29 | 516.00 | | CARBON | 12/31/2022 3:15 PM | bl | 0.352 | 901 231 | 0.439 | 0.099 | 357 312 | 318 364 | 0.252 | 0.088 | 0.9619 | 1.0000 |




Name:

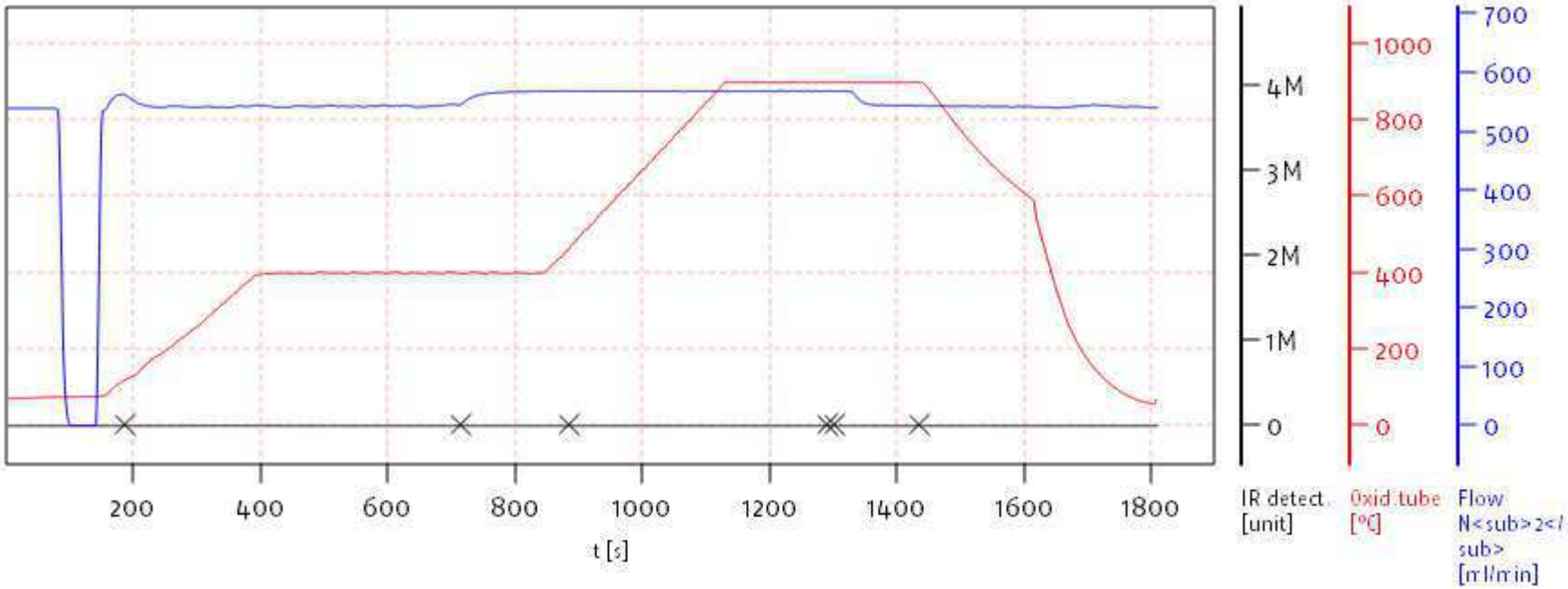
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 145 | 56 | BLANK | 1.00 | | CARBON | 12/31/2022 3:46 PM | bl | 0.000 | 8 477 | 0.000 | 0.000 | 377 | 1 497 | 0.000 | 0.000 | 0.9619 | 1.0000 |




Name:

Access: soliTOC superuser

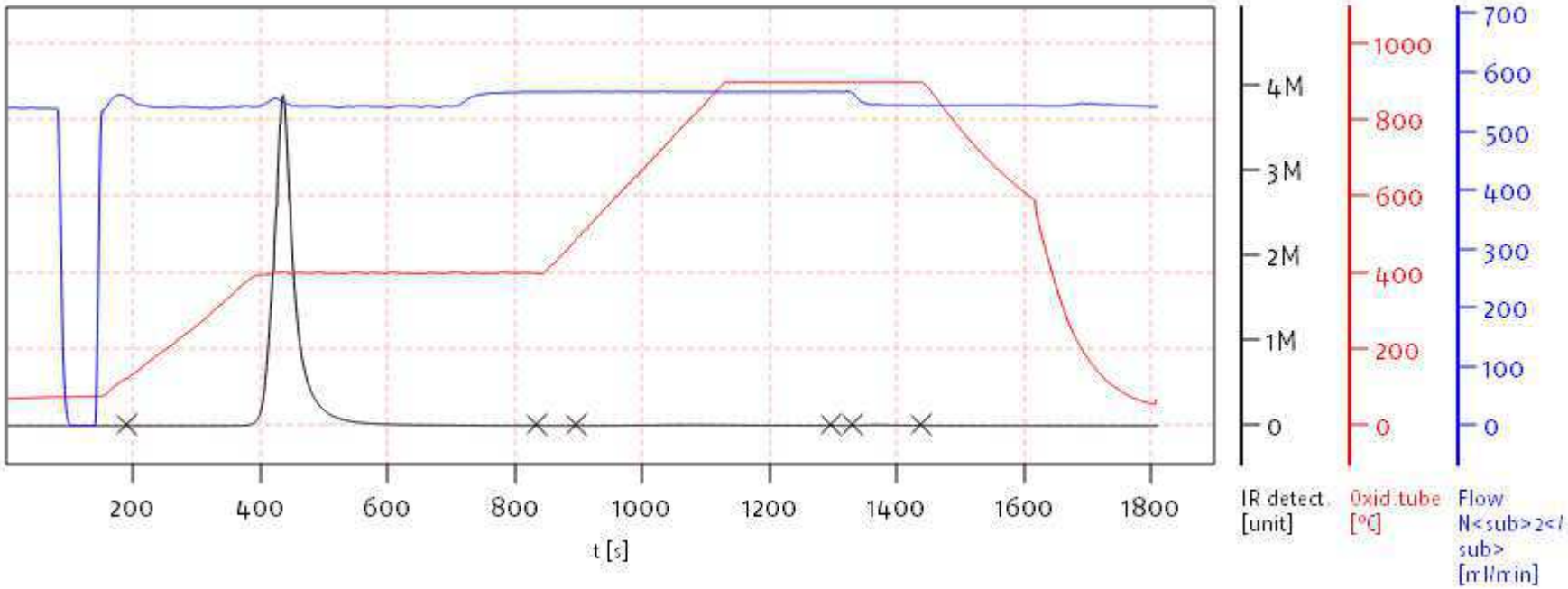
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146 | 57 | Dfactor | 19.30 | | CARBON | 12/31/2022 4:16 PM | bl | 44.467 | 5 642 249 | 45.050 | 0.021 | 29 141 | 99 276 | 44.446 | 0.583 | 0.9867 | 1.0000 |




Name:

Access: soliTOC superuser

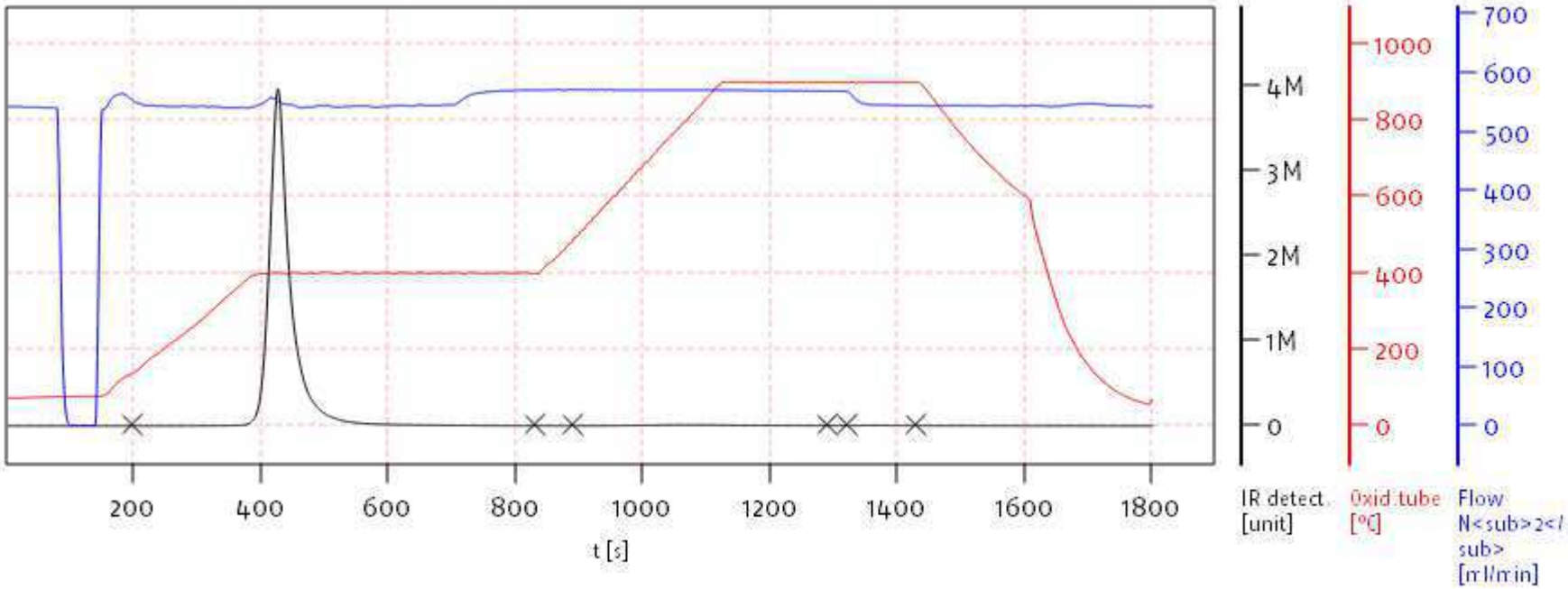
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 147 | 58 | Dfactor | 19.20 | | CARBON | 12/31/2022 4:47 PM | bl | 44.446 | 5 701 287 | 44.935 | 0.000 | 19 314 | 87 237 | 44.446 | 0.489 | 0.9714 | 1.0000 |




Name:

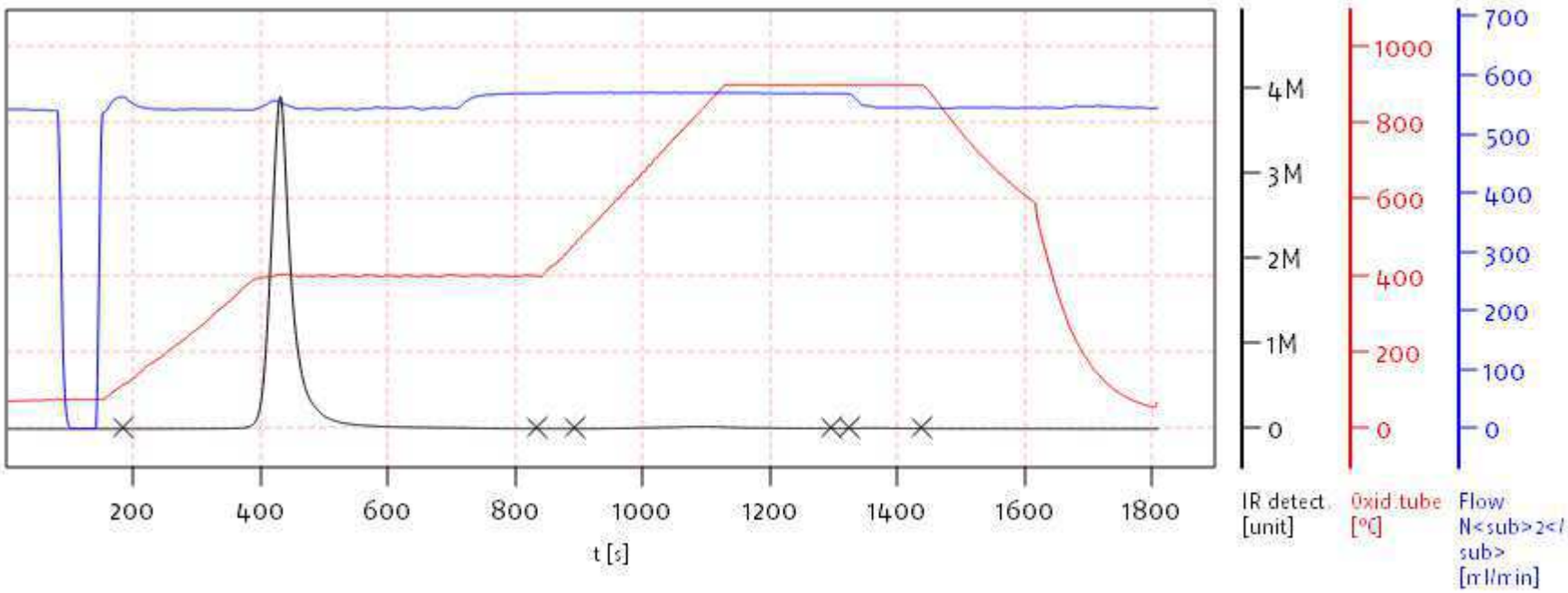
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 148 | 59 | SKL0336-CCVC | 19.70 | | CARBON | 12/31/2022 5:17 PM | bl | 44.187 | 5 769 864 | 45.350 | 0.000 | 26 333 | 174 532 | 44.187 | 1.163 | 0.9791 | 1.0000 |




Name:

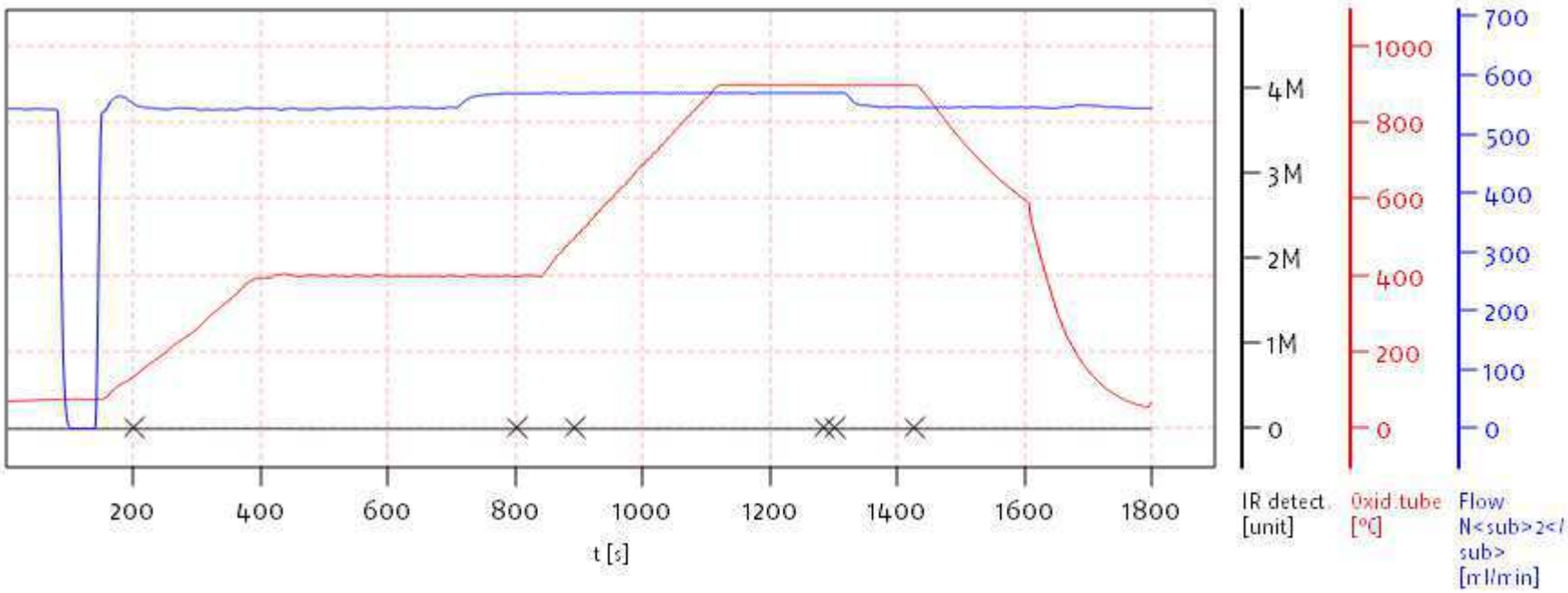
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 149 | 60 | SKL0336-CCBC | 512.20 | | CARBON | 12/31/2022 5:48 PM | bl,C3u,C2u | 0.000 | 11 093 | 0.000 | 0.000 | 864 | 1 929 | 0.000 | 0.000 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

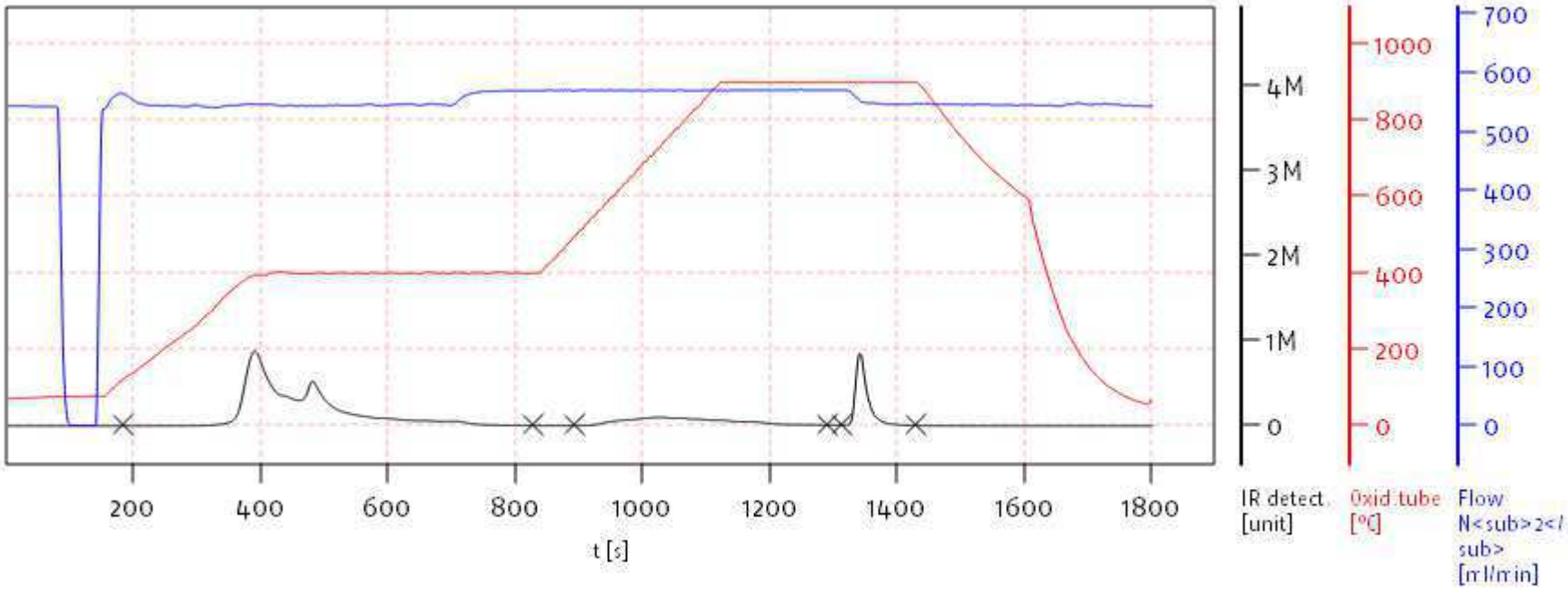
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 61 | 22L0329-30 | 561.70 | | CARBON | 12/31/2022 6:18 PM | bl | 1.080 | 3 345 240 | 1.279 | 0.184 | 694 697 | 749 214 | 0.895 | 0.199 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

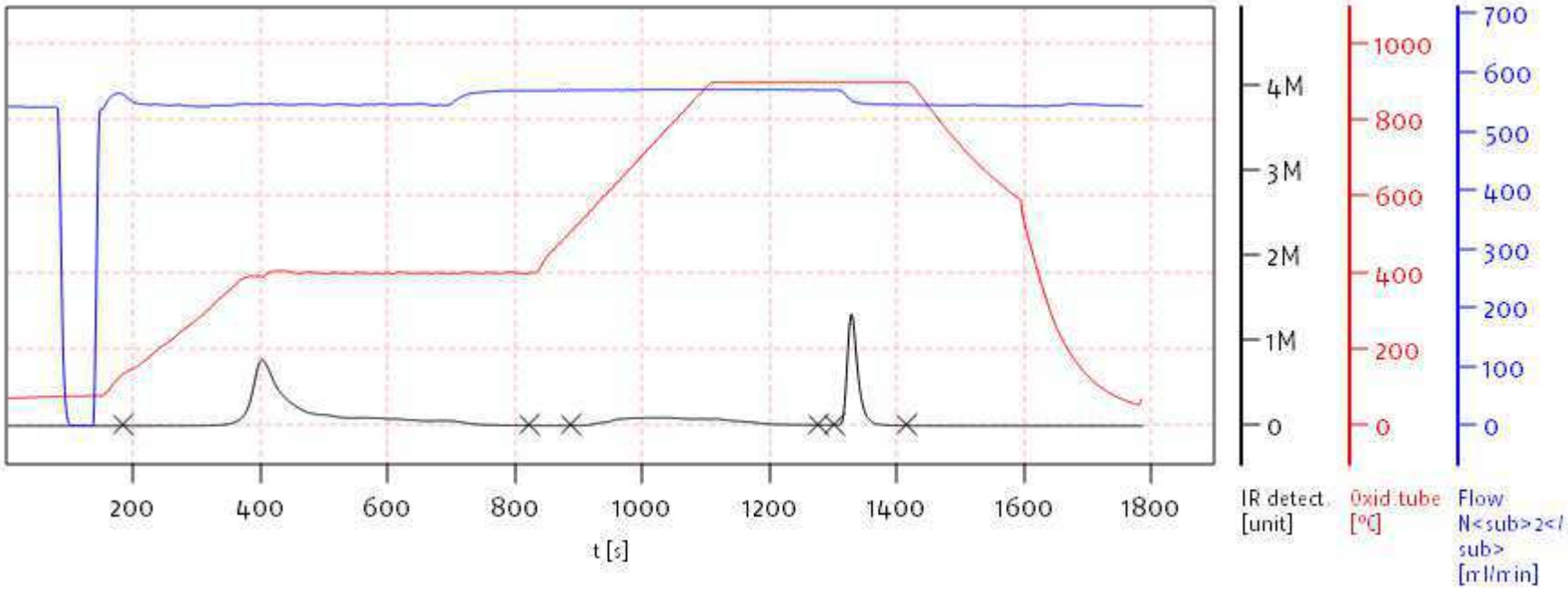
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 151 | 62 | 22L0329-31 | 532.90 | | CARBON | 12/31/2022 6:48 PM | bl | 0.960 | 2 437 504 | 1.180 | 0.274 | 970 845 | 785 419 | 0.686 | 0.220 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

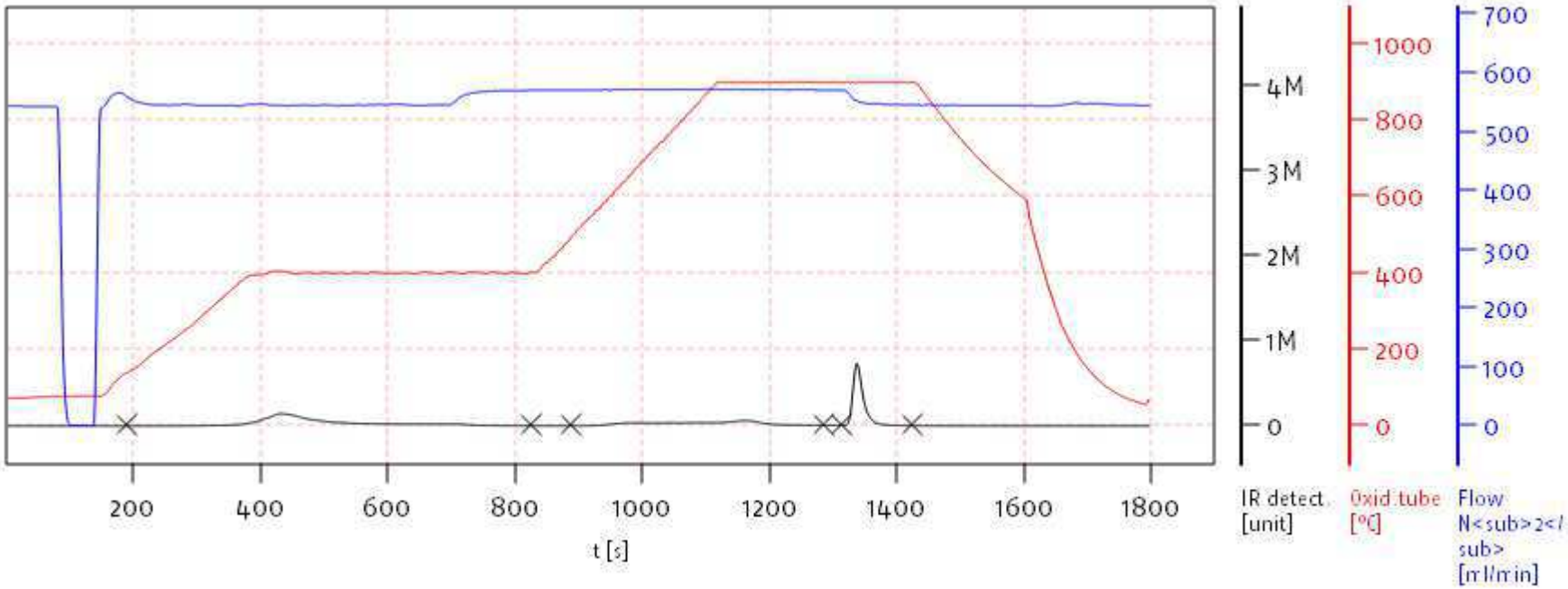
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 152 | 63 | 22L0329-32 | 636.70 | | CARBON | 12/31/2022 7:19 PM | bl | 0.278 | 678 324 | 0.369 | 0.123 | 531 334 | 403 052 | 0.155 | 0.092 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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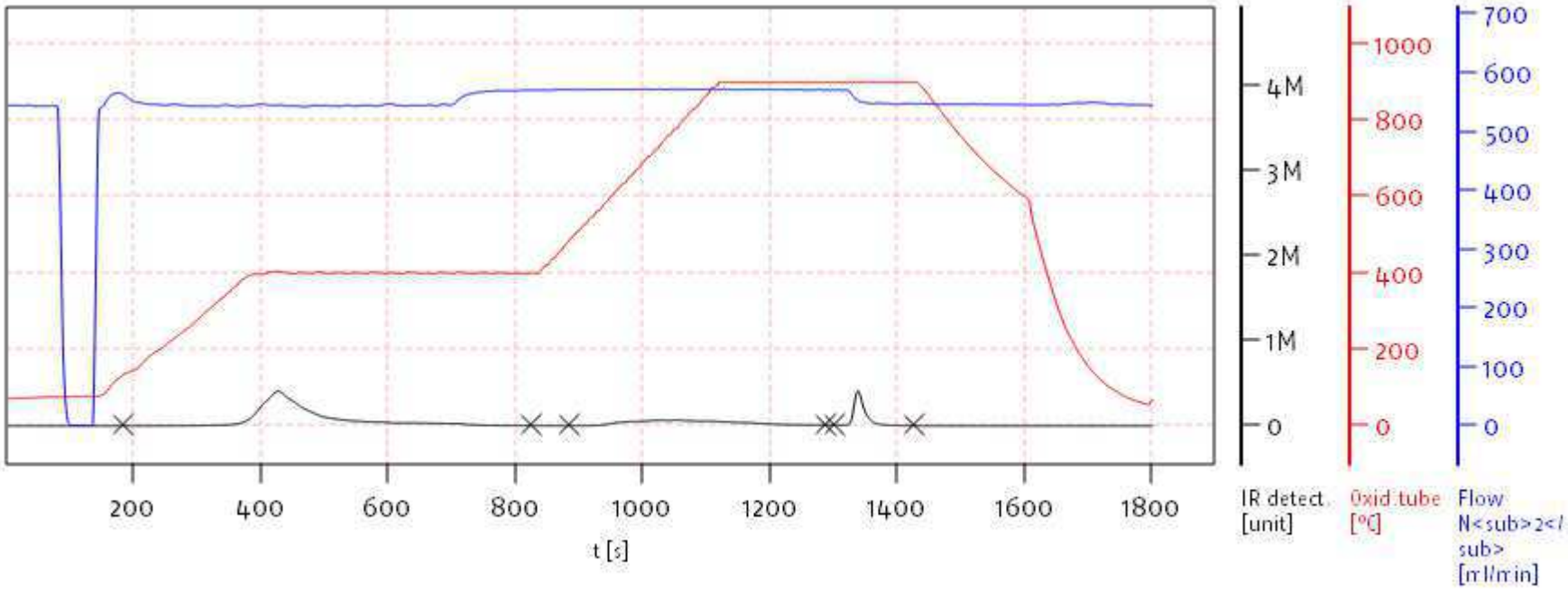
elementar
EXCELLENCE IN ELEMENTS

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 153 | 64 | 22L0329-33 | 563.70 | | CARBON | 12/31/2022 7:49 PM | bl | 0.483 | 1 534 676 | 0.621 | 0.078 | 310 333 | 528 147 | 0.405 | 0.138 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

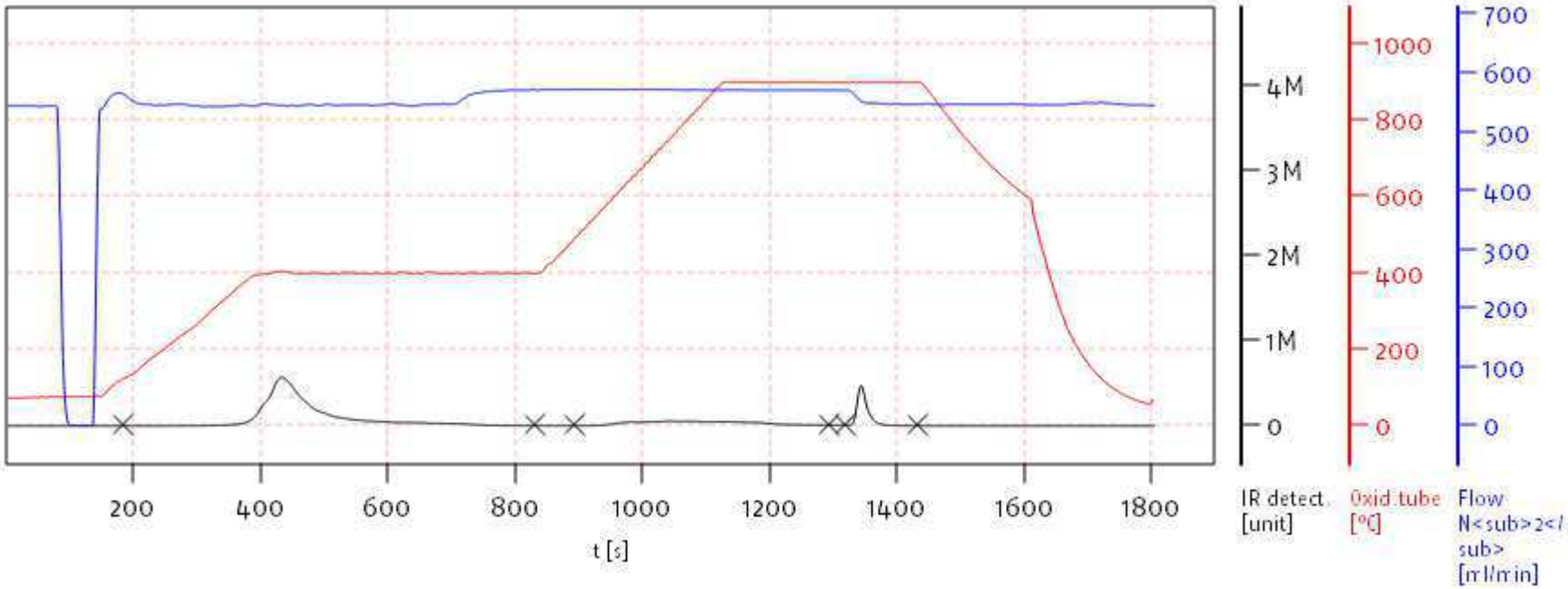
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 154 | 65 | 22L0329-34 | 654.60 | | CARBON | 12/31/2022 8:20 PM | bl | 0.512 | 1 924 577 | 0.620 | 0.072 | 331 303 | 485 000 | 0.439 | 0.108 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

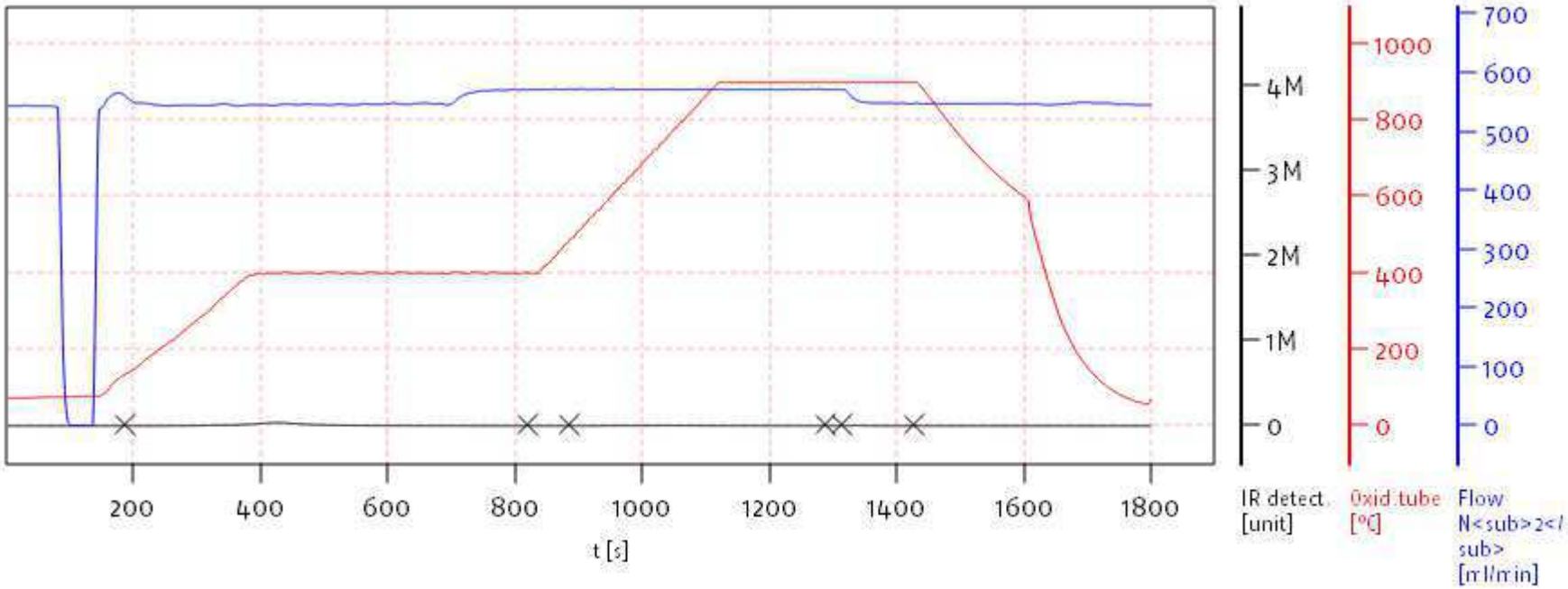
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 155 | 66 | 22L0329-35 | 554.00 | | CARBON | 12/31/2022 8:50 PM | bl | 0.041 | 175 811 | 0.043 | 0.000 | 5 283 | 32 621 | 0.041 | 0.002 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

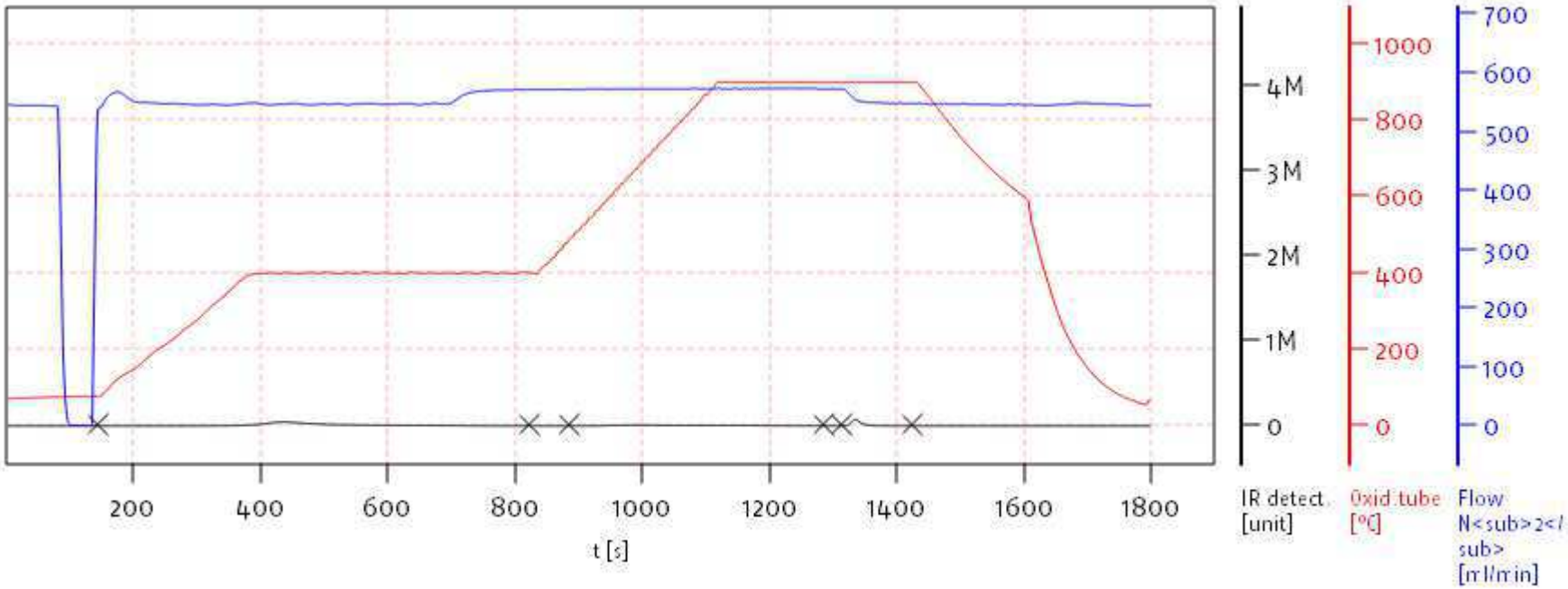
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 156 | 67 | 22L0329-36 | 565.00 | | CARBON | 12/31/2022 9:20 PM | bl | 0.058 | 215 475 | 0.069 | 0.007 | 51 654 | 69 911 | 0.051 | 0.012 | 0.9791 | 1.0000 |




Name:

