# LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

# ADMINISTRATIVE RECORD

**Volume 24**

**2020**

**Bate Stamp Numbers**
**00989850 – 00991797**

**Prepared for**

**Department of the Army**
**Longhorn Army Ammunition Plant**

**1976–2020**

***LONGHORN ARMY AMMUNITION PLANT***
***KARNACK, TEXAS***
**ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX**

VOLUME 24

2020

A. Title: (cont'd) Report – Level IV DOD to Quarterly Evaluation Report, 3rd Quarter (April-September) 2020, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, December 2020
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers
Date: December 3, 2020
Bate Stamp: 00989850 – 00991797

ALS Group Houston

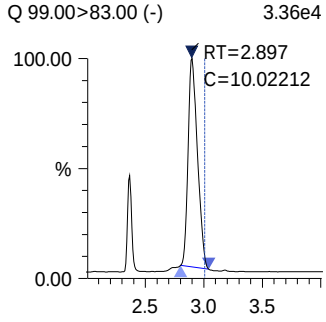
# PERCHLORATE7

Date acquired: 7/24/2020 1:59:53 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_020.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 1:59:53 PM | 181792 | 10.02212 | 20200724_020 | 2.897 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 1:59:53 PM | 149874 | 1.00000 | 20200724_020 | 2.897 | 25.0000 | 1.0000 | 4 |

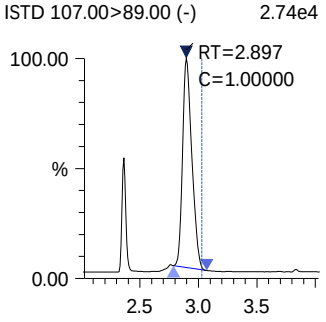
## Perchlorate

Conc 10.02212
Area 181792




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 149874



ALS Group Houston

# EQ2000302-04X10

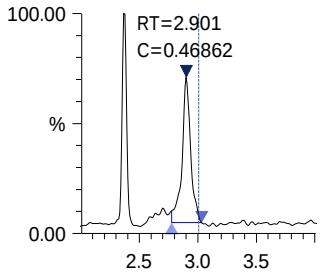
Date acquired: 7/24/2020 2:07:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_021.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-04X10 | 7/24/2020 2:07:48 PM | 4582 | 0.46862 | 20200724_021 | 2.901 | 25.0000 | 1.0000 | 16 |
| Sodium Perchlorate-18O4_IS | EQ2000302-04X10 | 7/24/2020 2:07:48 PM | 80779 | 1.00000 | 20200724_021 | 2.897 | 25.0000 | 1.0000 | 16 |

## Perchlorate

Conc 0.46862
Area 4582

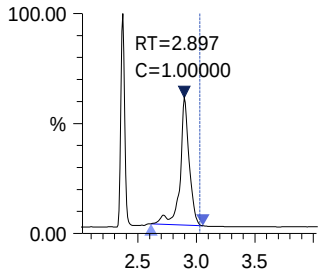
Q 99.00>83.00 (-) 1.33e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 80779

ISTD 107.00>89.00 (-) 2.49e4



ALS Group Houston

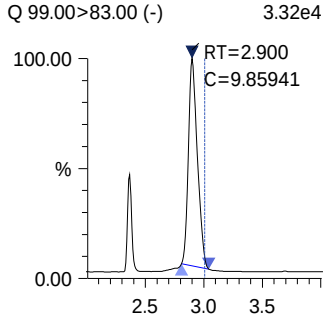
# PERCHLORATE7

Date acquired: 7/24/2020 3:11:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_029.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 3:11:02 PM | 170004 | 9.85941 | 20200724_029 | 2.900 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 3:11:02 PM | 142468 | 1.00000 | 20200724_029 | 2.899 | 25.0000 | 1.0000 | 4 |

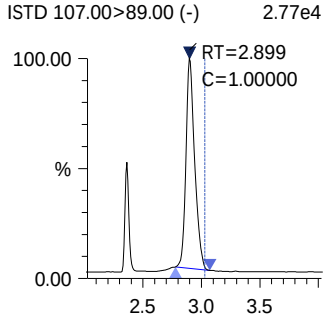
## Perchlorate

Conc 9.85941
Area 170004




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 142468



ALS Group Houston

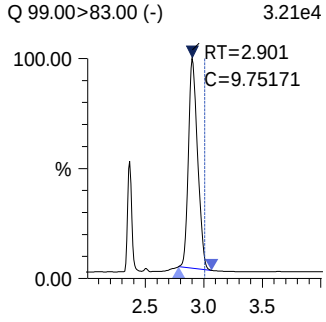
# PERCHLORATE7

Date acquired: 7/24/2020 3:37:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_032.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 3:37:07 PM | 169350 | 9.75171 | 20200724_032 | 2.901 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 3:37:07 PM | 143487 | 1.00000 | 20200724_032 | 2.899 | 25.0000 | 1.0000 | 4 |

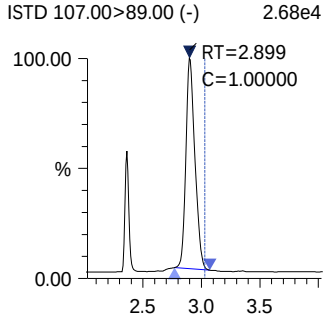
## Perchlorate

Conc 9.75171
Area 169350




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143487



ALS Group Houston

# EQ2000302-05X10

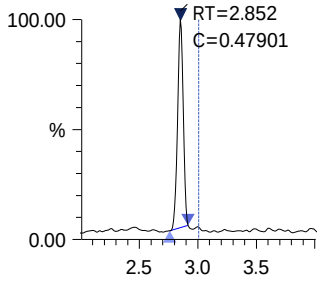
Date acquired: 7/24/2020 3:45:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_033.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-05X10 | 7/24/2020 3:45:36 PM | 7062 | 0.47901 | 20200724_033 | 2.852 | 25.0000 | 1.0000 | 17 |
| Sodium Perchlorate-18O4_IS | EQ2000302-05X10 | 7/24/2020 3:45:36 PM | 121804 | 1.00000 | 20200724_033 | 2.850 | 25.0000 | 1.0000 | 17 |

## Perchlorate

Conc 0.47901
Area 7062

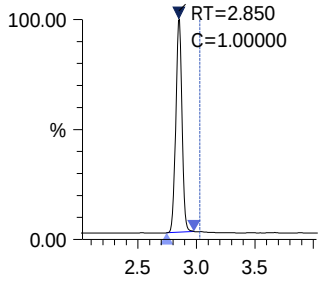
Q 99.00>83.00 (-) 2.13e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 121804

ISTD 107.00>89.00 (-) 3.33e4



ALS Group Houston

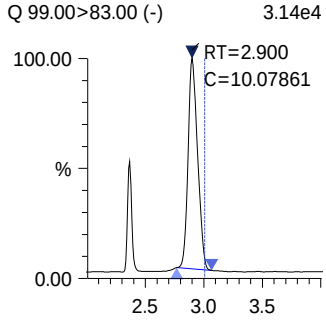
# PERCHLORATE7

Date acquired: 7/24/2020 3:53:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_034.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 3:53:29 PM | 173301 | 10.07861 | 20200724_034 | 2.900 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 3:53:29 PM | 142073 | 1.00000 | 20200724_034 | 2.899 | 25.0000 | 1.0000 | 4 |

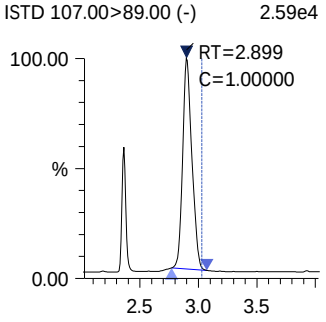
## Perchlorate

Conc 10.07861
Area 173301




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 142073



# HS20070621 - ME - ICP_W_DOD

ALS WO# HS20070621

**ALS Houston, US** Date: 31-Jul-20

## FORM 12 - PREPARATION LOG

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621
Start Date: 27-Jul-2020 14:30 End Date: 27-Jul-2020 18:30

Batch ID: 155817
Prep Code: 3010A
Method: SW3010A
Technician:

| SampID | ClientID | Matrix | Init Wt | Init Vol | FinalVol (mL) | PrepFac |
|---|---|---|---|---|---|---|
| HS20070621-01 | LH18/24-SP140_071420 | Water | | 10 | 10 | 1 |
| HS20070621-01MS | | | | 10 | 10 | 1 |
| HS20070621-01MSD | | | | 10 | 10 | 1 |
| HS20070621-01PDS | | | | 10 | 10 | 1 |
| HS20070621-01SD | | | | 10 | 10 | 1 |
| LCS-155817 | | | | 10 | 10 | 1 |
| MBLK-155817 | | | | 10 | 10 | 1 |

**ALS Houston, US**

Date: 31-Jul-20

## FORM 13 - ANALYSIS RUN LOG

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621
Start Date: 28-Jul-2020 End Date: 28-Jul-2020

Run ID:ICPMS06_365787
Instrument:ICPMS06
Method:

| Sample No. | D/F | Time | FileID | Analytes |
|---|---|---|---|---|
| ICPMS06_365787_Tune | 1 | 28-Jul-2020 00:00 | ICPMS06_365787_Tune_1 | |
| CAL BLK | 1 | 28-Jul-2020 11:27 | 013CALB.d_5677072 | AG SE |
| 2/10/200 | 1 | 28-Jul-2020 11:29 | 014CALS.d_5677073 | AG SE |
| 5/25/500 | 1 | 28-Jul-2020 11:31 | 015CALS.d_5677074 | AG SE |
| 10/50/100 | 1 | 28-Jul-2020 11:33 | 016CALS.d_5677075 | AG SE |
| 100/500/10K | 1 | 28-Jul-2020 11:35 | 017CALS.d_5677076 | AG SE |
| 200/1000/20K | 1 | 28-Jul-2020 11:37 | 018CALS.d_5677077 | AG SE |
| LLICV2 | 1 | 28-Jul-2020 11:42 | 021LCV2.d_5677080 | AG SE |
| LLICV5 | 1 | 28-Jul-2020 11:44 | 022LCV5.d_5677081 | AG SE |
| ICB | 1 | 28-Jul-2020 11:46 | 023_ICB.d_5677082 | AG SE |
| ICV | 1 | 28-Jul-2020 11:50 | 024_ICV.d_5677083 | AG SE |
| ICSA | 1 | 28-Jul-2020 11:58 | 026ICSA.d_5677085 | AG SE |
| ICSAB | 1 | 28-Jul-2020 12:00 | 027ICSB.d_5677086 | AG SE |
| CAL BLK | 1 | 28-Jul-2020 15:30 | 105CALB.d_5677087 | AG SE |
| 2/10/200 | 1 | 28-Jul-2020 15:32 | 106CALS.d_5677088 | AG SE |
| 5/25/500 | 1 | 28-Jul-2020 15:34 | 107CALS.d_5677089 | AG SE |
| 10/50/100 | 1 | 28-Jul-2020 15:36 | 108CALS.d_5677090 | AG SE |
| 100/500/10K | 1 | 28-Jul-2020 15:38 | 109CALS.d_5677091 | AG SE |
| 200/1000/20K | 1 | 28-Jul-2020 15:40 | 110CALS.d_5677092 | AG SE |
| ICV | 1 | 28-Jul-2020 15:43 | 112_ICV.d_5677094 | AG SE |
| LLICCV2 | 1 | 28-Jul-2020 15:45 | 113LCV2.d_5677095 | AG SE |
| LLICCV5 | 1 | 28-Jul-2020 15:47 | 114LCV5.d_5677096 | AG SE |
| ICCB 1 | 1 | 28-Jul-2020 15:49 | 115_ICB.d_5677097 | AG SE |
| CCV 1 | 1 | 28-Jul-2020 15:59 | 117_CCV.d_5677309 | AG SE |
| CCB 2 | 1 | 28-Jul-2020 16:01 | 118_CCB.d_5677310 | AG SE |
| MBLK-155817 | 1 | 28-Jul-2020 16:05 | 119SMPL.d_5677311 | AG SE |
| LCS-155817 | 1 | 28-Jul-2020 16:07 | 120SMPL.d_5677312 | AG SE |
| LH18/24-SP140_071420 | 1 | 28-Jul-2020 16:08 | 121SMPL.d_5677313 | AG SE |
| LH18/24-SP140_071420SD | 5 | 28-Jul-2020 16:10 | 122SMPL.d_5677314 | AG SE |
| LH18/24-SP140_071420MS | 1 | 28-Jul-2020 16:12 | 123SMPL.d_5677315 | AG SE |
| LH18/24-SP140_071420MSD | 1 | 28-Jul-2020 16:14 | 124SMPL.d_5677316 | AG SE |
| LH18/24-SP140_071420PDS | 1 | 28-Jul-2020 16:16 | 125SMPL.d_5677317 | AG SE |
| CCV 2 | 1 | 28-Jul-2020 16:24 | 128_CCV.d_5677320 | AG SE |
| CCB 3 | 1 | 28-Jul-2020 16:26 | 129_CCB.d_5677321 | AG SE |
| CCV 3 | 1 | 28-Jul-2020 20:43 | 170_CCV.d_5677573 | AG SE |
| CCB 4 | 1 | 28-Jul-2020 20:45 | 171_CCB.d_5677574 | AG SE |
| LCS-155817 | 1 | 28-Jul-2020 20:47 | 172SMPL.d_5677575 | |
| CCV 4 | 1 | 28-Jul-2020 21:00 | 179_CCV.d_5677577 | AG SE |
| CCB 5 | 1 | 28-Jul-2020 21:02 | 180_CCB.d_5677578 | AG SE |

**ALS Houston, US** Date: 31-Jul-20

## Form 2 - Initial and Continuing Calibration Verification

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Run ID: ICPMS06_365787
Instrument: ICPMS06
Method: SW6020

| ICV | Date: 28-Jul-2020 11:50 | | Seq: 5677083 | ICV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Selenium | 100 | 96.984 | 97 | 90-110 | |
| Silver | 100 | 99.008 | 99 | 90-110 | |

| ICV | Date: 28-Jul-2020 15:43 | | Seq: 5677094 | ICV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Selenium | 100 | 96.453 | 97 | 90-110 | |
| Silver | 100 | 94.807 | 95 | 90-110 | |

| CCV1 | Date: 28-Jul-2020 15:59 | | Seq: 5677309 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Selenium | 100 | 95.414 | 95 | 90-110 | |
| Silver | 100 | 95.305 | 95 | 90-110 | |

| CCV2 | Date: 28-Jul-2020 16:24 | | Seq: 5677320 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Selenium | 100 | 99.201 | 99 | 90-110 | |
| Silver | 100 | 95.422 | 95 | 90-110 | |

| CCV3 | Date: 28-Jul-2020 20:43 | | Seq: 5677573 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Selenium | 100 | 102.632 | 103 | 90-110 | |
| Silver | 100 | 103.551 | 104 | 90-110 | |

| CCV4 | Date: 28-Jul-2020 21:00 | | Seq: 5677577 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Selenium | 100 | 103.492 | 103 | 90-110 | |
| Silver | 100 | 100.683 | 101 | 90-110 | |

**ALS Houston, US** Date: 31-Jul-20

## Form 3 - BLANKS

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Run ID: ICPMS06_365787
Instrument: ICPMS06
Method: SW6020

| ICB | Date: 28-Jul-2020 11:46 | | Seq: 5677082 | ICB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 5 | 1.1 | 5 | U | |
| Silver | 5 | 0.2 | 5 | U | |
| ICCB1 | Date: 28-Jul-2020 15:49 | | Seq: 5677097 | CCB | Units: ug/L |
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 5 | 1.1 | 5 | U | |
| Silver | 5 | 0.2 | 5 | U | |
| CCB2 | Date: 28-Jul-2020 16:01 | | Seq: 5677310 | CCB | Units: ug/L |
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |
| MBLK-155817 | Date: 28-Jul-2020 16:05 | | Seq: 5677311 | MBLK | Units: ug/L |
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 5 | 1.1 | 5 | U | |
| Silver | 5 | 0.2 | 5 | U | |
| CCB3 | Date: 28-Jul-2020 16:26 | | Seq: 5677321 | CCB | Units: ug/L |
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |
| CCB4 | Date: 28-Jul-2020 20:45 | | Seq: 5677574 | CCB | Units: ug/L |
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |
| CCB5 | Date: 28-Jul-2020 21:02 | | Seq: 5677578 | CCB | Units: ug/L |
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |

## Form 4 - ICP Interference Check Sample

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Run ID: ICPMS06_365787
Instrument: ICPMS06
Method: SW6020

| ICSA | Date: 28-Jul-2020 11:58 | Seq: 5677085 | ICSA | Units: ug/L |
|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | |
| Selenium | | 0.34 | 0 | |
| Silver | | 0.05 | 0 | |

| ICSAB | Date: 28-Jul-2020 12:00 | Seq: 5677086 | ICSAB | Units: ug/L |
|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | |
| Selenium | 100 | 110.8 | 111 | |
| Silver | 100 | 99.85 | 99.9 | |

**ALS Houston, US** Date: 31-Jul-20

## Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Date Analyzed: 28-Jul-2020 16:14
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Matrix Spike: HS20070621-01MS
Client Sample ID: LH18/24-SP140_071420

Analysis Method: SW6020

| Analyte | Sample Result | MS Result | Spike Amount | % Rec | MSD Result | Spike Amount | % Rec | % Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 5.000 | 49.79 | 50.00 | 98.4 | 47.05 | 50.00 | 92.9 | 80-120 | 5.67 | 20 |
| Silver | 5.000 | 45.92 | 50.00 | 91.8 | 43.09 | 50.00 | 86.1 | 85-116 | 6.35 | 20 |

**ALS Houston, US**

Date: 31-Jul-20

## Form 5B - Post Digest Sample Recovery

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Date Analyzed: 28-Jul-2020 16:16
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Lab Sample ID: HS20070621-01PDS
Client Sample ID: LH18/24-SP140_071420

Analysis Method: SW6020

| Analyte | Sample Result | PDS Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Selenium | 0 | 103.6 | 100 | 103 | 80-120 |
| Silver | 0 | 95 | 100 | 95 | 80-120 |

**ALS Houston, US** Date: 31-Jul-20

**Form 7 - Laboratory Control Sample**

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Date Analyzed: 28-Jul-2020 16:07
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Lab Sample ID: LCS-155817 Analysis Method: SW6020

| Analyte | Spike Amount | LCS Result | % Rec | % Rec Limits |
|---|---|---|---|---|
| Selenium | 50 | 48.14 | 96 | 80-120 |
| Silver | 50 | 44.43 | 89 | 85-116 |

**ALS Houston, US**

Date: 31-Jul-20

**Form 8 - ICP Serial Dilutions**

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Influent Samples
**WorkOrder:** HS20070621

Date Analyzed: 28-Jul-2020 16:10
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Lab Sample ID: HS20070621-01SD
Client Sample ID:LH18/24-SP140_071420

Analysis Method: SW6020

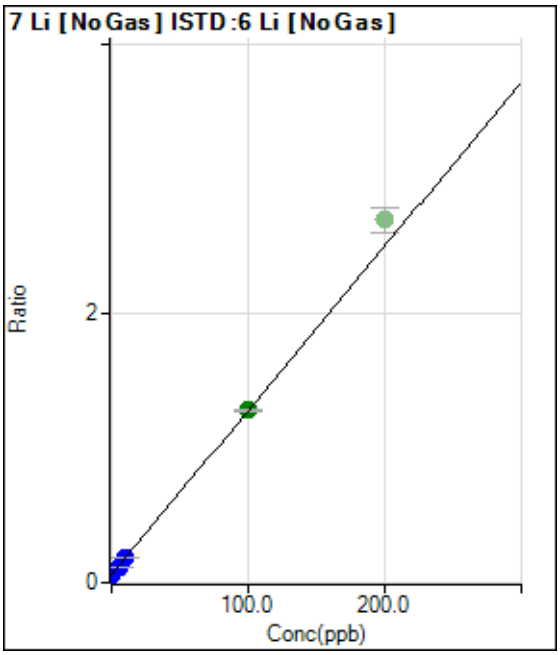
| Analyte | Sample Result | C | SD Result | C | RPD | Q |
|---|---|---|---|---|---|---|
| Selenium | 0 | U | 0 | U | 0 | |
| Silver | 0 | U | 0 | U | 0 | |

Calibration for 024_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 013CALB.d | CAL BLK | 7/28/2020 11:27:43 AM |
| 2 | 014CALS.d | 2/10/200 | 7/28/2020 11:29:37 AM |
| 3 | 015CALS.d | 5/25/500 | 7/28/2020 11:31:30 AM |
| 4 | 016CALS.d | 10/50/100 | 7/28/2020 11:33:23 AM |
| 5 | 017CALS.d | 100/500/10K | 7/28/2020 11:35:16 AM |
| 6 | 018CALS.d | 200/1000/20K | 7/28/2020 11:37:05 AM |

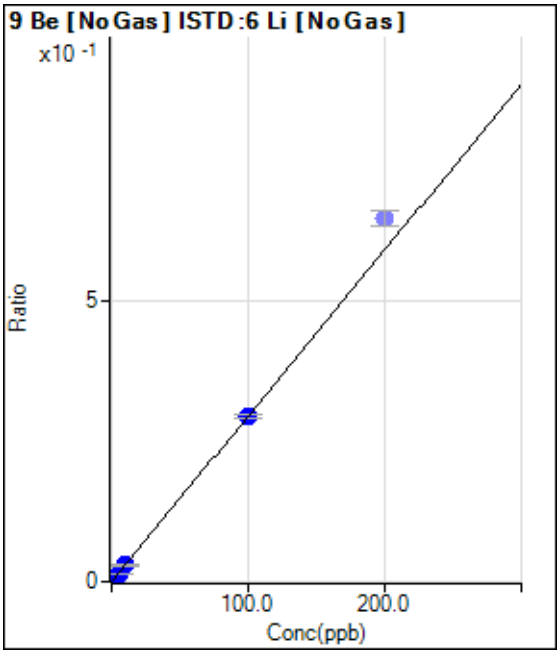
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 60887.35 | 0.0600 | P | 3.3 |
| 2 | ☐ | 2.000 | 1.971 | 85442.97 | 0.0840 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.693 | 120299.92 | 0.1172 | P | 2.4 |
| 4 | ☐ | 10.000 | 9.787 | 184783.31 | 0.1792 | P | 0.3 |
| 5 | ☐ | 100.000 | 100.037 | 1246034.12 | 1.2787 | A | 0.4 |
| 6 | ☑ | 200.000 | | 2500120.38 | 2.6929 | A | 7.2 |

y = 0.0122 * x + 0.0600
R = 1.0000
DL = 0.4848
BEC = 4.924

Weight: <None>
Min Conc: <None>

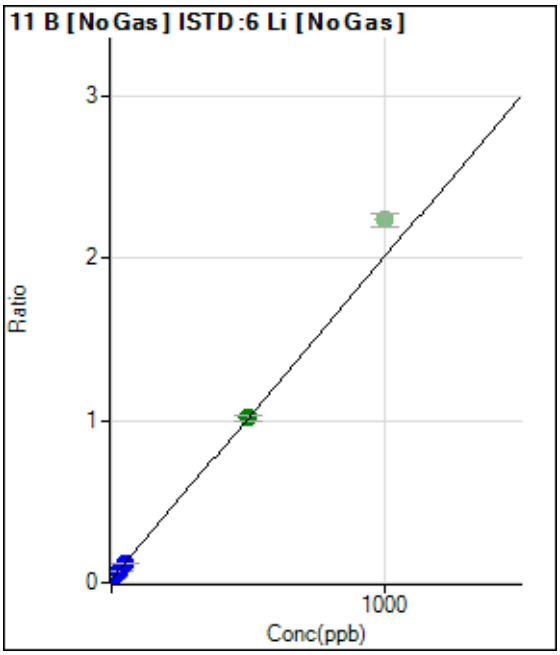



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 50.00 | 0.0000 | P | 21.3 |
| 2 | ☐ | 2.000 | 2.027 | 6148.06 | 0.0060 | P | 1.0 |
| 3 | ☐ | 5.000 | 5.060 | 15403.54 | 0.0150 | P | 4.6 |
| 4 | ☐ | 10.000 | 9.937 | 30336.30 | 0.0294 | P | 4.5 |
| 5 | ☐ | 100.000 | 100.003 | 288156.78 | 0.2958 | P | 2.3 |
| 6 | ☑ | 200.000 | | 601540.68 | 0.6474 | P | 4.1 |

y = 0.0030 * x + 4.9364E-005
R = 1.0000
DL = 0.01069
BEC = 0.01669

Weight: <None>
Min Conc: <None>

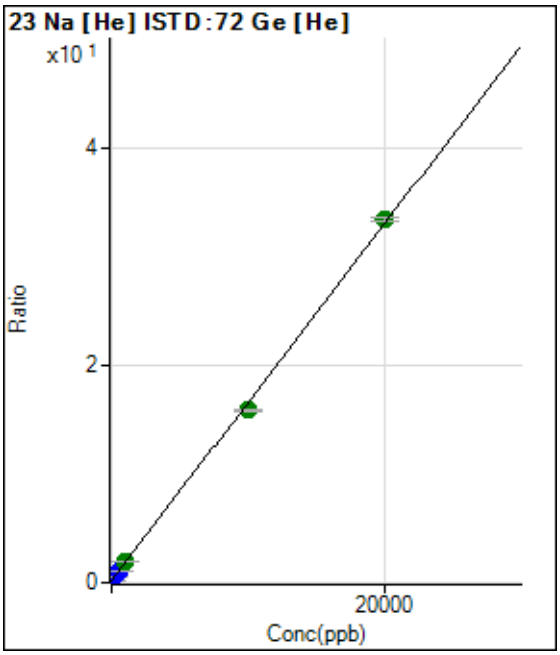
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22361.31 | 0.0220 | P | 2.1 |
| 2 | ☐ | 10.000 | 8.675 | 39901.80 | 0.0392 | P | 3.6 |
| 3 | ☐ | 25.000 | 23.842 | 71125.00 | 0.0694 | P | 6.3 |
| 4 | ☐ | 50.000 | 49.802 | 124612.82 | 0.1209 | P | 2.7 |
| 5 | ☐ | 500.000 | 500.104 | 988801.29 | 1.0150 | A | 3.8 |
| 6 | ☑ | 1000.000 | | 2077857.10 | 2.2358 | A | 3.9 |

y = 0.0020 * x + 0.0220
R = 1.0000
DL = 0.6856
BEC = 11.09

Weight: <None>
Min Conc: <None>

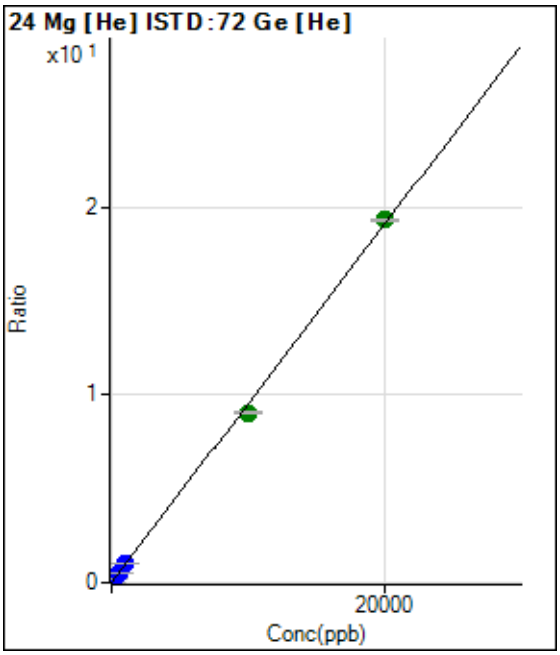



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 107088.46 | 0.1951 | P | 1.5 |
| 2 | ☐ | 200.000 | 204.438 | 290394.32 | 0.5308 | P | 0.4 |
| 3 | ☐ | 500.000 | 515.861 | 565672.41 | 1.0421 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1049.384 | 1035978.14 | 1.9182 | A | 4.3 |
| 5 | ☐ | 10000.00 | 9548.405 | 8454832.58 | 15.8732 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20222.88 | 17452547.66 | 33.4002 | A | 1.1 |

y = 0.0016 * x + 0.1951
R = 0.9996
DL = 5.293
BEC = 118.8

Weight: <None>
Min Conc: <None>

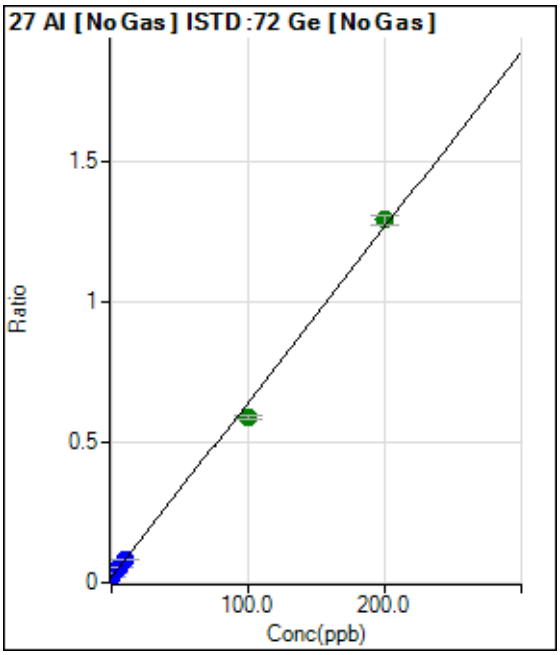
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 880.05 | 0.0016 | P | 6.4 |
| 2 | ☐ | 200.000 | 206.142 | 108552.84 | 0.1984 | P | 1.3 |
| 3 | ☐ | 500.000 | 514.423 | 267539.37 | 0.4928 | P | 0.2 |
| 4 | ☐ | 1000.000 | 1049.859 | 542202.09 | 1.0040 | P | 0.8 |
| 5 | ☐ | 10000.00 | 9488.678 | 4826217.95 | 9.0613 | A | 1.4 |
| 6 | ☐ | 20000.00 | 20252.74 | 10105680.48 | 19.3387 | A | 0.8 |

y = 9.5479E-004 * x + 0.0016
R = 0.9995
DL = 0.3222
BEC = 1.679

Weight: <None>
Min Conc: <None>

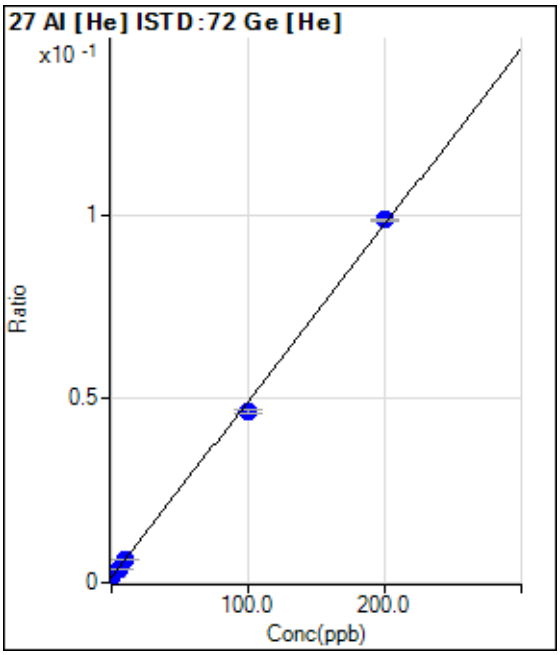



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33150.05 | 0.0188 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.262 | 57529.58 | 0.0329 | P | 2.4 |
| 3 | ☐ | 5.000 | 5.617 | 93219.08 | 0.0538 | P | 4.3 |
| 4 | ☐ | 10.000 | 10.504 | 148912.53 | 0.0844 | P | 1.9 |
| 5 | ☐ | 100.000 | 91.605 | 1005380.87 | 0.5909 | A | 2.6 |
| 6 | ☐ | 200.000 | 204.154 | 2098551.48 | 1.2938 | A | 2.4 |

y = 0.0062 * x + 0.0188
R = 0.9987
DL = 0.2526
BEC = 3.005

Weight: <None>
Min Conc: <None>

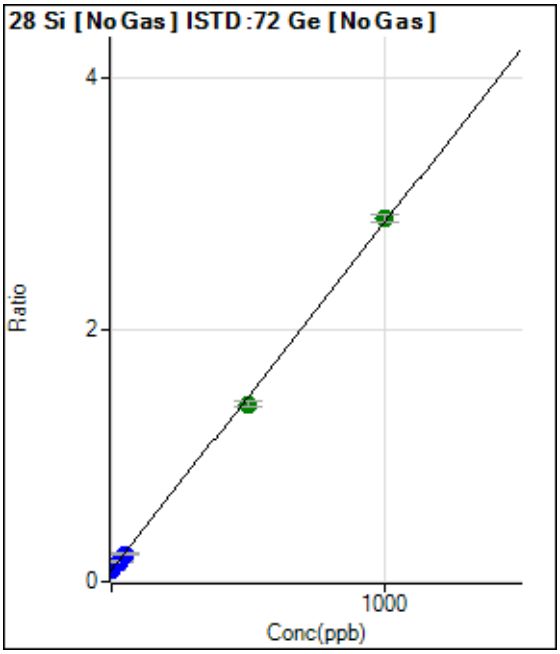
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 803.37 | 0.0015 | P | 17.1 |
| 2 | ☐ | 2.000 | 2.625 | 1490.11 | 0.0027 | P | 16.7 |
| 3 | ☐ | 5.000 | 4.756 | 2033.53 | 0.0037 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.331 | 3467.16 | 0.0064 | P | 0.7 |
| 5 | ☐ | 100.000 | 94.467 | 24929.39 | 0.0468 | P | 2.2 |
| 6 | ☐ | 200.000 | 202.750 | 51606.65 | 0.0988 | P | 0.9 |

y = 4.7990E-004 * x + 0.0015
R = 0.9994
DL = 1.566
BEC = 3.047

Weight: <None>
Min Conc: <None>

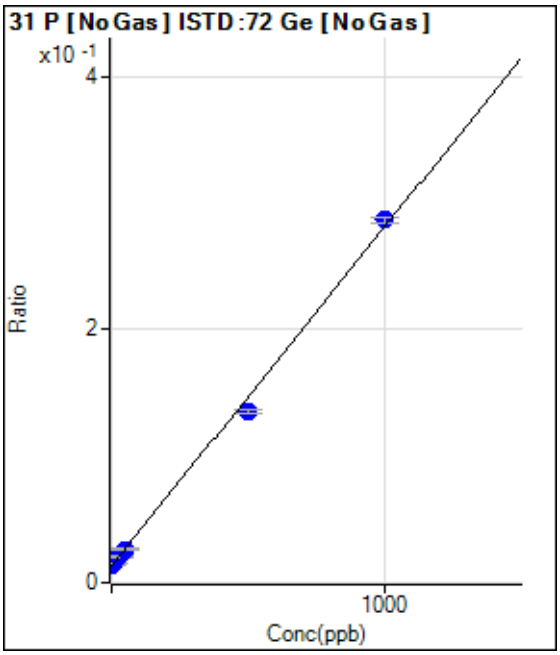



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 161313.86 | 0.0913 | P | 1.9 |
| 2 | ☐ | 10.000 | 9.709 | 206641.89 | 0.1182 | P | 3.4 |
| 3 | ☐ | 25.000 | 24.819 | 276872.83 | 0.1599 | P | 3.3 |
| 4 | ☐ | 50.000 | 46.956 | 390104.23 | 0.2211 | P | 2.4 |
| 5 | ☐ | 500.000 | 478.597 | 2404962.83 | 1.4134 | A | 2.8 |
| 6 | ☐ | 1000.000 | 1010.861 | 4677515.56 | 2.8837 | A | 2.0 |

y = 0.0028 * x + 0.0913
R = 0.9997
DL = 1.918
BEC = 33.07

Weight: <None>
Min Conc: <None>

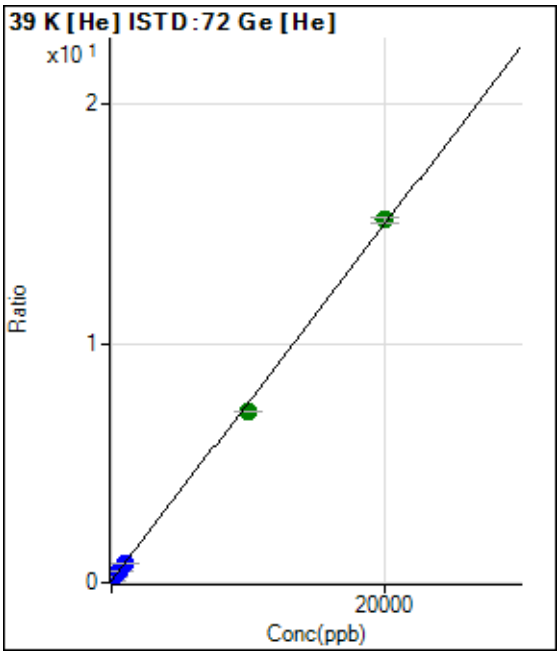
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23426.80 | 0.0133 | P | 4.2 |
| 2 | ☐ | 10.000 | 9.401 | 27617.93 | 0.0158 | P | 1.5 |
| 3 | ☐ | 25.000 | 27.451 | 35696.39 | 0.0206 | P | 5.0 |
| 4 | ☐ | 50.000 | 49.698 | 46902.55 | 0.0266 | P | 2.7 |
| 5 | ☐ | 500.000 | 457.138 | 230858.25 | 0.1357 | P | 2.0 |
| 6 | ☐ | 1000.000 | 1021.391 | 465091.24 | 0.2867 | P | 1.7 |

y = 2.6774E-004 * x + 0.0133
R = 0.9987
DL = 6.262
BEC = 49.57

Weight: <None>
Min Conc: <None>

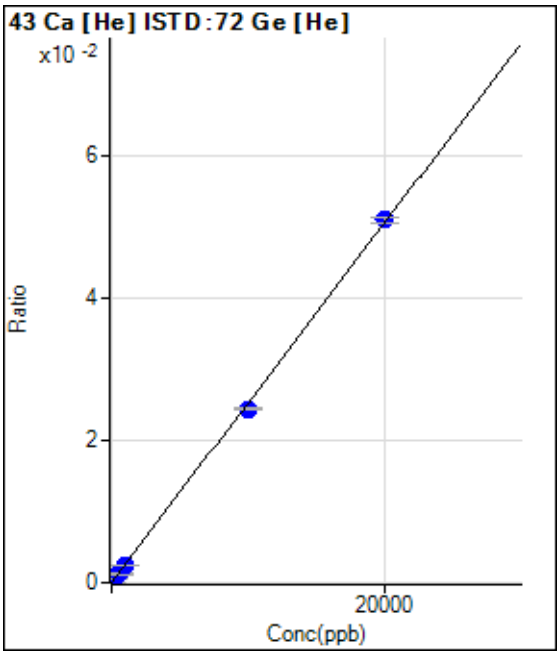



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 45017.02 | 0.0820 | P | 1.6 |
| 2 | ☐ | 200.000 | 199.436 | 126196.70 | 0.2307 | P | 1.4 |
| 3 | ☐ | 500.000 | 514.737 | 252824.05 | 0.4657 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1016.193 | 453364.21 | 0.8395 | P | 0.4 |
| 5 | ☐ | 10000.00 | 9489.440 | 3811441.92 | 7.1554 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20254.10 | 7932235.71 | 15.1794 | A | 1.7 |

y = 7.4540E-004 * x + 0.0820
R = 0.9995
DL = 5.159
BEC = 110

Weight: <None>
Min Conc: <None>

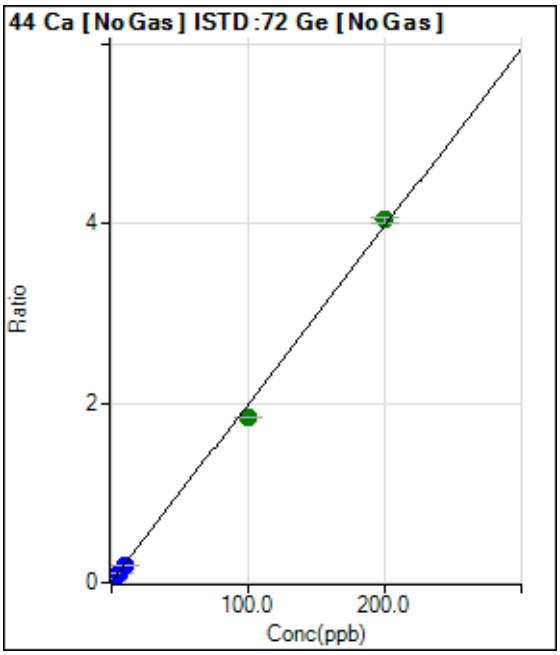
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 99.4 |
| 2 | ☐ | 200.000 | 216.838 | 323.35 | 0.0006 | P | 21.1 |
| 3 | ☐ | 500.000 | 484.408 | 690.03 | 0.0013 | P | 19.0 |
| 4 | ☐ | 1000.000 | 961.313 | 1336.75 | 0.0025 | P | 4.7 |
| 5 | ☐ | 10000.00 | 9654.755 | 13039.72 | 0.0245 | P | 1.6 |
| 6 | ☐ | 20000.00 | 20174.77 | 26702.96 | 0.0511 | P | 1.5 |

y = 2.5310E-006 * x + 4.2653E-005
R = 0.9998
DL = 50.27
BEC = 16.85

Weight: <None>
Min Conc: <None>

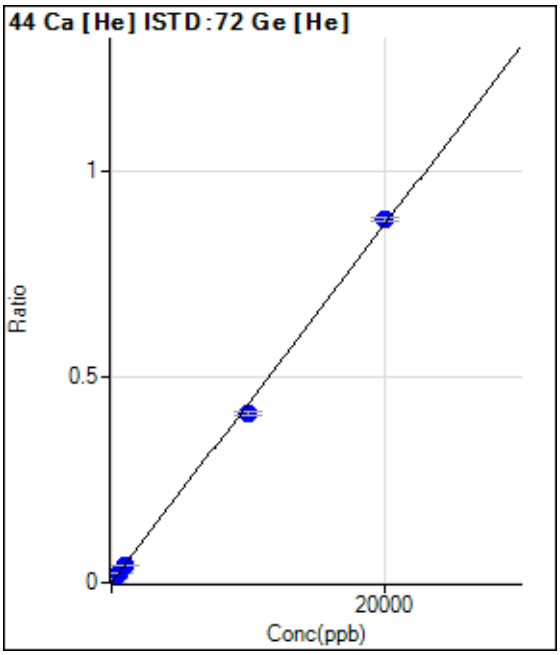



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 19767.76 | 0.0112 | P | 5.3 |
| 2 | ☐ | 2.000 | 1.943 | 86793.61 | 0.0496 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.938 | 188433.15 | 0.1088 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.566 | 353498.43 | 0.2003 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.643 | 3136106.31 | 1.8425 | A | 0.5 |
| 6 | ☐ | 200.000 | 203.702 | 6550296.99 | 4.0378 | A | 1.4 |

y = 0.0198 * x + 0.0112
R = 0.9991
DL = 0.08967
BEC = 0.5665

Weight: <None>
Min Conc: <None>

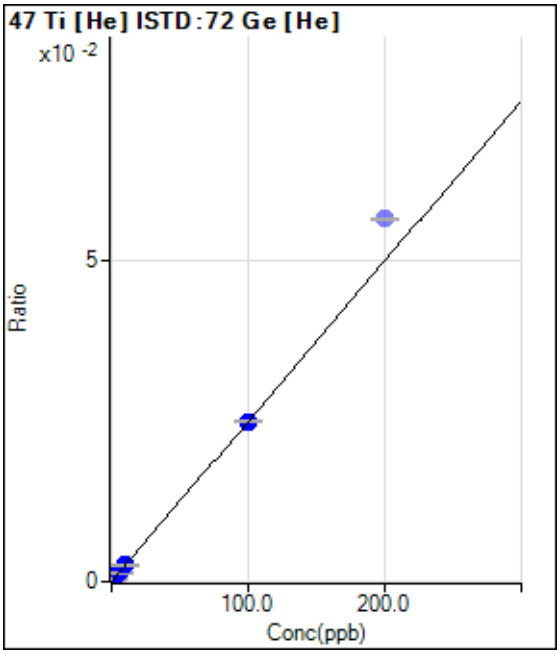
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 406.68 | 0.0007 | P | 10.6 |
| 2 | ☐ | 200.000 | 208.760 | 5374.49 | 0.0098 | P | 5.3 |
| 3 | ☐ | 500.000 | 493.588 | 12068.81 | 0.0222 | P | 3.0 |
| 4 | ☐ | 1000.000 | 989.866 | 23663.94 | 0.0438 | P | 0.6 |
| 5 | ☐ | 10000.00 | 9457.215 | 219587.21 | 0.4123 | P | 2.6 |
| 6 | ☐ | 20000.00 | 20271.97 | 461369.86 | 0.8830 | P | 1.2 |

y = 4.3519E-005 * x + 7.4130E-004
R = 0.9995
DL = 5.43
BEC = 17.03

Weight: <None>
Min Conc: <None>

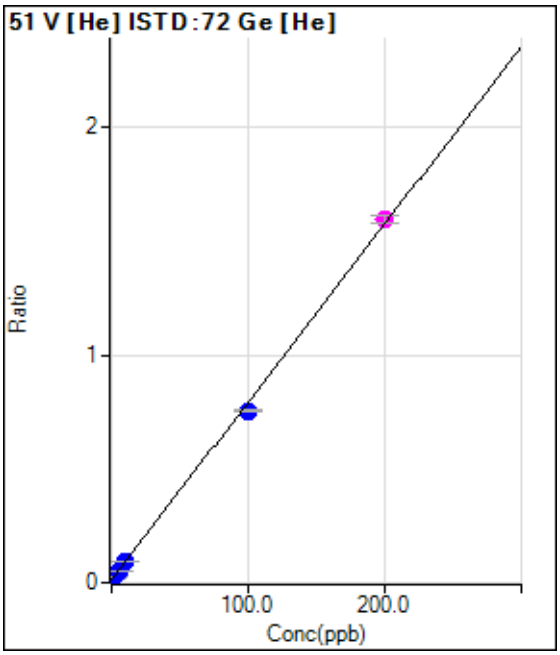



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13.33 | 0.0000 | P | 115.0 |
| 2 | ☐ | 2.000 | 1.762 | 253.34 | 0.0005 | P | 16.0 |
| 3 | ☐ | 5.000 | 5.492 | 756.70 | 0.0014 | P | 22.9 |
| 4 | ☐ | 10.000 | 10.118 | 1373.42 | 0.0025 | P | 1.1 |
| 5 | ☐ | 100.000 | 99.968 | 13270.02 | 0.0249 | P | 1.8 |
| 6 | ☑ | 200.000 | | 29462.21 | 0.0564 | P | 0.7 |

y = 2.4896E-004 * x + 2.4297E-005
R = 1.0000
DL = 0.3367
BEC = 0.0976

Weight: <None>
Min Conc: <None>

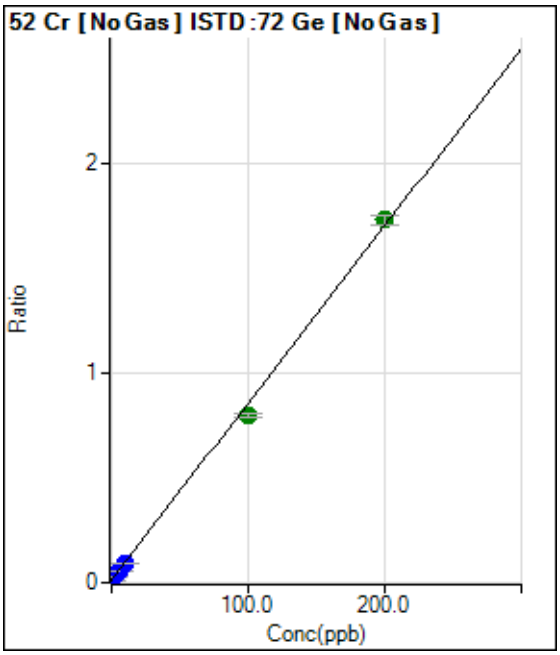
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 7065.18 | 0.0129 | P | 1.1 |
| 2 | ☐ | 2.000 | 2.024 | 15681.22 | 0.0287 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.944 | 27930.72 | 0.0515 | P | 2.0 |
| 4 | ☐ | 10.000 | 10.006 | 49120.18 | 0.0910 | P | 0.4 |
| 5 | ☐ | 100.000 | 94.983 | 401657.09 | 0.7541 | P | 0.5 |
| 6 | ☐ | 200.000 | 202.509 | 832589.05 | 1.5932 | M | 2.3 |

y = 0.0078 * x + 0.0129
R = 0.9996
DL = 0.05555
BEC = 1.65

Weight: <None>
Min Conc: <None>

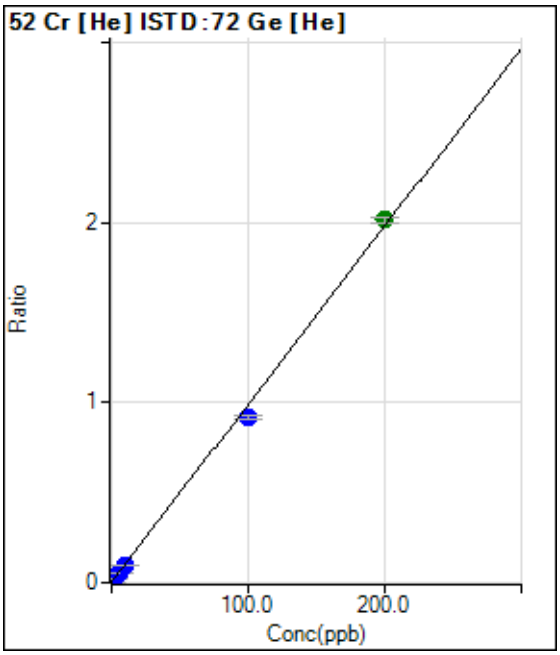



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22742.44 | 0.0129 | P | 4.1 |
| 2 | ☐ | 2.000 | 1.886 | 50359.50 | 0.0288 | P | 4.1 |
| 3 | ☐ | 5.000 | 4.941 | 94555.73 | 0.0546 | P | 0.7 |
| 4 | ☐ | 10.000 | 9.636 | 166260.81 | 0.0942 | P | 1.7 |
| 5 | ☐ | 100.000 | 93.180 | 1360306.49 | 0.7993 | A | 3.0 |
| 6 | ☐ | 200.000 | 203.431 | 2805821.21 | 1.7298 | A | 2.4 |

y = 0.0084 * x + 0.0129
R = 0.9992
DL = 0.1896
BEC = 1.526

Weight: <None>
Min Conc: <None>

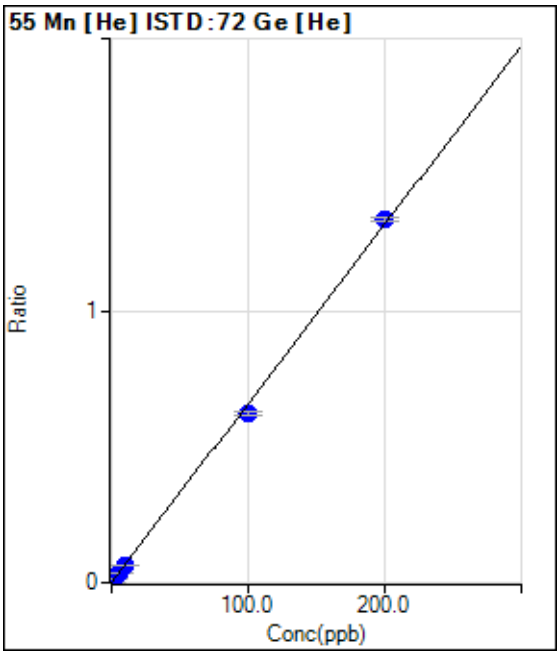
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1480.11 | 0.0027 | P | 4.0 |
| 2 | ☐ | 2.000 | 2.001 | 12292.36 | 0.0225 | P | 1.1 |
| 3 | ☐ | 5.000 | 4.733 | 26853.49 | 0.0495 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.768 | 53589.03 | 0.0992 | P | 1.4 |
| 5 | ☐ | 100.000 | 92.695 | 489362.05 | 0.9188 | P | 1.6 |
| 6 | ☐ | 200.000 | 203.671 | 1053175.56 | 2.0156 | A | 1.4 |

y = 0.0099 * x + 0.0027
R = 0.9991
DL = 0.03246
BEC = 0.2728

Weight: <None>
Min Conc: <None>

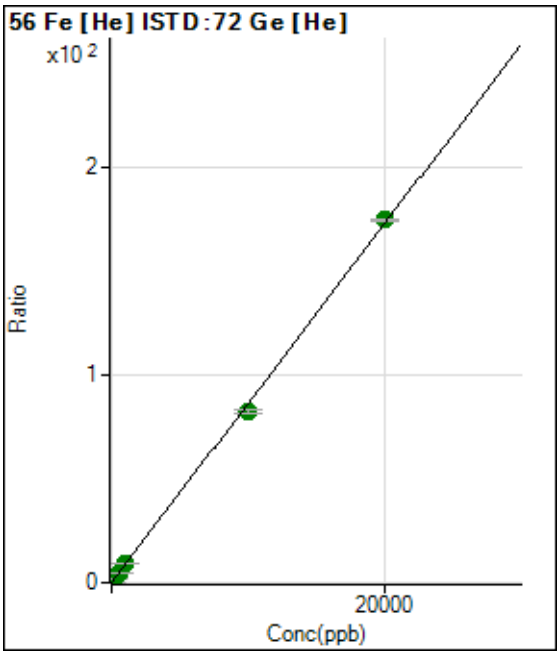



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 576.69 | 0.0010 | P | 16.8 |
| 2 | ☐ | 2.000 | 2.029 | 7869.11 | 0.0144 | P | 1.2 |
| 3 | ☐ | 5.000 | 5.012 | 18449.47 | 0.0340 | P | 2.9 |
| 4 | ☐ | 10.000 | 9.919 | 35774.21 | 0.0662 | P | 1.7 |
| 5 | ☐ | 100.000 | 94.541 | 331505.46 | 0.6224 | P | 2.0 |
| 6 | ☐ | 200.000 | 202.733 | 696820.43 | 1.3335 | P | 1.1 |

y = 0.0066 * x + 0.0010
R = 0.9995
DL = 0.08034
BEC = 0.1597

Weight: <None>
Min Conc: <None>

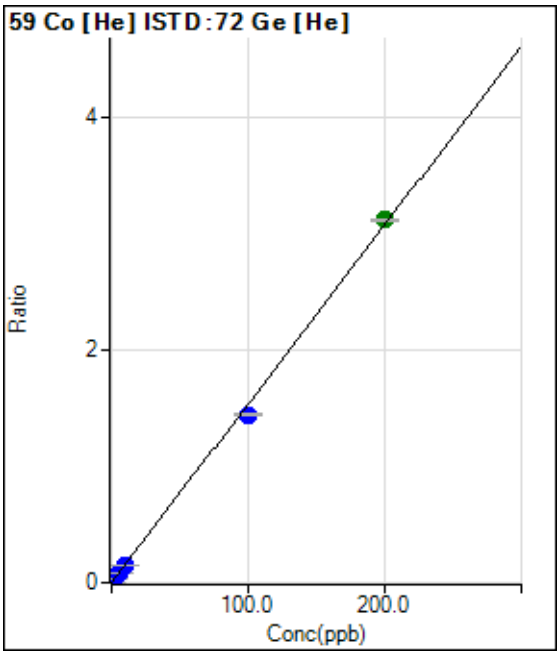
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10525.96 | 0.0192 | P | 6.6 |
| 2 | ☐ | 200.000 | 205.107 | 981885.33 | 1.7948 | A | 2.8 |
| 3 | ☐ | 500.000 | 523.581 | 2471244.91 | 4.5519 | A | 0.9 |
| 4 | ☐ | 1000.000 | 1034.156 | 4845425.34 | 8.9720 | A | 1.1 |
| 5 | ☐ | 10000.00 | 9554.064 | 44061017.68 | 82.7297 | A | 2.5 |
| 6 | ☐ | 20000.00 | 20220.61 | 91481711.97 | 175.071 | A | 0.7 |

y = 0.0087 * x + 0.0192
R = 0.9996
DL = 0.4371
BEC = 2.215

Weight: <None>
Min Conc: <None>

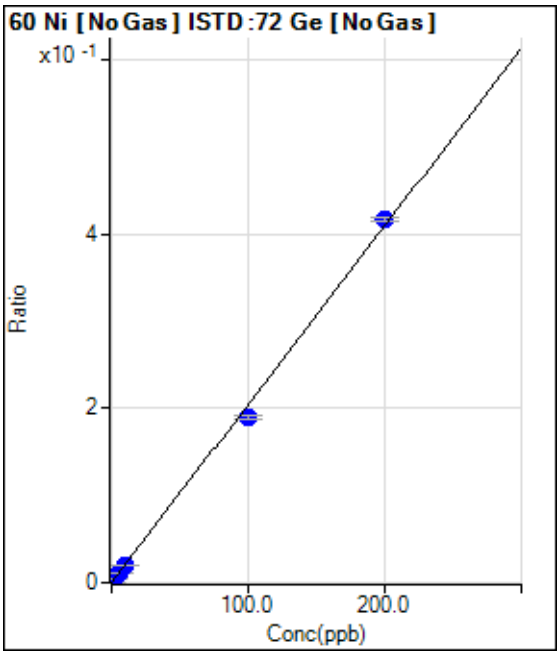



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 180.00 | 0.0003 | P | 22.5 |
| 2 | ☐ | 2.000 | 1.984 | 16827.34 | 0.0308 | P | 5.3 |
| 3 | ☐ | 5.000 | 4.973 | 41594.15 | 0.0766 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.087 | 83757.78 | 0.1551 | P | 1.1 |
| 5 | ☐ | 100.000 | 94.027 | 768600.06 | 1.4431 | P | 1.5 |
| 6 | ☐ | 200.000 | 202.983 | 1627739.25 | 3.1149 | A | 0.7 |

y = 0.0153 * x + 3.2802E-004
R = 0.9994
DL = 0.01441
BEC = 0.02138

Weight: <None>
Min Conc: <None>

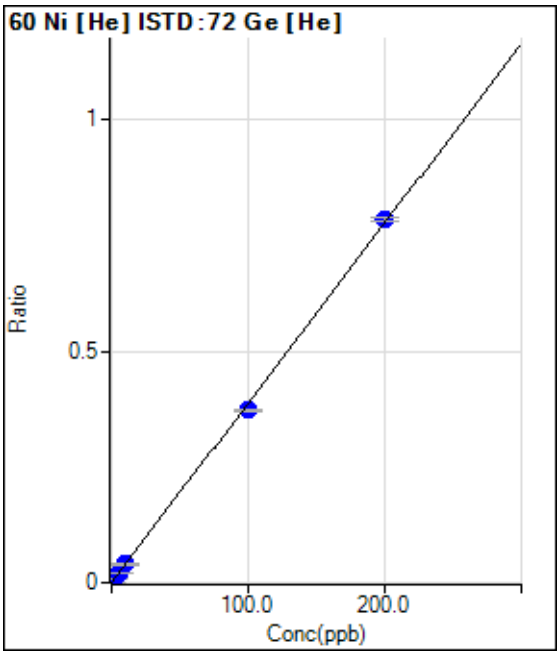
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 393.35 | 0.0002 | P | 10.4 |
| 2 | ☐ | 2.000 | 2.035 | 7658.96 | 0.0044 | P | 0.8 |
| 3 | ☐ | 5.000 | 5.096 | 18402.83 | 0.0106 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.814 | 35750.97 | 0.0203 | P | 2.7 |
| 5 | ☐ | 100.000 | 92.911 | 323174.97 | 0.1899 | P | 1.7 |
| 6 | ☐ | 200.000 | 203.551 | 674487.83 | 0.4158 | P | 1.1 |

y = 0.0020 * x + 2.2309E-004
R = 0.9991
DL = 0.03425
BEC = 0.1093

Weight: <None>
Min Conc: <None>

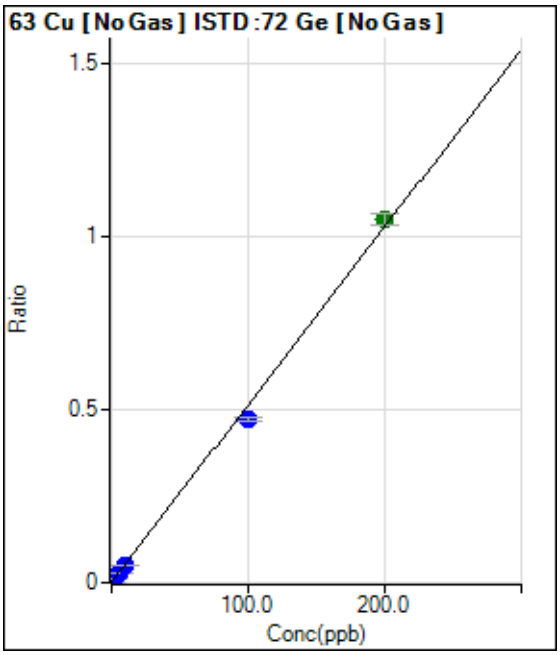



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 140.00 | 0.0003 | P | 21.7 |
| 2 | ☐ | 2.000 | 2.012 | 4414.14 | 0.0081 | P | 4.7 |
| 3 | ☐ | 5.000 | 4.960 | 10591.00 | 0.0195 | P | 2.9 |
| 4 | ☐ | 10.000 | 10.271 | 21667.55 | 0.0401 | P | 4.8 |
| 5 | ☐ | 100.000 | 95.975 | 198575.68 | 0.3728 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.000 | 409868.22 | 0.7844 | P | 0.9 |

y = 0.0039 * x + 2.5512E-004
R = 0.9997
DL = 0.04271
BEC = 0.06572

Weight: <None>
Min Conc: <None>

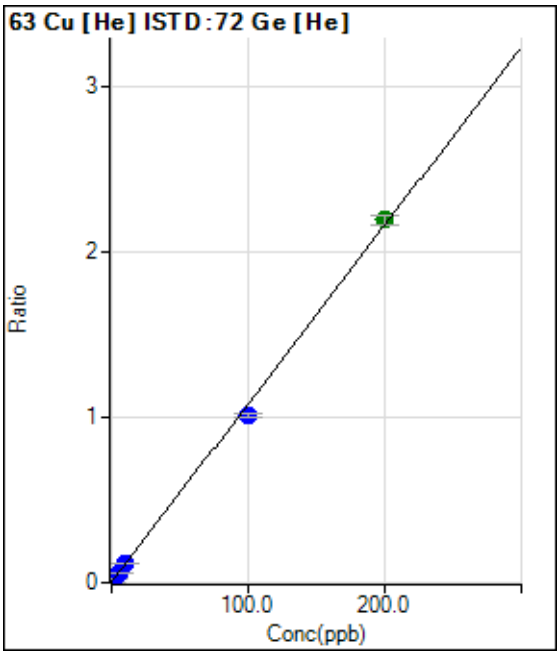
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2536.95 | 0.0014 | P | 10.6 |
| 2 | ☐ | 2.000 | 1.919 | 19707.92 | 0.0113 | P | 2.4 |
| 3 | ☐ | 5.000 | 4.840 | 45416.40 | 0.0262 | P | 3.2 |
| 4 | ☐ | 10.000 | 9.516 | 88569.31 | 0.0502 | P | 1.4 |
| 5 | ☐ | 100.000 | 91.905 | 803457.57 | 0.4722 | P | 3.1 |
| 6 | ☐ | 200.000 | 204.077 | 1698336.95 | 1.0468 | A | 3.2 |

y = 0.0051 * x + 0.0014
R = 0.9989
DL = 0.08913
BEC = 0.2808

Weight: <None>
Min Conc: <None>

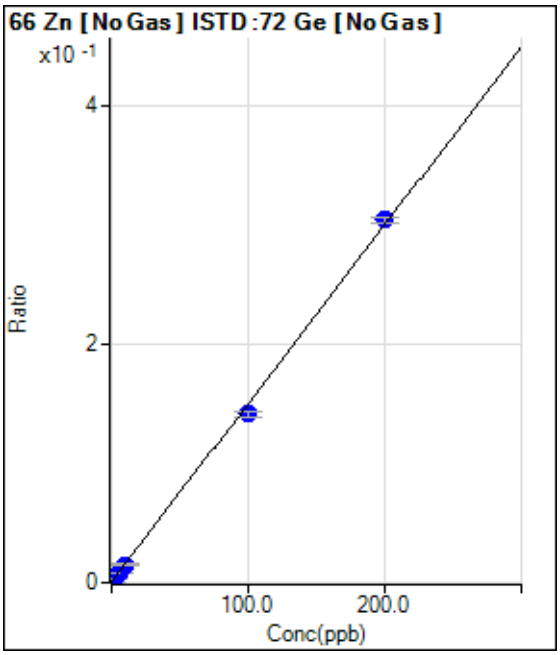



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1583.45 | 0.0029 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.927 | 12966.44 | 0.0237 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.943 | 30544.83 | 0.0563 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.175 | 60903.45 | 0.1128 | P | 2.2 |
| 5 | ☐ | 100.000 | 93.677 | 540418.91 | 1.0147 | P | 2.0 |
| 6 | ☐ | 200.000 | 203.155 | 1147958.32 | 2.1971 | A | 2.7 |

y = 0.0108 * x + 0.0029
R = 0.9993
DL = 0.07031
BEC = 0.2671

Weight: <None>
Min Conc: <None>

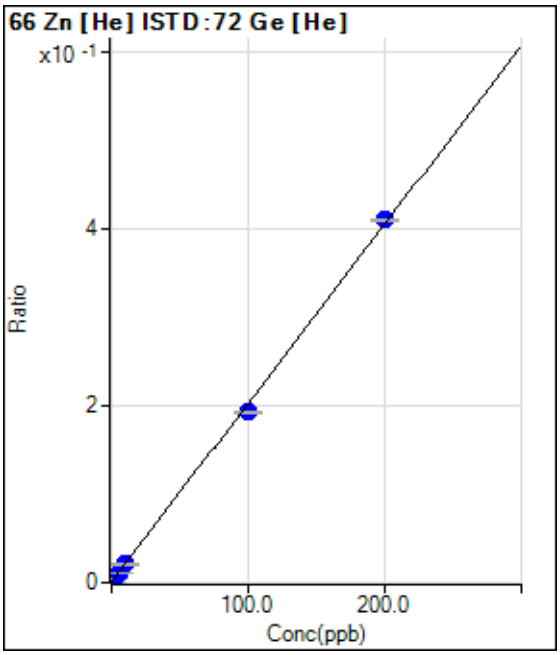
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1120.07 | 0.0006 | P | 4.6 |
| 2 | ☐ | 2.000 | 1.941 | 6191.54 | 0.0035 | P | 2.3 |
| 3 | ☐ | 5.000 | 4.913 | 13823.94 | 0.0080 | P | 5.2 |
| 4 | ☐ | 10.000 | 9.818 | 27057.34 | 0.0153 | P | 3.4 |
| 5 | ☐ | 100.000 | 94.041 | 240486.64 | 0.1413 | P | 2.9 |
| 6 | ☐ | 200.000 | 202.992 | 493677.82 | 0.3044 | P | 1.4 |

y = 0.0015 * x + 6.3444E-004
R = 0.9994
DL = 0.0586
BEC = 0.424

Weight: <None>
Min Conc: <None>

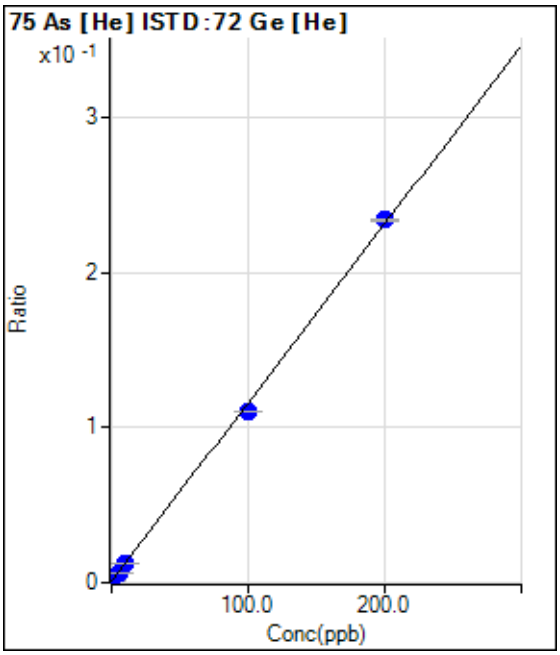



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 423.34 | 0.0008 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.893 | 2516.95 | 0.0046 | P | 4.0 |
| 3 | ☐ | 5.000 | 4.852 | 5748.02 | 0.0106 | P | 1.9 |
| 4 | ☐ | 10.000 | 9.931 | 11268.18 | 0.0209 | P | 2.2 |
| 5 | ☐ | 100.000 | 94.916 | 102704.47 | 0.1928 | P | 1.6 |
| 6 | ☐ | 200.000 | 202.550 | 214569.92 | 0.4106 | P | 0.6 |

y = 0.0020 * x + 7.7091E-004
R = 0.9995
DL = 0.1562
BEC = 0.381

Weight: <None>
Min Conc: <None>

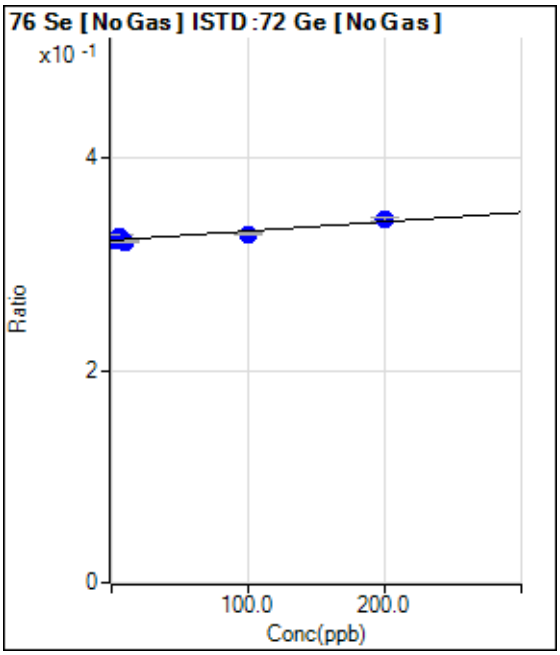
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 495.57 | 0.0009 | P | 9.0 |
| 2 | ☐ | 2.000 | 2.073 | 1799.02 | 0.0033 | P | 4.6 |
| 3 | ☐ | 5.000 | 4.991 | 3608.28 | 0.0066 | P | 2.5 |
| 4 | ☐ | 10.000 | 10.236 | 6849.55 | 0.0127 | P | 1.9 |
| 5 | ☐ | 100.000 | 95.195 | 58835.57 | 0.1105 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.390 | 122188.49 | 0.2338 | P | 0.6 |

y = 0.0012 * x + 9.0319E-004
R = 0.9996
DL = 0.2121
BEC = 0.7848

Weight: <None>
Min Conc: <None>

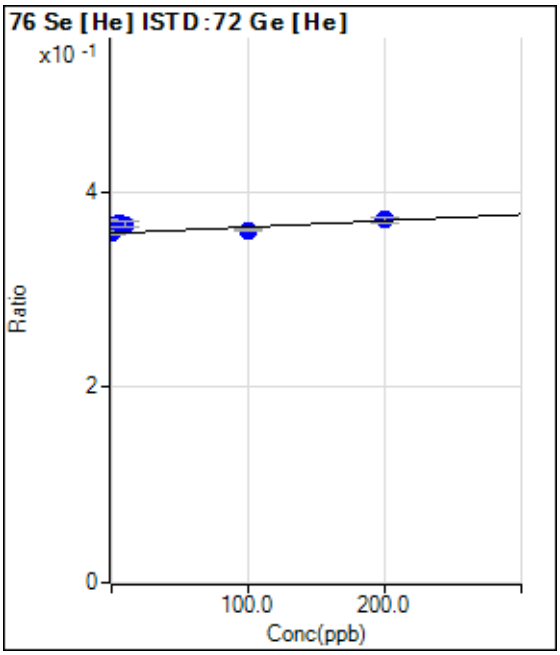



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 569197.36 | 0.3224 | P | 3.1 |
| 2 | ☐ | 2.000 | -4.294 | 563326.92 | 0.3220 | P | 1.1 |
| 3 | ☐ | 5.000 | 31.005 | 563094.51 | 0.3251 | P | 1.8 |
| 4 | ☐ | 10.000 | -20.173 | 565961.40 | 0.3206 | P | 0.6 |
| 5 | ☐ | 100.000 | 64.645 | 558336.96 | 0.3281 | P | 0.7 |
| 6 | ☐ | 200.000 | 218.599 | 554135.43 | 0.3416 | P | 1.0 |

y = 8.7776E-005 * x + 0.3224
R = 0.9606
DL = 337
BEC = 3673

Weight: <None>
Min Conc: <None>

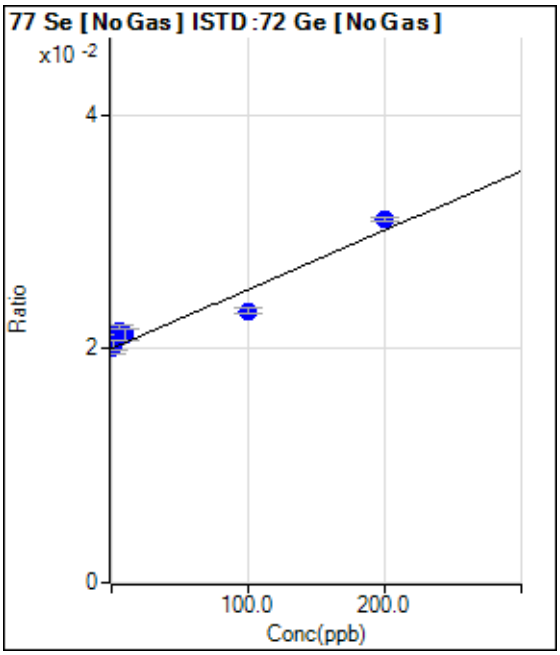
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 196109.38 | 0.3573 | P | 1.0 |
| 2 | ☐ | 2.000 | 123.190 | 199806.37 | 0.3653 | P | 2.5 |
| 3 | ☐ | 5.000 | 163.619 | 199678.24 | 0.3679 | P | 2.3 |
| 4 | ☐ | 10.000 | 138.925 | 197801.75 | 0.3663 | P | 1.4 |
| 5 | ☐ | 100.000 | 53.025 | 192139.08 | 0.3607 | P | 0.7 |
| 6 | ☐ | 200.000 | 211.864 | 193860.99 | 0.3710 | P | 1.5 |

y = 6.4732E-005 * x + 0.3573
R = 0.4351
DL = 159.6
BEC = 5520

Weight: <None>
Min Conc: <None>

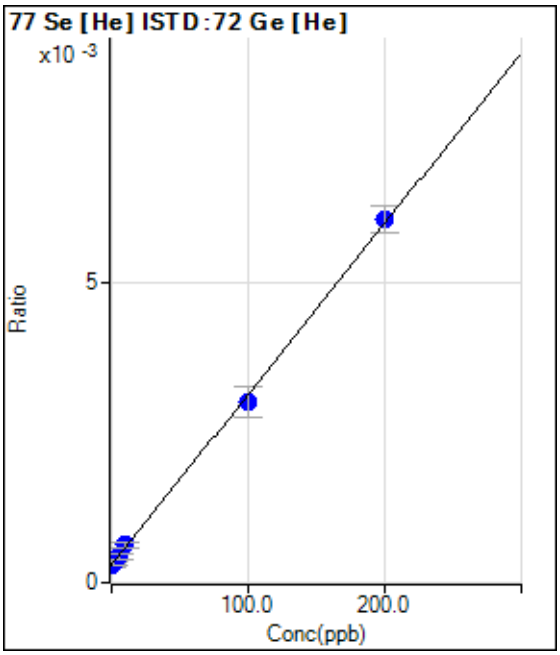



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 35373.64 | 0.0200 | P | 3.9 |
| 2 | ☐ | 2.000 | 6.377 | 35617.75 | 0.0204 | P | 4.4 |
| 3 | ☐ | 5.000 | 31.169 | 37435.85 | 0.0216 | P | 3.6 |
| 4 | ☐ | 10.000 | 22.049 | 37318.77 | 0.0212 | P | 4.7 |
| 5 | ☐ | 100.000 | 62.564 | 39478.25 | 0.0232 | P | 2.1 |
| 6 | ☐ | 200.000 | 217.417 | 50337.47 | 0.0310 | P | 0.9 |

y = 5.0575E-005 * x + 0.0200
R = 0.9631
DL = 46.84
BEC = 396.2

Weight: <None>
Min Conc: <None>

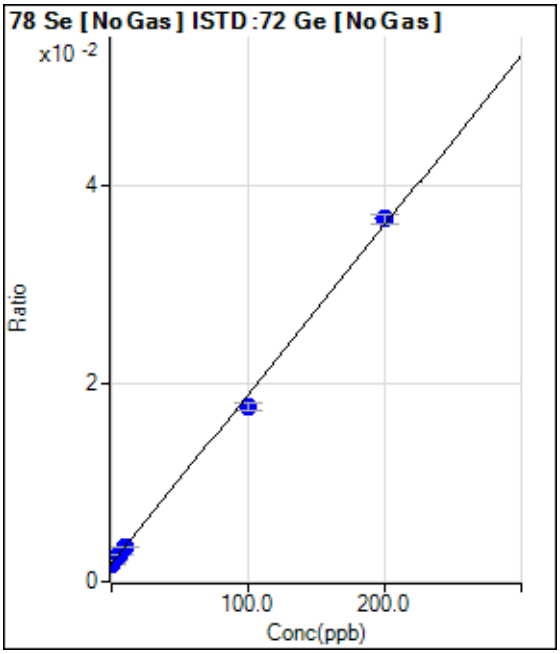
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 163.34 | 0.0003 | P | 22.7 |
| 2 | ☐ | 2.000 | 1.121 | 180.00 | 0.0003 | P | 15.6 |
| 3 | ☐ | 5.000 | 5.043 | 240.01 | 0.0004 | P | 19.2 |
| 4 | ☐ | 10.000 | 11.862 | 343.35 | 0.0006 | P | 14.2 |
| 5 | ☐ | 100.000 | 95.438 | 1610.13 | 0.0030 | P | 17.0 |
| 6 | ☐ | 200.000 | 202.196 | 3170.43 | 0.0061 | P | 7.5 |

y = 2.8525E-005 * x + 2.9733E-004
R = 0.9996
DL = 7.091
BEC = 10.42

Weight: <None>
Min Conc: <None>

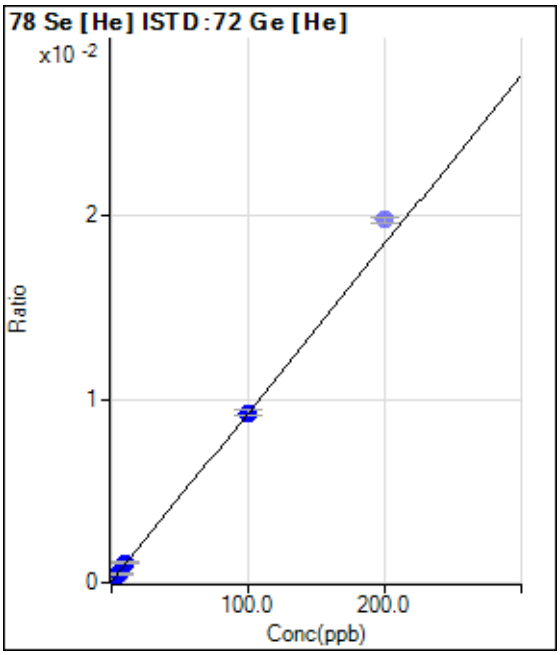



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3203.79 | 0.0018 | P | 3.8 |
| 2 | ☐ | 2.000 | 1.872 | 3730.59 | 0.0021 | P | 6.6 |
| 3 | ☐ | 5.000 | 5.516 | 4774.27 | 0.0028 | P | 3.9 |
| 4 | ☐ | 10.000 | 9.840 | 6168.20 | 0.0035 | P | 3.5 |
| 5 | ☐ | 100.000 | 92.784 | 30057.35 | 0.0177 | P | 3.7 |
| 6 | ☐ | 200.000 | 203.604 | 59351.18 | 0.0366 | P | 3.0 |

y = 1.7083E-004 * x + 0.0018
R = 0.9991
DL = 1.21
BEC = 10.62

Weight: <None>
Min Conc: <None>

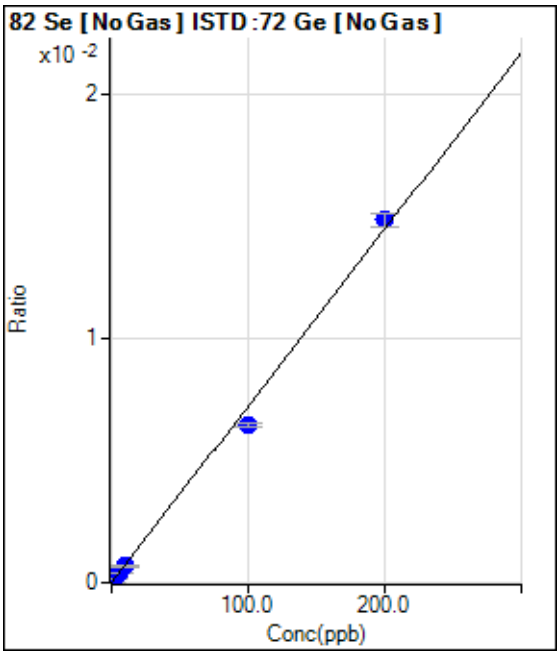
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34.67 | 0.0001 | P | 15.0 |
| 2 | ☐ | 2.000 | 1.976 | 134.00 | 0.0002 | P | 7.4 |
| 3 | ☐ | 5.000 | 4.841 | 276.00 | 0.0005 | P | 15.2 |
| 4 | ☐ | 10.000 | 11.091 | 585.35 | 0.0011 | P | 6.3 |
| 5 | ☐ | 100.000 | 99.899 | 4928.92 | 0.0093 | P | 3.3 |
| 6 | ☑ | 200.000 | | 10339.32 | 0.0198 | P | 1.3 |

y = 9.2012E-005 * x + 6.3196E-005
R = 0.9999
DL = 0.3099
BEC = 0.6868

Weight: <None>
Min Conc: <None>

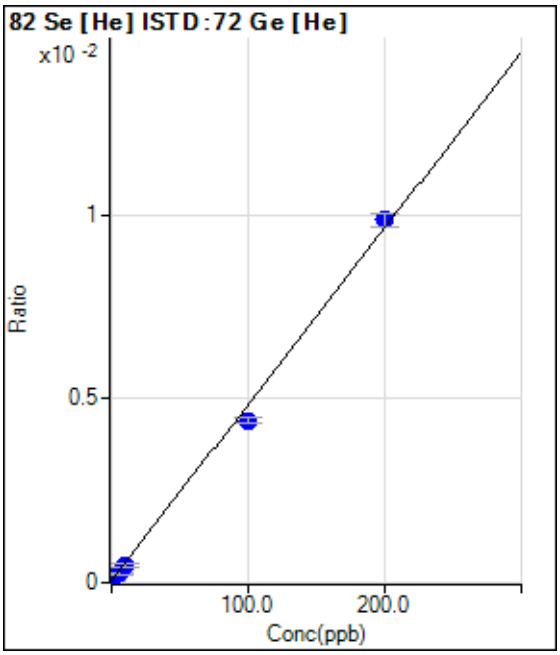



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 8.50 | 0.0000 | P | 1099.3 |
| 2 | ☐ | 2.000 | 2.537 | 328.43 | 0.0002 | P | 28.8 |
| 3 | ☐ | 5.000 | 4.966 | 628.63 | 0.0004 | P | 4.0 |
| 4 | ☐ | 10.000 | 9.245 | 1185.29 | 0.0007 | P | 15.1 |
| 5 | ☐ | 100.000 | 89.254 | 10976.51 | 0.0065 | P | 3.4 |
| 6 | ☐ | 200.000 | 205.406 | 24070.79 | 0.0148 | P | 3.9 |

y = 7.2236E-005 * x + 4.0454E-006
R = 0.9980
DL = 1.847
BEC = 0.056

Weight: <None>
Min Conc: <None>

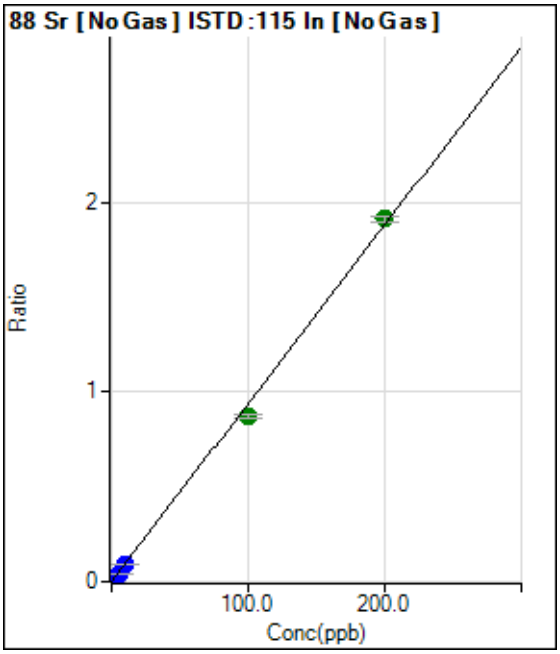
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.306 | 93.33 | 0.0002 | P | 45.5 |
| 3 | ☐ | 5.000 | 3.996 | 136.67 | 0.0003 | P | 15.9 |
| 4 | ☐ | 10.000 | 8.270 | 246.67 | 0.0005 | P | 20.3 |
| 5 | ☐ | 100.000 | 90.694 | 2343.58 | 0.0044 | P | 3.3 |
| 6 | ☐ | 200.000 | 204.762 | 5151.09 | 0.0099 | P | 3.7 |

y = 4.7853E-005 * x + 6.0678E-005
R = 0.9985
DL = 0.6269
BEC = 1.268

Weight: <None>
Min Conc: <None>

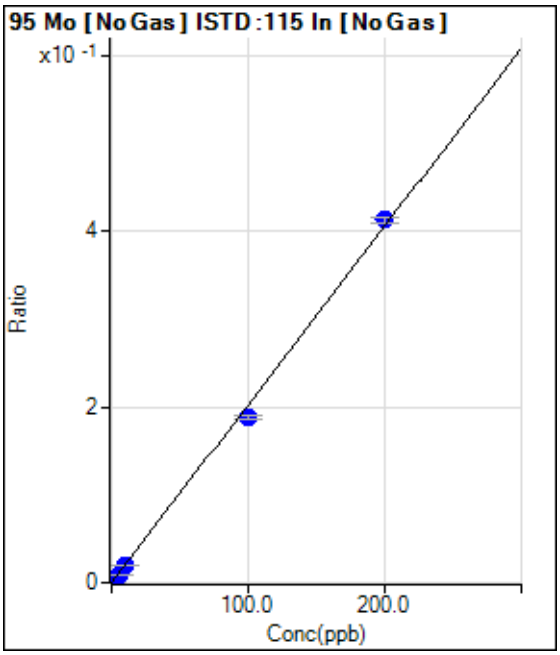



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1270.08 | 0.0006 | P | 3.9 |
| 2 | ☐ | 2.000 | 1.929 | 39245.22 | 0.0187 | P | 1.7 |
| 3 | ☐ | 5.000 | 4.760 | 96219.58 | 0.0453 | P | 1.0 |
| 4 | ☐ | 10.000 | 9.393 | 188254.34 | 0.0888 | P | 1.6 |
| 5 | ☐ | 100.000 | 92.928 | 1803784.92 | 0.8732 | A | 2.4 |
| 6 | ☐ | 200.000 | 203.573 | 3753500.36 | 1.9121 | A | 1.3 |

y = 0.0094 * x + 5.9979E-004
R = 0.9991
DL = 0.007559
BEC = 0.06388

Weight: <None>
Min Conc: <None>

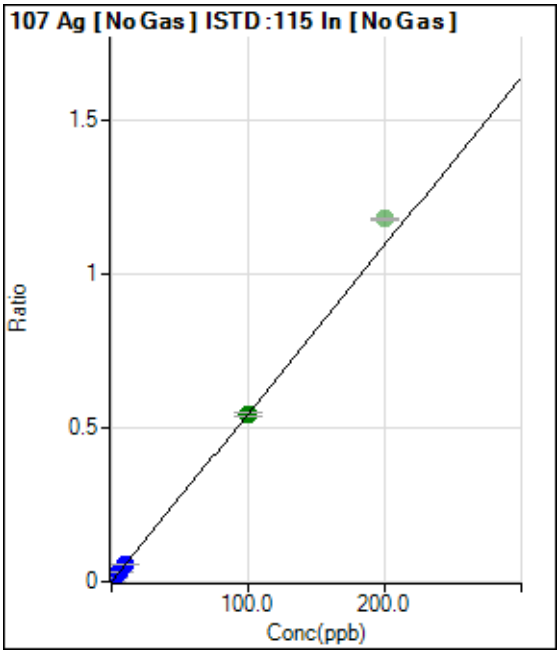
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0000 | P | 86.6 |
| 2 | ☐ | 2.000 | 1.972 | 8419.49 | 0.0040 | P | 3.9 |
| 3 | ☐ | 5.000 | 4.752 | 20516.16 | 0.0097 | P | 1.2 |
| 4 | ☐ | 10.000 | 9.468 | 40772.88 | 0.0192 | P | 0.6 |
| 5 | ☐ | 100.000 | 92.626 | 388393.28 | 0.1880 | P | 1.9 |
| 6 | ☐ | 200.000 | 203.720 | 811643.17 | 0.4135 | P | 1.8 |

y = 0.0020 * x + 1.2610E-005
R = 0.9991
DL = 0.01614
BEC = 0.006213

Weight: <None>
Min Conc: <None>

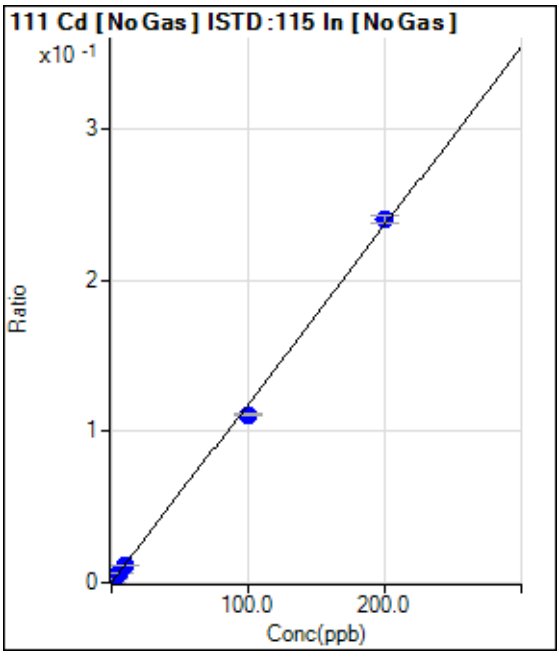



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 170.00 | 0.0001 | P | 11.7 |
| 2 | ☐ | 2.000 | 2.121 | 24472.96 | 0.0117 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.231 | 60890.65 | 0.0287 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.197 | 118294.54 | 0.0558 | P | 0.8 |
| 5 | ☐ | 100.000 | 99.966 | 1128470.63 | 0.5462 | A | 2.3 |
| 6 | ☑ | 200.000 | | 2314339.60 | 1.1789 | A | 0.6 |

y = 0.0055 * x + 8.0290E-005
R = 1.0000
DL = 0.005151
BEC = 0.0147

Weight: <None>
Min Conc: <None>

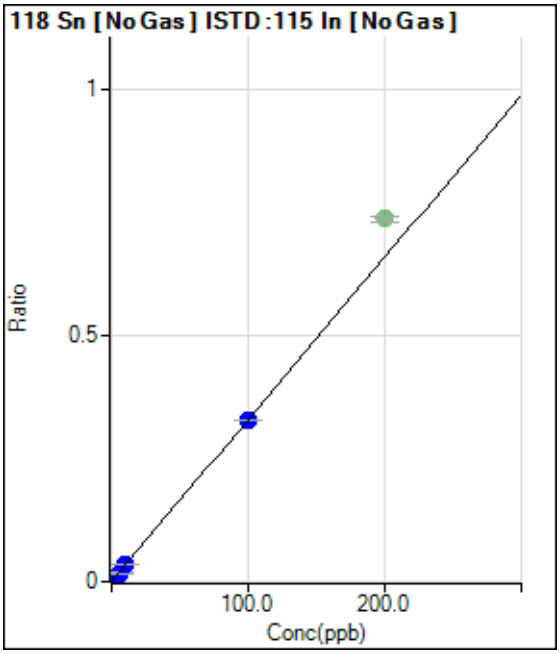
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10.00 | 0.0000 | P | 99.7 |
| 2 | ☐ | 2.000 | 1.977 | 4911.00 | 0.0023 | P | 5.9 |
| 3 | ☐ | 5.000 | 4.969 | 12492.79 | 0.0059 | P | 0.9 |
| 4 | ☐ | 10.000 | 9.578 | 24019.01 | 0.0113 | P | 2.0 |
| 5 | ☐ | 100.000 | 93.747 | 229001.39 | 0.1108 | P | 1.1 |
| 6 | ☐ | 200.000 | 203.149 | 471459.79 | 0.2402 | P | 2.1 |

y = 0.0012 * x + 4.7250E-006
R = 0.9993
DL = 0.01196
BEC = 0.003997

Weight: <None>
Min Conc: <None>

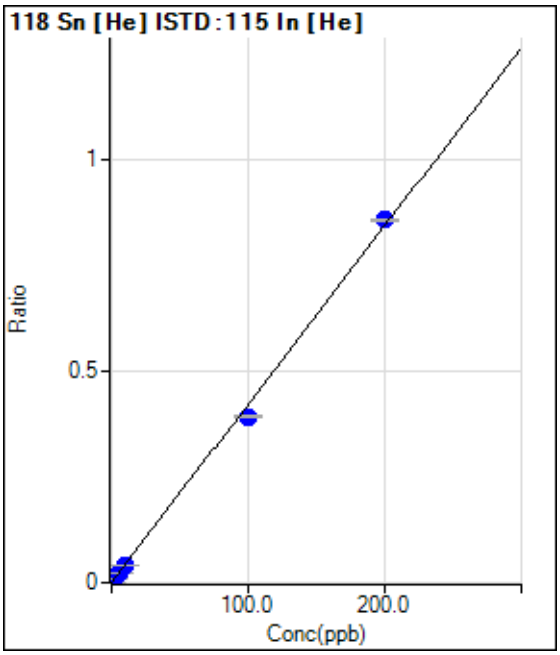



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1443.44 | 0.0007 | P | 9.1 |
| 2 | ☐ | 2.000 | 2.019 | 15342.61 | 0.0073 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.062 | 36782.17 | 0.0173 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.371 | 73704.35 | 0.0348 | P | 0.6 |
| 5 | ☐ | 100.000 | 99.959 | 680093.71 | 0.3291 | P | 0.1 |
| 6 | ☑ | 200.000 | | 1444493.47 | 0.7358 | A | 1.7 |

y = 0.0033 * x + 6.8178E-004
R = 1.0000
DL = 0.05657
BEC = 0.2075

Weight: <None>
Min Conc: <None>

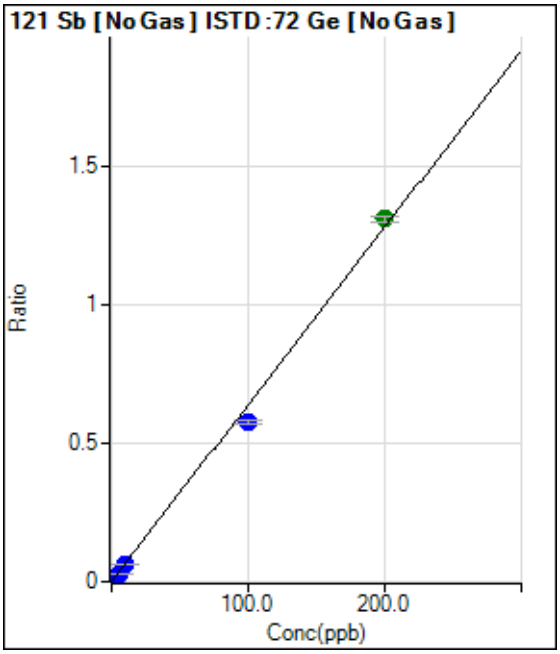
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 750.04 | 0.0008 | P | 5.0 |
| 2 | ☐ | 2.000 | 1.866 | 8186.04 | 0.0087 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.839 | 20269.33 | 0.0212 | P | 5.1 |
| 4 | ☐ | 10.000 | 9.725 | 39396.25 | 0.0418 | P | 1.4 |
| 5 | ☐ | 100.000 | 93.126 | 359076.80 | 0.3935 | P | 0.9 |
| 6 | ☐ | 200.000 | 203.456 | 762051.76 | 0.8588 | P | 0.7 |

y = 0.0042 * x + 8.0026E-004
R = 0.9992
DL = 0.02825
BEC = 0.1898

Weight: <None>
Min Conc: <None>

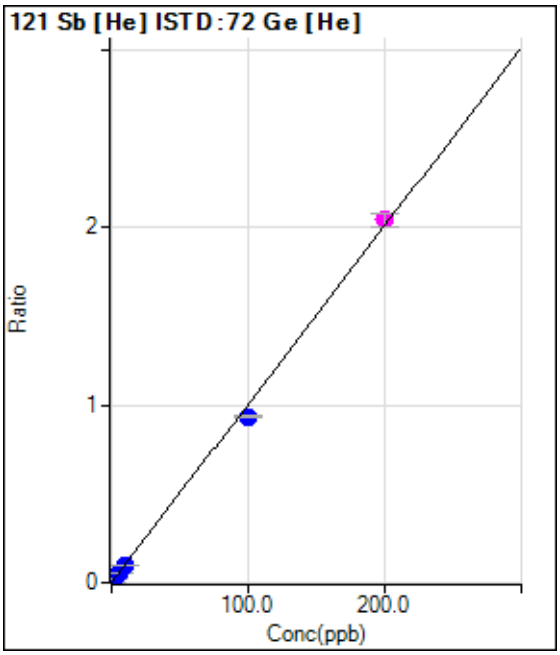



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1690.14 | 0.0010 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.804 | 21805.12 | 0.0125 | P | 1.6 |
| 3 | ☐ | 5.000 | 4.634 | 52846.89 | 0.0305 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.194 | 105200.57 | 0.0596 | P | 2.0 |
| 5 | ☐ | 100.000 | 90.285 | 981699.13 | 0.5769 | P | 2.3 |
| 6 | ☐ | 200.000 | 204.909 | 2122041.16 | 1.3082 | A | 1.2 |

y = 0.0064 * x + 9.5551E-004
R = 0.9984
DL = 0.03153
BEC = 0.1498

Weight: <None>
Min Conc: <None>

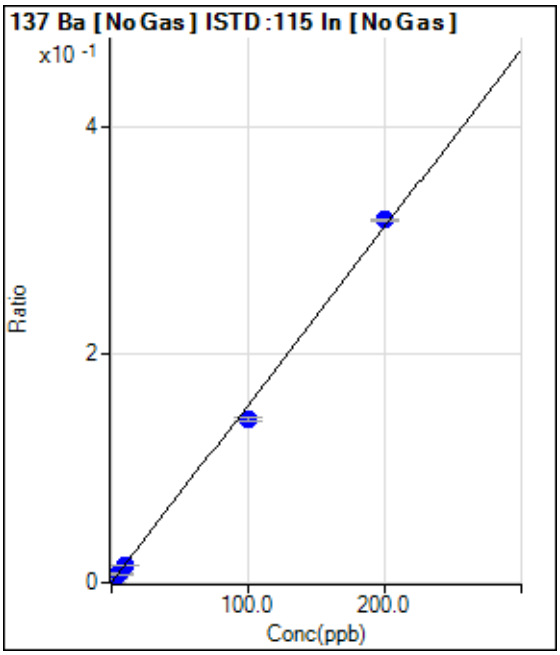
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 790.04 | 0.0014 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.960 | 11541.89 | 0.0211 | P | 5.2 |
| 3 | ☐ | 5.000 | 4.844 | 27158.53 | 0.0500 | P | 1.4 |
| 4 | ☐ | 10.000 | 9.791 | 53824.37 | 0.0997 | P | 2.9 |
| 5 | ☐ | 100.000 | 93.143 | 498465.40 | 0.9358 | P | 0.5 |
| 6 | ☐ | 200.000 | 203.443 | 1067013.97 | 2.0423 | M | 3.7 |

y = 0.0100 * x + 0.0014
R = 0.9992
DL = 0.03776
BEC = 0.1434

Weight: <None>
Min Conc: <None>

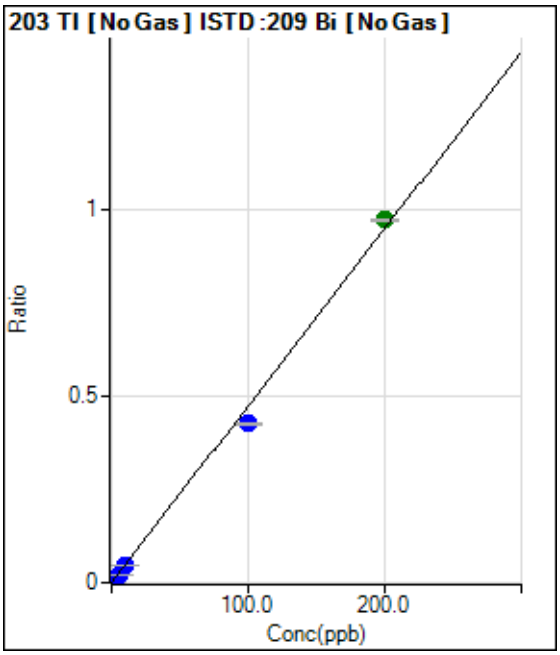



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 376.68 | 0.0002 | P | 15.7 |
| 2 | ☐ | 2.000 | 2.009 | 6935.31 | 0.0033 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.818 | 16310.57 | 0.0077 | P | 4.4 |
| 4 | ☐ | 10.000 | 9.442 | 31528.75 | 0.0149 | P | 5.4 |
| 5 | ☐ | 100.000 | 91.827 | 295750.62 | 0.1431 | P | 1.5 |
| 6 | ☐ | 200.000 | 204.119 | 624197.25 | 0.3180 | P | 0.6 |

y = 0.0016 * x + 1.7800E-004
R = 0.9988
DL = 0.05369
BEC = 0.1143

Weight: <None>
Min Conc: <None>

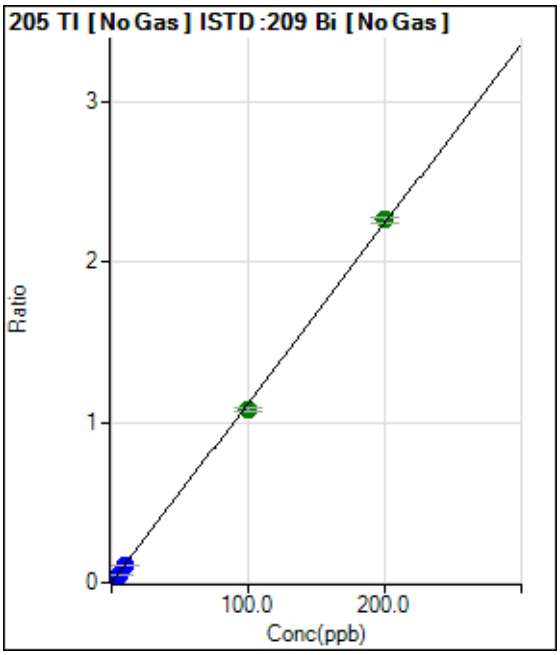
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 153.33 | 0.0001 | P | 12.2 |
| 2 | ☐ | 2.000 | 1.832 | 20861.28 | 0.0088 | P | 2.5 |
| 3 | ☐ | 5.000 | 4.532 | 51553.53 | 0.0216 | P | 0.8 |
| 4 | ☐ | 10.000 | 9.433 | 104608.97 | 0.0449 | P | 1.7 |
| 5 | ☐ | 100.000 | 89.833 | 984896.78 | 0.4266 | P | 1.9 |
| 6 | ☐ | 200.000 | 205.125 | 2202539.19 | 0.9740 | A | 0.6 |

y = 0.0047 * x + 6.5183E-005
R = 0.9982
DL = 0.00503
BEC = 0.01373

Weight: <None>
Min Conc: <None>

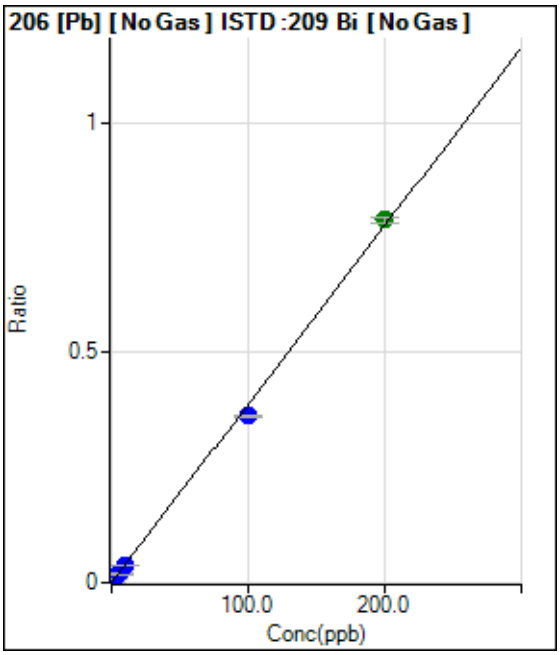



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 346.68 | 0.0001 | P | 13.5 |
| 2 | ☐ | 2.000 | 1.870 | 50252.16 | 0.0211 | P | 4.5 |
| 3 | ☐ | 5.000 | 4.664 | 125254.20 | 0.0524 | P | 2.6 |
| 4 | ☐ | 10.000 | 9.665 | 253143.49 | 0.1085 | P | 0.6 |
| 5 | ☐ | 100.000 | 95.935 | 2483784.28 | 1.0758 | A | 2.3 |
| 6 | ☐ | 200.000 | 202.059 | 5122729.19 | 2.2656 | A | 1.6 |

y = 0.0112 * x + 1.4715E-004
R = 0.9997
DL = 0.005316
BEC = 0.01312

Weight: <None>
Min Conc: <None>

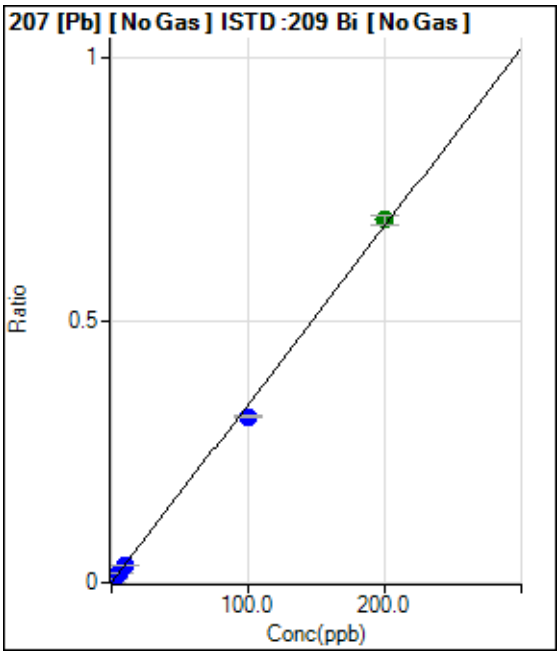
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 760.04 | 0.0003 | P | 10.5 |
| 2 | ☐ | 2.000 | 1.889 | 18217.02 | 0.0077 | P | 2.9 |
| 3 | ☐ | 5.000 | 4.817 | 45400.01 | 0.0190 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.731 | 88804.64 | 0.0381 | P | 0.4 |
| 5 | ☐ | 100.000 | 93.233 | 835642.52 | 0.3619 | P | 1.8 |
| 6 | ☐ | 200.000 | 203.403 | 1784618.99 | 0.7892 | A | 1.4 |

y = 0.0039 * x + 3.2307E-004
R = 0.9992
DL = 0.02627
BEC = 0.0833

Weight: <None>
Min Conc: <None>

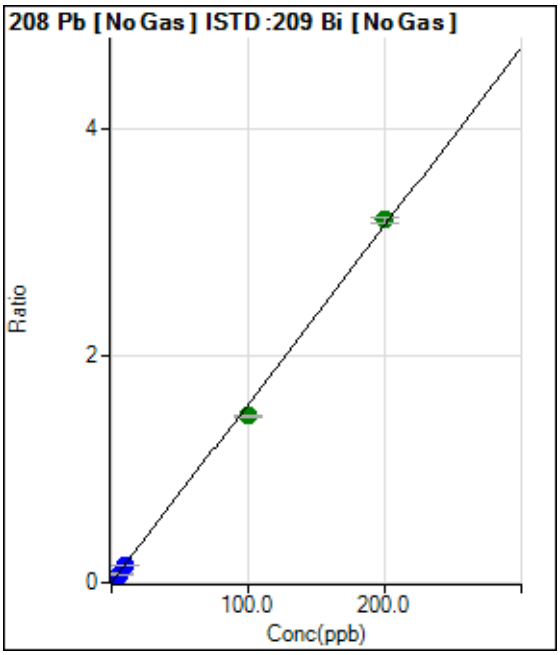



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 540.02 | 0.0002 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.925 | 16124.13 | 0.0068 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.972 | 40921.31 | 0.0171 | P | 2.1 |
| 4 | ☐ | 10.000 | 9.797 | 78209.70 | 0.0335 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.919 | 729857.98 | 0.3161 | P | 1.3 |
| 6 | ☐ | 200.000 | 203.552 | 1565199.09 | 0.6922 | A | 2.6 |

y = 0.0034 * x + 2.2900E-004
R = 0.9991
DL = 0.02776
BEC = 0.06736

Weight: <None>
Min Conc: <None>

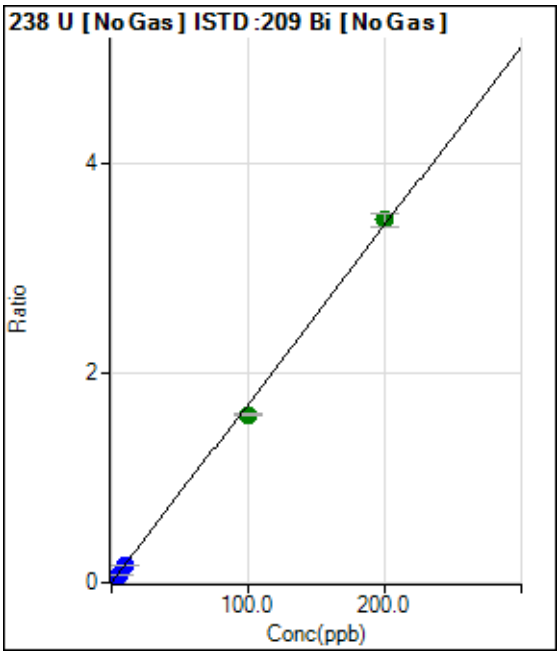
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2620.16 | 0.0011 | P | 3.0 |
| 2 | ☐ | 2.000 | 1.901 | 73697.17 | 0.0310 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.774 | 181670.33 | 0.0761 | P | 1.5 |
| 4 | ☐ | 10.000 | 9.665 | 356523.34 | 0.1529 | P | 1.1 |
| 5 | ☐ | 100.000 | 93.368 | 3387003.65 | 1.4670 | A | 1.9 |
| 6 | ☐ | 200.000 | 203.339 | 7220763.02 | 3.1935 | A | 1.5 |

y = 0.0157 * x + 0.0011
R = 0.9992
DL = 0.006314
BEC = 0.07085

Weight: <None>
Min Conc: <None>

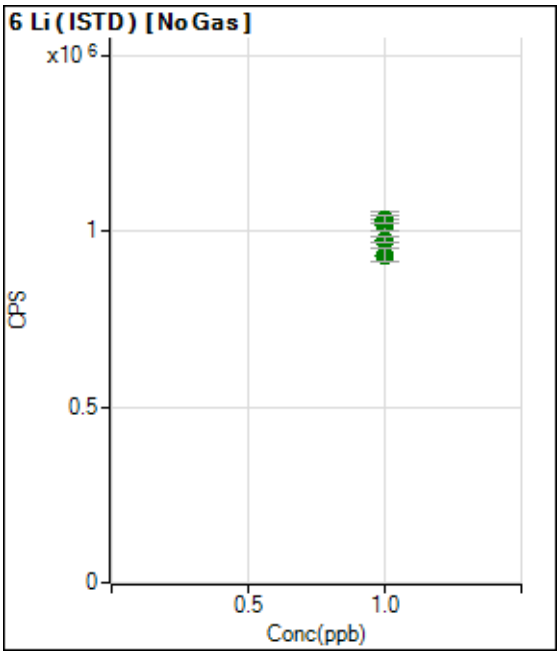



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 35.7 |
| 2 | ☐ | 2.000 | 1.841 | 74688.97 | 0.0314 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.607 | 187471.43 | 0.0785 | P | 0.5 |
| 4 | ☐ | 10.000 | 9.438 | 374880.46 | 0.1608 | P | 3.1 |
| 5 | ☐ | 100.000 | 93.946 | 3694641.51 | 1.6000 | A | 0.9 |
| 6 | ☐ | 200.000 | 203.067 | 7817840.09 | 3.4584 | A | 3.5 |

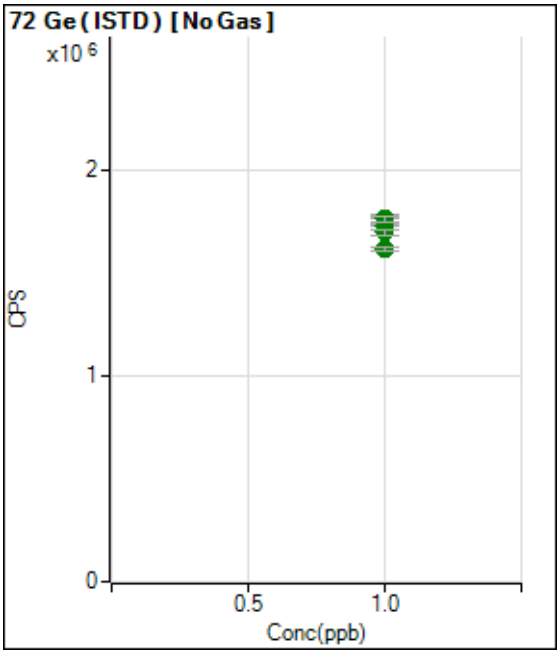
y = 0.0170 * x + 2.3983E-005
R = 0.9994
DL = 0.001509
BEC = 0.001408

Weight: <None>
Min Conc: <None>

Calibration for 024_ICV.d

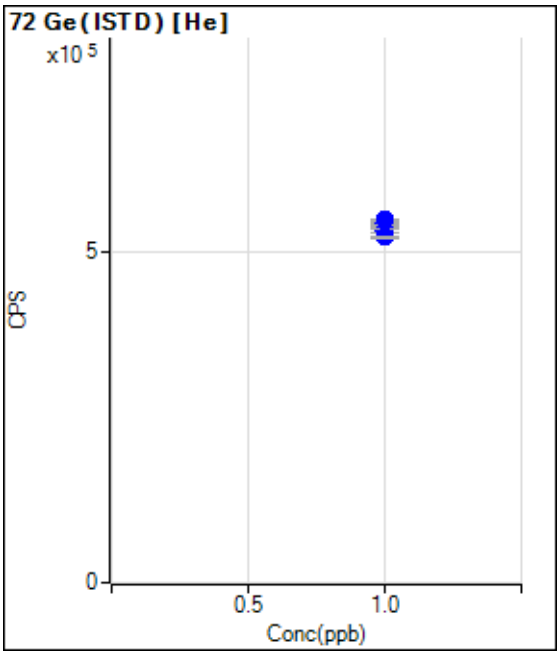



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1015680.29 | | A | 3.2 |
| 2 | ☐ | 1.000 | | 1017479.61 | | A | 3.2 |
| 3 | ☐ | 1.000 | | 1027534.57 | | A | 4.8 |
| 4 | ☐ | 1.000 | | 1031062.31 | | A | 2.1 |
| 5 | ☐ | 1.000 | | 974419.34 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 930358.24 | | A | 4.4 |

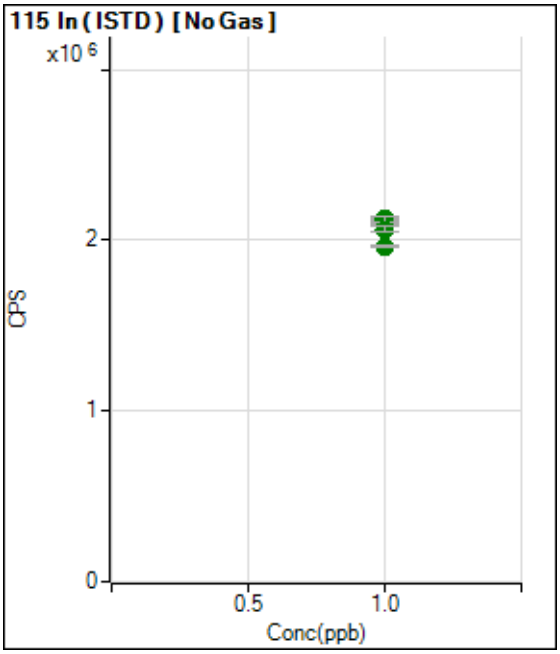



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1766562.79 | | A | 2.8 |
| 2 | ☐ | 1.000 | | 1749482.99 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 1732247.63 | | A | 2.1 |
| 4 | ☐ | 1.000 | | 1765154.09 | | A | 1.6 |
| 5 | ☐ | 1.000 | | 1702022.63 | | A | 1.6 |
| 6 | ☐ | 1.000 | | 1622238.36 | | A | 1.4 |

Calibration for 024_ICV.d

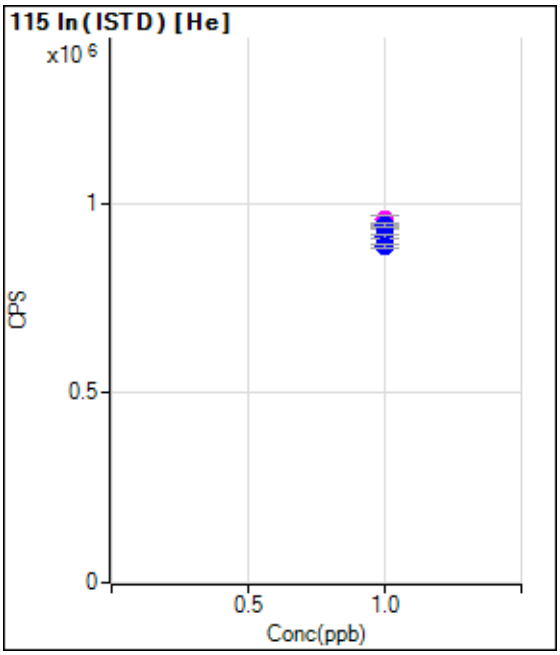



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 548875.87 | | P | 0.8 |
| 2 | ☐ | 1.000 | | 547102.11 | | P | 0.9 |
| 3 | ☐ | 1.000 | | 542931.65 | | P | 1.8 |
| 4 | ☐ | 1.000 | | 540043.83 | | P | 0.6 |
| 5 | ☐ | 1.000 | | 532668.18 | | P | 1.0 |
| 6 | ☐ | 1.000 | | 522558.05 | | P | 0.8 |

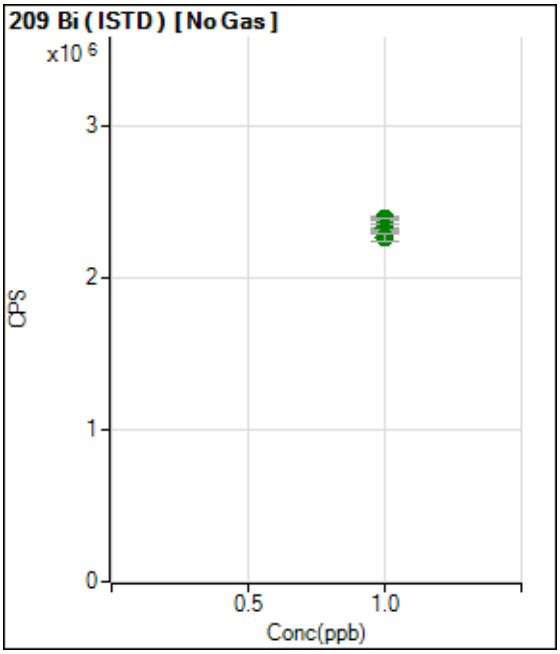



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2117300.96 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2097565.69 | | A | 0.5 |
| 3 | ☐ | 1.000 | | 2124607.94 | | A | 1.2 |
| 4 | ☐ | 1.000 | | 2120433.63 | | A | 1.8 |
| 5 | ☐ | 1.000 | | 2066252.67 | | A | 1.3 |
| 6 | ☐ | 1.000 | | 1963080.08 | | A | 0.4 |

Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 937310.27 | | P | 0.7 |
| 2 | ☐ | 1.000 | | 944141.79 | | P | 0.7 |
| 3 | ☐ | 1.000 | | 956709.14 | | M | 2.8 |
| 4 | ☐ | 1.000 | | 942224.75 | | P | 0.9 |
| 5 | ☐ | 1.000 | | 912474.90 | | P | 0.6 |
| 6 | ☐ | 1.000 | | 887284.66 | | P | 0.9 |



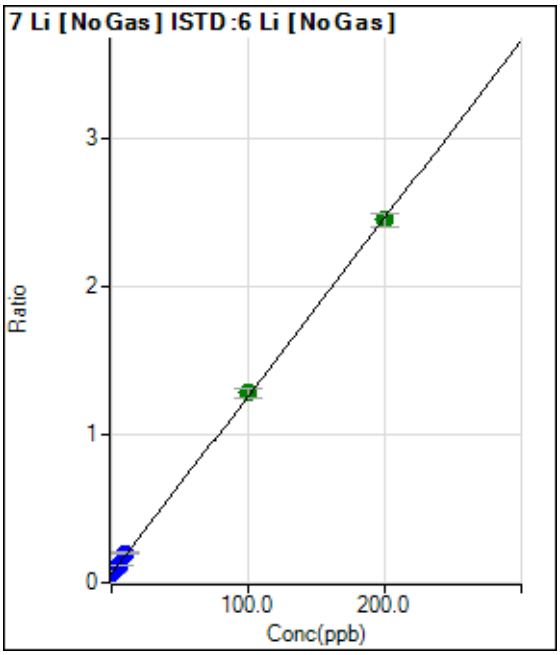

| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2356498.98 | | A | 2.4 |
| 2 | ☐ | 1.000 | | 2380832.25 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 2388726.89 | | A | 0.5 |
| 4 | ☐ | 1.000 | | 2332758.09 | | A | 1.9 |
| 5 | ☐ | 1.000 | | 2309062.78 | | A | 0.8 |
| 6 | ☐ | 1.000 | | 2261574.76 | | A | 2.3 |

Calibration for 112_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 105CALB.d | CAL BLK | 7/28/2020 3:30:53 PM |
| 2 | 106CALS.d | 2/10/200 | 7/28/2020 3:32:46 PM |
| 3 | 107CALS.d | 5/25/500 | 7/28/2020 3:34:40 PM |
| 4 | 108CALS.d | 10/50/100 | 7/28/2020 3:36:33 PM |
| 5 | 109CALS.d | 100/500/10K | 7/28/2020 3:38:26 PM |
| 6 | 110CALS.d | 200/1000/20K | 7/28/2020 3:40:14 PM |

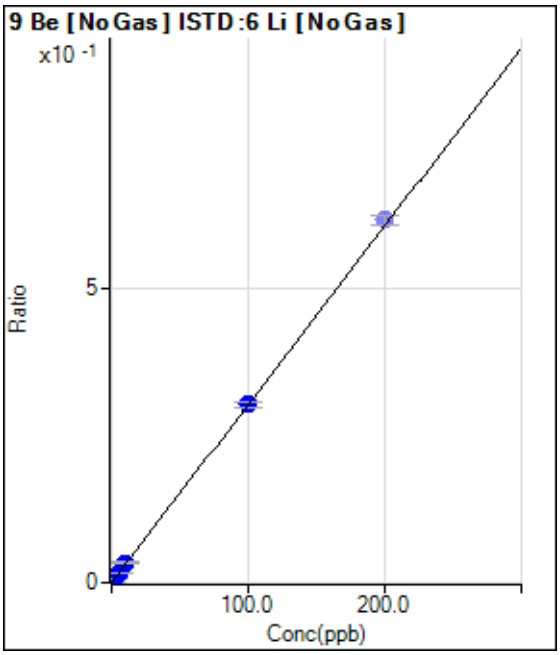
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57553.15 | 0.0602 | P | 2.9 |
| 2 | ☐ | 2.000 | 1.787 | 81043.87 | 0.0816 | P | 4.4 |
| 3 | ☐ | 5.000 | 5.071 | 117544.46 | 0.1210 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.513 | 192006.51 | 0.1983 | P | 4.7 |
| 5 | ☐ | 100.000 | 101.698 | 1205651.31 | 1.2801 | A | 4.9 |
| 6 | ☐ | 200.000 | 199.076 | 2210597.62 | 2.4482 | A | 3.4 |

y = 0.0120 * x + 0.0602
R = 0.9999
DL = 0.4418
BEC = 5.018

Weight: <None>
Min Conc: <None>

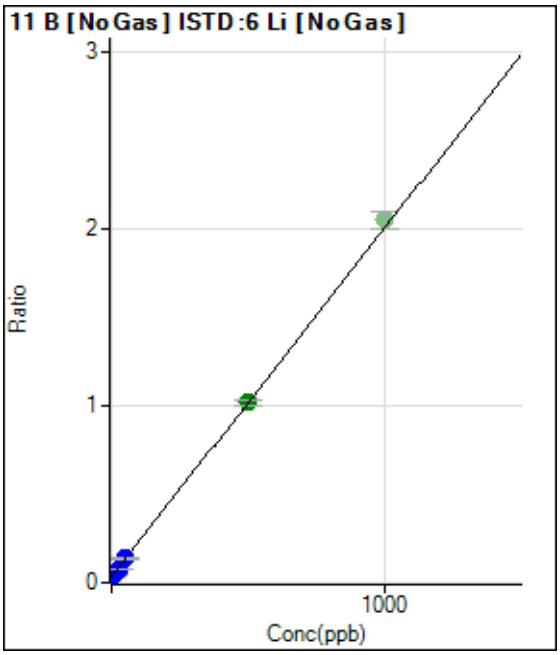



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 8.6 |
| 2 | ☐ | 2.000 | 1.928 | 5811.25 | 0.0059 | P | 6.3 |
| 3 | ☐ | 5.000 | 5.036 | 14804.60 | 0.0153 | P | 5.3 |
| 4 | ☐ | 10.000 | 11.212 | 32830.06 | 0.0339 | P | 7.1 |
| 5 | ☐ | 100.000 | 99.878 | 284652.50 | 0.3021 | P | 2.6 |
| 6 | ☑ | 200.000 | | 556169.85 | 0.6160 | P | 2.4 |

y = 0.0030 * x + 2.4330E-005
R = 0.9999
DL = 0.002077
BEC = 0.008044

Weight: <None>
Min Conc: <None>

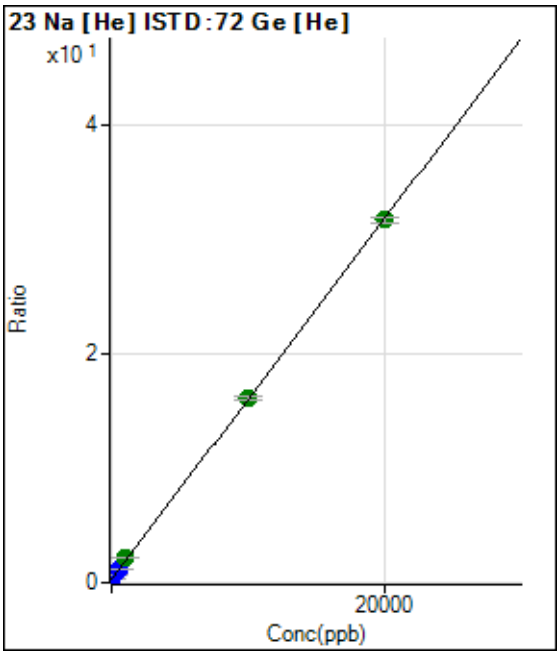
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34305.31 | 0.0359 | P | 5.1 |
| 2 | ☐ | 10.000 | 6.410 | 48169.57 | 0.0485 | P | 4.9 |
| 3 | ☐ | 25.000 | 22.078 | 77039.42 | 0.0794 | P | 5.4 |
| 4 | ☐ | 50.000 | 52.747 | 135237.47 | 0.1398 | P | 7.4 |
| 5 | ☐ | 500.000 | 499.943 | 961815.48 | 1.0209 | A | 2.8 |
| 6 | ☑ | 1000.000 | | 1854198.36 | 2.0542 | A | 4.6 |

y = 0.0020 * x + 0.0359
R = 0.9999
DL = 2.781
BEC = 18.22

Weight: <None>
Min Conc: <None>

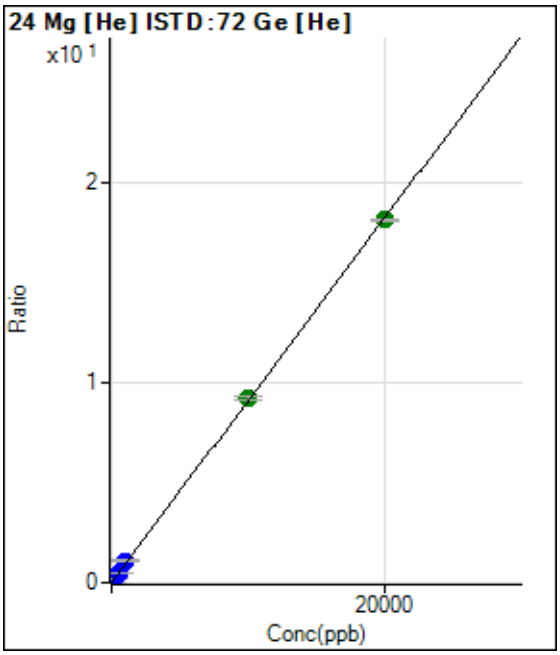



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 157304.74 | 0.2964 | P | 0.5 |
| 2 | ☐ | 200.000 | 215.953 | 336196.26 | 0.6358 | P | 1.6 |
| 3 | ☐ | 500.000 | 541.214 | 605356.17 | 1.1472 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1182.813 | 1122101.13 | 2.1557 | A | 3.6 |
| 5 | ☐ | 10000.00 | 10088.71 | 8249336.75 | 16.1558 | A | 1.9 |
| 6 | ☐ | 20000.00 | 19945.31 | 15860316.01 | 31.6504 | A | 1.4 |

y = 0.0016 * x + 0.2964
R = 1.0000
DL = 2.787
BEC = 188.5

Weight: <None>
Min Conc: <None>

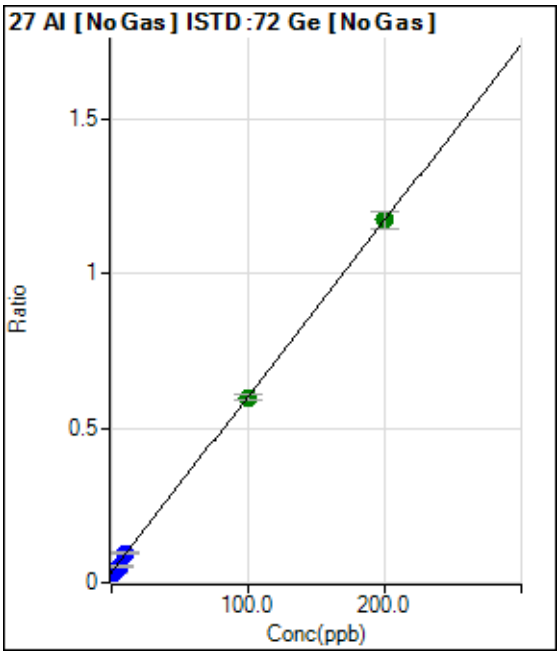
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 640.03 | 0.0012 | P | 29.6 |
| 2 | ☐ | 200.000 | 215.855 | 104582.22 | 0.1978 | P | 0.7 |
| 3 | ☐ | 500.000 | 544.027 | 262074.72 | 0.4967 | P | 1.6 |
| 4 | ☐ | 1000.000 | 1210.368 | 574291.26 | 1.1035 | P | 0.6 |
| 5 | ☐ | 10000.00 | 10154.76 | 4722820.87 | 9.2492 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19910.83 | 9087071.95 | 18.1340 | A | 0.2 |

y = 9.1070E-004 * x + 0.0012
R = 0.9999
DL = 1.174
BEC = 1.322

Weight: <None>
Min Conc: <None>

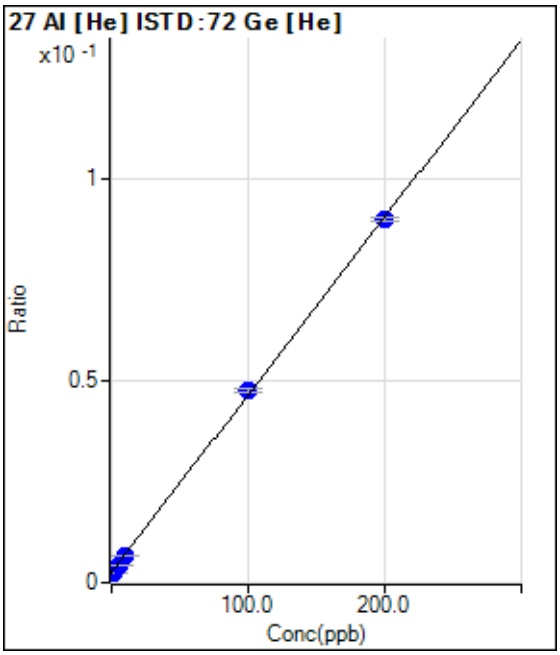



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57161.36 | 0.0340 | P | 1.3 |
| 2 | ☐ | 2.000 | -0.276 | 55488.26 | 0.0325 | P | 3.0 |
| 3 | ☐ | 5.000 | 3.270 | 89130.18 | 0.0526 | P | 4.1 |
| 4 | ☐ | 10.000 | 10.857 | 160870.45 | 0.0957 | P | 1.9 |
| 5 | ☐ | 100.000 | 99.507 | 993725.74 | 0.5994 | A | 2.1 |
| 6 | ☐ | 200.000 | 200.270 | 1897813.67 | 1.1719 | A | 4.5 |

y = 0.0057 * x + 0.0340
R = 0.9999
DL = 0.2381
BEC = 5.988

Weight: <None>
Min Conc: <None>

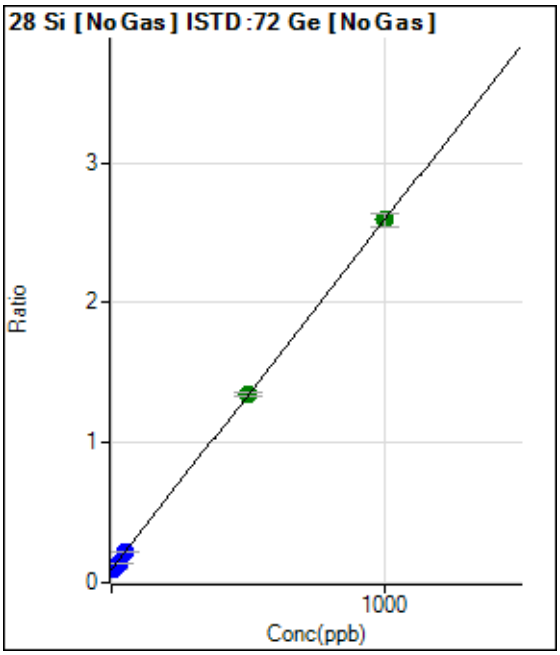
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1383.43 | 0.0026 | P | 9.3 |
| 2 | ☐ | 2.000 | -0.352 | 1296.75 | 0.0025 | P | 7.1 |
| 3 | ☐ | 5.000 | 3.651 | 2220.22 | 0.0042 | P | 3.5 |
| 4 | ☐ | 10.000 | 9.468 | 3517.17 | 0.0068 | P | 3.0 |
| 5 | ☐ | 100.000 | 102.950 | 24375.03 | 0.0477 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.609 | 44933.15 | 0.0897 | P | 1.2 |

y = 4.3835E-004 * x + 0.0026
R = 0.9998
DL = 1.661
BEC = 5.948

Weight: <None>
Min Conc: <None>

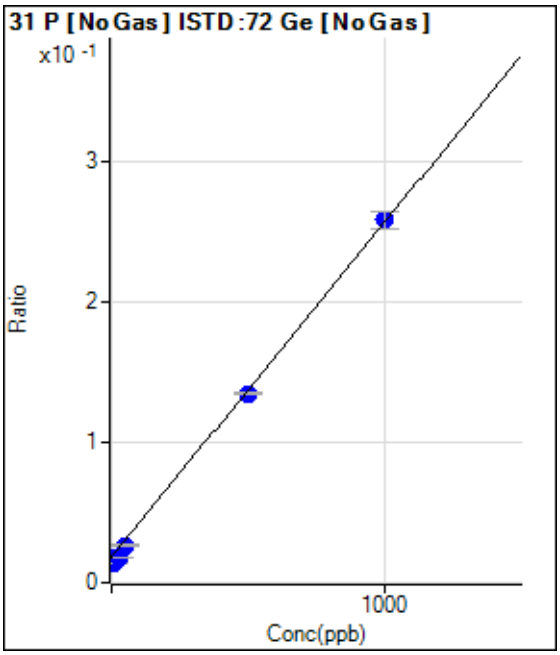



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 159662.85 | 0.0951 | P | 3.0 |
| 2 | ☐ | 10.000 | 2.651 | 173885.87 | 0.1017 | P | 2.1 |
| 3 | ☐ | 25.000 | 17.592 | 235486.14 | 0.1390 | P | 2.2 |
| 4 | ☐ | 50.000 | 50.689 | 372405.00 | 0.2216 | P | 3.3 |
| 5 | ☐ | 500.000 | 499.050 | 2222547.88 | 1.3406 | A | 2.1 |
| 6 | ☐ | 1000.000 | 1000.699 | 4198607.86 | 2.5926 | A | 4.0 |

y = 0.0025 * x + 0.0951
R = 1.0000
DL = 3.408
BEC = 38.09

Weight: <None>
Min Conc: <None>

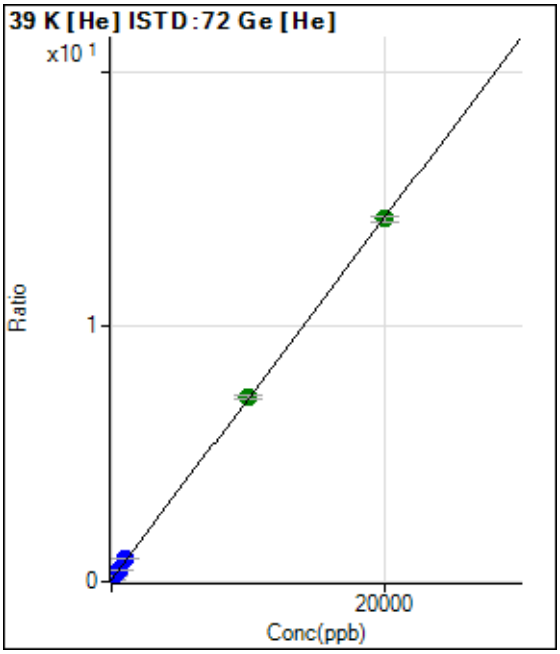
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 30734.42 | 0.0183 | P | 1.7 |
| 2 | ☐ | 10.000 | -20.428 | 22965.93 | 0.0134 | P | 3.0 |
| 3 | ☐ | 25.000 | -1.552 | 30383.69 | 0.0179 | P | 1.4 |
| 4 | ☐ | 50.000 | 34.740 | 44645.69 | 0.0266 | P | 3.7 |
| 5 | ☐ | 500.000 | 488.484 | 223203.23 | 0.1346 | P | 0.5 |
| 6 | ☐ | 1000.000 | 1007.489 | 418114.59 | 0.2582 | P | 4.5 |

y = 2.3812E-004 * x + 0.0183
R = 0.9997
DL = 3.849
BEC = 76.83

Weight: <None>
Min Conc: <None>

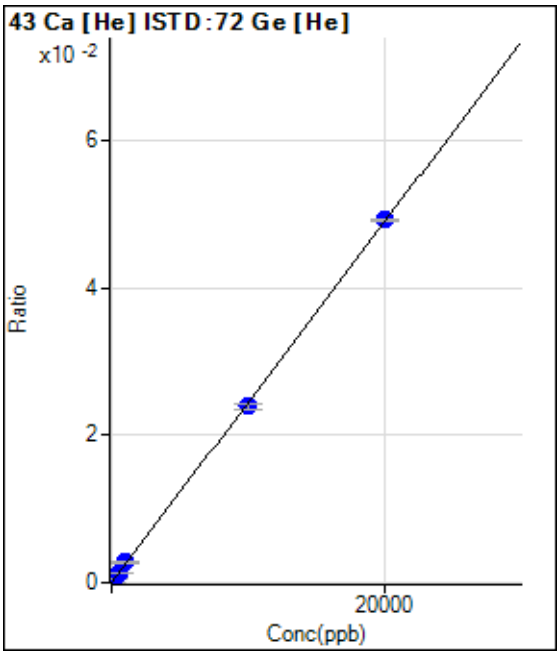



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43562.27 | 0.0821 | P | 1.1 |
| 2 | ☐ | 200.000 | 220.650 | 126145.84 | 0.2386 | P | 1.2 |
| 3 | ☐ | 500.000 | 540.978 | 245789.48 | 0.4657 | P | 1.1 |
| 4 | ☐ | 1000.000 | 1172.611 | 475484.84 | 0.9137 | P | 1.5 |
| 5 | ☐ | 10000.00 | 10080.21 | 3692880.05 | 7.2307 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19950.03 | 7130939.06 | 14.2301 | A | 1.4 |

y = 7.0917E-004 * x + 0.0821
R = 1.0000
DL = 3.714
BEC = 115.7

Weight: <None>
Min Conc: <None>

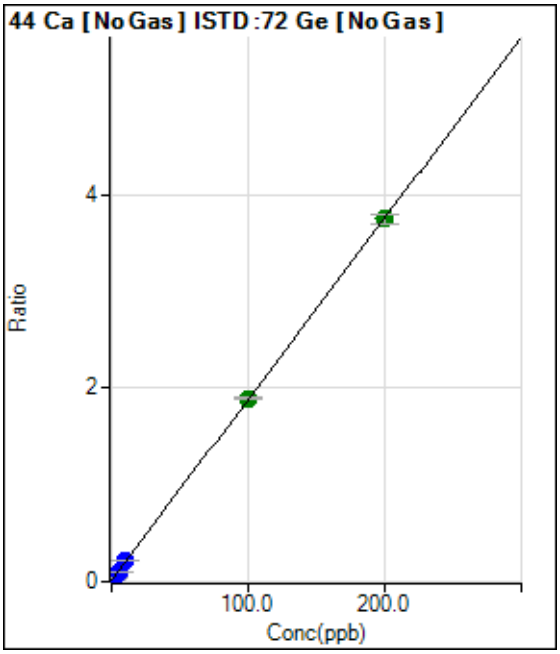
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16.67 | 0.0000 | P | 91.5 |
| 2 | ☐ | 200.000 | 211.308 | 290.01 | 0.0005 | P | 19.0 |
| 3 | ☐ | 500.000 | 531.481 | 703.36 | 0.0013 | P | 6.6 |
| 4 | ☐ | 1000.000 | 1124.964 | 1450.11 | 0.0028 | P | 8.1 |
| 5 | ☐ | 10000.00 | 9762.480 | 12232.32 | 0.0239 | P | 3.2 |
| 6 | ☐ | 20000.00 | 20111.61 | 24705.94 | 0.0493 | P | 0.4 |

y = 2.4499E-006 * x + 3.1186E-005
R = 0.9999
DL = 34.96
BEC = 12.73

Weight: <None>
Min Conc: <None>

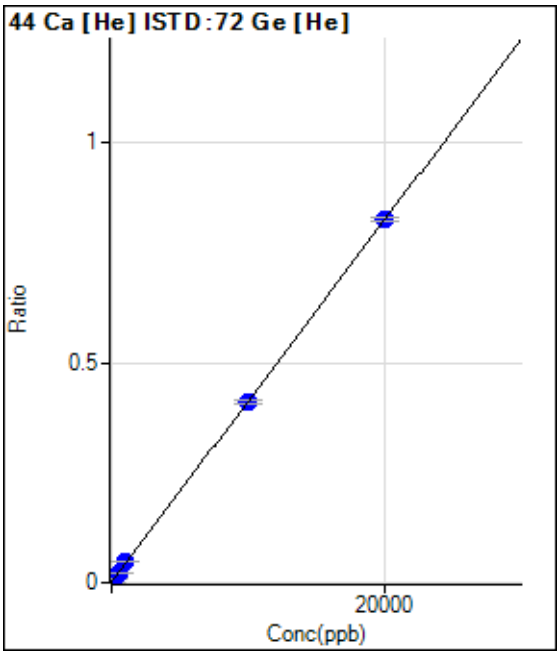



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23617.25 | 0.0141 | P | 2.5 |
| 2 | ☐ | 2.000 | 1.889 | 84512.71 | 0.0494 | P | 2.3 |
| 3 | ☐ | 5.000 | 5.036 | 183637.38 | 0.1084 | P | 0.9 |
| 4 | ☐ | 10.000 | 11.184 | 375528.85 | 0.2235 | P | 3.4 |
| 5 | ☐ | 100.000 | 100.461 | 3142422.87 | 1.8951 | A | 1.1 |
| 6 | ☐ | 200.000 | 199.711 | 6079906.99 | 3.7535 | A | 2.6 |

y = 0.0187 * x + 0.0141
R = 1.0000
DL = 0.05687
BEC = 0.7506

Weight: <None>
Min Conc: <None>

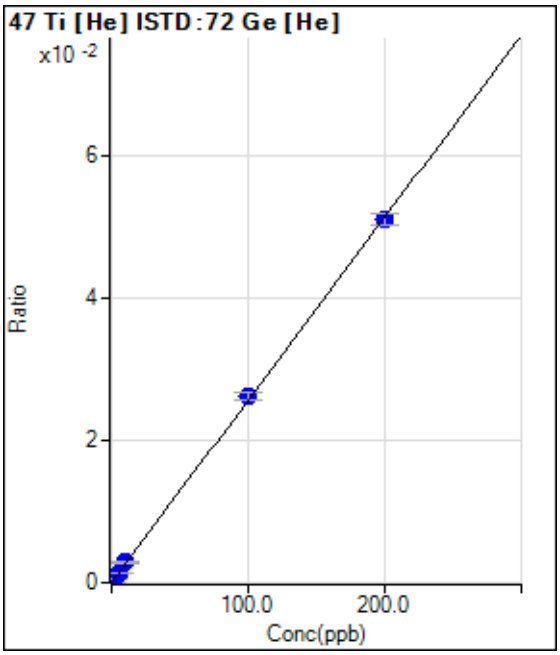
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 593.36 | 0.0011 | P | 6.9 |
| 2 | ☐ | 200.000 | 183.786 | 4590.88 | 0.0087 | P | 5.9 |
| 3 | ☐ | 500.000 | 507.334 | 11611.82 | 0.0220 | P | 2.4 |
| 4 | ☐ | 1000.000 | 1130.330 | 24802.77 | 0.0477 | P | 1.1 |
| 5 | ☐ | 10000.00 | 9960.922 | 210046.45 | 0.4113 | P | 1.7 |
| 6 | ☐ | 20000.00 | 20013.00 | 413499.04 | 0.8252 | P | 1.2 |

y = 4.1175E-005 * x + 0.0011
R = 1.0000
DL = 5.615
BEC = 27.16

Weight: <None>
Min Conc: <None>

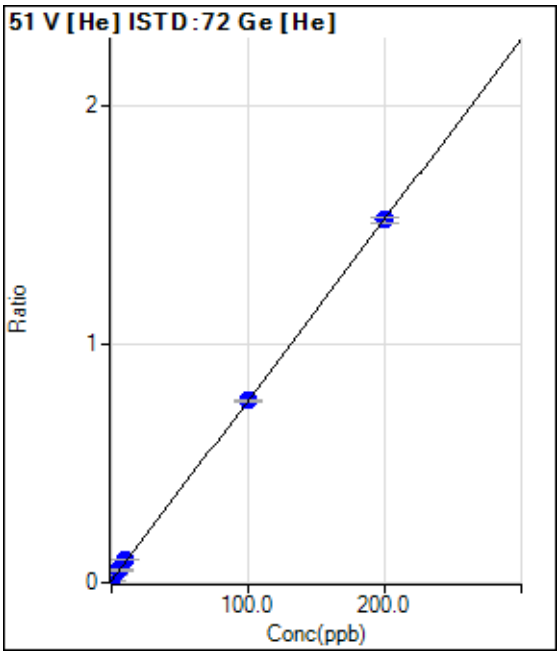



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 1.920 | 263.34 | 0.0005 | P | 10.0 |
| 3 | ☐ | 5.000 | 5.306 | 720.04 | 0.0014 | P | 10.4 |
| 4 | ☐ | 10.000 | 11.448 | 1530.12 | 0.0029 | P | 7.3 |
| 5 | ☐ | 100.000 | 102.271 | 13380.11 | 0.0262 | P | 3.9 |
| 6 | ☐ | 200.000 | 198.785 | 25524.15 | 0.0509 | P | 3.0 |

y = 2.5620E-004 * x + 6.2258E-006
R = 0.9999
DL = 0.1263
BEC = 0.0243

Weight: <None>
Min Conc: <None>

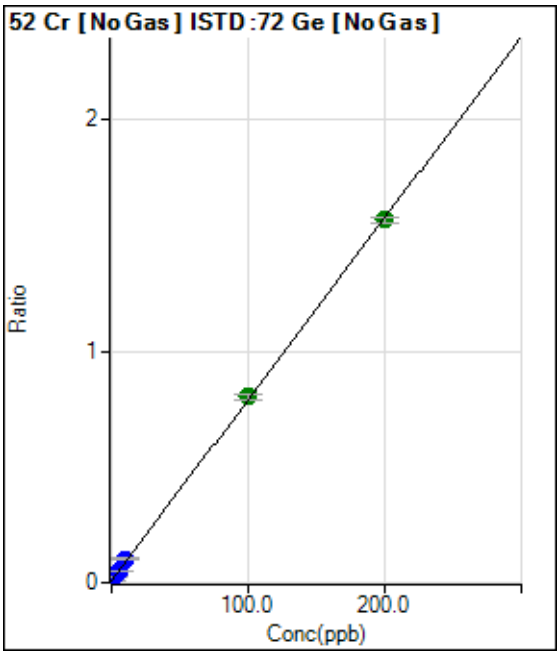
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 4168.44 | 0.0079 | P | 2.1 |
| 2 | ☐ | 2.000 | 2.755 | 15200.69 | 0.0287 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.931 | 27878.34 | 0.0528 | P | 1.4 |
| 4 | ☐ | 10.000 | 12.216 | 52301.63 | 0.1005 | P | 0.5 |
| 5 | ☐ | 100.000 | 99.962 | 391110.69 | 0.7659 | P | 1.4 |
| 6 | ☐ | 200.000 | 199.877 | 763522.64 | 1.5237 | P | 1.8 |

y = 0.0076 * x + 0.0079
R = 1.0000
DL = 0.06477
BEC = 1.036

Weight: <None>
Min Conc: <None>

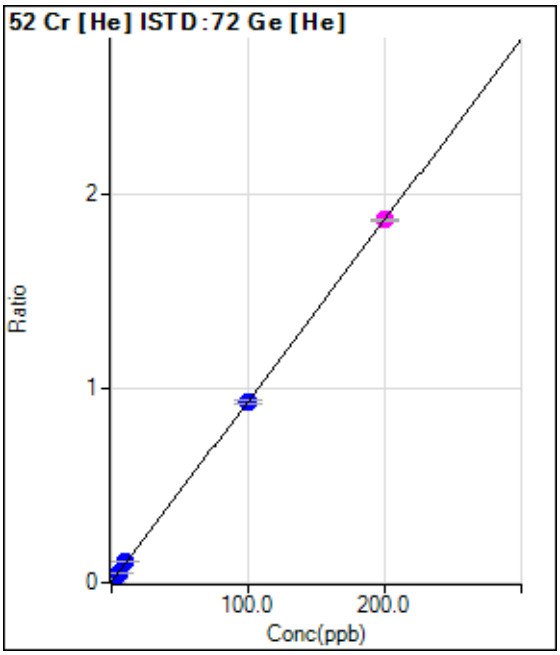



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13490.19 | 0.0080 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.666 | 49402.71 | 0.0289 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.797 | 90502.34 | 0.0534 | P | 1.7 |
| 4 | ☐ | 10.000 | 12.204 | 174069.94 | 0.1035 | P | 2.5 |
| 5 | ☐ | 100.000 | 101.630 | 1332066.31 | 0.8035 | A | 2.9 |
| 6 | ☐ | 200.000 | 199.048 | 2536885.69 | 1.5659 | A | 1.4 |

y = 0.0078 * x + 0.0080
R = 0.9999
DL = 0.08659
BEC = 1.026

Weight: <None>
Min Conc: <None>

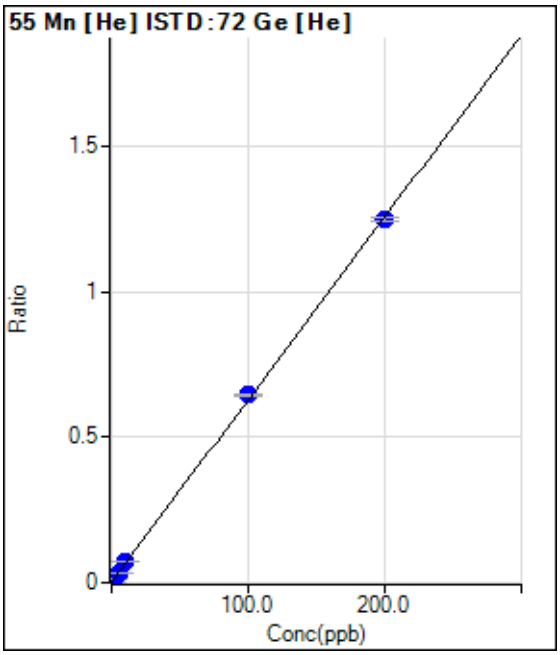
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1306.76 | 0.0025 | P | 8.3 |
| 2 | ☐ | 2.000 | 1.970 | 11031.32 | 0.0209 | P | 1.6 |
| 3 | ☐ | 5.000 | 5.162 | 26739.79 | 0.0507 | P | 3.5 |
| 4 | ☐ | 10.000 | 11.303 | 56233.15 | 0.1081 | P | 2.8 |
| 5 | ☐ | 100.000 | 99.578 | 476314.49 | 0.9328 | P | 1.4 |
| 6 | ☐ | 200.000 | 200.142 | 938225.48 | 1.8723 | M | 0.8 |

y = 0.0093 * x + 0.0025
R = 1.0000
DL = 0.06577
BEC = 0.2636

Weight: <None>
Min Conc: <None>

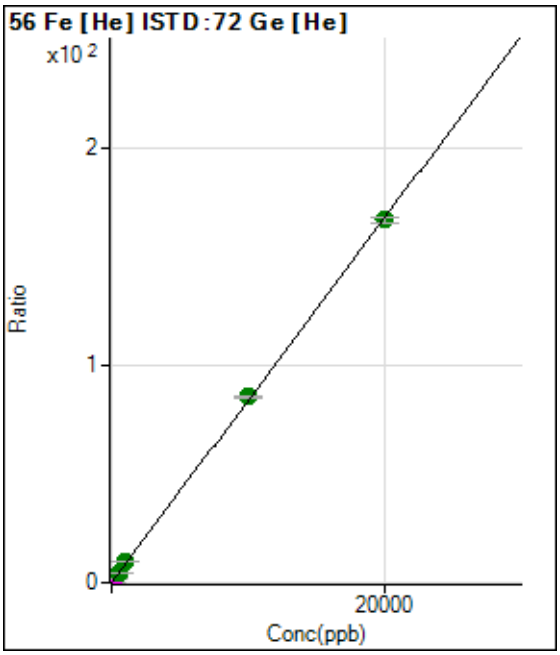



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1180.07 | 0.0022 | P | 10.6 |
| 2 | ☐ | 2.000 | 2.008 | 7832.39 | 0.0148 | P | 4.7 |
| 3 | ☐ | 5.000 | 5.009 | 17741.81 | 0.0336 | P | 3.7 |
| 4 | ☐ | 10.000 | 11.429 | 38451.51 | 0.0739 | P | 1.5 |
| 5 | ☐ | 100.000 | 102.597 | 329643.51 | 0.6455 | P | 0.3 |
| 6 | ☐ | 200.000 | 198.630 | 625203.90 | 1.2477 | P | 1.2 |

y = 0.0063 * x + 0.0022
R = 0.9999
DL = 0.1132
BEC = 0.3545

Weight: <None>
Min Conc: <None>

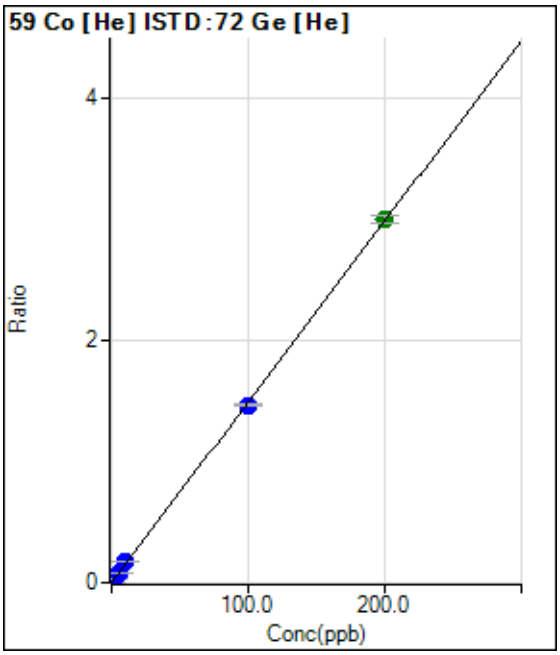
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 5481.18 | 0.0103 | P | 2.8 |
| 2 | ☐ | 200.000 | 209.851 | 935949.51 | 1.7700 | M | 1.4 |
| 3 | ☐ | 500.000 | 533.215 | 2364601.68 | 4.4815 | A | 1.7 |
| 4 | ☐ | 1000.000 | 1155.871 | 5049631.49 | 9.7026 | A | 1.1 |
| 5 | ☐ | 10000.00 | 10183.07 | 43606426.01 | 85.3982 | A | 1.4 |
| 6 | ☐ | 20000.00 | 19899.74 | 83620213.75 | 166.875 | A | 1.6 |

y = 0.0084 * x + 0.0103
R = 0.9999
DL = 0.1027
BEC = 1.231

Weight: <None>
Min Conc: <None>

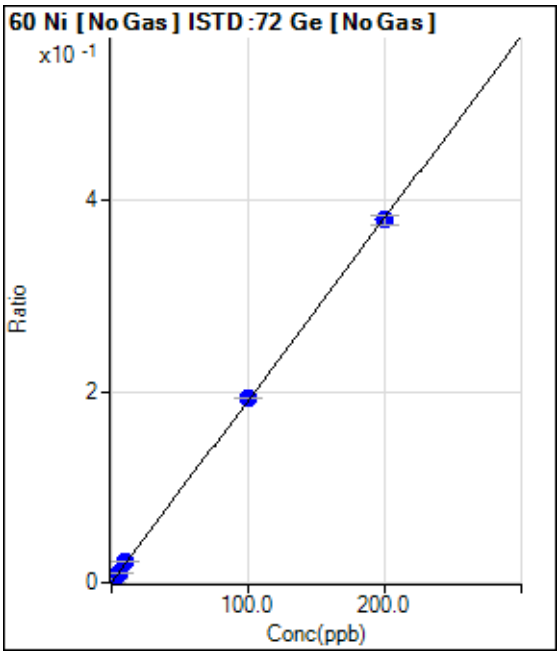



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 256.67 | 0.0005 | P | 19.0 |
| 2 | ☐ | 2.000 | 2.032 | 16249.96 | 0.0307 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.071 | 40089.48 | 0.0760 | P | 2.3 |
| 4 | ☐ | 10.000 | 11.260 | 87472.08 | 0.1681 | P | 0.8 |
| 5 | ☐ | 100.000 | 98.225 | 746821.66 | 1.4625 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.822 | 1498047.32 | 2.9896 | A | 2.1 |

y = 0.0149 * x + 4.8288E-004
R = 0.9999
DL = 0.01848
BEC = 0.03244

Weight: <None>
Min Conc: <None>

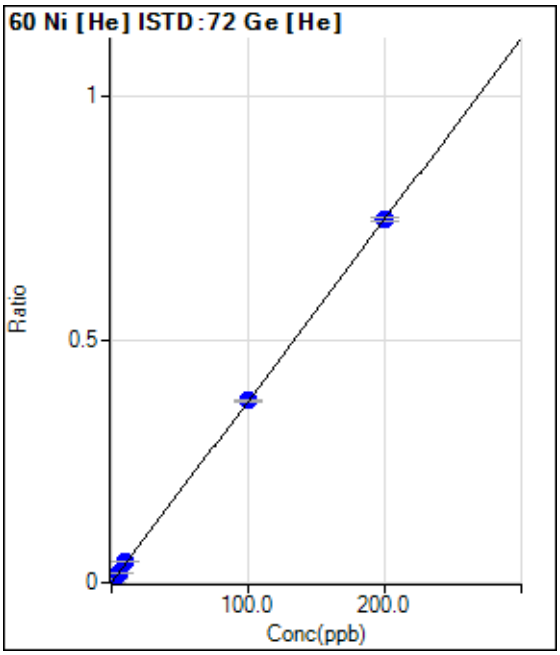
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 313.34 | 0.0002 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.123 | 7242.07 | 0.0042 | P | 2.0 |
| 3 | ☐ | 5.000 | 5.298 | 17431.53 | 0.0103 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.780 | 38063.69 | 0.0226 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.634 | 321595.35 | 0.1939 | P | 0.2 |
| 6 | ☐ | 200.000 | 199.085 | 615081.67 | 0.3797 | P | 2.4 |

y = 0.0019 * x + 1.8664E-004
R = 0.9999
DL = 0.01708
BEC = 0.0979

Weight: <None>
Min Conc: <None>

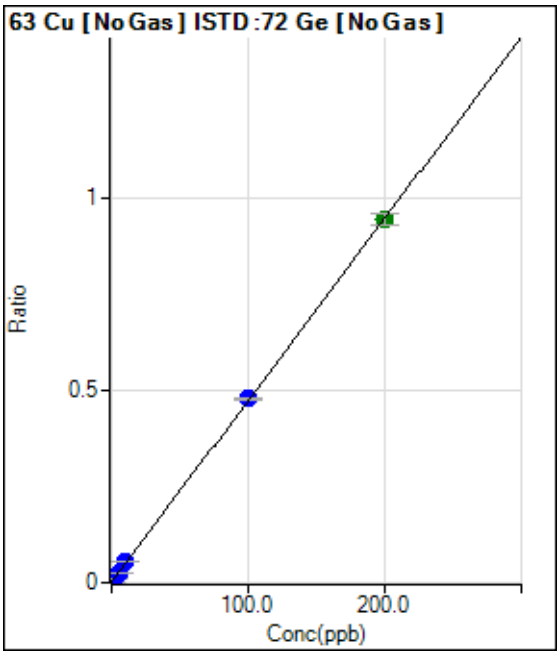



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 150.00 | 0.0003 | P | 34.4 |
| 2 | ☐ | 2.000 | 2.032 | 4160.72 | 0.0079 | P | 9.7 |
| 3 | ☐ | 5.000 | 5.282 | 10557.62 | 0.0200 | P | 2.7 |
| 4 | ☐ | 10.000 | 11.857 | 23186.73 | 0.0446 | P | 2.8 |
| 5 | ☐ | 100.000 | 100.077 | 190956.21 | 0.3740 | P | 1.6 |
| 6 | ☐ | 200.000 | 199.861 | 374109.62 | 0.7466 | P | 1.0 |

y = 0.0037 * x + 2.8187E-004
R = 1.0000
DL = 0.07796
BEC = 0.07548

Weight: <None>
Min Conc: <None>

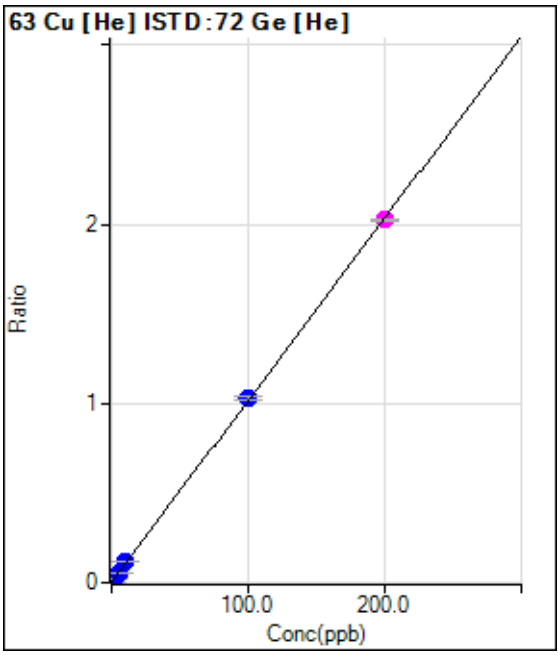
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1650.13 | 0.0010 | P | 10.5 |
| 2 | ☐ | 2.000 | 2.110 | 18706.55 | 0.0109 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.254 | 43671.07 | 0.0258 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.722 | 94639.95 | 0.0563 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.024 | 792086.66 | 0.4777 | P | 0.5 |
| 6 | ☐ | 200.000 | 199.394 | 1525520.13 | 0.9418 | A | 3.0 |

y = 0.0047 * x + 9.8236E-004
R = 1.0000
DL = 0.06549
BEC = 0.2082

Weight: <None>
Min Conc: <None>

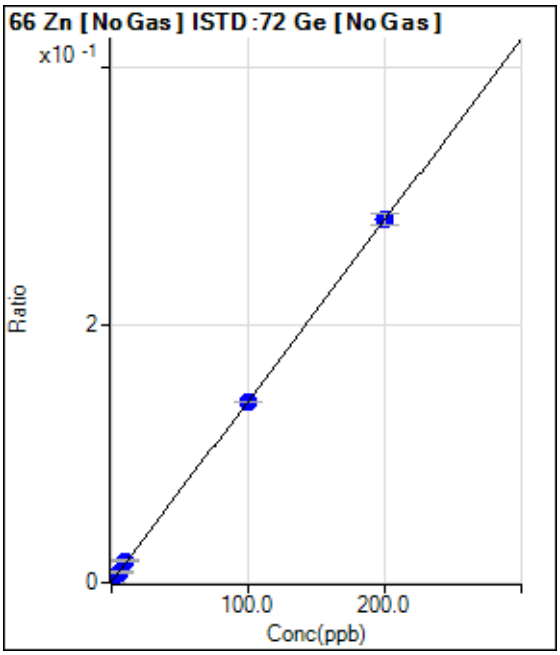



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1030.05 | 0.0019 | P | 1.3 |
| 2 | ☐ | 2.000 | 2.052 | 12035.53 | 0.0228 | P | 3.9 |
| 3 | ☐ | 5.000 | 5.210 | 28924.86 | 0.0548 | P | 2.4 |
| 4 | ☐ | 10.000 | 11.638 | 62490.70 | 0.1201 | P | 0.6 |
| 5 | ☐ | 100.000 | 101.276 | 525850.11 | 1.0299 | P | 2.4 |
| 6 | ☐ | 200.000 | 199.274 | 1014546.60 | 2.0246 | M | 0.8 |

y = 0.0102 * x + 0.0019
R = 0.9999
DL = 0.007658
BEC = 0.1912

Weight: <None>
Min Conc: <None>

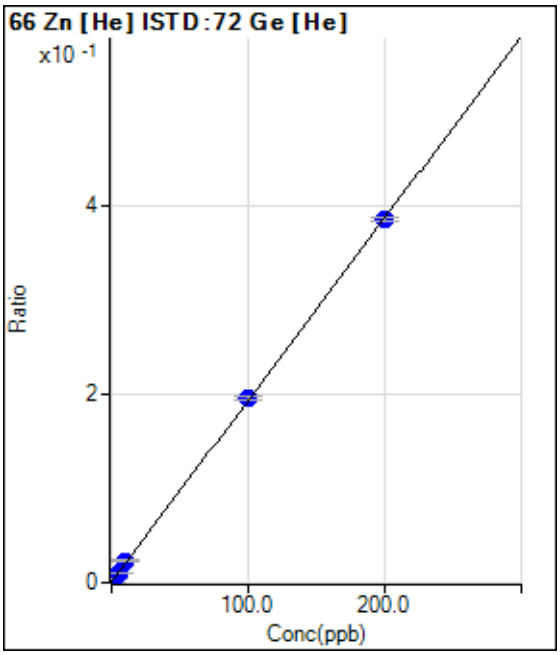
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 933.39 | 0.0006 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.320 | 6525.03 | 0.0038 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.335 | 13647.18 | 0.0081 | P | 6.6 |
| 4 | ☐ | 10.000 | 11.816 | 28837.85 | 0.0172 | P | 0.7 |
| 5 | ☐ | 100.000 | 99.616 | 232968.88 | 0.1405 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.090 | 456141.96 | 0.2816 | P | 3.1 |

y = 0.0014 * x + 5.5656E-004
R = 1.0000
DL = 0.1962
BEC = 0.3962

Weight: <None>
Min Conc: <None>

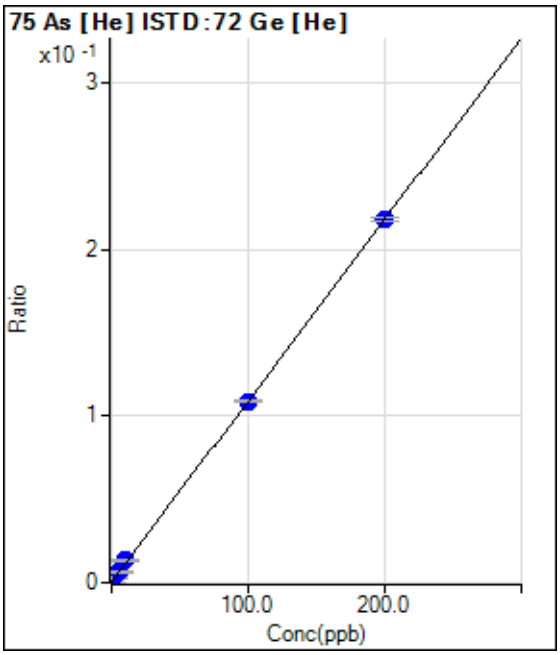



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 296.68 | 0.0006 | P | 23.8 |
| 2 | ☐ | 2.000 | 2.221 | 2556.94 | 0.0048 | P | 16.5 |
| 3 | ☐ | 5.000 | 5.124 | 5504.54 | 0.0104 | P | 5.7 |
| 4 | ☐ | 10.000 | 11.674 | 12002.16 | 0.0231 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.500 | 100181.30 | 0.1962 | P | 1.7 |
| 6 | ☐ | 200.000 | 199.161 | 192641.95 | 0.3844 | P | 1.0 |

y = 0.0019 * x + 5.5894E-004
R = 0.9999
DL = 0.2068
BEC = 0.29

Weight: <None>
Min Conc: <None>

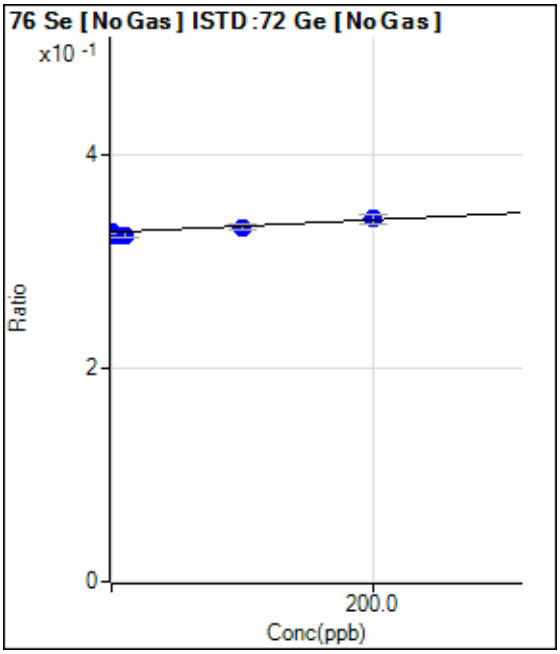
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 203.34 | 0.0004 | P | 22.8 |
| 2 | ☐ | 2.000 | 2.312 | 1532.32 | 0.0029 | P | 4.0 |
| 3 | ☐ | 5.000 | 5.499 | 3358.22 | 0.0064 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.989 | 6985.18 | 0.0134 | P | 2.3 |
| 5 | ☐ | 100.000 | 99.905 | 55675.38 | 0.1090 | P | 0.4 |
| 6 | ☐ | 200.000 | 199.932 | 109139.12 | 0.2178 | P | 1.1 |

y = 0.0011 * x + 3.8370E-004
R = 1.0000
DL = 0.2418
BEC = 0.3528

Weight: <None>
Min Conc: <None>

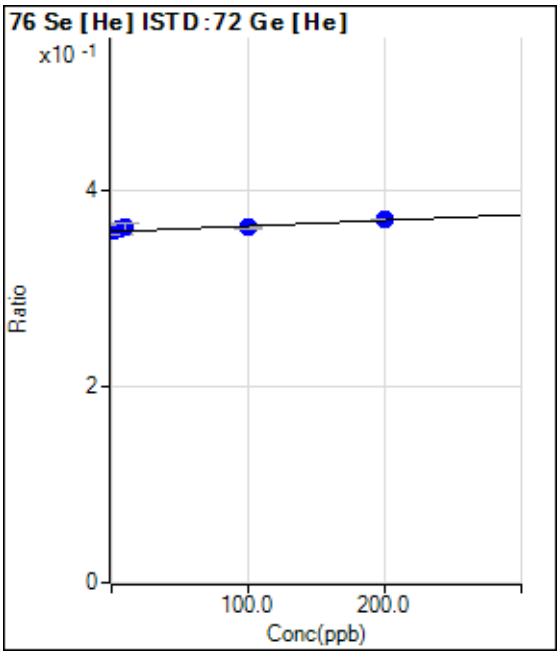



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 549267.10 | 0.3269 | P | 0.2 |
| 2 | ☐ | 2.000 | -63.603 | 552711.98 | 0.3232 | P | 2.0 |
| 3 | ☐ | 5.000 | -58.602 | 548166.28 | 0.3235 | P | 1.2 |
| 4 | ☐ | 10.000 | -38.740 | 545634.03 | 0.3246 | P | 2.1 |
| 5 | ☐ | 100.000 | 80.188 | 549682.96 | 0.3315 | P | 1.6 |
| 6 | ☐ | 200.000 | 214.589 | 549654.39 | 0.3393 | P | 2.7 |

y = 5.8100E-005 * x + 0.3269
R = 0.9746
DL = 28.38
BEC = 5626

Weight: <None>
Min Conc: <None>

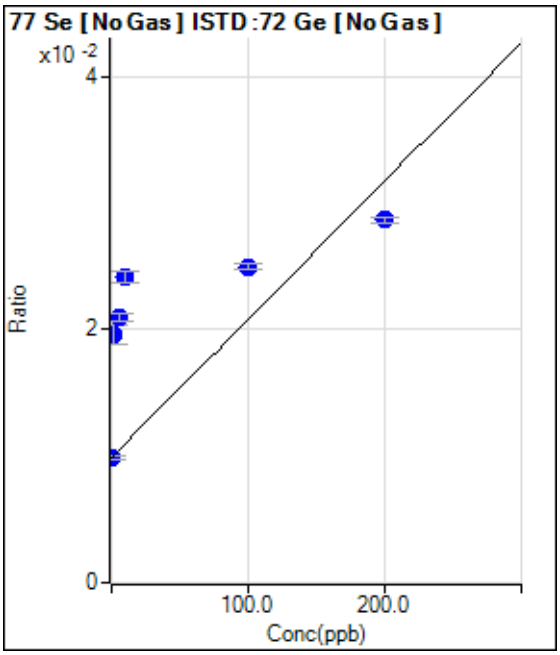
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 189505.80 | 0.3570 | P | 0.6 |
| 2 | ☐ | 2.000 | 30.900 | 189726.88 | 0.3588 | P | 1.5 |
| 3 | ☐ | 5.000 | 36.376 | 189489.47 | 0.3591 | P | 2.5 |
| 4 | ☐ | 10.000 | 81.114 | 188254.13 | 0.3617 | P | 1.8 |
| 5 | ☐ | 100.000 | 77.348 | 184631.09 | 0.3615 | P | 0.6 |
| 6 | ☐ | 200.000 | 206.697 | 184933.13 | 0.3691 | P | 0.2 |

y = 5.8148E-005 * x + 0.3570
R = 0.9191
DL = 112.5
BEC = 6140

Weight: <None>
Min Conc: <None>

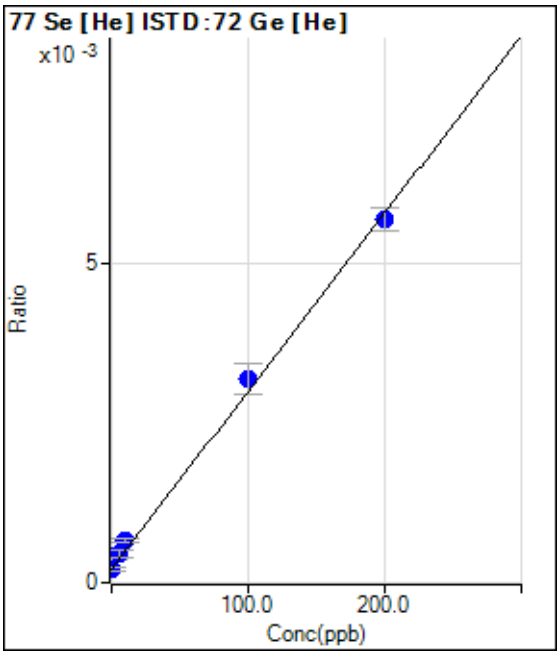



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16660.60 | 0.0099 | P | 3.2 |
| 2 | ☐ | 2.000 | 88.567 | 33468.87 | 0.0196 | P | 8.1 |
| 3 | ☐ | 5.000 | 101.550 | 35590.77 | 0.0210 | P | 2.6 |
| 4 | ☐ | 10.000 | 129.876 | 40504.82 | 0.0241 | P | 3.8 |
| 5 | ☐ | 100.000 | 137.963 | 41414.00 | 0.0250 | P | 2.0 |
| 6 | ☐ | 200.000 | 171.745 | 46446.90 | 0.0287 | P | 1.8 |

y = 1.0917E-004 * x + 0.0099
R = 0.6982
DL = 8.771
BEC = 90.85

Weight: <None>
Min Conc: <None>

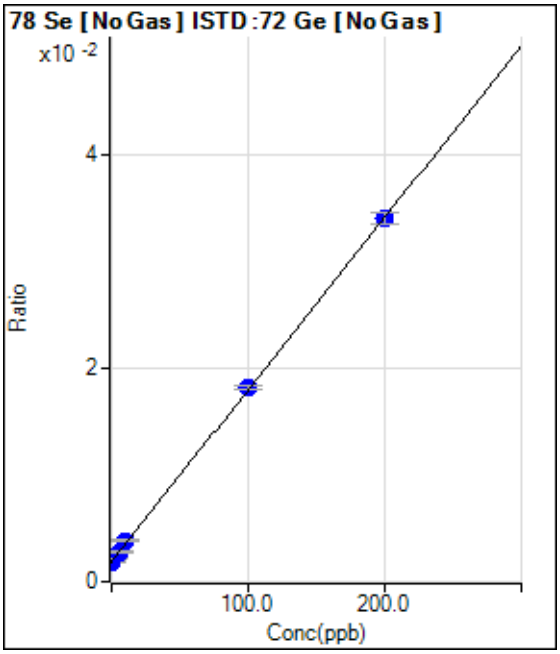
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 113.33 | 0.0002 | P | 23.4 |
| 2 | ☐ | 2.000 | 7.474 | 223.34 | 0.0004 | P | 24.7 |
| 3 | ☐ | 5.000 | 8.382 | 236.68 | 0.0004 | P | 22.6 |
| 4 | ☐ | 10.000 | 16.226 | 346.68 | 0.0007 | P | 7.9 |
| 5 | ☐ | 100.000 | 106.447 | 1626.79 | 0.0032 | P | 15.1 |
| 6 | ☐ | 200.000 | 196.326 | 2850.35 | 0.0057 | P | 6.2 |

y = 2.7886E-005 * x + 2.1389E-004
R = 0.9991
DL = 5.375
BEC = 7.67

Weight: <None>
Min Conc: <None>

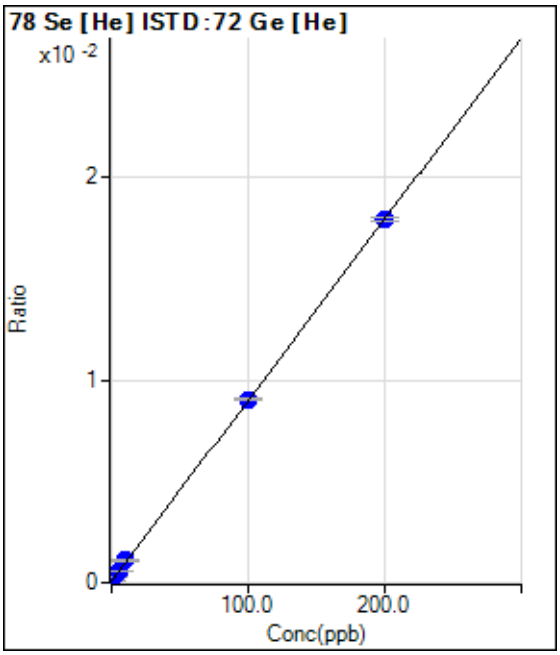



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3170.43 | 0.0019 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.381 | 3883.96 | 0.0023 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.341 | 4650.90 | 0.0027 | P | 8.6 |
| 4 | ☐ | 10.000 | 11.928 | 6398.29 | 0.0038 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.043 | 30090.66 | 0.0181 | P | 2.3 |
| 6 | ☐ | 200.000 | 199.370 | 55026.19 | 0.0340 | P | 3.2 |

y = 1.6094E-004 * x + 0.0019
R = 1.0000
DL = 2.035
BEC = 11.72

Weight: <None>
Min Conc: <None>

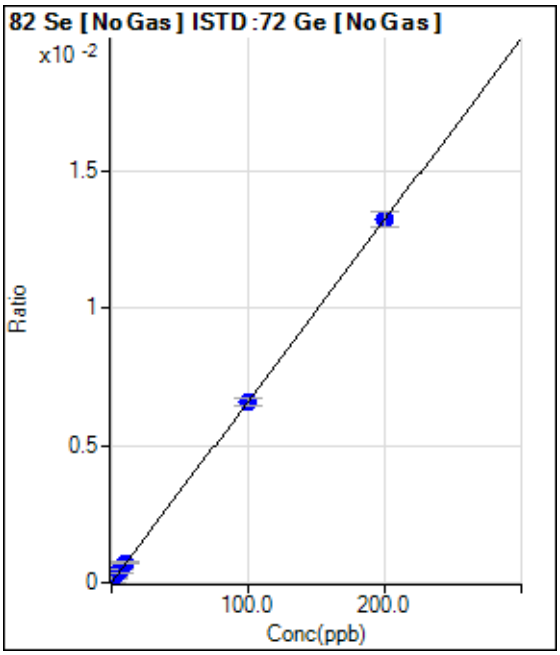
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 35.9 |
| 2 | ☐ | 2.000 | 2.164 | 135.33 | 0.0003 | P | 14.4 |
| 3 | ☐ | 5.000 | 5.844 | 308.67 | 0.0006 | P | 4.5 |
| 4 | ☐ | 10.000 | 11.645 | 574.01 | 0.0011 | P | 2.9 |
| 5 | ☐ | 100.000 | 100.391 | 4610.13 | 0.0090 | P | 1.1 |
| 6 | ☐ | 200.000 | 199.699 | 8967.68 | 0.0179 | P | 1.1 |

y = 8.9298E-005 * x + 6.2935E-005
R = 1.0000
DL = 0.759
BEC = 0.7048

Weight: <None>
Min Conc: <None>

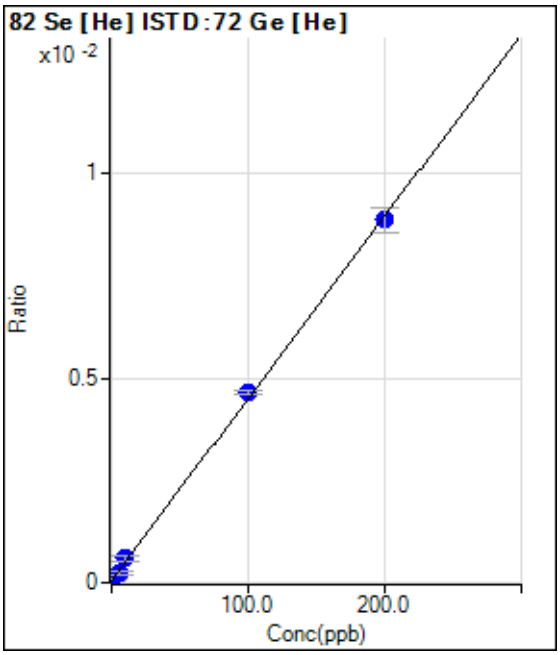



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | -41.47 | 0.0000 | P | -43.2 |
| 2 | ☐ | 2.000 | 2.784 | 272.15 | 0.0002 | P | 47.9 |
| 3 | ☐ | 5.000 | 6.017 | 632.14 | 0.0004 | P | 34.4 |
| 4 | ☐ | 10.000 | 11.069 | 1191.98 | 0.0007 | P | 8.5 |
| 5 | ☐ | 100.000 | 99.555 | 10899.93 | 0.0066 | P | 3.5 |
| 6 | ☐ | 200.000 | 200.136 | 21453.01 | 0.0132 | P | 4.3 |

y = 6.6296E-005 * x - 2.4782E-005
R = 1.0000
DL = 0.4848
BEC = -0.3738

Weight: <None>
Min Conc: <None>

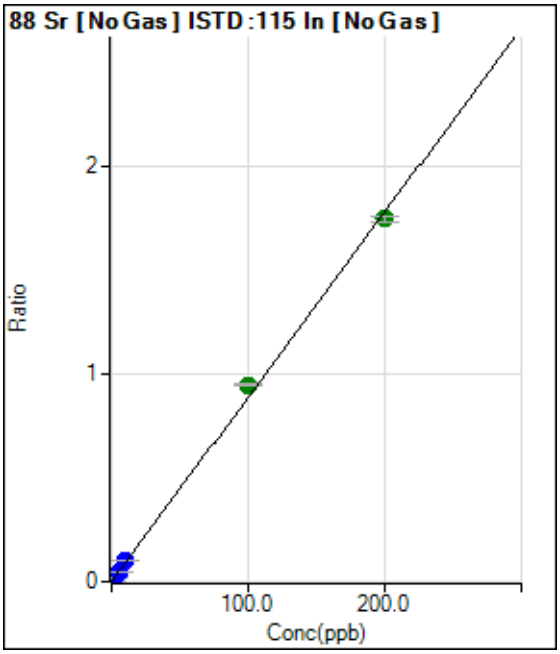
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0001 | P | 79.1 |
| 2 | ☐ | 2.000 | 1.838 | 70.00 | 0.0001 | P | 37.8 |
| 3 | ☐ | 5.000 | 3.961 | 120.00 | 0.0002 | P | 28.6 |
| 4 | ☐ | 10.000 | 12.398 | 313.34 | 0.0006 | P | 23.0 |
| 5 | ☐ | 100.000 | 103.581 | 2380.25 | 0.0047 | P | 1.6 |
| 6 | ☐ | 200.000 | 198.117 | 4444.14 | 0.0089 | P | 6.8 |

y = 4.4505E-005 * x + 5.0541E-005
R = 0.9997
DL = 2.696
BEC = 1.136

Weight: <None>
Min Conc: <None>

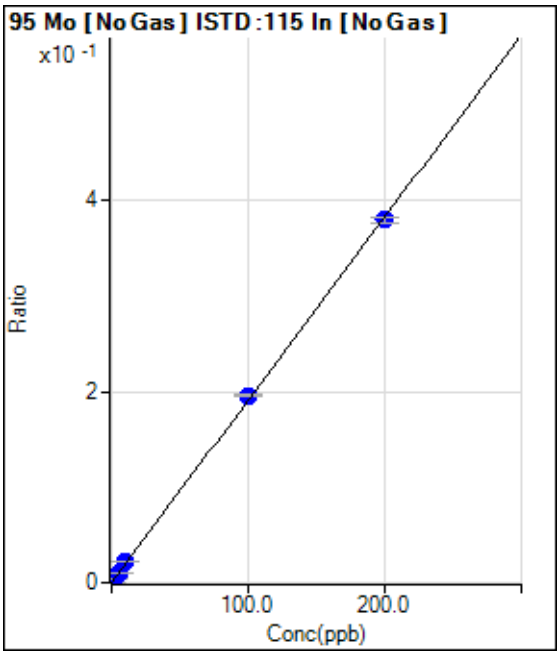



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2056.86 | 0.0010 | P | 6.6 |
| 2 | ☐ | 2.000 | 2.054 | 39057.46 | 0.0192 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.062 | 96243.50 | 0.0459 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.306 | 207012.44 | 0.1013 | P | 3.9 |
| 5 | ☐ | 100.000 | 106.724 | 1871818.67 | 0.9481 | A | 0.7 |
| 6 | ☐ | 200.000 | 196.570 | 3471502.45 | 1.7454 | A | 1.7 |

y = 0.0089 * x + 9.6840E-004
R = 0.9992
DL = 0.02163
BEC = 0.1091

Weight: <None>
Min Conc: <None>

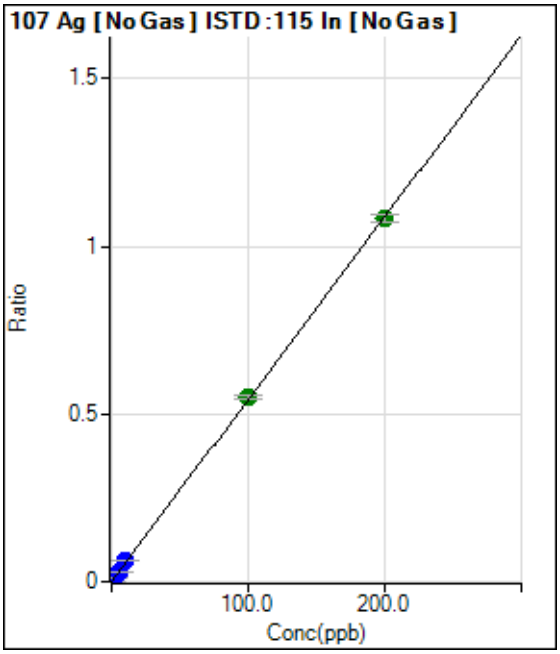
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 12.5 |
| 2 | ☐ | 2.000 | 2.088 | 8172.68 | 0.0040 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.919 | 19768.38 | 0.0094 | P | 2.2 |
| 4 | ☐ | 10.000 | 11.418 | 44641.96 | 0.0218 | P | 5.6 |
| 5 | ☐ | 100.000 | 102.518 | 386787.65 | 0.1959 | P | 0.9 |
| 6 | ☐ | 200.000 | 198.671 | 755022.25 | 0.3796 | P | 1.5 |

y = 0.0019 * x + 2.6703E-005
R = 0.9999
DL = 0.005236
BEC = 0.01397

Weight: <None>
Min Conc: <None>

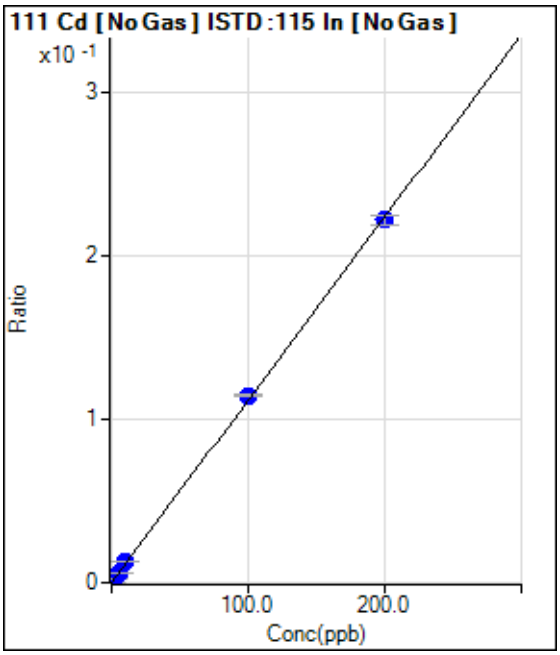



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 176.67 | 0.0001 | P | 15.9 |
| 2 | ☐ | 2.000 | 2.122 | 23621.58 | 0.0116 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.074 | 57980.93 | 0.0277 | P | 2.1 |
| 4 | ☐ | 10.000 | 11.449 | 127291.58 | 0.0623 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.586 | 1089834.10 | 0.5520 | A | 2.1 |
| 6 | ☐ | 200.000 | 199.132 | 2151939.40 | 1.0821 | A | 2.0 |

y = 0.0054 * x + 8.2957E-005
R = 0.9999
DL = 0.007271
BEC = 0.01527

Weight: <None>
Min Conc: <None>

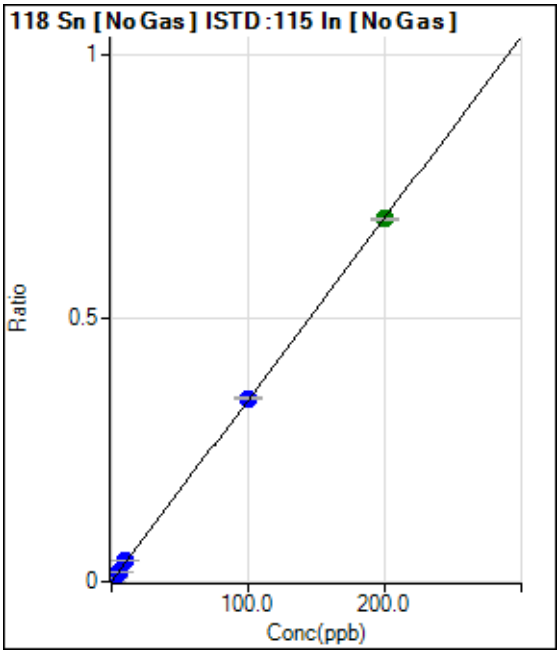
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.071 | 4717.61 | 0.0023 | P | 6.9 |
| 3 | ☐ | 5.000 | 5.012 | 11765.47 | 0.0056 | P | 4.3 |
| 4 | ☐ | 10.000 | 11.661 | 26660.71 | 0.0130 | P | 3.1 |
| 5 | ☐ | 100.000 | 102.583 | 226541.25 | 0.1147 | P | 0.8 |
| 6 | ☐ | 200.000 | 198.625 | 441773.33 | 0.2222 | P | 2.8 |

y = 0.0011 * x + 1.5280E-006
R = 0.9999
DL = 0.007098
BEC = 0.001366

Weight: <None>
Min Conc: <None>

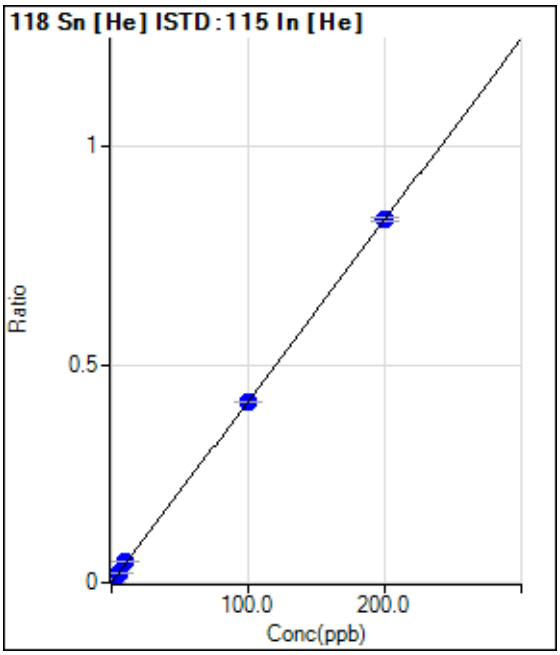



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 830.04 | 0.0004 | P | 12.2 |
| 2 | ☐ | 2.000 | 2.099 | 15512.81 | 0.0076 | P | 4.3 |
| 3 | ☐ | 5.000 | 4.845 | 35856.12 | 0.0171 | P | 1.1 |
| 4 | ☐ | 10.000 | 11.338 | 80742.12 | 0.0395 | P | 0.7 |
| 5 | ☐ | 100.000 | 100.607 | 685723.43 | 0.3473 | P | 1.0 |
| 6 | ☐ | 200.000 | 199.632 | 1370156.13 | 0.6888 | A | 0.6 |

y = 0.0034 * x + 3.8934E-004
R = 1.0000
DL = 0.0412
BEC = 0.1129

Weight: <None>
Min Conc: <None>

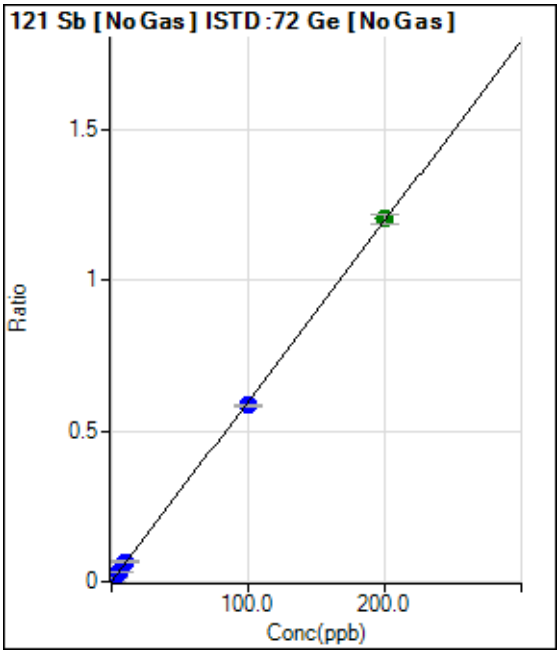
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 363.35 | 0.0004 | P | 21.6 |
| 2 | ☐ | 2.000 | 1.953 | 7835.82 | 0.0085 | P | 5.4 |
| 3 | ☐ | 5.000 | 5.021 | 18973.98 | 0.0213 | P | 4.2 |
| 4 | ☐ | 10.000 | 11.220 | 42302.17 | 0.0470 | P | 2.7 |
| 5 | ☐ | 100.000 | 99.804 | 365963.80 | 0.4151 | P | 0.6 |
| 6 | ☐ | 200.000 | 200.037 | 719082.64 | 0.8316 | P | 1.2 |

y = 0.0042 * x + 3.9301E-004
R = 1.0000
DL = 0.06136
BEC = 0.09458

Weight: <None>
Min Conc: <None>

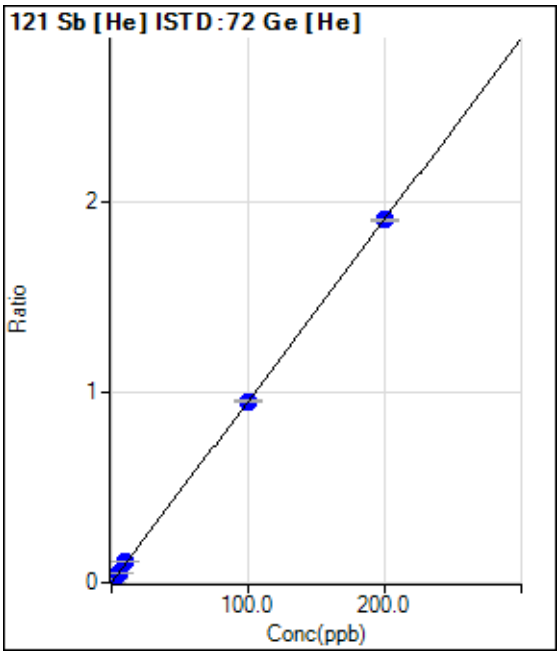



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 556.69 | 0.0003 | P | 9.0 |
| 2 | ☐ | 2.000 | 1.963 | 20619.90 | 0.0121 | P | 3.2 |
| 3 | ☐ | 5.000 | 4.946 | 50631.70 | 0.0299 | P | 1.4 |
| 4 | ☐ | 10.000 | 11.117 | 112185.01 | 0.0667 | P | 2.3 |
| 5 | ☐ | 100.000 | 97.614 | 967330.51 | 0.5834 | P | 1.5 |
| 6 | ☐ | 200.000 | 201.139 | 1946819.03 | 1.2019 | A | 2.8 |

y = 0.0060 * x + 3.3096E-004
R = 0.9999
DL = 0.01493
BEC = 0.0554

Weight: <None>
Min Conc: <None>

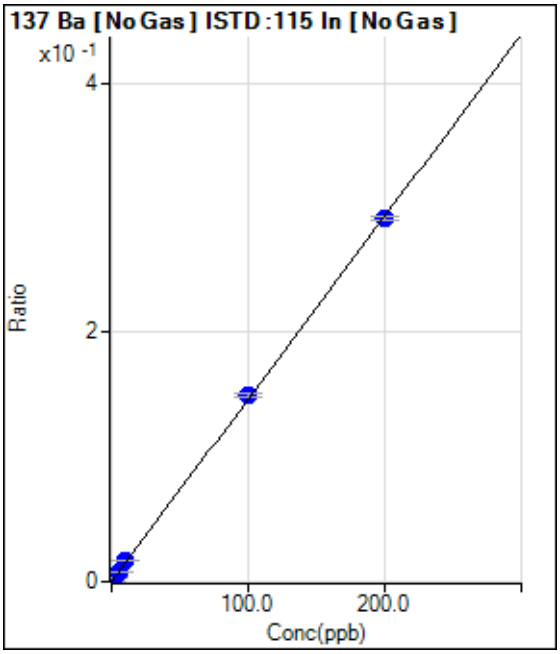
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 266.68 | 0.0005 | P | 6.9 |
| 2 | ☐ | 2.000 | 2.064 | 10661.29 | 0.0202 | P | 5.1 |
| 3 | ☐ | 5.000 | 4.972 | 25268.07 | 0.0479 | P | 4.4 |
| 4 | ☐ | 10.000 | 11.493 | 57255.13 | 0.1100 | P | 1.2 |
| 5 | ☐ | 100.000 | 100.063 | 487143.42 | 0.9540 | P | 1.3 |
| 6 | ☐ | 200.000 | 199.894 | 954754.31 | 1.9053 | P | 0.8 |

y = 0.0095 * x + 5.0221E-004
R = 1.0000
DL = 0.01089
BEC = 0.0527

Weight: <None>
Min Conc: <None>

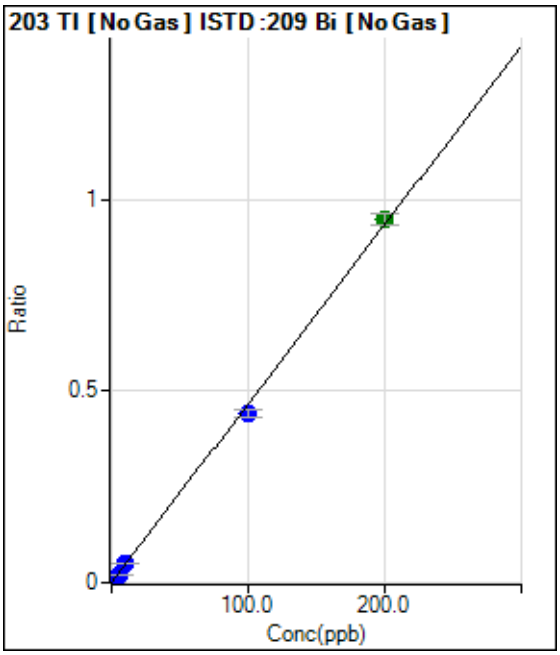



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 323.34 | 0.0002 | P | 10.3 |
| 2 | ☐ | 2.000 | 2.055 | 6425.05 | 0.0032 | P | 6.2 |
| 3 | ☐ | 5.000 | 4.881 | 15289.28 | 0.0073 | P | 0.8 |
| 4 | ☐ | 10.000 | 11.368 | 34302.37 | 0.0168 | P | 1.9 |
| 5 | ☐ | 100.000 | 102.271 | 295572.60 | 0.1497 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.798 | 578548.95 | 0.2909 | P | 1.0 |

y = 0.0015 * x + 1.5236E-004
R = 0.9999
DL = 0.03222
BEC = 0.1042

Weight: <None>
Min Conc: <None>

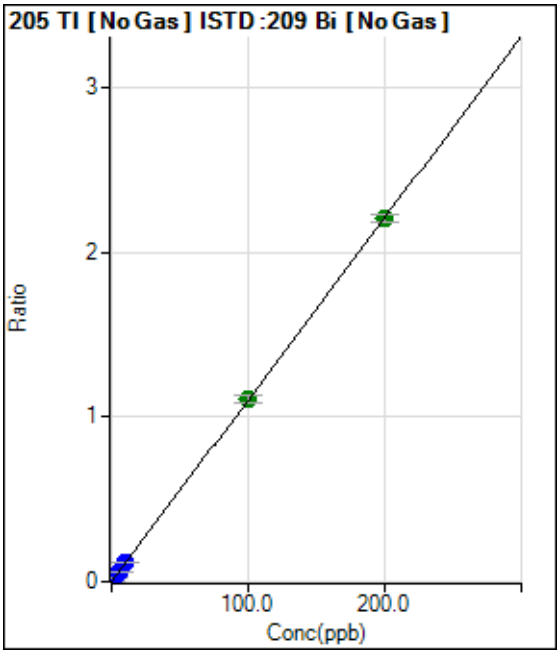
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 190.00 | 0.0001 | P | 24.3 |
| 2 | ☐ | 2.000 | 1.920 | 21138.33 | 0.0090 | P | 5.7 |
| 3 | ☐ | 5.000 | 4.729 | 52196.42 | 0.0222 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.676 | 115325.89 | 0.0499 | P | 0.6 |
| 5 | ☐ | 100.000 | 94.291 | 999080.37 | 0.4404 | P | 5.0 |
| 6 | ☐ | 200.000 | 202.828 | 2051287.26 | 0.9472 | A | 3.2 |

y = 0.0047 * x + 8.1210E-005
R = 0.9994
DL = 0.01269
BEC = 0.01739

Weight: <None>
Min Conc: <None>

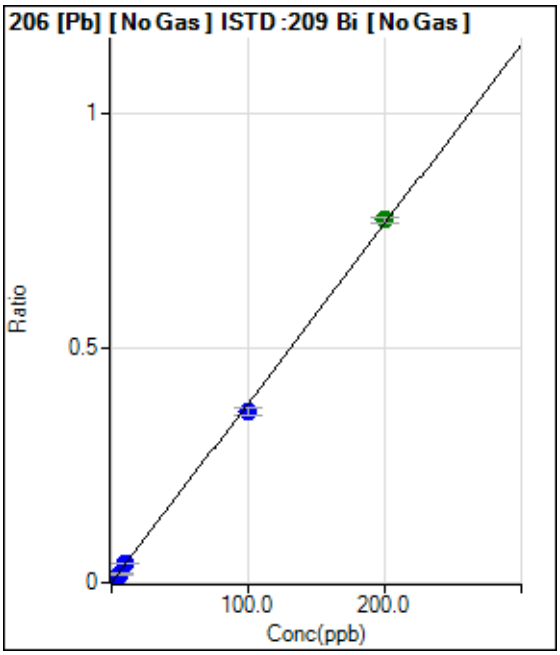



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 473.35 | 0.0002 | P | 26.4 |
| 2 | ☐ | 2.000 | 1.934 | 50315.23 | 0.0215 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.829 | 125870.69 | 0.0534 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.824 | 276099.75 | 0.1195 | P | 1.4 |
| 5 | ☐ | 100.000 | 100.698 | 2519794.34 | 1.1104 | A | 4.2 |
| 6 | ☐ | 200.000 | 199.614 | 4767765.24 | 2.2010 | A | 2.2 |

y = 0.0110 * x + 2.0240E-004
R = 1.0000
DL = 0.01456
BEC = 0.01836

Weight: <None>
Min Conc: <None>

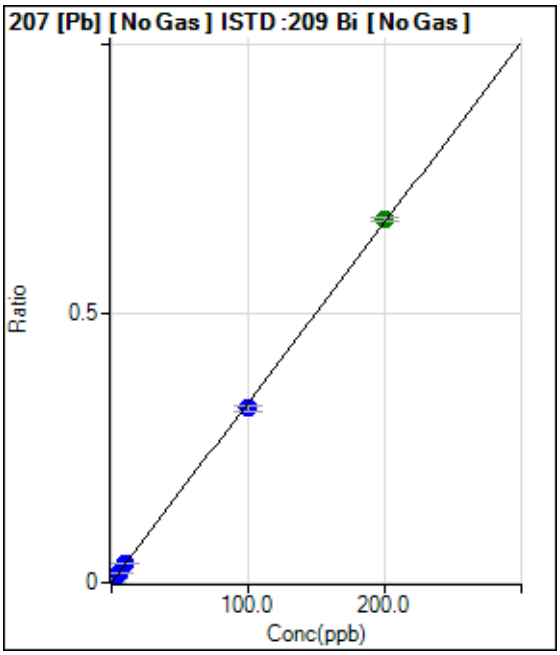
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 463.35 | 0.0002 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.938 | 17799.73 | 0.0076 | P | 2.8 |
| 3 | ☐ | 5.000 | 4.718 | 42961.64 | 0.0183 | P | 6.8 |
| 4 | ☐ | 10.000 | 10.846 | 96326.80 | 0.0417 | P | 2.3 |
| 5 | ☐ | 100.000 | 95.382 | 828989.70 | 0.3653 | P | 3.5 |
| 6 | ☐ | 200.000 | 202.274 | 1677531.70 | 0.7744 | A | 1.7 |

y = 0.0038 * x + 1.9804E-004
R = 0.9996
DL = 0.01092
BEC = 0.05174

Weight: <None>
Min Conc: <None>

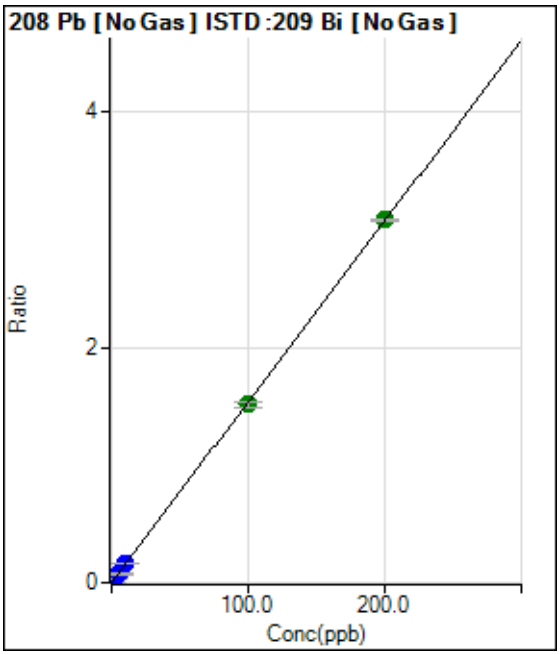



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 450.02 | 0.0002 | P | 23.6 |
| 2 | ☐ | 2.000 | 1.983 | 15930.45 | 0.0068 | P | 1.9 |
| 3 | ☐ | 5.000 | 4.912 | 39085.38 | 0.0166 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.779 | 83600.87 | 0.0362 | P | 1.0 |
| 5 | ☐ | 100.000 | 97.025 | 735987.96 | 0.3243 | P | 3.3 |
| 6 | ☐ | 200.000 | 201.451 | 1457882.37 | 0.6731 | A | 1.0 |

y = 0.0033 * x + 1.9233E-004
R = 0.9998
DL = 0.0407
BEC = 0.05758

Weight: <None>
Min Conc: <None>

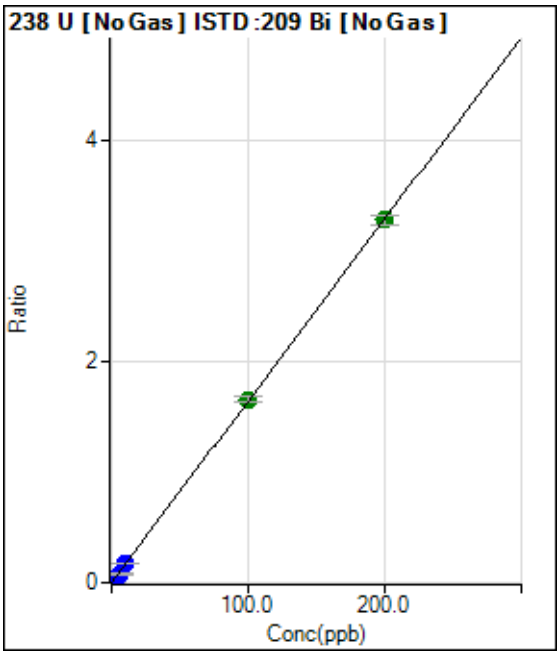
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1826.75 | 0.0008 | P | 8.7 |
| 2 | ☐ | 2.000 | 1.960 | 72113.33 | 0.0308 | P | 1.3 |
| 3 | ☐ | 5.000 | 4.825 | 176126.12 | 0.0748 | P | 3.6 |
| 4 | ☐ | 10.000 | 10.871 | 387015.75 | 0.1676 | P | 0.9 |
| 5 | ☐ | 100.000 | 98.418 | 3429651.90 | 1.5107 | A | 2.5 |
| 6 | ☐ | 200.000 | 200.752 | 6673583.18 | 3.0807 | A | 0.6 |

y = 0.0153 * x + 7.8052E-004
R = 0.9999
DL = 0.01325
BEC = 0.05087

Weight: <None>
Min Conc: <None>

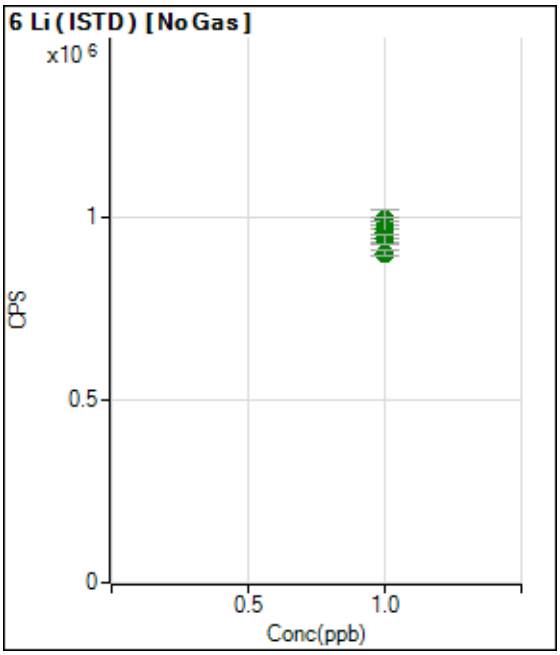



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43.33 | 0.0000 | P | 47.8 |
| 2 | ☐ | 2.000 | 1.908 | 73361.33 | 0.0314 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.754 | 184109.05 | 0.0782 | P | 1.0 |
| 4 | ☐ | 10.000 | 10.809 | 410458.07 | 0.1777 | P | 1.3 |
| 5 | ☐ | 100.000 | 100.599 | 3754126.50 | 1.6540 | A | 3.2 |
| 6 | ☐ | 200.000 | 199.667 | 7109814.06 | 3.2827 | A | 2.5 |

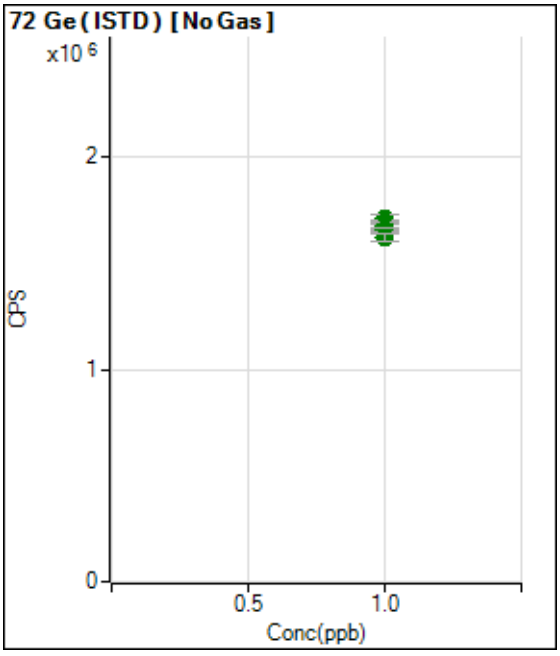
y = 0.0164 * x + 1.8496E-005
R = 1.0000
DL = 0.001612
BEC = 0.001125

Weight: <None>
Min Conc: <None>

Calibration for 112_ICV.d

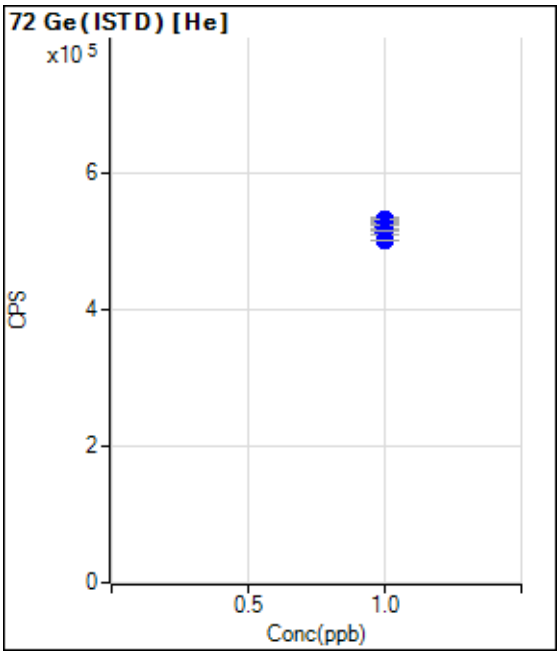



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 957132.97 | | A | 5.0 |
| 2 | ☐ | 1.000 | | 994375.52 | | A | 5.2 |
| 3 | ☐ | 1.000 | | 971627.86 | | A | 3.8 |
| 4 | ☐ | 1.000 | | 970061.26 | | A | 6.0 |
| 5 | ☐ | 1.000 | | 942582.61 | | A | 2.6 |
| 6 | ☐ | 1.000 | | 903141.58 | | A | 2.1 |

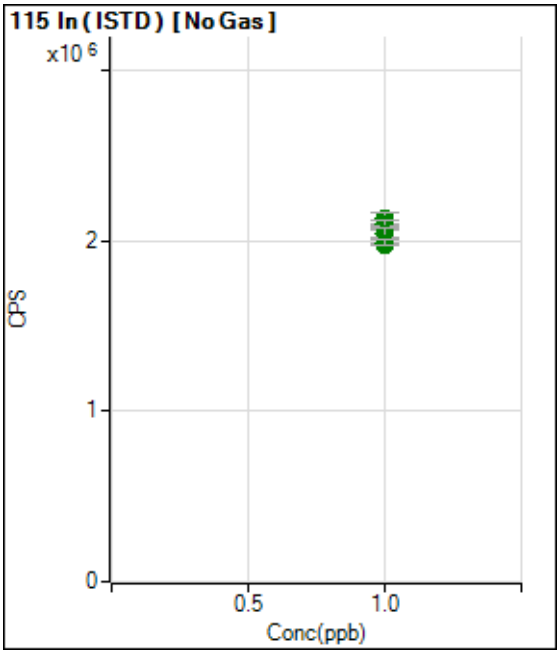



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1680329.35 | | A | 2.2 |
| 2 | ☐ | 1.000 | | 1710786.07 | | A | 2.5 |
| 3 | ☐ | 1.000 | | 1694813.72 | | A | 1.3 |
| 4 | ☐ | 1.000 | | 1681153.73 | | A | 1.7 |
| 5 | ☐ | 1.000 | | 1658204.71 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 1620376.85 | | A | 2.1 |

Calibration for 112_ICV.d

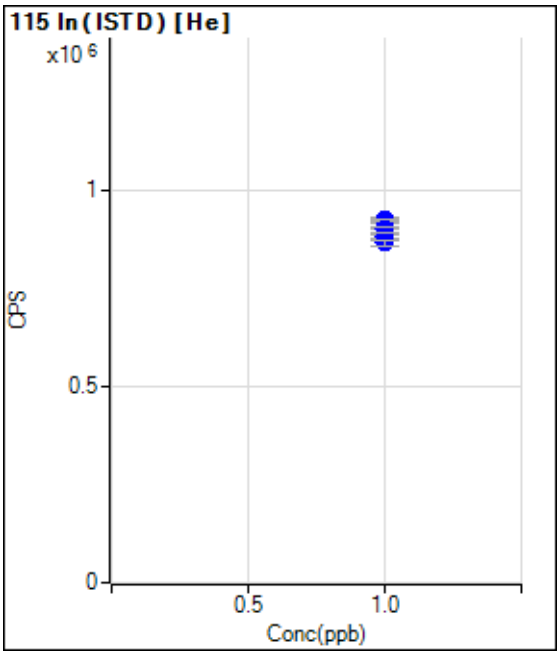



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 530791.59 | | P | 1.1 |
| 2 | ☐ | 1.000 | | 528799.38 | | P | 1.2 |
| 3 | ☐ | 1.000 | | 527716.37 | | P | 1.4 |
| 4 | ☐ | 1.000 | | 520437.31 | | P | 0.7 |
| 5 | ☐ | 1.000 | | 510671.44 | | P | 1.1 |
| 6 | ☐ | 1.000 | | 501105.42 | | P | 0.2 |

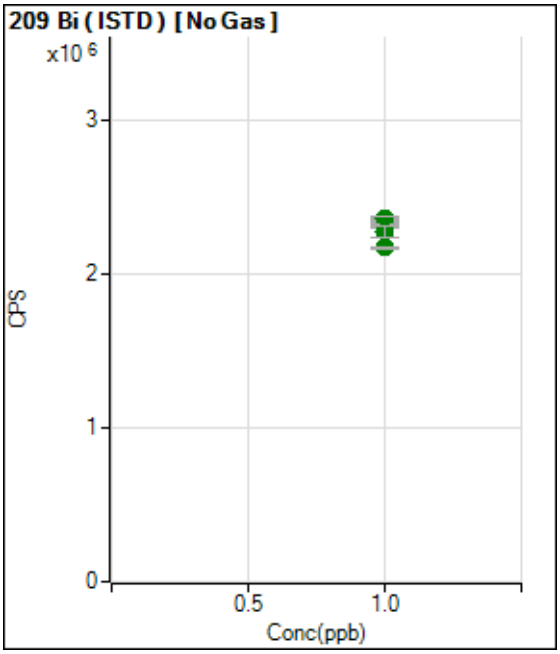



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2126706.84 | | A | 3.1 |
| 2 | ☐ | 1.000 | | 2035004.19 | | A | 2.3 |
| 3 | ☐ | 1.000 | | 2097330.28 | | A | 1.6 |
| 4 | ☐ | 1.000 | | 2045021.76 | | A | 2.9 |
| 5 | ☐ | 1.000 | | 1974303.74 | | A | 0.5 |
| 6 | ☐ | 1.000 | | 1989132.00 | | A | 1.8 |

Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 923418.95 | | P | 1.7 |
| 2 | ☐ | 1.000 | | 920740.24 | | P | 0.4 |
| 3 | ☐ | 1.000 | | 892921.89 | | P | 2.0 |
| 4 | ☐ | 1.000 | | 899976.61 | | P | 1.6 |
| 5 | ☐ | 1.000 | | 881610.10 | | P | 1.6 |
| 6 | ☐ | 1.000 | | 864747.16 | | P | 1.3 |



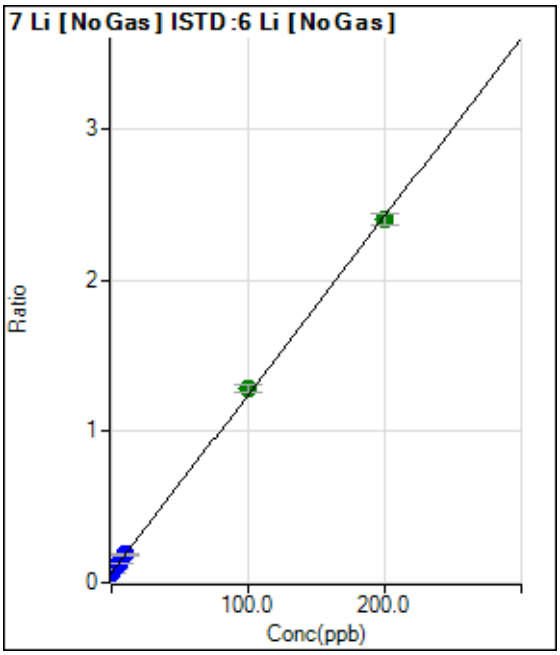

| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2340208.45 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2338032.62 | | A | 2.0 |
| 3 | ☐ | 1.000 | | 2355450.90 | | A | 1.8 |
| 4 | ☐ | 1.000 | | 2309769.08 | | A | 1.1 |
| 5 | ☐ | 1.000 | | 2271594.55 | | A | 3.8 |
| 6 | ☐ | 1.000 | | 2166139.03 | | A | 1.0 |

Calibration for 241_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 10:58:41 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 234CALB.d | CAL BLK | 7/28/2020 10:45:01 PM |
| 2 | 235CALS.d | 2/10/200 | 7/28/2020 10:46:55 PM |
| 3 | 236CALS.d | 5/25/500 | 7/28/2020 10:48:48 PM |
| 4 | 237CALS.d | 10/50/100 | 7/28/2020 10:50:40 PM |
| 5 | 238CALS.d | 100/500/10K | 7/28/2020 10:52:33 PM |
| 6 | 239CALS.d | 200/1000/20K | 7/28/2020 10:54:20 PM |

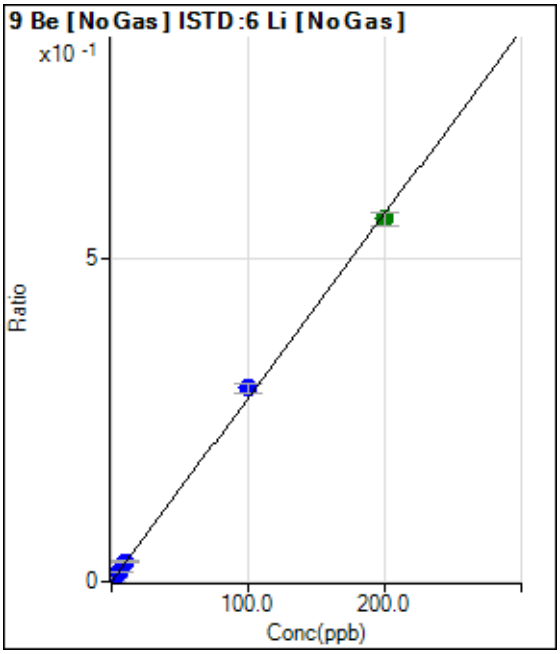
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 91938.00 | 0.0648 | P | 4.4 |
| 2 | ☐ | 2.000 | 2.090 | 124115.25 | 0.0894 | P | 4.1 |
| 3 | ☐ | 5.000 | 5.133 | 171353.32 | 0.1252 | P | 3.4 |
| 4 | ☐ | 10.000 | 10.495 | 261183.75 | 0.1884 | P | 5.0 |
| 5 | ☐ | 100.000 | 103.771 | 1650923.46 | 1.2866 | A | 3.7 |
| 6 | ☐ | 200.000 | 198.085 | 3120468.39 | 2.3970 | A | 3.1 |

y = 0.0118 * x + 0.0648
R = 0.9998
DL = 0.7194
BEC = 5.505

Weight: <None>
Min Conc: <None>

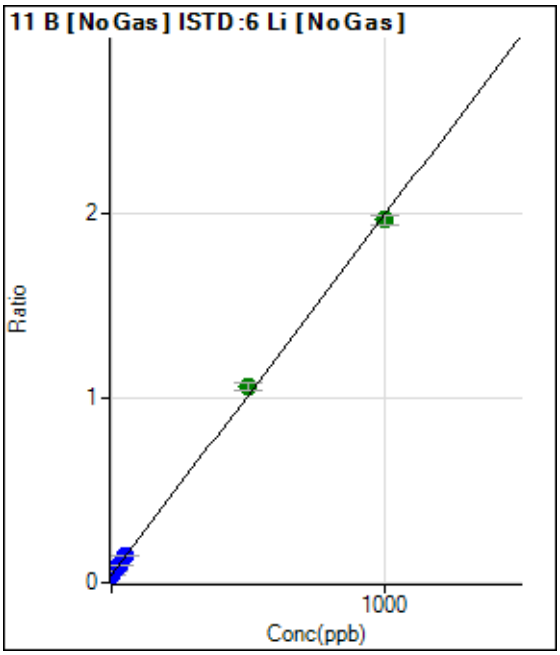



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1.67 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.003 | 7887.26 | 0.0057 | P | 7.0 |
| 3 | ☐ | 5.000 | 5.168 | 20084.58 | 0.0147 | P | 1.0 |
| 4 | ☐ | 10.000 | 10.960 | 43107.73 | 0.0311 | P | 6.8 |
| 5 | ☐ | 100.000 | 105.205 | 383097.98 | 0.2986 | P | 4.7 |
| 6 | ☐ | 200.000 | 197.345 | 729088.74 | 0.5602 | A | 3.6 |

y = 0.0028 * x + 1.1212E-006
R = 0.9995
DL = 0.002053
BEC = 0.000395

Weight: <None>
Min Conc: <None>

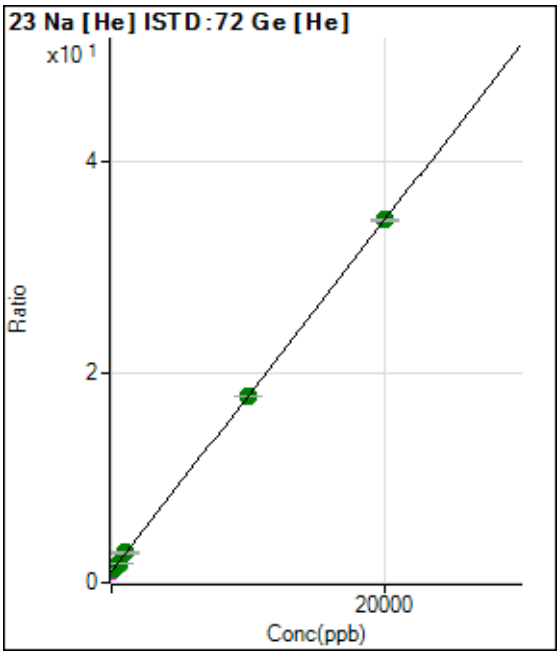
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 59705.12 | 0.0421 | P | 5.5 |
| 2 | ☐ | 10.000 | 9.386 | 83880.03 | 0.0604 | P | 3.6 |
| 3 | ☐ | 25.000 | 24.924 | 124161.64 | 0.0907 | P | 3.7 |
| 4 | ☐ | 50.000 | 53.765 | 203797.09 | 0.1470 | P | 5.7 |
| 5 | ☐ | 500.000 | 526.002 | 1371084.67 | 1.0685 | A | 4.0 |
| 6 | ☐ | 1000.000 | 986.819 | 2561476.16 | 1.9677 | A | 3.0 |

y = 0.0020 * x + 0.0421
R = 0.9995
DL = 3.555
BEC = 21.58

Weight: <None>
Min Conc: <None>

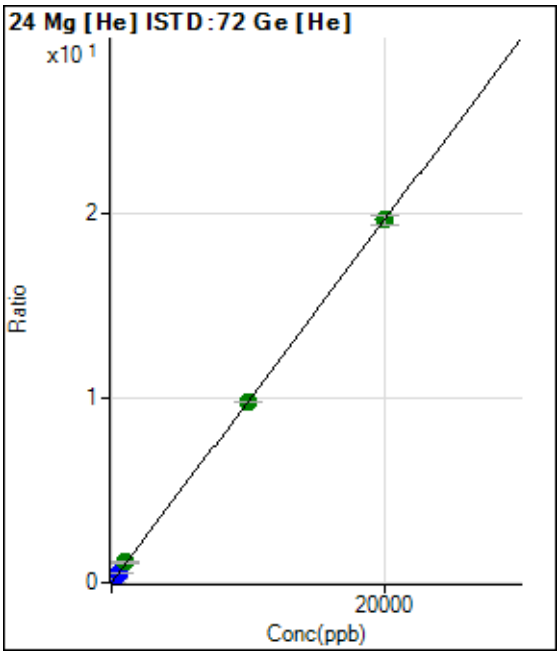



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 711172.31 | 1.0597 | M | 2.3 |
| 2 | ☐ | 200.000 | 184.522 | 922755.69 | 1.3678 | A | 1.9 |
| 3 | ☐ | 500.000 | 463.561 | 1251950.37 | 1.8337 | A | 1.1 |
| 4 | ☐ | 1000.000 | 1071.837 | 1888393.46 | 2.8494 | A | 2.2 |
| 5 | ☐ | 10000.00 | 9965.011 | 11268943.16 | 17.6990 | A | 0.7 |
| 6 | ☐ | 20000.00 | 20014.96 | 21409949.68 | 34.4802 | A | 0.7 |

y = 0.0017 * x + 1.0597
R = 1.0000
DL = 43.44
BEC = 634.6

Weight: <None>
Min Conc: <None>

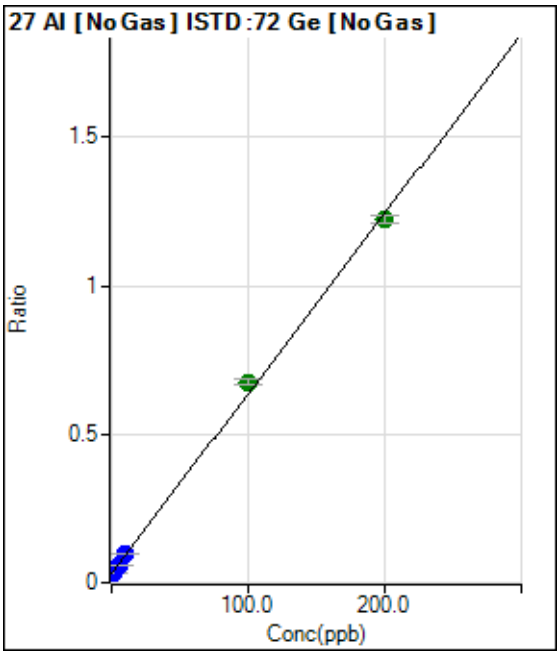
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1610.12 | 0.0024 | P | 7.6 |
| 2 | ☐ | 200.000 | 212.236 | 142275.51 | 0.2108 | P | 0.9 |
| 3 | ☐ | 500.000 | 524.469 | 353270.02 | 0.5175 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1129.449 | 736487.46 | 1.1116 | A | 6.2 |
| 5 | ☐ | 10000.00 | 9983.213 | 6244049.91 | 9.8069 | A | 0.6 |
| 6 | ☐ | 20000.00 | 20001.18 | 12195346.07 | 19.6456 | A | 2.6 |

y = 9.8210E-004 * x + 0.0024
R = 1.0000
DL = 0.5598
BEC = 2.442

Weight: <None>
Min Conc: <None>

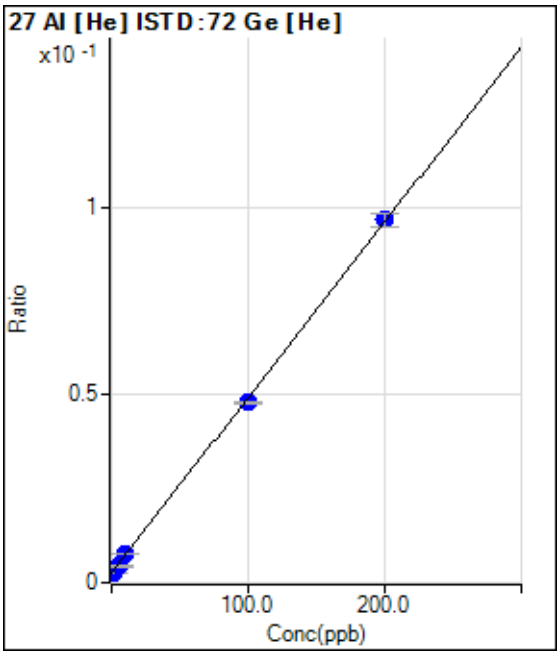



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 68439.35 | 0.0310 | P | 0.4 |
| 2 | ☐ | 2.000 | 0.478 | 75812.41 | 0.0339 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.132 | 123757.14 | 0.0561 | P | 2.2 |
| 4 | ☐ | 10.000 | 11.183 | 212766.66 | 0.0988 | P | 1.9 |
| 5 | ☐ | 100.000 | 106.632 | 1408147.69 | 0.6769 | A | 3.3 |
| 6 | ☐ | 200.000 | 196.662 | 2518228.61 | 1.2221 | A | 2.1 |

y = 0.0061 * x + 0.0310
R = 0.9991
DL = 0.05915
BEC = 5.122

Weight: <None>
Min Conc: <None>

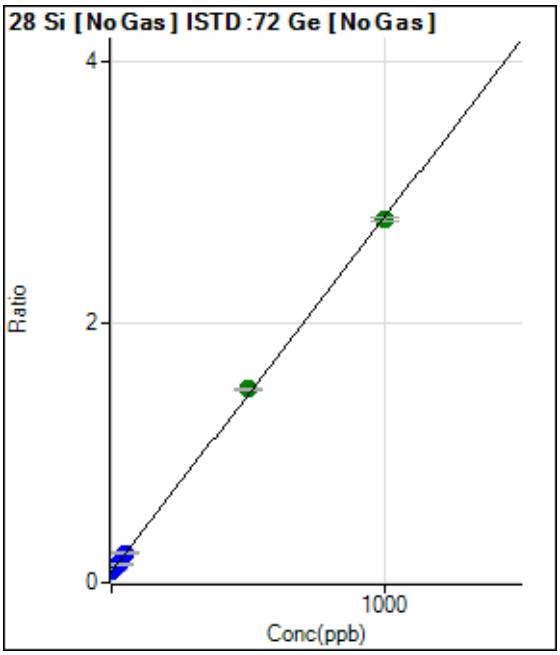
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1780.18 | 0.0027 | P | 11.8 |
| 2 | ☐ | 2.000 | 0.096 | 1820.15 | 0.0027 | P | 5.3 |
| 3 | ☐ | 5.000 | 3.791 | 3017.06 | 0.0044 | P | 9.3 |
| 4 | ☐ | 10.000 | 10.669 | 5057.70 | 0.0076 | P | 4.6 |
| 5 | ☐ | 100.000 | 97.279 | 30567.20 | 0.0480 | P | 1.3 |
| 6 | ☐ | 200.000 | 201.377 | 59916.18 | 0.0965 | P | 3.6 |

y = 4.6623E-004 * x + 0.0027
R = 0.9998
DL = 2.015
BEC = 5.691

Weight: <None>
Min Conc: <None>

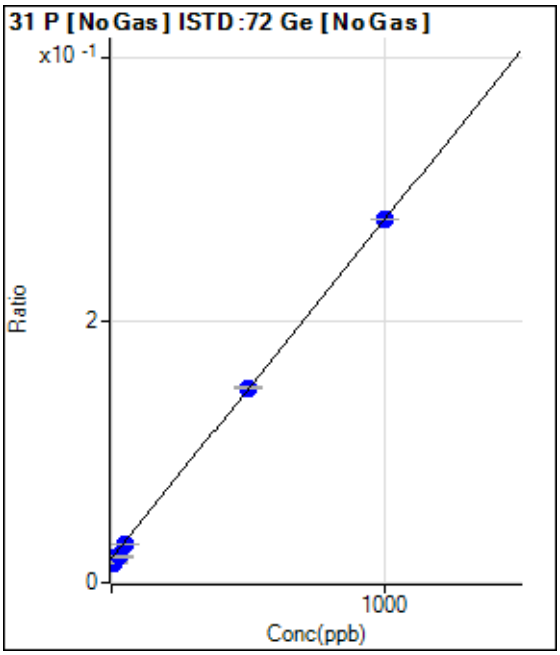



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 184280.68 | 0.0835 | P | 2.2 |
| 2 | ☐ | 10.000 | 5.762 | 221833.98 | 0.0992 | P | 2.2 |
| 3 | ☐ | 25.000 | 21.523 | 313797.67 | 0.1421 | P | 3.3 |
| 4 | ☐ | 50.000 | 52.921 | 490278.82 | 0.2276 | P | 2.8 |
| 5 | ☐ | 500.000 | 514.869 | 3090483.39 | 1.4852 | A | 1.4 |
| 6 | ☐ | 1000.000 | 992.549 | 5739604.91 | 2.7856 | A | 1.0 |

y = 0.0027 * x + 0.0835
R = 0.9998
DL = 1.983
BEC = 30.69

Weight: <None>
Min Conc: <None>

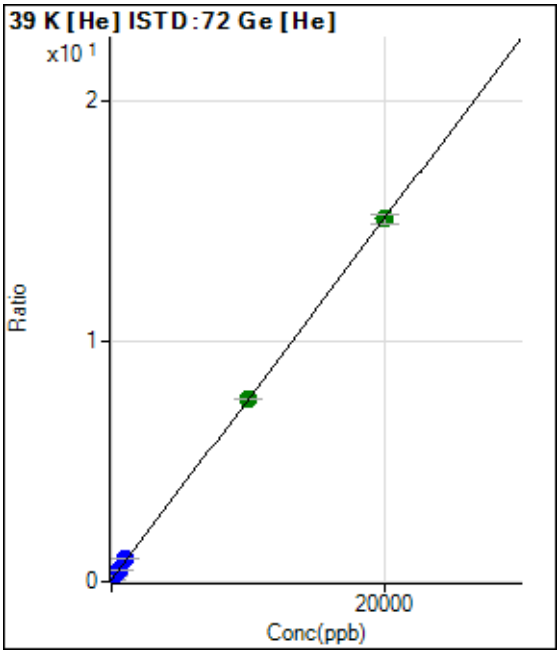
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 40817.02 | 0.0185 | P | 1.7 |
| 2 | ☐ | 10.000 | -12.478 | 34159.03 | 0.0153 | P | 2.7 |
| 3 | ☐ | 25.000 | 5.618 | 44070.15 | 0.0200 | P | 2.0 |
| 4 | ☐ | 50.000 | 41.944 | 63197.38 | 0.0293 | P | 1.8 |
| 5 | ☐ | 500.000 | 503.576 | 309160.44 | 0.1486 | P | 1.1 |
| 6 | ☐ | 1000.000 | 999.324 | 569901.38 | 0.2766 | P | 0.1 |

y = 2.5826E-004 * x + 0.0185
R = 0.9998
DL = 3.673
BEC = 71.65

Weight: <None>
Min Conc: <None>

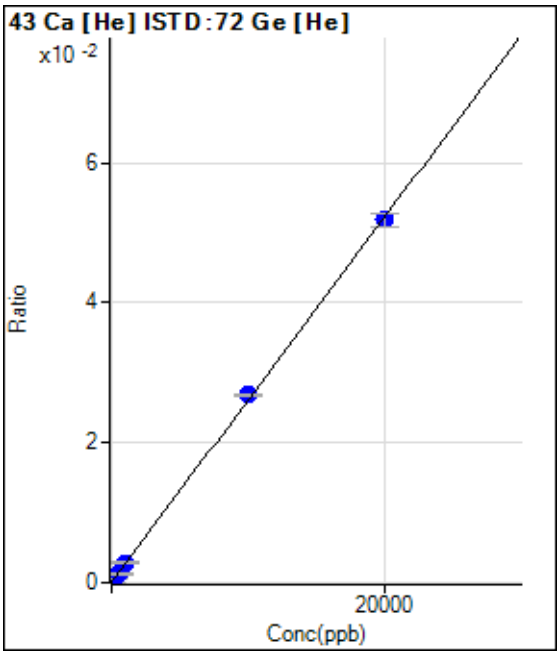



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 55829.97 | 0.0832 | P | 0.5 |
| 2 | ☐ | 200.000 | 215.742 | 165618.38 | 0.2455 | P | 2.4 |
| 3 | ☐ | 500.000 | 520.369 | 324072.89 | 0.4747 | P | 0.7 |
| 4 | ☐ | 1000.000 | 1149.994 | 628612.96 | 0.9484 | P | 0.3 |
| 5 | ☐ | 10000.00 | 10004.88 | 4845602.64 | 7.6103 | A | 0.9 |
| 6 | ☐ | 20000.00 | 19989.39 | 9386402.15 | 15.1222 | A | 2.9 |

y = 7.5235E-004 * x + 0.0832
R = 1.0000
DL = 1.644
BEC = 110.6

Weight: <None>
Min Conc: <None>

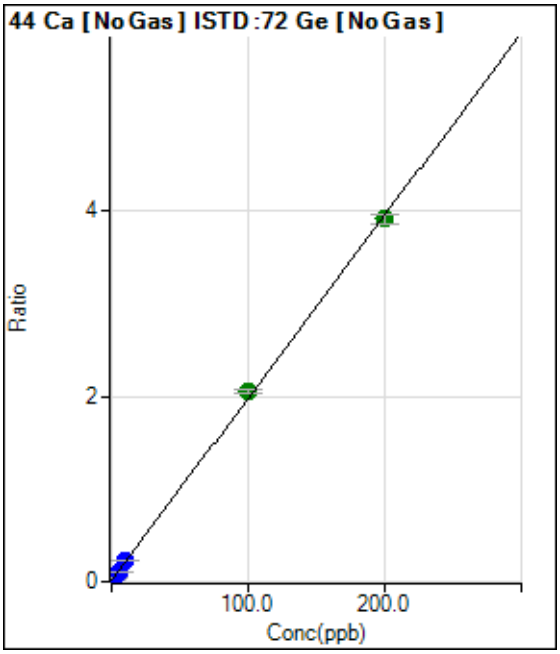
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 36.67 | 0.0001 | P | 68.5 |
| 2 | ☐ | 200.000 | 218.026 | 420.01 | 0.0006 | P | 20.9 |
| 3 | ☐ | 500.000 | 460.505 | 856.71 | 0.0013 | P | 3.5 |
| 4 | ☐ | 1000.000 | 1066.569 | 1880.16 | 0.0028 | P | 9.1 |
| 5 | ☐ | 10000.00 | 10272.10 | 17080.88 | 0.0268 | P | 1.6 |
| 6 | ☐ | 20000.00 | 19861.42 | 32168.28 | 0.0518 | P | 3.8 |

y = 2.6063E-006 * x + 5.4523E-005
R = 0.9999
DL = 43.01
BEC = 20.92

Weight: <None>
Min Conc: <None>

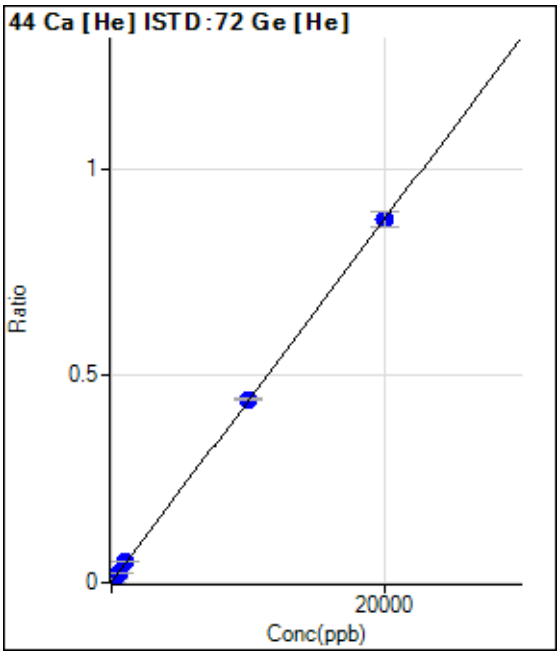



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26275.34 | 0.0119 | P | 1.0 |
| 2 | ☐ | 2.000 | 1.951 | 112488.96 | 0.0503 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.059 | 246267.88 | 0.1115 | P | 0.8 |
| 4 | ☐ | 10.000 | 11.261 | 503215.49 | 0.2336 | P | 3.4 |
| 5 | ☐ | 100.000 | 103.523 | 4265967.33 | 2.0501 | A | 2.0 |
| 6 | ☐ | 200.000 | 198.175 | 8063325.71 | 3.9137 | A | 2.5 |

y = 0.0197 * x + 0.0119
R = 0.9998
DL = 0.01791
BEC = 0.6049

Weight: <None>
Min Conc: <None>

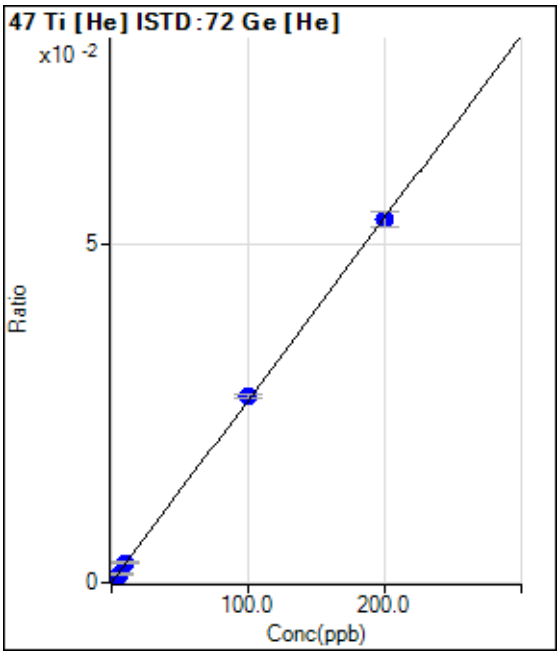
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 710.03 | 0.0011 | P | 19.9 |
| 2 | ☐ | 200.000 | 196.279 | 6515.00 | 0.0097 | P | 4.2 |
| 3 | ☐ | 500.000 | 475.542 | 14948.37 | 0.0219 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1106.427 | 32836.28 | 0.0495 | P | 2.4 |
| 5 | ☐ | 10000.00 | 10061.85 | 281405.11 | 0.4420 | P | 1.0 |
| 6 | ☐ | 20000.00 | 19964.40 | 543582.95 | 0.8759 | P | 4.3 |

y = 4.3820E-005 * x + 0.0011
R = 1.0000
DL = 14.44
BEC = 24.14

Weight: <None>
Min Conc: <None>

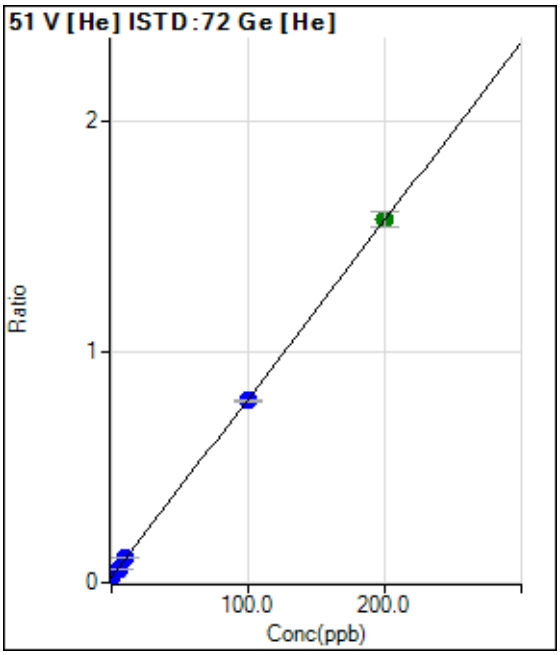



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 6.67 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.235 | 413.35 | 0.0006 | P | 25.7 |
| 3 | ☐ | 5.000 | 4.675 | 866.71 | 0.0013 | P | 14.0 |
| 4 | ☐ | 10.000 | 10.822 | 1940.18 | 0.0029 | P | 9.2 |
| 5 | ☐ | 100.000 | 102.158 | 17524.96 | 0.0275 | P | 2.9 |
| 6 | ☐ | 200.000 | 198.885 | 33247.47 | 0.0536 | P | 4.3 |

y = 2.6933E-004 * x + 9.8843E-006
R = 0.9999
DL = 0.1907
BEC = 0.0367

Weight: <None>
Min Conc: <None>

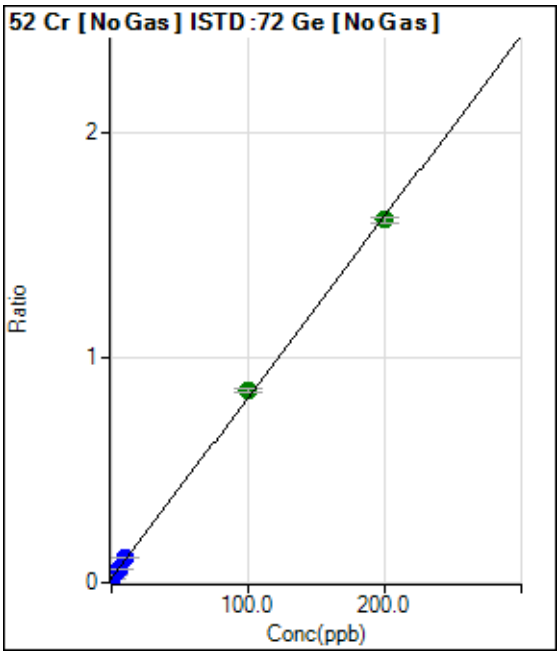
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16095.06 | 0.0240 | P | 3.0 |
| 2 | ☐ | 2.000 | 1.912 | 26157.17 | 0.0388 | P | 2.3 |
| 3 | ☐ | 5.000 | 4.844 | 41962.89 | 0.0615 | P | 0.5 |
| 4 | ☐ | 10.000 | 11.096 | 72798.87 | 0.1098 | P | 1.2 |
| 5 | ☐ | 100.000 | 99.202 | 504004.87 | 0.7916 | P | 1.2 |
| 6 | ☐ | 200.000 | 200.349 | 977025.93 | 1.5743 | A | 4.4 |

y = 0.0077 * x + 0.0240
R = 1.0000
DL = 0.2757
BEC = 3.099

Weight: <None>
Min Conc: <None>

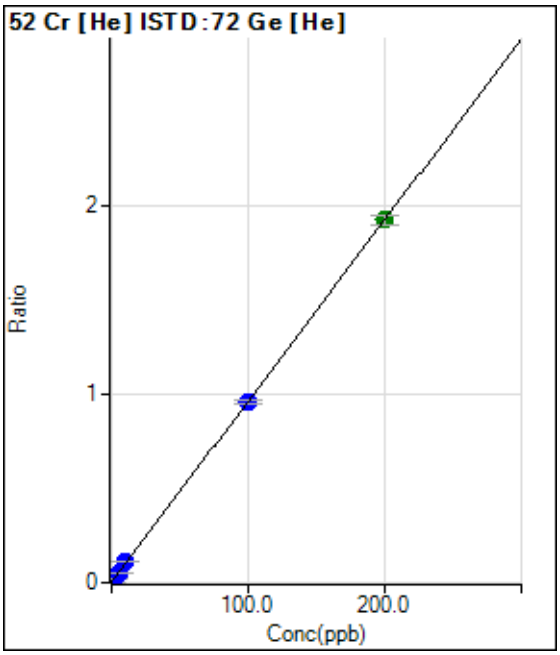



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 41967.91 | 0.0190 | P | 0.3 |
| 2 | ☐ | 2.000 | 1.878 | 76359.25 | 0.0342 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.076 | 132339.72 | 0.0599 | P | 2.1 |
| 4 | ☐ | 10.000 | 11.391 | 238720.06 | 0.1108 | P | 1.0 |
| 5 | ☐ | 100.000 | 103.633 | 1777065.96 | 0.8541 | A | 2.4 |
| 6 | ☐ | 200.000 | 198.114 | 3328191.41 | 1.6154 | A | 1.7 |

y = 0.0081 * x + 0.0190
R = 0.9998
DL = 0.02025
BEC = 2.361

Weight: <None>
Min Conc: <None>

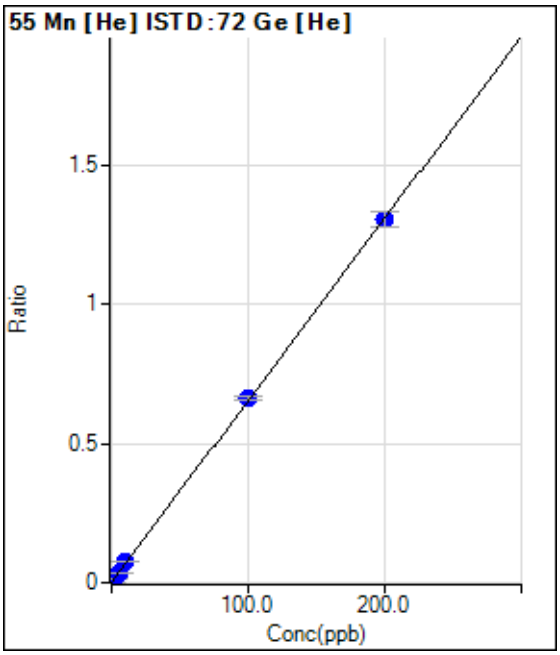
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1656.80 | 0.0025 | P | 8.9 |
| 2 | ☐ | 2.000 | 1.939 | 14227.70 | 0.0211 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.973 | 34290.02 | 0.0502 | P | 0.1 |
| 4 | ☐ | 10.000 | 11.168 | 72723.97 | 0.1097 | P | 1.8 |
| 5 | ☐ | 100.000 | 99.600 | 610501.96 | 0.9589 | P | 1.4 |
| 6 | ☐ | 200.000 | 200.143 | 1194428.32 | 1.9243 | A | 2.9 |

y = 0.0096 * x + 0.0025
R = 1.0000
DL = 0.0687
BEC = 0.2571

Weight: <None>
Min Conc: <None>

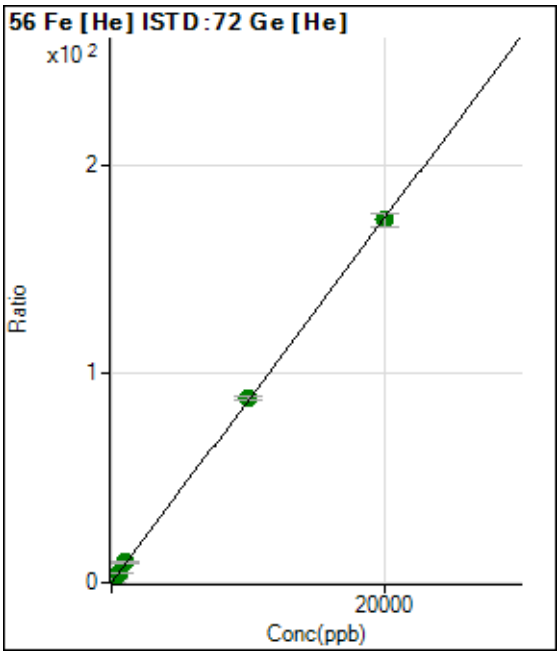



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 606.69 | 0.0009 | P | 17.4 |
| 2 | ☐ | 2.000 | 2.079 | 9783.70 | 0.0145 | P | 5.3 |
| 3 | ☐ | 5.000 | 5.134 | 23540.64 | 0.0345 | P | 0.4 |
| 4 | ☐ | 10.000 | 11.267 | 49443.01 | 0.0746 | P | 1.8 |
| 5 | ☐ | 100.000 | 101.258 | 422190.27 | 0.6631 | P | 2.4 |
| 6 | ☐ | 200.000 | 199.304 | 809426.24 | 1.3043 | P | 4.1 |

y = 0.0065 * x + 9.0440E-004
R = 1.0000
DL = 0.07232
BEC = 0.1383

Weight: <None>
Min Conc: <None>

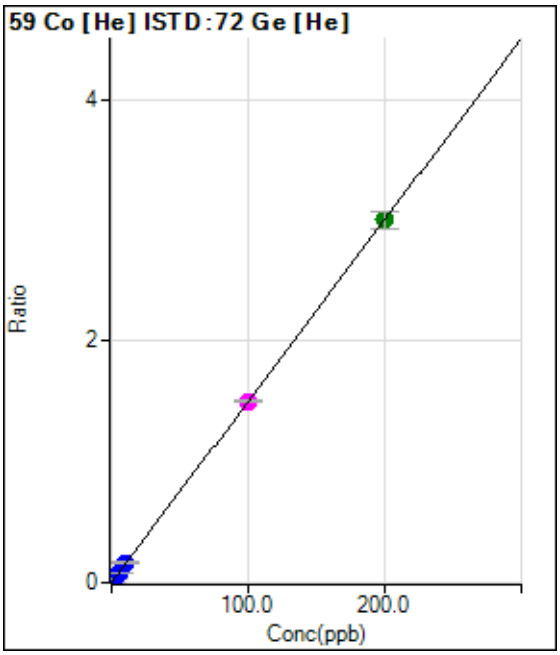
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 5704.63 | 0.0085 | P | 2.8 |
| 2 | ☐ | 200.000 | 211.708 | 1251542.38 | 1.8549 | A | 0.9 |
| 3 | ☐ | 500.000 | 522.174 | 3115109.85 | 4.5626 | A | 0.8 |
| 4 | ☐ | 1000.000 | 1111.745 | 6431652.82 | 9.7045 | A | 1.4 |
| 5 | ☐ | 10000.00 | 10159.95 | 56421937.49 | 88.6181 | A | 1.9 |
| 6 | ☐ | 20000.00 | 19913.76 | 107790781.7 | 173.685 | A | 3.8 |

y = 0.0087 * x + 0.0085
R = 0.9999
DL = 0.08135
BEC = 0.9746

Weight: <None>
Min Conc: <None>

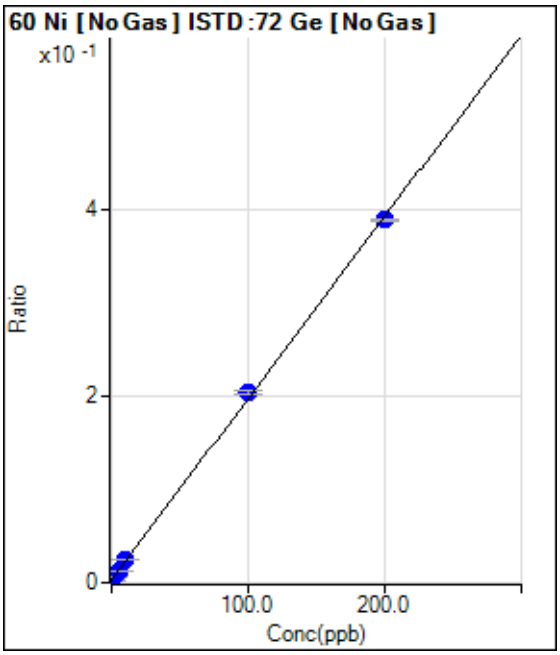



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 180.00 | 0.0003 | P | 15.0 |
| 2 | ☐ | 2.000 | 2.042 | 20863.02 | 0.0309 | P | 4.9 |
| 3 | ☐ | 5.000 | 5.086 | 52341.43 | 0.0767 | P | 1.2 |
| 4 | ☐ | 10.000 | 11.107 | 110743.12 | 0.1671 | P | 1.3 |
| 5 | ☐ | 100.000 | 99.760 | 954202.70 | 1.4987 | M | 1.2 |
| 6 | ☐ | 200.000 | 200.062 | 1864878.31 | 3.0053 | A | 4.6 |

y = 0.0150 * x + 2.6828E-004
R = 1.0000
DL = 0.008037
BEC = 0.01786

Weight: <None>
Min Conc: <None>

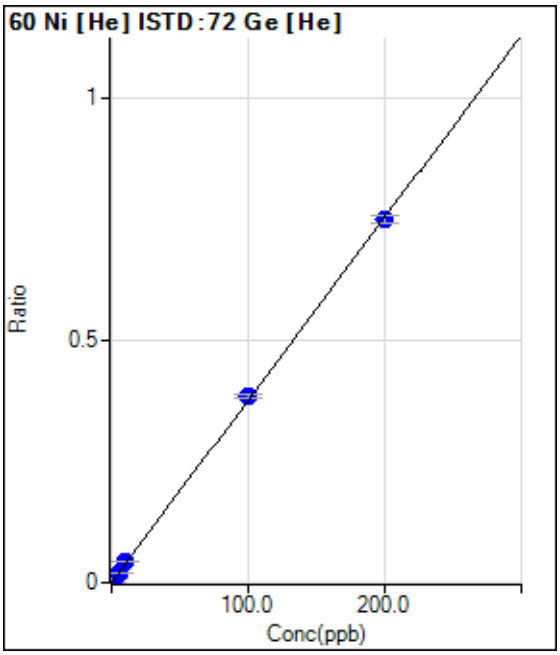
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 6344.91 | 0.0029 | P | 6.1 |
| 2 | ☐ | 2.000 | 2.033 | 15282.11 | 0.0068 | P | 3.3 |
| 3 | ☐ | 5.000 | 5.223 | 28817.54 | 0.0130 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.292 | 53562.19 | 0.0249 | P | 0.9 |
| 5 | ☐ | 100.000 | 103.312 | 424463.91 | 0.2040 | P | 2.6 |
| 6 | ☐ | 200.000 | 198.274 | 801306.83 | 0.3889 | P | 0.3 |

y = 0.0019 * x + 0.0029
R = 0.9998
DL = 0.2714
BEC = 1.478

Weight: <None>
Min Conc: <None>

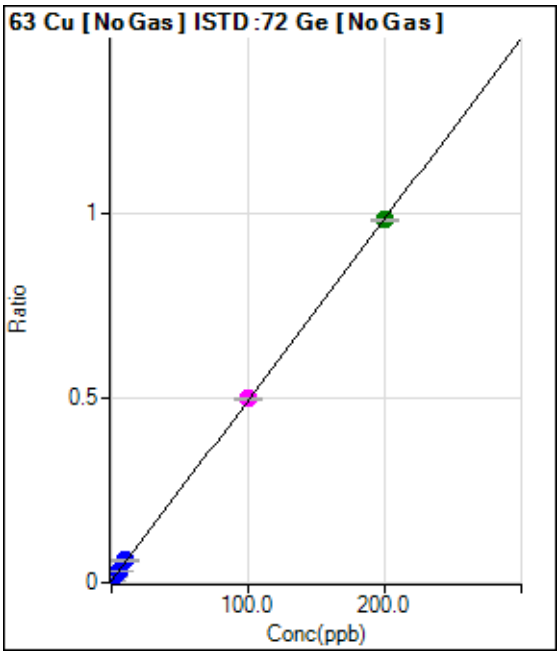



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 136.67 | 0.0002 | P | 22.1 |
| 2 | ☐ | 2.000 | 2.177 | 5657.96 | 0.0084 | P | 11.6 |
| 3 | ☐ | 5.000 | 5.203 | 13507.00 | 0.0198 | P | 1.7 |
| 4 | ☐ | 10.000 | 11.285 | 28286.43 | 0.0427 | P | 1.5 |
| 5 | ☐ | 100.000 | 102.181 | 244960.67 | 0.3847 | P | 1.5 |
| 6 | ☐ | 200.000 | 198.838 | 464636.09 | 0.7485 | P | 2.2 |

y = 0.0038 * x + 2.0353E-004
R = 0.9999
DL = 0.03587
BEC = 0.05408

Weight: <None>
Min Conc: <None>

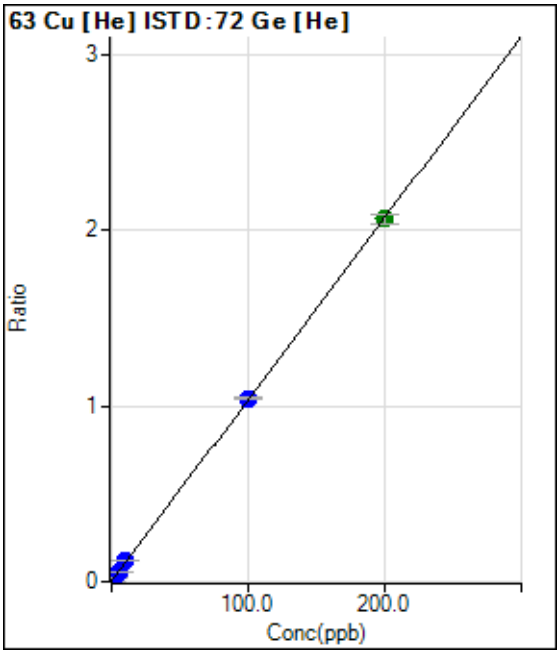
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 9767.03 | 0.0044 | P | 1.9 |
| 2 | ☐ | 2.000 | 1.982 | 31630.47 | 0.0141 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.998 | 63886.75 | 0.0289 | P | 1.2 |
| 4 | ☐ | 10.000 | 11.379 | 129708.79 | 0.0602 | P | 2.4 |
| 5 | ☐ | 100.000 | 100.652 | 1036170.37 | 0.4979 | M | 1.2 |
| 6 | ☐ | 200.000 | 199.606 | 2025684.97 | 0.9831 | A | 0.8 |

y = 0.0049 * x + 0.0044
R = 1.0000
DL = 0.05144
BEC = 0.9029

Weight: <None>
Min Conc: <None>

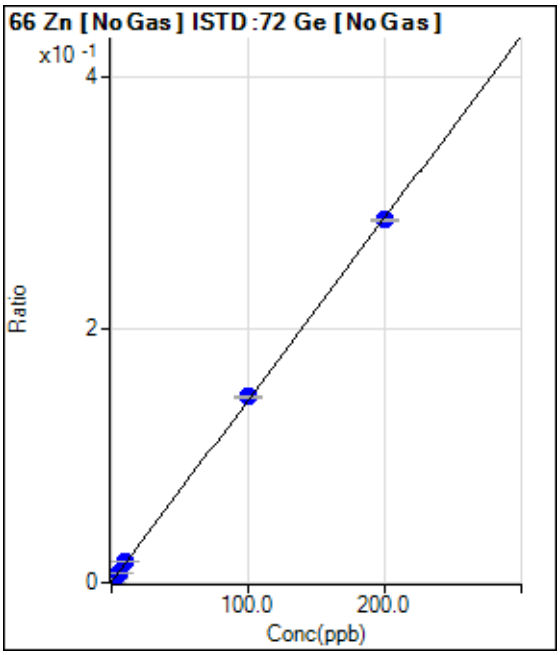



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1593.46 | 0.0024 | P | 1.9 |
| 2 | ☐ | 2.000 | 2.069 | 16036.47 | 0.0238 | P | 1.2 |
| 3 | ☐ | 5.000 | 5.037 | 37171.42 | 0.0544 | P | 1.4 |
| 4 | ☐ | 10.000 | 11.066 | 77413.50 | 0.1168 | P | 0.2 |
| 5 | ☐ | 100.000 | 100.756 | 664776.37 | 1.0441 | P | 0.6 |
| 6 | ☐ | 200.000 | 199.567 | 1282290.01 | 2.0657 | A | 2.4 |

y = 0.0103 * x + 0.0024
R = 1.0000
DL = 0.01329
BEC = 0.2296

Weight: <None>
Min Conc: <None>

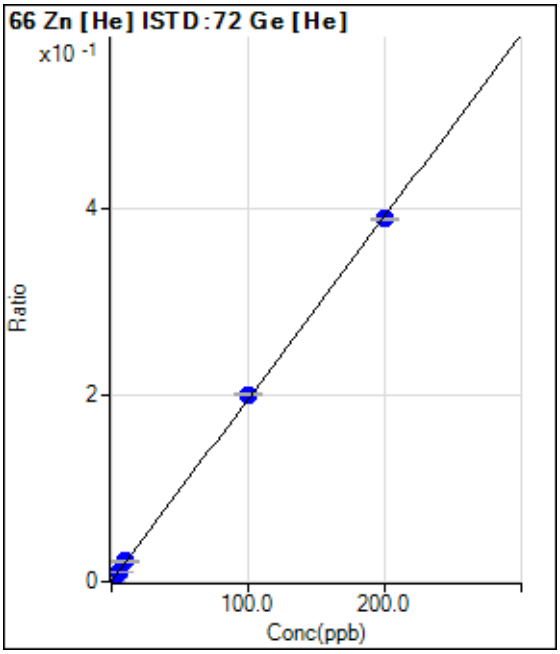
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1126.74 | 0.0005 | P | 6.1 |
| 2 | ☐ | 2.000 | 2.052 | 7742.33 | 0.0035 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.042 | 17147.81 | 0.0078 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.236 | 35938.01 | 0.0167 | P | 0.6 |
| 5 | ☐ | 100.000 | 101.875 | 306125.05 | 0.1471 | P | 1.0 |
| 6 | ☐ | 200.000 | 198.999 | 591112.13 | 0.2869 | P | 0.4 |

y = 0.0014 * x + 5.1104E-004
R = 0.9999
DL = 0.06489
BEC = 0.3551

Weight: <None>
Min Conc: <None>

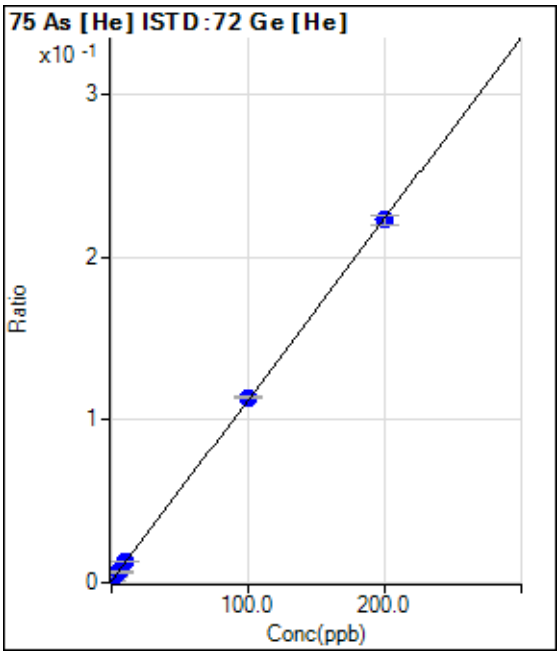



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 230.01 | 0.0003 | P | 17.5 |
| 2 | ☐ | 2.000 | 2.268 | 3227.10 | 0.0048 | P | 4.9 |
| 3 | ☐ | 5.000 | 4.876 | 6745.12 | 0.0099 | P | 6.6 |
| 4 | ☐ | 10.000 | 11.135 | 14661.52 | 0.0221 | P | 5.0 |
| 5 | ☐ | 100.000 | 102.423 | 127815.61 | 0.2007 | P | 1.5 |
| 6 | ☐ | 200.000 | 198.732 | 241647.67 | 0.3892 | P | 0.7 |

y = 0.0020 * x + 3.4277E-004
R = 0.9999
DL = 0.09205
BEC = 0.1752

Weight: <None>
Min Conc: <None>

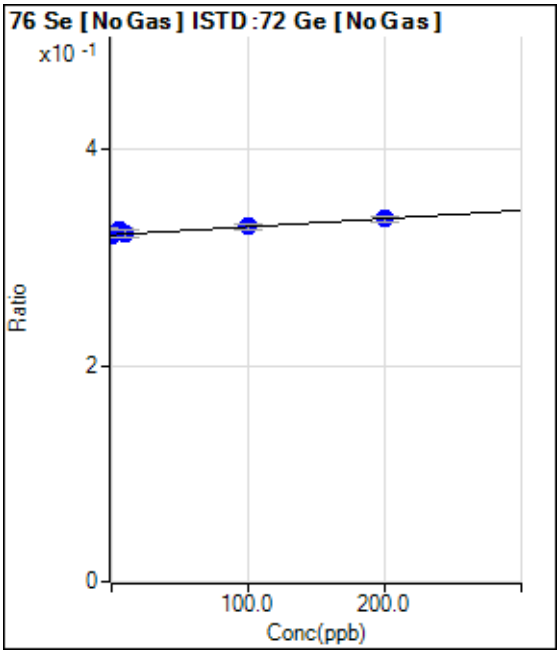
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 648.91 | 0.0010 | P | 15.0 |
| 2 | ☐ | 2.000 | 2.011 | 2163.52 | 0.0032 | P | 5.3 |
| 3 | ☐ | 5.000 | 5.026 | 4484.10 | 0.0066 | P | 2.4 |
| 4 | ☐ | 10.000 | 10.975 | 8747.32 | 0.0132 | P | 0.7 |
| 5 | ☐ | 100.000 | 101.197 | 72415.55 | 0.1137 | P | 0.9 |
| 6 | ☐ | 200.000 | 199.352 | 138494.27 | 0.2231 | P | 2.8 |

y = 0.0011 * x + 9.6733E-004
R = 1.0000
DL = 0.3904
BEC = 0.8681

Weight: <None>
Min Conc: <None>

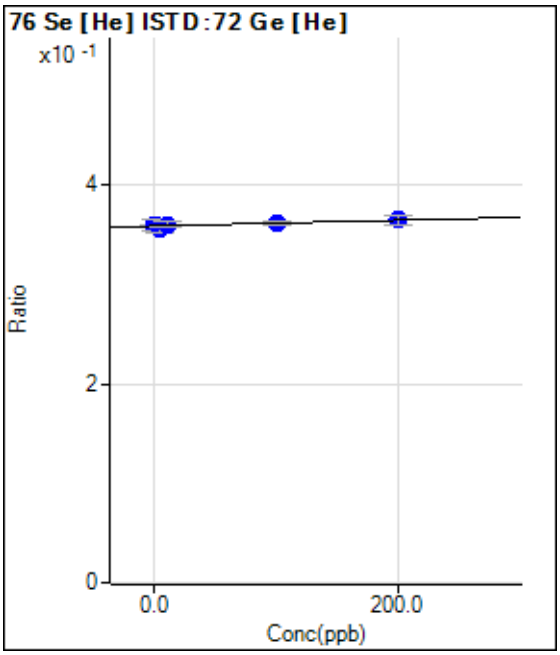



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 707398.14 | 0.3207 | P | 1.2 |
| 2 | ☐ | 2.000 | 9.146 | 718648.66 | 0.3214 | P | 1.0 |
| 3 | ☐ | 5.000 | 71.874 | 720248.53 | 0.3262 | P | 1.0 |
| 4 | ☐ | 10.000 | 13.063 | 692995.48 | 0.3217 | P | 2.2 |
| 5 | ☐ | 100.000 | 105.083 | 683867.07 | 0.3287 | P | 1.5 |
| 6 | ☐ | 200.000 | 195.562 | 691256.06 | 0.3355 | P | 1.8 |

y = 7.5565E-005 * x + 0.3207
R = 0.9452
DL = 151.9
BEC = 4244

Weight: <None>
Min Conc: <None>

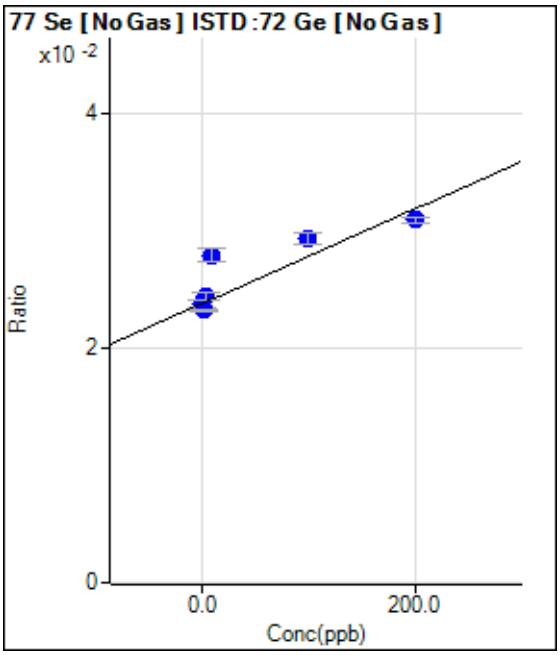
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 241064.50 | 0.3592 | P | 0.3 |
| 2 | ☐ | 2.000 | 57.348 | 243382.23 | 0.3608 | P | 3.2 |
| 3 | ☐ | 5.000 | -134.891 | 242535.98 | 0.3553 | P | 1.9 |
| 4 | ☐ | 10.000 | 50.206 | 239004.09 | 0.3606 | P | 1.3 |
| 5 | ☐ | 100.000 | 85.929 | 230259.46 | 0.3616 | P | 0.9 |
| 6 | ☐ | 200.000 | 207.969 | 226675.04 | 0.3652 | P | 2.5 |

y = 2.8847E-005 * x + 0.3592
R = 0.7873
DL = 98.1
BEC = 1.245E+04

Weight: <None>
Min Conc: <None>

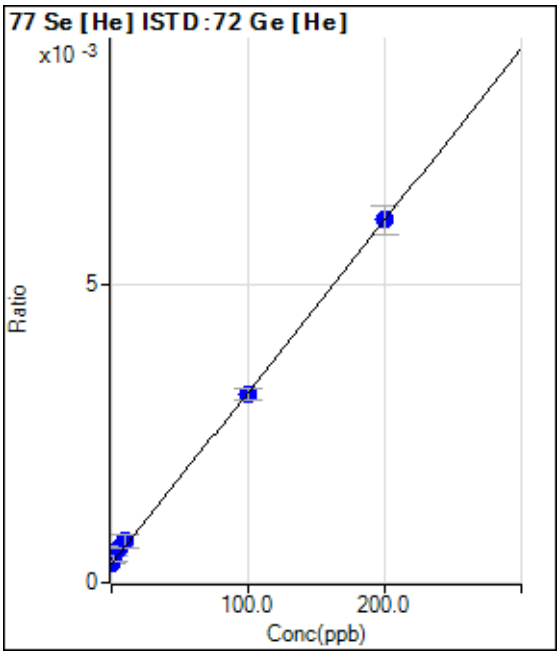



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 52482.83 | 0.0238 | P | 2.8 |
| 2 | ☐ | 2.000 | -14.476 | 51900.62 | 0.0232 | P | 0.9 |
| 3 | ☐ | 5.000 | 15.134 | 53905.51 | 0.0244 | P | 2.9 |
| 4 | ☐ | 10.000 | 102.574 | 60192.01 | 0.0279 | P | 4.1 |
| 5 | ☐ | 100.000 | 136.843 | 61028.63 | 0.0293 | P | 3.0 |
| 6 | ☐ | 200.000 | 176.861 | 63780.79 | 0.0310 | P | 1.4 |

y = 4.0442E-005 * x + 0.0238
R = 0.8599
DL = 49.36
BEC = 588.5

Weight: <None>
Min Conc: <None>

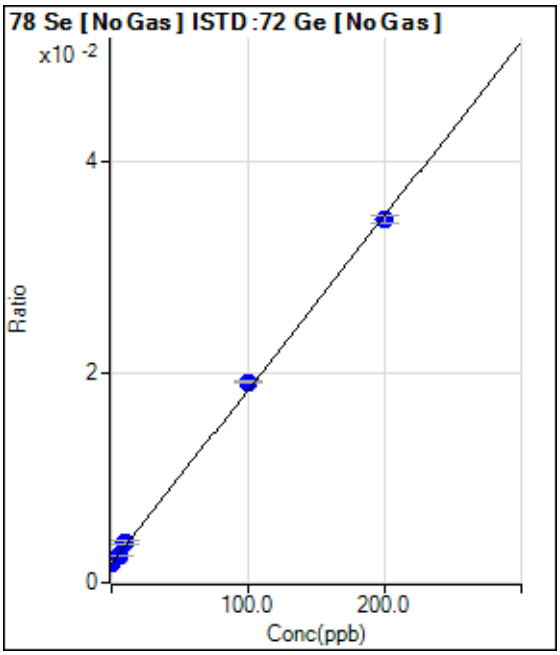
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 210.01 | 0.0003 | P | 4.2 |
| 2 | ☐ | 2.000 | 3.172 | 273.34 | 0.0004 | P | 23.0 |
| 3 | ☐ | 5.000 | 9.677 | 403.35 | 0.0006 | P | 8.6 |
| 4 | ☐ | 10.000 | 13.370 | 463.35 | 0.0007 | P | 31.0 |
| 5 | ☐ | 100.000 | 98.955 | 2010.20 | 0.0032 | P | 5.9 |
| 6 | ☐ | 200.000 | 200.225 | 3763.93 | 0.0061 | P | 8.2 |

y = 2.8742E-005 * x + 3.1284E-004
R = 0.9997
DL = 1.375
BEC = 10.88

Weight: <None>
Min Conc: <None>

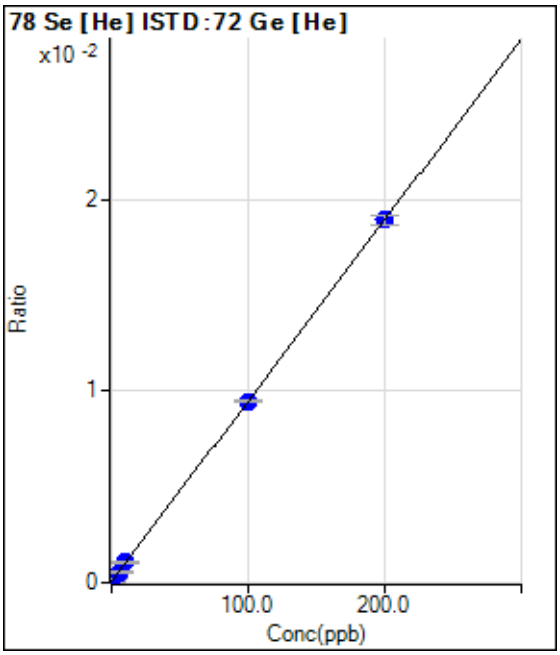



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3960.66 | 0.0018 | P | 1.7 |
| 2 | ☐ | 2.000 | 1.931 | 4727.60 | 0.0021 | P | 8.4 |
| 3 | ☐ | 5.000 | 4.440 | 5587.92 | 0.0025 | P | 3.7 |
| 4 | ☐ | 10.000 | 12.061 | 8159.31 | 0.0038 | P | 8.1 |
| 5 | ☐ | 100.000 | 104.580 | 39725.71 | 0.0191 | P | 1.8 |
| 6 | ☐ | 200.000 | 197.622 | 71047.42 | 0.0345 | P | 2.0 |

y = 1.6539E-004 * x + 0.0018
R = 0.9996
DL = 0.5488
BEC = 10.86

Weight: <None>
Min Conc: <None>

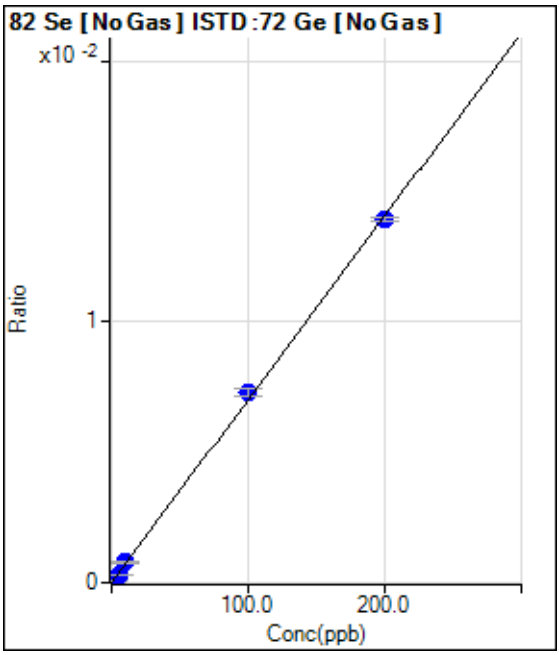
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 36.67 | 0.0001 | P | 29.5 |
| 2 | ☐ | 2.000 | 2.124 | 172.00 | 0.0003 | P | 7.9 |
| 3 | ☐ | 5.000 | 5.237 | 374.68 | 0.0005 | P | 10.3 |
| 4 | ☐ | 10.000 | 10.836 | 714.02 | 0.0011 | P | 11.2 |
| 5 | ☐ | 100.000 | 99.773 | 6032.70 | 0.0095 | P | 1.5 |
| 6 | ☐ | 200.000 | 200.064 | 11758.47 | 0.0189 | P | 3.0 |

y = 9.4418E-005 * x + 5.4570E-005
R = 1.0000
DL = 0.5121
BEC = 0.578

Weight: <None>
Min Conc: <None>

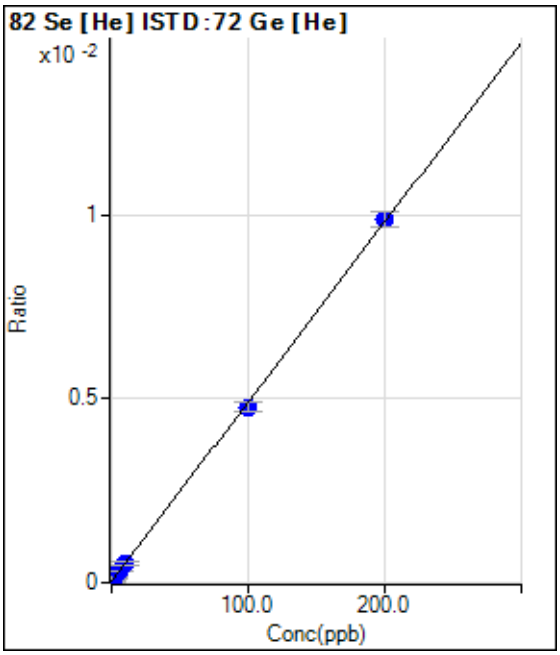



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | -12.28 | 0.0000 | P | -213.9 |
| 2 | ☐ | 2.000 | 1.852 | 277.55 | 0.0001 | P | 42.9 |
| 3 | ☐ | 5.000 | 4.400 | 671.00 | 0.0003 | P | 7.4 |
| 4 | ☐ | 10.000 | 11.248 | 1691.28 | 0.0008 | P | 9.5 |
| 5 | ☐ | 100.000 | 103.743 | 15163.20 | 0.0073 | P | 3.9 |
| 6 | ☐ | 200.000 | 198.083 | 28689.32 | 0.0139 | P | 1.1 |

y = 7.0320E-005 * x - 5.6895E-006
R = 0.9997
DL = 0.5193
BEC = -0.08091

Weight: <None>
Min Conc: <None>

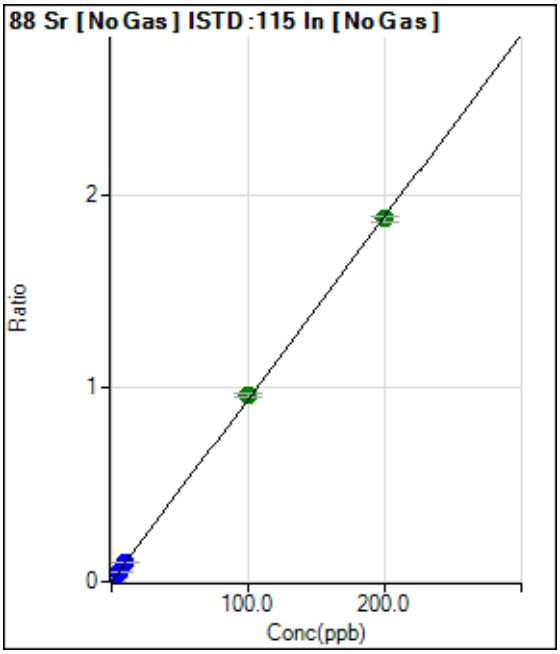
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 20.00 | 0.0000 | P | 131.9 |
| 2 | ☐ | 2.000 | 1.726 | 76.67 | 0.0001 | P | 34.1 |
| 3 | ☐ | 5.000 | 5.984 | 220.01 | 0.0003 | P | 7.4 |
| 4 | ☐ | 10.000 | 10.188 | 350.01 | 0.0005 | P | 14.3 |
| 5 | ☐ | 100.000 | 97.221 | 3043.73 | 0.0048 | P | 5.4 |
| 6 | ☐ | 200.000 | 201.358 | 6128.18 | 0.0099 | P | 4.2 |

y = 4.8870E-005 * x + 2.9708E-005
R = 0.9998
DL = 2.406
BEC = 0.6079

Weight: <None>
Min Conc: <None>

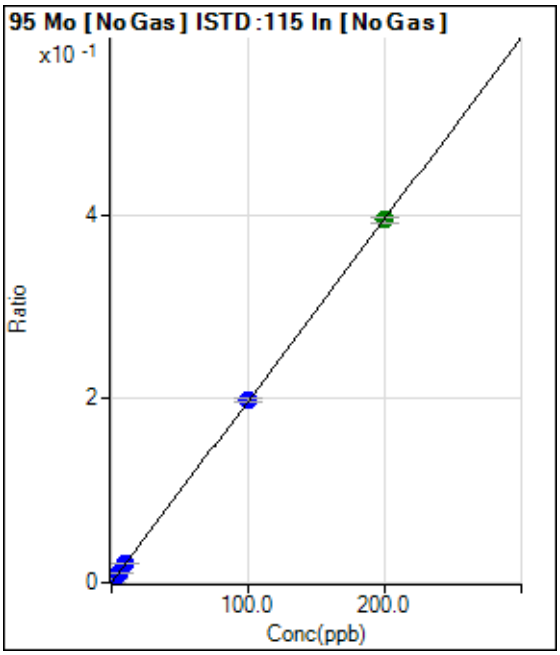



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2563.64 | 0.0010 | P | 3.6 |
| 2 | ☐ | 2.000 | 2.035 | 53497.56 | 0.0202 | P | 2.2 |
| 3 | ☐ | 5.000 | 4.989 | 128599.11 | 0.0480 | P | 1.2 |
| 4 | ☐ | 10.000 | 10.827 | 274617.32 | 0.1031 | P | 2.5 |
| 5 | ☐ | 100.000 | 102.063 | 2440658.87 | 0.9632 | A | 1.4 |
| 6 | ☐ | 200.000 | 198.927 | 4622669.41 | 1.8764 | A | 1.3 |

y = 0.0094 * x + 9.7869E-004
R = 0.9999
DL = 0.01136
BEC = 0.1038

Weight: <None>
Min Conc: <None>

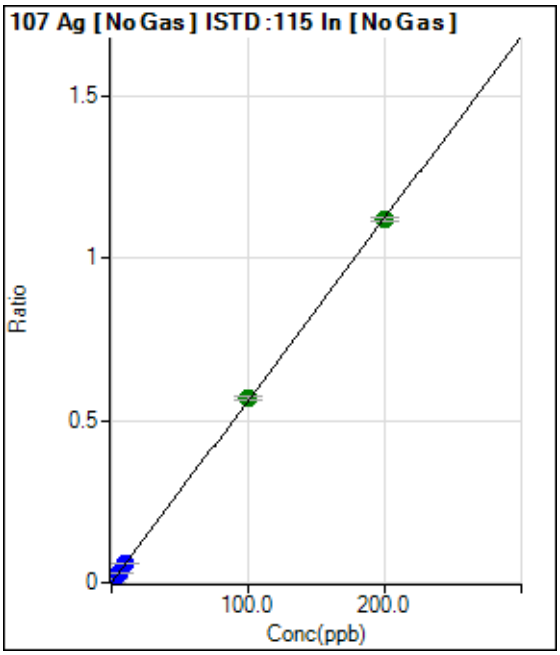
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 46.67 | 0.0000 | P | 52.3 |
| 2 | ☐ | 2.000 | 2.032 | 10697.84 | 0.0040 | P | 4.9 |
| 3 | ☐ | 5.000 | 4.991 | 26446.72 | 0.0099 | P | 3.8 |
| 4 | ☐ | 10.000 | 10.666 | 56165.98 | 0.0211 | P | 5.3 |
| 5 | ☐ | 100.000 | 100.662 | 503871.82 | 0.1988 | P | 2.3 |
| 6 | ☐ | 200.000 | 199.636 | 971459.73 | 0.3943 | A | 1.8 |

y = 0.0020 * x + 1.7686E-005
R = 1.0000
DL = 0.01404
BEC = 0.008954

Weight: <None>
Min Conc: <None>

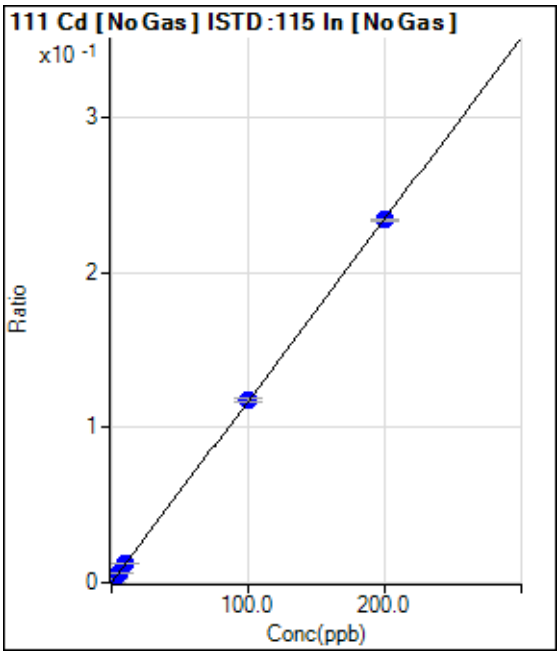



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 236.68 | 0.0001 | P | 5.9 |
| 2 | ☐ | 2.000 | 2.052 | 30763.16 | 0.0116 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.063 | 76273.62 | 0.0285 | P | 1.2 |
| 4 | ☐ | 10.000 | 10.629 | 159063.72 | 0.0597 | P | 1.6 |
| 5 | ☐ | 100.000 | 101.616 | 1443875.55 | 0.5698 | A | 1.7 |
| 6 | ☐ | 200.000 | 199.158 | 2751177.88 | 1.1167 | A | 0.9 |

y = 0.0056 * x + 9.0322E-005
R = 1.0000
DL = 0.002868
BEC = 0.01611

Weight: <None>
Min Conc: <None>

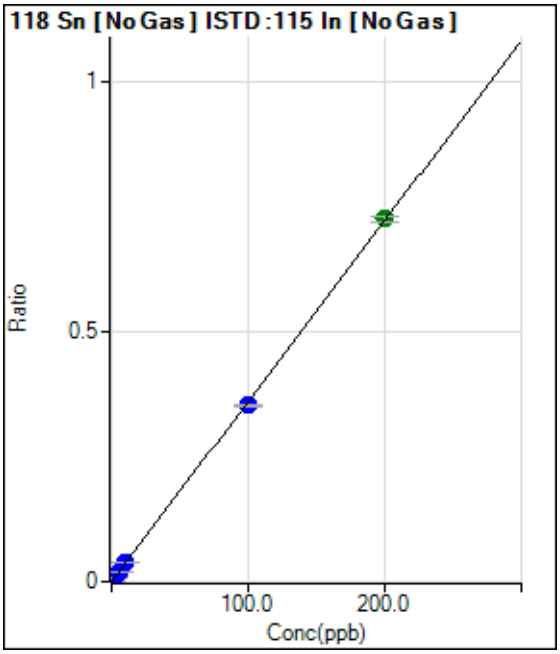
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 20.00 | 0.0000 | P | 84.5 |
| 2 | ☐ | 2.000 | 1.983 | 6181.60 | 0.0023 | P | 2.5 |
| 3 | ☐ | 5.000 | 4.944 | 15526.08 | 0.0058 | P | 3.9 |
| 4 | ☐ | 10.000 | 10.857 | 33917.46 | 0.0127 | P | 1.9 |
| 5 | ☐ | 100.000 | 100.533 | 298312.07 | 0.1177 | P | 1.6 |
| 6 | ☐ | 200.000 | 199.692 | 576159.39 | 0.2339 | P | 0.6 |

y = 0.0012 * x + 7.5420E-006
R = 1.0000
DL = 0.01632
BEC = 0.006441

Weight: <None>
Min Conc: <None>

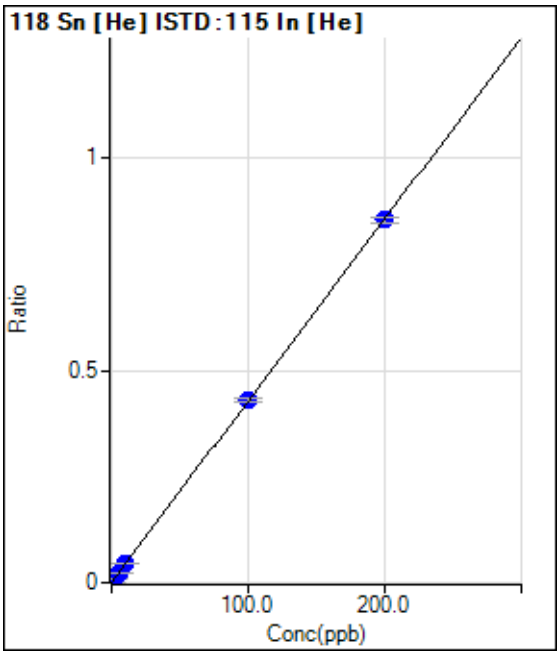



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1243.42 | 0.0005 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.979 | 20212.58 | 0.0076 | P | 3.6 |
| 3 | ☐ | 5.000 | 4.814 | 47834.34 | 0.0179 | P | 1.1 |
| 4 | ☐ | 10.000 | 10.530 | 102607.28 | 0.0385 | P | 0.7 |
| 5 | ☐ | 100.000 | 97.529 | 893458.89 | 0.3526 | P | 1.1 |
| 6 | ☐ | 200.000 | 201.214 | 1791076.69 | 0.7270 | A | 1.7 |

y = 0.0036 * x + 4.7478E-004
R = 0.9999
DL = 0.03465
BEC = 0.1315

Weight: <None>
Min Conc: <None>

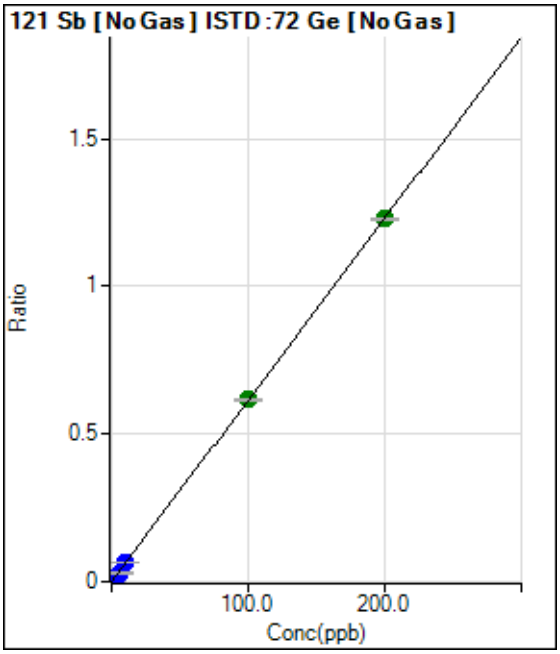
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 663.36 | 0.0006 | P | 8.5 |
| 2 | ☐ | 2.000 | 1.840 | 10210.82 | 0.0084 | P | 6.9 |
| 3 | ☐ | 5.000 | 4.849 | 25712.22 | 0.0213 | P | 2.0 |
| 4 | ☐ | 10.000 | 10.480 | 53366.06 | 0.0453 | P | 0.4 |
| 5 | ☐ | 100.000 | 100.632 | 472779.31 | 0.4307 | P | 2.2 |
| 6 | ☐ | 200.000 | 199.665 | 923135.17 | 0.8540 | P | 1.5 |

y = 0.0043 * x + 5.5255E-004
R = 1.0000
DL = 0.03301
BEC = 0.1293

Weight: <None>
Min Conc: <None>

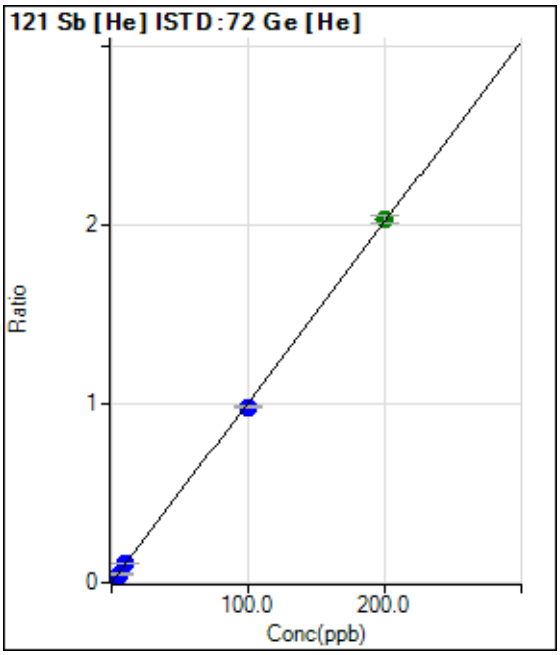



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 330.01 | 0.0001 | P | 11.8 |
| 2 | ☐ | 2.000 | 1.888 | 26270.08 | 0.0118 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.737 | 64619.31 | 0.0293 | P | 0.6 |
| 4 | ☐ | 10.000 | 10.439 | 138531.08 | 0.0643 | P | 0.7 |
| 5 | ☐ | 100.000 | 100.147 | 1280962.54 | 0.6156 | A | 0.9 |
| 6 | ☐ | 200.000 | 199.912 | 2531650.74 | 1.2287 | A | 0.6 |

y = 0.0061 * x + 1.4971E-004
R = 1.0000
DL = 0.008623
BEC = 0.02436

Weight: <None>
Min Conc: <None>

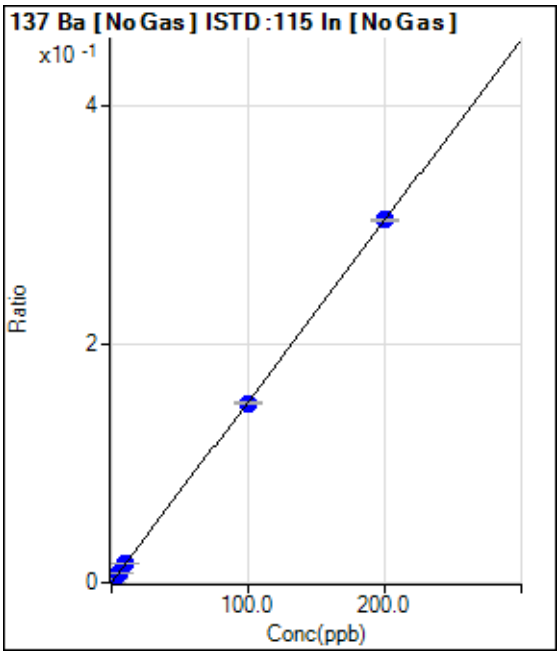
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 173.34 | 0.0003 | P | 12.5 |
| 2 | ☐ | 2.000 | 1.896 | 13086.79 | 0.0194 | P | 2.1 |
| 3 | ☐ | 5.000 | 4.763 | 33015.28 | 0.0484 | P | 2.2 |
| 4 | ☐ | 10.000 | 10.575 | 70932.22 | 0.1070 | P | 2.3 |
| 5 | ☐ | 100.000 | 97.470 | 626741.62 | 0.9844 | P | 0.7 |
| 6 | ☐ | 200.000 | 201.243 | 1261488.70 | 2.0321 | A | 2.0 |

y = 0.0101 * x + 2.5836E-004
R = 0.9999
DL = 0.009595
BEC = 0.02559

Weight: <None>
Min Conc: <None>

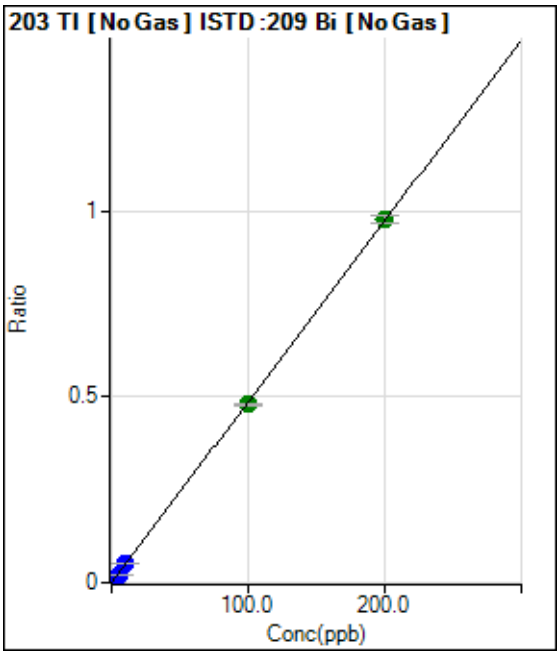



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 296.68 | 0.0001 | P | 13.2 |
| 2 | ☐ | 2.000 | 1.990 | 8319.51 | 0.0031 | P | 2.2 |
| 3 | ☐ | 5.000 | 4.974 | 20549.93 | 0.0077 | P | 1.4 |
| 4 | ☐ | 10.000 | 10.702 | 43633.96 | 0.0164 | P | 3.3 |
| 5 | ☐ | 100.000 | 99.195 | 382133.91 | 0.1508 | P | 1.5 |
| 6 | ☐ | 200.000 | 200.368 | 750261.00 | 0.3045 | P | 0.8 |

y = 0.0015 * x + 1.1303E-004
R = 1.0000
DL = 0.02936
BEC = 0.07439

Weight: <None>
Min Conc: <None>

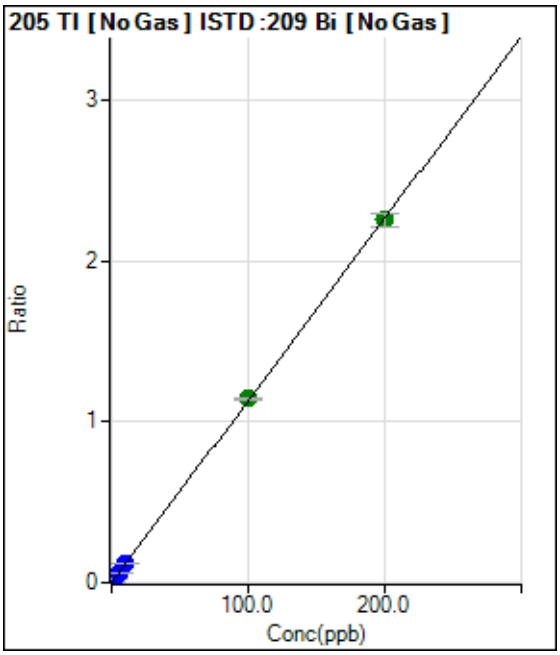
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 36.2 |
| 2 | ☐ | 2.000 | 1.881 | 25934.18 | 0.0092 | P | 2.4 |
| 3 | ☐ | 5.000 | 4.743 | 64872.68 | 0.0231 | P | 0.6 |
| 4 | ☐ | 10.000 | 10.303 | 140636.25 | 0.0501 | P | 1.7 |
| 5 | ☐ | 100.000 | 98.612 | 1297079.46 | 0.4792 | A | 1.0 |
| 6 | ☐ | 200.000 | 200.687 | 2554210.95 | 0.9752 | A | 2.2 |

y = 0.0049 * x + 2.0463E-005
R = 1.0000
DL = 0.004578
BEC = 0.004211

Weight: <None>
Min Conc: <None>

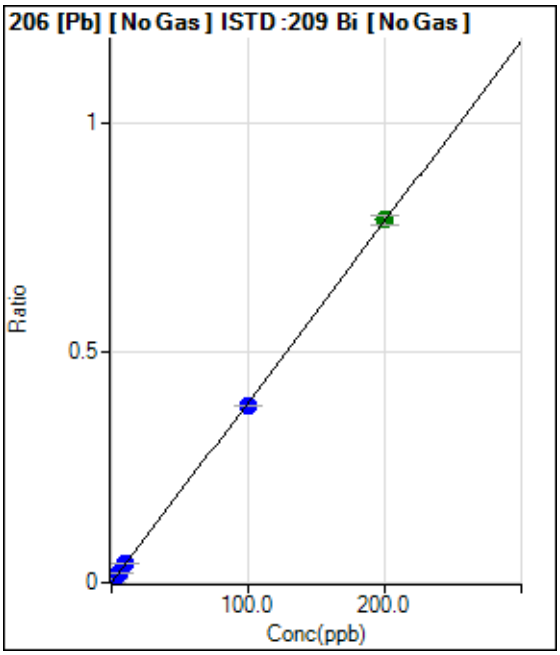



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 146.67 | 0.0001 | P | 29.8 |
| 2 | ☐ | 2.000 | 1.933 | 62148.96 | 0.0220 | P | 2.8 |
| 3 | ☐ | 5.000 | 4.951 | 157901.70 | 0.0562 | P | 2.6 |
| 4 | ☐ | 10.000 | 10.696 | 340468.83 | 0.1213 | P | 1.6 |
| 5 | ☐ | 100.000 | 101.316 | 3107980.58 | 1.1482 | A | 0.9 |
| 6 | ☐ | 200.000 | 199.309 | 5914914.91 | 2.2587 | A | 3.5 |

y = 0.0113 * x + 5.2907E-005
R = 1.0000
DL = 0.004168
BEC = 0.004669

Weight: <None>
Min Conc: <None>

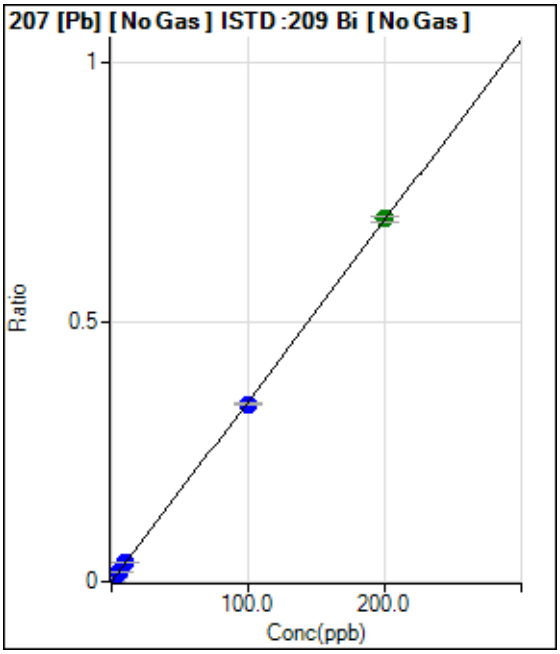
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 163.33 | 0.0001 | P | 17.2 |
| 2 | ☐ | 2.000 | 1.998 | 22330.48 | 0.0079 | P | 3.3 |
| 3 | ☐ | 5.000 | 4.957 | 54824.67 | 0.0195 | P | 1.1 |
| 4 | ☐ | 10.000 | 10.678 | 117709.17 | 0.0419 | P | 3.0 |
| 5 | ☐ | 100.000 | 97.957 | 1039862.64 | 0.3842 | P | 1.0 |
| 6 | ☐ | 200.000 | 200.989 | 2063936.95 | 0.7881 | A | 2.7 |

y = 0.0039 * x + 5.9192E-005
R = 0.9999
DL = 0.007798
BEC = 0.0151

Weight: <None>
Min Conc: <None>

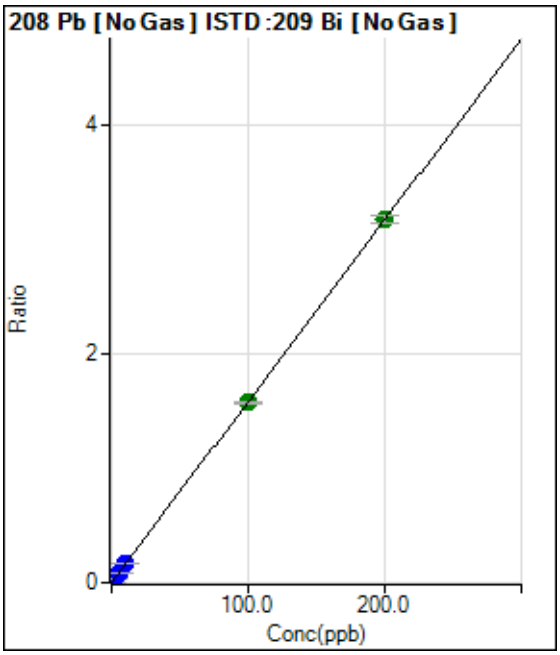



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 126.67 | 0.0000 | P | 14.9 |
| 2 | ☐ | 2.000 | 2.016 | 19936.49 | 0.0070 | P | 4.8 |
| 3 | ☐ | 5.000 | 4.957 | 48545.87 | 0.0173 | P | 2.8 |
| 4 | ☐ | 10.000 | 10.590 | 103422.26 | 0.0368 | P | 1.7 |
| 5 | ☐ | 100.000 | 98.128 | 922901.94 | 0.3409 | P | 1.2 |
| 6 | ☐ | 200.000 | 200.908 | 1828486.90 | 0.6980 | A | 1.7 |

y = 0.0035 * x + 4.5757E-005
R = 0.9999
DL = 0.005877
BEC = 0.01317

Weight: <None>
Min Conc: <None>

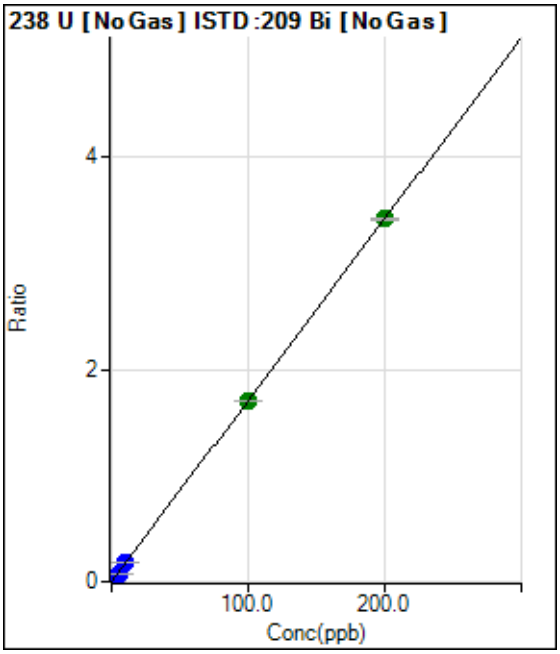
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 646.68 | 0.0002 | P | 1.3 |
| 2 | ☐ | 2.000 | 1.980 | 89196.07 | 0.0315 | P | 3.0 |
| 3 | ☐ | 5.000 | 4.890 | 217917.46 | 0.0775 | P | 1.8 |
| 4 | ☐ | 10.000 | 10.639 | 472608.36 | 0.1683 | P | 2.0 |
| 5 | ☐ | 100.000 | 99.432 | 4253373.25 | 1.5713 | A | 1.1 |
| 6 | ☐ | 200.000 | 200.255 | 8287561.18 | 3.1644 | A | 2.1 |

y = 0.0158 * x + 2.3393E-004
R = 1.0000
DL = 0.0005978
BEC = 0.01481

Weight: <None>
Min Conc: <None>

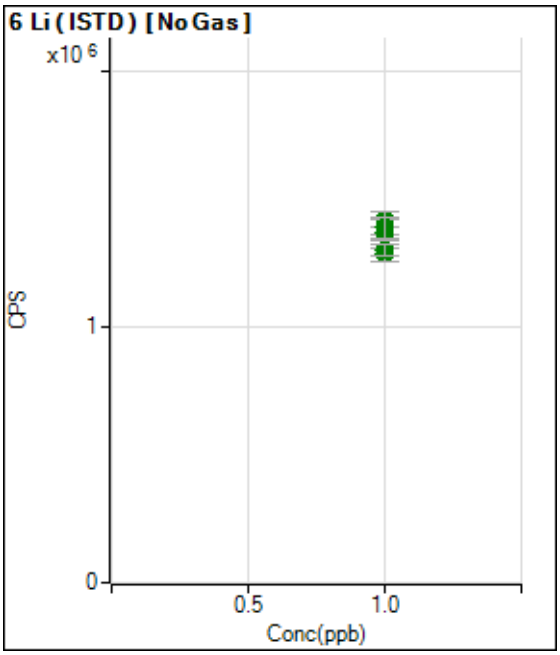



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10.00 | 0.0000 | P | 101.5 |
| 2 | ☐ | 2.000 | 1.872 | 90629.59 | 0.0320 | P | 1.9 |
| 3 | ☐ | 5.000 | 4.682 | 225198.17 | 0.0801 | P | 1.7 |
| 4 | ☐ | 10.000 | 10.365 | 497749.36 | 0.1773 | P | 1.7 |
| 5 | ☐ | 100.000 | 99.780 | 4619714.10 | 1.7066 | A | 0.5 |
| 6 | ☐ | 200.000 | 200.101 | 8965900.28 | 3.4225 | A | 0.7 |

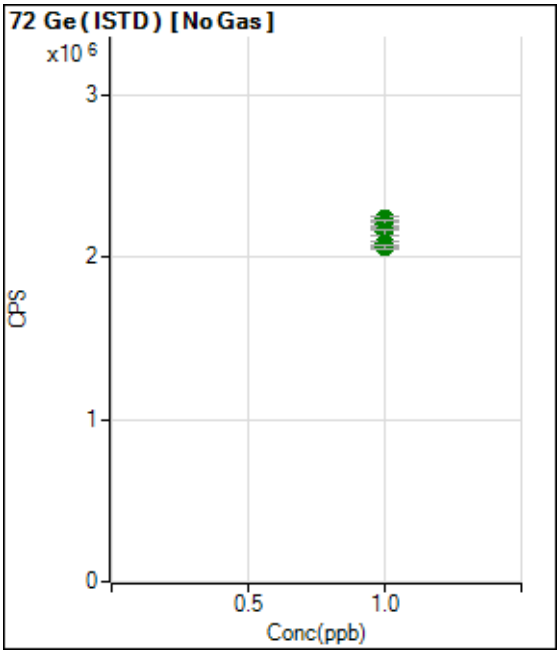
y = 0.0171 * x + 3.6509E-006
R = 1.0000
DL = 0.0006502
BEC = 0.0002135

Weight: <None>
Min Conc: <None>

Calibration for 241_ICV.d

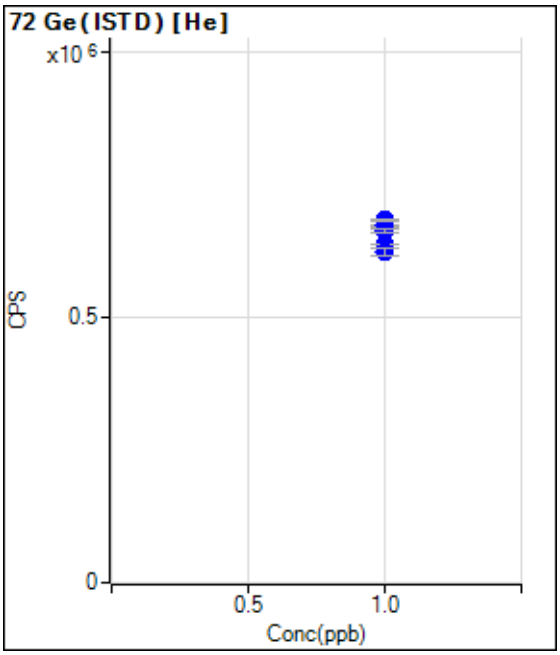



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1419811.71 | | A | 4.2 |
| 2 | ☐ | 1.000 | | 1389475.30 | | A | 4.3 |
| 3 | ☐ | 1.000 | | 1369240.57 | | A | 3.8 |
| 4 | ☐ | 1.000 | | 1388955.43 | | A | 5.5 |
| 5 | ☐ | 1.000 | | 1284466.20 | | A | 4.0 |
| 6 | ☐ | 1.000 | | 1302481.88 | | A | 3.2 |

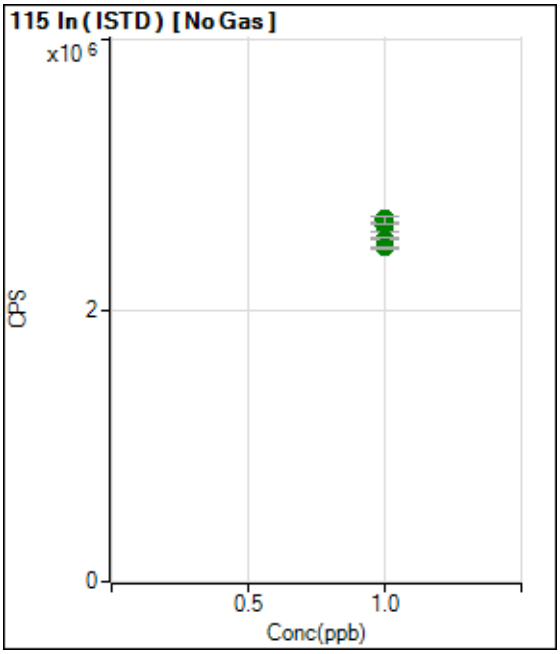



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2205986.01 | | A | 2.3 |
| 2 | ☐ | 1.000 | | 2235754.34 | | A | 1.5 |
| 3 | ☐ | 1.000 | | 2208414.86 | | A | 1.7 |
| 4 | ☐ | 1.000 | | 2154610.33 | | A | 1.8 |
| 5 | ☐ | 1.000 | | 2081102.68 | | A | 1.8 |
| 6 | ☐ | 1.000 | | 2060467.00 | | A | 0.7 |

Calibration for 241_ICV.d

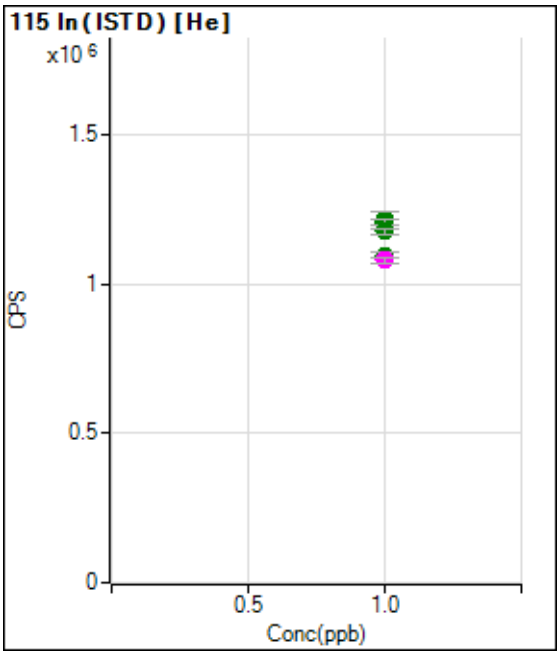



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 671191.87 | | P | 0.6 |
| 2 | ☐ | 1.000 | | 674791.74 | | P | 1.8 |
| 3 | ☐ | 1.000 | | 682743.90 | | P | 0.8 |
| 4 | ☐ | 1.000 | | 662829.36 | | P | 1.4 |
| 5 | ☐ | 1.000 | | 636704.67 | | P | 0.2 |
| 6 | ☐ | 1.000 | | 620973.29 | | P | 2.3 |

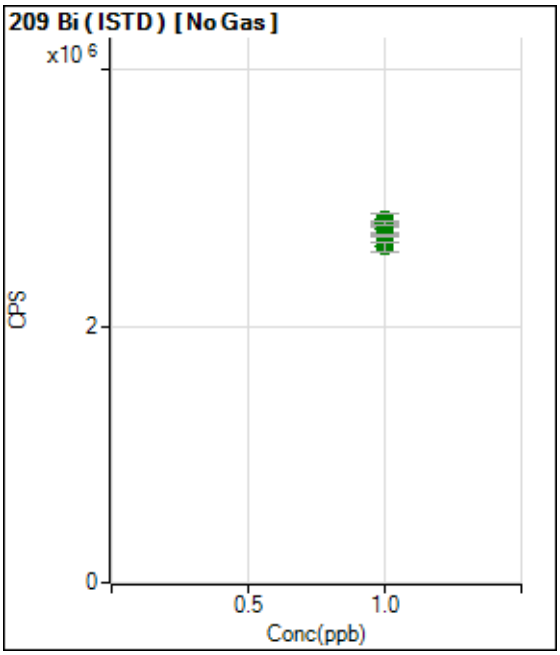



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2620159.38 | | A | 2.2 |
| 2 | ☐ | 1.000 | | 2652820.63 | | A | 0.5 |
| 3 | ☐ | 1.000 | | 2678864.55 | | A | 1.7 |
| 4 | ☐ | 1.000 | | 2665695.75 | | A | 2.0 |
| 5 | ☐ | 1.000 | | 2533857.27 | | A | 0.6 |
| 6 | ☐ | 1.000 | | 2463715.15 | | A | 0.6 |

Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1202081.19 | | A | 2.4 |
| 2 | ☐ | 1.000 | | 1215786.80 | | A | 5.1 |
| 3 | ☐ | 1.000 | | 1208692.76 | | A | 1.9 |
| 4 | ☐ | 1.000 | | 1176873.73 | | A | 2.0 |
| 5 | ☐ | 1.000 | | 1098082.16 | | A | 2.0 |
| 6 | ☐ | 1.000 | | 1081137.93 | | M | 1.9 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2764776.00 | | A | 2.3 |
| 2 | ☐ | 1.000 | | 2831681.10 | | A | 3.4 |
| 3 | ☐ | 1.000 | | 2812098.40 | | A | 0.9 |
| 4 | ☐ | 1.000 | | 2808042.77 | | A | 1.4 |
| 5 | ☐ | 1.000 | | 2706893.40 | | A | 0.3 |
| 6 | ☐ | 1.000 | | 2620006.84 | | A | 2.7 |

# Calibration Blank Report

**Sample Table**

| | |
|---|---|
| Sample Name | CAL BLK |
| Data File Name | 013CALB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:27:43-05:00 |
| Sample Type | CalBlk |
| Level | 1 |
| Dilution | 1 |
| Comment | |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 60887 | 0.00 |
| Be | 9 | 1 | No Gas | 50 | 40.00 |
| V | 51 | 2 | He | 7065 | 0.02 |
| Cr | 52 | 2 | He | 1480 | 0.32 |
| Fe | 56 | 2 | He | 10526 | 0.07 |
| Se | 78 | 2 | He | 35 | 41.88 |
| Sn | 118 | 2 | He | 750 | 0.64 |
| As | 75 | 2 | He | 496 | 1.71 |
| Ca | 44 | 2 | He | 407 | 2.44 |
| Na | 23 | 2 | He | 107088 | 0.00 |
| Mg | 24 | 2 | He | 880 | 0.72 |
| K | 39 | 2 | He | 45017 | 0.00 |
| Mn | 55 | 2 | He | 577 | 3.03 |
| Co | 59 | 2 | He | 180 | 12.35 |
| Ni | 60 | 2 | He | 140 | 15.31 |
| Cu | 63 | 2 | He | 1583 | 0.55 |
| Zn | 66 | 2 | He | 423 | 3.36 |
| Al | 27 | 2 | He | 803 | 2.24 |
| B | 11 | 1 | No Gas | 22361 | 0.01 |
| Al | 27 | 1 | No Gas | 33150 | 0.01 |
| Si | 28 | 1 | No Gas | 161314 | 0.00 |
| P | 31 | 1 | No Gas | 23427 | 0.01 |
| Ag | 107 | 1 | No Gas | 170 | 6.92 |
| Cd | 111 | 1 | No Gas | 10 | 1000.00 |
| Sr | 88 | 1 | No Gas | 1270 | 0.35 |
| Mo | 95 | 1 | No Gas | 27 | 324.76 |
| Sn | 118 | 1 | No Gas | 1443 | 0.62 |
| Sb | 121 | 1 | No Gas | 1690 | 0.58 |
| Ba | 137 | 1 | No Gas | 377 | 4.01 |
| Tl | 205 | 1 | No Gas | 347 | 3.93 |
| Tl | 203 | 1 | No Gas | 153 | 6.50 |
| Pb | 208 | 1 | No Gas | 2620 | 0.08 |
| U | 238 | 1 | No Gas | 57 | 64.83 |
| Ca | 43 | 2 | He | 23 | 424.18 |
| Sb | 121 | 2 | He | 790 | 1.21 |
| Ti | 47 | 2 | He | 13 | 859.23 |
| Cu | 63 | 1 | No Gas | 2537 | 0.34 |

# Calibration Blank Report

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1015680 | 3.23 |
| Ge | 72 | 2 | He | 548876 | 0.79 |

# Calibration Blank Report

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Ge | 72 | 1 | No Gas | 1766563 | 2.79 |
| In | 115 | 1 | No Gas | 2117301 | 0.53 |
| Bi | 209 | 1 | No Gas | 2356499 | 2.41 |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 2/10/200 |
| Data File Name | 014CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:29:37-05:00 |
| Sample Type | CalStd |
| Level | 2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 6148 | 0.04 |
| V | 51 | 2 | He | 15681 | 0.01 |
| Cr | 52 | 2 | He | 12292 | 0.01 |
| Fe | 56 | 2 | He | 981885 | 0.00 |
| Se | 78 | 2 | He | 134 | 4.86 |
| Sn | 118 | 2 | He | 8186 | 0.04 |
| As | 75 | 2 | He | 1799 | 0.21 |
| Ca | 44 | 2 | He | 5374 | 0.08 |
| Na | 23 | 2 | He | 290394 | 0.00 |
| Mg | 24 | 2 | He | 108553 | 0.00 |
| K | 39 | 2 | He | 126197 | 0.00 |
| Mn | 55 | 2 | He | 7869 | 0.01 |
| Co | 59 | 2 | He | 16827 | 0.03 |
| Ni | 60 | 2 | He | 4414 | 0.13 |
| Cu | 63 | 2 | He | 12966 | 0.01 |
| Zn | 66 | 2 | He | 2517 | 0.15 |
| Al | 27 | 2 | He | 1490 | 1.15 |
| B | 11 | 1 | No Gas | 39902 | 0.00 |
| Al | 27 | 1 | No Gas | 57530 | 0.00 |
| Si | 28 | 1 | No Gas | 206642 | 0.00 |
| P | 31 | 1 | No Gas | 27618 | 0.00 |
| Ag | 107 | 1 | No Gas | 24473 | 0.01 |
| Cd | 111 | 1 | No Gas | 4911 | 0.11 |
| Sr | 88 | 1 | No Gas | 39245 | 0.00 |
| Mo | 95 | 1 | No Gas | 8419 | 0.05 |
| Sn | 118 | 1 | No Gas | 15343 | 0.03 |
| Sb | 121 | 1 | No Gas | 21805 | 0.01 |
| Ba | 137 | 1 | No Gas | 6935 | 0.04 |
| Tl | 205 | 1 | No Gas | 50252 | 0.01 |
| Tl | 203 | 1 | No Gas | 20861 | 0.01 |
| Pb | 208 | 1 | No Gas | 73697 | 0.00 |
| U | 238 | 1 | No Gas | 74689 | 0.00 |
| Ca | 43 | 2 | He | 323 | 6.37 |
| Sb | 121 | 2 | He | 11542 | 0.04 |
| Cu | 63 | 1 | No Gas | 19708 | 0.01 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1017480 | 3.21 | 1015680 | 100.18 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 547102 | 0.89 | 548876 | 99.68 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1749483 | 1.94 | 1766563 | 99.03 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2097566 | 0.48 | 2117301 | 99.07 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2380832 | 1.92 | 2356499 | 101.03 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 5/25/500 |
| Data File Name | 015CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:31:30-05:00 |
| Sample Type | CalStd |
| Level | 3 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 15404 | 0.01 |
| V | 51 | 2 | He | 27931 | 0.01 |
| Cr | 52 | 2 | He | 26853 | 0.00 |
| Fe | 56 | 2 | He | 2471245 | 0.00 |
| Se | 78 | 2 | He | 276 | 5.33 |
| Sn | 118 | 2 | He | 20269 | 0.01 |
| As | 75 | 2 | He | 3608 | 0.05 |
| Ca | 44 | 2 | He | 12069 | 0.04 |
| Na | 23 | 2 | He | 565672 | 0.00 |
| Mg | 24 | 2 | He | 267539 | 0.00 |
| K | 39 | 2 | He | 252824 | 0.00 |
| Mn | 55 | 2 | He | 18449 | 0.01 |
| Co | 59 | 2 | He | 41594 | 0.00 |
| Ni | 60 | 2 | He | 10591 | 0.03 |
| Cu | 63 | 2 | He | 30545 | 0.00 |
| Zn | 66 | 2 | He | 5748 | 0.04 |
| Al | 27 | 2 | He | 2034 | 0.19 |
| B | 11 | 1 | No Gas | 71125 | 0.00 |
| Al | 27 | 1 | No Gas | 93219 | 0.00 |
| Si | 28 | 1 | No Gas | 276873 | 0.00 |
| P | 31 | 1 | No Gas | 35696 | 0.01 |
| Ag | 107 | 1 | No Gas | 60891 | 0.00 |
| Cd | 111 | 1 | No Gas | 12493 | 0.01 |
| Sr | 88 | 1 | No Gas | 96220 | 0.00 |
| Mo | 95 | 1 | No Gas | 20516 | 0.01 |
| Sn | 118 | 1 | No Gas | 36782 | 0.00 |
| Sb | 121 | 1 | No Gas | 52847 | 0.00 |
| Ba | 137 | 1 | No Gas | 16311 | 0.02 |
| Tl | 205 | 1 | No Gas | 125254 | 0.00 |
| Tl | 203 | 1 | No Gas | 51554 | 0.00 |
| Pb | 208 | 1 | No Gas | 181670 | 0.00 |
| U | 238 | 1 | No Gas | 187471 | 0.00 |
| Ca | 43 | 2 | He | 690 | 2.96 |
| Sb | 121 | 2 | He | 27159 | 0.00 |
| Cu | 63 | 1 | No Gas | 45416 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1027535 | 4.82 | 1015680 | 101.17 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 542932 | 1.81 | 548876 | 98.92 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1732248 | 2.13 | 1766563 | 98.06 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2124608 | 1.16 | 2117301 | 100.35 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2388727 | 0.50 | 2356499 | 101.37 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 10/50/100 |
| Data File Name | 016CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:33:23-05:00 |
| Sample Type | CalStd |
| Level | 4 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 30336 | 0.01 |
| V | 51 | 2 | He | 49120 | 0.00 |
| Cr | 52 | 2 | He | 53589 | 0.00 |
| Fe | 56 | 2 | He | 4845425 | 0.00 |
| Se | 78 | 2 | He | 585 | 1.14 |
| Sn | 118 | 2 | He | 39396 | 0.00 |
| As | 75 | 2 | He | 6850 | 0.03 |
| Ca | 44 | 2 | He | 23664 | 0.00 |
| Na | 23 | 2 | He | 1035978 | 0.00 |
| Mg | 24 | 2 | He | 542202 | 0.00 |
| K | 39 | 2 | He | 453364 | 0.00 |
| Mn | 55 | 2 | He | 35774 | 0.00 |
| Co | 59 | 2 | He | 83758 | 0.00 |
| Ni | 60 | 2 | He | 21668 | 0.02 |
| Cu | 63 | 2 | He | 60903 | 0.00 |
| Zn | 66 | 2 | He | 11268 | 0.02 |
| Al | 27 | 2 | He | 3467 | 0.00 |
| B | 11 | 1 | No Gas | 124613 | 0.00 |
| Al | 27 | 1 | No Gas | 148913 | 0.00 |
| Si | 28 | 1 | No Gas | 390104 | 0.00 |
| P | 31 | 1 | No Gas | 46903 | 0.00 |
| Ag | 107 | 1 | No Gas | 118295 | 0.00 |
| Cd | 111 | 1 | No Gas | 24019 | 0.01 |
| Sr | 88 | 1 | No Gas | 188254 | 0.00 |
| Mo | 95 | 1 | No Gas | 40773 | 0.01 |
| Sn | 118 | 1 | No Gas | 73704 | 0.00 |
| Sb | 121 | 1 | No Gas | 105201 | 0.00 |
| Ba | 137 | 1 | No Gas | 31529 | 0.01 |
| Tl | 205 | 1 | No Gas | 253143 | 0.00 |
| Tl | 203 | 1 | No Gas | 104609 | 0.00 |
| Pb | 208 | 1 | No Gas | 356523 | 0.00 |
| U | 238 | 1 | No Gas | 374880 | 0.00 |
| Ca | 43 | 2 | He | 1337 | 0.31 |
| Sb | 121 | 2 | He | 53824 | 0.01 |
| Cu | 63 | 1 | No Gas | 88569 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1031062 | 2.06 | 1015680 | 101.51 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 540044 | 0.57 | 548876 | 98.39 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1765154 | 1.56 | 1766563 | 99.92 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2120434 | 1.76 | 2117301 | 100.15 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2332758 | 1.89 | 2356499 | 98.99 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 100/500/10K |
| Data File Name | 017CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:35:16-05:00 |
| Sample Type | CalStd |
| Level | 5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 288157 | 0.00 |
| V | 51 | 2 | He | 401657 | 0.00 |
| Cr | 52 | 2 | He | 489362 | 0.00 |
| Fe | 56 | 2 | He | 44061018 | 0.00 |
| Se | 78 | 2 | He | 4929 | 0.05 |
| Sn | 118 | 2 | He | 359077 | 0.00 |
| As | 75 | 2 | He | 58836 | 0.00 |
| Ca | 44 | 2 | He | 219587 | 0.00 |
| Na | 23 | 2 | He | 8454833 | 0.00 |
| Mg | 24 | 2 | He | 4826218 | 0.00 |
| K | 39 | 2 | He | 3811442 | 0.00 |
| Mn | 55 | 2 | He | 331505 | 0.00 |
| Co | 59 | 2 | He | 768600 | 0.00 |
| Ni | 60 | 2 | He | 198576 | 0.00 |
| Cu | 63 | 2 | He | 540419 | 0.00 |
| Zn | 66 | 2 | He | 102704 | 0.00 |
| Al | 27 | 2 | He | 24929 | 0.01 |
| B | 11 | 1 | No Gas | 988801 | 0.00 |
| Al | 27 | 1 | No Gas | 1005381 | 0.00 |
| Si | 28 | 1 | No Gas | 2404963 | 0.00 |
| P | 31 | 1 | No Gas | 230858 | 0.00 |
| Ag | 107 | 1 | No Gas | 1128471 | 0.00 |
| Cd | 111 | 1 | No Gas | 229001 | 0.00 |
| Sr | 88 | 1 | No Gas | 1803785 | 0.00 |
| Mo | 95 | 1 | No Gas | 388393 | 0.00 |
| Sn | 118 | 1 | No Gas | 680094 | 0.00 |
| Sb | 121 | 1 | No Gas | 981699 | 0.00 |
| Ba | 137 | 1 | No Gas | 295751 | 0.00 |
| Tl | 205 | 1 | No Gas | 2483784 | 0.00 |
| Tl | 203 | 1 | No Gas | 984897 | 0.00 |
| Pb | 208 | 1 | No Gas | 3387004 | 0.00 |
| U | 238 | 1 | No Gas | 3694642 | 0.00 |
| Ca | 43 | 2 | He | 13040 | 0.02 |
| Sb | 121 | 2 | He | 498465 | 0.00 |
| Cu | 63 | 1 | No Gas | 803458 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 974419 | 1.38 | 1015680 | 95.94 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 532668 | 1.01 | 548876 | 97.05 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1702023 | 1.61 | 1766563 | 96.35 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2066253 | 1.33 | 2117301 | 97.59 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2309063 | 0.79 | 2356499 | 97.99 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 200/1000/20K |
| Data File Name | 018CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:37:05-05:00 |
| Sample Type | CalStd |
| Level | 6 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 601541 | 0.00 |
| V | 51 | 2 | He | 832589 | 0.00 |
| Cr | 52 | 2 | He | 1053176 | 0.00 |
| Fe | 56 | 2 | He | 91481712 | 0.00 |
| Se | 78 | 2 | He | 10339 | 0.02 |
| Sn | 118 | 2 | He | 762052 | 0.00 |
| As | 75 | 2 | He | 122188 | 0.00 |
| Ca | 44 | 2 | He | 461370 | 0.00 |
| Na | 23 | 2 | He | 17452548 | 0.00 |
| Mg | 24 | 2 | He | 10105680 | 0.00 |
| K | 39 | 2 | He | 7932236 | 0.00 |
| Mn | 55 | 2 | He | 696820 | 0.00 |
| Co | 59 | 2 | He | 1627739 | 0.00 |
| Ni | 60 | 2 | He | 409868 | 0.00 |
| Cu | 63 | 2 | He | 1147958 | 0.00 |
| Zn | 66 | 2 | He | 214570 | 0.00 |
| Al | 27 | 2 | He | 51607 | 0.00 |
| B | 11 | 1 | No Gas | 2077857 | 0.00 |
| Al | 27 | 1 | No Gas | 2098551 | 0.00 |
| Si | 28 | 1 | No Gas | 4677516 | 0.00 |
| P | 31 | 1 | No Gas | 465091 | 0.00 |
| Ag | 107 | 1 | No Gas | 2314340 | 0.00 |
| Cd | 111 | 1 | No Gas | 471460 | 0.00 |
| Sr | 88 | 1 | No Gas | 3753500 | 0.00 |
| Mo | 95 | 1 | No Gas | 811643 | 0.00 |
| Sn | 118 | 1 | No Gas | 1444493 | 0.00 |
| Sb | 121 | 1 | No Gas | 2122041 | 0.00 |
| Ba | 137 | 1 | No Gas | 624197 | 0.00 |
| Tl | 205 | 1 | No Gas | 5122729 | 0.00 |
| Tl | 203 | 1 | No Gas | 2202539 | 0.00 |
| Pb | 208 | 1 | No Gas | 7220763 | 0.00 |
| U | 238 | 1 | No Gas | 7817840 | 0.00 |
| Ca | 43 | 2 | He | 26703 | 0.00 |
| Sb | 121 | 2 | He | 1067014 | 0.00 |
| Cu | 63 | 1 | No Gas | 1698337 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 930358 | 4.39 | 1015680 | 91.60 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 522558 | 0.82 | 548876 | 95.21 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1622238 | 1.40 | 1766563 | 91.83 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1963080 | 0.42 | 2117301 | 92.72 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2261575 | 2.27 | 2356499 | 95.97 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICV2 |
| Data File Name | 021LCV2.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:42:32-05:00 |
| Sample Type | LLCCV2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 1.936 | 1.936 | 13.35 | 85202 | 0.00 | 2 | |
| Be | 9 | 1 | No Gas | 1.883 | 1.883 | 2.76 | 6050 | 0.03 | 2 | |
| V | 51 | 2 | He | 1.509 | 1.509 | 6.62 | 13349 | 0.01 | 2 | |
| Cr | 52 | 2 | He | 1.889 | 1.889 | 4.00 | 11568 | 0.02 | 2 | |
| Fe | 56 | 2 | He | 199.202 | 199.202 | 5.89 | 944112 | 0.02 | 200 | |
| Se | 78 | 2 | He | 1.960 | 1.960 | 12.67 | 137 | 1.43 | 2 | |
| Sn | 118 | 2 | He | 2.113 | 2.113 | 4.04 | 8967 | 0.02 | 2 | |
| As | 75 | 2 | He | 1.710 | 1.710 | 3.28 | 1556 | 0.11 | 2 | |
| Ca | 44 | 2 | He | 196.019 | 196.019 | 7.91 | 5018 | 3.91 | 200 | |
| Na | 23 | 2 | He | 204.635 | 204.635 | 3.69 | 287654 | 0.07 | 200 | |
| Mg | 24 | 2 | He | 210.699 | 210.699 | 3.82 | 109799 | 0.19 | 200 | |
| K | 39 | 2 | He | 204.091 | 204.091 | 3.65 | 126815 | 0.16 | 200 | |
| Mn | 55 | 2 | He | 1.975 | 1.975 | 4.76 | 7606 | 0.03 | 2 | |
| Co | 59 | 2 | He | 1.921 | 1.921 | 8.31 | 16123 | 0.01 | 2 | |
| Ni | 60 | 2 | He | 2.152 | 2.152 | 2.28 | 4664 | 0.05 | 2 | |
| Cu | 63 | 2 | He | 2.058 | 2.058 | 6.57 | 13594 | 0.02 | 2 | |
| Zn | 66 | 2 | He | 2.130 | 2.130 | 1.97 | 2754 | 0.08 | 2 | |
| Al | 27 | 2 | He | 2.137 | 2.137 | 14.08 | 1347 | 0.16 | 2 | |
| B | 11 | 1 | No Gas | 22.799 | 22.799 | 1.99 | 71572 | 0.03 | 10 | NewName Main CR1 Failed |
| Al | 27 | 1 | No Gas | 2.355 | 2.355 | 1.85 | 57671 | 0.00 | 2 | |
| Si | 28 | 1 | No Gas | 13.240 | 13.240 | 6.86 | 220329 | 0.01 | 10 | NewName Main CR1 Failed |
| P | 31 | 1 | No Gas | 9.972 | 9.972 | 23.37 | 27451 | 0.04 | 10 | |
| Ag | 107 | 1 | No Gas | 1.964 | 1.964 | 2.67 | 23755 | 0.01 | 2 | |
| Cd | 111 | 1 | No Gas | 2.043 | 2.043 | 1.78 | 5004 | 0.04 | 2 | |
| Sr | 88 | 1 | No Gas | 1.953 | 1.953 | 2.91 | 39155 | 0.00 | 2 | |
| Mo | 95 | 1 | No Gas | 1.975 | 1.975 | 2.08 | 8316 | 0.02 | 2 | |
| Sn | 118 | 1 | No Gas | 2.069 | 2.069 | 2.75 | 16798 | 0.01 | 2 | |
| Sb | 121 | 1 | No Gas | 1.908 | 1.908 | 2.46 | 22610 | 0.01 | 2 | |
| Ba | 137 | 1 | No Gas | 2.077 | 2.077 | 5.25 | 7059 | 0.03 | 2 | |
| Tl | 205 | 1 | No Gas | 1.983 | 1.983 | 1.80 | 53081 | 0.00 | 2 | |
| Tl | 203 | 1 | No Gas | 1.931 | 1.931 | 2.69 | 21890 | 0.01 | 2 | |
| Pb | 208 | 1 | No Gas | 1.950 | 1.950 | 2.69 | 75221 | 0.00 | 2 | |
| U | 238 | 1 | No Gas | 1.825 | 1.825 | 2.03 | 73740 | 0.00 | 2 | |
| Ca | 43 | 2 | He | 226.150 | 226.150 | 13.63 | 333 | 67.84 | 200 | |
| Sb | 121 | 2 | He | 1.946 | 1.946 | 2.09 | 11352 | 0.02 | 2 | |
| Ti | 47 | 2 | He | 1.952 | 1.952 | 32.56 | 303 | 0.64 | 200 | |
| Cu | 63 | 1 | No Gas | 1.930 | 1.930 | 4.50 | 19504 | 0.01 | 2 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1001872 | 2.38 | 1015680 | 98.64 | 70 | 120 | |
| Ge | 72 | 2 | He | 541827 | 2.74 | 548876 | 98.72 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1722726 | 1.66 | 1766563 | 97.52 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2068297 | 1.53 | 2117301 | 97.69 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2371662 | 1.56 | 2356499 | 100.64 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICV5 |
| Data File Name | 022LCV5.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:44:25-05:00 |
| Sample Type | LLCCV5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 013CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 4.900 | 4.900 | 5.24 | 120034 | 0.00 | 5 | |
| Be | 9 | 1 | No Gas | 4.871 | 4.871 | 3.65 | 15097 | 0.03 | 5 | |
| V | 51 | 2 | He | 4.389 | 4.389 | 3.47 | 25272 | 0.02 | 5 | |
| Cr | 52 | 2 | He | 4.823 | 4.823 | 2.18 | 27010 | 0.02 | 5 | |
| Fe | 56 | 2 | He | 513.067 | 513.067 | 2.47 | 2392296 | 0.02 | 500 | |
| Se | 78 | 2 | He | 5.111 | 5.111 | 4.32 | 301 | 1.70 | 5 | |
| Sn | 118 | 2 | He | 4.921 | 4.921 | 1.69 | 20350 | 0.02 | 5 | |
| As | 75 | 2 | He | 4.661 | 4.661 | 2.44 | 3363 | 0.14 | 5 | |
| Ca | 44 | 2 | He | 484.621 | 484.621 | 4.19 | 11705 | 4.14 | 500 | |
| Na | 23 | 2 | He | 509.254 | 509.254 | 4.32 | 552986 | 0.09 | 500 | |
| Mg | 24 | 2 | He | 513.723 | 513.723 | 2.28 | 263917 | 0.19 | 500 | |
| K | 39 | 2 | He | 504.095 | 504.095 | 2.56 | 245519 | 0.21 | 500 | |
| Mn | 55 | 2 | He | 4.927 | 4.927 | 5.05 | 17925 | 0.03 | 5 | |
| Co | 59 | 2 | He | 5.124 | 5.124 | 4.24 | 42330 | 0.01 | 5 | |
| Ni | 60 | 2 | He | 5.139 | 5.139 | 4.74 | 10835 | 0.05 | 5 | |
| Cu | 63 | 2 | He | 5.016 | 5.016 | 3.91 | 30595 | 0.02 | 5 | |
| Zn | 66 | 2 | He | 4.849 | 4.849 | 7.19 | 5675 | 0.09 | 5 | |
| Al | 27 | 2 | He | 5.696 | 5.696 | 3.81 | 2250 | 0.25 | 5 | |
| B | 11 | 1 | No Gas | 32.251 | 32.251 | 6.65 | 89282 | 0.04 | 25 | |
| Al | 27 | 1 | No Gas | 5.518 | 5.518 | 4.92 | 91981 | 0.01 | 5 | |
| Si | 28 | 1 | No Gas | 26.321 | 26.321 | 0.31 | 283563 | 0.01 | 25 | |
| P | 31 | 1 | No Gas | 25.963 | 25.963 | 4.38 | 34951 | 0.07 | 25 | |
| Ag | 107 | 1 | No Gas | 4.842 | 4.842 | 2.81 | 58490 | 0.01 | 5 | |
| Cd | 111 | 1 | No Gas | 4.894 | 4.894 | 3.31 | 12009 | 0.04 | 5 | |
| Sr | 88 | 1 | No Gas | 4.754 | 4.754 | 2.27 | 93816 | 0.01 | 5 | |
| Mo | 95 | 1 | No Gas | 4.743 | 4.743 | 5.18 | 19985 | 0.02 | 5 | |
| Sn | 118 | 1 | No Gas | 4.772 | 4.772 | 2.82 | 37009 | 0.01 | 5 | |
| Sb | 121 | 1 | No Gas | 4.537 | 4.537 | 0.78 | 51679 | 0.01 | 5 | |
| Ba | 137 | 1 | No Gas | 4.937 | 4.937 | 2.71 | 16311 | 0.03 | 5 | |
| Tl | 205 | 1 | No Gas | 4.748 | 4.748 | 3.03 | 126470 | 0.00 | 5 | |
| Tl | 203 | 1 | No Gas | 4.646 | 4.646 | 3.84 | 52394 | 0.01 | 5 | |
| Pb | 208 | 1 | No Gas | 4.760 | 4.760 | 3.76 | 179631 | 0.00 | 5 | |
| U | 238 | 1 | No Gas | 4.610 | 4.610 | 1.64 | 186063 | 0.00 | 5 | |
| Ca | 43 | 2 | He | 508.147 | 508.147 | 4.69 | 713 | 71.23 | 500 | |
| Sb | 121 | 2 | He | 4.886 | 4.886 | 2.49 | 27058 | 0.02 | 5 | |
| Ti | 47 | 2 | He | 4.295 | 4.295 | 4.56 | 647 | 0.66 | 5 | |
| Cu | 63 | 1 | No Gas | 4.869 | 4.869 | 0.59 | 45597 | 0.01 | 5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 972379 | 3.72 | 1015680 | 95.74 | 70 | 120 | |
| Ge | 72 | 2 | He | 536493 | 2.35 | 548876 | 97.74 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 1 | No Gas | 1728497 | 1.37 | 1766563 | 97.85 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2074499 | 1.74 | 2117301 | 97.98 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2370033 | 2.68 | 2356499 | 100.57 | 70 | 120 | |

# Initial Calibration Blank (ICB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICB |
| Data File Name | 023_ICB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:46:19-05:00 |
| Sample Type | ICB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.167 | -95.3 | 59932 | 2.4 | 0.5 | |
| Be | 9 | 1 | No Gas | -0.003 | -152.1 | 42 | 36.7 | 0.5 | |
| V | 51 | 2 | He | -0.338 | -12.9 | 5521 | 2.3 | 2.5 | |
| Cr | 52 | 2 | He | -0.016 | -129.1 | 1367 | 6.8 | 2.5 | |
| Fe | 56 | 2 | He | -0.356 | -4.3 | 8683 | 3.3 | 100 | |
| Se | 78 | 2 | He | -0.015 | -41.3 | 33 | 3.5 | 1 | |
| Sn | 118 | 2 | He | 0.016 | 135.8 | 813 | 10.2 | 2.5 | |
| As | 75 | 2 | He | -0.142 | -18.3 | 399 | 4.6 | 2.5 | |
| Ca | 44 | 2 | He | 8.747 | 52.7 | 607 | 19.7 | 100 | |
| Na | 23 | 2 | He | 1.008 | 304.5 | 106148 | 0.9 | 100 | |
| Mg | 24 | 2 | He | -0.299 | -84.6 | 713 | 20.4 | 100 | |
| K | 39 | 2 | He | 3.194 | 145.5 | 45519 | 1.7 | 100 | |
| Mn | 55 | 2 | He | 0.021 | 64.9 | 640 | 9.4 | 2.5 | |
| Co | 59 | 2 | He | 0.004 | 61.8 | 213 | 9.8 | 2.5 | |
| Ni | 60 | 2 | He | 0.025 | 75.4 | 190 | 19.0 | 2.5 | |
| Cu | 63 | 2 | He | -0.002 | -1308.5 | 1547 | 9.0 | 1 | |
| Zn | 66 | 2 | He | 0.026 | 142.7 | 443 | 6.9 | 2.5 | |
| Al | 27 | 2 | He | 1.546 | 29.7 | 1190 | 11.0 | 5 | |
| B | 11 | 1 | No Gas | 5.754 | 9.0 | 35757 | 2.2 | 0.5 | ICB Main CR1 Failed |
| Al | 27 | 1 | No Gas | 0.973 | 5.3 | 41776 | 1.2 | 5 | |
| Si | 28 | 1 | No Gas | -2.566 | -16.7 | 141701 | 2.4 | 10 | |
| P | 31 | 1 | No Gas | 3.431 | 34.6 | 23861 | 2.0 | 10 | |
| Ag | 107 | 1 | No Gas | -0.002 | -139.6 | 147 | 20.8 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.001 | 170.8 | 13 | 43.3 | 1 | |
| Sr | 88 | 1 | No Gas | 0.029 | 27.5 | 1830 | 9.0 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.002 | 247.7 | 37 | 68.6 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.017 | 154.9 | 1563 | 13.1 | 5 | |
| Sb | 121 | 1 | No Gas | 0.009 | 113.2 | 1700 | 5.7 | 2.5 | |
| Ba | 137 | 1 | No Gas | -0.030 | -42.4 | 277 | 14.6 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.024 | 3.7 | 973 | 3.3 | 1 | |
| Tl | 203 | 1 | No Gas | 0.019 | 21.0 | 367 | 12.9 | 1 | |
| Pb | 208 | 1 | No Gas | 0.009 | 40.2 | 2927 | 5.3 | 2.5 | |
| U | 238 | 1 | No Gas | 0.001 | 58.7 | 100 | 26.5 | 2.5 | |
| Ca | 43 | 2 | He | -4.722 | -174.2 | 17 | 69.3 | 100 | |
| Sb | 121 | 2 | He | -0.006 | -324.6 | 743 | 16.6 | 2.5 | |
| Ti | 47 | 2 | He | -0.066 | -57.8 | 3 | 173.2 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1037048 | 2.67 | 1015680 | 102.10 | 70 | 120 | |
| Ge | 72 | 2 | He | 539658 | 2.53 | 548876 | 98.32 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1681640 | 1.28 | 1766563 | 95.19 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2104721 | 0.72 | 2117301 | 99.41 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2348297 | 1.55 | 2356499 | 99.65 | 70 | 120 | |

# Initial Calibration Verification (ICV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICV |
| Data File Name | 024_ICV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:50:03-05:00 |
| Sample Type | ICV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 97.313 | 2.098 | 1214504 | 2.15 | 100 | 97.3 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 99.964 | 0.593 | 288314 | 1.76 | 100 | 100.0 | 90 | 110 | |
| V | 51 | 2 | He | 93.457 | 0.628 | 403661 | 0.71 | 100 | 93.5 | 90 | 110 | |
| Cr | 52 | 2 | He | 92.287 | 0.741 | 497532 | 0.83 | 100 | 92.3 | 90 | 110 | |
| Fe | 56 | 2 | He | 9436.190 | 1.550 | 44442798 | 1.87 | 10000 | 94.4 | 90 | 110 | |
| Se | 78 | 2 | He | 91.737 | 2.553 | 4888 | 2.87 | 100 | 91.7 | 90 | 110 | |
| Sn | 118 | 2 | He | 94.498 | 0.408 | 363996 | 1.59 | 100 | 94.5 | 90 | 110 | |
| As | 75 | 2 | He | 95.034 | 1.368 | 59979 | 1.66 | 100 | 95.0 | 90 | 110 | |
| Ca | 44 | 2 | He | 9394.466 | 1.245 | 222765 | 0.99 | 10000 | 93.9 | 90 | 110 | |
| Na | 23 | 2 | He | 9443.516 | 1.783 | 8539333 | 1.41 | 10000 | 94.4 | 90 | 110 | |
| Mg | 24 | 2 | He | 9488.445 | 1.223 | 4928359 | 1.45 | 10000 | 94.9 | 90 | 110 | |
| K | 39 | 2 | He | 9528.222 | 1.070 | 3907452 | 0.77 | 10000 | 95.3 | 90 | 110 | |
| Mn | 55 | 2 | He | 94.751 | 0.609 | 339285 | 0.79 | 100 | 94.8 | 90 | 110 | |
| Co | 59 | 2 | He | 92.526 | 1.110 | 772341 | 1.03 | 100 | 92.5 | 90 | 110 | |
| Ni | 60 | 2 | He | 95.259 | 2.524 | 201257 | 2.53 | 100 | 95.3 | 90 | 110 | |
| Cu | 63 | 2 | He | 92.161 | 0.869 | 542969 | 0.90 | 100 | 92.2 | 90 | 110 | |
| Zn | 66 | 2 | He | 94.470 | 1.244 | 104384 | 1.08 | 100 | 94.5 | 90 | 110 | |
| Al | 27 | 2 | He | 94.478 | 2.929 | 25457 | 3.15 | 100 | 94.5 | 90 | 110 | |
| B | 11 | 1 | No Gas | 508.379 | 2.182 | 1005559 | 0.94 | 500 | 101.7 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 93.959 | 0.949 | 1032478 | 0.91 | 100 | 94.0 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 488.294 | 1.492 | 2455471 | 1.31 | 500 | 97.7 | 90 | 110 | |
| P | 31 | 1 | No Gas | 459.993 | 0.735 | 232615 | 0.70 | 500 | 92.0 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 93.148 | 1.972 | 1139277 | 0.94 | 100 | 93.1 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 92.491 | 0.351 | 230314 | 1.28 | 100 | 92.5 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 92.016 | 1.375 | 1820900 | 1.43 | 100 | 92.0 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 90.561 | 0.903 | 387111 | 0.87 | 100 | 90.6 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 89.650 | 0.846 | 680569 | 0.84 | 100 | 89.6 | 90 | 110 | ICV Main CR1 Failed |
| Sb | 121 | 1 | No Gas | 89.389 | 0.924 | 973898 | 0.79 | 100 | 89.4 | 90 | 110 | ICV Main CR1 Failed |
| Ba | 137 | 1 | No Gas | 90.567 | 1.819 | 297304 | 0.89 | 100 | 90.6 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 94.368 | 2.761 | 2477743 | 2.09 | 100 | 94.4 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 88.816 | 1.274 | 987564 | 0.55 | 100 | 88.8 | 90 | 110 | ICV Main CR1 Failed |
| Pb | 208 | 1 | No Gas | 92.418 | 2.033 | 3400051 | 1.44 | 100 | 92.4 | 90 | 110 | |
| U | 238 | 1 | No Gas | 92.468 | 1.955 | 3687636 | 1.66 | 100 | 92.5 | 90 | 110 | |
| Ca | 43 | 2 | He | 9715.067 | 0.854 | 13397 | 0.95 | 10000 | 97.2 | 90 | 110 | |
| Sb | 121 | 2 | He | 92.395 | 1.269 | 504912 | 1.38 | 100 | 92.4 | 90 | 110 | |
| Ti | 47 | 2 | He | 89.092 | 2.605 | 13347 | 2.81 | 100 | 89.1 | 90 | 110 | ICV Main CR1 Failed |
| Cu | 63 | 1 | No Gas | 91.616 | 1.318 | 802598 | 1.22 | 100 | 91.6 | 90 | 110 | |

**QC ISTD Table**

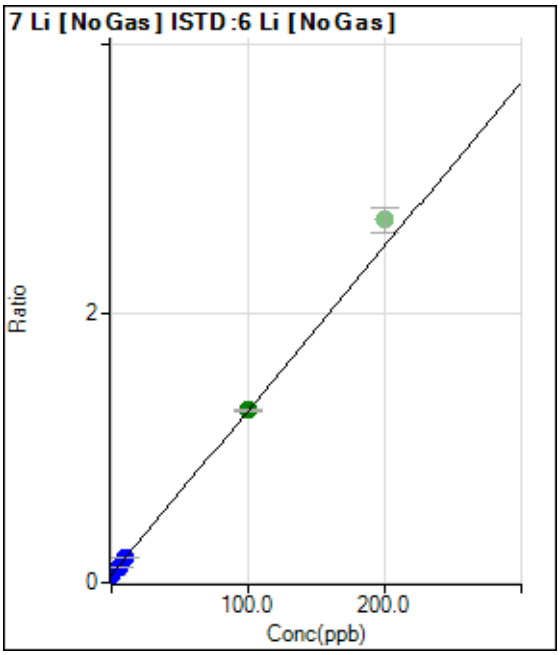
| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 975135 | 1.45 | 1015680 | 96.01 | 70 | 120 | |
| Ge | 72 | 2 | He | 543896 | 0.36 | 548876 | 99.09 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1704996 | 0.15 | 1766563 | 96.51 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2106218 | 1.56 | 2117301 | 99.48 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2341746 | 0.73 | 2356499 | 99.37 | 70 | 120 | |

Calibration for 024_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 013CALB.d | CAL BLK | 7/28/2020 11:27:43 AM |
| 2 | 014CALS.d | 2/10/200 | 7/28/2020 11:29:37 AM |
| 3 | 015CALS.d | 5/25/500 | 7/28/2020 11:31:30 AM |
| 4 | 016CALS.d | 10/50/100 | 7/28/2020 11:33:23 AM |
| 5 | 017CALS.d | 100/500/10K | 7/28/2020 11:35:16 AM |
| 6 | 018CALS.d | 200/1000/20K | 7/28/2020 11:37:05 AM |