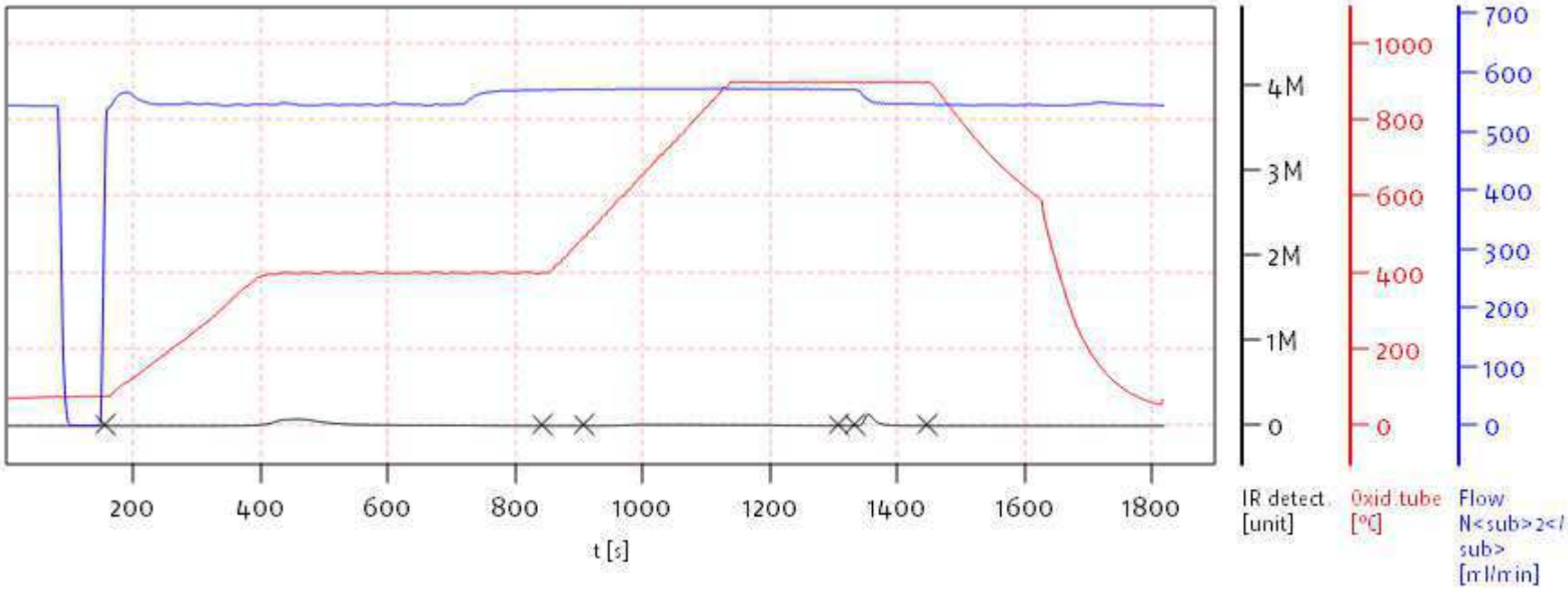
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 157 | 68 | 22L0329-37 | 531.80 | | CARBON | 12/31/2022 9:51 PM | bl | 0.110 | 336 501 | 0.137 | 0.022 | 100 910 | 120 109 | 0.088 | 0.027 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

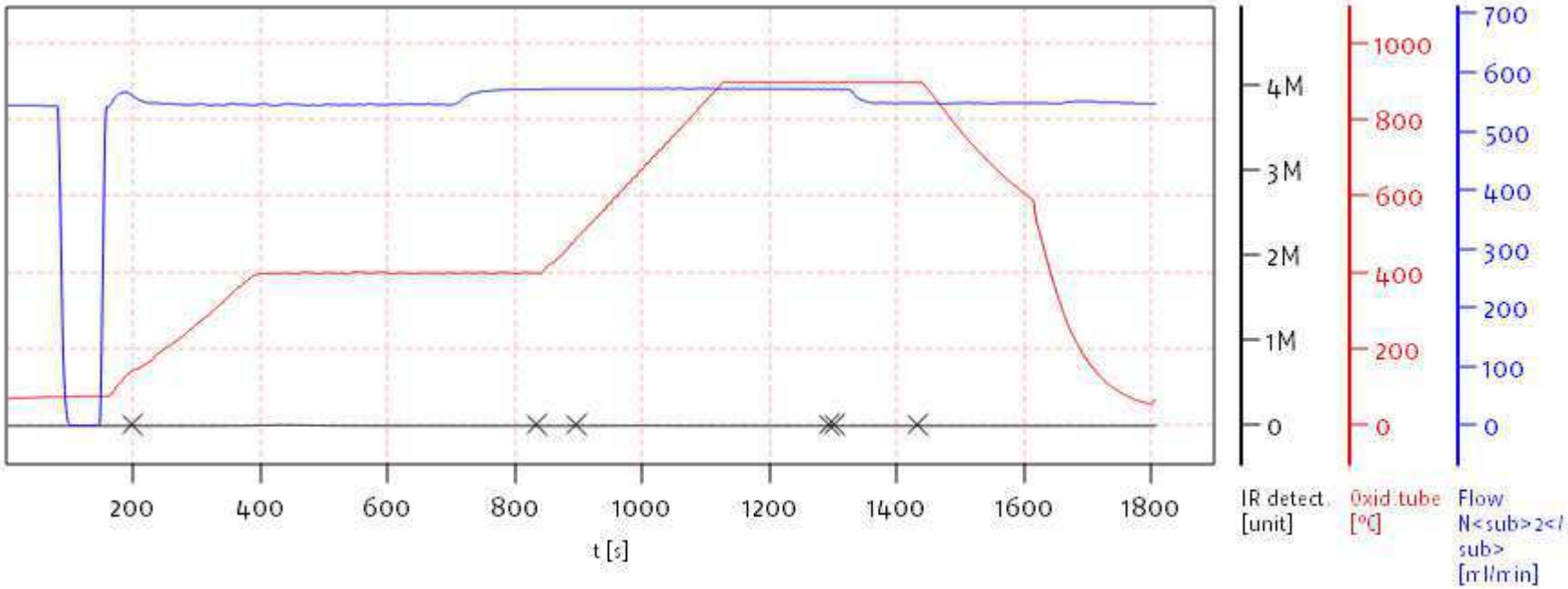
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 158 | 69 | 22L0329-38 | 511.30 | | CARBON | 12/31/2022 10:22 PM | bl,C2u | 0.006 | 45 577 | 0.006 | 0.000 | 2 073 | 12 913 | 0.006 | 0.000 | 0.9791 | 1.0000 |




Name:

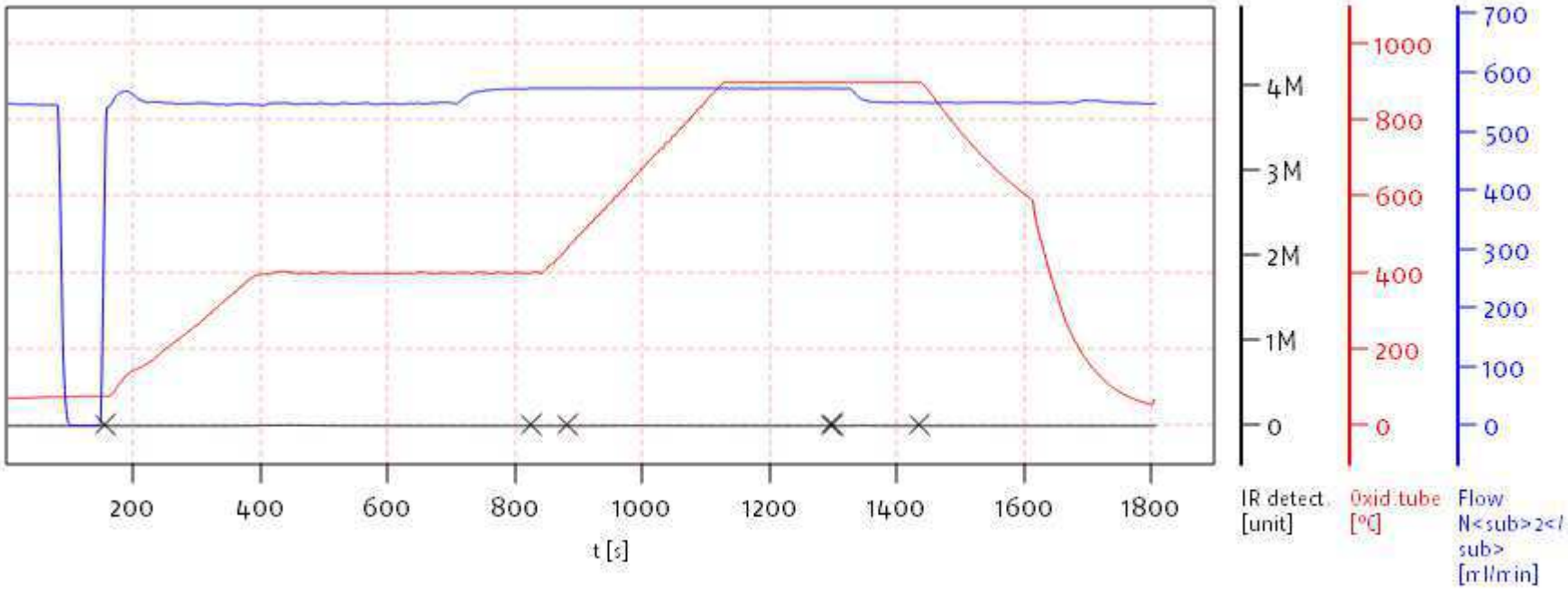
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159 | 70 | 22L0329-39 | 538.80 | | CARBON | 12/31/2022 10:52 PM | bl | 0.003 | 38 567 | 0.003 | 0.000 | 4 278 | 11 875 | 0.003 | 0.000 | 0.9791 | 1.0000 |




Name:

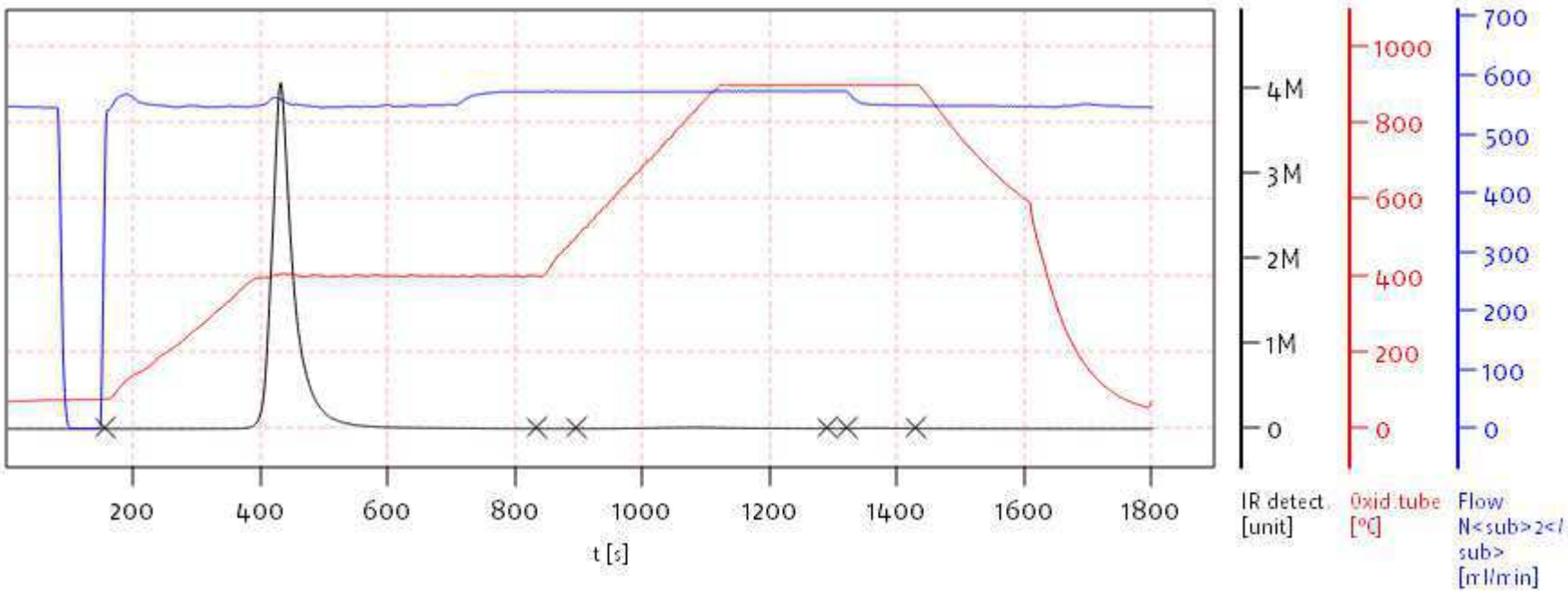
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 160 | 71 | SKL0336-CCVD | 20.70 | | CARBON | 12/31/2022 11:23 PM | bl | 44.344 | 6 082 897 | 44.986 | 0.000 | 25 317 | 112 404 | 44.344 | 0.642 | 0.9791 | 1.0000 |




Name:

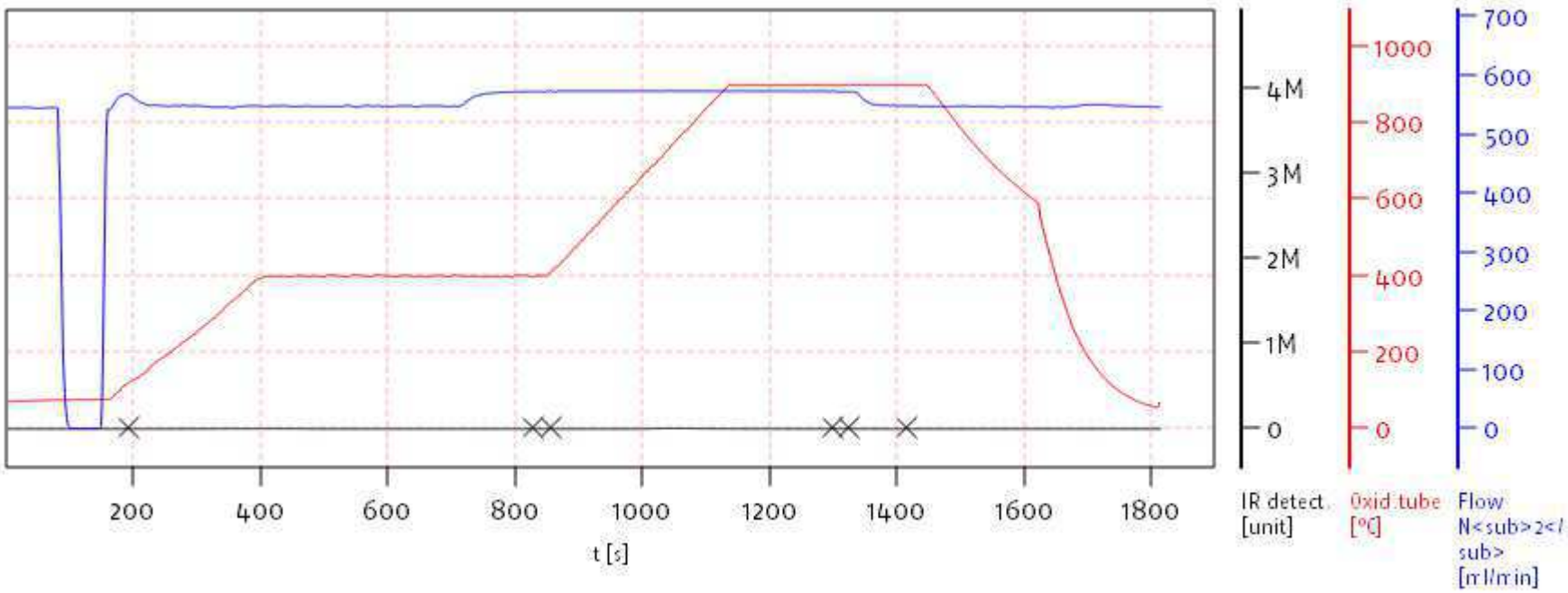
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 161 | 72 | SKL0336-CCBD | 510.00 | | CARBON | 12/31/2022 11:53 PM | bl,C2u | 0.000 | 18 170 | 0.000 | 0.000 | 1 299 | 27 248 | 0.000 | 0.000 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

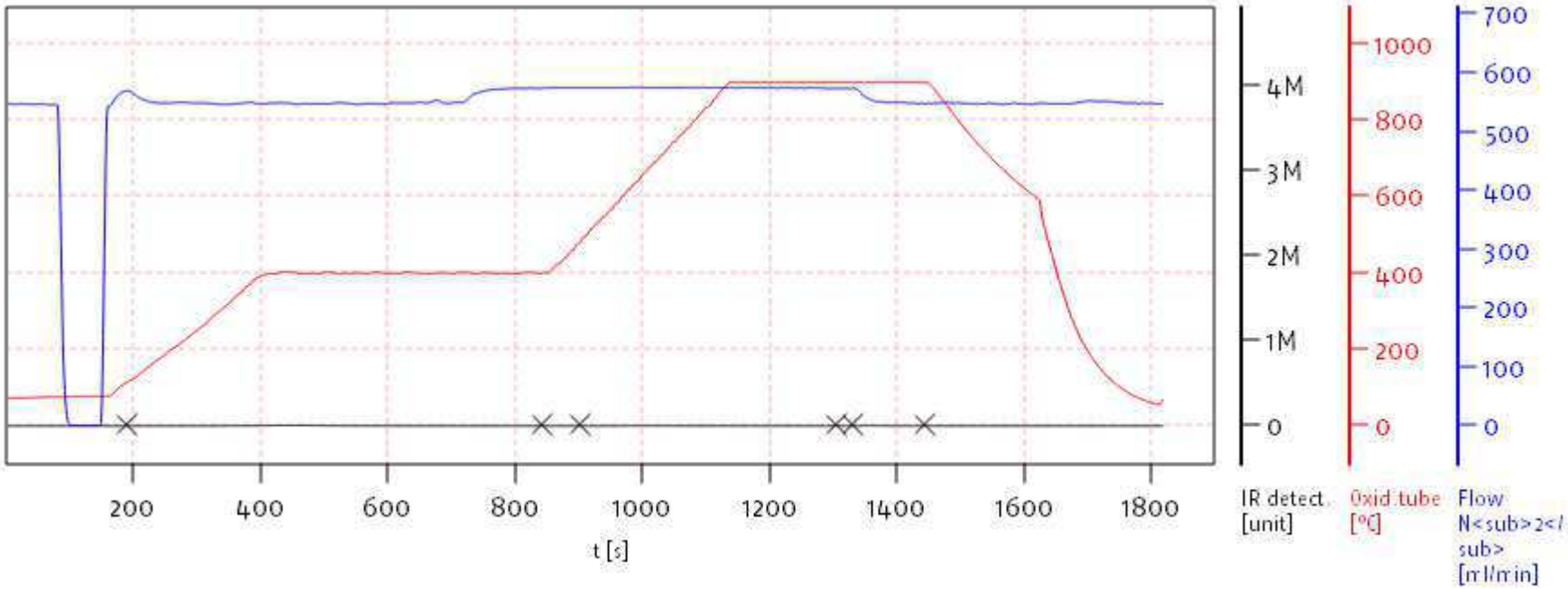
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 162 | 73 | 22L0329-40 | 508.40 | | CARBON | 1/1/2023 12:24 AM | bl | 0.003 | 38 201 | 0.003 | 0.000 | 4 604 | 12 641 | 0.003 | 0.000 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

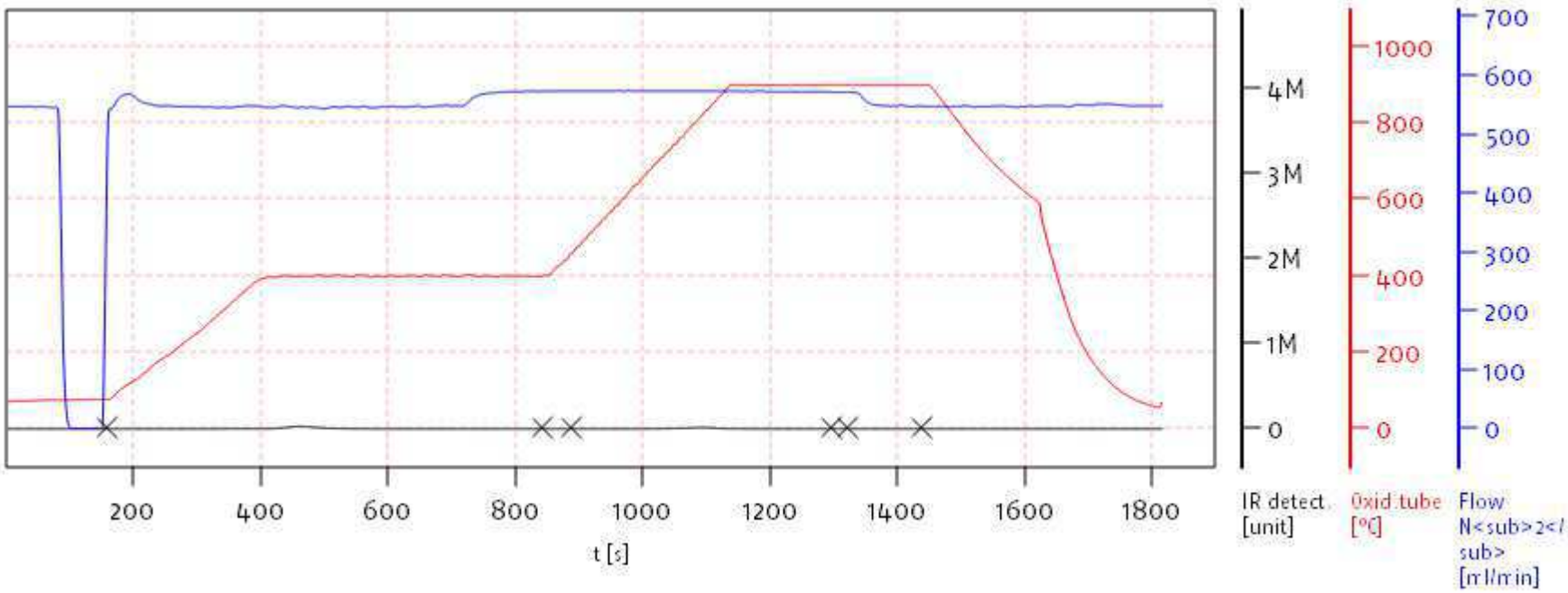
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 163 | 74 | BKL0652-MRL1 | 548.60 | | CARBON | 1/1/2023 12:55 AM | bl,C2u | 0.013 | 73 613 | 0.016 | 0.000 | 678 | 38 165 | 0.013 | 0.003 | 0.9791 | 1.0000 |

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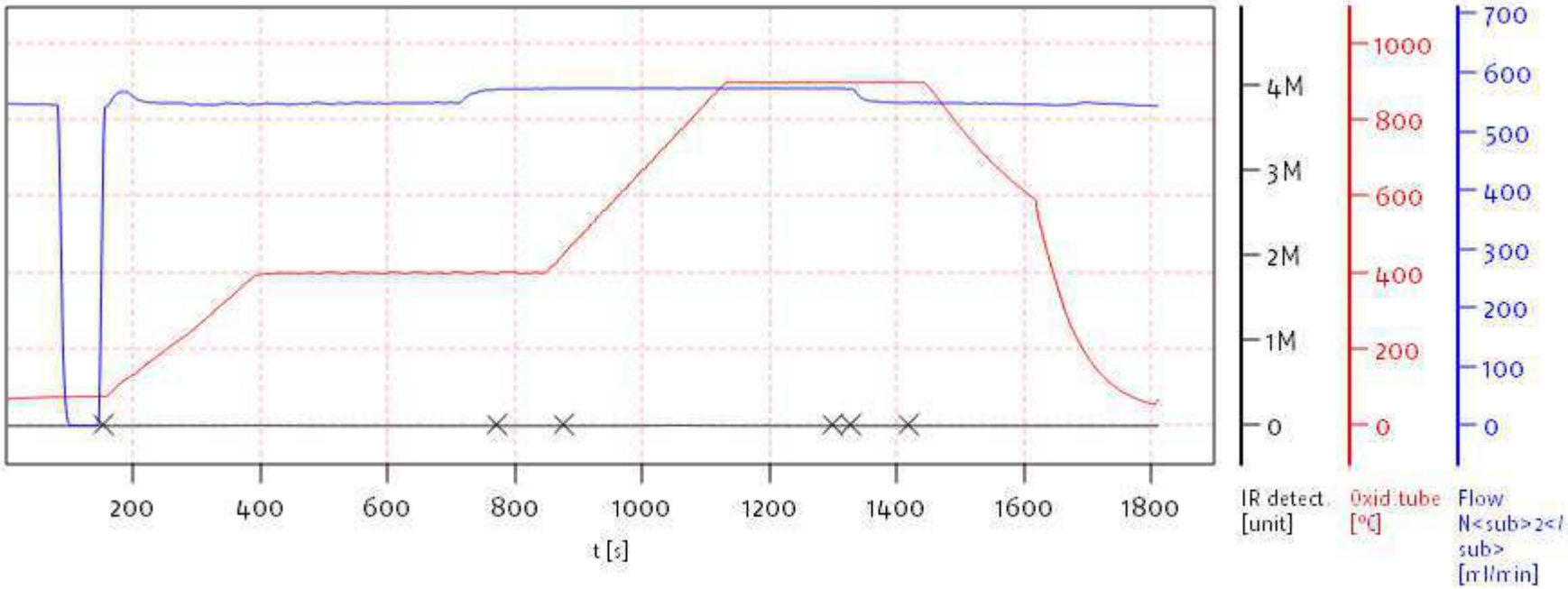
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 164 | 75 | BKL0652-BLK1 | 511.00 | | CARBON | 1/1/2023 1:25 AM | bl,C2u | 0.000 | 20 971 | 0.000 | 0.000 | 644 | 21 914 | 0.000 | 0.000 | 0.9791 | 1.0000 |

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soliTOC V2.0.2 (31015f9) 2018-11-19
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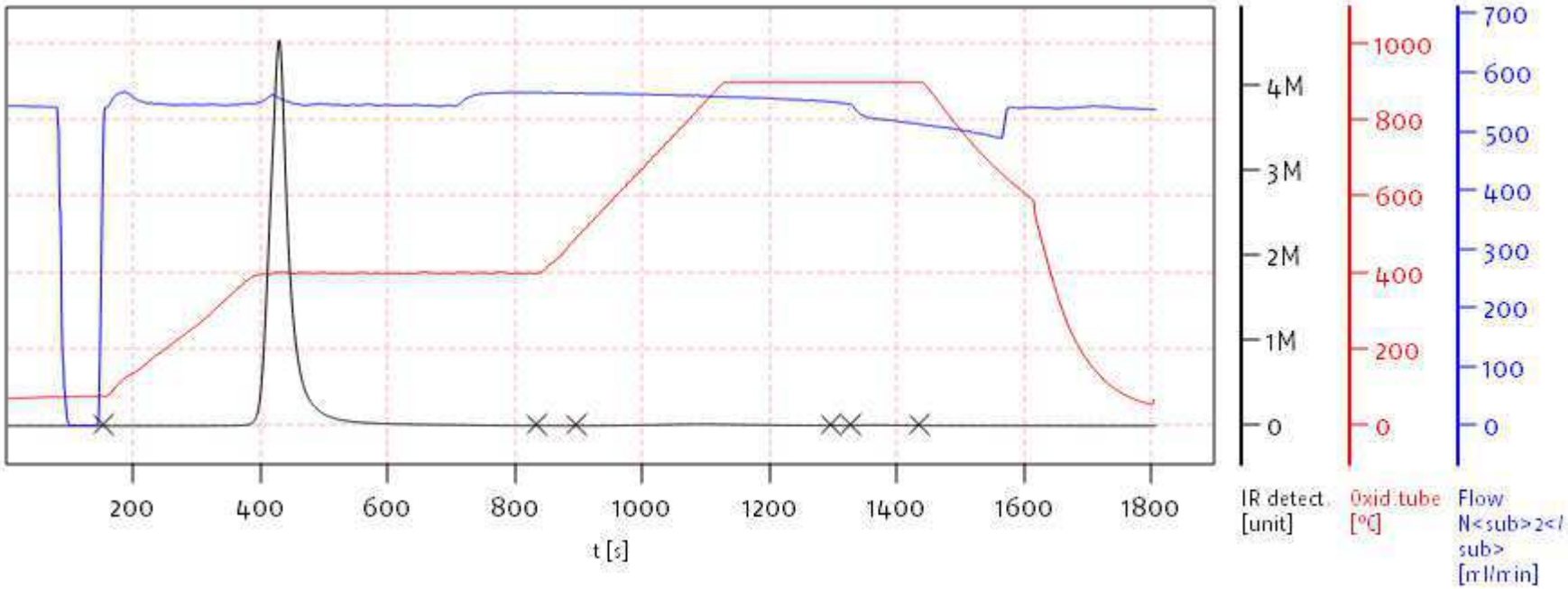
Document: 122822 DOE from: 1/3/2023 7:07 AM

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165 | 76 | BKL0652-BS1 | 21.30 | | CARBON | 1/1/2023 1:56 AM | bl | 44.428 | 6 269 704 | 45.307 | 0.003 | 26 980 | 147 586 | 44.424 | 0.880 | 0.9791 | 1.0000 |

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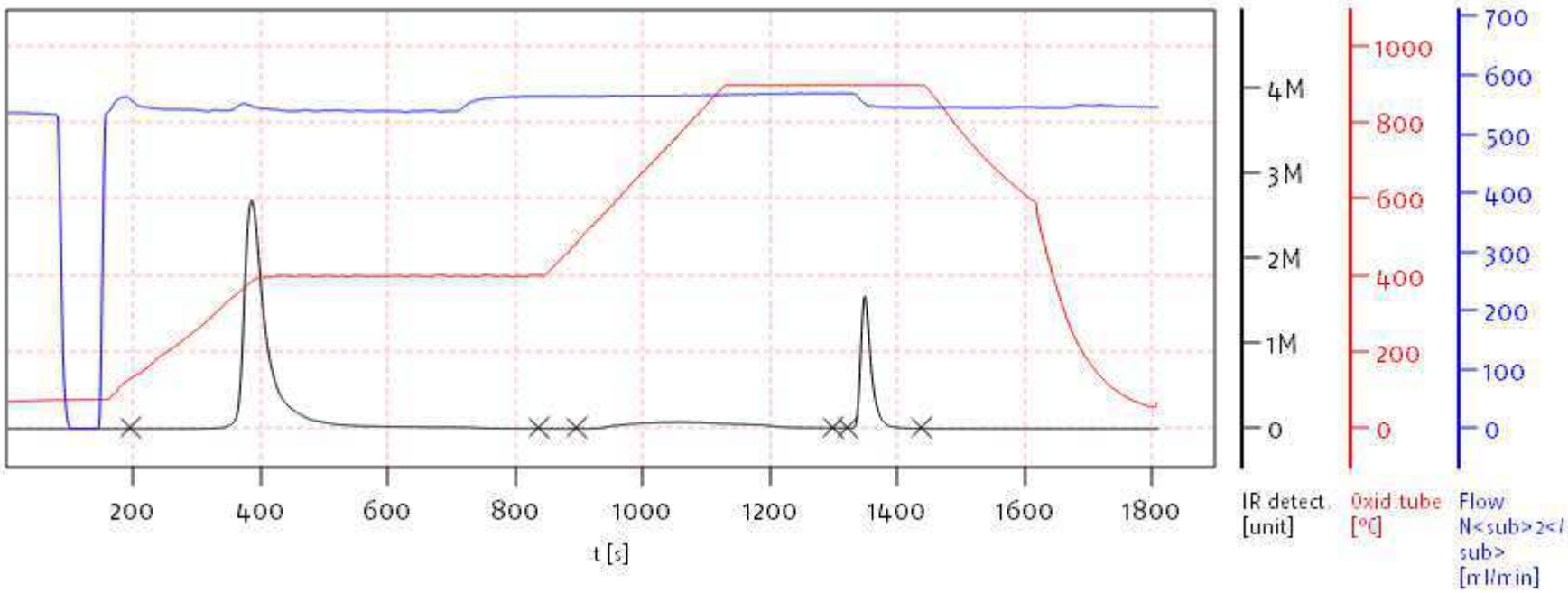
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 166 | 77 | BKL0652-SRM1 | 274.70 | | CARBON | 1/1/2023 2:26 AM | bl | 2.992 | 4 317 746 | 3.355 | 0.624 | 1 134 237 | 670 186 | 2.368 | 0.363 | 0.9791 | 1.0000 |

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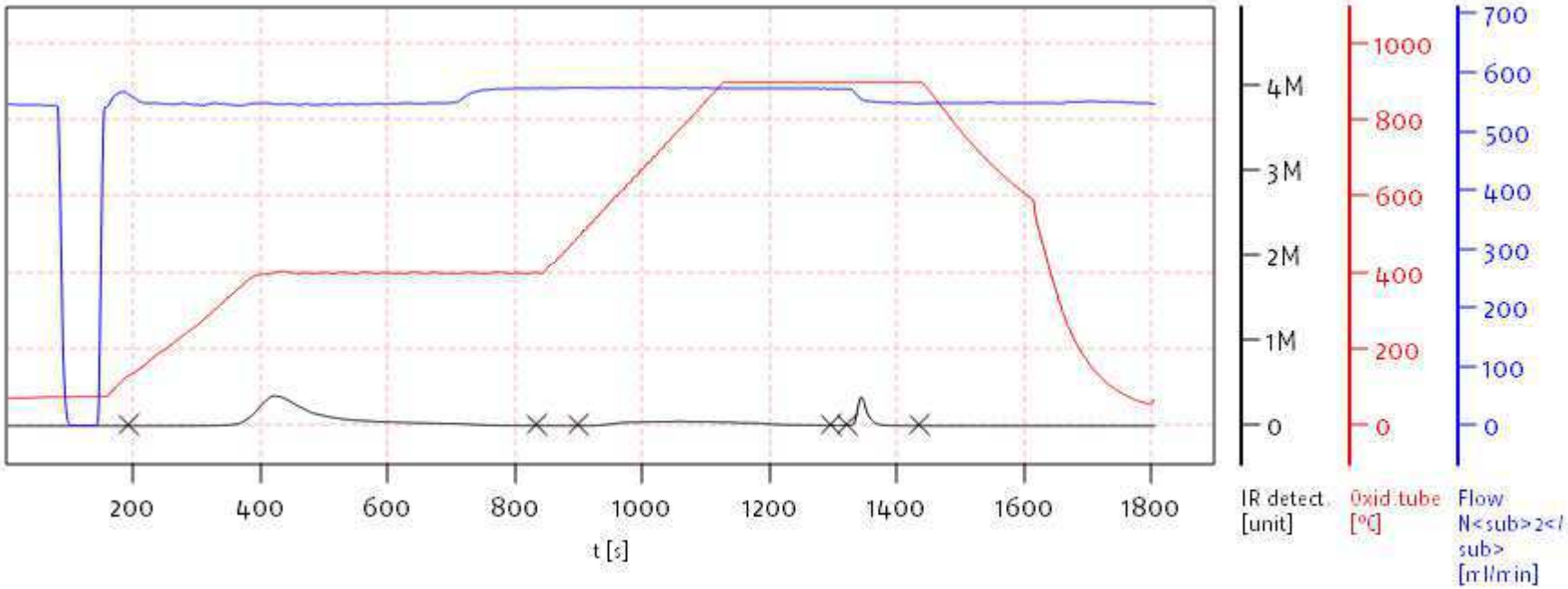
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 167 | 78 | 22L0329-41 | 525.30 | | CARBON | 1/1/2023 2:57 AM | bl | 0.498 | 1 543 037 | 0.621 | 0.060 | 230 904 | 443 169 | 0.438 | 0.123 | 0.9791 | 1.0000 |

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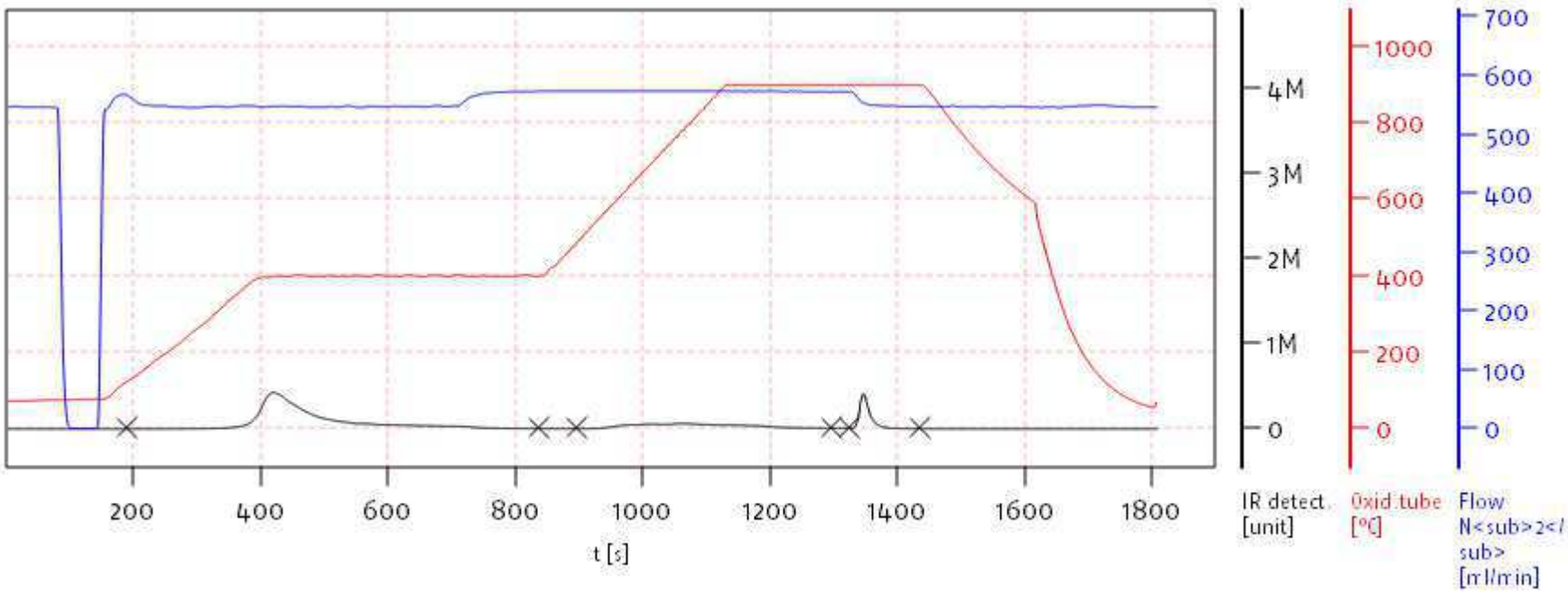
Serial No: 0300.181017
Mode CCC

# 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 | BKL0652-DUP1 | 572.30 | | CARBON | 1/1/2023 3:27 AM | bl | 0.506 | 1 662 421 | 0.634 | 0.072 | 294 170 | 501 341 | 0.433 | 0.128 | 0.9791 | 1.0000 |

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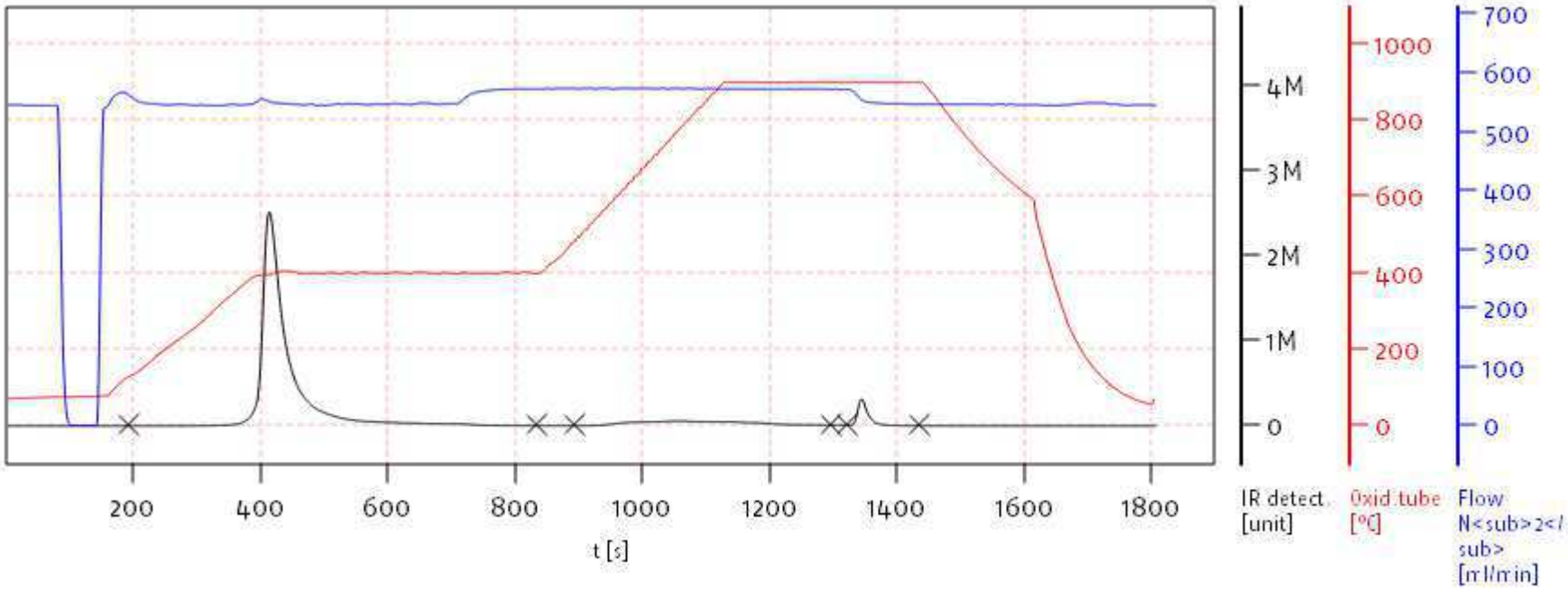
# Soli TOC Cube, Carbon
## Balance: BAL3
## Analyst: DOE

| | Pos. | Name | Weight [mg] | Memo | Method | Date Time | Info | TOC [%] | TOC400 Area | TC [%] | ROC [%] | ROC Area | TIC900 Area | TOC400 [%] | TIC900 [%] | TOC400 Factor | TIC900 Factor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 169 | 80 | BKL0652-MS1 | 511.60 | 0.0088 | CARBON | 1/1/2023 3:58 AM | bl | 1.299 | 4 204 636 | 1.436 | 0.061 | 227 545 | 479 384 | 1.238 | 0.137 | 0.9791 | 1.0000 |

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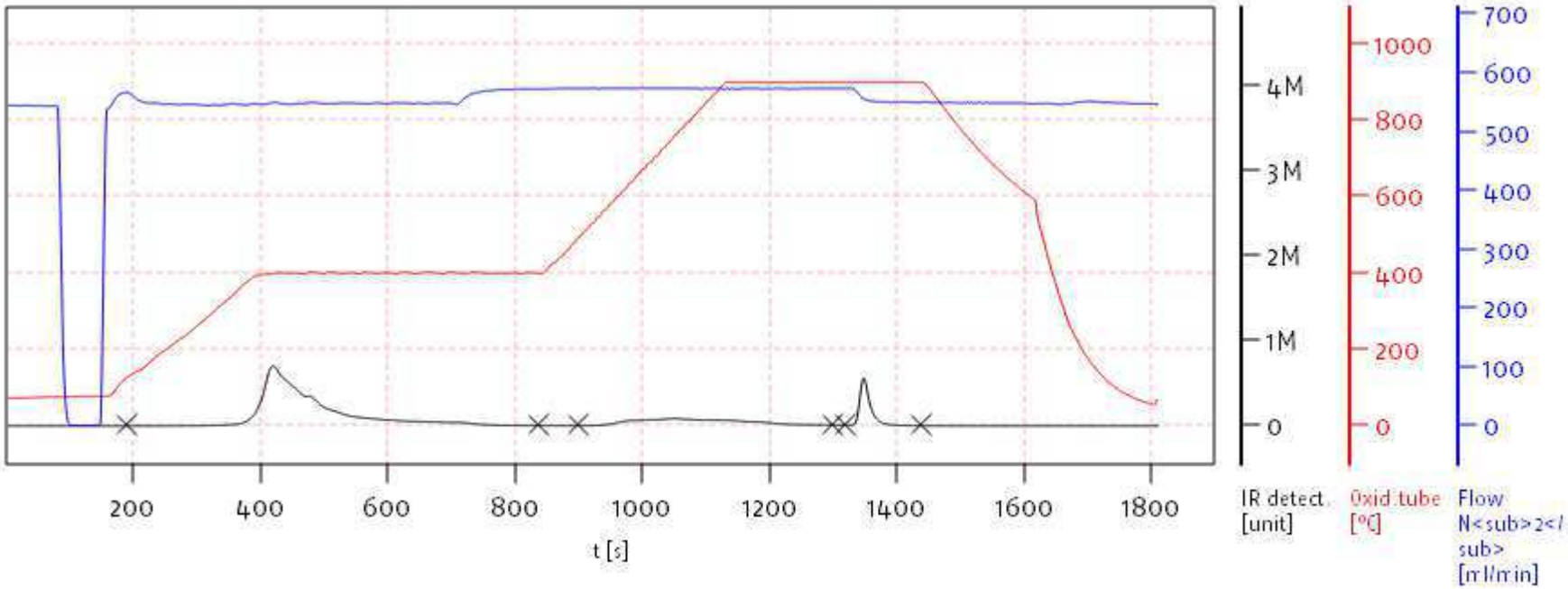
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 170 | 81 | 22L0329-42 | 639.30 | | CARBON | 1/1/2023 4:28 AM | bl | 0.697 | 2 572 338 | 0.852 | 0.093 | 410 589 | 668 854 | 0.604 | 0.156 | 0.9791 | 1.0000 |

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soliTOC V2.0.2 (31015f9) 2018-11-19
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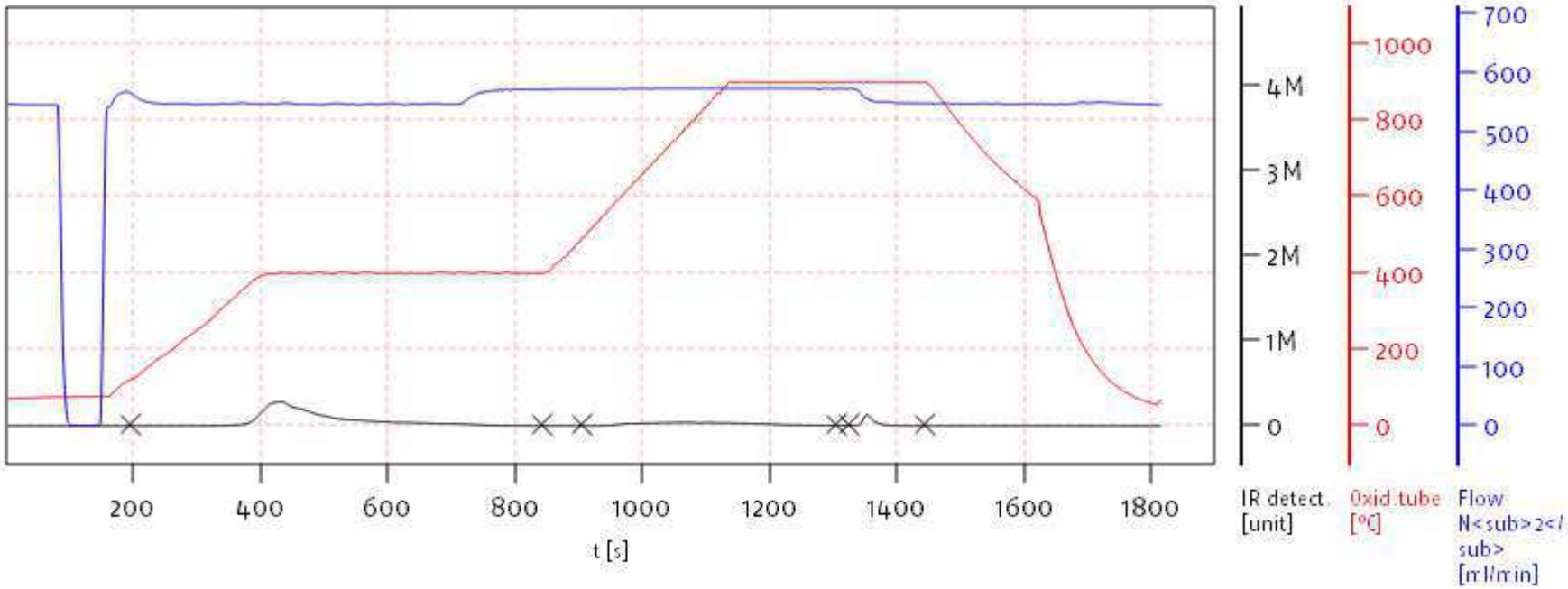
Document: 122822 DOE from: 1/3/2023 7:07 AM

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 171 | 82 | 22L0329-43 | 504.10 | | CARBON | 1/1/2023 4:59 AM | bl | 0.408 | 1 306 683 | 0.503 | 0.023 | 101 968 | 335 027 | 0.385 | 0.095 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

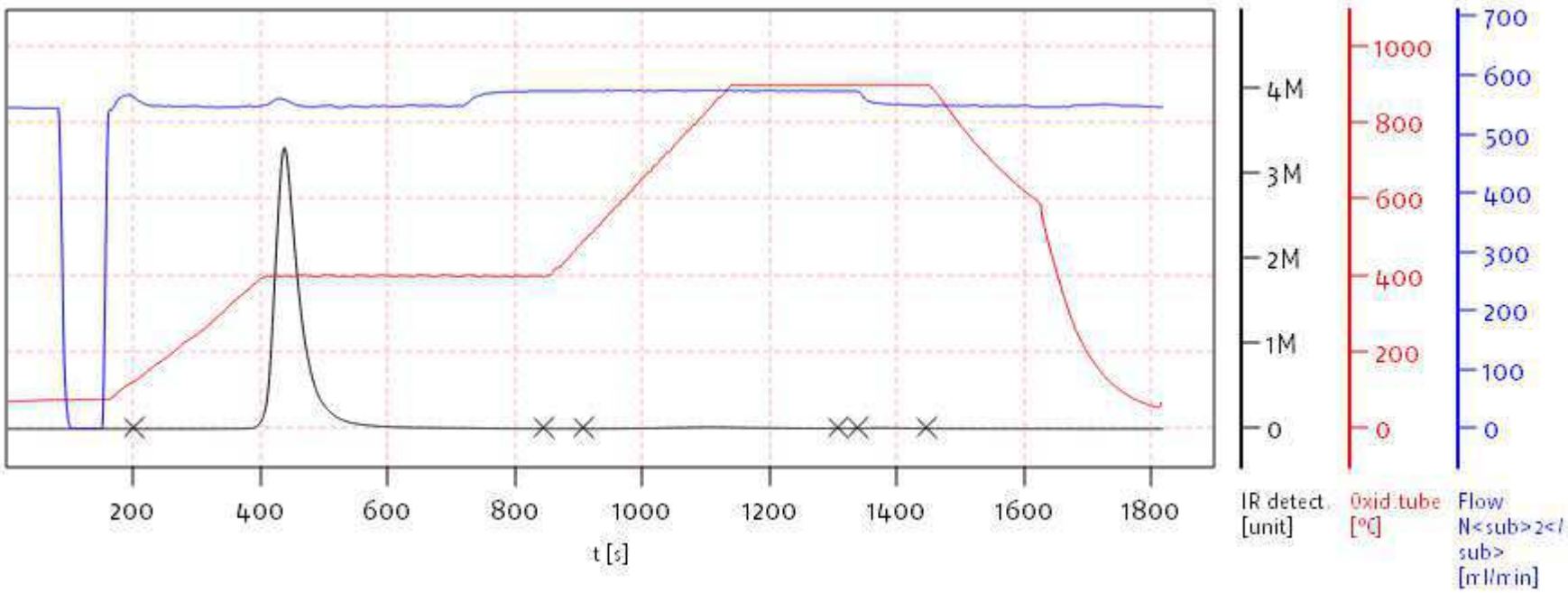
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 172 | 83 | SKL0336-CCVE | 20.00 | | CARBON | 1/1/2023 5:30 AM | bl | 43.330 | 5 741 152 | 44.176 | 0.024 | 29 599 | 135 812 | 43.306 | 0.846 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

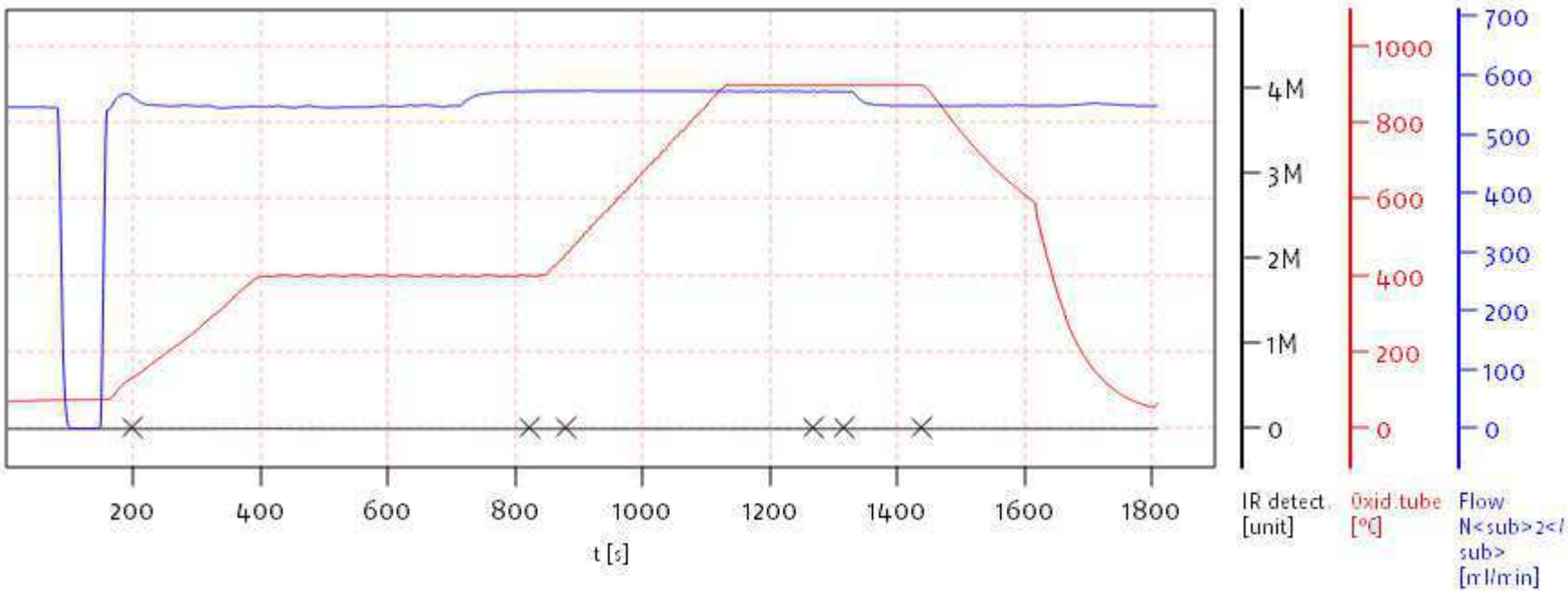
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 | SKL0336-CCBE | 526.20 | | CARBON | 1/1/2023 6:00 AM | bl,C3u,C2u | 0.000 | 12 891 | 0.000 | 0.000 | 829 | 2 244 | 0.000 | 0.000 | 0.9791 | 1.0000 |

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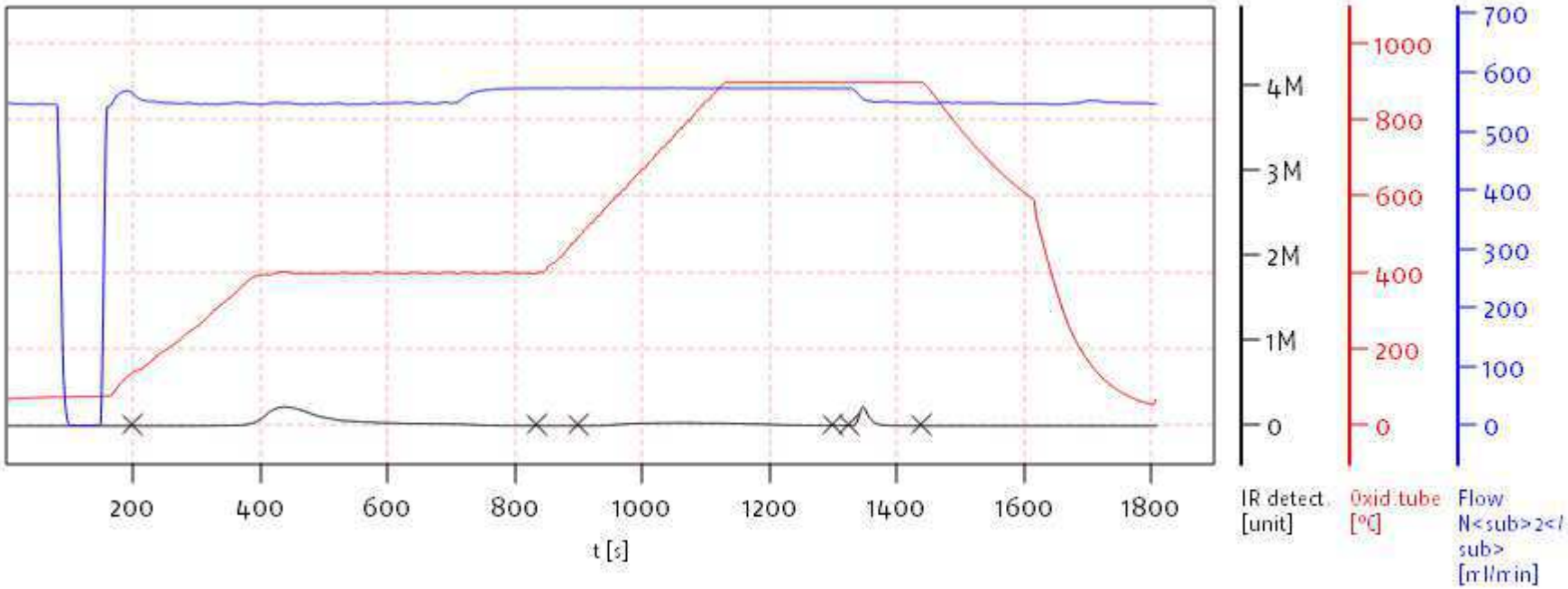
Document: 122822 DOE from: 1/3/2023 7:07 AM

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 174 | 85 | 22L0329-44 | 538.20 | | CARBON | 1/1/2023 6:31 AM | bl | 0.322 | 1 039 842 | 0.400 | 0.037 | 155 299 | 295 151 | 0.285 | 0.077 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

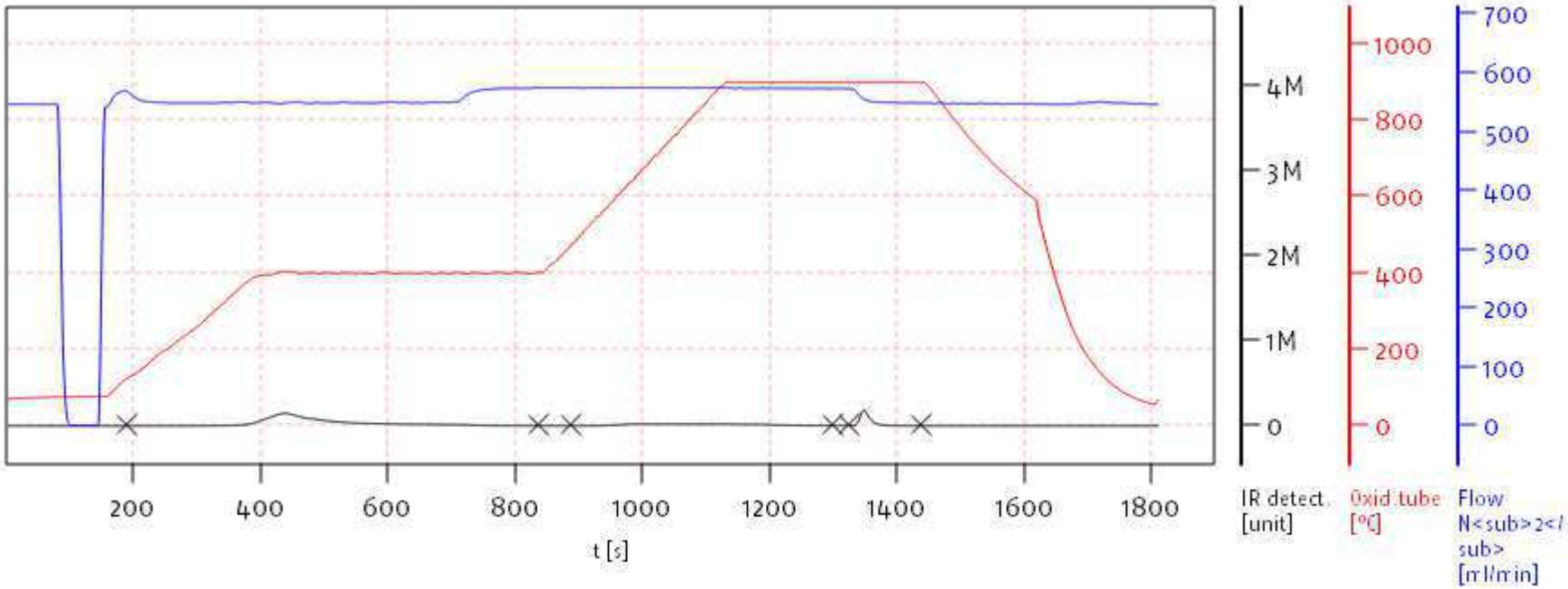
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 175 | 86 | 22L0329-45 | 538.70 | | CARBON | 1/1/2023 7:01 AM | bl | 0.211 | 671 810 | 0.262 | 0.030 | 130 131 | 203 608 | 0.182 | 0.051 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
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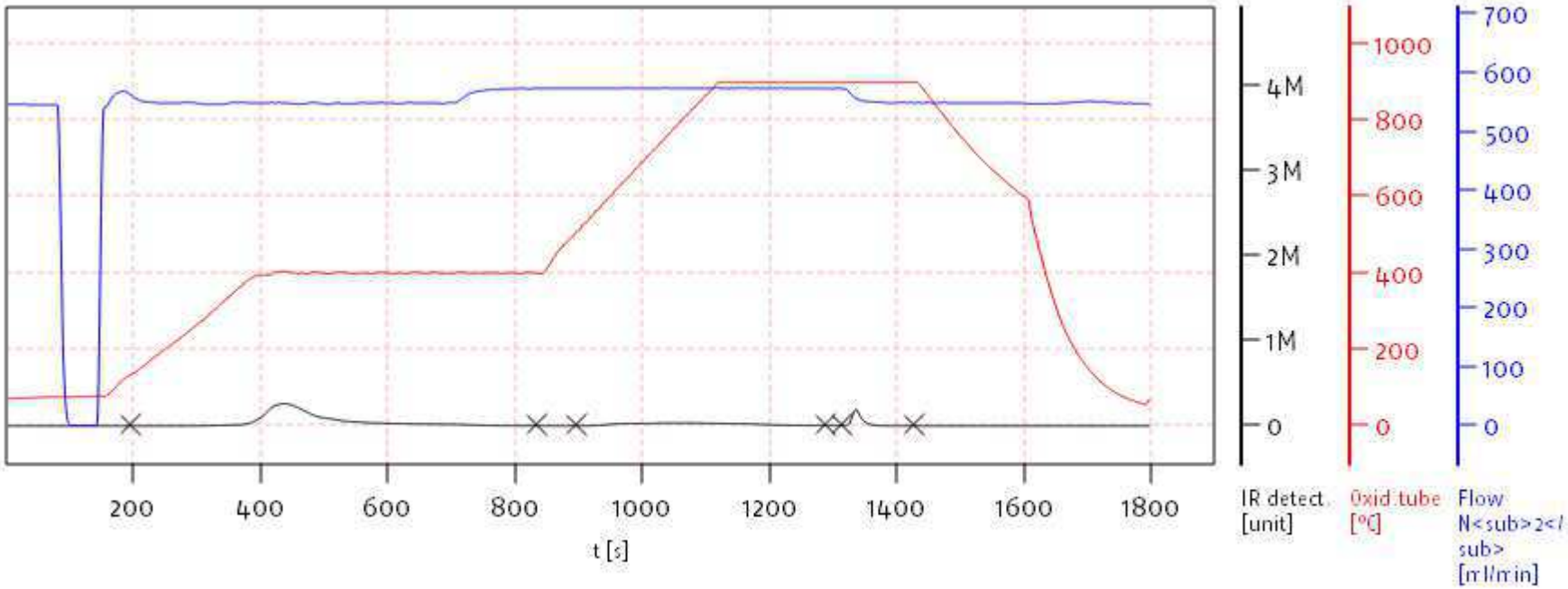
Document: 122822 DOE from: 1/3/2023 7:07 AM

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 176 | 87 | 22L0329-46 | 523.20 | | CARBON | 1/1/2023 7:32 AM | bl | 0.337 | 1 086 433 | 0.416 | 0.030 | 127 029 | 292 928 | 0.307 | 0.079 | 0.9791 | 1.0000 |




Name:

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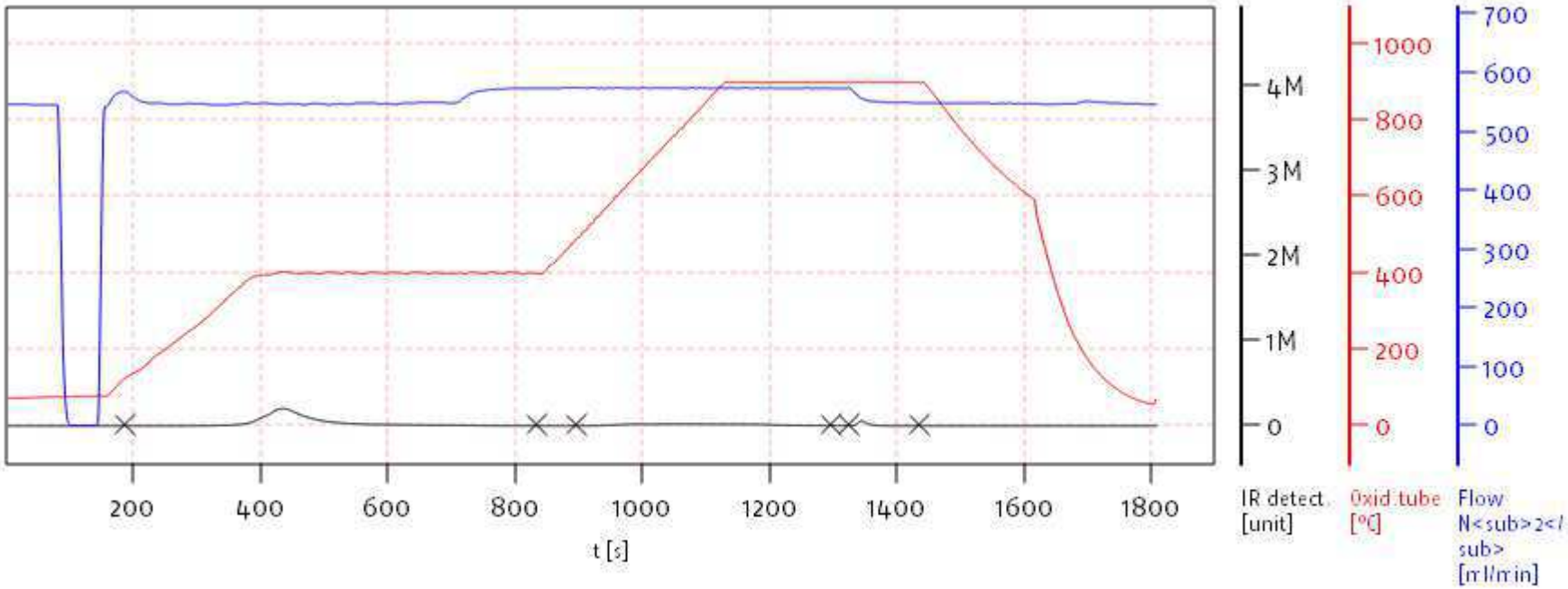
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 177 | 88 | 22L0329-47 | 508.70 | | CARBON | 1/1/2023 8:02 AM | bl | 0.216 | 738 309 | 0.270 | 0.004 | 40 129 | 203 065 | 0.212 | 0.054 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

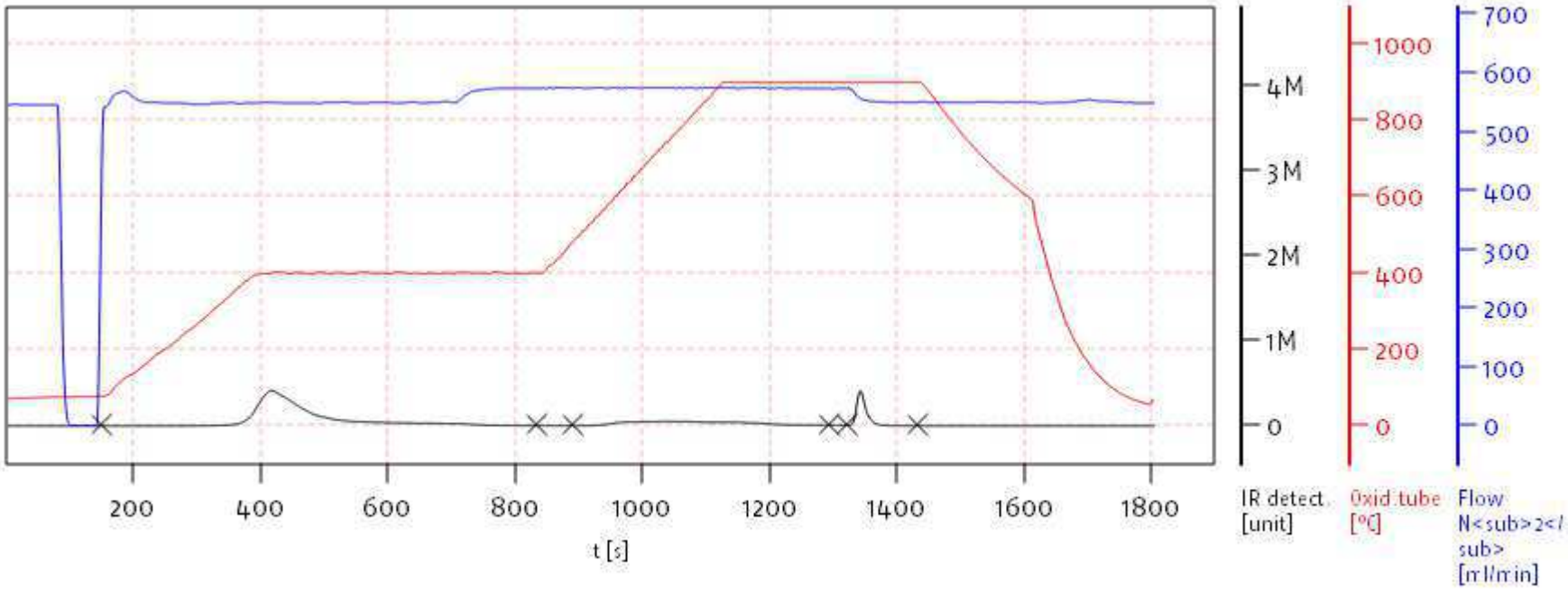
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 178 | 89 | 22L0329-48 | 535.90 | | CARBON | 1/1/2023 8:33 AM | bl | 0.504 | 1 559 791 | 0.631 | 0.070 | 270 408 | 466 131 | 0.434 | 0.127 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

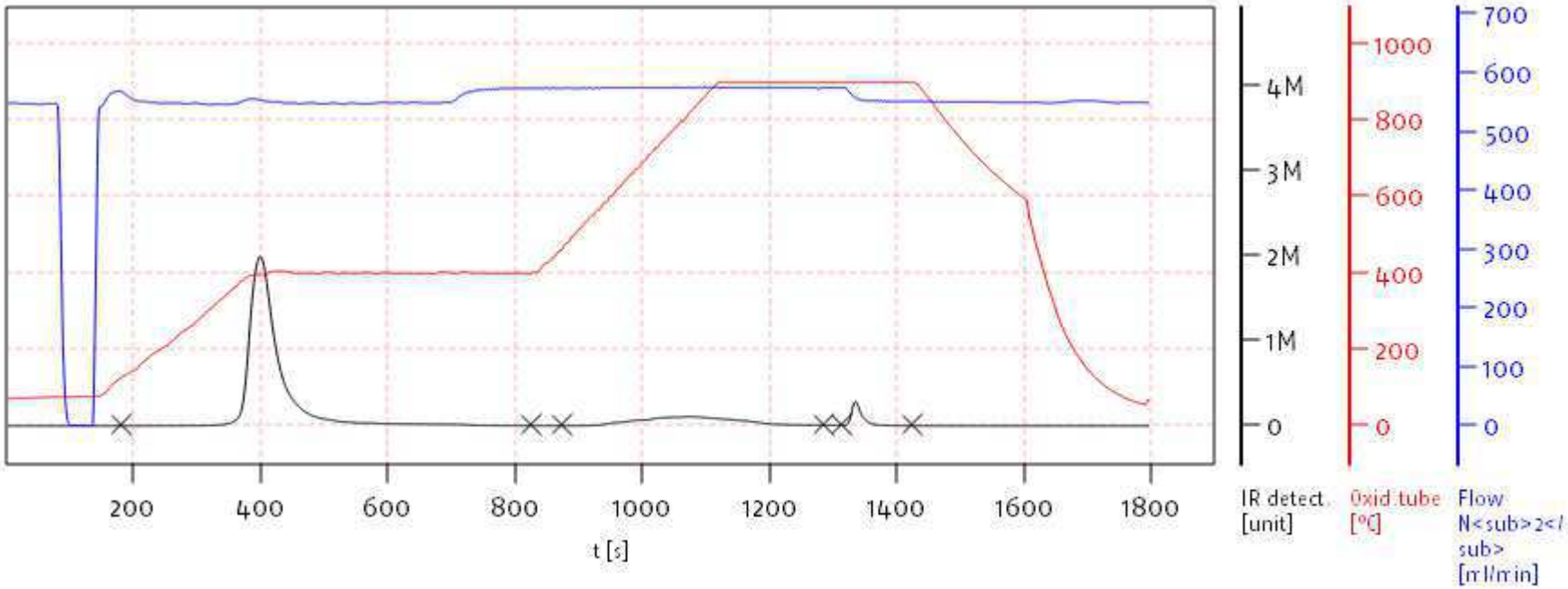
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 179 | 1 | 22L0459-01 | 546.90 | | CARBON | 1/1/2023 9:03 AM | bl | 1.132 | 3 929 880 | 1.339 | 0.051 | 205 048 | 756 445 | 1.082 | 0.207 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

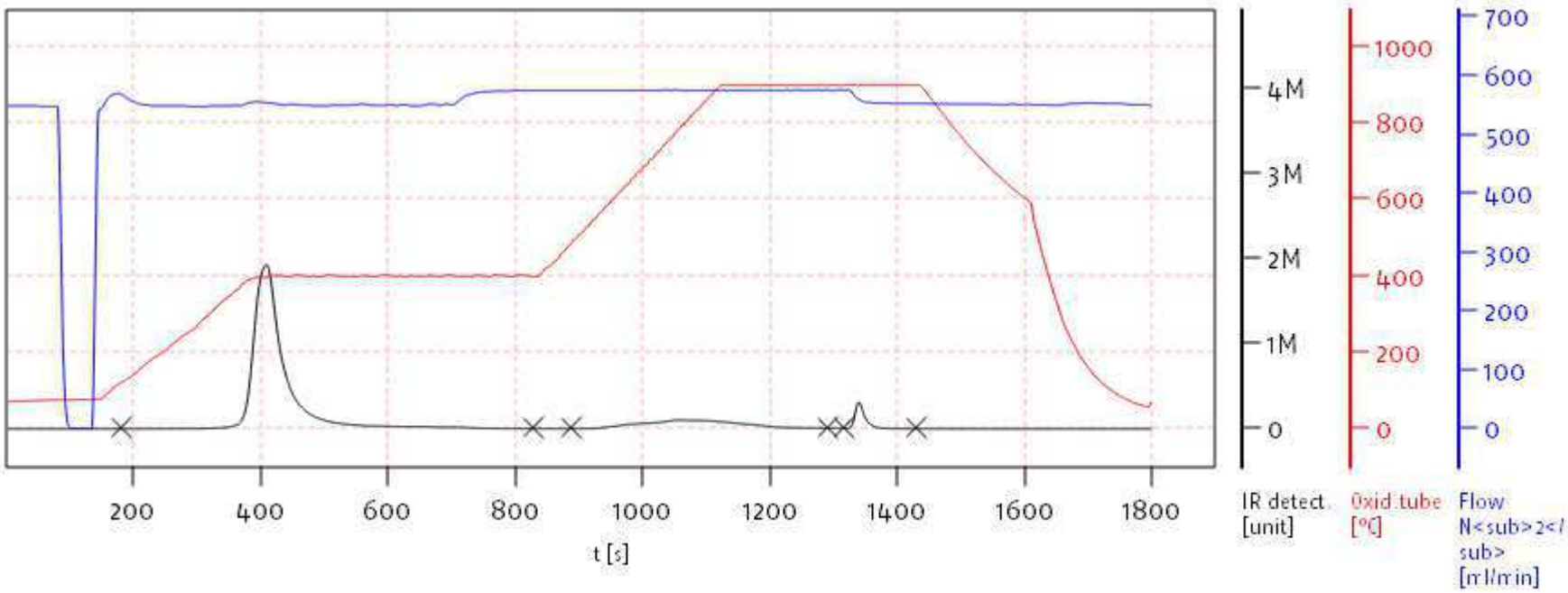
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180 | 2 | BKL0652-DUP2 | 525.60 | | CARBON | 1/1/2023 9:34 AM | bl | 1.196 | 3 979 426 | 1.403 | 0.057 | 218 619 | 728 170 | 1.140 | 0.207 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

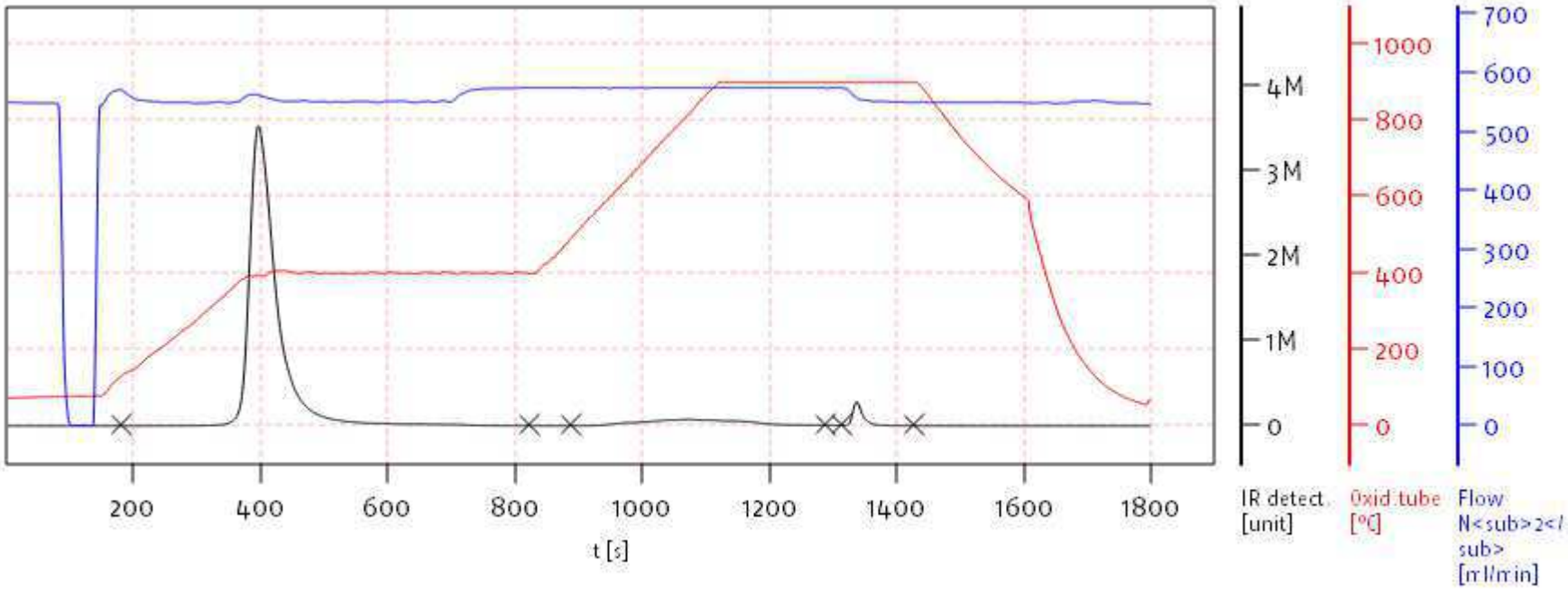
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181 | 3 | BKL0652-MS2 | 503.70 | 0.0083 | CARBON | 1/1/2023 10:04 AM | bl | 2.004 | 6 508 376 | 2.164 | 0.053 | 199 401 | 550 122 | 1.950 | 0.161 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