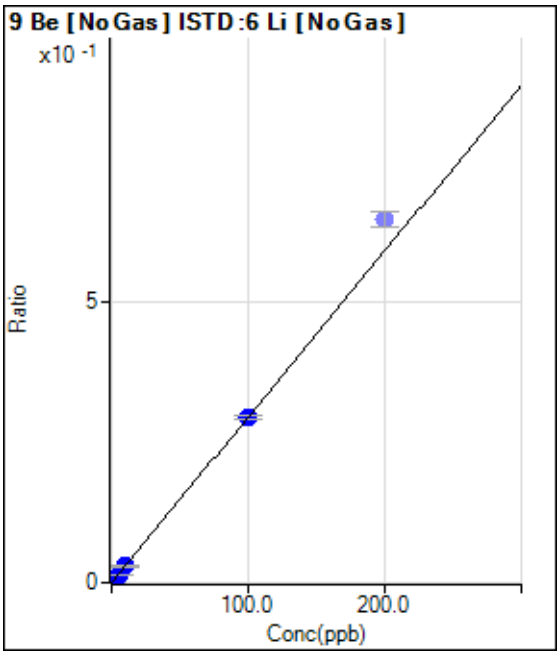
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 60887.35 | 0.0600 | P | 3.3 |
| 2 | ☐ | 2.000 | 1.971 | 85442.97 | 0.0840 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.693 | 120299.92 | 0.1172 | P | 2.4 |
| 4 | ☐ | 10.000 | 9.787 | 184783.31 | 0.1792 | P | 0.3 |
| 5 | ☐ | 100.000 | 100.037 | 1246034.12 | 1.2787 | A | 0.4 |
| 6 | ☑ | 200.000 | | 2500120.38 | 2.6929 | A | 7.2 |

y = 0.0122 * x + 0.0600
R = 1.0000
DL = 0.4848
BEC = 4.924

Weight: <None>
Min Conc: <None>

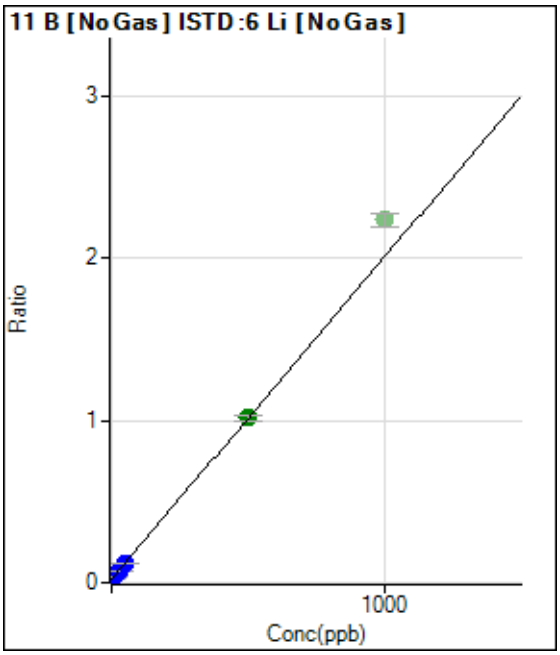



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 50.00 | 0.0000 | P | 21.3 |
| 2 | ☐ | 2.000 | 2.027 | 6148.06 | 0.0060 | P | 1.0 |
| 3 | ☐ | 5.000 | 5.060 | 15403.54 | 0.0150 | P | 4.6 |
| 4 | ☐ | 10.000 | 9.937 | 30336.30 | 0.0294 | P | 4.5 |
| 5 | ☐ | 100.000 | 100.003 | 288156.78 | 0.2958 | P | 2.3 |
| 6 | ☑ | 200.000 | | 601540.68 | 0.6474 | P | 4.1 |

y = 0.0030 * x + 4.9364E-005
R = 1.0000
DL = 0.01069
BEC = 0.01669

Weight: <None>
Min Conc: <None>

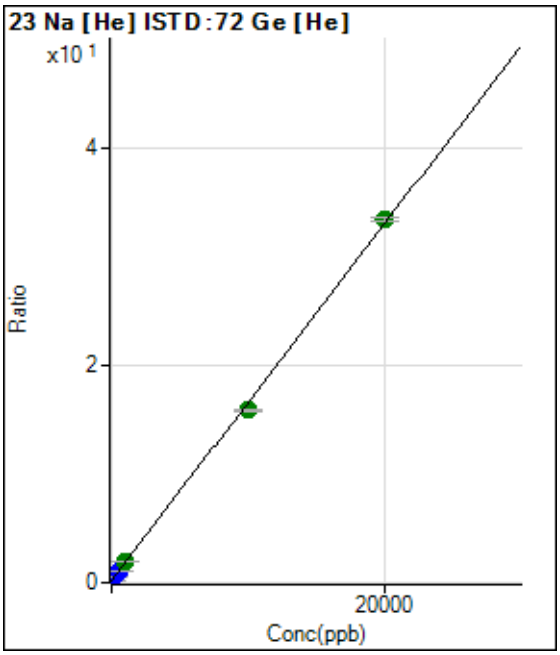
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22361.31 | 0.0220 | P | 2.1 |
| 2 | ☐ | 10.000 | 8.675 | 39901.80 | 0.0392 | P | 3.6 |
| 3 | ☐ | 25.000 | 23.842 | 71125.00 | 0.0694 | P | 6.3 |
| 4 | ☐ | 50.000 | 49.802 | 124612.82 | 0.1209 | P | 2.7 |
| 5 | ☐ | 500.000 | 500.104 | 988801.29 | 1.0150 | A | 3.8 |
| 6 | ☑ | 1000.000 | | 2077857.10 | 2.2358 | A | 3.9 |

y = 0.0020 * x + 0.0220
R = 1.0000
DL = 0.6856
BEC = 11.09

Weight: <None>
Min Conc: <None>

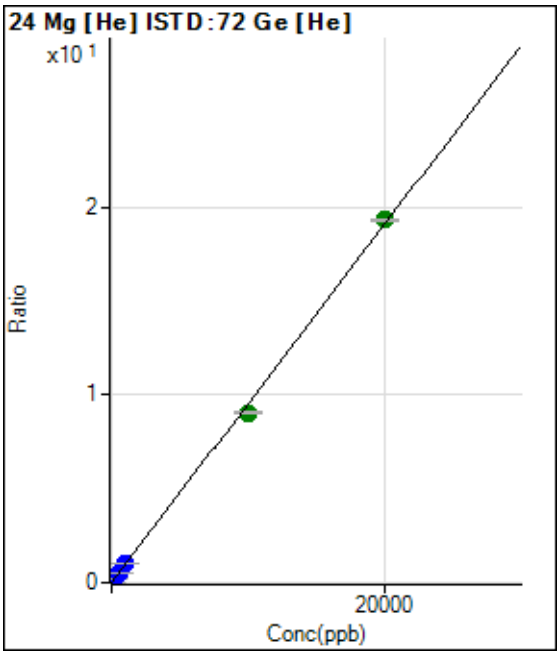



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 107088.46 | 0.1951 | P | 1.5 |
| 2 | ☐ | 200.000 | 204.438 | 290394.32 | 0.5308 | P | 0.4 |
| 3 | ☐ | 500.000 | 515.861 | 565672.41 | 1.0421 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1049.384 | 1035978.14 | 1.9182 | A | 4.3 |
| 5 | ☐ | 10000.00 | 9548.405 | 8454832.58 | 15.8732 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20222.88 | 17452547.66 | 33.4002 | A | 1.1 |

y = 0.0016 * x + 0.1951
R = 0.9996
DL = 5.293
BEC = 118.8

Weight: <None>
Min Conc: <None>

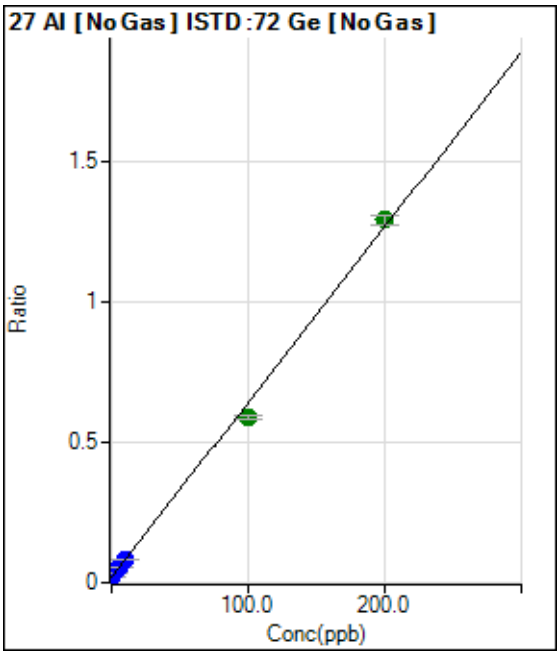
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 880.05 | 0.0016 | P | 6.4 |
| 2 | ☐ | 200.000 | 206.142 | 108552.84 | 0.1984 | P | 1.3 |
| 3 | ☐ | 500.000 | 514.423 | 267539.37 | 0.4928 | P | 0.2 |
| 4 | ☐ | 1000.000 | 1049.859 | 542202.09 | 1.0040 | P | 0.8 |
| 5 | ☐ | 10000.00 | 9488.678 | 4826217.95 | 9.0613 | A | 1.4 |
| 6 | ☐ | 20000.00 | 20252.74 | 10105680.48 | 19.3387 | A | 0.8 |

y = 9.5479E-004 * x + 0.0016
R = 0.9995
DL = 0.3222
BEC = 1.679

Weight: <None>
Min Conc: <None>

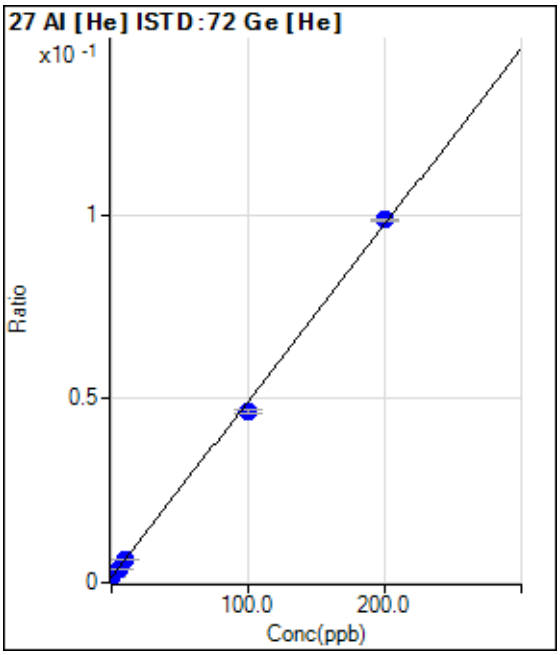



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33150.05 | 0.0188 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.262 | 57529.58 | 0.0329 | P | 2.4 |
| 3 | ☐ | 5.000 | 5.617 | 93219.08 | 0.0538 | P | 4.3 |
| 4 | ☐ | 10.000 | 10.504 | 148912.53 | 0.0844 | P | 1.9 |
| 5 | ☐ | 100.000 | 91.605 | 1005380.87 | 0.5909 | A | 2.6 |
| 6 | ☐ | 200.000 | 204.154 | 2098551.48 | 1.2938 | A | 2.4 |

y = 0.0062 * x + 0.0188
R = 0.9987
DL = 0.2526
BEC = 3.005

Weight: <None>
Min Conc: <None>

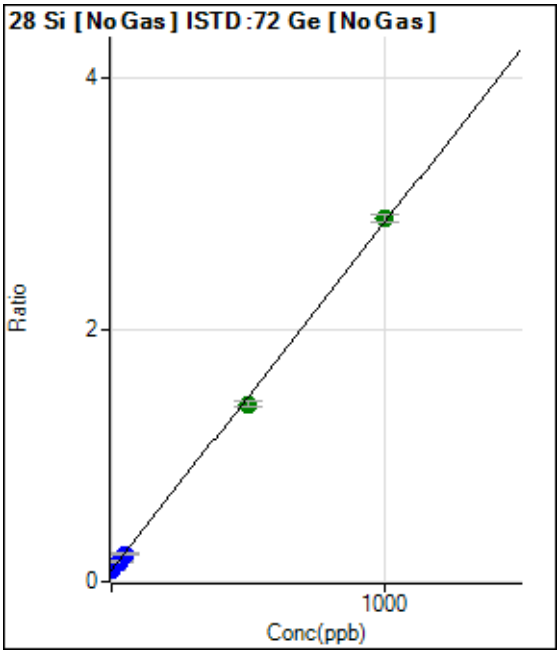
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 803.37 | 0.0015 | P | 17.1 |
| 2 | ☐ | 2.000 | 2.625 | 1490.11 | 0.0027 | P | 16.7 |
| 3 | ☐ | 5.000 | 4.756 | 2033.53 | 0.0037 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.331 | 3467.16 | 0.0064 | P | 0.7 |
| 5 | ☐ | 100.000 | 94.467 | 24929.39 | 0.0468 | P | 2.2 |
| 6 | ☐ | 200.000 | 202.750 | 51606.65 | 0.0988 | P | 0.9 |

y = 4.7990E-004 * x + 0.0015
R = 0.9994
DL = 1.566
BEC = 3.047

Weight: <None>
Min Conc: <None>

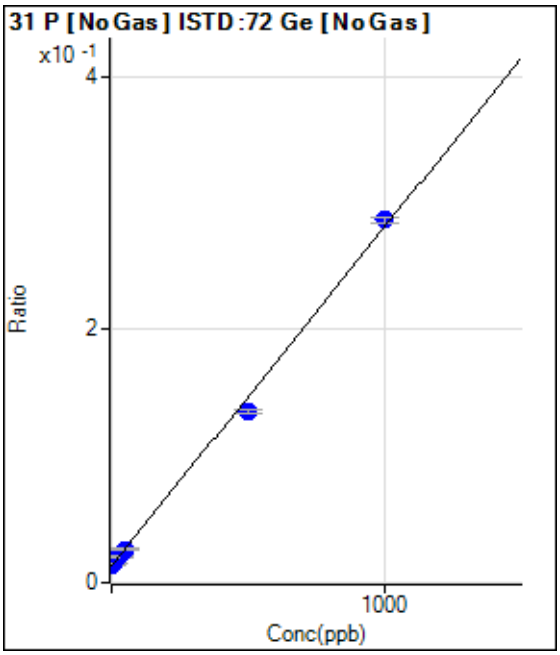



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 161313.86 | 0.0913 | P | 1.9 |
| 2 | ☐ | 10.000 | 9.709 | 206641.89 | 0.1182 | P | 3.4 |
| 3 | ☐ | 25.000 | 24.819 | 276872.83 | 0.1599 | P | 3.3 |
| 4 | ☐ | 50.000 | 46.956 | 390104.23 | 0.2211 | P | 2.4 |
| 5 | ☐ | 500.000 | 478.597 | 2404962.83 | 1.4134 | A | 2.8 |
| 6 | ☐ | 1000.000 | 1010.861 | 4677515.56 | 2.8837 | A | 2.0 |

y = 0.0028 * x + 0.0913
R = 0.9997
DL = 1.918
BEC = 33.07

Weight: <None>
Min Conc: <None>

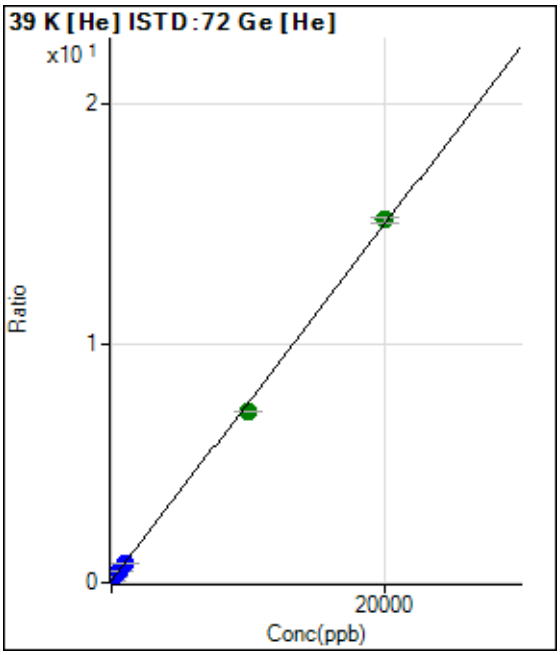
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23426.80 | 0.0133 | P | 4.2 |
| 2 | ☐ | 10.000 | 9.401 | 27617.93 | 0.0158 | P | 1.5 |
| 3 | ☐ | 25.000 | 27.451 | 35696.39 | 0.0206 | P | 5.0 |
| 4 | ☐ | 50.000 | 49.698 | 46902.55 | 0.0266 | P | 2.7 |
| 5 | ☐ | 500.000 | 457.138 | 230858.25 | 0.1357 | P | 2.0 |
| 6 | ☐ | 1000.000 | 1021.391 | 465091.24 | 0.2867 | P | 1.7 |

y = 2.6774E-004 * x + 0.0133
R = 0.9987
DL = 6.262
BEC = 49.57

Weight: <None>
Min Conc: <None>

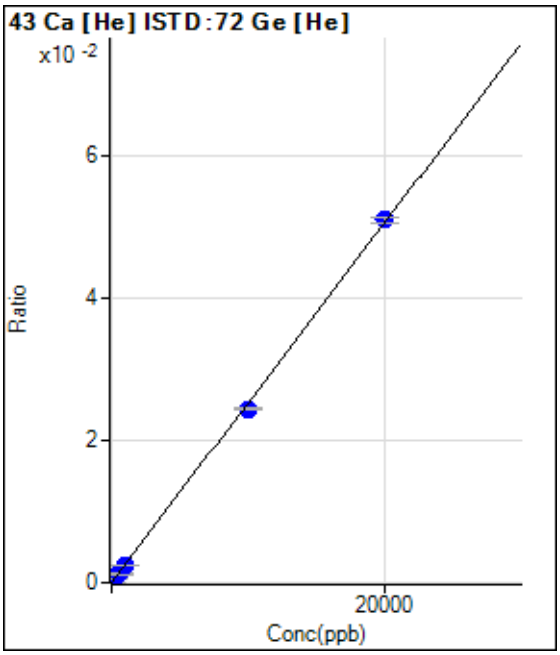



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 45017.02 | 0.0820 | P | 1.6 |
| 2 | ☐ | 200.000 | 199.436 | 126196.70 | 0.2307 | P | 1.4 |
| 3 | ☐ | 500.000 | 514.737 | 252824.05 | 0.4657 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1016.193 | 453364.21 | 0.8395 | P | 0.4 |
| 5 | ☐ | 10000.00 | 9489.440 | 3811441.92 | 7.1554 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20254.10 | 7932235.71 | 15.1794 | A | 1.7 |

y = 7.4540E-004 * x + 0.0820
R = 0.9995
DL = 5.159
BEC = 110

Weight: <None>
Min Conc: <None>

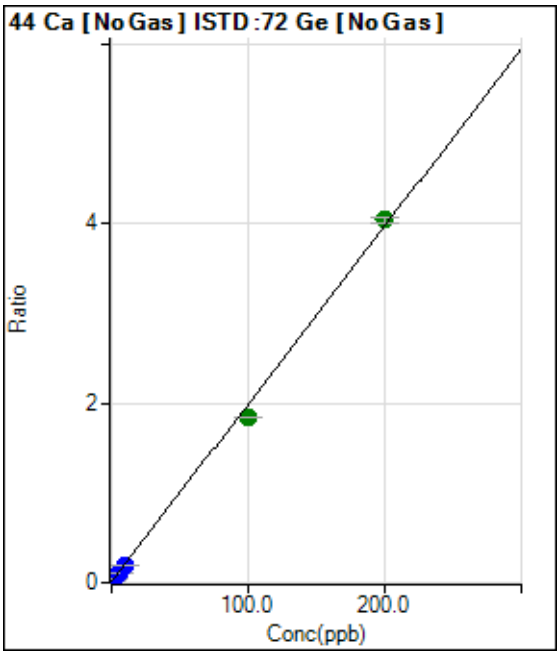
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 99.4 |
| 2 | ☐ | 200.000 | 216.838 | 323.35 | 0.0006 | P | 21.1 |
| 3 | ☐ | 500.000 | 484.408 | 690.03 | 0.0013 | P | 19.0 |
| 4 | ☐ | 1000.000 | 961.313 | 1336.75 | 0.0025 | P | 4.7 |
| 5 | ☐ | 10000.00 | 9654.755 | 13039.72 | 0.0245 | P | 1.6 |
| 6 | ☐ | 20000.00 | 20174.77 | 26702.96 | 0.0511 | P | 1.5 |

y = 2.5310E-006 * x + 4.2653E-005
R = 0.9998
DL = 50.27
BEC = 16.85

Weight: <None>
Min Conc: <None>

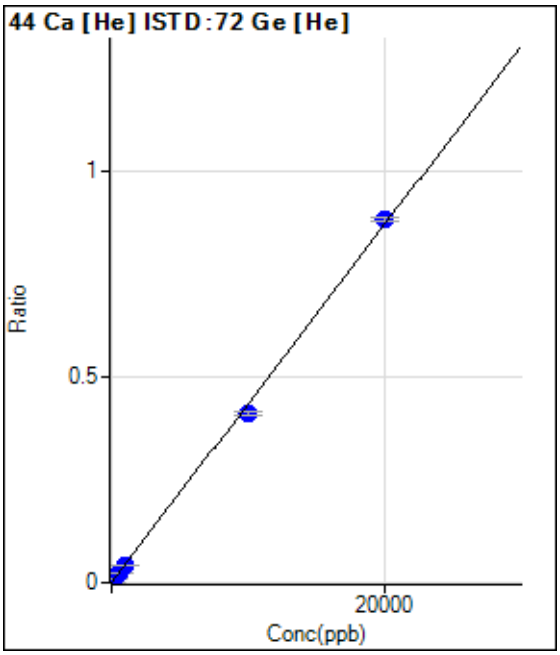



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 19767.76 | 0.0112 | P | 5.3 |
| 2 | ☐ | 2.000 | 1.943 | 86793.61 | 0.0496 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.938 | 188433.15 | 0.1088 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.566 | 353498.43 | 0.2003 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.643 | 3136106.31 | 1.8425 | A | 0.5 |
| 6 | ☐ | 200.000 | 203.702 | 6550296.99 | 4.0378 | A | 1.4 |

y = 0.0198 * x + 0.0112
R = 0.9991
DL = 0.08967
BEC = 0.5665

Weight: <None>
Min Conc: <None>

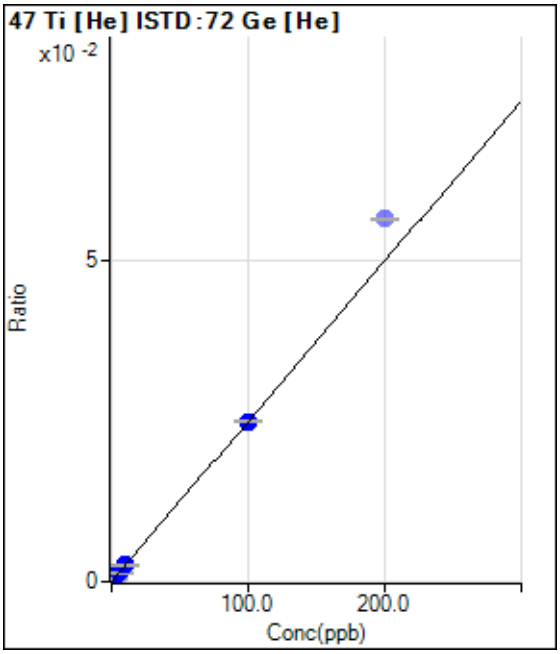
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 406.68 | 0.0007 | P | 10.6 |
| 2 | ☐ | 200.000 | 208.760 | 5374.49 | 0.0098 | P | 5.3 |
| 3 | ☐ | 500.000 | 493.588 | 12068.81 | 0.0222 | P | 3.0 |
| 4 | ☐ | 1000.000 | 989.866 | 23663.94 | 0.0438 | P | 0.6 |
| 5 | ☐ | 10000.00 | 9457.215 | 219587.21 | 0.4123 | P | 2.6 |
| 6 | ☐ | 20000.00 | 20271.97 | 461369.86 | 0.8830 | P | 1.2 |

y = 4.3519E-005 * x + 7.4130E-004
R = 0.9995
DL = 5.43
BEC = 17.03

Weight: <None>
Min Conc: <None>

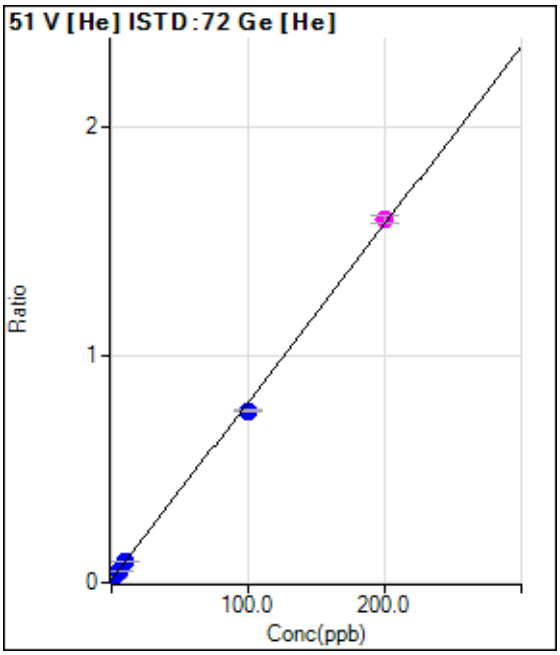



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13.33 | 0.0000 | P | 115.0 |
| 2 | ☐ | 2.000 | 1.762 | 253.34 | 0.0005 | P | 16.0 |
| 3 | ☐ | 5.000 | 5.492 | 756.70 | 0.0014 | P | 22.9 |
| 4 | ☐ | 10.000 | 10.118 | 1373.42 | 0.0025 | P | 1.1 |
| 5 | ☐ | 100.000 | 99.968 | 13270.02 | 0.0249 | P | 1.8 |
| 6 | ☑ | 200.000 | | 29462.21 | 0.0564 | P | 0.7 |

y = 2.4896E-004 * x + 2.4297E-005
R = 1.0000
DL = 0.3367
BEC = 0.0976

Weight: <None>
Min Conc: <None>

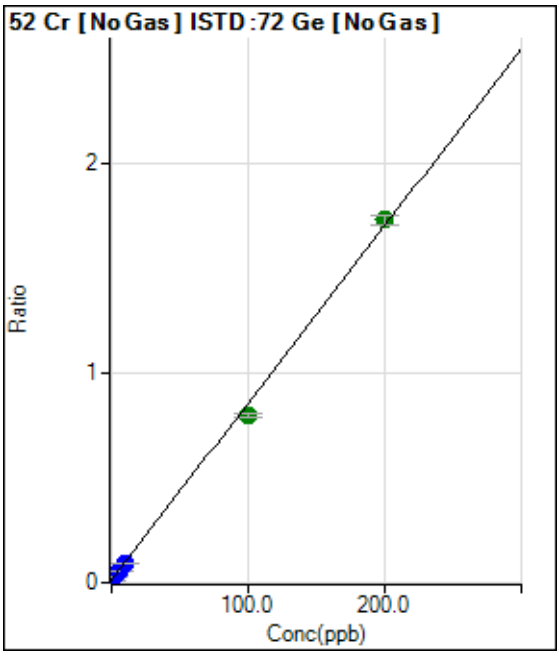
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 7065.18 | 0.0129 | P | 1.1 |
| 2 | ☐ | 2.000 | 2.024 | 15681.22 | 0.0287 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.944 | 27930.72 | 0.0515 | P | 2.0 |
| 4 | ☐ | 10.000 | 10.006 | 49120.18 | 0.0910 | P | 0.4 |
| 5 | ☐ | 100.000 | 94.983 | 401657.09 | 0.7541 | P | 0.5 |
| 6 | ☐ | 200.000 | 202.509 | 832589.05 | 1.5932 | M | 2.3 |

y = 0.0078 * x + 0.0129
R = 0.9996
DL = 0.05555
BEC = 1.65

Weight: <None>
Min Conc: <None>

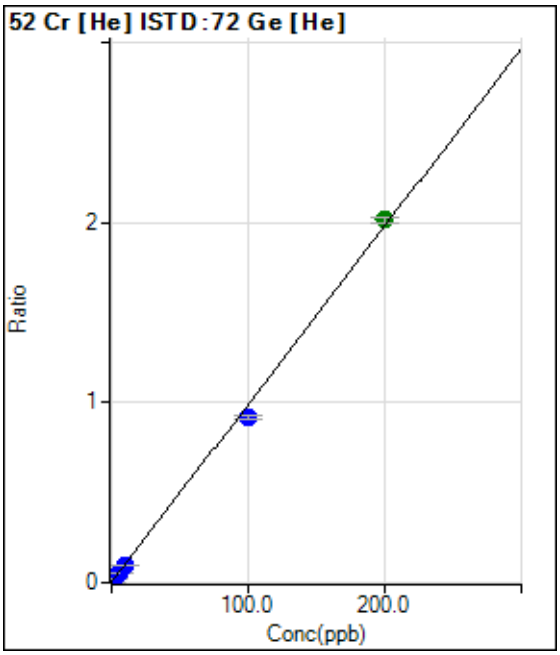



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22742.44 | 0.0129 | P | 4.1 |
| 2 | ☐ | 2.000 | 1.886 | 50359.50 | 0.0288 | P | 4.1 |
| 3 | ☐ | 5.000 | 4.941 | 94555.73 | 0.0546 | P | 0.7 |
| 4 | ☐ | 10.000 | 9.636 | 166260.81 | 0.0942 | P | 1.7 |
| 5 | ☐ | 100.000 | 93.180 | 1360306.49 | 0.7993 | A | 3.0 |
| 6 | ☐ | 200.000 | 203.431 | 2805821.21 | 1.7298 | A | 2.4 |

y = 0.0084 * x + 0.0129
R = 0.9992
DL = 0.1896
BEC = 1.526

Weight: <None>
Min Conc: <None>

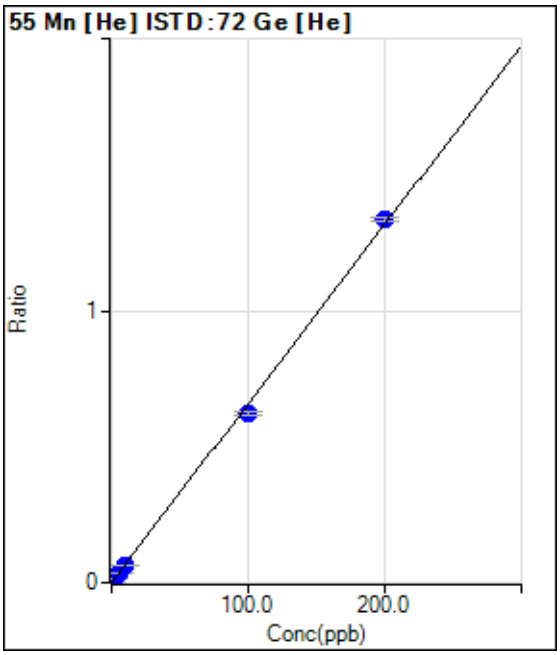
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1480.11 | 0.0027 | P | 4.0 |
| 2 | ☐ | 2.000 | 2.001 | 12292.36 | 0.0225 | P | 1.1 |
| 3 | ☐ | 5.000 | 4.733 | 26853.49 | 0.0495 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.768 | 53589.03 | 0.0992 | P | 1.4 |
| 5 | ☐ | 100.000 | 92.695 | 489362.05 | 0.9188 | P | 1.6 |
| 6 | ☐ | 200.000 | 203.671 | 1053175.56 | 2.0156 | A | 1.4 |

y = 0.0099 * x + 0.0027
R = 0.9991
DL = 0.03246
BEC = 0.2728

Weight: <None>
Min Conc: <None>

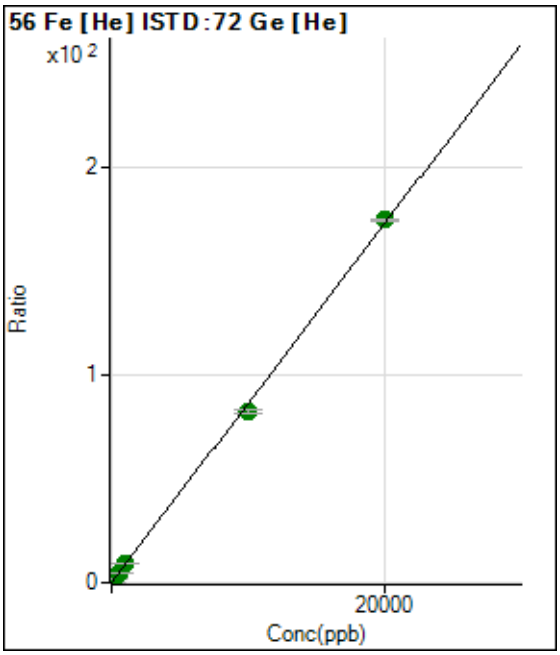



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 576.69 | 0.0010 | P | 16.8 |
| 2 | ☐ | 2.000 | 2.029 | 7869.11 | 0.0144 | P | 1.2 |
| 3 | ☐ | 5.000 | 5.012 | 18449.47 | 0.0340 | P | 2.9 |
| 4 | ☐ | 10.000 | 9.919 | 35774.21 | 0.0662 | P | 1.7 |
| 5 | ☐ | 100.000 | 94.541 | 331505.46 | 0.6224 | P | 2.0 |
| 6 | ☐ | 200.000 | 202.733 | 696820.43 | 1.3335 | P | 1.1 |

y = 0.0066 * x + 0.0010
R = 0.9995
DL = 0.08034
BEC = 0.1597

Weight: <None>
Min Conc: <None>

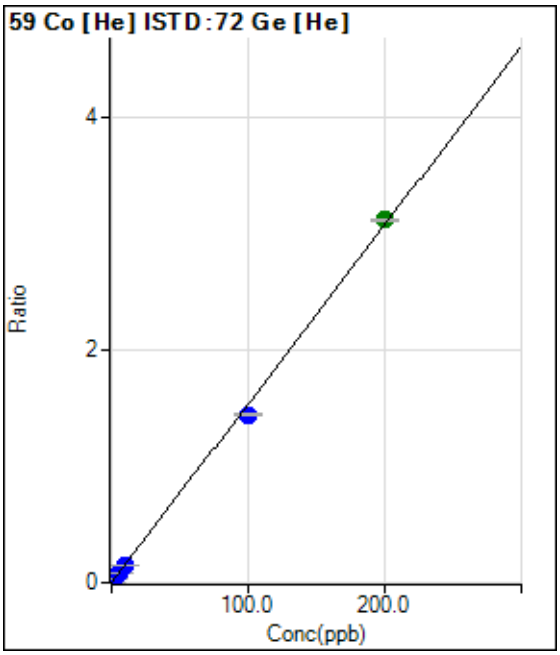
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10525.96 | 0.0192 | P | 6.6 |
| 2 | ☐ | 200.000 | 205.107 | 981885.33 | 1.7948 | A | 2.8 |
| 3 | ☐ | 500.000 | 523.581 | 2471244.91 | 4.5519 | A | 0.9 |
| 4 | ☐ | 1000.000 | 1034.156 | 4845425.34 | 8.9720 | A | 1.1 |
| 5 | ☐ | 10000.00 | 9554.064 | 44061017.68 | 82.7297 | A | 2.5 |
| 6 | ☐ | 20000.00 | 20220.61 | 91481711.97 | 175.071 | A | 0.7 |

y = 0.0087 * x + 0.0192
R = 0.9996
DL = 0.4371
BEC = 2.215

Weight: <None>
Min Conc: <None>

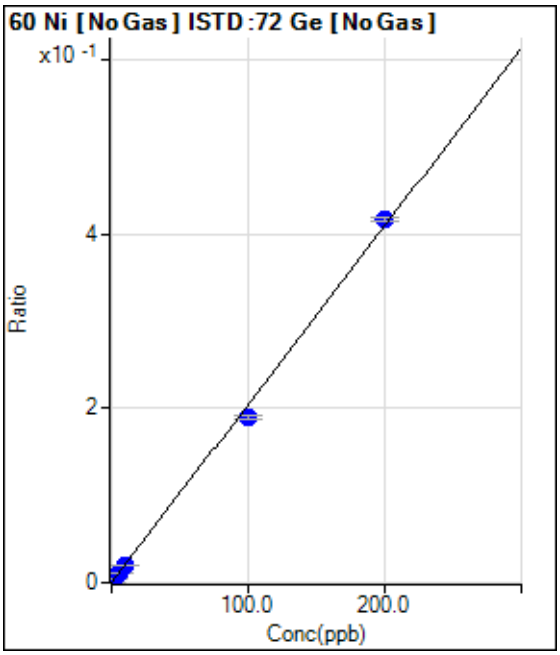



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 180.00 | 0.0003 | P | 22.5 |
| 2 | ☐ | 2.000 | 1.984 | 16827.34 | 0.0308 | P | 5.3 |
| 3 | ☐ | 5.000 | 4.973 | 41594.15 | 0.0766 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.087 | 83757.78 | 0.1551 | P | 1.1 |
| 5 | ☐ | 100.000 | 94.027 | 768600.06 | 1.4431 | P | 1.5 |
| 6 | ☐ | 200.000 | 202.983 | 1627739.25 | 3.1149 | A | 0.7 |

y = 0.0153 * x + 3.2802E-004
R = 0.9994
DL = 0.01441
BEC = 0.02138

Weight: <None>
Min Conc: <None>

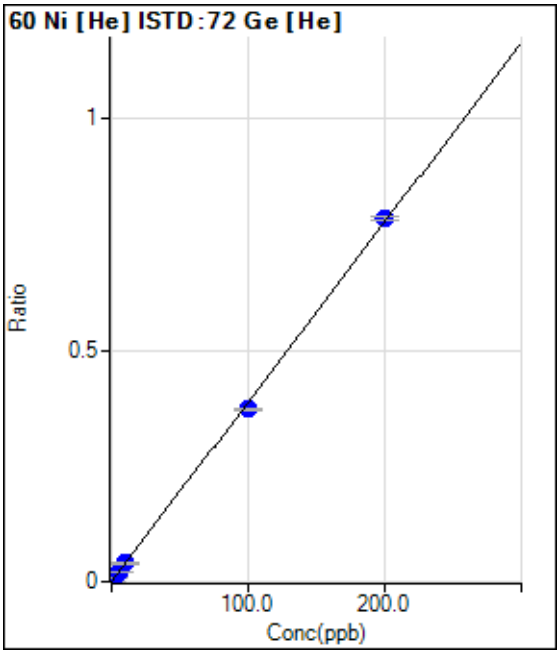
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 393.35 | 0.0002 | P | 10.4 |
| 2 | ☐ | 2.000 | 2.035 | 7658.96 | 0.0044 | P | 0.8 |
| 3 | ☐ | 5.000 | 5.096 | 18402.83 | 0.0106 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.814 | 35750.97 | 0.0203 | P | 2.7 |
| 5 | ☐ | 100.000 | 92.911 | 323174.97 | 0.1899 | P | 1.7 |
| 6 | ☐ | 200.000 | 203.551 | 674487.83 | 0.4158 | P | 1.1 |

y = 0.0020 * x + 2.2309E-004
R = 0.9991
DL = 0.03425
BEC = 0.1093

Weight: <None>
Min Conc: <None>

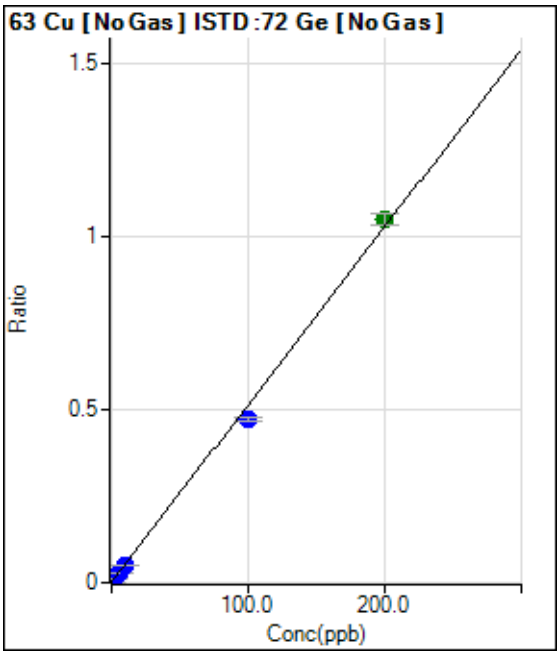



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 140.00 | 0.0003 | P | 21.7 |
| 2 | ☐ | 2.000 | 2.012 | 4414.14 | 0.0081 | P | 4.7 |
| 3 | ☐ | 5.000 | 4.960 | 10591.00 | 0.0195 | P | 2.9 |
| 4 | ☐ | 10.000 | 10.271 | 21667.55 | 0.0401 | P | 4.8 |
| 5 | ☐ | 100.000 | 95.975 | 198575.68 | 0.3728 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.000 | 409868.22 | 0.7844 | P | 0.9 |

y = 0.0039 * x + 2.5512E-004
R = 0.9997
DL = 0.04271
BEC = 0.06572

Weight: <None>
Min Conc: <None>

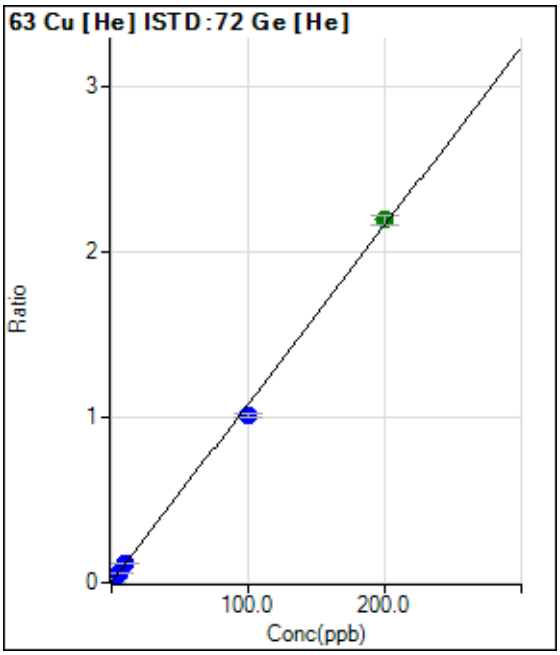
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2536.95 | 0.0014 | P | 10.6 |
| 2 | ☐ | 2.000 | 1.919 | 19707.92 | 0.0113 | P | 2.4 |
| 3 | ☐ | 5.000 | 4.840 | 45416.40 | 0.0262 | P | 3.2 |
| 4 | ☐ | 10.000 | 9.516 | 88569.31 | 0.0502 | P | 1.4 |
| 5 | ☐ | 100.000 | 91.905 | 803457.57 | 0.4722 | P | 3.1 |
| 6 | ☐ | 200.000 | 204.077 | 1698336.95 | 1.0468 | A | 3.2 |

y = 0.0051 * x + 0.0014
R = 0.9989
DL = 0.08913
BEC = 0.2808

Weight: <None>
Min Conc: <None>

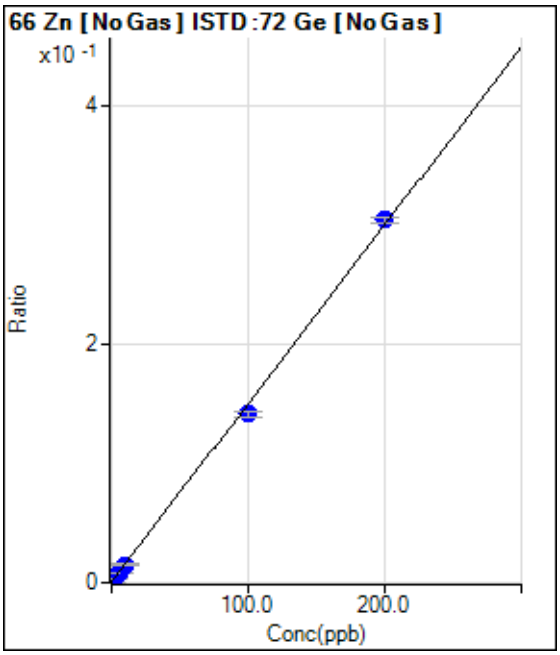



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1583.45 | 0.0029 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.927 | 12966.44 | 0.0237 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.943 | 30544.83 | 0.0563 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.175 | 60903.45 | 0.1128 | P | 2.2 |
| 5 | ☐ | 100.000 | 93.677 | 540418.91 | 1.0147 | P | 2.0 |
| 6 | ☐ | 200.000 | 203.155 | 1147958.32 | 2.1971 | A | 2.7 |

y = 0.0108 * x + 0.0029
R = 0.9993
DL = 0.07031
BEC = 0.2671

Weight: <None>
Min Conc: <None>

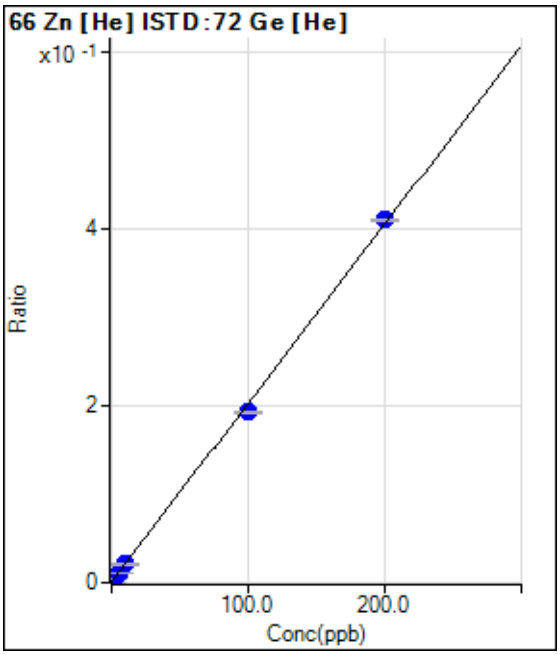
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1120.07 | 0.0006 | P | 4.6 |
| 2 | ☐ | 2.000 | 1.941 | 6191.54 | 0.0035 | P | 2.3 |
| 3 | ☐ | 5.000 | 4.913 | 13823.94 | 0.0080 | P | 5.2 |
| 4 | ☐ | 10.000 | 9.818 | 27057.34 | 0.0153 | P | 3.4 |
| 5 | ☐ | 100.000 | 94.041 | 240486.64 | 0.1413 | P | 2.9 |
| 6 | ☐ | 200.000 | 202.992 | 493677.82 | 0.3044 | P | 1.4 |

y = 0.0015 * x + 6.3444E-004
R = 0.9994
DL = 0.0586
BEC = 0.424

Weight: <None>
Min Conc: <None>

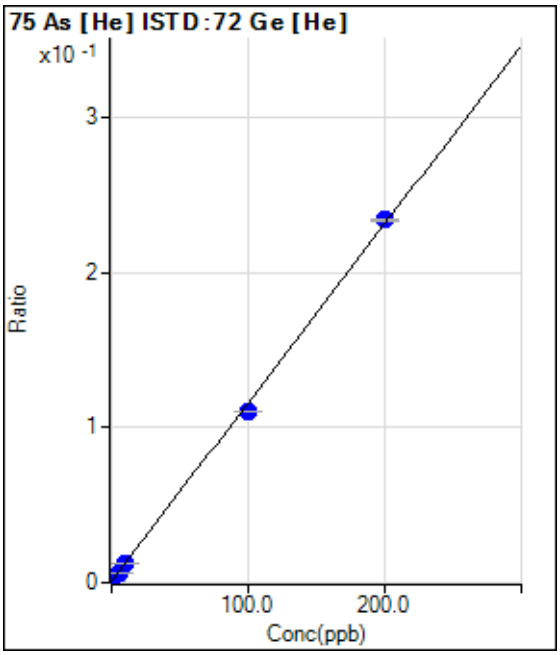



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 423.34 | 0.0008 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.893 | 2516.95 | 0.0046 | P | 4.0 |
| 3 | ☐ | 5.000 | 4.852 | 5748.02 | 0.0106 | P | 1.9 |
| 4 | ☐ | 10.000 | 9.931 | 11268.18 | 0.0209 | P | 2.2 |
| 5 | ☐ | 100.000 | 94.916 | 102704.47 | 0.1928 | P | 1.6 |
| 6 | ☐ | 200.000 | 202.550 | 214569.92 | 0.4106 | P | 0.6 |

y = 0.0020 * x + 7.7091E-004
R = 0.9995
DL = 0.1562
BEC = 0.381

Weight: <None>
Min Conc: <None>

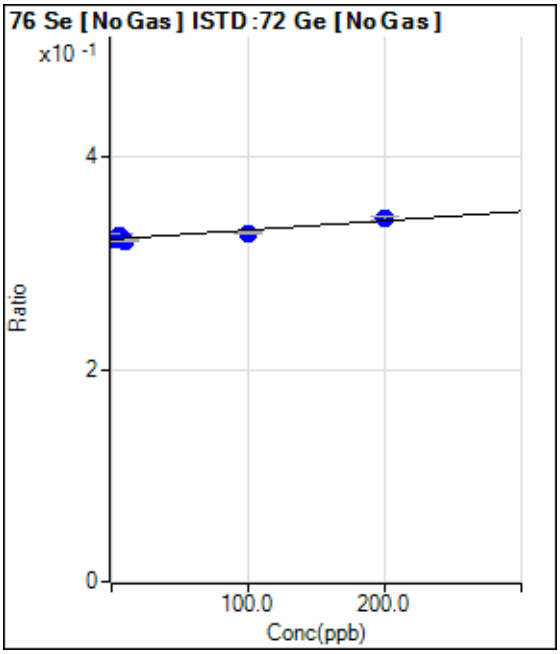
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 495.57 | 0.0009 | P | 9.0 |
| 2 | ☐ | 2.000 | 2.073 | 1799.02 | 0.0033 | P | 4.6 |
| 3 | ☐ | 5.000 | 4.991 | 3608.28 | 0.0066 | P | 2.5 |
| 4 | ☐ | 10.000 | 10.236 | 6849.55 | 0.0127 | P | 1.9 |
| 5 | ☐ | 100.000 | 95.195 | 58835.57 | 0.1105 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.390 | 122188.49 | 0.2338 | P | 0.6 |

y = 0.0012 * x + 9.0319E-004
R = 0.9996
DL = 0.2121
BEC = 0.7848

Weight: <None>
Min Conc: <None>

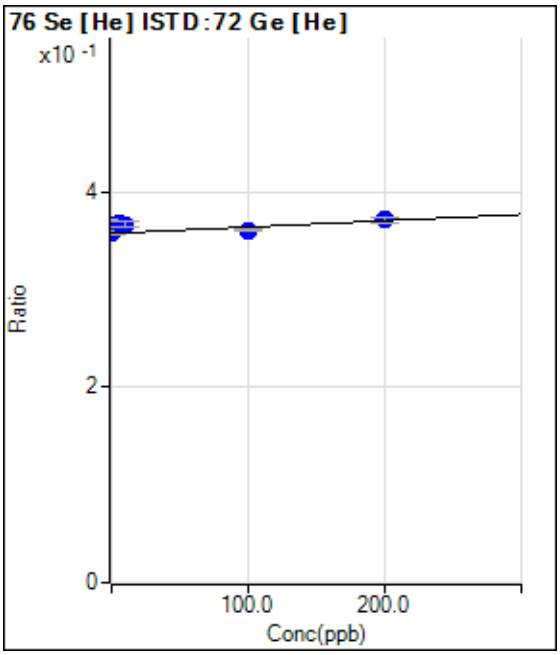



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 569197.36 | 0.3224 | P | 3.1 |
| 2 | ☐ | 2.000 | -4.294 | 563326.92 | 0.3220 | P | 1.1 |
| 3 | ☐ | 5.000 | 31.005 | 563094.51 | 0.3251 | P | 1.8 |
| 4 | ☐ | 10.000 | -20.173 | 565961.40 | 0.3206 | P | 0.6 |
| 5 | ☐ | 100.000 | 64.645 | 558336.96 | 0.3281 | P | 0.7 |
| 6 | ☐ | 200.000 | 218.599 | 554135.43 | 0.3416 | P | 1.0 |

y = 8.7776E-005 * x + 0.3224
R = 0.9606
DL = 337
BEC = 3673

Weight: <None>
Min Conc: <None>

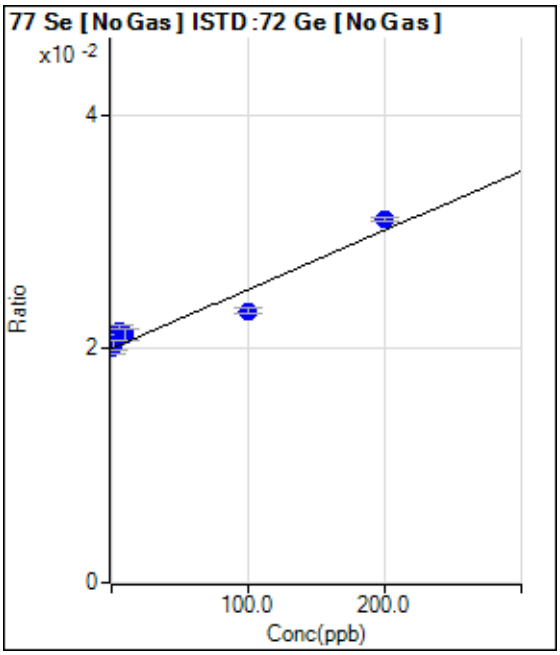
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 196109.38 | 0.3573 | P | 1.0 |
| 2 | ☐ | 2.000 | 123.190 | 199806.37 | 0.3653 | P | 2.5 |
| 3 | ☐ | 5.000 | 163.619 | 199678.24 | 0.3679 | P | 2.3 |
| 4 | ☐ | 10.000 | 138.925 | 197801.75 | 0.3663 | P | 1.4 |
| 5 | ☐ | 100.000 | 53.025 | 192139.08 | 0.3607 | P | 0.7 |
| 6 | ☐ | 200.000 | 211.864 | 193860.99 | 0.3710 | P | 1.5 |

y = 6.4732E-005 * x + 0.3573
R = 0.4351
DL = 159.6
BEC = 5520

Weight: <None>
Min Conc: <None>

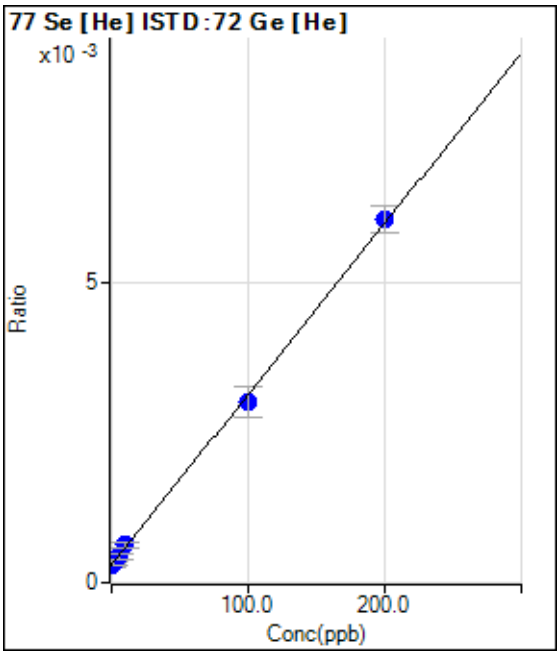



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 35373.64 | 0.0200 | P | 3.9 |
| 2 | ☐ | 2.000 | 6.377 | 35617.75 | 0.0204 | P | 4.4 |
| 3 | ☐ | 5.000 | 31.169 | 37435.85 | 0.0216 | P | 3.6 |
| 4 | ☐ | 10.000 | 22.049 | 37318.77 | 0.0212 | P | 4.7 |
| 5 | ☐ | 100.000 | 62.564 | 39478.25 | 0.0232 | P | 2.1 |
| 6 | ☐ | 200.000 | 217.417 | 50337.47 | 0.0310 | P | 0.9 |

y = 5.0575E-005 * x + 0.0200
R = 0.9631
DL = 46.84
BEC = 396.2

Weight: <None>
Min Conc: <None>

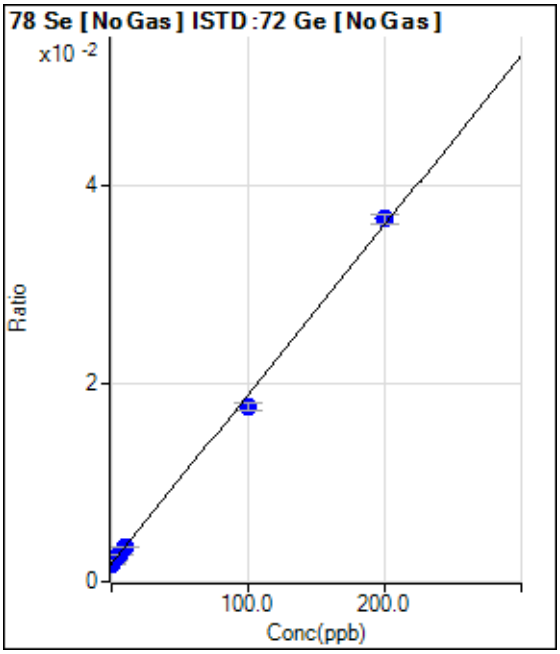
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 163.34 | 0.0003 | P | 22.7 |
| 2 | ☐ | 2.000 | 1.121 | 180.00 | 0.0003 | P | 15.6 |
| 3 | ☐ | 5.000 | 5.043 | 240.01 | 0.0004 | P | 19.2 |
| 4 | ☐ | 10.000 | 11.862 | 343.35 | 0.0006 | P | 14.2 |
| 5 | ☐ | 100.000 | 95.438 | 1610.13 | 0.0030 | P | 17.0 |
| 6 | ☐ | 200.000 | 202.196 | 3170.43 | 0.0061 | P | 7.5 |

y = 2.8525E-005 * x + 2.9733E-004
R = 0.9996
DL = 7.091
BEC = 10.42

Weight: <None>
Min Conc: <None>

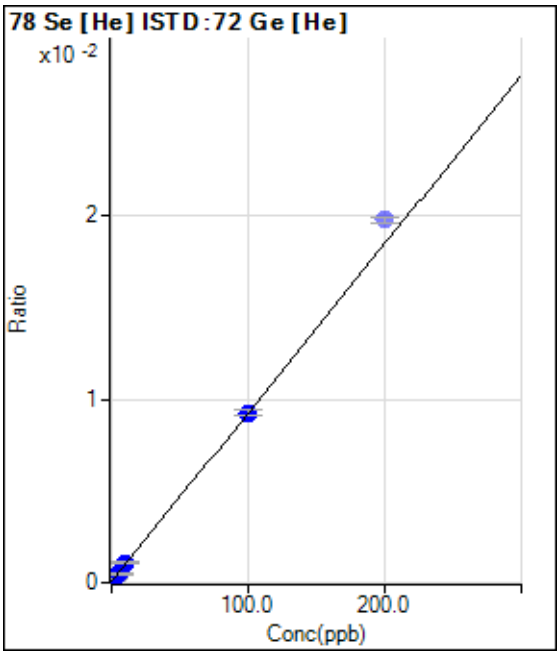



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3203.79 | 0.0018 | P | 3.8 |
| 2 | ☐ | 2.000 | 1.872 | 3730.59 | 0.0021 | P | 6.6 |
| 3 | ☐ | 5.000 | 5.516 | 4774.27 | 0.0028 | P | 3.9 |
| 4 | ☐ | 10.000 | 9.840 | 6168.20 | 0.0035 | P | 3.5 |
| 5 | ☐ | 100.000 | 92.784 | 30057.35 | 0.0177 | P | 3.7 |
| 6 | ☐ | 200.000 | 203.604 | 59351.18 | 0.0366 | P | 3.0 |

y = 1.7083E-004 * x + 0.0018
R = 0.9991
DL = 1.21
BEC = 10.62

Weight: <None>
Min Conc: <None>

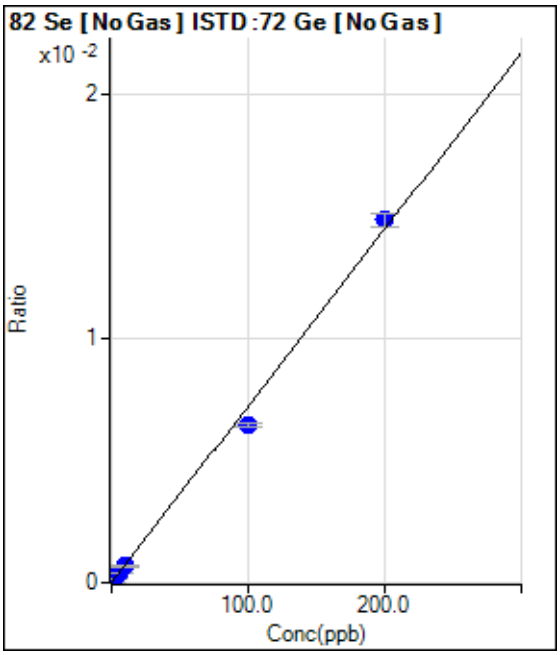
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34.67 | 0.0001 | P | 15.0 |
| 2 | ☐ | 2.000 | 1.976 | 134.00 | 0.0002 | P | 7.4 |
| 3 | ☐ | 5.000 | 4.841 | 276.00 | 0.0005 | P | 15.2 |
| 4 | ☐ | 10.000 | 11.091 | 585.35 | 0.0011 | P | 6.3 |
| 5 | ☐ | 100.000 | 99.899 | 4928.92 | 0.0093 | P | 3.3 |
| 6 | ☑ | 200.000 | | 10339.32 | 0.0198 | P | 1.3 |

y = 9.2012E-005 * x + 6.3196E-005
R = 0.9999
DL = 0.3099
BEC = 0.6868

Weight: <None>
Min Conc: <None>

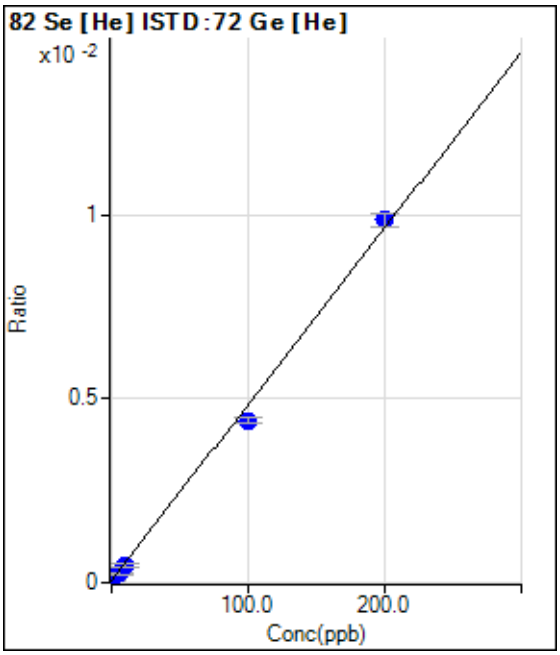



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 8.50 | 0.0000 | P | 1099.3 |
| 2 | ☐ | 2.000 | 2.537 | 328.43 | 0.0002 | P | 28.8 |
| 3 | ☐ | 5.000 | 4.966 | 628.63 | 0.0004 | P | 4.0 |
| 4 | ☐ | 10.000 | 9.245 | 1185.29 | 0.0007 | P | 15.1 |
| 5 | ☐ | 100.000 | 89.254 | 10976.51 | 0.0065 | P | 3.4 |
| 6 | ☐ | 200.000 | 205.406 | 24070.79 | 0.0148 | P | 3.9 |

y = 7.2236E-005 * x + 4.0454E-006
R = 0.9980
DL = 1.847
BEC = 0.056

Weight: <None>
Min Conc: <None>

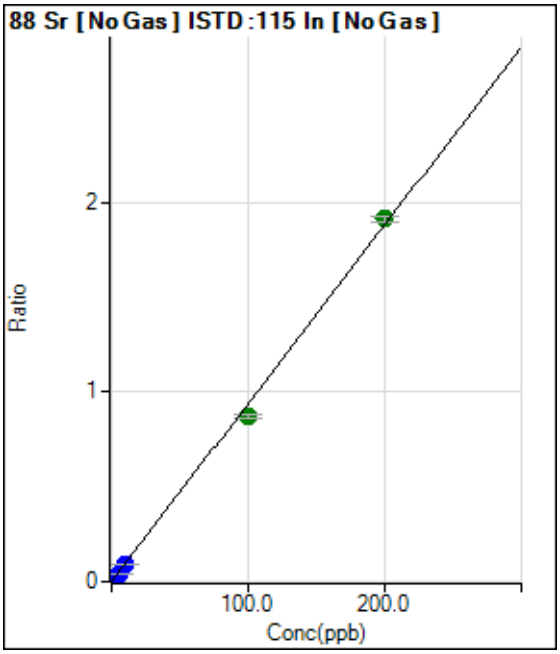
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.306 | 93.33 | 0.0002 | P | 45.5 |
| 3 | ☐ | 5.000 | 3.996 | 136.67 | 0.0003 | P | 15.9 |
| 4 | ☐ | 10.000 | 8.270 | 246.67 | 0.0005 | P | 20.3 |
| 5 | ☐ | 100.000 | 90.694 | 2343.58 | 0.0044 | P | 3.3 |
| 6 | ☐ | 200.000 | 204.762 | 5151.09 | 0.0099 | P | 3.7 |

y = 4.7853E-005 * x + 6.0678E-005
R = 0.9985
DL = 0.6269
BEC = 1.268

Weight: <None>
Min Conc: <None>

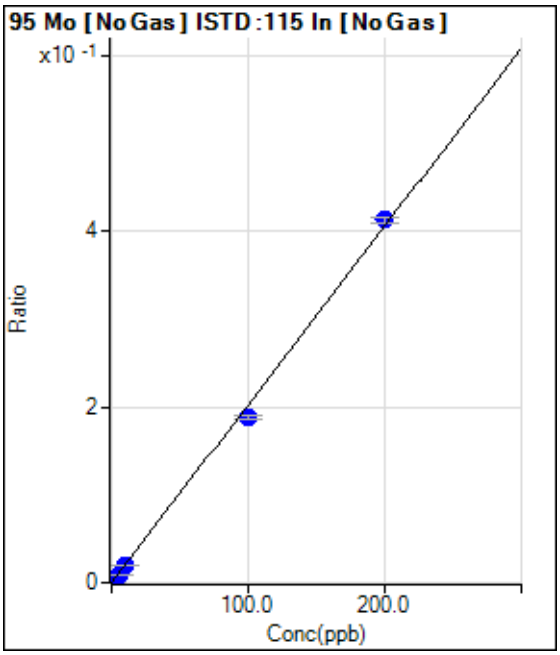



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1270.08 | 0.0006 | P | 3.9 |
| 2 | ☐ | 2.000 | 1.929 | 39245.22 | 0.0187 | P | 1.7 |
| 3 | ☐ | 5.000 | 4.760 | 96219.58 | 0.0453 | P | 1.0 |
| 4 | ☐ | 10.000 | 9.393 | 188254.34 | 0.0888 | P | 1.6 |
| 5 | ☐ | 100.000 | 92.928 | 1803784.92 | 0.8732 | A | 2.4 |
| 6 | ☐ | 200.000 | 203.573 | 3753500.36 | 1.9121 | A | 1.3 |

y = 0.0094 * x + 5.9979E-004
R = 0.9991
DL = 0.007559
BEC = 0.06388

Weight: <None>
Min Conc: <None>

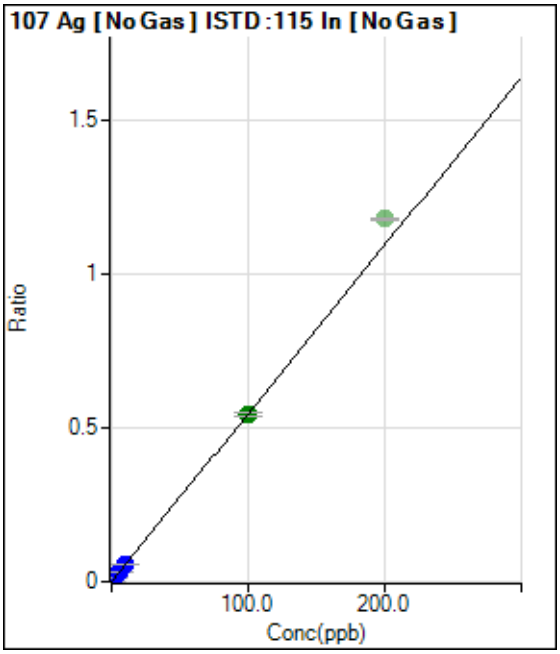
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0000 | P | 86.6 |
| 2 | ☐ | 2.000 | 1.972 | 8419.49 | 0.0040 | P | 3.9 |
| 3 | ☐ | 5.000 | 4.752 | 20516.16 | 0.0097 | P | 1.2 |
| 4 | ☐ | 10.000 | 9.468 | 40772.88 | 0.0192 | P | 0.6 |
| 5 | ☐ | 100.000 | 92.626 | 388393.28 | 0.1880 | P | 1.9 |
| 6 | ☐ | 200.000 | 203.720 | 811643.17 | 0.4135 | P | 1.8 |

y = 0.0020 * x + 1.2610E-005
R = 0.9991
DL = 0.01614
BEC = 0.006213

Weight: <None>
Min Conc: <None>

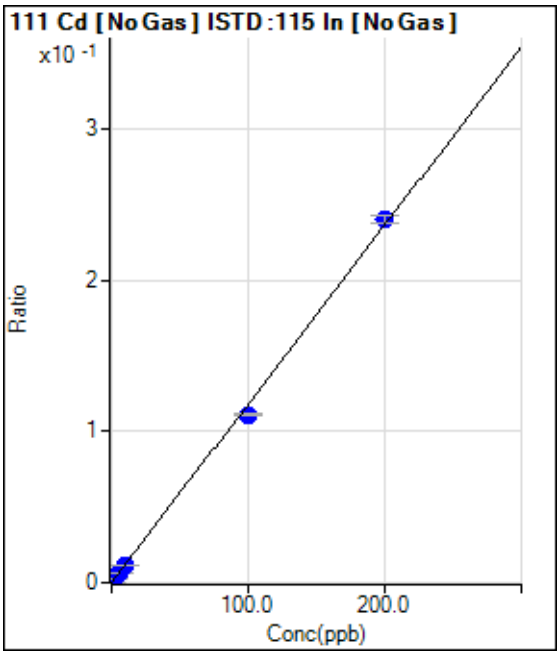



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 170.00 | 0.0001 | P | 11.7 |
| 2 | ☐ | 2.000 | 2.121 | 24472.96 | 0.0117 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.231 | 60890.65 | 0.0287 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.197 | 118294.54 | 0.0558 | P | 0.8 |
| 5 | ☐ | 100.000 | 99.966 | 1128470.63 | 0.5462 | A | 2.3 |
| 6 | ☑ | 200.000 | | 2314339.60 | 1.1789 | A | 0.6 |

y = 0.0055 * x + 8.0290E-005
R = 1.0000
DL = 0.005151
BEC = 0.0147

Weight: <None>
Min Conc: <None>

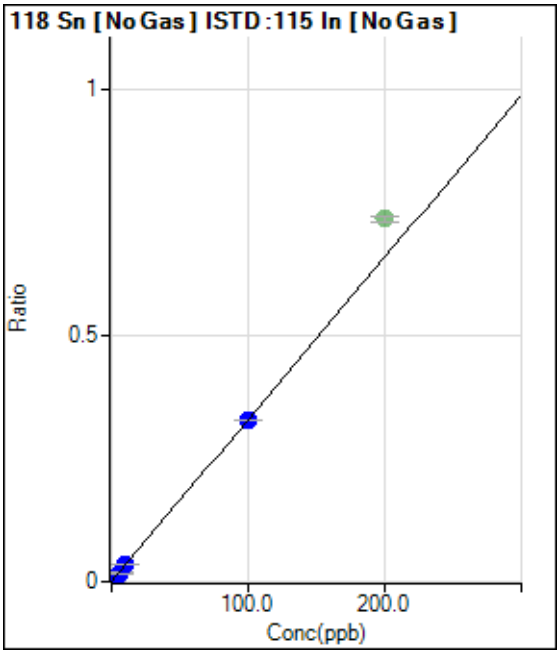
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10.00 | 0.0000 | P | 99.7 |
| 2 | ☐ | 2.000 | 1.977 | 4911.00 | 0.0023 | P | 5.9 |
| 3 | ☐ | 5.000 | 4.969 | 12492.79 | 0.0059 | P | 0.9 |
| 4 | ☐ | 10.000 | 9.578 | 24019.01 | 0.0113 | P | 2.0 |
| 5 | ☐ | 100.000 | 93.747 | 229001.39 | 0.1108 | P | 1.1 |
| 6 | ☐ | 200.000 | 203.149 | 471459.79 | 0.2402 | P | 2.1 |

y = 0.0012 * x + 4.7250E-006
R = 0.9993
DL = 0.01196
BEC = 0.003997

Weight: <None>
Min Conc: <None>

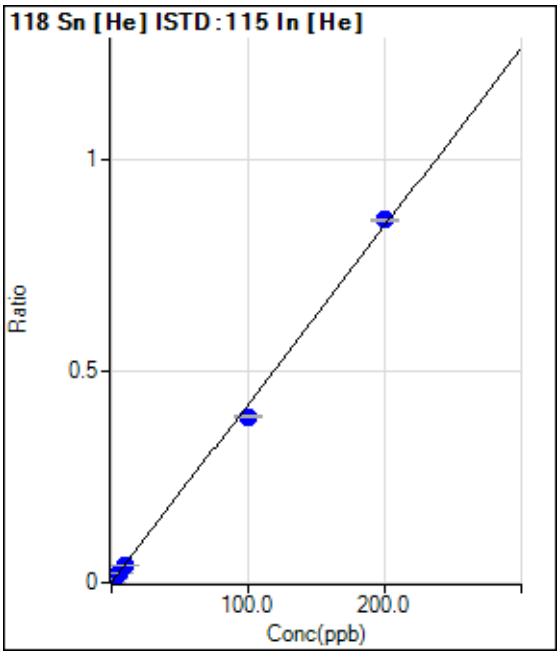



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1443.44 | 0.0007 | P | 9.1 |
| 2 | ☐ | 2.000 | 2.019 | 15342.61 | 0.0073 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.062 | 36782.17 | 0.0173 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.371 | 73704.35 | 0.0348 | P | 0.6 |
| 5 | ☐ | 100.000 | 99.959 | 680093.71 | 0.3291 | P | 0.1 |
| 6 | ☑ | 200.000 | | 1444493.47 | 0.7358 | A | 1.7 |

y = 0.0033 * x + 6.8178E-004
R = 1.0000
DL = 0.05657
BEC = 0.2075

Weight: <None>
Min Conc: <None>

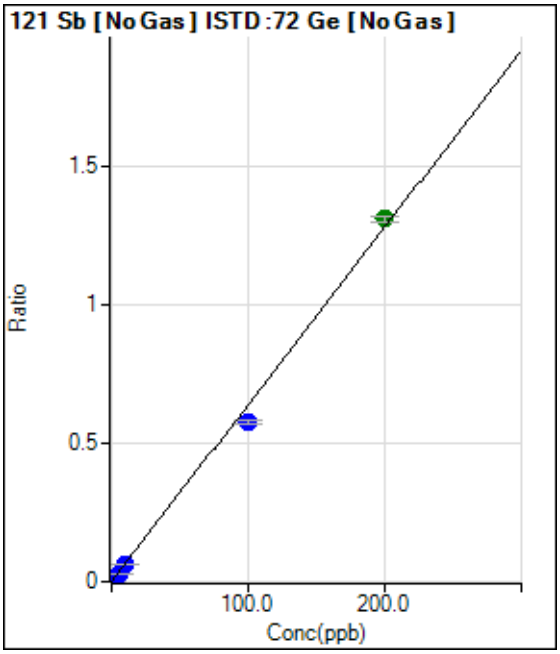
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 750.04 | 0.0008 | P | 5.0 |
| 2 | ☐ | 2.000 | 1.866 | 8186.04 | 0.0087 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.839 | 20269.33 | 0.0212 | P | 5.1 |
| 4 | ☐ | 10.000 | 9.725 | 39396.25 | 0.0418 | P | 1.4 |
| 5 | ☐ | 100.000 | 93.126 | 359076.80 | 0.3935 | P | 0.9 |
| 6 | ☐ | 200.000 | 203.456 | 762051.76 | 0.8588 | P | 0.7 |

y = 0.0042 * x + 8.0026E-004
R = 0.9992
DL = 0.02825
BEC = 0.1898

Weight: <None>
Min Conc: <None>

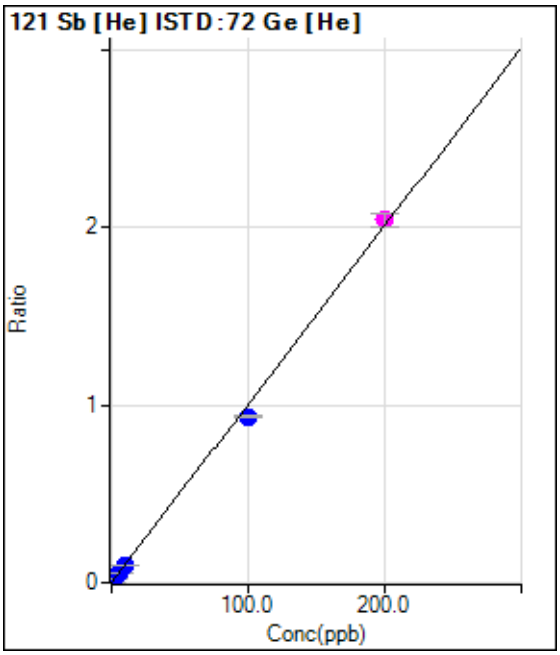



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1690.14 | 0.0010 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.804 | 21805.12 | 0.0125 | P | 1.6 |
| 3 | ☐ | 5.000 | 4.634 | 52846.89 | 0.0305 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.194 | 105200.57 | 0.0596 | P | 2.0 |
| 5 | ☐ | 100.000 | 90.285 | 981699.13 | 0.5769 | P | 2.3 |
| 6 | ☐ | 200.000 | 204.909 | 2122041.16 | 1.3082 | A | 1.2 |

y = 0.0064 * x + 9.5551E-004
R = 0.9984
DL = 0.03153
BEC = 0.1498

Weight: <None>
Min Conc: <None>

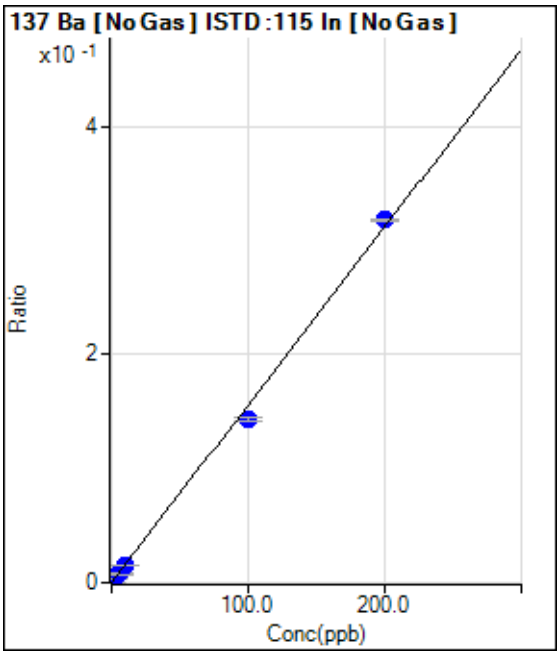
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 790.04 | 0.0014 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.960 | 11541.89 | 0.0211 | P | 5.2 |
| 3 | ☐ | 5.000 | 4.844 | 27158.53 | 0.0500 | P | 1.4 |
| 4 | ☐ | 10.000 | 9.791 | 53824.37 | 0.0997 | P | 2.9 |
| 5 | ☐ | 100.000 | 93.143 | 498465.40 | 0.9358 | P | 0.5 |
| 6 | ☐ | 200.000 | 203.443 | 1067013.97 | 2.0423 | M | 3.7 |

y = 0.0100 * x + 0.0014
R = 0.9992
DL = 0.03776
BEC = 0.1434

Weight: <None>
Min Conc: <None>

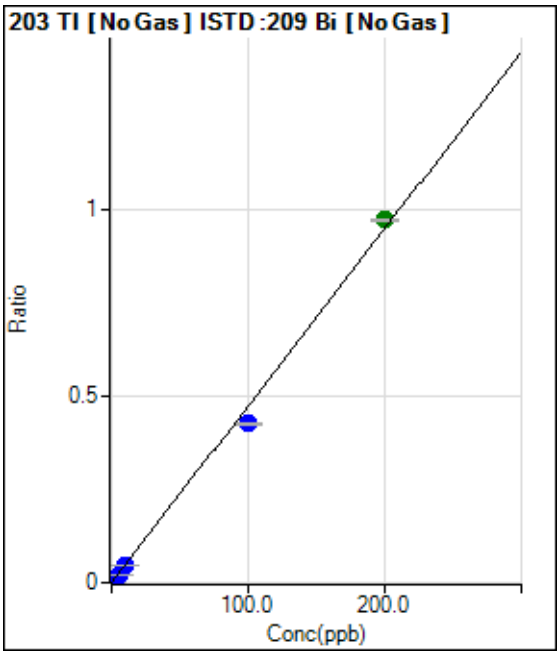



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 376.68 | 0.0002 | P | 15.7 |
| 2 | ☐ | 2.000 | 2.009 | 6935.31 | 0.0033 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.818 | 16310.57 | 0.0077 | P | 4.4 |
| 4 | ☐ | 10.000 | 9.442 | 31528.75 | 0.0149 | P | 5.4 |
| 5 | ☐ | 100.000 | 91.827 | 295750.62 | 0.1431 | P | 1.5 |
| 6 | ☐ | 200.000 | 204.119 | 624197.25 | 0.3180 | P | 0.6 |

y = 0.0016 * x + 1.7800E-004
R = 0.9988
DL = 0.05369
BEC = 0.1143

Weight: <None>
Min Conc: <None>

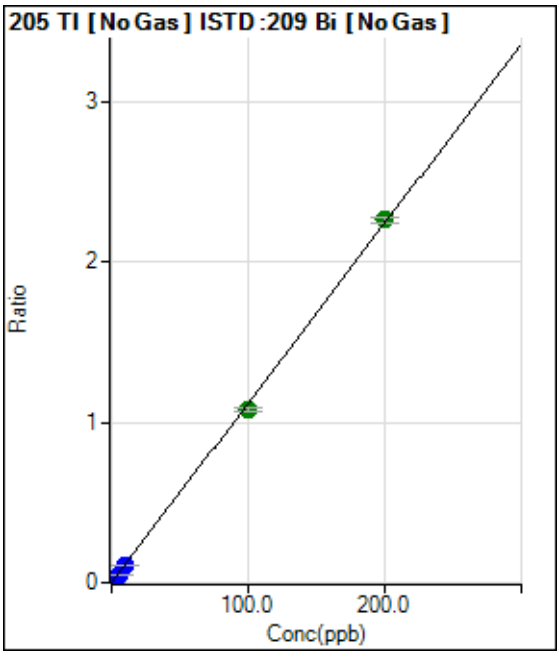
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 153.33 | 0.0001 | P | 12.2 |
| 2 | ☐ | 2.000 | 1.832 | 20861.28 | 0.0088 | P | 2.5 |
| 3 | ☐ | 5.000 | 4.532 | 51553.53 | 0.0216 | P | 0.8 |
| 4 | ☐ | 10.000 | 9.433 | 104608.97 | 0.0449 | P | 1.7 |
| 5 | ☐ | 100.000 | 89.833 | 984896.78 | 0.4266 | P | 1.9 |
| 6 | ☐ | 200.000 | 205.125 | 2202539.19 | 0.9740 | A | 0.6 |

y = 0.0047 * x + 6.5183E-005
R = 0.9982
DL = 0.00503
BEC = 0.01373

Weight: <None>
Min Conc: <None>

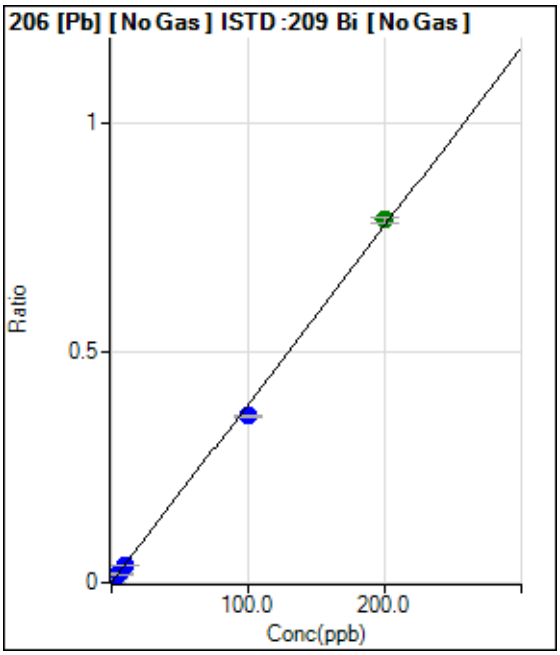



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 346.68 | 0.0001 | P | 13.5 |
| 2 | ☐ | 2.000 | 1.870 | 50252.16 | 0.0211 | P | 4.5 |
| 3 | ☐ | 5.000 | 4.664 | 125254.20 | 0.0524 | P | 2.6 |
| 4 | ☐ | 10.000 | 9.665 | 253143.49 | 0.1085 | P | 0.6 |
| 5 | ☐ | 100.000 | 95.935 | 2483784.28 | 1.0758 | A | 2.3 |
| 6 | ☐ | 200.000 | 202.059 | 5122729.19 | 2.2656 | A | 1.6 |

y = 0.0112 * x + 1.4715E-004
R = 0.9997
DL = 0.005316
BEC = 0.01312

Weight: <None>
Min Conc: <None>

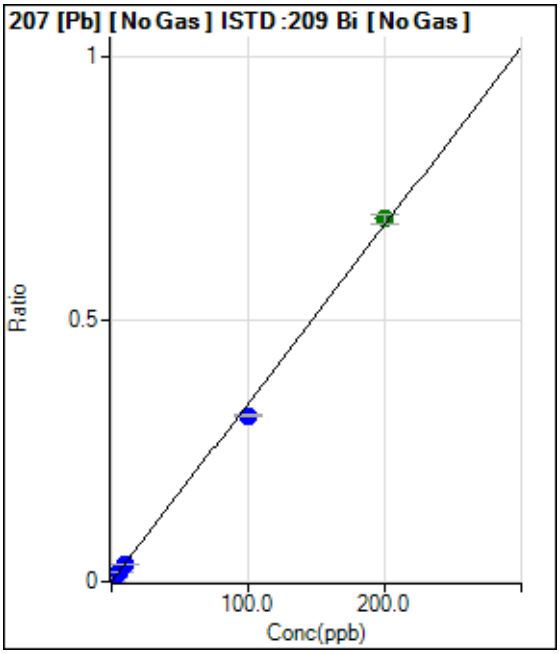
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 760.04 | 0.0003 | P | 10.5 |
| 2 | ☐ | 2.000 | 1.889 | 18217.02 | 0.0077 | P | 2.9 |
| 3 | ☐ | 5.000 | 4.817 | 45400.01 | 0.0190 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.731 | 88804.64 | 0.0381 | P | 0.4 |
| 5 | ☐ | 100.000 | 93.233 | 835642.52 | 0.3619 | P | 1.8 |
| 6 | ☐ | 200.000 | 203.403 | 1784618.99 | 0.7892 | A | 1.4 |

y = 0.0039 * x + 3.2307E-004
R = 0.9992
DL = 0.02627
BEC = 0.0833

Weight: <None>
Min Conc: <None>

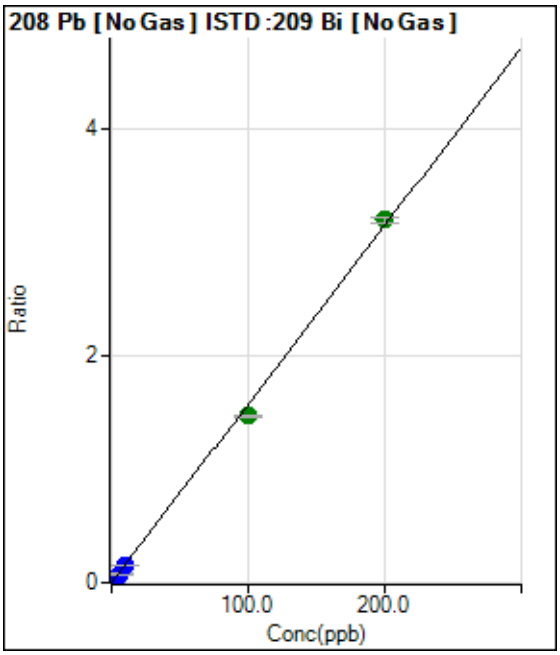



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 540.02 | 0.0002 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.925 | 16124.13 | 0.0068 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.972 | 40921.31 | 0.0171 | P | 2.1 |
| 4 | ☐ | 10.000 | 9.797 | 78209.70 | 0.0335 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.919 | 729857.98 | 0.3161 | P | 1.3 |
| 6 | ☐ | 200.000 | 203.552 | 1565199.09 | 0.6922 | A | 2.6 |

y = 0.0034 * x + 2.2900E-004
R = 0.9991
DL = 0.02776
BEC = 0.06736

Weight: <None>
Min Conc: <None>

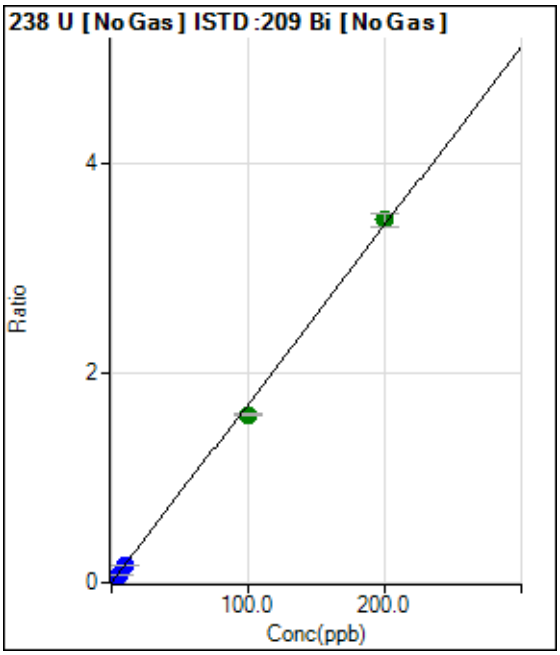
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2620.16 | 0.0011 | P | 3.0 |
| 2 | ☐ | 2.000 | 1.901 | 73697.17 | 0.0310 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.774 | 181670.33 | 0.0761 | P | 1.5 |
| 4 | ☐ | 10.000 | 9.665 | 356523.34 | 0.1529 | P | 1.1 |
| 5 | ☐ | 100.000 | 93.368 | 3387003.65 | 1.4670 | A | 1.9 |
| 6 | ☐ | 200.000 | 203.339 | 7220763.02 | 3.1935 | A | 1.5 |

y = 0.0157 * x + 0.0011
R = 0.9992
DL = 0.006314
BEC = 0.07085

Weight: <None>
Min Conc: <None>

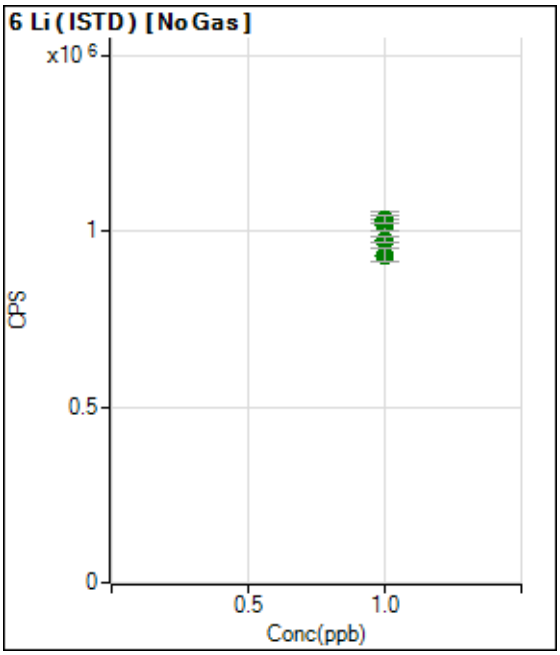



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 35.7 |
| 2 | ☐ | 2.000 | 1.841 | 74688.97 | 0.0314 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.607 | 187471.43 | 0.0785 | P | 0.5 |
| 4 | ☐ | 10.000 | 9.438 | 374880.46 | 0.1608 | P | 3.1 |
| 5 | ☐ | 100.000 | 93.946 | 3694641.51 | 1.6000 | A | 0.9 |
| 6 | ☐ | 200.000 | 203.067 | 7817840.09 | 3.4584 | A | 3.5 |

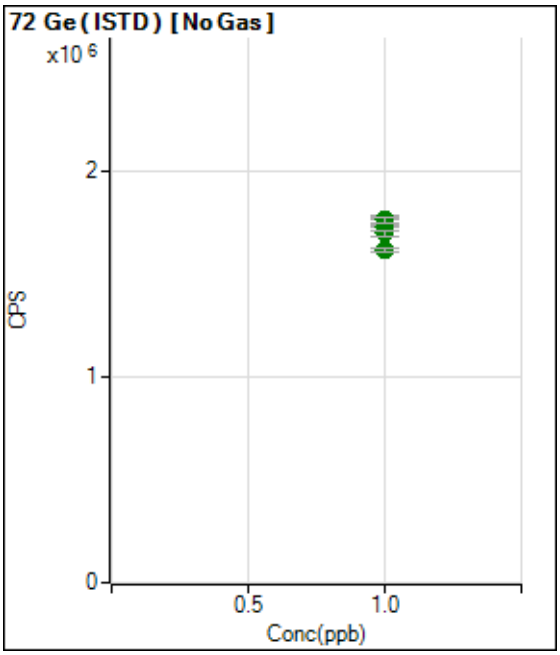
y = 0.0170 * x + 2.3983E-005
R = 0.9994
DL = 0.001509
BEC = 0.001408

Weight: <None>
Min Conc: <None>

Calibration for 024_ICV.d

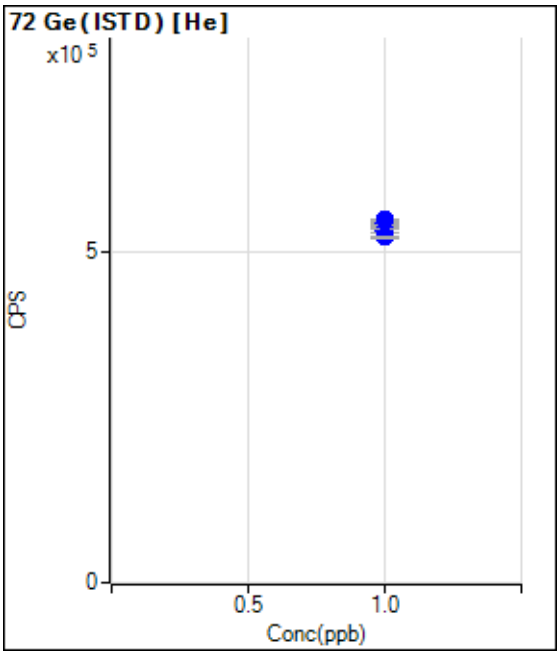



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1015680.29 | | A | 3.2 |
| 2 | ☐ | 1.000 | | 1017479.61 | | A | 3.2 |
| 3 | ☐ | 1.000 | | 1027534.57 | | A | 4.8 |
| 4 | ☐ | 1.000 | | 1031062.31 | | A | 2.1 |
| 5 | ☐ | 1.000 | | 974419.34 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 930358.24 | | A | 4.4 |

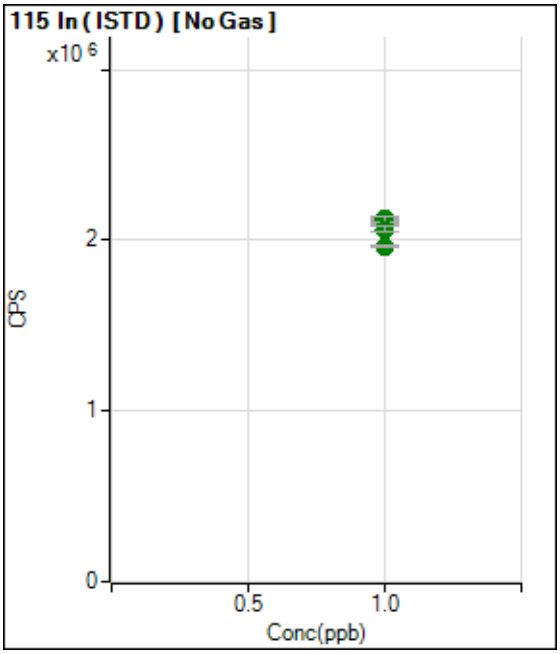



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1766562.79 | | A | 2.8 |
| 2 | ☐ | 1.000 | | 1749482.99 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 1732247.63 | | A | 2.1 |
| 4 | ☐ | 1.000 | | 1765154.09 | | A | 1.6 |
| 5 | ☐ | 1.000 | | 1702022.63 | | A | 1.6 |
| 6 | ☐ | 1.000 | | 1622238.36 | | A | 1.4 |

Calibration for 024_ICV.d

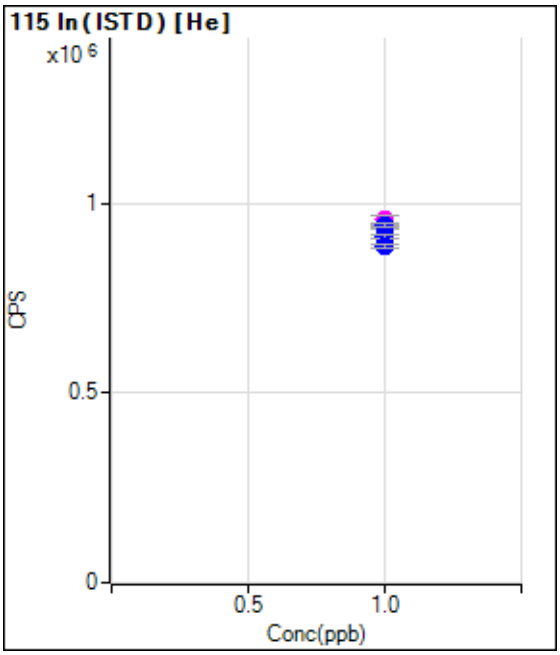



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 548875.87 | | P | 0.8 |
| 2 | ☐ | 1.000 | | 547102.11 | | P | 0.9 |
| 3 | ☐ | 1.000 | | 542931.65 | | P | 1.8 |
| 4 | ☐ | 1.000 | | 540043.83 | | P | 0.6 |
| 5 | ☐ | 1.000 | | 532668.18 | | P | 1.0 |
| 6 | ☐ | 1.000 | | 522558.05 | | P | 0.8 |

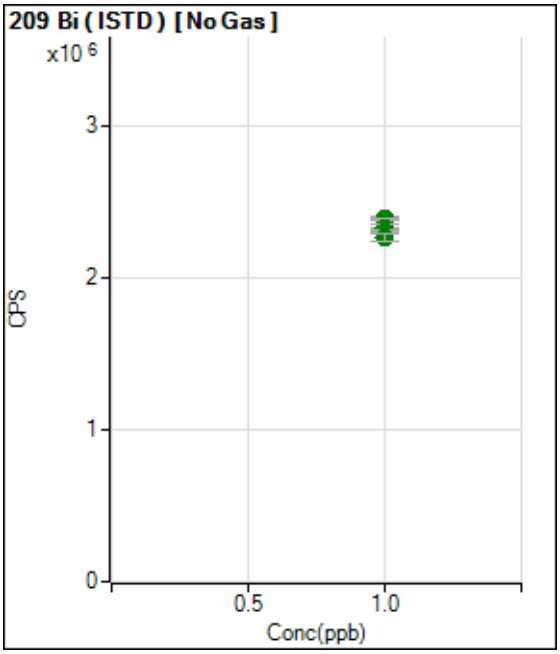



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2117300.96 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2097565.69 | | A | 0.5 |
| 3 | ☐ | 1.000 | | 2124607.94 | | A | 1.2 |
| 4 | ☐ | 1.000 | | 2120433.63 | | A | 1.8 |
| 5 | ☐ | 1.000 | | 2066252.67 | | A | 1.3 |
| 6 | ☐ | 1.000 | | 1963080.08 | | A | 0.4 |

Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 937310.27 | | P | 0.7 |
| 2 | ☐ | 1.000 | | 944141.79 | | P | 0.7 |
| 3 | ☐ | 1.000 | | 956709.14 | | M | 2.8 |
| 4 | ☐ | 1.000 | | 942224.75 | | P | 0.9 |
| 5 | ☐ | 1.000 | | 912474.90 | | P | 0.6 |
| 6 | ☐ | 1.000 | | 887284.66 | | P | 0.9 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2356498.98 | | A | 2.4 |
| 2 | ☐ | 1.000 | | 2380832.25 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 2388726.89 | | A | 0.5 |
| 4 | ☐ | 1.000 | | 2332758.09 | | A | 1.9 |
| 5 | ☐ | 1.000 | | 2309062.78 | | A | 0.8 |
| 6 | ☐ | 1.000 | | 2261574.76 | | A | 2.3 |

# Interference Check Solution A (ICS-A) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICSA |
| Data File Name | 026ICSA.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:58:41-05:00 |
| Sample Type | ICSA |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.506 | 10.4 | 62697 | 0.9 | 0 | ICSA Main CR1 Failed |
| Be | 9 | 1 | No Gas | -0.004 | -121.4 | 35 | 42.9 | 0 | ICSA Main CR1 Failed |
| V | 51 | 2 | He | 0.035 | 147.9 | 6587 | 3.3 | 0 | ICSA Main CR1 Failed |
| Cr | 52 | 2 | He | 0.922 | 5.4 | 5915 | 3.5 | 0 | ICSA Main CR1 Failed |
| Fe | 56 | 2 | He | 103666.173 | 1.5 | 449819767 | 2.0 | 0 | |
| Se | 78 | 2 | He | 0.322 | 46.3 | 47 | 14.8 | 0 | ICSA Main CR1 Failed |
| Sn | 118 | 2 | He | 0.078 | 58.2 | 957 | 17.3 | 0 | ICSA Main CR1 Failed |
| As | 75 | 2 | He | 0.148 | 18.4 | 538 | 3.1 | 0 | ICSA Main CR1 Failed |
| Ca | 44 | 2 | He | 103293.476 | 1.0 | 2253232 | 0.3 | 0 | |
| Na | 23 | 2 | He | 106566.706 | 0.5 | 87796162 | 1.1 | 0 | |
| Mg | 24 | 2 | He | 105355.456 | 1.1 | 50417081 | 1.5 | 0 | |
| K | 39 | 2 | He | 103955.673 | 0.8 | 38876214 | 0.5 | 0 | |
| Mn | 55 | 2 | He | 0.186 | 19.2 | 1140 | 11.2 | 0 | ICSA Main CR1 Failed |
| Co | 59 | 2 | He | 0.193 | 14.7 | 1650 | 13.4 | 0 | ICSA Main CR1 Failed |
| Ni | 60 | 2 | He | 0.216 | 26.2 | 547 | 19.2 | 0 | ICSA Main CR1 Failed |
| Cu | 63 | 2 | He | 0.274 | 5.3 | 2927 | 1.9 | 0 | ICSA Main CR1 Failed |
| Zn | 66 | 2 | He | 1.191 | 9.2 | 1593 | 6.3 | 0 | ICSA Main CR1 Failed |
| Al | 27 | 2 | He | 99017.949 | 1.6 | 23817059 | 2.0 | 0 | |
| B | 11 | 1 | No Gas | 4.508 | 9.9 | 29361 | 4.0 | 0 | |
| Al | 27 | 1 | No Gas | 97834.191 | 1.2 | 963947826 | 1.3 | 0 | |
| Si | 28 | 1 | No Gas | 35.379 | 2.5 | 298276 | 0.8 | 0 | |
| P | 31 | 1 | No Gas | 94749.057 | 1.1 | 40041444 | 0.8 | 0 | |
| Ag | 107 | 1 | No Gas | 0.047 | 5.7 | 670 | 3.9 | 0 | ICSA Main CR1 Failed |
| Cd | 111 | 1 | No Gas | 1.580 | 3.9 | 3567 | 3.5 | 0 | ICSA Main CR1 Failed |
| Sr | 88 | 1 | No Gas | 0.965 | 7.0 | 18410 | 6.7 | 0 | ICSA Main CR1 Failed |
| Mo | 95 | 1 | No Gas | 2011.669 | 3.0 | 7776017 | 2.1 | 0 | |
| Sn | 118 | 1 | No Gas | 0.088 | 11.9 | 1850 | 4.7 | 0 | ICSA Main CR1 Failed |
| Sb | 121 | 1 | No Gas | 0.046 | 39.5 | 1970 | 9.8 | 0 | ICSA Main CR1 Failed |
| Ba | 137 | 1 | No Gas | 0.025 | 62.0 | 413 | 11.2 | 0 | ICSA Main CR1 Failed |
| Tl | 205 | 1 | No Gas | 0.013 | 25.4 | 610 | 7.5 | 0 | ICSA Main CR1 Failed |
| Tl | 203 | 1 | No Gas | 0.010 | 37.6 | 233 | 17.8 | 0 | ICSA Main CR1 Failed |
| Pb | 208 | 1 | No Gas | 0.051 | 23.5 | 4034 | 6.7 | 0 | ICSA Main CR1 Failed |
| U | 238 | 1 | No Gas | 0.005 | 21.6 | 223 | 12.9 | 0 | ICSA Main CR1 Failed |
| Ca | 43 | 2 | He | 104104.291 | 1.5 | 132067 | 0.6 | 0 | |
| Sb | 121 | 2 | He | 0.075 | 10.1 | 1097 | 2.6 | 0 | ICSA Main CR1 Failed |
| Ti | 47 | 2 | He | 2240.778 | 1.6 | 279590 | 1.1 | 0 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 947785 | 1.75 | 1015680 | 93.32 | 70 | 120 | |
| Ge | 72 | 2 | He | 501193 | 0.90 | 548876 | 91.31 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1577625 | 0.62 | 1766563 | 89.30 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1905083 | 1.67 | 2117301 | 89.98 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2107470 | 5.19 | 2356499 | 89.43 | 70 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICSAB |
| Data File Name | 027ICSB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T12:00:36-05:00 |
| Sample Type | ICSB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 101.271 | 2.731 | 1223724 | 1.52 | 100 | 101.3 | 180 | 120 | ICSB Main CR1 Failed |
| Be | 9 | 1 | No Gas | 107.032 | 3.758 | 299333 | 0.40 | 100 | 107.0 | 80 | 120 | |
| V | 51 | 2 | He | 104.206 | 1.230 | 412567 | 0.44 | 100 | 104.2 | 80 | 120 | |
| Cr | 52 | 2 | He | 101.197 | 1.946 | 500835 | 1.17 | 100 | 101.2 | 80 | 120 | |
| Fe | 56 | 2 | He | 109844.719 | 0.671 | 474994713 | 1.39 | 100 | 109844.7 | 80 | 120 | ICSB Main CR1 Failed |
| Se | 78 | 2 | He | 104.818 | 2.556 | 5124 | 1.77 | 100 | 104.8 | 80 | 120 | |
| Sn | 118 | 2 | He | 103.202 | 0.663 | 367824 | 1.22 | 100 | 103.2 | 80 | 120 | |
| As | 75 | 2 | He | 103.471 | 0.357 | 59930 | 1.06 | 100 | 103.5 | 80 | 120 | |
| Ca | 44 | 2 | He | 112239.976 | 2.330 | 2440194 | 2.64 | 100 | 112240.0 | 80 | 120 | |
| Na | 23 | 2 | He | 112629.790 | 1.062 | 92466869 | 1.26 | 100 | 112629.8 | 80 | 120 | ICSB Main CR1 Failed |
| Mg | 24 | 2 | He | 112060.259 | 0.564 | 53443356 | 1.34 | 100 | 112060.3 | 80 | 120 | ICSB Main CR1 Failed |
| K | 39 | 2 | He | 112118.032 | 1.513 | 41786363 | 2.22 | 100 | 112118.0 | 80 | 120 | |
| Mn | 55 | 2 | He | 101.949 | 0.901 | 335193 | 0.68 | 100 | 101.9 | 80 | 120 | |
| Co | 59 | 2 | He | 100.194 | 1.788 | 767999 | 1.47 | 100 | 100.2 | 80 | 120 | |
| Ni | 60 | 2 | He | 100.825 | 2.627 | 195590 | 1.96 | 100 | 100.8 | 80 | 120 | |
| Cu | 63 | 2 | He | 97.492 | 1.641 | 527352 | 1.09 | 100 | 97.5 | 80 | 120 | |
| Zn | 66 | 2 | He | 101.733 | 0.675 | 103201 | 1.14 | 100 | 101.7 | 80 | 120 | |
| Al | 27 | 2 | He | 97010.117 | 1.120 | 23254714 | 1.76 | 100 | 97010.1 | 80 | 120 | ICSB Main CR1 Failed |
| B | 11 | 1 | No Gas | 533.651 | 5.734 | 1022696 | 4.04 | 100 | 533.7 | 80 | 120 | |
| Al | 27 | 1 | No Gas | 98003.372 | 3.287 | 947976413 | 1.55 | 100 | 98003.4 | 80 | 120 | ICSB Main CR1 Failed |
| Si | 28 | 1 | No Gas | 535.981 | 3.672 | 2434508 | 1.59 | 100 | 536.0 | 80 | 120 | |
| P | 31 | 1 | No Gas | 93156.692 | 3.576 | 38647826 | 1.41 | 100 | 93156.7 | 80 | 120 | ICSB Main CR1 Failed |
| Ag | 107 | 1 | No Gas | 93.942 | 0.586 | 1019872 | 1.08 | 100 | 93.9 | 80 | 120 | |
| Cd | 111 | 1 | No Gas | 102.947 | 0.787 | 227509 | 1.29 | 100 | 102.9 | 80 | 120 | |
| Sr | 88 | 1 | No Gas | 105.590 | 2.936 | 1854127 | 2.44 | 100 | 105.6 | 80 | 120 | |
| Mo | 95 | 1 | No Gas | 2090.817 | 2.727 | 7930884 | 2.26 | 100 | 2090.8 | 80 | 120 | ICSB Main CR1 Failed |
| Sn | 118 | 1 | No Gas | 108.721 | 1.426 | 669053 | 1.66 | 100 | 108.7 | 80 | 120 | |
| Sb | 121 | 1 | No Gas | 98.770 | 3.502 | 977308 | 1.09 | 100 | 98.8 | 80 | 120 | |
| Ba | 137 | 1 | No Gas | 101.649 | 1.702 | 296134 | 1.75 | 100 | 101.6 | 80 | 120 | |
| Tl | 205 | 1 | No Gas | 103.273 | 2.392 | 2397445 | 2.44 | 100 | 103.3 | 80 | 120 | |
| Tl | 203 | 1 | No Gas | 96.543 | 2.260 | 948920 | 0.85 | 100 | 96.5 | 80 | 120 | |
| Pb | 208 | 1 | No Gas | 101.065 | 2.370 | 3286588 | 0.98 | 100 | 101.1 | 80 | 120 | |
| U | 238 | 1 | No Gas | 109.367 | 2.585 | 3855387 | 1.22 | 100 | 109.4 | 80 | 120 | |
| Ca | 43 | 2 | He | 111467.267 | 2.743 | 140943 | 3.15 | 100 | 111467.3 | 80 | 120 | ICSB Main CR1 Failed |
| Sb | 121 | 2 | He | 100.132 | 1.939 | 502417 | 1.76 | 100 | 100.1 | 80 | 120 | |
| Ti | 47 | 2 | He | 2306.174 | 2.002 | 286769 | 1.75 | 100 | 2306.2 | 80 | 120 | ICSB Main CR1 Failed |
| Cu | 63 | 1 | No Gas | 97.023 | 2.465 | 772045 | 0.42 | 100 | 97.0 | 80 | 120 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 946381 | 3.41 | 1015680 | 93.18 | 70 | 120 | |
| Ge | 72 | 2 | He | 499477 | 0.78 | 548876 | 91.00 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1549553 | 2.44 | 1766563 | 87.72 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1869153 | 0.50 | 2117301 | 88.28 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2070458 | 1.87 | 2356499 | 87.86 | 70 | 120 | |

# Calibration Blank Report

**Sample Table**

| | |
|---|---|
| Sample Name | CAL BLK |
| Data File Name | 105CALB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:30:53-05:00 |
| Sample Type | CalBlk |
| Level | 1 |
| Dilution | 1 |
| Comment | |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 57553 | 0.00 |
| Be | 9 | 1 | No Gas | 23 | 53.02 |
| V | 51 | 2 | He | 4168 | 0.06 |
| Cr | 52 | 2 | He | 1307 | 0.62 |
| Fe | 56 | 2 | He | 5481 | 0.06 |
| Se | 78 | 2 | He | 33 | 105.47 |
| Sn | 118 | 2 | He | 363 | 6.17 |
| As | 75 | 2 | He | 203 | 10.67 |
| Ca | 44 | 2 | He | 593 | 1.00 |
| Na | 23 | 2 | He | 157305 | 0.00 |
| Mg | 24 | 2 | He | 640 | 4.72 |
| K | 39 | 2 | He | 43562 | 0.00 |
| Mn | 55 | 2 | He | 1180 | 0.94 |
| Co | 59 | 2 | He | 257 | 7.79 |
| Ni | 60 | 2 | He | 150 | 23.52 |
| Cu | 63 | 2 | He | 1030 | 0.09 |
| Zn | 66 | 2 | He | 297 | 8.06 |
| Al | 27 | 2 | He | 1383 | 0.62 |
| B | 11 | 1 | No Gas | 34305 | 0.01 |
| Al | 27 | 1 | No Gas | 57161 | 0.00 |
| Si | 28 | 1 | No Gas | 159663 | 0.00 |
| P | 31 | 1 | No Gas | 30734 | 0.00 |
| Ag | 107 | 1 | No Gas | 177 | 9.79 |
| Cd | 111 | 1 | No Gas | 3 | 5196.15 |
| Sr | 88 | 1 | No Gas | 2057 | 0.18 |
| Mo | 95 | 1 | No Gas | 57 | 17.98 |
| Sn | 118 | 1 | No Gas | 830 | 1.82 |
| Sb | 121 | 1 | No Gas | 557 | 1.95 |
| Ba | 137 | 1 | No Gas | 323 | 2.21 |
| Tl | 205 | 1 | No Gas | 473 | 5.51 |
| Tl | 203 | 1 | No Gas | 190 | 12.70 |
| Pb | 208 | 1 | No Gas | 1827 | 0.48 |
| U | 238 | 1 | No Gas | 43 | 110.86 |
| Ca | 43 | 2 | He | 17 | 549.91 |
| Sb | 121 | 2 | He | 267 | 2.93 |
| Ti | 47 | 2 | He | 3 | 5196.15 |
| Cu | 63 | 1 | No Gas | 1650 | 0.61 |

# Calibration Blank Report

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 957133 | 5.05 |
| Ge | 72 | 2 | He | 530792 | 1.13 |

# Calibration Blank Report

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Ge | 72 | 1 | No Gas | 1680329 | 2.22 |
| In | 115 | 1 | No Gas | 2126707 | 3.10 |
| Bi | 209 | 1 | No Gas | 2340208 | 0.47 |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 2/10/200 |
| Data File Name | 106CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:32:46-05:00 |
| Sample Type | CalStd |
| Level | 2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 5811 | 0.02 |
| V | 51 | 2 | He | 15201 | 0.01 |
| Cr | 52 | 2 | He | 11031 | 0.00 |
| Fe | 56 | 2 | He | 935950 | 0.00 |
| Se | 78 | 2 | He | 135 | 9.91 |
| Sn | 118 | 2 | He | 7836 | 0.07 |
| As | 75 | 2 | He | 1532 | 0.26 |
| Ca | 44 | 2 | He | 4591 | 0.10 |
| Na | 23 | 2 | He | 336196 | 0.00 |
| Mg | 24 | 2 | He | 104582 | 0.00 |
| K | 39 | 2 | He | 126146 | 0.00 |
| Mn | 55 | 2 | He | 7832 | 0.06 |
| Co | 59 | 2 | He | 16250 | 0.03 |
| Ni | 60 | 2 | He | 4161 | 0.23 |
| Cu | 63 | 2 | He | 12036 | 0.03 |
| Zn | 66 | 2 | He | 2557 | 0.62 |
| Al | 27 | 2 | He | 1297 | 0.48 |
| B | 11 | 1 | No Gas | 48170 | 0.00 |
| Al | 27 | 1 | No Gas | 55488 | 0.00 |
| Si | 28 | 1 | No Gas | 173886 | 0.00 |
| P | 31 | 1 | No Gas | 22966 | 0.00 |
| Ag | 107 | 1 | No Gas | 23622 | 0.00 |
| Cd | 111 | 1 | No Gas | 4718 | 0.16 |
| Sr | 88 | 1 | No Gas | 39057 | 0.00 |
| Mo | 95 | 1 | No Gas | 8173 | 0.04 |
| Sn | 118 | 1 | No Gas | 15513 | 0.02 |
| Sb | 121 | 1 | No Gas | 20620 | 0.00 |
| Ba | 137 | 1 | No Gas | 6425 | 0.10 |
| Tl | 205 | 1 | No Gas | 50315 | 0.00 |
| Tl | 203 | 1 | No Gas | 21138 | 0.02 |
| Pb | 208 | 1 | No Gas | 72113 | 0.00 |
| U | 238 | 1 | No Gas | 73361 | 0.00 |
| Ca | 43 | 2 | He | 290 | 6.29 |
| Sb | 121 | 2 | He | 10661 | 0.04 |
| Cu | 63 | 1 | No Gas | 18707 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 994376 | 5.23 | 957133 | 103.89 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 528799 | 1.23 | 530792 | 99.62 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1710786 | 2.55 | 1680329 | 101.81 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2035004 | 2.33 | 2126707 | 95.69 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2338033 | 2.03 | 2340208 | 99.91 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 5/25/500 |
| Data File Name | 107CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:34:40-05:00 |
| Sample Type | CalStd |
| Level | 3 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 14805 | 0.01 |
| V | 51 | 2 | He | 27878 | 0.00 |
| Cr | 52 | 2 | He | 26740 | 0.01 |
| Fe | 56 | 2 | He | 2364602 | 0.00 |
| Se | 78 | 2 | He | 309 | 1.75 |
| Sn | 118 | 2 | He | 18974 | 0.02 |
| As | 75 | 2 | He | 3358 | 0.06 |
| Ca | 44 | 2 | He | 11612 | 0.01 |
| Na | 23 | 2 | He | 605356 | 0.00 |
| Mg | 24 | 2 | He | 262075 | 0.00 |
| K | 39 | 2 | He | 245789 | 0.00 |
| Mn | 55 | 2 | He | 17742 | 0.02 |
| Co | 59 | 2 | He | 40089 | 0.01 |
| Ni | 60 | 2 | He | 10558 | 0.03 |
| Cu | 63 | 2 | He | 28925 | 0.00 |
| Zn | 66 | 2 | He | 5505 | 0.09 |
| Al | 27 | 2 | He | 2220 | 0.12 |
| B | 11 | 1 | No Gas | 77039 | 0.00 |
| Al | 27 | 1 | No Gas | 89130 | 0.00 |
| Si | 28 | 1 | No Gas | 235486 | 0.00 |
| P | 31 | 1 | No Gas | 30384 | 0.01 |
| Ag | 107 | 1 | No Gas | 57981 | 0.00 |
| Cd | 111 | 1 | No Gas | 11765 | 0.05 |
| Sr | 88 | 1 | No Gas | 96244 | 0.00 |
| Mo | 95 | 1 | No Gas | 19768 | 0.01 |
| Sn | 118 | 1 | No Gas | 35856 | 0.00 |
| Sb | 121 | 1 | No Gas | 50632 | 0.00 |
| Ba | 137 | 1 | No Gas | 15289 | 0.01 |
| Tl | 205 | 1 | No Gas | 125871 | 0.00 |
| Tl | 203 | 1 | No Gas | 52196 | 0.00 |
| Pb | 208 | 1 | No Gas | 176126 | 0.00 |
| U | 238 | 1 | No Gas | 184109 | 0.00 |
| Ca | 43 | 2 | He | 703 | 0.84 |
| Sb | 121 | 2 | He | 25268 | 0.02 |
| Cu | 63 | 1 | No Gas | 43671 | 0.01 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 971628 | 3.85 | 957133 | 101.51 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 527716 | 1.37 | 530792 | 99.42 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1694814 | 1.30 | 1680329 | 100.86 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2097330 | 1.57 | 2126707 | 98.62 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2355451 | 1.78 | 2340208 | 100.65 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 10/50/100 |
| Data File Name | 108CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:36:33-05:00 |
| Sample Type | CalStd |
| Level | 4 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 32830 | 0.01 |
| V | 51 | 2 | He | 52302 | 0.00 |
| Cr | 52 | 2 | He | 56233 | 0.00 |
| Fe | 56 | 2 | He | 5049631 | 0.00 |
| Se | 78 | 2 | He | 574 | 0.63 |
| Sn | 118 | 2 | He | 42302 | 0.00 |
| As | 75 | 2 | He | 6985 | 0.04 |
| Ca | 44 | 2 | He | 24803 | 0.00 |
| Na | 23 | 2 | He | 1122101 | 0.00 |
| Mg | 24 | 2 | He | 574291 | 0.00 |
| K | 39 | 2 | He | 475485 | 0.00 |
| Mn | 55 | 2 | He | 38452 | 0.00 |
| Co | 59 | 2 | He | 87472 | 0.00 |
| Ni | 60 | 2 | He | 23187 | 0.01 |
| Cu | 63 | 2 | He | 62491 | 0.00 |
| Zn | 66 | 2 | He | 12002 | 0.04 |
| Al | 27 | 2 | He | 3517 | 0.09 |
| B | 11 | 1 | No Gas | 135237 | 0.00 |
| Al | 27 | 1 | No Gas | 160870 | 0.00 |
| Si | 28 | 1 | No Gas | 372405 | 0.00 |
| P | 31 | 1 | No Gas | 44646 | 0.00 |
| Ag | 107 | 1 | No Gas | 127292 | 0.00 |
| Cd | 111 | 1 | No Gas | 26661 | 0.00 |
| Sr | 88 | 1 | No Gas | 207012 | 0.00 |
| Mo | 95 | 1 | No Gas | 44642 | 0.01 |
| Sn | 118 | 1 | No Gas | 80742 | 0.00 |
| Sb | 121 | 1 | No Gas | 112185 | 0.00 |
| Ba | 137 | 1 | No Gas | 34302 | 0.01 |
| Tl | 205 | 1 | No Gas | 276100 | 0.00 |
| Tl | 203 | 1 | No Gas | 115326 | 0.00 |
| Pb | 208 | 1 | No Gas | 387016 | 0.00 |
| U | 238 | 1 | No Gas | 410458 | 0.00 |
| Ca | 43 | 2 | He | 1450 | 0.51 |
| Sb | 121 | 2 | He | 57255 | 0.00 |
| Cu | 63 | 1 | No Gas | 94640 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 970061 | 6.01 | 957133 | 101.35 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 520437 | 0.72 | 530792 | 98.05 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1681154 | 1.74 | 1680329 | 100.05 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2045022 | 2.87 | 2126707 | 96.16 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2309769 | 1.08 | 2340208 | 98.70 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 100/500/10K |
| Data File Name | 109CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:38:26-05:00 |
| Sample Type | CalStd |
| Level | 5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 284652 | 0.00 |
| V | 51 | 2 | He | 391111 | 0.00 |
| Cr | 52 | 2 | He | 476314 | 0.00 |
| Fe | 56 | 2 | He | 43606426 | 0.00 |
| Se | 78 | 2 | He | 4610 | 0.03 |
| Sn | 118 | 2 | He | 365964 | 0.00 |
| As | 75 | 2 | He | 55675 | 0.00 |
| Ca | 44 | 2 | He | 210046 | 0.00 |
| Na | 23 | 2 | He | 8249337 | 0.00 |
| Mg | 24 | 2 | He | 4722821 | 0.00 |
| K | 39 | 2 | He | 3692880 | 0.00 |
| Mn | 55 | 2 | He | 329644 | 0.00 |
| Co | 59 | 2 | He | 746822 | 0.00 |
| Ni | 60 | 2 | He | 190956 | 0.00 |
| Cu | 63 | 2 | He | 525850 | 0.00 |
| Zn | 66 | 2 | He | 100181 | 0.00 |
| Al | 27 | 2 | He | 24375 | 0.01 |
| B | 11 | 1 | No Gas | 961815 | 0.00 |
| Al | 27 | 1 | No Gas | 993726 | 0.00 |
| Si | 28 | 1 | No Gas | 2222548 | 0.00 |
| P | 31 | 1 | No Gas | 223203 | 0.00 |
| Ag | 107 | 1 | No Gas | 1089834 | 0.00 |
| Cd | 111 | 1 | No Gas | 226541 | 0.00 |
| Sr | 88 | 1 | No Gas | 1871819 | 0.00 |
| Mo | 95 | 1 | No Gas | 386788 | 0.00 |
| Sn | 118 | 1 | No Gas | 685723 | 0.00 |
| Sb | 121 | 1 | No Gas | 967331 | 0.00 |
| Ba | 137 | 1 | No Gas | 295573 | 0.00 |
| Tl | 205 | 1 | No Gas | 2519794 | 0.00 |
| Tl | 203 | 1 | No Gas | 999080 | 0.00 |
| Pb | 208 | 1 | No Gas | 3429652 | 0.00 |
| U | 238 | 1 | No Gas | 3754127 | 0.00 |
| Ca | 43 | 2 | He | 12232 | 0.03 |
| Sb | 121 | 2 | He | 487143 | 0.00 |
| Cu | 63 | 1 | No Gas | 792087 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 942583 | 2.64 | 957133 | 98.48 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 510671 | 1.12 | 530792 | 96.21 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1658205 | 1.38 | 1680329 | 98.68 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1974304 | 0.48 | 2126707 | 92.83 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2271595 | 3.77 | 2340208 | 97.07 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 200/1000/20K |
| Data File Name | 110CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:40:14-05:00 |
| Sample Type | CalStd |
| Level | 6 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 556170 | 0.00 |
| V | 51 | 2 | He | 763523 | 0.00 |
| Cr | 52 | 2 | He | 938225 | 0.00 |
| Fe | 56 | 2 | He | 83620214 | 0.00 |
| Se | 78 | 2 | He | 8968 | 0.01 |
| Sn | 118 | 2 | He | 719083 | 0.00 |
| As | 75 | 2 | He | 109139 | 0.00 |
| Ca | 44 | 2 | He | 413499 | 0.00 |
| Na | 23 | 2 | He | 15860316 | 0.00 |
| Mg | 24 | 2 | He | 9087072 | 0.00 |
| K | 39 | 2 | He | 7130939 | 0.00 |
| Mn | 55 | 2 | He | 625204 | 0.00 |
| Co | 59 | 2 | He | 1498047 | 0.00 |
| Ni | 60 | 2 | He | 374110 | 0.00 |
| Cu | 63 | 2 | He | 1014547 | 0.00 |
| Zn | 66 | 2 | He | 192642 | 0.00 |
| Al | 27 | 2 | He | 44933 | 0.00 |
| B | 11 | 1 | No Gas | 1854198 | 0.00 |
| Al | 27 | 1 | No Gas | 1897814 | 0.00 |
| Si | 28 | 1 | No Gas | 4198608 | 0.00 |
| P | 31 | 1 | No Gas | 418115 | 0.00 |
| Ag | 107 | 1 | No Gas | 2151939 | 0.00 |
| Cd | 111 | 1 | No Gas | 441773 | 0.00 |
| Sr | 88 | 1 | No Gas | 3471502 | 0.00 |
| Mo | 95 | 1 | No Gas | 755022 | 0.00 |
| Sn | 118 | 1 | No Gas | 1370156 | 0.00 |
| Sb | 121 | 1 | No Gas | 1946819 | 0.00 |
| Ba | 137 | 1 | No Gas | 578549 | 0.00 |
| Tl | 205 | 1 | No Gas | 4767765 | 0.00 |
| Tl | 203 | 1 | No Gas | 2051287 | 0.00 |
| Pb | 208 | 1 | No Gas | 6673583 | 0.00 |
| U | 238 | 1 | No Gas | 7109814 | 0.00 |
| Ca | 43 | 2 | He | 24706 | 0.00 |
| Sb | 121 | 2 | He | 954754 | 0.00 |
| Cu | 63 | 1 | No Gas | 1525520 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 903142 | 2.12 | 957133 | 94.36 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 501105 | 0.22 | 530792 | 94.41 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1620377 | 2.12 | 1680329 | 96.43 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1989132 | 1.82 | 2126707 | 93.53 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2166139 | 0.97 | 2340208 | 92.56 | 70 | 120 | |

# Initial Calibration Verification (ICV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICCV |
| Data File Name | 112_ICV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:43:54-05:00 |
| Sample Type | ICV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 97.226 | 2.719 | 1128152 | 0.53 | 100 | 97.2 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 92.342 | 1.585 | 260728 | 1.31 | 100 | 92.3 | 90 | 110 | |
| V | 51 | 2 | He | 95.458 | 0.746 | 365180 | 0.38 | 100 | 95.5 | 90 | 110 | |
| Cr | 52 | 2 | He | 94.654 | 0.758 | 442549 | 1.22 | 100 | 94.7 | 90 | 110 | |
| Fe | 56 | 2 | He | 9581.540 | 0.971 | 40101435 | 1.64 | 10000 | 95.8 | 90 | 110 | |
| Se | 78 | 2 | He | 96.453 | 2.204 | 4329 | 1.78 | 100 | 96.5 | 90 | 110 | |
| Sn | 118 | 2 | He | 92.130 | 0.816 | 334152 | 1.64 | 100 | 92.1 | 90 | 110 | |
| As | 75 | 2 | He | 96.563 | 1.426 | 52591 | 0.78 | 100 | 96.6 | 90 | 110 | |
| Ca | 44 | 2 | He | 9601.536 | 0.693 | 197846 | 0.46 | 10000 | 96.0 | 90 | 110 | |
| Na | 23 | 2 | He | 9648.894 | 0.656 | 7717144 | 0.41 | 10000 | 96.5 | 90 | 110 | |
| Mg | 24 | 2 | He | 9670.206 | 1.087 | 4395364 | 1.01 | 10000 | 96.7 | 90 | 110 | |
| K | 39 | 2 | He | 9703.085 | 0.447 | 3474869 | 0.42 | 10000 | 97.0 | 90 | 110 | |
| Mn | 55 | 2 | He | 96.040 | 2.067 | 301616 | 2.04 | 100 | 96.0 | 90 | 110 | |
| Co | 59 | 2 | He | 93.340 | 0.611 | 693543 | 0.75 | 100 | 93.3 | 90 | 110 | |
| Ni | 60 | 2 | He | 94.488 | 0.314 | 176215 | 0.98 | 100 | 94.5 | 90 | 110 | |
| Cu | 63 | 2 | He | 94.982 | 0.640 | 482079 | 0.99 | 100 | 95.0 | 90 | 110 | |
| Zn | 66 | 2 | He | 95.408 | 1.648 | 92055 | 2.34 | 100 | 95.4 | 90 | 110 | |
| Al | 27 | 2 | He | 96.249 | 2.065 | 22355 | 1.63 | 100 | 96.2 | 90 | 110 | |
| B | 11 | 1 | No Gas | 473.208 | 3.208 | 907368 | 2.25 | 500 | 94.6 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 98.752 | 4.974 | 940631 | 1.67 | 100 | 98.8 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 548.383 | 2.449 | 2314796 | 1.26 | 500 | 109.7 | 90 | 110 | |
| P | 31 | 1 | No Gas | 464.157 | 2.619 | 203739 | 1.99 | 500 | 92.8 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 94.807 | 2.372 | 1012955 | 0.67 | 100 | 94.8 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 94.714 | 2.669 | 208303 | 1.93 | 100 | 94.7 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 96.132 | 2.855 | 1679089 | 0.87 | 100 | 96.1 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 94.682 | 3.421 | 355672 | 0.41 | 100 | 94.7 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 93.701 | 2.767 | 635984 | 0.37 | 100 | 93.7 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 95.922 | 3.932 | 906398 | 1.26 | 100 | 95.9 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 94.504 | 4.128 | 271934 | 1.34 | 100 | 94.5 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 93.638 | 2.028 | 2283626 | 1.59 | 100 | 93.6 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 89.002 | 1.622 | 919355 | 2.01 | 100 | 89.0 | 90 | 110 | ICV Main CR1 Failed |
| Pb | 208 | 1 | No Gas | 93.458 | 0.903 | 3172884 | 0.68 | 100 | 93.5 | 90 | 110 | |
| U | 238 | 1 | No Gas | 95.576 | 1.783 | 3475667 | 2.36 | 100 | 95.6 | 90 | 110 | |
| Ca | 43 | 2 | He | 9411.223 | 0.772 | 11522 | 0.96 | 10000 | 94.1 | 90 | 110 | |
| Sb | 121 | 2 | He | 96.478 | 0.679 | 459030 | 0.43 | 100 | 96.5 | 90 | 110 | |
| Ti | 47 | 2 | He | 96.521 | 2.321 | 12342 | 1.76 | 100 | 96.5 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 98.735 | 3.680 | 738073 | 0.55 | 100 | 98.7 | 90 | 110 | |

**QC ISTD Table**

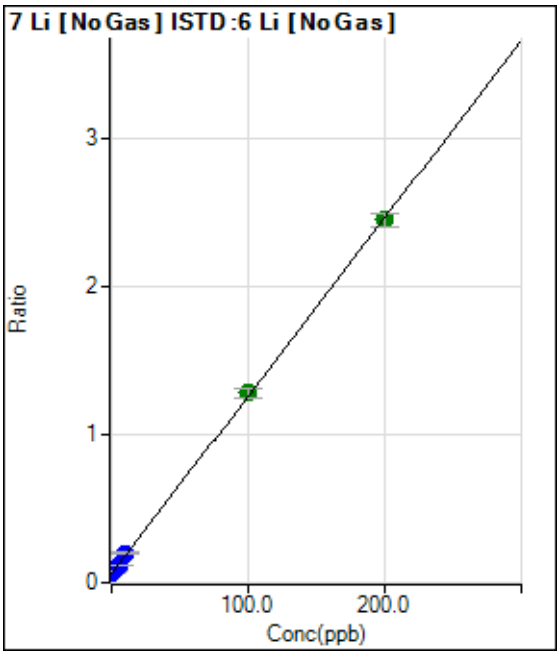
| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 920171 | 2.19 | 957133 | 96.14 | 70 | 120 | |
| Ge | 72 | 2 | He | 499038 | 0.70 | 530792 | 94.02 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1582253 | 3.40 | 1680329 | 94.16 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1967043 | 3.07 | 2126707 | 92.49 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2211821 | 1.44 | 2340208 | 94.51 | 70 | 120 | |

Calibration for 112_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 105CALB.d | CAL BLK | 7/28/2020 3:30:53 PM |
| 2 | 106CALS.d | 2/10/200 | 7/28/2020 3:32:46 PM |
| 3 | 107CALS.d | 5/25/500 | 7/28/2020 3:34:40 PM |
| 4 | 108CALS.d | 10/50/100 | 7/28/2020 3:36:33 PM |
| 5 | 109CALS.d | 100/500/10K | 7/28/2020 3:38:26 PM |
| 6 | 110CALS.d | 200/1000/20K | 7/28/2020 3:40:14 PM |

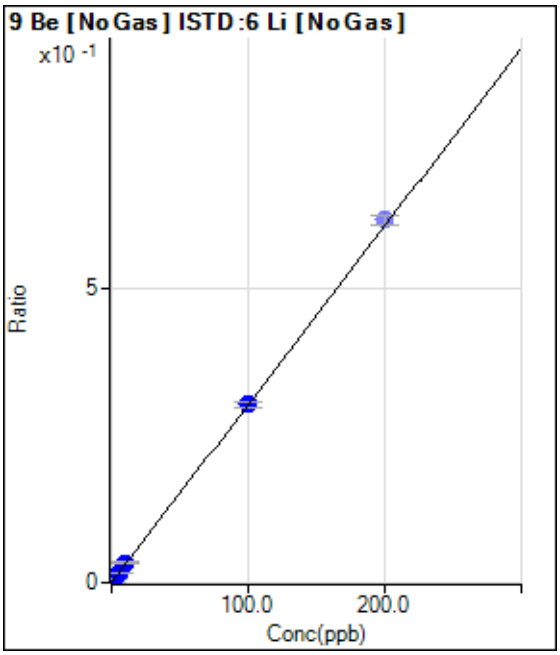
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57553.15 | 0.0602 | P | 2.9 |
| 2 | ☐ | 2.000 | 1.787 | 81043.87 | 0.0816 | P | 4.4 |
| 3 | ☐ | 5.000 | 5.071 | 117544.46 | 0.1210 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.513 | 192006.51 | 0.1983 | P | 4.7 |
| 5 | ☐ | 100.000 | 101.698 | 1205651.31 | 1.2801 | A | 4.9 |
| 6 | ☐ | 200.000 | 199.076 | 2210597.62 | 2.4482 | A | 3.4 |

y = 0.0120 * x + 0.0602
R = 0.9999
DL = 0.4418
BEC = 5.018

Weight: <None>
Min Conc: <None>

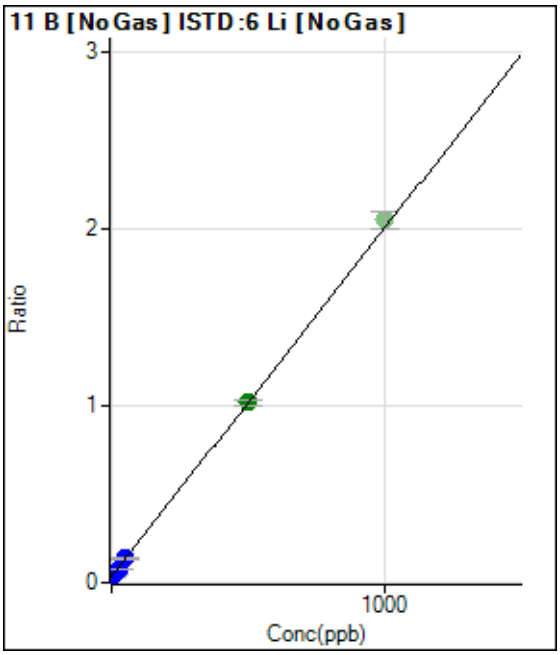



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 8.6 |
| 2 | ☐ | 2.000 | 1.928 | 5811.25 | 0.0059 | P | 6.3 |
| 3 | ☐ | 5.000 | 5.036 | 14804.60 | 0.0153 | P | 5.3 |
| 4 | ☐ | 10.000 | 11.212 | 32830.06 | 0.0339 | P | 7.1 |
| 5 | ☐ | 100.000 | 99.878 | 284652.50 | 0.3021 | P | 2.6 |
| 6 | ☑ | 200.000 | | 556169.85 | 0.6160 | P | 2.4 |

y = 0.0030 * x + 2.4330E-005
R = 0.9999
DL = 0.002077
BEC = 0.008044

Weight: <None>
Min Conc: <None>

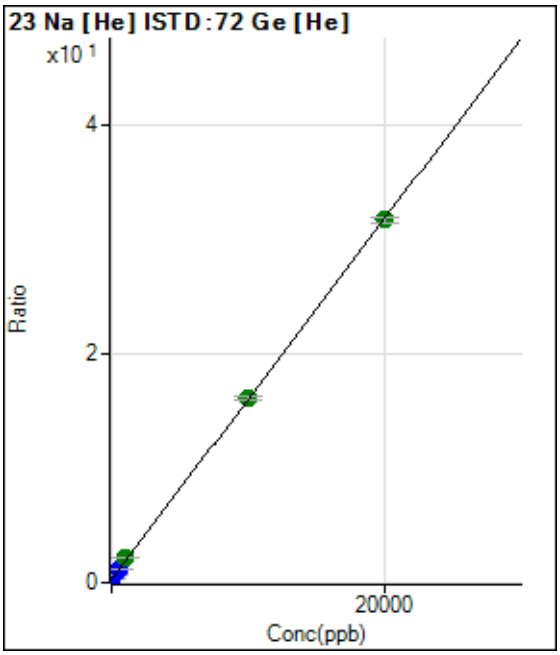
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34305.31 | 0.0359 | P | 5.1 |
| 2 | ☐ | 10.000 | 6.410 | 48169.57 | 0.0485 | P | 4.9 |
| 3 | ☐ | 25.000 | 22.078 | 77039.42 | 0.0794 | P | 5.4 |
| 4 | ☐ | 50.000 | 52.747 | 135237.47 | 0.1398 | P | 7.4 |
| 5 | ☐ | 500.000 | 499.943 | 961815.48 | 1.0209 | A | 2.8 |
| 6 | ☑ | 1000.000 | | 1854198.36 | 2.0542 | A | 4.6 |

y = 0.0020 * x + 0.0359
R = 0.9999
DL = 2.781
BEC = 18.22

Weight: <None>
Min Conc: <None>

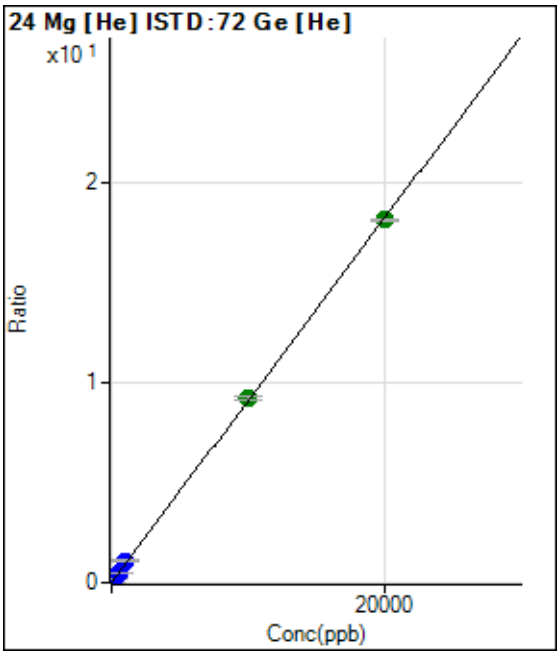



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 157304.74 | 0.2964 | P | 0.5 |
| 2 | ☐ | 200.000 | 215.953 | 336196.26 | 0.6358 | P | 1.6 |
| 3 | ☐ | 500.000 | 541.214 | 605356.17 | 1.1472 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1182.813 | 1122101.13 | 2.1557 | A | 3.6 |
| 5 | ☐ | 10000.00 | 10088.71 | 8249336.75 | 16.1558 | A | 1.9 |
| 6 | ☐ | 20000.00 | 19945.31 | 15860316.01 | 31.6504 | A | 1.4 |

y = 0.0016 * x + 0.2964
R = 1.0000
DL = 2.787
BEC = 188.5

Weight: <None>
Min Conc: <None>

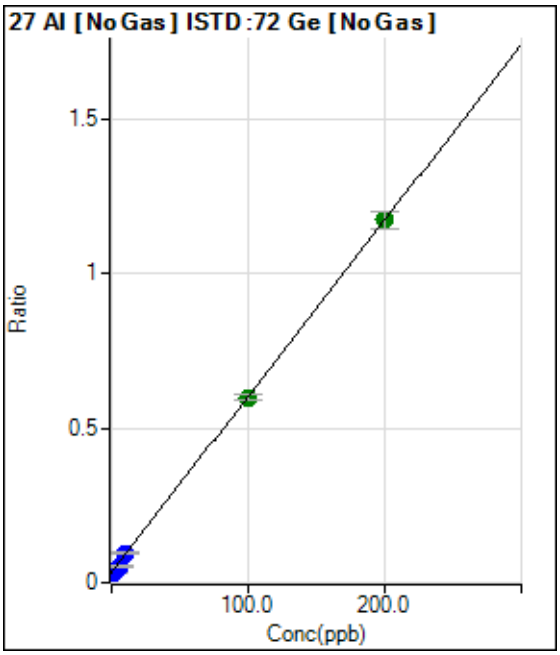
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 640.03 | 0.0012 | P | 29.6 |
| 2 | ☐ | 200.000 | 215.855 | 104582.22 | 0.1978 | P | 0.7 |
| 3 | ☐ | 500.000 | 544.027 | 262074.72 | 0.4967 | P | 1.6 |
| 4 | ☐ | 1000.000 | 1210.368 | 574291.26 | 1.1035 | P | 0.6 |
| 5 | ☐ | 10000.00 | 10154.76 | 4722820.87 | 9.2492 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19910.83 | 9087071.95 | 18.1340 | A | 0.2 |

y = 9.1070E-004 * x + 0.0012
R = 0.9999
DL = 1.174
BEC = 1.322

Weight: <None>
Min Conc: <None>

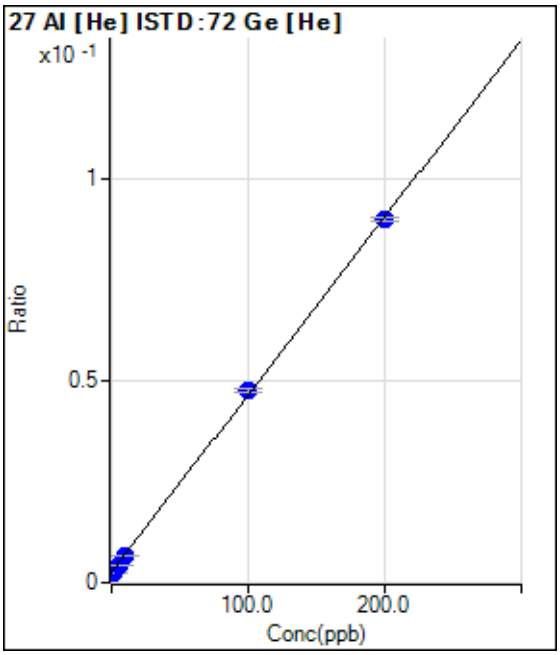



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57161.36 | 0.0340 | P | 1.3 |
| 2 | ☐ | 2.000 | -0.276 | 55488.26 | 0.0325 | P | 3.0 |
| 3 | ☐ | 5.000 | 3.270 | 89130.18 | 0.0526 | P | 4.1 |
| 4 | ☐ | 10.000 | 10.857 | 160870.45 | 0.0957 | P | 1.9 |
| 5 | ☐ | 100.000 | 99.507 | 993725.74 | 0.5994 | A | 2.1 |
| 6 | ☐ | 200.000 | 200.270 | 1897813.67 | 1.1719 | A | 4.5 |

y = 0.0057 * x + 0.0340
R = 0.9999
DL = 0.2381
BEC = 5.988

Weight: <None>
Min Conc: <None>

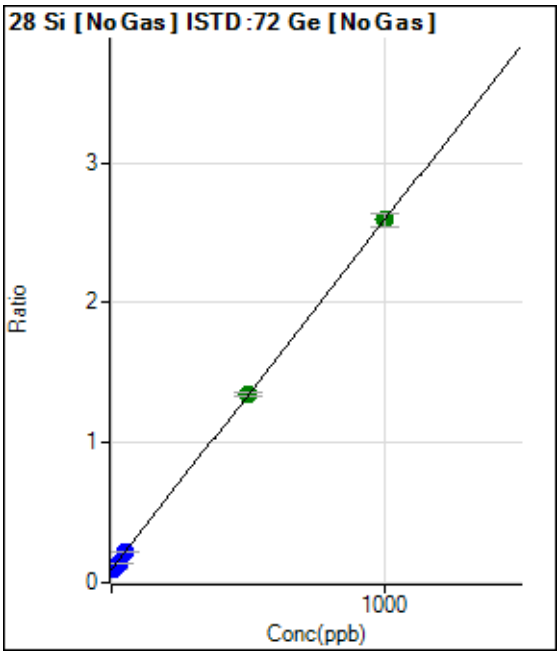
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1383.43 | 0.0026 | P | 9.3 |
| 2 | ☐ | 2.000 | -0.352 | 1296.75 | 0.0025 | P | 7.1 |
| 3 | ☐ | 5.000 | 3.651 | 2220.22 | 0.0042 | P | 3.5 |
| 4 | ☐ | 10.000 | 9.468 | 3517.17 | 0.0068 | P | 3.0 |
| 5 | ☐ | 100.000 | 102.950 | 24375.03 | 0.0477 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.609 | 44933.15 | 0.0897 | P | 1.2 |

y = 4.3835E-004 * x + 0.0026
R = 0.9998
DL = 1.661
BEC = 5.948

Weight: <None>
Min Conc: <None>

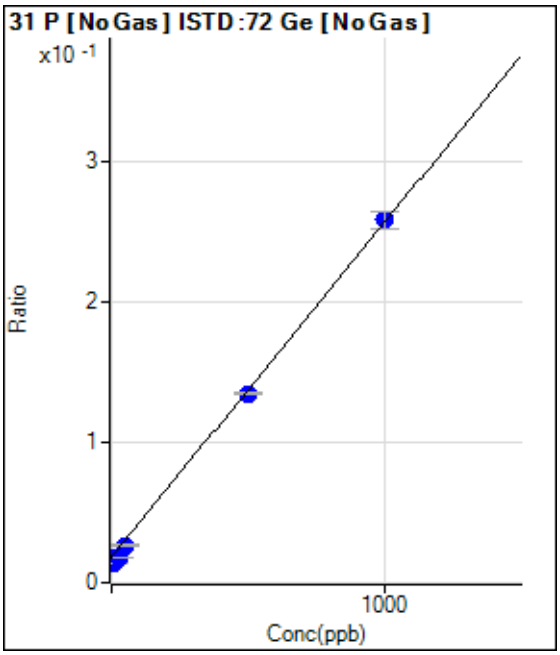



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 159662.85 | 0.0951 | P | 3.0 |
| 2 | ☐ | 10.000 | 2.651 | 173885.87 | 0.1017 | P | 2.1 |
| 3 | ☐ | 25.000 | 17.592 | 235486.14 | 0.1390 | P | 2.2 |
| 4 | ☐ | 50.000 | 50.689 | 372405.00 | 0.2216 | P | 3.3 |
| 5 | ☐ | 500.000 | 499.050 | 2222547.88 | 1.3406 | A | 2.1 |
| 6 | ☐ | 1000.000 | 1000.699 | 4198607.86 | 2.5926 | A | 4.0 |

y = 0.0025 * x + 0.0951
R = 1.0000
DL = 3.408
BEC = 38.09

Weight: <None>
Min Conc: <None>

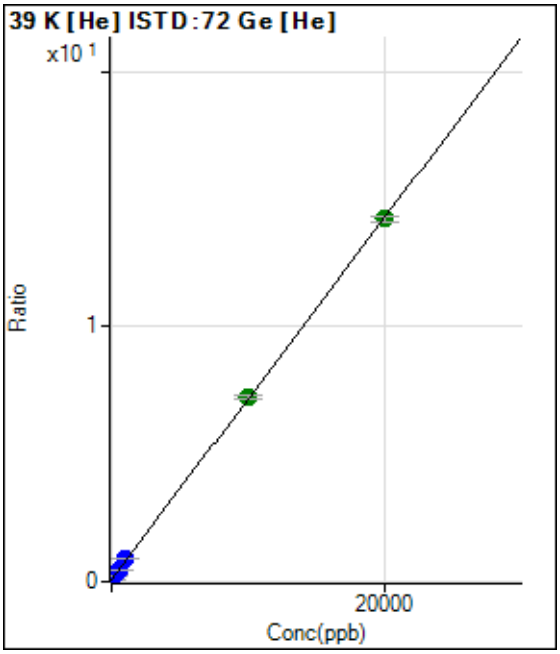
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 30734.42 | 0.0183 | P | 1.7 |
| 2 | ☐ | 10.000 | -20.428 | 22965.93 | 0.0134 | P | 3.0 |
| 3 | ☐ | 25.000 | -1.552 | 30383.69 | 0.0179 | P | 1.4 |
| 4 | ☐ | 50.000 | 34.740 | 44645.69 | 0.0266 | P | 3.7 |
| 5 | ☐ | 500.000 | 488.484 | 223203.23 | 0.1346 | P | 0.5 |
| 6 | ☐ | 1000.000 | 1007.489 | 418114.59 | 0.2582 | P | 4.5 |

y = 2.3812E-004 * x + 0.0183
R = 0.9997
DL = 3.849
BEC = 76.83

Weight: <None>
Min Conc: <None>

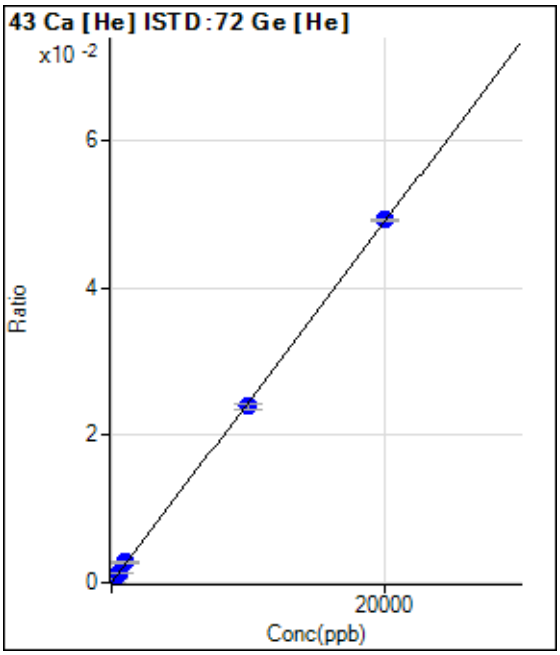



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43562.27 | 0.0821 | P | 1.1 |
| 2 | ☐ | 200.000 | 220.650 | 126145.84 | 0.2386 | P | 1.2 |
| 3 | ☐ | 500.000 | 540.978 | 245789.48 | 0.4657 | P | 1.1 |
| 4 | ☐ | 1000.000 | 1172.611 | 475484.84 | 0.9137 | P | 1.5 |
| 5 | ☐ | 10000.00 | 10080.21 | 3692880.05 | 7.2307 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19950.03 | 7130939.06 | 14.2301 | A | 1.4 |

y = 7.0917E-004 * x + 0.0821
R = 1.0000
DL = 3.714
BEC = 115.7

Weight: <None>
Min Conc: <None>

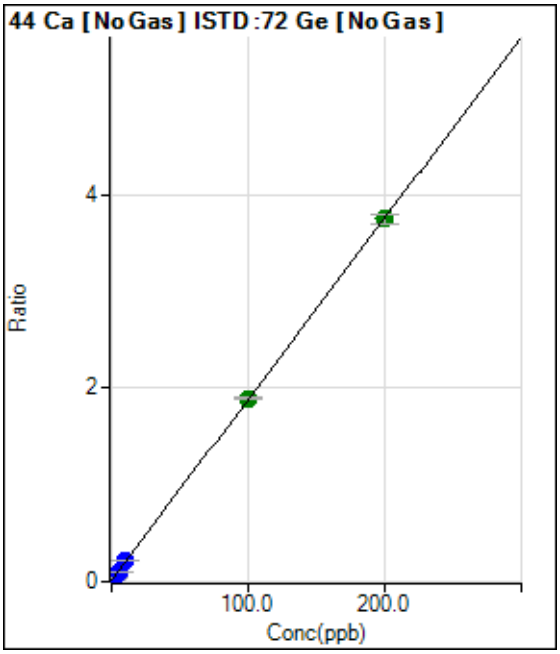
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16.67 | 0.0000 | P | 91.5 |
| 2 | ☐ | 200.000 | 211.308 | 290.01 | 0.0005 | P | 19.0 |
| 3 | ☐ | 500.000 | 531.481 | 703.36 | 0.0013 | P | 6.6 |
| 4 | ☐ | 1000.000 | 1124.964 | 1450.11 | 0.0028 | P | 8.1 |
| 5 | ☐ | 10000.00 | 9762.480 | 12232.32 | 0.0239 | P | 3.2 |
| 6 | ☐ | 20000.00 | 20111.61 | 24705.94 | 0.0493 | P | 0.4 |

y = 2.4499E-006 * x + 3.1186E-005
R = 0.9999
DL = 34.96
BEC = 12.73

Weight: <None>
Min Conc: <None>

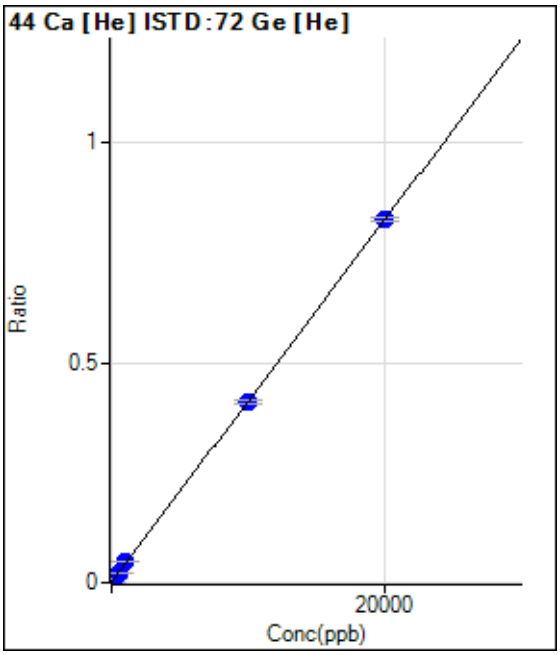



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23617.25 | 0.0141 | P | 2.5 |
| 2 | ☐ | 2.000 | 1.889 | 84512.71 | 0.0494 | P | 2.3 |
| 3 | ☐ | 5.000 | 5.036 | 183637.38 | 0.1084 | P | 0.9 |
| 4 | ☐ | 10.000 | 11.184 | 375528.85 | 0.2235 | P | 3.4 |
| 5 | ☐ | 100.000 | 100.461 | 3142422.87 | 1.8951 | A | 1.1 |
| 6 | ☐ | 200.000 | 199.711 | 6079906.99 | 3.7535 | A | 2.6 |

y = 0.0187 * x + 0.0141
R = 1.0000
DL = 0.05687
BEC = 0.7506

Weight: <None>
Min Conc: <None>

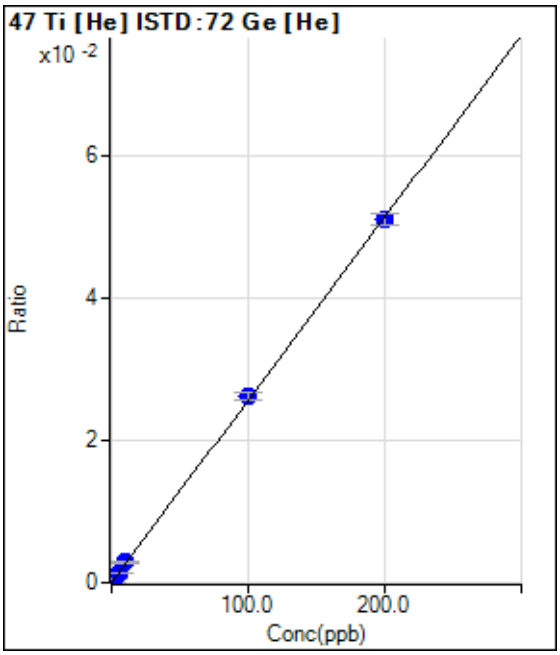
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 593.36 | 0.0011 | P | 6.9 |
| 2 | ☐ | 200.000 | 183.786 | 4590.88 | 0.0087 | P | 5.9 |
| 3 | ☐ | 500.000 | 507.334 | 11611.82 | 0.0220 | P | 2.4 |
| 4 | ☐ | 1000.000 | 1130.330 | 24802.77 | 0.0477 | P | 1.1 |
| 5 | ☐ | 10000.00 | 9960.922 | 210046.45 | 0.4113 | P | 1.7 |
| 6 | ☐ | 20000.00 | 20013.00 | 413499.04 | 0.8252 | P | 1.2 |

y = 4.1175E-005 * x + 0.0011
R = 1.0000
DL = 5.615
BEC = 27.16

Weight: <None>
Min Conc: <None>

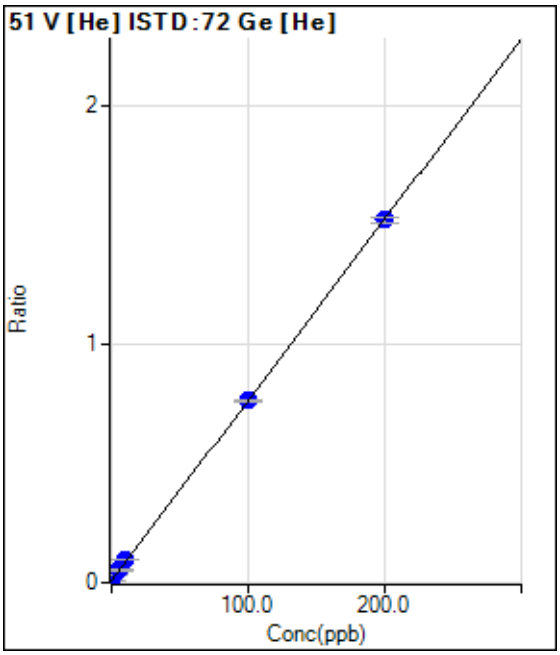



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 1.920 | 263.34 | 0.0005 | P | 10.0 |
| 3 | ☐ | 5.000 | 5.306 | 720.04 | 0.0014 | P | 10.4 |
| 4 | ☐ | 10.000 | 11.448 | 1530.12 | 0.0029 | P | 7.3 |
| 5 | ☐ | 100.000 | 102.271 | 13380.11 | 0.0262 | P | 3.9 |
| 6 | ☐ | 200.000 | 198.785 | 25524.15 | 0.0509 | P | 3.0 |

y = 2.5620E-004 * x + 6.2258E-006
R = 0.9999
DL = 0.1263
BEC = 0.0243

Weight: <None>
Min Conc: <None>

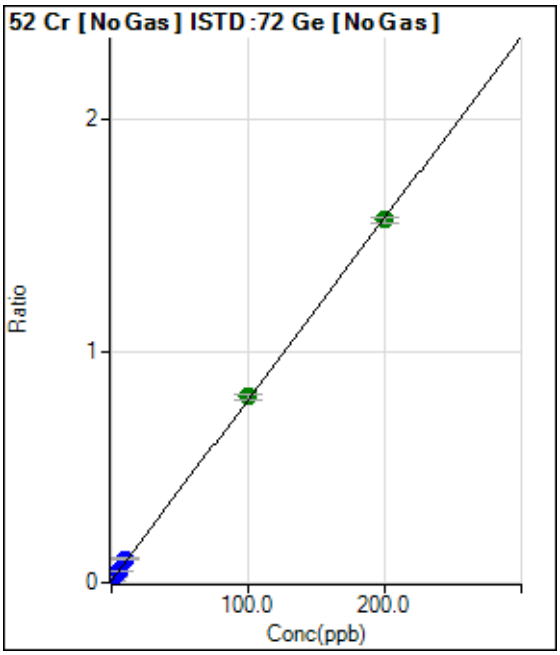
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 4168.44 | 0.0079 | P | 2.1 |
| 2 | ☐ | 2.000 | 2.755 | 15200.69 | 0.0287 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.931 | 27878.34 | 0.0528 | P | 1.4 |
| 4 | ☐ | 10.000 | 12.216 | 52301.63 | 0.1005 | P | 0.5 |
| 5 | ☐ | 100.000 | 99.962 | 391110.69 | 0.7659 | P | 1.4 |
| 6 | ☐ | 200.000 | 199.877 | 763522.64 | 1.5237 | P | 1.8 |

y = 0.0076 * x + 0.0079
R = 1.0000
DL = 0.06477
BEC = 1.036

Weight: <None>
Min Conc: <None>

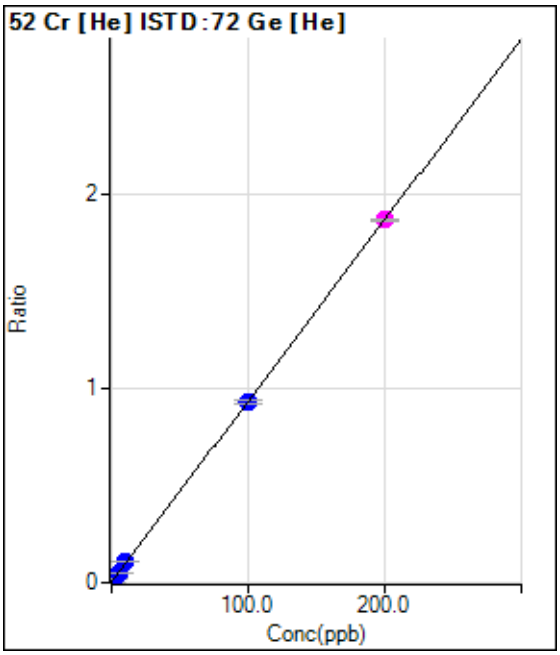



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13490.19 | 0.0080 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.666 | 49402.71 | 0.0289 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.797 | 90502.34 | 0.0534 | P | 1.7 |
| 4 | ☐ | 10.000 | 12.204 | 174069.94 | 0.1035 | P | 2.5 |
| 5 | ☐ | 100.000 | 101.630 | 1332066.31 | 0.8035 | A | 2.9 |
| 6 | ☐ | 200.000 | 199.048 | 2536885.69 | 1.5659 | A | 1.4 |

y = 0.0078 * x + 0.0080
R = 0.9999
DL = 0.08659
BEC = 1.026

Weight: <None>
Min Conc: <None>

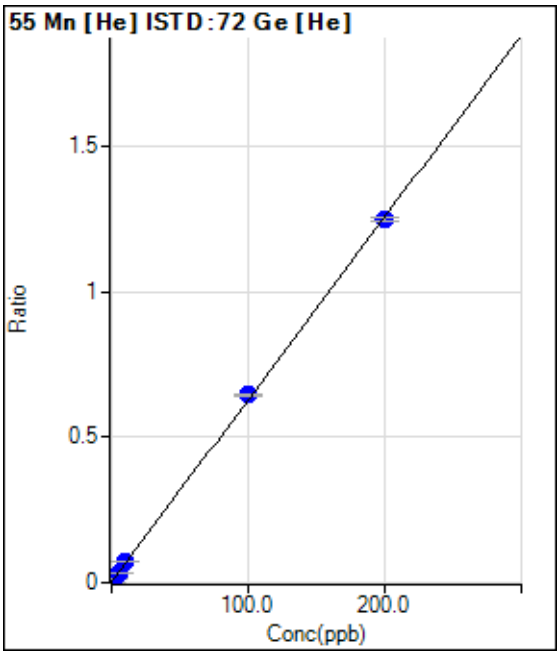
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1306.76 | 0.0025 | P | 8.3 |
| 2 | ☐ | 2.000 | 1.970 | 11031.32 | 0.0209 | P | 1.6 |
| 3 | ☐ | 5.000 | 5.162 | 26739.79 | 0.0507 | P | 3.5 |
| 4 | ☐ | 10.000 | 11.303 | 56233.15 | 0.1081 | P | 2.8 |
| 5 | ☐ | 100.000 | 99.578 | 476314.49 | 0.9328 | P | 1.4 |
| 6 | ☐ | 200.000 | 200.142 | 938225.48 | 1.8723 | M | 0.8 |

y = 0.0093 * x + 0.0025
R = 1.0000
DL = 0.06577
BEC = 0.2636

Weight: <None>
Min Conc: <None>

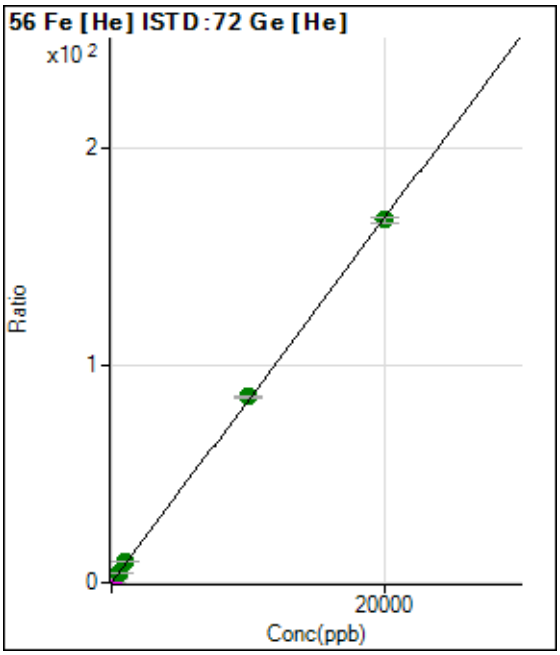



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1180.07 | 0.0022 | P | 10.6 |
| 2 | ☐ | 2.000 | 2.008 | 7832.39 | 0.0148 | P | 4.7 |
| 3 | ☐ | 5.000 | 5.009 | 17741.81 | 0.0336 | P | 3.7 |
| 4 | ☐ | 10.000 | 11.429 | 38451.51 | 0.0739 | P | 1.5 |
| 5 | ☐ | 100.000 | 102.597 | 329643.51 | 0.6455 | P | 0.3 |
| 6 | ☐ | 200.000 | 198.630 | 625203.90 | 1.2477 | P | 1.2 |

y = 0.0063 * x + 0.0022
R = 0.9999
DL = 0.1132
BEC = 0.3545

Weight: <None>
Min Conc: <None>

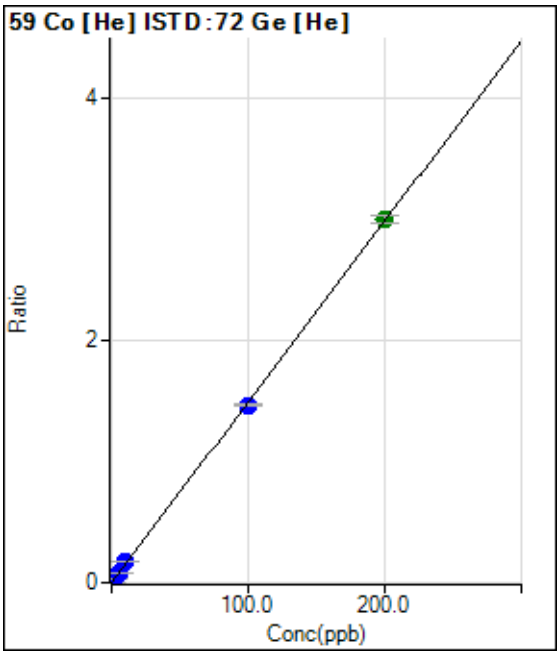
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 5481.18 | 0.0103 | P | 2.8 |
| 2 | ☐ | 200.000 | 209.851 | 935949.51 | 1.7700 | M | 1.4 |
| 3 | ☐ | 500.000 | 533.215 | 2364601.68 | 4.4815 | A | 1.7 |
| 4 | ☐ | 1000.000 | 1155.871 | 5049631.49 | 9.7026 | A | 1.1 |
| 5 | ☐ | 10000.00 | 10183.07 | 43606426.01 | 85.3982 | A | 1.4 |
| 6 | ☐ | 20000.00 | 19899.74 | 83620213.75 | 166.875 | A | 1.6 |

y = 0.0084 * x + 0.0103
R = 0.9999
DL = 0.1027
BEC = 1.231

Weight: <None>
Min Conc: <None>

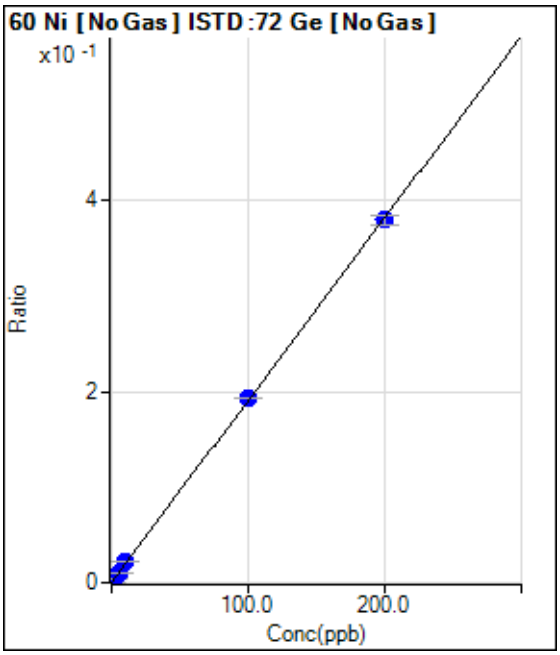



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 256.67 | 0.0005 | P | 19.0 |
| 2 | ☐ | 2.000 | 2.032 | 16249.96 | 0.0307 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.071 | 40089.48 | 0.0760 | P | 2.3 |
| 4 | ☐ | 10.000 | 11.260 | 87472.08 | 0.1681 | P | 0.8 |
| 5 | ☐ | 100.000 | 98.225 | 746821.66 | 1.4625 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.822 | 1498047.32 | 2.9896 | A | 2.1 |

y = 0.0149 * x + 4.8288E-004
R = 0.9999
DL = 0.01848
BEC = 0.03244

Weight: <None>
Min Conc: <None>

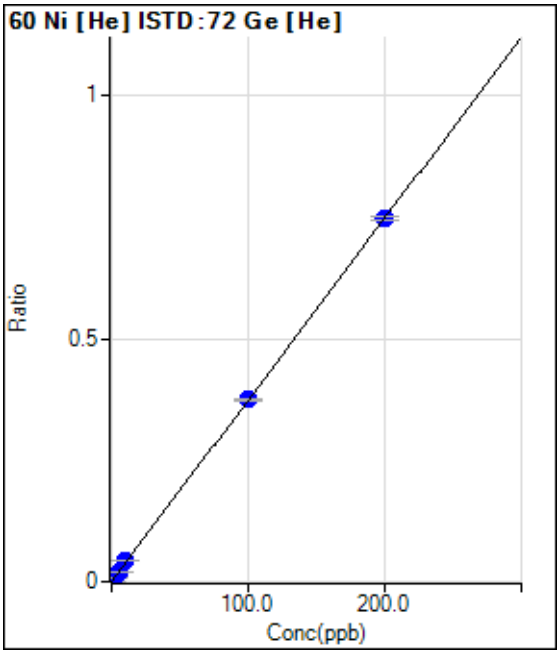
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 313.34 | 0.0002 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.123 | 7242.07 | 0.0042 | P | 2.0 |
| 3 | ☐ | 5.000 | 5.298 | 17431.53 | 0.0103 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.780 | 38063.69 | 0.0226 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.634 | 321595.35 | 0.1939 | P | 0.2 |
| 6 | ☐ | 200.000 | 199.085 | 615081.67 | 0.3797 | P | 2.4 |

y = 0.0019 * x + 1.8664E-004
R = 0.9999
DL = 0.01708
BEC = 0.0979

Weight: <None>
Min Conc: <None>

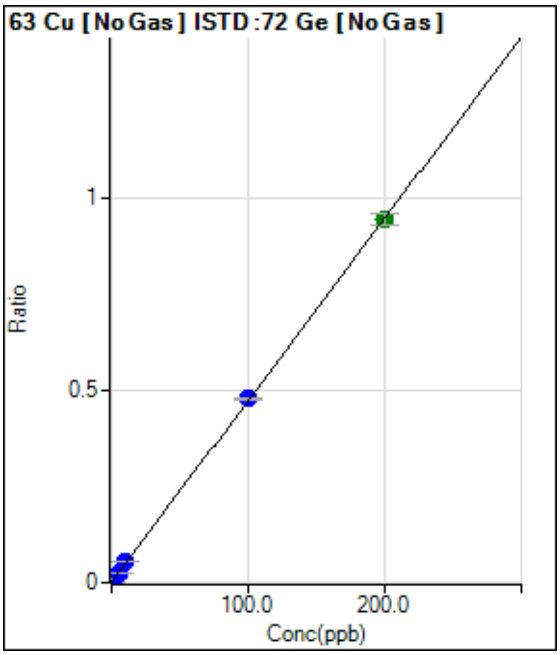



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 150.00 | 0.0003 | P | 34.4 |
| 2 | ☐ | 2.000 | 2.032 | 4160.72 | 0.0079 | P | 9.7 |
| 3 | ☐ | 5.000 | 5.282 | 10557.62 | 0.0200 | P | 2.7 |
| 4 | ☐ | 10.000 | 11.857 | 23186.73 | 0.0446 | P | 2.8 |
| 5 | ☐ | 100.000 | 100.077 | 190956.21 | 0.3740 | P | 1.6 |
| 6 | ☐ | 200.000 | 199.861 | 374109.62 | 0.7466 | P | 1.0 |

y = 0.0037 * x + 2.8187E-004
R = 1.0000
DL = 0.07796
BEC = 0.07548

Weight: <None>
Min Conc: <None>

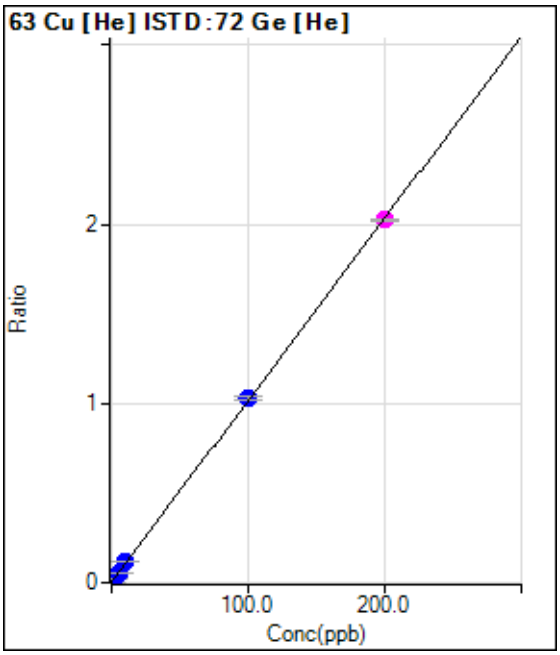
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1650.13 | 0.0010 | P | 10.5 |
| 2 | ☐ | 2.000 | 2.110 | 18706.55 | 0.0109 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.254 | 43671.07 | 0.0258 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.722 | 94639.95 | 0.0563 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.024 | 792086.66 | 0.4777 | P | 0.5 |
| 6 | ☐ | 200.000 | 199.394 | 1525520.13 | 0.9418 | A | 3.0 |

y = 0.0047 * x + 9.8236E-004
R = 1.0000
DL = 0.06549
BEC = 0.2082

Weight: <None>
Min Conc: <None>

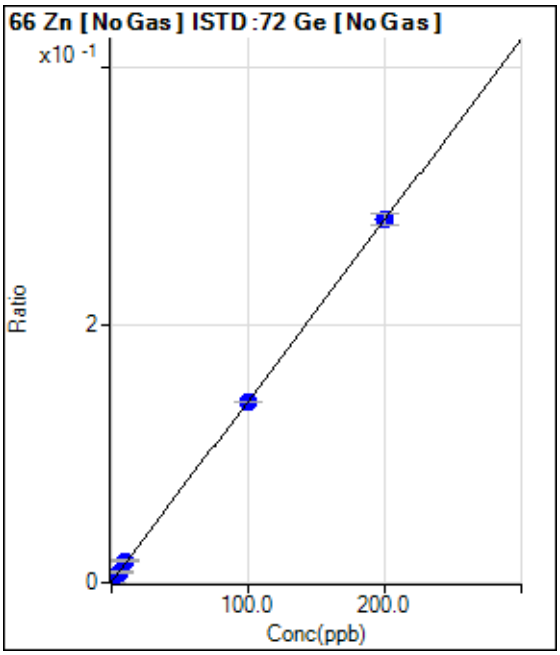



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1030.05 | 0.0019 | P | 1.3 |
| 2 | ☐ | 2.000 | 2.052 | 12035.53 | 0.0228 | P | 3.9 |
| 3 | ☐ | 5.000 | 5.210 | 28924.86 | 0.0548 | P | 2.4 |
| 4 | ☐ | 10.000 | 11.638 | 62490.70 | 0.1201 | P | 0.6 |
| 5 | ☐ | 100.000 | 101.276 | 525850.11 | 1.0299 | P | 2.4 |
| 6 | ☐ | 200.000 | 199.274 | 1014546.60 | 2.0246 | M | 0.8 |

y = 0.0102 * x + 0.0019
R = 0.9999
DL = 0.007658
BEC = 0.1912

Weight: <None>
Min Conc: <None>

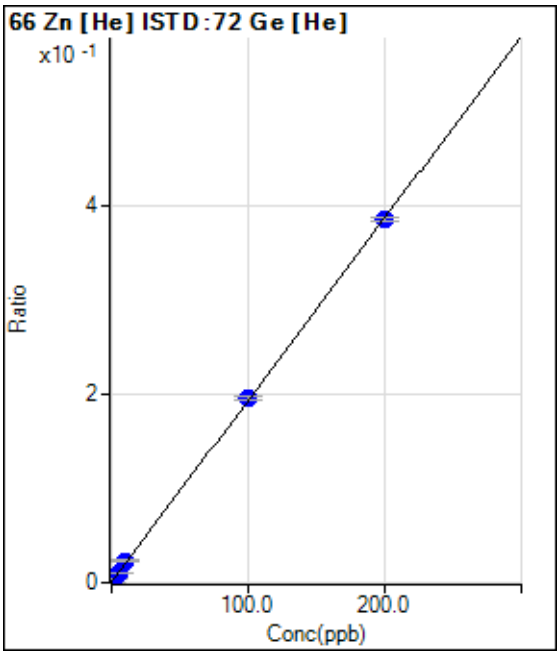
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 933.39 | 0.0006 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.320 | 6525.03 | 0.0038 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.335 | 13647.18 | 0.0081 | P | 6.6 |
| 4 | ☐ | 10.000 | 11.816 | 28837.85 | 0.0172 | P | 0.7 |
| 5 | ☐ | 100.000 | 99.616 | 232968.88 | 0.1405 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.090 | 456141.96 | 0.2816 | P | 3.1 |

y = 0.0014 * x + 5.5656E-004
R = 1.0000
DL = 0.1962
BEC = 0.3962

Weight: <None>
Min Conc: <None>

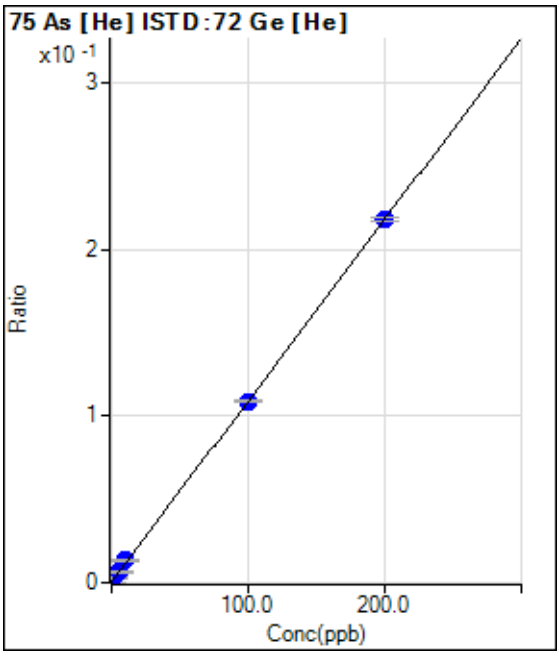



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 296.68 | 0.0006 | P | 23.8 |
| 2 | ☐ | 2.000 | 2.221 | 2556.94 | 0.0048 | P | 16.5 |
| 3 | ☐ | 5.000 | 5.124 | 5504.54 | 0.0104 | P | 5.7 |
| 4 | ☐ | 10.000 | 11.674 | 12002.16 | 0.0231 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.500 | 100181.30 | 0.1962 | P | 1.7 |
| 6 | ☐ | 200.000 | 199.161 | 192641.95 | 0.3844 | P | 1.0 |

y = 0.0019 * x + 5.5894E-004
R = 0.9999
DL = 0.2068
BEC = 0.29

Weight: <None>
Min Conc: <None>

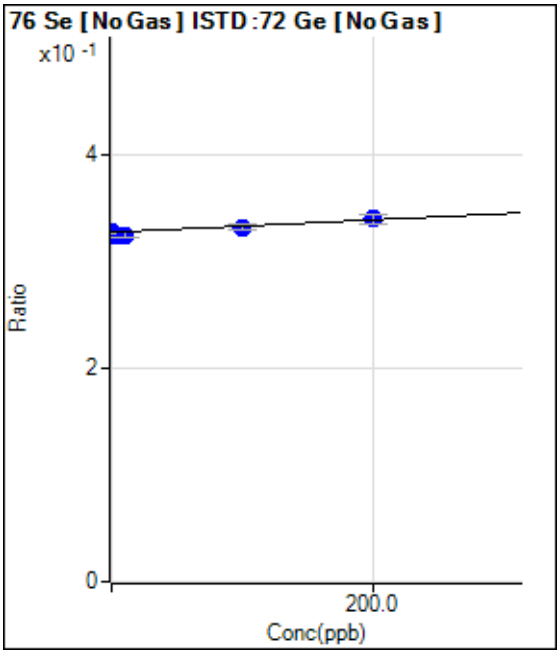
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 203.34 | 0.0004 | P | 22.8 |
| 2 | ☐ | 2.000 | 2.312 | 1532.32 | 0.0029 | P | 4.0 |
| 3 | ☐ | 5.000 | 5.499 | 3358.22 | 0.0064 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.989 | 6985.18 | 0.0134 | P | 2.3 |
| 5 | ☐ | 100.000 | 99.905 | 55675.38 | 0.1090 | P | 0.4 |
| 6 | ☐ | 200.000 | 199.932 | 109139.12 | 0.2178 | P | 1.1 |

y = 0.0011 * x + 3.8370E-004
R = 1.0000
DL = 0.2418
BEC = 0.3528

Weight: <None>
Min Conc: <None>

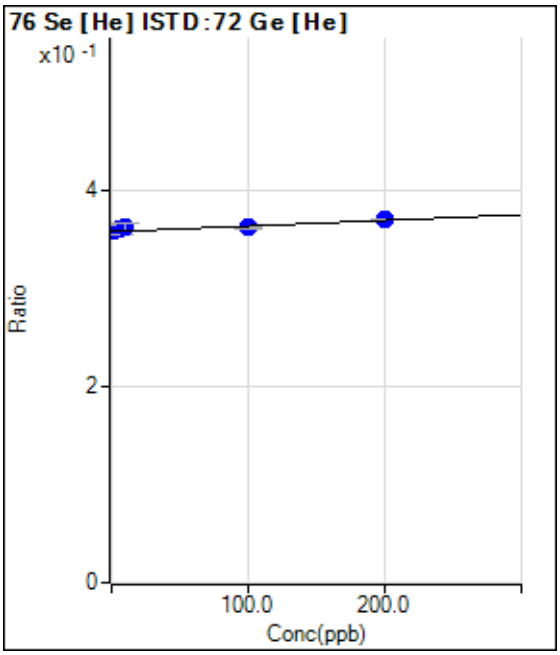



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 549267.10 | 0.3269 | P | 0.2 |
| 2 | ☐ | 2.000 | -63.603 | 552711.98 | 0.3232 | P | 2.0 |
| 3 | ☐ | 5.000 | -58.602 | 548166.28 | 0.3235 | P | 1.2 |
| 4 | ☐ | 10.000 | -38.740 | 545634.03 | 0.3246 | P | 2.1 |
| 5 | ☐ | 100.000 | 80.188 | 549682.96 | 0.3315 | P | 1.6 |
| 6 | ☐ | 200.000 | 214.589 | 549654.39 | 0.3393 | P | 2.7 |

y = 5.8100E-005 * x + 0.3269
R = 0.9746
DL = 28.38
BEC = 5626

Weight: <None>
Min Conc: <None>

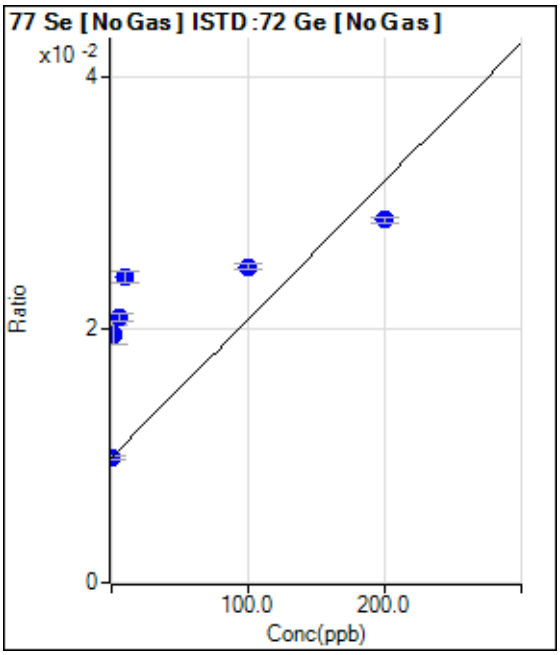
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 189505.80 | 0.3570 | P | 0.6 |
| 2 | ☐ | 2.000 | 30.900 | 189726.88 | 0.3588 | P | 1.5 |
| 3 | ☐ | 5.000 | 36.376 | 189489.47 | 0.3591 | P | 2.5 |
| 4 | ☐ | 10.000 | 81.114 | 188254.13 | 0.3617 | P | 1.8 |
| 5 | ☐ | 100.000 | 77.348 | 184631.09 | 0.3615 | P | 0.6 |
| 6 | ☐ | 200.000 | 206.697 | 184933.13 | 0.3691 | P | 0.2 |

y = 5.8148E-005 * x + 0.3570
R = 0.9191
DL = 112.5
BEC = 6140

Weight: <None>
Min Conc: <None>

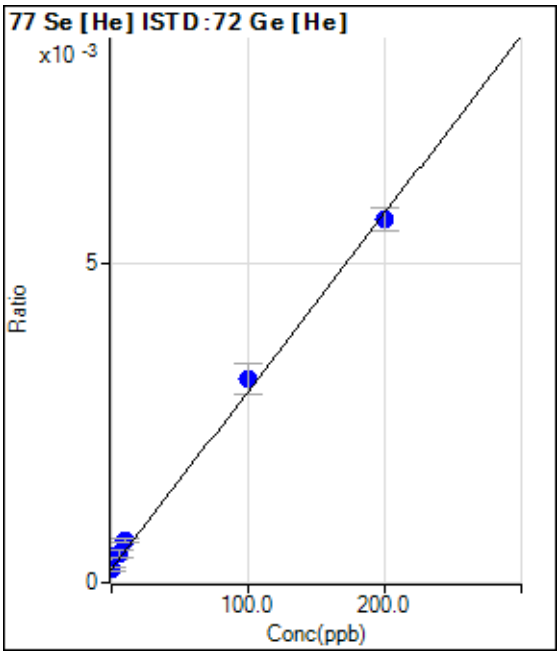



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16660.60 | 0.0099 | P | 3.2 |
| 2 | ☐ | 2.000 | 88.567 | 33468.87 | 0.0196 | P | 8.1 |
| 3 | ☐ | 5.000 | 101.550 | 35590.77 | 0.0210 | P | 2.6 |
| 4 | ☐ | 10.000 | 129.876 | 40504.82 | 0.0241 | P | 3.8 |
| 5 | ☐ | 100.000 | 137.963 | 41414.00 | 0.0250 | P | 2.0 |
| 6 | ☐ | 200.000 | 171.745 | 46446.90 | 0.0287 | P | 1.8 |

y = 1.0917E-004 * x + 0.0099
R = 0.6982
DL = 8.771
BEC = 90.85

Weight: <None>
Min Conc: <None>

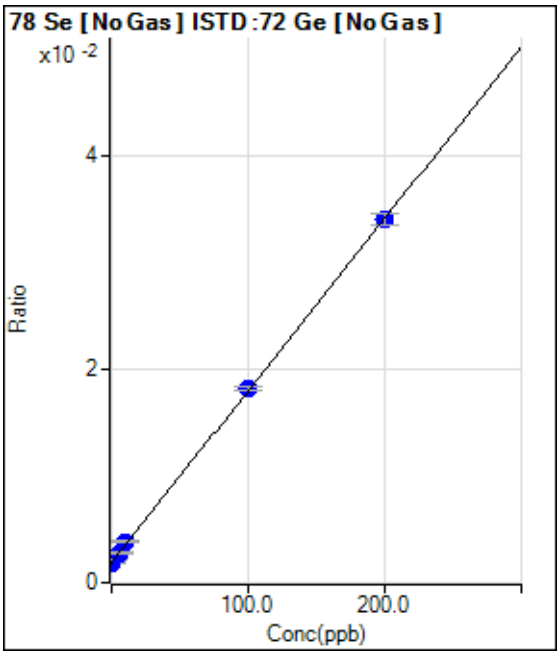
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 113.33 | 0.0002 | P | 23.4 |
| 2 | ☐ | 2.000 | 7.474 | 223.34 | 0.0004 | P | 24.7 |
| 3 | ☐ | 5.000 | 8.382 | 236.68 | 0.0004 | P | 22.6 |
| 4 | ☐ | 10.000 | 16.226 | 346.68 | 0.0007 | P | 7.9 |
| 5 | ☐ | 100.000 | 106.447 | 1626.79 | 0.0032 | P | 15.1 |
| 6 | ☐ | 200.000 | 196.326 | 2850.35 | 0.0057 | P | 6.2 |

y = 2.7886E-005 * x + 2.1389E-004
R = 0.9991
DL = 5.375
BEC = 7.67

Weight: <None>
Min Conc: <None>

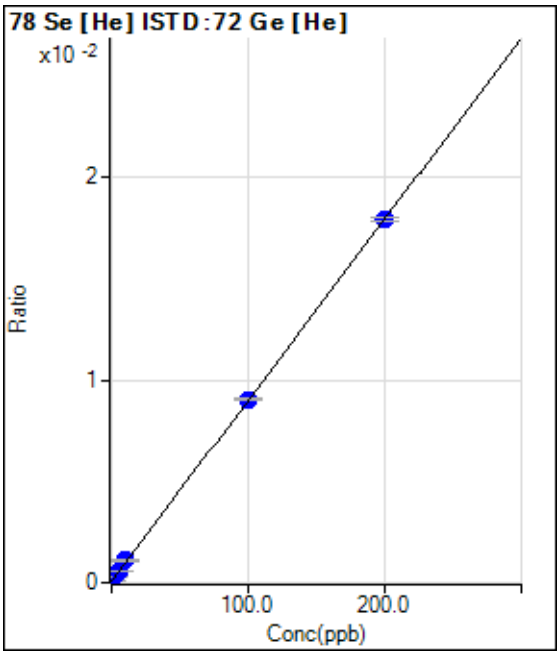



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3170.43 | 0.0019 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.381 | 3883.96 | 0.0023 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.341 | 4650.90 | 0.0027 | P | 8.6 |
| 4 | ☐ | 10.000 | 11.928 | 6398.29 | 0.0038 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.043 | 30090.66 | 0.0181 | P | 2.3 |
| 6 | ☐ | 200.000 | 199.370 | 55026.19 | 0.0340 | P | 3.2 |

y = 1.6094E-004 * x + 0.0019
R = 1.0000
DL = 2.035
BEC = 11.72

Weight: <None>
Min Conc: <None>

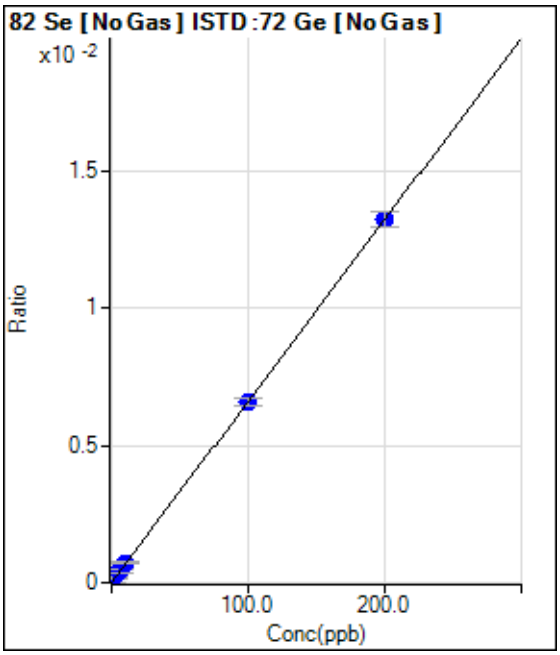
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 35.9 |
| 2 | ☐ | 2.000 | 2.164 | 135.33 | 0.0003 | P | 14.4 |
| 3 | ☐ | 5.000 | 5.844 | 308.67 | 0.0006 | P | 4.5 |
| 4 | ☐ | 10.000 | 11.645 | 574.01 | 0.0011 | P | 2.9 |
| 5 | ☐ | 100.000 | 100.391 | 4610.13 | 0.0090 | P | 1.1 |
| 6 | ☐ | 200.000 | 199.699 | 8967.68 | 0.0179 | P | 1.1 |

y = 8.9298E-005 * x + 6.2935E-005
R = 1.0000
DL = 0.759
BEC = 0.7048

Weight: <None>
Min Conc: <None>

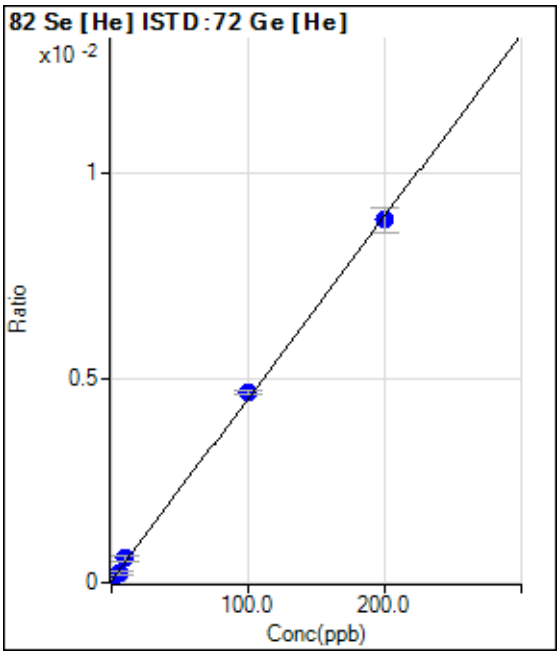



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | -41.47 | 0.0000 | P | -43.2 |
| 2 | ☐ | 2.000 | 2.784 | 272.15 | 0.0002 | P | 47.9 |
| 3 | ☐ | 5.000 | 6.017 | 632.14 | 0.0004 | P | 34.4 |
| 4 | ☐ | 10.000 | 11.069 | 1191.98 | 0.0007 | P | 8.5 |
| 5 | ☐ | 100.000 | 99.555 | 10899.93 | 0.0066 | P | 3.5 |
| 6 | ☐ | 200.000 | 200.136 | 21453.01 | 0.0132 | P | 4.3 |

y = 6.6296E-005 * x - 2.4782E-005
R = 1.0000
DL = 0.4848
BEC = -0.3738

Weight: <None>
Min Conc: <None>

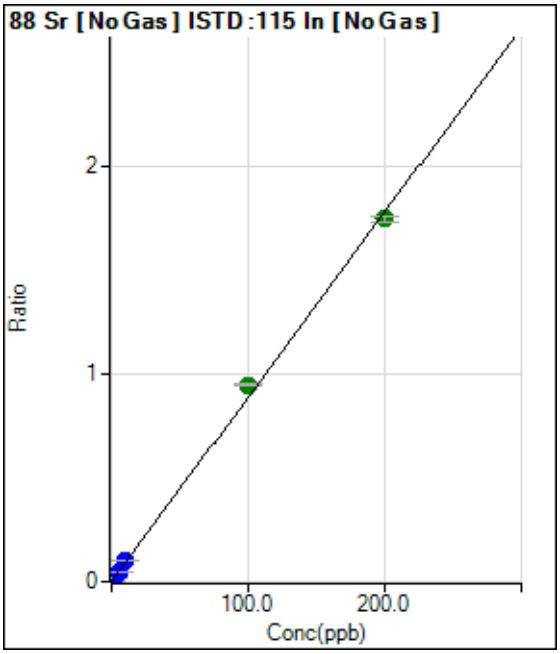
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0001 | P | 79.1 |
| 2 | ☐ | 2.000 | 1.838 | 70.00 | 0.0001 | P | 37.8 |
| 3 | ☐ | 5.000 | 3.961 | 120.00 | 0.0002 | P | 28.6 |
| 4 | ☐ | 10.000 | 12.398 | 313.34 | 0.0006 | P | 23.0 |
| 5 | ☐ | 100.000 | 103.581 | 2380.25 | 0.0047 | P | 1.6 |
| 6 | ☐ | 200.000 | 198.117 | 4444.14 | 0.0089 | P | 6.8 |

y = 4.4505E-005 * x + 5.0541E-005
R = 0.9997
DL = 2.696
BEC = 1.136

Weight: <None>
Min Conc: <None>

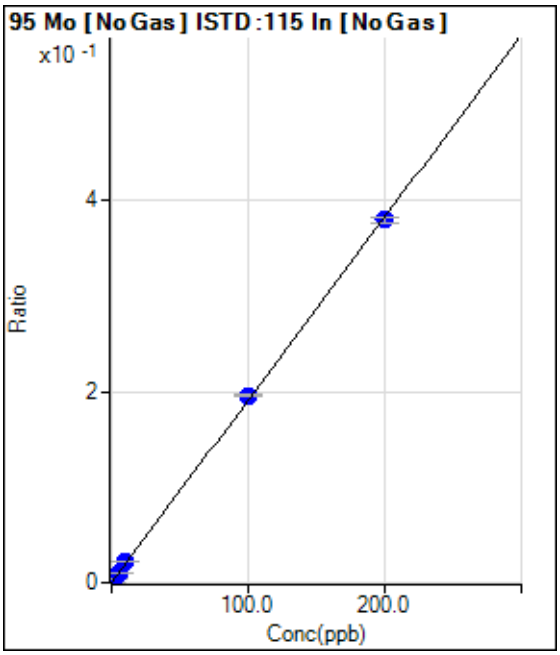



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2056.86 | 0.0010 | P | 6.6 |
| 2 | ☐ | 2.000 | 2.054 | 39057.46 | 0.0192 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.062 | 96243.50 | 0.0459 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.306 | 207012.44 | 0.1013 | P | 3.9 |
| 5 | ☐ | 100.000 | 106.724 | 1871818.67 | 0.9481 | A | 0.7 |
| 6 | ☐ | 200.000 | 196.570 | 3471502.45 | 1.7454 | A | 1.7 |

y = 0.0089 * x + 9.6840E-004
R = 0.9992
DL = 0.02163
BEC = 0.1091

Weight: <None>
Min Conc: <None>

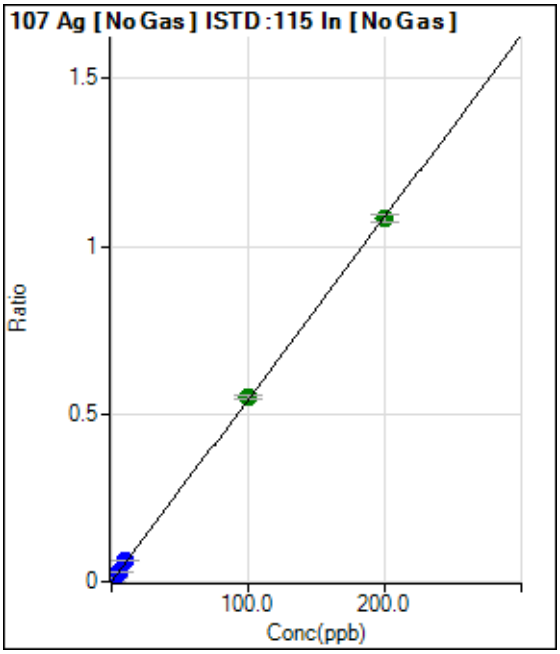
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 12.5 |
| 2 | ☐ | 2.000 | 2.088 | 8172.68 | 0.0040 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.919 | 19768.38 | 0.0094 | P | 2.2 |
| 4 | ☐ | 10.000 | 11.418 | 44641.96 | 0.0218 | P | 5.6 |
| 5 | ☐ | 100.000 | 102.518 | 386787.65 | 0.1959 | P | 0.9 |
| 6 | ☐ | 200.000 | 198.671 | 755022.25 | 0.3796 | P | 1.5 |

y = 0.0019 * x + 2.6703E-005
R = 0.9999
DL = 0.005236
BEC = 0.01397

Weight: <None>
Min Conc: <None>

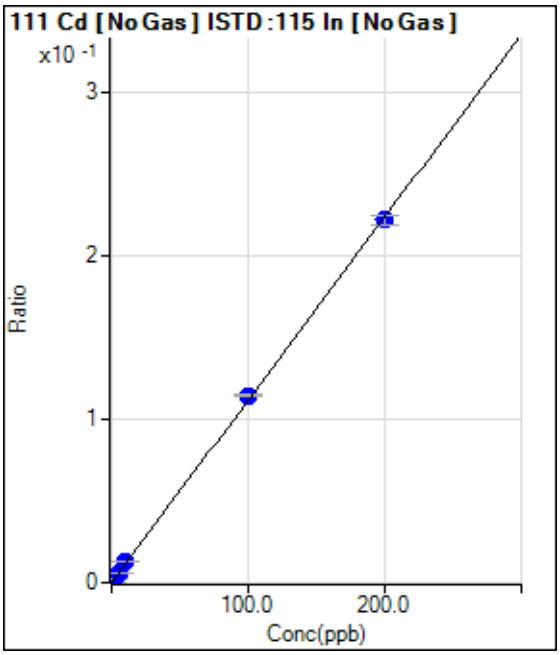



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 176.67 | 0.0001 | P | 15.9 |
| 2 | ☐ | 2.000 | 2.122 | 23621.58 | 0.0116 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.074 | 57980.93 | 0.0277 | P | 2.1 |
| 4 | ☐ | 10.000 | 11.449 | 127291.58 | 0.0623 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.586 | 1089834.10 | 0.5520 | A | 2.1 |
| 6 | ☐ | 200.000 | 199.132 | 2151939.40 | 1.0821 | A | 2.0 |

y = 0.0054 * x + 8.2957E-005
R = 0.9999
DL = 0.007271
BEC = 0.01527

Weight: <None>
Min Conc: <None>

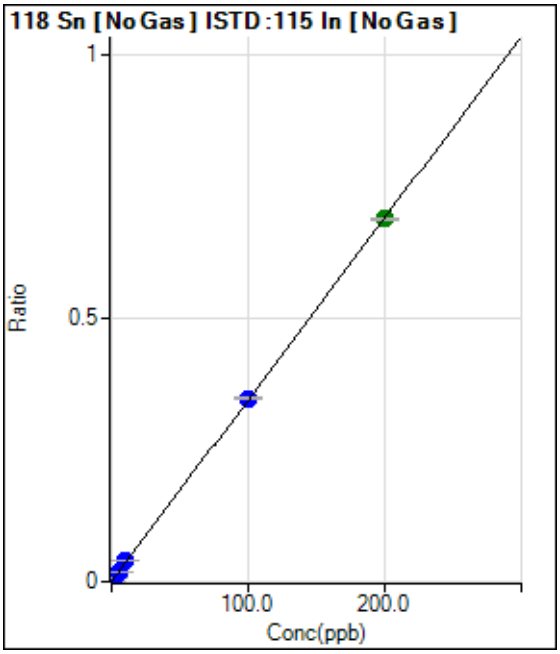
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.071 | 4717.61 | 0.0023 | P | 6.9 |
| 3 | ☐ | 5.000 | 5.012 | 11765.47 | 0.0056 | P | 4.3 |
| 4 | ☐ | 10.000 | 11.661 | 26660.71 | 0.0130 | P | 3.1 |
| 5 | ☐ | 100.000 | 102.583 | 226541.25 | 0.1147 | P | 0.8 |
| 6 | ☐ | 200.000 | 198.625 | 441773.33 | 0.2222 | P | 2.8 |

y = 0.0011 * x + 1.5280E-006
R = 0.9999
DL = 0.007098
BEC = 0.001366

Weight: <None>
Min Conc: <None>

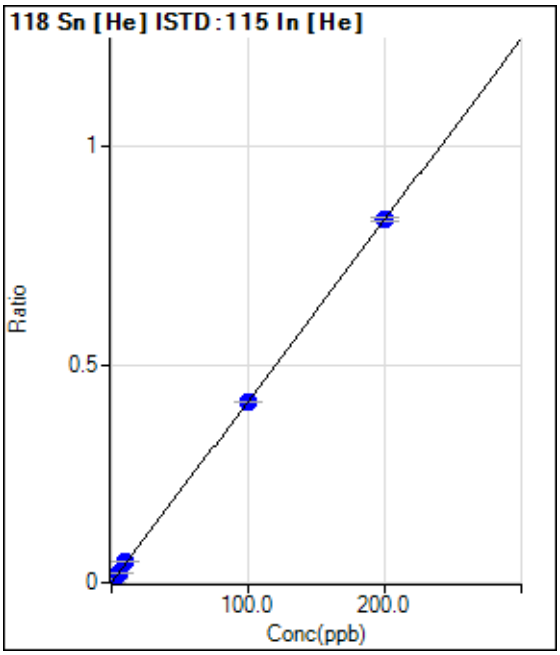



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 830.04 | 0.0004 | P | 12.2 |
| 2 | ☐ | 2.000 | 2.099 | 15512.81 | 0.0076 | P | 4.3 |
| 3 | ☐ | 5.000 | 4.845 | 35856.12 | 0.0171 | P | 1.1 |
| 4 | ☐ | 10.000 | 11.338 | 80742.12 | 0.0395 | P | 0.7 |
| 5 | ☐ | 100.000 | 100.607 | 685723.43 | 0.3473 | P | 1.0 |
| 6 | ☐ | 200.000 | 199.632 | 1370156.13 | 0.6888 | A | 0.6 |

y = 0.0034 * x + 3.8934E-004
R = 1.0000
DL = 0.0412
BEC = 0.1129

Weight: <None>
Min Conc: <None>

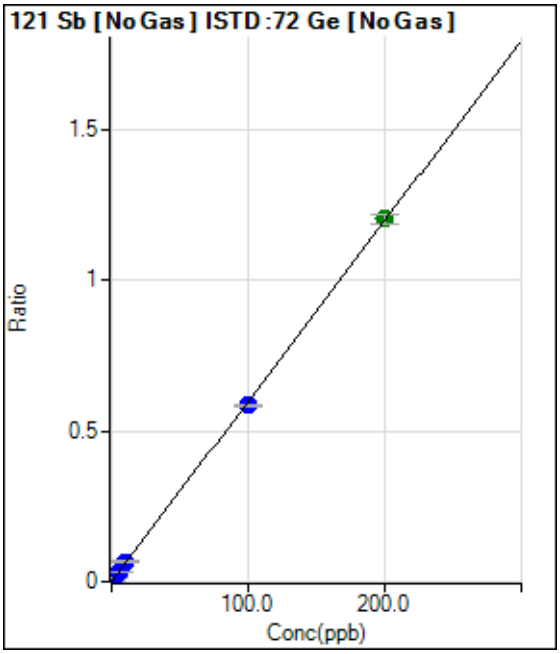
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 363.35 | 0.0004 | P | 21.6 |
| 2 | ☐ | 2.000 | 1.953 | 7835.82 | 0.0085 | P | 5.4 |
| 3 | ☐ | 5.000 | 5.021 | 18973.98 | 0.0213 | P | 4.2 |
| 4 | ☐ | 10.000 | 11.220 | 42302.17 | 0.0470 | P | 2.7 |
| 5 | ☐ | 100.000 | 99.804 | 365963.80 | 0.4151 | P | 0.6 |
| 6 | ☐ | 200.000 | 200.037 | 719082.64 | 0.8316 | P | 1.2 |

y = 0.0042 * x + 3.9301E-004
R = 1.0000
DL = 0.06136
BEC = 0.09458

Weight: <None>
Min Conc: <None>

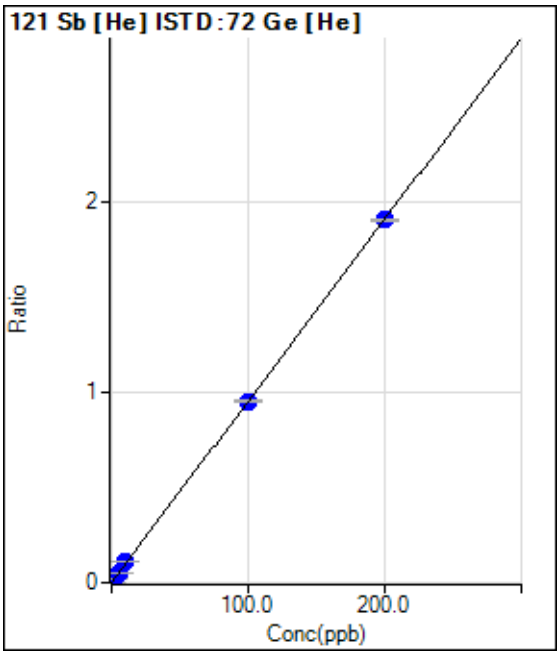



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 556.69 | 0.0003 | P | 9.0 |
| 2 | ☐ | 2.000 | 1.963 | 20619.90 | 0.0121 | P | 3.2 |
| 3 | ☐ | 5.000 | 4.946 | 50631.70 | 0.0299 | P | 1.4 |
| 4 | ☐ | 10.000 | 11.117 | 112185.01 | 0.0667 | P | 2.3 |
| 5 | ☐ | 100.000 | 97.614 | 967330.51 | 0.5834 | P | 1.5 |
| 6 | ☐ | 200.000 | 201.139 | 1946819.03 | 1.2019 | A | 2.8 |

y = 0.0060 * x + 3.3096E-004
R = 0.9999
DL = 0.01493
BEC = 0.0554

Weight: <None>
Min Conc: <None>

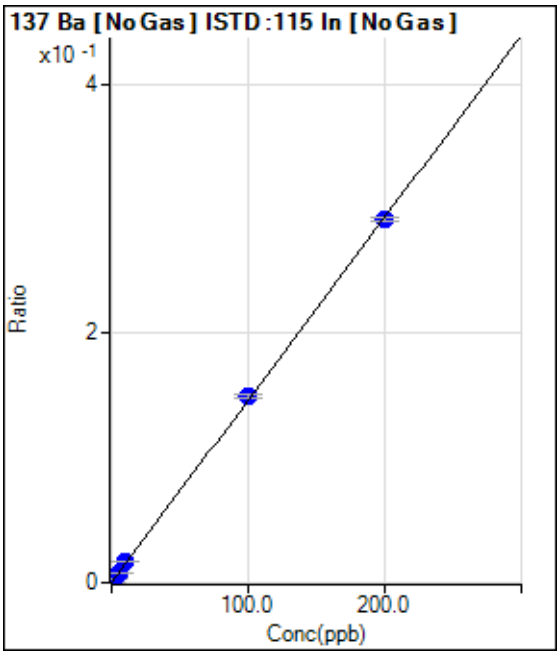
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 266.68 | 0.0005 | P | 6.9 |
| 2 | ☐ | 2.000 | 2.064 | 10661.29 | 0.0202 | P | 5.1 |
| 3 | ☐ | 5.000 | 4.972 | 25268.07 | 0.0479 | P | 4.4 |
| 4 | ☐ | 10.000 | 11.493 | 57255.13 | 0.1100 | P | 1.2 |
| 5 | ☐ | 100.000 | 100.063 | 487143.42 | 0.9540 | P | 1.3 |
| 6 | ☐ | 200.000 | 199.894 | 954754.31 | 1.9053 | P | 0.8 |

y = 0.0095 * x + 5.0221E-004
R = 1.0000
DL = 0.01089
BEC = 0.0527

Weight: <None>
Min Conc: <None>

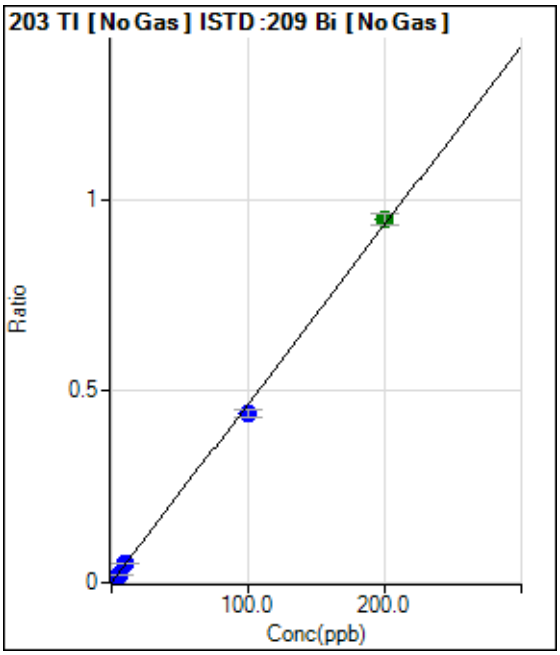



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 323.34 | 0.0002 | P | 10.3 |
| 2 | ☐ | 2.000 | 2.055 | 6425.05 | 0.0032 | P | 6.2 |
| 3 | ☐ | 5.000 | 4.881 | 15289.28 | 0.0073 | P | 0.8 |
| 4 | ☐ | 10.000 | 11.368 | 34302.37 | 0.0168 | P | 1.9 |
| 5 | ☐ | 100.000 | 102.271 | 295572.60 | 0.1497 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.798 | 578548.95 | 0.2909 | P | 1.0 |

y = 0.0015 * x + 1.5236E-004
R = 0.9999
DL = 0.03222
BEC = 0.1042

Weight: <None>
Min Conc: <None>

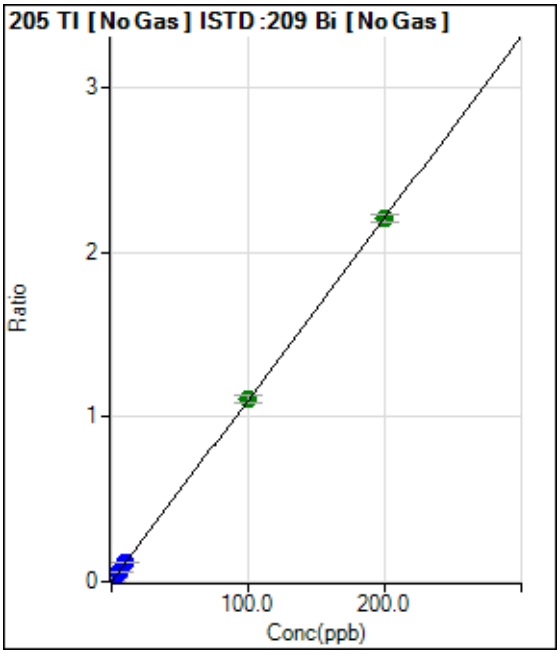
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 190.00 | 0.0001 | P | 24.3 |
| 2 | ☐ | 2.000 | 1.920 | 21138.33 | 0.0090 | P | 5.7 |
| 3 | ☐ | 5.000 | 4.729 | 52196.42 | 0.0222 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.676 | 115325.89 | 0.0499 | P | 0.6 |
| 5 | ☐ | 100.000 | 94.291 | 999080.37 | 0.4404 | P | 5.0 |
| 6 | ☐ | 200.000 | 202.828 | 2051287.26 | 0.9472 | A | 3.2 |

y = 0.0047 * x + 8.1210E-005
R = 0.9994
DL = 0.01269
BEC = 0.01739

Weight: <None>
Min Conc: <None>

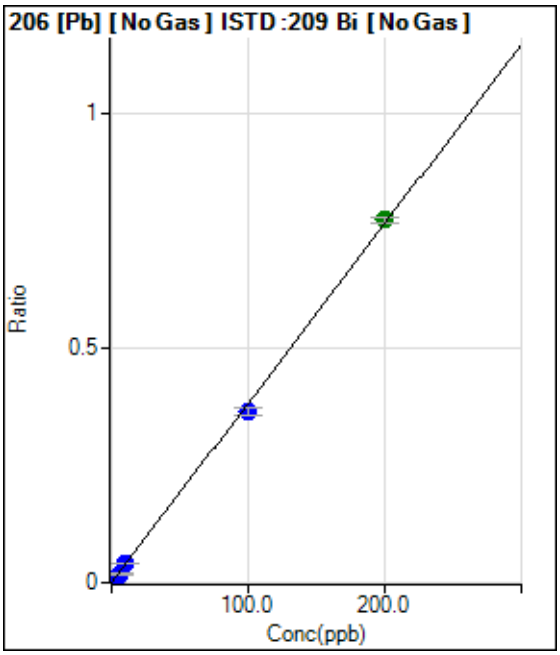



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 473.35 | 0.0002 | P | 26.4 |
| 2 | ☐ | 2.000 | 1.934 | 50315.23 | 0.0215 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.829 | 125870.69 | 0.0534 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.824 | 276099.75 | 0.1195 | P | 1.4 |
| 5 | ☐ | 100.000 | 100.698 | 2519794.34 | 1.1104 | A | 4.2 |
| 6 | ☐ | 200.000 | 199.614 | 4767765.24 | 2.2010 | A | 2.2 |

y = 0.0110 * x + 2.0240E-004
R = 1.0000
DL = 0.01456
BEC = 0.01836

Weight: <None>
Min Conc: <None>

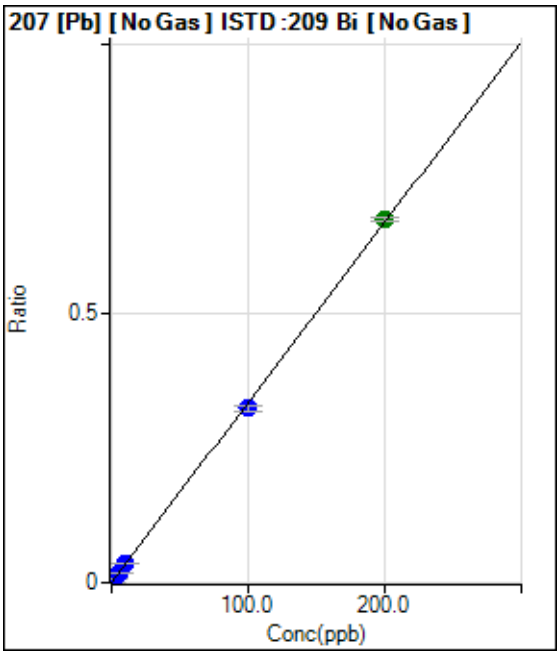
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 463.35 | 0.0002 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.938 | 17799.73 | 0.0076 | P | 2.8 |
| 3 | ☐ | 5.000 | 4.718 | 42961.64 | 0.0183 | P | 6.8 |
| 4 | ☐ | 10.000 | 10.846 | 96326.80 | 0.0417 | P | 2.3 |
| 5 | ☐ | 100.000 | 95.382 | 828989.70 | 0.3653 | P | 3.5 |
| 6 | ☐ | 200.000 | 202.274 | 1677531.70 | 0.7744 | A | 1.7 |

y = 0.0038 * x + 1.9804E-004
R = 0.9996
DL = 0.01092
BEC = 0.05174

Weight: <None>
Min Conc: <None>

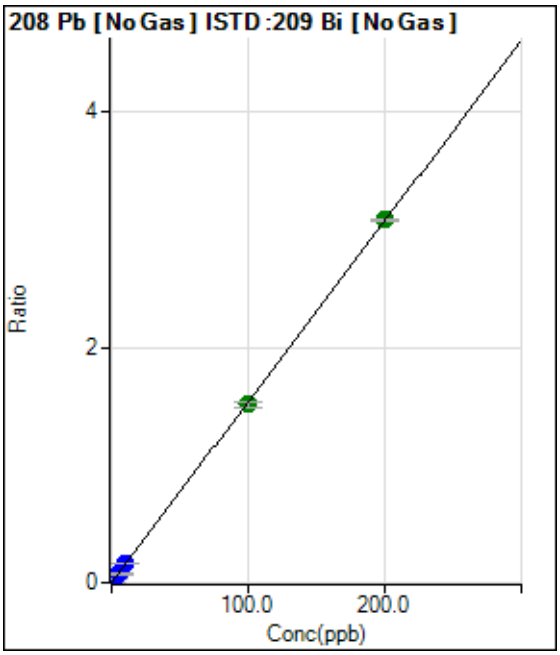



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 450.02 | 0.0002 | P | 23.6 |
| 2 | ☐ | 2.000 | 1.983 | 15930.45 | 0.0068 | P | 1.9 |
| 3 | ☐ | 5.000 | 4.912 | 39085.38 | 0.0166 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.779 | 83600.87 | 0.0362 | P | 1.0 |
| 5 | ☐ | 100.000 | 97.025 | 735987.96 | 0.3243 | P | 3.3 |
| 6 | ☐ | 200.000 | 201.451 | 1457882.37 | 0.6731 | A | 1.0 |

y = 0.0033 * x + 1.9233E-004
R = 0.9998
DL = 0.0407
BEC = 0.05758

Weight: <None>
Min Conc: <None>

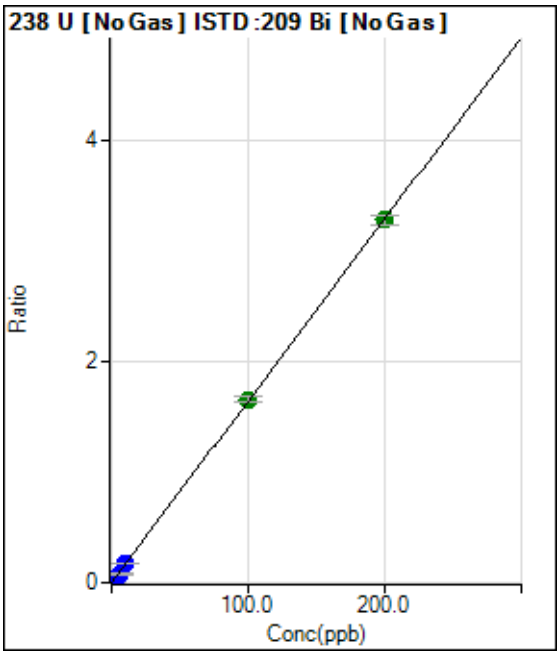
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1826.75 | 0.0008 | P | 8.7 |
| 2 | ☐ | 2.000 | 1.960 | 72113.33 | 0.0308 | P | 1.3 |
| 3 | ☐ | 5.000 | 4.825 | 176126.12 | 0.0748 | P | 3.6 |
| 4 | ☐ | 10.000 | 10.871 | 387015.75 | 0.1676 | P | 0.9 |
| 5 | ☐ | 100.000 | 98.418 | 3429651.90 | 1.5107 | A | 2.5 |
| 6 | ☐ | 200.000 | 200.752 | 6673583.18 | 3.0807 | A | 0.6 |

y = 0.0153 * x + 7.8052E-004
R = 0.9999
DL = 0.01325
BEC = 0.05087

Weight: <None>
Min Conc: <None>

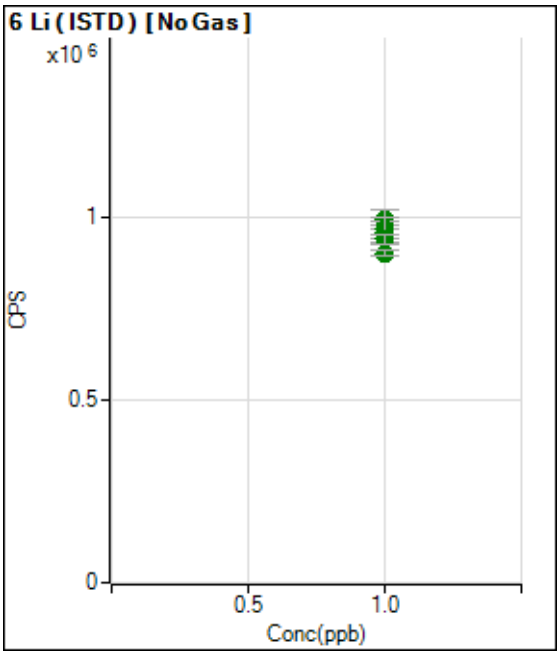



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43.33 | 0.0000 | P | 47.8 |
| 2 | ☐ | 2.000 | 1.908 | 73361.33 | 0.0314 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.754 | 184109.05 | 0.0782 | P | 1.0 |
| 4 | ☐ | 10.000 | 10.809 | 410458.07 | 0.1777 | P | 1.3 |
| 5 | ☐ | 100.000 | 100.599 | 3754126.50 | 1.6540 | A | 3.2 |
| 6 | ☐ | 200.000 | 199.667 | 7109814.06 | 3.2827 | A | 2.5 |

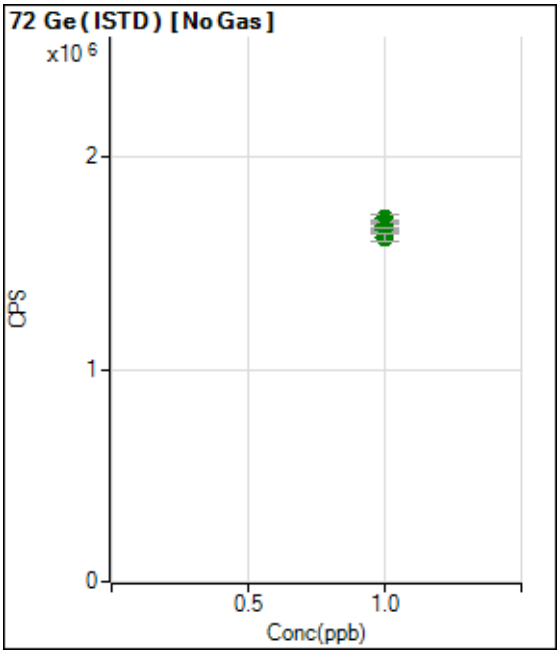
y = 0.0164 * x + 1.8496E-005
R = 1.0000
DL = 0.001612
BEC = 0.001125

Weight: <None>
Min Conc: <None>

Calibration for 112_ICV.d

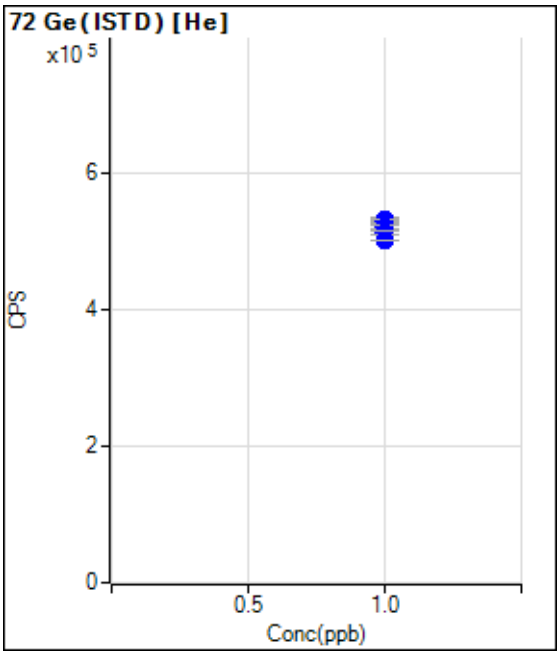



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 957132.97 | | A | 5.0 |
| 2 | ☐ | 1.000 | | 994375.52 | | A | 5.2 |
| 3 | ☐ | 1.000 | | 971627.86 | | A | 3.8 |
| 4 | ☐ | 1.000 | | 970061.26 | | A | 6.0 |
| 5 | ☐ | 1.000 | | 942582.61 | | A | 2.6 |
| 6 | ☐ | 1.000 | | 903141.58 | | A | 2.1 |

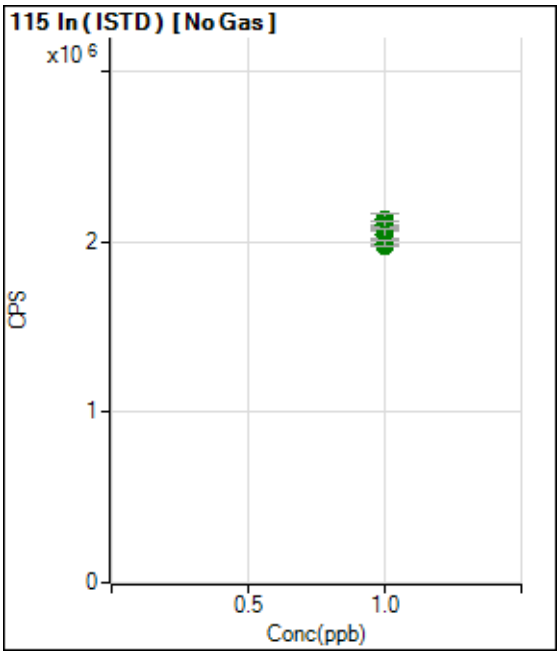



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1680329.35 | | A | 2.2 |
| 2 | ☐ | 1.000 | | 1710786.07 | | A | 2.5 |
| 3 | ☐ | 1.000 | | 1694813.72 | | A | 1.3 |
| 4 | ☐ | 1.000 | | 1681153.73 | | A | 1.7 |
| 5 | ☐ | 1.000 | | 1658204.71 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 1620376.85 | | A | 2.1 |

Calibration for 112_ICV.d

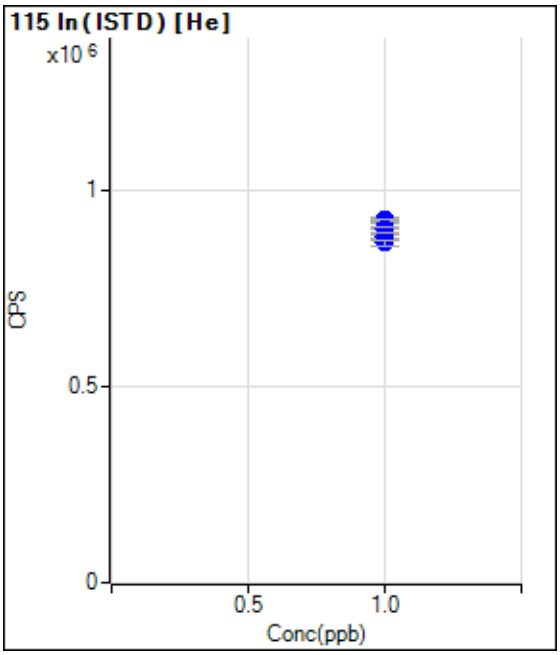



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 530791.59 | | P | 1.1 |
| 2 | ☐ | 1.000 | | 528799.38 | | P | 1.2 |
| 3 | ☐ | 1.000 | | 527716.37 | | P | 1.4 |
| 4 | ☐ | 1.000 | | 520437.31 | | P | 0.7 |
| 5 | ☐ | 1.000 | | 510671.44 | | P | 1.1 |
| 6 | ☐ | 1.000 | | 501105.42 | | P | 0.2 |

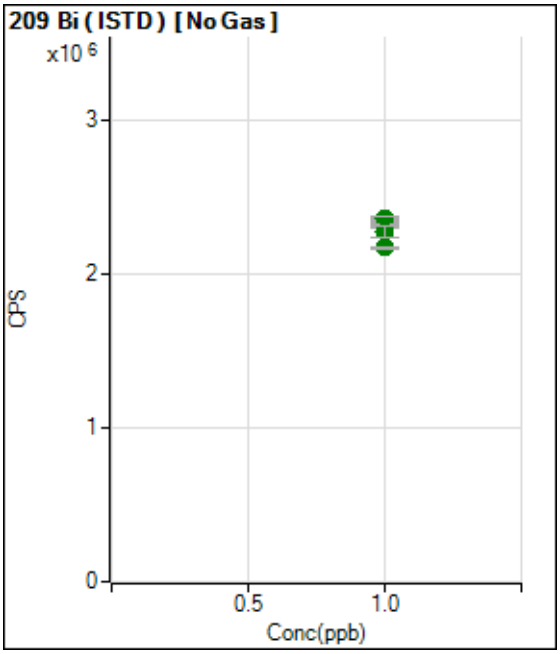



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2126706.84 | | A | 3.1 |
| 2 | ☐ | 1.000 | | 2035004.19 | | A | 2.3 |
| 3 | ☐ | 1.000 | | 2097330.28 | | A | 1.6 |
| 4 | ☐ | 1.000 | | 2045021.76 | | A | 2.9 |
| 5 | ☐ | 1.000 | | 1974303.74 | | A | 0.5 |
| 6 | ☐ | 1.000 | | 1989132.00 | | A | 1.8 |

Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 923418.95 | | P | 1.7 |
| 2 | ☐ | 1.000 | | 920740.24 | | P | 0.4 |
| 3 | ☐ | 1.000 | | 892921.89 | | P | 2.0 |
| 4 | ☐ | 1.000 | | 899976.61 | | P | 1.6 |
| 5 | ☐ | 1.000 | | 881610.10 | | P | 1.6 |
| 6 | ☐ | 1.000 | | 864747.16 | | P | 1.3 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2340208.45 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2338032.62 | | A | 2.0 |
| 3 | ☐ | 1.000 | | 2355450.90 | | A | 1.8 |
| 4 | ☐ | 1.000 | | 2309769.08 | | A | 1.1 |
| 5 | ☐ | 1.000 | | 2271594.55 | | A | 3.8 |
| 6 | ☐ | 1.000 | | 2166139.03 | | A | 1.0 |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICCV2 |
| Data File Name | 113LCV2.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:45:44-05:00 |
| Sample Type | LLCCV2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 1.961 | 1.961 | 9.76 | 79873 | 0.00 | 2 | |
| Be | 9 | 1 | No Gas | 1.952 | 1.952 | 8.08 | 5735 | 0.03 | 2 | |
| V | 51 | 2 | He | 2.167 | 2.167 | 2.49 | 12283 | 0.02 | 2 | |
| Cr | 52 | 2 | He | 2.109 | 2.109 | 3.55 | 11211 | 0.02 | 2 | |
| Fe | 56 | 2 | He | 212.867 | 212.867 | 1.85 | 907855 | 0.02 | 200 | |
| Se | 78 | 2 | He | 1.557 | 1.557 | 33.76 | 102 | 1.53 | 2 | |
| Sn | 118 | 2 | He | 2.216 | 2.216 | 3.50 | 8536 | 0.03 | 2 | |
| As | 75 | 2 | He | 2.250 | 2.250 | 4.66 | 1431 | 0.16 | 2 | |
| Ca | 44 | 2 | He | 208.534 | 208.534 | 7.42 | 4911 | 4.25 | 200 | |
| Na | 23 | 2 | He | 199.995 | 199.995 | 0.99 | 308896 | 0.06 | 200 | |
| Mg | 24 | 2 | He | 215.066 | 215.066 | 0.37 | 99674 | 0.22 | 200 | |
| K | 39 | 2 | He | 228.652 | 228.652 | 3.11 | 123512 | 0.19 | 200 | |
| Mn | 55 | 2 | He | 1.907 | 1.907 | 6.85 | 7169 | 0.03 | 2 | |
| Co | 59 | 2 | He | 2.026 | 2.026 | 2.83 | 15492 | 0.01 | 2 | |
| Ni | 60 | 2 | He | 2.145 | 2.145 | 10.62 | 4194 | 0.05 | 2 | |
| Cu | 63 | 2 | He | 2.271 | 2.271 | 1.20 | 12643 | 0.02 | 2 | |
| Zn | 66 | 2 | He | 2.059 | 2.059 | 2.26 | 2290 | 0.09 | 2 | |
| Al | 27 | 2 | He | -0.230 | -0.230 | -380.82 | 1267 | -0.02 | 2 | NewName Main CR1 Failed |
| B | 11 | 1 | No Gas | 16.498 | 16.498 | 5.27 | 65881 | 0.03 | 10 | NewName Main CR1 Failed |
| Al | 27 | 1 | No Gas | -0.121 | -0.121 | -94.94 | 54364 | 0.00 | 2 | NewName Main CR1 Failed |
| Si | 28 | 1 | No Gas | 7.216 | 7.216 | 14.86 | 184419 | 0.00 | 10 | |
| P | 31 | 1 | No Gas | -19.056 | -19.056 | -4.50 | 22442 | -0.08 | 10 | NewName Main CR1 Failed |
| Ag | 107 | 1 | No Gas | 2.126 | 2.126 | 0.06 | 23234 | 0.01 | 2 | |
| Cd | 111 | 1 | No Gas | 2.161 | 2.161 | 1.88 | 4831 | 0.04 | 2 | |
| Sr | 88 | 1 | No Gas | 2.000 | 2.000 | 2.10 | 37376 | 0.01 | 2 | |
| Mo | 95 | 1 | No Gas | 2.015 | 2.015 | 4.28 | 7742 | 0.03 | 2 | |
| Sn | 118 | 1 | No Gas | 2.311 | 2.311 | 6.95 | 16688 | 0.01 | 2 | |
| Sb | 121 | 1 | No Gas | 2.294 | 2.294 | 0.25 | 22894 | 0.01 | 2 | |
| Ba | 137 | 1 | No Gas | 2.055 | 2.055 | 2.93 | 6305 | 0.03 | 2 | |
| Tl | 205 | 1 | No Gas | 2.127 | 2.127 | 1.52 | 52562 | 0.00 | 2 | |
| Tl | 203 | 1 | No Gas | 2.053 | 2.053 | 1.73 | 21489 | 0.01 | 2 | |
| Pb | 208 | 1 | No Gas | 2.043 | 2.043 | 0.25 | 71388 | 0.00 | 2 | |
| U | 238 | 1 | No Gas | 1.979 | 1.979 | 1.72 | 72352 | 0.00 | 2 | |
| Ca | 43 | 2 | He | 215.751 | 215.751 | 16.96 | 283 | 76.14 | 200 | |
| Sb | 121 | 2 | He | 2.375 | 2.375 | 5.02 | 11695 | 0.02 | 2 | |
| Ti | 47 | 2 | He | 2.190 | 2.190 | 13.32 | 287 | 0.76 | 200 | |
| Cu | 63 | 1 | No Gas | 2.170 | 2.170 | 1.27 | 18306 | 0.01 | 2 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 954323 | 1.33 | 957133 | 99.71 | 70 | 120 | |
| Ge | 72 | 2 | He | 505776 | 1.39 | 530792 | 95.29 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1631177 | 0.97 | 1680329 | 97.07 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1996984 | 0.55 | 2126707 | 93.90 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2222666 | 1.93 | 2340208 | 94.98 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICCV5 |
| Data File Name | 114LCV5.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:47:37-05:00 |
| Sample Type | LLCCV5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 4.975 | 4.975 | 4.86 | 113140 | 0.00 | 5 | |
| Be | 9 | 1 | No Gas | 4.966 | 4.966 | 1.73 | 14204 | 0.03 | 5 | |
| V | 51 | 2 | He | 5.154 | 5.154 | 1.18 | 23614 | 0.02 | 5 | |
| Cr | 52 | 2 | He | 5.165 | 5.165 | 2.37 | 25511 | 0.02 | 5 | |
| Fe | 56 | 2 | He | 525.170 | 525.170 | 3.50 | 2220414 | 0.02 | 500 | |
| Se | 78 | 2 | He | 5.067 | 5.067 | 11.91 | 259 | 1.95 | 5 | |
| Sn | 118 | 2 | He | 5.105 | 5.105 | 1.84 | 19034 | 0.03 | 5 | |
| As | 75 | 2 | He | 5.269 | 5.269 | 1.76 | 3076 | 0.17 | 5 | |
| Ca | 44 | 2 | He | 494.887 | 494.887 | 1.46 | 10814 | 4.58 | 500 | |
| Na | 23 | 2 | He | 519.085 | 519.085 | 1.44 | 559578 | 0.09 | 500 | |
| Mg | 24 | 2 | He | 540.148 | 540.148 | 0.89 | 248069 | 0.22 | 500 | |
| K | 39 | 2 | He | 534.613 | 534.613 | 0.84 | 232026 | 0.23 | 500 | |
| Mn | 55 | 2 | He | 5.105 | 5.105 | 7.08 | 17228 | 0.03 | 5 | |
| Co | 59 | 2 | He | 5.042 | 5.042 | 1.92 | 37990 | 0.01 | 5 | |
| Ni | 60 | 2 | He | 5.129 | 5.129 | 5.77 | 9774 | 0.05 | 5 | |
| Cu | 63 | 2 | He | 5.260 | 5.260 | 2.65 | 27839 | 0.02 | 5 | |
| Zn | 66 | 2 | He | 5.238 | 5.238 | 3.37 | 5361 | 0.10 | 5 | |
| Al | 27 | 2 | He | 2.987 | 2.987 | 28.88 | 1970 | 0.15 | 5 | NewName2 Main CR1 Failed |
| B | 11 | 1 | No Gas | 26.541 | 26.541 | 1.72 | 83266 | 0.03 | 25 | |
| Al | 27 | 1 | No Gas | 3.334 | 3.334 | 5.19 | 86630 | 0.00 | 5 | NewName2 Main CR1 Failed |
| Si | 28 | 1 | No Gas | 18.608 | 18.608 | 8.59 | 231397 | 0.01 | 25 | |
| P | 31 | 1 | No Gas | -3.552 | -3.552 | -69.06 | 28530 | -0.01 | 25 | NewName2 Main CR1 Failed |
| Ag | 107 | 1 | No Gas | 5.130 | 5.130 | 6.20 | 55644 | 0.01 | 5 | |
| Cd | 111 | 1 | No Gas | 5.140 | 5.140 | 3.68 | 11459 | 0.04 | 5 | |
| Sr | 88 | 1 | No Gas | 5.032 | 5.032 | 3.02 | 90838 | 0.01 | 5 | |
| Mo | 95 | 1 | No Gas | 5.007 | 5.007 | 1.57 | 19107 | 0.03 | 5 | |
| Sn | 118 | 1 | No Gas | 5.029 | 5.029 | 1.69 | 35314 | 0.01 | 5 | |
| Sb | 121 | 1 | No Gas | 5.084 | 5.084 | 0.60 | 50227 | 0.01 | 5 | |
| Ba | 137 | 1 | No Gas | 4.921 | 4.921 | 3.17 | 14635 | 0.03 | 5 | |
| Tl | 205 | 1 | No Gas | 4.950 | 4.950 | 4.27 | 121940 | 0.00 | 5 | |
| Tl | 203 | 1 | No Gas | 4.831 | 4.831 | 0.39 | 50419 | 0.01 | 5 | |
| Pb | 208 | 1 | No Gas | 4.998 | 4.998 | 0.82 | 172493 | 0.00 | 5 | |
| U | 238 | 1 | No Gas | 4.868 | 4.868 | 2.25 | 178253 | 0.00 | 5 | |
| Ca | 43 | 2 | He | 498.800 | 498.800 | 25.90 | 630 | 79.17 | 500 | |
| Sb | 121 | 2 | He | 5.251 | 5.251 | 4.27 | 25422 | 0.02 | 5 | |
| Ti | 47 | 2 | He | 5.053 | 5.053 | 28.02 | 653 | 0.77 | 5 | |
| Cu | 63 | 1 | No Gas | 5.256 | 5.256 | 3.03 | 42159 | 0.01 | 5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 944139 | 1.72 | 957133 | 98.64 | 70 | 120 | |
| Ge | 72 | 2 | He | 503076 | 0.84 | 530792 | 94.78 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1635841 | 2.33 | 1680329 | 97.35 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1991864 | 1.84 | 2126707 | 93.66 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2227052 | 1.61 | 2340208 | 95.16 | 70 | 120 | |

# Initial Calibration Blank (ICB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICCB |
| Data File Name | 115_ICB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:49:31-05:00 |
| Sample Type | ICB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.065 | -276.9 | 56295 | 1.4 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.015 | 32.9 | 65 | 23.1 | 0.5 | |
| V | 51 | 2 | He | 0.361 | 3.9 | 5302 | 1.4 | 2.5 | |
| Cr | 52 | 2 | He | -0.005 | -357.6 | 1210 | 8.0 | 2.5 | |
| Fe | 56 | 2 | He | 0.950 | 49.4 | 9151 | 21.1 | 100 | |
| Se | 78 | 2 | He | -0.020 | -756.1 | 31 | 22.9 | 1 | |
| Sn | 118 | 2 | He | 0.160 | 21.7 | 927 | 12.9 | 2.5 | |
| As | 75 | 2 | He | 0.210 | 2.0 | 307 | 1.1 | 2.5 | |
| Ca | 44 | 2 | He | 5.198 | 56.4 | 667 | 8.3 | 100 | |
| Na | 23 | 2 | He | -13.065 | -19.2 | 138074 | 0.8 | 100 | |
| Mg | 24 | 2 | He | 0.608 | 6.2 | 880 | 3.0 | 100 | |
| K | 39 | 2 | He | 11.086 | 26.7 | 45020 | 1.9 | 100 | |
| Mn | 55 | 2 | He | -0.012 | -399.3 | 1073 | 13.6 | 2.5 | |
| Co | 59 | 2 | He | -0.012 | -34.8 | 153 | 19.9 | 2.5 | |
| Ni | 60 | 2 | He | 0.055 | 25.6 | 243 | 10.3 | 2.5 | |
| Cu | 63 | 2 | He | 0.099 | 10.3 | 1477 | 3.4 | 1 | |
| Zn | 66 | 2 | He | 0.432 | 2.4 | 697 | 2.2 | 2.5 | |
| Al | 27 | 2 | He | -0.705 | -64.3 | 1150 | 8.0 | 5 | |
| B | 11 | 1 | No Gas | 0.448 | 144.8 | 34848 | 1.3 | 0.5 | |
| Al | 27 | 1 | No Gas | -0.568 | -23.9 | 49579 | 2.2 | 5 | |
| Si | 28 | 1 | No Gas | 22.060 | 6.5 | 241699 | 1.7 | 10 | ICB Main CR1 Failed |
| P | 31 | 1 | No Gas | -28.046 | -5.3 | 18703 | 2.2 | 10 | |
| Ag | 107 | 1 | No Gas | 0.007 | 83.9 | 237 | 26.8 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.008 | 117.6 | 20 | 100.0 | 1 | |
| Sr | 88 | 1 | No Gas | 0.019 | 57.7 | 2240 | 9.7 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.007 | 111.9 | 80 | 37.5 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.135 | 12.1 | 1687 | 6.8 | 5 | |
| Sb | 121 | 1 | No Gas | 0.097 | 5.7 | 1463 | 3.1 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.022 | 152.1 | 363 | 25.4 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.017 | 18.0 | 860 | 8.4 | 1 | |
| Tl | 203 | 1 | No Gas | 0.023 | 15.1 | 423 | 8.3 | 1 | |
| Pb | 208 | 1 | No Gas | 0.026 | 11.5 | 2653 | 4.5 | 2.5 | |
| U | 238 | 1 | No Gas | 0.002 | 43.7 | 113 | 28.4 | 2.5 | |
| Ca | 43 | 2 | He | 9.013 | 138.9 | 27 | 57.3 | 100 | |
| Sb | 121 | 2 | He | 0.128 | 16.3 | 860 | 11.2 | 2.5 | |
| Ti | 47 | 2 | He | 0.683 | 159.9 | 90 | 154.4 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 948248 | 3.57 | 957133 | 99.07 | 70 | 120 | |
| Ge | 72 | 2 | He | 500620 | 1.06 | 530792 | 94.32 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1610250 | 0.87 | 1680329 | 95.83 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1969603 | 1.23 | 2126707 | 92.61 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2235436 | 0.62 | 2340208 | 95.52 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 117_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:59:26-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 97.242 | 5.316 | 1128699 | 2.06 | 100 | 97.2 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 95.465 | 3.534 | 265801 | 0.97 | 100 | 95.5 | 90 | 110 | |
| V | 51 | 2 | He | 95.054 | 1.328 | 369699 | 0.88 | 100 | 95.1 | 90 | 110 | |
| Cr | 52 | 2 | He | 96.203 | 1.294 | 457275 | 1.97 | 100 | 96.2 | 90 | 110 | |
| Fe | 56 | 2 | He | 9542.019 | 0.244 | 40599120 | 0.71 | 10000 | 95.4 | 90 | 110 | |
| Se | 78 | 2 | He | 95.414 | 0.247 | 4355 | 1.00 | 100 | 95.4 | 90 | 110 | |
| Sn | 118 | 2 | He | 93.360 | 3.013 | 337032 | 1.56 | 100 | 93.4 | 90 | 110 | |
| As | 75 | 2 | He | 97.202 | 0.745 | 53821 | 0.72 | 100 | 97.2 | 90 | 110 | |
| Ca | 44 | 2 | He | 9479.647 | 1.448 | 198593 | 1.34 | 10000 | 94.8 | 90 | 110 | |
| Na | 23 | 2 | He | 9450.850 | 1.503 | 7687589 | 1.27 | 10000 | 94.5 | 90 | 110 | |
| Mg | 24 | 2 | He | 9561.775 | 0.315 | 4418617 | 1.08 | 10000 | 95.6 | 90 | 110 | |
| K | 39 | 2 | He | 9602.755 | 4.726 | 3496110 | 4.17 | 10000 | 96.0 | 90 | 110 | |
| Mn | 55 | 2 | He | 96.135 | 1.441 | 306927 | 0.83 | 100 | 96.1 | 90 | 110 | |
| Co | 59 | 2 | He | 92.358 | 0.667 | 697668 | 0.58 | 100 | 92.4 | 90 | 110 | |
| Ni | 60 | 2 | He | 94.808 | 1.155 | 179764 | 1.93 | 100 | 94.8 | 90 | 110 | |
| Cu | 63 | 2 | He | 95.236 | 2.244 | 491406 | 2.22 | 100 | 95.2 | 90 | 110 | |
| Zn | 66 | 2 | He | 96.239 | 1.166 | 94388 | 0.43 | 100 | 96.2 | 90 | 110 | |
| Al | 27 | 2 | He | 94.354 | 3.725 | 22305 | 3.21 | 100 | 94.4 | 90 | 110 | |
| B | 11 | 1 | No Gas | 475.770 | 4.269 | 895727 | 1.50 | 500 | 95.2 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 96.620 | 6.064 | 953336 | 3.36 | 100 | 96.6 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 536.519 | 3.449 | 2346043 | 1.00 | 5000 | 10.7 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 456.953 | 2.436 | 207982 | 1.71 | 500 | 91.4 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 95.305 | 2.609 | 1037723 | 1.30 | 100 | 95.3 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 95.000 | 1.322 | 212943 | 1.22 | 100 | 95.0 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 96.218 | 4.519 | 1712200 | 2.08 | 100 | 96.2 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 93.957 | 2.434 | 359759 | 0.01 | 100 | 94.0 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 93.022 | 2.809 | 643514 | 1.96 | 100 | 93.0 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 93.515 | 3.708 | 914259 | 0.44 | 100 | 93.5 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 94.031 | 4.022 | 275760 | 1.60 | 100 | 94.0 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 98.222 | 3.064 | 2405264 | 2.51 | 100 | 98.2 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 90.882 | 1.548 | 942647 | 1.49 | 100 | 90.9 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 92.506 | 0.609 | 3153819 | 1.20 | 100 | 92.5 | 90 | 110 | |
| U | 238 | 1 | No Gas | 95.213 | 2.176 | 3476698 | 2.32 | 100 | 95.2 | 90 | 110 | |
| Ca | 43 | 2 | He | 9148.172 | 3.383 | 11388 | 4.04 | 10000 | 91.5 | 90 | 110 | |
| Sb | 121 | 2 | He | 95.508 | 0.886 | 461974 | 0.22 | 100 | 95.5 | 90 | 110 | |
| Ti | 47 | 2 | He | 97.972 | 3.941 | 12736 | 3.47 | 100 | 98.0 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 96.439 | 4.291 | 745792 | 0.71 | 100 | 96.4 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 921088 | 3.08 | 957133 | 96.23 | 70 | 120 | |
| Ge | 72 | 2 | He | 507348 | 0.80 | 530792 | 95.58 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1637104 | 3.58 | 1680329 | 97.43 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2004371 | 2.41 | 2126707 | 94.25 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2220923 | 0.59 | 2340208 | 94.90 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 118_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:01:15-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.146 | -70.9 | 56134 | 1.2 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.015 | 74.6 | 67 | 48.2 | 0.5 | |
| V | 51 | 2 | He | 0.181 | 8.7 | 4667 | 2.2 | 2.5 | |
| Cr | 52 | 2 | He | 0.011 | 175.2 | 1300 | 8.0 | 2.5 | |
| Fe | 56 | 2 | He | 1.237 | 10.7 | 10471 | 5.7 | 100 | |
| Se | 78 | 2 | He | 0.093 | 147.7 | 36 | 16.7 | 2 | |
| As | 75 | 2 | He | 0.195 | 13.9 | 301 | 5.7 | 2.5 | |
| Ca | 44 | 2 | He | -3.337 | -166.2 | 497 | 23.9 | 100 | |
| Na | 23 | 2 | He | -26.626 | -8.4 | 128712 | 0.4 | 100 | |
| Mg | 24 | 2 | He | 0.508 | 33.1 | 843 | 9.5 | 100 | |
| K | 39 | 2 | He | 11.131 | 31.6 | 45495 | 1.8 | 100 | |
| Mn | 55 | 2 | He | -0.100 | -23.3 | 807 | 8.3 | 2.5 | |
| Co | 59 | 2 | He | -0.014 | -29.5 | 137 | 23.5 | 2.5 | |
| Ni | 60 | 2 | He | -0.001 | -4636.8 | 140 | 68.1 | 2.5 | |
| Cu | 63 | 2 | He | 0.076 | 22.1 | 1370 | 6.3 | 2 | |
| Zn | 66 | 2 | He | 0.168 | 21.1 | 447 | 6.8 | 2.5 | |
| Al | 27 | 2 | He | -1.677 | -12.3 | 947 | 4.3 | 5 | |
| B | 11 | 1 | No Gas | 2.843 | 27.5 | 39853 | 2.2 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -1.761 | -9.6 | 38785 | 2.9 | 5 | |
| Si | 28 | 1 | No Gas | -0.156 | -487.4 | 152922 | 1.4 | 10 | |
| P | 31 | 1 | No Gas | -28.665 | -3.7 | 18526 | 1.2 | 10 | |
| Ag | 107 | 1 | No Gas | 0.009 | 39.8 | 263 | 15.3 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.009 | 57.3 | 23 | 49.5 | 1 | |
| Sr | 88 | 1 | No Gas | 0.000 | -1321.4 | 1940 | 6.8 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.030 | 89.1 | 170 | 61.4 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.251 | 10.3 | 2524 | 7.5 | 5 | |
| Sb | 121 | 1 | No Gas | 0.237 | 3.2 | 2824 | 1.5 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.009 | 218.1 | 333 | 17.1 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.086 | 31.0 | 2620 | 26.1 | 1 | |
| Tl | 203 | 1 | No Gas | 0.085 | 34.3 | 1097 | 29.3 | 1 | |
| Pb | 208 | 1 | No Gas | 0.033 | 21.0 | 2937 | 8.7 | 2.5 | |
| U | 238 | 1 | No Gas | 0.010 | 39.1 | 427 | 36.0 | 2.5 | |
| Ca | 43 | 2 | He | 0.783 | 1579.2 | 17 | 91.7 | 100 | |
| Sb | 121 | 2 | He | 0.212 | 19.3 | 1273 | 14.5 | 2.5 | |
| Ti | 47 | 2 | He | 0.052 | 145.8 | 10 | 100.0 | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.086 | 4.2 | 2244 | 1.8 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 960867 | 2.54 | 957133 | 100.39 | 70 | 120 | |
| Ge | 72 | 2 | He | 505768 | 0.97 | 530792 | 95.29 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1615488 | 1.14 | 1680329 | 96.14 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2011802 | 0.91 | 2126707 | 94.60 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2285060 | 1.19 | 2340208 | 97.64 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | MBLK-155817 |
| Data File Name | 119SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:05:04-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.007 | 0.007 | 1625.25 | 56619 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 0.001 | 0.001 | 155.81 | 27 | 0.01 | 2000 | |
| V | 51 | 2 | He | 0.038 | 0.038 | 77.88 | 4288 | 0.00 | 2000 | |
| Cr | 52 | 2 | He | -0.040 | -0.040 | -62.09 | 1100 | 0.00 | 2000 | |
| Fe | 56 | 2 | He | 1.391 | 1.391 | 4.75 | 11578 | 0.01 | 200000 | |
| Se | 78 | 2 | He | 0.088 | 0.088 | 239.41 | 37 | 0.24 | 2000 | |
| Sn | 118 | 2 | He | 0.089 | 0.089 | 35.74 | 690 | 0.01 | 200 | |
| As | 75 | 2 | He | 0.119 | 0.119 | 64.32 | 270 | 0.04 | 2000 | |
| Ca | 44 | 2 | He | 3.093 | 3.093 | 108.36 | 657 | 0.47 | 200000 | |
| Na | 23 | 2 | He | 47.178 | 47.178 | 0.95 | 195147 | 0.02 | 200000 | |
| Mg | 24 | 2 | He | 16.119 | 16.119 | 4.94 | 8363 | 0.19 | 200000 | |
| K | 39 | 2 | He | 10.303 | 10.303 | 18.38 | 47071 | 0.02 | 200000 | |
| Mn | 55 | 2 | He | 0.719 | 0.719 | 5.53 | 3547 | 0.02 | 2000 | |
| Co | 59 | 2 | He | -0.018 | -0.018 | -23.09 | 117 | -0.02 | 2000 | |
| Ni | 60 | 2 | He | 0.047 | 0.047 | 12.98 | 240 | 0.02 | 2000 | |
| Cu | 63 | 2 | He | 1.043 | 1.043 | 4.71 | 6595 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 1.467 | 1.467 | 8.55 | 1783 | 0.08 | 2000 | |
| Al | 27 | 2 | He | 2.758 | 2.758 | 6.83 | 2010 | 0.14 | 2000 | |
| B | 11 | 1 | No Gas | -3.219 | -3.219 | -20.73 | 27748 | -0.01 | 2000 | |
| Al | 27 | 1 | No Gas | 3.174 | 3.174 | 1.89 | 86277 | 0.00 | 2000 | |
| Si | 28 | 1 | No Gas | 84.032 | 84.032 | 3.09 | 505078 | 0.02 | 2000 | |
| Ag | 107 | 1 | No Gas | 0.009 | 0.009 | 71.53 | 270 | 0.00 | 2000 | |
| Cd | 111 | 1 | No Gas | 0.007 | 0.007 | 102.55 | 20 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | -0.029 | -0.029 | -14.09 | 1473 | 0.00 | 2000 | |
| Mo | 95 | 1 | No Gas | -0.001 | -0.001 | -293.48 | 50 | 0.00 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.059 | 0.059 | 7.79 | 1227 | 0.00 | 2000 | |
| Sb | 121 | 1 | No Gas | 1.324 | 1.324 | 1.87 | 13661 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 0.041 | 0.041 | 89.76 | 437 | 0.01 | 2000 | |
| Tl | 205 | 1 | No Gas | 0.000 | 0.000 | -753.85 | 470 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | -0.001 | -0.001 | -757.83 | 187 | 0.00 | 2000 | |
| Pb | 208 | 1 | No Gas | 0.030 | 0.030 | 13.51 | 2940 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.000 | 0.000 | 72.19 | 63 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 28.682 | 28.682 | 68.48 | 53 | 53.78 | 200000 | |
| Sb | 121 | 2 | He | 1.386 | 1.386 | 5.50 | 7219 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 0.100 | 0.100 | 44.13 | 17 | 0.60 | 2000 | |
| Cu | 63 | 1 | No Gas | 1.045 | 1.045 | 11.98 | 9790 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 1.491 | 1.491 | 8.35 | 4391 | 0.03 | 2000 | |
| Se | 82 | 1 | No Gas | 0.118 | 0.118 | 311.17 | -28 | -0.42 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 939830 | 3.91 | 957133 | 98.19 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 526675 | 1.30 | 530792 | 99.22 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1657555 | 2.18 | 1680329 | 98.64 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2064754 | 2.53 | 2126707 | 97.09 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2372584 | 2.05 | 2340208 | 101.38 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LCS-155817 |
| Data File Name | 120SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:07:00-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.001 | -0.001 | -5665.07 | 56398 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 45.581 | 45.581 | 2.99 | 129197 | 0.04 | 2000 | |
| V | 51 | 2 | He | 43.422 | 43.422 | 0.69 | 176610 | 0.02 | 2000 | |
| Cr | 52 | 2 | He | 44.189 | 44.189 | 1.54 | 217529 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 4413.684 | 4413.684 | 2.12 | 19389186 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 48.136 | 48.136 | 5.66 | 2284 | 2.11 | 2000 | |
| Sn | 118 | 2 | He | 0.161 | 0.161 | 6.13 | 953 | 0.02 | 200 | |
| As | 75 | 2 | He | 46.033 | 46.033 | 1.07 | 26421 | 0.17 | 2000 | |
| Ca | 44 | 2 | He | 4379.005 | 4379.005 | 1.20 | 95028 | 4.61 | 200000 | |
| Na | 23 | 2 | He | 4629.395 | 4629.395 | 1.98 | 3966798 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 4615.497 | 4615.497 | 0.84 | 2202359 | 0.21 | 200000 | |
| K | 39 | 2 | He | 4557.231 | 4557.231 | 1.88 | 1735839 | 0.26 | 200000 | |
| Mn | 55 | 2 | He | 44.225 | 44.225 | 2.18 | 146397 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 43.977 | 43.977 | 2.00 | 343081 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 44.800 | 44.800 | 1.96 | 87764 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 46.264 | 46.264 | 3.01 | 246962 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 47.789 | 47.789 | 2.24 | 48534 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 92.512 | 92.512 | 1.83 | 22612 | 0.41 | 2000 | |
| B | 11 | 1 | No Gas | -4.639 | -4.639 | -14.19 | 25063 | -0.02 | 2000 | |
| Al | 27 | 1 | No Gas | 98.905 | 98.905 | 0.58 | 994409 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 94.044 | 94.044 | 1.51 | 550248 | 0.02 | 2000 | |
| Ag | 107 | 1 | No Gas | 44.429 | 44.429 | 3.77 | 495900 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 46.392 | 46.392 | 3.81 | 106577 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 0.012 | 0.012 | 85.23 | 2210 | 0.00 | 2000 | |
| Mo | 95 | 1 | No Gas | 43.486 | 43.486 | 4.24 | 170662 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.149 | 0.149 | 8.36 | 1857 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 44.849 | 44.849 | 1.20 | 447562 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 43.813 | 43.813 | 2.47 | 131910 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 40.938 | 40.938 | 3.42 | 1035622 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 40.027 | 40.027 | 3.94 | 428826 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 42.827 | 42.827 | 2.13 | 1508944 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.000 | 0.000 | 174.11 | 60 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 4417.895 | 4417.895 | 3.17 | 5685 | 77.72 | 200000 | |
| Sb | 121 | 2 | He | 46.258 | 46.258 | 2.57 | 231122 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 44.466 | 44.466 | 1.21 | 5971 | 0.74 | 2000 | |
| Cu | 63 | 1 | No Gas | 47.012 | 47.012 | 0.63 | 371758 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 48.430 | 48.430 | 0.82 | 114440 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 48.829 | 48.829 | 2.51 | 5360 | 0.91 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 937394 | 2.75 | 957133 | 97.94 | 70 | 120 | |
| Ge | 72 | 2 | He | 523845 | 1.37 | 530792 | 98.69 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1668569 | 0.45 | 1680329 | 99.30 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In | 115 | 1 | No Gas | 2054886 | 3.38 | 2126707 | 96.62 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2294538 | 2.23 | 2340208 | 98.05 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01 |
| Data File Name | 121SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:08:53-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.504 | 18.504 | 1.56 | 241506 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 0.315 | 0.315 | 14.34 | 835 | 0.04 | 2000 | |
| V | 51 | 2 | He | 2.535 | 2.535 | 1.18 | 13729 | 0.02 | 2000 | |
| Cr | 52 | 2 | He | 13.910 | 13.910 | 1.25 | 67139 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 4520.159 | 4520.159 | 2.30 | 19222896 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 0.575 | 0.575 | 56.62 | 58 | 0.99 | 2000 | |
| Sn | 118 | 2 | He | 0.163 | 0.163 | 5.96 | 923 | 0.02 | 200 | |
| As | 75 | 2 | He | 3.315 | 3.315 | 3.04 | 2022 | 0.16 | 2000 | |
| Ca | 44 | 2 | He | 23028.631 | 23028.631 | 0.79 | 481282 | 4.78 | 200000 | |
| Na | 23 | 2 | He | 124951.216 | 124951.216 | 1.24 | 99727589 | 0.13 | 200000 | |
| Mg | 24 | 2 | He | 18219.769 | 18219.769 | 1.24 | 8412403 | 0.22 | 200000 | |
| K | 39 | 2 | He | 1027.327 | 1027.327 | 0.40 | 410976 | 0.25 | 200000 | |
| Mn | 55 | 2 | He | 405.640 | 405.640 | 1.50 | 1290746 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 7.040 | 7.040 | 1.00 | 53372 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 9.112 | 9.112 | 3.71 | 17398 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 16.048 | 16.048 | 1.70 | 83563 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 63.315 | 63.315 | 1.82 | 62149 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 540.975 | 540.975 | 2.90 | 121525 | 0.45 | 2000 | |
| B | 11 | 1 | No Gas | 43.602 | 43.602 | 1.95 | 104238 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 705.714 | 705.714 | 34.49 | 6385819 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 20203.842 | 20203.842 | 2.63 | 79945557 | 0.03 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 0.021 | 0.021 | 39.15 | 380 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 0.244 | 0.244 | 13.83 | 533 | 0.05 | 2000 | |
| Sr | 88 | 1 | No Gas | 414.803 | 414.803 | 2.53 | 7162937 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 0.630 | 0.630 | 3.41 | 2394 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.154 | 0.154 | 30.63 | 1787 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 1.197 | 1.197 | 1.11 | 11846 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 464.865 | 464.865 | 2.28 | 1322731 | 0.04 | 2000 | |
| Tl | 205 | 1 | No Gas | 0.159 | 0.159 | 57.77 | 4288 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 0.165 | 0.165 | 48.57 | 1867 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 1.095 | 1.095 | 3.24 | 38394 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.541 | 0.541 | 3.97 | 19466 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 23152.469 | 23152.469 | 0.35 | 28774 | 80.46 | 200000 | |
| Sb | 121 | 2 | He | 1.286 | 1.286 | 5.98 | 6465 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 10.057 | 10.057 | 19.29 | 1310 | 0.77 | 2000 | |
| Cu | 63 | 1 | No Gas | 16.578 | 16.578 | 2.30 | 125339 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 64.326 | 64.326 | 0.60 | 143894 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 0.679 | 0.679 | 35.91 | 32 | 2.13 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 855873 | 0.88 | 957133 | 89.42 | 70 | 120 | |
| Ge | 72 | 2 | He | 506996 | 1.05 | 530792 | 95.52 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1582721 | 0.98 | 1680329 | 94.19 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1944994 | 1.06 | 2126707 | 91.46 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2183842 | 2.38 | 2340208 | 93.32 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01SD |
| Data File Name | 122SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:10:46-05:00 |
| Sample Type | Sample |
| Dilution | 5 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 3.348 | 16.738 | 4.80 | 93918 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 0.065 | 0.325 | 7.10 | 207 | 0.03 | 2000 | |
| V | 51 | 2 | He | 1.154 | 5.770 | 4.19 | 8668 | 0.01 | 2000 | |
| Cr | 52 | 2 | He | 2.799 | 13.994 | 5.19 | 14937 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 911.544 | 4557.719 | 1.27 | 3995814 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 0.012 | 0.059 | 2047.96 | 33 | 0.04 | 2000 | |
| Sn | 118 | 2 | He | 0.093 | 0.467 | 39.87 | 683 | 0.01 | 200 | |
| As | 75 | 2 | He | 0.917 | 4.586 | 5.86 | 721 | 0.13 | 2000 | |
| Ca | 44 | 2 | He | 4540.699 | 22703.494 | 2.74 | 98182 | 4.62 | 200000 | |
| Na | 23 | 2 | He | 24738.212 | 123691.058 | 2.40 | 20455667 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 3677.992 | 18389.959 | 1.44 | 1749280 | 0.21 | 200000 | |
| K | 39 | 2 | He | 206.611 | 1033.056 | 1.56 | 119346 | 0.17 | 200000 | |
| Mn | 55 | 2 | He | 78.336 | 391.680 | 0.40 | 257603 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 1.436 | 7.182 | 2.52 | 11415 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 1.815 | 9.074 | 7.20 | 3684 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 3.407 | 17.033 | 0.24 | 19067 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 13.443 | 67.214 | 2.58 | 13817 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 113.520 | 567.598 | 5.66 | 27350 | 0.42 | 2000 | |
| B | 11 | 1 | No Gas | 5.115 | 25.576 | 3.82 | 43031 | 0.01 | 2000 | |
| Al | 27 | 1 | No Gas | 112.936 | 564.682 | 9.48 | 1104907 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 3908.982 | 19544.909 | 3.11 | 16124604 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 0.004 | 0.020 | 124.32 | 210 | 0.00 | 2000 | |
| Cd | 111 | 1 | No Gas | 0.049 | 0.246 | 28.48 | 113 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 84.186 | 420.930 | 2.56 | 1499797 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 0.109 | 0.544 | 9.59 | 470 | 0.02 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.079 | 0.395 | 26.07 | 1327 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 0.290 | 1.450 | 4.98 | 3377 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 90.002 | 450.008 | 1.36 | 264221 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 0.011 | 0.055 | 10.10 | 720 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 0.014 | 0.072 | 24.67 | 330 | 0.00 | 2000 | |
| Pb | 208 | 1 | No Gas | 0.268 | 1.341 | 17.02 | 10900 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.103 | 0.515 | 5.05 | 3811 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 4620.429 | 23102.147 | 4.17 | 5928 | 77.94 | 200000 | |
| Sb | 121 | 2 | He | 0.315 | 1.573 | 4.20 | 1827 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 1.966 | 9.832 | 38.96 | 267 | 0.74 | 2000 | |
| Cu | 63 | 1 | No Gas | 3.376 | 16.878 | 2.55 | 27682 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 13.559 | 67.796 | 2.56 | 32108 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 0.212 | 1.058 | 370.36 | -18 | -1.15 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 936010 | 1.16 | 957133 | 97.79 | 70 | 120 | |
| Ge | 72 | 2 | He | 522109 | 1.09 | 530792 | 98.36 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1637784 | 2.98 | 1680329 | 97.47 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In | 115 | 1 | No Gas | 2005208 | 1.09 | 2126707 | 94.29 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2227154 | 0.47 | 2340208 | 95.17 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01MS |
| Data File Name | 123SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:12:39-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.154 | 18.154 | 4.09 | 251572 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 48.203 | 48.203 | 2.01 | 132011 | 0.04 | 2000 | |
| V | 51 | 2 | He | 49.554 | 49.554 | 1.47 | 196233 | 0.03 | 2000 | |
| Cr | 52 | 2 | He | 63.284 | 63.284 | 1.49 | 303651 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 9332.422 | 9332.422 | 3.22 | 40023049 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 49.790 | 49.790 | 3.08 | 2306 | 2.16 | 2000 | |
| Sn | 118 | 2 | He | 0.197 | 0.197 | 21.41 | 1043 | 0.02 | 200 | |
| As | 75 | 2 | He | 51.049 | 51.049 | 1.19 | 28592 | 0.18 | 2000 | |
| Ca | 44 | 2 | He | 29006.491 | 29006.491 | 0.33 | 611497 | 4.74 | 200000 | |
| Na | 23 | 2 | He | 133005.894 | 133005.894 | 1.64 | 107087282 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 23194.022 | 23194.022 | 0.21 | 10804952 | 0.21 | 200000 | |
| K | 39 | 2 | He | 5845.181 | 5845.181 | 3.99 | 2162065 | 0.27 | 200000 | |
| Mn | 55 | 2 | He | 461.720 | 461.720 | 0.65 | 1481923 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 52.132 | 52.132 | 1.33 | 397112 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 56.310 | 56.310 | 1.53 | 107688 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 64.582 | 64.582 | 0.99 | 336266 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 113.505 | 113.505 | 1.06 | 112182 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 825.800 | 825.800 | 5.43 | 186415 | 0.44 | 2000 | |
| B | 11 | 1 | No Gas | 42.381 | 42.381 | 2.32 | 108098 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 796.315 | 796.315 | 6.34 | 7397320 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 21046.905 | 21046.905 | 2.72 | 85358822 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 45.915 | 45.915 | 1.10 | 481673 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 47.674 | 47.674 | 2.22 | 102905 | 0.05 | 2000 | |
| Sr | 88 | 1 | No Gas | 441.037 | 441.037 | 2.09 | 7554979 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 48.565 | 48.565 | 1.31 | 179148 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.195 | 0.195 | 16.01 | 2054 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 46.465 | 46.465 | 2.38 | 450772 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 544.715 | 544.715 | 1.56 | 1537707 | 0.04 | 2000 | |
| Tl | 205 | 1 | No Gas | 44.081 | 44.081 | 1.93 | 1038030 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 42.502 | 42.502 | 0.45 | 423958 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 46.573 | 46.573 | 1.91 | 1527168 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.562 | 0.562 | 2.30 | 19750 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 28871.491 | 28871.491 | 2.03 | 36195 | 79.77 | 200000 | |
| Sb | 121 | 2 | He | 47.225 | 47.225 | 3.12 | 230396 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 60.661 | 60.661 | 4.67 | 7953 | 0.76 | 2000 | |
| Cu | 63 | 1 | No Gas | 65.177 | 65.177 | 2.74 | 500422 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 112.919 | 112.919 | 1.56 | 258221 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 47.479 | 47.479 | 5.94 | 5070 | 0.94 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 905645 | 3.05 | 957133 | 94.62 | 70 | 120 | |
| Ge | 72 | 2 | He | 511509 | 1.20 | 530792 | 96.37 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1622465 | 1.45 | 1680329 | 96.56 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1930050 | 1.28 | 2126707 | 90.75 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2135369 | 1.52 | 2340208 | 91.25 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01MSD |
| Data File Name | 124SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:14:32-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.195 | 18.195 | 2.03 | 251194 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 47.023 | 47.023 | 1.04 | 128333 | 0.04 | 2000 | |
| V | 51 | 2 | He | 46.809 | 46.809 | 2.41 | 186765 | 0.03 | 2000 | |
| Cr | 52 | 2 | He | 59.328 | 59.328 | 1.87 | 286595 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 8936.377 | 8936.377 | 2.50 | 38578372 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 47.046 | 47.046 | 5.41 | 2194 | 2.14 | 2000 | |
| Sn | 118 | 2 | He | 0.208 | 0.208 | 11.16 | 1083 | 0.02 | 200 | |
| As | 75 | 2 | He | 49.969 | 49.969 | 0.23 | 28176 | 0.18 | 2000 | |
| Ca | 44 | 2 | He | 27740.775 | 27740.775 | 1.01 | 588632 | 4.71 | 200000 | |
| Na | 23 | 2 | He | 129532.334 | 129532.334 | 1.50 | 104998422 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 22638.396 | 22638.396 | 2.91 | 10612120 | 0.21 | 200000 | |
| K | 39 | 2 | He | 5681.104 | 5681.104 | 1.72 | 2116479 | 0.27 | 200000 | |
| Mn | 55 | 2 | He | 449.353 | 449.353 | 2.74 | 1451351 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 50.399 | 50.399 | 0.54 | 386465 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 52.650 | 52.650 | 0.48 | 101377 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 60.628 | 60.628 | 1.52 | 317786 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 110.178 | 110.178 | 1.81 | 109604 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 802.912 | 802.912 | 5.07 | 182444 | 0.44 | 2000 | |
| B | 11 | 1 | No Gas | 40.012 | 40.012 | 3.51 | 103487 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 785.236 | 785.236 | 6.57 | 7298138 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 20256.185 | 20256.185 | 2.34 | 82195009 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 43.089 | 43.089 | 3.03 | 464196 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 45.128 | 45.128 | 2.97 | 100049 | 0.05 | 2000 | |
| Sr | 88 | 1 | No Gas | 419.162 | 419.162 | 2.26 | 7375313 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 45.395 | 45.395 | 2.34 | 171991 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.202 | 0.202 | 10.25 | 2154 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 45.428 | 45.428 | 1.96 | 440933 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 531.334 | 531.334 | 2.99 | 1540433 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 41.872 | 41.872 | 0.96 | 998703 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 40.864 | 40.864 | 1.32 | 412758 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 44.130 | 44.130 | 0.71 | 1465746 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.544 | 0.544 | 1.87 | 19379 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 27739.122 | 27739.122 | 0.81 | 35008 | 79.24 | 200000 | |
| Sb | 121 | 2 | He | 45.445 | 45.445 | 2.32 | 223167 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 57.392 | 57.392 | 2.04 | 7572 | 0.76 | 2000 | |
| Cu | 63 | 1 | No Gas | 62.364 | 62.364 | 1.61 | 479154 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 111.132 | 111.132 | 1.86 | 254245 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 50.135 | 50.135 | 2.82 | 5356 | 0.94 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 902269 | 2.24 | 957133 | 94.27 | 70 | 120 | |
| Ge | 72 | 2 | He | 514886 | 1.96 | 530792 | 97.00 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1623199 | 1.64 | 1680329 | 96.60 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1982734 | 1.86 | 2126707 | 93.23 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2162448 | 0.84 | 2340208 | 92.40 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01PDS |
| Data File Name | 125SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:16:24-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.120 | 18.120 | 2.16 | 252361 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 102.889 | 102.889 | 3.11 | 282889 | 0.04 | 2000 | |
| V | 51 | 2 | He | 101.721 | 101.721 | 0.17 | 405023 | 0.03 | 2000 | |
| Cr | 52 | 2 | He | 112.755 | 112.755 | 1.37 | 548754 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 14415.020 | 14415.020 | 1.95 | 62822561 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 103.556 | 103.556 | 1.68 | 4839 | 2.14 | 2000 | |
| Sn | 118 | 2 | He | 0.218 | 0.218 | 11.71 | 1150 | 0.02 | 200 | |
| As | 75 | 2 | He | 108.418 | 108.418 | 0.52 | 61475 | 0.18 | 2000 | |
| Ca | 44 | 2 | He | 33392.528 | 33392.528 | 2.94 | 715107 | 4.67 | 200000 | |
| Na | 23 | 2 | He | 133005.343 | 133005.343 | 2.07 | 108821285 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 27929.135 | 27929.135 | 1.42 | 13219468 | 0.21 | 200000 | |
| K | 39 | 2 | He | 11029.968 | 11029.968 | 1.07 | 4108240 | 0.27 | 200000 | |
| Mn | 55 | 2 | He | 505.075 | 505.075 | 0.38 | 1647055 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 102.159 | 102.159 | 0.53 | 790512 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 106.462 | 106.462 | 0.72 | 206753 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 115.008 | 115.008 | 1.89 | 607677 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 163.411 | 163.411 | 0.31 | 163985 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 977.088 | 977.088 | 2.80 | 223934 | 0.44 | 2000 | |
| B | 11 | 1 | No Gas | 40.341 | 40.341 | 6.75 | 104835 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 860.417 | 860.417 | 7.67 | 8062026 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 20541.032 | 20541.032 | 2.39 | 84111065 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 94.998 | 94.998 | 1.21 | 1028866 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 99.595 | 99.595 | 0.65 | 222049 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 414.300 | 414.300 | 0.47 | 7329863 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 99.540 | 99.540 | 1.47 | 379104 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.159 | 0.159 | 20.31 | 1870 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 93.182 | 93.182 | 0.93 | 912256 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 576.421 | 576.421 | 0.93 | 1680454 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 97.920 | 97.920 | 0.66 | 2346875 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 93.424 | 93.424 | 1.47 | 948277 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 96.926 | 96.926 | 0.77 | 3233778 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.543 | 0.543 | 1.84 | 19456 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 33618.982 | 33618.982 | 1.69 | 42821 | 78.51 | 200000 | |
| Sb | 121 | 2 | He | 95.794 | 95.794 | 1.18 | 474689 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 120.566 | 120.566 | 2.62 | 16056 | 0.75 | 2000 | |
| Cu | 63 | 1 | No Gas | 115.228 | 115.228 | 1.57 | 892041 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 163.007 | 163.007 | 0.11 | 375932 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 100.605 | 100.605 | 1.77 | 10883 | 0.92 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 909565 | 3.36 | 957133 | 95.03 | 70 | 120 | |
| Ge | 72 | 2 | He | 519729 | 0.65 | 530792 | 97.92 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1637832 | 0.78 | 1680329 | 97.47 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1993151 | 1.22 | 2126707 | 93.72 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2173532 | 1.07 | 2340208 | 92.88 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 128_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:24:40-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 94.488 | 2.017 | 1146846 | 1.71 | 100 | 94.5 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 94.251 | 2.707 | 273885 | 1.38 | 100 | 94.3 | 90 | 110 | |
| V | 51 | 2 | He | 93.995 | 0.366 | 383826 | 0.74 | 100 | 94.0 | 90 | 110 | |
| Cr | 52 | 2 | He | 93.506 | 1.606 | 466531 | 0.79 | 100 | 93.5 | 90 | 110 | |
| Fe | 56 | 2 | He | 9531.068 | 2.336 | 42566075 | 1.92 | 10000 | 95.3 | 90 | 110 | |
| Se | 78 | 2 | He | 99.201 | 2.487 | 4751 | 1.90 | 100 | 99.2 | 90 | 110 | |
| Sn | 118 | 2 | He | 94.371 | 2.045 | 353090 | 1.07 | 100 | 94.4 | 90 | 110 | |
| As | 75 | 2 | He | 98.041 | 1.310 | 56981 | 0.59 | 100 | 98.0 | 90 | 110 | |
| Ca | 44 | 2 | He | 9576.651 | 1.579 | 210587 | 0.93 | 10000 | 95.8 | 90 | 110 | |
| Na | 23 | 2 | He | 9698.476 | 0.977 | 8277208 | 0.60 | 10000 | 97.0 | 90 | 110 | |
| Mg | 24 | 2 | He | 9548.801 | 0.613 | 4631944 | 0.80 | 10000 | 95.5 | 90 | 110 | |
| K | 39 | 2 | He | 9563.535 | 3.392 | 3655090 | 2.49 | 10000 | 95.6 | 90 | 110 | |
| Mn | 55 | 2 | He | 94.300 | 2.628 | 316032 | 1.62 | 100 | 94.3 | 90 | 110 | |
| Co | 59 | 2 | He | 93.591 | 1.223 | 742148 | 1.40 | 100 | 93.6 | 90 | 110 | |
| Ni | 60 | 2 | He | 95.415 | 0.195 | 189905 | 1.12 | 100 | 95.4 | 90 | 110 | |
| Cu | 63 | 2 | He | 94.495 | 0.577 | 511835 | 0.50 | 100 | 94.5 | 90 | 110 | |
| Zn | 66 | 2 | He | 96.297 | 1.316 | 99142 | 0.83 | 100 | 96.3 | 90 | 110 | |
| Al | 27 | 2 | He | 96.819 | 2.152 | 23991 | 2.01 | 100 | 96.8 | 90 | 110 | |
| B | 11 | 1 | No Gas | 471.915 | 3.708 | 928170 | 4.87 | 500 | 94.4 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 101.740 | 2.804 | 1021143 | 3.73 | 100 | 101.7 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 566.474 | 4.546 | 2516108 | 3.36 | 5000 | 11.3 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 474.490 | 5.555 | 218797 | 0.61 | 500 | 94.9 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 95.422 | 2.520 | 1063395 | 1.63 | 100 | 95.4 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 95.876 | 1.358 | 219943 | 1.20 | 100 | 95.9 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 96.416 | 0.214 | 1757013 | 1.66 | 100 | 96.4 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 95.606 | 1.069 | 374722 | 0.94 | 100 | 95.6 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 93.153 | 0.797 | 659738 | 2.55 | 100 | 93.2 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 95.385 | 5.406 | 950047 | 1.48 | 100 | 95.4 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 93.889 | 1.999 | 281886 | 0.19 | 100 | 93.9 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 95.456 | 6.433 | 2366892 | 2.46 | 100 | 95.5 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 90.838 | 6.313 | 953903 | 2.09 | 100 | 90.8 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 94.389 | 3.258 | 3261216 | 2.43 | 100 | 94.4 | 90 | 110 | |
| U | 238 | 1 | No Gas | 98.063 | 3.632 | 3629530 | 3.65 | 100 | 98.1 | 90 | 110 | |
| Ca | 43 | 2 | He | 9387.954 | 4.031 | 12269 | 4.93 | 10000 | 93.9 | 90 | 110 | |
| Sb | 121 | 2 | He | 95.148 | 0.784 | 483131 | 0.75 | 100 | 95.1 | 90 | 110 | |
| Ti | 47 | 2 | He | 96.609 | 1.300 | 13187 | 2.27 | 100 | 96.6 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 99.439 | 4.289 | 783753 | 0.99 | 100 | 99.4 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 961217 | 3.49 | 957133 | 100.43 | 70 | 120 | |
| Ge | 72 | 2 | He | 532585 | 0.98 | 530792 | 100.34 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1669106 | 4.64 | 1680329 | 99.33 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2051172 | 1.84 | 2126707 | 96.45 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2252536 | 4.29 | 2340208 | 96.25 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 129_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:26:29-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.099 | 38.9 | 57933 | 3.1 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.016 | 36.7 | 68 | 25.7 | 0.5 | |
| V | 51 | 2 | He | 0.737 | 10.3 | 7000 | 3.1 | 2.5 | |
| Cr | 52 | 2 | He | 0.019 | 181.2 | 1373 | 9.9 | 2.5 | |
| Fe | 56 | 2 | He | 1.090 | 9.2 | 10134 | 2.0 | 100 | |
| Se | 78 | 2 | He | -0.001 | -18399.1 | 33 | 34.8 | 2 | |
| As | 75 | 2 | He | 0.399 | 15.4 | 426 | 8.6 | 2.5 | |
| Ca | 44 | 2 | He | -5.065 | -32.8 | 473 | 5.3 | 100 | |
| Na | 23 | 2 | He | 8.283 | 21.0 | 161127 | 1.7 | 100 | |
| Mg | 24 | 2 | He | 0.576 | 7.1 | 900 | 1.9 | 100 | |
| K | 39 | 2 | He | 13.431 | 20.9 | 47699 | 1.8 | 100 | |
| Mn | 55 | 2 | He | -0.099 | -33.5 | 833 | 11.8 | 2.5 | |
| Co | 59 | 2 | He | -0.014 | -6.7 | 140 | 7.1 | 2.5 | |
| Ni | 60 | 2 | He | 0.003 | 281.3 | 153 | 13.6 | 2.5 | |
| Cu | 63 | 2 | He | 0.061 | 42.0 | 1330 | 7.9 | 2 | |
| Zn | 66 | 2 | He | 0.139 | 24.4 | 430 | 6.2 | 2.5 | |
| Al | 27 | 2 | He | -1.299 | -41.8 | 1063 | 13.7 | 5 | |
| B | 11 | 1 | No Gas | 1.378 | 87.6 | 36421 | 5.2 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -1.671 | -5.1 | 41462 | 1.1 | 5 | |
| Si | 28 | 1 | No Gas | 2.447 | 68.5 | 170950 | 1.1 | 10 | |
| P | 31 | 1 | No Gas | -27.872 | -9.7 | 19698 | 3.4 | 10 | |
| Ag | 107 | 1 | No Gas | 0.006 | 14.5 | 243 | 6.3 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.013 | 67.9 | 33 | 62.4 | 1 | |
| Sr | 88 | 1 | No Gas | -0.004 | -114.8 | 1957 | 4.4 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.038 | 15.4 | 210 | 12.6 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.207 | 5.3 | 2310 | 5.5 | 5 | |
| Sb | 121 | 1 | No Gas | 0.276 | 12.2 | 3337 | 7.3 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.008 | 382.7 | 343 | 27.1 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.090 | 33.1 | 2744 | 30.7 | 1 | |
| Tl | 203 | 1 | No Gas | 0.084 | 31.0 | 1083 | 28.9 | 1 | |
| Pb | 208 | 1 | No Gas | 0.025 | 25.1 | 2667 | 7.2 | 2.5 | |
| U | 238 | 1 | No Gas | 0.008 | 21.1 | 343 | 21.9 | 2.5 | |
| Ca | 43 | 2 | He | 2.744 | 564.1 | 20 | 100.0 | 100 | |
| Sb | 121 | 2 | He | 0.256 | 9.1 | 1530 | 6.2 | 2.5 | |
| Ti | 47 | 2 | He | -0.024 | 0.0 | 0 | #DIV/0! | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.067 | 53.0 | 2194 | 10.8 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 943827 | 2.42 | 957133 | 98.61 | 70 | 120 | |
| Ge | 72 | 2 | He | 520849 | 2.28 | 530792 | 98.13 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1691200 | 3.05 | 1680329 | 100.65 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2096391 | 2.14 | 2126707 | 98.57 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2282280 | 3.69 | 2340208 | 97.52 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 170_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T20:43:49-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 101.620 | 1.146 | 1313931 | 1.98 | 100 | 101.6 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 100.664 | 0.736 | 312737 | 0.34 | 100 | 100.7 | 90 | 110 | |
| V | 51 | 2 | He | 101.656 | 1.397 | 431681 | 1.28 | 100 | 101.7 | 90 | 110 | |
| Cr | 52 | 2 | He | 100.262 | 1.131 | 520578 | 0.83 | 100 | 100.3 | 90 | 110 | |
| Fe | 56 | 2 | He | 10151.343 | 2.274 | 47182753 | 1.17 | 10000 | 101.5 | 90 | 110 | |
| Se | 78 | 2 | He | 102.632 | 0.436 | 5116 | 2.05 | 100 | 102.6 | 90 | 110 | |
| Sn | 118 | 2 | He | 100.614 | 0.943 | 394455 | 0.93 | 100 | 100.6 | 90 | 110 | |
| As | 75 | 2 | He | 103.612 | 0.728 | 62669 | 1.31 | 100 | 103.6 | 90 | 110 | |
| Ca | 44 | 2 | He | 10608.292 | 3.307 | 242685 | 2.11 | 10000 | 106.1 | 90 | 110 | |
| Na | 23 | 2 | He | 10356.352 | 0.751 | 9189831 | 2.30 | 10000 | 103.6 | 90 | 110 | |
| Mg | 24 | 2 | He | 10429.225 | 1.061 | 5266325 | 2.60 | 10000 | 104.3 | 90 | 110 | |
| K | 39 | 2 | He | 10689.882 | 2.196 | 4247095 | 0.98 | 10000 | 106.9 | 90 | 110 | |
| Mn | 55 | 2 | He | 102.171 | 1.108 | 356322 | 0.77 | 100 | 102.2 | 90 | 110 | |
| Co | 59 | 2 | He | 98.061 | 1.532 | 809242 | 0.17 | 100 | 98.1 | 90 | 110 | |
| Ni | 60 | 2 | He | 100.583 | 0.357 | 208366 | 1.86 | 100 | 100.6 | 90 | 110 | |
| Cu | 63 | 2 | He | 100.710 | 0.860 | 567788 | 2.42 | 100 | 100.7 | 90 | 110 | |
| Zn | 66 | 2 | He | 102.057 | 1.662 | 109336 | 0.42 | 100 | 102.1 | 90 | 110 | |
| Al | 27 | 2 | He | 107.741 | 0.908 | 27625 | 1.23 | 100 | 107.7 | 90 | 110 | |
| B | 11 | 1 | No Gas | 517.101 | 3.679 | 1083022 | 2.65 | 500 | 103.4 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 109.130 | 3.667 | 1163618 | 3.69 | 100 | 109.1 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 539.591 | 2.615 | 2564844 | 2.45 | 5000 | 10.8 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 518.523 | 1.664 | 252186 | 1.16 | 500 | 103.7 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 103.551 | 3.385 | 1203455 | 2.32 | 100 | 103.6 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 103.200 | 1.814 | 246893 | 0.58 | 100 | 103.2 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 101.970 | 3.753 | 1937091 | 1.90 | 100 | 102.0 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 101.307 | 3.114 | 414024 | 1.53 | 100 | 101.3 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 98.095 | 0.792 | 724446 | 1.60 | 100 | 98.1 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 99.448 | 1.846 | 1057331 | 1.08 | 100 | 99.4 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 101.895 | 3.927 | 318981 | 2.46 | 100 | 101.9 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 99.816 | 4.138 | 2661484 | 2.49 | 100 | 99.8 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 93.307 | 1.299 | 1054063 | 1.41 | 100 | 93.3 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 97.539 | 1.439 | 3621389 | 0.70 | 100 | 97.5 | 90 | 110 | |
| U | 238 | 1 | No Gas | 99.506 | 2.237 | 3957488 | 2.65 | 100 | 99.5 | 90 | 110 | |
| Ca | 43 | 2 | He | 10538.169 | 1.389 | 14328 | 1.18 | 10000 | 105.4 | 90 | 110 | |
| Sb | 121 | 2 | He | 102.334 | 1.848 | 540758 | 0.98 | 100 | 102.3 | 90 | 110 | |
| Ti | 47 | 2 | He | 103.371 | 3.253 | 14681 | 2.59 | 100 | 103.4 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 102.405 | 1.281 | 861304 | 1.09 | 100 | 102.4 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1027093 | 0.89 | 957133 | 107.31 | 70 | 120 | |
| Ge | 72 | 2 | He | 554353 | 1.70 | 530792 | 104.44 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1778989 | 0.77 | 1680329 | 105.87 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2139329 | 1.95 | 2126707 | 100.59 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2419155 | 1.95 | 2340208 | 103.37 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 171_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T20:45:38-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.098 | -124.5 | 63602 | 1.5 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.013 | 21.9 | 70 | 14.3 | 0.5 | |
| V | 51 | 2 | He | 1.590 | 4.1 | 11141 | 2.4 | 2.5 | |
| Cr | 52 | 2 | He | 0.006 | 379.6 | 1410 | 8.9 | 2.5 | |
| Fe | 56 | 2 | He | 1.411 | 6.6 | 12399 | 3.2 | 100 | |
| Se | 78 | 2 | He | -0.038 | -575.9 | 33 | 33.0 | 2 | |
| As | 75 | 2 | He | 0.635 | 8.6 | 601 | 5.2 | 2.5 | |
| Ca | 44 | 2 | He | -4.010 | -98.8 | 533 | 17.0 | 100 | |
| Na | 23 | 2 | He | 46.807 | 4.1 | 207014 | 0.7 | 100 | |
| Mg | 24 | 2 | He | 0.660 | 18.5 | 1010 | 6.0 | 100 | |
| K | 39 | 2 | He | 11.328 | 10.5 | 50422 | 0.7 | 100 | |
| Mn | 55 | 2 | He | -0.075 | -13.0 | 980 | 3.7 | 2.5 | |
| Co | 59 | 2 | He | -0.009 | -62.0 | 197 | 22.9 | 2.5 | |
| Ni | 60 | 2 | He | 0.009 | 270.9 | 177 | 29.0 | 2.5 | |
| Cu | 63 | 2 | He | 0.067 | 21.0 | 1467 | 5.7 | 2 | |
| Zn | 66 | 2 | He | 0.455 | 20.1 | 803 | 12.5 | 2.5 | |
| Al | 27 | 2 | He | -1.872 | -28.1 | 1000 | 13.1 | 5 | |
| B | 11 | 1 | No Gas | 2.752 | 27.1 | 44541 | 4.2 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -2.240 | -4.5 | 37267 | 1.6 | 5 | |
| Si | 28 | 1 | No Gas | -5.081 | -15.3 | 144186 | 0.9 | 10 | |
| P | 31 | 1 | No Gas | -12.444 | -32.7 | 26820 | 4.2 | 10 | |
| Ag | 107 | 1 | No Gas | 0.023 | 8.8 | 463 | 5.0 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.020 | 22.3 | 53 | 21.7 | 1 | |
| Sr | 88 | 1 | No Gas | -0.007 | -51.2 | 1994 | 3.3 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.043 | 29.1 | 240 | 20.8 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.243 | 26.3 | 2704 | 17.0 | 5 | |
| Sb | 121 | 1 | No Gas | 0.243 | 11.9 | 3114 | 8.6 | 2.5 | |
| Ba | 137 | 1 | No Gas | -0.010 | -106.1 | 303 | 12.5 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.127 | 51.6 | 3904 | 45.4 | 1 | |
| Tl | 203 | 1 | No Gas | 0.125 | 46.2 | 1623 | 40.9 | 1 | |
| Pb | 208 | 1 | No Gas | 0.016 | 49.0 | 2477 | 10.2 | 2.5 | |
| U | 238 | 1 | No Gas | 0.011 | 6.9 | 497 | 7.1 | 2.5 | |
| Ca | 43 | 2 | He | 4.286 | 97.5 | 23 | 24.7 | 100 | |
| Sb | 121 | 2 | He | 0.237 | 9.6 | 1543 | 7.8 | 2.5 | |
| Ti | 47 | 2 | He | 0.139 | 29.4 | 23 | 24.7 | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.185 | 15.1 | 3250 | 9.1 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1077820 | 1.01 | 957133 | 112.61 | 70 | 120 | |
| Ge | 72 | 2 | He | 559580 | 0.28 | 530792 | 105.42 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1750901 | 2.39 | 1680329 | 104.20 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2205361 | 1.23 | 2126707 | 103.70 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2434454 | 1.47 | 2340208 | 104.03 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LCS-155817 |
| Data File Name | 172SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T20:47:33-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817/RR |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.042 | -0.042 | -334.94 | 64302 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 46.238 | 46.238 | 0.90 | 150725 | 0.03 | 2000 | |
| V | 51 | 2 | He | 46.545 | 46.545 | 1.64 | 207646 | 0.02 | 2000 | |
| Cr | 52 | 2 | He | 45.674 | 45.674 | 1.77 | 246971 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 4631.015 | 4631.015 | 1.89 | 22351653 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 51.414 | 51.414 | 1.21 | 2678 | 1.92 | 2000 | |
| Sn | 118 | 2 | He | 0.061 | 0.061 | 45.75 | 633 | 0.01 | 200 | |
| As | 75 | 2 | He | 48.384 | 48.384 | 1.53 | 30499 | 0.16 | 2000 | |
| Ca | 44 | 2 | He | 4773.896 | 4773.896 | 0.60 | 113763 | 4.20 | 200000 | |
| Na | 23 | 2 | He | 4772.215 | 4772.215 | 2.24 | 4487402 | 0.11 | 200000 | |
| Mg | 24 | 2 | He | 4843.195 | 4843.195 | 0.88 | 2538911 | 0.19 | 200000 | |
| K | 39 | 2 | He | 4965.457 | 4965.457 | 1.25 | 2073642 | 0.24 | 200000 | |
| Mn | 55 | 2 | He | 47.310 | 47.310 | 0.89 | 171990 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 44.890 | 44.890 | 1.24 | 384770 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 46.048 | 46.048 | 1.90 | 99108 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 47.551 | 47.551 | 1.43 | 278889 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 48.740 | 48.740 | 1.03 | 54383 | 0.09 | 2000 | |
| Al | 27 | 2 | He | 58.064 | 58.064 | 3.05 | 16146 | 0.36 | 2000 | |
| B | 11 | 1 | No Gas | -2.664 | -2.664 | -17.00 | 33031 | -0.01 | 2000 | |
| Al | 27 | 1 | No Gas | 58.129 | 58.129 | 2.86 | 666739 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 108.920 | 108.920 | 4.92 | 671442 | 0.02 | 2000 | |
| Ag | 107 | 1 | No Gas | 46.683 | 46.683 | 1.86 | 561732 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 48.787 | 48.787 | 1.07 | 120828 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | -0.009 | -0.009 | -63.32 | 1974 | 0.00 | 2000 | |
| Mo | 95 | 1 | No Gas | 46.470 | 46.470 | 2.96 | 196610 | 0.02 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.052 | 0.052 | 13.79 | 1257 | 0.00 | 2000 | |
| Sb | 121 | 1 | No Gas | 46.902 | 46.902 | 0.32 | 513499 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 46.538 | 46.538 | 1.43 | 151030 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 44.738 | 44.738 | 3.58 | 1225579 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 43.430 | 43.430 | 1.80 | 503989 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 45.035 | 45.035 | 1.94 | 1718335 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.000 | 0.000 | 383.73 | 57 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 4580.004 | 4580.004 | 8.05 | 6475 | 70.73 | 200000 | |
| Sb | 121 | 2 | He | 47.806 | 47.806 | 0.84 | 262441 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 44.927 | 44.927 | 2.46 | 6628 | 0.68 | 2000 | |
| Cu | 63 | 1 | No Gas | 48.033 | 48.033 | 1.85 | 416622 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 48.803 | 48.803 | 1.07 | 126512 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 50.790 | 50.790 | 4.81 | 6120 | 0.83 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1077654 | 1.94 | 957133 | 112.59 | 70 | 120 | |
| Ge | 72 | 2 | He | 575487 | 0.65 | 530792 | 108.42 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1830656 | 1.45 | 1680329 | 108.95 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In | 115 | 1 | No Gas | 2214240 | 1.53 | 2126707 | 104.12 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2484807 | 2.10 | 2340208 | 106.18 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 179_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T21:00:48-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 104.738 | 3.846 | 1339495 | 3.08 | 100 | 104.7 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 100.858 | 3.456 | 310317 | 0.46 | 100 | 100.9 | 90 | 110 | |
| V | 51 | 2 | He | 98.091 | 1.665 | 413920 | 1.15 | 100 | 98.1 | 90 | 110 | |
| Cr | 52 | 2 | He | 97.938 | 1.909 | 505155 | 1.33 | 100 | 97.9 | 90 | 110 | |
| Fe | 56 | 2 | He | 9982.698 | 1.938 | 46094346 | 1.28 | 10000 | 99.8 | 90 | 110 | |
| Se | 78 | 2 | He | 103.492 | 2.392 | 5123 | 1.79 | 100 | 103.5 | 90 | 110 | |
| Sn | 118 | 2 | He | 99.284 | 1.716 | 389027 | 2.74 | 100 | 99.3 | 90 | 110 | |
| As | 75 | 2 | He | 100.742 | 1.987 | 60531 | 1.58 | 100 | 100.7 | 90 | 110 | |
| Ca | 44 | 2 | He | 10248.495 | 1.923 | 232958 | 1.29 | 10000 | 102.5 | 90 | 110 | |
| Na | 23 | 2 | He | 10327.155 | 2.245 | 9103103 | 2.75 | 10000 | 103.3 | 90 | 110 | |
| Mg | 24 | 2 | He | 10415.531 | 2.778 | 5223597 | 2.76 | 10000 | 104.2 | 90 | 110 | |
| K | 39 | 2 | He | 10470.546 | 2.839 | 4133412 | 2.15 | 10000 | 104.7 | 90 | 110 | |
| Mn | 55 | 2 | He | 99.789 | 1.413 | 345737 | 1.01 | 100 | 99.8 | 90 | 110 | |
| Co | 59 | 2 | He | 96.541 | 2.273 | 791425 | 1.63 | 100 | 96.5 | 90 | 110 | |
| Ni | 60 | 2 | He | 99.755 | 1.586 | 205251 | 1.02 | 100 | 99.8 | 90 | 110 | |
| Cu | 63 | 2 | He | 99.149 | 0.030 | 555215 | 0.67 | 100 | 99.1 | 90 | 110 | |
| Zn | 66 | 2 | He | 101.528 | 1.249 | 108055 | 0.64 | 100 | 101.5 | 90 | 110 | |
| Al | 27 | 2 | He | 106.657 | 2.094 | 27180 | 2.26 | 100 | 106.7 | 90 | 110 | |
| B | 11 | 1 | No Gas | 520.901 | 4.282 | 1080180 | 0.25 | 500 | 104.2 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 106.916 | 3.875 | 1123087 | 2.40 | 100 | 106.9 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 531.770 | 1.746 | 2490796 | 2.11 | 5000 | 10.6 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 506.185 | 4.108 | 243013 | 0.68 | 500 | 101.2 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 100.683 | 4.267 | 1153020 | 4.07 | 100 | 100.7 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 103.061 | 3.842 | 242861 | 2.06 | 100 | 103.1 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 104.452 | 2.894 | 1955112 | 1.00 | 100 | 104.5 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 100.911 | 2.225 | 406360 | 0.85 | 100 | 100.9 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 97.778 | 1.325 | 711378 | 0.90 | 100 | 97.8 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 98.457 | 4.367 | 1029900 | 0.63 | 100 | 98.5 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 101.424 | 2.281 | 312866 | 0.51 | 100 | 101.4 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 101.832 | 2.569 | 2654709 | 0.95 | 100 | 101.8 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 96.227 | 2.709 | 1062375 | 0.40 | 100 | 96.2 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 99.255 | 0.654 | 3602968 | 2.01 | 100 | 99.3 | 90 | 110 | |
| U | 238 | 1 | No Gas | 98.800 | 1.372 | 3841264 | 2.07 | 100 | 98.8 | 90 | 110 | |
| Ca | 43 | 2 | He | 10458.390 | 2.915 | 14124 | 2.34 | 10000 | 104.6 | 90 | 110 | |
| Sb | 121 | 2 | He | 100.935 | 1.089 | 529891 | 1.30 | 100 | 100.9 | 90 | 110 | |
| Ti | 47 | 2 | He | 97.684 | 6.217 | 13781 | 5.62 | 100 | 97.7 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 100.726 | 2.688 | 833951 | 2.33 | 100 | 100.7 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1018050 | 3.88 | 957133 | 106.36 | 70 | 120 | |
| Ge | 72 | 2 | He | 550638 | 0.66 | 530792 | 103.74 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1752007 | 3.71 | 1680329 | 104.27 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2107724 | 1.87 | 2126707 | 99.11 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2365100 | 2.66 | 2340208 | 101.06 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 180_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T21:02:37-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.002 | 3404.5 | 64551 | 1.0 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.023 | 28.3 | 100 | 20.0 | 0.5 | |
| V | 51 | 2 | He | 0.749 | 10.1 | 7483 | 4.9 | 2.5 | |
| Cr | 52 | 2 | He | -0.026 | -47.1 | 1227 | 6.1 | 2.5 | |
| Fe | 56 | 2 | He | 1.272 | 4.9 | 11605 | 3.8 | 100 | |
| Se | 78 | 2 | He | -0.070 | -272.0 | 31 | 30.2 | 2 | |
| As | 75 | 2 | He | 0.360 | 3.2 | 429 | 3.6 | 2.5 | |
| Ca | 44 | 2 | He | -0.419 | -765.8 | 610 | 14.6 | 100 | |
| Na | 23 | 2 | He | 105.960 | 5.2 | 255883 | 1.0 | 100 | CCB Main CR1 Failed |
| Mg | 24 | 2 | He | 0.788 | 12.5 | 1063 | 7.1 | 100 | |
| K | 39 | 2 | He | 32.142 | 18.0 | 57948 | 1.9 | 100 | |
| Mn | 55 | 2 | He | -0.082 | -36.6 | 947 | 13.2 | 2.5 | |
| Co | 59 | 2 | He | -0.013 | -54.0 | 160 | 34.8 | 2.5 | |
| Ni | 60 | 2 | He | 0.025 | 40.8 | 207 | 10.1 | 2.5 | |
| Cu | 63 | 2 | He | 0.057 | 36.5 | 1390 | 5.9 | 2 | |
| Zn | 66 | 2 | He | 0.281 | 36.8 | 607 | 16.6 | 2.5 | |
| Al | 27 | 2 | He | -1.909 | -13.0 | 980 | 8.7 | 5 | |
| B | 11 | 1 | No Gas | 5.463 | 16.8 | 50028 | 4.3 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -2.460 | -1.7 | 35519 | 0.9 | 5 | |
| Si | 28 | 1 | No Gas | -2.268 | -15.8 | 158444 | 1.1 | 10 | |
| P | 31 | 1 | No Gas | -20.042 | -3.7 | 23968 | 1.7 | 10 | |
| Ag | 107 | 1 | No Gas | 0.020 | 34.2 | 417 | 20.0 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.014 | 17.2 | 37 | 15.7 | 1 | |
| Sr | 88 | 1 | No Gas | 0.004 | 340.5 | 2207 | 11.3 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.054 | 51.1 | 287 | 40.4 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.251 | 17.6 | 2760 | 11.9 | 5 | |
| Sb | 121 | 1 | No Gas | 0.283 | 8.9 | 3584 | 6.6 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.008 | 176.0 | 360 | 12.7 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.133 | 50.6 | 4074 | 46.0 | 1 | |
| Tl | 203 | 1 | No Gas | 0.142 | 54.7 | 1820 | 50.2 | 1 | |
| Pb | 208 | 1 | No Gas | 0.021 | 10.5 | 2667 | 3.5 | 2.5 | |
| U | 238 | 1 | No Gas | 0.010 | 18.4 | 463 | 18.1 | 2.5 | |
| Ca | 43 | 2 | He | 2.113 | 355.6 | 20 | 50.0 | 100 | |
| Sb | 121 | 2 | He | 0.273 | 15.4 | 1713 | 10.4 | 2.5 | |
| Ti | 47 | 2 | He | -0.024 | 0.0 | 0 | #DIV/0! | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.238 | 6.2 | 3731 | 2.9 | 2.5 | |

**QC ISTD Table**

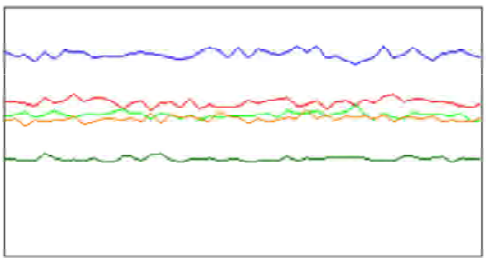
| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1072139 | 1.69 | 957133 | 112.02 | 70 | 120 | |
| Ge | 72 | 2 | He | 552903 | 2.55 | 530792 | 104.17 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1772557 | 2.07 | 1680329 | 105.49 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2201258 | 0.76 | 2126707 | 103.51 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2431971 | 1.38 | 2340208 | 103.92 | 70 | 120 | |

# Tune Check Report

| | |
|---|---|
| **Operator Name** | ALSHS NoUser |
| **Acq/Data Batch** | C:\Agilent\ICPMH\1\DATA\072820A.b |
| **Acq. Date-Time** | 7/28/2020 10:11:34 AM |
| **Report Comment** | --- |
| **Instrument Name** | G8421A SG18523544 |

**[No Gas]**

**Sensitivity**



| | |
|---|---|
| Sampling Period [sec] | 0.514 |
| Integration Time [sec] | 0.1 |

| Mass | Range | Count | Resp [cps/ug/l] | Resp (Required) [cps/ug/l] | Resp (Flag) |
|---|---|---|---|---|---|
| 9 | 5000 | 3096 | 30962.36 | | |
| 24 | 20000 | 11389 | 113889.24 | | |
| 59 | 20000 | 16305 | 163046.40 | | |
| 115 | 50000 | 27693 | 276933.21 | | |
| 208 | 50000 | 19543 | 195432.36 | | |

| Mass | Resp Ratio | Resp Ratio (Required) | Resp Ratio (Flag) |
|---|---|---|---|
| 9 | | - | |
| 24 | | - | |
| 59 | | - | |
| 115 | | - | |
| 208 | | - | |

| Mass | RSD% | RSD% (Required) | RSD% (Flag) |
|---|---|---|---|
| 9 | 2.471 | 5.000 | |
| 24 | 2.200 | 5.000 | |
| 59 | 2.079 | 5.000 | |
| 115 | 2.264 | 5.000 | |
| 208 | 2.110 | 5.000 | |

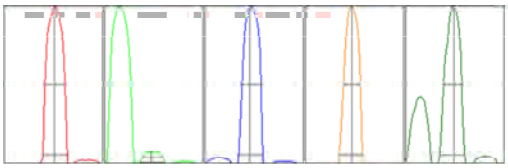
| Mass | Background | Background (Required) | Background (Flag) |
|---|---|---|---|
| 9 | 0.000 | | |
| 24 | 0.400 | | |
| 59 | 0.400 | | |
| 115 | 0.200 | | |
| 208 | 0.500 | | |

**Oxide/Doubly Charged Ratio**

| | |
|---|---|
| Oxide | 156 / 140 0.644 % |
| Doubly Charged | 70 / 140 0.712 % |

# Tune Check Report

### Resolution/Axis



| | |
|---|---|
| Integration Time [sec] | 0.1 |
| Acquisition Time [sec] | 37.4 |
| Y Axis | Linear |

| Mass | Peak Height | Axis | Axis (Required) | Axis (Flag) |
|---|---|---|---|---|
| 9 | 3161.15 | 9.05 | 8.90 - 9.10 | |
| 24 | 11251.34 | 23.95 | 23.90 - 24.10 | |
| 59 | 16439.18 | 58.90 | 58.90 - 59.10 | |
| 115 | 27582.16 | 114.95 | 114.90 - 115.10 | |
| 208 | 19231.82 | 208.00 | 207.90 - 208.10 | |

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 9 | 0.62 | 0.740 | | |
| 24 | 0.62 | 0.778 | | |
| 59 | 0.58 | 0.734 | | |
| 115 | 0.52 | 0.719 | | |
| 208 | 0.56 | 0.769 | | |

### Tune Parameters

#### Plasma Parameters

| | | | | | |
|---|---|---|---|---|---|
| Plasma Mode | --- | Nebulizer Gas | 0.45 L/min | Dilution Gas | 0.55 L/min |
| RF Power | 1600 W | Option Gas | --- | Auxiliary Gas | 0.90 L/min |
| RF Matching | 1.80 V | Nebulizer Pump | 0.10 rps | Plasma Gas | 15.0 L/min |
| Sample Depth | 8.0 mm | S/C Temp | 2 °C | | |

#### Lens Parameters

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 9.1 V | Deflect | 12.6 V |
| Extract 2 | -195.0 V | Cell Entrance | -30 V | Plate Bias | -35 V |
| Omega Bias | -90 V | Cell Exit | -50 V | | |

#### Cell Parameters

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | No | 3rd Gas Flow | --- | Energy Discrimination | 5.0 V |
| He Flow | 0.0 mL/min | OctP Bias | -8.0 V | | |
| H2 Flow | --- | OctP RF | 190 V | | |

#### QP Parameters

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 133 | Axis Gain | 0.9999 | QP Bias | -3.0 V |
| Mass Offset | 125 | Axis Offset | 0.13 | | |

### Hardware Settings

#### Torch

| | | | |
|---|---|---|---|
| Torch H | -0.3 mm | Torch V | 0.3 mm |

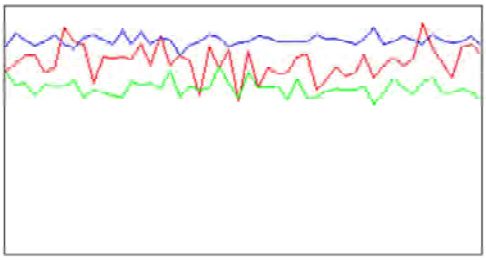
#### EM

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 3.2 mV | Analog HV | 2405 V | Pulse HV | 1182 V |

**[He]**

# Tune Check Report

**Sensitivity**



| | |
|---|---|
| Sampling Period [sec] | 0.306 |
| Integration Time [sec] | 0.1 |

| Mass | Range | Count | Resp [cps/ug/l] | Resp (Required) [cps/ug/l] | Resp (Flag) |
|---|---|---|---|---|---|
| 9 | 200 | 155 | 1552.09 | | |
| 24 | 1000 | 670 | 6697.60 | | |
| 59 | 10000 | 8638 | 86377.18 | | |

| Mass | Resp Ratio | Resp Ratio (Required) | Resp Ratio (Flag) |
|---|---|---|---|
| 9 | | - | |
| 24 | | - | |
| 59 | | - | |

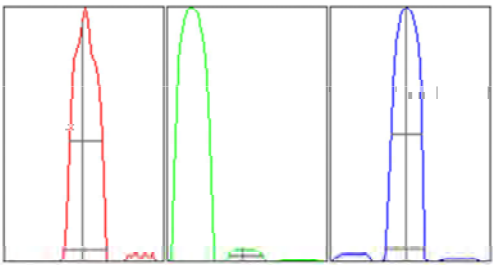
| Mass | RSD% | RSD% (Required) | RSD% (Flag) |
|---|---|---|---|
| 9 | 8.299 | 5.000 | Fail |
| 24 | 4.916 | 5.000 | |
| 59 | 2.399 | 5.000 | |

| Mass | Background | Background (Required) | Background (Flag) |
|---|---|---|---|
| 9 | 0.100 | | |
| 24 | 0.000 | | |
| 59 | 0.000 | | |

**Oxide/Doubly Charged Ratio**

| | |
|---|---|
| Oxide | 156 / 140 0.318 % |
| Doubly Charged | 70 / 140 0.712 % |

**Resolution/Axis**



| | |
|---|---|
| Integration Time [sec] | 0.1 |
| Acquisition Time [sec] | 22.24 |
| Y Axis | Linear |

| Mass | Peak Height | Axis | Axis (Required) | Axis (Flag) |
|---|---|---|---|---|
| 9 | 164.27 | 9.00 | 8.90 - 9.10 | |
| 24 | 674.69 | 23.95 | 23.90 - 24.10 | |
| 59 | 8722.65 | 58.95 | 58.90 - 59.10 | |

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 9 | 0.62 | 0.783 | | |
| 24 | 0.63 | 0.776 | | |

# Tune Check Report

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 59 | 0.58 | 0.734 | | |

## Tune Parameters

### Plasma Parameters

| | | | | | |
|---|---|---|---|---|---|
| Plasma Mode | --- | Nebulizer Gas | 0.45 L/min | Dilution Gas | 0.55 L/min |
| RF Power | 1600 W | Option Gas | --- | Auxiliary Gas | 0.90 L/min |
| RF Matching | 1.80 V | Nebulizer Pump | 0.10 rps | Plasma Gas | 15.0 L/min |
| Sample Depth | 8.0 mm | S/C Temp | 2 °C | | |

### Lens Parameters

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 10.0 V | Deflect | 0.0 V |
| Extract 2 | -195.0 V | Cell Entrance | -40 V | Plate Bias | -60 V |
| Omega Bias | -80 V | Cell Exit | -60 V | | |

### Cell Parameters

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | Yes | 3rd Gas Flow | --- | Energy Discrimination | 3.0 V |
| He Flow | 4.0 mL/min | OctP Bias | -18.0 V | | |
| H2 Flow | --- | OctP RF | 200 V | | |

### QP Parameters

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 133 | Axis Gain | 0.9999 | QP Bias | -15.0 V |
| Mass Offset | 125 | Axis Offset | 0.13 | | |

## Hardware Settings

### Torch

| | | | |
|---|---|---|---|
| Torch H | -0.3 mm | Torch V | 0.3 mm |

### EM

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 3.2 mV | Analog HV | 2405 V | Pulse HV | 1182 V |

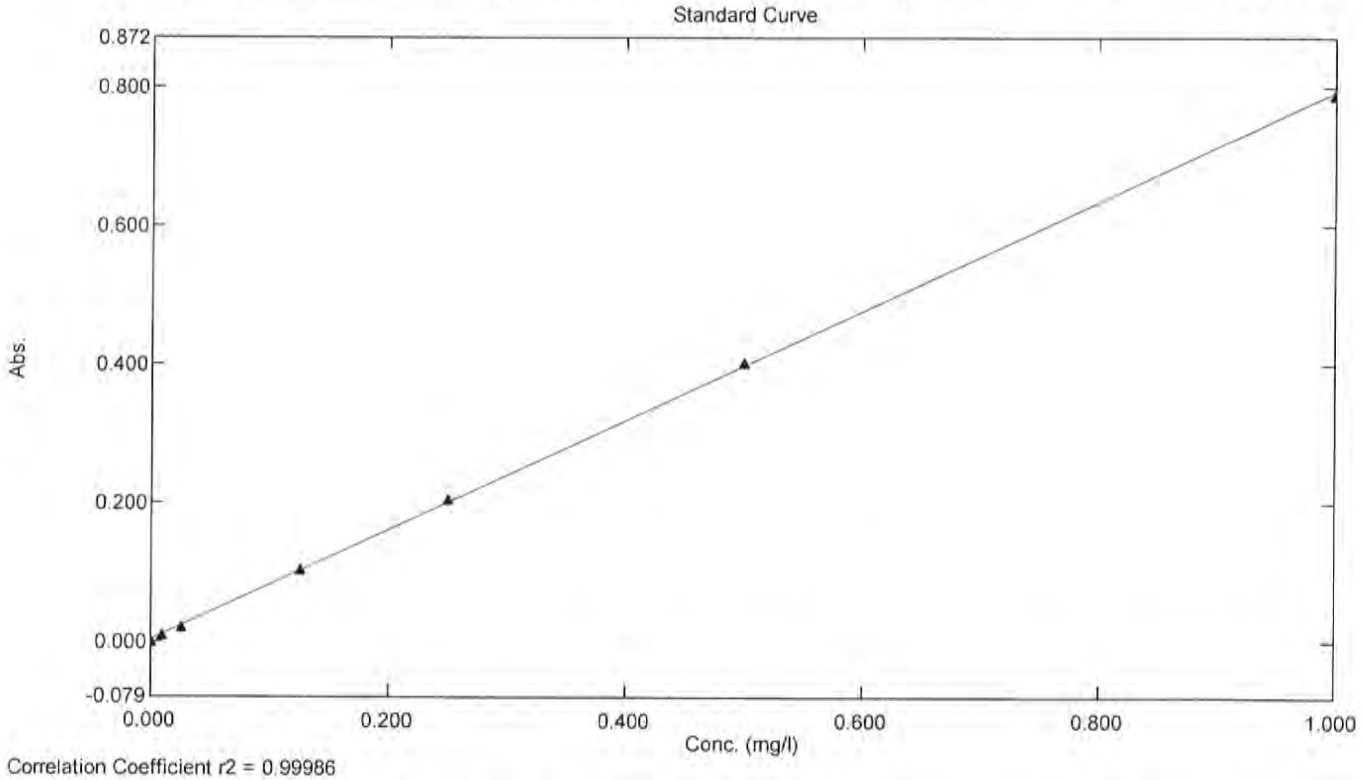
# HS20070621 Wet Chem Raw Data (CR_6)

ALS WO# HS20070621

# Standard Table Report

07/31/2020 12:52:44 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\07152020-CR6 W_.pho




Correlation Coefficient r2 = 0.99986

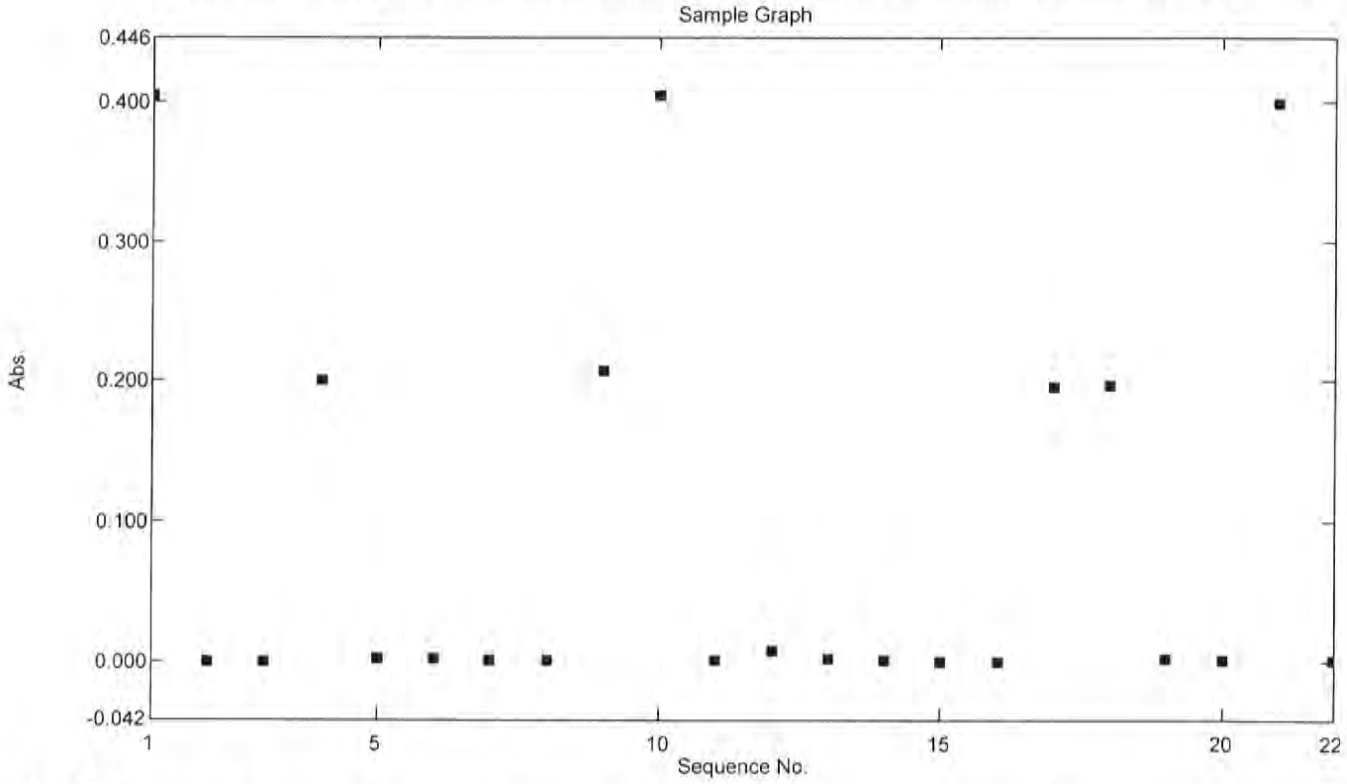
Standard Table

| | Sample ID | Type | Ex | Conc | WL540.0 | Wgt.Factor | Comments |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | Standard | | 0.000 | 0.000 | 1.000 | |
| 2 | STD2 | Standard | | 0.010 | 0.008 | 1.000 | |
| 3 | STD3 | Standard | | 0.025 | 0.020 | 1.000 | |
| 4 | STD4 | Standard | | 0.125 | 0.104 | 1.000 | |
| 5 | STD5 | Standard | | 0.250 | 0.203 | 1.000 | |
| 6 | STD6 | Standard | | 0.500 | 0.403 | 1.000 | |
| 7 | STD7 | Standard | | 1.000 | 0.790 | 1.000 | |
| 8 | | | | | | | |

# Sample Table Report

07/31/2020 12:30:53 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\07152020-CR6 W_.pho



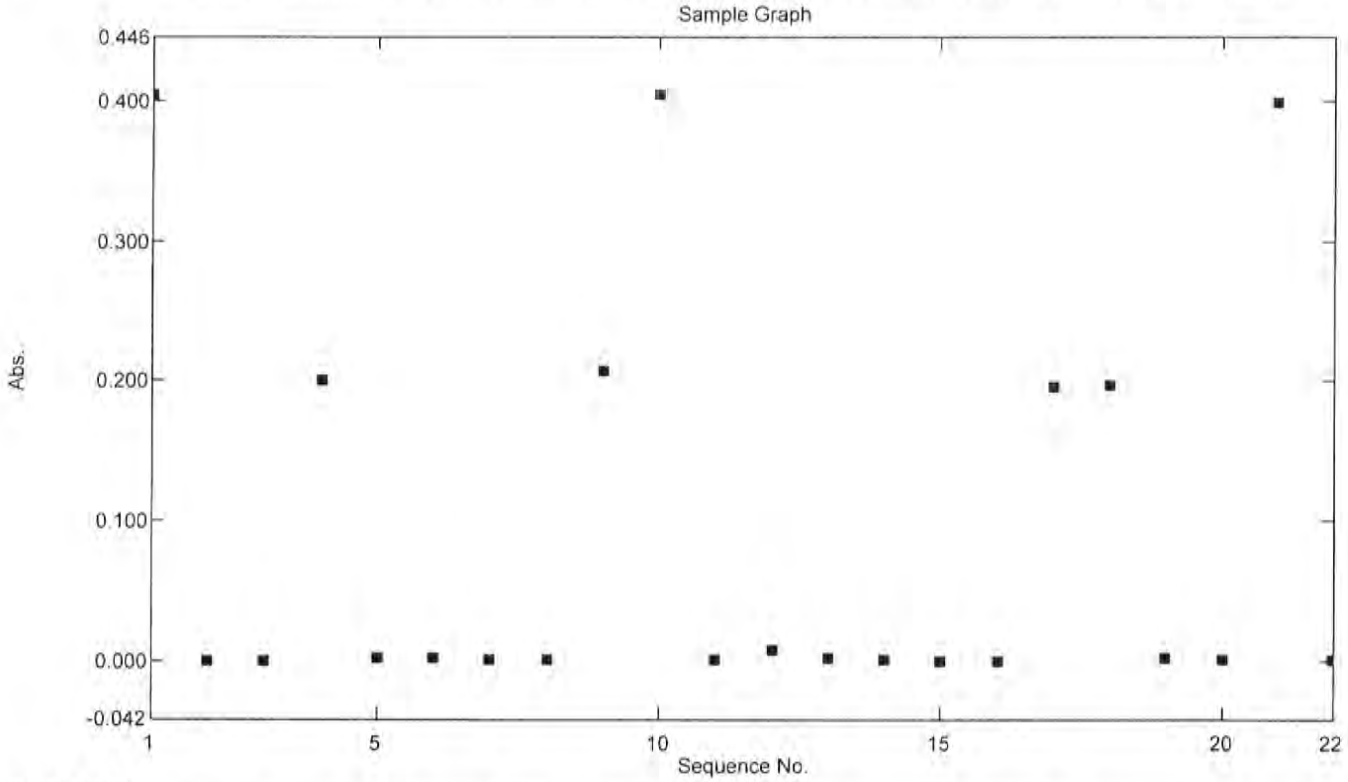

Sample Table

| | Sample ID | Type | Ex | Conc | WL540.0 | Comments |
|---|---|---|---|---|---|---|
| 1 | CCV | Unknown | | 0.508 | 0.404 | 314060710 WC-14 |
| 2 | CCB | Unknown | | -0.004 | -0.000 | 314060711 WC-13 |
| 3 | MBLK | Unknown | | -0.003 | -0.000 | 313105501 WC-13 |
| 4 | LCS | Unknown | | 0.250 | 0.200 | 314060709 WC-14 |
| 5 | HS20070621.01 | Unknown | | -0.002 | 0.001 | 12:46PM,SAMP-BKG=TOTAL |
| 6 | HS20070621.01BKG | Unknown | | -0.002 | 0.001 | 12:46PM,0 |
| 7 | HS20070623.01 | Unknown | | -0.002 | 0.001 | 12:48PM,0 |
| 8 | HS20070623.01BKG | Unknown | | -0.003 | 0.000 | 12:49PM |
| 9 | LCSD | Unknown | | 0.258 | 0.207 | 12:56PM |
| 10 | CCV2 | Unknown | | 0.509 | 0.405 | |
| 11 | CCB2 | Unknown | | -0.002 | 0.001 | |
| 12 | HS20070521.06 | Unknown | | 0.006 | 0.008 | |
| 13 | HS20070635.01 | Unknown | | -0.001 | 0.002 | 4:52PM,0 |
| 14 | HS20070635.01BKG | Unknown | | -0.002 | 0.001 | 4:53PM |
| 15 | HS20070636.01 | Unknown | | -0.004 | -0.001 | 4:53PM,0 |
| 16 | HS20070636.01BKG | Unknown | | -0.005 | -0.001 | 4:54PM |
| 17 | HS20070636.01MS | Unknown | | 0.244 | 0.196 | 4:56PM |
| 18 | HS20070636.01MSD | Unknown | | 0.246 | 0.197 | 4:56PM |
| 19 | HS20070633.01 | Unknown | | -0.002 | 0.001 | 4:57PM,0 |

# Sample Table Report

07/31/2020 12:30:53 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\07152020-CR6 W_.pho




Sample Table

| | Sample ID | Type | Ex | Conc | WL540.0 | Comments |
|---|---|---|---|---|---|---|
| 20 | HS20070633.01BKG | Unknown | | -0.003 | 0.000 | 4:57PM |
| 21 | CCV3 | Unknown | | 0.502 | 0.399 | |
| 22 | CCB3 | Unknown | | -0.003 | 0.000 | |
| 23 | | | | | | |

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20070623

## Longhorn GW Treatment Plant Monthly Effluent Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**19-Aug-2020**

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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  - LH18/24-SP650_071420_BIX
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  - Dates Report
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HS20070623 Wet Chem Raw Data (Cr6_W)

# HS20070623 Longhorn GW Treatment Plant Monthly Effluent Samples Final

ALS WO# HS20070623

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

July 30, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20070623**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Jul 15, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**Work Order:** HS20070623

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20070623-01 | LH18/24-SP650_071420 | Water | | 14-Jul-2020 14:00 | 15-Jul-2020 09:05 | ☐ |
| HS20070623-02 | LH18/24-SP650_071420_BIX | Water | | 14-Jul-2020 14:00 | 15-Jul-2020 09:05 | ☐ |
| HS20070623-03 | Trip Blank | Water | CG-060320-161 | 14-Jul-2020 14:00 | 15-Jul-2020 09:05 | ☐ |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc. **CASE NARRATIVE**
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**Work Order:** HS20070623

## Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

## GCMS Semivolatiles by Method SW8270SIM

### Batch ID: 155513

**Sample ID: LH18/24-SP650_071420 (HS20070623-01)**

• The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.

• The surrogate recoveries could not be determined due to dilution below the calibration range.

## GCMS Volatiles by Method SW8260

### Batch ID: R365280

**Sample ID: HS20070674-01MS**

• MS and MSD are for an unrelated sample

## Metals by Method SW6020

### Batch ID: 155817

**Sample ID: HS20070621-01MS**

• MS and MSD are for an unrelated sample

## WetChemistry by Method SW7196

### Batch ID: R365072

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**ALS Houston, US** Date: 30-Jul-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20070623
Sample ID: LH18/24-SP650_071420 Lab ID:HS20070623-01
Collection Date: 14-Jul-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| **1,2-Dichloroethane** | **0.77** | J | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 17-Jul-2020 13:33 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| 4-Methyl-2-pentanone | 1.0 | U | 0.70 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 30-Jul-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20070623
Sample ID: LH18/24-SP650_071420 Lab ID:HS20070623-01
Collection Date: 14-Jul-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| **cis-1,2-Dichloroethene** | **15** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 17-Jul-2020 13:33 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Toluene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| **Trichloroethene** | **3.4** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 17-Jul-2020 13:33 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:33 |
| *Surr: 1,2-Dichloroethane-d4* | *86.0* | | | **0** | *81-118* | *%REC* | *1* | *17-Jul-2020 13:33* |
| *Surr: 4-Bromofluorobenzene* | *102* | | | **0** | *85-114* | *%REC* | *1* | *17-Jul-2020 13:33* |
| *Surr: Dibromofluoromethane* | *88.2* | | | **0** | *80-119* | *%REC* | *1* | *17-Jul-2020 13:33* |
| *Surr: Toluene-d8* | *97.5* | | | **0** | *89-112* | *%REC* | *1* | *17-Jul-2020 13:33* |
| **SEMIVOLATILES SIM** | | **Method:SW8270SIM** | | | | Prep:SW3510 / 17-Jul-2020 | | Analyst: GEY |
| **1,4-Dioxane** | **15** | a | **1.0** | **1.0** | **1.0** | **ug/L** | 100 | 17-Jul-2020 15:57 |
| *Surr: 2-Fluorobiphenyl* | *0* | *S* | | 0 | *40-140* | *%REC* | *100* | *17-Jul-2020 15:57* |
| *Surr: 4-Terphenyl-d14* | *0* | *S* | | 0 | *40-140* | *%REC* | *100* | *17-Jul-2020 15:57* |
| *Surr: Nitrobenzene-d5* | *0* | *S* | | 0 | *40-140* | *%REC* | *100* | *17-Jul-2020 15:57* |
| **METALS BY ICPMS BY SW6020A** | | **Method:SW6020** | | | | Prep:SW3010A / 27-Jul-2020 | | Analyst: JHD |
| **Barium** | **0.276** | | **0.00190** | **0.00250** | **0.00500** | **mg/L** | 1 | 28-Jul-2020 16:18 |
| Lead | 0.00100 | U | 0.000600 | 0.00100 | 0.00500 | mg/L | 1 | 28-Jul-2020 16:18 |
| Selenium | 0.00250 | U | 0.00110 | 0.00250 | 0.00500 | mg/L | 1 | 28-Jul-2020 16:18 |
| Silver | 0.000500 | U | 0.000200 | 0.000500 | 0.00500 | mg/L | 1 | 28-Jul-2020 16:18 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 30-Jul-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20070623
Sample ID: LH18/24-SP650_071420 Lab ID:HS20070623-01
Collection Date: 14-Jul-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY SW7196A** | | **Method:SW7196** | | | | | | Analyst: KVL |
| Chromium, Hexavalent | 0.0100 | U | 0.00600 | 0.0100 | 0.0100 | mg/L | 1 | 15-Jul-2020 12:40 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 30-Jul-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20070623
Sample ID: LH18/24-SP650_071420_BIX
Lab ID:HS20070623-02
Collection Date: 14-Jul-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)** | | **Method:NA** | | | | | | Analyst: GR |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 29-Jul-2020 12:01 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 30-Jul-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20070623
Sample ID: Trip Blank
Lab ID:HS20070623-03
Collection Date: 14-Jul-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 30-Jul-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20070623

Sample ID: Trip Blank Lab ID:HS20070623-03

Collection Date: 14-Jul-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| cis-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Toluene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Trichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 17-Jul-2020 13:09 |
| *Surr: 1,2-Dichloroethane-d4* | *91.5* | | | **0** | *81-118* | *%REC* | *1* | *17-Jul-2020 13:09* |
| *Surr: 4-Bromofluorobenzene* | *98.9* | | | **0** | *85-114* | *%REC* | *1* | *17-Jul-2020 13:09* |
| *Surr: Dibromofluoromethane* | *93.7* | | | **0** | *80-119* | *%REC* | *1* | *17-Jul-2020 13:09* |
| *Surr: Toluene-d8* | *104* | | | **0** | *89-112* | *%REC* | *1* | *17-Jul-2020 13:09* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Weight / Prep Log**

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**Batch ID:** 155513 **Start Date:** 17 Jul 2020 07:00 **End Date:** 17 Jul 2020 14:00
**Method:** SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20070623-01 | 1 | 1000 (mL) | 1 (mL) | 0.001 |

**Batch ID:** 155817 **Start Date:** 27 Jul 2020 14:30 **End Date:** 27 Jul 2020 18:30
**Method:** WATER - SW3010A **Prep Code:** 3010A

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20070623-01 | | 10 (mL) | 10 (mL) | 1 |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**DATES REPORT**

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** 155513 ( 0 ) | **Test Name :** SEMIVOLATILES SIM | | | | **Matrix:** Water | |
| HS20070623-01 | LH18/24-SP650_071420 | 14 Jul 2020 14:00 | | 17 Jul 2020 11:15 | 17 Jul 2020 15:57 | 100 |
| **Batch ID:** 155817 ( 0 ) | **Test Name :** METALS BY ICPMS BY SW6020A | | | | **Matrix:** Water | |
| HS20070623-01 | LH18/24-SP650_071420 | 14 Jul 2020 14:00 | | 27 Jul 2020 18:30 | 28 Jul 2020 16:18 | 1 |
| **Batch ID:** R365072 ( 0 ) | **Test Name :** HEXAVALENT CHROMIUM BY SW7196A | | | | **Matrix:** Water | |
| HS20070623-01 | LH18/24-SP650_071420 | 14 Jul 2020 14:00 | | | 15 Jul 2020 12:40 | 1 |
| **Batch ID:** R365280 ( 0 ) | **Test Name :** VOLATILES ORGANICS BY METHOD 8260C | | | | **Matrix:** Water | |
| HS20070623-01 | LH18/24-SP650_071420 | 14 Jul 2020 14:00 | | | 17 Jul 2020 13:33 | 1 |
| HS20070623-03 | Trip Blank | 14 Jul 2020 14:00 | | | 17 Jul 2020 13:09 | 1 |
| **Batch ID:** R365837 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) | | | | **Matrix:** Water | |
| HS20070623-02 | LH18/24-SP650_071420_BIX | 14 Jul 2020 14:00 | | | 29 Jul 2020 12:01 | 1 |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID: 155817 ( 0 )** **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

**MBLK** Sample ID: **MBLK-155817** Units: **mg/L** Analysis Date: **28-Jul-2020 16:05**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677311** PrepDate: **27-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.00250 | 0.00500 | | | | | | | | U |
| Lead | 0.00100 | 0.00500 | | | | | | | | U |
| Selenium | 0.00250 | 0.00500 | | | | | | | | U |
| Silver | 0.000500 | 0.00500 | | | | | | | | U |

**LCS** Sample ID: **LCS-155817** Units: **mg/L** Analysis Date: **28-Jul-2020 16:07**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677312** PrepDate: **27-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.04381 | 0.00500 | 0.05 | 0 | 87.6 | 86 - 114 | | | | |
| Selenium | 0.04814 | 0.00500 | 0.05 | 0 | 96.3 | 80 - 120 | | | | |
| Silver | 0.04443 | 0.00500 | 0.05 | 0 | 88.9 | 85 - 116 | | | | |

**LCS** Sample ID: **LCS-155817** Units: **mg/L** Analysis Date: **28-Jul-2020 20:47**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677575** PrepDate: **27-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.04503 | 0.00500 | 0.05 | 0 | 90.1 | 88 - 115 | | | | |

**MS** Sample ID: **HS20070621-01MS** Units: **mg/L** Analysis Date: **28-Jul-2020 16:12**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677315** PrepDate: **27-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.5447 | 0.00500 | 0.05 | 0.4649 | 160 | 86 - 114 | | | | SO |
| Lead | 0.04657 | 0.00500 | 0.05 | 0.001095 | 91.0 | 88 - 115 | | | | |
| Selenium | 0.04979 | 0.00500 | 0.05 | 0.000575 | 98.4 | 80 - 120 | | | | |
| Silver | 0.04591 | 0.00500 | 0.05 | 0.000021 | 91.8 | 85 - 116 | | | | |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID: 155817 ( 0 )** **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

**MSD** Sample ID: **HS20070621-01MSD** Units: **mg/L** Analysis Date: **28-Jul-2020 16:14**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677316** PrepDate: **27-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.5313 | 0.00500 | 0.05 | 0.4649 | 133 | 86 - 114 | 0.5447 | 2.49 | 20 | SO |
| Lead | 0.04413 | 0.00500 | 0.05 | 0.001095 | 86.1 | 88 - 115 | 0.04657 | 5.39 | 20 | S |
| Selenium | 0.04705 | 0.00500 | 0.05 | 0.000575 | 92.9 | 80 - 120 | 0.04979 | 5.67 | 20 | |
| Silver | 0.04309 | 0.00500 | 0.05 | 0.000021 | 86.1 | 85 - 116 | 0.04591 | 6.35 | 20 | |

**PDS** Sample ID: **HS20070621-01PDS** Units: **mg/L** Analysis Date: **28-Jul-2020 16:16**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677317** PrepDate: **27-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.5764 | 0.00500 | 0.1 | 0.4649 | 112 | 80 - 120 | | | | O |
| Lead | 0.09693 | 0.00500 | 0.1 | 0.001095 | 95.8 | 80 - 120 | | | | |
| Selenium | 0.1036 | 0.00500 | 0.1 | 0.000575 | 103 | 80 - 120 | | | | |
| Silver | 0.095 | 0.00500 | 0.1 | 0.000021 | 95.0 | 80 - 120 | | | | |

**SD** Sample ID: **HS20070621-01SD** Units: **mg/L** Analysis Date: **28-Jul-2020 16:10**
Client ID: Run ID: **ICPMS06_365787** SeqNo: **5677314** PrepDate: **27-Jul-2020** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.45 | 0.0250 | | | | | 0.4649 | 3.2 | 10 | |
| Lead | 0.00500 | 0.0250 | | | | | 0.001095 | 0 | 10 | U |
| Selenium | 0.0125 | 0.0250 | | | | | 0.000575 | 0 | 10 | U |
| Silver | 0.00250 | 0.0250 | | | | | 0.000021 | 0 | 10 | U |

**The following samples were analyzed in this batch:** HS20070623-01

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID: 155513 ( 0 )** **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

**MBLK** Sample ID: **MBLK-155513** Units: **ug/L** Analysis Date: **17-Jul-2020 14:32**
Client ID: Run ID: **SV-6_365262** SeqNo: **5665738** PrepDate: **17-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.010 | 0.010 | | | | | | | | U |
| *Surr: 2-Fluorobiphenyl* | *0.07665* | *0* | *0.08* | *0* | *95.8* | *40 - 140* | | | | |
| *Surr: 4-Terphenyl-d14* | *0.05594* | *0* | *0.08* | *0* | *69.9* | *40 - 140* | | | | |
| *Surr: Nitrobenzene-d5* | *0.08308* | *0* | *0.08* | *0* | *104* | *40 - 140* | | | | |

**LCS** Sample ID: **LCS-155513** Units: **ug/L** Analysis Date: **17-Jul-2020 14:52**
Client ID: Run ID: **SV-6_365262** SeqNo: **5665739** PrepDate: **17-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.1081 | 0.010 | 0.08 | 0 | 135 | 40 - 140 | | | | |
| *Surr: 2-Fluorobiphenyl* | *0.08329* | *0* | *0.08* | *0* | *104* | *40 - 140* | | | | |
| *Surr: 4-Terphenyl-d14* | *0.06252* | *0* | *0.08* | *0* | *78.1* | *40 - 140* | | | | |
| *Surr: Nitrobenzene-d5* | *0.09504* | *0* | *0.08* | *0* | *119* | *40 - 140* | | | | |

**LCSD** Sample ID: **LCSD-155513** Units: **ug/L** Analysis Date: **17-Jul-2020 15:11**
Client ID: Run ID: **SV-6_365262** SeqNo: **5665740** PrepDate: **17-Jul-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.1037 | 0.010 | 0.08 | 0 | 130 | 40 - 140 | 0.1081 | 4.22 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *0.07136* | *0* | *0.08* | *0* | *89.2* | *40 - 140* | *0.08329* | *15.4* | *20* | |
| *Surr: 4-Terphenyl-d14* | *0.0617* | *0* | *0.08* | *0* | *77.1* | *40 - 140* | *0.06252* | *1.31* | *20* | |
| *Surr: Nitrobenzene-d5* | *0.08701* | *0* | *0.08* | *0* | *109* | *40 - 140* | *0.09504* | *8.83* | *20* | |

**The following samples were analyzed in this batch:** HS20070623-01

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200717** Units: **UG/L** Analysis Date: **17-Jul-2020 12:45**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666190** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,1-Trichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,2-Trichloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloropropene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dibromo-3-chloropropane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dibromoethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,3,5-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,4-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 2,2-Dichloropropane | 0.50 | 1.0 | | | | | | | | U |
| 2-Butanone | 1.0 | 2.0 | | | | | | | | U |
| 2-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 2-Hexanone | 2.0 | 2.0 | | | | | | | | U |
| 4-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Isopropyltoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Methyl-2-pentanone | 2.0 | 2.0 | | | | | | | | U |
| Acetone | 1.0 | 2.0 | | | | | | | | U |
| Benzene | 0.50 | 1.0 | | | | | | | | U |
| Bromobenzene | 1.0 | 1.0 | | | | | | | | U |
| Bromochloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromodichloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromoform | 1.0 | 1.0 | | | | | | | | U |
| Bromomethane | 1.0 | 1.0 | | | | | | | | U |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200717** Units: **UG/L** Analysis Date: **17-Jul-2020 12:45**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666190** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 1.0 | 2.0 | | | | | | | | U |
| Carbon tetrachloride | 1.0 | 1.0 | | | | | | | | U |
| Chlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| Chloroethane | 1.0 | 1.0 | | | | | | | | U |
| Chloroform | 0.50 | 1.0 | | | | | | | | U |
| Chloromethane | 0.50 | 1.0 | | | | | | | | U |
| cis-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| cis-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Dibromochloromethane | 1.0 | 1.0 | | | | | | | | U |
| Dibromomethane | 0.50 | 1.0 | | | | | | | | U |
| Dichlorodifluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Ethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Hexachlorobutadiene | 1.0 | 1.0 | | | | | | | | U |
| Isopropylbenzene | 1.0 | 1.0 | | | | | | | | U |
| m,p-Xylene | 1.0 | 2.0 | | | | | | | | U |
| Methylene chloride | 1.0 | 2.0 | | | | | | | | U |
| Naphthalene | 1.0 | 1.0 | | | | | | | | U |
| n-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| n-Propylbenzene | 1.0 | 1.0 | | | | | | | | U |
| o-Xylene | 1.0 | 1.0 | | | | | | | | U |
| sec-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Styrene | 1.0 | 1.0 | | | | | | | | U |
| tert-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Tetrachloroethene | 1.0 | 1.0 | | | | | | | | U |
| Toluene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Trichloroethene | 0.50 | 1.0 | | | | | | | | U |
| Trichlorofluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Vinyl chloride | 0.50 | 1.0 | | | | | | | | U |
| *Surr: 1,2-Dichloroethane-d4* | *43.63* | *1.0* | *50* | *0* | *87.3* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *56.92* | *1.0* | *50* | *0* | *114* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *44.05* | *1.0* | *50* | *0* | *88.1* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *46.12* | *1.0* | *50* | *0* | *92.2* | *89 - 112* | | | | |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200717** Units: **UG/L** Analysis Date: **17-Jul-2020 11:57**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666189** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.77 | 1.0 | 20 | 0 | 104 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 21.13 | 1.0 | 20 | 0 | 106 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.3 | 1.0 | 20 | 0 | 102 | 71 - 121 | | | | |
| 1,1,2-Trichloroethane | 20.91 | 1.0 | 20 | 0 | 105 | 80 - 119 | | | | |
| 1,1-Dichloroethane | 20.52 | 1.0 | 20 | 0 | 103 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 20.87 | 1.0 | 20 | 0 | 104 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 22.29 | 1.0 | 20 | 0 | 111 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 17.01 | 1.0 | 20 | 0 | 85.1 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 20.47 | 1.0 | 20 | 0 | 102 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 17.76 | 1.0 | 20 | 0 | 88.8 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 20.55 | 1.0 | 20 | 0 | 103 | 76 - 124 | | | | |
| 1,2-Dibromo-3-chloropropane | 16.23 | 1.0 | 20 | 0 | 81.1 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 22.27 | 1.0 | 20 | 0 | 111 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 20.76 | 1.0 | 20 | 0 | 104 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 21.22 | 1.0 | 20 | 0 | 106 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 21.36 | 1.0 | 20 | 0 | 107 | 78 - 122 | | | | |
| 1,3,5-Trimethylbenzene | 22.11 | 1.0 | 20 | 0 | 111 | 75 - 124 | | | | |
| 1,3-Dichlorobenzene | 20.87 | 1.0 | 20 | 0 | 104 | 80 - 119 | | | | |
| 1,3-Dichloropropane | 20.46 | 1.0 | 20 | 0 | 102 | 80 - 119 | | | | |
| 1,4-Dichlorobenzene | 20.55 | 1.0 | 20 | 0 | 103 | 79 - 118 | | | | |
| 2,2-Dichloropropane | 22.26 | 1.0 | 20 | 0 | 111 | 60 - 139 | | | | |
| 2-Butanone | 40.44 | 2.0 | 40 | 0 | 101 | 56 - 143 | | | | |
| 2-Chlorotoluene | 20.6 | 1.0 | 20 | 0 | 103 | 79 - 122 | | | | |
| 2-Hexanone | 40.25 | 2.0 | 40 | 0 | 101 | 57 - 139 | | | | |
| 4-Chlorotoluene | 21.36 | 1.0 | 20 | 0 | 107 | 78 - 122 | | | | |
| 4-Isopropyltoluene | 22.15 | 1.0 | 20 | 0 | 111 | 77 - 127 | | | | |
| 4-Methyl-2-pentanone | 40.39 | 2.0 | 40 | 0 | 101 | 67 - 130 | | | | |
| Acetone | 38.74 | 2.0 | 40 | 0 | 96.8 | 39 - 160 | | | | |
| Benzene | 21.51 | 1.0 | 20 | 0 | 108 | 79 - 120 | | | | |
| Bromobenzene | 21.84 | 1.0 | 20 | 0 | 109 | 80 - 120 | | | | |
| Bromochloromethane | 19.73 | 1.0 | 20 | 0 | 98.6 | 78 - 123 | | | | |
| Bromodichloromethane | 21.3 | 1.0 | 20 | 0 | 106 | 79 - 125 | | | | |
| Bromoform | 19.59 | 1.0 | 20 | 0 | 97.9 | 66 - 130 | | | | |
| Bromomethane | 23.51 | 1.0 | 20 | 0 | 118 | 53 - 141 | | | | |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200717** Units: **UG/L** Analysis Date: **17-Jul-2020 11:57**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666189** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 40.8 | 2.0 | 40 | 0 | 102 | 64 - 133 | | | | |
| Carbon tetrachloride | 21.68 | 1.0 | 20 | 0 | 108 | 72 - 136 | | | | |
| Chlorobenzene | 21.27 | 1.0 | 20 | 0 | 106 | 82 - 118 | | | | |
| Chloroethane | 20.16 | 1.0 | 20 | 0 | 101 | 60 - 138 | | | | |
| Chloroform | 20.95 | 1.0 | 20 | 0 | 105 | 79 - 124 | | | | |
| Chloromethane | 22.68 | 1.0 | 20 | 0 | 113 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 21.29 | 1.0 | 20 | 0 | 106 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 22.32 | 1.0 | 20 | 0 | 112 | 75 - 124 | | | | |
| Dibromochloromethane | 20.86 | 1.0 | 20 | 0 | 104 | 74 - 126 | | | | |
| Dibromomethane | 20.83 | 1.0 | 20 | 0 | 104 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 22.04 | 1.0 | 20 | 0 | 110 | 32 - 152 | | | | |
| Ethylbenzene | 21.18 | 1.0 | 20 | 0 | 106 | 79 - 121 | | | | |
| Hexachlorobutadiene | 19.37 | 1.0 | 20 | 0 | 96.9 | 66 - 134 | | | | |
| Isopropylbenzene | 21.13 | 1.0 | 20 | 0 | 106 | 72 - 131 | | | | |
| m,p-Xylene | 42.98 | 2.0 | 40 | 0 | 107 | 80 - 121 | | | | |
| Methylene chloride | 22.16 | 2.0 | 20 | 0 | 111 | 74 - 124 | | | | |
| Naphthalene | 17.29 | 1.0 | 20 | 0 | 86.5 | 61 - 128 | | | | |
| n-Butylbenzene | 22.51 | 1.0 | 20 | 0 | 113 | 75 - 128 | | | | |
| n-Propylbenzene | 22.12 | 1.0 | 20 | 0 | 111 | 76 - 126 | | | | |
| o-Xylene | 20.6 | 1.0 | 20 | 0 | 103 | 78 - 122 | | | | |
| sec-Butylbenzene | 21.56 | 1.0 | 20 | 0 | 108 | 77 - 126 | | | | |
| Styrene | 20.96 | 1.0 | 20 | 0 | 105 | 78 - 123 | | | | |
| tert-Butylbenzene | 21.2 | 1.0 | 20 | 0 | 106 | 78 - 124 | | | | |
| Tetrachloroethene | 21.34 | 1.0 | 20 | 0 | 107 | 74 - 129 | | | | |
| Toluene | 21.18 | 1.0 | 20 | 0 | 106 | 80 - 121 | | | | |
| trans-1,2-Dichloroethene | 21.92 | 1.0 | 20 | 0 | 110 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 21.73 | 1.0 | 20 | 0 | 109 | 73 - 127 | | | | |
| Trichloroethene | 20.5 | 1.0 | 20 | 0 | 102 | 79 - 123 | | | | |
| Trichlorofluoromethane | 21.19 | 1.0 | 20 | 0 | 106 | 65 - 141 | | | | |
| Vinyl chloride | 21.38 | 1.0 | 20 | 0 | 107 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *47.95* | *1.0* | *50* | *0* | *95.9* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.09* | *1.0* | *50* | *0* | *100* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *49.69* | *1.0* | *50* | *0* | *99.4* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *49.06* | *1.0* | *50* | *0* | *98.1* | *89 - 112* | | | | |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20070674-01MS** Units: **UG/L** Analysis Date: **17-Jul-2020 16:20**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666199** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 21.4 | 1.0 | 20 | 0 | 107 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 19.82 | 1.0 | 20 | 0 | 99.1 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 18.13 | 1.0 | 20 | 0 | 90.6 | 71 - 121 | | | | |
| 1,1,2-Trichloroethane | 19.48 | 1.0 | 20 | 0 | 97.4 | 80 - 119 | | | | |
| 1,1-Dichloroethane | 17.21 | 1.0 | 20 | 0 | 86.0 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 31.9 | 1.0 | 20 | 0 | 160 | 71 - 131 | | | | S |
| 1,1-Dichloropropene | 22.01 | 1.0 | 20 | 0 | 110 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 13.14 | 1.0 | 20 | 0 | 65.7 | 69 - 129 | | | | S |
| 1,2,3-Trichloropropane | 18.38 | 1.0 | 20 | 0 | 91.9 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 14.3 | 1.0 | 20 | 0 | 71.5 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 21.62 | 1.0 | 20 | 0 | 108 | 76 - 124 | | | | |
| 1,2-Dibromo-3-chloropropane | 18.34 | 1.0 | 20 | 0 | 91.7 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 21.32 | 1.0 | 20 | 0 | 107 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 20.16 | 1.0 | 20 | 0 | 101 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 20.9 | 1.0 | 20 | 0 | 105 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 19.56 | 1.0 | 20 | 0 | 97.8 | 78 - 122 | | | | |
| 1,3,5-Trimethylbenzene | 21.87 | 1.0 | 20 | 0 | 109 | 75 - 124 | | | | |
| 1,3-Dichlorobenzene | 21.19 | 1.0 | 20 | 0 | 106 | 80 - 119 | | | | |
| 1,3-Dichloropropane | 18.96 | 1.0 | 20 | 0 | 94.8 | 80 - 119 | | | | |
| 1,4-Dichlorobenzene | 20.98 | 1.0 | 20 | 0 | 105 | 79 - 118 | | | | |
| 2,2-Dichloropropane | 20.02 | 1.0 | 20 | 0 | 100 | 60 - 139 | | | | |
| 2-Butanone | 31 | 2.0 | 40 | 0 | 77.5 | 56 - 143 | | | | |
| 2-Chlorotoluene | 20.54 | 1.0 | 20 | 0 | 103 | 79 - 122 | | | | |
| 2-Hexanone | 35.82 | 2.0 | 40 | 0 | 89.5 | 57 - 139 | | | | |
| 4-Chlorotoluene | 20.41 | 1.0 | 20 | 0 | 102 | 78 - 122 | | | | |
| 4-Isopropyltoluene | 22.98 | 1.0 | 20 | 0 | 115 | 77 - 127 | | | | |
| 4-Methyl-2-pentanone | 37.11 | 2.0 | 40 | 0 | 92.8 | 67 - 130 | | | | |
| Acetone | 46.44 | 2.0 | 40 | 0 | 116 | 39 - 160 | | | | |
| Benzene | 20.48 | 1.0 | 20 | 0 | 102 | 79 - 120 | | | | |
| Bromobenzene | 21.19 | 1.0 | 20 | 0 | 106 | 80 - 120 | | | | |
| Bromochloromethane | 16.79 | 1.0 | 20 | 0 | 84.0 | 78 - 123 | | | | |
| Bromodichloromethane | 20.01 | 1.0 | 20 | 0 | 100 | 79 - 125 | | | | |
| Bromoform | 20.74 | 1.0 | 20 | 0 | 104 | 66 - 130 | | | | |
| Bromomethane | 35.36 | 1.0 | 20 | 0 | 177 | 53 - 141 | | | | S |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20070674-01MS** Units: **UG/L** Analysis Date: **17-Jul-2020 16:20**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666199** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 41.73 | 2.0 | 40 | 0 | 104 | 64 - 133 | | | | |
| Carbon tetrachloride | 23.29 | 1.0 | 20 | 0 | 116 | 72 - 136 | | | | |
| Chlorobenzene | 20.86 | 1.0 | 20 | 0 | 104 | 82 - 118 | | | | |
| Chloroethane | 31.09 | 1.0 | 20 | 0 | 155 | 60 - 138 | | | | S |
| Chloroform | 18.52 | 1.0 | 20 | 0 | 92.6 | 79 - 124 | | | | |
| Chloromethane | 26.23 | 1.0 | 20 | 0 | 131 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 18.5 | 1.0 | 20 | 0 | 92.5 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 20.24 | 1.0 | 20 | 0 | 101 | 75 - 124 | | | | |
| Dibromochloromethane | 20.93 | 1.0 | 20 | 0 | 105 | 74 - 126 | | | | |
| Dibromomethane | 19.16 | 1.0 | 20 | 0 | 95.8 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 25.5 | 1.0 | 20 | 0 | 128 | 32 - 152 | | | | |
| Ethylbenzene | 21.7 | 1.0 | 20 | 0 | 109 | 79 - 121 | | | | |
| Hexachlorobutadiene | 16.86 | 1.0 | 20 | 0 | 84.3 | 66 - 134 | | | | |
| Isopropylbenzene | 22.44 | 1.0 | 20 | 0 | 112 | 72 - 131 | | | | |
| m,p-Xylene | 43.83 | 2.0 | 40 | 0 | 110 | 80 - 121 | | | | |
| Methylene chloride | 17.69 | 2.0 | 20 | 0 | 88.5 | 74 - 124 | | | | |
| Naphthalene | 14.14 | 1.0 | 20 | 0 | 70.7 | 61 - 128 | | | | |
| n-Butylbenzene | 22.47 | 1.0 | 20 | 0 | 112 | 75 - 128 | | | | |
| n-Propylbenzene | 21.77 | 1.0 | 20 | 0 | 109 | 76 - 126 | | | | |
| o-Xylene | 20.73 | 1.0 | 20 | 0 | 104 | 78 - 122 | | | | |
| sec-Butylbenzene | 22.46 | 1.0 | 20 | 0 | 112 | 77 - 126 | | | | |
| Styrene | 20.26 | 1.0 | 20 | 0 | 101 | 78 - 123 | | | | |
| tert-Butylbenzene | 22.93 | 1.0 | 20 | 0 | 115 | 78 - 124 | | | | |
| Tetrachloroethene | 22.94 | 1.0 | 20 | 0 | 115 | 74 - 129 | | | | |
| Toluene | 20.81 | 1.0 | 20 | 0 | 104 | 80 - 121 | | | | |
| trans-1,2-Dichloroethene | 19.34 | 1.0 | 20 | 0 | 96.7 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 19.58 | 1.0 | 20 | 0 | 97.9 | 73 - 127 | | | | |
| Trichloroethene | 32.58 | 1.0 | 20 | 9.324 | 116 | 79 - 123 | | | | |
| Trichlorofluoromethane | 32.87 | 1.0 | 20 | 0 | 164 | 65 - 141 | | | | S |
| Vinyl chloride | 24.39 | 1.0 | 20 | 0 | 122 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *47.03* | *1.0* | *50* | *0* | *94.1* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *54.76* | *1.0* | *50* | *0* | *110* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *48.3* | *1.0* | *50* | *0* | *96.6* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *52.63* | *1.0* | *50* | *0* | *105* | *89 - 112* | | | | |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20070674-01MSD** Units: **UG/L** Analysis Date: **17-Jul-2020 16:44**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666200** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 21.29 | 1.0 | 20 | 0 | 106 | 78 - 124 | 21.4 | 0.491 | 20 | |
| 1,1,1-Trichloroethane | 20.05 | 1.0 | 20 | 0 | 100 | 74 - 131 | 19.82 | 1.13 | 20 | |
| 1,1,2,2-Tetrachloroethane | 18.27 | 1.0 | 20 | 0 | 91.4 | 71 - 121 | 18.13 | 0.8 | 20 | |
| 1,1,2-Trichloroethane | 20.11 | 1.0 | 20 | 0 | 101 | 80 - 119 | 19.48 | 3.21 | 20 | |
| 1,1-Dichloroethane | 17.85 | 1.0 | 20 | 0 | 89.3 | 77 - 125 | 17.21 | 3.69 | 20 | |
| 1,1-Dichloroethene | 31.9 | 1.0 | 20 | 0 | 159 | 71 - 131 | 31.9 | 0.015 | 20 | S |
| 1,1-Dichloropropene | 21.05 | 1.0 | 20 | 0 | 105 | 78 - 125 | 22.01 | 4.46 | 20 | |
| 1,2,3-Trichlorobenzene | 18.33 | 1.0 | 20 | 0 | 91.6 | 69 - 129 | 13.14 | 32.9 | 20 | R |
| 1,2,3-Trichloropropane | 19.1 | 1.0 | 20 | 0 | 95.5 | 73 - 122 | 18.38 | 3.86 | 20 | |
| 1,2,4-Trichlorobenzene | 18.81 | 1.0 | 20 | 0 | 94.1 | 69 - 130 | 14.3 | 27.2 | 20 | R |
| 1,2,4-Trimethylbenzene | 21.48 | 1.0 | 20 | 0 | 107 | 76 - 124 | 21.62 | 0.624 | 20 | |
| 1,2-Dibromo-3-chloropropane | 19.28 | 1.0 | 20 | 0 | 96.4 | 62 - 128 | 18.34 | 4.99 | 20 | |
| 1,2-Dibromoethane | 21.2 | 1.0 | 20 | 0 | 106 | 77 - 121 | 21.32 | 0.601 | 20 | |
| 1,2-Dichlorobenzene | 20.5 | 1.0 | 20 | 0 | 103 | 80 - 119 | 20.16 | 1.7 | 20 | |
| 1,2-Dichloroethane | 21.12 | 1.0 | 20 | 0 | 106 | 73 - 128 | 20.9 | 1.03 | 20 | |
| 1,2-Dichloropropane | 19.58 | 1.0 | 20 | 0 | 97.9 | 78 - 122 | 19.56 | 0.119 | 20 | |
| 1,3,5-Trimethylbenzene | 21.07 | 1.0 | 20 | 0 | 105 | 75 - 124 | 21.87 | 3.7 | 20 | |
| 1,3-Dichlorobenzene | 20.63 | 1.0 | 20 | 0 | 103 | 80 - 119 | 21.19 | 2.69 | 20 | |
| 1,3-Dichloropropane | 19.83 | 1.0 | 20 | 0 | 99.1 | 80 - 119 | 18.96 | 4.48 | 20 | |
| 1,4-Dichlorobenzene | 20.36 | 1.0 | 20 | 0 | 102 | 79 - 118 | 20.98 | 2.99 | 20 | |
| 2,2-Dichloropropane | 19.93 | 1.0 | 20 | 0 | 99.7 | 60 - 139 | 20.02 | 0.404 | 20 | |
| 2-Butanone | 33.88 | 2.0 | 40 | 0 | 84.7 | 56 - 143 | 31 | 8.87 | 20 | |
| 2-Chlorotoluene | 20.33 | 1.0 | 20 | 0 | 102 | 79 - 122 | 20.54 | 1.02 | 20 | |
| 2-Hexanone | 37.66 | 2.0 | 40 | 0 | 94.1 | 57 - 139 | 35.82 | 5 | 20 | |
| 4-Chlorotoluene | 19.99 | 1.0 | 20 | 0 | 100.0 | 78 - 122 | 20.41 | 2.06 | 20 | |
| 4-Isopropyltoluene | 22.3 | 1.0 | 20 | 0 | 112 | 77 - 127 | 22.98 | 2.99 | 20 | |
| 4-Methyl-2-pentanone | 39.18 | 2.0 | 40 | 0 | 98.0 | 67 - 130 | 37.11 | 5.43 | 20 | |
| Acetone | 52.34 | 2.0 | 40 | 0 | 131 | 39 - 160 | 46.44 | 12 | 20 | |
| Benzene | 20.08 | 1.0 | 20 | 0 | 100 | 79 - 120 | 20.48 | 1.94 | 20 | |
| Bromobenzene | 21.45 | 1.0 | 20 | 0 | 107 | 80 - 120 | 21.19 | 1.21 | 20 | |
| Bromochloromethane | 17.57 | 1.0 | 20 | 0 | 87.8 | 78 - 123 | 16.79 | 4.51 | 20 | |
| Bromodichloromethane | 19.98 | 1.0 | 20 | 0 | 99.9 | 79 - 125 | 20.01 | 0.189 | 20 | |
| Bromoform | 21.35 | 1.0 | 20 | 0 | 107 | 66 - 130 | 20.74 | 2.91 | 20 | |
| Bromomethane | 32.91 | 1.0 | 20 | 0 | 165 | 53 - 141 | 35.36 | 7.18 | 20 | S |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID:** R365280 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20070674-01MSD** Units: **UG/L** Analysis Date: **17-Jul-2020 16:44**
Client ID: Run ID: **VOA6_365280** SeqNo: **5666200** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 40.29 | 2.0 | 40 | 0 | 101 | 64 - 133 | 41.73 | 3.53 | 20 | |
| Carbon tetrachloride | 22.6 | 1.0 | 20 | 0 | 113 | 72 - 136 | 23.29 | 3.03 | 20 | |
| Chlorobenzene | 21.23 | 1.0 | 20 | 0 | 106 | 82 - 118 | 20.86 | 1.77 | 20 | |
| Chloroethane | 29.46 | 1.0 | 20 | 0 | 147 | 60 - 138 | 31.09 | 5.38 | 20 | S |
| Chloroform | 18.46 | 1.0 | 20 | 0 | 92.3 | 79 - 124 | 18.52 | 0.292 | 20 | |
| Chloromethane | 21.32 | 1.0 | 20 | 0 | 107 | 50 - 139 | 26.23 | 20.6 | 20 | R |
| cis-1,2-Dichloroethene | 19.16 | 1.0 | 20 | 0 | 95.8 | 78 - 123 | 18.5 | 3.5 | 20 | |
| cis-1,3-Dichloropropene | 20.19 | 1.0 | 20 | 0 | 101 | 75 - 124 | 20.24 | 0.22 | 20 | |
| Dibromochloromethane | 21.3 | 1.0 | 20 | 0 | 106 | 74 - 126 | 20.93 | 1.75 | 20 | |
| Dibromomethane | 19.23 | 1.0 | 20 | 0 | 96.1 | 79 - 123 | 19.16 | 0.359 | 20 | |
| Dichlorodifluoromethane | 20.83 | 1.0 | 20 | 0 | 104 | 32 - 152 | 25.5 | 20.2 | 20 | R |
| Ethylbenzene | 21.26 | 1.0 | 20 | 0 | 106 | 79 - 121 | 21.7 | 2.03 | 20 | |
| Hexachlorobutadiene | 19.62 | 1.0 | 20 | 0 | 98.1 | 66 - 134 | 16.86 | 15.1 | 20 | |
| Isopropylbenzene | 22.22 | 1.0 | 20 | 0 | 111 | 72 - 131 | 22.44 | 1 | 20 | |
| m,p-Xylene | 43.41 | 2.0 | 40 | 0 | 109 | 80 - 121 | 43.83 | 0.953 | 20 | |
| Methylene chloride | 17.58 | 2.0 | 20 | 0 | 87.9 | 74 - 124 | 17.69 | 0.645 | 20 | |
| Naphthalene | 18 | 1.0 | 20 | 0 | 90.0 | 61 - 128 | 14.14 | 24 | 20 | R |
| n-Butylbenzene | 21.87 | 1.0 | 20 | 0 | 109 | 75 - 128 | 22.47 | 2.69 | 20 | |
| n-Propylbenzene | 21.27 | 1.0 | 20 | 0 | 106 | 76 - 126 | 21.77 | 2.35 | 20 | |
| o-Xylene | 21.22 | 1.0 | 20 | 0 | 106 | 78 - 122 | 20.73 | 2.35 | 20 | |
| sec-Butylbenzene | 22.01 | 1.0 | 20 | 0 | 110 | 77 - 126 | 22.46 | 2.02 | 20 | |
| Styrene | 20.51 | 1.0 | 20 | 0 | 103 | 78 - 123 | 20.26 | 1.23 | 20 | |
| tert-Butylbenzene | 22.31 | 1.0 | 20 | 0 | 112 | 78 - 124 | 22.93 | 2.72 | 20 | |
| Tetrachloroethene | 23.01 | 1.0 | 20 | 0 | 115 | 74 - 129 | 22.94 | 0.311 | 20 | |
| Toluene | 20.64 | 1.0 | 20 | 0 | 103 | 80 - 121 | 20.81 | 0.794 | 20 | |
| trans-1,2-Dichloroethene | 18.97 | 1.0 | 20 | 0 | 94.8 | 75 - 124 | 19.34 | 1.94 | 20 | |
| trans-1,3-Dichloropropene | 20.17 | 1.0 | 20 | 0 | 101 | 73 - 127 | 19.58 | 2.98 | 20 | |
| Trichloroethene | 31.87 | 1.0 | 20 | 9.324 | 113 | 79 - 123 | 32.58 | 2.2 | 20 | |
| Trichlorofluoromethane | 31.45 | 1.0 | 20 | 0 | 157 | 65 - 141 | 32.87 | 4.42 | 20 | S |
| Vinyl chloride | 23.53 | 1.0 | 20 | 0 | 118 | 58 - 137 | 24.39 | 3.59 | 20 | |
| *Surr: 1,2-Dichloroethane-d4* | *48.79* | *1.0* | *50* | *0* | *97.6* | *81 - 118* | *47.03* | *3.66* | *20* | |
| *Surr: 4-Bromofluorobenzene* | *53.69* | *1.0* | *50* | *0* | *107* | *85 - 114* | *54.76* | *1.97* | *20* | |
| *Surr: Dibromofluoromethane* | *48.94* | *1.0* | *50* | *0* | *97.9* | *80 - 119* | *48.3* | *1.32* | *20* | |
| *Surr: Toluene-d8* | *51.64* | *1.0* | *50* | *0* | *103* | *89 - 112* | *52.63* | *1.89* | *20* | |

**ALS Houston, US** Date: 30-Jul-20

| | |
|---|---|
| **Client:** | Bhate Environmental Associates, Inc. |
| **Project:** | Longhorn GW Treatment Plant Monthly Effluent Samples |
| **WorkOrder:** | HS20070623 |

**QC BATCH REPORT**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | **R365280 ( 0 )** | **Instrument:** | **VOA6** | **Method:** | **VOLATILES ORGANICS BY METHOD 8260C** |

**The following samples were analyzed in this batch:** HS20070623-01 HS20070623-03

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

**QC BATCH REPORT**

**Batch ID: R365072 ( 0 )** **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

**MBLK** Sample ID: **MBLK-R365072** Units: **mg/L** Analysis Date: **15-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365072** SeqNo: **5662660** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.0100 | 0.0100 | | | | | | | | U |

**LCS** Sample ID: **LCS-R365072** Units: **mg/L** Analysis Date: **15-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365072** SeqNo: **5662659** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.25 | 0.0100 | 0.25 | 0 | 100 | 90 - 111 | | | | |

**LCSD** Sample ID: **LCSD-R365072** Units: **mg/L** Analysis Date: **15-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365072** SeqNo: **5663323** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.258 | 0.0100 | 0.25 | 0 | 103 | 90 - 111 | 0.25 | 3.15 | 20 | |

**MS** Sample ID: **HS20070636-01MS** Units: **mg/L** Analysis Date: **15-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365072** SeqNo: **5663325** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.244 | 0.0100 | 0.25 | 0 | 97.6 | 90 - 111 | | | | |

**MSD** Sample ID: **HS20070636-01MSD** Units: **mg/L** Analysis Date: **15-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365072** SeqNo: **5663324** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.246 | 0.0100 | 0.25 | 0 | 98.4 | 90 - 111 | 0.244 | 0.816 | 20 | |

**The following samples were analyzed in this batch:** HS20070623-01

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** **HS20070623**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V009 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kansas | E-10352 2019-2020 | 31-Jul-2020 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

**ALS Houston, US** Date: 30-Jul-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**Work Order:** HS20070623

## SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20070623-01 | LH18/24-SP650_071420 | Login | 7/15/2020 11:50:46 AM | PMG | EXT137 |
| HS20070623-01 | LH18/24-SP650_071420 | Login | 7/15/2020 11:50:46 AM | PMG | WET073 |
| HS20070623-01 | LH18/24-SP650_071420 | Login | 7/15/2020 11:50:46 AM | PMG | MET066 |
| HS20070623-01 | LH18/24-SP650_071420 | Login | 7/15/2020 11:50:46 AM | PMG | VOA042 |
| HS20070623-02 | LH18/24-SP650_071420_BIX | Login | 7/15/2020 11:50:46 AM | PMG | Sub |
| HS20070623-03 | Trip Blank | Login | 7/15/2020 11:50:46 AM | PMG | VOA042 |

**ALS Houston, US** Date: 30-Jul-20

## Sample Receipt Checklist

**Work Order ID:** HS20070623 **Date/Time Received:** **15-Jul-2020 09:05**

**Client Name:** Bhate Environmental **Received by:** **Paresh M. Giga**

| **Completed By:** | /S/ Paresh M. Giga | 15-Jul-2020 11:54 | **Reviewed by:** | /S/ RJ Modashia | 15-Jul-2020 21:42 |
|---|---|---|---|---|---|
| | eSignature | Date/Time | | eSignature | Date/Time |

Matrices: **Water** Carrier name: **FedEx**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:None |
| Samplers name present on COC? | Yes ☐ | No ☑ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |

| | | |
|---|---|---|
| Temperature(s)/Thermometer(s): | 0.5C U/C | IR25 |
| Cooler(s)/Kit(s): | 46127 | |
| Date/Time sample(s) sent to storage: | 7/15/2020 12:10 | |

| | | | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ |
| pH adjusted? | Yes ☐ | No ☑ | N/A ☐ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 – 5656 ATTN: RJ Modashia



Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
**GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES**

Prepared By:
Scott Beesinger

P.O. Number

**HS20070623**
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Effluent Sample

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | Analyses: VOLATILES | SILVER, SELENIUM, LEAD, BARIUM | HEXAVALENT CHROMIUM | 1, 4 - DIOXANE | PERCHLORATE | | | | | | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_071420 | Water | 07/14/20 / 14:00 | | 3 | X | | | | | | | | | | HCL | |
| LH18/24-SP650_071420 | Water | 07/14/20 / 14:00 | | 2 | | | X | X | | | | | | | NONE | |
| LH18/24-SP650_071420_BIX | Water | 07/14/20 / 14:00 | | 1 | | | | | X | | | | | | NONE | |
| LH18/24-SP650_071420 | Water | 07/14/20 / 14:00 | | 1 | | X | | | | | | | | | HNO3 | |
| Trip Blank | Water | 07/14/20 | | 2 | X | | | | | | | | | | HCL | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Additional Remarks: **Standard TAT**

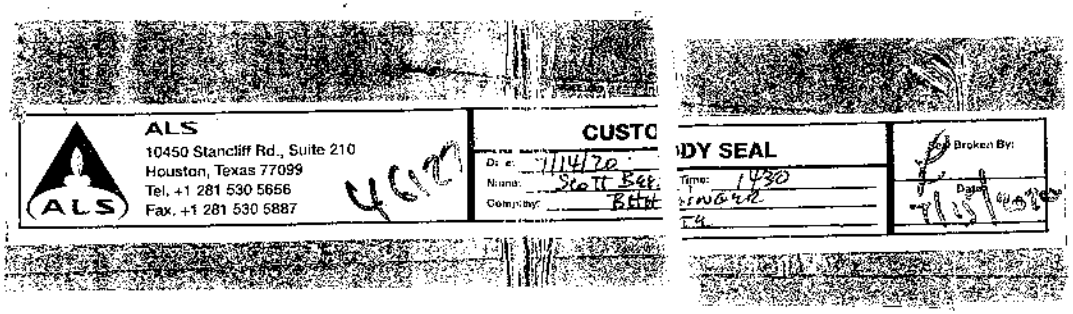
| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Beesinger | 07/14/20 | 14:30 | | 7/15/20 | 0900 | | | | | | |

**For Lab Use Only**

| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

Remarks:
etc.
J6127 0.5°
#2
Cl-0.5

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTO
DY SEAL
Broken By:


FedEx.
1251 0297 1981
WED - 15 JUL 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

July 29, 2020 Service Request No:E2000639

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**Laboratory Results for: HS20070623**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory July 15, 2020
For your reference, these analyses have been assigned our service request number **E2000639.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

# Certificate of Analysis

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Environmental**

| | | | |
|---|---|---|---|
| **Client:** | ALS Houston | **Service Request No.:** | E2000639 |
| **Project:** | HS20070623 | **Date Received:** | 07/15/20 |
| **Sample Matrix:** | W | | |

## CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 07/15/20.

The sample was received in good condition and are consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

### Data Validation Notes and Discussion

**Precision and Accuracy:**

EQ2000302: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. MS and MSD was performed on an unrelated sample, LCS/LCSD recoveries are within QC limits.