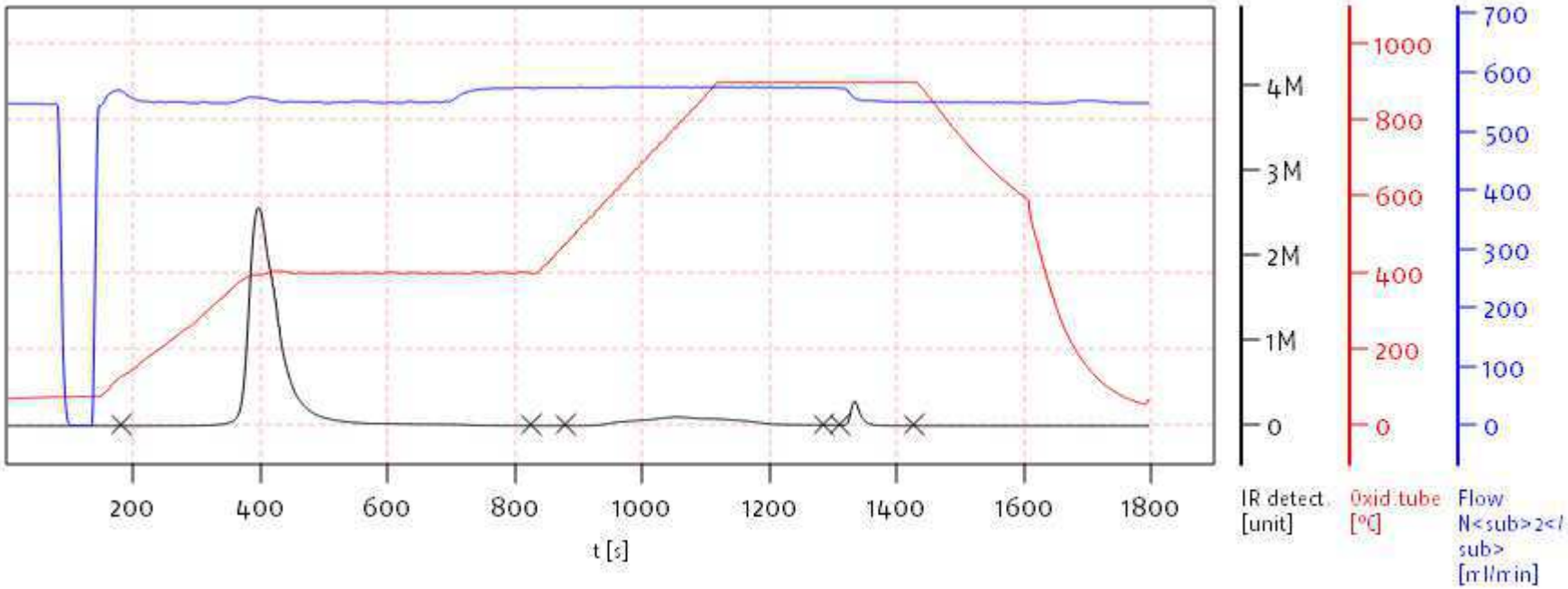
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 182 | 4 | 22L0459-02 | 553.00 | | CARBON | 1/1/2023 10:34 AM | bl | 1.489 | 5 283 699 | 1.686 | 0.048 | 198 987 | 728 467 | 1.441 | 0.196 | 0.9791 | 1.0000 |




Name:

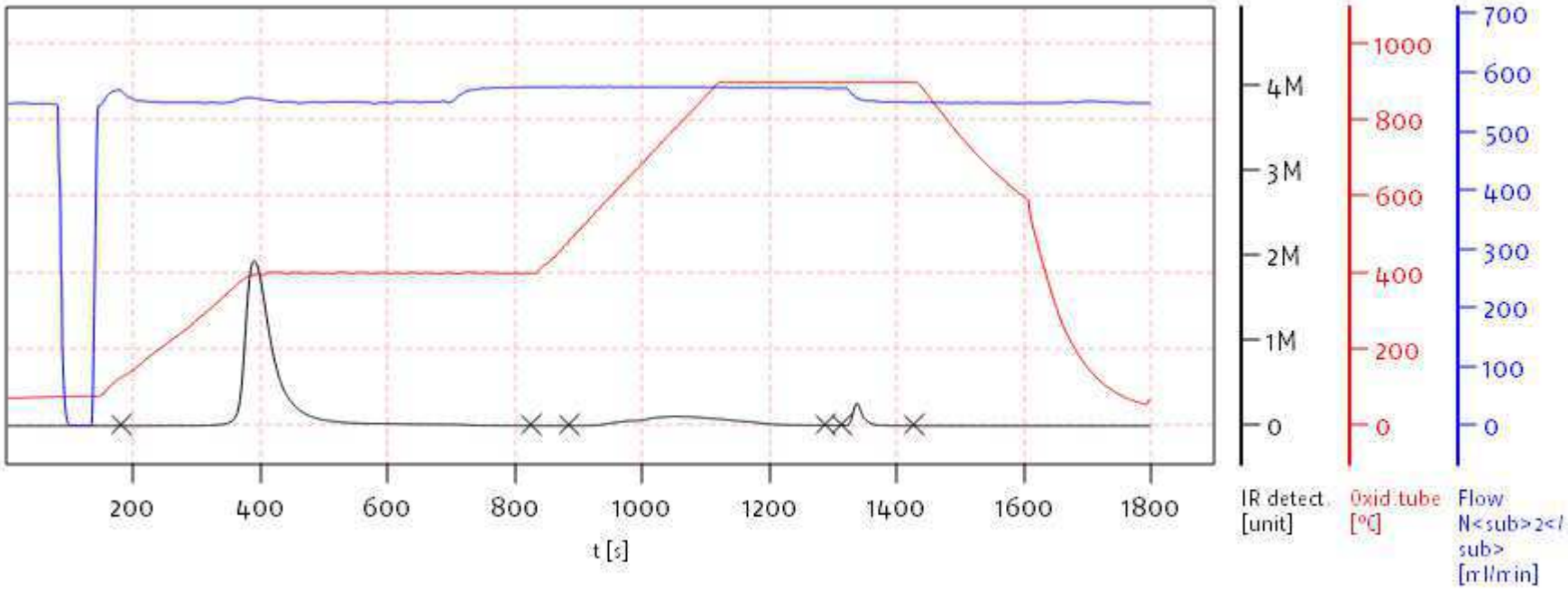
Access: soliTOC superuser

Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 183 | 5 | 22L0459-03 | 504.10 | | CARBON | 1/1/2023 11:05 AM | bl | 1.204 | 3 870 882 | 1.426 | 0.049 | 184 651 | 747 999 | 1.156 | 0.222 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

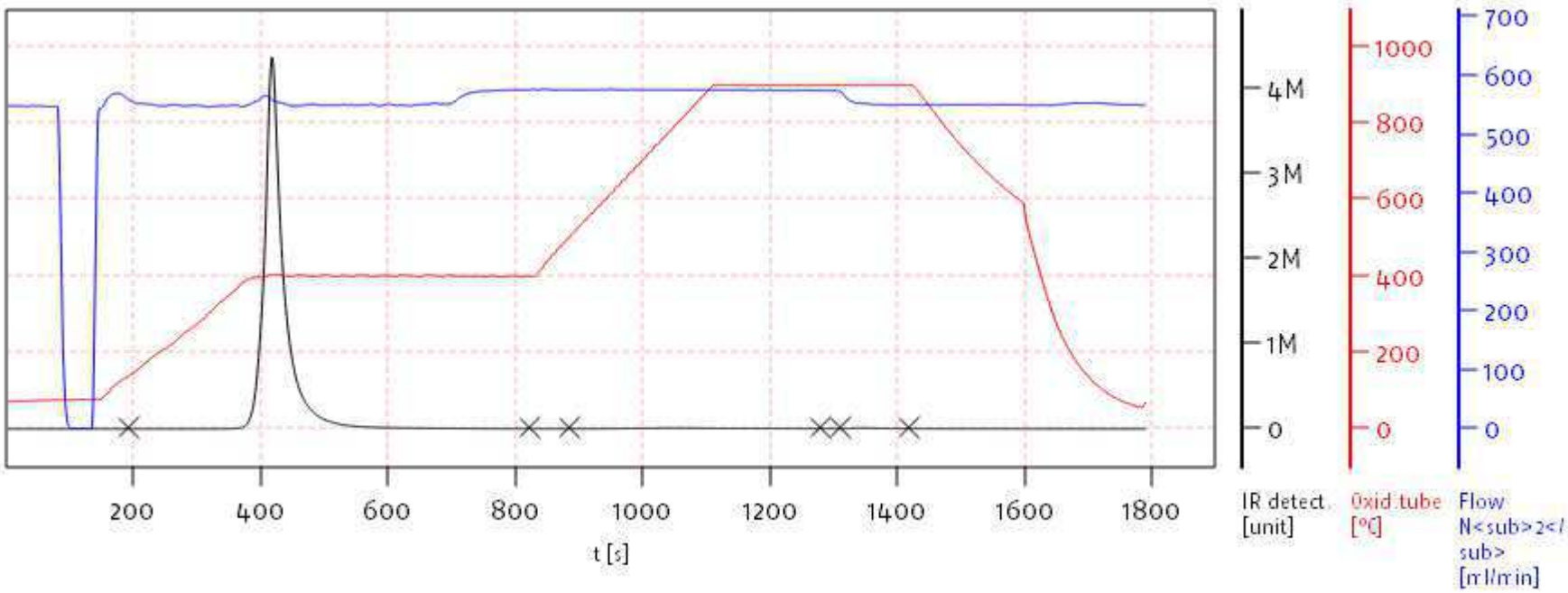
Date: Tue Jan 3 07:07:46 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 184 | 6 | SKL0336-CCVF | 19.70 | | CARBON | 1/1/2023 11:35 AM | bl | 43.919 | 5 734 995 | 44.345 | 0.000 | 24 057 | 80 776 | 43.919 | 0.426 | 0.9791 | 1.0000 |




Name:

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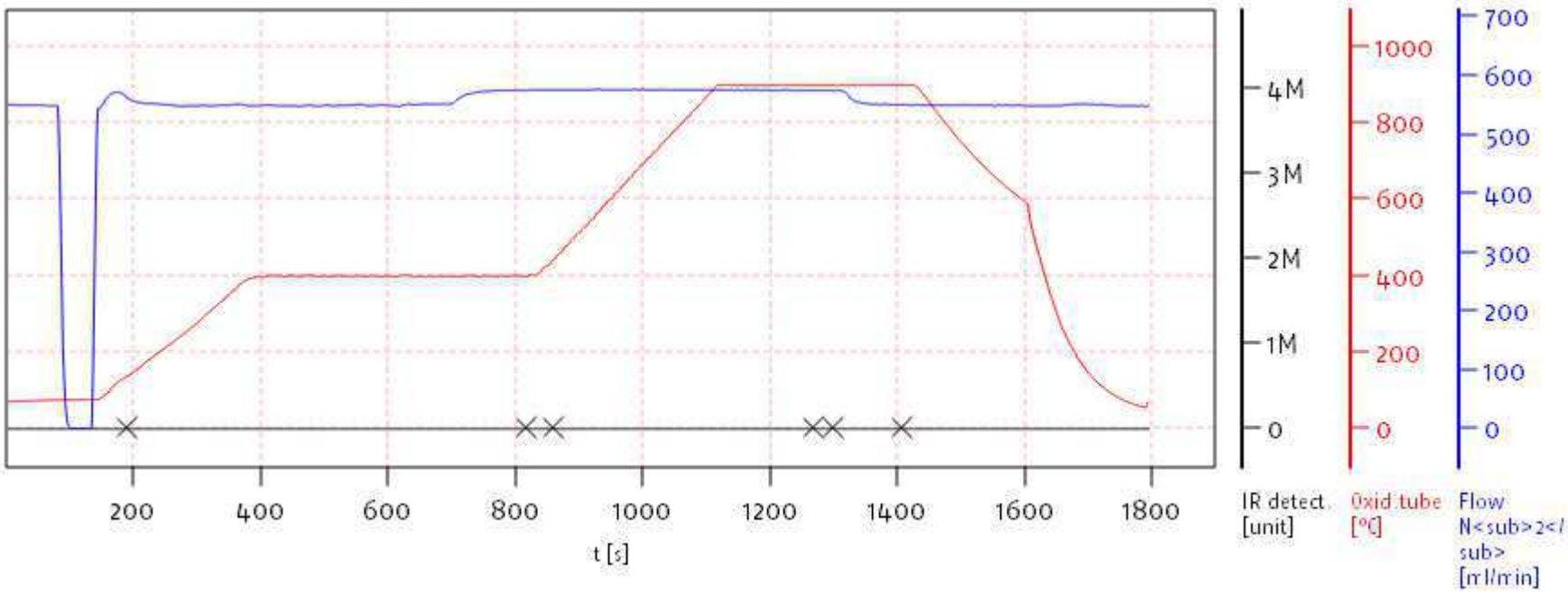
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 185 | 7 | SKL0336-CCBF | 503.50 | | CARBON | 1/1/2023 12:05 PM | bl,C2u | 0.000 | 3 712 | 0.000 | 0.000 | 947 | 3 000 | 0.000 | 0.000 | 0.9791 | 1.0000 |

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soliTOC V2.0.2 (31015f9) 2018-11-19
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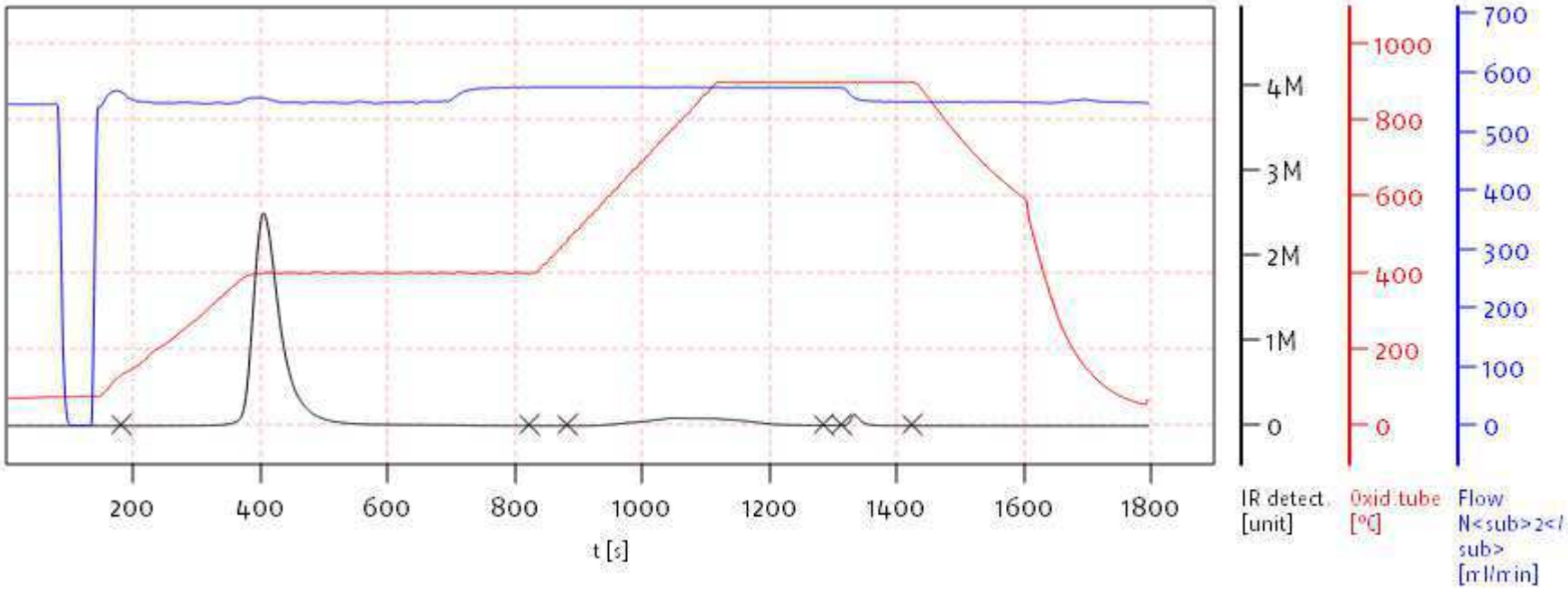
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 186 | 8 | 22L0459-04 | 585.50 | | CARBON | 1/1/2023 12:36 PM | bl | 1.262 | 4 828 602 | 1.424 | 0.019 | 97 318 | 641 567 | 1.243 | 0.163 | 0.9791 | 1.0000 |




Name:

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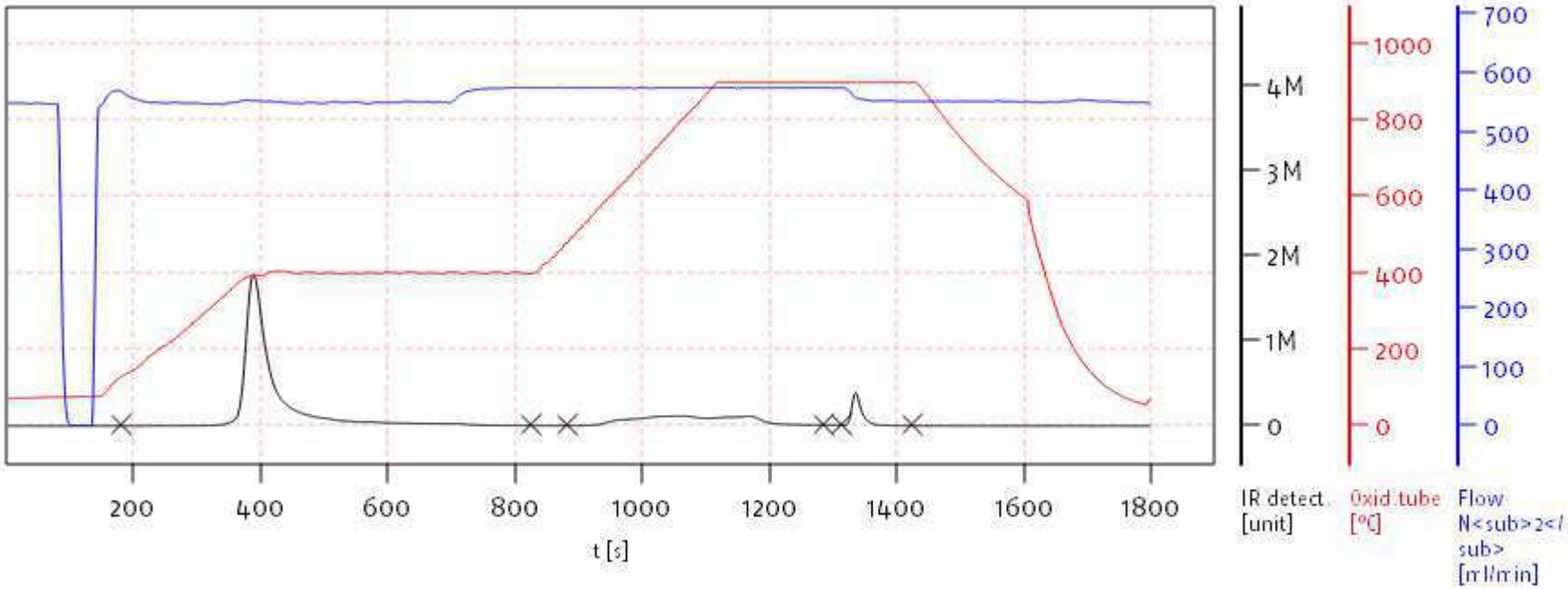
Document: 122822 DOE from: 1/3/2023 7:07 AM

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 187 | 9 | 22L0459-05 | 518.10 | | CARBON | 1/1/2023 1:06 PM | bl | 1.002 | 3 206 499 | 1.285 | 0.072 | 267 557 | 971 388 | 0.930 | 0.282 | 0.9791 | 1.0000 |

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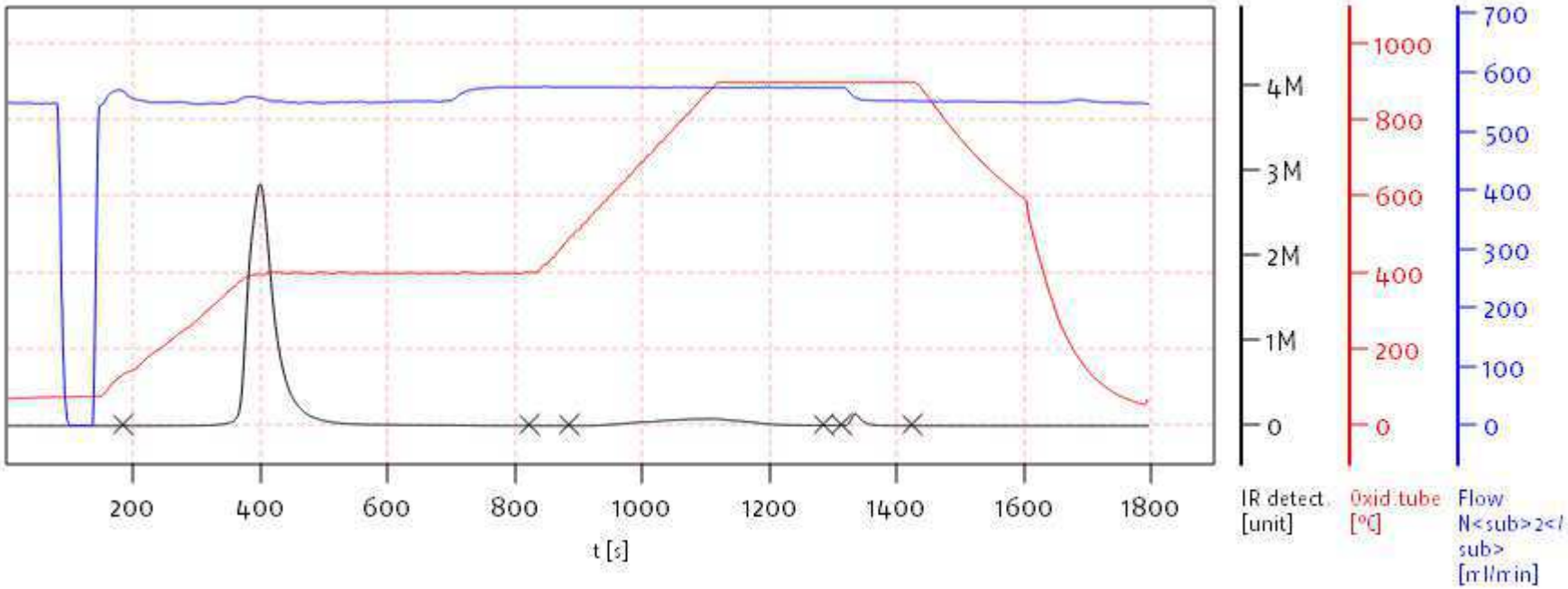
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 188 | 10 | 22L0459-06 | 541.60 | | CARBON | 1/1/2023 1:36 PM | bl | 1.470 | 5 195 518 | 1.622 | 0.023 | 107 213 | 559 662 | 1.447 | 0.152 | 0.9791 | 1.0000 |

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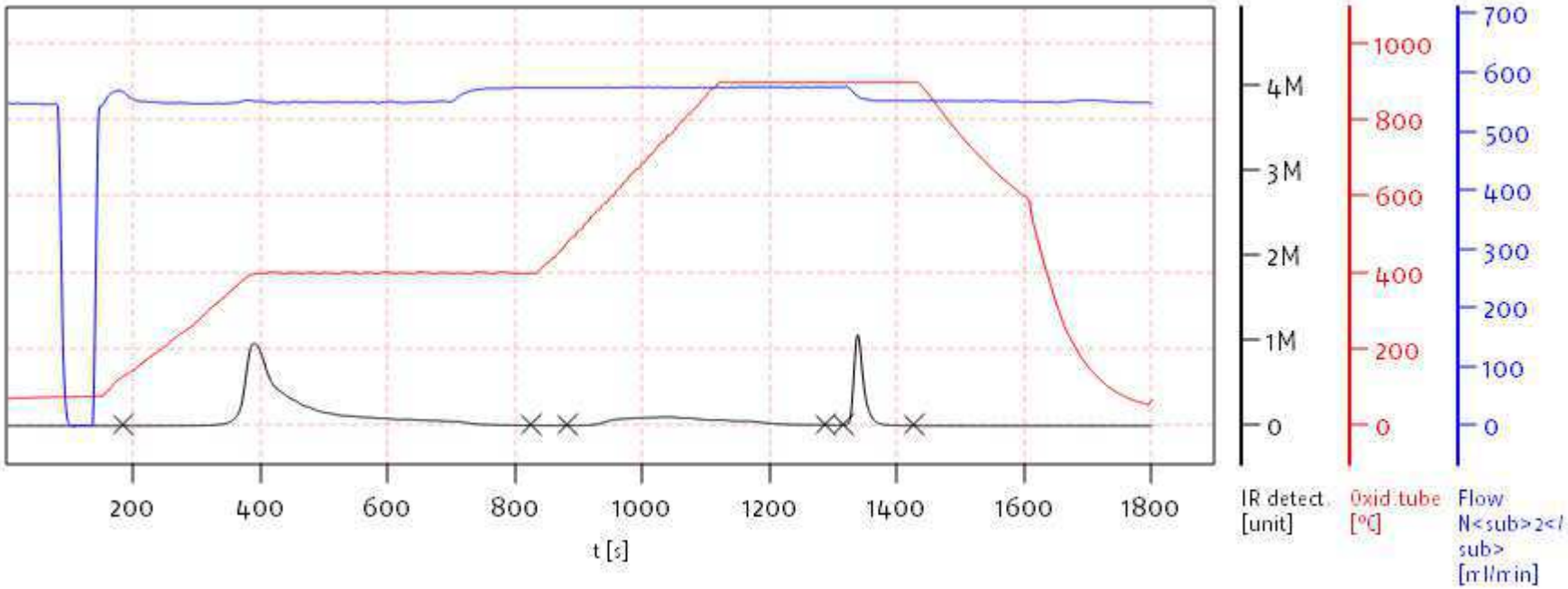
# Soli TOC Cube, Carbon
## Balance: BAL3
## Analyst: DOE

| | Pos. | Name | Weight [mg] | Memo | Method | Date Time | Info | TOC [%] | TOC400 Area | TC [%] | ROC [%] | ROC Area | TIC900 Area | TOC400 [%] | TIC900 [%] | TOC400 Factor | TIC900 Factor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 189 | 11 | 22L0459-07 | 530.60 | | CARBON | 1/1/2023 2:07 PM | bl | 1.082 | 3 098 637 | 1.313 | 0.204 | 727 192 | 819 749 | 0.878 | 0.231 | 0.9791 | 1.0000 |

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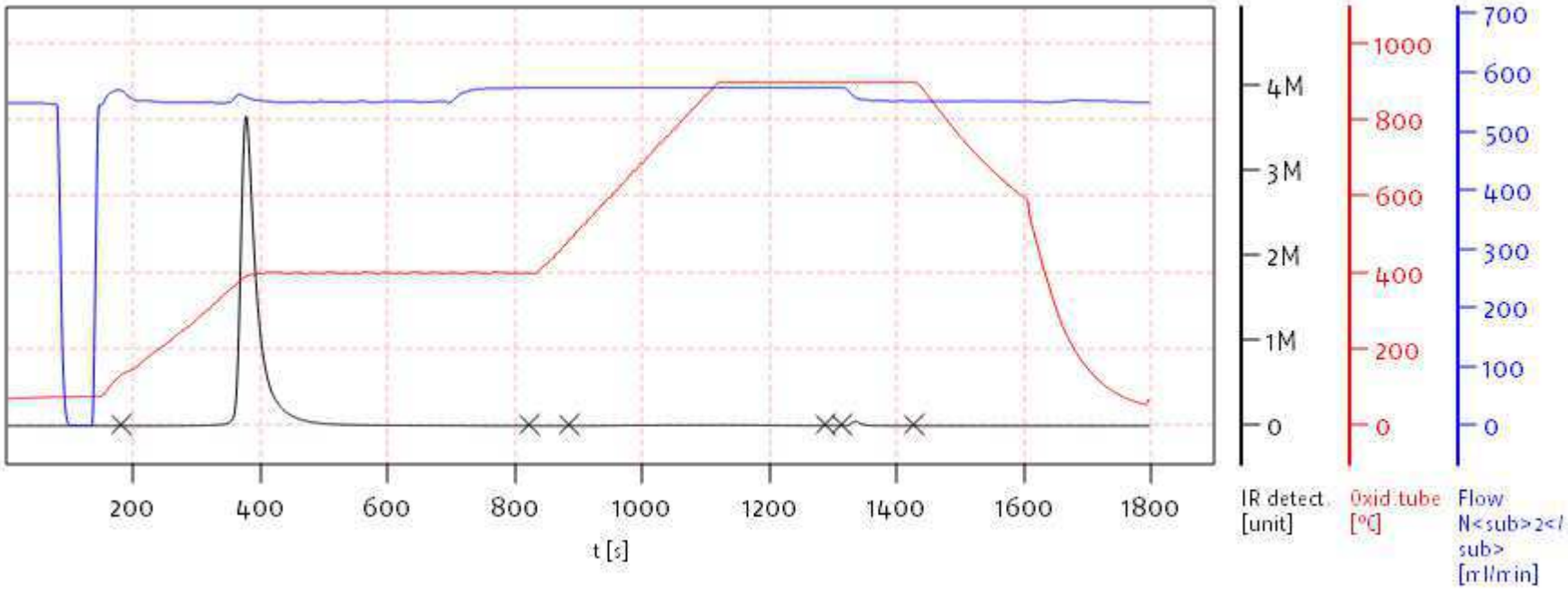
# Soli TOC Cube, Carbon
## Balance: BAL3
## Analyst: DOE

| | Pos. | Name | Weight [mg] | Memo | Method | Date Time | Info | TOC [%] | TOC400 Area | TC [%] | ROC [%] | ROC Area | TIC900 Area | TOC400 [%] | TIC900 [%] | TOC400 Factor | TIC900 Factor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 190 | 12 | BKL0502-MS2 | 95.30 | 0.0093 | CARBON | 1/1/2023 2:37 PM | bl | 6.642 | 4 192 295 | 6.731 | 0.017 | 37 127 | 81 180 | 6.625 | 0.089 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

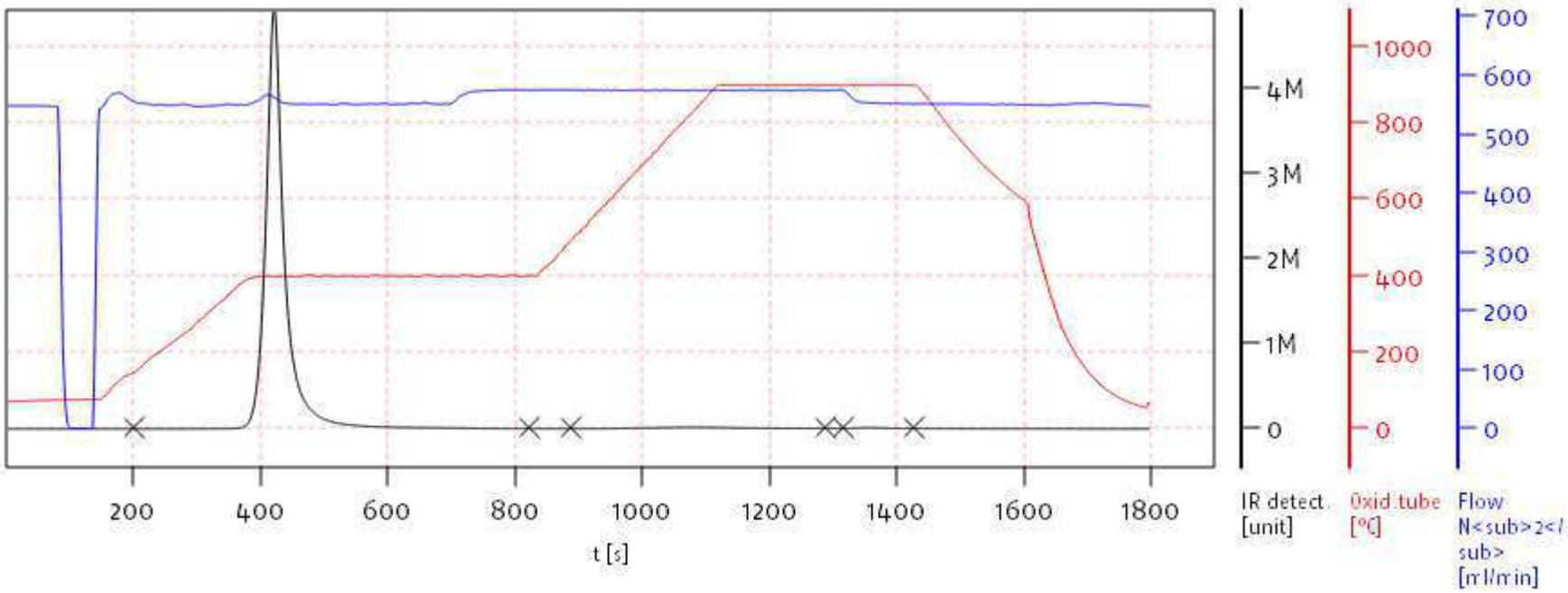
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 191 | 13 | SKL0336-CCVG | 22.00 | | CARBON | 1/1/2023 3:07 PM | bl | 44.105 | 6 421 622 | 44.872 | 0.047 | 33 273 | 135 625 | 44.057 | 0.768 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

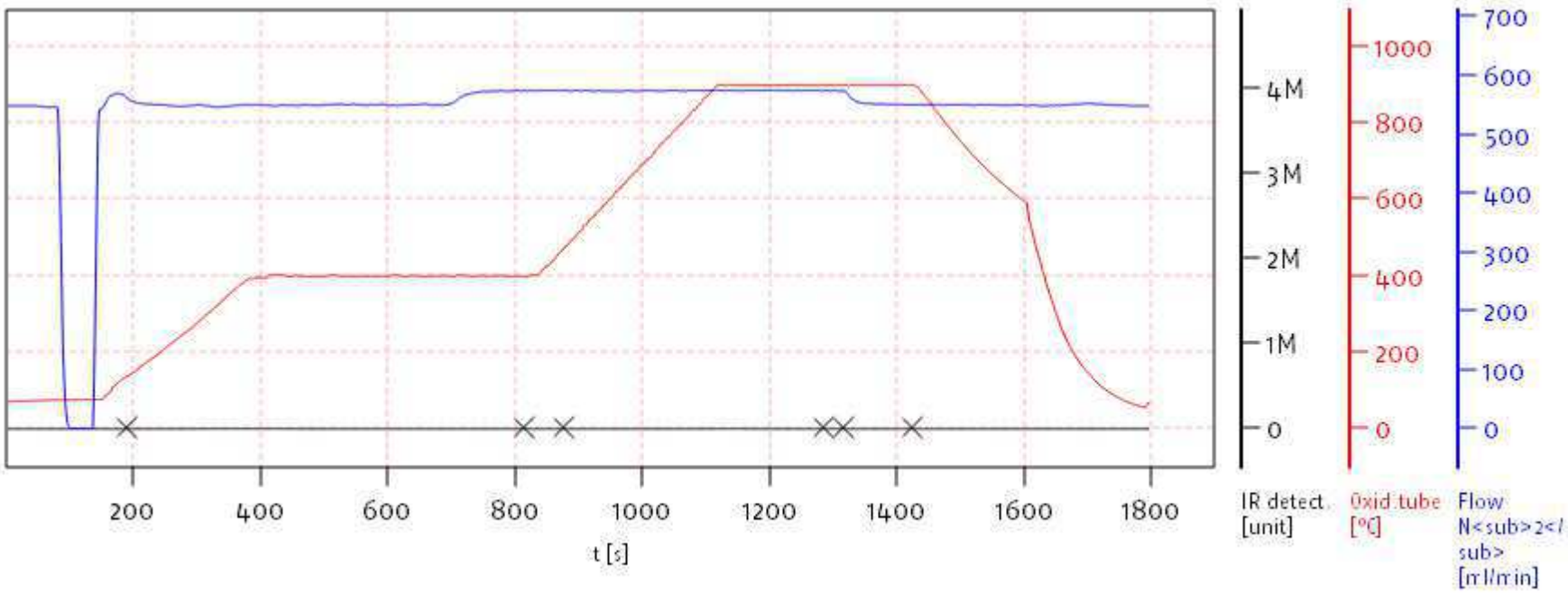
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 192 | 14 | SKL0336-CCBG | 510.60 | | CARBON | 1/1/2023 3:38 PM | bl,C2u | 0.000 | 10 989 | 0.000 | 0.000 | 846 | 4 670 | 0.000 | 0.000 | 0.9791 | 1.0000 |




Name:

Access: soliTOC superuser

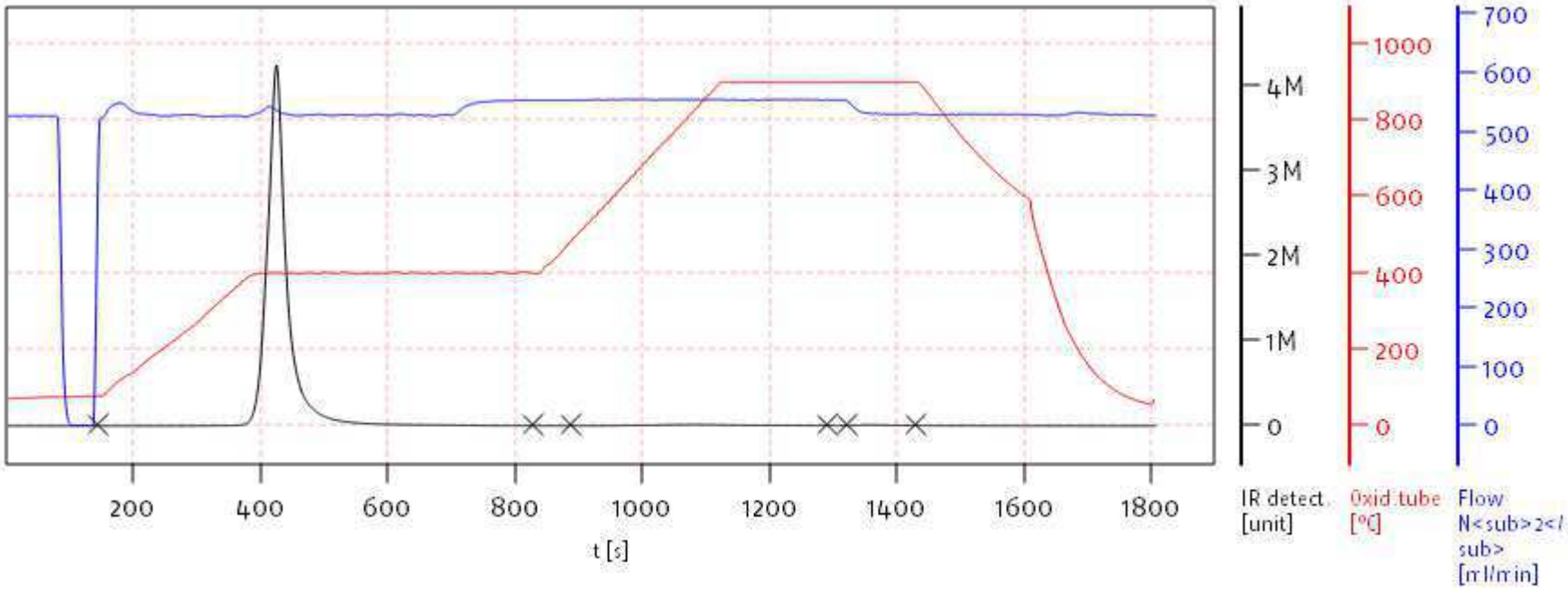
Date: Tue Jan 3 07:07:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: 1/3/2023 7:07 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95 | 6 | BKL0650-BS1 | 19.10 | | CARBON | | bl | 45.077 | 5 715 005 | 45.698 | 0.014 | 28 228 | 103 151 | 45.063 | 0.621 | 0.9774 | 1.0000 |




Name:

Access: soliTOC superuser

Date: Tue Jan 3 07:16:46 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 122822 DOE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

# ANALYSIS BATCH (SEQUENCE) SUMMARY

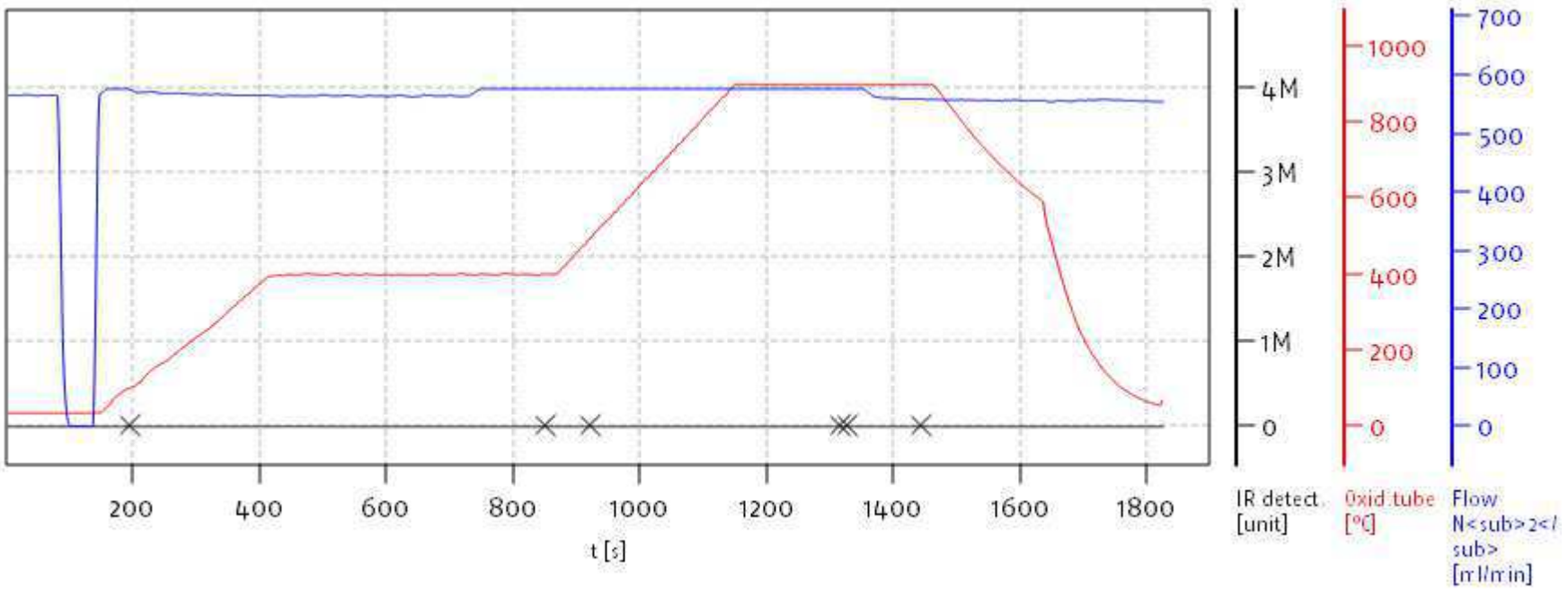
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Sequence: | SLA0004 | Instrument: | TOC Cube |
| | | Calibration: | FD00070 |

| Sample Name | Lab Sample ID | Lab File ID | Matrix | Analysis Date/Time |
|---|---|---|---|---|
| Initial Cal Check | SLA0004-ICV1 | CubeData_01042023@1301-003 | NA | 01/04/23 09:38 |
| Initial Cal Blank | SLA0004-ICB1 | CubeData_01042023@1301-004 | NA | 01/04/23 10:08 |
| LDW22-IT799A | BKL0650-DUP2 | CubeData_01042023@1301-005 | Solid | 01/04/23 10:39 |
| Calibration Check | SLA0004-CCV1 | CubeData_01042023@1301-006 | NA | 01/04/23 11:09 |
| Calibration Blank | SLA0004-CCB1 | CubeData_01042023@1301-007 | NA | 01/04/23 11:40 |

# 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 | 1/4/2023 8:07 AM | bl | 0.000 | 12 088 | 0.000 | 0.000 | 2 049 | 3 965 | 0.000 | 0.000 | 1.0000 | 1.0000 |




Name:

Access: soliTOC superuser

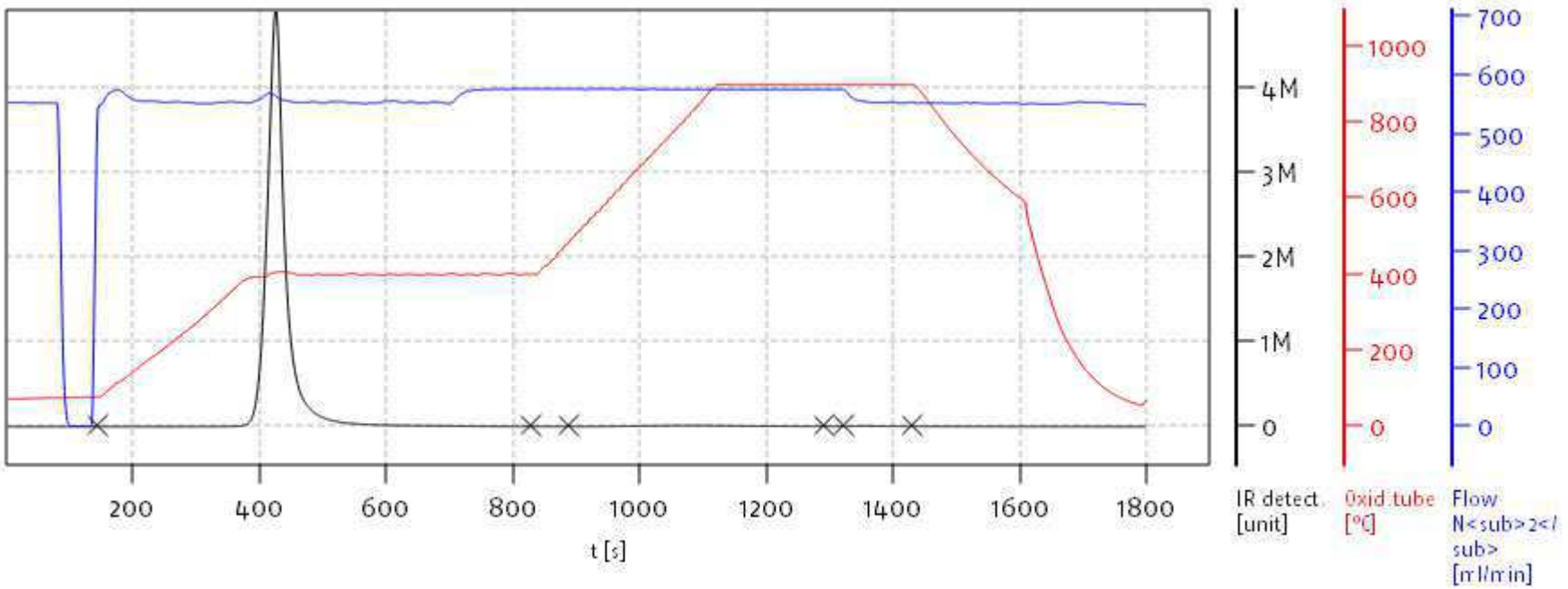
Date: Wed Jan 4 12:52:02 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 010323 DOE from: 1/4/2023 12:51 PM

# 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 | 20.90 | | CARBON | 1/4/2023 8:37 AM | bl | 44.446 | 6 220 690 | 45.008 | 0.000 | 21 159 | 102 399 | 44.446 | 0.562 | 0.9688 | 1.0000 |




Name:

Access: soliTOC superuser

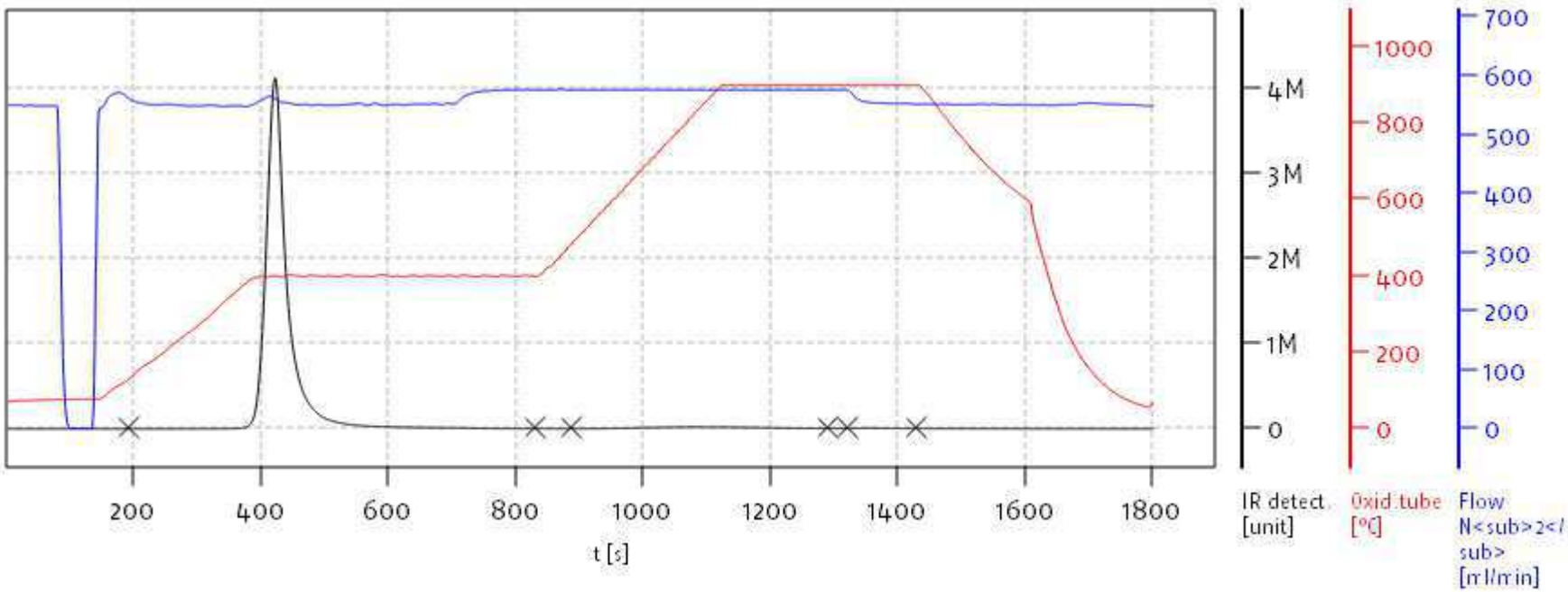
Date: Wed Jan 4 12:52:02 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 010323 DOE from: 1/4/2023 12:51 PM

# 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 | 20.50 | | CARBON | 1/4/2023 9:08 AM | bl | 44.446 | 5 933 985 | 45.536 | 0.000 | 23 793 | 170 942 | 44.446 | 1.090 | 0.9963 | 1.0000 |




Name:

Access: soliTOC superuser

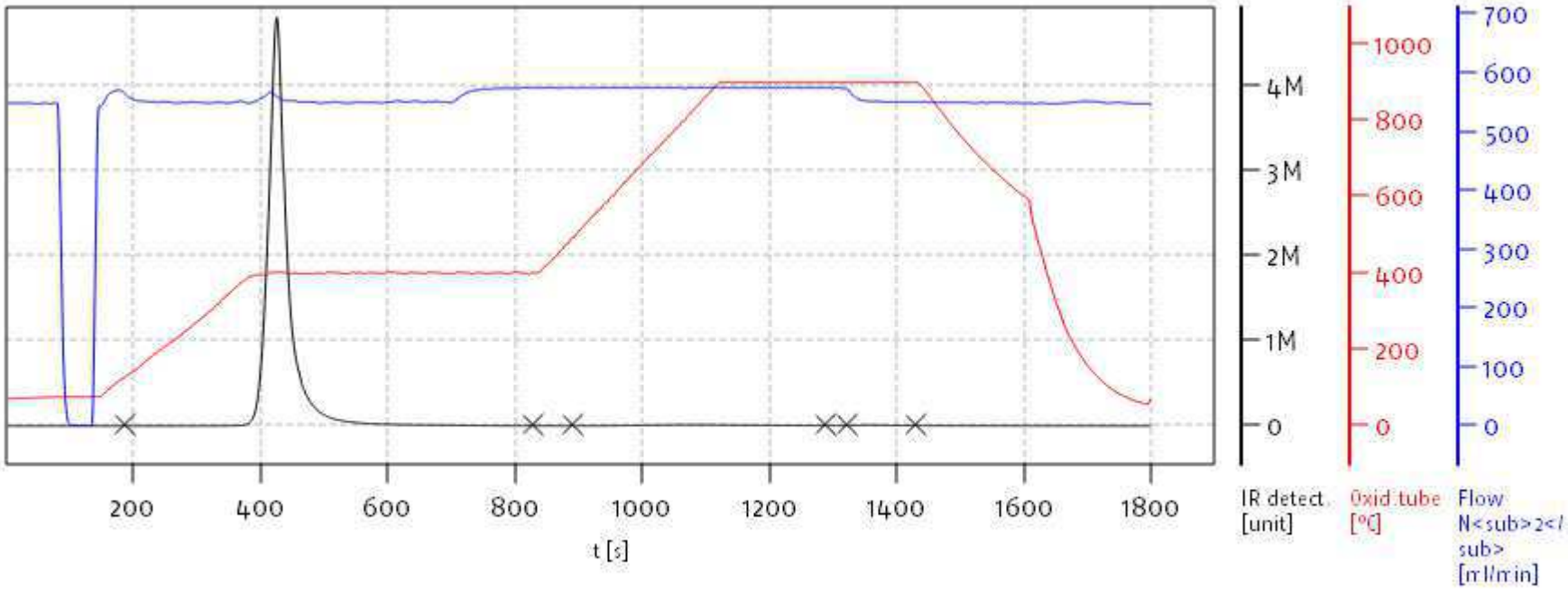
Date: Wed Jan 4 12:52:02 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 010323 DOE from: 1/4/2023 12:51 PM

# 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 | SLA0004-ICV1 | 21.20 | | CARBON | 1/4/2023 9:38 AM | bl | 45.218 | 6 328 153 | 45.803 | 0.007 | 27 445 | 106 641 | 45.211 | 0.585 | 0.9825 | 1.0000 |




Name:

Access: soliTOC superuser

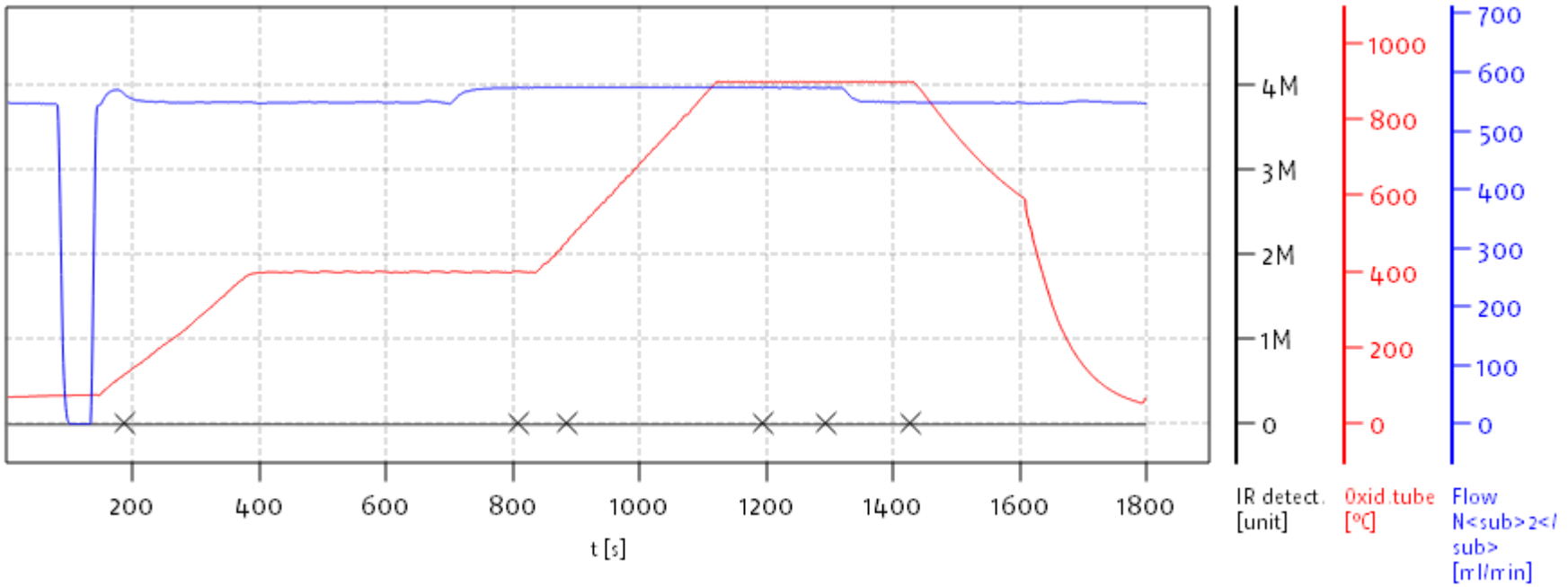
Date: Wed Jan 4 12:52:02 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 010323 DOE from: 1/4/2023 12:51 PM

# 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 | SLA0004-ICB1 | 502.60 | | CARBON | 1/4/2023 10:08 AM | bl,C3u,C2u | 0.000 | 8 917 | 0.000 | 0.000 | 989 | 1 663 | 0.000 | 0.000 | 0.9825 | 1.0000 |




Name:

Access: soliTOC superuser

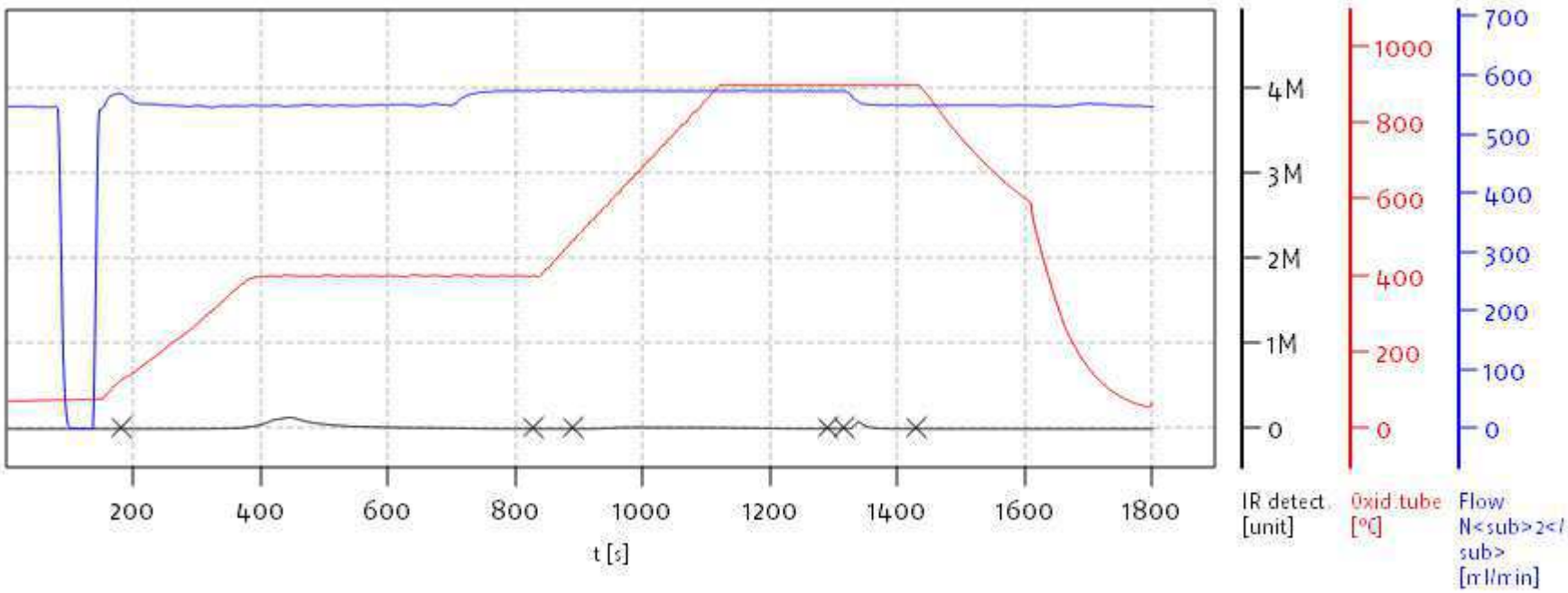
Date: Wed Jan 4 12:52:02 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 010323 DOE from: 1/4/2023 12:51 PM

# 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 | BKL0650-DUP2 | 504.50 | | CARBON | 1/4/2023 10:39 AM | bl | 0.178 | 579 352 | 0.212 | 0.011 | 62 204 | 138 038 | 0.167 | 0.034 | 0.9825 | 1.0000 |




Name:

Access: soliTOC superuser

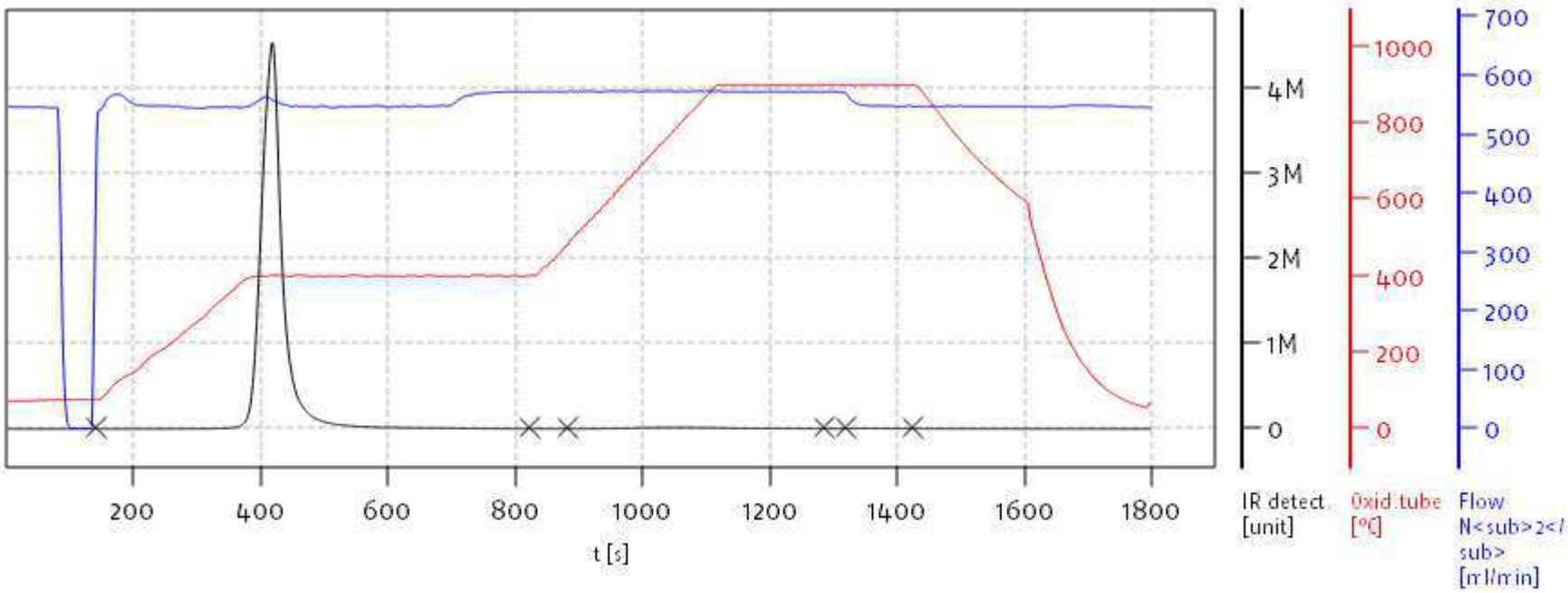
Date: Wed Jan 4 12:52:02 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 7 | SLA0004-CCV1 | 21.70 | | CARBON | 1/4/2023 11:09 AM | bl | 45.774 | 6 557 041 | 46.426 | 0.000 | 18 204 | 117 955 | 45.774 | 0.652 | 0.9825 | 1.0000 |




Name:

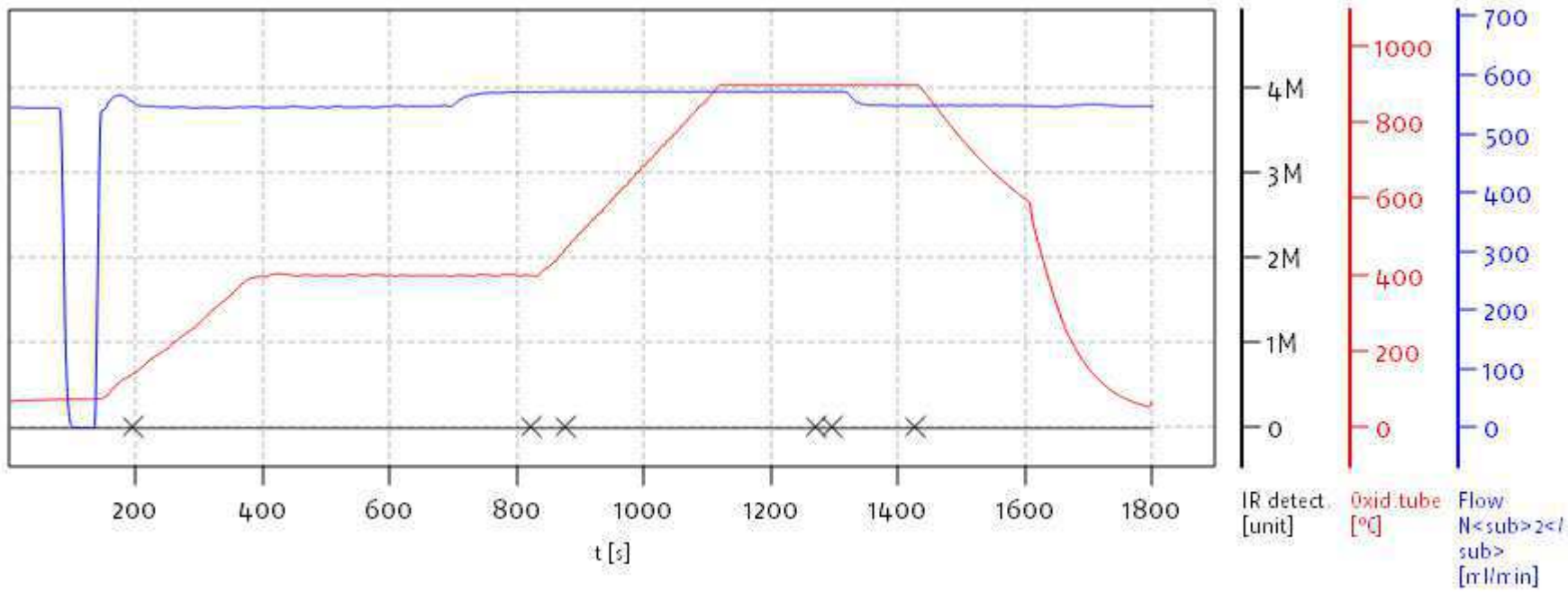
Access: soliTOC superuser

Date: Wed Jan 4 12:52:02 2023

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 8 | SLA0004-CCB1 | 515.40 | | CARBON | 1/4/2023 11:40 AM | bl,C2u | 0.000 | 7 568 | 0.000 | 0.000 | 797 | 7 452 | 0.000 | 0.000 | 0.9825 | 1.0000 |




Name:

Access: soliTOC superuser

Date: Wed Jan 4 12:52:02 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 010323 DOE from: 1/4/2023 12:51 PM

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL CALIBRATION DATA

## EPA 9060A m

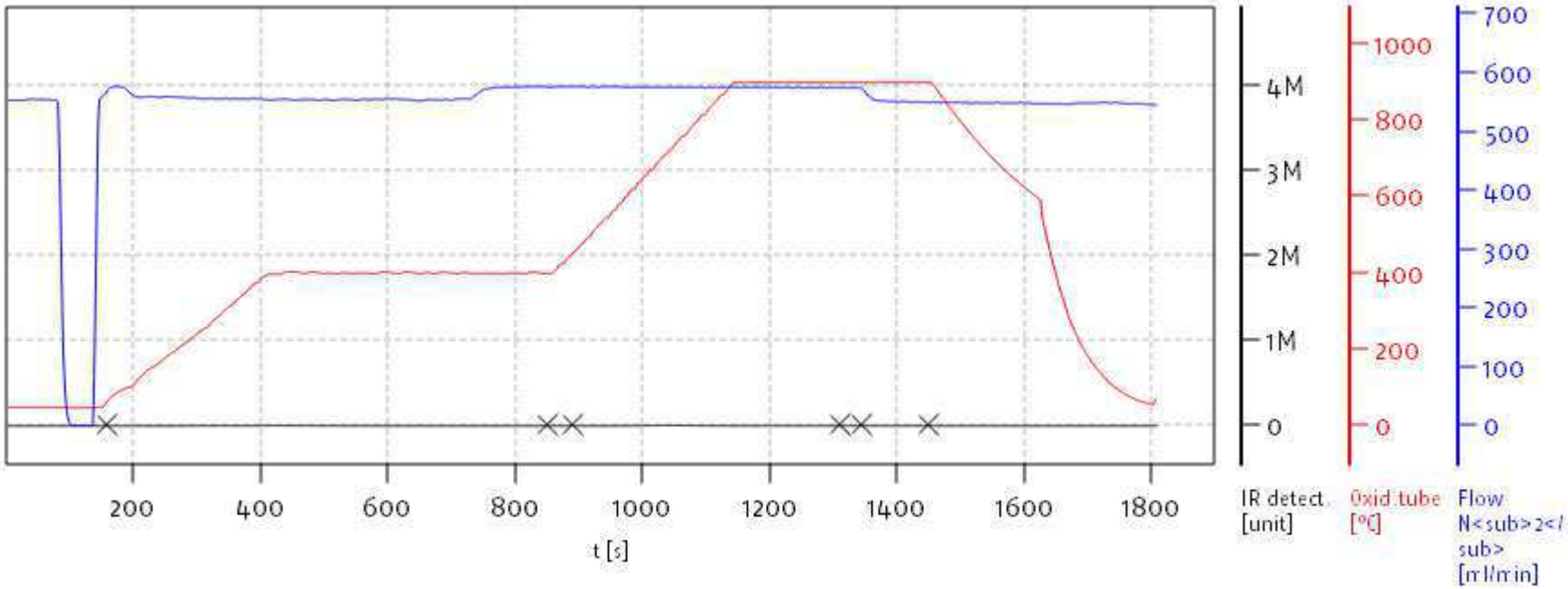
| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Calibration: | FD00070 | Instrument: | TOC Cube |
| Calibration Date: | 04/26/2022 11:29 | | |

| 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

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

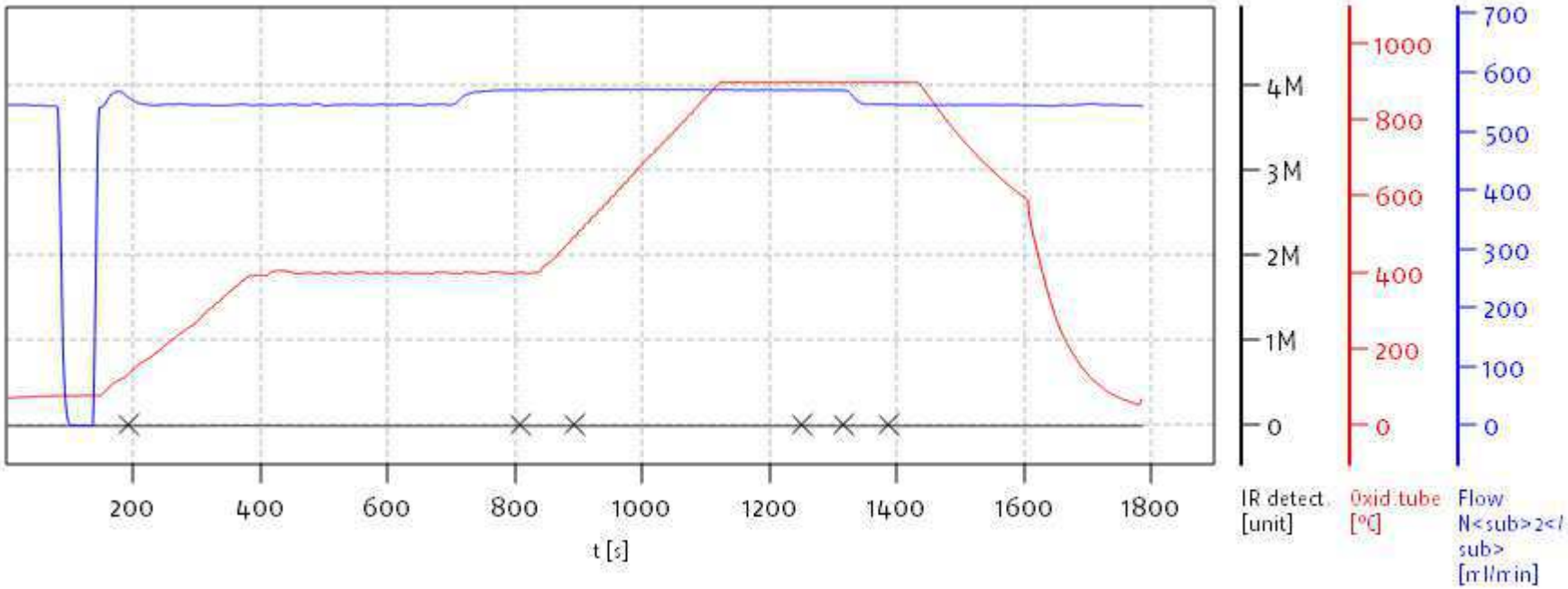
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

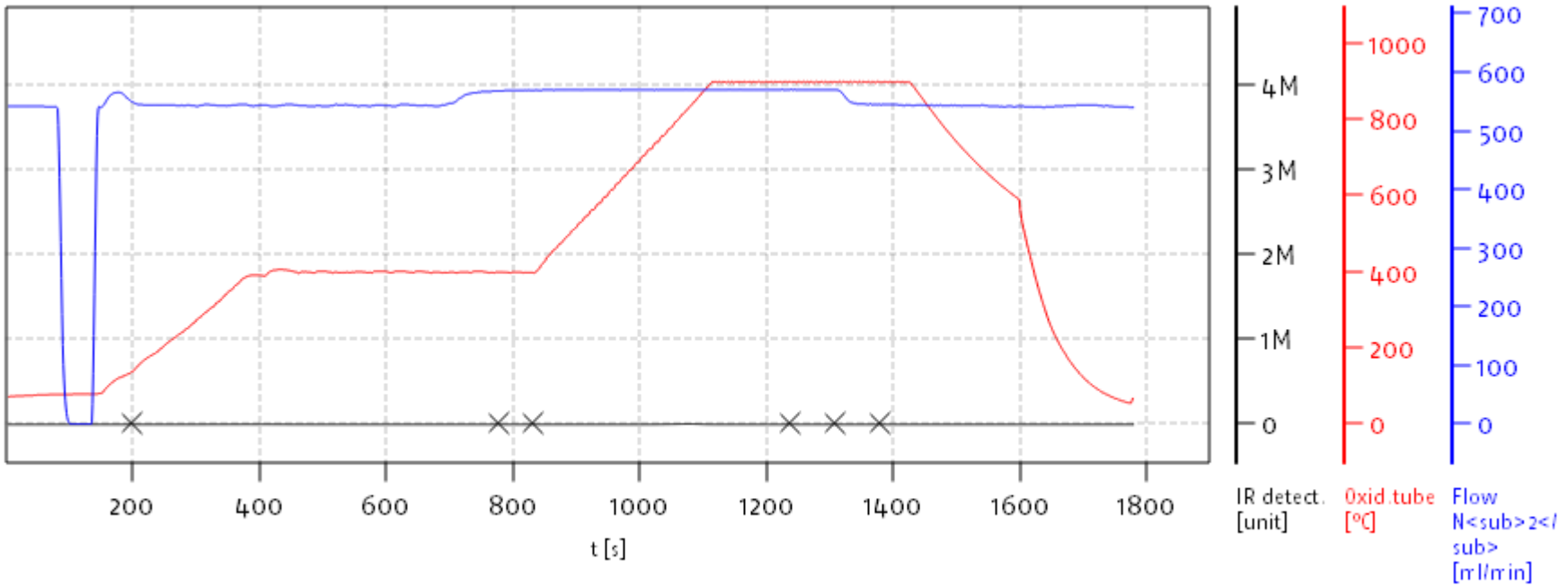
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

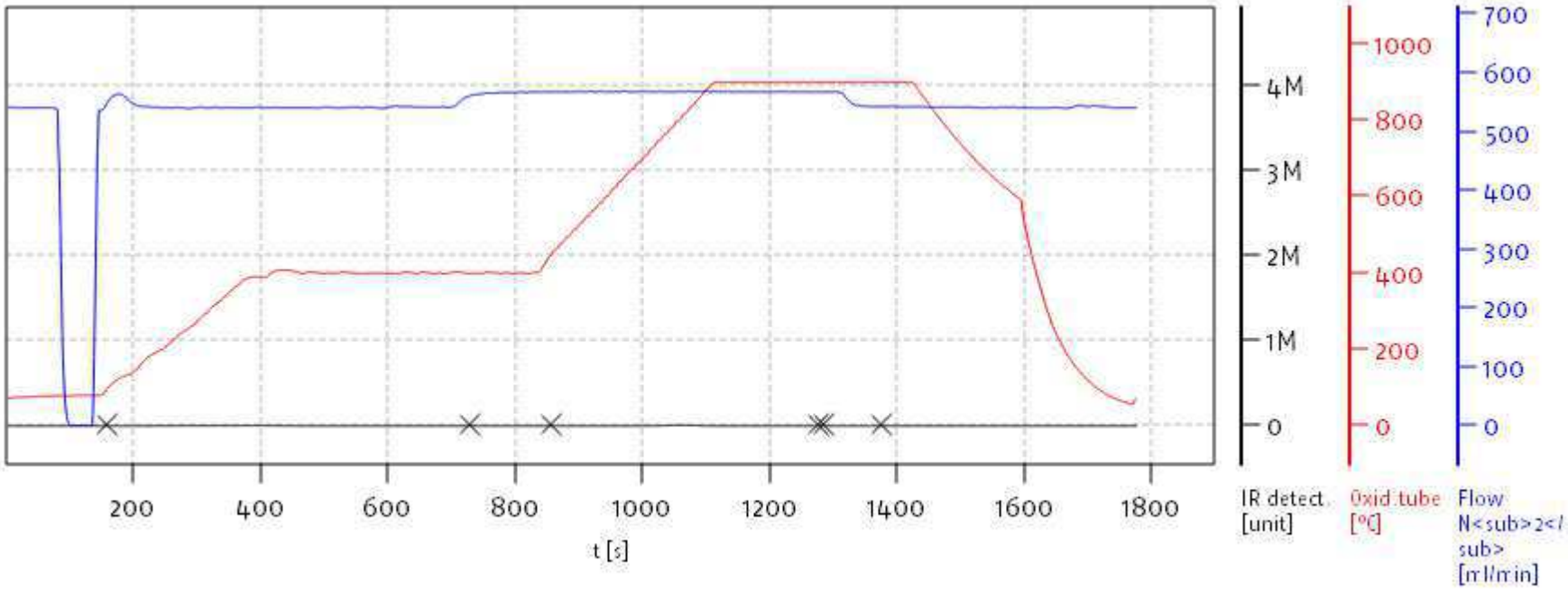
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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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

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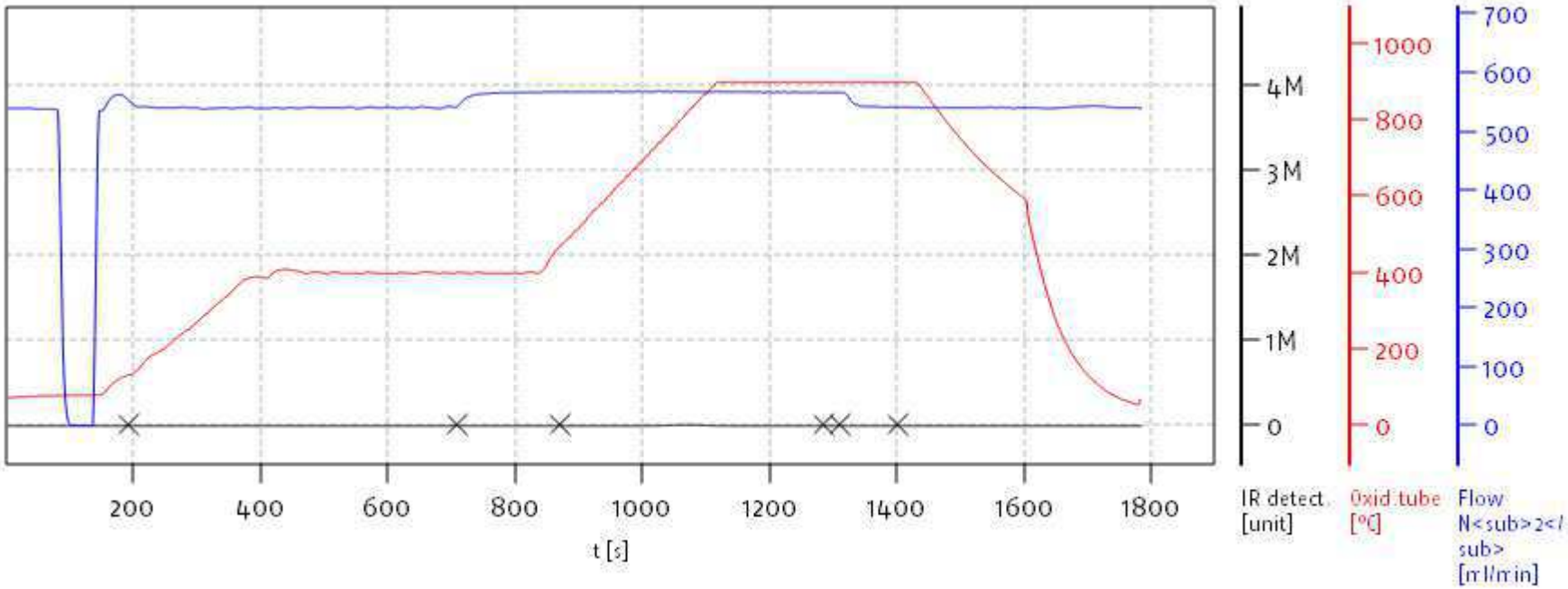
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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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