DOD Certification is held for the method/matrix/analytes provided in this report.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*

**Client:** ALS Environmental - US **Service Request:**E2000639
**Project:** HS20070623

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| E2000639-001 | LH18/24-SP650_071420-BIX | 7/14/2020 | 1400 |

# Service Request Summary

**Folder #:** **E2000639**
Client Name: ALS Environmental - US
Project Name: HS20070623
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/15/20
Internal Due Date: 7/29/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20070623
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 5C
**Pressure Gas:**

| Lab Samp No. | Client Samp No | Matrix | Collected | HOUSTON ClO4 DOD/6850 |
|---|---|---|---|---|
| E2000639-001 | LH18/24-SP650_071420-BIX | Ground Water | 07/14/20 1400 | **IV** |

# Service Request Summary

**Folder #:** **E2000639**
Client Name: ALS Environmental - US
Project Name: HS20070623
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/15/20
Internal Due Date: 7/29/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20070623
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 5C
**Pressure Gas:**

## Test Comments:

| Group | Test/Method | Samples | Comments |
|---|---|---|---|
| Semivoa GCMS | ClO4 DOD/6850 | 1 | Level II due 7/29,level IV 8/5 |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| + | Possible Tedlar bag artifact. |
| A | TIC is a suspected aldol-condensation product |
| B | Analyte found in the associated method blank as well as in the sample. |
| BC | Reported results are not blank corrected. |
| BH | The back section of the tube yielded higher results than the front. |
| BT | Results indicated possible breakthrough; back section >=10% front section. |
| C | Result identification confirmed. |
| D | Compound identified in an analysis at a secondary dilution factor |
| D | Spike was diluted out |
| DE | Reported results are corrected for desorption efficiency. |
| E | Estimated value. Concentration above calibration range |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| H1 | Sample analysis performed past holding time. See case narrative. |
| H2 | Initial analysis within holding time. Reanalysis for the required dilution was past holding time. |
| H3 | Sample was received and analyzed past holding time. |
| H4 | Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative. |
| I | Internal standard not within the specified limits. See case narrative. |
| J | Estimated Value. Concentration found below MRL. |
| K | A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate. |
| K | Analyte was detected above the method reporting limit prior to normalization. |
| L1 | Laboratory control sample recovery outside the specified limits; results may be biased high. |
| L2 | Laboratory control sample recovery outside the specified limits; results may be biased low. |
| L3 | Laboratory control sample recovery outside the specified limits. |
| M | Matrix interference; results may be biased high. |
| M | The duplicate injection precision not met. |
| M1 | Matrix interference due to coelution with a non-target compound; results may be biased high. |
| N | Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| P | Indicates chlorodiphenyl ether interference present at the retention time of the target compound. |
| P | Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns |
| Q | Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria. |
| R | Duplicate Precision not met. |
| R1 | Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated. |
| S | Surrogate recovery not within specified limits. |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| T | Analyte is a tentatively identified compound, result is estimated. |
| U | Compound was analyzed for, but was not detected (ND). |
| V1 | The continuing calibration verification standard was outside (biased high) the specified limits for this compound. |
| V2 | The continuing calibration verification standard was outside (biased low) the specified limits for this compound. |
| W | Result quantified, but the corresponding peak was detected outside the generated retention time window. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| X | See case narrative. |
| Y | Recovery outside limits |
| Y | The chromatogram resembles a petroleum product but does not match the calibration standard. |
| Z | The chromatogram does not resemble a petroleum product. |
| i | The MRL/MDL has been elevated due to a matrix interference. |

# ALS Laboratory Group

**Acronyms**

| | |
|---|---|
| Cal | Calibration |
| Conc | CONCentration |
| Dioxin(s) | Polychlorinated dibenzo-p-dioxin(s) |
| EDL | Estimated Detection Limit |
| EMPC | Estimated Maximum Possible Concentration |
| Flags | Data qualifiers |
| Furan(s) | Polychlorinated dibenzofuran(s) |
| g | Grams |
| ICAL | Initial CALibration |
| ID | IDentifier |
| Ions | Masses monitored for the analyte during data acquisition |
| L | Liter (s) |
| LCS | Laboratory Control Sample |
| DLCS | Duplicate Laboratory Control Sample |
| MB | Method Blank |
| MCL | Method Calibration Limit |
| MDL | Method Detection Limit |
| mL | Milliliters |
| MS | Matrix Spiked sample |
| DMS | Duplicate Matrix Spiked sample |
| NO | Number of peaks meeting all identification criteria |
| PCDD(s) | Polychlorinated dibenzo-p-dioxin(s) |
| PCDF(s) | Polychlorinated dibenzofuran(s) |
| ppb | Parts per billion |
| ppm | Parts per million |
| ppq | Parts per quadrillion |
| ppt | Parts per trillion |
| QA | Quality Assurance |
| QC | Quality Control |
| Ratio | Ratio of areas from monitored ions for an analyte |
| % Rec. | Percent recovery |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RT | Retention Time |
| SDG | Sample Delivery Group |
| S/N | Signal-to-noise ratio |
| TEF | Toxicity Equivalence Factor |
| TEQ | Toxicity Equivalence Quotient |

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

## State Certifications, Accreditations, and Licenses

| Agency | Number | Expire Date |
|---|---|---|
| American Association for Laboratory Accreditation | 2897.01 2020 | 11/30/2021 |
| Arkansas Department of Environmental Quality | 20-030-0 | 3/26/2021 |
| Department of Defense | A2LA 2897.01 | 11/30/2021 |
| Hawaii Department of Health | 2020 | 4/30/2021 |
| Illinois Environmental Protection Agency | 2000322020-4 | 5/9/2021 |
| Kansas Department of Health and Environment | E-10352 | 7/31/2020 |
| Louisiana Department of Health and Hospitals | LA028-2020 | 12/31/2020 |
| Maine Department of Health and Human Services | 2020016 | 6/5/2022 |
| Minnesota Department of Health | 1785988 | 12/31/2020 |
| Nebraska Department of Health and Human Services | NE-OS-25-13 (2020) | 4/30/2021 |
| Nevada Department of Concervation and Natural Resources | TX026932019-1 | 7/31/2020 |
| New Hampshire Environmental Laboratory Accreditation Program | 209420 | 4/24/2021 |
| New York Department of Health | 11707 | 3/31/2021 |
| Oklahoma Department of Environmental Quality | 2019-067 | 8/31/2020 |
| Tennessee Department of Environment and Concervation | 04016-2020 | 4/30/2021 |
| Texas Commision on Environmental Quality | T104704231-20-26 | 4/30/2021 |
| United States Department of Agriculture | P330-19-00299 | 10/10/2022 |
| Utah Department of Health Environmental Laboratory Certification | TX026932019-9 | 7/31/2020 |
| Washington Department of Health | C819 | 11/14/2020 |



ALS

# Chain of Custody

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID:** **14288**

**SUBCONTRACT TO:**

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

**Phone:** +1 281 530 5656

E2000639 5
ALS Laboratory Group
HS20070623

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | |
| **Email:** | |

**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20070623 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| 1. | **HS20070623-02** | **LH18/24-SP650_071420_BIX** | **Water** | **14 Jul 2020 14:00** |
| | SUB_Perch-6850 | | | 29 Jul 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 7/15/20 12:45

Received By: LL Date/Time: 7/15/20 12:45

Cooler ID(s): Temperature(s):

# Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-H

Thermometer ID SM04/18231

Date/Time Received: 7/15/20 Initials: CH Date/Time Logged in: 7/14/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

| Cooler Tracking Number | COC ID | Date Opened | Time Opened | Opened By | Temp. °C | Temp Blank? |
|---|---|---|---|---|---|---|
| – | | 7/14/20 | 1245 | CH | 3.8 | ☒ |
| | | | | | | ☐ |
| | | | | | | ☐ |
| | | | | | | ☐ |

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

E2000639 5
ALS Laboratory Group
HS20070623



HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

10450 Stancliff Rd., Suite 210
Houston, TX 77099
**T:** +1 713 266 1599
**F:** +1 713 266 1599
**www.alsglobal.com**

# SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

**Cooler Custody Seals (desirable, mandatory if specified in SAP):**

- ✓ Intact on outside of cooler, signed and dated

**Chain-of-Custody (COC) documentation (mandatory):**

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

**Sample Integrity (mandatory):**

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

**Temperature Requirement (varies by sample matrix):**

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

# Preparation Information Benchsheets

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

# *Preparation Information Benchsheet*

**Prep Run#:** 361870 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 7/20/20 10:39

| # | Lab Code | Client ID | B# | Method /Test | pH | Cl | Matrix | Amt. Ext. | Sample Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | E2000626-001 | LH18/24-SP650_070920-BIX | .01 | 6850/ClO4 DOD | | | Water | 10mL | |
| 2 | E2000627-001 | 50WW08-200708 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 3 | E2000627-002 | 50WW29-200708 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 4 | E2000627-003 | 50WW05-200708 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 5 | E2000627-004 | 50WW14-200709 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 6 | E2000627-005 | 50WW13-200709 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 7 | E2000627-006 | 50WW11-200709 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 8 | E2000627-007 | 50WW11-200709-FD | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 9 | E2000627-008 | 50WW06-200709 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 10 | E2000627-009 | 50WW12-200709 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 11 | E2000638-001 | LH18/24-SP650_071420-BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 12 | E2000639-001 | LH18/24-SP650_071420-BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 13 | E2000640-001 | LH18/24-SP140_071420 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 14 | E2000660-001 | 16EW01-200716 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 15 | E2000660-003 | 16EW02-200716 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 16 | E2000660-004 | 16EW02-200716-FD | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 17 | E2000660-005 | 16IW09-200716 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 18 | E2000660-006 | 16RW05-200716 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 19 | EQ2000302-01 | MB | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 20 | EQ2000302-02 | LCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 21 | EQ2000302-03 | DLCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 22 | EQ2000302-04 | 50WW14-200709 MS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 23 | EQ2000302-05 | 50WW14-200709 DMS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |

**Spiking Solutions**

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E2000626-001 | 100.00µL | E2000627-001 | 100.00µL | E2000627-002 | 100.00µL | E2000627-003 | 100.00µL | E2000627-004 | 100.00µL | E2000627-005 | 100.00µL |
| E2000627-006 | 100.00µL | E2000627-007 | 100.00µL | E2000627-008 | 100.00µL | E2000627-009 | 100.00µL | E2000638-001 | 100.00µL | E2000639-001 | 100.00µL |
| E2000640-001 | 100.00µL | E2000660-001 | 100.00µL | E2000660-003 | 100.00µL | E2000660-004 | 100.00µL | E2000660-005 | 100.00µL | E2000660-006 | 100.00µL |
| EQ2000302-02 | 100.00µL | EQ2000302-03 | 100.00µL | EQ2000302-04 | 100.00µL | EQ2000302-05 | 100.00µL | | | | |

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EQ2000302-02 | 1.00µL | EQ2000302-03 | 1.00µL | EQ2000302-04 | 10.00µL | EQ2000302-05 | 10.00µL |

# *Preparation Information Benchsheet*

**Prep Run#:** 361870 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 7/20/20 10:39

## Preparation Steps

Step: Preparation
Started: 7/20/20 10:39
Finished: 7/20/20 14:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

# Analytical Results

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | 7/14/20 1400 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 7/15/20 |
| **Sample Name:** | LH18/24-SP650_071420-BIX | **Units:** | µg/L |
| **Lab Code:** | E2000639-001 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.106** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/20/20 | 7/28/20 12:21 | 361870 | 688729 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | µg/L |
| **Lab Code:** | EQ2000302-01 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | ND | U | 0.100 | 0.0500 | 0.0250 | 1 | 7/20/20 | 7/20/20 13:47 | 361870 | 688323 | |

# Accuracy & Precision

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10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623
**Sample Matrix:** Ground Water

**Service Request:** E2000639
**Date Analyzed:** 7/20/20

## Lab Control Sample Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**Prep Method:** Method

**Units:** µg/L
**Basis:** NA

**Extraction Lot:** 361870

| | Lab Control Sample EQ2000302-02 | | | Duplicate Lab Control Sample EQ2000302-03 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.102 | 0.100 | 102 | 0.117 | 0.100 | 117 | 84 - 119 | 13 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000302-02 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.102** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/20/20 | 7/20/20 13:55 | 361870 | 688323 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000302-03 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.117** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/20/20 | 7/20/20 14:03 | 361870 | 688323 | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| | | **Date Analyzed:** | 7/24/20 |

## Matrix Spike Summary

## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | E2000627-004 | **Basis:** | NA |

**Analytical Method:** 6850
**Prep Method:** Method

| | | Batch QCMS Matrix Spike EQ2000302-04 | | | Batch QCDMS Duplicate Matrix Spike EQ2000302-05 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 3.69 | 4.69 | 1.00 | 99 | 4.79 | 1.00 | 110 | 84 - 119 | 2 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000302-04 | **Basis:** | NA |
| **Run Type:** | Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **4.69** | | 1.00 | 0.500 | 0.250 | 10 | 7/20/20 | 7/24/20 14:07 | 361870 | 688371 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000302-05 | **Basis:** | NA |
| **Run Type:** | Duplicate Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **4.79** | | 1.00 | 0.500 | 0.250 | 10 | 7/20/20 | 7/24/20 15:45 | 361870 | 688371 | |

# Initial Calibration

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200720**

ALS Environmental

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/20/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000014

**1st Review:** Kneir
**2nd Review:** Hvan

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200720_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 |
| 2 | PERCHLORATE2 | | 20200720_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 |
| 3 | PERCHLORATE3 | | 20200720_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 |
| 4 | PERCHLORATE4 | | 20200720_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 |
| 5 | PERCHLORATE5 | | 20200720_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 |
| 6 | PERCHLORATE6 | | 20200720_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 |
| 7 | PERCHLORATE7 | | 20200720_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | PERCHLORATE8 | | 20200720_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 |
| 9 | PERCHLORATE9 | | 20200720_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 |
| 10 | PERCHLORATE10 | | 20200720_015 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 |
| 11 | PERCHLORATEICV | | 20200720_017 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 |
| 12 | IB | | 20200720_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 13 | IB | | 20200720_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | LODV | | 20200720_020 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | ICS | | 20200720_021 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | PERCHLORATE7 | | 20200720_022 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | EQ2000302-01 | | 20200720_023 | Perchlorate6850b.lcm | 1x | ☒ | |
| 18 | EQ2000302-02 | | 20200720_024 | Perchlorate6850b.lcm | 1x | ☒ | |
| 19 | EQ2000302-03 | | 20200720_025 | Perchlorate6850b.lcm | 1x | ☒ | |
| 20 | EQ2000302-04 | | 20200720_026 | Perchlorate6850b.lcm | 1x | ☒ | |
| 21 | EQ2000302-05 | | 20200720_027 | Perchlorate6850b.lcm | 1x | ☒ | |
| 22 | E2000626-001 | | 20200720_028 | Perchlorate6850b.lcm | 1x | ☒ | |
| 23 | E2000627-001 | | 20200720_029 | Perchlorate6850b.lcm | 1x | ☒ | |
| 24 | E2000627-002 | | 20200720_030 | Perchlorate6850b.lcm | 1x | ☒ | |
| 25 | E2000627-003 | | 20200720_031 | Perchlorate6850b.lcm | 1x | ☒ | |
| 26 | E2000627-004 | | 20200720_032 | Perchlorate6850b.lcm | 1x | ☒ | |
| 27 | PERCHLORATE7 | | 20200720_033 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 28 | E2000627-005 | | 20200720_034 | Perchlorate6850b.lcm | 1x | ☒ | |
| 29 | E2000627-006 | | 20200720_035 | Perchlorate6850b.lcm | 1x | ☒ | |
| 30 | E2000627-007 | | 20200720_036 | Perchlorate6850b.lcm | 1x | ☒ | |
| 31 | E2000627-008 | | 20200720_037 | Perchlorate6850b.lcm | 1x | ☒ | |
| 32 | E2000627-009 | | 20200720_038 | Perchlorate6850b.lcm | 1x | ☒ | |
| 33 | E2000638-001 | | 20200720_039 | Perchlorate6850b.lcm | 1x | ☒ | |
| 34 | E2000639-001 | | 20200720_040 | Perchlorate6850b.lcm | 1x | ☒ | |
| 35 | E2000640-001 | | 20200720_041 | Perchlorate6850b.lcm | 1x | ☒ | |
| 36 | PERCHLORATE7 | | 20200720_042 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 37 | EQ2000303-01 | | 20200720_043 | Perchlorate6850b.lcm | 1x | ☒ | |
| 38 | EQ2000303-02 | | 20200720_044 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | EQ2000303-03 | | 20200720_045 | Perchlorate6850b.lcm | 1x | ☒ | |
| 40 | E2000641-001 | | 20200720_046 | Perchlorate6850b.lcm | 1x | ☒ | |
| 41 | E2000641-002 | | 20200720_047 | Perchlorate6850b.lcm | 1x | ☒ | |
| 42 | E2000641-003 | | 20200720_048 | Perchlorate6850b.lcm | 1x | ☒ | |
| 43 | E2000641-004 | | 20200720_049 | Perchlorate6850b.lcm | 1x | ☒ | |
| 44 | E2000641-005 | | 20200720_050 | Perchlorate6850b.lcm | 1x | ☒ | |
| 45 | E2000641-006 | | 20200720_051 | Perchlorate6850b.lcm | 1x | ☒ | |
| 46 | E2000641-007 | | 20200720_052 | Perchlorate6850b.lcm | 1x | ☒ | |
| 47 | PERCHLORATE7 | | 20200720_053 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 48 | E2000641-008 | | 20200720_054 | Perchlorate6850b.lcm | 1x | ☒ | |
| 49 | E2000641-009 | | 20200720_055 | Perchlorate6850b.lcm | 1x | ☒ | |
| 50 | E2000648-001 | | 20200720_056 | Perchlorate6850b.lcm | 1x | ☒ | |
| 51 | E2000648-002 | | 20200720_057 | Perchlorate6850b.lcm | 1x | ☒ | |
| 52 | E2000648-003 | | 20200720_058 | Perchlorate6850b.lcm | 1x | ☒ | |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000014 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000014-01 | PERCHLORATE1 | 20200720_006 | 07/20/2020 10:09 |
| 02 | EC2000014-02 | PERCHLORATE2 | 20200720_007 | 07/20/2020 10:17 |
| 03 | EC2000014-03 | PERCHLORATE3 | 20200720_008 | 07/20/2020 10:24 |
| 04 | EC2000014-04 | PERCHLORATE4 | 20200720_009 | 07/20/2020 10:32 |
| 06 | EC2000014-06 | PERCHLORATE6 | 20200720_011 | 07/20/2020 10:48 |
| 07 | EC2000014-07 | PERCHLORATE7 | 20200720_012 | 07/20/2020 10:56 |
| 08 | EC2000014-08 | PERCHLORATE8 | 20200720_013 | 07/20/2020 11:04 |
| 09 | EC2000014-09 | PERCHLORATE9 | 20200720_014 | 07/20/2020 11:12 |
| 10 | EC2000014-10 | PERCHLORATE10 | 20200720_015 | 07/20/2020 11:20 |
| 05 | EC2000014-05 | PERCHLORATE5 | 20200720_016 | 07/20/2020 12:28 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 3.545** **Average RF = 0.121**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1239 | 02 | 0.5000 | 0.1227 | 03 | 0.7000 | 0.1244 | 04 | 1.0000 | 0.1237 |
| 05 | 2.0000 | 0.1208 | 06 | 5.0000 | 0.1169 | 07 | 10.0000 | 0.1279 | 08 | 20.0000 | 0.1185 |
| 09 | 30.0000 | 0.1182 | 10 | 50.0000 | 0.1134 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.102 | 2.3 | 02 | 0.5000 | 0.507 | 1.4 | 03 | 0.7000 | 0.719 | 2.7 |
| 04 | 1.0000 | 1.02 | 2.2 | 05 | 2.0000 | 2.00 | -0.2 | 06 | 5.0000 | 4.83 | -3.4 |
| 07 | 10.0000 | 10.6 | 5.7 | 08 | 20.0000 | 19.6 | -2.1 | 09 | 30.0000 | 29.3 | -2.3 |
| 10 | 50.0000 | 46.8 | -6.3 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000014 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200720_017 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000014-11 | T | Average RF | 10 | 10.475 | ng/mL | 4.8 | <= 15 |

ALS Group Houston

# PERCHLORATE1

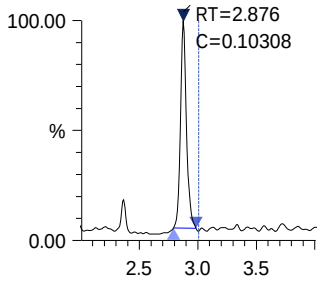
Date acquired: 7/20/2020 10:09:08 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_006.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 7/20/2020 10:09:08 AM | 5665 | 0.10308 | 20200720_006 | 2.876 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 7/20/2020 10:09:08 AM | 457293 | 1.00000 | 20200720_006 | 2.874 | 25.0000 | 1.0000 | 5 |

## Perchlorate

Conc 0.10308
Area 5665

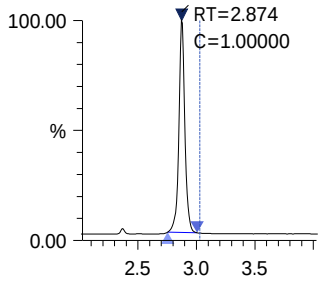
Q 99.00>83.00 (-) 1.65e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 457293

ISTD 107.00>89.00 (-) 1.28e5



ALS Group Houston

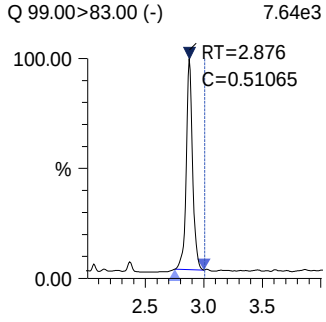
# PERCHLORATE2

Date acquired: 7/20/2020 10:17:03 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_007.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 7/20/2020 10:17:03 AM | 28211 | 0.51065 | 20200720_007 | 2.876 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 7/20/2020 10:17:03 AM | 459674 | 1.00000 | 20200720_007 | 2.873 | 25.0000 | 1.0000 | 6 |

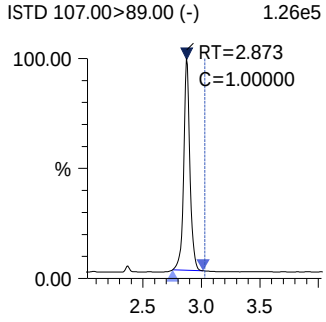
## Perchlorate

Conc 0.51065
Area 28211




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 459674



ALS Group Houston

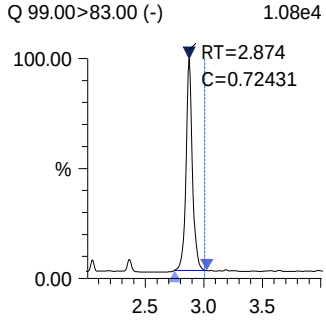
# PERCHLORATE3

Date acquired: 7/20/2020 10:24:56 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_008.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 7/20/2020 10:24:56 AM | 40510 | 0.72431 | 20200720_008 | 2.874 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 7/20/2020 10:24:56 AM | 465371 | 1.00000 | 20200720_008 | 2.874 | 25.0000 | 1.0000 | 7 |

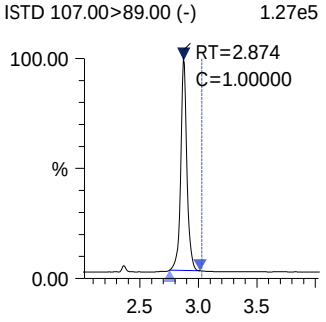
## Perchlorate

Conc 0.72431
Area 40510




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 465371



ALS Group Houston

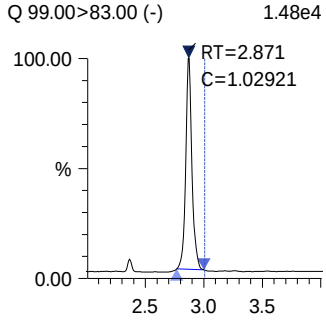
# PERCHLORATE4

Date acquired: 7/20/2020 10:32:48 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_009.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 7/20/2020 10:32:48 AM | 54285 | 1.02921 | 20200720_009 | 2.871 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 7/20/2020 10:32:48 AM | 438869 | 1.00000 | 20200720_009 | 2.869 | 25.0000 | 1.0000 | 8 |

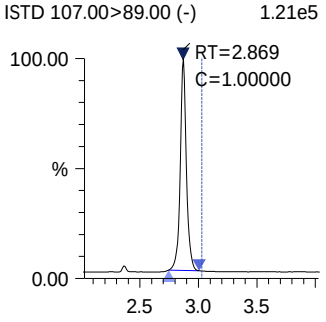
## Perchlorate

Conc 1.02921
Area 54285




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 438869



ALS Group Houston

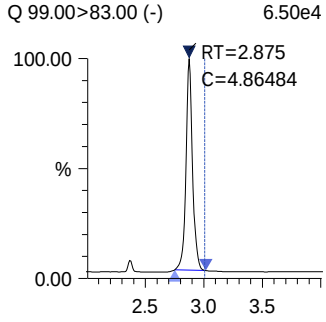
# PERCHLORATE6

Date acquired: 7/20/2020 10:48:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_011.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 7/20/2020 10:48:37 AM | 249126 | 4.86484 | 20200720_011 | 2.875 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 7/20/2020 10:48:37 AM | 426098 | 1.00000 | 20200720_011 | 2.873 | 25.0000 | 1.0000 | 10 |

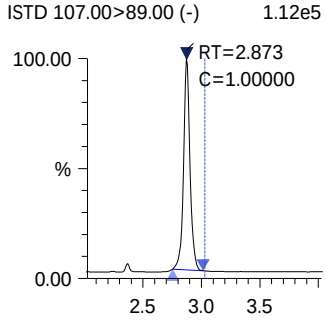
## Perchlorate

Conc 4.86484
Area 249126




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 426098



ALS Group Houston

# PERCHLORATE7

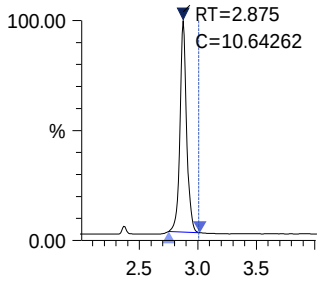
Date acquired: 7/20/2020 10:56:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_012.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/20/2020 10:56:33 AM | 453181 | 10.64262 | 20200720_012 | 2.875 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/20/2020 10:56:33 AM | 354309 | 1.00000 | 20200720_012 | 2.873 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 10.64262
Area 453181

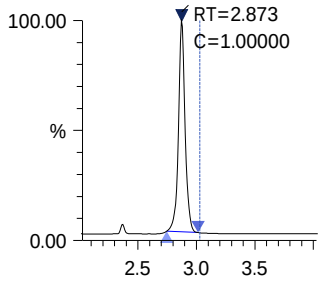
Q 99.00>83.00 (-) 1.16e5




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 354309

ISTD 107.00>89.00 (-) 9.03e4



ALS Group Houston

# PERCHLORATE8

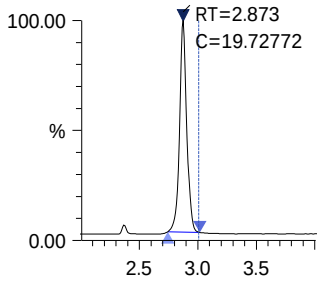
Date acquired: 7/20/2020 11:04:29 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 7/20/2020 11:04:29 AM | 811652 | 19.72772 | 20200720_013 | 2.873 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 7/20/2020 11:04:29 AM | 342336 | 1.00000 | 20200720_013 | 2.872 | 25.0000 | 1.0000 | 11 |

## Perchlorate

Conc 19.72772
Area 811652

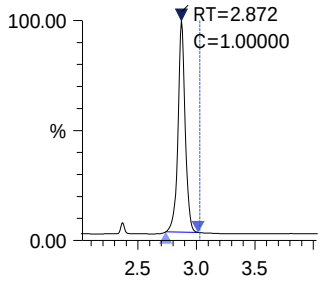
Q 99.00>83.00 (-) 1.93e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 342336

ISTD 107.00>89.00 (-) 8.10e4



ALS Group Houston

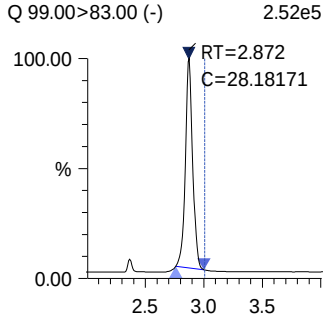
# PERCHLORATE9

Date acquired: 7/20/2020 11:12:22 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 7/20/2020 11:12:22 AM | 1067782 | 28.18171 | 20200720_014 | 2.872 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 7/20/2020 11:12:22 AM | 315264 | 1.00000 | 20200720_014 | 2.871 | 25.0000 | 1.0000 | 12 |

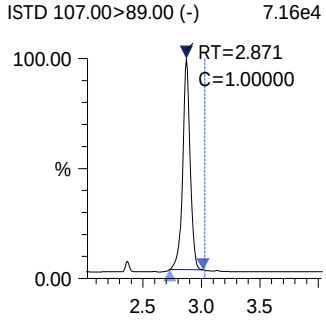
## Perchlorate

Conc 28.18171
Area 1067782




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 315264



ALS Group Houston

# PERCHLORATE10

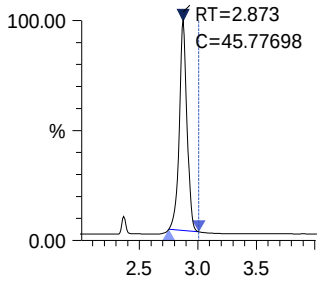
Date acquired: 7/20/2020 11:20:14 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 7/20/2020 11:20:14 AM | 1515028 | 45.77698 | 20200720_015 | 2.873 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 7/20/2020 11:20:14 AM | 275380 | 1.00000 | 20200720_015 | 2.872 | 25.0000 | 1.0000 | 13 |

## Perchlorate

Conc 45.77698
Area 1515028

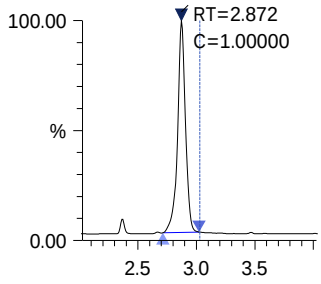
Q 99.00>83.00 (-) 3.39e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 275380

ISTD 107.00>89.00 (-) 5.90e4



ALS Group Houston

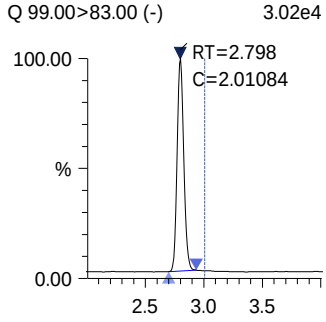
# PERCHLORATE5

Date acquired: 7/20/2020 12:28:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_016.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 7/20/2020 12:28:05 PM | 119859 | 2.01084 | 20200720_016 | 2.798 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 7/20/2020 12:28:05 PM | 495966 | 1.00000 | 20200720_016 | 2.795 | 25.0000 | 1.0000 | 9 |

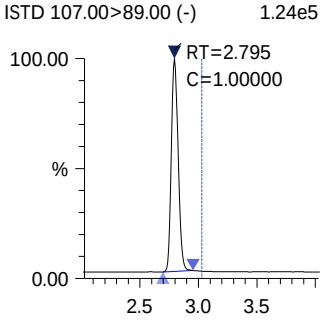
## Perchlorate

Conc 2.01084
Area 119859




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 495966



ALS Group Houston

# PERCHLORATEICV

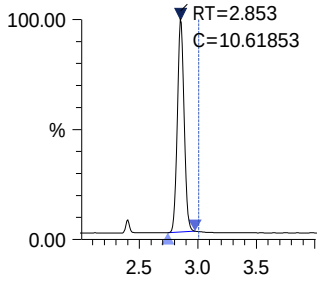
Date acquired: 7/20/2020 12:52:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_017.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 7/20/2020 12:52:26 PM | 490921 | 10.61853 | 20200720_017 | 2.853 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 7/20/2020 12:52:26 PM | 384686 | 1.00000 | 20200720_017 | 2.851 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 10.61853
Area 490921

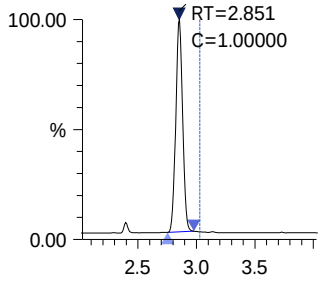
Q 99.00>83.00 (-) 1.21e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 384686

ISTD 107.00>89.00 (-) 9.52e4



**20200724**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200724_005 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 |
| 2 | PERCHLORATE2 | | 20200724_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 |
| 3 | PERCHLORATE3 | | 20200724_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 |
| 4 | PERCHLORATE4 | | 20200724_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 |
| 5 | PERCHLORATE5 | | 20200724_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 |
| 6 | PERCHLORATE6 | | 20200724_010 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 |
| 7 | PERCHLORATE7 | | 20200724_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | PERCHLORATE8 | | 20200724_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 |
| 9 | PERCHLORATE9 | | 20200724_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 |
| 10 | PERCHLORATE10 | | 20200724_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 |
| 11 | IB | | 20200724_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | PERCHLORATEICV | | 20200724_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 |
| 13 | IB | | 20200724_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | LODV | | 20200724_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | ICS | | 20200724_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | PERCHLORATE7 | | 20200724_020 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | EQ2000302-04X10 | | 20200724_021 | Perchlorate6850b.lcm | 10x | ☒ | |
| 18 | EQ2000302-05X10DNU | | 20200724_022 | Perchlorate6850b.lcm | 10x | ☒ | |
| 19 | E2000626-001X2 | | 20200724_023 | Perchlorate6850b.lcm | 2x | ☒ | |
| 20 | E2000627-001X10 | | 20200724_024 | Perchlorate6850b.lcm | 10x | ☒ | |
| 21 | E2000627-005X100 | | 20200724_025 | Perchlorate6850b.lcm | 100x | ☒ | |
| 22 | E2000627-006X100 | | 20200724_026 | Perchlorate6850b.lcm | 100x | ☒ | |
| 23 | E2000627-009X1000 | | 20200724_027 | Perchlorate6850b.lcm | 1000x | ☒ | |
| 24 | E2000640-001X200 | | 20200724_028 | Perchlorate6850b.lcm | 200x | ☒ | |
| 25 | PERCHLORATE7 | | 20200724_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 26 | E2000660-001X10 | | 20200724_030 | Perchlorate6850b.lcm | 10x | ☒ | |
| 27 | E2000627-004X10 | | 20200724_031 | Perchlorate6850b.lcm | 10x | ☒ | |
| 28 | PERCHLORATE7 | | 20200724_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 29 | EQ2000302-05X10 | | 20200724_033 | Perchlorate6850b.lcm | 10x | ☒ | |
| 30 | PERCHLORATE7 | | 20200724_034 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 31 | E2000660-003X10 | | 20200724_035 | Perchlorate6850b.lcm | 10x | ☒ | |
| 32 | E2000660-004X10 | | 20200724_036 | Perchlorate6850b.lcm | 10x | ☒ | |
| 33 | E2000660-005X2 | | 20200724_037 | Perchlorate6850b.lcm | 2x | ☒ | |
| 34 | E2000660-006X10 | | 20200724_038 | Perchlorate6850b.lcm | 10x | ☒ | |
| 35 | PERCHLORATE7 | | 20200724_039 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 36 | EQ2000303-01 | | 20200724_040 | Perchlorate6850b.lcm | 1x | ☒ | |
| 37 | EQ2000303-02 | | 20200724_041 | Perchlorate6850b.lcm | 1x | ☒ | |
| 38 | EQ2000303-03 | | 20200724_042 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | E2000641-001X20 | | 20200724_043 | Perchlorate6850b.lcm | 20x | ☒ | |
| 40 | E2000641-002X20 | | 20200724_044 | Perchlorate6850b.lcm | 20x | ☒ | |
| 41 | E2000641-003X10 | | 20200724_045 | Perchlorate6850b.lcm | 10x | ☒ | |
| 42 | E2000641-004X20 | | 20200724_046 | Perchlorate6850b.lcm | 20x | ☒ | |
| 43 | E2000641-005X10 | | 20200724_047 | Perchlorate6850b.lcm | 10x | ☒ | |
| 44 | E2000641-006X10 | | 20200724_048 | Perchlorate6850b.lcm | 10x | ☒ | |
| 45 | E2000641-007X10 | | 20200724_049 | Perchlorate6850b.lcm | 10x | ☒ | |
| 46 | PERCHLORATE7 | | 20200724_050 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 47 | E2000641-008X10 | | 20200724_051 | Perchlorate6850b.lcm | 10x | ☒ | |
| 48 | E2000641-009X10 | | 20200724_052 | Perchlorate6850b.lcm | 10x | ☒ | |
| 49 | E2000648-001X10 | | 20200724_053 | Perchlorate6850b.lcm | 10x | ☒ | |
| 50 | E2000648-002X10 | | 20200724_054 | Perchlorate6850b.lcm | 10x | ☒ | |
| 51 | E2000648-003X20 | | 20200724_055 | Perchlorate6850b.lcm | 20x | ☒ | |
| 52 | E2000648-005X10 | | 20200724_056 | Perchlorate6850b.lcm | 10x | ☒ | |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000016 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000016-01 | PERCHLORATE1 | 20200724_005 | 07/24/2020 11:48 |
| 02 | EC2000016-02 | PERCHLORATE2 | 20200724_006 | 07/24/2020 11:56 |
| 03 | EC2000016-03 | PERCHLORATE3 | 20200724_007 | 07/24/2020 12:04 |
| 04 | EC2000016-04 | PERCHLORATE4 | 20200724_008 | 07/24/2020 12:11 |
| 05 | EC2000016-05 | PERCHLORATE5 | 20200724_009 | 07/24/2020 12:19 |
| 06 | EC2000016-06 | PERCHLORATE6 | 20200724_010 | 07/24/2020 12:27 |
| 07 | EC2000016-07 | PERCHLORATE7 | 20200724_011 | 07/24/2020 12:35 |
| 08 | EC2000016-08 | PERCHLORATE8 | 20200724_012 | 07/24/2020 12:43 |
| 09 | EC2000016-09 | PERCHLORATE9 | 20200724_013 | 07/24/2020 12:51 |
| 10 | EC2000016-10 | PERCHLORATE10 | 20200724_014 | 07/24/2020 12:59 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 4.659** **Average RF = 0.121**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1283 | 02 | 0.5000 | 0.13 | 03 | 0.7000 | 0.1207 | 04 | 1.0000 | 0.1251 |
| 05 | 2.0000 | 0.1211 | 06 | 5.0000 | 0.1202 | 07 | 10.0000 | 0.1211 | 08 | 20.0000 | 0.1168 |
| 09 | 30.0000 | 0.1121 | 10 | 50.0000 | 0.1148 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.106 | 6.0 | 02 | 0.5000 | 0.537 | 7.4 | 03 | 0.7000 | 0.698 | -0.3 |
| 04 | 1.0000 | 1.03 | 3.4 | 05 | 2.0000 | 2.00 | 0.1 | 06 | 5.0000 | 4.97 | -0.7 |
| 07 | 10.0000 | 10.0 | 0.1 | 08 | 20.0000 | 19.3 | -3.5 | 09 | 30.0000 | 27.8 | -7.3 |
| 10 | 50.0000 | 47.4 | -5.1 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000016 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200724_016 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000016-11 | T | Average RF | 10 | 9.867 | ng/mL | -1.3 | <= 15 |

ALS Group Houston

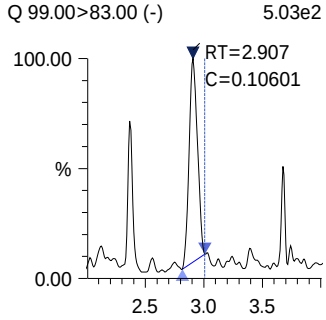
# PERCHLORATE1

Date acquired: 7/24/2020 11:48:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 7/24/2020 11:48:19 AM | 2348 | 0.10601 | 20200724_005 | 2.907 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 7/24/2020 11:48:19 AM | 183001 | 1.00000 | 20200724_005 | 2.903 | 25.0000 | 1.0000 | 5 |

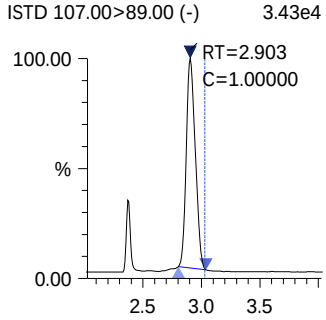
## Perchlorate

Conc 0.10601
Area 2348




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183001



ALS Group Houston

# PERCHLORATE2

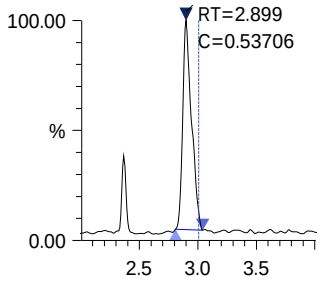
Date acquired: 7/24/2020 11:56:11 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 7/24/2020 11:56:11 AM | 11773 | 0.53706 | 20200724_006 | 2.899 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 7/24/2020 11:56:11 AM | 181125 | 1.00000 | 20200724_006 | 2.898 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.53706
Area 11773

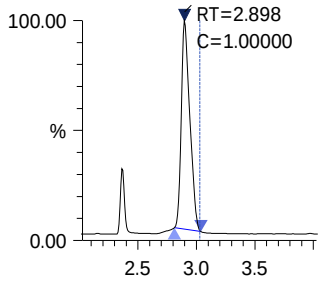
Q 99.00>83.00 (-) 2.32e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181125

ISTD 107.00>89.00 (-) 3.62e4



ALS Group Houston

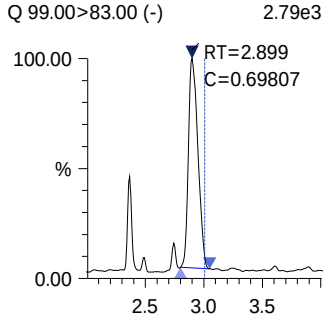
# PERCHLORATE3

Date acquired: 7/24/2020 12:04:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 7/24/2020 12:04:05 PM | 15258 | 0.69807 | 20200724_007 | 2.899 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 7/24/2020 12:04:05 PM | 180602 | 1.00000 | 20200724_007 | 2.896 | 25.0000 | 1.0000 | 7 |

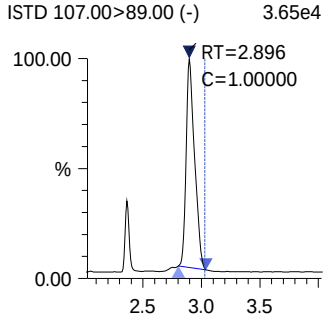
## Perchlorate

Conc 0.69807
Area 15258




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 180602



ALS Group Houston

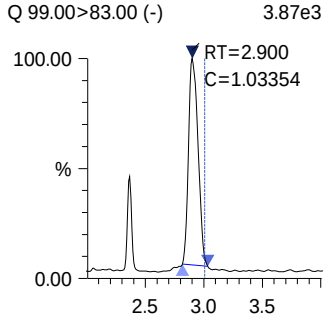
# PERCHLORATE4

Date acquired: 7/24/2020 12:11:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 7/24/2020 12:11:58 PM | 20922 | 1.03354 | 20200724_008 | 2.900 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 7/24/2020 12:11:58 PM | 167260 | 1.00000 | 20200724_008 | 2.902 | 25.0000 | 1.0000 | 8 |

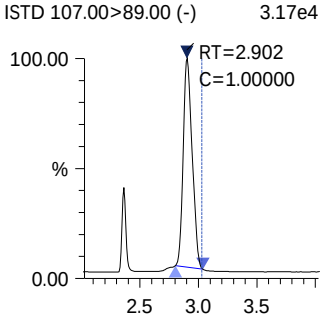
## Perchlorate

Conc 1.03354
Area 20922




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 167260



ALS Group Houston

# PERCHLORATE5

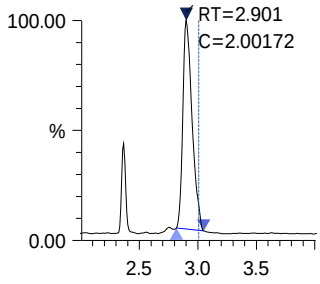
Date acquired: 7/24/2020 12:19:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 7/24/2020 12:19:50 PM | 39343 | 2.00172 | 20200724_009 | 2.901 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 7/24/2020 12:19:50 PM | 162397 | 1.00000 | 20200724_009 | 2.899 | 25.0000 | 1.0000 | 9 |

## Perchlorate

Conc 2.00172
Area 39343

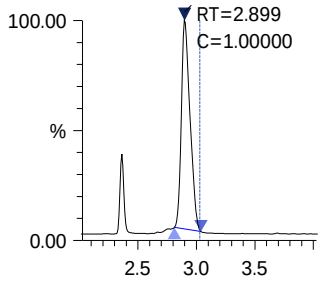
Q 99.00>83.00 (-) 7.39e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 162397

ISTD 107.00>89.00 (-) 3.19e4



ALS Group Houston

# PERCHLORATE6

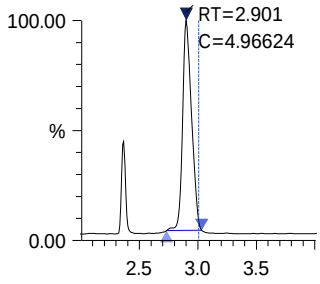
Date acquired: 7/24/2020 12:27:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 7/24/2020 12:27:42 PM | 102216 | 4.96624 | 20200724_010 | 2.901 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 7/24/2020 12:27:42 PM | 170060 | 1.00000 | 20200724_010 | 2.900 | 25.0000 | 1.0000 | 10 |

## Perchlorate

Conc 4.96624
Area 102216

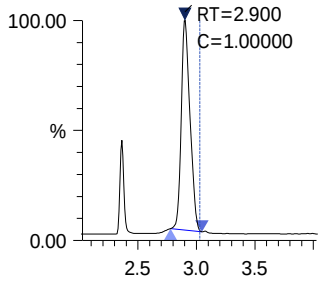
Q 99.00>83.00 (-) 1.97e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 170060

ISTD 107.00>89.00 (-) 3.28e4



ALS Group Houston

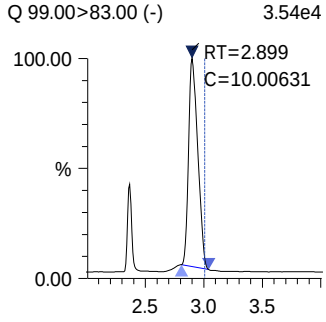
# PERCHLORATE7

Date acquired: 7/24/2020 12:35:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 12:35:33 PM | 187110 | 10.00631 | 20200724_011 | 2.899 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 12:35:33 PM | 154502 | 1.00000 | 20200724_011 | 2.897 | 25.0000 | 1.0000 | 4 |

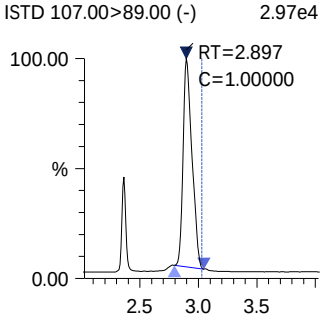
## Perchlorate

Conc 10.00631
Area 187110




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 154502



ALS Group Houston

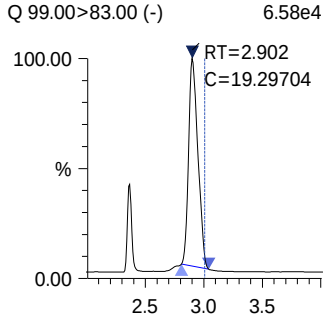
# PERCHLORATE8

Date acquired: 7/24/2020 12:43:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 7/24/2020 12:43:26 PM | 349524 | 19.29704 | 20200724_012 | 2.902 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 7/24/2020 12:43:26 PM | 149657 | 1.00000 | 20200724_012 | 2.900 | 25.0000 | 1.0000 | 11 |

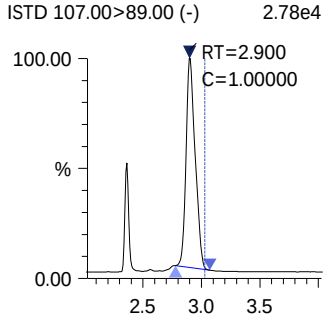
## Perchlorate

Conc 19.29704
Area 349524




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 149657



ALS Group Houston

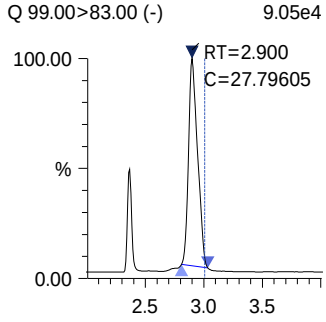
# PERCHLORATE9

Date acquired: 7/24/2020 12:51:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 7/24/2020 12:51:22 PM | 465757 | 27.79605 | 20200724_013 | 2.900 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 7/24/2020 12:51:22 PM | 138448 | 1.00000 | 20200724_013 | 2.898 | 25.0000 | 1.0000 | 12 |

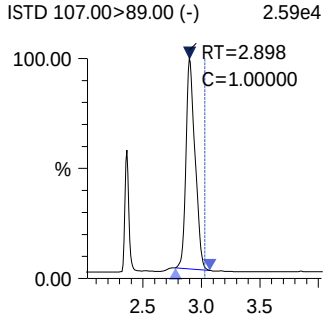
## Perchlorate

Conc 27.79605
Area 465757




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 138448



ALS Group Houston

# PERCHLORATE10

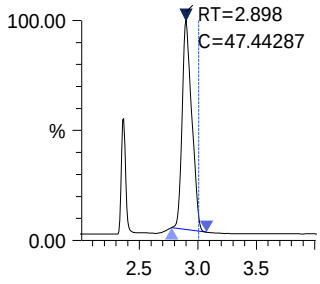
Date acquired: 7/24/2020 12:59:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 7/24/2020 12:59:14 PM | 708682 | 47.44287 | 20200724_014 | 2.898 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 7/24/2020 12:59:14 PM | 123422 | 1.00000 | 20200724_014 | 2.896 | 25.0000 | 1.0000 | 13 |

## Perchlorate

Conc 47.44287
Area 708682

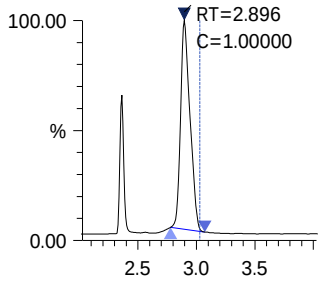
Q 99.00>83.00 (-) 1.28e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 123422

ISTD 107.00>89.00 (-) 2.23e4



ALS Group Houston

# PERCHLORATEICV

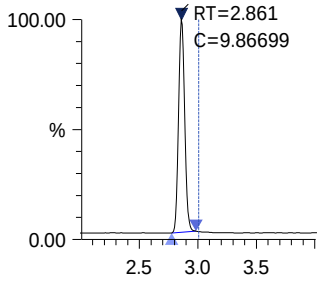
Date acquired: 7/24/2020 1:28:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 7/24/2020 1:28:19 PM | 231631 | 9.86699 | 20200724_016 | 2.861 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 7/24/2020 1:28:19 PM | 193964 | 1.00000 | 20200724_016 | 2.859 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 9.86699
Area 231631

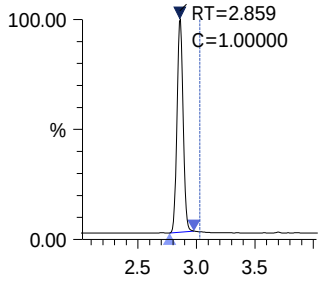
Q 99.00>83.00 (-) 6.30e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 193964

ISTD 107.00>89.00 (-) 5.33e4



# Chromatograms and Selected Ion Monitoring

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200720**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/20/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000014

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200720_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 |
| 2 | PERCHLORATE2 | | 20200720_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 |
| 3 | PERCHLORATE3 | | 20200720_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 |
| 4 | PERCHLORATE4 | | 20200720_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 |
| 5 | PERCHLORATE5 | | 20200720_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 |
| 6 | PERCHLORATE6 | | 20200720_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 |
| 7 | PERCHLORATE7 | | 20200720_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | PERCHLORATE8 | | 20200720_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 |
| 9 | PERCHLORATE9 | | 20200720_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 |
| 10 | PERCHLORATE10 | | 20200720_015 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 |
| 11 | PERCHLORATEICV | | 20200720_017 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 |
| 12 | IB | | 20200720_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 13 | IB | | 20200720_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | LODV | | 20200720_020 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | ICS | | 20200720_021 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | PERCHLORATE7 | | 20200720_022 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | EQ2000302-01 | | 20200720_023 | Perchlorate6850b.lcm | 1x | ☒ | |
| 18 | EQ2000302-02 | | 20200720_024 | Perchlorate6850b.lcm | 1x | ☒ | |
| 19 | EQ2000302-03 | | 20200720_025 | Perchlorate6850b.lcm | 1x | ☒ | |
| 20 | EQ2000302-04 | | 20200720_026 | Perchlorate6850b.lcm | 1x | ☒ | |
| 21 | EQ2000302-05 | | 20200720_027 | Perchlorate6850b.lcm | 1x | ☒ | |
| 22 | E2000626-001 | | 20200720_028 | Perchlorate6850b.lcm | 1x | ☒ | |
| 23 | E2000627-001 | | 20200720_029 | Perchlorate6850b.lcm | 1x | ☒ | |
| 24 | E2000627-002 | | 20200720_030 | Perchlorate6850b.lcm | 1x | ☒ | |
| 25 | E2000627-003 | | 20200720_031 | Perchlorate6850b.lcm | 1x | ☒ | |
| 26 | E2000627-004 | | 20200720_032 | Perchlorate6850b.lcm | 1x | ☒ | |
| 27 | PERCHLORATE7 | | 20200720_033 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 28 | E2000627-005 | | 20200720_034 | Perchlorate6850b.lcm | 1x | ☒ | |
| 29 | E2000627-006 | | 20200720_035 | Perchlorate6850b.lcm | 1x | ☒ | |
| 30 | E2000627-007 | | 20200720_036 | Perchlorate6850b.lcm | 1x | ☒ | |
| 31 | E2000627-008 | | 20200720_037 | Perchlorate6850b.lcm | 1x | ☒ | |
| 32 | E2000627-009 | | 20200720_038 | Perchlorate6850b.lcm | 1x | ☒ | |
| 33 | E2000638-001 | | 20200720_039 | Perchlorate6850b.lcm | 1x | ☒ | |
| 34 | E2000639-001 | | 20200720_040 | Perchlorate6850b.lcm | 1x | ☒ | |
| 35 | E2000640-001 | | 20200720_041 | Perchlorate6850b.lcm | 1x | ☒ | |
| 36 | PERCHLORATE7 | | 20200720_042 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 37 | EQ2000303-01 | | 20200720_043 | Perchlorate6850b.lcm | 1x | ☒ | |
| 38 | EQ2000303-02 | | 20200720_044 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | EQ2000303-03 | | 20200720_045 | Perchlorate6850b.lcm | 1x | ☒ | |
| 40 | E2000641-001 | | 20200720_046 | Perchlorate6850b.lcm | 1x | ☒ | |
| 41 | E2000641-002 | | 20200720_047 | Perchlorate6850b.lcm | 1x | ☒ | |
| 42 | E2000641-003 | | 20200720_048 | Perchlorate6850b.lcm | 1x | ☒ | |
| 43 | E2000641-004 | | 20200720_049 | Perchlorate6850b.lcm | 1x | ☒ | |
| 44 | E2000641-005 | | 20200720_050 | Perchlorate6850b.lcm | 1x | ☒ | |
| 45 | E2000641-006 | | 20200720_051 | Perchlorate6850b.lcm | 1x | ☒ | |
| 46 | E2000641-007 | | 20200720_052 | Perchlorate6850b.lcm | 1x | ☒ | |
| 47 | PERCHLORATE7 | | 20200720_053 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 48 | E2000641-008 | | 20200720_054 | Perchlorate6850b.lcm | 1x | ☒ | |
| 49 | E2000641-009 | | 20200720_055 | Perchlorate6850b.lcm | 1x | ☒ | |
| 50 | E2000648-001 | | 20200720_056 | Perchlorate6850b.lcm | 1x | ☒ | |
| 51 | E2000648-002 | | 20200720_057 | Perchlorate6850b.lcm | 1x | ☒ | |
| 52 | E2000648-003 | | 20200720_058 | Perchlorate6850b.lcm | 1x | ☒ | |

**20200724**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200724_005 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 |
| 2 | PERCHLORATE2 | | 20200724_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 |
| 3 | PERCHLORATE3 | | 20200724_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 |
| 4 | PERCHLORATE4 | | 20200724_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 |
| 5 | PERCHLORATE5 | | 20200724_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 |
| 6 | PERCHLORATE6 | | 20200724_010 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 |
| 7 | PERCHLORATE7 | | 20200724_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | PERCHLORATE8 | | 20200724_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 |
| 9 | PERCHLORATE9 | | 20200724_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 |
| 10 | PERCHLORATE10 | | 20200724_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 |
| 11 | IB | | 20200724_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | PERCHLORATEICV | | 20200724_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 |
| 13 | IB | | 20200724_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | LODV | | 20200724_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | ICS | | 20200724_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | PERCHLORATE7 | | 20200724_020 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | EQ2000302-04X10 | | 20200724_021 | Perchlorate6850b.lcm | 10x | ☒ | |
| 18 | EQ2000302-05X10DNU | | 20200724_022 | Perchlorate6850b.lcm | 10x | ☒ | |
| 19 | E2000626-001X2 | | 20200724_023 | Perchlorate6850b.lcm | 2x | ☒ | |
| 20 | E2000627-001X10 | | 20200724_024 | Perchlorate6850b.lcm | 10x | ☒ | |
| 21 | E2000627-005X100 | | 20200724_025 | Perchlorate6850b.lcm | 100x | ☒ | |
| 22 | E2000627-006X100 | | 20200724_026 | Perchlorate6850b.lcm | 100x | ☒ | |
| 23 | E2000627-009X1000 | | 20200724_027 | Perchlorate6850b.lcm | 1000x | ☒ | |
| 24 | E2000640-001X200 | | 20200724_028 | Perchlorate6850b.lcm | 200x | ☒ | |
| 25 | PERCHLORATE7 | | 20200724_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 26 | E2000660-001X10 | | 20200724_030 | Perchlorate6850b.lcm | 10x | ☒ | |
| 27 | E2000627-004X10 | | 20200724_031 | Perchlorate6850b.lcm | 10x | ☒ | |
| 28 | PERCHLORATE7 | | 20200724_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 29 | EQ2000302-05X10 | | 20200724_033 | Perchlorate6850b.lcm | 10x | ☒ | |
| 30 | PERCHLORATE7 | | 20200724_034 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 31 | E2000660-003X10 | | 20200724_035 | Perchlorate6850b.lcm | 10x | ☒ | |
| 32 | E2000660-004X10 | | 20200724_036 | Perchlorate6850b.lcm | 10x | ☒ | |
| 33 | E2000660-005X2 | | 20200724_037 | Perchlorate6850b.lcm | 2x | ☒ | |
| 34 | E2000660-006X10 | | 20200724_038 | Perchlorate6850b.lcm | 10x | ☒ | |
| 35 | PERCHLORATE7 | | 20200724_039 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 36 | EQ2000303-01 | | 20200724_040 | Perchlorate6850b.lcm | 1x | ☒ | |
| 37 | EQ2000303-02 | | 20200724_041 | Perchlorate6850b.lcm | 1x | ☒ | |
| 38 | EQ2000303-03 | | 20200724_042 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | E2000641-001X20 | | 20200724_043 | Perchlorate6850b.lcm | 20x | ☒ | |
| 40 | E2000641-002X20 | | 20200724_044 | Perchlorate6850b.lcm | 20x | ☒ | |
| 41 | E2000641-003X10 | | 20200724_045 | Perchlorate6850b.lcm | 10x | ☒ | |
| 42 | E2000641-004X20 | | 20200724_046 | Perchlorate6850b.lcm | 20x | ☒ | |
| 43 | E2000641-005X10 | | 20200724_047 | Perchlorate6850b.lcm | 10x | ☒ | |
| 44 | E2000641-006X10 | | 20200724_048 | Perchlorate6850b.lcm | 10x | ☒ | |
| 45 | E2000641-007X10 | | 20200724_049 | Perchlorate6850b.lcm | 10x | ☒ | |
| 46 | PERCHLORATE7 | | 20200724_050 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 47 | E2000641-008X10 | | 20200724_051 | Perchlorate6850b.lcm | 10x | ☒ | |
| 48 | E2000641-009X10 | | 20200724_052 | Perchlorate6850b.lcm | 10x | ☒ | |
| 49 | E2000648-001X10 | | 20200724_053 | Perchlorate6850b.lcm | 10x | ☒ | |
| 50 | E2000648-002X10 | | 20200724_054 | Perchlorate6850b.lcm | 10x | ☒ | |
| 51 | E2000648-003X20 | | 20200724_055 | Perchlorate6850b.lcm | 20x | ☒ | |
| 52 | E2000648-005X10 | | 20200724_056 | Perchlorate6850b.lcm | 10x | ☒ | |

**20200728**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | null | | 20200728_001 | Perchlorate6850b.lcm | 1x | ☒ | |
| 2 | null | | 20200728_002 | Perchlorate6850b.lcm | 1x | ☒ | |
| 3 | IB | | 20200728_003 | Perchlorate6850b.lcm | 1x | ☒ | |
| 4 | IB | | 20200728_004 | Perchlorate6850b.lcm | 1x | ☒ | |
| 5 | LODV | | 20200728_005 | Perchlorate6850b.lcm | 1x | ☒ | |
| 6 | ICS | | 20200728_006 | Perchlorate6850b.lcm | 1x | ☒ | |
| 7 | PERCHLORATE7 | | 20200728_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | E2000638-001 | | 20200728_008 | Perchlorate6850b.lcm | 1x | ☒ | |
| 9 | E2000639-001 | | 20200728_009 | Perchlorate6850b.lcm | 1x | ☒ | |
| 10 | E2000641-003 | | 20200728_010 | Perchlorate6850b.lcm | 1x | ☒ | |
| 11 | E2000641-006 | | 20200728_011 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | E2000641-007 | | 20200728_012 | Perchlorate6850b.lcm | 1x | ☒ | |
| 13 | E2000641-008 | | 20200728_013 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | E2000641-009 | | 20200728_014 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | E2000648-001 | | 20200728_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | E2000648-002 | | 20200728_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | PERCHLORATE7 | | 20200728_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 18 | E2000648-006 | | 20200728_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 19 | E2000648-007 | | 20200728_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 20 | E2000649-003 | | 20200728_020 | Perchlorate6850b.lcm | 1x | ☒ | |
| 21 | E2000649-004 | | 20200728_021 | Perchlorate6850b.lcm | 1x | ☒ | |
| 22 | E2000649-006 | | 20200728_022 | Perchlorate6850b.lcm | 1x | ☒ | |
| 23 | E2000649-005 | | 20200728_023 | Perchlorate6850b.lcm | 1x | ☒ | |
| 24 | E2000641-005 | | 20200728_024 | Perchlorate6850b.lcm | 1x | ☒ | |
| 25 | EQ2000303-02 | | 20200728_025 | Perchlorate6850b.lcm | 1x | ☒ | |
| 26 | PERCHLORATE7 | | 20200728_026 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/20/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200720\20200720_022

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.7 | 0.1210 | 0.1285 | 6.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/20/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200720\20200720_033

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.1 | 0.1210 | 0.1212 | 0.1 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/20/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200720\20200720_042

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.4 | 0.1210 | 0.1247 | 3.0 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/22/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200722\20200722_016

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.1 | 0.1210 | 0.1215 | 0.4 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/22/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200722\20200722_024

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.89 | 0.1210 | 0.1189 | -1.8 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/23/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200723\20200723_007

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.1 | 0.1210 | 0.1214 | 0.3 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/23/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200723\20200723_017

**Calibration Date:** 7/20/20
**Calibration ID:** EC2000014
**Analysis Lot:** 688323
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.34 | 0.1210 | 0.1122 | -7.3 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_020

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.0 | 0.1210 | 0.1213 | 0.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_029

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.86 | 0.1210 | 0.1193 | -1.4 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_032

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.75 | 0.1210 | 0.1180 | -2.5 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_034

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.1 | 0.1210 | 0.1220 | 0.8 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_039

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.0 | 0.1210 | 0.1214 | 0.3 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_050

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.68 | 0.1210 | 0.1172 | -3.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/24/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200724\20200724_060

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688371
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 10.1 | 0.1210 | 0.1226 | 1.3 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/28/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200728\20200728_007

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688729
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.90 | 0.1210 | 0.1198 | -1.0 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/28/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200728\20200728_017

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 688729
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.97 | 0.1210 | 0.1207 | -0.3 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/20/20 13:39

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200720\20200720_022
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000310-01
**Analysis Lot:** 688323
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-01 | 380,500 | 2.80 |
| Method Blank | EQ2000302-01 | 475,788 | 2.87 |
| Lab Control Sample | EQ2000302-02 | 485,348 | 2.87 |
| Duplicate Lab Control Sample | EQ2000302-03 | 485,451 | 2.87 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/20/20 15:22 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200720\20200720_033 | **Lab Code:** | EQ2000310-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688323 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-02 | 373,864 | 2.79 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/20/20 16:55 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200720\20200720_042 | **Lab Code:** | EQ2000310-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688323 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-03 | 224,958 | 2.91 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/22/20 19:13 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200722\20200722_016 | **Lab Code:** | EQ2000310-04 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688323 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-04 | 223,422 | 2.95 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/22/20 20:16 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200722\20200722_024 | **Lab Code:** | EQ2000310-05 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688323 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-05 | 232,812 | 2.95 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/23/20 11:41 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200723\20200723_007 | **Lab Code:** | EQ2000310-06 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688323 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-06 | 202,016 | 2.92 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/23/20 13:00 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200723\20200723_017 | **Lab Code:** | EQ2000310-07 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688323 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 403,151 | 2.86 |
| | **Upper Limit ==>** | 604,727 | 4.86 |
| | **Lower Limit ==>** | 201,576 | 0.86 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000310-07 | 202,415 | 2.91 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 13:59 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_020 | **Lab Code:** | EQ2000311-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-01 | 149,874 | 2.90 |
| Batch QCMS | EQ2000302-04 | 80,779 | 2.90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 15:11 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_029 | **Lab Code:** | EQ2000311-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-02 | 142,468 | 2.90 |
| Batch QC | E2000627-004 | 214,190 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 15:37 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_032 | **Lab Code:** | EQ2000311-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-03 | 143,487 | 2.90 |
| Batch QCDMS | EQ2000302-05 | 121,804 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 15:53 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_034 | **Lab Code:** | EQ2000311-04 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-04 | 142,073 | 2.90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 16:33 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_039 | **Lab Code:** | EQ2000311-05 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-05 | 142,477 | 2.90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 17:59 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_050 | **Lab Code:** | EQ2000311-06 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-06 | 128,840 | 2.90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/24/20 19:18 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200724\20200724_060 | **Lab Code:** | EQ2000311-07 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688371 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000311-07 | 129,501 | 2.90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070623

**Service Request:** E2000639
**Date Analyzed:** 7/28/20 12:05

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200728\20200728_007
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000314-01
**Analysis Lot:** 688729
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000314-01 | 184,014 | 2.90 |
| LH18/24-SP650_071420-BIX | E2000639-001 | 87,302 | 2.89 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000639 |
| **Project:** | HS20070623 | **Date Analyzed:** | 7/28/20 13:24 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200728\20200728_017 | **Lab Code:** | EQ2000314-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 688729 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000314-02 | 141,202 | 2.89 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

ALS Group Houston

# PERCHLORATE7

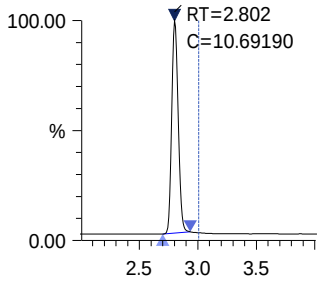
Date acquired: 7/20/2020 1:39:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_022.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/20/2020 1:39:32 PM | 488934 | 10.69190 | 20200720_022 | 2.802 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/20/2020 1:39:32 PM | 380500 | 1.00000 | 20200720_022 | 2.800 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 10.69190
Area 488934

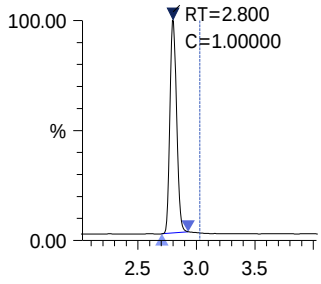
Q 99.00>83.00 (-) 1.26e5




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 380500

ISTD 107.00>89.00 (-) 9.71e4



ALS Group Houston

# EQ2000302-01

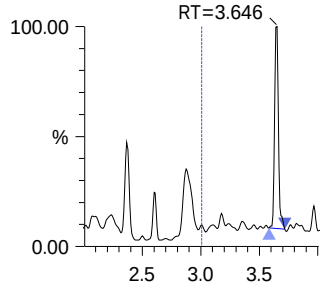
Date acquired: 7/20/2020 1:47:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_023.lcd
Vial: 1 | Inj. Volume: 25.0000uL | Tray: 3

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-01 | 7/20/2020 1:47:28 PM | ---- | ---- | 20200720_023 | ---- | 25.0000 | 1.0000 | 1 |
| Sodium Perchlorate-18O4_IS | EQ2000302-01 | 7/20/2020 1:47:28 PM | 475788 | 1.00000 | 20200720_023 | 2.866 | 25.0000 | 1.0000 | 1 |

## Perchlorate

Conc ----
Area ----

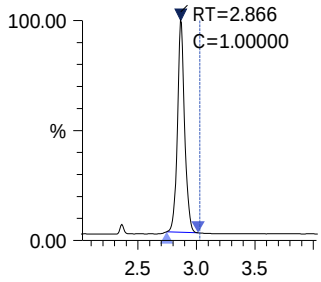
Q 99.00>83.00 (-) 6.94e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 475788

ISTD 107.00>89.00 (-) 1.12e5



ALS Group Houston

# EQ2000302-02

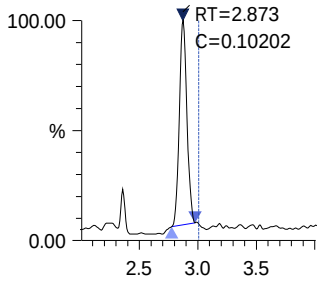
Date acquired: 7/20/2020 1:55:23 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_024.lcd
Vial: 2 | Inj. Volume: 25.0000uL | Tray: 3

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-02 | 7/20/2020 1:55:23 PM | 5951 | 0.10202 | 20200720_024 | 2.873 | 25.0000 | 1.0000 | 2 |
| Sodium Perchlorate-18O4_IS | EQ2000302-02 | 7/20/2020 1:55:23 PM | 485348 | 1.00000 | 20200720_024 | 2.868 | 25.0000 | 1.0000 | 2 |

## Perchlorate

Conc 0.10202
Area 5951

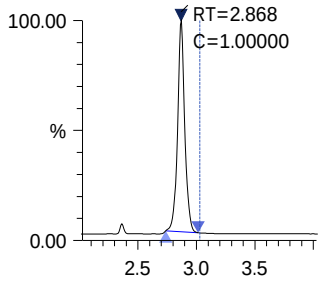
Q 99.00>83.00 (-) 1.38e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 485348

ISTD 107.00>89.00 (-) 1.15e5



ALS Group Houston

# EQ2000302-03

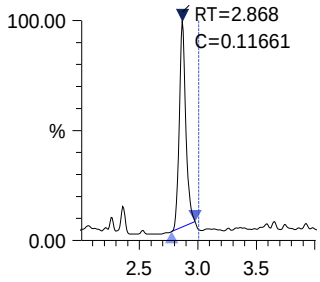
Date acquired: 7/20/2020 2:03:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_025.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 3

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-03 | 7/20/2020 2:03:16 PM | 6802 | 0.11661 | 20200720_025 | 2.868 | 25.0000 | 1.0000 | 3 |
| Sodium Perchlorate-18O4_IS | EQ2000302-03 | 7/20/2020 2:03:16 PM | 485451 | 1.00000 | 20200720_025 | 2.866 | 25.0000 | 1.0000 | 3 |

## Perchlorate

Conc 0.11661
Area 6802

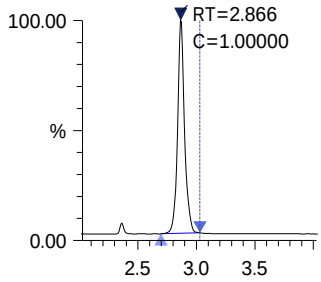
Q 99.00>83.00 (-) 1.83e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 485451

ISTD 107.00>89.00 (-) 1.17e5



ALS Group Houston

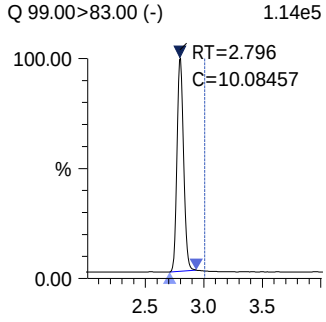
# PERCHLORATE7

Date acquired: 7/20/2020 3:22:41 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200720\20200720_033.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/20/2020 3:22:41 PM | 453118 | 10.08457 | 20200720_033 | 2.796 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/20/2020 3:22:41 PM | 373864 | 1.00000 | 20200720_033 | 2.794 | 25.0000 | 1.0000 | 4 |

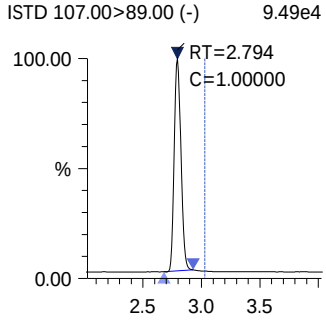
## Perchlorate

Conc 10.08457
Area 453118




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 373864



ALS Group Houston

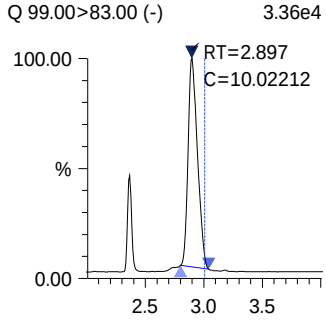
# PERCHLORATE7

Date acquired: 7/24/2020 1:59:53 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_020.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 1:59:53 PM | 181792 | 10.02212 | 20200724_020 | 2.897 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 1:59:53 PM | 149874 | 1.00000 | 20200724_020 | 2.897 | 25.0000 | 1.0000 | 4 |

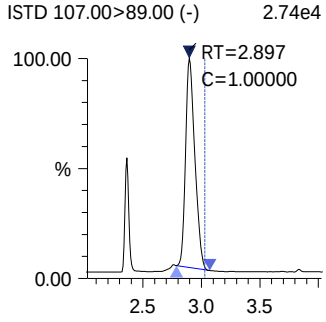
## Perchlorate

Conc 10.02212
Area 181792




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 149874



ALS Group Houston

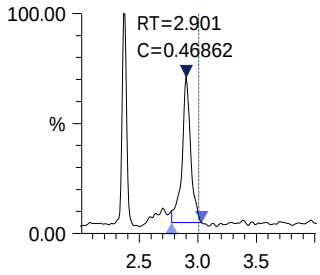
# EQ2000302-04X10

Date acquired: 7/24/2020 2:07:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_021.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-04X10 | 7/24/2020 2:07:48 PM | 4582 | 0.46862 | 20200724_021 | 2.901 | 25.0000 | 1.0000 | 16 |
| Sodium Perchlorate-18O4_IS | EQ2000302-04X10 | 7/24/2020 2:07:48 PM | 80779 | 1.00000 | 20200724_021 | 2.897 | 25.0000 | 1.0000 | 16 |

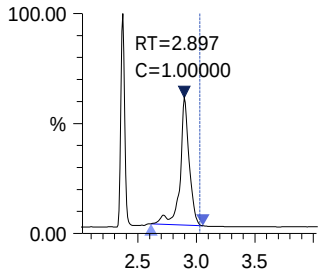
## Perchlorate

Conc 0.46862
Area 4582
Q 99.00>83.00 (-) 1.33e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 80779
ISTD 107.00>89.00 (-) 2.49e4



ALS Group Houston

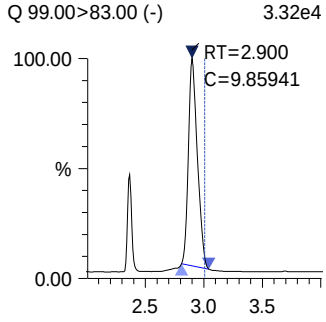
# PERCHLORATE7

Date acquired: 7/24/2020 3:11:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_029.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 3:11:02 PM | 170004 | 9.85941 | 20200724_029 | 2.900 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 3:11:02 PM | 142468 | 1.00000 | 20200724_029 | 2.899 | 25.0000 | 1.0000 | 4 |

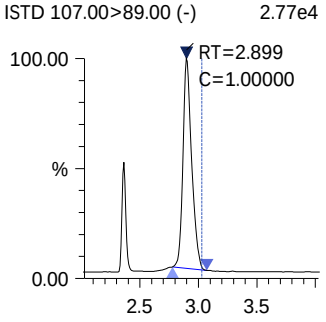
## Perchlorate

Conc 9.85941
Area 170004




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 142468



ALS Group Houston

# PERCHLORATE7

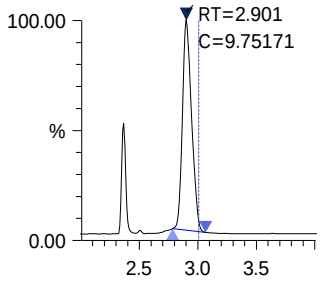
Date acquired: 7/24/2020 3:37:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_032.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 3:37:07 PM | 169350 | 9.75171 | 20200724_032 | 2.901 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 3:37:07 PM | 143487 | 1.00000 | 20200724_032 | 2.899 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.75171
Area 169350

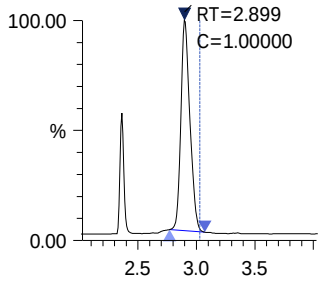
Q 99.00>83.00 (-) 3.21e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 143487

ISTD 107.00>89.00 (-) 2.68e4



ALS Group Houston

# EQ2000302-05X10

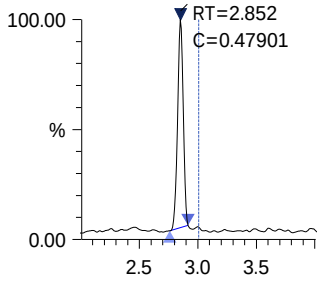
Date acquired: 7/24/2020 3:45:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_033.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000302-05X10 | 7/24/2020 3:45:36 PM | 7062 | 0.47901 | 20200724_033 | 2.852 | 25.0000 | 1.0000 | 17 |
| Sodium Perchlorate-18O4_IS | EQ2000302-05X10 | 7/24/2020 3:45:36 PM | 121804 | 1.00000 | 20200724_033 | 2.850 | 25.0000 | 1.0000 | 17 |

## Perchlorate

Conc 0.47901
Area 7062

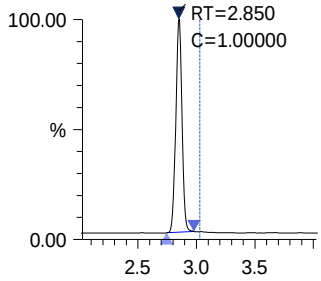
Q 99.00>83.00 (-) 2.13e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 121804

ISTD 107.00>89.00 (-) 3.33e4



ALS Group Houston

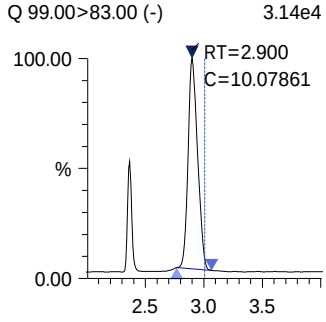
# PERCHLORATE7

Date acquired: 7/24/2020 3:53:29 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_034.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 3:53:29 PM | 173301 | 10.07861 | 20200724_034 | 2.900 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 3:53:29 PM | 142073 | 1.00000 | 20200724_034 | 2.899 | 25.0000 | 1.0000 | 4 |

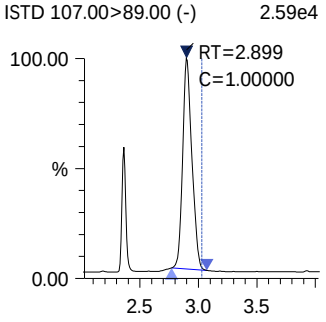
## Perchlorate

Conc 10.07861
Area 173301




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 142073



# HS20070623 8260 Raw Data

ALS WO# HS20070623

# MSVOA06 -Logbook

**Batch:** 41087 **Analyst:** Presenta Cabascango

**Date:** 07-13-2020 **Reviewer:**

**Method:** 8260 **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BFB | TUNE | 07-13-2020 10:03 am | 1.00 | 50 mL | 50 mL | X071301.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 2 | VSTD000.25 | ICAL1 | 07-13-2020 10:27 am | 1.00 | 50 mL | 50 mL | X071302.D | Liquid | Y | NA |
| | *0.10 uL cal std/100 mL DI* | | | | | | | | | |
| 3 | VSTD000.5 | ICAL2 | 07-13-2020 10:55 am | 1.00 | 50 mL | 50 mL | X071303.D | Liquid | Y | NA |
| | *0.10 uL cal std/50 mL DI* | | | | | | | | | |
| 4 | VSTD001 | ICAL3 | 07-13-2020 11:42 am | 1.00 | 50 mL | 50 mL | X071304.D | Liquid | Y | NA |
| | *0.20 uL cal std/50 mL DI* | | | | | | | | | |
| 5 | VSTD002 | ICAL4 | 07-13-2020 12:06 pm | 1.00 | 50 mL | 50 mL | X071305.D | Liquid | Y | NA |
| | *0.40 uL cal std/50 mL DI* | | | | | | | | | |
| 6 | VSTD005 | ICAL5 | 07-13-2020 12:30 pm | 1.00 | 50 mL | 50 mL | X071306.D | Liquid | Y | NA |
| | *1.0 uL cal std/50 mL DI* | | | | | | | | | |
| 7 | VSTD020 | ICAL6 | 07-13-2020 12:54 pm | 1.00 | 50 mL | 50 mL | X071307.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 8 | VSTD050 | ICAL7 | 07-13-2020 01:18 pm | 1.00 | 50 mL | 50 mL | X071308.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 9 | VSTD100 | ICAL8 | 07-13-2020 01:42 pm | 1.00 | 50 mL | 50 mL | X071309.D | Liquid | Y | NA |
| | *20 uL cal std/50 mL DI* | | | | | | | | | |
| 10 | VSTD150 | ICAL9 | 07-13-2020 02:06 pm | 1.00 | 50 mL | 50 mL | X071310.D | Liquid | Y | NA |
| | *30 uL cal std/50 mL DI* | | | | | | | | | |
| 11 | VSTD200 | ICAL | 07-13-2020 02:30 pm | 1.00 | 50 mL | 50 mL | X071311.D | Liquid | Y | NA |
| | *40 uL cal std/50 mL DI* | | | | | | | | | |
| 12 | BLANK | SAMP | 07-13-2020 02:54 pm | 1.00 | 50 mL | 50 mL | X071312.D | Liquid | Y | NA |
| 13 | CCV | ICV | 07-13-2020 03:42 pm | 1.00 | 50 mL | 50 mL | X071313.D | Liquid | Y | NA |
| | *10 uL ical std/50 mL DI* | | | | | | | | | |
| 14 | BFB | TUNE | 07-13-2020 04:06 pm | 1.00 | 50 mL | 50 mL | Y071301.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 15 | CCV | CCV | 07-13-2020 04:30 pm | 1.00 | 50 mL | 50 mL | Y071302.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 16 | BLANK | SAMP | 07-13-2020 04:53 pm | 1.00 | 50 mL | 50 mL | Y071303.D | Liquid | Y | NA |
| 17 | CCB | SAMP | 07-13-2020 05:17 pm | 1.00 | 50 mL | 50 mL | Y071304.D | Liquid | Y | NA |
| 18 | VLCSW-200713 | LCS | 07-13-2020 05:41 pm | 1.00 | 50 mL | 50 mL | Y071305.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 19 | BLANK | SAMP | 07-13-2020 06:05 pm | 1.00 | 50 mL | 50 mL | Y071306.D | Liquid | Y | NA |
| 20 | VBLKW-200713 | MBLK | 07-13-2020 06:29 pm | 1.00 | 50 mL | 50 mL | Y071307.D | Liquid | Y | NA |
| 21 | HS20070399-02 | SAMP | 07-13-2020 06:53 pm | 1.00 | 50 mL | 50 mL | Y071308.D | Liquid | Y | <2 |
| 22 | HS20070399-01 | SAMP | 07-13-2020 07:17 pm | 1.00 | 50 mL | 50 mL | Y071309.D | Liquid | Y | <2 |
| 23 | HS20070043-19 | SAMP | 07-13-2020 07:41 pm | 200.0( | 250 µL | 50 mL | Y071310.D | Liquid | Y | <2 |
| 24 | HS20070043-19 | SAMP | 07-13-2020 08:05 pm | 20.00 | 2.5 mL | 50 mL | Y071311.D | Liquid | Y | <2 |
| 25 | HS20070043-19MS | MS | 07-13-2020 08:29 pm | 200.0( | 250 µL | 50 mL | Y071312.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 26 | HS20070043-19MSD | MSD | 07-13-2020 08:54 pm | 200.0( | 250 µL | 50 mL | Y071313.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 27 | HS20070096-06 | SAMP | 07-13-2020 09:18 pm | 100.0( | 500 µL | 50 mL | Y071314.D | Liquid | Y | <2 |
| 28 | HS20070043-05 | SAMP | 07-13-2020 09:42 pm | 50.00 | 1 mL | 50 mL | Y071315.D | Liquid | Y | <2 |
| 29 | HS20070043-05 | SAMP | 07-13-2020 10:06 pm | 500.0( | 100 µL | 50 mL | Y071316.D | Liquid | Y | <2 |
| 30 | HS20070043-06 | SAMP | 07-13-2020 10:30 pm | 50.00 | 1 mL | 50 mL | Y071317.D | Liquid | Y | <2 |
| 31 | HS20070043-06 | SAMP | 07-13-2020 10:54 pm | 500.0( | 100 µL | 50 mL | Y071318.D | Liquid | Y | <2 |
| 32 | HS20070043-11 | SAMP | 07-13-2020 11:18 pm | 50.00 | 1 mL | 50 mL | Y071319.D | Liquid | Y | <2 |

# MSVOA06 -Logbook

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 | HS20070043-11 | SAMP | 07-13-2020 11:42 pm | 500.0( | 100 µL | 50 mL | Y071320.D | Liquid | Y | <2 |
| 34 | CCV-END | CCV | 07-14-2020 12:06 am | 1.00 | 50 mL | 50 mL | Y071321.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 35 | HS20070493-01 | SAMP | 07-14-2020 12:30 am | 1.00 | 50 mL | 50 mL | Y071322.D | Liquid | Y | <2 |
| 36 | HS20070096-29 | SAMP | 07-14-2020 12:54 am | 10.00 | 5 mL | 50 mL | Y071323.D | Liquid | Y | <2 |
| 37 | HS20070096-29 | SAMP | 07-14-2020 01:18 am | 100.0( | 500 µL | 50 mL | Y071324.D | Liquid | Y | <2 |
| 38 | HS20070096-24 | SAMP | 07-14-2020 01:42 am | 10.00 | 5 mL | 50 mL | Y071325.D | Liquid | Y | <2 |
| 39 | HS20070096-24 | SAMP | 07-14-2020 02:06 am | 100.0( | 500 µL | 50 mL | Y071326.D | Liquid | Y | <2 |
| 40 | HS20070096-30 | SAMP | 07-14-2020 02:30 am | 25.00 | 2 mL | 50 mL | Y071327.D | Liquid | Y | <2 |
| 41 | HS20070096-30 | SAMP | 07-14-2020 02:54 am | 250.0( | 200 µL | 50 mL | Y071328.D | Liquid | Y | <2 |
| 42 | HS20070096-34 | SAMP | 07-14-2020 03:18 am | 25.00 | 2 mL | 50 mL | Y071329.D | Liquid | Y | <2 |
| 43 | HS20070096-34 | SAMP | 07-14-2020 03:42 am | 500.0( | 100 µL | 50 mL | Y071330.D | Liquid | Y | <2 |
| 44 | BLANK | SAMP | 07-14-2020 04:07 am | 1.00 | 50 mL | 50 mL | Y071340.D | Liquid | Y | NA |

| Chemical | Value |
|---|---|
| SURR SPK ID | 31106-38-06- |
| IS ID | 31106-38-06 |
| CAL STD ID | 31106-38-01/02 |
| BFB ID | 31106-38-06 |

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 50.00 | 49.89 | 100 | 80-120 |
| trans-1,3-Dichloroprope | 50.00 | 49.66 | 99 | 80-120 |
| 1,3-Dichlorobenzene | 50.00 | 52.99 | 106 | 80-120 |
| 2,2-Dichloropropane | 50.00 | 50.23 | 100 | 80-120 |
| 1,1-Dichloropropene | 50.00 | 47.08 | 94 | 80-120 |
| Dibromomethane | 50.00 | 48.51 | 97 | 80-120 |
| 1,2-Dibromoethane | 50.00 | 51.71 | 103 | 80-120 |
| trans-1,2-Dichloroethen | 50.00 | 43.09 | 86 | 80-120 |
| 1,1,1,2-Tetrachloroetha | 50.00 | 47.06 | 94 | 80-120 |
| 1,1,1-Trichloroethane | 50.00 | 46.83 | 94 | 80-120 |
| 1,1,2,2-Tetrachloroetha | 50.00 | 56.29 | 112 | 80-120 |
| 1,1,2-Trichloroethane | 50.00 | 50.25 | 100 | 80-120 |
| 1,1-Dichloroethane | 50.00 | 46.38 | 93 | 80-120 |
| 1,1-Dichloroethene | 50.00 | 44.05 | 88 | 80-120 |
| Trichloroethene | 50.00 | 48.39 | 97 | 80-120 |
| 1,2,3-Trichlorobenzene | 50.00 | 59.94 | 120 | 80-120 |
| Trichlorofluoromethane | 50.00 | 43.43 | 87 | 80-120 |
| 1,2,4-Trichlorobenzene | 50.00 | 57.24 | 114 | 80-120 |
| 1,2,4-Trimethylbenzene | 50.00 | 53.74 | 107 | 80-120 |
| Tetrachloroethene | 50.00 | 45.37 | 91 | 80-120 |
| 1,2-Dichlorobenzene | 50.00 | 46.70 | 93 | 80-120 |
| 1,2-Dichloroethane | 50.00 | 51.43 | 103 | 80-120 |
| 1,2-Dichloropropane | 50.00 | 49.69 | 99 | 80-120 |
| 1,3,5-Trimethylbenzene | 50.00 | 50.47 | 101 | 80-120 |
| 1,3-Dichloropropane | 50.00 | 48.28 | 96 | 80-120 |
| 1,4-Dichlorobenzene | 50.00 | 42.76 | 86 | 80-120 |
| Toluene | 50.00 | 47.83 | 96 | 80-120 |
| 2-Butanone | 100.00 | 111.87 | 112 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

# FORM 3
## WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| 2-Chlorotoluene | 50.00 | 49.98 | 100 | 80-120 |
| 2-Hexanone | 100.00 | 107.10 | 107 | 80-120 |
| 4-Chlorotoluene | 50.00 | 50.83 | 102 | 80-120 |
| tert-Butylbenzene | 50.00 | 51.14 | 102 | 80-120 |
| 4-Methyl-2-Pentanone | 100.00 | 104.56 | 104 | 80-120 |
| Acetone | 100.00 | 94.49 | 94 | 80-120 |
| Benzene | 50.00 | 50.34 | 101 | 80-120 |
| Bromobenzene | 50.00 | 54.60 | 109 | 80-120 |
| Bromochloromethane | 50.00 | 44.73 | 89 | 80-120 |
| Bromodichloromethane | 50.00 | 47.87 | 96 | 80-120 |
| Bromoform | 50.00 | 49.43 | 99 | 80-120 |
| Bromomethane | 50.00 | 46.91 | 94 | 80-120 |
| Carbon Disulfide | 100.00 | 85.77 | 86 | 80-120 |
| Carbon Tetrachloride | 50.00 | 46.54 | 93 | 80-120 |
| Chlorobenzene | 50.00 | 48.27 | 96 | 80-120 |
| Chloroethane | 50.00 | 40.76 | 82 | 80-120 |
| Chloroform | 50.00 | 47.66 | 95 | 80-120 |
| Chloromethane | 50.00 | 46.97 | 94 | 80-120 |
| cis-1,2-Dichloroethene | 50.00 | 49.13 | 98 | 80-120 |
| Dibromochloromethane | 50.00 | 48.65 | 97 | 80-120 |
| Dichlorodifluoromethane | 50.00 | 49.02 | 98 | 80-120 |
| Ethylbenzene | 50.00 | 47.43 | 95 | 80-120 |
| Hexachlorobutadiene | 50.00 | 55.49 | 111 | 80-120 |
| Isopropylbenzene | 50.00 | 44.27 | 88 | 80-120 |
| m,p-Xylenes | 100.00 | 91.24 | 91 | 80-120 |
| Methylene Chloride | 50.00 | 43.61 | 87 | 80-120 |
| n-Butylbenzene | 50.00 | 45.18 | 90 | 80-120 |
| n-Propylbenzene | 50.00 | 48.66 | 97 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

# FORM 3
## WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| Naphthalene | 50.00 | 59.96 | 120 | 80-120 |
| o-Xylene | 50.00 | 45.29 | 90 | 80-120 |
| sec-Butylbenzene | 50.00 | 50.87 | 102 | 80-120 |
| Styrene | 50.00 | 47.05 | 94 | 80-120 |
| Vinyl Chloride | 50.00 | 41.64 | 83 | 80-120 |
| 1,2,3-Trichloropropane | 50.00 | 56.59 | 113 | 80-120 |
| p-Isopropyltoluene | 50.00 | 51.34 | 103 | 80-120 |
| 1,2-Dibromo-3-Chloropro | 50.00 | 59.09 | 118 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

# FORM 5
## VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID: X071301 BFB Injection Date: 07/13/20

Instrument ID: VOA6 BFB Injection Time: 1003

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 32.0 |
| 75 | 30.0 - 60.0% of mass 95 | 53.2 |
| 95 | Base Peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.2 |
| 173 | Less than 2.0% of mass 174 | 0.5 ( 0.8)1 |
| 174 | Greater than 50.0% of mass 95 | 56.5 |
| 175 | 5.0 - 9.0% of mass 174 | 4.8 ( 8.5)1 |
| 176 | 95.0 - 101.0% of mass 174 | 54.9 ( 97.2)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 8.6)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD000.25 | VSTD000.25 | X071302 | 07/13/20 | 1027 |
| 02 | VSTD000.5 | VSTD000.5 | X071303 | 07/13/20 | 1055 |
| 03 | VSTD001 | VSTD001 | X071304 | 07/13/20 | 1142 |
| 04 | VSTD002 | VSTD002 | X071305 | 07/13/20 | 1206 |
| 05 | VSTD005 | VSTD005 | X071306 | 07/13/20 | 1230 |
| 06 | VSTD020 | VSTD020 | X071307 | 07/13/20 | 1254 |
| 07 | VSTD050 | VSTD050 | X071308 | 07/13/20 | 1318 |
| 08 | VSTD100 | VSTD100 | X071309 | 07/13/20 | 1342 |
| 09 | VSTD150 | VSTD150 | X071310 | 07/13/20 | 1406 |
| 10 | VSTD200 | VSTD200 | X071311 | 07/13/20 | 1430 |
| 11 | ICV | ICV | X071313 | 07/13/20 | 1542 |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Instrument ID: VOA6 Calibration Date(s): 07/13/20 07/13/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1027 1430

LAB FILE ID: RF0.25: X071302 RF0.5: X071303 RF1: X071304
RF2: X071305 RF5: X071306 RF20: X071307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | | 0.523 | 0.567 | 0.584 | 0.602 | 0.578 |
| trans-1,3-Dichloropropene | | 0.562 | 0.412 | 0.600 | 0.551 | 0.535 |
| 1,3-Dichlorobenzene | | 1.677 | 1.589 | 1.550 | 1.515 | 1.483 |
| 2,2-Dichloropropane | | 0.936 | 0.989 | 1.012 | 0.835 | 0.800 |
| 1,1-Dichloropropene | | 0.569 | 0.496 | 0.391 | 0.451 | 0.445 |
| Dibromomethane | | 0.235 | 0.261 | 0.255 | 0.249 | 0.242 |
| 1,2-Dibromoethane | | 0.339 | 0.373 | 0.367 | 0.383 | 0.388 |
| trans-1,2-Dichloroethene | | 0.514 | 0.561 | 0.613 | 0.538 | 0.489 |
| 1,1,1,2-Tetrachloroethane | | 0.475 | 0.356 | 0.376 | 0.390 | 0.375 |
| 1,1,1-Trichloroethane | | 0.986 | 0.894 | 0.929 | 0.876 | 0.884 |
| 1,1,2,2-Tetrachloroethane | | 0.992 | 0.934 | 0.957 | 0.991 | 0.906 |
| 1,1,2-Trichloroethane | | 0.319 | 0.237 | 0.296 | 0.390 | 0.314 |
| 1,1-Dichloroethane | | 1.614 | 1.464 | 1.521 | 1.345 | 1.247 |
| 1,1-Dichloroethene | | 0.507 | 0.437 | 0.472 | 0.433 | 0.404 |
| Trichloroethene | | 0.390 | 0.356 | 0.356 | 0.342 | 0.350 |
| 1,2,3-Trichlorobenzene | | 0.162 | 0.171 | 0.182 | 0.190 | 0.177 |
| Trichlorofluoromethane | | 0.895 | 0.772 | 0.904 | 0.764 | 0.764 |
| 1,2,4-Trichlorobenzene | | 0.257 | 0.334 | 0.323 | 0.369 | 0.358 |
| 1,2,4-Trimethylbenzene | | 2.978 | 2.694 | 2.779 | 2.754 | 2.687 |
| Tetrachloroethene | | 0.372 | 0.294 | 0.301 | 0.324 | 0.299 |
| 1,2-Dichlorobenzene | | 1.590 | 1.374 | 1.426 | 1.400 | 1.352 |
| 1,2-Dichloroethane | | 0.620 | 0.589 | 0.616 | 0.503 | 0.603 |
| 1,2-Dichloropropane | | 0.539 | 0.430 | 0.412 | 0.457 | 0.463 |
| 1,3,5-Trimethylbenzene | | 2.901 | 2.819 | 2.768 | 2.609 | 2.633 |
| 1,3-Dichloropropane | | 0.771 | 0.559 | 0.613 | 0.805 | 0.638 |
| 1,4-Dichlorobenzene | | 1.816 | 1.606 | 1.551 | 1.563 | 1.469 |
| Toluene | | 1.679 | 1.516 | 1.474 | 1.907 | 1.528 |
| 2-Butanone | | 0.356 | 0.364 | 0.402 | 0.422 | 0.449 |
| 2-Chlorotoluene | | 2.677 | 2.688 | 2.329 | 2.337 | 2.225 |
| 2-Hexanone | | 0.398 | 0.378 | 0.440 | 0.593 | 0.487 |
| 4-Chlorotoluene | | 3.189 | 2.974 | 2.864 | 2.703 | 2.651 |
| tert-Butylbenzene | | 2.343 | 2.139 | 2.238 | 2.153 | 2.114 |
| 4-Methyl-2-Pentanone | | 0.567 | 0.626 | 0.594 | 0.846 | 0.695 |
| Acetone | | 6844 | 7883 | 11772 | 23758 | 68543 |
| Benzene | | 1.447 | 1.409 | 1.306 | 1.157 | 1.358 |
| Bromobenzene | | 1.015 | 0.917 | 0.970 | 0.921 | 0.892 |
| Bromochloromethane | | 0.424 | 0.406 | 0.408 | 0.355 | 0.326 |
| Bromodichloromethane | | 0.483 | 0.534 | 0.505 | 0.500 | 0.490 |
| Bromoform | | 0.262 | 0.270 | 0.240 | 0.327 | 0.273 |
| Bromomethane | | 1581 | 2906 | 6118 | 12533 | 34876 |
| Carbon Disulfide | | 1.661 | 1.347 | 1.532 | 1.380 | 1.231 |
| Carbon Tetrachloride | | 0.493 | 0.529 | 0.411 | 0.468 | 0.439 |
| Chlorobenzene | | 1.072 | 1.041 | 1.012 | 0.994 | 0.974 |
| Chloroethane | | 0.445 | 0.521 | 0.509 | 0.408 | 0.387 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date(s): 07/13/20 07/13/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1027 1430

LAB FILE ID: RF0.25: X071302 RF0.5: X071303 RF1: X071304
RF2: X071305 RF5: X071306 RF20: X071307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| Chloroform | | 1.144 | 1.144 | 1.148 | 1.113 | 1.072 |
| Chloromethane | | 3489 | 6654 | 11467 | 28703 | 93790 |
| cis-1,2-Dichloroethene | | 0.671 | 0.633 | 0.710 | 0.601 | 0.608 |
| Dibromochloromethane | | 0.428 | 0.370 | 0.387 | 0.461 | 0.401 |
| Dichlorodifluoromethane | | 0.482 | 0.483 | 0.526 | 0.494 | 0.486 |
| Ethylbenzene | | 0.570 | 0.508 | 0.526 | 0.515 | 0.510 |
| Hexachlorobutadiene | | 0.301 | 0.252 | 0.246 | 0.233 | 0.272 |
| Isopropylbenzene | | 1.482 | 1.572 | 1.498 | 1.821 | 1.496 |
| m,p-Xylenes | | 0.679 | 0.626 | 0.612 | 0.604 | 0.613 |
| Methylene Chloride | | 4271 | 5799 | 8593 | 18680 | 58274 |
| n-Butylbenzene | | 2.339 | 2.257 | 2.298 | 2.138 | 2.341 |
| n-Propylbenzene | | 3.945 | 3.943 | 3.728 | 3.683 | 3.718 |
| Naphthalene | | 536 | 1603 | 3601 | 9070 | 36314 |
| o-Xylene | | 0.680 | 0.640 | 0.588 | 0.729 | 0.594 |
| sec-Butylbenzene | | 3.586 | 2.692 | 3.101 | 2.977 | 3.003 |
| Styrene | | 1.091 | 1.081 | 1.021 | 1.258 | 1.067 |
| Vinyl Chloride | | 0.884 | 0.854 | 0.860 | 0.769 | 0.732 |
| 1,2,3-Trichloropropane | | 0.922 | 0.798 | 0.823 | 0.828 | 0.792 |
| p-Isopropyltoluene | | 2.950 | 2.587 | 2.455 | 2.446 | 2.596 |
| 1,2-Dibromo-3-Chloropropane | | 103 | 276 | 578 | 1652 | 5688 |
| 1,2-Dichloroethane-d4 | | 2548 | 4323 | 6078 | 19086 | 78060 |
| Dibromofluoromethane | | 2011 | 3129 | 5716 | 15802 | 57060 |
| Toluene-d8 | | 1.494 | 1.286 | 1.208 | 1.624 | 1.277 |
| 4-Bromofluorobenzene | | 3265 | 4513 | 7984 | 21438 | 75648 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date(s): 07/13/20 07/13/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1027 1430

LAB FILE ID: RF50: X071308 RF100: X071309 RF150: X071310
RF200: X071311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.580 | 0.605 | 0.608 | 0.596 |
| trans-1,3-Dichloropropene | 0.529 | 0.541 | 0.553 | 0.551 |
| 1,3-Dichlorobenzene | 1.518 | 1.528 | 1.481 | 1.456 |
| 2,2-Dichloropropane | 0.834 | 0.855 | 0.861 | 0.840 |
| 1,1-Dichloropropene | 0.444 | 0.472 | 0.484 | 0.463 |
| Dibromomethane | 0.241 | 0.245 | 0.246 | 0.245 |
| 1,2-Dibromoethane | 0.386 | 0.380 | 0.380 | 0.317 |
| trans-1,2-Dichloroethene | 0.528 | 0.538 | 0.544 | 0.523 |
| 1,1,1,2-Tetrachloroethane | 0.380 | 0.376 | 0.378 | 0.370 |
| 1,1,1-Trichloroethane | 0.881 | 0.902 | 0.927 | 0.917 |
| 1,1,2,2-Tetrachloroethane | 0.921 | 0.916 | 0.809 | 0.884 |
| 1,1,2-Trichloroethane | 0.308 | 0.302 | 0.302 | 0.288 |
| 1,1-Dichloroethane | 1.349 | 1.348 | 1.367 | 1.354 |
| 1,1-Dichloroethene | 0.446 | 0.413 | 0.423 | 0.401 |
| Trichloroethene | 0.359 | 0.360 | 0.366 | 0.359 |
| 1,2,3-Trichlorobenzene | 0.176 | 0.146 | 0.170 | 0.149 |
| Trichlorofluoromethane | 0.824 | 0.833 | 0.853 | 0.830 |
| 1,2,4-Trichlorobenzene | 0.350 | 0.289 | 0.330 | 0.276 |
| 1,2,4-Trimethylbenzene | 2.779 | 2.825 | 2.749 | 2.501 |
| Tetrachloroethene | 0.292 | 0.293 | 0.294 | 0.285 |
| 1,2-Dichlorobenzene | 1.335 | 1.360 | 1.375 | 1.336 |
| 1,2-Dichloroethane | 0.601 | 0.616 | 0.602 | 0.603 |
| 1,2-Dichloropropane | 0.462 | 0.468 | 0.465 | 0.458 |
| 1,3,5-Trimethylbenzene | 2.697 | 2.767 | 2.687 | 2.569 |
| 1,3-Dichloropropane | 0.635 | 0.627 | 0.620 | 0.622 |
| 1,4-Dichlorobenzene | 1.508 | 1.526 | 1.526 | 1.486 |
| Toluene | 1.516 | 1.502 | 1.495 | 1.480 |
| 2-Butanone | 0.475 | 0.472 | 0.486 | 0.479 |
| 2-Chlorotoluene | 2.332 | 2.347 | 2.205 | 2.290 |
| 2-Hexanone | 0.492 | 0.491 | 0.503 | 0.481 |
| 4-Chlorotoluene | 2.717 | 2.740 | 2.679 | 2.558 |
| tert-Butylbenzene | 2.192 | 2.190 | 2.204 | 1.937 |
| 4-Methyl-2-Pentanone | 0.695 | 0.700 | 0.701 | 0.716 |
| Acetone | 175674 | 288895 | 434863 | |
| Benzene | 1.353 | 1.402 | 1.408 | 1.375 |
| Bromobenzene | 0.922 | 0.915 | 0.829 | 0.861 |
| Bromochloromethane | 0.312 | 0.323 | 0.320 | 0.305 |
| Bromodichloromethane | 0.493 | 0.508 | 0.512 | 0.504 |
| Bromoform | 0.274 | 0.281 | 0.278 | 0.284 |
| Bromomethane | 89079 | 166657 | 238785 | 310885 |
| Carbon Disulfide | 1.384 | 1.297 | 1.343 | 1.228 |
| Carbon Tetrachloride | 0.449 | 0.476 | 0.492 | 0.474 |
| Chlorobenzene | 0.970 | 0.978 | 0.970 | 0.946 |
| Chloroethane | 0.436 | 0.420 | 0.417 | 0.411 |

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date(s): 07/13/20 07/13/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1027 1430

LAB FILE ID: RF50: X071308 RF100: X071309 RF150: X071310
RF200: X071311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| Chloroform | 1.052 | 1.064 | 1.081 | 1.060 |
| Chloromethane | 240898 | 484693 | 733378 | 989264 |
| cis-1,2-Dichloroethene | 0.633 | 0.635 | 0.649 | 0.632 |
| Dibromochloromethane | 0.403 | 0.402 | 0.406 | 0.401 |
| Dichlorodifluoromethane | 0.530 | 0.582 | 0.601 | 0.569 |
| Ethylbenzene | 0.509 | 0.514 | 0.510 | 0.510 |
| Hexachlorobutadiene | 0.262 | 0.195 | 0.221 | |
| Isopropylbenzene | 1.531 | 1.558 | 1.516 | 1.521 |
| m,p-Xylenes | 0.616 | 0.622 | 0.615 | 0.609 |
| Methylene Chloride | 153830 | 277730 | 426028 | 499769 |
| n-Butylbenzene | 2.419 | 2.445 | 2.467 | 2.318 |
| n-Propylbenzene | 3.860 | 3.955 | 3.649 | 3.807 |
| Naphthalene | 94043 | 166338 | 271059 | |
| o-Xylene | 0.611 | 0.614 | 0.596 | 0.602 |
| sec-Butylbenzene | 3.140 | 3.186 | 3.194 | 2.990 |
| Styrene | 1.077 | 1.082 | 1.050 | 1.059 |
| Vinyl Chloride | 0.805 | 0.795 | 0.856 | 0.845 |
| 1,2,3-Trichloropropane | 0.826 | 0.822 | 0.720 | 0.780 |
| p-Isopropyltoluene | 2.731 | 2.759 | 2.775 | 2.647 |
| 1,2-Dibromo-3-Chloropropane | 15053 | 28602 | 43451 | 57589 |
| 1,2-Dichloroethane-d4 | 186102 | 358725 | 528876 | 688409 |
| Dibromofluoromethane | 137160 | 266517 | 392708 | 499552 |
| Toluene-d8 | 1.249 | 1.216 | 1.221 | 1.211 |
| 4-Bromofluorobenzene | 186024 | 353354 | | |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date(s): 07/13/20 07/13/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1027 1430

| COMPOUND | CURVE | COEFFICENTS A0 | COEFFICENTS A1 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | AVRG | | 0.58252029 | 4.537 | 15.000 |
| trans-1,3-Dichloropropene | AVRG | | 0.53724591 | 9.514 | 15.000 |
| 1,3-Dichlorobenzene | AVRG | | 1.53274744 | 4.368 | 15.000 |
| 2,2-Dichloropropane | AVRG | | 0.88477073 | 8.513 | 15.000 |
| 1,1-Dichloropropene | AVRG | | 0.46843486 | 10.291 | 15.000 |
| Dibromomethane | AVRG | | 0.24667795 | 3.111 | 15.000 |
| 1,2-Dibromoethane | AVRG | | 0.36814072 | 6.607 | 15.000 |
| trans-1,2-Dichloroethene | AVRG | | 0.53865233 | 6.378 | 15.000 |
| 1,1,1,2-Tetrachloroethane | AVRG | | 0.38620707 | 8.963 | 15.000 |
| 1,1,1-Trichloroethane | AVRG | | 0.91091461 | 3.785 | 15.000 |
| 1,1,2,2-Tetrachloroethane | AVRG | | 0.92316068 | 6.117 | 15.000 |
| 1,1,2-Trichloroethane | AVRG | | 0.30614855 | 12.846 | 15.000 |
| 1,1-Dichloroethane | AVRG | | 1.40105952 | 7.958 | 15.000 |
| 1,1-Dichloroethene | AVRG | | 0.43742258 | 7.870 | 15.000 |
| Trichloroethene | AVRG | | 0.35986567 | 3.677 | 15.000 |
| 1,2,3-Trichlorobenzene | AVRG | | 0.16913917 | 8.538 | 15.000 |
| Trichlorofluoromethane | AVRG | | 0.82653912 | 6.376 | 15.000 |
| 1,2,4-Trichlorobenzene | AVRG | | 0.32072038 | 12.024 | 15.000 |
| 1,2,4-Trimethylbenzene | AVRG | | 2.74956891 | 4.608 | 15.000 |
| Tetrachloroethene | AVRG | | 0.30605196 | 8.817 | 15.000 |
| 1,2-Dichlorobenzene | AVRG | | 1.39421152 | 5.674 | 15.000 |
| 1,2-Dichloroethane | AVRG | | 0.59495642 | 5.987 | 15.000 |
| 1,2-Dichloropropane | AVRG | | 0.46169025 | 7.492 | 15.000 |
| 1,3,5-Trimethylbenzene | AVRG | | 2.71670409 | 3.931 | 15.000 |
| 1,3-Dichloropropane | AVRG | | 0.65433002 | 12.149 | 15.000 |
| 1,4-Dichlorobenzene | AVRG | | 1.56125370 | 6.658 | 15.000 |
| Toluene | AVRG | | 1.56652817 | 9.044 | 15.000 |
| 2-Butanone | AVRG | | 0.43400669 | 11.586 | 15.000 |
| 2-Chlorotoluene | AVRG | | 2.38132243 | 7.481 | 15.000 |
| 2-Hexanone | AVRG | | 0.47363261 | 13.352 | 15.000 |
| 4-Chlorotoluene | AVRG | | 2.78627576 | 6.933 | 15.000 |
| tert-Butylbenzene | AVRG | | 2.16780554 | 5.038 | 15.000 |
| 4-Methyl-2-Pentanone | AVRG | | 0.68229628 | 11.939 | 15.000 |
| Acetone | LINR | -8.07e-002 | 3.24606784 | 0.9976668 | 0.9900000 |
| Benzene | AVRG | | 1.35722254 | 6.292 | 15.000 |
| Bromobenzene | AVRG | | 0.91571619 | 5.977 | 15.000 |
| Bromochloromethane | AVRG | | 0.35335889 | 13.245 | 15.000 |
| Bromodichloromethane | AVRG | | 0.50310536 | 2.952 | 15.000 |
| Bromoform | AVRG | | 0.27657878 | 8.281 | 15.000 |
| Bromomethane | LINR | -2.09e-002 | 2.92304768 | 0.9999065 | 0.9900000 |
| Carbon Disulfide | AVRG | | 1.37797181 | 10.158 | 15.000 |
| Carbon Tetrachloride | AVRG | | 0.47010629 | 7.334 | 15.000 |
| Chlorobenzene | AVRG | | 0.99529665 | 4.011 | 15.000 |
| Chloroethane | AVRG | | 0.43946280 | 10.468 | 15.000 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date(s): 07/13/20 07/13/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1027 1430

| COMPOUND | CURVE | COEFFICENTS A0 | COEFFICENTS A1 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|
| Chloroform | AVRG | | 1.09766726 | 3.611 | 15.000 |
| Chloromethane | LINR | 3.425e-002 | 0.92605757 | 0.9983901 | 0.9900000 |
| cis-1,2-Dichloroethene | AVRG | | 0.64139859 | 5.112 | 15.000 |
| Dibromochloromethane | AVRG | | 0.40675901 | 6.258 | 15.000 |
| Dichlorodifluoromethane | AVRG | | 0.52793429 | 8.712 | 15.000 |
| Ethylbenzene | AVRG | | 0.51925649 | 3.820 | 15.000 |
| Hexachlorobutadiene | AVRG | | 0.24770740 | 13.176 | 15.000 |
| Isopropylbenzene | AVRG | | 1.55508981 | 6.677 | 15.000 |
| m,p-Xylenes | AVRG | | 0.62186624 | 3.581 | 15.000 |
| Methylene Chloride | LINR | -2.77e-002 | 1.74738834 | 0.9957026 | 0.9900000 |
| n-Butylbenzene | AVRG | | 2.33576713 | 4.369 | 15.000 |
| n-Propylbenzene | AVRG | | 3.80986910 | 3.168 | 15.000 |
| Naphthalene | LINR | 2.494e-002 | 1.90571828 | 0.9953494 | 0.9900000 |
| o-Xylene | AVRG | | 0.62833825 | 7.556 | 15.000 |
| sec-Butylbenzene | AVRG | | 3.09665977 | 7.724 | 15.000 |
| Styrene | AVRG | | 1.08739135 | 6.217 | 15.000 |
| Vinyl Chloride | AVRG | | 0.82218964 | 6.078 | 15.000 |
| 1,2,3-Trichloropropane | AVRG | | 0.81224547 | 6.591 | 15.000 |
| p-Isopropyltoluene | AVRG | | 2.66078824 | 6.087 | 15.000 |
| 1,2-Dibromo-3-Chloropropane | LINR | 2.632e-002 | 11.5405181 | 0.9991794 | 0.9900000 |
| 1,2-Dichloroethane-d4 | LINR | 6.783e-003 | 1.31478695 | 0.9998415 | 0.9900000 |
| Dibromofluoromethane | LINR | -1.65e-003 | 1.79776555 | 0.9996449 | 0.9900000 |
| Toluene-d8 | AVRG | | 1.30969442 | 11.293 | 15.000 |
| 4-Bromofluorobenzene | LINR | -1.07e-002 | 2.08902614 | 0.9998105 | 0.9900000 |

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071301.D



Date : 13-JUL-2020 10:03

Client ID: BFB

Instrument: voa6.i

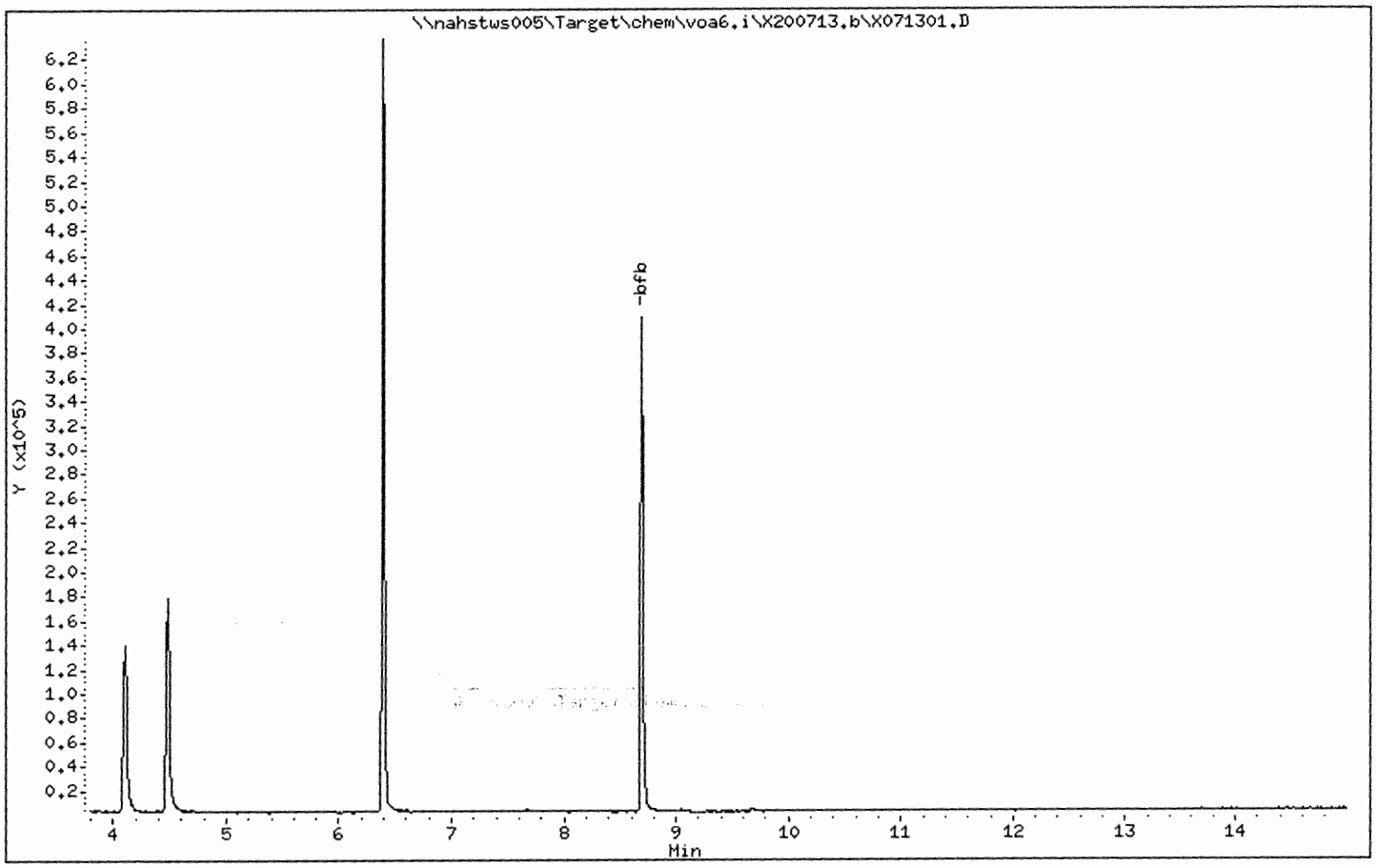
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071301.D

Date : 13-JUL-2020 10:03

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

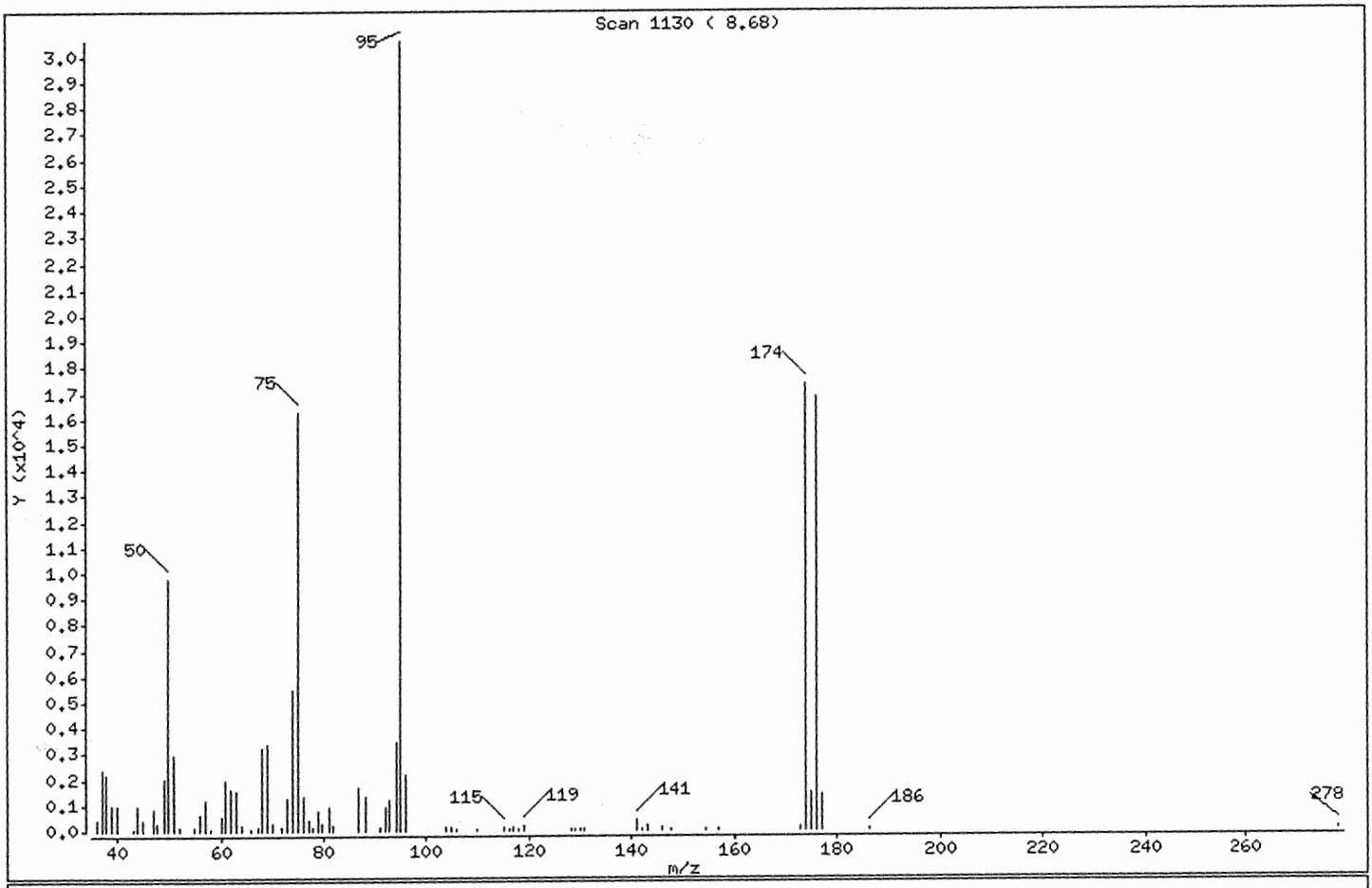
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 32.02 |
| 75 | 30.00 - 60.00% of mass 95 | 53.18 |
| 96 | 5.00 - 9.00% of mass 95 | 7.17 |
| 173 | Less than 2.00% of mass 174 | 0.46 ( 0.82) |
| 174 | Greater than 50.00% of mass 95 | 56.48 |
| 175 | 5.00 - 9.00% of mass 174 | 4.82 ( 8.53) |
| 176 | 95.00 - 101.00% of mass 174 | 54.89 ( 97.18) |
| 177 | 5.00 - 9.00% of mass 176 | 4.71 ( 8.58) |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071301.D



Date : 13-JUL-2020 10:03

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X071301.D
Spectrum: Scan 1130 ( 8.68)
Location of Maximum: 95.00
Number of points: 74

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 444 | 61.00 | 1942 | 81.90 | 205 | 128.90 | 99 |
| 37.00 | 2396 | 62.00 | 1633 | 86.90 | 1699 | 129.80 | 104 |
| 38.00 | 2186 | 62.90 | 1549 | 88.00 | 1344 | 130.80 | 64 |
| 39.00 | 986 | 64.10 | 217 | 90.80 | 174 | 140.80 | 443 |
| 39.90 | 954 | 65.80 | 50 | 92.00 | 885 | 141.90 | 67 |
| 43.10 | 89 | 67.10 | 114 | 92.90 | 1223 | 142.90 | 214 |
| 44.00 | 1013 | 68.00 | 3245 | 94.00 | 3447 | 145.90 | 124 |
| 45.00 | 398 | 68.90 | 3410 | 95.00 | 30624 | 147.70 | 70 |
| 46.90 | 833 | 70.10 | 279 | 96.10 | 2195 | 154.50 | 62 |
| 47.90 | 275 | 72.00 | 165 | 103.90 | 114 | 156.80 | 77 |
| 49.00 | 2032 | 73.00 | 1257 | 104.90 | 127 | 172.80 | 142 |
| 50.00 | 9806 | 74.00 | 5481 | 106.00 | 69 | 173.90 | 17296 |
| 51.00 | 2987 | 75.00 | 16285 | 109.90 | 62 | 174.90 | 1476 |
| 52.10 | 147 | 76.00 | 1357 | 115.00 | 175 | 175.90 | 16808 |
| 54.90 | 158 | 77.10 | 416 | 116.10 | 95 | 176.90 | 1442 |
| 55.90 | 654 | 78.00 | 140 | 116.80 | 127 | 186.20 | 58 |
| 57.00 | 1205 | 78.90 | 796 | 118.00 | 91 | 278.10 | 84 |
| 58.00 | 51 | 79.80 | 299 | 118.90 | 184 | | |
| 60.00 | 554 | 80.90 | 893 | 128.10 | 76 | | |

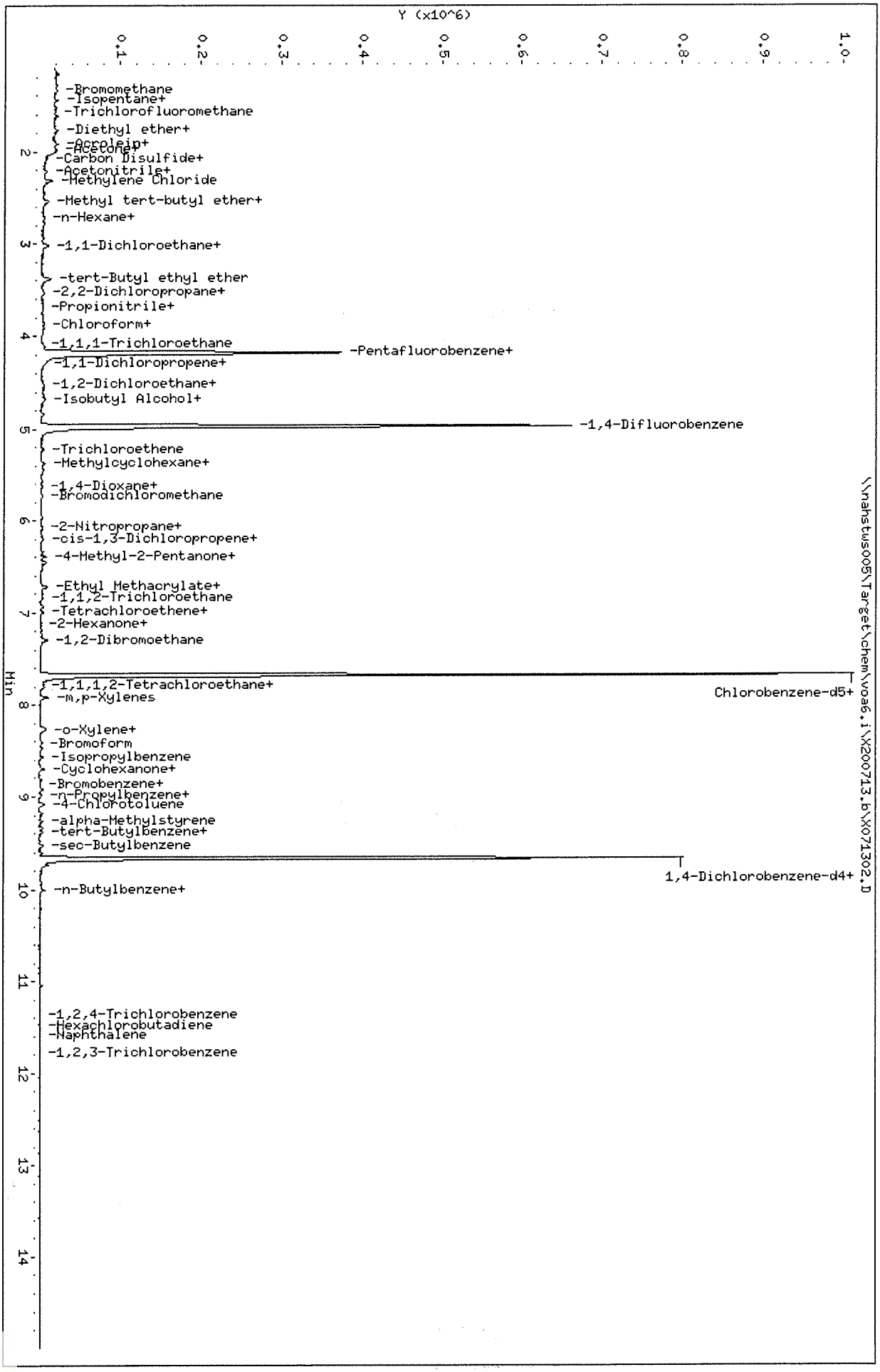
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 808 | 0.25000 | 0.18 (aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.074 | 9.074 | (0.939) | 2450 | 0.25000 | 0.24 (a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1359 | 0.25000 | 0.23 (a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 1340 | 0.25000 | 0.23 (aM) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.690 | 9.690 | (1.002) | 1772 | 0.25000 | 0.30 (a) |
| 26 | 2,2-Dichloropropane | 77 | 3.523 | 3.523 | (0.841) | 1515 | 0.25000 | 0.28 (aM) |
| 24 | 2-Butanone | 43 | 3.638 | 3.638 | (0.868) | 1280 | 0.50000 | 0.49 (aM) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 1993 | 0.25000 | 0.22 (a) |
| 52 | 2-Hexanone | 43 | 7.119 | 7.119 | (0.928) | 2063 | 0.50000 | 0.50 (Ta) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 2485 | 0.25000 | 0.23 (a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 2463 | 0.25000 | 0.24 (a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 3086 | 0.50000 | 0.52 (a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 5077 | 0.50000 | (a) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 3764 | 0.25000 | 0.28 (a) |
| 74 | Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 880 | 0.25000 | 0.25 (a) |
| 29 | Bromochloromethane | 128 | 3.817 | 3.817 | (0.911) | 624 | 0.25000 | 0.29 (a) |
| 39 | Bromodichloromethane | 83 | 5.736 | 5.736 | (1.154) | 1083 | 0.25000 | 0.22 (aM) |
| 66 | Bromoform | 173 | 8.423 | 8.423 | (1.098) | 323 | 0.25000 | 0.13 (aM) |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 906 | 0.25000 | (aM) |
| 19 | Carbon Disulfide | 76 | 2.076 | 2.076 | (0.496) | 4382 | 0.50000 | 0.53 (a) |
| 34 | Carbon Tetrachloride | 117 | 4.275 | 4.275 | (0.860) | 1403 | 0.25000 | 0.30 (aM) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 2374 | 0.25000 | 0.27 (a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 458 | 0.25000 | 0.17 (aM) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 1640 | 0.25000 | 0.25 (a) |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 2153 | 0.25000 | 2.04 (aM) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.537 | 3.537 | (0.844) | 887 | 0.25000 | 0.23 (aM) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.173 | 6.173 | (1.242) | 1505 | 0.25000 | 0.26 (a) |
| 55 | Dibromochloromethane | 129 | 7.183 | 7.183 | (0.937) | 1059 | 0.25000 | 0.30 (a) |
| 44 | Dibromomethane | 93 | 5.565 | 5.565 | (1.120) | 533 | 0.25000 | 0.22 (aM) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 657 | 0.25000 | 0.20 (aM) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 1157 | 0.25000 | 0.26 (a) |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 252 | 0.25000 | 0.27 (aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 2799 | 0.25000 | 0.21 (a) |
| 62 | m,p-Xylenes | 106 | 7.914 | 7.914 | (1.032) | 2587 | 0.50000 | 0.48 (a) |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 2897 | 0.25000 | (aM) |
| 87 | n-Butylbenzene | 91 | 10.006 | 10.006 | (1.035) | 2266 | 0.25000 | 0.25 (a) |
| 73 | n-Propylbenzene | 91 | 8.924 | 8.924 | (0.923) | 3116 | 0.25000 | 0.21 (a) |
| 92 | Naphthalene | 128 | 11.603 | 11.603 | (1.200) | 497 | 0.25000 | 1.50 (aM) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 1339 | 0.25000 | 0.24 (a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 2832 | 0.25000 | 0.24 (a) |
| 64 | Styrene | 104 | 8.272 | 8.272 | (1.078) | 2383 | 0.25000 | 0.25 (a) |
| 78 | tert-Butylbenzene | 119 | 9.347 | 9.347 | (0.967) | 1945 | 0.25000 | 0.24 (a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 735 | 0.25000 | 0.28 (a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 3684 | 0.25000 | 0.27 (a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.549 | 2.549 | (0.608) | 837 | 0.25000 | 0.26 (Ta) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 1333 | 0.25000 | 0.25 (a) |
| 38 | Trichloroethene | 130 | 5.221 | 5.221 | (1.050) | 1101 | 0.25000 | 0.31 (a) |
| 8 | Trichlorofluoromethane | 101 | 1.568 | 1.568 | (0.374) | 1092 | 0.25000 | 0.22 (a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 1137 | 0.25000 | 0.23 (a) |

## QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

QC Flag Legend

M - Compound response manually integrated.




Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071302.D
Date : 13-JUL-2020 10:27
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 13-JUL-2020 10:55
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:50 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 10:27 Cal File: X071302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

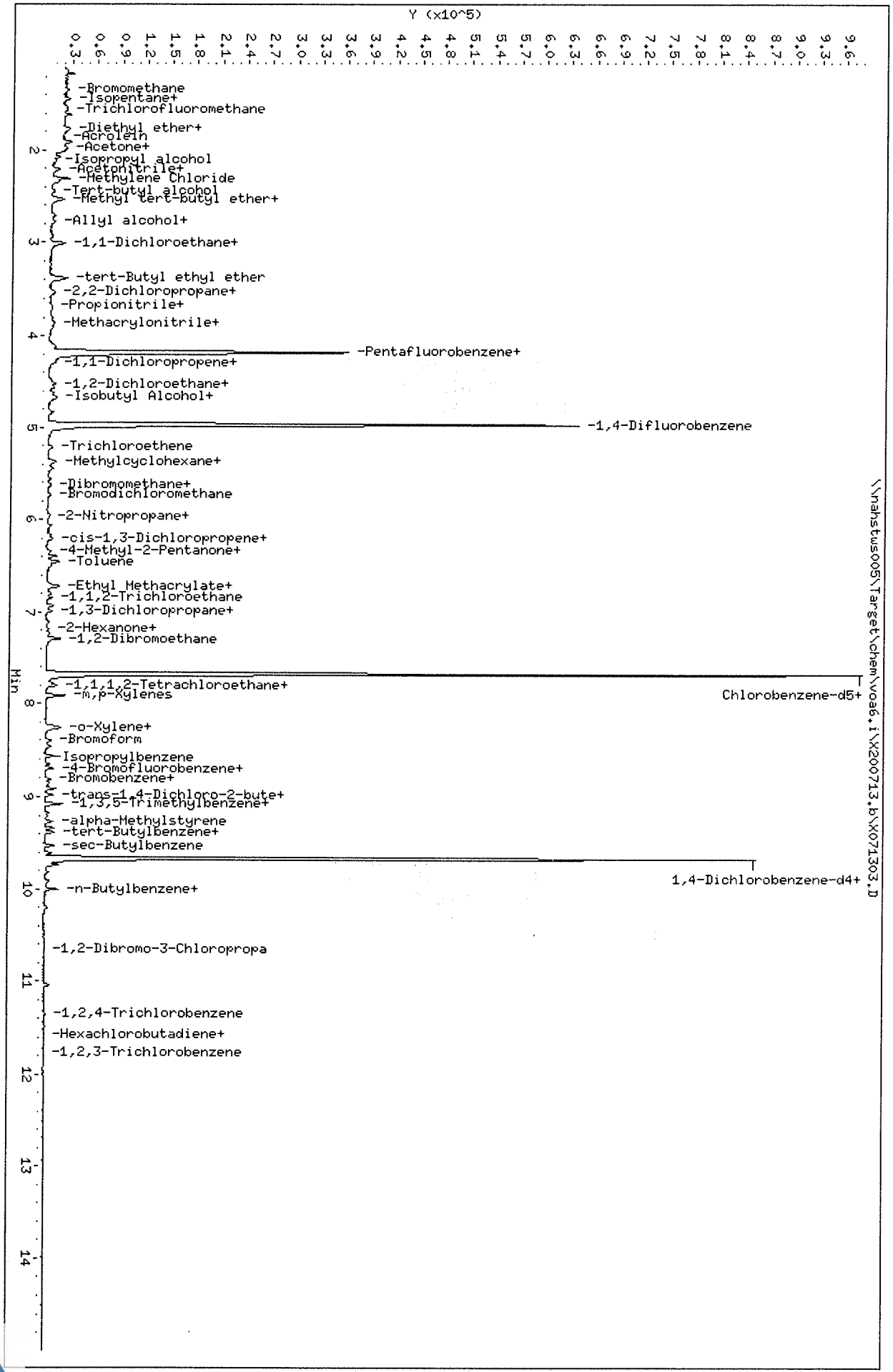
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 286110 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 463555 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 412015 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 194722 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 2011 | 0.50000 | 0.54(a) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.070) | 2548 | 0.50000 | 0.92(Ta) |
| $ 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 6156 | 0.50000 | 0.57(a) |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 3265 | 0.50000 | 0.29(a) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 1959 | 0.50000 | 0.61(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.096 | 4.096 | (0.978) | 2822 | 0.50000 | 0.54(a) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 1931 | 0.50000 | 0.53(aM) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 1313 | 0.50000 | 0.52(a) |
| 22 1,1-Dichloroethane | 63 | 2.921 | 2.921 | (0.697) | 4619 | 0.50000 | 0.57(Ta) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 1452 | 0.50000 | 0.58(aM) |
| 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 2638 | 0.50000 | 0.60(a) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.761 | 11.761 | (1.216) | 316 | 0.50000 | 0.47(aM) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 1796 | 0.50000 | 0.56(aM) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.352 | 11.352 | (1.174) | 501 | 0.50000 | 0.40(aM) |
| 79 1,2,4-Trimethylbenzene | 105 | 9.390 | 9.390 | (0.971) | 5799 | 0.50000 | 0.54(a) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 103 | 0.50000 | 1.62(aM) |
| 57 1,2-Dibromoethane | 107 | 7.269 | 7.269 | (0.948) | 1397 | 0.50000 | 0.46(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 3096 | 0.50000 | 0.57(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071303.D Page 2
Report Date: 13-Aug-2020 14:50

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.576 | 4.576 | (0.921) | 2874 | 0.50000 | 0.52(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 2500 | 0.50000 | 0.58(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 5649 | 0.50000 | 0.53(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 3265 | 0.50000 | 0.54(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 3175 | 0.50000 | 0.58(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 3536 | 0.50000 | 0.58(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.509 | 3.509 | (0.838) | 2678 | 0.50000 | 0.52(a) |
| 24 | 2-Butanone | 43 | 3.631 | 3.631 | (0.867) | 2037 | 1.00000 | 0.82(aM) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 5213 | 0.50000 | 0.56(a) |
| 52 | 2-Hexanone | 43 | 7.105 | 7.105 | (0.926) | 3283 | 1.00000 | 0.84(a) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 6209 | 0.50000 | 0.57(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 5745 | 0.50000 | 0.55(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 4670 | 1.00000 | 0.83(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 6844 | 1.00000 | (a) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 6709 | 0.50000 | 0.53(a) |
| 74 | Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 1977 | 0.50000 | 0.55(a) |
| 29 | Bromochloromethane | 128 | 3.810 | 3.810 | (0.909) | 1213 | 0.50000 | 0.59(aM) |
| 39 | Bromodichloromethane | 83 | 5.737 | 5.737 | (1.154) | 2238 | 0.50000 | 0.47(aM) |
| 66 | Bromoform | 173 | 8.423 | 8.423 | (1.098) | 1079 | 0.50000 | 0.47(aM) |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 1581 | 0.50000 | (aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 9504 | 1.00000 | 1.20(a) |
| 34 | Carbon Tetrachloride | 117 | 4.275 | 4.275 | (0.860) | 2286 | 0.50000 | 0.52(aMH) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 4419 | 0.50000 | 0.53(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 1274 | 0.50000 | 0.50(aM) |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.935) | 3272 | 0.50000 | 0.52(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 3489 | 0.50000 | 2.27(a) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.545 | 3.545 | (0.846) | 1921 | 0.50000 | 0.52(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 2423 | 0.50000 | 0.44(a) |
| 55 | Dibromochloromethane | 129 | 7.184 | 7.184 | (0.937) | 1765 | 0.50000 | 0.52(a) |
| 44 | Dibromomethane | 93 | 5.565 | 5.565 | (1.120) | 1091 | 0.50000 | 0.47(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 1379 | 0.50000 | 0.45(aM) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 2349 | 0.50000 | 0.54(a) |
| 91 | Hexachlorobutadiene | 225 | 11.488 | 11.488 | (1.188) | 587 | 0.50000 | 0.60(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 6106 | 0.50000 | 0.47(a) |
| 62 | m,p-Xylenes | 106 | 7.914 | 7.914 | (1.032) | 5592 | 1.00000 | 1.09(a) |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 4271 | 0.50000 | (a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 4555 | 0.50000 | 0.50(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 7682 | 0.50000 | 0.51(a) |
| 92 | Naphthalene | 128 | 11.567 | 11.567 | (1.196) | 536 | 0.50000 | 1.50(aM) |
| 63 | o-Xylene | 106 | 8.251 | 8.251 | (1.076) | 2802 | 0.50000 | 0.54(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 6983 | 0.50000 | 0.57(a) |
| 64 | Styrene | 104 | 8.272 | 8.272 | (1.078) | 4495 | 0.50000 | 0.50(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 4563 | 0.50000 | 0.54(a) |
| 56 | Tetrachloroethene | 164 | 6.940 | 6.940 | (0.905) | 1533 | 0.50000 | 0.60(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 6919 | 0.50000 | 0.53(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.542 | 2.542 | (0.607) | 1470 | 0.50000 | 0.47(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 2606 | 0.50000 | 0.52(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 1810 | 0.50000 | 0.54(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 2560 | 0.50000 | 0.54(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 2528 | 0.50000 | 0.53(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

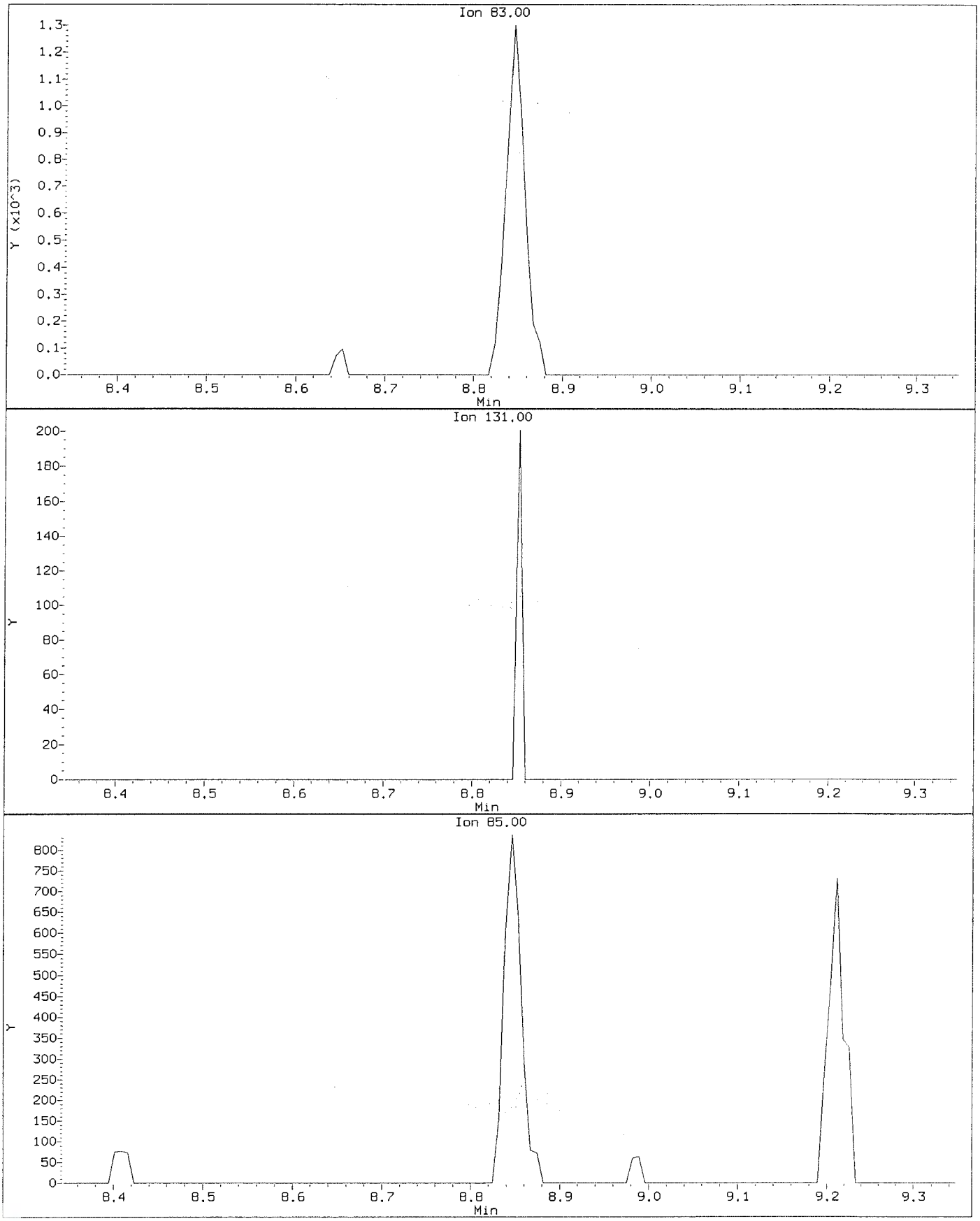



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Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

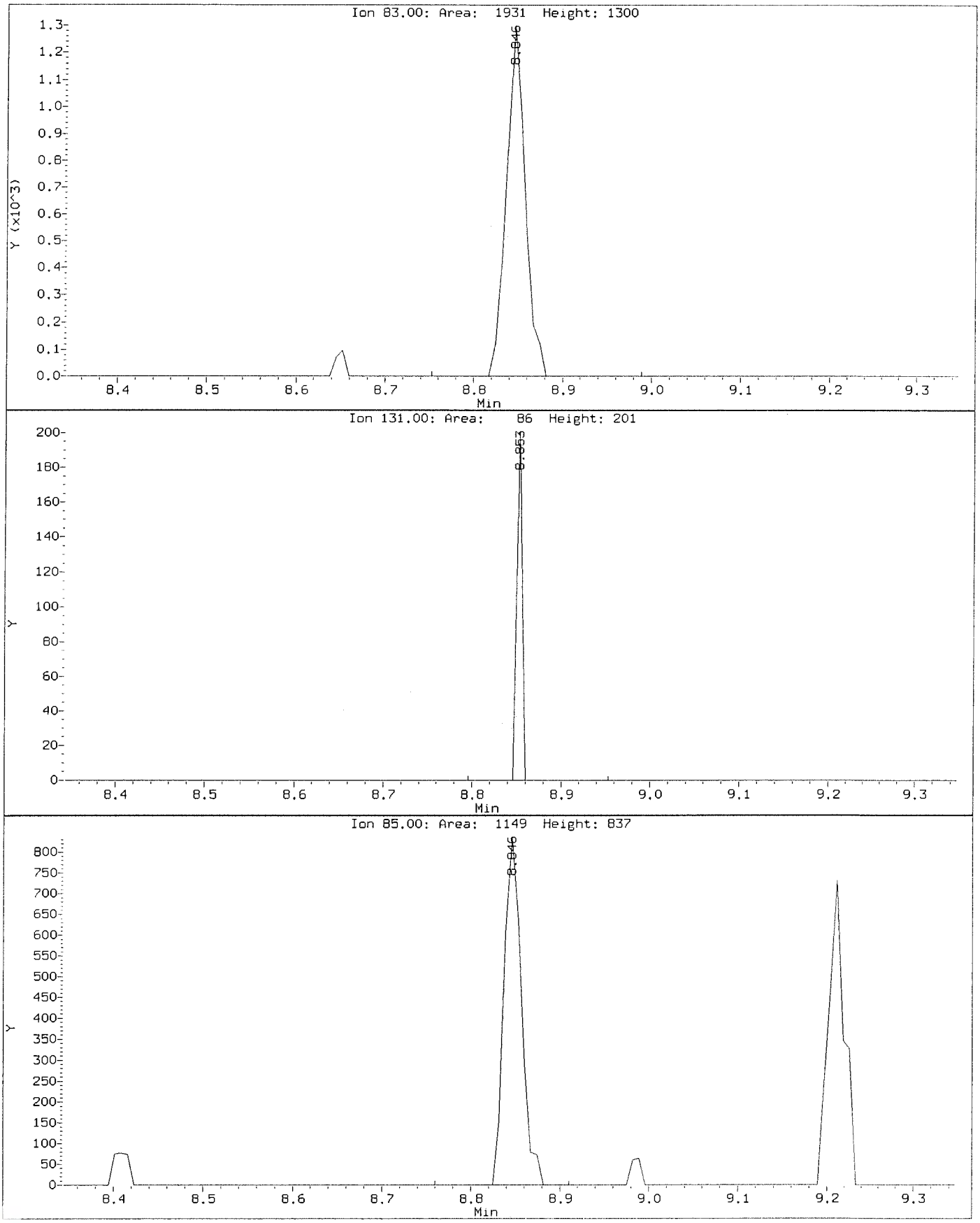
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Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



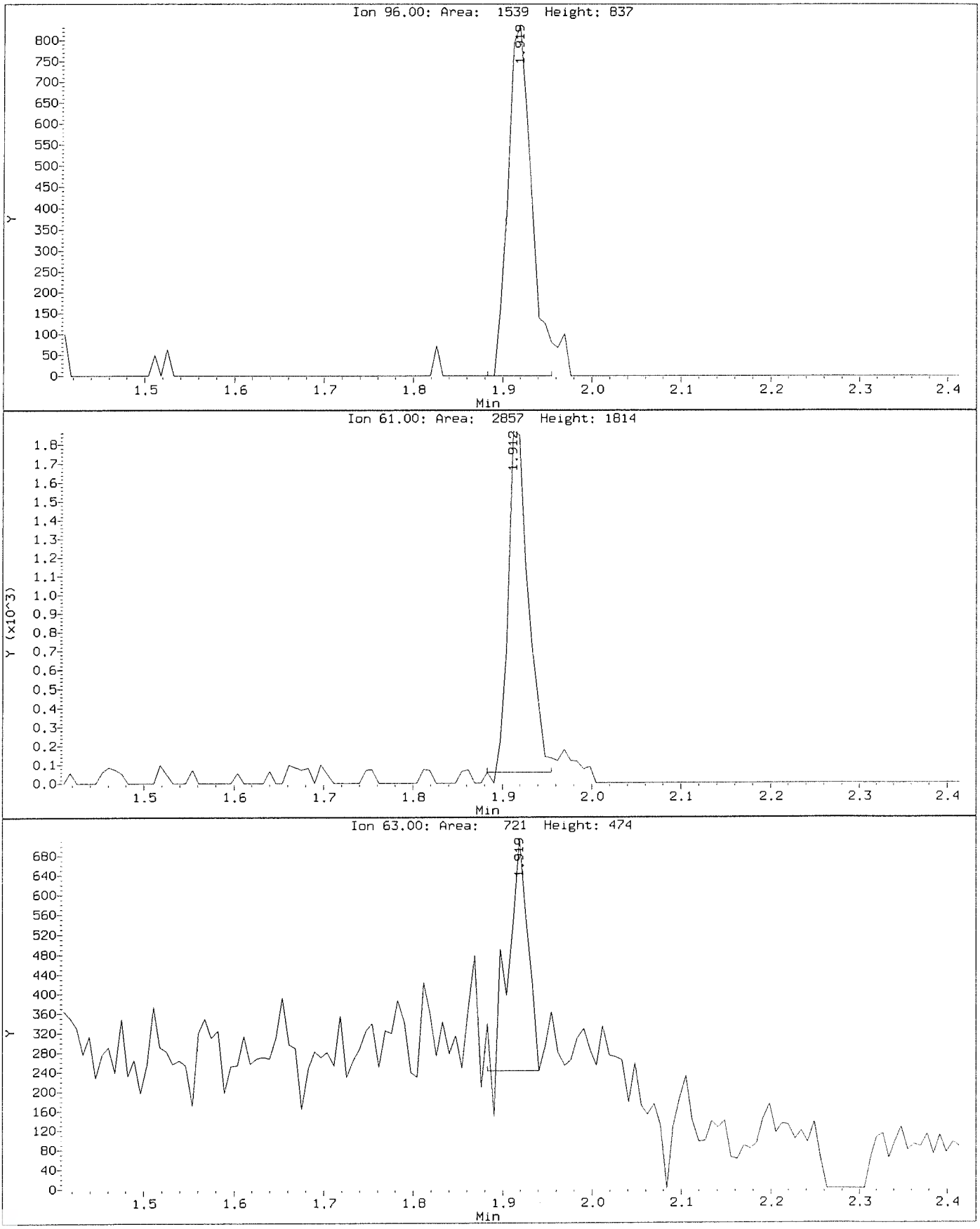
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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



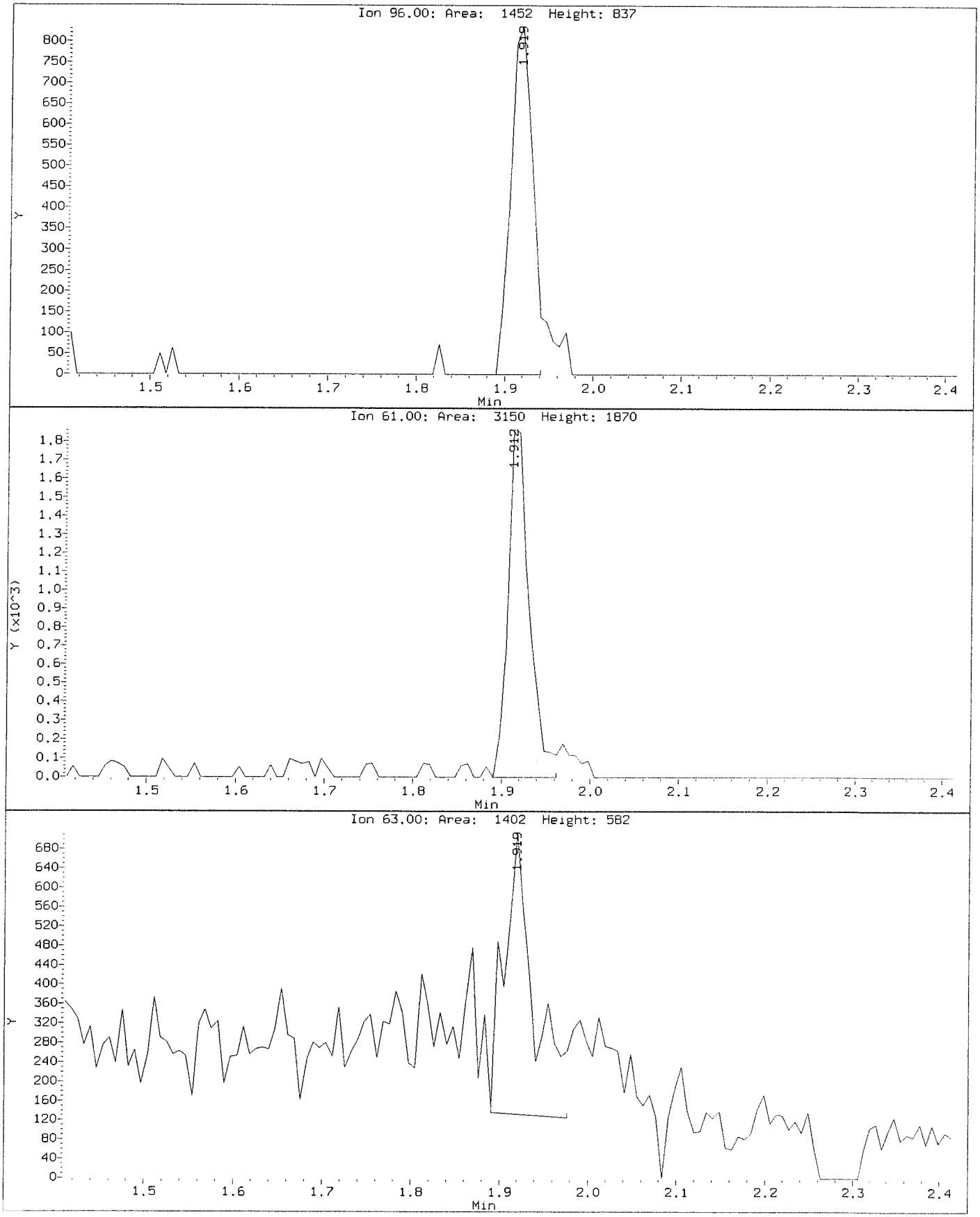
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Instrument: voa6.i
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



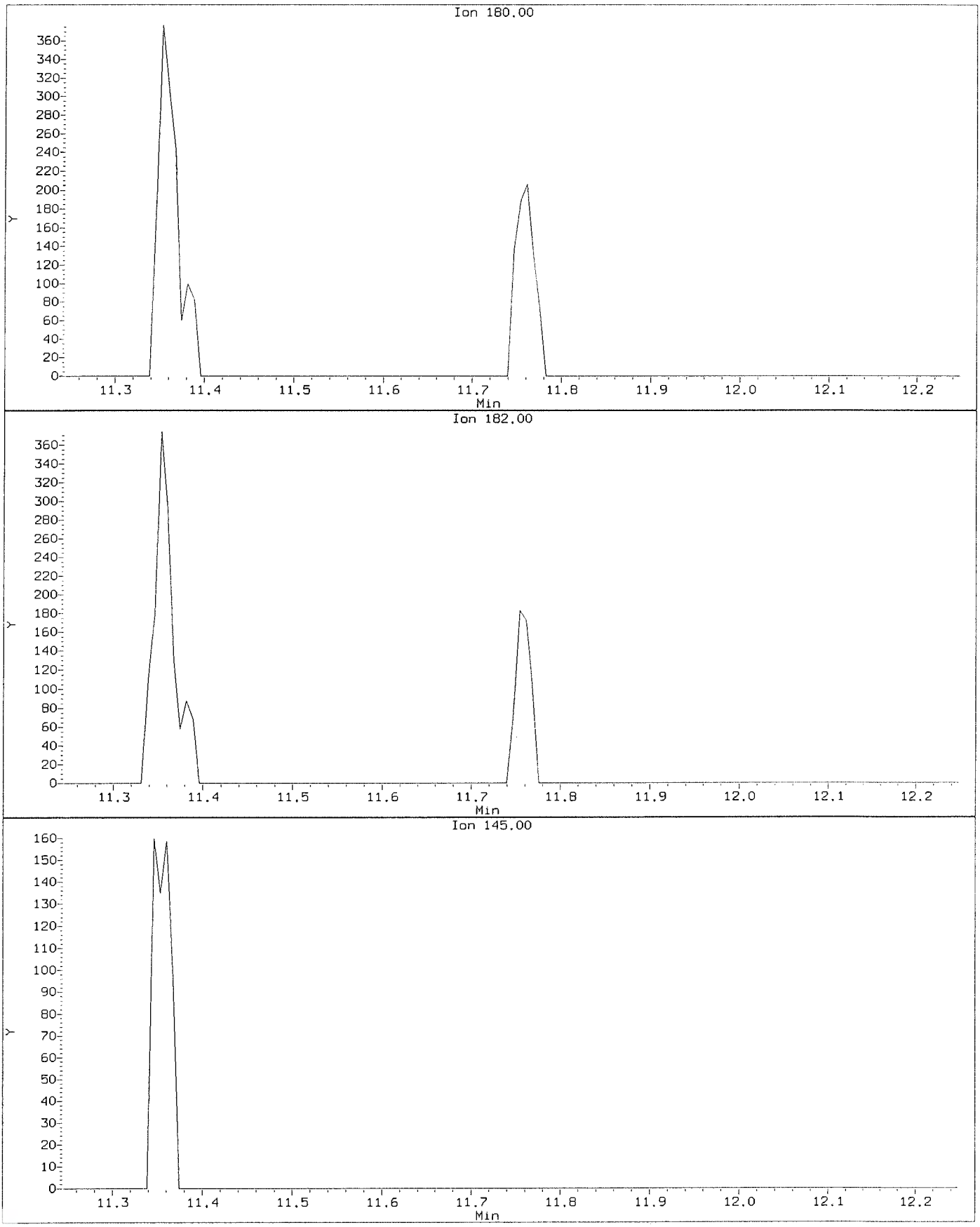
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



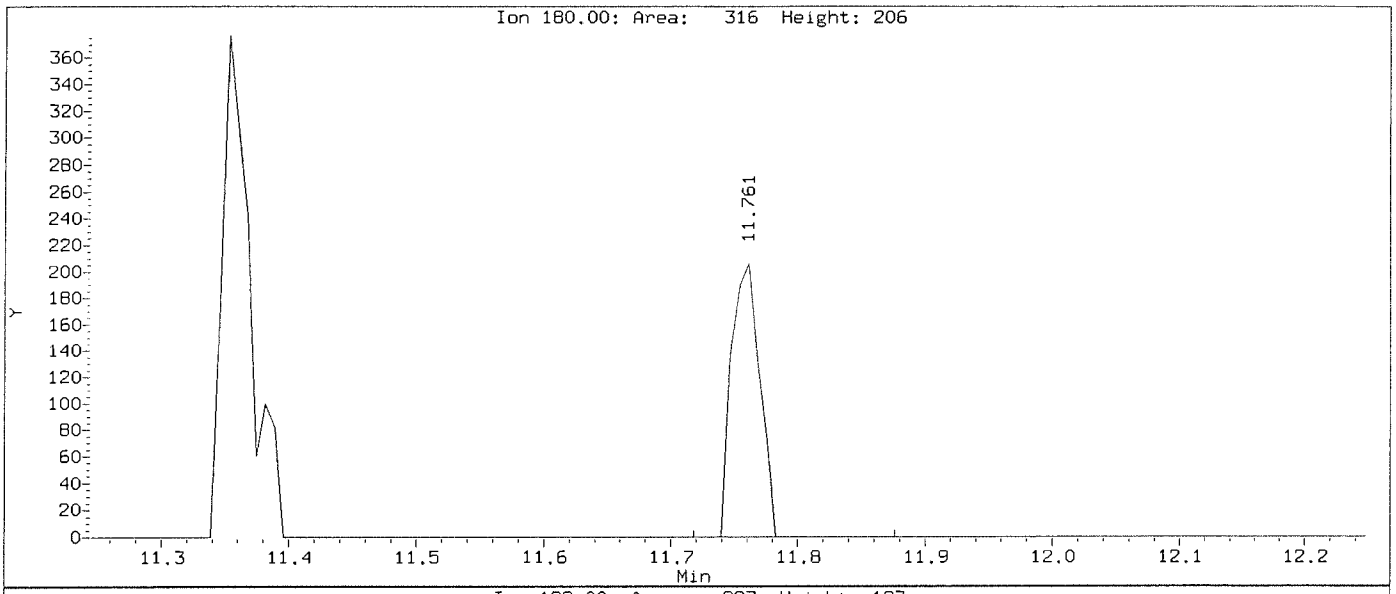
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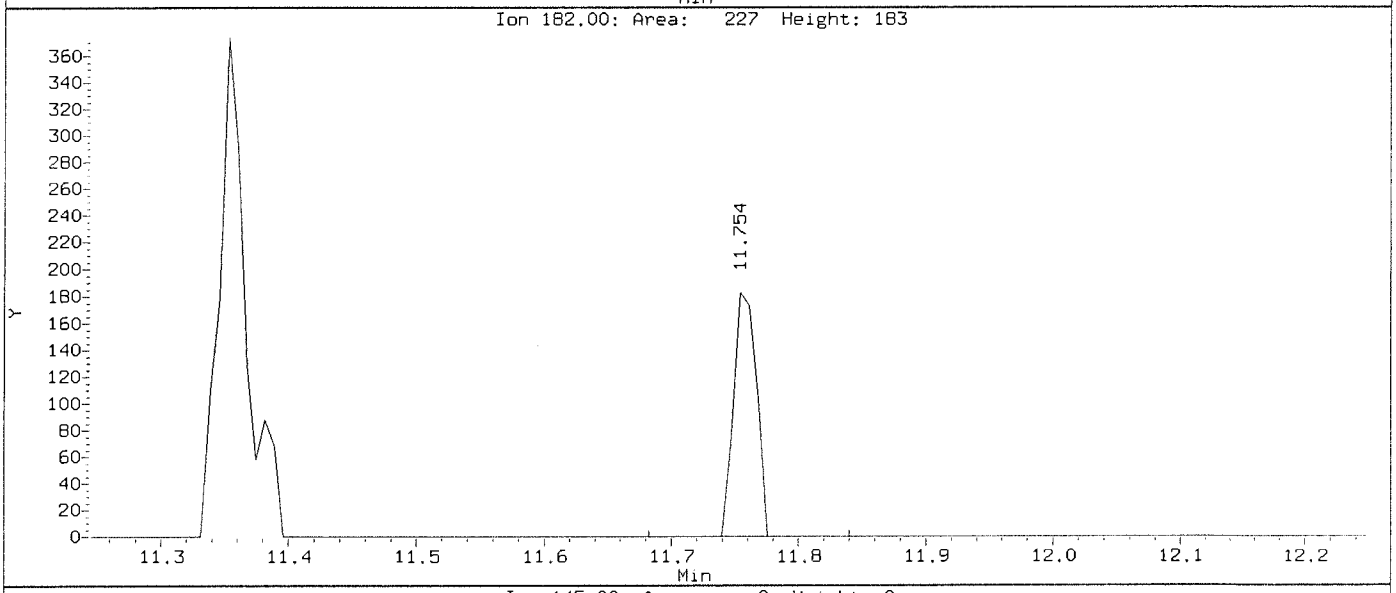
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

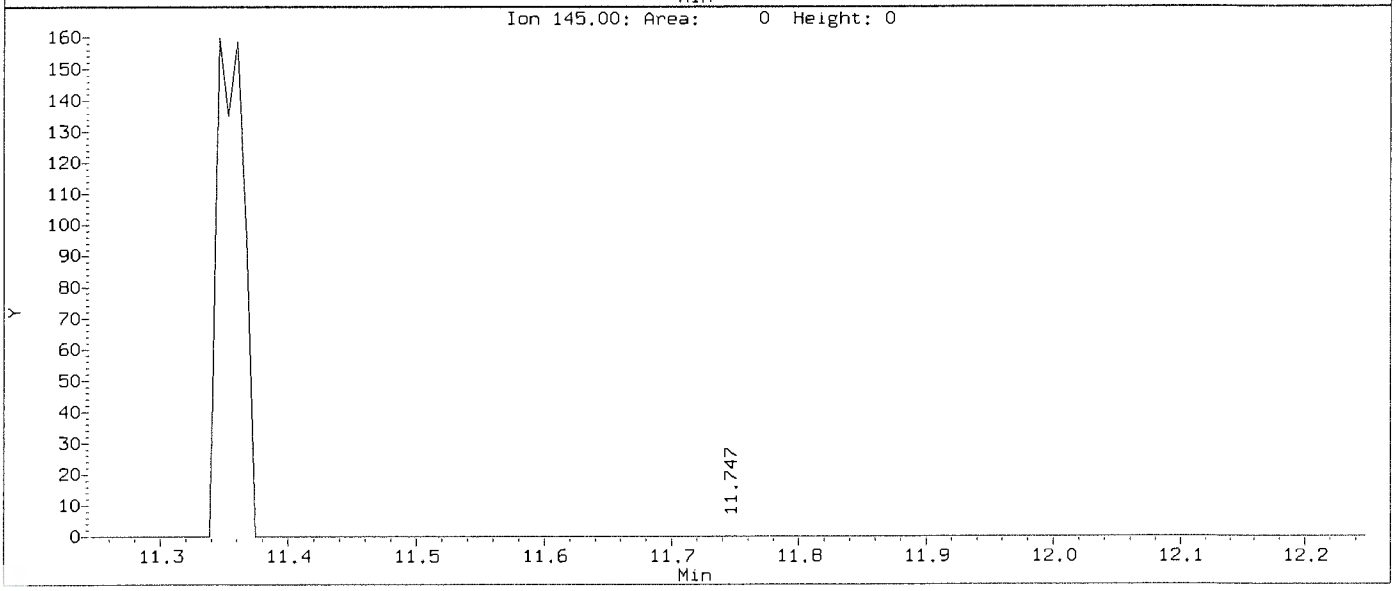


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

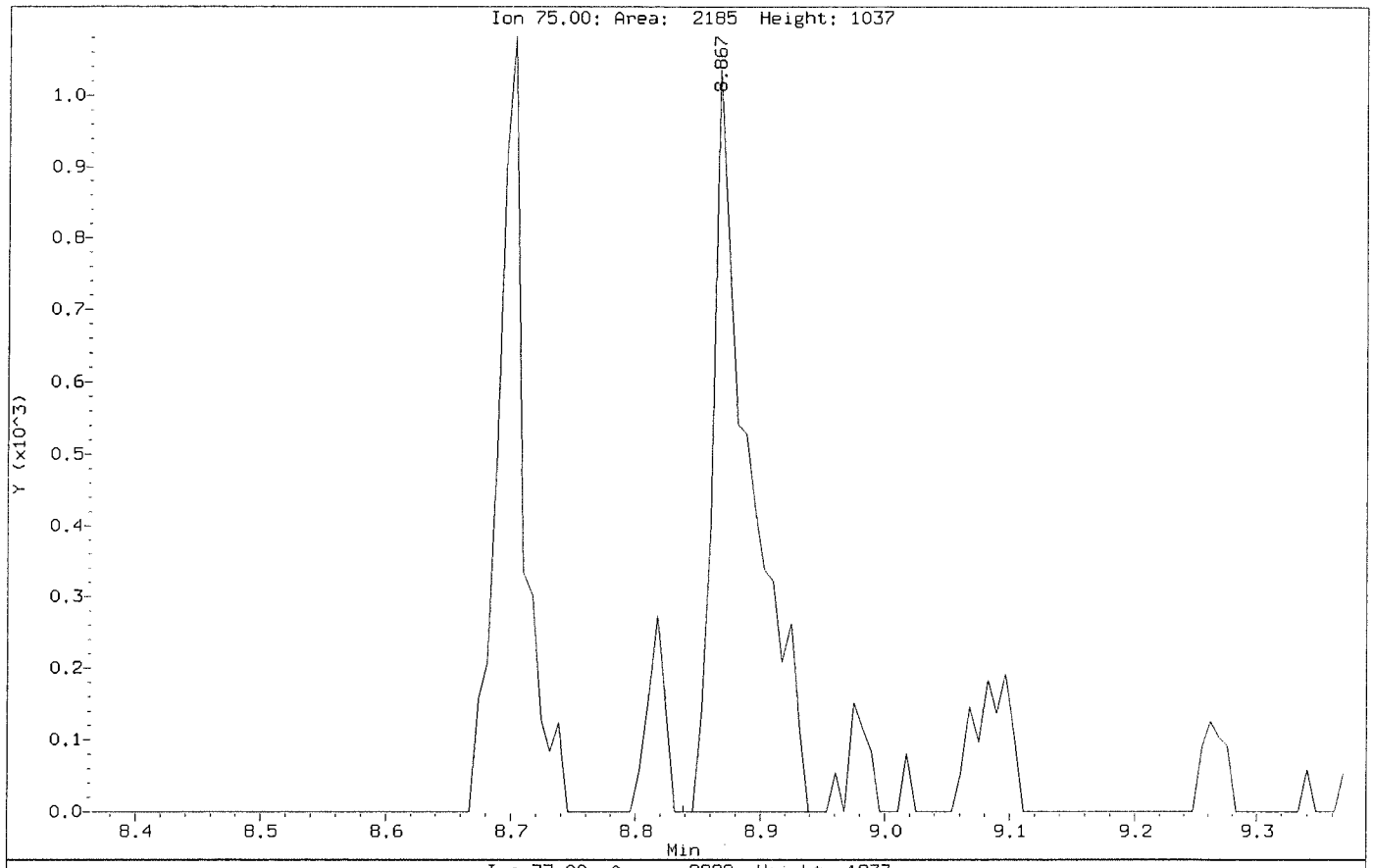


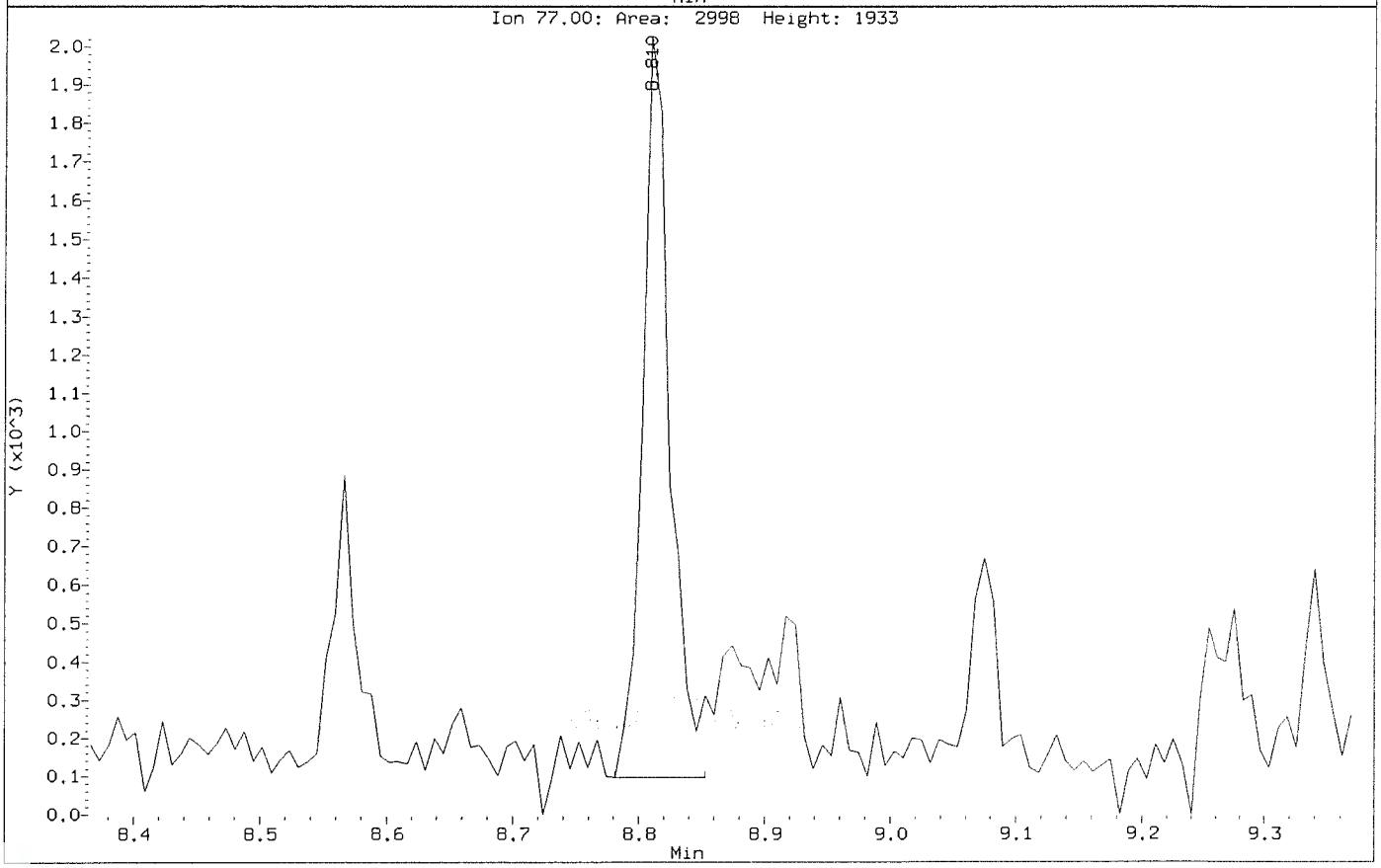



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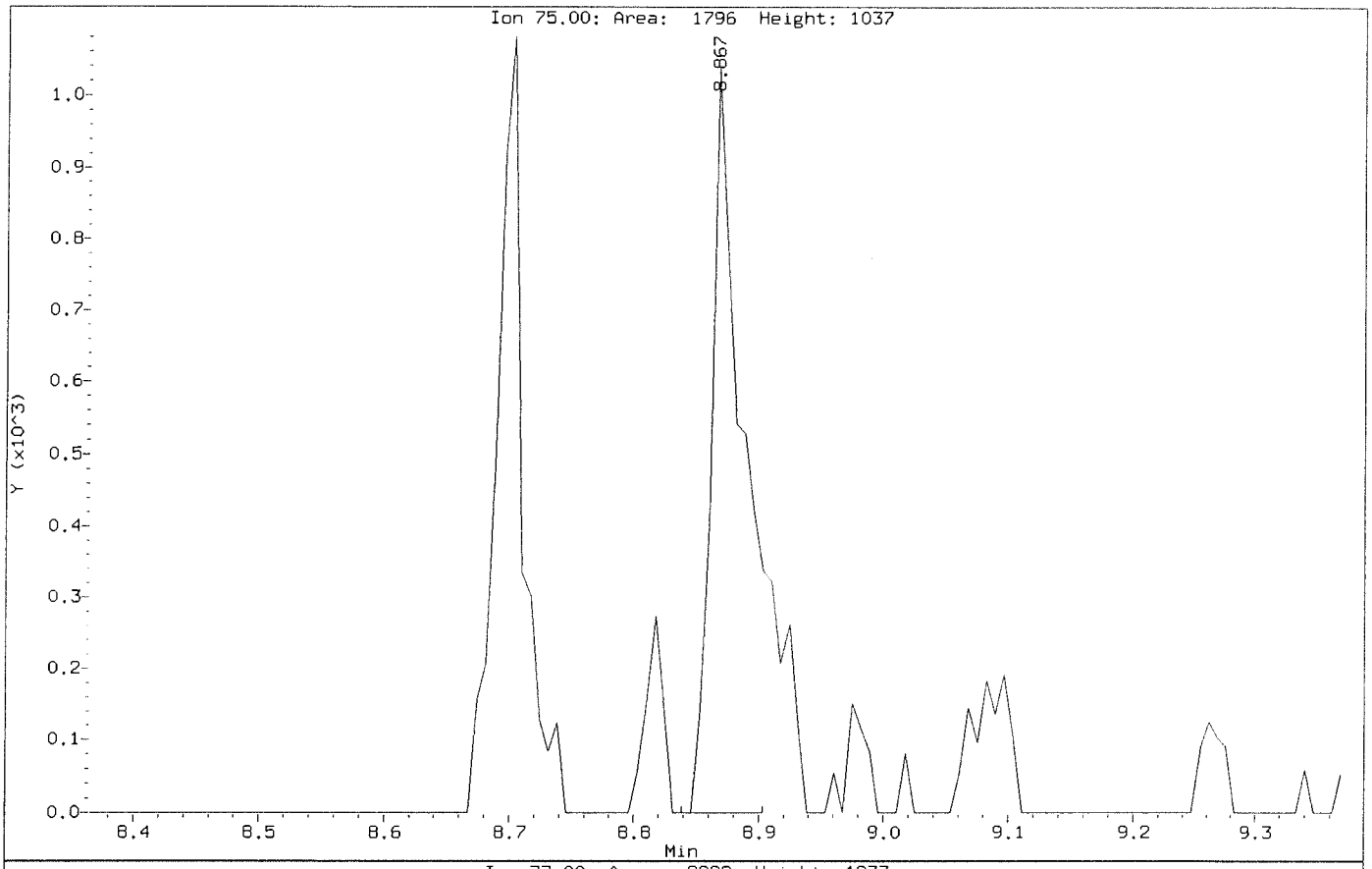
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

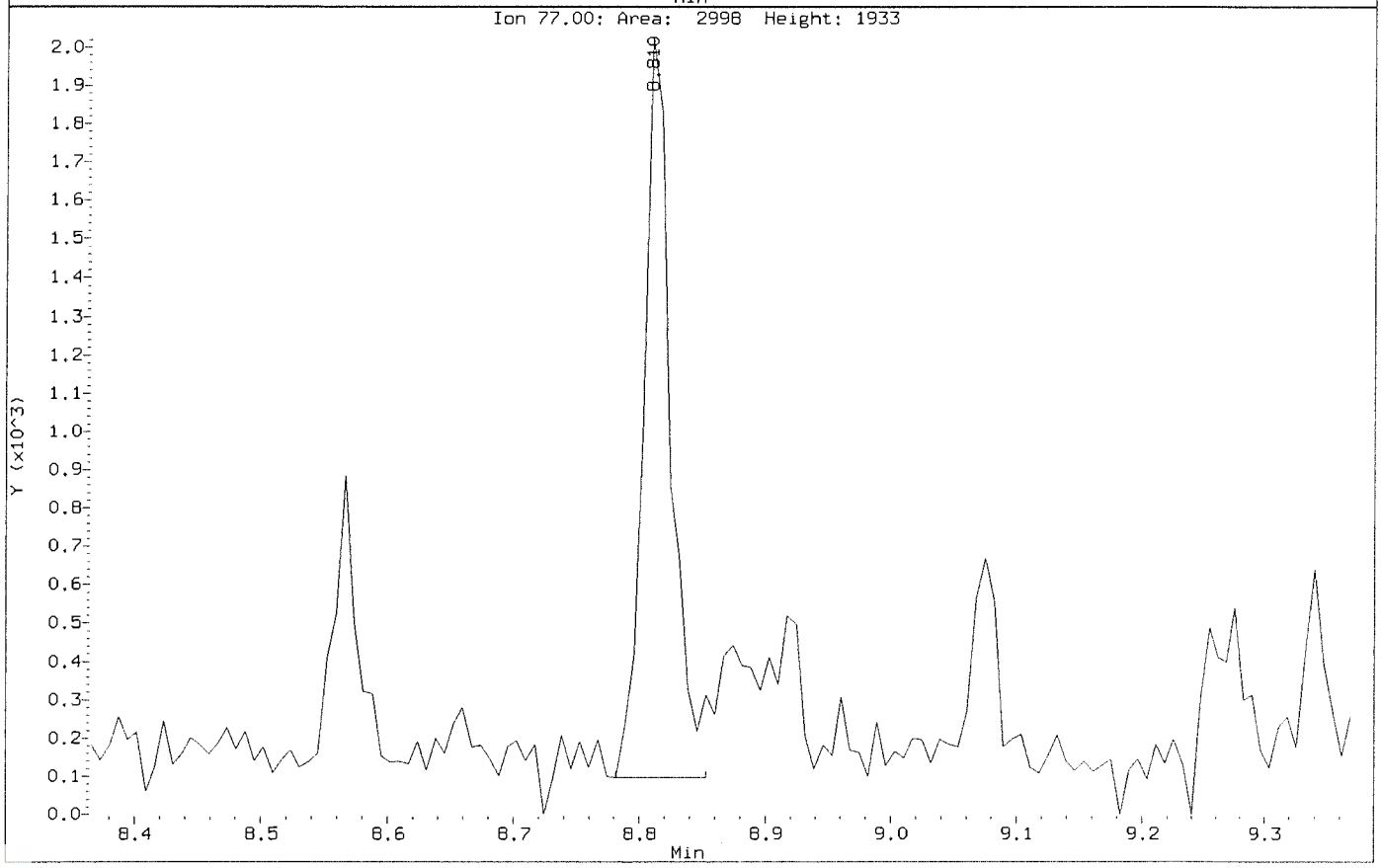


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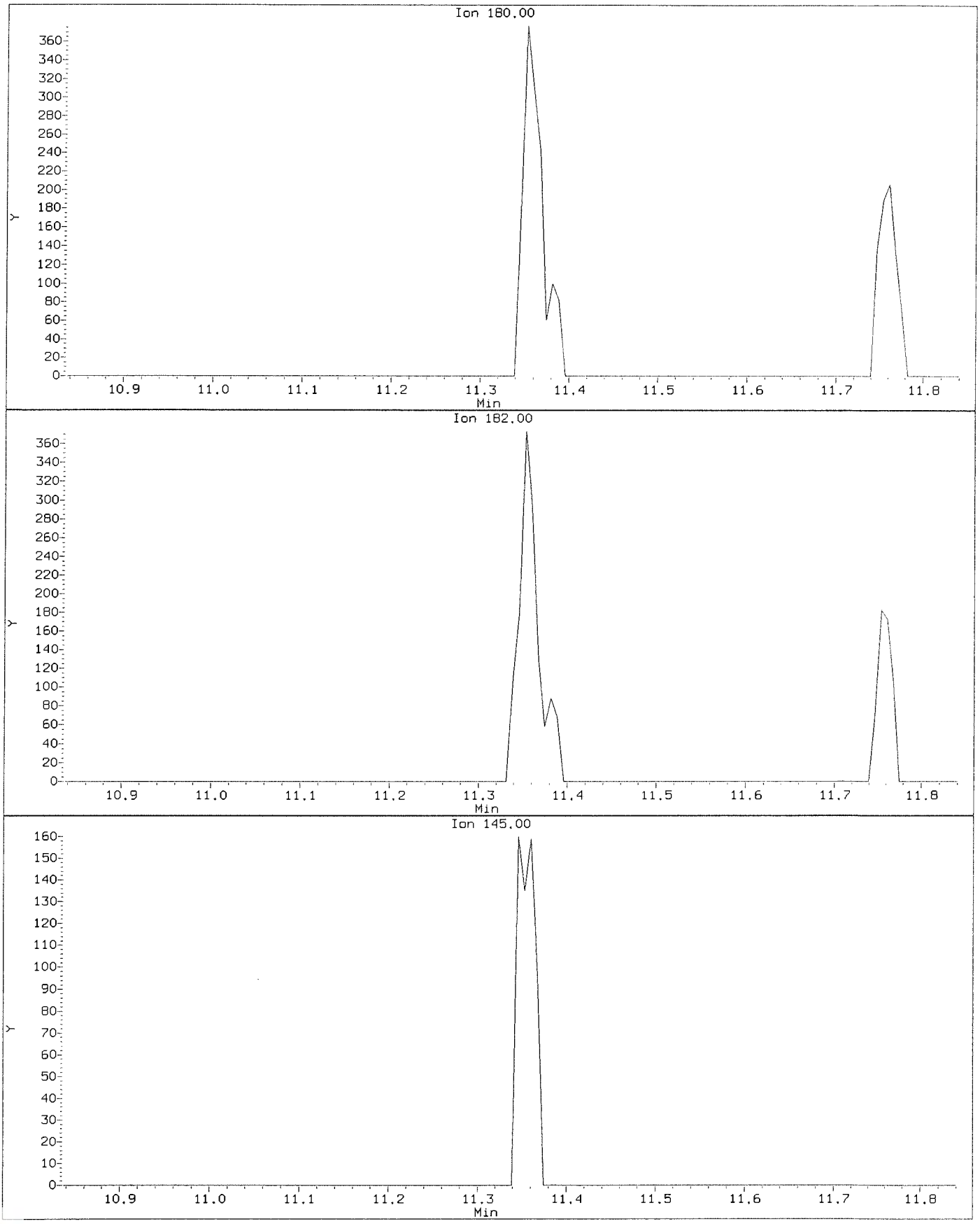
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



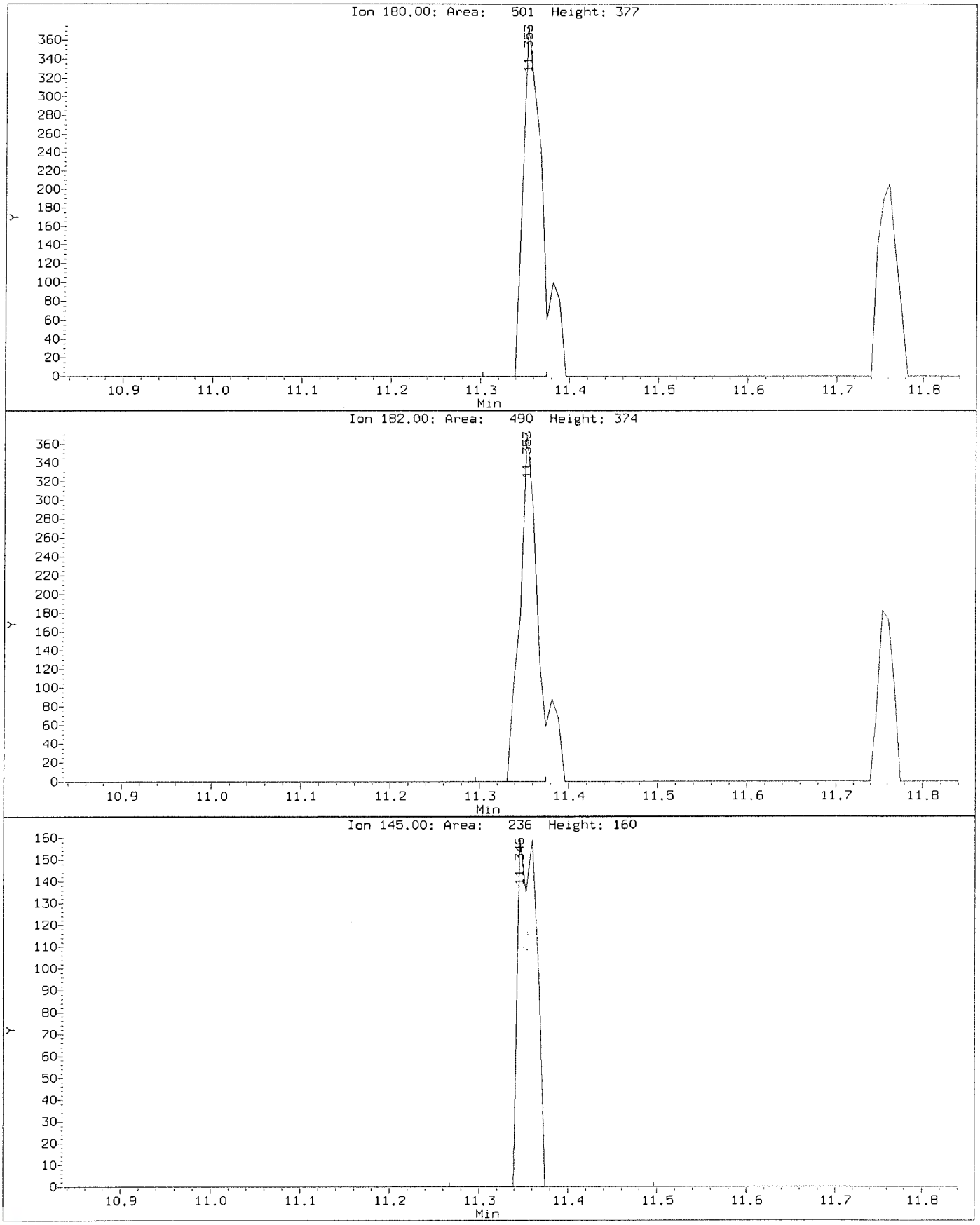
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



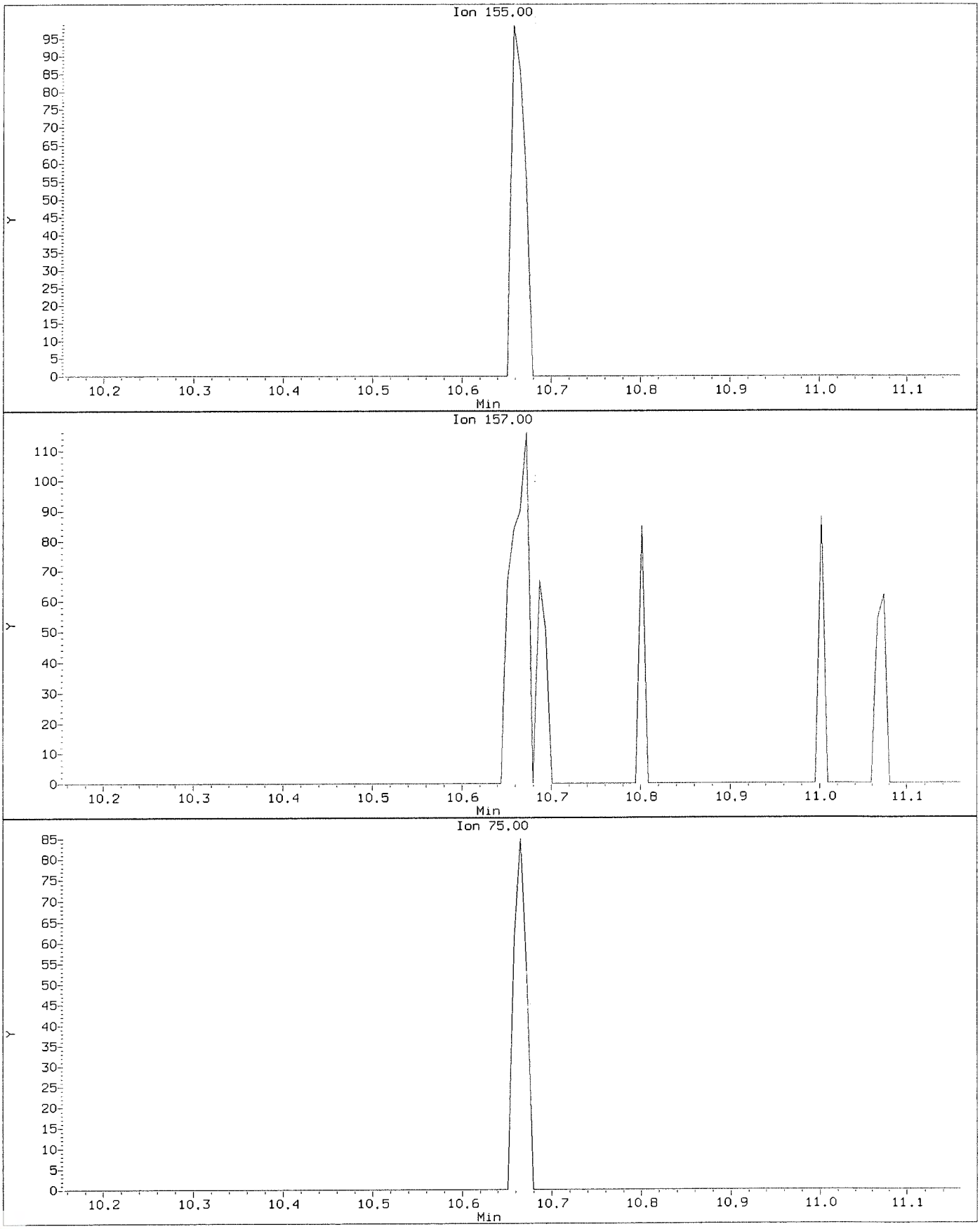
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Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



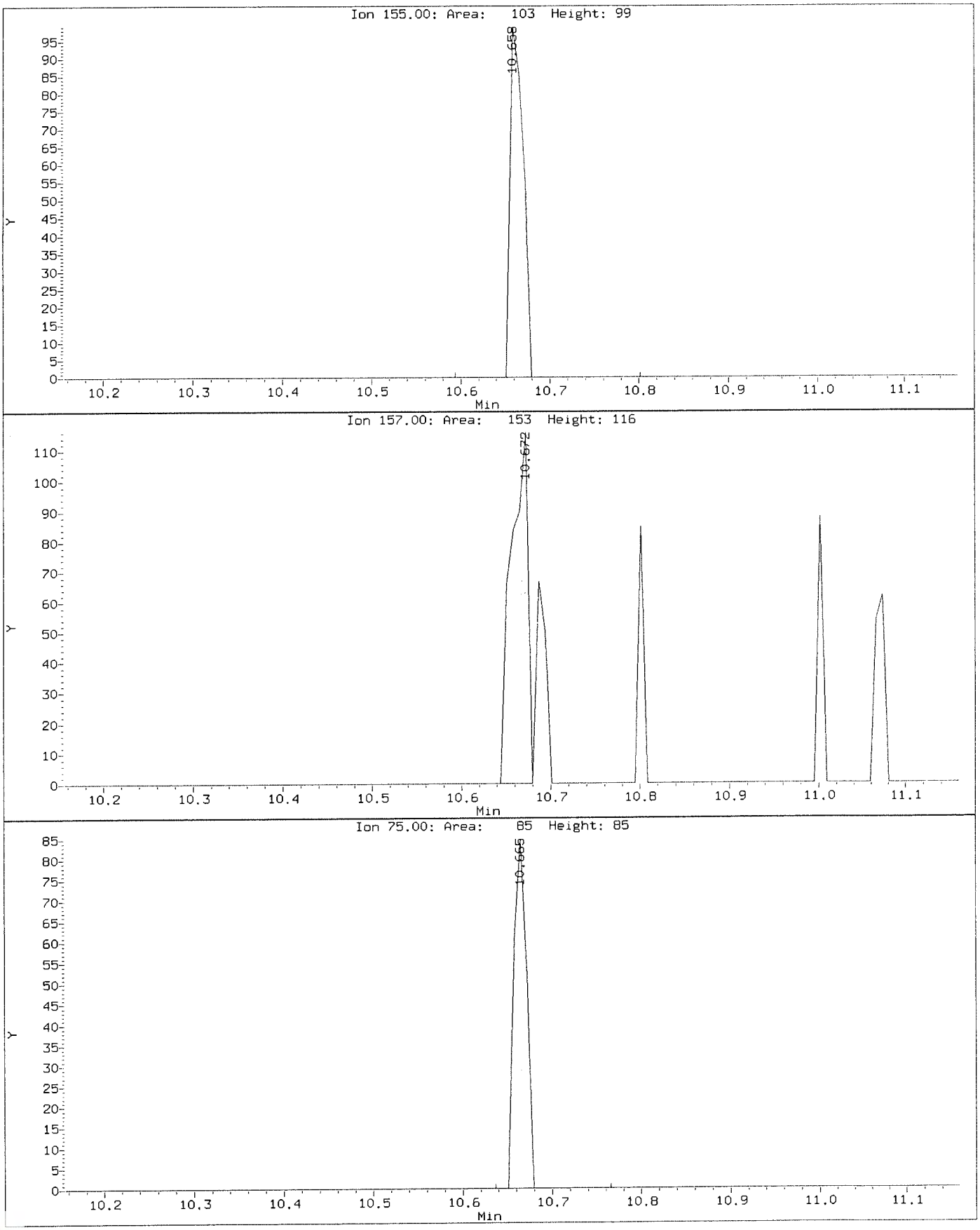
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



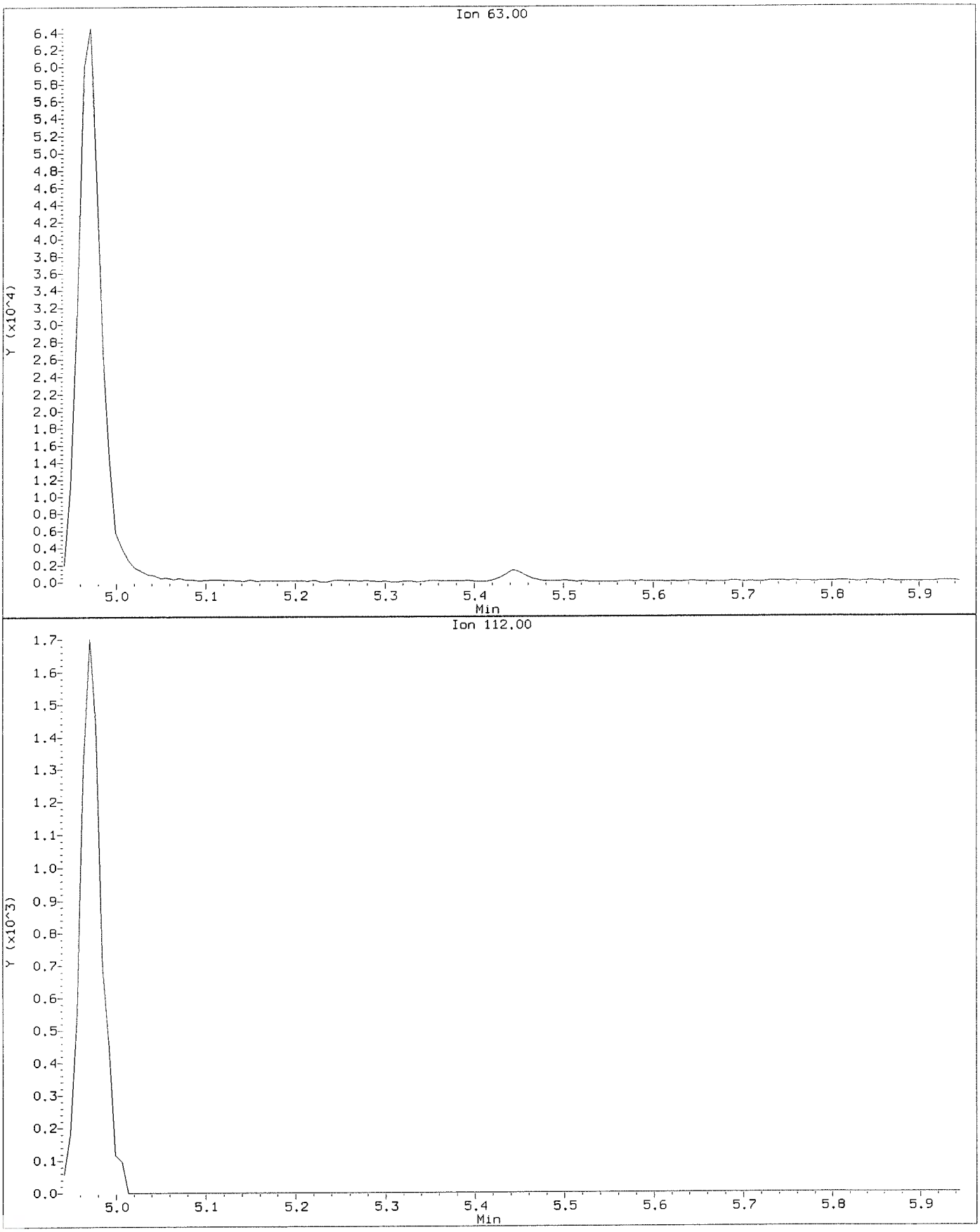
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



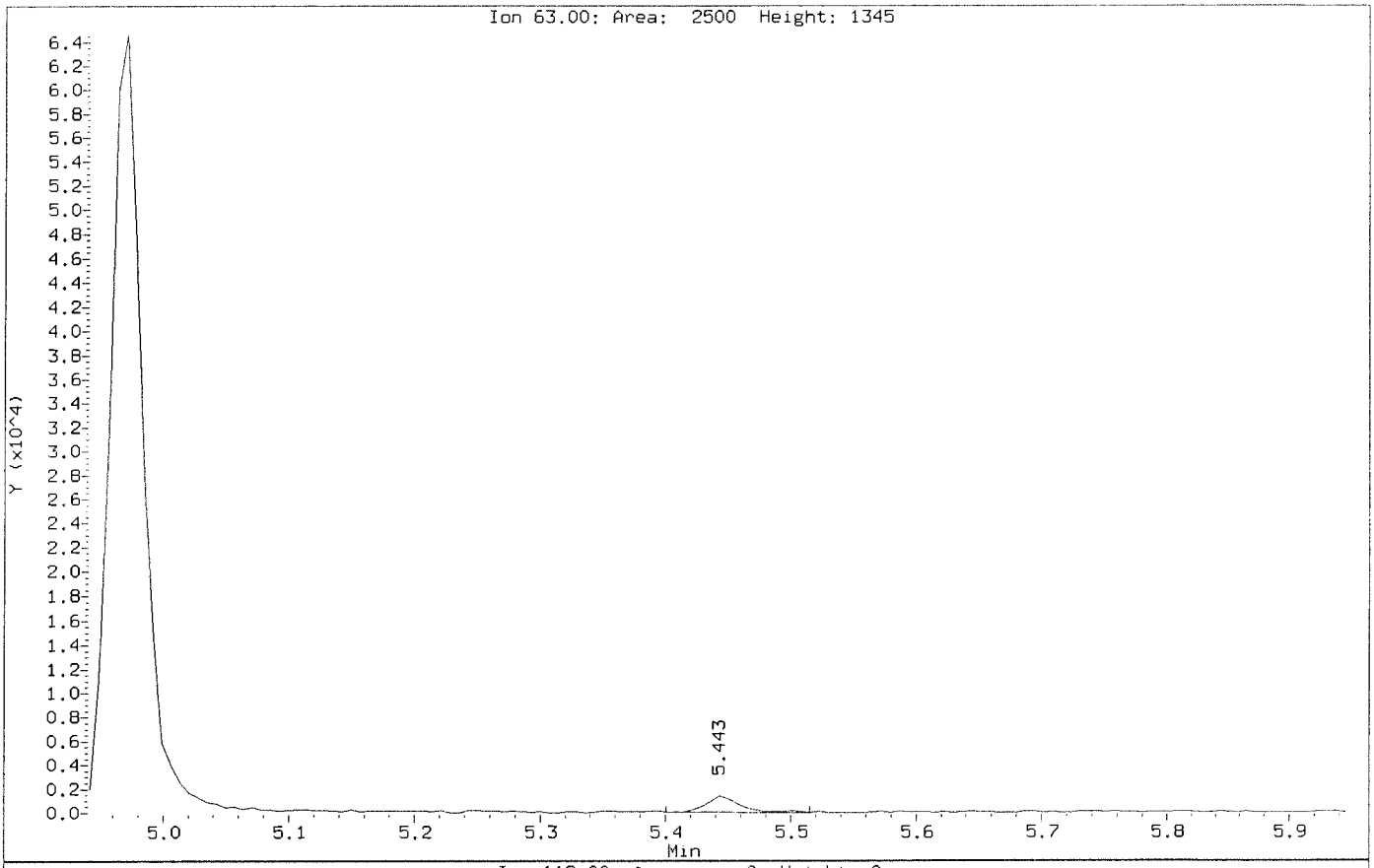
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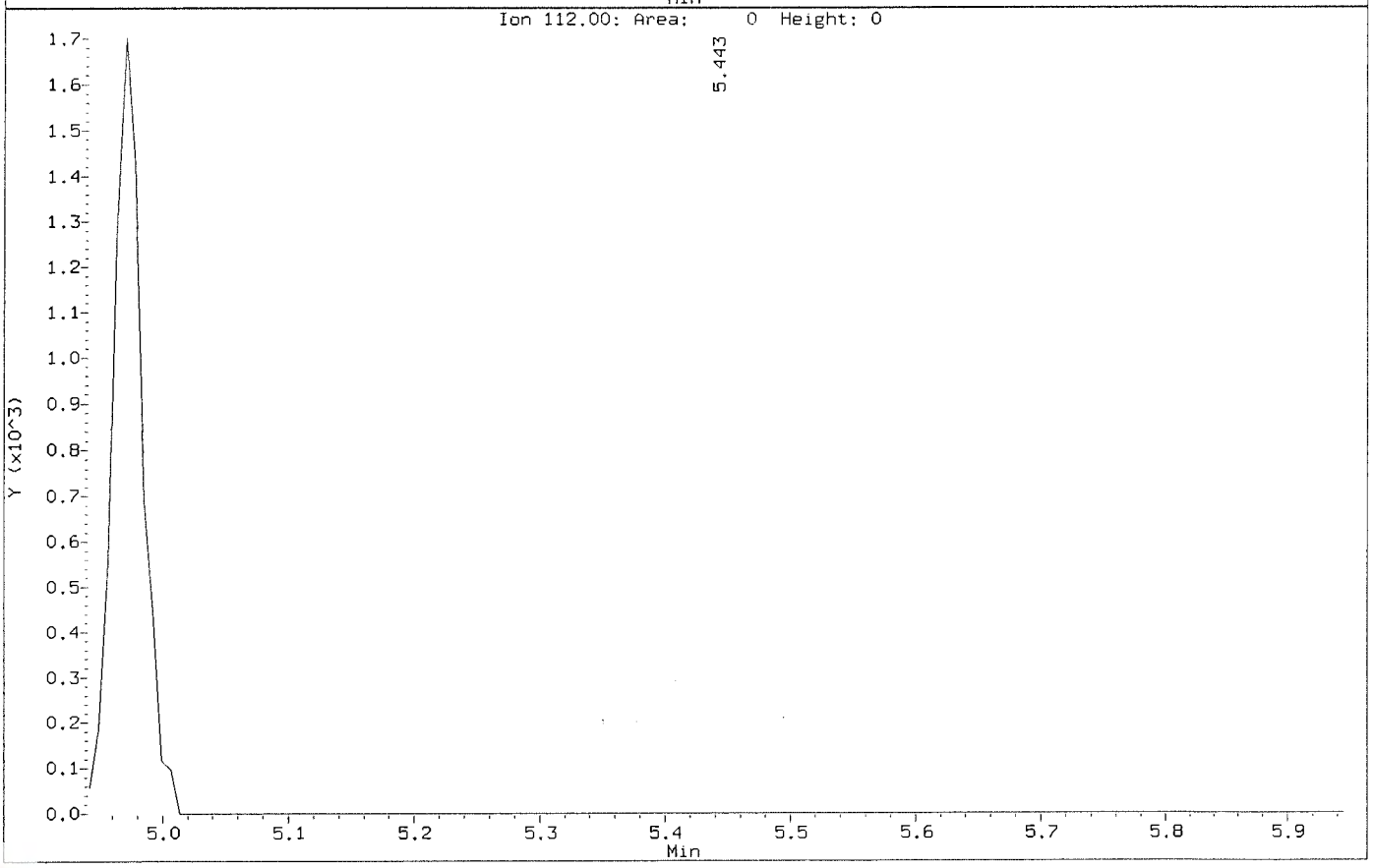
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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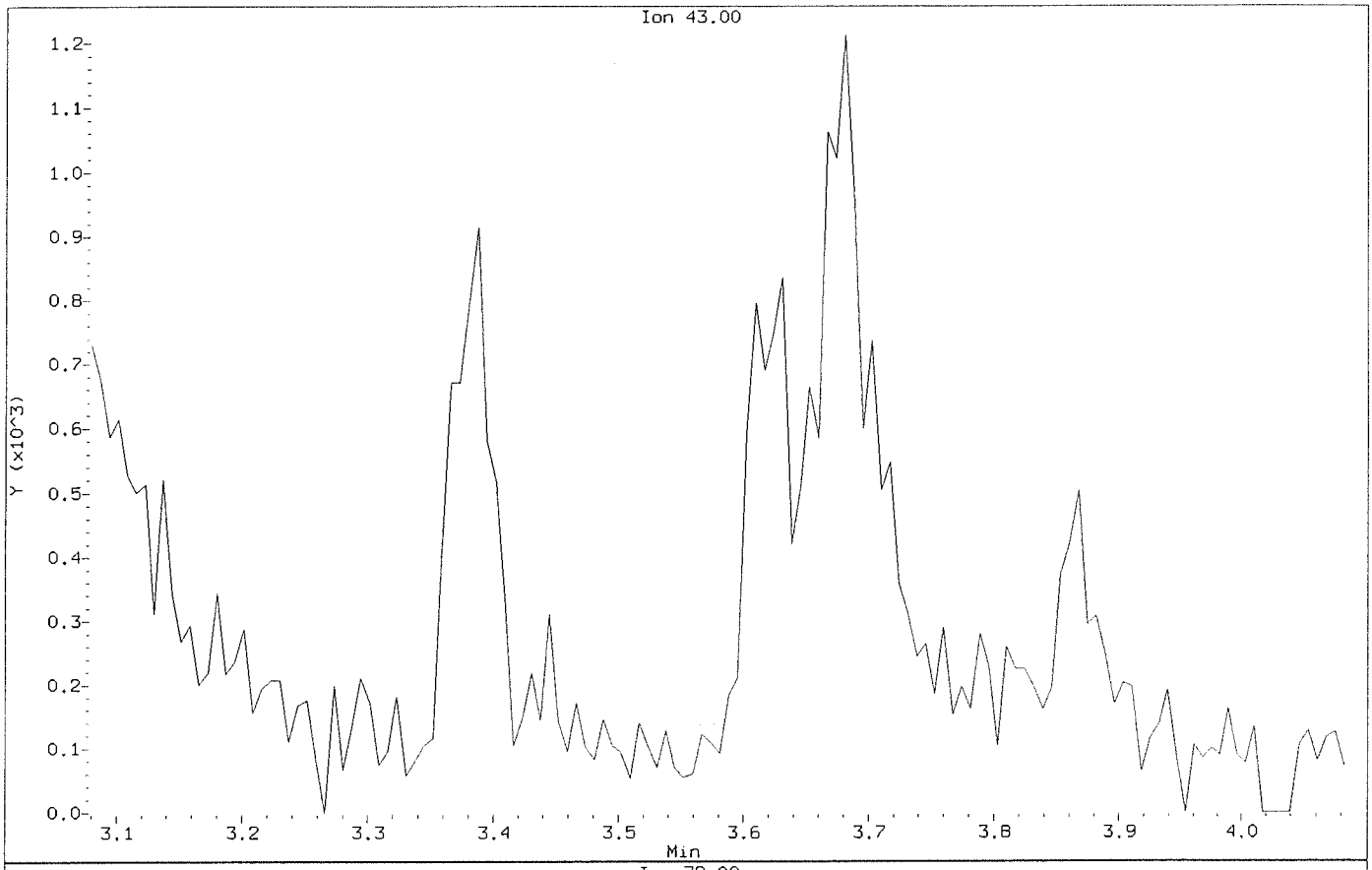
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CAS Number: 78-87-5

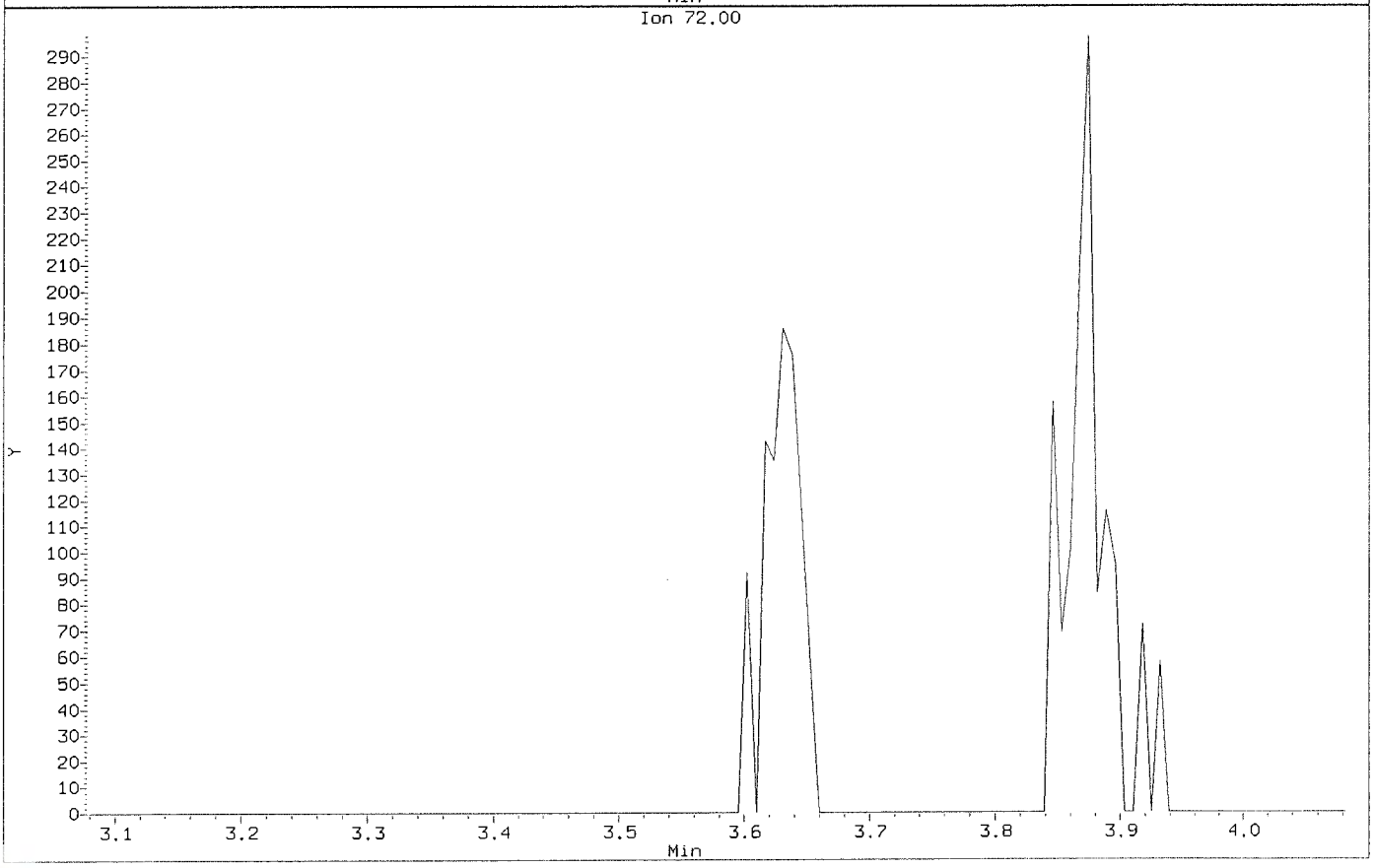


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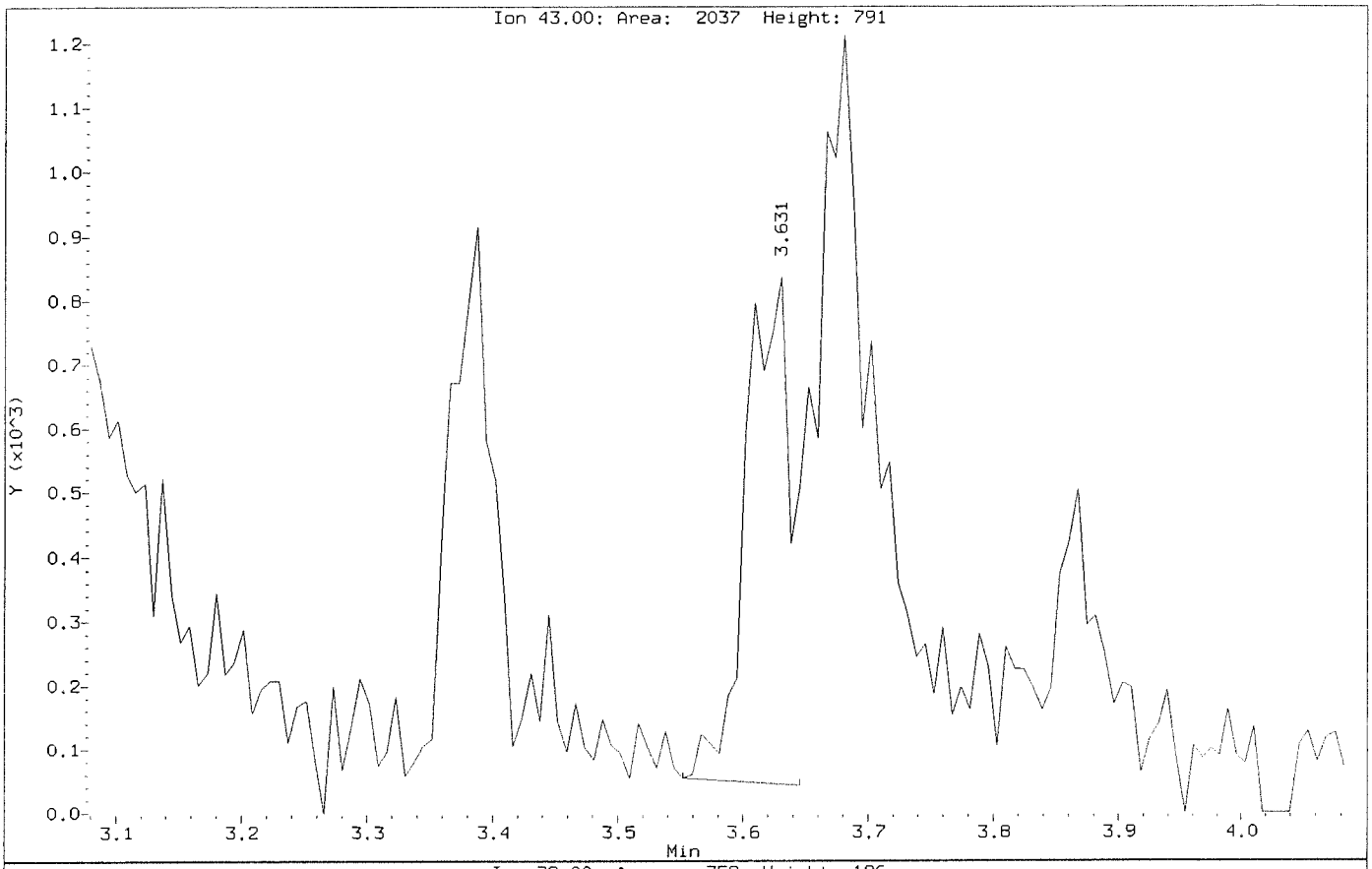
Compound: 2-Butanone
CAS Number: 78-93-3

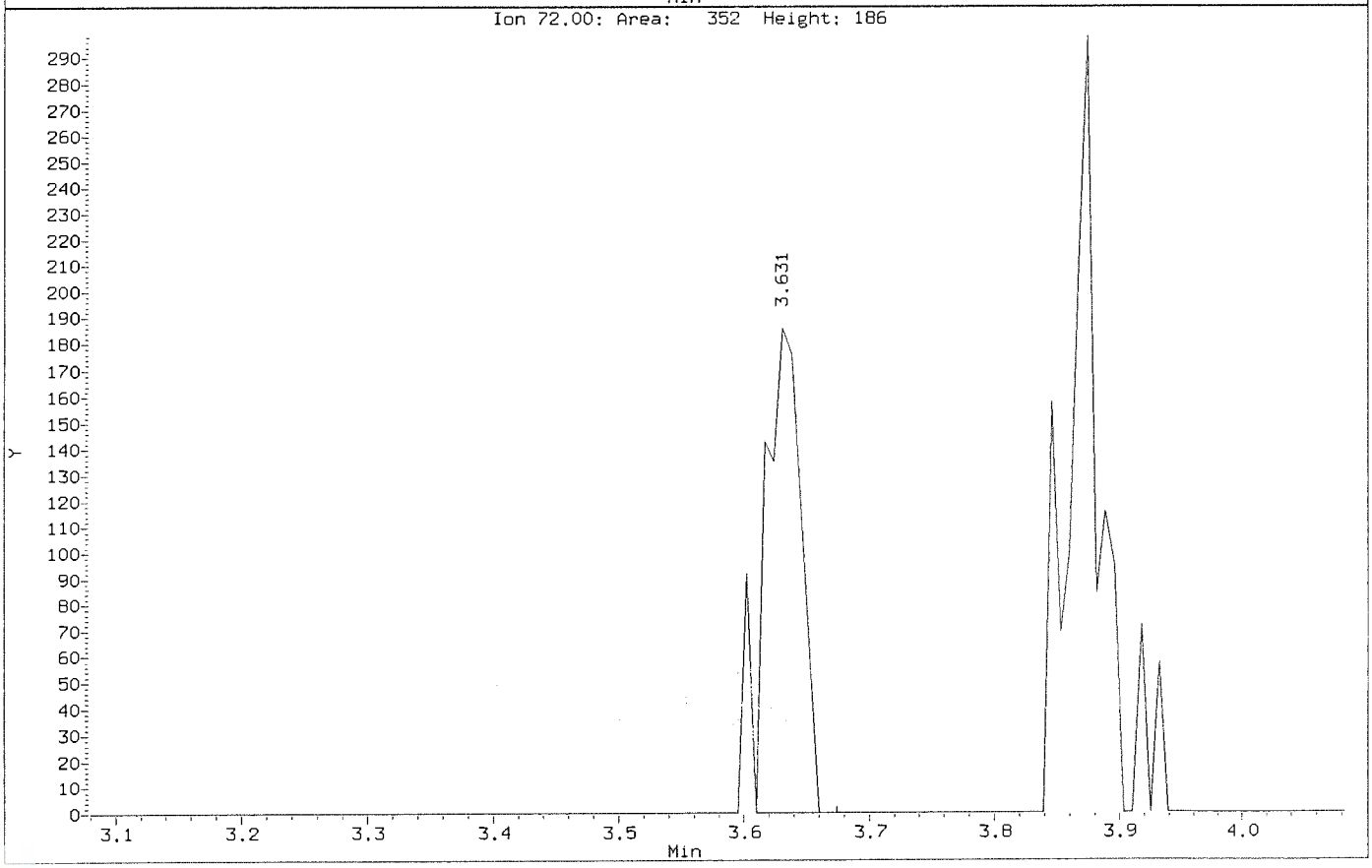


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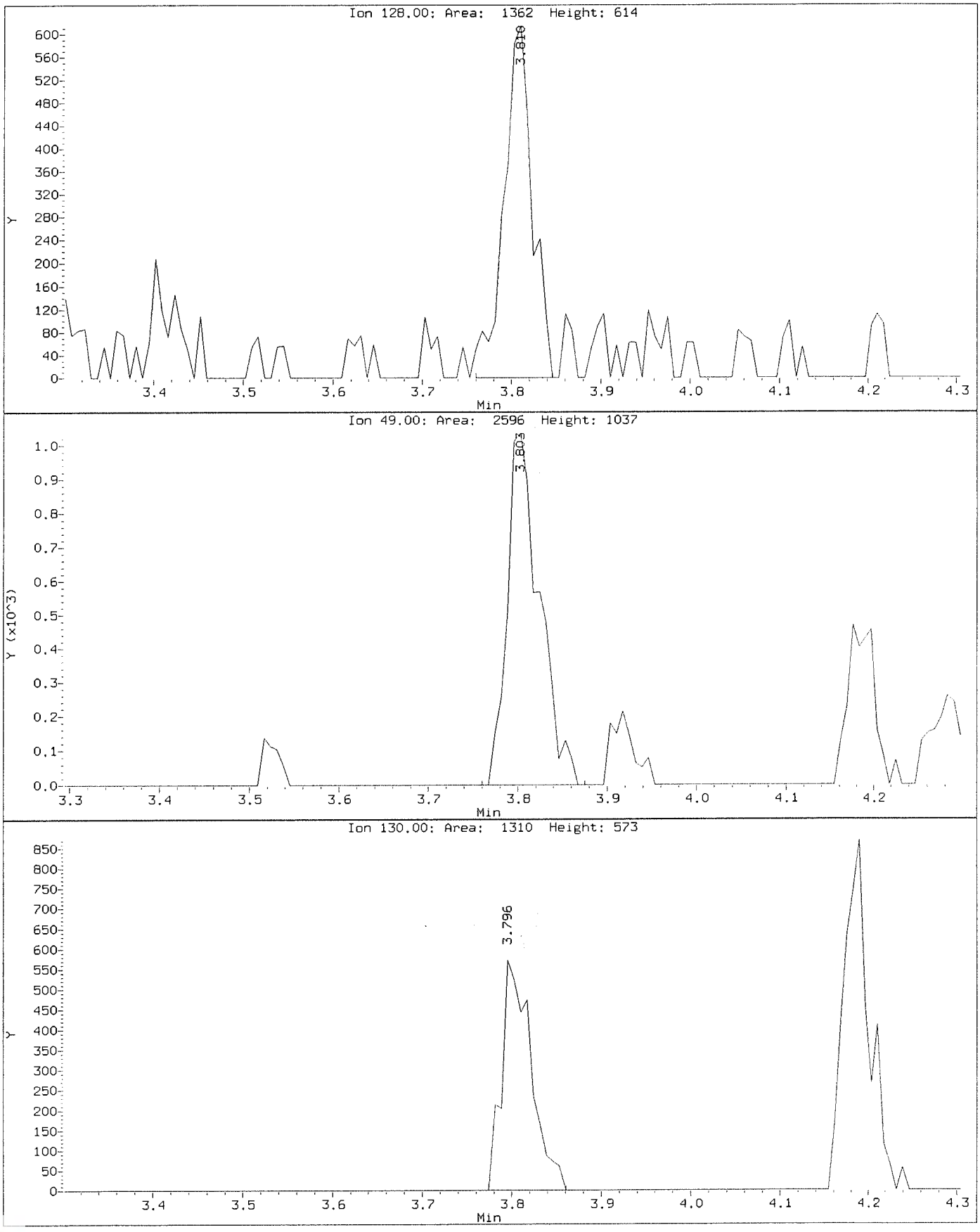
Compound: 2-Butanone
CAS Number: 78-93-3



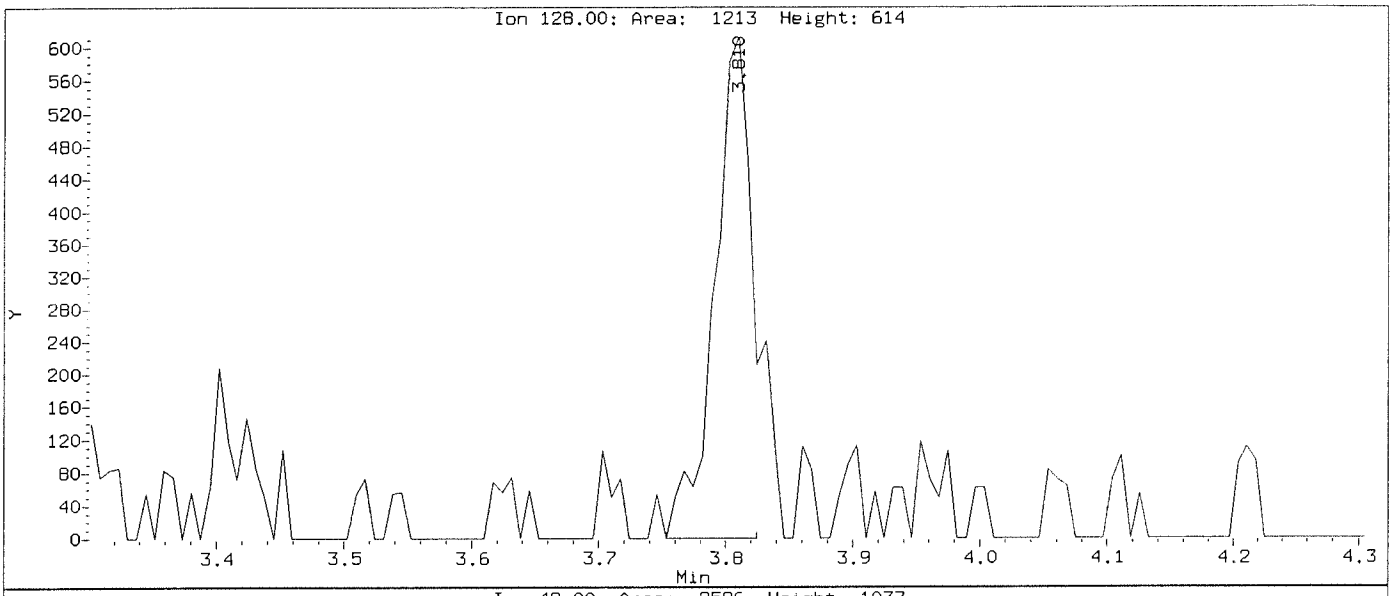
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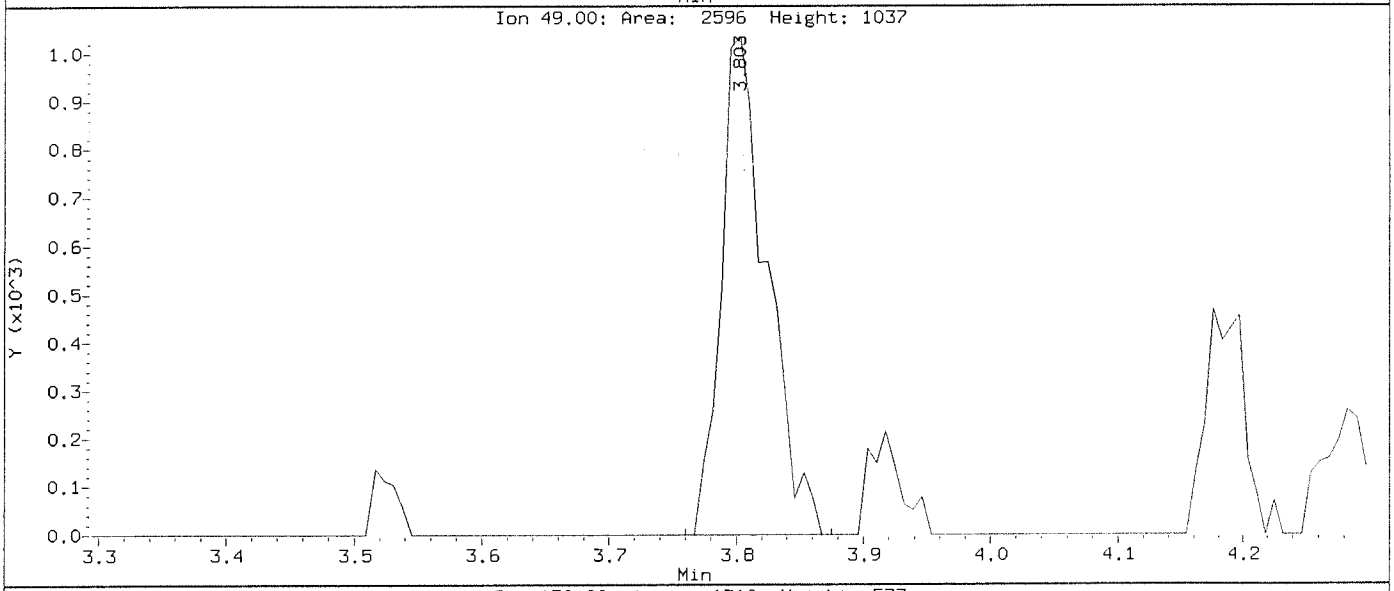
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CAS Number: 74-97-5

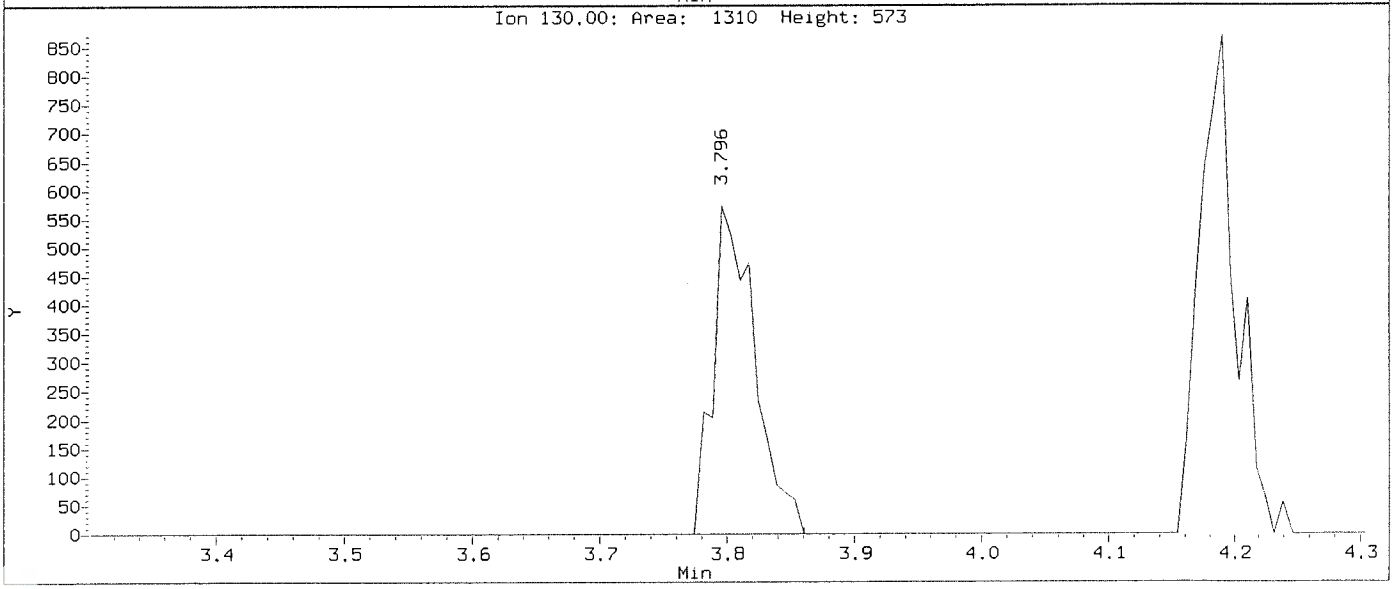


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Compound: Bromochloromethane
CAS Number: 74-97-5

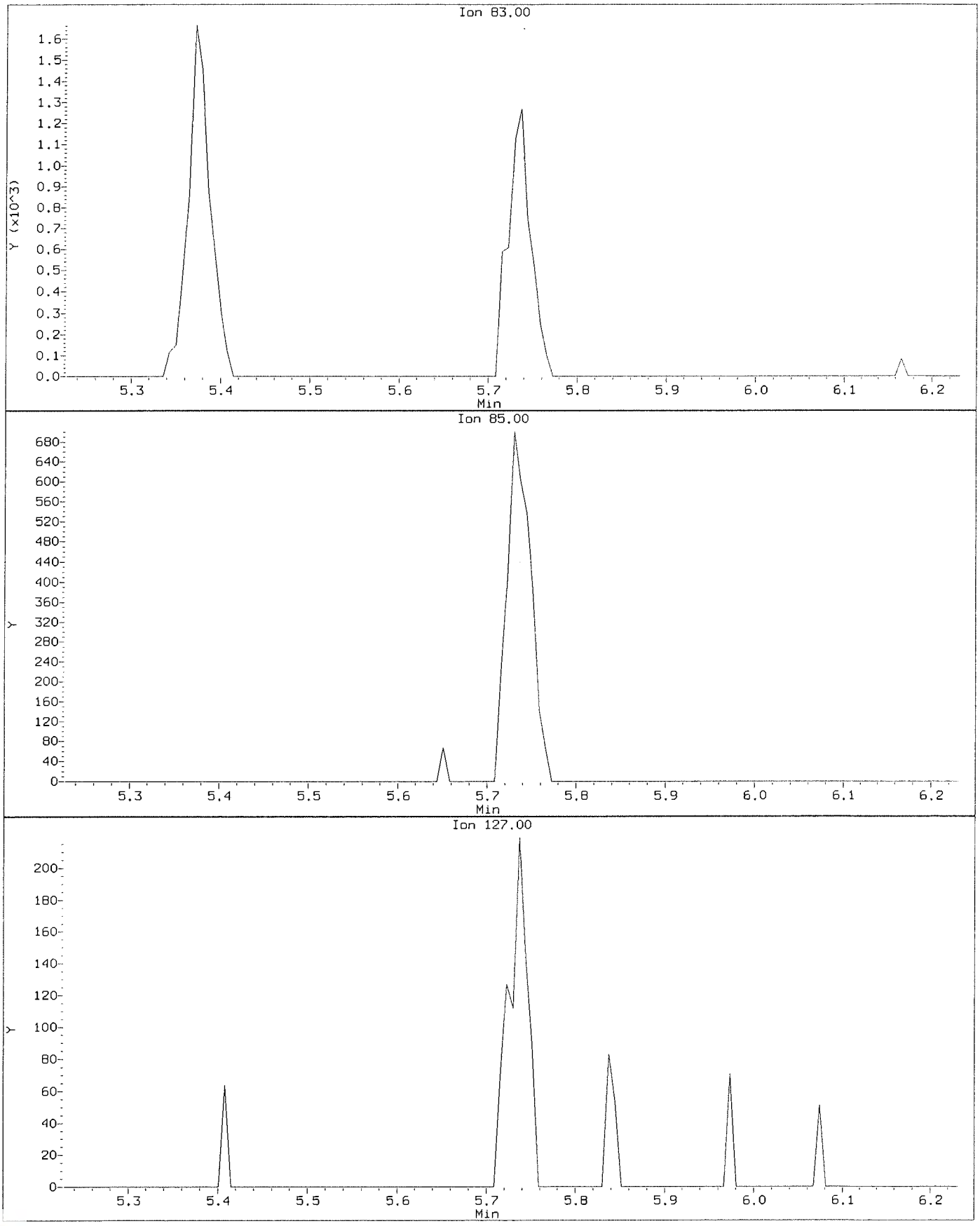


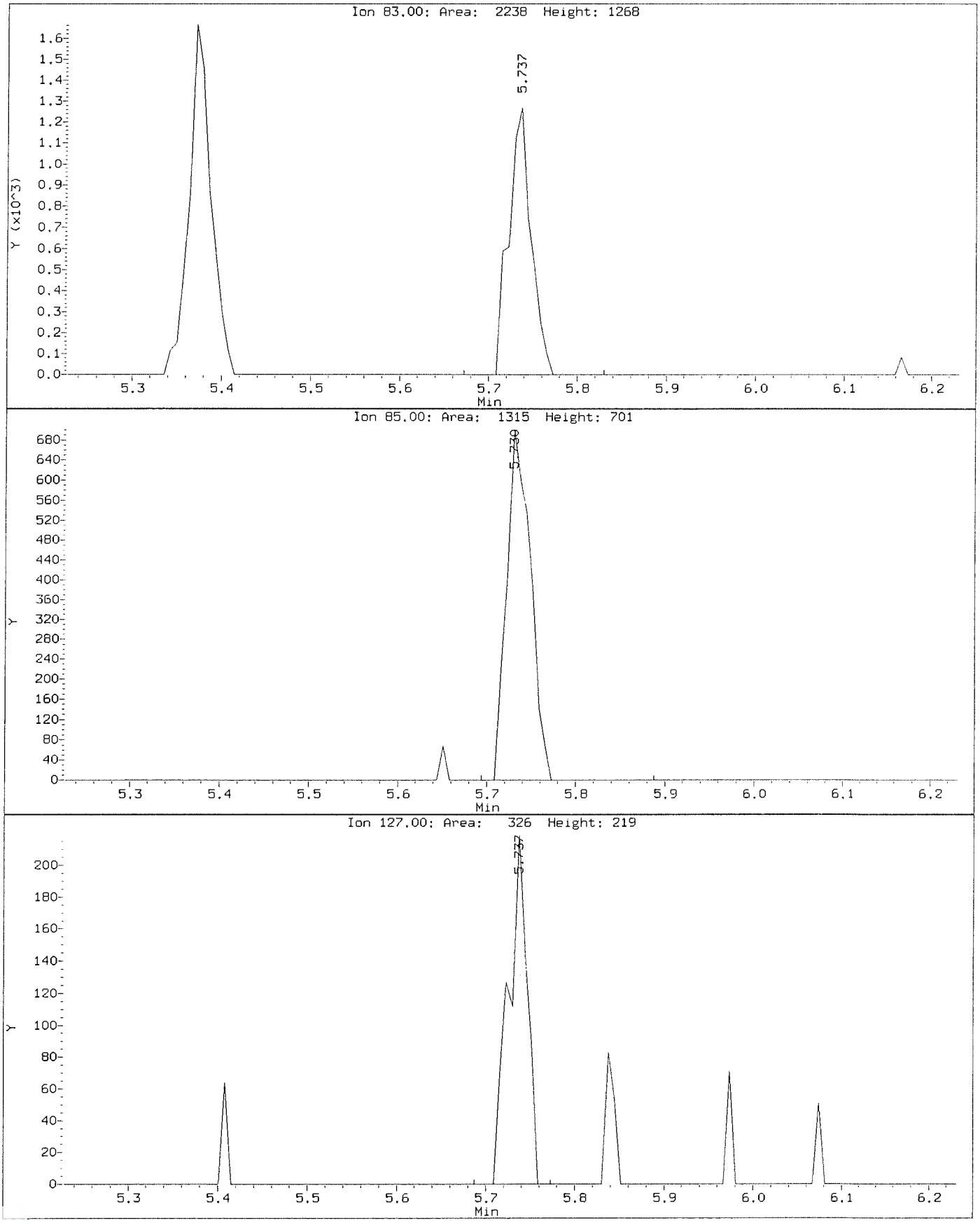
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



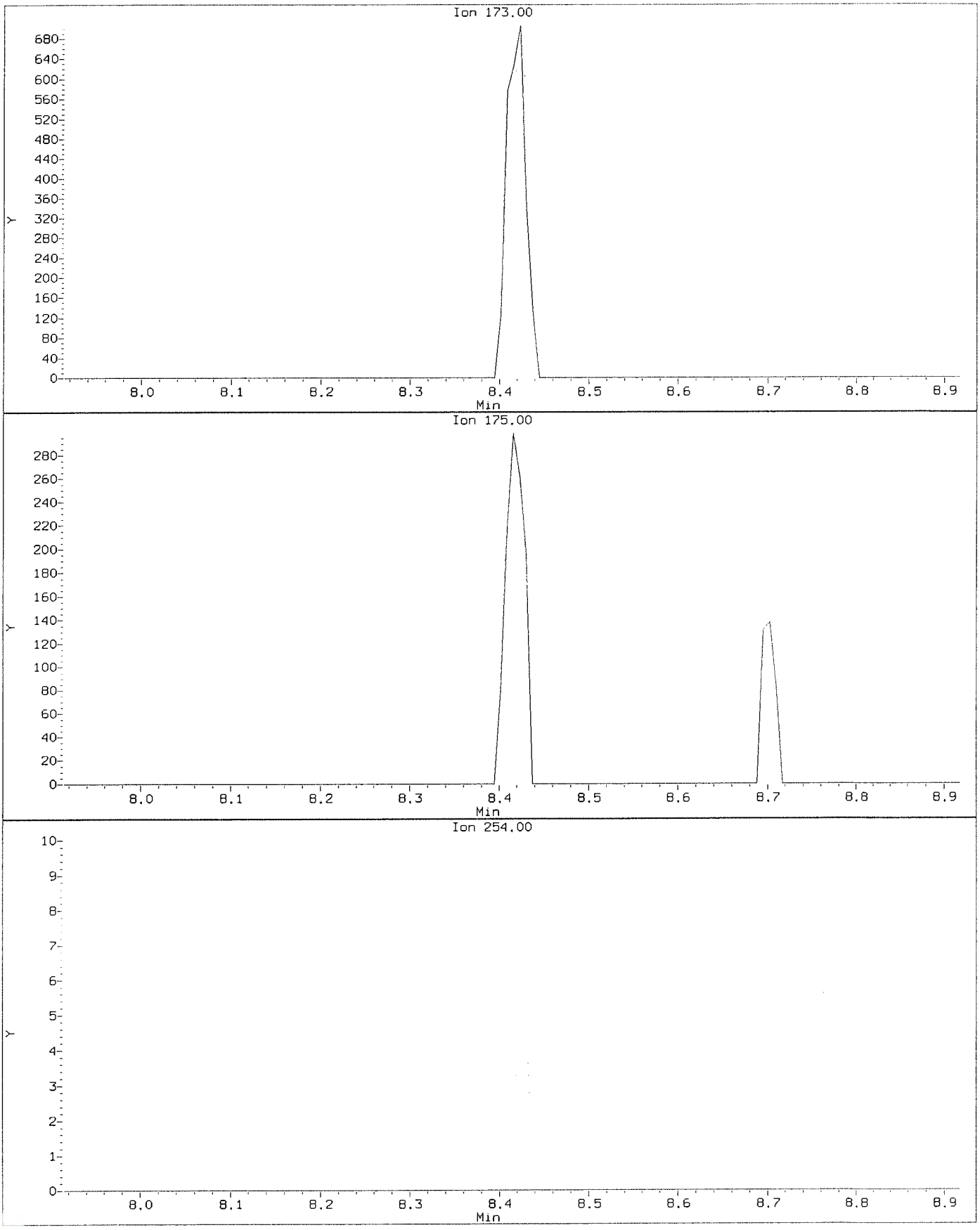
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



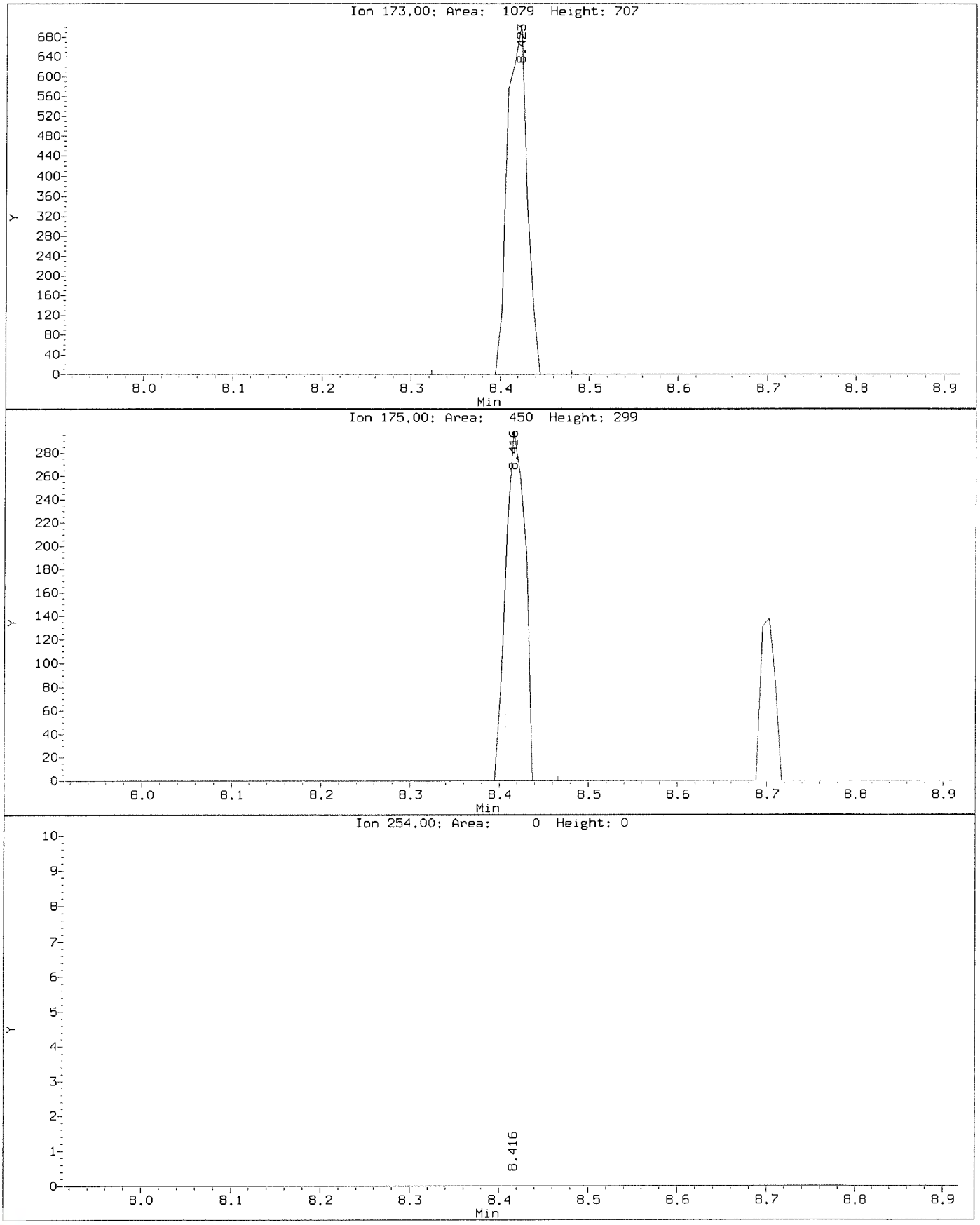
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



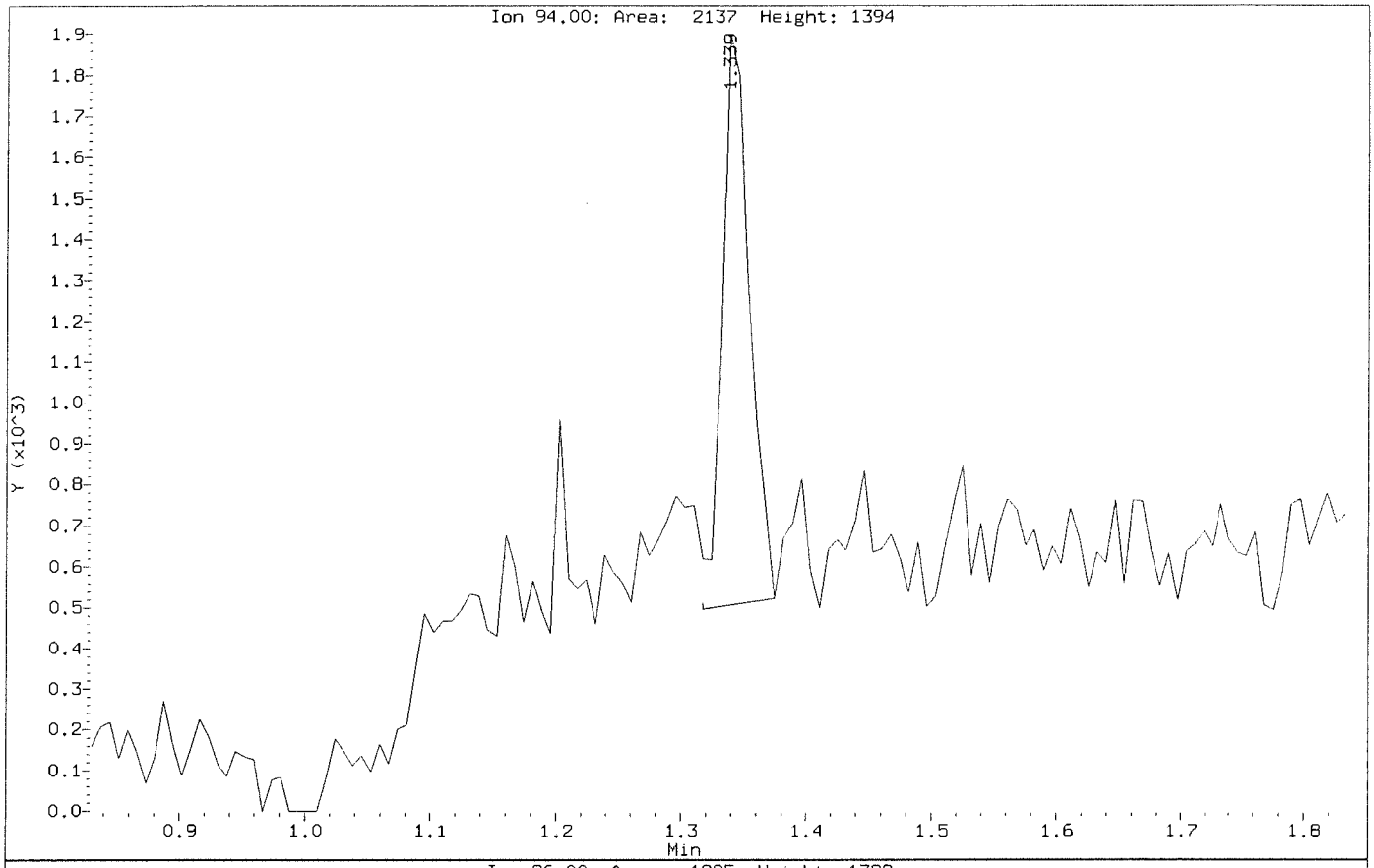
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Instrument: voa6.i
Client Sample ID: VSTD000.5

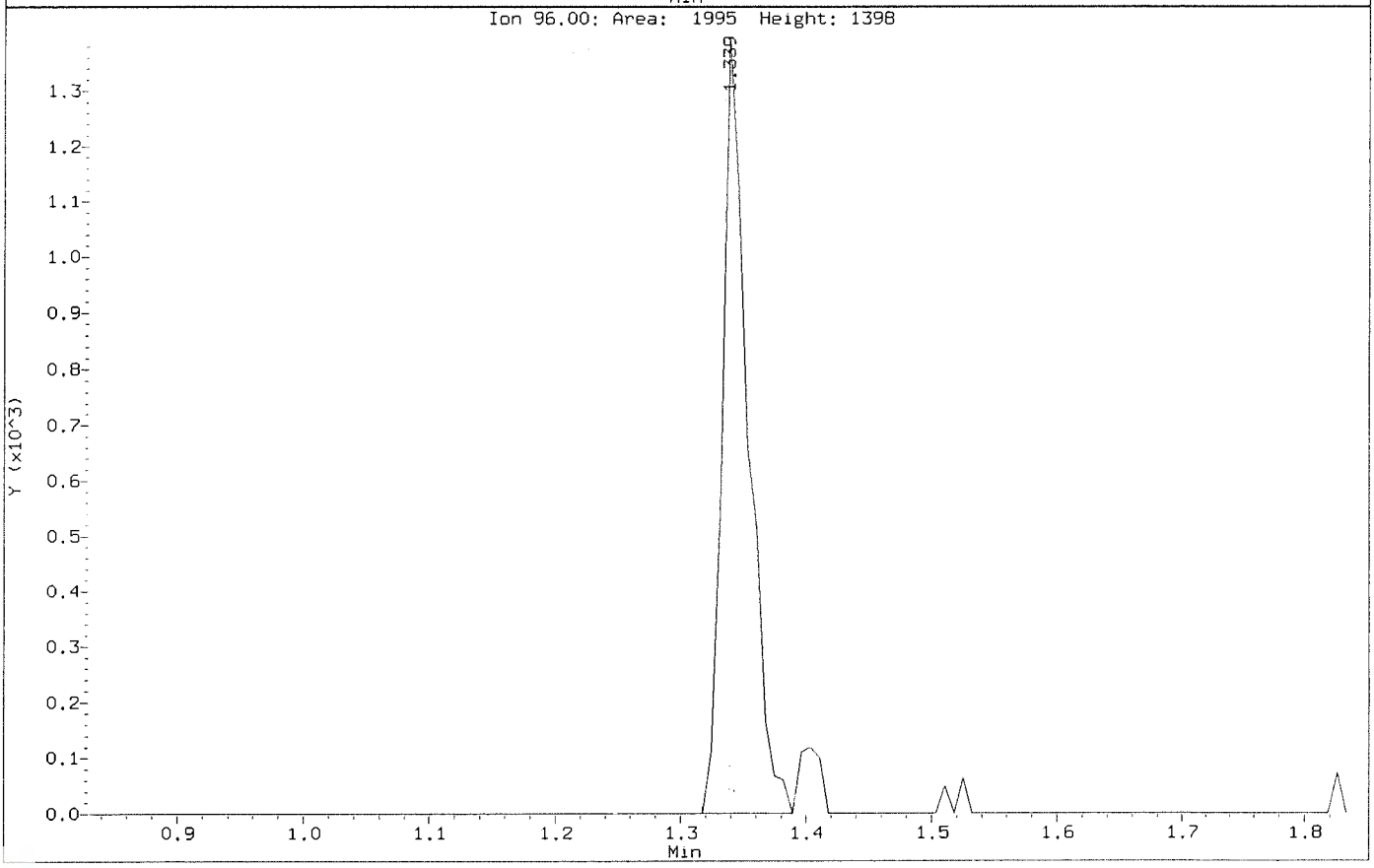
Compound: Bromoform
CAS Number: 75-25-2



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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

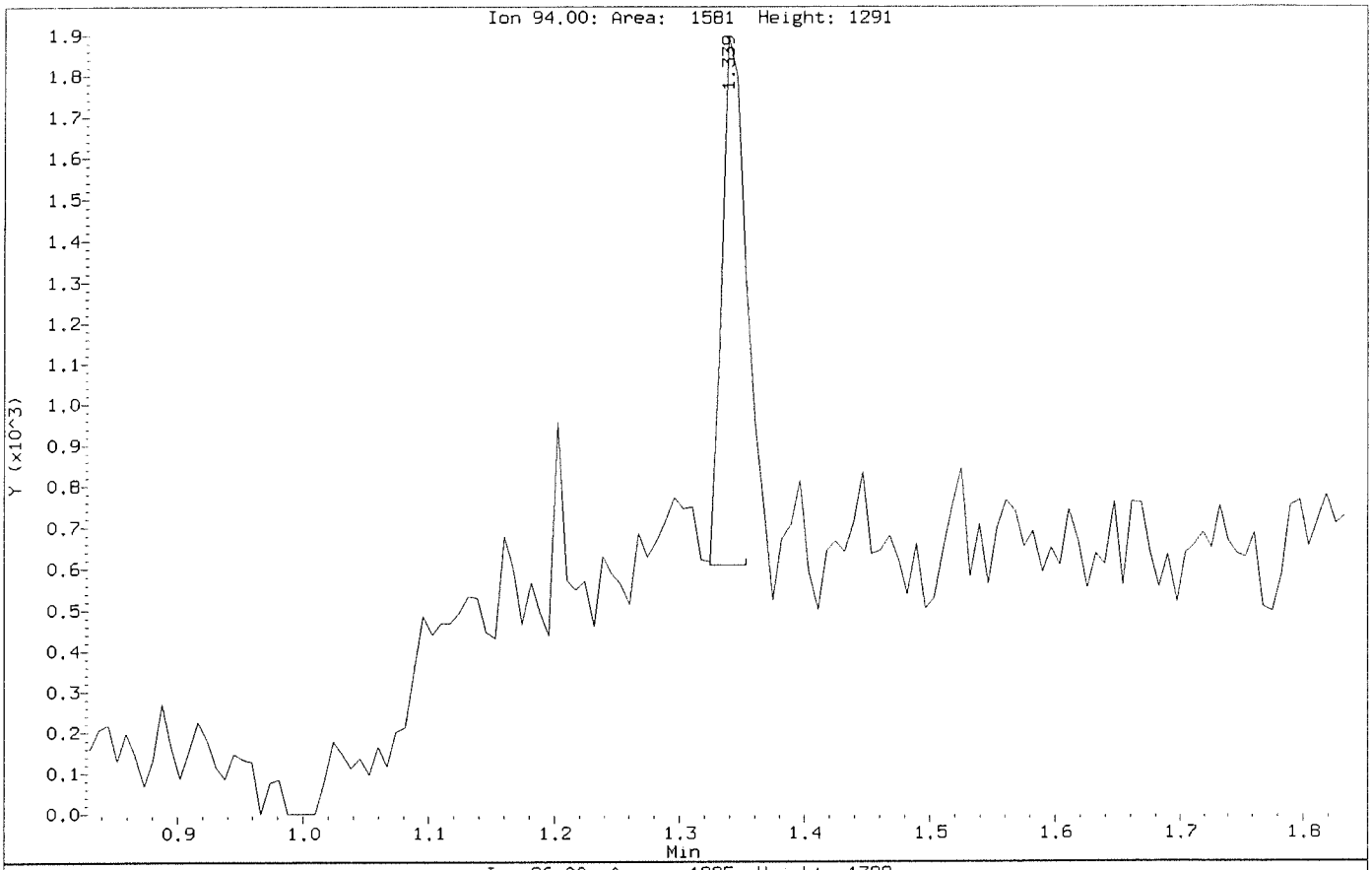
Compound: Bromomethane
CAS Number: 74-83-9

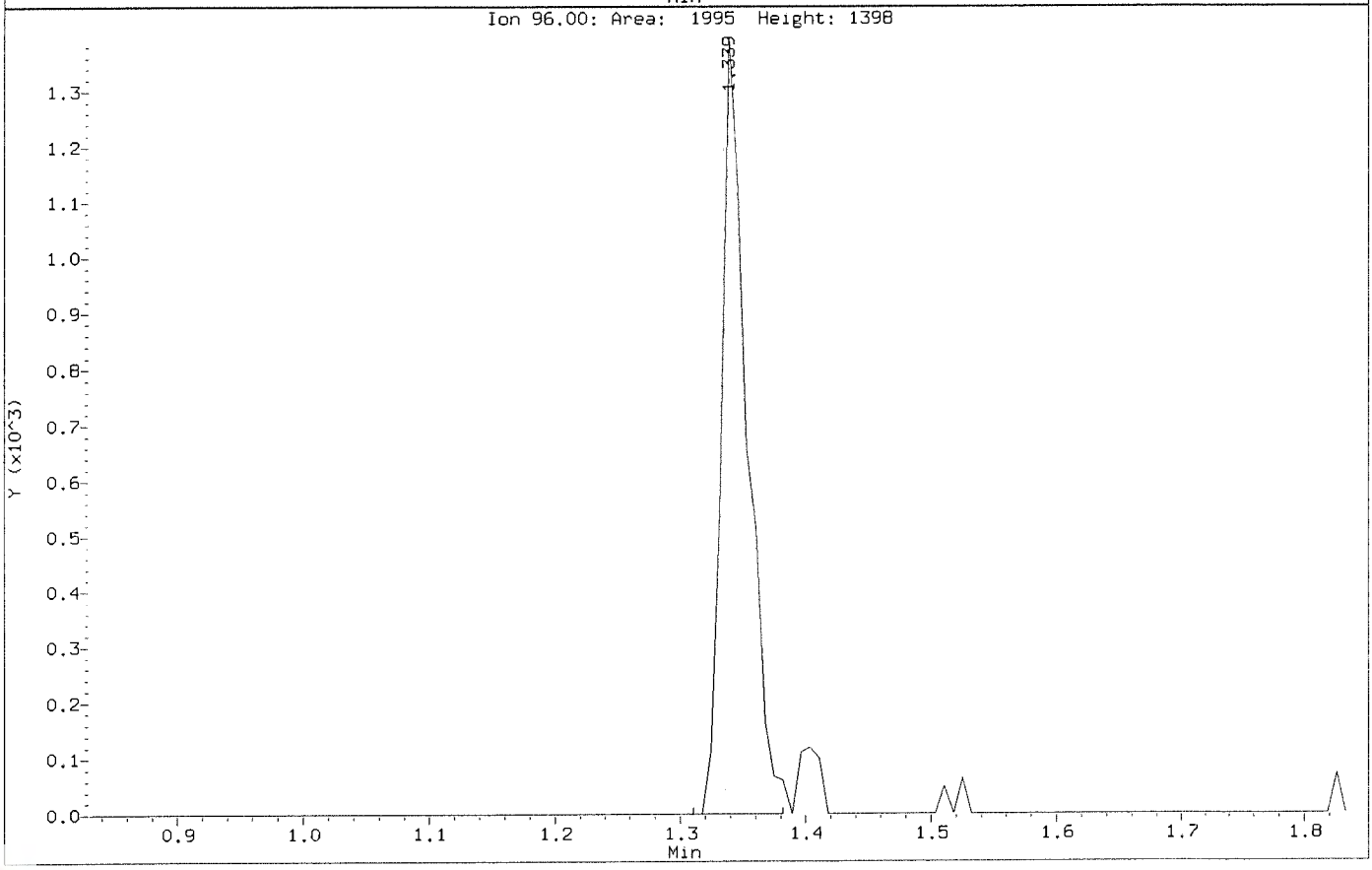


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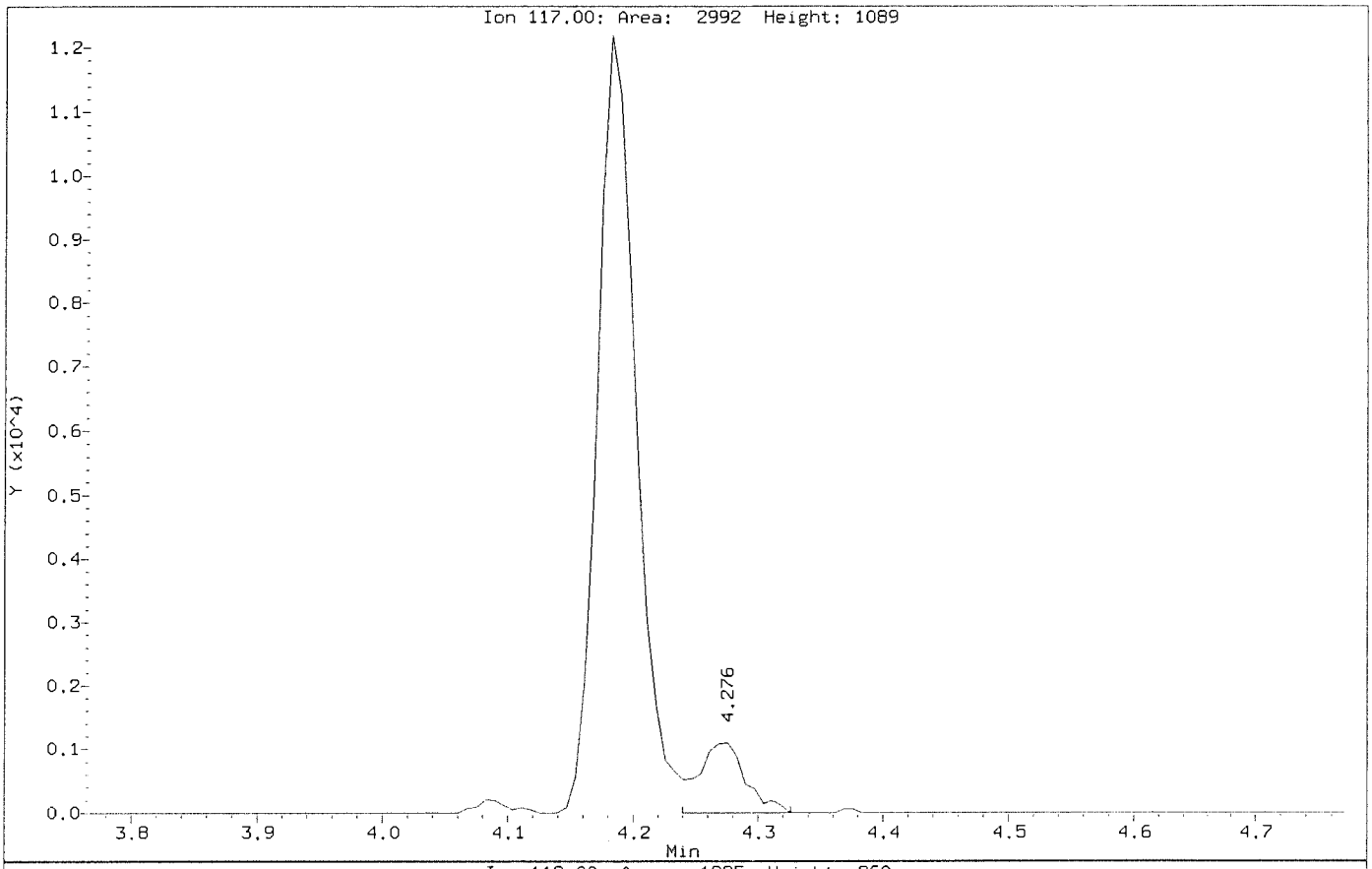
Compound: Bromomethane
CAS Number: 74-83-9

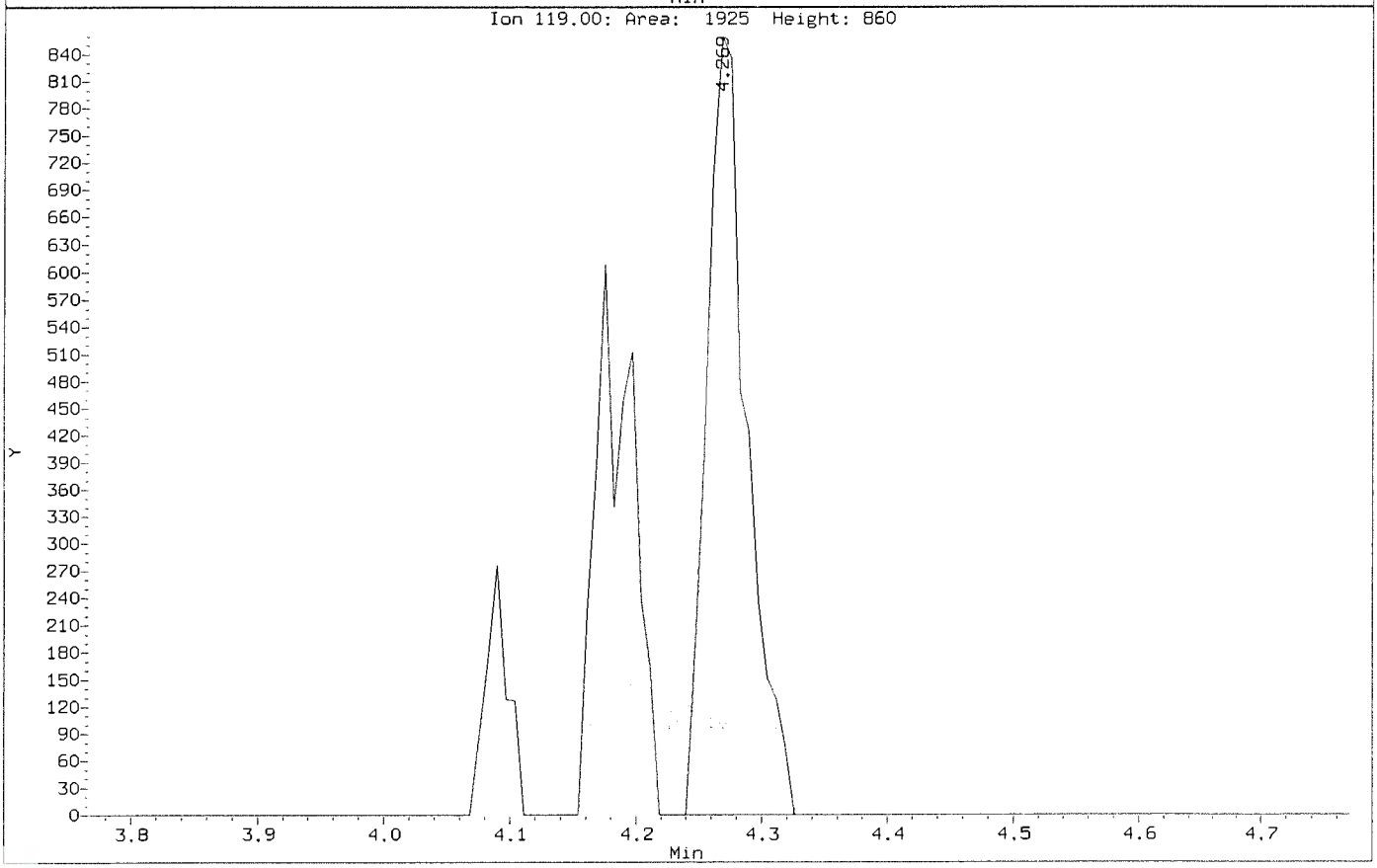


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Instrument: voa6.i
Client Sample ID: VSTD000.5

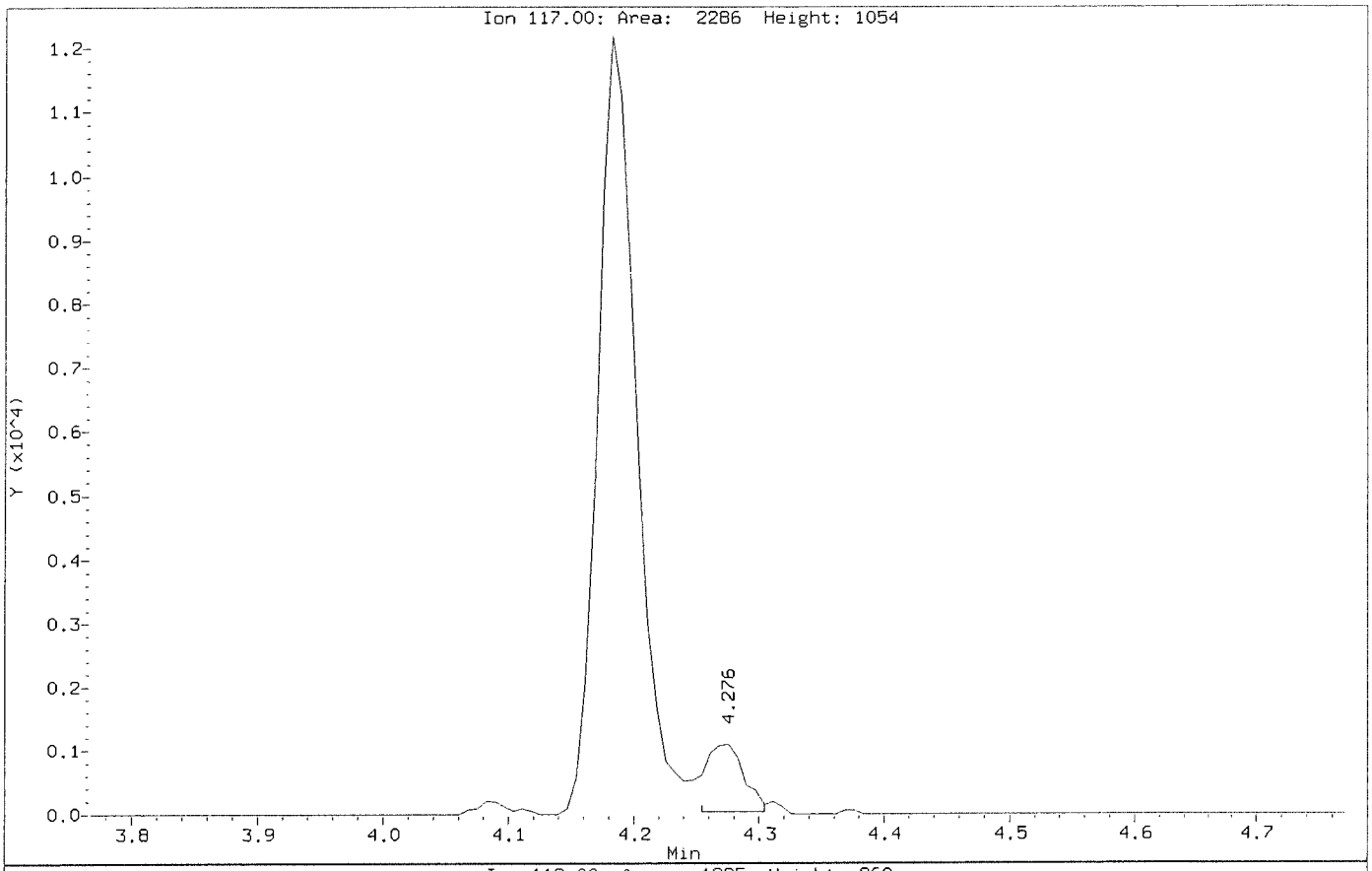
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

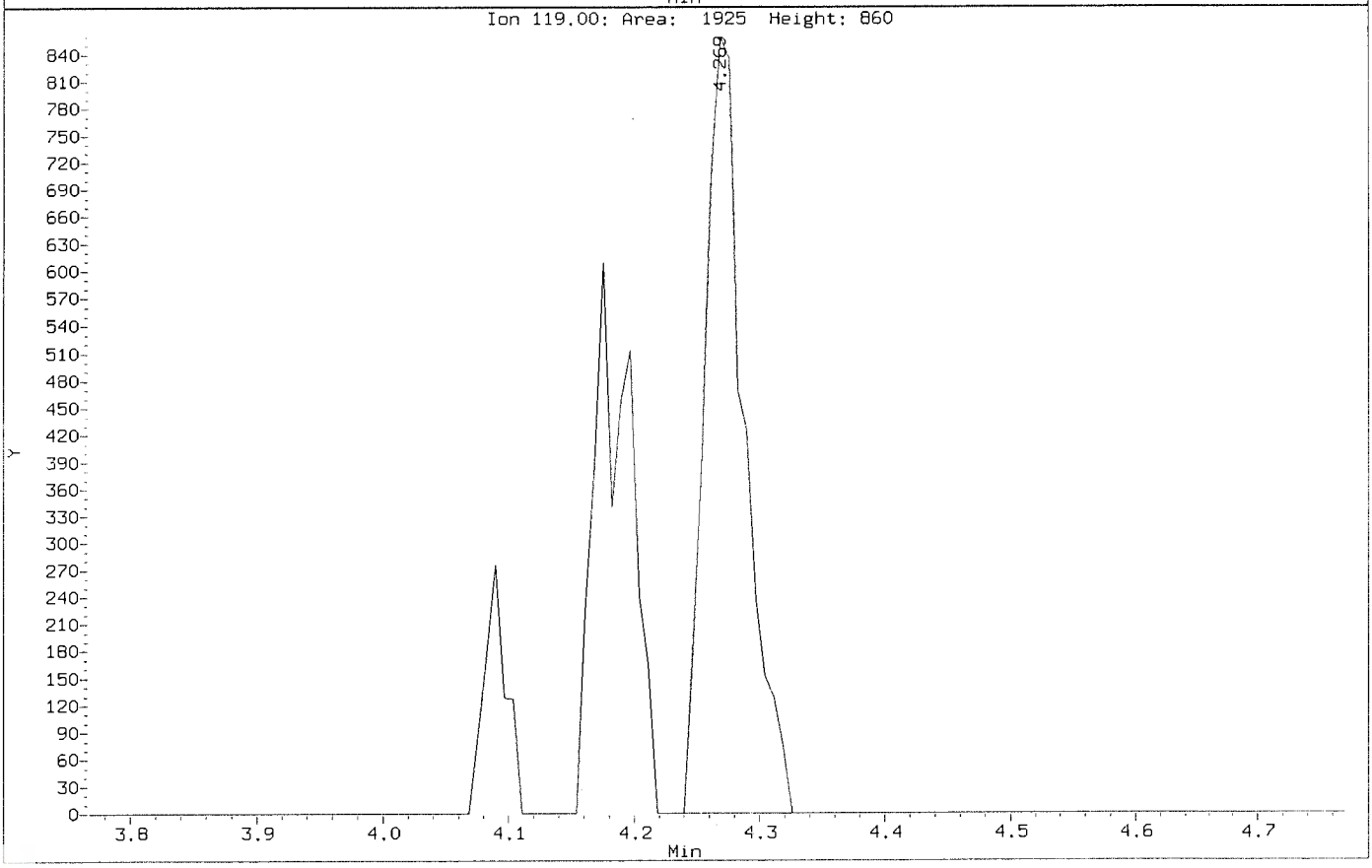


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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

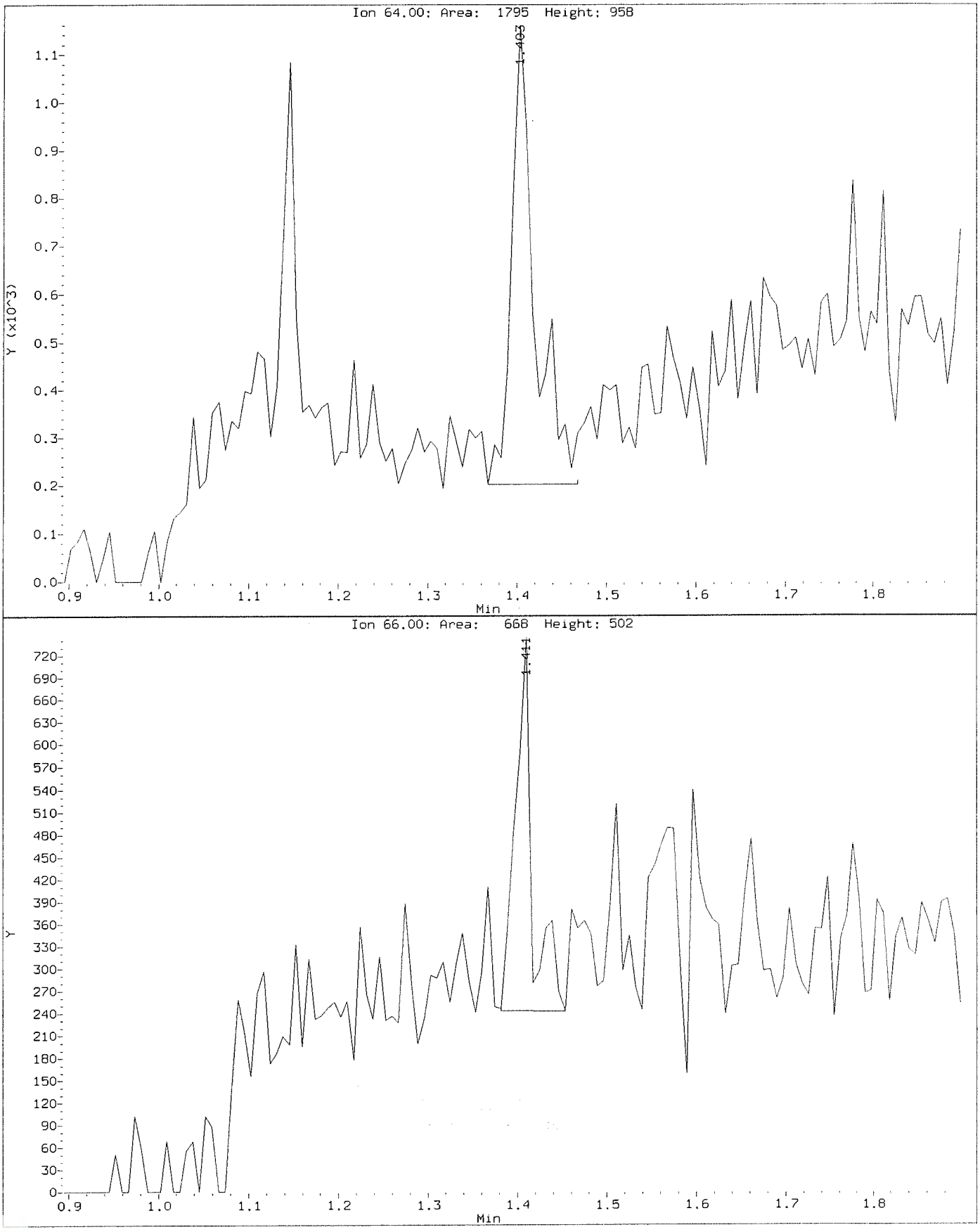
Compound: Carbon Tetrachloride
CAS Number: 56-23-5



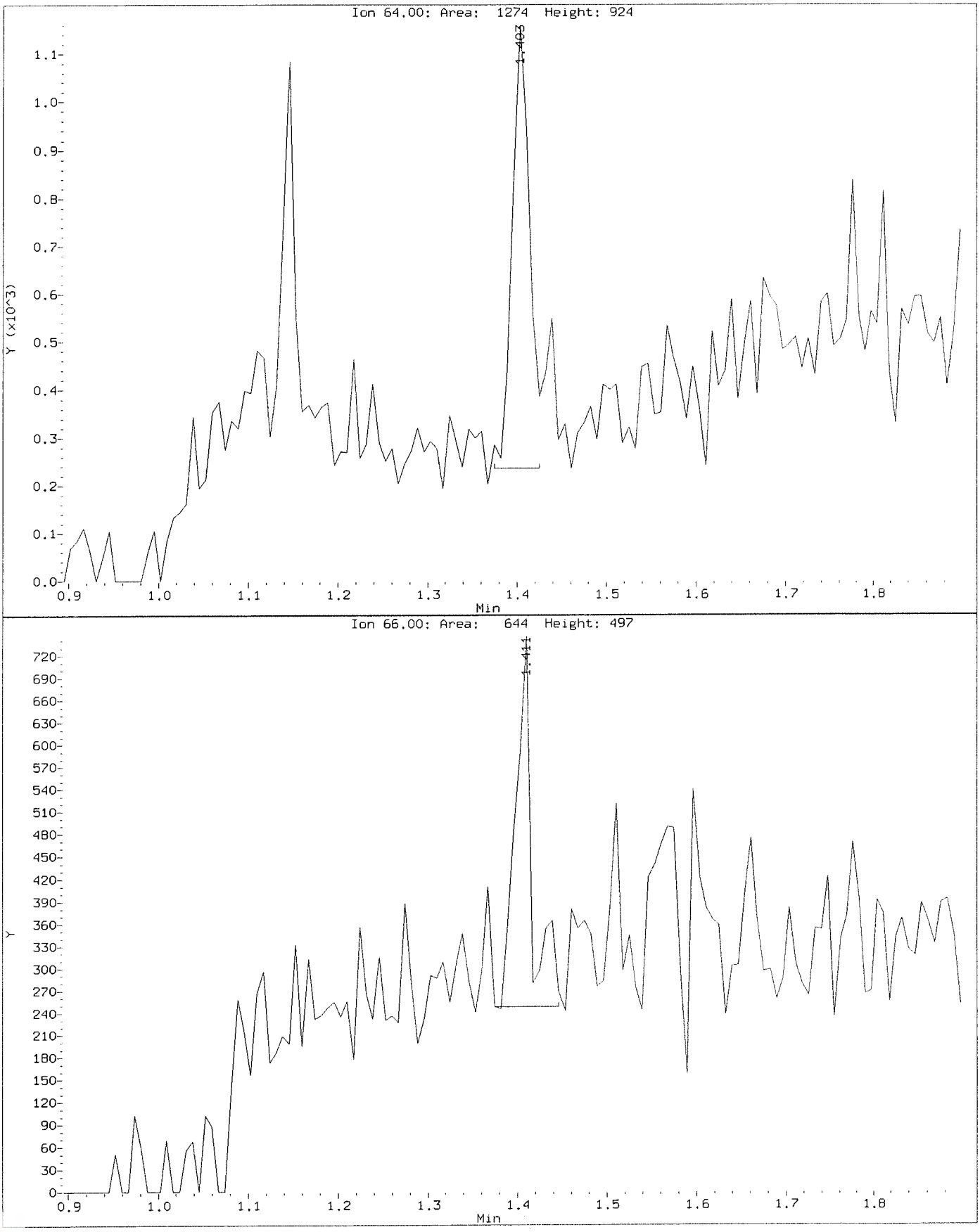
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3



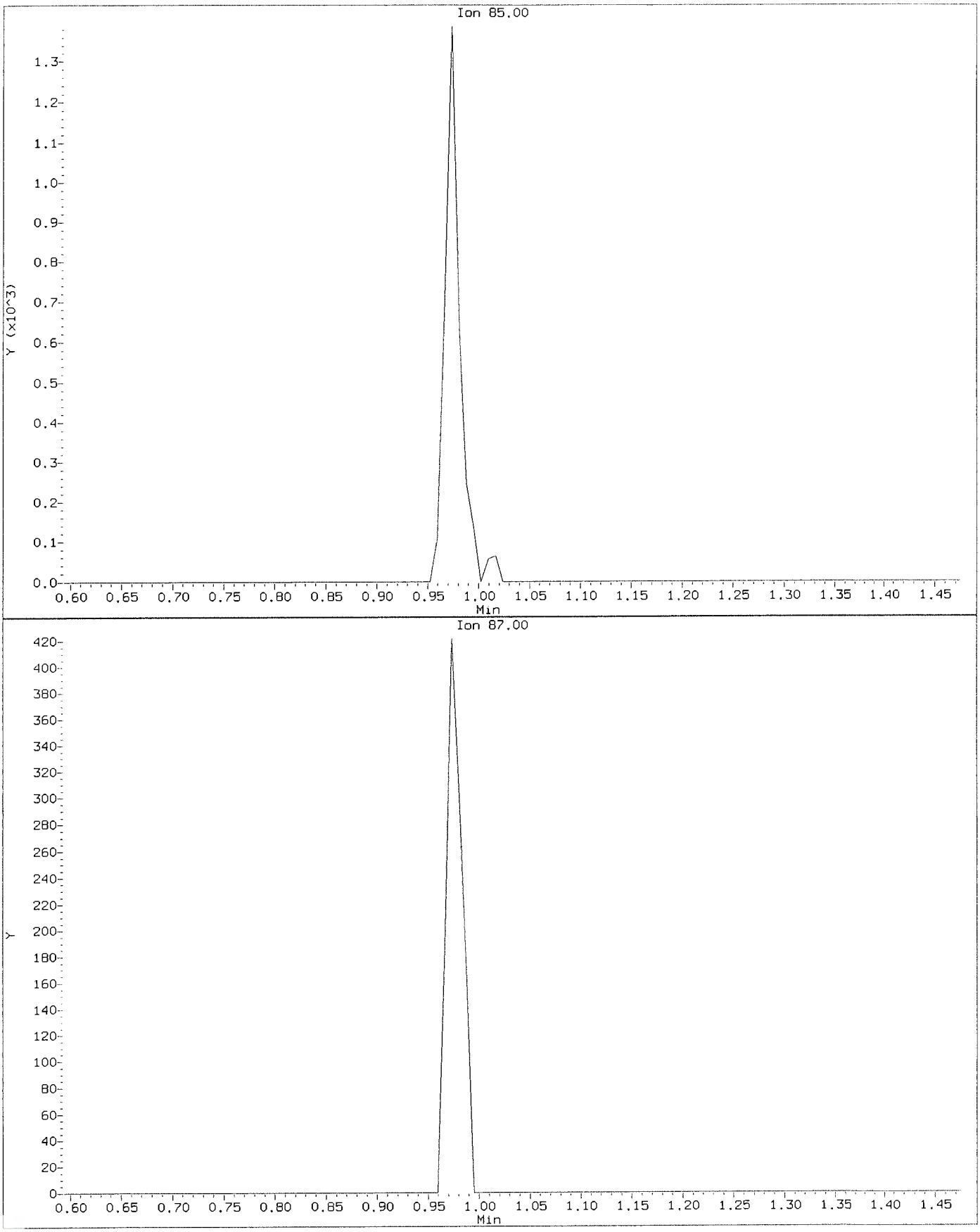
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chloroethane
CAS Number: 75-00-3



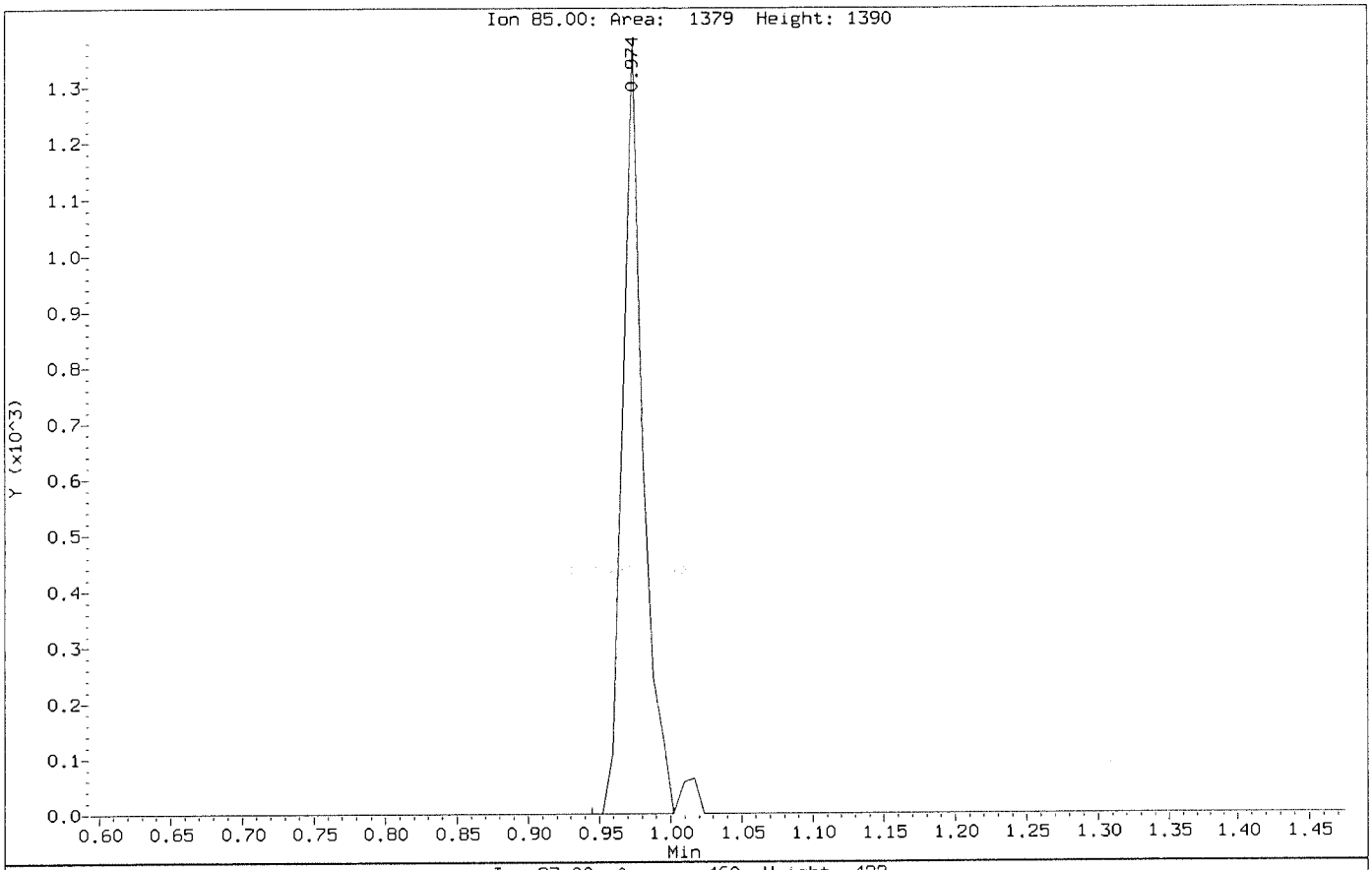
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Client Sample ID: VSTD000.5

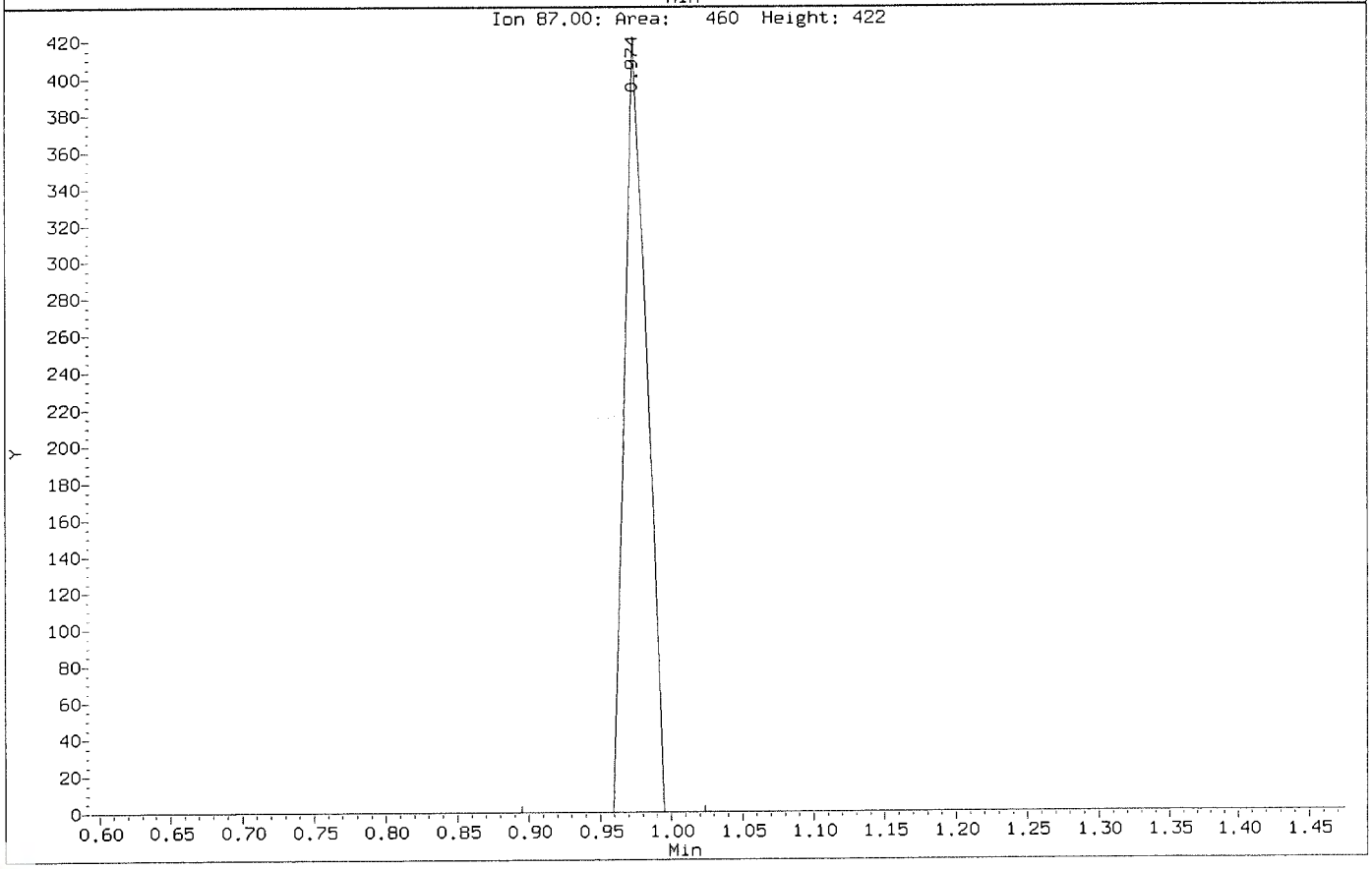
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

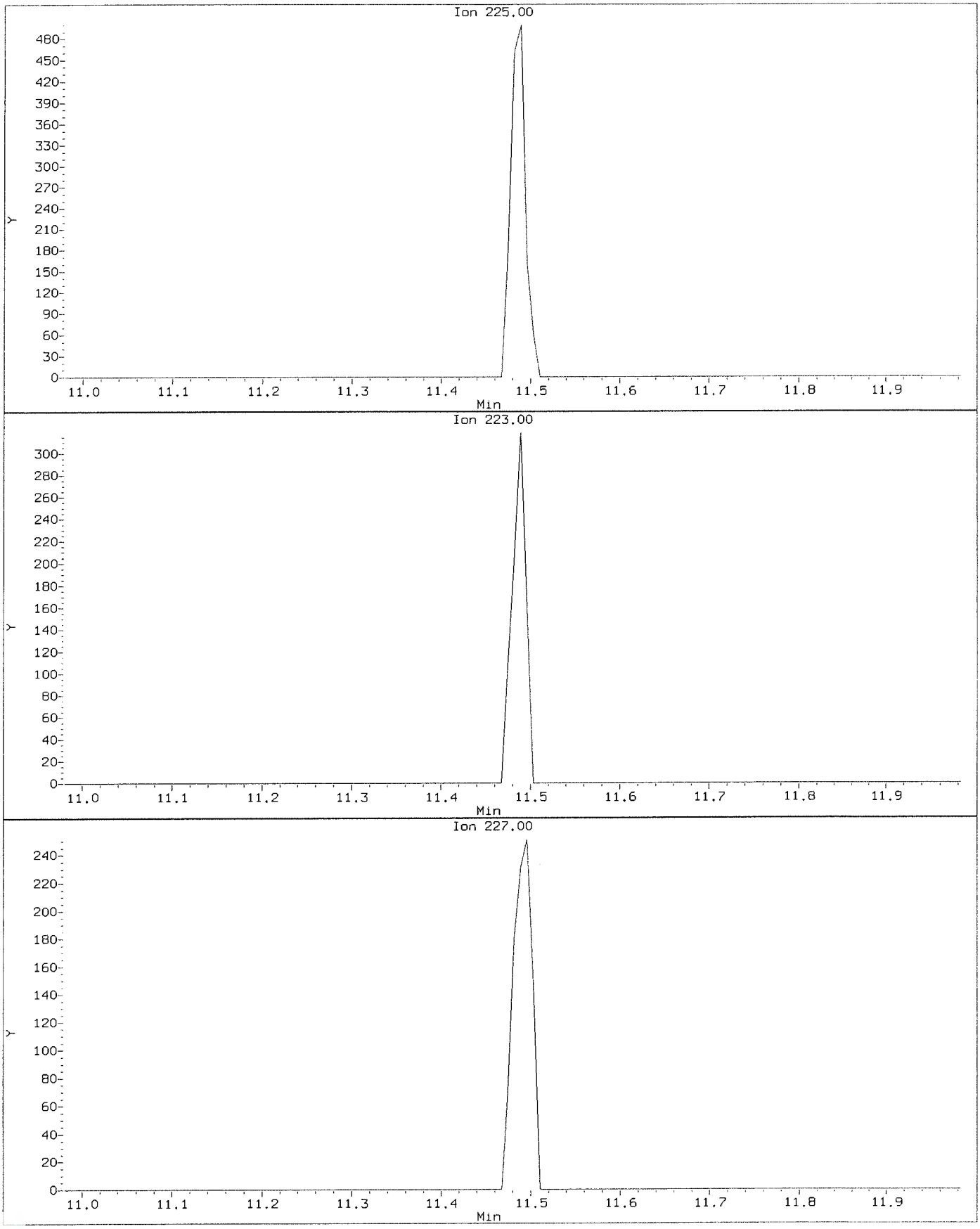
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8



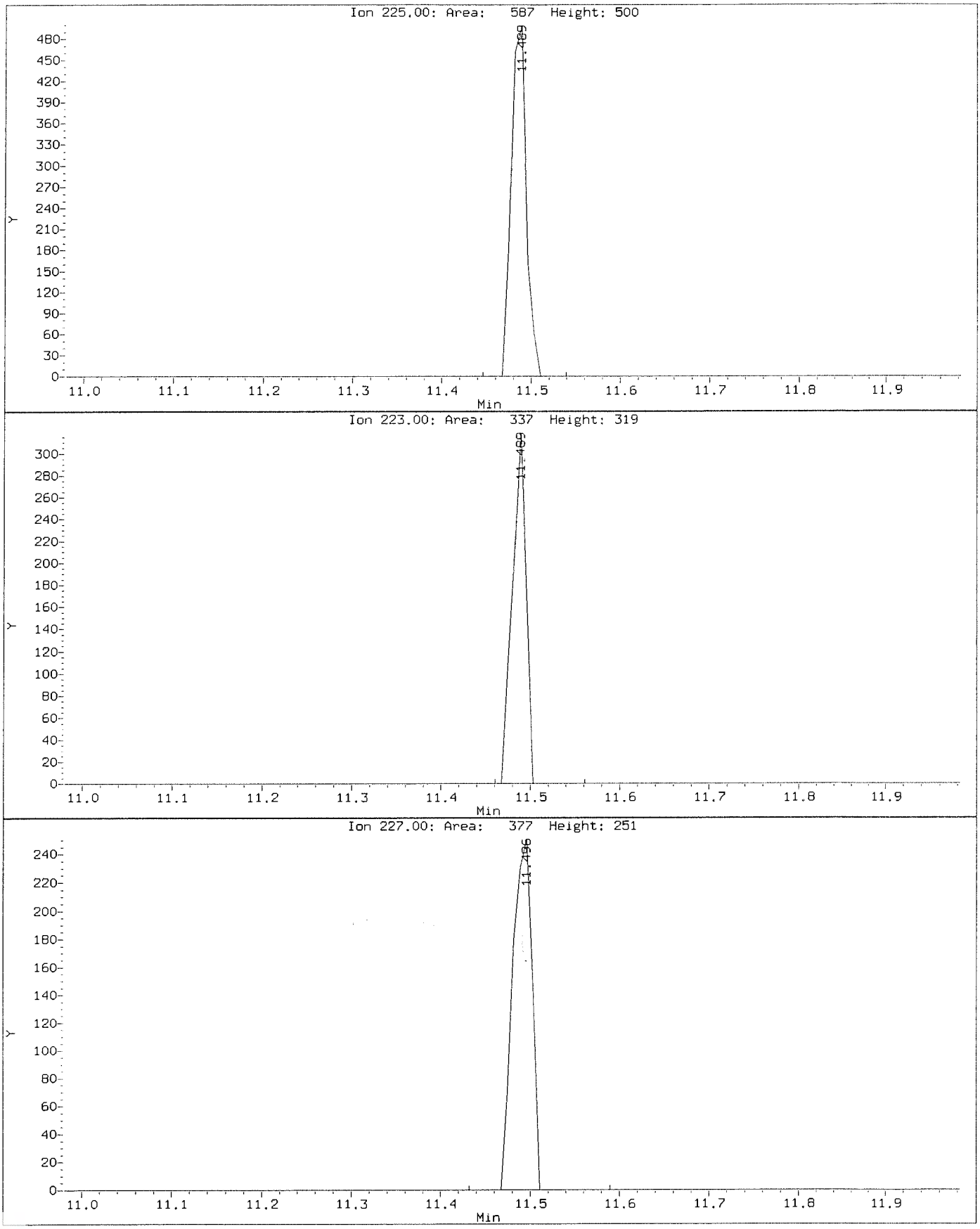
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



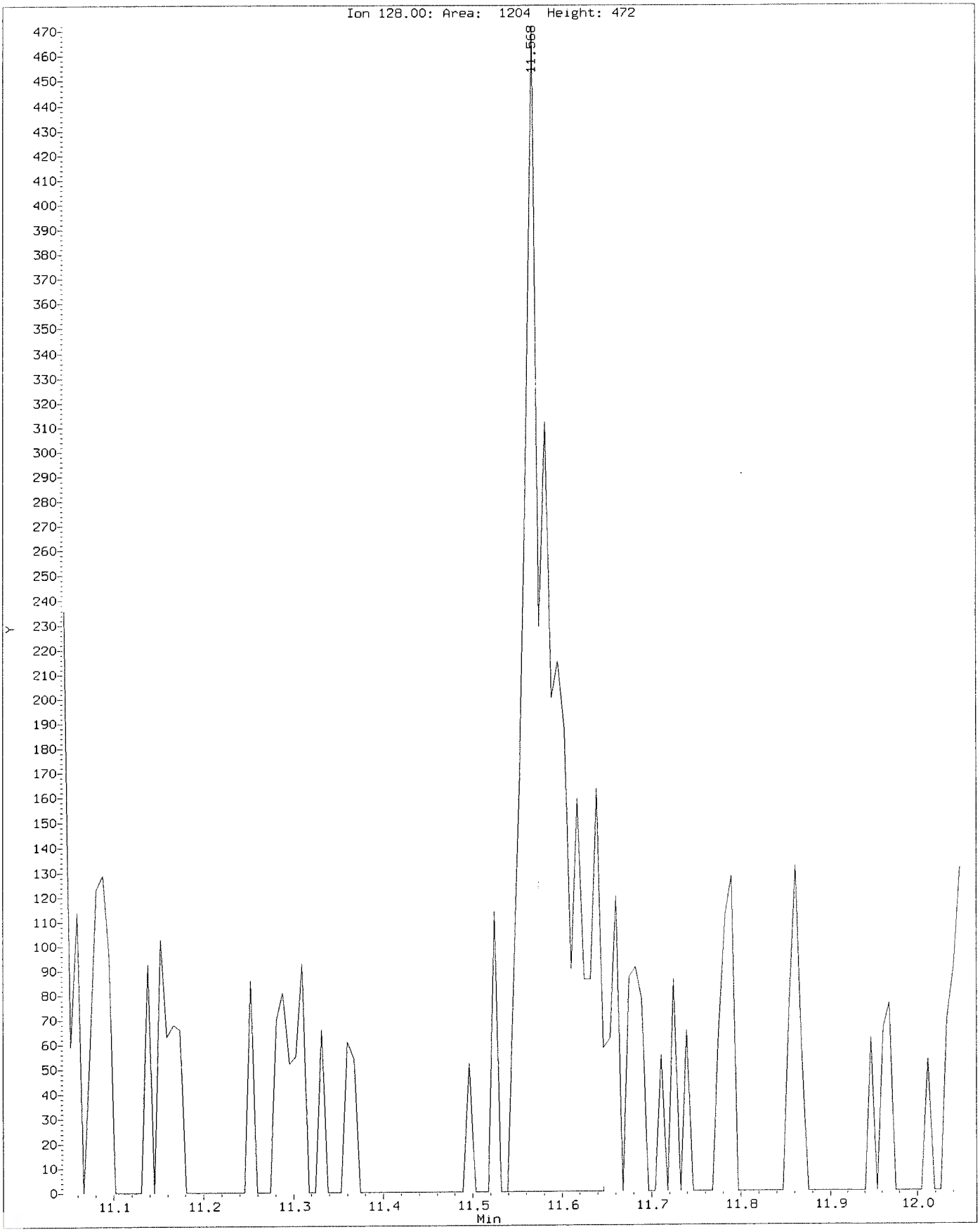
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Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



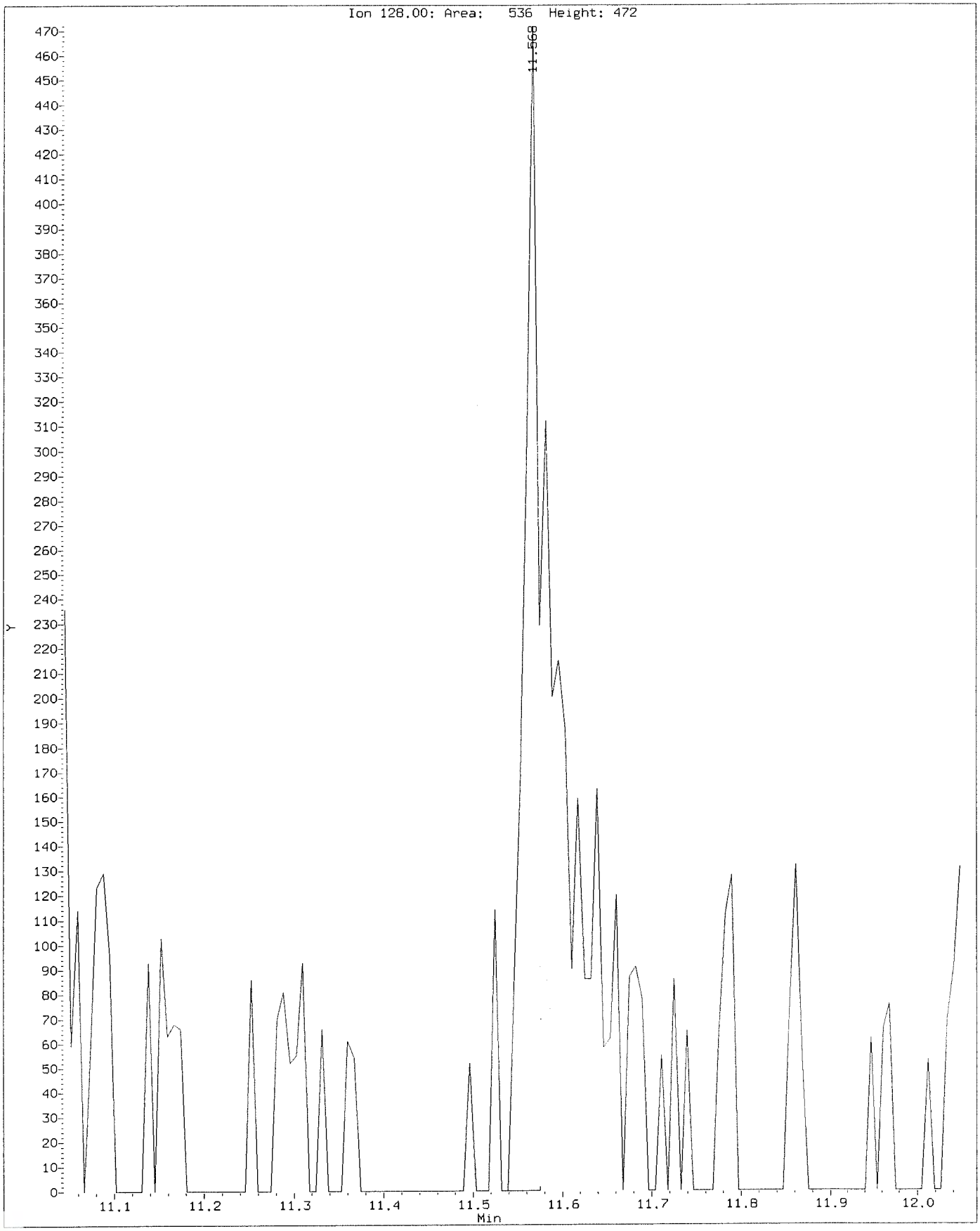
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Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071303.D
Injection Date: 13-JUL-2020 10:55
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 13-JUL-2020 11:42
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:50 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 10:55 Cal File: X071303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

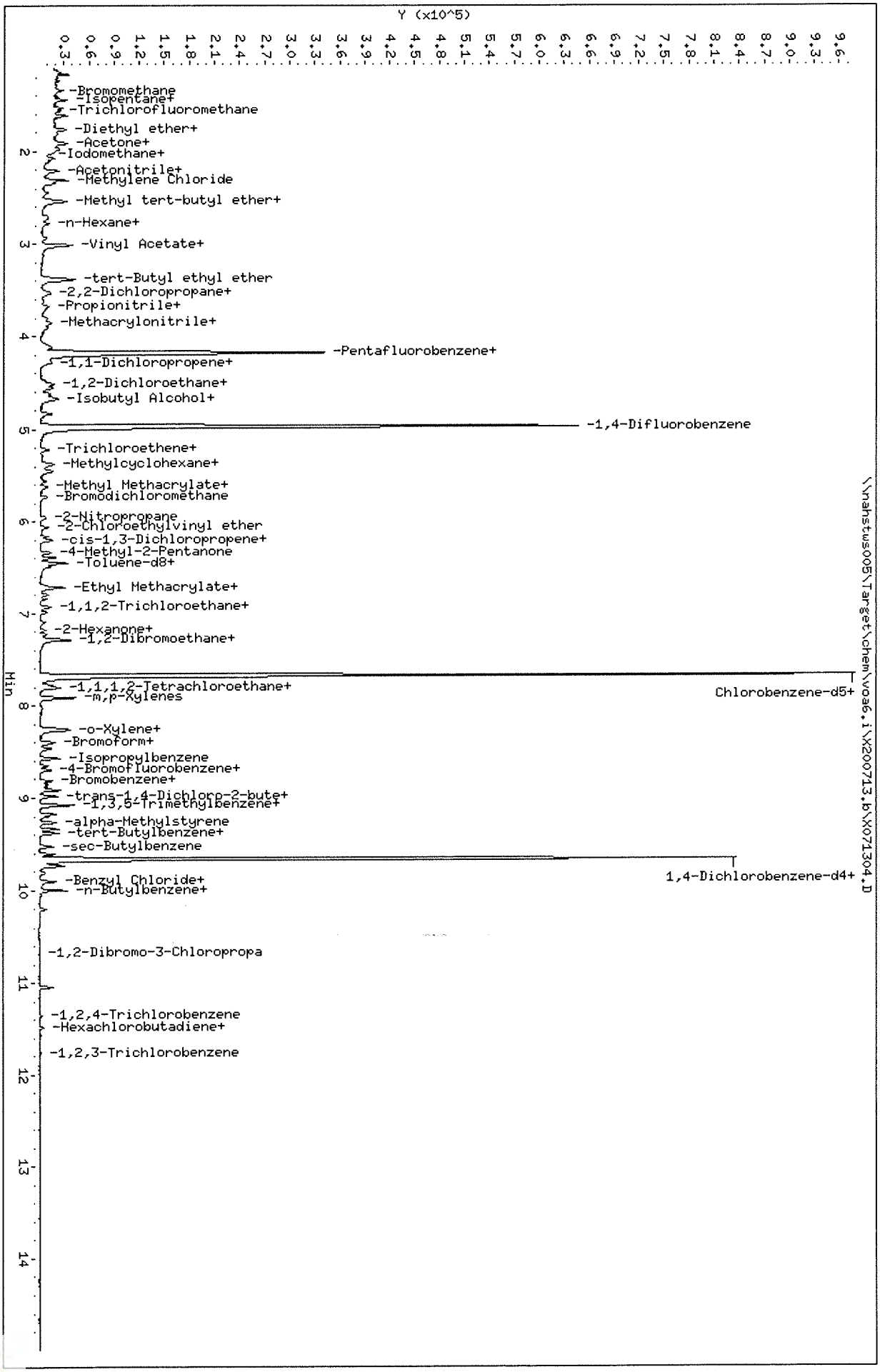
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 272342 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 461217 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 414030 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 193083 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 3129 | 1.00000 | 0.95(a) |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.490 | 4.490 | (1.072) | 4323 | 1.00000 | 1.38(a) |
| $ | 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 10651 | 1.00000 | 0.98(a) |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 4513 | 1.00000 | 0.60(a) |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.785 | 7.785 | (1.015) | 2950 | 1.00000 | 0.92(a) |
| | 31 1,1,1-Trichloroethane | 97 | 4.096 | 4.096 | (0.978) | 4871 | 1.00000 | 0.98(a) |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 3605 | 1.00000 | 1.01(aM) |
| | 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 1966 | 1.00000 | 0.77(a) |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 7972 | 1.00000 | 1.04(a) |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 2381 | 1.00000 | 0.99(a) |
| | 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 4580 | 1.00000 | 1.05(a) |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.761 | 11.761 | (1.216) | 659 | 1.00000 | 1.00(aM) |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 3080 | 1.00000 | 0.98(aM) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.352 | 11.352 | (1.174) | 1289 | 1.00000 | 1.04(aM) |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 10402 | 1.00000 | 0.97(a) |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 276 | 1.00000 | 2.14(aM) |
| | 57 1,2-Dibromoethane | 107 | 7.269 | 7.269 | (0.948) | 3092 | 1.00000 | 1.01(a) |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 5305 | 1.00000 | 0.98(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071304.D Page 2
Report Date: 13-Aug-2020 14:50

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 5434 | 1.00000 | 0.99(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 3968 | 1.00000 | 0.93(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 10886 | 1.00000 | 1.03(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 6135 | 1.00000 | 1.03(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 4626 | 1.00000 | 0.85(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 6203 | 1.00000 | 1.02(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 5385 | 1.00000 | 1.11(a) |
| 24 | 2-Butanone | 43 | 3.609 | 3.609 | (0.862) | 3969 | 2.00000 | 1.67(a) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 10382 | 1.00000 | 1.12(a) |
| 52 | 2-Hexanone | 43 | 7.098 | 7.098 | (0.925) | 6255 | 2.00000 | 1.59(a) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 11485 | 1.00000 | 1.06(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 9989 | 1.00000 | 0.97(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 10373 | 2.00000 | 1.83(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 7883 | 2.00000 | 0.66(a) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 12999 | 1.00000 | 1.03(a) |
| 74 | Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 3540 | 1.00000 | 1.00(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 2212 | 1.00000 | 1.14(a) |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 4925 | 1.00000 | 1.06(aM) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 2238 | 1.00000 | 0.97(Ta) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 2906 | 1.00000 | 0.51(aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 14675 | 2.00000 | 1.95(a) |
| 34 | Carbon Tetrachloride | 117 | 4.261 | 4.261 | (0.857) | 4883 | 1.00000 | 1.12(aH) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 8617 | 1.00000 | 1.04(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 2838 | 1.00000 | 1.18(aM) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 6234 | 1.00000 | 1.04(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 6654 | 1.00000 | 2.84(aM) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.537 | 3.537 | (0.844) | 3447 | 1.00000 | 0.98(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 5228 | 1.00000 | 0.97(a) |
| 55 | Dibromochloromethane | 129 | 7.183 | 7.183 | (0.937) | 3068 | 1.00000 | 0.91(a) |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 2406 | 1.00000 | 1.05(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 2630 | 1.00000 | 0.91(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 4211 | 1.00000 | 0.97(a) |
| 91 | Hexachlorobutadiene | 225 | 11.488 | 11.488 | (1.188) | 975 | 1.00000 | 1.01(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 13018 | 1.00000 | 1.01(a) |
| 62 | m,p-Xylenes | 106 | 7.914 | 7.914 | (1.032) | 10367 | 2.00000 | 2.01(a) |
| 17 | Methylene Chloride | 84 | 2.313 | 2.313 | (0.552) | 5799 | 1.00000 | 0.47(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 8716 | 1.00000 | 0.96(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 15225 | 1.00000 | 1.03(a) |
| 92 | Naphthalene | 128 | 11.560 | 11.560 | (1.196) | 1603 | 1.00000 | 2.03(aM) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 5298 | 1.00000 | 1.01(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 10394 | 1.00000 | 0.86(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 8953 | 1.00000 | 0.99(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 8260 | 1.00000 | 0.98(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 2432 | 1.00000 | 0.95(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 12551 | 1.00000 | 0.96(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.542 | 2.542 | (0.607) | 3055 | 1.00000 | 1.04(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 3805 | 1.00000 | 0.76(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 3283 | 1.00000 | 0.98(a) |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 4203 | 1.00000 | 0.93(a) |
| 5 | Vinyl Chloride | 62 | 1.138 | 1.138 | (0.272) | 4654 | 1.00000 | 1.03(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

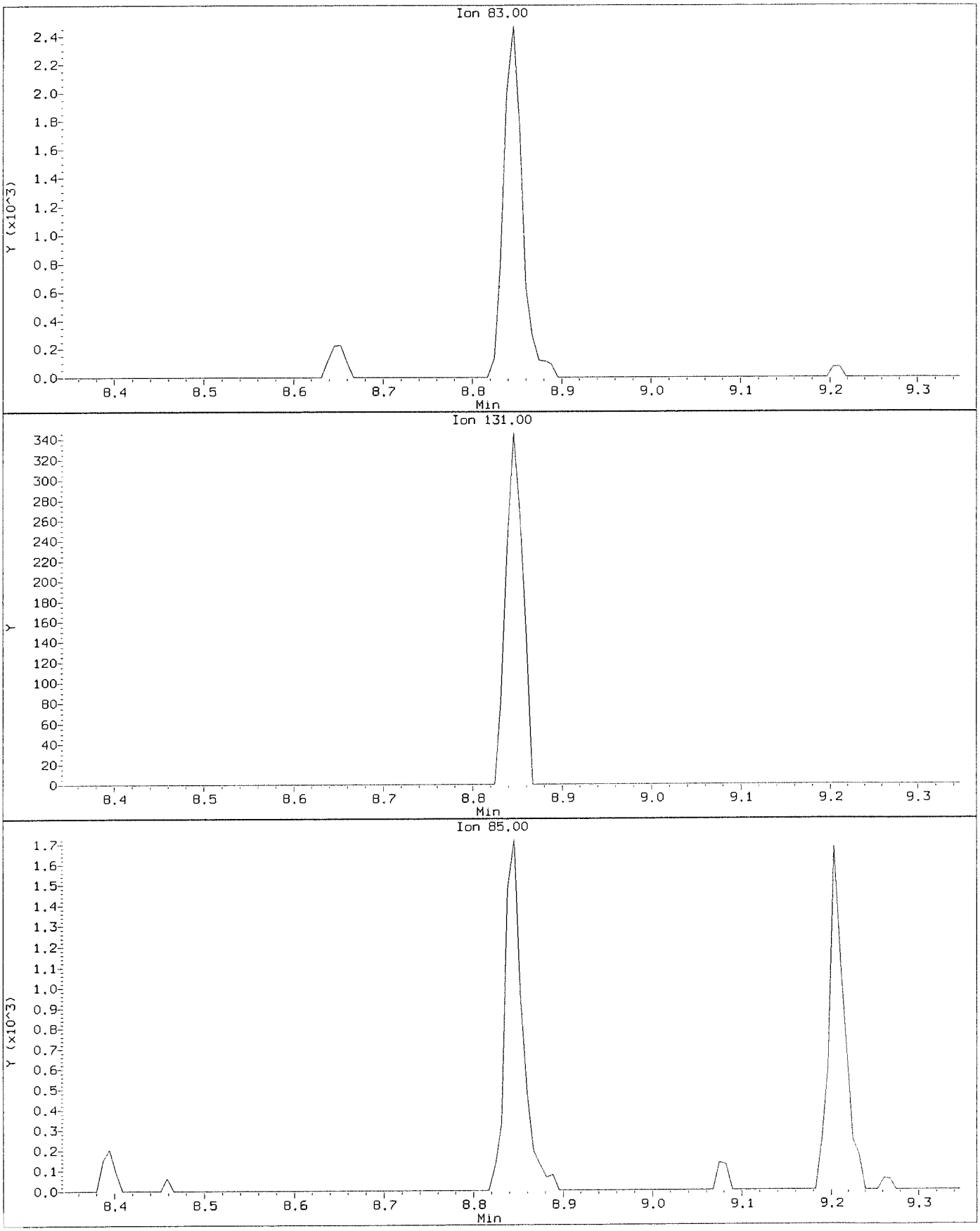



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071304.D
Date : 13-JUL-2020 11:42
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

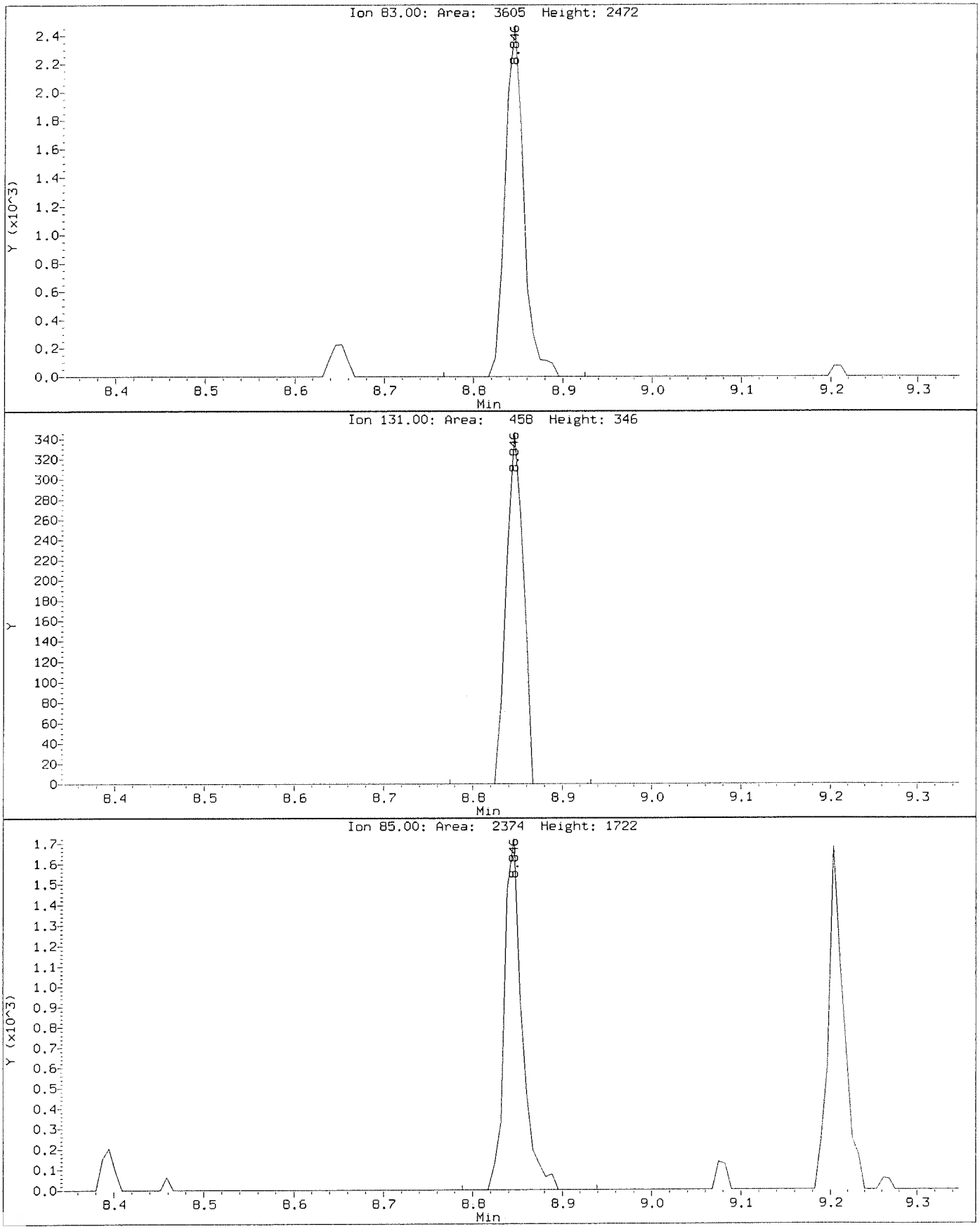
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Injection Date: 13-JUL-2020 11:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



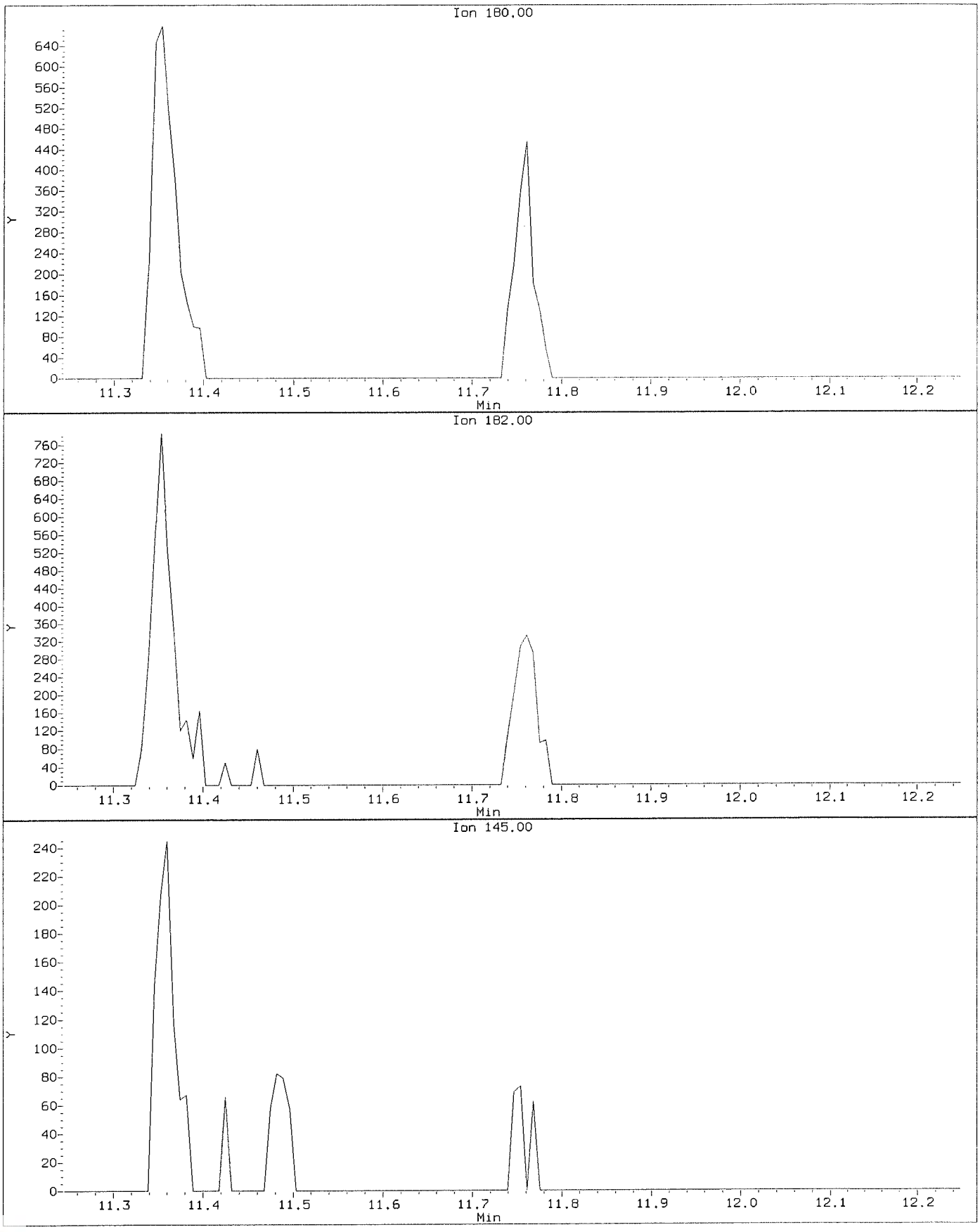
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



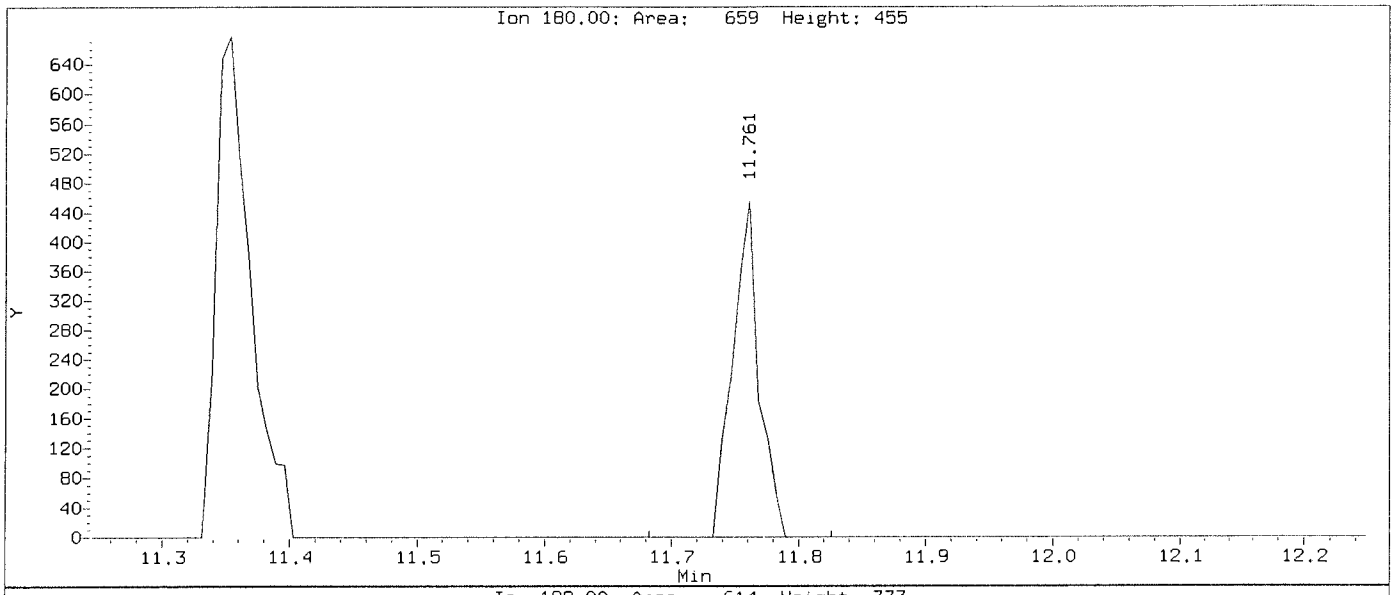
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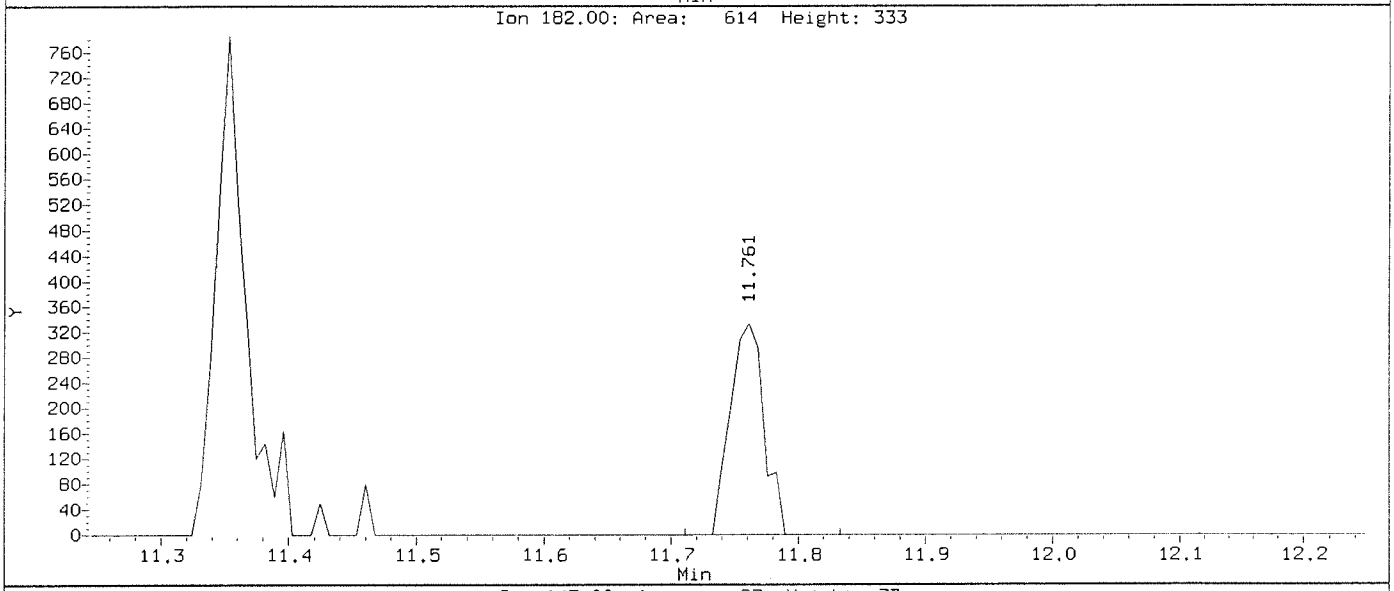
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

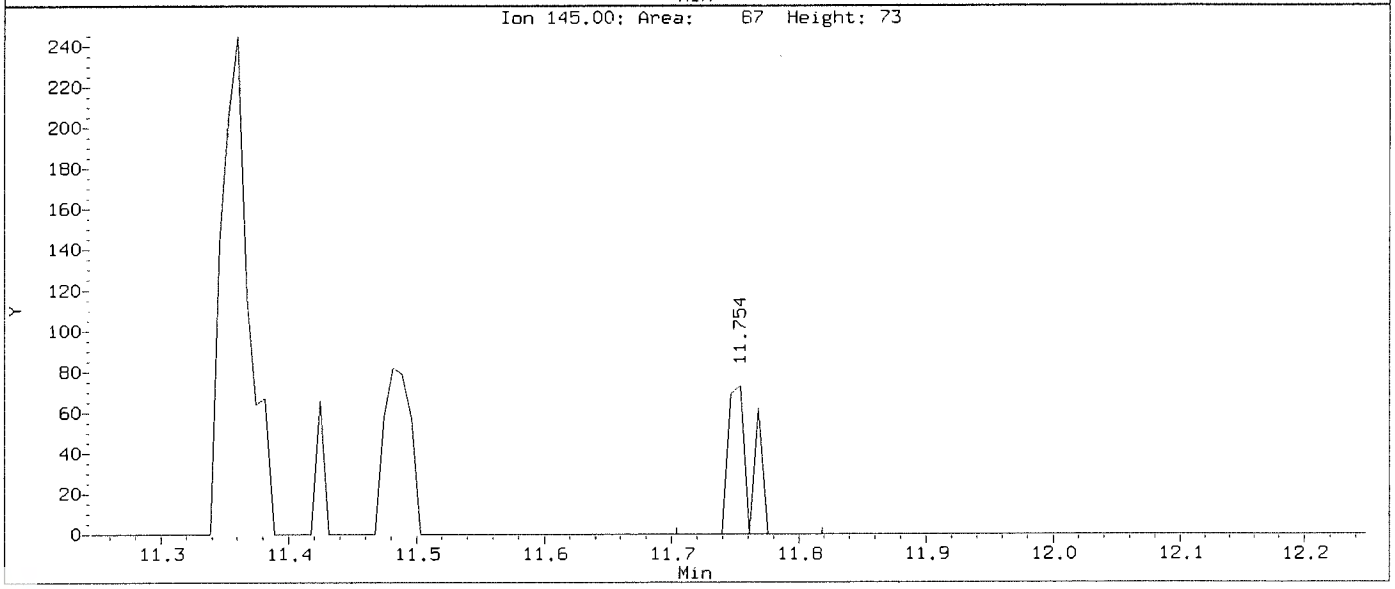


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

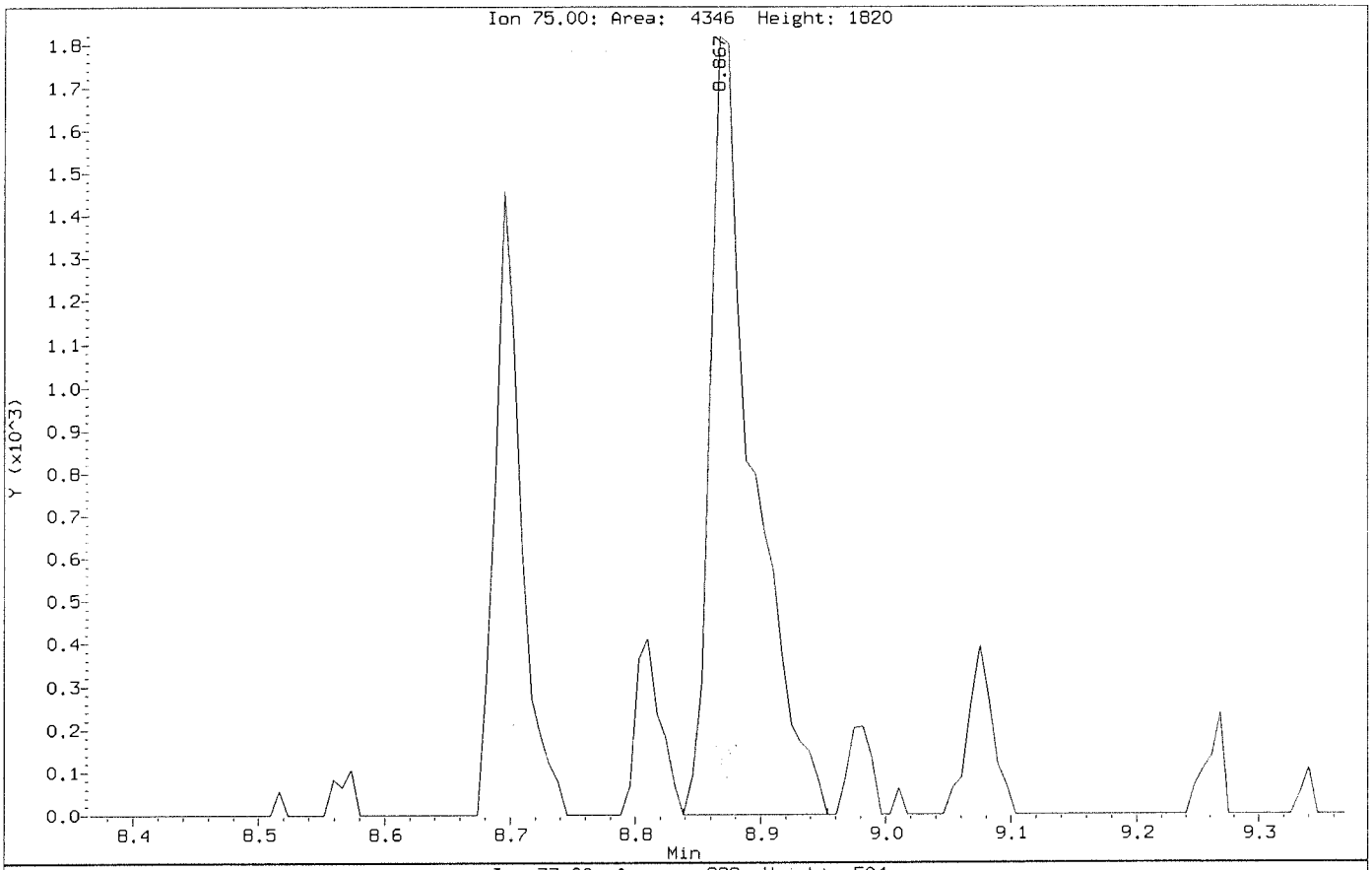


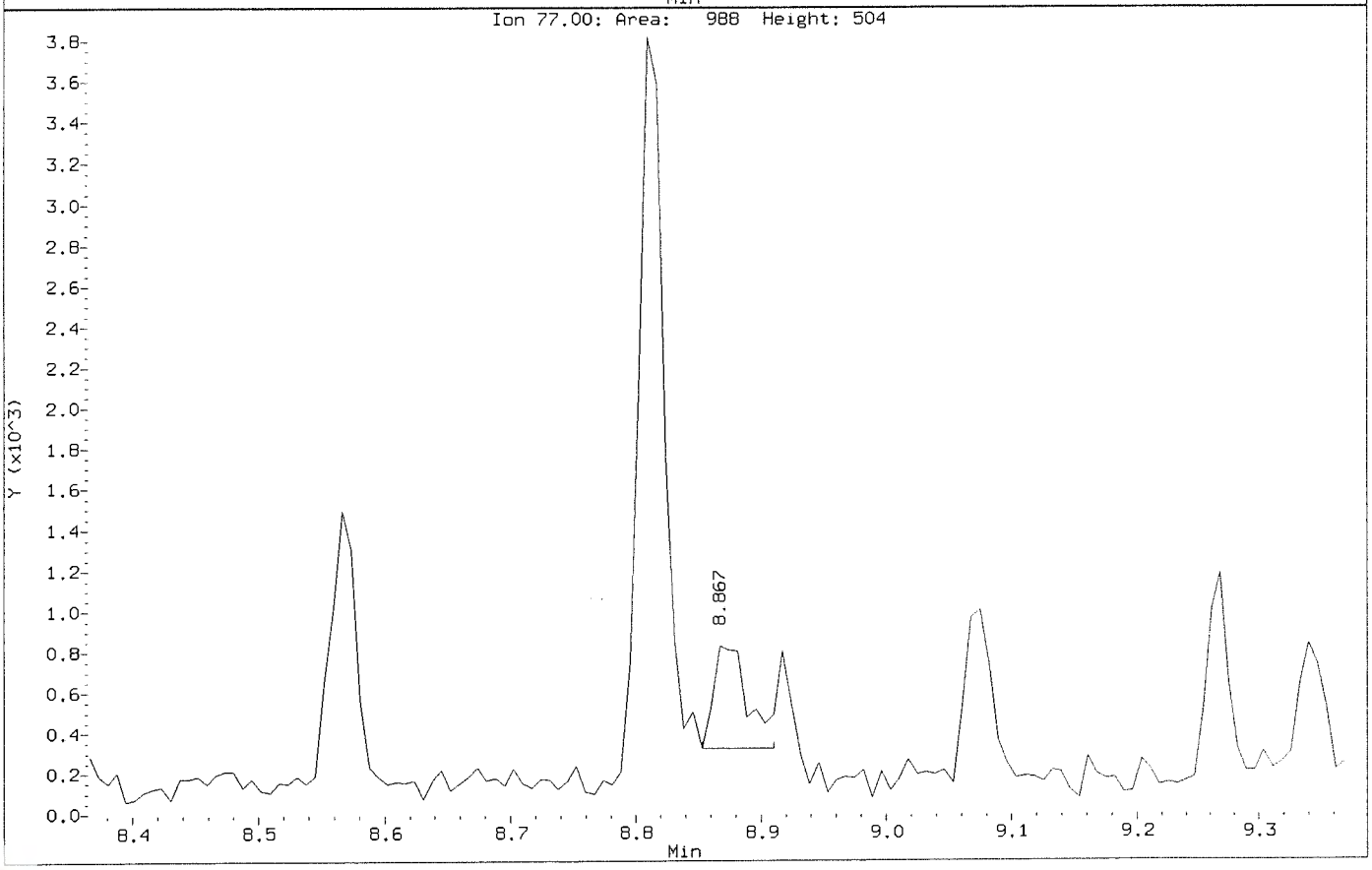



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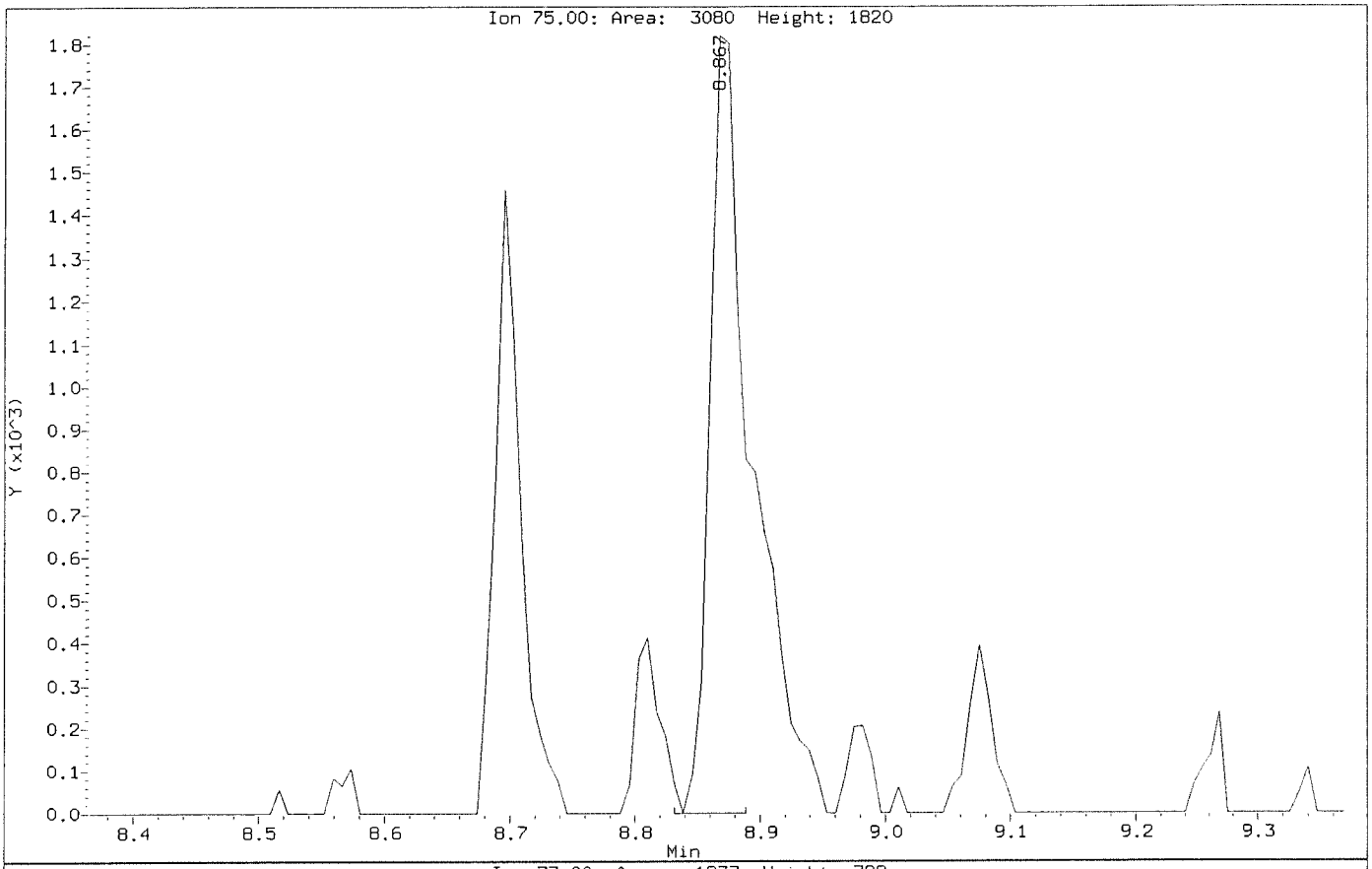
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CAS Number: 96-18-4

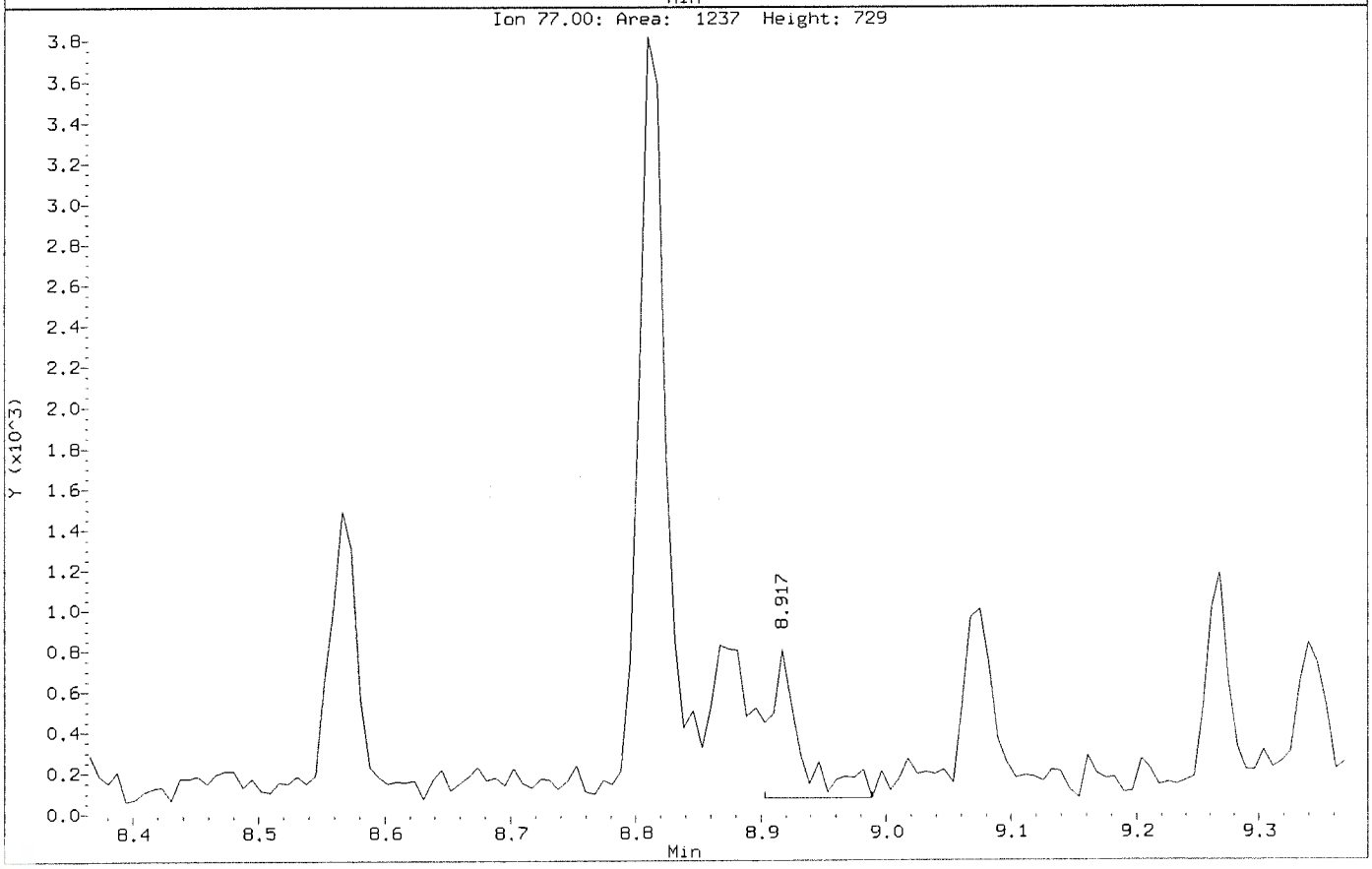


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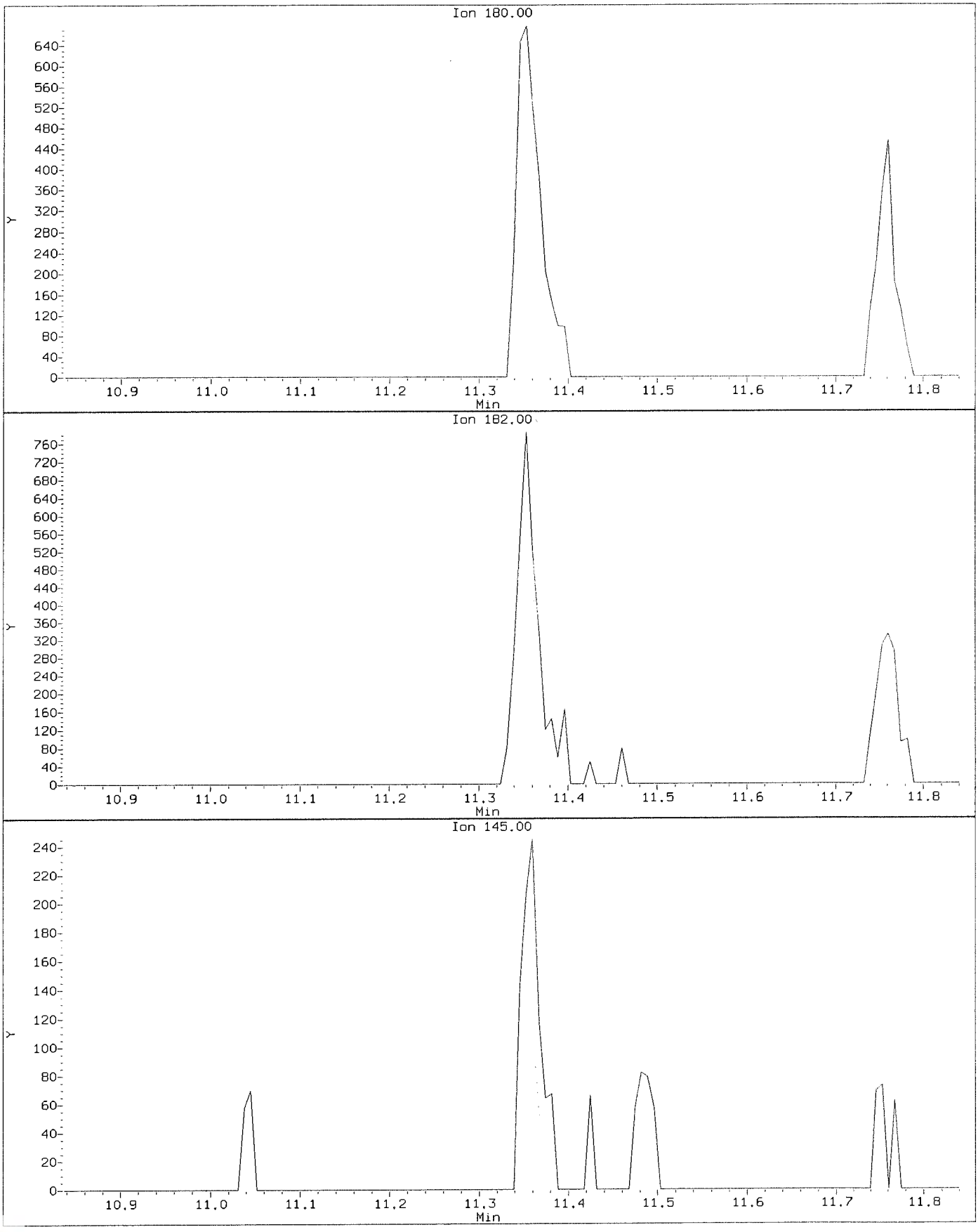
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CAS Number: 96-18-4



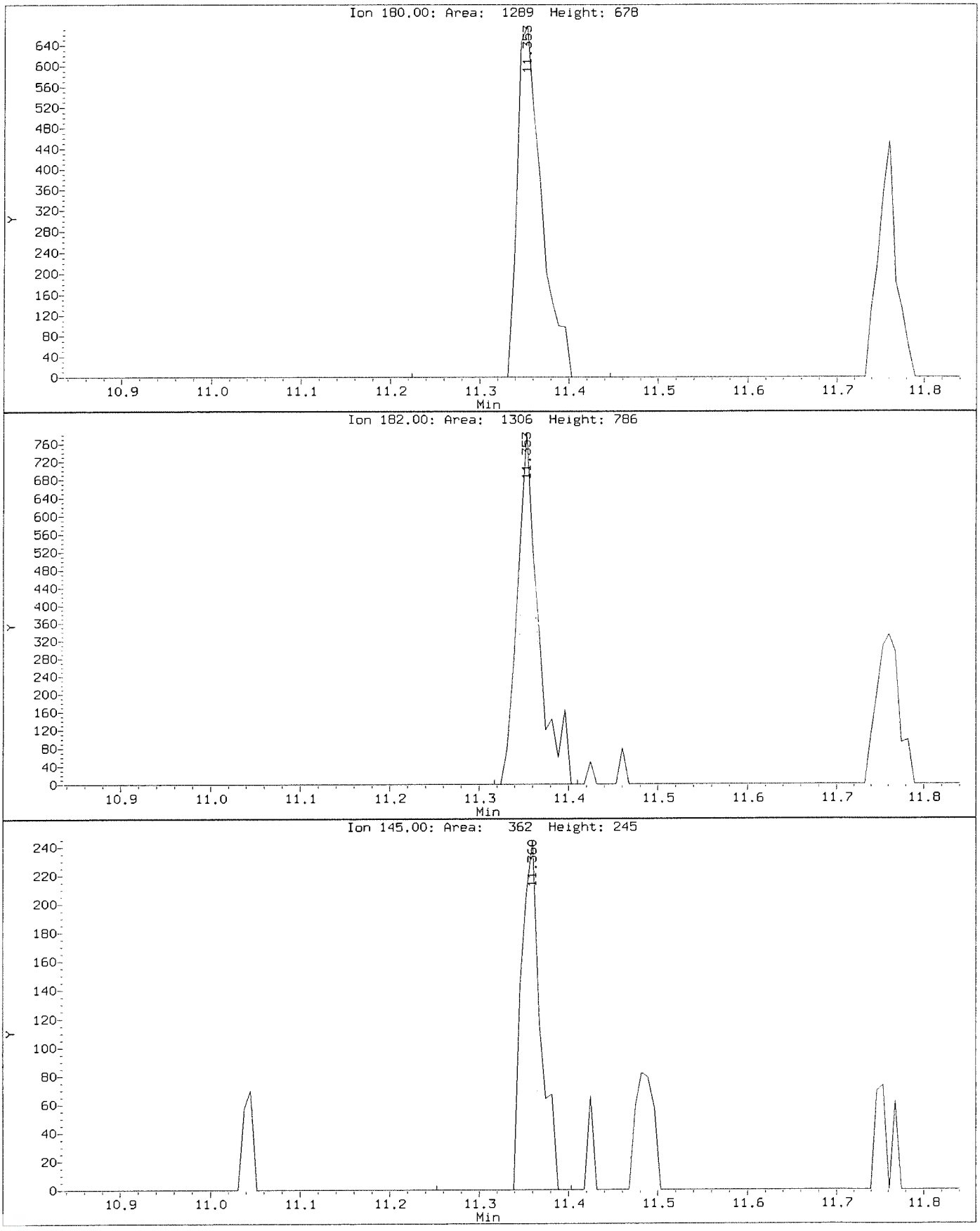
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Injection Date: 13-JUL-2020 11:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



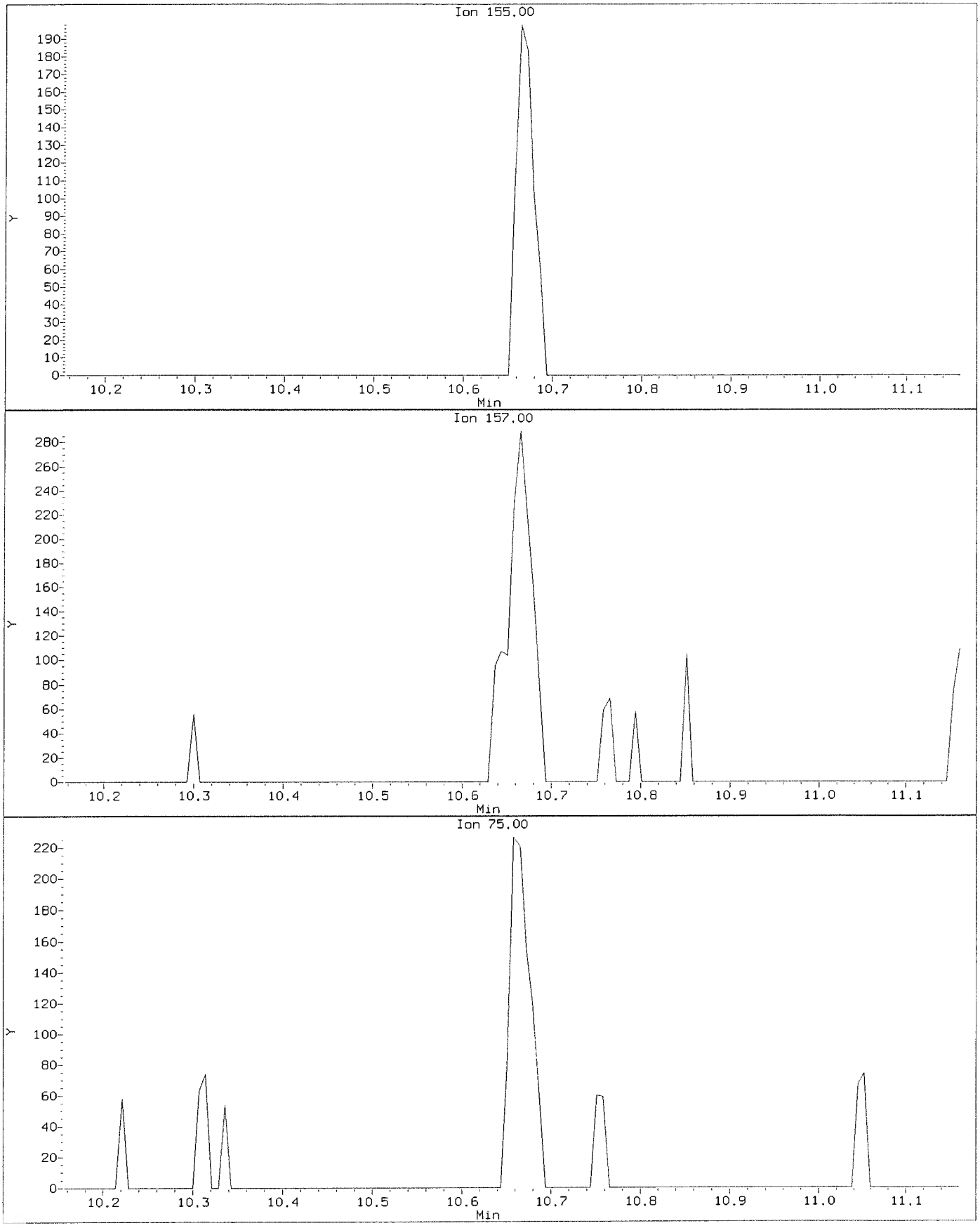
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Injection Date: 13-JUL-2020 11:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



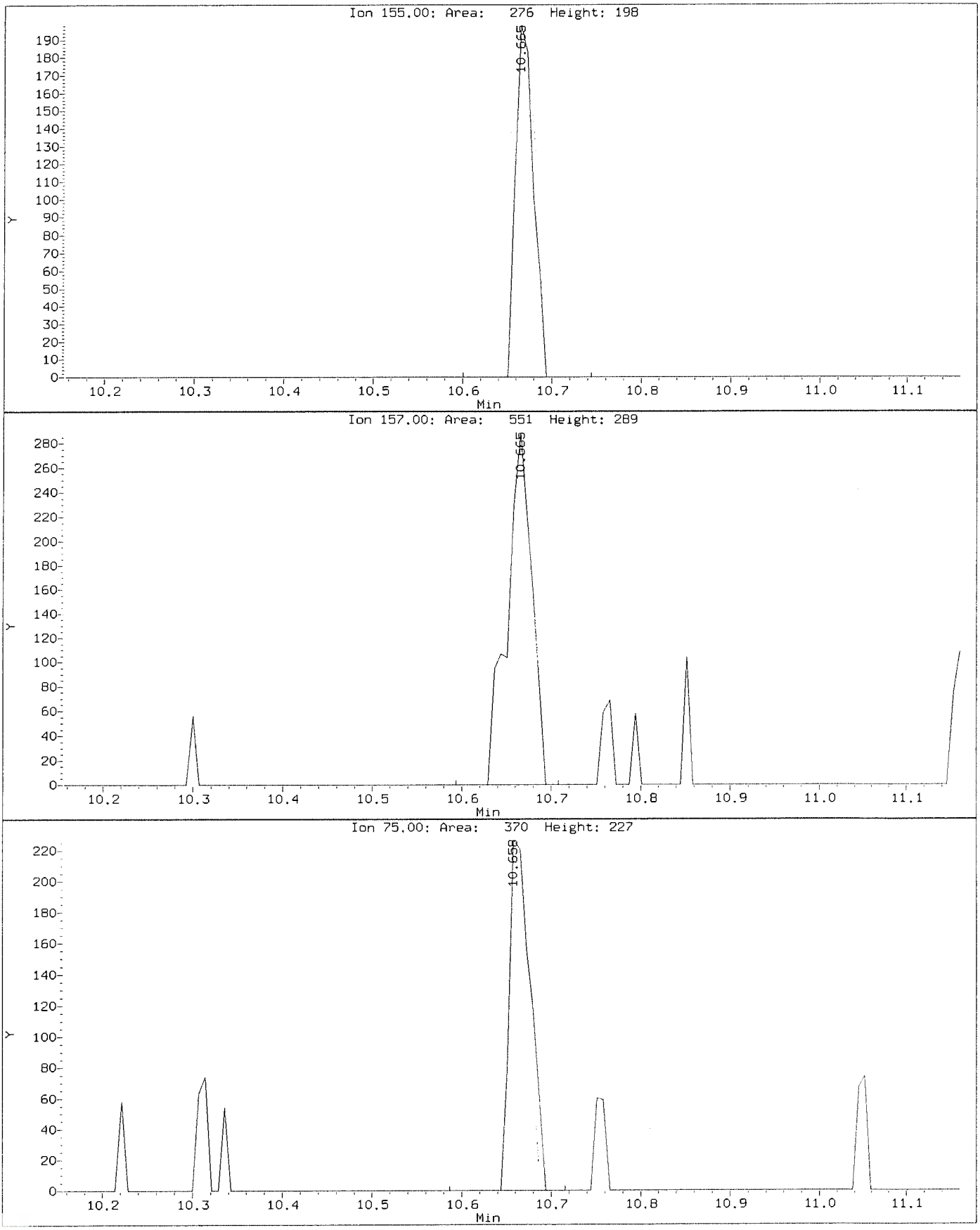
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Injection Date: 13-JUL-2020 11:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



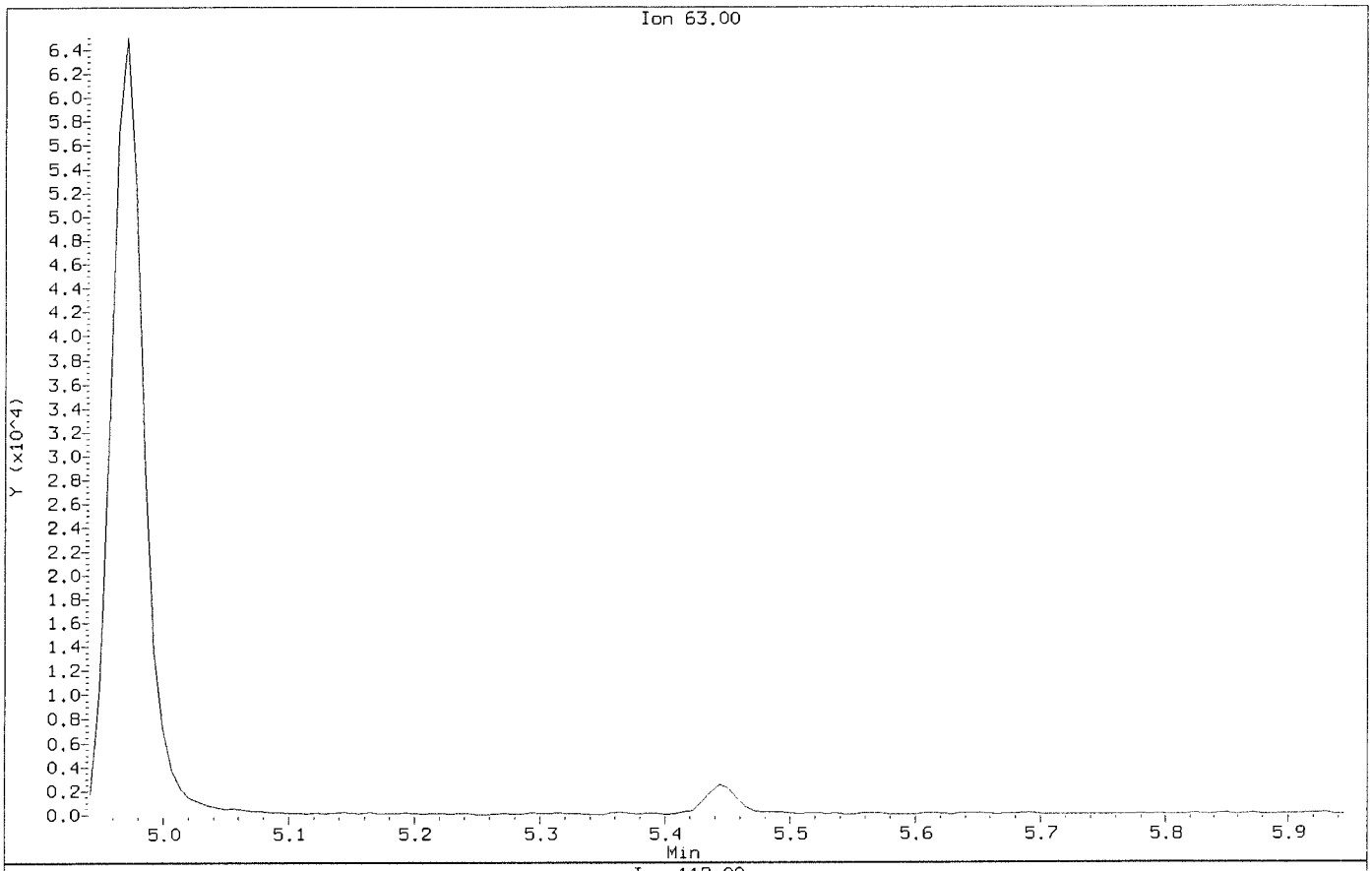
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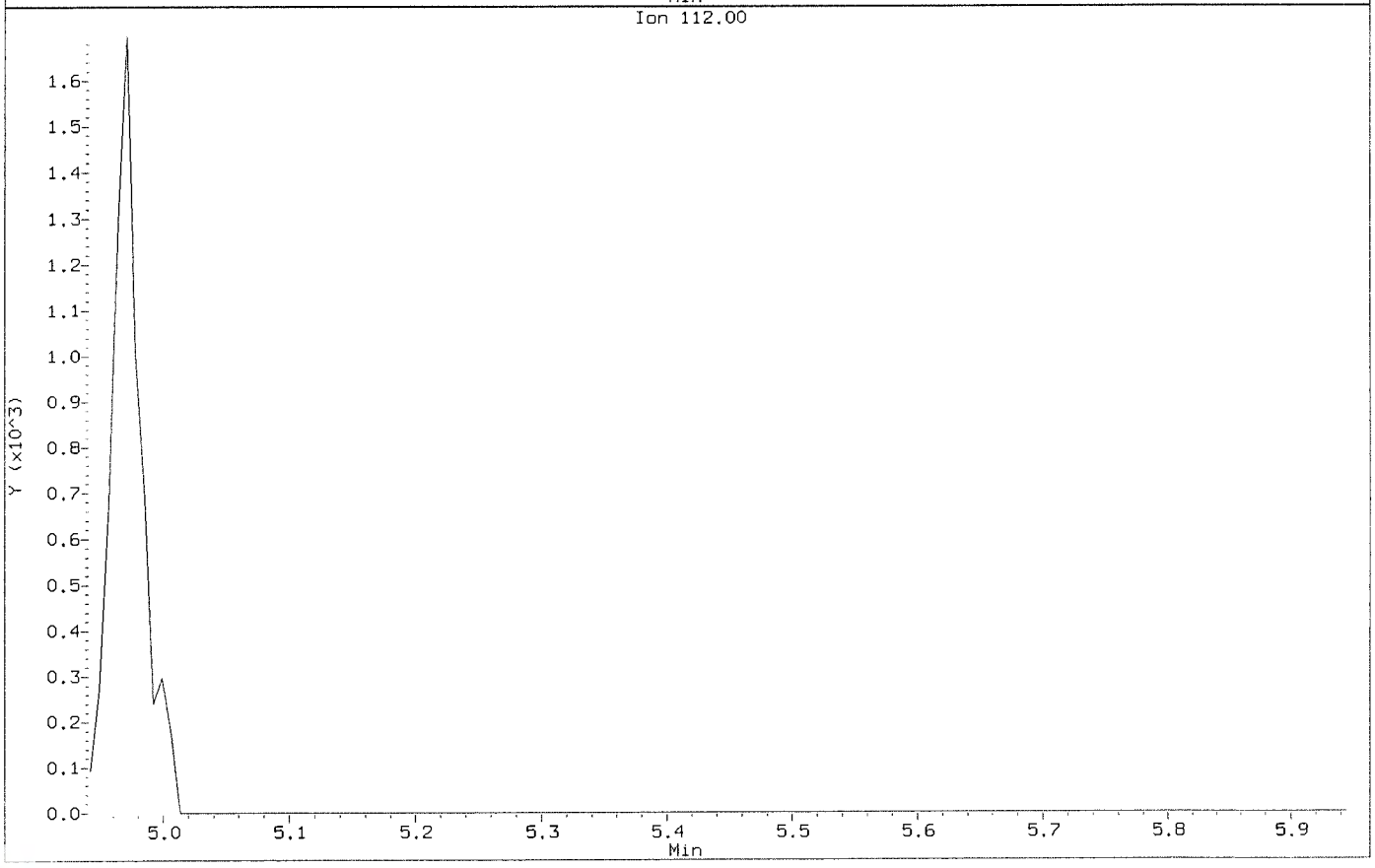
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Client Sample ID: VSTD001

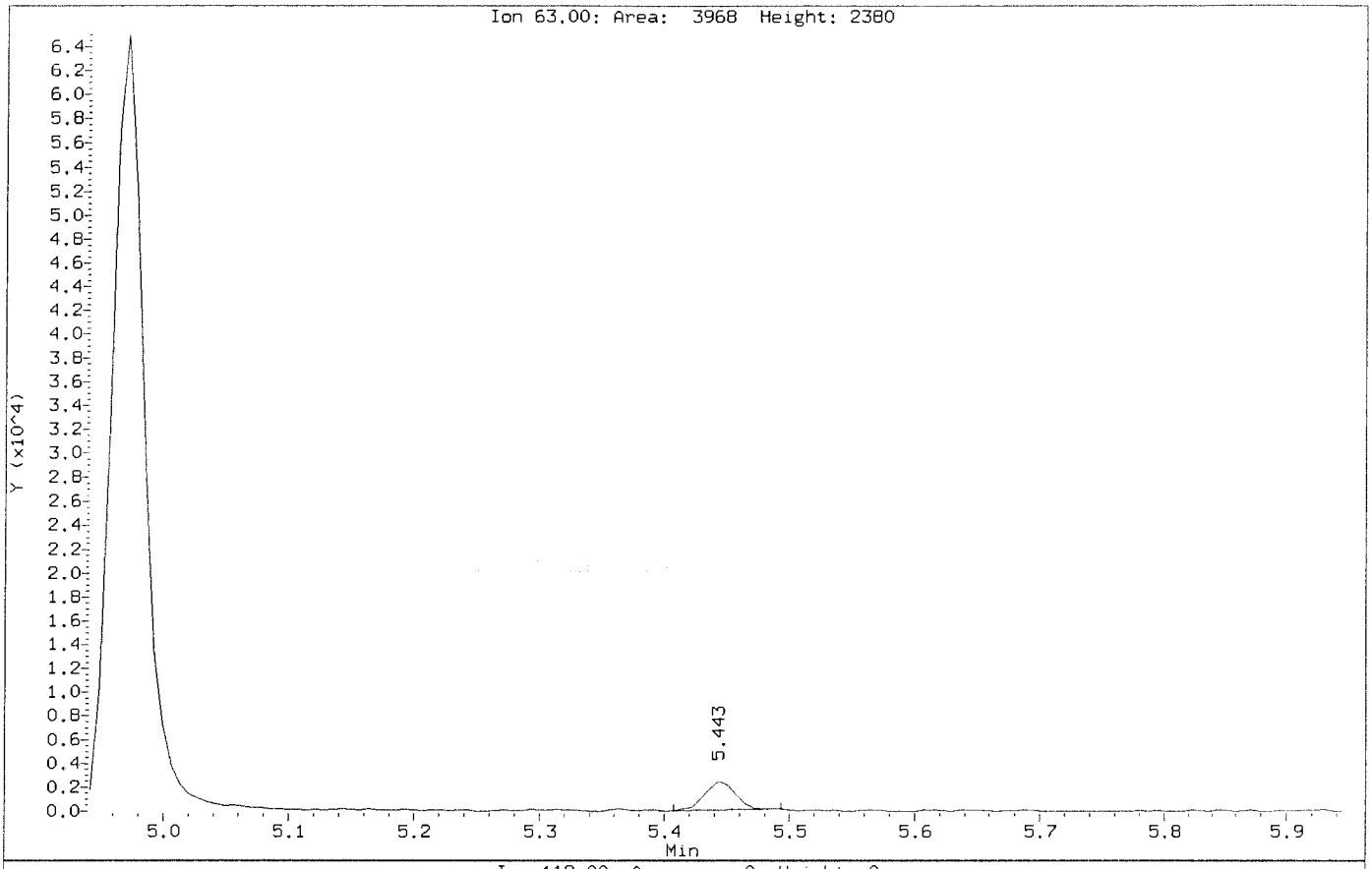
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

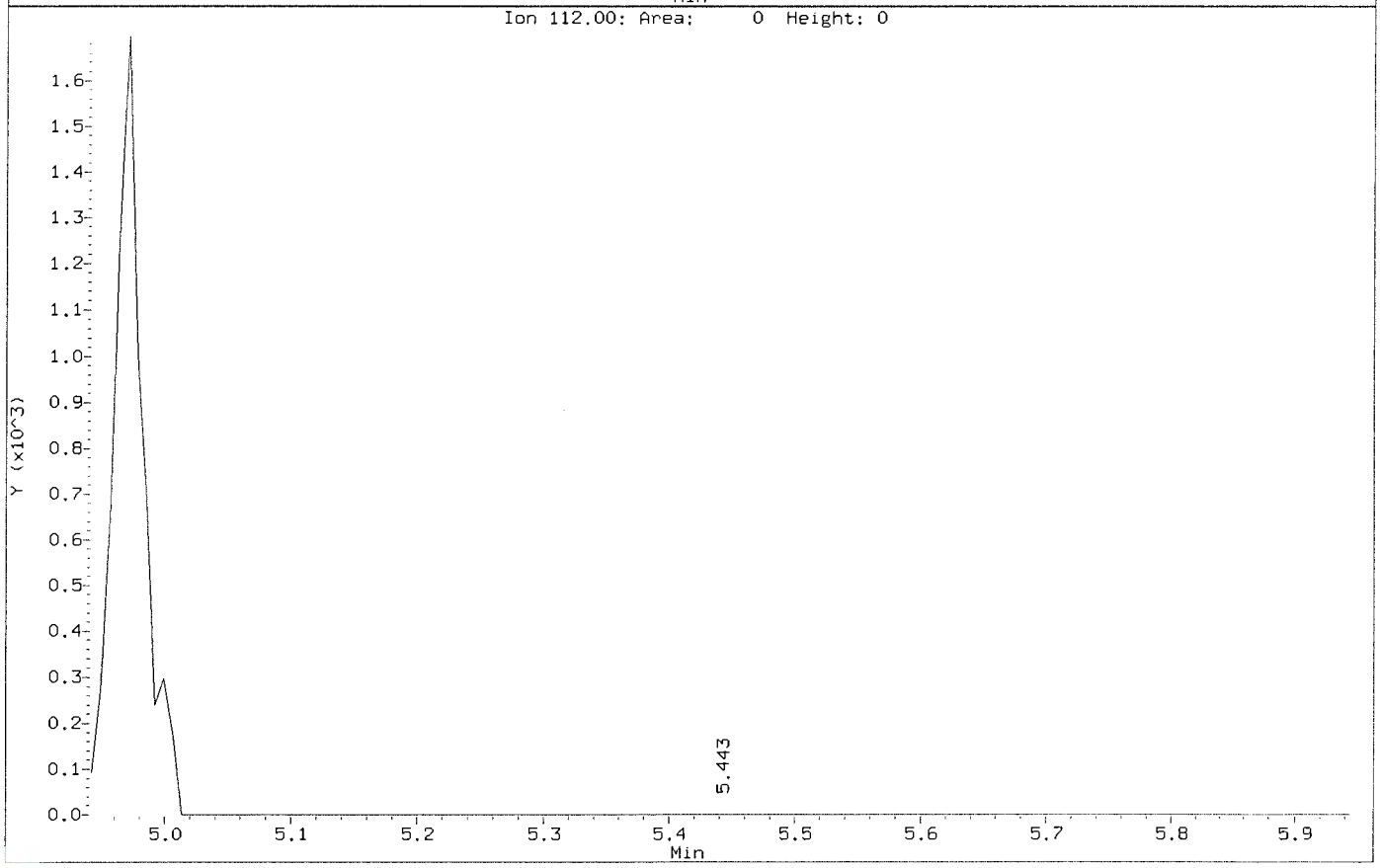


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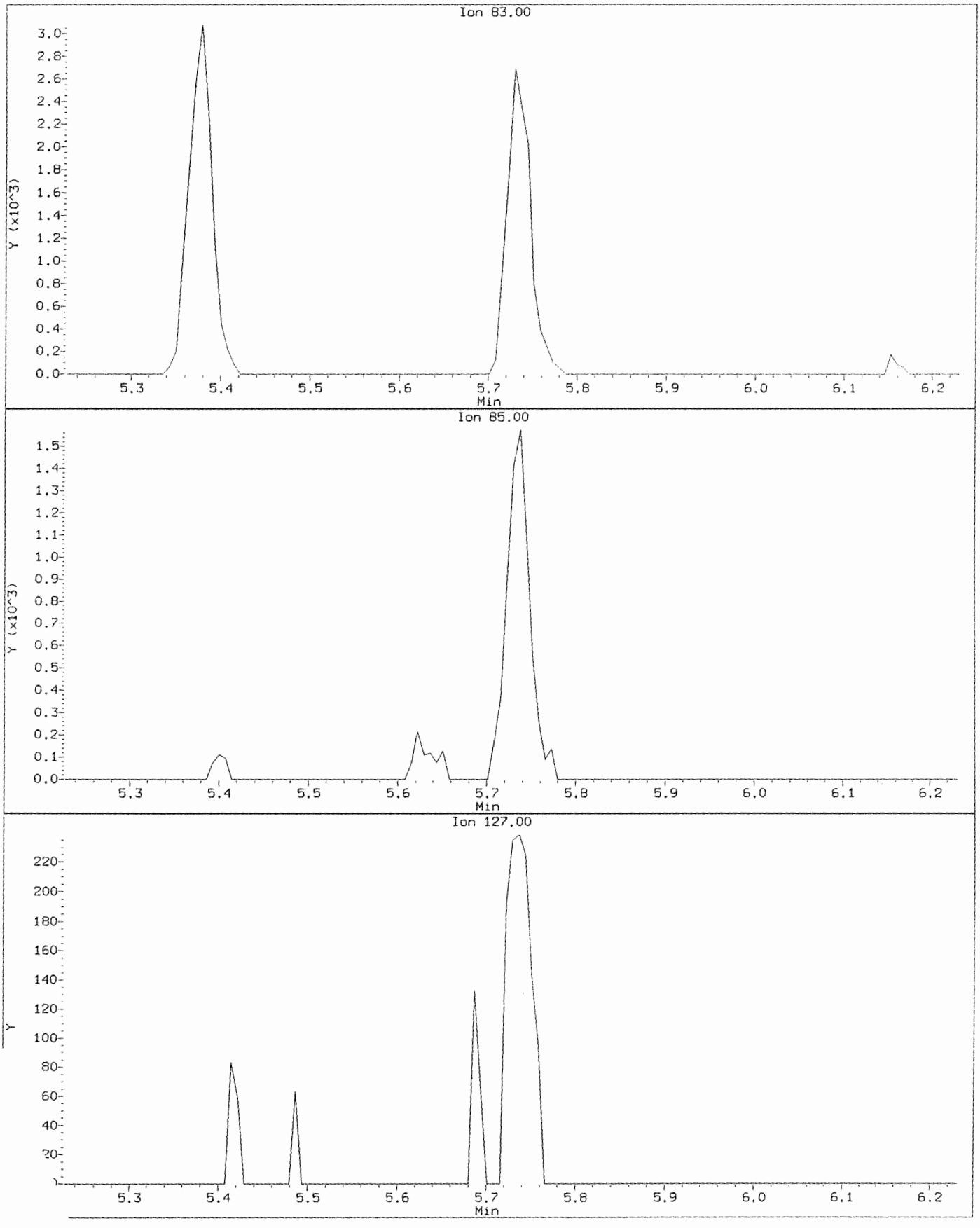
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



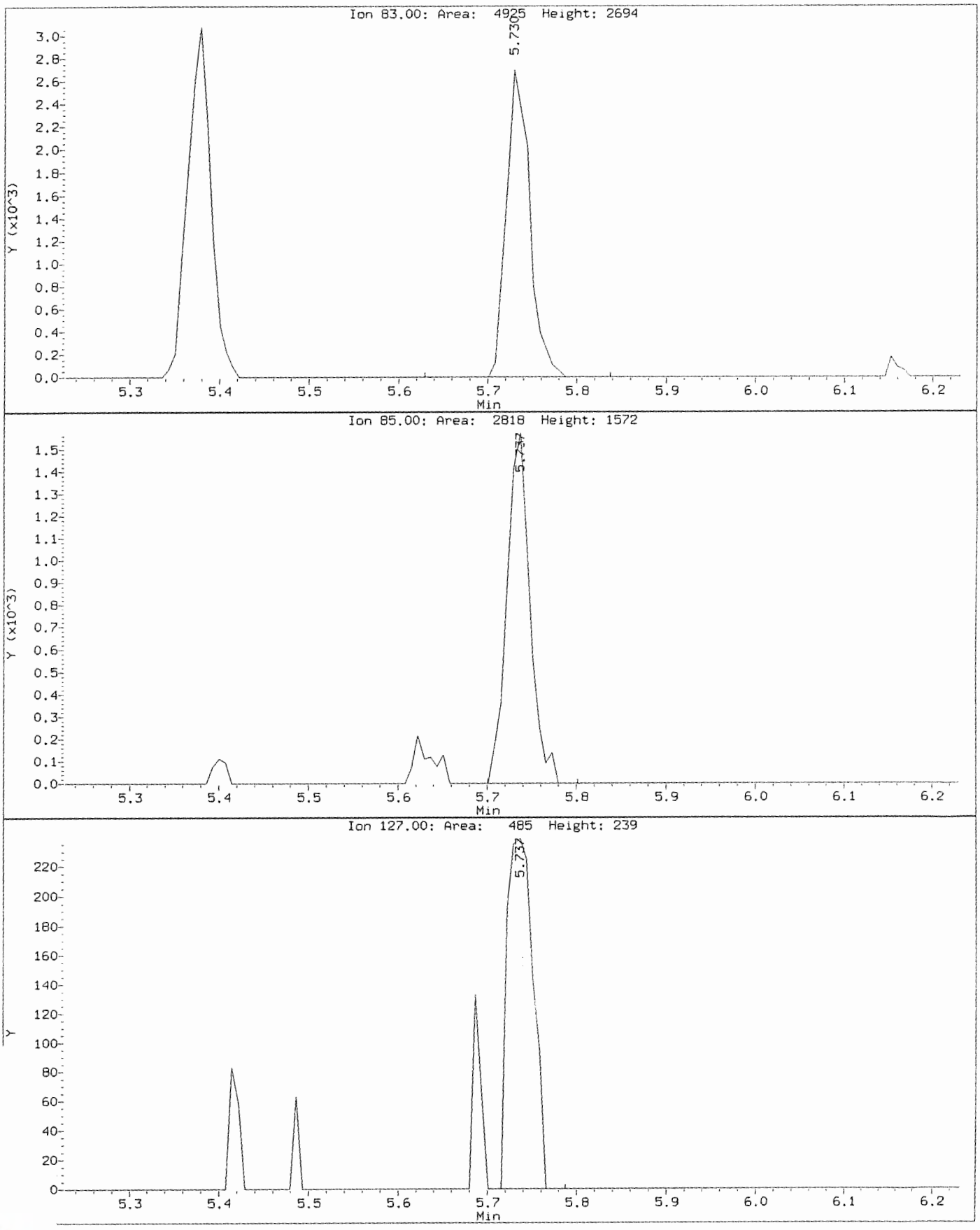
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njection Date: 13-JUL-2020 11:42
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lient Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



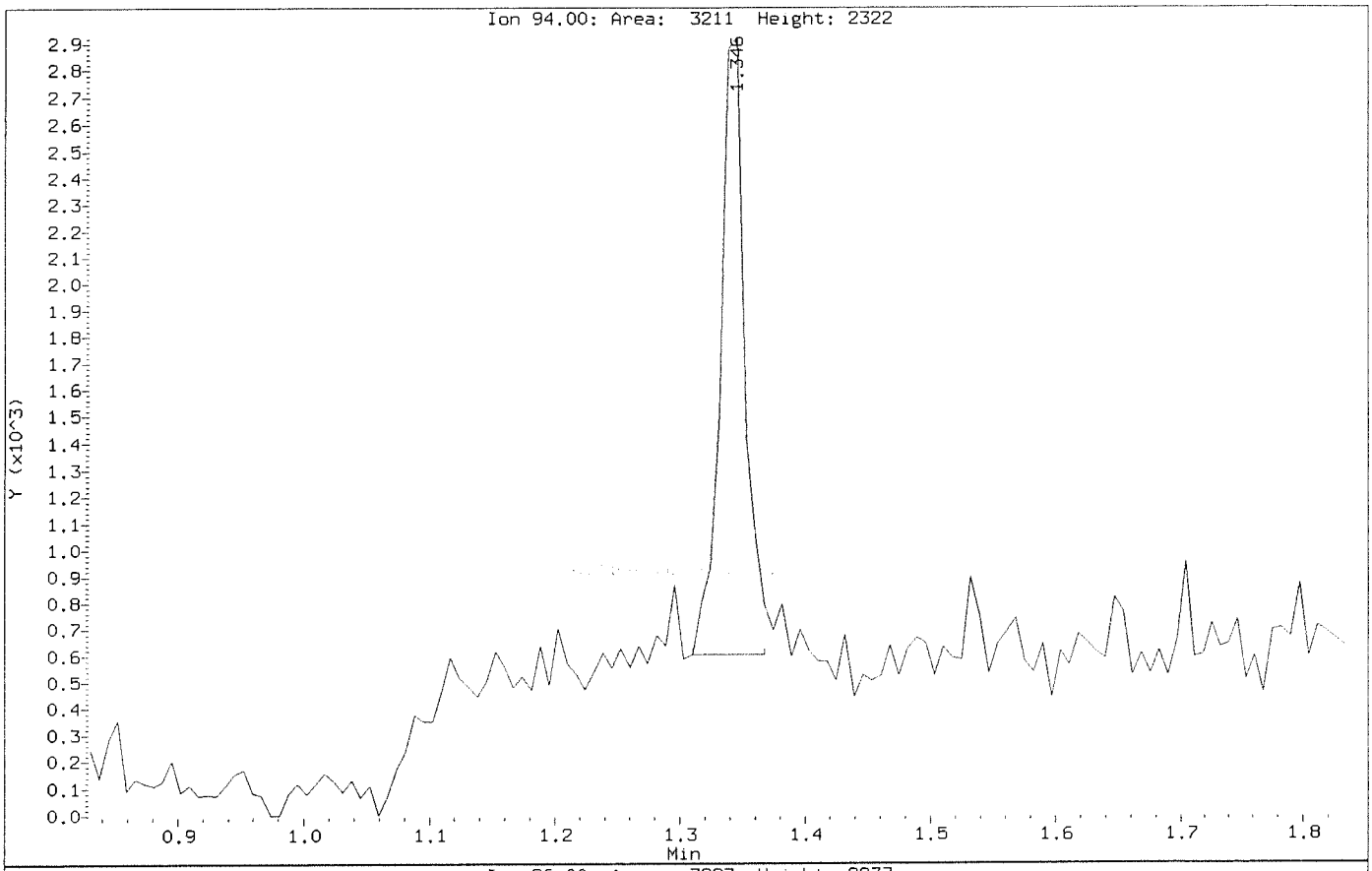
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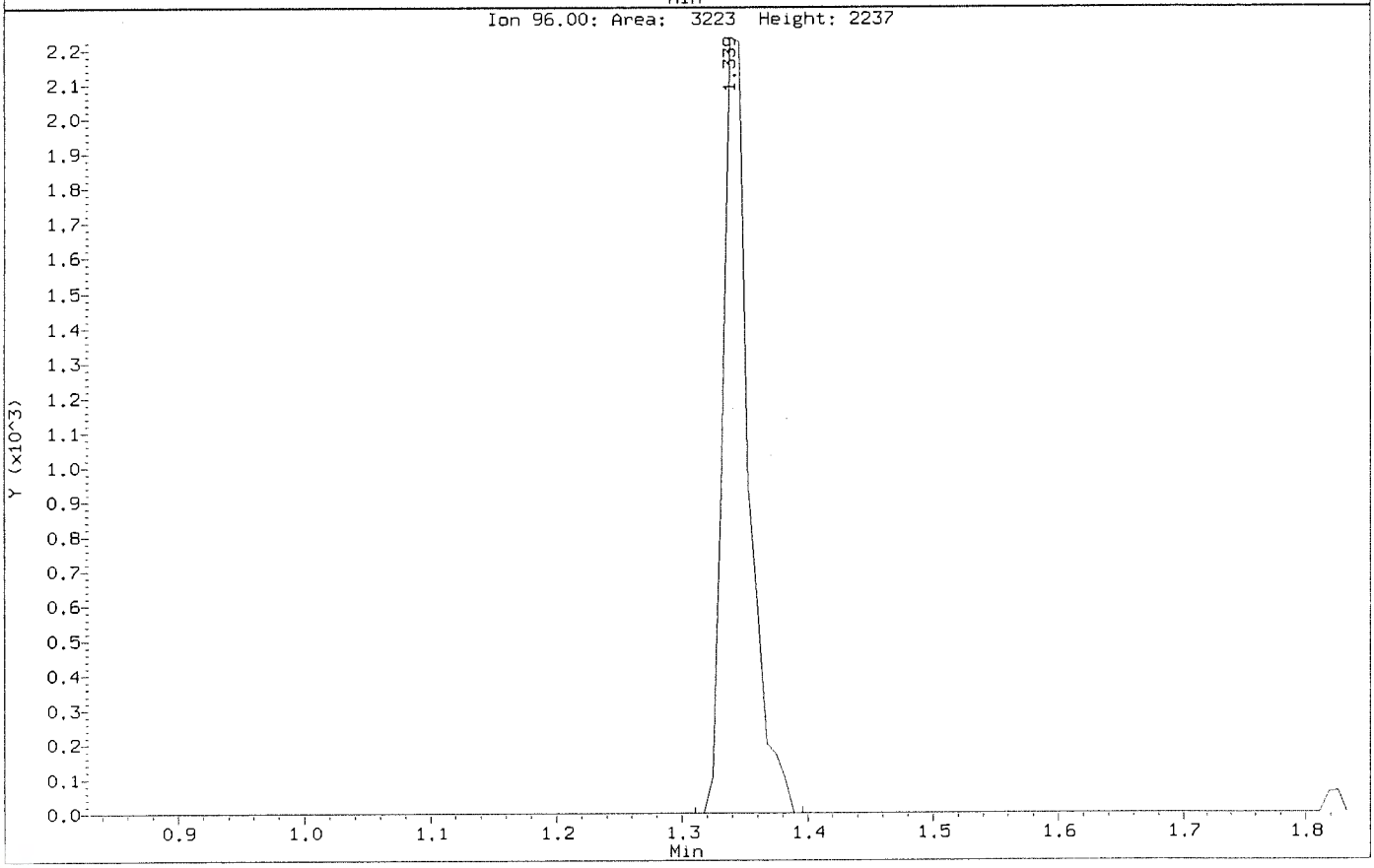
Compound: Bromodichloromethane
CAS Number: 75-27-4



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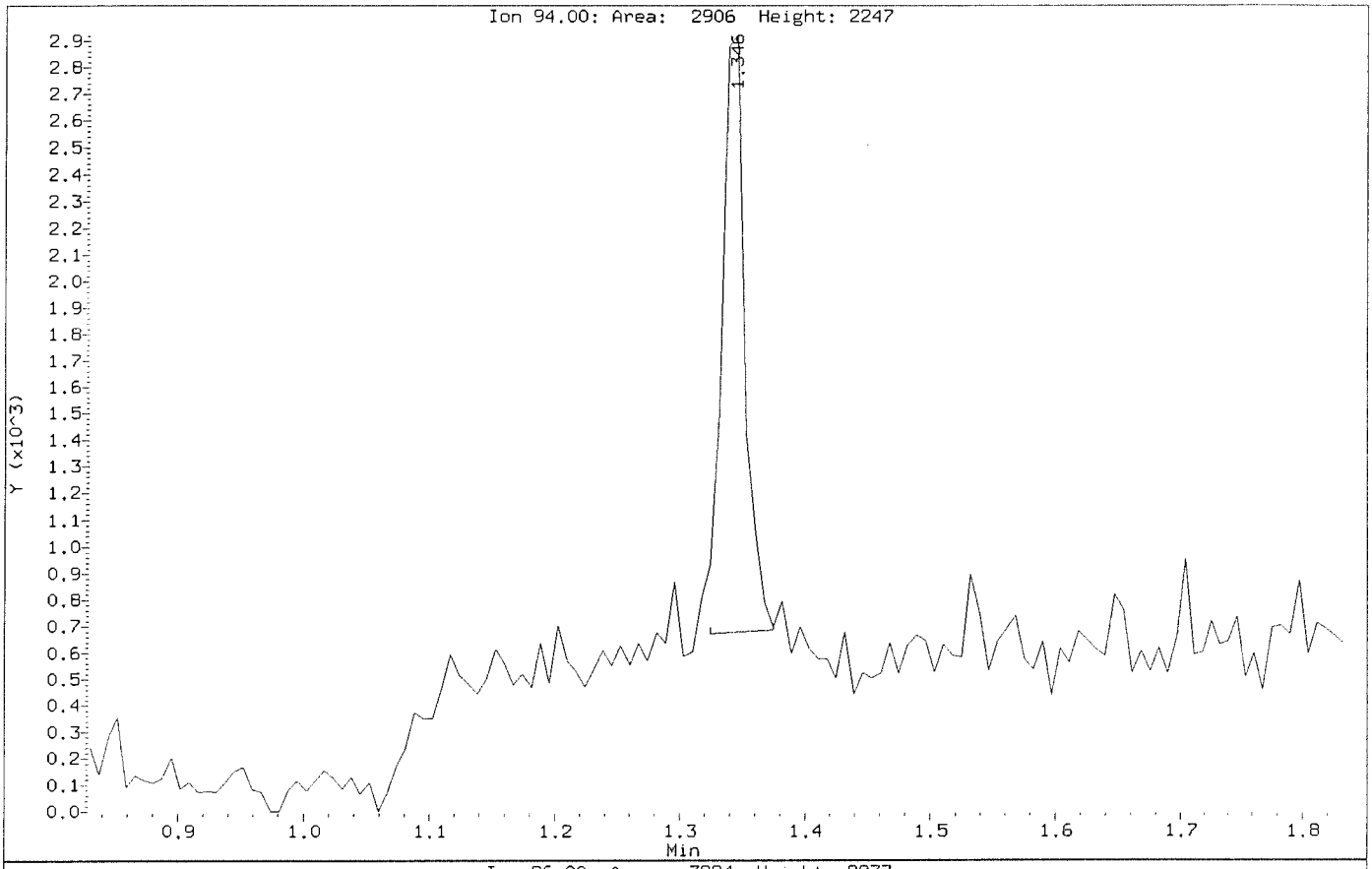
Compound: Bromomethane
CAS Number: 74-83-9