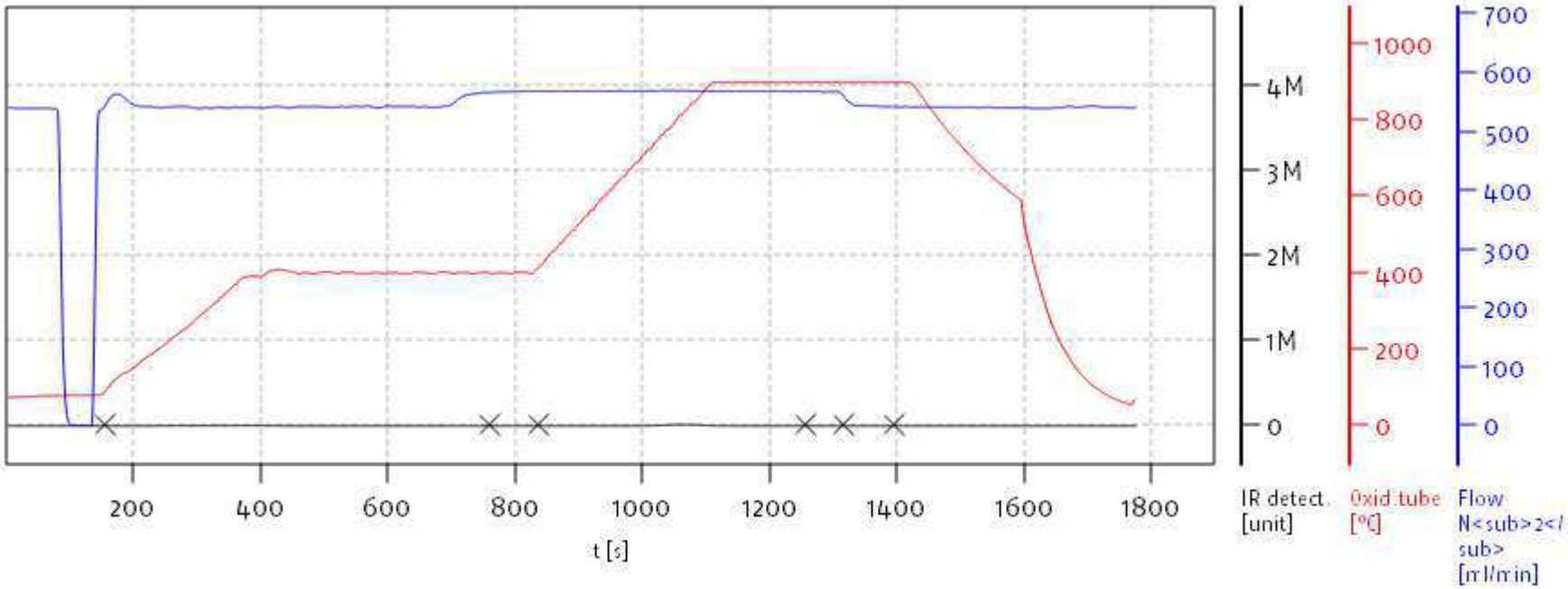
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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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

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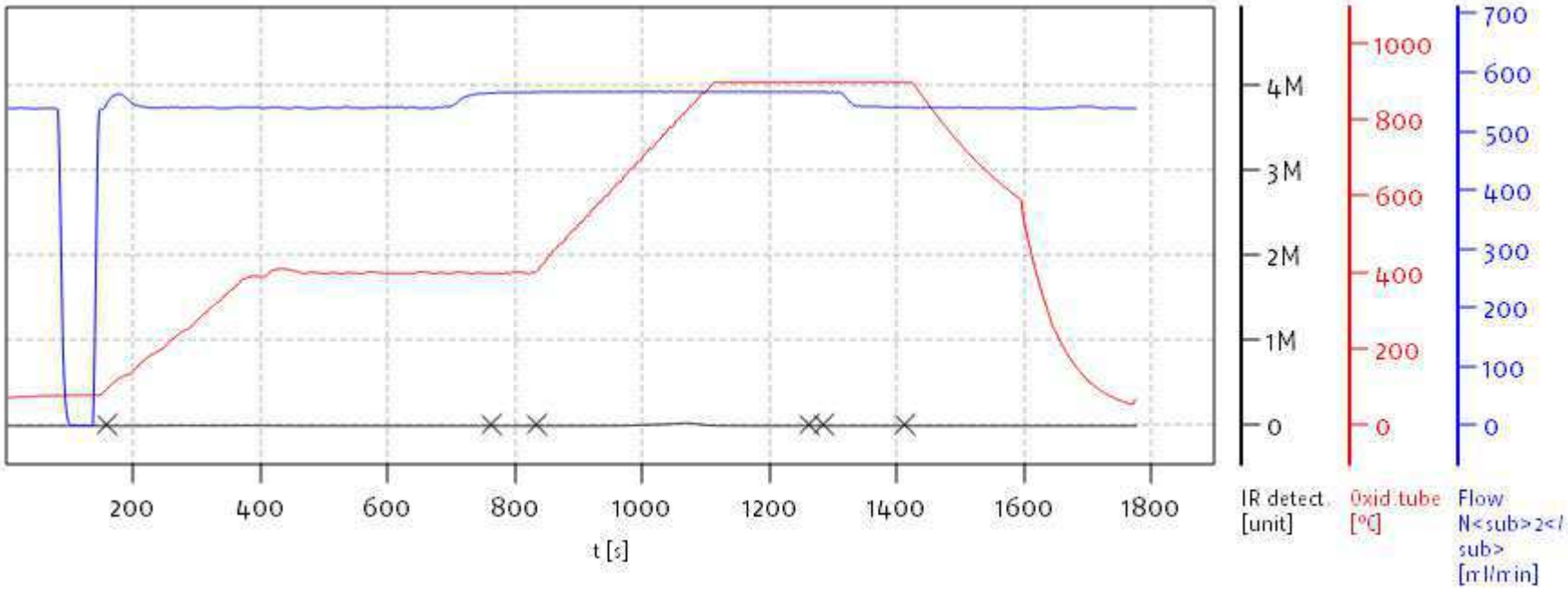
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

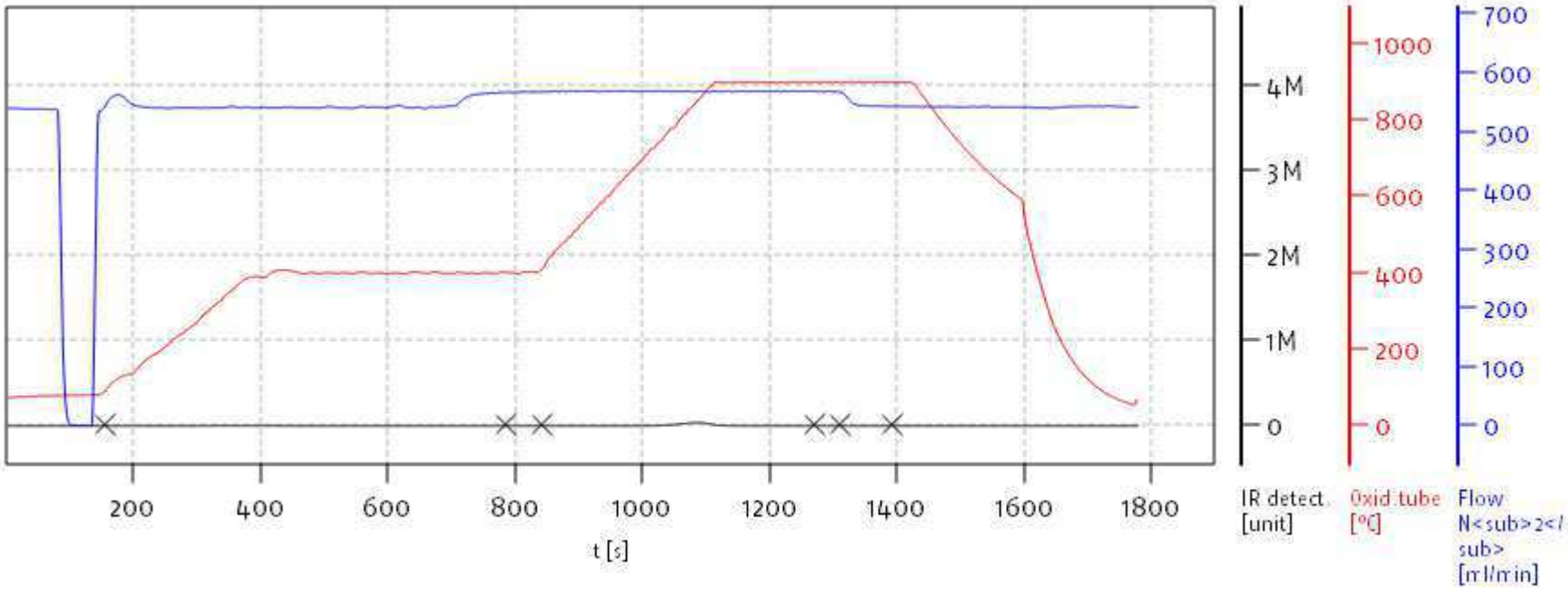
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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elementar
EXCELLENCE IN ELEMENTS

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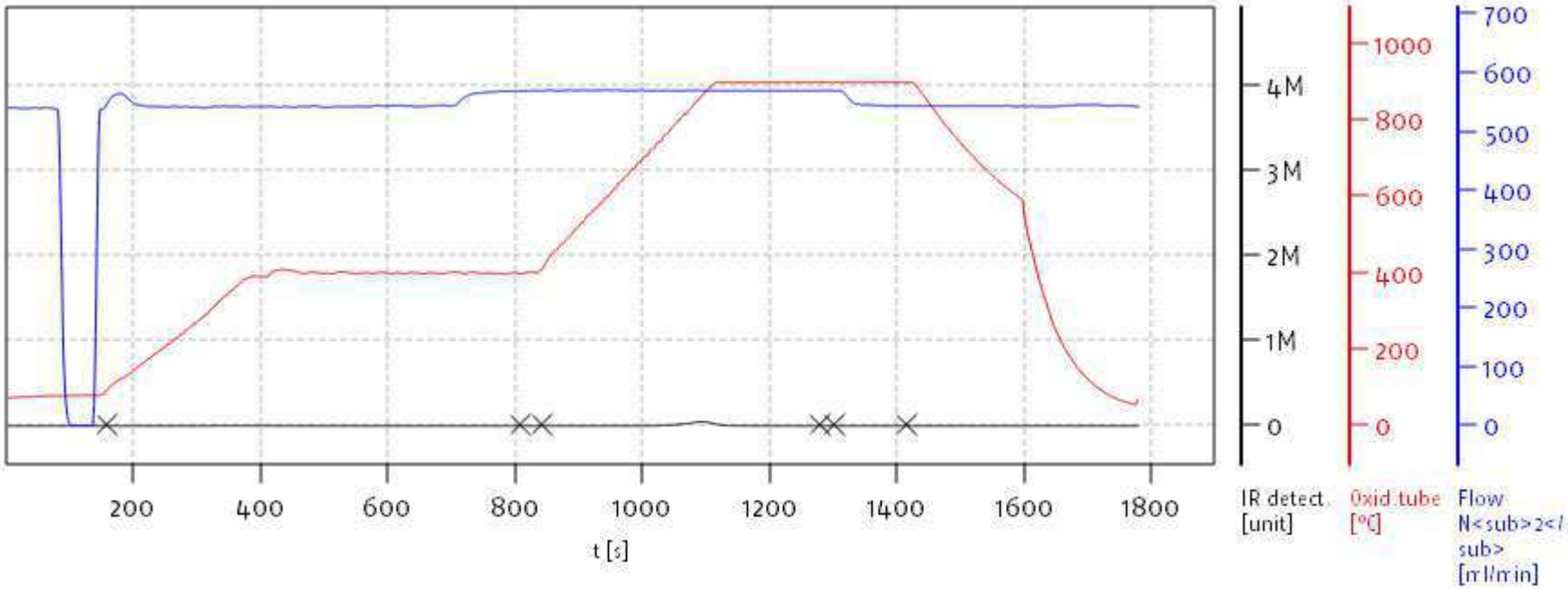
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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EXCELLENCE IN ELEMENTS

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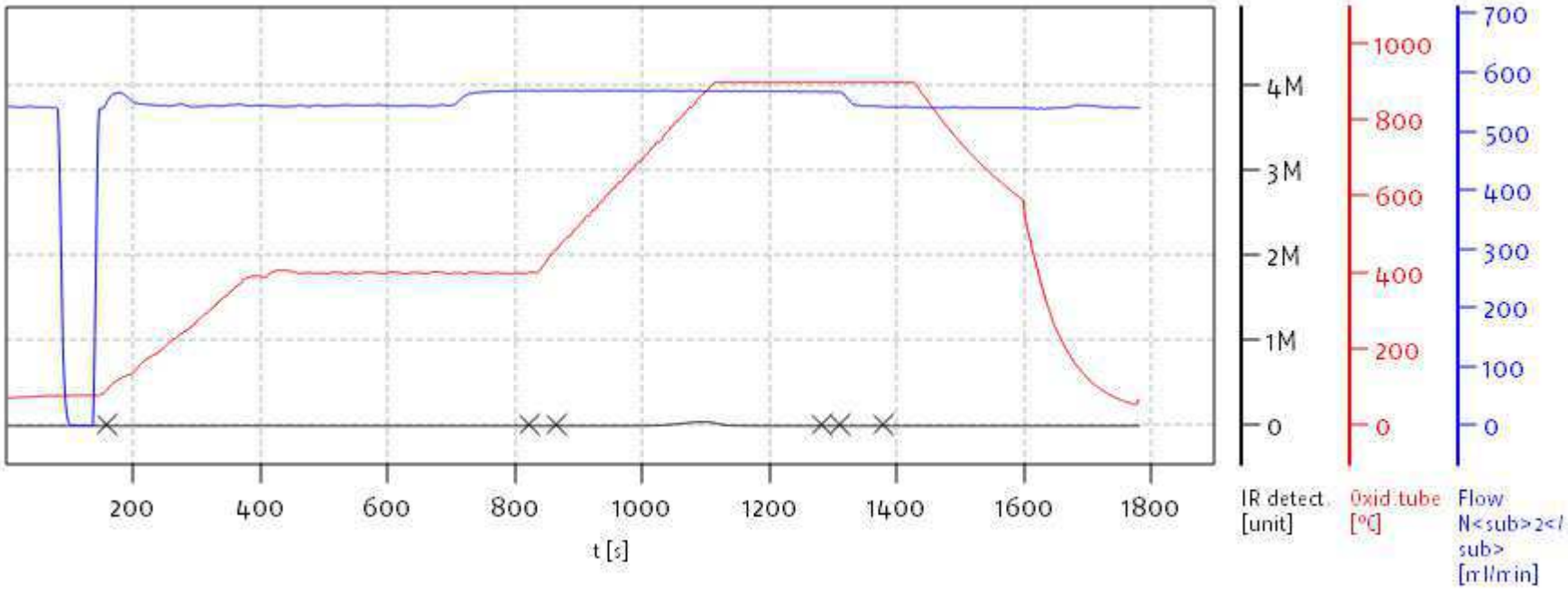
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Date: Wed Apr 27 11:07:12 2022

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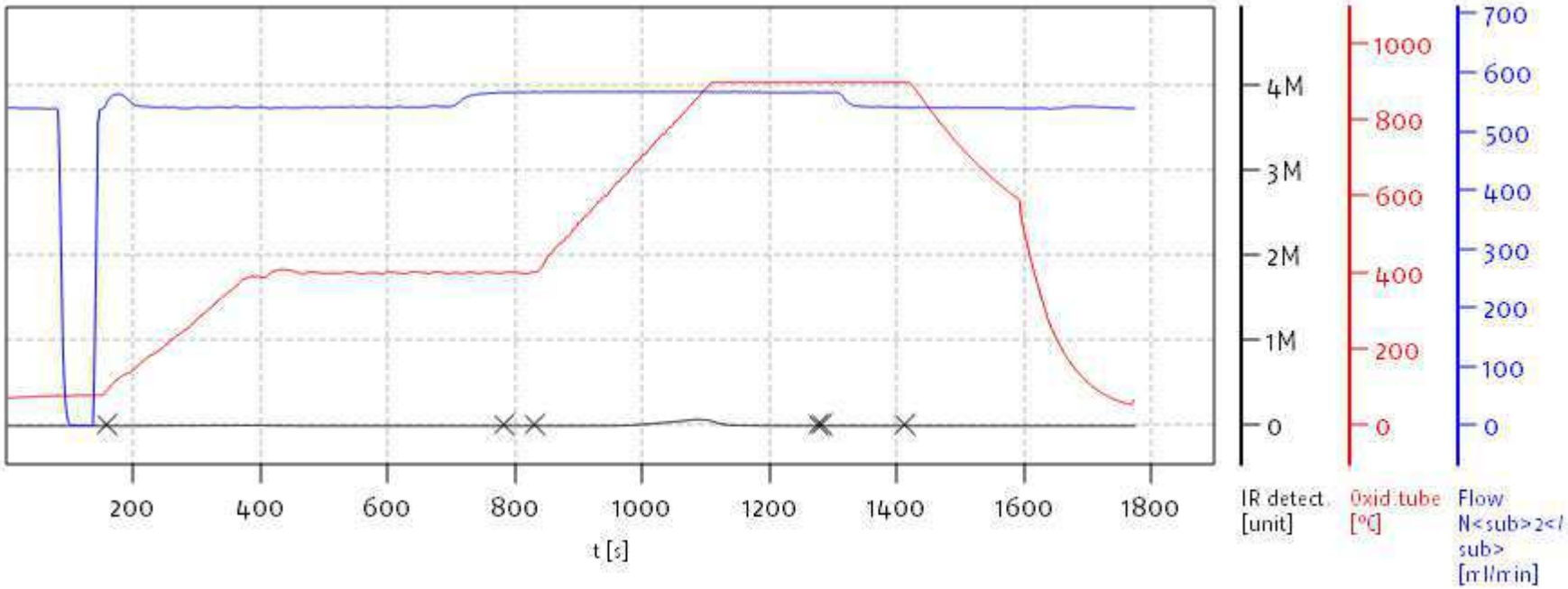
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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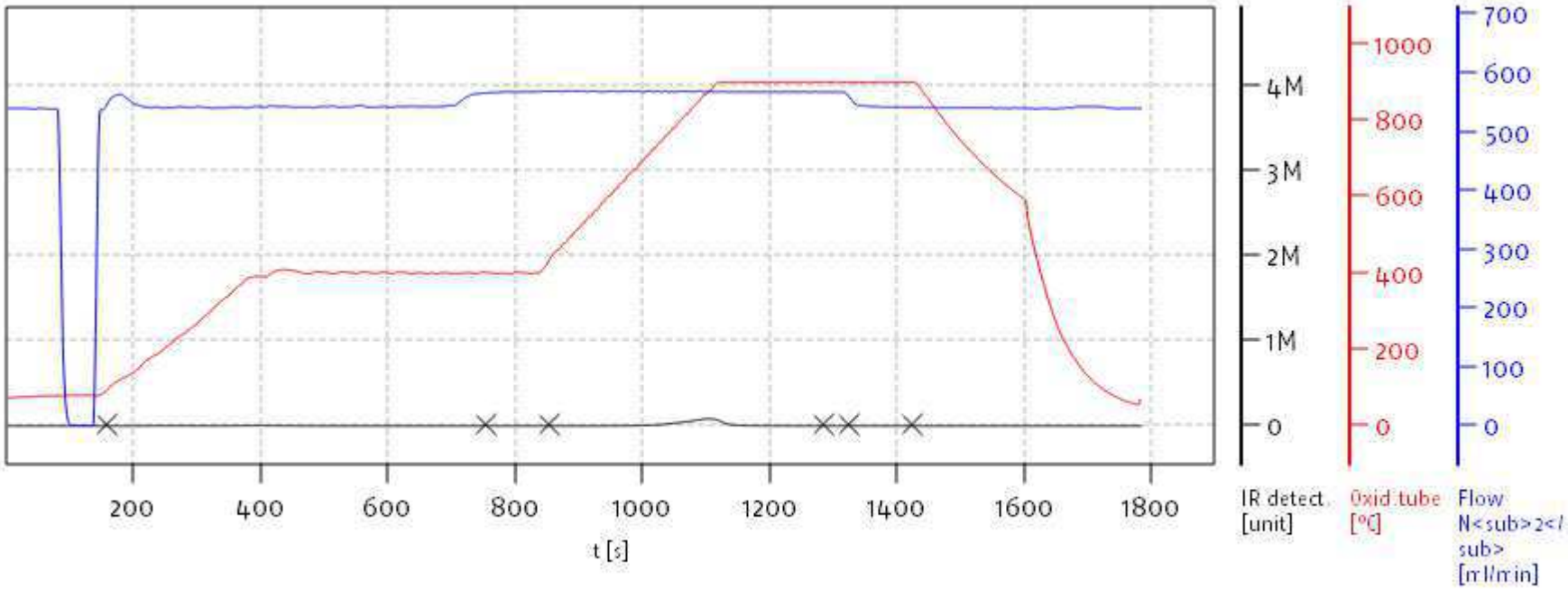
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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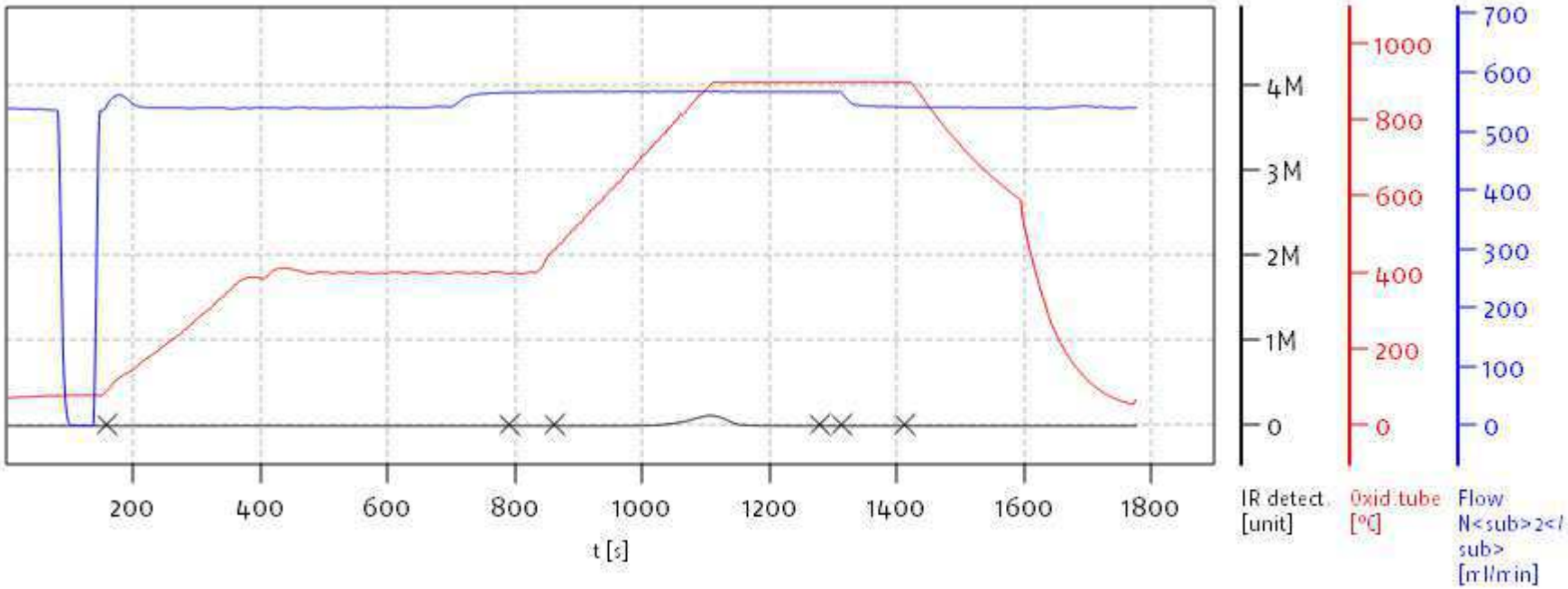
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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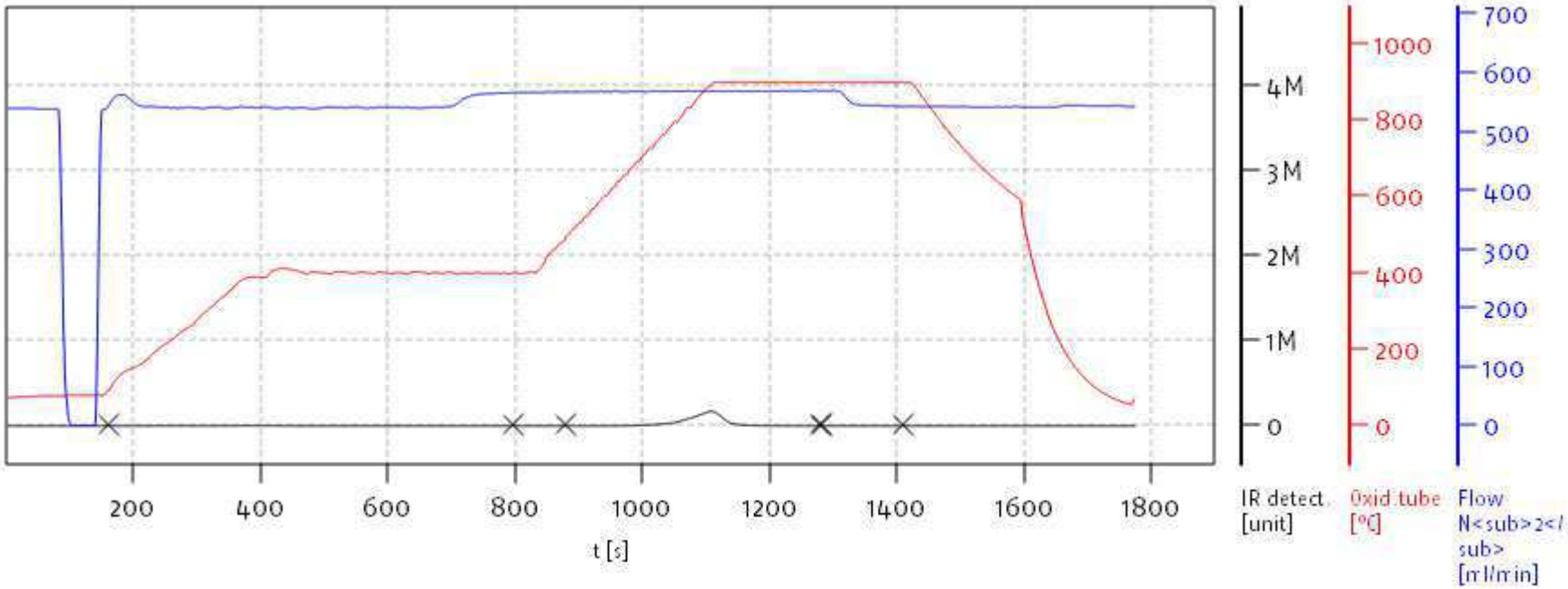
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

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soliTOC V2.0.2 (31015f9) 2018-11-19
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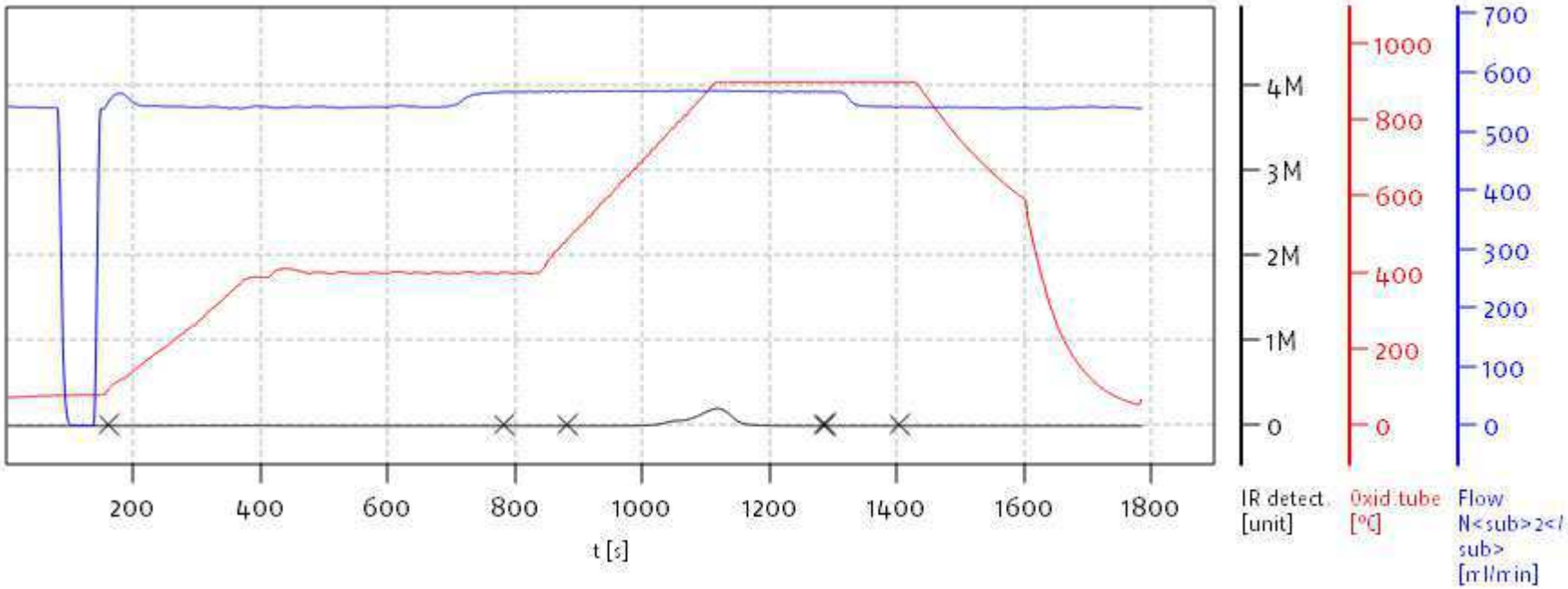
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

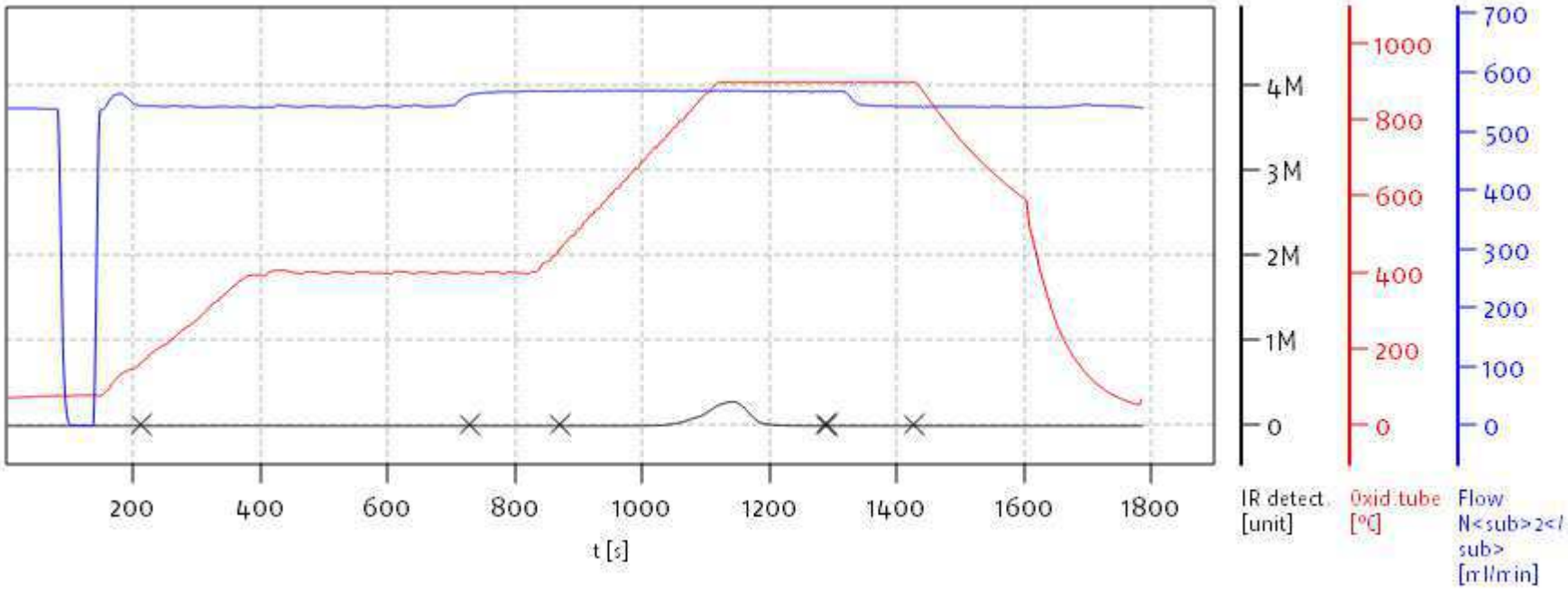
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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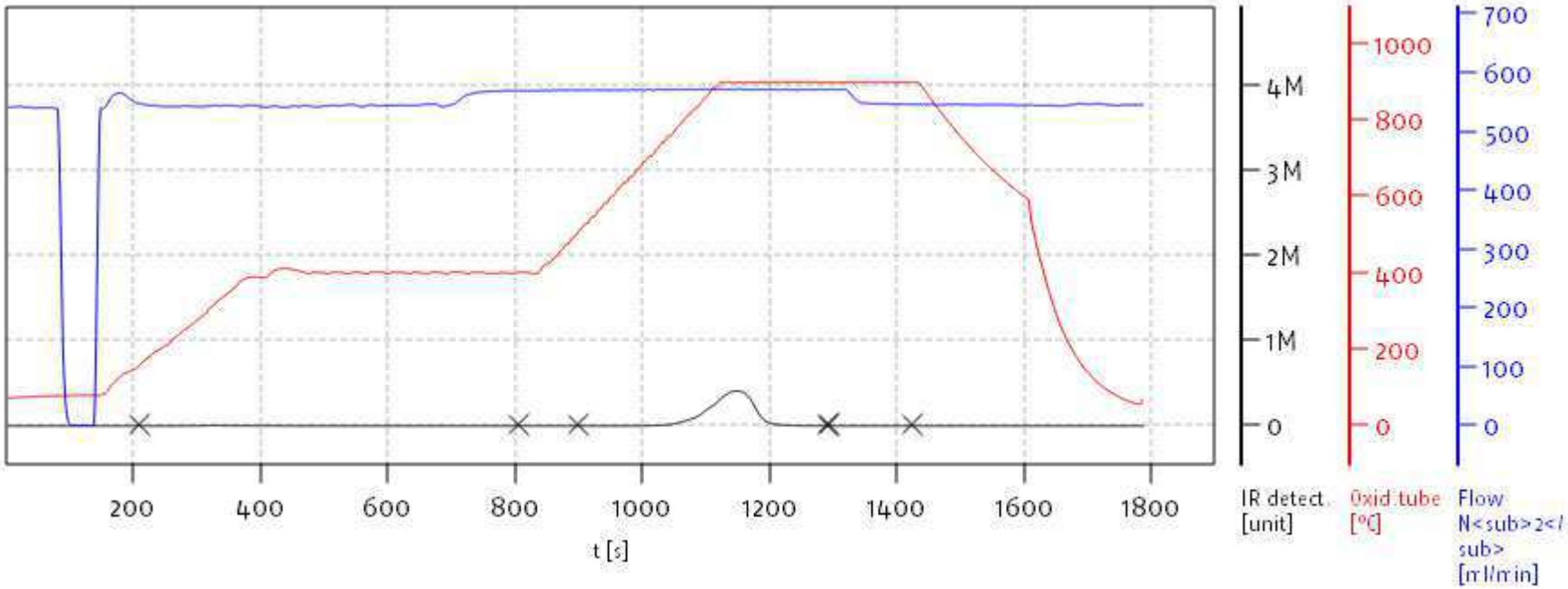
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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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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

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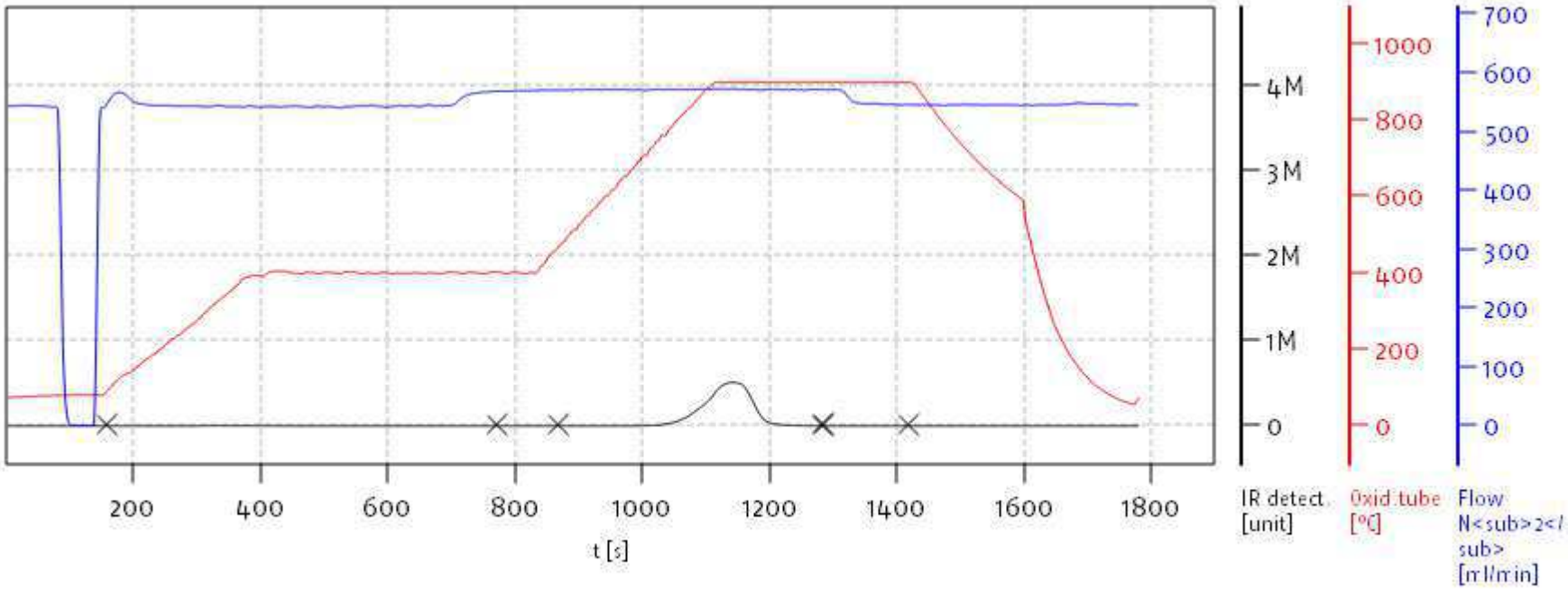
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

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soliTOC V2.0.2 (31015f9) 2018-11-19
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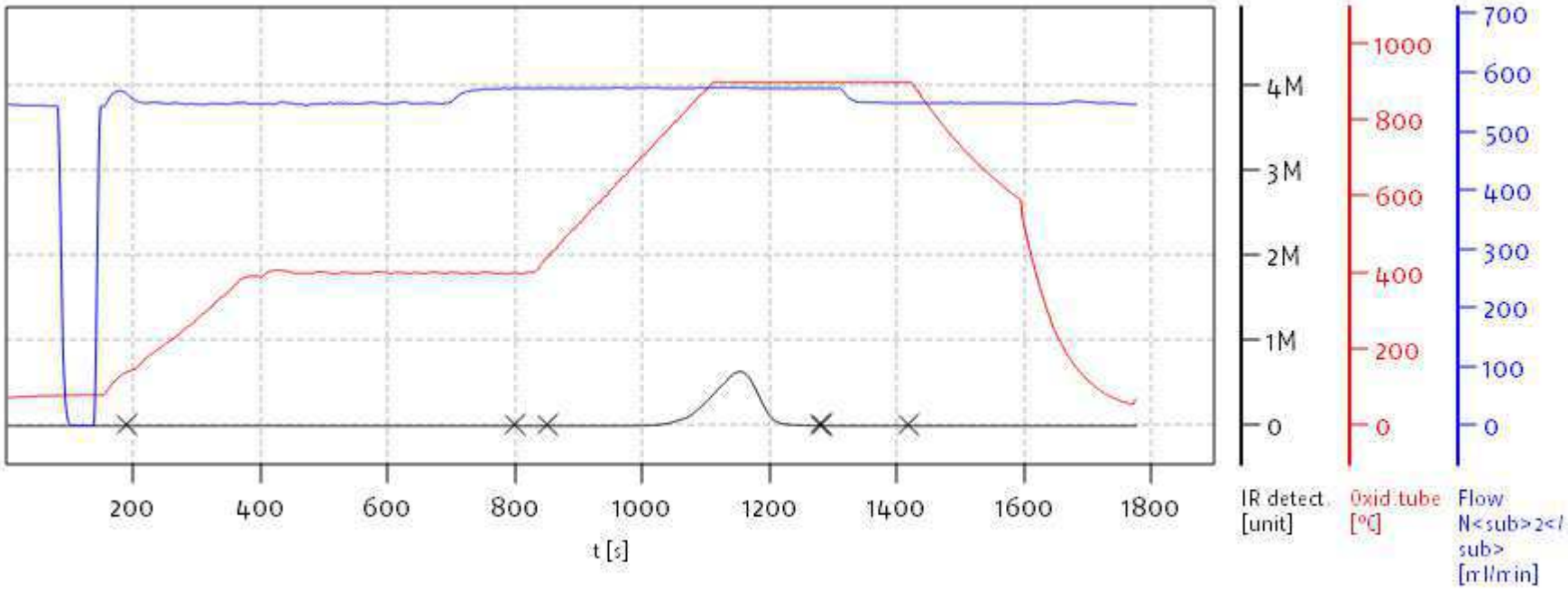
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

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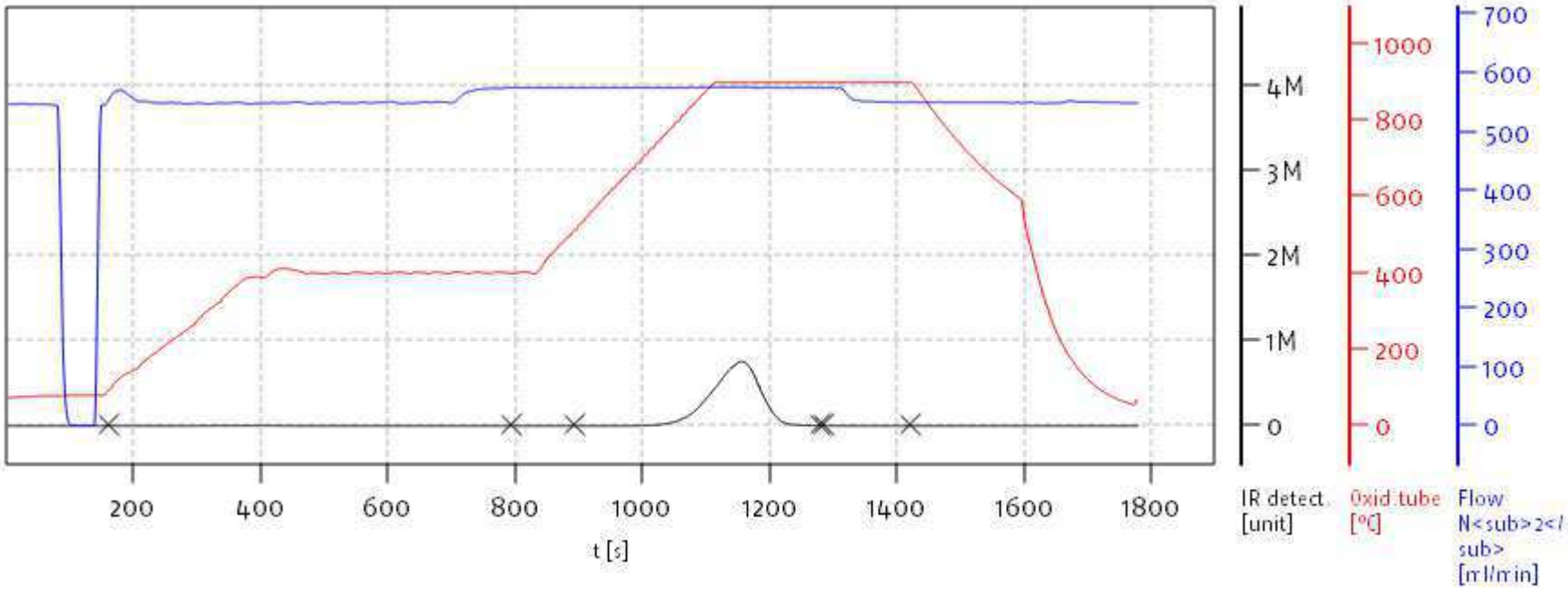
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

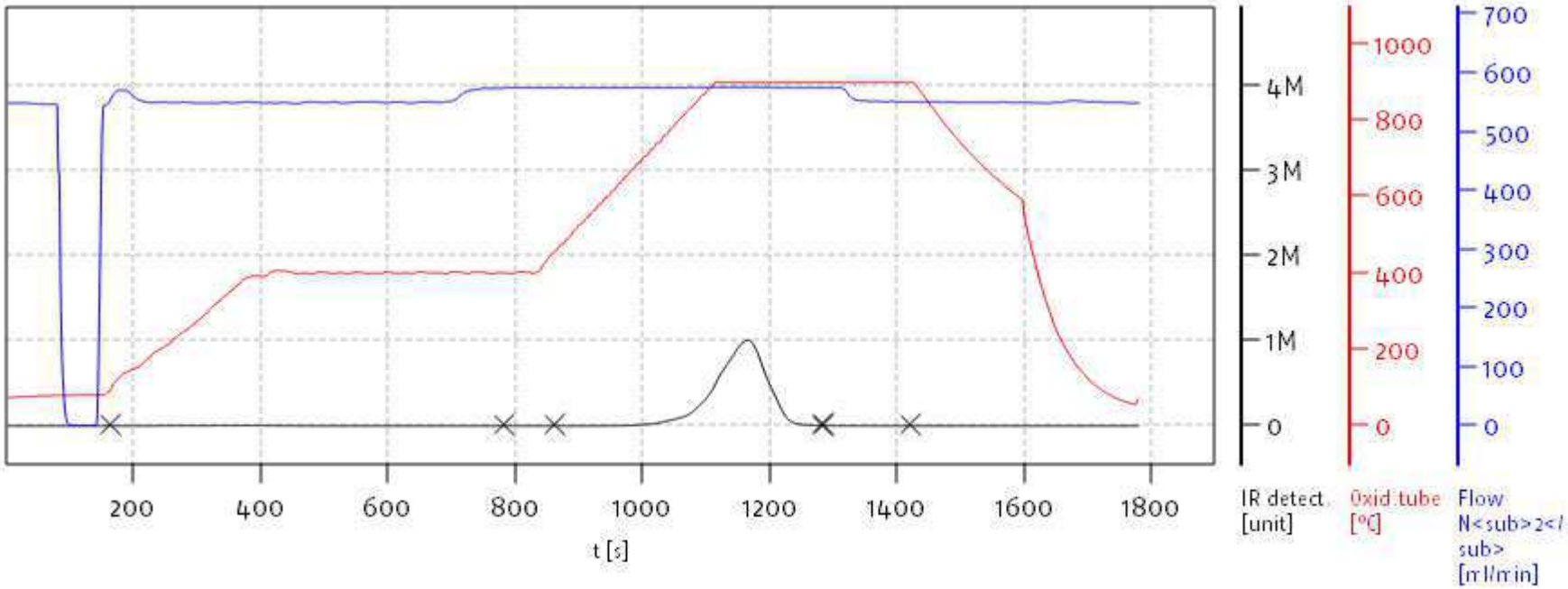
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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

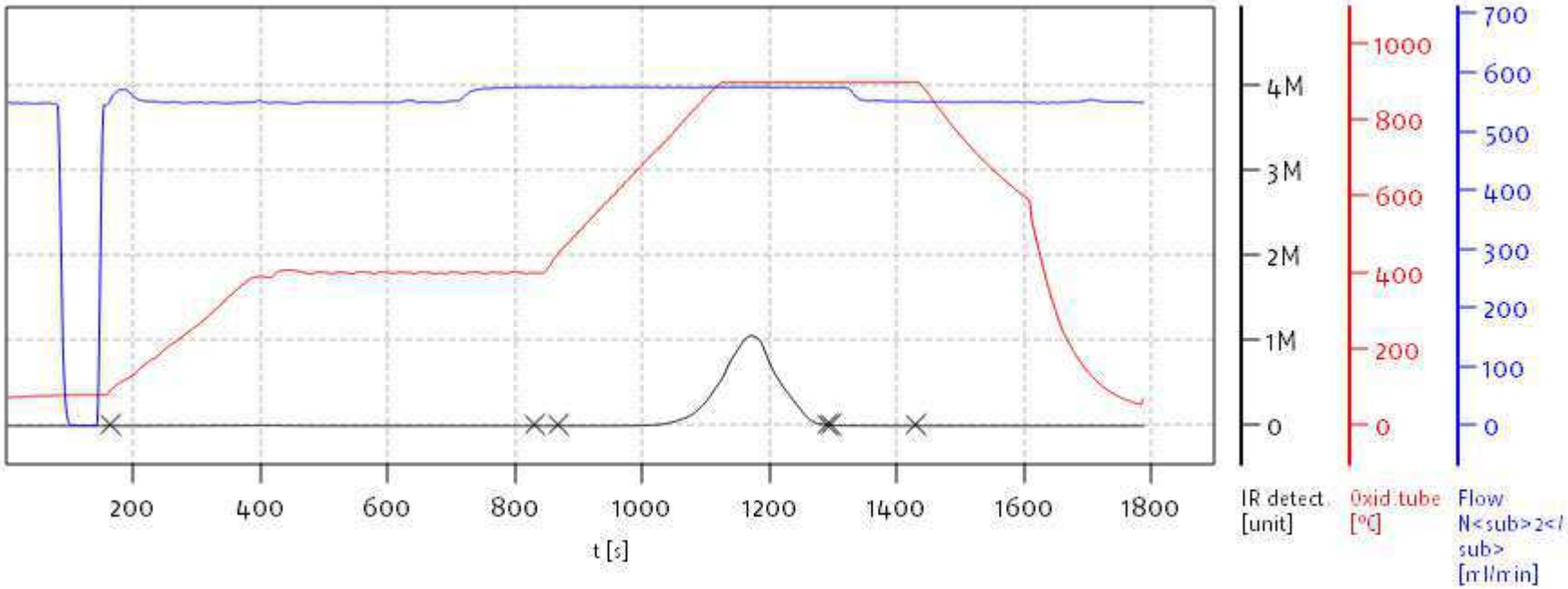
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

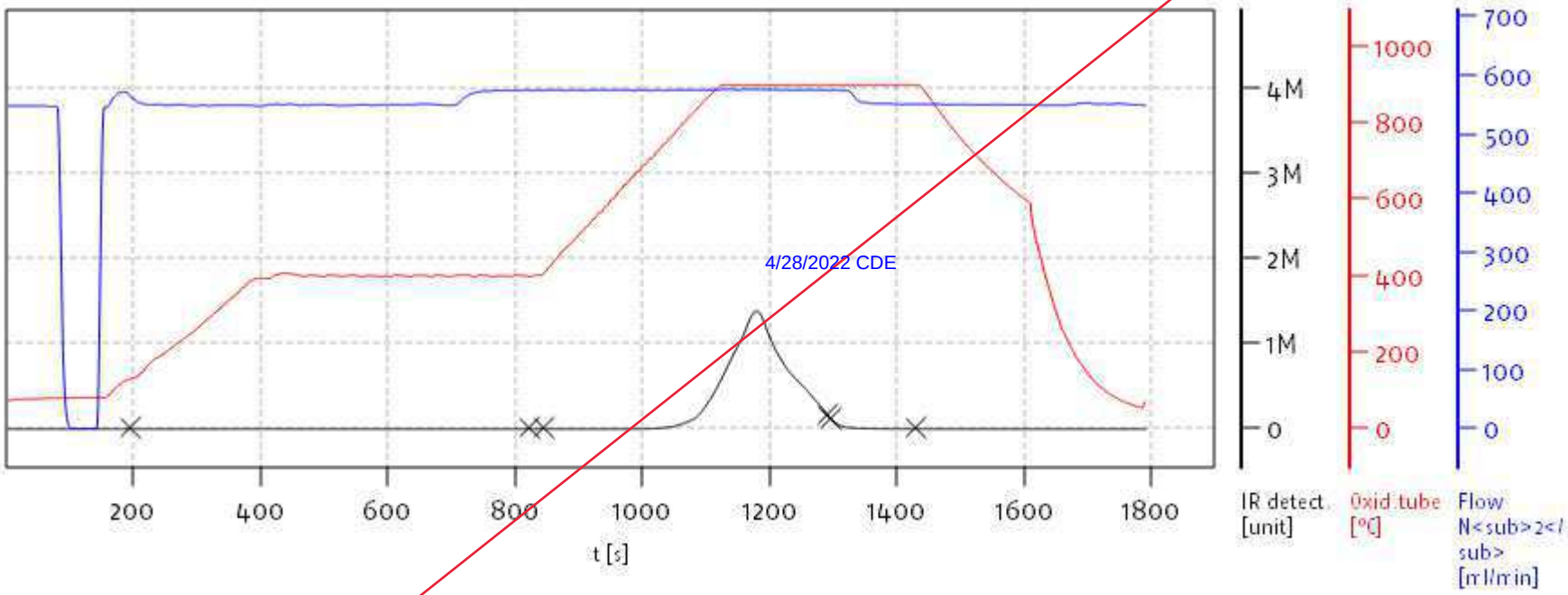
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 | 4/26/2022 10:31 PM | 0.005 | 3.805 | 3.810 | bl,C1u | 3 605 | 5 648 620 | 71 970 | 1.0000 | 0.9443 |




Name:

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

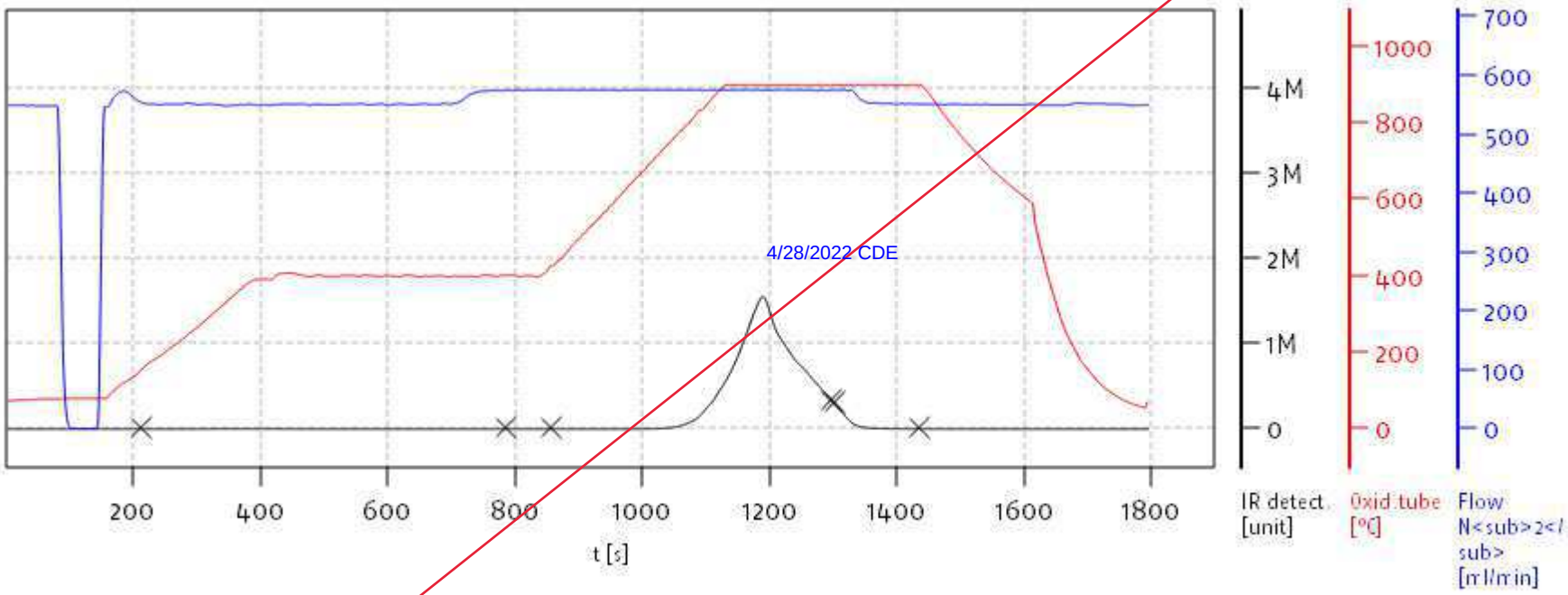
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 | 4/26/2022 11:02 PM | 0.010 | 4.637 | 4.647 | bl | 10 023 | 6 397 530 | 228 171 | 1.0000 | 0.9539 |




Name:

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

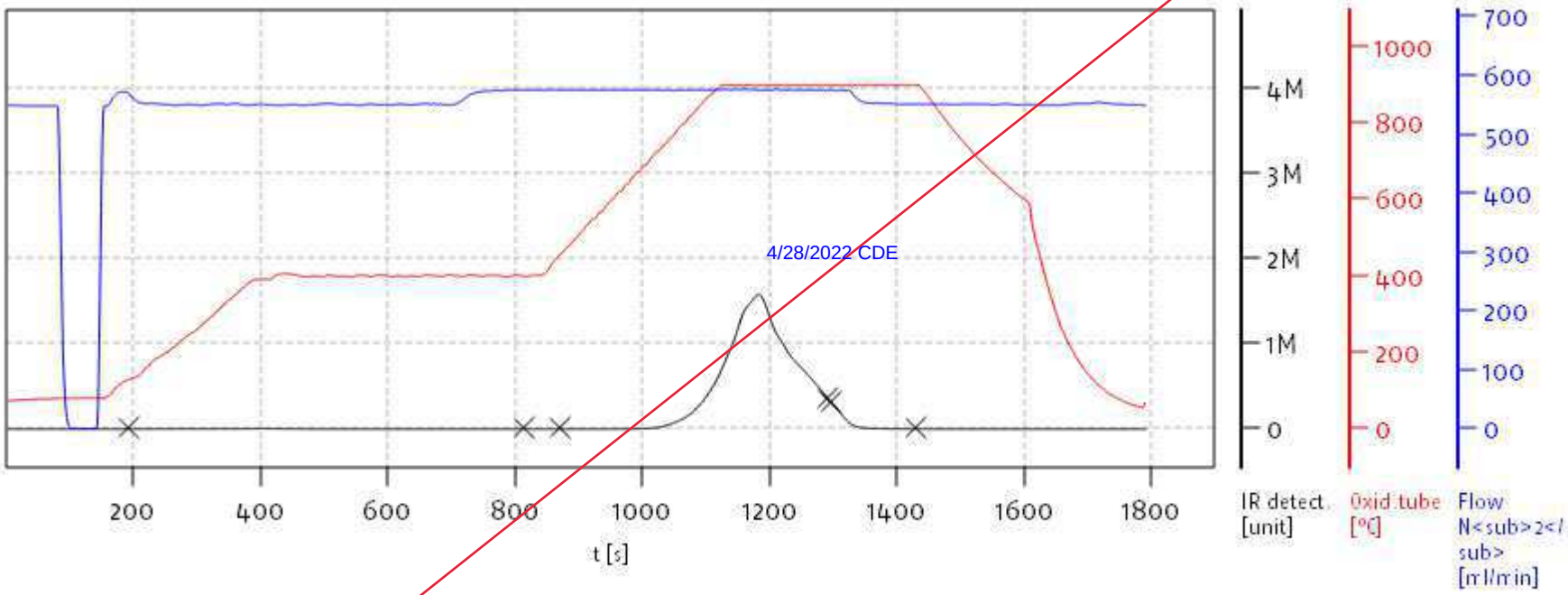
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 | 4/26/2022 11:32 PM | 0.020 | 5.219 | 5.239 | bl | 23 354 | 7 186 580 | 239 986 | 1.0000 | 0.9540 |




Name:

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

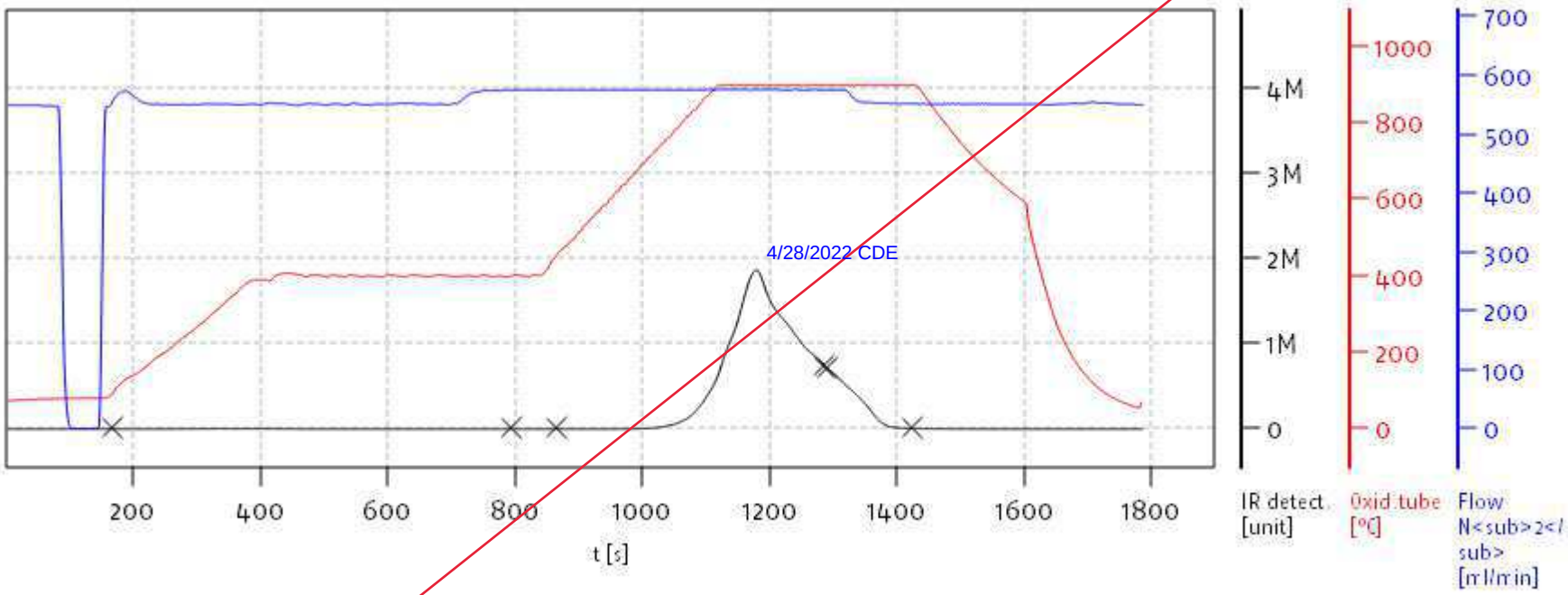
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 12:02 AM | 0.019 | 7.915 | 7.934 | bl,C3o | 21 248 | 8 544 610 | 1 334 580 | 1.0000 | 1.0714 |




Name:

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

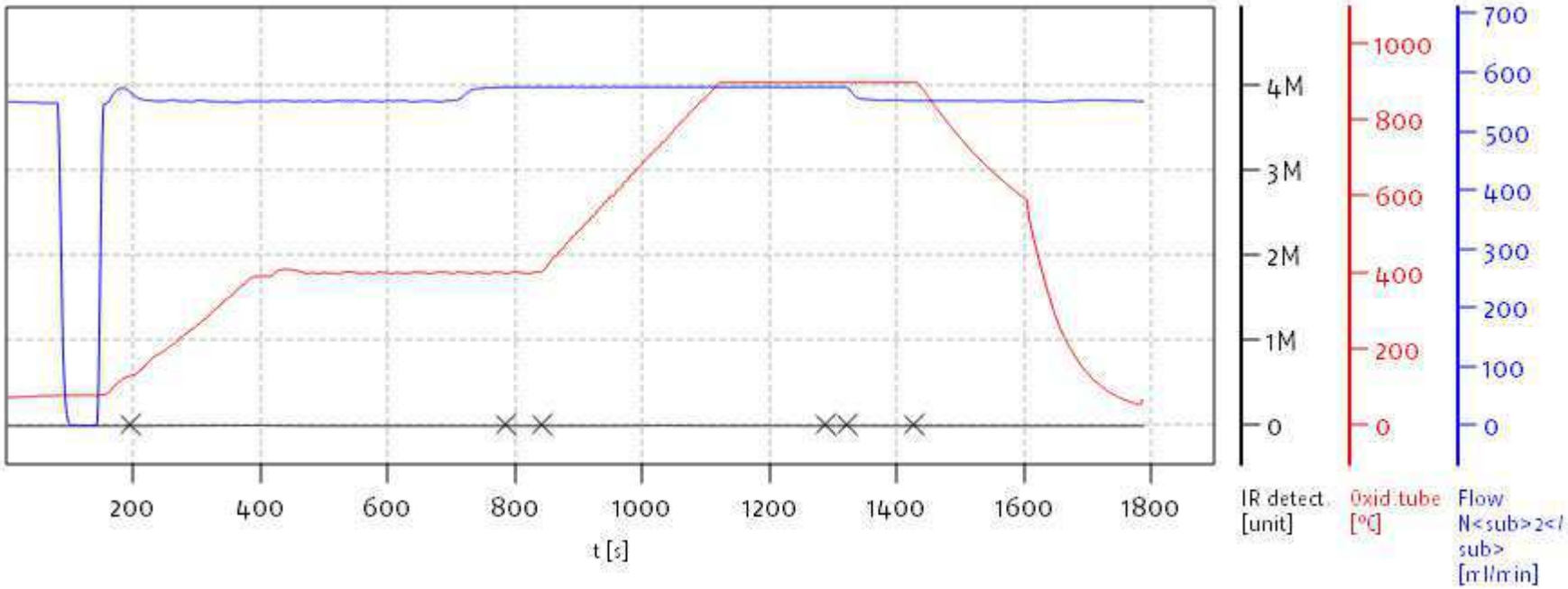
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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

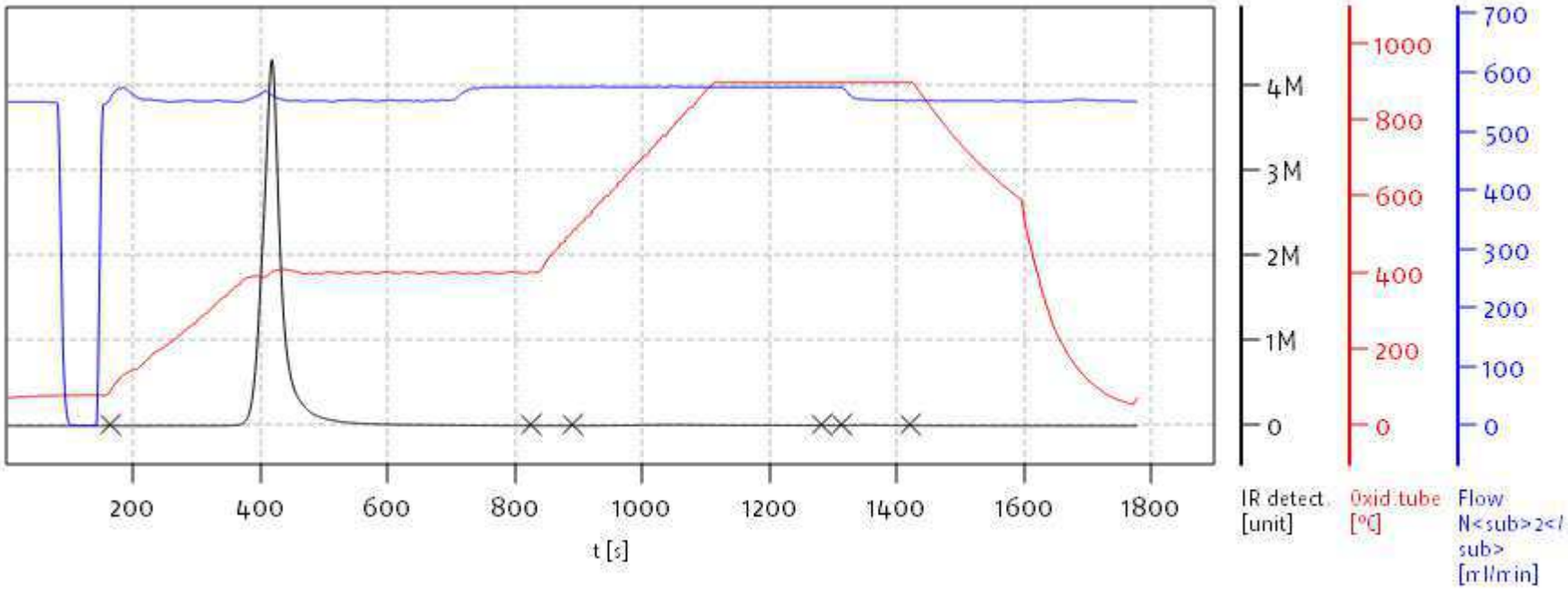
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
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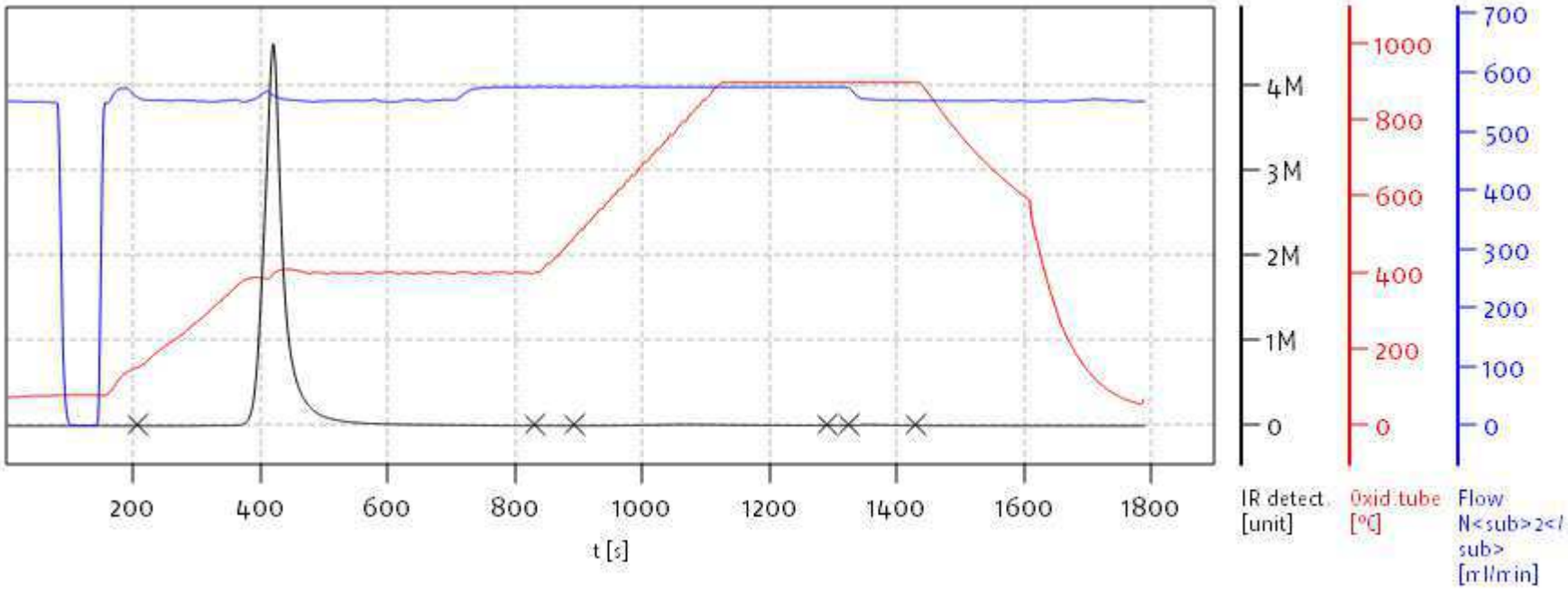
elementar
EXCELLENCE IN ELEMENTS

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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

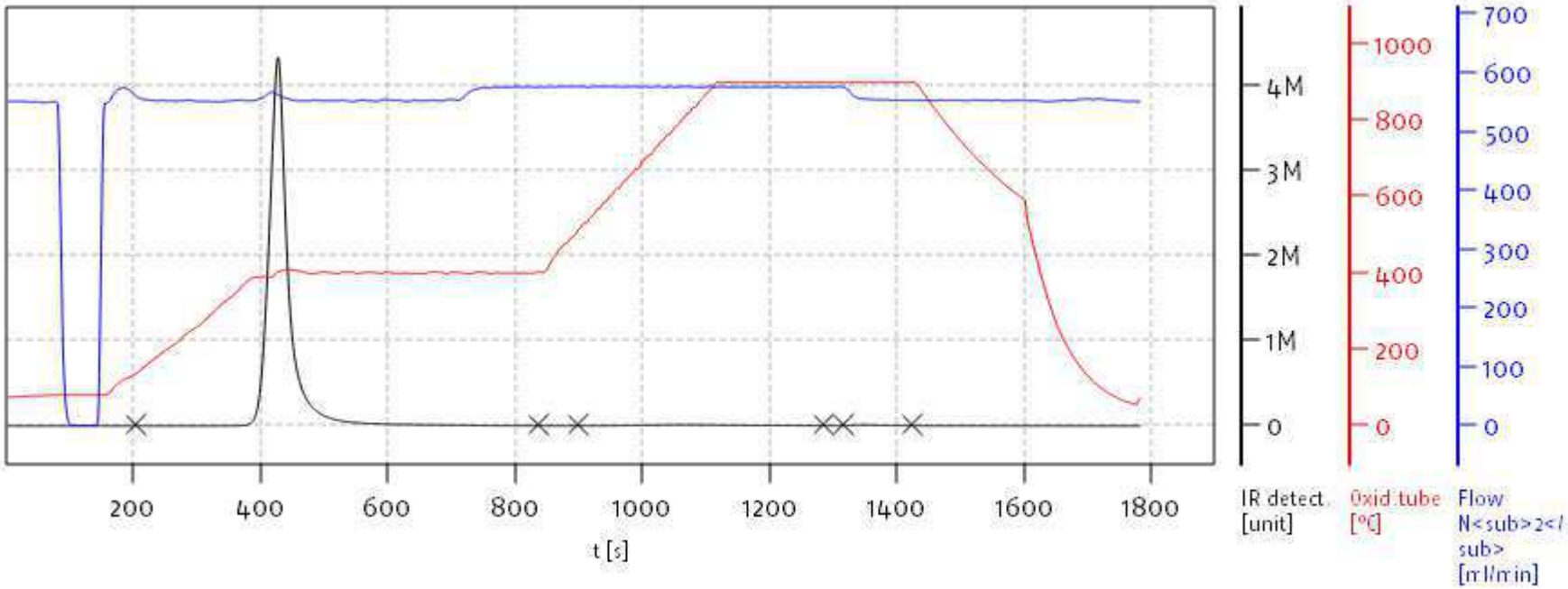
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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

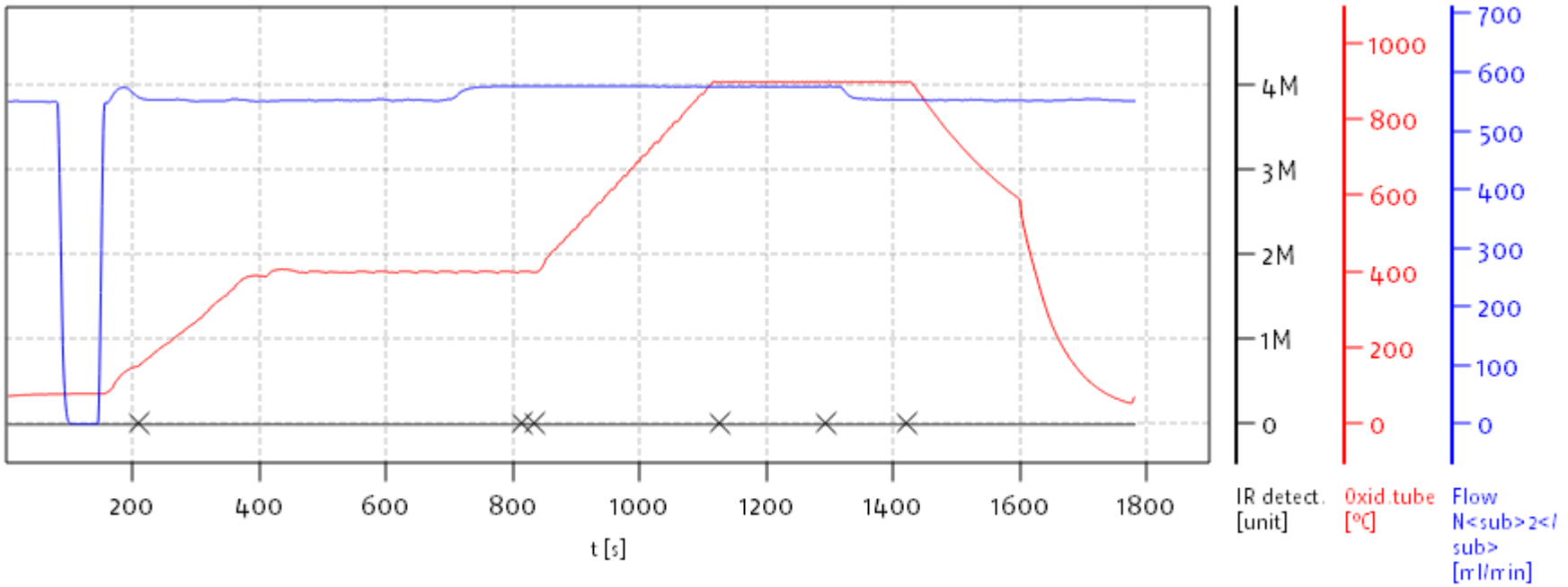
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |




Name:

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

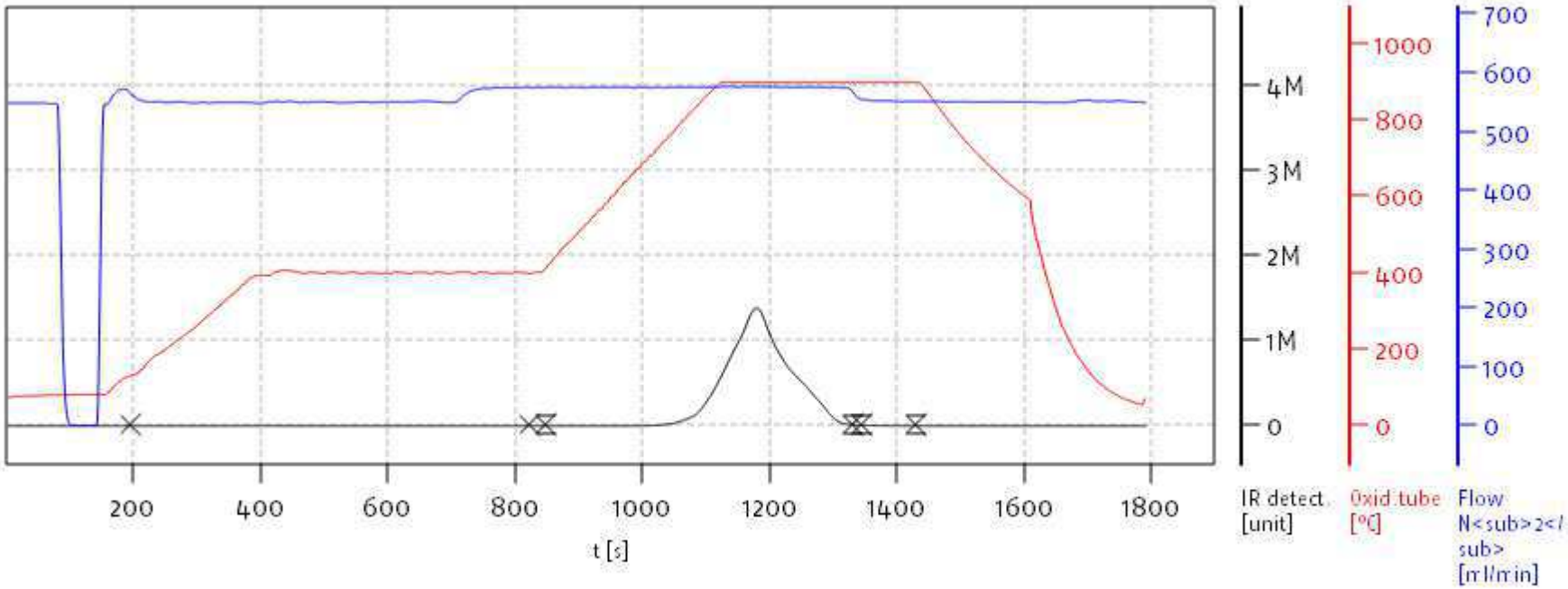
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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