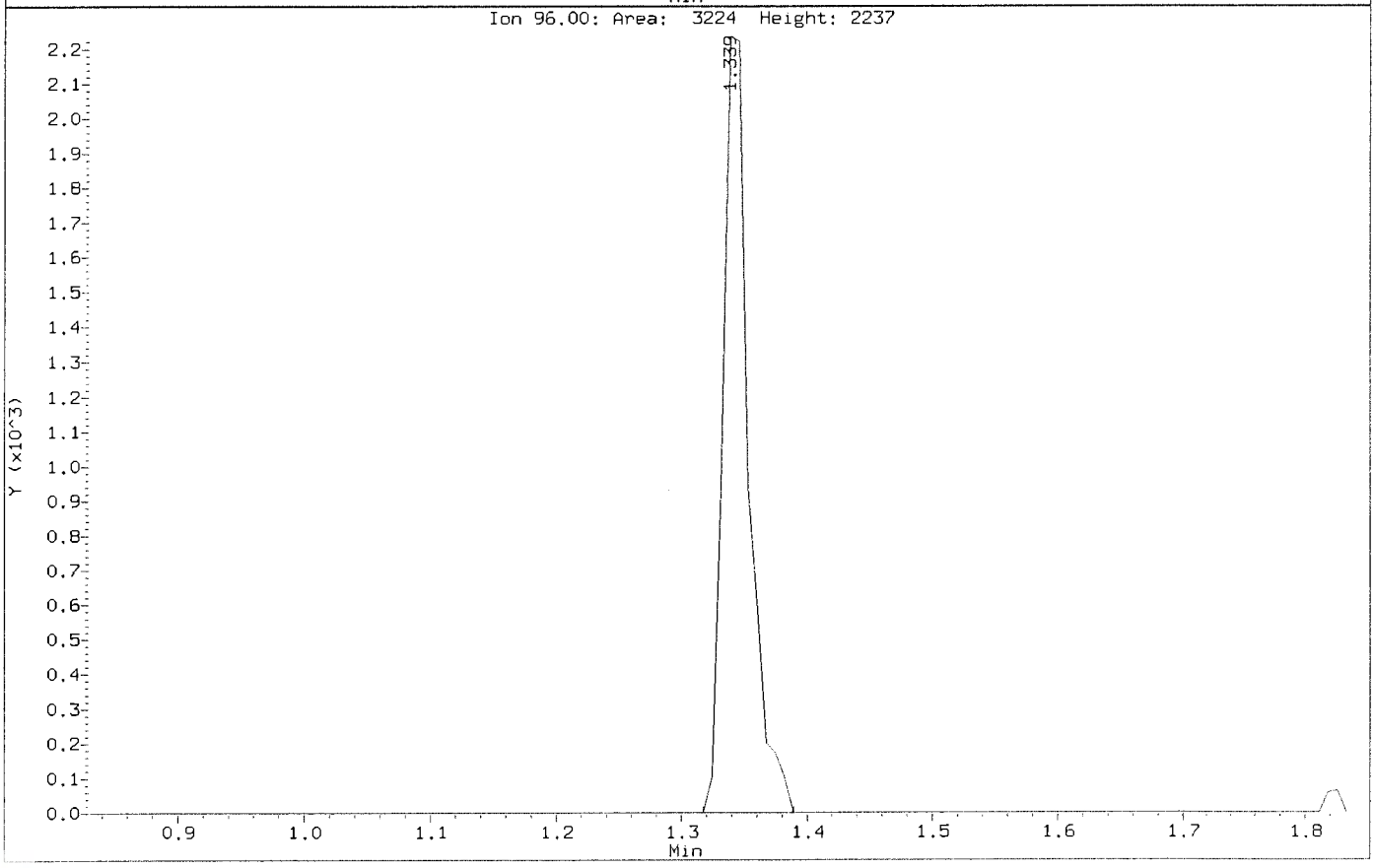


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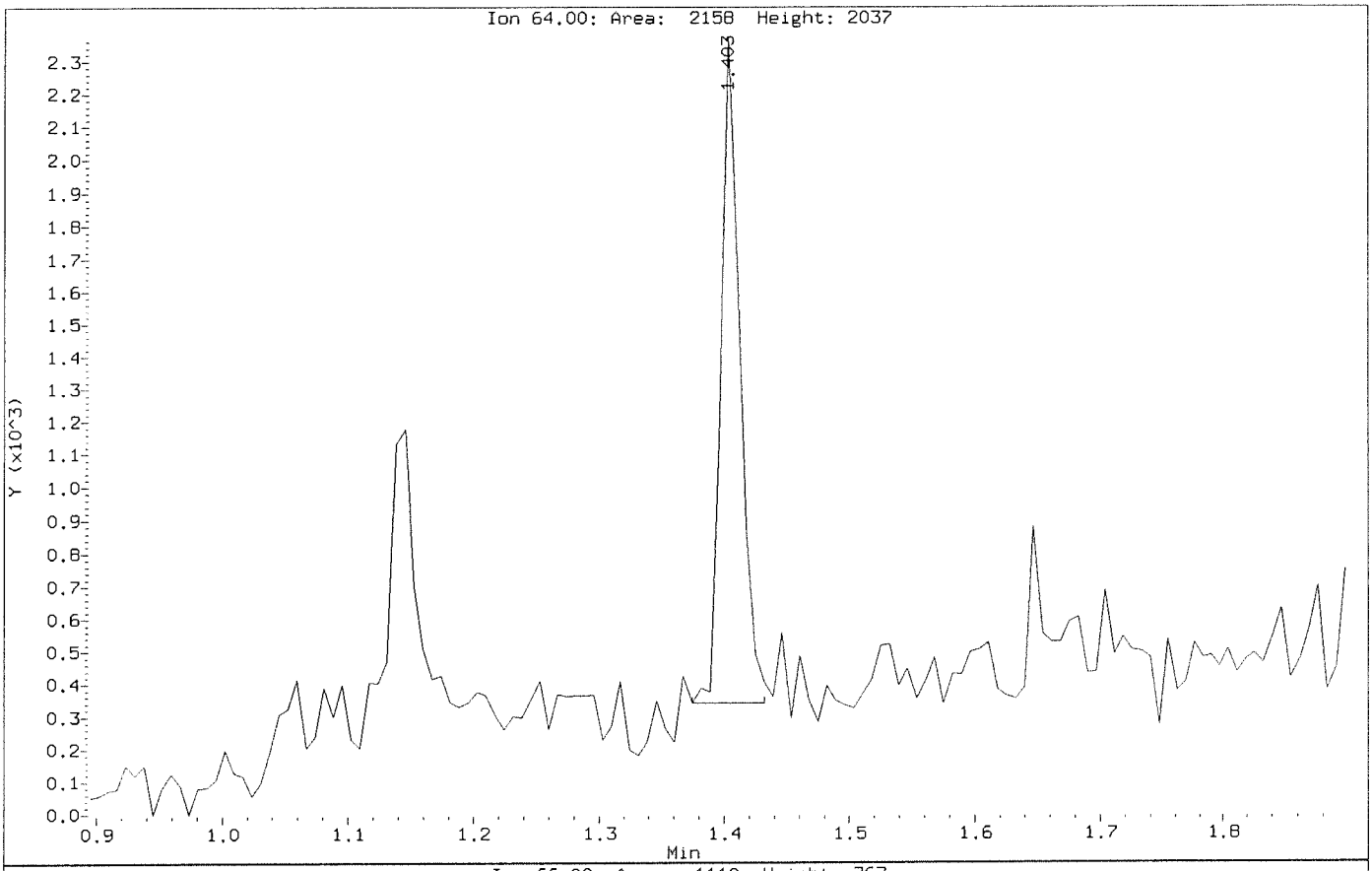
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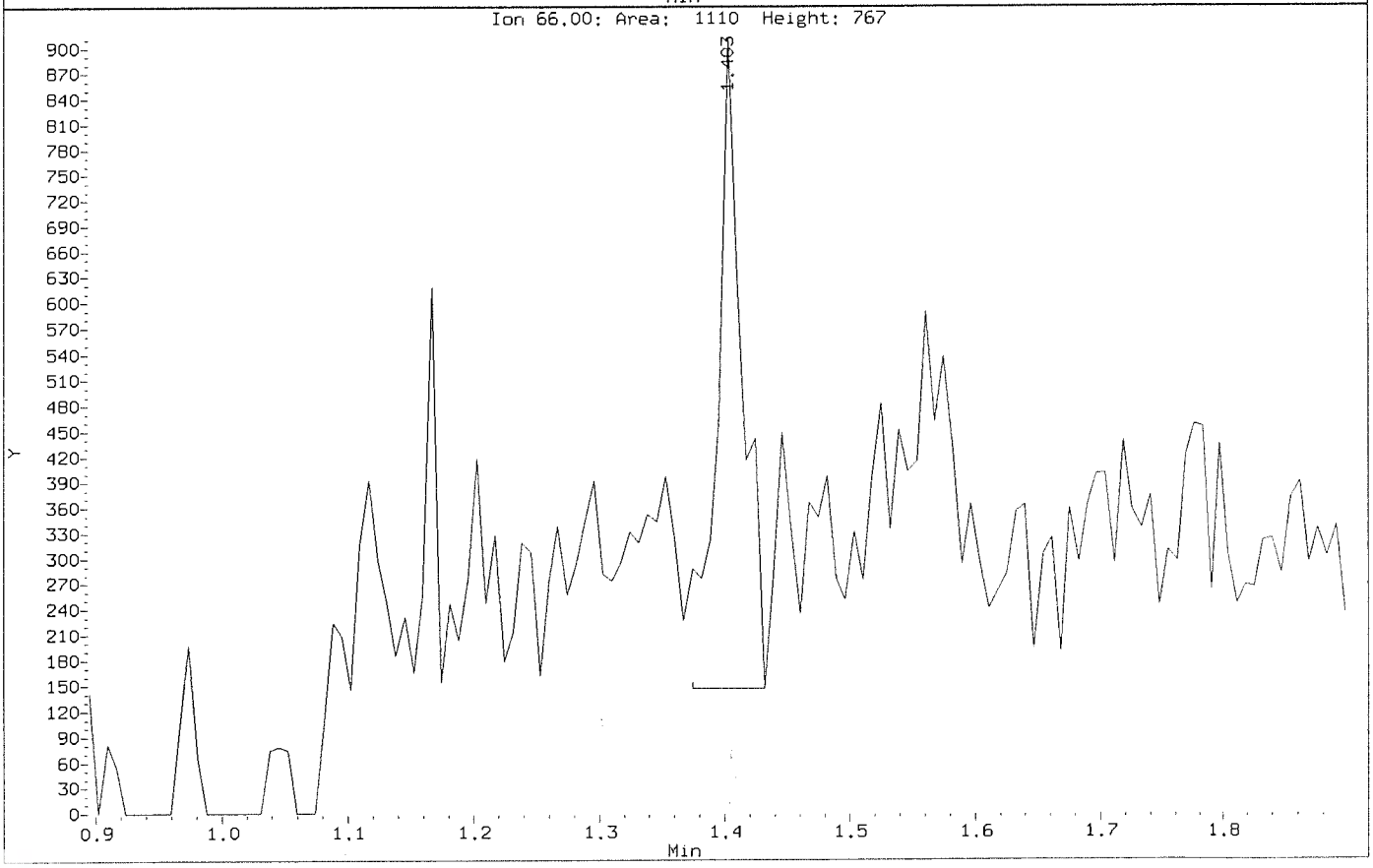


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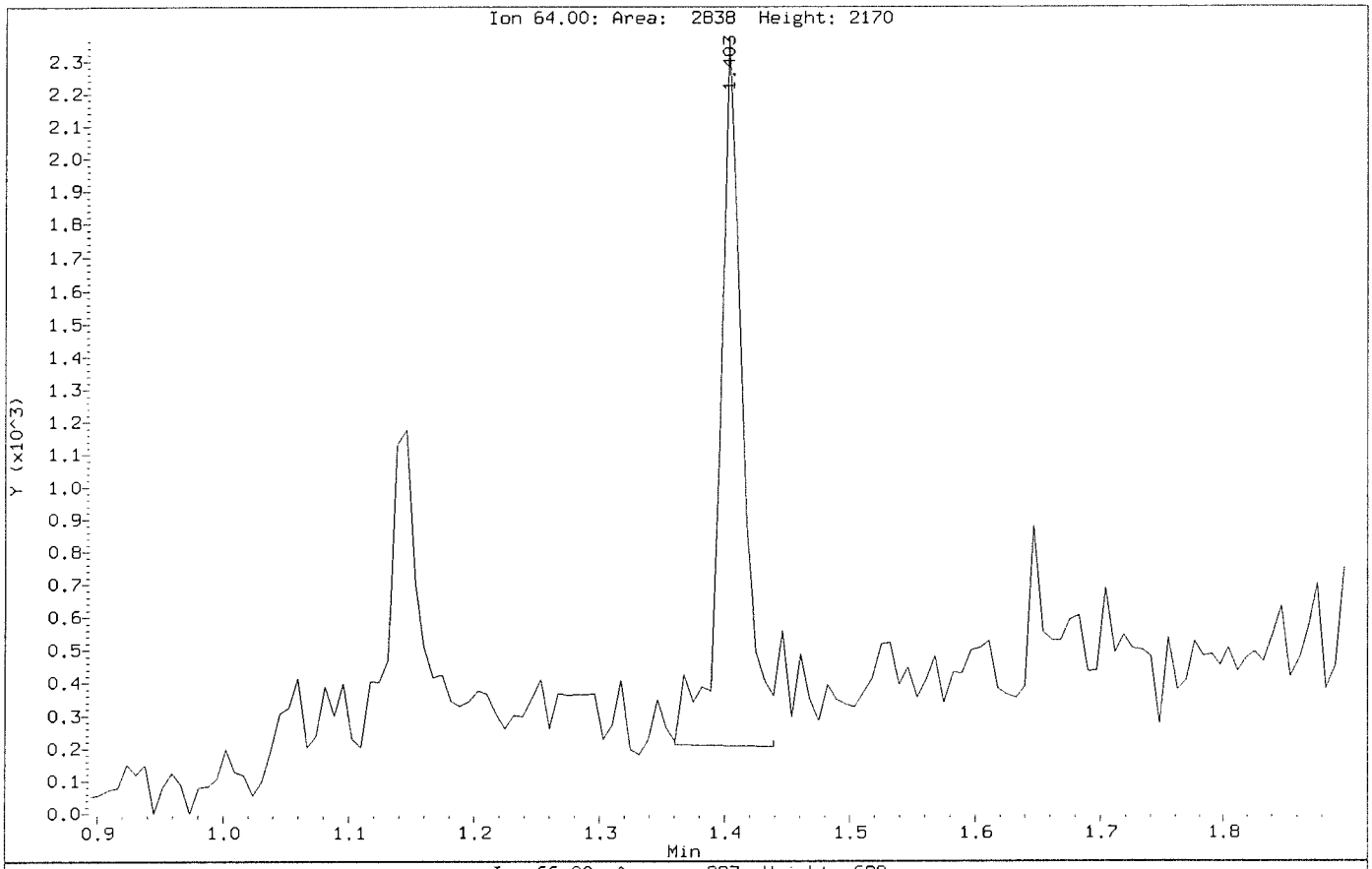
Compound: Chloroethane
CAS Number: 75-00-3

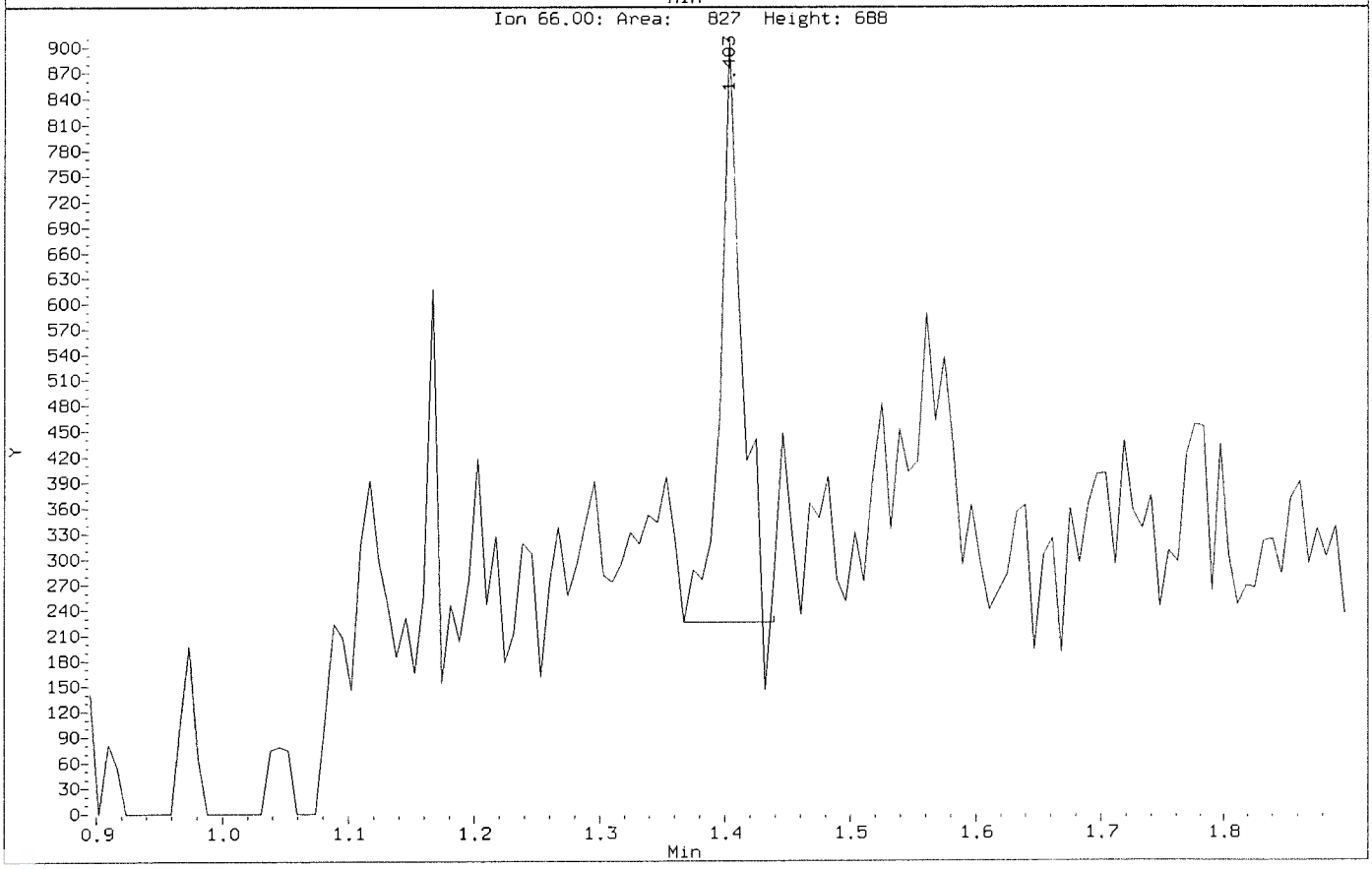


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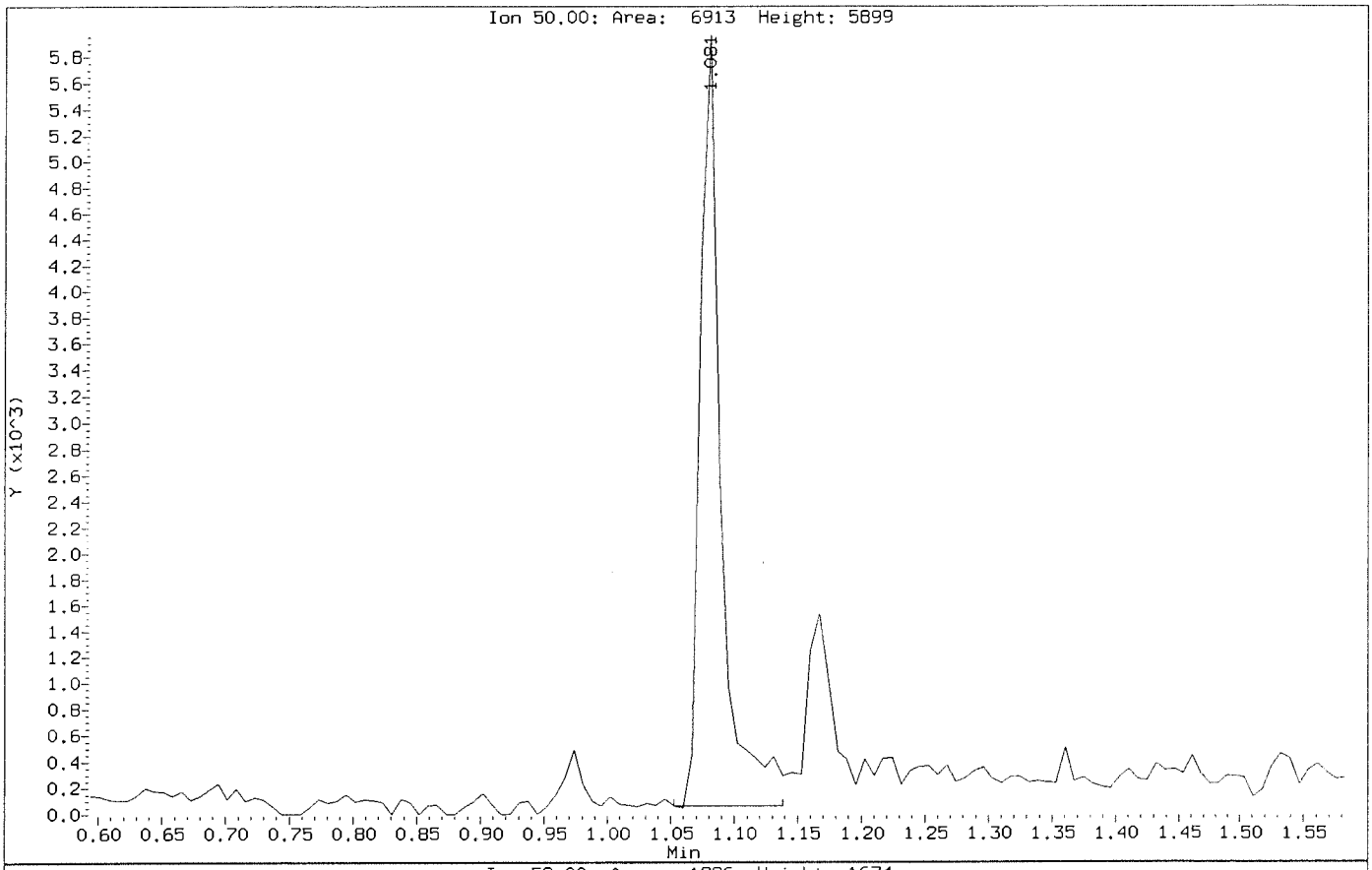
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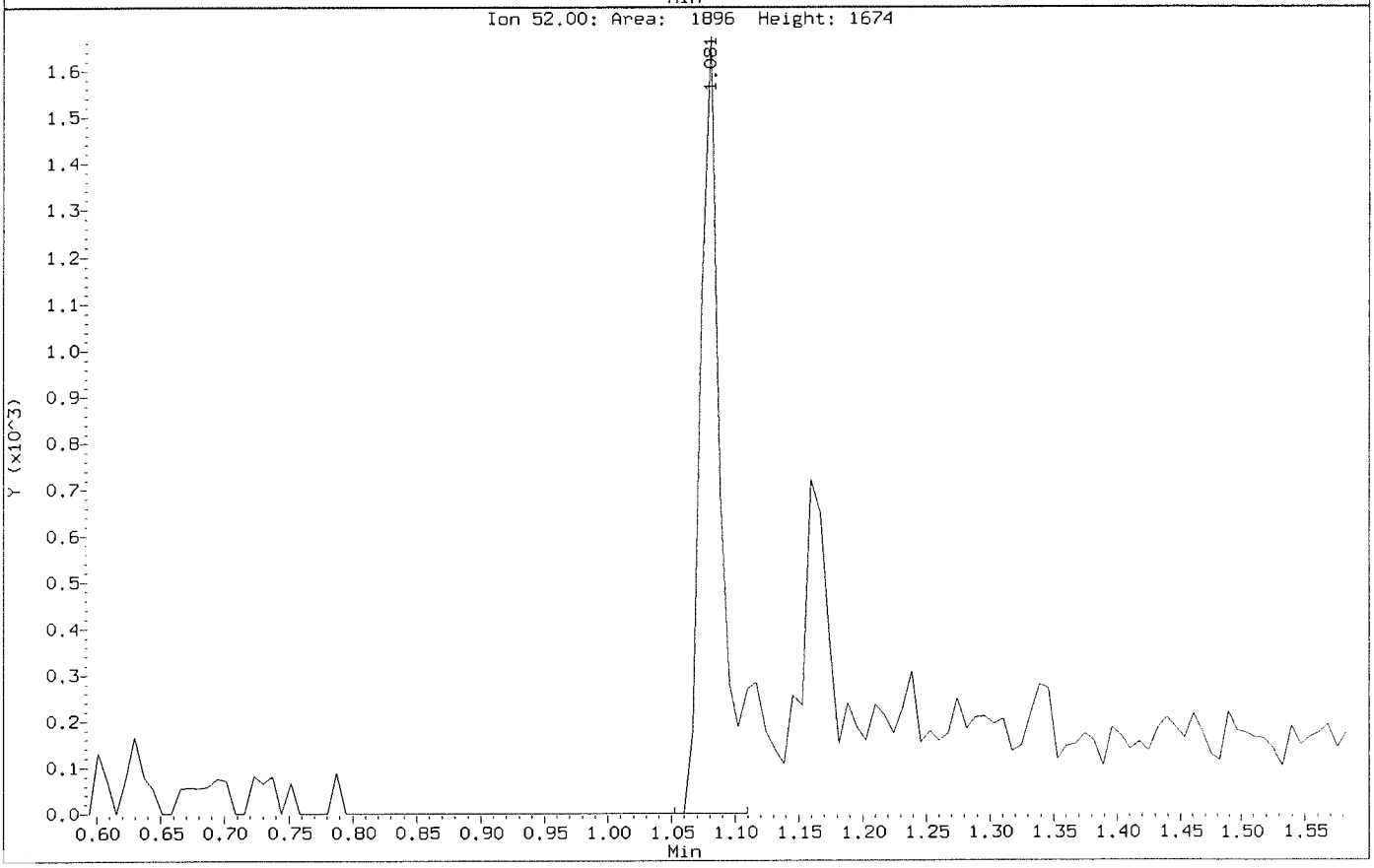


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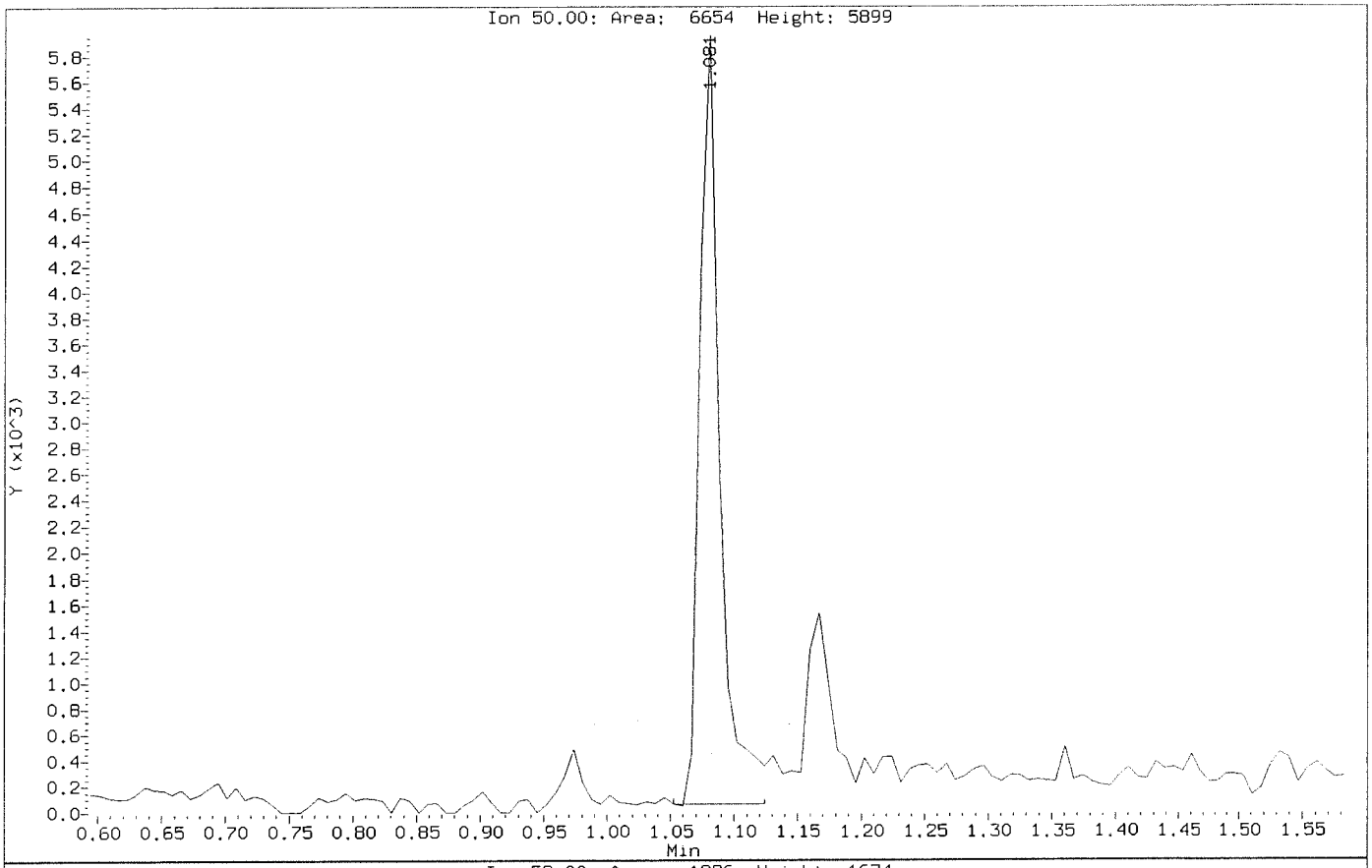
Compound: Chloromethane
CAS Number: 74-87-3

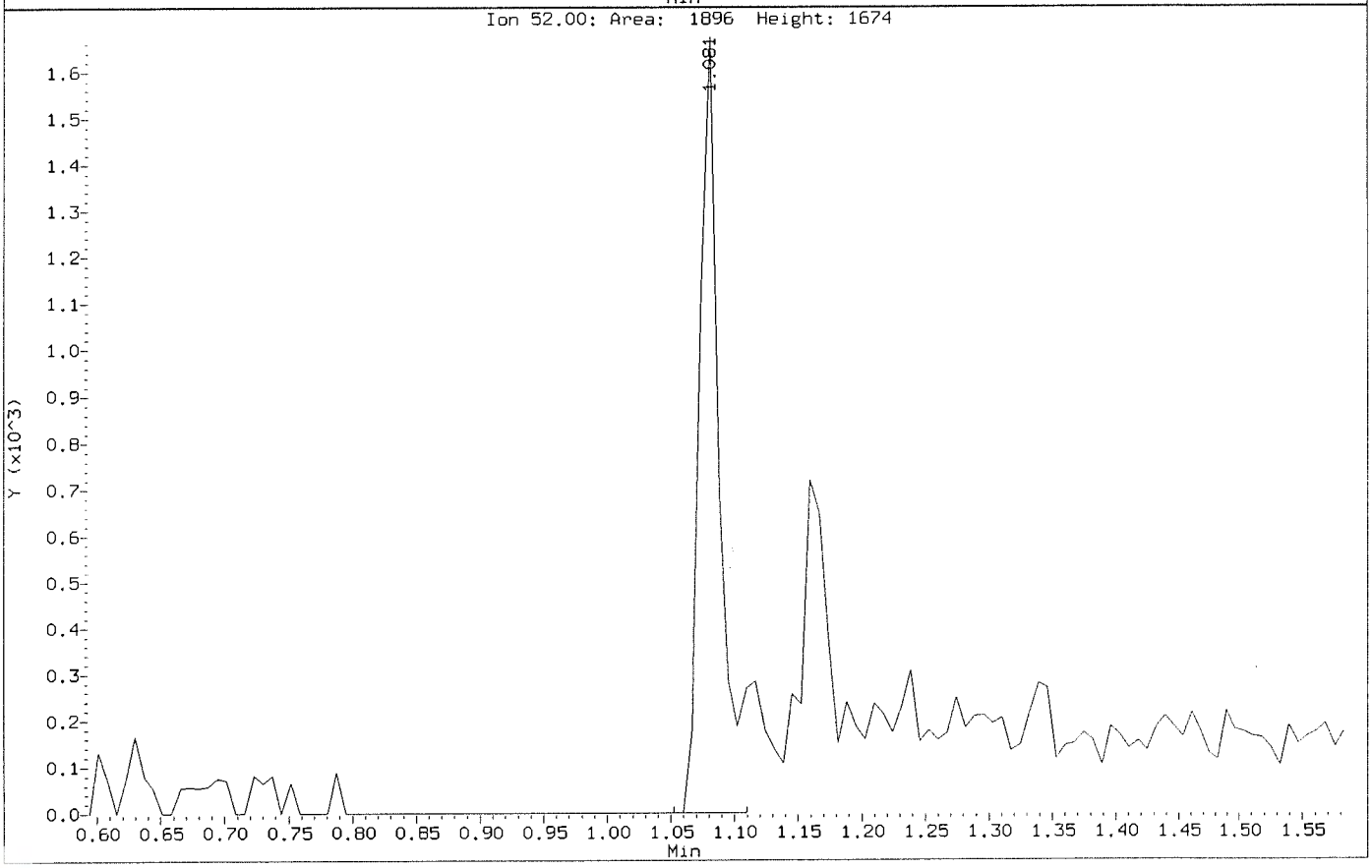


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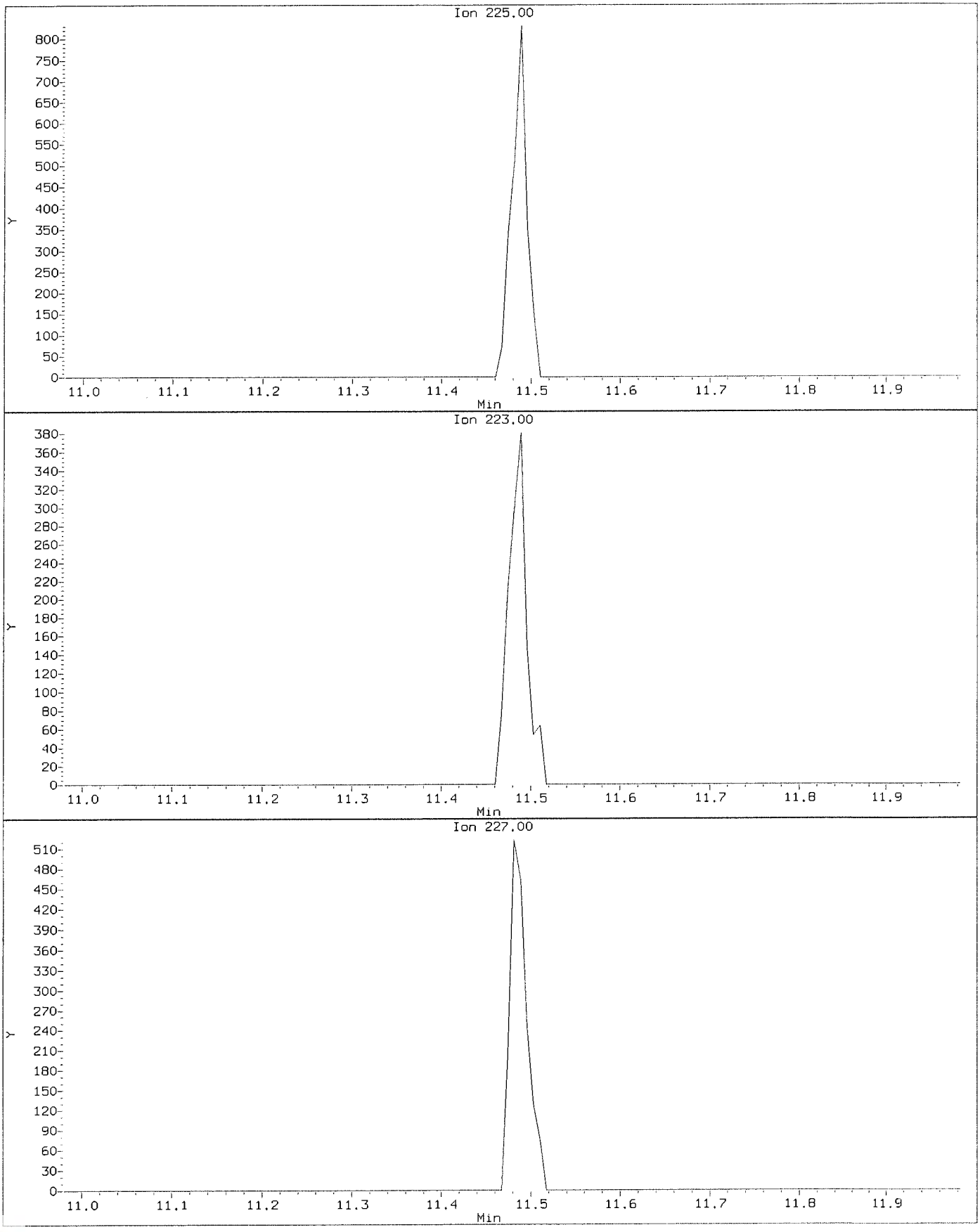
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CAS Number: 74-87-3



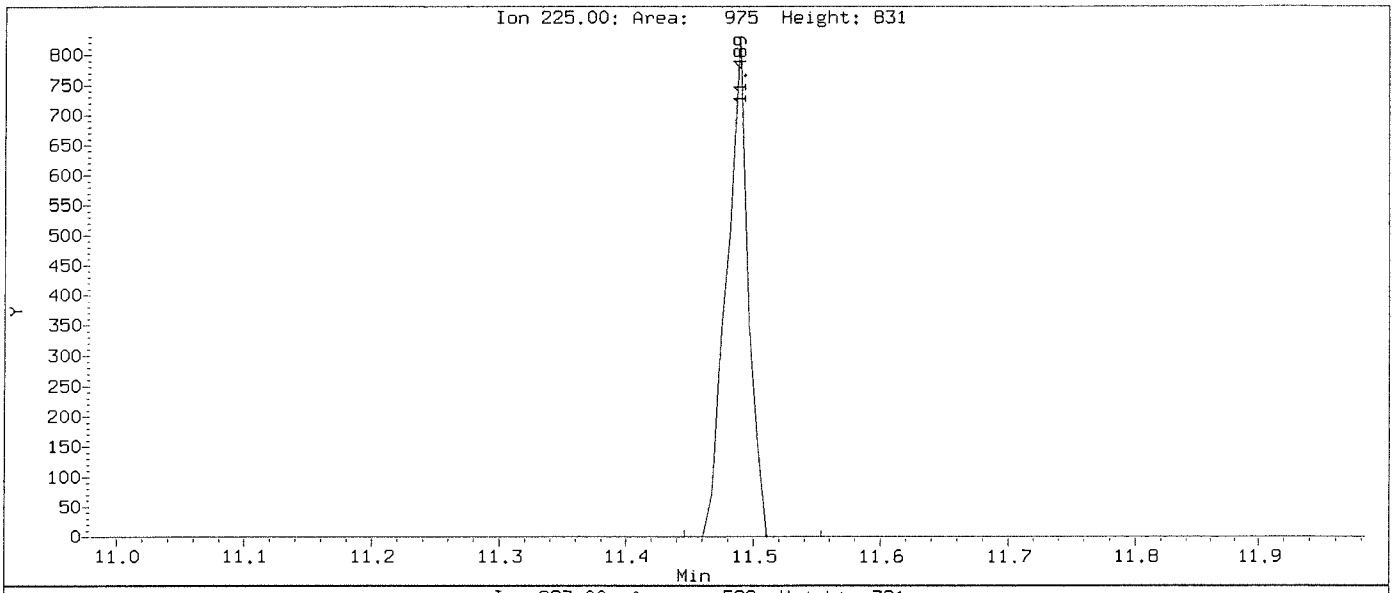
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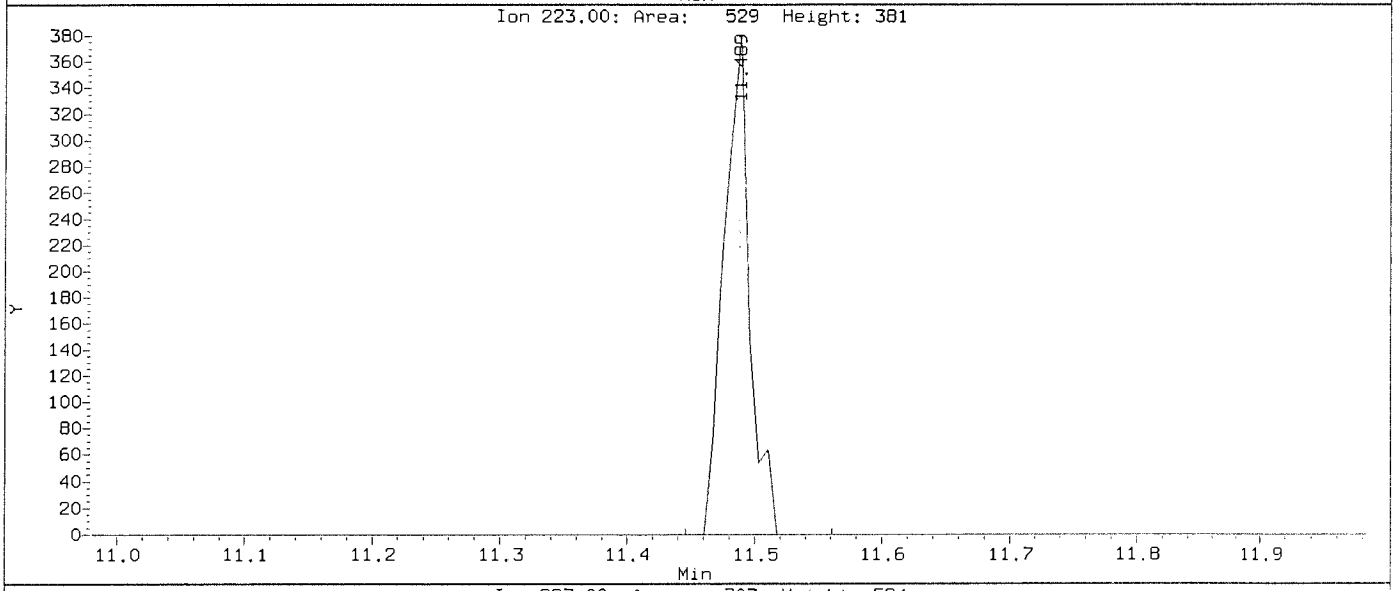
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

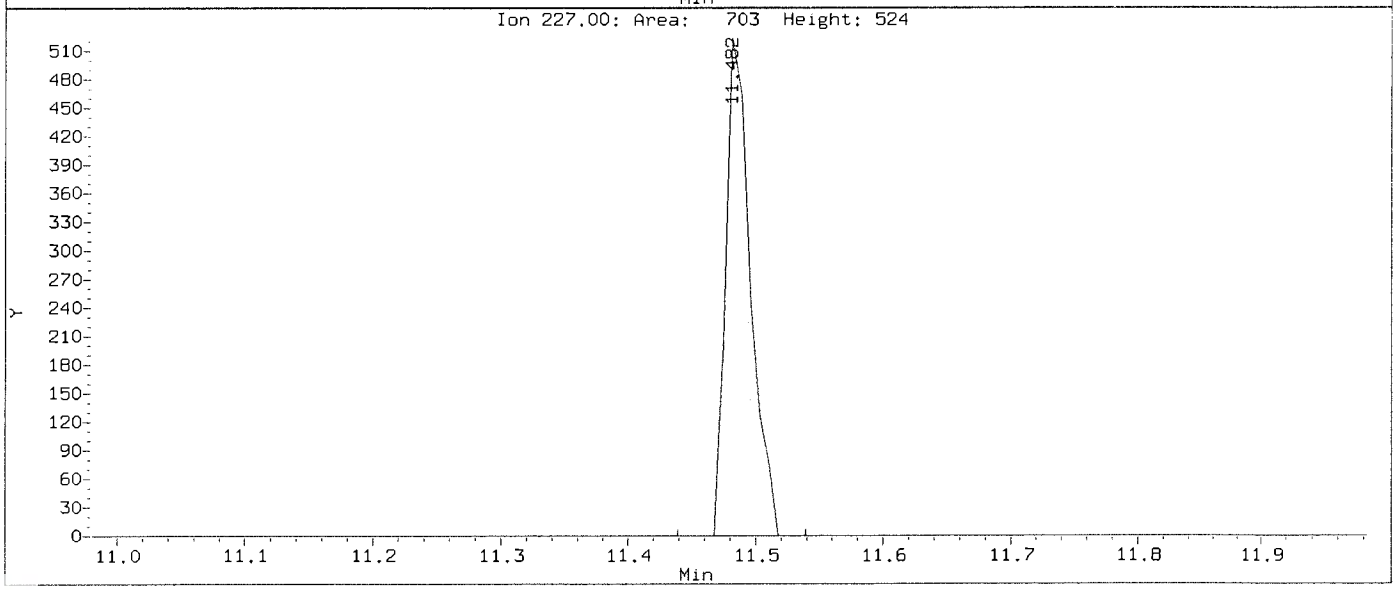


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Compound: Hexachlorobutadiene
CAS Number: 87-68-3

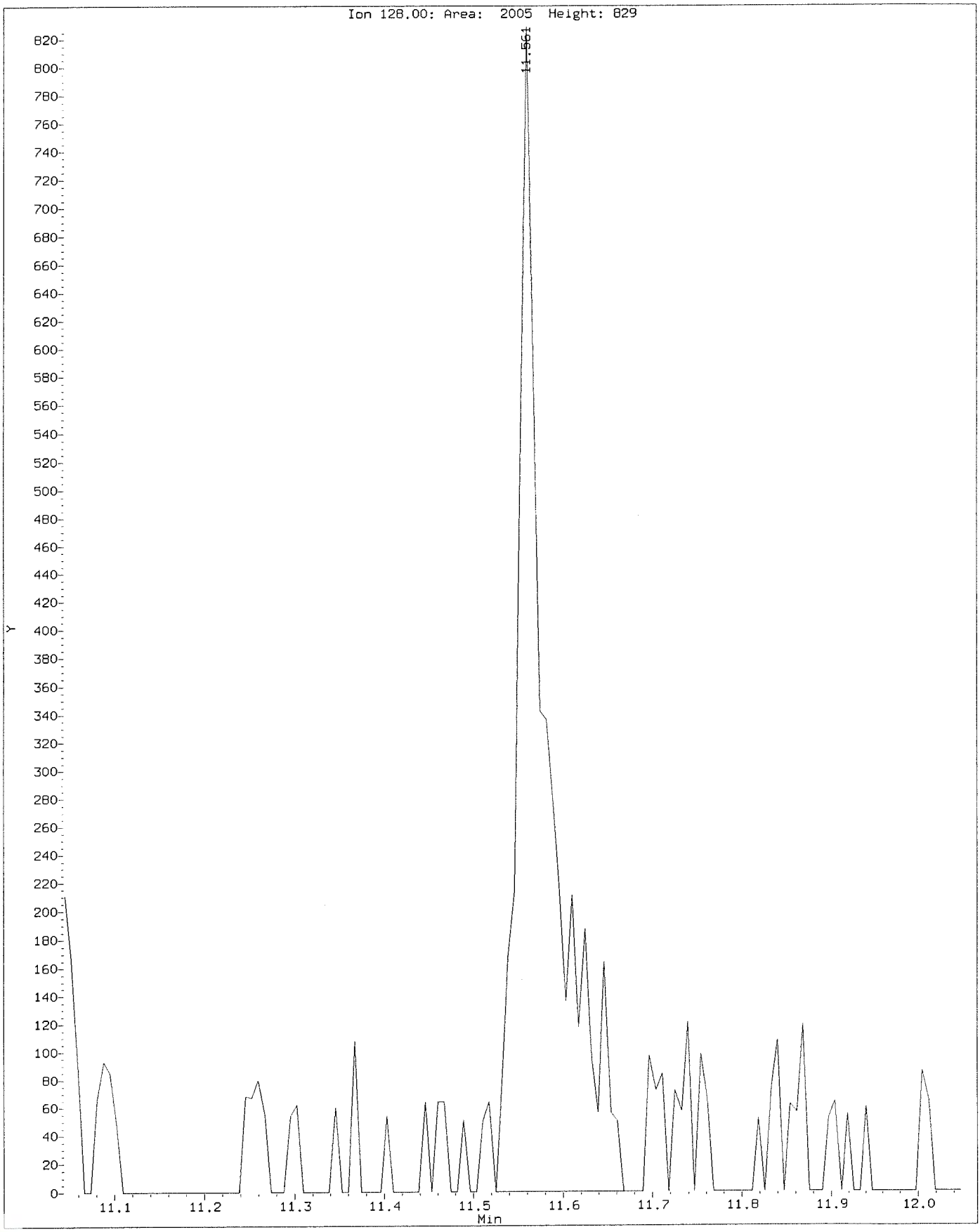


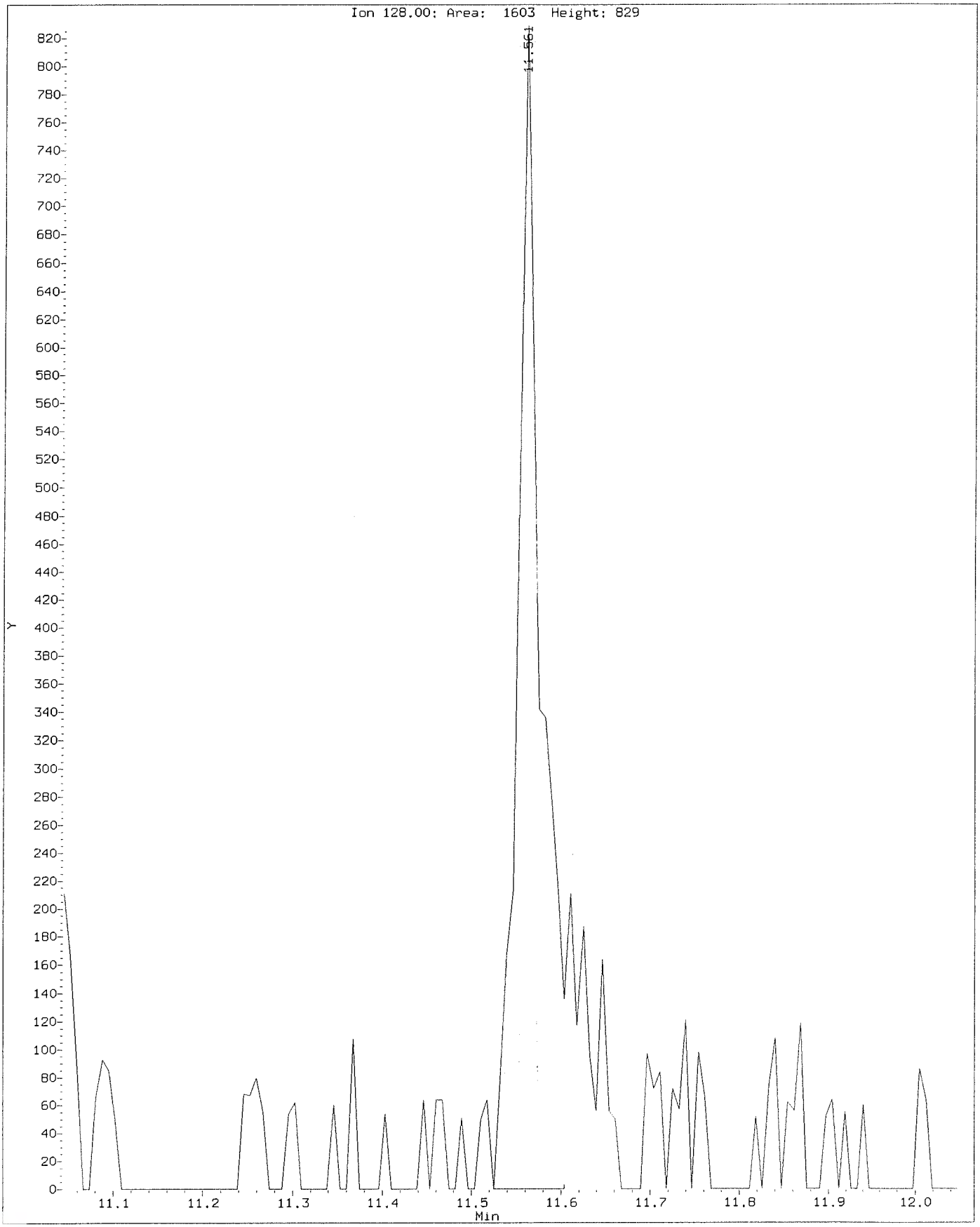
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Injection Date: 13-JUL-2020 11:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071304.D
Injection Date: 13-JUL-2020 11:42
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071305.D Page 1
Report Date: 13-Aug-2020 14:50

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 13-JUL-2020 12:06
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:50 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 11:42 Cal File: X071304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

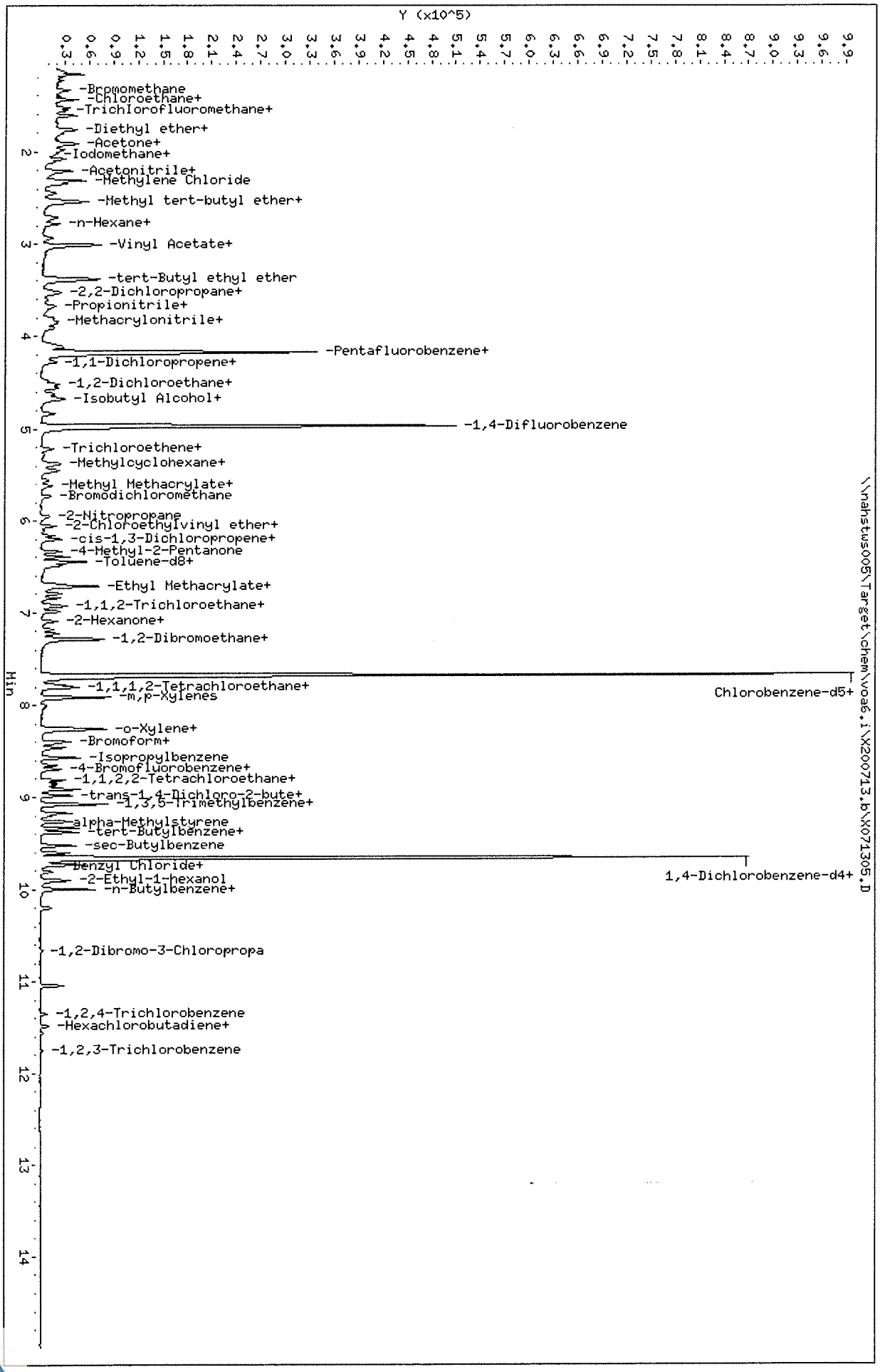
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.182 | 4.182 | (1.000) | 241171 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 361641 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 414402 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 191002 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.981) | 5716 | 2.00000 | 2.04(a) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.072) | 6078 | 2.00000 | 1.99(a) |
| $ 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 20027 | 2.00000 | 1.84(a) |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 7984 | 2.00000 | 1.47(a) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 6232 | 2.00000 | 1.94(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.096 | 4.096 | (0.979) | 8965 | 2.00000 | 2.04(a) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 7313 | 2.00000 | 2.07(a) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 4901 | 2.00000 | 1.93(a) |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.700) | 14670 | 2.00000 | 2.17(a) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.459) | 4557 | 2.00000 | 2.15(a) |
| 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 5660 | 2.00000 | 1.67(a) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 1388 | 2.00000 | 2.14(a) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 6285 | 2.00000 | 2.02(aM) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.352 | 11.352 | (1.174) | 2468 | 2.00000 | 2.01(a) |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 21231 | 2.00000 | 2.02(a) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 578 | 2.00000 | 3.06(aM) |
| 57 1,2-Dibromoethane | 107 | 7.270 | 7.270 | (0.948) | 6087 | 2.00000 | 1.99(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 10896 | 2.00000 | 2.04(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071305.D Page 2
Report Date: 13-Aug-2020 14:50

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 8907 | 2.00000 | 2.06(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 5959 | 2.00000 | 1.78(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 21148 | 2.00000 | 2.03(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 11839 | 2.00000 | 2.02(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 10164 | 2.00000 | 1.87(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 11847 | 2.00000 | 1.98(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.841) | 9767 | 2.00000 | 2.28(a) |
| 24 | 2-Butanone | 43 | 3.602 | 3.602 | (0.861) | 7754 | 4.00000 | 3.70(a) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 17797 | 2.00000 | 1.95(a) |
| 52 | 2-Hexanone | 43 | 7.098 | 7.098 | (0.925) | 14575 | 4.00000 | 3.71(a) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 21879 | 2.00000 | 2.05(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 18754 | 2.00000 | 1.84(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 19710 | 4.00000 | 3.48(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.473) | 11772 | 4.00000 | 3.88(a) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 18885 | 2.00000 | 1.92(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 7409 | 2.00000 | 2.11(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.909) | 3937 | 2.00000 | 2.30(a) |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 7307 | 2.00000 | 2.00(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 3980 | 2.00000 | 1.73(Ta) |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 6118 | 2.00000 | 2.66(aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.495) | 29553 | 4.00000 | 4.44(a) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 5940 | 2.00000 | 1.74(aH) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 16780 | 2.00000 | 2.03(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.336) | 4911 | 2.00000 | 2.31(a) |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.937) | 11075 | 2.00000 | 2.09(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 11467 | 2.00000 | 3.91(aM) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.538 | 3.538 | (0.846) | 6846 | 2.00000 | 2.21(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 8453 | 2.00000 | 2.00(a) |
| 55 | Dibromochloromethane | 129 | 7.184 | 7.184 | (0.937) | 6412 | 2.00000 | 1.90(a) |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 3694 | 2.00000 | 2.07(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.233) | 5070 | 2.00000 | 1.99(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 8722 | 2.00000 | 2.02(a) |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 1878 | 2.00000 | 1.98(a) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 24840 | 2.00000 | 1.92(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 20300 | 4.00000 | 3.93(a) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.551) | 8593 | 2.00000 | 1.73(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 17558 | 2.00000 | 1.96(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 28485 | 2.00000 | 1.95(a) |
| 92 | Naphthalene | 128 | 11.560 | 11.560 | (1.196) | 3601 | 2.00000 | 3.04(aM) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 9756 | 2.00000 | 1.87(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 23695 | 2.00000 | 2.00(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 16920 | 2.00000 | 1.87(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 17097 | 2.00000 | 2.06(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 4994 | 2.00000 | 1.96(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 24432 | 2.00000 | 1.88(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.606) | 5911 | 2.00000 | 2.27(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 8684 | 2.00000 | 2.23(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 5153 | 2.00000 | 1.97(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 8722 | 2.00000 | 2.18(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.274) | 8298 | 2.00000 | 2.09(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

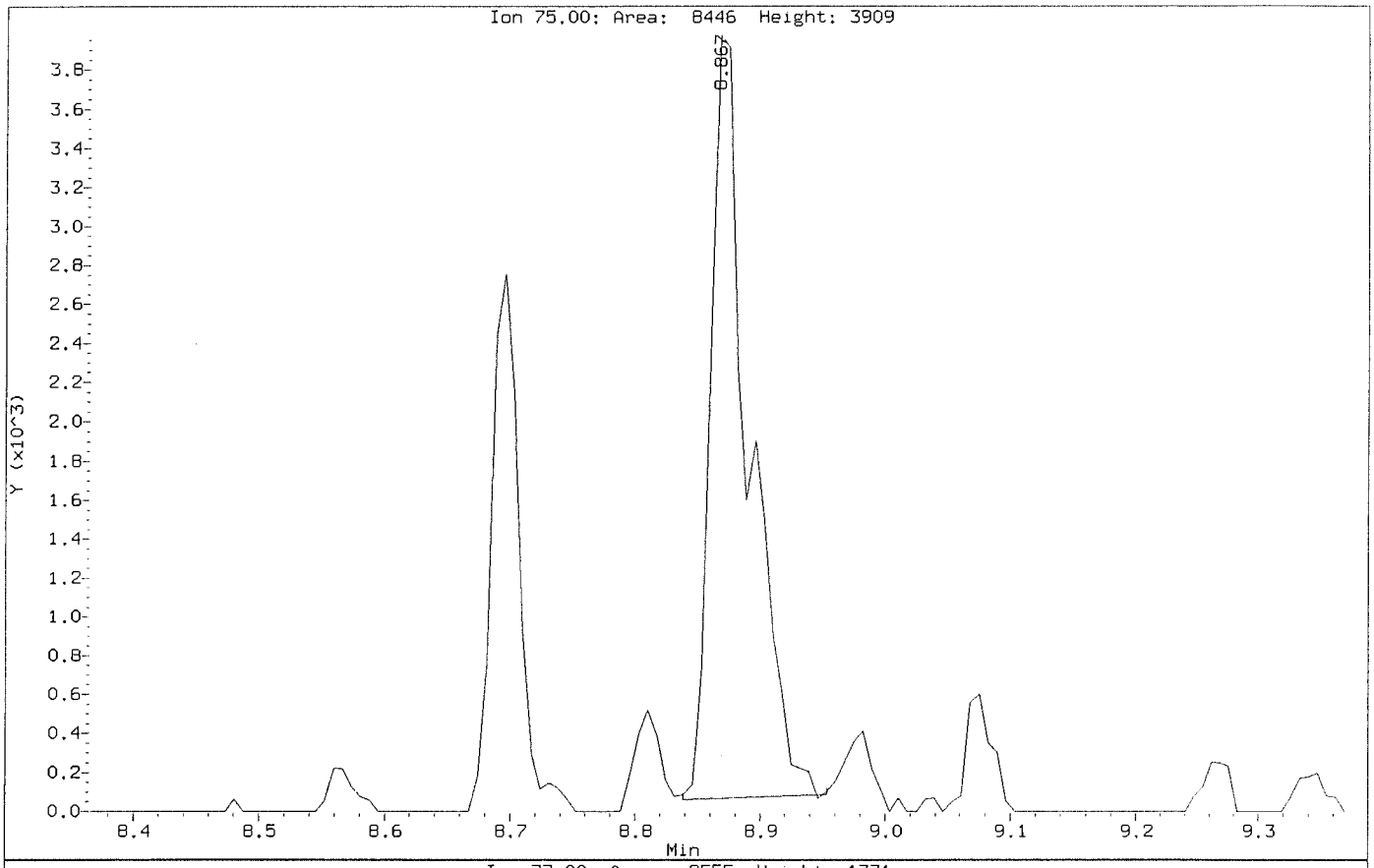


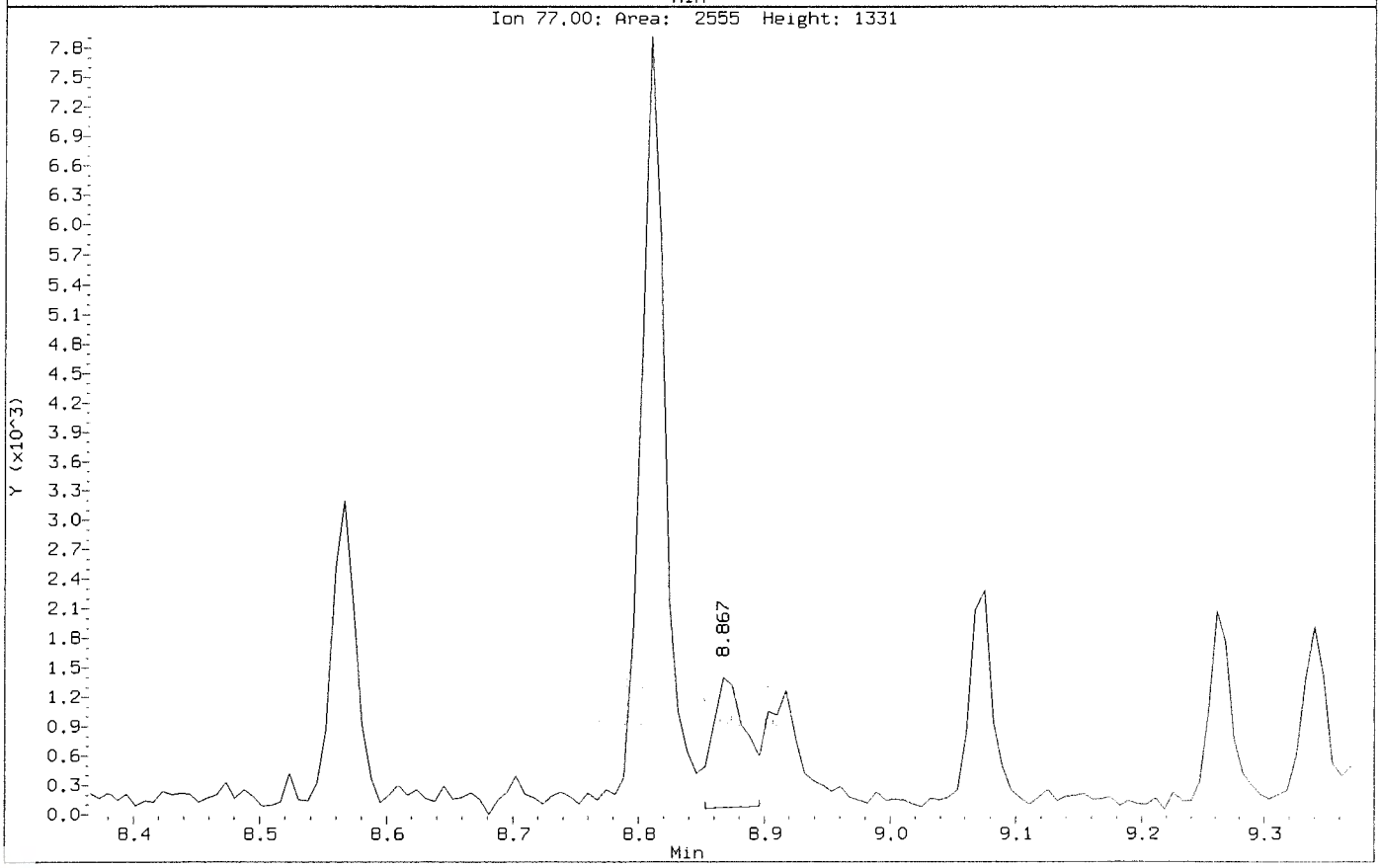

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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071305.D
Injection Date: 13-JUL-2020 12:06
Instrument: voa6.i
Client Sample ID: VSTD002

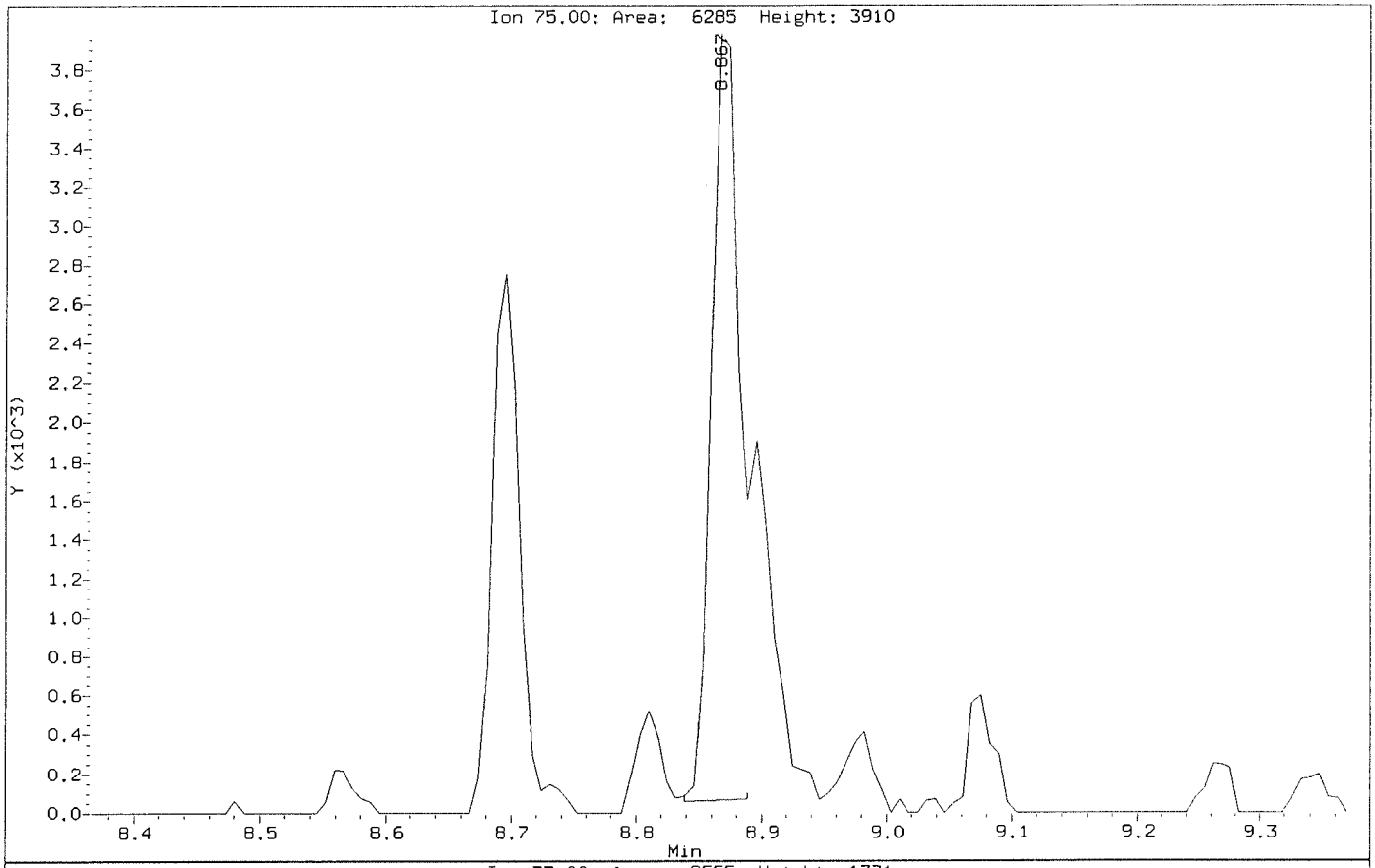
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CAS Number: 96-18-4

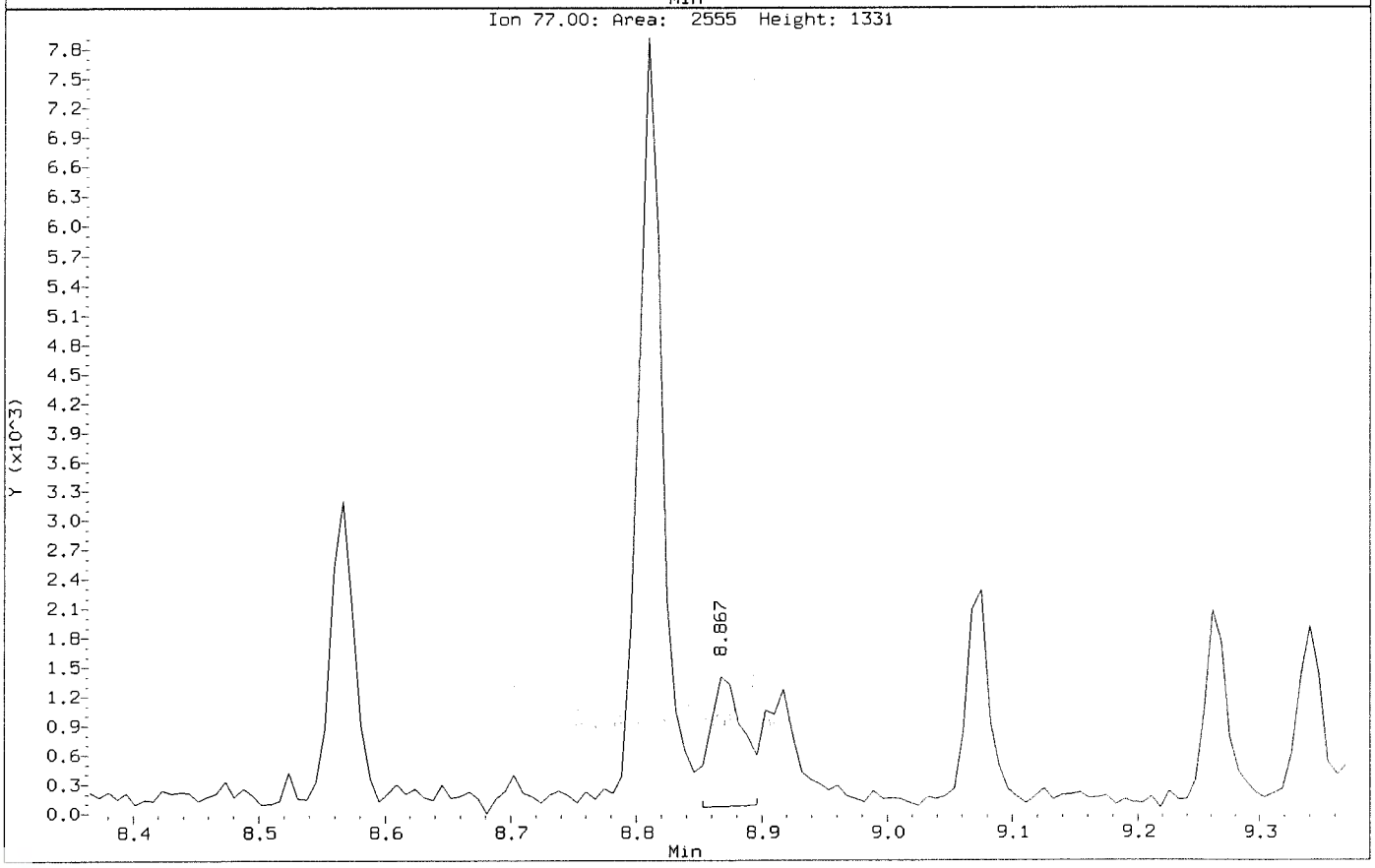


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Instrument: voa6.i
Client Sample ID: VSTD002

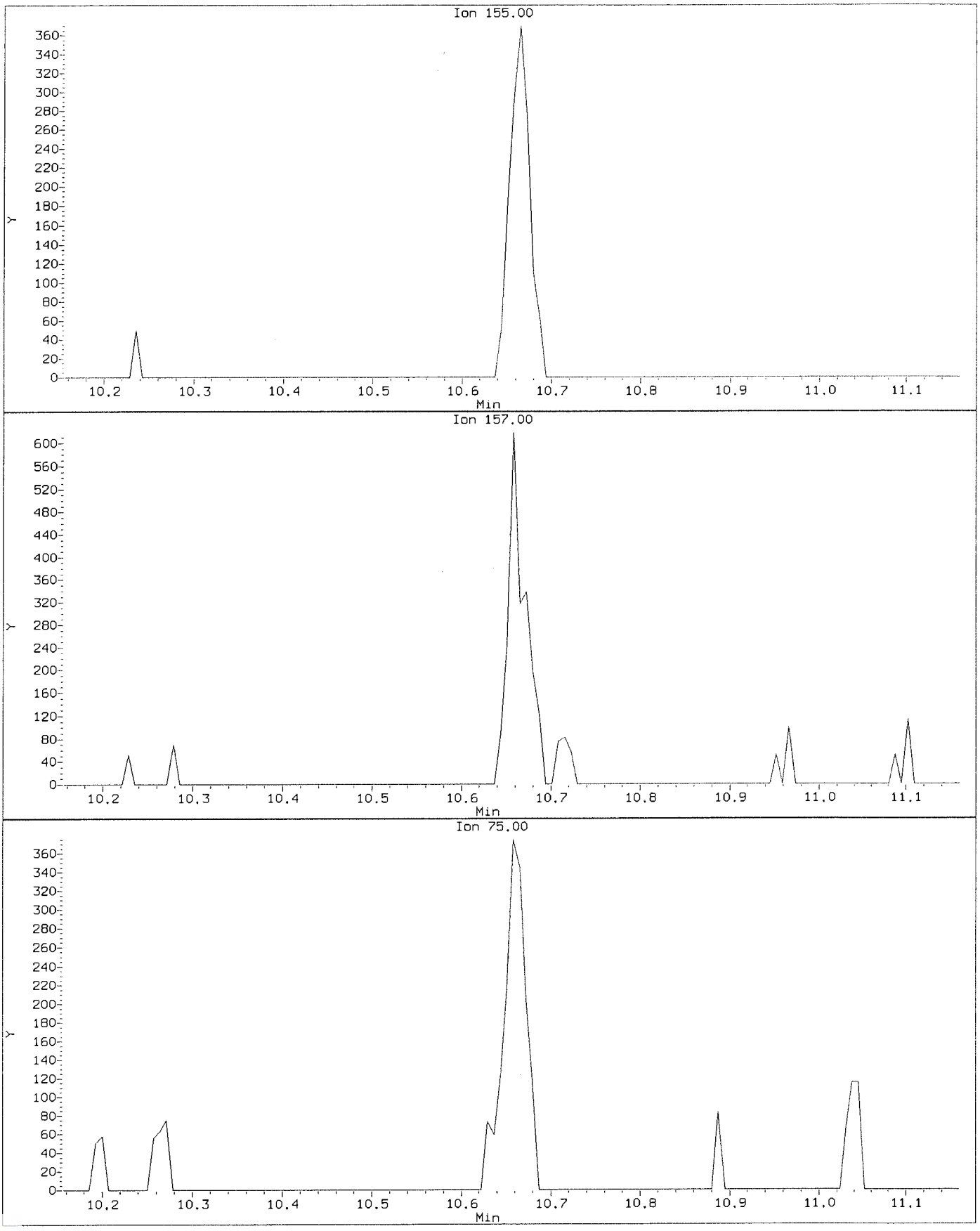
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



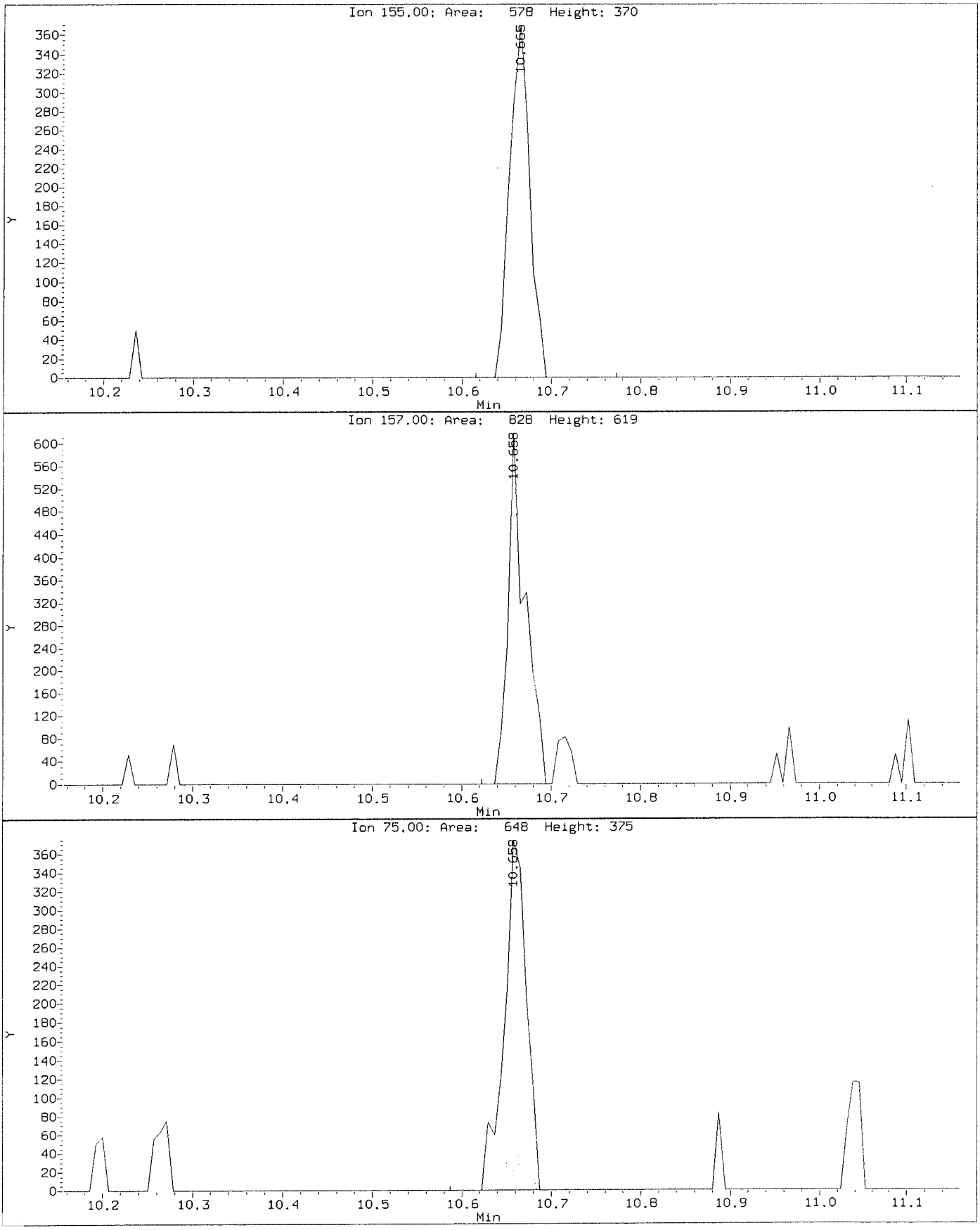
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Injection Date: 13-JUL-2020 12:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



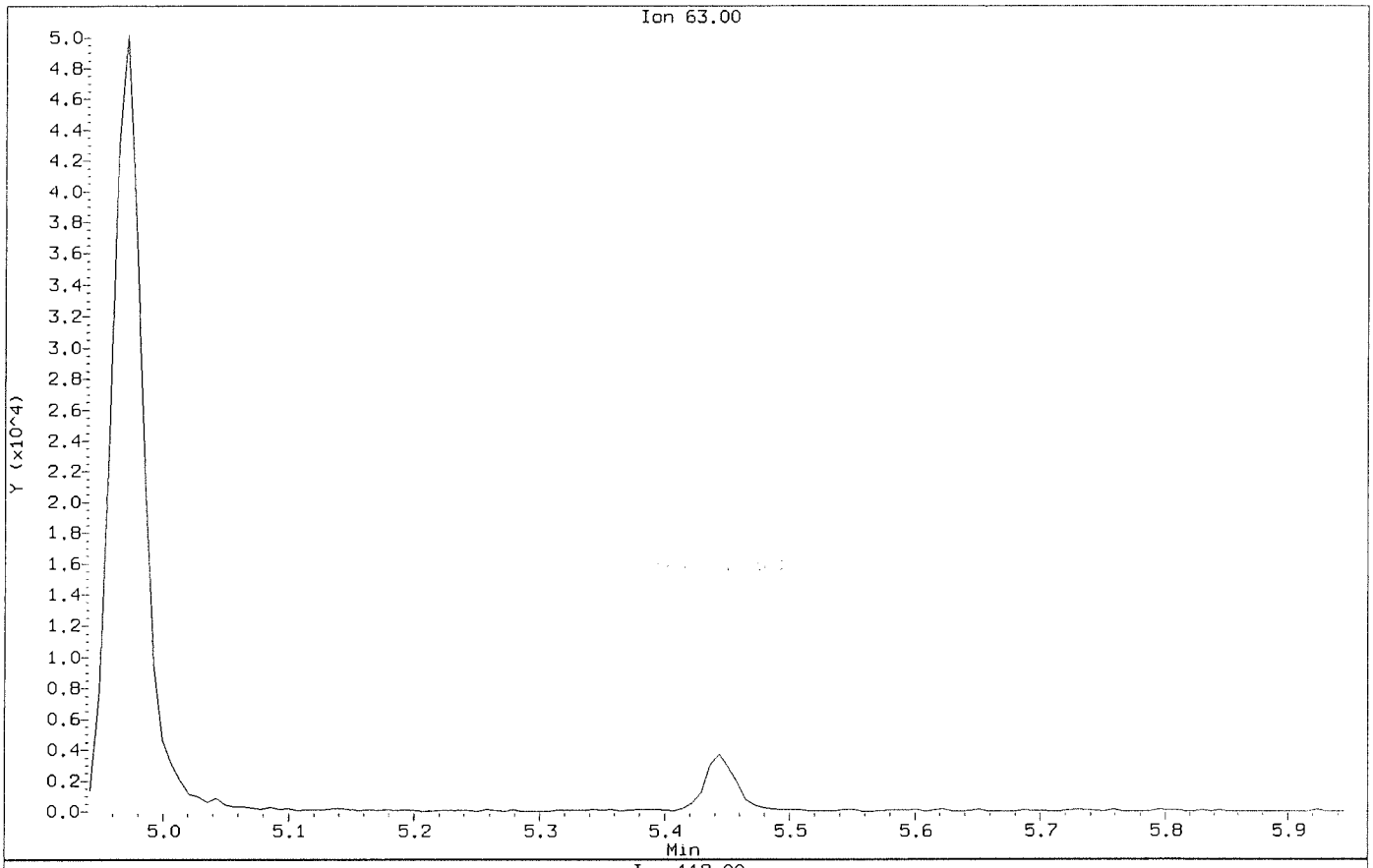
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Instrument: voa6.i
Client Sample ID: VSTD002

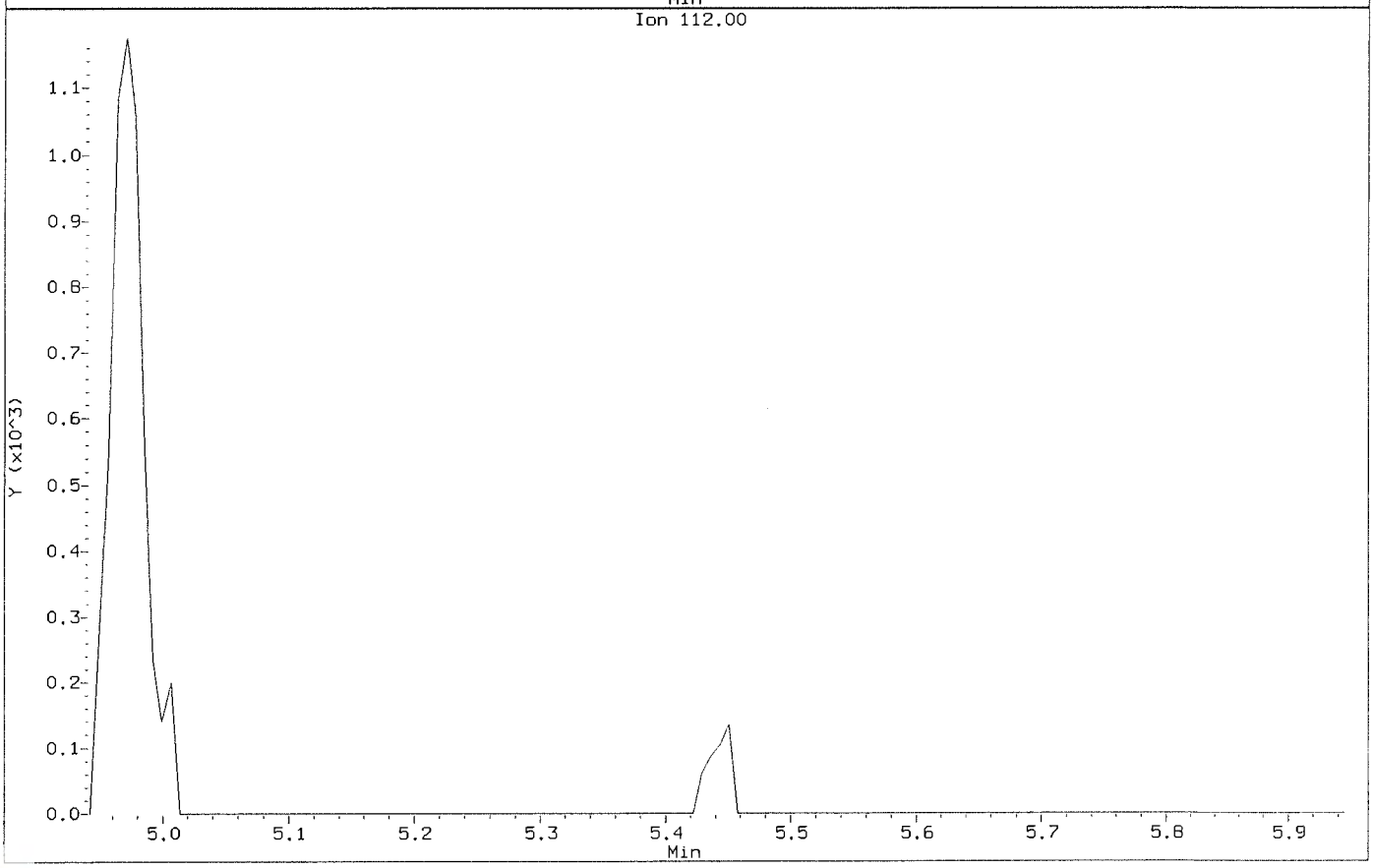
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 13-JUL-2020 12:06
Instrument: voa6.i
Client Sample ID: VSTD002

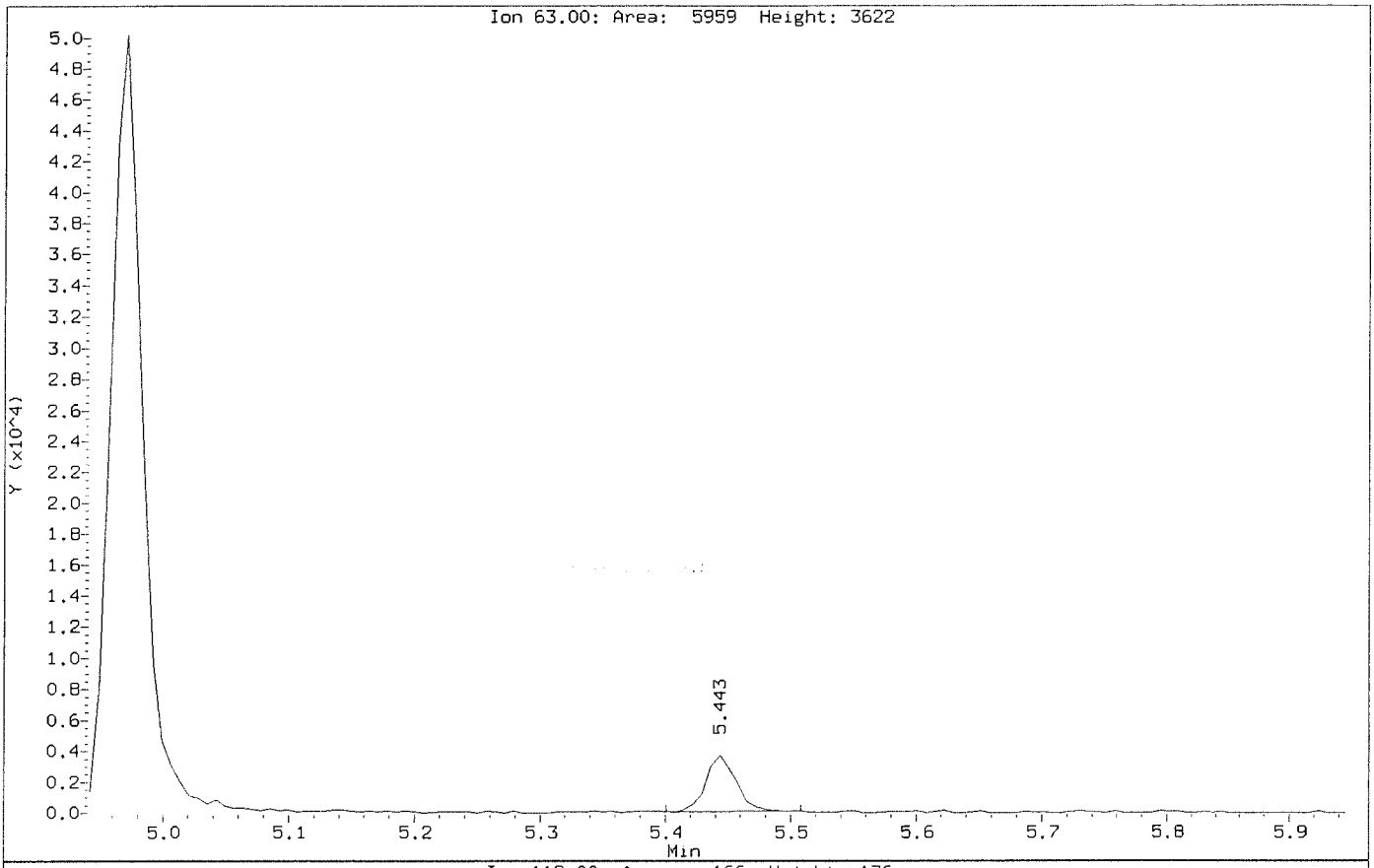
Compound: 1,2-Dichloropropane
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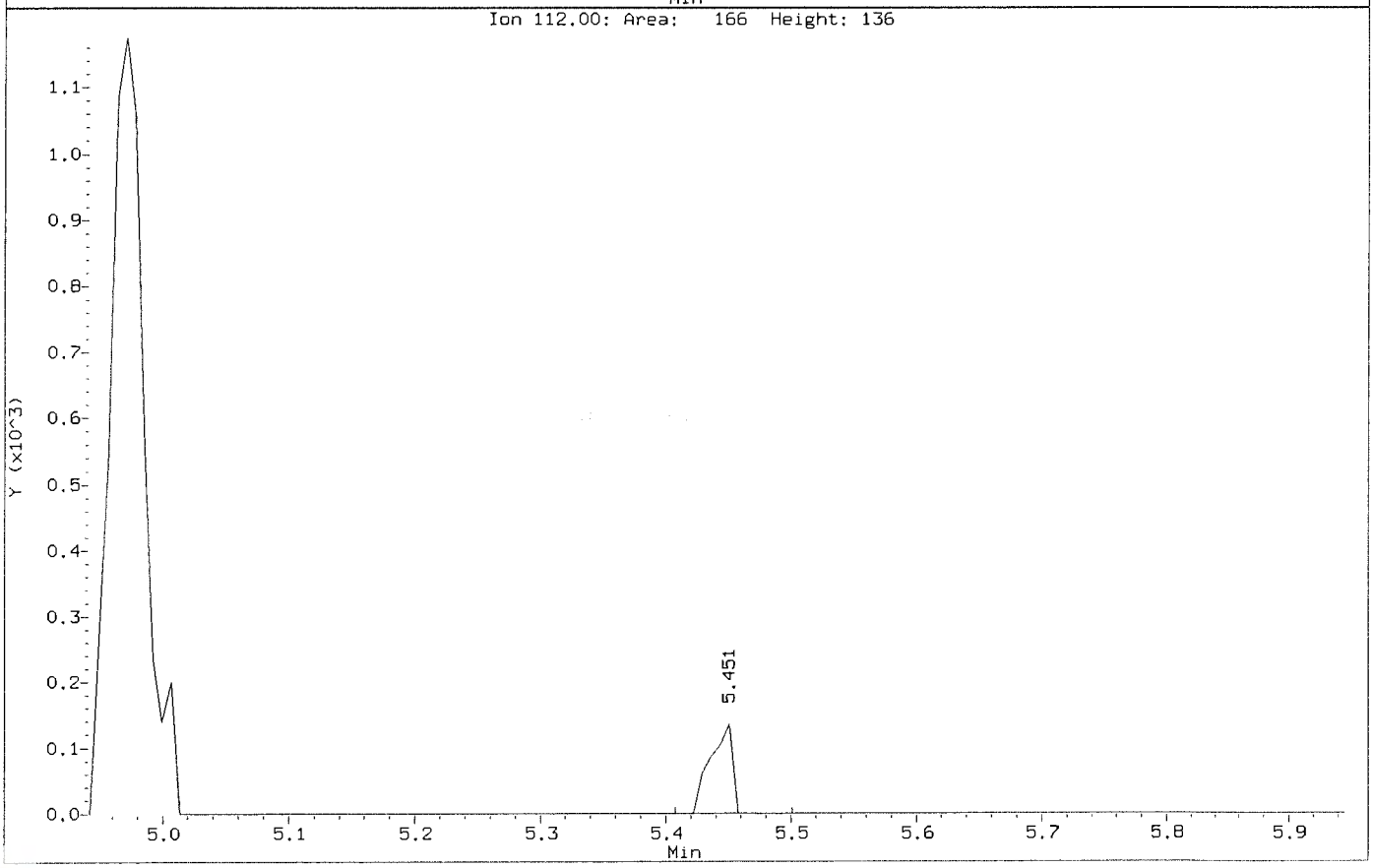


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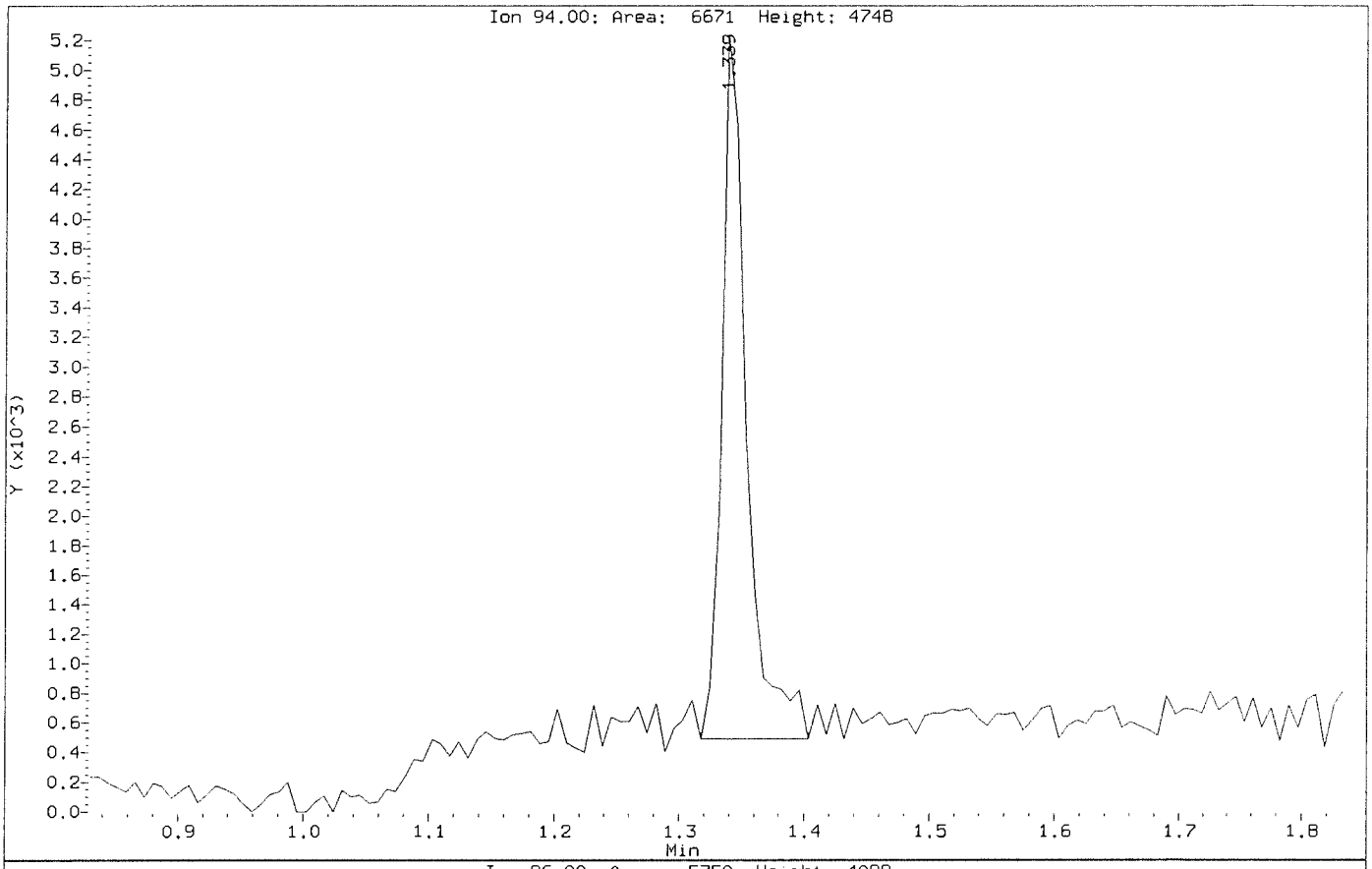
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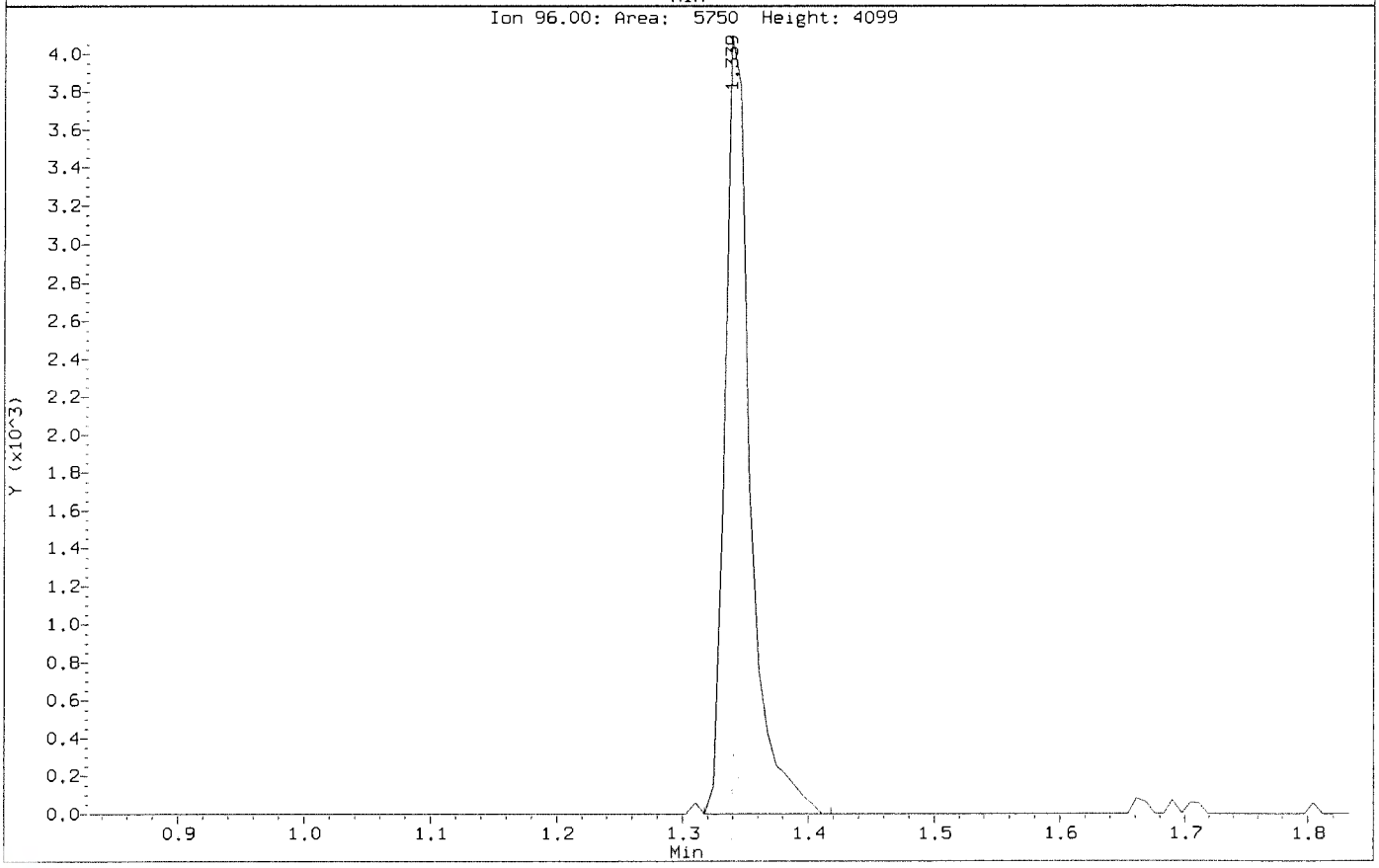


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Client Sample ID: VSTD002

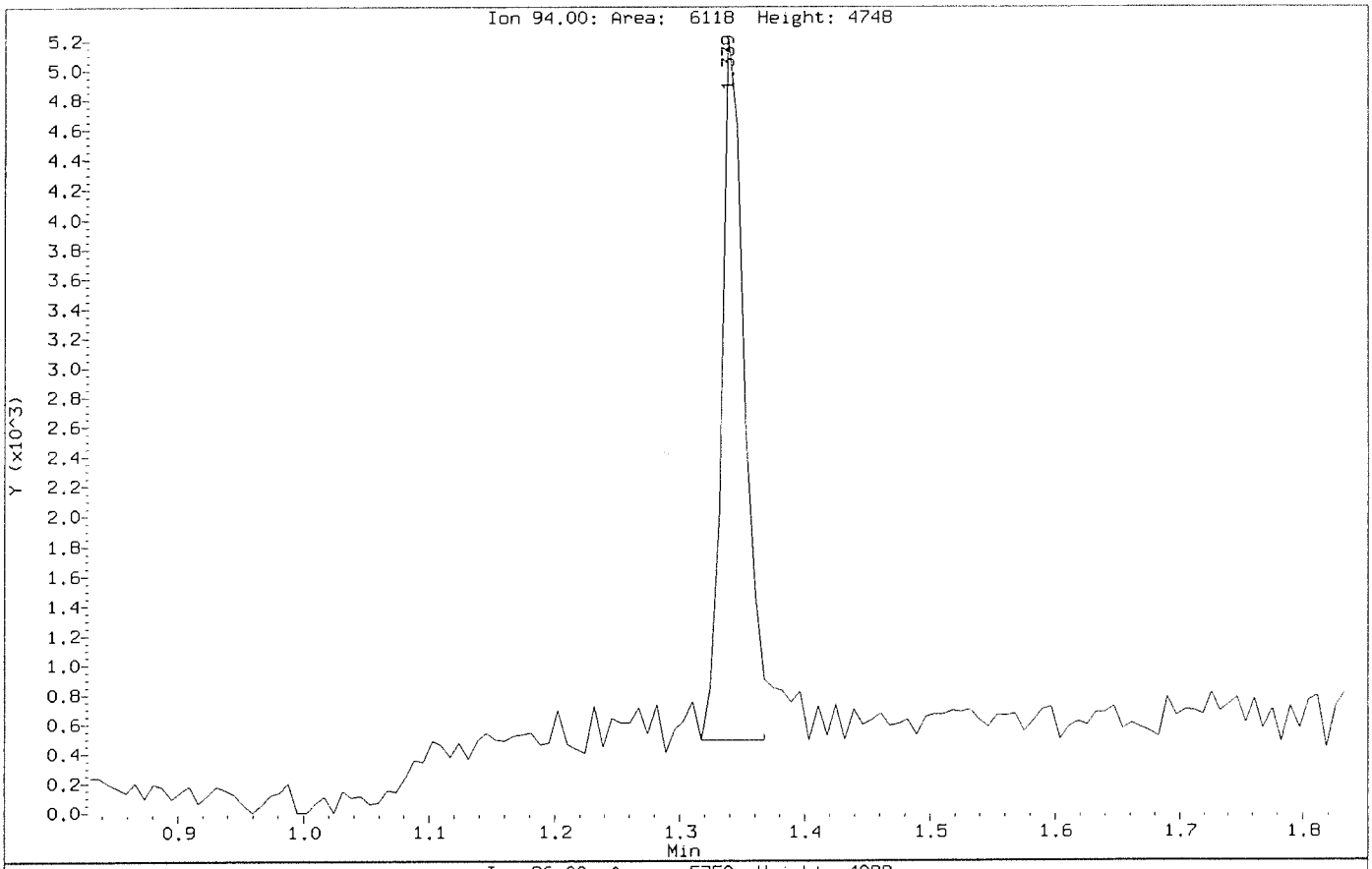
Compound: Bromomethane
CAS Number: 74-83-9

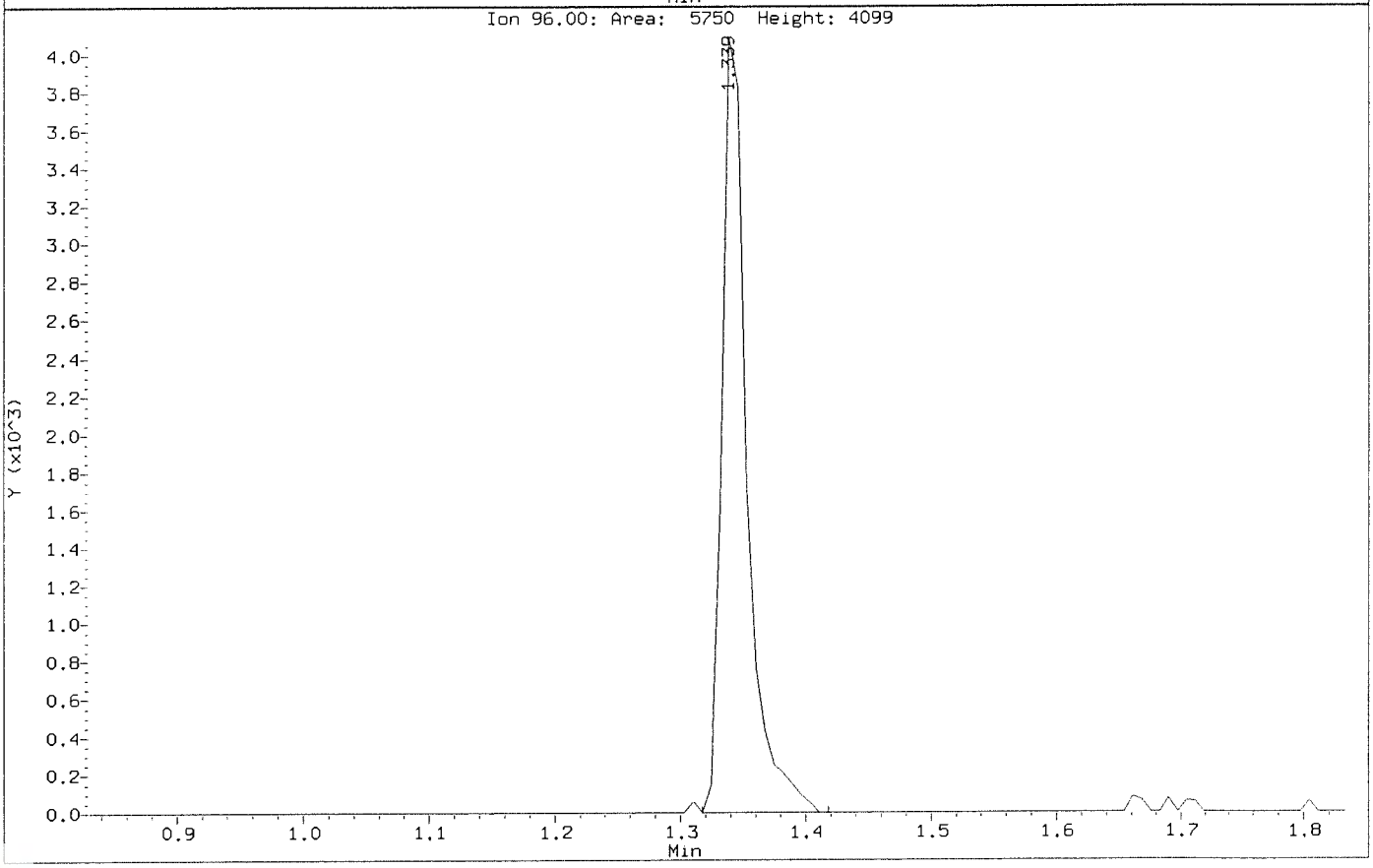


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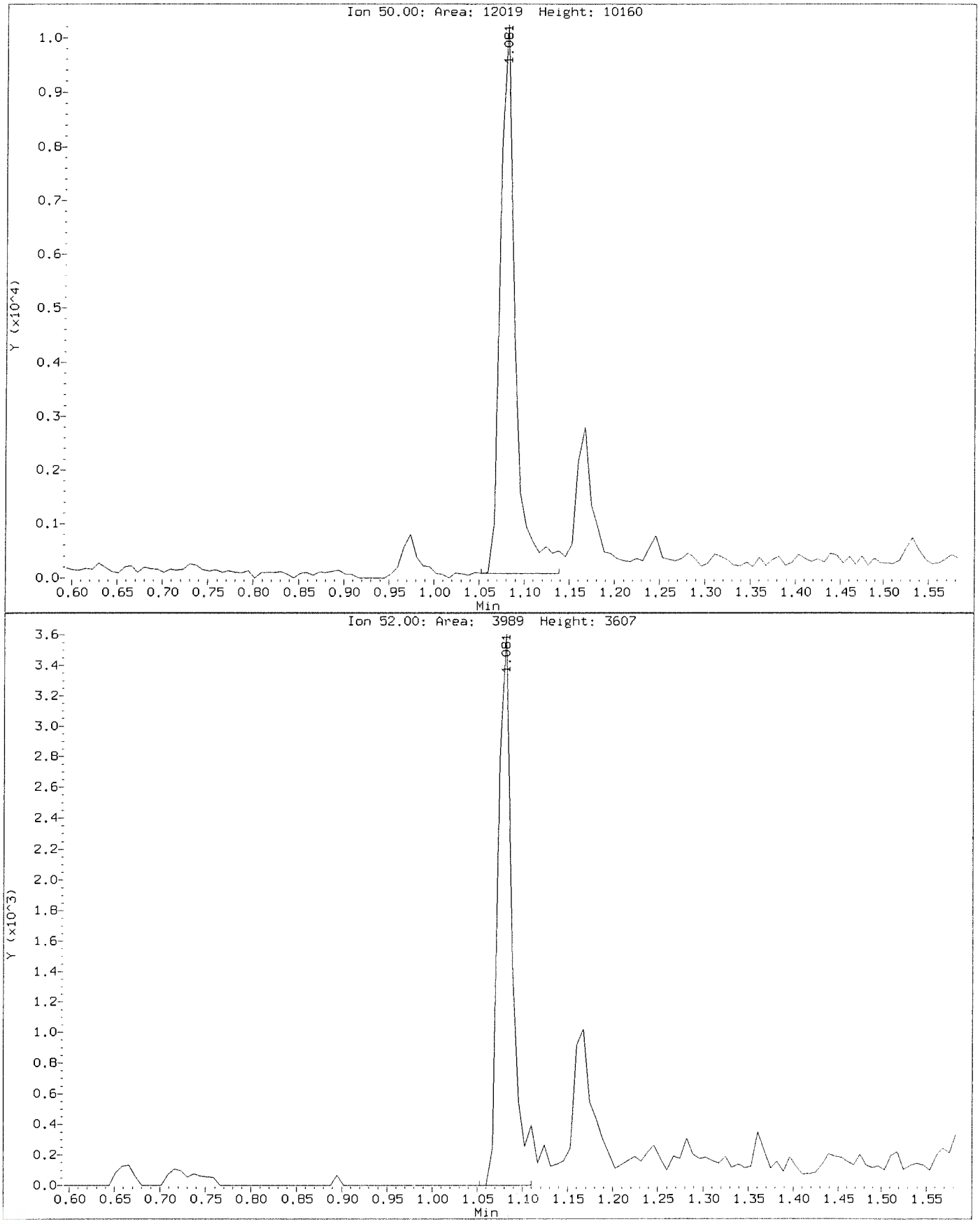
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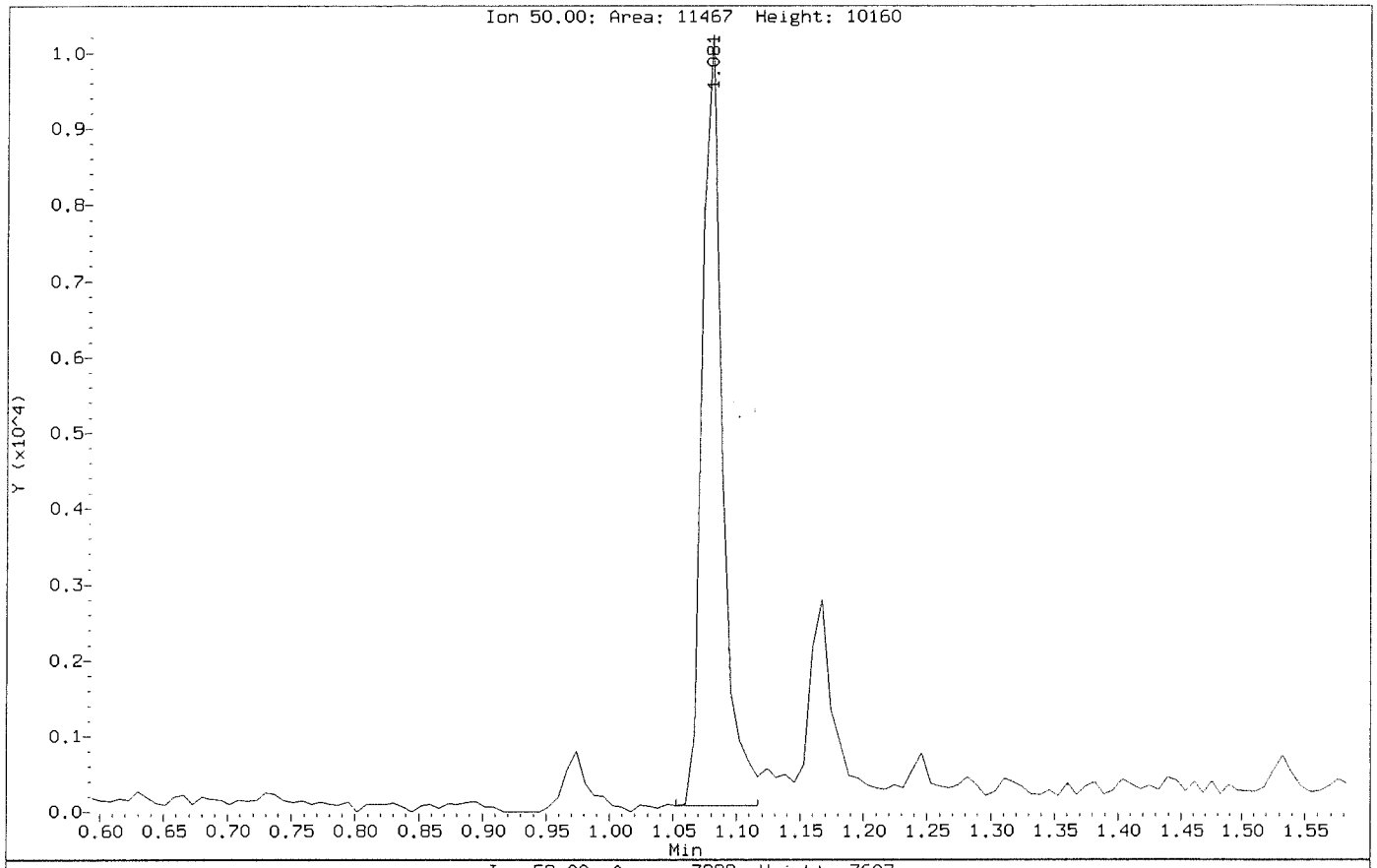
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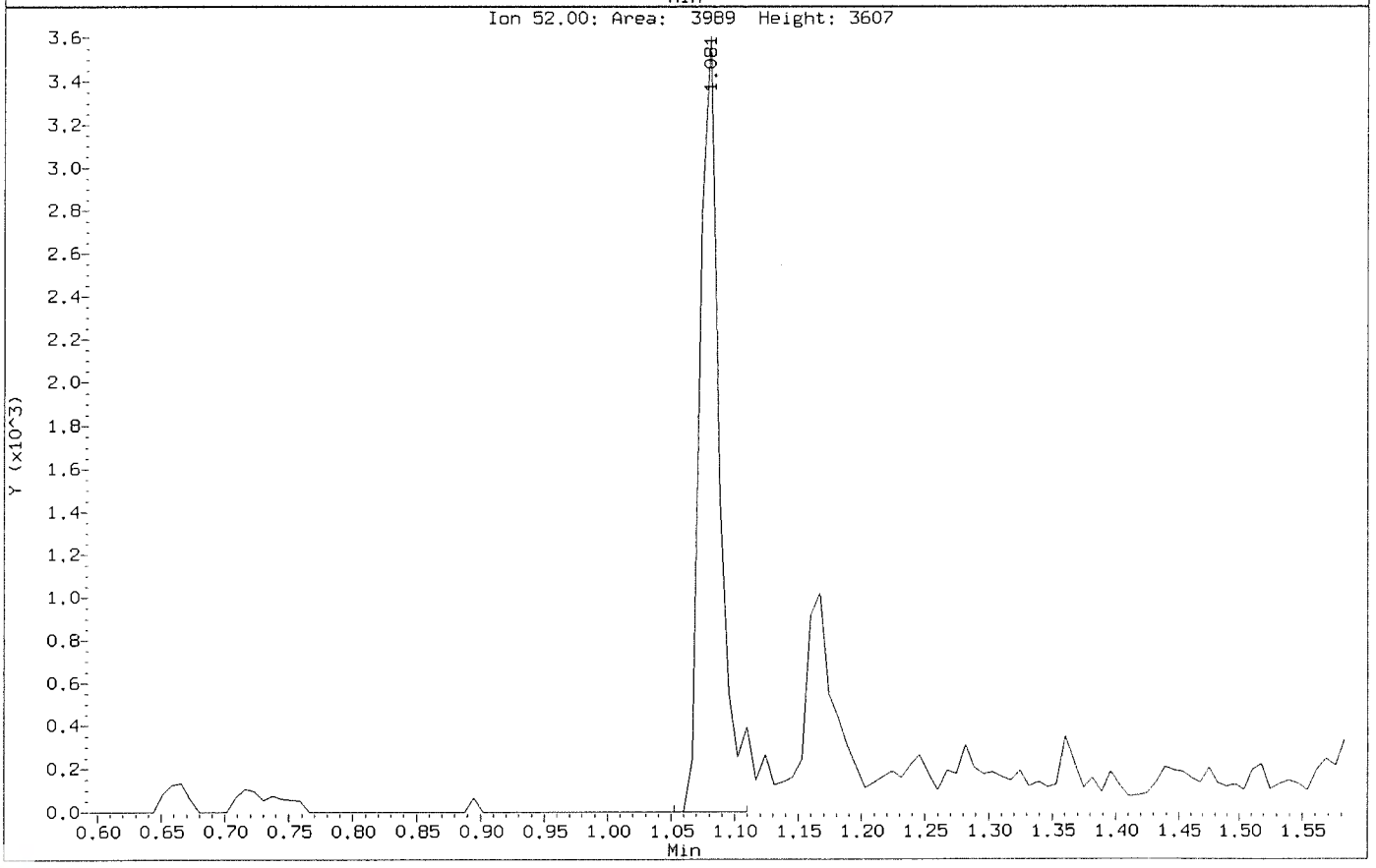
Compound: Chloromethane
CAS Number: 74-87-3



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Instrument: voa6.i
Client Sample ID: VSTD002

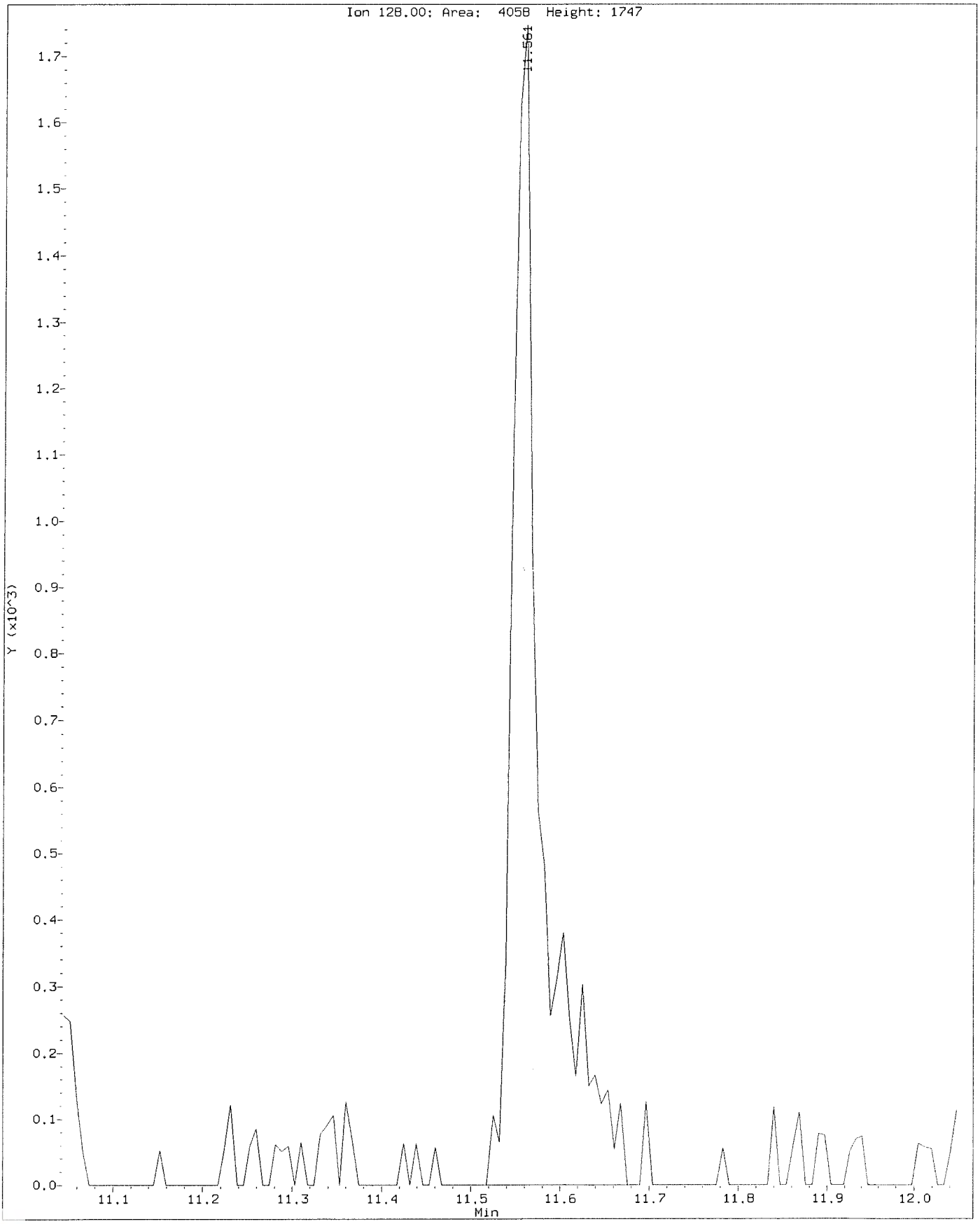
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CAS Number: 74-87-3



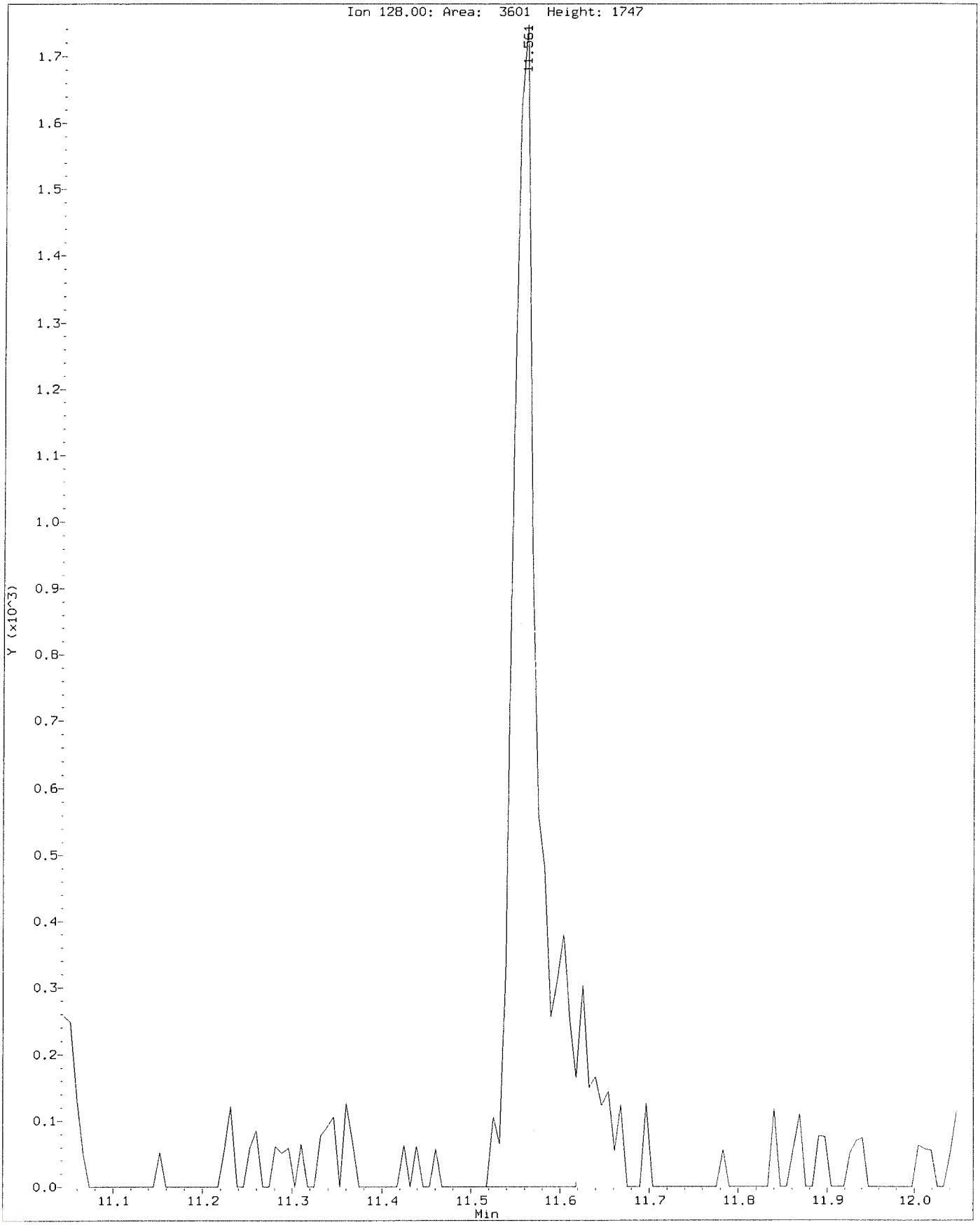
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Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071305.D
Injection Date: 13-JUL-2020 12:06
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071306.D  Page 1
Report Date: 13-Aug-2020 14:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071306.D
Lab Smp Id: VSTD005  Client Smp ID: VSTD005
Inj Date  : 13-JUL-2020 12:30
Operator  : PC  Inst ID: voa6.i
Smp Info  : VSTD005;VSTD005;1;5;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:51 voa6.i  Quant Type: ISTD
Cal Date  : 13-JUL-2020 12:06  Cal File: X071305.D
Als bottle: 7  Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

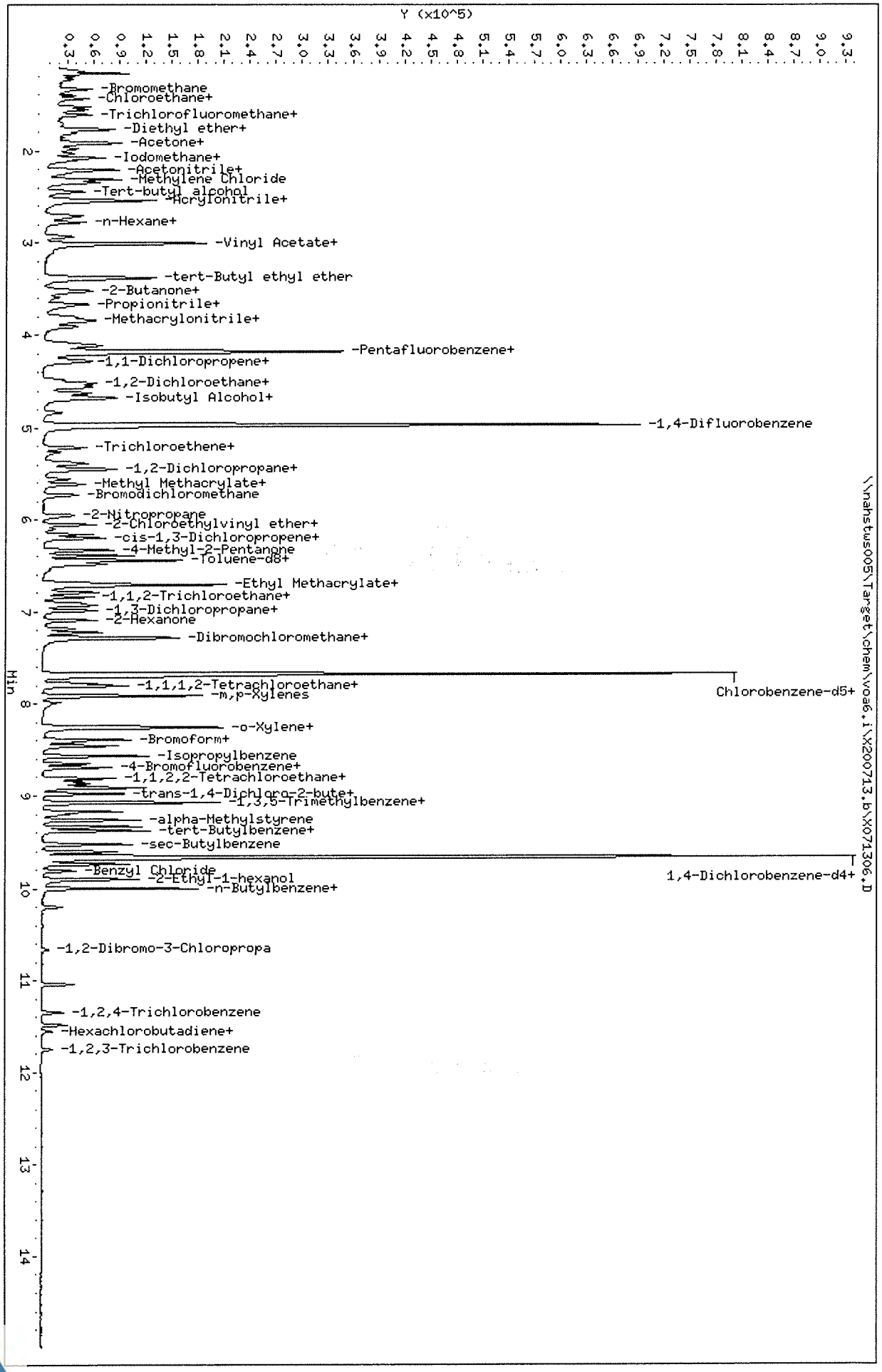
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 273643 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 442506 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 340884 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 193290 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 15802 | 5.00000 | 5.10 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.070) | 19086 | 5.00000 | 4.92(a) |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 55374 | 5.00000 | 6.20 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 21438 | 5.00000 | 6.03 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 13279 | 5.00000 | 5.04 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 23973 | 5.00000 | 4.80(a) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 19151 | 5.00000 | 5.36 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 13282 | 5.00000 | 6.36 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 36806 | 5.00000 | 4.80(a) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 11848 | 5.00000 | 4.94(a) |
| 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 19974 | 5.00000 | 4.81(a) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 3665 | 5.00000 | 5.60(M) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 16006 | 5.00000 | 5.09(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.345 | (1.173) | 7130 | 5.00000 | 5.75 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 53238 | 5.00000 | 5.00 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 1652 | 5.00000 | 6.24 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 13057 | 5.00000 | 5.20 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 27071 | 5.00000 | 5.02 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071306.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 22279 | 5.00000 | 4.23(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 20237 | 5.00000 | 4.95(a) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 50432 | 5.00000 | 4.80(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 29277 | 5.00000 | 4.94(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 27428 | 5.00000 | 6.14 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 30204 | 5.00000 | 5.00 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 22857 | 5.00000 | 4.72(a) |
| 24 | 2-Butanone | 43 | 3.588 | 3.588 | (0.856) | 23110 | 10.0000 | 9.72 |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 45170 | 5.00000 | 4.90(a) |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 40421 | 10.0000 | 12.51 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 52254 | 5.00000 | 4.85(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 47285 | 5.00000 | 4.59(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 57676 | 10.0000 | 12.39 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 23758 | 10.0000 | 10.05 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 51209 | 5.00000 | 4.26(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 17798 | 5.00000 | 5.02 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 9718 | 5.00000 | 5.02 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 22114 | 5.00000 | 4.96(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 11138 | 5.00000 | 5.90 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 12533 | 5.00000 | 5.64 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 75503 | 10.0000 | 10.01 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 20691 | 5.00000 | 4.97(aH) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 33889 | 5.00000 | 4.99(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 11173 | 5.00000 | 4.64(a) |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.935) | 30449 | 5.00000 | 5.06 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 28703 | 5.00000 | 6.56 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 16456 | 5.00000 | 4.68(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 26646 | 5.00000 | 5.16 |
| 55 | Dibromochloromethane | 129 | 7.184 | 7.184 | (0.937) | 15706 | 5.00000 | 5.66 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 11029 | 5.00000 | 5.05 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 13524 | 5.00000 | 4.68(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 17551 | 5.00000 | 4.95(a) |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 4496 | 5.00000 | 4.69(a) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 62070 | 5.00000 | 5.85 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 41186 | 10.0000 | 9.71 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 18680 | 5.00000 | 4.58(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 41319 | 5.00000 | 4.57(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 71185 | 5.00000 | 4.83(a) |
| 92 | Naphthalene | 128 | 11.553 | 11.553 | (1.195) | 9070 | 5.00000 | 5.71(M) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 24863 | 5.00000 | 5.80 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 57543 | 5.00000 | 4.80(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 42901 | 5.00000 | 5.78 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 41611 | 5.00000 | 4.96(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 11030 | 5.00000 | 5.28 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 65015 | 5.00000 | 6.08 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 14734 | 5.00000 | 4.99(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 24385 | 5.00000 | 5.12 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 15147 | 5.00000 | 4.75(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 20912 | 5.00000 | 4.62(a) |
| 5 | Vinyl Chloride | 62 | 1.138 | 1.138 | (0.272) | 21041 | 5.00000 | 4.67(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

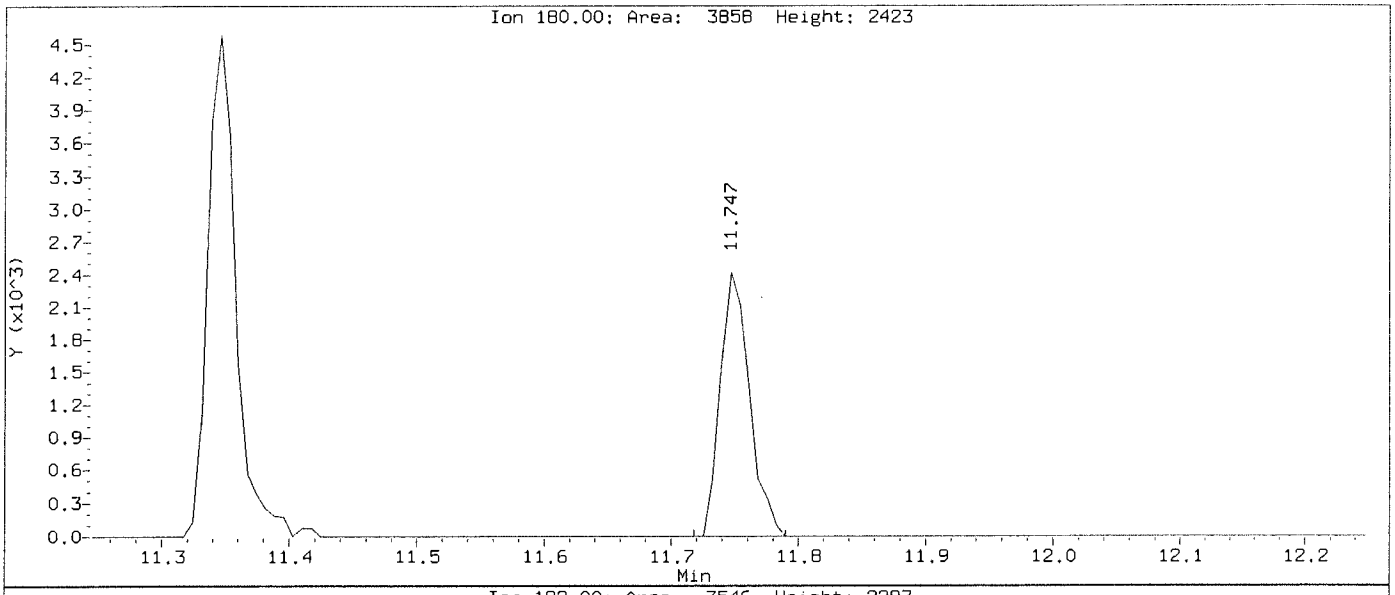


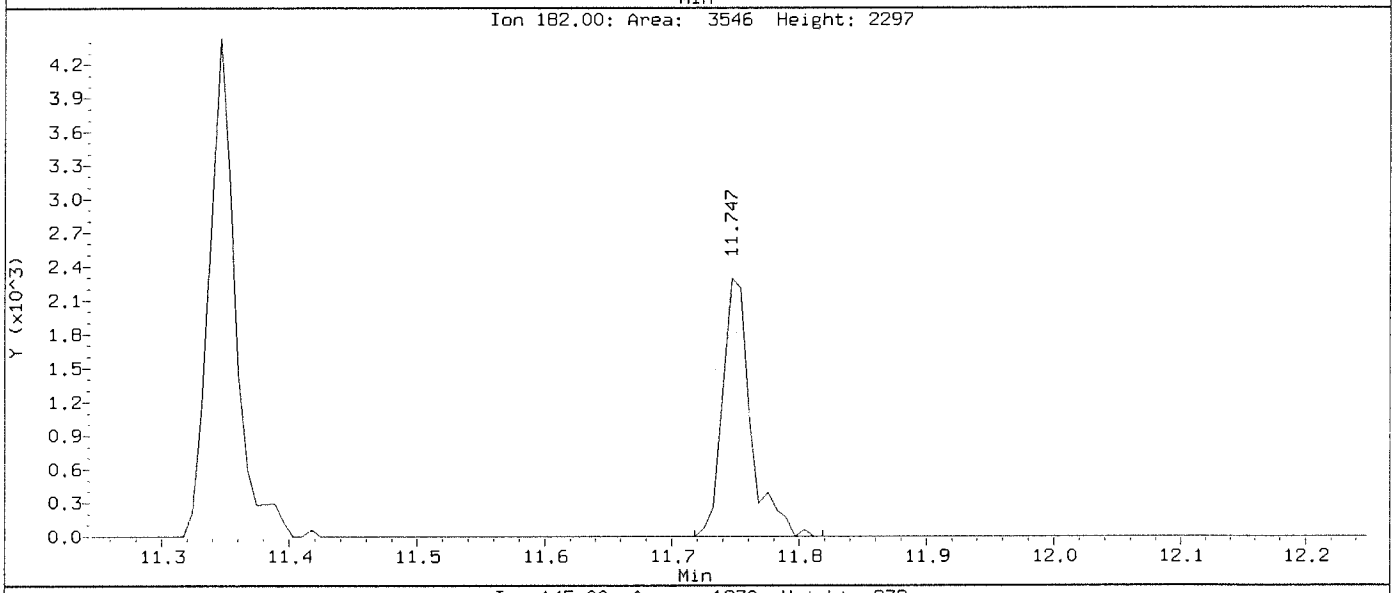

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Column phase: DB624

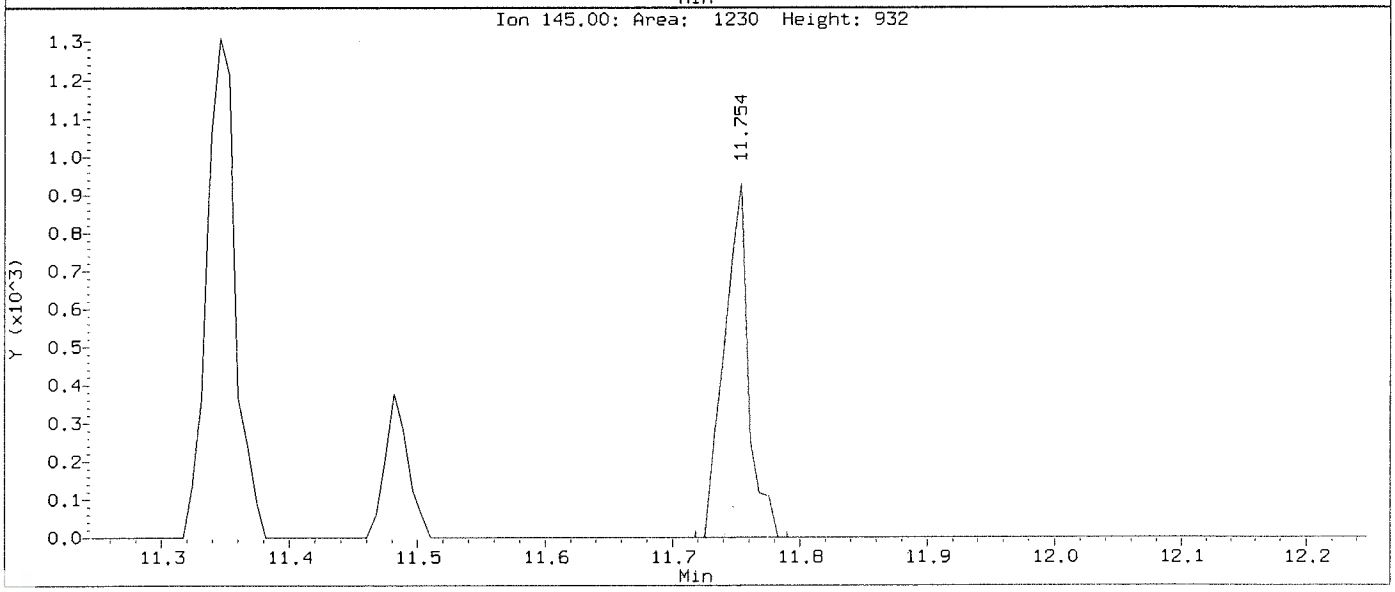
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Operator: PC
Column diameter: 0.18

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Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

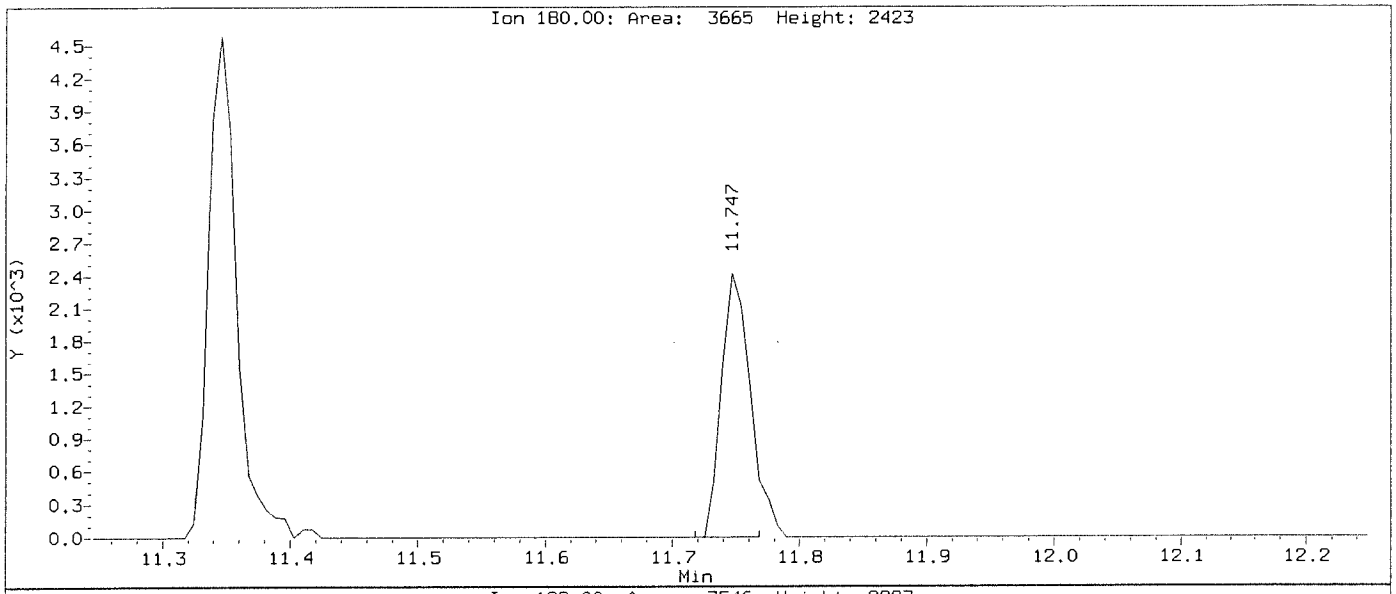


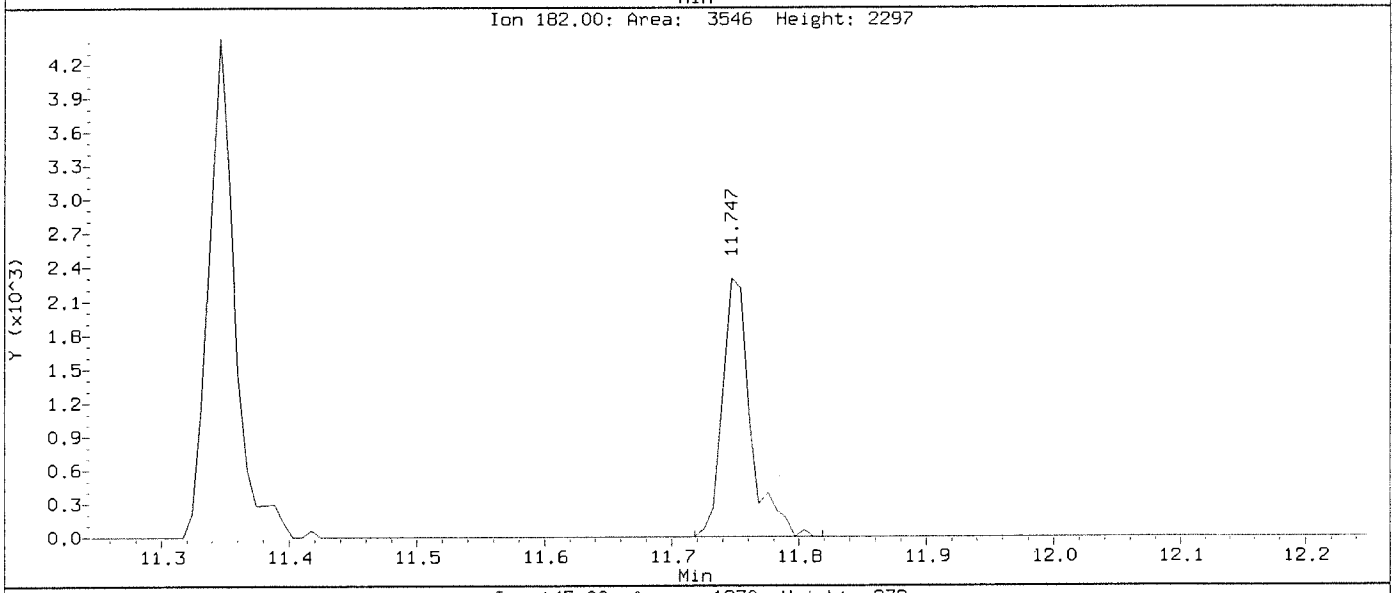



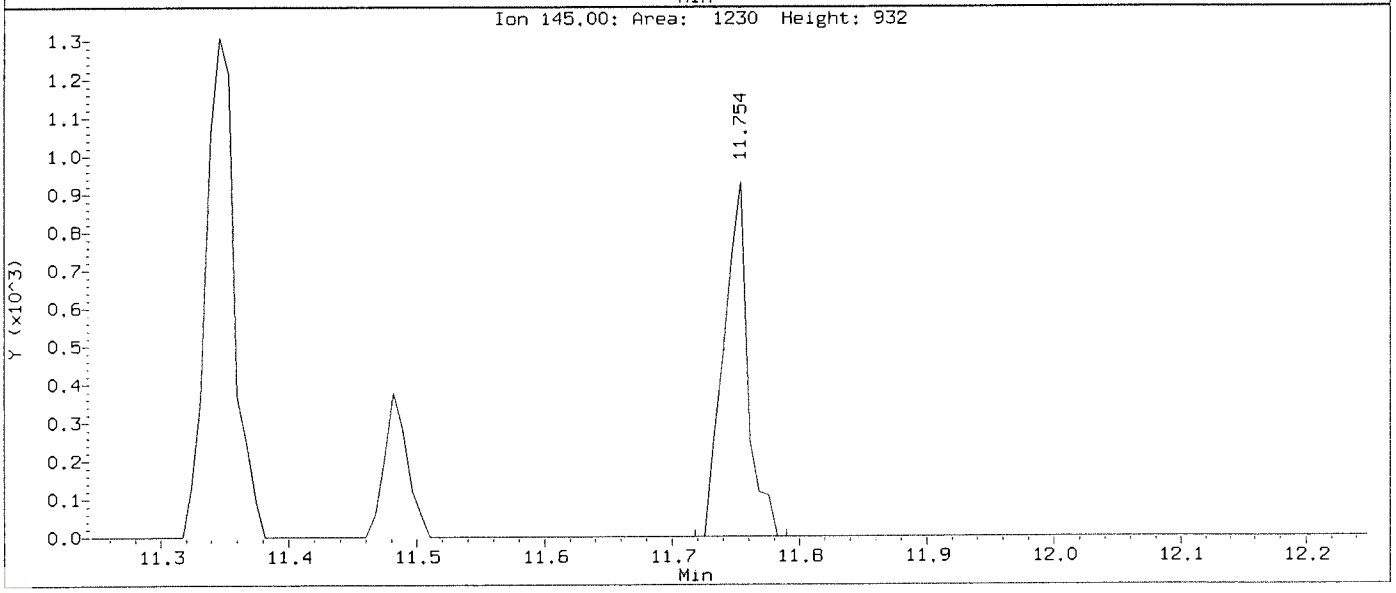



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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

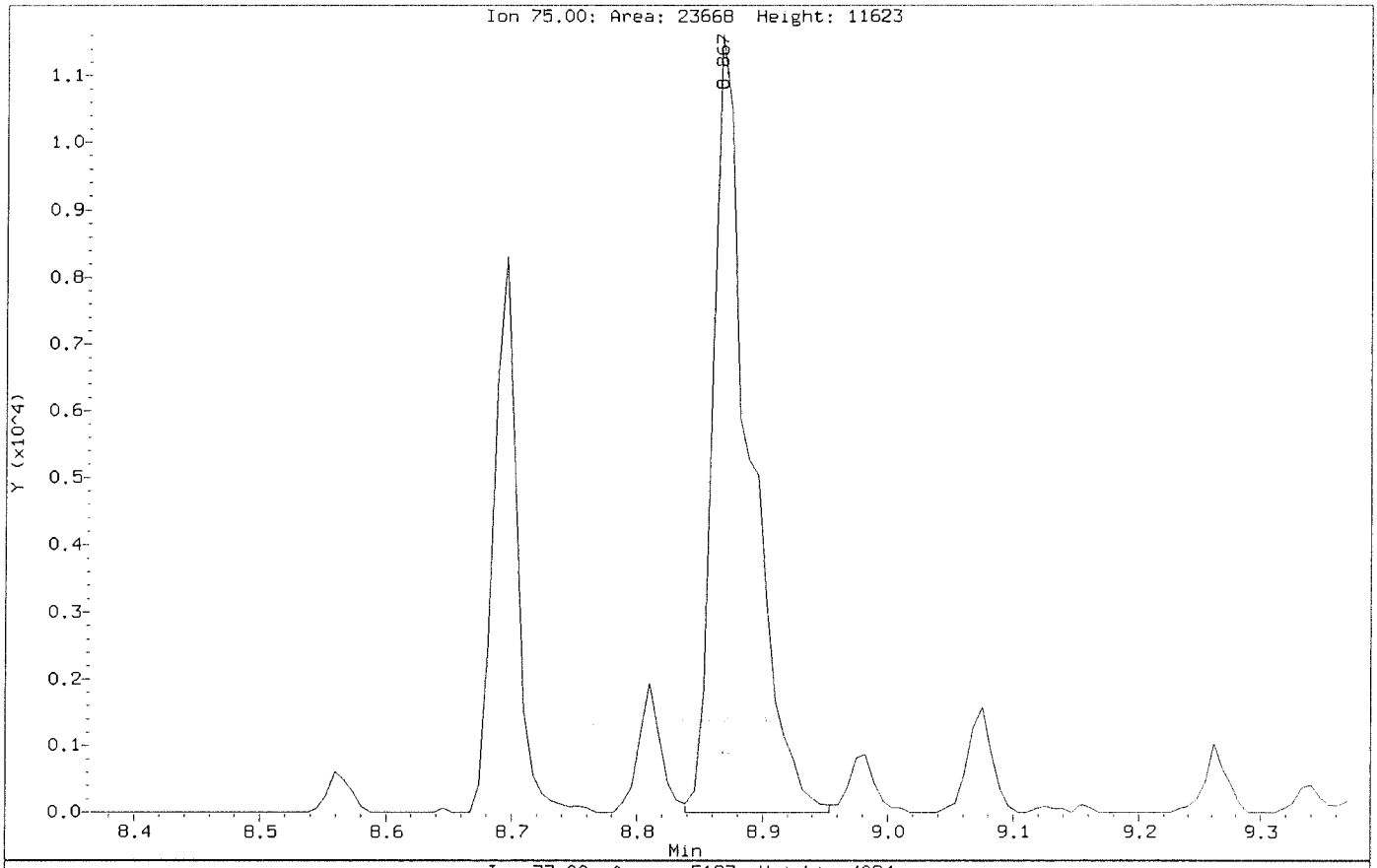


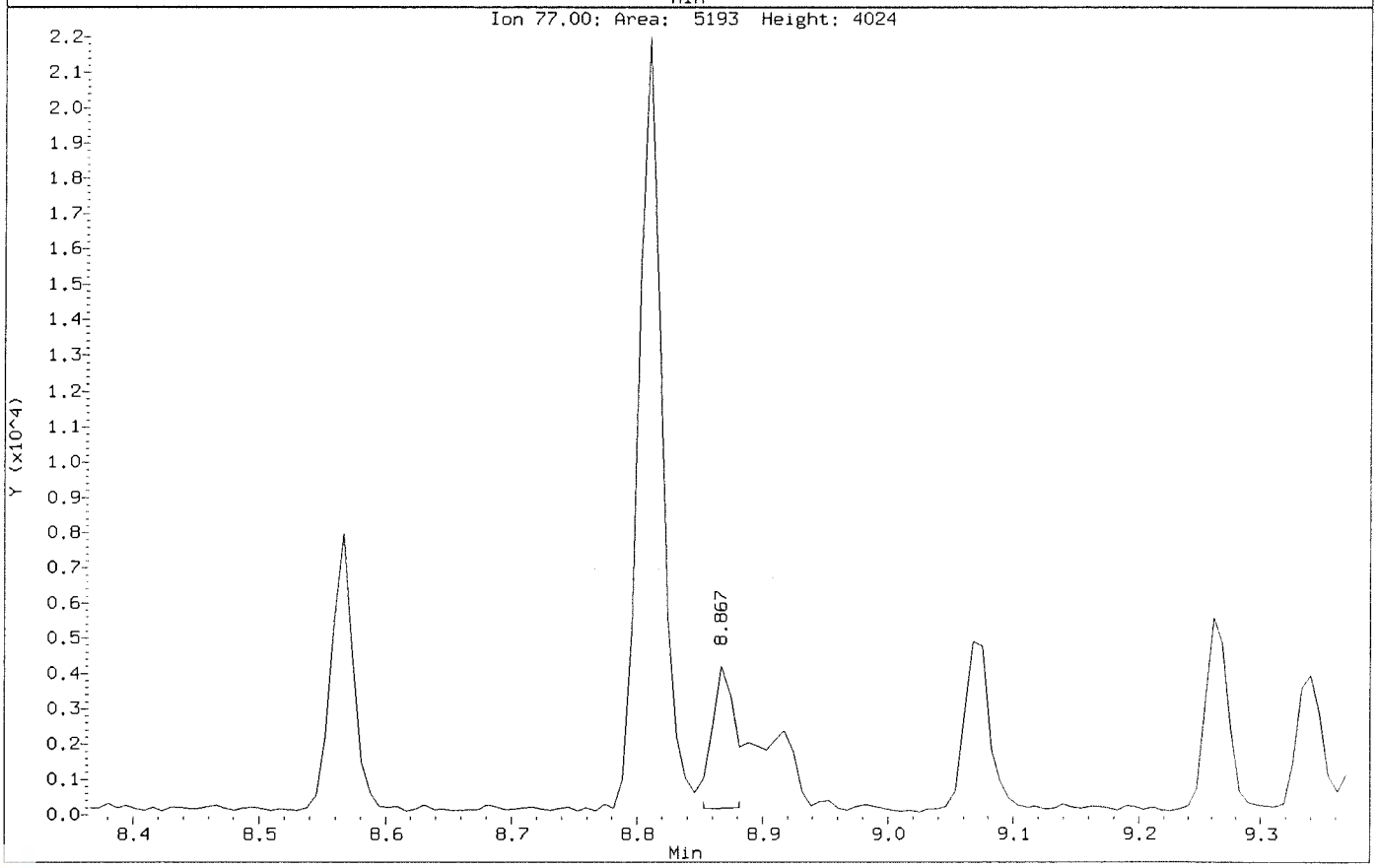



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Client Sample ID: VSTD005

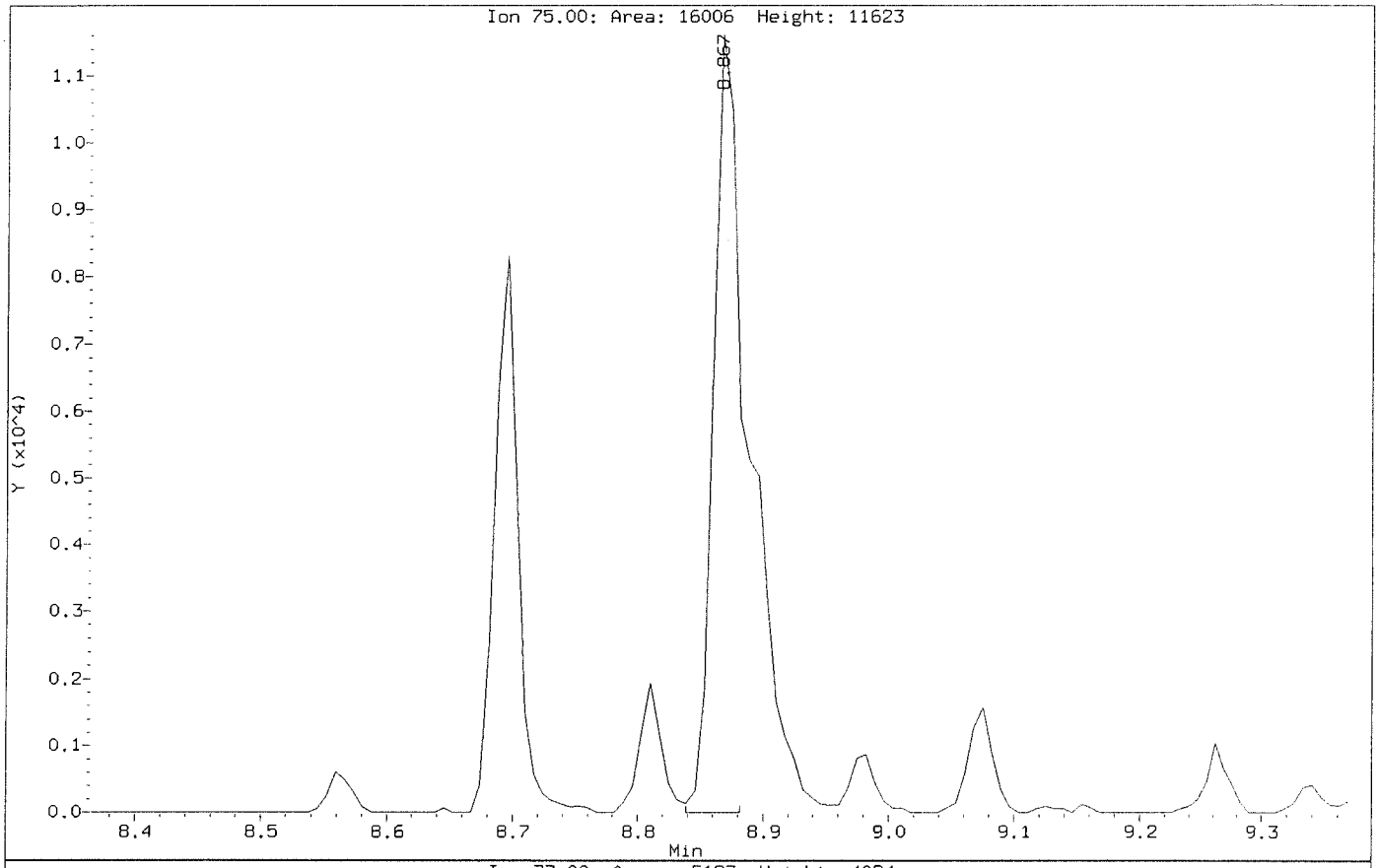
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

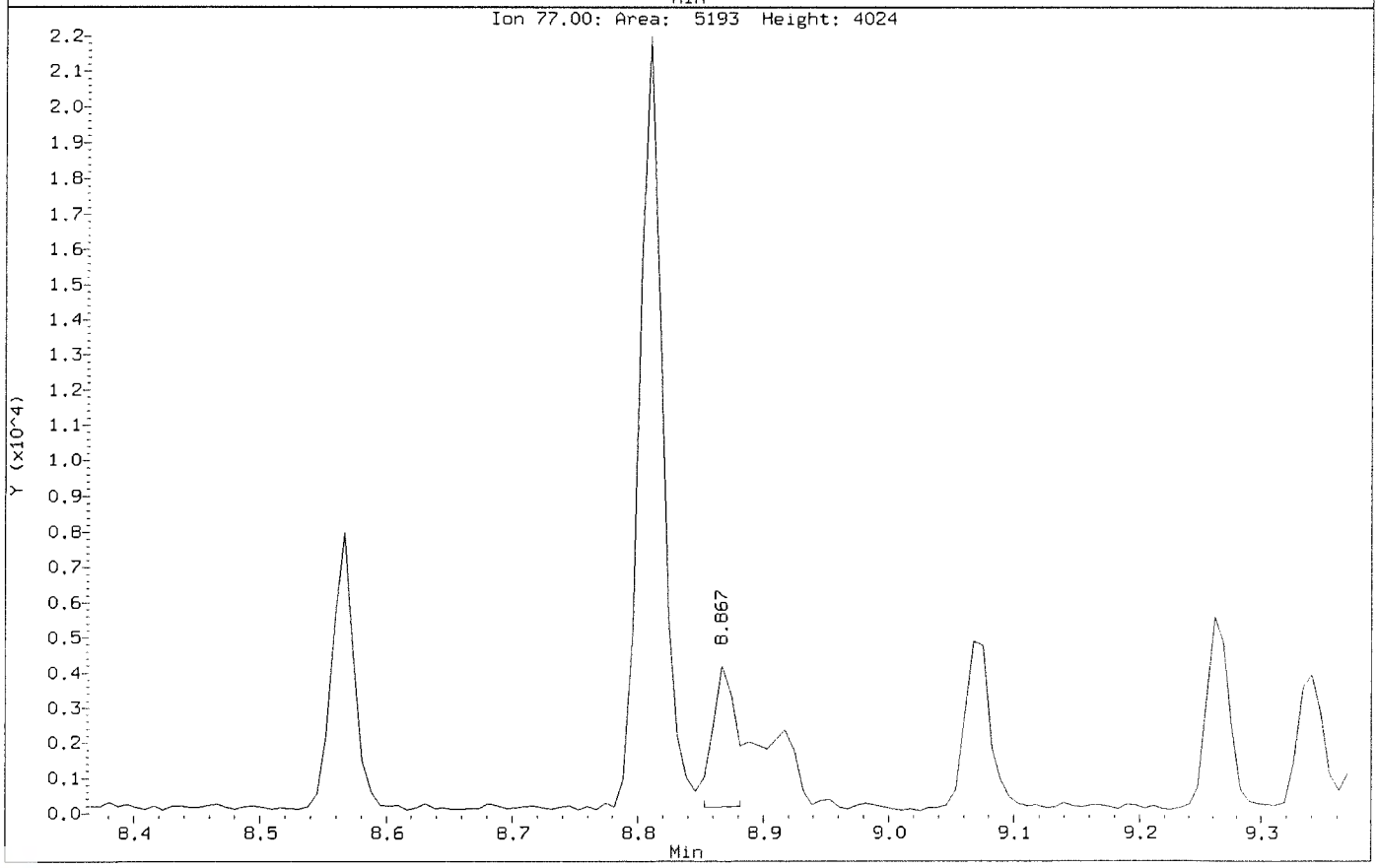


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Instrument: voa6.i
Client Sample ID: VSTD005

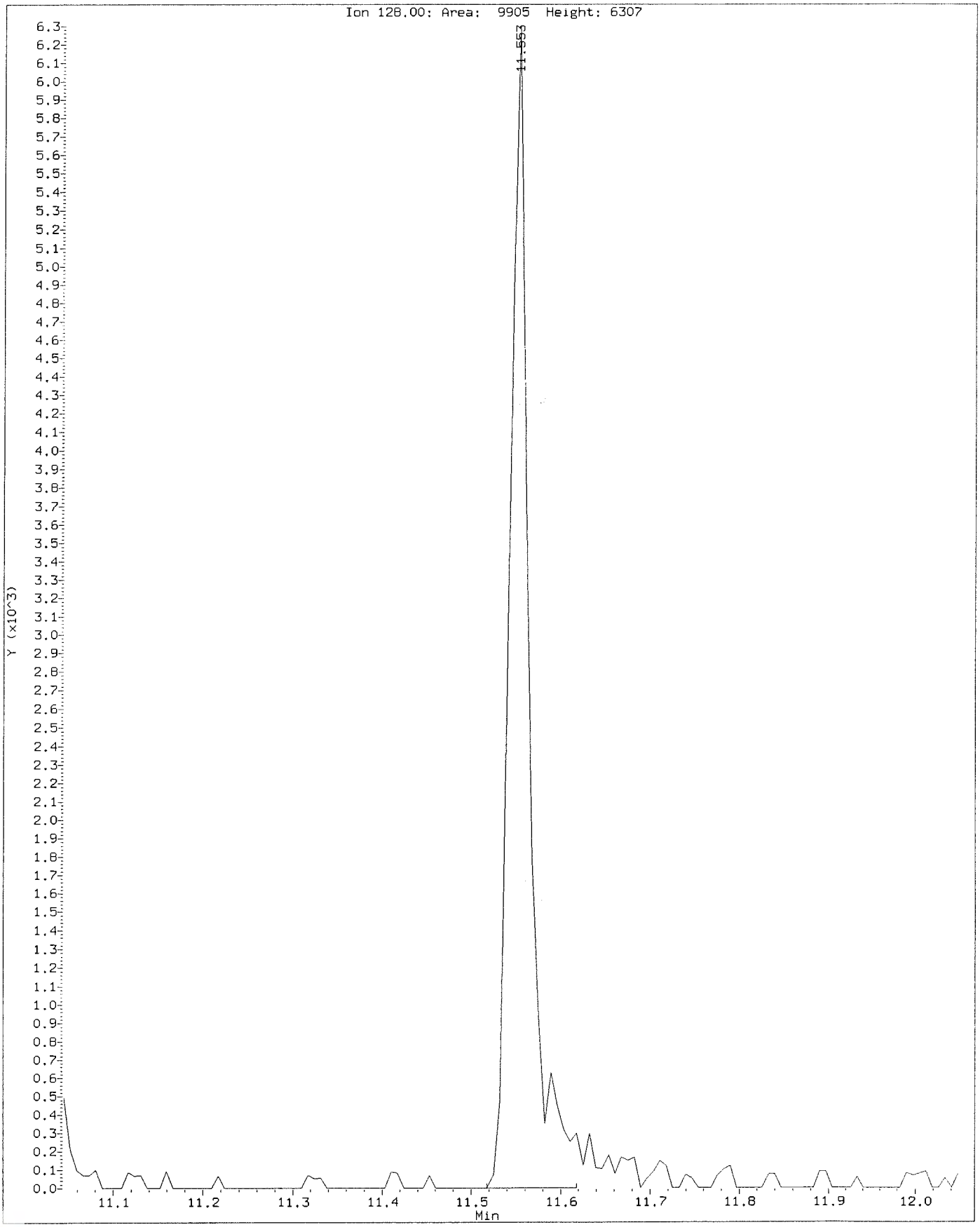
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



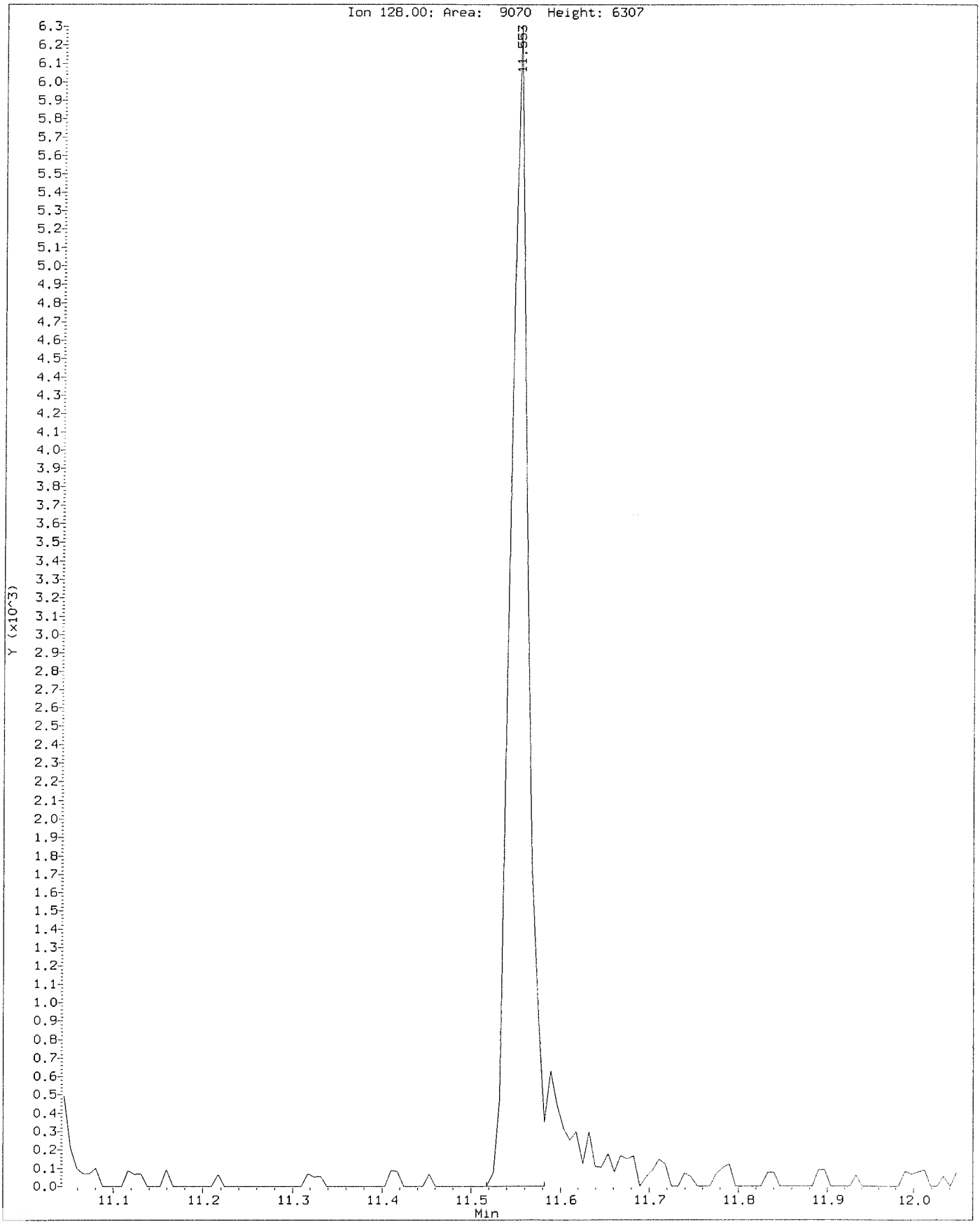
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Injection Date: 13-JUL-2020 12:30
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071306.D
Injection Date: 13-JUL-2020 12:30
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071307.D Page 1
Report Date: 13-Aug-2020 14:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 13-JUL-2020 12:54
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:51 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 12:30 Cal File: X071306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

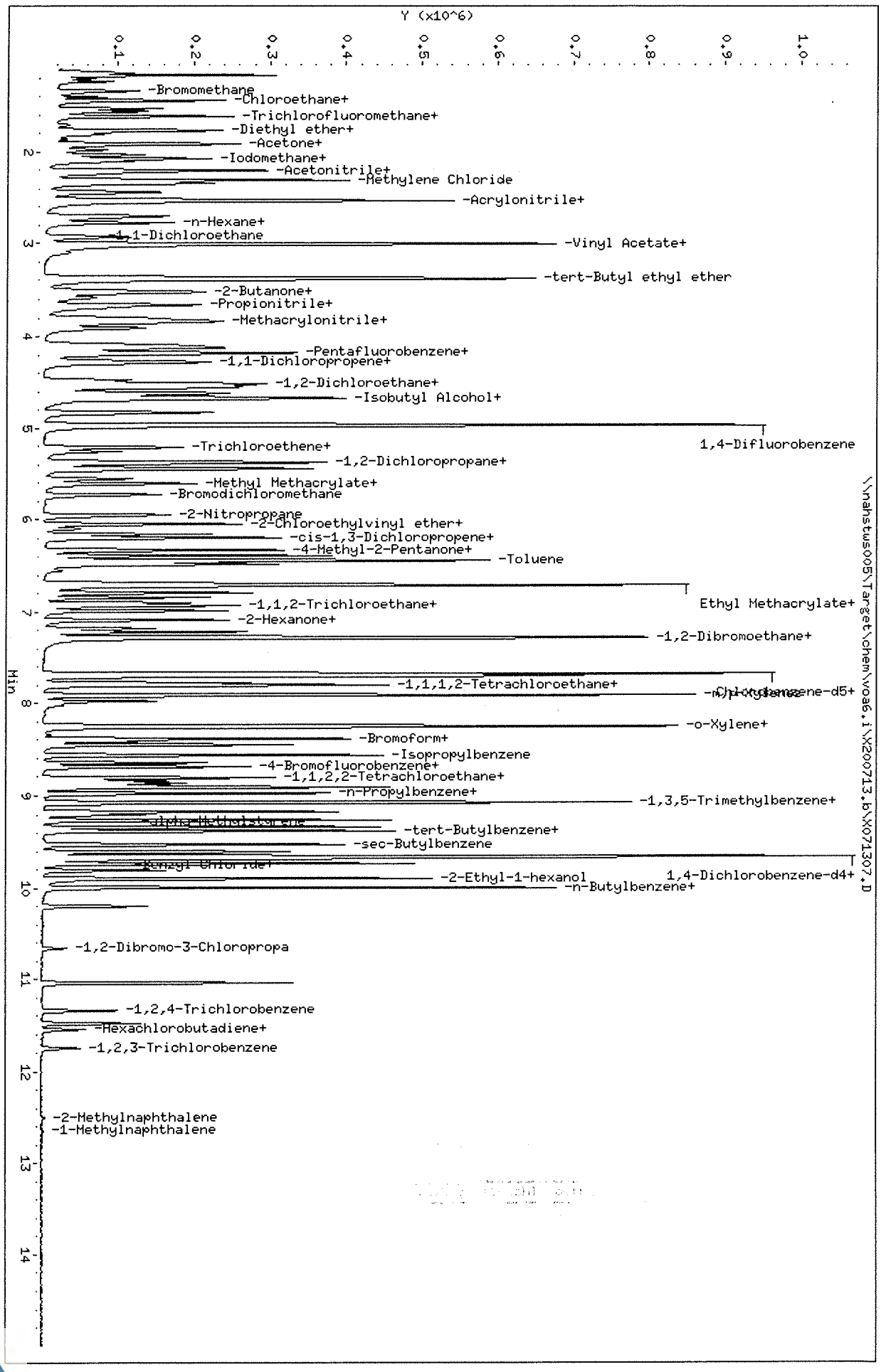
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 253573 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 421442 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 382758 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 186382 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 57060 | 20.0000 | 20.14 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 78060 | 20.0000 | 20.57 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 195468 | 20.0000 | 19.49 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 75648 | 20.0000 | 20.10 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 57406 | 20.0000 | 19.41 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 89722 | 20.0000 | 19.42 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 67545 | 20.0000 | 19.62 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 48065 | 20.0000 | 20.50 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 126480 | 20.0000 | 17.80 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 40964 | 20.0000 | 18.46 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 75083 | 20.0000 | 19.01 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 13199 | 20.0000 | 20.93(M) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 59025 | 20.0000 | 19.49(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 26708 | 20.0000 | 22.33 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 200298 | 20.0000 | 19.54 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 5688 | 20.0000 | 18.92 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 59439 | 20.0000 | 21.09 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 100787 | 20.0000 | 19.39 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071307.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 101682 | 20.0000 | 20.27 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 78092 | 20.0000 | 20.06 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 196326 | 20.0000 | 19.38 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 110544 | 20.0000 | 19.34 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 97614 | 20.0000 | 19.48 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 109540 | 20.0000 | 18.82 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 81095 | 20.0000 | 18.07 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 91155 | 40.0000 | 41.41 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 165901 | 20.0000 | 18.68 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 149041 | 40.0000 | 41.10 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 197676 | 20.0000 | 19.03 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 193573 | 20.0000 | 19.51 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 212897 | 40.0000 | 40.76 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 68543 | 40.0000 | 39.83 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 229005 | 20.0000 | 20.01 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 66470 | 20.0000 | 19.47 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 33088 | 20.0000 | 18.46 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 82567 | 20.0000 | 19.47 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 41754 | 20.0000 | 19.72 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 34876 | 20.0000 | 19.05(M) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 249663 | 40.0000 | 35.72 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 73956 | 20.0000 | 18.66(H) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 149101 | 20.0000 | 19.56 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 39294 | 20.0000 | 17.63 |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.935) | 108746 | 20.0000 | 19.53 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 93790 | 20.0000 | 18.83 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 61658 | 20.0000 | 18.95 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 97390 | 20.0000 | 19.83 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 61467 | 20.0000 | 19.74 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 40799 | 20.0000 | 19.62 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 49290 | 20.0000 | 18.40 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 78012 | 20.0000 | 19.62 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 20285 | 20.0000 | 21.96 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 228992 | 20.0000 | 19.23 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 187695 | 40.0000 | 39.42 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 58274 | 20.0000 | 18.69 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 174513 | 20.0000 | 20.04 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 277218 | 20.0000 | 19.51 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 36314 | 20.0000 | 19.81 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 90878 | 20.0000 | 18.89 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 223860 | 20.0000 | 19.39 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 163353 | 20.0000 | 19.62 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 157640 | 20.0000 | 19.50 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 45838 | 20.0000 | 19.56 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 234031 | 20.0000 | 19.51 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 49591 | 20.0000 | 18.15 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 90135 | 20.0000 | 19.90 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 59096 | 20.0000 | 19.48 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 77515 | 20.0000 | 18.49 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 74208 | 20.0000 | 17.79 |

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

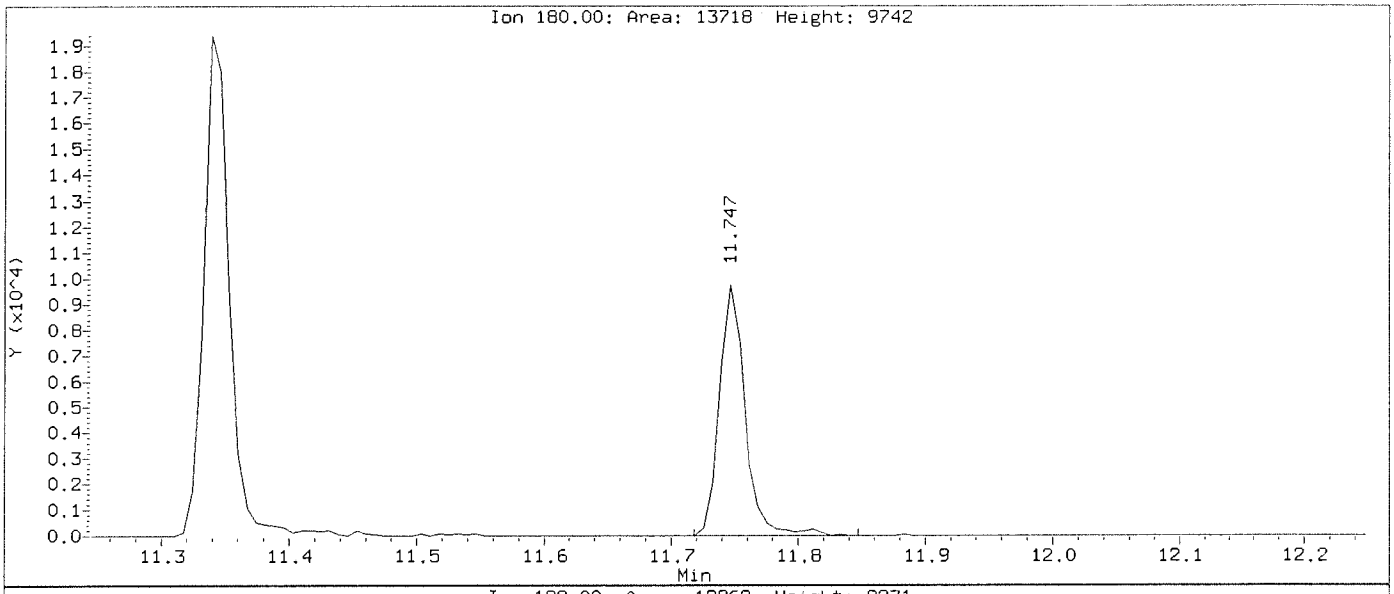


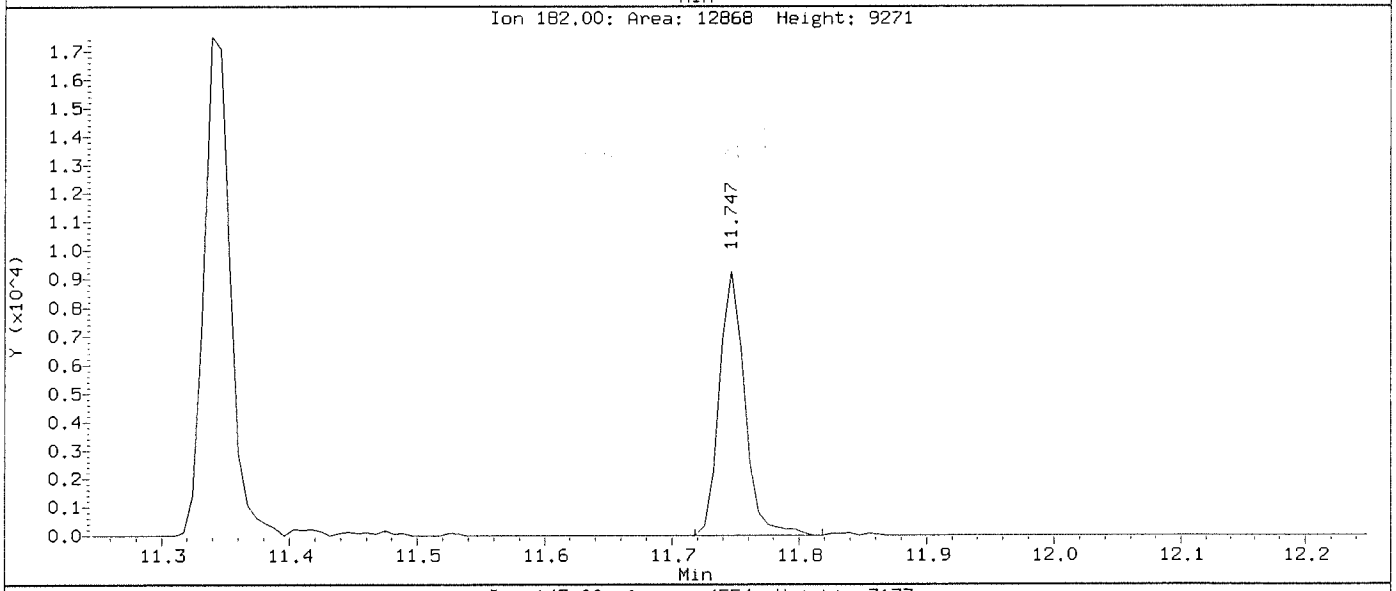

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Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
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Column phase: DB624

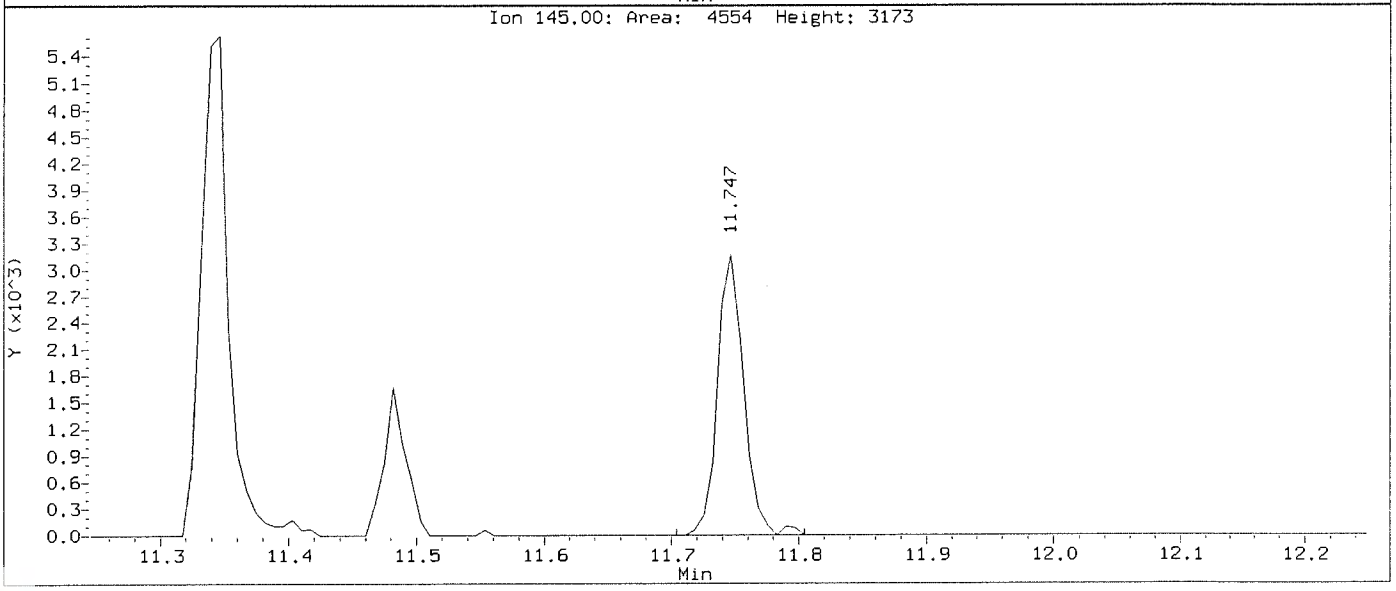
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Injection Date: 13-JUL-2020 12:54
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

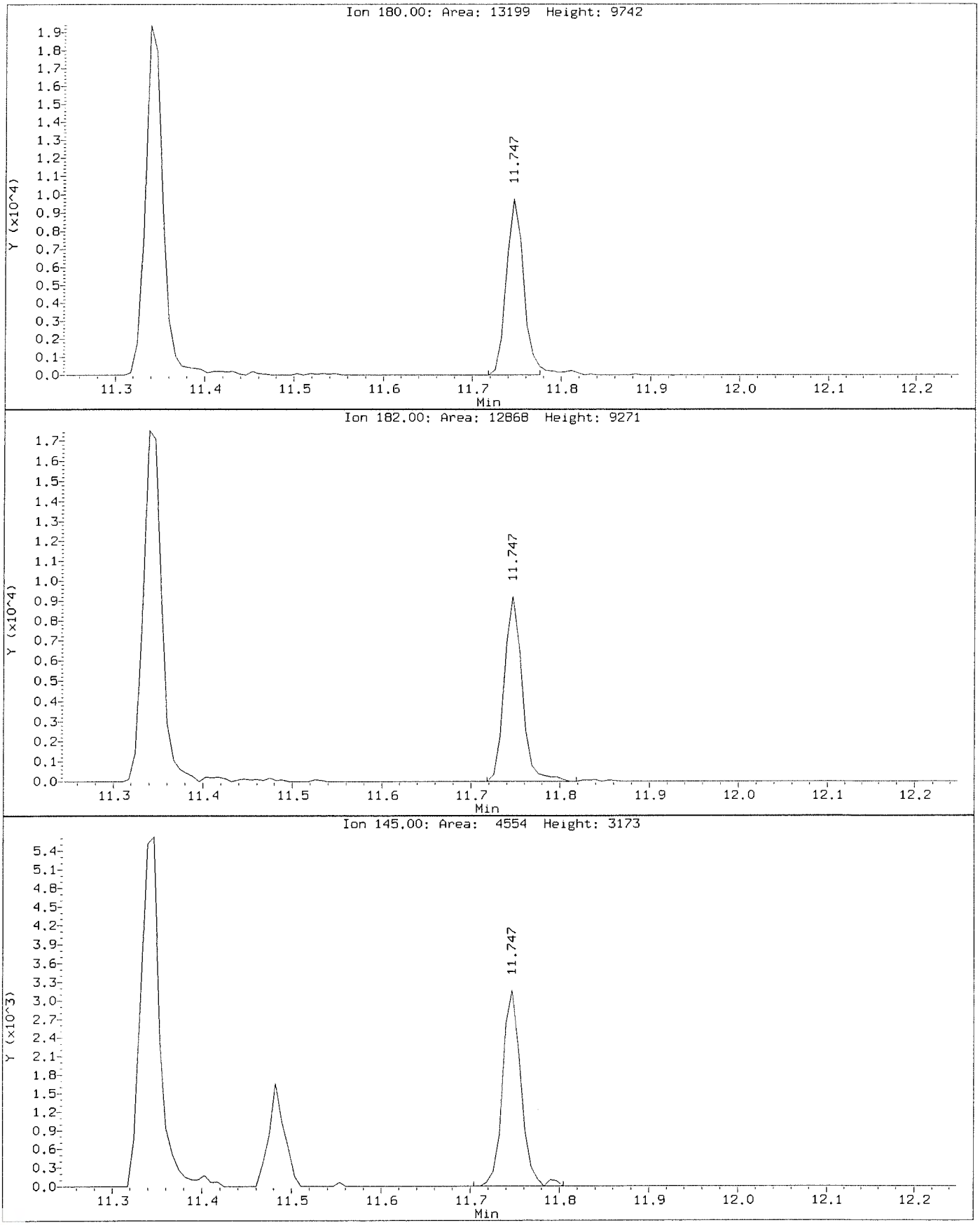


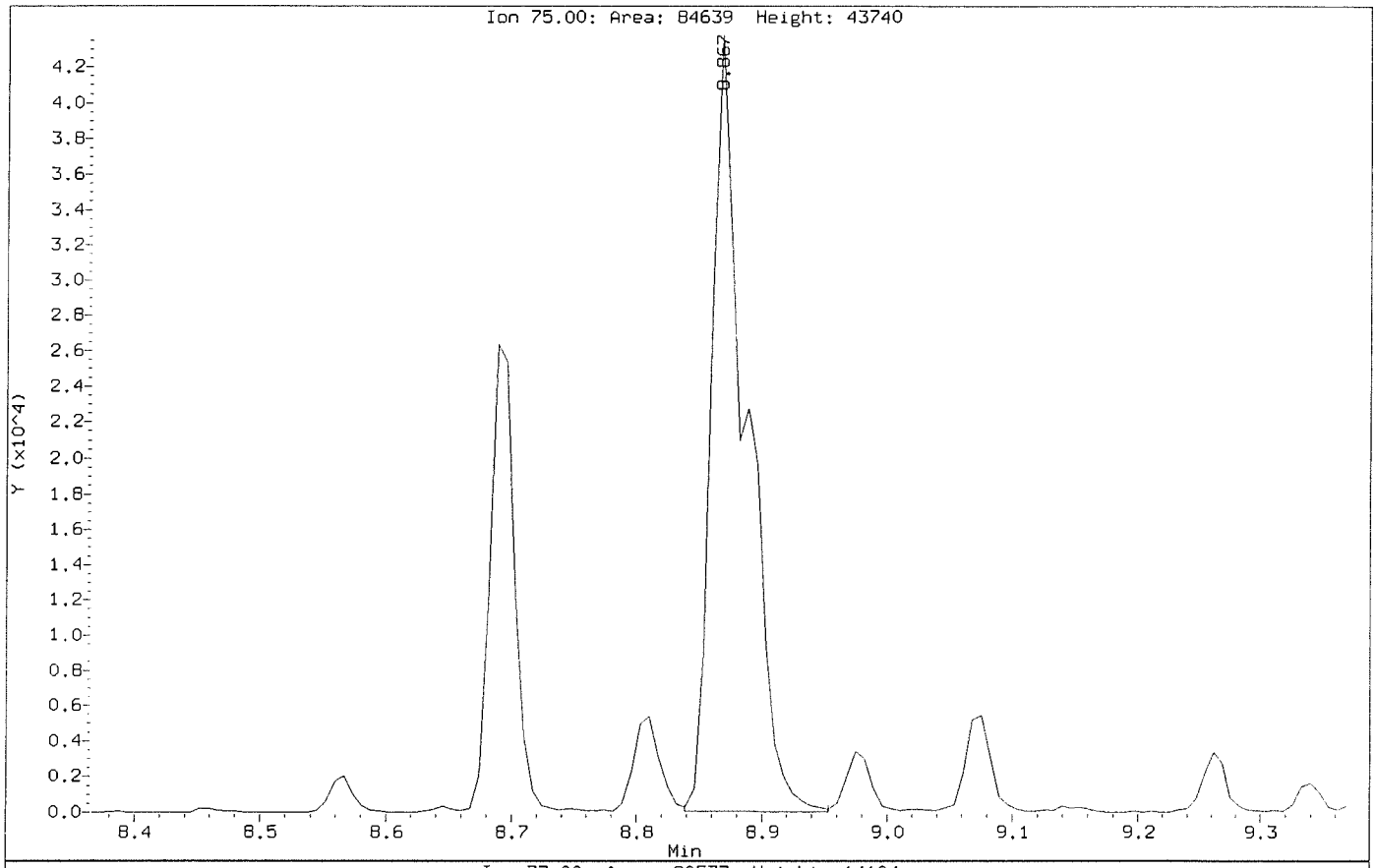
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Instrument: voa6.i
Client Sample ID: VSTD020

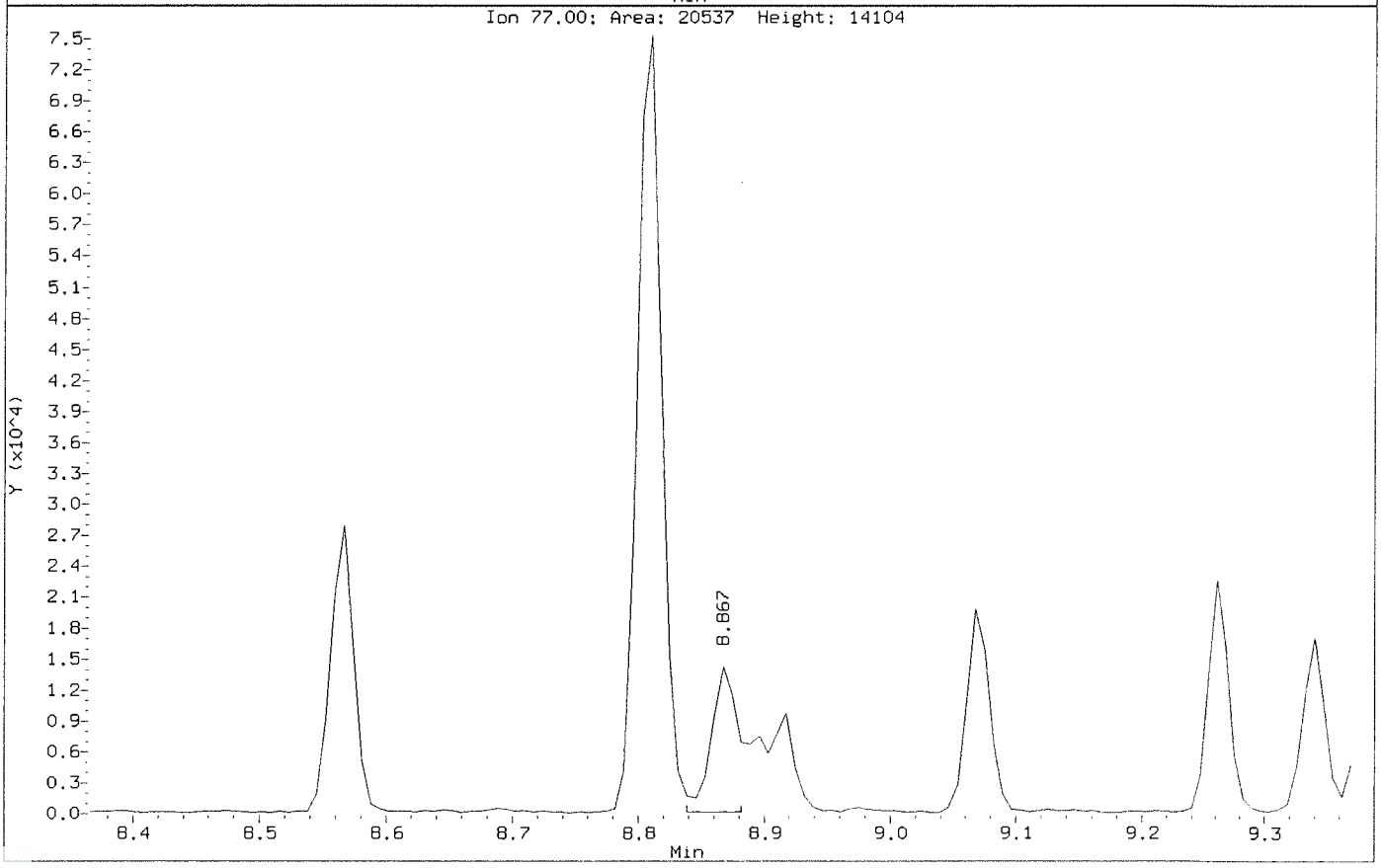
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD020

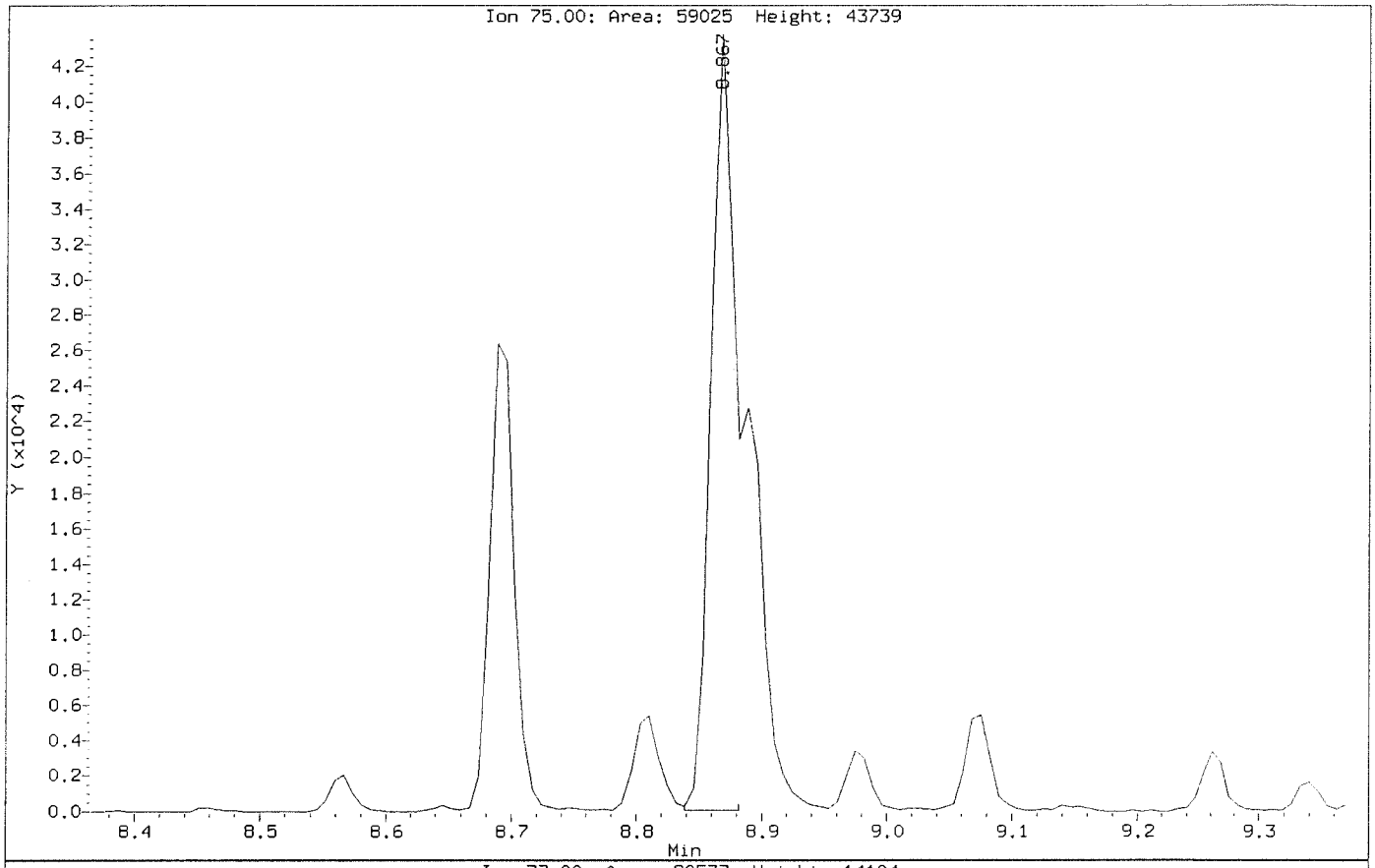
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

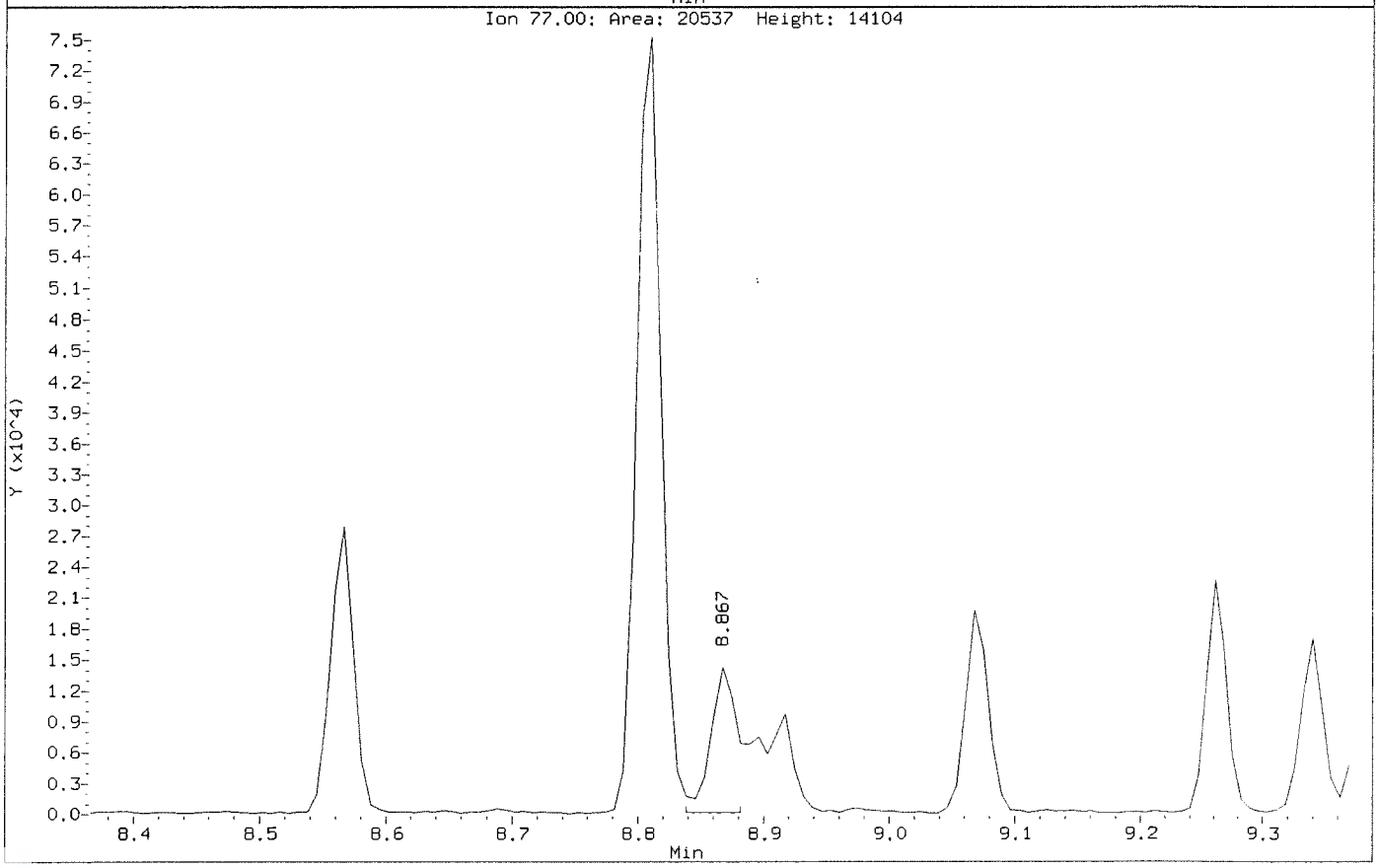


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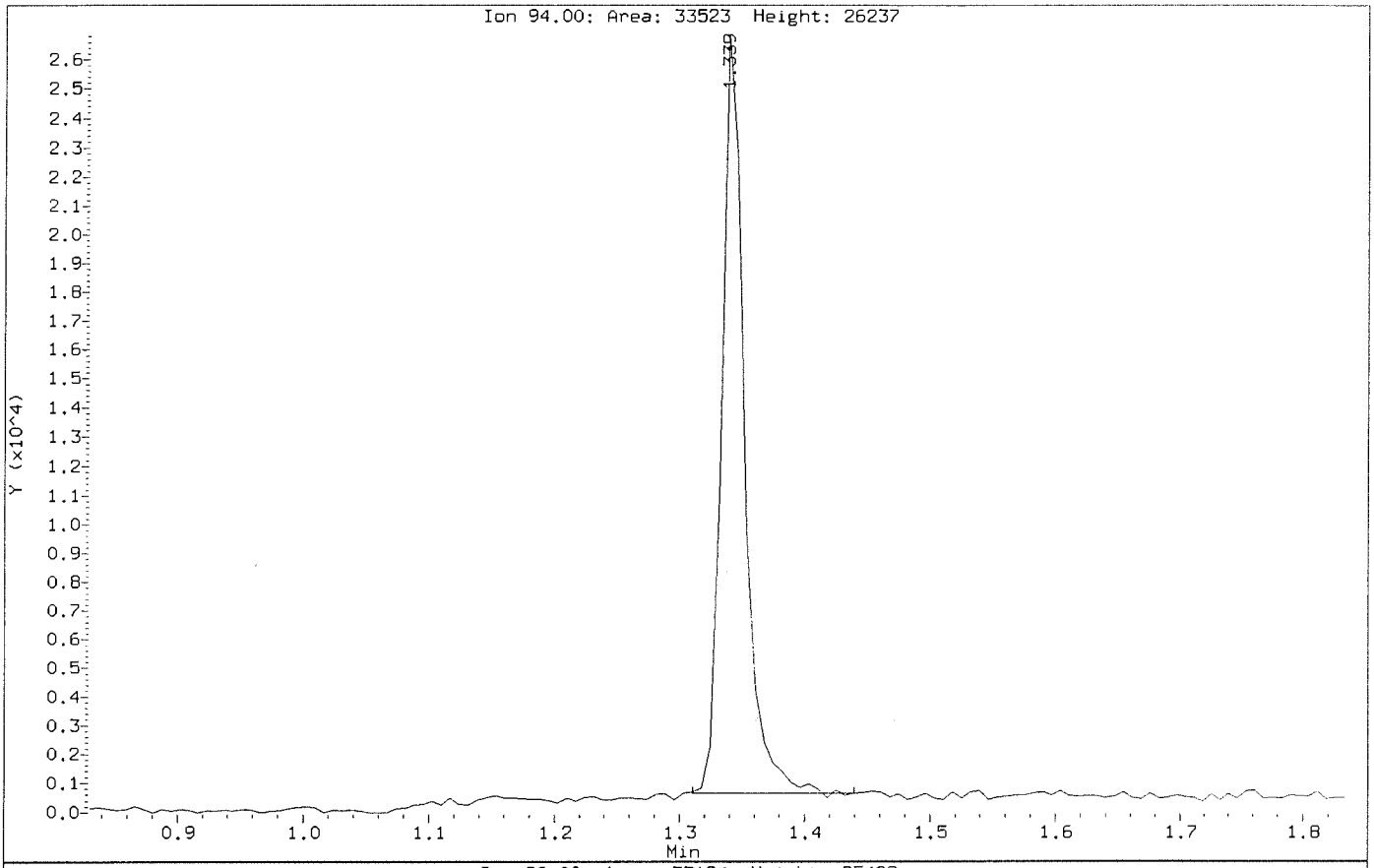
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CAS Number: 96-18-4

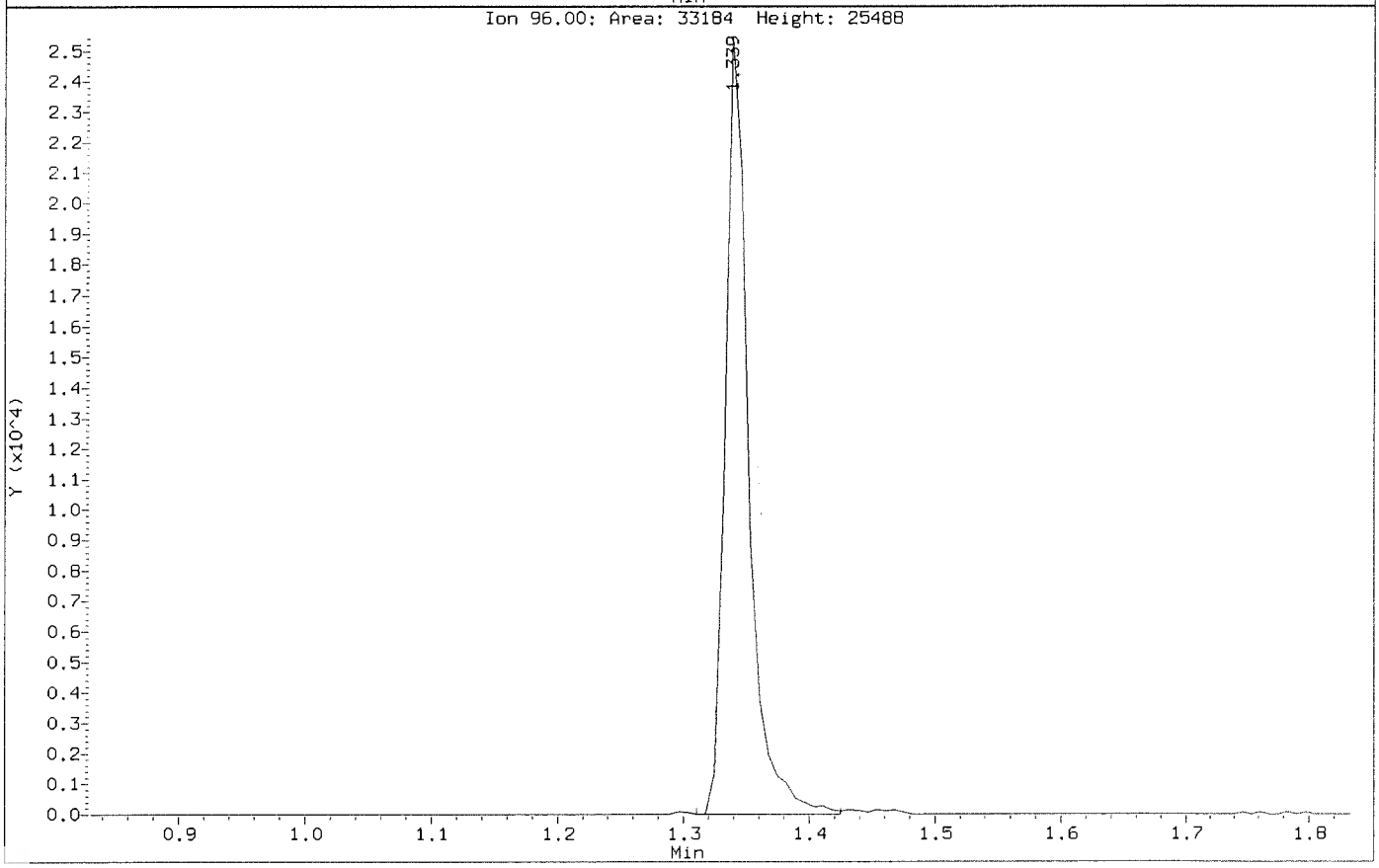


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Injection Date: 13-JUL-2020 12:54
Instrument: voa6.i
Client Sample ID: VSTD020

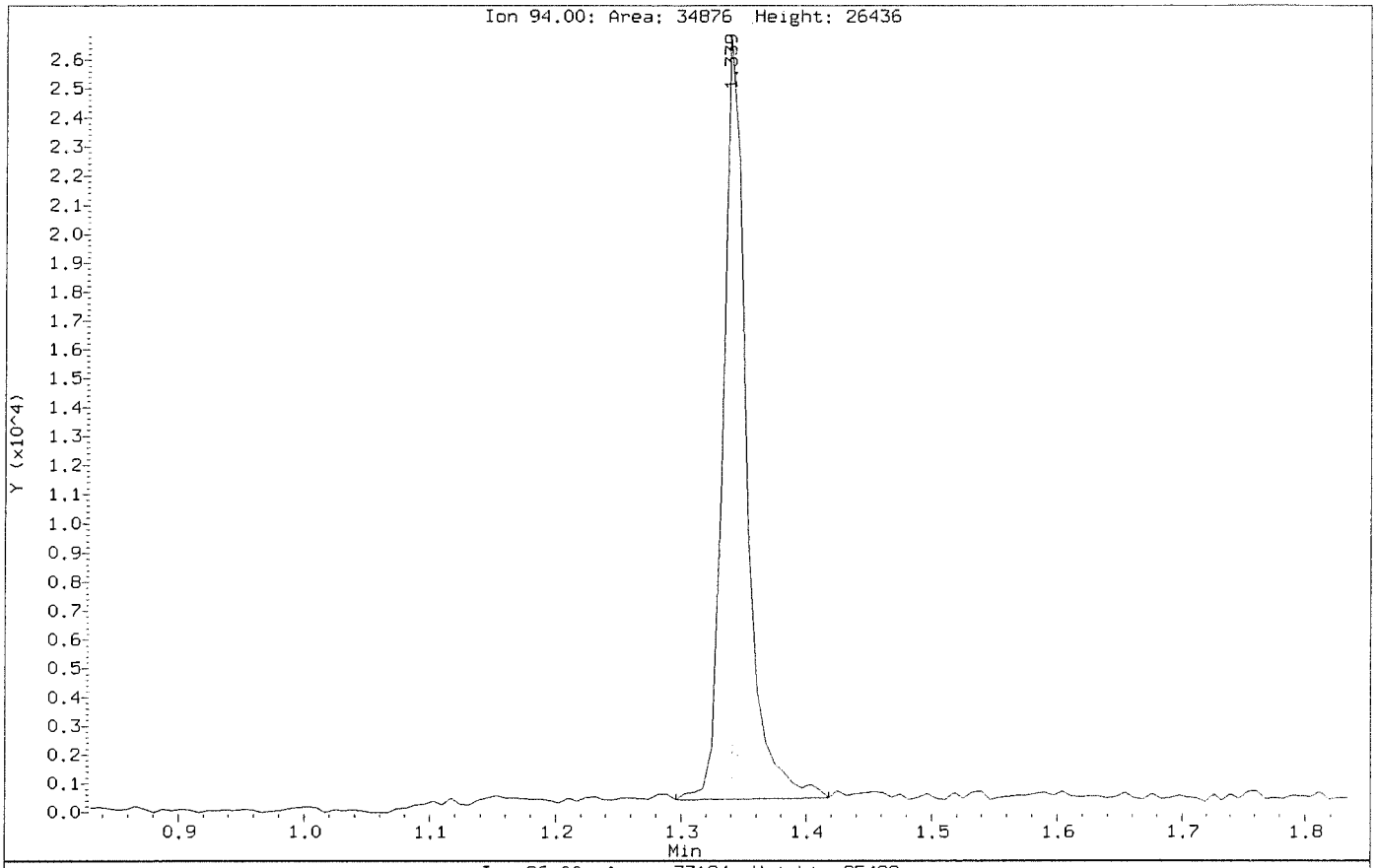
Compound: Bromomethane
CAS Number: 74-83-9

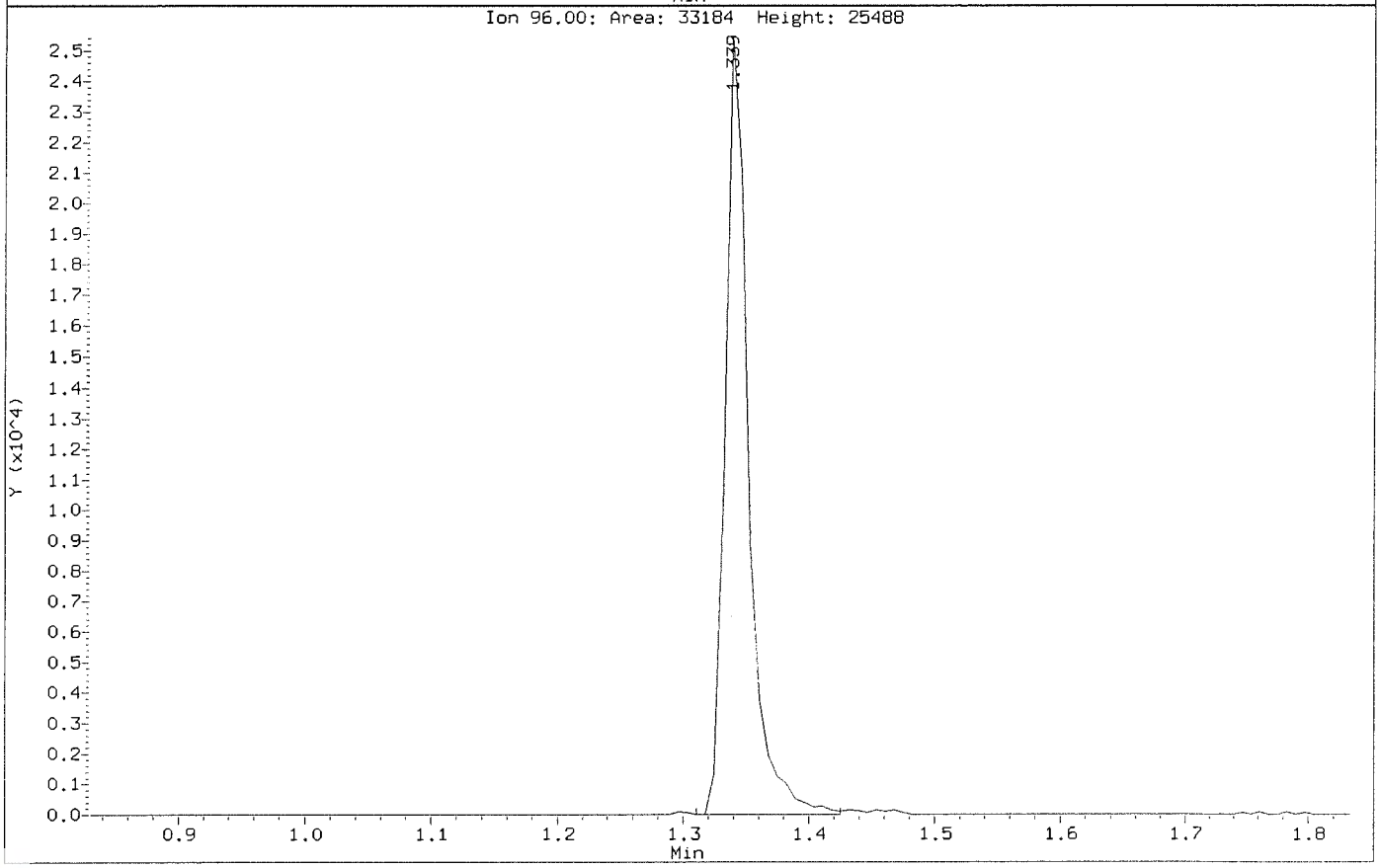


Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071307.D
Injection Date: 13-JUL-2020 12:54
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: Bromomethane
CAS Number: 74-83-9



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071308.D Page 1
Report Date: 13-Aug-2020 14:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 13-JUL-2020 13:18
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:51 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 12:54 Cal File: X071307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

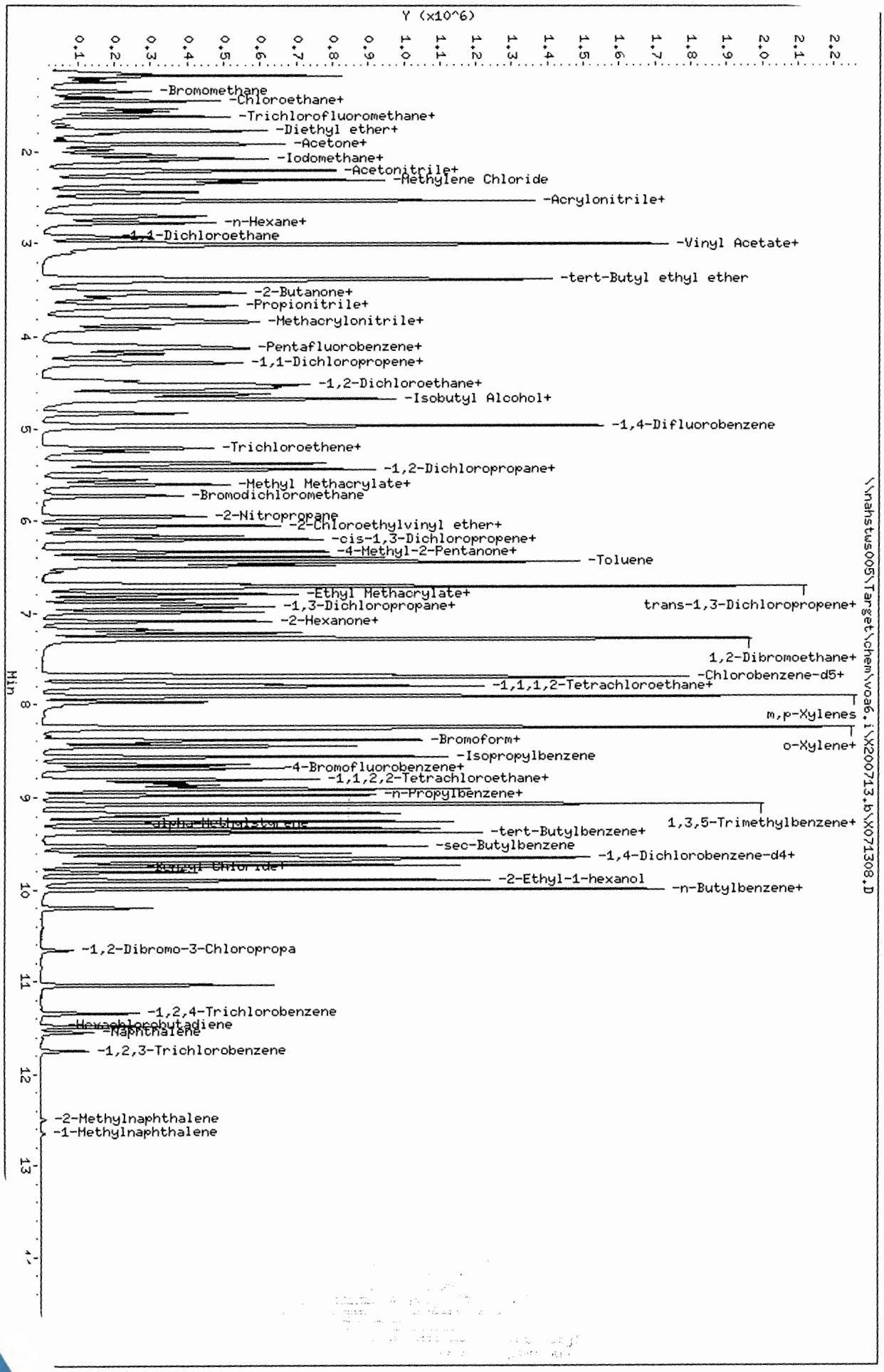
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 250164 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 416710 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 383548 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 184191 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 137160 | 50.0000 | 49.20 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 186102 | 50.0000 | 49.24 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 479221 | 50.0000 | 47.69 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 186024 | 50.0000 | 50.12 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 145609 | 50.0000 | 49.14 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 220312 | 50.0000 | 48.33 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 169575 | 50.0000 | 49.86 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 118016 | 50.0000 | 50.25 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 337487 | 50.0000 | 48.14 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 111538 | 50.0000 | 50.96 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 184830 | 50.0000 | 47.34 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 32381 | 50.0000 | 51.96(M) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 152205 | 50.0000 | 50.86(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 64531 | 50.0000 | 54.61 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 511859 | 50.0000 | 50.53 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 15053 | 50.0000 | 48.47 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 147910 | 50.0000 | 52.37 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 245893 | 50.0000 | 47.87 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071308.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 250459 | 50.0000 | 50.51 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 192541 | 50.0000 | 50.03 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 496766 | 50.0000 | 49.63 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.993) | 279597 | 50.0000 | 49.51 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 243528 | 50.0000 | 48.51 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 277784 | 50.0000 | 48.29 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 208780 | 50.0000 | 47.16 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 237745 | 100.000 | 109.48 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 429614 | 50.0000 | 48.97 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 377765 | 100.000 | 103.97 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 500508 | 50.0000 | 48.76 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 503011 | 50.0000 | 51.31 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 533236 | 100.000 | 101.88 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 175674 | 100.000 | 109.94 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 563766 | 50.0000 | 49.84 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 169832 | 50.0000 | 50.34 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 78144 | 50.0000 | 44.20 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 205341 | 50.0000 | 48.97 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 105208 | 50.0000 | 49.58 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 89079 | 50.0000 | 50.99 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 692438 | 100.000 | 100.43 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 187306 | 50.0000 | 47.80(H) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 372254 | 50.0000 | 48.75 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 109135 | 50.0000 | 49.63 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 263288 | 50.0000 | 47.94 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 240898 | 50.0000 | 46.30 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 158287 | 50.0000 | 49.32 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 241608 | 50.0000 | 49.76 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 154666 | 50.0000 | 49.56 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 100368 | 50.0000 | 48.82 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 132468 | 50.0000 | 50.15 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 195374 | 50.0000 | 49.04 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 48180 | 50.0000 | 52.79 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 587299 | 50.0000 | 49.23 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 472914 | 100.000 | 99.13 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 153830 | 50.0000 | 52.34 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 445629 | 50.0000 | 51.78 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 710975 | 50.0000 | 50.65 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 94043 | 50.0000 | 49.89 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 234305 | 50.0000 | 48.61 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 578409 | 50.0000 | 50.70 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 413214 | 50.0000 | 49.53 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 403727 | 50.0000 | 50.55 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 112059 | 50.0000 | 47.73 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 581543 | 50.0000 | 48.39 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 132114 | 50.0000 | 49.02 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 220310 | 50.0000 | 49.20 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 149525 | 50.0000 | 49.85 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 206168 | 50.0000 | 49.85 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 201301 | 50.0000 | 48.93 |

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

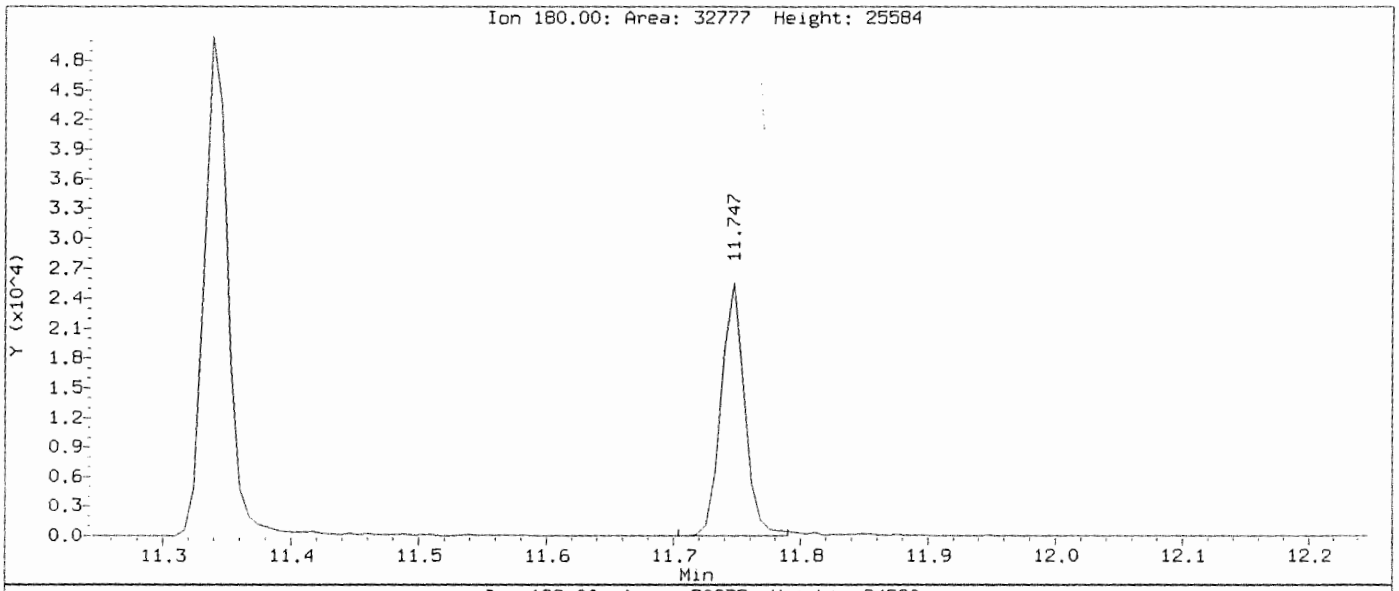


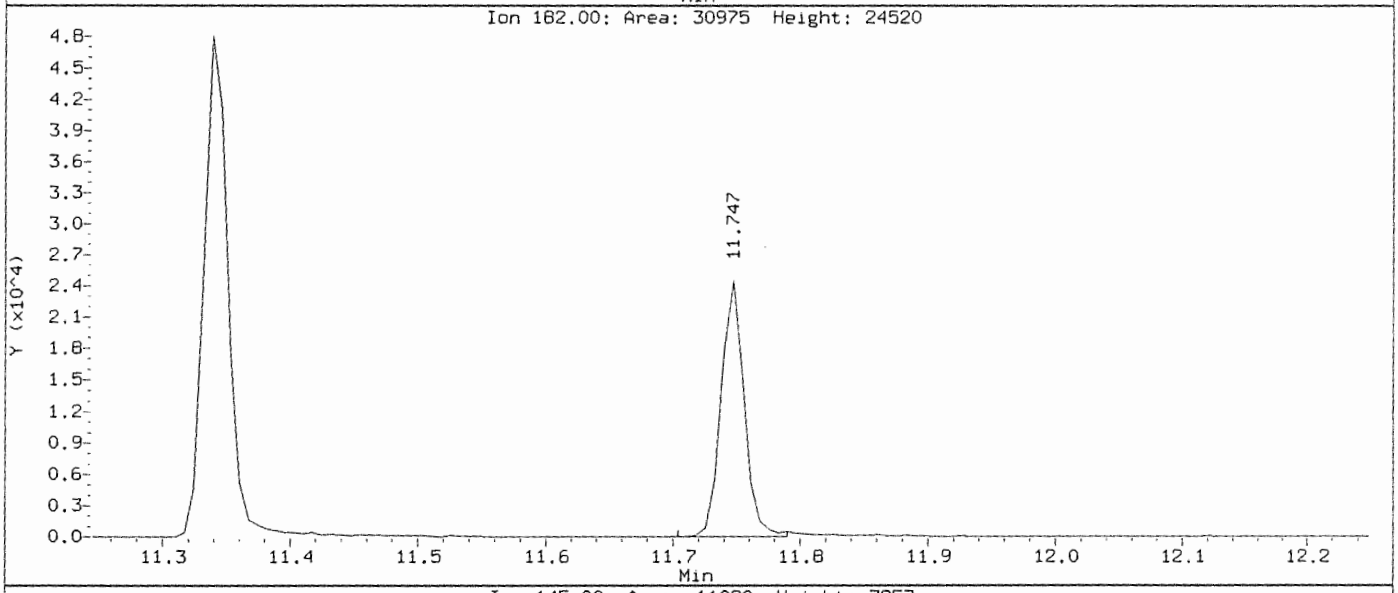

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Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

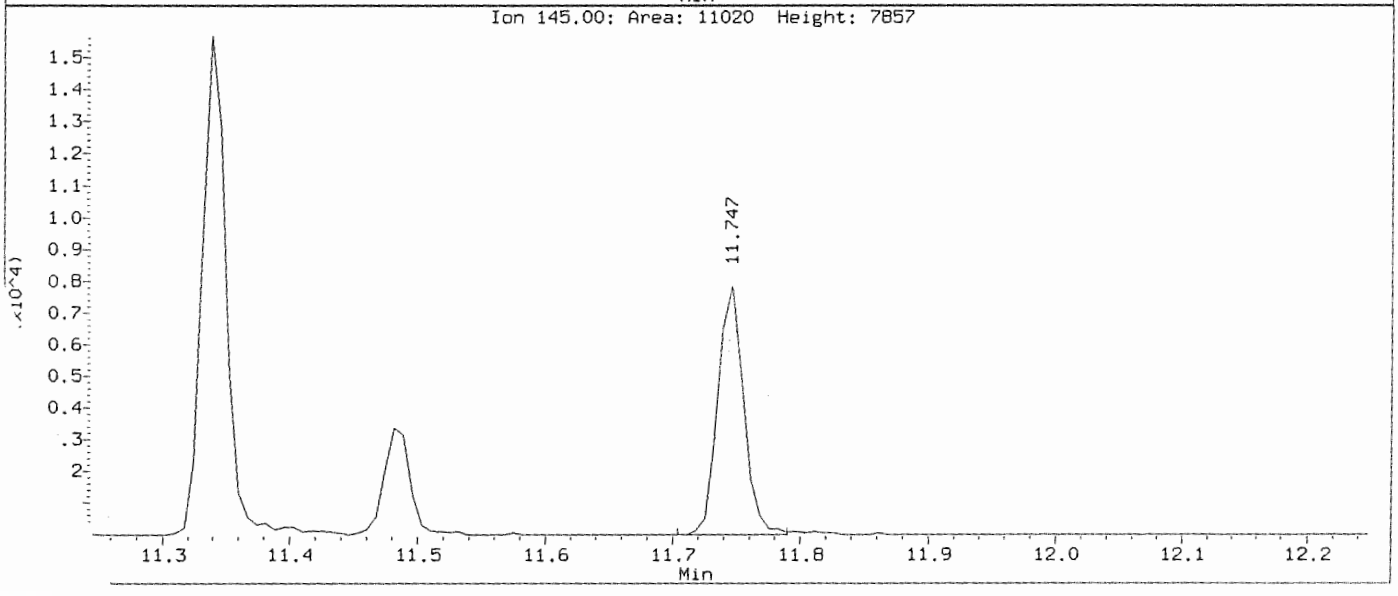
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Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071308.D
Injection Date: 13-JUL-2020 13:18
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

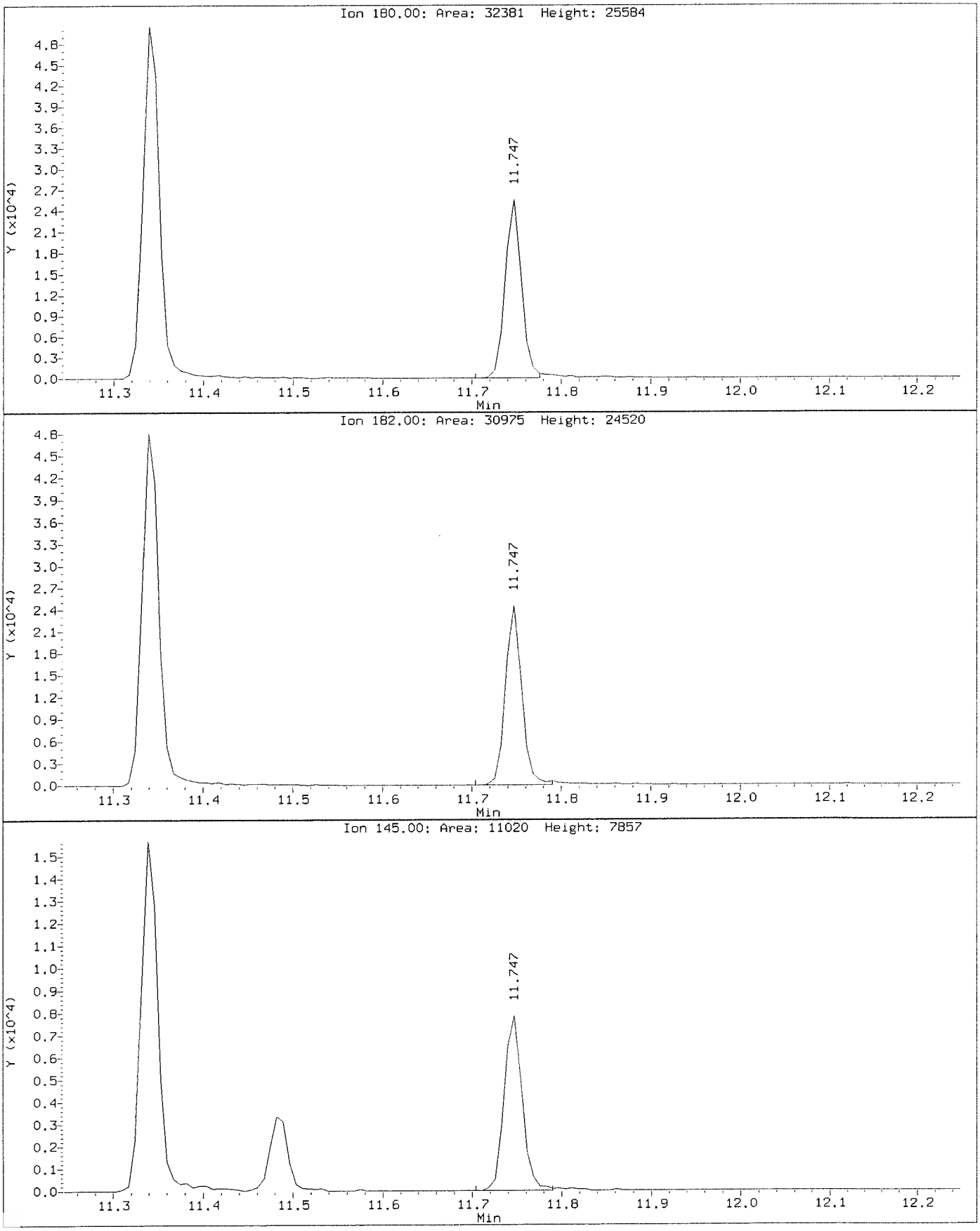


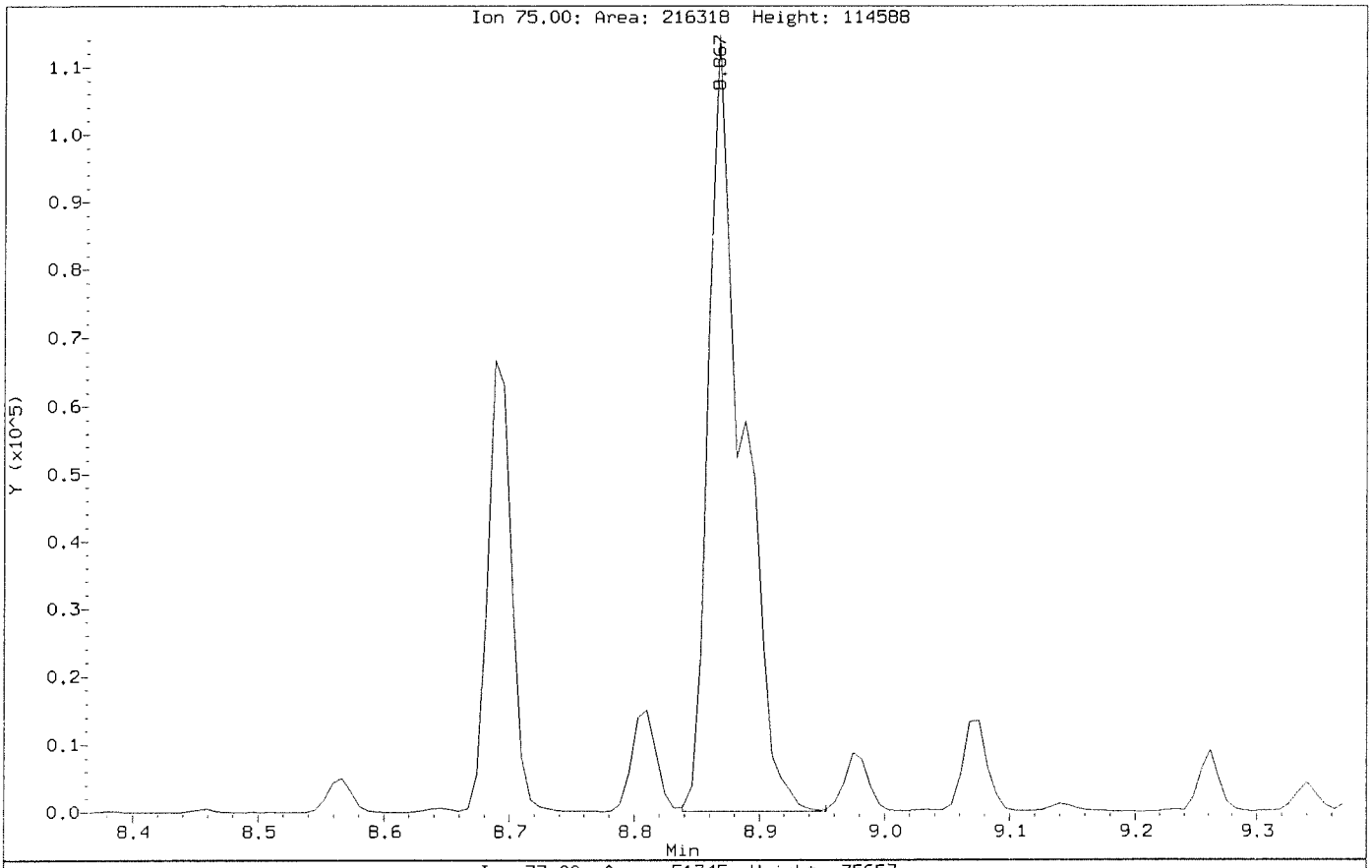
Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071308.D
Injection Date: 13-JUL-2020 13:18
Instrument: voa6.i
Client Sample ID: VSTD050

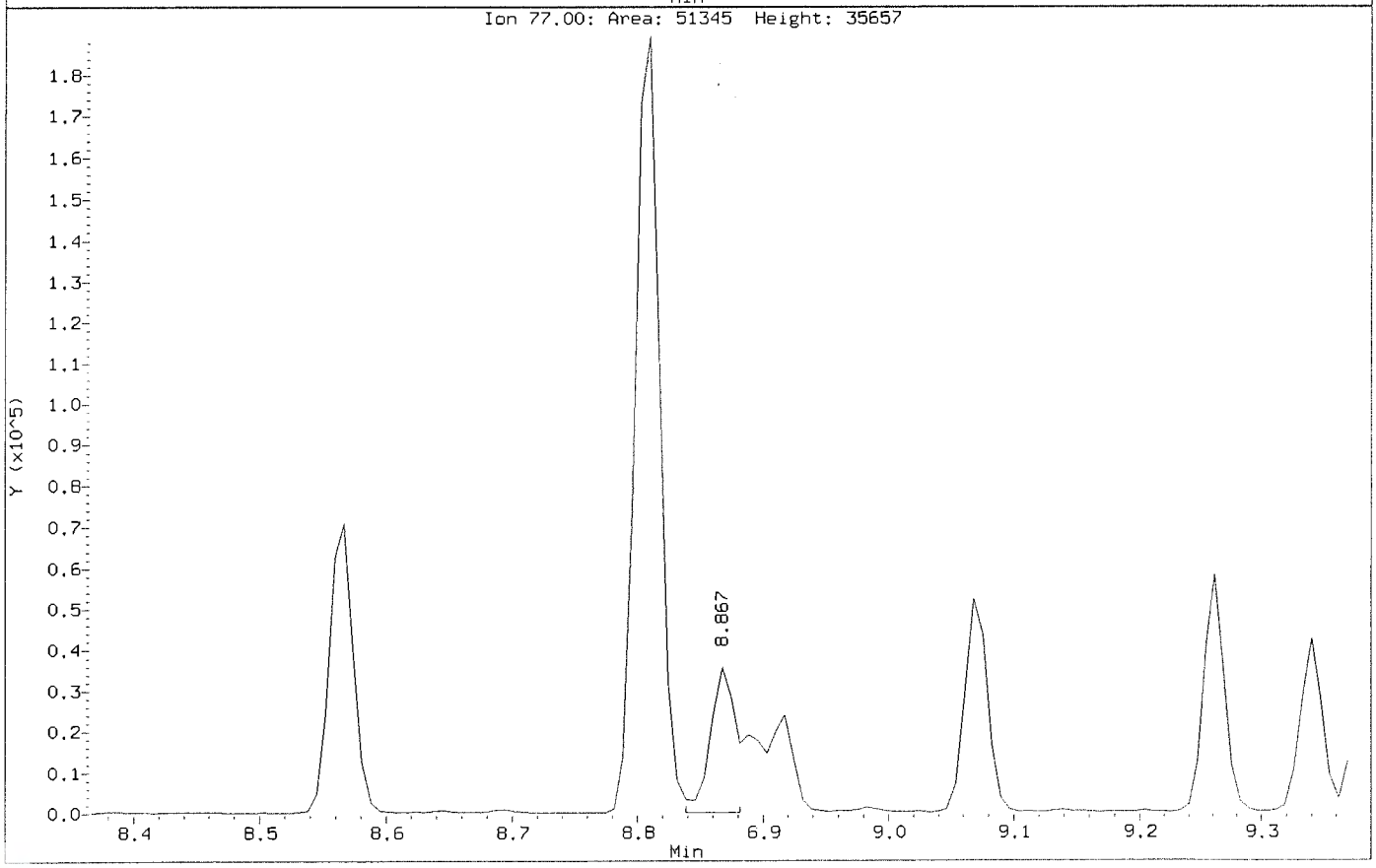
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071308.D
Injection Date: 13-JUL-2020 13:18
Instrument: voa6.i
Client Sample ID: VSTD050

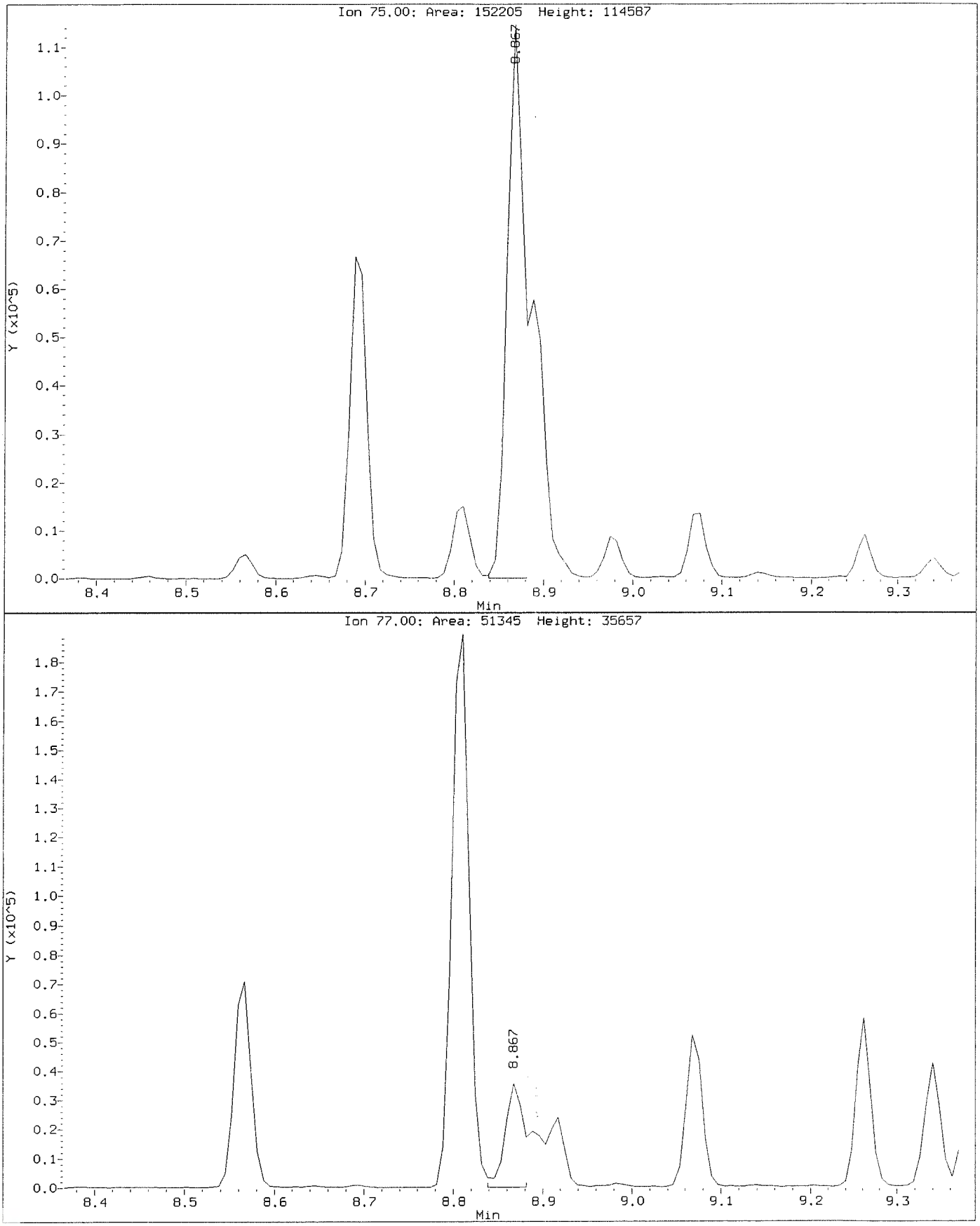
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071308.D
Injection Date: 13-JUL-2020 13:18
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071309.D
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Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 13-Aug-2020 14:51 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18 Cal File: X071308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

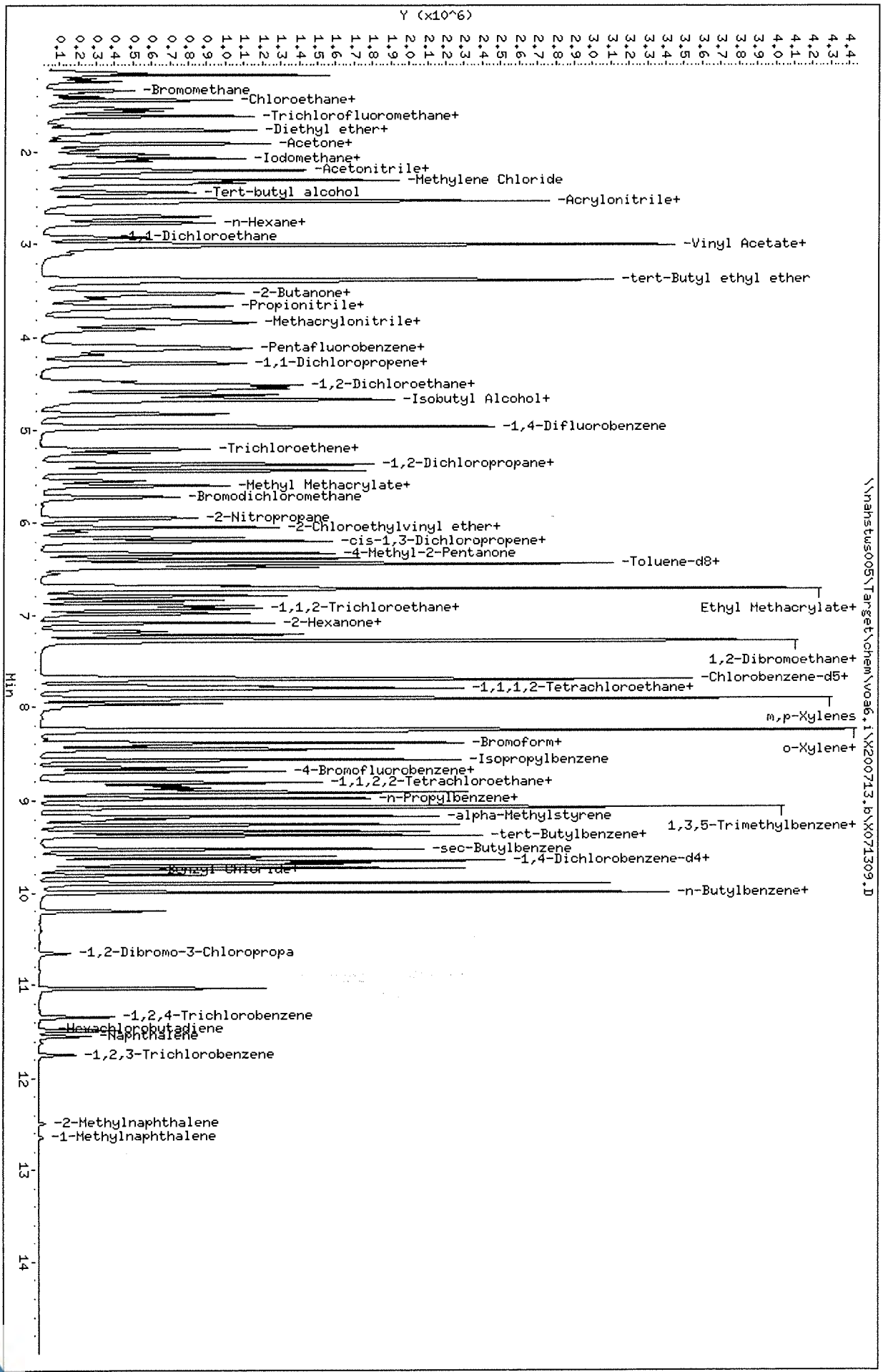
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 241410 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 394471 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 367611 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 175701 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 266517 | 100.000 | 99.15 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 358725 | 100.000 | 98.02 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 894200 | 100.000 | 92.86 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 353354 | 100.000 | 99.86 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 276323 | 100.000 | 97.31 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 435679 | 100.000 | 99.06 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 321806 | 100.000 | 99.20 |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 221967 | 100.000 | 98.61 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 651027 | 100.000 | 96.24 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 199334 | 100.000 | 94.38 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 372169 | 100.000 | 100.70 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 51441 | 100.000 | 86.54 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 288717 | 100.000 | 101.15(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 101490 | 100.000 | 90.05 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 992825 | 100.000 | 102.75 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.657 | 10.657 | (1.102) | 28602 | 100.000 | 95.24 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 279316 | 100.000 | 103.19 |
| 88 1,2-Dichlorobenzene | 146 | 9.998 | 9.998 | (1.034) | 477874 | 100.000 | 97.53 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071309.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 486248 | 100.000 | 103.59 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 369055 | 100.000 | 101.32 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 972293 | 100.000 | 101.84 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 536878 | 100.000 | 99.67 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 461077 | 100.000 | 95.84 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 536352 | 100.000 | 97.76 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 412965 | 100.000 | 96.67 |
| 24 | 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 455527 | 200.000 | 217.38(A) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 824896 | 100.000 | 98.57 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 721641 | 200.000 | 207.23(A) |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.074 | (0.939) | 963032 | 100.000 | 98.35 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 969641 | 100.000 | 103.70 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 1029988 | 200.000 | 205.32(A) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 288895 | 200.000 | 190.19 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 1106101 | 100.000 | 103.29 |
| 74 | Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 321499 | 100.000 | 99.91 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 155940 | 100.000 | 91.40 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 400516 | 100.000 | 100.90 |
| 66 | Bromoform | 173 | 8.415 | 8.415 | (1.097) | 206928 | 100.000 | 101.76 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 166657 | 100.000 | 99.84 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1252326 | 200.000 | 188.23 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 375558 | 100.000 | 101.25(H) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 718879 | 100.000 | 98.23 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 202772 | 100.000 | 95.56 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 513955 | 100.000 | 96.97 |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 484693 | 100.000 | 94.67 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 306783 | 100.000 | 99.06 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 477276 | 100.000 | 103.85 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 295797 | 100.000 | 98.90 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 193496 | 100.000 | 99.42 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 280967 | 100.000 | 110.22 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 377900 | 100.000 | 98.98 |
| 91 | Hexachlorobutadiene | 225 | 11.488 | 11.488 | (1.188) | 68418 | 100.000 | 78.60 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 1145615 | 100.000 | 100.19 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 915114 | 200.000 | 200.15(A) |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 277730 | 100.000 | 99.13 |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 859162 | 100.000 | 104.67 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1389902 | 100.000 | 103.81 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 166338 | 100.000 | 91.45 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 451830 | 100.000 | 97.80 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 1119681 | 100.000 | 102.89 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 795773 | 100.000 | 99.53 |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 769551 | 100.000 | 101.02 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 215710 | 100.000 | 95.86 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 1104310 | 100.000 | 95.88 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 259807 | 100.000 | 99.89 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 427002 | 100.000 | 100.74 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 283882 | 100.000 | 99.98 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 402173 | 100.000 | 100.77 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 383986 | 100.000 | 96.72 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

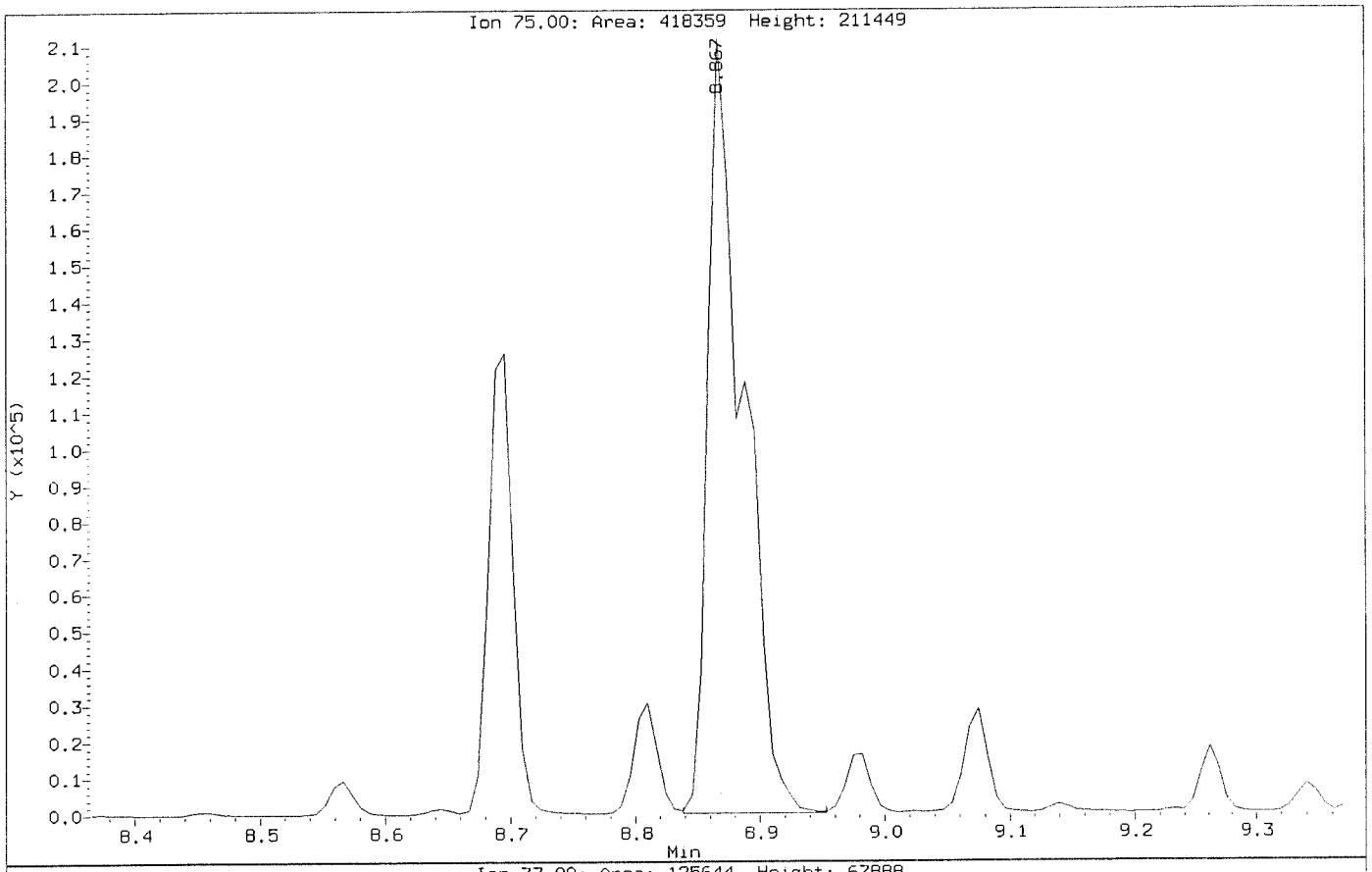


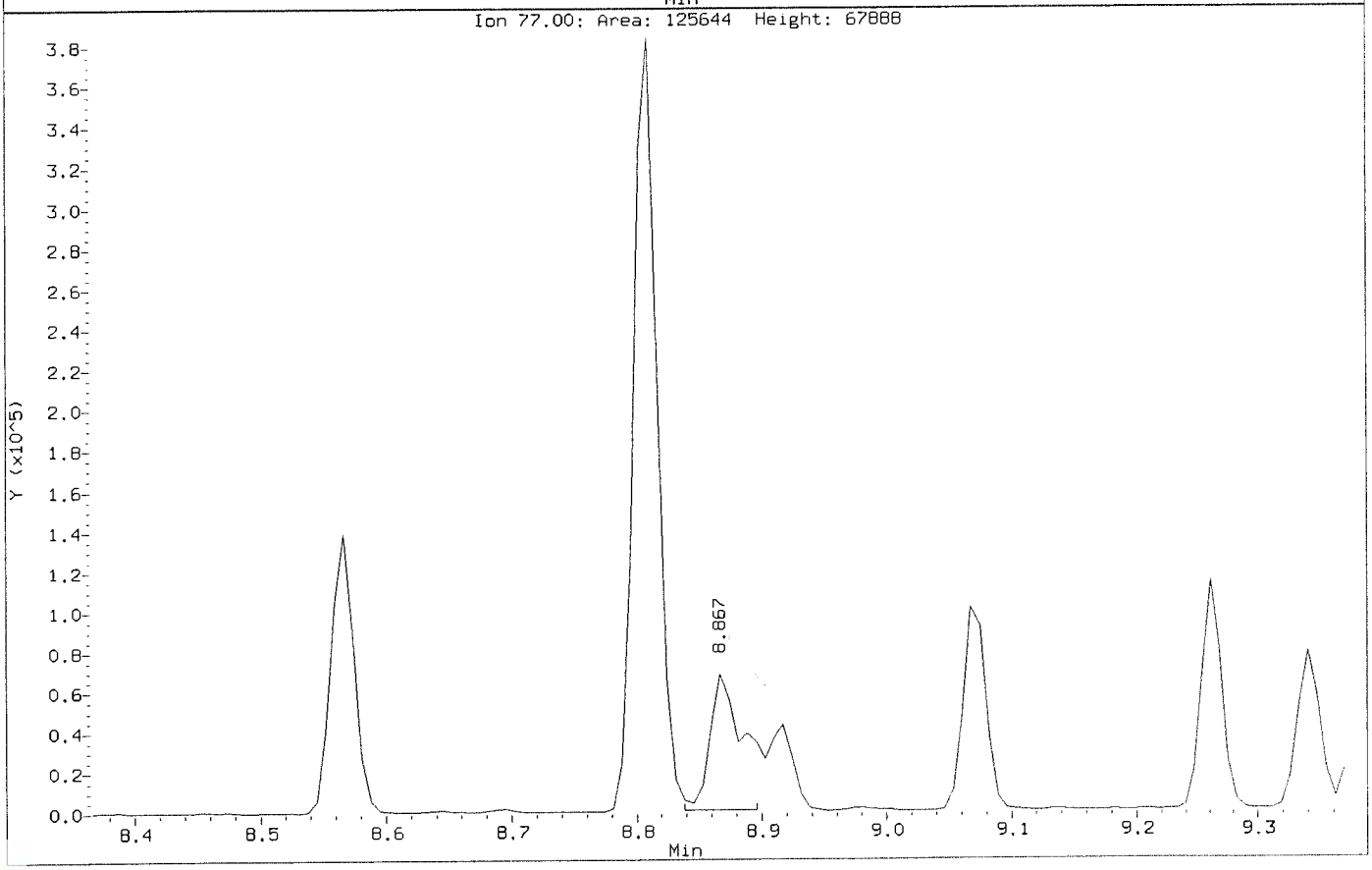

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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071309.D
Injection Date: 13-JUL-2020 13:42
Instrument: voa6.i
Client Sample ID: VSTD100

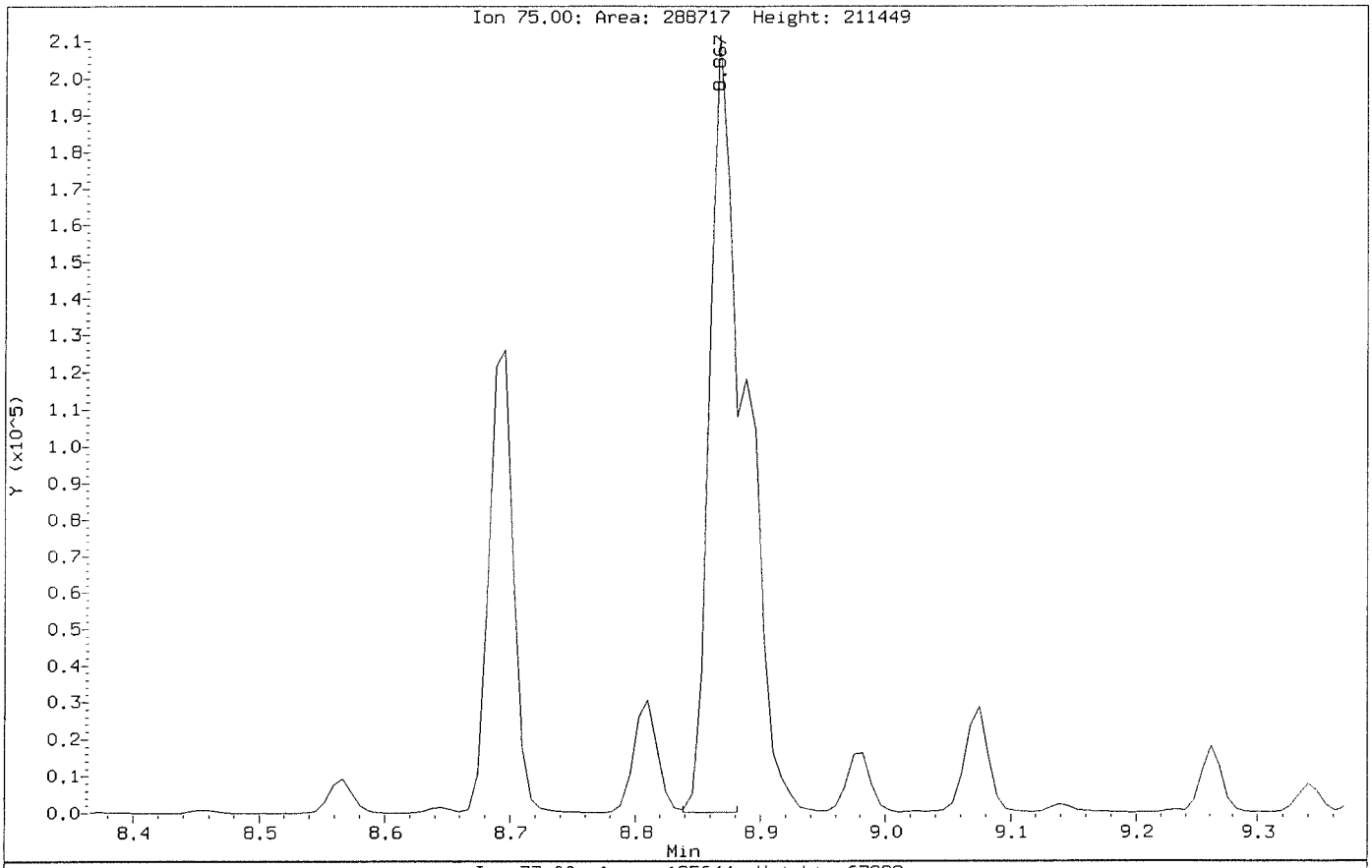
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

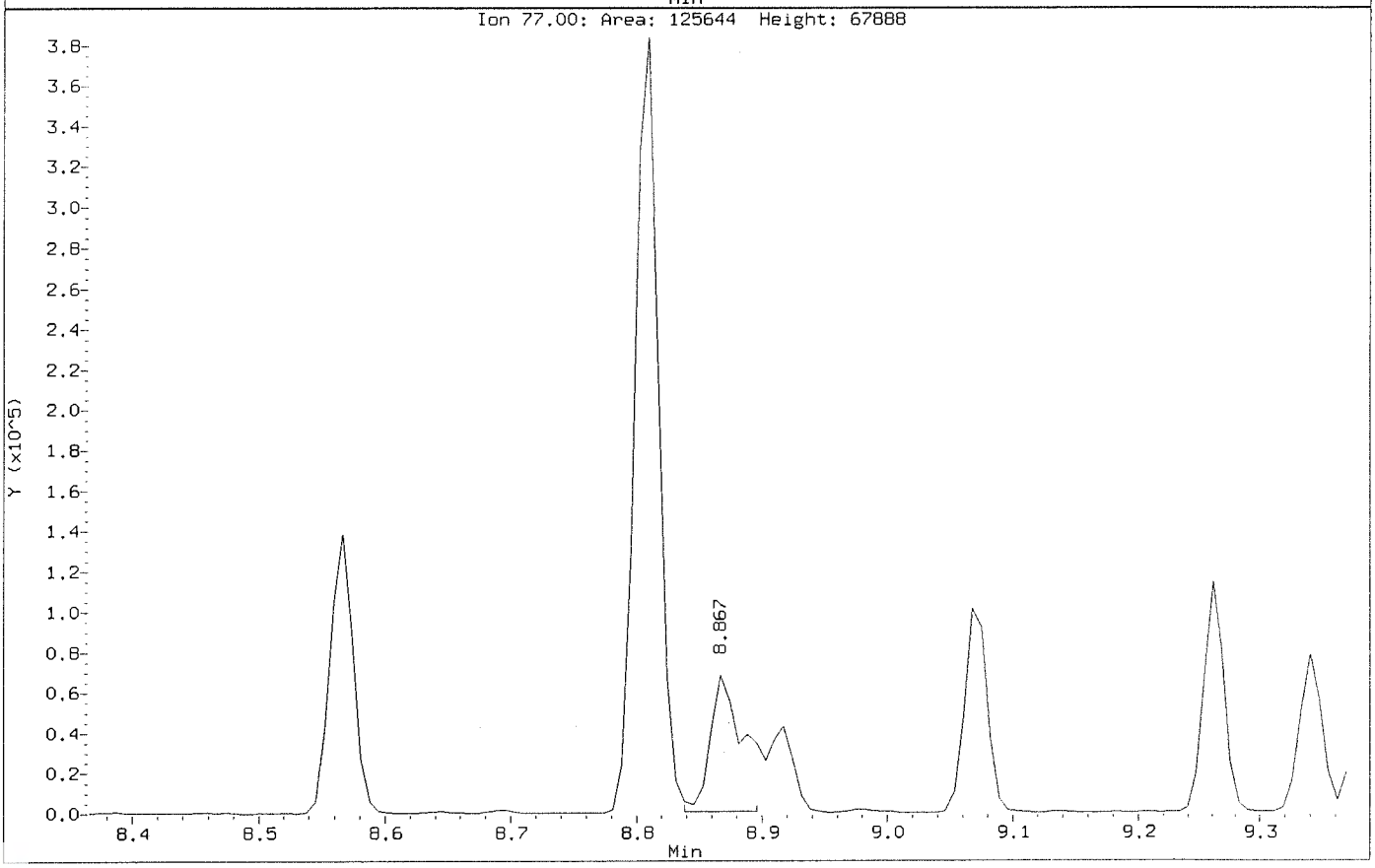


Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071309.D
Injection Date: 13-JUL-2020 13:42
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071310.D Page 1
Report Date: 13-Aug-2020 14:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 13-JUL-2020 14:06
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:51 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 13:42 Cal File: X071309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

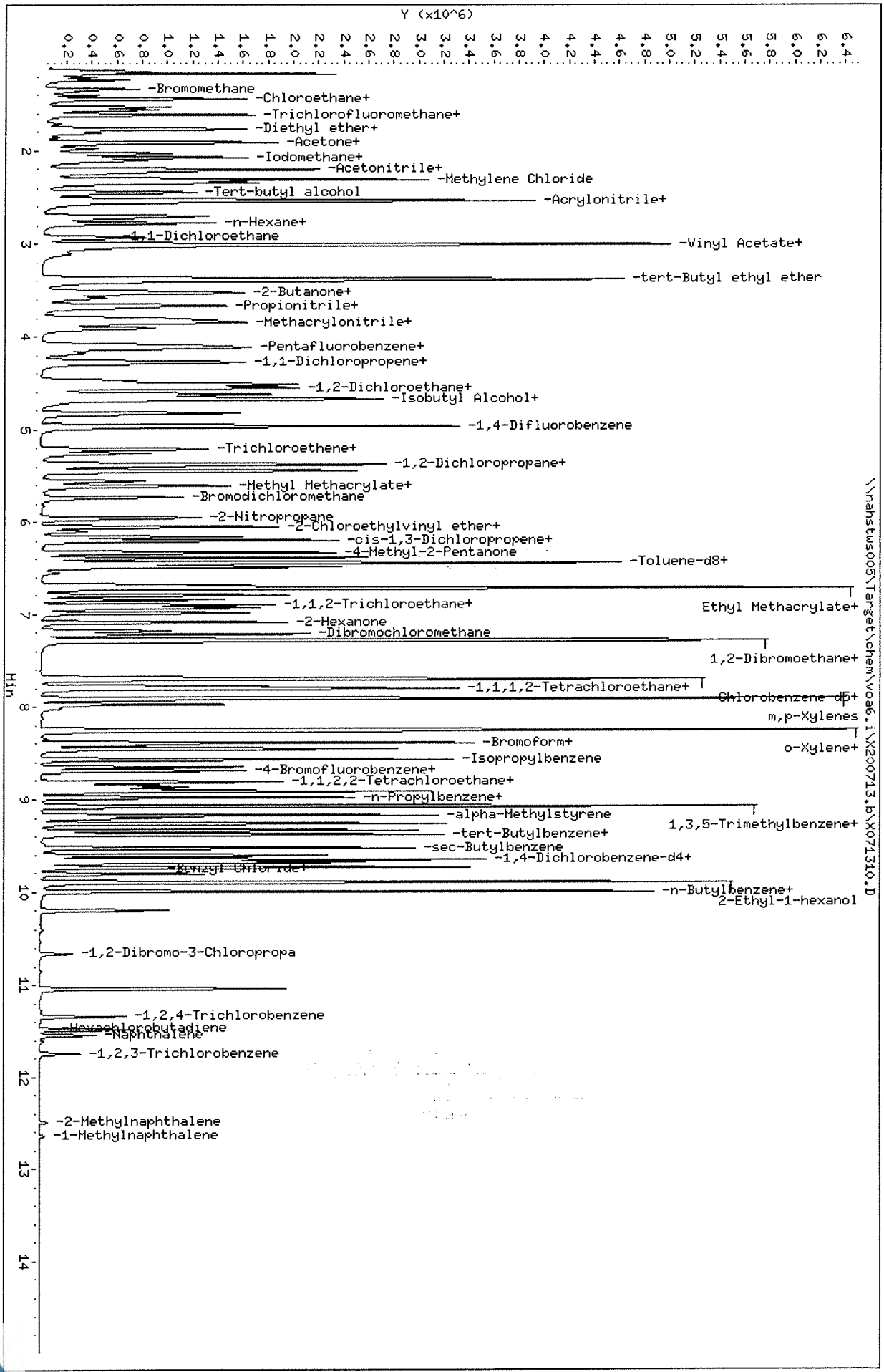
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 230193 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 377089 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 359232 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 167954 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 392708 | 150.000 | 153.26 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 528876 | 150.000 | 151.37 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 1315908 | 150.000 | 139.84 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 442637 | 150.000 | 128.16 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 407626 | 150.000 | 146.90 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 640355 | 150.000 | 152.69 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 407473 | 150.000 | 131.40 |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 325485 | 150.000 | 147.97 |
| 22 1,1-Dichloroethane | 63 | 2.921 | 2.921 | (0.697) | 944016 | 150.000 | 146.35 |
| 11 1,1-Dichloroethene | 96 | 1.912 | 1.912 | (0.456) | 292253 | 150.000 | 145.12 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 547442 | 150.000 | 154.95 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 85702 | 150.000 | 150.84 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 362910 | 150.000 | 133.01(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 166257 | 150.000 | 154.32 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 1385102 | 150.000 | 149.96 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 43451 | 150.000 | 150.59 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 409614 | 150.000 | 154.86 |
| 3 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 692860 | 150.000 | 147.94 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071310.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 681533 | 150.000 | 151.88 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 525849 | 150.000 | 151.02 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 1353847 | 150.000 | 148.35 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 746116 | 150.000 | 144.91 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 668052 | 150.000 | 142.10 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 769104 | 150.000 | 146.65 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 594659 | 150.000 | 145.98 |
| 24 | 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 672027 | 300.000 | 336.33(A) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 1110956 | 150.000 | 138.88 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 1084996 | 300.000 | 318.84(A) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 1349791 | 150.000 | 144.21 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 1398295 | 150.000 | 156.44 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 1510293 | 300.000 | 308.09(A) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 434863 | 300.000 | 302.57(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 1592295 | 150.000 | 155.56 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 417656 | 150.000 | 135.78 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 220921 | 150.000 | 135.79 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 579377 | 150.000 | 152.69 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 299848 | 150.000 | 150.89 |
| 6 | Bromomethane | 94 | 1.331 | 1.331 | (0.318) | 238785 | 150.000 | 150.56 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1855037 | 300.000 | 292.40(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 556069 | 150.000 | 156.84(H) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 1044850 | 150.000 | 146.11 |
| 7 | Chloroethane | 64 | 1.396 | 1.396 | (0.333) | 288073 | 150.000 | 142.38 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 746597 | 150.000 | 147.73 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 733378 | 150.000 | 149.22 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 447986 | 150.000 | 151.71 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 687810 | 150.000 | 156.56 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 437555 | 150.000 | 149.72 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 278485 | 150.000 | 149.69 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 414837 | 150.000 | 170.67 |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 550060 | 150.000 | 147.44 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 111325 | 150.000 | 133.79 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 1633594 | 150.000 | 146.21 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 1325989 | 300.000 | 296.78(A) |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 426028 | 150.000 | 160.31 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 1242946 | 150.000 | 158.41 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1838700 | 150.000 | 143.67 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 271059 | 150.000 | 155.02 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 642067 | 150.000 | 142.22 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 1609476 | 150.000 | 154.72 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 1131381 | 150.000 | 144.81 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 1110686 | 150.000 | 152.52 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 316496 | 150.000 | 143.93 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 1611330 | 150.000 | 143.16 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.528 | 2.528 | (0.603) | 375359 | 150.000 | 151.36 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 625897 | 150.000 | 154.47 |
| 38 | Trichloroethene | 130 | 5.207 | 5.207 | (1.048) | 414098 | 150.000 | 152.57 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 589104 | 150.000 | 154.81 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 590934 | 150.000 | 156.11 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

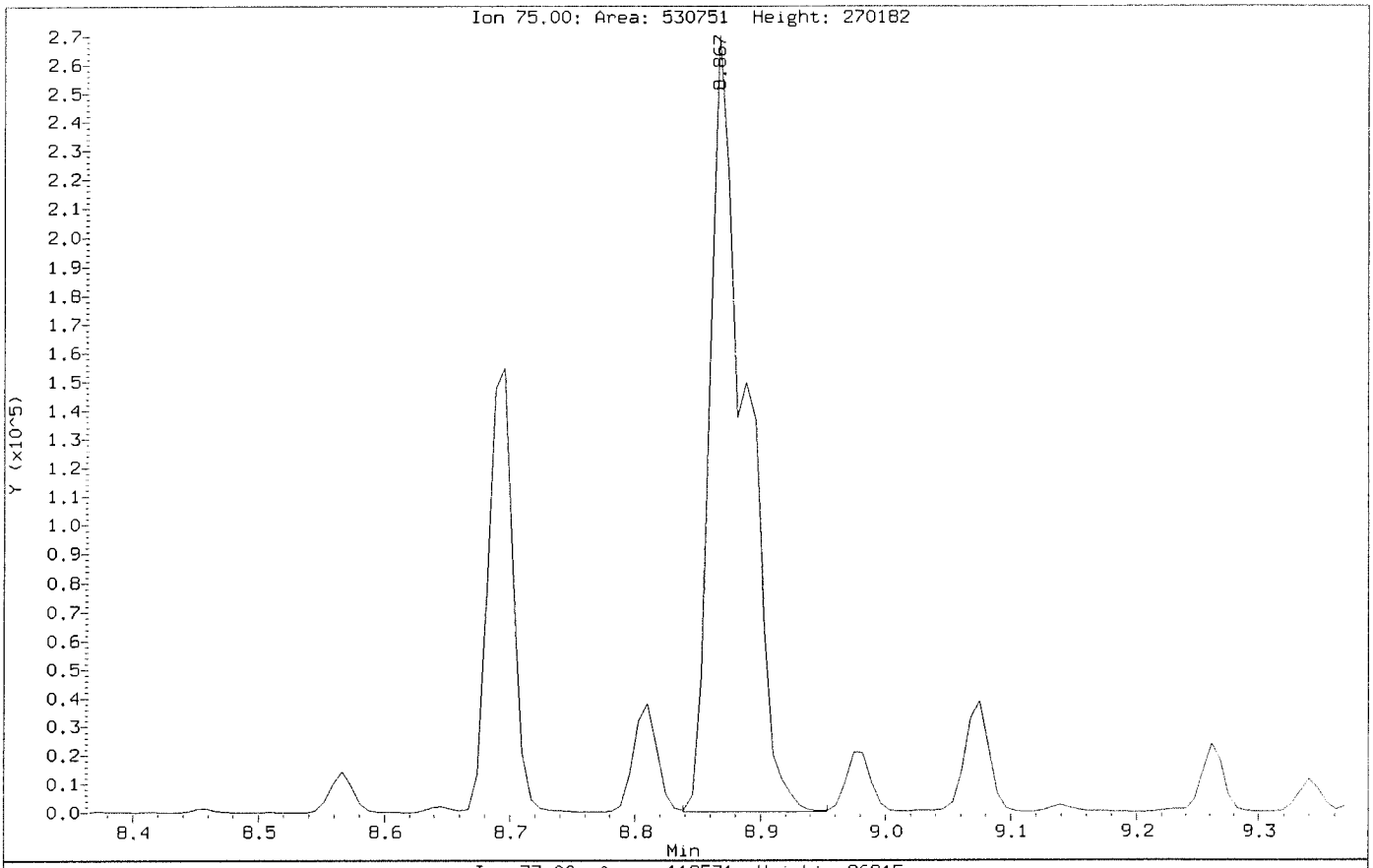


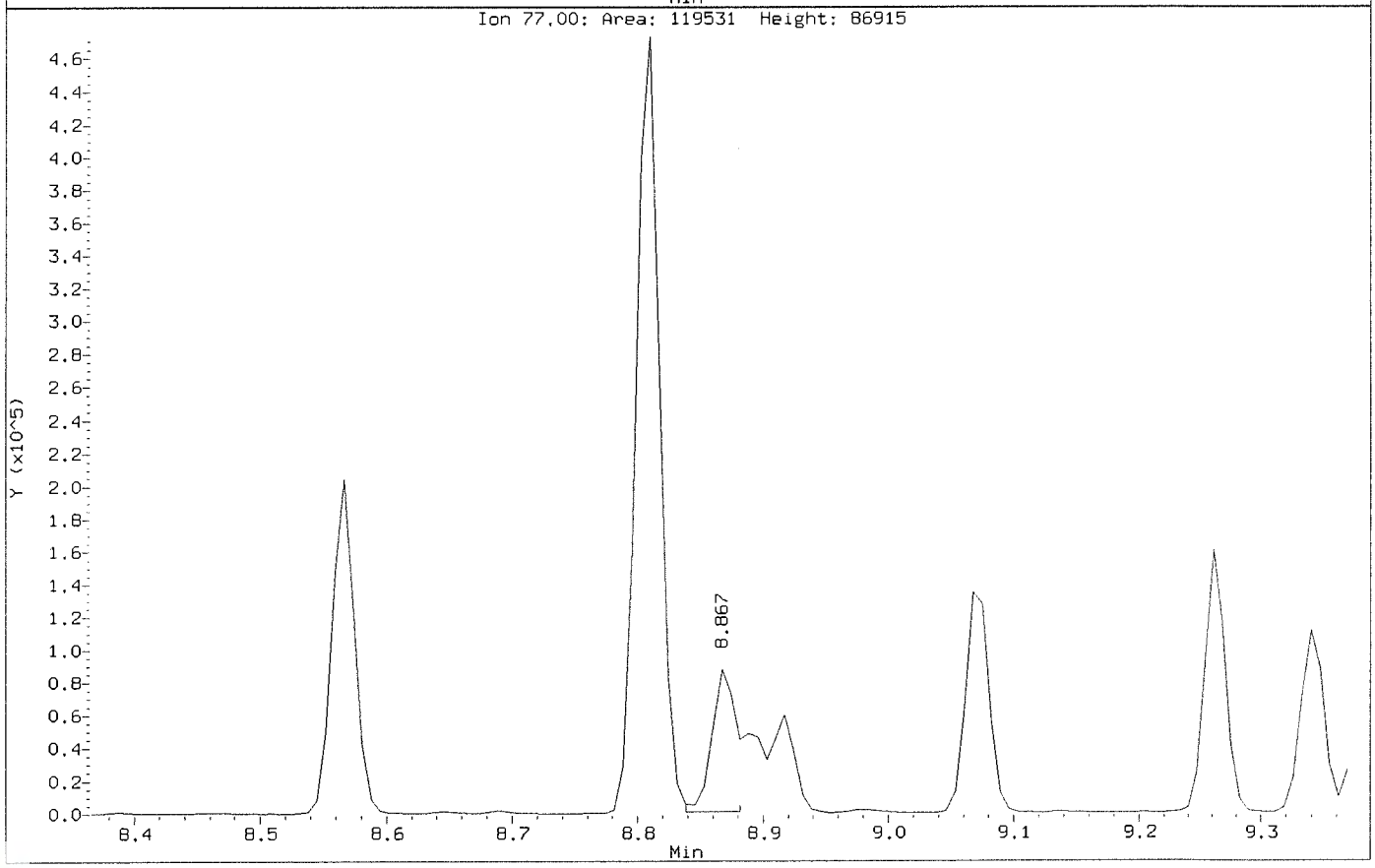

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071310.D
Date : 13-JUL-2020 14:06
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071310.D
Injection Date: 13-JUL-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD150

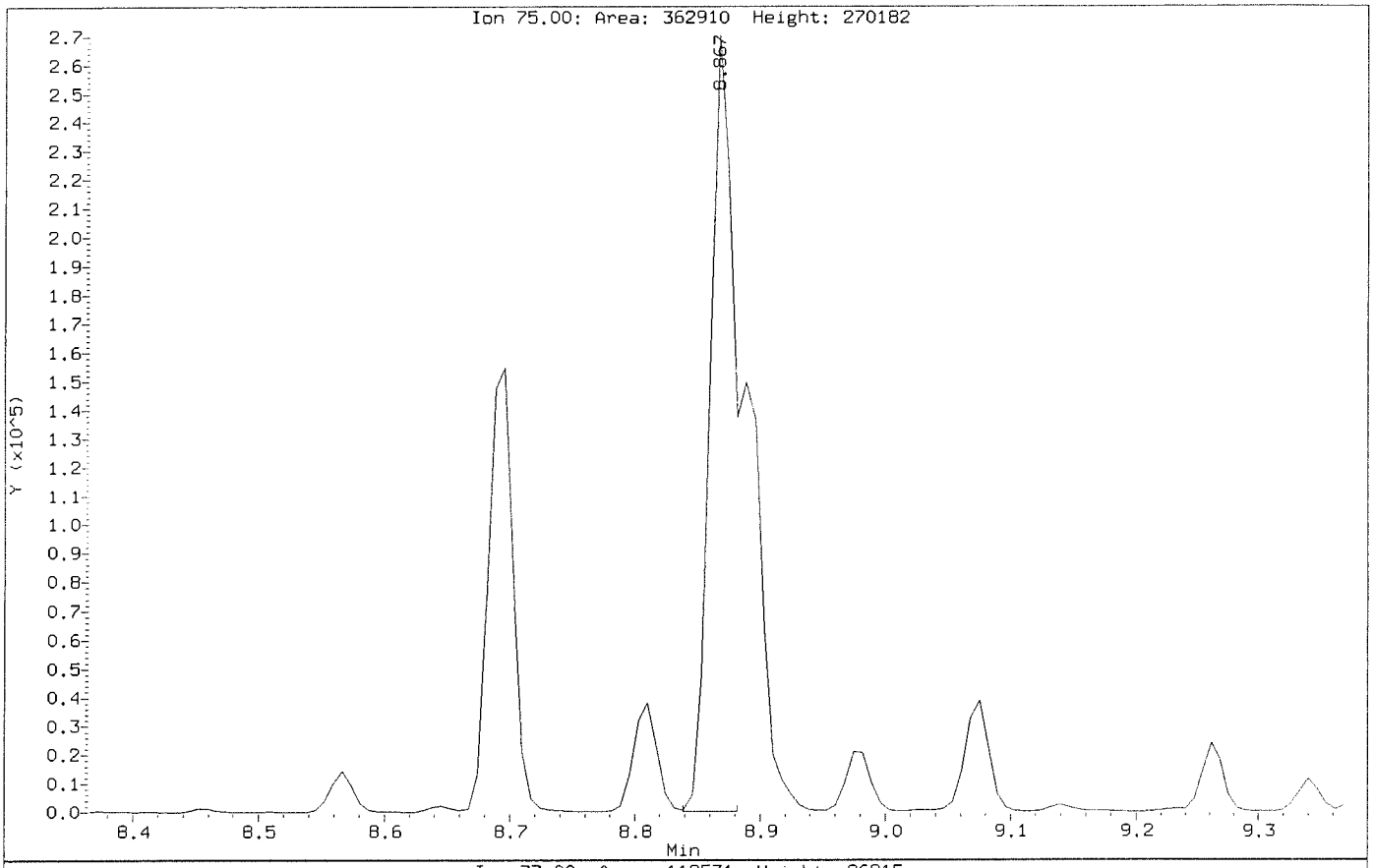
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

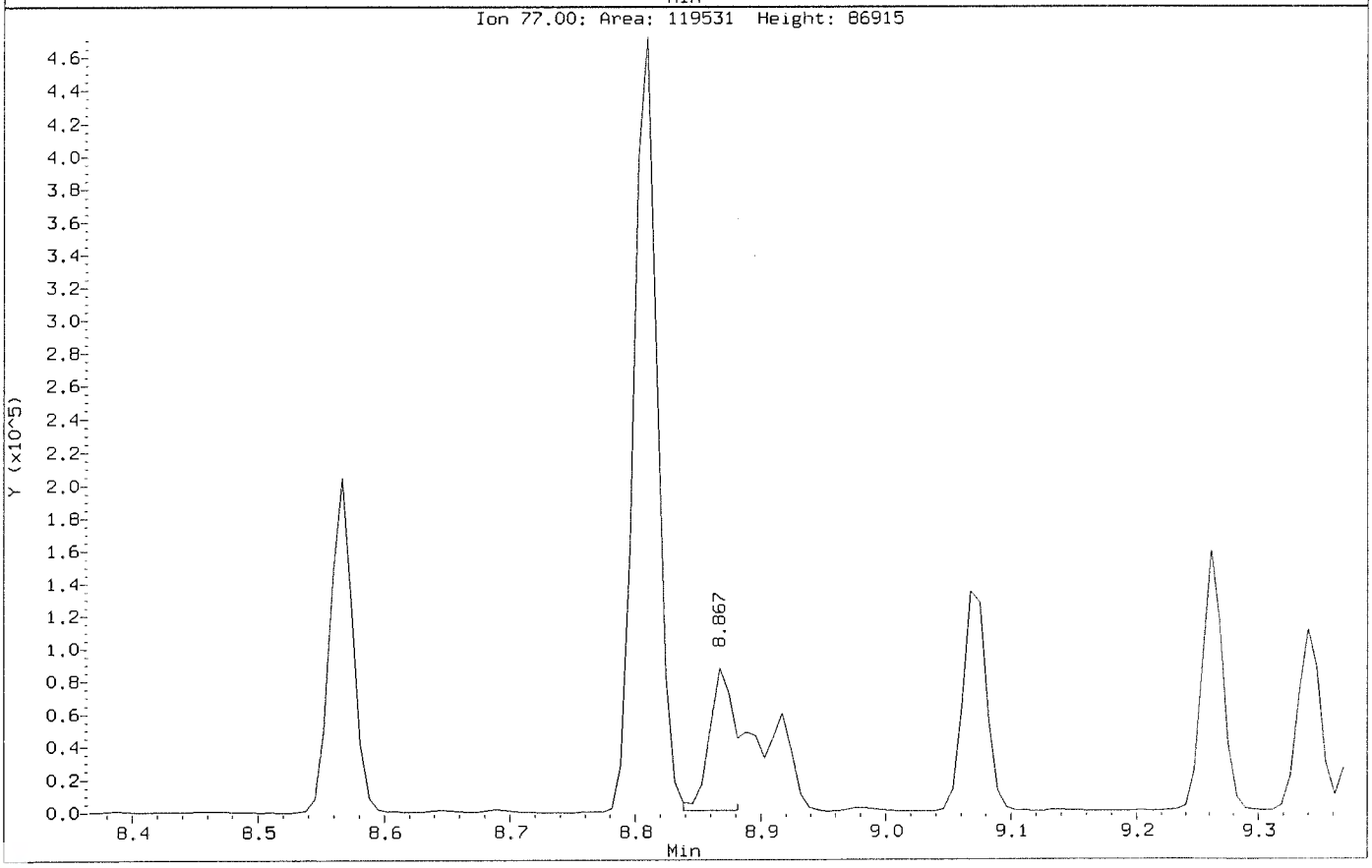


Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071310.D
Injection Date: 13-JUL-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071311.D
Lab Smp Id: VSTD200  Client Smp ID: VSTD200
Inj Date : 13-JUL-2020 14:30
Operator : PC  Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:51 voa6.i  Quant Type: ISTD
Cal Date : 13-JUL-2020 14:06  Cal File: X071310.D
Als bottle: 12  Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

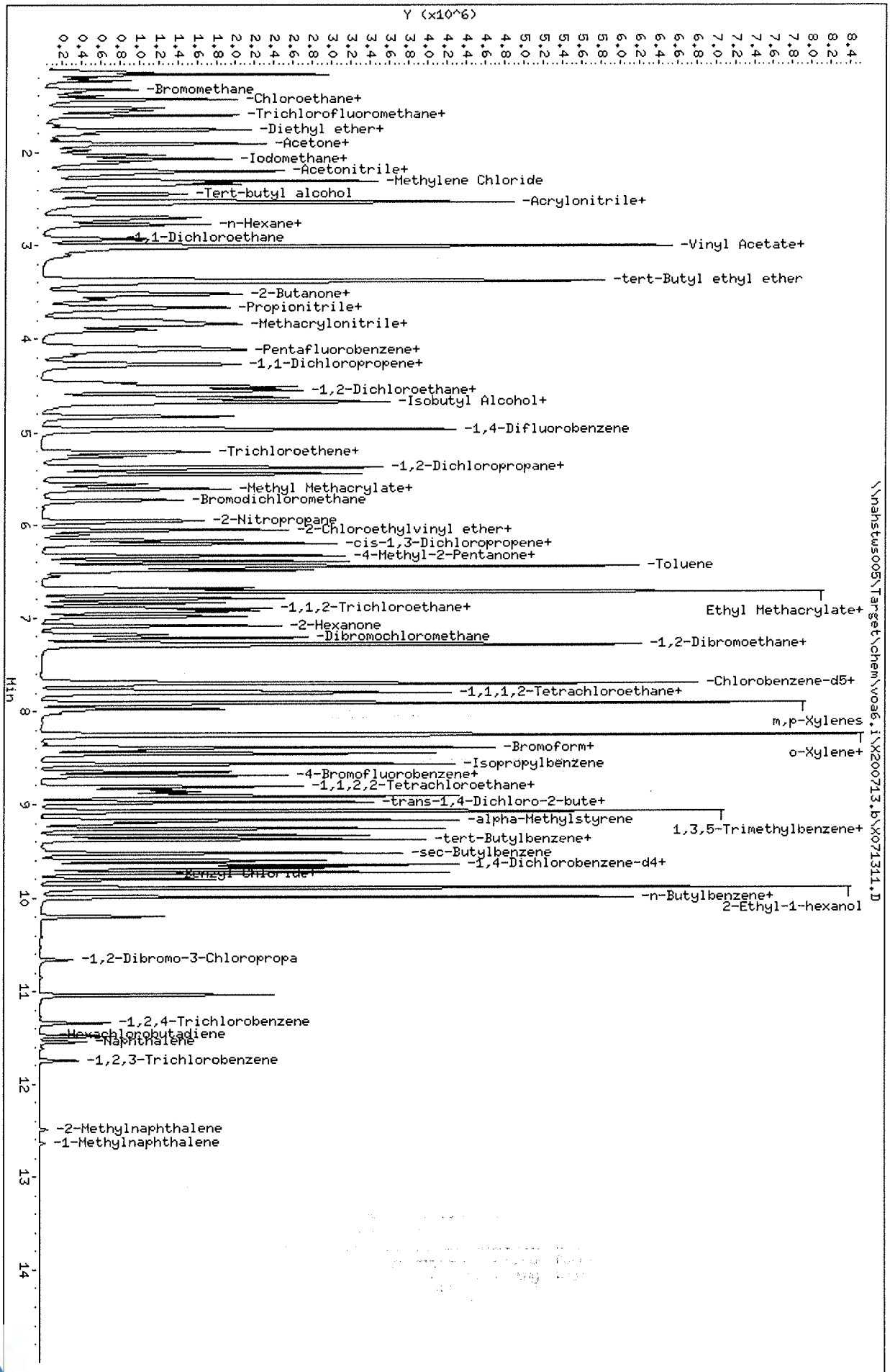
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 226606 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 377615 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 350855 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 165433 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 499552 | 200.000 | 198.07 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 688409 | 200.000 | 200.04(A) |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 1699318 | 200.000 | 184.90 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 662646 | 200.000 | 196.73 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 519224 | 200.000 | 191.59 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 831504 | 200.000 | 201.41(A) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 585059 | 200.000 | 191.54 |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 404715 | 200.000 | 188.39 |
| 22 1,1-Dichloroethane | 63 | 2.922 | 2.922 | (0.697) | 1227625 | 200.000 | 193.33 |
| 11 1,1-Dichloroethene | 96 | 1.912 | 1.912 | (0.456) | 363508 | 200.000 | 183.36 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 699456 | 200.000 | 197.71 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 98407 | 200.000 | 175.84 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 515907 | 200.000 | 191.96(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 182717 | 200.000 | 172.18 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 1655157 | 200.000 | 181.93 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 57589 | 200.000 | 202.18(A) |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 444455 | 200.000 | 172.05 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 883809 | 200.000 | 191.59 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071311.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 911285 | 200.000 | 202.81(A) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 692632 | 200.000 | 198.64 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 1699909 | 200.000 | 189.11 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 963269 | 200.000 | 189.94 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 873496 | 200.000 | 190.24 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 983089 | 200.000 | 190.31 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 761422 | 200.000 | 189.88 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 867892 | 400.000 | 441.23(A) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 1515299 | 200.000 | 192.32 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 1349319 | 400.000 | 405.99(A) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 1692947 | 200.000 | 183.63 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 1751692 | 200.000 | 198.97 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 2008333 | 400.000 | 419.47(A) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 491866 | 400.000 | 348.25(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 2076655 | 200.000 | 202.59(A) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 570057 | 200.000 | 188.15 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 276858 | 200.000 | 172.87 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 761279 | 200.000 | 200.35(A) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 397885 | 200.000 | 205.01(A) |
| 6 | Bromomethane | 94 | 1.331 | 1.331 | (0.318) | 310885 | 200.000 | 199.46 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 2225665 | 400.000 | 356.38(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 716664 | 200.000 | 201.85(AH) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 1328129 | 200.000 | 190.16 |
| 7 | Chloroethane | 64 | 1.396 | 1.396 | (0.333) | 372253 | 200.000 | 186.90 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 960718 | 200.000 | 193.11 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 989264 | 200.000 | 203.85(A) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 573367 | 200.000 | 197.24 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 900590 | 200.000 | 204.70(A) |
| 55 | Dibromochloromethane | 129 | 7.184 | 7.184 | (0.937) | 563221 | 200.000 | 197.32 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 370066 | 200.000 | 198.64 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 515464 | 200.000 | 215.43(A) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 716131 | 200.000 | 196.54 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 123032 | 200.000 | 150.11 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 2135175 | 200.000 | 195.66 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 1708698 | 400.000 | 391.57(A) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 499769 | 200.000 | 191.30 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 1533778 | 200.000 | 198.46 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 2519224 | 200.000 | 199.85 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 296243 | 200.000 | 171.87 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 845487 | 200.000 | 191.75 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 1978710 | 200.000 | 193.12 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 1485668 | 200.000 | 194.70 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 1281573 | 200.000 | 178.67 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 400280 | 200.000 | 186.38 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 2077879 | 200.000 | 189.02 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.528 | 2.528 | (0.603) | 474378 | 200.000 | 194.31 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 832686 | 200.000 | 205.22(A) |
| 38 | Trichloroethene | 130 | 5.207 | 5.207 | (1.048) | 541719 | 200.000 | 199.32 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 752087 | 200.000 | 200.77(A) |
| 5 | Vinyl Chloride | 62 | 1.138 | 1.138 | (0.272) | 766186 | 200.000 | 205.61(A) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

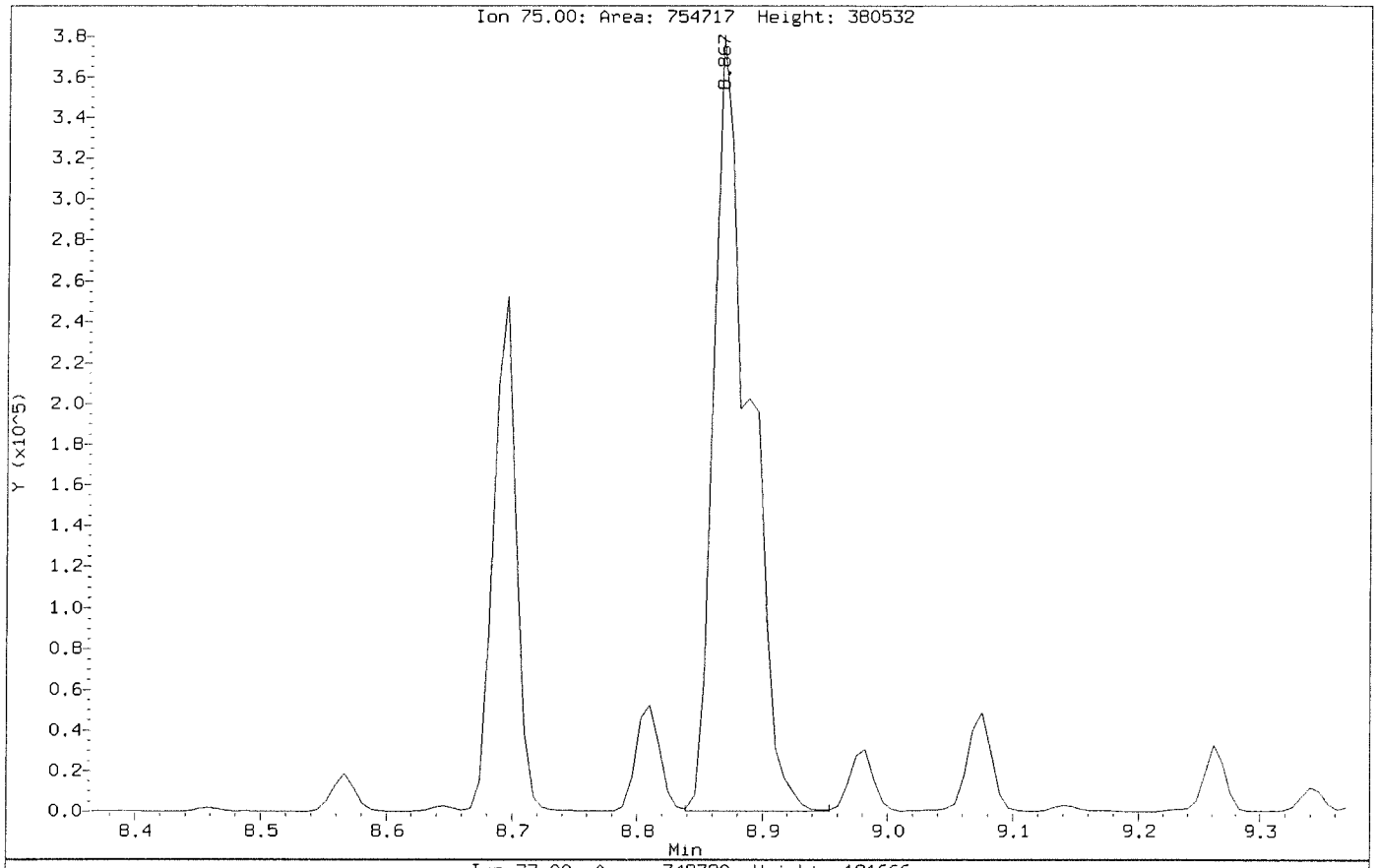


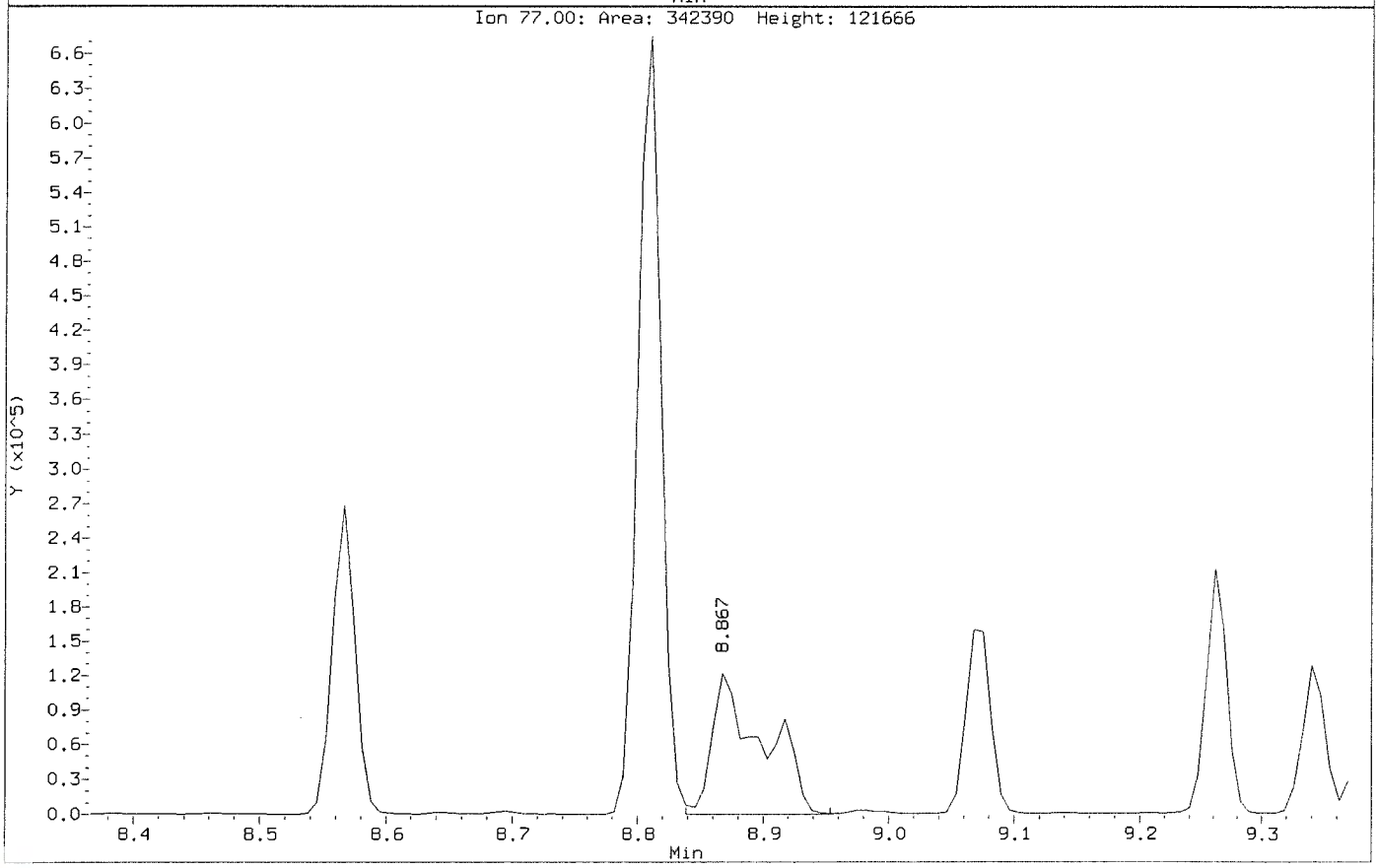

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071311.D
Date : 13-JUL-2020 14:30
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071311.D
Injection Date: 13-JUL-2020 14:30
Instrument: voa6.i
Client Sample ID: VSTD200

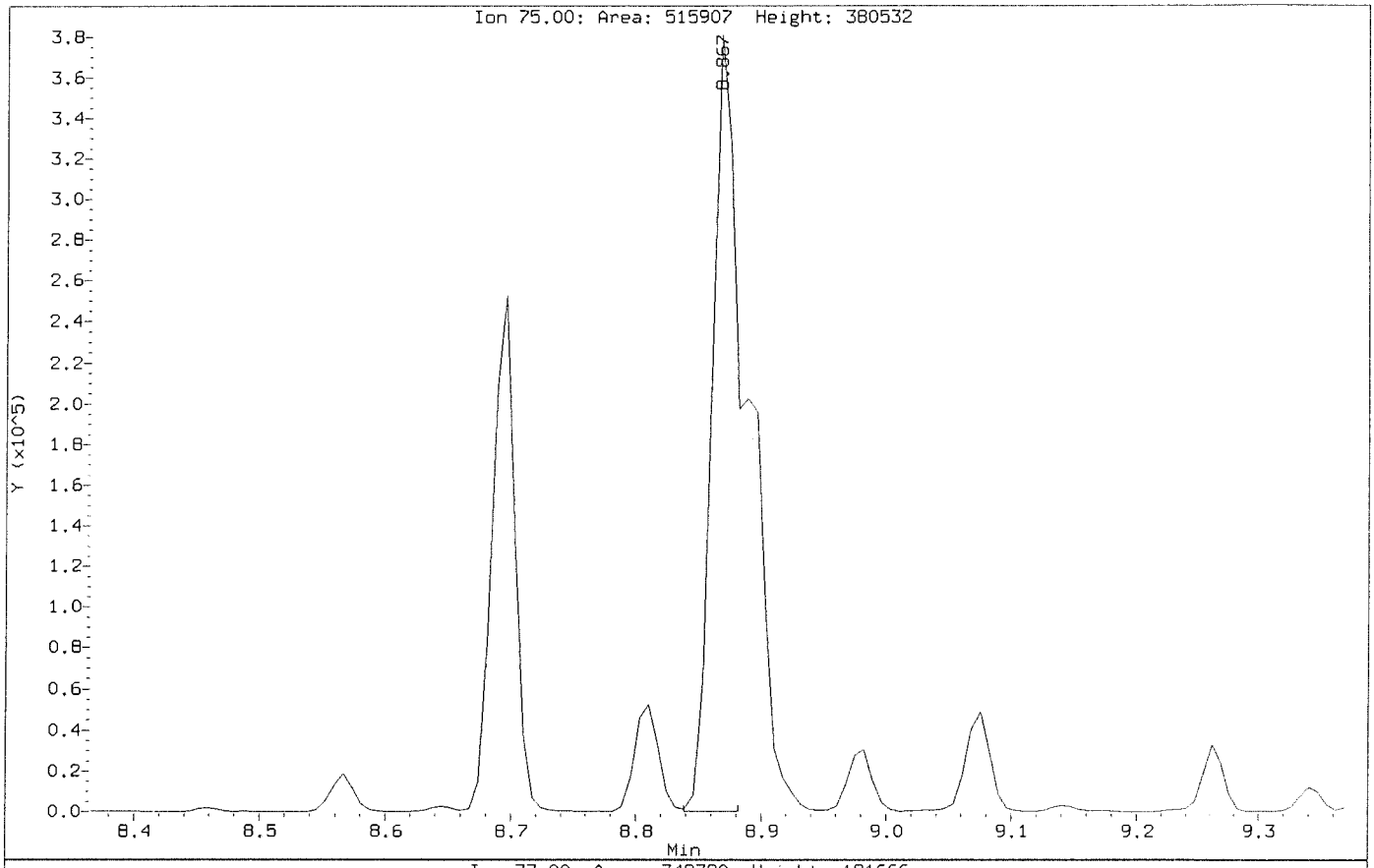
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

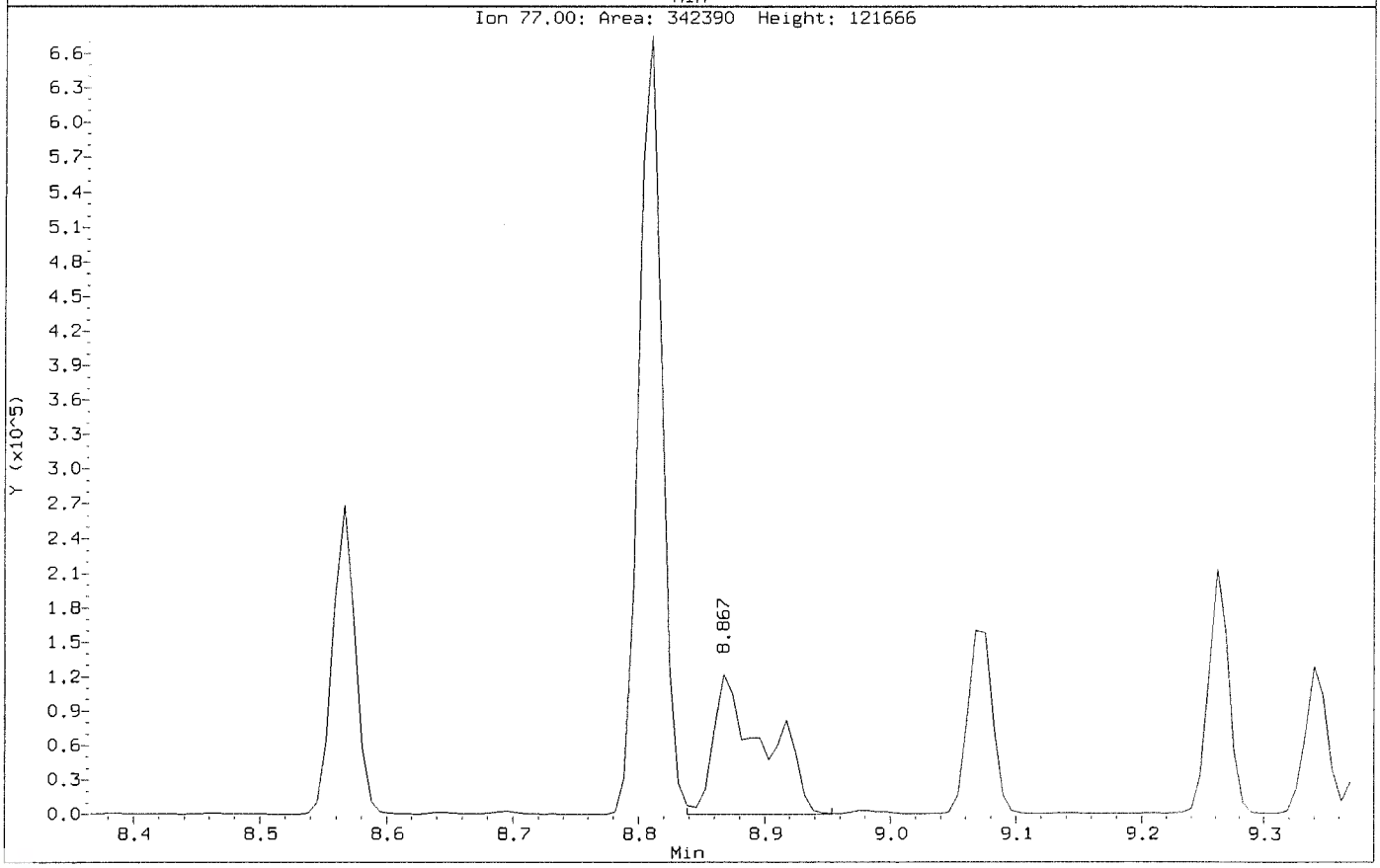


Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071311.D
Injection Date: 13-JUL-2020 14:30
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D  Page 1
Report Date: 13-Aug-2020 14:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D
Lab Smp Id: ICV  Client Smp ID: ICV
Inj Date  : 13-JUL-2020 15:42
Operator  : PC  Inst ID: voa6.i
Smp Info  : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200713.b\8260W.m
Meth Date : 13-Aug-2020 14:51 voa6.i  Quant Type: ISTD
Cal Date  : 13-JUL-2020 14:30  Cal File: X071311.D
Als bottle: 15  QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

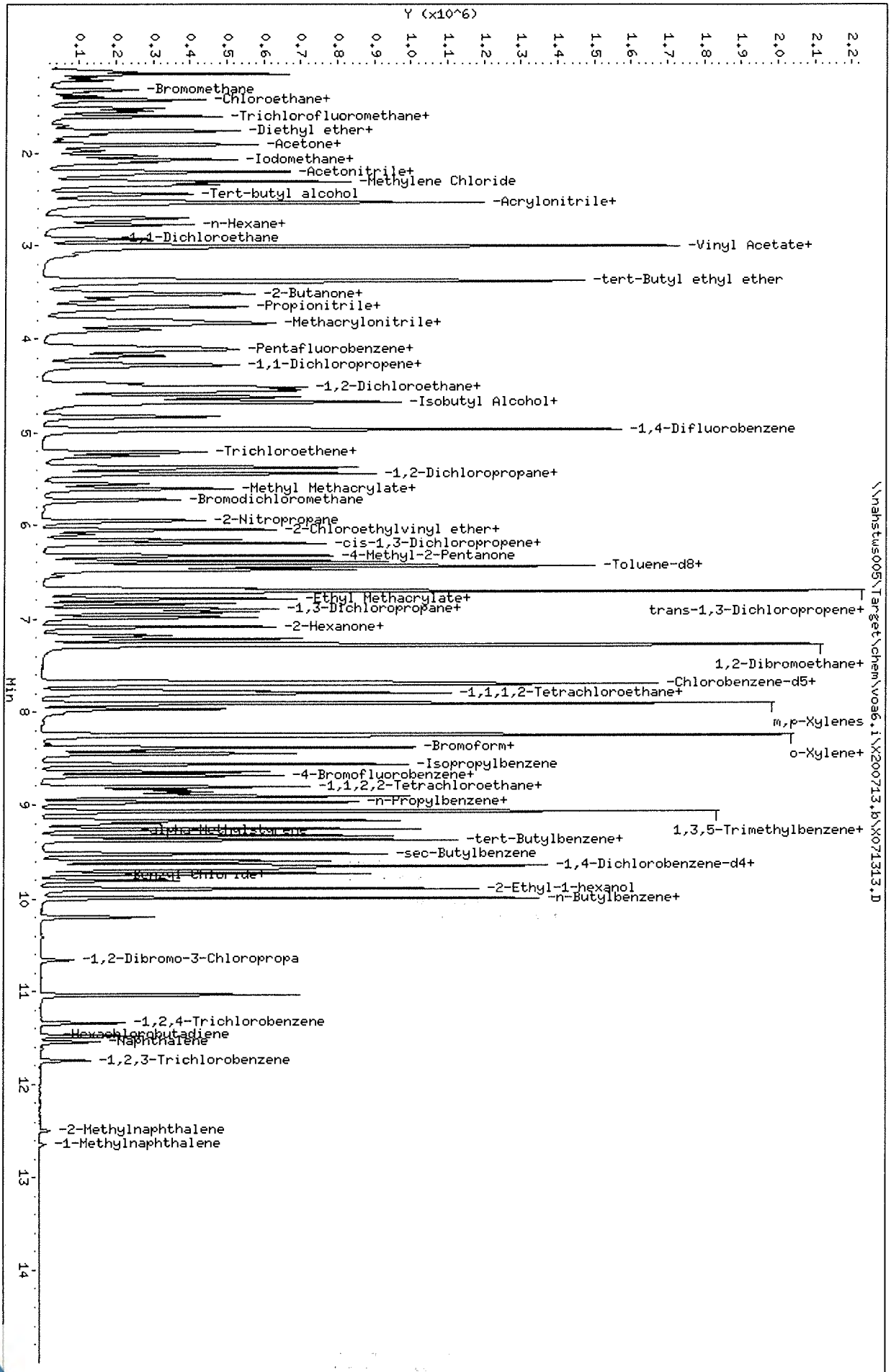
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 247155 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 407373 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 373467 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.669 | (1.000) | 159419 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 141230 | 51.2819 | 51.28 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 190337 | 50.9658 | 50.96 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 473220 | 48.3739 | 48.37 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 178443 | 49.3711 | 49.37 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 135780 | 47.0688 | 47.06 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 210892 | 46.8363 | 46.83 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 165689 | 56.2920 | 56.29 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.847 | (0.892) | 114924 | 50.2570 | 50.25 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.922 | (0.699) | 321262 | 46.3878 | 46.38 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.912 | (0.458) | 95261 | 44.0570 | 44.05 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.283 | (0.862) | 179702 | 47.0849 | 47.08 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 32328 | 59.9466 | 59.94(M) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 146576 | 56.5986 | 56.59(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 58539 | 57.2465 | 57.24 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 471204 | 53.7495 | 53.74 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 15964 | 59.0984 | 59.09 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 142207 | 51.7160 | 51.71 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.035) | 207603 | 46.7019 | 46.70 |

Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D Page 2
Report Date: 13-Aug-2020 14:51

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 249342 | 51.4385 | 51.43 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 186946 | 49.6985 | 49.69 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.075 | (0.938) | 437198 | 50.4738 | 50.47 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.995) | 259004 | 52.9988 | 52.99 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 236003 | 48.2879 | 48.28 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.002) | 212867 | 42.7627 | 42.76 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 219725 | 50.2400 | 50.23 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 240001 | 111.871 | 111.87 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.981 | (0.929) | 379515 | 49.9851 | 49.98 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 378900 | 107.103 | 107.10 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 451626 | 50.8376 | 50.83 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 435607 | 51.3469 | 51.34 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 532905 | 104.567 | 104.56 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 150047 | 94.4988 | 94.49 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 556751 | 50.3486 | 50.34 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.912) | 159418 | 54.6017 | 54.60 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 78132 | 44.7315 | 44.73 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 196256 | 47.8786 | 47.87 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 102128 | 49.4360 | 49.43 |
| 6 | Bromomethane | 94 | 1.338 | 1.331 | (0.320) | 81107 | 46.9145 | 46.91 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 584261 | 85.7763 | 85.77 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 178259 | 46.5407 | 46.54(H) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 358922 | 48.2798 | 48.27 |
| 7 | Chloroethane | 64 | 1.403 | 1.396 | (0.335) | 88562 | 40.7686 | 40.76 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 258616 | 47.6634 | 47.66 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 241621 | 46.9784 | 46.97 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 155775 | 49.1327 | 49.13 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 236796 | 49.8932 | 49.89 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.184 | (0.936) | 147810 | 48.6502 | 48.65 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 97504 | 48.5143 | 48.51 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 127948 | 49.0291 | 49.02 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.807 | (1.017) | 183978 | 47.4353 | 47.43 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.188) | 43827 | 55.4923 | 55.49 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 514320 | 44.2788 | 44.27 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 423817 | 91.2429 | 91.24 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.306 | (0.550) | 127302 | 43.6183 | 43.61 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.035) | 336495 | 45.1834 | 45.18 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.923) | 591132 | 48.6636 | 48.66 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.195) | 98243 | 59.9674 | 59.96(M) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 212595 | 45.2978 | 45.29 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.986) | 502348 | 50.8793 | 50.87 |
| 64 | Styrene | 104 | 8.258 | 8.265 | (1.077) | 382194 | 47.0561 | 47.05 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.967) | 353469 | 51.1400 | 51.14 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 103735 | 45.3783 | 45.37 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 559710 | 47.8347 | 47.83 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.528 | (0.605) | 114744 | 43.0945 | 43.09 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 217379 | 49.6618 | 49.66 |
| 38 | Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 141901 | 48.3975 | 48.39 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 177443 | 43.4306 | 43.43 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.138 | (0.273) | 169254 | 41.6454 | 41.64 |

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

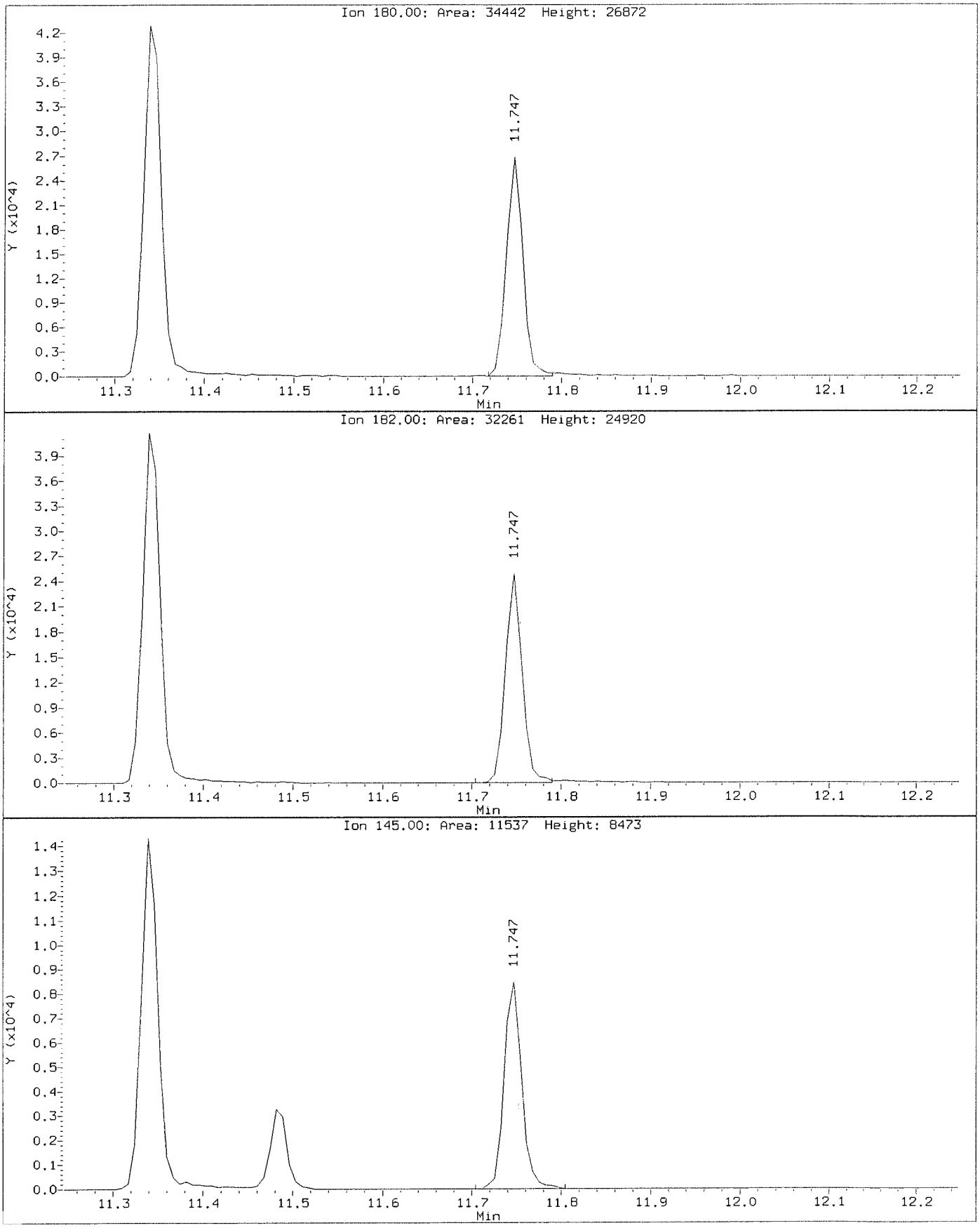



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D
Date : 13-JUL-2020 15:42
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

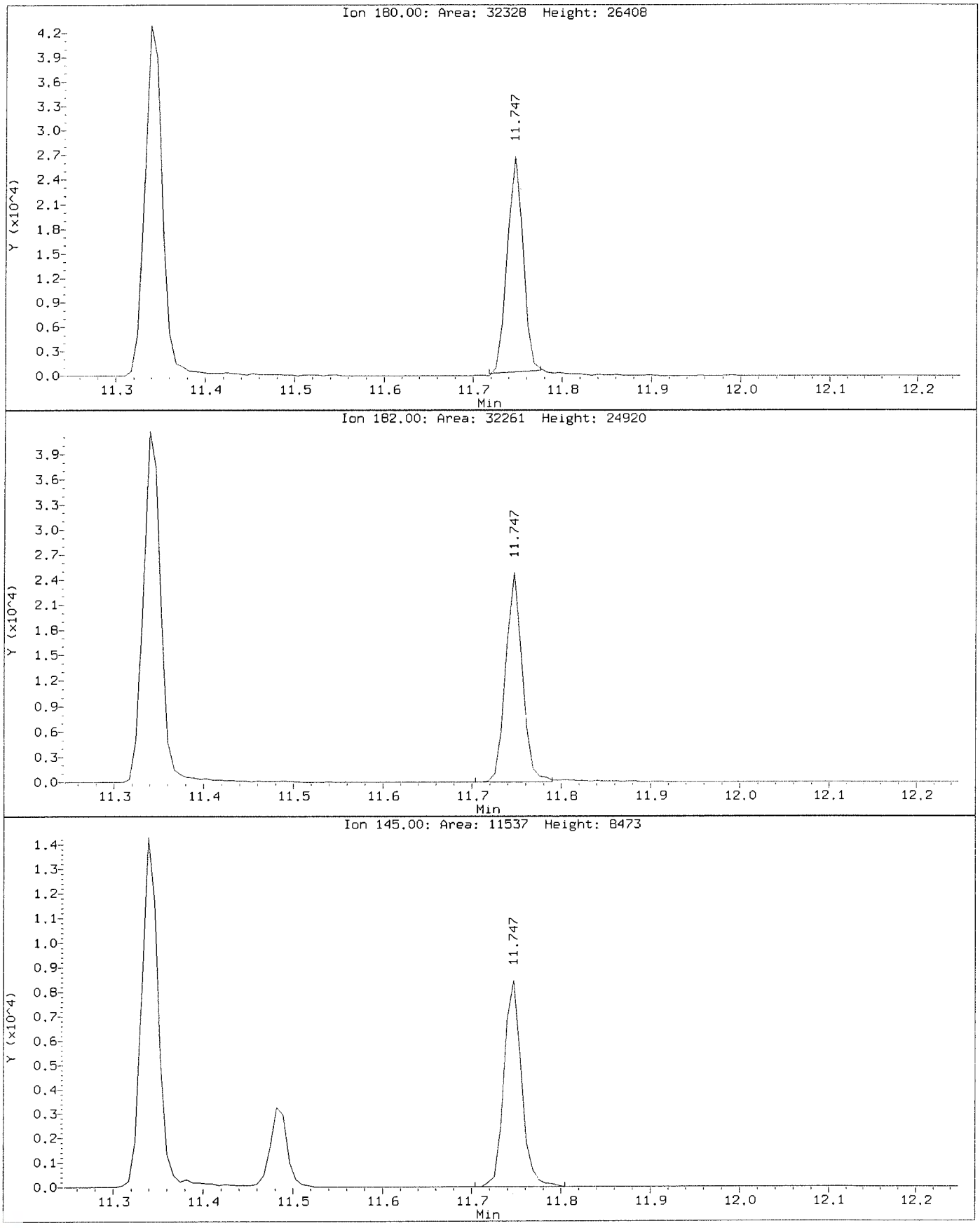
Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071313.D
Injection Date: 13-JUL-2020 15:42
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



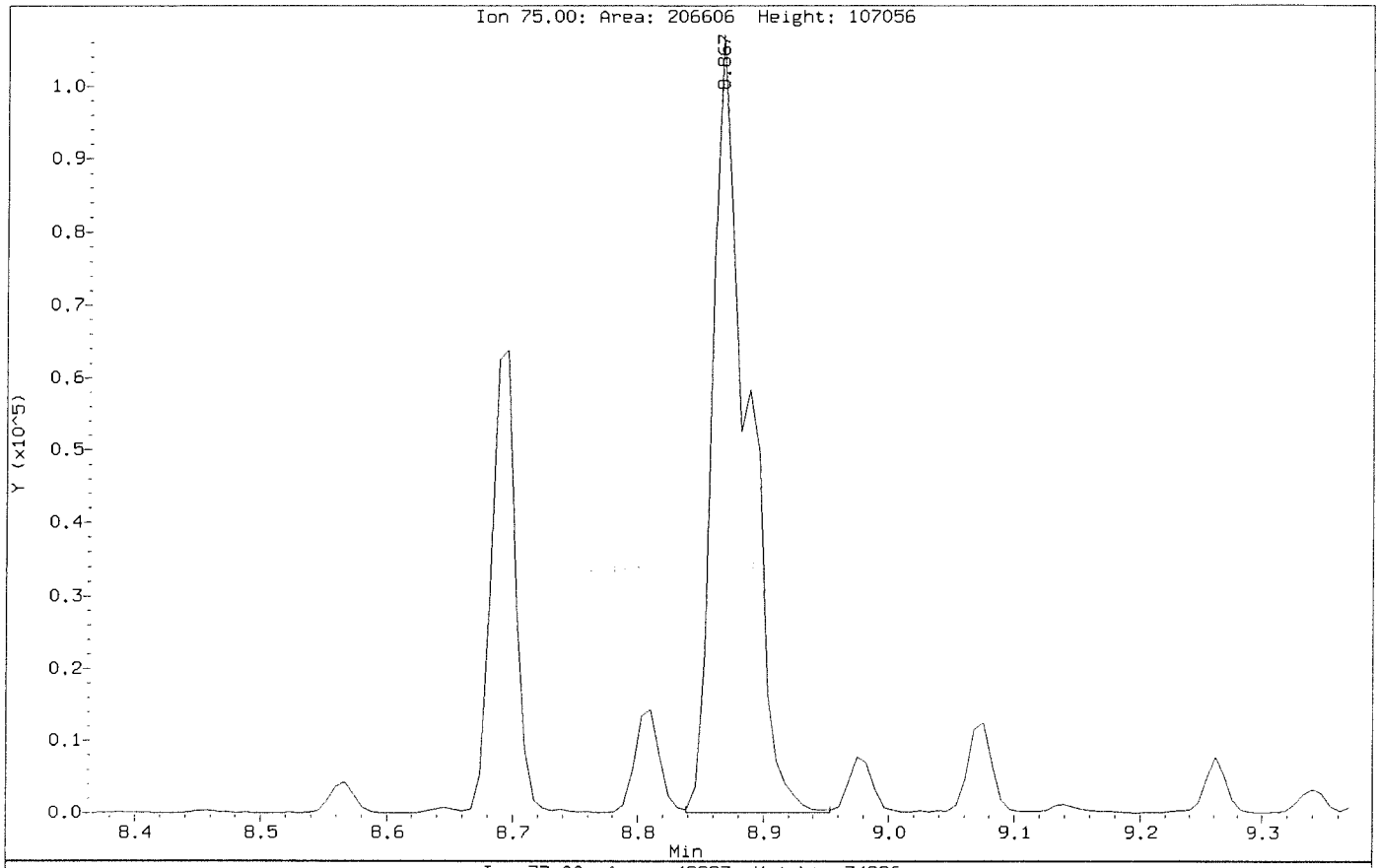
Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D
Injection Date: 13-JUL-2020 15:42
Instrument: voa6.i
Client Sample ID: ICV

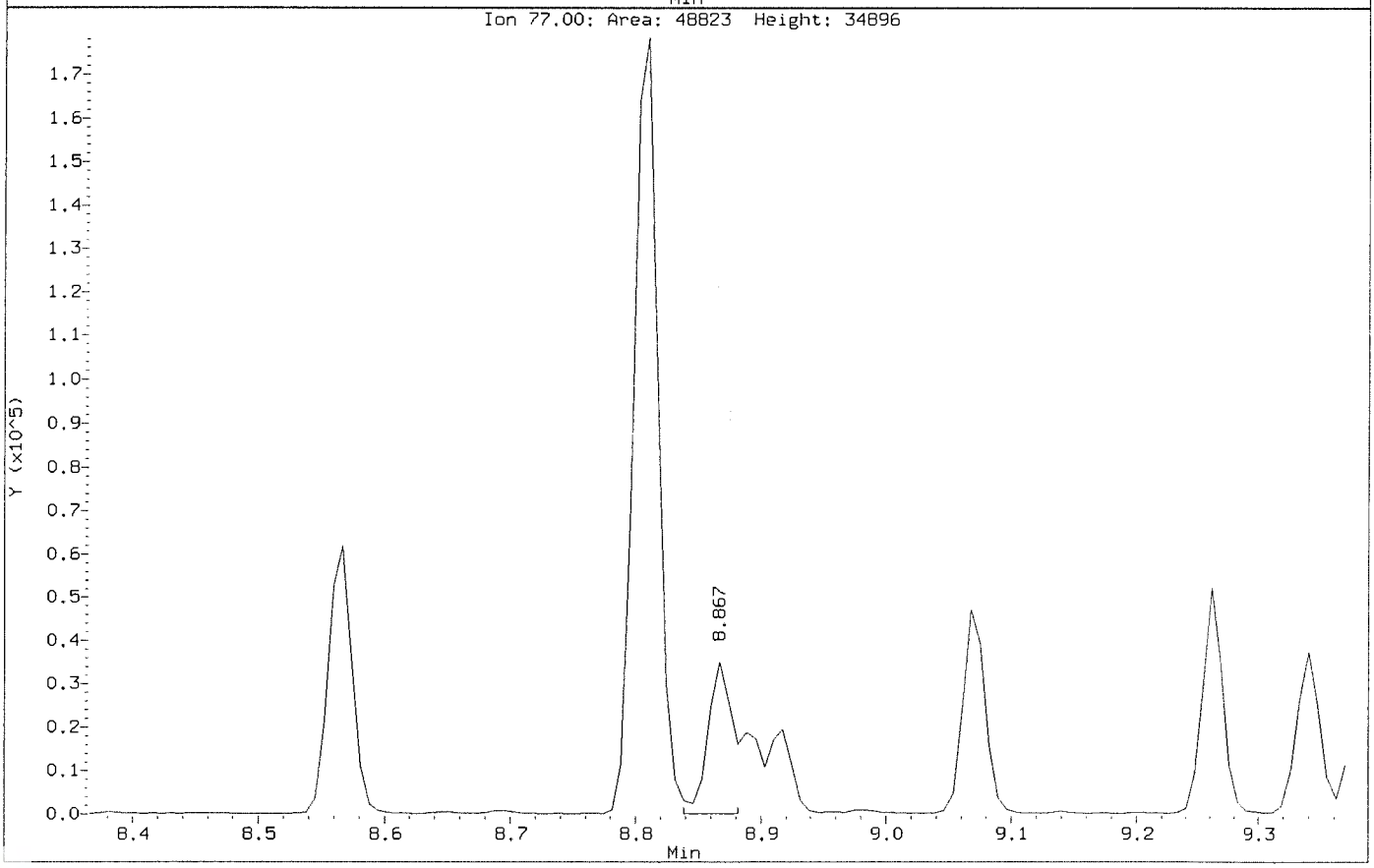
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071313.D
Injection Date: 13-JUL-2020 15:42
Instrument: voa6.i
Client Sample ID: ICV

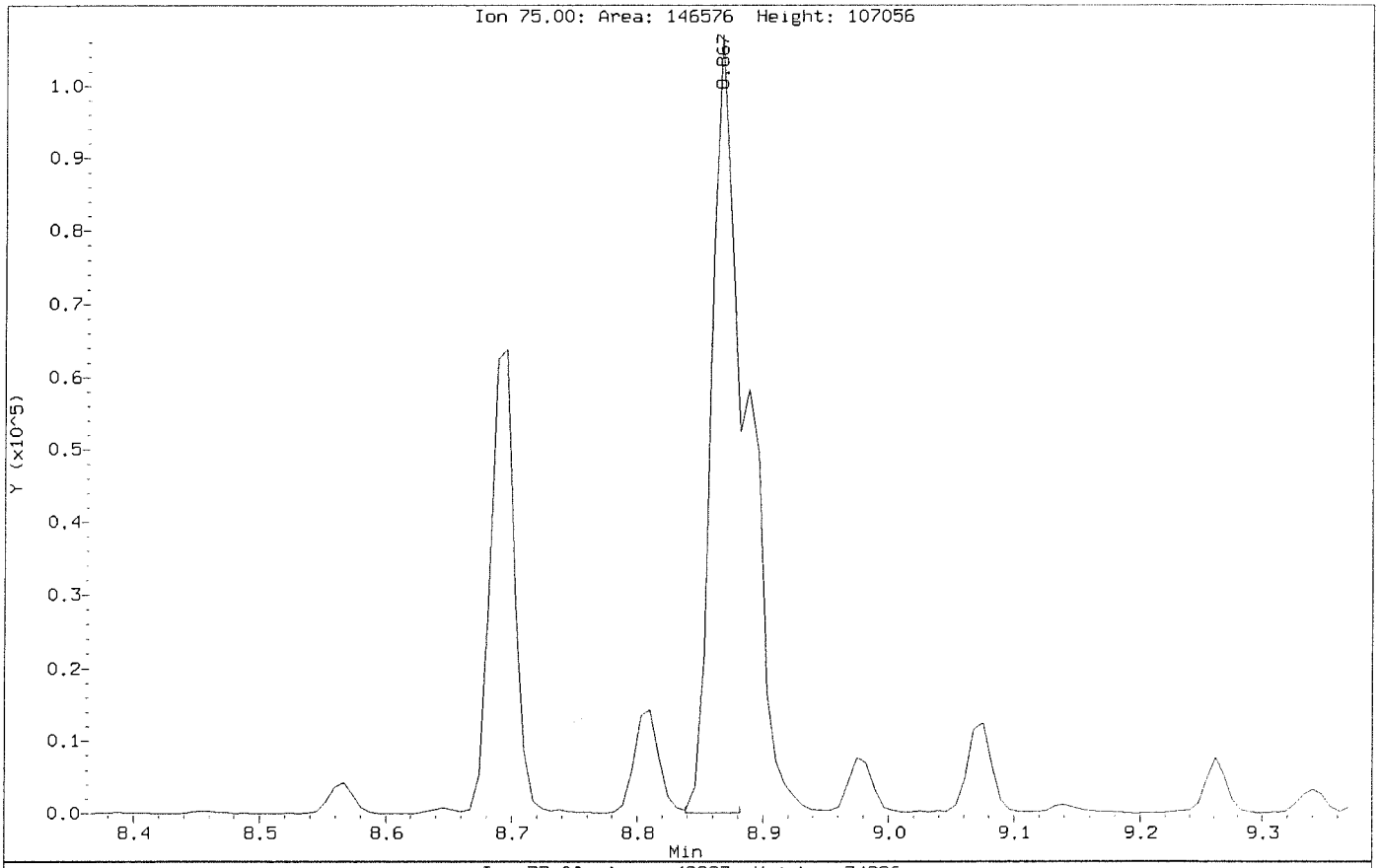
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

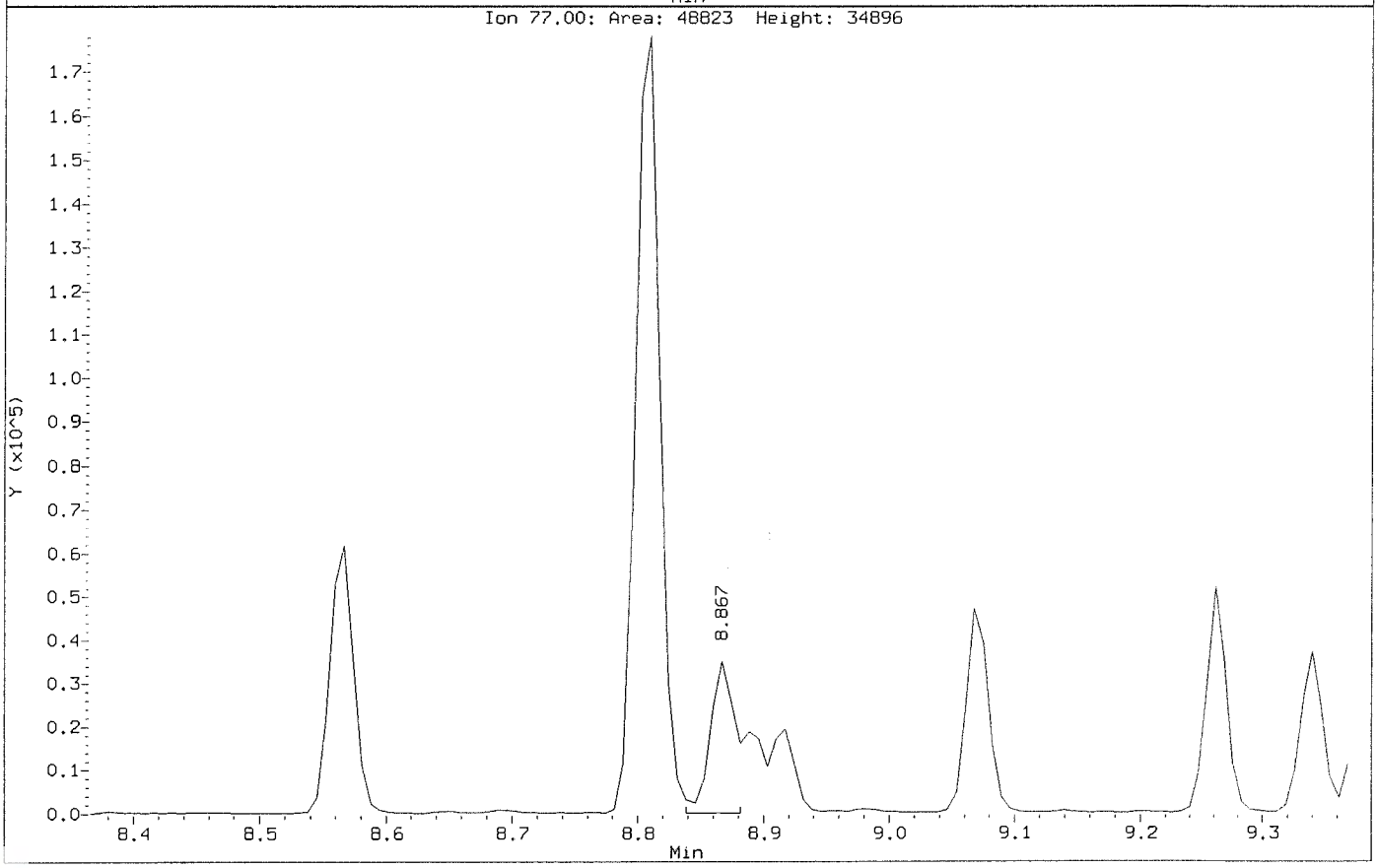


Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D
Injection Date: 13-JUL-2020 15:42
Instrument: voa6.i
Client Sample ID: ICV

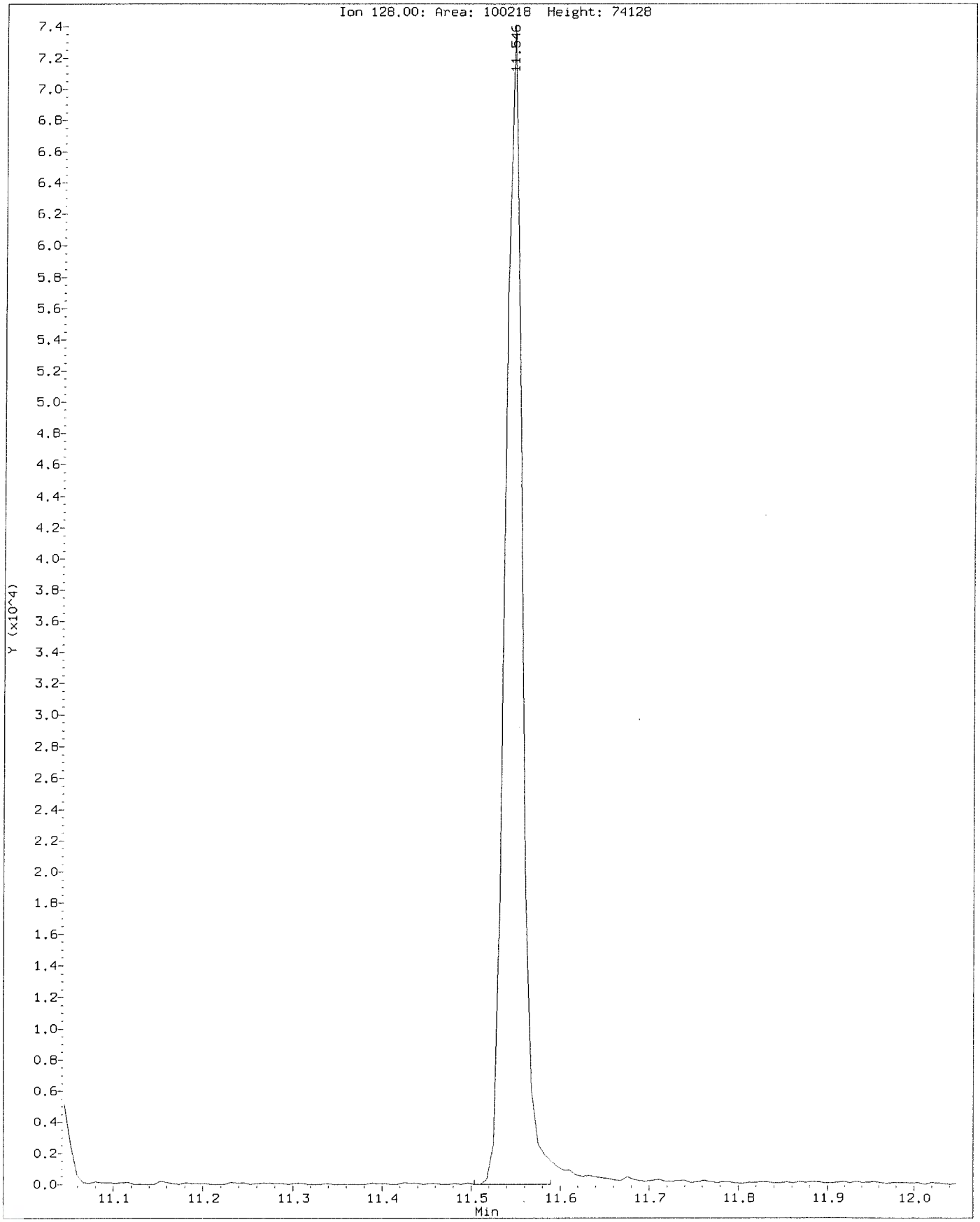
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



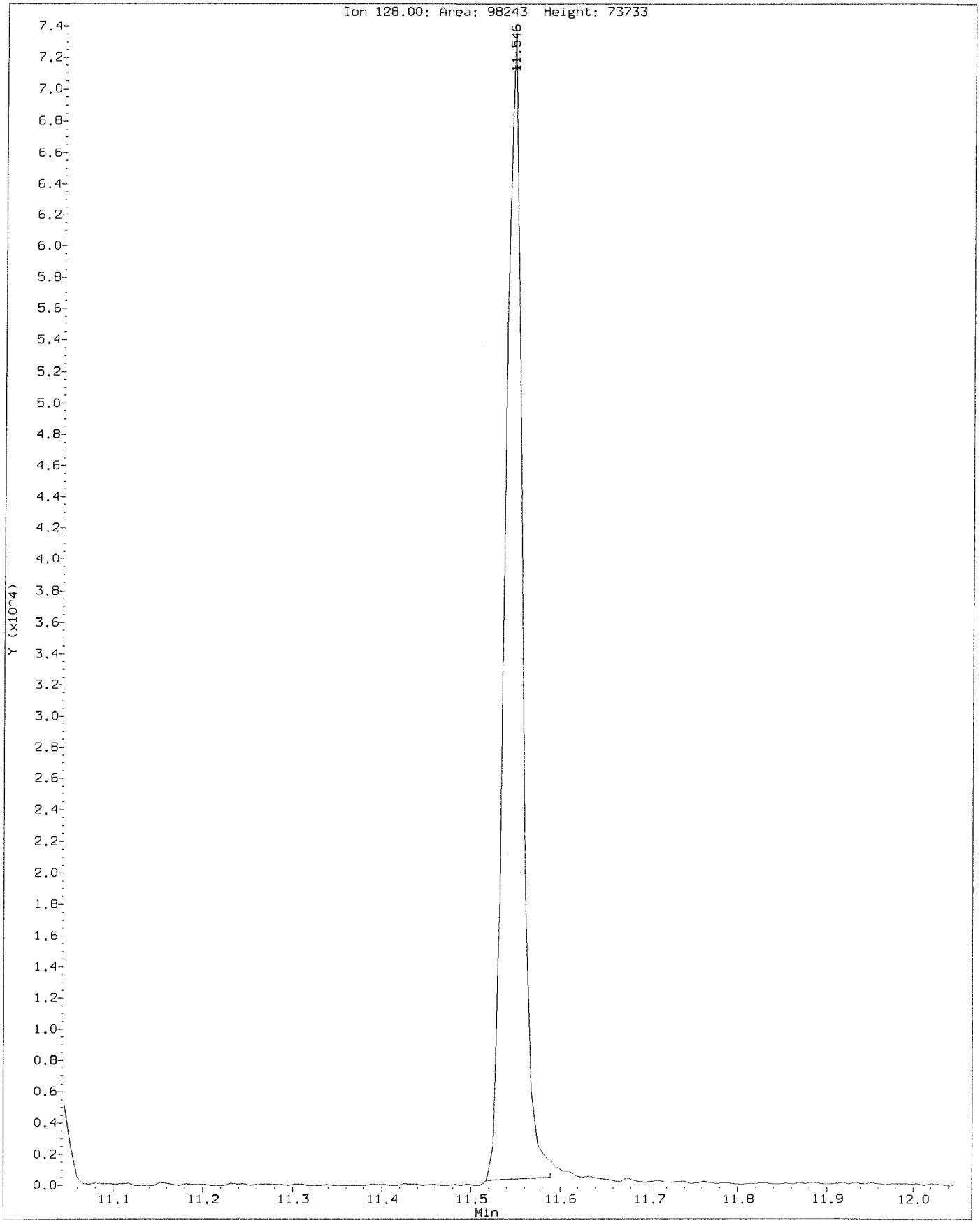
Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\Before\X071313.D
Injection Date: 13-JUL-2020 15:42
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200713.b\X071313.D
Injection Date: 13-JUL-2020 15:42
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



# MSVOA06 -Logbook

**Batch:** 41203 **Analyst:** Presenta Cabascango

**Date:** 07-17-2020 **Reviewer:**

**Method:** 8260 **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BFB | TUNE | 07-17-2020 10:21 am | 1.00 | 50 mL | 50 mL | X071701.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 2 | CCV | CCV | 07-17-2020 10:45 am | 1.00 | 50 mL | 50 mL | X071702a.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 3 | CCV | CCV | 07-17-2020 11:09 am | 1.00 | 50 mL | 50 mL | X071703.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 4 | CCB | SAMP | 07-17-2020 11:33 am | 1.00 | 50 mL | 50 mL | X071704.D | Liquid | Y | NA |
| 5 | VLCSW-200717 | LCS | 07-17-2020 11:57 am | 1.00 | 50 mL | 50 mL | X071705.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 6 | BLANK | SAMP | 07-17-2020 12:21 pm | 1.00 | 50 mL | 50 mL | X071706.D | Liquid | Y | NA |
| 7 | VBLKW-200717 | MBLK | 07-17-2020 12:45 pm | 1.00 | 50 mL | 50 mL | X071707.D | Liquid | Y | NA |
| 8 | HS20070623-03 | SAMP | 07-17-2020 01:09 pm | 1.00 | 50 mL | 50 mL | X071708.D | Liquid | Y | <2 |
| 9 | HS20070623-01 | SAMP | 07-17-2020 01:33 pm | 1.00 | 50 mL | 50 mL | X071709.D | Liquid | Y | <2 |
| 10 | HS20070674-01 | SAMP | 07-17-2020 01:57 pm | 1.00 | 50 mL | 50 mL | X071710.D | Liquid | Y | <2 |
| 11 | HS20070674-02 | SAMP | 07-17-2020 02:21 pm | 1.00 | 50 mL | 50 mL | X071711.D | Liquid | Y | <2 |
| 12 | HS20070674-04 | SAMP | 07-17-2020 02:45 pm | 1.00 | 50 mL | 50 mL | X071712.D | Liquid | Y | <2 |
| 13 | HS20070674-06 | SAMP | 07-17-2020 03:09 pm | 1.00 | 50 mL | 50 mL | X071713.D | Liquid | Y | <2 |
| 14 | HS20070674-07 | SAMP | 07-17-2020 03:32 pm | 1.00 | 50 mL | 50 mL | X071714.D | Liquid | Y | <2 |
| 15 | HS20070674-05 | SAMP | 07-17-2020 03:56 pm | 1.00 | 50 mL | 50 mL | X071715.D | Liquid | Y | <2 |
| 16 | HS20070674-01MS | MS | 07-17-2020 04:20 pm | 1.00 | 50 mL | 50 mL | X071716.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 17 | HS20070674-01MSD | MSD | 07-17-2020 04:44 pm | 1.00 | 50 mL | 50 mL | X071717.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 18 | HS20070625-06 | SAMP | 07-17-2020 05:08 pm | 25.00 | 2 mL | 50 mL | X071718.D | Liquid | Y | <2 |
| 19 | HS20070674-03 | SAMP | 07-17-2020 05:32 pm | 20.00 | 2.5 mL | 50 mL | X071719.D | Liquid | Y | <2 |
| 20 | HS20070674-03 | SAMP | 07-17-2020 05:56 pm | 250.0( | 200 µL | 50 mL | X071720.D | Liquid | Y | <2 |
| 21 | HS20070674-08 | SAMP | 07-17-2020 06:20 pm | 20.00 | 2.5 mL | 50 mL | X071721.D | Liquid | Y | <2 |
| 22 | HS20070674-08 | SAMP | 07-17-2020 06:44 pm | 250.0( | 200 µL | 50 mL | X071722.D | Liquid | Y | <2 |
| 23 | HS20070674-05 | SAMP | 07-17-2020 07:08 pm | 10.00 | 5 mL | 50 mL | X071723.D | Liquid | Y | <2 |
| 24 | CCV-END | CCV | 07-17-2020 07:31 pm | 1.00 | 50 mL | 50 mL | X071724.D | Liquid | Y | na |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 25 | HS20070669-03 | SAMP | 07-17-2020 07:56 pm | 1.00 | 50 mL | 50 mL | X071725.D | Liquid | Y | <2 |
| 26 | HS20070669-01 | SAMP | 07-17-2020 08:20 pm | 1.00 | 50 mL | 50 mL | X071726.D | Liquid | Y | <2 |
| 27 | HS20070669-02 | SAMP | 07-17-2020 08:44 pm | 1.00 | 50 mL | 50 mL | X071727.D | Liquid | Y | <2 |
| 28 | HS20070669-04 | SAMP | 07-17-2020 09:08 pm | 1.00 | 50 mL | 50 mL | X071728.D | Liquid | Y | <2 |
| 29 | HS20070669-05c/o | SAMP | 07-17-2020 09:32 pm | 1.00 | 50 mL | 50 mL | X071729.D | Liquid | Y | <2 |
| 30 | HS20070669-06 | SAMP | 07-17-2020 09:56 pm | 1.00 | 50 mL | 50 mL | X071730.D | Liquid | Y | <2 |
| 31 | BLANK | SAMP | 07-17-2020 10:20 pm | 1.00 | 50 mL | 50 mL | X071731.D | Liquid | Y | <2 |

| Chemical | Value |
|---|---|
| SURR SPK ID | 31106-38-06 |
| IS ID | 31106-38-06 |
| CAL STD ID | 31106-38-01/02 |
| BFB ID | 3106-38-06 |
| pH Paper | 634-64-11 |

# FORM 2
## WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

| | CLIENT SAMPLE NO. | SMC1 (DCE) # | SMC2 # | SMC3 (TOL) # | OTHER # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VLCSW-200717 | 96 | 99 | 98 | 100 | 0 |
| 02 | VBLKW-200717 | 87 | 88 | 92 | 114 | 0 |
| 03 | HS20070623-03 | 91 | 94 | 104 | 99 | 0 |
| 04 | HS20070623-01 | 86 | 88 | 98 | 102 | 0 |
| 05 | | | | | | |
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| 28 | | | | | | |

| | | QC LIMITS |
|---|---|---|
| SMC1 (DCE) | = 1,2-Dichloroethane-d4 | ( 0-130) |
| SMC2 | = Dibromofluoromethane | ( 0-130) |
| SMC3 (TOL) | = Toluene-d8 | ( 0-130) |
| OTHER | = 4-Bromofluorobenzene | ( 0-130) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200717

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID: X071707 Lab Sample ID: VBLKW-200717

Date Analyzed: 07/17/20 Time Analyzed: 1245

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | VLCSW-200717 | VLCSW-200717 | X071705 | 1157 |
| 02 | HS20070623-0 | HS20070623-03 | X071708 | 1309 |
| 03 | HS20070623-0 | HS20070623-01 | X071709 | 1333 |
| 04 | HS20070674-0 | HS20070674-01M | X071716 | 1620 |
| 05 | HS20070674-0 | HS20070674-01M | X071717 | 1644 |
| 06 | | | | |
| 07 | | | | |
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| 30 | | | | |

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID: X071701 BFB Injection Date: 07/17/20

Instrument ID: VOA6 BFB Injection Time: 1021

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 26.8 |
| 75 | 30.0 - 60.0% of mass 95 | 50.2 |
| 95 | Base Peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.9 |
| 173 | Less than 2.0% of mass 174 | 0.8 ( 1.2)1 |
| 174 | Greater than 50.0% of mass 95 | 71.0 |
| 175 | 5.0 - 9.0% of mass 174 | 5.6 ( 7.9)1 |
| 176 | 95.0 - 101.0% of mass 174 | 68.1 ( 95.9)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.0 ( 7.3)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | CCV | CCV | X071703 | 07/17/20 | 1109 |
| 02 | VLCSW-200717 | VLCSW-200717 | X071705 | 07/17/20 | 1157 |
| 03 | VBLKW-200717 | VBLKW-200717 | X071707 | 07/17/20 | 1245 |
| 04 | HS20070623-0 | HS20070623-03 | X071708 | 07/17/20 | 1309 |
| 05 | HS20070623-0 | HS20070623-01 | X071709 | 07/17/20 | 1333 |
| 06 | HS20070674-0 | HS20070674-01M | X071716 | 07/17/20 | 1620 |
| 07 | HS20070674-0 | HS20070674-01M | X071717 | 07/17/20 | 1644 |
| 08 | CCV-END | CCV-END | X071724 | 07/17/20 | 1931 |
| 09 | | | | | |
| 10 | | | | | |
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| 12 | | | | | |
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# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Instrument ID: VOA6 Calibration Date: 07/17/20 Time: 1109

Lab File ID: X071703 Init. Calib. Date(s): 07/13/20 07/13/20

Init. Calib. Times: 1027 1430

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.5820000 | 0.6399452 | 0.6399452 | 0.2 | -9.96 | 20.00 | AVRG |
| trans-1,3-Dichloropropene | 0.5370000 | 0.5660184 | 0.5660184 | 0.1 | -5.40 | 20.00 | AVRG |
| 1,3-Dichlorobenzene | 1.5330000 | 1.6123789 | 1.6123789 | 0.6 | -5.18 | 20.00 | AVRG |
| 2,2-Dichloropropane | 0.8850000 | 0.9758728 | 0.9758728 | 0.1 | -10.27 | 20.00 | AVRG |
| 1,1-Dichloropropene | 0.4680000 | 0.4997785 | 0.4997785 | 0.1 | -6.79 | 20.00 | AVRG |
| Dibromomethane | 0.2460000 | 0.2506126 | 0.2506126 | 0.1 | -1.88 | 20.00 | AVRG |
| 1,2-Dibromoethane | 0.3680000 | 0.4167637 | 0.4167637 | 0.1 | -13.25 | 20.00 | AVRG |
| trans-1,2-Dichloroethene | 0.5390000 | 0.5962896 | 0.5962896 | 0.1 | -10.63 | 20.00 | AVRG |
| 1,1,1,2-Tetrachloroethane | 0.3860000 | 0.4217454 | 0.4217454 | 0.1 | -9.26 | 20.00 | AVRG |
| 1,1,1-Trichloroethane | 0.9110000 | 0.9496214 | 0.9496214 | 0.1 | -4.24 | 20.00 | AVRG |
| 1,1,2,2-Tetrachloroethane | 0.9230000 | 0.9337907 | 0.9337907 | 0.3 | -1.17 | 20.00 | AVRG |
| 1,1,2-Trichloroethane | 0.3060000 | 0.3337992 | 0.3337992 | 0.1 | -9.08 | 20.00 | AVRG |
| 1,1-Dichloroethane | 1.4010000 | 1.4724054 | 1.4724054 | 0.2 | -5.10 | 20.00 | AVRG |
| 1,1-Dichloroethene | 0.4370000 | 0.4791253 | 0.4791253 | 0.1 | -9.64 | 20.00 | AVRG |
| Trichloroethene | 0.3600000 | 0.3866209 | 0.3866209 | 0.2 | -7.39 | 20.00 | AVRG |
| 1,2,3-Trichlorobenzene | 0.1690000 | 0.1532768 | 0.1532768 | 0.01 | 9.30 | 20.00 | AVRG |
| Trichlorofluoromethane | 0.8260000 | 0.9287716 | 0.9287716 | 0.1 | -12.44 | 20.00 | AVRG |
| 1,2,4-Trichlorobenzene | 0.3210000 | 0.2702353 | 0.2702353 | 0.1 | 15.81 | 20.00 | AVRG |
| 1,2,4-Trimethylbenzene | 2.7500000 | 2.9630198 | 2.9630198 | 0.1 | -7.75 | 20.00 | AVRG |
| Tetrachloroethene | 0.3060000 | 0.3196540 | 0.3196540 | 0.2 | -4.46 | 20.00 | AVRG |
| 1,2-Dichlorobenzene | 1.3940000 | 1.3608112 | 1.3608112 | 0.4 | 2.38 | 20.00 | AVRG |
| 1,2-Dichloroethane | 0.5950000 | 0.6460906 | 0.6460906 | 0.1 | -8.59 | 20.00 | AVRG |
| 1,2-Dichloropropane | 0.4620000 | 0.4950440 | 0.4950440 | 0.1 | -7.15 | 20.00 | AVRG |
| 1,3,5-Trimethylbenzene | 2.7170000 | 2.8909671 | 2.8909671 | 0.1 | -6.40 | 20.00 | AVRG |
| 1,3-Dichloropropane | 0.6540000 | 0.6617684 | 0.6617684 | 0.1 | -1.19 | 20.00 | AVRG |
| 1,4-Dichlorobenzene | 1.5610000 | 1.6155323 | 1.6155323 | 0.4 | -3.49 | 20.00 | AVRG |
| Toluene | 1.5660000 | 1.6574187 | 1.6574187 | 0.4 | -5.84 | 20.00 | AVRG |
| 2-Butanone | 0.4340000 | 0.4509729 | 0.4509729 | 0.1 | -3.91 | 20.00 | AVRG |
| 2-Chlorotoluene | 2.3810000 | 2.5262984 | 2.5262984 | 0.1 | -6.10 | 20.00 | AVRG |
| 2-Hexanone | 0.4740000 | 0.4924818 | 0.4924818 | 0.1 | -3.90 | 20.00 | AVRG |
| 4-Chlorotoluene | 2.7860000 | 2.9643257 | 2.9643257 | 0.1 | -6.40 | 20.00 | AVRG |
| tert-Butylbenzene | 2.1680000 | 2.3027863 | 2.3027863 | 0.1 | -6.22 | 20.00 | AVRG |
| 4-Methyl-2-Pentanone | 0.6820000 | 0.7047324 | 0.7047324 | 0.1 | -3.33 | 20.00 | AVRG |
| Acetone | 102.48222 | 100.00000 | 0.3281426 | 0.1 | -2.48 | 20.00 | LINR |
| Benzene | 1.3570000 | 1.4879204 | 1.4879204 | 0.5 | -9.65 | 20.00 | AVRG |
| Bromobenzene | 0.9160000 | 0.9959620 | 0.9959620 | 0.1 | -8.73 | 20.00 | AVRG |
| Bromochloromethane | 0.3530000 | 0.3226956 | 0.3226956 | 0.1 | 8.58 | 20.00 | AVRG |
| romodichloromethane | 0.5030000 | 0.5299397 | 0.5299397 | 0.2 | -5.36 | 20.00 | AVRG |
| romoform | 0.2760000 | 0.2857468 | 0.2857468 | 0.1 | -3.53 | 20.00 | AVRG |
| omomethane | 57.991027 | 50.000000 | 0.4039501 | 0.1 | -15.98 | 20.00 | LINR |
| bon Disulfide | 1.3780000 | 1.4911476 | 1.4911476 | 0.1 | -8.21 | 20.00 | AVRG |
| bon Tetrachloride | 0.4700000 | 0.5103870 | 0.5103870 | 0.1 | -8.59 | 20.00 | AVRG |

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date: 07/17/20 Time: 1109

Lab File ID: X071703 Init. Calib. Date(s): 07/13/20 07/13/20

Init. Calib. Times: 1027 1430

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| Chlorobenzene | 0.9950000 | 1.0212137 | 1.0212137 | 0.5 | -2.63 | 20.00 | AVRG |
| Chloroethane | 0.4390000 | 0.4515184 | 0.4515184 | 0.1 | -2.85 | 20.00 | AVRG |
| Chloroform | 1.0980000 | 1.1320092 | 1.1320092 | 0.2 | -3.10 | 20.00 | AVRG |
| Chloromethane | 53.651095 | 50.000000 | 1.1217186 | 0.1 | -7.30 | 20.00 | LINR |
| cis-1,2-Dichloroethene | 0.6410000 | 0.6795237 | 0.6795237 | 0.1 | -6.01 | 20.00 | AVRG |
| Dibromochloromethane | 0.4060000 | 0.4476049 | 0.4476049 | 0.1 | -10.25 | 20.00 | AVRG |
| Dichlorodifluoromethane | 0.5280000 | 0.5969012 | 0.5969012 | 0.1 | -13.05 | 20.00 | AVRG |
| Ethylbenzene | 0.5190000 | 0.5622902 | 0.5622902 | 0.1 | -8.34 | 20.00 | AVRG |
| Hexachlorobutadiene | 0.2480000 | 0.2095264 | 0.2095264 | 0.1 | 15.51 | 20.00 | AVRG |
| Isopropylbenzene | 1.5550000 | 1.6254786 | 1.6254786 | 0.1 | -4.53 | 20.00 | AVRG |
| m,p-Xylenes | 0.6220000 | 0.6183277 | 0.6183277 | 0.1 | 0.59 | 20.00 | AVRG |
| Methylene Chloride | 56.207222 | 50.000000 | 0.6591574 | 0.1 | -12.41 | 20.00 | LINR |
| n-Butylbenzene | 2.3360000 | 2.3742312 | 2.3742312 | 0.5 | -1.64 | 20.00 | AVRG |
| n-Propylbenzene | 3.8100000 | 4.1087320 | 4.1087320 | 0.1 | -7.84 | 20.00 | AVRG |
| Naphthalene | 46.312782 | 50.000000 | 0.4729554 | 0.2 | 7.37 | 20.00 | LINR |
| o-Xylene | 0.6280000 | 0.6520754 | 0.6520754 | 0.3 | -3.83 | 20.00 | AVRG |
| sec-Butylbenzene | 3.0960000 | 3.2549618 | 3.2549618 | 0.1 | -5.13 | 20.00 | AVRG |
| Styrene | 1.0870000 | 1.1128947 | 1.1128947 | 0.3 | -2.38 | 20.00 | AVRG |
| Vinyl Chloride | 0.8220000 | 0.8864106 | 0.8864106 | 0.1 | -7.84 | 20.00 | AVRG |
| 1,2,3-Trichloropropane | 0.8120000 | 0.8421616 | 0.8421616 | 0.1 | -3.71 | 20.00 | AVRG |
| p-Isopropyltoluene | 2.6610000 | 2.8264970 | 2.8264970 | 0.1 | -6.22 | 20.00 | AVRG |
| 1,2-Dibromo-3-Chloropropane | 42.714988 | 50.000000 | 7.17e-002 | 0.05 | 14.57 | 20.00 | LINR |
| 1,2-Dichloroethane-d4 | 47.772851 | 50.000000 | 0.7215417 | 0.1 | 4.45 | 20.00 | LINR |
| Dibromofluoromethane | 48.498700 | 50.000000 | 0.5404599 | 0.1 | 3.00 | 20.00 | LINR |
| Toluene-d8 | 1.3100000 | 1.3013468 | 1.3013468 | 0.1 | 0.66 | 20.00 | AVRG |
| 4-Bromofluorobenzene | 49.163673 | 50.000000 | 0.4758158 | 0.1 | 1.67 | 20.00 | LINR |

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Instrument ID: VOA6 Calibration Date: 07/17/20 Time: 1931

Lab File ID: X071724 Init. Calib. Date(s): 07/13/20 07/13/20

Init. Calib. Times: 1027 1430

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.5820000 | 0.5816898 | 0.5816898 | 0.2 | 0.05 | 50.00 | AVRG |
| trans-1,3-Dichloropropene | 0.5370000 | 0.5213656 | 0.5213656 | 0.1 | 2.91 | 50.00 | AVRG |
| 1,3-Dichlorobenzene | 1.5330000 | 1.5347660 | 1.5347660 | 0.6 | -0.12 | 50.00 | AVRG |
| 2,2-Dichloropropane | 0.8850000 | 0.7926223 | 0.7926223 | 0.1 | 10.44 | 50.00 | AVRG |
| 1,1-Dichloropropene | 0.4680000 | 0.4831178 | 0.4831178 | 0.1 | -3.23 | 50.00 | AVRG |
| Dibromomethane | 0.2460000 | 0.2457632 | 0.2457632 | 0.1 | 0.10 | 50.00 | AVRG |
| 1,2-Dibromoethane | 0.3680000 | 0.3876198 | 0.3876198 | 0.1 | -5.33 | 50.00 | AVRG |
| trans-1,2-Dichloroethene | 0.5390000 | 0.5747359 | 0.5747359 | 0.1 | -6.63 | 50.00 | AVRG |
| 1,1,1,2-Tetrachloroethane | 0.3860000 | 0.3821321 | 0.3821321 | 0.1 | 1.00 | 50.00 | AVRG |
| 1,1,1-Trichloroethane | 0.9110000 | 0.9369970 | 0.9369970 | 0.1 | -2.85 | 50.00 | AVRG |
| 1,1,2,2-Tetrachloroethane | 0.9230000 | 0.8574667 | 0.8574667 | 0.3 | 7.10 | 50.00 | AVRG |
| 1,1,2-Trichloroethane | 0.3060000 | 0.3149171 | 0.3149171 | 0.1 | -2.91 | 50.00 | AVRG |
| 1,1-Dichloroethane | 1.4010000 | 1.4154544 | 1.4154544 | 0.2 | -1.03 | 50.00 | AVRG |
| 1,1-Dichloroethene | 0.4370000 | 0.5450532 | 0.5450532 | 0.1 | -24.73 | 50.00 | AVRG |
| Trichloroethene | 0.3600000 | 0.3740569 | 0.3740569 | 0.2 | -3.90 | 50.00 | AVRG |
| 1,2,3-Trichlorobenzene | 0.1690000 | 9.7e-002 | 9.7e-002 | 0.01 | 42.60 | 50.00 | AVRG |
| Trichlorofluoromethane | 0.8260000 | 1.0403343 | 1.0403343 | 0.1 | -25.95 | 50.00 | AVRG |
| 1,2,4-Trichlorobenzene | 0.3210000 | 0.2217057 | 0.2217057 | 0.1 | 30.93 | 50.00 | AVRG |
| 1,2,4-Trimethylbenzene | 2.7500000 | 2.7527106 | 2.7527106 | 0.1 | -0.10 | 50.00 | AVRG |
| Tetrachloroethene | 0.3060000 | 0.3139179 | 0.3139179 | 0.2 | -2.59 | 50.00 | AVRG |
| 1,2-Dichlorobenzene | 1.3940000 | 1.3422906 | 1.3422906 | 0.4 | 3.71 | 50.00 | AVRG |
| 1,2-Dichloroethane | 0.5950000 | 0.6097033 | 0.6097033 | 0.1 | -2.47 | 50.00 | AVRG |
| 1,2-Dichloropropane | 0.4620000 | 0.4682851 | 0.4682851 | 0.1 | -1.36 | 50.00 | AVRG |
| 1,3,5-Trimethylbenzene | 2.7170000 | 2.8040783 | 2.8040783 | 0.1 | -3.20 | 50.00 | AVRG |
| 1,3-Dichloropropane | 0.6540000 | 0.6462294 | 0.6462294 | 0.1 | 1.19 | 50.00 | AVRG |
| 1,4-Dichlorobenzene | 1.5610000 | 1.5287952 | 1.5287952 | 0.4 | 2.06 | 50.00 | AVRG |
| Toluene | 1.5660000 | 1.5942989 | 1.5942989 | 0.4 | -1.81 | 50.00 | AVRG |
| 2-Butanone | 0.4340000 | 0.4304061 | 0.4304061 | 0.1 | 0.83 | 50.00 | AVRG |
| 2-Chlorotoluene | 2.3810000 | 2.3992398 | 2.3992398 | 0.1 | -0.77 | 50.00 | AVRG |
| 2-Hexanone | 0.4740000 | 0.4605627 | 0.4605627 | 0.1 | 2.83 | 50.00 | AVRG |
| 4-Chlorotoluene | 2.7860000 | 2.7831431 | 2.7831431 | 0.1 | 0.10 | 50.00 | AVRG |
| tert-Butylbenzene | 2.1680000 | 2.1840659 | 2.1840659 | 0.1 | -0.74 | 50.00 | AVRG |
| 4-Methyl-2-Pentanone | 0.6820000 | 0.6781846 | 0.6781846 | 0.1 | 0.56 | 50.00 | AVRG |
| Acetone | 114.38593 | 100.00000 | 0.3648137 | 0.1 | -14.38 | 50.00 | LINR |
| Benzene | 1.3570000 | 1.4151361 | 1.4151361 | 0.5 | -4.28 | 50.00 | AVRG |
| Bromobenzene | 0.9160000 | 0.9392038 | 0.9392038 | 0.1 | -2.53 | 50.00 | AVRG |
| Bromochloromethane | 0.3530000 | 0.3309967 | 0.3309967 | 0.1 | 6.23 | 50.00 | AVRG |
| Bromodichloromethane | 0.5030000 | 0.5003438 | 0.5003438 | 0.2 | 0.53 | 50.00 | AVRG |
| Bromoform | 0.2760000 | 0.2716377 | 0.2716377 | 0.1 | 1.58 | 50.00 | AVRG |
| Bromomethane | 55.002080 | 50.000000 | 0.3834992 | 0.1 | -10.00 | 50.00 | LINR |
| Carbon Disulfide | 1.3780000 | 1.3355194 | 1.3355194 | 0.1 | 3.08 | 50.00 | AVRG |
| Carbon Tetrachloride | 0.4700000 | 0.4790236 | 0.4790236 | 0.1 | -1.92 | 50.00 | AVRG |

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: VOA6 Calibration Date: 07/17/20 Time: 1931

Lab File ID: X071724 Init. Calib. Date(s): 07/13/20 07/13/20

Init. Calib. Times: 1027 1430

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| Chlorobenzene | 0.9950000 | 1.0067231 | 1.0067231 | 0.5 | -1.18 | 50.00 | AVRG |
| Chloroethane | 0.4390000 | 0.5115367 | 0.5115367 | 0.1 | -16.52 | 50.00 | AVRG |
| Chloroform | 1.0980000 | 1.1026139 | 1.1026139 | 0.2 | -0.42 | 50.00 | AVRG |
| Chloromethane | 48.271998 | 50.000000 | 1.0055466 | 0.1 | 3.46 | 50.00 | LINR |
| cis-1,2-Dichloroethene | 0.6410000 | 0.6633382 | 0.6633382 | 0.1 | -3.48 | 50.00 | AVRG |
| Dibromochloromethane | 0.4060000 | 0.4078570 | 0.4078570 | 0.1 | -0.46 | 50.00 | AVRG |
| Dichlorodifluoromethane | 0.5280000 | 0.5670025 | 0.5670025 | 0.1 | -7.39 | 50.00 | AVRG |
| Ethylbenzene | 0.5190000 | 0.5330739 | 0.5330739 | 0.1 | -2.71 | 50.00 | AVRG |
| Hexachlorobutadiene | 0.2480000 | 0.1852738 | 0.1852738 | 0.1 | 25.29 | 50.00 | AVRG |
| Isopropylbenzene | 1.5550000 | 1.5900060 | 1.5900060 | 0.1 | -2.25 | 50.00 | AVRG |
| m,p-Xylenes | 0.6220000 | 0.6484763 | 0.6484763 | 0.1 | -4.26 | 50.00 | AVRG |
| Methylene Chloride | 55.822913 | 50.000000 | 0.6547587 | 0.1 | -11.64 | 50.00 | LINR |
| n-Butylbenzene | 2.3360000 | 2.4488900 | 2.4488900 | 0.5 | -4.83 | 50.00 | AVRG |
| n-Propylbenzene | 3.8100000 | 3.9589654 | 3.9589654 | 0.1 | -3.91 | 50.00 | AVRG |
| Naphthalene | 34.731761 | 50.000000 | 0.3514157 | 0.2 | 30.54 | 50.00 | LINR |
| o-Xylene | 0.6280000 | 0.6285961 | 0.6285961 | 0.3 | -0.09 | 50.00 | AVRG |
| sec-Butylbenzene | 3.0960000 | 3.2300409 | 3.2300409 | 0.1 | -4.33 | 50.00 | AVRG |
| Styrene | 1.0870000 | 1.0905151 | 1.0905151 | 0.3 | -0.32 | 50.00 | AVRG |
| Vinyl Chloride | 0.8220000 | 0.8025996 | 0.8025996 | 0.1 | 2.36 | 50.00 | AVRG |
| 1,2,3-Trichloropropane | 0.8120000 | 0.7999050 | 0.7999050 | 0.1 | 1.49 | 50.00 | AVRG |
| p-Isopropyltoluene | 2.6610000 | 2.7921938 | 2.7921938 | 0.1 | -4.93 | 50.00 | AVRG |
| 1,2-Dibromo-3-Chloropropane | 41.173340 | 50.000000 | 6.91e-002 | 0.05 | 17.65 | 50.00 | LINR |
| 1,2-Dichloroethane-d4 | 50.701764 | 50.000000 | 0.7660951 | 0.1 | -1.40 | 50.00 | LINR |
| Dibromofluoromethane | 51.245365 | 50.000000 | 0.5710163 | 0.1 | -2.49 | 50.00 | LINR |
| Toluene-d8 | 1.3100000 | 1.3208501 | 1.3208501 | 0.1 | -0.83 | 50.00 | AVRG |
| 4-Bromofluorobenzene | 50.797907 | 50.000000 | 0.4914617 | 0.1 | -1.60 | 50.00 | LINR |



FORM VII VOA

# FORM 8
## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

ɔ Name: Contract:

ɹab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID (Standard): X071703 Date Analyzed: 07/17/20

Instrument ID: VOA6 Time Analyzed: 1109

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1(CBZ) AREA # | RT # | IS2(DFB) AREA # | RT # | IS3(DCB) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 351283 | 7.67 | 390535 | 4.97 | 166170 | 9.67 |
| | UPPER LIMIT | 702566 | 8.17 | 781070 | 5.47 | 332340 | 10.17 |
| | LOWER LIMIT | 175642 | 7.17 | 195268 | 4.47 | 83085 | 9.17 |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | VLCSW-200717 | 374924 | 7.67 | 401857 | 4.97 | 165000 | 9.67 |
| 02 | VBLKW-200717 | 386969 | 7.67 | 511651 | 4.97 | 220176 | 9.66 |
| 03 | HS20070623-03 | 459533 | 7.67 | 538186 | 4.97 | 196474 | 9.67 |
| 04 | HS20070623-01 | 346339 | 7.67 | 387253 | 4.97 | 167419 | 9.67 |
| 05 | HS20070674-01 | 317166 | 7.67 | 345798 | 4.97 | 155619 | 9.67 |
| 06 | HS20070674-01 | 307903 | 7.67 | 345021 | 4.97 | 153685 | 9.67 |
| 07 | | | | | | | |
| 08 | | | | | | | |
| 09 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID (Standard): X071703 Date Analyzed: 07/17/20

Instrument ID: VOA6 Time Analyzed: 1109

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS4 AREA # | RT # | AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 241968 | 4.19 | | | | |
| | UPPER LIMIT | 483936 | 4.69 | | | | |
| | LOWER LIMIT | 120984 | 3.69 | | | | |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | VLCSW-200717 | 250970 | 4.19 | | | | |
| 02 | VBLKW-200717 | 333913 | 4.19 | | | | |
| 03 | HS20070623-03 | 338104 | 4.19 | | | | |
| 04 | HS20070623-01 | 257931 | 4.19 | | | | |
| 05 | HS20070674-01 | 236309 | 4.19 | | | | |
| 06 | HS20070674-01 | 226490 | 4.19 | | | | |
| 07 | | | | | | | |
| 08 | | | | | | | |
| 09 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
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| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.



FORM VIII VOA

File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071701.D



: 17-JUL-2020 10:21

ient ID: BFB

Instrument: voa6.i

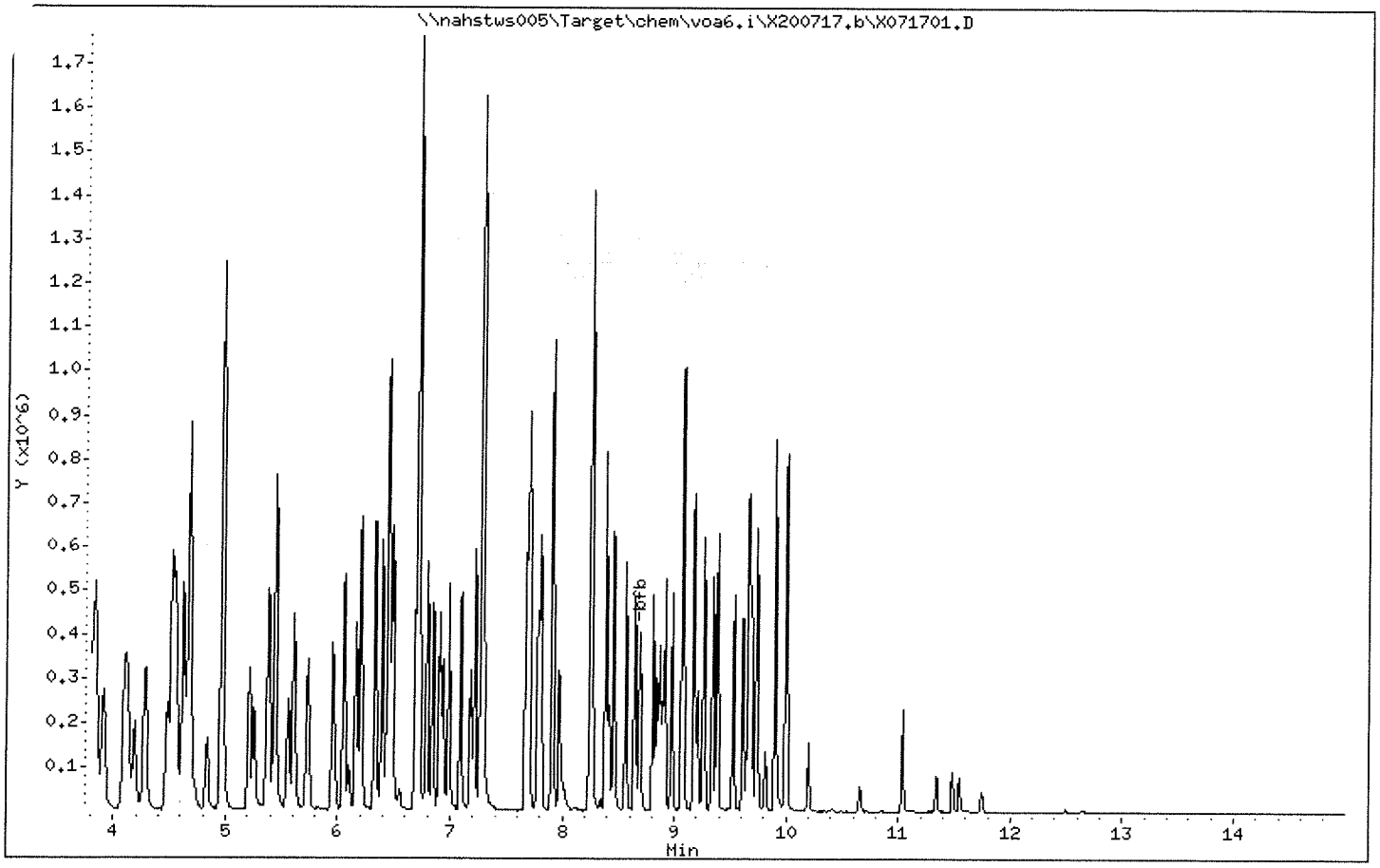
ample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071701.D



e : 17-JUL-2020 10:21

ient ID: BFB

Instrument: voa6.i

ample Info: BFB;BFB;3;;BFB

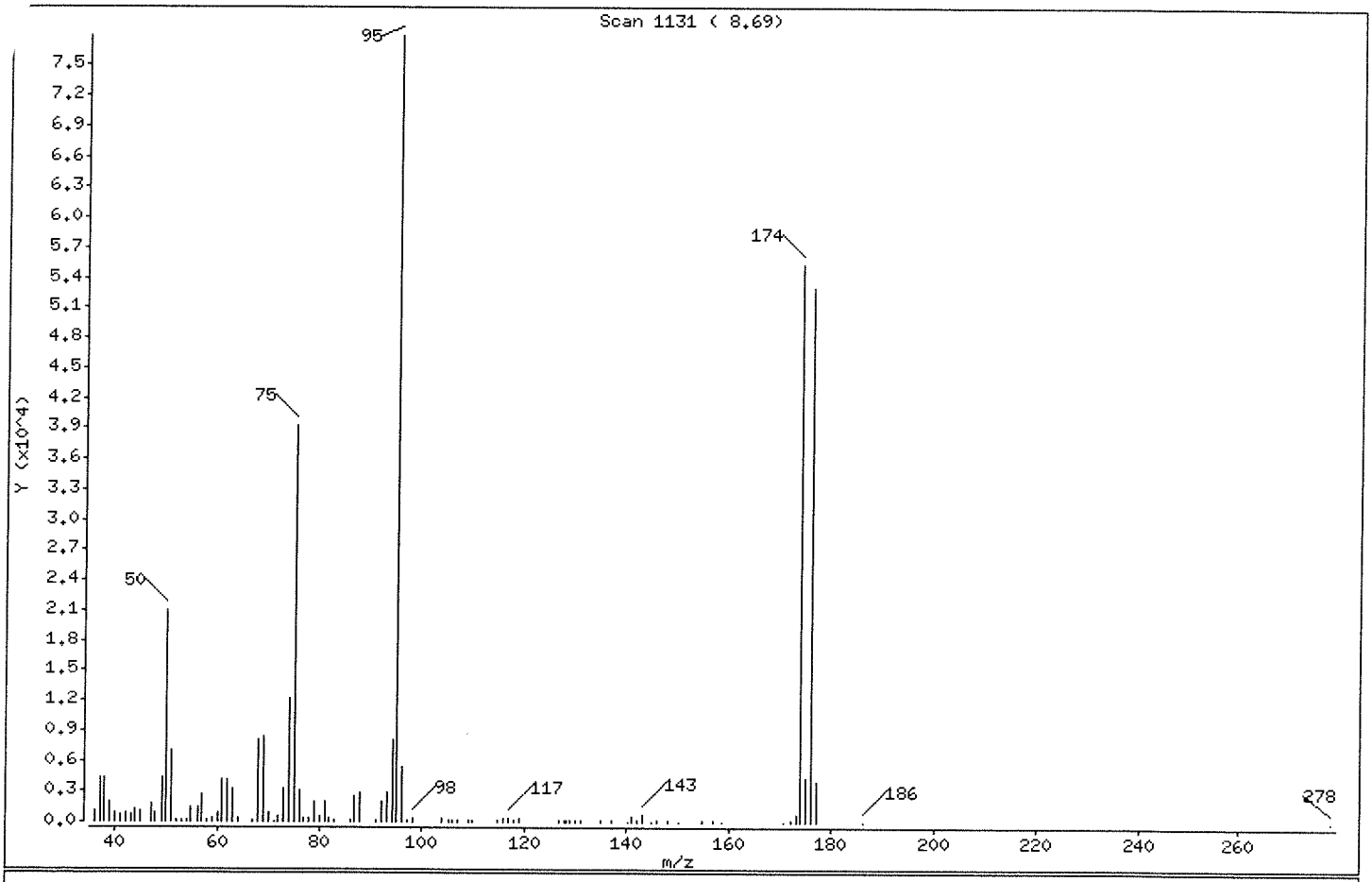
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| | | |
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 26.82 |
| 75 | 30.00 - 60.00% of mass 95 | 50.24 |
| 96 | 5.00 - 9.00% of mass 95 | 6.88 |
| 173 | Less than 2.00% of mass 174 | 0.83 ( 1.18) |
| 174 | Greater than 50.00% of mass 95 | 70.95 |
| 175 | 5.00 - 9.00% of mass 174 | 5.59 ( 7.88) |
| 176 | 95.00 - 101.00% of mass 174 | 68.06 ( 95.92) |
| 177 | 5.00 - 9.00% of mass 176 | 4.96 ( 7.29) |

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071701.D

Date : 17-JUL-2020 10:21

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X071701.D
Spectrum: Scan 1131 ( 8.69)
Location of Maximum: 95.00
Number of points: 95

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 1063 | 60.90 | 4172 | 91.00 | 229 | 130.90 | 163 |
| 37.10 | 4323 | 62.00 | 4066 | 92.00 | 2015 | 134.90 | 130 |
| 38.00 | 4261 | 63.00 | 3247 | 93.00 | 2880 | 136.90 | 167 |
| 39.00 | 2047 | 63.90 | 309 | 94.00 | 8104 | 140.20 | 78 |
| 40.00 | 917 | 67.00 | 184 | 95.00 | 77920 | 140.90 | 586 |
| 41.00 | 706 | 68.00 | 8081 | 96.00 | 5359 | 141.90 | 139 |
| 42.00 | 809 | 69.00 | 8422 | 97.00 | 214 | 143.00 | 643 |
| 43.00 | 798 | 70.00 | 811 | 97.90 | 444 | 144.90 | 71 |
| 44.00 | 1192 | 71.10 | 55 | 103.90 | 313 | 145.90 | 141 |
| 45.00 | 1149 | 71.90 | 465 | 105.00 | 90 | 147.90 | 223 |
| 46.90 | 1838 | 73.00 | 3234 | 105.80 | 223 | 150.00 | 58 |
| 47.80 | 905 | 74.00 | 12256 | 106.80 | 194 | 154.90 | 203 |
| 49.00 | 4310 | 75.00 | 39144 | 109.00 | 173 | 156.90 | 164 |
| 50.00 | 20896 | 76.00 | 3110 | 109.70 | 97 | 158.70 | 52 |
| 51.00 | 7057 | 76.90 | 396 | 114.80 | 116 | 170.80 | 75 |
| 52.00 | 247 | 77.90 | 406 | 115.80 | 319 | 172.10 | 103 |
| 53.00 | 199 | 78.90 | 1958 | 117.00 | 392 | 173.00 | 650 |
| 54.10 | 198 | 80.00 | 480 | 117.90 | 223 | 173.90 | 55288 |
| 55.00 | 1397 | 80.90 | 2020 | 118.90 | 363 | 174.90 | 4354 |
| 56.10 | 1489 | 81.90 | 378 | 126.90 | 205 | 175.90 | 53032 |
| 57.00 | 2718 | 82.90 | 139 | 127.80 | 228 | 176.90 | 3865 |
| 57.90 | 183 | 86.00 | 105 | 128.10 | 199 | 186.20 | 82 |
| 59.00 | 356 | 86.90 | 2426 | 128.90 | 143 | 278.10 | 70 |
| 60.00 | 866 | 87.90 | 2843 | 129.80 | 259 | | |

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071703.D
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Inj Date : 17-JUL-2020 11:09
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Meth Date : 18-Aug-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18 Cal File: X071308.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

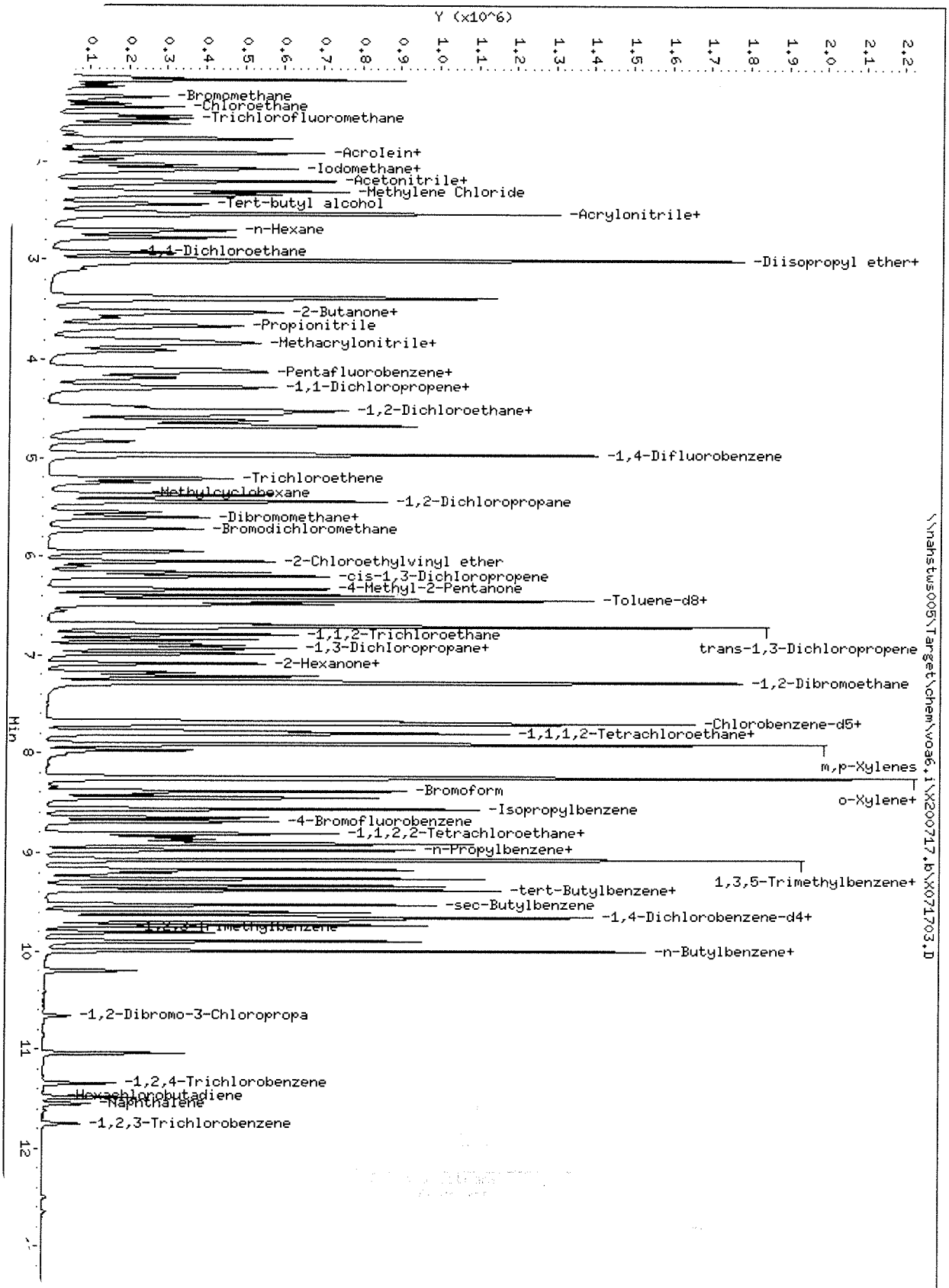
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * 1 | Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 241968 | 50.0000 | |
| * 36 | 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 390535 | 50.0000 | |
| * 47 | Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 351283 | 50.0000 | |
| * 70 | 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 166170 | 50.0000 | |
| $ 30 | Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 130774 | 50.0000 | 48.49 |
| $ 35 | 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 174590 | 50.0000 | 47.77 |
| $ 48 | Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 457141 | 50.0000 | 49.68 |
| $ 69 | 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 167146 | 50.0000 | 49.16 |
| 60 | 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 148152 | 50.0000 | 54.60 |
| 31 | 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 229778 | 50.0000 | 52.12 |
| 68 | 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 155168 | 50.0000 | 50.57 |
| 53 | 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 117258 | 50.0000 | 54.51 |
| 22 | 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 356275 | 50.0000 | 52.54 |
| 11 | 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 115933 | 50.0000 | 54.76 |
| 32 | 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 195181 | 50.0000 | 53.34 |
| 93 | 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 25470 | 50.0000 | 45.31 |
| 71 | 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 139942 | 50.0000 | 51.84(M) |
| 9 | 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 44905 | 50.0000 | 42.12 |
| | 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 492365 | 50.0000 | 53.88 |
| | 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 11922 | 50.0000 | 42.71 |
| | .2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 146402 | 50.0000 | 56.60 |
| | 2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 226126 | 50.0000 | 48.80 |

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071703.D Page 2
Report Date: 18-Aug-2020 12:53

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 252321 | 50.0000 | 54.29 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 193332 | 50.0000 | 53.61 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 480392 | 50.0000 | 53.20 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.993) | 267929 | 50.0000 | 52.59 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 232468 | 50.0000 | 50.56 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 268453 | 50.0000 | 51.73 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 236130 | 50.0000 | 55.14 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 218242 | 100.000 | 103.90 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 419795 | 50.0000 | 53.04 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 346001 | 100.000 | 103.97 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 492582 | 50.0000 | 53.19 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 469679 | 50.0000 | 53.11 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.324 | (0.824) | 495121 | 100.000 | 103.28 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 158800 | 100.000 | 102.48 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 581085 | 50.0000 | 54.81 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 165499 | 50.0000 | 54.38 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 78082 | 50.0000 | 45.66 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 206960 | 50.0000 | 52.66 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 100378 | 50.0000 | 51.65 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 97743 | 50.0000 | 57.99 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 721620 | 100.000 | 108.21 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 199324 | 50.0000 | 54.28 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 358735 | 50.0000 | 51.30 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 109253 | 50.0000 | 51.37 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 273910 | 50.0000 | 51.56 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 271420 | 50.0000 | 53.65 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 164423 | 50.0000 | 52.97 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 249921 | 50.0000 | 54.92 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 157236 | 50.0000 | 55.02 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 97873 | 50.0000 | 50.79 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 144431 | 50.0000 | 56.53 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 197523 | 50.0000 | 54.14 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 34817 | 50.0000 | 42.29 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 571003 | 50.0000 | 52.26 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 434416 | 100.000 | 99.43 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 159495 | 50.0000 | 56.20 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 394526 | 50.0000 | 50.82 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 682748 | 50.0000 | 53.92 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 78591 | 50.0000 | 46.31 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 229063 | 50.0000 | 51.88 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 540877 | 50.0000 | 52.55 |
| 64 | Styrene | 104 | 8.258 | 8.258 | (1.077) | 390941 | 50.0000 | 51.17 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 382654 | 50.0000 | 53.11 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 112289 | 50.0000 | 52.22 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 582223 | 50.0000 | 52.90 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 144283 | 50.0000 | 55.35 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 221050 | 50.0000 | 52.67 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 150989 | 50.0000 | 53.71 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 224733 | 50.0000 | 56.18 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 214483 | 50.0000 | 53.90 |

QC Flag Legend

M - Compound response manually integrated.

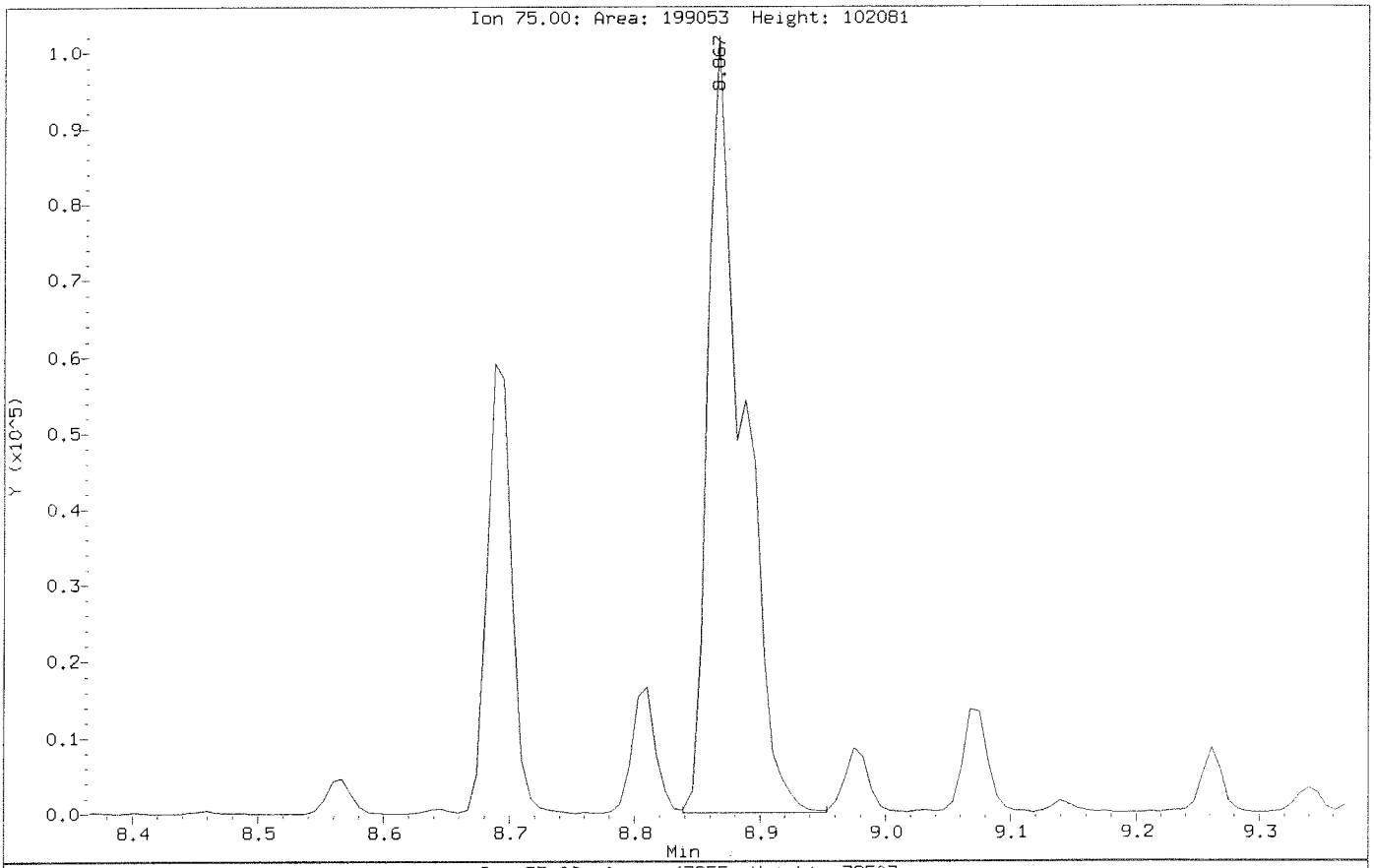


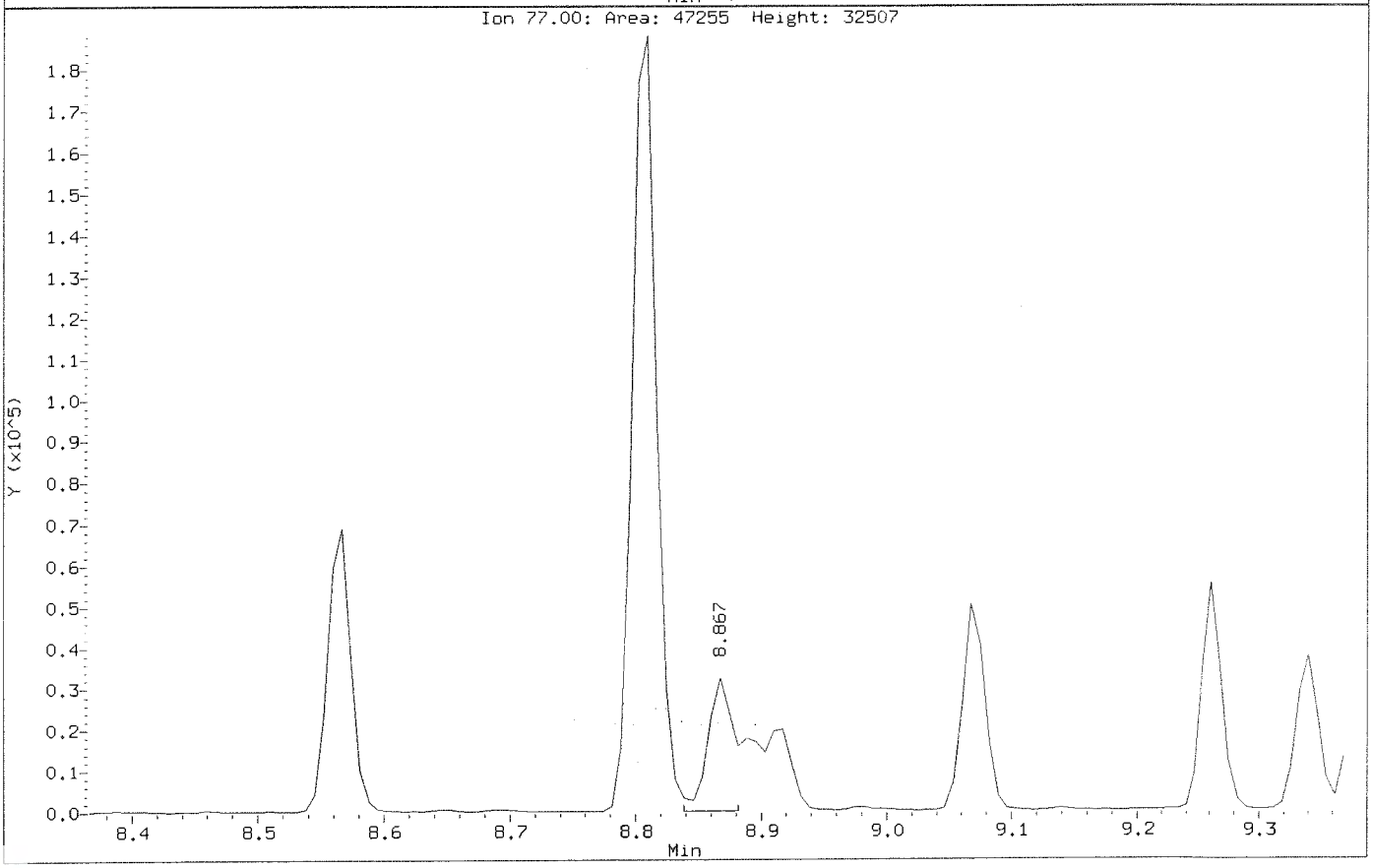

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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\Before\X071703.D
Injection Date: 17-JUL-2020 11:09
Instrument: voa6.i
Client Sample ID: CCV

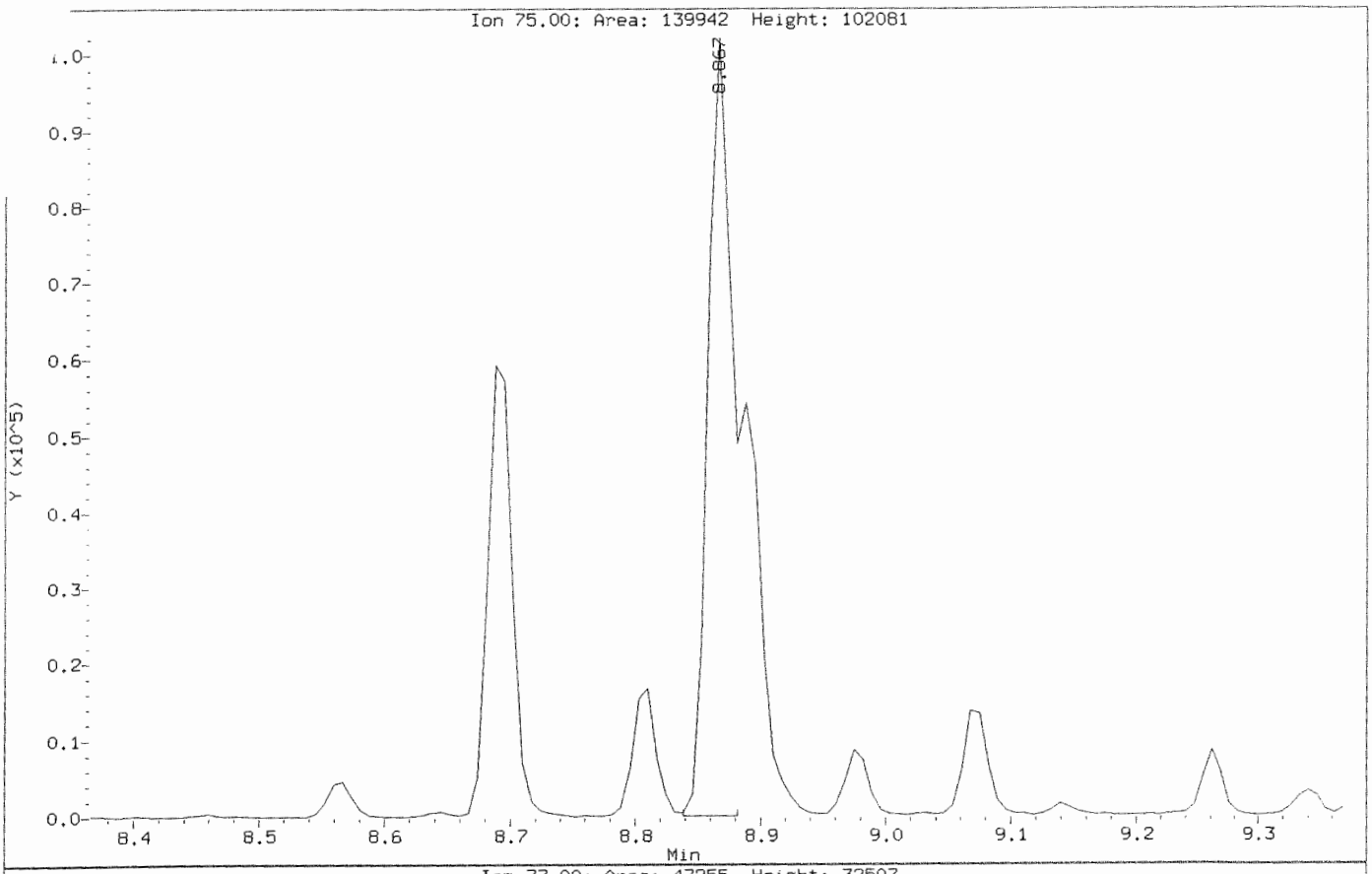
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CAS Number: 96-18-4

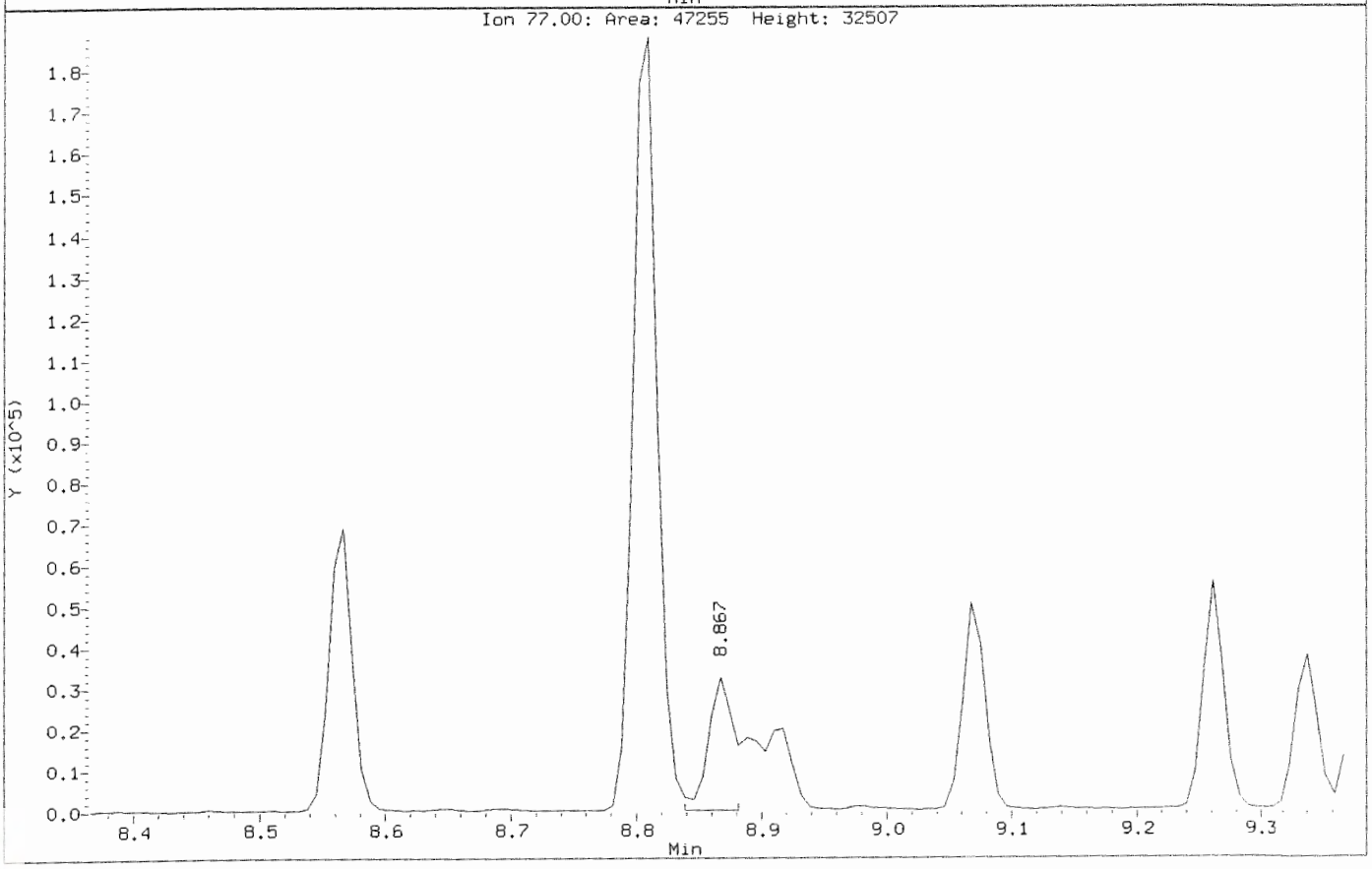


\\nahstws005\Target\chem\voa6.i\X200717.b\X071703.D
Date: 17-JUL-2020 11:09
ıt: voa6.i
ample ID: CCV

d: 1,2,3-Trichloropropane
ıber: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071705.D
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Inj Date : 17-JUL-2020 11:57
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200717;VLCSW-200717;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200717.b\8260W.m
Meth Date : 18-Aug-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18 Cal File: X071308.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

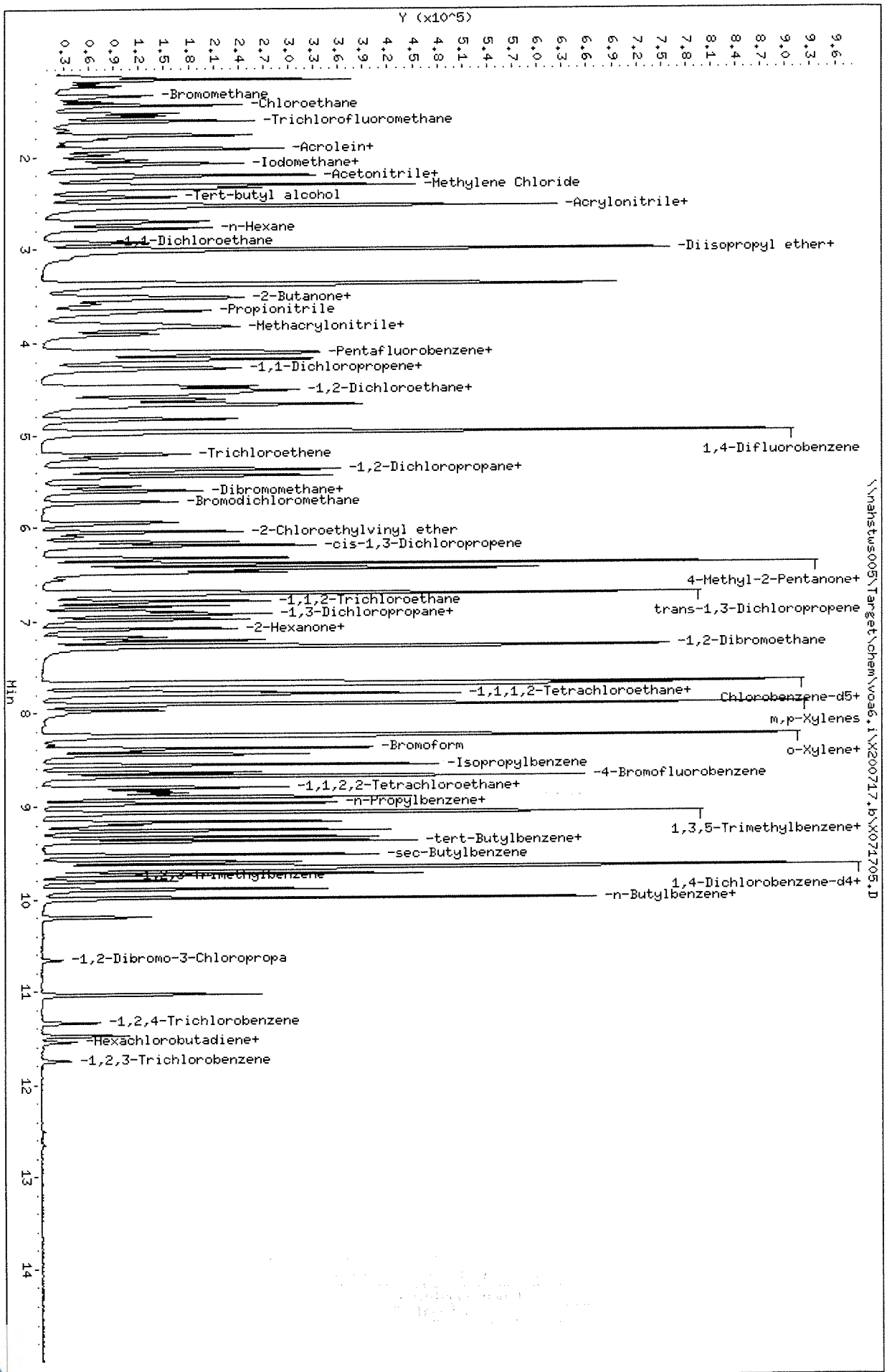
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 250970 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 401857 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 374924 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 165000 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 138967 | 49.6906 | 49.69 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 181762 | 47.9501 | 47.95 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 481801 | 49.0597 | 49.05 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.695 | (1.133) | 181725 | 50.0915 | 50.09 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 60159 | 20.7734 | 20.77 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 96624 | 21.1327 | 21.13 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 61857 | 20.3047 | 20.30 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 48011 | 20.9139 | 20.91 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 144316 | 20.5214 | 20.52 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 45831 | 20.8740 | 20.87 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 83904 | 22.2860 | 22.28 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 9497 | 17.0149 | 17.01 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 54866 | 20.4693 | 20.46(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.338 | (1.173) | 18800 | 17.7630 | 17.76 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 186481 | 20.5521 | 20.55 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.658 | (1.103) | 4264 | 16.2275 | 16.22 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 61470 | 22.2677 | 22.26 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 95535 | 20.7644 | 20.76 |

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071705.D Page 2
Report Date: 18-Aug-2020 12:53

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 101449 | 21.2159 | 21.21 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 79251 | 21.3576 | 21.35 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 198225 | 22.1107 | 22.11 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.605 | (0.994) | 105548 | 20.8673 | 20.86 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 100402 | 20.4631 | 20.46 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 105884 | 20.5515 | 20.55 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 98862 | 22.2611 | 22.26 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 88104 | 40.4434 | 40.44 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 161854 | 20.5964 | 20.59 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 142955 | 40.2517 | 40.25 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 196394 | 21.3595 | 21.35 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 194500 | 22.1511 | 22.15 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.324 | (0.825) | 206665 | 40.3944 | 40.39 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 66138 | 38.7367 | 38.73 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 234675 | 21.5137 | 21.51 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 65991 | 21.8379 | 21.83 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 34986 | 19.7254 | 19.72 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 86122 | 21.2987 | 21.29 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 40618 | 19.5851 | 19.58 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 42164 | 23.5070 | 23.50 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 282200 | 40.8004 | 40.80 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 81924 | 21.6827 | 21.68 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 158772 | 21.2740 | 21.27 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 44470 | 20.1601 | 20.16 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 115427 | 20.9500 | 20.95 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 113665 | 22.6830 | 22.68 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 68545 | 21.2910 | 21.29 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 104482 | 22.3166 | 22.31 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 63625 | 20.8601 | 20.86 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 41289 | 20.8258 | 20.82 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 58414 | 22.0437 | 22.04 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 82477 | 21.1825 | 21.18 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 15837 | 19.3740 | 19.37 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 246414 | 21.1318 | 21.13 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 200423 | 42.9811 | 42.98 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 67622 | 22.1581 | 22.15 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 173526 | 22.5124 | 22.51 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 278101 | 22.1197 | 22.11 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 27785 | 17.2924 | 17.29 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 97079 | 20.6043 | 20.60 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 220339 | 21.5617 | 21.56 |
| 64 | Styrene | 104 | 8.258 | 8.258 | (1.077) | 170920 | 20.9621 | 20.96 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 151626 | 21.1953 | 21.19 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 48982 | 21.3436 | 21.34 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 248850 | 21.1849 | 21.18 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 59271 | 21.9221 | 21.92 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 93836 | 21.7318 | 21.73 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 59288 | 20.4986 | 20.49 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 87912 | 21.1901 | 21.19 |
| | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 88213 | 21.3751 | 21.37 |

QC Flag Legend

M - Compound response manually integrated.

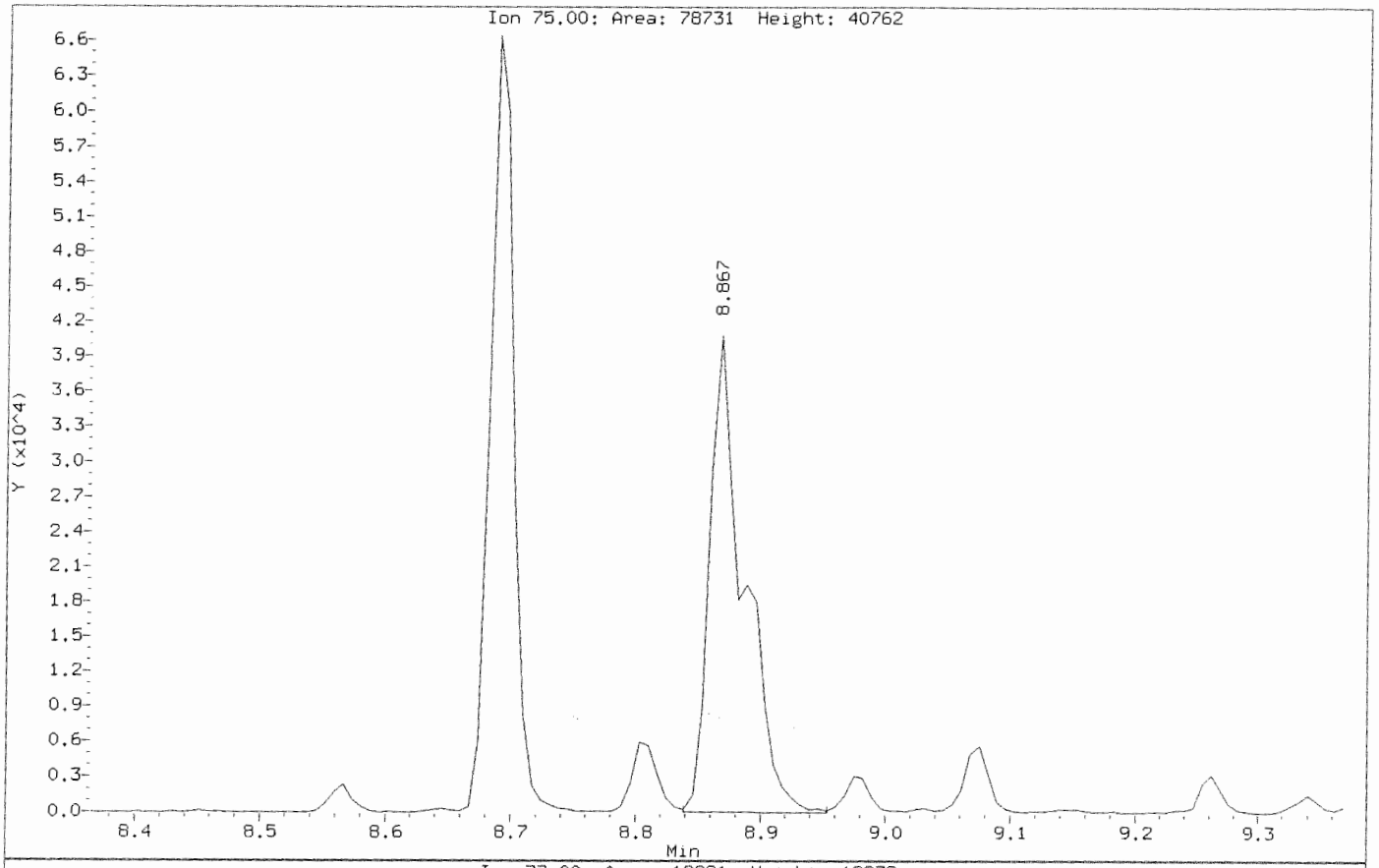


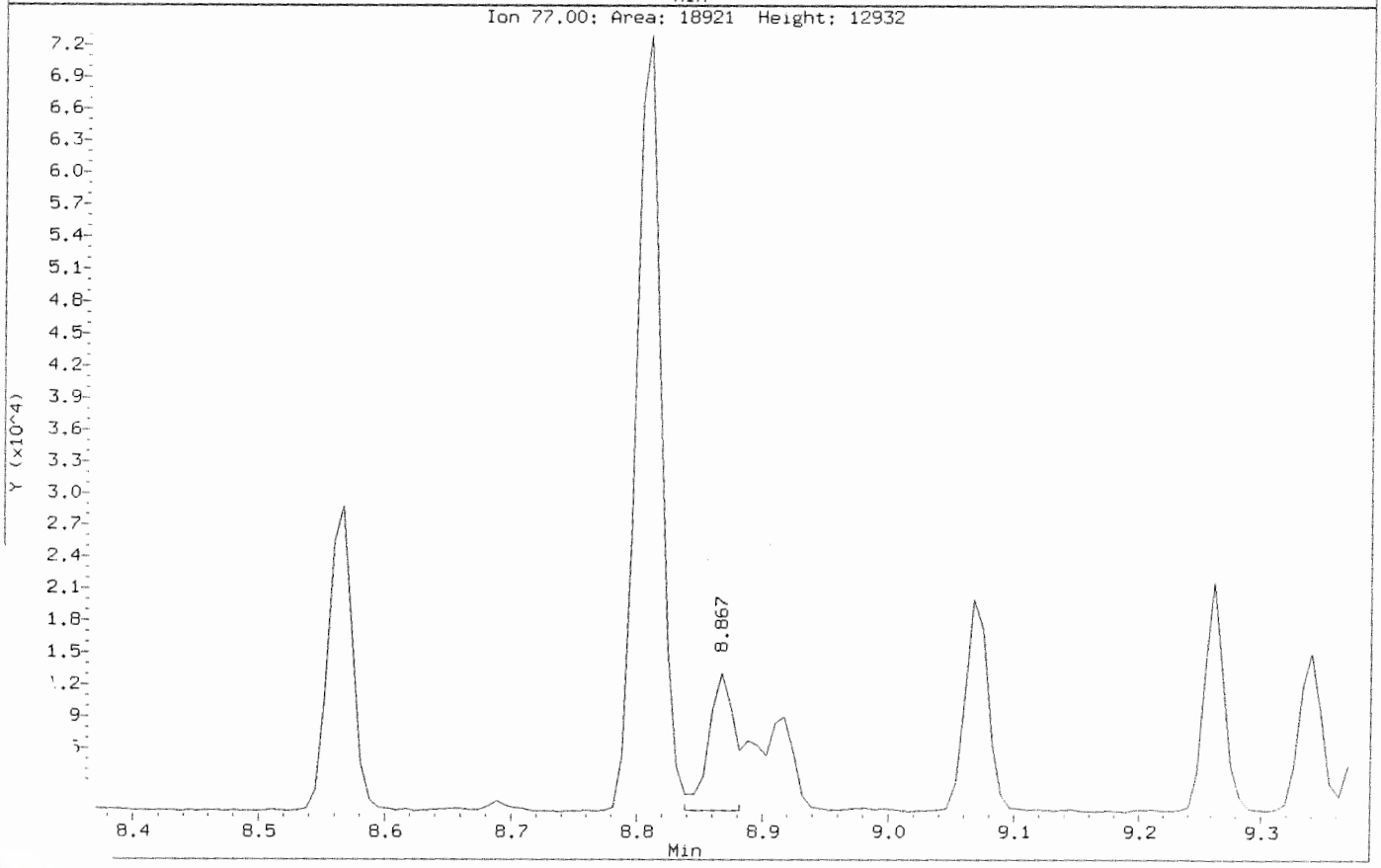

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071705.D
Date : 17-JUL-2020 11:57
Client ID: VLCSW-200717
Sample Info: VLCSW-200717;VLCSW-200717;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\Before\X071705.D
Injection Date: 17-JUL-2020 11:57
Instrument: voa6.i
Client Sample ID: VLCSW-200717

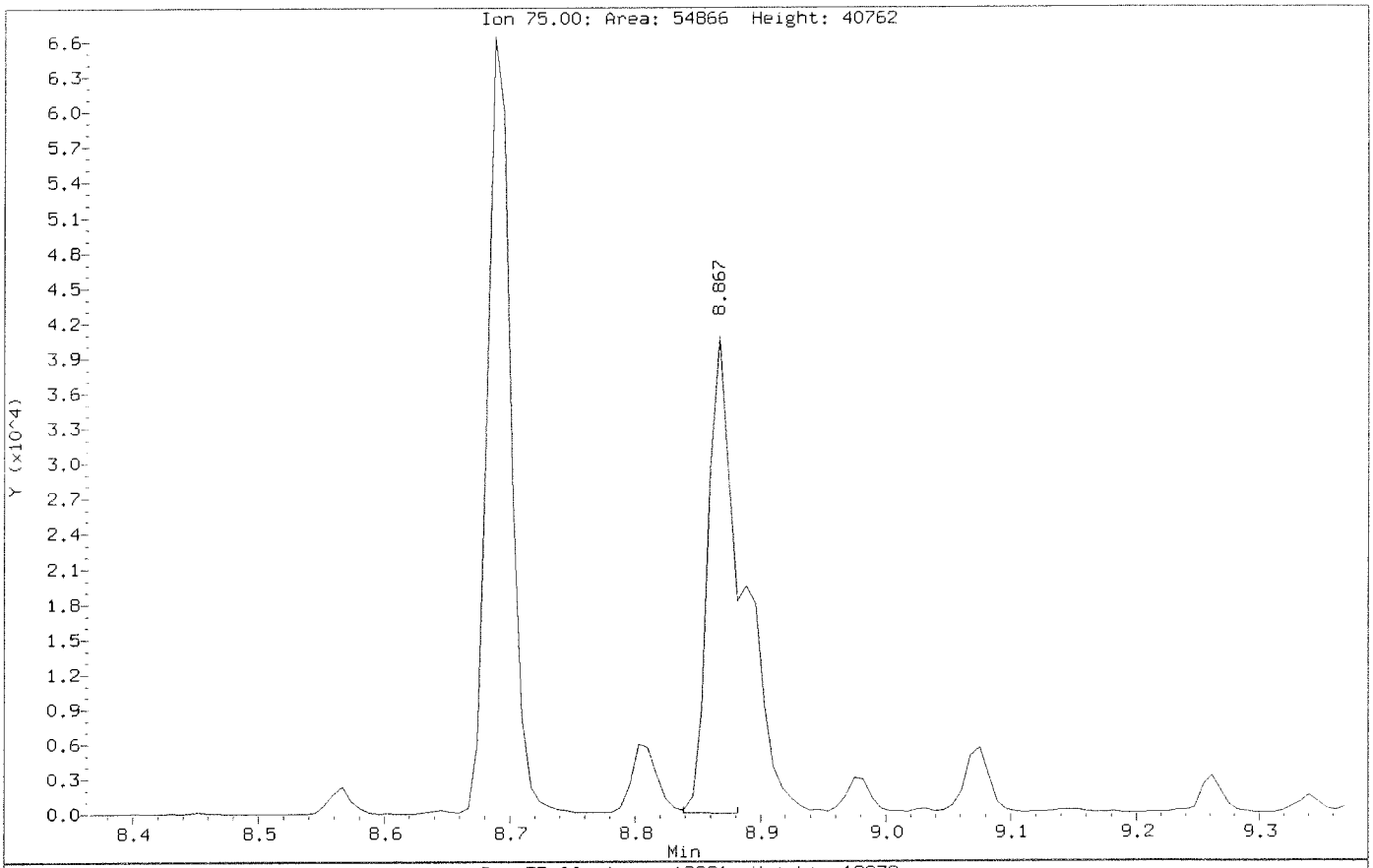
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

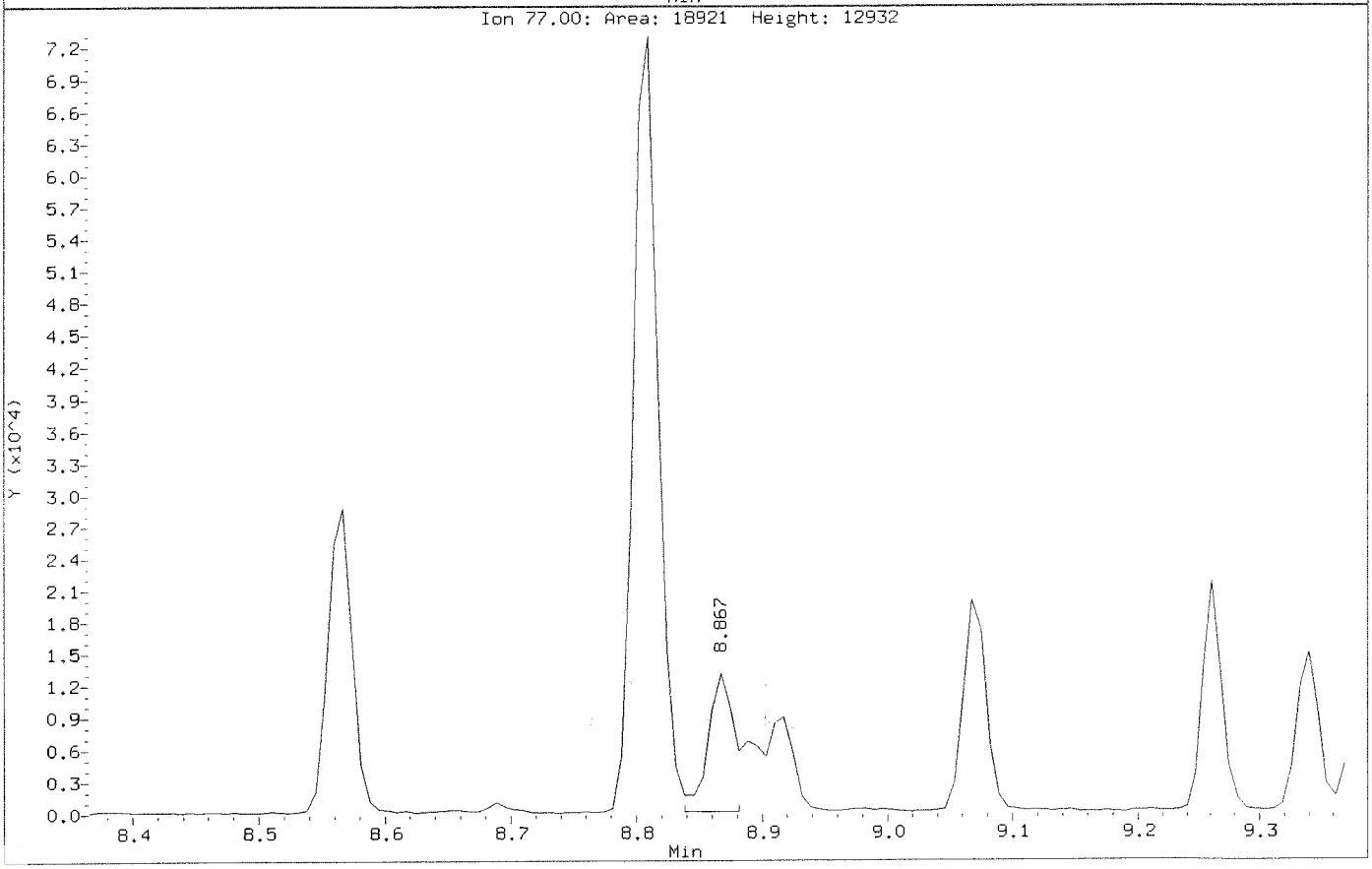


Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071705.D
Injection Date: 17-JUL-2020 11:57
Instrument: voa6.i
Client Sample ID: VLCSW-200717

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

ata file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071707.D
ab Smp Id: VBLKW-200717  Client Smp ID: VBLKW-200717
Inj Date : 17-JUL-2020 12:45
Operator : PC  Inst ID: voa6.i
Smp Info : VBLKW-200717;VBLKW-200717;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200717.b\8260W.m
Meth Date : 18-Aug-2020 12:53 voa6.i  Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18  Cal File: X071308.D
Als bottle: 7  QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

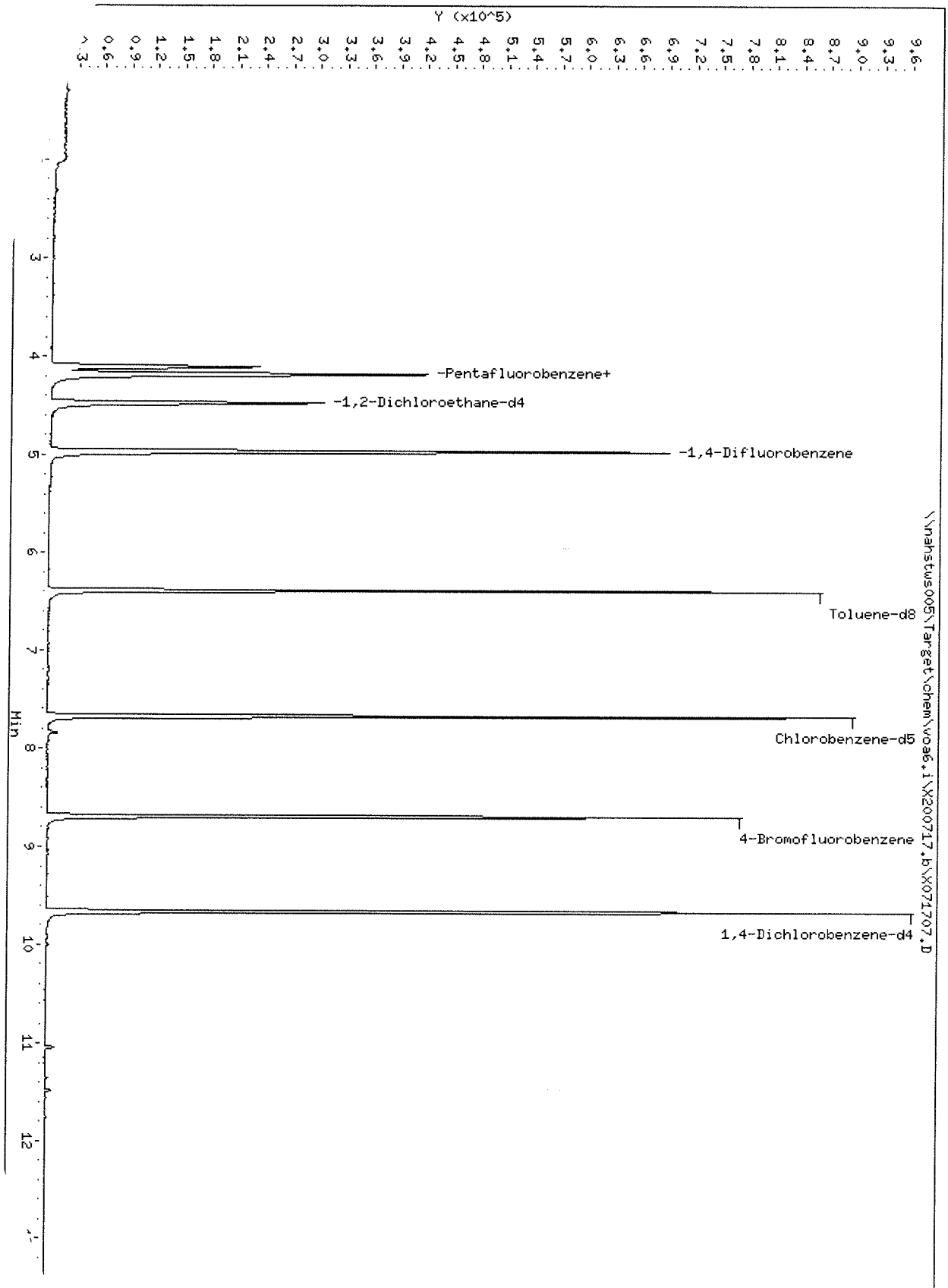
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 333913 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 511651 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 386969 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.669 | (1.000) | 220176 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 163935 | 44.0485 | 44.04 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 219904 | 43.6329 | 43.63 |
| $ 48 Toluene-d8 | 98 | 6.389 | 6.388 | (0.833) | 467502 | 46.1219 | 46.12 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 212853 | 56.9177 | 56.91(M) |

QC Flag Legend

M - Compound response manually integrated.




Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071707.D
Date : 17-JUL-2020 12:45
Client ID: VBLKW-200717
Sample Info: VBLKW-200717;VBLKW-200717;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

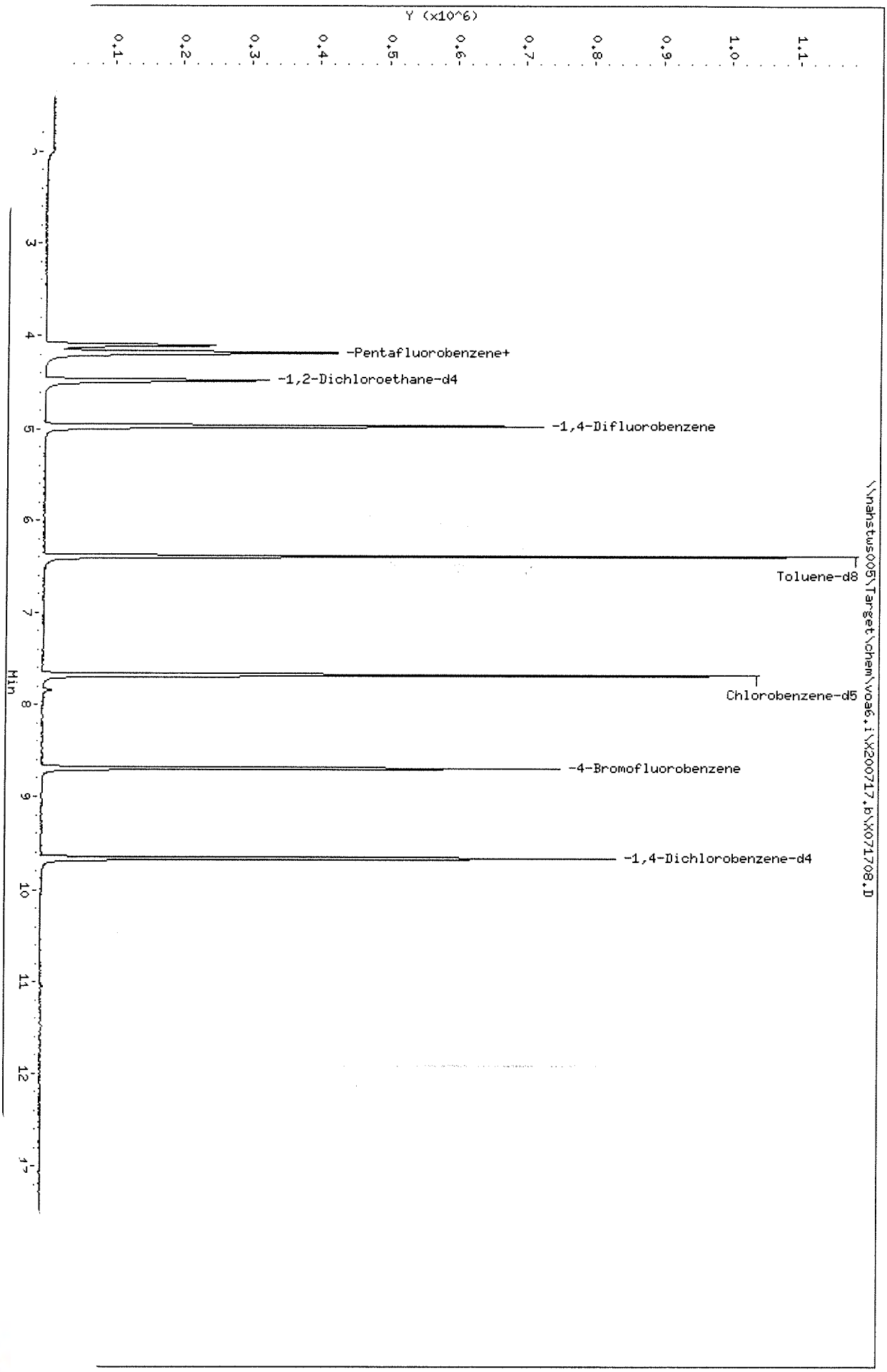
ALS Laboratory Group

ata file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071708.D
ab Smp Id: HS20070623-03  Client Smp ID: HS20070623-03
Inj Date : 17-JUL-2020 13:09
Operator : PC  Inst ID: voa6.i
Smp Info : HS20070623-03;HS20070623-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200717.b\8260W.m
Meth Date : 18-Aug-2020 12:51 dev.giga  Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18  Cal File: X071308.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 338104 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 538186 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.670 | 7.671 | (1.000) | 459533 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 196474 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 176520 | 46.8473 | 46.84 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 233478 | 45.7355 | 45.73 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 627054 | 52.0941 | 52.09 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 219984 | 49.4662 | 49.46 |




Data File: \\nahstws005\Target\chem\voa6,i\X200717,b\X071708.D
Date : 17-JUL-2020 13:09
Client ID: HS20070623-03
Sample Info: HS20070623-03;HS20070623-03;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071709.D Page 1
Report Date: 18-Aug-2020 12:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071709.D
Lab Smp Id: HS20070623-01 Client Smp ID: HS20070623-01
Inj Date : 17-JUL-2020 13:33
Operator : PC Inst ID: voa6.i
Smp Info : HS20070623-01;HS20070623-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200717.b\8260W.m
Meth Date : 18-Aug-2020 12:51 dev.giga Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18 Cal File: X071308.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

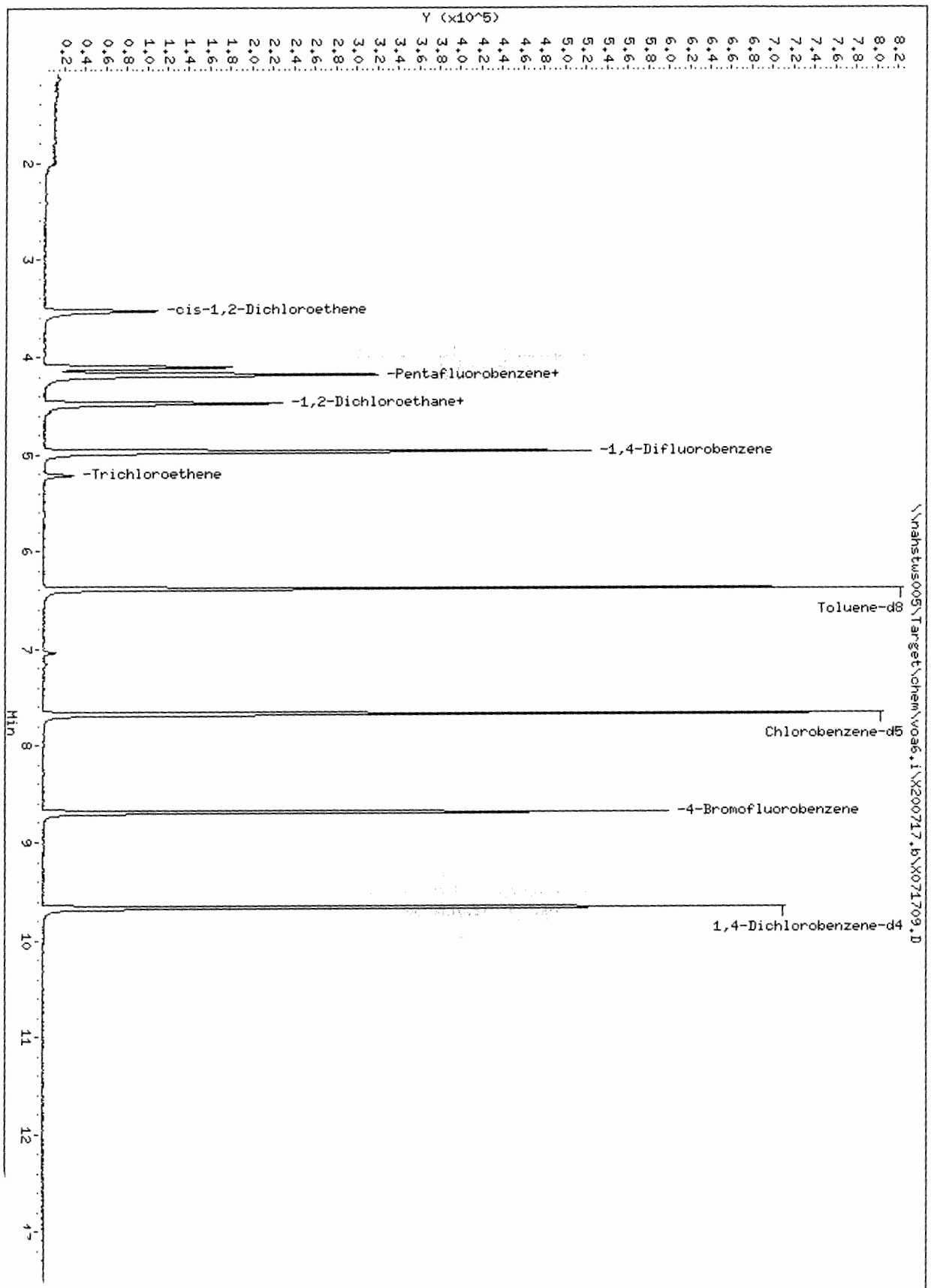
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 257931 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 387253 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 346339 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 167419 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 126839 | 44.1207 | 44.12 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 167356 | 42.9935 | 42.99 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 442481 | 48.7745 | 48.77 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 170080 | 50.7580 | 50.75 |
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 3569 | 0.77453 | 0.77(a) |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 48640 | 14.7005 | 14.70 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 9435 | 3.38514 | 3.38(a) |

C Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ)




Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071709.D
Date : 17-JUL-2020 13:33
Client ID: HS20070623-01
Sample Info: HS20070623-01;HS20070623-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071709.D



Date : 17-JUL-2020 13:33

Client ID: HS20070623-01

Instrument: voa6.i

Sample Info: HS20070623-01;HS20070623-01;;;

Purge Volume: 5.0

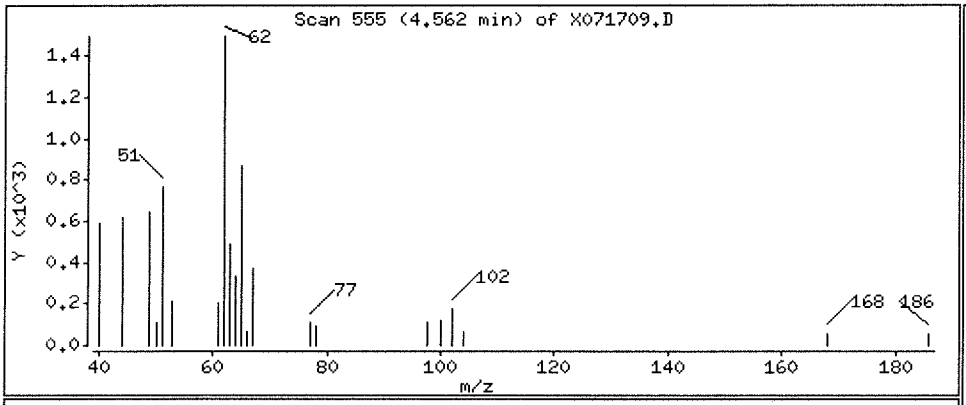
Operator: PC

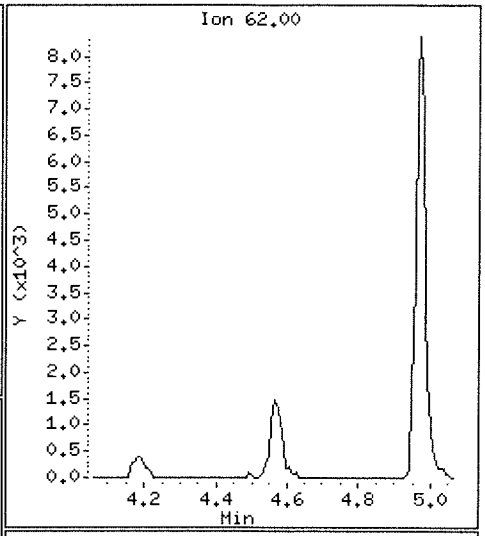
Column phase: DB624

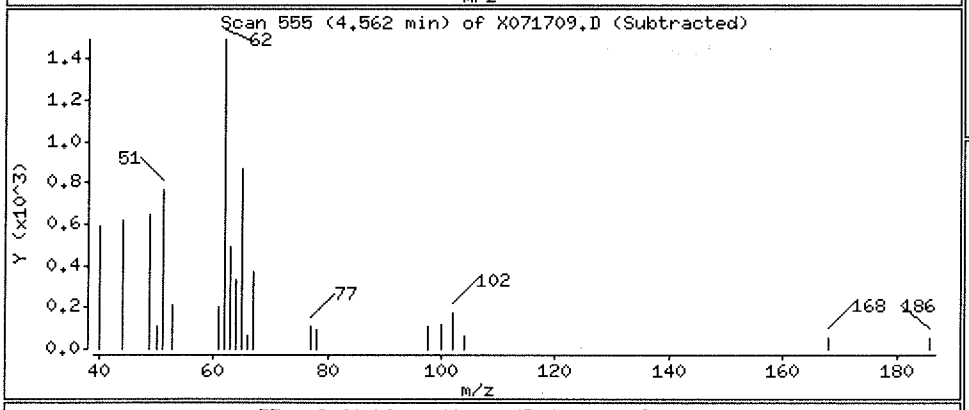
Column diameter: 0.18

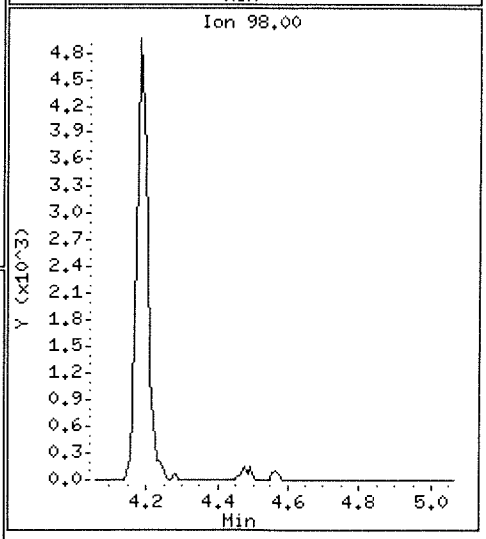
33 1,2-Dichloroethane

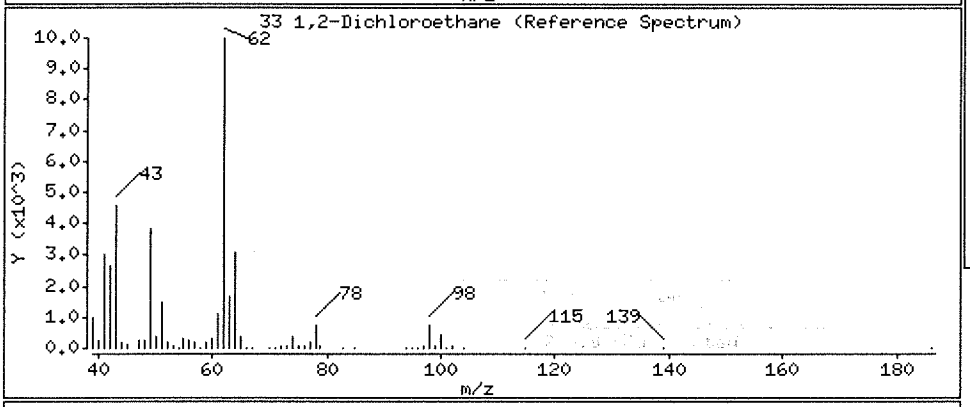
Concentration: 0.77 ug/l

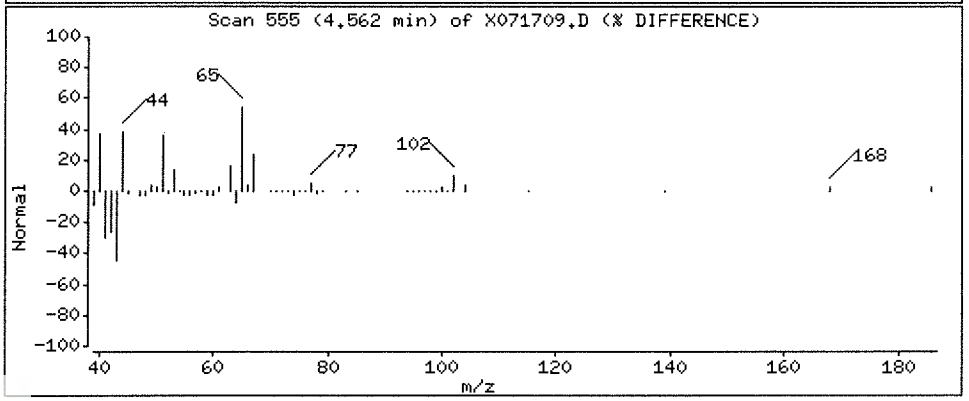


Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071709.D Page 4

Date : 17-JUL-2020 13:33

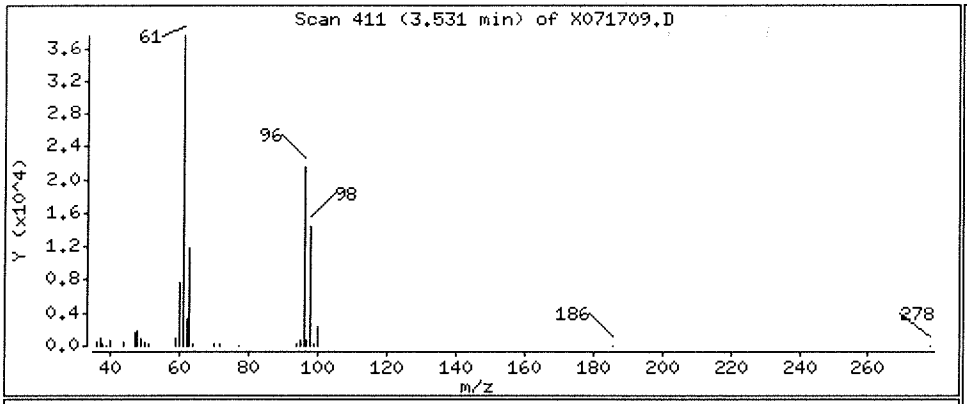
Client ID: HS20070623-01 Instrument: voa6.i

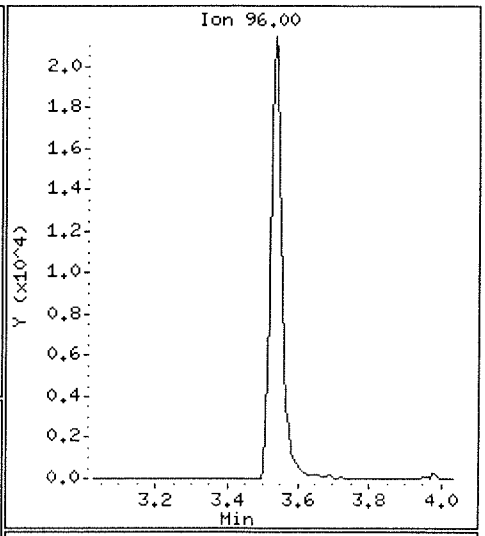
Sample Info: HS20070623-01;HS20070623-01;;;

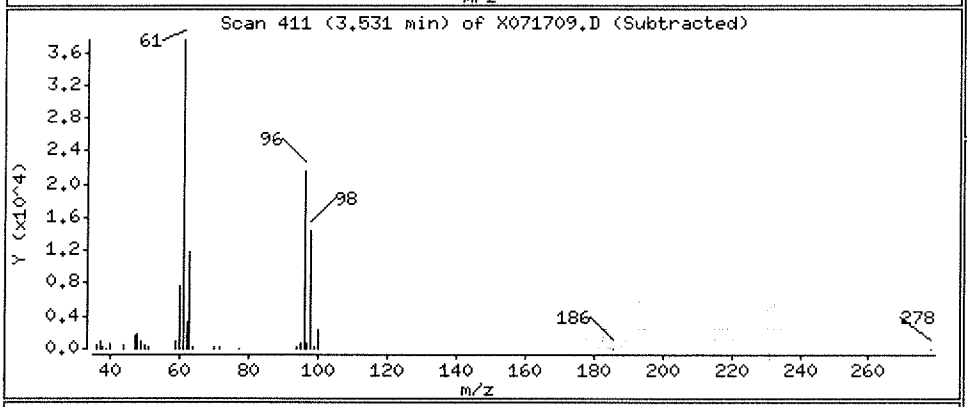
Purge Volume: 5.0 Operator: PC

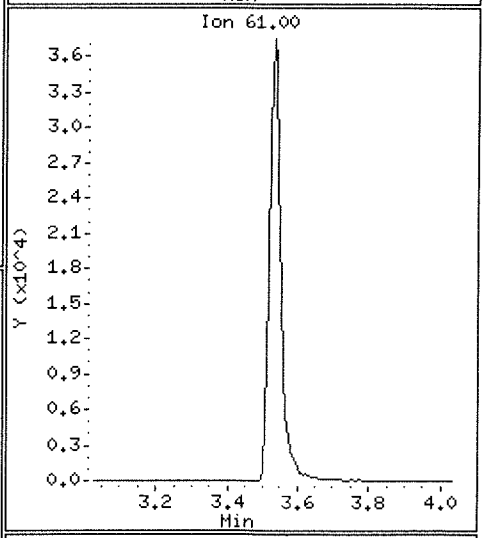
Column phase: DB624 Column diameter: 0.18

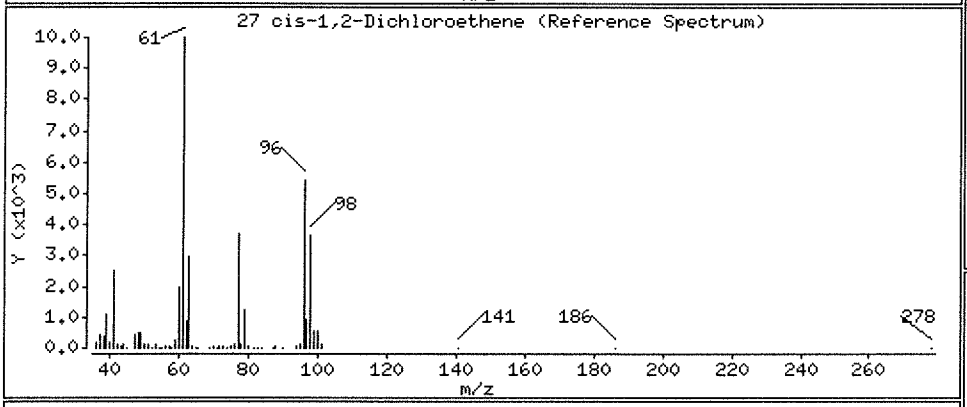
27 cis-1,2-Dichloroethene Concentration: 14.70 ug/l

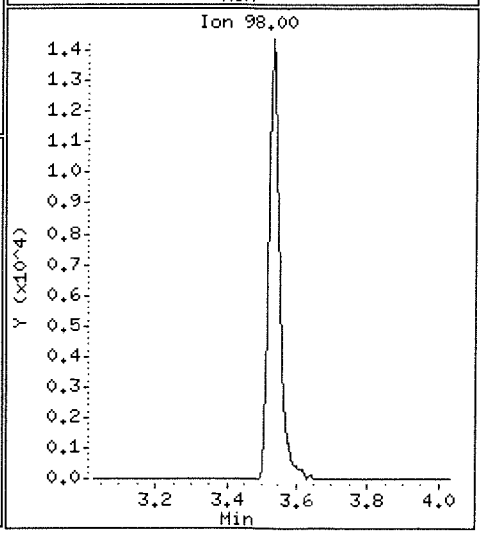


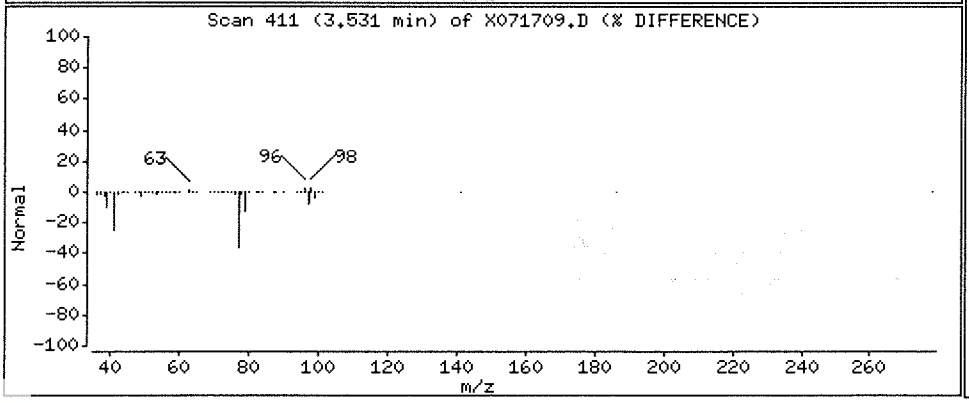



Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071709.D



Date : 17-JUL-2020 13:33

Client ID: HS20070623-01

Instrument: voa6.i

Sample Info: HS20070623-01;HS20070623-01;;;

Purge Volume: 5.0

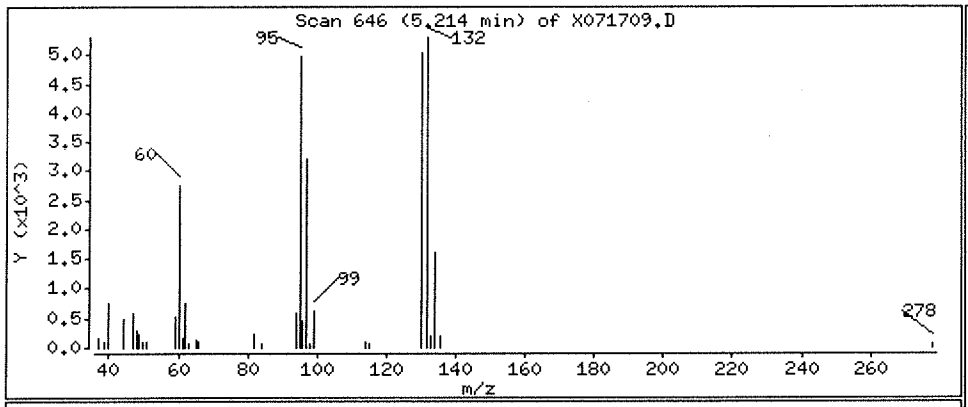
Operator: PC

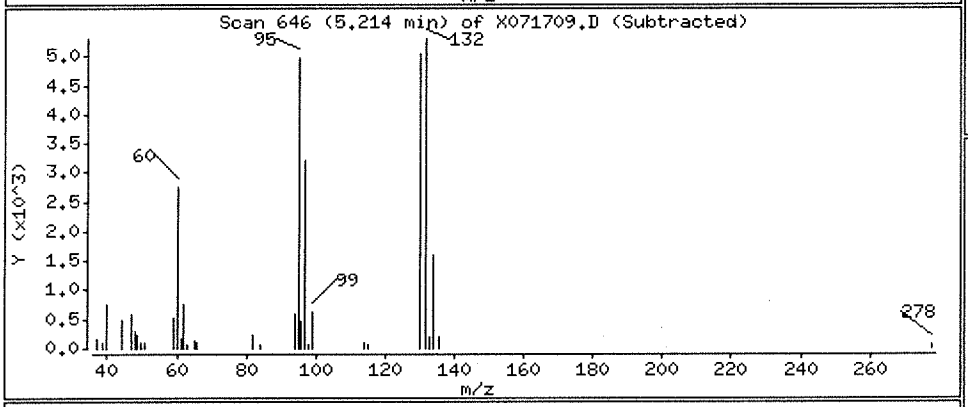
Column phase: DB624

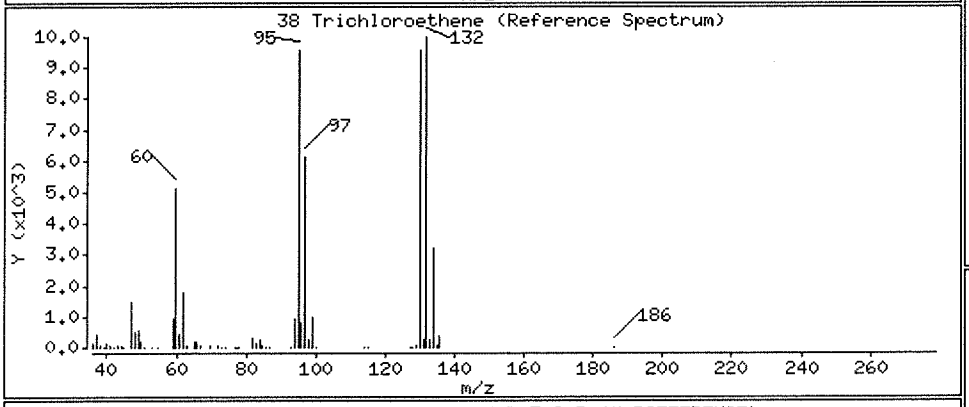
Column diameter: 0.18

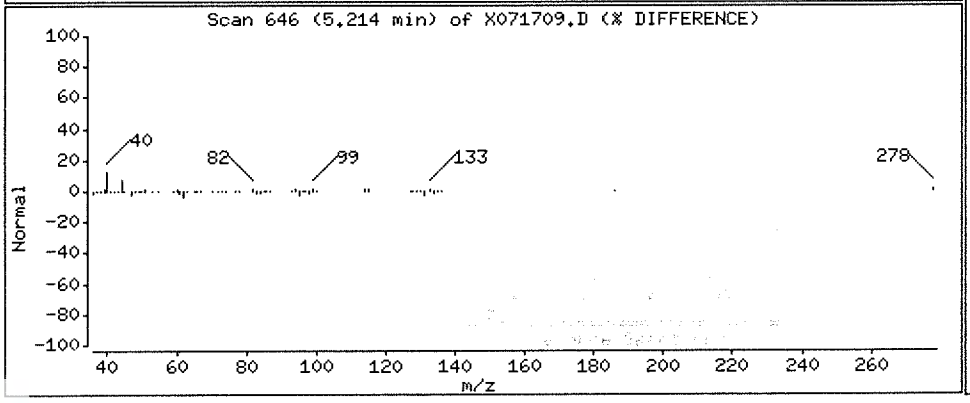
38 Trichloroethene

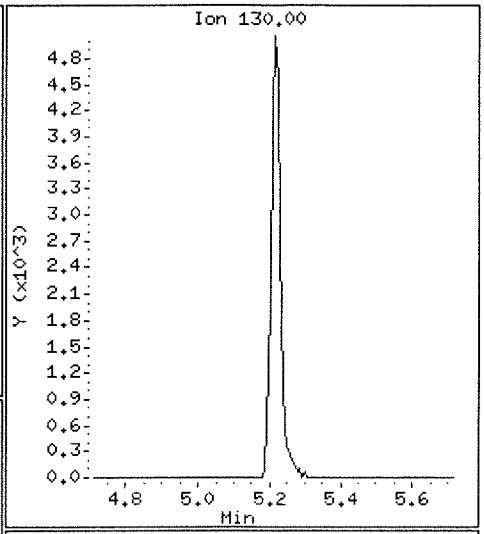
Concentration: 3.38 ug/l

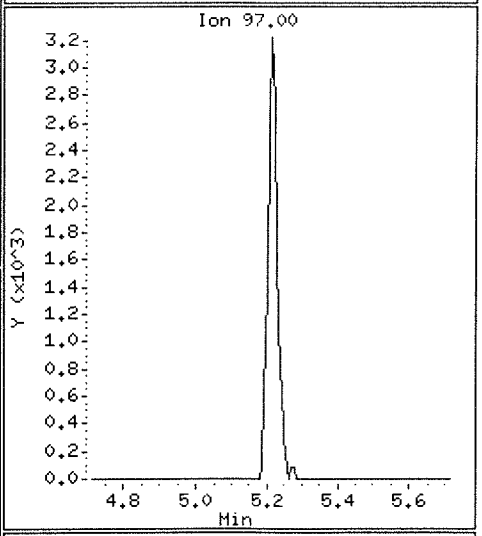


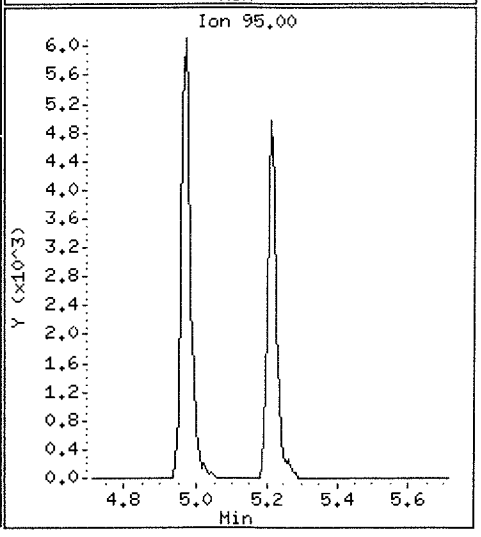



Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071716.D  Page 1
Report Date: 18-Aug-2020 12:53

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071716.D
Lab Smp Id: HS20070674-01MS  Client Smp ID: HS20070674-01MS
Inj Date : 17-JUL-2020 16:20
Operator : PC  Inst ID: voa6.i
Smp Info : HS20070674-01MS;HS20070674-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200717.b\8260W.m
Meth Date : 18-Aug-2020 12:53 voa6.i  Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18  Cal File: X071308.D
Als bottle: 16  QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

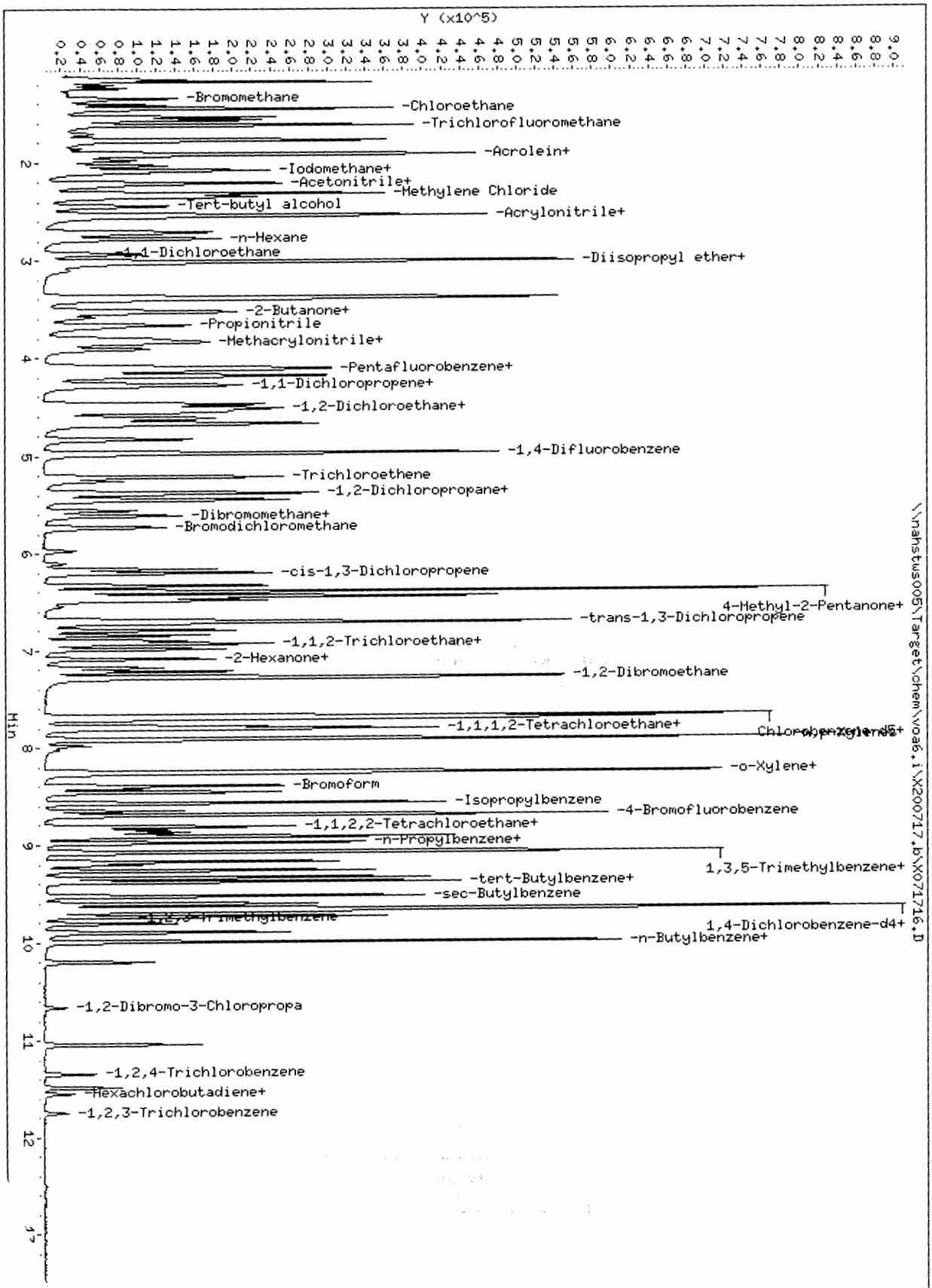
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 236309 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 345798 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 317166 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 155619 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 127193 | 48.2999 | 48.29 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 167854 | 47.0349 | 47.03 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 437202 | 52.6254 | 52.62 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 167906 | 54.7601 | 54.76 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 52418 | 21.3965 | 21.39 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 85348 | 19.8246 | 19.82 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 52088 | 18.1287 | 18.12 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 37825 | 19.4774 | 19.47 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 113949 | 17.2085 | 17.20 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 65955 | 31.9033 | 31.90 |
| | 32 1,1-Dichloropropene | 75 | 4.282 | 4.283 | (0.862) | 71314 | 22.0127 | 22.01 |
| | 3 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 6919 | 13.1434 | 13.14 |
| | 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 46454 | 18.3757 | 18.37(M) |
| | 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 14277 | 14.3027 | 14.30 |
| | ,2,4-Trimethylbenzene | 105 | 9.382 | 9.383 | (0.970) | 184981 | 21.6157 | 21.61 |
| | 2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 4591 | 18.3390 | 18.33 |
| | -Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 49794 | 21.3229 | 21.32 |
| | Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 87473 | 20.1582 | 20.15 |

| pounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 86000 | 20.9007 | 20.90 |
| 42 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 62450 | 19.5582 | 19.55 |
| 75 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 184912 | 21.8691 | 21.86 |
| 83 1,3-Dichlorobenzene | 146 | 9.612 | 9.605 | (0.994) | 101079 | 21.1884 | 21.18 |
| 54 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 78681 | 18.9564 | 18.95 |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 101925 | 20.9756 | 20.97 |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 83697 | 20.0156 | 20.01 |
| 24 2-Butanone | 43 | 3.580 | 3.581 | (0.855) | 63590 | 31.0015 | 31.00 |
| 76 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 152200 | 20.5354 | 20.53 |
| 52 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 107616 | 35.8194 | 35.81 |
| 77 4-Chlorotoluene | 91 | 9.074 | 9.075 | (0.939) | 177007 | 20.4114 | 20.41 |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 190319 | 22.9815 | 22.98 |
| 45 4-Methyl-2-Pentanone | 43 | 6.331 | 6.324 | (0.825) | 160608 | 37.1089 | 37.10 |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 73486 | 46.4371 | 46.43 |
| 37 Benzene | 78 | 4.519 | 4.519 | (0.909) | 192195 | 20.4757 | 20.47 |
| 74 Bromobenzene | 156 | 8.809 | 8.810 | (0.911) | 60400 | 21.1926 | 21.19 |
| 29 Bromochloromethane | 128 | 3.802 | 3.803 | (0.908) | 28041 | 16.7906 | 16.79 |
| 39 Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 69634 | 20.0129 | 20.01 |
| 66 Bromoform | 173 | 8.415 | 8.416 | (1.097) | 36384 | 20.7384 | 20.73 |
| 6 Bromomethane | 94 | 1.338 | 1.339 | (0.320) | 58865 | 35.3596 | 35.35 |
| 19 Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 271800 | 41.7349 | 41.73 |
| 34 Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 75727 | 23.2918 | 23.29 |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 131701 | 20.8603 | 20.86 |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 64582 | 31.0942 | 31.09 |
| 28 Chloroform | 83 | 3.910 | 3.910 | (0.933) | 96056 | 18.5158 | 18.51 |
| 3 Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 125106 | 26.2258 | 26.22 |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 56088 | 18.5026 | 18.50 |
| 46 cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 81522 | 20.2354 | 20.23 |
| 55 Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 53999 | 20.9282 | 20.92 |
| 44 Dibromomethane | 93 | 5.557 | 5.558 | (1.118) | 32685 | 19.1587 | 19.15 |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 63630 | 25.5019 | 25.50 |
| 61 Ethylbenzene | 106 | 7.807 | 7.800 | (1.018) | 71477 | 21.7004 | 21.70 |
| 91 Hexachlorobutadiene | 225 | 11.488 | 11.481 | (1.188) | 12999 | 16.8608 | 16.86 |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 221388 | 22.4431 | 22.44 |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 172891 | 43.8287 | 43.82 |
| 17 Methylene Chloride | 84 | 2.305 | 2.306 | (0.550) | 51599 | 17.6945 | 17.69 |
| 87 n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 163330 | 22.4669 | 22.46 |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 258156 | 21.7711 | 21.77 |
| 92 Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 21065 | 14.1449 | 14.14 |
| 63 o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 82629 | 20.7311 | 20.73 |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 216425 | 22.4554 | 22.45 |
| 64 Styrene | 104 | 8.265 | 8.258 | (1.078) | 139736 | 20.2584 | 20.25 |
| 78 tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 154690 | 22.9271 | 22.92 |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 44532 | 22.9383 | 22.93 |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 206756 | 20.8067 | 20.80 |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 49232 | 19.3388 | 19.33 |
| 51 trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 72761 | 19.5827 | 19.58 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 81077 | 32.5765 | 32.57 |
| 8 Trichlorofluoromethane | 101 | 1.560 | 1.561 | (0.373) | 128394 | 32.8678 | 32.86 |
| Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 94783 | 24.3920 | 24.39 |

QC Flag Legend

M - Compound response manually integrated.

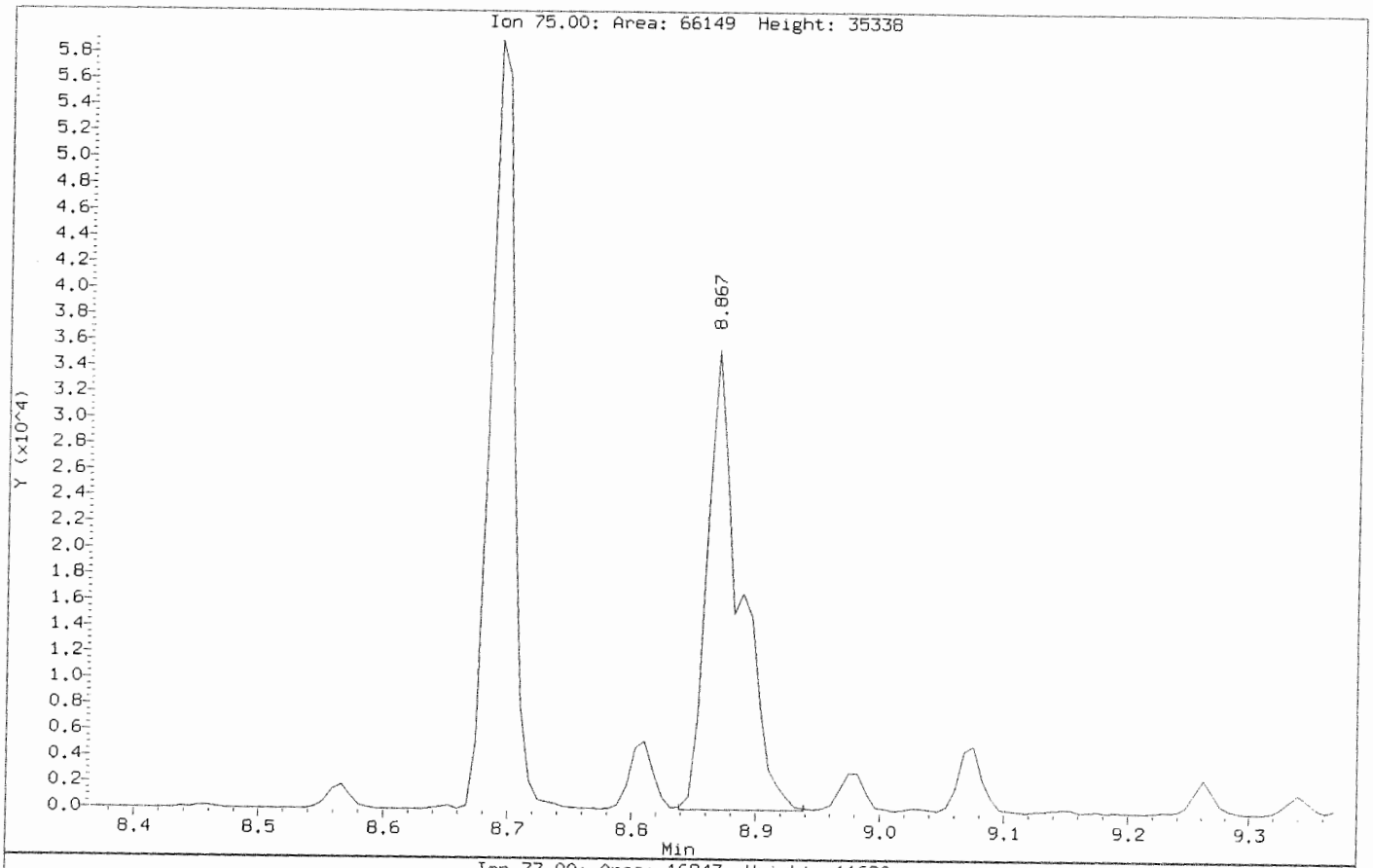


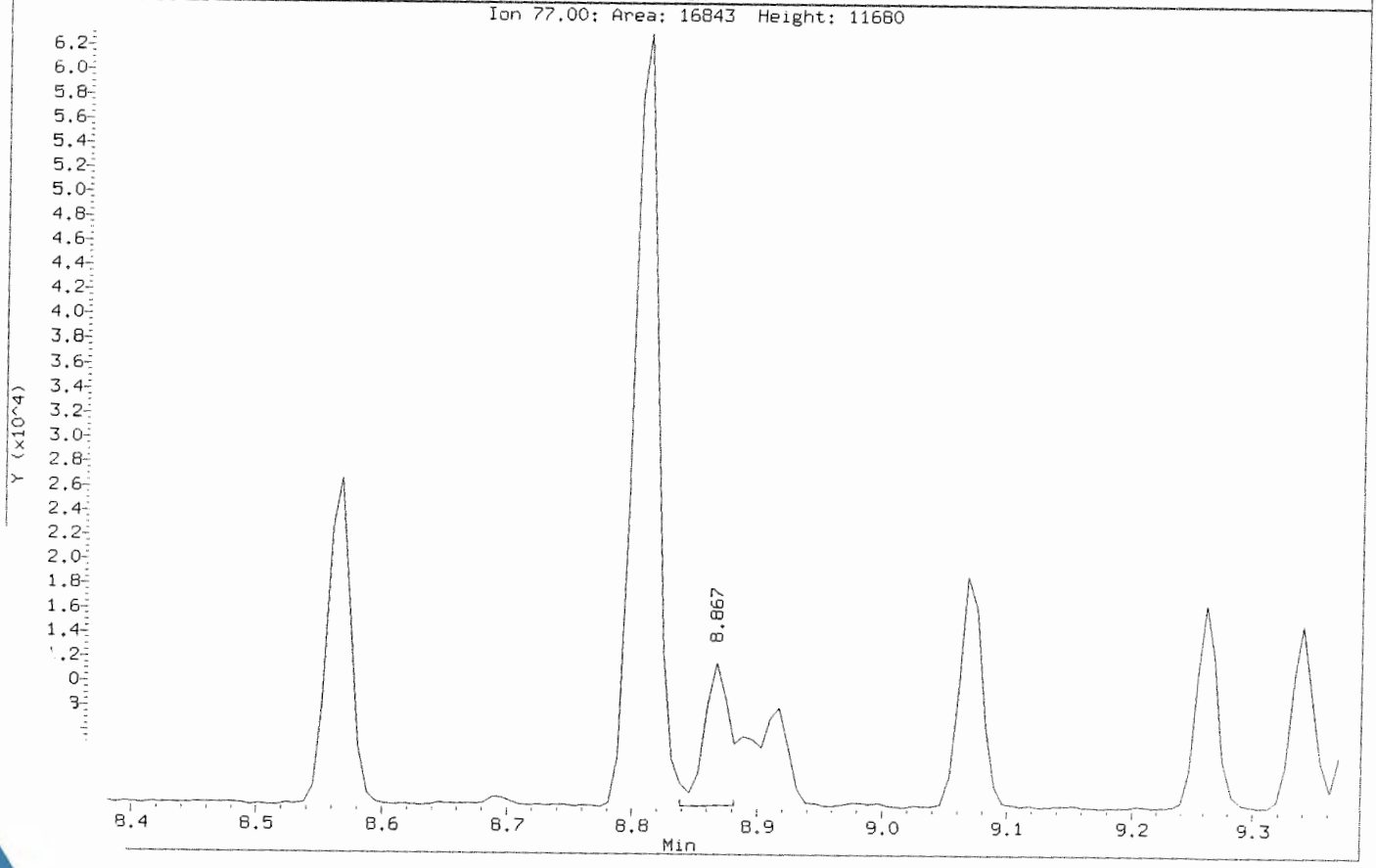

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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\Before\X071716.D
Injection Date: 17-JUL-2020 16:20
Instrument: voa6.i
Client Sample ID: HS20070674-01MS

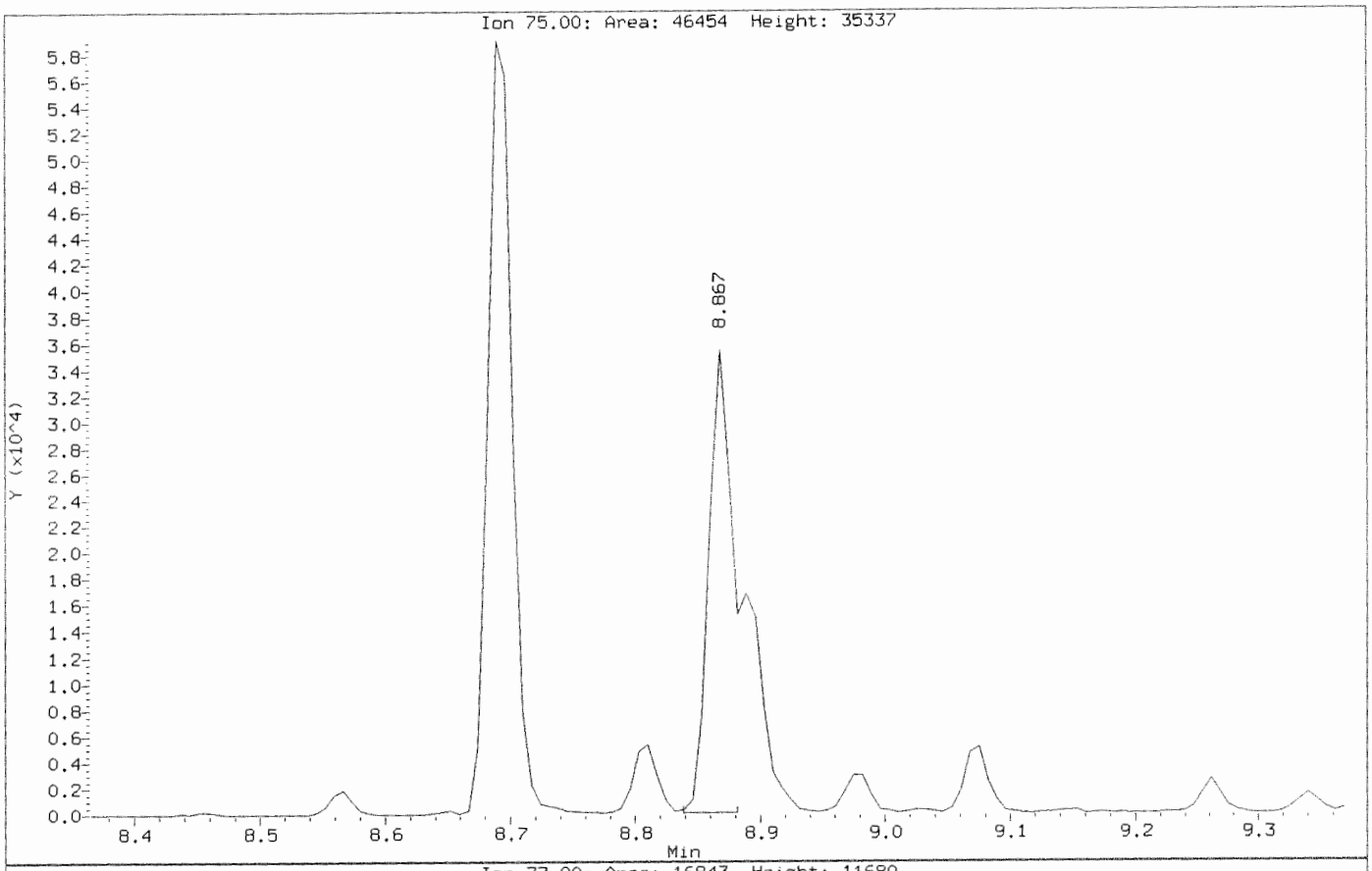
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CAS Number: 96-18-4

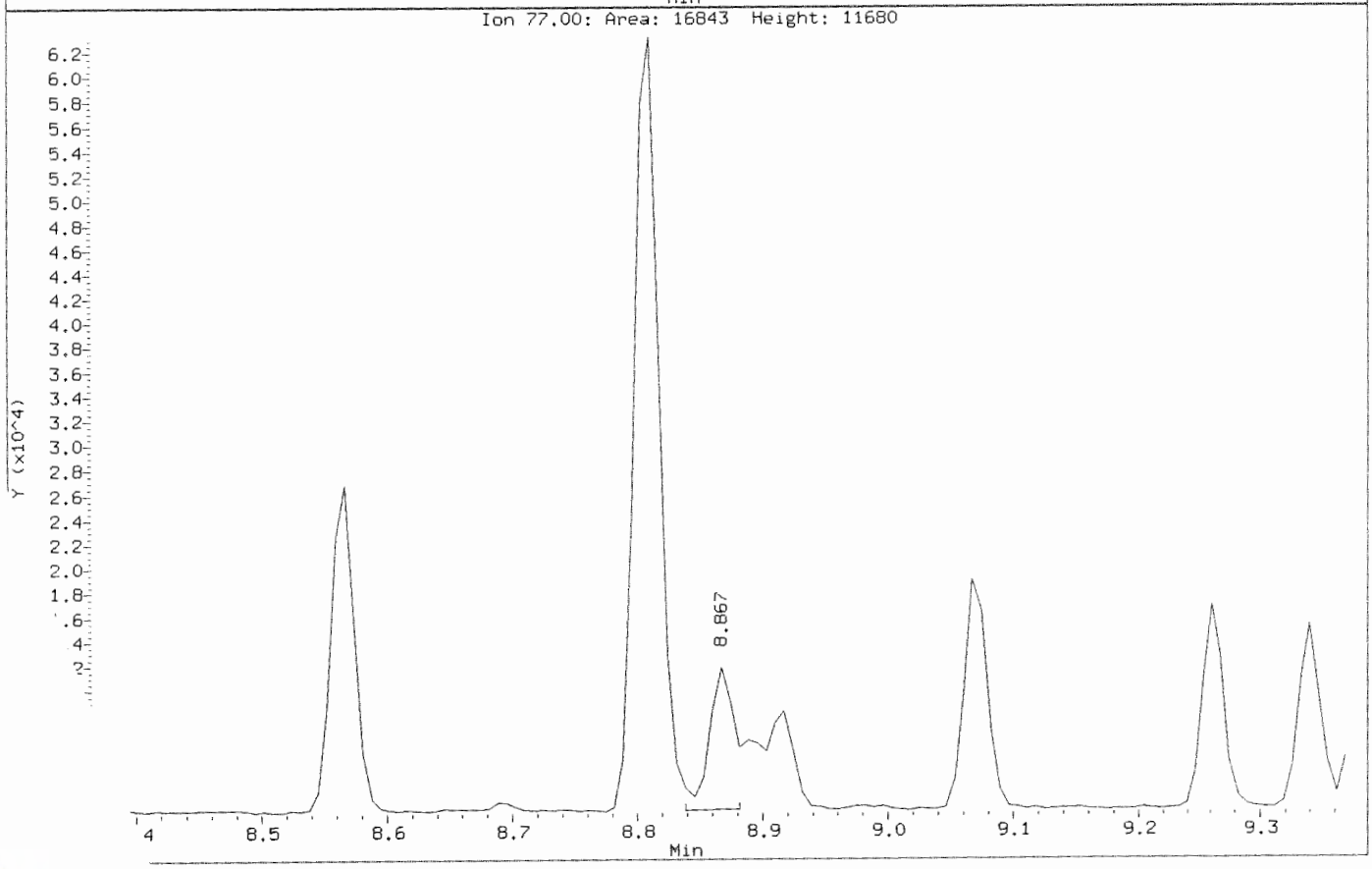


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Injection Date: 17-JUL-2020 16:20
Instrument: voa6.i
Client Sample ID: HS20070674-01MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071717.D
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Inj Date : 17-JUL-2020 16:44
Operator : PC Inst ID: voa6.i
Smp Info : HS20070674-01MSD;HS20070674-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 18-Aug-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18 Cal File: X071308.D
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

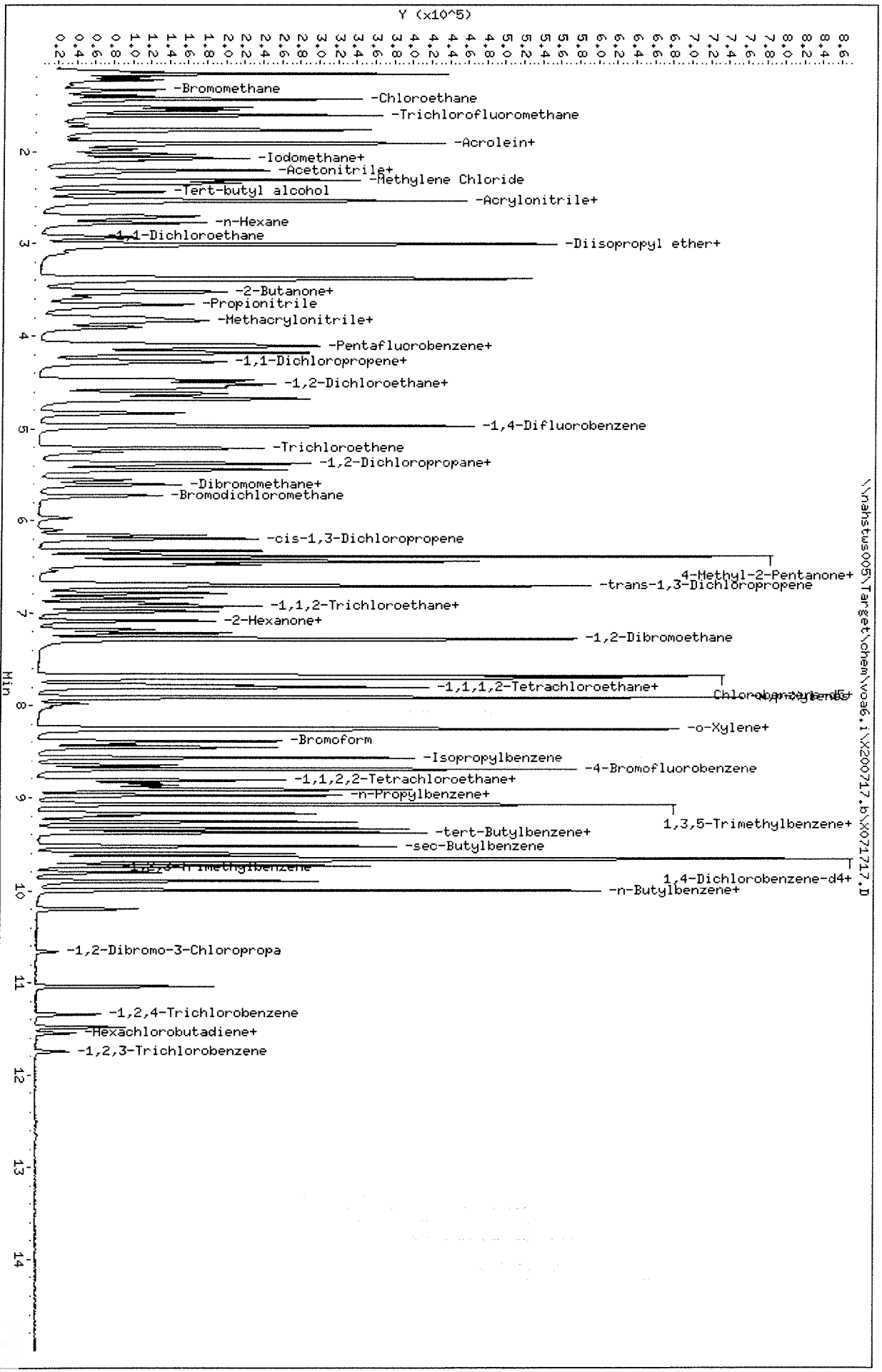
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 226490 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 345021 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 307903 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 153685 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 123522 | 48.9405 | 48.94 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 166926 | 48.7899 | 48.78 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 416485 | 51.6399 | 51.63 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 159848 | 53.6900 | 53.69 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 50638 | 21.2918 | 21.29 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 82734 | 20.0506 | 20.05 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.838 | (0.915) | 51854 | 18.2744 | 18.27 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 37917 | 20.1121 | 20.11 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 113315 | 17.8547 | 17.85 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 63205 | 31.8986 | 31.89 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.283 | (0.862) | 68052 | 21.0531 | 21.05 |
| 73 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 9527 | 18.3253 | 18.32 |
| 1 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 47682 | 19.0988 | 19.09(M) |
| 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 18544 | 18.8112 | 18.81 |
| 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 181546 | 21.4813 | 21.48 |
| 2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 4784 | 19.2778 | 19.27 |
| 2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 48050 | 21.1951 | 21.19 |
| -Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 87870 | 20.5046 | 20.50 |

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071717.D Page 2
Report Date: 18-Aug-2020 12:53

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 86699 | 21.1180 | 21.11 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 62384 | 19.5815 | 19.58 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 175979 | 21.0745 | 21.07 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.605 | (0.994) | 97169 | 20.6251 | 20.62 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 79887 | 19.8260 | 19.82 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 97695 | 20.3581 | 20.35 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 79896 | 19.9350 | 19.93 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 66603 | 33.8780 | 33.87 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 148790 | 20.3280 | 20.32 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 109832 | 37.6568 | 37.65 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 171235 | 19.9943 | 19.99 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 182412 | 22.3039 | 22.30 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.324 | (0.824) | 164625 | 39.1813 | 39.18 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 78669 | 52.3394 | 52.33 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 188088 | 20.0833 | 20.08 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 60373 | 21.4497 | 21.44 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 28116 | 17.5654 | 17.56 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 69346 | 19.9750 | 19.97 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 36365 | 21.3511 | 21.35 |
| 6 | Bromomethane | 94 | 1.338 | 1.339 | (0.320) | 52619 | 32.9074 | 32.90 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 251480 | 40.2888 | 40.28 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 73302 | 22.5967 | 22.59 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 130140 | 21.2331 | 21.23 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 58654 | 29.4643 | 29.46 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 91796 | 18.4618 | 18.46 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 95927 | 21.3233 | 21.32 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 55674 | 19.1622 | 19.16 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 81160 | 20.1909 | 20.19 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 53345 | 21.2967 | 21.29 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 32729 | 19.2277 | 19.22 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 49802 | 20.8251 | 20.82 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 67996 | 21.2646 | 21.26 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 14941 | 19.6236 | 19.62 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 212783 | 22.2197 | 22.21 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 166250 | 43.4131 | 43.41 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.306 | (0.550) | 49160 | 17.5807 | 17.58 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 157016 | 21.8702 | 21.87 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 249024 | 21.2652 | 21.26 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 27029 | 18.0050 | 18.00 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 82126 | 21.2248 | 21.22 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 209466 | 22.0069 | 22.00 |
| 64 | Styrene | 104 | 8.265 | 8.258 | (1.078) | 137332 | 20.5089 | 20.50 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 148667 | 22.3117 | 22.31 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 43366 | 23.0097 | 23.00 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 199131 | 20.6422 | 20.64 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 46280 | 18.9673 | 18.96 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 74793 | 20.1749 | 20.17 |
| 18 | Trichloroethene | 130 | 5.207 | 5.214 | (1.048) | 79137 | 31.8686 | 31.86 |
| 1 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 117733 | 31.4453 | 31.44 |
| | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 87641 | 23.5319 | 23.53 |

QC Flag Legend

M - Compound response manually integrated.

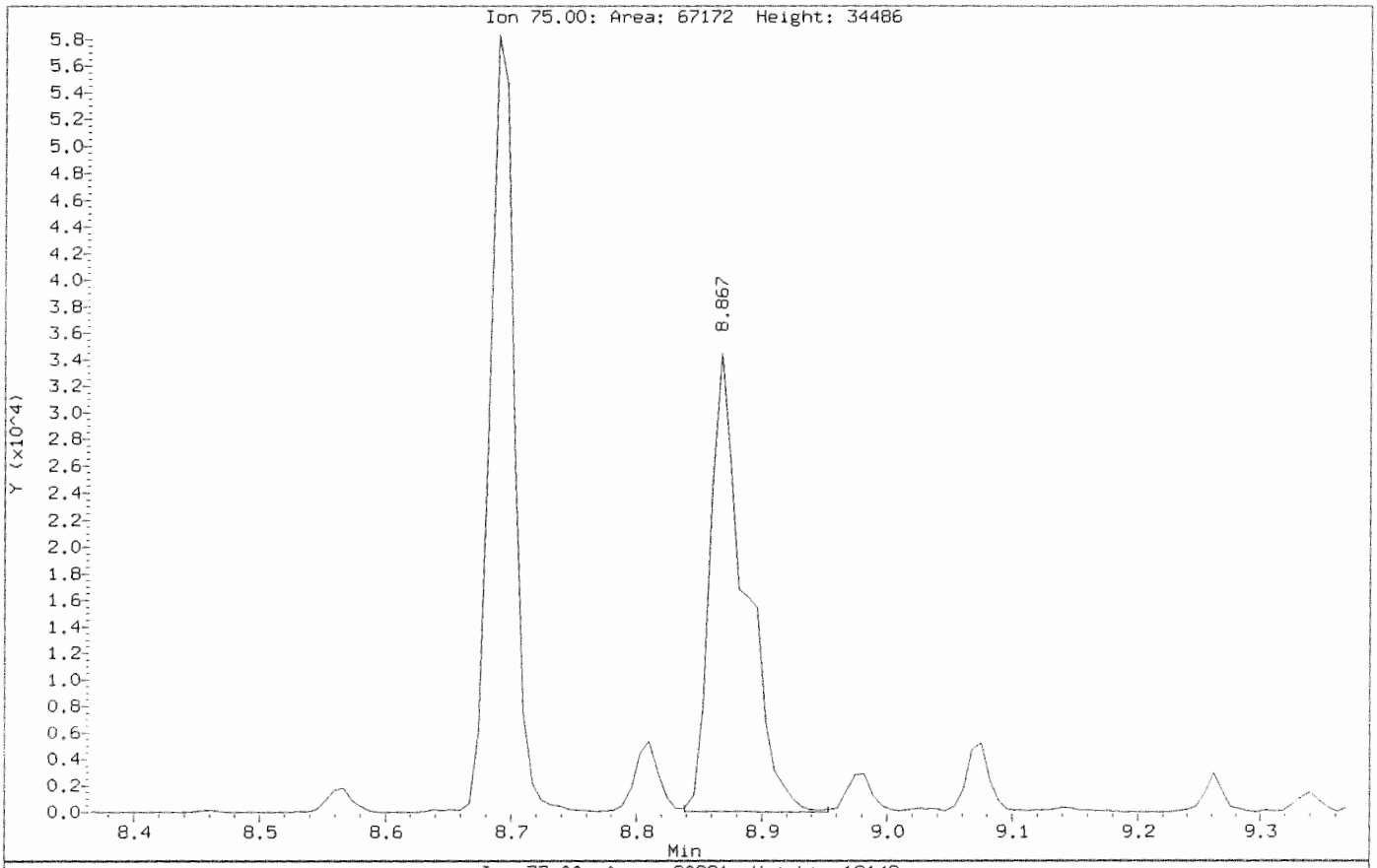


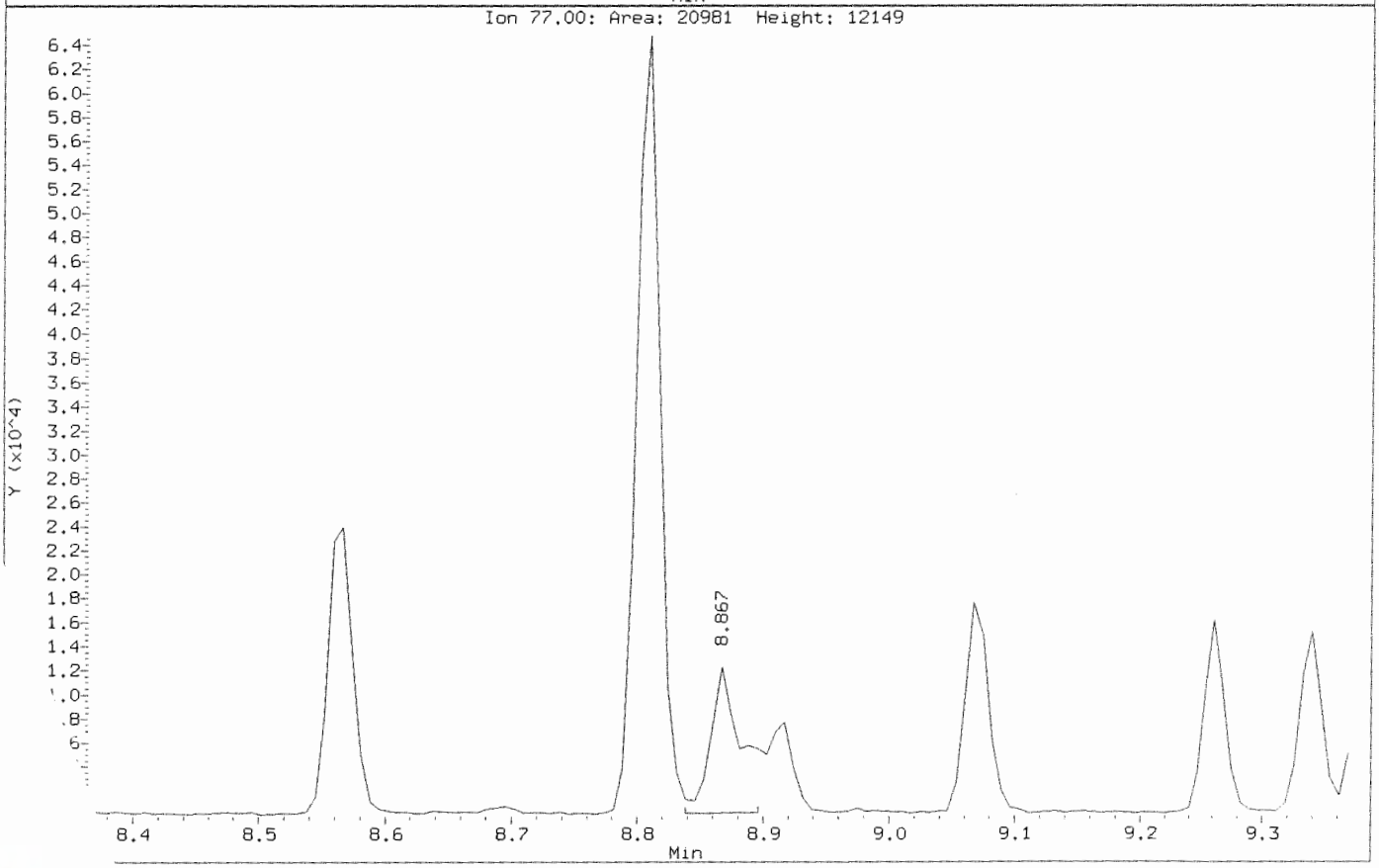

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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\Before\X071717.D
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Instrument: voa6.i
Client Sample ID: HS20070674-01MSD

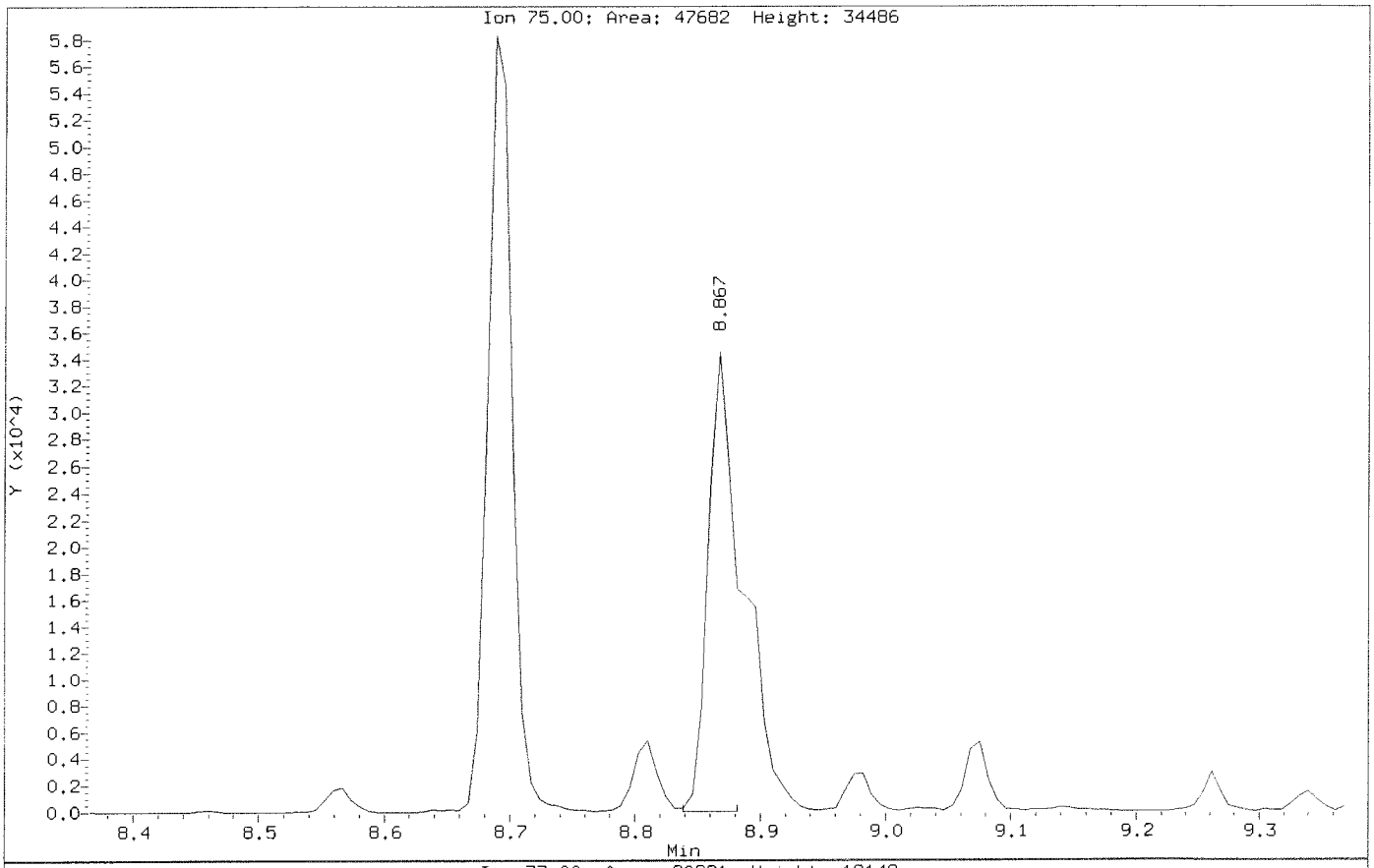
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

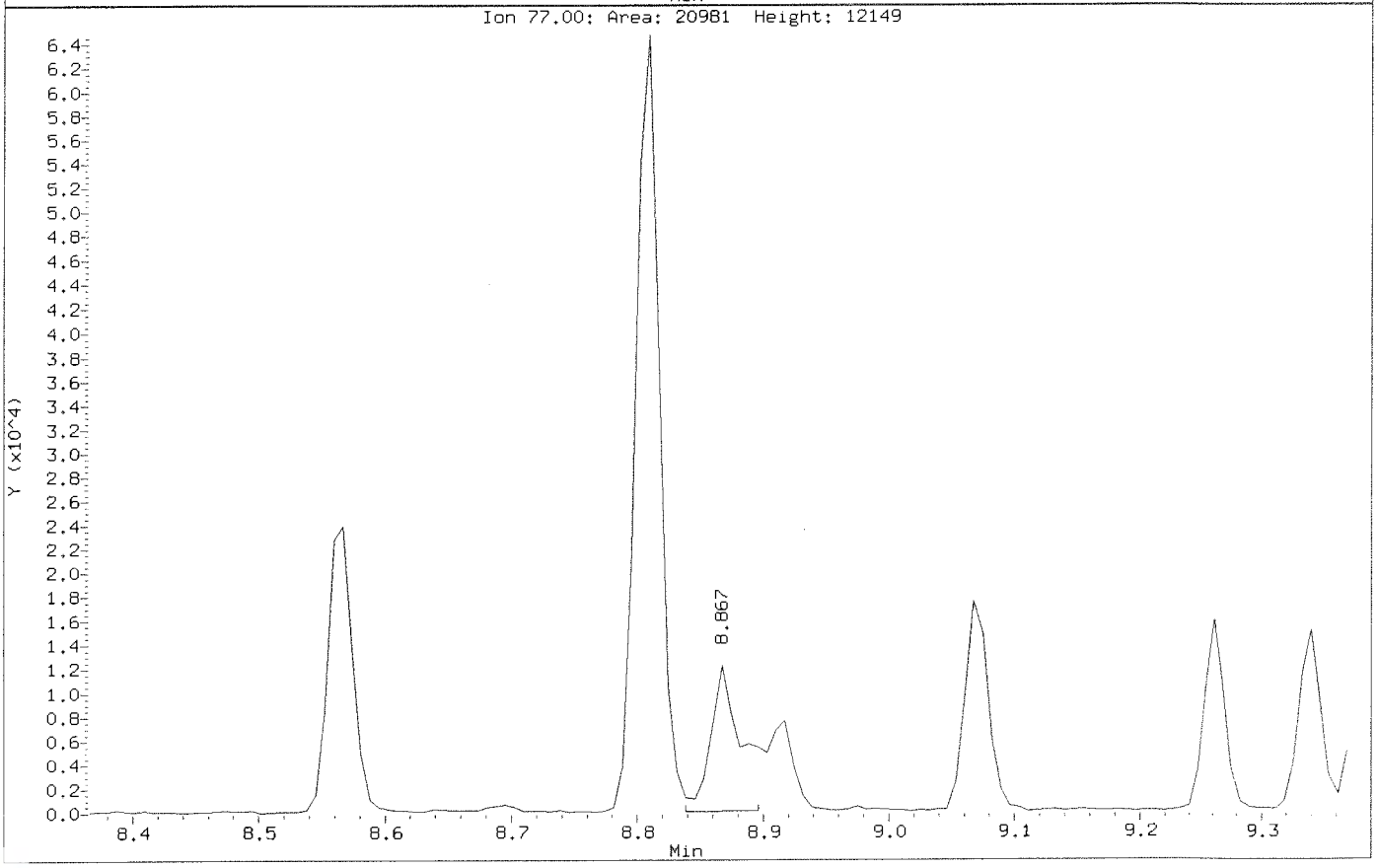


Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071717.D
Injection Date: 17-JUL-2020 16:44
Instrument: voa6.i
Client Sample ID: HS20070674-01MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071724.D Page 1
Report Date: 18-Aug-2020 12:53

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200717.b\X071724.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 17-JUL-2020 19:31
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200717.b\8260W.m
Meth Date : 18-Aug-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 13-JUL-2020 13:18 Cal File: X071308.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

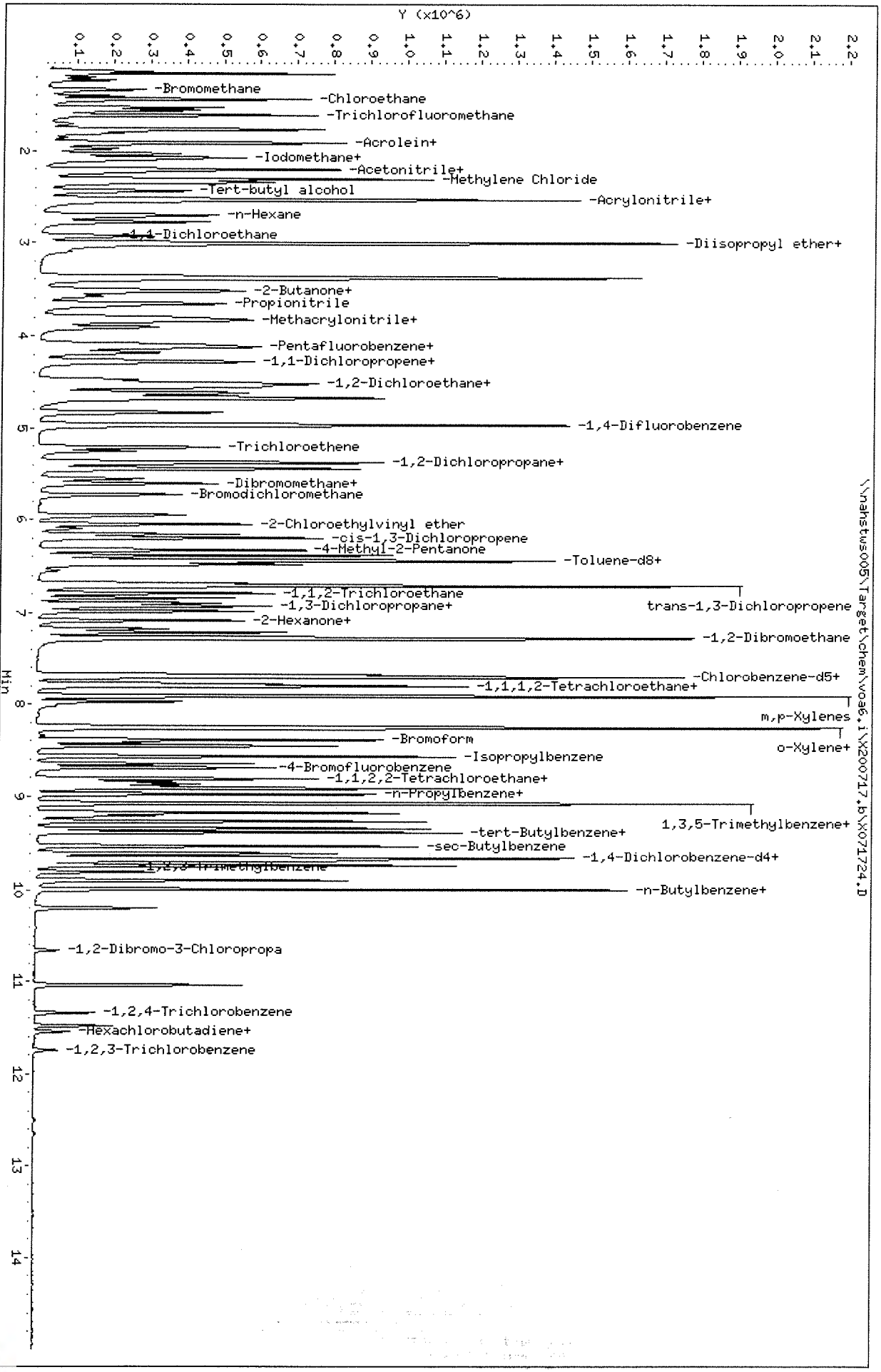
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 244655 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 408625 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 368281 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 174682 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 139702 | 50.0000 | 51.24 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 187429 | 50.0000 | 50.70 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 486444 | 50.0000 | 50.42 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 180996 | 50.0000 | 50.79 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 140732 | 50.0000 | 49.47 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 229241 | 50.0000 | 51.43 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 149784 | 50.0000 | 46.44 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 115978 | 50.0000 | 51.43 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 346298 | 50.0000 | 50.51 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 133350 | 50.0000 | 62.30 |
| | 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 197414 | 50.0000 | 51.56 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 16950 | 50.0000 | 28.68 |
| | `1 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 139729 | 50.0000 | 49.24(M) |
| | ` 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 38728 | 50.0000 | 34.56 |
| | 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 480849 | 50.0000 | 50.05 |
| | `,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 12066 | 50.0000 | 41.17 |
| | 2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 142753 | 50.0000 | 52.64 |
| | ?-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 234474 | 50.0000 | 48.13 |

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071724.D Page 2
Report Date: 18-Aug-2020 12:53

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 249140 | 50.0000 | 51.23 |
| 42 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 191353 | 50.0000 | 50.71 |
| 75 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 489822 | 50.0000 | 51.60 |
| 83 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.993) | 268096 | 50.0000 | 50.06 |
| 54 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 237994 | 50.0000 | 49.38 |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 267053 | 50.0000 | 48.96 |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 193919 | 50.0000 | 44.79 |
| 24 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 210602 | 100.000 | 99.17 |
| 76 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 419104 | 50.0000 | 50.37 |
| 52 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 339233 | 100.000 | 97.24 |
| 77 4-Chlorotoluene | 91 | 9.074 | 9.074 | (0.939) | 486165 | 50.0000 | 49.94 |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 487746 | 50.0000 | 52.46 |
| 45 4-Methyl-2-Pentanone | 43 | 6.324 | 6.324 | (0.824) | 499525 | 100.000 | 99.39 |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 178507 | 100.000 | 114.38 |
| 37 Benzene | 78 | 4.519 | 4.519 | (0.909) | 578260 | 50.0000 | 52.13 |
| 74 Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 164062 | 50.0000 | 51.28 |
| 29 Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 80980 | 50.0000 | 46.83 |
| 39 Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 204453 | 50.0000 | 49.72 |
| 66 Bromoform | 173 | 8.415 | 8.415 | (1.097) | 100039 | 50.0000 | 49.10 |
| 6 Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 93825 | 50.0000 | 55.00 |
| 19 Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 653483 | 100.000 | 96.91 |
| 34 Carbon Tetrachloride | 117 | 4.275 | 4.275 | (0.860) | 195741 | 50.0000 | 50.94 |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 370757 | 50.0000 | 50.57 |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 125150 | 50.0000 | 58.20 |
| 28 Chloroform | 83 | 3.910 | 3.910 | (0.933) | 269760 | 50.0000 | 50.22 |
| 3 Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 246012 | 50.0000 | 48.27 |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 162289 | 50.0000 | 51.71 |
| 46 cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 237693 | 50.0000 | 49.92 |
| 55 Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 150206 | 50.0000 | 50.13 |
| 44 Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 100425 | 50.0000 | 49.81 |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 138720 | 50.0000 | 53.70 |
| 61 Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 196321 | 50.0000 | 51.33 |
| 91 Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 32364 | 50.0000 | 37.39 |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 585569 | 50.0000 | 51.12 |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 477643 | 100.000 | 104.27 |
| 17 Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 160190 | 50.0000 | 55.82 |
| 87 n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 427777 | 50.0000 | 52.42 |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 691560 | 50.0000 | 51.95 |
| 92 Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 61386 | 50.0000 | 34.73 |
| 63 o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 231500 | 50.0000 | 50.02 |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 564230 | 50.0000 | 52.15 |
| 64 Styrene | 104 | 8.258 | 8.258 | (1.077) | 401616 | 50.0000 | 50.14 |
| 78 tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 381517 | 50.0000 | 50.37 |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 115610 | 50.0000 | 51.28 |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 587150 | 50.0000 | 50.88 |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 140612 | 50.0000 | 53.34 |
| 51 trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 213043 | 50.0000 | 48.52 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 152849 | 50.0000 | 51.97 |
| 8 Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 254523 | 50.0000 | 62.93 |
| Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 196360 | 50.0000 | 48.80 |

QC Flag Legend

M - Compound response manually integrated.

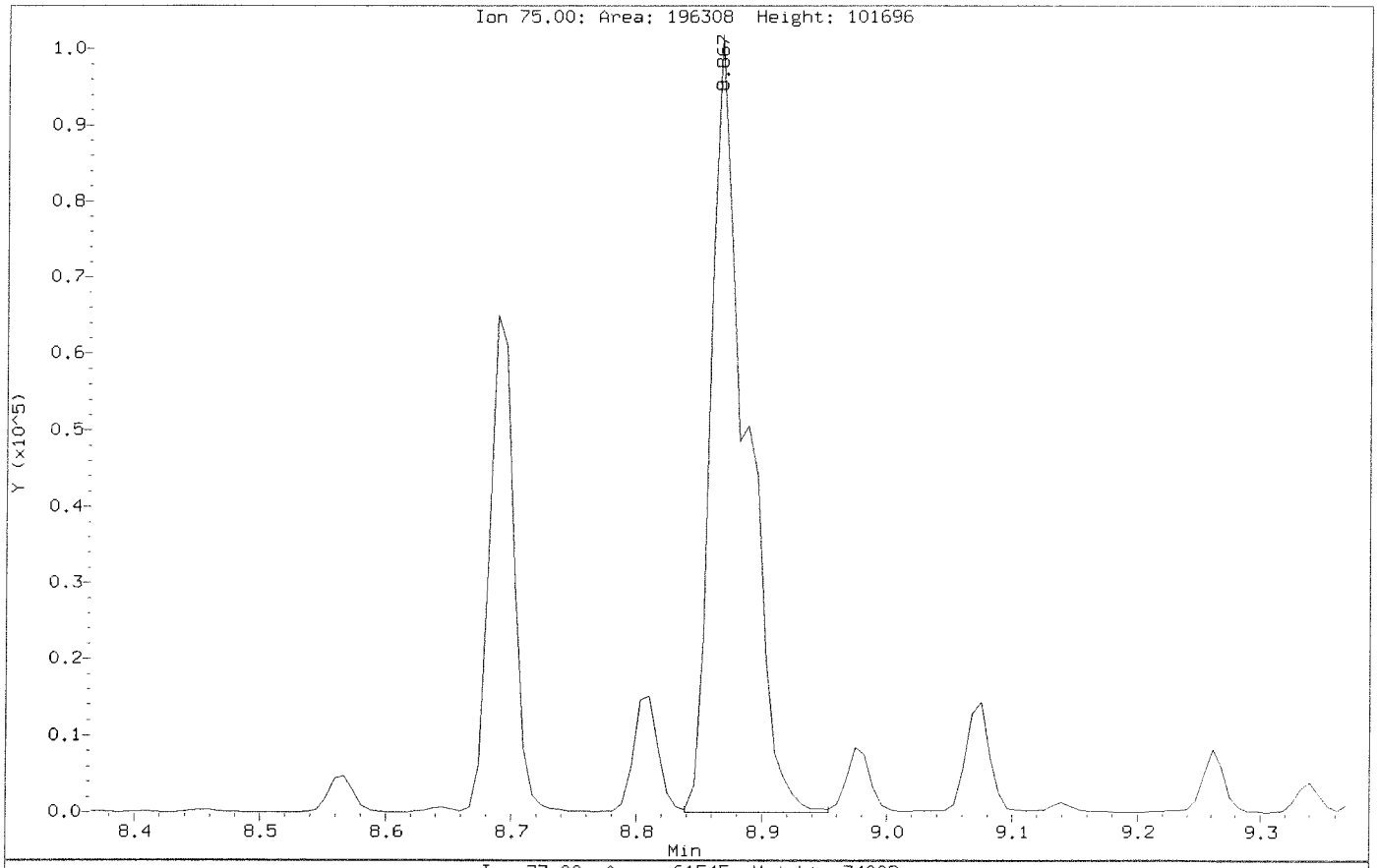


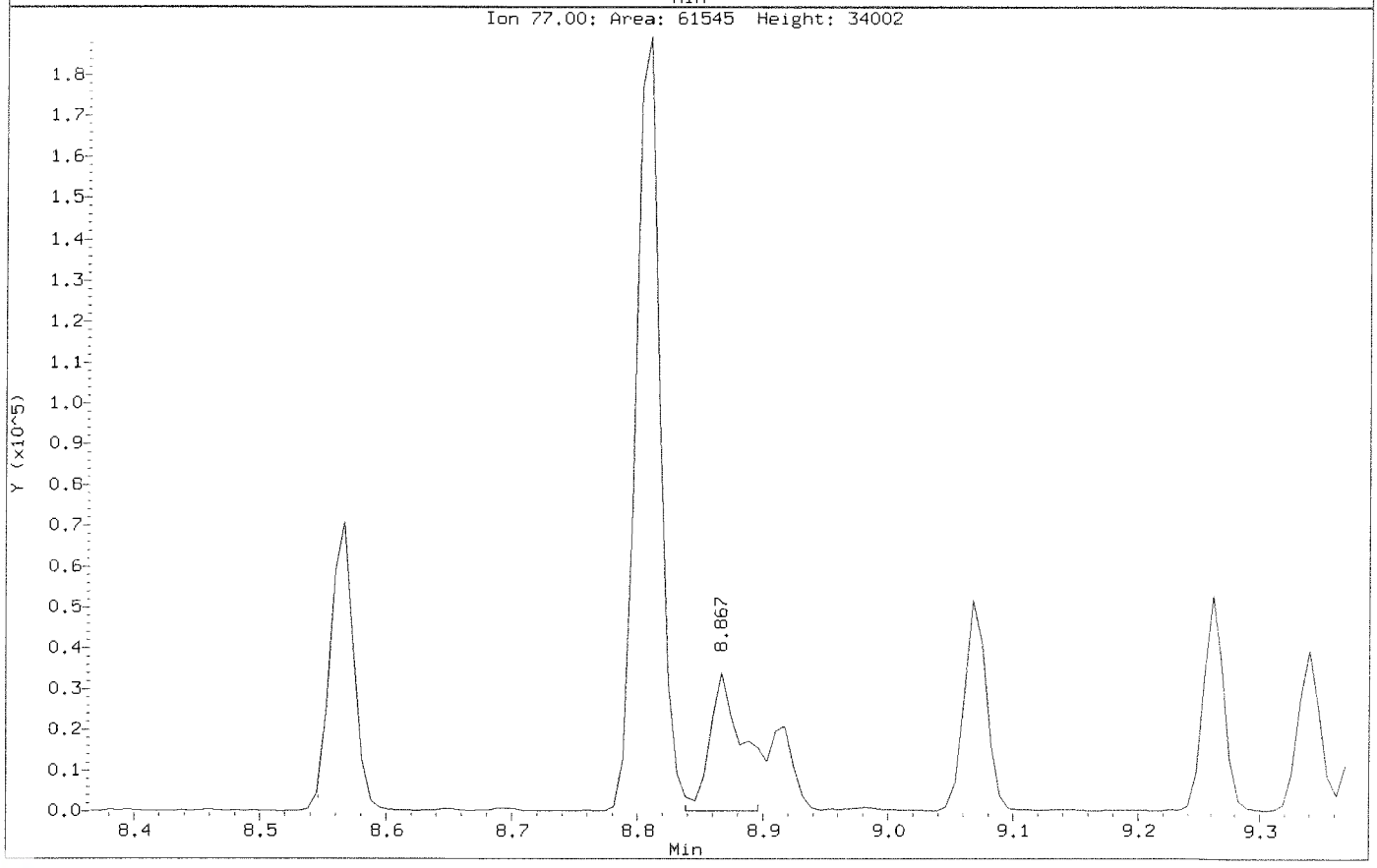

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071724.D
Date : 17-JUL-2020 19:31
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\Before\X071724.D
Injection Date: 17-JUL-2020 19:31
Instrument: voa6.i
Client Sample ID: CCV-END

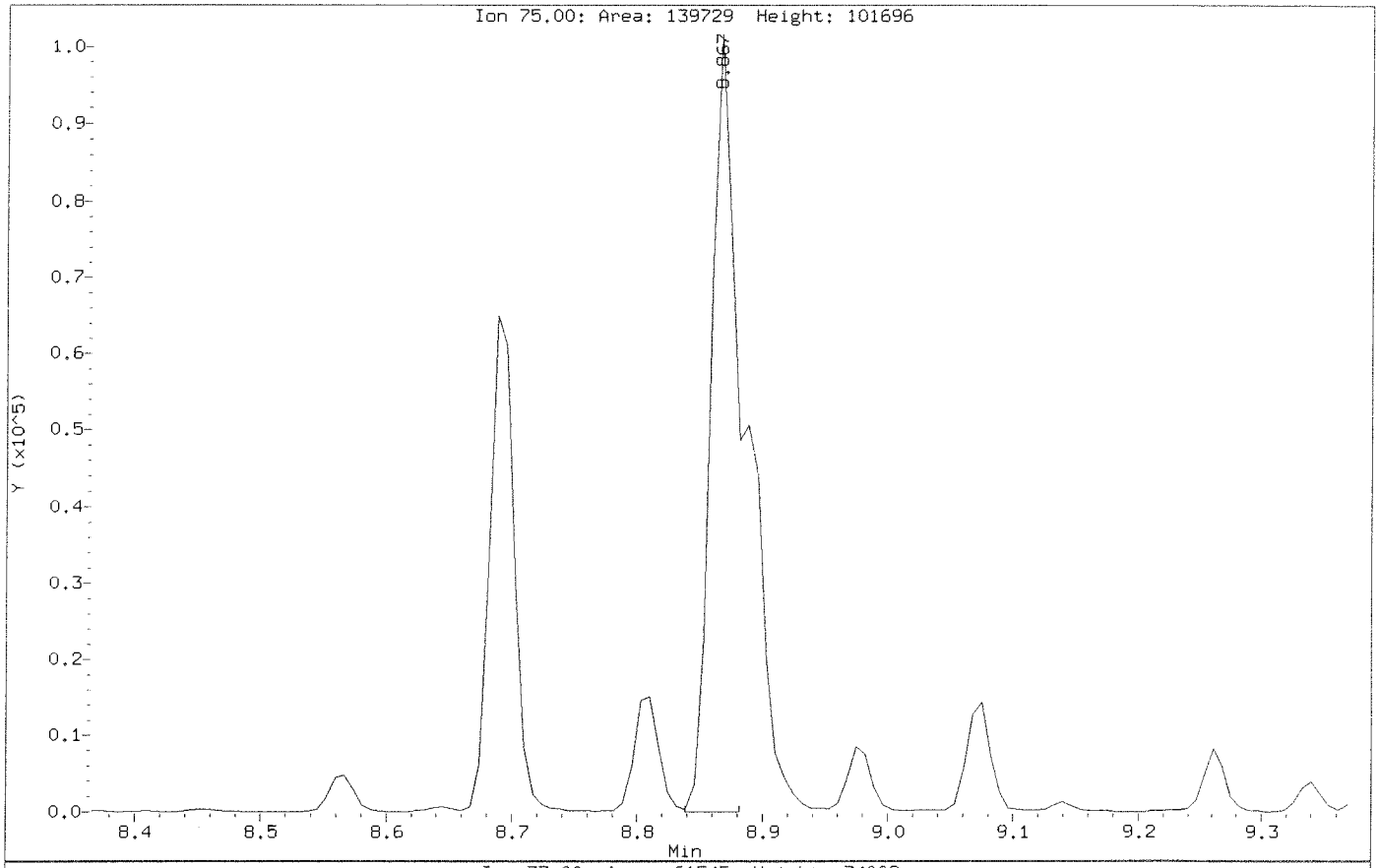
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

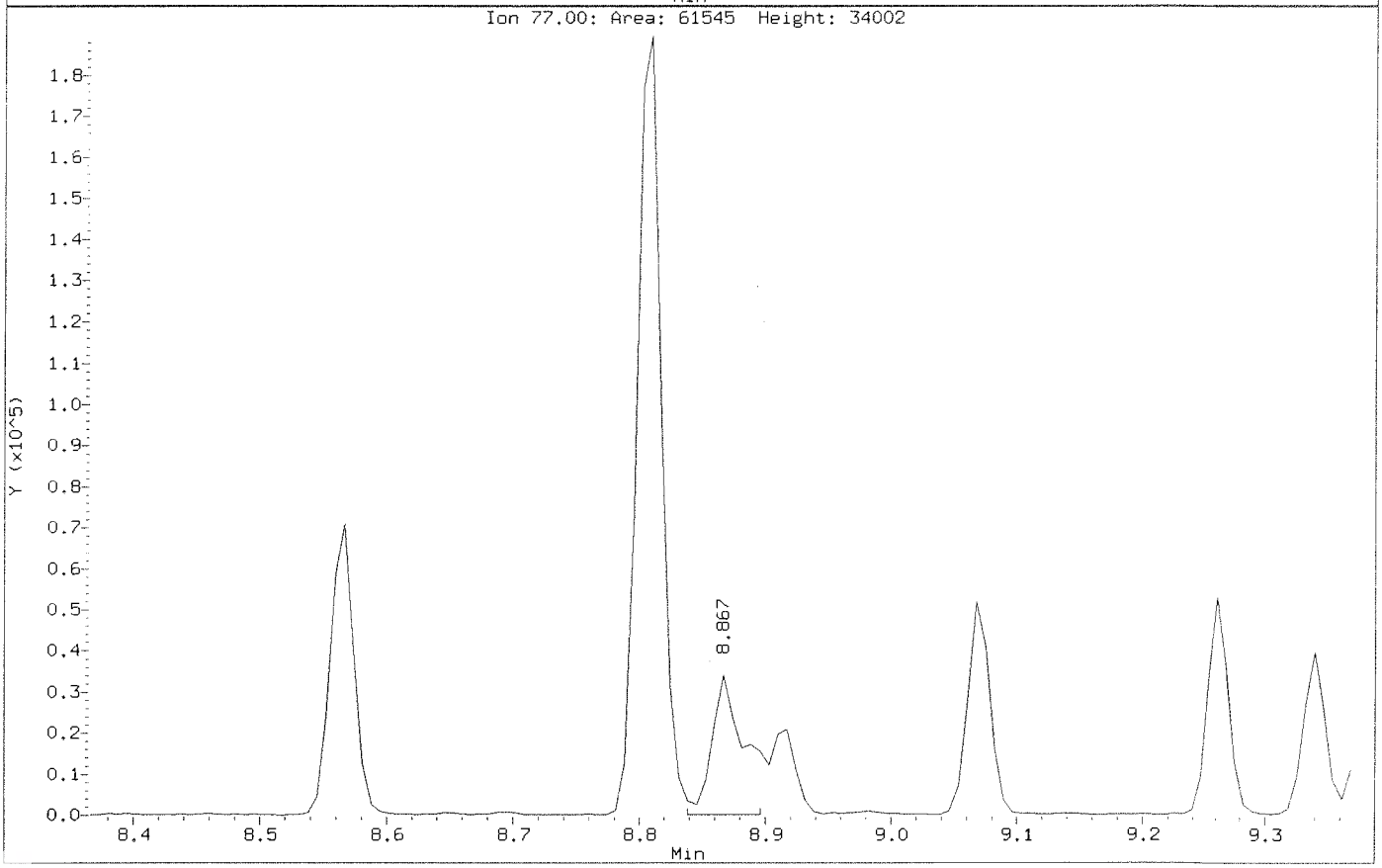


Data File: \\nahstws005\Target\chem\voa6.i\X200717.b\X071724.D
Injection Date: 17-JUL-2020 19:31
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



# HS20070623 8270 Raw Data

ALS WO# HS20070623

# SV06 -Logbook

**Batch:** 37098 **Analyst:** Linda Graham

**Date:** 08-20-2019 **Reviewer:**

**Method:** 8270D-LL & SIM **Laboratory:** Houston

**Comments:** MSSV003

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DFTPP02 | TUNE | 08-20-2019 08:34 am | 1.00 | | | 001.D | | Y | NA |
| 2 | SLSTD-2.5 | CCV | 08-20-2019 08:59 am | 1.00 | | | 002.D | | Y | NA |
| 3 | SIMDX-0.08 | SAMP | 08-20-2019 09:27 am | 1.00 | | | 003.D | | Y | NA |
| 4 | SIMDX-0.01 | SAMP | 08-20-2019 09:52 am | 1.00 | | | 004.D | | Y | NA |
| 5 | SIMDX-0.03 | ICAL2 | 08-20-2019 10:13 am | 1.00 | | | 005.D | | Y | NA |
| 6 | SIMDX-0.05 | ICAL3 | 08-20-2019 10:32 am | 1.00 | | | 006.D | | Y | NA |
| 7 | SIMDX-0.08 | ICAL4 | 08-20-2019 10:51 am | 1.00 | | | 007.D | | Y | NA |
| 8 | SIMDX-0.1 | ICAL5 | 08-20-2019 11:10 am | 1.00 | | | 008.D | | Y | NA |
| 9 | SIMDX-0.15 | ICAL6 | 08-20-2019 11:29 am | 1.00 | | | 009.D | | Y | NA |
| 10 | SIMDX-0.2 | ICAL7 | 08-20-2019 11:49 am | 1.00 | | | 010.D | | Y | NA |
| 11 | SIMDX-0.5 | ICAL8 | 08-20-2019 12:08 pm | 1.00 | | | 011.D | | Y | NA |
| 12 | SIMDX-0.01 | ICAL1 | 08-20-2019 12:27 pm | 1.00 | | | 012.D | | Y | NA |
| 13 | SIMDX-ICV | SAMP | 08-20-2019 12:46 pm | 1.00 | | | 013.D | | Y | NA |
| 14 | CCB | SAMP | 08-20-2019 01:05 pm | 1.00 | | | 014.D | | Y | NA |
| 15 | MBLK-144188 | MBLK | 08-20-2019 01:24 pm | 1.00 | 1000.00 mL | 1.00 mL | 015.D | Liquid | Y | NA |
| 16 | LCS-144188 | LCS | 08-20-2019 01:43 pm | 1.00 | 1000.00 mL | 1.00 mL | 016.D | Liquid | Y | NA |
| 17 | LCSD-144188 | LCSD | 08-20-2019 02:02 pm | 1.00 | 1000.00 mL | 1.00 mL | 017.D | Liquid | Y | NA |
| 18 | HS19080732-01 | SAMP | 08-20-2019 02:21 pm | 1.00 | 1000.00 mL | 1.00 mL | 018.D | Liquid | Y | NA |
| 19 | HS19080732-01 | SAMP | 08-20-2019 02:43 pm | 1.00 | 1000.00 mL | 1.00 mL | 019.D | Liquid | Y | NA |
| 20 | SIMDX-0.08 | CCV | 08-20-2019 03:05 pm | 1.00 | | | 020.D | | Y | NA |
| 21 | SPIKE | SAMP | 08-20-2019 03:24 pm | 1.00 | 1000.00 mL | 1.00 mL | 021.D | Liquid | Y | NA |
| 22 | HS19080732-01 | SAMP | 08-20-2019 03:52 pm | 5.00 | 1000.00 mL | 1.00 mL | 022.D | Liquid | Y | NA |
| 23 | CCB | SAMP | 08-20-2019 04:16 pm | 1.00 | | | 023.D | | Y | NA |
| 24 | HS19080727-02 | SAMP | 08-20-2019 04:42 pm | 100.0( | 30.00 gm | 1.00 mL | 024.D | Solid | Y | NA |
| 25 | HS19080727-03 | SAMP | 08-20-2019 05:01 pm | 100.0( | 30.00 gm | 1.00 mL | 025.D | Solid | Y | NA |
| 26 | HS19080727-04 | SAMP | 08-20-2019 05:19 pm | 5.00 | 30.00 gm | 1.00 mL | 026.D | Solid | Y | NA |
| 27 | HS19080727-07 | SAMP | 08-20-2019 05:38 pm | 10.00 | 30.00 gm | 1.00 mL | 027.D | Solid | Y | NA |
| 28 | HS19080727-05 | SAMP | 08-20-2019 05:57 pm | 100.0( | 30.00 gm | 1.00 mL | 028.D | Solid | Y | NA |

| Chemical | Value |
|---|---|
| IS ID | 3081958-02 & 3081957-10 |
| CAL STD ID | 3081945-06 & 3081962-05 |
| DFTPP ID | 3081958-01 |
| PCP Tailing | 0.91 |
| Benz. Tailing | 0.82 |
| STD-01 | 3081962-02 - 3081962-09 |
| ICV ID | 3081962-10 |
| Routine SOP Maintenance | LG |

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Matrix Spike - Sample No.: SIMDX-ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| 1,4-Dioxane | 0.08000 | 0.06515 | 81 | 75-125 |

# Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM III SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Instrument ID: SV6 Calibration Date(s): 08/20/19 08/20/19

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1013 1227

LAB FILE ID: RF0.01: 012 RF0.03: 005 RF0.05: 006
RF0.08: 007 RF0.1: 008 RF0.15: 009

| COMPOUND | RF0.01 | RF0.03 | RF0.05 | RF0.08 | RF0.1 | RF0.15 |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.068 | 0.066 | 0.062 | 0.062 | 0.066 | 0.058 |
| Nitrobenzene-d5 | 0.259 | 0.253 | 0.248 | 0.235 | 0.256 | 0.251 |
| 4-Terphenyl-d14 | 0.864 | 0.799 | 0.804 | 0.815 | 0.808 | 0.822 |
| 2-Fluorobiphenyl | 1.190 | 1.244 | 1.156 | 1.138 | 1.196 | 1.178 |

FORM VI SV

# FORM 6
# SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007062

Instrument ID: SV6 Calibration Date(s): 08/20/19 08/20/19

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1013 1227

LAB FILE ID: RF0.2: 010 RF0.5: 011

| COMPOUND | RF0.2 | RF0.5 | CURVE | COEFFICENT A1 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.067 | 0.058 | AVRG | 6.346e-002 | 6.165 | 20.000 |
| Nitrobenzene-d5 | 0.298 | 0.288 | AVRG | 0.26110947 | 8.070 | 20.000 |
| 4-Terphenyl-d14 | 0.864 | 0.822 | AVRG | 0.82462670 | 3.080 | 20.000 |
| 2-Fluorobiphenyl | 1.198 | 1.196 | AVRG | 1.18704840 | 2.670 | 20.000 |

FORM VI SV

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D



Date : 20-AUG-2019 08:34

Client ID: DFTPP02

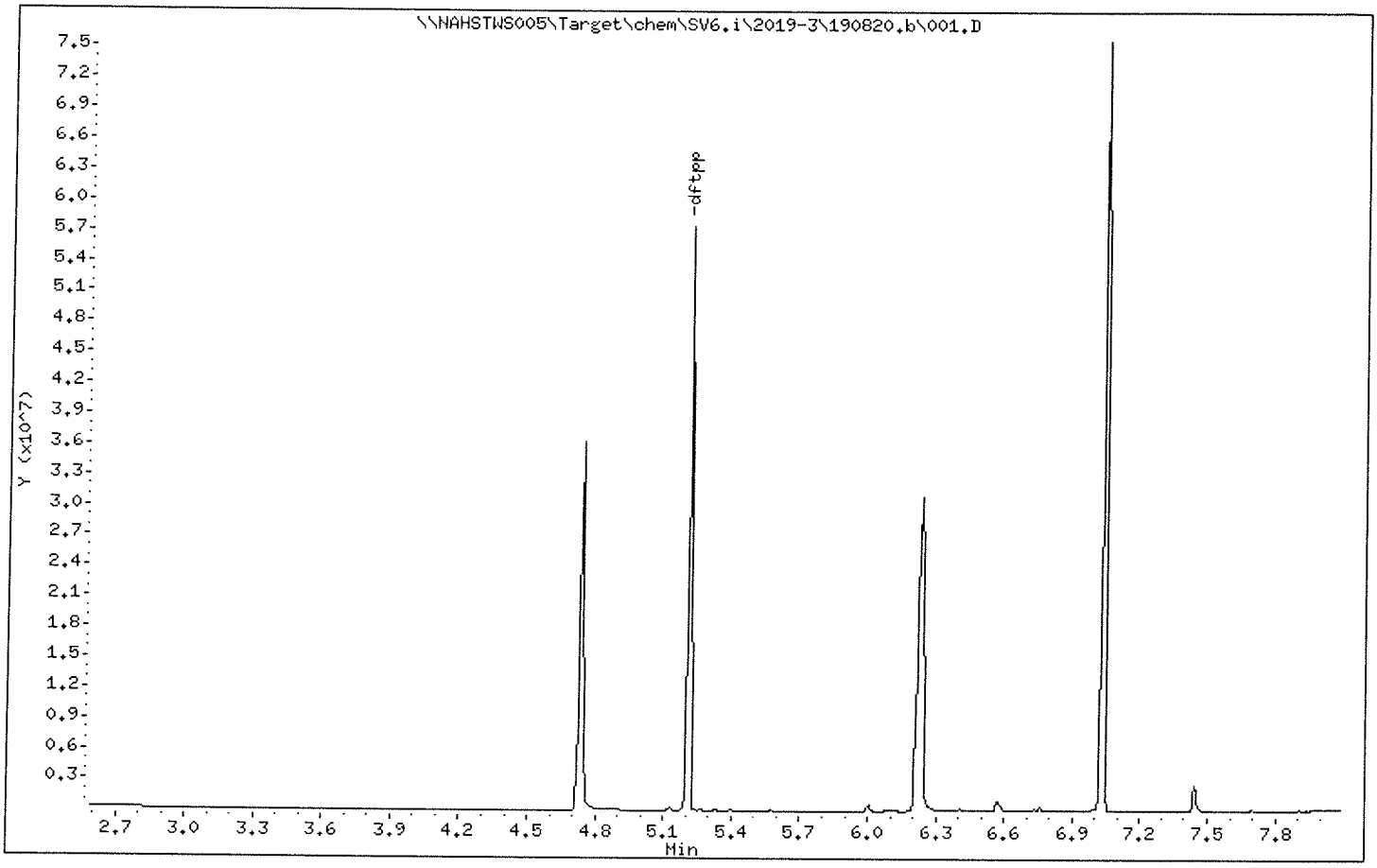
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D



Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

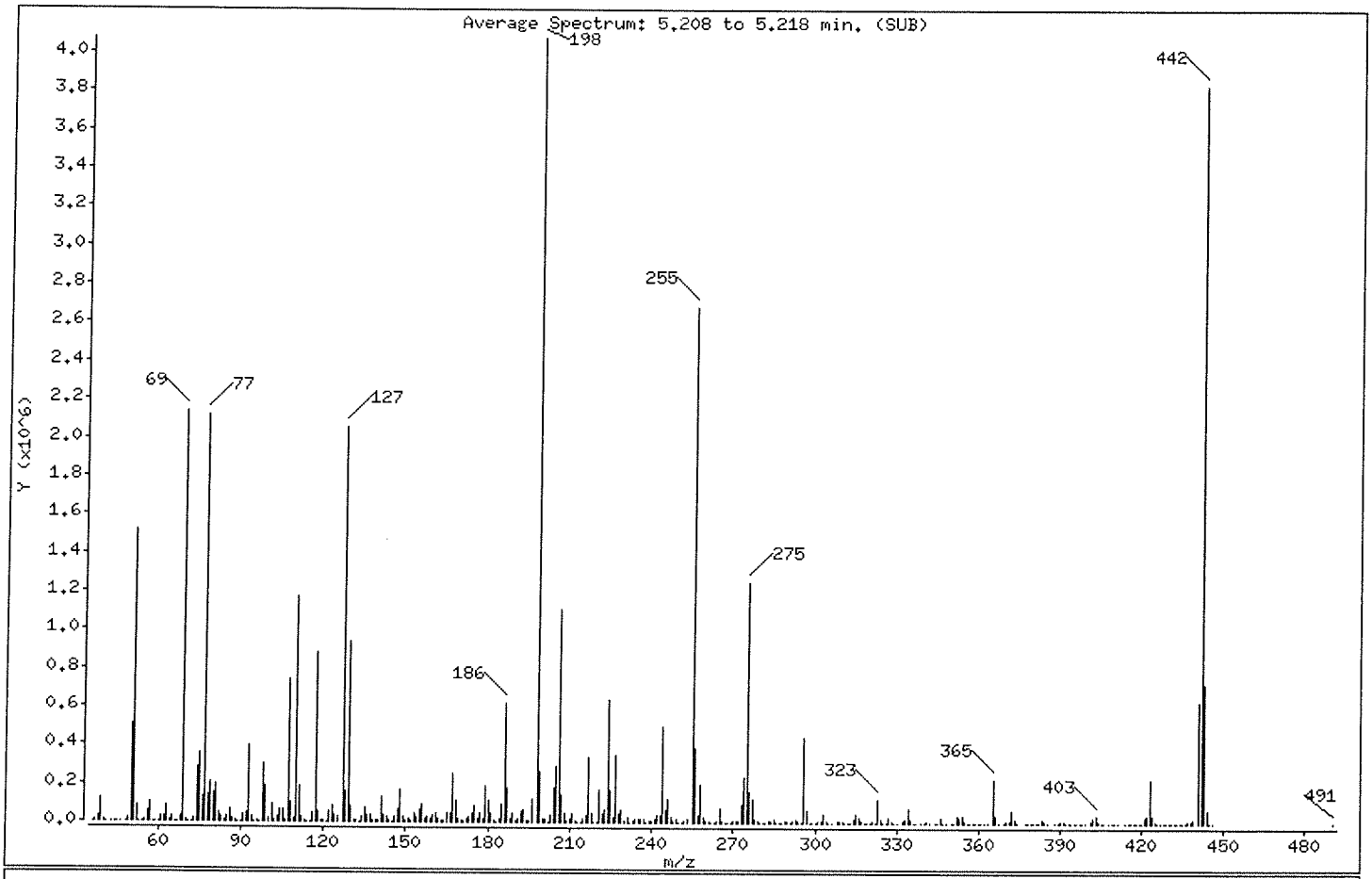
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| | | |
| 198 | Base Peak, 100% relative abundance | 100.00 |
| 51 | 10.00 - 80.00% of mass 198 | 37.27 |
| 68 | Less than 2.00% of mass 69 | 0.66 ( 1.27) |
| 69 | Mass 69 relative abundance | 52.42 |
| 70 | Less than 2.00% of mass 69 | 0.21 ( 0.40) |
| 127 | 10.00 - 80.00% of mass 198 | 50.38 |
| 197 | Less than 2.00% of mass 198 | 0.00 |
| 199 | 5.00 - 9.00% of mass 198 | 6.54 |
| 275 | 10.00 - 60.00% of mass 198 | 30.53 |
| 365 | 1.00 - 100.00% of mass 198 | 5.43 |
| 441 | Present, but less than mass 443 | 15.33 |
| 442 | 50.00 - 150.00% of mass 198 | 93.99 |
| 443 | 15.00 - 24.00% of mass 442 | 17.61 ( 18.74) |

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D



Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 835 | 137.00 | 33208 | 236.00 | 14798 | 337.00 | 100 |
| 37.00 | 12102 | 138.00 | 8411 | 237.00 | 22248 | 339.00 | 2477 |
| 38.00 | 25296 | 139.00 | 4795 | 238.00 | 2941 | 340.00 | 1567 |
| 39.00 | 117160 | 140.00 | 12158 | 239.00 | 13468 | 341.00 | 13981 |
| 40.00 | 5499 | 141.00 | 131200 | 240.00 | 9878 | 342.00 | 3948 |
| 41.00 | 753 | 142.00 | 36240 | 241.00 | 19728 | 344.00 | 804 |
| 43.00 | 91 | 143.00 | 24424 | 242.00 | 35264 | 345.00 | 480 |
| 44.00 | 1276 | 144.00 | 6124 | 243.00 | 41928 | 346.00 | 28472 |
| 45.00 | 3402 | 145.00 | 4643 | 244.00 | 496256 | 347.00 | 4140 |
| 46.00 | 106 | 146.00 | 26048 | 245.00 | 67520 | 348.00 | 271 |
| 48.00 | 1625 | 147.00 | 64000 | 246.00 | 122680 | 350.00 | 1935 |
| 49.00 | 14501 | 148.00 | 169408 | 247.00 | 24744 | 351.00 | 4169 |
| 50.00 | 504320 | 149.00 | 25880 | 248.00 | 4938 | 352.00 | 37592 |
| 51.00 | 1518592 | 150.00 | 7101 | 249.00 | 19120 | 353.00 | 27976 |
| 52.00 | 83816 | 151.00 | 16800 | 250.00 | 4389 | 354.00 | 36440 |
| 53.00 | 3136 | 152.00 | 9343 | 251.00 | 4453 | 355.00 | 7095 |
| 54.00 | 184 | 153.00 | 44568 | 252.00 | 6078 | 356.00 | 446 |
| 55.00 | 11858 | 154.00 | 31536 | 253.00 | 17208 | 357.00 | 391 |
| 56.00 | 54208 | 155.00 | 64536 | 255.00 | 2677248 | 358.00 | 1318 |
| 57.00 | 102632 | 156.00 | 92080 | 256.00 | 382592 | 359.00 | 2789 |
| 58.00 | 3650 | 157.00 | 15872 | 257.00 | 33904 | 360.00 | 1244 |
| 59.00 | 1625 | 158.00 | 23880 | 258.00 | 193536 | 361.00 | 1450 |
| 60.00 | 1858 | 159.00 | 18264 | 259.00 | 31792 | 362.00 | 1798 |
| 61.00 | 24904 | 160.00 | 36112 | 260.00 | 5628 | 363.00 | 1262 |
| 62.00 | 32112 | 161.00 | 51192 | 261.00 | 5009 | 365.00 | 221376 |
| 63.00 | 80232 | 162.00 | 14572 | 262.00 | 603 | 366.00 | 34008 |
| 64.00 | 12711 | 163.00 | 5995 | 263.00 | 2490 | 367.00 | 1707 |
| 65.00 | 29088 | 164.00 | 6170 | 264.00 | 6905 | 369.00 | 407 |
| 66.00 | 1294 | 165.00 | 51448 | 265.00 | 76376 | 370.00 | 5368 |
| 67.00 | 922 | 166.00 | 42280 | 266.00 | 13210 | 371.00 | 11263 |
| 68.00 | 27024 | 167.00 | 255744 | 267.00 | 1076 | 372.00 | 67920 |
| 69.00 | 2136064 | 168.00 | 107920 | 268.00 | 2066 | 373.00 | 18112 |
| 70.00 | 8518 | 169.00 | 18928 | 269.00 | 956 | 374.00 | 1860 |
| 71.00 | 489 | 170.00 | 10335 | 270.00 | 5559 | 377.00 | 1403 |
| 72.00 | 1438 | 171.00 | 7634 | 271.00 | 7831 | 378.00 | 915 |

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D 

Date : 20-AUG-2019 08:34

Client ID: DFTPP02 Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 73.00 | 21832 | 172.00 | 21320 | 272.00 | 12923 | 379.00 | 143 |
| 74.00 | 279552 | 173.00 | 29712 | 273.00 | 90072 | 380.00 | 144 |
| 75.00 | 360000 | 174.00 | 45472 | 274.00 | 231936 | 381.00 | 498 |
| 76.00 | 127952 | 175.00 | 80656 | 275.00 | 1244160 | 382.00 | 629 |
| 77.00 | 2114048 | 176.00 | 21440 | 276.00 | 161152 | 383.00 | 20544 |
| 78.00 | 137728 | 177.00 | 47248 | 277.00 | 122616 | 384.00 | 4734 |
| 79.00 | 204864 | 178.00 | 18200 | 278.00 | 18792 | 385.00 | 1203 |
| 80.00 | 153472 | 179.00 | 183168 | 279.00 | 5011 | 388.00 | 451 |
| 81.00 | 199296 | 180.00 | 113264 | 280.00 | 604 | 389.00 | 265 |
| 82.00 | 46040 | 181.00 | 49512 | 281.00 | 900 | 390.00 | 10255 |
| 83.00 | 31856 | 182.00 | 11982 | 282.00 | 4109 | 391.00 | 6532 |
| 84.00 | 5566 | 183.00 | 3715 | 283.00 | 13570 | 392.00 | 4418 |
| 85.00 | 32504 | 184.00 | 16784 | 284.00 | 11220 | 393.00 | 1245 |
| 86.00 | 61824 | 185.00 | 89160 | 285.00 | 20912 | 394.00 | 513 |
| 87.00 | 21392 | 186.00 | 620608 | 286.00 | 3760 | 395.00 | 749 |
| 88.00 | 9127 | 187.00 | 175296 | 287.00 | 1271 | 396.00 | 444 |
| 89.00 | 3136 | 188.00 | 16624 | 288.00 | 1937 | 397.00 | 691 |
| 90.00 | 443 | 189.00 | 45672 | 289.00 | 5097 | 398.00 | 405 |
| 91.00 | 41216 | 190.00 | 7016 | 290.00 | 4794 | 399.00 | 123 |
| 92.00 | 50488 | 191.00 | 19680 | 291.00 | 3934 | 401.00 | 5262 |
| 93.00 | 394112 | 192.00 | 59496 | 292.00 | 8215 | 402.00 | 29296 |
| 94.00 | 24512 | 193.00 | 62640 | 293.00 | 21280 | 403.00 | 40856 |
| 95.00 | 3693 | 194.00 | 12573 | 294.00 | 8043 | 404.00 | 14012 |
| 96.00 | 9479 | 195.00 | 6966 | 295.00 | 4289 | 405.00 | 1459 |
| 97.00 | 44 | 196.00 | 124048 | 296.00 | 436544 | 406.00 | 138 |
| 98.00 | 303680 | 198.00 | 4075008 | 297.00 | 62032 | 408.00 | 284 |
| 99.00 | 191552 | 199.00 | 266624 | 298.00 | 3806 | 409.00 | 264 |
| 100.00 | 15372 | 200.00 | 19696 | 299.00 | 1143 | 410.00 | 1263 |
| 101.00 | 94456 | 201.00 | 17256 | 300.00 | 676 | 411.00 | 294 |
| 102.00 | 5355 | 202.00 | 1968 | 301.00 | 6097 | 414.00 | 403 |
| 103.00 | 32272 | 203.00 | 40488 | 302.00 | 8958 | 415.00 | 1669 |
| 104.00 | 67864 | 204.00 | 179392 | 303.00 | 43928 | 416.00 | 498 |
| 105.00 | 62672 | 205.00 | 294784 | 304.00 | 10193 | 417.00 | 65 |
| 106.00 | 12815 | 206.00 | 1107456 | 305.00 | 1447 | 418.00 | 1538 |
| 107.00 | 743744 | 207.00 | 142720 | 306.00 | 106 | 419.00 | 1353 |

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D



Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 108.00 | 101768 | 208.00 | 46152 | 308.00 | 6241 | 420.00 | 2993 |
| 109.00 | 17928 | 209.00 | 12596 | 309.00 | 6298 | 421.00 | 29488 |
| 110.00 | 1171456 | 210.00 | 19512 | 310.00 | 6172 | 422.00 | 36720 |
| 111.00 | 184832 | 211.00 | 45856 | 311.00 | 604 | 423.00 | 226496 |
| 112.00 | 25208 | 212.00 | 5547 | 312.00 | 1912 | 424.00 | 41632 |
| 113.00 | 6233 | 213.00 | 3969 | 313.00 | 3850 | 425.00 | 5802 |
| 114.00 | 2033 | 214.00 | 2043 | 314.00 | 19248 | 426.00 | 59 |
| 115.00 | 4354 | 215.00 | 17152 | 315.00 | 48288 | 427.00 | 586 |
| 116.00 | 48960 | 216.00 | 34016 | 316.00 | 24504 | 428.00 | 274 |
| 117.00 | 878976 | 217.00 | 341696 | 317.00 | 4752 | 429.00 | 576 |
| 118.00 | 56712 | 218.00 | 43448 | 318.00 | 87 | 430.00 | 1543 |
| 119.00 | 5084 | 219.00 | 3982 | 319.00 | 1150 | 431.00 | 1228 |
| 120.00 | 8536 | 220.00 | 3610 | 320.00 | 3527 | 432.00 | 2552 |
| 121.00 | 3746 | 221.00 | 168960 | 321.00 | 11938 | 433.00 | 1912 |
| 122.00 | 60432 | 222.00 | 45336 | 322.00 | 2915 | 434.00 | 2804 |
| 123.00 | 81152 | 223.00 | 66888 | 323.00 | 123376 | 435.00 | 3410 |
| 124.00 | 36080 | 224.00 | 638528 | 324.00 | 20024 | 436.00 | 3032 |
| 125.00 | 28848 | 225.00 | 166336 | 325.00 | 3713 | 437.00 | 7750 |
| 127.00 | 2053120 | 226.00 | 23496 | 326.00 | 3277 | 438.00 | 8493 |
| 128.00 | 154816 | 227.00 | 346624 | 327.00 | 25960 | 439.00 | 15936 |
| 129.00 | 939136 | 228.00 | 46312 | 328.00 | 10207 | 441.00 | 624704 |
| 130.00 | 80128 | 229.00 | 62808 | 329.00 | 3443 | 442.00 | 3830272 |
| 131.00 | 12860 | 230.00 | 8935 | 330.00 | 592 | 443.00 | 717696 |
| 132.00 | 9218 | 231.00 | 23840 | 332.00 | 10907 | 444.00 | 65712 |
| 133.00 | 3460 | 232.00 | 4201 | 333.00 | 16824 | 445.00 | 3400 |
| 134.00 | 26576 | 233.00 | 6938 | 334.00 | 79336 | 446.00 | 239 |
| 135.00 | 73008 | 234.00 | 21800 | 335.00 | 21480 | 491.00 | 180 |
| 136.00 | 35592 | 235.00 | 17528 | 336.00 | 2596 | | |

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\005.D
Lab Smp Id: SIMDX-0.03 Client Smp ID: SIMDX-0.03
Inj Date : 20-AUG-2019 10:13 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.03;SIMDX-0.03
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 18-JUL-2019 10:08 Cal File: 002.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

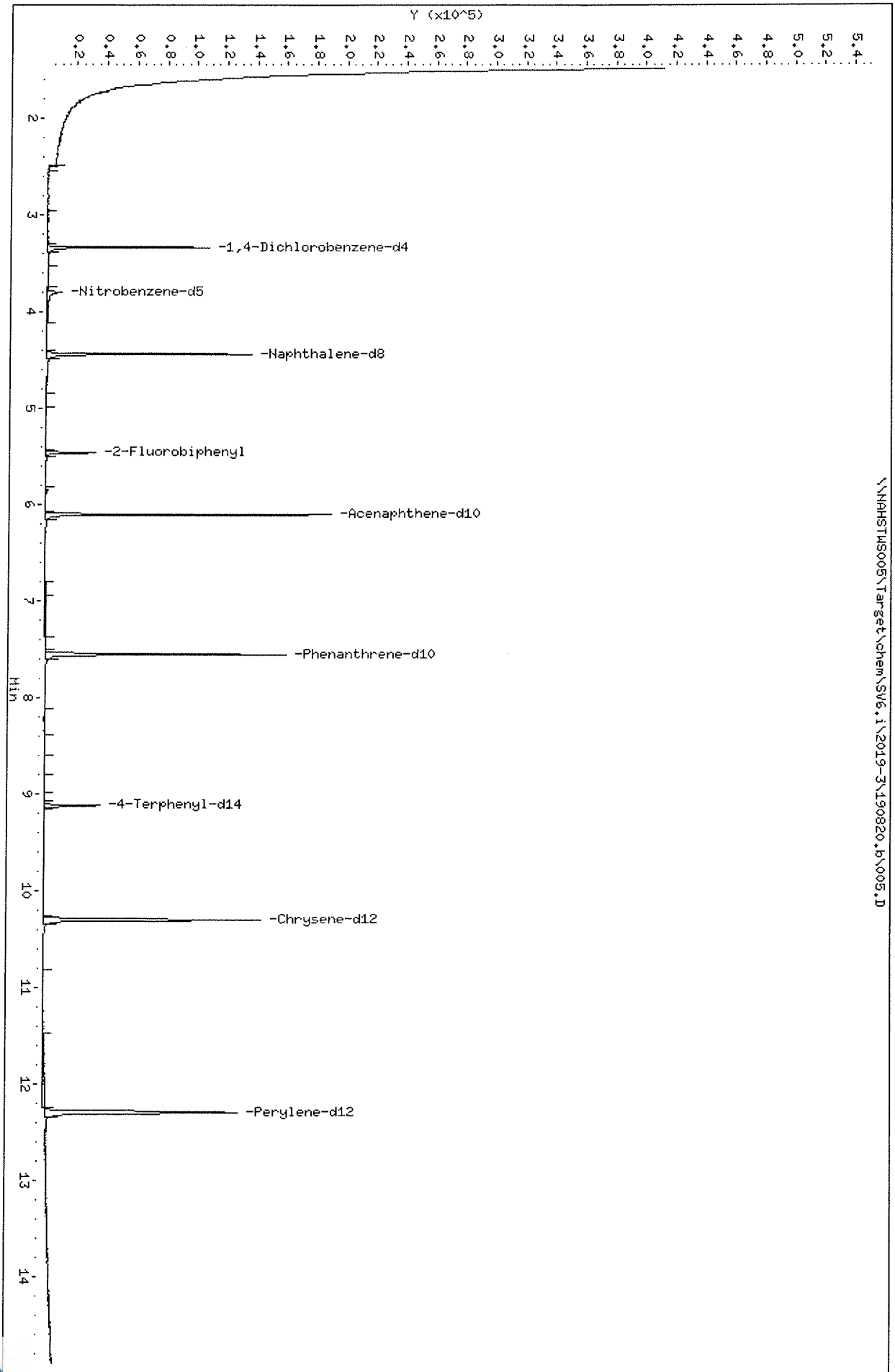
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | ON-COL ( NG) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.339 | 3.334 | (1.000) | 33546 | 0.10000 | | (aQH) |
| * 45 Naphthalene-d8 | 136 | 4.439 | 4.442 | (1.000) | 136953 | 0.10000 | | (QH) |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 10387 | 0.03000 | | (QM) |
| * 86 Acenaphthene-d10 | 164 | 6.105 | 6.110 | (1.000) | 81893 | 0.10000 | | (QH) |
| $ 69 2-Fluorobiphenyl | 172 | 5.463 | 5.464 | (0.868) | 30574 | 0.03000 | | (aQ) |
| * 126 Phenanthrene-d10 | 188 | 7.549 | 7.555 | (1.000) | 160375 | 0.10000 | | (Q) |
| * 182 Chrysene-d12 | 240 | 10.298 | 10.304 | (1.000) | 153711 | 0.10000 | | (QH) |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.849) | 36860 | 0.03000 | | (aQH) |
| * 198 Perylene-d12 | 264 | 12.292 | 12.297 | (1.000) | 170856 | 0.10000 | | (QM) |
| 1 1,4-Dioxane | 58 | 1.652 | 1.612 | (0.468) | 666 | 0.03000 | | (aH) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.




Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\005.D
Date : 20-AUG-2019 10:13
Client ID: SIMDX-0.03
Sample Info: SIMDX-0.03;SIMDX-0.03
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\006.D
Lab Smp Id: SIMDX-0.05 Client Smp ID: SIMDX-0.05
Inj Date : 20-AUG-2019 10:32 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.05;SIMDX-0.05
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:13 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

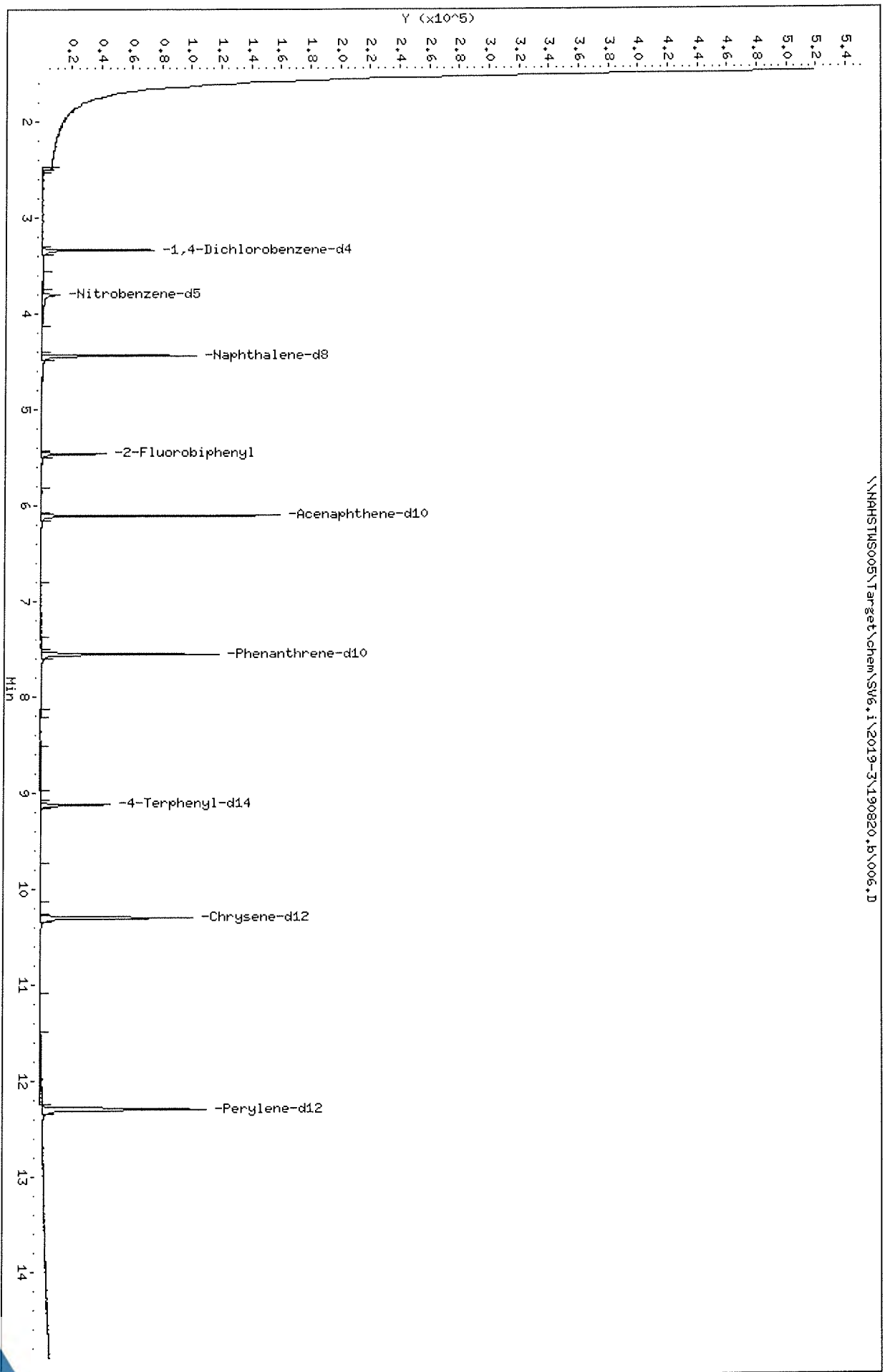
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | AMOUNTS ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.339 | 3.334 | (1.000) | 25816 | 0.10000 | (a) |
| * 45 Naphthalene-d8 | 136 | 4.439 | 4.442 | (1.000) | 94844 | 0.10000 | (M) |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 11773 | 0.05000 | 0.04910(QM) |
| * 86 Acenaphthene-d10 | 164 | 6.105 | 6.110 | (1.000) | 61276 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.463 | 5.464 | (0.895) | 35405 | 0.05000 | 0.04643 |
| * 126 Phenanthrene-d10 | 188 | 7.549 | 7.555 | (1.000) | 119311 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.298 | 10.304 | (1.000) | 113920 | 0.10000 | |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.886) | 45770 | 0.05000 | 0.05026 |
| * 198 Perylene-d12 | 264 | 12.292 | 12.297 | (1.000) | 125817 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.641 | 1.612 | (0.492) | 803 | 0.05000 | 0.04700(aM) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.




Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\006.D
Date : 20-AUG-2019 10:32
Client ID: SIMDX-0.05
Sample Info: SIMDX-0.05;SIMDX-0.05
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\007.D
Lab Smp Id: SIMDX-0.08 Client Smp ID: SIMDX-0.08
Inj Date : 20-AUG-2019 10:51 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.08;SIMDX-0.08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:32 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

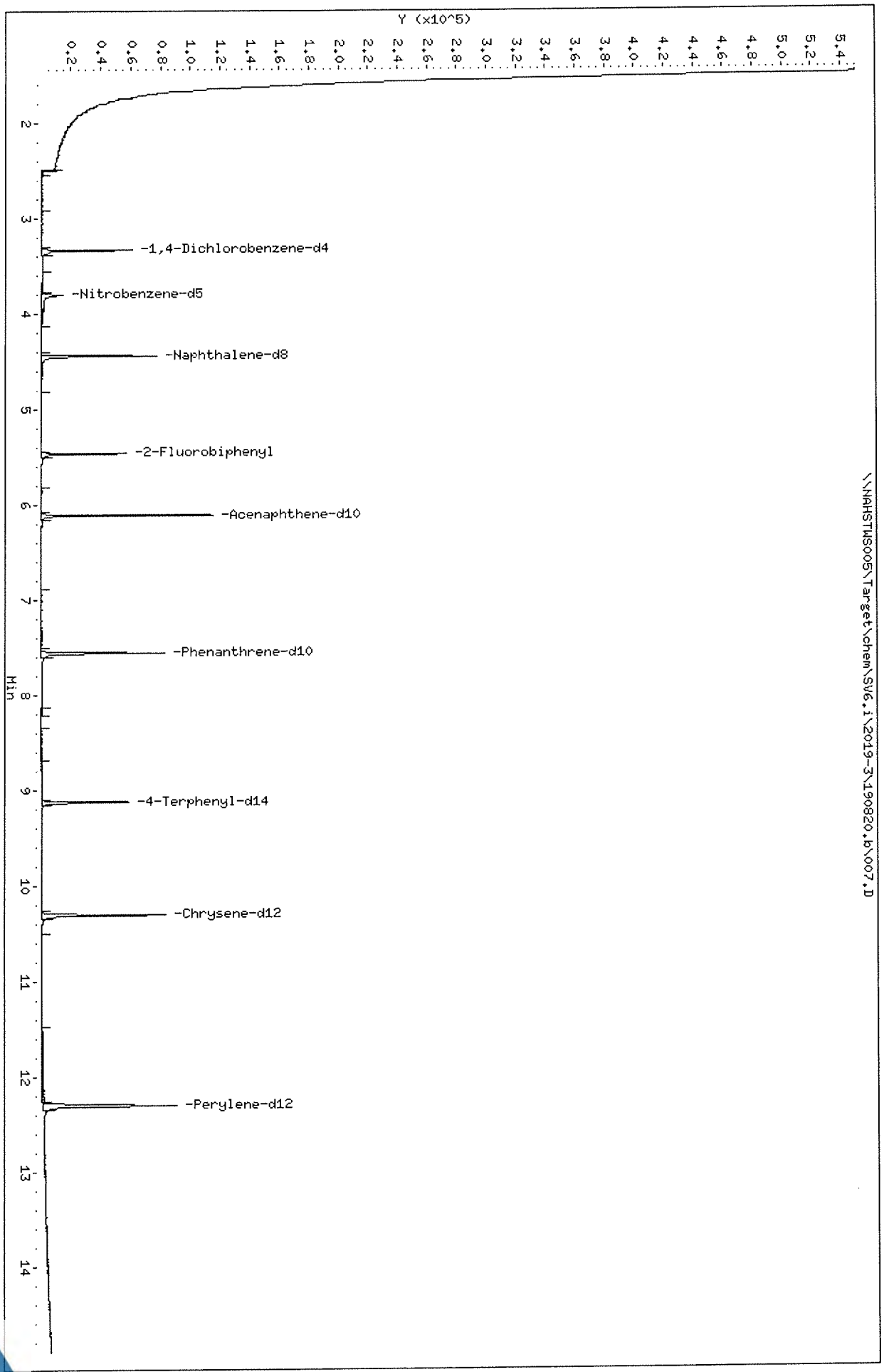
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | AMOUNTS ON-COL ( NG) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.334 | 3.334 | (1.000) | 21258 | 0.10000 | | (a) |
| * 45 Naphthalene-d8 | 136 | 4.442 | 4.442 | (1.000) | 78809 | 0.10000 | | |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 14821 | 0.08000 | 0.07202 | (M) |
| * 86 Acenaphthene-d10 | 164 | 6.110 | 6.110 | (1.000) | 46108 | 0.10000 | | |
| $ 69 2-Fluorobiphenyl | 172 | 5.464 | 5.464 | (0.894) | 41986 | 0.08000 | 0.07671 | |
| * 126 Phenanthrene-d10 | 188 | 7.555 | 7.555 | (1.000) | 88651 | 0.10000 | | |
| * 182 Chrysene-d12 | 240 | 10.304 | 10.304 | (1.000) | 83555 | 0.10000 | | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.125 | 9.125 | (0.889) | 54489 | 0.08000 | 0.07908 | |
| * 198 Perylene-d12 | 264 | 12.297 | 12.297 | (1.000) | 95521 | 0.10000 | | |
| 1 1,4-Dioxane | 58 | 1.612 | 1.612 | (0.483) | 1060 | 0.08000 | 0.07857 | (a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.




Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\007.D
Date : 20-AUG-2019 10:51
Client ID: SIHDX-0.08
Sample Info: SIHDX-0.08;SIHDX-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D
Lab Smp Id: SIMDX-0.1 Client Smp ID: SIMDX-0.1
Inj Date : 20-AUG-2019 11:10 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.1;SIMDX-0.1
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:51 Cal File: 007.D
Als bottle: 8 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

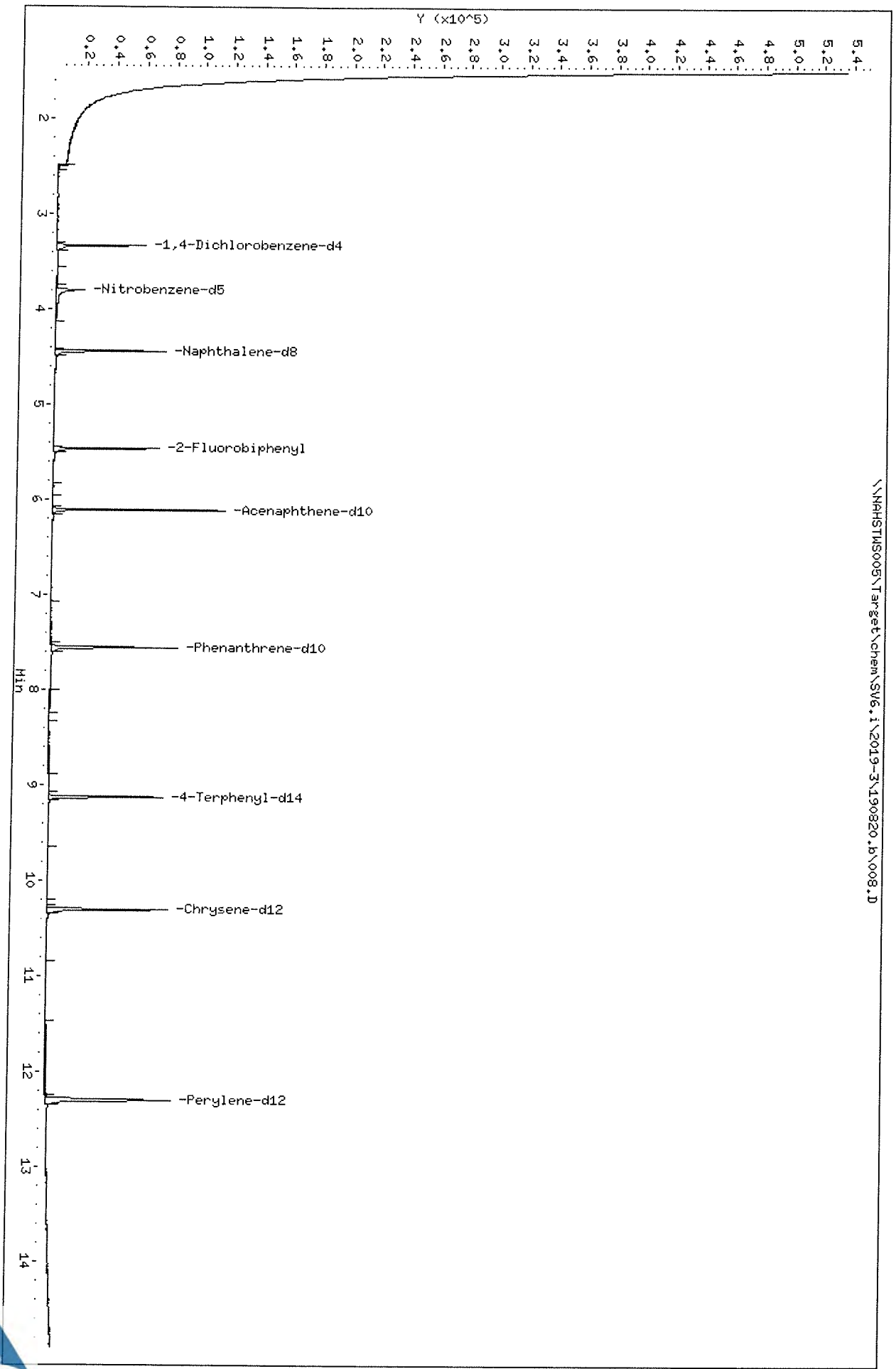
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | AMOUNTS ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.334 | 3.334 | (1.000) | 18520 | 0.10000 | (a) |
| * 45 Naphthalene-d8 | 136 | 4.443 | 4.442 | (1.000) | 77644 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 19915 | 0.10000 | 0.1045(M) |
| * 86 Acenaphthene-d10 | 164 | 6.110 | 6.110 | (1.000) | 45687 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.464 | 5.464 | (0.894) | 54630 | 0.10000 | 0.1014 |
| * 126 Phenanthrene-d10 | 188 | 7.555 | 7.555 | (1.000) | 94205 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.304 | 10.304 | (1.000) | 87080 | 0.10000 | |
| $ 158 4-Terphenyl-d14 | 244 | 9.126 | 9.125 | (0.886) | 70350 | 0.10000 | 0.1002 |
| * 198 Perylene-d12 | 264 | 12.297 | 12.297 | (1.000) | 96547 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.612 | 1.612 | (0.484) | 1224 | 0.10000 | 0.1040(aM) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D
Date : 20-AUG-2019 11:10
Client ID: SIHDX-0.1
Sample Info: SIHDX-0.1;SIHDX-0.1
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D
Lab Smp Id: SIMDX-0.15 Client Smp ID: SIMDX-0.15
Inj Date : 20-AUG-2019 11:29 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.15;SIMDX-0.15
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:10 Cal File: 008.D
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

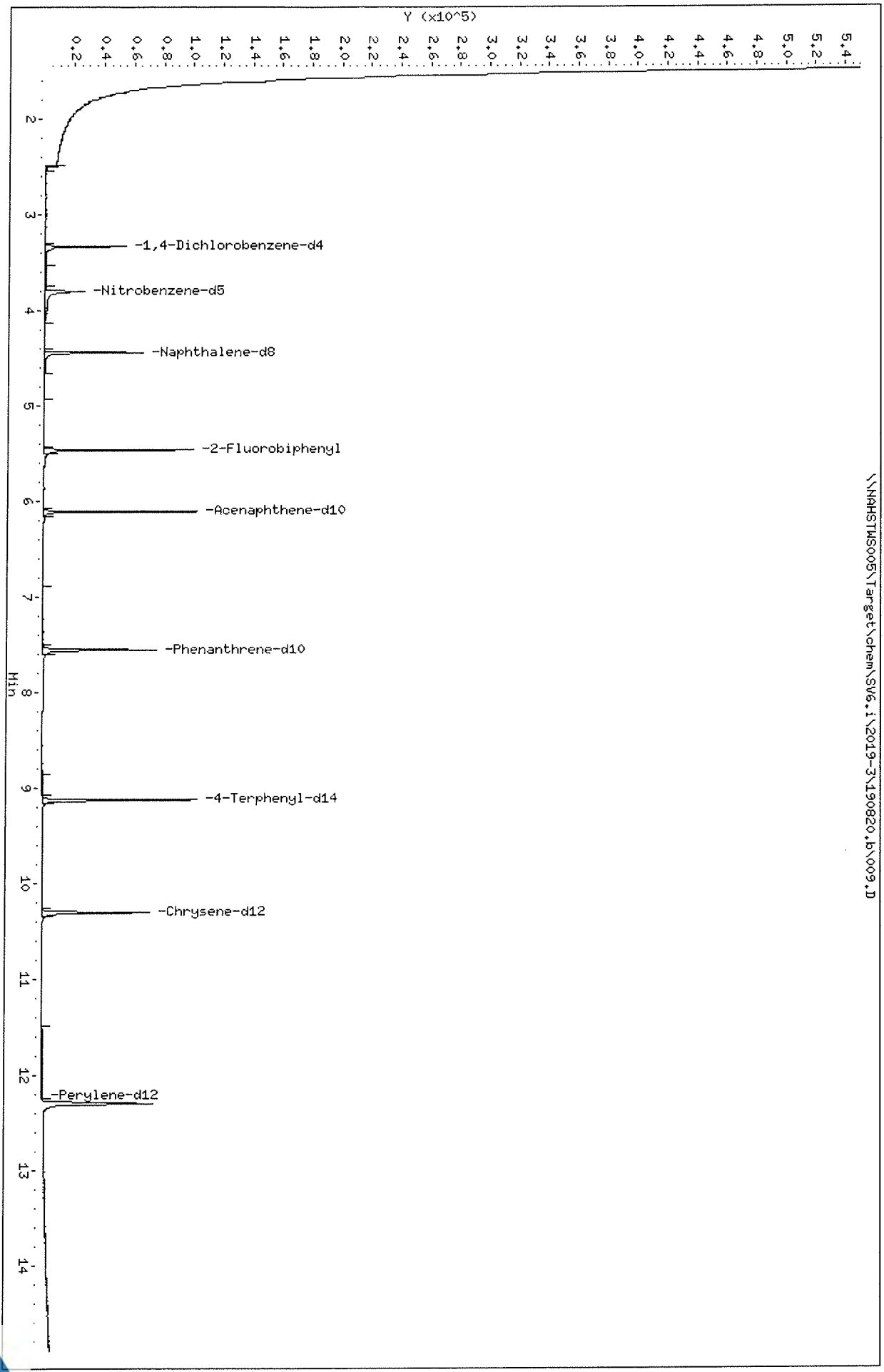
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.334 | 3.334 | (1.000) | 18250 | 0.10000 | (a) |
| * 45 Naphthalene-d8 | 136 | 4.443 | 4.442 | (1.000) | 69930 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 26336 | 0.15000 | 0.1518(AM) |
| * 86 Acenaphthene-d10 | 164 | 6.110 | 6.110 | (1.000) | 42317 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.464 | 5.464 | (0.894) | 74789 | 0.15000 | 0.1493 |
| * 126 Phenanthrene-d10 | 188 | 7.550 | 7.555 | (1.000) | 87386 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.304 | 10.304 | (1.000) | 79255 | 0.10000 | |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.885) | 97729 | 0.15000 | 0.1529(A) |
| * 198 Perylene-d12 | 264 | 12.297 | 12.297 | (1.000) | 88054 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.612 | 1.612 | (0.484) | 1583 | 0.15000 | 0.1351(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D
Date : 20-AUG-2019 11:29
Client ID: SIMDX-0.15
Sample Info: SIMDX-0.15;SIMDX-0.15
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D
Lab Smp Id: SIMDX-0.2 Client Smp ID: SIMDX-0.2
Inj Date : 20-AUG-2019 11:49 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.2;SIMDX-0.2
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:29 Cal File: 009.D
Als bottle: 10 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

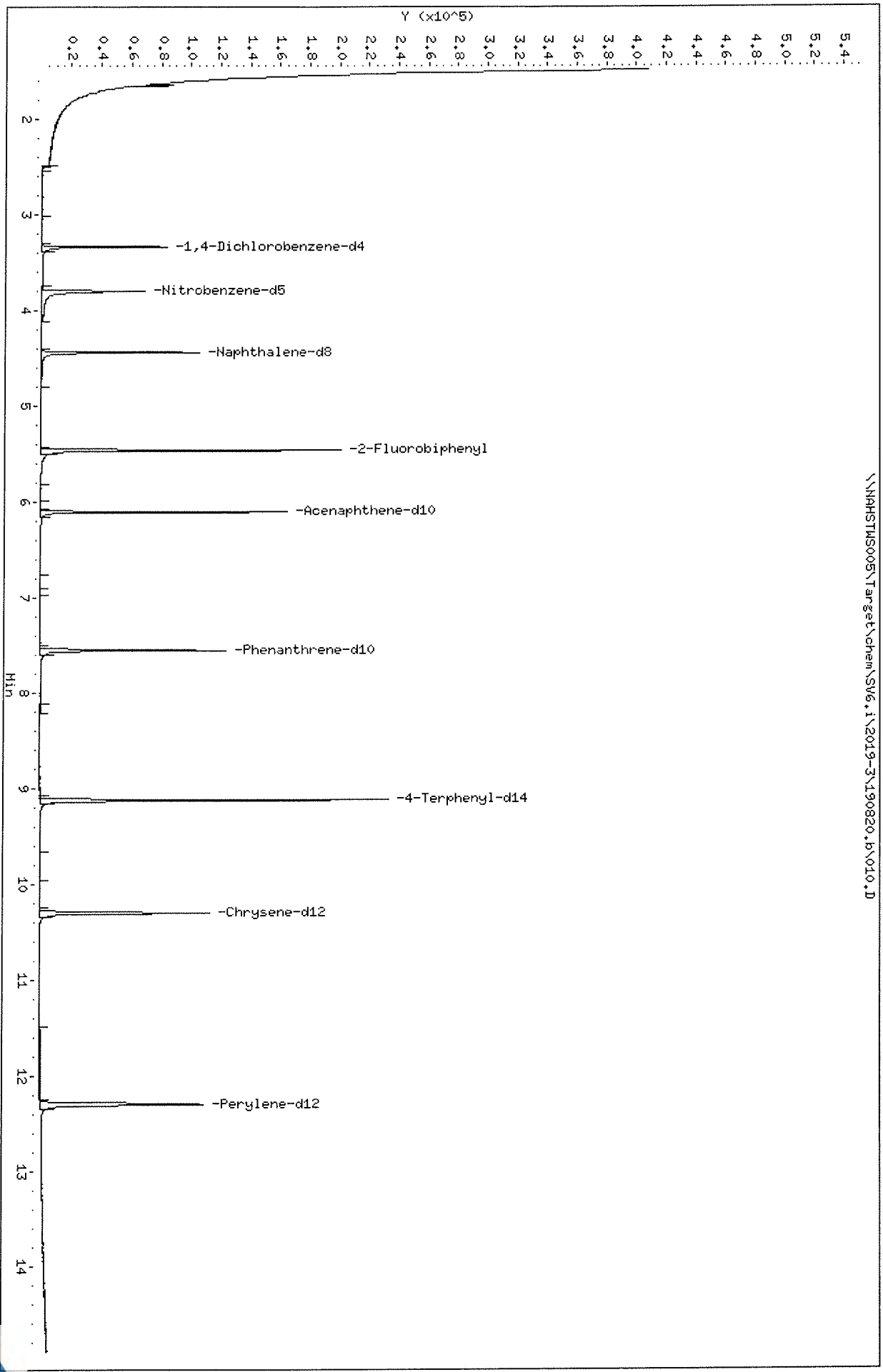
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.339 | 3.334 | (1.000) | 29701 | 0.10000 | (a) |
| * 45 Naphthalene-d8 | 136 | 4.439 | 4.442 | (1.000) | 114404 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 68087 | 0.20000 | 0.2331(AM) |
| * 86 Acenaphthene-d10 | 164 | 6.105 | 6.110 | (1.000) | 67885 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.463 | 5.464 | (0.895) | 162627 | 0.20000 | 0.2022(AM) |
| * 126 Phenanthrene-d10 | 188 | 7.549 | 7.555 | (1.000) | 130309 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.298 | 10.304 | (1.000) | 128572 | 0.10000 | |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.886) | 222096 | 0.20000 | 0.2128(A) |
| * 198 Perylene-d12 | 264 | 12.292 | 12.297 | (1.000) | 144072 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.648 | 1.612 | (0.494) | 3958 | 0.20000 | 0.2144 |

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.




Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D
Date : 20-AUG-2019 11:49
Client ID: SIMDX-0.2
Sample Info: SIMDX-0.2;SIMDX-0.2
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D
Lab Smp Id: SIMDX-0.5 Client Smp ID: SIMDX-0.5
Inj Date : 20-AUG-2019 12:08 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.5;SIMDX-0.5
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:29 Cal File: 009.D
Als bottle: 11 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

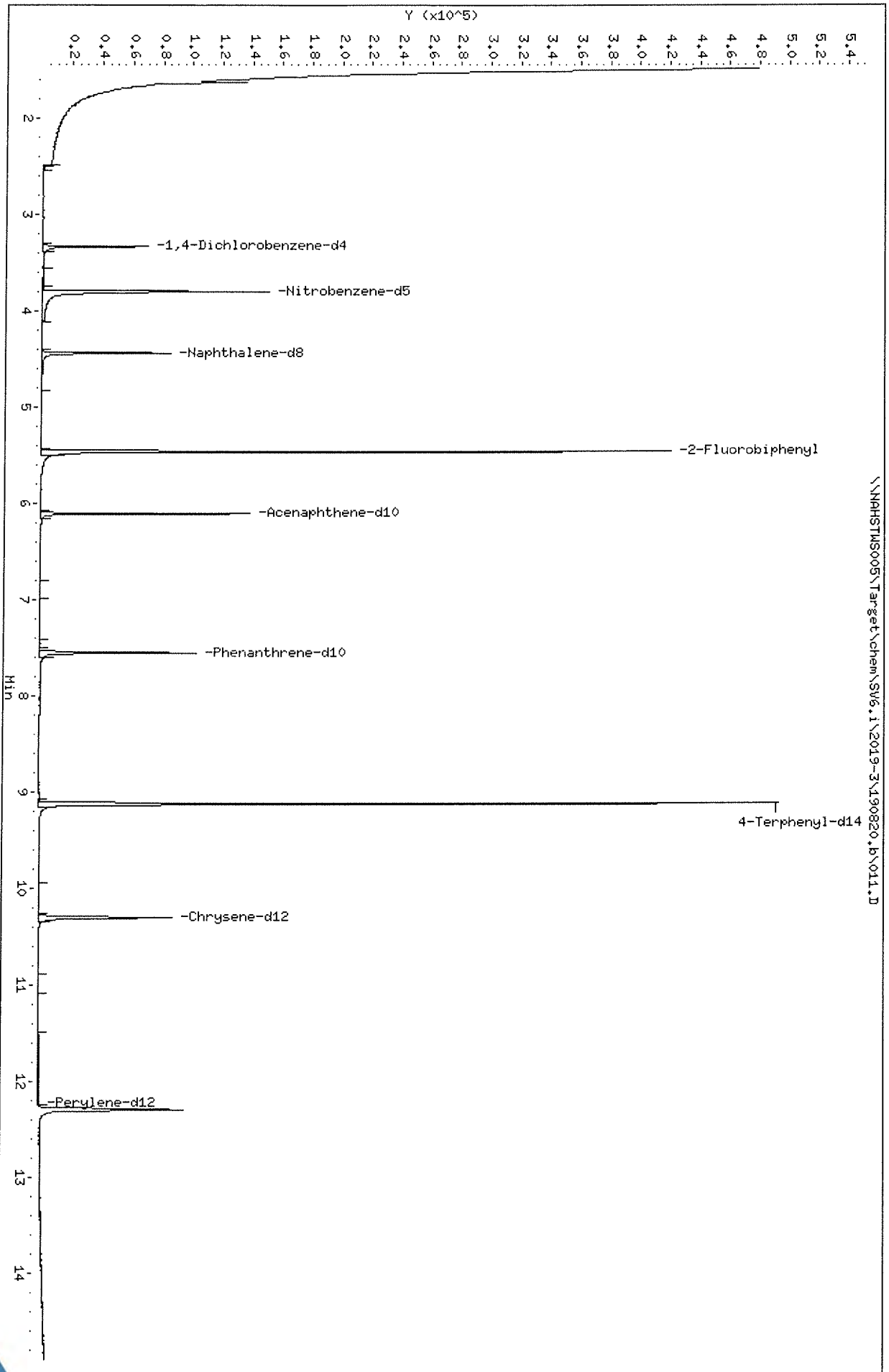
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | AMOUNTS ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.334 | 3.334 | (1.000) | 24883 | 0.10000 | (a) |
| * 45 Naphthalene-d8 | 136 | 4.439 | 4.442 | (1.000) | 93180 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 134339 | 0.50000 | 0.5521(AM) |
| * 86 Acenaphthene-d10 | 164 | 6.105 | 6.110 | (1.000) | 55005 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.464 | 5.464 | (0.895) | 328985 | 0.50000 | 0.5038(A) |
| * 126 Phenanthrene-d10 | 188 | 7.550 | 7.555 | (1.000) | 104825 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.298 | 10.304 | (1.000) | 99506 | 0.10000 | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.894) | 408835 | 0.50000 | 0.4982(A) |
| * 198 Perylene-d12 | 264 | 12.292 | 12.297 | (1.000) | 114944 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.630 | 1.612 | (0.489) | 7255 | 0.50000 | 0.4594(M) |

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D
Date : 20-AUG-2019 12:08
Client ID: SIMDX-0.5
Sample Info: SIMDX-0.5;SIMDX-0.5
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D
Lab Smp Id: SIMDX-0.01 Client Smp ID: SIMDX-0.01
Inj Date : 20-AUG-2019 12:27 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.01;SIMDX-0.01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:49 Cal File: 010.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

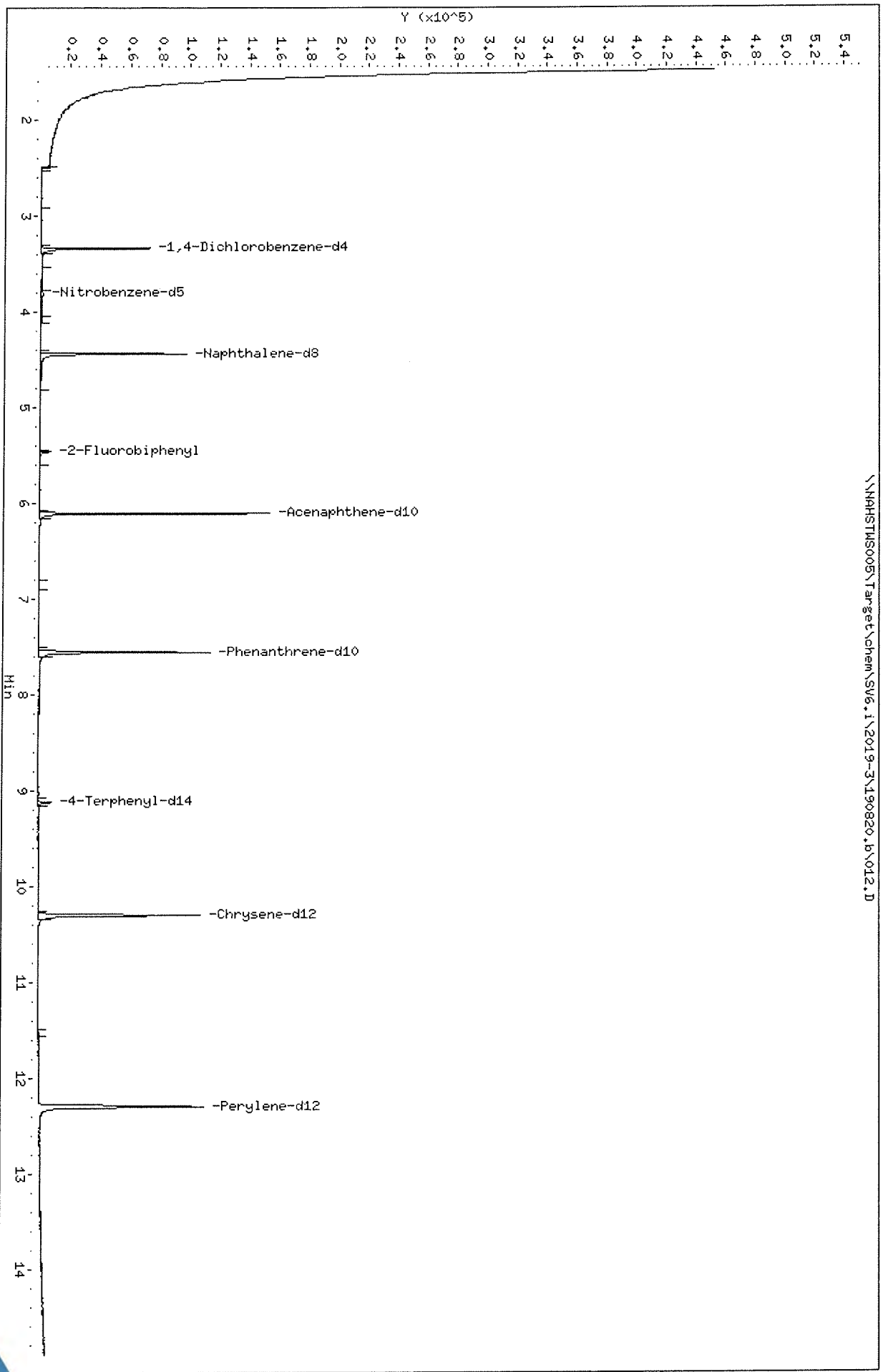
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.339 | 3.334 | (1.000) | 26864 | 0.10000 | (a) |
| * 45 Naphthalene-d8 | 136 | 4.439 | 4.442 | (1.000) | 99904 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.806 | 3.801 | (0.857) | 2590 | 0.01000 | 0.009919(QM) |
| * 86 Acenaphthene-d10 | 164 | 6.105 | 6.110 | (1.000) | 62399 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.463 | 5.464 | (0.895) | 7426 | 0.01000 | 0.01003 |
| * 126 Phenanthrene-d10 | 188 | 7.549 | 7.555 | (1.000) | 119188 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.298 | 10.304 | (1.000) | 118702 | 0.10000 | |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.886) | 10251 | 0.01000 | 0.01054 |
| * 198 Perylene-d12 | 264 | 12.292 | 12.297 | (1.000) | 130498 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.637 | 1.612 | (0.490) | 183 | 0.01000 | 0.01085(aM) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D
Date : 20-AUG-2019 12:27
Client ID: SIMDX-0.01
Sample Info: SIMDX-0.01;SIMDX-0.01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D
Lab Smp Id: SIMDX-ICV Client Smp ID: SIMDX-ICV
Inj Date : 20-AUG-2019 12:46 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-ICV;SIMDX-ICV
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 13 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

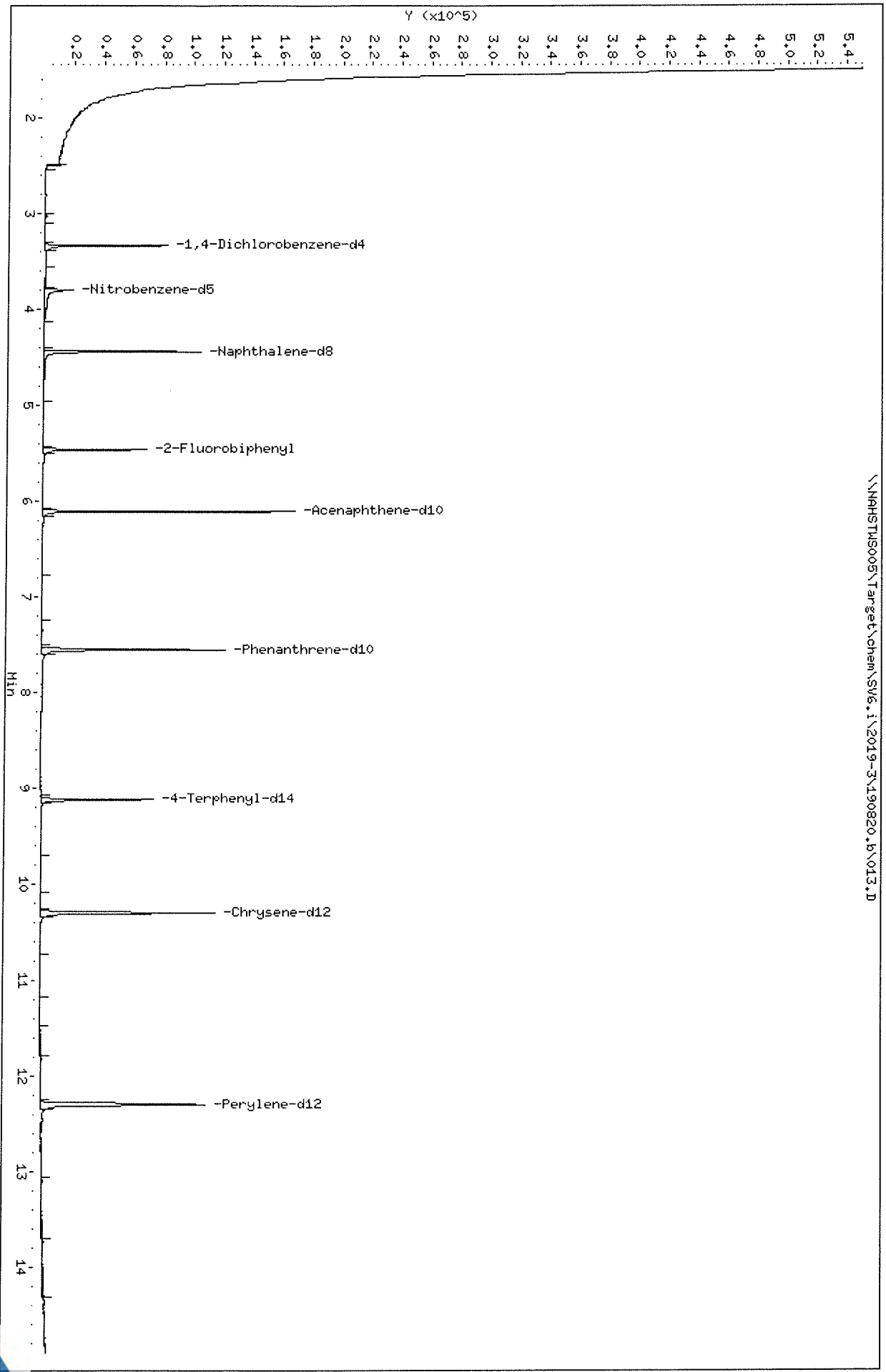
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( NG) | FINAL ( ug/L) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.339 | 3.334 | (1.000) | 28781 | 0.10000 | | (a) |
| * 45 Naphthalene-d8 | 136 | 4.439 | 4.442 | (1.000) | 106230 | 0.10000 | | |
| $ 33 Nitrobenzene-d5 | 82 | 3.801 | 3.801 | (0.856) | 21420 | 0.07722 | 0.07722 | (M) |
| * 86 Acenaphthene-d10 | 164 | 6.105 | 6.110 | (1.000) | 65527 | 0.10000 | | |
| $ 69 2-Fluorobiphenyl | 172 | 5.464 | 5.464 | (0.895) | 55855 | 0.07181 | 0.07181 | |
| * 126 Phenanthrene-d10 | 188 | 7.550 | 7.555 | (1.000) | 124804 | 0.10000 | | |
| * 182 Chrysene-d12 | 240 | 10.298 | 10.304 | (1.000) | 120805 | 0.10000 | | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.120 | 9.125 | (0.896) | 70816 | 0.07109 | 0.07109 | |
| * 198 Perylene-d12 | 264 | 12.292 | 12.297 | (1.000) | 136762 | 0.10000 | | |
| 1 1,4-Dioxane | 58 | 1.634 | 1.612 | (0.489) | 1190 | 0.06515 | 0.06515 | (a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.




Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D
Date : 20-AUG-2019 12:46
Client ID: SIMDX-ICV
Sample Info: SIMDX-ICV;SIMDX-ICV
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

# SV06 -Logbook

**Batch:** 41111 **Analyst:** Georgette Youssef

**Date:** 07-17-2020 **Reviewer:**

**Method:** 8270LVI/SIM **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DFTPP | TUNE | 07-17-2020 11:53 am | 1.00 | 0.00 gm | 0.00 mL | 001.D | | Y | NA |
| 2 | SLSTD-2.5 | SAMP | 07-17-2020 12:05 pm | 1.00 | 1000.00 mL | 1000.00 mL | 002.D | Liquid | Y | NA |
| 3 | DXSIM-0.08 | SAMP | 07-17-2020 01:07 pm | 1.00 | 1000.00 mL | 1000.00 mL | 003.D | Liquid | Y | NA |
| 4 | LVIPAH-0.025 | SAMP | 07-17-2020 01:28 pm | 1.00 | 33.00 mL | 2000.00 mL | 004.D | Liquid | Y | NA |
| 5 | DXSIM-0.08 | CCV | 07-17-2020 01:46 pm | 1.00 | 1000.00 mL | 1000.00 mL | 005.D | Liquid | Y | NA |
| 6 | LVIPAH-0.025 | CCV | 07-17-2020 02:15 pm | 1.00 | 33.00 mL | 2000.00 mL | 006.D | Liquid | Y | NA |
| 7 | MBLK-155513 | MBLK | 07-17-2020 02:32 pm | 1.00 | 1000.00 mL | 1000.00 mL | 007.D | Liquid | Y | NA |
| 8 | LCS-155513 | LCS | 07-17-2020 02:52 pm | 1.00 | 1000.00 mL | 1000.00 mL | 008.D | Liquid | Y | NA |
| 9 | LCSD-155513 | LCSD | 07-17-2020 03:11 pm | 1.00 | 1000.00 mL | 1000.00 mL | 009.D | Liquid | Y | NA |
| 10 | HS20070623-01 | SAMP | 07-17-2020 03:30 pm | 1.00 | 1000.00 mL | 1000.00 mL | 010.D | Liquid | Y | NA |
| 11 | HS20070623-01 | SAMP | 07-17-2020 03:57 pm | 100.0( | 1000.00 mL | 1000.00 mL | 011.D | Liquid | Y | NA |
| 12 | CCB | SAMP | 07-17-2020 04:23 pm | 1.00 | 1000.00 mL | 1000.00 mL | 012.D | Liquid | Y | NA |
| 13 | HS20070616-01 | SAMP | 07-17-2020 04:59 pm | 1.00 | 33.00 mL | 2000.00 mL | 013.D | Liquid | Y | NA |
| 14 | CCB | SAMP | 07-17-2020 05:16 pm | 1.00 | 1000.00 mL | 1000.00 mL | 014.D | Liquid | Y | NA |
| 15 | HS20070616-02 | SAMP | 07-17-2020 05:38 pm | 1.00 | 33.00 mL | 2000.00 mL | 015.D | Liquid | Y | NA |
| 16 | DXSIM-0.08 | SAMP | 07-17-2020 05:55 pm | 1.00 | 1000.00 mL | 1000.00 mL | 016.D | Liquid | Y | NA |
| 17 | HS20070616-03 | SAMP | 07-17-2020 06:16 pm | 1.00 | 33.00 mL | 2000.00 mL | 017.D | Liquid | Y | NA |
| 18 | HS20070616-04 | SAMP | 07-17-2020 06:36 pm | 1.00 | 33.00 mL | 2000.00 mL | 018.D | Liquid | Y | NA |
| 19 | HS20070616-05 | SAMP | 07-17-2020 06:55 pm | 1.00 | 33.00 mL | 2000.00 mL | 019.D | Liquid | Y | NA |
| 20 | HS20070616-06 | SAMP | 07-17-2020 07:14 pm | 1.00 | 33.00 mL | 2000.00 mL | 020.D | Liquid | Y | NA |
| 21 | HS20070616-07 | SAMP | 07-17-2020 07:34 pm | 1.00 | 33.00 mL | 2000.00 mL | 021.D | Liquid | Y | NA |
| 22 | HS20070616-08 | SAMP | 07-17-2020 07:53 pm | 1.00 | 33.00 mL | 2000.00 mL | 022.D | Liquid | Y | NA |
| 23 | HS20070616-11 | SAMP | 07-17-2020 08:13 pm | 1.00 | 33.00 mL | 2000.00 mL | 023.D | Liquid | Y | NA |
| 24 | HS20070616-12 | SAMP | 07-17-2020 08:32 pm | 1.00 | 33.00 mL | 2000.00 mL | 024.D | Liquid | Y | NA |
| 25 | HS20070616-13 | SAMP | 07-17-2020 08:52 pm | 1.00 | 33.00 mL | 2000.00 mL | 025.D | Liquid | Y | NA |
| 26 | HS20070616-14 | SAMP | 07-17-2020 09:11 pm | 1.00 | 33.00 mL | 2000.00 mL | 026.D | Liquid | Y | NA |
| 27 | HS20070627-02 | SAMP | 07-17-2020 09:31 pm | 1.00 | 33.00 mL | 2000.00 mL | 027.D | Liquid | Y | NA |
| 28 | HS20070627-03 | SAMP | 07-17-2020 09:50 pm | 1.00 | 33.00 mL | 2000.00 mL | 028.D | Liquid | Y | NA |
| 29 | HS20070627-04 | SAMP | 07-17-2020 10:10 pm | 1.00 | 33.00 mL | 2000.00 mL | 029.D | Liquid | Y | NA |
| 30 | HS20070627-05 | SAMP | 07-17-2020 10:29 pm | 1.00 | 33.00 mL | 2000.00 mL | 030.D | Liquid | Y | NA |
| 31 | HS20070627-06 | SAMP | 07-17-2020 10:49 pm | 1.00 | 33.00 mL | 2000.00 mL | 031.D | Liquid | Y | NA |
| 32 | HS20070584-03 | SAMP | 07-17-2020 11:08 pm | 1.00 | 33.00 mL | 2000.00 mL | 032.D | Liquid | Y | NA |
| 33 | HS20070584-04 | SAMP | 07-17-2020 11:28 pm | 1.00 | 33.00 mL | 2000.00 mL | 033.D | Liquid | Y | NA |
| 34 | HS20070584-05 | SAMP | 07-17-2020 11:47 pm | 1.00 | 33.00 mL | 2000.00 mL | 034.D | Liquid | Y | NA |
| 35 | HS20070584-06 | SAMP | 07-18-2020 12:07 am | 1.00 | 33.00 mL | 2000.00 mL | 035.D | Liquid | Y | NA |

# SV06 -Logbook

| Chemical | Value |
|---|---|
| IS ID | 3111822-02 & 3111808-07 |
| CAL STD ID | 3111841-04& 3111841-02 |
| DFTPP ID | 3111820-01 |
| PCP Tailing | 0.93 |
| Benz. Tailing | 0.95 |
| Routine SOP Maintenance | LG |

# FORM 2
## WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

| | CLIENT SAMPLE NO. | S1 (NBZ)# | S2 # | S3 (FBP)# | S4 # | S5 # | S6 # | S7 # | S8 # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | MBLK-155513 | 104 | 70 | 96 | | | | | | 0 |
| 02 | LCS-155513 | 119 | 78 | 104 | | | | | | 0 |
| 03 | LCSD-155513 | 109 | 77 | 89 | | | | | | 0 |
| 04 | HS20070623-02 | 0D | 0D | 0D | | | | | | 0 |
| 05 | | | | | | | | | | |
| 06 | | | | | | | | | | |
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| 28 | | | | | | | | | | |

| | | QC LIMITS |
|---|---|---|
| S1 (NBZ) | = Nitrobenzene-d5 | (40-140) |
| S2 | = 4-Terphenyl-d14 | (40-140) |
| S3 (FBP) | = 2-Fluorobiphenyl | (40-140) |

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

# FORM 5
## SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID: 001 DFTPP Injection Date: 07/17/20

Instrument ID: SV6 DFTPP Injection Time: 1153

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 10.0 - 80.0% of mass 198 | 43.9 |
| 68 | Less than 2.0% of mass 69 | 0.8 ( 1.7)1 |
| 69 | Mass 69 relative abundance | 48.4 |
| 70 | Less than 2.0% of mass 69 | 0.3 ( 0.6)1 |
| 127 | 10.0 - 80.0% of mass 198 | 60.7 |
| 197 | Less than 2.0% of mass 198 | 0.0 |
| 198 | Base Peak, 100% relative abundance | 100.0 |
| 199 | 5.0 to 9.0% of mass 198 | 6.9 |
| 275 | 10.0 - 60.0% of mass 198 | 26.9 |
| 365 | 1.0 - 100.0% of mass 198 | 3.5 |
| 441 | Present, but less than mass 443 | 17.4 |
| 442 | 50.0 - 150.0% of mass 198 | 108.5 |
| 443 | 15.0 - 24.0% of mass 442 | 22.0 ( 20.3)2 |

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | DXSIM-0.08 | DXSIM-0.08 | 005 | 07/17/20 | 1346 |
| 02 | MBLK-155513 | MBLK-155513 | 007 | 07/17/20 | 1432 |
| 03 | LCS-155513 | LCS-155513 | 008 | 07/17/20 | 1452 |
| 04 | LCSD-155513 | LCSD-155513 | 009 | 07/17/20 | 1511 |
| 05 | HS20070623-0 | HS20070623-01 | 011 | 07/17/20 | 1557 |
| 06 | DXSIM-0.08 | DXSIM-0.08 | 016 | 07/17/20 | 1755 |
| 07 | | | | | |
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| 22 | | | | | |

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Instrument ID: SV6 Calibration Date: 07/17/20 Time: 1346

Lab File ID: 005 Init. Calib. Date(s): 08/20/19 08/20/19

Init. Calib. Times: 1013 1227

GC Column: RTX-5SIL MS ID: 0.28 (mm)

| COMPOUND | RRF OR AMOUNT | RRF8e-002 OR AMOUNT | MIN RRF | %D OR %DRIFT | MAX %D OR %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 6.3e-002 | 6.88e-002 | 0.01 | 9.21 | 20.00 | AVRG |
| Nitrobenzene-d5 | 0.2610000 | 0.2846723 | 0.01 | 9.07 | 20.00 | AVRG |
| 4-Terphenyl-d14 | 0.8250000 | 0.8281445 | 0.01 | 0.38 | 20.00 | AVRG |
| 2-Fluorobiphenyl | 1.1870000 | 1.1275602 | 0.01 | -5.01 | 20.00 | AVRG |

FORM VII SV

# FORM 7B
## SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Instrument ID: SV6 Calibration Date: 07/17/20 Time: 1755

Lab File ID: 016 Init. Calib. Date(s): 08/20/19 08/20/19

Init. Calib. Times: 1013 1227

GC Column: RTX-5SIL MS ID: 0.28 (mm)

| COMPOUND | RRF OR AMOUNT | RRF8e-002 OR AMOUNT | MIN RRF | %D OR %DRIFT | MAX %D OR %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 6.3e-002 | 7.37e-002 | 0.01 | 16.98 | 50.00 | AVRG |
| Nitrobenzene-d5 | 0.2610000 | 0.2218719 | 0.01 | -14.99 | 50.00 | AVRG |
| 4-Terphenyl-d14 | 0.8250000 | 0.8575045 | 0.01 | 3.94 | 50.00 | AVRG |
| 2-Fluorobiphenyl | 1.1870000 | 1.0535965 | 0.01 | -11.24 | 50.00 | AVRG |

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID (Standard): 005 Date Analyzed: 07/17/20

Instrument ID: SV6 Time Analyzed: 1346

| | | IS1(DCB) AREA # | RT # | IS2(NPT) AREA # | RT # | IS3(ANT) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 24515 | 3.38 | 40169 | 4.49 | 18407 | 6.16 |
| | UPPER LIMIT | 49030 | 3.88 | 80338 | 4.99 | 36814 | 6.66 |
| | LOWER LIMIT | 12258 | 2.88 | 20085 | 3.99 | 9204 | 5.66 |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | MBLK-155513 | 18062 | 3.38 | 73560 | 4.49 | 34571 | 6.16 |
| 02 | LCS-155513 | 26218 | 3.38 | 52284 | 4.49 | 24086 | 6.16 |
| 03 | LCSD-155513 | 29947 | 3.38 | 69860 | 4.49 | 32929 | 6.16 |
| 04 | HS20070623-02 | 15687 | 3.38 | 65446 | 4.49 | 30806 | 6.17 |
| 05 | | | | | | | |
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| 20 | | | | | | | |

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.



FORM VIII SV

# FORM 8
## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070623

Lab File ID (Standard): 005 Date Analyzed: 07/17/20

Instrument ID: SV6 Time Analyzed: 1346

| | | IS4 (PHN) AREA # | RT # | IS5 (CRY) AREA # | RT # | IS6 (PRY) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 36214 | 7.61 | 29631 | 10.38 | 27500 | 12.40 |
| | UPPER LIMIT | 72428 | 8.11 | 59262 | 10.88 | 55000 | 12.90 |
| | LOWER LIMIT | 18107 | 7.11 | 14816 | 9.88 | 13750 | 11.90 |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | MBLK-155513 | 59831 | 7.61 | 47829 | 10.38 | 45296 | 12.40 |
| 02 | LCS-155513 | 40409 | 7.61 | 32924 | 10.38 | 30604 | 12.40 |
| 03 | LCSD-155513 | 56156 | 7.61 | 45236 | 10.38 | 42844 | 12.40 |
| 04 | HS20070623-02 | 52531 | 7.61 | 43722 | 10.39 | 43776 | 12.40 |
| 05 | | | | | | | |
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| 19 | | | | | | | |
| 20 | | | | | | | |

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.



FORM VIII SV

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\001.D



Date : 17-JUL-2020 11:53

Client ID: DFTPP

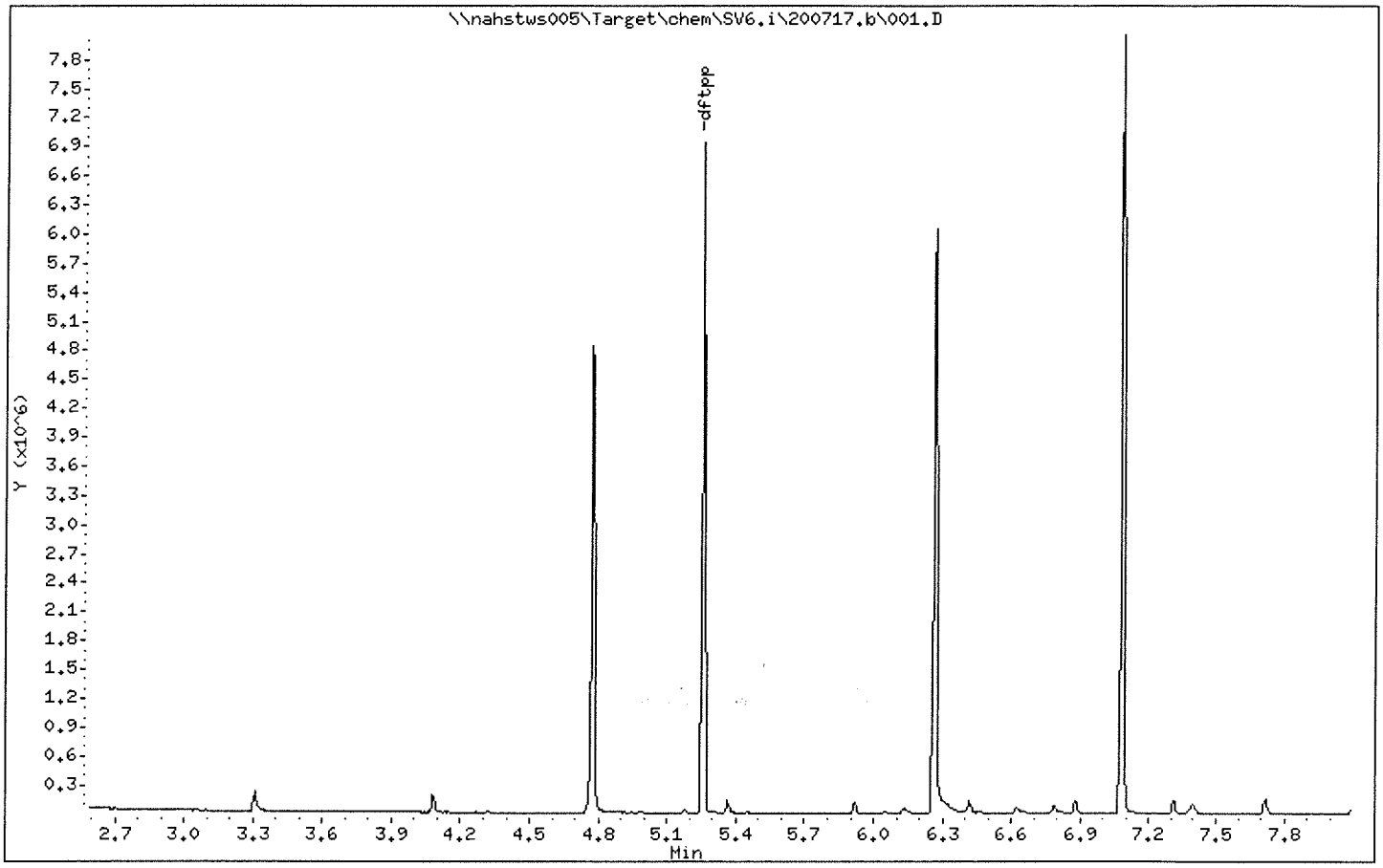
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\SV6.i\200717.b\001.D 

Date : 17-JUL-2020 11:53

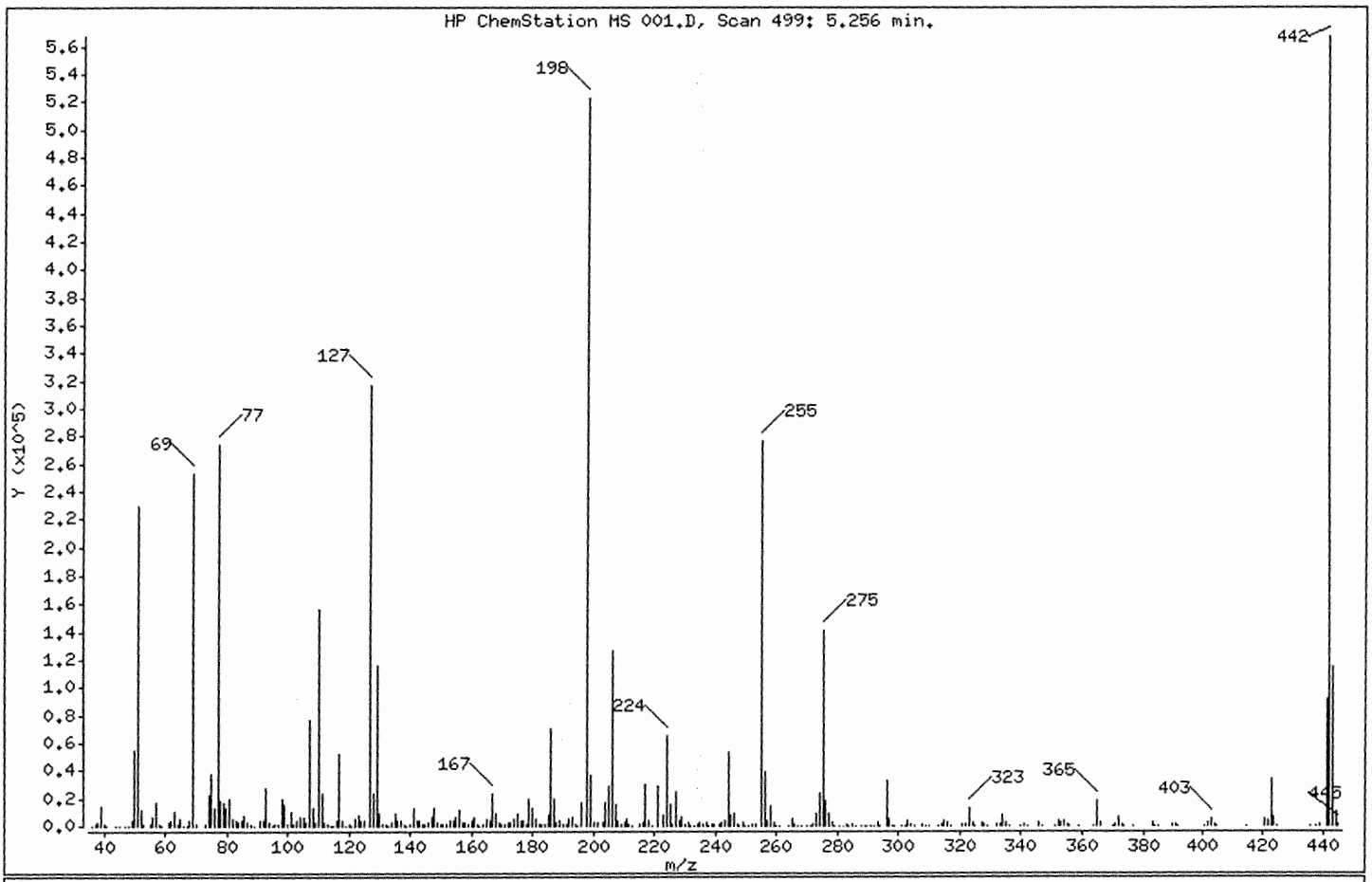
Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

1 dftpp




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 198 | Base Peak, 100% relative abundance | 100.00 |
| 51 | 10.00 - 80.00% of mass 198 | 43.86 |
| 68 | Less than 2.00% of mass 69 | 0.82 ( 1.70) |
| 69 | Mass 69 relative abundance | 48.40 |
| 70 | Less than 2.00% of mass 69 | 0.29 ( 0.60) |
| 127 | 10.00 - 80.00% of mass 198 | 60.66 |
| 197 | Less than 2.00% of mass 198 | 0.00 |
| 199 | 5.00 - 9.00% of mass 198 | 6.88 |
| 275 | 10.00 - 60.00% of mass 198 | 26.87 |
| 365 | 1.00 - 100.00% of mass 198 | 3.48 |
| 441 | Present, but less than mass 443 | 17.42 |
| 442 | 50.00 - 150.00% of mass 198 | 108.52 |
| 443 | 15.00 - 24.00% of mass 442 | 22.04 ( 20.31) |

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\001.D



Date : 17-JUL-2020 11:53

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: HP ChemStation MS 001.D, Scan 499: 5.256 min.
Location of Maximum: 442.00
Number of points: 316

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 35.90 | 496 | 124.00 | 3671 | 207.00 | 15844 | 297.00 | 5058 |
| 37.00 | 757 | 125.00 | 3758 | 207.90 | 3782 | 297.80 | 429 |
| 38.00 | 2233 | 127.00 | 317248 | 209.00 | 1026 | 298.80 | 170 |
| 39.00 | 14832 | 128.00 | 23528 | 210.00 | 2235 | 301.00 | 626 |
| 40.00 | 1004 | 128.90 | 115632 | 211.00 | 4911 | 302.00 | 651 |
| 41.00 | 581 | 129.90 | 9706 | 211.60 | 1619 | 303.00 | 4423 |
| 43.90 | 629 | 130.90 | 1486 | 212.80 | 476 | 304.00 | 1166 |
| 44.90 | 505 | 131.90 | 1116 | 215.00 | 1467 | 305.00 | 157 |
| 46.80 | 445 | 132.80 | 316 | 216.00 | 2351 | 307.80 | 682 |
| 48.00 | 291 | 133.90 | 3000 | 216.90 | 30144 | 308.90 | 491 |
| 49.00 | 4340 | 135.00 | 8635 | 218.00 | 4196 | 310.00 | 293 |
| 50.00 | 54912 | 136.00 | 3676 | 219.10 | 421 | 312.70 | 354 |
| 51.00 | 229376 | 137.00 | 4237 | 221.00 | 28576 | 313.90 | 1686 |
| 52.00 | 11913 | 137.80 | 905 | 223.00 | 7803 | 314.90 | 4161 |
| 52.90 | 725 | 138.90 | 480 | 224.00 | 64808 | 316.00 | 2297 |
| 55.00 | 771 | 139.90 | 1433 | 225.00 | 15937 | 317.00 | 500 |
| 56.00 | 7070 | 141.00 | 13327 | 226.00 | 1929 | 320.90 | 1590 |
| 56.90 | 17560 | 142.00 | 4197 | 227.00 | 24344 | 322.10 | 818 |
| 57.90 | 888 | 142.90 | 3567 | 228.00 | 3527 | 323.00 | 13225 |
| 58.90 | 270 | 144.00 | 807 | 229.00 | 6018 | 324.00 | 2446 |
| 60.90 | 3169 | 144.90 | 943 | 230.00 | 711 | 325.00 | 290 |
| 62.00 | 3388 | 145.90 | 2266 | 230.90 | 2125 | 326.90 | 2333 |
| 63.00 | 9826 | 147.00 | 6864 | 232.00 | 431 | 327.90 | 992 |
| 64.00 | 1694 | 147.90 | 13449 | 232.80 | 562 | 328.80 | 419 |
| 65.00 | 5070 | 148.90 | 2997 | 234.00 | 1724 | 332.00 | 1138 |
| 65.90 | 395 | 150.00 | 1005 | 235.00 | 2115 | 333.00 | 1529 |
| 66.90 | 306 | 150.90 | 1873 | 235.90 | 1188 | 334.00 | 7505 |
| 68.00 | 4295 | 151.90 | 1257 | 237.00 | 2225 | 335.00 | 2276 |
| 68.90 | 253120 | 152.90 | 3715 | 238.00 | 350 | 335.90 | 189 |
| 70.00 | 1514 | 154.00 | 3412 | 238.90 | 1017 | 339.80 | 166 |
| 73.00 | 1578 | 155.00 | 6802 | 239.70 | 679 | 341.00 | 1442 |
| 74.00 | 22592 | 156.00 | 12270 | 241.00 | 1698 | 342.00 | 400 |
| 75.00 | 37360 | 157.00 | 2198 | 242.00 | 2915 | 345.90 | 2594 |
| 76.00 | 13071 | 157.90 | 2482 | 243.10 | 4381 | 346.70 | 352 |
| 77.00 | 274432 | 159.00 | 1656 | 244.00 | 52960 | 347.00 | 353 |

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\001.D 

Date : 17-JUL-2020 11:53

Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: HP ChemStation MS 001.D, Scan 499: 5.256 min.
Location of Maximum: 442.00
Number of points: 316

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 78.00 | 17696 | 159.90 | 4040 | 245.00 | 7334 | 350.90 | 540 |
| 79.00 | 17168 | 161.00 | 6330 | 246.00 | 9452 | 352.00 | 3851 |
| 79.90 | 13537 | 161.90 | 1871 | 247.00 | 1871 | 353.00 | 2443 |
| 81.00 | 19216 | 162.80 | 457 | 248.00 | 575 | 354.00 | 3949 |
| 82.00 | 5304 | 163.90 | 675 | 248.90 | 2041 | 355.00 | 731 |
| 83.00 | 4532 | 165.00 | 4654 | 249.80 | 513 | 355.80 | 245 |
| 83.90 | 3119 | 166.00 | 4022 | 250.90 | 608 | 359.00 | 419 |
| 84.90 | 3644 | 167.00 | 23648 | 252.00 | 749 | 363.50 | 374 |
| 85.90 | 7198 | 167.90 | 9775 | 253.10 | 1864 | 364.90 | 18176 |
| 86.90 | 2993 | 169.00 | 1961 | 255.00 | 276800 | 366.00 | 2199 |
| 87.90 | 1454 | 170.00 | 926 | 256.00 | 38992 | 370.00 | 556 |
| 88.90 | 426 | 170.80 | 1198 | 257.00 | 3820 | 370.90 | 1068 |
| 90.90 | 3621 | 171.90 | 2539 | 258.00 | 14362 | 372.00 | 7074 |
| 91.90 | 4530 | 172.90 | 2530 | 259.00 | 2229 | 373.00 | 1786 |
| 92.90 | 27504 | 174.00 | 5181 | 260.00 | 366 | 373.90 | 224 |
| 94.00 | 2181 | 175.00 | 9303 | 260.90 | 514 | 376.80 | 246 |
| 94.90 | 589 | 176.00 | 3263 | 263.70 | 533 | 383.00 | 2212 |
| 95.90 | 1351 | 177.00 | 4291 | 264.90 | 5799 | 383.90 | 554 |
| 97.00 | 765 | 177.90 | 1390 | 266.00 | 917 | 384.80 | 213 |
| 98.00 | 19176 | 178.90 | 19408 | 267.00 | 176 | 390.00 | 1481 |
| 98.90 | 15852 | 180.00 | 12873 | 267.90 | 411 | 391.00 | 882 |
| 99.90 | 1356 | 181.00 | 5729 | 269.70 | 352 | 391.90 | 515 |
| 101.00 | 10837 | 182.00 | 873 | 270.90 | 618 | 400.80 | 598 |
| 102.00 | 689 | 182.70 | 716 | 271.90 | 802 | 402.00 | 2776 |
| 102.90 | 4096 | 183.90 | 1461 | 273.00 | 8690 | 403.00 | 4891 |
| 104.00 | 6419 | 185.00 | 8380 | 274.00 | 23176 | 404.00 | 1875 |
| 105.00 | 5981 | 186.00 | 70032 | 275.00 | 140544 | 405.00 | 245 |
| 106.00 | 2108 | 187.00 | 19208 | 276.00 | 17752 | 414.60 | 252 |
| 107.00 | 77448 | 187.90 | 1975 | 277.00 | 9412 | 421.00 | 4975 |
| 108.00 | 12575 | 189.00 | 3443 | 278.00 | 2208 | 422.00 | 4474 |
| 109.00 | 2846 | 190.00 | 660 | 279.00 | 313 | 423.00 | 34472 |
| 110.00 | 156032 | 190.90 | 1693 | 280.90 | 249 | 424.00 | 7004 |
| 111.00 | 23272 | 191.90 | 5159 | 281.80 | 365 | 425.00 | 608 |
| 112.00 | 2961 | 193.00 | 6571 | 282.90 | 1279 | 435.90 | 194 |
| 112.90 | 706 | 194.00 | 1571 | 283.90 | 651 | 437.40 | 357 |

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\001.D 

Date : 17-JUL-2020 11:53

Client ID: DFTPP Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS Column diameter: 0.25

Data File: 001.D
Spectrum: HP ChemStation MS 001.D, Scan 499: 5.256 min.
Location of Maximum: 442.00
Number of points: 316

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 114.20 | 155 | 194.60 | 610 | 285.00 | 1946 | 438.50 | 795 |
| 115.00 | 318 | 196.00 | 17512 | 286.00 | 544 | 441.00 | 91096 |
| 115.90 | 4402 | 197.90 | 523008 | 288.00 | 187 | 442.00 | 567552 |
| 116.90 | 51936 | 198.90 | 35976 | 289.00 | 521 | 443.00 | 115256 |
| 117.90 | 3641 | 199.90 | 2367 | 289.90 | 521 | 444.00 | 10341 |
| 119.10 | 572 | 201.50 | 2765 | 291.00 | 326 | 444.90 | 654 |
| 120.00 | 888 | 202.90 | 3068 | 291.90 | 519 | | |
| 120.80 | 482 | 204.00 | 16752 | 293.00 | 2385 | | |
| 121.90 | 4984 | 205.00 | 29336 | 294.00 | 573 | | |
| 122.90 | 8468 | 206.00 | 127016 | 296.00 | 33064 | | |

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200717.b\005.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 17-JUL-2020 13:46 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200717.b\DXSIM.m
Meth Date : 18-Aug-2020 13:16 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

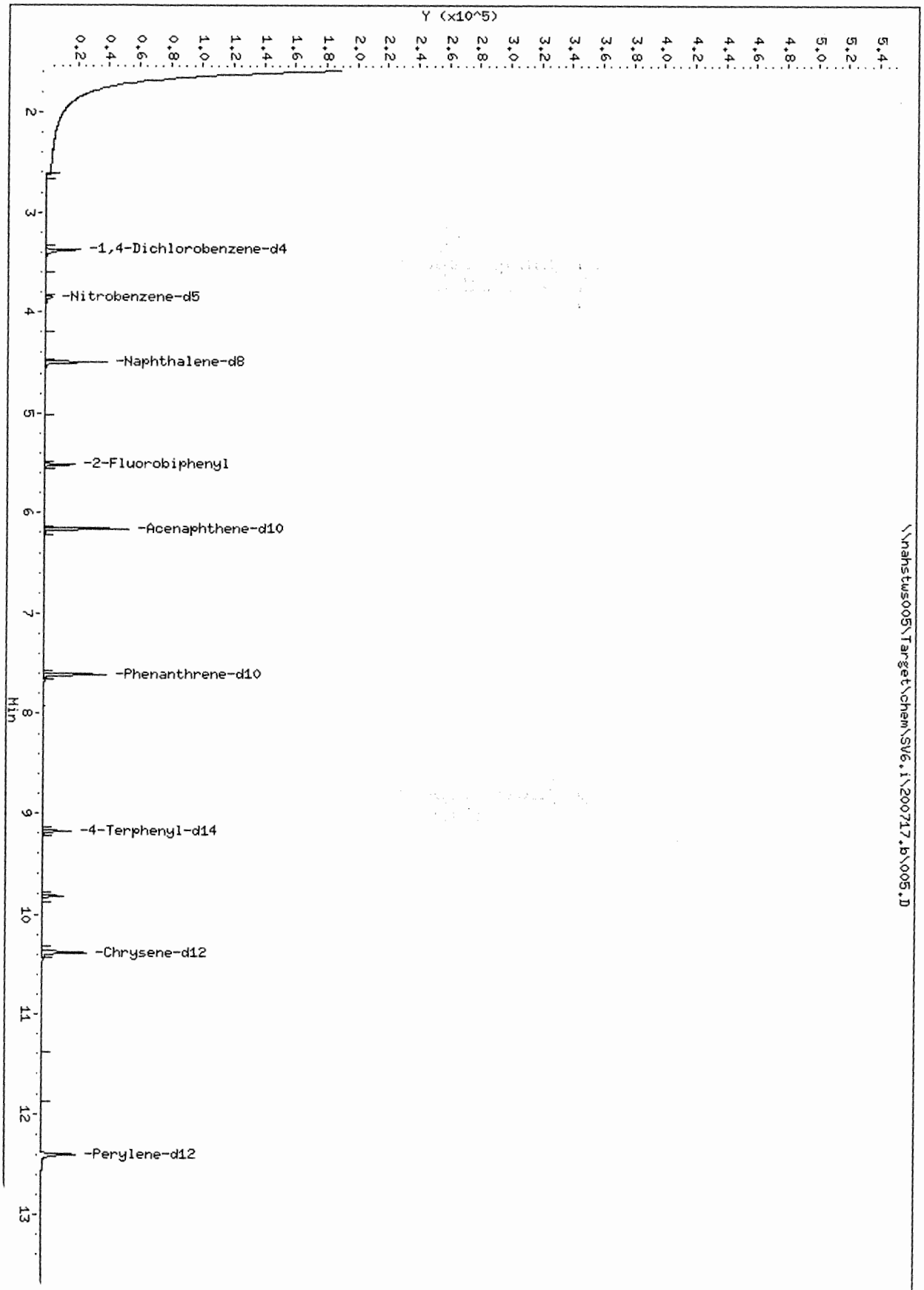
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | ON-COL ( NG) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.379 | 3.379 | (1.000) | 24515 | 0.10000 | | (aQM) |
| * 45 Naphthalene-d8 | 136 | 4.494 | 4.494 | (1.000) | 40169 | 0.10000 | | |
| $ 33 Nitrobenzene-d5 | 82 | 3.851 | 3.851 | (0.857) | 9148 | 0.08000 | 0.08722 | (Q) |
| * 86 Acenaphthene-d10 | 164 | 6.163 | 6.163 | (1.000) | 18407 | 0.10000 | | |
| $ 69 2-Fluorobiphenyl | 172 | 5.519 | 5.519 | (0.896) | 16604 | 0.08000 | 0.07599 | |
| * 126 Phenanthrene-d10 | 188 | 7.607 | 7.607 | (1.000) | 36214 | 0.10000 | | |
| * 182 Chrysene-d12 | 240 | 10.383 | 10.383 | (1.000) | 29631 | 0.10000 | | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.183 | 9.183 | (0.884) | 19631 | 0.08000 | 0.08034 | (M) |
| * 198 Perylene-d12 | 264 | 12.397 | 12.397 | (1.000) | 27500 | 0.10000 | | |
| 1 1,4-Dioxane | 58 | 1.627 | 1.627 | (0.482) | 1349 | 0.08000 | 0.08671 | (a) |

QC Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- Qualifier signal failed the ratio test. Compound response manually integrated.




Data File: \\nahstws005\Target\chem\SV6.i\200717.b\005.D
Date : 17-JUL-2020 13:46
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\007.D Page 1
Report Date: 18-Aug-2020 13:16

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200717.b\007.D
Lab Smp Id: MBLK-155513 Client Smp ID: MBLK-155513
Inj Date : 17-JUL-2020 14:32 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-155513;MBLK-155513;3;;BLANK
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200717.b\DXSIM.m
Meth Date : 18-Aug-2020 13:16 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

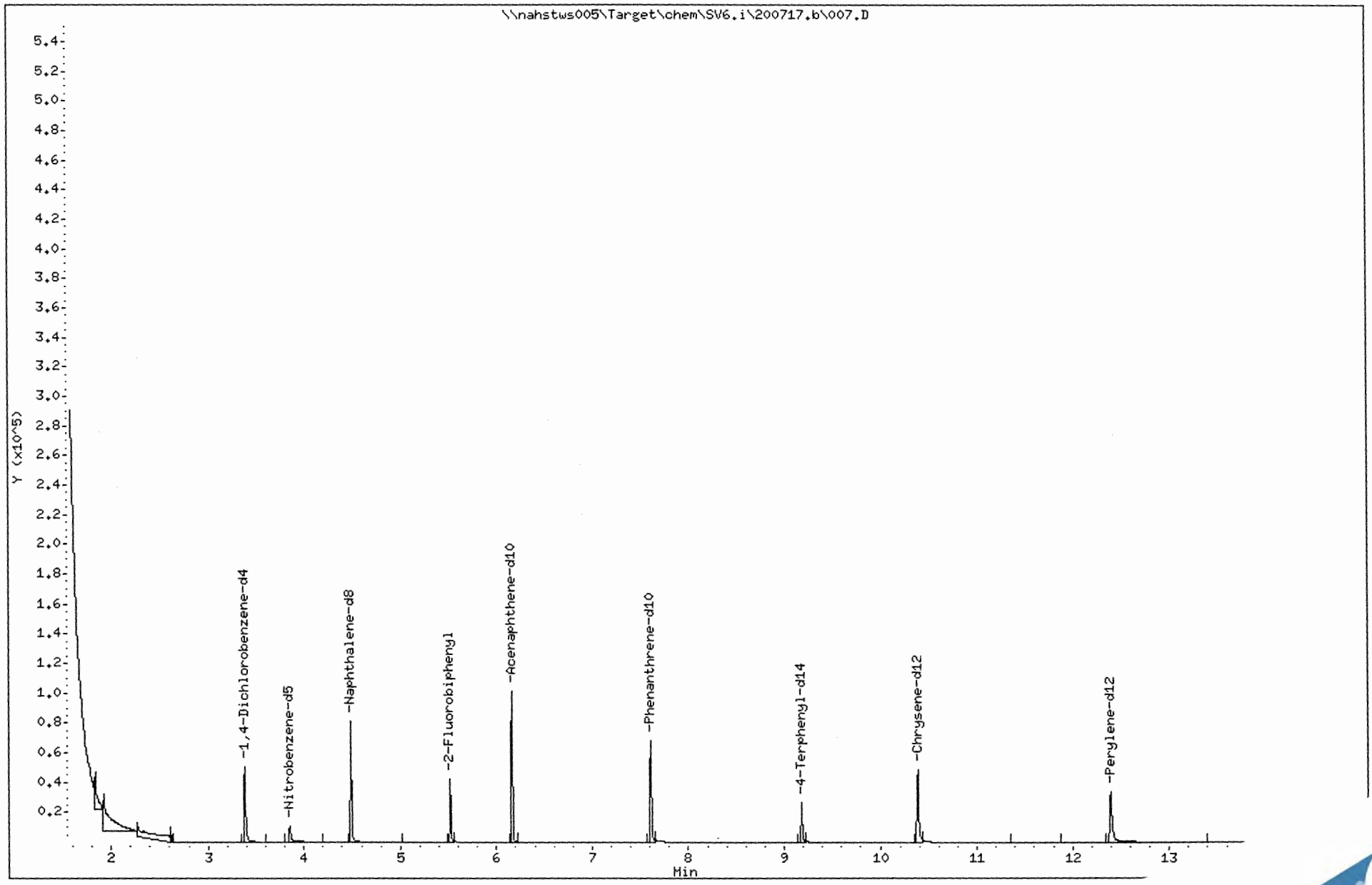
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( NG) | FINAL ( ug/L) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.384 | 3.379 | (1.000) | 18062 | 0.10000 | | (a) |
| * 45 Naphthalene-d8 | 136 | 4.494 | 4.494 | (1.000) | 73560 | 0.10000 | | |
| $ 33 Nitrobenzene-d5 | 82 | 3.851 | 3.851 | (0.857) | 15957 | 0.08308 | 0.08308 | (Q) |
| * 86 Acenaphthene-d10 | 164 | 6.163 | 6.163 | (1.000) | 34571 | 0.10000 | | |
| $ 69 2-Fluorobiphenyl | 172 | 5.515 | 5.519 | (0.895) | 31455 | 0.07665 | 0.07665 | |
| * 126 Phenanthrene-d10 | 188 | 7.607 | 7.607 | (1.000) | 59831 | 0.10000 | | |
| * 182 Chrysene-d12 | 240 | 10.383 | 10.383 | (1.000) | 47829 | 0.10000 | | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.183 | 9.183 | (0.884) | 22063 | 0.05594 | 0.05594 | (M) |
| * 198 Perylene-d12 | 264 | 12.397 | 12.397 | (1.000) | 45296 | 0.10000 | | |

QC Flag Legend

\ - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- Qualifier signal failed the ratio test.
- Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\007.D
Date : 17-JUL-2020 14:32
Client ID: MBLK-155513
Instrument: SV6.i
Sample Info: MBLK-155513;MBLK-155513;3;;BLANK
Purge Volume: 1000.0
Operator: LG
Column phase: RTX-5SIL MS
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200717.b\008.D
Lab Smp Id: LCS-155513 Client Smp ID: LCS-155513
Inj Date : 17-JUL-2020 14:52 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : LCS-155513;LCS-155513;3;;LCS
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200717.b\DXSIM.m
Meth Date : 18-Aug-2020 13:16 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

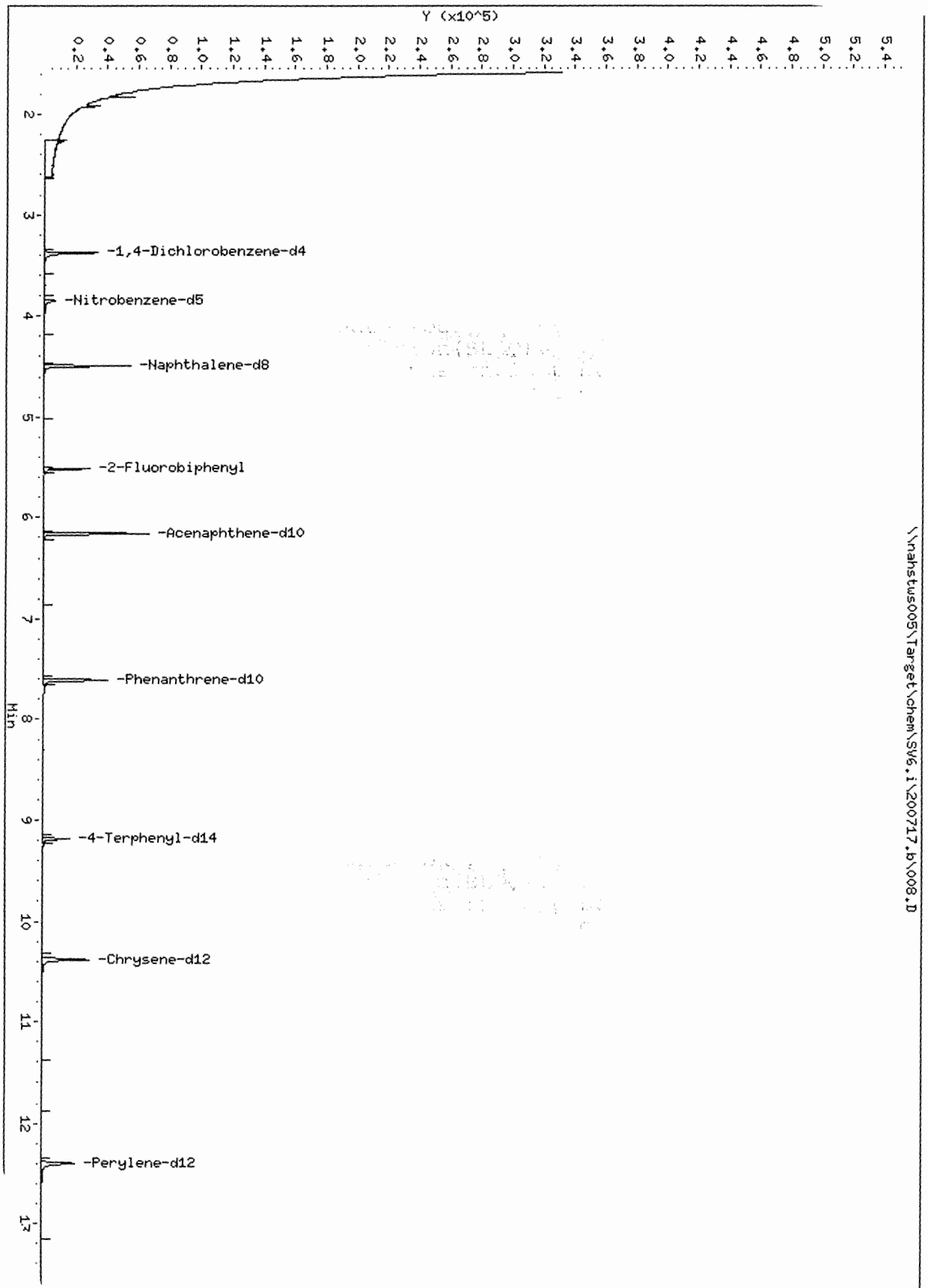
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( NG) | FINAL ( ug/L) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.384 | 3.379 | (1.000) | 26218 | 0.10000 | | (aM) |
| * 45 Naphthalene-d8 | 136 | 4.494 | 4.494 | (1.000) | 52284 | 0.10000 | | |
| $ 33 Nitrobenzene-d5 | 82 | 3.851 | 3.851 | (0.857) | 12975 | 0.09504 | 0.09504 | (Q) |
| * 86 Acenaphthene-d10 | 164 | 6.163 | 6.163 | (1.000) | 24086 | 0.10000 | | |
| $ 69 2-Fluorobiphenyl | 172 | 5.519 | 5.519 | (0.896) | 23814 | 0.08329 | 0.08329 | |
| * 126 Phenanthrene-d10 | 188 | 7.607 | 7.607 | (1.000) | 40409 | 0.10000 | | |
| * 182 Chrysene-d12 | 240 | 10.383 | 10.383 | (1.000) | 32924 | 0.10000 | | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.183 | 9.183 | (0.884) | 16973 | 0.06252 | 0.06252 | (M) |
| * 198 Perylene-d12 | 264 | 12.397 | 12.397 | (1.000) | 30604 | 0.10000 | | |
| 1 1,4-Dioxane | 58 | 1.634 | 1.627 | (0.483) | 1799 | 0.10812 | 0.1081 | (aM) |

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.




Data File: \\nahstws005\Target\chem\SV6.i\200717.b\008.D
Date : 17-JUL-2020 14:52
Client ID: LCS-155513
Sample Info: LCS-155513;LCS-155513;3;;LCS
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

\\nahstws005\Target\chem\SV6.i\200717.b\008.D

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\009.D
Report Date: 18-Aug-2020 13:16

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200717.b\009.D
Lab Smp Id: LCSD-155513 Client Smp ID: LCSD-155513
Inj Date : 17-JUL-2020 15:11 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-155513;LCSD-155513;3;;LCSD
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200717.b\DXSIM.m
Meth Date : 18-Aug-2020 13:16 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 9 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

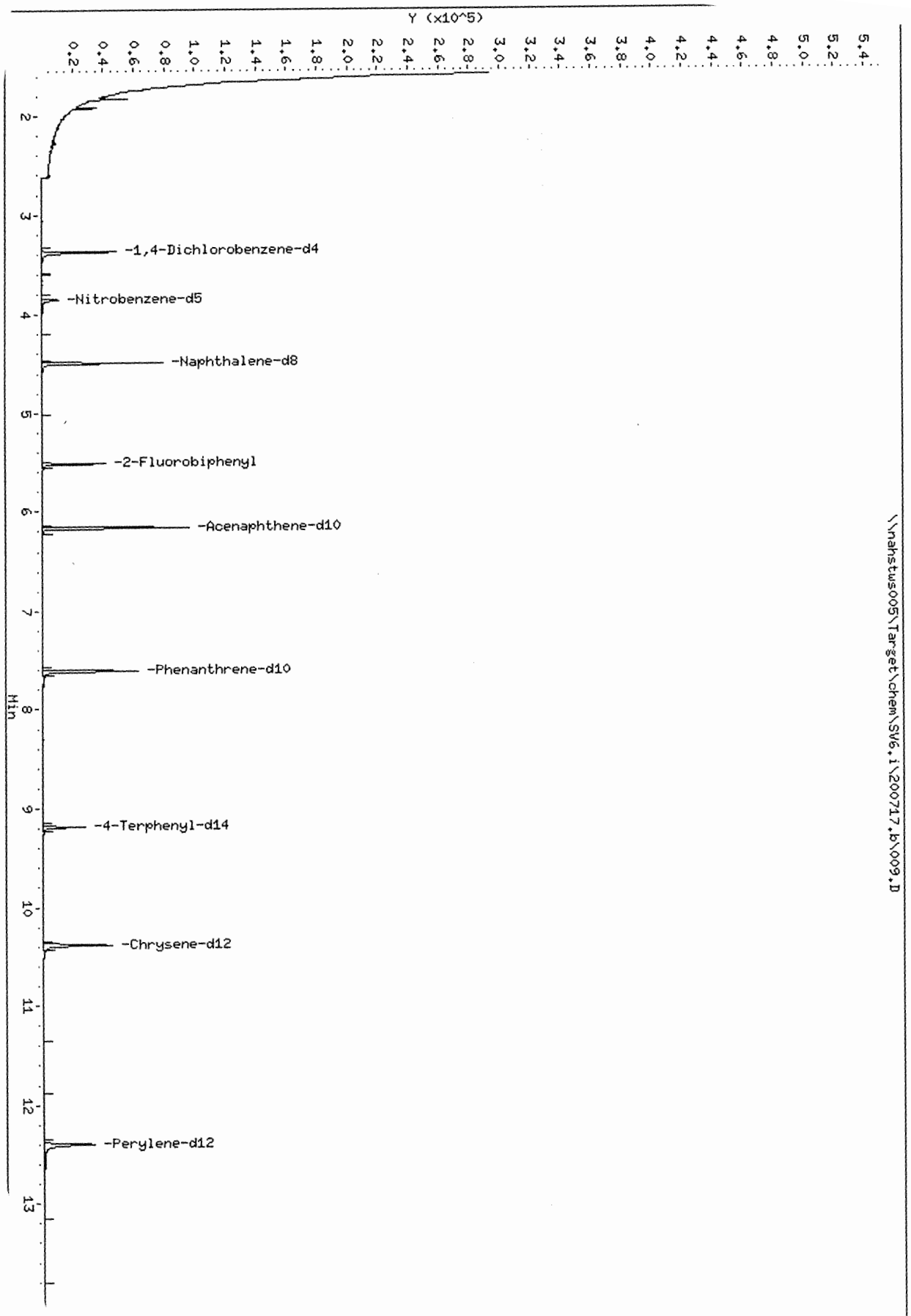
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( NG) | FINAL ( ug/L) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.384 | 3.379 | (1.000) | 29947 | 0.10000 | (aM) |
| * 45 Naphthalene-d8 | 136 | 4.494 | 4.494 | (1.000) | 69860 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.851 | 3.851 | (0.857) | 15871 | 0.08701 | 0.08701(Q) |
| * 86 Acenaphthene-d10 | 164 | 6.163 | 6.163 | (1.000) | 32929 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.519 | 5.519 | (0.896) | 27894 | 0.07136 | 0.07136 |
| * 126 Phenanthrene-d10 | 188 | 7.607 | 7.607 | (1.000) | 56156 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.383 | 10.383 | (1.000) | 45236 | 0.10000 | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.183 | 9.183 | (0.884) | 23016 | 0.06170 | 0.06170(M) |
| * 198 Perylene-d12 | 264 | 12.397 | 12.397 | (1.000) | 42844 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.638 | 1.627 | (0.484) | 1970 | 0.10366 | 0.1036(aM) |

QC Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- Qualifier signal failed the ratio test. Compound response manually integrated.




Data File: \\nahstws005\Target\chem\SV6.i\200717.b\009.D
Date : 17-JUL-2020 15:11
Client ID: LCSD-155513
Sample Info: LCSD-155513;LCSD-155513;3;;LCSD
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

\\nahstws005\Target\chem\SV6.i\200717.b\009.D

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200717.b\011.D
Lab Smp Id: HS20070623-01 Client Smp ID: HS20070623-02
Inj Date : 17-JUL-2020 15:57 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : HS20070623-01;HS20070623-02
Misc Info : HS20070623;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200717.b\DXSIM.m
Meth Date : 18-Aug-2020 13:15 dev.giga Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 11
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 100.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( NG) | CONCENTRATIONS FINAL ( ug/L) | |
|---|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.384 | 3.379 | (1.000) | 15687 | 0.10000 | | (a) |
| * 45 Naphthalene-d8 | 136 | 4.494 | 4.494 | (1.000) | 65446 | 0.10000 | | |
| * 86 Acenaphthene-d10 | 164 | 6.168 | 6.163 | (1.000) | 30806 | 0.10000 | | |
| * 126 Phenanthrene-d10 | 188 | 7.613 | 7.607 | (1.000) | 52531 | 0.10000 | | |
| * 182 Chrysene-d12 | 240 | 10.388 | 10.383 | (1.000) | 43722 | 0.10000 | | (M) |
| * 198 Perylene-d12 | 264 | 12.402 | 12.397 | (1.000) | 43776 | 0.10000 | | |
| 1 1,4-Dioxane | 58 | 1.638 | 1.627 | (0.484) | 1479 | 0.14856 | 14.86 | (a) |

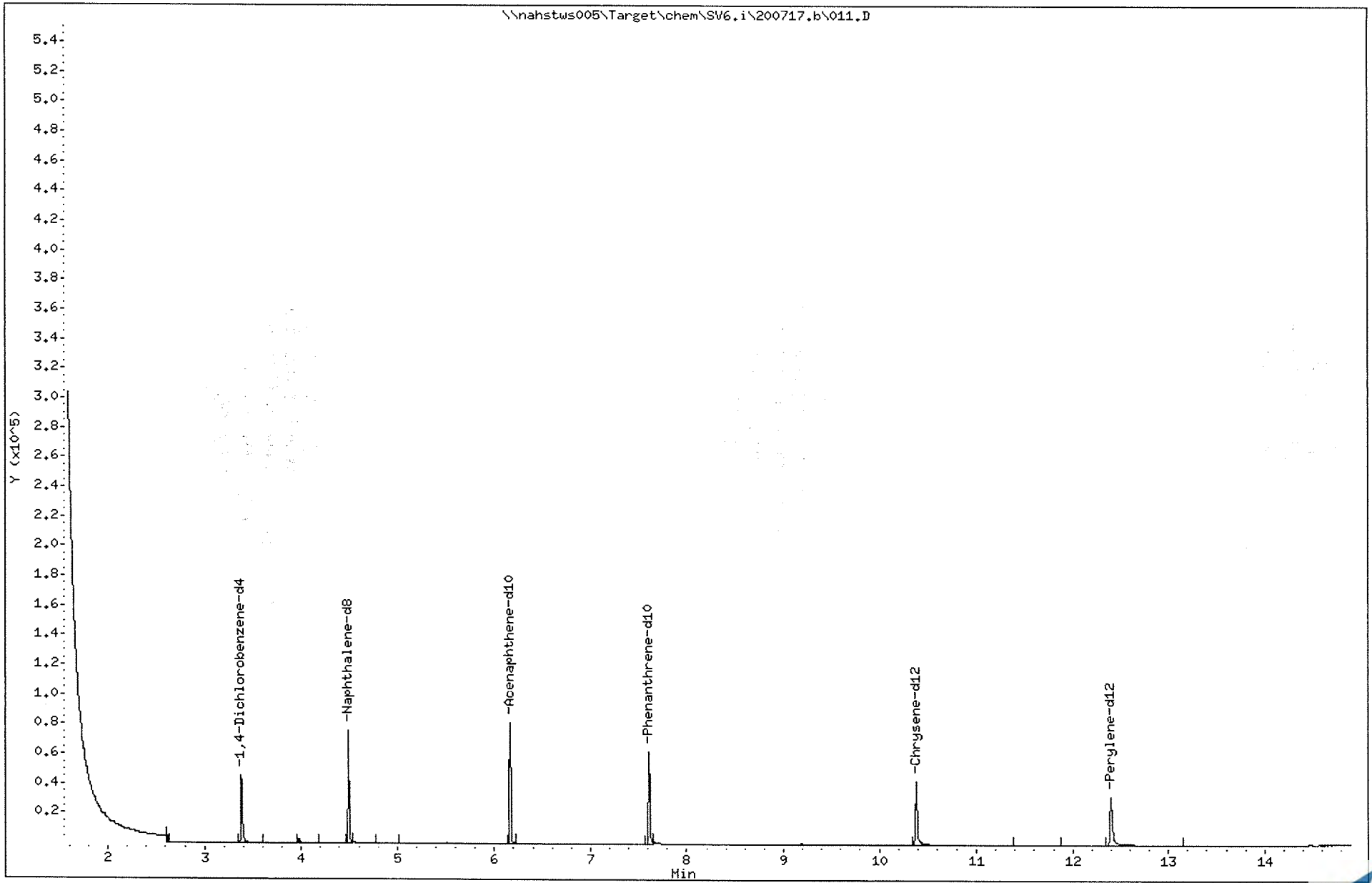
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200717.b\011.D
Date : 17-JUL-2020 15:57
Client ID: HS20070623-02
Sample Info: HS20070623-01;HS20070623-02
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28





Data File: \\nahstws005\Target\chem\SV6.i\200717.b\011.D



Date : 17-JUL-2020 15:57

Client ID: HS20070623-02

Instrument: SV6.i

Sample Info: HS20070623-01;HS20070623-02

Purge Volume: 1000.0

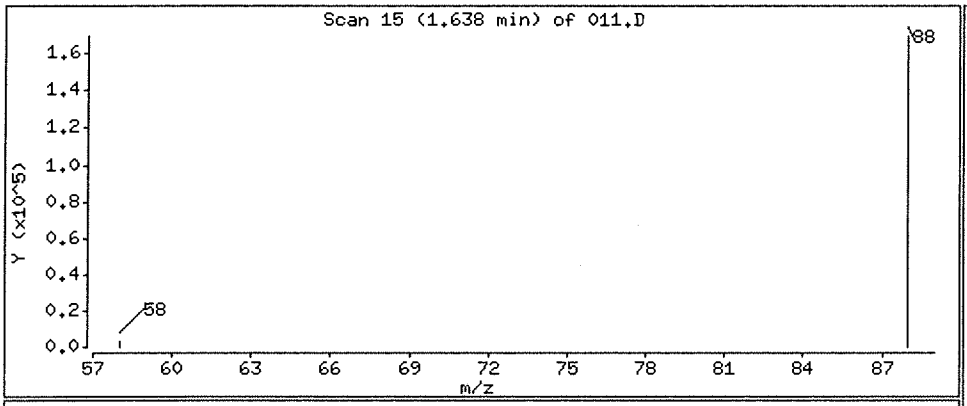
Operator: LG

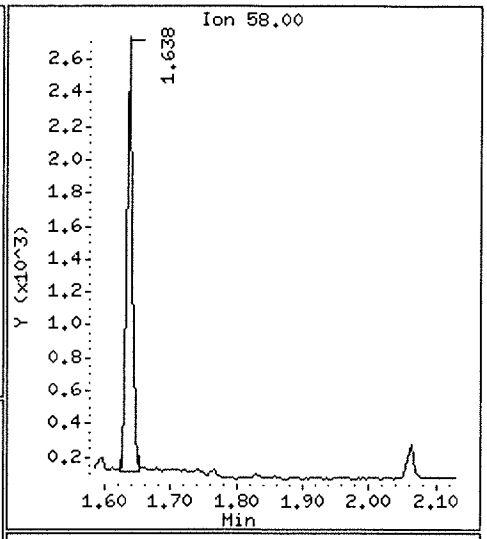
Column phase: RTX-5SIL MS

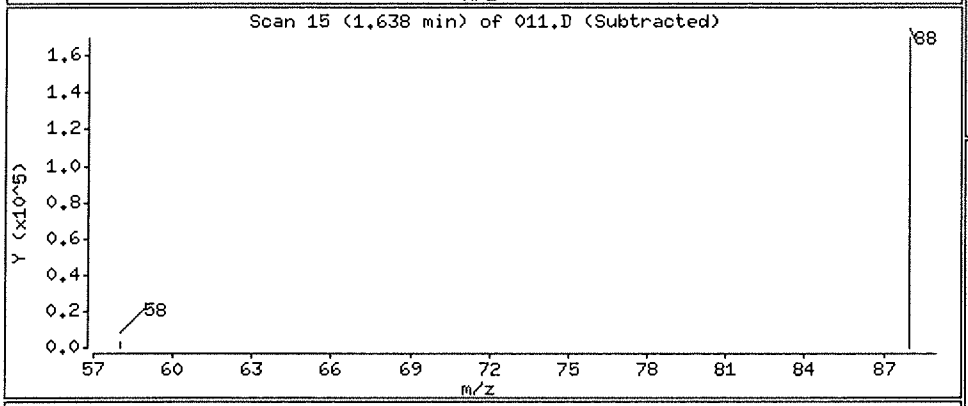
Column diameter: 0.28

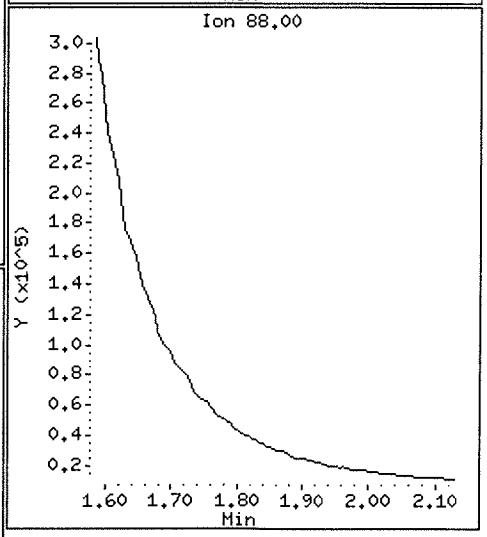
1 1,4-Dioxane

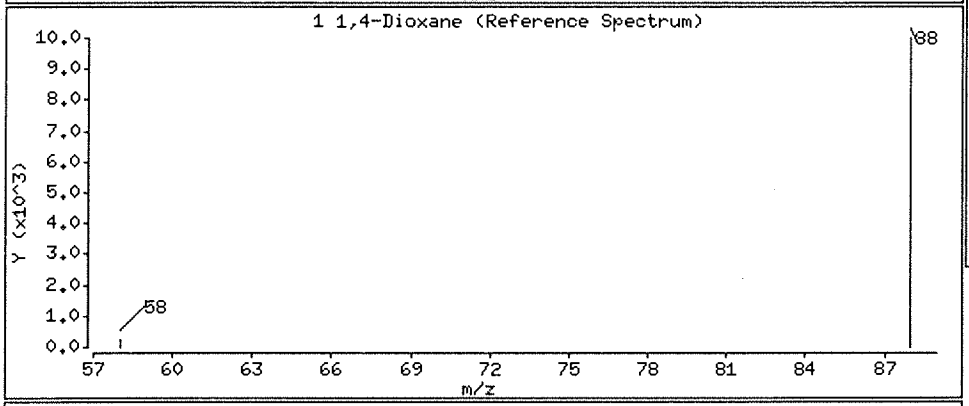
Concentration: 14.86 ug/L

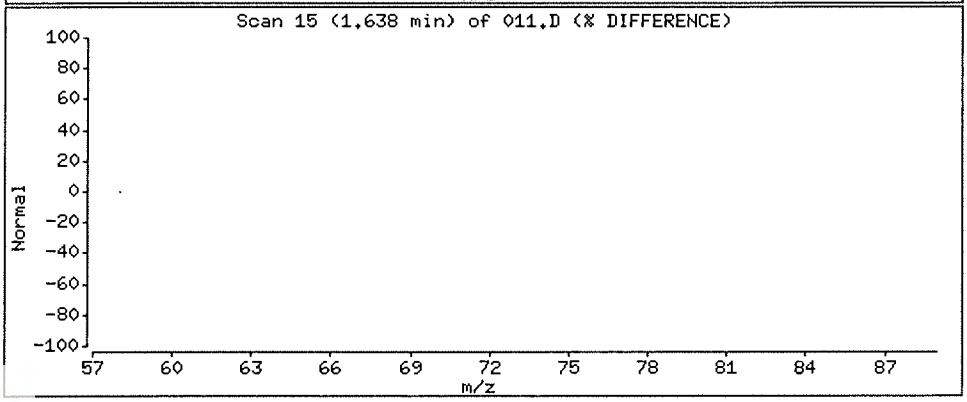


ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200717.b\016.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 17-JUL-2020 17:55 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200717.b\DXSIM.m
Meth Date : 18-Aug-2020 13:19 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 16 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

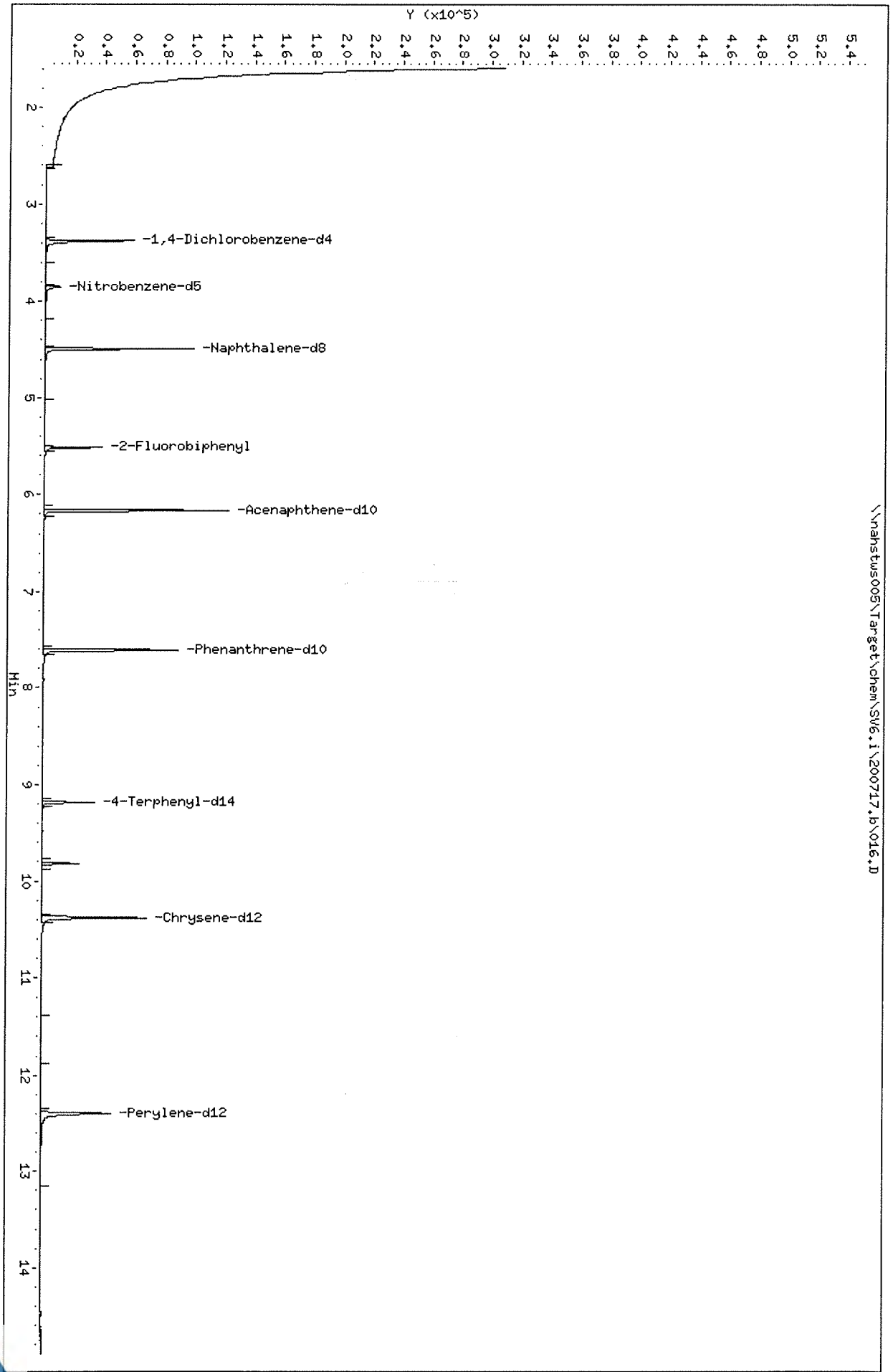
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 1.000 | ng unit correction factor |
| Vt | 1000.000 | Volume of final extract (uL) |
| Vo | 1000.000 | Volume of sample extracted (mL) |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( NG) | ON-COL ( NG) |
|---|---|---|---|---|---|---|---|
| * 20 1,4-Dichlorobenzene-d4 | 152 | 3.384 | 3.384 | (1.000) | 45046 | 0.10000 | (aQM) |
| * 45 Naphthalene-d8 | 136 | 4.494 | 4.494 | (1.000) | 89759 | 0.10000 | |
| $ 33 Nitrobenzene-d5 | 82 | 3.851 | 3.851 | (0.857) | 15932 | 0.08000 | 0.06798(Q) |
| * 86 Acenaphthene-d10 | 164 | 6.163 | 6.163 | (1.000) | 43431 | 0.10000 | |
| $ 69 2-Fluorobiphenyl | 172 | 5.519 | 5.519 | (0.896) | 36607 | 0.08000 | 0.07101(M) |
| * 126 Phenanthrene-d10 | 188 | 7.607 | 7.607 | (1.000) | 80878 | 0.10000 | |
| * 182 Chrysene-d12 | 240 | 10.383 | 10.383 | (1.000) | 68332 | 0.10000 | (M) |
| $ 158 4-Terphenyl-d14 | 244 | 9.183 | 9.183 | (0.884) | 46876 | 0.08000 | 0.08319(M) |
| * 198 Perylene-d12 | 264 | 12.397 | 12.397 | (1.000) | 63228 | 0.10000 | |
| 1 1,4-Dioxane | 58 | 1.634 | 1.634 | (0.483) | 2655 | 0.08000 | 0.09287(aM) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.




Data File: \\nahstws005\Target\chem\SV6.i\200717.b\016.D
Date : 17-JUL-2020 17:55
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

# HS20070623 - ME - ICP_W_DOD

ALS WO# HS20070623

**ALS Houston, US**

Date: 18-Aug-20

## FORM 12 - PREPARATION LOG

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623
Start Date: 27-Jul-2020 14:30 End Date: 27-Jul-2020 18:30

Batch ID: 155817
Prep Code: 3010A
Method: SW3010A
Technician:

| SampID | ClientID | Matrix | Init Wt | Init Vol | FinalVol (mL) | PrepFac |
|---|---|---|---|---|---|---|
| HS20070621-01MS | | | | 10 | 10 | 1 |
| HS20070621-01MSD | | | | 10 | 10 | 1 |
| HS20070621-01PDS | | | | 10 | 10 | 1 |
| HS20070621-01SD | | | | 10 | 10 | 1 |
| HS20070623-01 | LH18/24-SP650_071420 | Water | | 10 | 10 | 1 |
| LCS-155817 | | | | 10 | 10 | 1 |
| MBLK-155817 | | | | 10 | 10 | 1 |

## FORM 13 - ANALYSIS RUN LOG

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623
Start Date: 28-Jul-2020 End Date: 28-Jul-2020

Run ID:ICPMS06_365787
Instrument:ICPMS06
Method:

| Sample No. | D/F | Time | FileID | Analytes |
|---|---|---|---|---|
| ICPMS06_365787_Tune | 1 | 28-Jul-2020 00:00 | ICPMS06_365787_Tune_1 | |
| CAL BLK | 1 | 28-Jul-2020 11:27 | 013CALB.d_5677072 | AG BA PB SE |
| 2/10/200 | 1 | 28-Jul-2020 11:29 | 014CALS.d_5677073 | AG BA PB SE |
| 5/25/500 | 1 | 28-Jul-2020 11:31 | 015CALS.d_5677074 | AG BA PB SE |
| 10/50/100 | 1 | 28-Jul-2020 11:33 | 016CALS.d_5677075 | AG BA PB SE |
| 100/500/10K | 1 | 28-Jul-2020 11:35 | 017CALS.d_5677076 | AG BA PB SE |
| 200/1000/20K | 1 | 28-Jul-2020 11:37 | 018CALS.d_5677077 | AG BA PB SE |
| LLICV2 | 1 | 28-Jul-2020 11:42 | 021LCV2.d_5677080 | AG BA PB SE |
| LLICV5 | 1 | 28-Jul-2020 11:44 | 022LCV5.d_5677081 | AG BA PB SE |
| ICB | 1 | 28-Jul-2020 11:46 | 023_ICB.d_5677082 | AG BA PB SE |
| ICV | 1 | 28-Jul-2020 11:50 | 024_ICV.d_5677083 | AG BA PB SE |
| ICSA | 1 | 28-Jul-2020 11:58 | 026ICSA.d_5677085 | AG BA PB SE |
| ICSAB | 1 | 28-Jul-2020 12:00 | 027ICSB.d_5677086 | AG BA PB SE |
| CAL BLK | 1 | 28-Jul-2020 15:30 | 105CALB.d_5677087 | AG BA PB SE |
| 2/10/200 | 1 | 28-Jul-2020 15:32 | 106CALS.d_5677088 | AG BA PB SE |
| 5/25/500 | 1 | 28-Jul-2020 15:34 | 107CALS.d_5677089 | AG BA PB SE |
| 10/50/100 | 1 | 28-Jul-2020 15:36 | 108CALS.d_5677090 | AG BA PB SE |
| 100/500/10K | 1 | 28-Jul-2020 15:38 | 109CALS.d_5677091 | AG BA PB SE |
| 200/1000/20K | 1 | 28-Jul-2020 15:40 | 110CALS.d_5677092 | AG BA PB SE |
| ICV | 1 | 28-Jul-2020 15:43 | 112_ICV.d_5677094 | AG BA PB SE |
| LLICCV2 | 1 | 28-Jul-2020 15:45 | 113LCV2.d_5677095 | AG BA PB SE |
| LLICCV5 | 1 | 28-Jul-2020 15:47 | 114LCV5.d_5677096 | AG BA PB SE |
| ICCB 1 | 1 | 28-Jul-2020 15:49 | 115_ICB.d_5677097 | AG BA PB SE |
| CCV 1 | 1 | 28-Jul-2020 15:59 | 117_CCV.d_5677309 | AG BA PB SE |
| CCB 2 | 1 | 28-Jul-2020 16:01 | 118_CCB.d_5677310 | AG BA PB SE |
| MBLK-155817 | 1 | 28-Jul-2020 16:05 | 119SMPL.d_5677311 | AG BA PB SE |
| LCS-155817 | 1 | 28-Jul-2020 16:07 | 120SMPL.d_5677312 | AG BA SE |
| ZZZZZZSD | 5 | 28-Jul-2020 16:10 | 122SMPL.d_5677314 | AG BA PB SE |
| ZZZZZZMS | 1 | 28-Jul-2020 16:12 | 123SMPL.d_5677315 | AG BA PB SE |
| ZZZZZZMSD | 1 | 28-Jul-2020 16:14 | 124SMPL.d_5677316 | AG BA PB SE |
| ZZZZZZPDS | 1 | 28-Jul-2020 16:16 | 125SMPL.d_5677317 | AG BA PB SE |
| LH18/24-SP650_071420 | 1 | 28-Jul-2020 16:18 | 126SMPL.d_5677318 | AG BA PB SE |
| CCV 2 | 1 | 28-Jul-2020 16:24 | 128_CCV.d_5677320 | AG BA PB SE |
| CCB 3 | 1 | 28-Jul-2020 16:26 | 129_CCB.d_5677321 | AG BA PB SE |
| CCV 3 | 1 | 28-Jul-2020 20:43 | 170_CCV.d_5677573 | AG BA PB SE |
| CCB 4 | 1 | 28-Jul-2020 20:45 | 171_CCB.d_5677574 | AG BA PB SE |
| LCS-155817 | 1 | 28-Jul-2020 20:47 | 172SMPL.d_5677575 | PB |
| CCV 4 | 1 | 28-Jul-2020 21:00 | 179_CCV.d_5677577 | AG BA PB SE |
| CCB 5 | 1 | 28-Jul-2020 21:02 | 180_CCB.d_5677578 | AG BA PB SE |

**ALS Houston, US** Date: 18-Aug-20

## Form 2 - Initial and Continuing Calibration Verification

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

Run ID: ICPMS06_365787
Instrument: ICPMS06
Method: SW6020

| ICV | Date: 28-Jul-2020 11:50 | | Seq: 5677083 | ICV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Barium | 100 | 90.567 | 91 | 90-110 | |
| Lead | 100 | 92.418 | 92 | 90-110 | |
| Selenium | 100 | 96.984 | 97 | 90-110 | |
| Silver | 100 | 99.008 | 99 | 90-110 | |

| ICV | Date: 28-Jul-2020 15:43 | | Seq: 5677094 | ICV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Barium | 100 | 94.504 | 95 | 90-110 | |
| Lead | 100 | 93.458 | 94 | 90-110 | |
| Selenium | 100 | 96.453 | 97 | 90-110 | |
| Silver | 100 | 94.807 | 95 | 90-110 | |

| CCV1 | Date: 28-Jul-2020 15:59 | | Seq: 5677309 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Barium | 100 | 94.031 | 94 | 90-110 | |
| Lead | 100 | 92.506 | 93 | 90-110 | |
| Selenium | 100 | 95.414 | 95 | 90-110 | |
| Silver | 100 | 95.305 | 95 | 90-110 | |

| CCV2 | Date: 28-Jul-2020 16:24 | | Seq: 5677320 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Barium | 100 | 93.889 | 94 | 90-110 | |
| Lead | 100 | 94.389 | 94 | 90-110 | |
| Selenium | 100 | 99.201 | 99 | 90-110 | |
| Silver | 100 | 95.422 | 95 | 90-110 | |

| CCV3 | Date: 28-Jul-2020 20:43 | | Seq: 5677573 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Barium | 100 | 101.895 | 102 | 90-110 | |
| Lead | 100 | 97.539 | 98 | 90-110 | |
| Selenium | 100 | 102.632 | 103 | 90-110 | |
| Silver | 100 | 103.551 | 104 | 90-110 | |

| CCV4 | Date: 28-Jul-2020 21:00 | | Seq: 5677577 | CCV | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | **Control Limits** | **Flag** |
| Barium | 100 | 101.424 | 101 | 90-110 | |
| Lead | 100 | 99.255 | 99 | 90-110 | |
| Selenium | 100 | 103.492 | 103 | 90-110 | |
| Silver | 100 | 100.683 | 101 | 90-110 | |

## Form 3 - BLANKS

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

Run ID: ICPMS06_365787
Instrument: ICPMS06
Method: SW6020

| ICB | Date: 28-Jul-2020 11:46 | | Seq: 5677082 | ICB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 5 | 1.9 | 5 | U | |
| Lead | 5 | 0.6 | 5 | U | |
| Selenium | 5 | 1.1 | 5 | U | |
| Silver | 5 | 0.2 | 5 | U | |

| ICCB1 | Date: 28-Jul-2020 15:49 | | Seq: 5677097 | CCB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 5 | 1.9 | 5 | U | |
| Lead | 5 | 0.6 | 5 | U | |
| Selenium | 5 | 1.1 | 5 | U | |
| Silver | 5 | 0.2 | 5 | U | |

| CCB2 | Date: 28-Jul-2020 16:01 | | Seq: 5677310 | CCB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 4 | 1.9 | 4 | U | |
| Lead | 2 | 0.6 | 2 | U | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |

| MBLK-155817 | Date: 28-Jul-2020 16:05 | | Seq: 5677311 | MBLK | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 5 | 1.9 | 5 | U | |
| Lead | 5 | 0.6 | 5 | U | |
| Selenium | 5 | 1.1 | 5 | U | |
| Silver | 5 | 0.2 | 5 | U | |

| CCB3 | Date: 28-Jul-2020 16:26 | | Seq: 5677321 | CCB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 4 | 1.9 | 4 | U | |
| Lead | 2 | 0.6 | 2 | U | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |

| CCB4 | Date: 28-Jul-2020 20:45 | | Seq: 5677574 | CCB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 4 | 1.9 | 4 | U | |
| Lead | 2 | 0.6 | 2 | U | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |

| CCB5 | Date: 28-Jul-2020 21:02 | | Seq: 5677578 | CCB | Units: ug/L |
|---|---|---|---|---|---|
| **Analyte** | **Result** | **MDL** | **Report Limit** | **Qual** | |
| Barium | 4 | 1.9 | 4 | U | |
| Lead | 2 | 0.6 | 2 | U | |
| Selenium | 2 | 1.1 | 2 | U | |
| Silver | 2 | 0.2 | 2 | U | |

**ALS Houston, US** Date: 18-Aug-20

## Form 4 - ICP Interference Check Sample

**Client:** Bhate Environmental Associates, Inc. Run ID:ICPMS06_365787
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples Instrument:ICPMS06
**WorkOrder:** HS20070623 Method:SW6020

| ICSA | Date: 28-Jul-2020 11:58 | Seq: 5677085 | ICSA | Units: ug/L |
|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | |
| Barium | | 0.025 | 0 | |
| Lead | | 0.051 | 0 | |
| Selenium | | 0.34 | 0 | |
| Silver | | 0.05 | 0 | |

| ICSAB | Date: 28-Jul-2020 12:00 | Seq: 5677086 | ICSAB | Units: ug/L |
|---|---|---|---|---|
| **Analyte** | **True** | **Found** | **%R** | |
| Barium | 100 | 101.6 | 102 | |
| Lead | 100 | 101.1 | 101 | |
| Selenium | 100 | 110.8 | 111 | |
| Silver | 100 | 99.85 | 99.9 | |

**ALS Houston, US** Date: 18-Aug-20

## Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

Date Analyzed: 28-Jul-2020 16:14
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Matrix Spike: HS20070621-01MS
Client Sample ID:

Analysis Method: SW6020

| Analyte | Sample Result | MS Result | Spike Amount | % Rec | MSD Result | Spike Amount | % Rec | % Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 464.9 | 544.7 | 50.00 | 160 | 531.3 | 50.00 | 133 | 86-114 | 2.49 | 20 |
| Lead | 1.095 | 46.57 | 50.00 | 91.0 | 44.13 | 50.00 | 86.1 | 88-115 | 5.39 | 20 |
| Selenium | 5.000 | 49.79 | 50.00 | 98.4 | 47.05 | 50.00 | 92.9 | 80-120 | 5.67 | 20 |
| Silver | 5.000 | 45.92 | 50.00 | 91.8 | 43.09 | 50.00 | 86.1 | 85-116 | 6.35 | 20 |

**ALS Houston, US** Date: 18-Aug-20

## Form 5B - Post Digest Sample Recovery

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

Date Analyzed: 28-Jul-2020 16:16
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Lab Sample ID: HS20070621-01PDS
Client Sample ID:

Analysis Method: SW6020

| Analyte | Sample Result | PDS Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Barium | 464.9 | 576.4 | 100 | 112 | 80-120 |
| Lead | 1.095 | 96.93 | 100 | 96 | 80-120 |
| Selenium | 0 | 103.6 | 100 | 103 | 80-120 |
| Silver | 0 | 95 | 100 | 95 | 80-120 |

**ALS Houston, US**

Date: 18-Aug-20

**Form 7 - Laboratory Control Sample**

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

Date Analyzed: 28-Jul-2020 16:07
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Lab Sample ID: LCS-155817
Analysis Method: SW6020

| Analyte | Spike Amount | LCS Result | % Rec | % Rec Limits |
|---|---|---|---|---|
| Barium | 50 | 43.81 | 88 | 86-114 |
| Selenium | 50 | 48.14 | 96 | 80-120 |
| Silver | 50 | 44.43 | 89 | 85-116 |
| Lead | 50 | 45.03 | 90 | 88-115 |

**ALS Houston, US** Date: 18-Aug-20

## Form 8 - ICP Serial Dilutions

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20070623

Date Analyzed: 28-Jul-2020 16:10
Date Extracted: 27-Jul-2020 18:30
Units: ug/L

Lab Sample ID: HS20070621-01SD
Client Sample ID:

Analysis Method: SW6020

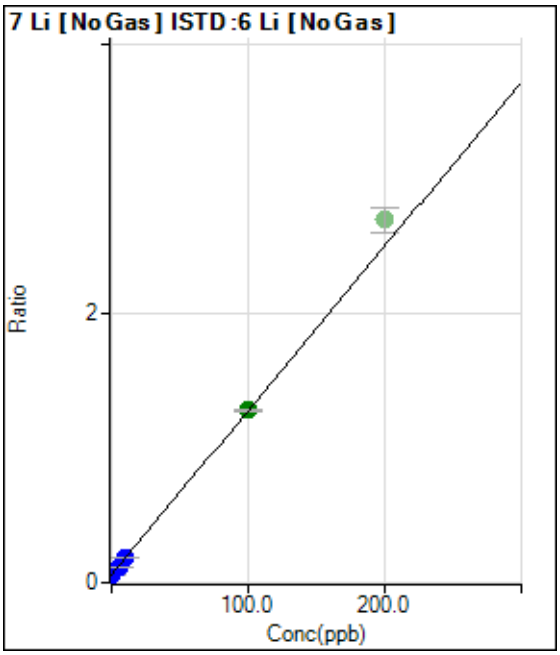
| Analyte | Sample Result | C | SD Result | C | RPD | Q |
|---|---|---|---|---|---|---|
| Barium | 464.9 | | 450 | | 3 | |
| Lead | 1.095 | J | 0 | U | 0 | |
| Selenium | 0 | U | 0 | U | 0 | |
| Silver | 0 | U | 0 | U | 0 | |

Calibration for 024_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 013CALB.d | CAL BLK | 7/28/2020 11:27:43 AM |
| 2 | 014CALS.d | 2/10/200 | 7/28/2020 11:29:37 AM |
| 3 | 015CALS.d | 5/25/500 | 7/28/2020 11:31:30 AM |
| 4 | 016CALS.d | 10/50/100 | 7/28/2020 11:33:23 AM |
| 5 | 017CALS.d | 100/500/10K | 7/28/2020 11:35:16 AM |
| 6 | 018CALS.d | 200/1000/20K | 7/28/2020 11:37:05 AM |

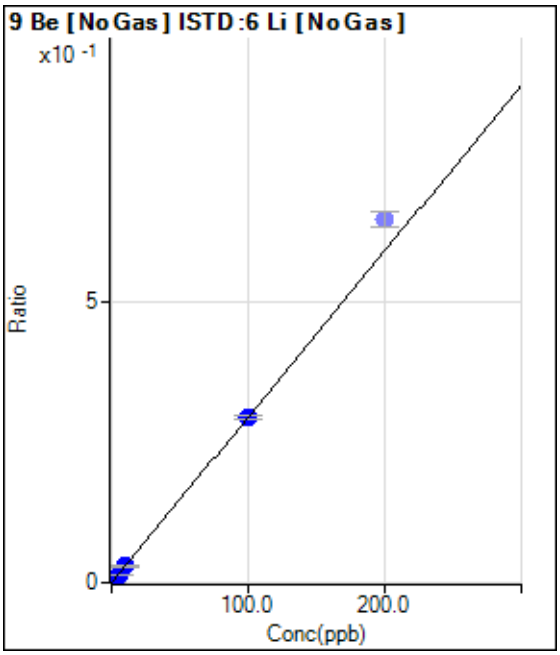
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 60887.35 | 0.0600 | P | 3.3 |
| 2 | ☐ | 2.000 | 1.971 | 85442.97 | 0.0840 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.693 | 120299.92 | 0.1172 | P | 2.4 |
| 4 | ☐ | 10.000 | 9.787 | 184783.31 | 0.1792 | P | 0.3 |
| 5 | ☐ | 100.000 | 100.037 | 1246034.12 | 1.2787 | A | 0.4 |
| 6 | ☑ | 200.000 | | 2500120.38 | 2.6929 | A | 7.2 |

y = 0.0122 * x + 0.0600
R = 1.0000
DL = 0.4848
BEC = 4.924

Weight: <None>
Min Conc: <None>

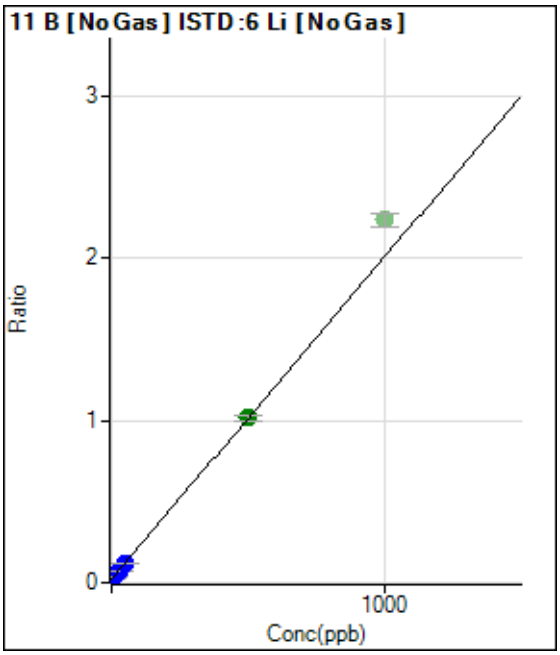



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 50.00 | 0.0000 | P | 21.3 |
| 2 | ☐ | 2.000 | 2.027 | 6148.06 | 0.0060 | P | 1.0 |
| 3 | ☐ | 5.000 | 5.060 | 15403.54 | 0.0150 | P | 4.6 |
| 4 | ☐ | 10.000 | 9.937 | 30336.30 | 0.0294 | P | 4.5 |
| 5 | ☐ | 100.000 | 100.003 | 288156.78 | 0.2958 | P | 2.3 |
| 6 | ☑ | 200.000 | | 601540.68 | 0.6474 | P | 4.1 |

y = 0.0030 * x + 4.9364E-005
R = 1.0000
DL = 0.01069
BEC = 0.01669

Weight: <None>
Min Conc: <None>

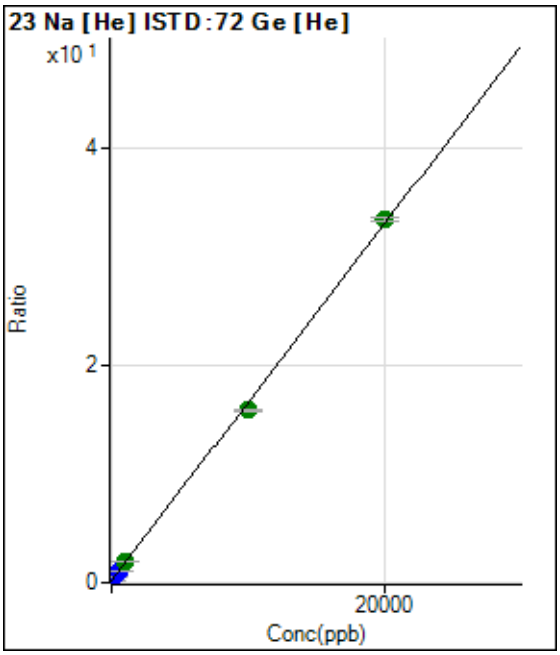
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22361.31 | 0.0220 | P | 2.1 |
| 2 | ☐ | 10.000 | 8.675 | 39901.80 | 0.0392 | P | 3.6 |
| 3 | ☐ | 25.000 | 23.842 | 71125.00 | 0.0694 | P | 6.3 |
| 4 | ☐ | 50.000 | 49.802 | 124612.82 | 0.1209 | P | 2.7 |
| 5 | ☐ | 500.000 | 500.104 | 988801.29 | 1.0150 | A | 3.8 |
| 6 | ☑ | 1000.000 | | 2077857.10 | 2.2358 | A | 3.9 |

y = 0.0020 * x + 0.0220
R = 1.0000
DL = 0.6856
BEC = 11.09

Weight: <None>
Min Conc: <None>

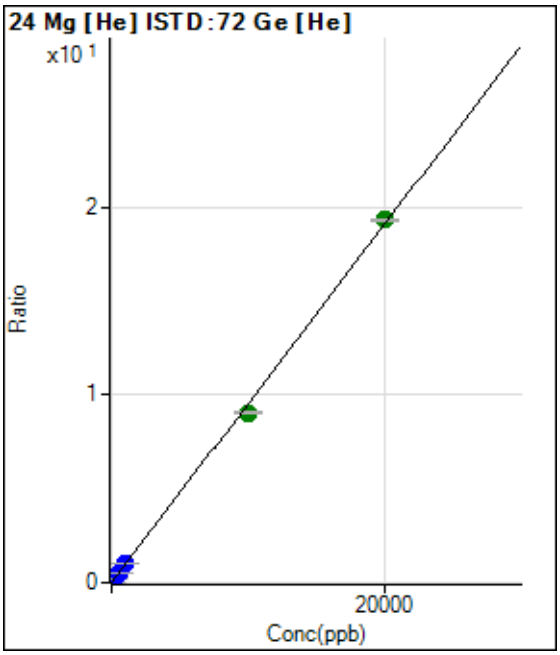



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 107088.46 | 0.1951 | P | 1.5 |
| 2 | ☐ | 200.000 | 204.438 | 290394.32 | 0.5308 | P | 0.4 |
| 3 | ☐ | 500.000 | 515.861 | 565672.41 | 1.0421 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1049.384 | 1035978.14 | 1.9182 | A | 4.3 |
| 5 | ☐ | 10000.00 | 9548.405 | 8454832.58 | 15.8732 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20222.88 | 17452547.66 | 33.4002 | A | 1.1 |

y = 0.0016 * x + 0.1951
R = 0.9996
DL = 5.293
BEC = 118.8

Weight: <None>
Min Conc: <None>

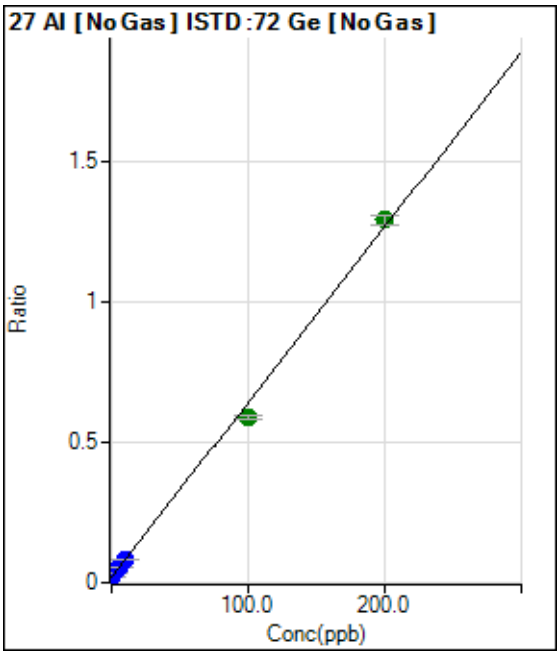
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 880.05 | 0.0016 | P | 6.4 |
| 2 | ☐ | 200.000 | 206.142 | 108552.84 | 0.1984 | P | 1.3 |
| 3 | ☐ | 500.000 | 514.423 | 267539.37 | 0.4928 | P | 0.2 |
| 4 | ☐ | 1000.000 | 1049.859 | 542202.09 | 1.0040 | P | 0.8 |
| 5 | ☐ | 10000.00 | 9488.678 | 4826217.95 | 9.0613 | A | 1.4 |
| 6 | ☐ | 20000.00 | 20252.74 | 10105680.48 | 19.3387 | A | 0.8 |

y = 9.5479E-004 * x + 0.0016
R = 0.9995
DL = 0.3222
BEC = 1.679

Weight: <None>
Min Conc: <None>

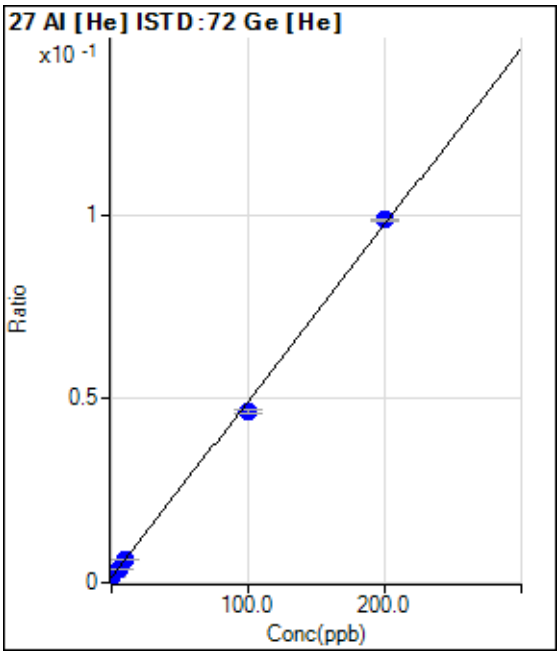



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33150.05 | 0.0188 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.262 | 57529.58 | 0.0329 | P | 2.4 |
| 3 | ☐ | 5.000 | 5.617 | 93219.08 | 0.0538 | P | 4.3 |
| 4 | ☐ | 10.000 | 10.504 | 148912.53 | 0.0844 | P | 1.9 |
| 5 | ☐ | 100.000 | 91.605 | 1005380.87 | 0.5909 | A | 2.6 |
| 6 | ☐ | 200.000 | 204.154 | 2098551.48 | 1.2938 | A | 2.4 |

y = 0.0062 * x + 0.0188
R = 0.9987
DL = 0.2526
BEC = 3.005

Weight: <None>
Min Conc: <None>

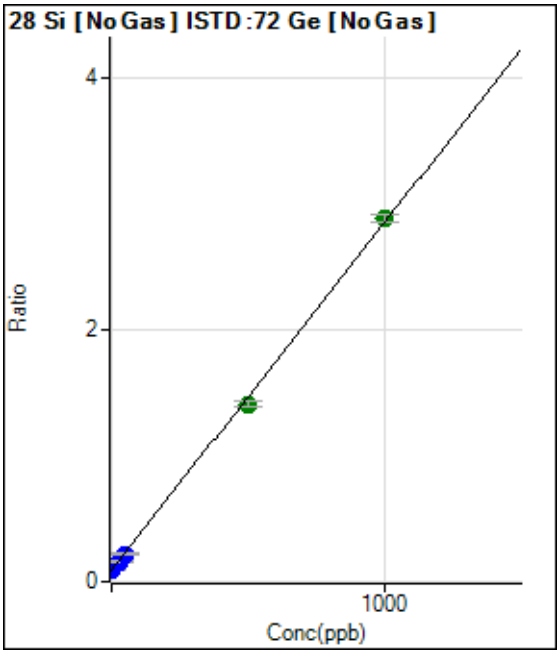
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 803.37 | 0.0015 | P | 17.1 |
| 2 | ☐ | 2.000 | 2.625 | 1490.11 | 0.0027 | P | 16.7 |
| 3 | ☐ | 5.000 | 4.756 | 2033.53 | 0.0037 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.331 | 3467.16 | 0.0064 | P | 0.7 |
| 5 | ☐ | 100.000 | 94.467 | 24929.39 | 0.0468 | P | 2.2 |
| 6 | ☐ | 200.000 | 202.750 | 51606.65 | 0.0988 | P | 0.9 |

y = 4.7990E-004 * x + 0.0015
R = 0.9994
DL = 1.566
BEC = 3.047

Weight: <None>
Min Conc: <None>

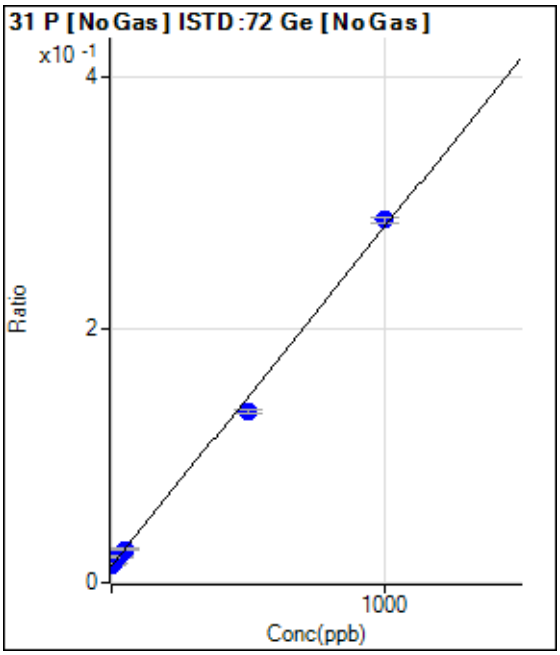



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 161313.86 | 0.0913 | P | 1.9 |
| 2 | ☐ | 10.000 | 9.709 | 206641.89 | 0.1182 | P | 3.4 |
| 3 | ☐ | 25.000 | 24.819 | 276872.83 | 0.1599 | P | 3.3 |
| 4 | ☐ | 50.000 | 46.956 | 390104.23 | 0.2211 | P | 2.4 |
| 5 | ☐ | 500.000 | 478.597 | 2404962.83 | 1.4134 | A | 2.8 |
| 6 | ☐ | 1000.000 | 1010.861 | 4677515.56 | 2.8837 | A | 2.0 |

y = 0.0028 * x + 0.0913
R = 0.9997
DL = 1.918
BEC = 33.07

Weight: <None>
Min Conc: <None>

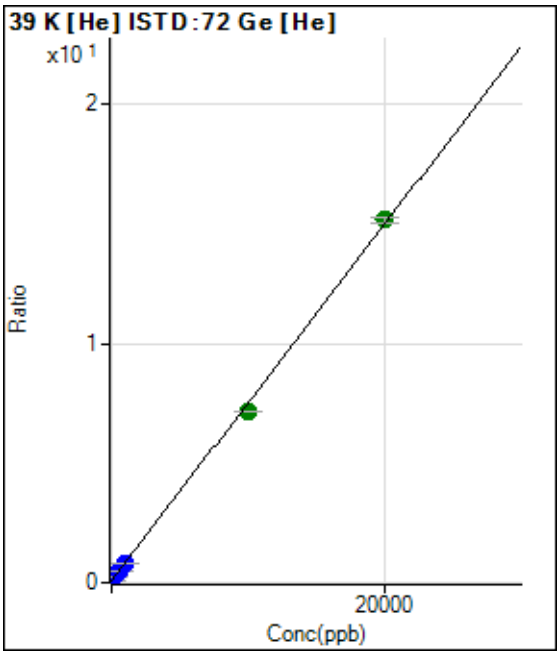
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23426.80 | 0.0133 | P | 4.2 |
| 2 | ☐ | 10.000 | 9.401 | 27617.93 | 0.0158 | P | 1.5 |
| 3 | ☐ | 25.000 | 27.451 | 35696.39 | 0.0206 | P | 5.0 |
| 4 | ☐ | 50.000 | 49.698 | 46902.55 | 0.0266 | P | 2.7 |
| 5 | ☐ | 500.000 | 457.138 | 230858.25 | 0.1357 | P | 2.0 |
| 6 | ☐ | 1000.000 | 1021.391 | 465091.24 | 0.2867 | P | 1.7 |

y = 2.6774E-004 * x + 0.0133
R = 0.9987
DL = 6.262
BEC = 49.57

Weight: <None>
Min Conc: <None>

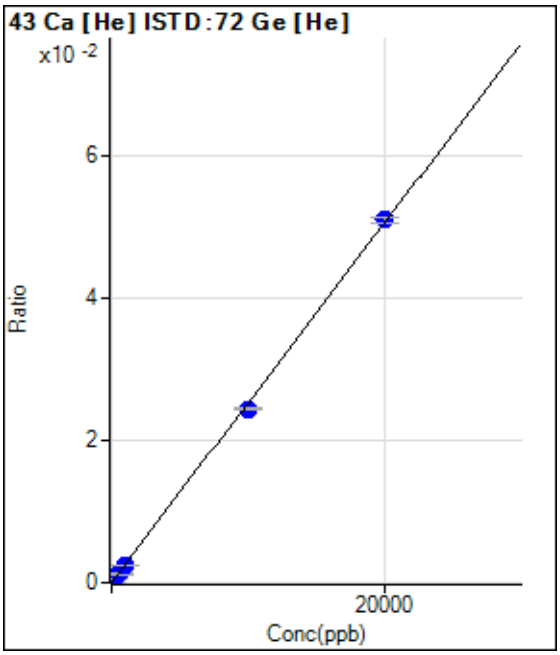



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 45017.02 | 0.0820 | P | 1.6 |
| 2 | ☐ | 200.000 | 199.436 | 126196.70 | 0.2307 | P | 1.4 |
| 3 | ☐ | 500.000 | 514.737 | 252824.05 | 0.4657 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1016.193 | 453364.21 | 0.8395 | P | 0.4 |
| 5 | ☐ | 10000.00 | 9489.440 | 3811441.92 | 7.1554 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20254.10 | 7932235.71 | 15.1794 | A | 1.7 |

y = 7.4540E-004 * x + 0.0820
R = 0.9995
DL = 5.159
BEC = 110

Weight: <None>
Min Conc: <None>

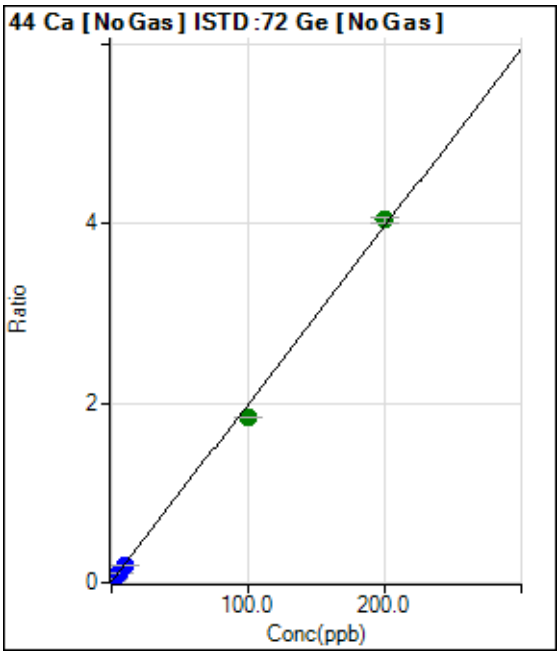
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 99.4 |
| 2 | ☐ | 200.000 | 216.838 | 323.35 | 0.0006 | P | 21.1 |
| 3 | ☐ | 500.000 | 484.408 | 690.03 | 0.0013 | P | 19.0 |
| 4 | ☐ | 1000.000 | 961.313 | 1336.75 | 0.0025 | P | 4.7 |
| 5 | ☐ | 10000.00 | 9654.755 | 13039.72 | 0.0245 | P | 1.6 |
| 6 | ☐ | 20000.00 | 20174.77 | 26702.96 | 0.0511 | P | 1.5 |

y = 2.5310E-006 * x + 4.2653E-005
R = 0.9998
DL = 50.27
BEC = 16.85

Weight: <None>
Min Conc: <None>

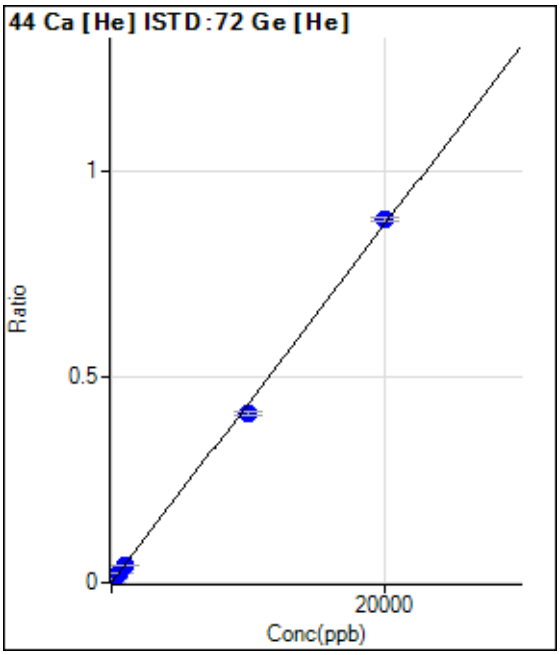



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 19767.76 | 0.0112 | P | 5.3 |
| 2 | ☐ | 2.000 | 1.943 | 86793.61 | 0.0496 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.938 | 188433.15 | 0.1088 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.566 | 353498.43 | 0.2003 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.643 | 3136106.31 | 1.8425 | A | 0.5 |
| 6 | ☐ | 200.000 | 203.702 | 6550296.99 | 4.0378 | A | 1.4 |

y = 0.0198 * x + 0.0112
R = 0.9991
DL = 0.08967
BEC = 0.5665

Weight: <None>
Min Conc: <None>

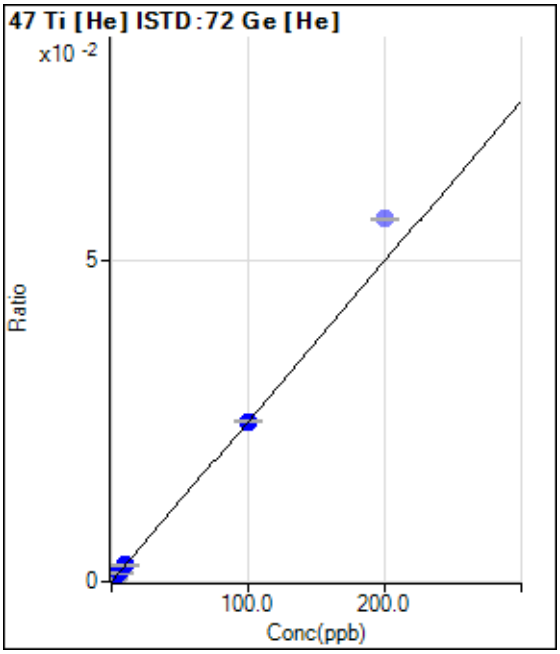
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 406.68 | 0.0007 | P | 10.6 |
| 2 | ☐ | 200.000 | 208.760 | 5374.49 | 0.0098 | P | 5.3 |
| 3 | ☐ | 500.000 | 493.588 | 12068.81 | 0.0222 | P | 3.0 |
| 4 | ☐ | 1000.000 | 989.866 | 23663.94 | 0.0438 | P | 0.6 |
| 5 | ☐ | 10000.00 | 9457.215 | 219587.21 | 0.4123 | P | 2.6 |
| 6 | ☐ | 20000.00 | 20271.97 | 461369.86 | 0.8830 | P | 1.2 |

y = 4.3519E-005 * x + 7.4130E-004
R = 0.9995
DL = 5.43
BEC = 17.03

Weight: <None>
Min Conc: <None>

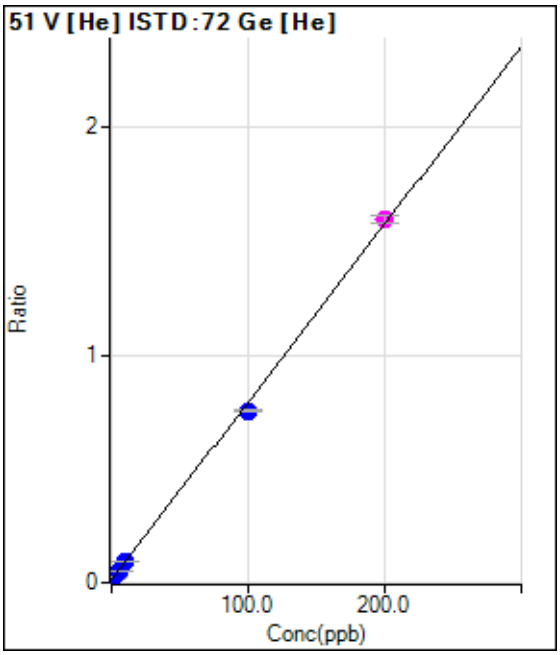



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13.33 | 0.0000 | P | 115.0 |
| 2 | ☐ | 2.000 | 1.762 | 253.34 | 0.0005 | P | 16.0 |
| 3 | ☐ | 5.000 | 5.492 | 756.70 | 0.0014 | P | 22.9 |
| 4 | ☐ | 10.000 | 10.118 | 1373.42 | 0.0025 | P | 1.1 |
| 5 | ☐ | 100.000 | 99.968 | 13270.02 | 0.0249 | P | 1.8 |
| 6 | ☑ | 200.000 | | 29462.21 | 0.0564 | P | 0.7 |

y = 2.4896E-004 * x + 2.4297E-005
R = 1.0000
DL = 0.3367
BEC = 0.0976

Weight: <None>
Min Conc: <None>

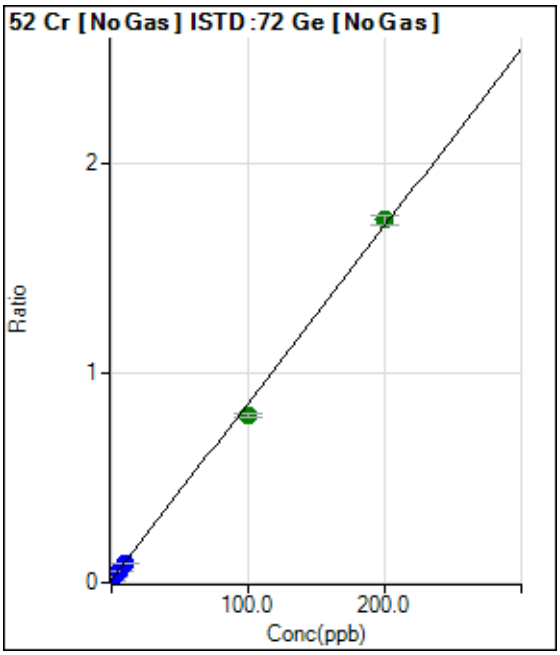
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 7065.18 | 0.0129 | P | 1.1 |
| 2 | ☐ | 2.000 | 2.024 | 15681.22 | 0.0287 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.944 | 27930.72 | 0.0515 | P | 2.0 |
| 4 | ☐ | 10.000 | 10.006 | 49120.18 | 0.0910 | P | 0.4 |
| 5 | ☐ | 100.000 | 94.983 | 401657.09 | 0.7541 | P | 0.5 |
| 6 | ☐ | 200.000 | 202.509 | 832589.05 | 1.5932 | M | 2.3 |

y = 0.0078 * x + 0.0129
R = 0.9996
DL = 0.05555
BEC = 1.65

Weight: <None>
Min Conc: <None>

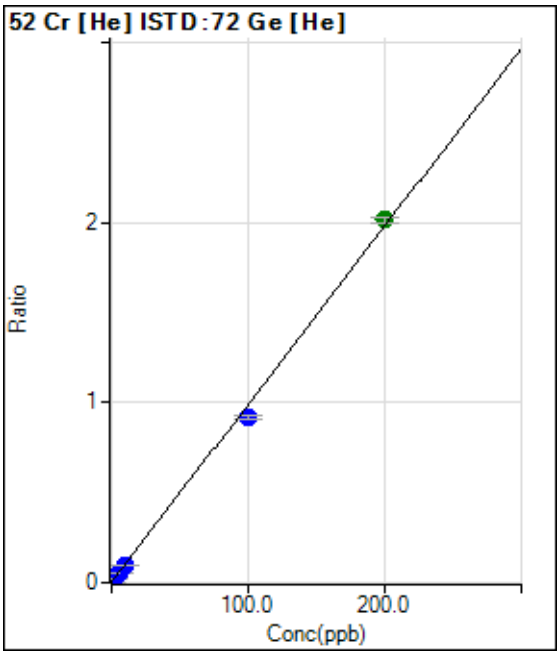



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22742.44 | 0.0129 | P | 4.1 |
| 2 | ☐ | 2.000 | 1.886 | 50359.50 | 0.0288 | P | 4.1 |
| 3 | ☐ | 5.000 | 4.941 | 94555.73 | 0.0546 | P | 0.7 |
| 4 | ☐ | 10.000 | 9.636 | 166260.81 | 0.0942 | P | 1.7 |
| 5 | ☐ | 100.000 | 93.180 | 1360306.49 | 0.7993 | A | 3.0 |
| 6 | ☐ | 200.000 | 203.431 | 2805821.21 | 1.7298 | A | 2.4 |

y = 0.0084 * x + 0.0129
R = 0.9992
DL = 0.1896
BEC = 1.526

Weight: <None>
Min Conc: <None>

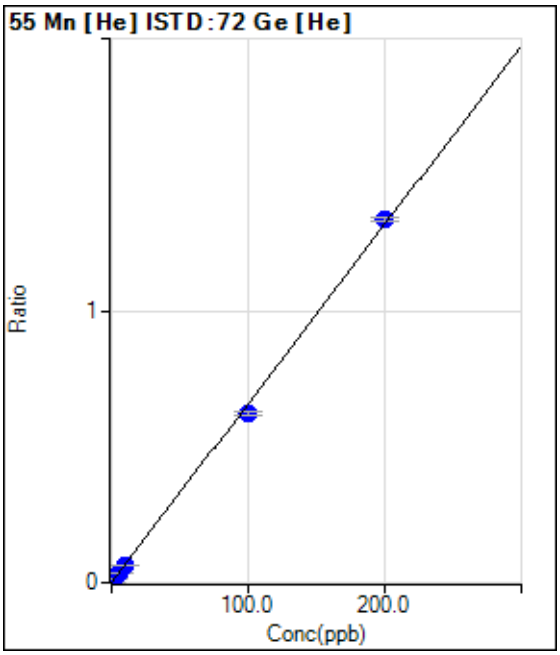
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1480.11 | 0.0027 | P | 4.0 |
| 2 | ☐ | 2.000 | 2.001 | 12292.36 | 0.0225 | P | 1.1 |
| 3 | ☐ | 5.000 | 4.733 | 26853.49 | 0.0495 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.768 | 53589.03 | 0.0992 | P | 1.4 |
| 5 | ☐ | 100.000 | 92.695 | 489362.05 | 0.9188 | P | 1.6 |
| 6 | ☐ | 200.000 | 203.671 | 1053175.56 | 2.0156 | A | 1.4 |

y = 0.0099 * x + 0.0027
R = 0.9991
DL = 0.03246
BEC = 0.2728

Weight: <None>
Min Conc: <None>

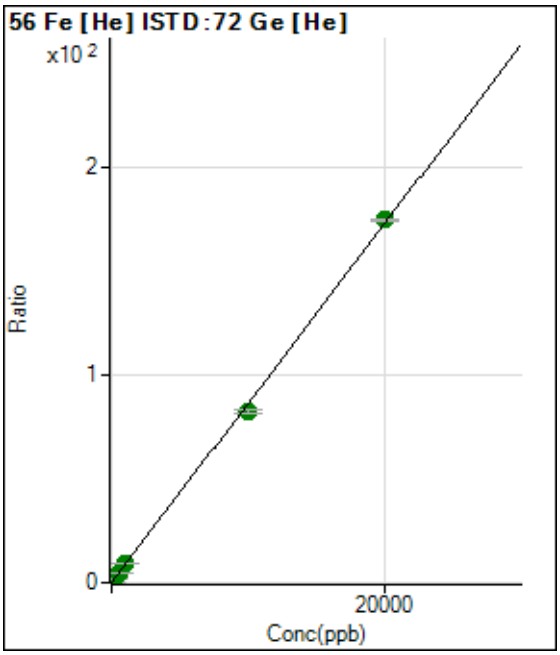



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 576.69 | 0.0010 | P | 16.8 |
| 2 | ☐ | 2.000 | 2.029 | 7869.11 | 0.0144 | P | 1.2 |
| 3 | ☐ | 5.000 | 5.012 | 18449.47 | 0.0340 | P | 2.9 |
| 4 | ☐ | 10.000 | 9.919 | 35774.21 | 0.0662 | P | 1.7 |
| 5 | ☐ | 100.000 | 94.541 | 331505.46 | 0.6224 | P | 2.0 |
| 6 | ☐ | 200.000 | 202.733 | 696820.43 | 1.3335 | P | 1.1 |

y = 0.0066 * x + 0.0010
R = 0.9995
DL = 0.08034
BEC = 0.1597

Weight: <None>
Min Conc: <None>

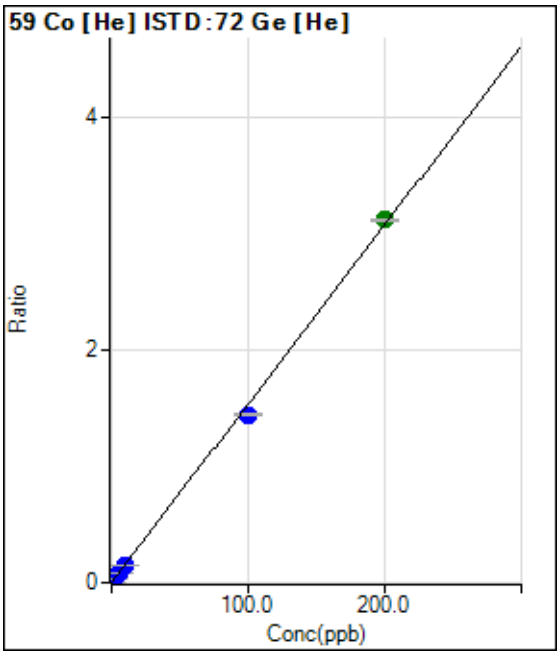
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10525.96 | 0.0192 | P | 6.6 |
| 2 | ☐ | 200.000 | 205.107 | 981885.33 | 1.7948 | A | 2.8 |
| 3 | ☐ | 500.000 | 523.581 | 2471244.91 | 4.5519 | A | 0.9 |
| 4 | ☐ | 1000.000 | 1034.156 | 4845425.34 | 8.9720 | A | 1.1 |
| 5 | ☐ | 10000.00 | 9554.064 | 44061017.68 | 82.7297 | A | 2.5 |
| 6 | ☐ | 20000.00 | 20220.61 | 91481711.97 | 175.071 | A | 0.7 |

y = 0.0087 * x + 0.0192
R = 0.9996
DL = 0.4371
BEC = 2.215

Weight: <None>
Min Conc: <None>

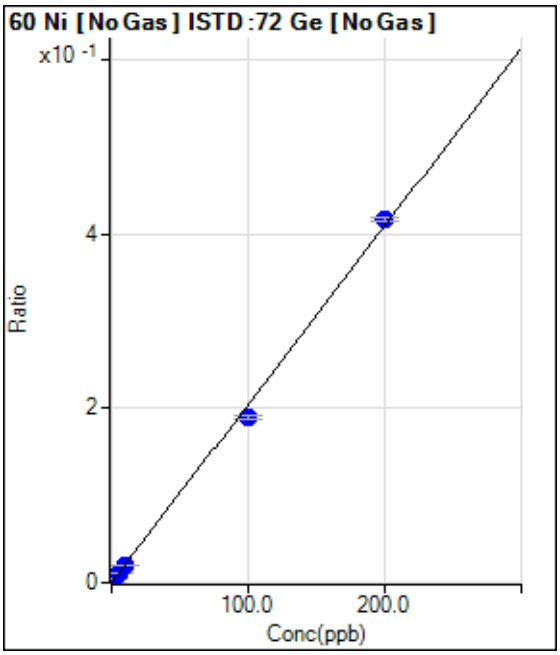



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 180.00 | 0.0003 | P | 22.5 |
| 2 | ☐ | 2.000 | 1.984 | 16827.34 | 0.0308 | P | 5.3 |
| 3 | ☐ | 5.000 | 4.973 | 41594.15 | 0.0766 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.087 | 83757.78 | 0.1551 | P | 1.1 |
| 5 | ☐ | 100.000 | 94.027 | 768600.06 | 1.4431 | P | 1.5 |
| 6 | ☐ | 200.000 | 202.983 | 1627739.25 | 3.1149 | A | 0.7 |

y = 0.0153 * x + 3.2802E-004
R = 0.9994
DL = 0.01441
BEC = 0.02138

Weight: <None>
Min Conc: <None>

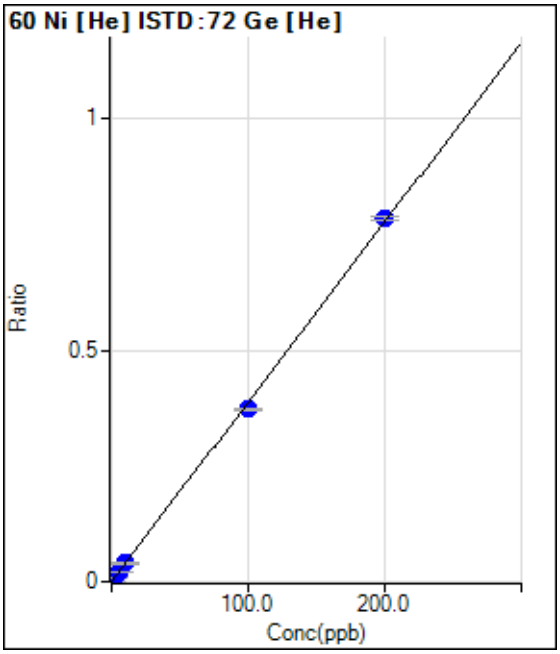
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 393.35 | 0.0002 | P | 10.4 |
| 2 | ☐ | 2.000 | 2.035 | 7658.96 | 0.0044 | P | 0.8 |
| 3 | ☐ | 5.000 | 5.096 | 18402.83 | 0.0106 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.814 | 35750.97 | 0.0203 | P | 2.7 |
| 5 | ☐ | 100.000 | 92.911 | 323174.97 | 0.1899 | P | 1.7 |
| 6 | ☐ | 200.000 | 203.551 | 674487.83 | 0.4158 | P | 1.1 |

y = 0.0020 * x + 2.2309E-004
R = 0.9991
DL = 0.03425
BEC = 0.1093

Weight: <None>
Min Conc: <None>

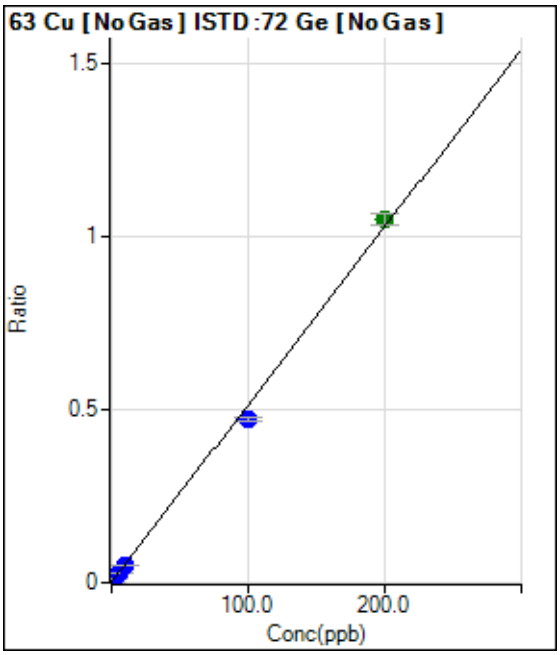



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 140.00 | 0.0003 | P | 21.7 |
| 2 | ☐ | 2.000 | 2.012 | 4414.14 | 0.0081 | P | 4.7 |
| 3 | ☐ | 5.000 | 4.960 | 10591.00 | 0.0195 | P | 2.9 |
| 4 | ☐ | 10.000 | 10.271 | 21667.55 | 0.0401 | P | 4.8 |
| 5 | ☐ | 100.000 | 95.975 | 198575.68 | 0.3728 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.000 | 409868.22 | 0.7844 | P | 0.9 |

y = 0.0039 * x + 2.5512E-004
R = 0.9997
DL = 0.04271
BEC = 0.06572

Weight: <None>
Min Conc: <None>

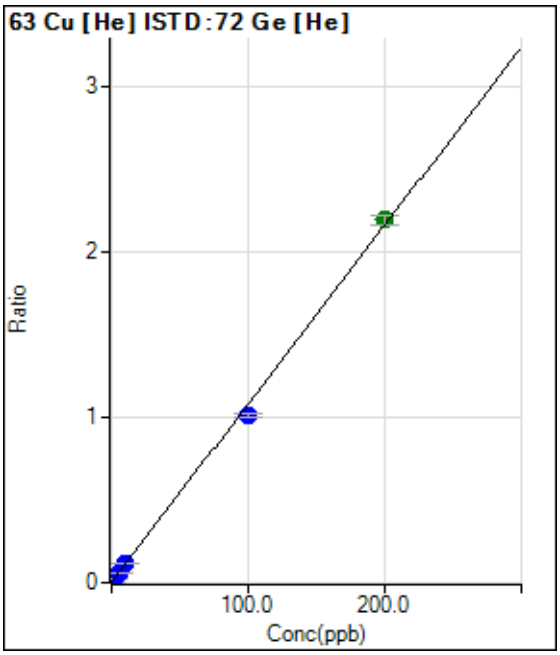
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2536.95 | 0.0014 | P | 10.6 |
| 2 | ☐ | 2.000 | 1.919 | 19707.92 | 0.0113 | P | 2.4 |
| 3 | ☐ | 5.000 | 4.840 | 45416.40 | 0.0262 | P | 3.2 |
| 4 | ☐ | 10.000 | 9.516 | 88569.31 | 0.0502 | P | 1.4 |
| 5 | ☐ | 100.000 | 91.905 | 803457.57 | 0.4722 | P | 3.1 |
| 6 | ☐ | 200.000 | 204.077 | 1698336.95 | 1.0468 | A | 3.2 |

y = 0.0051 * x + 0.0014
R = 0.9989
DL = 0.08913
BEC = 0.2808

Weight: <None>
Min Conc: <None>

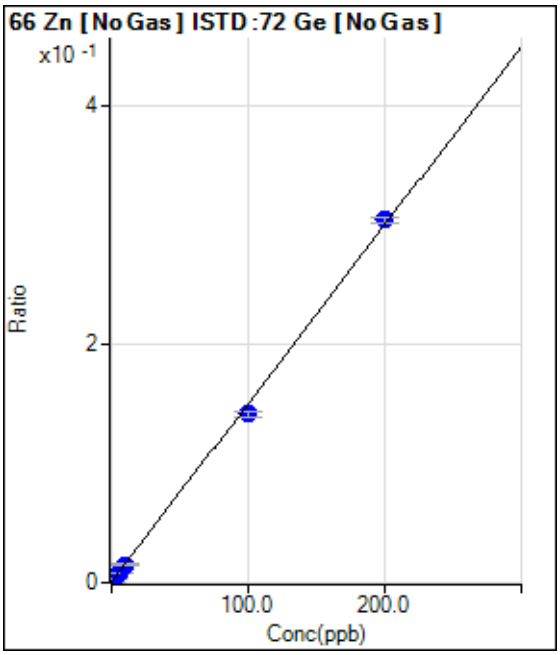



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1583.45 | 0.0029 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.927 | 12966.44 | 0.0237 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.943 | 30544.83 | 0.0563 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.175 | 60903.45 | 0.1128 | P | 2.2 |
| 5 | ☐ | 100.000 | 93.677 | 540418.91 | 1.0147 | P | 2.0 |
| 6 | ☐ | 200.000 | 203.155 | 1147958.32 | 2.1971 | A | 2.7 |

y = 0.0108 * x + 0.0029
R = 0.9993
DL = 0.07031
BEC = 0.2671

Weight: <None>
Min Conc: <None>

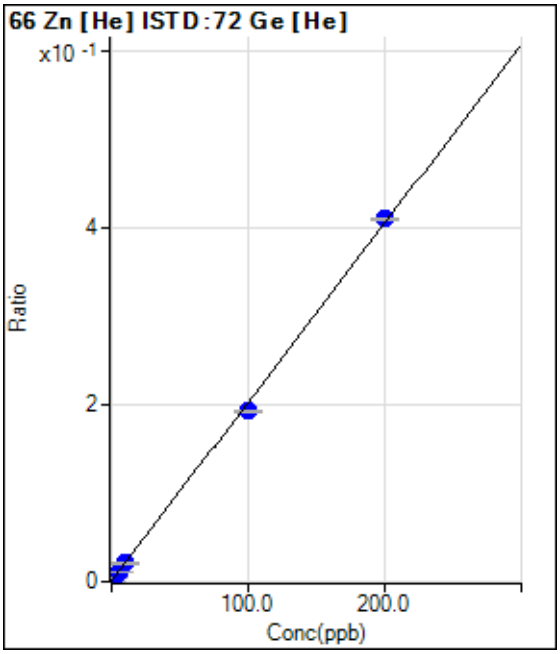
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1120.07 | 0.0006 | P | 4.6 |
| 2 | ☐ | 2.000 | 1.941 | 6191.54 | 0.0035 | P | 2.3 |
| 3 | ☐ | 5.000 | 4.913 | 13823.94 | 0.0080 | P | 5.2 |
| 4 | ☐ | 10.000 | 9.818 | 27057.34 | 0.0153 | P | 3.4 |
| 5 | ☐ | 100.000 | 94.041 | 240486.64 | 0.1413 | P | 2.9 |
| 6 | ☐ | 200.000 | 202.992 | 493677.82 | 0.3044 | P | 1.4 |

y = 0.0015 * x + 6.3444E-004
R = 0.9994
DL = 0.0586
BEC = 0.424

Weight: <None>
Min Conc: <None>

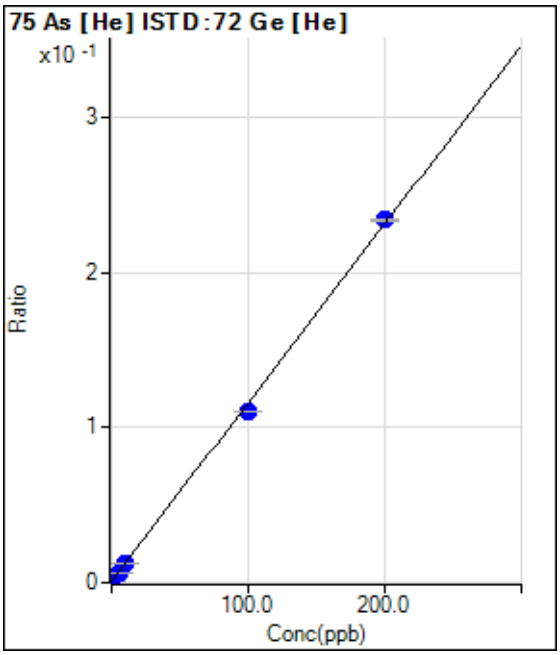



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 423.34 | 0.0008 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.893 | 2516.95 | 0.0046 | P | 4.0 |
| 3 | ☐ | 5.000 | 4.852 | 5748.02 | 0.0106 | P | 1.9 |
| 4 | ☐ | 10.000 | 9.931 | 11268.18 | 0.0209 | P | 2.2 |
| 5 | ☐ | 100.000 | 94.916 | 102704.47 | 0.1928 | P | 1.6 |
| 6 | ☐ | 200.000 | 202.550 | 214569.92 | 0.4106 | P | 0.6 |

y = 0.0020 * x + 7.7091E-004
R = 0.9995
DL = 0.1562
BEC = 0.381

Weight: <None>
Min Conc: <None>

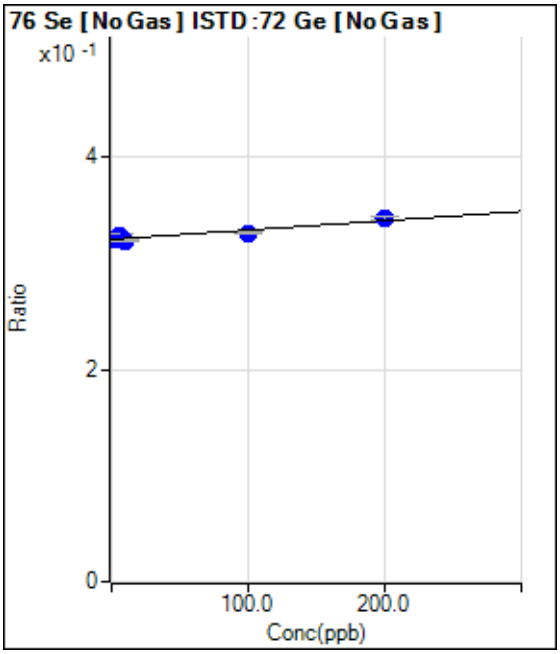
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 495.57 | 0.0009 | P | 9.0 |
| 2 | ☐ | 2.000 | 2.073 | 1799.02 | 0.0033 | P | 4.6 |
| 3 | ☐ | 5.000 | 4.991 | 3608.28 | 0.0066 | P | 2.5 |
| 4 | ☐ | 10.000 | 10.236 | 6849.55 | 0.0127 | P | 1.9 |
| 5 | ☐ | 100.000 | 95.195 | 58835.57 | 0.1105 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.390 | 122188.49 | 0.2338 | P | 0.6 |

y = 0.0012 * x + 9.0319E-004
R = 0.9996
DL = 0.2121
BEC = 0.7848

Weight: <None>
Min Conc: <None>

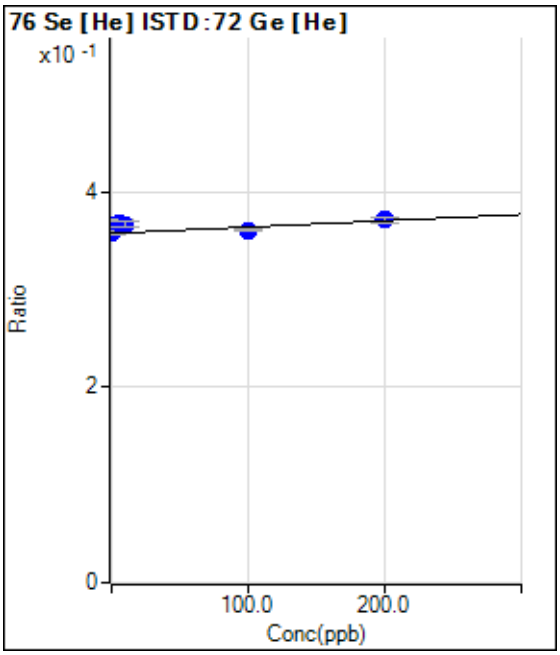



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 569197.36 | 0.3224 | P | 3.1 |
| 2 | ☐ | 2.000 | -4.294 | 563326.92 | 0.3220 | P | 1.1 |
| 3 | ☐ | 5.000 | 31.005 | 563094.51 | 0.3251 | P | 1.8 |
| 4 | ☐ | 10.000 | -20.173 | 565961.40 | 0.3206 | P | 0.6 |
| 5 | ☐ | 100.000 | 64.645 | 558336.96 | 0.3281 | P | 0.7 |
| 6 | ☐ | 200.000 | 218.599 | 554135.43 | 0.3416 | P | 1.0 |

y = 8.7776E-005 * x + 0.3224
R = 0.9606
DL = 337
BEC = 3673

Weight: <None>
Min Conc: <None>

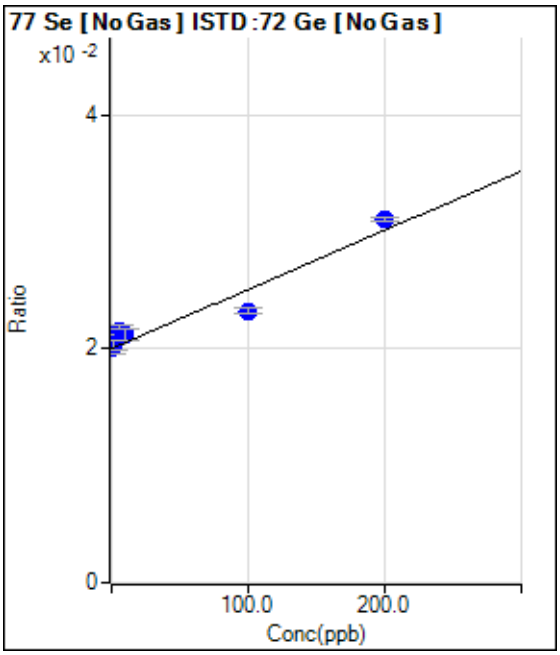
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 196109.38 | 0.3573 | P | 1.0 |
| 2 | ☐ | 2.000 | 123.190 | 199806.37 | 0.3653 | P | 2.5 |
| 3 | ☐ | 5.000 | 163.619 | 199678.24 | 0.3679 | P | 2.3 |
| 4 | ☐ | 10.000 | 138.925 | 197801.75 | 0.3663 | P | 1.4 |
| 5 | ☐ | 100.000 | 53.025 | 192139.08 | 0.3607 | P | 0.7 |
| 6 | ☐ | 200.000 | 211.864 | 193860.99 | 0.3710 | P | 1.5 |

y = 6.4732E-005 * x + 0.3573
R = 0.4351
DL = 159.6
BEC = 5520

Weight: <None>
Min Conc: <None>

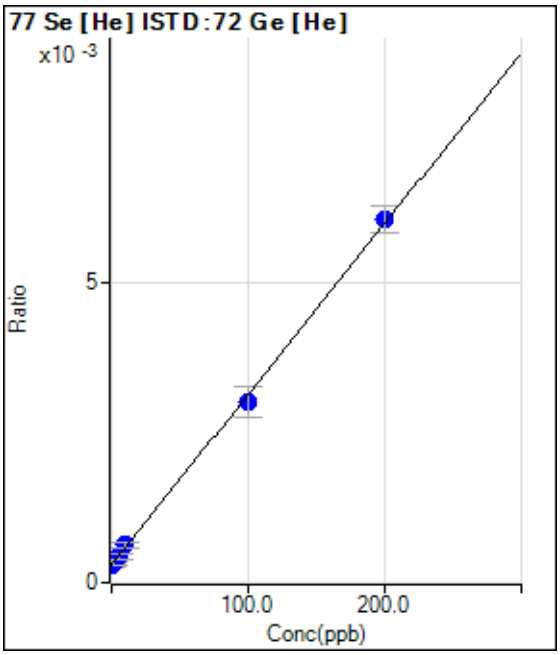



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 35373.64 | 0.0200 | P | 3.9 |
| 2 | ☐ | 2.000 | 6.377 | 35617.75 | 0.0204 | P | 4.4 |
| 3 | ☐ | 5.000 | 31.169 | 37435.85 | 0.0216 | P | 3.6 |
| 4 | ☐ | 10.000 | 22.049 | 37318.77 | 0.0212 | P | 4.7 |
| 5 | ☐ | 100.000 | 62.564 | 39478.25 | 0.0232 | P | 2.1 |
| 6 | ☐ | 200.000 | 217.417 | 50337.47 | 0.0310 | P | 0.9 |

y = 5.0575E-005 * x + 0.0200
R = 0.9631
DL = 46.84
BEC = 396.2

Weight: <None>
Min Conc: <None>

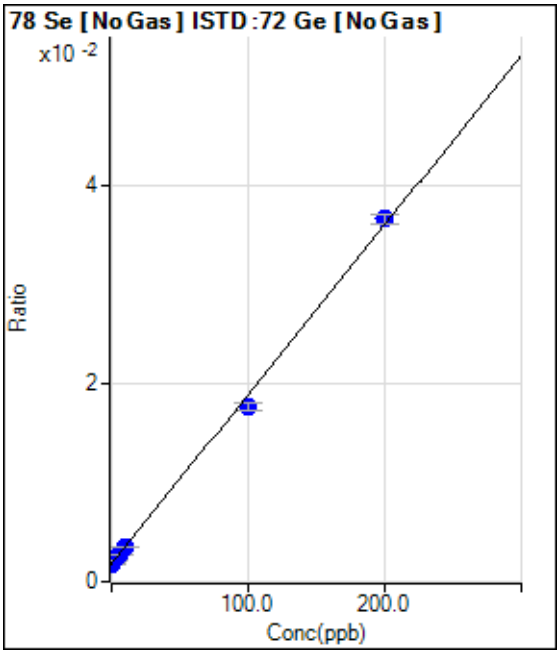
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 163.34 | 0.0003 | P | 22.7 |
| 2 | ☐ | 2.000 | 1.121 | 180.00 | 0.0003 | P | 15.6 |
| 3 | ☐ | 5.000 | 5.043 | 240.01 | 0.0004 | P | 19.2 |
| 4 | ☐ | 10.000 | 11.862 | 343.35 | 0.0006 | P | 14.2 |
| 5 | ☐ | 100.000 | 95.438 | 1610.13 | 0.0030 | P | 17.0 |
| 6 | ☐ | 200.000 | 202.196 | 3170.43 | 0.0061 | P | 7.5 |

y = 2.8525E-005 * x + 2.9733E-004
R = 0.9996
DL = 7.091
BEC = 10.42

Weight: <None>
Min Conc: <None>

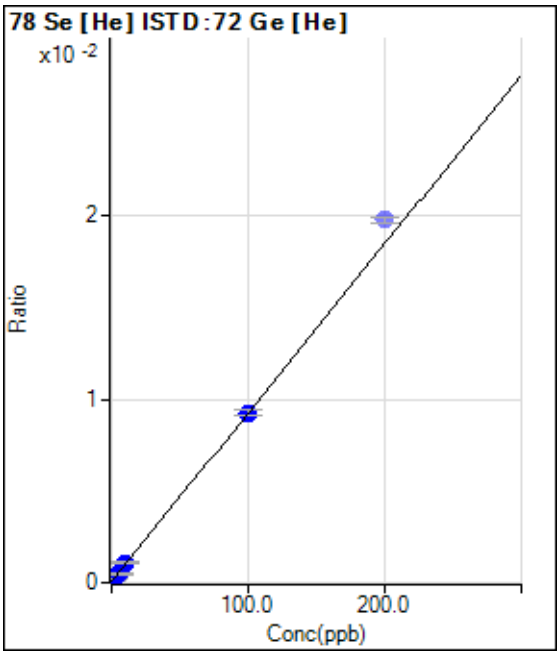



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3203.79 | 0.0018 | P | 3.8 |
| 2 | ☐ | 2.000 | 1.872 | 3730.59 | 0.0021 | P | 6.6 |
| 3 | ☐ | 5.000 | 5.516 | 4774.27 | 0.0028 | P | 3.9 |
| 4 | ☐ | 10.000 | 9.840 | 6168.20 | 0.0035 | P | 3.5 |
| 5 | ☐ | 100.000 | 92.784 | 30057.35 | 0.0177 | P | 3.7 |
| 6 | ☐ | 200.000 | 203.604 | 59351.18 | 0.0366 | P | 3.0 |

y = 1.7083E-004 * x + 0.0018
R = 0.9991
DL = 1.21
BEC = 10.62

Weight: <None>
Min Conc: <None>

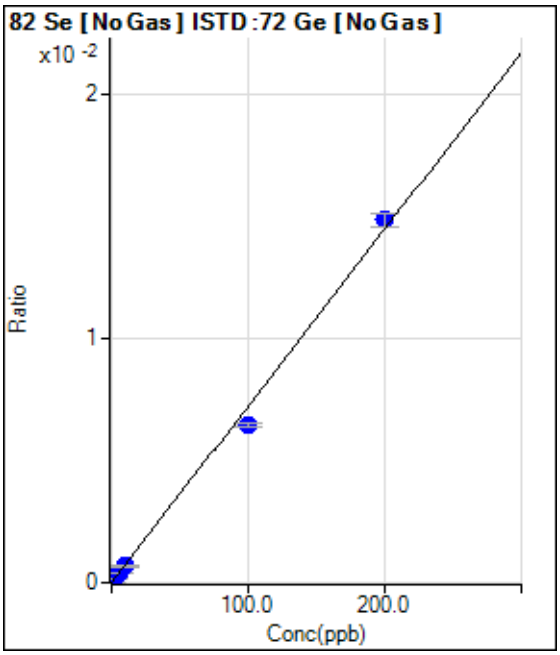
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34.67 | 0.0001 | P | 15.0 |
| 2 | ☐ | 2.000 | 1.976 | 134.00 | 0.0002 | P | 7.4 |
| 3 | ☐ | 5.000 | 4.841 | 276.00 | 0.0005 | P | 15.2 |
| 4 | ☐ | 10.000 | 11.091 | 585.35 | 0.0011 | P | 6.3 |
| 5 | ☐ | 100.000 | 99.899 | 4928.92 | 0.0093 | P | 3.3 |
| 6 | ☑ | 200.000 | | 10339.32 | 0.0198 | P | 1.3 |

y = 9.2012E-005 * x + 6.3196E-005
R = 0.9999
DL = 0.3099
BEC = 0.6868

Weight: <None>
Min Conc: <None>

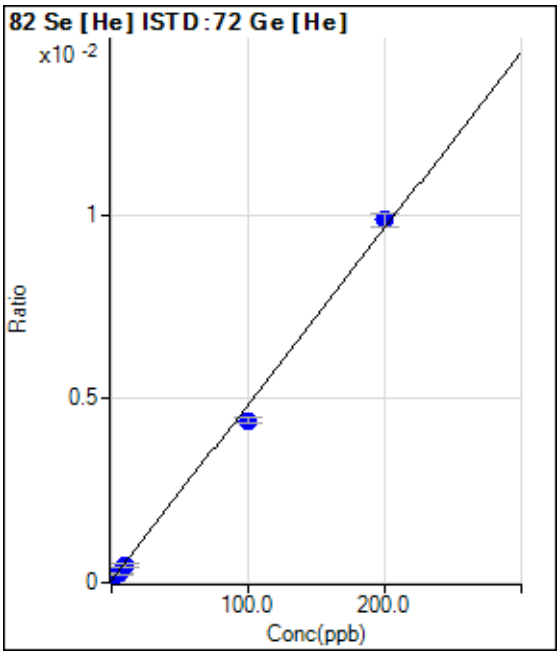



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 8.50 | 0.0000 | P | 1099.3 |
| 2 | ☐ | 2.000 | 2.537 | 328.43 | 0.0002 | P | 28.8 |
| 3 | ☐ | 5.000 | 4.966 | 628.63 | 0.0004 | P | 4.0 |
| 4 | ☐ | 10.000 | 9.245 | 1185.29 | 0.0007 | P | 15.1 |
| 5 | ☐ | 100.000 | 89.254 | 10976.51 | 0.0065 | P | 3.4 |
| 6 | ☐ | 200.000 | 205.406 | 24070.79 | 0.0148 | P | 3.9 |

y = 7.2236E-005 * x + 4.0454E-006
R = 0.9980
DL = 1.847
BEC = 0.056

Weight: <None>
Min Conc: <None>

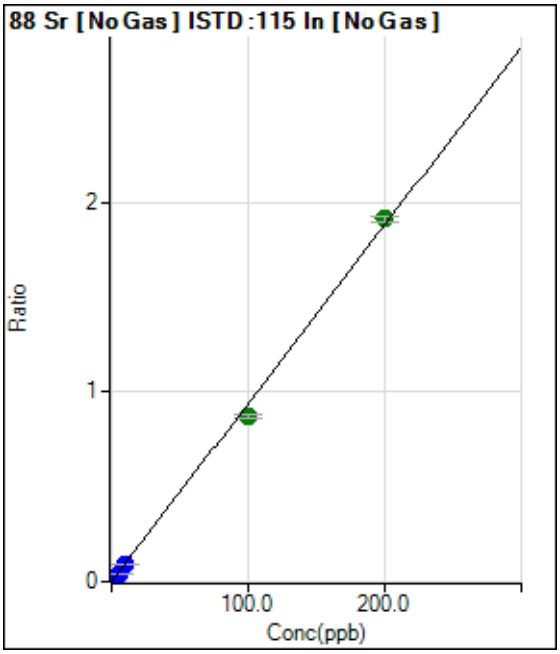
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.306 | 93.33 | 0.0002 | P | 45.5 |
| 3 | ☐ | 5.000 | 3.996 | 136.67 | 0.0003 | P | 15.9 |
| 4 | ☐ | 10.000 | 8.270 | 246.67 | 0.0005 | P | 20.3 |
| 5 | ☐ | 100.000 | 90.694 | 2343.58 | 0.0044 | P | 3.3 |
| 6 | ☐ | 200.000 | 204.762 | 5151.09 | 0.0099 | P | 3.7 |

y = 4.7853E-005 * x + 6.0678E-005
R = 0.9985
DL = 0.6269
BEC = 1.268

Weight: <None>
Min Conc: <None>

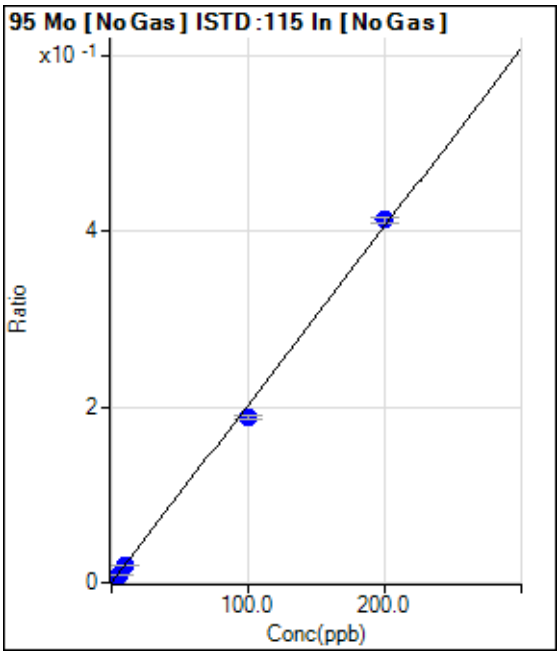



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1270.08 | 0.0006 | P | 3.9 |
| 2 | ☐ | 2.000 | 1.929 | 39245.22 | 0.0187 | P | 1.7 |
| 3 | ☐ | 5.000 | 4.760 | 96219.58 | 0.0453 | P | 1.0 |
| 4 | ☐ | 10.000 | 9.393 | 188254.34 | 0.0888 | P | 1.6 |
| 5 | ☐ | 100.000 | 92.928 | 1803784.92 | 0.8732 | A | 2.4 |
| 6 | ☐ | 200.000 | 203.573 | 3753500.36 | 1.9121 | A | 1.3 |

y = 0.0094 * x + 5.9979E-004
R = 0.9991
DL = 0.007559
BEC = 0.06388

Weight: <None>
Min Conc: <None>

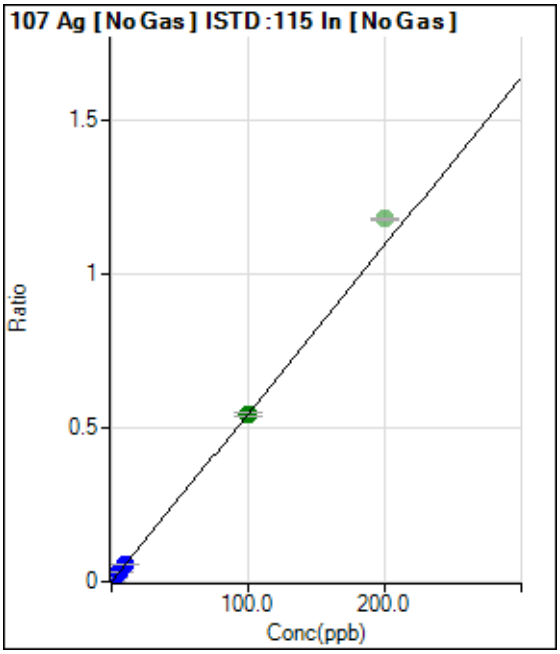
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0000 | P | 86.6 |
| 2 | ☐ | 2.000 | 1.972 | 8419.49 | 0.0040 | P | 3.9 |
| 3 | ☐ | 5.000 | 4.752 | 20516.16 | 0.0097 | P | 1.2 |
| 4 | ☐ | 10.000 | 9.468 | 40772.88 | 0.0192 | P | 0.6 |
| 5 | ☐ | 100.000 | 92.626 | 388393.28 | 0.1880 | P | 1.9 |
| 6 | ☐ | 200.000 | 203.720 | 811643.17 | 0.4135 | P | 1.8 |

y = 0.0020 * x + 1.2610E-005
R = 0.9991
DL = 0.01614
BEC = 0.006213

Weight: <None>
Min Conc: <None>

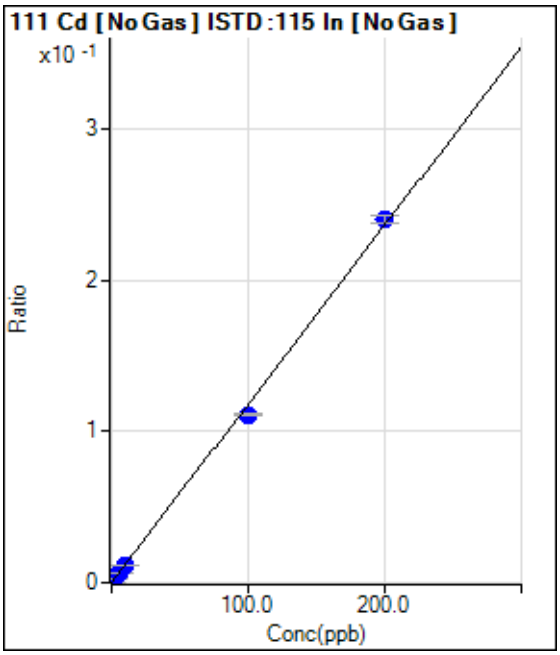



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 170.00 | 0.0001 | P | 11.7 |
| 2 | ☐ | 2.000 | 2.121 | 24472.96 | 0.0117 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.231 | 60890.65 | 0.0287 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.197 | 118294.54 | 0.0558 | P | 0.8 |
| 5 | ☐ | 100.000 | 99.966 | 1128470.63 | 0.5462 | A | 2.3 |
| 6 | ☑ | 200.000 | | 2314339.60 | 1.1789 | A | 0.6 |

y = 0.0055 * x + 8.0290E-005
R = 1.0000
DL = 0.005151
BEC = 0.0147

Weight: <None>
Min Conc: <None>

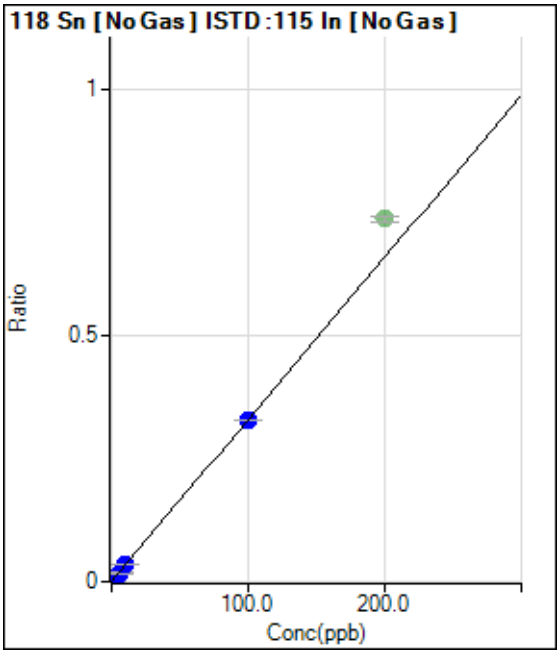
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10.00 | 0.0000 | P | 99.7 |
| 2 | ☐ | 2.000 | 1.977 | 4911.00 | 0.0023 | P | 5.9 |
| 3 | ☐ | 5.000 | 4.969 | 12492.79 | 0.0059 | P | 0.9 |
| 4 | ☐ | 10.000 | 9.578 | 24019.01 | 0.0113 | P | 2.0 |
| 5 | ☐ | 100.000 | 93.747 | 229001.39 | 0.1108 | P | 1.1 |
| 6 | ☐ | 200.000 | 203.149 | 471459.79 | 0.2402 | P | 2.1 |

y = 0.0012 * x + 4.7250E-006
R = 0.9993
DL = 0.01196
BEC = 0.003997

Weight: <None>
Min Conc: <None>

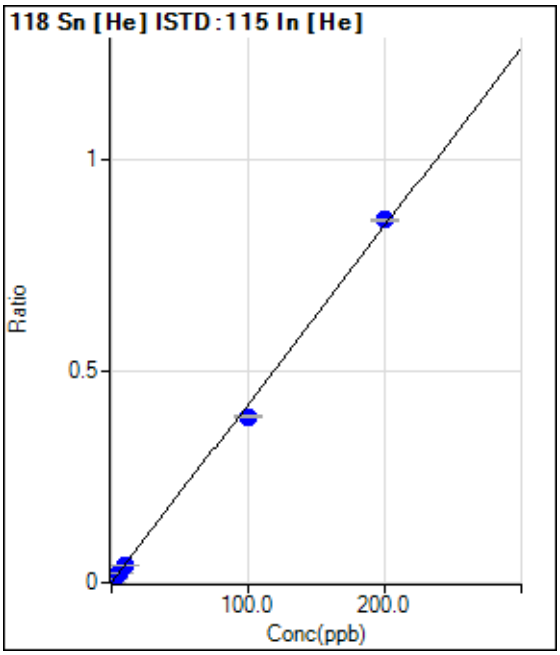



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1443.44 | 0.0007 | P | 9.1 |
| 2 | ☐ | 2.000 | 2.019 | 15342.61 | 0.0073 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.062 | 36782.17 | 0.0173 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.371 | 73704.35 | 0.0348 | P | 0.6 |
| 5 | ☐ | 100.000 | 99.959 | 680093.71 | 0.3291 | P | 0.1 |
| 6 | ☑ | 200.000 | | 1444493.47 | 0.7358 | A | 1.7 |

y = 0.0033 * x + 6.8178E-004
R = 1.0000
DL = 0.05657
BEC = 0.2075

Weight: <None>
Min Conc: <None>

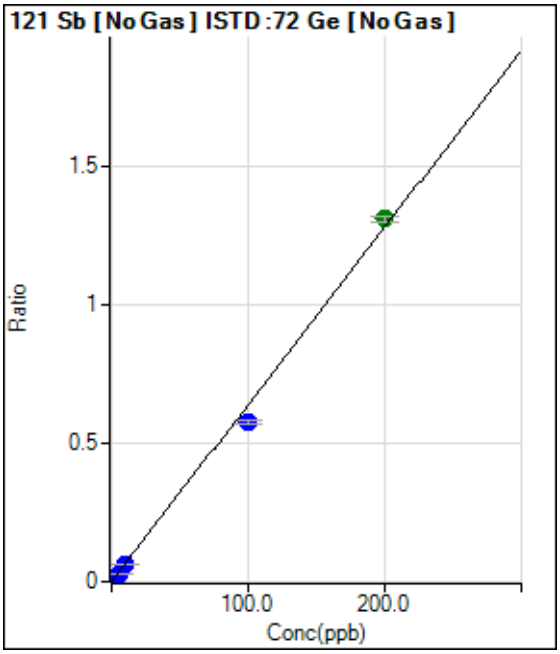
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 750.04 | 0.0008 | P | 5.0 |
| 2 | ☐ | 2.000 | 1.866 | 8186.04 | 0.0087 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.839 | 20269.33 | 0.0212 | P | 5.1 |
| 4 | ☐ | 10.000 | 9.725 | 39396.25 | 0.0418 | P | 1.4 |
| 5 | ☐ | 100.000 | 93.126 | 359076.80 | 0.3935 | P | 0.9 |
| 6 | ☐ | 200.000 | 203.456 | 762051.76 | 0.8588 | P | 0.7 |

y = 0.0042 * x + 8.0026E-004
R = 0.9992
DL = 0.02825
BEC = 0.1898

Weight: <None>
Min Conc: <None>

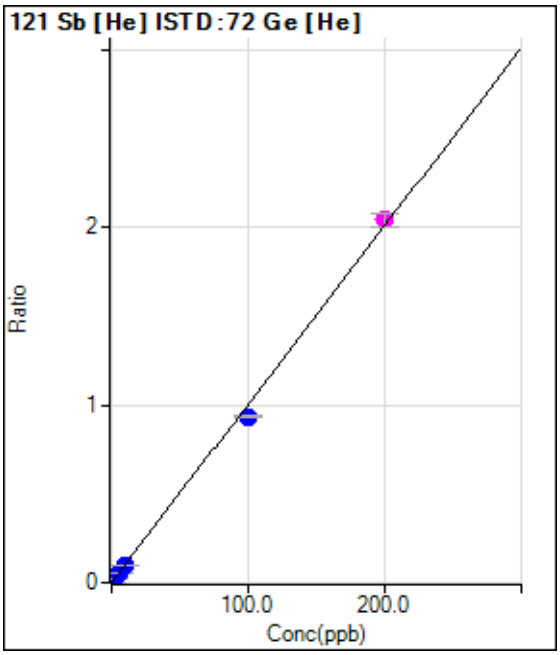



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1690.14 | 0.0010 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.804 | 21805.12 | 0.0125 | P | 1.6 |
| 3 | ☐ | 5.000 | 4.634 | 52846.89 | 0.0305 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.194 | 105200.57 | 0.0596 | P | 2.0 |
| 5 | ☐ | 100.000 | 90.285 | 981699.13 | 0.5769 | P | 2.3 |
| 6 | ☐ | 200.000 | 204.909 | 2122041.16 | 1.3082 | A | 1.2 |

y = 0.0064 * x + 9.5551E-004
R = 0.9984
DL = 0.03153
BEC = 0.1498

Weight: <None>
Min Conc: <None>

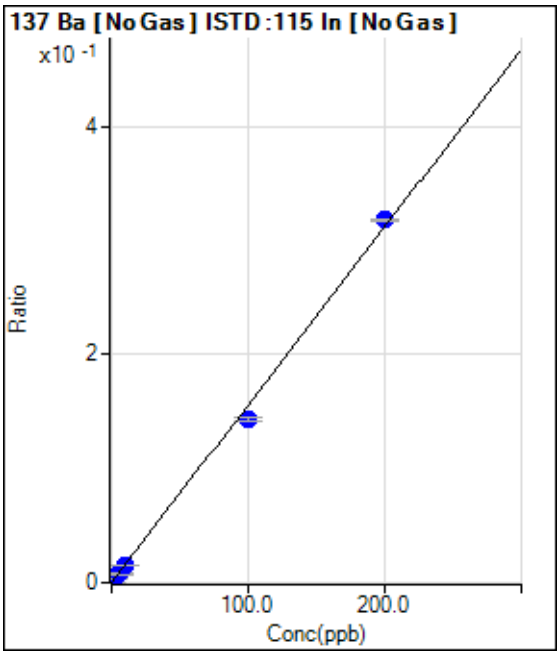
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 790.04 | 0.0014 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.960 | 11541.89 | 0.0211 | P | 5.2 |
| 3 | ☐ | 5.000 | 4.844 | 27158.53 | 0.0500 | P | 1.4 |
| 4 | ☐ | 10.000 | 9.791 | 53824.37 | 0.0997 | P | 2.9 |
| 5 | ☐ | 100.000 | 93.143 | 498465.40 | 0.9358 | P | 0.5 |
| 6 | ☐ | 200.000 | 203.443 | 1067013.97 | 2.0423 | M | 3.7 |

y = 0.0100 * x + 0.0014
R = 0.9992
DL = 0.03776
BEC = 0.1434

Weight: <None>
Min Conc: <None>

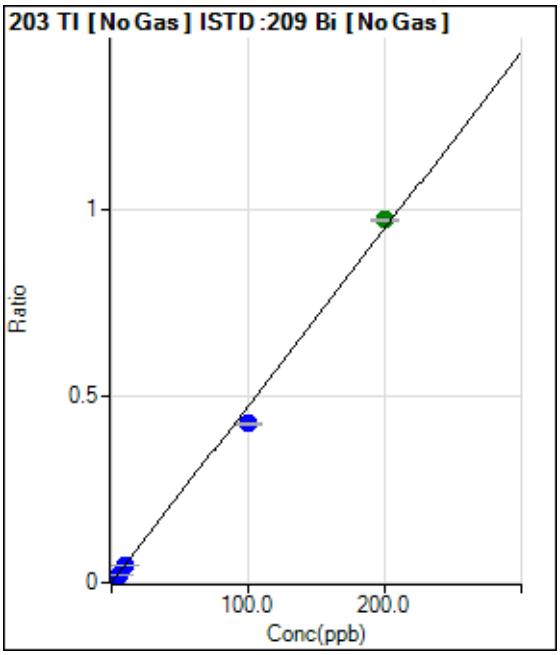



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 376.68 | 0.0002 | P | 15.7 |
| 2 | ☐ | 2.000 | 2.009 | 6935.31 | 0.0033 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.818 | 16310.57 | 0.0077 | P | 4.4 |
| 4 | ☐ | 10.000 | 9.442 | 31528.75 | 0.0149 | P | 5.4 |
| 5 | ☐ | 100.000 | 91.827 | 295750.62 | 0.1431 | P | 1.5 |
| 6 | ☐ | 200.000 | 204.119 | 624197.25 | 0.3180 | P | 0.6 |

y = 0.0016 * x + 1.7800E-004
R = 0.9988
DL = 0.05369
BEC = 0.1143

Weight: <None>
Min Conc: <None>

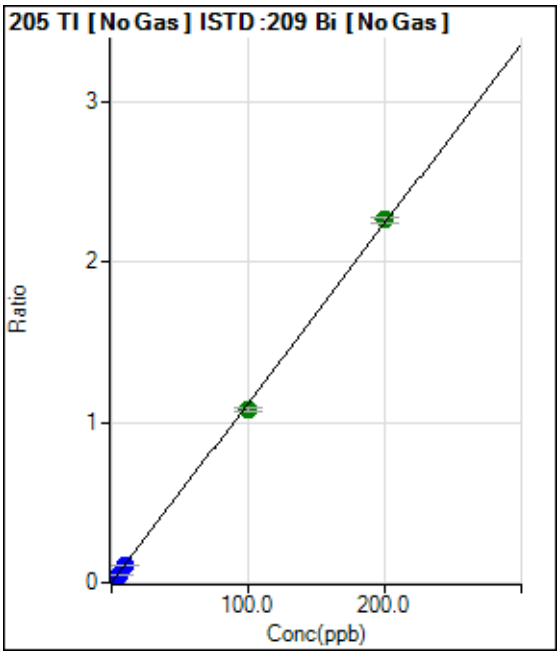
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 153.33 | 0.0001 | P | 12.2 |
| 2 | ☐ | 2.000 | 1.832 | 20861.28 | 0.0088 | P | 2.5 |
| 3 | ☐ | 5.000 | 4.532 | 51553.53 | 0.0216 | P | 0.8 |
| 4 | ☐ | 10.000 | 9.433 | 104608.97 | 0.0449 | P | 1.7 |
| 5 | ☐ | 100.000 | 89.833 | 984896.78 | 0.4266 | P | 1.9 |
| 6 | ☐ | 200.000 | 205.125 | 2202539.19 | 0.9740 | A | 0.6 |

y = 0.0047 * x + 6.5183E-005
R = 0.9982
DL = 0.00503
BEC = 0.01373

Weight: <None>
Min Conc: <None>

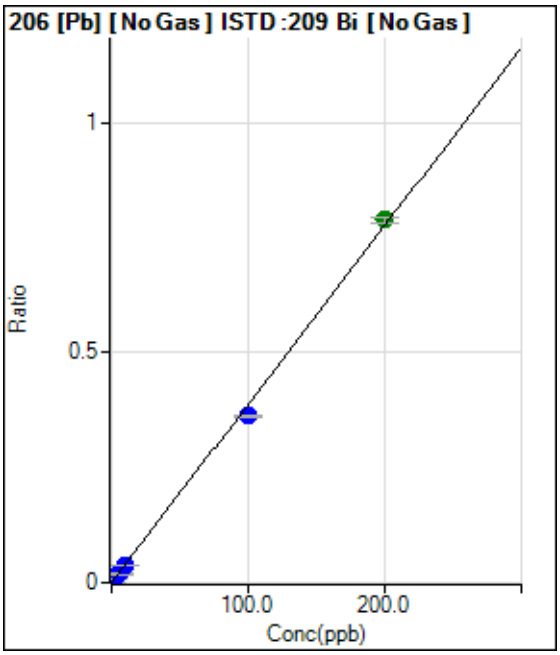



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 346.68 | 0.0001 | P | 13.5 |
| 2 | ☐ | 2.000 | 1.870 | 50252.16 | 0.0211 | P | 4.5 |
| 3 | ☐ | 5.000 | 4.664 | 125254.20 | 0.0524 | P | 2.6 |
| 4 | ☐ | 10.000 | 9.665 | 253143.49 | 0.1085 | P | 0.6 |
| 5 | ☐ | 100.000 | 95.935 | 2483784.28 | 1.0758 | A | 2.3 |
| 6 | ☐ | 200.000 | 202.059 | 5122729.19 | 2.2656 | A | 1.6 |

y = 0.0112 * x + 1.4715E-004
R = 0.9997
DL = 0.005316
BEC = 0.01312

Weight: <None>
Min Conc: <None>

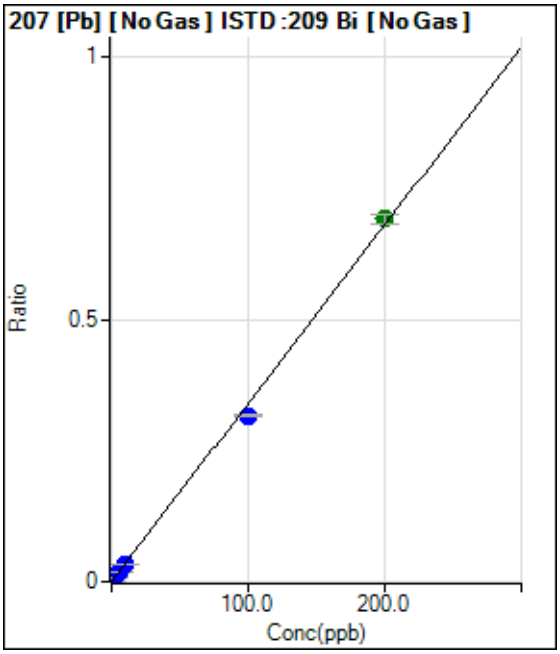
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 760.04 | 0.0003 | P | 10.5 |
| 2 | ☐ | 2.000 | 1.889 | 18217.02 | 0.0077 | P | 2.9 |
| 3 | ☐ | 5.000 | 4.817 | 45400.01 | 0.0190 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.731 | 88804.64 | 0.0381 | P | 0.4 |
| 5 | ☐ | 100.000 | 93.233 | 835642.52 | 0.3619 | P | 1.8 |
| 6 | ☐ | 200.000 | 203.403 | 1784618.99 | 0.7892 | A | 1.4 |

y = 0.0039 * x + 3.2307E-004
R = 0.9992
DL = 0.02627
BEC = 0.0833

Weight: <None>
Min Conc: <None>

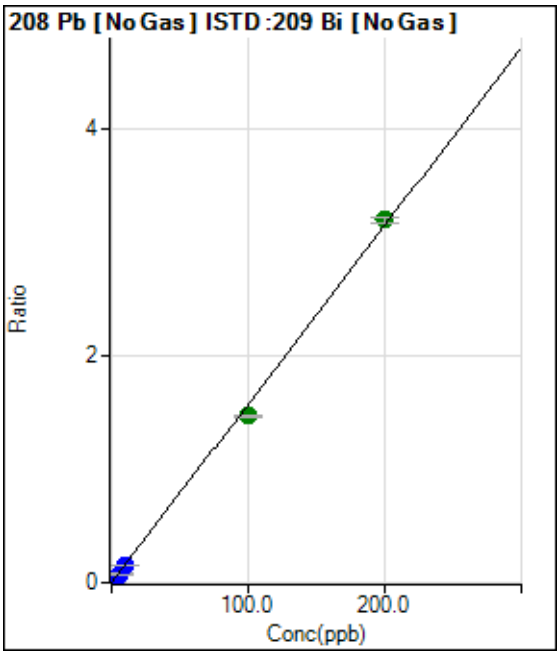



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 540.02 | 0.0002 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.925 | 16124.13 | 0.0068 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.972 | 40921.31 | 0.0171 | P | 2.1 |
| 4 | ☐ | 10.000 | 9.797 | 78209.70 | 0.0335 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.919 | 729857.98 | 0.3161 | P | 1.3 |
| 6 | ☐ | 200.000 | 203.552 | 1565199.09 | 0.6922 | A | 2.6 |

y = 0.0034 * x + 2.2900E-004
R = 0.9991
DL = 0.02776
BEC = 0.06736

Weight: <None>
Min Conc: <None>

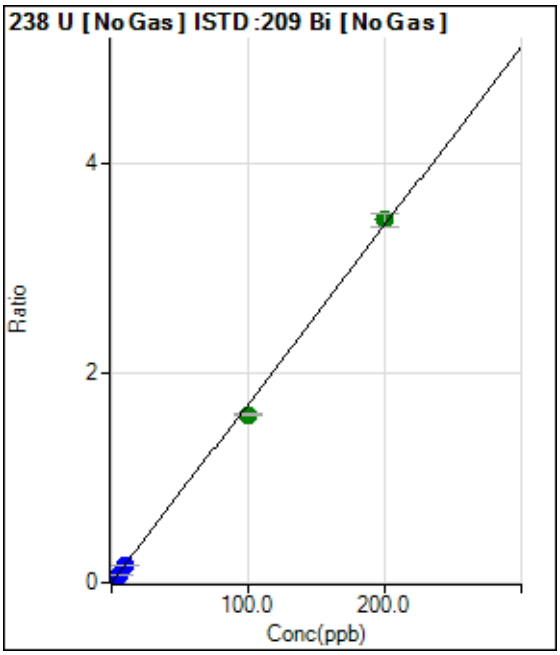
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2620.16 | 0.0011 | P | 3.0 |
| 2 | ☐ | 2.000 | 1.901 | 73697.17 | 0.0310 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.774 | 181670.33 | 0.0761 | P | 1.5 |
| 4 | ☐ | 10.000 | 9.665 | 356523.34 | 0.1529 | P | 1.1 |
| 5 | ☐ | 100.000 | 93.368 | 3387003.65 | 1.4670 | A | 1.9 |
| 6 | ☐ | 200.000 | 203.339 | 7220763.02 | 3.1935 | A | 1.5 |

y = 0.0157 * x + 0.0011
R = 0.9992
DL = 0.006314
BEC = 0.07085

Weight: <None>
Min Conc: <None>

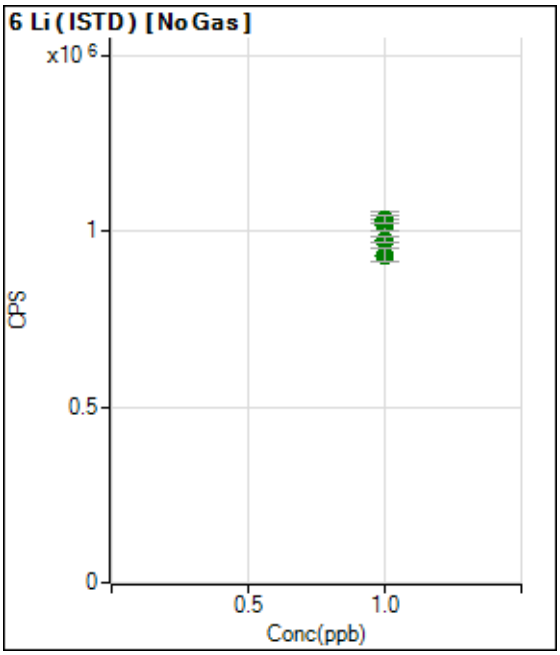



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 35.7 |
| 2 | ☐ | 2.000 | 1.841 | 74688.97 | 0.0314 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.607 | 187471.43 | 0.0785 | P | 0.5 |
| 4 | ☐ | 10.000 | 9.438 | 374880.46 | 0.1608 | P | 3.1 |
| 5 | ☐ | 100.000 | 93.946 | 3694641.51 | 1.6000 | A | 0.9 |
| 6 | ☐ | 200.000 | 203.067 | 7817840.09 | 3.4584 | A | 3.5 |