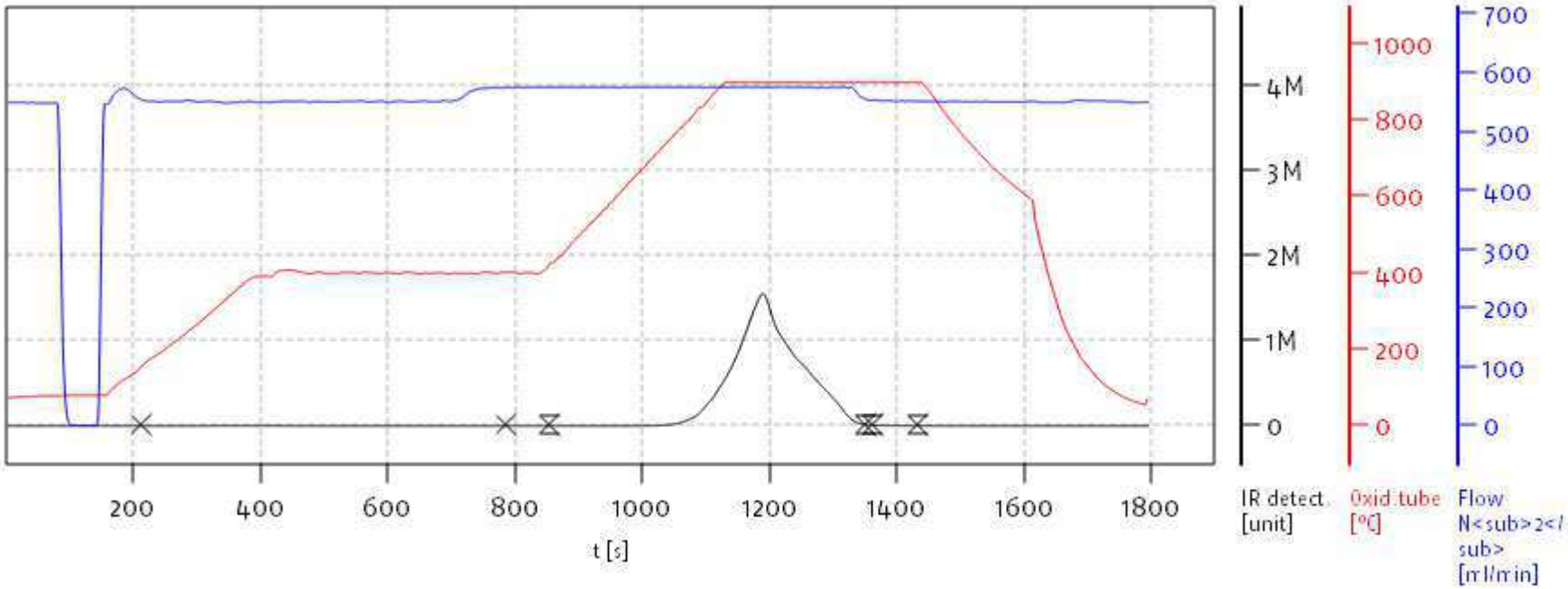
elementar
EXCELLENCE IN ELEMENTS

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

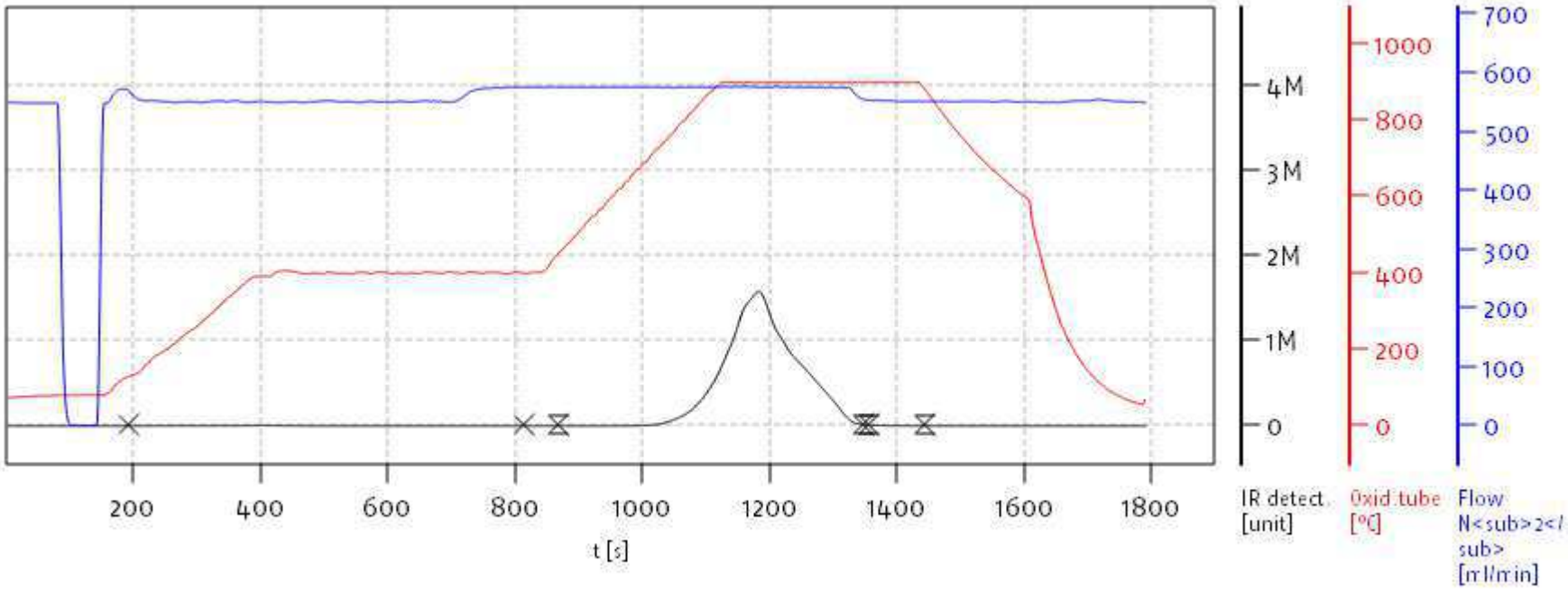
elementar
EXCELLENCE IN ELEMENTS

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

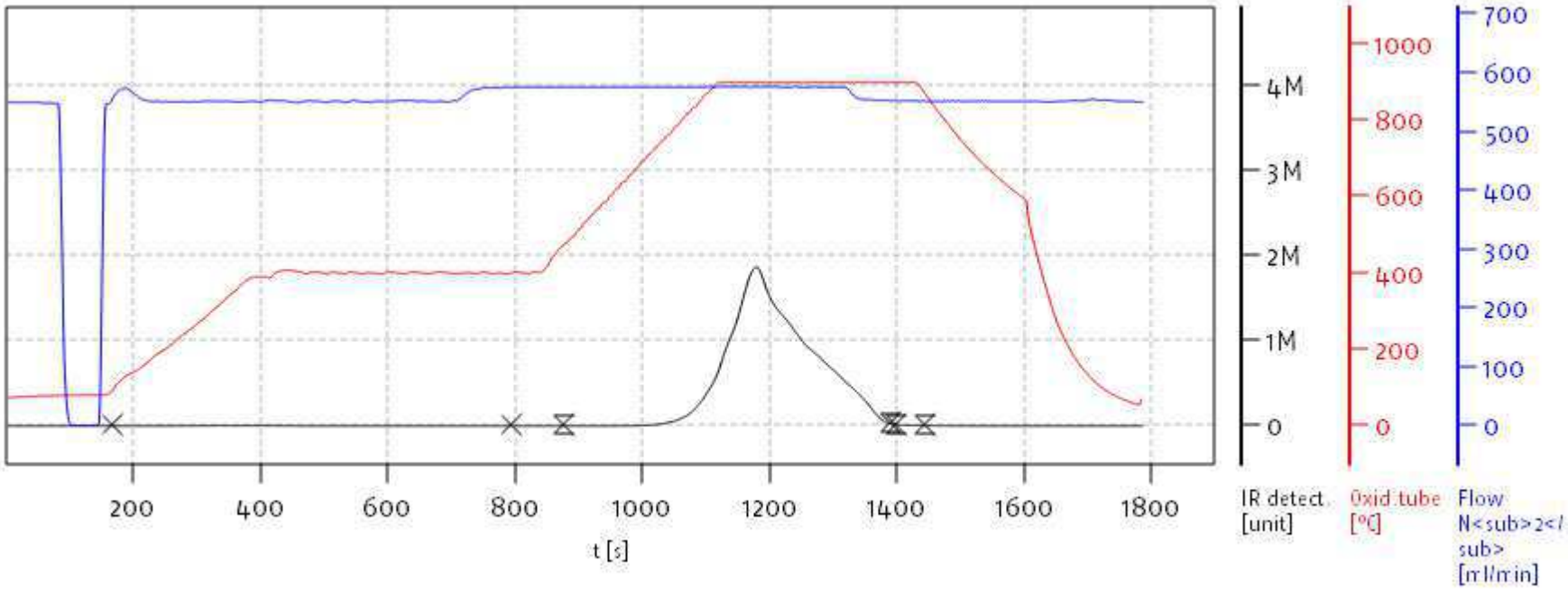
elementar
EXCELLENCE IN ELEMENTS

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

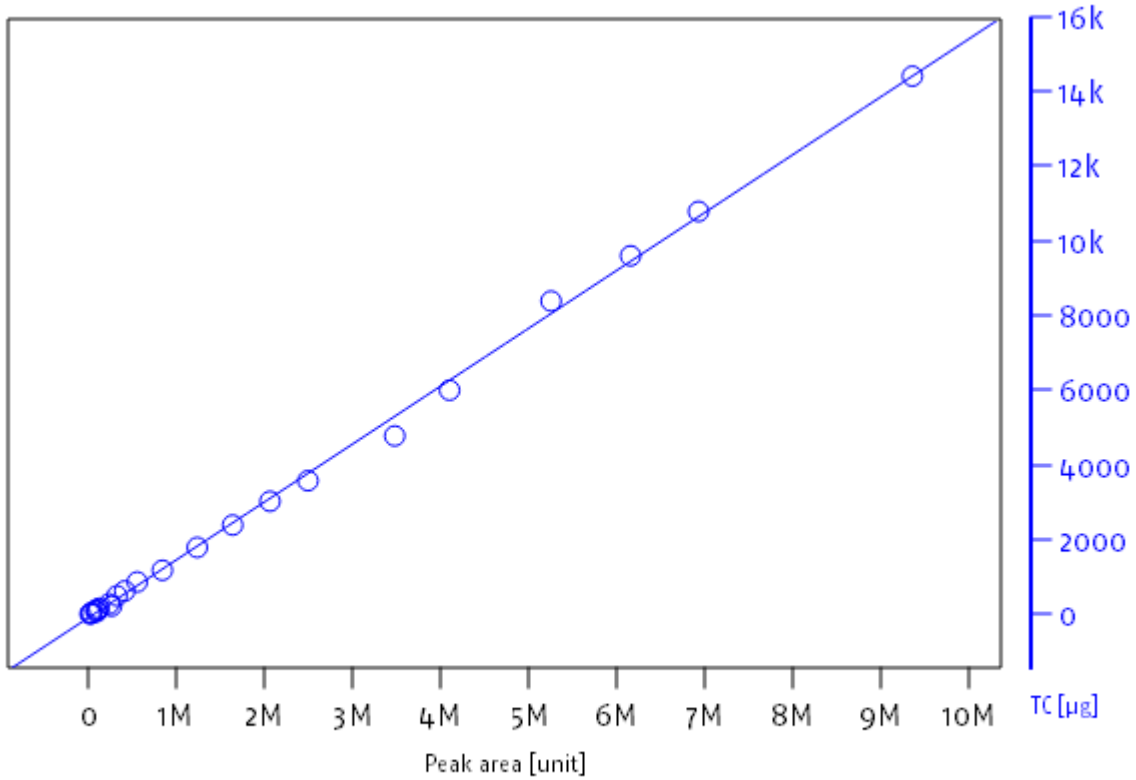
elementar
EXCELLENCE IN ELEMENTS

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**




Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:19:56 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INSTRUMENT BLANKS
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| 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 | % | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INSTRUMENT BLANKS
## EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: TOC Cube
Sequence: SKL0336

SDG: 22L0329
Project: AOC4 UR Phase 3
Calibration: FD00070
Date Analyzed: 01/01/23 06:00

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C |
|---|---|---|---|---|---|---|
| SKL0336-CCBE | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCBF | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCBG | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-ICB1 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB1 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB2 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB3 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB4 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB5 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB6 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB7 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB8 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCB9 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCBA | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCBB | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCBC | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SKL0336-CCBD | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INSTRUMENT BLANKS
## EPA 9060A m

| | | | |
|---|---|---|---|
| Laboratory: | Analytical Resources, LLC | SDG: | 22L0329 |
| Client: | Anchor QEA, LLC | Project: | AOC4 UR Phase 3 |
| Instrument ID: | TOC Cube | Calibration: | FD00070 |
| Sequence: | SLA0004 | Date Analyzed: | 01/04/23 10:08 |

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C |
|---|---|---|---|---|---|---|
| SLA0004-ICB1 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |
| SLA0004-CCB1 | Total Organic Carbon | 0.00 | 0.02 | 0.02 | % | |

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKL0336

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| SKL0336-CCVE | Total Organic Carbon | 44.446 | 43.3 | 97.5 | % | EPA 9060A m |
| SKL0336-CCVF | Total Organic Carbon | 44.446 | 43.9 | 98.8 | % | EPA 9060A m |
| SKL0336-CCVG | Total Organic Carbon | 44.446 | 44.1 | 99.2 | % | EPA 9060A m |
| SKL0336-ICV1 | Total Organic Carbon | 44.446 | 44.5 | 100 | % | EPA 9060A m |
| SKL0336-CCV1 | Total Organic Carbon | 44.446 | 44.1 | 99.3 | % | EPA 9060A m |
| SKL0336-CCV2 | Total Organic Carbon | 44.446 | 44.1 | 99.3 | % | EPA 9060A m |
| SKL0336-CCV3 | Total Organic Carbon | 44.446 | 44.8 | 101 | % | EPA 9060A m |
| SKL0336-CCV4 | Total Organic Carbon | 44.446 | 45.5 | 102 | % | EPA 9060A m |
| SKL0336-CCV5 | Total Organic Carbon | 44.446 | 45.3 | 102 | % | EPA 9060A m |
| SKL0336-CCV6 | Total Organic Carbon | 44.446 | 45.0 | 101 | % | EPA 9060A m |
| SKL0336-CCV7 | Total Organic Carbon | 44.446 | 46.1 | 104 | % | EPA 9060A m |
| SKL0336-CCV8 | Total Organic Carbon | 44.446 | 43.8 | 98.5 | % | EPA 9060A m |
| SKL0336-CCV9 | Total Organic Carbon | 44.446 | 44.4 | 99.9 | % | EPA 9060A m |
| SKL0336-CCVA | Total Organic Carbon | 44.446 | 44.7 | 100 | % | EPA 9060A m |
| SKL0336-CCVB | Total Organic Carbon | 44.446 | 44.3 | 99.6 | % | EPA 9060A m |
| SKL0336-CCVC | Total Organic Carbon | 44.446 | 44.2 | 99.4 | % | EPA 9060A m |
| SKL0336-CCVD | Total Organic Carbon | 44.446 | 44.3 | 99.8 | % | EPA 9060A m |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# INITIAL AND CONTINUING CALIBRATION CHECK

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
Client: Anchor QEA, LLC
Project: AOC4 UR Phase 3
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SLA0004

| Lab Sample ID | Analyte | True | Found | %R | Units | Method |
|---|---|---|---|---|---|---|
| SLA0004-ICV1 | Total Organic Carbon | 44.446 | 45.2 | 102 | % | EPA 9060A m |
| SLA0004-CCV1 | Total Organic Carbon | 44.446 | 45.8 | 103 | % | 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:** | 22L0329 |
| **Client:** | Anchor QEA, LLC | **Project:** | AOC4 UR Phase 3 |
| **Matrix:** | Solid | **Laboratory ID:** | BKL0650-SRM1 |
| **Batch:** | BKL0650 | **Initial/Final:** | 0.2853 g / 0.2853 g |
| **Preparation:** | Plumb 1981 | **Analyzed:** | 12/30/2022 14:50 |
| **Standard ID:** | K011789 | **Expires:** | 12/24/2023 |
| **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 | 3.04 | 0.02 | 0.02 | | 102 | 80 - 120 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# STANDARD REFERENCE MATERIAL RECOVERY

## EPA 9060A m

**Laboratory:** Analytical Resources, LLC
**SDG:** 22L0329
**Client:** Anchor QEA, LLC
**Project:** AOC4 UR Phase 3
**Matrix:** Solid
**Laboratory ID:** BKL0651-SRM1
**Batch:** BKL0651
**Initial/Final:** 0.2856 g / 0.2856 g
**Preparation:** Plumb 1981
**Analyzed:** 12/31/2022 8:38
**Standard ID:** K011789
**Expires:** 12/24/2023
**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 | 2.99 | 0.02 | 0.02 | | 99.9 | 80 - 120 |

* Values outside of QC limits

**Analytical Resources, LLC**
**Analytical Chemists and Consultants**

# STANDARD REFERENCE MATERIAL RECOVERY

## EPA 9060A m

| | | | |
|---|---|---|---|
| **Laboratory:** | Analytical Resources, LLC | **SDG:** | 22L0329 |
| **Client:** | Anchor QEA, LLC | **Project:** | AOC4 UR Phase 3 |
| **Matrix:** | Solid | **Laboratory ID:** | BKL0652-SRM1 |
| **Batch:** | BKL0652 | **Initial/Final:** | 0.2747 g / 0.2747 g |
| **Preparation:** | Plumb 1981 | **Analyzed:** | 01/01/2023 2:26 |
| **Standard ID:** | K011789 | **Expires:** | 12/24/2023 |
| **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 | 2.99 | 0.02 | 0.02 | | 100 | 80 - 120 |

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: EPA 9060A m**

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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-IT799A 22L0329-01 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 17:53 | | | * |
| LDW22-IT799B 22L0329-02 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 19:24 | | | * |
| LDW22-IT799C 22L0329-03 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 19:55 | | | * |
| LDW22-IT799D 22L0329-04 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 20:25 | | | * |
| LDW22-IT799E 22L0329-05 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 20:56 | | | * |
| LDW22-IT799F 22L0329-06 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 21:26 | | | * |
| LDW22-SC788B 22L0329-07 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 21:57 | | | * |
| LDW22-SC788C 22L0329-08 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 22:27 | | | * |
| LDW22-SC788D 22L0329-09 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 23:59 | | | * |
| LDW22-SC788E 22L0329-10 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 00:29 | | | * |
| LDW22-SC788E-FD 22L0329-11 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 01:00 | | | * |
| LDW22-SC788F 22L0329-12 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 01:30 | | | * |
| LDW22-SC788G 22L0329-13 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 02:01 | | | * |
| LDW22-SC788H 22L0329-14 | 12/13/22 10:28 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 02:32 | | | * |
| LDW22-IT791A 22L0329-15 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 03:02 | | | * |
| LDW22-IT791B 22L0329-16 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 03:32 | | | * |
| LDW22-IT791C 22L0329-17 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 04:03 | | | * |
| LDW22-IT791D 22L0329-18 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 04:34 | | | * |
| LDW22-IT791E 22L0329-19 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 06:05 | | | * |
| LDW22-IT791F 22L0329-20 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/31/22 06:36 | | | * |
| LDW22-IT791G 22L0329-21 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 09:08 | | | * |
| LDW22-SC781B 22L0329-22 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 10:40 | | | * |

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: EPA 9060A m**

Laboratory: Analytical Resources, LLC SDG: 22L0329

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-SC781C 22L0329-23 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 12:12 | | | * |
| LDW22-SC781D 22L0329-24 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 12:42 | | | * |
| LDW22-SC781E 22L0329-25 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 13:13 | | | * |
| LDW22-SC781F 22L0329-26 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 13:43 | | | * |
| LDW22-SC781G 22L0329-27 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 14:14 | | | * |
| LDW22-SC781H 22L0329-28 | 12/13/22 11:00 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 14:44 | | | * |
| LDW22-SC765B 22L0329-29 | 12/13/22 12:14 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 15:15 | | | * |
| LDW22-SC765C 22L0329-30 | 12/13/22 12:14 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 18:18 | | | * |
| LDW22-SC765D 22L0329-31 | 12/13/22 12:14 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 18:48 | | | * |
| LDW22-SC765E 22L0329-32 | 12/13/22 12:14 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 19:19 | | | * |
| LDW22-SC757A 22L0329-33 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 19:49 | | | * |
| LDW22-SC757B 22L0329-34 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 20:20 | | | * |
| LDW22-SC757C 22L0329-35 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 20:50 | | | * |
| LDW22-SC757D 22L0329-36 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 21:20 | | | * |
| LDW22-SC757E 22L0329-37 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 21:51 | | | * |
| LDW22-SC757F 22L0329-38 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 22:22 | | | * |
| LDW22-SC757G 22L0329-39 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 12/31/22 22:52 | | | * |
| LDW22-SC757H 22L0329-40 | 12/13/22 13:36 | 12/13/22 16:54 | 12/29/22 12:30 | 15 | 14 | 01/01/23 00:24 | | | * |
| LDW22-SC754A 22L0329-41 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 02:57 | | | * |
| LDW22-SC754B 22L0329-42 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 04:28 | | | * |
| LDW22-SC754C 22L0329-43 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 04:59 | | | * |
| LDW22-SC754D 22L0329-44 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 06:31 | | | * |

Analytical Resources, LLC
Analytical Chemists and Consultants

# HOLDING TIME SUMMARY

**Analysis: EPA 9060A m**

Laboratory: Analytical Resources, LLC SDG: 22L0329

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-SC754E 22L0329-45 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 07:01 | | | * |
| LDW22-SC754F 22L0329-46 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 07:32 | | | * |
| LDW22-SC754G 22L0329-47 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 08:02 | | | * |
| LDW22-SC754H 22L0329-48 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 08:33 | | | * |
| Duplicate BKL0650-DUP1 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 18:24 | | | * |
| Duplicate BKL0650-DUP2 | 12/13/22 08:13 | 12/13/22 16:54 | 01/04/23 10:39 | 22 | 14 | 01/04/23 10:39 | | | * |
| Matrix Spike BKL0650-MS1 | 12/13/22 08:13 | 12/13/22 16:54 | 12/29/22 10:40 | 16 | 14 | 12/30/22 18:54 | | | * |
| Duplicate BKL0651-DUP1 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 09:39 | | | * |
| Matrix Spike BKL0651-MS1 | 12/13/22 09:50 | 12/13/22 16:54 | 12/29/22 12:30 | 16 | 14 | 12/31/22 10:09 | | | * |
| Duplicate BKL0652-DUP1 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 03:27 | | | * |
| Matrix Spike BKL0652-MS1 | 12/13/22 15:28 | 12/13/22 16:54 | 12/30/22 08:30 | 16 | 14 | 01/01/23 03:58 | | | * |

* Indicates hold time exceedance.

Analytical Resources, LLC
Analytical Chemists and Consultants

# METHOD DETECTION AND REPORTING LIMITS

## EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 22L0329
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

Robert L. Watters, Jr., Director
Office of Reference Materials

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

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 Internet at http://www.nist.gov/srm.

| Bill to: 68455 | Ship to: 68456 |
|---|---|
| DAVE MITCHELL<br>ANALYTICAL RESOURCES INC<br>4611 S 134TH PLACE<br>SUITE 100<br>TUKWILA, WA 98168-3240<br>1 (206)695-6205 | DAVE MITCHELL<br>ANALYTICAL RESOURCES INC<br>4611 S 134TH PLACE<br>SUITE 100<br>TUKWILA, WA 98168-3240<br>1 (206)695-6205 |

22L0329 CLPLIKE (Rev1) - Page 19 of 1982

| | | | | | |
|---|---|---|---|---|---|
| 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

| | |
|---|---|
| Picked by | |
| Packed by | |
| # of pieces | |
| Weight | |

1700101

**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:** $(C_6H_{10}O_5)n$<br>**CAS #:** 9004-34-6<br>**Physical Description:** White Powder | **Formula Weight:** N/A<br>**Storage:** 15 - 30°C |

| Test | Specification | Result |
|---|---|---|
| Identity Test | Passes | Passes |
| Purity | 97.0 - 102.0% | 97.0 - 102.0% |
| Moisture | <5.0% | 3.4% |
| Particle Size/Mesh<br>+60 mesh<br>+200 mesh | Wt %<br><8%<br>>45% | <br><1%<br>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

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E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

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- 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*
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Quality Control Manager

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# TOTAL SOLIDS BENCHSHEET

**Method: PSEP 1986**

**(dry at 103-105 C)**

**Instrumentation**

| | |
|---|---|
| **Batch:** | BKL0638 |
| **Date:** | 12/27/2022 15:13 |
| **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:** | 12/28/2022 14:51 | 109 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp: 109 |
| **Date/time out:** | 12/29/2022 9:13 | 108 | TS = (Final Dry Wt X 100)/ (sample & dish -dish tare) | End Temp: 108 |
| **Elapsed hrs:** | 18.4 | | | |

| SAMPLE ID | Dish Tare Wt (g) | Dish with Sample (g) | Dry Wt (g) | Solids Wt (g) | TS (%) | Sample Decanted |
|---|---|---|---|---|---|---|
| 22L0329-01 | 0.8100 | 11.7500 | 9.7100 | 8.90 | **81.35%** | No |
| 22L0329-02 | 0.8100 | 11.2000 | 9.3300 | 8.52 | **82.00%** | No |
| 22L0329-03 | 0.8000 | 11.7400 | 9.0800 | 8.28 | **75.69%** | No |
| 22L0329-04 | 0.7900 | 11.3700 | 8.4900 | 7.70 | **72.78%** | No |
| 22L0329-05 | 0.7900 | 11.9000 | 9.1200 | 8.33 | **74.98%** | No |
| 22L0329-06 | 0.8000 | 12.2700 | 8.8700 | 8.07 | **70.36%** | Yes |
| 22L0329-07 | 0.8100 | 11.0100 | 6.6200 | 5.81 | **56.96%** | Yes |
| 22L0329-08 | 0.8000 | 11.3200 | 6.9600 | 6.16 | **58.56%** | Yes |
| 22L0329-09 | 0.8200 | 11.3000 | 6.6800 | 5.86 | **55.92%** | Yes |
| 22L0329-10 | 0.8000 | 12.0700 | 6.9700 | 6.17 | **54.75%** | Yes |
| 22L0329-11 | 0.8000 | 11.3600 | 6.6000 | 5.80 | **54.92%** | Yes |
| 22L0329-12 | 0.8000 | 11.9000 | 7.4300 | 6.63 | **59.73%** | Yes |
| 22L0329-13 | 0.8000 | 12.5200 | 7.7500 | 6.95 | **59.30%** | No |
| 22L0329-14 | 0.8000 | 11.8700 | 7.5300 | 6.73 | **60.79%** | No |
| 22L0329-15 | 0.8000 | 11.2200 | 9.2300 | 8.43 | **80.90%** | No |
| 22L0329-16 | 0.7900 | 11.8200 | 10.6600 | 9.87 | **89.48%** | No |
| 22L0329-17 | 0.8100 | 11.5400 | 10.1100 | 9.30 | **86.67%** | No |
| 22L0329-18 | 0.8100 | 12.0300 | 9.8200 | 9.01 | **80.30%** | No |
| 22L0329-19 | 0.8100 | 11.1800 | 8.8100 | 8.00 | **77.15%** | No |
| 22L0329-20 | 0.8000 | 12.0200 | 9.4100 | 8.61 | **76.74%** | No |

| TOTAL SOLIDS BENCHSHEET | Batch: | BKL0638 |
|---|---|---|
| Method: PSEP 1986 | Date: | 12/27/2022 15:13 |
| (dry at 103-105 C) | Analyst: | CR |
| Instrumentation | Drying Oven: | 015 |
| | Analytical Balance: | B139298002 |

| Batch drying time | | | Oven Temp, C | TS (%) calculated as: | Oven Temps, °C | |
|---|---|---|---|---|---|---|
| Record times as mm/dd/yy hh:mm | | | | | | |
| Date/time in oven: | 12/28/22 | 14:51 | 109 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp: | 109 |
| Date/time out: | 12/29/22 | 9:13 | 108 | TS = (Final Dry Wt X 100)/ (sample & dish -dish tare) | End Temp: | 108 |
| Elapsed hrs: | 0.0 | | | | | |

| SAMPLE ID | Dish Tare Wt (g) | Dish with Sample (g) | Dry Wt (g) | Solids Wt (g) | TS (%) | Sample Decanted |
|---|---|---|---|---|---|---|
| 22L0329-01 B | 0.81 | 11.75 | 9.71 | | | No |
| 22L0329-02 B | 0.81 | 11.20 | 9.33 | | | No |
| 22L0329-03 A | 0.80 | 11.74 | 9.08 | | | No |
| 22L0329-04 A | 0.79 | 11.37 | 8.49 | | | No |
| 22L0329-05 A | 0.79 | 11.90 | 9.12 | | | No |
| 22L0329-06 B | 0.80 | 12.27 | 8.87 | | | ~~No~~ yes |
| 22L0329-07 A | 0.81 | 11.01 | 6.62 | | | ~~No~~ yes |
| 22L0329-08 A | 0.80 | 11.32 | 6.96 | | | ~~No~~ yes |
| 22L0329-09 B | 0.82 | 11.30 | 6.68 | | | ~~No~~ yes |
| 22L0329-10 A | 0.80 | 12.07 | 6.97 | | | ~~No~~ yes |
| 22L0329-11 B | 0.80 | 11.36 | 6.68 | | | ~~No~~ yes |
| 22L0329-12 | 0.80 | 11.90 | 7.43 | | | ~~No~~ yes |
| 22L0329-13 | 0.80 | 12.52 | 7.75 | | | No |
| 22L0329-14 | 0.80 | 11.87 | 7.53 | | | No |
| 22L0329-15 | 0.80 | 11.22 | 9.23 | | | No |
| 22L0329-16 | 0.79 | 11.82 | 10.66 | | | No |
| 22L0329-17 | 0.81 | 11.54 | 10.4 | | | No |
| 22L0329-18 | 0.81 | 12.03 | 9.92 | | | No |
| 22L0329-19 | 0.81 | 11.18 | 8.91 | | | No |
| 22L0329-20 B | 0.80 | 12.02 | 9.41 | | | No |

T/S + Solids
no copies

| TOTAL SOLIDS BENCHSHEET | | |
|---|---|---|
| Method: PSEP 1986 | Batch: | BKL0640 |
| (dry at 103-105 C) | Date: | 12/27/2022 15:16 |
| | Analyst: | CR |
| Instrumentation | 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: | 12/29/2022 15:22 | 111 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp: | 111 |
| Date/time out: | 12/30/2022 9:25 | 98 | TS = (Final Dry Wt X 100)/ (sample & dish -dish tare) | End Temp: | 98 |
| Elapsed hrs: | 18.0 | | | | |

| SAMPLE ID | Dish Tare Wt (g) | Dish with Sample (g) | Dry Wt (g) | Solids Wt (g) | TS (%) | Sample Decanted |
|---|---|---|---|---|---|---|
| 22L0329-21 | 0.8000 | 11.5700 | 8.7200 | 7.92 | **73.54%** | Yes |
| 22L0329-22 | 0.8000 | 11.7700 | 7.5700 | 6.77 | **61.71%** | Yes |
| 22L0329-23 | 0.8000 | 11.7500 | 7.2700 | 6.47 | **59.09%** | Yes |
| 22L0329-24 | 0.7900 | 11.9300 | 7.5600 | 6.77 | **60.77%** | No |
| 22L0329-25 | 0.7900 | 11.3400 | 7.1800 | 6.39 | **60.57%** | Yes |
| 22L0329-26 | 0.8000 | 12.4500 | 7.4600 | 6.66 | **57.17%** | No |
| 22L0329-27 | 0.7900 | 11.3300 | 6.9800 | 6.19 | **58.73%** | No |
| 22L0329-28 | 0.8000 | 11.9600 | 7.4700 | 6.67 | **59.77%** | No |
| 22L0329-29 | 0.7900 | 11.9300 | 10.0300 | 9.24 | **82.94%** | Yes |
| 22L0329-30 | 0.8200 | 11.1700 | 6.5500 | 5.73 | **55.36%** | Yes |
| 22L0329-31 | 0.8000 | 11.4500 | 7.7300 | 6.93 | **65.07%** | Yes |
| 22L0329-32 | 0.8000 | 11.4800 | 9.0700 | 8.27 | **77.43%** | Yes |
| 22L0329-33 | 0.7900 | 11.7400 | 8.5200 | 7.73 | **70.59%** | Yes |
| 22L0329-34 | 0.8100 | 11.8800 | 8.8500 | 8.04 | **72.63%** | Yes |
| 22L0329-35 | 0.8100 | 11.9700 | 9.6500 | 8.84 | **79.21%** | No |
| 22L0329-36 | 0.8100 | 11.8100 | 9.8400 | 9.03 | **82.09%** | No |
| 22L0329-37 | 0.8000 | 11.6500 | 9.6100 | 8.81 | **81.20%** | No |
| 22L0329-38 | 0.8000 | 11.5000 | 10.1300 | 9.33 | **87.20%** | No |
| 22L0329-39 | 0.8000 | 11.3100 | 9.5000 | 8.70 | **82.78%** | No |
| 22L0329-40 | 0.8100 | 11.3000 | 9.4600 | 8.65 | **82.46%** | No |

| TOTAL SOLIDS BENCHSHEET | | |
|---|---|---|
| Method: PSEP 1986 | Batch: | BKL0640 |
| (dry at 103-105 C) | Date: | 12/27/2022 15:16 |
| | Analyst: | CR |
| **Instrumentation** | Drying Oven: | 015 |
| | 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: | 12/29/22 15:22 | 111 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp: 111 |
| Date/time out: | 12/30/22 09:25 | 98 | TS = (Final Dry Wt X 100)/ (sample & dish -dish tare) | End Temp: 98 |
| Elapsed hrs: | 0.0 | | | |

| SAMPLE ID | Dish Tare Wt (g) | Dish with Sample (g) | Dry Wt (g) | Solids Wt (g) | TS (%) | Sample Decanted |
|---|---|---|---|---|---|---|
| 22L0329-21 B | 0.80 | 11.57 | 8.72 | | | ~~No~~ yes |
| 22L0329-22 | 0.80 | 11.77 | 7.57 | | | ~~No~~ yes |
| 22L0329-23 | 0.80 | 11.75 | 7.27 | | | ~~No~~ yes |
| 22L0329-24 | 0.79 | 11.93 | 7.56 | | | No |
| 22L0329-25 | 0.79 | 11.34 | 7.18 | | | ~~No~~ yes |
| 22L0329-26 | 0.80 | 12.45 | 7.46 | | | No |
| 22L0329-27 | 0.79 | 11.33 | 6.98 | | | No |
| 22L0329-28 | 0.80 | 11.96 | 7.47 | | | No |
| 22L0329-29 | 0.79 | 11.93 | 10.03 | | | ~~No~~ yes |
| 22L0329-30 | 0.82 | 11.17 | 6.55 | | | ~~No~~ yes |
| 22L0329-31 | 0.80 | 11.45 | 7.73 | | | ~~No~~ yes |
| 22L0329-32 | 0.80 | 11.48 | 9.07 | | | ~~No~~ yes |
| 22L0329-33 | 0.79 | 11.74 | 8.52 | | | ~~No~~ yes |
| 22L0329-34 | 0.81 | 11.88 | 8.95 | | | ~~No~~ yes |
| 22L0329-35 | 0.81 | 11.97 | 9.65 | | | No |
| 22L0329-36 | 0.81 | 11.81 | 9.84 | | | No |
| 22L0329-37 | 0.80 | 11.65 | 9.61 | | | No |
| 22L0329-38 | 0.80 | 11.50 | 10.13 | | | No |
| 22L0329-39 | 0.80 | 11.31 | 9.50 | | | No |
| 22L0329-40 B | 0.81 | 11.50 | 9.46 | | | No |

T/S + Screen
No copies

# TOTAL SOLIDS BENCHSHEET

**Method: PSEP 1986**

**(dry at 103-105 C)**

| | |
|---|---|
| **Batch:** | BKL0642 |
| **Date:** | 12/27/2022 15:20 |
| **Analyst:** | CR |
| **Drying Oven:** | 15 |
| **Analytical Balance:** | B139298002 |

**Instrumentation**

| Batch drying time | | | | |
|---|---|---|---|---|
| Record times as mm/dd/yy hh:mm | | Oven Temp, C | TS (%) calculated as: | Oven Temps, °C |
| Date/time in oven: | 12/29/2022 17:04 | 108 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp: 108 |
| Date/time out: | 12/30/2022 9:24 | 98 | TS = (Final Dry Wt X 100)/ (sample & dish -dish tare) | End Temp: 98 |
| Elapsed hrs: | 16.3 | | | |

| SAMPLE ID | Dish Tare Wt (g) | Dish with Sample (g) | Dry Wt (g) | Solids Wt (g) | TS (%) | Sample Decanted |
|---|---|---|---|---|---|---|
| 22L0329-41 | 0.8100 | 11.3100 | 8.2000 | 7.39 | **70.38%** | Yes |
| 22L0329-42 | 0.8000 | 11.3100 | 7.8200 | 7.02 | **66.79%** | Yes |
| 22L0329-43 | 0.8000 | 11.4800 | 8.3300 | 7.53 | **70.51%** | Yes |
| 22L0329-44 | 0.7700 | 11.7700 | 8.9000 | 8.13 | **73.91%** | Yes |
| 22L0329-45 | 0.8100 | 11.5400 | 8.6200 | 7.81 | **72.79%** | No |
| 22L0329-46 | 0.8100 | 11.5800 | 8.6900 | 7.88 | **73.17%** | Yes |
| 22L0329-47 | 0.8100 | 11.9600 | 9.0000 | 8.19 | **73.45%** | Yes |
| 22L0329-48 | 0.8100 | 11.8900 | 8.2500 | 7.44 | **67.15%** | Yes |

| TOTAL SOLIDS BENCHSHEET | | |
|---|---|---|
| Method: PSEP 1986 | Batch: | BKL0642 |
| (dry at 103-105 C) | Date: | 12/27/2022 15:20 |
| | Analyst: | CR |
| **Instrumentation** | Drying Oven: | 015 |
| | 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: | 12/29/22 | 17:04 | 108 | Final dry wt (g) = (Dry Wt - Tare Wt) | Start Temp: 108 |
| Date/time out: | 12/30/22 | 09:24 | 098 | TS = (Final Dry Wt X 100)/ (sample & dish -dish tare) | End Temp: 098 |
| Elapsed hrs: | 0.0 | | | | |

| SAMPLE ID | Dish Tare Wt (g) | Dish with Sample (g) | Dry Wt (g) | Solids Wt (g) | TS (%) | Sample Decanted |
|---|---|---|---|---|---|---|
| 22L0329-41 B | 0.81 | 11.31 | 8.20 | | | ~~No~~ yes |
| 22L0329-42 | 0.80 | 11.31 | 7.82 | | | ~~No~~ yes |
| 22L0329-43 | 0.80 | 11.48 | 8.33 | | | ~~No~~ yes |
| 22L0329-44 | 0.77 | 11.77 | 8.90 | | | ~~No~~ yes |
| 22L0329-45 | 0.81 | 11.54 | 8.62 | | | No |
| 22L0329-46 | 0.81 | 11.58 | 8.69 | | | ~~No~~ yes |
| 22L0329-47 | 0.81 | 11.96 | 9.20 | | | ~~No~~ yes |
| 22L0329-48 B | 0.81 | 11.89 | 8.25 | | | ~~No~~ yes |

T/S + Solids
No Lipids