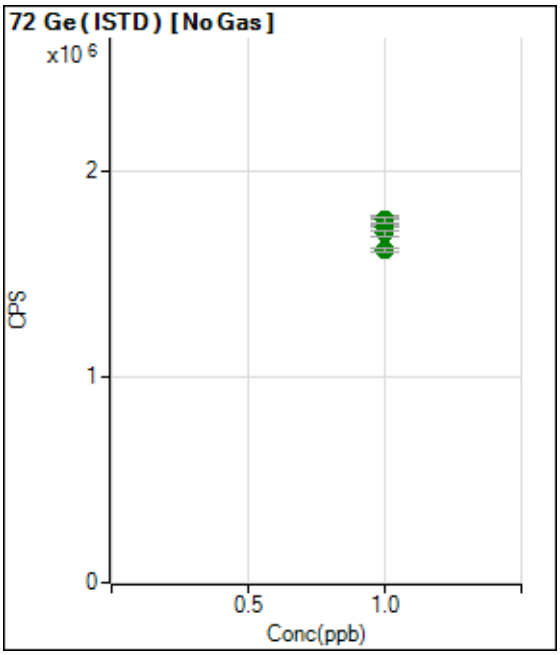
y = 0.0170 * x + 2.3983E-005
R = 0.9994
DL = 0.001509
BEC = 0.001408

Weight: <None>
Min Conc: <None>

Calibration for 024_ICV.d

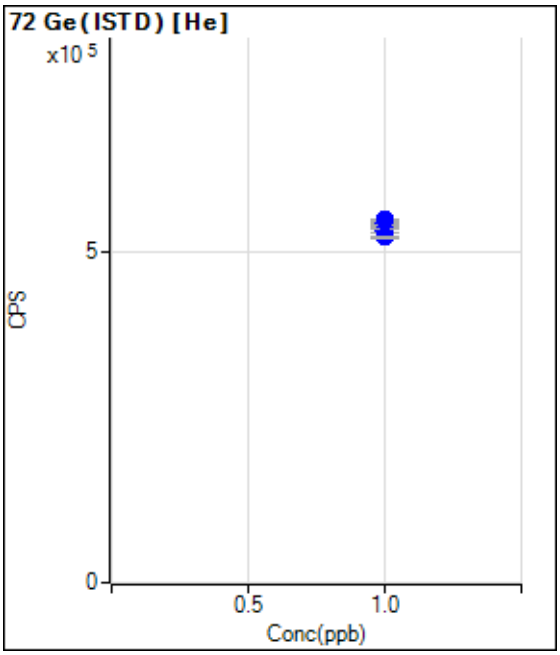



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1015680.29 | | A | 3.2 |
| 2 | ☐ | 1.000 | | 1017479.61 | | A | 3.2 |
| 3 | ☐ | 1.000 | | 1027534.57 | | A | 4.8 |
| 4 | ☐ | 1.000 | | 1031062.31 | | A | 2.1 |
| 5 | ☐ | 1.000 | | 974419.34 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 930358.24 | | A | 4.4 |

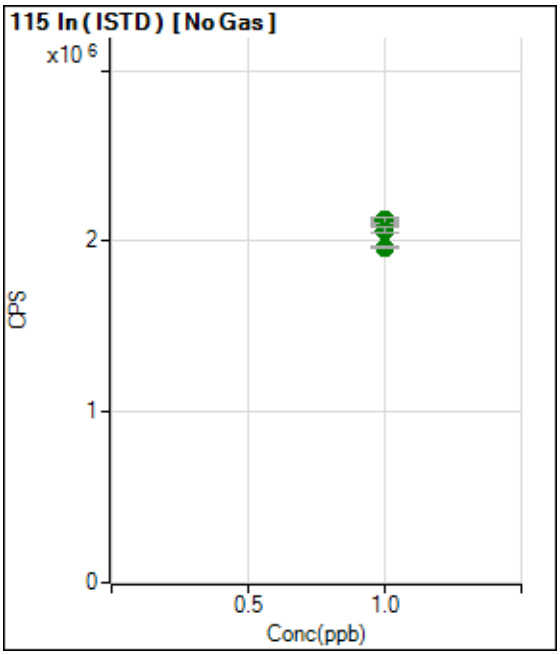



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1766562.79 | | A | 2.8 |
| 2 | ☐ | 1.000 | | 1749482.99 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 1732247.63 | | A | 2.1 |
| 4 | ☐ | 1.000 | | 1765154.09 | | A | 1.6 |
| 5 | ☐ | 1.000 | | 1702022.63 | | A | 1.6 |
| 6 | ☐ | 1.000 | | 1622238.36 | | A | 1.4 |

Calibration for 024_ICV.d

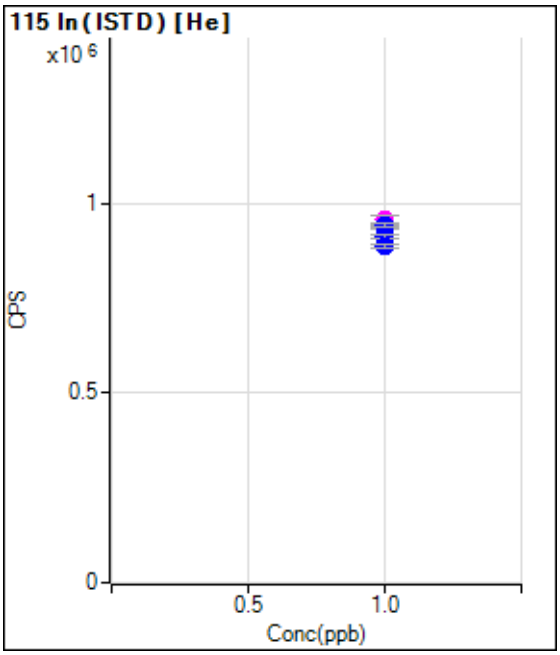



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 548875.87 | | P | 0.8 |
| 2 | ☐ | 1.000 | | 547102.11 | | P | 0.9 |
| 3 | ☐ | 1.000 | | 542931.65 | | P | 1.8 |
| 4 | ☐ | 1.000 | | 540043.83 | | P | 0.6 |
| 5 | ☐ | 1.000 | | 532668.18 | | P | 1.0 |
| 6 | ☐ | 1.000 | | 522558.05 | | P | 0.8 |

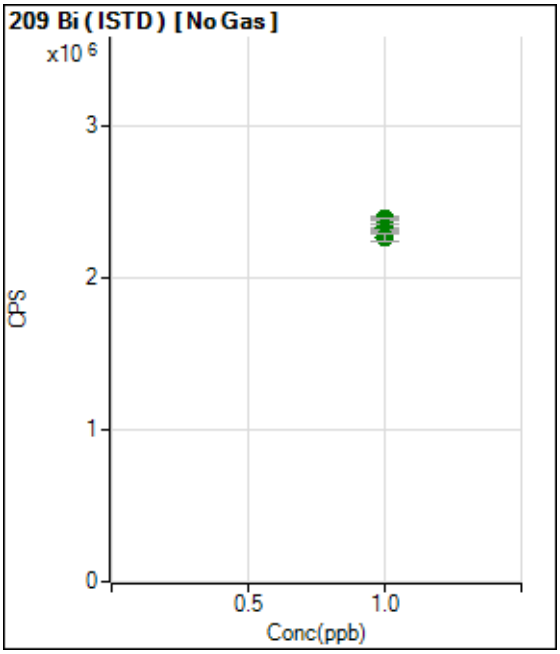



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2117300.96 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2097565.69 | | A | 0.5 |
| 3 | ☐ | 1.000 | | 2124607.94 | | A | 1.2 |
| 4 | ☐ | 1.000 | | 2120433.63 | | A | 1.8 |
| 5 | ☐ | 1.000 | | 2066252.67 | | A | 1.3 |
| 6 | ☐ | 1.000 | | 1963080.08 | | A | 0.4 |

Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 937310.27 | | P | 0.7 |
| 2 | ☐ | 1.000 | | 944141.79 | | P | 0.7 |
| 3 | ☐ | 1.000 | | 956709.14 | | M | 2.8 |
| 4 | ☐ | 1.000 | | 942224.75 | | P | 0.9 |
| 5 | ☐ | 1.000 | | 912474.90 | | P | 0.6 |
| 6 | ☐ | 1.000 | | 887284.66 | | P | 0.9 |



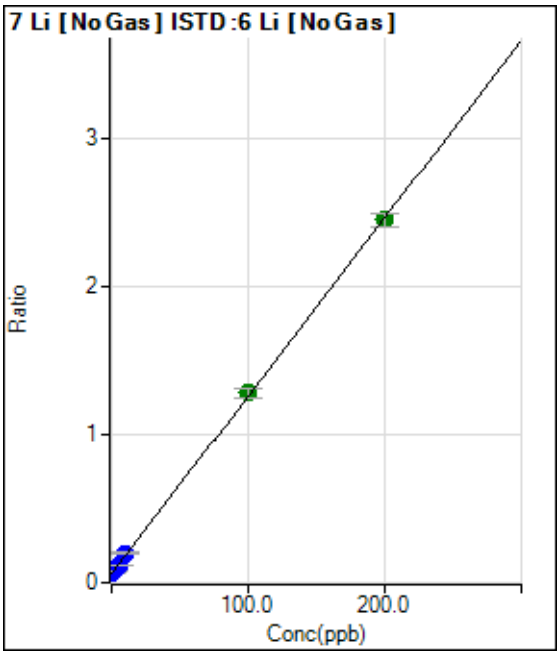

| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2356498.98 | | A | 2.4 |
| 2 | ☐ | 1.000 | | 2380832.25 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 2388726.89 | | A | 0.5 |
| 4 | ☐ | 1.000 | | 2332758.09 | | A | 1.9 |
| 5 | ☐ | 1.000 | | 2309062.78 | | A | 0.8 |
| 6 | ☐ | 1.000 | | 2261574.76 | | A | 2.3 |

Calibration for 112_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 105CALB.d | CAL BLK | 7/28/2020 3:30:53 PM |
| 2 | 106CALS.d | 2/10/200 | 7/28/2020 3:32:46 PM |
| 3 | 107CALS.d | 5/25/500 | 7/28/2020 3:34:40 PM |
| 4 | 108CALS.d | 10/50/100 | 7/28/2020 3:36:33 PM |
| 5 | 109CALS.d | 100/500/10K | 7/28/2020 3:38:26 PM |
| 6 | 110CALS.d | 200/1000/20K | 7/28/2020 3:40:14 PM |

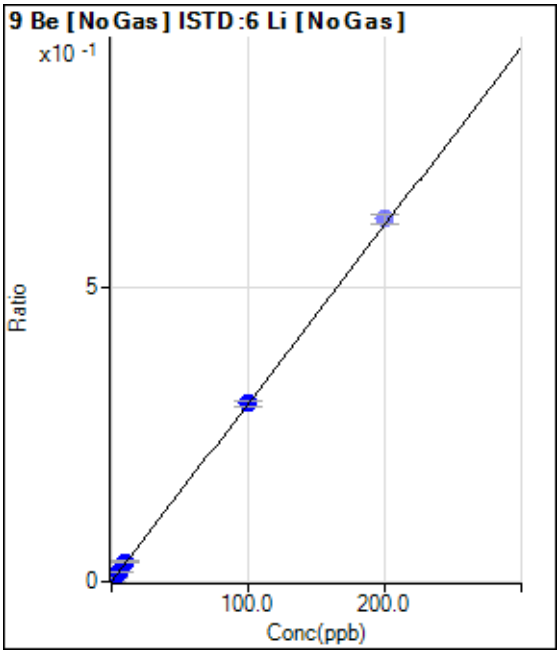
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57553.15 | 0.0602 | P | 2.9 |
| 2 | ☐ | 2.000 | 1.787 | 81043.87 | 0.0816 | P | 4.4 |
| 3 | ☐ | 5.000 | 5.071 | 117544.46 | 0.1210 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.513 | 192006.51 | 0.1983 | P | 4.7 |
| 5 | ☐ | 100.000 | 101.698 | 1205651.31 | 1.2801 | A | 4.9 |
| 6 | ☐ | 200.000 | 199.076 | 2210597.62 | 2.4482 | A | 3.4 |

y = 0.0120 * x + 0.0602
R = 0.9999
DL = 0.4418
BEC = 5.018

Weight: <None>
Min Conc: <None>

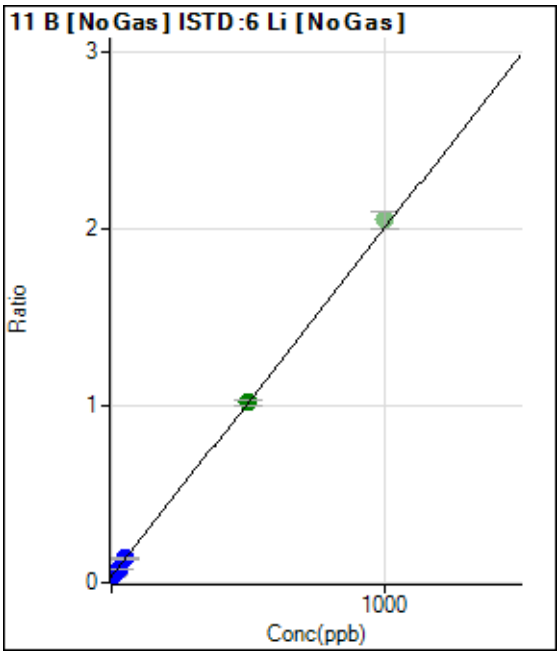



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 8.6 |
| 2 | ☐ | 2.000 | 1.928 | 5811.25 | 0.0059 | P | 6.3 |
| 3 | ☐ | 5.000 | 5.036 | 14804.60 | 0.0153 | P | 5.3 |
| 4 | ☐ | 10.000 | 11.212 | 32830.06 | 0.0339 | P | 7.1 |
| 5 | ☐ | 100.000 | 99.878 | 284652.50 | 0.3021 | P | 2.6 |
| 6 | ☑ | 200.000 | | 556169.85 | 0.6160 | P | 2.4 |

y = 0.0030 * x + 2.4330E-005
R = 0.9999
DL = 0.002077
BEC = 0.008044

Weight: <None>
Min Conc: <None>

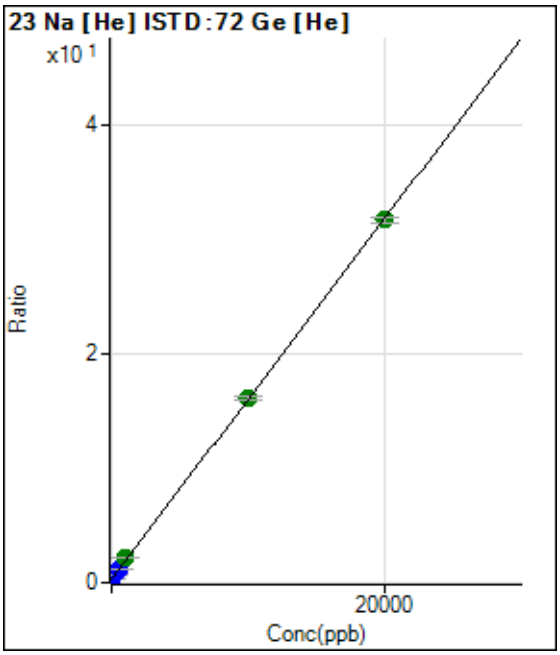
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34305.31 | 0.0359 | P | 5.1 |
| 2 | ☐ | 10.000 | 6.410 | 48169.57 | 0.0485 | P | 4.9 |
| 3 | ☐ | 25.000 | 22.078 | 77039.42 | 0.0794 | P | 5.4 |
| 4 | ☐ | 50.000 | 52.747 | 135237.47 | 0.1398 | P | 7.4 |
| 5 | ☐ | 500.000 | 499.943 | 961815.48 | 1.0209 | A | 2.8 |
| 6 | ☑ | 1000.000 | | 1854198.36 | 2.0542 | A | 4.6 |

y = 0.0020 * x + 0.0359
R = 0.9999
DL = 2.781
BEC = 18.22

Weight: <None>
Min Conc: <None>

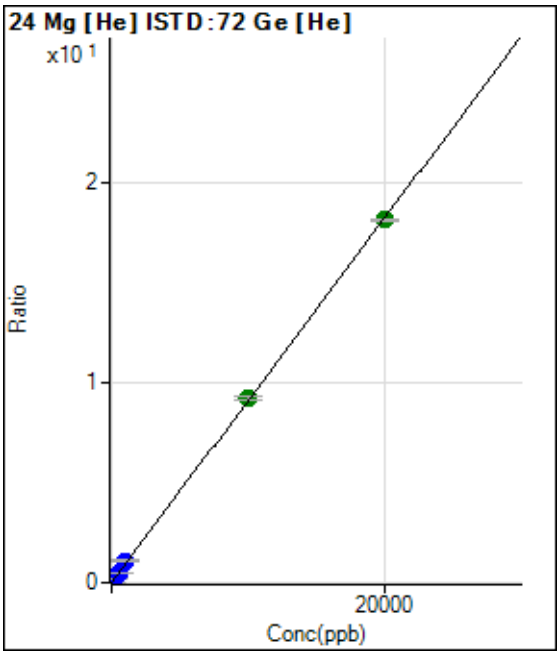



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 157304.74 | 0.2964 | P | 0.5 |
| 2 | ☐ | 200.000 | 215.953 | 336196.26 | 0.6358 | P | 1.6 |
| 3 | ☐ | 500.000 | 541.214 | 605356.17 | 1.1472 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1182.813 | 1122101.13 | 2.1557 | A | 3.6 |
| 5 | ☐ | 10000.00 | 10088.71 | 8249336.75 | 16.1558 | A | 1.9 |
| 6 | ☐ | 20000.00 | 19945.31 | 15860316.01 | 31.6504 | A | 1.4 |

y = 0.0016 * x + 0.2964
R = 1.0000
DL = 2.787
BEC = 188.5

Weight: <None>
Min Conc: <None>

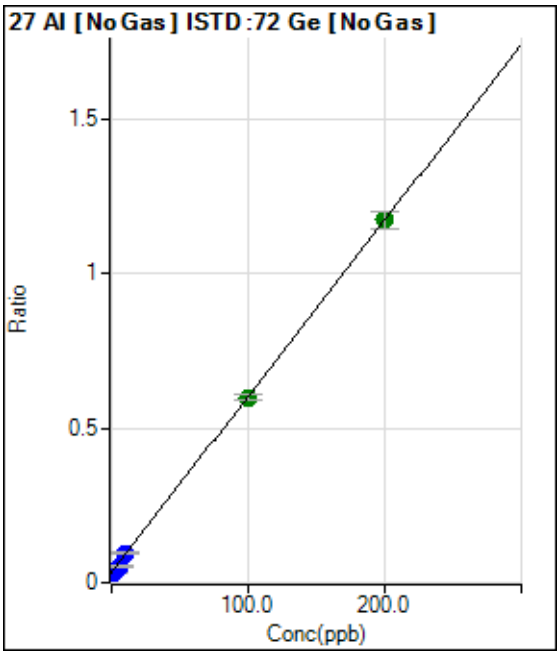
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 640.03 | 0.0012 | P | 29.6 |
| 2 | ☐ | 200.000 | 215.855 | 104582.22 | 0.1978 | P | 0.7 |
| 3 | ☐ | 500.000 | 544.027 | 262074.72 | 0.4967 | P | 1.6 |
| 4 | ☐ | 1000.000 | 1210.368 | 574291.26 | 1.1035 | P | 0.6 |
| 5 | ☐ | 10000.00 | 10154.76 | 4722820.87 | 9.2492 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19910.83 | 9087071.95 | 18.1340 | A | 0.2 |

y = 9.1070E-004 * x + 0.0012
R = 0.9999
DL = 1.174
BEC = 1.322

Weight: <None>
Min Conc: <None>

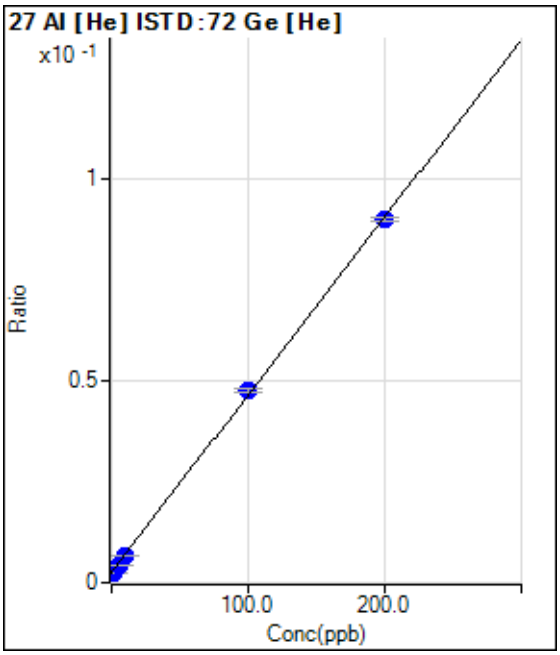



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57161.36 | 0.0340 | P | 1.3 |
| 2 | ☐ | 2.000 | -0.276 | 55488.26 | 0.0325 | P | 3.0 |
| 3 | ☐ | 5.000 | 3.270 | 89130.18 | 0.0526 | P | 4.1 |
| 4 | ☐ | 10.000 | 10.857 | 160870.45 | 0.0957 | P | 1.9 |
| 5 | ☐ | 100.000 | 99.507 | 993725.74 | 0.5994 | A | 2.1 |
| 6 | ☐ | 200.000 | 200.270 | 1897813.67 | 1.1719 | A | 4.5 |

y = 0.0057 * x + 0.0340
R = 0.9999
DL = 0.2381
BEC = 5.988

Weight: <None>
Min Conc: <None>

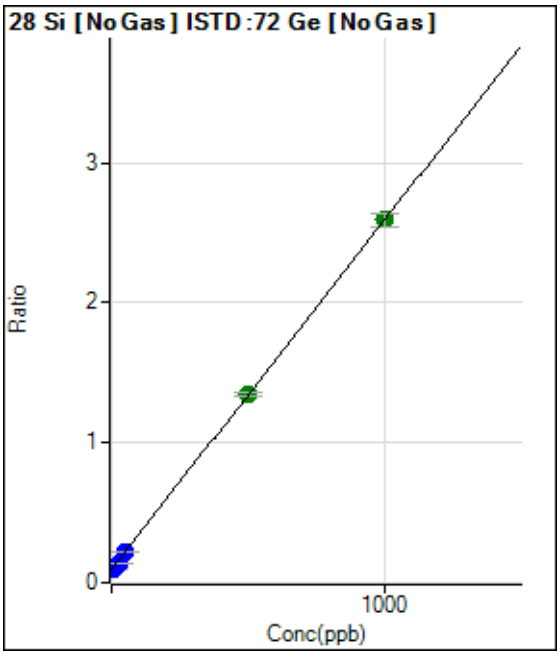
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1383.43 | 0.0026 | P | 9.3 |
| 2 | ☐ | 2.000 | -0.352 | 1296.75 | 0.0025 | P | 7.1 |
| 3 | ☐ | 5.000 | 3.651 | 2220.22 | 0.0042 | P | 3.5 |
| 4 | ☐ | 10.000 | 9.468 | 3517.17 | 0.0068 | P | 3.0 |
| 5 | ☐ | 100.000 | 102.950 | 24375.03 | 0.0477 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.609 | 44933.15 | 0.0897 | P | 1.2 |

y = 4.3835E-004 * x + 0.0026
R = 0.9998
DL = 1.661
BEC = 5.948

Weight: <None>
Min Conc: <None>

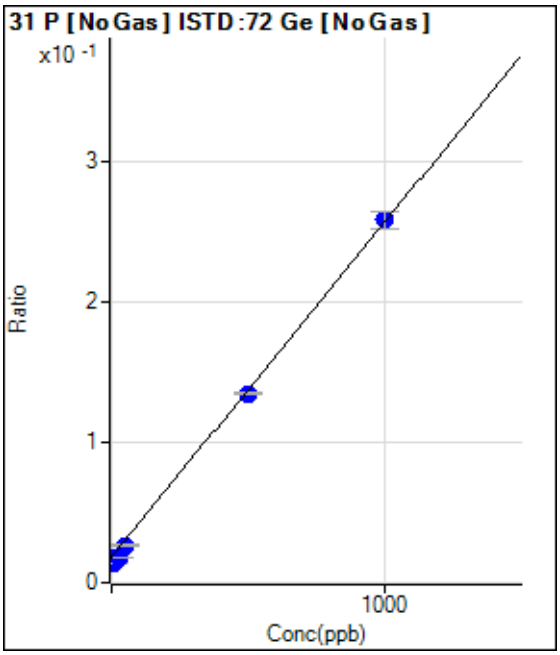



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 159662.85 | 0.0951 | P | 3.0 |
| 2 | ☐ | 10.000 | 2.651 | 173885.87 | 0.1017 | P | 2.1 |
| 3 | ☐ | 25.000 | 17.592 | 235486.14 | 0.1390 | P | 2.2 |
| 4 | ☐ | 50.000 | 50.689 | 372405.00 | 0.2216 | P | 3.3 |
| 5 | ☐ | 500.000 | 499.050 | 2222547.88 | 1.3406 | A | 2.1 |
| 6 | ☐ | 1000.000 | 1000.699 | 4198607.86 | 2.5926 | A | 4.0 |

y = 0.0025 * x + 0.0951
R = 1.0000
DL = 3.408
BEC = 38.09

Weight: <None>
Min Conc: <None>

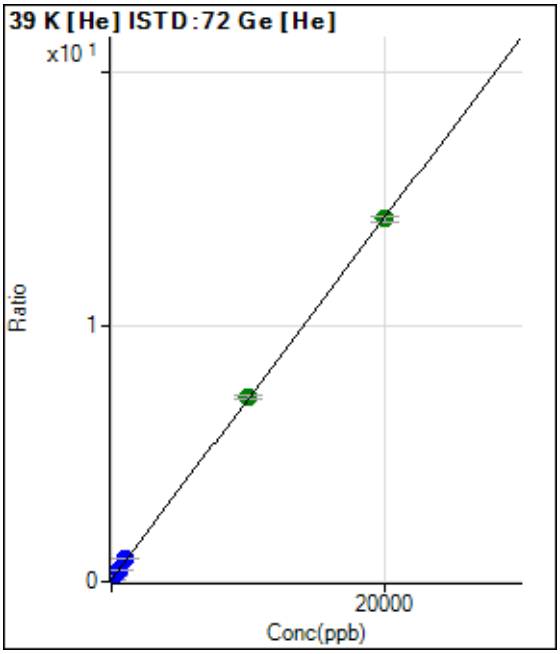
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 30734.42 | 0.0183 | P | 1.7 |
| 2 | ☐ | 10.000 | -20.428 | 22965.93 | 0.0134 | P | 3.0 |
| 3 | ☐ | 25.000 | -1.552 | 30383.69 | 0.0179 | P | 1.4 |
| 4 | ☐ | 50.000 | 34.740 | 44645.69 | 0.0266 | P | 3.7 |
| 5 | ☐ | 500.000 | 488.484 | 223203.23 | 0.1346 | P | 0.5 |
| 6 | ☐ | 1000.000 | 1007.489 | 418114.59 | 0.2582 | P | 4.5 |

y = 2.3812E-004 * x + 0.0183
R = 0.9997
DL = 3.849
BEC = 76.83

Weight: <None>
Min Conc: <None>

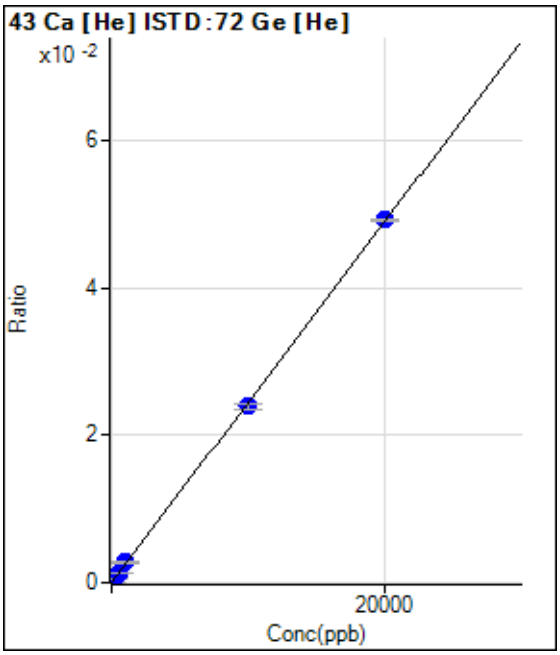



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43562.27 | 0.0821 | P | 1.1 |
| 2 | ☐ | 200.000 | 220.650 | 126145.84 | 0.2386 | P | 1.2 |
| 3 | ☐ | 500.000 | 540.978 | 245789.48 | 0.4657 | P | 1.1 |
| 4 | ☐ | 1000.000 | 1172.611 | 475484.84 | 0.9137 | P | 1.5 |
| 5 | ☐ | 10000.00 | 10080.21 | 3692880.05 | 7.2307 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19950.03 | 7130939.06 | 14.2301 | A | 1.4 |

y = 7.0917E-004 * x + 0.0821
R = 1.0000
DL = 3.714
BEC = 115.7

Weight: <None>
Min Conc: <None>

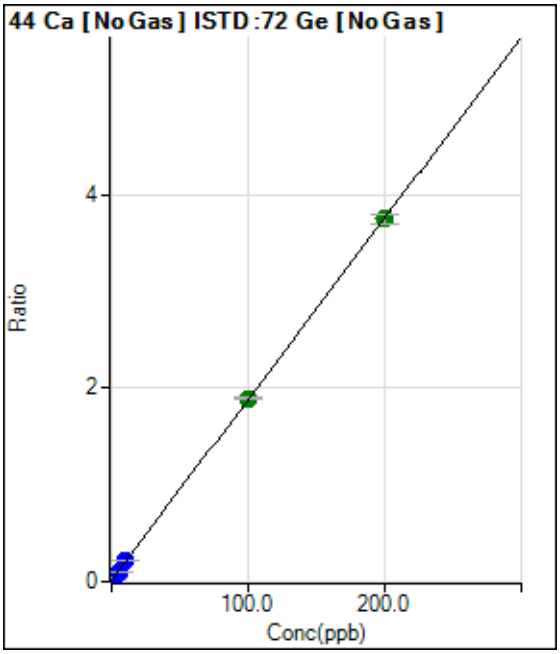
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16.67 | 0.0000 | P | 91.5 |
| 2 | ☐ | 200.000 | 211.308 | 290.01 | 0.0005 | P | 19.0 |
| 3 | ☐ | 500.000 | 531.481 | 703.36 | 0.0013 | P | 6.6 |
| 4 | ☐ | 1000.000 | 1124.964 | 1450.11 | 0.0028 | P | 8.1 |
| 5 | ☐ | 10000.00 | 9762.480 | 12232.32 | 0.0239 | P | 3.2 |
| 6 | ☐ | 20000.00 | 20111.61 | 24705.94 | 0.0493 | P | 0.4 |

y = 2.4499E-006 * x + 3.1186E-005
R = 0.9999
DL = 34.96
BEC = 12.73

Weight: <None>
Min Conc: <None>

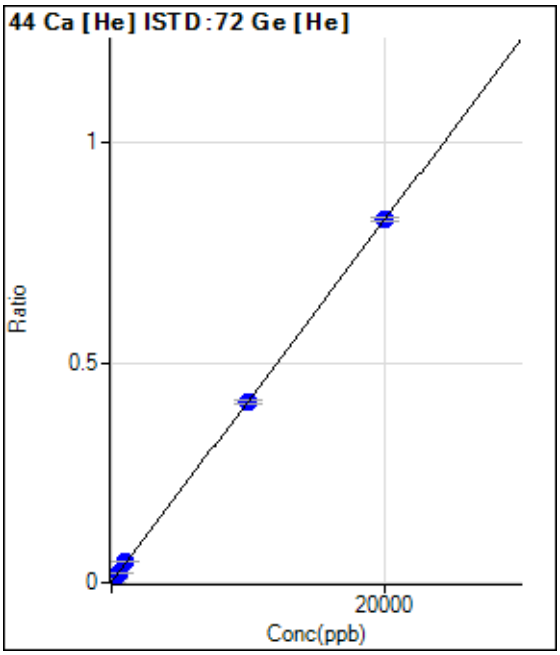



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23617.25 | 0.0141 | P | 2.5 |
| 2 | ☐ | 2.000 | 1.889 | 84512.71 | 0.0494 | P | 2.3 |
| 3 | ☐ | 5.000 | 5.036 | 183637.38 | 0.1084 | P | 0.9 |
| 4 | ☐ | 10.000 | 11.184 | 375528.85 | 0.2235 | P | 3.4 |
| 5 | ☐ | 100.000 | 100.461 | 3142422.87 | 1.8951 | A | 1.1 |
| 6 | ☐ | 200.000 | 199.711 | 6079906.99 | 3.7535 | A | 2.6 |

y = 0.0187 * x + 0.0141
R = 1.0000
DL = 0.05687
BEC = 0.7506

Weight: <None>
Min Conc: <None>

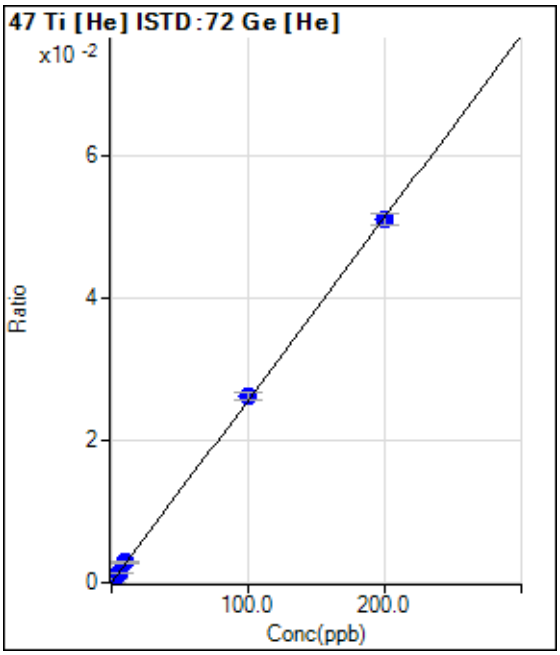
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 593.36 | 0.0011 | P | 6.9 |
| 2 | ☐ | 200.000 | 183.786 | 4590.88 | 0.0087 | P | 5.9 |
| 3 | ☐ | 500.000 | 507.334 | 11611.82 | 0.0220 | P | 2.4 |
| 4 | ☐ | 1000.000 | 1130.330 | 24802.77 | 0.0477 | P | 1.1 |
| 5 | ☐ | 10000.00 | 9960.922 | 210046.45 | 0.4113 | P | 1.7 |
| 6 | ☐ | 20000.00 | 20013.00 | 413499.04 | 0.8252 | P | 1.2 |

y = 4.1175E-005 * x + 0.0011
R = 1.0000
DL = 5.615
BEC = 27.16

Weight: <None>
Min Conc: <None>

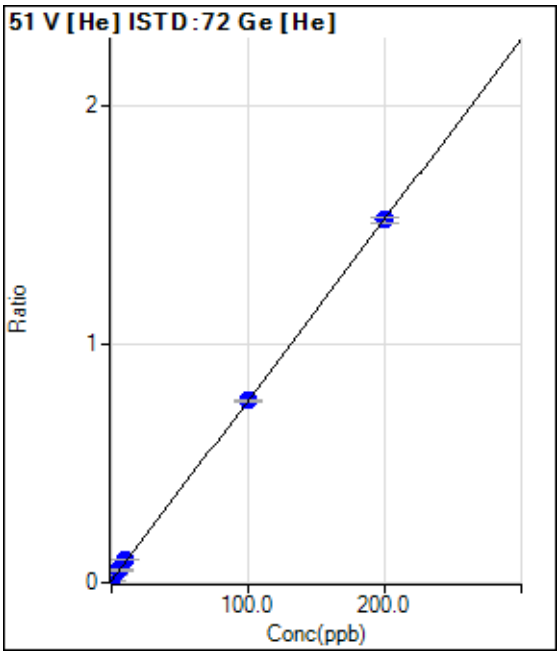



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 1.920 | 263.34 | 0.0005 | P | 10.0 |
| 3 | ☐ | 5.000 | 5.306 | 720.04 | 0.0014 | P | 10.4 |
| 4 | ☐ | 10.000 | 11.448 | 1530.12 | 0.0029 | P | 7.3 |
| 5 | ☐ | 100.000 | 102.271 | 13380.11 | 0.0262 | P | 3.9 |
| 6 | ☐ | 200.000 | 198.785 | 25524.15 | 0.0509 | P | 3.0 |

y = 2.5620E-004 * x + 6.2258E-006
R = 0.9999
DL = 0.1263
BEC = 0.0243

Weight: <None>
Min Conc: <None>

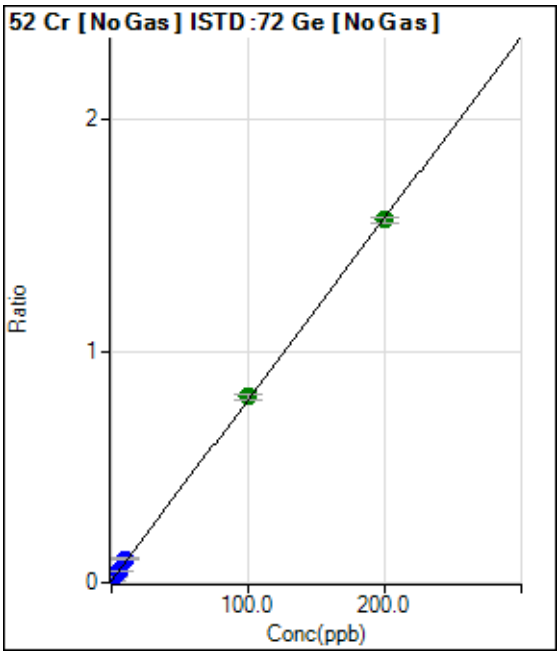
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 4168.44 | 0.0079 | P | 2.1 |
| 2 | ☐ | 2.000 | 2.755 | 15200.69 | 0.0287 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.931 | 27878.34 | 0.0528 | P | 1.4 |
| 4 | ☐ | 10.000 | 12.216 | 52301.63 | 0.1005 | P | 0.5 |
| 5 | ☐ | 100.000 | 99.962 | 391110.69 | 0.7659 | P | 1.4 |
| 6 | ☐ | 200.000 | 199.877 | 763522.64 | 1.5237 | P | 1.8 |

y = 0.0076 * x + 0.0079
R = 1.0000
DL = 0.06477
BEC = 1.036

Weight: <None>
Min Conc: <None>

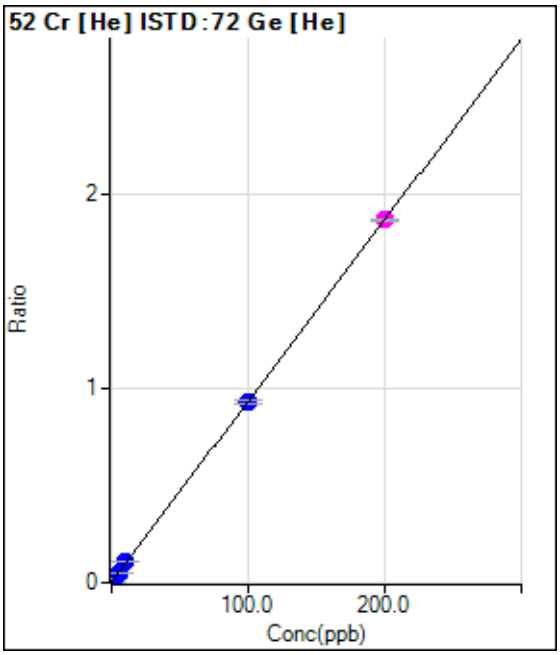



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13490.19 | 0.0080 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.666 | 49402.71 | 0.0289 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.797 | 90502.34 | 0.0534 | P | 1.7 |
| 4 | ☐ | 10.000 | 12.204 | 174069.94 | 0.1035 | P | 2.5 |
| 5 | ☐ | 100.000 | 101.630 | 1332066.31 | 0.8035 | A | 2.9 |
| 6 | ☐ | 200.000 | 199.048 | 2536885.69 | 1.5659 | A | 1.4 |

y = 0.0078 * x + 0.0080
R = 0.9999
DL = 0.08659
BEC = 1.026

Weight: <None>
Min Conc: <None>

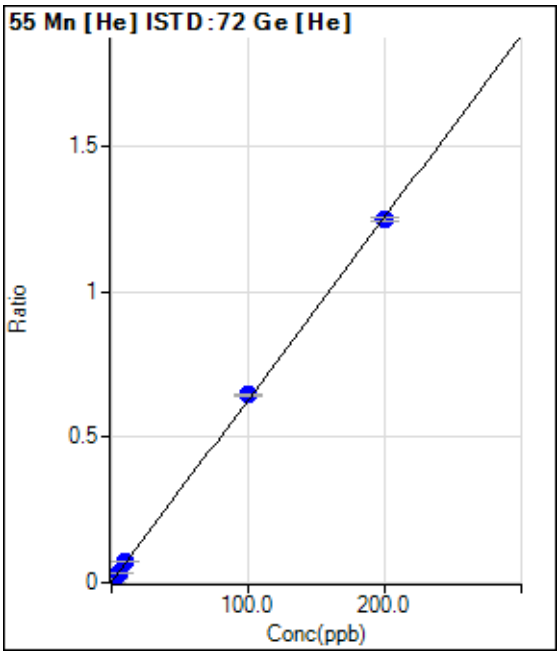
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1306.76 | 0.0025 | P | 8.3 |
| 2 | ☐ | 2.000 | 1.970 | 11031.32 | 0.0209 | P | 1.6 |
| 3 | ☐ | 5.000 | 5.162 | 26739.79 | 0.0507 | P | 3.5 |
| 4 | ☐ | 10.000 | 11.303 | 56233.15 | 0.1081 | P | 2.8 |
| 5 | ☐ | 100.000 | 99.578 | 476314.49 | 0.9328 | P | 1.4 |
| 6 | ☐ | 200.000 | 200.142 | 938225.48 | 1.8723 | M | 0.8 |

y = 0.0093 * x + 0.0025
R = 1.0000
DL = 0.06577
BEC = 0.2636

Weight: <None>
Min Conc: <None>

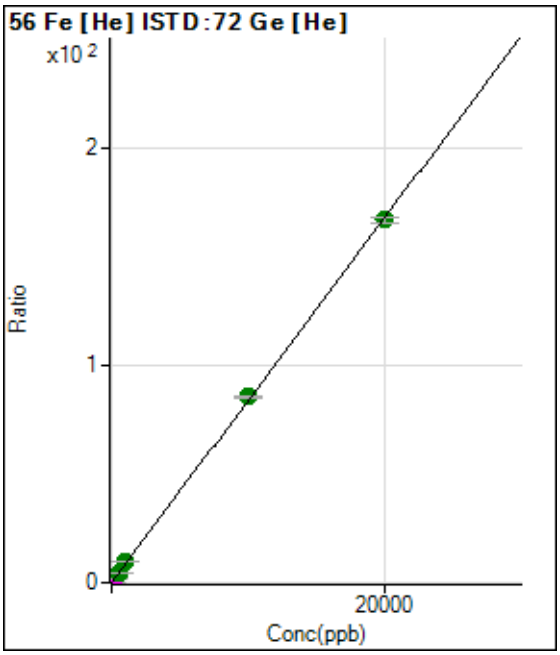



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1180.07 | 0.0022 | P | 10.6 |
| 2 | ☐ | 2.000 | 2.008 | 7832.39 | 0.0148 | P | 4.7 |
| 3 | ☐ | 5.000 | 5.009 | 17741.81 | 0.0336 | P | 3.7 |
| 4 | ☐ | 10.000 | 11.429 | 38451.51 | 0.0739 | P | 1.5 |
| 5 | ☐ | 100.000 | 102.597 | 329643.51 | 0.6455 | P | 0.3 |
| 6 | ☐ | 200.000 | 198.630 | 625203.90 | 1.2477 | P | 1.2 |

y = 0.0063 * x + 0.0022
R = 0.9999
DL = 0.1132
BEC = 0.3545

Weight: <None>
Min Conc: <None>

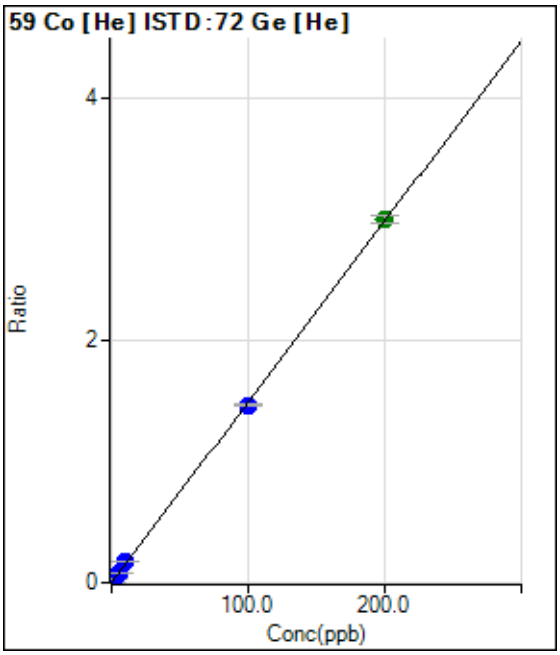
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 5481.18 | 0.0103 | P | 2.8 |
| 2 | ☐ | 200.000 | 209.851 | 935949.51 | 1.7700 | M | 1.4 |
| 3 | ☐ | 500.000 | 533.215 | 2364601.68 | 4.4815 | A | 1.7 |
| 4 | ☐ | 1000.000 | 1155.871 | 5049631.49 | 9.7026 | A | 1.1 |
| 5 | ☐ | 10000.00 | 10183.07 | 43606426.01 | 85.3982 | A | 1.4 |
| 6 | ☐ | 20000.00 | 19899.74 | 83620213.75 | 166.875 | A | 1.6 |

y = 0.0084 * x + 0.0103
R = 0.9999
DL = 0.1027
BEC = 1.231

Weight: <None>
Min Conc: <None>

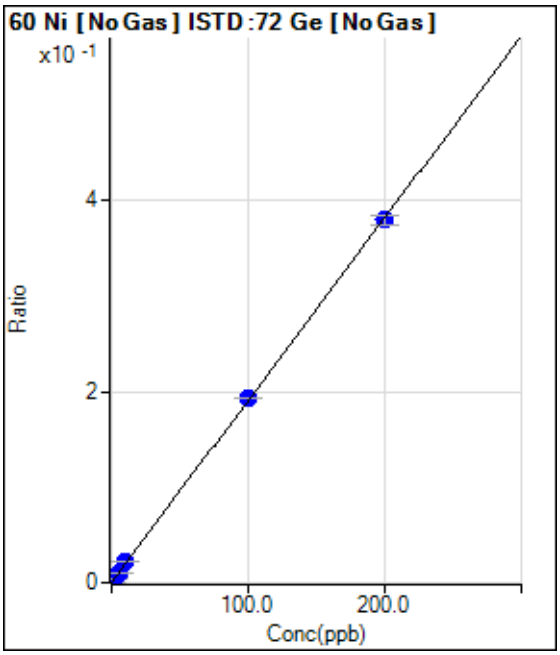



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 256.67 | 0.0005 | P | 19.0 |
| 2 | ☐ | 2.000 | 2.032 | 16249.96 | 0.0307 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.071 | 40089.48 | 0.0760 | P | 2.3 |
| 4 | ☐ | 10.000 | 11.260 | 87472.08 | 0.1681 | P | 0.8 |
| 5 | ☐ | 100.000 | 98.225 | 746821.66 | 1.4625 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.822 | 1498047.32 | 2.9896 | A | 2.1 |

y = 0.0149 * x + 4.8288E-004
R = 0.9999
DL = 0.01848
BEC = 0.03244

Weight: <None>
Min Conc: <None>

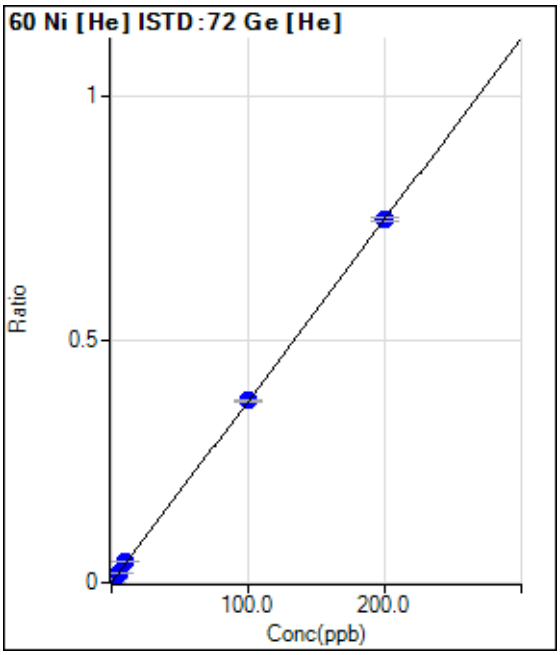
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 313.34 | 0.0002 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.123 | 7242.07 | 0.0042 | P | 2.0 |
| 3 | ☐ | 5.000 | 5.298 | 17431.53 | 0.0103 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.780 | 38063.69 | 0.0226 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.634 | 321595.35 | 0.1939 | P | 0.2 |
| 6 | ☐ | 200.000 | 199.085 | 615081.67 | 0.3797 | P | 2.4 |

y = 0.0019 * x + 1.8664E-004
R = 0.9999
DL = 0.01708
BEC = 0.0979

Weight: <None>
Min Conc: <None>

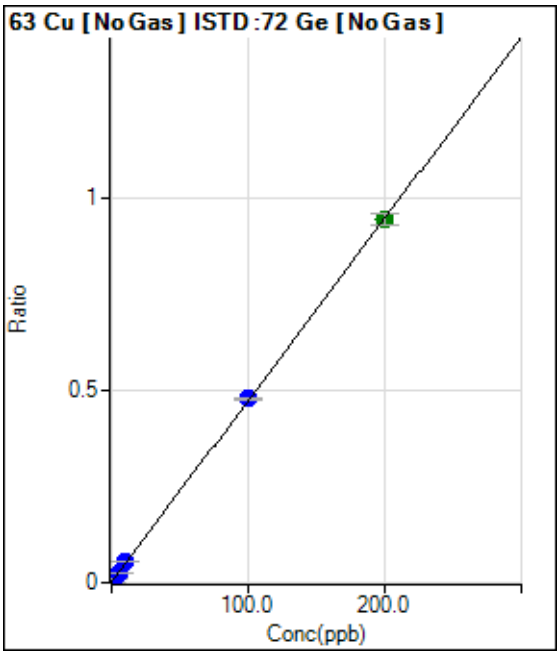



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 150.00 | 0.0003 | P | 34.4 |
| 2 | ☐ | 2.000 | 2.032 | 4160.72 | 0.0079 | P | 9.7 |
| 3 | ☐ | 5.000 | 5.282 | 10557.62 | 0.0200 | P | 2.7 |
| 4 | ☐ | 10.000 | 11.857 | 23186.73 | 0.0446 | P | 2.8 |
| 5 | ☐ | 100.000 | 100.077 | 190956.21 | 0.3740 | P | 1.6 |
| 6 | ☐ | 200.000 | 199.861 | 374109.62 | 0.7466 | P | 1.0 |

y = 0.0037 * x + 2.8187E-004
R = 1.0000
DL = 0.07796
BEC = 0.07548

Weight: <None>
Min Conc: <None>

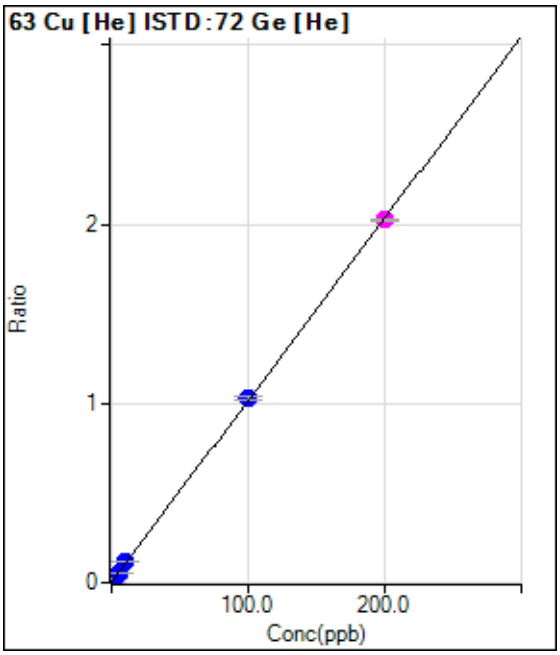
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1650.13 | 0.0010 | P | 10.5 |
| 2 | ☐ | 2.000 | 2.110 | 18706.55 | 0.0109 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.254 | 43671.07 | 0.0258 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.722 | 94639.95 | 0.0563 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.024 | 792086.66 | 0.4777 | P | 0.5 |
| 6 | ☐ | 200.000 | 199.394 | 1525520.13 | 0.9418 | A | 3.0 |

y = 0.0047 * x + 9.8236E-004
R = 1.0000
DL = 0.06549
BEC = 0.2082

Weight: <None>
Min Conc: <None>

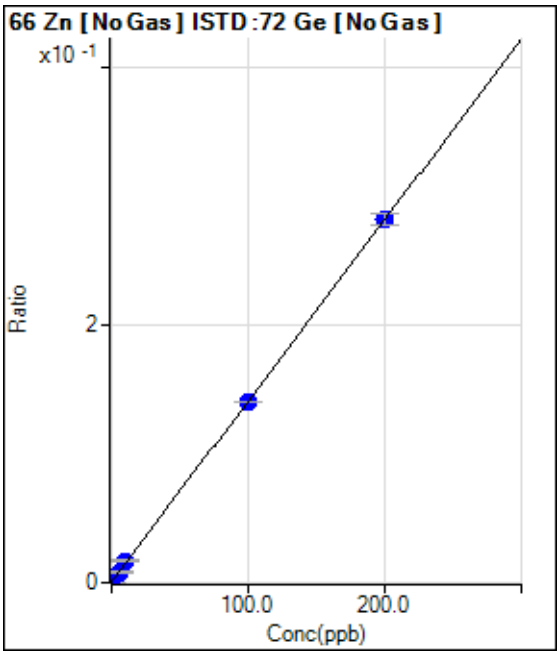



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1030.05 | 0.0019 | P | 1.3 |
| 2 | ☐ | 2.000 | 2.052 | 12035.53 | 0.0228 | P | 3.9 |
| 3 | ☐ | 5.000 | 5.210 | 28924.86 | 0.0548 | P | 2.4 |
| 4 | ☐ | 10.000 | 11.638 | 62490.70 | 0.1201 | P | 0.6 |
| 5 | ☐ | 100.000 | 101.276 | 525850.11 | 1.0299 | P | 2.4 |
| 6 | ☐ | 200.000 | 199.274 | 1014546.60 | 2.0246 | M | 0.8 |

y = 0.0102 * x + 0.0019
R = 0.9999
DL = 0.007658
BEC = 0.1912

Weight: <None>
Min Conc: <None>

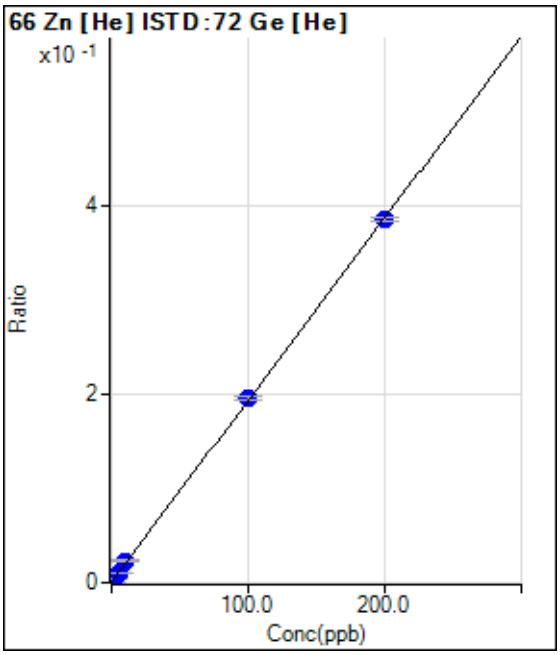
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 933.39 | 0.0006 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.320 | 6525.03 | 0.0038 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.335 | 13647.18 | 0.0081 | P | 6.6 |
| 4 | ☐ | 10.000 | 11.816 | 28837.85 | 0.0172 | P | 0.7 |
| 5 | ☐ | 100.000 | 99.616 | 232968.88 | 0.1405 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.090 | 456141.96 | 0.2816 | P | 3.1 |

y = 0.0014 * x + 5.5656E-004
R = 1.0000
DL = 0.1962
BEC = 0.3962

Weight: <None>
Min Conc: <None>

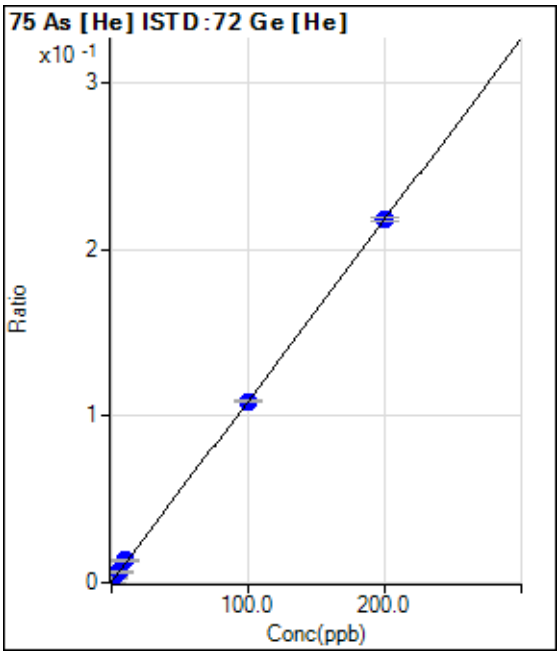



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 296.68 | 0.0006 | P | 23.8 |
| 2 | ☐ | 2.000 | 2.221 | 2556.94 | 0.0048 | P | 16.5 |
| 3 | ☐ | 5.000 | 5.124 | 5504.54 | 0.0104 | P | 5.7 |
| 4 | ☐ | 10.000 | 11.674 | 12002.16 | 0.0231 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.500 | 100181.30 | 0.1962 | P | 1.7 |
| 6 | ☐ | 200.000 | 199.161 | 192641.95 | 0.3844 | P | 1.0 |

y = 0.0019 * x + 5.5894E-004
R = 0.9999
DL = 0.2068
BEC = 0.29

Weight: <None>
Min Conc: <None>

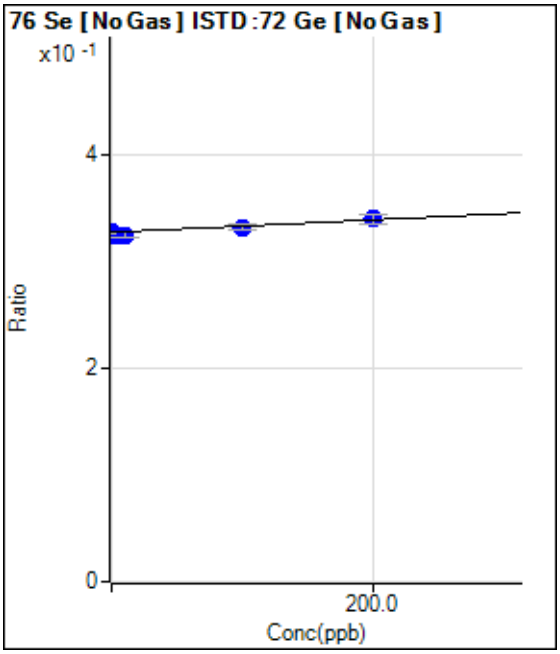
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 203.34 | 0.0004 | P | 22.8 |
| 2 | ☐ | 2.000 | 2.312 | 1532.32 | 0.0029 | P | 4.0 |
| 3 | ☐ | 5.000 | 5.499 | 3358.22 | 0.0064 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.989 | 6985.18 | 0.0134 | P | 2.3 |
| 5 | ☐ | 100.000 | 99.905 | 55675.38 | 0.1090 | P | 0.4 |
| 6 | ☐ | 200.000 | 199.932 | 109139.12 | 0.2178 | P | 1.1 |

y = 0.0011 * x + 3.8370E-004
R = 1.0000
DL = 0.2418
BEC = 0.3528

Weight: <None>
Min Conc: <None>

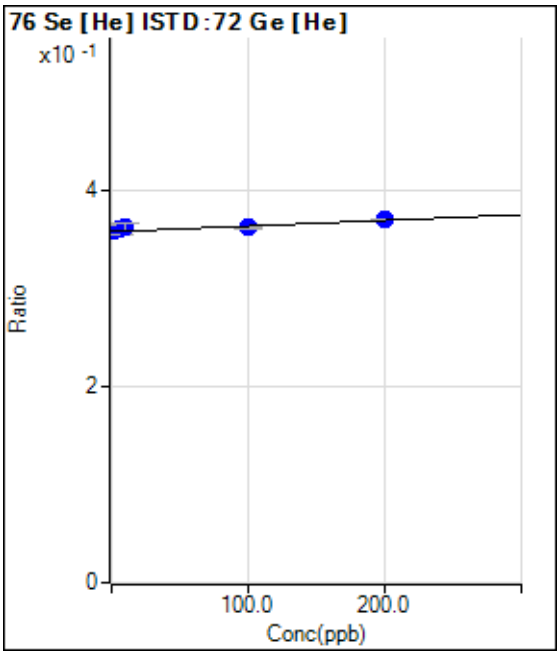



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 549267.10 | 0.3269 | P | 0.2 |
| 2 | ☐ | 2.000 | -63.603 | 552711.98 | 0.3232 | P | 2.0 |
| 3 | ☐ | 5.000 | -58.602 | 548166.28 | 0.3235 | P | 1.2 |
| 4 | ☐ | 10.000 | -38.740 | 545634.03 | 0.3246 | P | 2.1 |
| 5 | ☐ | 100.000 | 80.188 | 549682.96 | 0.3315 | P | 1.6 |
| 6 | ☐ | 200.000 | 214.589 | 549654.39 | 0.3393 | P | 2.7 |

y = 5.8100E-005 * x + 0.3269
R = 0.9746
DL = 28.38
BEC = 5626

Weight: <None>
Min Conc: <None>

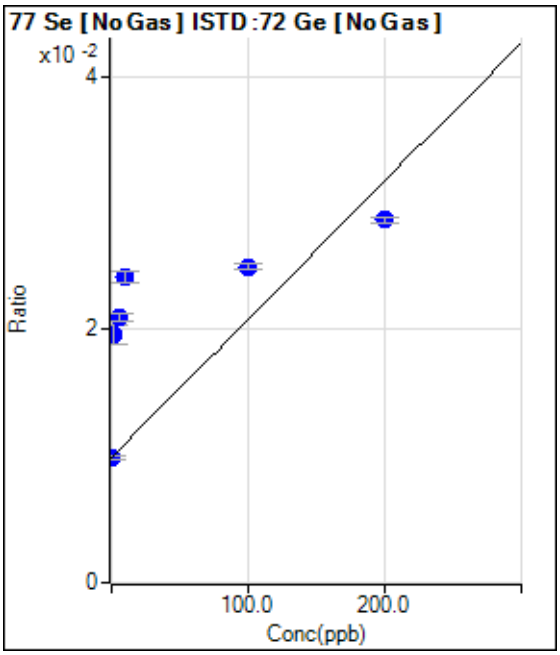
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 189505.80 | 0.3570 | P | 0.6 |
| 2 | ☐ | 2.000 | 30.900 | 189726.88 | 0.3588 | P | 1.5 |
| 3 | ☐ | 5.000 | 36.376 | 189489.47 | 0.3591 | P | 2.5 |
| 4 | ☐ | 10.000 | 81.114 | 188254.13 | 0.3617 | P | 1.8 |
| 5 | ☐ | 100.000 | 77.348 | 184631.09 | 0.3615 | P | 0.6 |
| 6 | ☐ | 200.000 | 206.697 | 184933.13 | 0.3691 | P | 0.2 |

y = 5.8148E-005 * x + 0.3570
R = 0.9191
DL = 112.5
BEC = 6140

Weight: <None>
Min Conc: <None>

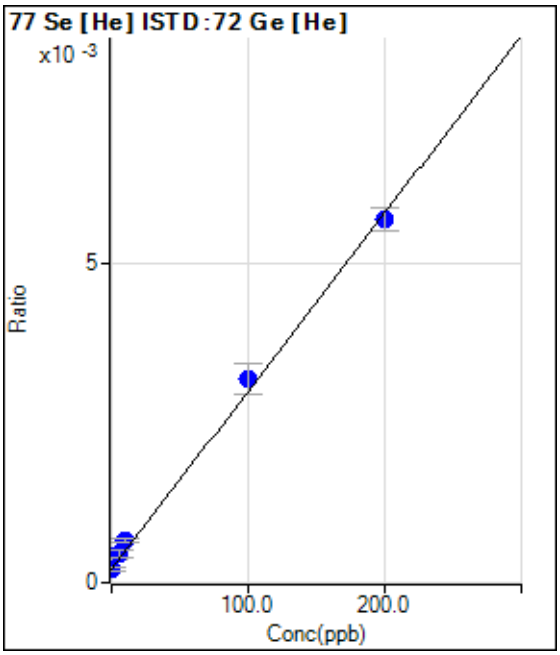



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16660.60 | 0.0099 | P | 3.2 |
| 2 | ☐ | 2.000 | 88.567 | 33468.87 | 0.0196 | P | 8.1 |
| 3 | ☐ | 5.000 | 101.550 | 35590.77 | 0.0210 | P | 2.6 |
| 4 | ☐ | 10.000 | 129.876 | 40504.82 | 0.0241 | P | 3.8 |
| 5 | ☐ | 100.000 | 137.963 | 41414.00 | 0.0250 | P | 2.0 |
| 6 | ☐ | 200.000 | 171.745 | 46446.90 | 0.0287 | P | 1.8 |

y = 1.0917E-004 * x + 0.0099
R = 0.6982
DL = 8.771
BEC = 90.85

Weight: <None>
Min Conc: <None>

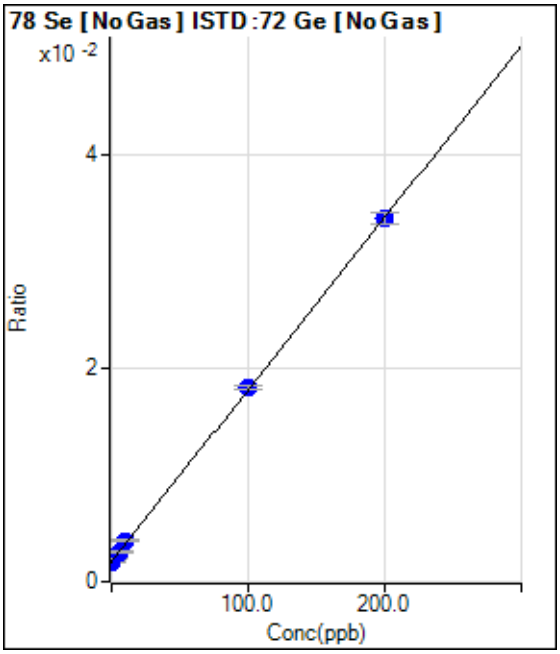
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 113.33 | 0.0002 | P | 23.4 |
| 2 | ☐ | 2.000 | 7.474 | 223.34 | 0.0004 | P | 24.7 |
| 3 | ☐ | 5.000 | 8.382 | 236.68 | 0.0004 | P | 22.6 |
| 4 | ☐ | 10.000 | 16.226 | 346.68 | 0.0007 | P | 7.9 |
| 5 | ☐ | 100.000 | 106.447 | 1626.79 | 0.0032 | P | 15.1 |
| 6 | ☐ | 200.000 | 196.326 | 2850.35 | 0.0057 | P | 6.2 |

y = 2.7886E-005 * x + 2.1389E-004
R = 0.9991
DL = 5.375
BEC = 7.67

Weight: <None>
Min Conc: <None>

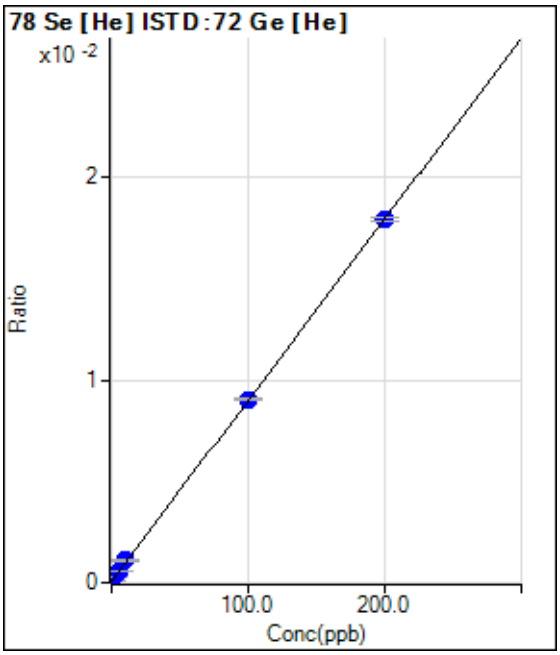



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3170.43 | 0.0019 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.381 | 3883.96 | 0.0023 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.341 | 4650.90 | 0.0027 | P | 8.6 |
| 4 | ☐ | 10.000 | 11.928 | 6398.29 | 0.0038 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.043 | 30090.66 | 0.0181 | P | 2.3 |
| 6 | ☐ | 200.000 | 199.370 | 55026.19 | 0.0340 | P | 3.2 |

y = 1.6094E-004 * x + 0.0019
R = 1.0000
DL = 2.035
BEC = 11.72

Weight: <None>
Min Conc: <None>

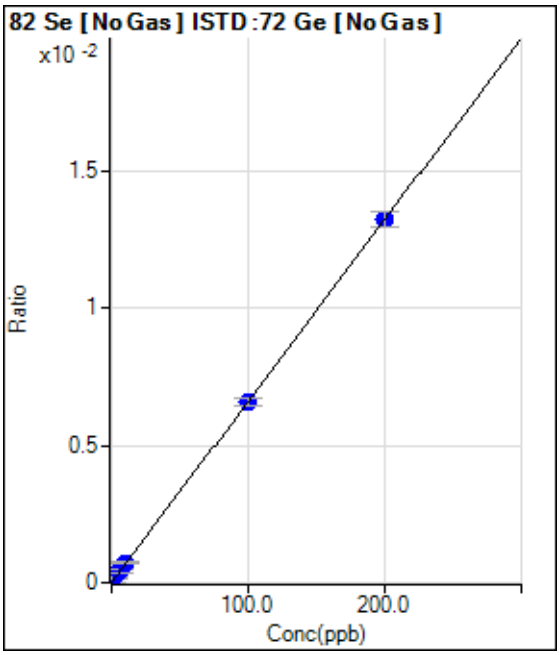
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 35.9 |
| 2 | ☐ | 2.000 | 2.164 | 135.33 | 0.0003 | P | 14.4 |
| 3 | ☐ | 5.000 | 5.844 | 308.67 | 0.0006 | P | 4.5 |
| 4 | ☐ | 10.000 | 11.645 | 574.01 | 0.0011 | P | 2.9 |
| 5 | ☐ | 100.000 | 100.391 | 4610.13 | 0.0090 | P | 1.1 |
| 6 | ☐ | 200.000 | 199.699 | 8967.68 | 0.0179 | P | 1.1 |

y = 8.9298E-005 * x + 6.2935E-005
R = 1.0000
DL = 0.759
BEC = 0.7048

Weight: <None>
Min Conc: <None>

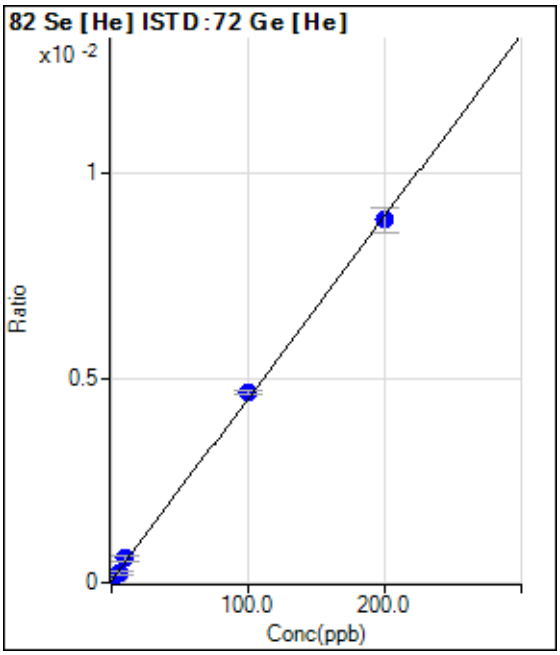



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | -41.47 | 0.0000 | P | -43.2 |
| 2 | ☐ | 2.000 | 2.784 | 272.15 | 0.0002 | P | 47.9 |
| 3 | ☐ | 5.000 | 6.017 | 632.14 | 0.0004 | P | 34.4 |
| 4 | ☐ | 10.000 | 11.069 | 1191.98 | 0.0007 | P | 8.5 |
| 5 | ☐ | 100.000 | 99.555 | 10899.93 | 0.0066 | P | 3.5 |
| 6 | ☐ | 200.000 | 200.136 | 21453.01 | 0.0132 | P | 4.3 |

y = 6.6296E-005 * x - 2.4782E-005
R = 1.0000
DL = 0.4848
BEC = -0.3738

Weight: <None>
Min Conc: <None>

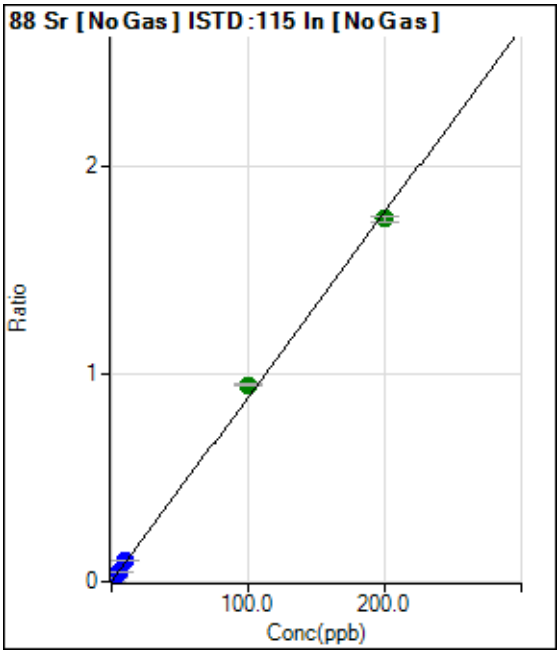
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0001 | P | 79.1 |
| 2 | ☐ | 2.000 | 1.838 | 70.00 | 0.0001 | P | 37.8 |
| 3 | ☐ | 5.000 | 3.961 | 120.00 | 0.0002 | P | 28.6 |
| 4 | ☐ | 10.000 | 12.398 | 313.34 | 0.0006 | P | 23.0 |
| 5 | ☐ | 100.000 | 103.581 | 2380.25 | 0.0047 | P | 1.6 |
| 6 | ☐ | 200.000 | 198.117 | 4444.14 | 0.0089 | P | 6.8 |

y = 4.4505E-005 * x + 5.0541E-005
R = 0.9997
DL = 2.696
BEC = 1.136

Weight: <None>
Min Conc: <None>

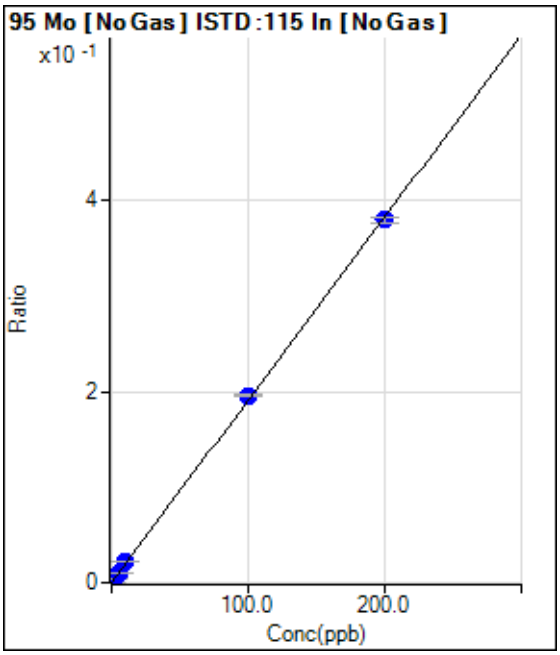



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2056.86 | 0.0010 | P | 6.6 |
| 2 | ☐ | 2.000 | 2.054 | 39057.46 | 0.0192 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.062 | 96243.50 | 0.0459 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.306 | 207012.44 | 0.1013 | P | 3.9 |
| 5 | ☐ | 100.000 | 106.724 | 1871818.67 | 0.9481 | A | 0.7 |
| 6 | ☐ | 200.000 | 196.570 | 3471502.45 | 1.7454 | A | 1.7 |

y = 0.0089 * x + 9.6840E-004
R = 0.9992
DL = 0.02163
BEC = 0.1091

Weight: <None>
Min Conc: <None>

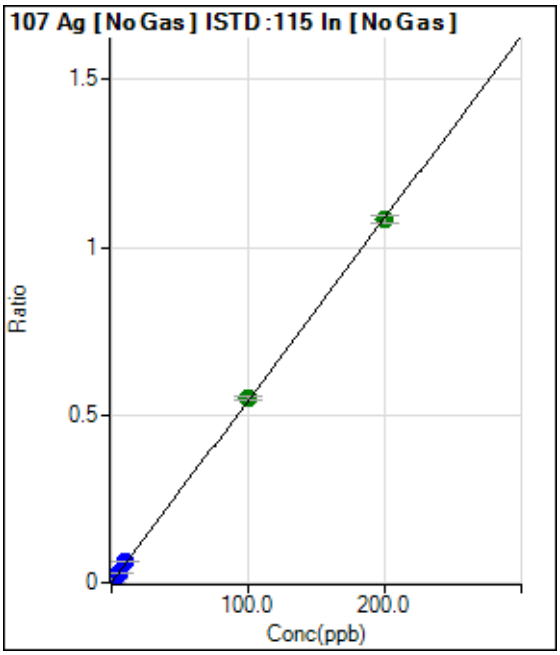
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 12.5 |
| 2 | ☐ | 2.000 | 2.088 | 8172.68 | 0.0040 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.919 | 19768.38 | 0.0094 | P | 2.2 |
| 4 | ☐ | 10.000 | 11.418 | 44641.96 | 0.0218 | P | 5.6 |
| 5 | ☐ | 100.000 | 102.518 | 386787.65 | 0.1959 | P | 0.9 |
| 6 | ☐ | 200.000 | 198.671 | 755022.25 | 0.3796 | P | 1.5 |

y = 0.0019 * x + 2.6703E-005
R = 0.9999
DL = 0.005236
BEC = 0.01397

Weight: <None>
Min Conc: <None>

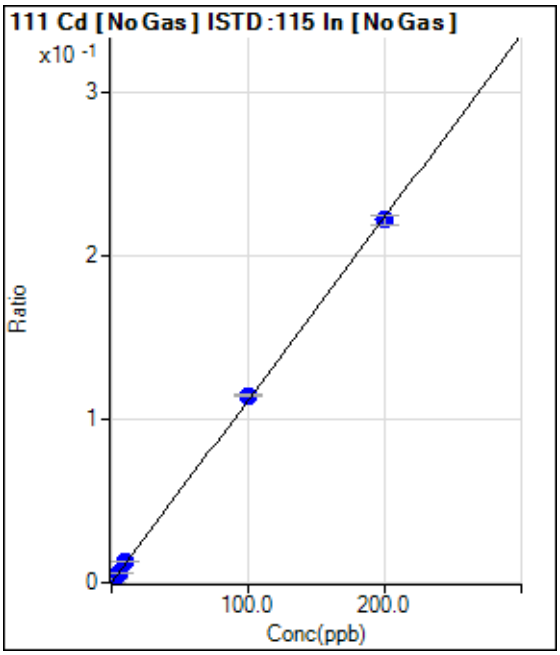



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 176.67 | 0.0001 | P | 15.9 |
| 2 | ☐ | 2.000 | 2.122 | 23621.58 | 0.0116 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.074 | 57980.93 | 0.0277 | P | 2.1 |
| 4 | ☐ | 10.000 | 11.449 | 127291.58 | 0.0623 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.586 | 1089834.10 | 0.5520 | A | 2.1 |
| 6 | ☐ | 200.000 | 199.132 | 2151939.40 | 1.0821 | A | 2.0 |

y = 0.0054 * x + 8.2957E-005
R = 0.9999
DL = 0.007271
BEC = 0.01527

Weight: <None>
Min Conc: <None>

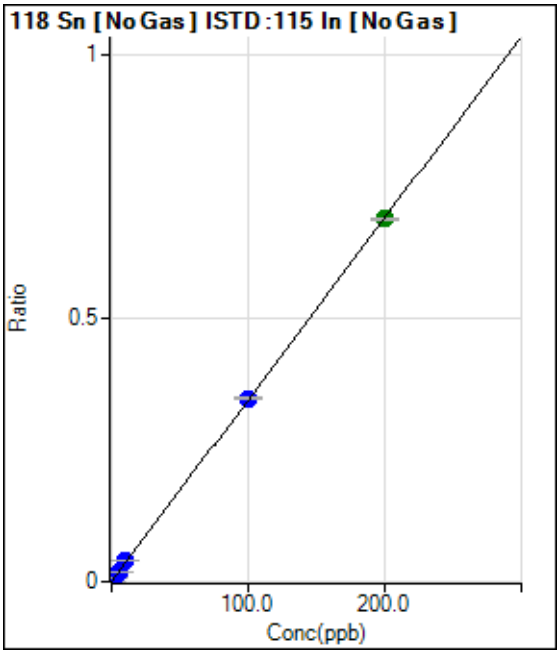
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.071 | 4717.61 | 0.0023 | P | 6.9 |
| 3 | ☐ | 5.000 | 5.012 | 11765.47 | 0.0056 | P | 4.3 |
| 4 | ☐ | 10.000 | 11.661 | 26660.71 | 0.0130 | P | 3.1 |
| 5 | ☐ | 100.000 | 102.583 | 226541.25 | 0.1147 | P | 0.8 |
| 6 | ☐ | 200.000 | 198.625 | 441773.33 | 0.2222 | P | 2.8 |

y = 0.0011 * x + 1.5280E-006
R = 0.9999
DL = 0.007098
BEC = 0.001366

Weight: <None>
Min Conc: <None>

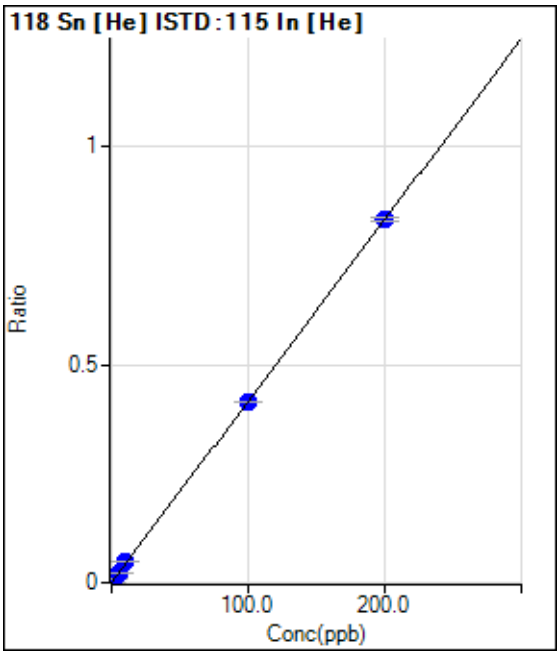



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 830.04 | 0.0004 | P | 12.2 |
| 2 | ☐ | 2.000 | 2.099 | 15512.81 | 0.0076 | P | 4.3 |
| 3 | ☐ | 5.000 | 4.845 | 35856.12 | 0.0171 | P | 1.1 |
| 4 | ☐ | 10.000 | 11.338 | 80742.12 | 0.0395 | P | 0.7 |
| 5 | ☐ | 100.000 | 100.607 | 685723.43 | 0.3473 | P | 1.0 |
| 6 | ☐ | 200.000 | 199.632 | 1370156.13 | 0.6888 | A | 0.6 |

y = 0.0034 * x + 3.8934E-004
R = 1.0000
DL = 0.0412
BEC = 0.1129

Weight: <None>
Min Conc: <None>

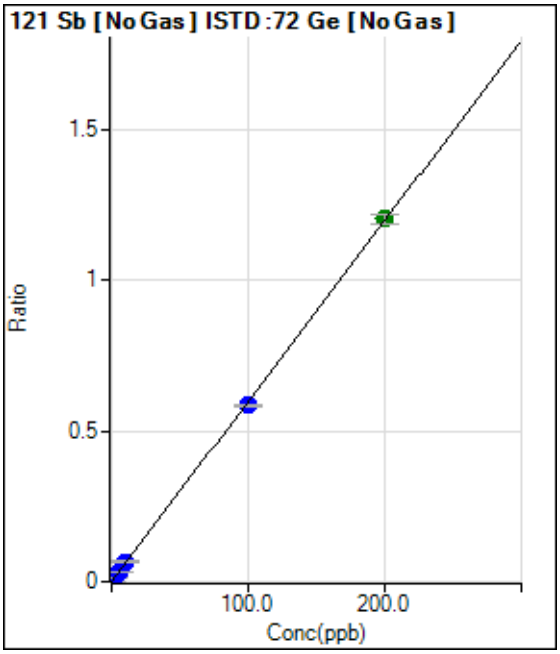
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 363.35 | 0.0004 | P | 21.6 |
| 2 | ☐ | 2.000 | 1.953 | 7835.82 | 0.0085 | P | 5.4 |
| 3 | ☐ | 5.000 | 5.021 | 18973.98 | 0.0213 | P | 4.2 |
| 4 | ☐ | 10.000 | 11.220 | 42302.17 | 0.0470 | P | 2.7 |
| 5 | ☐ | 100.000 | 99.804 | 365963.80 | 0.4151 | P | 0.6 |
| 6 | ☐ | 200.000 | 200.037 | 719082.64 | 0.8316 | P | 1.2 |

y = 0.0042 * x + 3.9301E-004
R = 1.0000
DL = 0.06136
BEC = 0.09458

Weight: <None>
Min Conc: <None>

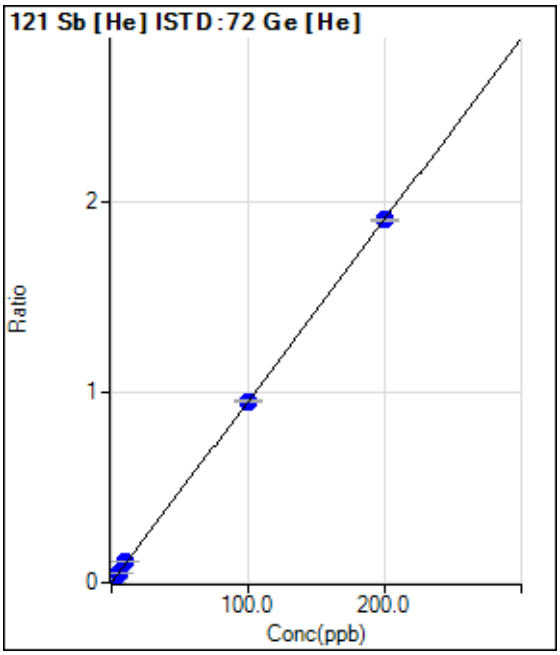



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 556.69 | 0.0003 | P | 9.0 |
| 2 | ☐ | 2.000 | 1.963 | 20619.90 | 0.0121 | P | 3.2 |
| 3 | ☐ | 5.000 | 4.946 | 50631.70 | 0.0299 | P | 1.4 |
| 4 | ☐ | 10.000 | 11.117 | 112185.01 | 0.0667 | P | 2.3 |
| 5 | ☐ | 100.000 | 97.614 | 967330.51 | 0.5834 | P | 1.5 |
| 6 | ☐ | 200.000 | 201.139 | 1946819.03 | 1.2019 | A | 2.8 |

y = 0.0060 * x + 3.3096E-004
R = 0.9999
DL = 0.01493
BEC = 0.0554

Weight: <None>
Min Conc: <None>

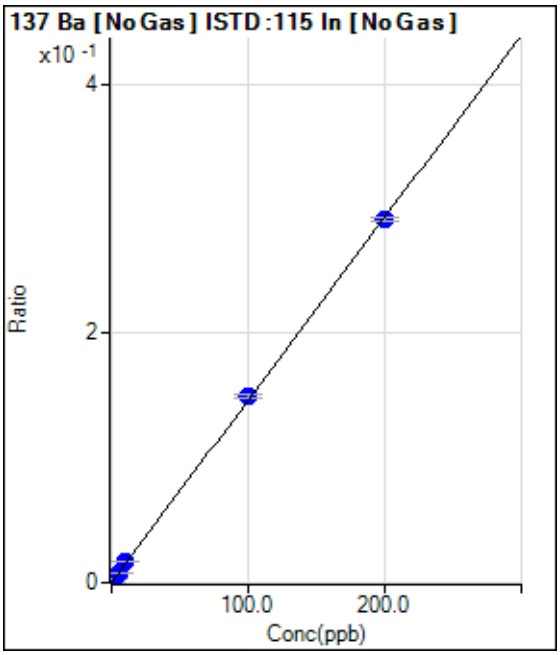
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 266.68 | 0.0005 | P | 6.9 |
| 2 | ☐ | 2.000 | 2.064 | 10661.29 | 0.0202 | P | 5.1 |
| 3 | ☐ | 5.000 | 4.972 | 25268.07 | 0.0479 | P | 4.4 |
| 4 | ☐ | 10.000 | 11.493 | 57255.13 | 0.1100 | P | 1.2 |
| 5 | ☐ | 100.000 | 100.063 | 487143.42 | 0.9540 | P | 1.3 |
| 6 | ☐ | 200.000 | 199.894 | 954754.31 | 1.9053 | P | 0.8 |

y = 0.0095 * x + 5.0221E-004
R = 1.0000
DL = 0.01089
BEC = 0.0527

Weight: <None>
Min Conc: <None>

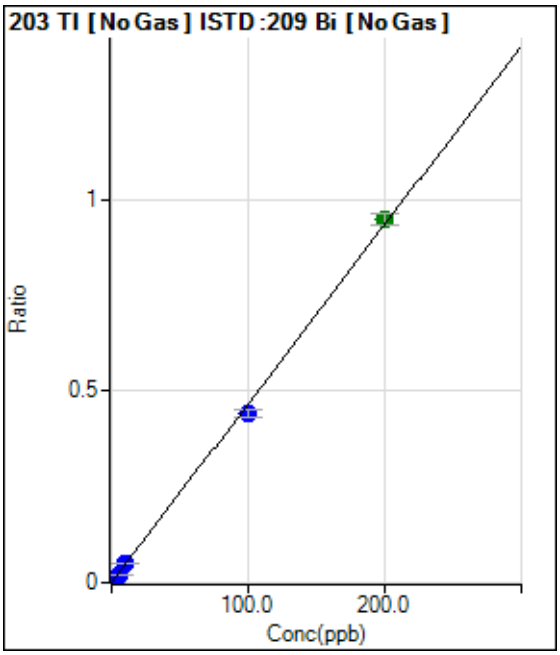



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 323.34 | 0.0002 | P | 10.3 |
| 2 | ☐ | 2.000 | 2.055 | 6425.05 | 0.0032 | P | 6.2 |
| 3 | ☐ | 5.000 | 4.881 | 15289.28 | 0.0073 | P | 0.8 |
| 4 | ☐ | 10.000 | 11.368 | 34302.37 | 0.0168 | P | 1.9 |
| 5 | ☐ | 100.000 | 102.271 | 295572.60 | 0.1497 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.798 | 578548.95 | 0.2909 | P | 1.0 |

y = 0.0015 * x + 1.5236E-004
R = 0.9999
DL = 0.03222
BEC = 0.1042

Weight: <None>
Min Conc: <None>

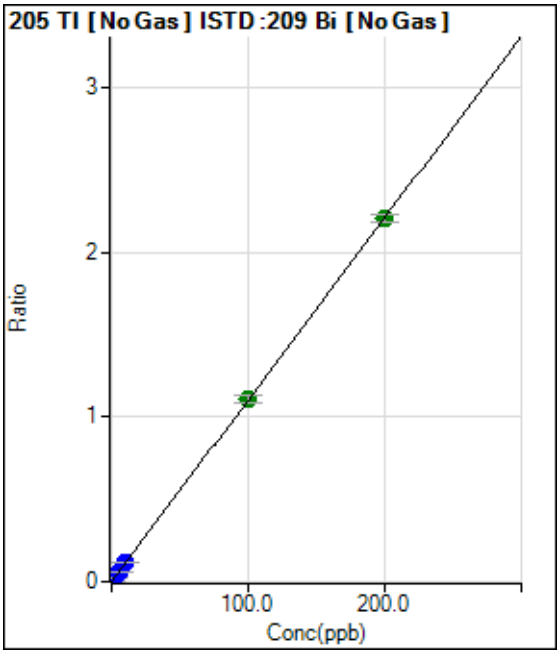
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 190.00 | 0.0001 | P | 24.3 |
| 2 | ☐ | 2.000 | 1.920 | 21138.33 | 0.0090 | P | 5.7 |
| 3 | ☐ | 5.000 | 4.729 | 52196.42 | 0.0222 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.676 | 115325.89 | 0.0499 | P | 0.6 |
| 5 | ☐ | 100.000 | 94.291 | 999080.37 | 0.4404 | P | 5.0 |
| 6 | ☐ | 200.000 | 202.828 | 2051287.26 | 0.9472 | A | 3.2 |

y = 0.0047 * x + 8.1210E-005
R = 0.9994
DL = 0.01269
BEC = 0.01739

Weight: <None>
Min Conc: <None>

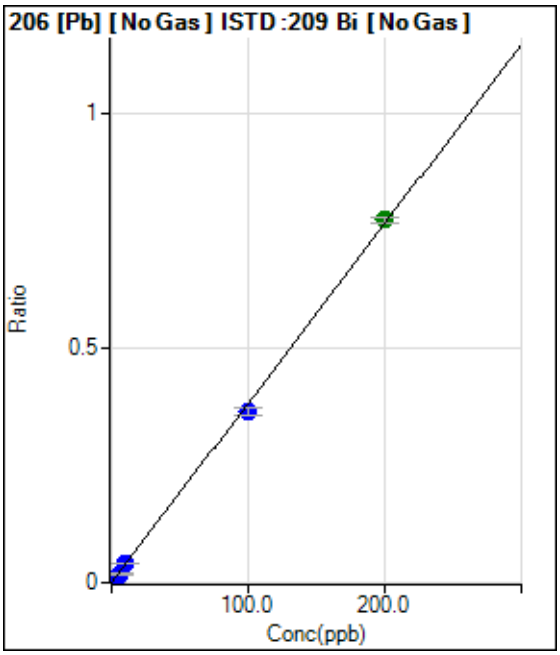



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 473.35 | 0.0002 | P | 26.4 |
| 2 | ☐ | 2.000 | 1.934 | 50315.23 | 0.0215 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.829 | 125870.69 | 0.0534 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.824 | 276099.75 | 0.1195 | P | 1.4 |
| 5 | ☐ | 100.000 | 100.698 | 2519794.34 | 1.1104 | A | 4.2 |
| 6 | ☐ | 200.000 | 199.614 | 4767765.24 | 2.2010 | A | 2.2 |

y = 0.0110 * x + 2.0240E-004
R = 1.0000
DL = 0.01456
BEC = 0.01836

Weight: <None>
Min Conc: <None>

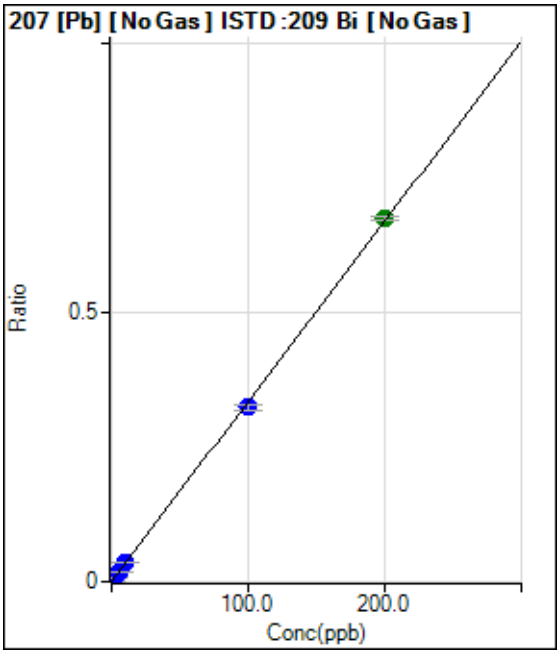
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 463.35 | 0.0002 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.938 | 17799.73 | 0.0076 | P | 2.8 |
| 3 | ☐ | 5.000 | 4.718 | 42961.64 | 0.0183 | P | 6.8 |
| 4 | ☐ | 10.000 | 10.846 | 96326.80 | 0.0417 | P | 2.3 |
| 5 | ☐ | 100.000 | 95.382 | 828989.70 | 0.3653 | P | 3.5 |
| 6 | ☐ | 200.000 | 202.274 | 1677531.70 | 0.7744 | A | 1.7 |

y = 0.0038 * x + 1.9804E-004
R = 0.9996
DL = 0.01092
BEC = 0.05174

Weight: <None>
Min Conc: <None>

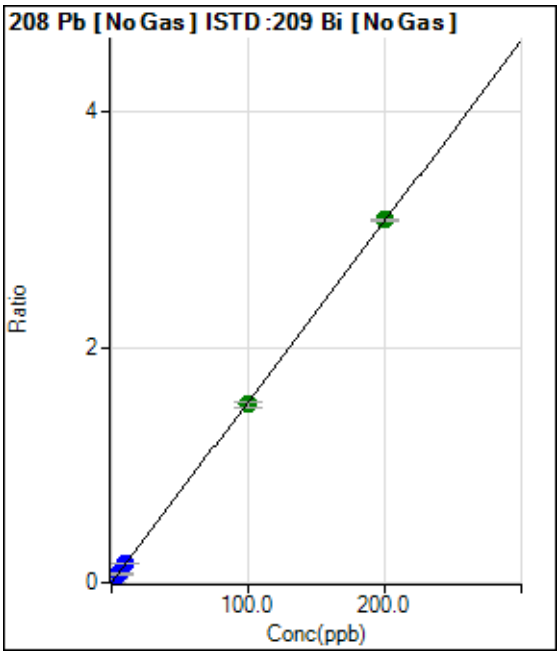



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 450.02 | 0.0002 | P | 23.6 |
| 2 | ☐ | 2.000 | 1.983 | 15930.45 | 0.0068 | P | 1.9 |
| 3 | ☐ | 5.000 | 4.912 | 39085.38 | 0.0166 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.779 | 83600.87 | 0.0362 | P | 1.0 |
| 5 | ☐ | 100.000 | 97.025 | 735987.96 | 0.3243 | P | 3.3 |
| 6 | ☐ | 200.000 | 201.451 | 1457882.37 | 0.6731 | A | 1.0 |

y = 0.0033 * x + 1.9233E-004
R = 0.9998
DL = 0.0407
BEC = 0.05758

Weight: <None>
Min Conc: <None>

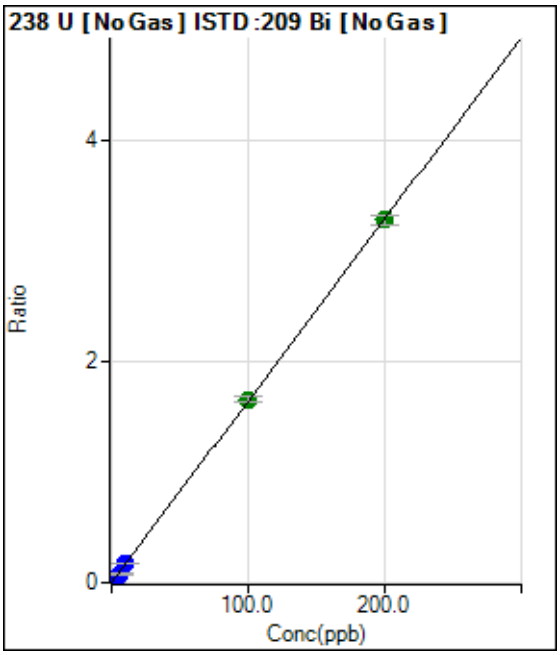
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1826.75 | 0.0008 | P | 8.7 |
| 2 | ☐ | 2.000 | 1.960 | 72113.33 | 0.0308 | P | 1.3 |
| 3 | ☐ | 5.000 | 4.825 | 176126.12 | 0.0748 | P | 3.6 |
| 4 | ☐ | 10.000 | 10.871 | 387015.75 | 0.1676 | P | 0.9 |
| 5 | ☐ | 100.000 | 98.418 | 3429651.90 | 1.5107 | A | 2.5 |
| 6 | ☐ | 200.000 | 200.752 | 6673583.18 | 3.0807 | A | 0.6 |

y = 0.0153 * x + 7.8052E-004
R = 0.9999
DL = 0.01325
BEC = 0.05087

Weight: <None>
Min Conc: <None>

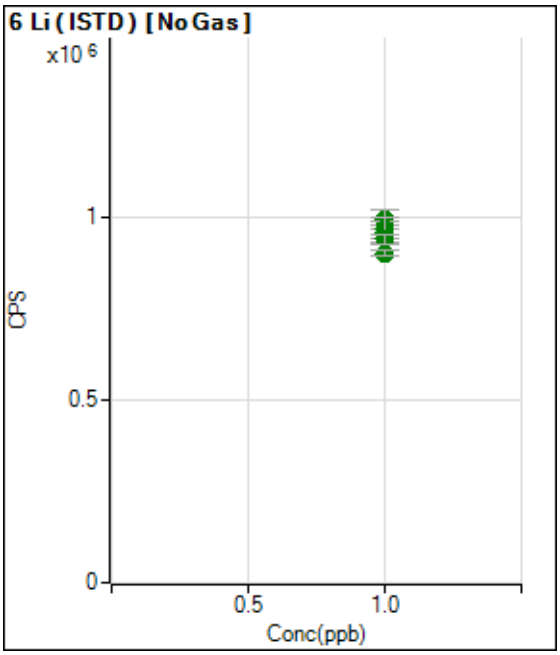



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43.33 | 0.0000 | P | 47.8 |
| 2 | ☐ | 2.000 | 1.908 | 73361.33 | 0.0314 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.754 | 184109.05 | 0.0782 | P | 1.0 |
| 4 | ☐ | 10.000 | 10.809 | 410458.07 | 0.1777 | P | 1.3 |
| 5 | ☐ | 100.000 | 100.599 | 3754126.50 | 1.6540 | A | 3.2 |
| 6 | ☐ | 200.000 | 199.667 | 7109814.06 | 3.2827 | A | 2.5 |

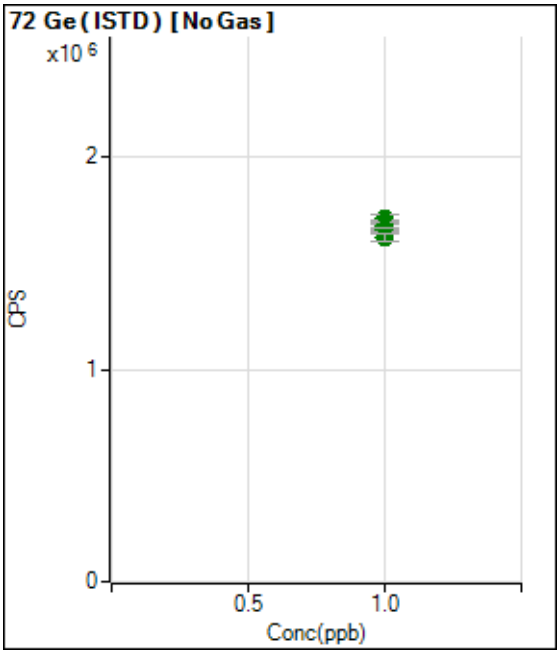
y = 0.0164 * x + 1.8496E-005
R = 1.0000
DL = 0.001612
BEC = 0.001125

Weight: <None>
Min Conc: <None>

Calibration for 112_ICV.d

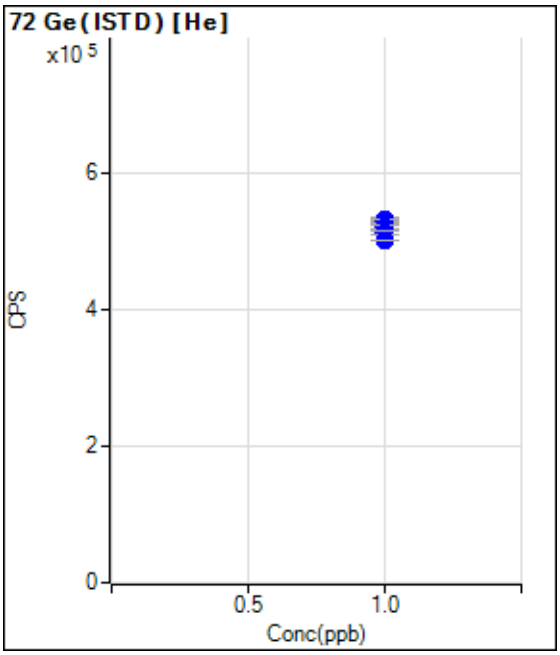



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 957132.97 | | A | 5.0 |
| 2 | ☐ | 1.000 | | 994375.52 | | A | 5.2 |
| 3 | ☐ | 1.000 | | 971627.86 | | A | 3.8 |
| 4 | ☐ | 1.000 | | 970061.26 | | A | 6.0 |
| 5 | ☐ | 1.000 | | 942582.61 | | A | 2.6 |
| 6 | ☐ | 1.000 | | 903141.58 | | A | 2.1 |

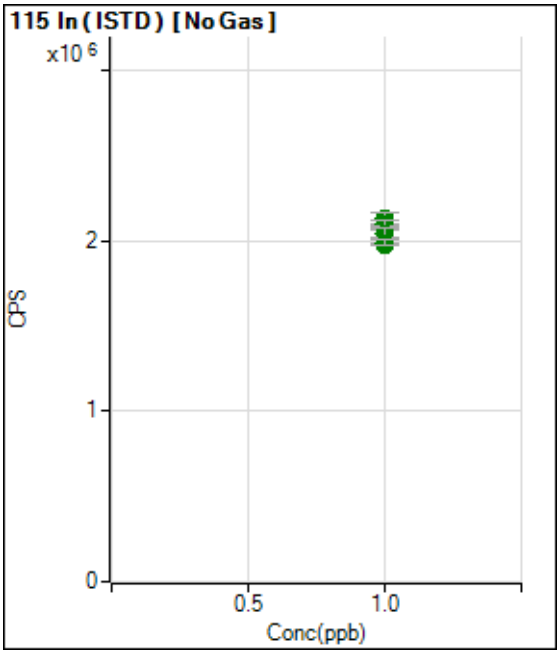



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1680329.35 | | A | 2.2 |
| 2 | ☐ | 1.000 | | 1710786.07 | | A | 2.5 |
| 3 | ☐ | 1.000 | | 1694813.72 | | A | 1.3 |
| 4 | ☐ | 1.000 | | 1681153.73 | | A | 1.7 |
| 5 | ☐ | 1.000 | | 1658204.71 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 1620376.85 | | A | 2.1 |

Calibration for 112_ICV.d

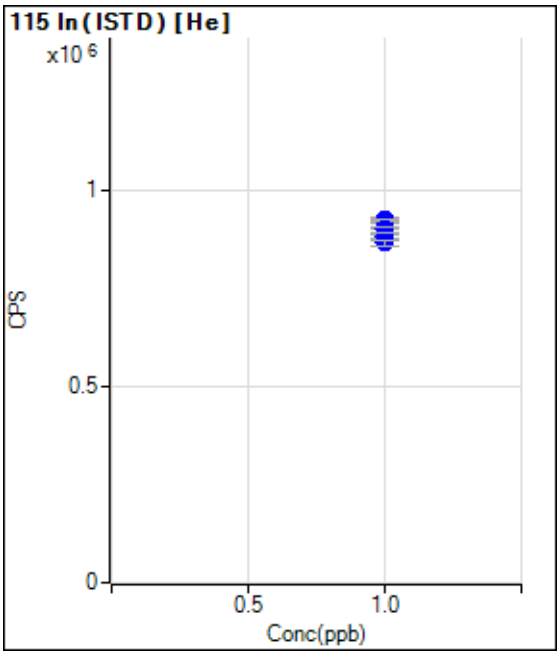



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 530791.59 | | P | 1.1 |
| 2 | ☐ | 1.000 | | 528799.38 | | P | 1.2 |
| 3 | ☐ | 1.000 | | 527716.37 | | P | 1.4 |
| 4 | ☐ | 1.000 | | 520437.31 | | P | 0.7 |
| 5 | ☐ | 1.000 | | 510671.44 | | P | 1.1 |
| 6 | ☐ | 1.000 | | 501105.42 | | P | 0.2 |

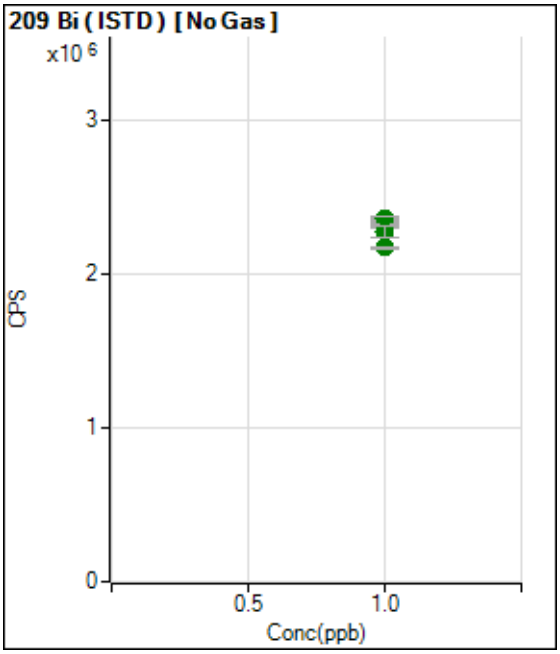



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2126706.84 | | A | 3.1 |
| 2 | ☐ | 1.000 | | 2035004.19 | | A | 2.3 |
| 3 | ☐ | 1.000 | | 2097330.28 | | A | 1.6 |
| 4 | ☐ | 1.000 | | 2045021.76 | | A | 2.9 |
| 5 | ☐ | 1.000 | | 1974303.74 | | A | 0.5 |
| 6 | ☐ | 1.000 | | 1989132.00 | | A | 1.8 |

Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 923418.95 | | P | 1.7 |
| 2 | ☐ | 1.000 | | 920740.24 | | P | 0.4 |
| 3 | ☐ | 1.000 | | 892921.89 | | P | 2.0 |
| 4 | ☐ | 1.000 | | 899976.61 | | P | 1.6 |
| 5 | ☐ | 1.000 | | 881610.10 | | P | 1.6 |
| 6 | ☐ | 1.000 | | 864747.16 | | P | 1.3 |



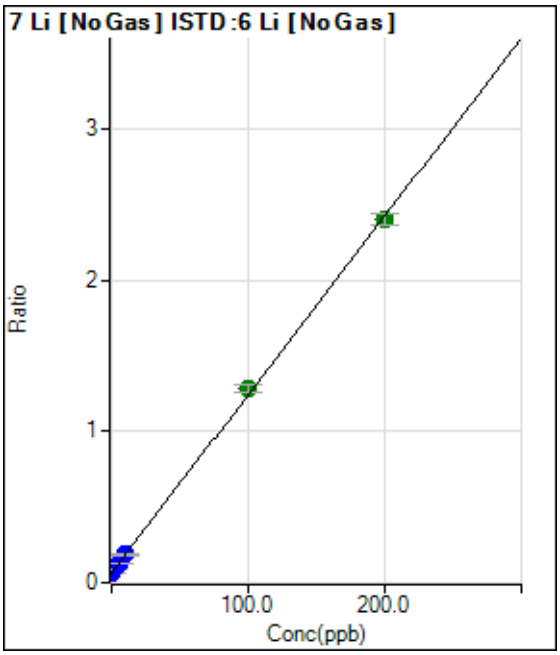

| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2340208.45 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2338032.62 | | A | 2.0 |
| 3 | ☐ | 1.000 | | 2355450.90 | | A | 1.8 |
| 4 | ☐ | 1.000 | | 2309769.08 | | A | 1.1 |
| 5 | ☐ | 1.000 | | 2271594.55 | | A | 3.8 |
| 6 | ☐ | 1.000 | | 2166139.03 | | A | 1.0 |

Calibration for 241_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 10:58:41 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 234CALB.d | CAL BLK | 7/28/2020 10:45:01 PM |
| 2 | 235CALS.d | 2/10/200 | 7/28/2020 10:46:55 PM |
| 3 | 236CALS.d | 5/25/500 | 7/28/2020 10:48:48 PM |
| 4 | 237CALS.d | 10/50/100 | 7/28/2020 10:50:40 PM |
| 5 | 238CALS.d | 100/500/10K | 7/28/2020 10:52:33 PM |
| 6 | 239CALS.d | 200/1000/20K | 7/28/2020 10:54:20 PM |

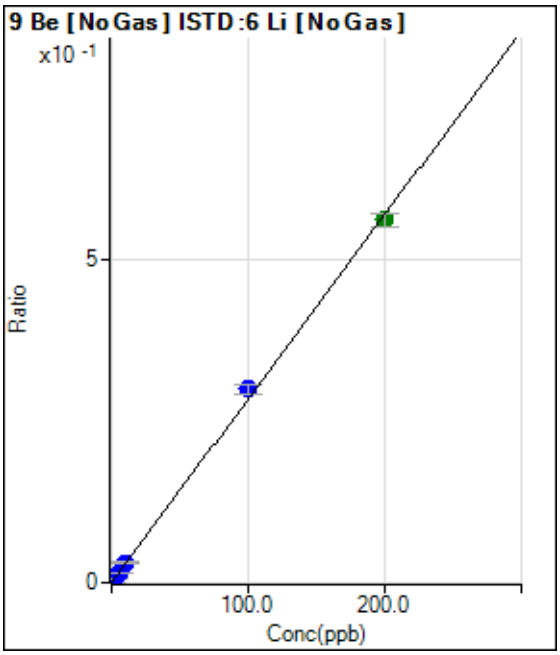
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 91938.00 | 0.0648 | P | 4.4 |
| 2 | ☐ | 2.000 | 2.090 | 124115.25 | 0.0894 | P | 4.1 |
| 3 | ☐ | 5.000 | 5.133 | 171353.32 | 0.1252 | P | 3.4 |
| 4 | ☐ | 10.000 | 10.495 | 261183.75 | 0.1884 | P | 5.0 |
| 5 | ☐ | 100.000 | 103.771 | 1650923.46 | 1.2866 | A | 3.7 |
| 6 | ☐ | 200.000 | 198.085 | 3120468.39 | 2.3970 | A | 3.1 |

y = 0.0118 * x + 0.0648
R = 0.9998
DL = 0.7194
BEC = 5.505

Weight: <None>
Min Conc: <None>

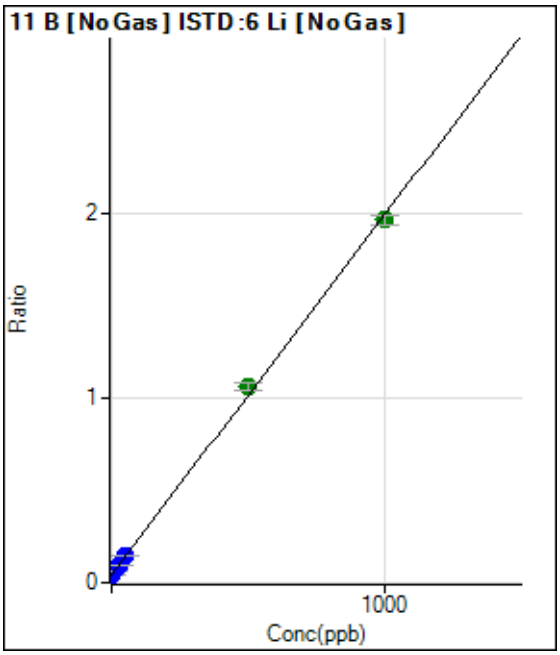



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1.67 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.003 | 7887.26 | 0.0057 | P | 7.0 |
| 3 | ☐ | 5.000 | 5.168 | 20084.58 | 0.0147 | P | 1.0 |
| 4 | ☐ | 10.000 | 10.960 | 43107.73 | 0.0311 | P | 6.8 |
| 5 | ☐ | 100.000 | 105.205 | 383097.98 | 0.2986 | P | 4.7 |
| 6 | ☐ | 200.000 | 197.345 | 729088.74 | 0.5602 | A | 3.6 |

y = 0.0028 * x + 1.1212E-006
R = 0.9995
DL = 0.002053
BEC = 0.000395

Weight: <None>
Min Conc: <None>

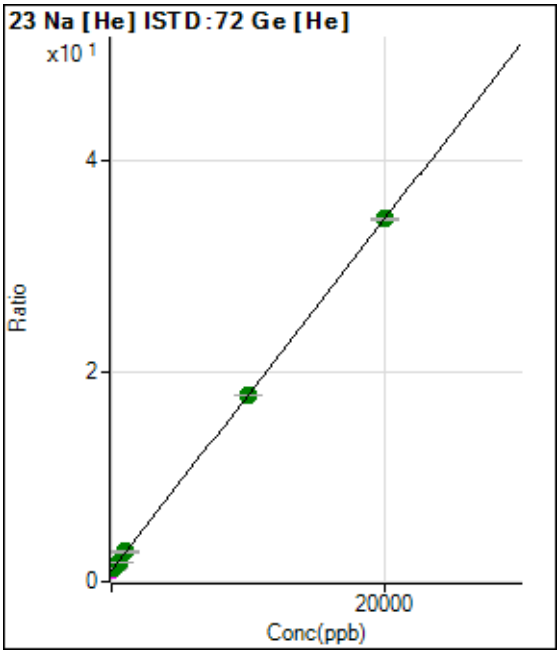
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 59705.12 | 0.0421 | P | 5.5 |
| 2 | ☐ | 10.000 | 9.386 | 83880.03 | 0.0604 | P | 3.6 |
| 3 | ☐ | 25.000 | 24.924 | 124161.64 | 0.0907 | P | 3.7 |
| 4 | ☐ | 50.000 | 53.765 | 203797.09 | 0.1470 | P | 5.7 |
| 5 | ☐ | 500.000 | 526.002 | 1371084.67 | 1.0685 | A | 4.0 |
| 6 | ☐ | 1000.000 | 986.819 | 2561476.16 | 1.9677 | A | 3.0 |

y = 0.0020 * x + 0.0421
R = 0.9995
DL = 3.555
BEC = 21.58

Weight: <None>
Min Conc: <None>

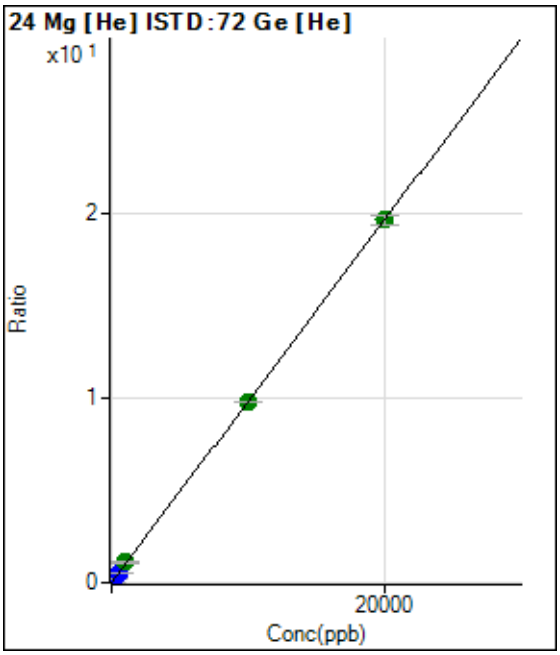



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 711172.31 | 1.0597 | M | 2.3 |
| 2 | ☐ | 200.000 | 184.522 | 922755.69 | 1.3678 | A | 1.9 |
| 3 | ☐ | 500.000 | 463.561 | 1251950.37 | 1.8337 | A | 1.1 |
| 4 | ☐ | 1000.000 | 1071.837 | 1888393.46 | 2.8494 | A | 2.2 |
| 5 | ☐ | 10000.00 | 9965.011 | 11268943.16 | 17.6990 | A | 0.7 |
| 6 | ☐ | 20000.00 | 20014.96 | 21409949.68 | 34.4802 | A | 0.7 |

y = 0.0017 * x + 1.0597
R = 1.0000
DL = 43.44
BEC = 634.6

Weight: <None>
Min Conc: <None>

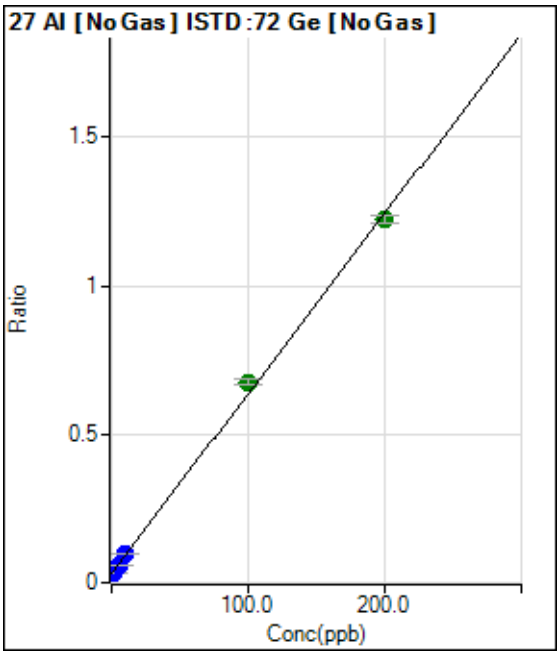
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1610.12 | 0.0024 | P | 7.6 |
| 2 | ☐ | 200.000 | 212.236 | 142275.51 | 0.2108 | P | 0.9 |
| 3 | ☐ | 500.000 | 524.469 | 353270.02 | 0.5175 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1129.449 | 736487.46 | 1.1116 | A | 6.2 |
| 5 | ☐ | 10000.00 | 9983.213 | 6244049.91 | 9.8069 | A | 0.6 |
| 6 | ☐ | 20000.00 | 20001.18 | 12195346.07 | 19.6456 | A | 2.6 |

y = 9.8210E-004 * x + 0.0024
R = 1.0000
DL = 0.5598
BEC = 2.442

Weight: <None>
Min Conc: <None>

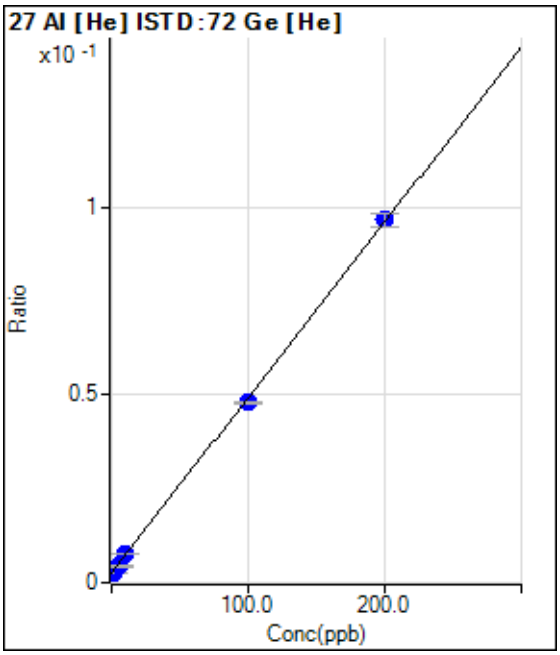



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 68439.35 | 0.0310 | P | 0.4 |
| 2 | ☐ | 2.000 | 0.478 | 75812.41 | 0.0339 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.132 | 123757.14 | 0.0561 | P | 2.2 |
| 4 | ☐ | 10.000 | 11.183 | 212766.66 | 0.0988 | P | 1.9 |
| 5 | ☐ | 100.000 | 106.632 | 1408147.69 | 0.6769 | A | 3.3 |
| 6 | ☐ | 200.000 | 196.662 | 2518228.61 | 1.2221 | A | 2.1 |

y = 0.0061 * x + 0.0310
R = 0.9991
DL = 0.05915
BEC = 5.122

Weight: <None>
Min Conc: <None>

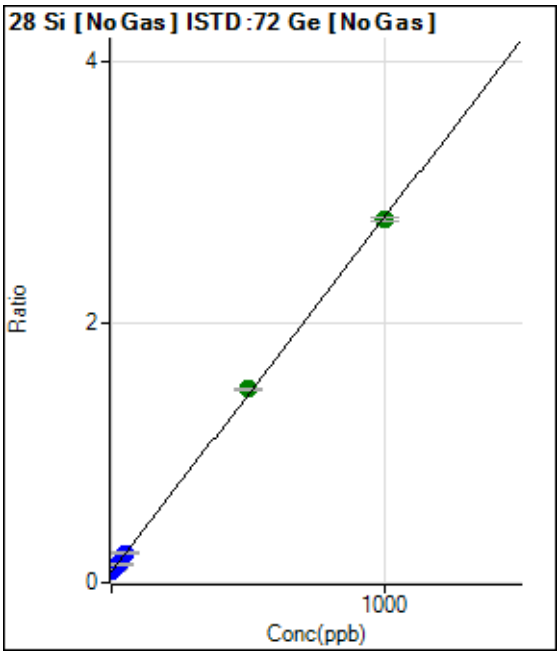
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1780.18 | 0.0027 | P | 11.8 |
| 2 | ☐ | 2.000 | 0.096 | 1820.15 | 0.0027 | P | 5.3 |
| 3 | ☐ | 5.000 | 3.791 | 3017.06 | 0.0044 | P | 9.3 |
| 4 | ☐ | 10.000 | 10.669 | 5057.70 | 0.0076 | P | 4.6 |
| 5 | ☐ | 100.000 | 97.279 | 30567.20 | 0.0480 | P | 1.3 |
| 6 | ☐ | 200.000 | 201.377 | 59916.18 | 0.0965 | P | 3.6 |

y = 4.6623E-004 * x + 0.0027
R = 0.9998
DL = 2.015
BEC = 5.691

Weight: <None>
Min Conc: <None>

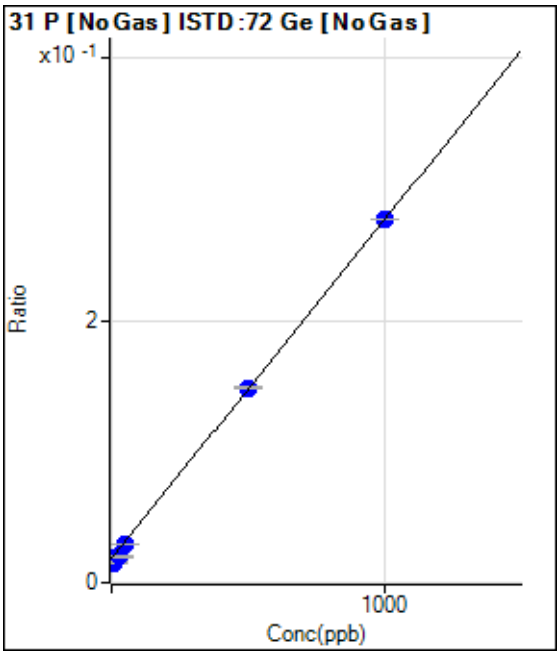



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 184280.68 | 0.0835 | P | 2.2 |
| 2 | ☐ | 10.000 | 5.762 | 221833.98 | 0.0992 | P | 2.2 |
| 3 | ☐ | 25.000 | 21.523 | 313797.67 | 0.1421 | P | 3.3 |
| 4 | ☐ | 50.000 | 52.921 | 490278.82 | 0.2276 | P | 2.8 |
| 5 | ☐ | 500.000 | 514.869 | 3090483.39 | 1.4852 | A | 1.4 |
| 6 | ☐ | 1000.000 | 992.549 | 5739604.91 | 2.7856 | A | 1.0 |

y = 0.0027 * x + 0.0835
R = 0.9998
DL = 1.983
BEC = 30.69

Weight: <None>
Min Conc: <None>

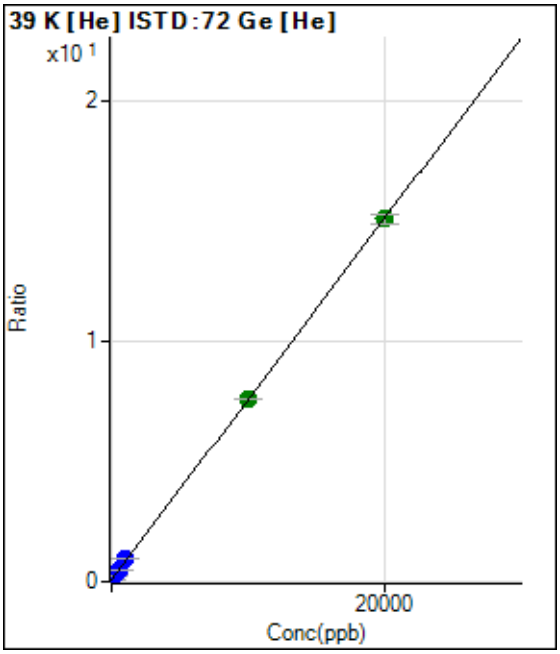
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 40817.02 | 0.0185 | P | 1.7 |
| 2 | ☐ | 10.000 | -12.478 | 34159.03 | 0.0153 | P | 2.7 |
| 3 | ☐ | 25.000 | 5.618 | 44070.15 | 0.0200 | P | 2.0 |
| 4 | ☐ | 50.000 | 41.944 | 63197.38 | 0.0293 | P | 1.8 |
| 5 | ☐ | 500.000 | 503.576 | 309160.44 | 0.1486 | P | 1.1 |
| 6 | ☐ | 1000.000 | 999.324 | 569901.38 | 0.2766 | P | 0.1 |

y = 2.5826E-004 * x + 0.0185
R = 0.9998
DL = 3.673
BEC = 71.65

Weight: <None>
Min Conc: <None>

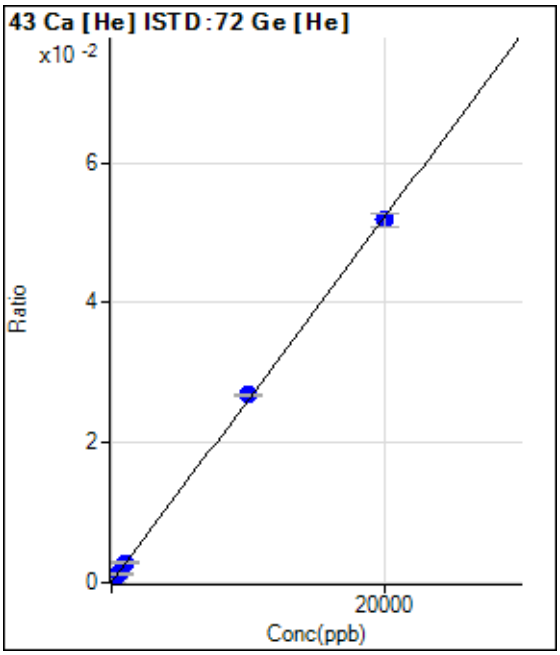



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 55829.97 | 0.0832 | P | 0.5 |
| 2 | ☐ | 200.000 | 215.742 | 165618.38 | 0.2455 | P | 2.4 |
| 3 | ☐ | 500.000 | 520.369 | 324072.89 | 0.4747 | P | 0.7 |
| 4 | ☐ | 1000.000 | 1149.994 | 628612.96 | 0.9484 | P | 0.3 |
| 5 | ☐ | 10000.00 | 10004.88 | 4845602.64 | 7.6103 | A | 0.9 |
| 6 | ☐ | 20000.00 | 19989.39 | 9386402.15 | 15.1222 | A | 2.9 |

y = 7.5235E-004 * x + 0.0832
R = 1.0000
DL = 1.644
BEC = 110.6

Weight: <None>
Min Conc: <None>

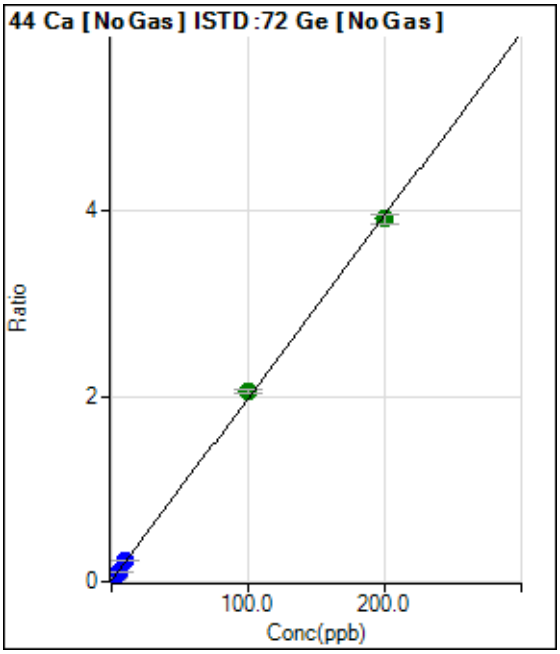
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 36.67 | 0.0001 | P | 68.5 |
| 2 | ☐ | 200.000 | 218.026 | 420.01 | 0.0006 | P | 20.9 |
| 3 | ☐ | 500.000 | 460.505 | 856.71 | 0.0013 | P | 3.5 |
| 4 | ☐ | 1000.000 | 1066.569 | 1880.16 | 0.0028 | P | 9.1 |
| 5 | ☐ | 10000.00 | 10272.10 | 17080.88 | 0.0268 | P | 1.6 |
| 6 | ☐ | 20000.00 | 19861.42 | 32168.28 | 0.0518 | P | 3.8 |

y = 2.6063E-006 * x + 5.4523E-005
R = 0.9999
DL = 43.01
BEC = 20.92

Weight: <None>
Min Conc: <None>

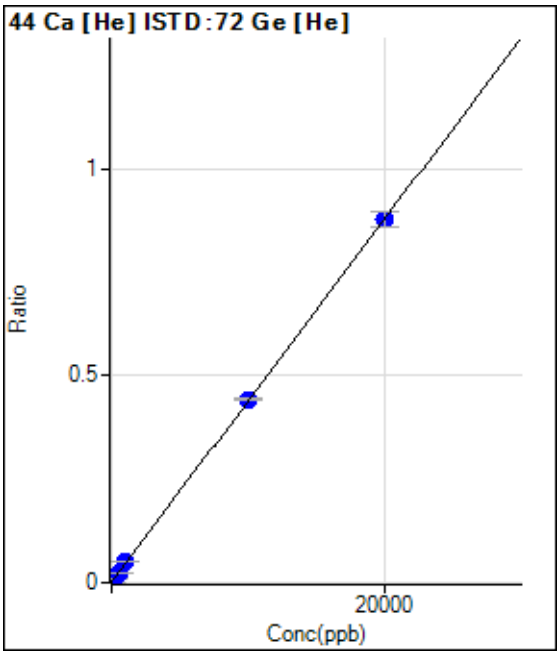



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26275.34 | 0.0119 | P | 1.0 |
| 2 | ☐ | 2.000 | 1.951 | 112488.96 | 0.0503 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.059 | 246267.88 | 0.1115 | P | 0.8 |
| 4 | ☐ | 10.000 | 11.261 | 503215.49 | 0.2336 | P | 3.4 |
| 5 | ☐ | 100.000 | 103.523 | 4265967.33 | 2.0501 | A | 2.0 |
| 6 | ☐ | 200.000 | 198.175 | 8063325.71 | 3.9137 | A | 2.5 |

y = 0.0197 * x + 0.0119
R = 0.9998
DL = 0.01791
BEC = 0.6049

Weight: <None>
Min Conc: <None>

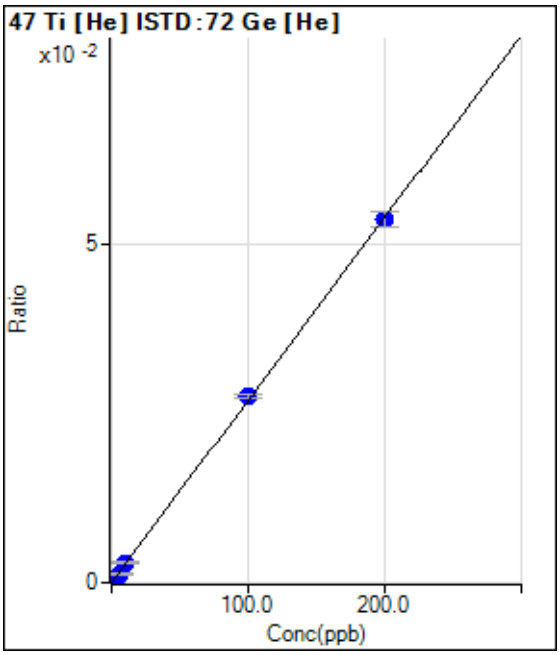
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 710.03 | 0.0011 | P | 19.9 |
| 2 | ☐ | 200.000 | 196.279 | 6515.00 | 0.0097 | P | 4.2 |
| 3 | ☐ | 500.000 | 475.542 | 14948.37 | 0.0219 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1106.427 | 32836.28 | 0.0495 | P | 2.4 |
| 5 | ☐ | 10000.00 | 10061.85 | 281405.11 | 0.4420 | P | 1.0 |
| 6 | ☐ | 20000.00 | 19964.40 | 543582.95 | 0.8759 | P | 4.3 |

y = 4.3820E-005 * x + 0.0011
R = 1.0000
DL = 14.44
BEC = 24.14

Weight: <None>
Min Conc: <None>

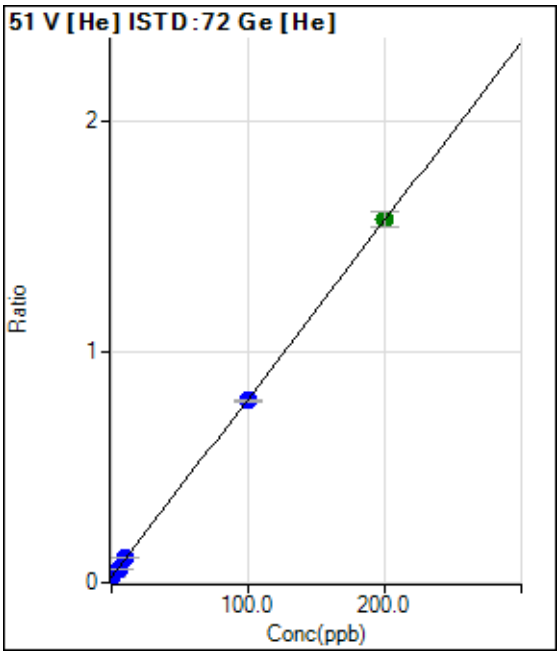



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 6.67 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.235 | 413.35 | 0.0006 | P | 25.7 |
| 3 | ☐ | 5.000 | 4.675 | 866.71 | 0.0013 | P | 14.0 |
| 4 | ☐ | 10.000 | 10.822 | 1940.18 | 0.0029 | P | 9.2 |
| 5 | ☐ | 100.000 | 102.158 | 17524.96 | 0.0275 | P | 2.9 |
| 6 | ☐ | 200.000 | 198.885 | 33247.47 | 0.0536 | P | 4.3 |

y = 2.6933E-004 * x + 9.8843E-006
R = 0.9999
DL = 0.1907
BEC = 0.0367

Weight: <None>
Min Conc: <None>

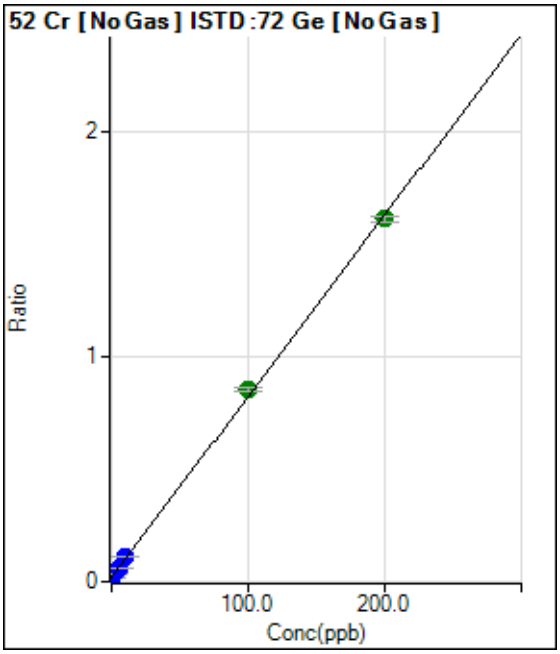
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16095.06 | 0.0240 | P | 3.0 |
| 2 | ☐ | 2.000 | 1.912 | 26157.17 | 0.0388 | P | 2.3 |
| 3 | ☐ | 5.000 | 4.844 | 41962.89 | 0.0615 | P | 0.5 |
| 4 | ☐ | 10.000 | 11.096 | 72798.87 | 0.1098 | P | 1.2 |
| 5 | ☐ | 100.000 | 99.202 | 504004.87 | 0.7916 | P | 1.2 |
| 6 | ☐ | 200.000 | 200.349 | 977025.93 | 1.5743 | A | 4.4 |

y = 0.0077 * x + 0.0240
R = 1.0000
DL = 0.2757
BEC = 3.099

Weight: <None>
Min Conc: <None>

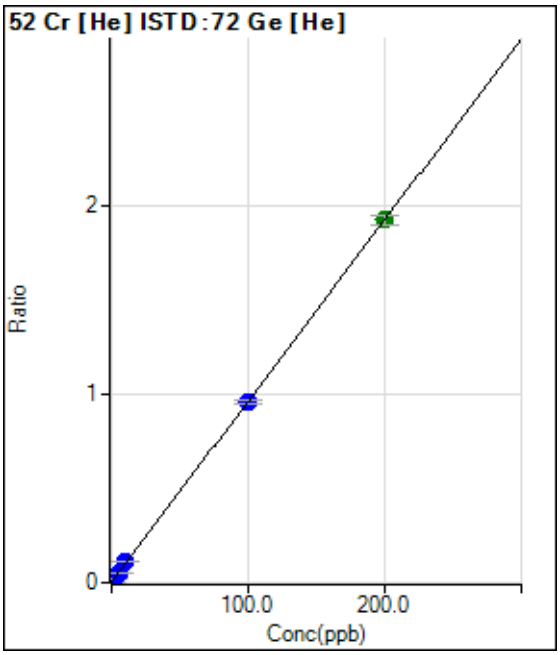



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 41967.91 | 0.0190 | P | 0.3 |
| 2 | ☐ | 2.000 | 1.878 | 76359.25 | 0.0342 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.076 | 132339.72 | 0.0599 | P | 2.1 |
| 4 | ☐ | 10.000 | 11.391 | 238720.06 | 0.1108 | P | 1.0 |
| 5 | ☐ | 100.000 | 103.633 | 1777065.96 | 0.8541 | A | 2.4 |
| 6 | ☐ | 200.000 | 198.114 | 3328191.41 | 1.6154 | A | 1.7 |

y = 0.0081 * x + 0.0190
R = 0.9998
DL = 0.02025
BEC = 2.361

Weight: <None>
Min Conc: <None>

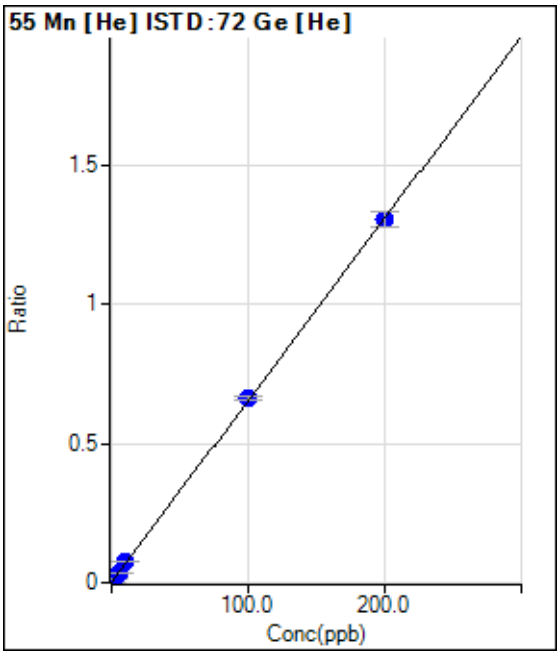
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1656.80 | 0.0025 | P | 8.9 |
| 2 | ☐ | 2.000 | 1.939 | 14227.70 | 0.0211 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.973 | 34290.02 | 0.0502 | P | 0.1 |
| 4 | ☐ | 10.000 | 11.168 | 72723.97 | 0.1097 | P | 1.8 |
| 5 | ☐ | 100.000 | 99.600 | 610501.96 | 0.9589 | P | 1.4 |
| 6 | ☐ | 200.000 | 200.143 | 1194428.32 | 1.9243 | A | 2.9 |

y = 0.0096 * x + 0.0025
R = 1.0000
DL = 0.0687
BEC = 0.2571

Weight: <None>
Min Conc: <None>

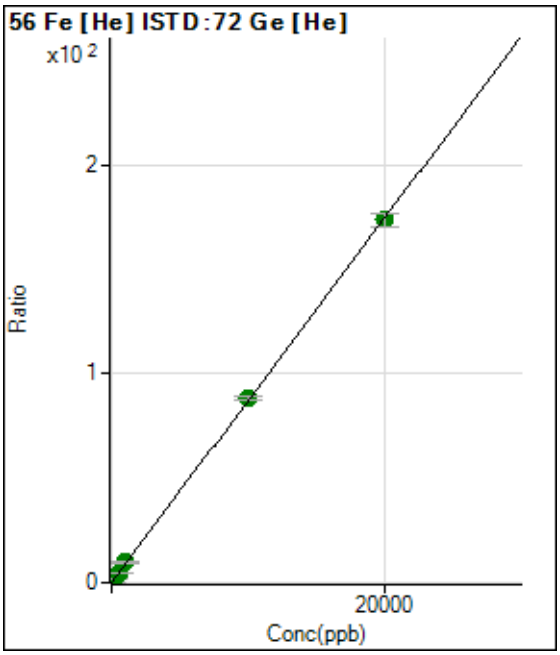



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 606.69 | 0.0009 | P | 17.4 |
| 2 | ☐ | 2.000 | 2.079 | 9783.70 | 0.0145 | P | 5.3 |
| 3 | ☐ | 5.000 | 5.134 | 23540.64 | 0.0345 | P | 0.4 |
| 4 | ☐ | 10.000 | 11.267 | 49443.01 | 0.0746 | P | 1.8 |
| 5 | ☐ | 100.000 | 101.258 | 422190.27 | 0.6631 | P | 2.4 |
| 6 | ☐ | 200.000 | 199.304 | 809426.24 | 1.3043 | P | 4.1 |

y = 0.0065 * x + 9.0440E-004
R = 1.0000
DL = 0.07232
BEC = 0.1383

Weight: <None>
Min Conc: <None>

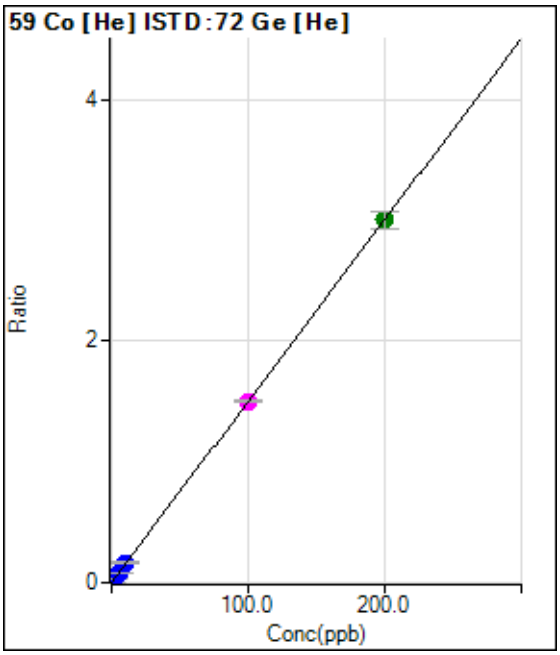
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 5704.63 | 0.0085 | P | 2.8 |
| 2 | ☐ | 200.000 | 211.708 | 1251542.38 | 1.8549 | A | 0.9 |
| 3 | ☐ | 500.000 | 522.174 | 3115109.85 | 4.5626 | A | 0.8 |
| 4 | ☐ | 1000.000 | 1111.745 | 6431652.82 | 9.7045 | A | 1.4 |
| 5 | ☐ | 10000.00 | 10159.95 | 56421937.49 | 88.6181 | A | 1.9 |
| 6 | ☐ | 20000.00 | 19913.76 | 107790781.7 | 173.685 | A | 3.8 |

y = 0.0087 * x + 0.0085
R = 0.9999
DL = 0.08135
BEC = 0.9746

Weight: <None>
Min Conc: <None>

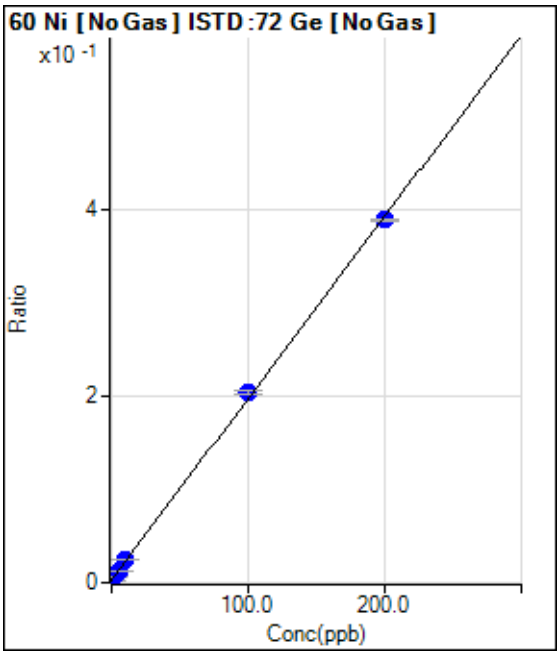



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 180.00 | 0.0003 | P | 15.0 |
| 2 | ☐ | 2.000 | 2.042 | 20863.02 | 0.0309 | P | 4.9 |
| 3 | ☐ | 5.000 | 5.086 | 52341.43 | 0.0767 | P | 1.2 |
| 4 | ☐ | 10.000 | 11.107 | 110743.12 | 0.1671 | P | 1.3 |
| 5 | ☐ | 100.000 | 99.760 | 954202.70 | 1.4987 | M | 1.2 |
| 6 | ☐ | 200.000 | 200.062 | 1864878.31 | 3.0053 | A | 4.6 |

y = 0.0150 * x + 2.6828E-004
R = 1.0000
DL = 0.008037
BEC = 0.01786

Weight: <None>
Min Conc: <None>

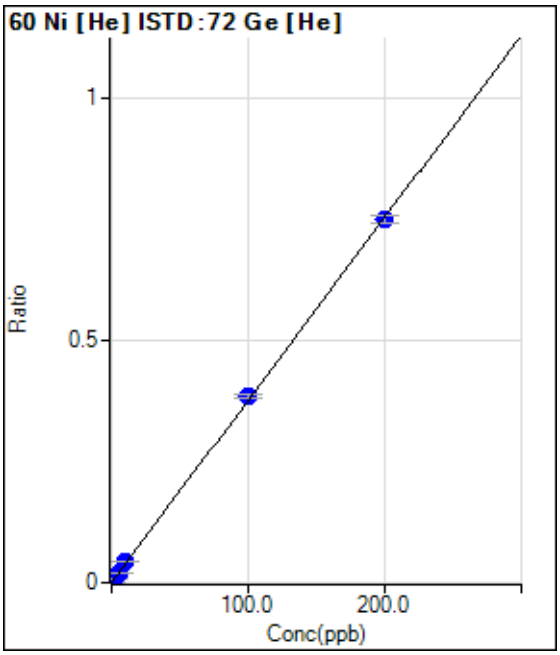
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 6344.91 | 0.0029 | P | 6.1 |
| 2 | ☐ | 2.000 | 2.033 | 15282.11 | 0.0068 | P | 3.3 |
| 3 | ☐ | 5.000 | 5.223 | 28817.54 | 0.0130 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.292 | 53562.19 | 0.0249 | P | 0.9 |
| 5 | ☐ | 100.000 | 103.312 | 424463.91 | 0.2040 | P | 2.6 |
| 6 | ☐ | 200.000 | 198.274 | 801306.83 | 0.3889 | P | 0.3 |

y = 0.0019 * x + 0.0029
R = 0.9998
DL = 0.2714
BEC = 1.478

Weight: <None>
Min Conc: <None>

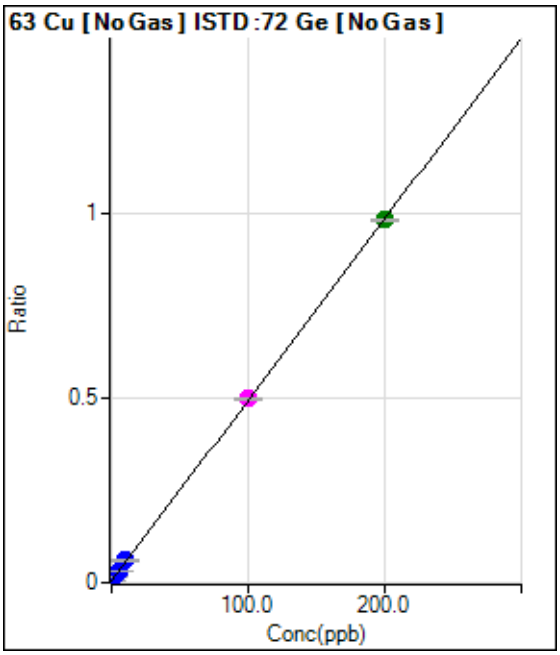



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 136.67 | 0.0002 | P | 22.1 |
| 2 | ☐ | 2.000 | 2.177 | 5657.96 | 0.0084 | P | 11.6 |
| 3 | ☐ | 5.000 | 5.203 | 13507.00 | 0.0198 | P | 1.7 |
| 4 | ☐ | 10.000 | 11.285 | 28286.43 | 0.0427 | P | 1.5 |
| 5 | ☐ | 100.000 | 102.181 | 244960.67 | 0.3847 | P | 1.5 |
| 6 | ☐ | 200.000 | 198.838 | 464636.09 | 0.7485 | P | 2.2 |

y = 0.0038 * x + 2.0353E-004
R = 0.9999
DL = 0.03587
BEC = 0.05408

Weight: <None>
Min Conc: <None>

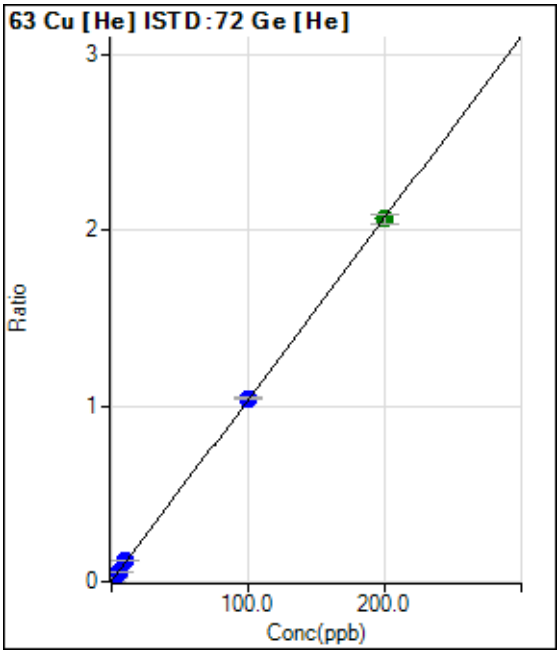
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 9767.03 | 0.0044 | P | 1.9 |
| 2 | ☐ | 2.000 | 1.982 | 31630.47 | 0.0141 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.998 | 63886.75 | 0.0289 | P | 1.2 |
| 4 | ☐ | 10.000 | 11.379 | 129708.79 | 0.0602 | P | 2.4 |
| 5 | ☐ | 100.000 | 100.652 | 1036170.37 | 0.4979 | M | 1.2 |
| 6 | ☐ | 200.000 | 199.606 | 2025684.97 | 0.9831 | A | 0.8 |

y = 0.0049 * x + 0.0044
R = 1.0000
DL = 0.05144
BEC = 0.9029

Weight: <None>
Min Conc: <None>

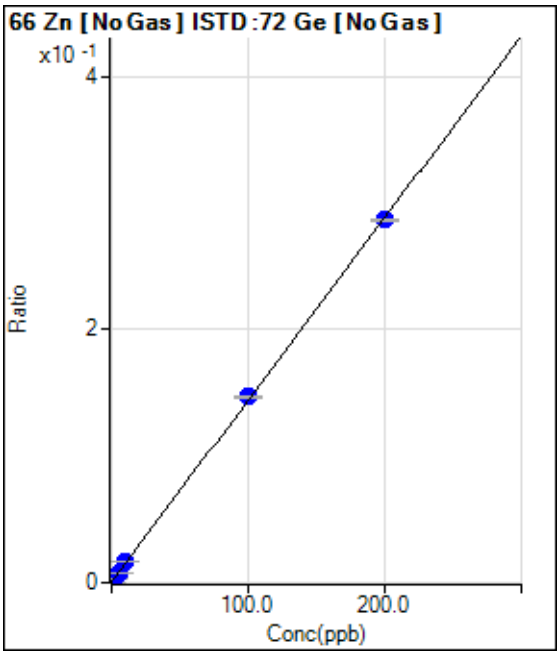



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1593.46 | 0.0024 | P | 1.9 |
| 2 | ☐ | 2.000 | 2.069 | 16036.47 | 0.0238 | P | 1.2 |
| 3 | ☐ | 5.000 | 5.037 | 37171.42 | 0.0544 | P | 1.4 |
| 4 | ☐ | 10.000 | 11.066 | 77413.50 | 0.1168 | P | 0.2 |
| 5 | ☐ | 100.000 | 100.756 | 664776.37 | 1.0441 | P | 0.6 |
| 6 | ☐ | 200.000 | 199.567 | 1282290.01 | 2.0657 | A | 2.4 |

y = 0.0103 * x + 0.0024
R = 1.0000
DL = 0.01329
BEC = 0.2296

Weight: <None>
Min Conc: <None>

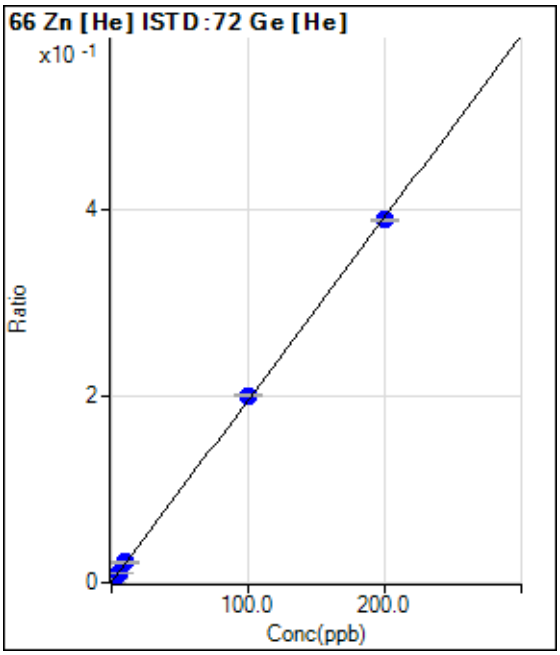
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1126.74 | 0.0005 | P | 6.1 |
| 2 | ☐ | 2.000 | 2.052 | 7742.33 | 0.0035 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.042 | 17147.81 | 0.0078 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.236 | 35938.01 | 0.0167 | P | 0.6 |
| 5 | ☐ | 100.000 | 101.875 | 306125.05 | 0.1471 | P | 1.0 |
| 6 | ☐ | 200.000 | 198.999 | 591112.13 | 0.2869 | P | 0.4 |

y = 0.0014 * x + 5.1104E-004
R = 0.9999
DL = 0.06489
BEC = 0.3551

Weight: <None>
Min Conc: <None>

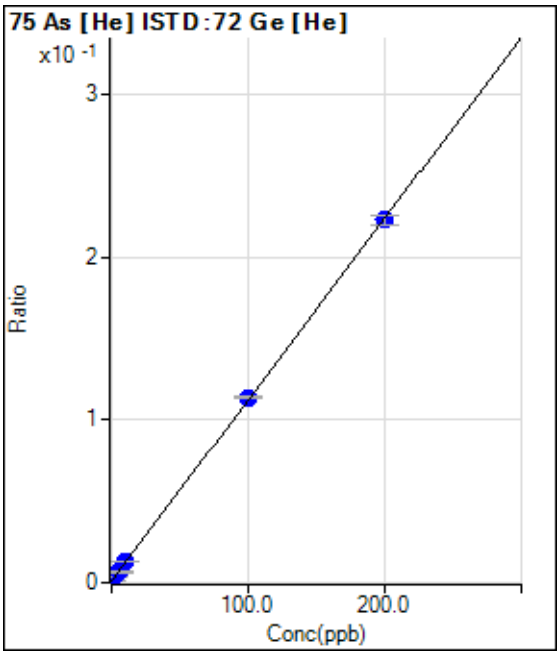



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 230.01 | 0.0003 | P | 17.5 |
| 2 | ☐ | 2.000 | 2.268 | 3227.10 | 0.0048 | P | 4.9 |
| 3 | ☐ | 5.000 | 4.876 | 6745.12 | 0.0099 | P | 6.6 |
| 4 | ☐ | 10.000 | 11.135 | 14661.52 | 0.0221 | P | 5.0 |
| 5 | ☐ | 100.000 | 102.423 | 127815.61 | 0.2007 | P | 1.5 |
| 6 | ☐ | 200.000 | 198.732 | 241647.67 | 0.3892 | P | 0.7 |

y = 0.0020 * x + 3.4277E-004
R = 0.9999
DL = 0.09205
BEC = 0.1752

Weight: <None>
Min Conc: <None>

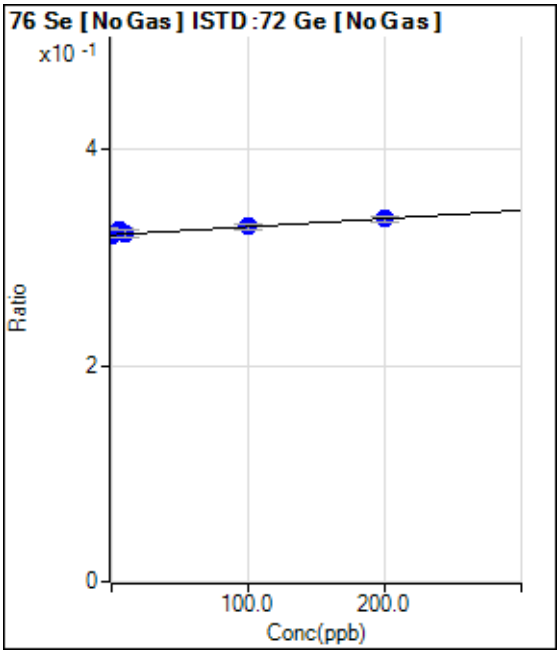
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 648.91 | 0.0010 | P | 15.0 |
| 2 | ☐ | 2.000 | 2.011 | 2163.52 | 0.0032 | P | 5.3 |
| 3 | ☐ | 5.000 | 5.026 | 4484.10 | 0.0066 | P | 2.4 |
| 4 | ☐ | 10.000 | 10.975 | 8747.32 | 0.0132 | P | 0.7 |
| 5 | ☐ | 100.000 | 101.197 | 72415.55 | 0.1137 | P | 0.9 |
| 6 | ☐ | 200.000 | 199.352 | 138494.27 | 0.2231 | P | 2.8 |

y = 0.0011 * x + 9.6733E-004
R = 1.0000
DL = 0.3904
BEC = 0.8681

Weight: <None>
Min Conc: <None>

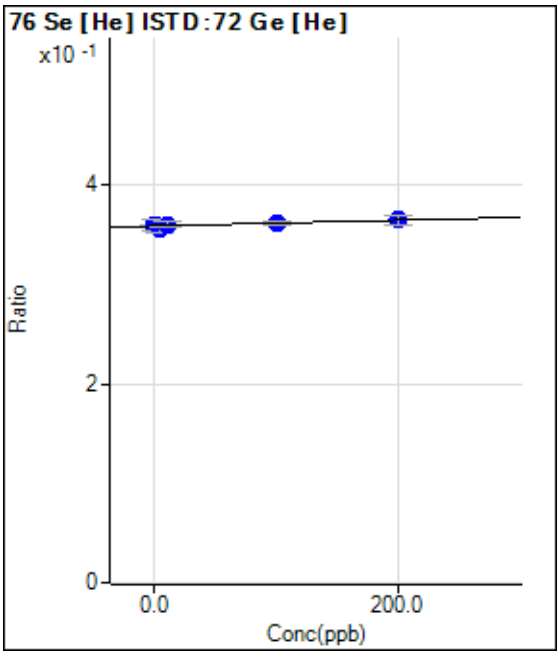



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 707398.14 | 0.3207 | P | 1.2 |
| 2 | ☐ | 2.000 | 9.146 | 718648.66 | 0.3214 | P | 1.0 |
| 3 | ☐ | 5.000 | 71.874 | 720248.53 | 0.3262 | P | 1.0 |
| 4 | ☐ | 10.000 | 13.063 | 692995.48 | 0.3217 | P | 2.2 |
| 5 | ☐ | 100.000 | 105.083 | 683867.07 | 0.3287 | P | 1.5 |
| 6 | ☐ | 200.000 | 195.562 | 691256.06 | 0.3355 | P | 1.8 |

y = 7.5565E-005 * x + 0.3207
R = 0.9452
DL = 151.9
BEC = 4244

Weight: <None>
Min Conc: <None>

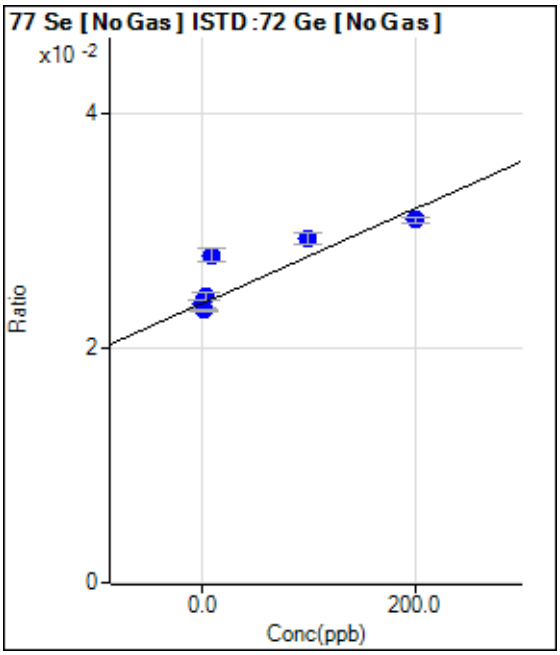
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 241064.50 | 0.3592 | P | 0.3 |
| 2 | ☐ | 2.000 | 57.348 | 243382.23 | 0.3608 | P | 3.2 |
| 3 | ☐ | 5.000 | -134.891 | 242535.98 | 0.3553 | P | 1.9 |
| 4 | ☐ | 10.000 | 50.206 | 239004.09 | 0.3606 | P | 1.3 |
| 5 | ☐ | 100.000 | 85.929 | 230259.46 | 0.3616 | P | 0.9 |
| 6 | ☐ | 200.000 | 207.969 | 226675.04 | 0.3652 | P | 2.5 |

y = 2.8847E-005 * x + 0.3592
R = 0.7873
DL = 98.1
BEC = 1.245E+04

Weight: <None>
Min Conc: <None>

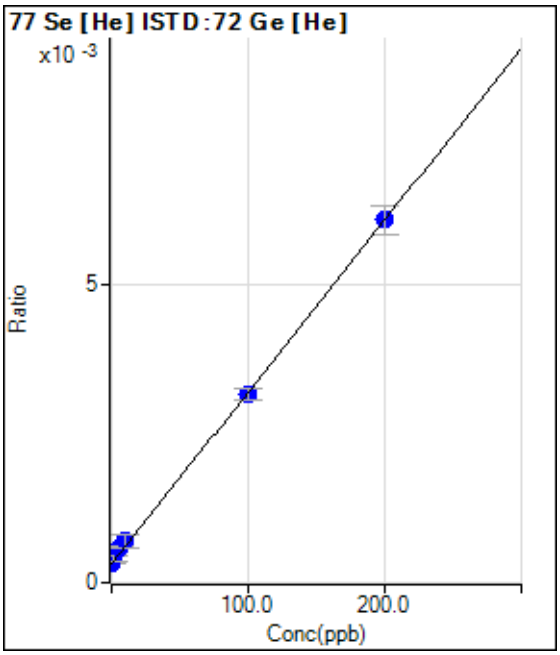



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 52482.83 | 0.0238 | P | 2.8 |
| 2 | ☐ | 2.000 | -14.476 | 51900.62 | 0.0232 | P | 0.9 |
| 3 | ☐ | 5.000 | 15.134 | 53905.51 | 0.0244 | P | 2.9 |
| 4 | ☐ | 10.000 | 102.574 | 60192.01 | 0.0279 | P | 4.1 |
| 5 | ☐ | 100.000 | 136.843 | 61028.63 | 0.0293 | P | 3.0 |
| 6 | ☐ | 200.000 | 176.861 | 63780.79 | 0.0310 | P | 1.4 |

y = 4.0442E-005 * x + 0.0238
R = 0.8599
DL = 49.36
BEC = 588.5

Weight: <None>
Min Conc: <None>

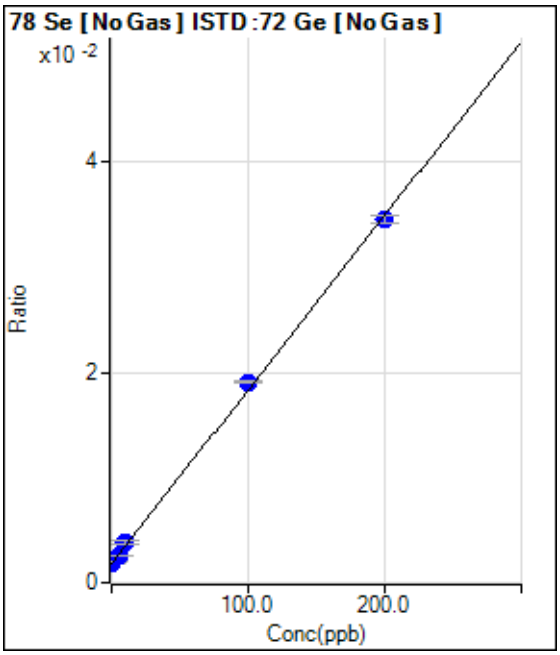
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 210.01 | 0.0003 | P | 4.2 |
| 2 | ☐ | 2.000 | 3.172 | 273.34 | 0.0004 | P | 23.0 |
| 3 | ☐ | 5.000 | 9.677 | 403.35 | 0.0006 | P | 8.6 |
| 4 | ☐ | 10.000 | 13.370 | 463.35 | 0.0007 | P | 31.0 |
| 5 | ☐ | 100.000 | 98.955 | 2010.20 | 0.0032 | P | 5.9 |
| 6 | ☐ | 200.000 | 200.225 | 3763.93 | 0.0061 | P | 8.2 |

y = 2.8742E-005 * x + 3.1284E-004
R = 0.9997
DL = 1.375
BEC = 10.88

Weight: <None>
Min Conc: <None>

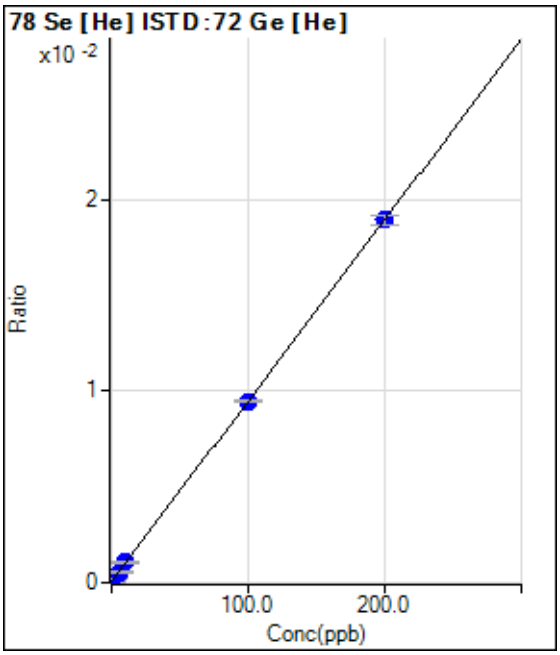



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3960.66 | 0.0018 | P | 1.7 |
| 2 | ☐ | 2.000 | 1.931 | 4727.60 | 0.0021 | P | 8.4 |
| 3 | ☐ | 5.000 | 4.440 | 5587.92 | 0.0025 | P | 3.7 |
| 4 | ☐ | 10.000 | 12.061 | 8159.31 | 0.0038 | P | 8.1 |
| 5 | ☐ | 100.000 | 104.580 | 39725.71 | 0.0191 | P | 1.8 |
| 6 | ☐ | 200.000 | 197.622 | 71047.42 | 0.0345 | P | 2.0 |

y = 1.6539E-004 * x + 0.0018
R = 0.9996
DL = 0.5488
BEC = 10.86

Weight: <None>
Min Conc: <None>

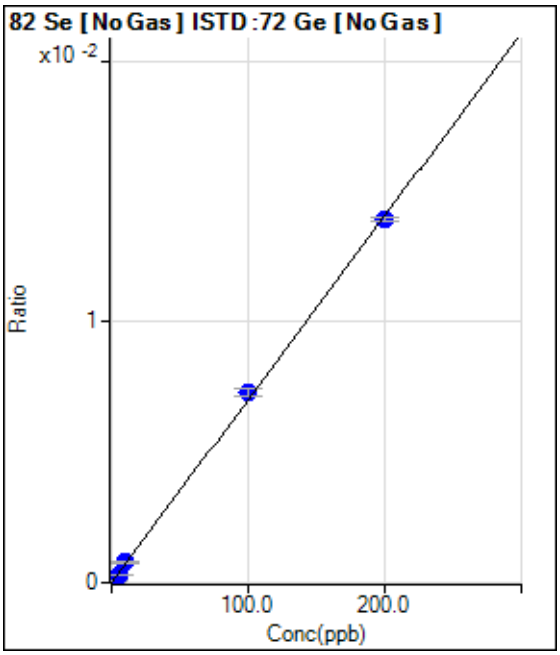
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 36.67 | 0.0001 | P | 29.5 |
| 2 | ☐ | 2.000 | 2.124 | 172.00 | 0.0003 | P | 7.9 |
| 3 | ☐ | 5.000 | 5.237 | 374.68 | 0.0005 | P | 10.3 |
| 4 | ☐ | 10.000 | 10.836 | 714.02 | 0.0011 | P | 11.2 |
| 5 | ☐ | 100.000 | 99.773 | 6032.70 | 0.0095 | P | 1.5 |
| 6 | ☐ | 200.000 | 200.064 | 11758.47 | 0.0189 | P | 3.0 |

y = 9.4418E-005 * x + 5.4570E-005
R = 1.0000
DL = 0.5121
BEC = 0.578

Weight: <None>
Min Conc: <None>

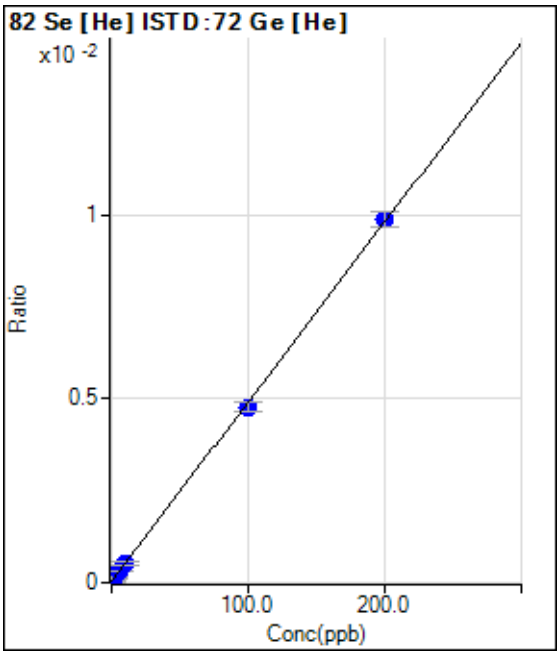



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | -12.28 | 0.0000 | P | -213.9 |
| 2 | ☐ | 2.000 | 1.852 | 277.55 | 0.0001 | P | 42.9 |
| 3 | ☐ | 5.000 | 4.400 | 671.00 | 0.0003 | P | 7.4 |
| 4 | ☐ | 10.000 | 11.248 | 1691.28 | 0.0008 | P | 9.5 |
| 5 | ☐ | 100.000 | 103.743 | 15163.20 | 0.0073 | P | 3.9 |
| 6 | ☐ | 200.000 | 198.083 | 28689.32 | 0.0139 | P | 1.1 |

y = 7.0320E-005 * x - 5.6895E-006
R = 0.9997
DL = 0.5193
BEC = -0.08091

Weight: <None>
Min Conc: <None>

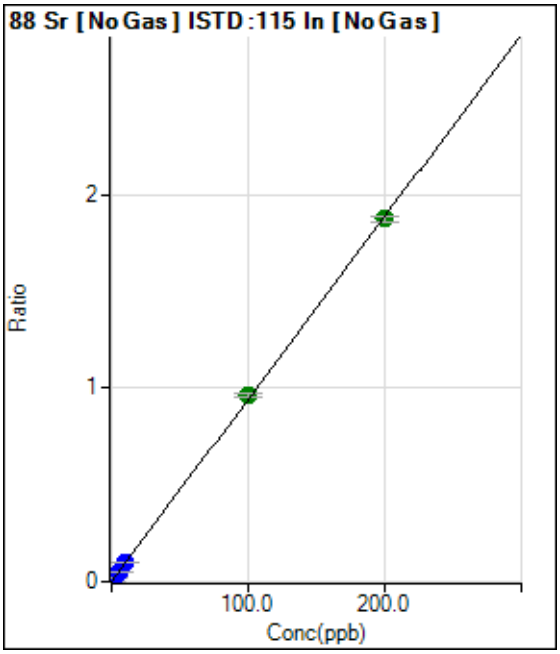
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 20.00 | 0.0000 | P | 131.9 |
| 2 | ☐ | 2.000 | 1.726 | 76.67 | 0.0001 | P | 34.1 |
| 3 | ☐ | 5.000 | 5.984 | 220.01 | 0.0003 | P | 7.4 |
| 4 | ☐ | 10.000 | 10.188 | 350.01 | 0.0005 | P | 14.3 |
| 5 | ☐ | 100.000 | 97.221 | 3043.73 | 0.0048 | P | 5.4 |
| 6 | ☐ | 200.000 | 201.358 | 6128.18 | 0.0099 | P | 4.2 |

y = 4.8870E-005 * x + 2.9708E-005
R = 0.9998
DL = 2.406
BEC = 0.6079

Weight: <None>
Min Conc: <None>

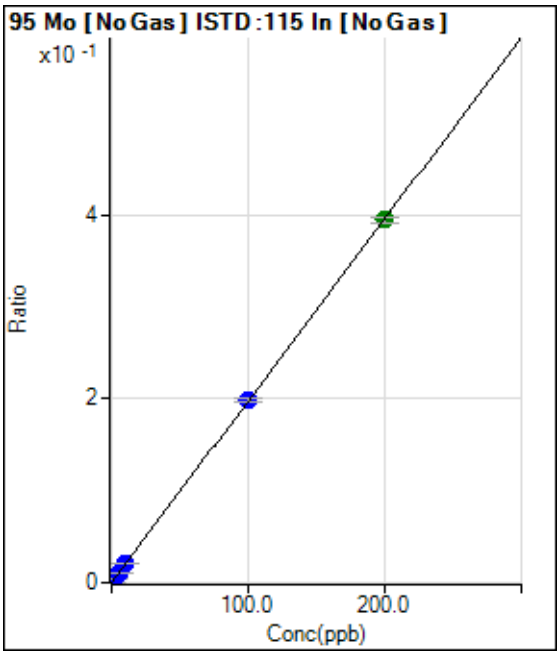



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2563.64 | 0.0010 | P | 3.6 |
| 2 | ☐ | 2.000 | 2.035 | 53497.56 | 0.0202 | P | 2.2 |
| 3 | ☐ | 5.000 | 4.989 | 128599.11 | 0.0480 | P | 1.2 |
| 4 | ☐ | 10.000 | 10.827 | 274617.32 | 0.1031 | P | 2.5 |
| 5 | ☐ | 100.000 | 102.063 | 2440658.87 | 0.9632 | A | 1.4 |
| 6 | ☐ | 200.000 | 198.927 | 4622669.41 | 1.8764 | A | 1.3 |

y = 0.0094 * x + 9.7869E-004
R = 0.9999
DL = 0.01136
BEC = 0.1038

Weight: <None>
Min Conc: <None>

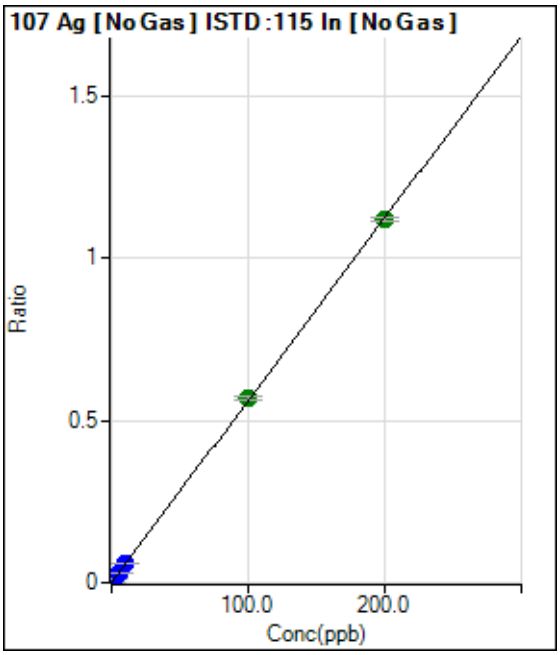
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 46.67 | 0.0000 | P | 52.3 |
| 2 | ☐ | 2.000 | 2.032 | 10697.84 | 0.0040 | P | 4.9 |
| 3 | ☐ | 5.000 | 4.991 | 26446.72 | 0.0099 | P | 3.8 |
| 4 | ☐ | 10.000 | 10.666 | 56165.98 | 0.0211 | P | 5.3 |
| 5 | ☐ | 100.000 | 100.662 | 503871.82 | 0.1988 | P | 2.3 |
| 6 | ☐ | 200.000 | 199.636 | 971459.73 | 0.3943 | A | 1.8 |

y = 0.0020 * x + 1.7686E-005
R = 1.0000
DL = 0.01404
BEC = 0.008954

Weight: <None>
Min Conc: <None>

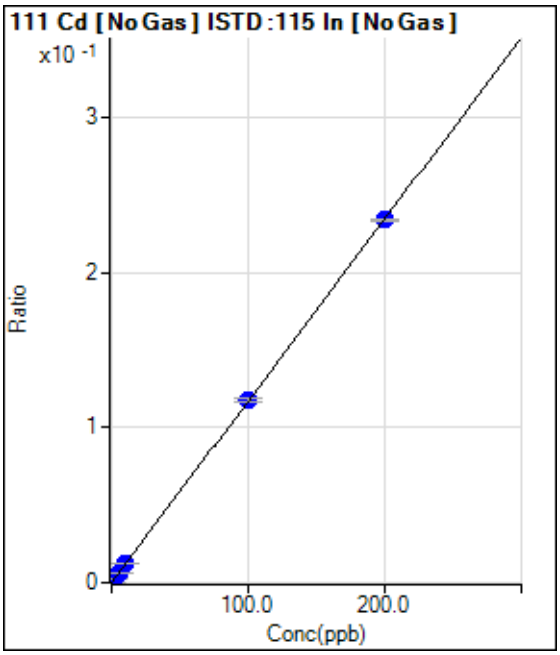



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 236.68 | 0.0001 | P | 5.9 |
| 2 | ☐ | 2.000 | 2.052 | 30763.16 | 0.0116 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.063 | 76273.62 | 0.0285 | P | 1.2 |
| 4 | ☐ | 10.000 | 10.629 | 159063.72 | 0.0597 | P | 1.6 |
| 5 | ☐ | 100.000 | 101.616 | 1443875.55 | 0.5698 | A | 1.7 |
| 6 | ☐ | 200.000 | 199.158 | 2751177.88 | 1.1167 | A | 0.9 |

y = 0.0056 * x + 9.0322E-005
R = 1.0000
DL = 0.002868
BEC = 0.01611

Weight: <None>
Min Conc: <None>

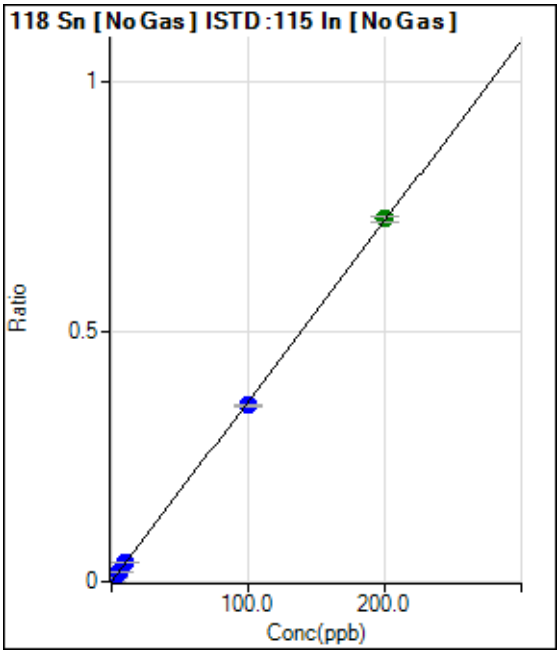
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 20.00 | 0.0000 | P | 84.5 |
| 2 | ☐ | 2.000 | 1.983 | 6181.60 | 0.0023 | P | 2.5 |
| 3 | ☐ | 5.000 | 4.944 | 15526.08 | 0.0058 | P | 3.9 |
| 4 | ☐ | 10.000 | 10.857 | 33917.46 | 0.0127 | P | 1.9 |
| 5 | ☐ | 100.000 | 100.533 | 298312.07 | 0.1177 | P | 1.6 |
| 6 | ☐ | 200.000 | 199.692 | 576159.39 | 0.2339 | P | 0.6 |

y = 0.0012 * x + 7.5420E-006
R = 1.0000
DL = 0.01632
BEC = 0.006441

Weight: <None>
Min Conc: <None>

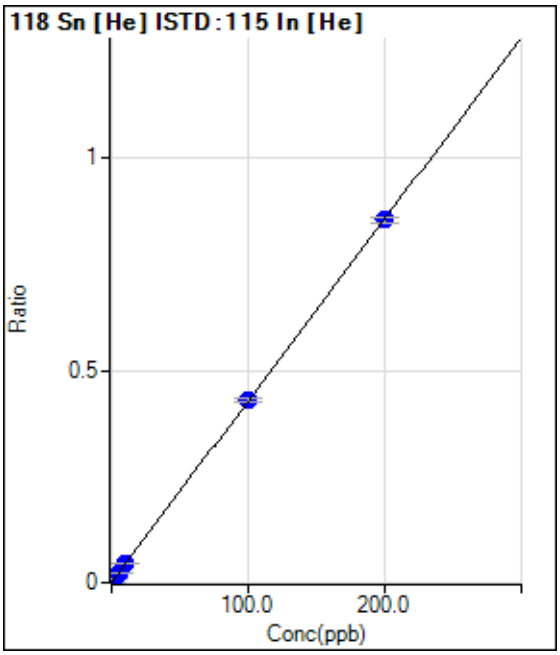



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1243.42 | 0.0005 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.979 | 20212.58 | 0.0076 | P | 3.6 |
| 3 | ☐ | 5.000 | 4.814 | 47834.34 | 0.0179 | P | 1.1 |
| 4 | ☐ | 10.000 | 10.530 | 102607.28 | 0.0385 | P | 0.7 |
| 5 | ☐ | 100.000 | 97.529 | 893458.89 | 0.3526 | P | 1.1 |
| 6 | ☐ | 200.000 | 201.214 | 1791076.69 | 0.7270 | A | 1.7 |

y = 0.0036 * x + 4.7478E-004
R = 0.9999
DL = 0.03465
BEC = 0.1315

Weight: <None>
Min Conc: <None>

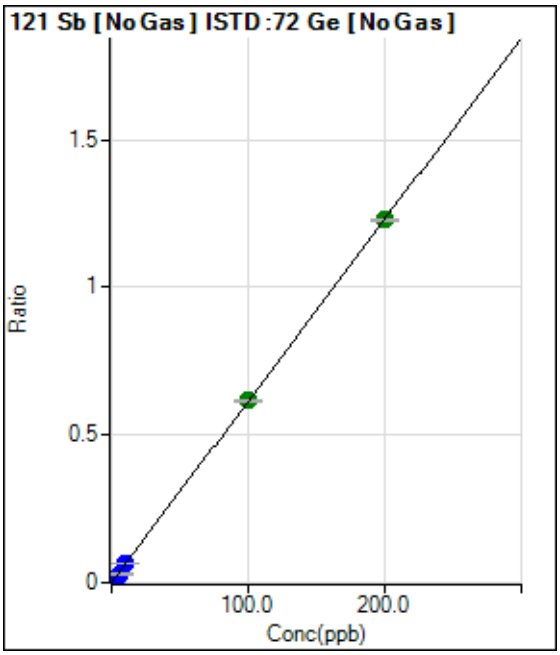
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 663.36 | 0.0006 | P | 8.5 |
| 2 | ☐ | 2.000 | 1.840 | 10210.82 | 0.0084 | P | 6.9 |
| 3 | ☐ | 5.000 | 4.849 | 25712.22 | 0.0213 | P | 2.0 |
| 4 | ☐ | 10.000 | 10.480 | 53366.06 | 0.0453 | P | 0.4 |
| 5 | ☐ | 100.000 | 100.632 | 472779.31 | 0.4307 | P | 2.2 |
| 6 | ☐ | 200.000 | 199.665 | 923135.17 | 0.8540 | P | 1.5 |

y = 0.0043 * x + 5.5255E-004
R = 1.0000
DL = 0.03301
BEC = 0.1293

Weight: <None>
Min Conc: <None>

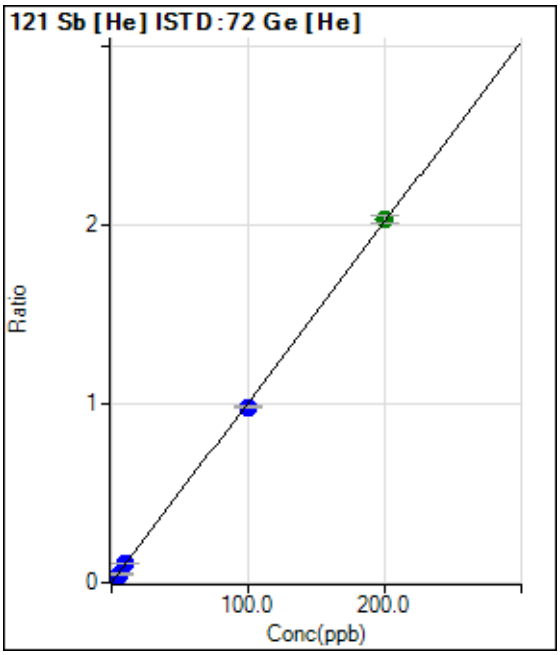



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 330.01 | 0.0001 | P | 11.8 |
| 2 | ☐ | 2.000 | 1.888 | 26270.08 | 0.0118 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.737 | 64619.31 | 0.0293 | P | 0.6 |
| 4 | ☐ | 10.000 | 10.439 | 138531.08 | 0.0643 | P | 0.7 |
| 5 | ☐ | 100.000 | 100.147 | 1280962.54 | 0.6156 | A | 0.9 |
| 6 | ☐ | 200.000 | 199.912 | 2531650.74 | 1.2287 | A | 0.6 |

y = 0.0061 * x + 1.4971E-004
R = 1.0000
DL = 0.008623
BEC = 0.02436

Weight: <None>
Min Conc: <None>

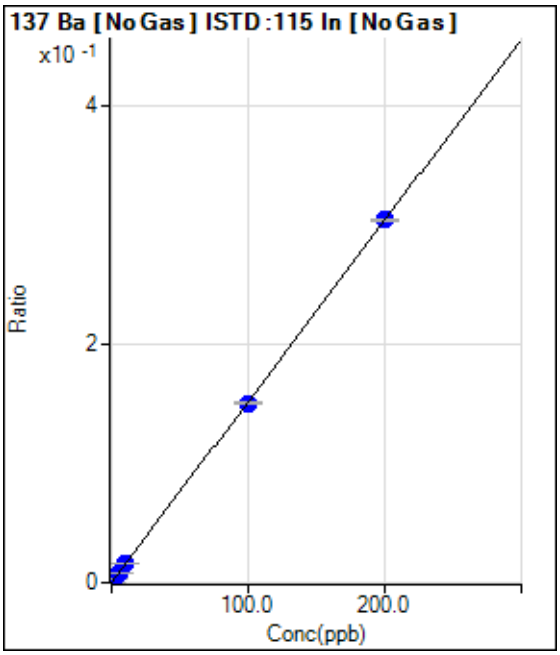
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 173.34 | 0.0003 | P | 12.5 |
| 2 | ☐ | 2.000 | 1.896 | 13086.79 | 0.0194 | P | 2.1 |
| 3 | ☐ | 5.000 | 4.763 | 33015.28 | 0.0484 | P | 2.2 |
| 4 | ☐ | 10.000 | 10.575 | 70932.22 | 0.1070 | P | 2.3 |
| 5 | ☐ | 100.000 | 97.470 | 626741.62 | 0.9844 | P | 0.7 |
| 6 | ☐ | 200.000 | 201.243 | 1261488.70 | 2.0321 | A | 2.0 |

y = 0.0101 * x + 2.5836E-004
R = 0.9999
DL = 0.009595
BEC = 0.02559

Weight: <None>
Min Conc: <None>

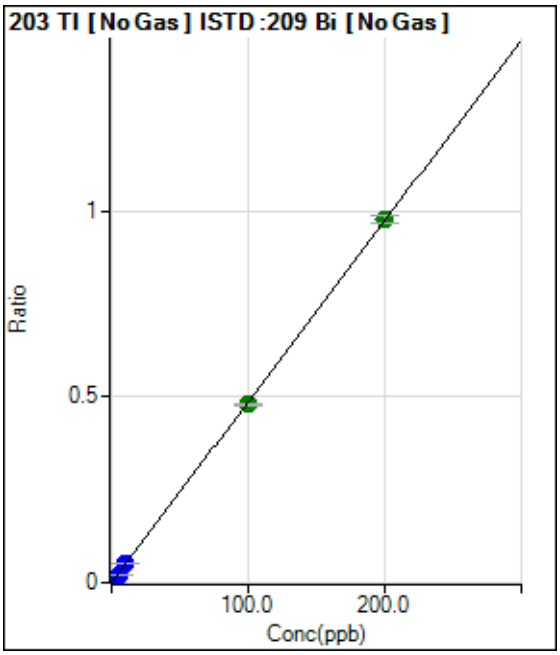



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 296.68 | 0.0001 | P | 13.2 |
| 2 | ☐ | 2.000 | 1.990 | 8319.51 | 0.0031 | P | 2.2 |
| 3 | ☐ | 5.000 | 4.974 | 20549.93 | 0.0077 | P | 1.4 |
| 4 | ☐ | 10.000 | 10.702 | 43633.96 | 0.0164 | P | 3.3 |
| 5 | ☐ | 100.000 | 99.195 | 382133.91 | 0.1508 | P | 1.5 |
| 6 | ☐ | 200.000 | 200.368 | 750261.00 | 0.3045 | P | 0.8 |

y = 0.0015 * x + 1.1303E-004
R = 1.0000
DL = 0.02936
BEC = 0.07439

Weight: <None>
Min Conc: <None>

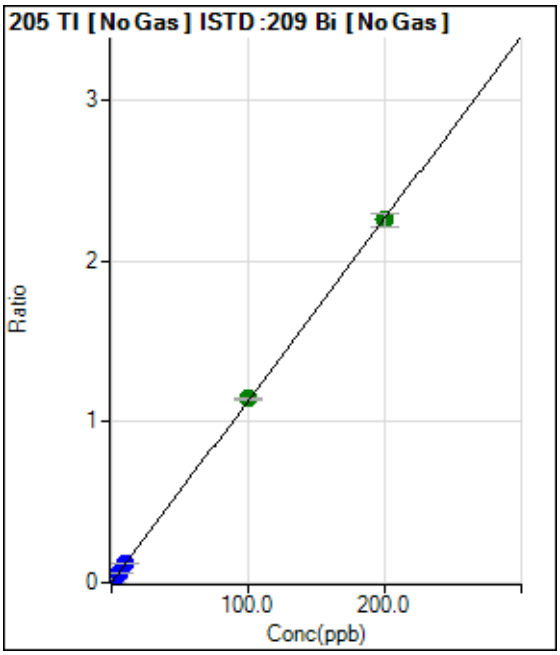
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 36.2 |
| 2 | ☐ | 2.000 | 1.881 | 25934.18 | 0.0092 | P | 2.4 |
| 3 | ☐ | 5.000 | 4.743 | 64872.68 | 0.0231 | P | 0.6 |
| 4 | ☐ | 10.000 | 10.303 | 140636.25 | 0.0501 | P | 1.7 |
| 5 | ☐ | 100.000 | 98.612 | 1297079.46 | 0.4792 | A | 1.0 |
| 6 | ☐ | 200.000 | 200.687 | 2554210.95 | 0.9752 | A | 2.2 |

y = 0.0049 * x + 2.0463E-005
R = 1.0000
DL = 0.004578
BEC = 0.004211

Weight: <None>
Min Conc: <None>

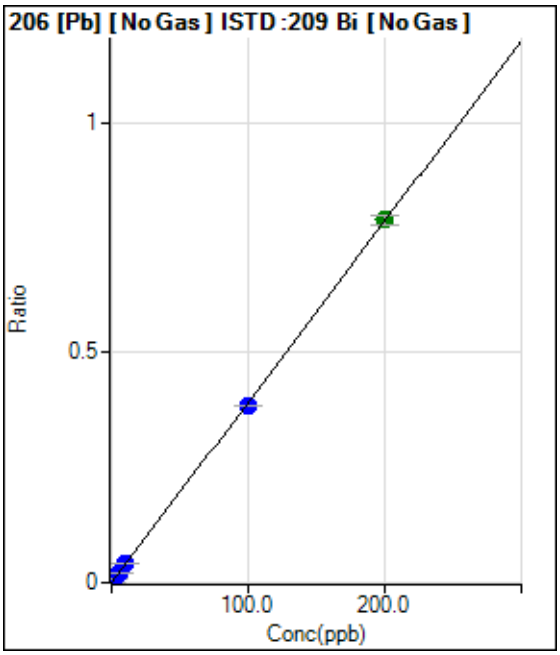



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 146.67 | 0.0001 | P | 29.8 |
| 2 | ☐ | 2.000 | 1.933 | 62148.96 | 0.0220 | P | 2.8 |
| 3 | ☐ | 5.000 | 4.951 | 157901.70 | 0.0562 | P | 2.6 |
| 4 | ☐ | 10.000 | 10.696 | 340468.83 | 0.1213 | P | 1.6 |
| 5 | ☐ | 100.000 | 101.316 | 3107980.58 | 1.1482 | A | 0.9 |
| 6 | ☐ | 200.000 | 199.309 | 5914914.91 | 2.2587 | A | 3.5 |

y = 0.0113 * x + 5.2907E-005
R = 1.0000
DL = 0.004168
BEC = 0.004669

Weight: <None>
Min Conc: <None>

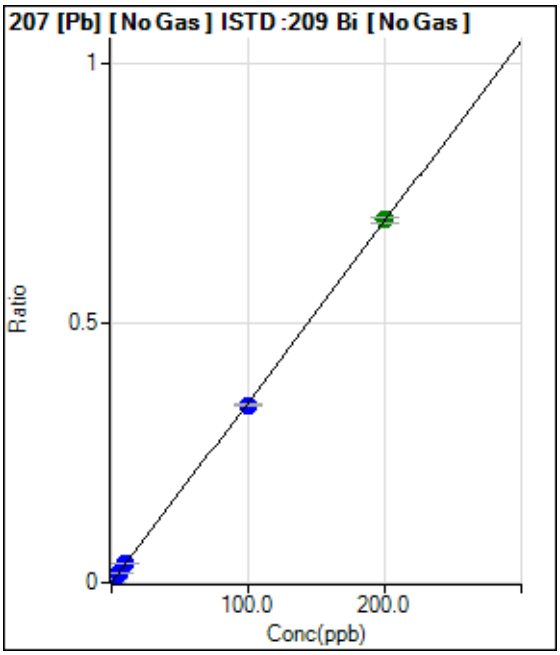
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 163.33 | 0.0001 | P | 17.2 |
| 2 | ☐ | 2.000 | 1.998 | 22330.48 | 0.0079 | P | 3.3 |
| 3 | ☐ | 5.000 | 4.957 | 54824.67 | 0.0195 | P | 1.1 |
| 4 | ☐ | 10.000 | 10.678 | 117709.17 | 0.0419 | P | 3.0 |
| 5 | ☐ | 100.000 | 97.957 | 1039862.64 | 0.3842 | P | 1.0 |
| 6 | ☐ | 200.000 | 200.989 | 2063936.95 | 0.7881 | A | 2.7 |

y = 0.0039 * x + 5.9192E-005
R = 0.9999
DL = 0.007798
BEC = 0.0151

Weight: <None>
Min Conc: <None>

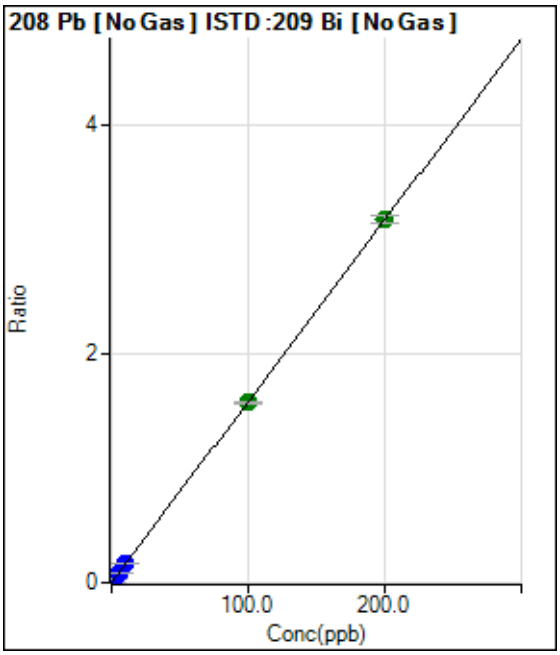



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 126.67 | 0.0000 | P | 14.9 |
| 2 | ☐ | 2.000 | 2.016 | 19936.49 | 0.0070 | P | 4.8 |
| 3 | ☐ | 5.000 | 4.957 | 48545.87 | 0.0173 | P | 2.8 |
| 4 | ☐ | 10.000 | 10.590 | 103422.26 | 0.0368 | P | 1.7 |
| 5 | ☐ | 100.000 | 98.128 | 922901.94 | 0.3409 | P | 1.2 |
| 6 | ☐ | 200.000 | 200.908 | 1828486.90 | 0.6980 | A | 1.7 |

y = 0.0035 * x + 4.5757E-005
R = 0.9999
DL = 0.005877
BEC = 0.01317

Weight: <None>
Min Conc: <None>

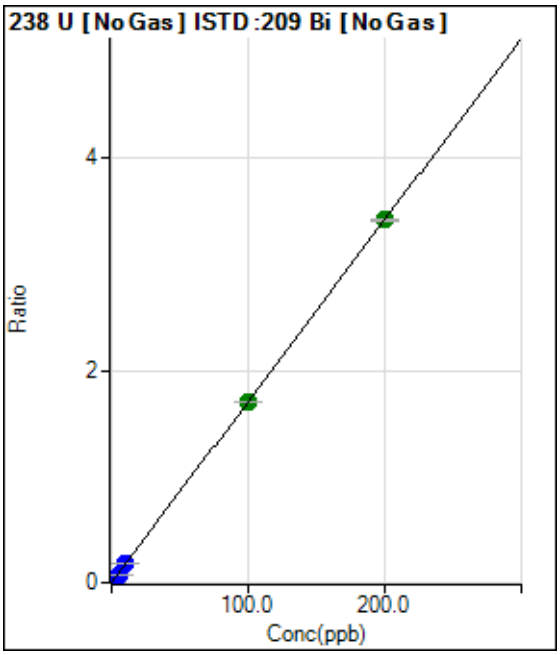
Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 646.68 | 0.0002 | P | 1.3 |
| 2 | ☐ | 2.000 | 1.980 | 89196.07 | 0.0315 | P | 3.0 |
| 3 | ☐ | 5.000 | 4.890 | 217917.46 | 0.0775 | P | 1.8 |
| 4 | ☐ | 10.000 | 10.639 | 472608.36 | 0.1683 | P | 2.0 |
| 5 | ☐ | 100.000 | 99.432 | 4253373.25 | 1.5713 | A | 1.1 |
| 6 | ☐ | 200.000 | 200.255 | 8287561.18 | 3.1644 | A | 2.1 |

y = 0.0158 * x + 2.3393E-004
R = 1.0000
DL = 0.0005978
BEC = 0.01481

Weight: <None>
Min Conc: <None>

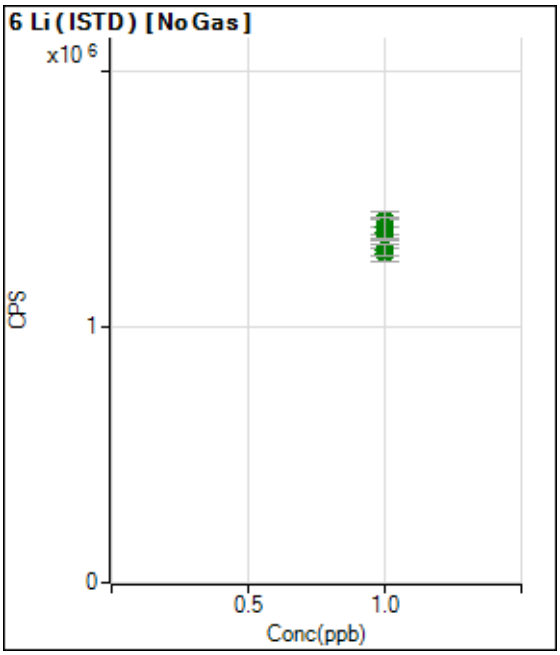



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10.00 | 0.0000 | P | 101.5 |
| 2 | ☐ | 2.000 | 1.872 | 90629.59 | 0.0320 | P | 1.9 |
| 3 | ☐ | 5.000 | 4.682 | 225198.17 | 0.0801 | P | 1.7 |
| 4 | ☐ | 10.000 | 10.365 | 497749.36 | 0.1773 | P | 1.7 |
| 5 | ☐ | 100.000 | 99.780 | 4619714.10 | 1.7066 | A | 0.5 |
| 6 | ☐ | 200.000 | 200.101 | 8965900.28 | 3.4225 | A | 0.7 |

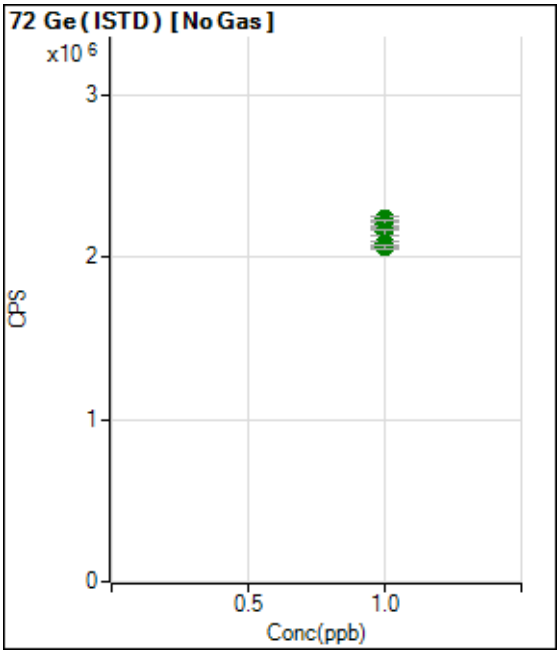
y = 0.0171 * x + 3.6509E-006
R = 1.0000
DL = 0.0006502
BEC = 0.0002135

Weight: <None>
Min Conc: <None>

Calibration for 241_ICV.d

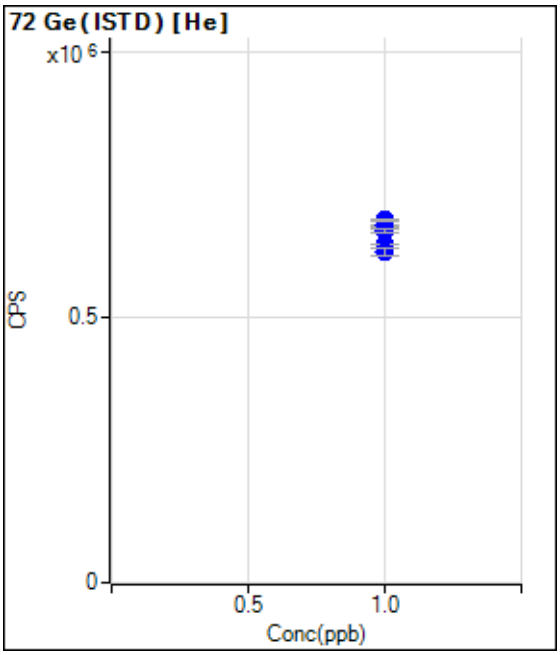



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1419811.71 | | A | 4.2 |
| 2 | ☐ | 1.000 | | 1389475.30 | | A | 4.3 |
| 3 | ☐ | 1.000 | | 1369240.57 | | A | 3.8 |
| 4 | ☐ | 1.000 | | 1388955.43 | | A | 5.5 |
| 5 | ☐ | 1.000 | | 1284466.20 | | A | 4.0 |
| 6 | ☐ | 1.000 | | 1302481.88 | | A | 3.2 |

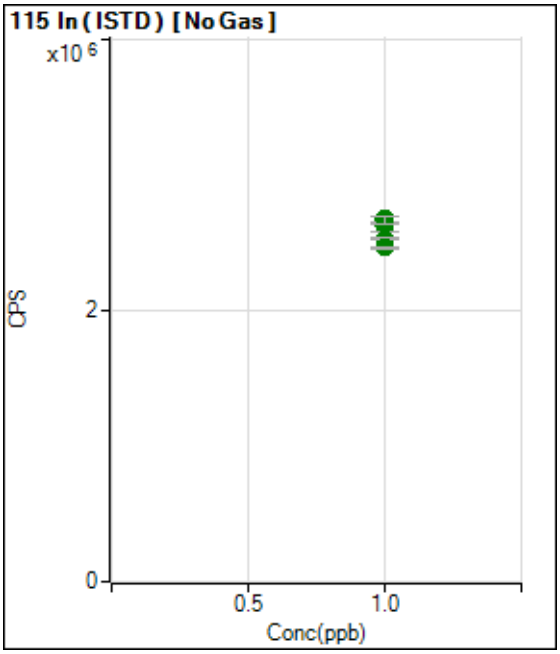



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2205986.01 | | A | 2.3 |
| 2 | ☐ | 1.000 | | 2235754.34 | | A | 1.5 |
| 3 | ☐ | 1.000 | | 2208414.86 | | A | 1.7 |
| 4 | ☐ | 1.000 | | 2154610.33 | | A | 1.8 |
| 5 | ☐ | 1.000 | | 2081102.68 | | A | 1.8 |
| 6 | ☐ | 1.000 | | 2060467.00 | | A | 0.7 |

Calibration for 241_ICV.d

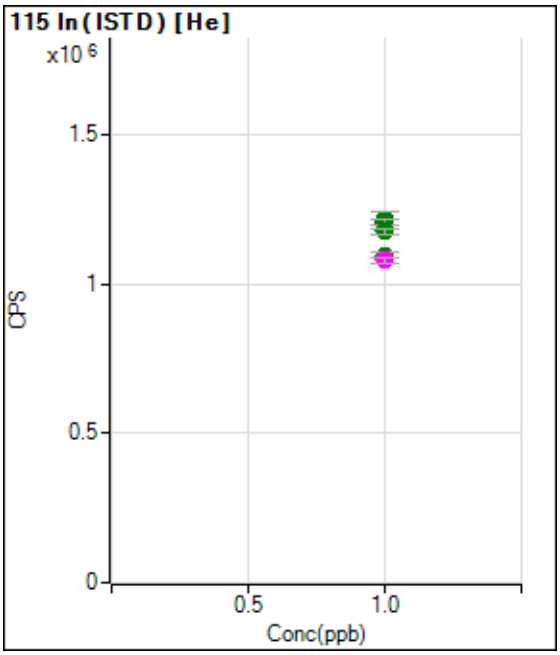



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 671191.87 | | P | 0.6 |
| 2 | ☐ | 1.000 | | 674791.74 | | P | 1.8 |
| 3 | ☐ | 1.000 | | 682743.90 | | P | 0.8 |
| 4 | ☐ | 1.000 | | 662829.36 | | P | 1.4 |
| 5 | ☐ | 1.000 | | 636704.67 | | P | 0.2 |
| 6 | ☐ | 1.000 | | 620973.29 | | P | 2.3 |

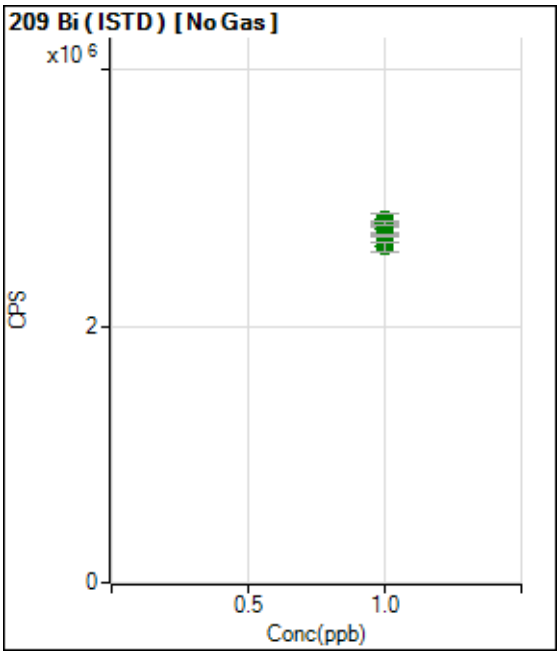



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2620159.38 | | A | 2.2 |
| 2 | ☐ | 1.000 | | 2652820.63 | | A | 0.5 |
| 3 | ☐ | 1.000 | | 2678864.55 | | A | 1.7 |
| 4 | ☐ | 1.000 | | 2665695.75 | | A | 2.0 |
| 5 | ☐ | 1.000 | | 2533857.27 | | A | 0.6 |
| 6 | ☐ | 1.000 | | 2463715.15 | | A | 0.6 |

Calibration for 241_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1202081.19 | | A | 2.4 |
| 2 | ☐ | 1.000 | | 1215786.80 | | A | 5.1 |
| 3 | ☐ | 1.000 | | 1208692.76 | | A | 1.9 |
| 4 | ☐ | 1.000 | | 1176873.73 | | A | 2.0 |
| 5 | ☐ | 1.000 | | 1098082.16 | | A | 2.0 |
| 6 | ☐ | 1.000 | | 1081137.93 | | M | 1.9 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2764776.00 | | A | 2.3 |
| 2 | ☐ | 1.000 | | 2831681.10 | | A | 3.4 |
| 3 | ☐ | 1.000 | | 2812098.40 | | A | 0.9 |
| 4 | ☐ | 1.000 | | 2808042.77 | | A | 1.4 |
| 5 | ☐ | 1.000 | | 2706893.40 | | A | 0.3 |
| 6 | ☐ | 1.000 | | 2620006.84 | | A | 2.7 |

# Calibration Blank Report

**Sample Table**

| | |
|---|---|
| Sample Name | CAL BLK |
| Data File Name | 013CALB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:27:43-05:00 |
| Sample Type | CalBlk |
| Level | 1 |
| Dilution | 1 |
| Comment | |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 60887 | 0.00 |
| Be | 9 | 1 | No Gas | 50 | 40.00 |
| V | 51 | 2 | He | 7065 | 0.02 |
| Cr | 52 | 2 | He | 1480 | 0.32 |
| Fe | 56 | 2 | He | 10526 | 0.07 |
| Se | 78 | 2 | He | 35 | 41.88 |
| Sn | 118 | 2 | He | 750 | 0.64 |
| As | 75 | 2 | He | 496 | 1.71 |
| Ca | 44 | 2 | He | 407 | 2.44 |
| Na | 23 | 2 | He | 107088 | 0.00 |
| Mg | 24 | 2 | He | 880 | 0.72 |
| K | 39 | 2 | He | 45017 | 0.00 |
| Mn | 55 | 2 | He | 577 | 3.03 |
| Co | 59 | 2 | He | 180 | 12.35 |
| Ni | 60 | 2 | He | 140 | 15.31 |
| Cu | 63 | 2 | He | 1583 | 0.55 |
| Zn | 66 | 2 | He | 423 | 3.36 |
| Al | 27 | 2 | He | 803 | 2.24 |
| B | 11 | 1 | No Gas | 22361 | 0.01 |
| Al | 27 | 1 | No Gas | 33150 | 0.01 |
| Si | 28 | 1 | No Gas | 161314 | 0.00 |
| P | 31 | 1 | No Gas | 23427 | 0.01 |
| Ag | 107 | 1 | No Gas | 170 | 6.92 |
| Cd | 111 | 1 | No Gas | 10 | 1000.00 |
| Sr | 88 | 1 | No Gas | 1270 | 0.35 |
| Mo | 95 | 1 | No Gas | 27 | 324.76 |
| Sn | 118 | 1 | No Gas | 1443 | 0.62 |
| Sb | 121 | 1 | No Gas | 1690 | 0.58 |
| Ba | 137 | 1 | No Gas | 377 | 4.01 |
| Tl | 205 | 1 | No Gas | 347 | 3.93 |
| Tl | 203 | 1 | No Gas | 153 | 6.50 |
| Pb | 208 | 1 | No Gas | 2620 | 0.08 |
| U | 238 | 1 | No Gas | 57 | 64.83 |
| Ca | 43 | 2 | He | 23 | 424.18 |
| Sb | 121 | 2 | He | 790 | 1.21 |
| Ti | 47 | 2 | He | 13 | 859.23 |
| Cu | 63 | 1 | No Gas | 2537 | 0.34 |

# Calibration Blank Report

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1015680 | 3.23 |
| Ge | 72 | 2 | He | 548876 | 0.79 |

# Calibration Blank Report

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Ge | 72 | 1 | No Gas | 1766563 | 2.79 |
| In | 115 | 1 | No Gas | 2117301 | 0.53 |
| Bi | 209 | 1 | No Gas | 2356499 | 2.41 |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 2/10/200 |
| Data File Name | 014CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:29:37-05:00 |
| Sample Type | CalStd |
| Level | 2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 6148 | 0.04 |
| V | 51 | 2 | He | 15681 | 0.01 |
| Cr | 52 | 2 | He | 12292 | 0.01 |
| Fe | 56 | 2 | He | 981885 | 0.00 |
| Se | 78 | 2 | He | 134 | 4.86 |
| Sn | 118 | 2 | He | 8186 | 0.04 |
| As | 75 | 2 | He | 1799 | 0.21 |
| Ca | 44 | 2 | He | 5374 | 0.08 |
| Na | 23 | 2 | He | 290394 | 0.00 |
| Mg | 24 | 2 | He | 108553 | 0.00 |
| K | 39 | 2 | He | 126197 | 0.00 |
| Mn | 55 | 2 | He | 7869 | 0.01 |
| Co | 59 | 2 | He | 16827 | 0.03 |
| Ni | 60 | 2 | He | 4414 | 0.13 |
| Cu | 63 | 2 | He | 12966 | 0.01 |
| Zn | 66 | 2 | He | 2517 | 0.15 |
| Al | 27 | 2 | He | 1490 | 1.15 |
| B | 11 | 1 | No Gas | 39902 | 0.00 |
| Al | 27 | 1 | No Gas | 57530 | 0.00 |
| Si | 28 | 1 | No Gas | 206642 | 0.00 |
| P | 31 | 1 | No Gas | 27618 | 0.00 |
| Ag | 107 | 1 | No Gas | 24473 | 0.01 |
| Cd | 111 | 1 | No Gas | 4911 | 0.11 |
| Sr | 88 | 1 | No Gas | 39245 | 0.00 |
| Mo | 95 | 1 | No Gas | 8419 | 0.05 |
| Sn | 118 | 1 | No Gas | 15343 | 0.03 |
| Sb | 121 | 1 | No Gas | 21805 | 0.01 |
| Ba | 137 | 1 | No Gas | 6935 | 0.04 |
| Tl | 205 | 1 | No Gas | 50252 | 0.01 |
| Tl | 203 | 1 | No Gas | 20861 | 0.01 |
| Pb | 208 | 1 | No Gas | 73697 | 0.00 |
| U | 238 | 1 | No Gas | 74689 | 0.00 |
| Ca | 43 | 2 | He | 323 | 6.37 |
| Sb | 121 | 2 | He | 11542 | 0.04 |
| Cu | 63 | 1 | No Gas | 19708 | 0.01 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1017480 | 3.21 | 1015680 | 100.18 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 547102 | 0.89 | 548876 | 99.68 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1749483 | 1.94 | 1766563 | 99.03 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2097566 | 0.48 | 2117301 | 99.07 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2380832 | 1.92 | 2356499 | 101.03 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 5/25/500 |
| Data File Name | 015CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:31:30-05:00 |
| Sample Type | CalStd |
| Level | 3 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 15404 | 0.01 |
| V | 51 | 2 | He | 27931 | 0.01 |
| Cr | 52 | 2 | He | 26853 | 0.00 |
| Fe | 56 | 2 | He | 2471245 | 0.00 |
| Se | 78 | 2 | He | 276 | 5.33 |
| Sn | 118 | 2 | He | 20269 | 0.01 |
| As | 75 | 2 | He | 3608 | 0.05 |
| Ca | 44 | 2 | He | 12069 | 0.04 |
| Na | 23 | 2 | He | 565672 | 0.00 |
| Mg | 24 | 2 | He | 267539 | 0.00 |
| K | 39 | 2 | He | 252824 | 0.00 |
| Mn | 55 | 2 | He | 18449 | 0.01 |
| Co | 59 | 2 | He | 41594 | 0.00 |
| Ni | 60 | 2 | He | 10591 | 0.03 |
| Cu | 63 | 2 | He | 30545 | 0.00 |
| Zn | 66 | 2 | He | 5748 | 0.04 |
| Al | 27 | 2 | He | 2034 | 0.19 |
| B | 11 | 1 | No Gas | 71125 | 0.00 |
| Al | 27 | 1 | No Gas | 93219 | 0.00 |
| Si | 28 | 1 | No Gas | 276873 | 0.00 |
| P | 31 | 1 | No Gas | 35696 | 0.01 |
| Ag | 107 | 1 | No Gas | 60891 | 0.00 |
| Cd | 111 | 1 | No Gas | 12493 | 0.01 |
| Sr | 88 | 1 | No Gas | 96220 | 0.00 |
| Mo | 95 | 1 | No Gas | 20516 | 0.01 |
| Sn | 118 | 1 | No Gas | 36782 | 0.00 |
| Sb | 121 | 1 | No Gas | 52847 | 0.00 |
| Ba | 137 | 1 | No Gas | 16311 | 0.02 |
| Tl | 205 | 1 | No Gas | 125254 | 0.00 |
| Tl | 203 | 1 | No Gas | 51554 | 0.00 |
| Pb | 208 | 1 | No Gas | 181670 | 0.00 |
| U | 238 | 1 | No Gas | 187471 | 0.00 |
| Ca | 43 | 2 | He | 690 | 2.96 |
| Sb | 121 | 2 | He | 27159 | 0.00 |
| Cu | 63 | 1 | No Gas | 45416 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1027535 | 4.82 | 1015680 | 101.17 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 542932 | 1.81 | 548876 | 98.92 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1732248 | 2.13 | 1766563 | 98.06 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2124608 | 1.16 | 2117301 | 100.35 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2388727 | 0.50 | 2356499 | 101.37 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 10/50/100 |
| Data File Name | 016CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:33:23-05:00 |
| Sample Type | CalStd |
| Level | 4 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 30336 | 0.01 |
| V | 51 | 2 | He | 49120 | 0.00 |
| Cr | 52 | 2 | He | 53589 | 0.00 |
| Fe | 56 | 2 | He | 4845425 | 0.00 |
| Se | 78 | 2 | He | 585 | 1.14 |
| Sn | 118 | 2 | He | 39396 | 0.00 |
| As | 75 | 2 | He | 6850 | 0.03 |
| Ca | 44 | 2 | He | 23664 | 0.00 |
| Na | 23 | 2 | He | 1035978 | 0.00 |
| Mg | 24 | 2 | He | 542202 | 0.00 |
| K | 39 | 2 | He | 453364 | 0.00 |
| Mn | 55 | 2 | He | 35774 | 0.00 |
| Co | 59 | 2 | He | 83758 | 0.00 |
| Ni | 60 | 2 | He | 21668 | 0.02 |
| Cu | 63 | 2 | He | 60903 | 0.00 |
| Zn | 66 | 2 | He | 11268 | 0.02 |
| Al | 27 | 2 | He | 3467 | 0.00 |
| B | 11 | 1 | No Gas | 124613 | 0.00 |
| Al | 27 | 1 | No Gas | 148913 | 0.00 |
| Si | 28 | 1 | No Gas | 390104 | 0.00 |
| P | 31 | 1 | No Gas | 46903 | 0.00 |
| Ag | 107 | 1 | No Gas | 118295 | 0.00 |
| Cd | 111 | 1 | No Gas | 24019 | 0.01 |
| Sr | 88 | 1 | No Gas | 188254 | 0.00 |
| Mo | 95 | 1 | No Gas | 40773 | 0.01 |
| Sn | 118 | 1 | No Gas | 73704 | 0.00 |
| Sb | 121 | 1 | No Gas | 105201 | 0.00 |
| Ba | 137 | 1 | No Gas | 31529 | 0.01 |
| Tl | 205 | 1 | No Gas | 253143 | 0.00 |
| Tl | 203 | 1 | No Gas | 104609 | 0.00 |
| Pb | 208 | 1 | No Gas | 356523 | 0.00 |
| U | 238 | 1 | No Gas | 374880 | 0.00 |
| Ca | 43 | 2 | He | 1337 | 0.31 |
| Sb | 121 | 2 | He | 53824 | 0.01 |
| Cu | 63 | 1 | No Gas | 88569 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1031062 | 2.06 | 1015680 | 101.51 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 540044 | 0.57 | 548876 | 98.39 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1765154 | 1.56 | 1766563 | 99.92 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2120434 | 1.76 | 2117301 | 100.15 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2332758 | 1.89 | 2356499 | 98.99 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 100/500/10K |
| Data File Name | 017CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:35:16-05:00 |
| Sample Type | CalStd |
| Level | 5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 288157 | 0.00 |
| V | 51 | 2 | He | 401657 | 0.00 |
| Cr | 52 | 2 | He | 489362 | 0.00 |
| Fe | 56 | 2 | He | 44061018 | 0.00 |
| Se | 78 | 2 | He | 4929 | 0.05 |
| Sn | 118 | 2 | He | 359077 | 0.00 |
| As | 75 | 2 | He | 58836 | 0.00 |
| Ca | 44 | 2 | He | 219587 | 0.00 |
| Na | 23 | 2 | He | 8454833 | 0.00 |
| Mg | 24 | 2 | He | 4826218 | 0.00 |
| K | 39 | 2 | He | 3811442 | 0.00 |
| Mn | 55 | 2 | He | 331505 | 0.00 |
| Co | 59 | 2 | He | 768600 | 0.00 |
| Ni | 60 | 2 | He | 198576 | 0.00 |
| Cu | 63 | 2 | He | 540419 | 0.00 |
| Zn | 66 | 2 | He | 102704 | 0.00 |
| Al | 27 | 2 | He | 24929 | 0.01 |
| B | 11 | 1 | No Gas | 988801 | 0.00 |
| Al | 27 | 1 | No Gas | 1005381 | 0.00 |
| Si | 28 | 1 | No Gas | 2404963 | 0.00 |
| P | 31 | 1 | No Gas | 230858 | 0.00 |
| Ag | 107 | 1 | No Gas | 1128471 | 0.00 |
| Cd | 111 | 1 | No Gas | 229001 | 0.00 |
| Sr | 88 | 1 | No Gas | 1803785 | 0.00 |
| Mo | 95 | 1 | No Gas | 388393 | 0.00 |
| Sn | 118 | 1 | No Gas | 680094 | 0.00 |
| Sb | 121 | 1 | No Gas | 981699 | 0.00 |
| Ba | 137 | 1 | No Gas | 295751 | 0.00 |
| Tl | 205 | 1 | No Gas | 2483784 | 0.00 |
| Tl | 203 | 1 | No Gas | 984897 | 0.00 |
| Pb | 208 | 1 | No Gas | 3387004 | 0.00 |
| U | 238 | 1 | No Gas | 3694642 | 0.00 |
| Ca | 43 | 2 | He | 13040 | 0.02 |
| Sb | 121 | 2 | He | 498465 | 0.00 |
| Cu | 63 | 1 | No Gas | 803458 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 974419 | 1.38 | 1015680 | 95.94 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 532668 | 1.01 | 548876 | 97.05 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1702023 | 1.61 | 1766563 | 96.35 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2066253 | 1.33 | 2117301 | 97.59 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2309063 | 0.79 | 2356499 | 97.99 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 200/1000/20K |
| Data File Name | 018CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:37:05-05:00 |
| Sample Type | CalStd |
| Level | 6 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 601541 | 0.00 |
| V | 51 | 2 | He | 832589 | 0.00 |
| Cr | 52 | 2 | He | 1053176 | 0.00 |
| Fe | 56 | 2 | He | 91481712 | 0.00 |
| Se | 78 | 2 | He | 10339 | 0.02 |
| Sn | 118 | 2 | He | 762052 | 0.00 |
| As | 75 | 2 | He | 122188 | 0.00 |
| Ca | 44 | 2 | He | 461370 | 0.00 |
| Na | 23 | 2 | He | 17452548 | 0.00 |
| Mg | 24 | 2 | He | 10105680 | 0.00 |
| K | 39 | 2 | He | 7932236 | 0.00 |
| Mn | 55 | 2 | He | 696820 | 0.00 |
| Co | 59 | 2 | He | 1627739 | 0.00 |
| Ni | 60 | 2 | He | 409868 | 0.00 |
| Cu | 63 | 2 | He | 1147958 | 0.00 |
| Zn | 66 | 2 | He | 214570 | 0.00 |
| Al | 27 | 2 | He | 51607 | 0.00 |
| B | 11 | 1 | No Gas | 2077857 | 0.00 |
| Al | 27 | 1 | No Gas | 2098551 | 0.00 |
| Si | 28 | 1 | No Gas | 4677516 | 0.00 |
| P | 31 | 1 | No Gas | 465091 | 0.00 |
| Ag | 107 | 1 | No Gas | 2314340 | 0.00 |
| Cd | 111 | 1 | No Gas | 471460 | 0.00 |
| Sr | 88 | 1 | No Gas | 3753500 | 0.00 |
| Mo | 95 | 1 | No Gas | 811643 | 0.00 |
| Sn | 118 | 1 | No Gas | 1444493 | 0.00 |
| Sb | 121 | 1 | No Gas | 2122041 | 0.00 |
| Ba | 137 | 1 | No Gas | 624197 | 0.00 |
| Tl | 205 | 1 | No Gas | 5122729 | 0.00 |
| Tl | 203 | 1 | No Gas | 2202539 | 0.00 |
| Pb | 208 | 1 | No Gas | 7220763 | 0.00 |
| U | 238 | 1 | No Gas | 7817840 | 0.00 |
| Ca | 43 | 2 | He | 26703 | 0.00 |
| Sb | 121 | 2 | He | 1067014 | 0.00 |
| Cu | 63 | 1 | No Gas | 1698337 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 930358 | 4.39 | 1015680 | 91.60 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 522558 | 0.82 | 548876 | 95.21 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1622238 | 1.40 | 1766563 | 91.83 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1963080 | 0.42 | 2117301 | 92.72 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2261575 | 2.27 | 2356499 | 95.97 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICV2 |
| Data File Name | 021LCV2.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:42:32-05:00 |
| Sample Type | LLCCV2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 1.936 | 1.936 | 13.35 | 85202 | 0.00 | 2 | |
| Be | 9 | 1 | No Gas | 1.883 | 1.883 | 2.76 | 6050 | 0.03 | 2 | |
| V | 51 | 2 | He | 1.509 | 1.509 | 6.62 | 13349 | 0.01 | 2 | |
| Cr | 52 | 2 | He | 1.889 | 1.889 | 4.00 | 11568 | 0.02 | 2 | |
| Fe | 56 | 2 | He | 199.202 | 199.202 | 5.89 | 944112 | 0.02 | 200 | |
| Se | 78 | 2 | He | 1.960 | 1.960 | 12.67 | 137 | 1.43 | 2 | |
| Sn | 118 | 2 | He | 2.113 | 2.113 | 4.04 | 8967 | 0.02 | 2 | |
| As | 75 | 2 | He | 1.710 | 1.710 | 3.28 | 1556 | 0.11 | 2 | |
| Ca | 44 | 2 | He | 196.019 | 196.019 | 7.91 | 5018 | 3.91 | 200 | |
| Na | 23 | 2 | He | 204.635 | 204.635 | 3.69 | 287654 | 0.07 | 200 | |
| Mg | 24 | 2 | He | 210.699 | 210.699 | 3.82 | 109799 | 0.19 | 200 | |
| K | 39 | 2 | He | 204.091 | 204.091 | 3.65 | 126815 | 0.16 | 200 | |
| Mn | 55 | 2 | He | 1.975 | 1.975 | 4.76 | 7606 | 0.03 | 2 | |
| Co | 59 | 2 | He | 1.921 | 1.921 | 8.31 | 16123 | 0.01 | 2 | |
| Ni | 60 | 2 | He | 2.152 | 2.152 | 2.28 | 4664 | 0.05 | 2 | |
| Cu | 63 | 2 | He | 2.058 | 2.058 | 6.57 | 13594 | 0.02 | 2 | |
| Zn | 66 | 2 | He | 2.130 | 2.130 | 1.97 | 2754 | 0.08 | 2 | |
| Al | 27 | 2 | He | 2.137 | 2.137 | 14.08 | 1347 | 0.16 | 2 | |
| B | 11 | 1 | No Gas | 22.799 | 22.799 | 1.99 | 71572 | 0.03 | 10 | NewName Main CR1 Failed |
| Al | 27 | 1 | No Gas | 2.355 | 2.355 | 1.85 | 57671 | 0.00 | 2 | |
| Si | 28 | 1 | No Gas | 13.240 | 13.240 | 6.86 | 220329 | 0.01 | 10 | NewName Main CR1 Failed |
| P | 31 | 1 | No Gas | 9.972 | 9.972 | 23.37 | 27451 | 0.04 | 10 | |
| Ag | 107 | 1 | No Gas | 1.964 | 1.964 | 2.67 | 23755 | 0.01 | 2 | |
| Cd | 111 | 1 | No Gas | 2.043 | 2.043 | 1.78 | 5004 | 0.04 | 2 | |
| Sr | 88 | 1 | No Gas | 1.953 | 1.953 | 2.91 | 39155 | 0.00 | 2 | |
| Mo | 95 | 1 | No Gas | 1.975 | 1.975 | 2.08 | 8316 | 0.02 | 2 | |
| Sn | 118 | 1 | No Gas | 2.069 | 2.069 | 2.75 | 16798 | 0.01 | 2 | |
| Sb | 121 | 1 | No Gas | 1.908 | 1.908 | 2.46 | 22610 | 0.01 | 2 | |
| Ba | 137 | 1 | No Gas | 2.077 | 2.077 | 5.25 | 7059 | 0.03 | 2 | |
| Tl | 205 | 1 | No Gas | 1.983 | 1.983 | 1.80 | 53081 | 0.00 | 2 | |
| Tl | 203 | 1 | No Gas | 1.931 | 1.931 | 2.69 | 21890 | 0.01 | 2 | |
| Pb | 208 | 1 | No Gas | 1.950 | 1.950 | 2.69 | 75221 | 0.00 | 2 | |
| U | 238 | 1 | No Gas | 1.825 | 1.825 | 2.03 | 73740 | 0.00 | 2 | |
| Ca | 43 | 2 | He | 226.150 | 226.150 | 13.63 | 333 | 67.84 | 200 | |
| Sb | 121 | 2 | He | 1.946 | 1.946 | 2.09 | 11352 | 0.02 | 2 | |
| Ti | 47 | 2 | He | 1.952 | 1.952 | 32.56 | 303 | 0.64 | 200 | |
| Cu | 63 | 1 | No Gas | 1.930 | 1.930 | 4.50 | 19504 | 0.01 | 2 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1001872 | 2.38 | 1015680 | 98.64 | 70 | 120 | |
| Ge | 72 | 2 | He | 541827 | 2.74 | 548876 | 98.72 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1722726 | 1.66 | 1766563 | 97.52 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2068297 | 1.53 | 2117301 | 97.69 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2371662 | 1.56 | 2356499 | 100.64 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICV5 |
| Data File Name | 022LCV5.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:44:25-05:00 |
| Sample Type | LLCCV5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 013CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 4.900 | 4.900 | 5.24 | 120034 | 0.00 | 5 | |
| Be | 9 | 1 | No Gas | 4.871 | 4.871 | 3.65 | 15097 | 0.03 | 5 | |
| V | 51 | 2 | He | 4.389 | 4.389 | 3.47 | 25272 | 0.02 | 5 | |
| Cr | 52 | 2 | He | 4.823 | 4.823 | 2.18 | 27010 | 0.02 | 5 | |
| Fe | 56 | 2 | He | 513.067 | 513.067 | 2.47 | 2392296 | 0.02 | 500 | |
| Se | 78 | 2 | He | 5.111 | 5.111 | 4.32 | 301 | 1.70 | 5 | |
| Sn | 118 | 2 | He | 4.921 | 4.921 | 1.69 | 20350 | 0.02 | 5 | |
| As | 75 | 2 | He | 4.661 | 4.661 | 2.44 | 3363 | 0.14 | 5 | |
| Ca | 44 | 2 | He | 484.621 | 484.621 | 4.19 | 11705 | 4.14 | 500 | |
| Na | 23 | 2 | He | 509.254 | 509.254 | 4.32 | 552986 | 0.09 | 500 | |
| Mg | 24 | 2 | He | 513.723 | 513.723 | 2.28 | 263917 | 0.19 | 500 | |
| K | 39 | 2 | He | 504.095 | 504.095 | 2.56 | 245519 | 0.21 | 500 | |
| Mn | 55 | 2 | He | 4.927 | 4.927 | 5.05 | 17925 | 0.03 | 5 | |
| Co | 59 | 2 | He | 5.124 | 5.124 | 4.24 | 42330 | 0.01 | 5 | |
| Ni | 60 | 2 | He | 5.139 | 5.139 | 4.74 | 10835 | 0.05 | 5 | |
| Cu | 63 | 2 | He | 5.016 | 5.016 | 3.91 | 30595 | 0.02 | 5 | |
| Zn | 66 | 2 | He | 4.849 | 4.849 | 7.19 | 5675 | 0.09 | 5 | |
| Al | 27 | 2 | He | 5.696 | 5.696 | 3.81 | 2250 | 0.25 | 5 | |
| B | 11 | 1 | No Gas | 32.251 | 32.251 | 6.65 | 89282 | 0.04 | 25 | |
| Al | 27 | 1 | No Gas | 5.518 | 5.518 | 4.92 | 91981 | 0.01 | 5 | |
| Si | 28 | 1 | No Gas | 26.321 | 26.321 | 0.31 | 283563 | 0.01 | 25 | |
| P | 31 | 1 | No Gas | 25.963 | 25.963 | 4.38 | 34951 | 0.07 | 25 | |
| Ag | 107 | 1 | No Gas | 4.842 | 4.842 | 2.81 | 58490 | 0.01 | 5 | |
| Cd | 111 | 1 | No Gas | 4.894 | 4.894 | 3.31 | 12009 | 0.04 | 5 | |
| Sr | 88 | 1 | No Gas | 4.754 | 4.754 | 2.27 | 93816 | 0.01 | 5 | |
| Mo | 95 | 1 | No Gas | 4.743 | 4.743 | 5.18 | 19985 | 0.02 | 5 | |
| Sn | 118 | 1 | No Gas | 4.772 | 4.772 | 2.82 | 37009 | 0.01 | 5 | |
| Sb | 121 | 1 | No Gas | 4.537 | 4.537 | 0.78 | 51679 | 0.01 | 5 | |
| Ba | 137 | 1 | No Gas | 4.937 | 4.937 | 2.71 | 16311 | 0.03 | 5 | |
| Tl | 205 | 1 | No Gas | 4.748 | 4.748 | 3.03 | 126470 | 0.00 | 5 | |
| Tl | 203 | 1 | No Gas | 4.646 | 4.646 | 3.84 | 52394 | 0.01 | 5 | |
| Pb | 208 | 1 | No Gas | 4.760 | 4.760 | 3.76 | 179631 | 0.00 | 5 | |
| U | 238 | 1 | No Gas | 4.610 | 4.610 | 1.64 | 186063 | 0.00 | 5 | |
| Ca | 43 | 2 | He | 508.147 | 508.147 | 4.69 | 713 | 71.23 | 500 | |
| Sb | 121 | 2 | He | 4.886 | 4.886 | 2.49 | 27058 | 0.02 | 5 | |
| Ti | 47 | 2 | He | 4.295 | 4.295 | 4.56 | 647 | 0.66 | 5 | |
| Cu | 63 | 1 | No Gas | 4.869 | 4.869 | 0.59 | 45597 | 0.01 | 5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 972379 | 3.72 | 1015680 | 95.74 | 70 | 120 | |
| Ge | 72 | 2 | He | 536493 | 2.35 | 548876 | 97.74 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 1 | No Gas | 1728497 | 1.37 | 1766563 | 97.85 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2074499 | 1.74 | 2117301 | 97.98 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2370033 | 2.68 | 2356499 | 100.57 | 70 | 120 | |

# Initial Calibration Blank (ICB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICB |
| Data File Name | 023_ICB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:46:19-05:00 |
| Sample Type | ICB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.167 | -95.3 | 59932 | 2.4 | 0.5 | |
| Be | 9 | 1 | No Gas | -0.003 | -152.1 | 42 | 36.7 | 0.5 | |
| V | 51 | 2 | He | -0.338 | -12.9 | 5521 | 2.3 | 2.5 | |
| Cr | 52 | 2 | He | -0.016 | -129.1 | 1367 | 6.8 | 2.5 | |
| Fe | 56 | 2 | He | -0.356 | -4.3 | 8683 | 3.3 | 100 | |
| Se | 78 | 2 | He | -0.015 | -41.3 | 33 | 3.5 | 1 | |
| Sn | 118 | 2 | He | 0.016 | 135.8 | 813 | 10.2 | 2.5 | |
| As | 75 | 2 | He | -0.142 | -18.3 | 399 | 4.6 | 2.5 | |
| Ca | 44 | 2 | He | 8.747 | 52.7 | 607 | 19.7 | 100 | |
| Na | 23 | 2 | He | 1.008 | 304.5 | 106148 | 0.9 | 100 | |
| Mg | 24 | 2 | He | -0.299 | -84.6 | 713 | 20.4 | 100 | |
| K | 39 | 2 | He | 3.194 | 145.5 | 45519 | 1.7 | 100 | |
| Mn | 55 | 2 | He | 0.021 | 64.9 | 640 | 9.4 | 2.5 | |
| Co | 59 | 2 | He | 0.004 | 61.8 | 213 | 9.8 | 2.5 | |
| Ni | 60 | 2 | He | 0.025 | 75.4 | 190 | 19.0 | 2.5 | |
| Cu | 63 | 2 | He | -0.002 | -1308.5 | 1547 | 9.0 | 1 | |
| Zn | 66 | 2 | He | 0.026 | 142.7 | 443 | 6.9 | 2.5 | |
| Al | 27 | 2 | He | 1.546 | 29.7 | 1190 | 11.0 | 5 | |
| B | 11 | 1 | No Gas | 5.754 | 9.0 | 35757 | 2.2 | 0.5 | ICB Main CR1 Failed |
| Al | 27 | 1 | No Gas | 0.973 | 5.3 | 41776 | 1.2 | 5 | |
| Si | 28 | 1 | No Gas | -2.566 | -16.7 | 141701 | 2.4 | 10 | |
| P | 31 | 1 | No Gas | 3.431 | 34.6 | 23861 | 2.0 | 10 | |
| Ag | 107 | 1 | No Gas | -0.002 | -139.6 | 147 | 20.8 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.001 | 170.8 | 13 | 43.3 | 1 | |
| Sr | 88 | 1 | No Gas | 0.029 | 27.5 | 1830 | 9.0 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.002 | 247.7 | 37 | 68.6 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.017 | 154.9 | 1563 | 13.1 | 5 | |
| Sb | 121 | 1 | No Gas | 0.009 | 113.2 | 1700 | 5.7 | 2.5 | |
| Ba | 137 | 1 | No Gas | -0.030 | -42.4 | 277 | 14.6 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.024 | 3.7 | 973 | 3.3 | 1 | |
| Tl | 203 | 1 | No Gas | 0.019 | 21.0 | 367 | 12.9 | 1 | |
| Pb | 208 | 1 | No Gas | 0.009 | 40.2 | 2927 | 5.3 | 2.5 | |
| U | 238 | 1 | No Gas | 0.001 | 58.7 | 100 | 26.5 | 2.5 | |
| Ca | 43 | 2 | He | -4.722 | -174.2 | 17 | 69.3 | 100 | |
| Sb | 121 | 2 | He | -0.006 | -324.6 | 743 | 16.6 | 2.5 | |
| Ti | 47 | 2 | He | -0.066 | -57.8 | 3 | 173.2 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1037048 | 2.67 | 1015680 | 102.10 | 70 | 120 | |
| Ge | 72 | 2 | He | 539658 | 2.53 | 548876 | 98.32 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1681640 | 1.28 | 1766563 | 95.19 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2104721 | 0.72 | 2117301 | 99.41 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2348297 | 1.55 | 2356499 | 99.65 | 70 | 120 | |

# Initial Calibration Verification (ICV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICV |
| Data File Name | 024_ICV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:50:03-05:00 |
| Sample Type | ICV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 97.313 | 2.098 | 1214504 | 2.15 | 100 | 97.3 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 99.964 | 0.593 | 288314 | 1.76 | 100 | 100.0 | 90 | 110 | |
| V | 51 | 2 | He | 93.457 | 0.628 | 403661 | 0.71 | 100 | 93.5 | 90 | 110 | |
| Cr | 52 | 2 | He | 92.287 | 0.741 | 497532 | 0.83 | 100 | 92.3 | 90 | 110 | |
| Fe | 56 | 2 | He | 9436.190 | 1.550 | 44442798 | 1.87 | 10000 | 94.4 | 90 | 110 | |
| Se | 78 | 2 | He | 91.737 | 2.553 | 4888 | 2.87 | 100 | 91.7 | 90 | 110 | |
| Sn | 118 | 2 | He | 94.498 | 0.408 | 363996 | 1.59 | 100 | 94.5 | 90 | 110 | |
| As | 75 | 2 | He | 95.034 | 1.368 | 59979 | 1.66 | 100 | 95.0 | 90 | 110 | |
| Ca | 44 | 2 | He | 9394.466 | 1.245 | 222765 | 0.99 | 10000 | 93.9 | 90 | 110 | |
| Na | 23 | 2 | He | 9443.516 | 1.783 | 8539333 | 1.41 | 10000 | 94.4 | 90 | 110 | |
| Mg | 24 | 2 | He | 9488.445 | 1.223 | 4928359 | 1.45 | 10000 | 94.9 | 90 | 110 | |
| K | 39 | 2 | He | 9528.222 | 1.070 | 3907452 | 0.77 | 10000 | 95.3 | 90 | 110 | |
| Mn | 55 | 2 | He | 94.751 | 0.609 | 339285 | 0.79 | 100 | 94.8 | 90 | 110 | |
| Co | 59 | 2 | He | 92.526 | 1.110 | 772341 | 1.03 | 100 | 92.5 | 90 | 110 | |
| Ni | 60 | 2 | He | 95.259 | 2.524 | 201257 | 2.53 | 100 | 95.3 | 90 | 110 | |
| Cu | 63 | 2 | He | 92.161 | 0.869 | 542969 | 0.90 | 100 | 92.2 | 90 | 110 | |
| Zn | 66 | 2 | He | 94.470 | 1.244 | 104384 | 1.08 | 100 | 94.5 | 90 | 110 | |
| Al | 27 | 2 | He | 94.478 | 2.929 | 25457 | 3.15 | 100 | 94.5 | 90 | 110 | |
| B | 11 | 1 | No Gas | 508.379 | 2.182 | 1005559 | 0.94 | 500 | 101.7 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 93.959 | 0.949 | 1032478 | 0.91 | 100 | 94.0 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 488.294 | 1.492 | 2455471 | 1.31 | 500 | 97.7 | 90 | 110 | |
| P | 31 | 1 | No Gas | 459.993 | 0.735 | 232615 | 0.70 | 500 | 92.0 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 93.148 | 1.972 | 1139277 | 0.94 | 100 | 93.1 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 92.491 | 0.351 | 230314 | 1.28 | 100 | 92.5 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 92.016 | 1.375 | 1820900 | 1.43 | 100 | 92.0 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 90.561 | 0.903 | 387111 | 0.87 | 100 | 90.6 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 89.650 | 0.846 | 680569 | 0.84 | 100 | 89.6 | 90 | 110 | ICV Main CR1 Failed |
| Sb | 121 | 1 | No Gas | 89.389 | 0.924 | 973898 | 0.79 | 100 | 89.4 | 90 | 110 | ICV Main CR1 Failed |
| Ba | 137 | 1 | No Gas | 90.567 | 1.819 | 297304 | 0.89 | 100 | 90.6 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 94.368 | 2.761 | 2477743 | 2.09 | 100 | 94.4 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 88.816 | 1.274 | 987564 | 0.55 | 100 | 88.8 | 90 | 110 | ICV Main CR1 Failed |
| Pb | 208 | 1 | No Gas | 92.418 | 2.033 | 3400051 | 1.44 | 100 | 92.4 | 90 | 110 | |
| U | 238 | 1 | No Gas | 92.468 | 1.955 | 3687636 | 1.66 | 100 | 92.5 | 90 | 110 | |
| Ca | 43 | 2 | He | 9715.067 | 0.854 | 13397 | 0.95 | 10000 | 97.2 | 90 | 110 | |
| Sb | 121 | 2 | He | 92.395 | 1.269 | 504912 | 1.38 | 100 | 92.4 | 90 | 110 | |
| Ti | 47 | 2 | He | 89.092 | 2.605 | 13347 | 2.81 | 100 | 89.1 | 90 | 110 | ICV Main CR1 Failed |
| Cu | 63 | 1 | No Gas | 91.616 | 1.318 | 802598 | 1.22 | 100 | 91.6 | 90 | 110 | |

**QC ISTD Table**

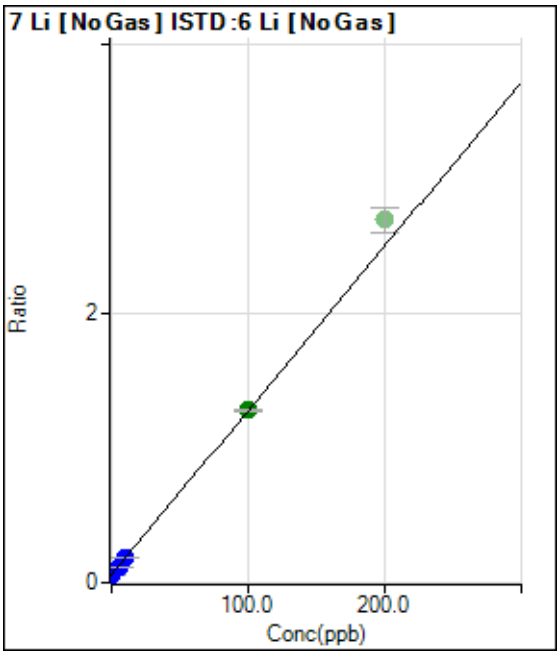
| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 975135 | 1.45 | 1015680 | 96.01 | 70 | 120 | |
| Ge | 72 | 2 | He | 543896 | 0.36 | 548876 | 99.09 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1704996 | 0.15 | 1766563 | 96.51 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2106218 | 1.56 | 2117301 | 99.48 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2341746 | 0.73 | 2356499 | 99.37 | 70 | 120 | |

Calibration for 024_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 013CALB.d | CAL BLK | 7/28/2020 11:27:43 AM |
| 2 | 014CALS.d | 2/10/200 | 7/28/2020 11:29:37 AM |
| 3 | 015CALS.d | 5/25/500 | 7/28/2020 11:31:30 AM |
| 4 | 016CALS.d | 10/50/100 | 7/28/2020 11:33:23 AM |
| 5 | 017CALS.d | 100/500/10K | 7/28/2020 11:35:16 AM |
| 6 | 018CALS.d | 200/1000/20K | 7/28/2020 11:37:05 AM |

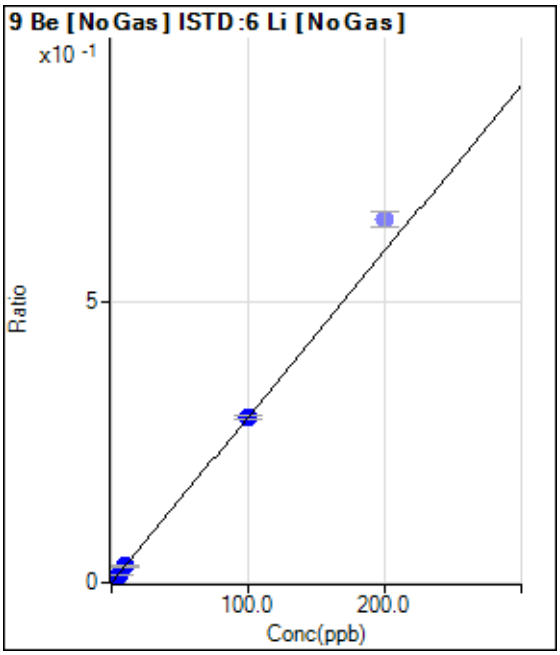
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 60887.35 | 0.0600 | P | 3.3 |
| 2 | ☐ | 2.000 | 1.971 | 85442.97 | 0.0840 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.693 | 120299.92 | 0.1172 | P | 2.4 |
| 4 | ☐ | 10.000 | 9.787 | 184783.31 | 0.1792 | P | 0.3 |
| 5 | ☐ | 100.000 | 100.037 | 1246034.12 | 1.2787 | A | 0.4 |
| 6 | ☑ | 200.000 | | 2500120.38 | 2.6929 | A | 7.2 |

y = 0.0122 * x + 0.0600
R = 1.0000
DL = 0.4848
BEC = 4.924

Weight: <None>
Min Conc: <None>

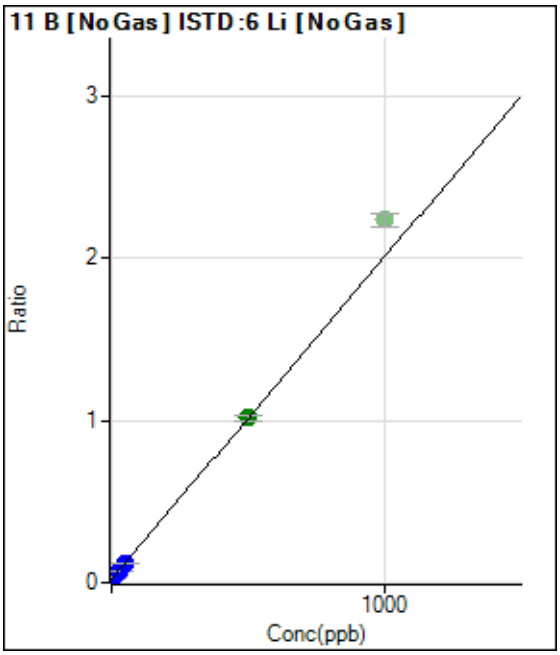



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 50.00 | 0.0000 | P | 21.3 |
| 2 | ☐ | 2.000 | 2.027 | 6148.06 | 0.0060 | P | 1.0 |
| 3 | ☐ | 5.000 | 5.060 | 15403.54 | 0.0150 | P | 4.6 |
| 4 | ☐ | 10.000 | 9.937 | 30336.30 | 0.0294 | P | 4.5 |
| 5 | ☐ | 100.000 | 100.003 | 288156.78 | 0.2958 | P | 2.3 |
| 6 | ☑ | 200.000 | | 601540.68 | 0.6474 | P | 4.1 |

y = 0.0030 * x + 4.9364E-005
R = 1.0000
DL = 0.01069
BEC = 0.01669

Weight: <None>
Min Conc: <None>

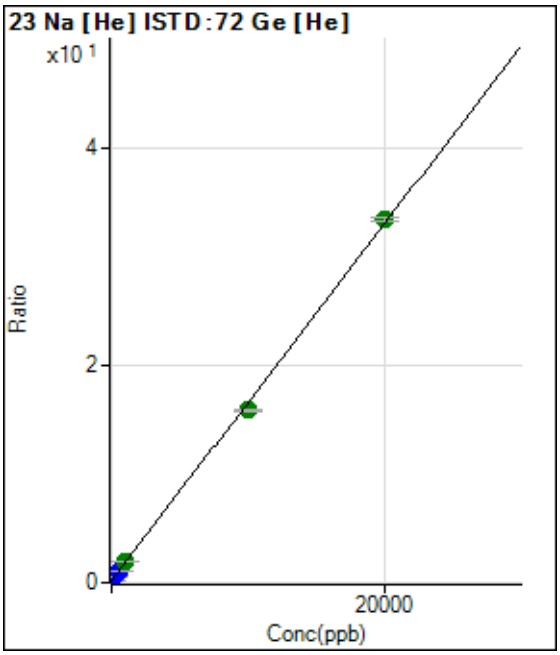
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22361.31 | 0.0220 | P | 2.1 |
| 2 | ☐ | 10.000 | 8.675 | 39901.80 | 0.0392 | P | 3.6 |
| 3 | ☐ | 25.000 | 23.842 | 71125.00 | 0.0694 | P | 6.3 |
| 4 | ☐ | 50.000 | 49.802 | 124612.82 | 0.1209 | P | 2.7 |
| 5 | ☐ | 500.000 | 500.104 | 988801.29 | 1.0150 | A | 3.8 |
| 6 | ☑ | 1000.000 | | 2077857.10 | 2.2358 | A | 3.9 |

y = 0.0020 * x + 0.0220
R = 1.0000
DL = 0.6856
BEC = 11.09

Weight: <None>
Min Conc: <None>

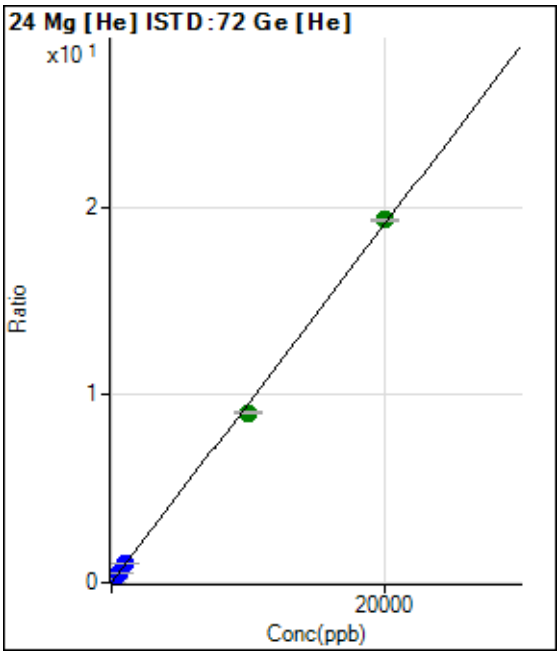



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 107088.46 | 0.1951 | P | 1.5 |
| 2 | ☐ | 200.000 | 204.438 | 290394.32 | 0.5308 | P | 0.4 |
| 3 | ☐ | 500.000 | 515.861 | 565672.41 | 1.0421 | P | 2.1 |
| 4 | ☐ | 1000.000 | 1049.384 | 1035978.14 | 1.9182 | A | 4.3 |
| 5 | ☐ | 10000.00 | 9548.405 | 8454832.58 | 15.8732 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20222.88 | 17452547.66 | 33.4002 | A | 1.1 |

y = 0.0016 * x + 0.1951
R = 0.9996
DL = 5.293
BEC = 118.8

Weight: <None>
Min Conc: <None>

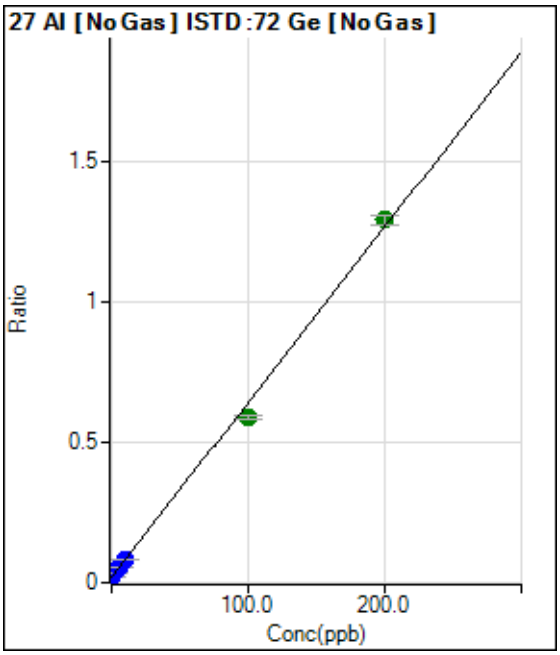
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 880.05 | 0.0016 | P | 6.4 |
| 2 | ☐ | 200.000 | 206.142 | 108552.84 | 0.1984 | P | 1.3 |
| 3 | ☐ | 500.000 | 514.423 | 267539.37 | 0.4928 | P | 0.2 |
| 4 | ☐ | 1000.000 | 1049.859 | 542202.09 | 1.0040 | P | 0.8 |
| 5 | ☐ | 10000.00 | 9488.678 | 4826217.95 | 9.0613 | A | 1.4 |
| 6 | ☐ | 20000.00 | 20252.74 | 10105680.48 | 19.3387 | A | 0.8 |

y = 9.5479E-004 * x + 0.0016
R = 0.9995
DL = 0.3222
BEC = 1.679

Weight: <None>
Min Conc: <None>

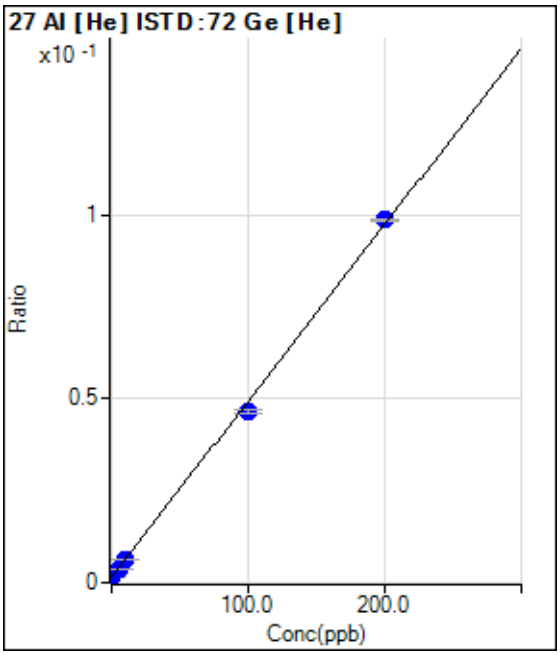



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33150.05 | 0.0188 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.262 | 57529.58 | 0.0329 | P | 2.4 |
| 3 | ☐ | 5.000 | 5.617 | 93219.08 | 0.0538 | P | 4.3 |
| 4 | ☐ | 10.000 | 10.504 | 148912.53 | 0.0844 | P | 1.9 |
| 5 | ☐ | 100.000 | 91.605 | 1005380.87 | 0.5909 | A | 2.6 |
| 6 | ☐ | 200.000 | 204.154 | 2098551.48 | 1.2938 | A | 2.4 |

y = 0.0062 * x + 0.0188
R = 0.9987
DL = 0.2526
BEC = 3.005

Weight: <None>
Min Conc: <None>

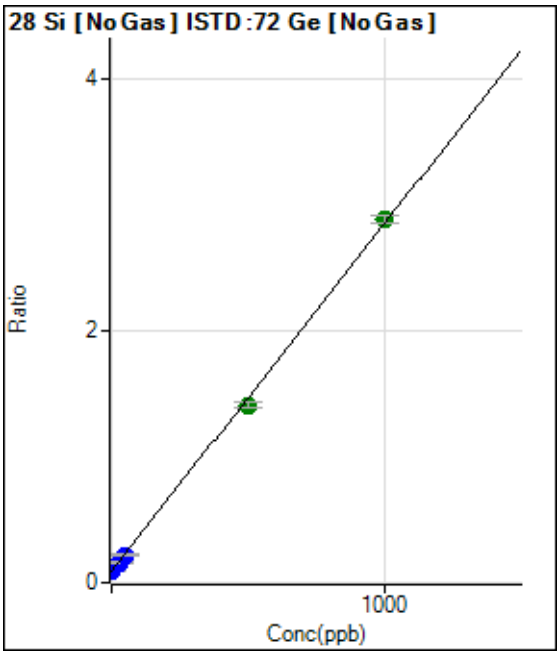
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 803.37 | 0.0015 | P | 17.1 |
| 2 | ☐ | 2.000 | 2.625 | 1490.11 | 0.0027 | P | 16.7 |
| 3 | ☐ | 5.000 | 4.756 | 2033.53 | 0.0037 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.331 | 3467.16 | 0.0064 | P | 0.7 |
| 5 | ☐ | 100.000 | 94.467 | 24929.39 | 0.0468 | P | 2.2 |
| 6 | ☐ | 200.000 | 202.750 | 51606.65 | 0.0988 | P | 0.9 |

y = 4.7990E-004 * x + 0.0015
R = 0.9994
DL = 1.566
BEC = 3.047

Weight: <None>
Min Conc: <None>

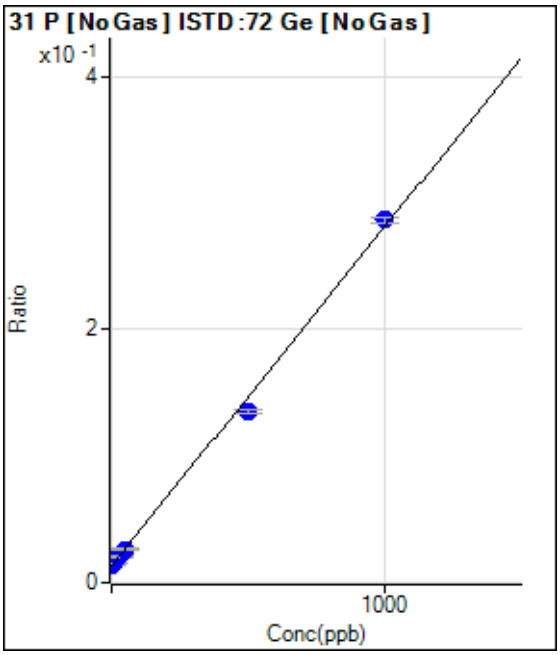



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 161313.86 | 0.0913 | P | 1.9 |
| 2 | ☐ | 10.000 | 9.709 | 206641.89 | 0.1182 | P | 3.4 |
| 3 | ☐ | 25.000 | 24.819 | 276872.83 | 0.1599 | P | 3.3 |
| 4 | ☐ | 50.000 | 46.956 | 390104.23 | 0.2211 | P | 2.4 |
| 5 | ☐ | 500.000 | 478.597 | 2404962.83 | 1.4134 | A | 2.8 |
| 6 | ☐ | 1000.000 | 1010.861 | 4677515.56 | 2.8837 | A | 2.0 |

y = 0.0028 * x + 0.0913
R = 0.9997
DL = 1.918
BEC = 33.07

Weight: <None>
Min Conc: <None>

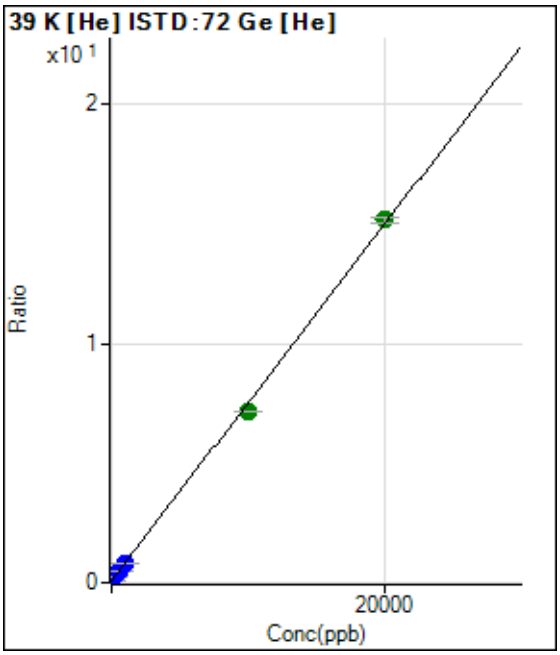
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23426.80 | 0.0133 | P | 4.2 |
| 2 | ☐ | 10.000 | 9.401 | 27617.93 | 0.0158 | P | 1.5 |
| 3 | ☐ | 25.000 | 27.451 | 35696.39 | 0.0206 | P | 5.0 |
| 4 | ☐ | 50.000 | 49.698 | 46902.55 | 0.0266 | P | 2.7 |
| 5 | ☐ | 500.000 | 457.138 | 230858.25 | 0.1357 | P | 2.0 |
| 6 | ☐ | 1000.000 | 1021.391 | 465091.24 | 0.2867 | P | 1.7 |

y = 2.6774E-004 * x + 0.0133
R = 0.9987
DL = 6.262
BEC = 49.57

Weight: <None>
Min Conc: <None>

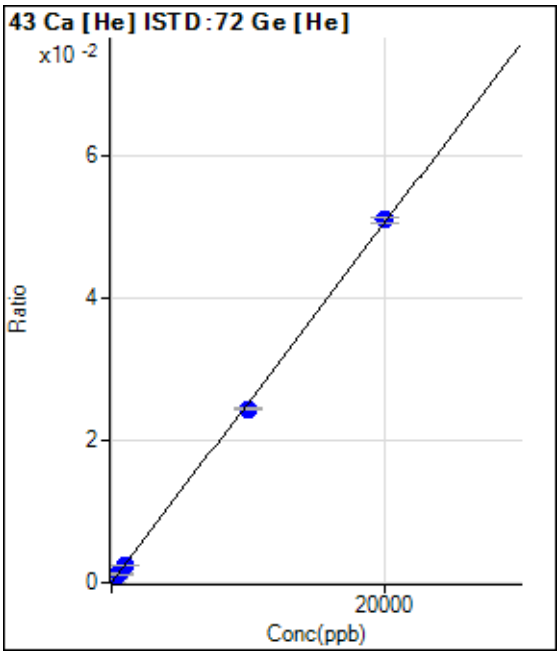



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 45017.02 | 0.0820 | P | 1.6 |
| 2 | ☐ | 200.000 | 199.436 | 126196.70 | 0.2307 | P | 1.4 |
| 3 | ☐ | 500.000 | 514.737 | 252824.05 | 0.4657 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1016.193 | 453364.21 | 0.8395 | P | 0.4 |
| 5 | ☐ | 10000.00 | 9489.440 | 3811441.92 | 7.1554 | A | 0.5 |
| 6 | ☐ | 20000.00 | 20254.10 | 7932235.71 | 15.1794 | A | 1.7 |

y = 7.4540E-004 * x + 0.0820
R = 0.9995
DL = 5.159
BEC = 110

Weight: <None>
Min Conc: <None>

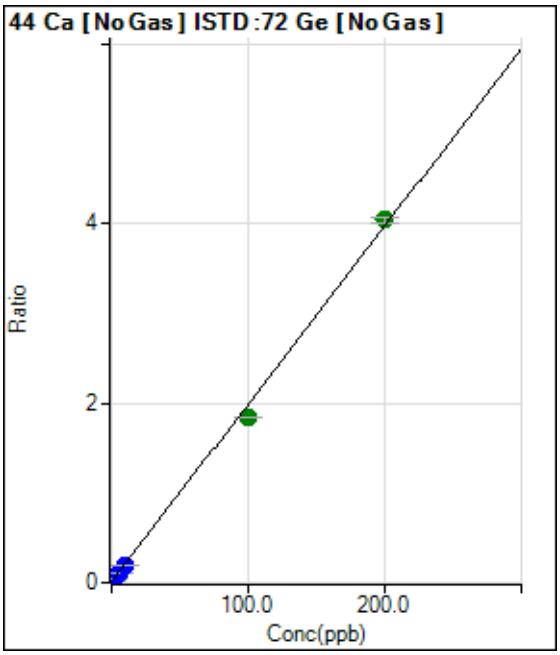
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 99.4 |
| 2 | ☐ | 200.000 | 216.838 | 323.35 | 0.0006 | P | 21.1 |
| 3 | ☐ | 500.000 | 484.408 | 690.03 | 0.0013 | P | 19.0 |
| 4 | ☐ | 1000.000 | 961.313 | 1336.75 | 0.0025 | P | 4.7 |
| 5 | ☐ | 10000.00 | 9654.755 | 13039.72 | 0.0245 | P | 1.6 |
| 6 | ☐ | 20000.00 | 20174.77 | 26702.96 | 0.0511 | P | 1.5 |

y = 2.5310E-006 * x + 4.2653E-005
R = 0.9998
DL = 50.27
BEC = 16.85

Weight: <None>
Min Conc: <None>

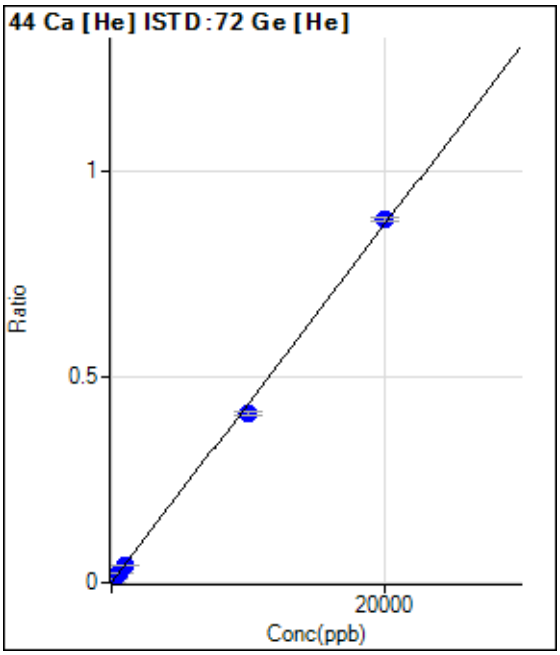



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 19767.76 | 0.0112 | P | 5.3 |
| 2 | ☐ | 2.000 | 1.943 | 86793.61 | 0.0496 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.938 | 188433.15 | 0.1088 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.566 | 353498.43 | 0.2003 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.643 | 3136106.31 | 1.8425 | A | 0.5 |
| 6 | ☐ | 200.000 | 203.702 | 6550296.99 | 4.0378 | A | 1.4 |

y = 0.0198 * x + 0.0112
R = 0.9991
DL = 0.08967
BEC = 0.5665

Weight: <None>
Min Conc: <None>

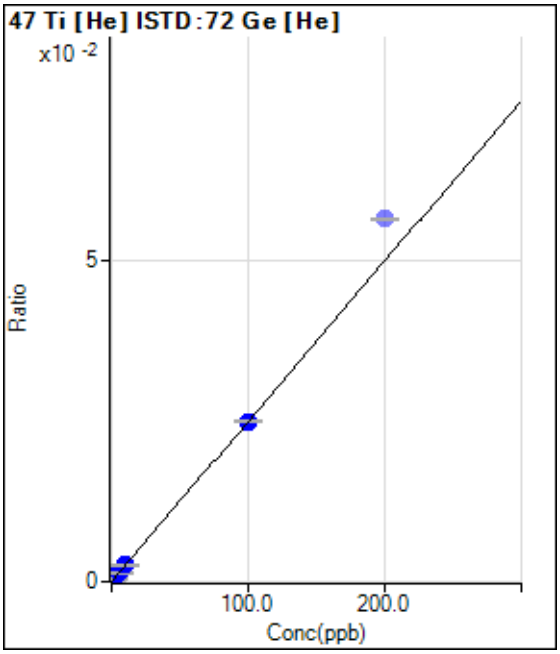
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 406.68 | 0.0007 | P | 10.6 |
| 2 | ☐ | 200.000 | 208.760 | 5374.49 | 0.0098 | P | 5.3 |
| 3 | ☐ | 500.000 | 493.588 | 12068.81 | 0.0222 | P | 3.0 |
| 4 | ☐ | 1000.000 | 989.866 | 23663.94 | 0.0438 | P | 0.6 |
| 5 | ☐ | 10000.00 | 9457.215 | 219587.21 | 0.4123 | P | 2.6 |
| 6 | ☐ | 20000.00 | 20271.97 | 461369.86 | 0.8830 | P | 1.2 |

y = 4.3519E-005 * x + 7.4130E-004
R = 0.9995
DL = 5.43
BEC = 17.03

Weight: <None>
Min Conc: <None>

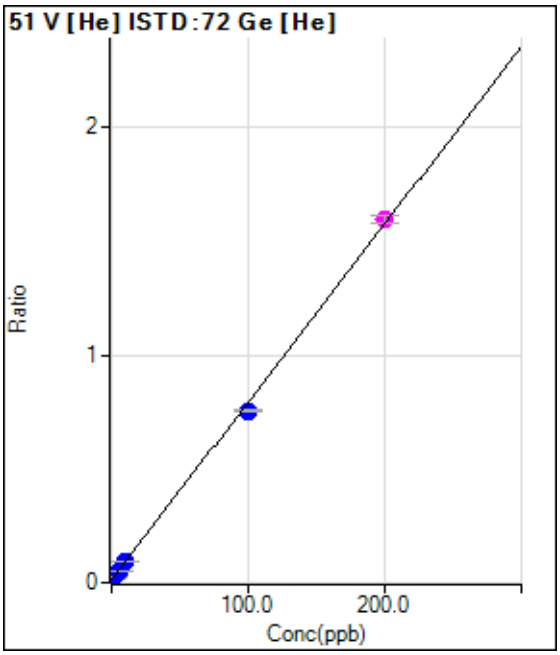



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13.33 | 0.0000 | P | 115.0 |
| 2 | ☐ | 2.000 | 1.762 | 253.34 | 0.0005 | P | 16.0 |
| 3 | ☐ | 5.000 | 5.492 | 756.70 | 0.0014 | P | 22.9 |
| 4 | ☐ | 10.000 | 10.118 | 1373.42 | 0.0025 | P | 1.1 |
| 5 | ☐ | 100.000 | 99.968 | 13270.02 | 0.0249 | P | 1.8 |
| 6 | ☑ | 200.000 | | 29462.21 | 0.0564 | P | 0.7 |

y = 2.4896E-004 * x + 2.4297E-005
R = 1.0000
DL = 0.3367
BEC = 0.0976

Weight: <None>
Min Conc: <None>

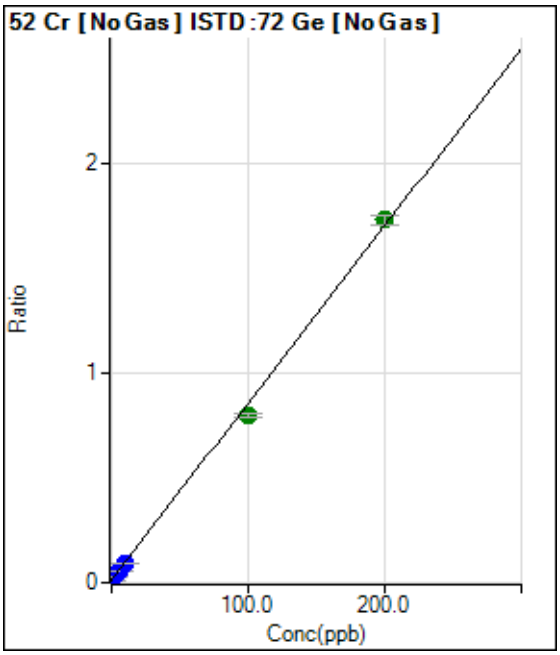
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 7065.18 | 0.0129 | P | 1.1 |
| 2 | ☐ | 2.000 | 2.024 | 15681.22 | 0.0287 | P | 1.5 |
| 3 | ☐ | 5.000 | 4.944 | 27930.72 | 0.0515 | P | 2.0 |
| 4 | ☐ | 10.000 | 10.006 | 49120.18 | 0.0910 | P | 0.4 |
| 5 | ☐ | 100.000 | 94.983 | 401657.09 | 0.7541 | P | 0.5 |
| 6 | ☐ | 200.000 | 202.509 | 832589.05 | 1.5932 | M | 2.3 |

y = 0.0078 * x + 0.0129
R = 0.9996
DL = 0.05555
BEC = 1.65

Weight: <None>
Min Conc: <None>

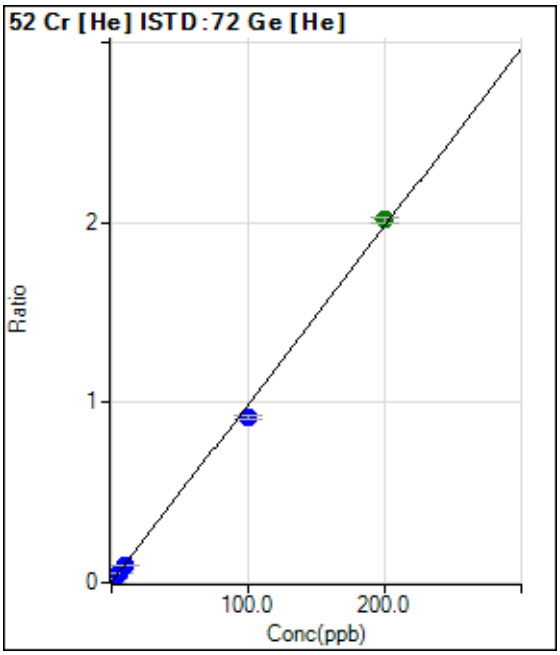



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 22742.44 | 0.0129 | P | 4.1 |
| 2 | ☐ | 2.000 | 1.886 | 50359.50 | 0.0288 | P | 4.1 |
| 3 | ☐ | 5.000 | 4.941 | 94555.73 | 0.0546 | P | 0.7 |
| 4 | ☐ | 10.000 | 9.636 | 166260.81 | 0.0942 | P | 1.7 |
| 5 | ☐ | 100.000 | 93.180 | 1360306.49 | 0.7993 | A | 3.0 |
| 6 | ☐ | 200.000 | 203.431 | 2805821.21 | 1.7298 | A | 2.4 |

y = 0.0084 * x + 0.0129
R = 0.9992
DL = 0.1896
BEC = 1.526

Weight: <None>
Min Conc: <None>

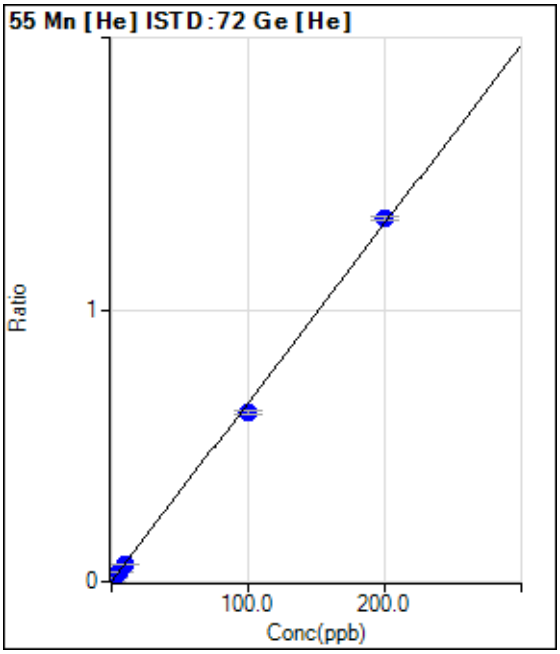
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1480.11 | 0.0027 | P | 4.0 |
| 2 | ☐ | 2.000 | 2.001 | 12292.36 | 0.0225 | P | 1.1 |
| 3 | ☐ | 5.000 | 4.733 | 26853.49 | 0.0495 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.768 | 53589.03 | 0.0992 | P | 1.4 |
| 5 | ☐ | 100.000 | 92.695 | 489362.05 | 0.9188 | P | 1.6 |
| 6 | ☐ | 200.000 | 203.671 | 1053175.56 | 2.0156 | A | 1.4 |

y = 0.0099 * x + 0.0027
R = 0.9991
DL = 0.03246
BEC = 0.2728

Weight: <None>
Min Conc: <None>

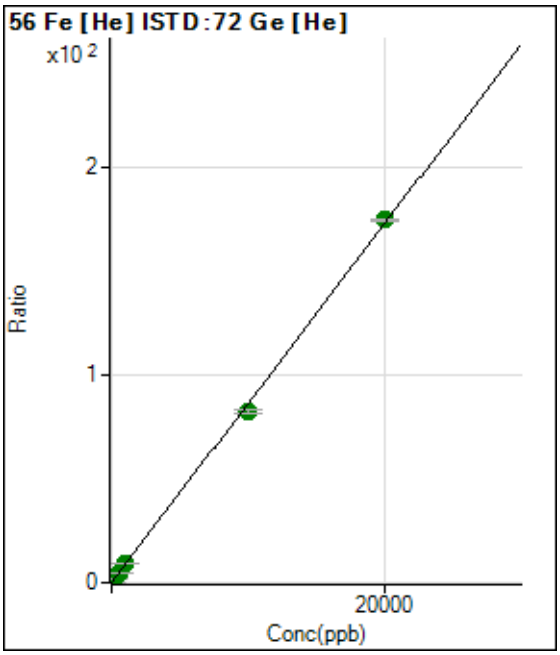



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 576.69 | 0.0010 | P | 16.8 |
| 2 | ☐ | 2.000 | 2.029 | 7869.11 | 0.0144 | P | 1.2 |
| 3 | ☐ | 5.000 | 5.012 | 18449.47 | 0.0340 | P | 2.9 |
| 4 | ☐ | 10.000 | 9.919 | 35774.21 | 0.0662 | P | 1.7 |
| 5 | ☐ | 100.000 | 94.541 | 331505.46 | 0.6224 | P | 2.0 |
| 6 | ☐ | 200.000 | 202.733 | 696820.43 | 1.3335 | P | 1.1 |

y = 0.0066 * x + 0.0010
R = 0.9995
DL = 0.08034
BEC = 0.1597

Weight: <None>
Min Conc: <None>

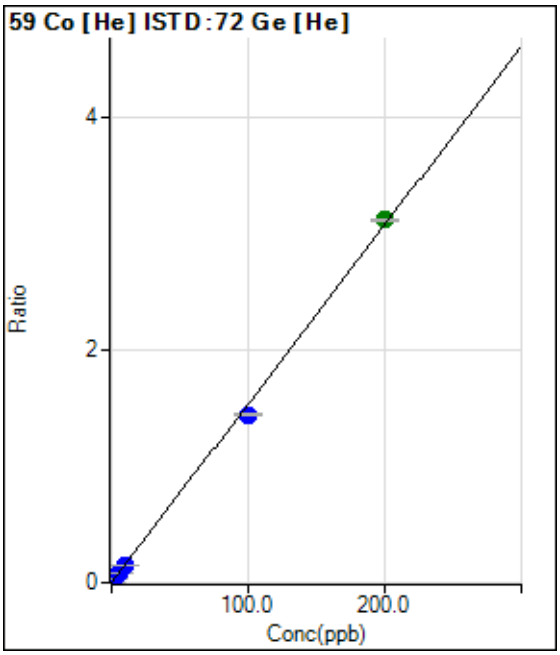
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10525.96 | 0.0192 | P | 6.6 |
| 2 | ☐ | 200.000 | 205.107 | 981885.33 | 1.7948 | A | 2.8 |
| 3 | ☐ | 500.000 | 523.581 | 2471244.91 | 4.5519 | A | 0.9 |
| 4 | ☐ | 1000.000 | 1034.156 | 4845425.34 | 8.9720 | A | 1.1 |
| 5 | ☐ | 10000.00 | 9554.064 | 44061017.68 | 82.7297 | A | 2.5 |
| 6 | ☐ | 20000.00 | 20220.61 | 91481711.97 | 175.071 | A | 0.7 |

y = 0.0087 * x + 0.0192
R = 0.9996
DL = 0.4371
BEC = 2.215

Weight: <None>
Min Conc: <None>

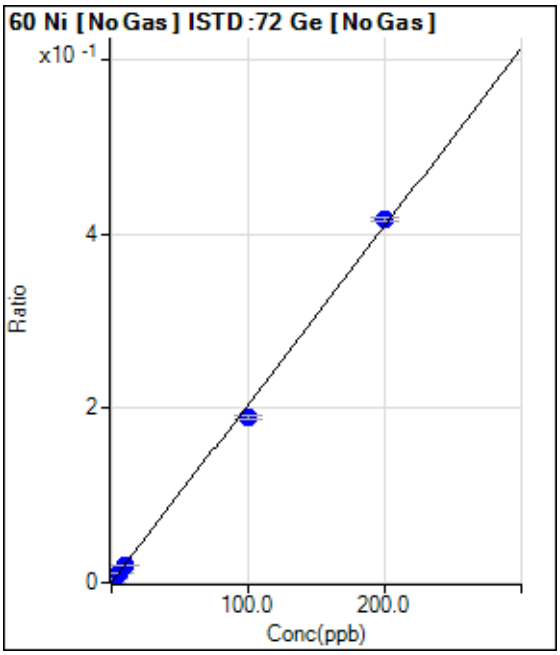



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 180.00 | 0.0003 | P | 22.5 |
| 2 | ☐ | 2.000 | 1.984 | 16827.34 | 0.0308 | P | 5.3 |
| 3 | ☐ | 5.000 | 4.973 | 41594.15 | 0.0766 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.087 | 83757.78 | 0.1551 | P | 1.1 |
| 5 | ☐ | 100.000 | 94.027 | 768600.06 | 1.4431 | P | 1.5 |
| 6 | ☐ | 200.000 | 202.983 | 1627739.25 | 3.1149 | A | 0.7 |

y = 0.0153 * x + 3.2802E-004
R = 0.9994
DL = 0.01441
BEC = 0.02138

Weight: <None>
Min Conc: <None>

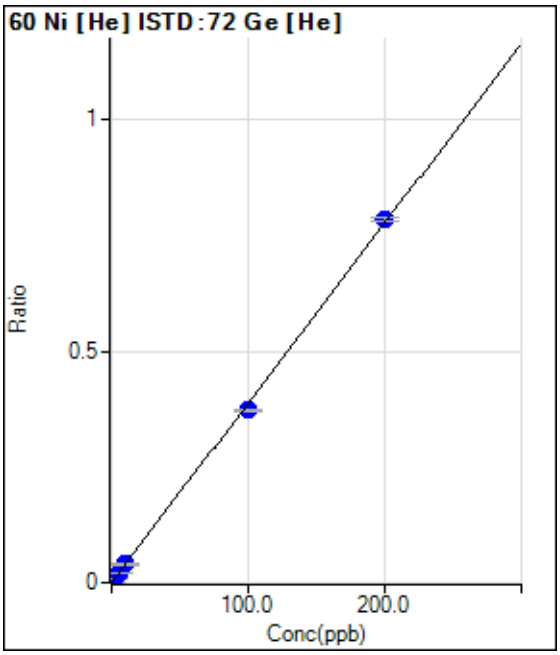
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 393.35 | 0.0002 | P | 10.4 |
| 2 | ☐ | 2.000 | 2.035 | 7658.96 | 0.0044 | P | 0.8 |
| 3 | ☐ | 5.000 | 5.096 | 18402.83 | 0.0106 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.814 | 35750.97 | 0.0203 | P | 2.7 |
| 5 | ☐ | 100.000 | 92.911 | 323174.97 | 0.1899 | P | 1.7 |
| 6 | ☐ | 200.000 | 203.551 | 674487.83 | 0.4158 | P | 1.1 |

y = 0.0020 * x + 2.2309E-004
R = 0.9991
DL = 0.03425
BEC = 0.1093

Weight: <None>
Min Conc: <None>

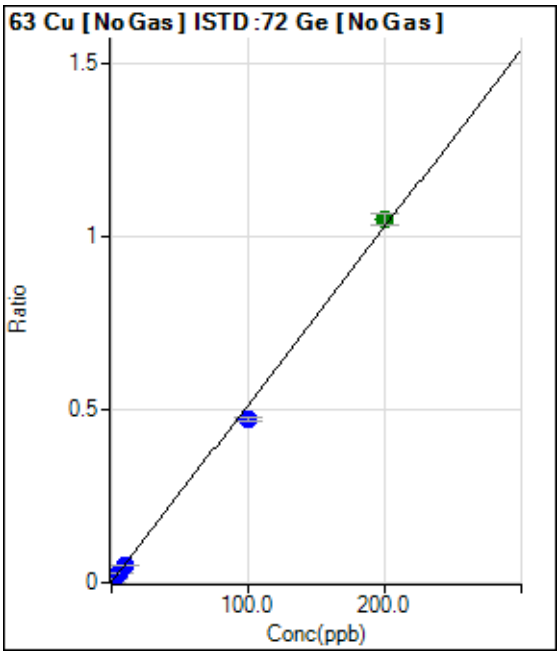



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 140.00 | 0.0003 | P | 21.7 |
| 2 | ☐ | 2.000 | 2.012 | 4414.14 | 0.0081 | P | 4.7 |
| 3 | ☐ | 5.000 | 4.960 | 10591.00 | 0.0195 | P | 2.9 |
| 4 | ☐ | 10.000 | 10.271 | 21667.55 | 0.0401 | P | 4.8 |
| 5 | ☐ | 100.000 | 95.975 | 198575.68 | 0.3728 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.000 | 409868.22 | 0.7844 | P | 0.9 |

y = 0.0039 * x + 2.5512E-004
R = 0.9997
DL = 0.04271
BEC = 0.06572

Weight: <None>
Min Conc: <None>

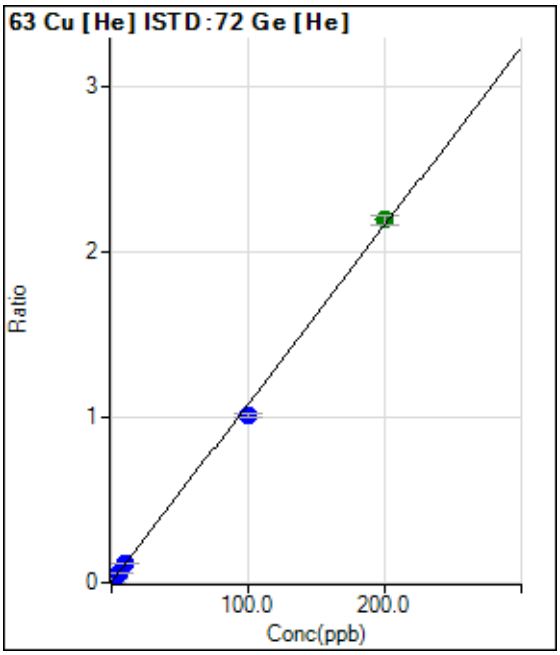
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2536.95 | 0.0014 | P | 10.6 |
| 2 | ☐ | 2.000 | 1.919 | 19707.92 | 0.0113 | P | 2.4 |
| 3 | ☐ | 5.000 | 4.840 | 45416.40 | 0.0262 | P | 3.2 |
| 4 | ☐ | 10.000 | 9.516 | 88569.31 | 0.0502 | P | 1.4 |
| 5 | ☐ | 100.000 | 91.905 | 803457.57 | 0.4722 | P | 3.1 |
| 6 | ☐ | 200.000 | 204.077 | 1698336.95 | 1.0468 | A | 3.2 |

y = 0.0051 * x + 0.0014
R = 0.9989
DL = 0.08913
BEC = 0.2808

Weight: <None>
Min Conc: <None>

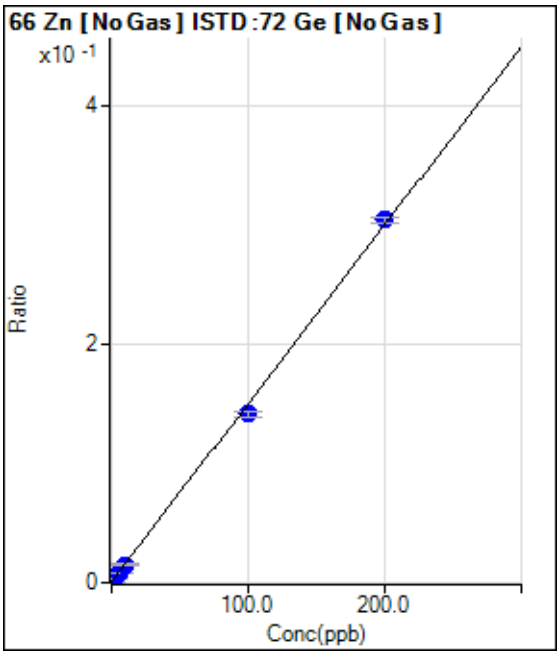



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1583.45 | 0.0029 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.927 | 12966.44 | 0.0237 | P | 1.8 |
| 3 | ☐ | 5.000 | 4.943 | 30544.83 | 0.0563 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.175 | 60903.45 | 0.1128 | P | 2.2 |
| 5 | ☐ | 100.000 | 93.677 | 540418.91 | 1.0147 | P | 2.0 |
| 6 | ☐ | 200.000 | 203.155 | 1147958.32 | 2.1971 | A | 2.7 |

y = 0.0108 * x + 0.0029
R = 0.9993
DL = 0.07031
BEC = 0.2671

Weight: <None>
Min Conc: <None>

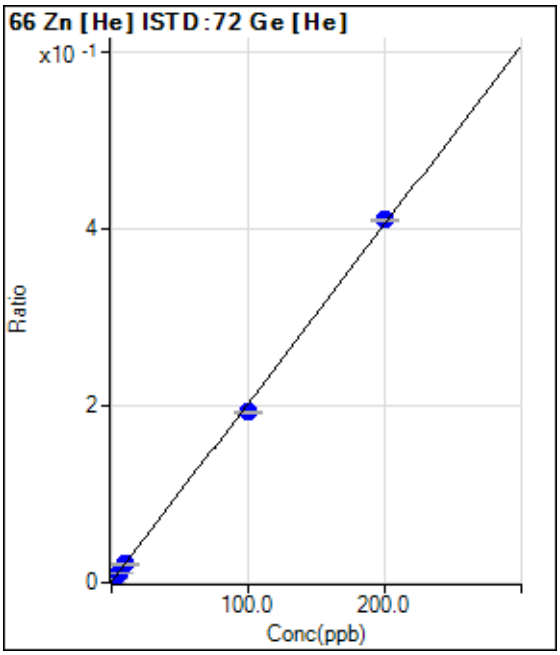
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1120.07 | 0.0006 | P | 4.6 |
| 2 | ☐ | 2.000 | 1.941 | 6191.54 | 0.0035 | P | 2.3 |
| 3 | ☐ | 5.000 | 4.913 | 13823.94 | 0.0080 | P | 5.2 |
| 4 | ☐ | 10.000 | 9.818 | 27057.34 | 0.0153 | P | 3.4 |
| 5 | ☐ | 100.000 | 94.041 | 240486.64 | 0.1413 | P | 2.9 |
| 6 | ☐ | 200.000 | 202.992 | 493677.82 | 0.3044 | P | 1.4 |

y = 0.0015 * x + 6.3444E-004
R = 0.9994
DL = 0.0586
BEC = 0.424

Weight: <None>
Min Conc: <None>

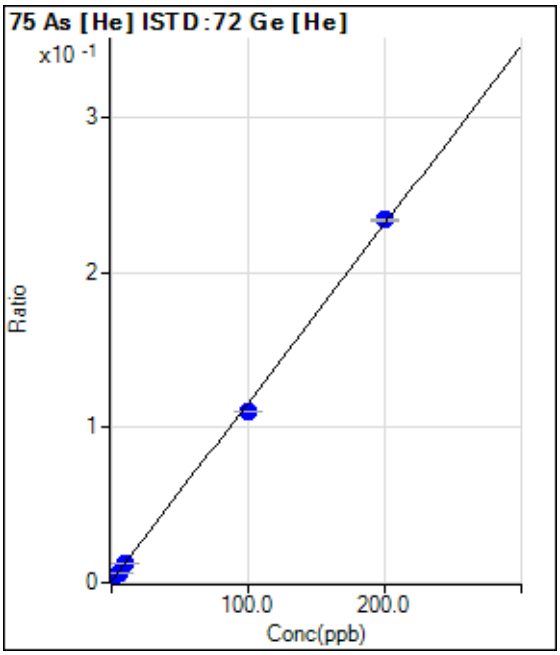



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 423.34 | 0.0008 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.893 | 2516.95 | 0.0046 | P | 4.0 |
| 3 | ☐ | 5.000 | 4.852 | 5748.02 | 0.0106 | P | 1.9 |
| 4 | ☐ | 10.000 | 9.931 | 11268.18 | 0.0209 | P | 2.2 |
| 5 | ☐ | 100.000 | 94.916 | 102704.47 | 0.1928 | P | 1.6 |
| 6 | ☐ | 200.000 | 202.550 | 214569.92 | 0.4106 | P | 0.6 |

y = 0.0020 * x + 7.7091E-004
R = 0.9995
DL = 0.1562
BEC = 0.381

Weight: <None>
Min Conc: <None>

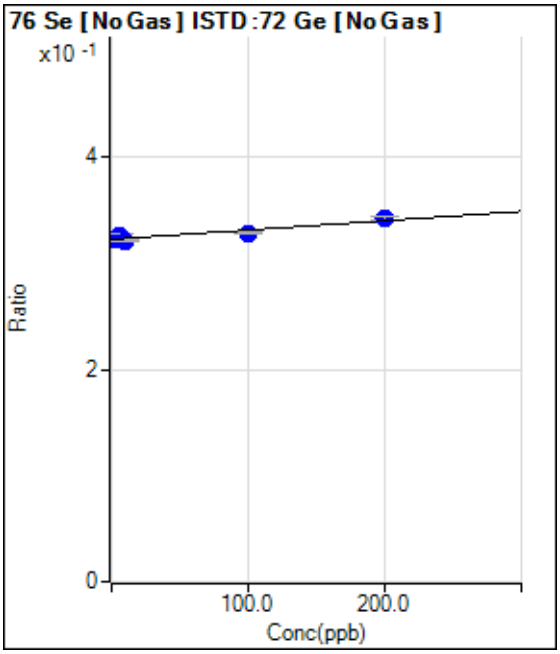
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 495.57 | 0.0009 | P | 9.0 |
| 2 | ☐ | 2.000 | 2.073 | 1799.02 | 0.0033 | P | 4.6 |
| 3 | ☐ | 5.000 | 4.991 | 3608.28 | 0.0066 | P | 2.5 |
| 4 | ☐ | 10.000 | 10.236 | 6849.55 | 0.0127 | P | 1.9 |
| 5 | ☐ | 100.000 | 95.195 | 58835.57 | 0.1105 | P | 0.8 |
| 6 | ☐ | 200.000 | 202.390 | 122188.49 | 0.2338 | P | 0.6 |

y = 0.0012 * x + 9.0319E-004
R = 0.9996
DL = 0.2121
BEC = 0.7848

Weight: <None>
Min Conc: <None>

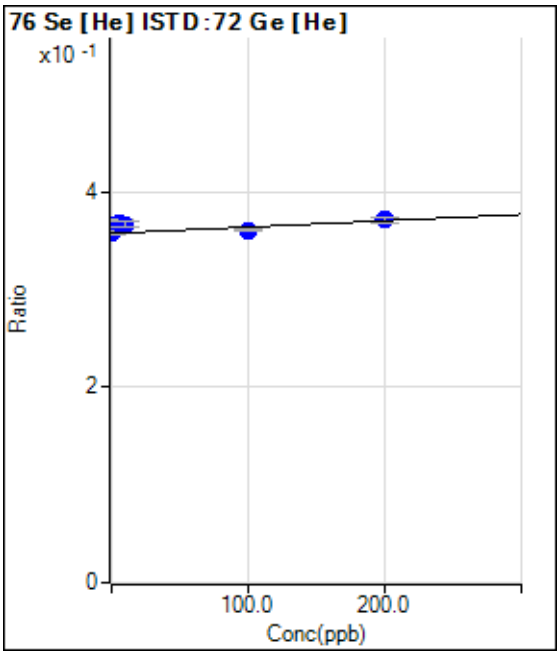



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 569197.36 | 0.3224 | P | 3.1 |
| 2 | ☐ | 2.000 | -4.294 | 563326.92 | 0.3220 | P | 1.1 |
| 3 | ☐ | 5.000 | 31.005 | 563094.51 | 0.3251 | P | 1.8 |
| 4 | ☐ | 10.000 | -20.173 | 565961.40 | 0.3206 | P | 0.6 |
| 5 | ☐ | 100.000 | 64.645 | 558336.96 | 0.3281 | P | 0.7 |
| 6 | ☐ | 200.000 | 218.599 | 554135.43 | 0.3416 | P | 1.0 |

y = 8.7776E-005 * x + 0.3224
R = 0.9606
DL = 337
BEC = 3673

Weight: <None>
Min Conc: <None>

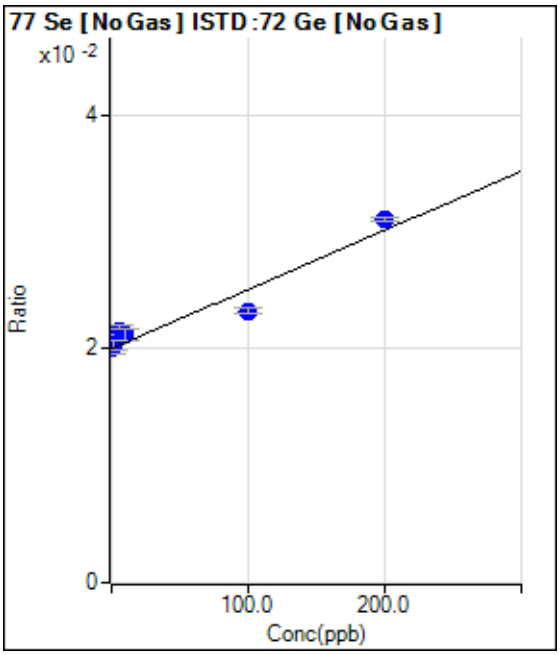
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 196109.38 | 0.3573 | P | 1.0 |
| 2 | ☐ | 2.000 | 123.190 | 199806.37 | 0.3653 | P | 2.5 |
| 3 | ☐ | 5.000 | 163.619 | 199678.24 | 0.3679 | P | 2.3 |
| 4 | ☐ | 10.000 | 138.925 | 197801.75 | 0.3663 | P | 1.4 |
| 5 | ☐ | 100.000 | 53.025 | 192139.08 | 0.3607 | P | 0.7 |
| 6 | ☐ | 200.000 | 211.864 | 193860.99 | 0.3710 | P | 1.5 |

y = 6.4732E-005 * x + 0.3573
R = 0.4351
DL = 159.6
BEC = 5520

Weight: <None>
Min Conc: <None>

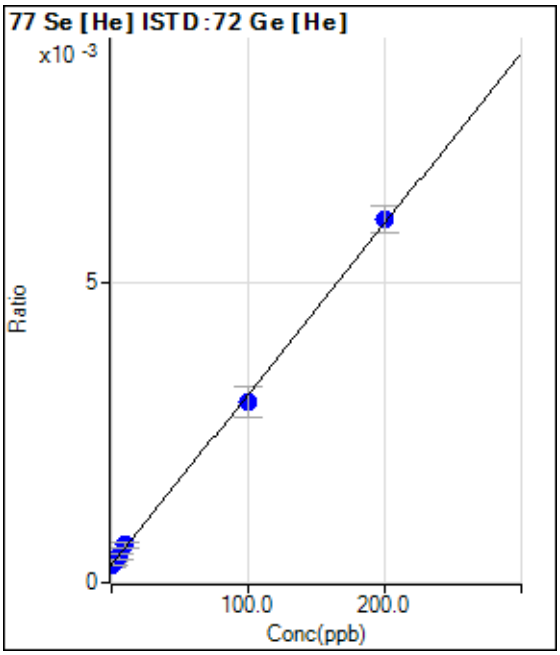



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 35373.64 | 0.0200 | P | 3.9 |
| 2 | ☐ | 2.000 | 6.377 | 35617.75 | 0.0204 | P | 4.4 |
| 3 | ☐ | 5.000 | 31.169 | 37435.85 | 0.0216 | P | 3.6 |
| 4 | ☐ | 10.000 | 22.049 | 37318.77 | 0.0212 | P | 4.7 |
| 5 | ☐ | 100.000 | 62.564 | 39478.25 | 0.0232 | P | 2.1 |
| 6 | ☐ | 200.000 | 217.417 | 50337.47 | 0.0310 | P | 0.9 |

y = 5.0575E-005 * x + 0.0200
R = 0.9631
DL = 46.84
BEC = 396.2

Weight: <None>
Min Conc: <None>

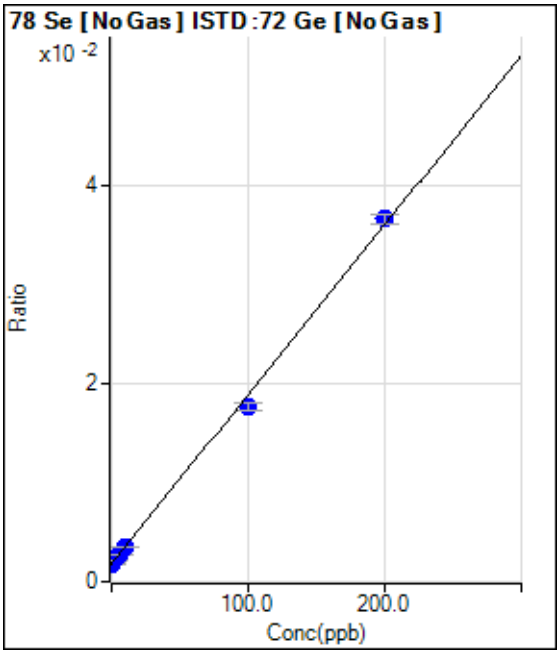
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 163.34 | 0.0003 | P | 22.7 |
| 2 | ☐ | 2.000 | 1.121 | 180.00 | 0.0003 | P | 15.6 |
| 3 | ☐ | 5.000 | 5.043 | 240.01 | 0.0004 | P | 19.2 |
| 4 | ☐ | 10.000 | 11.862 | 343.35 | 0.0006 | P | 14.2 |
| 5 | ☐ | 100.000 | 95.438 | 1610.13 | 0.0030 | P | 17.0 |
| 6 | ☐ | 200.000 | 202.196 | 3170.43 | 0.0061 | P | 7.5 |

y = 2.8525E-005 * x + 2.9733E-004
R = 0.9996
DL = 7.091
BEC = 10.42

Weight: <None>
Min Conc: <None>

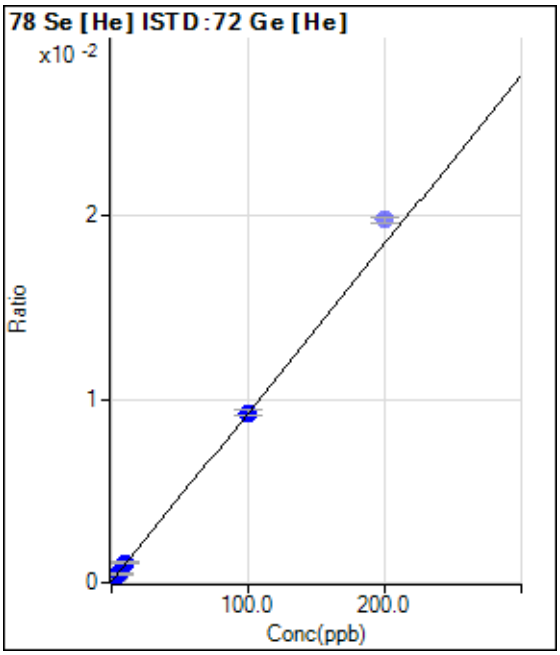



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3203.79 | 0.0018 | P | 3.8 |
| 2 | ☐ | 2.000 | 1.872 | 3730.59 | 0.0021 | P | 6.6 |
| 3 | ☐ | 5.000 | 5.516 | 4774.27 | 0.0028 | P | 3.9 |
| 4 | ☐ | 10.000 | 9.840 | 6168.20 | 0.0035 | P | 3.5 |
| 5 | ☐ | 100.000 | 92.784 | 30057.35 | 0.0177 | P | 3.7 |
| 6 | ☐ | 200.000 | 203.604 | 59351.18 | 0.0366 | P | 3.0 |

y = 1.7083E-004 * x + 0.0018
R = 0.9991
DL = 1.21
BEC = 10.62

Weight: <None>
Min Conc: <None>

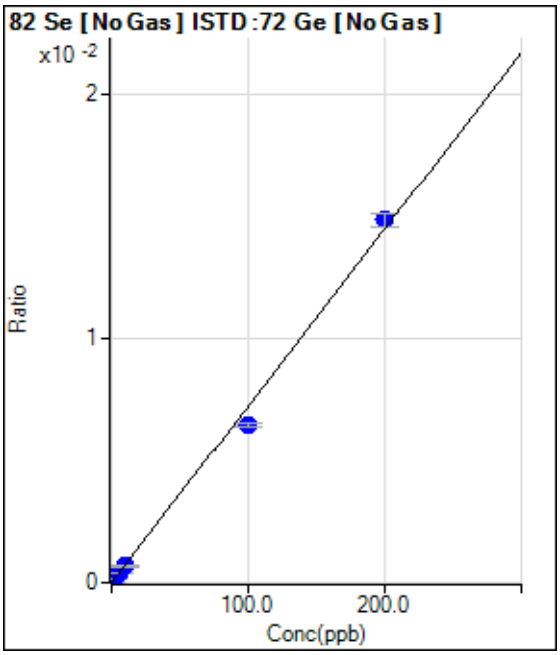
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34.67 | 0.0001 | P | 15.0 |
| 2 | ☐ | 2.000 | 1.976 | 134.00 | 0.0002 | P | 7.4 |
| 3 | ☐ | 5.000 | 4.841 | 276.00 | 0.0005 | P | 15.2 |
| 4 | ☐ | 10.000 | 11.091 | 585.35 | 0.0011 | P | 6.3 |
| 5 | ☐ | 100.000 | 99.899 | 4928.92 | 0.0093 | P | 3.3 |
| 6 | ☑ | 200.000 | | 10339.32 | 0.0198 | P | 1.3 |

y = 9.2012E-005 * x + 6.3196E-005
R = 0.9999
DL = 0.3099
BEC = 0.6868

Weight: <None>
Min Conc: <None>

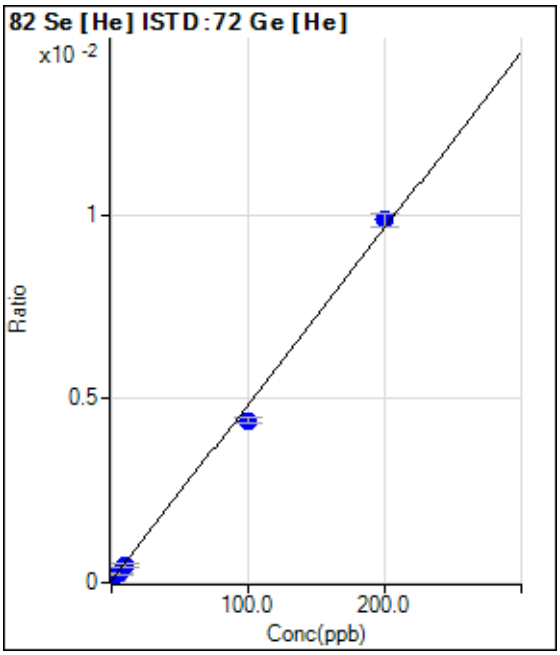



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 8.50 | 0.0000 | P | 1099.3 |
| 2 | ☐ | 2.000 | 2.537 | 328.43 | 0.0002 | P | 28.8 |
| 3 | ☐ | 5.000 | 4.966 | 628.63 | 0.0004 | P | 4.0 |
| 4 | ☐ | 10.000 | 9.245 | 1185.29 | 0.0007 | P | 15.1 |
| 5 | ☐ | 100.000 | 89.254 | 10976.51 | 0.0065 | P | 3.4 |
| 6 | ☐ | 200.000 | 205.406 | 24070.79 | 0.0148 | P | 3.9 |

y = 7.2236E-005 * x + 4.0454E-006
R = 0.9980
DL = 1.847
BEC = 0.056

Weight: <None>
Min Conc: <None>

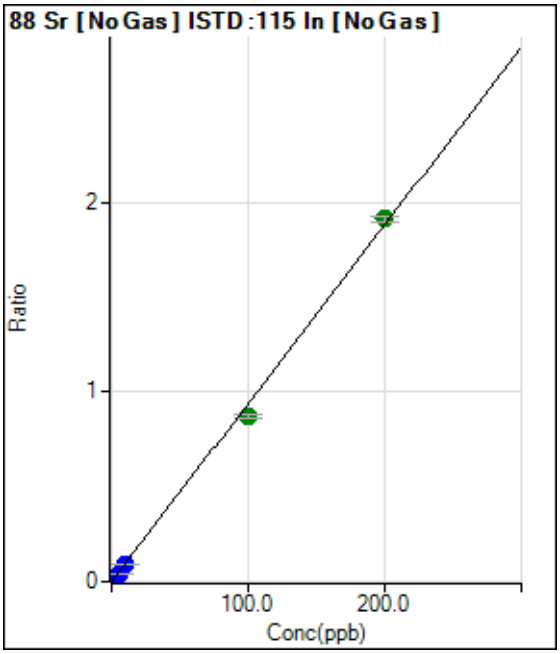
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.306 | 93.33 | 0.0002 | P | 45.5 |
| 3 | ☐ | 5.000 | 3.996 | 136.67 | 0.0003 | P | 15.9 |
| 4 | ☐ | 10.000 | 8.270 | 246.67 | 0.0005 | P | 20.3 |
| 5 | ☐ | 100.000 | 90.694 | 2343.58 | 0.0044 | P | 3.3 |
| 6 | ☐ | 200.000 | 204.762 | 5151.09 | 0.0099 | P | 3.7 |

y = 4.7853E-005 * x + 6.0678E-005
R = 0.9985
DL = 0.6269
BEC = 1.268

Weight: <None>
Min Conc: <None>

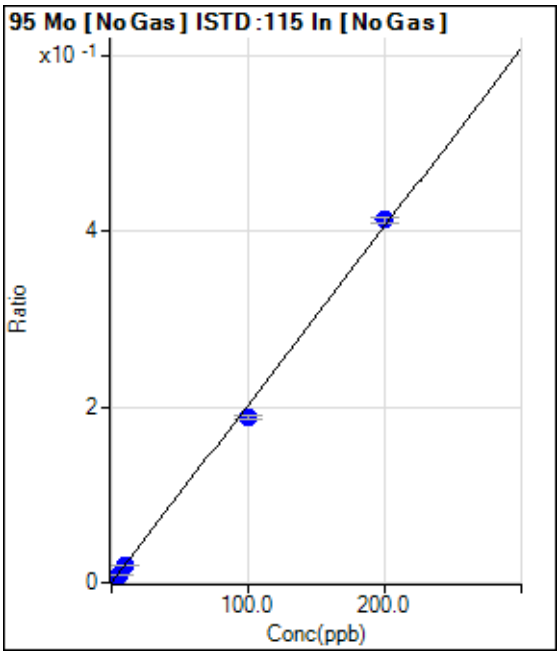



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1270.08 | 0.0006 | P | 3.9 |
| 2 | ☐ | 2.000 | 1.929 | 39245.22 | 0.0187 | P | 1.7 |
| 3 | ☐ | 5.000 | 4.760 | 96219.58 | 0.0453 | P | 1.0 |
| 4 | ☐ | 10.000 | 9.393 | 188254.34 | 0.0888 | P | 1.6 |
| 5 | ☐ | 100.000 | 92.928 | 1803784.92 | 0.8732 | A | 2.4 |
| 6 | ☐ | 200.000 | 203.573 | 3753500.36 | 1.9121 | A | 1.3 |

y = 0.0094 * x + 5.9979E-004
R = 0.9991
DL = 0.007559
BEC = 0.06388

Weight: <None>
Min Conc: <None>

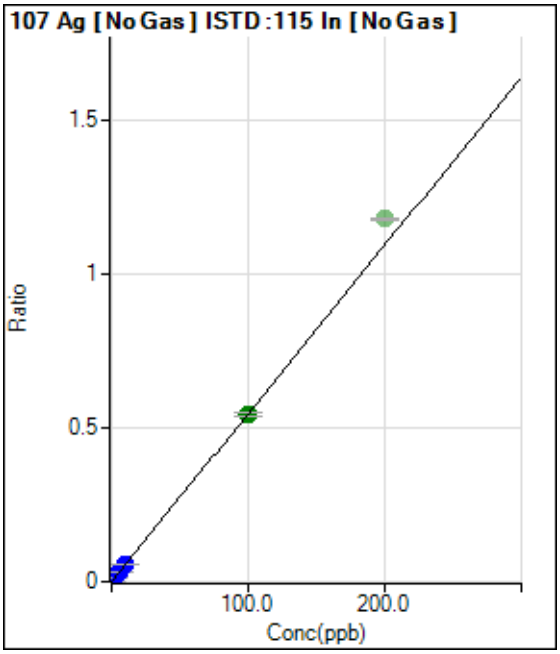
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0000 | P | 86.6 |
| 2 | ☐ | 2.000 | 1.972 | 8419.49 | 0.0040 | P | 3.9 |
| 3 | ☐ | 5.000 | 4.752 | 20516.16 | 0.0097 | P | 1.2 |
| 4 | ☐ | 10.000 | 9.468 | 40772.88 | 0.0192 | P | 0.6 |
| 5 | ☐ | 100.000 | 92.626 | 388393.28 | 0.1880 | P | 1.9 |
| 6 | ☐ | 200.000 | 203.720 | 811643.17 | 0.4135 | P | 1.8 |

y = 0.0020 * x + 1.2610E-005
R = 0.9991
DL = 0.01614
BEC = 0.006213

Weight: <None>
Min Conc: <None>

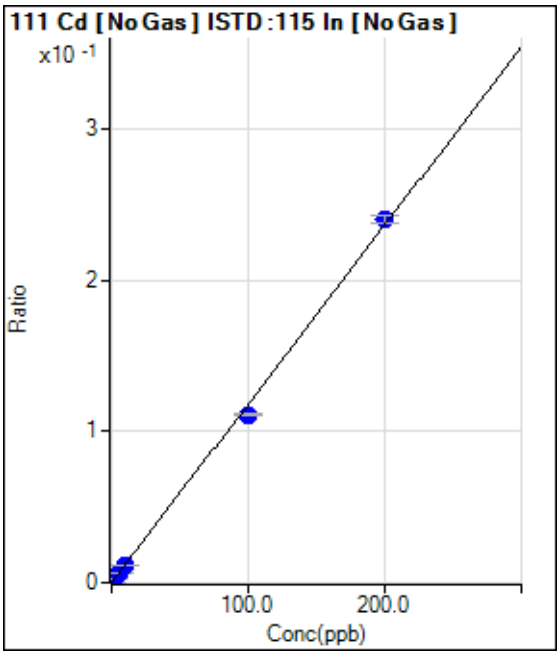



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 170.00 | 0.0001 | P | 11.7 |
| 2 | ☐ | 2.000 | 2.121 | 24472.96 | 0.0117 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.231 | 60890.65 | 0.0287 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.197 | 118294.54 | 0.0558 | P | 0.8 |
| 5 | ☐ | 100.000 | 99.966 | 1128470.63 | 0.5462 | A | 2.3 |
| 6 | ☑ | 200.000 | | 2314339.60 | 1.1789 | A | 0.6 |

y = 0.0055 * x + 8.0290E-005
R = 1.0000
DL = 0.005151
BEC = 0.0147

Weight: <None>
Min Conc: <None>

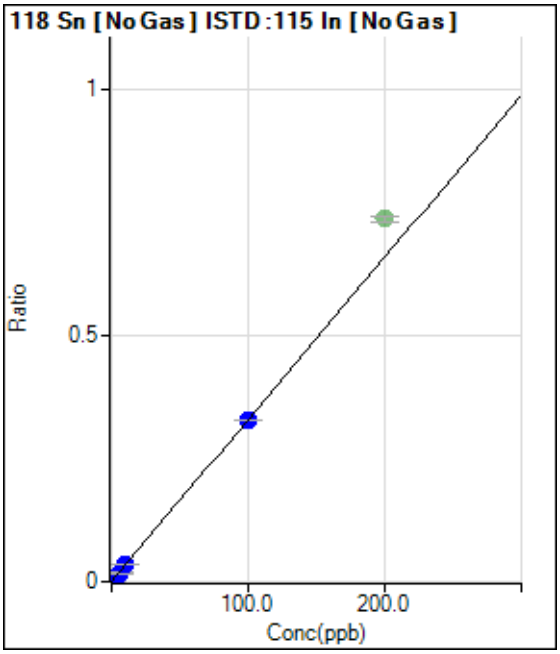
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 10.00 | 0.0000 | P | 99.7 |
| 2 | ☐ | 2.000 | 1.977 | 4911.00 | 0.0023 | P | 5.9 |
| 3 | ☐ | 5.000 | 4.969 | 12492.79 | 0.0059 | P | 0.9 |
| 4 | ☐ | 10.000 | 9.578 | 24019.01 | 0.0113 | P | 2.0 |
| 5 | ☐ | 100.000 | 93.747 | 229001.39 | 0.1108 | P | 1.1 |
| 6 | ☐ | 200.000 | 203.149 | 471459.79 | 0.2402 | P | 2.1 |

y = 0.0012 * x + 4.7250E-006
R = 0.9993
DL = 0.01196
BEC = 0.003997

Weight: <None>
Min Conc: <None>

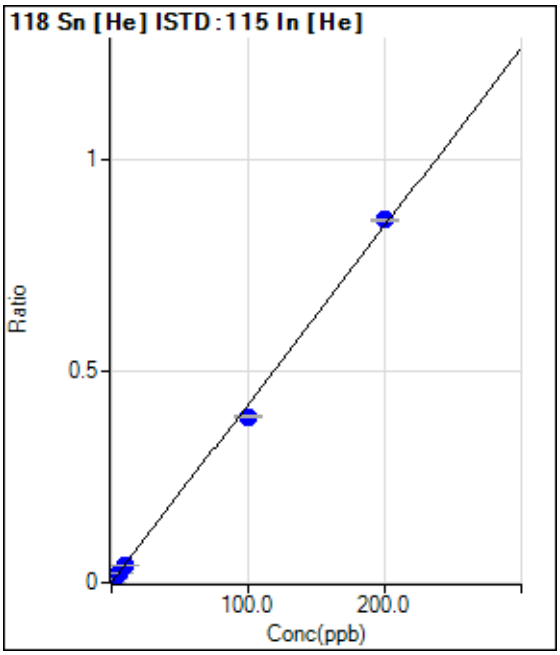



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1443.44 | 0.0007 | P | 9.1 |
| 2 | ☐ | 2.000 | 2.019 | 15342.61 | 0.0073 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.062 | 36782.17 | 0.0173 | P | 2.7 |
| 4 | ☐ | 10.000 | 10.371 | 73704.35 | 0.0348 | P | 0.6 |
| 5 | ☐ | 100.000 | 99.959 | 680093.71 | 0.3291 | P | 0.1 |
| 6 | ☑ | 200.000 | | 1444493.47 | 0.7358 | A | 1.7 |

y = 0.0033 * x + 6.8178E-004
R = 1.0000
DL = 0.05657
BEC = 0.2075

Weight: <None>
Min Conc: <None>

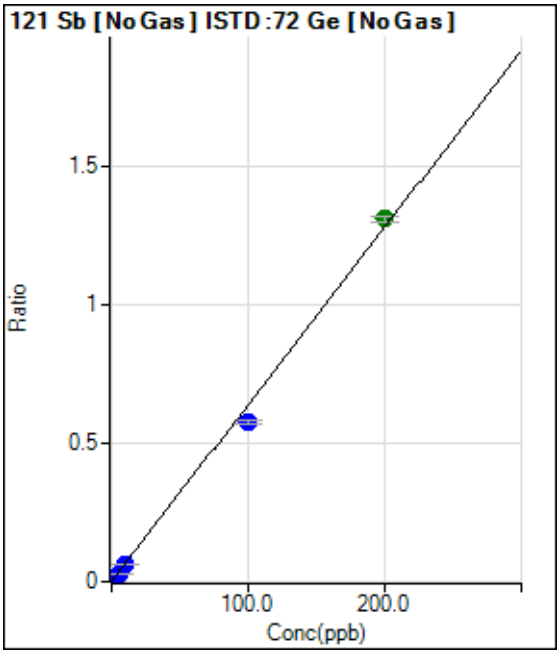
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 750.04 | 0.0008 | P | 5.0 |
| 2 | ☐ | 2.000 | 1.866 | 8186.04 | 0.0087 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.839 | 20269.33 | 0.0212 | P | 5.1 |
| 4 | ☐ | 10.000 | 9.725 | 39396.25 | 0.0418 | P | 1.4 |
| 5 | ☐ | 100.000 | 93.126 | 359076.80 | 0.3935 | P | 0.9 |
| 6 | ☐ | 200.000 | 203.456 | 762051.76 | 0.8588 | P | 0.7 |

y = 0.0042 * x + 8.0026E-004
R = 0.9992
DL = 0.02825
BEC = 0.1898

Weight: <None>
Min Conc: <None>

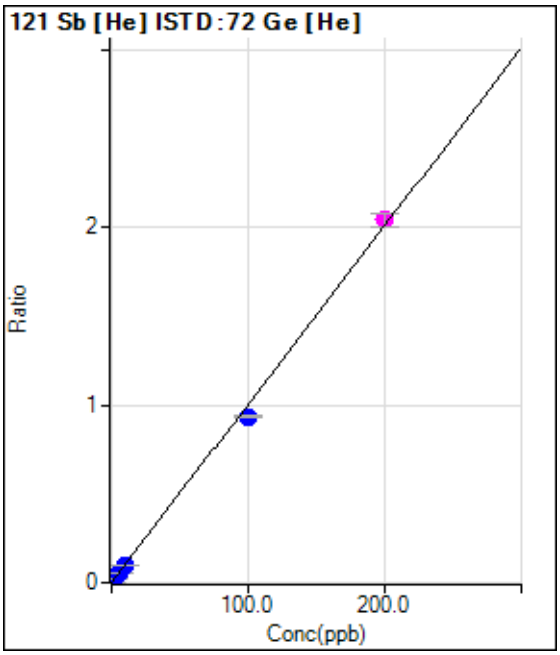



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1690.14 | 0.0010 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.804 | 21805.12 | 0.0125 | P | 1.6 |
| 3 | ☐ | 5.000 | 4.634 | 52846.89 | 0.0305 | P | 2.0 |
| 4 | ☐ | 10.000 | 9.194 | 105200.57 | 0.0596 | P | 2.0 |
| 5 | ☐ | 100.000 | 90.285 | 981699.13 | 0.5769 | P | 2.3 |
| 6 | ☐ | 200.000 | 204.909 | 2122041.16 | 1.3082 | A | 1.2 |

y = 0.0064 * x + 9.5551E-004
R = 0.9984
DL = 0.03153
BEC = 0.1498

Weight: <None>
Min Conc: <None>

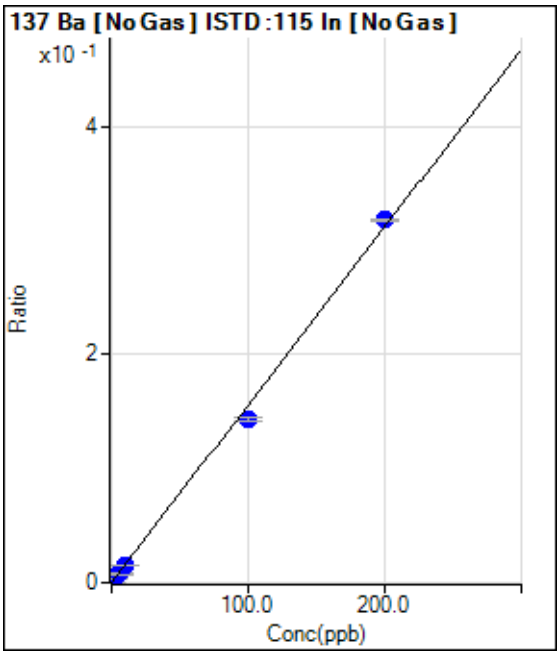
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 790.04 | 0.0014 | P | 8.8 |
| 2 | ☐ | 2.000 | 1.960 | 11541.89 | 0.0211 | P | 5.2 |
| 3 | ☐ | 5.000 | 4.844 | 27158.53 | 0.0500 | P | 1.4 |
| 4 | ☐ | 10.000 | 9.791 | 53824.37 | 0.0997 | P | 2.9 |
| 5 | ☐ | 100.000 | 93.143 | 498465.40 | 0.9358 | P | 0.5 |
| 6 | ☐ | 200.000 | 203.443 | 1067013.97 | 2.0423 | M | 3.7 |

y = 0.0100 * x + 0.0014
R = 0.9992
DL = 0.03776
BEC = 0.1434

Weight: <None>
Min Conc: <None>

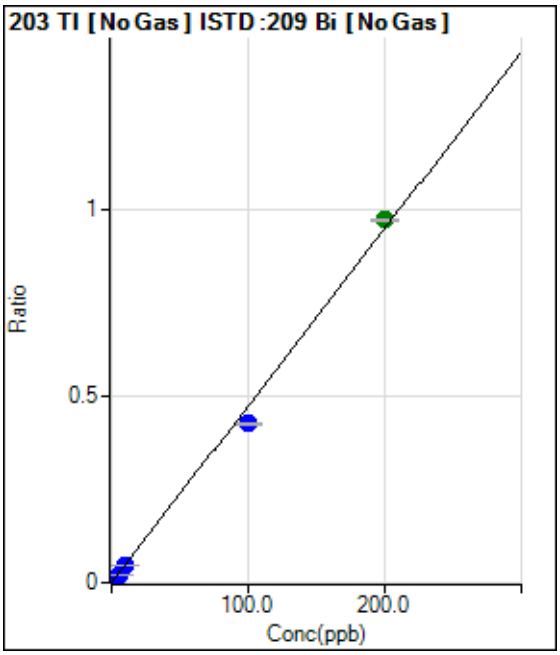



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 376.68 | 0.0002 | P | 15.7 |
| 2 | ☐ | 2.000 | 2.009 | 6935.31 | 0.0033 | P | 3.1 |
| 3 | ☐ | 5.000 | 4.818 | 16310.57 | 0.0077 | P | 4.4 |
| 4 | ☐ | 10.000 | 9.442 | 31528.75 | 0.0149 | P | 5.4 |
| 5 | ☐ | 100.000 | 91.827 | 295750.62 | 0.1431 | P | 1.5 |
| 6 | ☐ | 200.000 | 204.119 | 624197.25 | 0.3180 | P | 0.6 |

y = 0.0016 * x + 1.7800E-004
R = 0.9988
DL = 0.05369
BEC = 0.1143

Weight: <None>
Min Conc: <None>

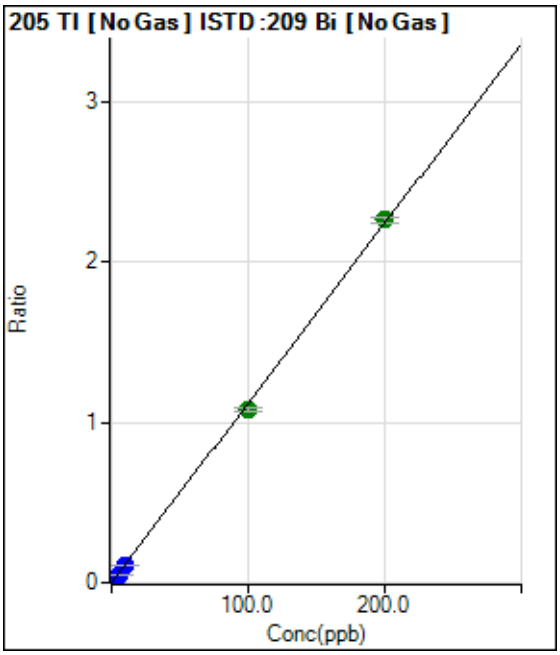
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 153.33 | 0.0001 | P | 12.2 |
| 2 | ☐ | 2.000 | 1.832 | 20861.28 | 0.0088 | P | 2.5 |
| 3 | ☐ | 5.000 | 4.532 | 51553.53 | 0.0216 | P | 0.8 |
| 4 | ☐ | 10.000 | 9.433 | 104608.97 | 0.0449 | P | 1.7 |
| 5 | ☐ | 100.000 | 89.833 | 984896.78 | 0.4266 | P | 1.9 |
| 6 | ☐ | 200.000 | 205.125 | 2202539.19 | 0.9740 | A | 0.6 |

y = 0.0047 * x + 6.5183E-005
R = 0.9982
DL = 0.00503
BEC = 0.01373

Weight: <None>
Min Conc: <None>

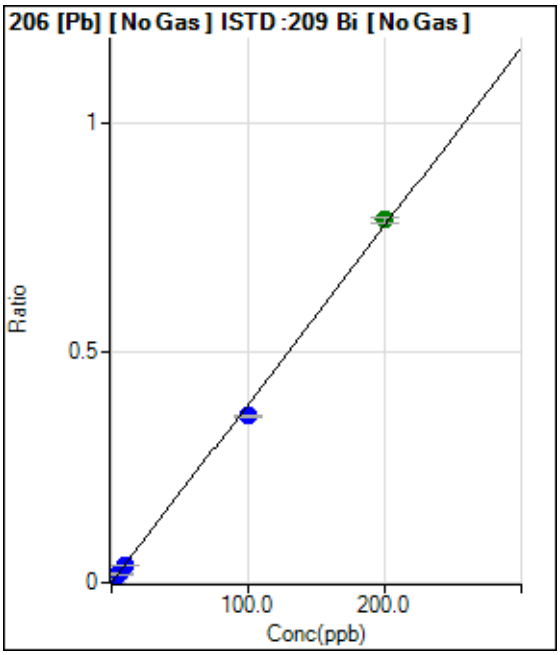



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 346.68 | 0.0001 | P | 13.5 |
| 2 | ☐ | 2.000 | 1.870 | 50252.16 | 0.0211 | P | 4.5 |
| 3 | ☐ | 5.000 | 4.664 | 125254.20 | 0.0524 | P | 2.6 |
| 4 | ☐ | 10.000 | 9.665 | 253143.49 | 0.1085 | P | 0.6 |
| 5 | ☐ | 100.000 | 95.935 | 2483784.28 | 1.0758 | A | 2.3 |
| 6 | ☐ | 200.000 | 202.059 | 5122729.19 | 2.2656 | A | 1.6 |

y = 0.0112 * x + 1.4715E-004
R = 0.9997
DL = 0.005316
BEC = 0.01312

Weight: <None>
Min Conc: <None>

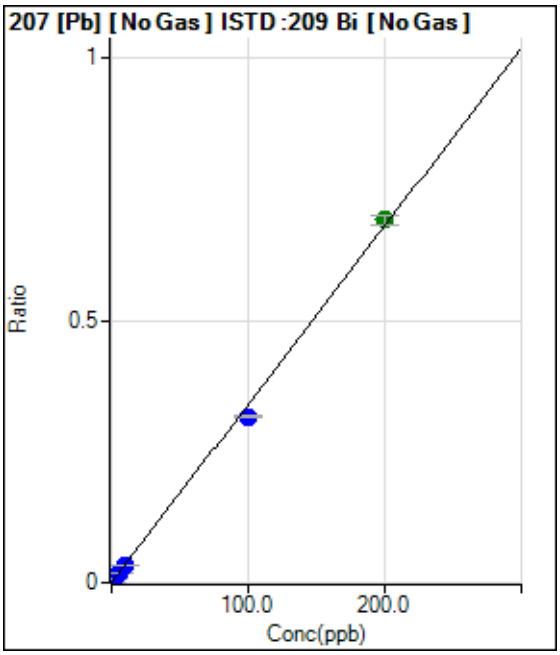
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 760.04 | 0.0003 | P | 10.5 |
| 2 | ☐ | 2.000 | 1.889 | 18217.02 | 0.0077 | P | 2.9 |
| 3 | ☐ | 5.000 | 4.817 | 45400.01 | 0.0190 | P | 2.5 |
| 4 | ☐ | 10.000 | 9.731 | 88804.64 | 0.0381 | P | 0.4 |
| 5 | ☐ | 100.000 | 93.233 | 835642.52 | 0.3619 | P | 1.8 |
| 6 | ☐ | 200.000 | 203.403 | 1784618.99 | 0.7892 | A | 1.4 |

y = 0.0039 * x + 3.2307E-004
R = 0.9992
DL = 0.02627
BEC = 0.0833

Weight: <None>
Min Conc: <None>

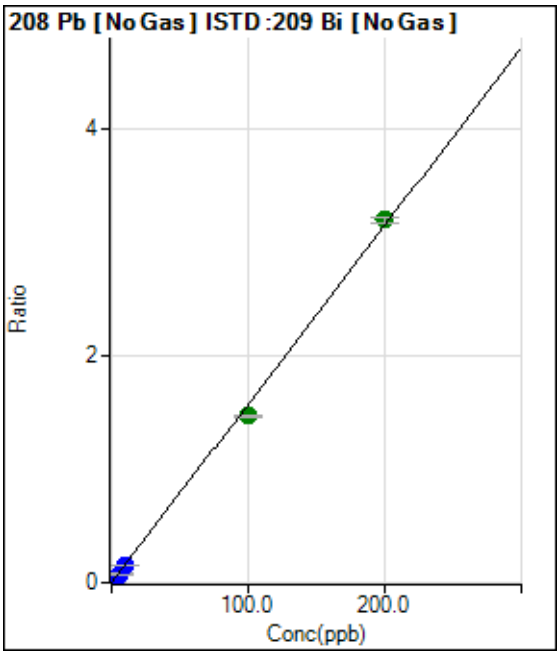



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 540.02 | 0.0002 | P | 13.7 |
| 2 | ☐ | 2.000 | 1.925 | 16124.13 | 0.0068 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.972 | 40921.31 | 0.0171 | P | 2.1 |
| 4 | ☐ | 10.000 | 9.797 | 78209.70 | 0.0335 | P | 1.7 |
| 5 | ☐ | 100.000 | 92.919 | 729857.98 | 0.3161 | P | 1.3 |
| 6 | ☐ | 200.000 | 203.552 | 1565199.09 | 0.6922 | A | 2.6 |

y = 0.0034 * x + 2.2900E-004
R = 0.9991
DL = 0.02776
BEC = 0.06736

Weight: <None>
Min Conc: <None>

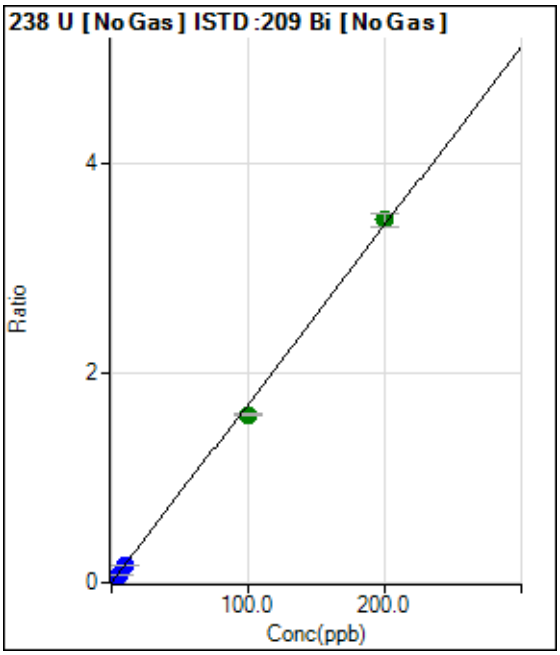
Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2620.16 | 0.0011 | P | 3.0 |
| 2 | ☐ | 2.000 | 1.901 | 73697.17 | 0.0310 | P | 1.2 |
| 3 | ☐ | 5.000 | 4.774 | 181670.33 | 0.0761 | P | 1.5 |
| 4 | ☐ | 10.000 | 9.665 | 356523.34 | 0.1529 | P | 1.1 |
| 5 | ☐ | 100.000 | 93.368 | 3387003.65 | 1.4670 | A | 1.9 |
| 6 | ☐ | 200.000 | 203.339 | 7220763.02 | 3.1935 | A | 1.5 |

y = 0.0157 * x + 0.0011
R = 0.9992
DL = 0.006314
BEC = 0.07085

Weight: <None>
Min Conc: <None>

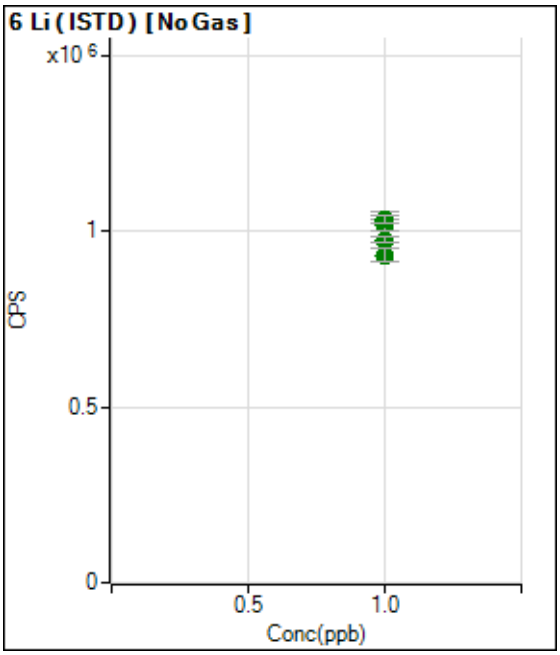



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 35.7 |
| 2 | ☐ | 2.000 | 1.841 | 74688.97 | 0.0314 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.607 | 187471.43 | 0.0785 | P | 0.5 |
| 4 | ☐ | 10.000 | 9.438 | 374880.46 | 0.1608 | P | 3.1 |
| 5 | ☐ | 100.000 | 93.946 | 3694641.51 | 1.6000 | A | 0.9 |
| 6 | ☐ | 200.000 | 203.067 | 7817840.09 | 3.4584 | A | 3.5 |

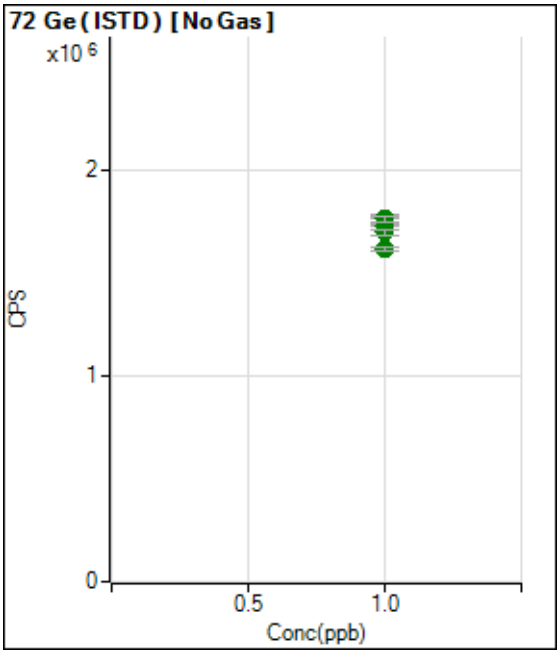
y = 0.0170 * x + 2.3983E-005
R = 0.9994
DL = 0.001509
BEC = 0.001408

Weight: <None>
Min Conc: <None>

Calibration for 024_ICV.d

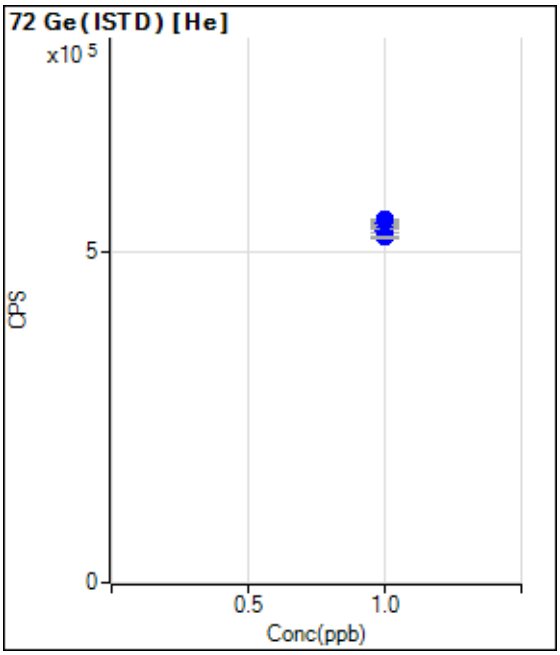



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1015680.29 | | A | 3.2 |
| 2 | ☐ | 1.000 | | 1017479.61 | | A | 3.2 |
| 3 | ☐ | 1.000 | | 1027534.57 | | A | 4.8 |
| 4 | ☐ | 1.000 | | 1031062.31 | | A | 2.1 |
| 5 | ☐ | 1.000 | | 974419.34 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 930358.24 | | A | 4.4 |

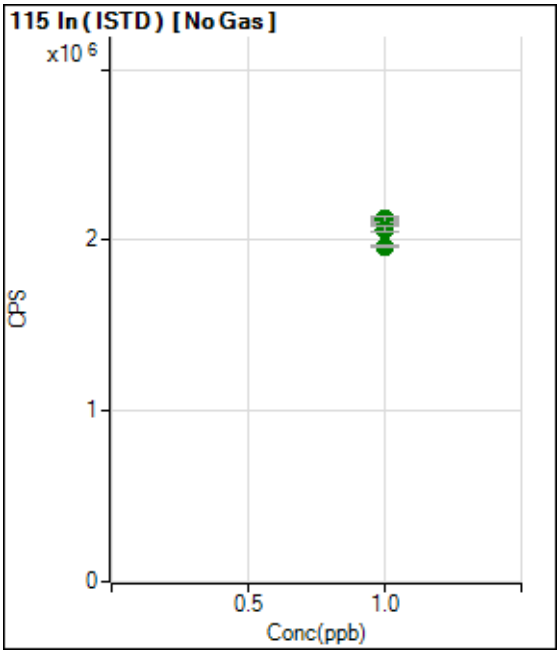



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1766562.79 | | A | 2.8 |
| 2 | ☐ | 1.000 | | 1749482.99 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 1732247.63 | | A | 2.1 |
| 4 | ☐ | 1.000 | | 1765154.09 | | A | 1.6 |
| 5 | ☐ | 1.000 | | 1702022.63 | | A | 1.6 |
| 6 | ☐ | 1.000 | | 1622238.36 | | A | 1.4 |

Calibration for 024_ICV.d

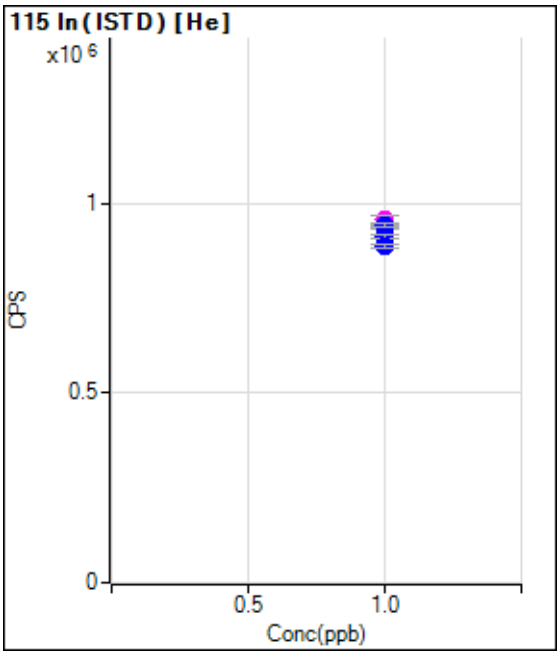



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 548875.87 | | P | 0.8 |
| 2 | ☐ | 1.000 | | 547102.11 | | P | 0.9 |
| 3 | ☐ | 1.000 | | 542931.65 | | P | 1.8 |
| 4 | ☐ | 1.000 | | 540043.83 | | P | 0.6 |
| 5 | ☐ | 1.000 | | 532668.18 | | P | 1.0 |
| 6 | ☐ | 1.000 | | 522558.05 | | P | 0.8 |

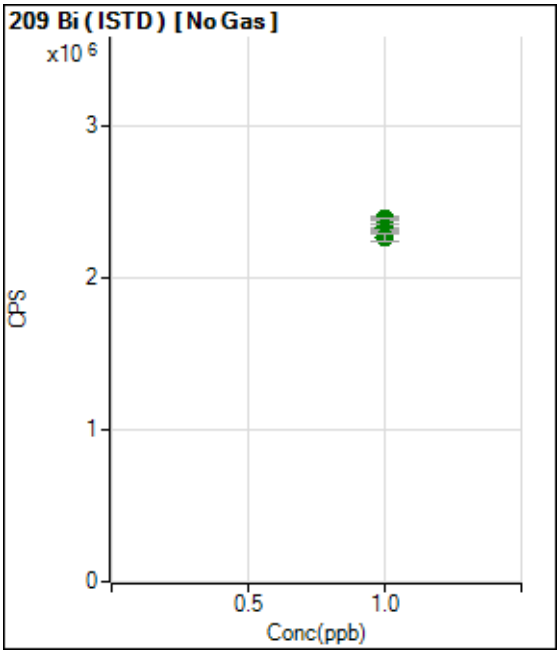



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2117300.96 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2097565.69 | | A | 0.5 |
| 3 | ☐ | 1.000 | | 2124607.94 | | A | 1.2 |
| 4 | ☐ | 1.000 | | 2120433.63 | | A | 1.8 |
| 5 | ☐ | 1.000 | | 2066252.67 | | A | 1.3 |
| 6 | ☐ | 1.000 | | 1963080.08 | | A | 0.4 |

Calibration for 024_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 937310.27 | | P | 0.7 |
| 2 | ☐ | 1.000 | | 944141.79 | | P | 0.7 |
| 3 | ☐ | 1.000 | | 956709.14 | | M | 2.8 |
| 4 | ☐ | 1.000 | | 942224.75 | | P | 0.9 |
| 5 | ☐ | 1.000 | | 912474.90 | | P | 0.6 |
| 6 | ☐ | 1.000 | | 887284.66 | | P | 0.9 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2356498.98 | | A | 2.4 |
| 2 | ☐ | 1.000 | | 2380832.25 | | A | 1.9 |
| 3 | ☐ | 1.000 | | 2388726.89 | | A | 0.5 |
| 4 | ☐ | 1.000 | | 2332758.09 | | A | 1.9 |
| 5 | ☐ | 1.000 | | 2309062.78 | | A | 0.8 |
| 6 | ☐ | 1.000 | | 2261574.76 | | A | 2.3 |

# Interference Check Solution A (ICS-A) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICSA |
| Data File Name | 026ICSA.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T11:58:41-05:00 |
| Sample Type | ICSA |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.506 | 10.4 | 62697 | 0.9 | 0 | ICSA Main CR1 Failed |
| Be | 9 | 1 | No Gas | -0.004 | -121.4 | 35 | 42.9 | 0 | ICSA Main CR1 Failed |
| V | 51 | 2 | He | 0.035 | 147.9 | 6587 | 3.3 | 0 | ICSA Main CR1 Failed |
| Cr | 52 | 2 | He | 0.922 | 5.4 | 5915 | 3.5 | 0 | ICSA Main CR1 Failed |
| Fe | 56 | 2 | He | 103666.173 | 1.5 | 449819767 | 2.0 | 0 | |
| Se | 78 | 2 | He | 0.322 | 46.3 | 47 | 14.8 | 0 | ICSA Main CR1 Failed |
| Sn | 118 | 2 | He | 0.078 | 58.2 | 957 | 17.3 | 0 | ICSA Main CR1 Failed |
| As | 75 | 2 | He | 0.148 | 18.4 | 538 | 3.1 | 0 | ICSA Main CR1 Failed |
| Ca | 44 | 2 | He | 103293.476 | 1.0 | 2253232 | 0.3 | 0 | |
| Na | 23 | 2 | He | 106566.706 | 0.5 | 87796162 | 1.1 | 0 | |
| Mg | 24 | 2 | He | 105355.456 | 1.1 | 50417081 | 1.5 | 0 | |
| K | 39 | 2 | He | 103955.673 | 0.8 | 38876214 | 0.5 | 0 | |
| Mn | 55 | 2 | He | 0.186 | 19.2 | 1140 | 11.2 | 0 | ICSA Main CR1 Failed |
| Co | 59 | 2 | He | 0.193 | 14.7 | 1650 | 13.4 | 0 | ICSA Main CR1 Failed |
| Ni | 60 | 2 | He | 0.216 | 26.2 | 547 | 19.2 | 0 | ICSA Main CR1 Failed |
| Cu | 63 | 2 | He | 0.274 | 5.3 | 2927 | 1.9 | 0 | ICSA Main CR1 Failed |
| Zn | 66 | 2 | He | 1.191 | 9.2 | 1593 | 6.3 | 0 | ICSA Main CR1 Failed |
| Al | 27 | 2 | He | 99017.949 | 1.6 | 23817059 | 2.0 | 0 | |
| B | 11 | 1 | No Gas | 4.508 | 9.9 | 29361 | 4.0 | 0 | |
| Al | 27 | 1 | No Gas | 97834.191 | 1.2 | 963947826 | 1.3 | 0 | |
| Si | 28 | 1 | No Gas | 35.379 | 2.5 | 298276 | 0.8 | 0 | |
| P | 31 | 1 | No Gas | 94749.057 | 1.1 | 40041444 | 0.8 | 0 | |
| Ag | 107 | 1 | No Gas | 0.047 | 5.7 | 670 | 3.9 | 0 | ICSA Main CR1 Failed |
| Cd | 111 | 1 | No Gas | 1.580 | 3.9 | 3567 | 3.5 | 0 | ICSA Main CR1 Failed |
| Sr | 88 | 1 | No Gas | 0.965 | 7.0 | 18410 | 6.7 | 0 | ICSA Main CR1 Failed |
| Mo | 95 | 1 | No Gas | 2011.669 | 3.0 | 7776017 | 2.1 | 0 | |
| Sn | 118 | 1 | No Gas | 0.088 | 11.9 | 1850 | 4.7 | 0 | ICSA Main CR1 Failed |
| Sb | 121 | 1 | No Gas | 0.046 | 39.5 | 1970 | 9.8 | 0 | ICSA Main CR1 Failed |
| Ba | 137 | 1 | No Gas | 0.025 | 62.0 | 413 | 11.2 | 0 | ICSA Main CR1 Failed |
| Tl | 205 | 1 | No Gas | 0.013 | 25.4 | 610 | 7.5 | 0 | ICSA Main CR1 Failed |
| Tl | 203 | 1 | No Gas | 0.010 | 37.6 | 233 | 17.8 | 0 | ICSA Main CR1 Failed |
| Pb | 208 | 1 | No Gas | 0.051 | 23.5 | 4034 | 6.7 | 0 | ICSA Main CR1 Failed |
| U | 238 | 1 | No Gas | 0.005 | 21.6 | 223 | 12.9 | 0 | ICSA Main CR1 Failed |
| Ca | 43 | 2 | He | 104104.291 | 1.5 | 132067 | 0.6 | 0 | |
| Sb | 121 | 2 | He | 0.075 | 10.1 | 1097 | 2.6 | 0 | ICSA Main CR1 Failed |
| Ti | 47 | 2 | He | 2240.778 | 1.6 | 279590 | 1.1 | 0 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 947785 | 1.75 | 1015680 | 93.32 | 70 | 120 | |
| Ge | 72 | 2 | He | 501193 | 0.90 | 548876 | 91.31 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1577625 | 0.62 | 1766563 | 89.30 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1905083 | 1.67 | 2117301 | 89.98 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2107470 | 5.19 | 2356499 | 89.43 | 70 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICSAB |
| Data File Name | 027ICSB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T12:00:36-05:00 |
| Sample Type | ICSB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 013CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 101.271 | 2.731 | 1223724 | 1.52 | 100 | 101.3 | 180 | 120 | ICSB Main CR1 Failed |
| Be | 9 | 1 | No Gas | 107.032 | 3.758 | 299333 | 0.40 | 100 | 107.0 | 80 | 120 | |
| V | 51 | 2 | He | 104.206 | 1.230 | 412567 | 0.44 | 100 | 104.2 | 80 | 120 | |
| Cr | 52 | 2 | He | 101.197 | 1.946 | 500835 | 1.17 | 100 | 101.2 | 80 | 120 | |
| Fe | 56 | 2 | He | 109844.719 | 0.671 | 474994713 | 1.39 | 100 | 109844.7 | 80 | 120 | ICSB Main CR1 Failed |
| Se | 78 | 2 | He | 104.818 | 2.556 | 5124 | 1.77 | 100 | 104.8 | 80 | 120 | |
| Sn | 118 | 2 | He | 103.202 | 0.663 | 367824 | 1.22 | 100 | 103.2 | 80 | 120 | |
| As | 75 | 2 | He | 103.471 | 0.357 | 59930 | 1.06 | 100 | 103.5 | 80 | 120 | |
| Ca | 44 | 2 | He | 112239.976 | 2.330 | 2440194 | 2.64 | 100 | 112240.0 | 80 | 120 | |
| Na | 23 | 2 | He | 112629.790 | 1.062 | 92466869 | 1.26 | 100 | 112629.8 | 80 | 120 | ICSB Main CR1 Failed |
| Mg | 24 | 2 | He | 112060.259 | 0.564 | 53443356 | 1.34 | 100 | 112060.3 | 80 | 120 | ICSB Main CR1 Failed |
| K | 39 | 2 | He | 112118.032 | 1.513 | 41786363 | 2.22 | 100 | 112118.0 | 80 | 120 | |
| Mn | 55 | 2 | He | 101.949 | 0.901 | 335193 | 0.68 | 100 | 101.9 | 80 | 120 | |
| Co | 59 | 2 | He | 100.194 | 1.788 | 767999 | 1.47 | 100 | 100.2 | 80 | 120 | |
| Ni | 60 | 2 | He | 100.825 | 2.627 | 195590 | 1.96 | 100 | 100.8 | 80 | 120 | |
| Cu | 63 | 2 | He | 97.492 | 1.641 | 527352 | 1.09 | 100 | 97.5 | 80 | 120 | |
| Zn | 66 | 2 | He | 101.733 | 0.675 | 103201 | 1.14 | 100 | 101.7 | 80 | 120 | |
| Al | 27 | 2 | He | 97010.117 | 1.120 | 23254714 | 1.76 | 100 | 97010.1 | 80 | 120 | ICSB Main CR1 Failed |
| B | 11 | 1 | No Gas | 533.651 | 5.734 | 1022696 | 4.04 | 100 | 533.7 | 80 | 120 | |
| Al | 27 | 1 | No Gas | 98003.372 | 3.287 | 947976413 | 1.55 | 100 | 98003.4 | 80 | 120 | ICSB Main CR1 Failed |
| Si | 28 | 1 | No Gas | 535.981 | 3.672 | 2434508 | 1.59 | 100 | 536.0 | 80 | 120 | |
| P | 31 | 1 | No Gas | 93156.692 | 3.576 | 38647826 | 1.41 | 100 | 93156.7 | 80 | 120 | ICSB Main CR1 Failed |
| Ag | 107 | 1 | No Gas | 93.942 | 0.586 | 1019872 | 1.08 | 100 | 93.9 | 80 | 120 | |
| Cd | 111 | 1 | No Gas | 102.947 | 0.787 | 227509 | 1.29 | 100 | 102.9 | 80 | 120 | |
| Sr | 88 | 1 | No Gas | 105.590 | 2.936 | 1854127 | 2.44 | 100 | 105.6 | 80 | 120 | |
| Mo | 95 | 1 | No Gas | 2090.817 | 2.727 | 7930884 | 2.26 | 100 | 2090.8 | 80 | 120 | ICSB Main CR1 Failed |
| Sn | 118 | 1 | No Gas | 108.721 | 1.426 | 669053 | 1.66 | 100 | 108.7 | 80 | 120 | |
| Sb | 121 | 1 | No Gas | 98.770 | 3.502 | 977308 | 1.09 | 100 | 98.8 | 80 | 120 | |
| Ba | 137 | 1 | No Gas | 101.649 | 1.702 | 296134 | 1.75 | 100 | 101.6 | 80 | 120 | |
| Tl | 205 | 1 | No Gas | 103.273 | 2.392 | 2397445 | 2.44 | 100 | 103.3 | 80 | 120 | |
| Tl | 203 | 1 | No Gas | 96.543 | 2.260 | 948920 | 0.85 | 100 | 96.5 | 80 | 120 | |
| Pb | 208 | 1 | No Gas | 101.065 | 2.370 | 3286588 | 0.98 | 100 | 101.1 | 80 | 120 | |
| U | 238 | 1 | No Gas | 109.367 | 2.585 | 3855387 | 1.22 | 100 | 109.4 | 80 | 120 | |
| Ca | 43 | 2 | He | 111467.267 | 2.743 | 140943 | 3.15 | 100 | 111467.3 | 80 | 120 | ICSB Main CR1 Failed |
| Sb | 121 | 2 | He | 100.132 | 1.939 | 502417 | 1.76 | 100 | 100.1 | 80 | 120 | |
| Ti | 47 | 2 | He | 2306.174 | 2.002 | 286769 | 1.75 | 100 | 2306.2 | 80 | 120 | ICSB Main CR1 Failed |
| Cu | 63 | 1 | No Gas | 97.023 | 2.465 | 772045 | 0.42 | 100 | 97.0 | 80 | 120 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 946381 | 3.41 | 1015680 | 93.18 | 70 | 120 | |
| Ge | 72 | 2 | He | 499477 | 0.78 | 548876 | 91.00 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1549553 | 2.44 | 1766563 | 87.72 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1869153 | 0.50 | 2117301 | 88.28 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2070458 | 1.87 | 2356499 | 87.86 | 70 | 120 | |

# Calibration Blank Report

**Sample Table**

| | |
|---|---|
| Sample Name | CAL BLK |
| Data File Name | 105CALB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:30:53-05:00 |
| Sample Type | CalBlk |
| Level | 1 |
| Dilution | 1 |
| Comment | |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 57553 | 0.00 |
| Be | 9 | 1 | No Gas | 23 | 53.02 |
| V | 51 | 2 | He | 4168 | 0.06 |
| Cr | 52 | 2 | He | 1307 | 0.62 |
| Fe | 56 | 2 | He | 5481 | 0.06 |
| Se | 78 | 2 | He | 33 | 105.47 |
| Sn | 118 | 2 | He | 363 | 6.17 |
| As | 75 | 2 | He | 203 | 10.67 |
| Ca | 44 | 2 | He | 593 | 1.00 |
| Na | 23 | 2 | He | 157305 | 0.00 |
| Mg | 24 | 2 | He | 640 | 4.72 |
| K | 39 | 2 | He | 43562 | 0.00 |
| Mn | 55 | 2 | He | 1180 | 0.94 |
| Co | 59 | 2 | He | 257 | 7.79 |
| Ni | 60 | 2 | He | 150 | 23.52 |
| Cu | 63 | 2 | He | 1030 | 0.09 |
| Zn | 66 | 2 | He | 297 | 8.06 |
| Al | 27 | 2 | He | 1383 | 0.62 |
| B | 11 | 1 | No Gas | 34305 | 0.01 |
| Al | 27 | 1 | No Gas | 57161 | 0.00 |
| Si | 28 | 1 | No Gas | 159663 | 0.00 |
| P | 31 | 1 | No Gas | 30734 | 0.00 |
| Ag | 107 | 1 | No Gas | 177 | 9.79 |
| Cd | 111 | 1 | No Gas | 3 | 5196.15 |
| Sr | 88 | 1 | No Gas | 2057 | 0.18 |
| Mo | 95 | 1 | No Gas | 57 | 17.98 |
| Sn | 118 | 1 | No Gas | 830 | 1.82 |
| Sb | 121 | 1 | No Gas | 557 | 1.95 |
| Ba | 137 | 1 | No Gas | 323 | 2.21 |
| Tl | 205 | 1 | No Gas | 473 | 5.51 |
| Tl | 203 | 1 | No Gas | 190 | 12.70 |
| Pb | 208 | 1 | No Gas | 1827 | 0.48 |
| U | 238 | 1 | No Gas | 43 | 110.86 |
| Ca | 43 | 2 | He | 17 | 549.91 |
| Sb | 121 | 2 | He | 267 | 2.93 |
| Ti | 47 | 2 | He | 3 | 5196.15 |
| Cu | 63 | 1 | No Gas | 1650 | 0.61 |

# Calibration Blank Report

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 957133 | 5.05 |
| Ge | 72 | 2 | He | 530792 | 1.13 |

# Calibration Blank Report

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Ge | 72 | 1 | No Gas | 1680329 | 2.22 |
| In | 115 | 1 | No Gas | 2126707 | 3.10 |
| Bi | 209 | 1 | No Gas | 2340208 | 0.47 |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 2/10/200 |
| Data File Name | 106CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:32:46-05:00 |
| Sample Type | CalStd |
| Level | 2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 5811 | 0.02 |
| V | 51 | 2 | He | 15201 | 0.01 |
| Cr | 52 | 2 | He | 11031 | 0.00 |
| Fe | 56 | 2 | He | 935950 | 0.00 |
| Se | 78 | 2 | He | 135 | 9.91 |
| Sn | 118 | 2 | He | 7836 | 0.07 |
| As | 75 | 2 | He | 1532 | 0.26 |
| Ca | 44 | 2 | He | 4591 | 0.10 |
| Na | 23 | 2 | He | 336196 | 0.00 |
| Mg | 24 | 2 | He | 104582 | 0.00 |
| K | 39 | 2 | He | 126146 | 0.00 |
| Mn | 55 | 2 | He | 7832 | 0.06 |
| Co | 59 | 2 | He | 16250 | 0.03 |
| Ni | 60 | 2 | He | 4161 | 0.23 |
| Cu | 63 | 2 | He | 12036 | 0.03 |
| Zn | 66 | 2 | He | 2557 | 0.62 |
| Al | 27 | 2 | He | 1297 | 0.48 |
| B | 11 | 1 | No Gas | 48170 | 0.00 |
| Al | 27 | 1 | No Gas | 55488 | 0.00 |
| Si | 28 | 1 | No Gas | 173886 | 0.00 |
| P | 31 | 1 | No Gas | 22966 | 0.00 |
| Ag | 107 | 1 | No Gas | 23622 | 0.00 |
| Cd | 111 | 1 | No Gas | 4718 | 0.16 |
| Sr | 88 | 1 | No Gas | 39057 | 0.00 |
| Mo | 95 | 1 | No Gas | 8173 | 0.04 |
| Sn | 118 | 1 | No Gas | 15513 | 0.02 |
| Sb | 121 | 1 | No Gas | 20620 | 0.00 |
| Ba | 137 | 1 | No Gas | 6425 | 0.10 |
| Tl | 205 | 1 | No Gas | 50315 | 0.00 |
| Tl | 203 | 1 | No Gas | 21138 | 0.02 |
| Pb | 208 | 1 | No Gas | 72113 | 0.00 |
| U | 238 | 1 | No Gas | 73361 | 0.00 |
| Ca | 43 | 2 | He | 290 | 6.29 |
| Sb | 121 | 2 | He | 10661 | 0.04 |
| Cu | 63 | 1 | No Gas | 18707 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 994376 | 5.23 | 957133 | 103.89 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 528799 | 1.23 | 530792 | 99.62 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1710786 | 2.55 | 1680329 | 101.81 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2035004 | 2.33 | 2126707 | 95.69 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2338033 | 2.03 | 2340208 | 99.91 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 5/25/500 |
| Data File Name | 107CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:34:40-05:00 |
| Sample Type | CalStd |
| Level | 3 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 14805 | 0.01 |
| V | 51 | 2 | He | 27878 | 0.00 |
| Cr | 52 | 2 | He | 26740 | 0.01 |
| Fe | 56 | 2 | He | 2364602 | 0.00 |
| Se | 78 | 2 | He | 309 | 1.75 |
| Sn | 118 | 2 | He | 18974 | 0.02 |
| As | 75 | 2 | He | 3358 | 0.06 |
| Ca | 44 | 2 | He | 11612 | 0.01 |
| Na | 23 | 2 | He | 605356 | 0.00 |
| Mg | 24 | 2 | He | 262075 | 0.00 |
| K | 39 | 2 | He | 245789 | 0.00 |
| Mn | 55 | 2 | He | 17742 | 0.02 |
| Co | 59 | 2 | He | 40089 | 0.01 |
| Ni | 60 | 2 | He | 10558 | 0.03 |
| Cu | 63 | 2 | He | 28925 | 0.00 |
| Zn | 66 | 2 | He | 5505 | 0.09 |
| Al | 27 | 2 | He | 2220 | 0.12 |
| B | 11 | 1 | No Gas | 77039 | 0.00 |
| Al | 27 | 1 | No Gas | 89130 | 0.00 |
| Si | 28 | 1 | No Gas | 235486 | 0.00 |
| P | 31 | 1 | No Gas | 30384 | 0.01 |
| Ag | 107 | 1 | No Gas | 57981 | 0.00 |
| Cd | 111 | 1 | No Gas | 11765 | 0.05 |
| Sr | 88 | 1 | No Gas | 96244 | 0.00 |
| Mo | 95 | 1 | No Gas | 19768 | 0.01 |
| Sn | 118 | 1 | No Gas | 35856 | 0.00 |
| Sb | 121 | 1 | No Gas | 50632 | 0.00 |
| Ba | 137 | 1 | No Gas | 15289 | 0.01 |
| Tl | 205 | 1 | No Gas | 125871 | 0.00 |
| Tl | 203 | 1 | No Gas | 52196 | 0.00 |
| Pb | 208 | 1 | No Gas | 176126 | 0.00 |
| U | 238 | 1 | No Gas | 184109 | 0.00 |
| Ca | 43 | 2 | He | 703 | 0.84 |
| Sb | 121 | 2 | He | 25268 | 0.02 |
| Cu | 63 | 1 | No Gas | 43671 | 0.01 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 971628 | 3.85 | 957133 | 101.51 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 527716 | 1.37 | 530792 | 99.42 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1694814 | 1.30 | 1680329 | 100.86 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2097330 | 1.57 | 2126707 | 98.62 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2355451 | 1.78 | 2340208 | 100.65 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 10/50/100 |
| Data File Name | 108CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:36:33-05:00 |
| Sample Type | CalStd |
| Level | 4 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 32830 | 0.01 |
| V | 51 | 2 | He | 52302 | 0.00 |
| Cr | 52 | 2 | He | 56233 | 0.00 |
| Fe | 56 | 2 | He | 5049631 | 0.00 |
| Se | 78 | 2 | He | 574 | 0.63 |
| Sn | 118 | 2 | He | 42302 | 0.00 |
| As | 75 | 2 | He | 6985 | 0.04 |
| Ca | 44 | 2 | He | 24803 | 0.00 |
| Na | 23 | 2 | He | 1122101 | 0.00 |
| Mg | 24 | 2 | He | 574291 | 0.00 |
| K | 39 | 2 | He | 475485 | 0.00 |
| Mn | 55 | 2 | He | 38452 | 0.00 |
| Co | 59 | 2 | He | 87472 | 0.00 |
| Ni | 60 | 2 | He | 23187 | 0.01 |
| Cu | 63 | 2 | He | 62491 | 0.00 |
| Zn | 66 | 2 | He | 12002 | 0.04 |
| Al | 27 | 2 | He | 3517 | 0.09 |
| B | 11 | 1 | No Gas | 135237 | 0.00 |
| Al | 27 | 1 | No Gas | 160870 | 0.00 |
| Si | 28 | 1 | No Gas | 372405 | 0.00 |
| P | 31 | 1 | No Gas | 44646 | 0.00 |
| Ag | 107 | 1 | No Gas | 127292 | 0.00 |
| Cd | 111 | 1 | No Gas | 26661 | 0.00 |
| Sr | 88 | 1 | No Gas | 207012 | 0.00 |
| Mo | 95 | 1 | No Gas | 44642 | 0.01 |
| Sn | 118 | 1 | No Gas | 80742 | 0.00 |
| Sb | 121 | 1 | No Gas | 112185 | 0.00 |
| Ba | 137 | 1 | No Gas | 34302 | 0.01 |
| Tl | 205 | 1 | No Gas | 276100 | 0.00 |
| Tl | 203 | 1 | No Gas | 115326 | 0.00 |
| Pb | 208 | 1 | No Gas | 387016 | 0.00 |
| U | 238 | 1 | No Gas | 410458 | 0.00 |
| Ca | 43 | 2 | He | 1450 | 0.51 |
| Sb | 121 | 2 | He | 57255 | 0.00 |
| Cu | 63 | 1 | No Gas | 94640 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 970061 | 6.01 | 957133 | 101.35 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 520437 | 0.72 | 530792 | 98.05 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1681154 | 1.74 | 1680329 | 100.05 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2045022 | 2.87 | 2126707 | 96.16 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2309769 | 1.08 | 2340208 | 98.70 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 100/500/10K |
| Data File Name | 109CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:38:26-05:00 |
| Sample Type | CalStd |
| Level | 5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 284652 | 0.00 |
| V | 51 | 2 | He | 391111 | 0.00 |
| Cr | 52 | 2 | He | 476314 | 0.00 |
| Fe | 56 | 2 | He | 43606426 | 0.00 |
| Se | 78 | 2 | He | 4610 | 0.03 |
| Sn | 118 | 2 | He | 365964 | 0.00 |
| As | 75 | 2 | He | 55675 | 0.00 |
| Ca | 44 | 2 | He | 210046 | 0.00 |
| Na | 23 | 2 | He | 8249337 | 0.00 |
| Mg | 24 | 2 | He | 4722821 | 0.00 |
| K | 39 | 2 | He | 3692880 | 0.00 |
| Mn | 55 | 2 | He | 329644 | 0.00 |
| Co | 59 | 2 | He | 746822 | 0.00 |
| Ni | 60 | 2 | He | 190956 | 0.00 |
| Cu | 63 | 2 | He | 525850 | 0.00 |
| Zn | 66 | 2 | He | 100181 | 0.00 |
| Al | 27 | 2 | He | 24375 | 0.01 |
| B | 11 | 1 | No Gas | 961815 | 0.00 |
| Al | 27 | 1 | No Gas | 993726 | 0.00 |
| Si | 28 | 1 | No Gas | 2222548 | 0.00 |
| P | 31 | 1 | No Gas | 223203 | 0.00 |
| Ag | 107 | 1 | No Gas | 1089834 | 0.00 |
| Cd | 111 | 1 | No Gas | 226541 | 0.00 |
| Sr | 88 | 1 | No Gas | 1871819 | 0.00 |
| Mo | 95 | 1 | No Gas | 386788 | 0.00 |
| Sn | 118 | 1 | No Gas | 685723 | 0.00 |
| Sb | 121 | 1 | No Gas | 967331 | 0.00 |
| Ba | 137 | 1 | No Gas | 295573 | 0.00 |
| Tl | 205 | 1 | No Gas | 2519794 | 0.00 |
| Tl | 203 | 1 | No Gas | 999080 | 0.00 |
| Pb | 208 | 1 | No Gas | 3429652 | 0.00 |
| U | 238 | 1 | No Gas | 3754127 | 0.00 |
| Ca | 43 | 2 | He | 12232 | 0.03 |
| Sb | 121 | 2 | He | 487143 | 0.00 |
| Cu | 63 | 1 | No Gas | 792087 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 942583 | 2.64 | 957133 | 98.48 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 510671 | 1.12 | 530792 | 96.21 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1658205 | 1.38 | 1680329 | 98.68 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1974304 | 0.48 | 2126707 | 92.83 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2271595 | 3.77 | 2340208 | 97.07 | 70 | 120 | |

# Calibration Standard Report

**Sample Table**

| | |
|---|---|
| Sample Name | 200/1000/20K |
| Data File Name | 110CALS.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:40:14-05:00 |
| Sample Type | CalStd |
| Level | 6 |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD |
|---|---|---|---|---|---|
| Be | 9 | 1 | No Gas | 556170 | 0.00 |
| V | 51 | 2 | He | 763523 | 0.00 |
| Cr | 52 | 2 | He | 938225 | 0.00 |
| Fe | 56 | 2 | He | 83620214 | 0.00 |
| Se | 78 | 2 | He | 8968 | 0.01 |
| Sn | 118 | 2 | He | 719083 | 0.00 |
| As | 75 | 2 | He | 109139 | 0.00 |
| Ca | 44 | 2 | He | 413499 | 0.00 |
| Na | 23 | 2 | He | 15860316 | 0.00 |
| Mg | 24 | 2 | He | 9087072 | 0.00 |
| K | 39 | 2 | He | 7130939 | 0.00 |
| Mn | 55 | 2 | He | 625204 | 0.00 |
| Co | 59 | 2 | He | 1498047 | 0.00 |
| Ni | 60 | 2 | He | 374110 | 0.00 |
| Cu | 63 | 2 | He | 1014547 | 0.00 |
| Zn | 66 | 2 | He | 192642 | 0.00 |
| Al | 27 | 2 | He | 44933 | 0.00 |
| B | 11 | 1 | No Gas | 1854198 | 0.00 |
| Al | 27 | 1 | No Gas | 1897814 | 0.00 |
| Si | 28 | 1 | No Gas | 4198608 | 0.00 |
| P | 31 | 1 | No Gas | 418115 | 0.00 |
| Ag | 107 | 1 | No Gas | 2151939 | 0.00 |
| Cd | 111 | 1 | No Gas | 441773 | 0.00 |
| Sr | 88 | 1 | No Gas | 3471502 | 0.00 |
| Mo | 95 | 1 | No Gas | 755022 | 0.00 |
| Sn | 118 | 1 | No Gas | 1370156 | 0.00 |
| Sb | 121 | 1 | No Gas | 1946819 | 0.00 |
| Ba | 137 | 1 | No Gas | 578549 | 0.00 |
| Tl | 205 | 1 | No Gas | 4767765 | 0.00 |
| Tl | 203 | 1 | No Gas | 2051287 | 0.00 |
| Pb | 208 | 1 | No Gas | 6673583 | 0.00 |
| U | 238 | 1 | No Gas | 7109814 | 0.00 |
| Ca | 43 | 2 | He | 24706 | 0.00 |
| Sb | 121 | 2 | He | 954754 | 0.00 |
| Cu | 63 | 1 | No Gas | 1525520 | 0.00 |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 903142 | 2.12 | 957133 | 94.36 | 70 | 120 | |

# Calibration Standard Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 501105 | 0.22 | 530792 | 94.41 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1620377 | 2.12 | 1680329 | 96.43 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1989132 | 1.82 | 2126707 | 93.53 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2166139 | 0.97 | 2340208 | 92.56 | 70 | 120 | |

# Initial Calibration Verification (ICV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICCV |
| Data File Name | 112_ICV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:43:54-05:00 |
| Sample Type | ICV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 97.226 | 2.719 | 1128152 | 0.53 | 100 | 97.2 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 92.342 | 1.585 | 260728 | 1.31 | 100 | 92.3 | 90 | 110 | |
| V | 51 | 2 | He | 95.458 | 0.746 | 365180 | 0.38 | 100 | 95.5 | 90 | 110 | |
| Cr | 52 | 2 | He | 94.654 | 0.758 | 442549 | 1.22 | 100 | 94.7 | 90 | 110 | |
| Fe | 56 | 2 | He | 9581.540 | 0.971 | 40101435 | 1.64 | 10000 | 95.8 | 90 | 110 | |
| Se | 78 | 2 | He | 96.453 | 2.204 | 4329 | 1.78 | 100 | 96.5 | 90 | 110 | |
| Sn | 118 | 2 | He | 92.130 | 0.816 | 334152 | 1.64 | 100 | 92.1 | 90 | 110 | |
| As | 75 | 2 | He | 96.563 | 1.426 | 52591 | 0.78 | 100 | 96.6 | 90 | 110 | |
| Ca | 44 | 2 | He | 9601.536 | 0.693 | 197846 | 0.46 | 10000 | 96.0 | 90 | 110 | |
| Na | 23 | 2 | He | 9648.894 | 0.656 | 7717144 | 0.41 | 10000 | 96.5 | 90 | 110 | |
| Mg | 24 | 2 | He | 9670.206 | 1.087 | 4395364 | 1.01 | 10000 | 96.7 | 90 | 110 | |
| K | 39 | 2 | He | 9703.085 | 0.447 | 3474869 | 0.42 | 10000 | 97.0 | 90 | 110 | |
| Mn | 55 | 2 | He | 96.040 | 2.067 | 301616 | 2.04 | 100 | 96.0 | 90 | 110 | |
| Co | 59 | 2 | He | 93.340 | 0.611 | 693543 | 0.75 | 100 | 93.3 | 90 | 110 | |
| Ni | 60 | 2 | He | 94.488 | 0.314 | 176215 | 0.98 | 100 | 94.5 | 90 | 110 | |
| Cu | 63 | 2 | He | 94.982 | 0.640 | 482079 | 0.99 | 100 | 95.0 | 90 | 110 | |
| Zn | 66 | 2 | He | 95.408 | 1.648 | 92055 | 2.34 | 100 | 95.4 | 90 | 110 | |
| Al | 27 | 2 | He | 96.249 | 2.065 | 22355 | 1.63 | 100 | 96.2 | 90 | 110 | |
| B | 11 | 1 | No Gas | 473.208 | 3.208 | 907368 | 2.25 | 500 | 94.6 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 98.752 | 4.974 | 940631 | 1.67 | 100 | 98.8 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 548.383 | 2.449 | 2314796 | 1.26 | 500 | 109.7 | 90 | 110 | |
| P | 31 | 1 | No Gas | 464.157 | 2.619 | 203739 | 1.99 | 500 | 92.8 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 94.807 | 2.372 | 1012955 | 0.67 | 100 | 94.8 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 94.714 | 2.669 | 208303 | 1.93 | 100 | 94.7 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 96.132 | 2.855 | 1679089 | 0.87 | 100 | 96.1 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 94.682 | 3.421 | 355672 | 0.41 | 100 | 94.7 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 93.701 | 2.767 | 635984 | 0.37 | 100 | 93.7 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 95.922 | 3.932 | 906398 | 1.26 | 100 | 95.9 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 94.504 | 4.128 | 271934 | 1.34 | 100 | 94.5 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 93.638 | 2.028 | 2283626 | 1.59 | 100 | 93.6 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 89.002 | 1.622 | 919355 | 2.01 | 100 | 89.0 | 90 | 110 | ICV Main CR1 Failed |
| Pb | 208 | 1 | No Gas | 93.458 | 0.903 | 3172884 | 0.68 | 100 | 93.5 | 90 | 110 | |
| U | 238 | 1 | No Gas | 95.576 | 1.783 | 3475667 | 2.36 | 100 | 95.6 | 90 | 110 | |
| Ca | 43 | 2 | He | 9411.223 | 0.772 | 11522 | 0.96 | 10000 | 94.1 | 90 | 110 | |
| Sb | 121 | 2 | He | 96.478 | 0.679 | 459030 | 0.43 | 100 | 96.5 | 90 | 110 | |
| Ti | 47 | 2 | He | 96.521 | 2.321 | 12342 | 1.76 | 100 | 96.5 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 98.735 | 3.680 | 738073 | 0.55 | 100 | 98.7 | 90 | 110 | |

**QC ISTD Table**

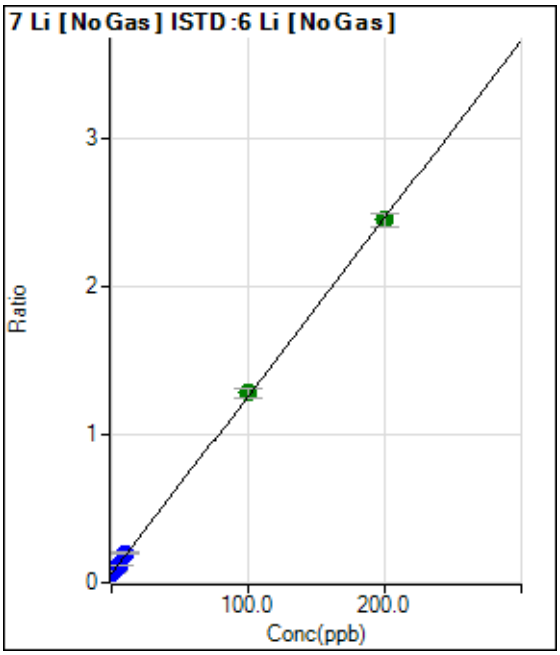
| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 920171 | 2.19 | 957133 | 96.14 | 70 | 120 | |
| Ge | 72 | 2 | He | 499038 | 0.70 | 530792 | 94.02 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1582253 | 3.40 | 1680329 | 94.16 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1967043 | 3.07 | 2126707 | 92.49 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2211821 | 1.44 | 2340208 | 94.51 | 70 | 120 | |

Calibration for 112_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\072820A.b\
Analysis File: 072820A.batch.bin
DA Date-Time: 7/28/2020 4:56:26 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | 105CALB.d | CAL BLK | 7/28/2020 3:30:53 PM |
| 2 | 106CALS.d | 2/10/200 | 7/28/2020 3:32:46 PM |
| 3 | 107CALS.d | 5/25/500 | 7/28/2020 3:34:40 PM |
| 4 | 108CALS.d | 10/50/100 | 7/28/2020 3:36:33 PM |
| 5 | 109CALS.d | 100/500/10K | 7/28/2020 3:38:26 PM |
| 6 | 110CALS.d | 200/1000/20K | 7/28/2020 3:40:14 PM |

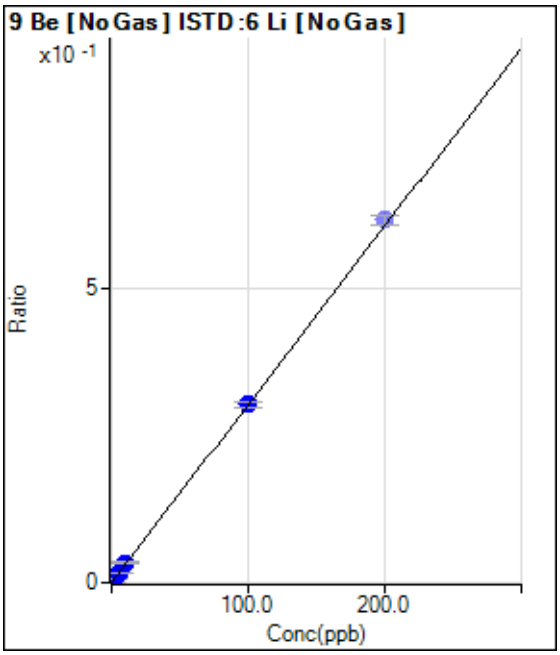
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57553.15 | 0.0602 | P | 2.9 |
| 2 | ☐ | 2.000 | 1.787 | 81043.87 | 0.0816 | P | 4.4 |
| 3 | ☐ | 5.000 | 5.071 | 117544.46 | 0.1210 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.513 | 192006.51 | 0.1983 | P | 4.7 |
| 5 | ☐ | 100.000 | 101.698 | 1205651.31 | 1.2801 | A | 4.9 |
| 6 | ☐ | 200.000 | 199.076 | 2210597.62 | 2.4482 | A | 3.4 |

y = 0.0120 * x + 0.0602
R = 0.9999
DL = 0.4418
BEC = 5.018

Weight: <None>
Min Conc: <None>

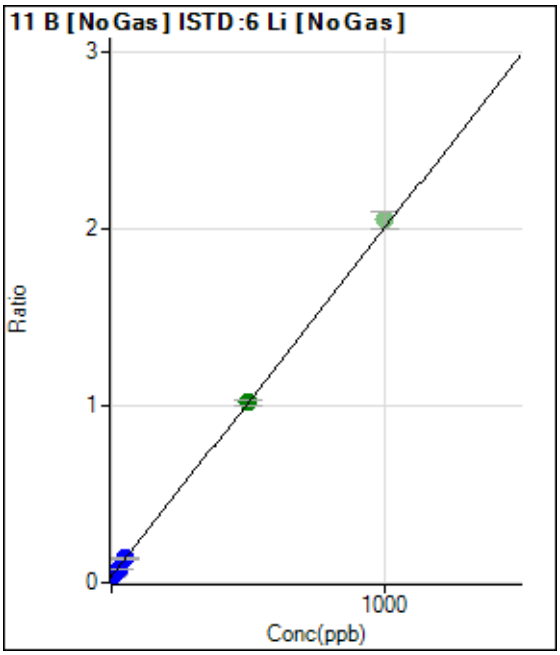



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23.33 | 0.0000 | P | 8.6 |
| 2 | ☐ | 2.000 | 1.928 | 5811.25 | 0.0059 | P | 6.3 |
| 3 | ☐ | 5.000 | 5.036 | 14804.60 | 0.0153 | P | 5.3 |
| 4 | ☐ | 10.000 | 11.212 | 32830.06 | 0.0339 | P | 7.1 |
| 5 | ☐ | 100.000 | 99.878 | 284652.50 | 0.3021 | P | 2.6 |
| 6 | ☑ | 200.000 | | 556169.85 | 0.6160 | P | 2.4 |

y = 0.0030 * x + 2.4330E-005
R = 0.9999
DL = 0.002077
BEC = 0.008044

Weight: <None>
Min Conc: <None>

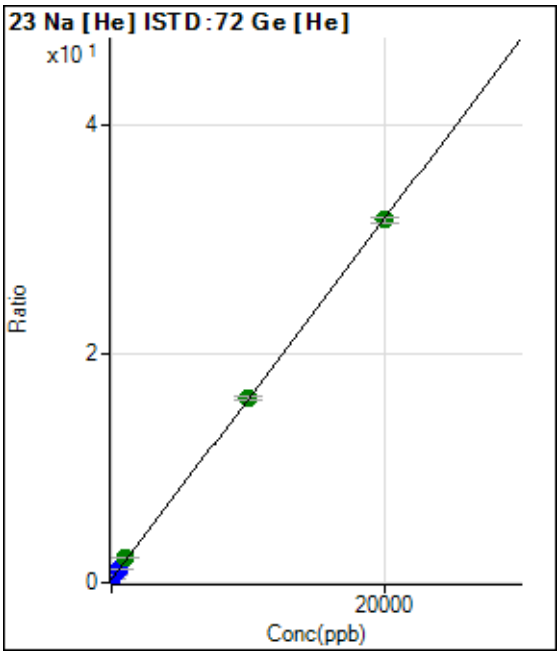
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 34305.31 | 0.0359 | P | 5.1 |
| 2 | ☐ | 10.000 | 6.410 | 48169.57 | 0.0485 | P | 4.9 |
| 3 | ☐ | 25.000 | 22.078 | 77039.42 | 0.0794 | P | 5.4 |
| 4 | ☐ | 50.000 | 52.747 | 135237.47 | 0.1398 | P | 7.4 |
| 5 | ☐ | 500.000 | 499.943 | 961815.48 | 1.0209 | A | 2.8 |
| 6 | ☑ | 1000.000 | | 1854198.36 | 2.0542 | A | 4.6 |

y = 0.0020 * x + 0.0359
R = 0.9999
DL = 2.781
BEC = 18.22

Weight: <None>
Min Conc: <None>

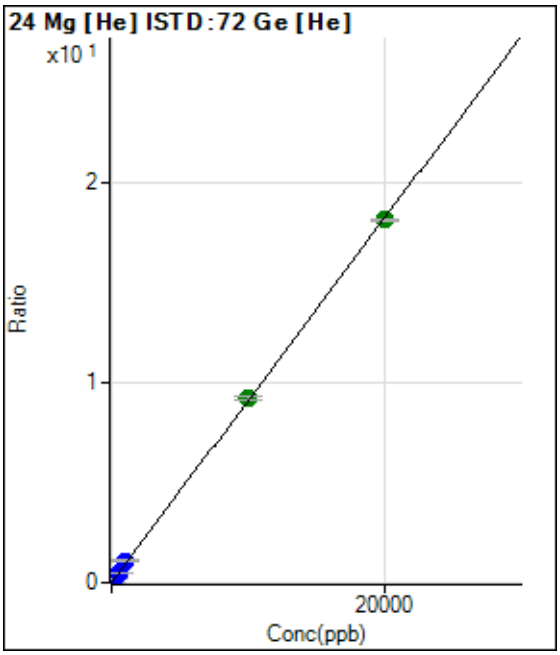



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 157304.74 | 0.2964 | P | 0.5 |
| 2 | ☐ | 200.000 | 215.953 | 336196.26 | 0.6358 | P | 1.6 |
| 3 | ☐ | 500.000 | 541.214 | 605356.17 | 1.1472 | P | 0.8 |
| 4 | ☐ | 1000.000 | 1182.813 | 1122101.13 | 2.1557 | A | 3.6 |
| 5 | ☐ | 10000.00 | 10088.71 | 8249336.75 | 16.1558 | A | 1.9 |
| 6 | ☐ | 20000.00 | 19945.31 | 15860316.01 | 31.6504 | A | 1.4 |

y = 0.0016 * x + 0.2964
R = 1.0000
DL = 2.787
BEC = 188.5

Weight: <None>
Min Conc: <None>

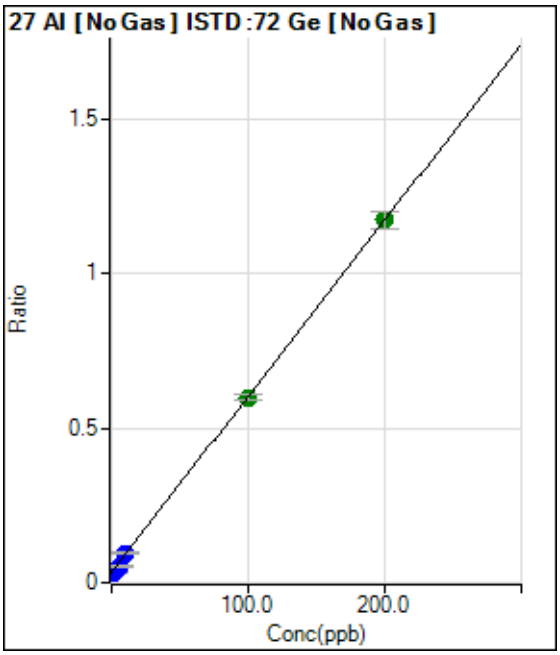
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 640.03 | 0.0012 | P | 29.6 |
| 2 | ☐ | 200.000 | 215.855 | 104582.22 | 0.1978 | P | 0.7 |
| 3 | ☐ | 500.000 | 544.027 | 262074.72 | 0.4967 | P | 1.6 |
| 4 | ☐ | 1000.000 | 1210.368 | 574291.26 | 1.1035 | P | 0.6 |
| 5 | ☐ | 10000.00 | 10154.76 | 4722820.87 | 9.2492 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19910.83 | 9087071.95 | 18.1340 | A | 0.2 |

y = 9.1070E-004 * x + 0.0012
R = 0.9999
DL = 1.174
BEC = 1.322

Weight: <None>
Min Conc: <None>

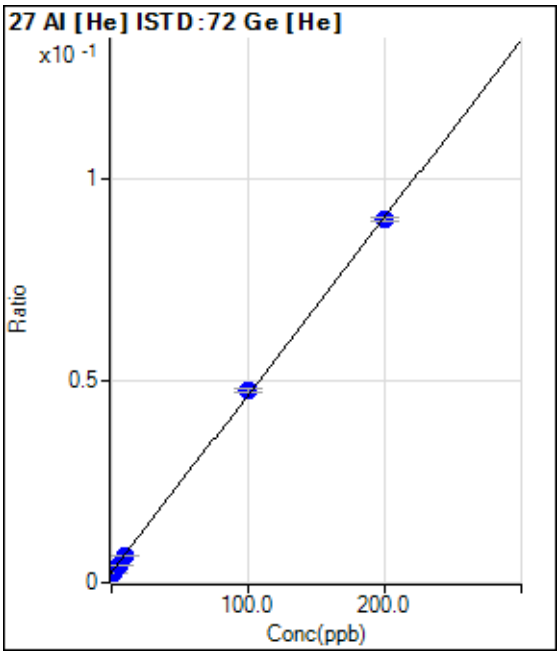



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 57161.36 | 0.0340 | P | 1.3 |
| 2 | ☐ | 2.000 | -0.276 | 55488.26 | 0.0325 | P | 3.0 |
| 3 | ☐ | 5.000 | 3.270 | 89130.18 | 0.0526 | P | 4.1 |
| 4 | ☐ | 10.000 | 10.857 | 160870.45 | 0.0957 | P | 1.9 |
| 5 | ☐ | 100.000 | 99.507 | 993725.74 | 0.5994 | A | 2.1 |
| 6 | ☐ | 200.000 | 200.270 | 1897813.67 | 1.1719 | A | 4.5 |

y = 0.0057 * x + 0.0340
R = 0.9999
DL = 0.2381
BEC = 5.988

Weight: <None>
Min Conc: <None>

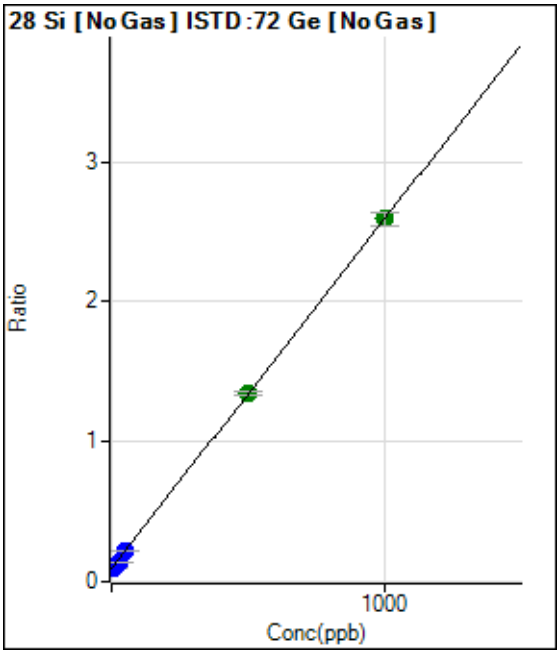
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1383.43 | 0.0026 | P | 9.3 |
| 2 | ☐ | 2.000 | -0.352 | 1296.75 | 0.0025 | P | 7.1 |
| 3 | ☐ | 5.000 | 3.651 | 2220.22 | 0.0042 | P | 3.5 |
| 4 | ☐ | 10.000 | 9.468 | 3517.17 | 0.0068 | P | 3.0 |
| 5 | ☐ | 100.000 | 102.950 | 24375.03 | 0.0477 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.609 | 44933.15 | 0.0897 | P | 1.2 |

y = 4.3835E-004 * x + 0.0026
R = 0.9998
DL = 1.661
BEC = 5.948

Weight: <None>
Min Conc: <None>

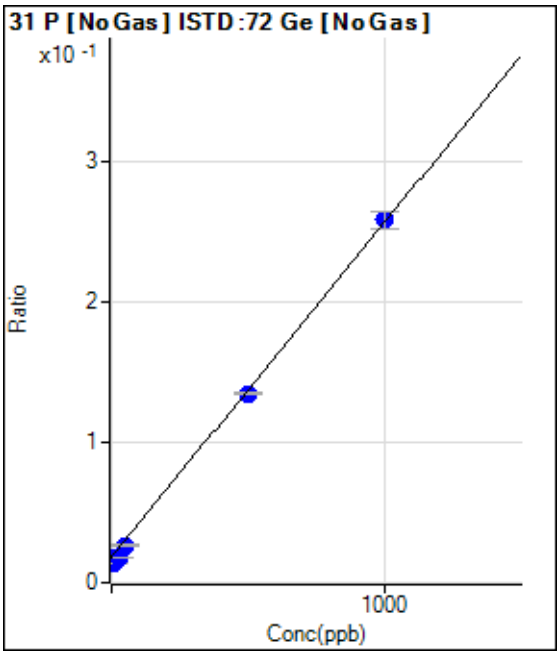



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 159662.85 | 0.0951 | P | 3.0 |
| 2 | ☐ | 10.000 | 2.651 | 173885.87 | 0.1017 | P | 2.1 |
| 3 | ☐ | 25.000 | 17.592 | 235486.14 | 0.1390 | P | 2.2 |
| 4 | ☐ | 50.000 | 50.689 | 372405.00 | 0.2216 | P | 3.3 |
| 5 | ☐ | 500.000 | 499.050 | 2222547.88 | 1.3406 | A | 2.1 |
| 6 | ☐ | 1000.000 | 1000.699 | 4198607.86 | 2.5926 | A | 4.0 |

y = 0.0025 * x + 0.0951
R = 1.0000
DL = 3.408
BEC = 38.09

Weight: <None>
Min Conc: <None>

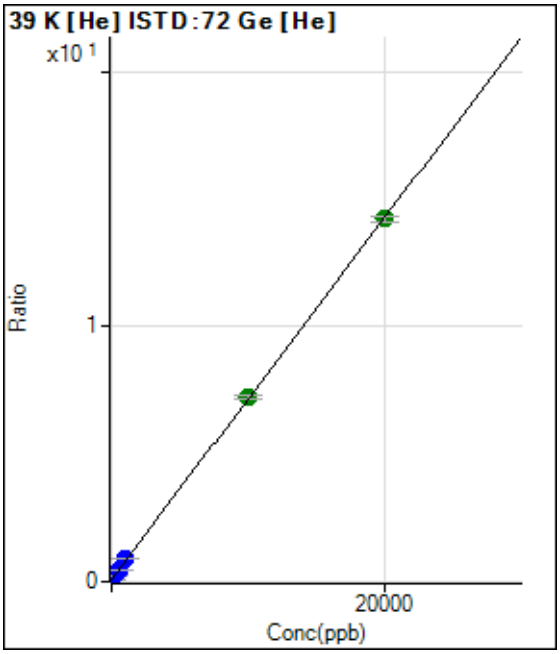
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 30734.42 | 0.0183 | P | 1.7 |
| 2 | ☐ | 10.000 | -20.428 | 22965.93 | 0.0134 | P | 3.0 |
| 3 | ☐ | 25.000 | -1.552 | 30383.69 | 0.0179 | P | 1.4 |
| 4 | ☐ | 50.000 | 34.740 | 44645.69 | 0.0266 | P | 3.7 |
| 5 | ☐ | 500.000 | 488.484 | 223203.23 | 0.1346 | P | 0.5 |
| 6 | ☐ | 1000.000 | 1007.489 | 418114.59 | 0.2582 | P | 4.5 |

y = 2.3812E-004 * x + 0.0183
R = 0.9997
DL = 3.849
BEC = 76.83

Weight: <None>
Min Conc: <None>

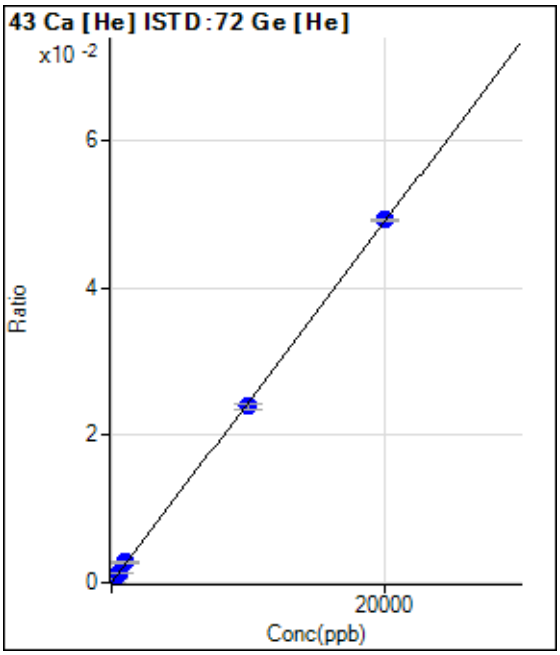



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43562.27 | 0.0821 | P | 1.1 |
| 2 | ☐ | 200.000 | 220.650 | 126145.84 | 0.2386 | P | 1.2 |
| 3 | ☐ | 500.000 | 540.978 | 245789.48 | 0.4657 | P | 1.1 |
| 4 | ☐ | 1000.000 | 1172.611 | 475484.84 | 0.9137 | P | 1.5 |
| 5 | ☐ | 10000.00 | 10080.21 | 3692880.05 | 7.2307 | A | 1.8 |
| 6 | ☐ | 20000.00 | 19950.03 | 7130939.06 | 14.2301 | A | 1.4 |

y = 7.0917E-004 * x + 0.0821
R = 1.0000
DL = 3.714
BEC = 115.7

Weight: <None>
Min Conc: <None>

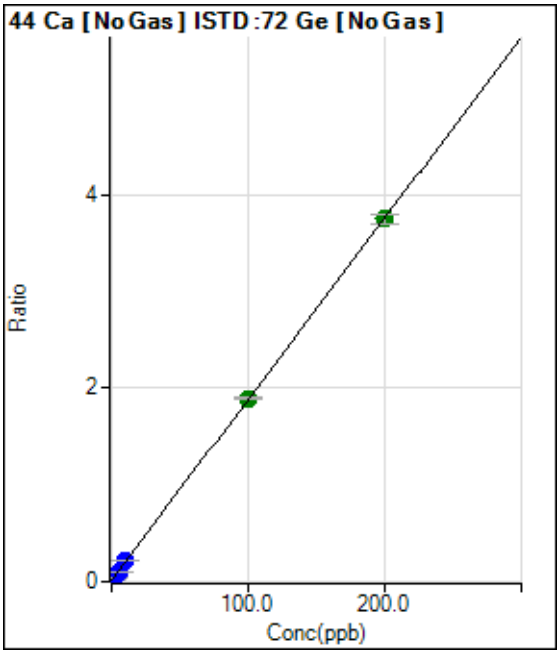
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16.67 | 0.0000 | P | 91.5 |
| 2 | ☐ | 200.000 | 211.308 | 290.01 | 0.0005 | P | 19.0 |
| 3 | ☐ | 500.000 | 531.481 | 703.36 | 0.0013 | P | 6.6 |
| 4 | ☐ | 1000.000 | 1124.964 | 1450.11 | 0.0028 | P | 8.1 |
| 5 | ☐ | 10000.00 | 9762.480 | 12232.32 | 0.0239 | P | 3.2 |
| 6 | ☐ | 20000.00 | 20111.61 | 24705.94 | 0.0493 | P | 0.4 |

y = 2.4499E-006 * x + 3.1186E-005
R = 0.9999
DL = 34.96
BEC = 12.73

Weight: <None>
Min Conc: <None>

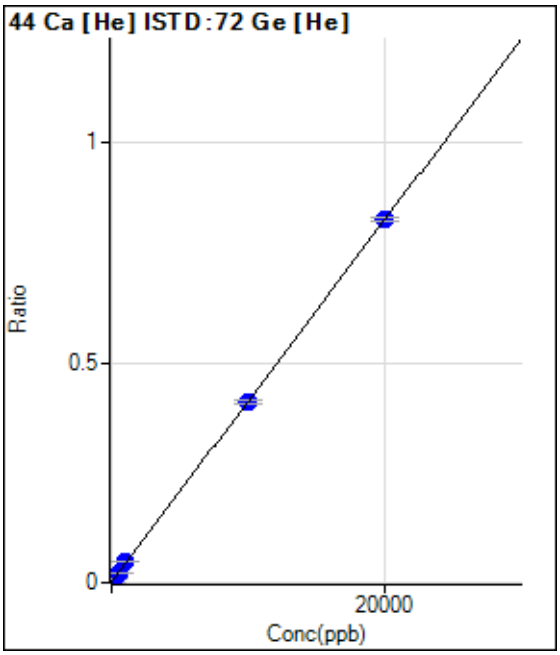



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 23617.25 | 0.0141 | P | 2.5 |
| 2 | ☐ | 2.000 | 1.889 | 84512.71 | 0.0494 | P | 2.3 |
| 3 | ☐ | 5.000 | 5.036 | 183637.38 | 0.1084 | P | 0.9 |
| 4 | ☐ | 10.000 | 11.184 | 375528.85 | 0.2235 | P | 3.4 |
| 5 | ☐ | 100.000 | 100.461 | 3142422.87 | 1.8951 | A | 1.1 |
| 6 | ☐ | 200.000 | 199.711 | 6079906.99 | 3.7535 | A | 2.6 |

y = 0.0187 * x + 0.0141
R = 1.0000
DL = 0.05687
BEC = 0.7506

Weight: <None>
Min Conc: <None>

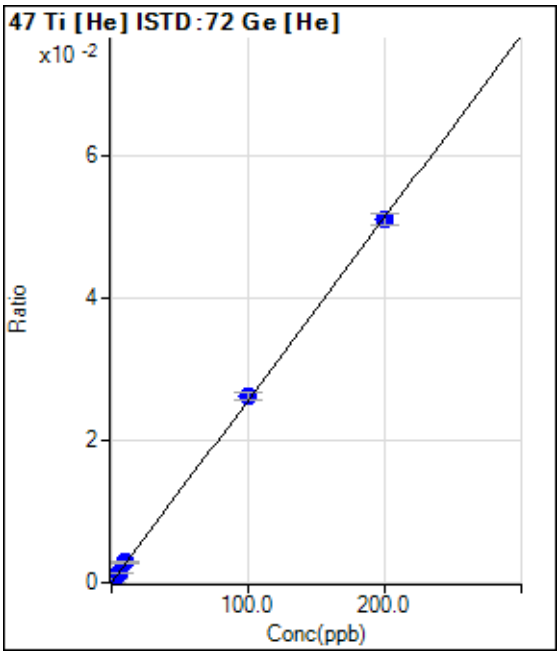
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 593.36 | 0.0011 | P | 6.9 |
| 2 | ☐ | 200.000 | 183.786 | 4590.88 | 0.0087 | P | 5.9 |
| 3 | ☐ | 500.000 | 507.334 | 11611.82 | 0.0220 | P | 2.4 |
| 4 | ☐ | 1000.000 | 1130.330 | 24802.77 | 0.0477 | P | 1.1 |
| 5 | ☐ | 10000.00 | 9960.922 | 210046.45 | 0.4113 | P | 1.7 |
| 6 | ☐ | 20000.00 | 20013.00 | 413499.04 | 0.8252 | P | 1.2 |

y = 4.1175E-005 * x + 0.0011
R = 1.0000
DL = 5.615
BEC = 27.16

Weight: <None>
Min Conc: <None>

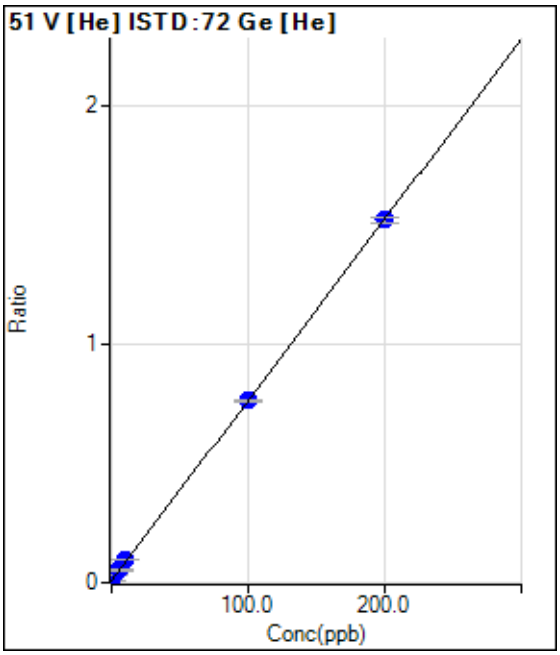



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 1.920 | 263.34 | 0.0005 | P | 10.0 |
| 3 | ☐ | 5.000 | 5.306 | 720.04 | 0.0014 | P | 10.4 |
| 4 | ☐ | 10.000 | 11.448 | 1530.12 | 0.0029 | P | 7.3 |
| 5 | ☐ | 100.000 | 102.271 | 13380.11 | 0.0262 | P | 3.9 |
| 6 | ☐ | 200.000 | 198.785 | 25524.15 | 0.0509 | P | 3.0 |

y = 2.5620E-004 * x + 6.2258E-006
R = 0.9999
DL = 0.1263
BEC = 0.0243

Weight: <None>
Min Conc: <None>

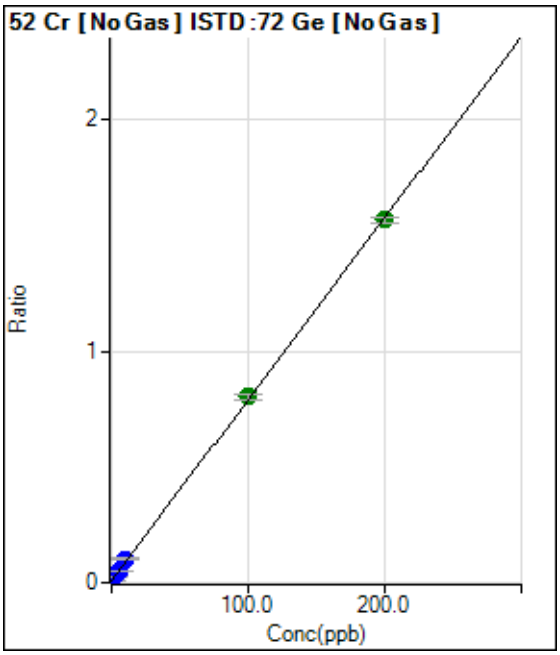
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 4168.44 | 0.0079 | P | 2.1 |
| 2 | ☐ | 2.000 | 2.755 | 15200.69 | 0.0287 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.931 | 27878.34 | 0.0528 | P | 1.4 |
| 4 | ☐ | 10.000 | 12.216 | 52301.63 | 0.1005 | P | 0.5 |
| 5 | ☐ | 100.000 | 99.962 | 391110.69 | 0.7659 | P | 1.4 |
| 6 | ☐ | 200.000 | 199.877 | 763522.64 | 1.5237 | P | 1.8 |

y = 0.0076 * x + 0.0079
R = 1.0000
DL = 0.06477
BEC = 1.036

Weight: <None>
Min Conc: <None>

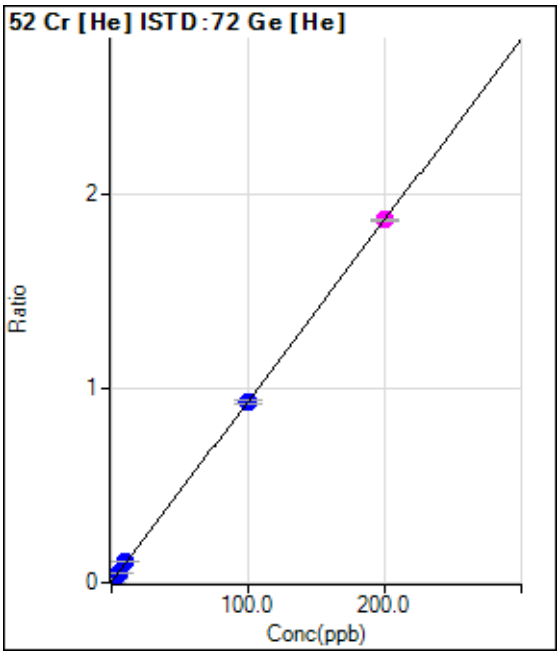



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 13490.19 | 0.0080 | P | 2.8 |
| 2 | ☐ | 2.000 | 2.666 | 49402.71 | 0.0289 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.797 | 90502.34 | 0.0534 | P | 1.7 |
| 4 | ☐ | 10.000 | 12.204 | 174069.94 | 0.1035 | P | 2.5 |
| 5 | ☐ | 100.000 | 101.630 | 1332066.31 | 0.8035 | A | 2.9 |
| 6 | ☐ | 200.000 | 199.048 | 2536885.69 | 1.5659 | A | 1.4 |

y = 0.0078 * x + 0.0080
R = 0.9999
DL = 0.08659
BEC = 1.026

Weight: <None>
Min Conc: <None>

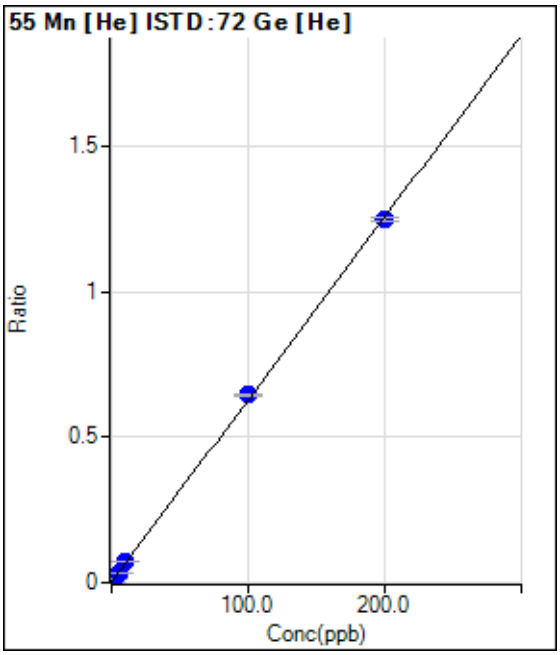
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1306.76 | 0.0025 | P | 8.3 |
| 2 | ☐ | 2.000 | 1.970 | 11031.32 | 0.0209 | P | 1.6 |
| 3 | ☐ | 5.000 | 5.162 | 26739.79 | 0.0507 | P | 3.5 |
| 4 | ☐ | 10.000 | 11.303 | 56233.15 | 0.1081 | P | 2.8 |
| 5 | ☐ | 100.000 | 99.578 | 476314.49 | 0.9328 | P | 1.4 |
| 6 | ☐ | 200.000 | 200.142 | 938225.48 | 1.8723 | M | 0.8 |

y = 0.0093 * x + 0.0025
R = 1.0000
DL = 0.06577
BEC = 0.2636

Weight: <None>
Min Conc: <None>

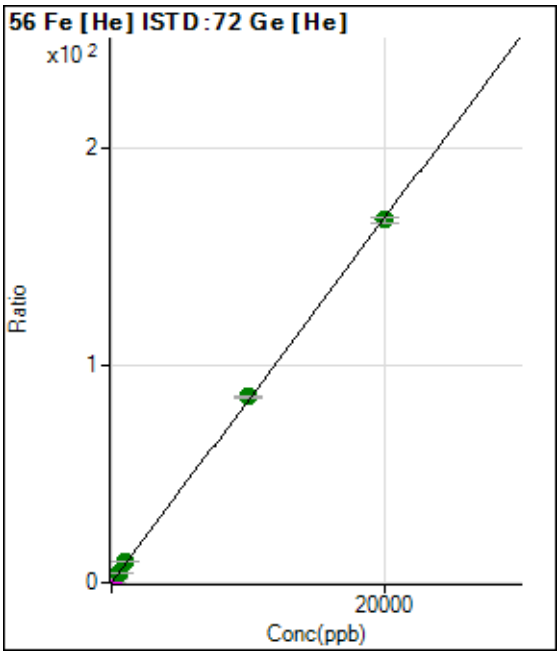



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1180.07 | 0.0022 | P | 10.6 |
| 2 | ☐ | 2.000 | 2.008 | 7832.39 | 0.0148 | P | 4.7 |
| 3 | ☐ | 5.000 | 5.009 | 17741.81 | 0.0336 | P | 3.7 |
| 4 | ☐ | 10.000 | 11.429 | 38451.51 | 0.0739 | P | 1.5 |
| 5 | ☐ | 100.000 | 102.597 | 329643.51 | 0.6455 | P | 0.3 |
| 6 | ☐ | 200.000 | 198.630 | 625203.90 | 1.2477 | P | 1.2 |

y = 0.0063 * x + 0.0022
R = 0.9999
DL = 0.1132
BEC = 0.3545

Weight: <None>
Min Conc: <None>

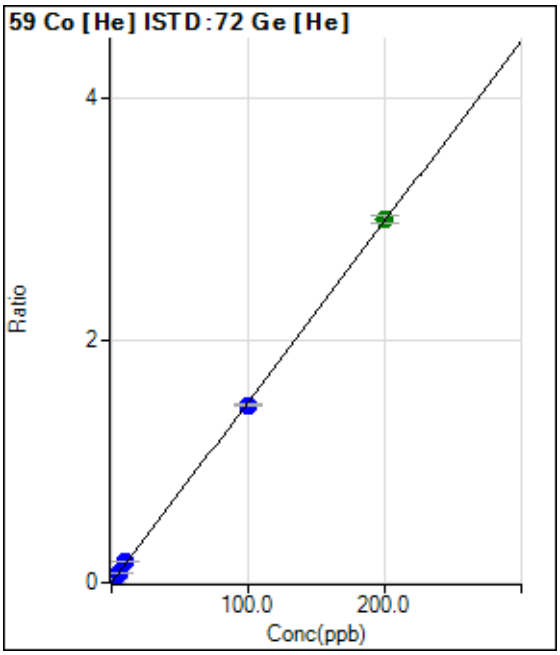
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 5481.18 | 0.0103 | P | 2.8 |
| 2 | ☐ | 200.000 | 209.851 | 935949.51 | 1.7700 | M | 1.4 |
| 3 | ☐ | 500.000 | 533.215 | 2364601.68 | 4.4815 | A | 1.7 |
| 4 | ☐ | 1000.000 | 1155.871 | 5049631.49 | 9.7026 | A | 1.1 |
| 5 | ☐ | 10000.00 | 10183.07 | 43606426.01 | 85.3982 | A | 1.4 |
| 6 | ☐ | 20000.00 | 19899.74 | 83620213.75 | 166.875 | A | 1.6 |

y = 0.0084 * x + 0.0103
R = 0.9999
DL = 0.1027
BEC = 1.231

Weight: <None>
Min Conc: <None>

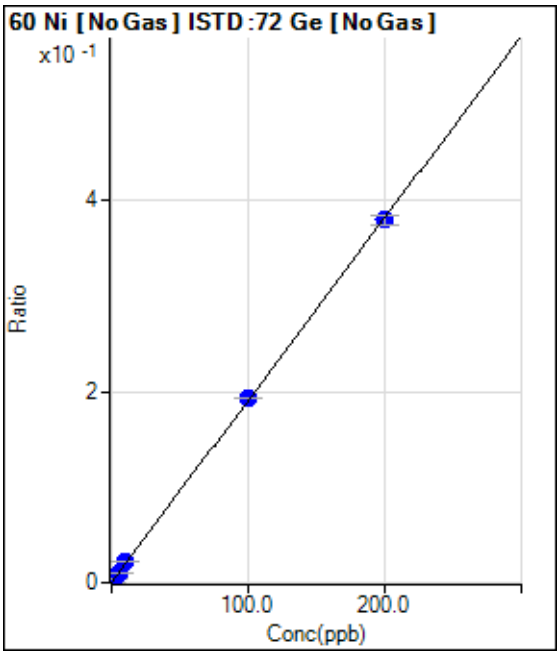



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 256.67 | 0.0005 | P | 19.0 |
| 2 | ☐ | 2.000 | 2.032 | 16249.96 | 0.0307 | P | 4.6 |
| 3 | ☐ | 5.000 | 5.071 | 40089.48 | 0.0760 | P | 2.3 |
| 4 | ☐ | 10.000 | 11.260 | 87472.08 | 0.1681 | P | 0.8 |
| 5 | ☐ | 100.000 | 98.225 | 746821.66 | 1.4625 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.822 | 1498047.32 | 2.9896 | A | 2.1 |

y = 0.0149 * x + 4.8288E-004
R = 0.9999
DL = 0.01848
BEC = 0.03244

Weight: <None>
Min Conc: <None>

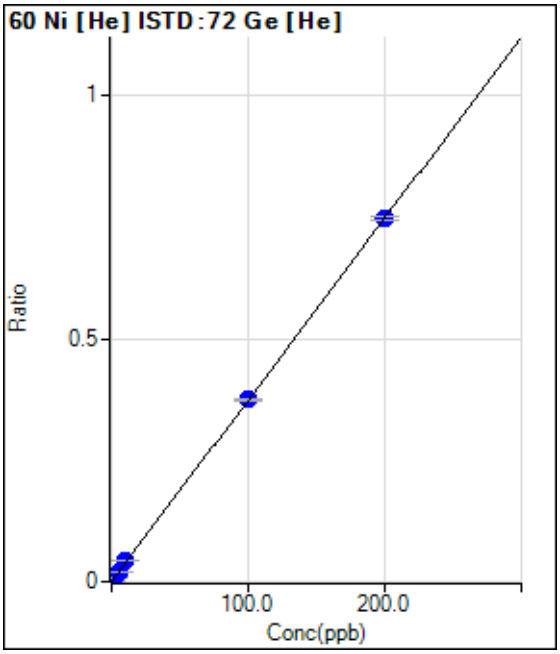
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 313.34 | 0.0002 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.123 | 7242.07 | 0.0042 | P | 2.0 |
| 3 | ☐ | 5.000 | 5.298 | 17431.53 | 0.0103 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.780 | 38063.69 | 0.0226 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.634 | 321595.35 | 0.1939 | P | 0.2 |
| 6 | ☐ | 200.000 | 199.085 | 615081.67 | 0.3797 | P | 2.4 |

y = 0.0019 * x + 1.8664E-004
R = 0.9999
DL = 0.01708
BEC = 0.0979

Weight: <None>
Min Conc: <None>

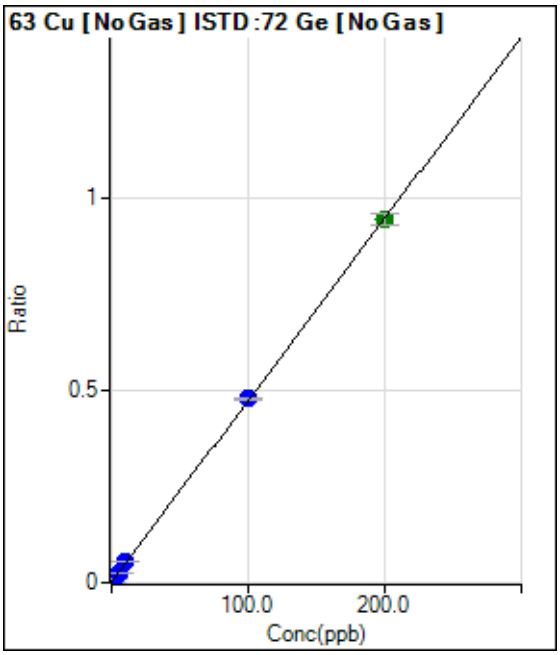



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 150.00 | 0.0003 | P | 34.4 |
| 2 | ☐ | 2.000 | 2.032 | 4160.72 | 0.0079 | P | 9.7 |
| 3 | ☐ | 5.000 | 5.282 | 10557.62 | 0.0200 | P | 2.7 |
| 4 | ☐ | 10.000 | 11.857 | 23186.73 | 0.0446 | P | 2.8 |
| 5 | ☐ | 100.000 | 100.077 | 190956.21 | 0.3740 | P | 1.6 |
| 6 | ☐ | 200.000 | 199.861 | 374109.62 | 0.7466 | P | 1.0 |

y = 0.0037 * x + 2.8187E-004
R = 1.0000
DL = 0.07796
BEC = 0.07548

Weight: <None>
Min Conc: <None>

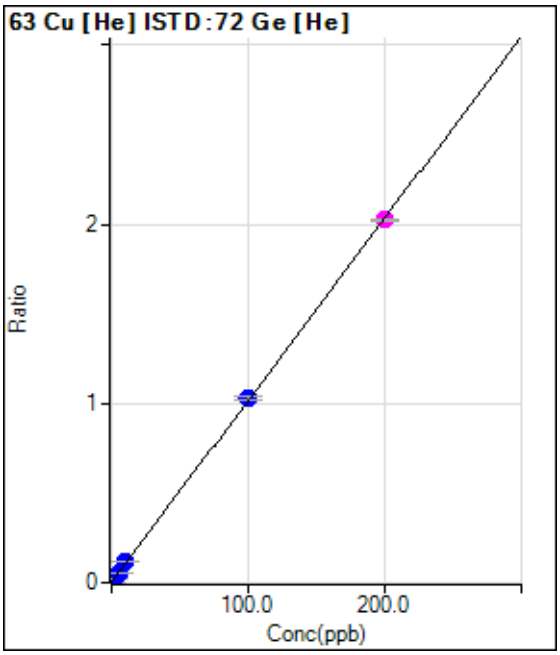
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1650.13 | 0.0010 | P | 10.5 |
| 2 | ☐ | 2.000 | 2.110 | 18706.55 | 0.0109 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.254 | 43671.07 | 0.0258 | P | 2.6 |
| 4 | ☐ | 10.000 | 11.722 | 94639.95 | 0.0563 | P | 1.1 |
| 5 | ☐ | 100.000 | 101.024 | 792086.66 | 0.4777 | P | 0.5 |
| 6 | ☐ | 200.000 | 199.394 | 1525520.13 | 0.9418 | A | 3.0 |

y = 0.0047 * x + 9.8236E-004
R = 1.0000
DL = 0.06549
BEC = 0.2082

Weight: <None>
Min Conc: <None>

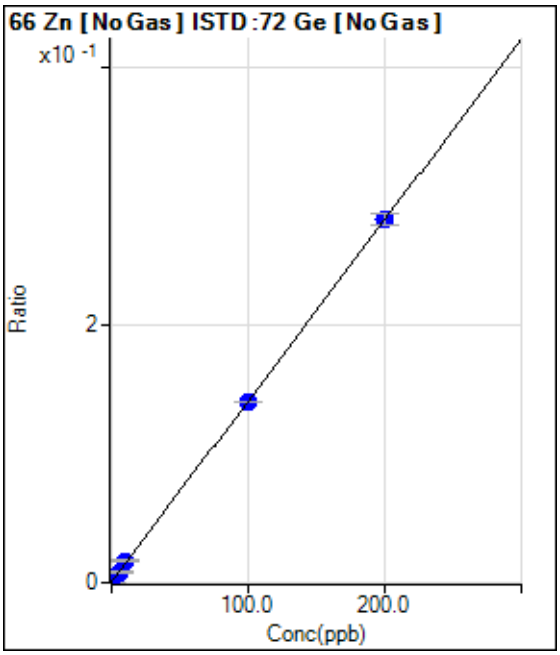



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1030.05 | 0.0019 | P | 1.3 |
| 2 | ☐ | 2.000 | 2.052 | 12035.53 | 0.0228 | P | 3.9 |
| 3 | ☐ | 5.000 | 5.210 | 28924.86 | 0.0548 | P | 2.4 |
| 4 | ☐ | 10.000 | 11.638 | 62490.70 | 0.1201 | P | 0.6 |
| 5 | ☐ | 100.000 | 101.276 | 525850.11 | 1.0299 | P | 2.4 |
| 6 | ☐ | 200.000 | 199.274 | 1014546.60 | 2.0246 | M | 0.8 |

y = 0.0102 * x + 0.0019
R = 0.9999
DL = 0.007658
BEC = 0.1912

Weight: <None>
Min Conc: <None>

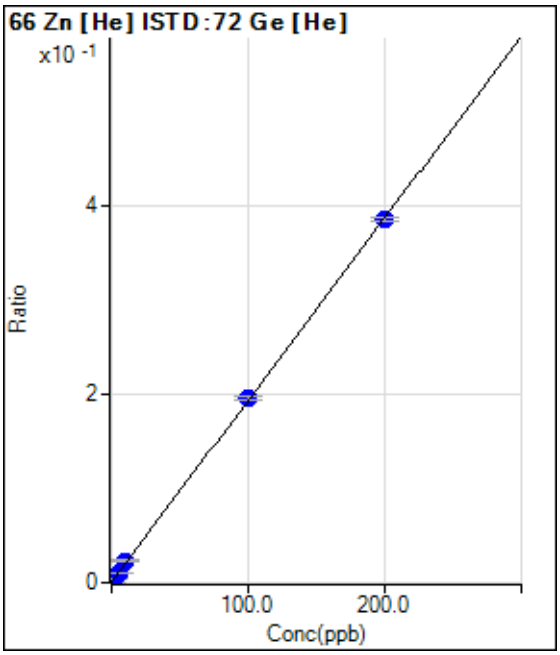
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 933.39 | 0.0006 | P | 16.5 |
| 2 | ☐ | 2.000 | 2.320 | 6525.03 | 0.0038 | P | 3.4 |
| 3 | ☐ | 5.000 | 5.335 | 13647.18 | 0.0081 | P | 6.6 |
| 4 | ☐ | 10.000 | 11.816 | 28837.85 | 0.0172 | P | 0.7 |
| 5 | ☐ | 100.000 | 99.616 | 232968.88 | 0.1405 | P | 0.7 |
| 6 | ☐ | 200.000 | 200.090 | 456141.96 | 0.2816 | P | 3.1 |

y = 0.0014 * x + 5.5656E-004
R = 1.0000
DL = 0.1962
BEC = 0.3962

Weight: <None>
Min Conc: <None>

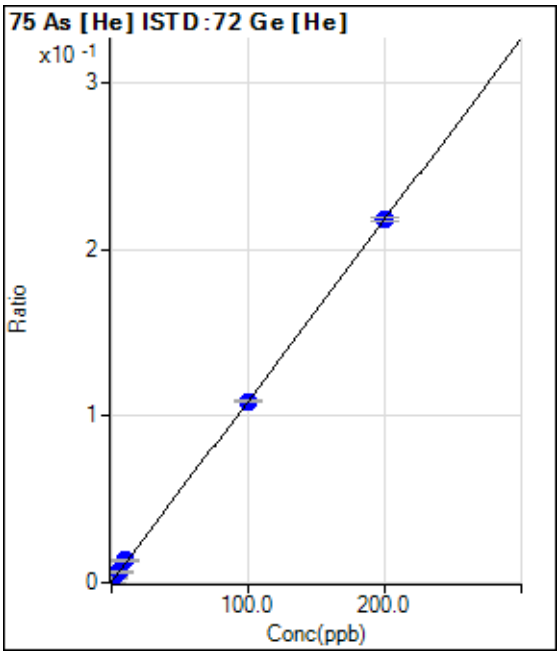



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 296.68 | 0.0006 | P | 23.8 |
| 2 | ☐ | 2.000 | 2.221 | 2556.94 | 0.0048 | P | 16.5 |
| 3 | ☐ | 5.000 | 5.124 | 5504.54 | 0.0104 | P | 5.7 |
| 4 | ☐ | 10.000 | 11.674 | 12002.16 | 0.0231 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.500 | 100181.30 | 0.1962 | P | 1.7 |
| 6 | ☐ | 200.000 | 199.161 | 192641.95 | 0.3844 | P | 1.0 |

y = 0.0019 * x + 5.5894E-004
R = 0.9999
DL = 0.2068
BEC = 0.29

Weight: <None>
Min Conc: <None>

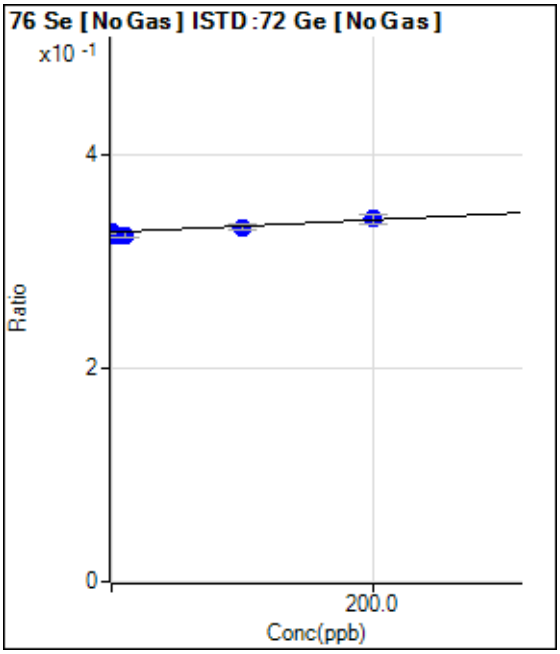
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 203.34 | 0.0004 | P | 22.8 |
| 2 | ☐ | 2.000 | 2.312 | 1532.32 | 0.0029 | P | 4.0 |
| 3 | ☐ | 5.000 | 5.499 | 3358.22 | 0.0064 | P | 1.6 |
| 4 | ☐ | 10.000 | 11.989 | 6985.18 | 0.0134 | P | 2.3 |
| 5 | ☐ | 100.000 | 99.905 | 55675.38 | 0.1090 | P | 0.4 |
| 6 | ☐ | 200.000 | 199.932 | 109139.12 | 0.2178 | P | 1.1 |

y = 0.0011 * x + 3.8370E-004
R = 1.0000
DL = 0.2418
BEC = 0.3528

Weight: <None>
Min Conc: <None>

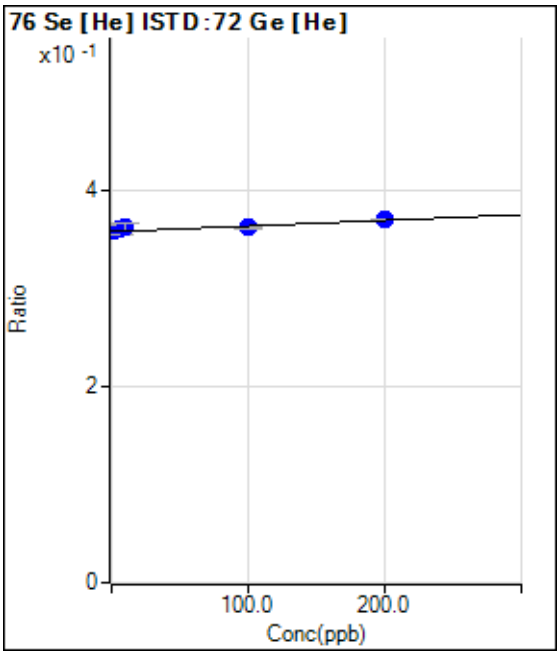



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 549267.10 | 0.3269 | P | 0.2 |
| 2 | ☐ | 2.000 | -63.603 | 552711.98 | 0.3232 | P | 2.0 |
| 3 | ☐ | 5.000 | -58.602 | 548166.28 | 0.3235 | P | 1.2 |
| 4 | ☐ | 10.000 | -38.740 | 545634.03 | 0.3246 | P | 2.1 |
| 5 | ☐ | 100.000 | 80.188 | 549682.96 | 0.3315 | P | 1.6 |
| 6 | ☐ | 200.000 | 214.589 | 549654.39 | 0.3393 | P | 2.7 |

y = 5.8100E-005 * x + 0.3269
R = 0.9746
DL = 28.38
BEC = 5626

Weight: <None>
Min Conc: <None>

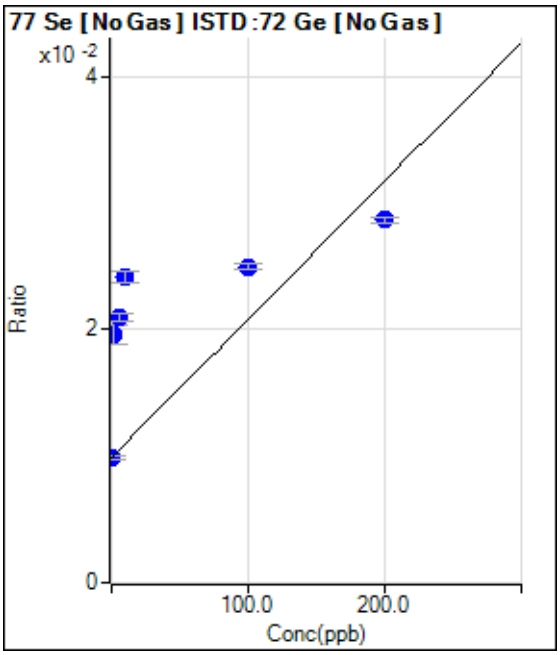
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 189505.80 | 0.3570 | P | 0.6 |
| 2 | ☐ | 2.000 | 30.900 | 189726.88 | 0.3588 | P | 1.5 |
| 3 | ☐ | 5.000 | 36.376 | 189489.47 | 0.3591 | P | 2.5 |
| 4 | ☐ | 10.000 | 81.114 | 188254.13 | 0.3617 | P | 1.8 |
| 5 | ☐ | 100.000 | 77.348 | 184631.09 | 0.3615 | P | 0.6 |
| 6 | ☐ | 200.000 | 206.697 | 184933.13 | 0.3691 | P | 0.2 |

y = 5.8148E-005 * x + 0.3570
R = 0.9191
DL = 112.5
BEC = 6140

Weight: <None>
Min Conc: <None>

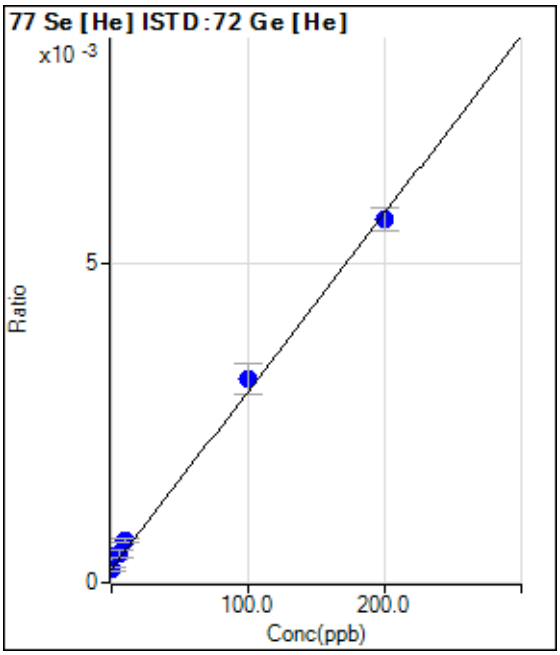



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 16660.60 | 0.0099 | P | 3.2 |
| 2 | ☐ | 2.000 | 88.567 | 33468.87 | 0.0196 | P | 8.1 |
| 3 | ☐ | 5.000 | 101.550 | 35590.77 | 0.0210 | P | 2.6 |
| 4 | ☐ | 10.000 | 129.876 | 40504.82 | 0.0241 | P | 3.8 |
| 5 | ☐ | 100.000 | 137.963 | 41414.00 | 0.0250 | P | 2.0 |
| 6 | ☐ | 200.000 | 171.745 | 46446.90 | 0.0287 | P | 1.8 |

y = 1.0917E-004 * x + 0.0099
R = 0.6982
DL = 8.771
BEC = 90.85

Weight: <None>
Min Conc: <None>

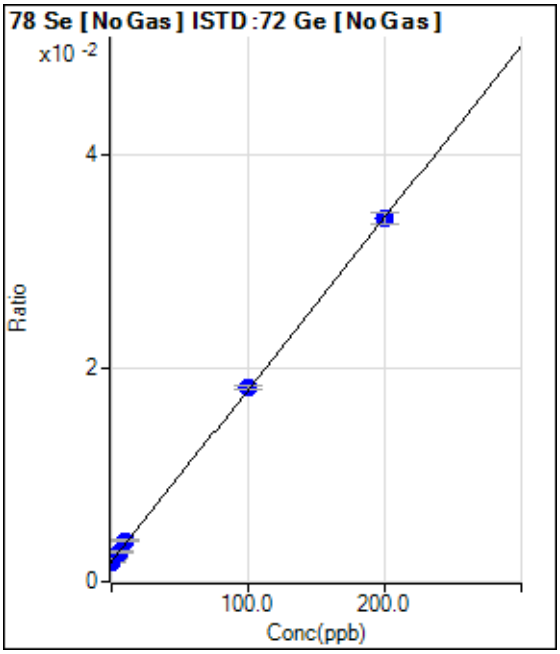
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 113.33 | 0.0002 | P | 23.4 |
| 2 | ☐ | 2.000 | 7.474 | 223.34 | 0.0004 | P | 24.7 |
| 3 | ☐ | 5.000 | 8.382 | 236.68 | 0.0004 | P | 22.6 |
| 4 | ☐ | 10.000 | 16.226 | 346.68 | 0.0007 | P | 7.9 |
| 5 | ☐ | 100.000 | 106.447 | 1626.79 | 0.0032 | P | 15.1 |
| 6 | ☐ | 200.000 | 196.326 | 2850.35 | 0.0057 | P | 6.2 |

y = 2.7886E-005 * x + 2.1389E-004
R = 0.9991
DL = 5.375
BEC = 7.67

Weight: <None>
Min Conc: <None>

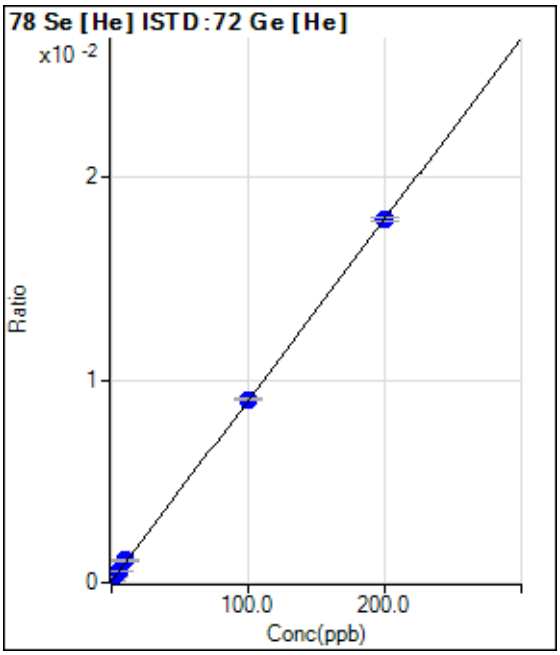



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3170.43 | 0.0019 | P | 5.8 |
| 2 | ☐ | 2.000 | 2.381 | 3883.96 | 0.0023 | P | 1.7 |
| 3 | ☐ | 5.000 | 5.341 | 4650.90 | 0.0027 | P | 8.6 |
| 4 | ☐ | 10.000 | 11.928 | 6398.29 | 0.0038 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.043 | 30090.66 | 0.0181 | P | 2.3 |
| 6 | ☐ | 200.000 | 199.370 | 55026.19 | 0.0340 | P | 3.2 |

y = 1.6094E-004 * x + 0.0019
R = 1.0000
DL = 2.035
BEC = 11.72

Weight: <None>
Min Conc: <None>

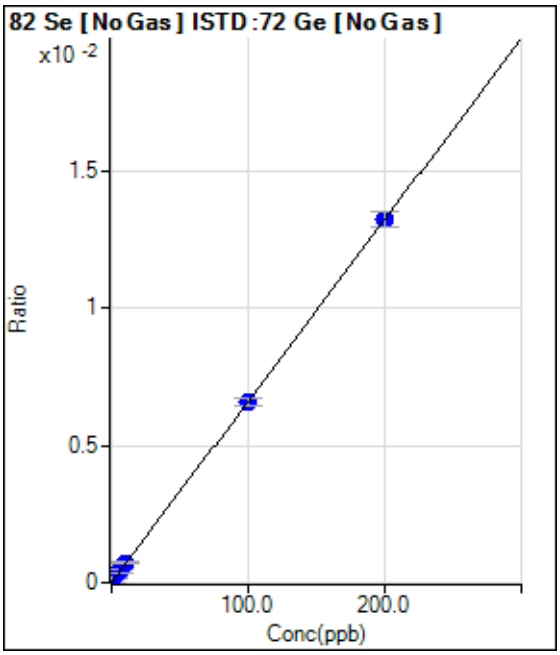
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 33.33 | 0.0001 | P | 35.9 |
| 2 | ☐ | 2.000 | 2.164 | 135.33 | 0.0003 | P | 14.4 |
| 3 | ☐ | 5.000 | 5.844 | 308.67 | 0.0006 | P | 4.5 |
| 4 | ☐ | 10.000 | 11.645 | 574.01 | 0.0011 | P | 2.9 |
| 5 | ☐ | 100.000 | 100.391 | 4610.13 | 0.0090 | P | 1.1 |
| 6 | ☐ | 200.000 | 199.699 | 8967.68 | 0.0179 | P | 1.1 |

y = 8.9298E-005 * x + 6.2935E-005
R = 1.0000
DL = 0.759
BEC = 0.7048

Weight: <None>
Min Conc: <None>

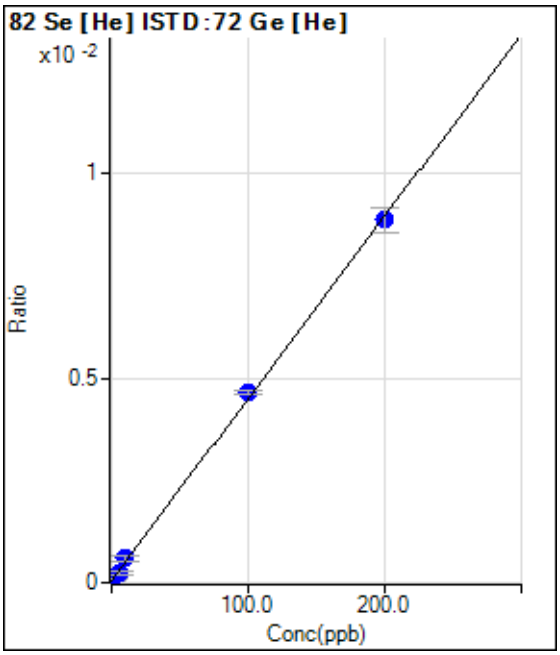



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | -41.47 | 0.0000 | P | -43.2 |
| 2 | ☐ | 2.000 | 2.784 | 272.15 | 0.0002 | P | 47.9 |
| 3 | ☐ | 5.000 | 6.017 | 632.14 | 0.0004 | P | 34.4 |
| 4 | ☐ | 10.000 | 11.069 | 1191.98 | 0.0007 | P | 8.5 |
| 5 | ☐ | 100.000 | 99.555 | 10899.93 | 0.0066 | P | 3.5 |
| 6 | ☐ | 200.000 | 200.136 | 21453.01 | 0.0132 | P | 4.3 |

y = 6.6296E-005 * x - 2.4782E-005
R = 1.0000
DL = 0.4848
BEC = -0.3738

Weight: <None>
Min Conc: <None>

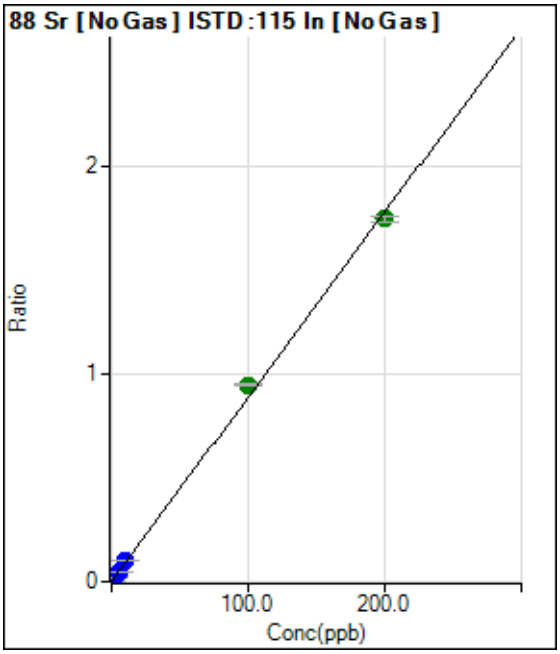
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 26.67 | 0.0001 | P | 79.1 |
| 2 | ☐ | 2.000 | 1.838 | 70.00 | 0.0001 | P | 37.8 |
| 3 | ☐ | 5.000 | 3.961 | 120.00 | 0.0002 | P | 28.6 |
| 4 | ☐ | 10.000 | 12.398 | 313.34 | 0.0006 | P | 23.0 |
| 5 | ☐ | 100.000 | 103.581 | 2380.25 | 0.0047 | P | 1.6 |
| 6 | ☐ | 200.000 | 198.117 | 4444.14 | 0.0089 | P | 6.8 |

y = 4.4505E-005 * x + 5.0541E-005
R = 0.9997
DL = 2.696
BEC = 1.136

Weight: <None>
Min Conc: <None>

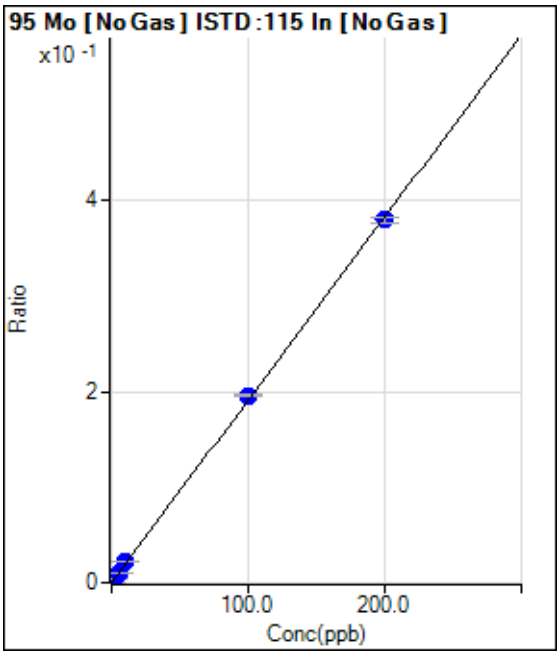



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 2056.86 | 0.0010 | P | 6.6 |
| 2 | ☐ | 2.000 | 2.054 | 39057.46 | 0.0192 | P | 1.9 |
| 3 | ☐ | 5.000 | 5.062 | 96243.50 | 0.0459 | P | 2.5 |
| 4 | ☐ | 10.000 | 11.306 | 207012.44 | 0.1013 | P | 3.9 |
| 5 | ☐ | 100.000 | 106.724 | 1871818.67 | 0.9481 | A | 0.7 |
| 6 | ☐ | 200.000 | 196.570 | 3471502.45 | 1.7454 | A | 1.7 |

y = 0.0089 * x + 9.6840E-004
R = 0.9992
DL = 0.02163
BEC = 0.1091

Weight: <None>
Min Conc: <None>

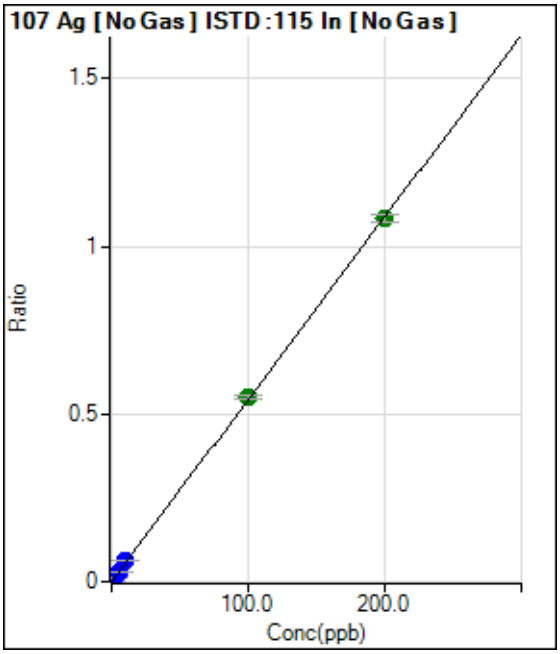
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 56.67 | 0.0000 | P | 12.5 |
| 2 | ☐ | 2.000 | 2.088 | 8172.68 | 0.0040 | P | 2.6 |
| 3 | ☐ | 5.000 | 4.919 | 19768.38 | 0.0094 | P | 2.2 |
| 4 | ☐ | 10.000 | 11.418 | 44641.96 | 0.0218 | P | 5.6 |
| 5 | ☐ | 100.000 | 102.518 | 386787.65 | 0.1959 | P | 0.9 |
| 6 | ☐ | 200.000 | 198.671 | 755022.25 | 0.3796 | P | 1.5 |

y = 0.0019 * x + 2.6703E-005
R = 0.9999
DL = 0.005236
BEC = 0.01397

Weight: <None>
Min Conc: <None>

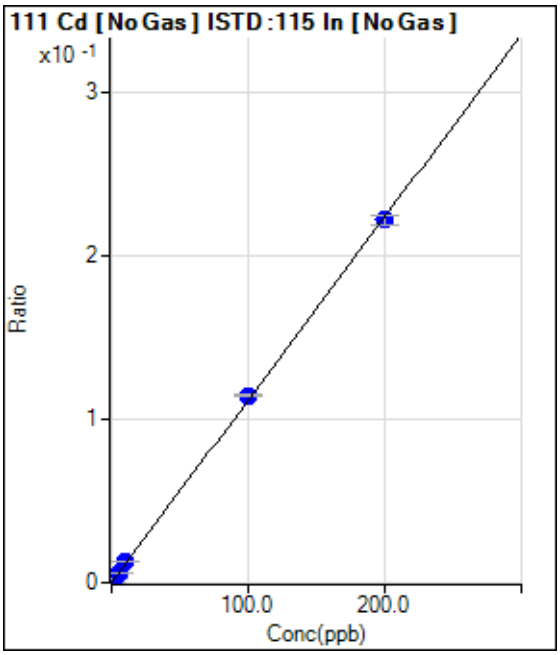



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 176.67 | 0.0001 | P | 15.9 |
| 2 | ☐ | 2.000 | 2.122 | 23621.58 | 0.0116 | P | 2.5 |
| 3 | ☐ | 5.000 | 5.074 | 57980.93 | 0.0277 | P | 2.1 |
| 4 | ☐ | 10.000 | 11.449 | 127291.58 | 0.0623 | P | 4.1 |
| 5 | ☐ | 100.000 | 101.586 | 1089834.10 | 0.5520 | A | 2.1 |
| 6 | ☐ | 200.000 | 199.132 | 2151939.40 | 1.0821 | A | 2.0 |

y = 0.0054 * x + 8.2957E-005
R = 0.9999
DL = 0.007271
BEC = 0.01527

Weight: <None>
Min Conc: <None>

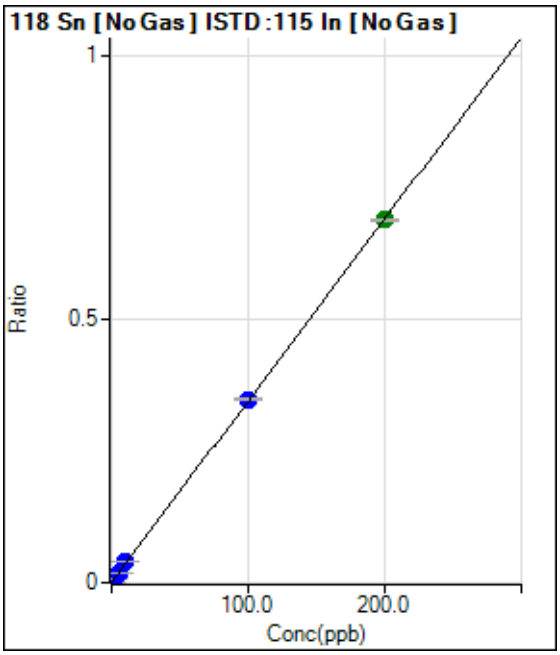
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3.33 | 0.0000 | P | 173.2 |
| 2 | ☐ | 2.000 | 2.071 | 4717.61 | 0.0023 | P | 6.9 |
| 3 | ☐ | 5.000 | 5.012 | 11765.47 | 0.0056 | P | 4.3 |
| 4 | ☐ | 10.000 | 11.661 | 26660.71 | 0.0130 | P | 3.1 |
| 5 | ☐ | 100.000 | 102.583 | 226541.25 | 0.1147 | P | 0.8 |
| 6 | ☐ | 200.000 | 198.625 | 441773.33 | 0.2222 | P | 2.8 |

y = 0.0011 * x + 1.5280E-006
R = 0.9999
DL = 0.007098
BEC = 0.001366

Weight: <None>
Min Conc: <None>

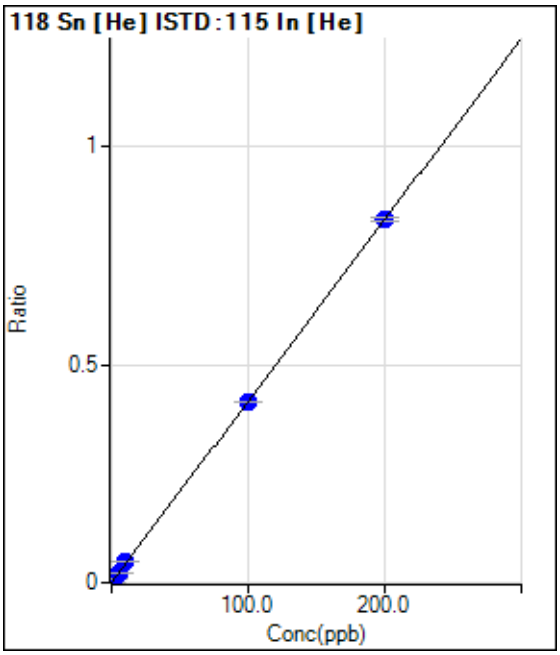



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 830.04 | 0.0004 | P | 12.2 |
| 2 | ☐ | 2.000 | 2.099 | 15512.81 | 0.0076 | P | 4.3 |
| 3 | ☐ | 5.000 | 4.845 | 35856.12 | 0.0171 | P | 1.1 |
| 4 | ☐ | 10.000 | 11.338 | 80742.12 | 0.0395 | P | 0.7 |
| 5 | ☐ | 100.000 | 100.607 | 685723.43 | 0.3473 | P | 1.0 |
| 6 | ☐ | 200.000 | 199.632 | 1370156.13 | 0.6888 | A | 0.6 |

y = 0.0034 * x + 3.8934E-004
R = 1.0000
DL = 0.0412
BEC = 0.1129

Weight: <None>
Min Conc: <None>

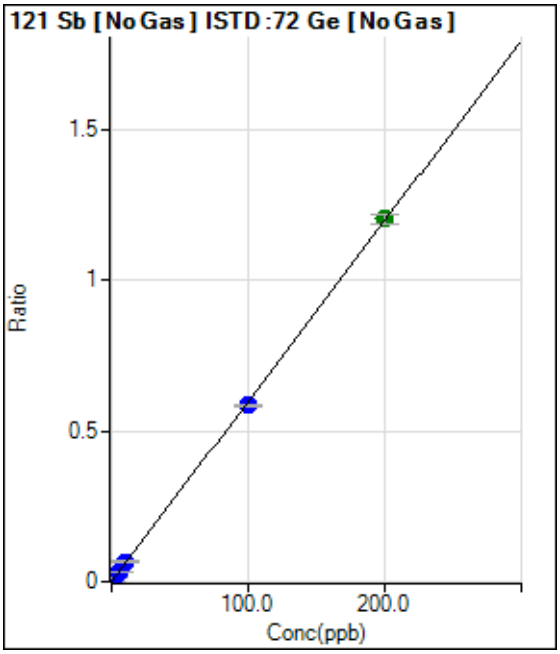
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 363.35 | 0.0004 | P | 21.6 |
| 2 | ☐ | 2.000 | 1.953 | 7835.82 | 0.0085 | P | 5.4 |
| 3 | ☐ | 5.000 | 5.021 | 18973.98 | 0.0213 | P | 4.2 |
| 4 | ☐ | 10.000 | 11.220 | 42302.17 | 0.0470 | P | 2.7 |
| 5 | ☐ | 100.000 | 99.804 | 365963.80 | 0.4151 | P | 0.6 |
| 6 | ☐ | 200.000 | 200.037 | 719082.64 | 0.8316 | P | 1.2 |

y = 0.0042 * x + 3.9301E-004
R = 1.0000
DL = 0.06136
BEC = 0.09458

Weight: <None>
Min Conc: <None>

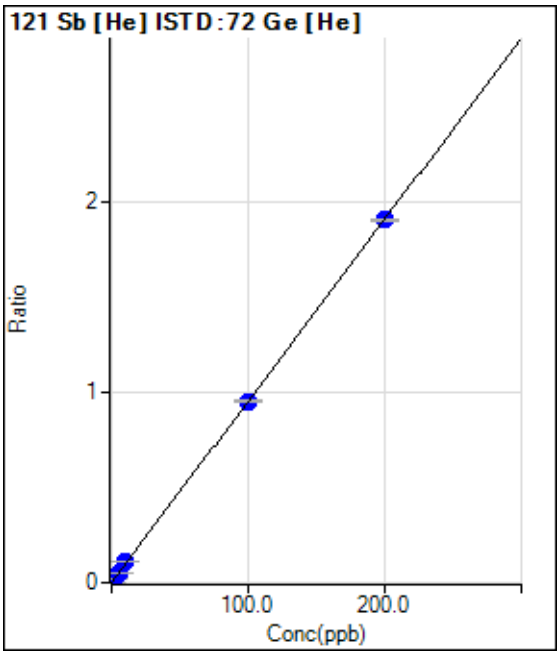



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 556.69 | 0.0003 | P | 9.0 |
| 2 | ☐ | 2.000 | 1.963 | 20619.90 | 0.0121 | P | 3.2 |
| 3 | ☐ | 5.000 | 4.946 | 50631.70 | 0.0299 | P | 1.4 |
| 4 | ☐ | 10.000 | 11.117 | 112185.01 | 0.0667 | P | 2.3 |
| 5 | ☐ | 100.000 | 97.614 | 967330.51 | 0.5834 | P | 1.5 |
| 6 | ☐ | 200.000 | 201.139 | 1946819.03 | 1.2019 | A | 2.8 |

y = 0.0060 * x + 3.3096E-004
R = 0.9999
DL = 0.01493
BEC = 0.0554

Weight: <None>
Min Conc: <None>

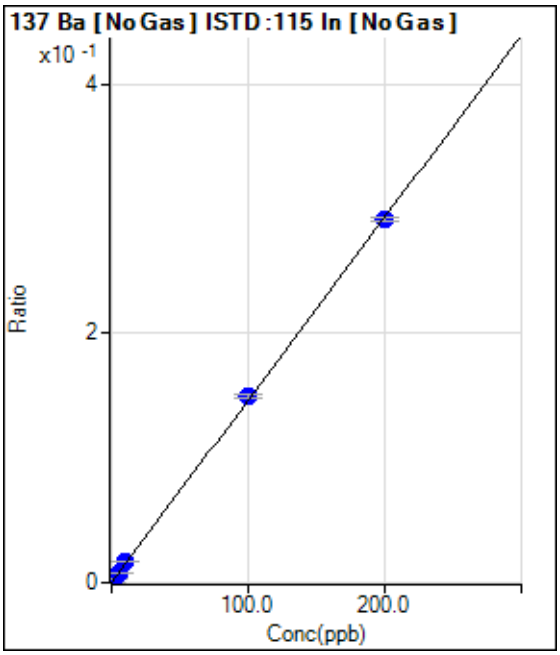
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 266.68 | 0.0005 | P | 6.9 |
| 2 | ☐ | 2.000 | 2.064 | 10661.29 | 0.0202 | P | 5.1 |
| 3 | ☐ | 5.000 | 4.972 | 25268.07 | 0.0479 | P | 4.4 |
| 4 | ☐ | 10.000 | 11.493 | 57255.13 | 0.1100 | P | 1.2 |
| 5 | ☐ | 100.000 | 100.063 | 487143.42 | 0.9540 | P | 1.3 |
| 6 | ☐ | 200.000 | 199.894 | 954754.31 | 1.9053 | P | 0.8 |

y = 0.0095 * x + 5.0221E-004
R = 1.0000
DL = 0.01089
BEC = 0.0527

Weight: <None>
Min Conc: <None>

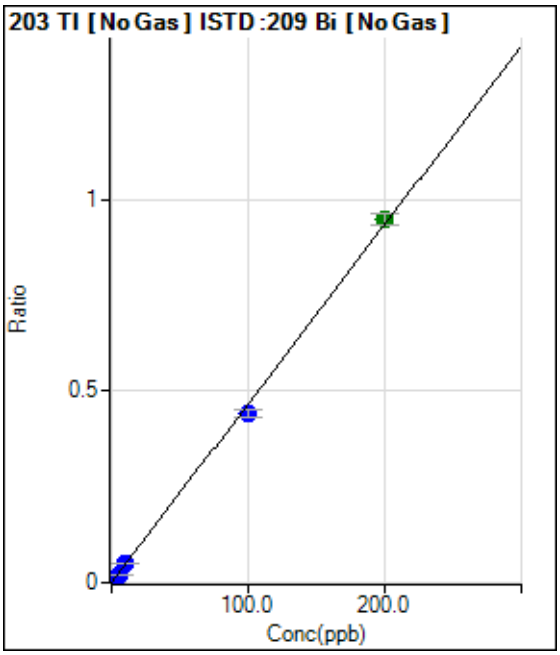



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 323.34 | 0.0002 | P | 10.3 |
| 2 | ☐ | 2.000 | 2.055 | 6425.05 | 0.0032 | P | 6.2 |
| 3 | ☐ | 5.000 | 4.881 | 15289.28 | 0.0073 | P | 0.8 |
| 4 | ☐ | 10.000 | 11.368 | 34302.37 | 0.0168 | P | 1.9 |
| 5 | ☐ | 100.000 | 102.271 | 295572.60 | 0.1497 | P | 2.0 |
| 6 | ☐ | 200.000 | 198.798 | 578548.95 | 0.2909 | P | 1.0 |

y = 0.0015 * x + 1.5236E-004
R = 0.9999
DL = 0.03222
BEC = 0.1042

Weight: <None>
Min Conc: <None>

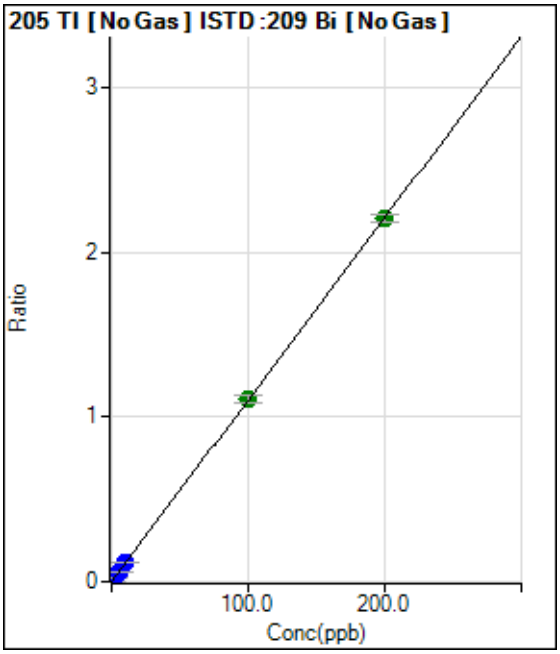
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 190.00 | 0.0001 | P | 24.3 |
| 2 | ☐ | 2.000 | 1.920 | 21138.33 | 0.0090 | P | 5.7 |
| 3 | ☐ | 5.000 | 4.729 | 52196.42 | 0.0222 | P | 1.6 |
| 4 | ☐ | 10.000 | 10.676 | 115325.89 | 0.0499 | P | 0.6 |
| 5 | ☐ | 100.000 | 94.291 | 999080.37 | 0.4404 | P | 5.0 |
| 6 | ☐ | 200.000 | 202.828 | 2051287.26 | 0.9472 | A | 3.2 |

y = 0.0047 * x + 8.1210E-005
R = 0.9994
DL = 0.01269
BEC = 0.01739

Weight: <None>
Min Conc: <None>

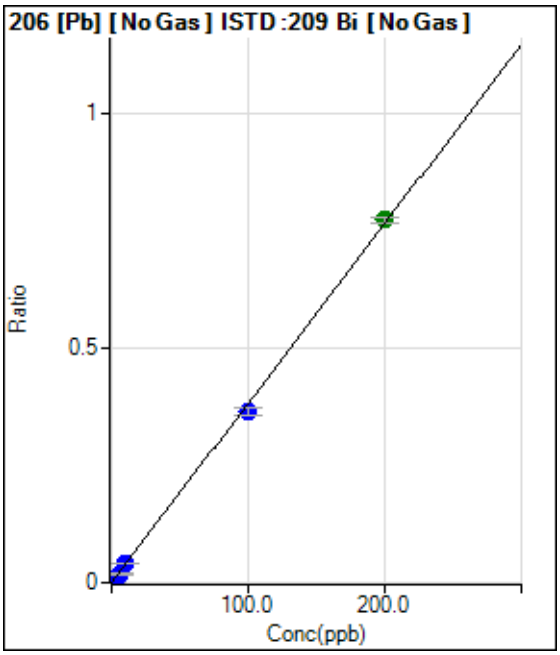



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 473.35 | 0.0002 | P | 26.4 |
| 2 | ☐ | 2.000 | 1.934 | 50315.23 | 0.0215 | P | 3.5 |
| 3 | ☐ | 5.000 | 4.829 | 125870.69 | 0.0534 | P | 1.3 |
| 4 | ☐ | 10.000 | 10.824 | 276099.75 | 0.1195 | P | 1.4 |
| 5 | ☐ | 100.000 | 100.698 | 2519794.34 | 1.1104 | A | 4.2 |
| 6 | ☐ | 200.000 | 199.614 | 4767765.24 | 2.2010 | A | 2.2 |

y = 0.0110 * x + 2.0240E-004
R = 1.0000
DL = 0.01456
BEC = 0.01836

Weight: <None>
Min Conc: <None>

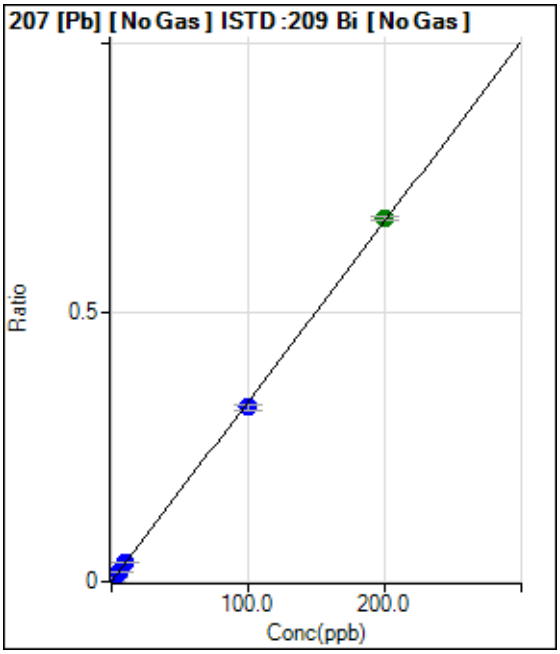
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 463.35 | 0.0002 | P | 7.0 |
| 2 | ☐ | 2.000 | 1.938 | 17799.73 | 0.0076 | P | 2.8 |
| 3 | ☐ | 5.000 | 4.718 | 42961.64 | 0.0183 | P | 6.8 |
| 4 | ☐ | 10.000 | 10.846 | 96326.80 | 0.0417 | P | 2.3 |
| 5 | ☐ | 100.000 | 95.382 | 828989.70 | 0.3653 | P | 3.5 |
| 6 | ☐ | 200.000 | 202.274 | 1677531.70 | 0.7744 | A | 1.7 |

y = 0.0038 * x + 1.9804E-004
R = 0.9996
DL = 0.01092
BEC = 0.05174

Weight: <None>
Min Conc: <None>

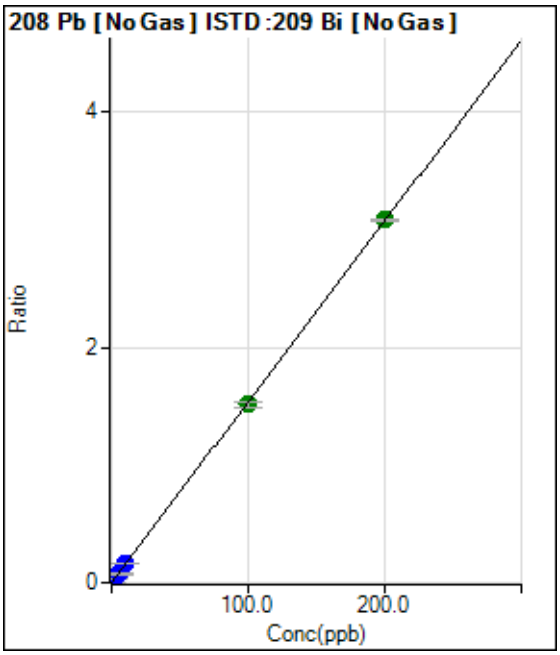



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 450.02 | 0.0002 | P | 23.6 |
| 2 | ☐ | 2.000 | 1.983 | 15930.45 | 0.0068 | P | 1.9 |
| 3 | ☐ | 5.000 | 4.912 | 39085.38 | 0.0166 | P | 3.1 |
| 4 | ☐ | 10.000 | 10.779 | 83600.87 | 0.0362 | P | 1.0 |
| 5 | ☐ | 100.000 | 97.025 | 735987.96 | 0.3243 | P | 3.3 |
| 6 | ☐ | 200.000 | 201.451 | 1457882.37 | 0.6731 | A | 1.0 |

y = 0.0033 * x + 1.9233E-004
R = 0.9998
DL = 0.0407
BEC = 0.05758

Weight: <None>
Min Conc: <None>

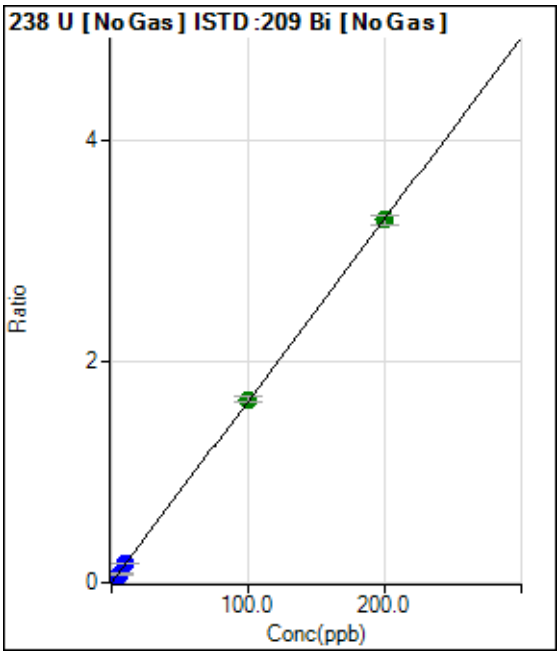
Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1826.75 | 0.0008 | P | 8.7 |
| 2 | ☐ | 2.000 | 1.960 | 72113.33 | 0.0308 | P | 1.3 |
| 3 | ☐ | 5.000 | 4.825 | 176126.12 | 0.0748 | P | 3.6 |
| 4 | ☐ | 10.000 | 10.871 | 387015.75 | 0.1676 | P | 0.9 |
| 5 | ☐ | 100.000 | 98.418 | 3429651.90 | 1.5107 | A | 2.5 |
| 6 | ☐ | 200.000 | 200.752 | 6673583.18 | 3.0807 | A | 0.6 |

y = 0.0153 * x + 7.8052E-004
R = 0.9999
DL = 0.01325
BEC = 0.05087

Weight: <None>
Min Conc: <None>

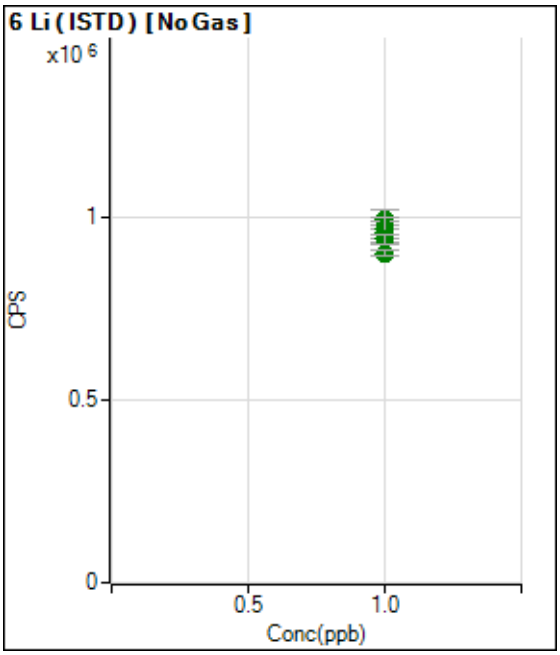



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 43.33 | 0.0000 | P | 47.8 |
| 2 | ☐ | 2.000 | 1.908 | 73361.33 | 0.0314 | P | 0.8 |
| 3 | ☐ | 5.000 | 4.754 | 184109.05 | 0.0782 | P | 1.0 |
| 4 | ☐ | 10.000 | 10.809 | 410458.07 | 0.1777 | P | 1.3 |
| 5 | ☐ | 100.000 | 100.599 | 3754126.50 | 1.6540 | A | 3.2 |
| 6 | ☐ | 200.000 | 199.667 | 7109814.06 | 3.2827 | A | 2.5 |

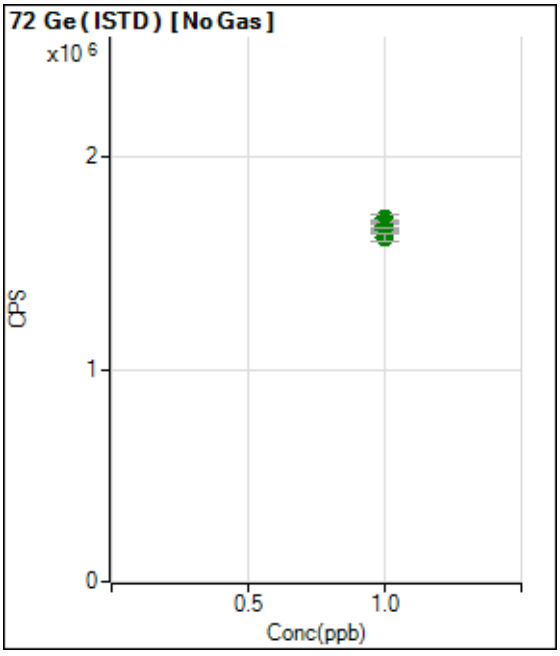
y = 0.0164 * x + 1.8496E-005
R = 1.0000
DL = 0.001612
BEC = 0.001125

Weight: <None>
Min Conc: <None>

Calibration for 112_ICV.d

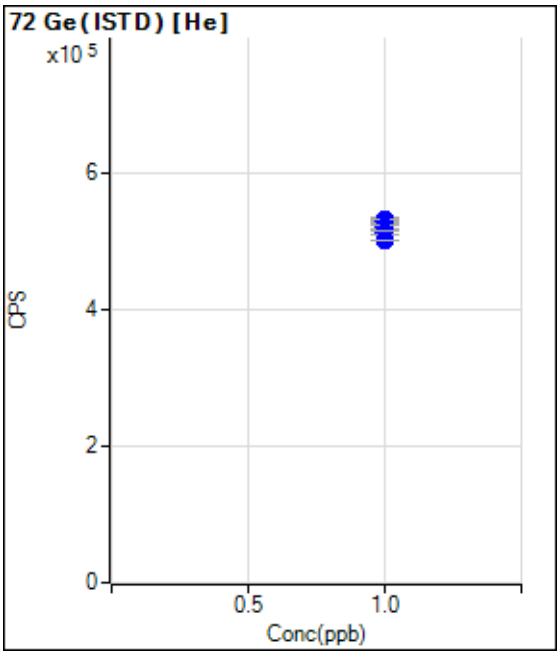



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 957132.97 | | A | 5.0 |
| 2 | ☐ | 1.000 | | 994375.52 | | A | 5.2 |
| 3 | ☐ | 1.000 | | 971627.86 | | A | 3.8 |
| 4 | ☐ | 1.000 | | 970061.26 | | A | 6.0 |
| 5 | ☐ | 1.000 | | 942582.61 | | A | 2.6 |
| 6 | ☐ | 1.000 | | 903141.58 | | A | 2.1 |

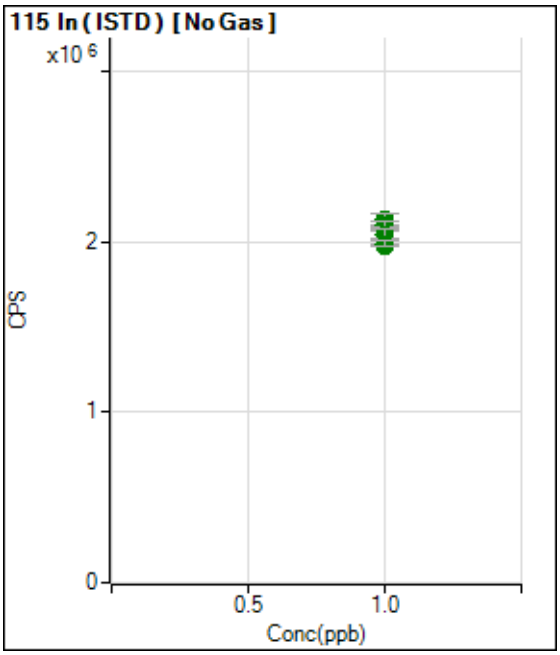



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 1680329.35 | | A | 2.2 |
| 2 | ☐ | 1.000 | | 1710786.07 | | A | 2.5 |
| 3 | ☐ | 1.000 | | 1694813.72 | | A | 1.3 |
| 4 | ☐ | 1.000 | | 1681153.73 | | A | 1.7 |
| 5 | ☐ | 1.000 | | 1658204.71 | | A | 1.4 |
| 6 | ☐ | 1.000 | | 1620376.85 | | A | 2.1 |

Calibration for 112_ICV.d

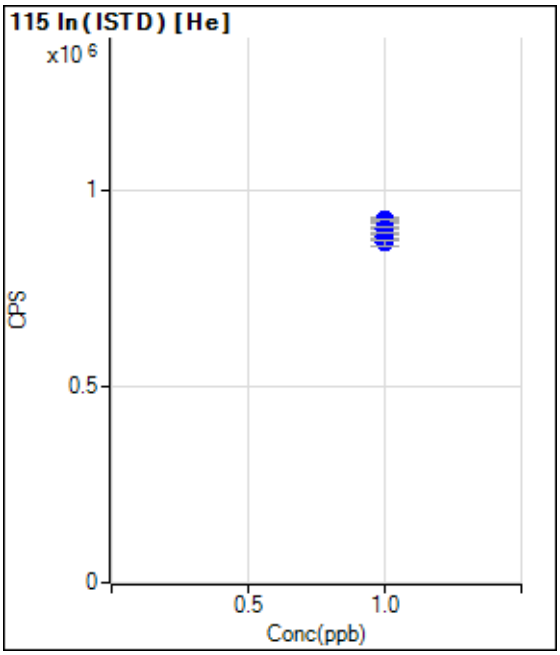



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 530791.59 | | P | 1.1 |
| 2 | ☐ | 1.000 | | 528799.38 | | P | 1.2 |
| 3 | ☐ | 1.000 | | 527716.37 | | P | 1.4 |
| 4 | ☐ | 1.000 | | 520437.31 | | P | 0.7 |
| 5 | ☐ | 1.000 | | 510671.44 | | P | 1.1 |
| 6 | ☐ | 1.000 | | 501105.42 | | P | 0.2 |

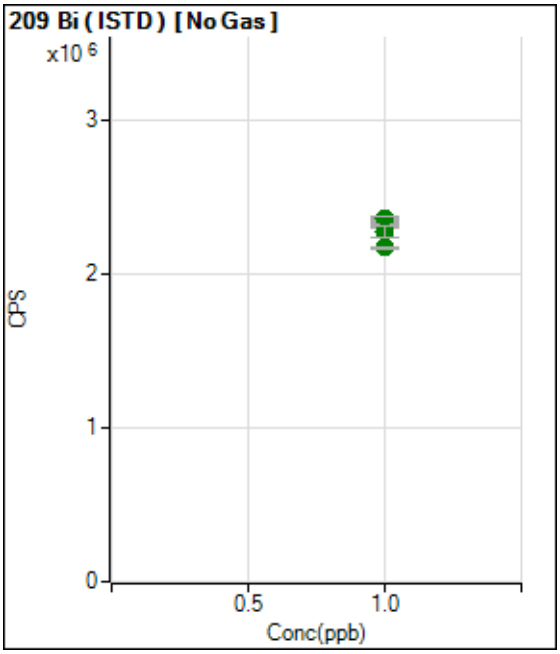



| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2126706.84 | | A | 3.1 |
| 2 | ☐ | 1.000 | | 2035004.19 | | A | 2.3 |
| 3 | ☐ | 1.000 | | 2097330.28 | | A | 1.6 |
| 4 | ☐ | 1.000 | | 2045021.76 | | A | 2.9 |
| 5 | ☐ | 1.000 | | 1974303.74 | | A | 0.5 |
| 6 | ☐ | 1.000 | | 1989132.00 | | A | 1.8 |

Calibration for 112_ICV.d




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 923418.95 | | P | 1.7 |
| 2 | ☐ | 1.000 | | 920740.24 | | P | 0.4 |
| 3 | ☐ | 1.000 | | 892921.89 | | P | 2.0 |
| 4 | ☐ | 1.000 | | 899976.61 | | P | 1.6 |
| 5 | ☐ | 1.000 | | 881610.10 | | P | 1.6 |
| 6 | ☐ | 1.000 | | 864747.16 | | P | 1.3 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 1.000 | | 2340208.45 | | A | 0.5 |
| 2 | ☐ | 1.000 | | 2338032.62 | | A | 2.0 |
| 3 | ☐ | 1.000 | | 2355450.90 | | A | 1.8 |
| 4 | ☐ | 1.000 | | 2309769.08 | | A | 1.1 |
| 5 | ☐ | 1.000 | | 2271594.55 | | A | 3.8 |
| 6 | ☐ | 1.000 | | 2166139.03 | | A | 1.0 |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICCV2 |
| Data File Name | 113LCV2.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:45:44-05:00 |
| Sample Type | LLCCV2 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 1.961 | 1.961 | 9.76 | 79873 | 0.00 | 2 | |
| Be | 9 | 1 | No Gas | 1.952 | 1.952 | 8.08 | 5735 | 0.03 | 2 | |
| V | 51 | 2 | He | 2.167 | 2.167 | 2.49 | 12283 | 0.02 | 2 | |
| Cr | 52 | 2 | He | 2.109 | 2.109 | 3.55 | 11211 | 0.02 | 2 | |
| Fe | 56 | 2 | He | 212.867 | 212.867 | 1.85 | 907855 | 0.02 | 200 | |
| Se | 78 | 2 | He | 1.557 | 1.557 | 33.76 | 102 | 1.53 | 2 | |
| Sn | 118 | 2 | He | 2.216 | 2.216 | 3.50 | 8536 | 0.03 | 2 | |
| As | 75 | 2 | He | 2.250 | 2.250 | 4.66 | 1431 | 0.16 | 2 | |
| Ca | 44 | 2 | He | 208.534 | 208.534 | 7.42 | 4911 | 4.25 | 200 | |
| Na | 23 | 2 | He | 199.995 | 199.995 | 0.99 | 308896 | 0.06 | 200 | |
| Mg | 24 | 2 | He | 215.066 | 215.066 | 0.37 | 99674 | 0.22 | 200 | |
| K | 39 | 2 | He | 228.652 | 228.652 | 3.11 | 123512 | 0.19 | 200 | |
| Mn | 55 | 2 | He | 1.907 | 1.907 | 6.85 | 7169 | 0.03 | 2 | |
| Co | 59 | 2 | He | 2.026 | 2.026 | 2.83 | 15492 | 0.01 | 2 | |
| Ni | 60 | 2 | He | 2.145 | 2.145 | 10.62 | 4194 | 0.05 | 2 | |
| Cu | 63 | 2 | He | 2.271 | 2.271 | 1.20 | 12643 | 0.02 | 2 | |
| Zn | 66 | 2 | He | 2.059 | 2.059 | 2.26 | 2290 | 0.09 | 2 | |
| Al | 27 | 2 | He | -0.230 | -0.230 | -380.82 | 1267 | -0.02 | 2 | NewName Main CR1 Failed |
| B | 11 | 1 | No Gas | 16.498 | 16.498 | 5.27 | 65881 | 0.03 | 10 | NewName Main CR1 Failed |
| Al | 27 | 1 | No Gas | -0.121 | -0.121 | -94.94 | 54364 | 0.00 | 2 | NewName Main CR1 Failed |
| Si | 28 | 1 | No Gas | 7.216 | 7.216 | 14.86 | 184419 | 0.00 | 10 | |
| P | 31 | 1 | No Gas | -19.056 | -19.056 | -4.50 | 22442 | -0.08 | 10 | NewName Main CR1 Failed |
| Ag | 107 | 1 | No Gas | 2.126 | 2.126 | 0.06 | 23234 | 0.01 | 2 | |
| Cd | 111 | 1 | No Gas | 2.161 | 2.161 | 1.88 | 4831 | 0.04 | 2 | |
| Sr | 88 | 1 | No Gas | 2.000 | 2.000 | 2.10 | 37376 | 0.01 | 2 | |
| Mo | 95 | 1 | No Gas | 2.015 | 2.015 | 4.28 | 7742 | 0.03 | 2 | |
| Sn | 118 | 1 | No Gas | 2.311 | 2.311 | 6.95 | 16688 | 0.01 | 2 | |
| Sb | 121 | 1 | No Gas | 2.294 | 2.294 | 0.25 | 22894 | 0.01 | 2 | |
| Ba | 137 | 1 | No Gas | 2.055 | 2.055 | 2.93 | 6305 | 0.03 | 2 | |
| Tl | 205 | 1 | No Gas | 2.127 | 2.127 | 1.52 | 52562 | 0.00 | 2 | |
| Tl | 203 | 1 | No Gas | 2.053 | 2.053 | 1.73 | 21489 | 0.01 | 2 | |
| Pb | 208 | 1 | No Gas | 2.043 | 2.043 | 0.25 | 71388 | 0.00 | 2 | |
| U | 238 | 1 | No Gas | 1.979 | 1.979 | 1.72 | 72352 | 0.00 | 2 | |
| Ca | 43 | 2 | He | 215.751 | 215.751 | 16.96 | 283 | 76.14 | 200 | |
| Sb | 121 | 2 | He | 2.375 | 2.375 | 5.02 | 11695 | 0.02 | 2 | |
| Ti | 47 | 2 | He | 2.190 | 2.190 | 13.32 | 287 | 0.76 | 200 | |
| Cu | 63 | 1 | No Gas | 2.170 | 2.170 | 1.27 | 18306 | 0.01 | 2 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 954323 | 1.33 | 957133 | 99.71 | 70 | 120 | |
| Ge | 72 | 2 | He | 505776 | 1.39 | 530792 | 95.29 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1631177 | 0.97 | 1680329 | 97.07 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1996984 | 0.55 | 2126707 | 93.90 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2222666 | 1.93 | 2340208 | 94.98 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LLICCV5 |
| Data File Name | 114LCV5.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:47:37-05:00 |
| Sample Type | LLCCV5 |
| Dilution | 1 |
| Comment | |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 4.975 | 4.975 | 4.86 | 113140 | 0.00 | 5 | |
| Be | 9 | 1 | No Gas | 4.966 | 4.966 | 1.73 | 14204 | 0.03 | 5 | |
| V | 51 | 2 | He | 5.154 | 5.154 | 1.18 | 23614 | 0.02 | 5 | |
| Cr | 52 | 2 | He | 5.165 | 5.165 | 2.37 | 25511 | 0.02 | 5 | |
| Fe | 56 | 2 | He | 525.170 | 525.170 | 3.50 | 2220414 | 0.02 | 500 | |
| Se | 78 | 2 | He | 5.067 | 5.067 | 11.91 | 259 | 1.95 | 5 | |
| Sn | 118 | 2 | He | 5.105 | 5.105 | 1.84 | 19034 | 0.03 | 5 | |
| As | 75 | 2 | He | 5.269 | 5.269 | 1.76 | 3076 | 0.17 | 5 | |
| Ca | 44 | 2 | He | 494.887 | 494.887 | 1.46 | 10814 | 4.58 | 500 | |
| Na | 23 | 2 | He | 519.085 | 519.085 | 1.44 | 559578 | 0.09 | 500 | |
| Mg | 24 | 2 | He | 540.148 | 540.148 | 0.89 | 248069 | 0.22 | 500 | |
| K | 39 | 2 | He | 534.613 | 534.613 | 0.84 | 232026 | 0.23 | 500 | |
| Mn | 55 | 2 | He | 5.105 | 5.105 | 7.08 | 17228 | 0.03 | 5 | |
| Co | 59 | 2 | He | 5.042 | 5.042 | 1.92 | 37990 | 0.01 | 5 | |
| Ni | 60 | 2 | He | 5.129 | 5.129 | 5.77 | 9774 | 0.05 | 5 | |
| Cu | 63 | 2 | He | 5.260 | 5.260 | 2.65 | 27839 | 0.02 | 5 | |
| Zn | 66 | 2 | He | 5.238 | 5.238 | 3.37 | 5361 | 0.10 | 5 | |
| Al | 27 | 2 | He | 2.987 | 2.987 | 28.88 | 1970 | 0.15 | 5 | NewName2 Main CR1 Failed |
| B | 11 | 1 | No Gas | 26.541 | 26.541 | 1.72 | 83266 | 0.03 | 25 | |
| Al | 27 | 1 | No Gas | 3.334 | 3.334 | 5.19 | 86630 | 0.00 | 5 | NewName2 Main CR1 Failed |
| Si | 28 | 1 | No Gas | 18.608 | 18.608 | 8.59 | 231397 | 0.01 | 25 | |
| P | 31 | 1 | No Gas | -3.552 | -3.552 | -69.06 | 28530 | -0.01 | 25 | NewName2 Main CR1 Failed |
| Ag | 107 | 1 | No Gas | 5.130 | 5.130 | 6.20 | 55644 | 0.01 | 5 | |
| Cd | 111 | 1 | No Gas | 5.140 | 5.140 | 3.68 | 11459 | 0.04 | 5 | |
| Sr | 88 | 1 | No Gas | 5.032 | 5.032 | 3.02 | 90838 | 0.01 | 5 | |
| Mo | 95 | 1 | No Gas | 5.007 | 5.007 | 1.57 | 19107 | 0.03 | 5 | |
| Sn | 118 | 1 | No Gas | 5.029 | 5.029 | 1.69 | 35314 | 0.01 | 5 | |
| Sb | 121 | 1 | No Gas | 5.084 | 5.084 | 0.60 | 50227 | 0.01 | 5 | |
| Ba | 137 | 1 | No Gas | 4.921 | 4.921 | 3.17 | 14635 | 0.03 | 5 | |
| Tl | 205 | 1 | No Gas | 4.950 | 4.950 | 4.27 | 121940 | 0.00 | 5 | |
| Tl | 203 | 1 | No Gas | 4.831 | 4.831 | 0.39 | 50419 | 0.01 | 5 | |
| Pb | 208 | 1 | No Gas | 4.998 | 4.998 | 0.82 | 172493 | 0.00 | 5 | |
| U | 238 | 1 | No Gas | 4.868 | 4.868 | 2.25 | 178253 | 0.00 | 5 | |
| Ca | 43 | 2 | He | 498.800 | 498.800 | 25.90 | 630 | 79.17 | 500 | |
| Sb | 121 | 2 | He | 5.251 | 5.251 | 4.27 | 25422 | 0.02 | 5 | |
| Ti | 47 | 2 | He | 5.053 | 5.053 | 28.02 | 653 | 0.77 | 5 | |
| Cu | 63 | 1 | No Gas | 5.256 | 5.256 | 3.03 | 42159 | 0.01 | 5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 944139 | 1.72 | 957133 | 98.64 | 70 | 120 | |
| Ge | 72 | 2 | He | 503076 | 0.84 | 530792 | 94.78 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1635841 | 2.33 | 1680329 | 97.35 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1991864 | 1.84 | 2126707 | 93.66 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2227052 | 1.61 | 2340208 | 95.16 | 70 | 120 | |

# Initial Calibration Blank (ICB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | ICCB |
| Data File Name | 115_ICB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:49:31-05:00 |
| Sample Type | ICB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.065 | -276.9 | 56295 | 1.4 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.015 | 32.9 | 65 | 23.1 | 0.5 | |
| V | 51 | 2 | He | 0.361 | 3.9 | 5302 | 1.4 | 2.5 | |
| Cr | 52 | 2 | He | -0.005 | -357.6 | 1210 | 8.0 | 2.5 | |
| Fe | 56 | 2 | He | 0.950 | 49.4 | 9151 | 21.1 | 100 | |
| Se | 78 | 2 | He | -0.020 | -756.1 | 31 | 22.9 | 1 | |
| Sn | 118 | 2 | He | 0.160 | 21.7 | 927 | 12.9 | 2.5 | |
| As | 75 | 2 | He | 0.210 | 2.0 | 307 | 1.1 | 2.5 | |
| Ca | 44 | 2 | He | 5.198 | 56.4 | 667 | 8.3 | 100 | |
| Na | 23 | 2 | He | -13.065 | -19.2 | 138074 | 0.8 | 100 | |
| Mg | 24 | 2 | He | 0.608 | 6.2 | 880 | 3.0 | 100 | |
| K | 39 | 2 | He | 11.086 | 26.7 | 45020 | 1.9 | 100 | |
| Mn | 55 | 2 | He | -0.012 | -399.3 | 1073 | 13.6 | 2.5 | |
| Co | 59 | 2 | He | -0.012 | -34.8 | 153 | 19.9 | 2.5 | |
| Ni | 60 | 2 | He | 0.055 | 25.6 | 243 | 10.3 | 2.5 | |
| Cu | 63 | 2 | He | 0.099 | 10.3 | 1477 | 3.4 | 1 | |
| Zn | 66 | 2 | He | 0.432 | 2.4 | 697 | 2.2 | 2.5 | |
| Al | 27 | 2 | He | -0.705 | -64.3 | 1150 | 8.0 | 5 | |
| B | 11 | 1 | No Gas | 0.448 | 144.8 | 34848 | 1.3 | 0.5 | |
| Al | 27 | 1 | No Gas | -0.568 | -23.9 | 49579 | 2.2 | 5 | |
| Si | 28 | 1 | No Gas | 22.060 | 6.5 | 241699 | 1.7 | 10 | ICB Main CR1 Failed |
| P | 31 | 1 | No Gas | -28.046 | -5.3 | 18703 | 2.2 | 10 | |
| Ag | 107 | 1 | No Gas | 0.007 | 83.9 | 237 | 26.8 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.008 | 117.6 | 20 | 100.0 | 1 | |
| Sr | 88 | 1 | No Gas | 0.019 | 57.7 | 2240 | 9.7 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.007 | 111.9 | 80 | 37.5 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.135 | 12.1 | 1687 | 6.8 | 5 | |
| Sb | 121 | 1 | No Gas | 0.097 | 5.7 | 1463 | 3.1 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.022 | 152.1 | 363 | 25.4 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.017 | 18.0 | 860 | 8.4 | 1 | |
| Tl | 203 | 1 | No Gas | 0.023 | 15.1 | 423 | 8.3 | 1 | |
| Pb | 208 | 1 | No Gas | 0.026 | 11.5 | 2653 | 4.5 | 2.5 | |
| U | 238 | 1 | No Gas | 0.002 | 43.7 | 113 | 28.4 | 2.5 | |
| Ca | 43 | 2 | He | 9.013 | 138.9 | 27 | 57.3 | 100 | |
| Sb | 121 | 2 | He | 0.128 | 16.3 | 860 | 11.2 | 2.5 | |
| Ti | 47 | 2 | He | 0.683 | 159.9 | 90 | 154.4 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 948248 | 3.57 | 957133 | 99.07 | 70 | 120 | |
| Ge | 72 | 2 | He | 500620 | 1.06 | 530792 | 94.32 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1610250 | 0.87 | 1680329 | 95.83 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1969603 | 1.23 | 2126707 | 92.61 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2235436 | 0.62 | 2340208 | 95.52 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 117_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T15:59:26-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 97.242 | 5.316 | 1128699 | 2.06 | 100 | 97.2 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 95.465 | 3.534 | 265801 | 0.97 | 100 | 95.5 | 90 | 110 | |
| V | 51 | 2 | He | 95.054 | 1.328 | 369699 | 0.88 | 100 | 95.1 | 90 | 110 | |
| Cr | 52 | 2 | He | 96.203 | 1.294 | 457275 | 1.97 | 100 | 96.2 | 90 | 110 | |
| Fe | 56 | 2 | He | 9542.019 | 0.244 | 40599120 | 0.71 | 10000 | 95.4 | 90 | 110 | |
| Se | 78 | 2 | He | 95.414 | 0.247 | 4355 | 1.00 | 100 | 95.4 | 90 | 110 | |
| Sn | 118 | 2 | He | 93.360 | 3.013 | 337032 | 1.56 | 100 | 93.4 | 90 | 110 | |
| As | 75 | 2 | He | 97.202 | 0.745 | 53821 | 0.72 | 100 | 97.2 | 90 | 110 | |
| Ca | 44 | 2 | He | 9479.647 | 1.448 | 198593 | 1.34 | 10000 | 94.8 | 90 | 110 | |
| Na | 23 | 2 | He | 9450.850 | 1.503 | 7687589 | 1.27 | 10000 | 94.5 | 90 | 110 | |
| Mg | 24 | 2 | He | 9561.775 | 0.315 | 4418617 | 1.08 | 10000 | 95.6 | 90 | 110 | |
| K | 39 | 2 | He | 9602.755 | 4.726 | 3496110 | 4.17 | 10000 | 96.0 | 90 | 110 | |
| Mn | 55 | 2 | He | 96.135 | 1.441 | 306927 | 0.83 | 100 | 96.1 | 90 | 110 | |
| Co | 59 | 2 | He | 92.358 | 0.667 | 697668 | 0.58 | 100 | 92.4 | 90 | 110 | |
| Ni | 60 | 2 | He | 94.808 | 1.155 | 179764 | 1.93 | 100 | 94.8 | 90 | 110 | |
| Cu | 63 | 2 | He | 95.236 | 2.244 | 491406 | 2.22 | 100 | 95.2 | 90 | 110 | |
| Zn | 66 | 2 | He | 96.239 | 1.166 | 94388 | 0.43 | 100 | 96.2 | 90 | 110 | |
| Al | 27 | 2 | He | 94.354 | 3.725 | 22305 | 3.21 | 100 | 94.4 | 90 | 110 | |
| B | 11 | 1 | No Gas | 475.770 | 4.269 | 895727 | 1.50 | 500 | 95.2 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 96.620 | 6.064 | 953336 | 3.36 | 100 | 96.6 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 536.519 | 3.449 | 2346043 | 1.00 | 5000 | 10.7 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 456.953 | 2.436 | 207982 | 1.71 | 500 | 91.4 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 95.305 | 2.609 | 1037723 | 1.30 | 100 | 95.3 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 95.000 | 1.322 | 212943 | 1.22 | 100 | 95.0 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 96.218 | 4.519 | 1712200 | 2.08 | 100 | 96.2 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 93.957 | 2.434 | 359759 | 0.01 | 100 | 94.0 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 93.022 | 2.809 | 643514 | 1.96 | 100 | 93.0 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 93.515 | 3.708 | 914259 | 0.44 | 100 | 93.5 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 94.031 | 4.022 | 275760 | 1.60 | 100 | 94.0 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 98.222 | 3.064 | 2405264 | 2.51 | 100 | 98.2 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 90.882 | 1.548 | 942647 | 1.49 | 100 | 90.9 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 92.506 | 0.609 | 3153819 | 1.20 | 100 | 92.5 | 90 | 110 | |
| U | 238 | 1 | No Gas | 95.213 | 2.176 | 3476698 | 2.32 | 100 | 95.2 | 90 | 110 | |
| Ca | 43 | 2 | He | 9148.172 | 3.383 | 11388 | 4.04 | 10000 | 91.5 | 90 | 110 | |
| Sb | 121 | 2 | He | 95.508 | 0.886 | 461974 | 0.22 | 100 | 95.5 | 90 | 110 | |
| Ti | 47 | 2 | He | 97.972 | 3.941 | 12736 | 3.47 | 100 | 98.0 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 96.439 | 4.291 | 745792 | 0.71 | 100 | 96.4 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 921088 | 3.08 | 957133 | 96.23 | 70 | 120 | |
| Ge | 72 | 2 | He | 507348 | 0.80 | 530792 | 95.58 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1637104 | 3.58 | 1680329 | 97.43 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2004371 | 2.41 | 2126707 | 94.25 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2220923 | 0.59 | 2340208 | 94.90 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 118_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:01:15-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.146 | -70.9 | 56134 | 1.2 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.015 | 74.6 | 67 | 48.2 | 0.5 | |
| V | 51 | 2 | He | 0.181 | 8.7 | 4667 | 2.2 | 2.5 | |
| Cr | 52 | 2 | He | 0.011 | 175.2 | 1300 | 8.0 | 2.5 | |
| Fe | 56 | 2 | He | 1.237 | 10.7 | 10471 | 5.7 | 100 | |
| Se | 78 | 2 | He | 0.093 | 147.7 | 36 | 16.7 | 2 | |
| As | 75 | 2 | He | 0.195 | 13.9 | 301 | 5.7 | 2.5 | |
| Ca | 44 | 2 | He | -3.337 | -166.2 | 497 | 23.9 | 100 | |
| Na | 23 | 2 | He | -26.626 | -8.4 | 128712 | 0.4 | 100 | |
| Mg | 24 | 2 | He | 0.508 | 33.1 | 843 | 9.5 | 100 | |
| K | 39 | 2 | He | 11.131 | 31.6 | 45495 | 1.8 | 100 | |
| Mn | 55 | 2 | He | -0.100 | -23.3 | 807 | 8.3 | 2.5 | |
| Co | 59 | 2 | He | -0.014 | -29.5 | 137 | 23.5 | 2.5 | |
| Ni | 60 | 2 | He | -0.001 | -4636.8 | 140 | 68.1 | 2.5 | |
| Cu | 63 | 2 | He | 0.076 | 22.1 | 1370 | 6.3 | 2 | |
| Zn | 66 | 2 | He | 0.168 | 21.1 | 447 | 6.8 | 2.5 | |
| Al | 27 | 2 | He | -1.677 | -12.3 | 947 | 4.3 | 5 | |
| B | 11 | 1 | No Gas | 2.843 | 27.5 | 39853 | 2.2 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -1.761 | -9.6 | 38785 | 2.9 | 5 | |
| Si | 28 | 1 | No Gas | -0.156 | -487.4 | 152922 | 1.4 | 10 | |
| P | 31 | 1 | No Gas | -28.665 | -3.7 | 18526 | 1.2 | 10 | |
| Ag | 107 | 1 | No Gas | 0.009 | 39.8 | 263 | 15.3 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.009 | 57.3 | 23 | 49.5 | 1 | |
| Sr | 88 | 1 | No Gas | 0.000 | -1321.4 | 1940 | 6.8 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.030 | 89.1 | 170 | 61.4 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.251 | 10.3 | 2524 | 7.5 | 5 | |
| Sb | 121 | 1 | No Gas | 0.237 | 3.2 | 2824 | 1.5 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.009 | 218.1 | 333 | 17.1 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.086 | 31.0 | 2620 | 26.1 | 1 | |
| Tl | 203 | 1 | No Gas | 0.085 | 34.3 | 1097 | 29.3 | 1 | |
| Pb | 208 | 1 | No Gas | 0.033 | 21.0 | 2937 | 8.7 | 2.5 | |
| U | 238 | 1 | No Gas | 0.010 | 39.1 | 427 | 36.0 | 2.5 | |
| Ca | 43 | 2 | He | 0.783 | 1579.2 | 17 | 91.7 | 100 | |
| Sb | 121 | 2 | He | 0.212 | 19.3 | 1273 | 14.5 | 2.5 | |
| Ti | 47 | 2 | He | 0.052 | 145.8 | 10 | 100.0 | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.086 | 4.2 | 2244 | 1.8 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 960867 | 2.54 | 957133 | 100.39 | 70 | 120 | |
| Ge | 72 | 2 | He | 505768 | 0.97 | 530792 | 95.29 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1615488 | 1.14 | 1680329 | 96.14 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2011802 | 0.91 | 2126707 | 94.60 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2285060 | 1.19 | 2340208 | 97.64 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | MBLK-155817 |
| Data File Name | 119SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:05:04-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.007 | 0.007 | 1625.25 | 56619 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 0.001 | 0.001 | 155.81 | 27 | 0.01 | 2000 | |
| V | 51 | 2 | He | 0.038 | 0.038 | 77.88 | 4288 | 0.00 | 2000 | |
| Cr | 52 | 2 | He | -0.040 | -0.040 | -62.09 | 1100 | 0.00 | 2000 | |
| Fe | 56 | 2 | He | 1.391 | 1.391 | 4.75 | 11578 | 0.01 | 200000 | |
| Se | 78 | 2 | He | 0.088 | 0.088 | 239.41 | 37 | 0.24 | 2000 | |
| Sn | 118 | 2 | He | 0.089 | 0.089 | 35.74 | 690 | 0.01 | 200 | |
| As | 75 | 2 | He | 0.119 | 0.119 | 64.32 | 270 | 0.04 | 2000 | |
| Ca | 44 | 2 | He | 3.093 | 3.093 | 108.36 | 657 | 0.47 | 200000 | |
| Na | 23 | 2 | He | 47.178 | 47.178 | 0.95 | 195147 | 0.02 | 200000 | |
| Mg | 24 | 2 | He | 16.119 | 16.119 | 4.94 | 8363 | 0.19 | 200000 | |
| K | 39 | 2 | He | 10.303 | 10.303 | 18.38 | 47071 | 0.02 | 200000 | |
| Mn | 55 | 2 | He | 0.719 | 0.719 | 5.53 | 3547 | 0.02 | 2000 | |
| Co | 59 | 2 | He | -0.018 | -0.018 | -23.09 | 117 | -0.02 | 2000 | |
| Ni | 60 | 2 | He | 0.047 | 0.047 | 12.98 | 240 | 0.02 | 2000 | |
| Cu | 63 | 2 | He | 1.043 | 1.043 | 4.71 | 6595 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 1.467 | 1.467 | 8.55 | 1783 | 0.08 | 2000 | |
| Al | 27 | 2 | He | 2.758 | 2.758 | 6.83 | 2010 | 0.14 | 2000 | |
| B | 11 | 1 | No Gas | -3.219 | -3.219 | -20.73 | 27748 | -0.01 | 2000 | |
| Al | 27 | 1 | No Gas | 3.174 | 3.174 | 1.89 | 86277 | 0.00 | 2000 | |
| Si | 28 | 1 | No Gas | 84.032 | 84.032 | 3.09 | 505078 | 0.02 | 2000 | |
| Ag | 107 | 1 | No Gas | 0.009 | 0.009 | 71.53 | 270 | 0.00 | 2000 | |
| Cd | 111 | 1 | No Gas | 0.007 | 0.007 | 102.55 | 20 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | -0.029 | -0.029 | -14.09 | 1473 | 0.00 | 2000 | |
| Mo | 95 | 1 | No Gas | -0.001 | -0.001 | -293.48 | 50 | 0.00 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.059 | 0.059 | 7.79 | 1227 | 0.00 | 2000 | |
| Sb | 121 | 1 | No Gas | 1.324 | 1.324 | 1.87 | 13661 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 0.041 | 0.041 | 89.76 | 437 | 0.01 | 2000 | |
| Tl | 205 | 1 | No Gas | 0.000 | 0.000 | -753.85 | 470 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | -0.001 | -0.001 | -757.83 | 187 | 0.00 | 2000 | |
| Pb | 208 | 1 | No Gas | 0.030 | 0.030 | 13.51 | 2940 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.000 | 0.000 | 72.19 | 63 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 28.682 | 28.682 | 68.48 | 53 | 53.78 | 200000 | |
| Sb | 121 | 2 | He | 1.386 | 1.386 | 5.50 | 7219 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 0.100 | 0.100 | 44.13 | 17 | 0.60 | 2000 | |
| Cu | 63 | 1 | No Gas | 1.045 | 1.045 | 11.98 | 9790 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 1.491 | 1.491 | 8.35 | 4391 | 0.03 | 2000 | |
| Se | 82 | 1 | No Gas | 0.118 | 0.118 | 311.17 | -28 | -0.42 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 939830 | 3.91 | 957133 | 98.19 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ge | 72 | 2 | He | 526675 | 1.30 | 530792 | 99.22 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1657555 | 2.18 | 1680329 | 98.64 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2064754 | 2.53 | 2126707 | 97.09 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2372584 | 2.05 | 2340208 | 101.38 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LCS-155817 |
| Data File Name | 120SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:07:00-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.001 | -0.001 | -5665.07 | 56398 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 45.581 | 45.581 | 2.99 | 129197 | 0.04 | 2000 | |
| V | 51 | 2 | He | 43.422 | 43.422 | 0.69 | 176610 | 0.02 | 2000 | |
| Cr | 52 | 2 | He | 44.189 | 44.189 | 1.54 | 217529 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 4413.684 | 4413.684 | 2.12 | 19389186 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 48.136 | 48.136 | 5.66 | 2284 | 2.11 | 2000 | |
| Sn | 118 | 2 | He | 0.161 | 0.161 | 6.13 | 953 | 0.02 | 200 | |
| As | 75 | 2 | He | 46.033 | 46.033 | 1.07 | 26421 | 0.17 | 2000 | |
| Ca | 44 | 2 | He | 4379.005 | 4379.005 | 1.20 | 95028 | 4.61 | 200000 | |
| Na | 23 | 2 | He | 4629.395 | 4629.395 | 1.98 | 3966798 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 4615.497 | 4615.497 | 0.84 | 2202359 | 0.21 | 200000 | |
| K | 39 | 2 | He | 4557.231 | 4557.231 | 1.88 | 1735839 | 0.26 | 200000 | |
| Mn | 55 | 2 | He | 44.225 | 44.225 | 2.18 | 146397 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 43.977 | 43.977 | 2.00 | 343081 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 44.800 | 44.800 | 1.96 | 87764 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 46.264 | 46.264 | 3.01 | 246962 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 47.789 | 47.789 | 2.24 | 48534 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 92.512 | 92.512 | 1.83 | 22612 | 0.41 | 2000 | |
| B | 11 | 1 | No Gas | -4.639 | -4.639 | -14.19 | 25063 | -0.02 | 2000 | |
| Al | 27 | 1 | No Gas | 98.905 | 98.905 | 0.58 | 994409 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 94.044 | 94.044 | 1.51 | 550248 | 0.02 | 2000 | |
| Ag | 107 | 1 | No Gas | 44.429 | 44.429 | 3.77 | 495900 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 46.392 | 46.392 | 3.81 | 106577 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 0.012 | 0.012 | 85.23 | 2210 | 0.00 | 2000 | |
| Mo | 95 | 1 | No Gas | 43.486 | 43.486 | 4.24 | 170662 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.149 | 0.149 | 8.36 | 1857 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 44.849 | 44.849 | 1.20 | 447562 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 43.813 | 43.813 | 2.47 | 131910 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 40.938 | 40.938 | 3.42 | 1035622 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 40.027 | 40.027 | 3.94 | 428826 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 42.827 | 42.827 | 2.13 | 1508944 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.000 | 0.000 | 174.11 | 60 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 4417.895 | 4417.895 | 3.17 | 5685 | 77.72 | 200000 | |
| Sb | 121 | 2 | He | 46.258 | 46.258 | 2.57 | 231122 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 44.466 | 44.466 | 1.21 | 5971 | 0.74 | 2000 | |
| Cu | 63 | 1 | No Gas | 47.012 | 47.012 | 0.63 | 371758 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 48.430 | 48.430 | 0.82 | 114440 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 48.829 | 48.829 | 2.51 | 5360 | 0.91 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 937394 | 2.75 | 957133 | 97.94 | 70 | 120 | |
| Ge | 72 | 2 | He | 523845 | 1.37 | 530792 | 98.69 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1668569 | 0.45 | 1680329 | 99.30 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In | 115 | 1 | No Gas | 2054886 | 3.38 | 2126707 | 96.62 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2294538 | 2.23 | 2340208 | 98.05 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01SD |
| Data File Name | 122SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:10:46-05:00 |
| Sample Type | Sample |
| Dilution | 5 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 3.348 | 16.738 | 4.80 | 93918 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 0.065 | 0.325 | 7.10 | 207 | 0.03 | 2000 | |
| V | 51 | 2 | He | 1.154 | 5.770 | 4.19 | 8668 | 0.01 | 2000 | |
| Cr | 52 | 2 | He | 2.799 | 13.994 | 5.19 | 14937 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 911.544 | 4557.719 | 1.27 | 3995814 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 0.012 | 0.059 | 2047.96 | 33 | 0.04 | 2000 | |
| Sn | 118 | 2 | He | 0.093 | 0.467 | 39.87 | 683 | 0.01 | 200 | |
| As | 75 | 2 | He | 0.917 | 4.586 | 5.86 | 721 | 0.13 | 2000 | |
| Ca | 44 | 2 | He | 4540.699 | 22703.494 | 2.74 | 98182 | 4.62 | 200000 | |
| Na | 23 | 2 | He | 24738.212 | 123691.058 | 2.40 | 20455667 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 3677.992 | 18389.959 | 1.44 | 1749280 | 0.21 | 200000 | |
| K | 39 | 2 | He | 206.611 | 1033.056 | 1.56 | 119346 | 0.17 | 200000 | |
| Mn | 55 | 2 | He | 78.336 | 391.680 | 0.40 | 257603 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 1.436 | 7.182 | 2.52 | 11415 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 1.815 | 9.074 | 7.20 | 3684 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 3.407 | 17.033 | 0.24 | 19067 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 13.443 | 67.214 | 2.58 | 13817 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 113.520 | 567.598 | 5.66 | 27350 | 0.42 | 2000 | |
| B | 11 | 1 | No Gas | 5.115 | 25.576 | 3.82 | 43031 | 0.01 | 2000 | |
| Al | 27 | 1 | No Gas | 112.936 | 564.682 | 9.48 | 1104907 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 3908.982 | 19544.909 | 3.11 | 16124604 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 0.004 | 0.020 | 124.32 | 210 | 0.00 | 2000 | |
| Cd | 111 | 1 | No Gas | 0.049 | 0.246 | 28.48 | 113 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 84.186 | 420.930 | 2.56 | 1499797 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 0.109 | 0.544 | 9.59 | 470 | 0.02 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.079 | 0.395 | 26.07 | 1327 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 0.290 | 1.450 | 4.98 | 3377 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 90.002 | 450.008 | 1.36 | 264221 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 0.011 | 0.055 | 10.10 | 720 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 0.014 | 0.072 | 24.67 | 330 | 0.00 | 2000 | |
| Pb | 208 | 1 | No Gas | 0.268 | 1.341 | 17.02 | 10900 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.103 | 0.515 | 5.05 | 3811 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 4620.429 | 23102.147 | 4.17 | 5928 | 77.94 | 200000 | |
| Sb | 121 | 2 | He | 0.315 | 1.573 | 4.20 | 1827 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 1.966 | 9.832 | 38.96 | 267 | 0.74 | 2000 | |
| Cu | 63 | 1 | No Gas | 3.376 | 16.878 | 2.55 | 27682 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 13.559 | 67.796 | 2.56 | 32108 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 0.212 | 1.058 | 370.36 | -18 | -1.15 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 936010 | 1.16 | 957133 | 97.79 | 70 | 120 | |
| Ge | 72 | 2 | He | 522109 | 1.09 | 530792 | 98.36 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1637784 | 2.98 | 1680329 | 97.47 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In | 115 | 1 | No Gas | 2005208 | 1.09 | 2126707 | 94.29 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2227154 | 0.47 | 2340208 | 95.17 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01MS |
| Data File Name | 123SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:12:39-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.154 | 18.154 | 4.09 | 251572 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 48.203 | 48.203 | 2.01 | 132011 | 0.04 | 2000 | |
| V | 51 | 2 | He | 49.554 | 49.554 | 1.47 | 196233 | 0.03 | 2000 | |
| Cr | 52 | 2 | He | 63.284 | 63.284 | 1.49 | 303651 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 9332.422 | 9332.422 | 3.22 | 40023049 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 49.790 | 49.790 | 3.08 | 2306 | 2.16 | 2000 | |
| Sn | 118 | 2 | He | 0.197 | 0.197 | 21.41 | 1043 | 0.02 | 200 | |
| As | 75 | 2 | He | 51.049 | 51.049 | 1.19 | 28592 | 0.18 | 2000 | |
| Ca | 44 | 2 | He | 29006.491 | 29006.491 | 0.33 | 611497 | 4.74 | 200000 | |
| Na | 23 | 2 | He | 133005.894 | 133005.894 | 1.64 | 107087282 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 23194.022 | 23194.022 | 0.21 | 10804952 | 0.21 | 200000 | |
| K | 39 | 2 | He | 5845.181 | 5845.181 | 3.99 | 2162065 | 0.27 | 200000 | |
| Mn | 55 | 2 | He | 461.720 | 461.720 | 0.65 | 1481923 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 52.132 | 52.132 | 1.33 | 397112 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 56.310 | 56.310 | 1.53 | 107688 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 64.582 | 64.582 | 0.99 | 336266 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 113.505 | 113.505 | 1.06 | 112182 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 825.800 | 825.800 | 5.43 | 186415 | 0.44 | 2000 | |
| B | 11 | 1 | No Gas | 42.381 | 42.381 | 2.32 | 108098 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 796.315 | 796.315 | 6.34 | 7397320 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 21046.905 | 21046.905 | 2.72 | 85358822 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 45.915 | 45.915 | 1.10 | 481673 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 47.674 | 47.674 | 2.22 | 102905 | 0.05 | 2000 | |
| Sr | 88 | 1 | No Gas | 441.037 | 441.037 | 2.09 | 7554979 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 48.565 | 48.565 | 1.31 | 179148 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.195 | 0.195 | 16.01 | 2054 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 46.465 | 46.465 | 2.38 | 450772 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 544.715 | 544.715 | 1.56 | 1537707 | 0.04 | 2000 | |
| Tl | 205 | 1 | No Gas | 44.081 | 44.081 | 1.93 | 1038030 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 42.502 | 42.502 | 0.45 | 423958 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 46.573 | 46.573 | 1.91 | 1527168 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.562 | 0.562 | 2.30 | 19750 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 28871.491 | 28871.491 | 2.03 | 36195 | 79.77 | 200000 | |
| Sb | 121 | 2 | He | 47.225 | 47.225 | 3.12 | 230396 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 60.661 | 60.661 | 4.67 | 7953 | 0.76 | 2000 | |
| Cu | 63 | 1 | No Gas | 65.177 | 65.177 | 2.74 | 500422 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 112.919 | 112.919 | 1.56 | 258221 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 47.479 | 47.479 | 5.94 | 5070 | 0.94 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 905645 | 3.05 | 957133 | 94.62 | 70 | 120 | |
| Ge | 72 | 2 | He | 511509 | 1.20 | 530792 | 96.37 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1622465 | 1.45 | 1680329 | 96.56 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1930050 | 1.28 | 2126707 | 90.75 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2135369 | 1.52 | 2340208 | 91.25 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01MSD |
| Data File Name | 124SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:14:32-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.195 | 18.195 | 2.03 | 251194 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 47.023 | 47.023 | 1.04 | 128333 | 0.04 | 2000 | |
| V | 51 | 2 | He | 46.809 | 46.809 | 2.41 | 186765 | 0.03 | 2000 | |
| Cr | 52 | 2 | He | 59.328 | 59.328 | 1.87 | 286595 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 8936.377 | 8936.377 | 2.50 | 38578372 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 47.046 | 47.046 | 5.41 | 2194 | 2.14 | 2000 | |
| Sn | 118 | 2 | He | 0.208 | 0.208 | 11.16 | 1083 | 0.02 | 200 | |
| As | 75 | 2 | He | 49.969 | 49.969 | 0.23 | 28176 | 0.18 | 2000 | |
| Ca | 44 | 2 | He | 27740.775 | 27740.775 | 1.01 | 588632 | 4.71 | 200000 | |
| Na | 23 | 2 | He | 129532.334 | 129532.334 | 1.50 | 104998422 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 22638.396 | 22638.396 | 2.91 | 10612120 | 0.21 | 200000 | |
| K | 39 | 2 | He | 5681.104 | 5681.104 | 1.72 | 2116479 | 0.27 | 200000 | |
| Mn | 55 | 2 | He | 449.353 | 449.353 | 2.74 | 1451351 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 50.399 | 50.399 | 0.54 | 386465 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 52.650 | 52.650 | 0.48 | 101377 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 60.628 | 60.628 | 1.52 | 317786 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 110.178 | 110.178 | 1.81 | 109604 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 802.912 | 802.912 | 5.07 | 182444 | 0.44 | 2000 | |
| B | 11 | 1 | No Gas | 40.012 | 40.012 | 3.51 | 103487 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 785.236 | 785.236 | 6.57 | 7298138 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 20256.185 | 20256.185 | 2.34 | 82195009 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 43.089 | 43.089 | 3.03 | 464196 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 45.128 | 45.128 | 2.97 | 100049 | 0.05 | 2000 | |
| Sr | 88 | 1 | No Gas | 419.162 | 419.162 | 2.26 | 7375313 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 45.395 | 45.395 | 2.34 | 171991 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.202 | 0.202 | 10.25 | 2154 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 45.428 | 45.428 | 1.96 | 440933 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 531.334 | 531.334 | 2.99 | 1540433 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 41.872 | 41.872 | 0.96 | 998703 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 40.864 | 40.864 | 1.32 | 412758 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 44.130 | 44.130 | 0.71 | 1465746 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.544 | 0.544 | 1.87 | 19379 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 27739.122 | 27739.122 | 0.81 | 35008 | 79.24 | 200000 | |
| Sb | 121 | 2 | He | 45.445 | 45.445 | 2.32 | 223167 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 57.392 | 57.392 | 2.04 | 7572 | 0.76 | 2000 | |
| Cu | 63 | 1 | No Gas | 62.364 | 62.364 | 1.61 | 479154 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 111.132 | 111.132 | 1.86 | 254245 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 50.135 | 50.135 | 2.82 | 5356 | 0.94 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 902269 | 2.24 | 957133 | 94.27 | 70 | 120 | |
| Ge | 72 | 2 | He | 514886 | 1.96 | 530792 | 97.00 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1623199 | 1.64 | 1680329 | 96.60 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1982734 | 1.86 | 2126707 | 93.23 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2162448 | 0.84 | 2340208 | 92.40 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070621-01PDS |
| Data File Name | 125SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:16:24-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 18.120 | 18.120 | 2.16 | 252361 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 102.889 | 102.889 | 3.11 | 282889 | 0.04 | 2000 | |
| V | 51 | 2 | He | 101.721 | 101.721 | 0.17 | 405023 | 0.03 | 2000 | |
| Cr | 52 | 2 | He | 112.755 | 112.755 | 1.37 | 548754 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 14415.020 | 14415.020 | 1.95 | 62822561 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 103.556 | 103.556 | 1.68 | 4839 | 2.14 | 2000 | |
| Sn | 118 | 2 | He | 0.218 | 0.218 | 11.71 | 1150 | 0.02 | 200 | |
| As | 75 | 2 | He | 108.418 | 108.418 | 0.52 | 61475 | 0.18 | 2000 | |
| Ca | 44 | 2 | He | 33392.528 | 33392.528 | 2.94 | 715107 | 4.67 | 200000 | |
| Na | 23 | 2 | He | 133005.343 | 133005.343 | 2.07 | 108821285 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 27929.135 | 27929.135 | 1.42 | 13219468 | 0.21 | 200000 | |
| K | 39 | 2 | He | 11029.968 | 11029.968 | 1.07 | 4108240 | 0.27 | 200000 | |
| Mn | 55 | 2 | He | 505.075 | 505.075 | 0.38 | 1647055 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 102.159 | 102.159 | 0.53 | 790512 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 106.462 | 106.462 | 0.72 | 206753 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 115.008 | 115.008 | 1.89 | 607677 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 163.411 | 163.411 | 0.31 | 163985 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 977.088 | 977.088 | 2.80 | 223934 | 0.44 | 2000 | |
| B | 11 | 1 | No Gas | 40.341 | 40.341 | 6.75 | 104835 | 0.04 | 2000 | |
| Al | 27 | 1 | No Gas | 860.417 | 860.417 | 7.67 | 8062026 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 20541.032 | 20541.032 | 2.39 | 84111065 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 94.998 | 94.998 | 1.21 | 1028866 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 99.595 | 99.595 | 0.65 | 222049 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 414.300 | 414.300 | 0.47 | 7329863 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 99.540 | 99.540 | 1.47 | 379104 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.159 | 0.159 | 20.31 | 1870 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 93.182 | 93.182 | 0.93 | 912256 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 576.421 | 576.421 | 0.93 | 1680454 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 97.920 | 97.920 | 0.66 | 2346875 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 93.424 | 93.424 | 1.47 | 948277 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 96.926 | 96.926 | 0.77 | 3233778 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.543 | 0.543 | 1.84 | 19456 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 33618.982 | 33618.982 | 1.69 | 42821 | 78.51 | 200000 | |
| Sb | 121 | 2 | He | 95.794 | 95.794 | 1.18 | 474689 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 120.566 | 120.566 | 2.62 | 16056 | 0.75 | 2000 | |
| Cu | 63 | 1 | No Gas | 115.228 | 115.228 | 1.57 | 892041 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 163.007 | 163.007 | 0.11 | 375932 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 100.605 | 100.605 | 1.77 | 10883 | 0.92 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 909565 | 3.36 | 957133 | 95.03 | 70 | 120 | |
| Ge | 72 | 2 | He | 519729 | 0.65 | 530792 | 97.92 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1637832 | 0.78 | 1680329 | 97.47 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1993151 | 1.22 | 2126707 | 93.72 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2173532 | 1.07 | 2340208 | 92.88 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | HS20070623-01 |
| Data File Name | 126SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:18:15-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817 |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 14.049 | 14.049 | 6.19 | 208861 | 0.01 | 2000 | |
| Be | 9 | 1 | No Gas | 0.046 | 0.046 | 21.29 | 150 | 0.03 | 2000 | |
| V | 51 | 2 | He | 1.246 | 1.246 | 3.64 | 9067 | 0.01 | 2000 | |
| Cr | 52 | 2 | He | 1.524 | 1.524 | 3.29 | 8750 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 556.835 | 556.835 | 4.76 | 2450728 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 0.422 | 0.422 | 43.05 | 53 | 0.80 | 2000 | |
| Sn | 118 | 2 | He | 0.241 | 0.241 | 9.41 | 1237 | 0.02 | 200 | |
| As | 75 | 2 | He | 1.013 | 1.013 | 5.19 | 778 | 0.13 | 2000 | |
| Ca | 44 | 2 | He | 14742.226 | 14742.226 | 1.42 | 318585 | 4.63 | 200000 | |
| Na | 23 | 2 | He | 155830.973 | 155830.973 | 3.27 | 128462115 | 0.12 | 200000 | |
| Mg | 24 | 2 | He | 16518.375 | 16518.375 | 2.37 | 7884613 | 0.21 | 200000 | |
| K | 39 | 2 | He | 1019.398 | 1019.398 | 1.12 | 421751 | 0.24 | 200000 | |
| Mn | 55 | 2 | He | 67.787 | 67.787 | 0.71 | 223848 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 1.021 | 1.021 | 0.80 | 8219 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 2.718 | 2.718 | 2.10 | 5465 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 1.629 | 1.629 | 4.08 | 9684 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 33.128 | 33.128 | 3.00 | 33739 | 0.10 | 2000 | |
| Al | 27 | 2 | He | 50.472 | 50.472 | 5.52 | 12964 | 0.39 | 2000 | |
| B | 11 | 1 | No Gas | 26.220 | 26.220 | 5.88 | 79972 | 0.03 | 2000 | |
| Al | 27 | 1 | No Gas | 45.789 | 45.789 | 4.16 | 485318 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 12969.650 | 12969.650 | 2.05 | 53550864 | 0.02 | 2000 | >LDR |
| Ag | 107 | 1 | No Gas | 0.016 | 0.016 | 36.10 | 330 | 0.00 | 2000 | |
| Cd | 111 | 1 | No Gas | 0.056 | 0.056 | 25.60 | 127 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | 357.289 | 357.289 | 0.98 | 6260052 | 0.01 | 2000 | |
| Mo | 95 | 1 | No Gas | 0.884 | 0.884 | 4.91 | 3387 | 0.03 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.289 | 0.289 | 11.74 | 2737 | 0.01 | 2000 | |
| Sb | 121 | 1 | No Gas | 3.453 | 3.453 | 4.20 | 34563 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 275.911 | 275.911 | 1.06 | 796641 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 0.107 | 0.107 | 22.47 | 2940 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 0.092 | 0.092 | 26.24 | 1083 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 0.150 | 0.150 | 14.09 | 6544 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.162 | 0.162 | 4.08 | 5691 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 14658.811 | 14658.811 | 3.77 | 18827 | 77.86 | 200000 | |
| Sb | 121 | 2 | He | 3.321 | 3.321 | 6.42 | 16841 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 1.166 | 1.166 | 21.99 | 160 | 0.73 | 2000 | |
| Cu | 63 | 1 | No Gas | 1.797 | 1.797 | 4.63 | 15606 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 32.599 | 32.599 | 2.95 | 76448 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 0.882 | 0.882 | 62.57 | 56 | 1.58 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 914081 | 3.32 | 957133 | 95.50 | 70 | 120 | |
| Ge | 72 | 2 | He | 523952 | 1.65 | 530792 | 98.71 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1649637 | 0.60 | 1680329 | 98.17 | 70 | 120 | |
| In | 115 | 1 | No Gas | 1973639 | 0.81 | 2126707 | 92.80 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2127440 | 1.50 | 2340208 | 90.91 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 128_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:24:40-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 94.488 | 2.017 | 1146846 | 1.71 | 100 | 94.5 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 94.251 | 2.707 | 273885 | 1.38 | 100 | 94.3 | 90 | 110 | |
| V | 51 | 2 | He | 93.995 | 0.366 | 383826 | 0.74 | 100 | 94.0 | 90 | 110 | |
| Cr | 52 | 2 | He | 93.506 | 1.606 | 466531 | 0.79 | 100 | 93.5 | 90 | 110 | |
| Fe | 56 | 2 | He | 9531.068 | 2.336 | 42566075 | 1.92 | 10000 | 95.3 | 90 | 110 | |
| Se | 78 | 2 | He | 99.201 | 2.487 | 4751 | 1.90 | 100 | 99.2 | 90 | 110 | |
| Sn | 118 | 2 | He | 94.371 | 2.045 | 353090 | 1.07 | 100 | 94.4 | 90 | 110 | |
| As | 75 | 2 | He | 98.041 | 1.310 | 56981 | 0.59 | 100 | 98.0 | 90 | 110 | |
| Ca | 44 | 2 | He | 9576.651 | 1.579 | 210587 | 0.93 | 10000 | 95.8 | 90 | 110 | |
| Na | 23 | 2 | He | 9698.476 | 0.977 | 8277208 | 0.60 | 10000 | 97.0 | 90 | 110 | |
| Mg | 24 | 2 | He | 9548.801 | 0.613 | 4631944 | 0.80 | 10000 | 95.5 | 90 | 110 | |
| K | 39 | 2 | He | 9563.535 | 3.392 | 3655090 | 2.49 | 10000 | 95.6 | 90 | 110 | |
| Mn | 55 | 2 | He | 94.300 | 2.628 | 316032 | 1.62 | 100 | 94.3 | 90 | 110 | |
| Co | 59 | 2 | He | 93.591 | 1.223 | 742148 | 1.40 | 100 | 93.6 | 90 | 110 | |
| Ni | 60 | 2 | He | 95.415 | 0.195 | 189905 | 1.12 | 100 | 95.4 | 90 | 110 | |
| Cu | 63 | 2 | He | 94.495 | 0.577 | 511835 | 0.50 | 100 | 94.5 | 90 | 110 | |
| Zn | 66 | 2 | He | 96.297 | 1.316 | 99142 | 0.83 | 100 | 96.3 | 90 | 110 | |
| Al | 27 | 2 | He | 96.819 | 2.152 | 23991 | 2.01 | 100 | 96.8 | 90 | 110 | |
| B | 11 | 1 | No Gas | 471.915 | 3.708 | 928170 | 4.87 | 500 | 94.4 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 101.740 | 2.804 | 1021143 | 3.73 | 100 | 101.7 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 566.474 | 4.546 | 2516108 | 3.36 | 5000 | 11.3 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 474.490 | 5.555 | 218797 | 0.61 | 500 | 94.9 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 95.422 | 2.520 | 1063395 | 1.63 | 100 | 95.4 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 95.876 | 1.358 | 219943 | 1.20 | 100 | 95.9 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 96.416 | 0.214 | 1757013 | 1.66 | 100 | 96.4 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 95.606 | 1.069 | 374722 | 0.94 | 100 | 95.6 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 93.153 | 0.797 | 659738 | 2.55 | 100 | 93.2 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 95.385 | 5.406 | 950047 | 1.48 | 100 | 95.4 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 93.889 | 1.999 | 281886 | 0.19 | 100 | 93.9 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 95.456 | 6.433 | 2366892 | 2.46 | 100 | 95.5 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 90.838 | 6.313 | 953903 | 2.09 | 100 | 90.8 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 94.389 | 3.258 | 3261216 | 2.43 | 100 | 94.4 | 90 | 110 | |
| U | 238 | 1 | No Gas | 98.063 | 3.632 | 3629530 | 3.65 | 100 | 98.1 | 90 | 110 | |
| Ca | 43 | 2 | He | 9387.954 | 4.031 | 12269 | 4.93 | 10000 | 93.9 | 90 | 110 | |
| Sb | 121 | 2 | He | 95.148 | 0.784 | 483131 | 0.75 | 100 | 95.1 | 90 | 110 | |
| Ti | 47 | 2 | He | 96.609 | 1.300 | 13187 | 2.27 | 100 | 96.6 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 99.439 | 4.289 | 783753 | 0.99 | 100 | 99.4 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 961217 | 3.49 | 957133 | 100.43 | 70 | 120 | |
| Ge | 72 | 2 | He | 532585 | 0.98 | 530792 | 100.34 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1669106 | 4.64 | 1680329 | 99.33 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2051172 | 1.84 | 2126707 | 96.45 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2252536 | 4.29 | 2340208 | 96.25 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 129_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T16:26:29-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.099 | 38.9 | 57933 | 3.1 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.016 | 36.7 | 68 | 25.7 | 0.5 | |
| V | 51 | 2 | He | 0.737 | 10.3 | 7000 | 3.1 | 2.5 | |
| Cr | 52 | 2 | He | 0.019 | 181.2 | 1373 | 9.9 | 2.5 | |
| Fe | 56 | 2 | He | 1.090 | 9.2 | 10134 | 2.0 | 100 | |
| Se | 78 | 2 | He | -0.001 | -18399.1 | 33 | 34.8 | 2 | |
| As | 75 | 2 | He | 0.399 | 15.4 | 426 | 8.6 | 2.5 | |
| Ca | 44 | 2 | He | -5.065 | -32.8 | 473 | 5.3 | 100 | |
| Na | 23 | 2 | He | 8.283 | 21.0 | 161127 | 1.7 | 100 | |
| Mg | 24 | 2 | He | 0.576 | 7.1 | 900 | 1.9 | 100 | |
| K | 39 | 2 | He | 13.431 | 20.9 | 47699 | 1.8 | 100 | |
| Mn | 55 | 2 | He | -0.099 | -33.5 | 833 | 11.8 | 2.5 | |
| Co | 59 | 2 | He | -0.014 | -6.7 | 140 | 7.1 | 2.5 | |
| Ni | 60 | 2 | He | 0.003 | 281.3 | 153 | 13.6 | 2.5 | |
| Cu | 63 | 2 | He | 0.061 | 42.0 | 1330 | 7.9 | 2 | |
| Zn | 66 | 2 | He | 0.139 | 24.4 | 430 | 6.2 | 2.5 | |
| Al | 27 | 2 | He | -1.299 | -41.8 | 1063 | 13.7 | 5 | |
| B | 11 | 1 | No Gas | 1.378 | 87.6 | 36421 | 5.2 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -1.671 | -5.1 | 41462 | 1.1 | 5 | |
| Si | 28 | 1 | No Gas | 2.447 | 68.5 | 170950 | 1.1 | 10 | |
| P | 31 | 1 | No Gas | -27.872 | -9.7 | 19698 | 3.4 | 10 | |
| Ag | 107 | 1 | No Gas | 0.006 | 14.5 | 243 | 6.3 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.013 | 67.9 | 33 | 62.4 | 1 | |
| Sr | 88 | 1 | No Gas | -0.004 | -114.8 | 1957 | 4.4 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.038 | 15.4 | 210 | 12.6 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.207 | 5.3 | 2310 | 5.5 | 5 | |
| Sb | 121 | 1 | No Gas | 0.276 | 12.2 | 3337 | 7.3 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.008 | 382.7 | 343 | 27.1 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.090 | 33.1 | 2744 | 30.7 | 1 | |
| Tl | 203 | 1 | No Gas | 0.084 | 31.0 | 1083 | 28.9 | 1 | |
| Pb | 208 | 1 | No Gas | 0.025 | 25.1 | 2667 | 7.2 | 2.5 | |
| U | 238 | 1 | No Gas | 0.008 | 21.1 | 343 | 21.9 | 2.5 | |
| Ca | 43 | 2 | He | 2.744 | 564.1 | 20 | 100.0 | 100 | |
| Sb | 121 | 2 | He | 0.256 | 9.1 | 1530 | 6.2 | 2.5 | |
| Ti | 47 | 2 | He | -0.024 | 0.0 | 0 | #DIV/0! | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.067 | 53.0 | 2194 | 10.8 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 943827 | 2.42 | 957133 | 98.61 | 70 | 120 | |
| Ge | 72 | 2 | He | 520849 | 2.28 | 530792 | 98.13 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1691200 | 3.05 | 1680329 | 100.65 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2096391 | 2.14 | 2126707 | 98.57 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2282280 | 3.69 | 2340208 | 97.52 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 170_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T20:43:49-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 101.620 | 1.146 | 1313931 | 1.98 | 100 | 101.6 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 100.664 | 0.736 | 312737 | 0.34 | 100 | 100.7 | 90 | 110 | |
| V | 51 | 2 | He | 101.656 | 1.397 | 431681 | 1.28 | 100 | 101.7 | 90 | 110 | |
| Cr | 52 | 2 | He | 100.262 | 1.131 | 520578 | 0.83 | 100 | 100.3 | 90 | 110 | |
| Fe | 56 | 2 | He | 10151.343 | 2.274 | 47182753 | 1.17 | 10000 | 101.5 | 90 | 110 | |
| Se | 78 | 2 | He | 102.632 | 0.436 | 5116 | 2.05 | 100 | 102.6 | 90 | 110 | |
| Sn | 118 | 2 | He | 100.614 | 0.943 | 394455 | 0.93 | 100 | 100.6 | 90 | 110 | |
| As | 75 | 2 | He | 103.612 | 0.728 | 62669 | 1.31 | 100 | 103.6 | 90 | 110 | |
| Ca | 44 | 2 | He | 10608.292 | 3.307 | 242685 | 2.11 | 10000 | 106.1 | 90 | 110 | |
| Na | 23 | 2 | He | 10356.352 | 0.751 | 9189831 | 2.30 | 10000 | 103.6 | 90 | 110 | |
| Mg | 24 | 2 | He | 10429.225 | 1.061 | 5266325 | 2.60 | 10000 | 104.3 | 90 | 110 | |
| K | 39 | 2 | He | 10689.882 | 2.196 | 4247095 | 0.98 | 10000 | 106.9 | 90 | 110 | |
| Mn | 55 | 2 | He | 102.171 | 1.108 | 356322 | 0.77 | 100 | 102.2 | 90 | 110 | |
| Co | 59 | 2 | He | 98.061 | 1.532 | 809242 | 0.17 | 100 | 98.1 | 90 | 110 | |
| Ni | 60 | 2 | He | 100.583 | 0.357 | 208366 | 1.86 | 100 | 100.6 | 90 | 110 | |
| Cu | 63 | 2 | He | 100.710 | 0.860 | 567788 | 2.42 | 100 | 100.7 | 90 | 110 | |
| Zn | 66 | 2 | He | 102.057 | 1.662 | 109336 | 0.42 | 100 | 102.1 | 90 | 110 | |
| Al | 27 | 2 | He | 107.741 | 0.908 | 27625 | 1.23 | 100 | 107.7 | 90 | 110 | |
| B | 11 | 1 | No Gas | 517.101 | 3.679 | 1083022 | 2.65 | 500 | 103.4 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 109.130 | 3.667 | 1163618 | 3.69 | 100 | 109.1 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 539.591 | 2.615 | 2564844 | 2.45 | 5000 | 10.8 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 518.523 | 1.664 | 252186 | 1.16 | 500 | 103.7 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 103.551 | 3.385 | 1203455 | 2.32 | 100 | 103.6 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 103.200 | 1.814 | 246893 | 0.58 | 100 | 103.2 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 101.970 | 3.753 | 1937091 | 1.90 | 100 | 102.0 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 101.307 | 3.114 | 414024 | 1.53 | 100 | 101.3 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 98.095 | 0.792 | 724446 | 1.60 | 100 | 98.1 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 99.448 | 1.846 | 1057331 | 1.08 | 100 | 99.4 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 101.895 | 3.927 | 318981 | 2.46 | 100 | 101.9 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 99.816 | 4.138 | 2661484 | 2.49 | 100 | 99.8 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 93.307 | 1.299 | 1054063 | 1.41 | 100 | 93.3 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 97.539 | 1.439 | 3621389 | 0.70 | 100 | 97.5 | 90 | 110 | |
| U | 238 | 1 | No Gas | 99.506 | 2.237 | 3957488 | 2.65 | 100 | 99.5 | 90 | 110 | |
| Ca | 43 | 2 | He | 10538.169 | 1.389 | 14328 | 1.18 | 10000 | 105.4 | 90 | 110 | |
| Sb | 121 | 2 | He | 102.334 | 1.848 | 540758 | 0.98 | 100 | 102.3 | 90 | 110 | |
| Ti | 47 | 2 | He | 103.371 | 3.253 | 14681 | 2.59 | 100 | 103.4 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 102.405 | 1.281 | 861304 | 1.09 | 100 | 102.4 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1027093 | 0.89 | 957133 | 107.31 | 70 | 120 | |
| Ge | 72 | 2 | He | 554353 | 1.70 | 530792 | 104.44 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1778989 | 0.77 | 1680329 | 105.87 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2139329 | 1.95 | 2126707 | 100.59 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2419155 | 1.95 | 2340208 | 103.37 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 171_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T20:45:38-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.098 | -124.5 | 63602 | 1.5 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.013 | 21.9 | 70 | 14.3 | 0.5 | |
| V | 51 | 2 | He | 1.590 | 4.1 | 11141 | 2.4 | 2.5 | |
| Cr | 52 | 2 | He | 0.006 | 379.6 | 1410 | 8.9 | 2.5 | |
| Fe | 56 | 2 | He | 1.411 | 6.6 | 12399 | 3.2 | 100 | |
| Se | 78 | 2 | He | -0.038 | -575.9 | 33 | 33.0 | 2 | |
| As | 75 | 2 | He | 0.635 | 8.6 | 601 | 5.2 | 2.5 | |
| Ca | 44 | 2 | He | -4.010 | -98.8 | 533 | 17.0 | 100 | |
| Na | 23 | 2 | He | 46.807 | 4.1 | 207014 | 0.7 | 100 | |
| Mg | 24 | 2 | He | 0.660 | 18.5 | 1010 | 6.0 | 100 | |
| K | 39 | 2 | He | 11.328 | 10.5 | 50422 | 0.7 | 100 | |
| Mn | 55 | 2 | He | -0.075 | -13.0 | 980 | 3.7 | 2.5 | |
| Co | 59 | 2 | He | -0.009 | -62.0 | 197 | 22.9 | 2.5 | |
| Ni | 60 | 2 | He | 0.009 | 270.9 | 177 | 29.0 | 2.5 | |
| Cu | 63 | 2 | He | 0.067 | 21.0 | 1467 | 5.7 | 2 | |
| Zn | 66 | 2 | He | 0.455 | 20.1 | 803 | 12.5 | 2.5 | |
| Al | 27 | 2 | He | -1.872 | -28.1 | 1000 | 13.1 | 5 | |
| B | 11 | 1 | No Gas | 2.752 | 27.1 | 44541 | 4.2 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -2.240 | -4.5 | 37267 | 1.6 | 5 | |
| Si | 28 | 1 | No Gas | -5.081 | -15.3 | 144186 | 0.9 | 10 | |
| P | 31 | 1 | No Gas | -12.444 | -32.7 | 26820 | 4.2 | 10 | |
| Ag | 107 | 1 | No Gas | 0.023 | 8.8 | 463 | 5.0 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.020 | 22.3 | 53 | 21.7 | 1 | |
| Sr | 88 | 1 | No Gas | -0.007 | -51.2 | 1994 | 3.3 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.043 | 29.1 | 240 | 20.8 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.243 | 26.3 | 2704 | 17.0 | 5 | |
| Sb | 121 | 1 | No Gas | 0.243 | 11.9 | 3114 | 8.6 | 2.5 | |
| Ba | 137 | 1 | No Gas | -0.010 | -106.1 | 303 | 12.5 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.127 | 51.6 | 3904 | 45.4 | 1 | |
| Tl | 203 | 1 | No Gas | 0.125 | 46.2 | 1623 | 40.9 | 1 | |
| Pb | 208 | 1 | No Gas | 0.016 | 49.0 | 2477 | 10.2 | 2.5 | |
| U | 238 | 1 | No Gas | 0.011 | 6.9 | 497 | 7.1 | 2.5 | |
| Ca | 43 | 2 | He | 4.286 | 97.5 | 23 | 24.7 | 100 | |
| Sb | 121 | 2 | He | 0.237 | 9.6 | 1543 | 7.8 | 2.5 | |
| Ti | 47 | 2 | He | 0.139 | 29.4 | 23 | 24.7 | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.185 | 15.1 | 3250 | 9.1 | 2.5 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1077820 | 1.01 | 957133 | 112.61 | 70 | 120 | |
| Ge | 72 | 2 | He | 559580 | 0.28 | 530792 | 105.42 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1750901 | 2.39 | 1680329 | 104.20 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2205361 | 1.23 | 2126707 | 103.70 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2434454 | 1.47 | 2340208 | 104.03 | 70 | 120 | |

# Sample Report

**Sample Table**

| | |
|---|---|
| Sample Name | LCS-155817 |
| Data File Name | 172SMPL.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T20:47:33-05:00 |
| Sample Type | Sample |
| Dilution | 1 |
| Comment | DOD 155817/RR |
| ISTD Ref FileName | 105CALB.d |
| Sample QC Pass/Fail | Pass |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | FinalConc | Conc %RSD | CPS | %RSD | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | -0.042 | -0.042 | -334.94 | 64302 | 0.00 | 2000 | |
| Be | 9 | 1 | No Gas | 46.238 | 46.238 | 0.90 | 150725 | 0.03 | 2000 | |
| V | 51 | 2 | He | 46.545 | 46.545 | 1.64 | 207646 | 0.02 | 2000 | |
| Cr | 52 | 2 | He | 45.674 | 45.674 | 1.77 | 246971 | 0.02 | 2000 | |
| Fe | 56 | 2 | He | 4631.015 | 4631.015 | 1.89 | 22351653 | 0.02 | 200000 | |
| Se | 78 | 2 | He | 51.414 | 51.414 | 1.21 | 2678 | 1.92 | 2000 | |
| Sn | 118 | 2 | He | 0.061 | 0.061 | 45.75 | 633 | 0.01 | 200 | |
| As | 75 | 2 | He | 48.384 | 48.384 | 1.53 | 30499 | 0.16 | 2000 | |
| Ca | 44 | 2 | He | 4773.896 | 4773.896 | 0.60 | 113763 | 4.20 | 200000 | |
| Na | 23 | 2 | He | 4772.215 | 4772.215 | 2.24 | 4487402 | 0.11 | 200000 | |
| Mg | 24 | 2 | He | 4843.195 | 4843.195 | 0.88 | 2538911 | 0.19 | 200000 | |
| K | 39 | 2 | He | 4965.457 | 4965.457 | 1.25 | 2073642 | 0.24 | 200000 | |
| Mn | 55 | 2 | He | 47.310 | 47.310 | 0.89 | 171990 | 0.03 | 2000 | |
| Co | 59 | 2 | He | 44.890 | 44.890 | 1.24 | 384770 | 0.01 | 2000 | |
| Ni | 60 | 2 | He | 46.048 | 46.048 | 1.90 | 99108 | 0.05 | 2000 | |
| Cu | 63 | 2 | He | 47.551 | 47.551 | 1.43 | 278889 | 0.02 | 2000 | |
| Zn | 66 | 2 | He | 48.740 | 48.740 | 1.03 | 54383 | 0.09 | 2000 | |
| Al | 27 | 2 | He | 58.064 | 58.064 | 3.05 | 16146 | 0.36 | 2000 | |
| B | 11 | 1 | No Gas | -2.664 | -2.664 | -17.00 | 33031 | -0.01 | 2000 | |
| Al | 27 | 1 | No Gas | 58.129 | 58.129 | 2.86 | 666739 | 0.01 | 2000 | |
| Si | 28 | 1 | No Gas | 108.920 | 108.920 | 4.92 | 671442 | 0.02 | 2000 | |
| Ag | 107 | 1 | No Gas | 46.683 | 46.683 | 1.86 | 561732 | 0.01 | 2000 | |
| Cd | 111 | 1 | No Gas | 48.787 | 48.787 | 1.07 | 120828 | 0.04 | 2000 | |
| Sr | 88 | 1 | No Gas | -0.009 | -0.009 | -63.32 | 1974 | 0.00 | 2000 | |
| Mo | 95 | 1 | No Gas | 46.470 | 46.470 | 2.96 | 196610 | 0.02 | 2000 | |
| Sn | 118 | 1 | No Gas | 0.052 | 0.052 | 13.79 | 1257 | 0.00 | 2000 | |
| Sb | 121 | 1 | No Gas | 46.902 | 46.902 | 0.32 | 513499 | 0.01 | 2000 | |
| Ba | 137 | 1 | No Gas | 46.538 | 46.538 | 1.43 | 151030 | 0.03 | 2000 | |
| Tl | 205 | 1 | No Gas | 44.738 | 44.738 | 3.58 | 1225579 | 0.00 | 2000 | |
| Tl | 203 | 1 | No Gas | 43.430 | 43.430 | 1.80 | 503989 | 0.01 | 2000 | |
| Pb | 208 | 1 | No Gas | 45.035 | 45.035 | 1.94 | 1718335 | 0.00 | 2000 | |
| U | 238 | 1 | No Gas | 0.000 | 0.000 | 383.73 | 57 | 0.00 | 2000 | |
| Ca | 43 | 2 | He | 4580.004 | 4580.004 | 8.05 | 6475 | 70.73 | 200000 | |
| Sb | 121 | 2 | He | 47.806 | 47.806 | 0.84 | 262441 | 0.02 | 2000 | |
| Ti | 47 | 2 | He | 44.927 | 44.927 | 2.46 | 6628 | 0.68 | 2000 | |
| Cu | 63 | 1 | No Gas | 48.033 | 48.033 | 1.85 | 416622 | 0.01 | 2000 | |
| Zn | 66 | 1 | No Gas | 48.803 | 48.803 | 1.07 | 126512 | 0.04 | 2000 | |
| Se | 82 | 1 | No Gas | 50.790 | 50.790 | 4.81 | 6120 | 0.83 | 2000 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1077654 | 1.94 | 957133 | 112.59 | 70 | 120 | |
| Ge | 72 | 2 | He | 575487 | 0.65 | 530792 | 108.42 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1830656 | 1.45 | 1680329 | 108.95 | 70 | 120 | |

# Sample Report

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In | 115 | 1 | No Gas | 2214240 | 1.53 | 2126707 | 104.12 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2484807 | 2.10 | 2340208 | 106.18 | 70 | 120 | |

# Continuing Calibration Verification (CCV) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCV |
| Data File Name | 179_CCV.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T21:00:48-05:00 |
| Sample Type | CCV |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Exp Value | %Rec | %Low | %High2 | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 104.738 | 3.846 | 1339495 | 3.08 | 100 | 104.7 | 90 | 110 | |
| Be | 9 | 1 | No Gas | 100.858 | 3.456 | 310317 | 0.46 | 100 | 100.9 | 90 | 110 | |
| V | 51 | 2 | He | 98.091 | 1.665 | 413920 | 1.15 | 100 | 98.1 | 90 | 110 | |
| Cr | 52 | 2 | He | 97.938 | 1.909 | 505155 | 1.33 | 100 | 97.9 | 90 | 110 | |
| Fe | 56 | 2 | He | 9982.698 | 1.938 | 46094346 | 1.28 | 10000 | 99.8 | 90 | 110 | |
| Se | 78 | 2 | He | 103.492 | 2.392 | 5123 | 1.79 | 100 | 103.5 | 90 | 110 | |
| Sn | 118 | 2 | He | 99.284 | 1.716 | 389027 | 2.74 | 100 | 99.3 | 90 | 110 | |
| As | 75 | 2 | He | 100.742 | 1.987 | 60531 | 1.58 | 100 | 100.7 | 90 | 110 | |
| Ca | 44 | 2 | He | 10248.495 | 1.923 | 232958 | 1.29 | 10000 | 102.5 | 90 | 110 | |
| Na | 23 | 2 | He | 10327.155 | 2.245 | 9103103 | 2.75 | 10000 | 103.3 | 90 | 110 | |
| Mg | 24 | 2 | He | 10415.531 | 2.778 | 5223597 | 2.76 | 10000 | 104.2 | 90 | 110 | |
| K | 39 | 2 | He | 10470.546 | 2.839 | 4133412 | 2.15 | 10000 | 104.7 | 90 | 110 | |
| Mn | 55 | 2 | He | 99.789 | 1.413 | 345737 | 1.01 | 100 | 99.8 | 90 | 110 | |
| Co | 59 | 2 | He | 96.541 | 2.273 | 791425 | 1.63 | 100 | 96.5 | 90 | 110 | |
| Ni | 60 | 2 | He | 99.755 | 1.586 | 205251 | 1.02 | 100 | 99.8 | 90 | 110 | |
| Cu | 63 | 2 | He | 99.149 | 0.030 | 555215 | 0.67 | 100 | 99.1 | 90 | 110 | |
| Zn | 66 | 2 | He | 101.528 | 1.249 | 108055 | 0.64 | 100 | 101.5 | 90 | 110 | |
| Al | 27 | 2 | He | 106.657 | 2.094 | 27180 | 2.26 | 100 | 106.7 | 90 | 110 | |
| B | 11 | 1 | No Gas | 520.901 | 4.282 | 1080180 | 0.25 | 500 | 104.2 | 90 | 110 | |
| Al | 27 | 1 | No Gas | 106.916 | 3.875 | 1123087 | 2.40 | 100 | 106.9 | 90 | 110 | |
| Si | 28 | 1 | No Gas | 531.770 | 1.746 | 2490796 | 2.11 | 5000 | 10.6 | 90 | 110 | CCV Main CR1-2 Failed |
| P | 31 | 1 | No Gas | 506.185 | 4.108 | 243013 | 0.68 | 500 | 101.2 | 90 | 110 | |
| Ag | 107 | 1 | No Gas | 100.683 | 4.267 | 1153020 | 4.07 | 100 | 100.7 | 90 | 110 | |
| Cd | 111 | 1 | No Gas | 103.061 | 3.842 | 242861 | 2.06 | 100 | 103.1 | 90 | 110 | |
| Sr | 88 | 1 | No Gas | 104.452 | 2.894 | 1955112 | 1.00 | 100 | 104.5 | 90 | 110 | |
| Mo | 95 | 1 | No Gas | 100.911 | 2.225 | 406360 | 0.85 | 100 | 100.9 | 90 | 110 | |
| Sn | 118 | 1 | No Gas | 97.778 | 1.325 | 711378 | 0.90 | 100 | 97.8 | 90 | 110 | |
| Sb | 121 | 1 | No Gas | 98.457 | 4.367 | 1029900 | 0.63 | 100 | 98.5 | 90 | 110 | |
| Ba | 137 | 1 | No Gas | 101.424 | 2.281 | 312866 | 0.51 | 100 | 101.4 | 90 | 110 | |
| Tl | 205 | 1 | No Gas | 101.832 | 2.569 | 2654709 | 0.95 | 100 | 101.8 | 90 | 110 | |
| Tl | 203 | 1 | No Gas | 96.227 | 2.709 | 1062375 | 0.40 | 100 | 96.2 | 90 | 110 | |
| Pb | 208 | 1 | No Gas | 99.255 | 0.654 | 3602968 | 2.01 | 100 | 99.3 | 90 | 110 | |
| U | 238 | 1 | No Gas | 98.800 | 1.372 | 3841264 | 2.07 | 100 | 98.8 | 90 | 110 | |
| Ca | 43 | 2 | He | 10458.390 | 2.915 | 14124 | 2.34 | 10000 | 104.6 | 90 | 110 | |
| Sb | 121 | 2 | He | 100.935 | 1.089 | 529891 | 1.30 | 100 | 100.9 | 90 | 110 | |
| Ti | 47 | 2 | He | 97.684 | 6.217 | 13781 | 5.62 | 100 | 97.7 | 90 | 110 | |
| Cu | 63 | 1 | No Gas | 100.726 | 2.688 | 833951 | 2.33 | 100 | 100.7 | 90 | 110 | |

**QC ISTD Table**

| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1018050 | 3.88 | 957133 | 106.36 | 70 | 120 | |
| Ge | 72 | 2 | He | 550638 | 0.66 | 530792 | 103.74 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1752007 | 3.71 | 1680329 | 104.27 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2107724 | 1.87 | 2126707 | 99.11 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2365100 | 2.66 | 2340208 | 101.06 | 70 | 120 | |

# Continuing Calibration Blank (CCB) Report

**Sample Table**

| | |
|---|---|
| Sample Name | CCB |
| Data File Name | 180_CCB.d |
| Data Path Name | C:\Agilent\ICPMH\1\DATA\072820A.b |
| Acq Date Time | 2020-07-28T21:02:37-05:00 |
| Sample Type | CCB |
| Dilution | 1 |
| Comment | |
| ISTD Ref File Name | 105CALB.d |
| Sample QC Pass/Fail | Fail |
| ISTD Pass/Fail | Pass |

**QC Analyte Table**

| Name | Mass | Tune Step | Tune Mode | Conc | Conc %RSD | CPS | CPS %RSD | Upper Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 1 | No Gas | 0.002 | 3404.5 | 64551 | 1.0 | 0.5 | |
| Be | 9 | 1 | No Gas | 0.023 | 28.3 | 100 | 20.0 | 0.5 | |
| V | 51 | 2 | He | 0.749 | 10.1 | 7483 | 4.9 | 2.5 | |
| Cr | 52 | 2 | He | -0.026 | -47.1 | 1227 | 6.1 | 2.5 | |
| Fe | 56 | 2 | He | 1.272 | 4.9 | 11605 | 3.8 | 100 | |
| Se | 78 | 2 | He | -0.070 | -272.0 | 31 | 30.2 | 2 | |
| As | 75 | 2 | He | 0.360 | 3.2 | 429 | 3.6 | 2.5 | |
| Ca | 44 | 2 | He | -0.419 | -765.8 | 610 | 14.6 | 100 | |
| Na | 23 | 2 | He | 105.960 | 5.2 | 255883 | 1.0 | 100 | CCB Main CR1 Failed |
| Mg | 24 | 2 | He | 0.788 | 12.5 | 1063 | 7.1 | 100 | |
| K | 39 | 2 | He | 32.142 | 18.0 | 57948 | 1.9 | 100 | |
| Mn | 55 | 2 | He | -0.082 | -36.6 | 947 | 13.2 | 2.5 | |
| Co | 59 | 2 | He | -0.013 | -54.0 | 160 | 34.8 | 2.5 | |
| Ni | 60 | 2 | He | 0.025 | 40.8 | 207 | 10.1 | 2.5 | |
| Cu | 63 | 2 | He | 0.057 | 36.5 | 1390 | 5.9 | 2 | |
| Zn | 66 | 2 | He | 0.281 | 36.8 | 607 | 16.6 | 2.5 | |
| Al | 27 | 2 | He | -1.909 | -13.0 | 980 | 8.7 | 5 | |
| B | 11 | 1 | No Gas | 5.463 | 16.8 | 50028 | 4.3 | 0.5 | CCB Main CR1 Failed |
| Al | 27 | 1 | No Gas | -2.460 | -1.7 | 35519 | 0.9 | 5 | |
| Si | 28 | 1 | No Gas | -2.268 | -15.8 | 158444 | 1.1 | 10 | |
| P | 31 | 1 | No Gas | -20.042 | -3.7 | 23968 | 1.7 | 10 | |
| Ag | 107 | 1 | No Gas | 0.020 | 34.2 | 417 | 20.0 | 2.5 | |
| Cd | 111 | 1 | No Gas | 0.014 | 17.2 | 37 | 15.7 | 1 | |
| Sr | 88 | 1 | No Gas | 0.004 | 340.5 | 2207 | 11.3 | 2.5 | |
| Mo | 95 | 1 | No Gas | 0.054 | 51.1 | 287 | 40.4 | 2.5 | |
| Sn | 118 | 1 | No Gas | 0.251 | 17.6 | 2760 | 11.9 | 5 | |
| Sb | 121 | 1 | No Gas | 0.283 | 8.9 | 3584 | 6.6 | 2.5 | |
| Ba | 137 | 1 | No Gas | 0.008 | 176.0 | 360 | 12.7 | 2.5 | |
| Tl | 205 | 1 | No Gas | 0.133 | 50.6 | 4074 | 46.0 | 1 | |
| Tl | 203 | 1 | No Gas | 0.142 | 54.7 | 1820 | 50.2 | 1 | |
| Pb | 208 | 1 | No Gas | 0.021 | 10.5 | 2667 | 3.5 | 2.5 | |
| U | 238 | 1 | No Gas | 0.010 | 18.4 | 463 | 18.1 | 2.5 | |
| Ca | 43 | 2 | He | 2.113 | 355.6 | 20 | 50.0 | 100 | |
| Sb | 121 | 2 | He | 0.273 | 15.4 | 1713 | 10.4 | 2.5 | |
| Ti | 47 | 2 | He | -0.024 | 0.0 | 0 | #DIV/0! | 2.5 | |
| Cu | 63 | 1 | No Gas | 0.238 | 6.2 | 3731 | 2.9 | 2.5 | |

**QC ISTD Table**

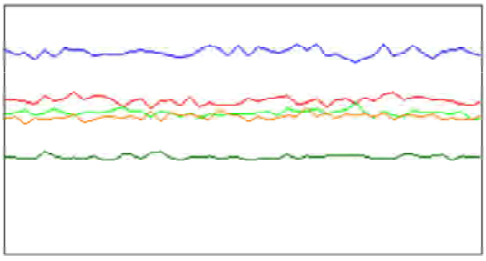
| Name | Mass | Tune Step | Tune Mode | CPS | %RSD | Ref CPS | %Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | 1 | No Gas | 1072139 | 1.69 | 957133 | 112.02 | 70 | 120 | |
| Ge | 72 | 2 | He | 552903 | 2.55 | 530792 | 104.17 | 70 | 120 | |
| Ge | 72 | 1 | No Gas | 1772557 | 2.07 | 1680329 | 105.49 | 70 | 120 | |
| In | 115 | 1 | No Gas | 2201258 | 0.76 | 2126707 | 103.51 | 70 | 120 | |
| Bi | 209 | 1 | No Gas | 2431971 | 1.38 | 2340208 | 103.92 | 70 | 120 | |

# Tune Check Report

| | |
|---|---|
| **Operator Name** | ALSHS NoUser |
| **Acq/Data Batch** | C:\Agilent\ICPMH\1\DATA\072820A.b |
| **Acq. Date-Time** | 7/28/2020 10:11:34 AM |
| **Report Comment** | --- |
| **Instrument Name** | G8421A SG18523544 |

**[No Gas]**

**Sensitivity**



| | |
|---|---|
| Sampling Period [sec] | 0.514 |
| Integration Time [sec] | 0.1 |

| Mass | Range | Count | Resp [cps/ug/l] | Resp (Required) [cps/ug/l] | Resp (Flag) |
|---|---|---|---|---|---|
| 9 | 5000 | 3096 | 30962.36 | | |
| 24 | 20000 | 11389 | 113889.24 | | |
| 59 | 20000 | 16305 | 163046.40 | | |
| 115 | 50000 | 27693 | 276933.21 | | |
| 208 | 50000 | 19543 | 195432.36 | | |

| Mass | Resp Ratio | Resp Ratio (Required) | Resp Ratio (Flag) |
|---|---|---|---|
| 9 | | - | |
| 24 | | - | |
| 59 | | - | |
| 115 | | - | |
| 208 | | - | |

| Mass | RSD% | RSD% (Required) | RSD% (Flag) |
|---|---|---|---|
| 9 | 2.471 | 5.000 | |
| 24 | 2.200 | 5.000 | |
| 59 | 2.079 | 5.000 | |
| 115 | 2.264 | 5.000 | |
| 208 | 2.110 | 5.000 | |

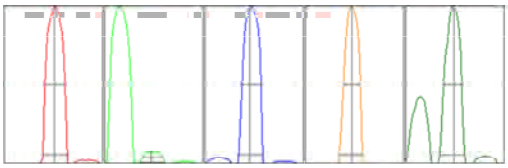
| Mass | Background | Background (Required) | Background (Flag) |
|---|---|---|---|
| 9 | 0.000 | | |
| 24 | 0.400 | | |
| 59 | 0.400 | | |
| 115 | 0.200 | | |
| 208 | 0.500 | | |

**Oxide/Doubly Charged Ratio**

| | |
|---|---|
| Oxide | 156 / 140 0.644 % |
| Doubly Charged | 70 / 140 0.712 % |

# Tune Check Report

### Resolution/Axis



| | |
|---|---|
| Integration Time [sec] | 0.1 |
| Acquisition Time [sec] | 37.4 |
| Y Axis | Linear |

| Mass | Peak Height | Axis | Axis (Required) | Axis (Flag) |
|---|---|---|---|---|
| 9 | 3161.15 | 9.05 | 8.90 - 9.10 | |
| 24 | 11251.34 | 23.95 | 23.90 - 24.10 | |
| 59 | 16439.18 | 58.90 | 58.90 - 59.10 | |
| 115 | 27582.16 | 114.95 | 114.90 - 115.10 | |
| 208 | 19231.82 | 208.00 | 207.90 - 208.10 | |

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 9 | 0.62 | 0.740 | | |
| 24 | 0.62 | 0.778 | | |
| 59 | 0.58 | 0.734 | | |
| 115 | 0.52 | 0.719 | | |
| 208 | 0.56 | 0.769 | | |

### Tune Parameters

#### Plasma Parameters

| | | | | | |
|---|---|---|---|---|---|
| Plasma Mode | --- | Nebulizer Gas | 0.45 L/min | Dilution Gas | 0.55 L/min |
| RF Power | 1600 W | Option Gas | --- | Auxiliary Gas | 0.90 L/min |
| RF Matching | 1.80 V | Nebulizer Pump | 0.10 rps | Plasma Gas | 15.0 L/min |
| Sample Depth | 8.0 mm | S/C Temp | 2 °C | | |

#### Lens Parameters

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 9.1 V | Deflect | 12.6 V |
| Extract 2 | -195.0 V | Cell Entrance | -30 V | Plate Bias | -35 V |
| Omega Bias | -90 V | Cell Exit | -50 V | | |

#### Cell Parameters

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | No | 3rd Gas Flow | --- | Energy Discrimination | 5.0 V |
| He Flow | 0.0 mL/min | OctP Bias | -8.0 V | | |
| H2 Flow | --- | OctP RF | 190 V | | |

#### QP Parameters

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 133 | Axis Gain | 0.9999 | QP Bias | -3.0 V |
| Mass Offset | 125 | Axis Offset | 0.13 | | |

### Hardware Settings

#### Torch

| | | | |
|---|---|---|---|
| Torch H | -0.3 mm | Torch V | 0.3 mm |

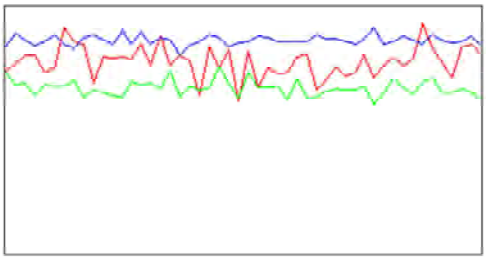
#### EM

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 3.2 mV | Analog HV | 2405 V | Pulse HV | 1182 V |

[He]

# Tune Check Report

**Sensitivity**



| | |
|---|---|
| Sampling Period [sec] | 0.306 |
| Integration Time [sec] | 0.1 |

| Mass | Range | Count | Resp [cps/ug/l] | Resp (Required) [cps/ug/l] | Resp (Flag) |
|---|---|---|---|---|---|
| 9 | 200 | 155 | 1552.09 | | |
| 24 | 1000 | 670 | 6697.60 | | |
| 59 | 10000 | 8638 | 86377.18 | | |

| Mass | Resp Ratio | Resp Ratio (Required) | Resp Ratio (Flag) |
|---|---|---|---|
| 9 | | - | |
| 24 | | - | |
| 59 | | - | |

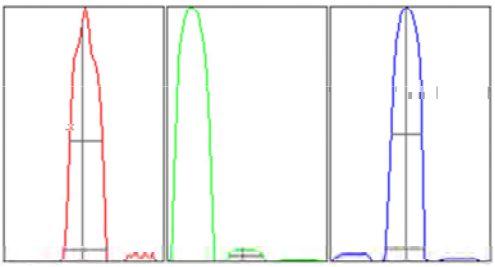
| Mass | RSD% | RSD% (Required) | RSD% (Flag) |
|---|---|---|---|
| 9 | 8.299 | 5.000 | Fail |
| 24 | 4.916 | 5.000 | |
| 59 | 2.399 | 5.000 | |

| Mass | Background | Background (Required) | Background (Flag) |
|---|---|---|---|
| 9 | 0.100 | | |
| 24 | 0.000 | | |
| 59 | 0.000 | | |

**Oxide/Doubly Charged Ratio**

| | |
|---|---|
| Oxide | 156 / 140 0.318 % |
| Doubly Charged | 70 / 140 0.712 % |

**Resolution/Axis**



| | |
|---|---|
| Integration Time [sec] | 0.1 |
| Acquisition Time [sec] | 22.24 |
| Y Axis | Linear |

| Mass | Peak Height | Axis | Axis (Required) | Axis (Flag) |
|---|---|---|---|---|
| 9 | 164.27 | 9.00 | 8.90 - 9.10 | |
| 24 | 674.69 | 23.95 | 23.90 - 24.10 | |
| 59 | 8722.65 | 58.95 | 58.90 - 59.10 | |

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 9 | 0.62 | 0.783 | | |
| 24 | 0.63 | 0.776 | | |

# Tune Check Report

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 59 | 0.58 | 0.734 | | |

## Tune Parameters

### Plasma Parameters

| | | | | | |
|---|---|---|---|---|---|
| Plasma Mode | --- | Nebulizer Gas | 0.45 L/min | Dilution Gas | 0.55 L/min |
| RF Power | 1600 W | Option Gas | --- | Auxiliary Gas | 0.90 L/min |
| RF Matching | 1.80 V | Nebulizer Pump | 0.10 rps | Plasma Gas | 15.0 L/min |
| Sample Depth | 8.0 mm | S/C Temp | 2 °C | | |

### Lens Parameters

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 10.0 V | Deflect | 0.0 V |
| Extract 2 | -195.0 V | Cell Entrance | -40 V | Plate Bias | -60 V |
| Omega Bias | -80 V | Cell Exit | -60 V | | |

### Cell Parameters

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | Yes | 3rd Gas Flow | --- | Energy Discrimination | 3.0 V |
| He Flow | 4.0 mL/min | OctP Bias | -18.0 V | | |
| H2 Flow | --- | OctP RF | 200 V | | |

### QP Parameters

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 133 | Axis Gain | 0.9999 | QP Bias | -15.0 V |
| Mass Offset | 125 | Axis Offset | 0.13 | | |

## Hardware Settings

### Torch

| | | | |
|---|---|---|---|
| Torch H | -0.3 mm | Torch V | 0.3 mm |

### EM

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 3.2 mV | Analog HV | 2405 V | Pulse HV | 1182 V |

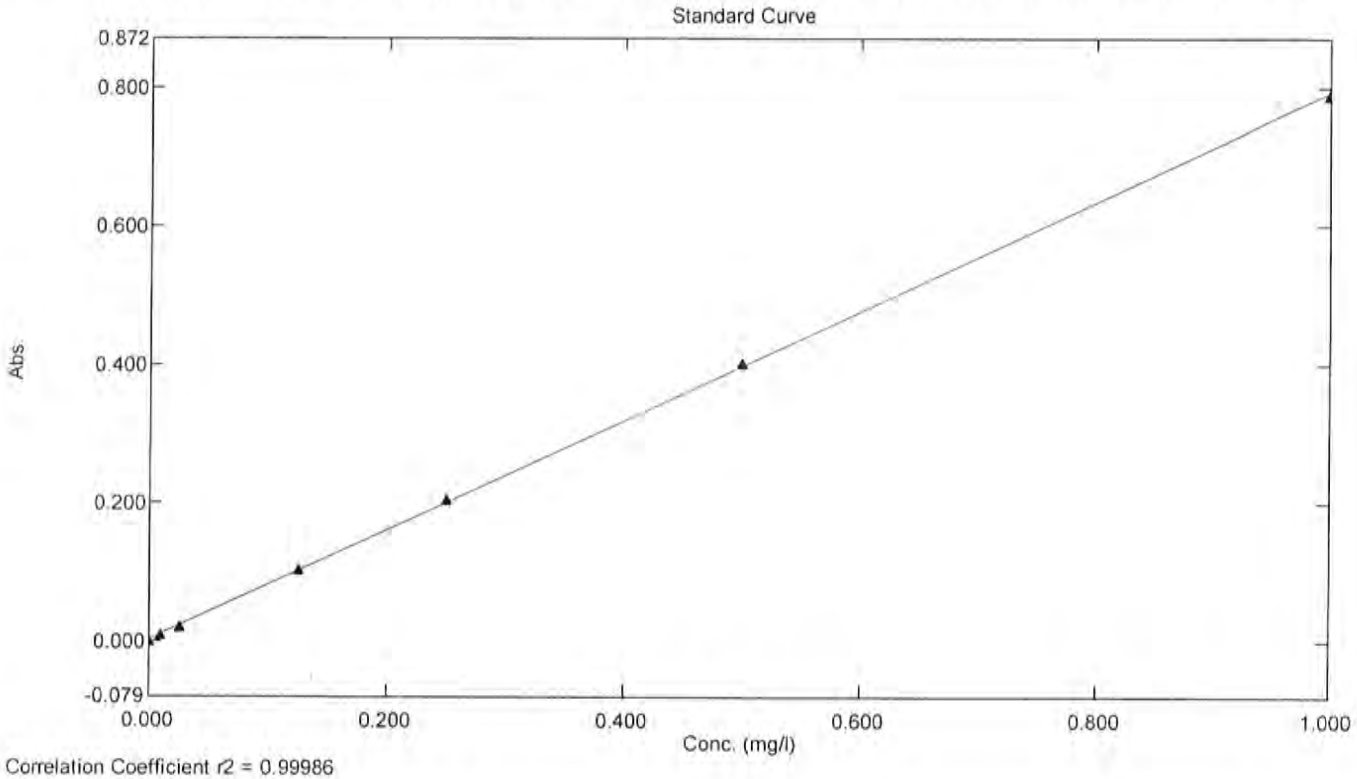
# HS20070623 Wet Chem Raw Data (Cr6_W)

ALS WO# HS20070623

# Standard Table Report

08/19/2020 08:21:40 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\07152020-CR6 W_.pho




Correlation Coefficient r2 = 0.99986

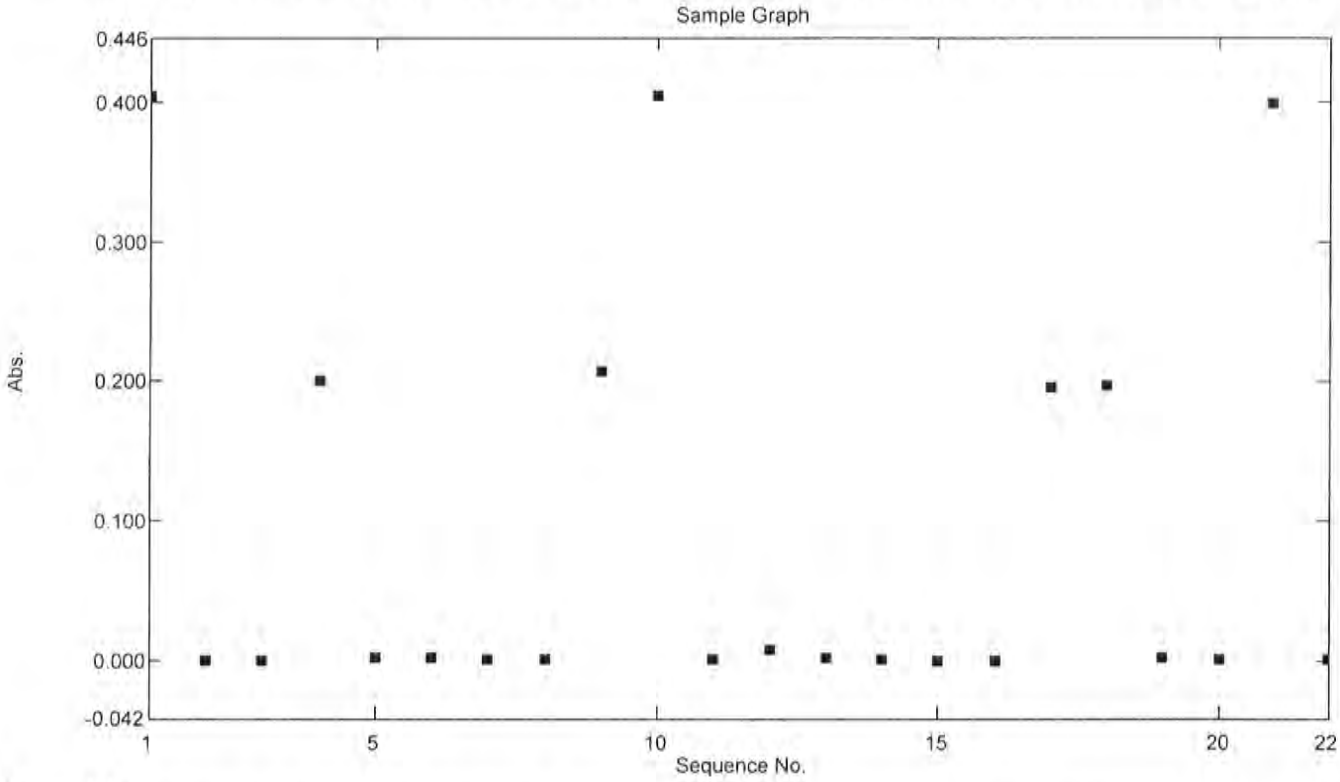
Standard Table

| | Sample ID | Type | Ex | Conc | WL540.0 | Wgt.Factor | Comments |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | Standard | | 0.000 | 0.000 | 1.000 | |
| 2 | STD2 | Standard | | 0.010 | 0.008 | 1.000 | |
| 3 | STD3 | Standard | | 0.025 | 0.020 | 1.000 | |
| 4 | STD4 | Standard | | 0.125 | 0.104 | 1.000 | |
| 5 | STD5 | Standard | | 0.250 | 0.203 | 1.000 | |
| 6 | STD6 | Standard | | 0.500 | 0.403 | 1.000 | |
| 7 | STD7 | Standard | | 1.000 | 0.790 | 1.000 | |
| 8 | | | | | | | |

# Sample Table Report

08/19/2020 08:21:43 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\07152020-CR6 W_.pho



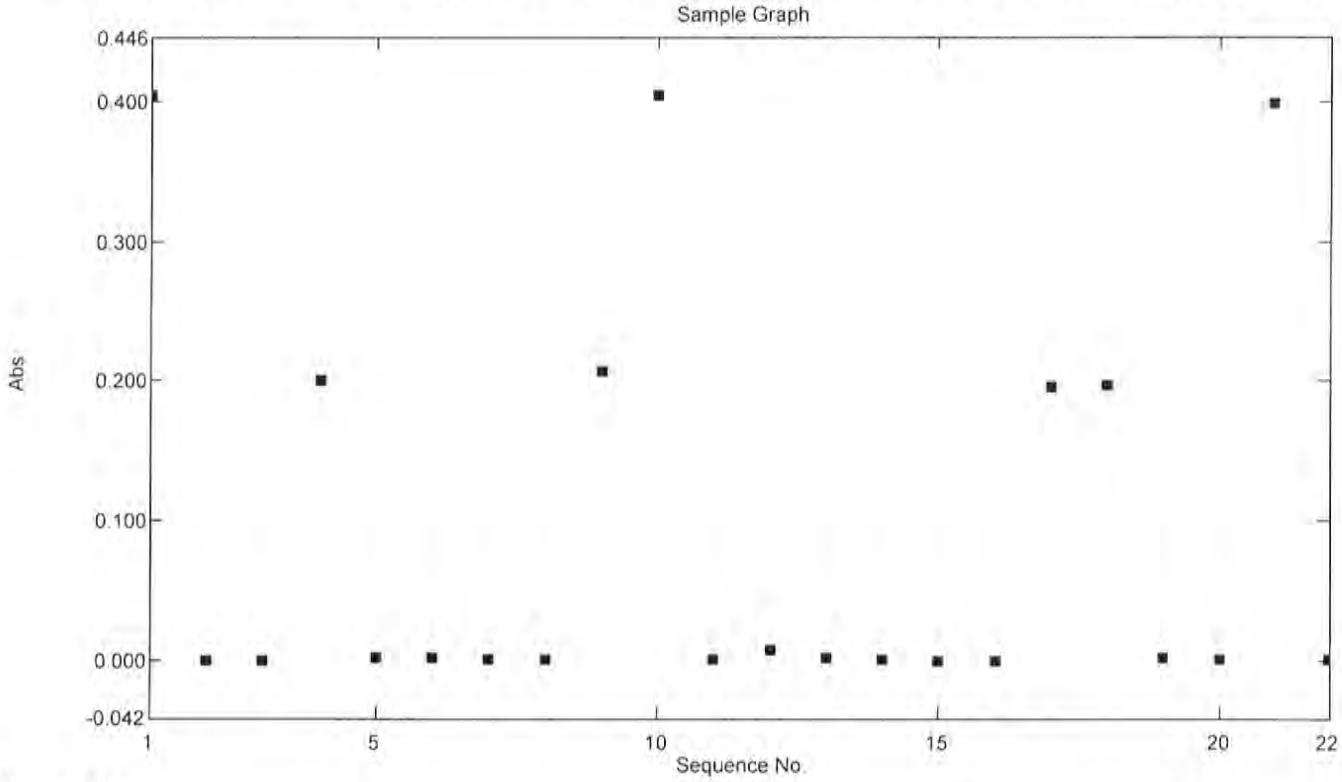

Sample Table

| | Sample ID | Type | Ex | Conc | WL540.0 | Comments |
|---|---|---|---|---|---|---|
| 1 | CCV | Unknown | | 0.508 | 0.404 | 314060710 WC-14 |
| 2 | CCB | Unknown | | -0.004 | -0.000 | 314060711 WC-13 |
| 3 | MBLK | Unknown | | -0.003 | -0.000 | 313105501 WC-13 |
| 4 | LCS | Unknown | | 0.250 | 0.200 | 314060709 WC-14 |
| 5 | HS20070621.01 | Unknown | | -0.002 | 0.001 | 12:46PM,SAMP-BKG=TOTAL |
| 6 | HS20070621.01BKG | Unknown | | -0.002 | 0.001 | 12:46PM,0 |
| 7 | HS20070623.01 | Unknown | | -0.002 | 0.001 | 12:48PM,0 |
| 8 | HS20070623.01BKG | Unknown | | -0.003 | 0.000 | 12:49PM |
| 9 | LCSD | Unknown | | 0.258 | 0.207 | 12:56PM |
| 10 | CCV2 | Unknown | | 0.509 | 0.405 | |
| 11 | CCB2 | Unknown | | -0.002 | 0.001 | |
| 12 | HS20070521.06 | Unknown | | 0.006 | 0.008 | |
| 13 | HS20070635.01 | Unknown | | -0.001 | 0.002 | 4:52PM,0 |
| 14 | HS20070635.01BKG | Unknown | | -0.002 | 0.001 | 4:53PM |
| 15 | HS20070636.01 | Unknown | | -0.004 | -0.001 | 4:53PM,0 |
| 16 | HS20070636.01BKG | Unknown | | -0.005 | -0.001 | 4:54PM |
| 17 | HS20070636.01MS | Unknown | | 0.244 | 0.196 | 4:56PM |
| 18 | HS20070636.01MSD | Unknown | | 0.246 | 0.197 | 4:56PM |
| 19 | HS20070633.01 | Unknown | | -0.002 | 0.001 | 4:57PM,0 |

# Sample Table Report

08/19/2020 08:21:43 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\07152020-CR6 W_.pho




Sample Table

| | Sample ID | Type | Ex | Conc | WL540.0 | Comments |
|---|---|---|---|---|---|---|
| 20 | HS20070633.01BKG | Unknown | | -0.003 | 0.000 | 4:57PM |
| 21 | CCV3 | Unknown | | 0.502 | 0.399 | |
| 22 | CCB3 | Unknown | | -0.003 | 0.000 | |
| 23 | | | | | | |

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20070982

## Longhorn GW Treatment Plant Weekly Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**12-Aug-2020**

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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  - Acronyms
  - Certifications
  - Sample Tracking Record
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# HS20070982 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20070982

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 07, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20070982**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Jul 22, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20070982

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20070982-01 | LH18/24-SP650_072120 | Water | | 21-Jul-2020 14:00 | 22-Jul-2020 09:55 | ☐ |
| HS20070982-02 | LH18/24-SP650_072120-BIX | Water | | 21-Jul-2020 14:00 | 22-Jul-2020 09:55 | ☐ |

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc. **CASE NARRATIVE**
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20070982

## Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

## Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

## WetChemistry by Method E350.3

### Batch ID: R365777

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method E365.3

### Batch ID: R365514

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**ALS Houston, US** Date: 07-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20070982
Sample ID: LH18/24-SP650_072120
Lab ID:HS20070982-01
Collection Date: 21-Jul-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **AMMONIA AS N BY E350.3(ISE)** | | **Method:E350.3** | | | | | | Analyst: MZD |
| **Nitrogen, Ammonia (As N)** | **12** | a | **0.20** | **0.20** | **0.20** | **mg/L** | 1 | 28-Jul-2020 12:24 |
| **ORTHO PHOSPHATE (PO4) AS P BY E365.3** | | **Method:E365.3** | | | | | | Analyst: KVL |
| **Phosphorus, Total Orthophosphate (As P)** | **1.65** | a | **0.100** | **0.250** | **0.250** | **mg/L** | 10 | 23-Jul-2020 12:40 |
| **SUBCONTRACT ANALYSIS - TOC ANALYSIS** | | **Method:NA** | | | | | | Analyst: SUBK |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 07-Aug-2020 09:33 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 07-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20070982
Sample ID: LH18/24-SP650_072120-BIX
Lab ID:HS20070982-02
Collection Date: 21-Jul-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)** | | **Method:NA** | | | | | | Analyst: GR |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 05-Aug-2020 16:59 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20070982

## DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** R365514 ( 0 ) | **Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3 | | | | **Matrix:** Water | |
| HS20070982-01 | LH18/24-SP650_072120 | 21 Jul 2020 14:00 | | | 23 Jul 2020 12:40 | 10 |
| **Batch ID:** R365777 ( 0 ) | **Test Name :** AMMONIA AS N BY E350.3(ISE) | | | | **Matrix:** Water | |
| HS20070982-01 | LH18/24-SP650_072120 | 21 Jul 2020 14:00 | | | 28 Jul 2020 12:24 | 1 |
| **Batch ID:** R366229 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) | | | | **Matrix:** Water | |
| HS20070982-02 | LH18/24-SP650_072120-BIX | 21 Jul 2020 14:00 | | | 05 Aug 2020 16:59 | 1 |
| **Batch ID:** R366343 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS | | | | **Matrix:** Water | |
| HS20070982-01 | LH18/24-SP650_072120 | 21 Jul 2020 14:00 | | | 07 Aug 2020 09:33 | 1 |

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20070982

**QC BATCH REPORT**

**Batch ID:** R365514 ( 0 ) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

**MBLK** Sample ID: **MBLK-R365514** Units: **mg/L** Analysis Date: **23-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365514** SeqNo: **5671391** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.0250 | 0.0250 | | | | | | | | U |

**LCS** Sample ID: **LCS-R365514** Units: **mg/L** Analysis Date: **23-Jul-2020 12:40**
Client ID: Run ID: **UV-2450_365514** SeqNo: **5671390** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.263 | 0.0250 | 0.25 | 0 | 105 | 85 - 115 | | | | |

**MS** Sample ID: **HS20070982-01MS** Units: **mg/L** Analysis Date: **23-Jul-2020 12:40**
Client ID: **LH18/24-SP650_072120** Run ID: **UV-2450_365514** SeqNo: **5671393** PrepDate: DF: **10**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 4.33 | 0.250 | 2.5 | 1.65 | 107 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20070982-01MSD** Units: **mg/L** Analysis Date: **23-Jul-2020 12:40**
Client ID: **LH18/24-SP650_072120** Run ID: **UV-2450_365514** SeqNo: **5671392** PrepDate: DF: **10**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 4.36 | 0.250 | 2.5 | 1.65 | 108 | 80 - 120 | 4.33 | 0.69 | 20 | |

**The following samples were analyzed in this batch:** HS20070982-01

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20070982

**QC BATCH REPORT**

**Batch ID: R365777 ( 0 )** **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

**MBLK** Sample ID: **MBLK-365777** Units: **mg/L** Analysis Date: **28-Jul-2020 12:24**
Client ID: Run ID: **WetChem_HS_365777** SeqNo: **5676769** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 0.20 | 0.20 | | | | | | | | U |

**LCS** Sample ID: **LCS-365777** Units: **mg/L** Analysis Date: **28-Jul-2020 12:24**
Client ID: Run ID: **WetChem_HS_365777** SeqNo: **5676770** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 11 | 0.20 | 10 | 0 | 110 | 80 - 120 | | | | |

**MS** Sample ID: **HS20070907-01MS** Units: **mg/L** Analysis Date: **28-Jul-2020 12:24**
Client ID: Run ID: **WetChem_HS_365777** SeqNo: **5676772** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 10.61 | 0.20 | 10 | 0.162 | 105 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20070907-01MSD** Units: **mg/L** Analysis Date: **28-Jul-2020 12:24**
Client ID: Run ID: **WetChem_HS_365777** SeqNo: **5676773** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 10.59 | 0.20 | 10 | 0.162 | 104 | 80 - 120 | 10.61 | 0.189 | 20 | |

**The following samples were analyzed in this batch:** HS20070982-01

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** **HS20070982**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V009 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

**ALS Houston, US** Date: 07-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20070982

## SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20070982-01 | LH18/24-SP650_072120 | Login | 7/22/2020 11:52:08 AM | PMG | WET024 |
| HS20070982-01 | LH18/24-SP650_072120 | Login | 7/22/2020 11:52:08 AM | PMG | WET024 |
| HS20070982-01 | LH18/24-SP650_072120 | Login | 7/22/2020 11:52:08 AM | PMG | Sub |
| HS20070982-02 | LH18/24-SP650_072120-BIX | Login | 7/22/2020 11:52:08 AM | PMG | Sub |

**ALS Houston, US** Date: 07-Aug-20

## Sample Receipt Checklist

**Work Order ID:** HS20070982 **Date/Time Received:** 22-Jul-2020 09:55

**Client Name:** Bhate Environmental **Received by:** Paresh M. Giga

| | | | | | |
|---|---|---|---|---|---|
| **Completed By:** | /S/ Paresh M. Giga | 22-Jul-2020 11:59 | **Reviewed by:** | /S/ RJ Modashia | 22-Jul-2020 15:40 |
| | eSignature | Date/Time | | eSignature | Date/Time |

Matrices: **Water** Carrier name: **FedEx**

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ | |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ | |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:None | |
| Samplers name present on COC? | Yes ☐ | No ☑ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | | |

| | | |
|---|---|---|
| Temperature(s)/Thermometer(s): | 2.1C U/C | IR31 |
| Cooler(s)/Kit(s): | 45217 | |
| Date/Time sample(s) sent to storage: | 7/22/2020 12:05 | |

| | | | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ |
| pH adjusted? | Yes ☐ | No ☑ | N/A ☐ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia



Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
**GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES**

Prepared By:
Scott Beesinger

P.O. Number

**HS20070982**
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | Analyses: AMMONIA-N | TOTAL ORGANIC CARBON | ORTHO-PHOSPHATE | PERCHLORATE | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_072120 | Water | 07/21/20 / 14:00 | | 3 | X | X | | | H2SO4 | |
| LH18/24-SP650_072120 | Water | 07/21/20 / 14:00 | | 1 | | | X | | NONE | |
| LH18/24–SP650_072120_BIX | Water | 07/21/20 / 14:00 | | 1 | | | | X | NONE | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Additional Remarks: **Standard TAT on all parameters**

| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 07/21/20 | 14:30 | | 7/22/2020 | 09:55 | | | | | | |

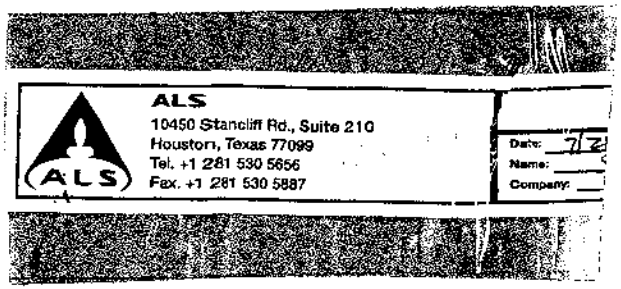
For Lab Use Only

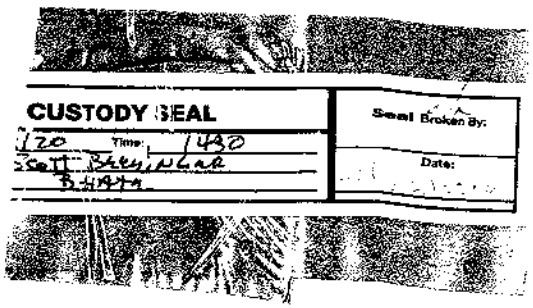
| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

Remarks:

45219 GIC. 2.1°C +31 09:00

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
Date:
Name:
Company:


CUSTODY SEAL
Time:
Seal Broken By:
Date:


FedEx
Express
WED – 22 JUL 10:30
PRIORITY OVERNIGHT
FedEx
TRK#
0221
1251 0297 2050
AB SGRA
77099
TX-US
IAH

August 05, 2020 Service Request No:E2000672

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**Laboratory Results for: HS20070982**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory July 22, 2020
For your reference, these analyses have been assigned our service request number **E2000672.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

# Certificate of Analysis

**ALS Environmental - Houston HRMS**
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Environmental**

| | | | |
|---|---|---|---|
| **Client:** | ALS Houston | **Service Request No.:** | E2000672 |
| **Project:** | HS20070982 | **Date Received:** | 07/22/20 |
| **Sample Matrix:** | W | | |

## CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 07/22/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

### Data Validation Notes and Discussion

**Precision and Accuracy:**

EQ2000317: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*

**Client:** ALS Environmental - US **Service Request:**E2000672
**Project:** HS20070982

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| E2000672-001 | LH18/24-SP650_072120-BIX | 7/21/2020 | 1400 |

# Service Request Summary

**Folder #:** **E2000672**
Client Name: ALS Environmental - US
Project Name: HS20070982
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/22/20
Internal Due Date: 8/5/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20070982
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 7D
**Pressure Gas:**

| Lab Samp No. | Client Samp No | Matrix | Collected | HOUSTON ClO4 DOD/6850 |
|---|---|---|---|---|
| E2000672-001 | LH18/24-SP650_072120-BIX | Ground Water | 07/21/20 1400 | **IV** |

# Service Request Summary

**Folder #:** **E2000672**
Client Name: ALS Environmental - US
Project Name: HS20070982
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/22/20
Internal Due Date: 8/5/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20070982
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 7D
**Pressure Gas:**

## Test Comments:

| Group | Test/Method | Samples | Comments |
|---|---|---|---|
| Semivoa GCMS | ClO4 DOD/6850 | 1 | Level II due 8/5,level IV 8/12 |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| + | Possible Tedlar bag artifact. |
| A | TIC is a suspected aldol-condensation product |
| B | Analyte found in the associated method blank as well as in the sample. |
| BC | Reported results are not blank corrected. |
| BH | The back section of the tube yielded higher results than the front. |
| BT | Results indicated possible breakthrough; back section >=10% front section. |
| C | Result identification confirmed. |
| D | Compound identified in an analysis at a secondary dilution factor |
| D | Spike was diluted out |
| DE | Reported results are corrected for desorption efficiency. |
| E | Estimated value. Concentration above calibration range |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| H1 | Sample analysis performed past holding time. See case narrative. |
| H2 | Initial analysis within holding time. Reanalysis for the required dilution was past holding time. |
| H3 | Sample was received and analyzed past holding time. |
| H4 | Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative. |
| I | Internal standard not within the specified limits. See case narrative. |
| J | Estimated Value. Concentration found below MRL. |
| K | A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate. |
| K | Analyte was detected above the method reporting limit prior to normalization. |
| L1 | Laboratory control sample recovery outside the specified limits; results may be biased high. |
| L2 | Laboratory control sample recovery outside the specified limits; results may be biased low. |
| L3 | Laboratory control sample recovery outside the specified limits. |
| M | Matrix interference; results may be biased high. |
| M | The duplicate injection precision not met. |
| M1 | Matrix interference due to coelution with a non-target compound; results may be biased high. |
| N | Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| P | Indicates chlorodiphenyl ether interference present at the retention time of the target compound. |
| P | Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns |
| Q | Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria. |
| R | Duplicate Precision not met. |
| R1 | Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated. |
| S | Surrogate recovery not within specified limits. |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| T | Analyte is a tentatively identified compound, result is estimated. |
| U | Compound was analyzed for, but was not detected (ND). |
| V1 | The continuing calibration verification standard was outside (biased high) the specified limits for this compound. |
| V2 | The continuing calibration verification standard was outside (biased low) the specified limits for this compound. |
| W | Result quantified, but the corresponding peak was detected outside the generated retention time window. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| X | See case narrative. |
| Y | Recovery outside limits |
| Y | The chromatogram resembles a petroleum product but does not match the calibration standard. |
| Z | The chromatogram does not resemble a petroleum product. |
| i | The MRL/MDL has been elevated due to a matrix interference. |

# ALS Laboratory Group

**Acronyms**

| | |
|---|---|
| Cal | Calibration |
| Conc | CONCentration |
| Dioxin(s) | Polychlorinated dibenzo-p-dioxin(s) |
| EDL | Estimated Detection Limit |
| EMPC | Estimated Maximum Possible Concentration |
| Flags | Data qualifiers |
| Furan(s) | Polychlorinated dibenzofuran(s) |
| g | Grams |
| ICAL | Initial CALibration |
| ID | IDentifier |
| Ions | Masses monitored for the analyte during data acquisition |
| L | Liter (s) |
| LCS | Laboratory Control Sample |
| DLCS | Duplicate Laboratory Control Sample |
| MB | Method Blank |
| MCL | Method Calibration Limit |
| MDL | Method Detection Limit |
| mL | Milliliters |
| MS | Matrix Spiked sample |
| DMS | Duplicate Matrix Spiked sample |
| NO | Number of peaks meeting all identification criteria |
| PCDD(s) | Polychlorinated dibenzo-p-dioxin(s) |
| PCDF(s) | Polychlorinated dibenzofuran(s) |
| ppb | Parts per billion |
| ppm | Parts per million |
| ppq | Parts per quadrillion |
| ppt | Parts per trillion |
| QA | Quality Assurance |
| QC | Quality Control |
| Ratio | Ratio of areas from monitored ions for an analyte |
| % Rec. | Percent recovery |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RT | Retention Time |
| SDG | Sample Delivery Group |
| S/N | Signal-to-noise ratio |
| TEF | Toxicity Equivalence Factor |
| TEQ | Toxicity Equivalence Quotient |

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ALS Environmental

## State Certifications, Accreditations, and Licenses

| Agency | Number | Expire Date |
|---|---|---|
| American Association for Laboratory Accreditation | 2897.01 2020 | 11/30/2021 |
| Arkansas Department of Environmental Quality | 20-030-0 | 3/26/2021 |
| Department of Defense | A2LA 2897.01 | 11/30/2021 |
| Hawaii Department of Health | 2020 | 4/30/2021 |
| Illinois Environmental Protection Agency | 2000322020-4 | 5/9/2021 |
| Louisiana Department of Health and Hospitals | LA028-2020 | 12/31/2020 |
| Maine Department of Health and Human Services | 2020016 | 6/5/2022 |
| Minnesota Department of Health | 1785988 | 12/31/2020 |
| Nebraska Department of Health and Human Services | NE-OS-25-13 (2020) | 4/30/2021 |
| New Hampshire Environmental Laboratory Accreditation Program | 209420 | 4/24/2021 |
| New York Department of Health | 11707 | 3/31/2021 |
| Oklahoma Department of Environmental Quality | 2019-067 | 8/31/2020 |
| Tennessee Department of Environment and Concervation | 04016-2020 | 4/30/2021 |
| Texas Commision on Environmental Quality | T104704231-20-26 | 4/30/2021 |
| United States Department of Agriculture | P330-19-00299 | 10/10/2022 |
| Washington Department of Health | C819 | 11/14/2020 |

# Chain of Custody

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID:** **14346**

**SUBCONTRACT TO:**

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

**Phone:** +1 281 530 5656

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | |
| **Email:** | |

**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20070982 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| **1.** | **HS20070982-02** | **LH18/24-SP650_072120-BIX** | **Water** | **21 Jul 2020 14:00** |
| | SUB_Perch-6850 | | | 05 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 7/22/20 1700

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

# Cooler Receipt Form

Project Chemist CH

Client/Project ALS-HI

Thermometer ID IR31

Date/Time Received: 7/22/20 Initials: CH Date/Time Logged in: 7/22/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ○ Baggies ✓ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

| Cooler Tracking Number | COC ID | Date Opened | Time Opened | Opened By | Temp. °C | Temp Blank? |
|---|---|---|---|---|---|---|
| — | | 7/22/20 | 1700 | CH | 1.9 | X |
| | | | | | | ☐ |
| | | | | | | ☐ |
| | | | | | | ☐ |

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
**T:** +1 713 266 1599
**F:** +1 713 266 1599
**www.alsglobal.com**

# SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

**Cooler Custody Seals (desirable, mandatory if specified in SAP):**

- ✓ Intact on outside of cooler, signed and dated

**Chain-of-Custody (COC) documentation (mandatory):**

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

**Sample Integrity (mandatory):**

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

**Temperature Requirement (varies by sample matrix):**

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

# Preparation Information Benchsheets

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

# *Preparation Information Benchsheet*

**Prep Run#:** 362574 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 7/30/20 08:39

| # | Lab Code | Client ID | B# | Method /Test | pH | Cl | Matrix | Amt. Ext. | Sample Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | E2000657-001 | GPW1_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 2 | E2000657-002 | GPW3_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 3 | E2000657-003 | GPW3_071620_a | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 4 | E2000657-004 | HBW1_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 5 | E2000657-005 | HBW10_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 6 | E2000657-006 | HBW7_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 7 | E2000669-001 | M3Q2011 | .01 | 6850/ClO4 DOD | | | Water | 10mL | |
| 8 | E2000671-001 | 16RW11-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 9 | E2000671-002 | 16IW20-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 10 | E2000671-003 | 16WW40-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 11 | E2000671-004 | 16WW12-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 12 | E2000671-005 | 16WW25-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 13 | E2000671-006 | 16WW26-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 14 | E2000671-007 | 16RW02-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 15 | E2000672-001 | LH18/24-SP650_072120-BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 16 | E2000689-001 | LH18/24-SP650_072820-BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 17 | EQ2000317-01 | MB | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 18 | EQ2000317-02 | LCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 19 | EQ2000317-03 | DLCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |

## Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000657-001 100.00µL E2000657-002 100.00µL E2000657-003 100.00µL E2000657-004 100.00µL E2000657-005 100.00µL E2000657-006 100.00µL
EQ2000317-01 100.00µL EQ2000317-02 100.00µL EQ2000317-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000317-02 1.00µL EQ2000317-03 1.00µL

## Preparation Steps

Step: Preparation
Started: 7/30/20 08:39
Finished: 7/30/20 15:16
By: GRIVERA
Comments

# *Preparation Information Benchsheet*

**Prep Run#:** 362574
**Team:** Semivoa GCMS/GRIVERA

**Prep WorkFlow:** GenExt28Day
**Prep Method:** Method

**Status:** Prepped
**Prep Date/Time:** 7/30/20 08:39

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

# Analytical Results

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000672 |
| **Project:** | HS20070982 | **Date Collected:** | 7/21/20 1400 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 7/22/20 |
| **Sample Name:** | LH18/24-SP650_072120-BIX | **Units:** | µg/L |
| **Lab Code:** | E2000672-001 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.627** | | 0.200 | 0.100 | 0.0500 | 2 | 7/30/20 | 8/5/20 11:40 | 362574 | 689792 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000672 |
| **Project:** | HS20070982 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | µg/L |
| **Lab Code:** | EQ2000317-01 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | ND | U | 0.100 | 0.0500 | 0.0250 | 1 | 7/30/20 | 8/4/20 13:33 | 362574 | 689589 | |

# Accuracy & Precision

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982
**Sample Matrix:** Ground Water

**Service Request:** E2000672
**Date Analyzed:** 8/ 4/20

## Lab Control Sample Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**Prep Method:** Method

**Units:** µg/L
**Basis:** NA

**Extraction Lot:** 362574

| | Lab Control Sample EQ2000317-02 | | | Duplicate Lab Control Sample EQ2000317-03 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.117 | 0.100 | 117 | 0.118 | 0.100 | 118 | 84 - 119 | <1 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000672 |
| **Project:** | HS20070982 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000317-02 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.117** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/30/20 | 8/4/20 13:41 | 362574 | 689589 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000672 |
| **Project:** | HS20070982 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000317-03 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.118** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/30/20 | 8/4/20 13:49 | 362574 | 689589 | |

# Initial Calibration

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200724**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200724_005 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 |
| 2 | PERCHLORATE2 | | 20200724_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 |
| 3 | PERCHLORATE3 | | 20200724_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 |
| 4 | PERCHLORATE4 | | 20200724_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 |
| 5 | PERCHLORATE5 | | 20200724_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 |
| 6 | PERCHLORATE6 | | 20200724_010 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 |
| 7 | PERCHLORATE7 | | 20200724_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | PERCHLORATE8 | | 20200724_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 |
| 9 | PERCHLORATE9 | | 20200724_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 |
| 10 | PERCHLORATE10 | | 20200724_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 |
| 11 | IB | | 20200724_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | PERCHLORATEICV | | 20200724_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 |
| 13 | IB | | 20200724_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | LODV | | 20200724_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | ICS | | 20200724_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | PERCHLORATE7 | | 20200724_020 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | EQ2000302-04X10 | | 20200724_021 | Perchlorate6850b.lcm | 10x | ☒ | |
| 18 | EQ2000302-05X10DNU | | 20200724_022 | Perchlorate6850b.lcm | 10x | ☒ | |
| 19 | E2000626-001X2 | | 20200724_023 | Perchlorate6850b.lcm | 2x | ☒ | |
| 20 | E2000627-001X10 | | 20200724_024 | Perchlorate6850b.lcm | 10x | ☒ | |
| 21 | E2000627-005X100 | | 20200724_025 | Perchlorate6850b.lcm | 100x | ☒ | |
| 22 | E2000627-006X100 | | 20200724_026 | Perchlorate6850b.lcm | 100x | ☒ | |
| 23 | E2000627-009X1000 | | 20200724_027 | Perchlorate6850b.lcm | 1000x | ☒ | |
| 24 | E2000640-001X200 | | 20200724_028 | Perchlorate6850b.lcm | 200x | ☒ | |
| 25 | PERCHLORATE7 | | 20200724_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 26 | E2000660-001X10 | | 20200724_030 | Perchlorate6850b.lcm | 10x | ☒ | |
| 27 | E2000627-004X10 | | 20200724_031 | Perchlorate6850b.lcm | 10x | ☒ | |
| 28 | PERCHLORATE7 | | 20200724_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 29 | EQ2000302-05X10 | | 20200724_033 | Perchlorate6850b.lcm | 10x | ☒ | |
| 30 | PERCHLORATE7 | | 20200724_034 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 31 | E2000660-003X10 | | 20200724_035 | Perchlorate6850b.lcm | 10x | ☒ | |
| 32 | E2000660-004X10 | | 20200724_036 | Perchlorate6850b.lcm | 10x | ☒ | |
| 33 | E2000660-005X2 | | 20200724_037 | Perchlorate6850b.lcm | 2x | ☒ | |
| 34 | E2000660-006X10 | | 20200724_038 | Perchlorate6850b.lcm | 10x | ☒ | |
| 35 | PERCHLORATE7 | | 20200724_039 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 36 | EQ2000303-01 | | 20200724_040 | Perchlorate6850b.lcm | 1x | ☒ | |
| 37 | EQ2000303-02 | | 20200724_041 | Perchlorate6850b.lcm | 1x | ☒ | |
| 38 | EQ2000303-03 | | 20200724_042 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | E2000641-001X20 | | 20200724_043 | Perchlorate6850b.lcm | 20x | ☒ | |
| 40 | E2000641-002X20 | | 20200724_044 | Perchlorate6850b.lcm | 20x | ☒ | |
| 41 | E2000641-003X10 | | 20200724_045 | Perchlorate6850b.lcm | 10x | ☒ | |
| 42 | E2000641-004X20 | | 20200724_046 | Perchlorate6850b.lcm | 20x | ☒ | |
| 43 | E2000641-005X10 | | 20200724_047 | Perchlorate6850b.lcm | 10x | ☒ | |
| 44 | E2000641-006X10 | | 20200724_048 | Perchlorate6850b.lcm | 10x | ☒ | |
| 45 | E2000641-007X10 | | 20200724_049 | Perchlorate6850b.lcm | 10x | ☒ | |
| 46 | PERCHLORATE7 | | 20200724_050 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 47 | E2000641-008X10 | | 20200724_051 | Perchlorate6850b.lcm | 10x | ☒ | |
| 48 | E2000641-009X10 | | 20200724_052 | Perchlorate6850b.lcm | 10x | ☒ | |
| 49 | E2000648-001X10 | | 20200724_053 | Perchlorate6850b.lcm | 10x | ☒ | |
| 50 | E2000648-002X10 | | 20200724_054 | Perchlorate6850b.lcm | 10x | ☒ | |
| 51 | E2000648-003X20 | | 20200724_055 | Perchlorate6850b.lcm | 20x | ☒ | |
| 52 | E2000648-005X10 | | 20200724_056 | Perchlorate6850b.lcm | 10x | ☒ | |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000016 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000016-01 | PERCHLORATE1 | 20200724_005 | 07/24/2020 11:48 |
| 02 | EC2000016-02 | PERCHLORATE2 | 20200724_006 | 07/24/2020 11:56 |
| 03 | EC2000016-03 | PERCHLORATE3 | 20200724_007 | 07/24/2020 12:04 |
| 04 | EC2000016-04 | PERCHLORATE4 | 20200724_008 | 07/24/2020 12:11 |
| 05 | EC2000016-05 | PERCHLORATE5 | 20200724_009 | 07/24/2020 12:19 |
| 06 | EC2000016-06 | PERCHLORATE6 | 20200724_010 | 07/24/2020 12:27 |
| 07 | EC2000016-07 | PERCHLORATE7 | 20200724_011 | 07/24/2020 12:35 |
| 08 | EC2000016-08 | PERCHLORATE8 | 20200724_012 | 07/24/2020 12:43 |
| 09 | EC2000016-09 | PERCHLORATE9 | 20200724_013 | 07/24/2020 12:51 |
| 10 | EC2000016-10 | PERCHLORATE10 | 20200724_014 | 07/24/2020 12:59 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 4.659** **Average RF = 0.121**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1283 | 02 | 0.5000 | 0.13 | 03 | 0.7000 | 0.1207 | 04 | 1.0000 | 0.1251 |
| 05 | 2.0000 | 0.1211 | 06 | 5.0000 | 0.1202 | 07 | 10.0000 | 0.1211 | 08 | 20.0000 | 0.1168 |
| 09 | 30.0000 | 0.1121 | 10 | 50.0000 | 0.1148 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.106 | 6.0 | 02 | 0.5000 | 0.537 | 7.4 | 03 | 0.7000 | 0.698 | -0.3 |
| 04 | 1.0000 | 1.03 | 3.4 | 05 | 2.0000 | 2.00 | 0.1 | 06 | 5.0000 | 4.97 | -0.7 |
| 07 | 10.0000 | 10.0 | 0.1 | 08 | 20.0000 | 19.3 | -3.5 | 09 | 30.0000 | 27.8 | -7.3 |
| 10 | 50.0000 | 47.4 | -5.1 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000016 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200724_016 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000016-11 | T | Average RF | 10 | 9.867 | ng/mL | -1.3 | <= 15 |

ALS Group Houston

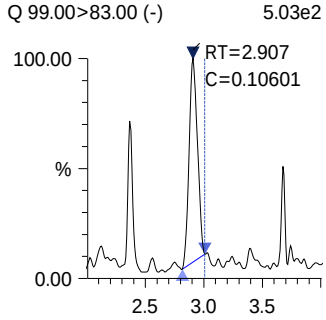
# PERCHLORATE1

Date acquired: 7/24/2020 11:48:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 7/24/2020 11:48:19 AM | 2348 | 0.10601 | 20200724_005 | 2.907 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 7/24/2020 11:48:19 AM | 183001 | 1.00000 | 20200724_005 | 2.903 | 25.0000 | 1.0000 | 5 |

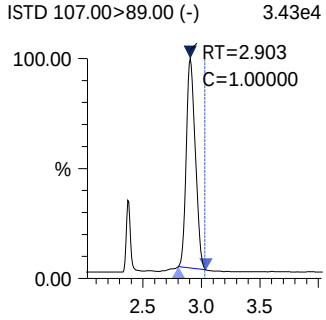
## Perchlorate

Conc 0.10601
Area 2348




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183001



ALS Group Houston

# PERCHLORATE2

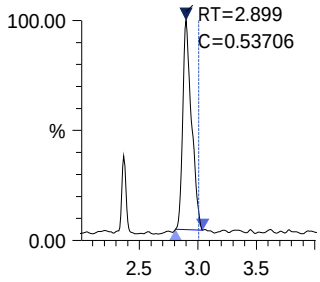
Date acquired: 7/24/2020 11:56:11 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 7/24/2020 11:56:11 AM | 11773 | 0.53706 | 20200724_006 | 2.899 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 7/24/2020 11:56:11 AM | 181125 | 1.00000 | 20200724_006 | 2.898 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.53706
Area 11773

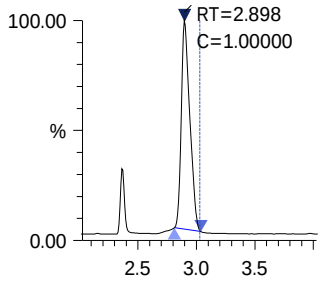
Q 99.00>83.00 (-) 2.32e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181125

ISTD 107.00>89.00 (-) 3.62e4



ALS Group Houston

# PERCHLORATE3

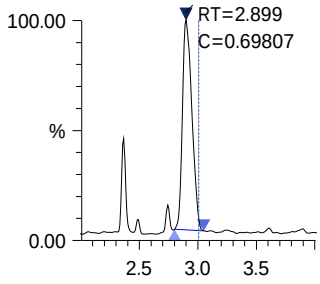
Date acquired: 7/24/2020 12:04:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 7/24/2020 12:04:05 PM | 15258 | 0.69807 | 20200724_007 | 2.899 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 7/24/2020 12:04:05 PM | 180602 | 1.00000 | 20200724_007 | 2.896 | 25.0000 | 1.0000 | 7 |

## Perchlorate

Conc 0.69807
Area 15258

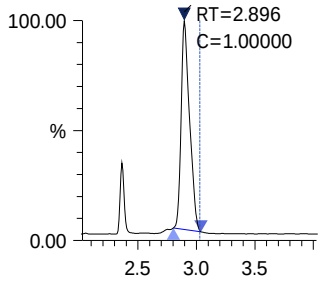
Q 99.00>83.00 (-) 2.79e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 180602

ISTD 107.00>89.00 (-) 3.65e4



ALS Group Houston

# PERCHLORATE4

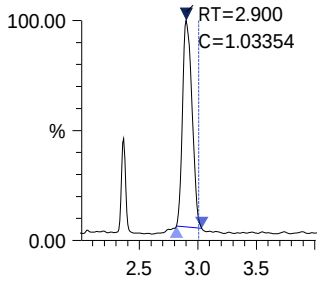
Date acquired: 7/24/2020 12:11:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 7/24/2020 12:11:58 PM | 20922 | 1.03354 | 20200724_008 | 2.900 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 7/24/2020 12:11:58 PM | 167260 | 1.00000 | 20200724_008 | 2.902 | 25.0000 | 1.0000 | 8 |

## Perchlorate

Conc 1.03354
Area 20922

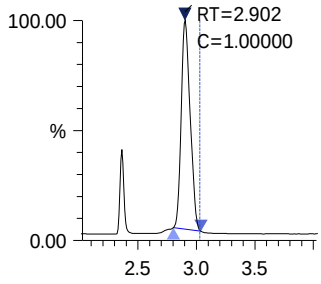
Q 99.00>83.00 (-) 3.87e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 167260

ISTD 107.00>89.00 (-) 3.17e4



ALS Group Houston

# PERCHLORATE5

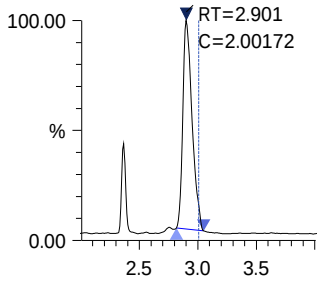
Date acquired: 7/24/2020 12:19:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 7/24/2020 12:19:50 PM | 39343 | 2.00172 | 20200724_009 | 2.901 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 7/24/2020 12:19:50 PM | 162397 | 1.00000 | 20200724_009 | 2.899 | 25.0000 | 1.0000 | 9 |

## Perchlorate

Conc 2.00172
Area 39343

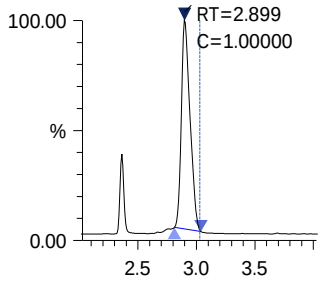
Q 99.00>83.00 (-) 7.39e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 162397

ISTD 107.00>89.00 (-) 3.19e4



ALS Group Houston

# PERCHLORATE6

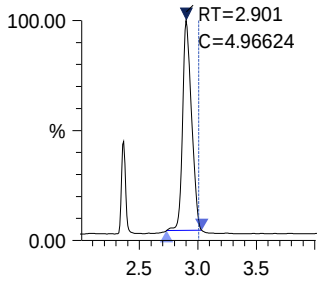
Date acquired: 7/24/2020 12:27:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 7/24/2020 12:27:42 PM | 102216 | 4.96624 | 20200724_010 | 2.901 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 7/24/2020 12:27:42 PM | 170060 | 1.00000 | 20200724_010 | 2.900 | 25.0000 | 1.0000 | 10 |

## Perchlorate

Conc 4.96624
Area 102216

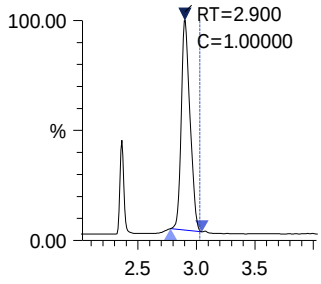
Q 99.00>83.00 (-) 1.97e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 170060

ISTD 107.00>89.00 (-) 3.28e4



ALS Group Houston

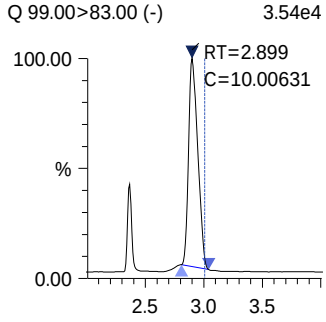
# PERCHLORATE7

Date acquired: 7/24/2020 12:35:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 12:35:33 PM | 187110 | 10.00631 | 20200724_011 | 2.899 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 12:35:33 PM | 154502 | 1.00000 | 20200724_011 | 2.897 | 25.0000 | 1.0000 | 4 |

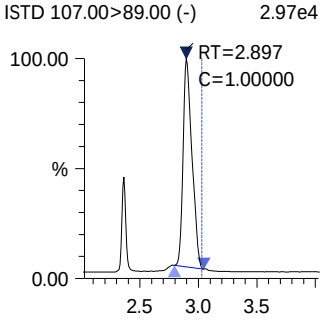
## Perchlorate

Conc 10.00631
Area 187110




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 154502



ALS Group Houston

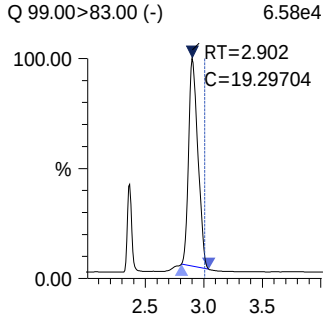
# PERCHLORATE8

Date acquired: 7/24/2020 12:43:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 7/24/2020 12:43:26 PM | 349524 | 19.29704 | 20200724_012 | 2.902 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 7/24/2020 12:43:26 PM | 149657 | 1.00000 | 20200724_012 | 2.900 | 25.0000 | 1.0000 | 11 |

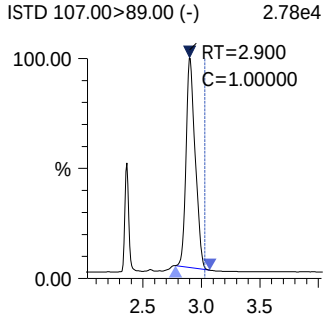
## Perchlorate

Conc 19.29704
Area 349524




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 149657



ALS Group Houston

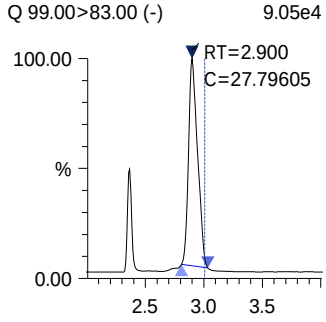
# PERCHLORATE9

Date acquired: 7/24/2020 12:51:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 7/24/2020 12:51:22 PM | 465757 | 27.79605 | 20200724_013 | 2.900 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 7/24/2020 12:51:22 PM | 138448 | 1.00000 | 20200724_013 | 2.898 | 25.0000 | 1.0000 | 12 |

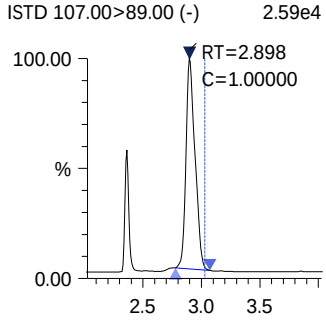
## Perchlorate

Conc 27.79605
Area 465757




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 138448



ALS Group Houston

# PERCHLORATE10

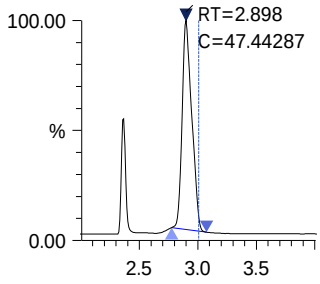
Date acquired: 7/24/2020 12:59:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 7/24/2020 12:59:14 PM | 708682 | 47.44287 | 20200724_014 | 2.898 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 7/24/2020 12:59:14 PM | 123422 | 1.00000 | 20200724_014 | 2.896 | 25.0000 | 1.0000 | 13 |

## Perchlorate

Conc 47.44287
Area 708682

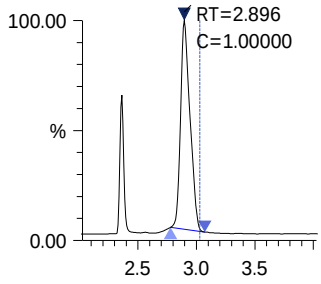
Q 99.00>83.00 (-) 1.28e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 123422

ISTD 107.00>89.00 (-) 2.23e4



ALS Group Houston

# PERCHLORATEICV

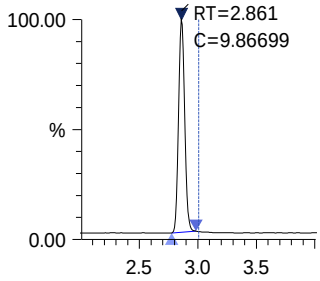
Date acquired: 7/24/2020 1:28:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 7/24/2020 1:28:19 PM | 231631 | 9.86699 | 20200724_016 | 2.861 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 7/24/2020 1:28:19 PM | 193964 | 1.00000 | 20200724_016 | 2.859 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 9.86699
Area 231631

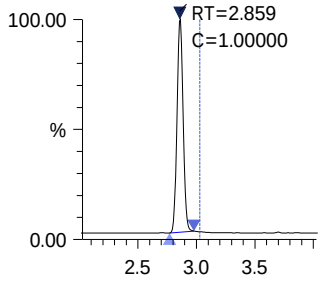
Q 99.00>83.00 (-) 6.30e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 193964

ISTD 107.00>89.00 (-) 5.33e4



# Chromatograms and Selected Ion Monitoring

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200804**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | null | | 20200804_001 | Perchlorate6850b.lcm | 1x | ☒ | |
| 2 | null | | 20200804_002 | Perchlorate6850b.lcm | 1x | ☒ | |
| 3 | IB | | 20200804_003 | Perchlorate6850b.lcm | 1x | ☒ | |
| 4 | IB | | 20200804_004 | Perchlorate6850b.lcm | 1x | ☒ | |
| 5 | LODV | | 20200804_005 | Perchlorate6850b.lcm | 1x | ☒ | |
| 6 | ICS | | 20200804_006 | Perchlorate6850b.lcm | 1x | ☒ | |
| 7 | PERCHLORATE7 | | 20200804_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | EQ2000317-01 | | 20200804_008 | Perchlorate6850b.lcm | 1x | ☒ | |
| 9 | EQ2000317-02 | | 20200804_009 | Perchlorate6850b.lcm | 1x | ☒ | |
| 10 | EQ2000317-03 | | 20200804_010 | Perchlorate6850b.lcm | 1x | ☒ | |
| 11 | E2000657-001 | | 20200804_011 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | E2000657-002 | | 20200804_012 | Perchlorate6850b.lcm | 1x | ☒ | |
| 13 | E2000657-003 | | 20200804_013 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | E2000657-004 | | 20200804_014 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | EQ2000317-01 | | 20200804_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | EQ2000317-02 | | 20200804_016 | Perchlorate6850b.lcm | 1x | ☒ | |
| 17 | EQ2000317-03 | | 20200804_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 18 | PERCHLORATE7 | | 20200804_018 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 19 | E2000657-005 | | 20200804_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 20 | E2000657-006 | | 20200804_020 | Perchlorate6850b.lcm | 1x | ☒ | |
| 21 | PERCHLORATE7 | | 20200804_021 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 22 | E2000669-001 | | 20200804_022 | Perchlorate6850b.lcm | 1x | ☒ | |
| 23 | E2000671-001 | | 20200804_023 | Perchlorate6850b.lcm | 1x | ☒ | |
| 24 | E2000671-002 | | 20200804_024 | Perchlorate6850b.lcm | 1x | ☒ | |
| 25 | E2000671-003 | | 20200804_025 | Perchlorate6850b.lcm | 1x | ☒ | |
| 26 | E2000671-004 | | 20200804_026 | Perchlorate6850b.lcm | 1x | ☒ | |
| 27 | E2000671-005 | | 20200804_027 | Perchlorate6850b.lcm | 1x | ☒ | |
| 28 | E2000671-006 | | 20200804_028 | Perchlorate6850b.lcm | 1x | ☒ | |
| 29 | E2000671-007 | | 20200804_029 | Perchlorate6850b.lcm | 1x | ☒ | |
| 30 | E2000672-001 | | 20200804_030 | Perchlorate6850b.lcm | 1x | ☒ | |
| 31 | PERCHLORATE7 | | 20200804_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 32 | E2000689-001 | | 20200804_032 | Perchlorate6850b.lcm | 1x | ☒ | |
| 33 | | | | | | | |
| 34 | | | | | | | |
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| 52 | | | | | | | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 4/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200804\20200804_007

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689589
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.14 | 0.1210 | 0.1106 | -8.6 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 4/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200804\20200804_018

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689589
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.92 | 0.1210 | 0.1080 | -10.8 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 4/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200804\20200804_021

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689589
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.98 | 0.1210 | 0.1087 | -10.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 4/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200804\20200804_021

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689792
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.98 | 0.1210 | 0.1087 | -10.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 4/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200804\20200804_031

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689792
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.33 | 0.1210 | 0.1129 | -6.7 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 5/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200805\20200805_007

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689792
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.01 | 0.1210 | 0.1091 | -9.9 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/ 5/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200805\20200805_014

**Calibration Date:** 7/24/20
**Calibration ID:** EC2000016
**Analysis Lot:** 689792
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.17 | 0.1210 | 0.1109 | -8.3 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/4/20 12:30

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200804\20200804_007
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000326-01
**Analysis Lot:** 689589
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000326-01 | 240,602 | 2.88 |
| Method Blank | EQ2000317-01 | 237,618 | 2.87 |
| Lab Control Sample | EQ2000317-02 | 240,798 | 2.88 |
| Duplicate Lab Control Sample | EQ2000317-03 | 241,552 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/4/20 13:57

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200804\20200804_018
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000326-02
**Analysis Lot:** 689589
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000326-02 | 233,712 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/4/20 14:21

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200804\20200804_021
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000326-03
**Analysis Lot:** 689589
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000326-03 | 229,068 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000672 |
| **Project:** | HS20070982 | **Date Analyzed:** | 8/4/20 14:21 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_021 | **Lab Code:** | EQ2000329-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689792 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-01 | 229,068 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/4/20 15:50

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200804\20200804_031
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000329-02
**Analysis Lot:** 689792
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-02 | 177,293 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000672 |
| **Project:** | HS20070982 | **Date Analyzed:** | 8/5/20 11:00 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200805\20200805_007 | **Lab Code:** | EQ2000329-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689792 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-03 | 212,867 | 2.88 |
| LH18/24-SP650_072120-BIX | E2000672-001 | 109,815 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20070982

**Service Request:** E2000672
**Date Analyzed:** 8/5/20 11:56

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200805\20200805_014
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000329-04
**Analysis Lot:** 689792
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-04 | 207,311 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Method File: I:\LCMS01\DATA\20200804\20200804.lcm

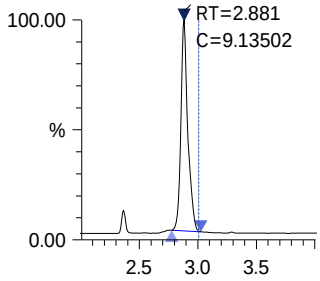
# PERCHLORATE7

Date acquired: 8/4/2020 12:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_007.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/4/2020 12:30:36 PM | 266011 | 9.13502 | 20200804_007 | 2.881 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/4/2020 12:30:36 PM | 240602 | 1.00000 | 20200804_007 | 2.880 | 25.0000 | 1.0000 | 4 |

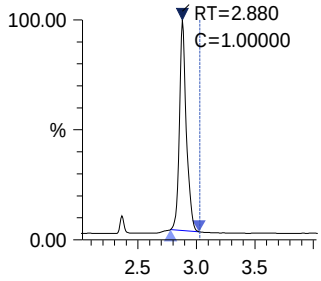
## Perchlorate

Conc 9.13502
Area 266011
Q 99.00>83.00 (-) 6.59e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 240602
ISTD 107.00>89.00 (-) 5.93e4



ALS Group Houston

Method File: I:\LCMS01\DATA\20200804\20200804.lcm

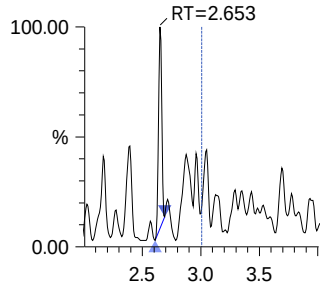
# EQ2000317-01

Date acquired: 8/4/2020 1:33:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_015.lcd
Vial: 36 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000317-01 | 8/4/2020 1:33:52 PM | ---- | ---- | 20200804_015 | ---- | 25.0000 | 1.0000 | 36 |
| Sodium Perchlorate-18O4_IS | EQ2000317-01 | 8/4/2020 1:33:52 PM | 237618 | 1.00000 | 20200804_015 | 2.870 | 25.0000 | 1.0000 | 36 |

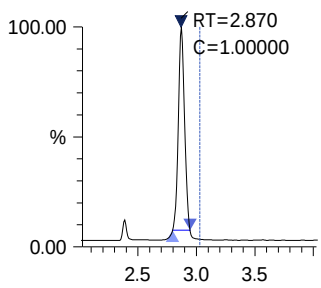
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 2.24e2




Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 237618
ISTD 107.00>89.00 (-) 6.74e4



ALS Group Houston

Method File: I:\LCMS01\DATA\20200804\20200804.lcm

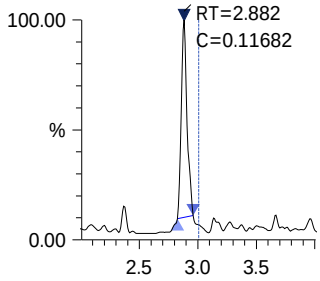
# EQ2000317-02

Date acquired: 8/4/2020 1:41:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_016.lcd
Vial: 37 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000317-02 | 8/4/2020 1:41:45 PM | 3404 | 0.11682 | 20200804_016 | 2.882 | 25.0000 | 1.0000 | 37 |
| Sodium Perchlorate-18O4_IS | EQ2000317-02 | 8/4/2020 1:41:45 PM | 240798 | 1.00000 | 20200804_016 | 2.880 | 25.0000 | 1.0000 | 37 |

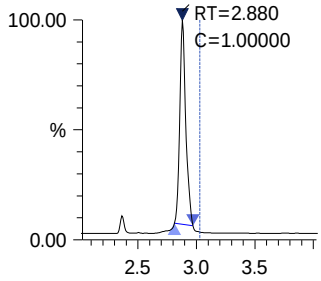
## Perchlorate

Conc 0.11682
Area 3404
Q 99.00>83.00 (-) 1.08e3




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 240798
ISTD 107.00>89.00 (-) 6.97e4



ALS Group Houston

Method File: I:\LCMS01\DATA\20200804\20200804.lcm

# EQ2000317-03

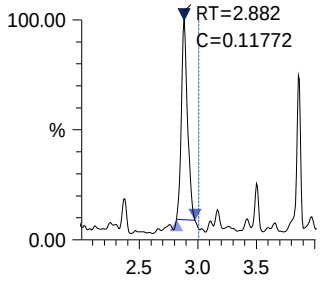
Date acquired: 8/4/2020 1:49:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_017.lcd
Vial: 38 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000317-03 | 8/4/2020 1:49:40 PM | 3442 | 0.11772 | 20200804_017 | 2.882 | 25.0000 | 1.0000 | 38 |
| Sodium Perchlorate-18O4_IS | EQ2000317-03 | 8/4/2020 1:49:40 PM | 241552 | 1.00000 | 20200804_017 | 2.880 | 25.0000 | 1.0000 | 38 |

Perchlorate

Conc 0.11772
Area 3442

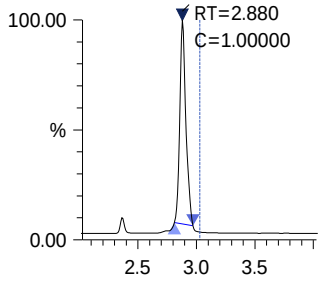
Q 99.00>83.00 (-) 1.01e3




Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 241552

ISTD 107.00>89.00 (-) 6.90e4



ALS Group Houston

Method File: I:\LCMS01\DATA\20200804\20200804.lcm

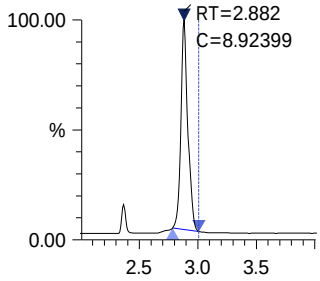
# PERCHLORATE7

Date acquired: 8/4/2020 1:57:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_018.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/4/2020 1:57:33 PM | 252424 | 8.92399 | 20200804_018 | 2.882 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/4/2020 1:57:33 PM | 233712 | 1.00000 | 20200804_018 | 2.880 | 25.0000 | 1.0000 | 4 |

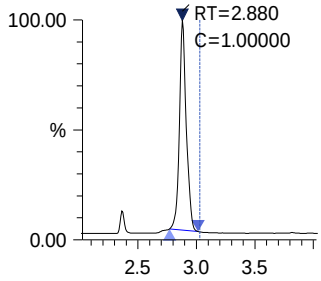
## Perchlorate

Conc 8.92399
Area 252424
Q 99.00>83.00 (-) 6.31e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 233712
ISTD 107.00>89.00 (-) 5.78e4



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

August 06, 2020

**Analytical Report for Service Request No:** K2006224

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**RE: ALS Houston DOD TOC**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory July 23, 2020
For your reference, these analyses have been assigned our service request number **K2006224.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Kelley Lovejoy

Kelley Lovejoy
Project Manager


RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

## Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated value. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |
| H | The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory. |

## Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. See case narrative. |
| J | The result is an estimated value. |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimated value. |
| J | The result is an estimated value. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso**
**State Certifications, Accreditations, and Licenses**

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

# Case Narrative

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

**Client:** ALS Environmental - US
**Project:** ALS Houston DOD TOC
**Sample Matrix:** Water

**Service Request:** K2006224
**Date Received:** 07/23/2020

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

**Sample Receipt:**

One water sample was received for analysis at ALS Environmental on 07/23/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

**General Chemistry:**

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 08/06/2020

# Chain of Custody

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

L2006224

10450 Stancliff Rd, Ste 210
Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID:** **14345**

**SUBCONTRACT TO:**

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

**Phone:** +1 360 501 3312

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | |
| **Email:** | |

**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20070982 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| **1.** | **HS20070982-01** | **LH18/24-SP650_072120** | **Water** | **21 Jul 2020 14:00** |
| | TOC Analysis for DOD Level IV | | | 05 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: J. Mahaffey Date/Time: 7/22/20 18:00

Received By: Date/Time: 7/23/20 0930

Cooler ID(s): Temperature(s):

PC RL

# Cooler Receipt and Preservation Form

Client HH - Houston Service Request K20 060224

Received: 7/23/20 Opened: 7/23/20 By: BR Unloaded: _____ By: _____

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

| Temp Blank | Sample 1 | Sample 2 | Sample 3 | Sample 4 | IR GUN | Cooler / COC ID (NA) | Tracking Number NA | Filed |
|---|---|---|---|---|---|---|---|---|
| 1.2 | — | — | — | — | IR01 | | 189188780437 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

*Notes, Discrepancies, & Resolutions:* _____

# General Chemistry

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | K2006224 |
| **Project:** | ALS Houston DOD TOC | **Date Collected:** | 07/21/20 |
| **Sample Matrix:** | Water | **Date Received:** | 07/23/20 |
| **Analysis Method:** | SM 5310 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |

## Carbon, Total Organic

| Sample Name | Lab Code | Result | LOQ | LOD | MDL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_072120 | K2006224-001 | **2.02** | 0.50 | 0.20 | 0.07 | 1 | 08/05/20 17:56 | |
| Method Blank | K2006224-MB | ND U | 0.50 | 0.20 | 0.07 | 1 | 08/05/20 17:56 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | K2006224 |
| **Project:** | ALS Houston DOD TOC | **Date Analyzed:** | 08/05/20 |
| **Sample Matrix:** | Water | **Date Extracted:** | NA |

**Lab Control Sample Summary**
**Carbon, Total Organic**

| | | | |
|---|---|---|---|
| **Analysis Method:** | SM 5310 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 689991 |

| Sample Name | Lab Code | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Lab Control Sample | K2006224-LCS | 26.2 | 25.0 | 105 | 83-117 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US **Service Request:** K2006224
**Project:** ALS Houston DOD TOC

## Continuing Calibration Verification (CCV) Summary

### Carbon, Total Organic

**Analysis Method:** SM 5310 C **Units:** mg/L

| | Analysis Lot | Lab Code | Date Analyzed | True Value | Measured Value | Percent Recovery | Acceptance Limits |
|---|---|---|---|---|---|---|---|
| CCV1 | 689991 | KQ2010844-05 | 08/05/20 17:56 | 25.0 | 25.5 | 102 | 90-110 |
| CCV2 | 689991 | KQ2010844-06 | 08/05/20 17:56 | 25.0 | 25.8 | 103 | 90-110 |
| CCV3 | 689991 | KQ2010844-07 | 08/05/20 17:56 | 25.0 | 25.3 | 101 | 90-110 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US **Service Request:**K2006224
**Project:** ALS Houston DOD TOC

## Continuing Calibration Blank (CCB) Summary
### Carbon, Total Organic

**Analysis Method:** SM 5310 C **Units:**mg/L

| | Analysis Lot | Lab Code | Date Analyzed | LOQ | LOD | MDL | Result | Q |
|---|---|---|---|---|---|---|---|---|
| CCB1 | 689991 | KQ2010844-08 | 08/05/20 17:56 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB2 | 689991 | KQ2010844-09 | 08/05/20 17:56 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB3 | 689991 | KQ2010844-10 | 08/05/20 17:56 | 0.50 | 0.20 | 0.07 | ND | U |

# Raw Data

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

# General Chemistry

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Work Request # Original (5714) 6036 6044 6221 6224 6047

Tier: 1 IV IV IV IV IV

Date Analyzed: 8/5/20

Analyst: MK Run # 690001 | 689991

Analysis: TDC

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no |
| 6. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| 7. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| 8. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| 9. | Are results for methods blanks all ND? | yes/no/NA |
| 10. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| 11. | Are all exceptions explained? | yes/no/NA |
| 12. | Have all applicable service requests been reviewed? | yes/no/NA |
| 13. | Are all samples labeled correctly? | yes/no/NA |
| 14. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V) | yes/no/NA |
| 15. | Are detection limits and units reported correctly? | yes/no/NA |
| 16. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 17. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**

6047 - 2, 5, 6 need to be reanalyzed samples were above curve.
1, 3, 4 and 2, 5, 6, will be reanalyzed due to failing CCB

Final Approved by: _____ Date: 8/6/20

DQREPORT

# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 689991 **Method/Testcode:** SM 5310 C/TOC T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2005714-002 | Carbon, Total Organic | N/A | | Water | 7.88 mg/L | 10 mL | 78.8 mg/L | 10 | 0.7 | 5.0 | | | 8/5/20 17:56:00 | N | I |
| K2006036-001 | Carbon, Total Organic | N/A | | Water | 2.13 mg/L | 10 mL | 2.13 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-001 | Carbon, Total Organic | N/A | | Water | 0.93 mg/L | 10 mL | 0.93 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-002 | Carbon, Total Organic | N/A | | Water | 1.23 mg/L | 10 mL | 1.23 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-003 | Carbon, Total Organic | N/A | | Water | 41.98 mg/L | 10 mL | 42.0 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-004 | Carbon, Total Organic | N/A | | Water | 0.89 mg/L | 10 mL | 0.89 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-005 | Carbon, Total Organic | N/A | | Water | 2.61 mg/L | 10 mL | 2.61 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-006 | Carbon, Total Organic | N/A | | Water | 2.35 mg/L | 10 mL | 2.35 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-007 | Carbon, Total Organic | N/A | | Water | 15.29 mg/L | 10 mL | 15.3 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006044-008 | Carbon, Total Organic | N/A | | Water | 8.90 mg/L | 10 mL | 8.90 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006221-002 | Carbon, Total Organic | N/A | | Ground Water | 8.66 mg/L | 10 mL | 8.66 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006221-003 | Carbon, Total Organic | N/A | | Ground Water | 8.72 mg/L | 10 mL | 8.72 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006221-004 | Carbon, Total Organic | N/A | | Ground Water | 27.89 mg/L | 10 mL | 27.9 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006221-005 | Carbon, Total Organic | N/A | | Ground Water | 3.05 mg/L | 10 mL | 3.05 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006224-001 | Carbon, Total Organic | N/A | | Water | | 10 mL | | 1 | | | | | 8/5/20 17:56:00 | N | IV |
| KQ2010844-01 | Carbon, Total Organic | DUP | K2006044-001 | Water | 0.97 mg/L | 10 mL | 0.97 mg/L | 1 | 0.07 | 0.50 | | 4 | 8/5/20 17:56:00 | N | IV |
| KQ2010844-02 | Carbon, Total Organic | MS | K2006044-001 | Water | 25.60 mg/L | 10 mL | 25.6 mg/L | 1 | 0.07 | 0.50 | 99 | | 8/5/20 17:56:00 | N | IV |
| KQ2010844-03 | Carbon, Total Organic | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | I |
| KQ2010844-04 | Carbon, Total Organic | LCS | | Water | 26.18 mg/L | 10 mL | 26.2 mg/L | 1 | 0.07 | 0.50 | 105 | | 8/5/20 17:56:00 | N | I |
| KQ2010844-05 | Carbon, Total Organic | CCV | | Water | 25.48 mg/L | 10 mL | 25.5 mg/L | 1 | | | | | 8/5/20 17:56:00 | N | I |
| KQ2010844-06 | Carbon, Total Organic | CCV | | Water | 25.83 mg/L | 10 mL | 25.8 mg/L | 1 | | | | | 8/5/20 17:56:00 | N | I |
| KQ2010844-07 | Carbon, Total Organic | CCV | | Water | 25.31 mg/L | 10 mL | 25.3 mg/L | 1 | | | | | 8/5/20 17:56:00 | N | I |
| KQ2010844-08 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | I |
| KQ2010844-09 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | I |
| KQ2010844-10 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | I |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 690001 **Method/Testcode:** SM 5310 C/TOC T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2006047-001 | Carbon, Total Organic | N/A | | Water | 3.58 mg/L | 10 mL | 3.58 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006047-002.R01 | Carbon, Total Organic | N/A | | Water | 53.68 mg/L | 10 mL | 53.7 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006047-003 | Carbon, Total Organic | N/A | | Water | 18.64 mg/L | 10 mL | 18.6 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006047-004 | Carbon, Total Organic | N/A | | Water | 5.60 mg/L | 10 mL | 5.60 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006047-005.R01 | Carbon, Total Organic | N/A | | Water | 86.41 mg/L | 10 mL | 86.4 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006047-006.R01 | Carbon, Total Organic | N/A | | Water | 19.58 mg/L | 10 mL | 19.6 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| K2006224-001 | Carbon, Total Organic | N/A | | Water | 2.02 mg/L | 10 mL | 2.02 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-01 | Carbon, Total Organic | DUP | K2006224-001 | Water | 2.22 mg/L | 10 mL | 2.22 mg/L | 1 | 0.07 | 0.50 | | 10 | 8/5/20 17:56:00 | N | IV |
| KQ2010845-02 | Carbon, Total Organic | MS | K2006224-001 | Water | 29.24 mg/L | 10 mL | 29.2 mg/L | 1 | 0.07 | 0.50 | 109 | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-03 | Carbon, Total Organic | CCV | | Water | 25.83 mg/L | 10 mL | 25.8 mg/L | 1 | | | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-04 | Carbon, Total Organic | CCV | | Water | 25.31 mg/L | 10 mL | 25.3 mg/L | 1 | | | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-05 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-06 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-07 | Carbon, Total Organic | CCB | | Water | 1.08 mg/L | 10 mL | 1.08 mg/L | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-08 | Carbon, Total Organic | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-09 | Carbon, Total Organic | LCS | | Water | 25.67 mg/L | 10 mL | 25.7 mg/L | 1 | 0.07 | 0.50 | 103 | | 8/5/20 17:56:00 | N | IV |
| KQ2010845-10 | Carbon, Total Organic | CCV | | Water | 27.16 mg/L | 10 mL | 27.2 mg/L | 1 | | | | | 8/5/20 17:56:00 | N | IV |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Schedule: 080520

**Version:** 10
**Instrument:** Fusion1
**Last Saved by:** Fusion1 (Fusion1)
**Last Saved on:** 2020/08/06 10:08 - Thursday

| Position | Sample Type | Sample ID | Method ID (Calibration ID) | Reps | Use | State |
|---|---|---|---|---|---|---|
| (Blank) | Blank | Reagent/Acid Blank | | 1 | True | Ready |
| D | Sample | RB | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 1 | Sample | MB1 | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| C | Check Standard | [TOC] LCS [24.0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 2 | Sample | ICS | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 3 | Sample | k2005714-002 10x | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 4 | Sample | K2006221-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 5 | Sample | K2006221-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 6 | Sample | K2006221-004 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 7 | Sample | K2006221-005 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 8 | Sample | K2006044-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 9 | Sample | K2006044-001D | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 10 | Sample | K2006044-001MS | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 11 | Sample | K2006044-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 12 | Sample | K2006044-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 13 | Sample | K2006044-004 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 14 | Sample | K2006044-005 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 15 | Sample | K2006044-006 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 16 | Sample | K2006044-007 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 17 | Sample | K2006044-008 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 18 | Sample | K2006036-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 19 | Sample | K2006224-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 20 | Sample | MB2 | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| C | Check Standard | [TOC] LCS [24.0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 21 | Sample | K2006224-001D | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 22 | Sample | K2006224-001MS | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 23 | Sample | K2006047-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 24 | Sample | K2006047-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 25 | Sample | K2006047-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 26 | Sample | K2006047-004 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 27 | Sample | K2006047-005 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 28 | Sample | K2006047-006 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 29 | Sample | K2006047-002 5X | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 30 | Sample | K2006047-5 10X | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 31 | Sample | K2006047-6 5X | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25ppm_salt [25ppm salt] | CAS_salt (CAS_salt_0811a) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| | | | | | False | |

NR

Printed on: August 6, 2020 15:36:52

Page 1

# Fusion Report - 080520
# Wednesday, August 05, 2020 05:56 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/08/06 10:34 - Thursday

## Report Summary Information

| | | | |
|---|---|---|---|
| Company Location: | Gen Chem Lab | | |
| Schedule Name: | 080520 | Engine Version: | 1.1.5.1 |
| Instrument Name: | Fusion1 | Firmware Version: | 1.2.0696 |
| Report Version: | 1 of 1 | Connection: | RS232 COM1 |
| Report Creation by Operators (schedule version): | Fusion1 (Fusion1) (v1)<br>Fusion1 (Fusion1) (v5)<br>Fusion1 (Fusion1) (v6)<br>Fusion1 (Fusion1) (v7)<br>Fusion1 (Fusion1) (v9)<br>Fusion1 (Fusion1) (v10) | | |
| Comment: | | | |

## Report Results

**Sample Type**: Blank (Creating v1429) From Schedule Version 1

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (blank) | | Reagent/Acid Blank | 2020/08/05 17:56 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | 11.67 | 24.90 | 13.23 | 49.97 | 08:00 |
| | | | | | | |
| 2 | TC Clean | 4.10 | 17.23 | 13.13 | 49.90 | 07:16 |
| 3 | TC Clean | 0.50 | 13.74 | 13.25 | 49.85 | 07:02 |
| 4 | TC Clean | 0.04 | 13.30 | 13.26 | 49.94 | 07:03 |
| | | | | | | |
| 5 | Reagent Blank | 4.01 | 17.27 | 13.26 | 50.00 | 08:10 |
| | | | | | | |
| 6 | Acid Blank | 0.37 | 13.64 | 13.28 | 49.61 | 05:34 |

**Sample Type**: Sample From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | RB | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/05 18:45 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 9.17 | 22.40 | 13.24 | 50.09 | 10:31 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 25.4763 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/05 18:59 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 25.4763 | 254.7632 | 188.60 | 201.77 | 13.17 | 50.11 | 10:32 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/05 19:14 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 9.03 | 22.40 | 13.36 | 50.16 | 10:32 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 1 | TOC | MB1 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/05 19:29 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.40 | 21.66 | 13.26 | 50.19 | 10:34 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [24.0 ppm] | 0 / infinity ( NA / NA ) | 26.1783 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/05 19:43 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 26.1783 | 261.7826 | 193.53 | 206.65 | 13.12 | 50.17 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |

**Sample Type**: Sample From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 2 | TOC | ICS | 0.3474 ppm | 0.0000 ppm | 0.0000% | 2020/08/05 19:58 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.3474 | 3.4737 | 11.61 | 25.12 | 13.51 | 50.18 | 10:31 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 3 | TOC | k2005714-002 10x | 7.8756 ppm | 0.0371 ppm | 0.4700% | 2020/08/05 20:13 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 7.8493 | 78.4934 | 64.23 | 77.66 | 13.43 | 50.18 | 10:29 |
| 2 | TOC | 7.9018 | 79.0180 | 64.60 | 78.25 | 13.65 | 50.16 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 4 | TOC | K2006221-002 | 8.6645 ppm | 0.2369 ppm | 2.7300% | 2020/08/05 20:41 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.8320 | 88.3197 | 71.12 | 84.56 | 13.44 | 50.20 | 10:28 |
| 2 | TOC | 8.4970 | 84.9697 | 68.78 | 82.43 | 13.65 | 50.24 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 5 | TOC | K2006221-003 | 8.7199 ppm | 0.1460 ppm | 1.6700% | 2020/08/05 21:09 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.8231 | 88.2313 | 71.06 | 84.45 | 13.39 | 50.18 | 10:28 |
| 2 | TOC | 8.6167 | 86.1671 | 69.62 | 83.04 | 13.42 | 50.20 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 6 | TOC | K2006221-004 | 27.8920 ppm | 0.9180 ppm | 3.2900% | 2020/08/05 21:37 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 28.5411 | 285.4108 | 209.38 | 222.93 | 13.55 | 50.20 | 10:26 |
| 2 | TOC | 27.2428 | 272.4283 | 200.27 | 213.61 | 13.33 | 50.17 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 7 | TOC | K2006221-005 | 3.0464 ppm | 0.0680 ppm | 2.2300% | 2020/08/05 22:05 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 3.0946 | 30.9455 | 30.88 | 44.37 | 13.49 | 50.19 | 10:25 |
| 2 | TOC | 2.9983 | 29.9833 | 30.20 | 43.71 | 13.51 | 50.17 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 8 | TOC | K2006044-001 | 0.9314 ppm | 0.0448 ppm | 4.8100% | 2020/08/05 22:33 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.9631 | 9.6307 | 15.93 | 29.52 | 13.59 | 50.20 | 10:26 |
| 2 | TOC | 0.8998 | 8.9977 | 15.48 | 29.21 | 13.73 | 50.18 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 9 | TOC | K2006044-001D | 0.9707 ppm | 0.0489 ppm | 5.0400% | 2020/08/05 23:01 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.0053 | 10.0526 | 16.22 | 29.64 | 13.42 | 50.18 | 10:26 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2 | TOC | 0.9361 | 9.3612 | 15.74 | 29.22 | 13.48 | 50.17 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 25.8333 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/05 23:29 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 25.8333 | 258.3328 | 191.11 | 204.62 | 13.52 | 50.18 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/05 23:44 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.95 | 22.27 | 13.32 | 50.19 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 10 | TOC | K2006044-001MS | 25.5979 ppm | 0.1718 ppm | 0.6700% | 2020/08/05 23:59 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 25.4764 | 254.7643 | 187.88 | 201.34 | 13.46 | 50.21 | 10:27 |
| 2 | TOC | 25.7193 | 257.1935 | 189.59 | 203.16 | 13.58 | 50.29 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | | Analysis | | | Std. Dev. | | |
|---|---|---|---|---|---|---|---|

| | Pos | Type | Sample ID | Result (ppmC) | (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 11 | TOC | K2006044-002 | 1.2344 ppm | 0.0396 ppm | 3.2100% | 2020/08/06 00:27 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.2624 | 12.6243 | 18.03 | 31.57 | 13.54 | 50.24 | 10:30 |
| 2 | TOC | 1.2064 | 12.0641 | 17.63 | 31.12 | 13.48 | 50.23 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 12 | TOC | K2006044-003 | 41.9765 ppm | 0.4087 ppm | 0.9700% | 2020/08/06 00:55 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 41.6875 | 416.8752 | 301.60 | 315.16 | 13.56 | 50.22 | 10:29 |
| 2 | TOC | 42.2654 | 422.6544 | 305.66 | 319.18 | 13.53 | 50.23 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 13 | TOC | K2006044-004 | 0.8868 ppm | 0.1462 ppm | 16.4800% | 2020/08/06 01:23 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.9902 | 9.9015 | 16.12 | 29.44 | 13.32 | 50.21 | 10:27 |
| 2 | TOC | 0.7834 | 7.8345 | 14.67 | 28.15 | 13.48 | 50.22 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 14 | TOC | K2006044-005 | 2.6089 ppm | 0.0248 ppm | 0.9500% | 2020/08/06 01:51 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.5913 | 25.9133 | 27.35 | 40.71 | 13.36 | 50.24 | 10:26 |
| 2 | TOC | 2.6264 | 26.2640 | 27.59 | 41.09 | 13.49 | 50.26 | 10:24 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 15 | TOC | K2006044-006 | 2.3500 ppm | 0.0145 ppm | 0.6200% | 2020/08/06 02:19 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.3603 | 23.6025 | 25.73 | 39.21 | 13.48 | 50.23 | 10:27 |
| 2 | TOC | 2.3397 | 23.3972 | 25.58 | 39.06 | 13.47 | 50.22 | 10:26 |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 16 | TOC | K2006044-007 | 15.2921 ppm | 0.0945 ppm | 0.6200% | 2020/08/06 02:47 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 15.2253 | 152.2529 | 115.97 | 129.45 | 13.48 | 50.22 | 10:30 |
| 2 | TOC | 15.3589 | 153.5886 | 116.91 | 130.40 | 13.49 | 50.21 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 17 | TOC | K2006044-008 | 8.9005 ppm | 0.0962 ppm | 1.0800% | 2020/08/06 03:15 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.9685 | 89.6854 | 72.08 | 85.57 | 13.49 | 50.29 | 10:26 |
| 2 | TOC | 8.8325 | 88.3254 | 71.13 | 84.67 | 13.54 | 50.21 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 18 | TOC | K2006036-001 | 2.1285 ppm | 0.0291 ppm | 1.3700% | 2020/08/06 03:43 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.1079 | 21.0793 | 23.96 | 37.42 | 13.46 | 50.19 | 10:26 |
| 2 | TOC | 2.1491 | 21.4913 | 24.25 | 37.74 | 13.50 | 50.26 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 19 | TOC | K2006224-001 | 2.0213 ppm | 0.0465 ppm | 2.3000% | 2020/08/06 04:11 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.9885 | 19.8847 | 23.12 | 36.65 | 13.53 | 50.23 | 10:25 |
| 2 | TOC | 2.0542 | 20.5419 | 23.58 | 36.98 | 13.40 | 50.19 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 25.3087 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/06 04:39 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 25.3087 | 253.0867 | 187.43 | 200.85 | 13.42 | 50.19 | 10:31 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/06 04:54 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 9.64 | 23.04 | 13.40 | 50.18 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 20 | TOC | MB2 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/06 05:08 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.24 | 21.72 | 13.49 | 50.25 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS From Schedule Version 5

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [24.0 ppm] | 0 / infinity ( NA / NA ) | 25.6691 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/06 05:23 |

| Pos | Base Analysis | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|

| | Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 25.6691 | 256.6905 | 189.96 | 203.52 | 13.56 | 50.18 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |

**Sample Type**: Sample From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 21 | TOC | K2006224-001D | 2.2243 ppm | 0.0695 ppm | 3.1200% | 2020/08/06 05:37 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.2734 | 22.7343 | 25.12 | 38.38 | 13.27 | 50.19 | 10:26 |
| 2 | TOC | 2.1752 | 21.7521 | 24.43 | 37.73 | 13.30 | 50.17 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 22 | TOC | K2006224-001MS | 29.2402 ppm | 0.0525 ppm | 0.1800% | 2020/08/06 06:05 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 29.2031 | 292.0311 | 214.02 | 227.38 | 13.36 | 50.16 | 10:28 |
| 2 | TOC | 29.2774 | 292.7738 | 214.55 | 227.96 | 13.41 | 50.22 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 23 | TOC | K2006047-001 | 3.5809 ppm | 0.0408 ppm | 1.1400% | 2020/08/06 06:34 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 3.6097 | 36.0975 | 34.49 | 48.21 | 13.72 | 50.18 | 10:25 |
| 2 | TOC | 3.5520 | 35.5201 | 34.09 | 47.55 | 13.46 | 50.20 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 24 | TOC | K2006047-002 | 53.6821 ppm | 0.7354 ppm | 1.3700% | 2020/08/06 07:02 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 54.2022 | 542.0216 | 389.39 | 402.93 | 13.54 | 50.17 | 10:27 |
| 2 | TOC | 53.1621 | 531.6208 | 382.09 | 395.92 | 13.83 | 50.17 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 25 | TOC | K2006047-003 | 18.6374 ppm | 0.2652 ppm | 1.4200% | 2020/08/06 07:30 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 18.8249 | 188.2495 | 141.22 | 154.86 | 13.63 | 50.19 | 10:29 |
| 2 | TOC | 18.4499 | 184.4989 | 138.59 | 152.24 | 13.65 | 50.15 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 26 | TOC | K2006047-004 | 5.5994 ppm | 0.0964 ppm | 1.7200% | 2020/08/06 07:58 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 5.6675 | 56.6753 | 48.93 | 62.18 | 13.25 | 50.14 | 10:27 |
| 2 | TOC | 5.5312 | 55.3125 | 47.97 | 61.53 | 13.56 | 50.14 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Sample From Schedule Version 6

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 27 | TOC | K2006047-005 | 86.4136 ppm | 4.0529 ppm | 4.6900% | 2020/08/06 08:26 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 83.5477 | 835.4772 | 595.24 | 608.81 | 13.57 | 50.11 | 10:24 |
| 2 | TOC | 89.2794 | 892.7944 | 635.45 | 649.95 | 14.50 | 50.10 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Sample From Schedule Version 7

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 28 | TOC | K2006047-006 | 18.8920 ppm | 19.5781 ppm | 103.6300% | 2020/08/06 08:54 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 32.7358 | 327.3577 | 238.81 | 252.98 | 14.18 | 50.08 | 10:31 |
| 2 | TOC | 5.0481 | 50.4813 | 44.58 | 57.85 | 13.27 | 50.09 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 29 | TOC | K2006047-002 5X | 16.5885 ppm | 0.8324 ppm | 5.0200% | 2020/08/06 09:22 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 17.1772 | 171.7715 | 129.67 | 142.98 | 13.32 | 50.08 | 10:26 |
| 2 | TOC | 15.9999 | 159.9993 | 121.41 | 134.63 | 13.22 | 50.07 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.1702 (IC) (v1429) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm — From Schedule Version 7

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 27.1565 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/06 09:50 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 27.1565 | 271.5647 | 200.39 | 213.65 | 13.26 | 50.06 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB — From Schedule Version 9

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 1.0759 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/06 10:06 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 1.0759 | 10.7586 | 17.44 | 30.42 | 12.98 | 50.06 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample — From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| • | 30 | TOC | K2006047-5 10X | NaN | NaN | NaN% | 2020/08/06 10:21 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|

| Dilution | Method | Calibration |
|---|---|---|
| 1:10 | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

## Meta Data Used in this Report

**Blanks**

| Version | Reagent (Abs) | Acid (Abs) | DI IC (Abs) | DI TC (Abs) | DI TOC (Abs) | Save Time | Operator |
|---|---|---|---|---|---|---|---|
| v1428 | 2.0260 | 0.3900 | 0.0000 | 0.0000 | 0.0000 | 2020/08/05 11:39 | Fusion1 (Fusion1) |
| v1429 | 1.3370 | 0.3660 | 0.0000 | 0.0000 | 0.0000 | 2020/08/05 18:45 | Fusion1 (Fusion1) |

**Calibrations**

**Name: CAS_salt_010711 (TOC)**

| | | | |
|---|---|---|---|
| Version: | v38 | Calibration curve formula: | TOC: y = 7.015x + 9.892 |
| Ver Creation: | 2020/06/13 16:40 | $r^2$ value: | TOC: $r^2$ = 0.99974 |
| Comment: | | | |
| Operator: | Fusion1 (Fusion1) | | |
| Basic Analysis Type | TOC | | |

**Basic Analysis Type**: TOC

| Sample ID | Y Raw Value | X Expected | Message | End Time |
|---|---|---|---|---|
| DI Water | 9.5750 | 0.0000 | | 2020/06/13 15:13 |
| 0.500 ppm | 12.9010 | 0.5000 | | 2020/06/13 15:28 |
| 1.0 ppm | 15.6320 | 1.0000 | | 2020/06/13 15:42 |
| 5.0 ppm | 43.2510 | 5.0000 | | 2020/06/13 15:56 |
| 10 ppm | 82.4040 | 10.0000 | | 2020/06/13 16:11 |
| 25 ppm | 188.6880 | 25.0000 | | 2020/06/13 16:25 |
| 50 ppm | 358.6500 | 50.0000 | | 2020/06/13 16:39 |

**Methods**

**Name: CAS_salt_010711 (TOC)**

| | | | |
|---|---|---|---|
| Version: | v4 | Operator: | Fusion1 (Fusion1) |
| Ver Creation: | 2019/02/21 17:57 | | |
| Comment: | | | |

| Parameter | Value |
|---|---|
| SampleVolume | 10.0 mL |
| Dilution | 1:10 |
| AcidVolume | 0.5 ml |
| ReagentVolume | 2.0 ml |
| UVReactorPrerinse | Off |
| UVReactorPrerinseVolume | 5.0 |
| NumberOfUVReactorPrerinses | 1 |
| ICSpargeTime | 1.00 mins |
| DetectorSweepFlow | 500 ml/min |
| PreSpargeTime | 2.00 mins |
| SystemFlow | 500 ml/min |

| Advanced Parameter | Value |
|---|---|
| NeedleRinseVolume | 5.0 ml |
| VialPrimeVolume | 2.0 ml |
| ICSamplePrimeVolume | 2.0 ml |
| ICSpargeRinseVolume | 12.0 ml |
| BaselineStabilizeTime | 0.70 min |
| DetectorPressureFlow | 150 ml/min |
| SyringeSpeedWaste | 10 |
| SyringeSpeedAcid | 7 |
| SyringeSpeedReagent | 7 |
| SyringeSpeedDIWater | 7 |
| NDIRPressurization | 60 psig |
| SyringeSpeedSampleDispense | 5 |
| SyringeSpeedSampleAspirate | 4 |
| SyringeSpeedUVDispense | 5 |
| SyringeSpeedUVAspirate | 5 |
| SyringeSpeedICDispense | 5 |
| SyringeSpeedICAspirate | 5 |
| NDIRPressureStabilize | 1.75 min |
| SampleMixing | Off |
| SampleMixingCycles | 1 |
| SampleMixingVolume | 10.0 |
| LowLevelFilterNDIR | Off |

## Acceptance / Approval

**Electronic Signatures**

| Report Version | User Name | Acceptance | Reason | Date |
|---|---|---|---|---|

## Report History

**Report History**

| Report Version | User Name | System Reason | User Reason | Date |
|---|---|---|---|---|
| 1 | Fusion1 (Fusion1) | Schedule completed | Schedule completed | 2020/08/06 10:31 |

ALS Environmental

StarLIMS Run: 689991/6900001

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-15-C 50 ppm LCS: 19-GEN-8-31I 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-4-G

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-32J

21 % H3PO4: 19-GEN-08-32I

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

| | |
|---|---|
| Analyzed By: MK | Date Analyzed: 8/6/20 |
| Reviewed By: JC | Date Reviewed: 8/6/20 |

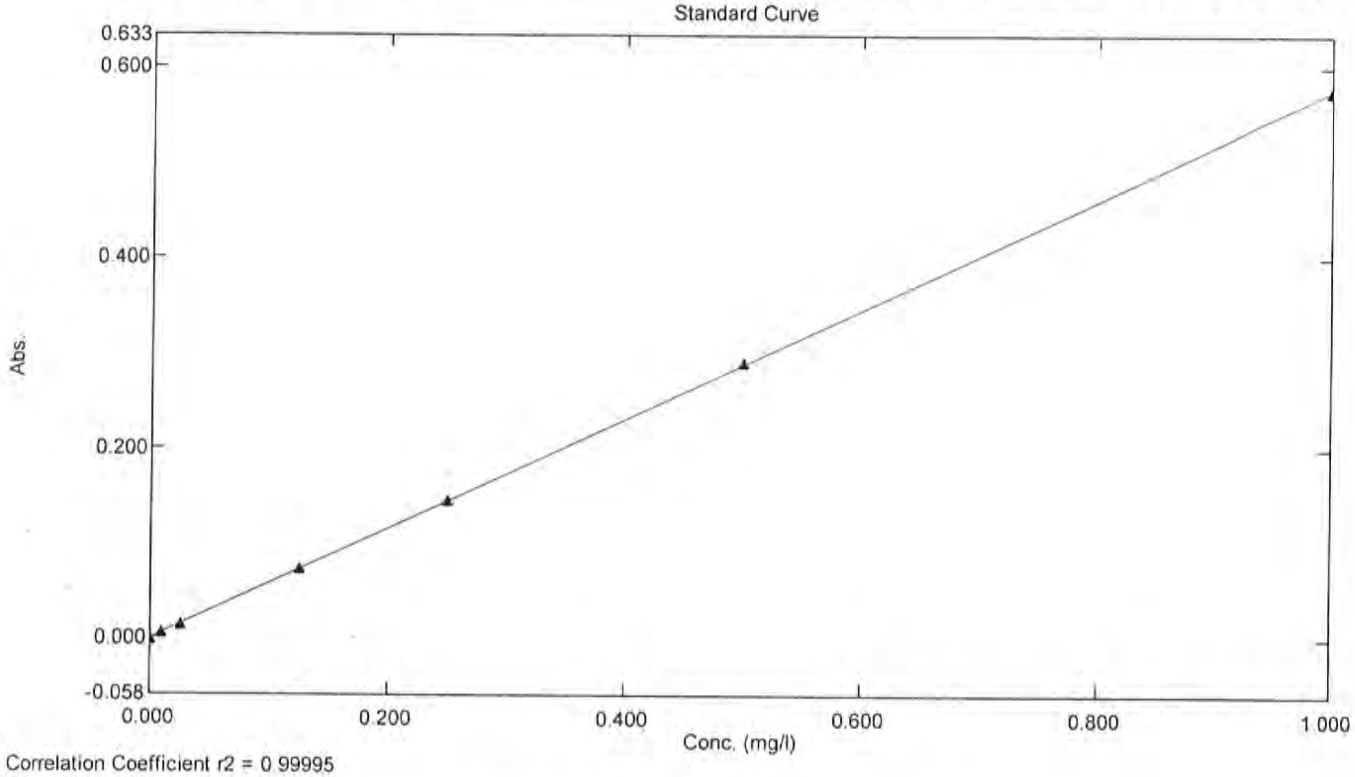
# HS20070982 Wet Chem Raw Data (P_Ortho)

ALS WO# HS20070982

# Standard Table Report

08/11/2020 04:55:04 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\072320_P_ORTHO.pho..p




Correlation Coefficient r2 = 0.99995

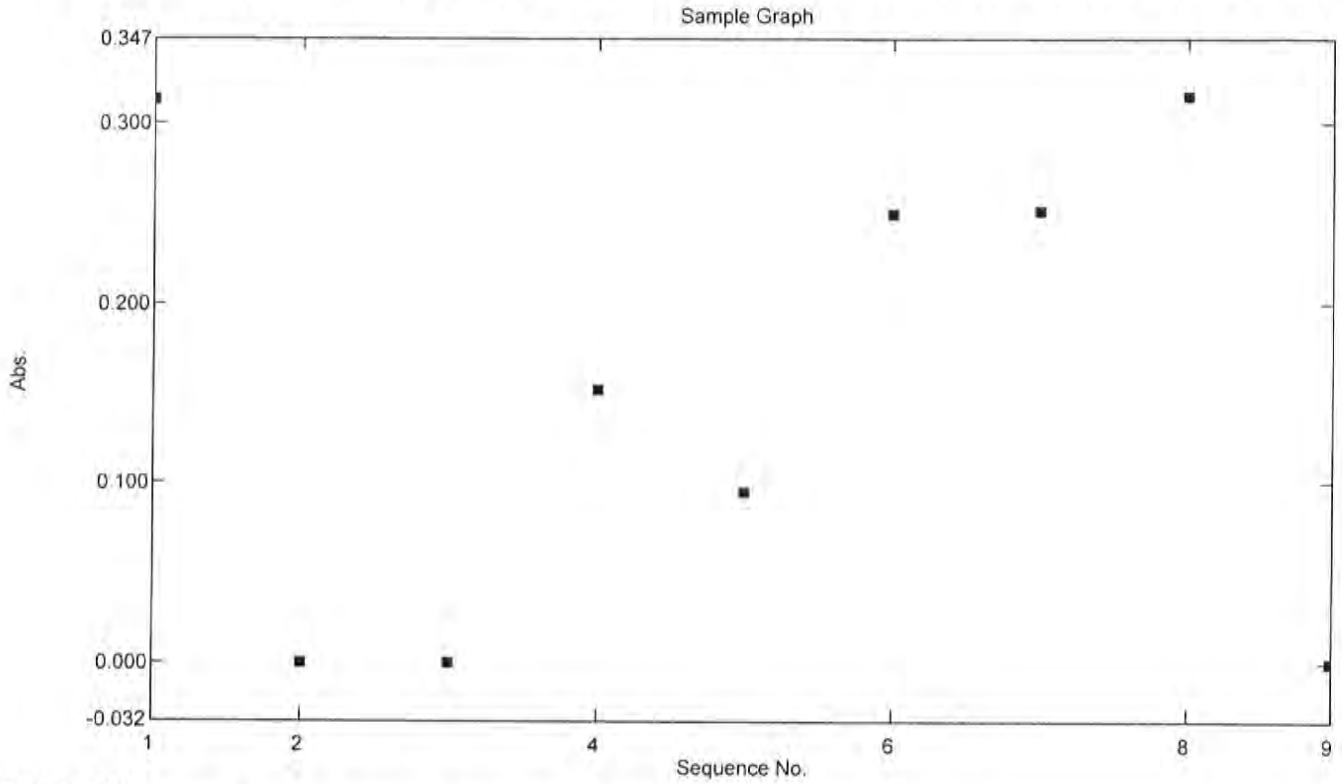
Standard Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Wgt.Facto | Comments |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | Standard | | 0.000 | -0.001 | 1.000 | |
| 2 | STD2 | Standard | | 0.010 | 0.005 | 1.000 | |
| 3 | STD3 | Standard | | 0.025 | 0.013 | 1.000 | |
| 4 | STD4 | Standard | | 0.125 | 0.073 | 1.000 | |
| 5 | STD5 | Standard | | 0.250 | 0.145 | 1.000 | |
| 6 | STD6 | Standard | | 0.500 | 0.290 | 1.000 | |
| 7 | STD7 | Standard | | 1.000 | 0.575 | 1.000 | |
| 8 | | | | | | | |

# Sample Table Report

08/11/2020 04:55:06 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\072320_P_ORTHO.pho..p




Sample Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Comments |
|---|---|---|---|---|---|---|
| 1 | CCV | Unknown | | 0.543 | 0.313 | 314061705 WC-14 |
| 2 | CCB | Unknown | | -0.001 | -0.000 | 314061707 UV-11 |
| 3 | MBLK | Unknown | | -0.001 | -0.001 | |
| 4 | LCS | Unknown | | 0.263 | 0.152 | 314061704 WC-14 |
| 5 | HS20070982.01 | Unknown | | 0.165 | 0.095 | PF-10X,12:42PM |
| 6 | HS20070982.01MS | Unknown | | 0.433 | 0.250 | 12:43PM,PF-10X |
| 7 | HS20070982.01MS | Unknown | | 0.436 | 0.251 | 12:44PM,PF-10X |
| 8 | CCV2 | Unknown | | 0.548 | 0.316 | |
| 9 | CCB2 | Unknown | | -0.000 | -0.000 | |
| 10 | | | | | | |

# HS20070982 Wet Chem Raw Data (NIT_AMN_W_ISE)

ALS WO# HS20070982

NIT-AMN-V-ISE /350.3

ALS Laboratory Group

Logbook **31220**

# Ion Selective Electrode Logbook

| | | | |
|---|---|---|---|
| Analyst: MD | | | Date: 7/28/20 12:25 PM |
| Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F | | | |
| Probe Calibration Date: 7/28/20 | Cal Std ID: 3140616102-067 | | Probe ID: X01-11806 |
| Std Level | mV | Conc., mg/L: | Sodium Thiosulfate ID: 3100601618 |
| STD 1 (mg/L): 0.2 | 136.8 | 0.203 | Std Level / mV / Conc., mg/L: |
| STD 2 (mg/L): 1 | 98.0 | 1.000 | STD 4 (mg/L):10 / 40.2 / 10.012 |
| STD 3 (mg/L): 5 | 56.5 | 5.004 | STD 5 (mg/L):50 / -1.9 / 50.223 |
| LSC / MS Spike ID: 3100601709 | | | ICAL Date & Slope: |
| ICV Cal STD ID: 3140616101 | | | 100.01 / -59.6 mV |
| DPD Reagent ID: 3100602305 | | | |

| WO # / SX # | Bottle # | Initial g or ml | Final Vol. ml | Dilution Factor | Initial Conc. mg/L | Final Conc. mg/L | Chlorine Check (+/-) | Comments |
|---|---|---|---|---|---|---|---|---|
| ICV | | 5ml | 50ml | | 10.389 | | | |
| CCB | | | | | 0.014 | | | |
| MBLK | | | | | 0.015 | | | |
| LCS | | | | | 10.999 | | | |
| MS20070982-01 | | | | | 12.443 | | -ve | |
| 907-01 | | | | | 0.162 | | +ve | Rechecked |
| 907-01MS | | | | | 10.614 | | | |
| 907-01MSD | | | | | 10.594 | | | |
| 1151-01 | | | | | 0.326 | | -ve | |
| 1126-01 | | | | | 0.192 | | -ve | |
| 960-01 | | | | | 3.565 | | -ve | |
| 938-01 | | | | | 0.360 | | -ve | |
| CCV | | | | | 10.572 | | | |
| CCB | | | | | 0.016 | | | |
| MS20070943-01 | | 0.1ml | 50ml | 500X | 1.873 | | +ve | Rechecked |
| CCV | | 50ml | 50ml | | 10.040 | | | |
| CCB | | | | | 0.017 | | | |

| Batch ID: 365XXS1 365777 | Reported By: MD | Reviewed By: KL |
|---|---|---|


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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20070984

## Longhorn GW Treatment Plant Bi Weekly Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**25-Aug-2020**

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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  - Certifications
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- HS20070984 8260 Raw Data
- HS20070984 Wet Chem Raw Data (9056_W)

# HS20070984 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20070984

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 04, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20070984**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Jul 22, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**Work Order:** HS20070984

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20070984-01 | LH18/24-SP650_072120 | Water | | 21-Jul-2020 14:00 | 22-Jul-2020 09:55 | ☐ |
| HS20070984-02 | Trip Blank | Water | CG-060320-205 | 21-Jul-2020 00:00 | 22-Jul-2020 09:55 | ☐ |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**Work Order:** HS20070984

**CASE NARRATIVE**

## GCMS Volatiles by Method SW8260

### Batch ID: R366144

**Sample ID: LH18/24-SP650_072120 (HS20070984-01MS)**

- MS/MSD failed QC and RPD limits for some compounds.

## Wet Chemistry by Method SW9056

### Batch ID: R365767

**Sample ID: HS20071033-03MS**

- MS and MSD are for an unrelated sample

## WetChemistry by Method SW9056

### Batch ID: R365767

**Sample ID: HS20071147-05MS**

- MS and MSD are for an unrelated sample

**ALS Houston, US** Date: 04-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20070984
Sample ID: LH18/24-SP650_072120 Lab ID:HS20070984-01
Collection Date: 21-Jul-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| **1,2-Dichloroethane** | **0.75** | J | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 03-Aug-2020 21:15 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 04-Aug-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_072120
Collection Date: 21-Jul-2020 14:00

**ANALYTICAL REPORT**
WorkOrder:HS20070984
Lab ID:HS20070984-01
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| **cis-1,2-Dichloroethene** | **19** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 03-Aug-2020 21:15 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| **Toluene** | **0.68** | J | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 03-Aug-2020 21:15 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| **Trichloroethene** | **3.8** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 03-Aug-2020 21:15 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 21:15 |
| *Surr: 1,2-Dichloroethane-d4* | *90.9* | | | **0** | *81-118* | *%REC* | *1* | *03-Aug-2020 21:15* |
| *Surr: 4-Bromofluorobenzene* | *96.9* | | | **0** | *85-114* | *%REC* | *1* | *03-Aug-2020 21:15* |
| *Surr: Dibromofluoromethane* | *92.4* | | | **0** | *80-119* | *%REC* | *1* | *03-Aug-2020 21:15* |
| *Surr: Toluene-d8* | *109* | | | **0** | *89-112* | *%REC* | *1* | *03-Aug-2020 21:15* |
| **ANIONS BY SW9056A** | | **Method:SW9056** | | | | | | Analyst: YP |
| **Chloride** | **294** | | **2.00** | **5.00** | **5.00** | **mg/L** | 10 | 27-Jul-2020 22:45 |
| **Sulfate** | **31.8** | | **0.200** | **0.500** | **0.500** | **mg/L** | 1 | 27-Jul-2020 22:27 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 04-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20070984
Sample ID: Trip Blank
Lab ID:HS20070984-02
Collection Date: 21-Jul-2020 00:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 04-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20070984
Sample ID: Trip Blank
Lab ID:HS20070984-02
Collection Date: 21-Jul-2020 00:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| cis-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| **Toluene** | **0.59** | J | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 03-Aug-2020 20:51 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Trichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 03-Aug-2020 20:51 |
| *Surr: 1,2-Dichloroethane-d4* | *90.1* | | | **0** | *81-118* | *%REC* | *1* | *03-Aug-2020 20:51* |
| *Surr: 4-Bromofluorobenzene* | *96.4* | | | **0** | *85-114* | *%REC* | *1* | *03-Aug-2020 20:51* |
| *Surr: Dibromofluoromethane* | *91.4* | | | **0** | *80-119* | *%REC* | *1* | *03-Aug-2020 20:51* |
| *Surr: Toluene-d8* | *109* | | | **0** | *89-112* | *%REC* | *1* | *03-Aug-2020 20:51* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**DATES REPORT**

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** R365767 ( 0 ) | **Test Name :** ANIONS BY SW9056A | | | | **Matrix:** Water | |
| HS20070984-01 | LH18/24-SP650_072120 | 21 Jul 2020 14:00 | | | 27 Jul 2020 22:45 | 10 |
| HS20070984-01 | LH18/24-SP650_072120 | 21 Jul 2020 14:00 | | | 27 Jul 2020 22:27 | 1 |
| **Batch ID:** R366144 ( 0 ) | **Test Name :** VOLATILES ORGANICS BY METHOD 8260C | | | | **Matrix:** Water | |
| HS20070984-01 | LH18/24-SP650_072120 | 21 Jul 2020 14:00 | | | 03 Aug 2020 21:15 | 1 |
| HS20070984-02 | Trip Blank | 21 Jul 2020 00:00 | | | 03 Aug 2020 20:51 | 1 |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200803** Units: **UG/L** Analysis Date: **03-Aug-2020 18:52**
Client ID: Run ID: **VOA6_366144** SeqNo: **5684424** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,1-Trichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,2-Trichloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloropropene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dibromo-3-chloropropane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dibromoethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,3,5-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,4-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 2,2-Dichloropropane | 0.50 | 1.0 | | | | | | | | U |
| 2-Butanone | 1.0 | 2.0 | | | | | | | | U |
| 2-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 2-Hexanone | 2.0 | 2.0 | | | | | | | | U |
| 4-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Isopropyltoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Methyl-2-pentanone | 2.0 | 2.0 | | | | | | | | U |
| Acetone | 1.0 | 2.0 | | | | | | | | U |
| Benzene | 0.50 | 1.0 | | | | | | | | U |
| Bromobenzene | 1.0 | 1.0 | | | | | | | | U |
| Bromochloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromodichloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromoform | 1.0 | 1.0 | | | | | | | | U |
| Bromomethane | 1.0 | 1.0 | | | | | | | | U |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200803** Units: **UG/L** Analysis Date: **03-Aug-2020 18:52**
Client ID: Run ID: **VOA6_366144** SeqNo: **5684424** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 1.0 | 2.0 | | | | | | | | U |
| Carbon tetrachloride | 1.0 | 1.0 | | | | | | | | U |
| Chlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| Chloroethane | 1.0 | 1.0 | | | | | | | | U |
| Chloroform | 0.50 | 1.0 | | | | | | | | U |
| Chloromethane | 0.50 | 1.0 | | | | | | | | U |
| cis-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| cis-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Dibromochloromethane | 1.0 | 1.0 | | | | | | | | U |
| Dibromomethane | 0.50 | 1.0 | | | | | | | | U |
| Dichlorodifluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Ethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Hexachlorobutadiene | 1.0 | 1.0 | | | | | | | | U |
| Isopropylbenzene | 1.0 | 1.0 | | | | | | | | U |
| m,p-Xylene | 1.0 | 2.0 | | | | | | | | U |
| Methylene chloride | 1.0 | 2.0 | | | | | | | | U |
| Naphthalene | 1.0 | 1.0 | | | | | | | | U |
| n-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| n-Propylbenzene | 1.0 | 1.0 | | | | | | | | U |
| o-Xylene | 1.0 | 1.0 | | | | | | | | U |
| sec-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Styrene | 1.0 | 1.0 | | | | | | | | U |
| tert-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Tetrachloroethene | 1.0 | 1.0 | | | | | | | | U |
| Toluene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Trichloroethene | 0.50 | 1.0 | | | | | | | | U |
| Trichlorofluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Vinyl chloride | 0.50 | 1.0 | | | | | | | | U |
| *Surr: 1,2-Dichloroethane-d4* | *45.39* | *1.0* | *50* | *0* | *90.8* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.02* | *1.0* | *50* | *0* | *98.0* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *46.23* | *1.0* | *50* | *0* | *92.5* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *53.12* | *1.0* | *50* | *0* | *106* | *89 - 112* | | | | |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200803** Units: **UG/L** Analysis Date: **03-Aug-2020 17:39**
Client ID: Run ID: **VOA6_366144** SeqNo: **5684423** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.34 | 1.0 | 20 | 0 | 91.7 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 17.89 | 1.0 | 20 | 0 | 89.5 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 18.96 | 1.0 | 20 | 0 | 94.8 | 71 - 121 | | | | |
| 1,1,2-Trichloroethane | 18.53 | 1.0 | 20 | 0 | 92.6 | 80 - 119 | | | | |
| 1,1-Dichloroethane | 18.91 | 1.0 | 20 | 0 | 94.6 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 18.92 | 1.0 | 20 | 0 | 94.6 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 17.83 | 1.0 | 20 | 0 | 89.2 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 19.34 | 1.0 | 20 | 0 | 96.7 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 17.82 | 1.0 | 20 | 0 | 89.1 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 20.28 | 1.0 | 20 | 0 | 101 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 16.98 | 1.0 | 20 | 0 | 84.9 | 76 - 124 | | | | |
| 1,2-Dibromo-3-chloropropane | 18.61 | 1.0 | 20 | 0 | 93.1 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 18.99 | 1.0 | 20 | 0 | 95.0 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 17.3 | 1.0 | 20 | 0 | 86.5 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 19.32 | 1.0 | 20 | 0 | 96.6 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 19.55 | 1.0 | 20 | 0 | 97.8 | 78 - 122 | | | | |
| 1,3,5-Trimethylbenzene | 16.64 | 1.0 | 20 | 0 | 83.2 | 75 - 124 | | | | |
| 1,3-Dichlorobenzene | 17.25 | 1.0 | 20 | 0 | 86.2 | 80 - 119 | | | | |
| 1,3-Dichloropropane | 19.16 | 1.0 | 20 | 0 | 95.8 | 80 - 119 | | | | |
| 1,4-Dichlorobenzene | 17.33 | 1.0 | 20 | 0 | 86.6 | 79 - 118 | | | | |
| 2,2-Dichloropropane | 18.76 | 1.0 | 20 | 0 | 93.8 | 60 - 139 | | | | |
| 2-Butanone | 39.37 | 2.0 | 40 | 0 | 98.4 | 56 - 143 | | | | |
| 2-Chlorotoluene | 17.3 | 1.0 | 20 | 0 | 86.5 | 79 - 122 | | | | |
| 2-Hexanone | 36.9 | 2.0 | 40 | 0 | 92.2 | 57 - 139 | | | | |
| 4-Chlorotoluene | 17.1 | 1.0 | 20 | 0 | 85.5 | 78 - 122 | | | | |
| 4-Isopropyltoluene | 15.93 | 1.0 | 20 | 0 | 79.6 | 77 - 127 | | | | |
| 4-Methyl-2-pentanone | 37.38 | 2.0 | 40 | 0 | 93.5 | 67 - 130 | | | | |
| Acetone | 40.89 | 2.0 | 40 | 0 | 102 | 39 - 160 | | | | |
| Benzene | 18.74 | 1.0 | 20 | 0 | 93.7 | 79 - 120 | | | | |
| Bromobenzene | 17.71 | 1.0 | 20 | 0 | 88.6 | 80 - 120 | | | | |
| Bromochloromethane | 18.33 | 1.0 | 20 | 0 | 91.6 | 78 - 123 | | | | |
| Bromodichloromethane | 18.73 | 1.0 | 20 | 0 | 93.7 | 79 - 125 | | | | |
| Bromoform | 18.46 | 1.0 | 20 | 0 | 92.3 | 66 - 130 | | | | |
| Bromomethane | 21.52 | 1.0 | 20 | 0 | 108 | 53 - 141 | | | | |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200803** Units: **UG/L** Analysis Date: **03-Aug-2020 17:39**
Client ID: Run ID: **VOA6_366144** SeqNo: **5684423** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 37.29 | 2.0 | 40 | 0 | 93.2 | 64 - 133 | | | | |
| Carbon tetrachloride | 17.51 | 1.0 | 20 | 0 | 87.6 | 72 - 136 | | | | |
| Chlorobenzene | 18.49 | 1.0 | 20 | 0 | 92.4 | 82 - 118 | | | | |
| Chloroethane | 18.87 | 1.0 | 20 | 0 | 94.3 | 60 - 138 | | | | |
| Chloroform | 18.58 | 1.0 | 20 | 0 | 92.9 | 79 - 124 | | | | |
| Chloromethane | 18.55 | 1.0 | 20 | 0 | 92.7 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 18.92 | 1.0 | 20 | 0 | 94.6 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 19.2 | 1.0 | 20 | 0 | 96.0 | 75 - 124 | | | | |
| Dibromochloromethane | 18.3 | 1.0 | 20 | 0 | 91.5 | 74 - 126 | | | | |
| Dibromomethane | 18.93 | 1.0 | 20 | 0 | 94.6 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 17.82 | 1.0 | 20 | 0 | 89.1 | 32 - 152 | | | | |
| Ethylbenzene | 17.82 | 1.0 | 20 | 0 | 89.1 | 79 - 121 | | | | |
| Hexachlorobutadiene | 19.75 | 1.0 | 20 | 0 | 98.8 | 66 - 134 | | | | |
| Isopropylbenzene | 16.9 | 1.0 | 20 | 0 | 84.5 | 72 - 131 | | | | |
| m,p-Xylene | 35.21 | 2.0 | 40 | 0 | 88.0 | 80 - 121 | | | | |
| Methylene chloride | 19.21 | 2.0 | 20 | 0 | 96.0 | 74 - 124 | | | | |
| Naphthalene | 20.23 | 1.0 | 20 | 0 | 101 | 61 - 128 | | | | |
| n-Butylbenzene | 16.04 | 1.0 | 20 | 0 | 80.2 | 75 - 128 | | | | |
| n-Propylbenzene | 16.25 | 1.0 | 20 | 0 | 81.2 | 76 - 126 | | | | |
| o-Xylene | 18.12 | 1.0 | 20 | 0 | 90.6 | 78 - 122 | | | | |
| sec-Butylbenzene | 15.63 | 1.0 | 20 | 0 | 78.2 | 77 - 126 | | | | |
| Styrene | 18.75 | 1.0 | 20 | 0 | 93.8 | 78 - 123 | | | | |
| tert-Butylbenzene | 16.01 | 1.0 | 20 | 0 | 80.0 | 78 - 124 | | | | |
| Tetrachloroethene | 17.26 | 1.0 | 20 | 0 | 86.3 | 74 - 129 | | | | |
| Toluene | 18.57 | 1.0 | 20 | 0 | 92.9 | 80 - 121 | | | | |
| trans-1,2-Dichloroethene | 18.62 | 1.0 | 20 | 0 | 93.1 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 18.66 | 1.0 | 20 | 0 | 93.3 | 73 - 127 | | | | |
| Trichloroethene | 18.77 | 1.0 | 20 | 0 | 93.8 | 79 - 123 | | | | |
| Trichlorofluoromethane | 18.11 | 1.0 | 20 | 0 | 90.5 | 65 - 141 | | | | |
| Vinyl chloride | 18.15 | 1.0 | 20 | 0 | 90.7 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *51.04* | *1.0* | *50* | *0* | *102* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *48.48* | *1.0* | *50* | *0* | *97.0* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *49.23* | *1.0* | *50* | *0* | *98.5* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *49.77* | *1.0* | *50* | *0* | *99.5* | *89 - 112* | | | | |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20070984-01MS** Units: **UG/L** Analysis Date: **03-Aug-2020 21:39**
Client ID: **LH18/24-SP650_072120** Run ID: **VOA6_366144** SeqNo: **5684427** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 23.19 | 1.0 | 20 | 0 | 116 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 24.05 | 1.0 | 20 | 0 | 120 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 23.72 | 1.0 | 20 | 0 | 119 | 71 - 121 | | | | |
| 1,1,2-Trichloroethane | 23.11 | 1.0 | 20 | 0 | 116 | 80 - 119 | | | | |
| 1,1-Dichloroethane | 24.2 | 1.0 | 20 | 0 | 121 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 25.34 | 1.0 | 20 | 0 | 127 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 24.08 | 1.0 | 20 | 0 | 120 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 16.52 | 1.0 | 20 | 0 | 82.6 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 22.01 | 1.0 | 20 | 0 | 110 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 18.56 | 1.0 | 20 | 0 | 92.8 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 24.3 | 1.0 | 20 | 0 | 122 | 76 - 124 | | | | |
| 1,2-Dibromo-3-chloropropane | 19.34 | 1.0 | 20 | 0 | 96.7 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 23.21 | 1.0 | 20 | 0 | 116 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 22.3 | 1.0 | 20 | 0 | 112 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 23.88 | 1.0 | 20 | 0.7487 | 116 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 23.7 | 1.0 | 20 | 0 | 118 | 78 - 122 | | | | |
| 1,3,5-Trimethylbenzene | 24.67 | 1.0 | 20 | 0 | 123 | 75 - 124 | | | | |
| 1,3-Dichlorobenzene | 23.18 | 1.0 | 20 | 0 | 116 | 80 - 119 | | | | |
| 1,3-Dichloropropane | 23.11 | 1.0 | 20 | 0 | 116 | 80 - 119 | | | | |
| 1,4-Dichlorobenzene | 22.75 | 1.0 | 20 | 0 | 114 | 79 - 118 | | | | |
| 2,2-Dichloropropane | 23.21 | 1.0 | 20 | 0 | 116 | 60 - 139 | | | | |
| 2-Butanone | 42.42 | 2.0 | 40 | 0 | 106 | 56 - 143 | | | | |
| 2-Chlorotoluene | 24.33 | 1.0 | 20 | 0 | 122 | 79 - 122 | | | | |
| 2-Hexanone | 43.1 | 2.0 | 40 | 0 | 108 | 57 - 139 | | | | |
| 4-Chlorotoluene | 23.9 | 1.0 | 20 | 0 | 120 | 78 - 122 | | | | |
| 4-Isopropyltoluene | 24.44 | 1.0 | 20 | 0 | 122 | 77 - 127 | | | | |
| 4-Methyl-2-pentanone | 44.16 | 2.0 | 40 | 0 | 110 | 67 - 130 | | | | |
| Acetone | 41.84 | 2.0 | 40 | 0 | 105 | 39 - 160 | | | | |
| Benzene | 23.92 | 1.0 | 20 | 0 | 120 | 79 - 120 | | | | |
| Bromobenzene | 23.58 | 1.0 | 20 | 0 | 118 | 80 - 120 | | | | |
| Bromochloromethane | 21.93 | 1.0 | 20 | 0 | 110 | 78 - 123 | | | | |
| Bromodichloromethane | 22.58 | 1.0 | 20 | 0 | 113 | 79 - 125 | | | | |
| Bromoform | 21.53 | 1.0 | 20 | 0 | 108 | 66 - 130 | | | | |
| Bromomethane | 23.34 | 1.0 | 20 | 0 | 117 | 53 - 141 | | | | |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20070984-01MS** Units: **UG/L** Analysis Date: **03-Aug-2020 21:39**
Client ID: **LH18/24-SP650_072120** Run ID: **VOA6_366144** SeqNo: **5684427** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 48.8 | 2.0 | 40 | 0 | 122 | 64 - 133 | | | | |
| Carbon tetrachloride | 24.25 | 1.0 | 20 | 0 | 121 | 72 - 136 | | | | |
| Chlorobenzene | 23.73 | 1.0 | 20 | 0 | 119 | 82 - 118 | | | | S |
| Chloroethane | 22.58 | 1.0 | 20 | 0 | 113 | 60 - 138 | | | | |
| Chloroform | 23.01 | 1.0 | 20 | 0 | 115 | 79 - 124 | | | | |
| Chloromethane | 21.49 | 1.0 | 20 | 0 | 107 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 42.67 | 1.0 | 20 | 19.34 | 117 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 22.65 | 1.0 | 20 | 0 | 113 | 75 - 124 | | | | |
| Dibromochloromethane | 22.41 | 1.0 | 20 | 0 | 112 | 74 - 126 | | | | |
| Dibromomethane | 22.63 | 1.0 | 20 | 0 | 113 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 20.63 | 1.0 | 20 | 0 | 103 | 32 - 152 | | | | |
| Ethylbenzene | 24.23 | 1.0 | 20 | 0 | 121 | 79 - 121 | | | | S |
| Hexachlorobutadiene | 20.43 | 1.0 | 20 | 0 | 102 | 66 - 134 | | | | |
| Isopropylbenzene | 24.84 | 1.0 | 20 | 0 | 124 | 72 - 131 | | | | |
| m,p-Xylene | 48.22 | 2.0 | 40 | 0 | 121 | 80 - 121 | | | | |
| Methylene chloride | 22.62 | 2.0 | 20 | 0 | 113 | 74 - 124 | | | | |
| Naphthalene | 17.96 | 1.0 | 20 | 0 | 89.8 | 61 - 128 | | | | |
| n-Butylbenzene | 24.2 | 1.0 | 20 | 0 | 121 | 75 - 128 | | | | |
| n-Propylbenzene | 24.86 | 1.0 | 20 | 0 | 124 | 76 - 126 | | | | |
| o-Xylene | 23.91 | 1.0 | 20 | 0 | 120 | 78 - 122 | | | | |
| sec-Butylbenzene | 24.68 | 1.0 | 20 | 0 | 123 | 77 - 126 | | | | |
| Styrene | 23.8 | 1.0 | 20 | 0 | 119 | 78 - 123 | | | | |
| tert-Butylbenzene | 24.99 | 1.0 | 20 | 0 | 125 | 78 - 124 | | | | S |
| Tetrachloroethene | 24.73 | 1.0 | 20 | 0 | 124 | 74 - 129 | | | | |
| Toluene | 24.85 | 1.0 | 20 | 0.6838 | 121 | 80 - 121 | | | | |
| trans-1,2-Dichloroethene | 23.75 | 1.0 | 20 | 0 | 119 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 22.14 | 1.0 | 20 | 0 | 111 | 73 - 127 | | | | |
| Trichloroethene | 27.6 | 1.0 | 20 | 3.814 | 119 | 79 - 123 | | | | |
| Trichlorofluoromethane | 24.31 | 1.0 | 20 | 0 | 122 | 65 - 141 | | | | |
| Vinyl chloride | 23.37 | 1.0 | 20 | 0 | 117 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *46.07* | *1.0* | *50* | *0* | *92.1* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.13* | *1.0* | *50* | *0* | *98.3* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *47.65* | *1.0* | *50* | *0* | *95.3* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *52.57* | *1.0* | *50* | *0* | *105* | *89 - 112* | | | | |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20070984-01MSD** Units: **UG/L** Analysis Date: **03-Aug-2020 22:04**
Client ID: **LH18/24-SP650_072120** Run ID: **VOA6_366144** SeqNo: **5684428** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 23.66 | 1.0 | 20 | 0 | 118 | 78 - 124 | 23.19 | 2 | 20 | |
| 1,1,1-Trichloroethane | 23.16 | 1.0 | 20 | 0 | 116 | 74 - 131 | 24.05 | 3.76 | 20 | |
| 1,1,2,2-Tetrachloroethane | 25.4 | 1.0 | 20 | 0 | 127 | 71 - 121 | 23.72 | 6.83 | 20 | S |
| 1,1,2-Trichloroethane | 23.77 | 1.0 | 20 | 0 | 119 | 80 - 119 | 23.11 | 2.8 | 20 | |
| 1,1-Dichloroethane | 23.74 | 1.0 | 20 | 0 | 119 | 77 - 125 | 24.2 | 1.93 | 20 | |
| 1,1-Dichloroethene | 24.66 | 1.0 | 20 | 0 | 123 | 71 - 131 | 25.34 | 2.7 | 20 | |
| 1,1-Dichloropropene | 23.36 | 1.0 | 20 | 0 | 117 | 78 - 125 | 24.08 | 2.99 | 20 | |
| 1,2,3-Trichlorobenzene | 22.15 | 1.0 | 20 | 0 | 111 | 69 - 129 | 16.52 | 29.1 | 20 | R |
| 1,2,3-Trichloropropane | 23.43 | 1.0 | 20 | 0 | 117 | 73 - 122 | 22.01 | 6.25 | 20 | |
| 1,2,4-Trichlorobenzene | 23.36 | 1.0 | 20 | 0 | 117 | 69 - 130 | 18.56 | 22.9 | 20 | R |
| 1,2,4-Trimethylbenzene | 25.22 | 1.0 | 20 | 0 | 126 | 76 - 124 | 24.3 | 3.7 | 20 | S |
| 1,2-Dibromo-3-chloropropane | 21.9 | 1.0 | 20 | 0 | 110 | 62 - 128 | 19.34 | 12.4 | 20 | |
| 1,2-Dibromoethane | 23.72 | 1.0 | 20 | 0 | 119 | 77 - 121 | 23.21 | 2.18 | 20 | |
| 1,2-Dichlorobenzene | 23.91 | 1.0 | 20 | 0 | 120 | 80 - 119 | 22.3 | 6.94 | 20 | S |
| 1,2-Dichloroethane | 24.35 | 1.0 | 20 | 0.7487 | 118 | 73 - 128 | 23.88 | 1.97 | 20 | |
| 1,2-Dichloropropane | 24.14 | 1.0 | 20 | 0 | 121 | 78 - 122 | 23.7 | 1.84 | 20 | |
| 1,3,5-Trimethylbenzene | 25.64 | 1.0 | 20 | 0 | 128 | 75 - 124 | 24.67 | 3.83 | 20 | S |
| 1,3-Dichlorobenzene | 24.5 | 1.0 | 20 | 0 | 123 | 80 - 119 | 23.18 | 5.54 | 20 | S |
| 1,3-Dichloropropane | 24.44 | 1.0 | 20 | 0 | 122 | 80 - 119 | 23.11 | 5.62 | 20 | S |
| 1,4-Dichlorobenzene | 24.28 | 1.0 | 20 | 0 | 121 | 79 - 118 | 22.75 | 6.52 | 20 | S |
| 2,2-Dichloropropane | 21.98 | 1.0 | 20 | 0 | 110 | 60 - 139 | 23.21 | 5.44 | 20 | |
| 2-Butanone | 44.01 | 2.0 | 40 | 0 | 110 | 56 - 143 | 42.42 | 3.7 | 20 | |
| 2-Chlorotoluene | 25.37 | 1.0 | 20 | 0 | 127 | 79 - 122 | 24.33 | 4.16 | 20 | S |
| 2-Hexanone | 44.54 | 2.0 | 40 | 0 | 111 | 57 - 139 | 43.1 | 3.29 | 20 | |
| 4-Chlorotoluene | 25 | 1.0 | 20 | 0 | 125 | 78 - 122 | 23.9 | 4.5 | 20 | S |
| 4-Isopropyltoluene | 25.51 | 1.0 | 20 | 0 | 128 | 77 - 127 | 24.44 | 4.26 | 20 | S |
| 4-Methyl-2-pentanone | 45.83 | 2.0 | 40 | 0 | 115 | 67 - 130 | 44.16 | 3.72 | 20 | |
| Acetone | 42.96 | 2.0 | 40 | 0 | 107 | 39 - 160 | 41.84 | 2.65 | 20 | |
| Benzene | 23.73 | 1.0 | 20 | 0 | 119 | 79 - 120 | 23.92 | 0.812 | 20 | |
| Bromobenzene | 24.71 | 1.0 | 20 | 0 | 124 | 80 - 120 | 23.58 | 4.67 | 20 | S |
| Bromochloromethane | 22.23 | 1.0 | 20 | 0 | 111 | 78 - 123 | 21.93 | 1.35 | 20 | |
| Bromodichloromethane | 22.92 | 1.0 | 20 | 0 | 115 | 79 - 125 | 22.58 | 1.5 | 20 | |
| Bromoform | 22.45 | 1.0 | 20 | 0 | 112 | 66 - 130 | 21.53 | 4.19 | 20 | |
| Bromomethane | 22.73 | 1.0 | 20 | 0 | 114 | 53 - 141 | 23.34 | 2.67 | 20 | |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R366144 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20070984-01MSD** Units: **UG/L** Analysis Date: **03-Aug-2020 22:04**
Client ID: **LH18/24-SP650_072120** Run ID: **VOA6_366144** SeqNo: **5684428** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 46.62 | 2.0 | 40 | 0 | 117 | 64 - 133 | 48.8 | 4.57 | 20 | |
| Carbon tetrachloride | 23.72 | 1.0 | 20 | 0 | 119 | 72 - 136 | 24.25 | 2.19 | 20 | |
| Chlorobenzene | 23.86 | 1.0 | 20 | 0 | 119 | 82 - 118 | 23.73 | 0.557 | 20 | S |
| Chloroethane | 21.44 | 1.0 | 20 | 0 | 107 | 60 - 138 | 22.58 | 5.19 | 20 | |
| Chloroform | 22.68 | 1.0 | 20 | 0 | 113 | 79 - 124 | 23.01 | 1.47 | 20 | |
| Chloromethane | 19.15 | 1.0 | 20 | 0 | 95.8 | 50 - 139 | 21.49 | 11.5 | 20 | |
| cis-1,2-Dichloroethene | 41.62 | 1.0 | 20 | 19.34 | 111 | 78 - 123 | 42.67 | 2.49 | 20 | |
| cis-1,3-Dichloropropene | 23.4 | 1.0 | 20 | 0 | 117 | 75 - 124 | 22.65 | 3.26 | 20 | |
| Dibromochloromethane | 22.8 | 1.0 | 20 | 0 | 114 | 74 - 126 | 22.41 | 1.74 | 20 | |
| Dibromomethane | 23.2 | 1.0 | 20 | 0 | 116 | 79 - 123 | 22.63 | 2.48 | 20 | |
| Dichlorodifluoromethane | 19.04 | 1.0 | 20 | 0 | 95.2 | 32 - 152 | 20.63 | 8.01 | 20 | |
| Ethylbenzene | 23.95 | 1.0 | 20 | 0 | 120 | 79 - 121 | 24.23 | 1.14 | 20 | |
| Hexachlorobutadiene | 23.49 | 1.0 | 20 | 0 | 117 | 66 - 134 | 20.43 | 14 | 20 | |
| Isopropylbenzene | 24.85 | 1.0 | 20 | 0 | 124 | 72 - 131 | 24.84 | 0.0242 | 20 | |
| m,p-Xylene | 48.39 | 2.0 | 40 | 0 | 121 | 80 - 121 | 48.22 | 0.343 | 20 | |
| Methylene chloride | 22.37 | 2.0 | 20 | 0 | 112 | 74 - 124 | 22.62 | 1.07 | 20 | |
| Naphthalene | 23.92 | 1.0 | 20 | 0 | 120 | 61 - 128 | 17.96 | 28.5 | 20 | R |
| n-Butylbenzene | 25.64 | 1.0 | 20 | 0 | 128 | 75 - 128 | 24.2 | 5.76 | 20 | S |
| n-Propylbenzene | 25.71 | 1.0 | 20 | 0 | 129 | 76 - 126 | 24.86 | 3.4 | 20 | S |
| o-Xylene | 24.14 | 1.0 | 20 | 0 | 121 | 78 - 122 | 23.91 | 0.982 | 20 | |
| sec-Butylbenzene | 25.75 | 1.0 | 20 | 0 | 129 | 77 - 126 | 24.68 | 4.25 | 20 | S |
| Styrene | 24.15 | 1.0 | 20 | 0 | 121 | 78 - 123 | 23.8 | 1.49 | 20 | |
| tert-Butylbenzene | 25.68 | 1.0 | 20 | 0 | 128 | 78 - 124 | 24.99 | 2.72 | 20 | S |
| Tetrachloroethene | 24.46 | 1.0 | 20 | 0 | 122 | 74 - 129 | 24.73 | 1.11 | 20 | |
| Toluene | 24.97 | 1.0 | 20 | 0.6838 | 121 | 80 - 121 | 24.85 | 0.507 | 20 | S |
| trans-1,2-Dichloroethene | 22.91 | 1.0 | 20 | 0 | 115 | 75 - 124 | 23.75 | 3.62 | 20 | |
| trans-1,3-Dichloropropene | 22.17 | 1.0 | 20 | 0 | 111 | 73 - 127 | 22.14 | 0.154 | 20 | |
| Trichloroethene | 27.47 | 1.0 | 20 | 3.814 | 118 | 79 - 123 | 27.6 | 0.468 | 20 | |
| Trichlorofluoromethane | 22.95 | 1.0 | 20 | 0 | 115 | 65 - 141 | 24.31 | 5.79 | 20 | |
| Vinyl chloride | 21.94 | 1.0 | 20 | 0 | 110 | 58 - 137 | 23.37 | 6.3 | 20 | |
| *Surr: 1,2-Dichloroethane-d4* | *45.62* | *1.0* | *50* | *0* | *91.2* | *81 - 118* | *46.07* | *0.981* | *20* | |
| *Surr: 4-Bromofluorobenzene* | *48.19* | *1.0* | *50* | *0* | *96.4* | *85 - 114* | *49.13* | *1.93* | *20* | |
| *Surr: Dibromofluoromethane* | *46.81* | *1.0* | *50* | *0* | *93.6* | *80 - 119* | *47.65* | *1.78* | *20* | |
| *Surr: Toluene-d8* | *52.94* | *1.0* | *50* | *0* | *106* | *89 - 112* | *52.57* | *0.706* | *20* | |

**ALS Houston, US** Date: 04-Aug-20

| | |
|---|---|
| **Client:** | Bhate Environmental Associates, Inc. |
| **Project:** | Longhorn GW Treatment Plant Bi Weekly Samples |
| **WorkOrder:** | HS20070984 |

**QC BATCH REPORT**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | **R366144 ( 0 )** | **Instrument:** | **VOA6** | **Method:** | **VOLATILES ORGANICS BY METHOD 8260C** |

**The following samples were analyzed in this batch:** HS20070984-01 HS20070984-02

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID: R365767 ( 0 )** **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

**MBLK** Sample ID: **MBLK-072720** Units: **mg/L** Analysis Date: **27-Jul-2020 17:01**
Client ID: Run ID: **ICS-Integrion_365767** SeqNo: **5676598** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.500 | 0.500 | | | | | | | | U |
| Sulfate | 0.2192 | 0.500 | | | | | | | | J |

**LCS** Sample ID: **LCS-072720** Units: **mg/L** Analysis Date: **27-Jul-2020 17:19**
Client ID: Run ID: **ICS-Integrion_365767** SeqNo: **5676599** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 20.08 | 0.500 | 20 | 0 | 100 | 80 - 120 | | | | |
| Sulfate | 20.34 | 0.500 | 20 | 0 | 102 | 80 - 120 | | | | |

**MS** Sample ID: **HS20071147-05MS** Units: **mg/L** Analysis Date: **28-Jul-2020 02:40**
Client ID: Run ID: **ICS-Integrion_365767** SeqNo: **5676619** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 32.52 | 0.500 | 10 | 23.18 | 93.4 | 80 - 120 | | | | |
| Sulfate | 91.12 | 0.500 | 10 | 86.42 | 47.0 | 80 - 120 | | | | SO |

**MS** Sample ID: **HS20071033-03MS** Units: **mg/L** Analysis Date: **27-Jul-2020 23:57**
Client ID: Run ID: **ICS-Integrion_365767** SeqNo: **5676610** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1043 | 0.500 | 10 | 1060 | -171 | 80 - 120 | | | | SEO |
| Sulfate | 0.500 | 0.500 | 10 | 0 | 0 | 80 - 120 | | | | S U |

**MSD** Sample ID: **HS20071147-05MSD** Units: **mg/L** Analysis Date: **28-Jul-2020 02:58**
Client ID: Run ID: **ICS-Integrion_365767** SeqNo: **5676620** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 32.55 | 0.500 | 10 | 23.18 | 93.7 | 80 - 120 | 32.52 | 0.0983 | 20 | |
| Sulfate | 91.19 | 0.500 | 10 | 86.42 | 47.7 | 80 - 120 | 91.12 | 0.0798 | 20 | SO |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20070984

**QC BATCH REPORT**

**Batch ID:** R365767 ( 0 ) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

**MSD** Sample ID: **HS20071033-03MSD** Units: **mg/L** Analysis Date: **28-Jul-2020 00:15**
Client ID: Run ID: **ICS-Integrion_365767** SeqNo: **5676611** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1047 | 0.500 | 10 | 1060 | -124 | 80 - 120 | 1043 | 0.445 | 20 | SEO |
| Sulfate | 0.500 | 0.500 | 10 | 0 | 0 | 80 - 120 | 0 | 0 | 20 | S U |

**The following samples were analyzed in this batch:** HS20070984-01

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** **HS20070984**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| Unit Reported | Description |
|---|---|
| mg/L | Milligrams per Liter |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V009 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

**ALS Houston, US** Date: 04-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**Work Order:** HS20070984

**SAMPLE TRACKING**

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20070984-01 | LH18/24-SP650_072120 | Login | 7/22/2020 12:09:56 PM | PMG | WET005 |
| HS20070984-01 | LH18/24-SP650_072120 | Login | 7/22/2020 12:09:56 PM | PMG | VOA071 |
| HS20070984-02 | Trip Blank | Login | 7/22/2020 12:09:56 PM | PMG | VOA071 |

**ALS Houston, US** Date: 04-Aug-20

## Sample Receipt Checklist

**Work Order ID:** HS20070984 **Date/Time Received:** 22-Jul-2020 09:55

**Client Name:** Bhate Environmental **Received by:** Paresh M. Giga

| | | | | | |
|---|---|---|---|---|---|
| **Completed By:** | /S/ Paresh M. Giga | 22-Jul-2020 12:11 | **Reviewed by:** | /S/ RJ Modashia | 22-Jul-2020 15:41 |
| | eSignature | Date/Time | | eSignature | Date/Time |

Matrices: **Water** Carrier name: **FedEx**

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ | |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ | |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:nONE | |
| Samplers name present on COC? | Yes ☐ | No ☑ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | | |
| Temperature(s)/Thermometer(s): | 2.1c u/c | ir31 | | |
| Cooler(s)/Kit(s): | 45217 | | | |
| Date/Time sample(s) sent to storage: | 7/22/2020 12:20 | | | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ | |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ | |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ | |
| pH adjusted by: | | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia



| Project: BHATE<br>LONGHORN ARMY AMMN. PLANT (LHAAP)<br>GROUNDWATER TREATMENT PLANT (GWTP)<br>KARNACK, TEXAS | Project No.<br>NWO1312.0150.0<br>16.0001 |
|---|---|
| Job:<br>**GROUNDWATER TREATMENT PLANT<br>BI-WEEKLY SAMPLES** | |
| Prepared By:<br>Scott Beesinger | P.O Number |

HS20070984

Bhate Environmental Associates, Inc.

Longhorn GW Treatment Plant Bi Weekly Samples

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | Analyses: VOC | Analyses: CHLORIDE, SULFATE | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_072120 | Water | 07/21/20 / 14:00 | | 3 | 3 | | HCL | |
| LH18/24-SP650_072120 | Water | 07/21/20 / 14:00 | | 1 | | 1 | NONE | |
| Trip Blank | Water | 07/21/20 | | 2 | 2 | | HCL | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Additional Remarks: **Standard TAT**

| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Beesinger | 07/21/20 | 14:30 | [illegible] | 7/22/2020 | 08:55 | | | | | | |

9For Lab Use Only

| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

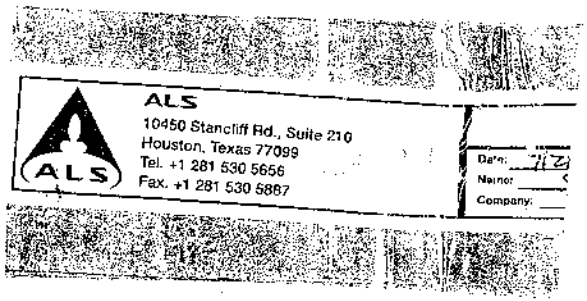
Remarks

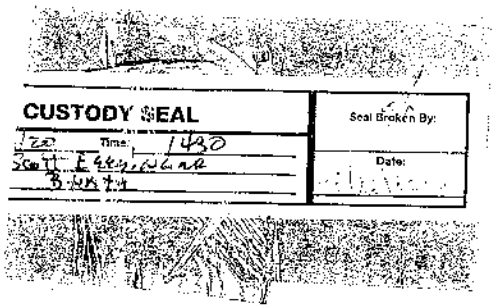
US 217 2.1° w/c.

#31

Cl - 0.0

(Word) S:\M-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
Date:
Name:
Company:


CUSTODY SEAL
Time:
Seal Broken By:
Date:


FedEx
Express
FedEx
TRK# 0221 1251 0297 2050
WED - 22 JUL 10:30
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US IAH

# HS20070984 8260 Raw Data

ALS WO# HS20070984

# MSVOA06 -Logbook

**Batch:** 41322 **Analyst:** Presenta Cabascango

**Date:** 08-03-2020 **Reviewer:**

**Method:** 8260 **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BFB | TUNE | 08-03-2020 11:16 am | 1.00 | 50 mL | 50 mL | X080301.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 2 | VSTD000.25 | ICAL1 | 08-03-2020 11:40 am | 1.00 | 50 mL | 50 mL | X080302.D | Liquid | Y | NA |
| | *0.10 uL cal std/100 mL DI* | | | | | | | | | |
| 3 | VSTD000.5 | ICAL2 | 08-03-2020 12:04 pm | 1.00 | 50 mL | 50 mL | X080303.D | Liquid | Y | NA |
| | *0.10 uL cal std/50 mL DI* | | | | | | | | | |
| 4 | VSTD001 | ICAL3 | 08-03-2020 12:52 pm | 1.00 | 50 mL | 50 mL | X080304.D | Liquid | Y | NA |
| | *0.20 uL cal std/50 mL DI* | | | | | | | | | |
| 5 | VSTD002 | ICAL4 | 08-03-2020 01:16 pm | 1.00 | 50 mL | 50 mL | X080305.D | Liquid | Y | NA |
| | *0.40 uL cal std/50 mL DI* | | | | | | | | | |
| 6 | VSTD005 | ICAL5 | 08-03-2020 01:40 pm | 1.00 | 50 mL | 50 mL | X080306.D | Liquid | Y | NA |
| | *1.0 uL cal std/50 mL DI* | | | | | | | | | |
| 7 | VSTD020 | ICAL6 | 08-03-2020 02:04 pm | 1.00 | 50 mL | 50 mL | X080307.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 8 | VSTD050 | ICAL7 | 08-03-2020 02:28 pm | 1.00 | 50 mL | 50 mL | X080308.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 9 | VSTD100 | ICAL8 | 08-03-2020 02:52 pm | 1.00 | 50 mL | 50 mL | X080309.D | Liquid | Y | NA |
| | *20 uL cal std/50 mL DI* | | | | | | | | | |
| 10 | VSTD150 | ICAL9 | 08-03-2020 03:16 pm | 1.00 | 50 mL | 50 mL | X080310.D | Liquid | Y | NA |
| | *30 uL cal std/50 mL DI* | | | | | | | | | |
| 11 | VSTD200 | ICAL | 08-03-2020 03:40 pm | 1.00 | 50 mL | 50 mL | X080311.D | Liquid | Y | NA |
| | *40 uL cal std/50 mL DI* | | | | | | | | | |
| 12 | BLANK | SAMP | 08-03-2020 04:04 pm | 1.00 | 50 mL | 50 mL | X080312.D | Liquid | Y | NA |
| 13 | BLANK | SAMP | 08-03-2020 04:28 pm | 1.00 | 50 mL | 50 mL | X080313.D | Liquid | Y | NA |
| 14 | ICV | CCV | 08-03-2020 04:51 pm | 1.00 | 50 mL | 50 mL | X080314.D | Liquid | Y | NA |
| | *10 uL ical std/50 mL DI* | | | | | | | | | |
| 15 | BLANK | SAMP | 08-03-2020 05:16 pm | 1.00 | 50 mL | 50 mL | X080315.D | Liquid | Y | NA |
| 16 | VLCSW-200803 | LCS | 08-03-2020 05:39 pm | 1.00 | 50 mL | 50 mL | X080316.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 17 | BLANK | SAMP | 08-03-2020 06:04 pm | 1.00 | 50 mL | 50 mL | X080317.D | Liquid | Y | NA |
| 18 | BLANK | SAMP | 08-03-2020 06:28 pm | 1.00 | 50 mL | 50 mL | X080318.D | Liquid | Y | NA |
| 19 | VBLKW-200803 | MBLK | 08-03-2020 06:52 pm | 1.00 | 50 mL | 50 mL | X080319.D | Liquid | Y | NA |
| 20 | HS20070575-13 | SAMP | 08-03-2020 07:16 pm | 1.00 | 50 mL | 50 mL | X080320.D | Liquid | Y | NA |
| 21 | HS20070575-14 | SAMP | 08-03-2020 07:40 pm | 1.00 | 50 mL | 50 mL | X080321.D | Liquid | Y | NA |
| 22 | HS20070575-15 | SAMP | 08-03-2020 08:03 pm | 1.00 | 50 mL | 50 mL | X080322.D | Liquid | Y | NA |
| 23 | HS20070575-16 | SAMP | 08-03-2020 08:27 pm | 1.00 | 50 mL | 50 mL | X080323.D | Liquid | Y | NA |
| 24 | HS20070984-02 | SAMP | 08-03-2020 08:51 pm | 1.00 | 50 mL | 50 mL | X080324.D | Liquid | Y | <2 |
| 25 | HS20070984-01 | SAMP | 08-03-2020 09:15 pm | 1.00 | 50 mL | 50 mL | X080325.D | Liquid | Y | <2 |
| 26 | HS20070984-01MS | MS | 08-03-2020 09:39 pm | 1.00 | 50 mL | 50 mL | X080326.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 27 | HS20070984-01MSD | MSD | 08-03-2020 10:04 pm | 1.00 | 50 mL | 50 mL | X080327.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 28 | CCV-END | CCV | 08-03-2020 10:27 pm | 1.00 | 50 mL | 50 mL | X080328.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |

# MSVOA06 -Logbook

| Chemical | Value |
|---|---|
| SURR SPK ID | 31106-38-06 |
| IS ID | 31106-38-06 |
| CAL STD ID | 31106-41-01/02 |
| BFB ID | 31106-38-06 |
| pH Paper | 634-64-10 |

# FORM 2
## WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

| | CLIENT SAMPLE NO. | SMC1 (DCE) # | SMC2 # | SMC3 (TOL) # | OTHER # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VLCSW-200803 | 102 | 98 | 100 | 97 | 0 |
| 02 | VBLKW-200803 | 91 | 92 | 106 | 98 | 0 |
| 03 | HS20070984-02 | 90 | 91 | 109 | 96 | 0 |
| 04 | HS20070984-01 | 91 | 92 | 109 | 97 | 0 |
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| | | QC LIMITS |
|---|---|---|
| SMC1 (DCE) | = 1,2-Dichloroethane-d4 | ( 0-130) |
| SMC2 | = Dibromofluoromethane | ( 0-130) |
| SMC3 (TOL) | = Toluene-d8 | ( 0-130) |
| OTHER | = 4-Bromofluorobenzene | ( 0-130) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 50.00 | 49.92 | 100 | 80-120 |
| trans-1,3-Dichloroprope | 50.00 | 48.62 | 97 | 80-120 |
| 1,3-Dichlorobenzene | 50.00 | 47.73 | 95 | 80-120 |
| 2,2-Dichloropropane | 50.00 | 50.96 | 102 | 80-120 |
| 1,1-Dichloropropene | 50.00 | 48.93 | 98 | 80-120 |
| Dibromomethane | 50.00 | 48.38 | 97 | 80-120 |
| 1,2-Dibromoethane | 50.00 | 48.72 | 97 | 80-120 |
| trans-1,2-Dichloroethen | 50.00 | 48.97 | 98 | 80-120 |
| 1,1,1,2-Tetrachloroetha | 50.00 | 47.75 | 96 | 80-120 |
| 1,1,1-Trichloroethane | 50.00 | 48.17 | 96 | 80-120 |
| 1,1,2,2-Tetrachloroetha | 50.00 | 48.28 | 96 | 80-120 |
| 1,1,2-Trichloroethane | 50.00 | 47.70 | 95 | 80-120 |
| 1,1-Dichloroethane | 50.00 | 50.19 | 100 | 80-120 |
| 1,1-Dichloroethene | 50.00 | 51.26 | 102 | 80-120 |
| Trichloroethene | 50.00 | 50.56 | 101 | 80-120 |
| 1,2,3-Trichlorobenzene | 50.00 | 50.30 | 101 | 80-120 |
| Trichlorofluoromethane | 50.00 | 49.79 | 100 | 80-120 |
| 1,2,4-Trichlorobenzene | 50.00 | 50.13 | 100 | 80-120 |
| 1,2,4-Trimethylbenzene | 50.00 | 48.17 | 96 | 80-120 |
| Tetrachloroethene | 50.00 | 47.53 | 95 | 80-120 |
| 1,2-Dichlorobenzene | 50.00 | 47.04 | 94 | 80-120 |
| 1,2-Dichloroethane | 50.00 | 48.99 | 98 | 80-120 |
| 1,2-Dichloropropane | 50.00 | 50.31 | 101 | 80-120 |
| 1,3,5-Trimethylbenzene | 50.00 | 48.06 | 96 | 80-120 |
| 1,3-Dichloropropane | 50.00 | 48.77 | 98 | 80-120 |
| 1,4-Dichlorobenzene | 50.00 | 48.32 | 97 | 80-120 |
| Toluene | 50.00 | 48.26 | 96 | 80-120 |
| 2-Butanone | 100.00 | 104.88 | 105 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| 2-Chlorotoluene | 50.00 | 48.31 | 97 | 80-120 |
| 2-Hexanone | 100.00 | 95.30 | 95 | 80-120 |
| 4-Chlorotoluene | 50.00 | 48.17 | 96 | 80-120 |
| tert-Butylbenzene | 50.00 | 47.34 | 95 | 80-120 |
| 4-Methyl-2-Pentanone | 100.00 | 93.57 | 94 | 80-120 |
| Acetone | 100.00 | 102.27 | 102 | 80-120 |
| Benzene | 50.00 | 49.44 | 99 | 80-120 |
| Bromobenzene | 50.00 | 47.40 | 95 | 80-120 |
| Bromochloromethane | 50.00 | 47.01 | 94 | 80-120 |
| Bromodichloromethane | 50.00 | 48.72 | 97 | 80-120 |
| Bromoform | 50.00 | 48.32 | 97 | 80-120 |
| Bromomethane | 50.00 | 53.47 | 107 | 80-120 |
| Carbon Disulfide | 100.00 | 101.43 | 101 | 80-120 |
| Carbon Tetrachloride | 50.00 | 47.96 | 96 | 80-120 |
| Chlorobenzene | 50.00 | 48.92 | 98 | 80-120 |
| Chloroethane | 50.00 | 51.05 | 102 | 80-120 |
| Chloroform | 50.00 | 47.94 | 96 | 80-120 |
| Chloromethane | 50.00 | 49.31 | 99 | 80-120 |
| cis-1,2-Dichloroethene | 50.00 | 48.89 | 98 | 80-120 |
| Dibromochloromethane | 50.00 | 47.41 | 95 | 80-120 |
| Dichlorodifluoromethane | 50.00 | 50.62 | 101 | 80-120 |
| Ethylbenzene | 50.00 | 48.65 | 97 | 80-120 |
| Hexachlorobutadiene | 50.00 | 48.15 | 96 | 80-120 |
| Isopropylbenzene | 50.00 | 48.56 | 97 | 80-120 |
| m,p-Xylenes | 100.00 | 97.74 | 98 | 80-120 |
| Methylene Chloride | 50.00 | 49.00 | 98 | 80-120 |
| n-Butylbenzene | 50.00 | 49.13 | 98 | 80-120 |
| n-Propylbenzene | 50.00 | 48.15 | 96 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

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FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| Naphthalene | 50.00 | 53.39 | 107 | 80-120 |
| o-Xylene | 50.00 | 48.76 | 98 | 80-120 |
| sec-Butylbenzene | 50.00 | 47.89 | 96 | 80-120 |
| Styrene | 50.00 | 49.51 | 99 | 80-120 |
| Vinyl Chloride | 50.00 | 50.76 | 102 | 80-120 |
| 1,2,3-Trichloropropane | 50.00 | 47.16 | 94 | 80-120 |
| p-Isopropyltoluene | 50.00 | 48.19 | 96 | 80-120 |
| 1,2-Dibromo-3-Chloropro | 50.00 | 47.23 | 94 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200803

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Lab File ID: X080319 Lab Sample ID: VBLKW-200803

Date Analyzed: 08/03/20 Time Analyzed: 1852

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | VLCSW-200803 | VLCSW-200803 | X080316 | 1739 |
| 02 | HS20070984-0 | HS20070984-02 | X080324 | 2051 |
| 03 | HS20070984-0 | HS20070984-01 | X080325 | 2115 |
| 04 | HS20070984-0 | HS20070984-01M | X080326 | 2139 |
| 05 | HS20070984-0 | HS20070984-01M | X080327 | 2204 |
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COMMENTS:

# FORM 5
## VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Lab File ID: X080301 BFB Injection Date: 08/03/20

Instrument ID: VOA6 BFB Injection Time: 1116

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 24.4 |
| 75 | 30.0 - 60.0% of mass 95 | 50.1 |
| 95 | Base Peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.4 |
| 173 | Less than 2.0% of mass 174 | 0.4 ( 0.6)1 |
| 174 | Greater than 50.0% of mass 95 | 67.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.2 ( 7.8)1 |
| 176 | 95.0 - 101.0% of mass 174 | 64.3 ( 95.6)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 7.2)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD000.25 | VSTD000.25 | X080302 | 08/03/20 | 1140 |
| 02 | VSTD000.5 | VSTD000.5 | X080303 | 08/03/20 | 1204 |
| 03 | VSTD001 | VSTD001 | X080304 | 08/03/20 | 1252 |
| 04 | VSTD002 | VSTD002 | X080305 | 08/03/20 | 1316 |
| 05 | VSTD005 | VSTD005 | X080306 | 08/03/20 | 1340 |
| 06 | VSTD020 | VSTD020 | X080307 | 08/03/20 | 1404 |
| 07 | VSTD050 | VSTD050 | X080308 | 08/03/20 | 1428 |
| 08 | VSTD100 | VSTD100 | X080309 | 08/03/20 | 1452 |
| 09 | VSTD150 | VSTD150 | X080310 | 08/03/20 | 1516 |
| 10 | VSTD200 | VSTD200 | X080311 | 08/03/20 | 1540 |
| 11 | ICV | ICV | X080314 | 08/03/20 | 1651 |
| 12 | VLCSW-200803 | VLCSW-200803 | X080316 | 08/03/20 | 1739 |
| 13 | VBLKW-200803 | VBLKW-200803 | X080319 | 08/03/20 | 1852 |
| 14 | HS20070984-0 | HS20070984-02 | X080324 | 08/03/20 | 2051 |
| 15 | HS20070984-0 | HS20070984-01 | X080325 | 08/03/20 | 2115 |
| 16 | HS20070984-0 | HS20070984-01M | X080326 | 08/03/20 | 2139 |
| 17 | HS20070984-0 | HS20070984-01M | X080327 | 08/03/20 | 2204 |
| 18 | CCV-END | CCV-END | X080328 | 08/03/20 | 2227 |
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# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | | 0.618 | 0.462 | 0.504 | 0.521 | 0.500 |
| trans-1,3-Dichloropropene | | 0.569 | 0.433 | 0.473 | 0.486 | 0.461 |
| 1,3-Dichlorobenzene | | 1.974 | 1.344 | 1.701 | 1.505 | 1.492 |
| 2,2-Dichloropropane | | 0.884 | 0.578 | 0.720 | 0.734 | 0.705 |
| 1,1-Dichloropropene | | 0.496 | 0.398 | 0.426 | 0.372 | 0.402 |
| Dibromomethane | | 0.256 | 0.205 | 0.209 | 0.218 | 0.208 |
| 1,2-Dibromoethane | | 0.419 | 0.349 | 0.380 | 0.366 | 0.356 |
| trans-1,2-Dichloroethene | | 0.547 | 0.446 | 0.452 | 0.452 | 0.455 |
| 1,1,1,2-Tetrachloroethane | | 0.480 | 0.340 | 0.394 | 0.373 | 0.361 |
| 1,1,1-Trichloroethane | | 0.921 | 0.718 | 0.732 | 0.745 | 0.744 |
| 1,1,2,2-Tetrachloroethane | | 3887 | 5190 | 17450 | 30714 | 110449 |
| 1,1,2-Trichloroethane | | 0.347 | 0.256 | 0.311 | 0.288 | 0.272 |
| 1,1-Dichloroethane | | 1.097 | 0.797 | 0.930 | 1.000 | 0.970 |
| 1,1-Dichloroethene | | 0.394 | 0.380 | 0.377 | 0.362 | 0.406 |
| Trichloroethene | | 0.395 | 0.297 | 0.346 | 0.339 | 0.352 |
| 1,2,3-Trichlorobenzene | | 0.182 | 0.144 | 0.165 | 0.146 | 0.146 |
| Trichlorofluoromethane | | 0.868 | 0.679 | 0.666 | 0.642 | 0.726 |
| 1,2,4-Trichlorobenzene | | 1350 | 1766 | 5020 | 11491 | 44232 |
| 1,2,4-Trimethylbenzene | | 3.392 | 2.228 | 2.748 | 2.560 | 2.560 |
| Tetrachloroethene | | 0.427 | 0.296 | 0.290 | 0.297 | 0.311 |
| 1,2-Dichlorobenzene | | 1.790 | 1.277 | 1.567 | 1.398 | 1.337 |
| 1,2-Dichloroethane | | 0.539 | 0.434 | 0.491 | 0.490 | 0.473 |
| 1,2-Dichloropropane | | 0.391 | 0.323 | 0.357 | 0.377 | 0.365 |
| 1,3,5-Trimethylbenzene | | 3.105 | 2.294 | 2.704 | 2.466 | 2.554 |
| 1,3-Dichloropropane | | 0.666 | 0.506 | 0.557 | 0.580 | 0.549 |
| 1,4-Dichlorobenzene | | 1.897 | 1.388 | 1.694 | 1.489 | 1.472 |
| Toluene | | 1.857 | 1.349 | 1.452 | 1.443 | 1.418 |
| 2-Butanone | | 0.257 | 0.195 | 0.230 | 0.238 | 0.240 |
| 2-Chlorotoluene | | 2.466 | 1.986 | 2.291 | 2.161 | 2.080 |
| 2-Hexanone | | 0.338 | 0.248 | 0.398 | 0.323 | 0.295 |
| 4-Chlorotoluene | | 3.038 | 2.301 | 2.587 | 2.471 | 2.409 |
| tert-Butylbenzene | | 2.850 | 1.958 | 2.274 | 2.043 | 2.244 |
| 4-Methyl-2-Pentanone | | 0.544 | 0.403 | 0.549 | 0.467 | 0.426 |
| Acetone | | 6244 | 5964 | 9756 | 22417 | 71506 |
| Benzene | | 1.472 | 1.124 | 1.176 | 1.206 | 1.207 |
| Bromobenzene | | 1.240 | 0.860 | 1.042 | 0.964 | 0.923 |
| Bromochloromethane | | 0.351 | 0.320 | 0.325 | 0.290 | 0.282 |
| Bromodichloromethane | | 0.576 | 0.402 | 0.436 | 0.428 | 0.426 |
| Bromoform | | 0.354 | 0.228 | 0.306 | 0.267 | 0.255 |
| Bromomethane | | 2498 | 4659 | 9294 | 19557 | 69521 |
| Carbon Disulfide | | 1.479 | 1.134 | 1.100 | 1.117 | 1.204 |
| Carbon Tetrachloride | | 0.528 | 0.430 | 0.420 | 0.411 | 0.425 |
| Chlorobenzene | | 1.247 | 0.874 | 0.972 | 0.966 | 0.933 |
| Chloroethane | | 0.430 | 0.304 | 0.328 | 0.327 | 0.355 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007098

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| Chloroform | | 1.068 | 0.851 | 0.891 | 0.887 | 0.861 |
| Chloromethane | | 0.888 | 0.598 | 0.694 | 0.698 | 0.666 |
| cis-1,2-Dichloroethene | | 0.641 | 0.522 | 0.524 | 0.547 | 0.541 |
| Dibromochloromethane | | 0.509 | 0.342 | 0.434 | 0.394 | 0.374 |
| Dichlorodifluoromethane | | 0.532 | 0.464 | 0.451 | 0.391 | 0.476 |
| Ethylbenzene | | 0.637 | 0.480 | 0.472 | 0.483 | 0.491 |
| Hexachlorobutadiene | | 0.235 | 0.256 | 0.314 | 0.247 | 0.306 |
| Isopropylbenzene | | 1.798 | 1.398 | 1.414 | 1.374 | 1.464 |
| m,p-Xylenes | | 0.741 | 0.568 | 0.590 | 0.595 | 0.593 |
| Methylene Chloride | | 13006 | 14851 | 20318 | 36047 | 113086 |
| n-Butylbenzene | | 2.783 | 1.821 | 2.137 | 1.869 | 2.205 |
| n-Propylbenzene | | 4.521 | 3.069 | 3.484 | 3.267 | 3.554 |
| Naphthalene | | 1670 | 3475 | 6258 | 16632 | 55065 |
| o-Xylene | | 0.741 | 0.556 | 0.581 | 0.583 | 0.578 |
| sec-Butylbenzene | | 3.747 | 2.660 | 2.985 | 2.618 | 3.017 |
| Styrene | | 1.248 | 0.896 | 1.106 | 1.036 | 1.008 |
| Vinyl Chloride | | 0.723 | 0.546 | 0.596 | 0.557 | 0.633 |
| 1,2,3-Trichloropropane | | 0.874 | 0.599 | 0.917 | 0.732 | 0.691 |
| p-Isopropyltoluene | | 3.431 | 2.390 | 2.780 | 2.421 | 2.730 |
| 1,2-Dibromo-3-Chloropropane | | 394 | 461 | 1468 | 2687 | 9119 |
| 1,2-Dichloroethane-d4 | | 0.669 | 0.575 | 0.501 | 0.605 | 0.564 |
| Dibromofluoromethane | | 0.528 | 0.509 | 0.451 | 0.514 | 0.476 |
| Toluene-d8 | | 1.258 | 1.357 | 1.124 | 1.218 | 1.201 |
| 4-Bromofluorobenzene | | 0.521 | 0.535 | 0.447 | 0.454 | 0.451 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007098

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.514 | 0.535 | 0.544 | 0.539 |
| trans-1,3-Dichloropropene | 0.458 | 0.478 | 0.490 | 0.492 |
| 1,3-Dichlorobenzene | 1.504 | 1.545 | 1.533 | 1.546 |
| 2,2-Dichloropropane | 0.684 | 0.700 | 0.707 | 0.706 |
| 1,1-Dichloropropene | 0.404 | 0.423 | 0.427 | 0.433 |
| Dibromomethane | 0.210 | 0.214 | 0.219 | 0.218 |
| 1,2-Dibromoethane | 0.353 | 0.355 | 0.359 | 0.360 |
| trans-1,2-Dichloroethene | 0.456 | 0.463 | 0.472 | 0.475 |
| 1,1,1,2-Tetrachloroethane | 0.365 | 0.371 | 0.370 | 0.370 |
| 1,1,1-Trichloroethane | 0.735 | 0.763 | 0.781 | 0.792 |
| 1,1,2,2-Tetrachloroethane | 259509 | 505068 | 753290 | 990670 |
| 1,1,2-Trichloroethane | 0.268 | 0.271 | 0.272 | 0.274 |
| 1,1-Dichloroethane | 0.970 | 0.993 | 1.008 | 1.023 |
| 1,1-Dichloroethene | 0.398 | 0.410 | 0.417 | 0.422 |
| Trichloroethene | 0.353 | 0.369 | 0.366 | 0.371 |
| 1,2,3-Trichlorobenzene | 0.145 | 0.122 | 0.160 | 0.144 |
| Trichlorofluoromethane | 0.737 | 0.755 | 0.769 | 0.784 |
| 1,2,4-Trichlorobenzene | 104906 | 167486 | 308625 | 360898 |
| 1,2,4-Trimethylbenzene | 2.529 | 2.694 | 2.637 | 2.691 |
| Tetrachloroethene | 0.300 | 0.313 | 0.309 | 0.317 |
| 1,2-Dichlorobenzene | 1.334 | 1.330 | 1.343 | 1.352 |
| 1,2-Dichloroethane | 0.471 | 0.484 | 0.487 | 0.487 |
| 1,2-Dichloropropane | 0.363 | 0.375 | 0.376 | 0.377 |
| 1,3,5-Trimethylbenzene | 2.500 | 2.644 | 2.594 | 2.653 |
| 1,3-Dichloropropane | 0.546 | 0.548 | 0.552 | 0.550 |
| 1,4-Dichlorobenzene | 1.475 | 1.522 | 1.516 | 1.533 |
| Toluene | 1.396 | 1.415 | 1.400 | 1.412 |
| 2-Butanone | 0.250 | 0.260 | 0.268 | 0.268 |
| 2-Chlorotoluene | 2.065 | 2.146 | 2.149 | 2.179 |
| 2-Hexanone | 0.295 | 0.302 | 0.311 | 0.315 |
| 4-Chlorotoluene | 2.381 | 2.518 | 2.483 | 2.523 |
| tert-Butylbenzene | 2.160 | 2.278 | 2.260 | 2.322 |
| 4-Methyl-2-Pentanone | 0.428 | 0.442 | 0.452 | 0.454 |
| Acetone | 170545 | 340970 | 481556 | 618700 |
| Benzene | 1.206 | 1.251 | 1.258 | 1.266 |
| Bromobenzene | 0.915 | 0.953 | 0.945 | 0.960 |
| Bromochloromethane | 0.281 | 0.290 | 0.290 | 0.283 |
| Bromodichloromethane | 0.430 | 0.446 | 0.453 | 0.453 |
| Bromoform | 0.264 | 0.270 | 0.276 | 0.278 |
| Bromomethane | 165840 | 329463 | 475898 | 632580 |
| Carbon Disulfide | 1.211 | 1.252 | 1.274 | 1.300 |
| Carbon Tetrachloride | 0.431 | 0.450 | 0.456 | 0.466 |
| Chlorobenzene | 0.939 | 0.964 | 0.959 | 0.965 |
| Chloroethane | 0.352 | 0.360 | 0.367 | 0.367 |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007098

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| Chloroform | 0.849 | 0.867 | 0.878 | 0.887 |
| Chloromethane | 0.680 | 0.679 | 0.695 | 0.720 |
| cis-1,2-Dichloroethene | 0.529 | 0.542 | 0.551 | 0.556 |
| Dibromochloromethane | 0.381 | 0.388 | 0.389 | 0.394 |
| Dichlorodifluoromethane | 0.490 | 0.516 | 0.534 | 0.549 |
| Ethylbenzene | 0.489 | 0.499 | 0.498 | 0.504 |
| Hexachlorobutadiene | 0.290 | 0.222 | 0.292 | 0.253 |
| Isopropylbenzene | 1.441 | 1.495 | 1.474 | 1.509 |
| m,p-Xylenes | 0.588 | 0.608 | 0.602 | 0.610 |
| Methylene Chloride | 256910 | 487953 | 693942 | 915440 |
| n-Butylbenzene | 2.171 | 2.303 | 2.281 | 2.331 |
| n-Propylbenzene | 3.462 | 3.672 | 3.652 | 3.736 |
| Naphthalene | 137510 | 244768 | 435994 | 531999 |
| o-Xylene | 0.582 | 0.593 | 0.590 | 0.594 |
| sec-Butylbenzene | 2.919 | 3.112 | 3.100 | 3.180 |
| Styrene | 1.015 | 1.015 | 1.027 | 1.022 |
| Vinyl Chloride | 0.647 | 0.674 | 0.698 | 0.718 |
| 1,2,3-Trichloropropane | 0.684 | 0.691 | 0.706 | 0.692 |
| p-Isopropyltoluene | 2.652 | 2.848 | 2.797 | 2.868 |
| 1,2-Dibromo-3-Chloropropane | 22898 | 44175 | 68839 | 87710 |
| 1,2-Dichloroethane-d4 | 0.554 | 0.583 | 0.594 | 0.593 |
| Dibromofluoromethane | 0.468 | 0.486 | 0.491 | 0.494 |
| Toluene-d8 | 1.182 | 1.197 | 1.182 | 1.196 |
| 4-Bromofluorobenzene | 0.446 | 0.454 | 0.449 | 0.453 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007098

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

| COMPOUND | CURVE | COEFFICENTS A0 | A1 | A2 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | AVRG | | 0.52631108 | | 8.055 | 15.000 |
| trans-1,3-Dichloropropene | AVRG | | 0.48238639 | | 7.750 | 15.000 |
| 1,3-Dichlorobenzene | AVRG | | 1.57158280 | | 11.203 | 15.000 |
| 2,2-Dichloropropane | AVRG | | 0.71314301 | | 10.968 | 15.000 |
| 1,1-Dichloropropene | AVRG | | 0.42016302 | | 8.160 | 15.000 |
| Dibromomethane | AVRG | | 0.21759689 | | 7.106 | 15.000 |
| 1,2-Dibromoethane | AVRG | | 0.36652489 | | 5.926 | 15.000 |
| trans-1,2-Dichloroethene | AVRG | | 0.46872891 | | 6.594 | 15.000 |
| 1,1,1,2-Tetrachloroethane | AVRG | | 0.38060507 | | 10.480 | 15.000 |
| 1,1,1-Trichloroethane | AVRG | | 0.77016692 | | 7.945 | 15.000 |
| 1,1,2,2-Tetrachloroethane | LINR | 7.722e-003 | 1.23187232 | | 0.9994783 | 0.9900000 |
| 1,1,2-Trichloroethane | AVRG | | 0.28450466 | | 9.857 | 15.000 |
| 1,1-Dichloroethane | AVRG | | 0.97667293 | | 8.336 | 15.000 |
| 1,1-Dichloroethene | AVRG | | 0.39616599 | | 5.052 | 15.000 |
| Trichloroethene | AVRG | | 0.35435187 | | 7.661 | 15.000 |
| 1,2,3-Trichlorobenzene | AVRG | | 0.15046244 | | 11.203 | 15.000 |
| Trichlorofluoromethane | AVRG | | 0.73636136 | | 9.380 | 15.000 |
| 1,2,4-Trichlorobenzene | 2ORDR | -1.1e-002 | 3.58766703 | -0.2952283 | 0.9906334 | 0.9900000 |
| 1,2,4-Trimethylbenzene | AVRG | | 2.67111779 | | 11.604 | 15.000 |
| Tetrachloroethene | AVRG | | 0.31784777 | | 13.220 | 15.000 |
| 1,2-Dichlorobenzene | AVRG | | 1.41425088 | | 11.530 | 15.000 |
| 1,2-Dichloroethane | AVRG | | 0.48410523 | | 5.599 | 15.000 |
| 1,2-Dichloropropane | AVRG | | 0.36695807 | | 5.225 | 15.000 |
| 1,3,5-Trimethylbenzene | AVRG | | 2.61272360 | | 8.480 | 15.000 |
| 1,3-Dichloropropane | AVRG | | 0.56175693 | | 7.766 | 15.000 |
| 1,4-Dichlorobenzene | AVRG | | 1.55419344 | | 9.792 | 15.000 |
| Toluene | AVRG | | 1.46017119 | | 10.382 | 15.000 |
| 2-Butanone | AVRG | | 0.24511086 | | 9.425 | 15.000 |
| 2-Chlorotoluene | AVRG | | 2.16926792 | | 6.442 | 15.000 |
| 2-Hexanone | AVRG | | 0.31389491 | | 12.771 | 15.000 |
| 4-Chlorotoluene | AVRG | | 2.52365549 | | 8.359 | 15.000 |
| tert-Butylbenzene | AVRG | | 2.26526404 | | 11.041 | 15.000 |
| 4-Methyl-2-Pentanone | AVRG | | 0.46275648 | | 11.014 | 15.000 |
| Acetone | LINR | -2.14e-002 | 5.79885157 | | 0.9996587 | 0.9900000 |
| Benzene | AVRG | | 1.24051491 | | 7.846 | 15.000 |
| Bromobenzene | AVRG | | 0.97809166 | | 11.206 | 15.000 |
| Bromochloromethane | AVRG | | 0.30138449 | | 8.187 | 15.000 |
| Bromodichloromethane | AVRG | | 0.45010731 | | 11.069 | 15.000 |
| Bromoform | AVRG | | 0.27741236 | | 12.753 | 15.000 |
| Bromomethane | LINR | 1.309e-002 | 2.86760046 | | 0.9995243 | 0.9900000 |
| Carbon Disulfide | AVRG | | 1.23004403 | | 9.502 | 15.000 |
| Carbon Tetrachloride | AVRG | | 0.44659821 | | 7.968 | 15.000 |
| Chlorobenzene | AVRG | | 0.97993823 | | 10.682 | 15.000 |
| Chloroethane | AVRG | | 0.35440033 | | 9.973 | 15.000 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007098

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

| COMPOUND | CURVE | COEFFICENTS A0 | A1 | A2 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| Chloroform | AVRG | | 0.89329334 | | 7.561 | 15.000 |
| Chloromethane | AVRG | | 0.70202961 | | 11.036 | 15.000 |
| cis-1,2-Dichloroethene | AVRG | | 0.55037038 | | 6.534 | 15.000 |
| Dibromochloromethane | AVRG | | 0.40050806 | | 11.789 | 15.000 |
| Dichlorodifluoromethane | AVRG | | 0.48936200 | | 10.210 | 15.000 |
| Ethylbenzene | AVRG | | 0.50598922 | | 9.941 | 15.000 |
| Hexachlorobutadiene | AVRG | | 0.26843621 | | 12.210 | 15.000 |
| Isopropylbenzene | AVRG | | 1.48528003 | | 8.449 | 15.000 |
| m,p-Xylenes | AVRG | | 0.61061949 | | 8.238 | 15.000 |
| Methylene Chloride | LINR | -2.76e-002 | 1.99382468 | | 0.9998680 | 0.9900000 |
| n-Butylbenzene | AVRG | | 2.21122856 | | 12.709 | 15.000 |
| n-Propylbenzene | AVRG | | 3.60198062 | | 11.195 | 15.000 |
| Naphthalene | 2ORDR | -2.54e-003 | 2.59173673 | -0.2152357 | 0.9947090 | 0.9900000 |
| o-Xylene | AVRG | | 0.59981322 | | 9.042 | 15.000 |
| sec-Butylbenzene | AVRG | | 3.03754823 | | 10.849 | 15.000 |
| Styrene | AVRG | | 1.04152018 | | 9.045 | 15.000 |
| Vinyl Chloride | AVRG | | 0.64360842 | | 10.284 | 15.000 |
| 1,2,3-Trichloropropane | AVRG | | 0.73186776 | | 13.664 | 15.000 |
| p-Isopropyltoluene | AVRG | | 2.76878531 | | 10.947 | 15.000 |
| 1,2-Dibromo-3-Chloropropane | LINR | 1.588e-002 | 13.7625896 | | 0.9986959 | 0.9900000 |
| 1,2-Dichloroethane-d4 | AVRG | | 0.58201048 | | 7.676 | 15.000 |
| Dibromofluoromethane | AVRG | | 0.49101450 | | 4.895 | 15.000 |
| Toluene-d8 | AVRG | | 1.21277844 | | 5.331 | 15.000 |
| 4-Bromofluorobenzene | AVRG | | 0.46785309 | | 7.389 | 15.000 |

FORM VI VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Instrument ID: VOA6 Calibration Date: 08/03/20 Time: 2227

Lab File ID: X080328 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.5260000 | 0.4787045 | 0.4787045 | 0.2 | 8.99 | 50.00 | AVRG |
| trans-1,3-Dichloropropene | 0.4820000 | 0.4372939 | 0.4372939 | 0.1 | 9.28 | 50.00 | AVRG |
| 1,3-Dichlorobenzene | 1.5720000 | 1.3675980 | 1.3675980 | 0.6 | 13.00 | 50.00 | AVRG |
| 2,2-Dichloropropane | 0.7130000 | 0.5565335 | 0.5565335 | 0.1 | 21.94 | 50.00 | AVRG |
| 1,1-Dichloropropene | 0.4200000 | 0.3340660 | 0.3340660 | 0.1 | 20.46 | 50.00 | AVRG |
| Dibromomethane | 0.2170000 | 0.2021021 | 0.2021021 | 0.1 | 6.86 | 50.00 | AVRG |
| 1,2-Dibromoethane | 0.3660000 | 0.3384120 | 0.3384120 | 0.1 | 7.54 | 50.00 | AVRG |
| trans-1,2-Dichloroethene | 0.4690000 | 0.4218107 | 0.4218107 | 0.1 | 10.06 | 50.00 | AVRG |
| 1,1,1,2-Tetrachloroethane | 0.3800000 | 0.3399347 | 0.3399347 | 0.1 | 10.54 | 50.00 | AVRG |
| 1,1,1-Trichloroethane | 0.7700000 | 0.6562085 | 0.6562085 | 0.1 | 14.78 | 50.00 | AVRG |
| 1,1,2,2-Tetrachloroethane | 46.682966 | 50.000000 | 0.7516506 | 0.3 | 6.63 | 50.00 | LINR |
| 1,1,2-Trichloroethane | 0.2840000 | 0.2596002 | 0.2596002 | 0.1 | 8.59 | 50.00 | AVRG |
| 1,1-Dichloroethane | 0.9760000 | 0.9251629 | 0.9251629 | 0.2 | 5.21 | 50.00 | AVRG |
| 1,1-Dichloroethene | 0.3960000 | 0.3484796 | 0.3484796 | 0.1 | 12.00 | 50.00 | AVRG |
| Trichloroethene | 0.3540000 | 0.3104749 | 0.3104749 | 0.2 | 12.30 | 50.00 | AVRG |
| 1,2,3-Trichlorobenzene | 0.1500000 | 0.1055274 | 0.1055274 | 0.01 | 29.65 | 50.00 | AVRG |
| Trichlorofluoromethane | 0.7360000 | 0.5978393 | 0.5978393 | 0.1 | 18.77 | 50.00 | AVRG |
| 1,2,4-Trichlorobenzene | 37.395001 | 50.000000 | 0.2153351 | 0.1 | 25.21 | 50.00 | 2RDR |
| 1,2,4-Trimethylbenzene | 2.6710000 | 2.2812745 | 2.2812745 | 0.1 | 14.59 | 50.00 | AVRG |
| Tetrachloroethene | 0.3180000 | 0.2486184 | 0.2486184 | 0.2 | 21.82 | 50.00 | AVRG |
| 1,2-Dichlorobenzene | 1.4140000 | 1.2154276 | 1.2154276 | 0.4 | 14.04 | 50.00 | AVRG |
| 1,2-Dichloroethane | 0.4840000 | 0.4547743 | 0.4547743 | 0.1 | 6.04 | 50.00 | AVRG |
| 1,2-Dichloropropane | 0.3670000 | 0.3446282 | 0.3446282 | 0.1 | 6.10 | 50.00 | AVRG |
| 1,3,5-Trimethylbenzene | 2.6130000 | 2.1913661 | 2.1913661 | 0.1 | 16.14 | 50.00 | AVRG |
| 1,3-Dichloropropane | 0.5620000 | 0.5188286 | 0.5188286 | 0.1 | 7.68 | 50.00 | AVRG |
| 1,4-Dichlorobenzene | 1.5540000 | 1.3659331 | 1.3659331 | 0.4 | 12.10 | 50.00 | AVRG |
| Toluene | 1.4600000 | 1.2609763 | 1.2609763 | 0.4 | 13.63 | 50.00 | AVRG |
| 2-Butanone | 0.2450000 | 0.2457809 | 0.2457809 | 0.1 | -0.32 | 50.00 | AVRG |
| 2-Chlorotoluene | 2.1690000 | 1.9075942 | 1.9075942 | 0.1 | 12.05 | 50.00 | AVRG |
| 2-Hexanone | 0.3140000 | 0.2816209 | 0.2816209 | 0.1 | 10.31 | 50.00 | AVRG |
| 4-Chlorotoluene | 2.5230000 | 2.2081364 | 2.2081364 | 0.1 | 12.48 | 50.00 | AVRG |
| tert-Butylbenzene | 2.2650000 | 1.8176793 | 1.8176793 | 0.1 | 19.75 | 50.00 | AVRG |
| 4-Methyl-2-Pentanone | 0.4630000 | 0.4143887 | 0.4143887 | 0.1 | 10.50 | 50.00 | AVRG |
| Acetone | 96.151132 | 100.00000 | 0.1676575 | 0.1 | 3.85 | 50.00 | LINR |
| Benzene | 1.2410000 | 1.1091081 | 1.1091081 | 0.5 | 10.63 | 50.00 | AVRG |
| Bromobenzene | 0.9780000 | 0.8848499 | 0.8848499 | 0.1 | 9.52 | 50.00 | AVRG |
| Bromochloromethane | 0.3010000 | 0.2768523 | 0.2768523 | 0.1 | 8.02 | 50.00 | AVRG |
| Bromodichloromethane | 0.4500000 | 0.4098076 | 0.4098076 | 0.2 | 8.93 | 50.00 | AVRG |
| Bromoform | 0.2780000 | 0.2480851 | 0.2480851 | 0.1 | 10.76 | 50.00 | AVRG |
| Bromomethane | 46.685407 | 50.000000 | 0.3210402 | 0.1 | 6.63 | 50.00 | LINR |
| Carbon Disulfide | 1.2300000 | 1.0619363 | 1.0619363 | 0.1 | 13.66 | 50.00 | AVRG |
| Carbon Tetrachloride | 0.4460000 | 0.3416353 | 0.3416353 | 0.1 | 23.40 | 50.00 | AVRG |



FORM VII VOA

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2007098

Instrument ID: VOA6 Calibration Date: 08/03/20 Time: 2227

Lab File ID: X080328 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| Chlorobenzene | 0.9800000 | 0.8768936 | 0.8768936 | 0.5 | 10.52 | 50.00 | AVRG |
| Chloroethane | 0.3540000 | 0.3273598 | 0.3273598 | 0.1 | 7.52 | 50.00 | AVRG |
| Chloroform | 0.8930000 | 0.8265706 | 0.8265706 | 0.2 | 7.44 | 50.00 | AVRG |
| Chloromethane | 0.7020000 | 0.5914177 | 0.5914177 | 0.1 | 15.75 | 50.00 | AVRG |
| cis-1,2-Dichloroethene | 0.5500000 | 0.5151491 | 0.5151491 | 0.1 | 6.34 | 50.00 | AVRG |
| Dibromochloromethane | 0.4000000 | 0.3614792 | 0.3614792 | 0.1 | 9.63 | 50.00 | AVRG |
| Dichlorodifluoromethane | 0.4890000 | 0.3875391 | 0.3875391 | 0.1 | 20.75 | 50.00 | AVRG |
| Ethylbenzene | 0.5060000 | 0.4253468 | 0.4253468 | 0.1 | 15.94 | 50.00 | AVRG |
| Hexachlorobutadiene | 0.2680000 | 0.1750678 | 0.1750678 | 0.1 | 34.68 | 50.00 | AVRG |
| Isopropylbenzene | 1.4850000 | 1.1934100 | 1.1934100 | 0.1 | 19.64 | 50.00 | AVRG |
| m,p-Xylenes | 0.6100000 | 0.5151907 | 0.5151907 | 0.1 | 15.54 | 50.00 | AVRG |
| Methylene Chloride | 47.950794 | 50.000000 | 0.4948184 | 0.1 | 4.10 | 50.00 | LINR |
| n-Butylbenzene | 2.2110000 | 1.6974357 | 1.6974357 | 0.5 | 23.23 | 50.00 | AVRG |
| n-Propylbenzene | 3.6020000 | 2.9454630 | 2.9454630 | 0.1 | 18.23 | 50.00 | AVRG |
| Naphthalene | 40.425691 | 50.000000 | 0.3215227 | 0.2 | 19.15 | 50.00 | 2RDR |
| o-Xylene | 0.6000000 | 0.5240722 | 0.5240722 | 0.3 | 12.65 | 50.00 | AVRG |
| sec-Butylbenzene | 3.0380000 | 2.3280994 | 2.3280994 | 0.1 | 23.37 | 50.00 | AVRG |
| Styrene | 1.0410000 | 0.9304296 | 0.9304296 | 0.3 | 10.62 | 50.00 | AVRG |
| Vinyl Chloride | 0.6440000 | 0.5497694 | 0.5497694 | 0.1 | 14.63 | 50.00 | AVRG |
| 1,2,3-Trichloropropane | 0.7320000 | 0.6560074 | 0.6560074 | 0.1 | 10.38 | 50.00 | AVRG |
| p-Isopropyltoluene | 2.7680000 | 2.1810927 | 2.1810927 | 0.1 | 21.20 | 50.00 | AVRG |
| 1,2-Dibromo-3-Chloropropane | 41.004354 | 50.000000 | 5.84e-002 | 0.05 | 17.99 | 50.00 | LINR |
| 1,2-Dichloroethane-d4 | 0.5820000 | 0.6010108 | 0.6010108 | 0.1 | -3.27 | 50.00 | AVRG |
| Dibromofluoromethane | 0.4910000 | 0.5026461 | 0.5026461 | 0.1 | -2.37 | 50.00 | AVRG |
| Toluene-d8 | 1.2130000 | 1.1940040 | 1.1940040 | 0.1 | 1.57 | 50.00 | AVRG |
| 4-Bromofluorobenzene | 0.4680000 | 0.4516816 | 0.4516816 | 0.1 | 3.49 | 50.00 | AVRG |



FORM VII VOA

# FORM 8
## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Lab File ID (Standard): X080308 Date Analyzed: 08/03/20

Instrument ID: VOA6 Time Analyzed: 1428

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1(CBZ) AREA # | IS1(CBZ) RT # | IS2(DFB) AREA # | IS2(DFB) RT # | IS3(DCB) AREA # | IS3(DCB) RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 702771 | 7.67 | 771177 | 4.97 | 336517 | 9.67 |
| | UPPER LIMIT | 1405542 | 8.17 | 1542354 | 5.47 | 673034 | 10.17 |
| | LOWER LIMIT | 351386 | 7.17 | 385589 | 4.47 | 168259 | 9.17 |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | VLCSW-200803 | 694842 | 7.67 | 765803 | 4.97 | 339345 | 9.66 |
| 02 | VBLKW-200803 | 655305 | 7.67 | 756362 | 4.97 | 305628 | 9.67 |
| 03 | HS20070984-02 | 633305 | 7.67 | 743987 | 4.97 | 282920 | 9.67 |
| 04 | HS20070984-01 | 632088 | 7.67 | 744076 | 4.97 | 291180 | 9.67 |
| 05 | HS20070984-01 | 638250 | 7.67 | 727989 | 4.97 | 297050 | 9.66 |
| 06 | HS20070984-01 | 606476 | 7.67 | 691299 | 4.97 | 273078 | 9.67 |
| 07 | | | | | | | |
| 08 | | | | | | | |
| 09 | | | | | | | |
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| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# FORM 8
## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20070984

Lab File ID (Standard): X080308 Date Analyzed: 08/03/20

Instrument ID: VOA6 Time Analyzed: 1428

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS4 AREA # | RT # | AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 511920 | 4.19 | | | | |
| | UPPER LIMIT | 1023840 | 4.69 | | | | |
| | LOWER LIMIT | 255960 | 3.69 | | | | |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | VLCSW-200803 | 505511 | 4.19 | | | | |
| 02 | VBLKW-200803 | 517121 | 4.19 | | | | |
| 03 | HS20070984-02 | 516248 | 4.19 | | | | |
| 04 | HS20070984-01 | 510343 | 4.19 | | | | |
| 05 | HS20070984-01 | 486130 | 4.19 | | | | |
| 06 | HS20070984-01 | 471439 | 4.19 | | | | |
| 07 | | | | | | | |
| 08 | | | | | | | |
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| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D



Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

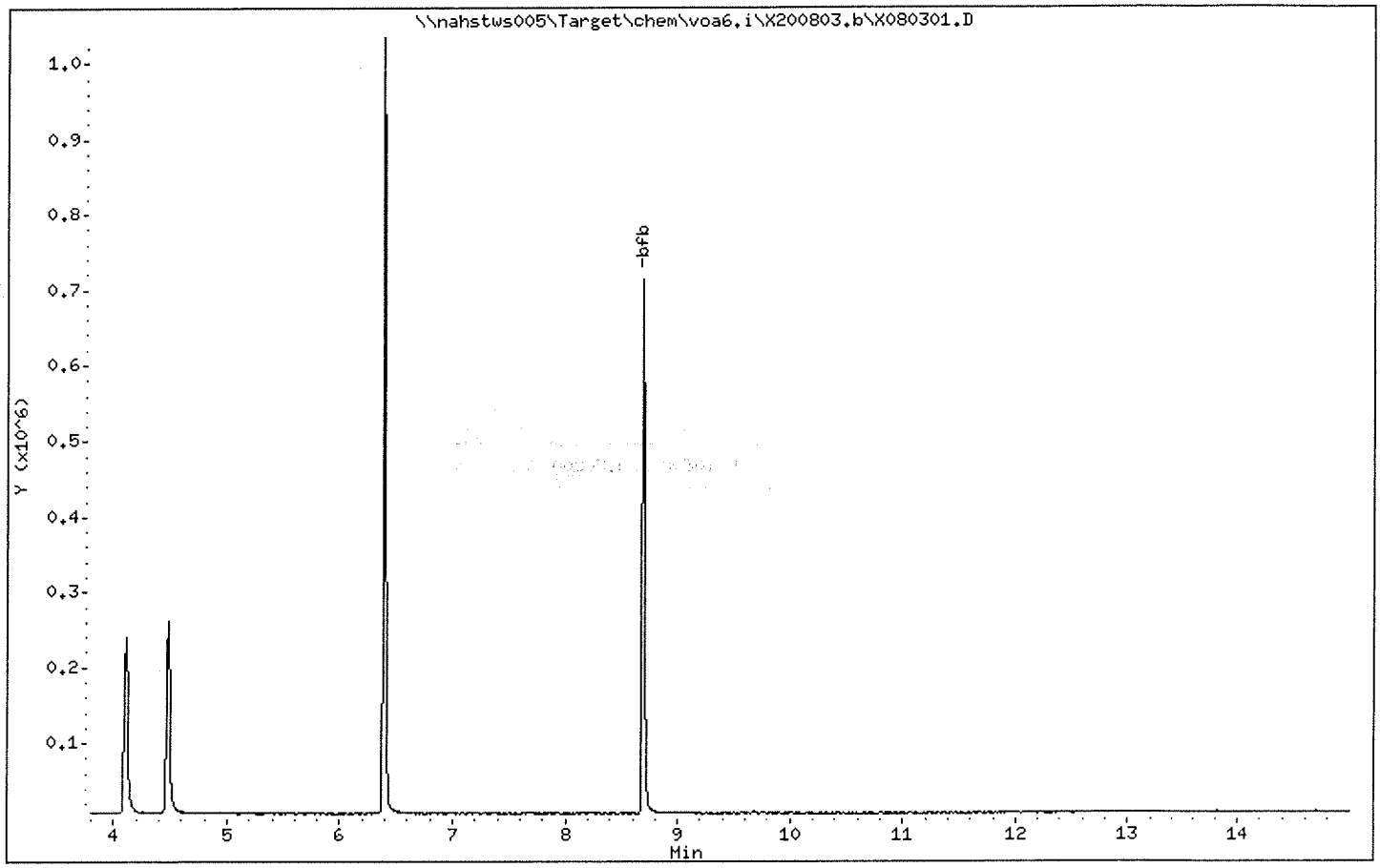
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D



Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

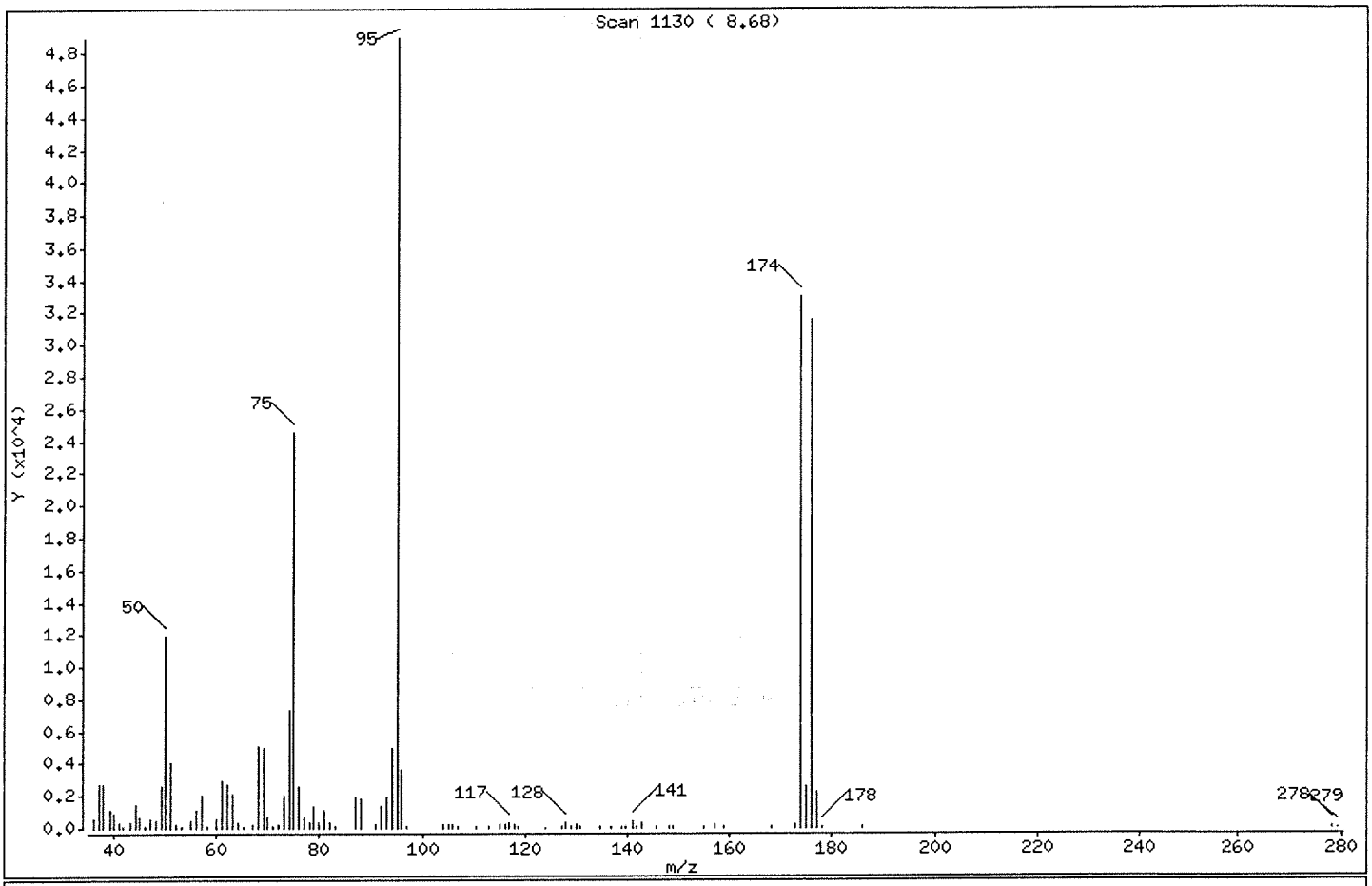
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 24.40 |
| 75 | 30.00 - 60.00% of mass 95 | 50.11 |
| 96 | 5.00 - 9.00% of mass 95 | 7.35 |
| 173 | Less than 2.00% of mass 174 | 0.43 ( 0.63) |
| 174 | Greater than 50.00% of mass 95 | 67.28 |
| 175 | 5.00 - 9.00% of mass 174 | 5.25 ( 7.80) |
| 176 | 95.00 - 101.00% of mass 174 | 64.32 ( 95.60) |
| 177 | 5.00 - 9.00% of mass 176 | 4.66 ( 7.25) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D



Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X080301.D
Spectrum: Scan 1130 ( 8.68)
Location of Maximum: 95.00
Number of points: 94

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 531 | 62.00 | 2722 | 92.00 | 1357 | 136.80 | 58 |
| 37.00 | 2708 | 63.00 | 2090 | 93.00 | 1937 | 139.00 | 114 |
| 38.00 | 2689 | 64.10 | 333 | 94.00 | 5003 | 139.80 | 109 |
| 39.10 | 1102 | 65.10 | 152 | 95.00 | 48920 | 141.00 | 492 |
| 39.90 | 914 | 67.00 | 172 | 96.00 | 3597 | 141.70 | 68 |
| 41.00 | 390 | 68.00 | 5065 | 97.10 | 159 | 142.90 | 325 |
| 41.80 | 147 | 69.00 | 4934 | 104.10 | 247 | 145.60 | 116 |
| 43.10 | 318 | 70.00 | 640 | 105.00 | 192 | 148.00 | 163 |
| 44.10 | 1442 | 71.10 | 132 | 105.90 | 238 | 149.00 | 64 |
| 44.90 | 624 | 71.90 | 198 | 107.00 | 73 | 155.00 | 128 |
| 46.10 | 63 | 73.00 | 2073 | 110.60 | 59 | 156.90 | 179 |
| 47.00 | 559 | 74.00 | 7325 | 113.00 | 90 | 159.00 | 102 |
| 48.00 | 397 | 75.00 | 24512 | 114.90 | 227 | 168.00 | 114 |
| 49.10 | 2563 | 76.00 | 2607 | 116.00 | 174 | 172.90 | 208 |
| 50.00 | 11935 | 76.90 | 632 | 116.80 | 351 | 173.90 | 32912 |
| 51.00 | 4006 | 78.00 | 348 | 117.80 | 175 | 174.90 | 2566 |
| 52.10 | 210 | 78.90 | 1387 | 118.70 | 154 | 175.90 | 31464 |
| 53.00 | 122 | 79.90 | 370 | 123.90 | 56 | 176.90 | 2280 |
| 55.00 | 461 | 80.90 | 1139 | 127.10 | 81 | 178.00 | 150 |
| 56.10 | 1076 | 81.90 | 296 | 127.90 | 291 | 186.00 | 89 |
| 57.00 | 2018 | 82.90 | 133 | 128.80 | 113 | 277.90 | 149 |
| 58.20 | 143 | 87.00 | 1966 | 129.90 | 205 | 279.20 | 55 |
| 60.00 | 526 | 87.90 | 1834 | 130.90 | 98 | | |
| 61.00 | 2907 | 91.00 | 222 | 134.80 | 63 | | |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D  Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Lab Smp Id: VSTD000.25  Client Smp ID: VSTD000.25
Inj Date  : 03-AUG-2020 11:40
Operator  : PC  Inst ID: voa6.i
Smp Info  : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i  Quant Type: ISTD
Cal Date  : 03-AUG-2020 14:28  Cal File: X080308.D
Als bottle: 2  Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 572408 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 867920 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 763638 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 355732 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 1662 | 0.25000 | 0.29(a) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.490 | 4.490 | (1.072) | 2175 | 0.25000 | 0.32(Ta) |
| $ 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 6945 | 0.25000 | 0.37(a) |
| $ 69 4-Bromofluorobenzene | 95 | 8.702 | 8.702 | (1.134) | 3200 | 0.25000 | 0.44(aM) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 1428 | 0.25000 | 0.24(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.096 | 4.096 | (0.978) | 2319 | 0.25000 | 0.26(a) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 1974 | 0.25000 | 0.72(aM) |
| 53 1,1,2-Trichloroethane | 83 | 6.854 | 6.854 | (0.894) | 1511 | 0.25000 | 0.34(aM) |
| 22 1,1-Dichloroethane | 63 | 2.936 | 2.936 | (0.701) | 3028 | 0.25000 | 0.27(a) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 1378 | 0.25000 | 0.30(a) |
| 32 1,1-Dichloropropene | 75 | 4.297 | 4.297 | (0.865) | 2193 | 0.25000 | 0.30(a) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.768 | 11.768 | (1.217) | 168 | 0.25000 | 0.15(aM) |
| 71 1,2,3-Trichloropropane | 75 | 8.874 | 8.874 | (0.918) | 1435 | 0.25000 | 0.27(aM) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.374 | 11.374 | (1.176) | 428 | 0.25000 | (aM) |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 5138 | 0.25000 | 0.27(a) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.686 | 10.686 | (1.105) | 50 | 0.25000 | 0.89(aM) |
| 57 1,2-Dibromoethane | 107 | 7.277 | 7.277 | (0.949) | 1365 | 0.25000 | 0.24(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 2418 | 0.25000 | 0.24(a) |

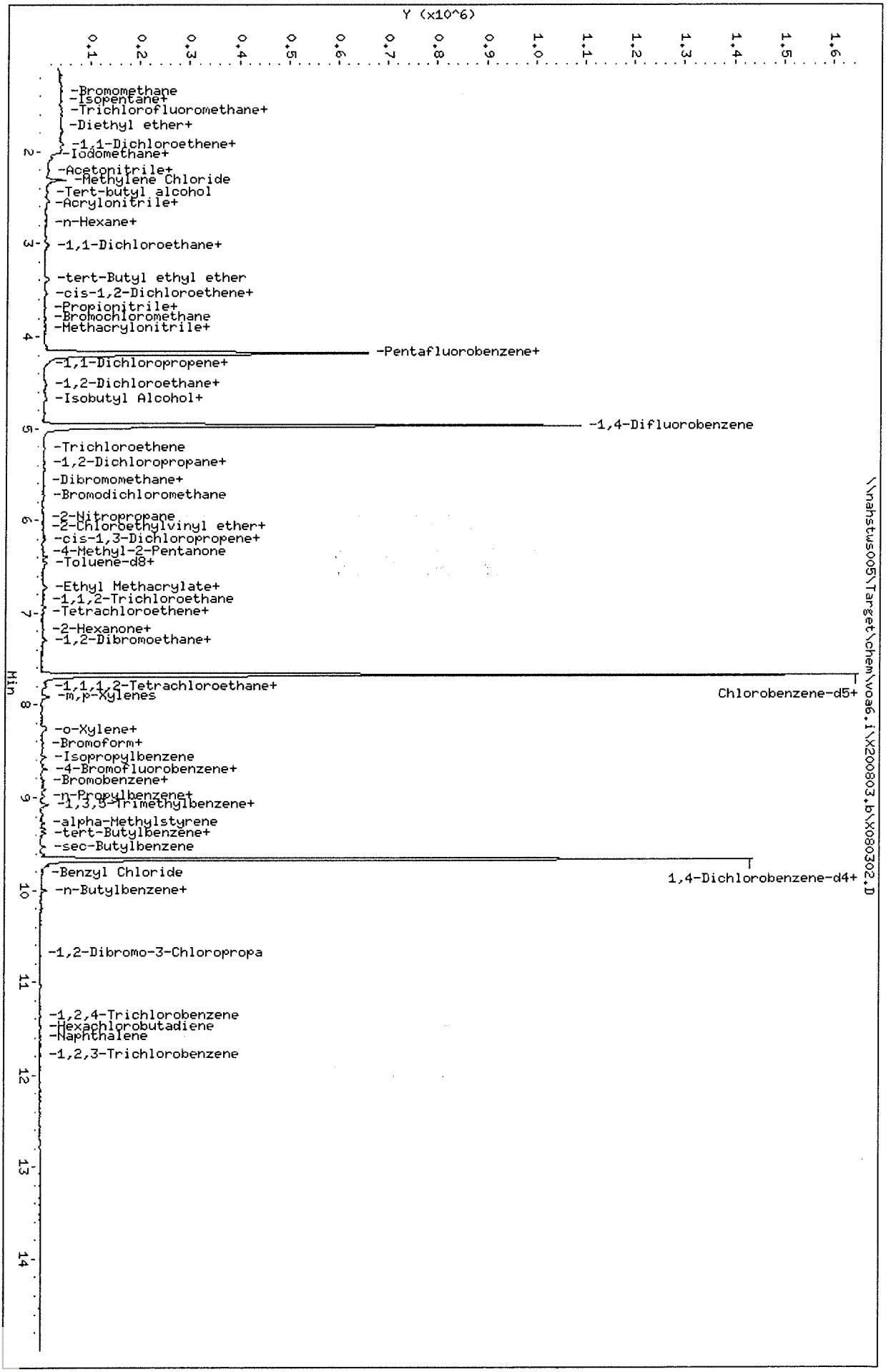
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 2225 | 0.25000 | 0.26(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.450 | 5.450 | (1.097) | 1294 | 0.25000 | 0.20(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 4991 | 0.25000 | 0.26(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 2610 | 0.25000 | 0.23(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 2288 | 0.25000 | 0.26(aM) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 3060 | 0.25000 | 0.27(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 2227 | 0.25000 | 0.27(aM) |
| 24 | 2-Butanone | 43 | 3.638 | 3.638 | (0.868) | 1048 | 0.50000 | 0.37(aM) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 4316 | 0.25000 | 0.27(a) |
| 52 | 2-Hexanone | 43 | 7.112 | 7.112 | (0.927) | 2498 | 0.50000 | 0.52(a) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 4822 | 0.25000 | 0.26(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 5222 | 0.25000 | 0.26(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 3501 | 0.50000 | 0.49(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 4869 | 0.50000 | 1.39(aM) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 5575 | 0.25000 | 0.25(a) |
| 74 | Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 1749 | 0.25000 | 0.25(a) |
| 29 | Bromochloromethane | 128 | 3.795 | 3.795 | (0.906) | 1013 | 0.25000 | 0.29(aM) |
| 39 | Bromodichloromethane | 83 | 5.737 | 5.737 | (1.154) | 2345 | 0.25000 | 0.30(aM) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 1002 | 0.25000 | 0.23(aM) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 1280 | 0.25000 | 0.97(aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 6971 | 0.50000 | 0.49(a) |
| 34 | Carbon Tetrachloride | 117 | 4.275 | 4.275 | (0.860) | 2189 | 0.25000 | 0.28(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 4245 | 0.25000 | 0.28(a) |
| 7 | Chloroethane | 64 | 1.410 | 1.410 | (0.337) | 1194 | 0.25000 | 0.29(aM) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 2183 | 0.25000 | 0.21(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 2410 | 0.25000 | 0.29(a) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.545 | 3.545 | (0.846) | 1634 | 0.25000 | 0.25(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 2355 | 0.25000 | 0.25(a) |
| 55 | Dibromochloromethane | 129 | 7.183 | 7.183 | (0.937) | 1646 | 0.25000 | 0.26(a) |
| 44 | Dibromomethane | 93 | 5.565 | 5.565 | (1.120) | 1127 | 0.25000 | 0.29(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 1555 | 0.25000 | 0.27(aM) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 2026 | 0.25000 | 0.26(aM) |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 351 | 0.25000 | 0.18(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 5606 | 0.25000 | 0.24(a) |
| 62 | m,p-Xylenes | 106 | 7.914 | 7.914 | (1.032) | 4680 | 0.50000 | 0.50(a) |
| 17 | Methylene Chloride | 84 | 2.313 | 2.313 | (0.552) | 13192 | 0.25000 | 0.91(aM) |
| 87 | n-Butylbenzene | 91 | 10.006 | 10.006 | (1.035) | 4073 | 0.25000 | 0.25(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 6307 | 0.25000 | 0.24(a) |
| 92 | Naphthalene | 128 | 11.589 | 11.589 | (1.199) | 698 | 0.25000 | 0.12(aM) |
| 63 | o-Xylene | 106 | 8.251 | 8.251 | (1.076) | 2471 | 0.25000 | 0.26(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 5521 | 0.25000 | 0.25(a) |
| 64 | Styrene | 104 | 8.272 | 8.272 | (1.078) | 3575 | 0.25000 | 0.22(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 4130 | 0.25000 | 0.25(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 1260 | 0.25000 | 0.25(a) |
| 50 | Toluene | 91 | 6.460 | 6.460 | (0.842) | 6876 | 0.25000 | 0.30(aM) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.542 | 2.542 | (0.607) | 1215 | 0.25000 | 0.22(aM) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 2328 | 0.25000 | 0.27(aM) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 1542 | 0.25000 | 0.25(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 1948 | 0.25000 | 0.23(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 1889 | 0.25000 | 0.25(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page
Report Date: 22-Aug-2020 11:54

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Date : 03-AUG-2020 11:40
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-AUG-2020 12:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 11:40 Cal File: X080302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

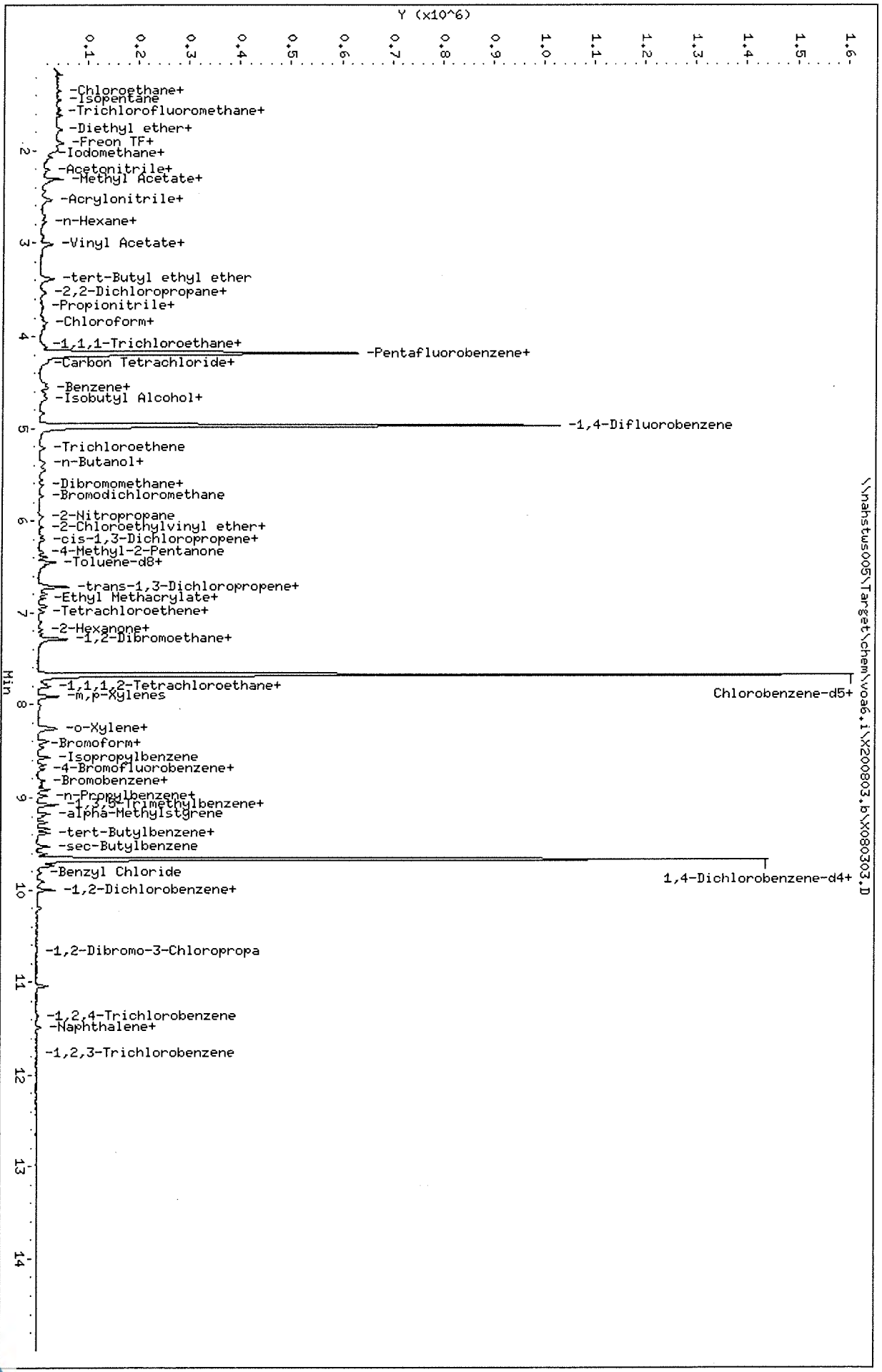
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 544079 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 825062 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 734728 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 351808 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.110 | 4.110 | (0.981) | 2875 | 0.50000 | 0.53(a) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.490 | 4.490 | (1.072) | 3638 | 0.50000 | 0.57(aM) |
| $ 48 Toluene-d8 | 98 | 6.395 | 6.395 | (0.834) | 9247 | 0.50000 | 0.51(a) |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 3831 | 0.50000 | 0.55(a) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 3529 | 0.50000 | 0.63(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 5010 | 0.50000 | 0.59(aM) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 3887 | 0.50000 | 1.06(aM) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 2550 | 0.50000 | 0.60(aM) |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 5969 | 0.50000 | 0.56(a) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 2144 | 0.50000 | 0.49(aM) |
| 32 1,1-Dichloropropene | 75 | 4.297 | 4.297 | (0.865) | 4094 | 0.50000 | 0.59(aM) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.761 | 11.761 | (1.216) | 642 | 0.50000 | 0.60(aM) |
| 71 1,2,3-Trichloropropane | 75 | 8.874 | 8.874 | (0.918) | 3074 | 0.50000 | 0.59(aM) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.359 | 11.359 | (1.175) | 1350 | 0.50000 | 0.14(aM) |
| 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 11934 | 0.50000 | 0.63(aM) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 394 | 0.50000 | 1.56(aM) |
| 57 1,2-Dibromoethane | 107 | 7.269 | 7.269 | (0.948) | 3081 | 0.50000 | 0.57(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.998 | 9.998 | (1.034) | 6299 | 0.50000 | 0.63(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 4445 | 0.50000 | 0.55(aM) |
| 42 | 1,2-Dichloropropane | 63 | 5.450 | 5.450 | (1.097) | 3223 | 0.50000 | 0.53(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.074 | 9.074 | (0.939) | 10923 | 0.50000 | 0.59(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 6943 | 0.50000 | 0.62(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 4895 | 0.50000 | 0.59(aM) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 6675 | 0.50000 | 0.61(aM) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 4808 | 0.50000 | 0.61(aM) |
| 24 | 2-Butanone | 43 | 3.609 | 3.609 | (0.862) | 2796 | 1.00000 | 1.04(a) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 8675 | 0.50000 | 0.56(aM) |
| 52 | 2-Hexanone | 43 | 7.105 | 7.105 | (0.926) | 4973 | 1.00000 | 1.07(aM) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 10688 | 0.50000 | 0.60(aM) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 12071 | 0.50000 | 0.61(aM) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 7990 | 1.00000 | 1.17(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 6244 | 1.00000 | 2.25(aM) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 12142 | 0.50000 | 0.59(a) |
| 74 | Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 4364 | 0.50000 | 0.63(a) |
| 29 | Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 1908 | 0.50000 | 0.58(aM) |
| 39 | Bromodichloromethane | 83 | 5.736 | 5.736 | (1.154) | 4753 | 0.50000 | 0.63(aM) |
| 66 | Bromoform | 173 | 8.415 | 8.415 | (1.097) | 2599 | 0.50000 | 0.63(Ta) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 2498 | 0.50000 | 1.31(aM) |
| 19 | Carbon Disulfide | 76 | 2.076 | 2.076 | (0.496) | 16094 | 1.00000 | 1.20(a) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 4361 | 0.50000 | 0.59(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 9164 | 0.50000 | 0.63(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 2338 | 0.50000 | 0.60(a) |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.935) | 5814 | 0.50000 | 0.59(a) |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 4829 | 0.50000 | 0.63(aM) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 3487 | 0.50000 | 0.58(aM) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 5096 | 0.50000 | 0.58(a) |
| 55 | Dibromochloromethane | 129 | 7.183 | 7.183 | (0.937) | 3742 | 0.50000 | 0.63(aM) |
| 44 | Dibromomethane | 93 | 5.565 | 5.565 | (1.120) | 2117 | 0.50000 | 0.58(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 2895 | 0.50000 | 0.54(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 4683 | 0.50000 | 0.62(a) |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 828 | 0.50000 | 0.43(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 13211 | 0.50000 | 0.60(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 10883 | 1.00000 | 1.21(a) |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 13006 | 0.50000 | 1.00(aM) |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 9792 | 0.50000 | 0.62(aM) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 15904 | 0.50000 | 0.62(a) |
| 92 | Naphthalene | 128 | 11.560 | 11.560 | (1.196) | 1670 | 0.50000 | 0.48(aM) |
| 63 | o-Xylene | 106 | 8.251 | 8.251 | (1.076) | 5447 | 0.50000 | 0.61(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 13181 | 0.50000 | 0.61(a) |
| 64 | Styrene | 104 | 8.272 | 8.272 | (1.078) | 9169 | 0.50000 | 0.59(aM) |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 10025 | 0.50000 | 0.62(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 3139 | 0.50000 | 0.67(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 13642 | 0.50000 | 0.63(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 2977 | 0.50000 | 0.58(aM) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 4694 | 0.50000 | 0.58(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 3262 | 0.50000 | 0.55(a) |
| 8 | Trichlorofluoromethane | 101 | 1.568 | 1.568 | (0.374) | 4721 | 0.50000 | 0.58(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 3935 | 0.50000 | 0.56(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

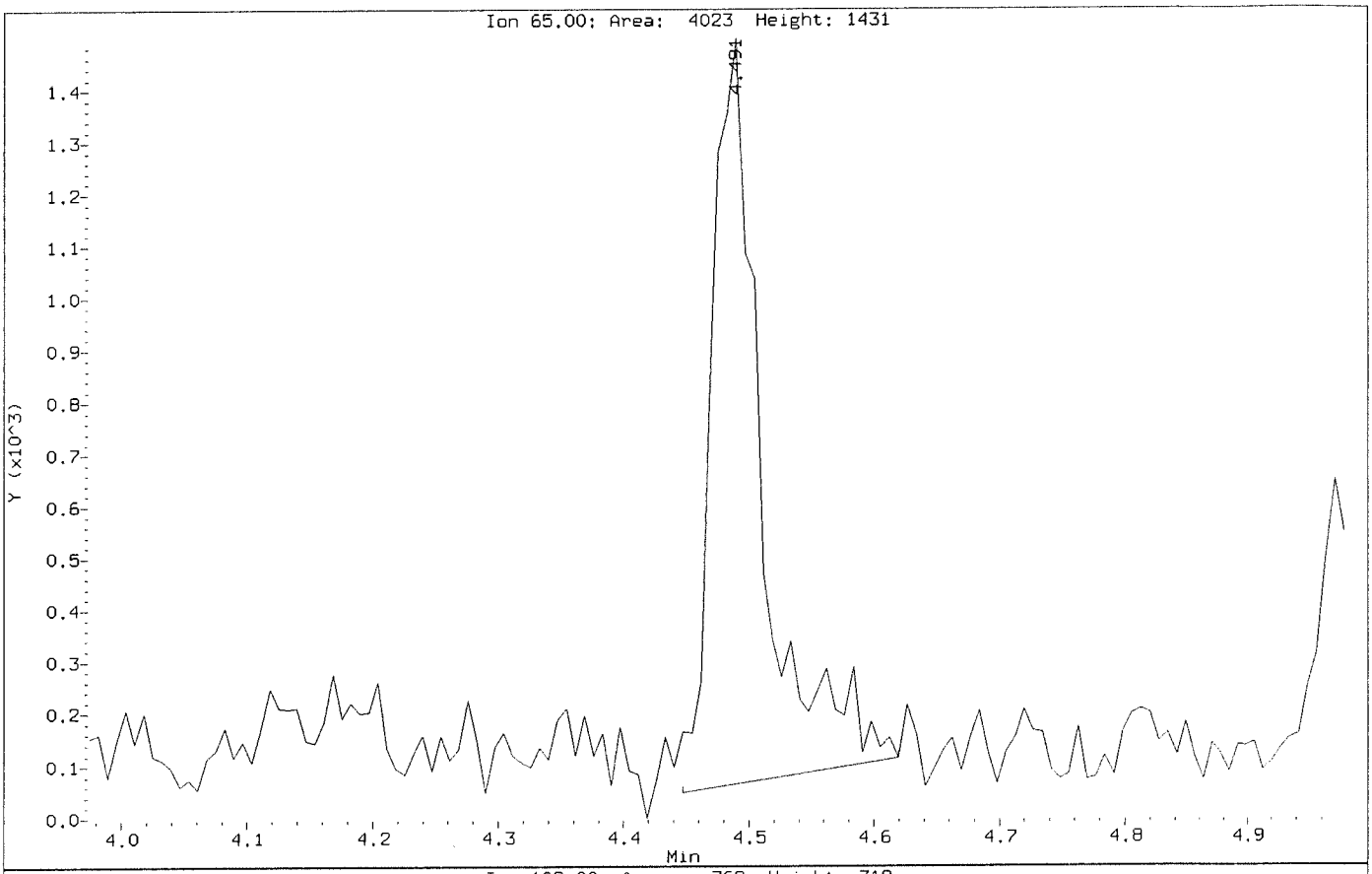


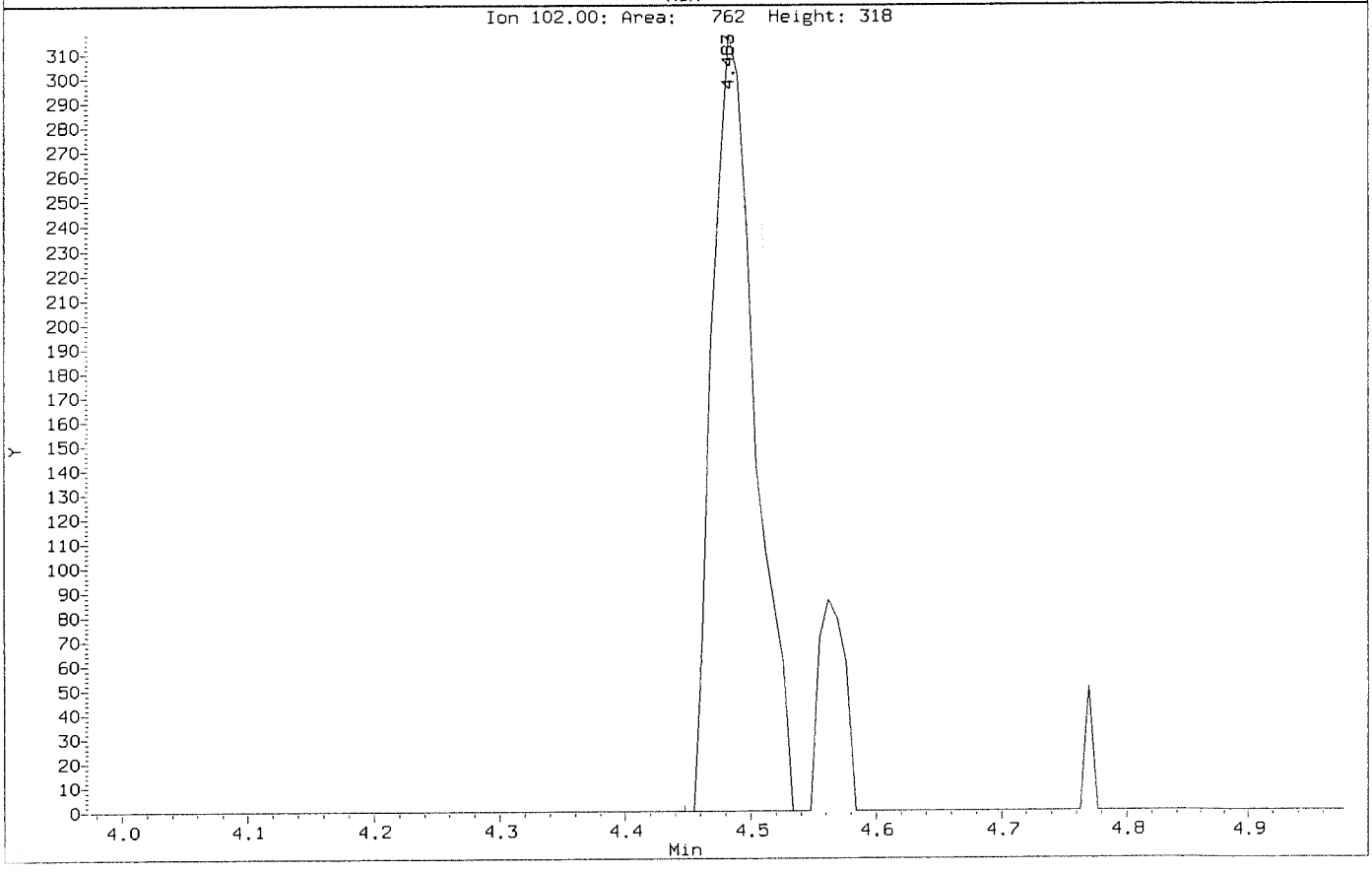

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Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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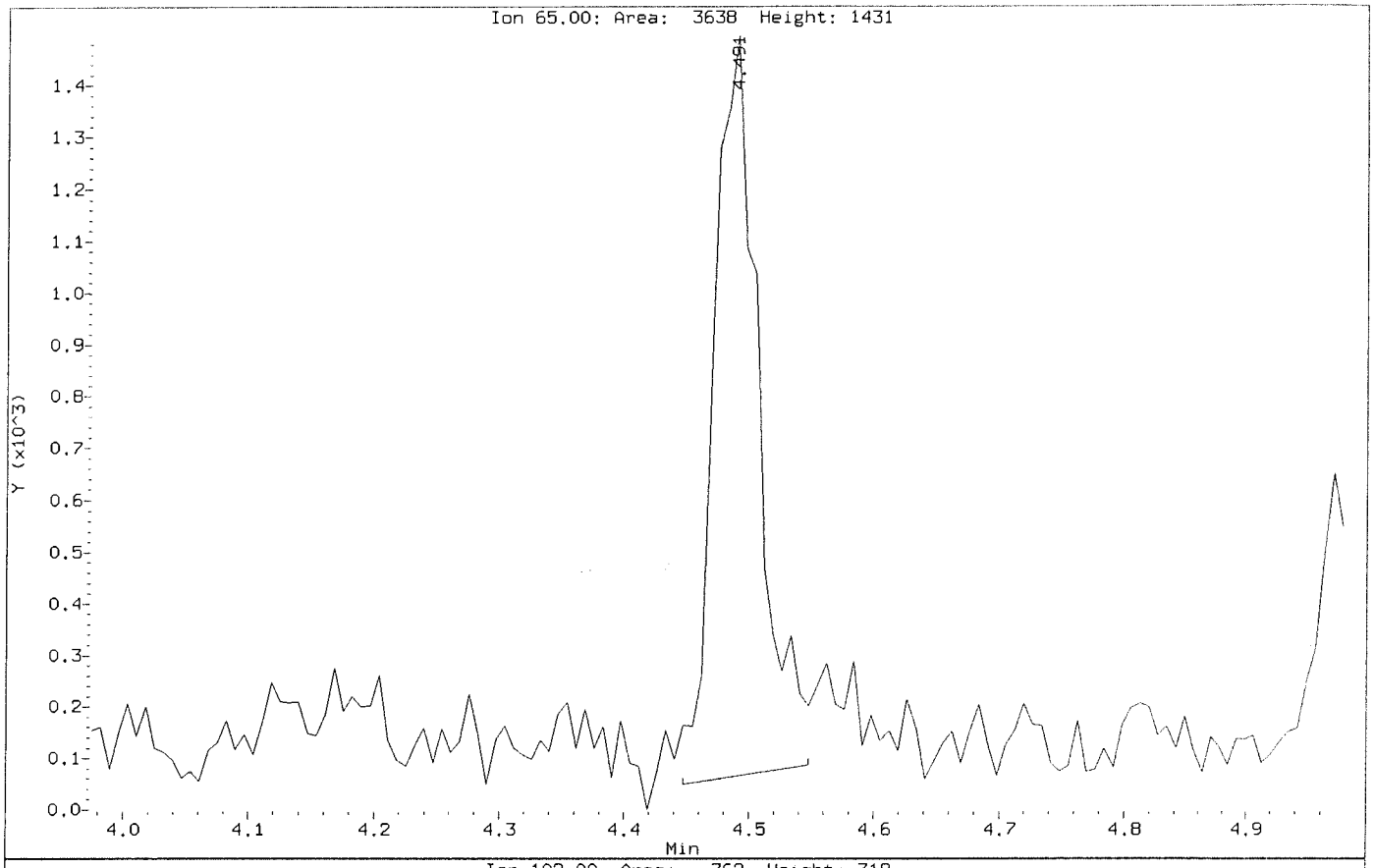
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CAS Number: 17060-07-0

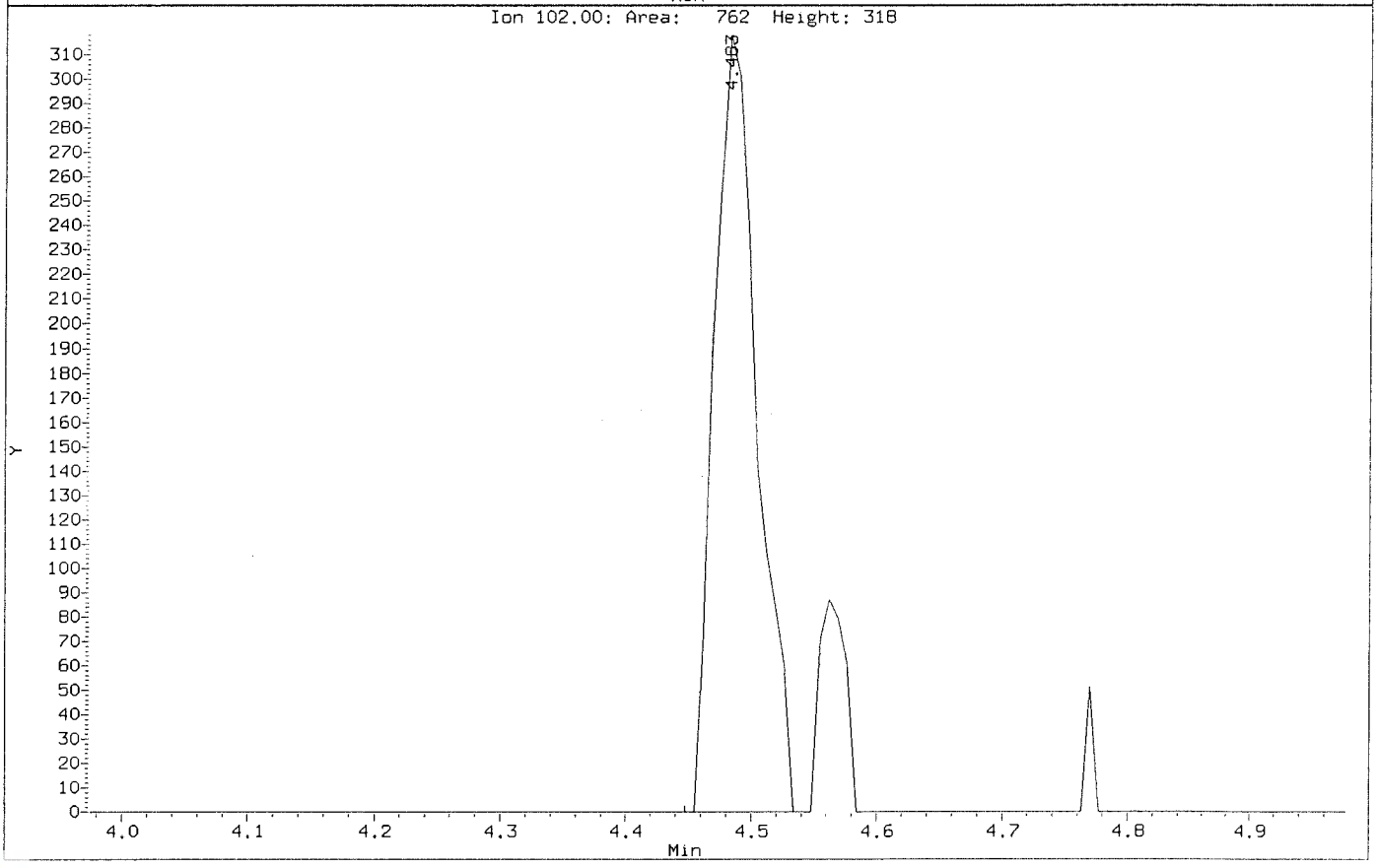


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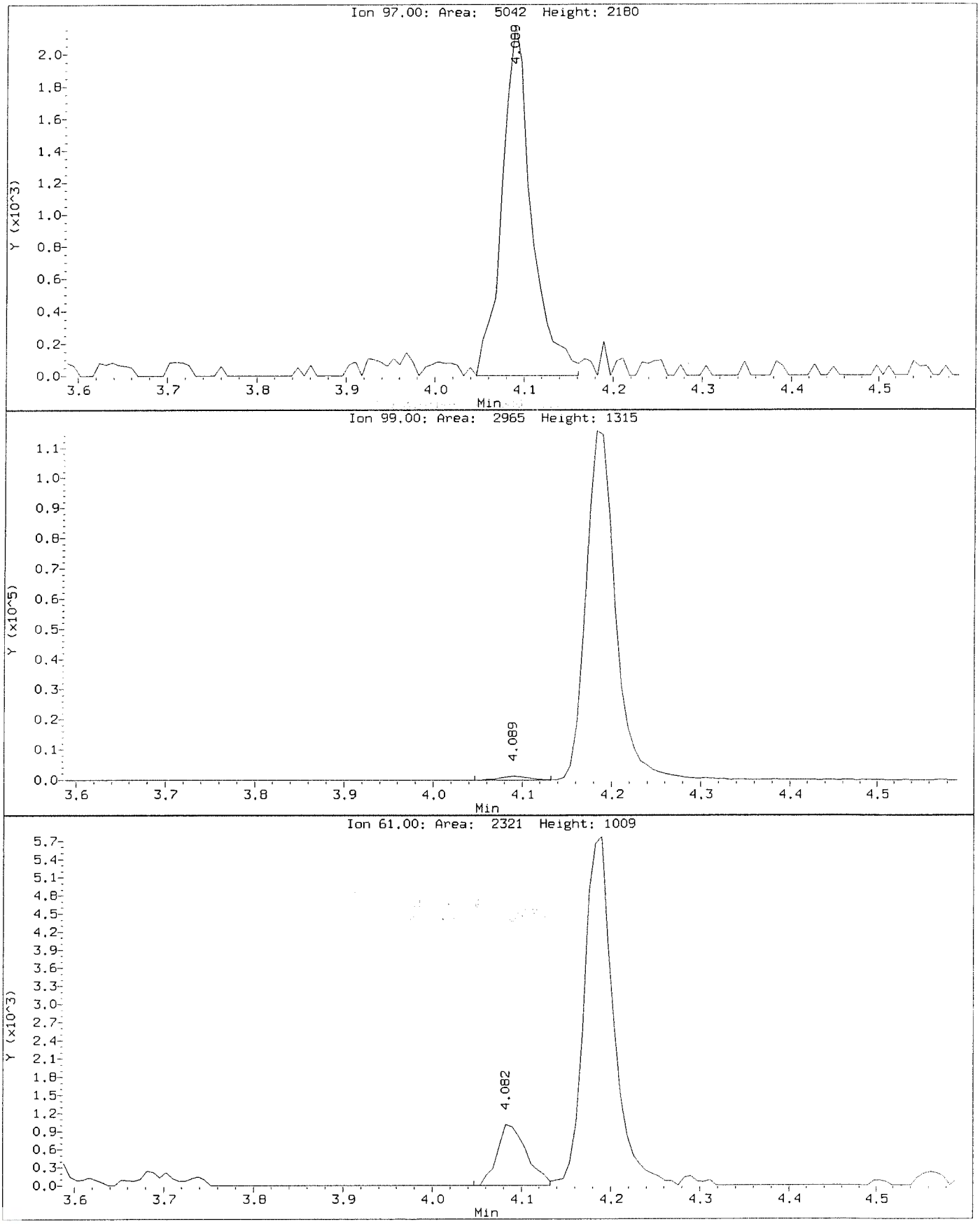
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CAS Number: 17060-07-0



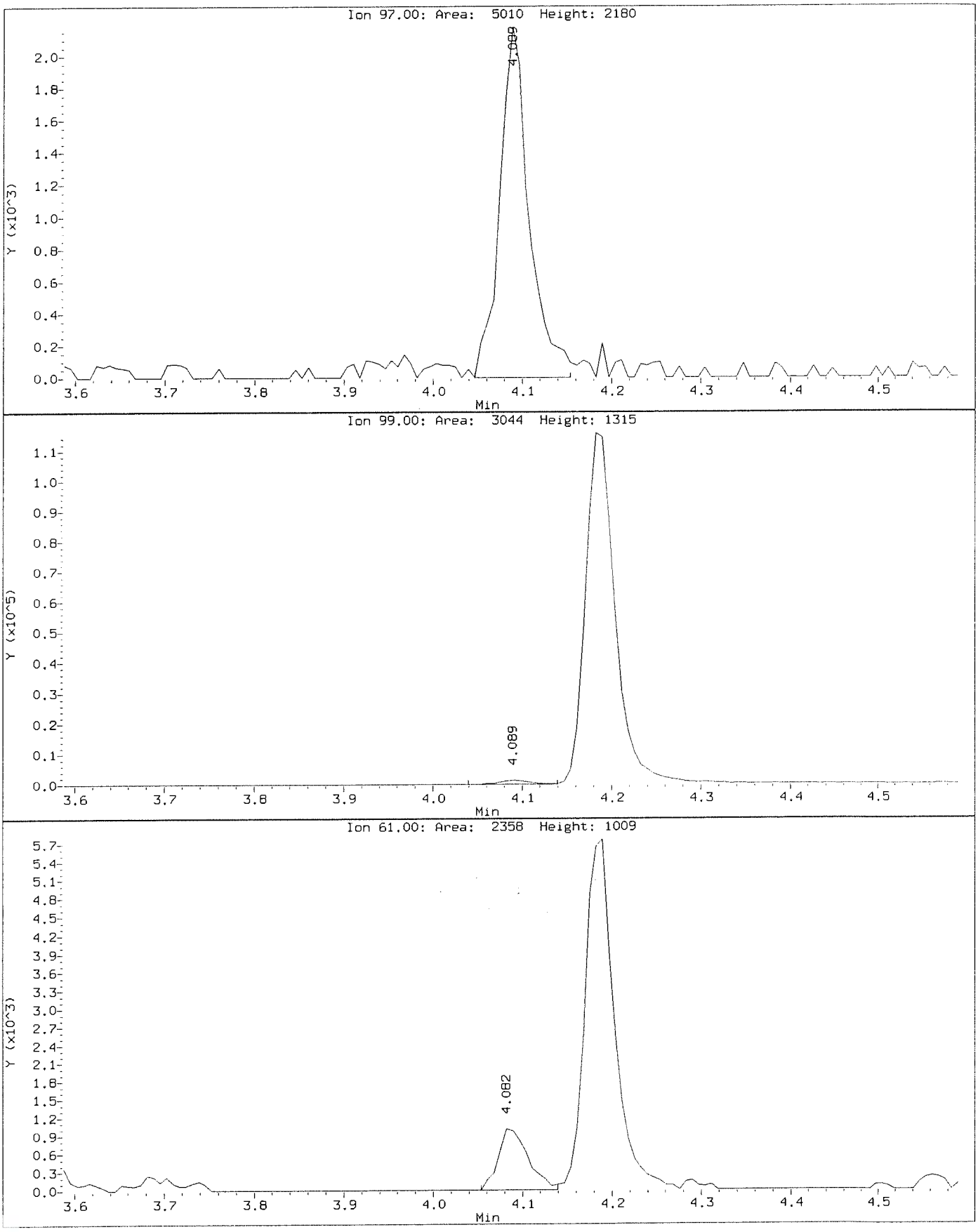
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



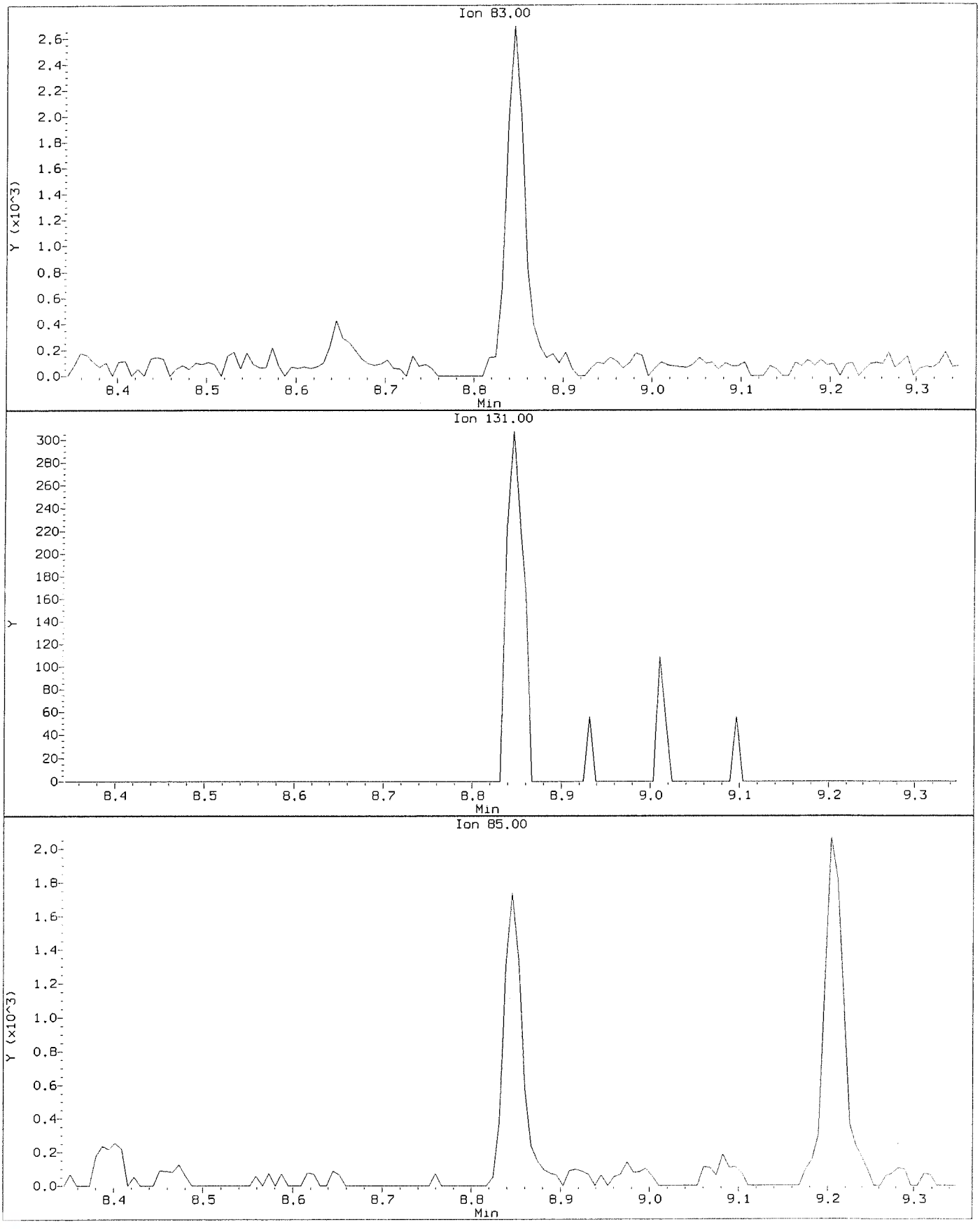
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



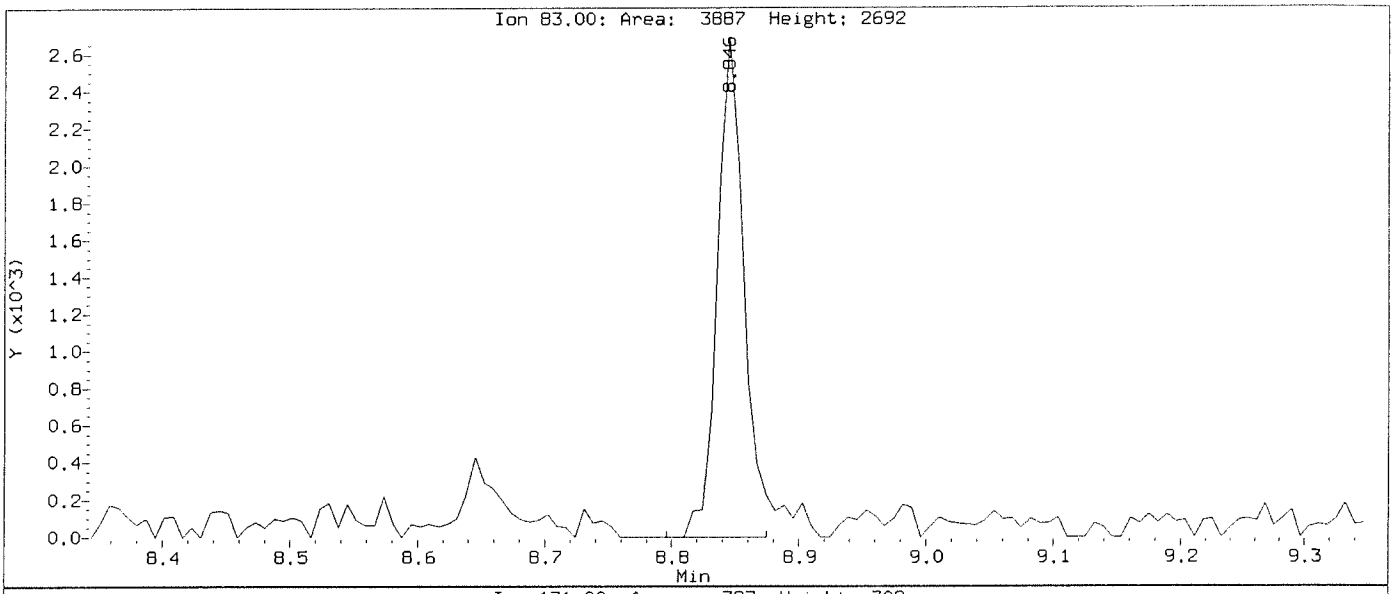
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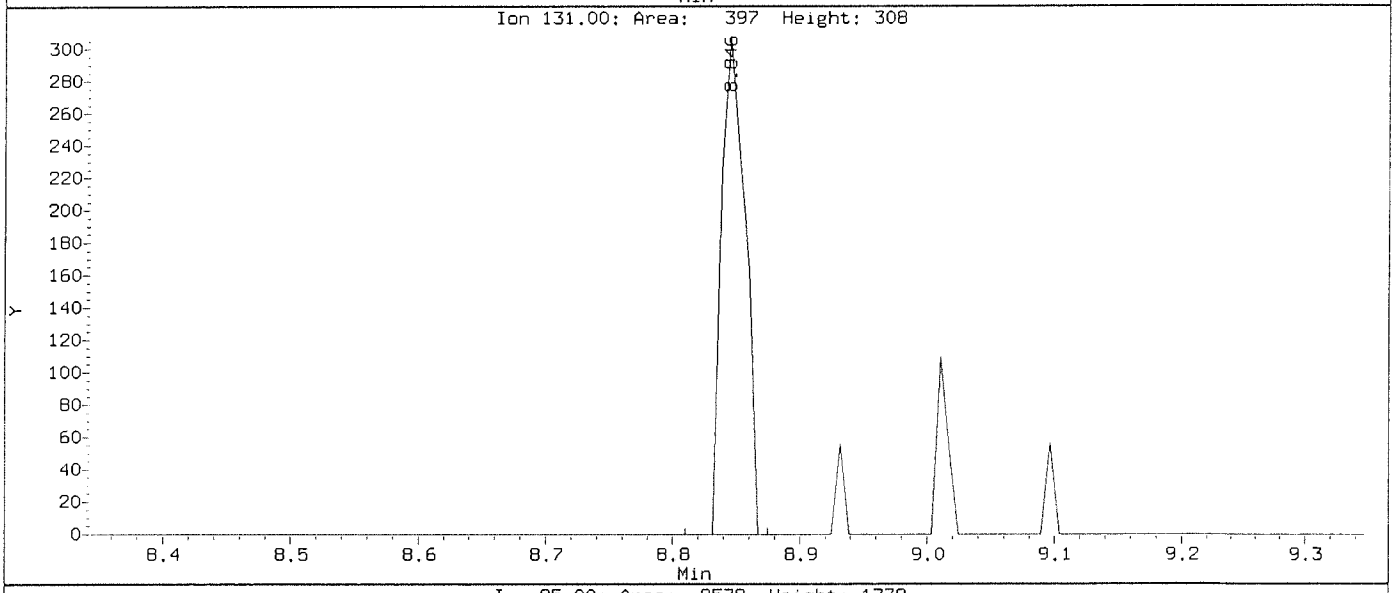
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CAS Number: 79-34-5

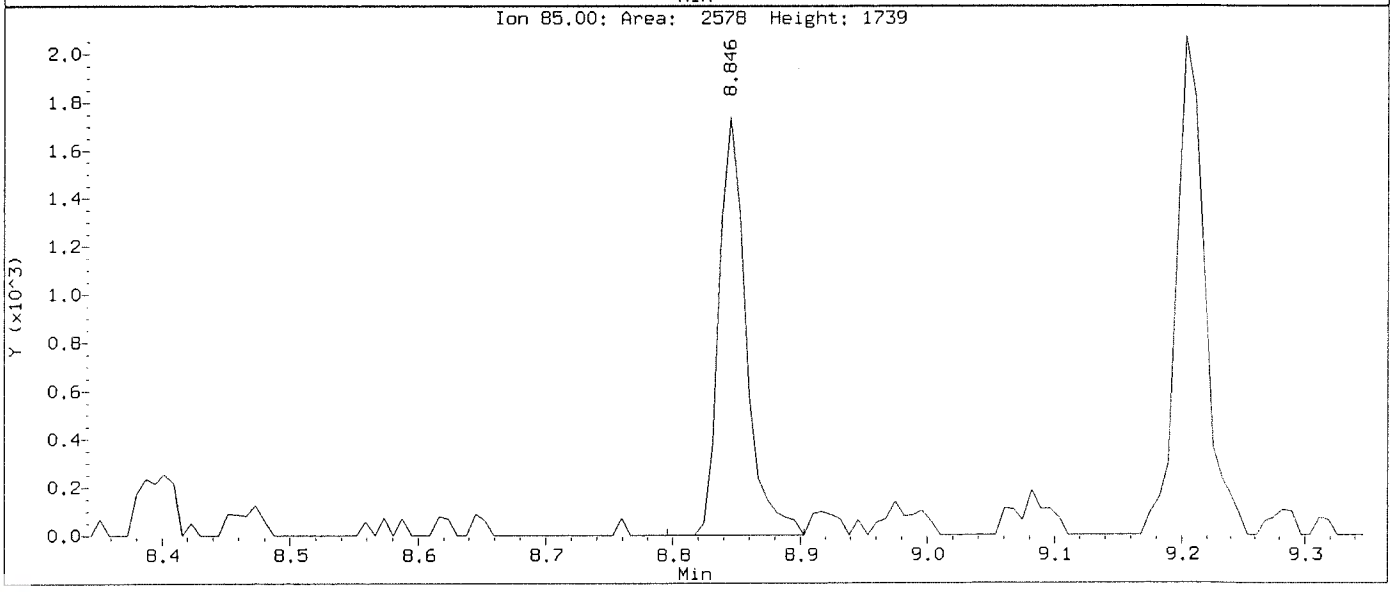


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Compound: 1,1,2,2-Tetrachloroethane
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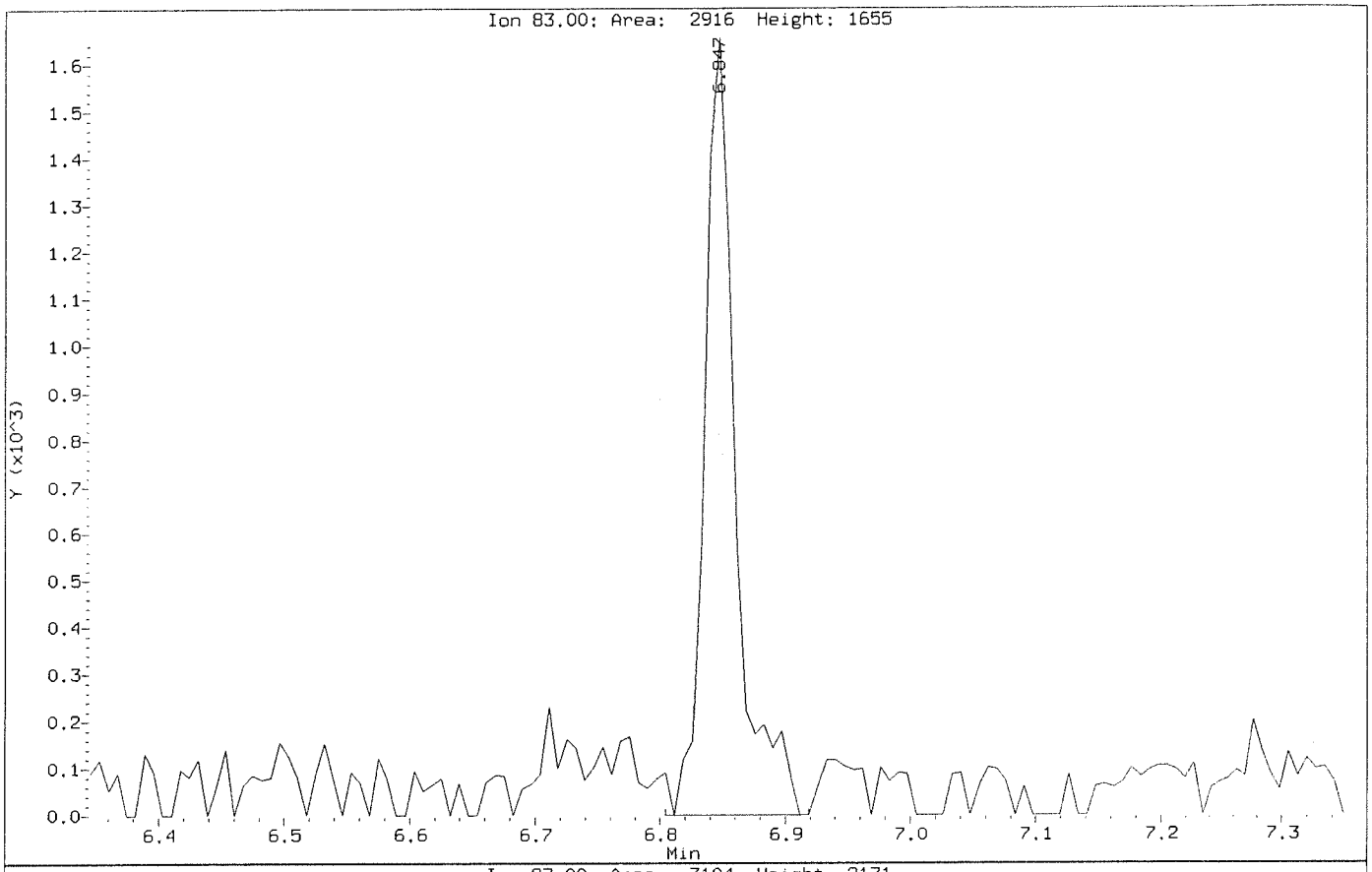


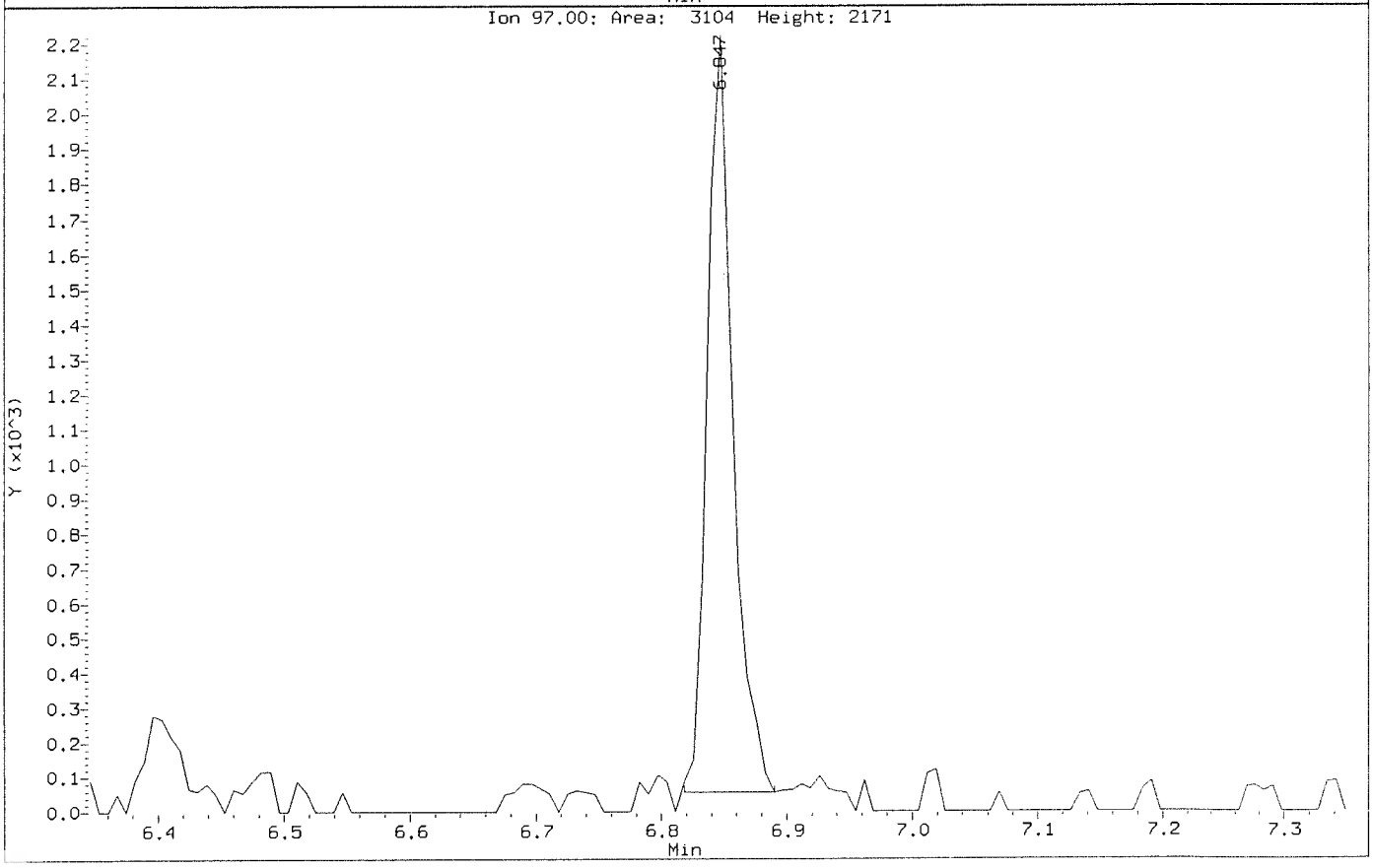



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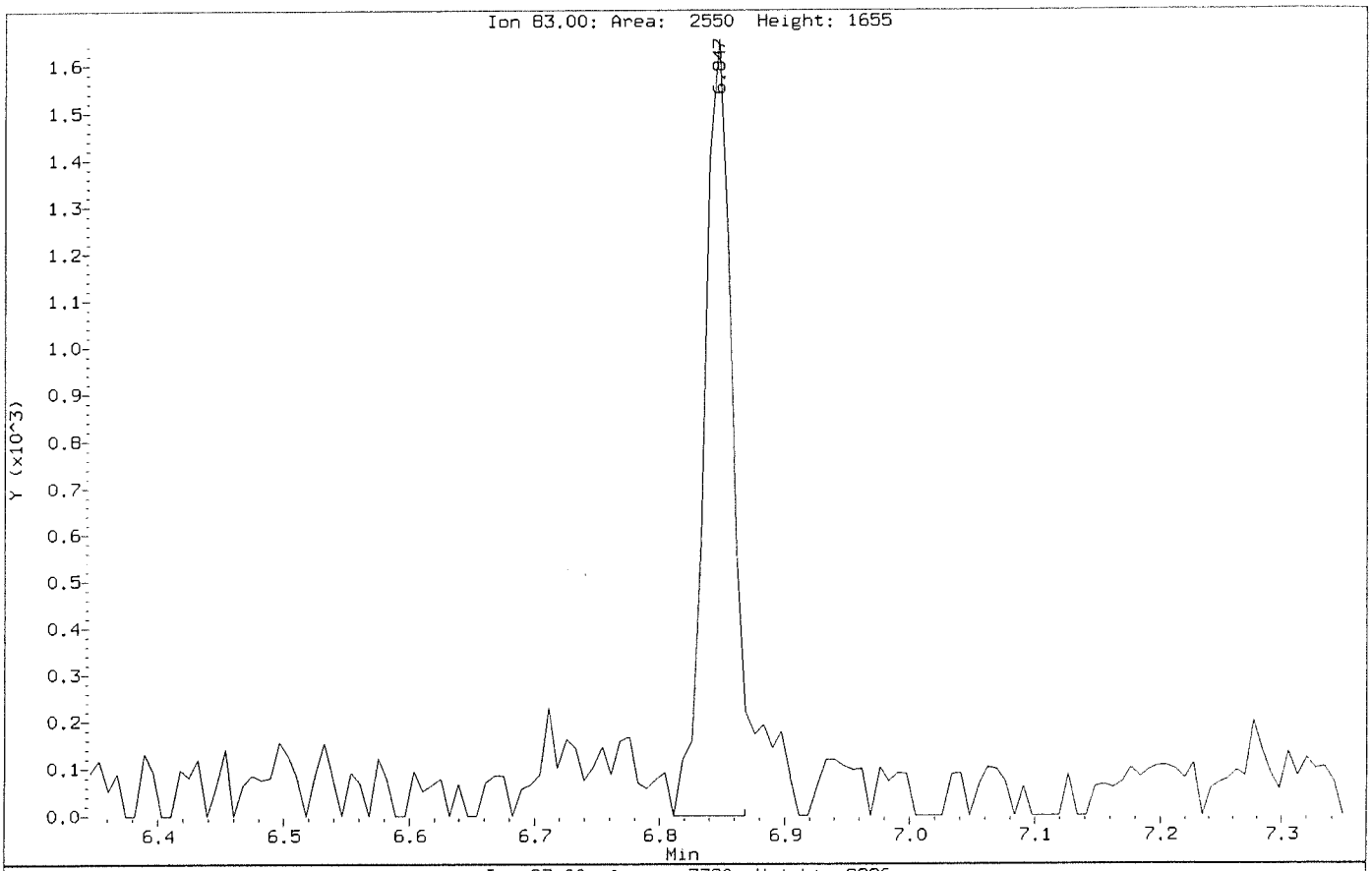
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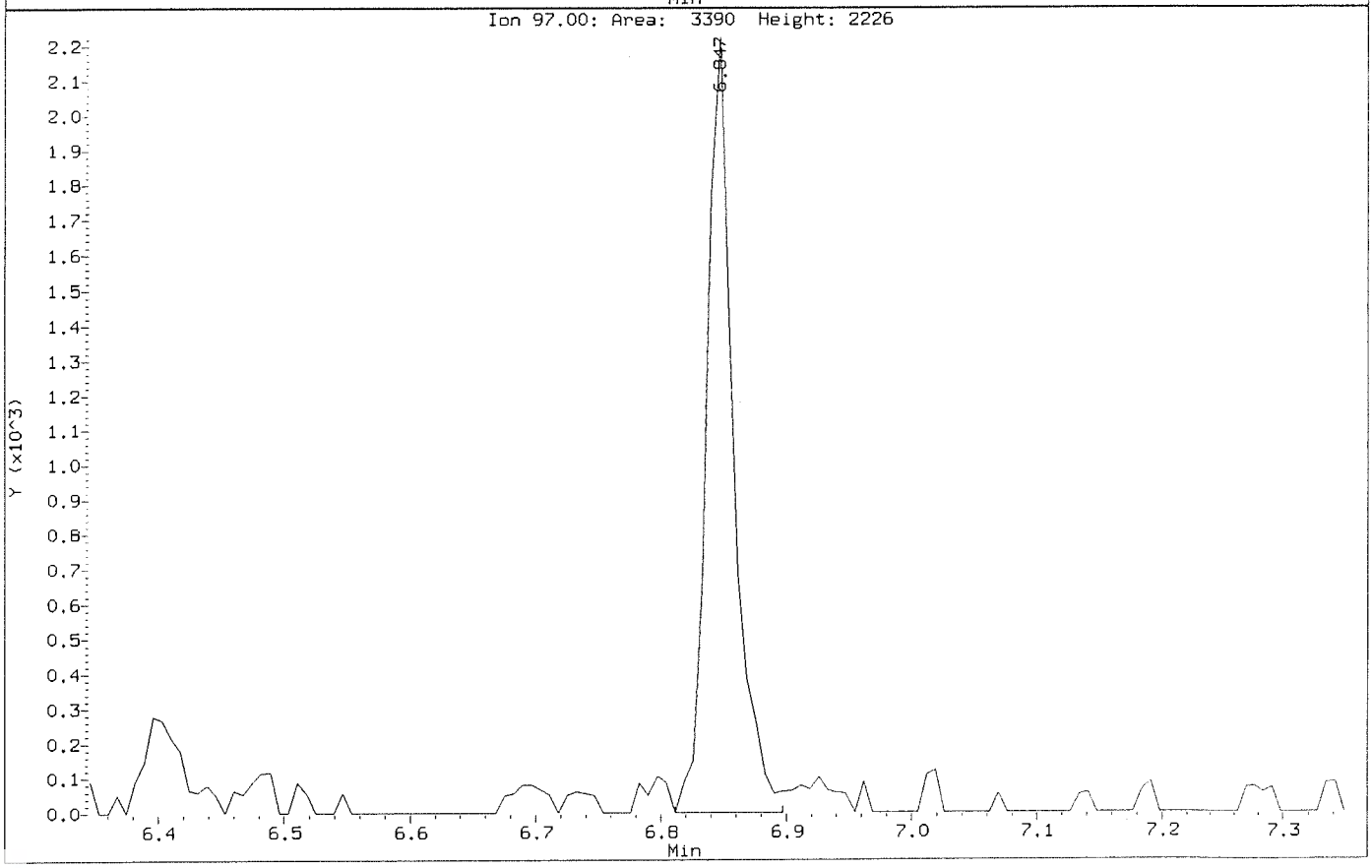


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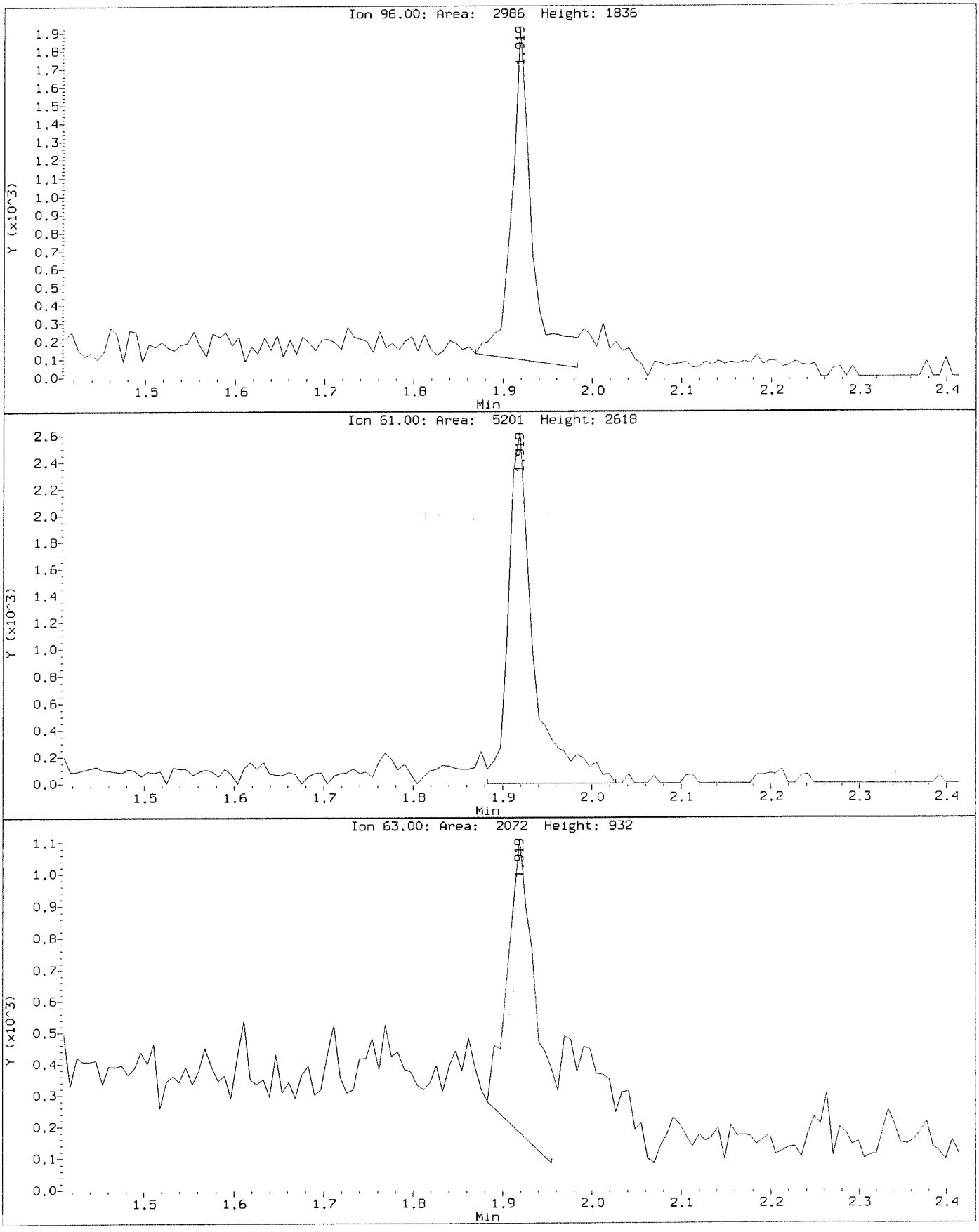
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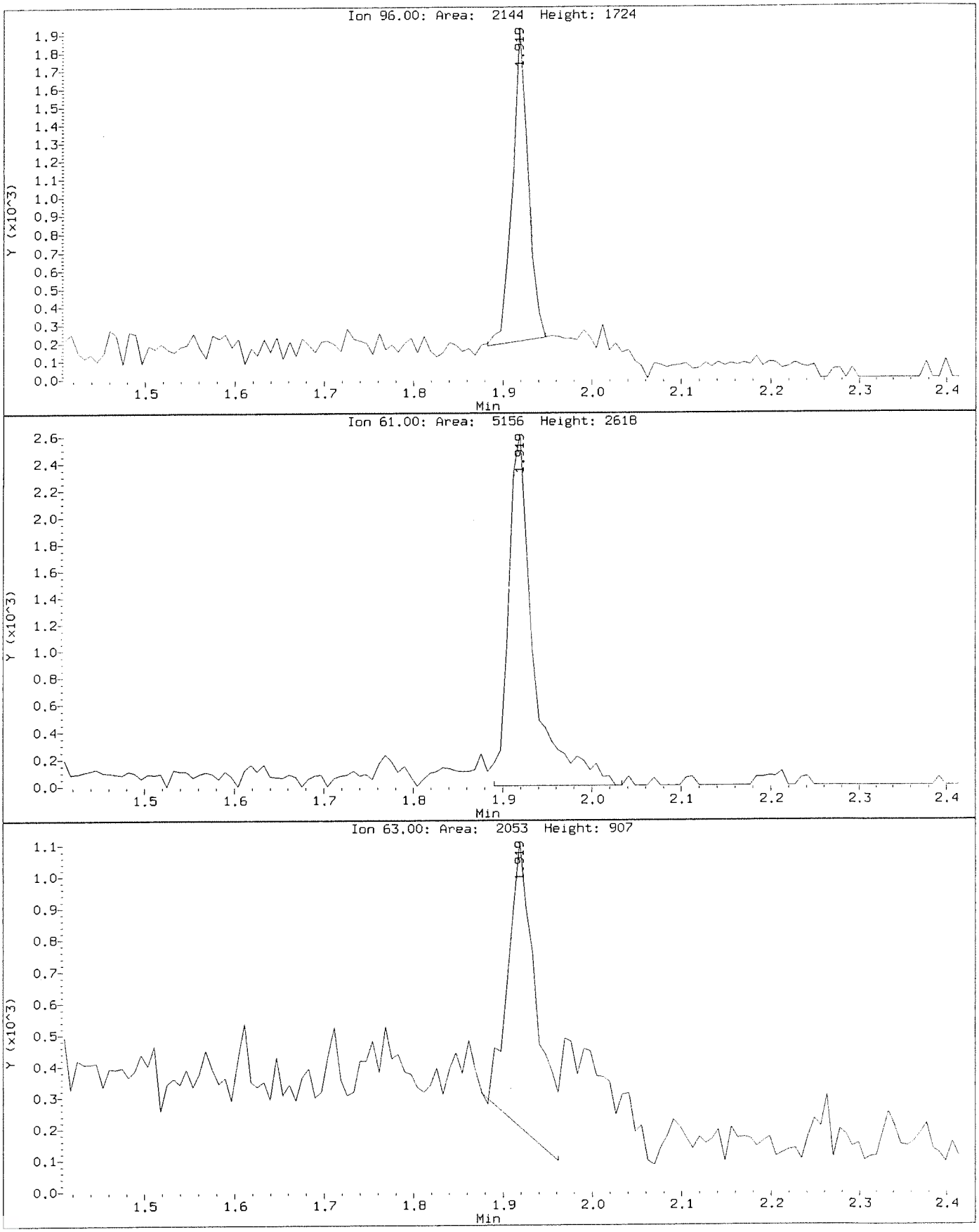
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



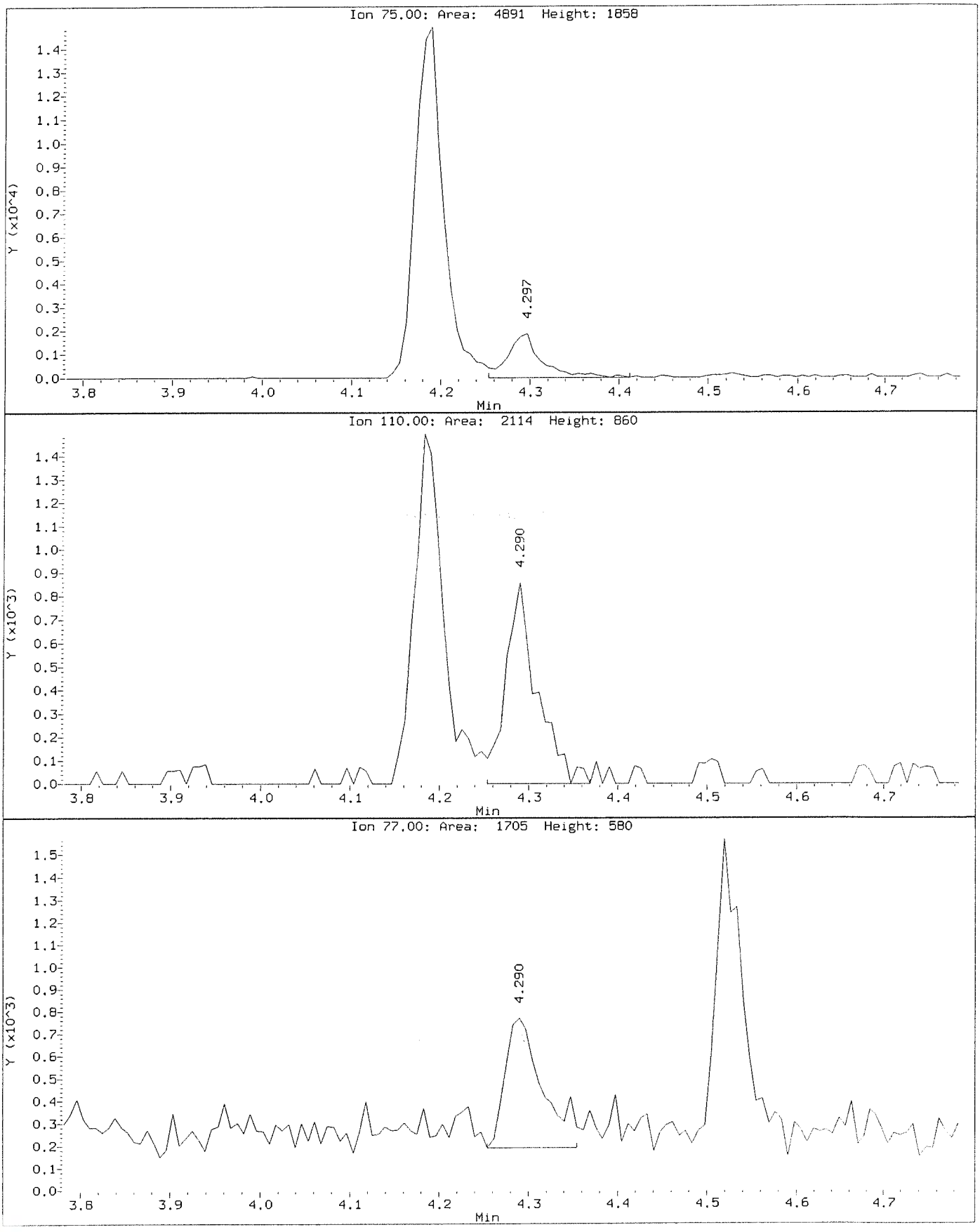
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



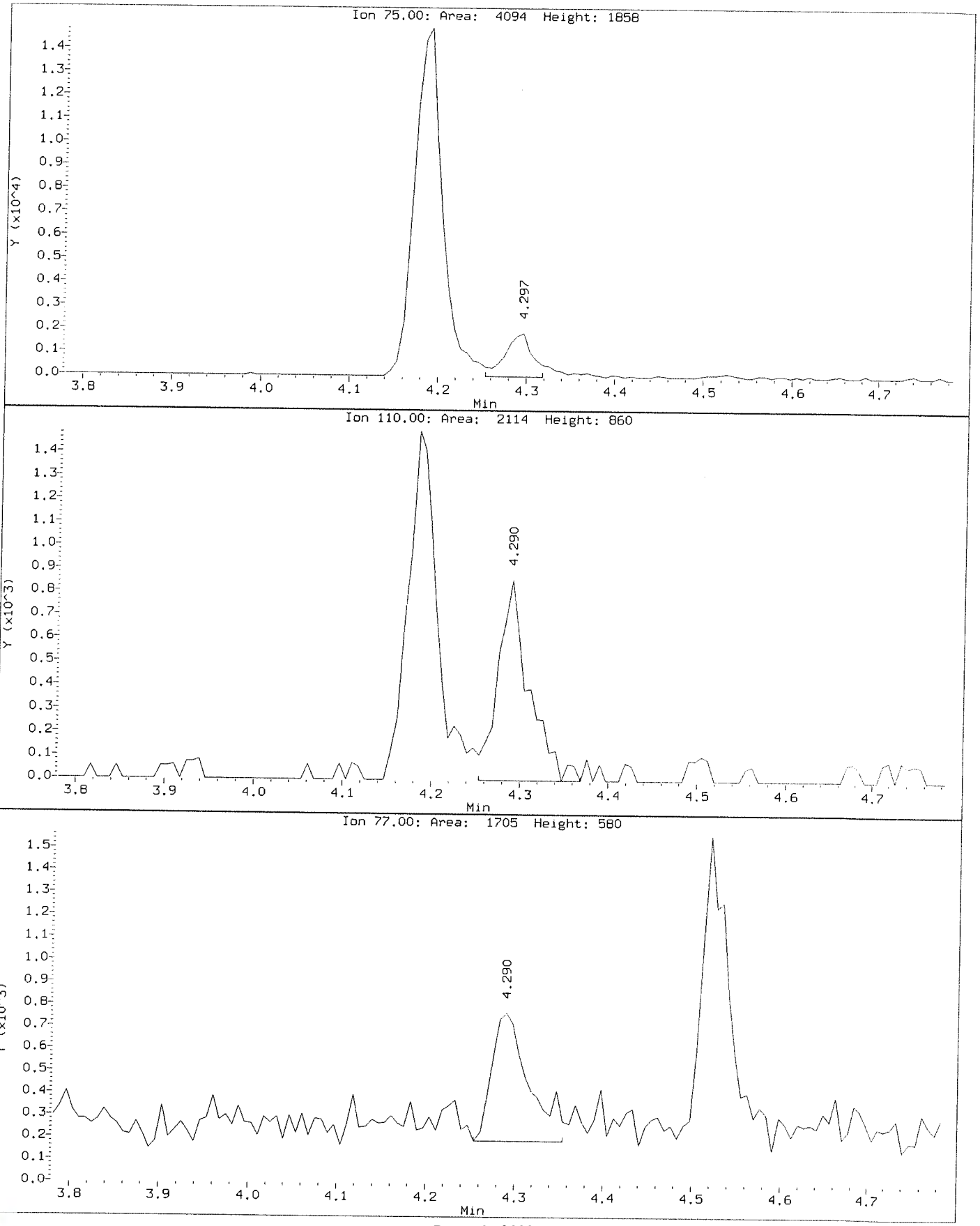
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



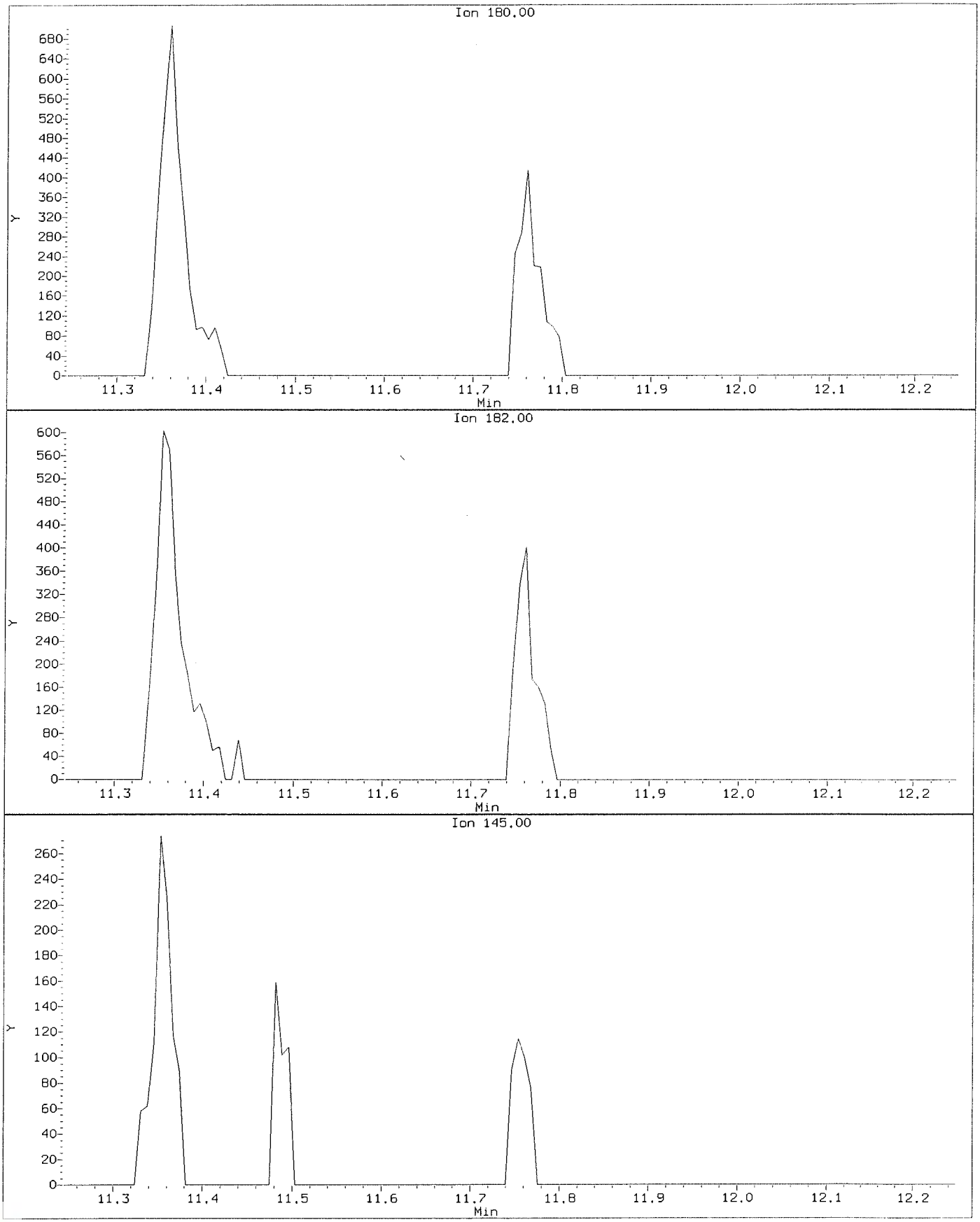
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



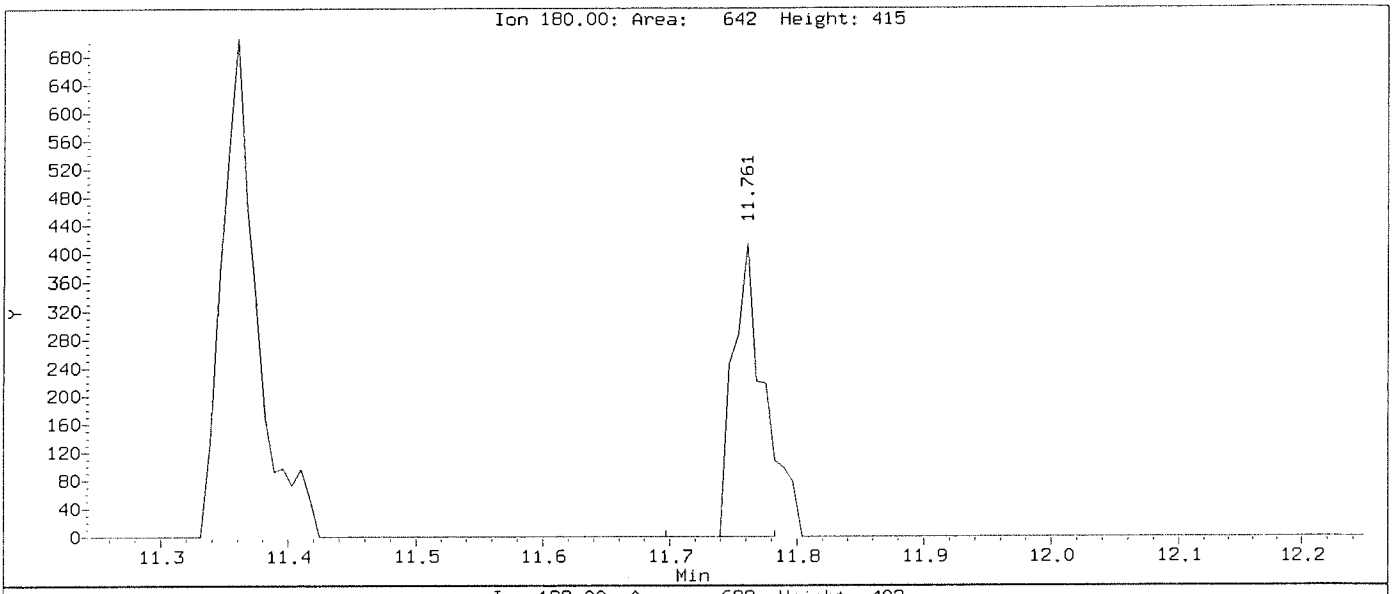
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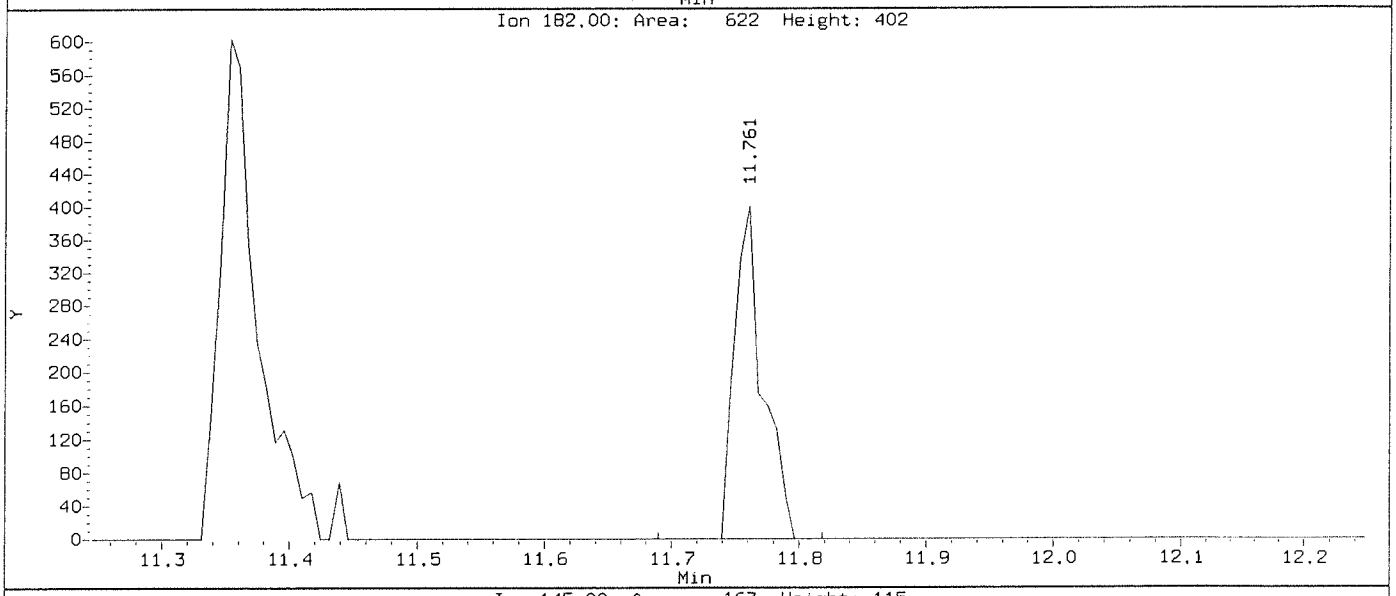
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

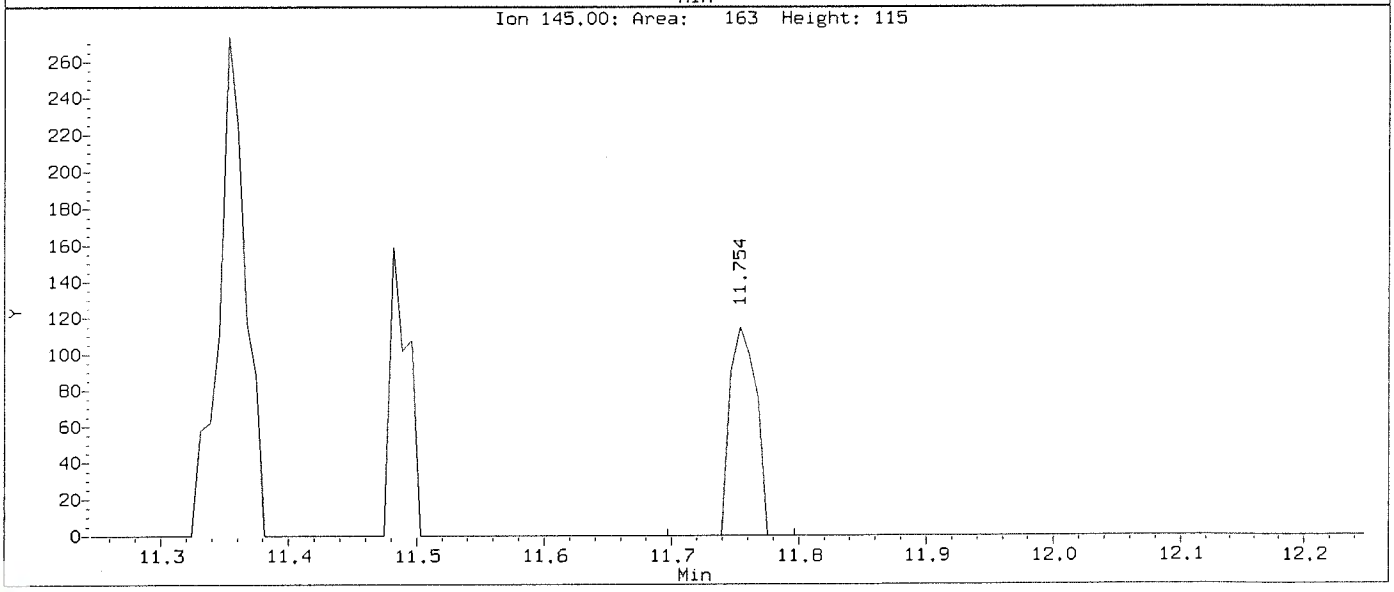


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

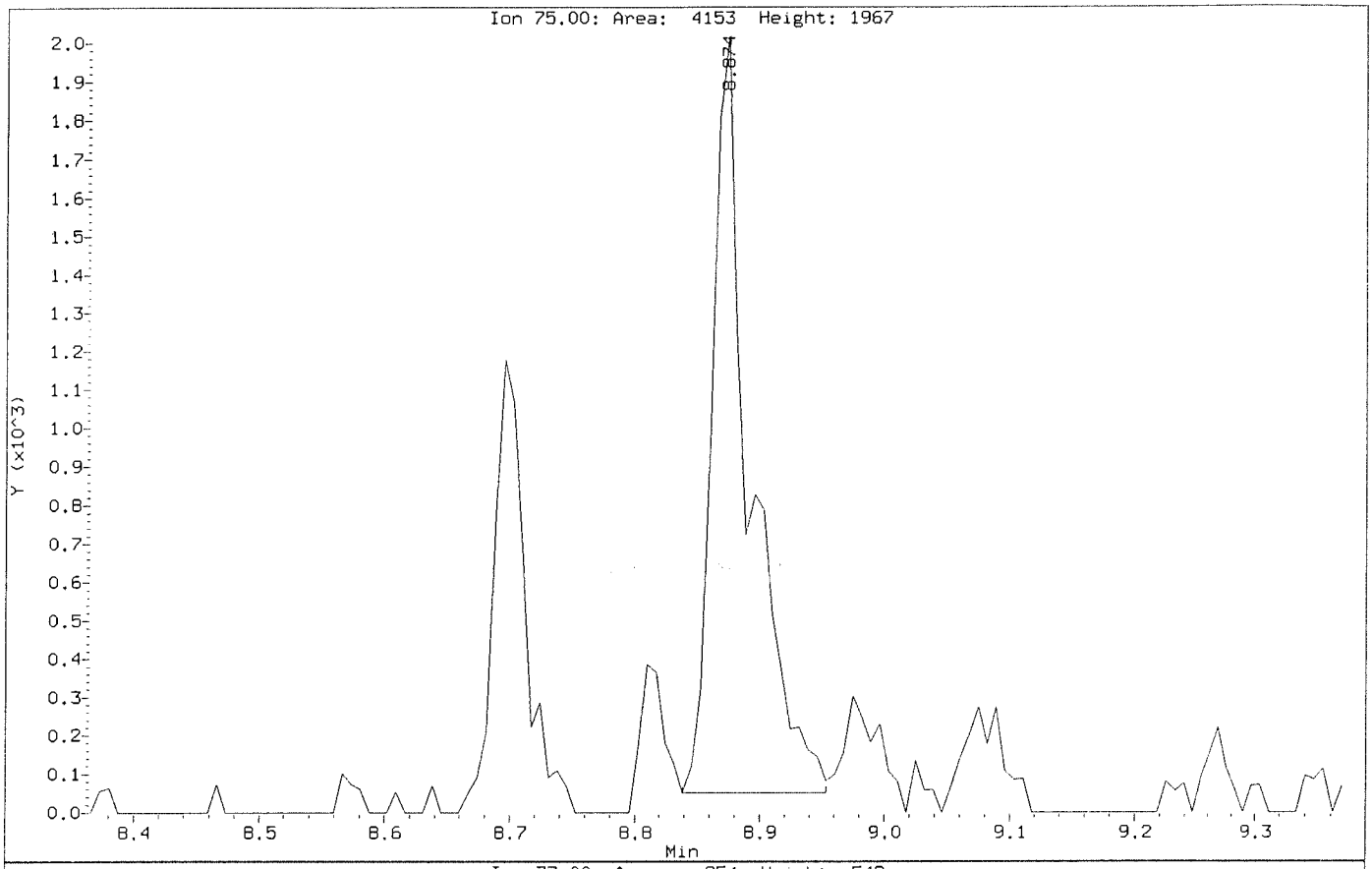


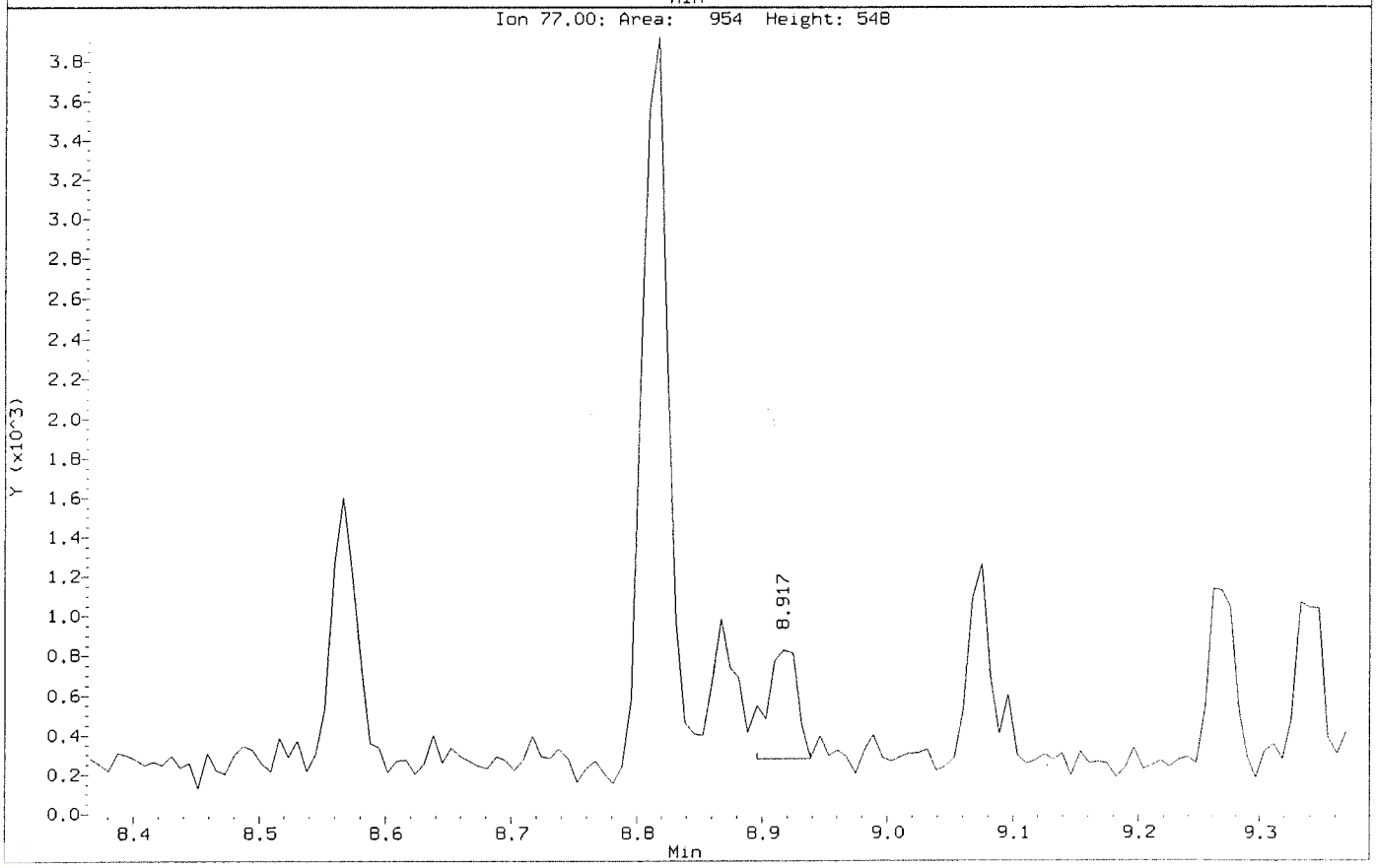



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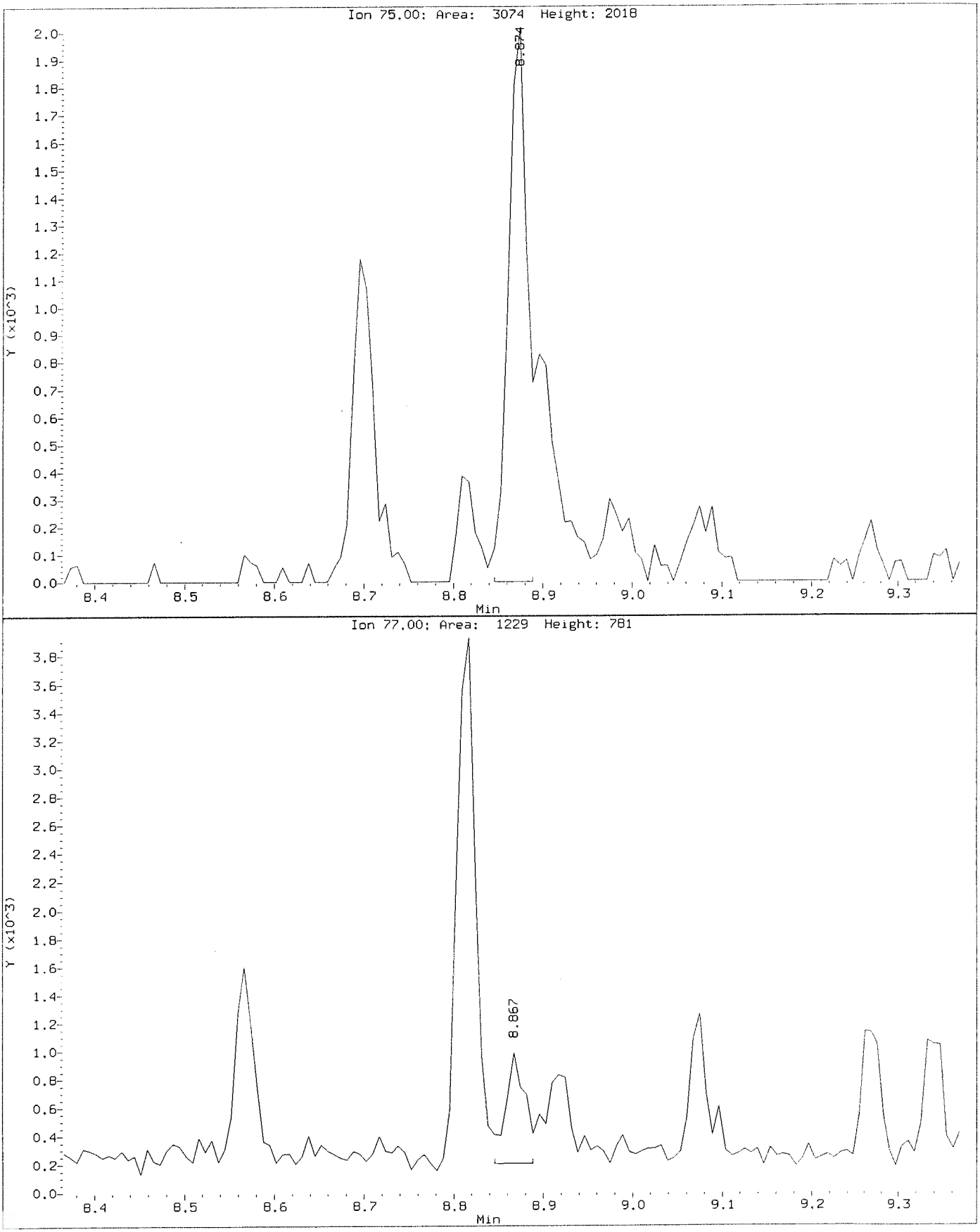
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



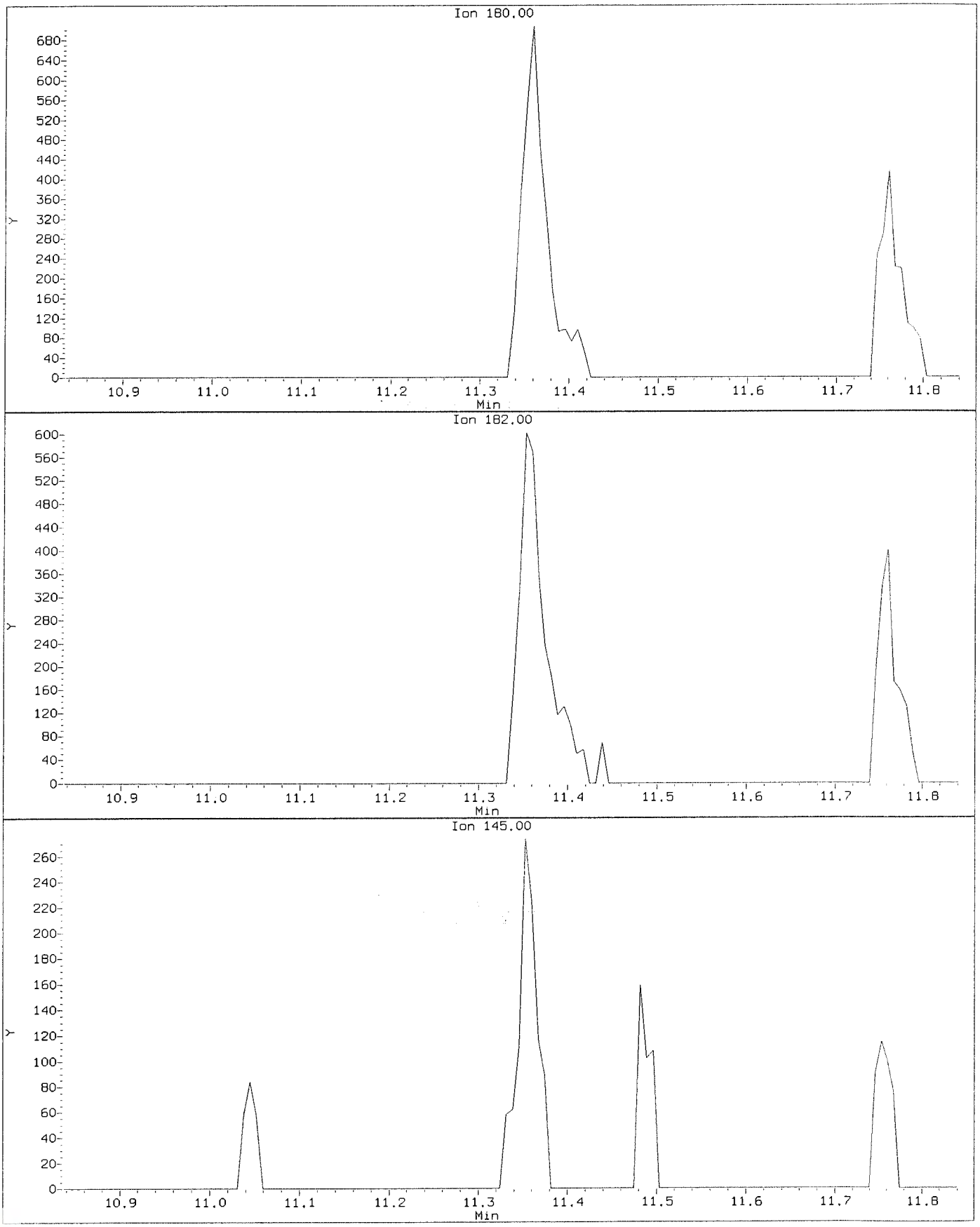
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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



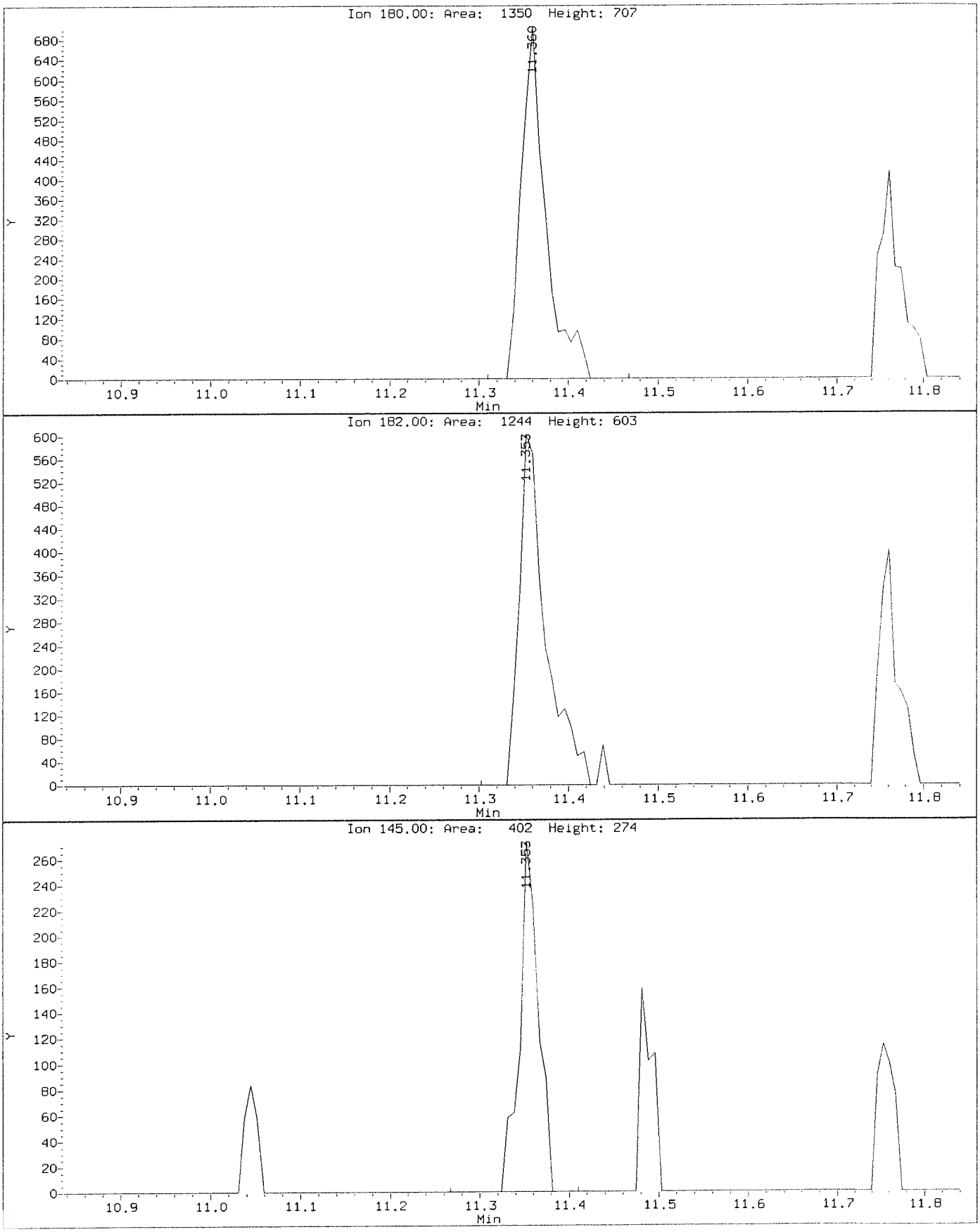
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Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



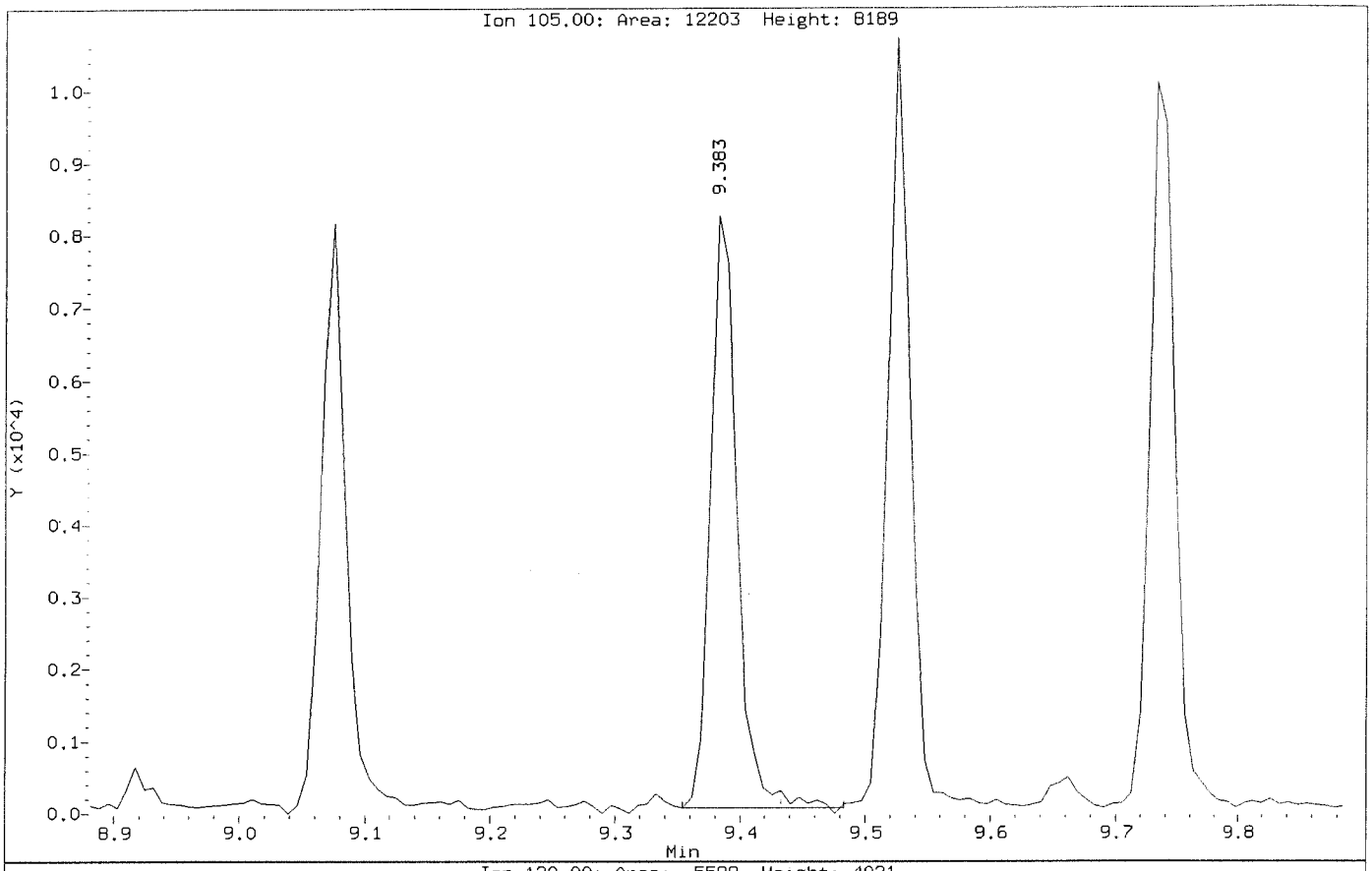
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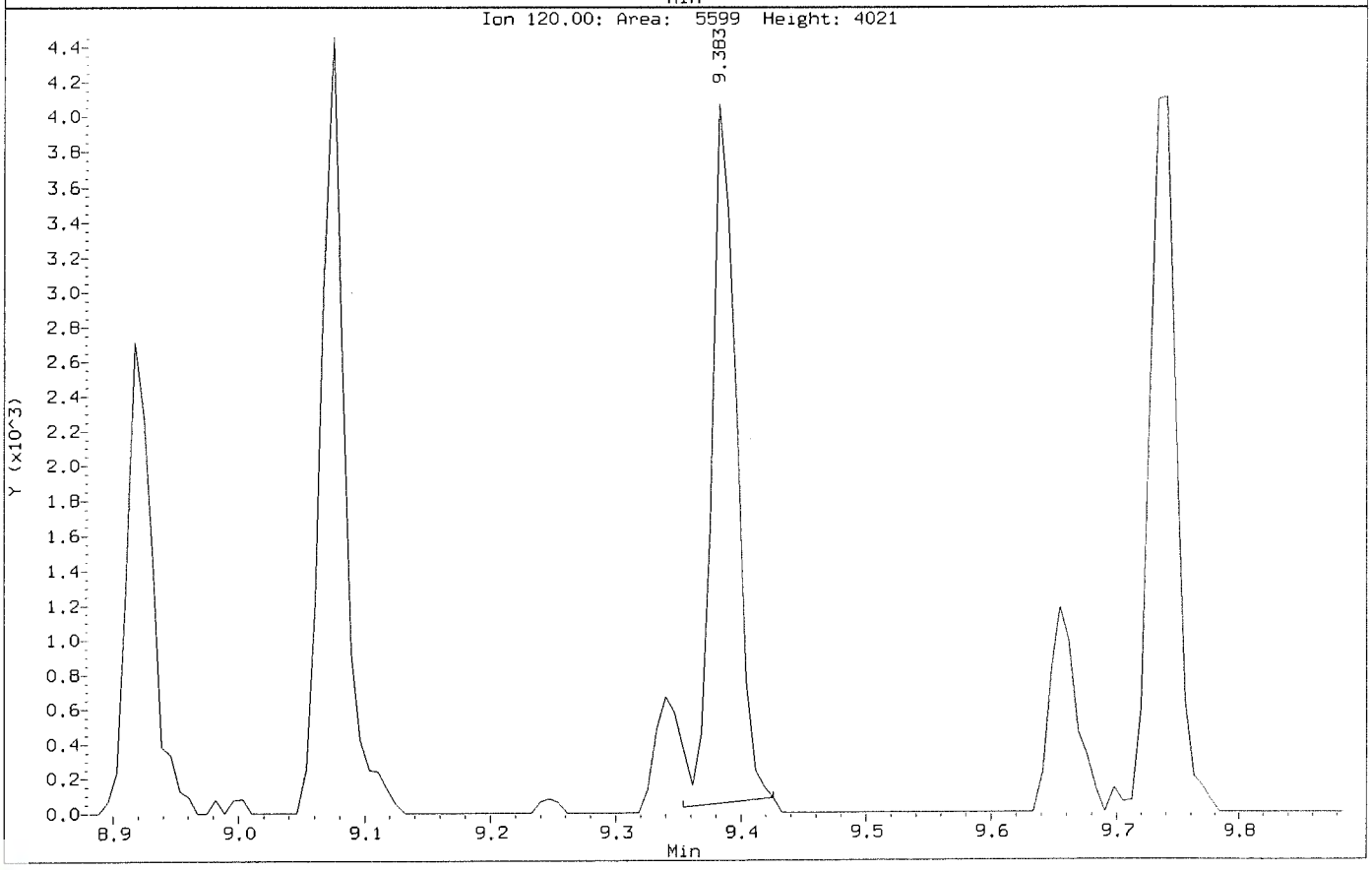
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CAS Number: 120-82-1



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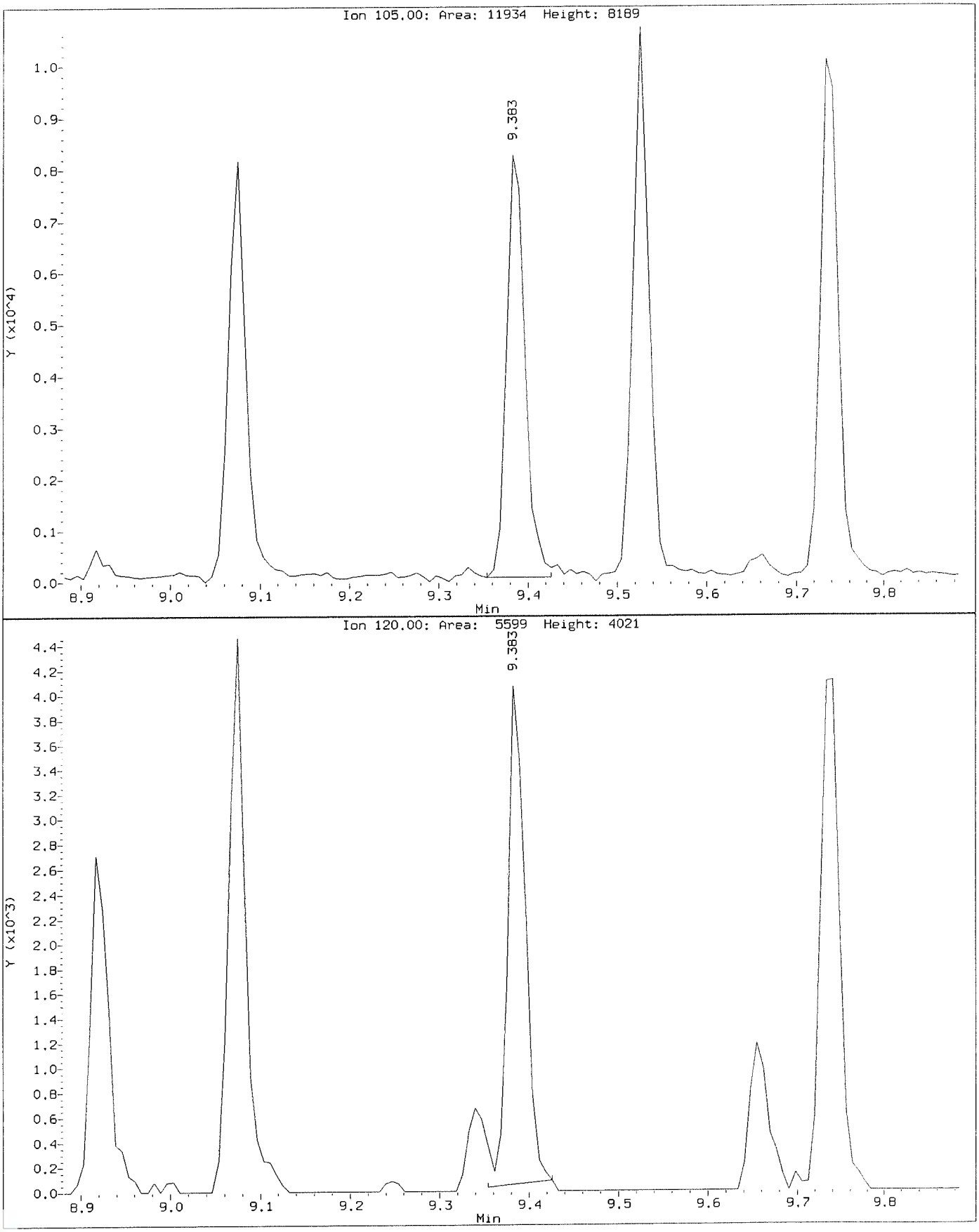
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



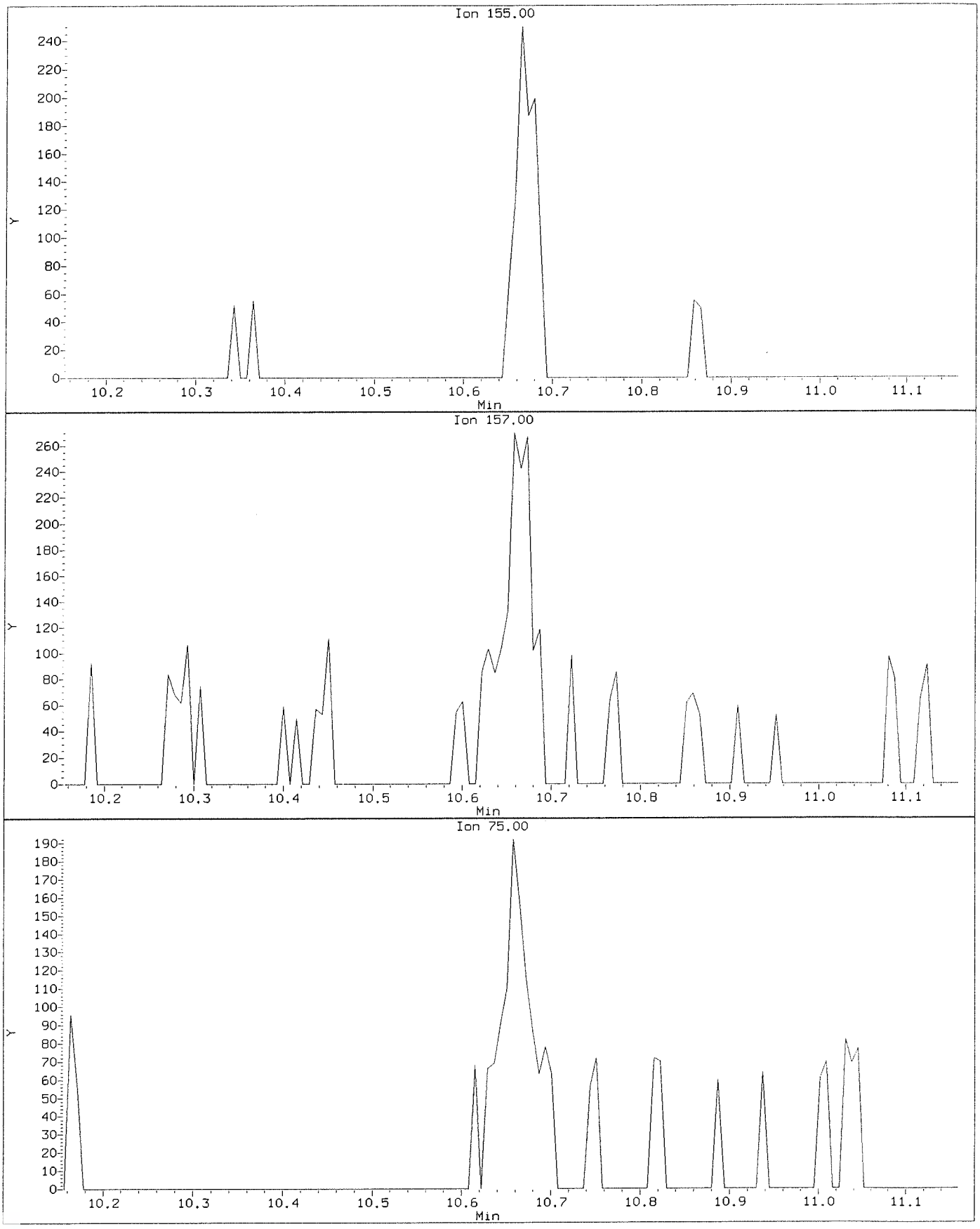
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Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



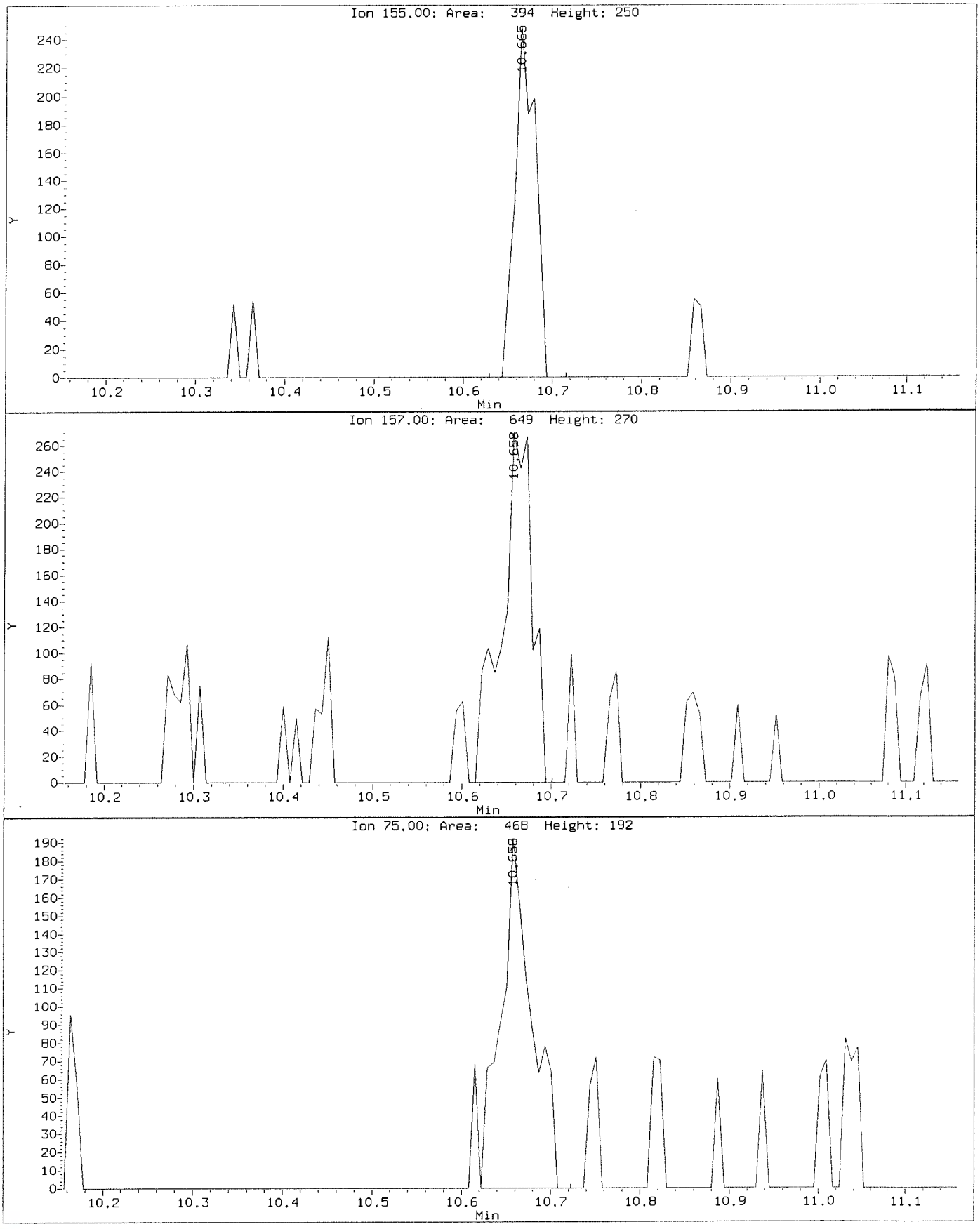
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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



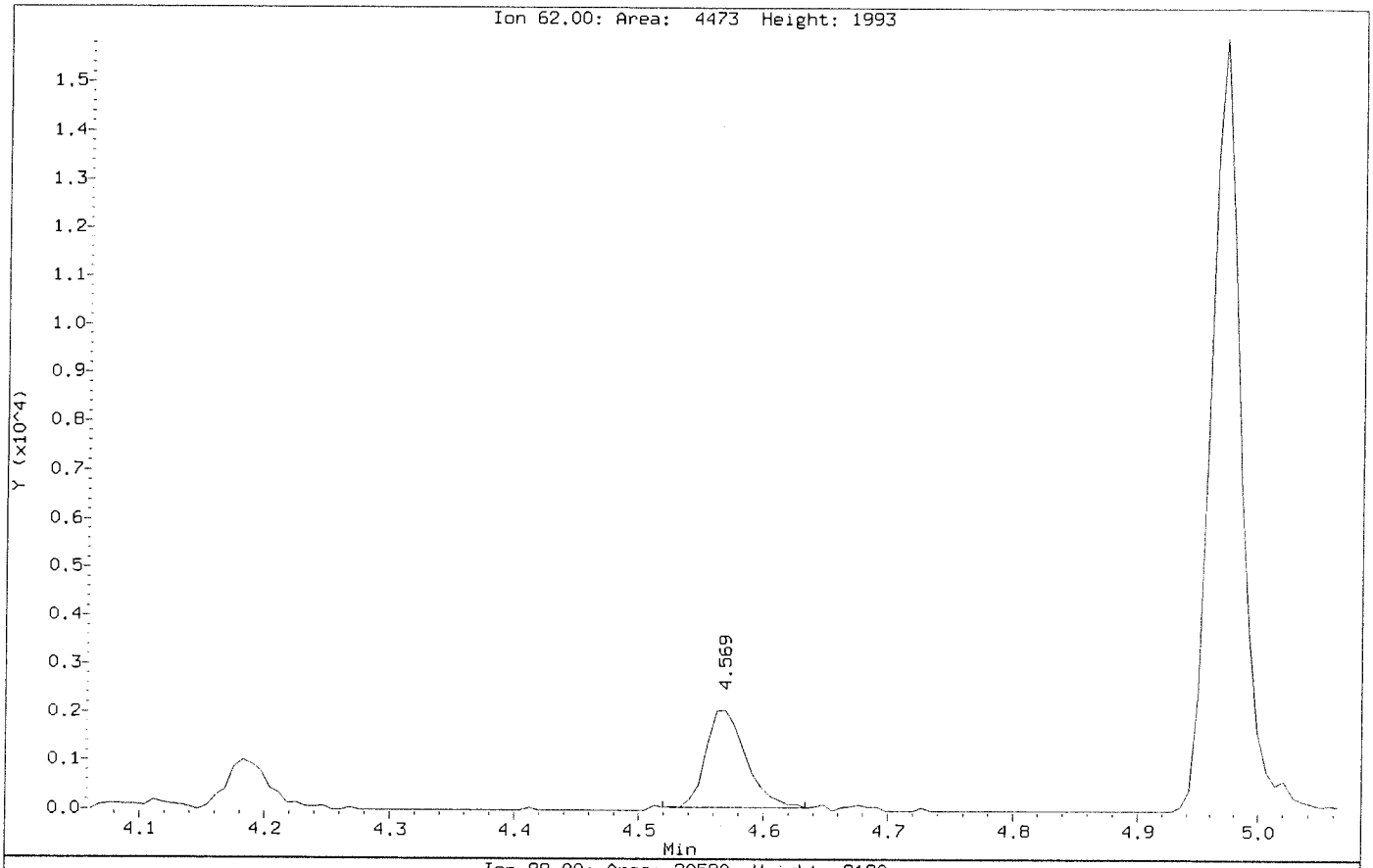
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

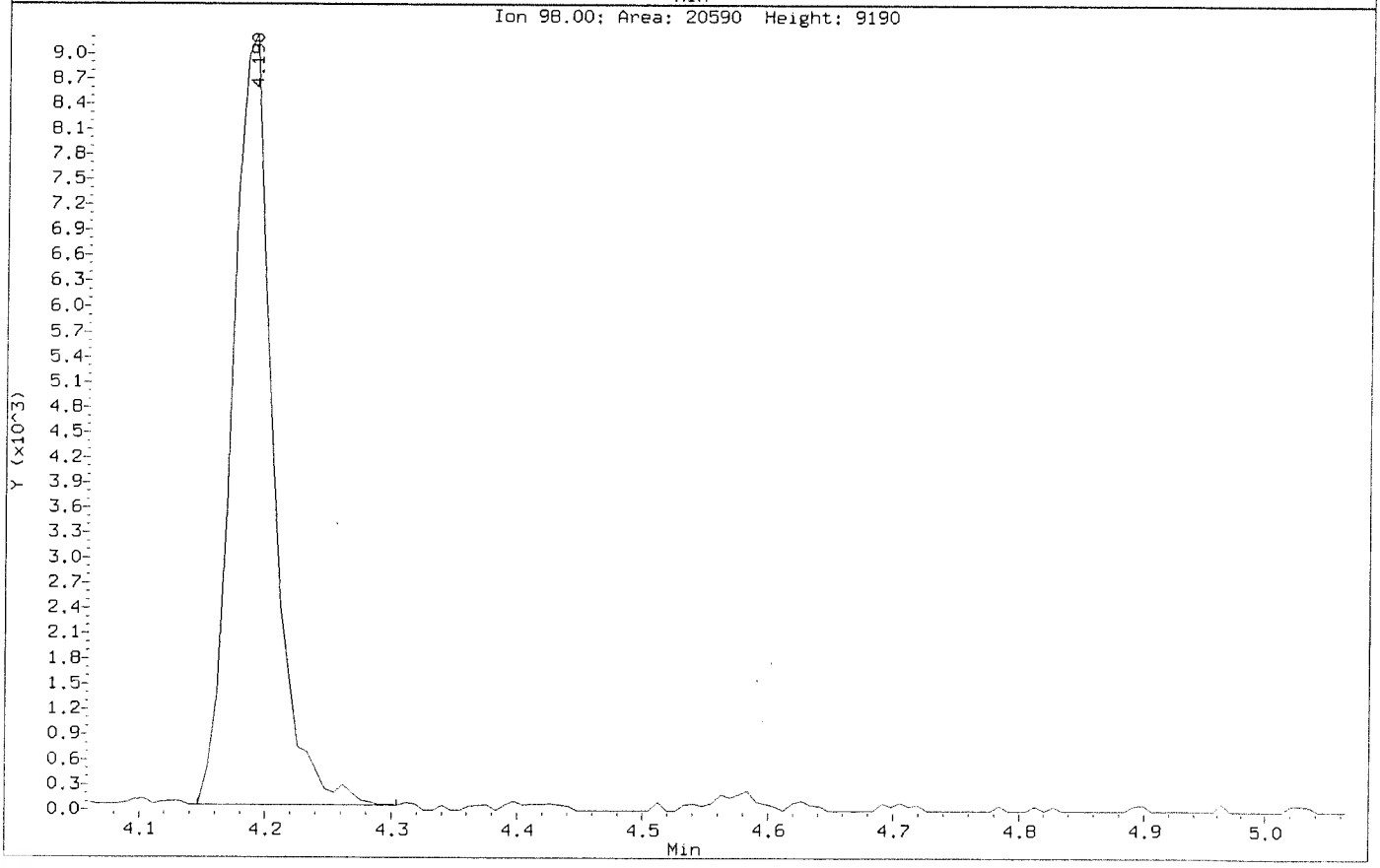
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Instrument: voa6.i
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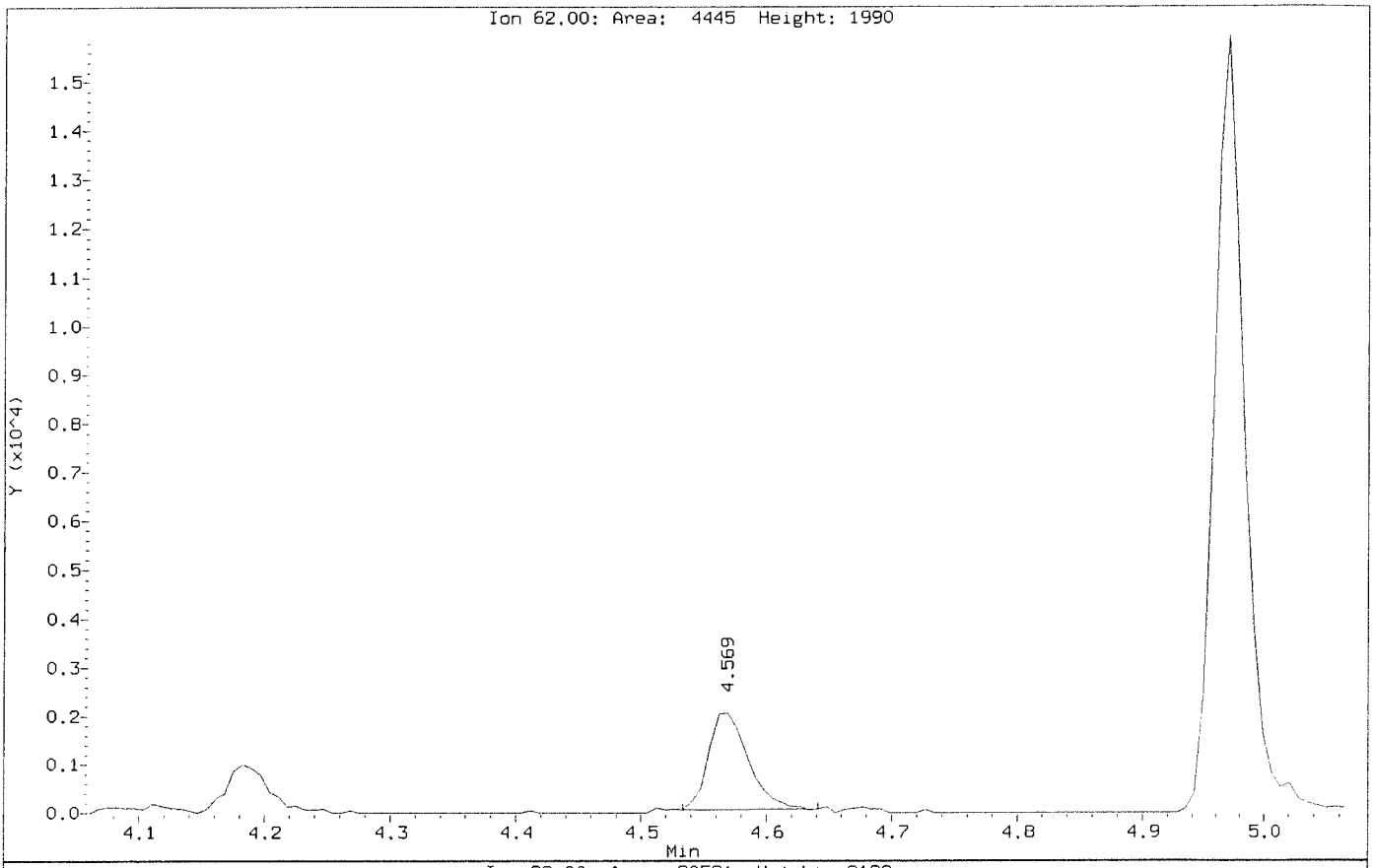
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

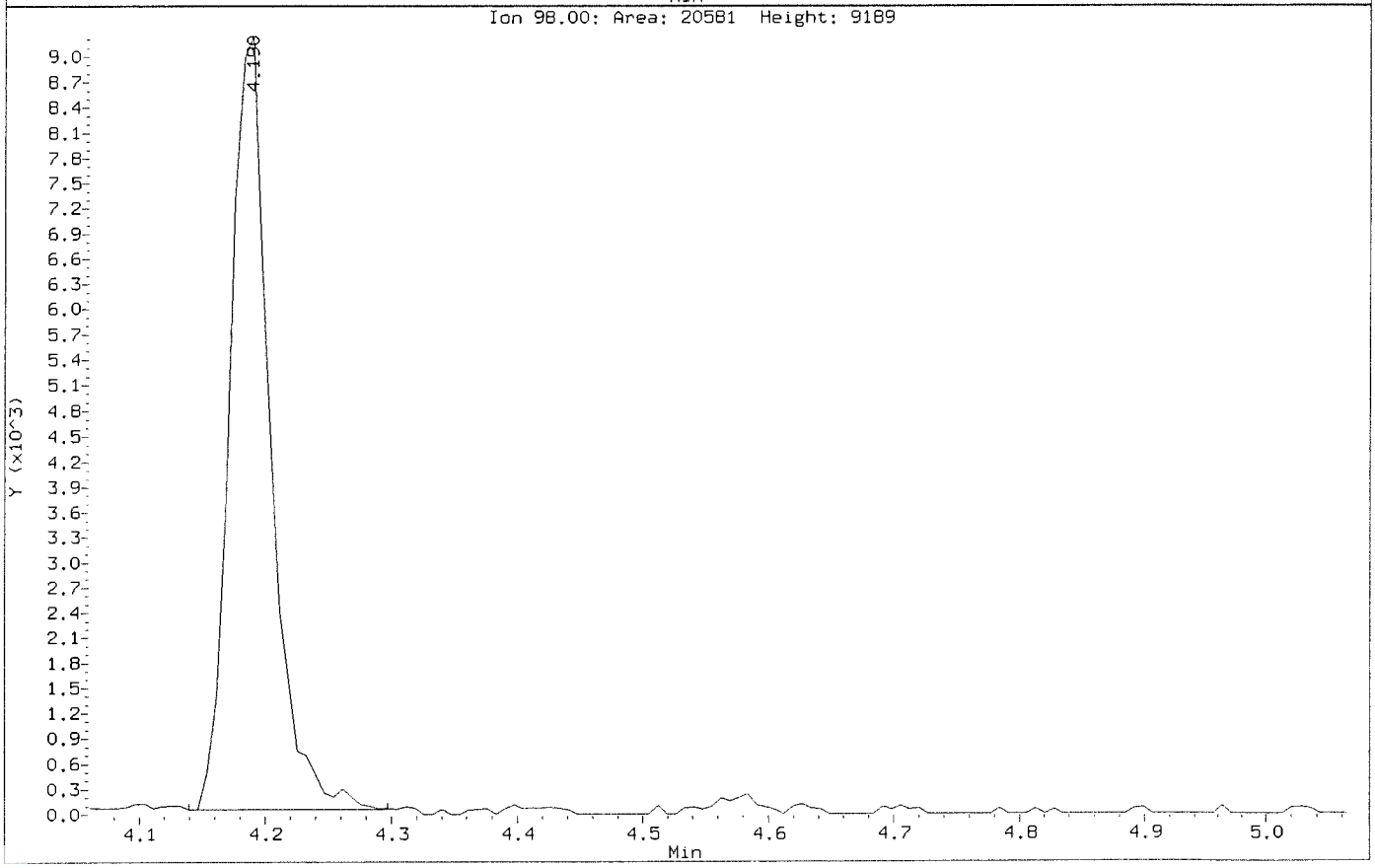


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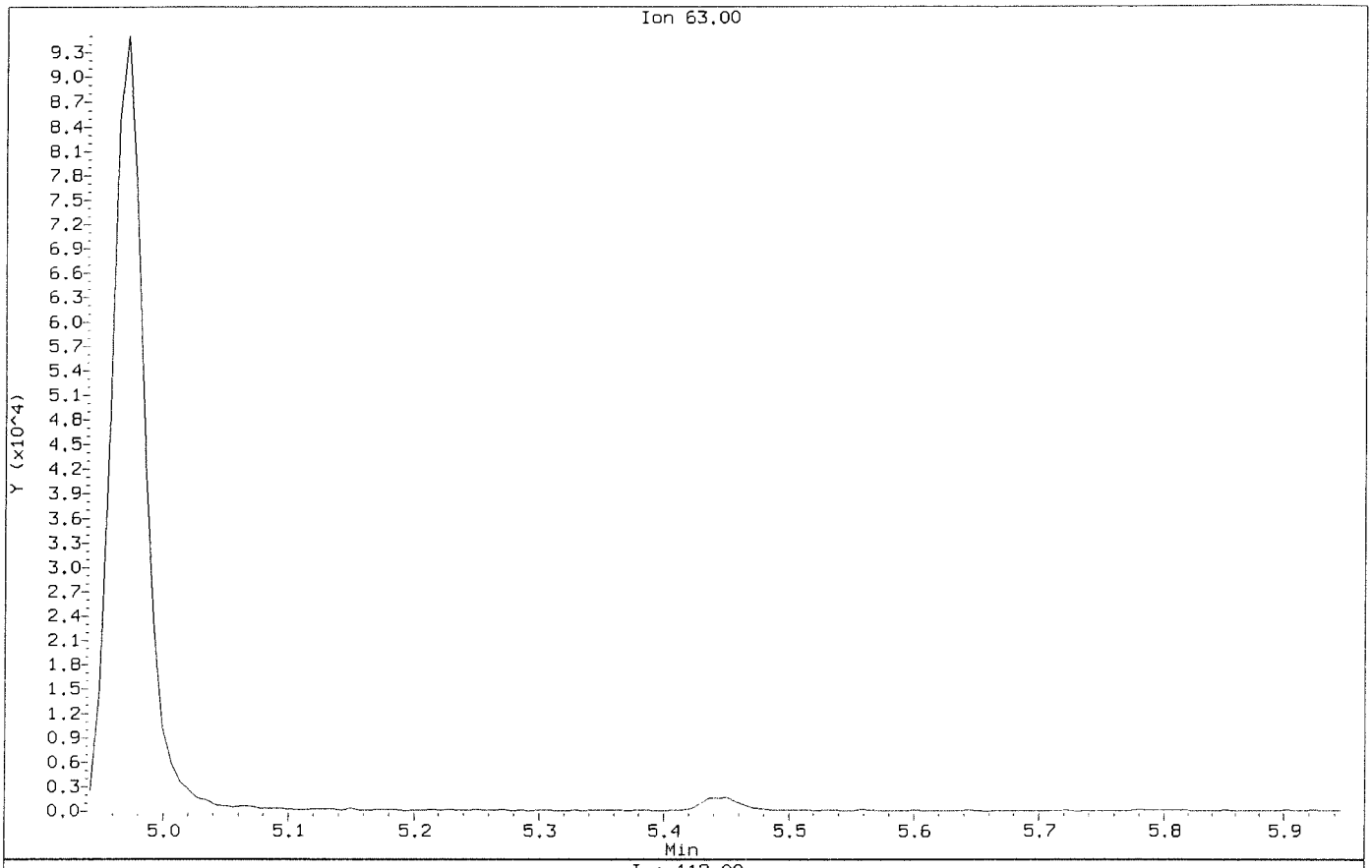
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

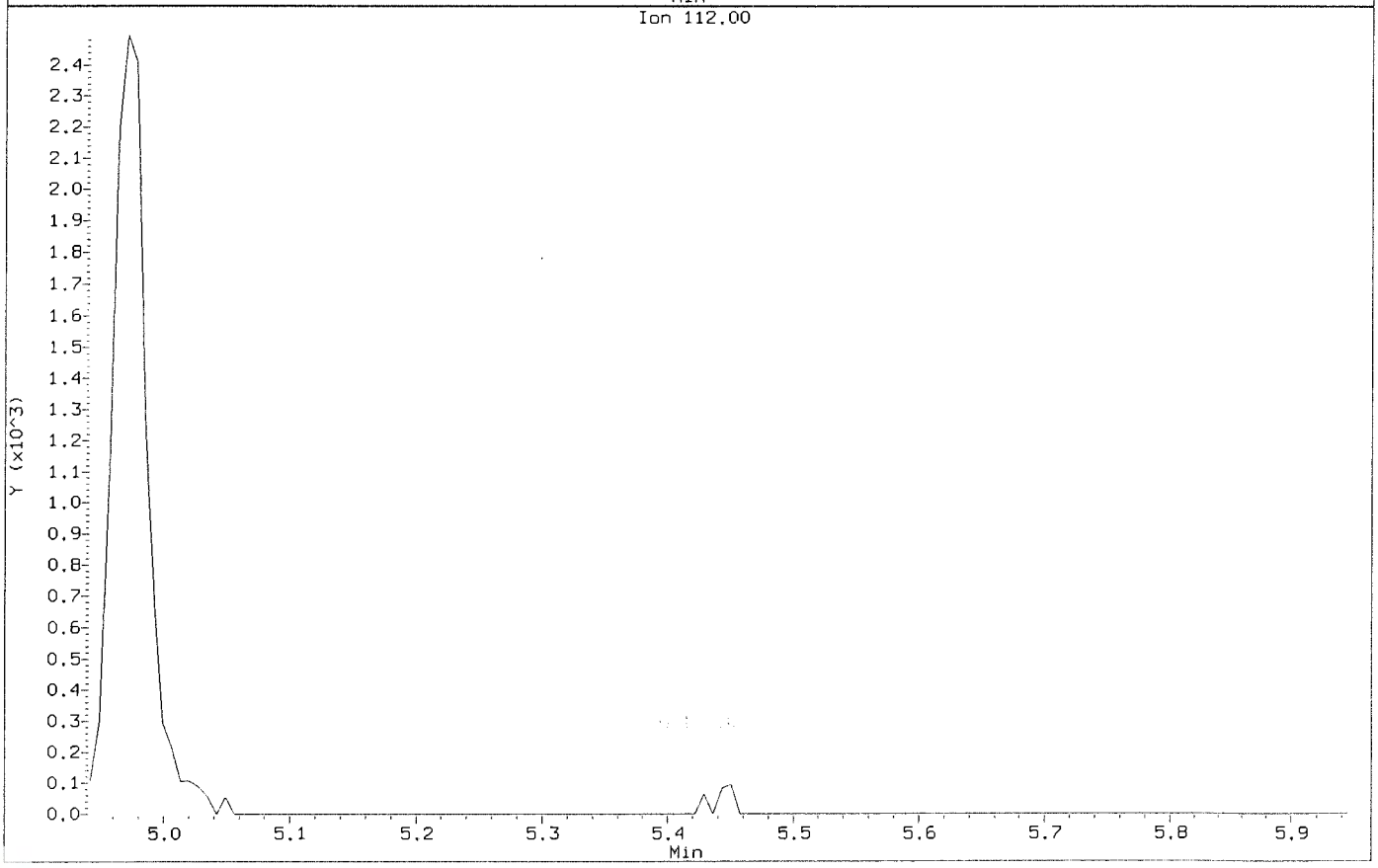


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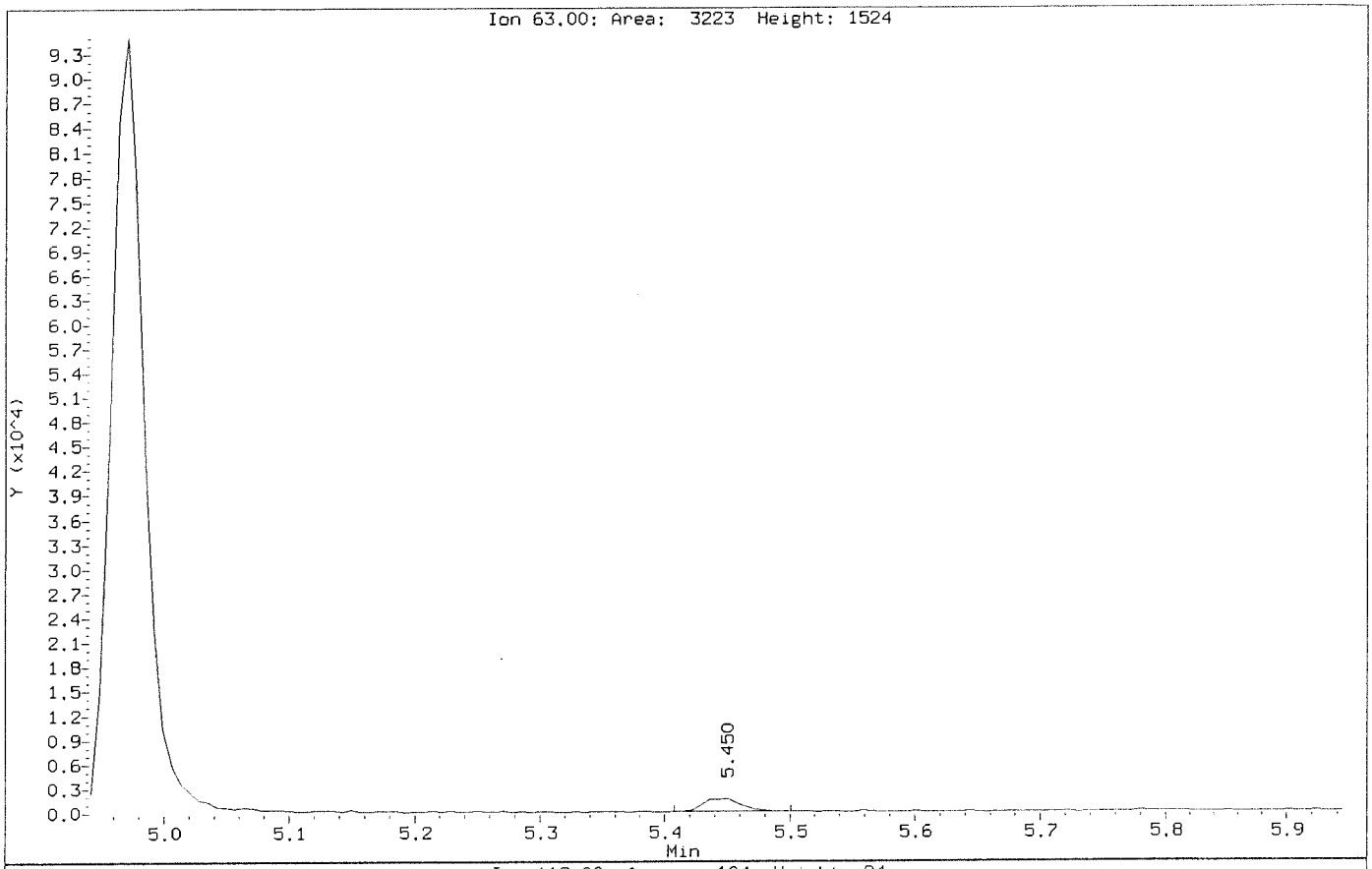
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

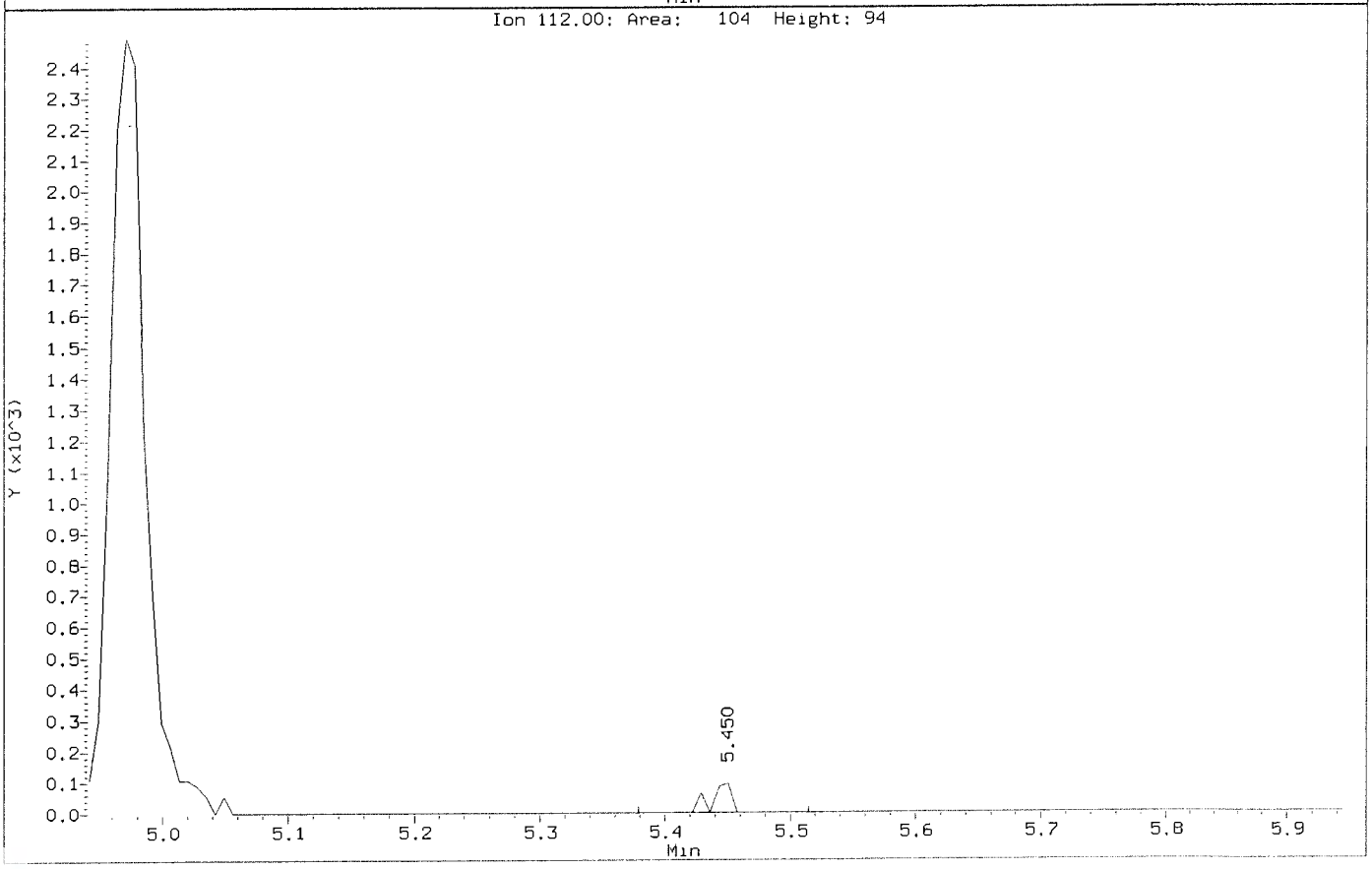


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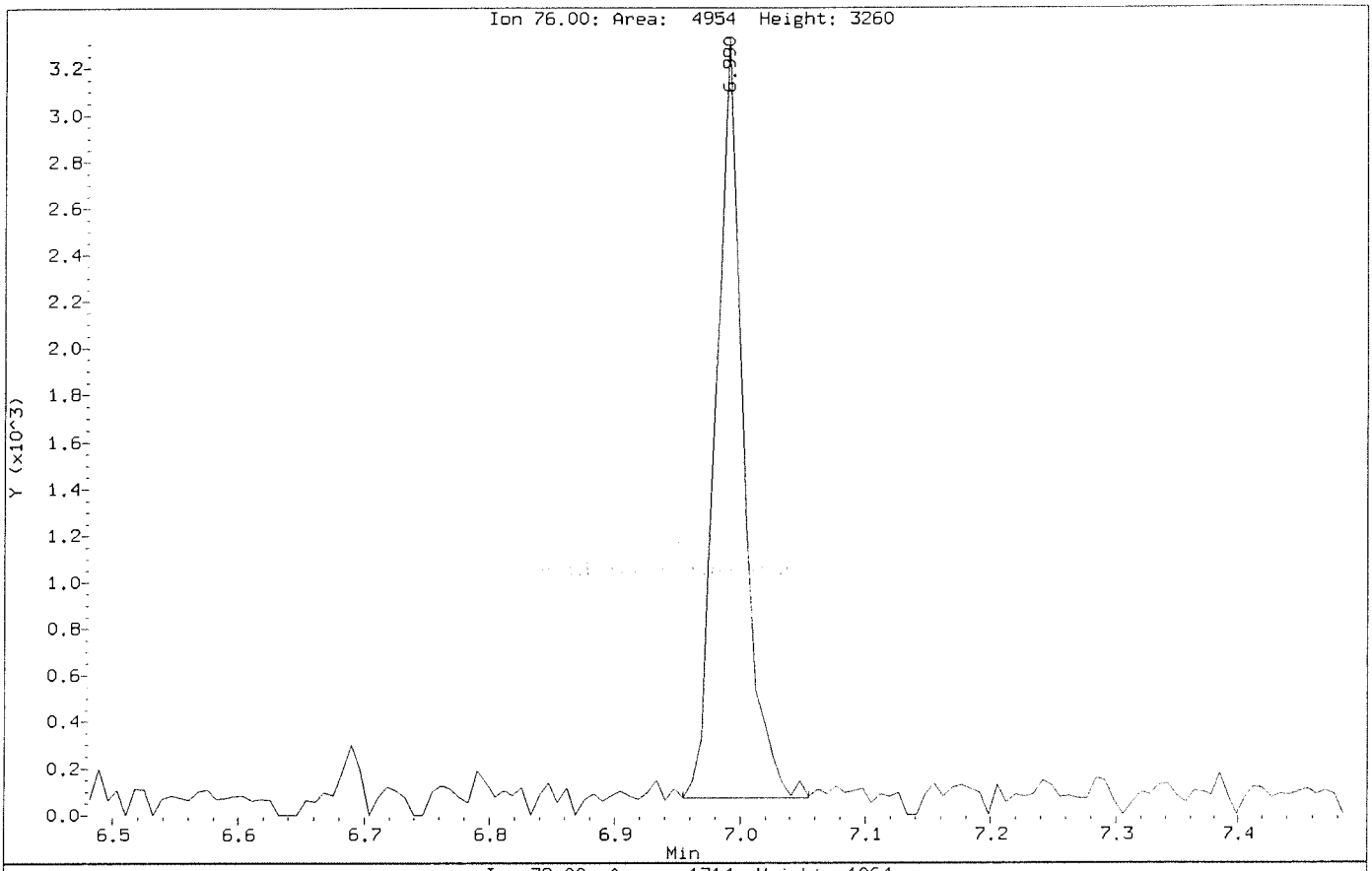
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

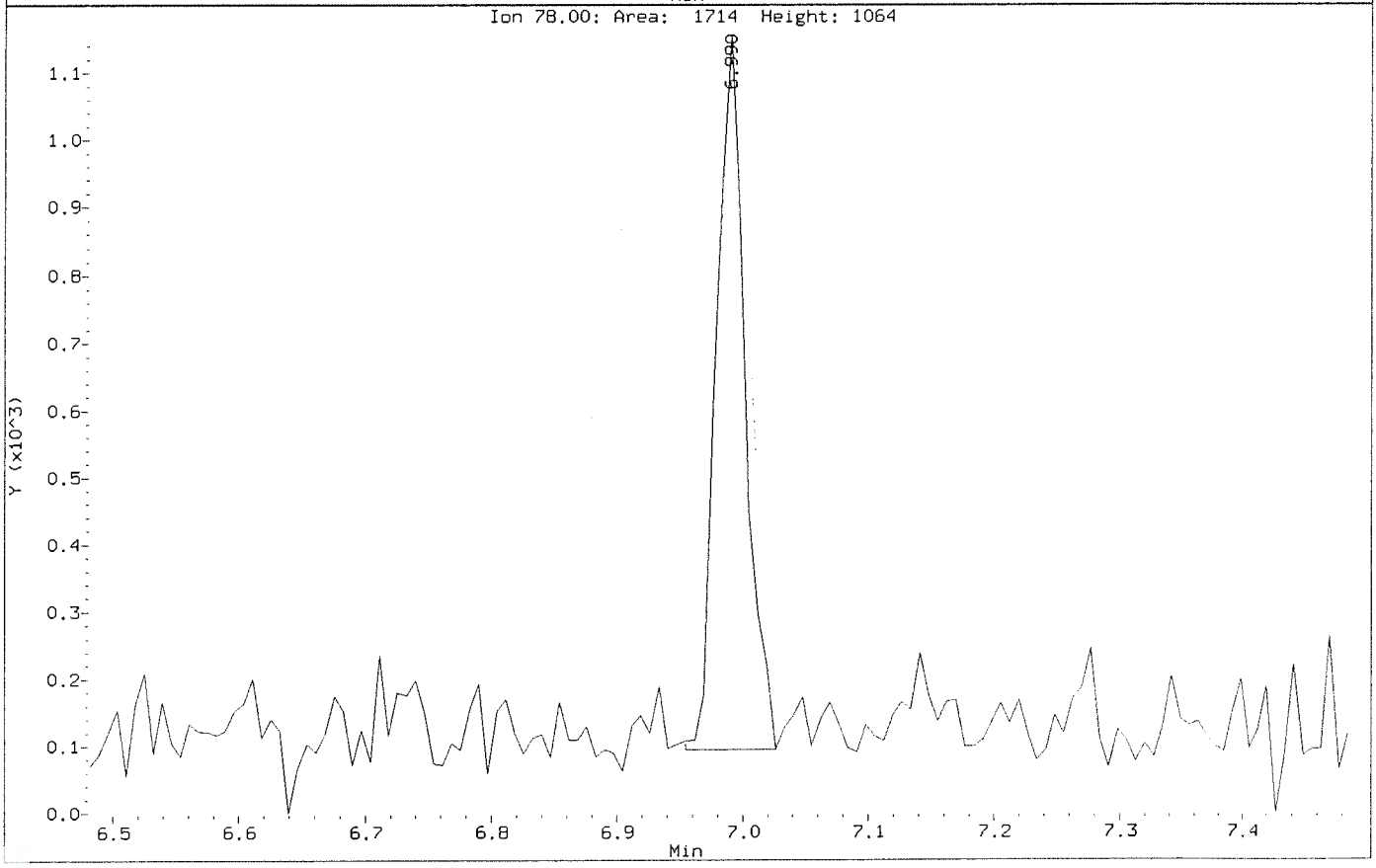


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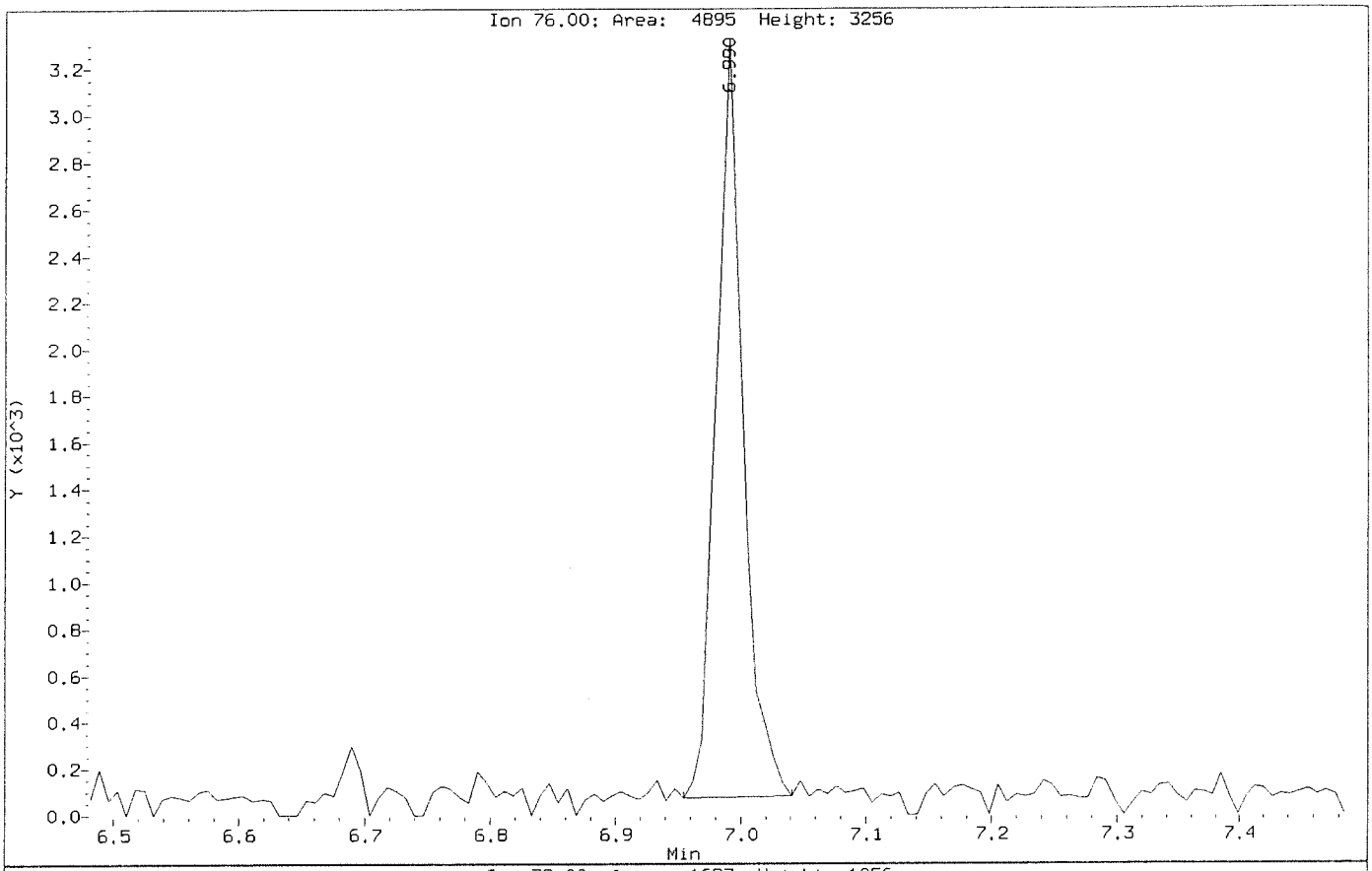
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

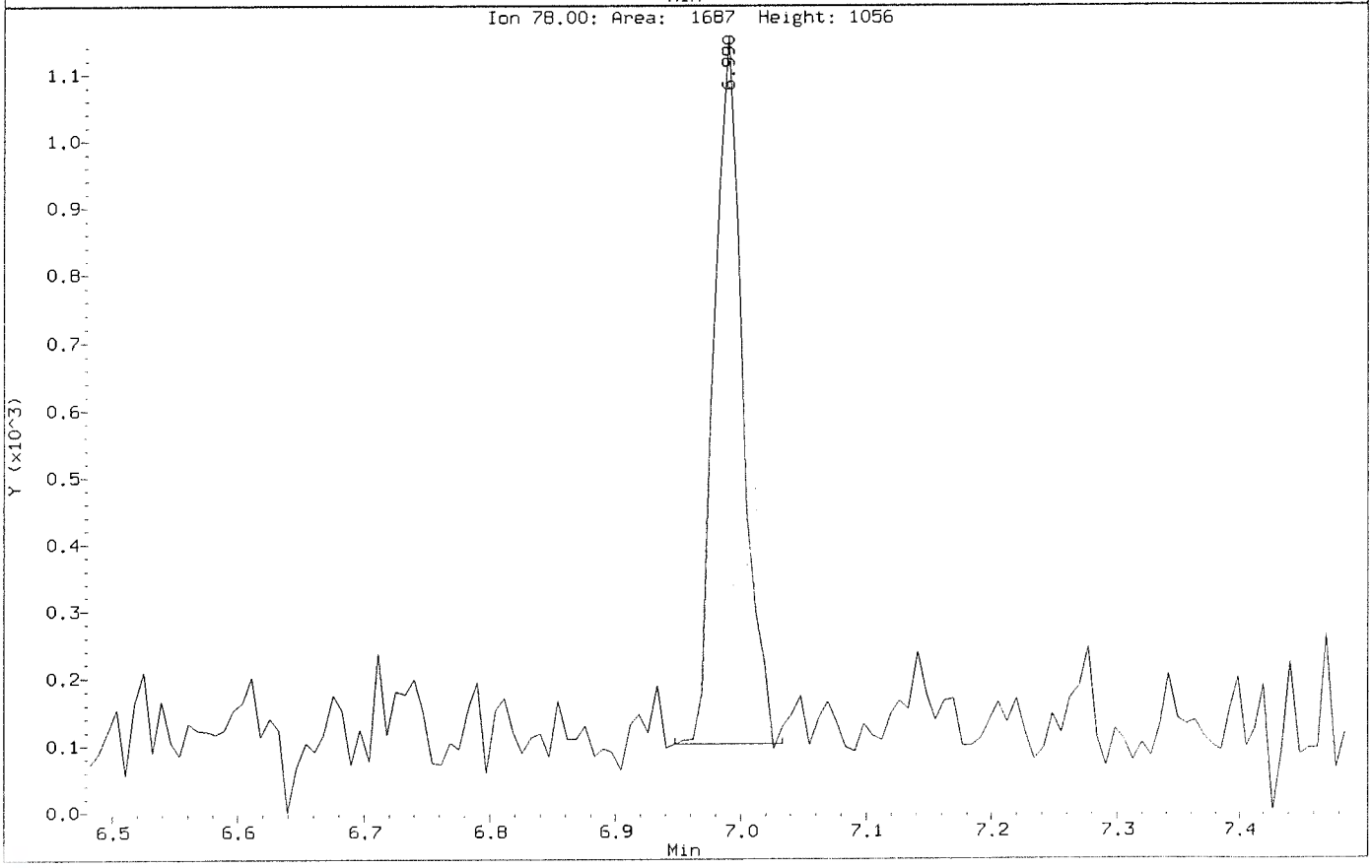


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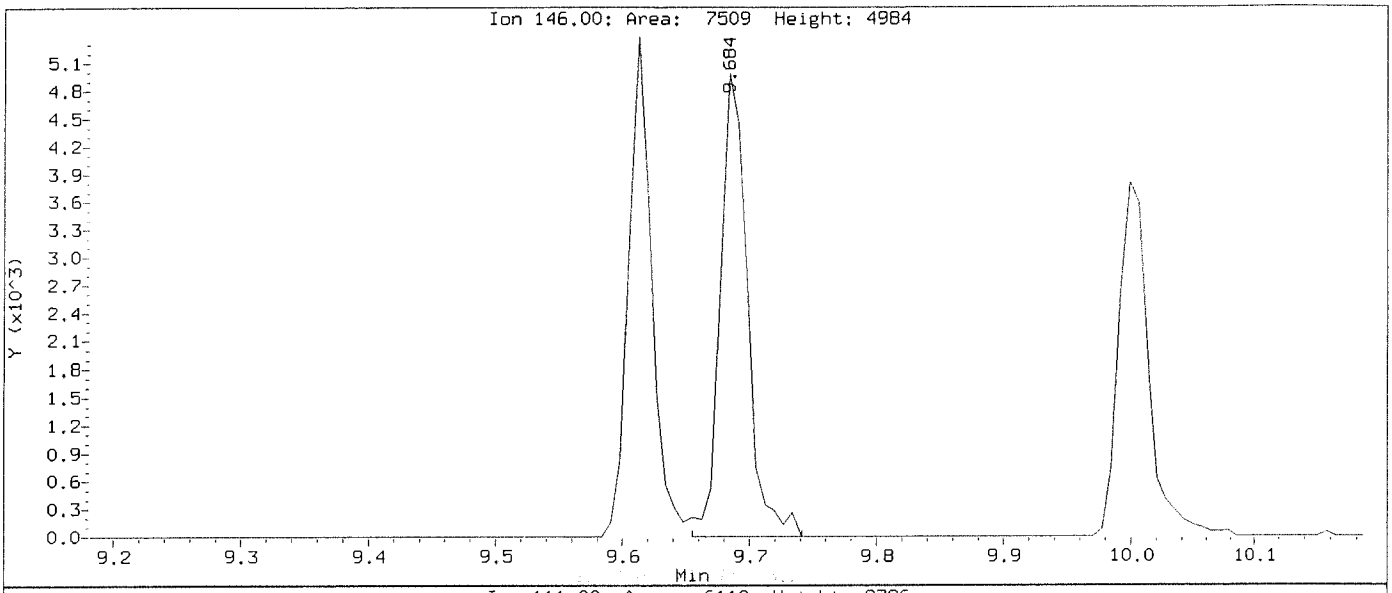
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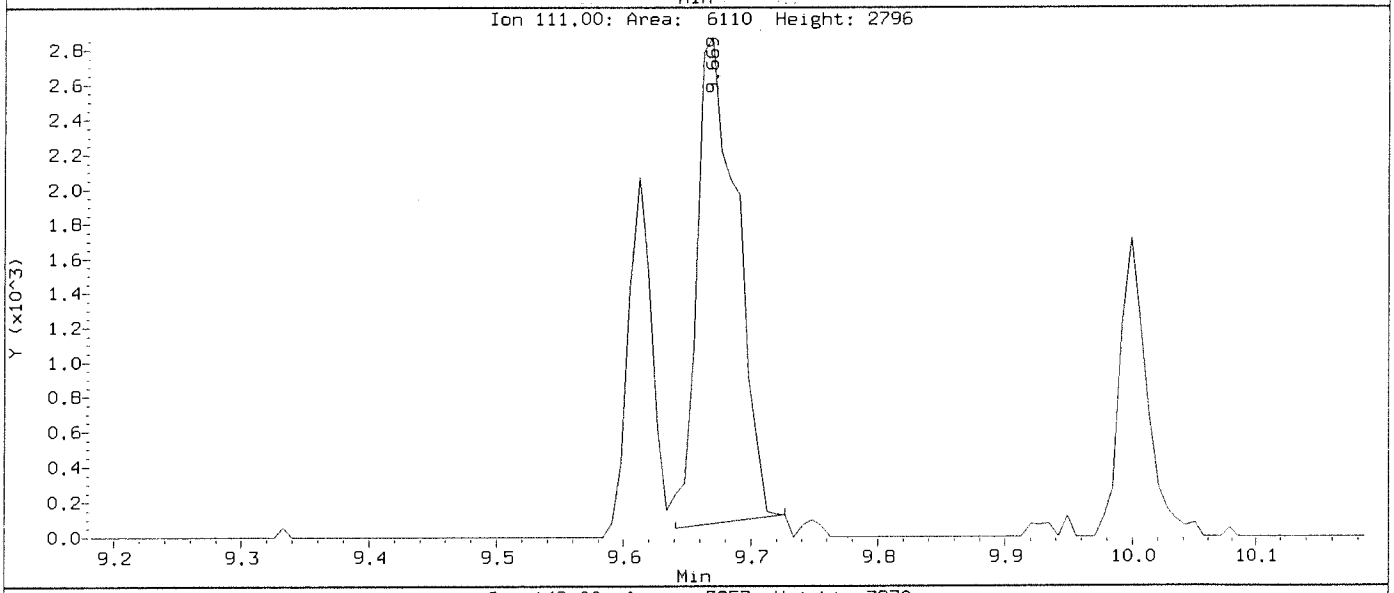


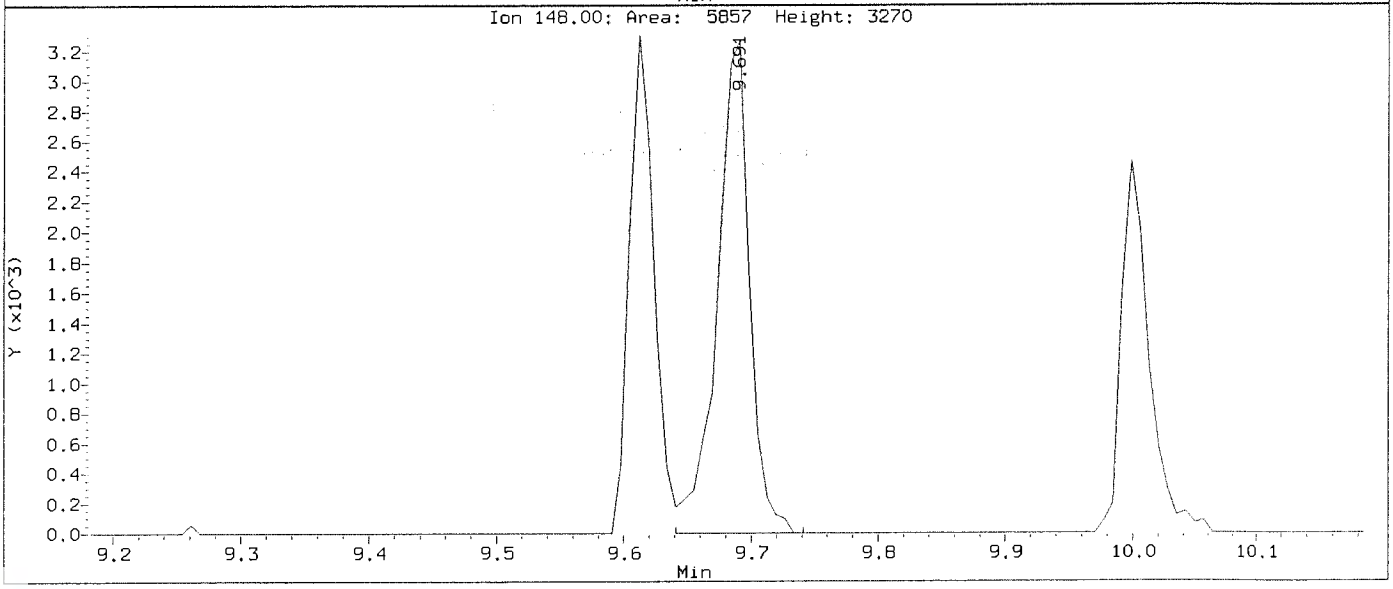



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

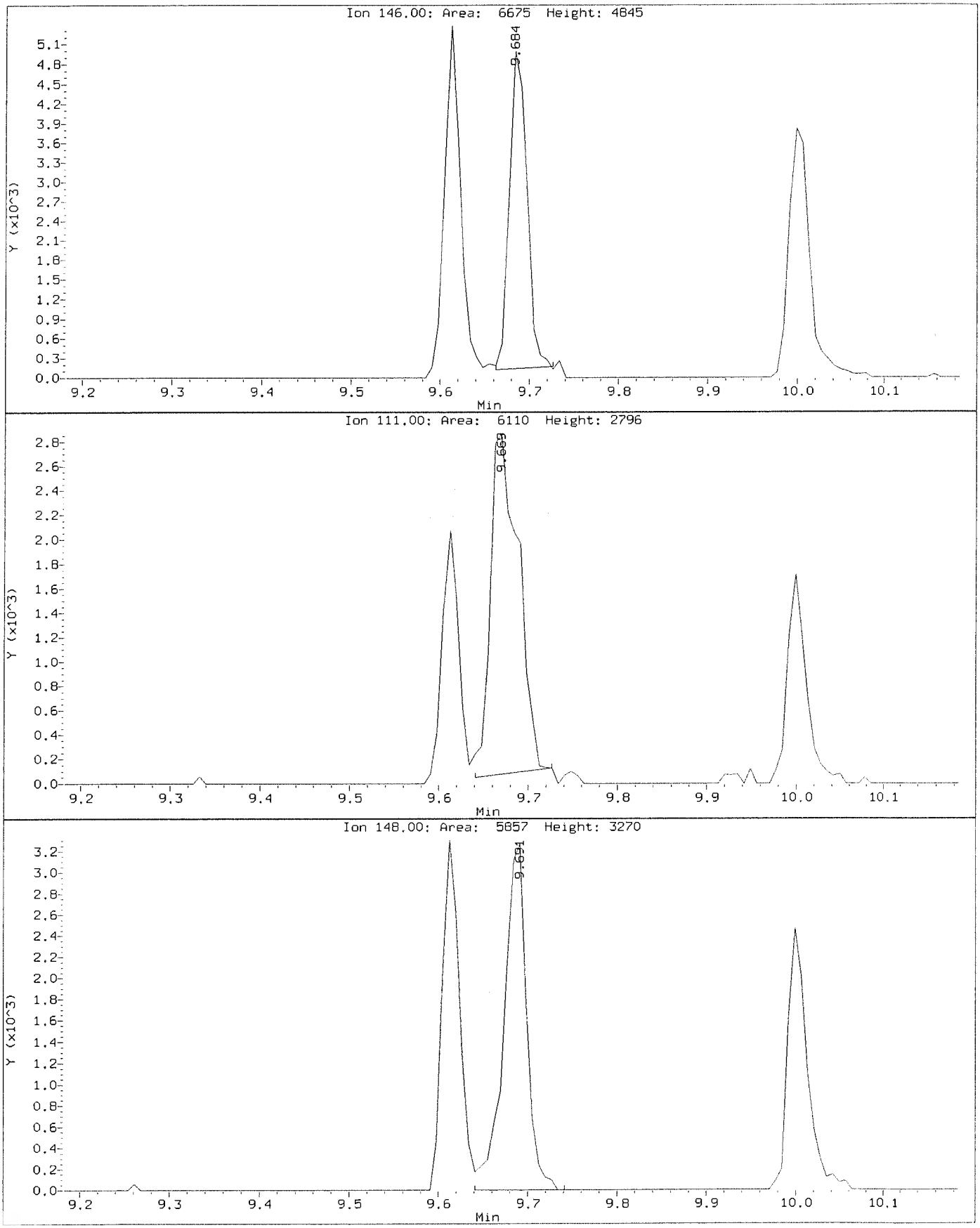


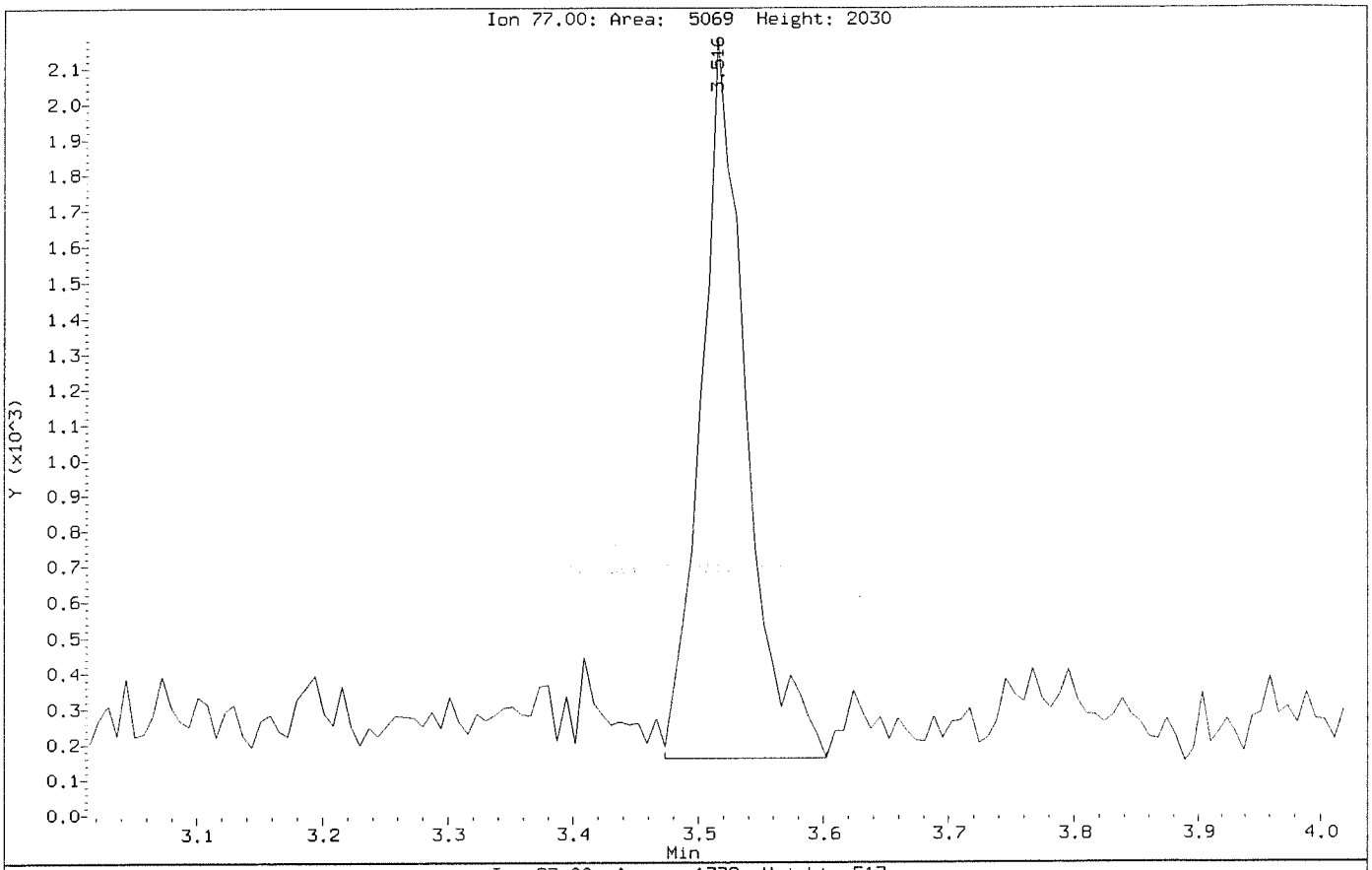
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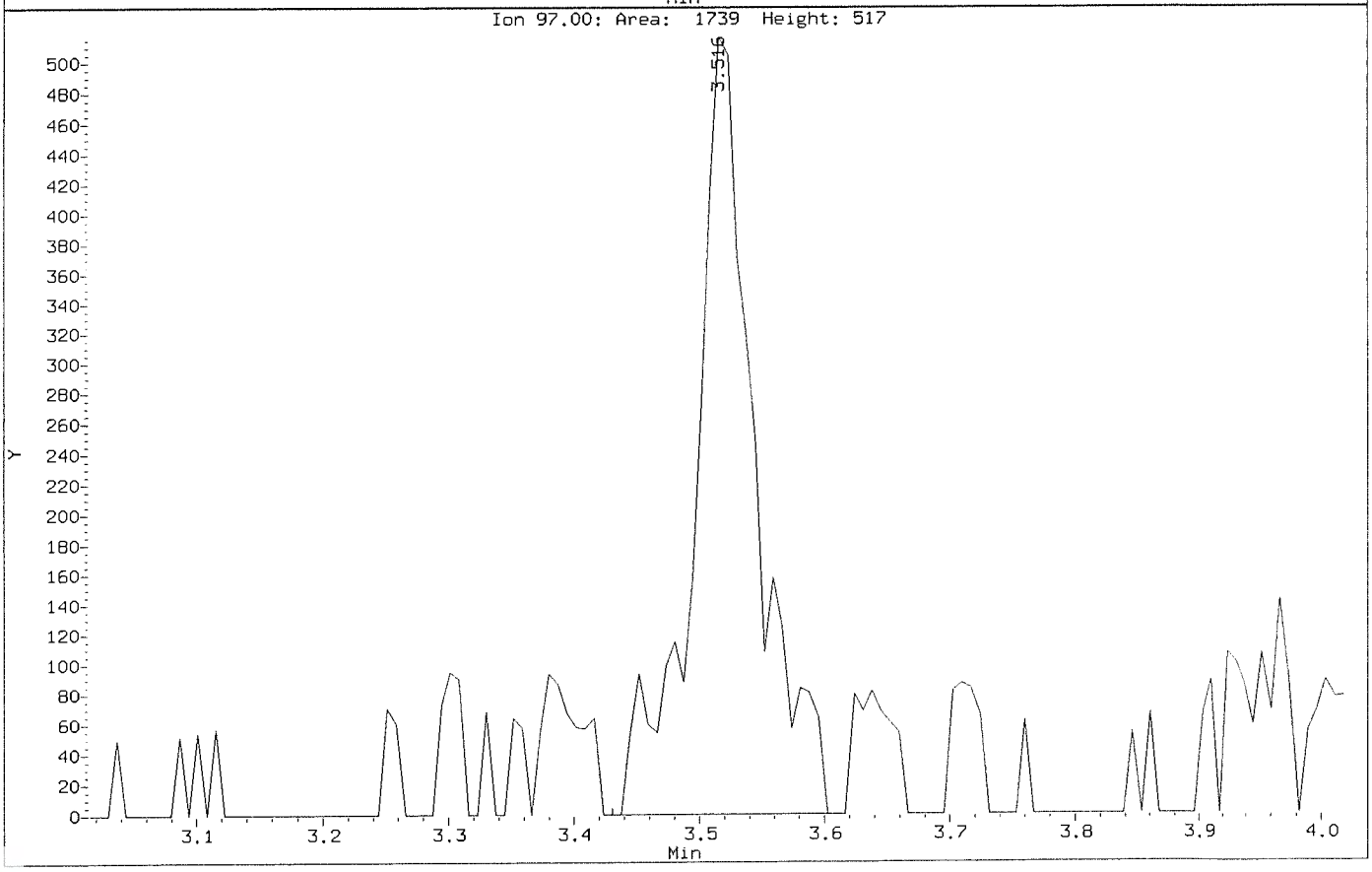
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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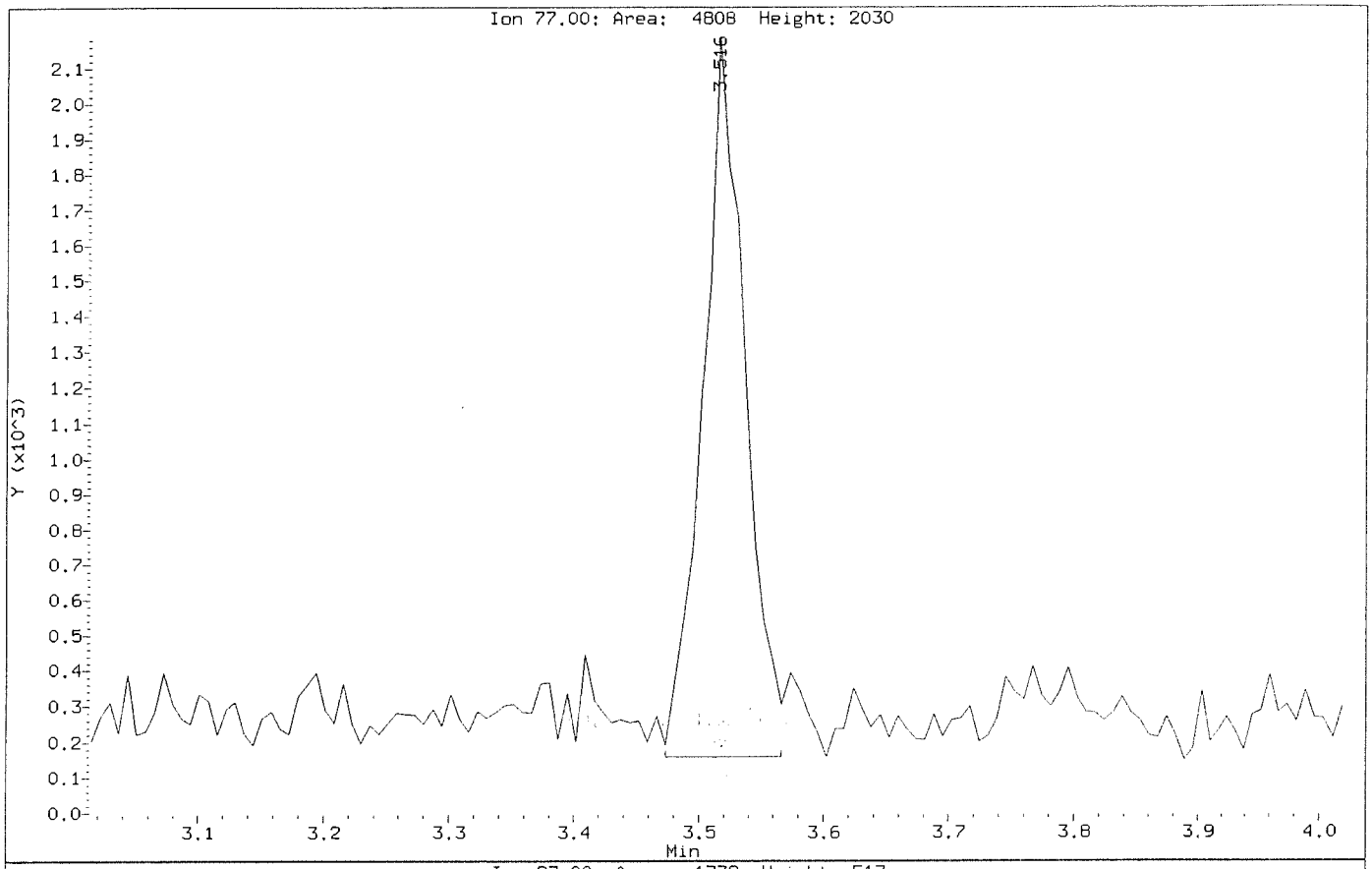
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

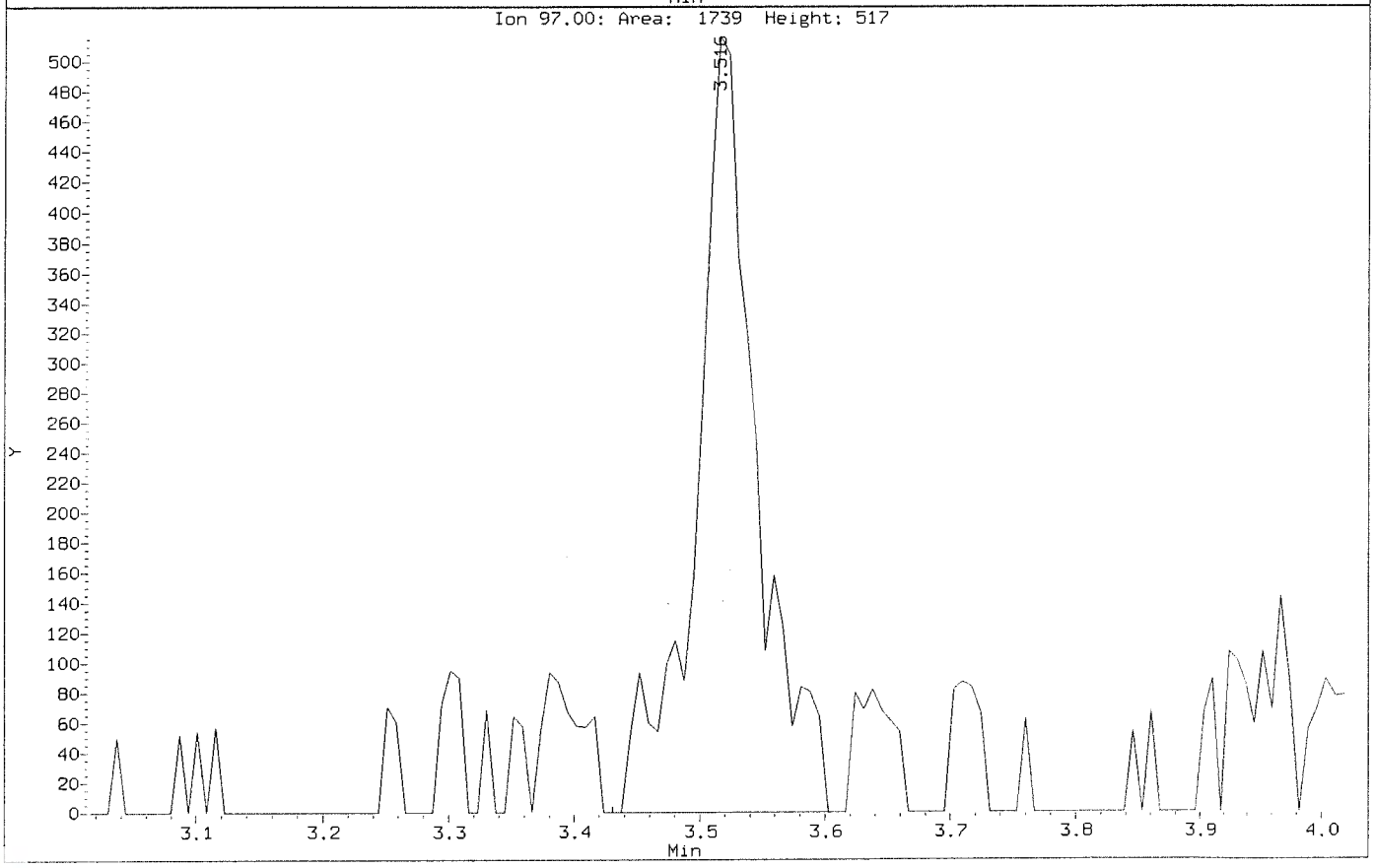


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Client Sample ID: VSTD000.5

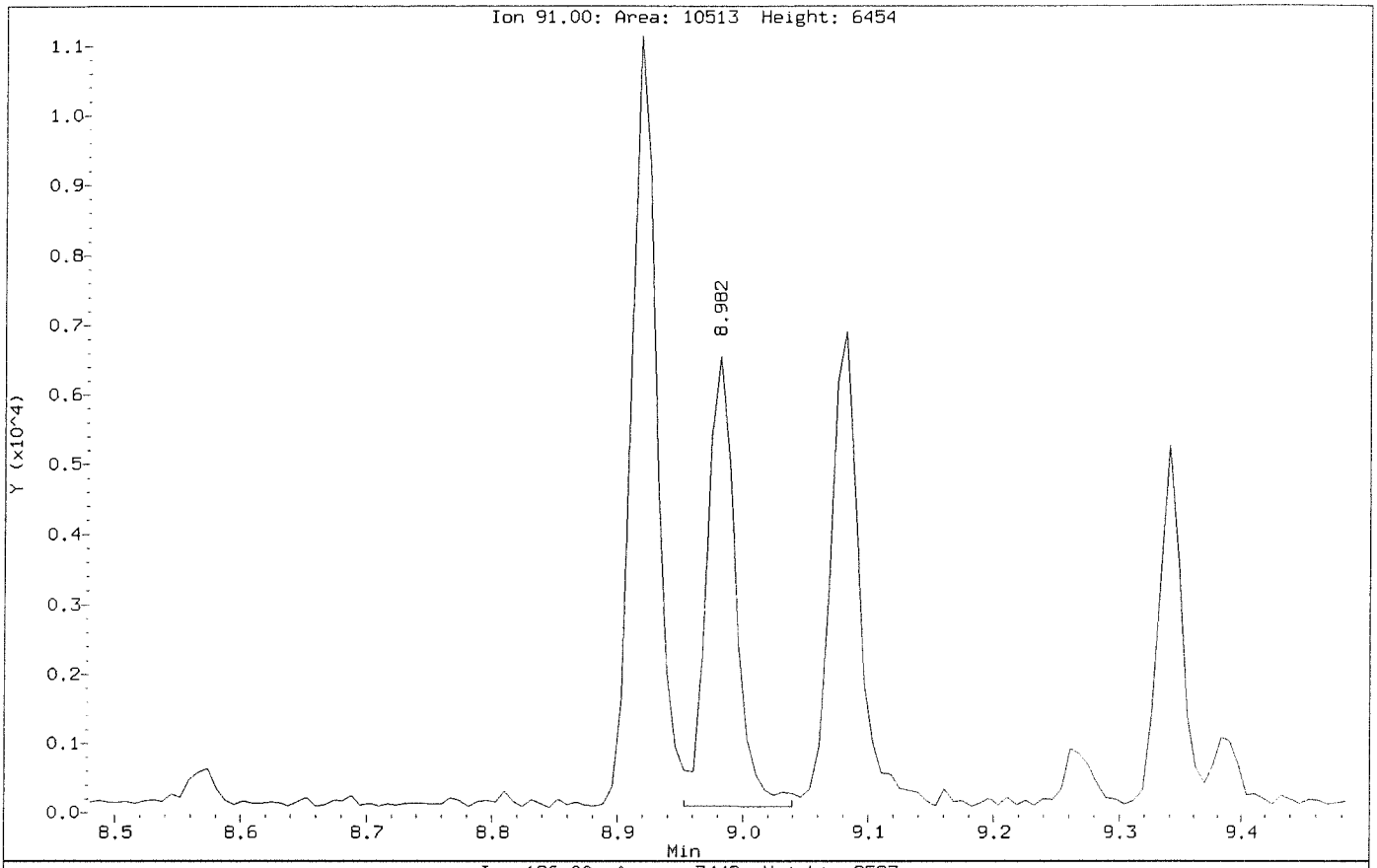
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

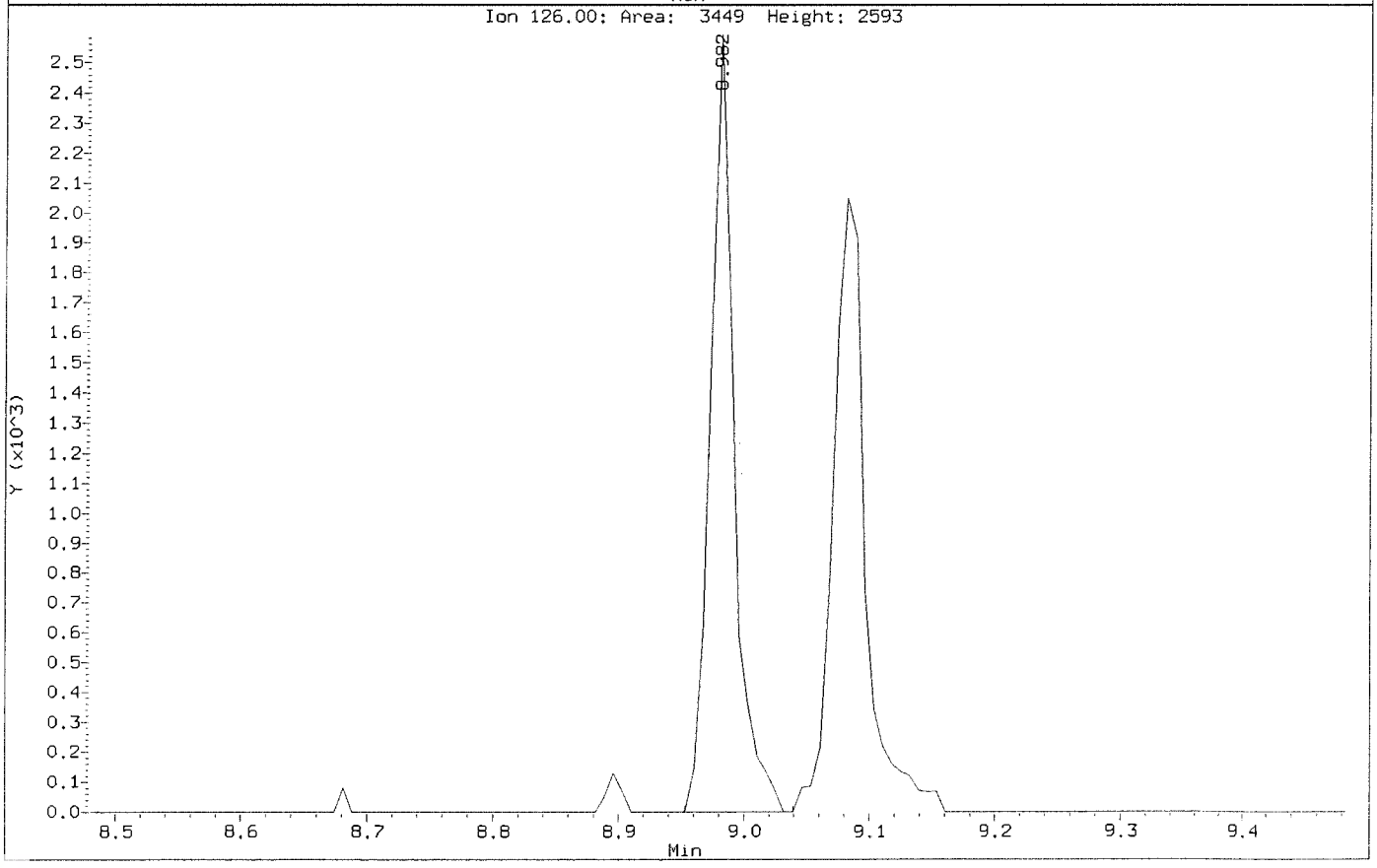


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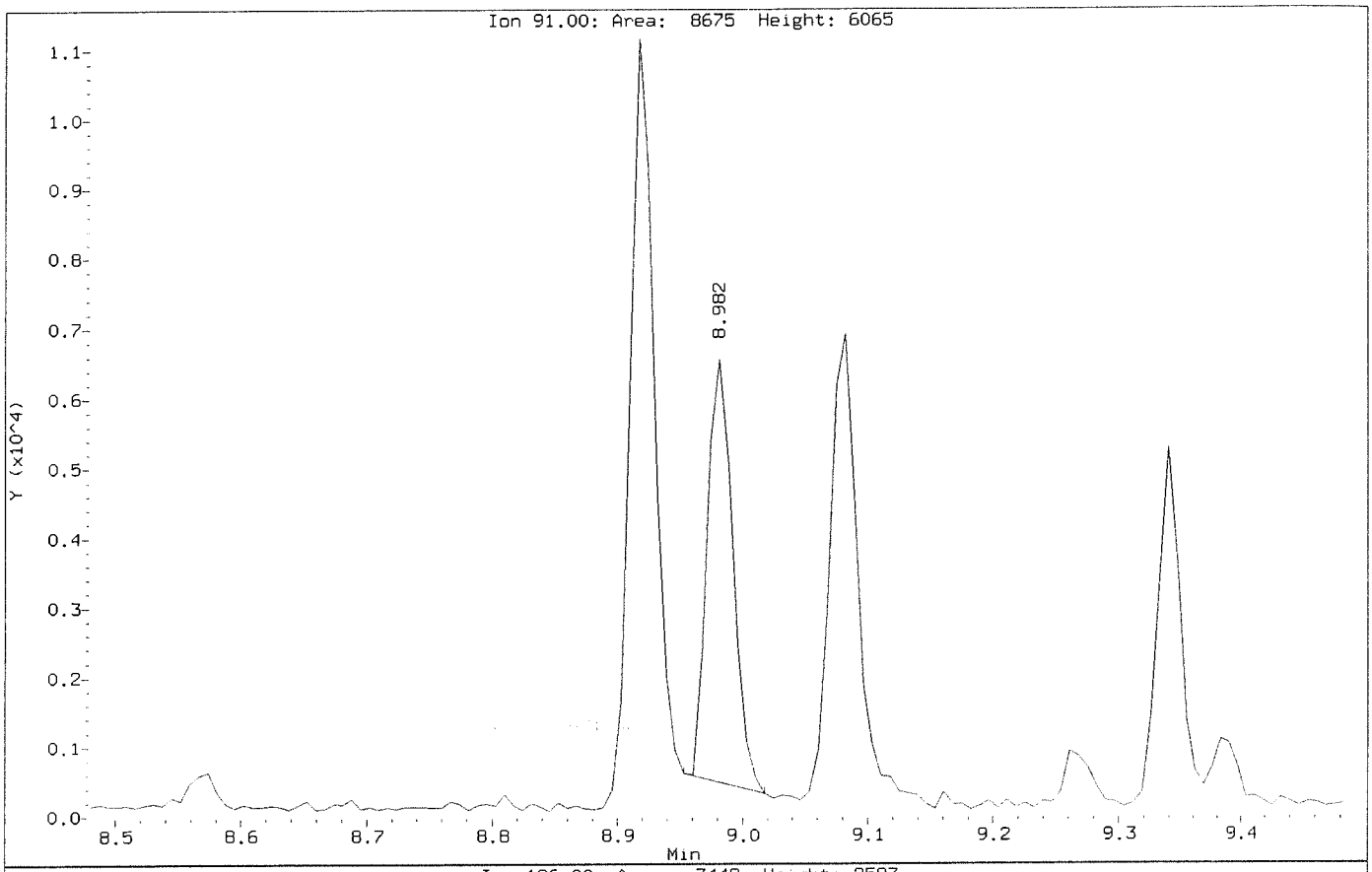
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

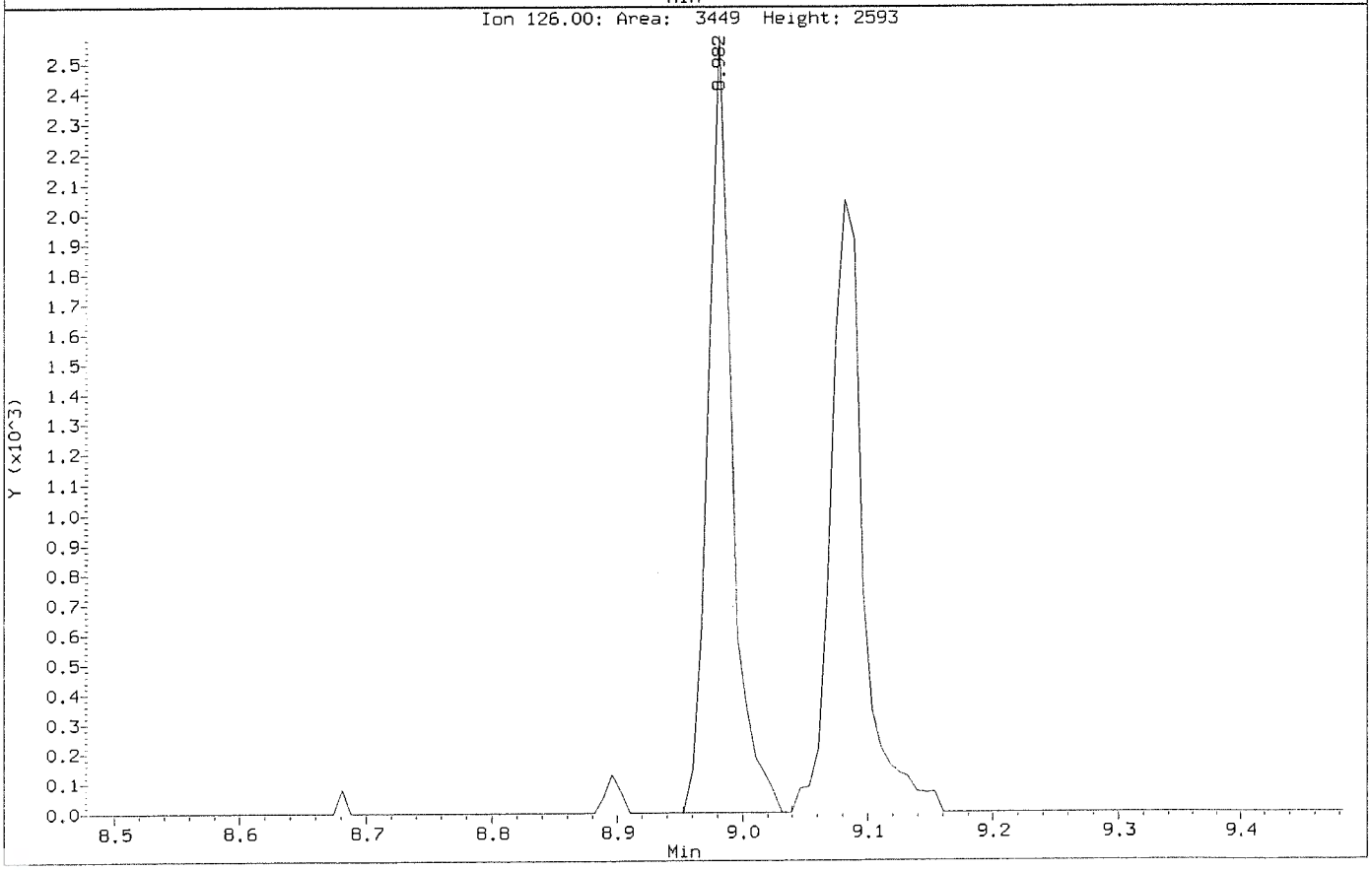


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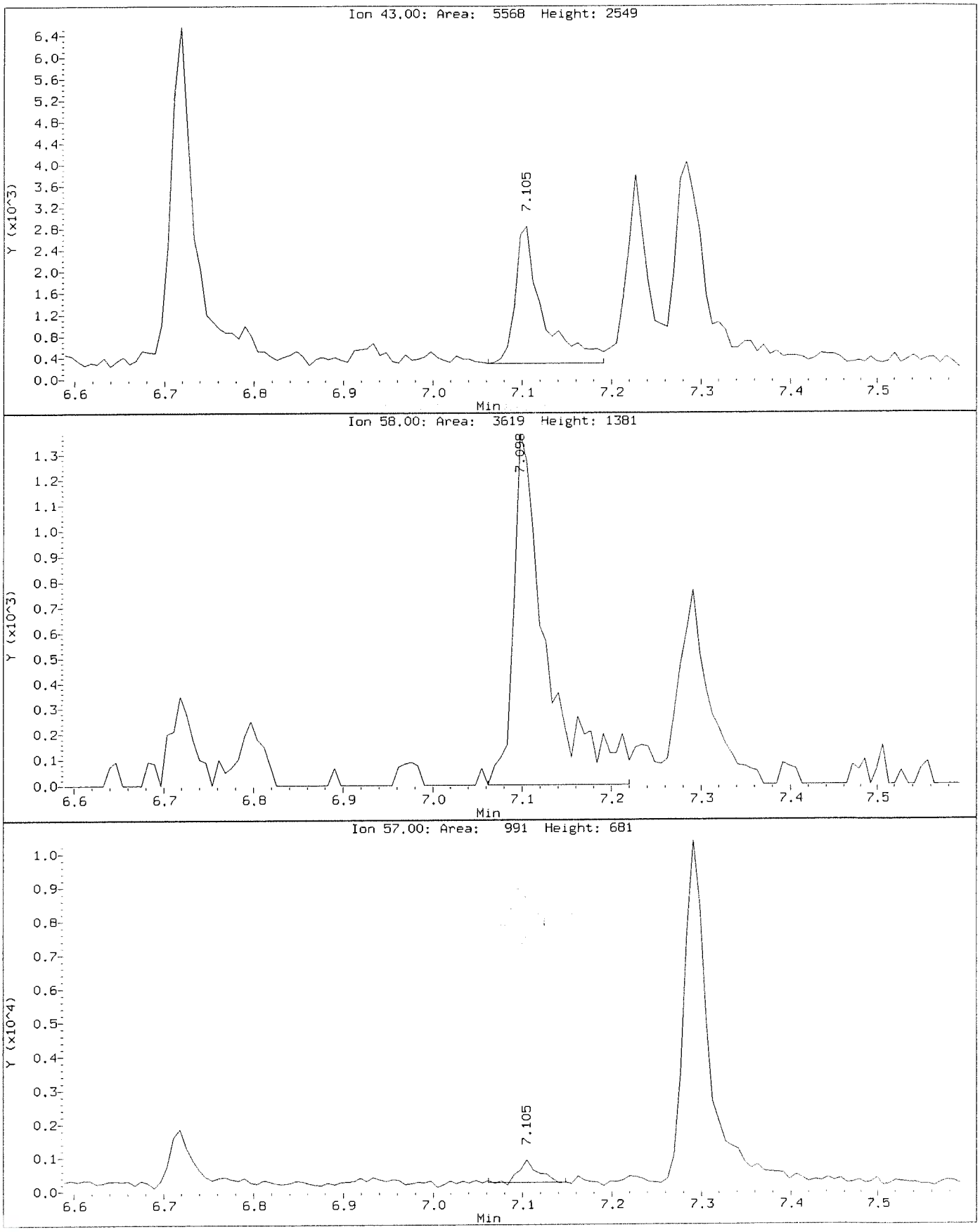
Compound: 2-Chlorotoluene
CAS Number: 95-49-8



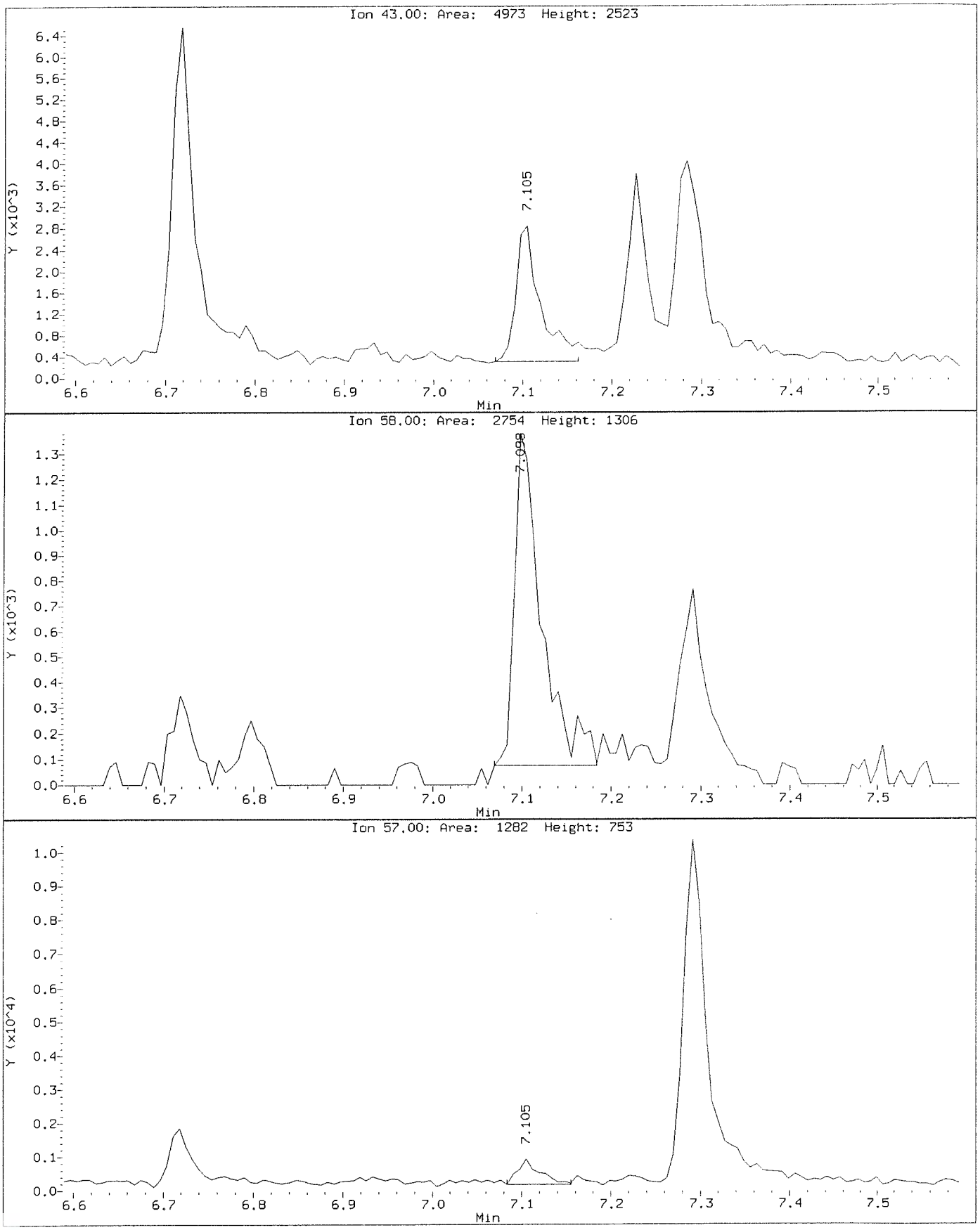
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



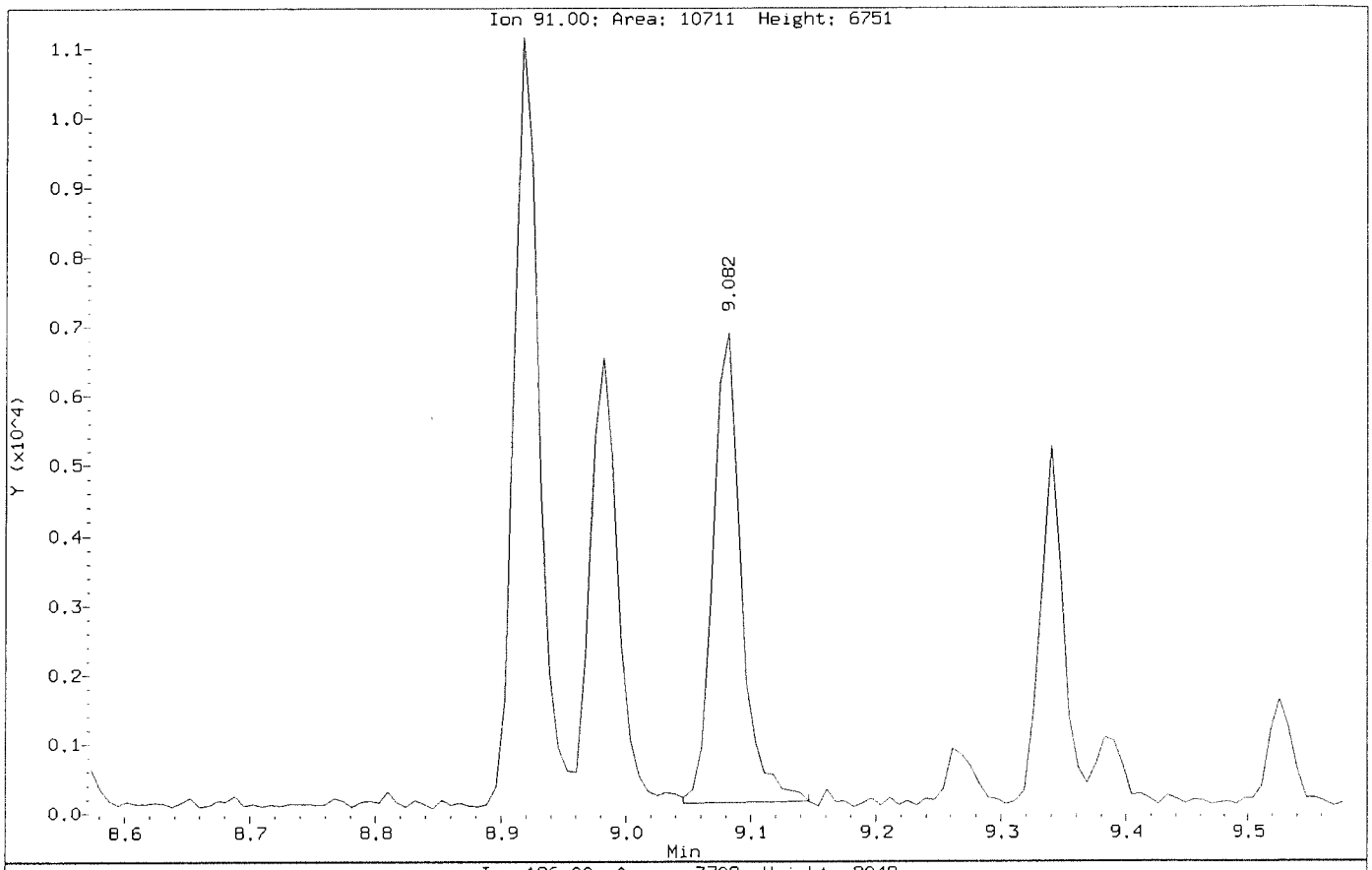
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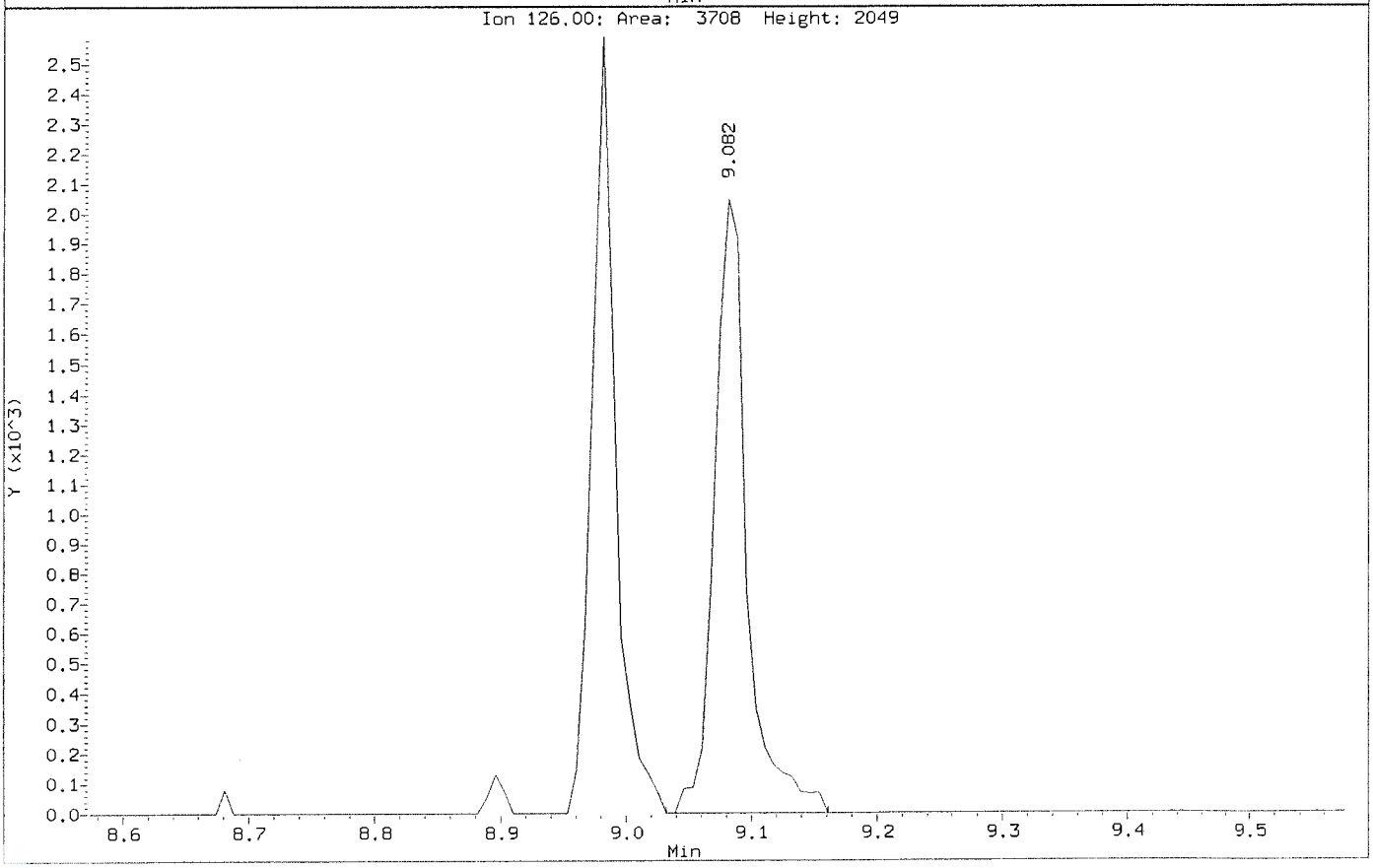
Compound: 2-Hexanone
CAS Number: 591-78-6



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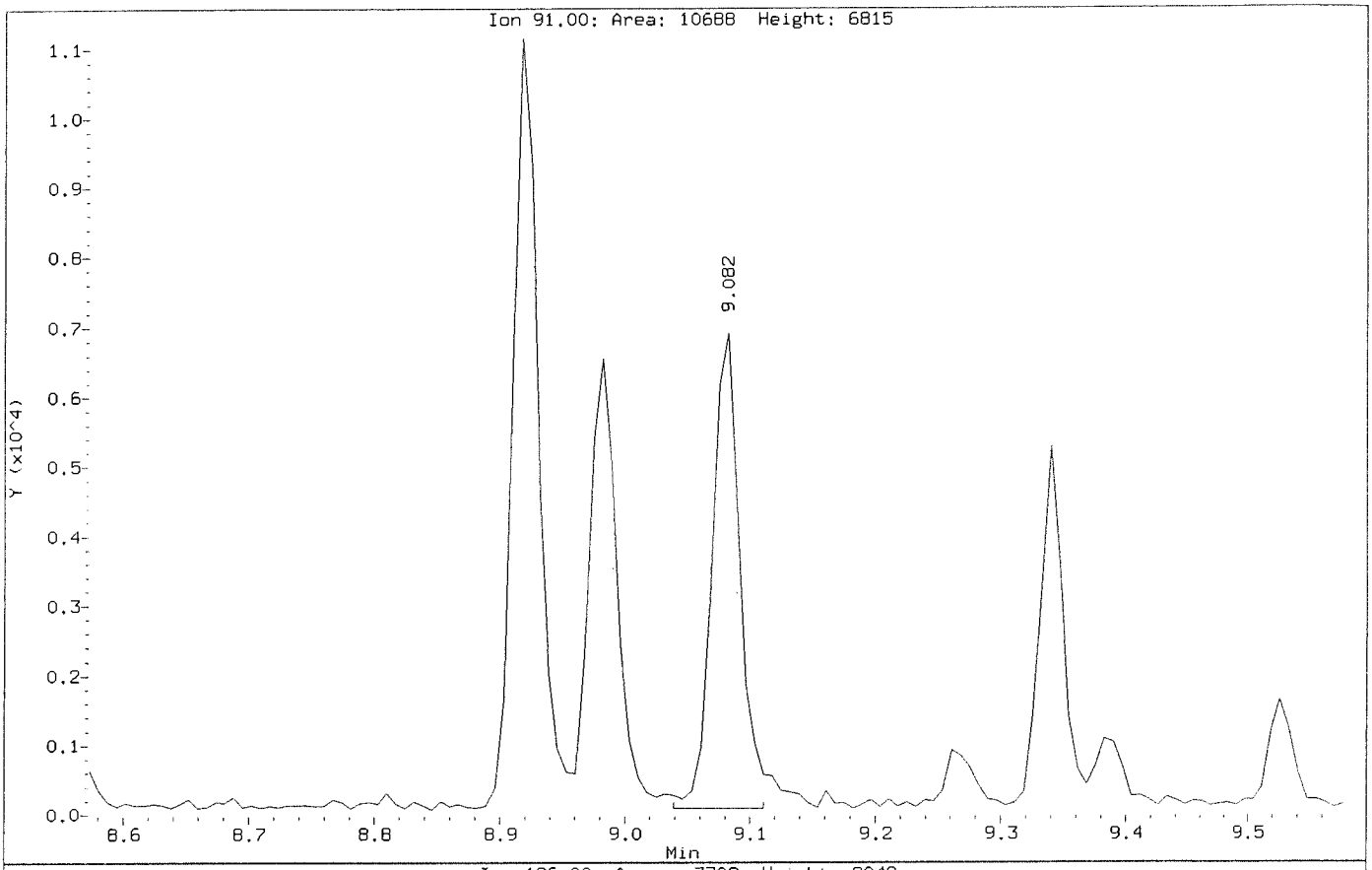
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

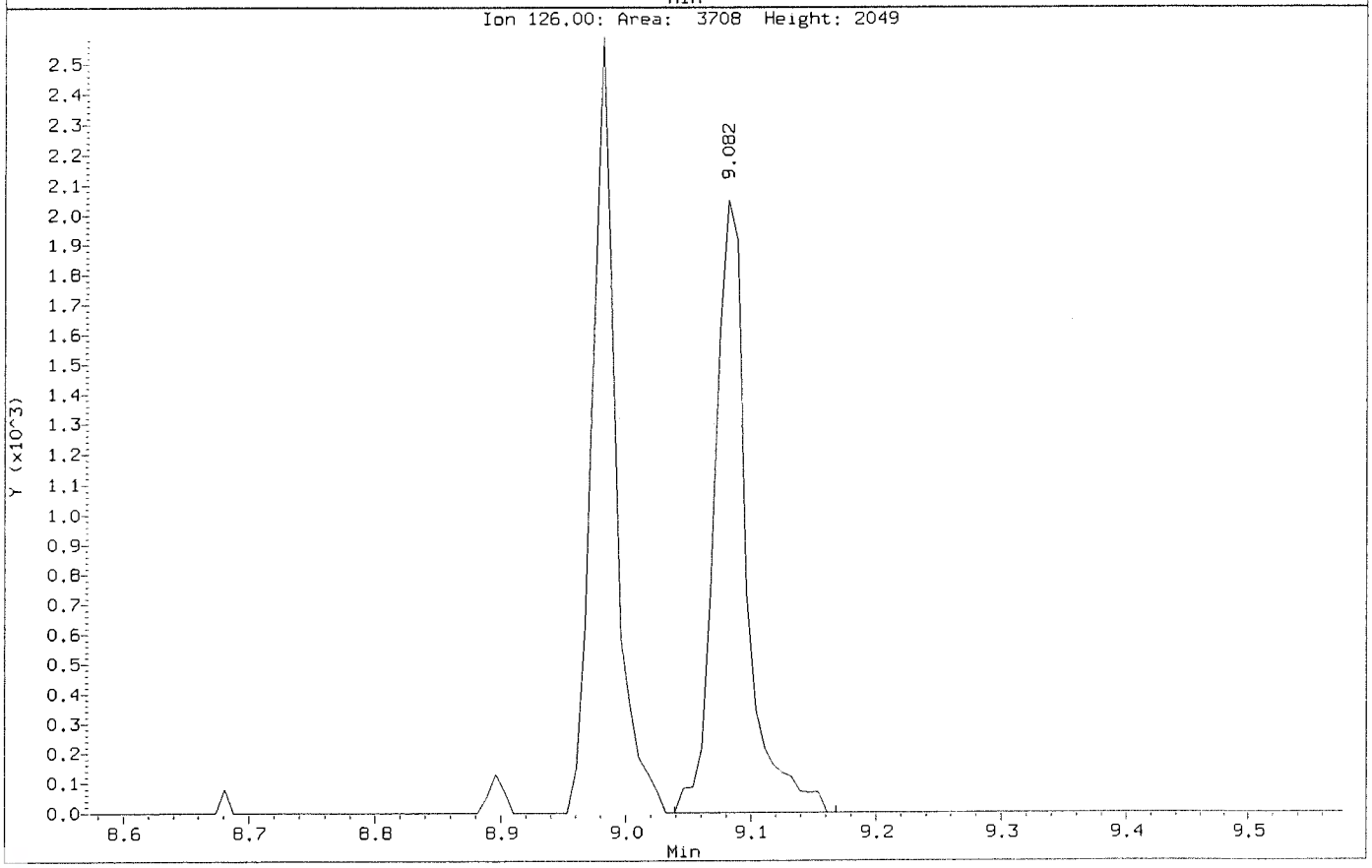


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Client Sample ID: VSTD000.5

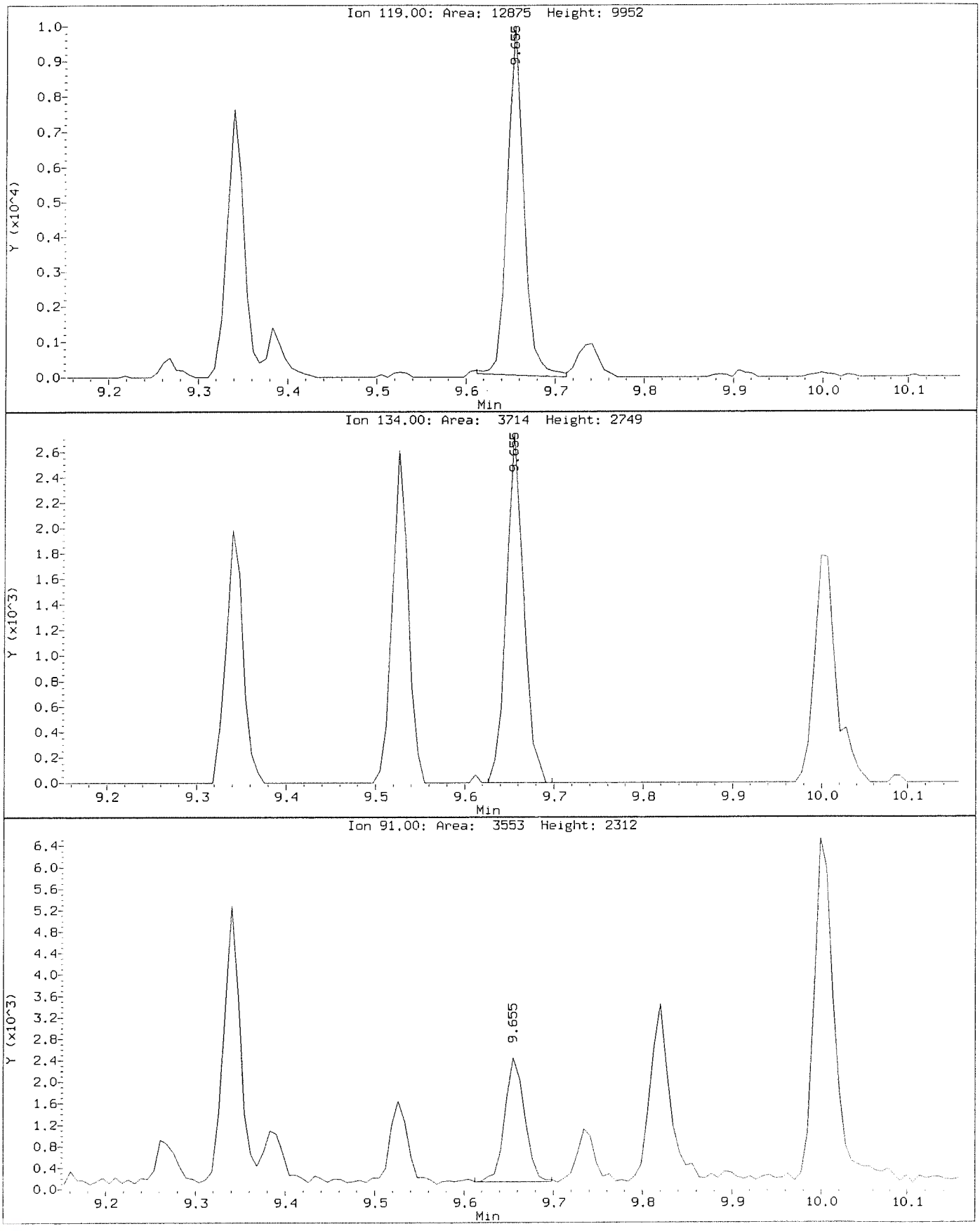
Compound: 4-Chlorotoluene
CAS Number: 106-43-4



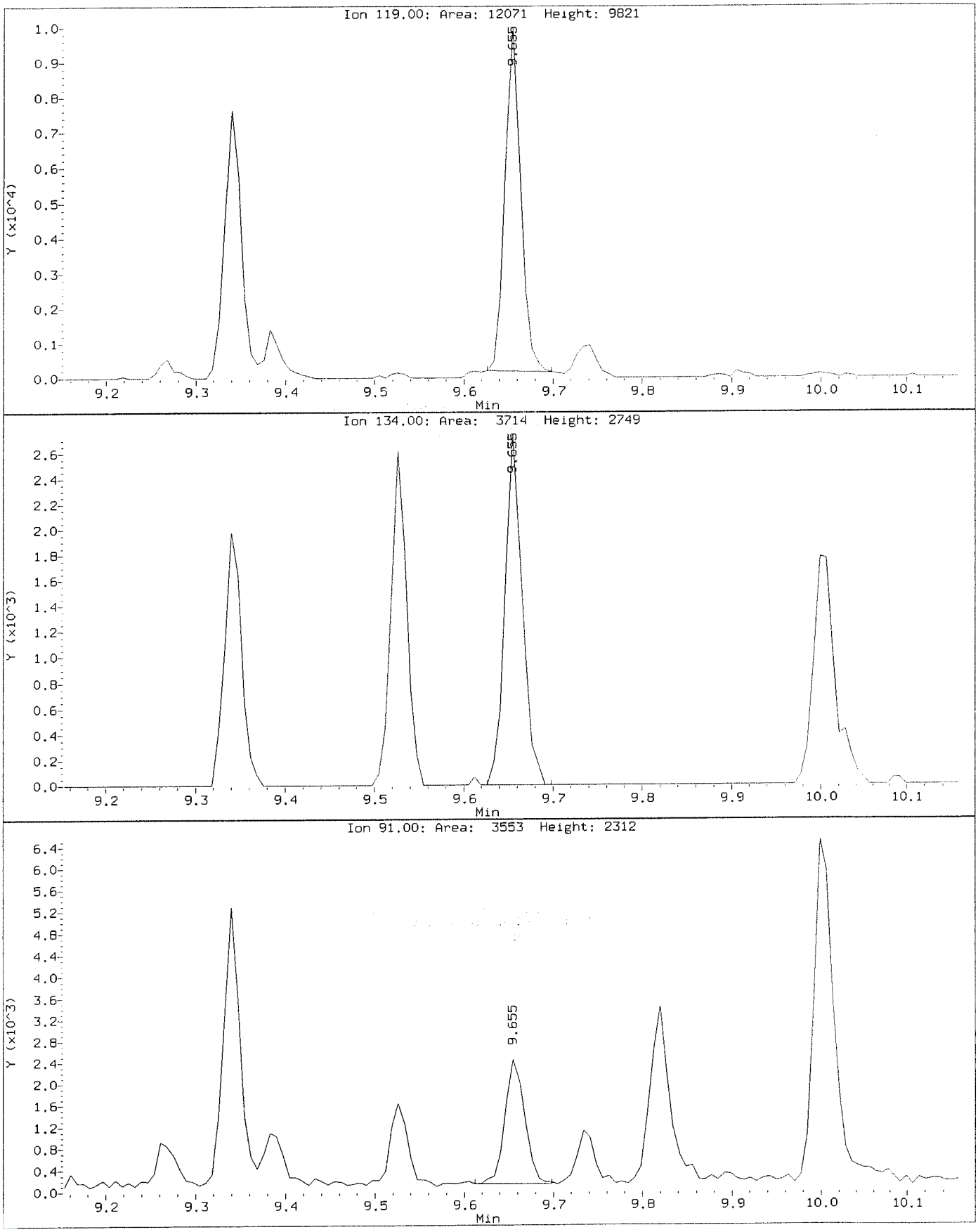
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



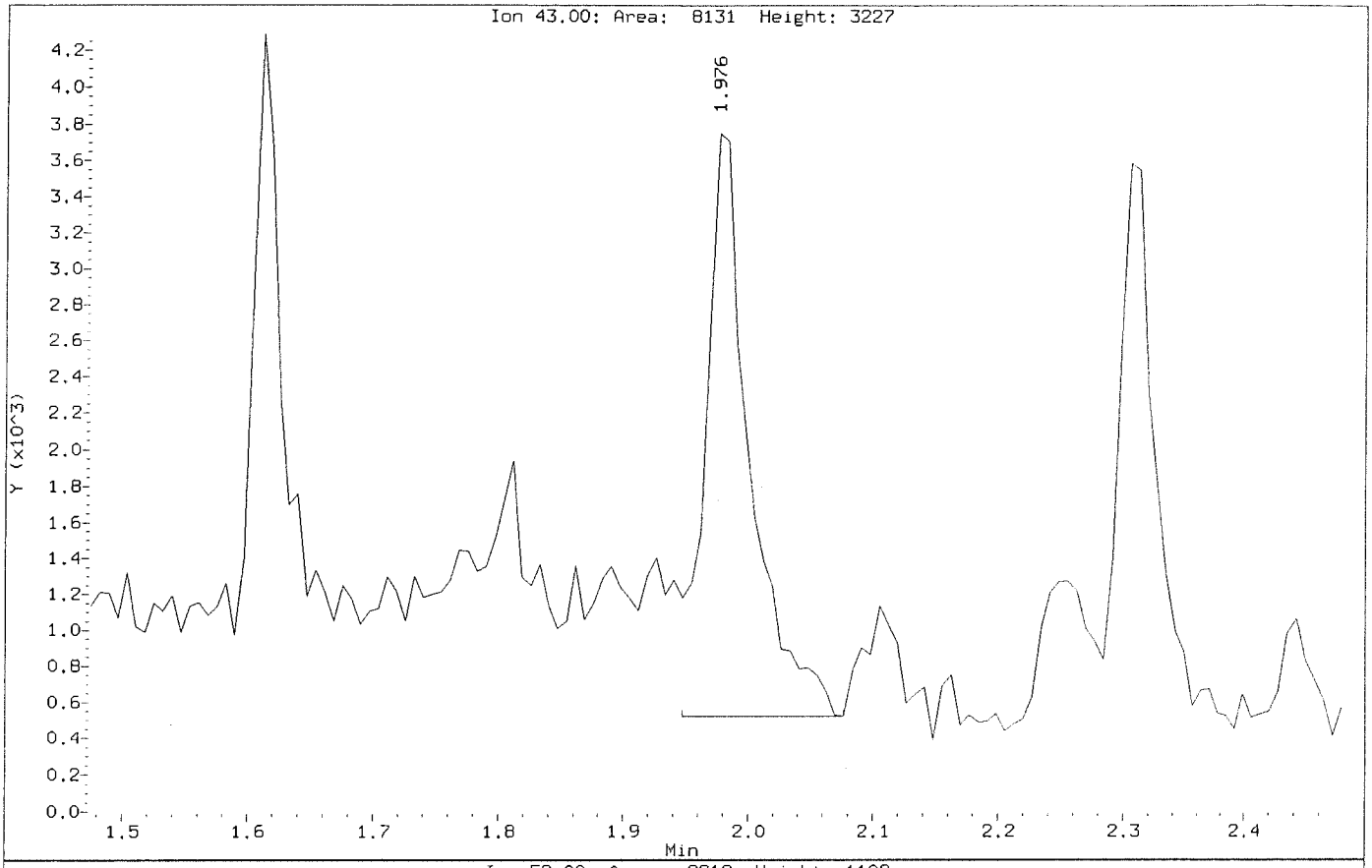
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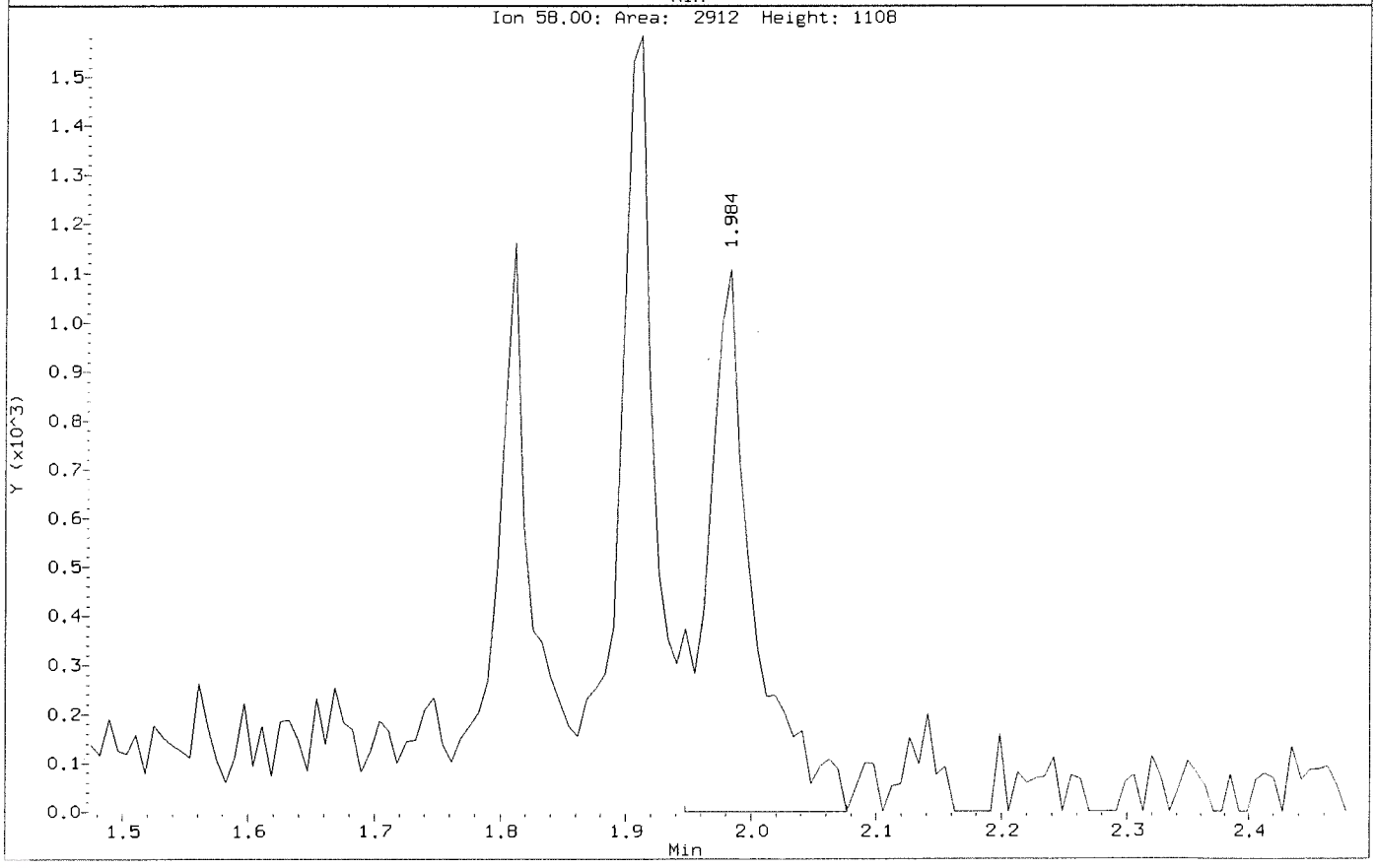
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Client Sample ID: VSTD000.5

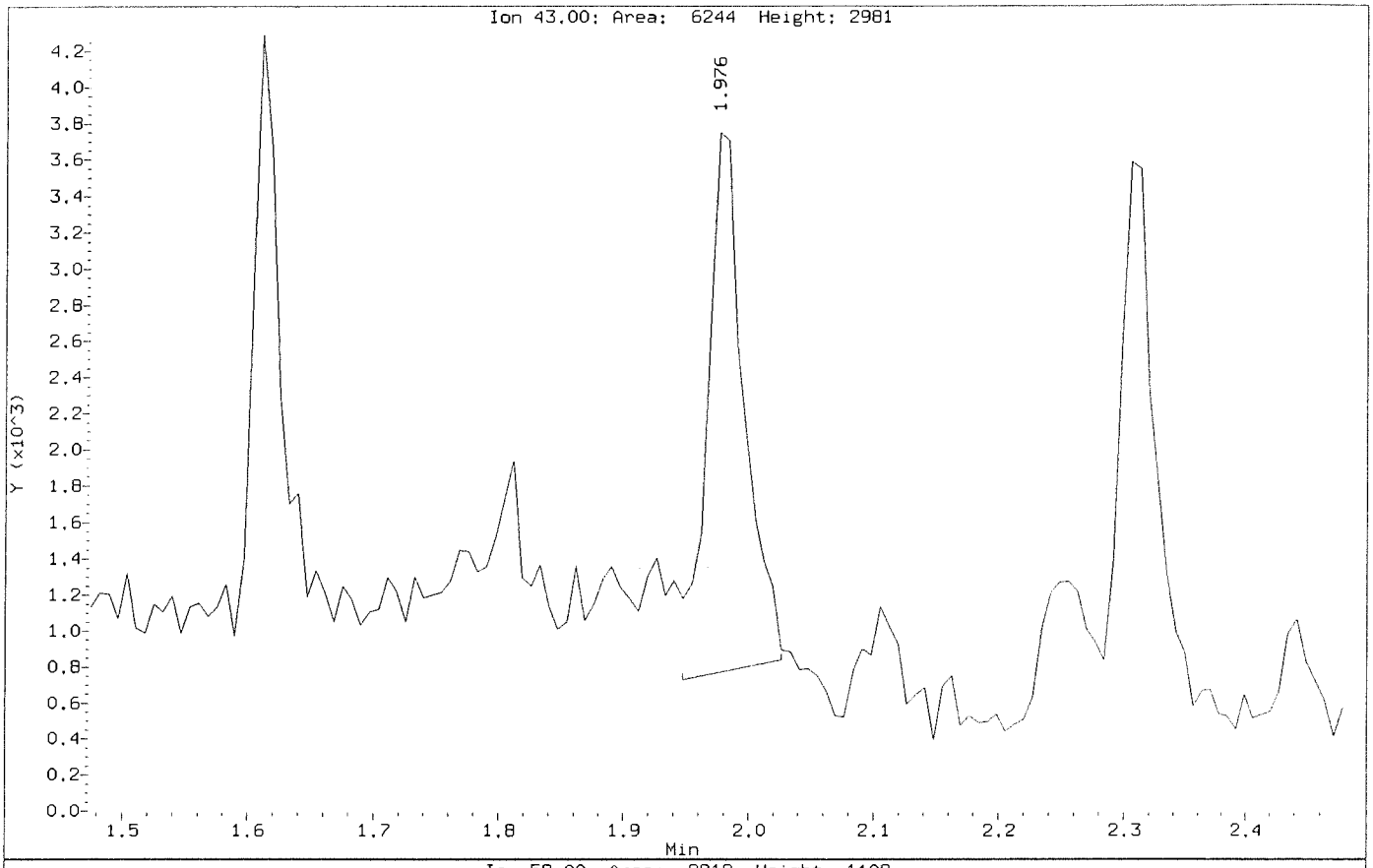
Compound: Acetone
CAS Number: 67-64-1

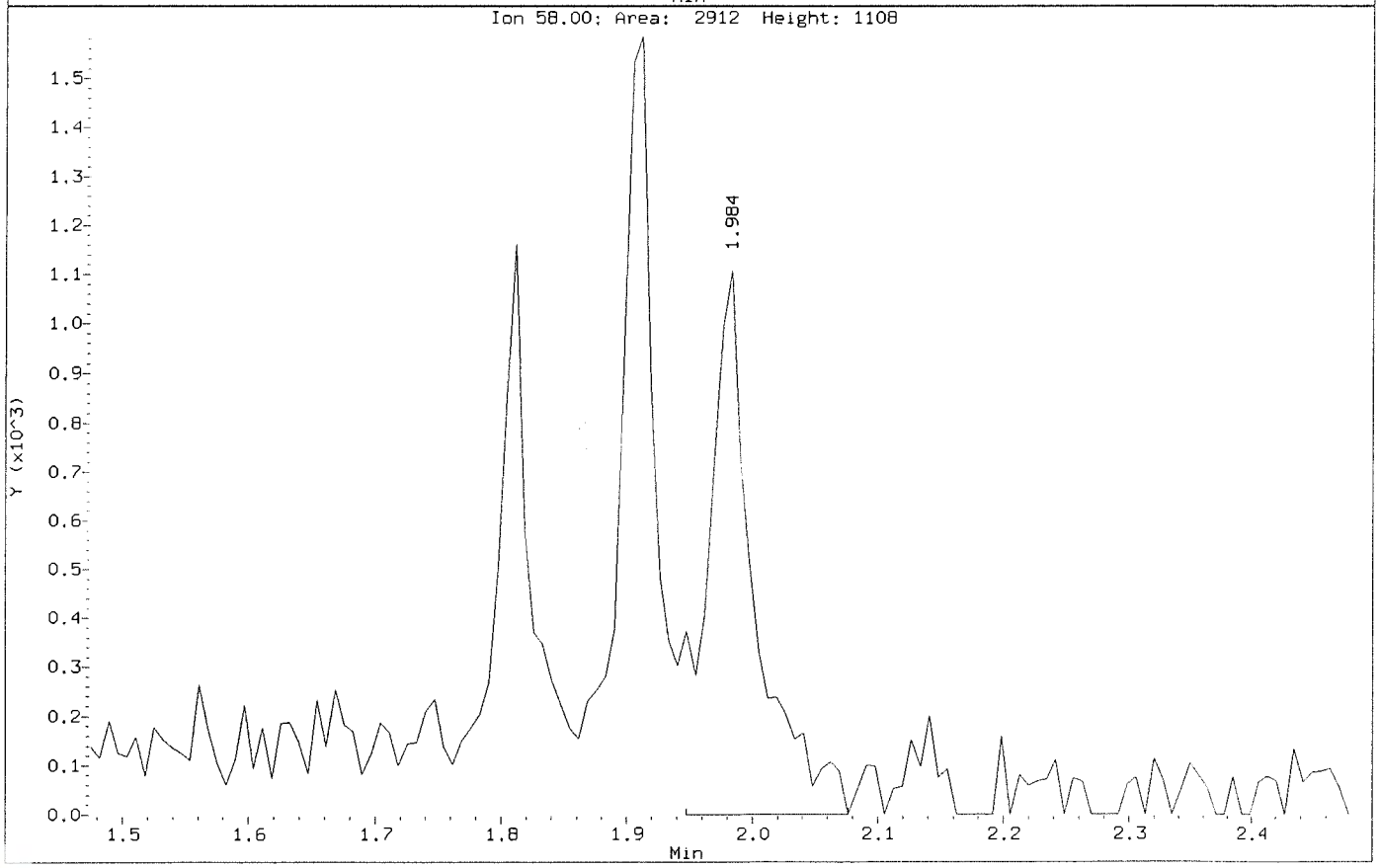


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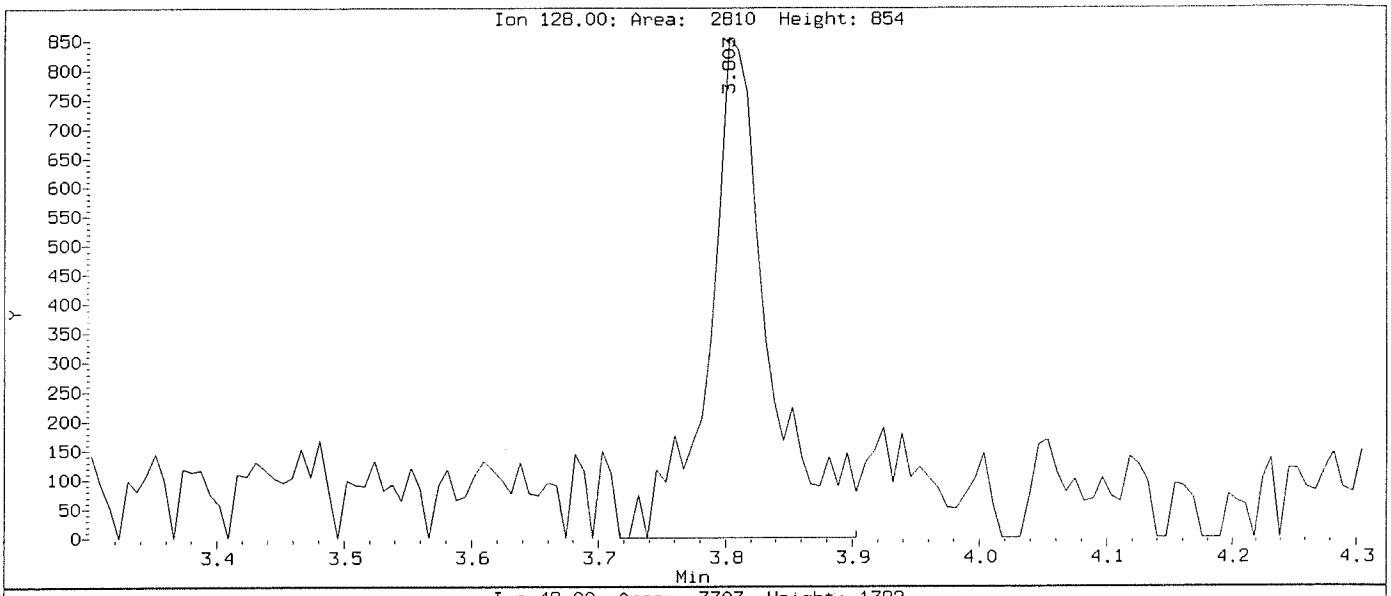
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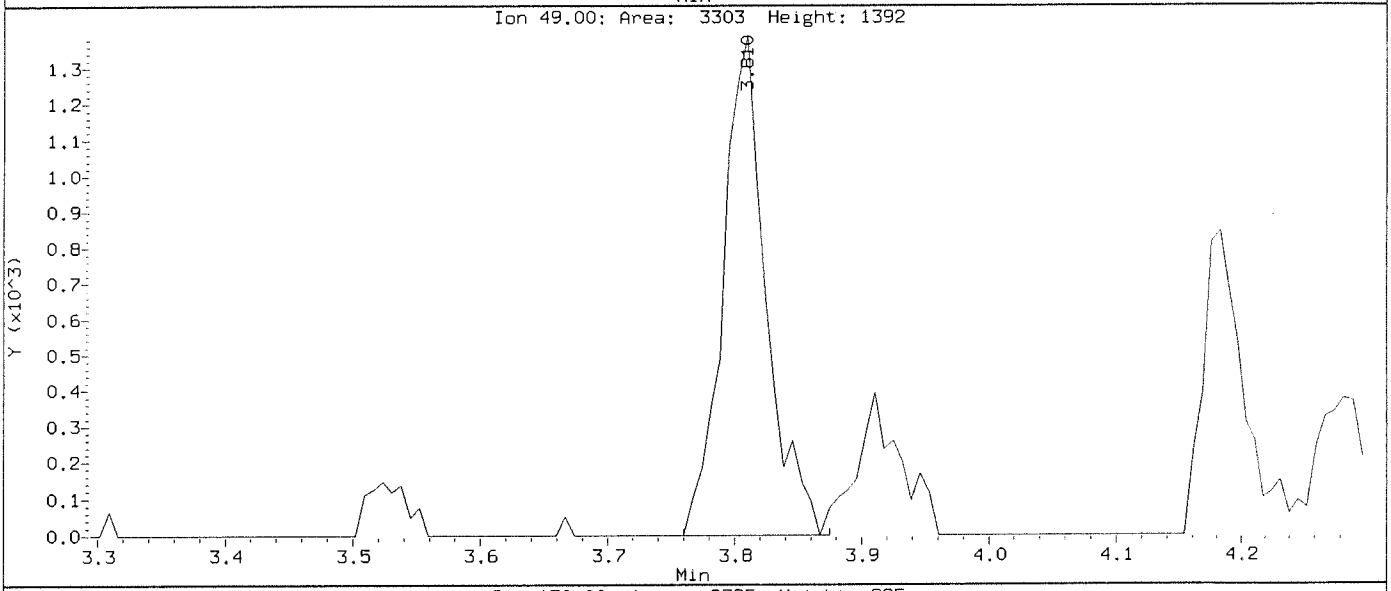


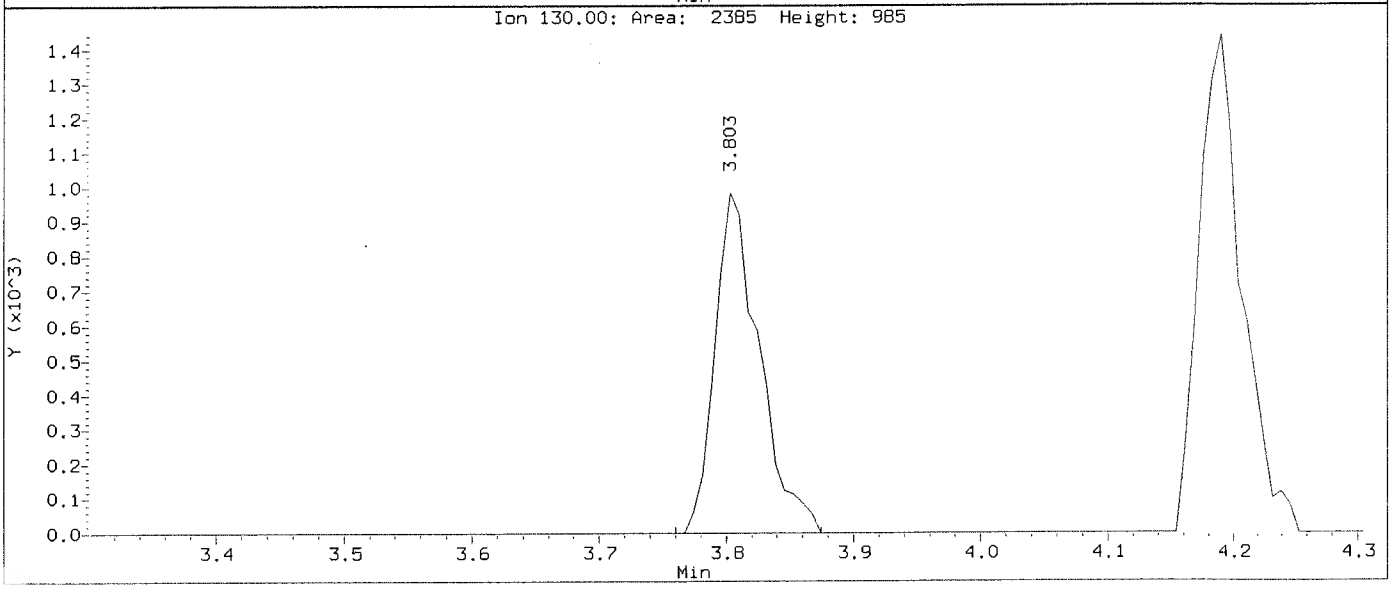



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

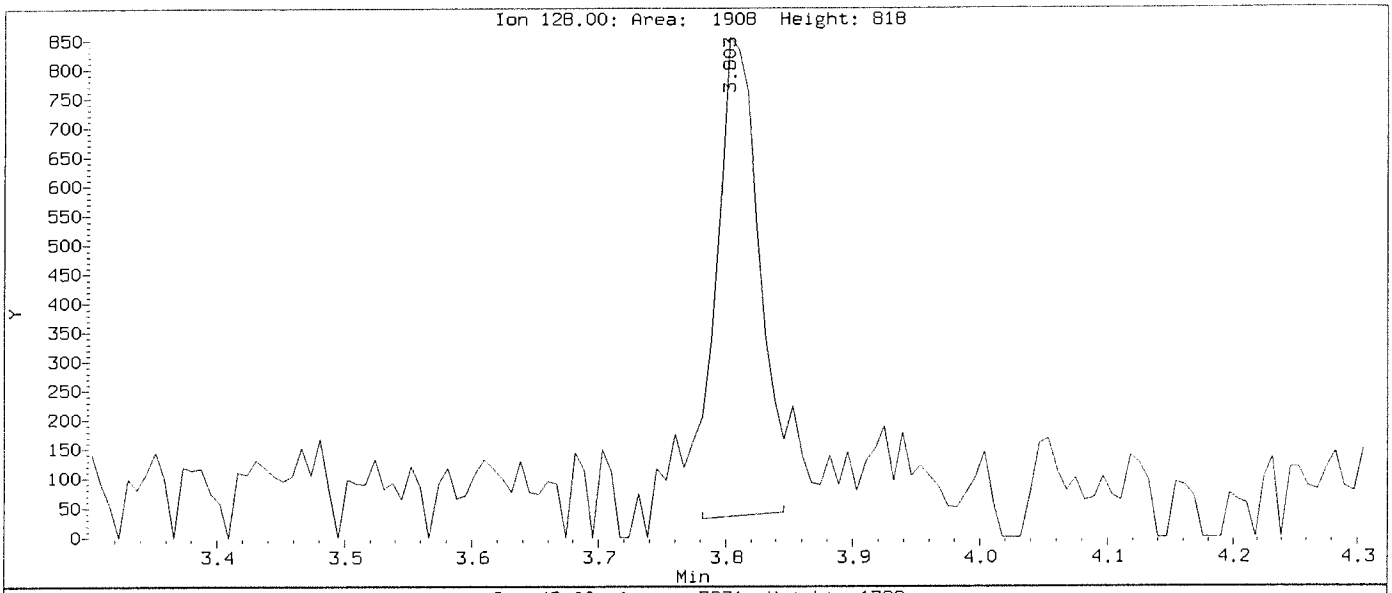


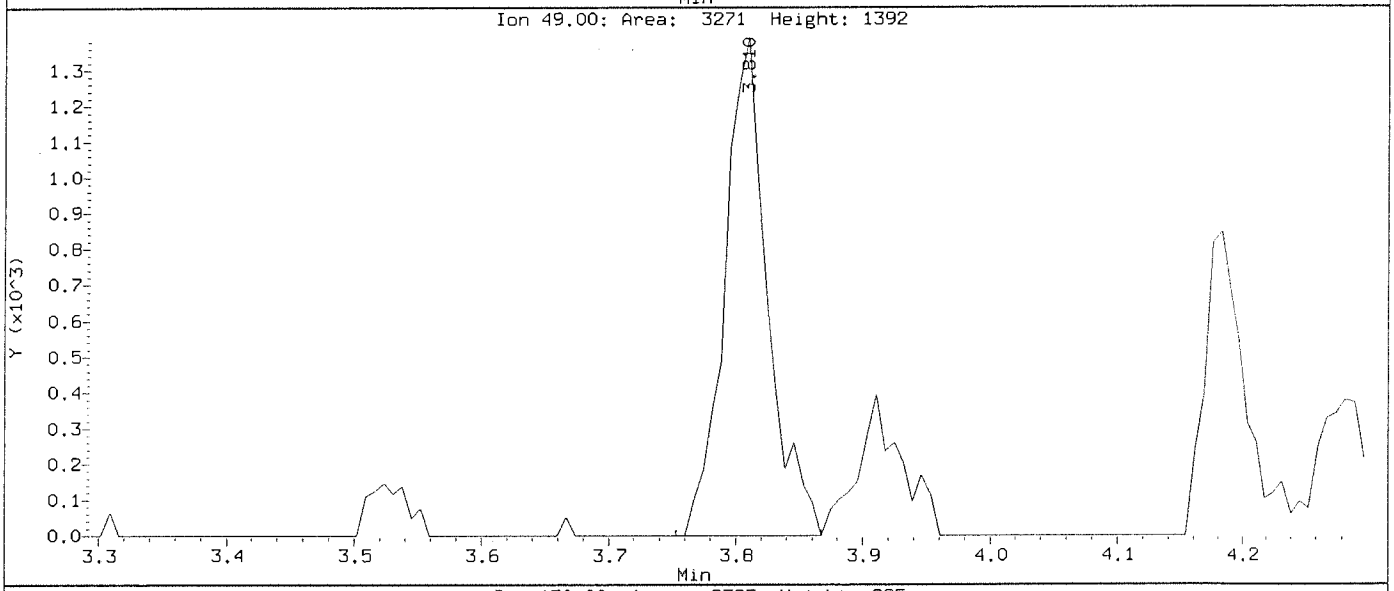



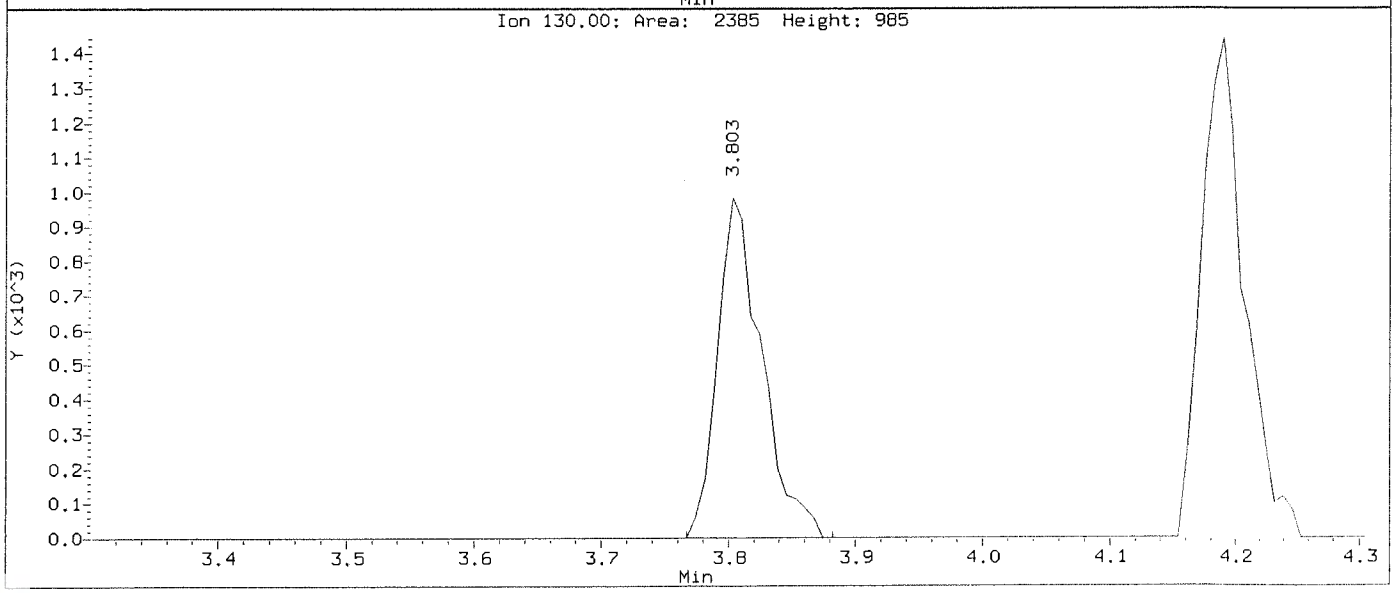



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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

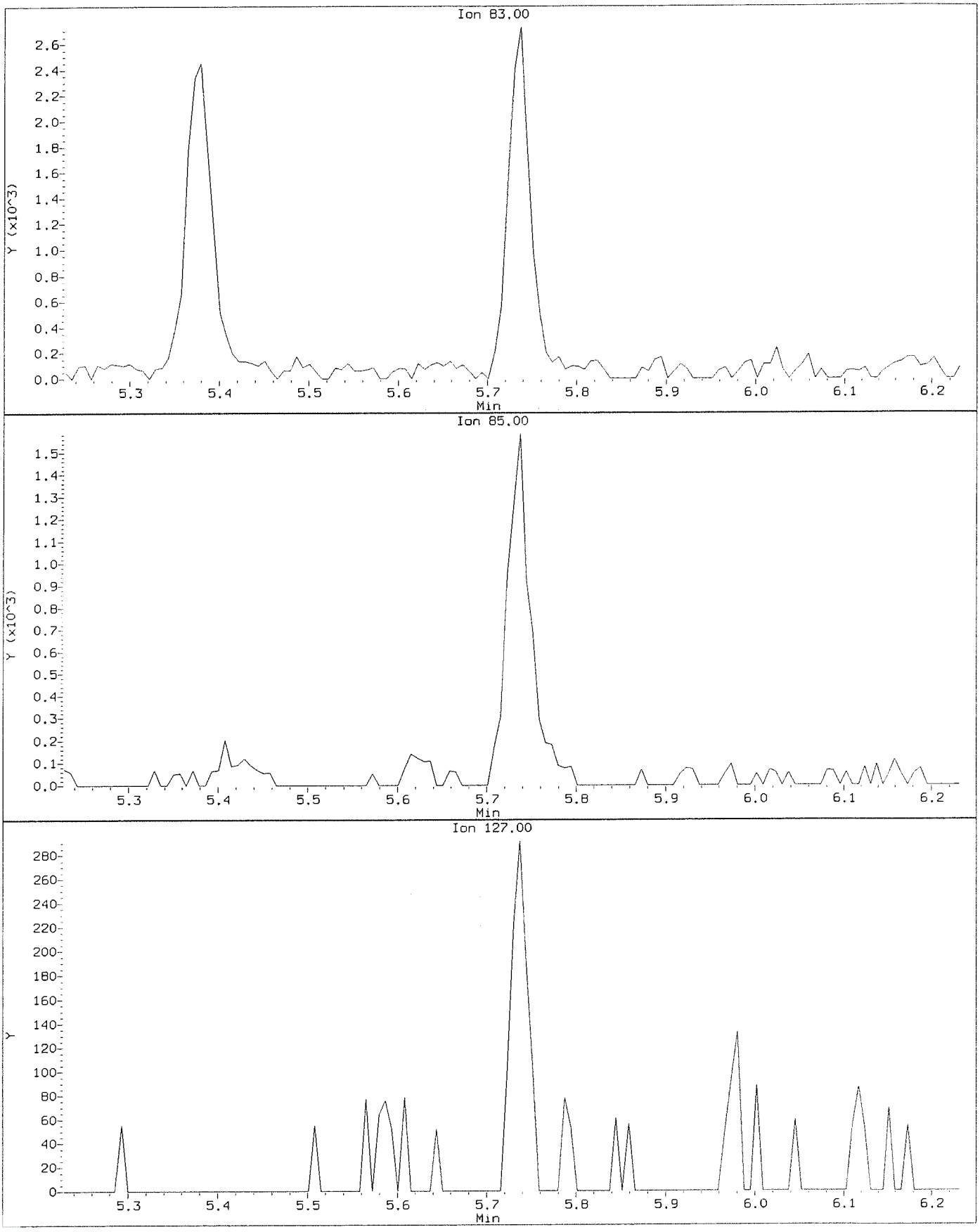


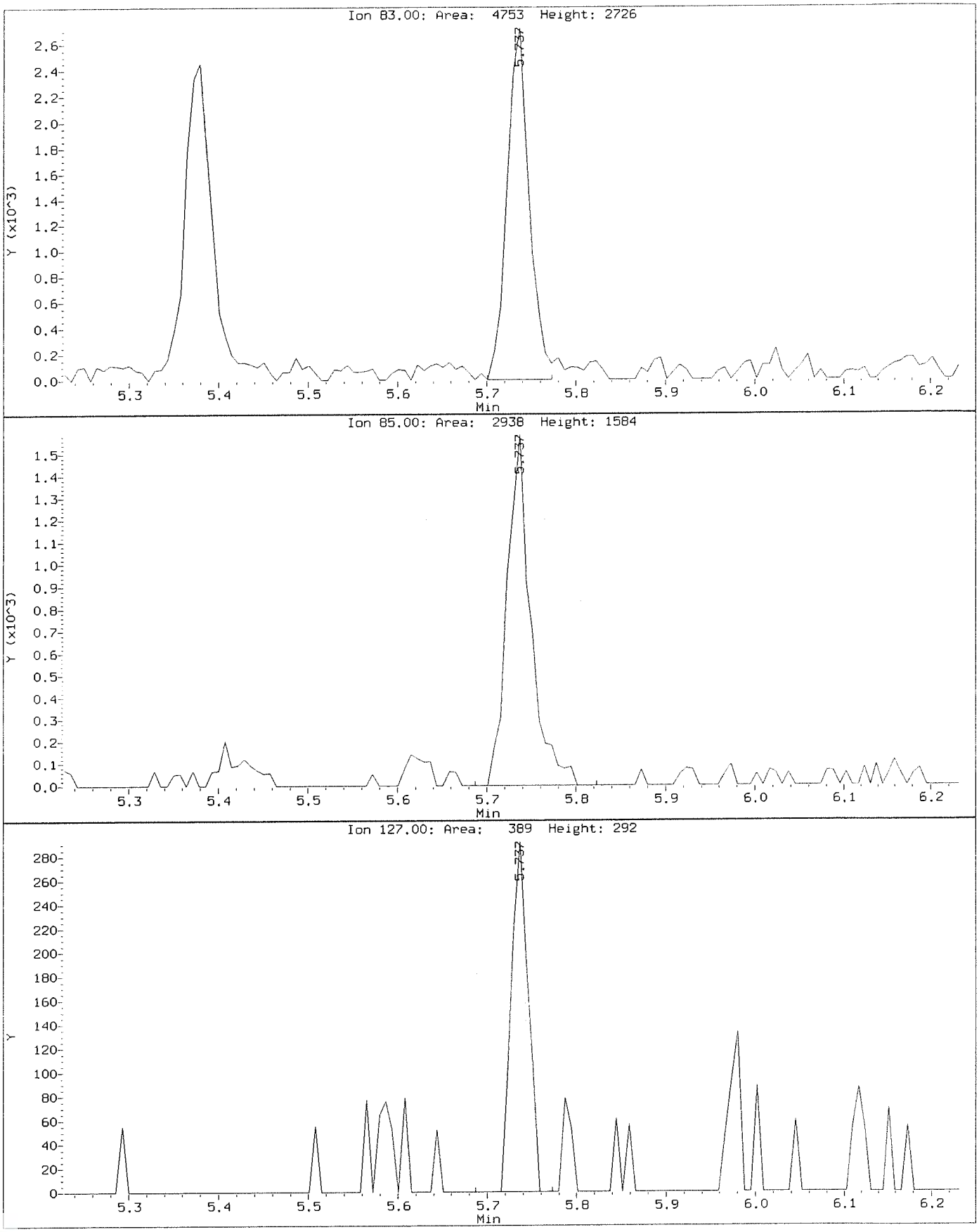
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



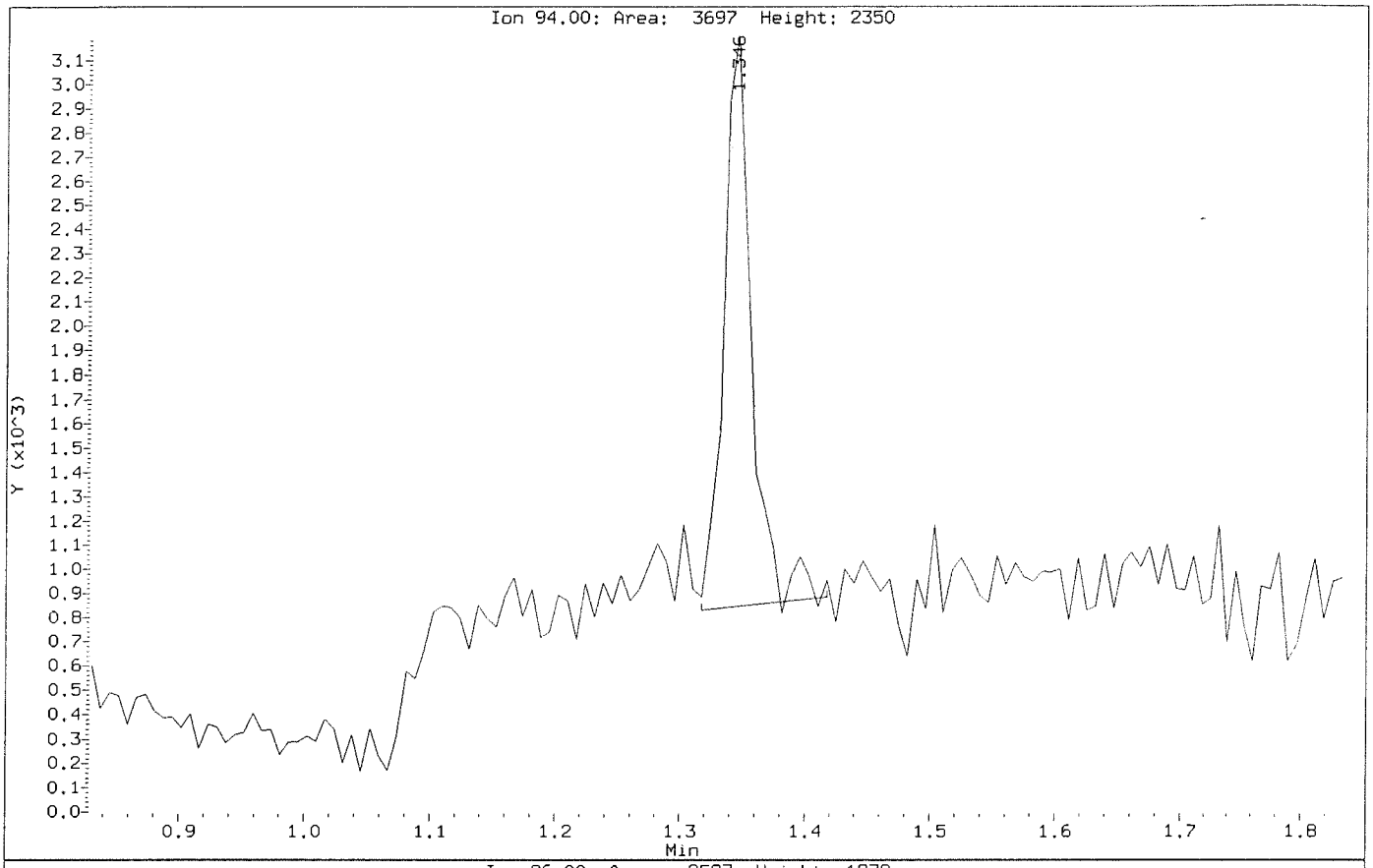
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Client Sample ID: VSTD000.5

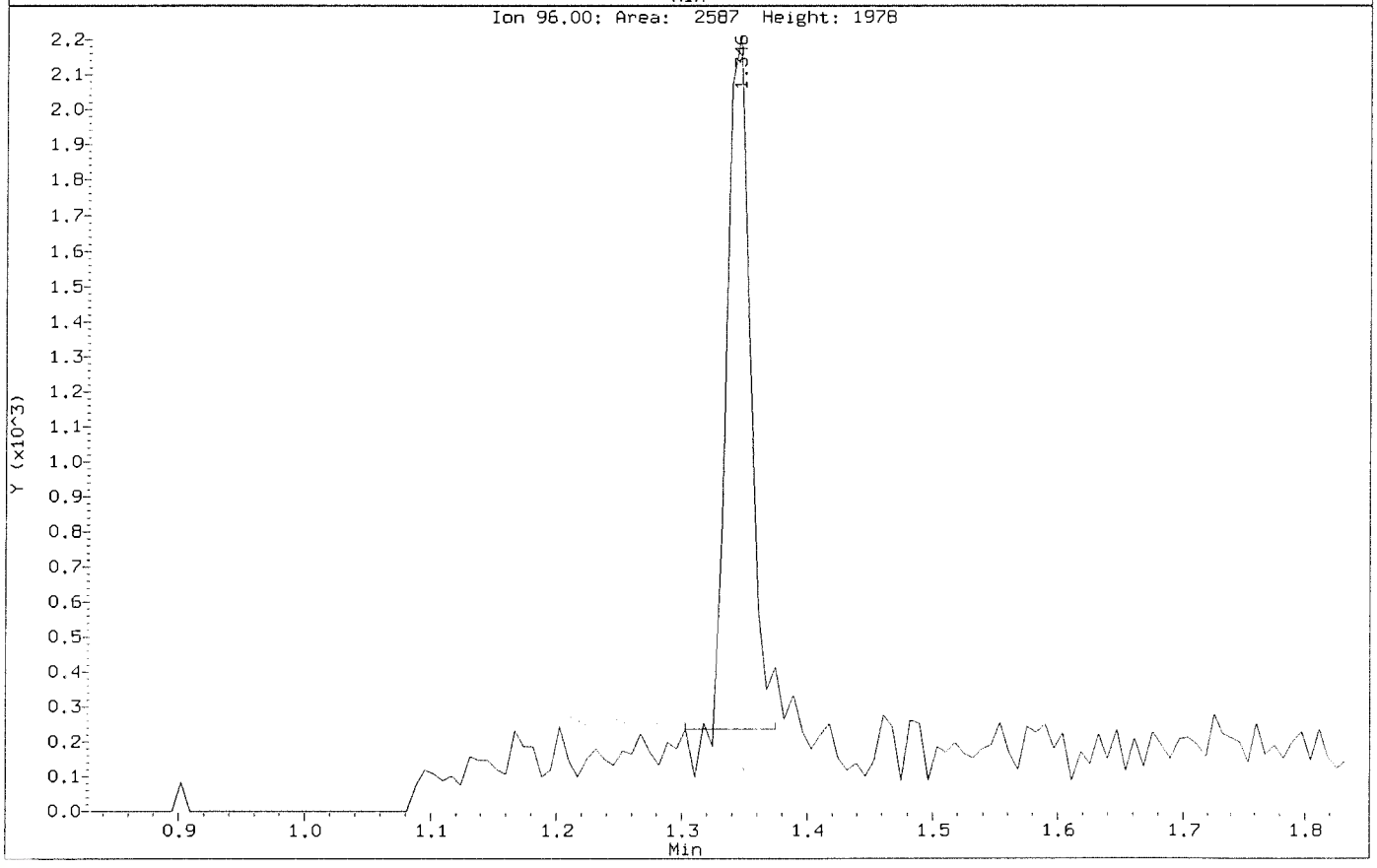
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Instrument: voa6.i
Client Sample ID: VSTD000.5

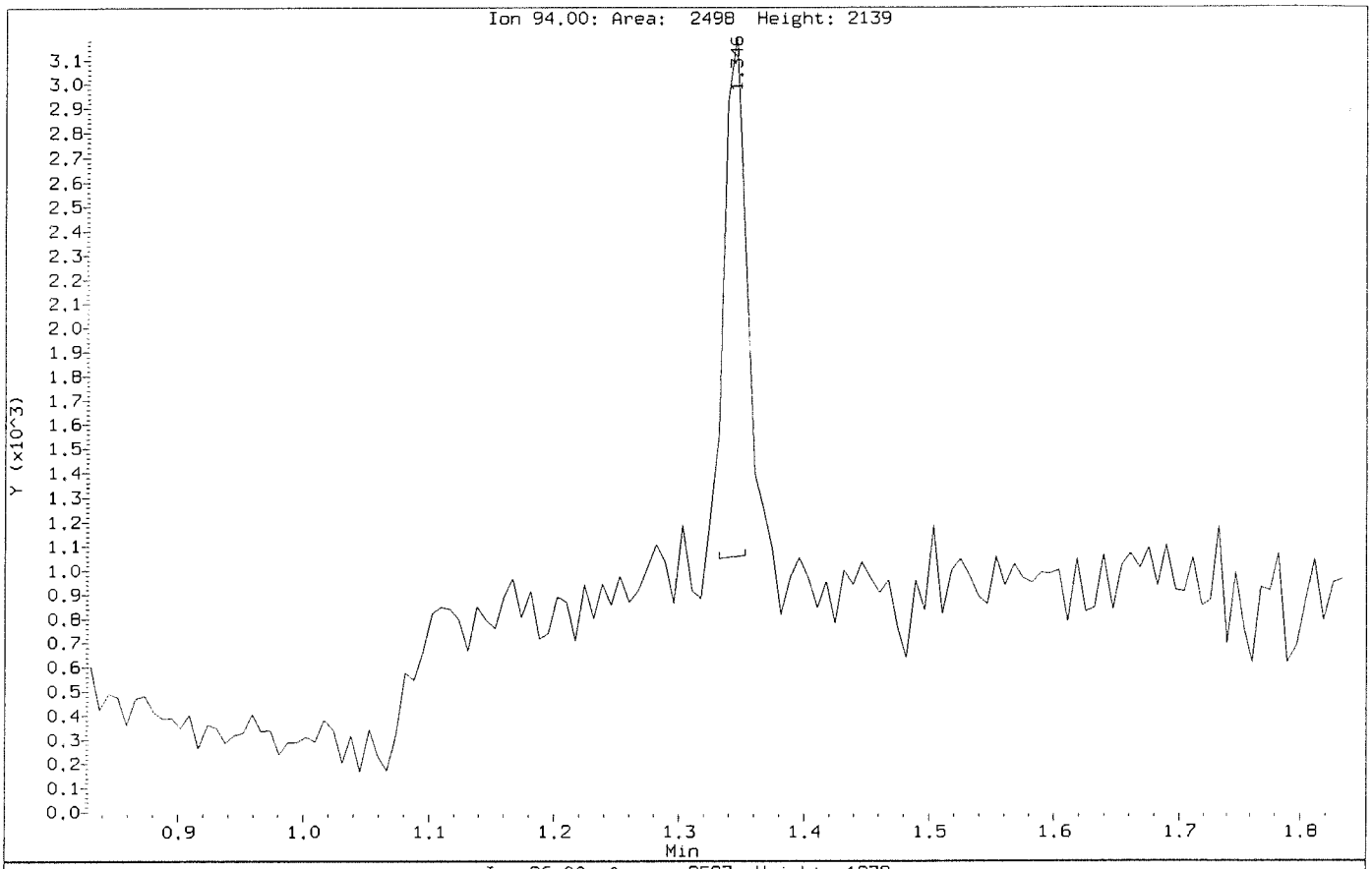
Compound: Bromomethane
CAS Number: 74-83-9

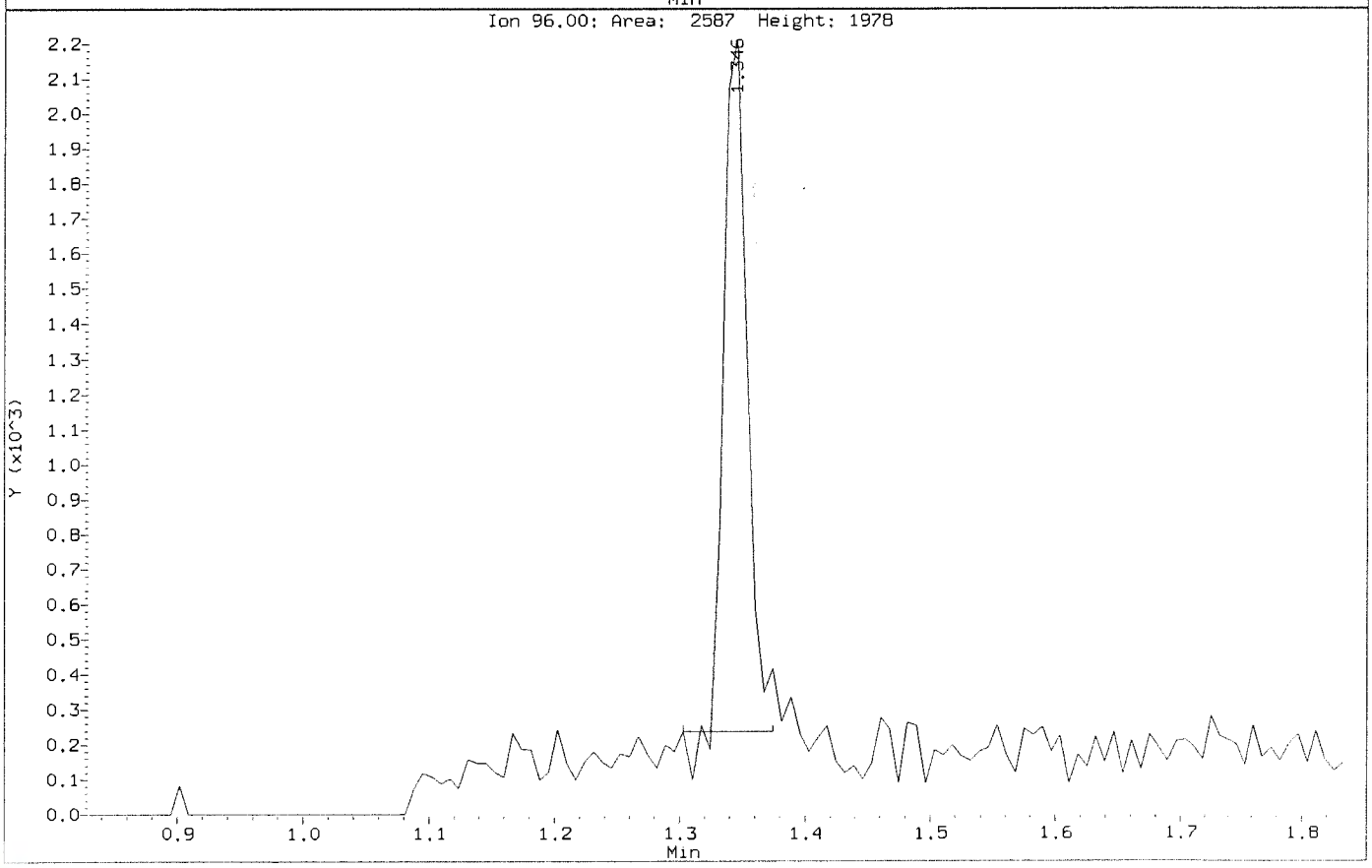


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Instrument: voa6.i
Client Sample ID: VSTD000.5

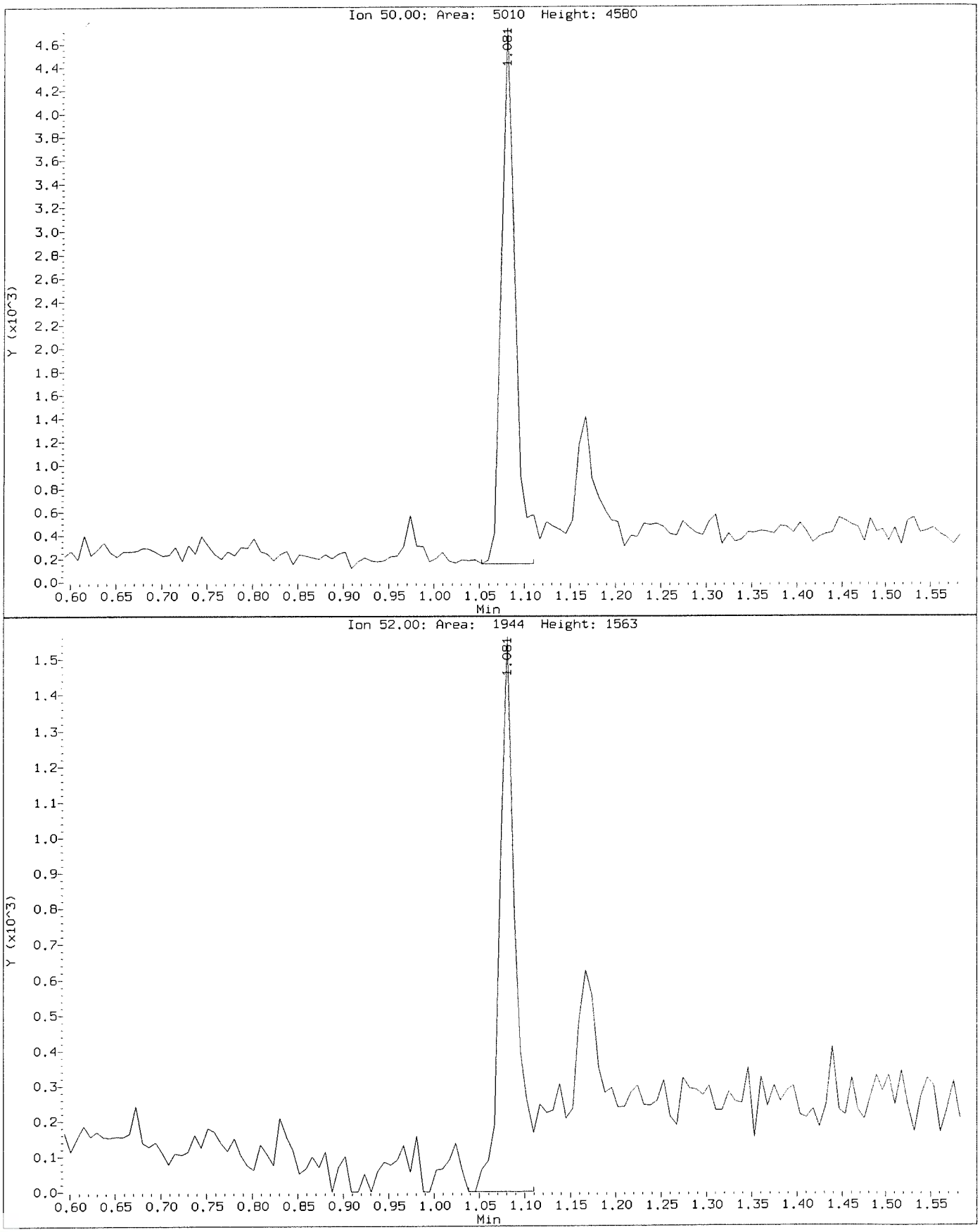
Compound: Bromomethane
CAS Number: 74-83-9



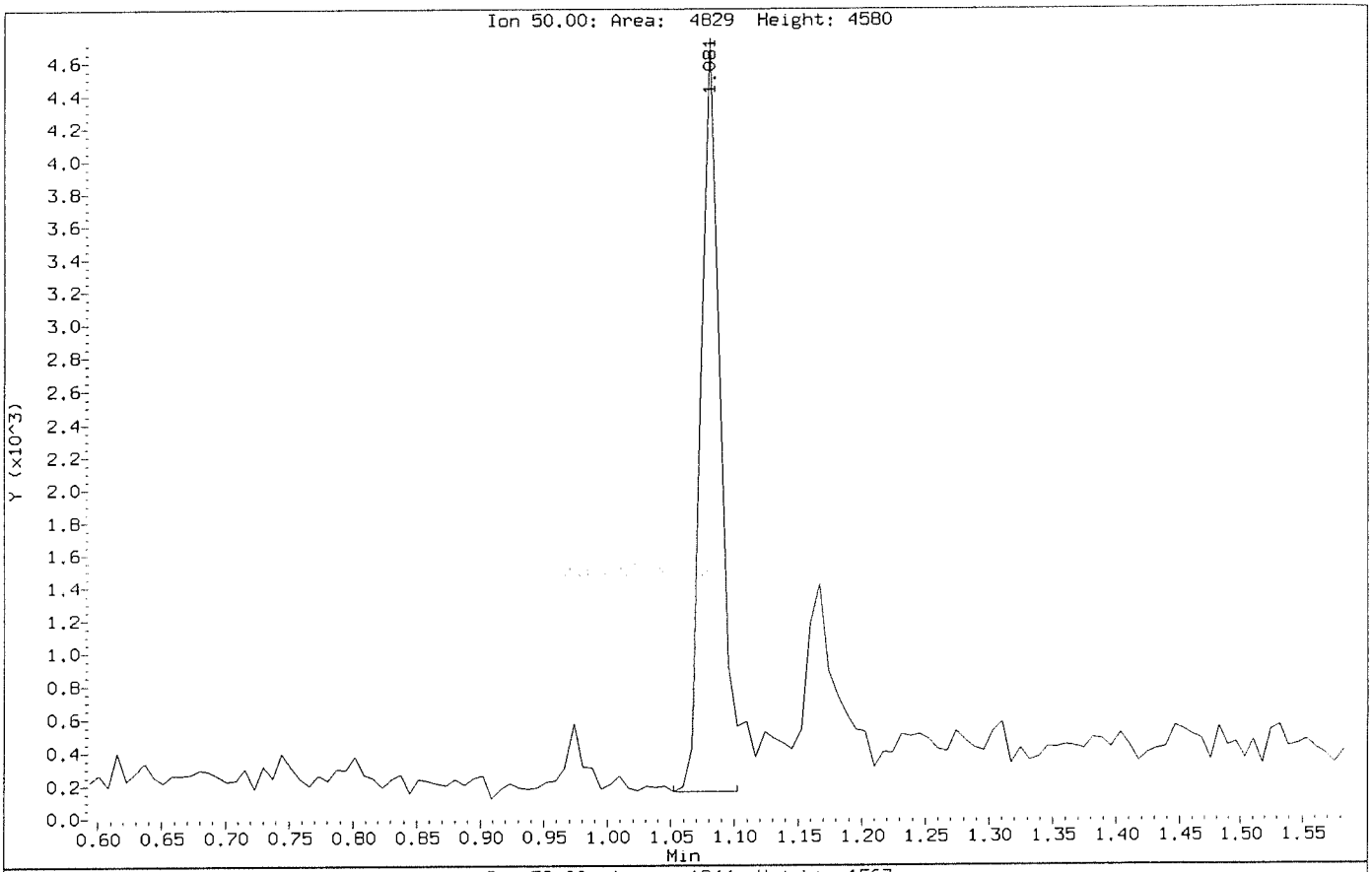
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Instrument: voa6.i
Client Sample ID: VSTD000.5

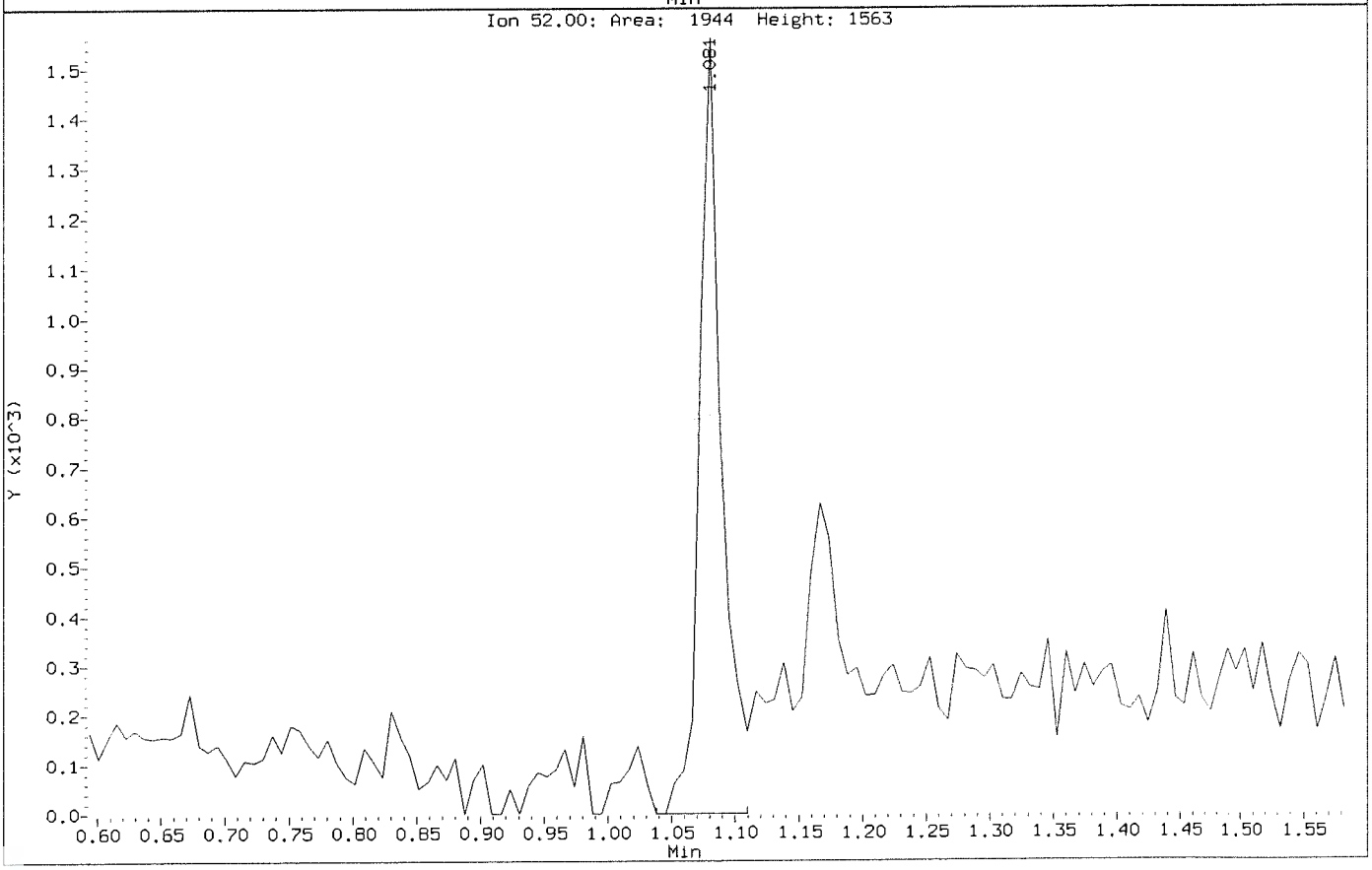
Compound: Chloromethane
CAS Number: 74-87-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

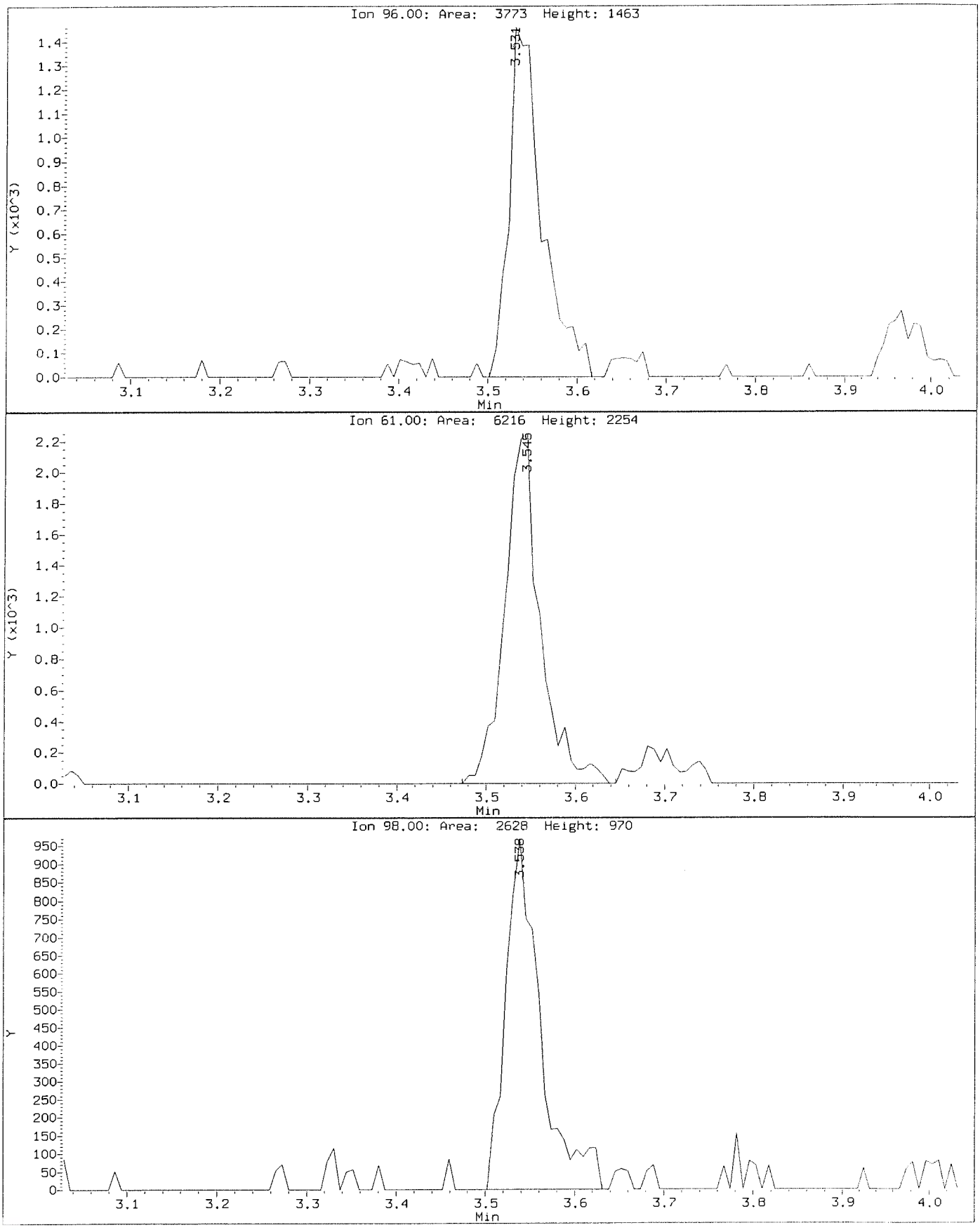
Compound: Chloromethane
CAS Number: 74-87-3



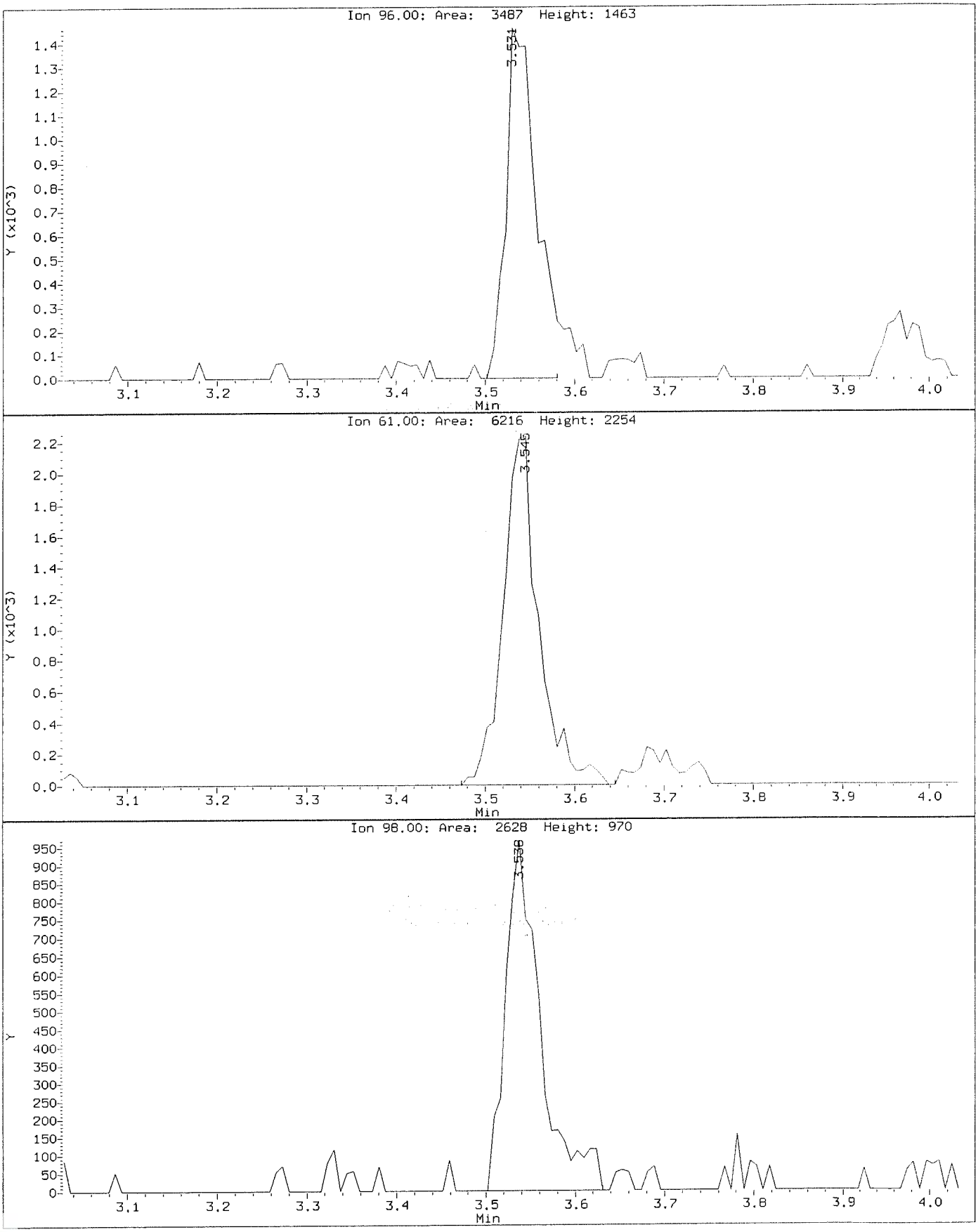
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



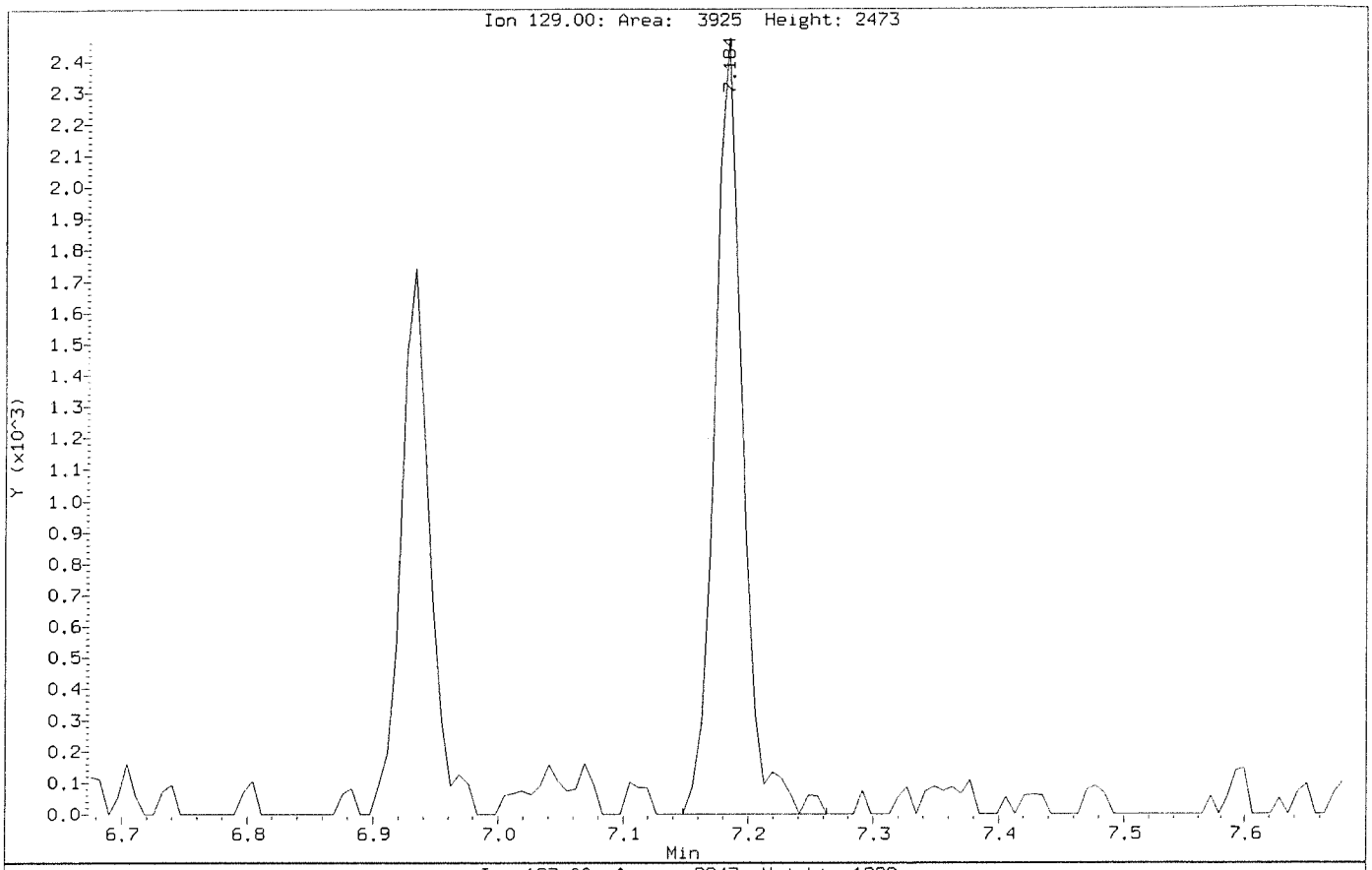
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Client Sample ID: VSTD000.5

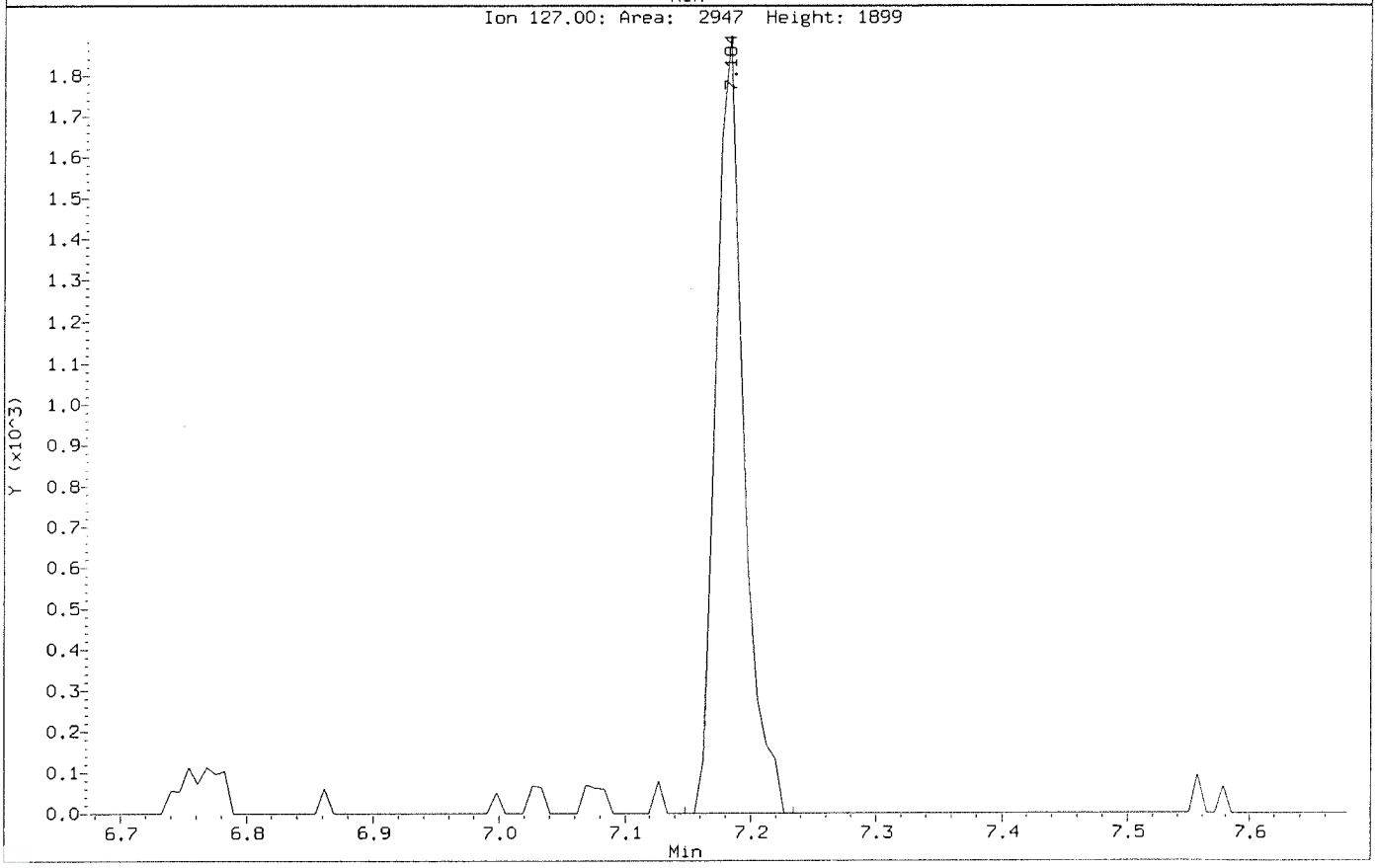
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

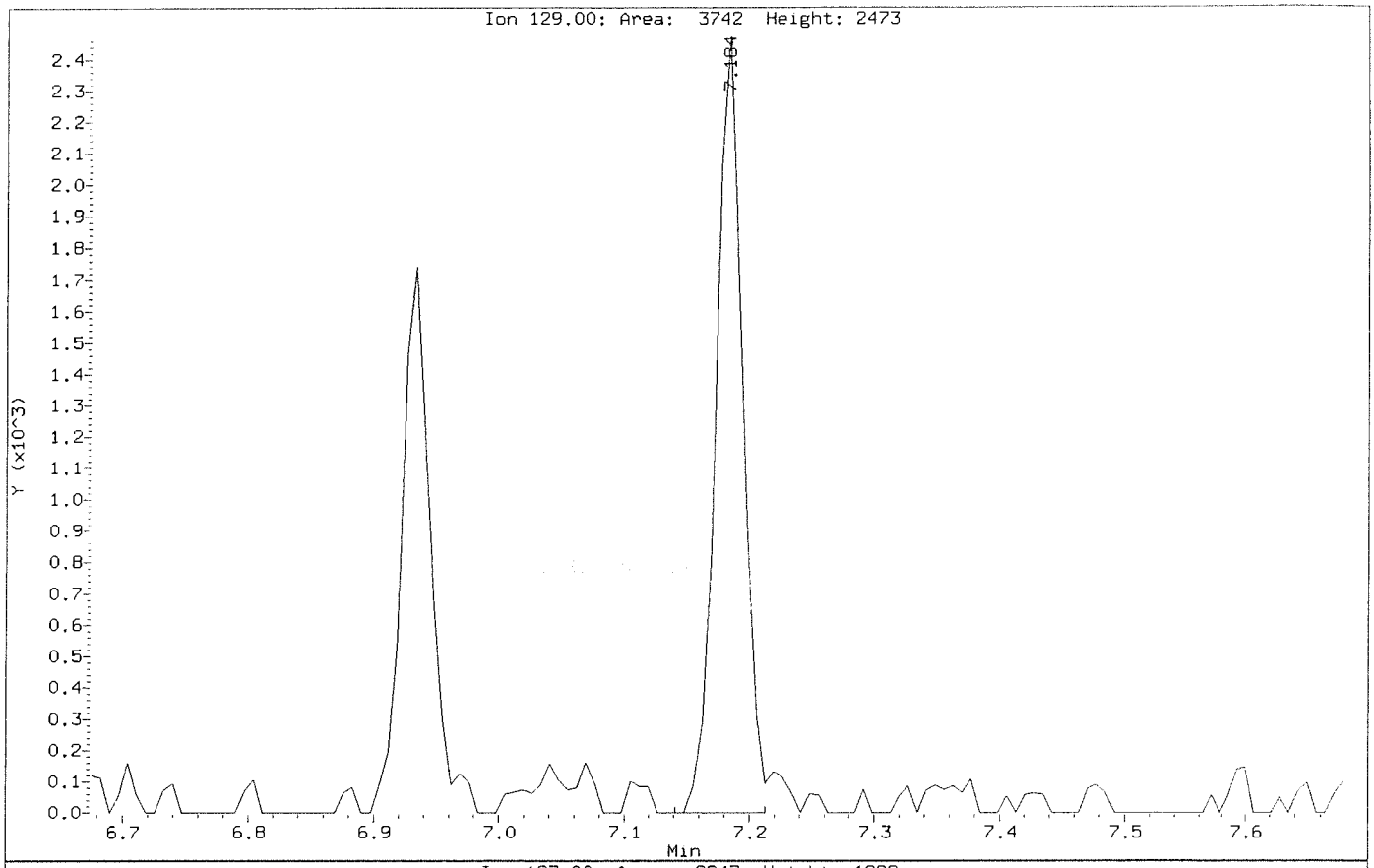
Compound: Dibromochloromethane
CAS Number: 124-48-1

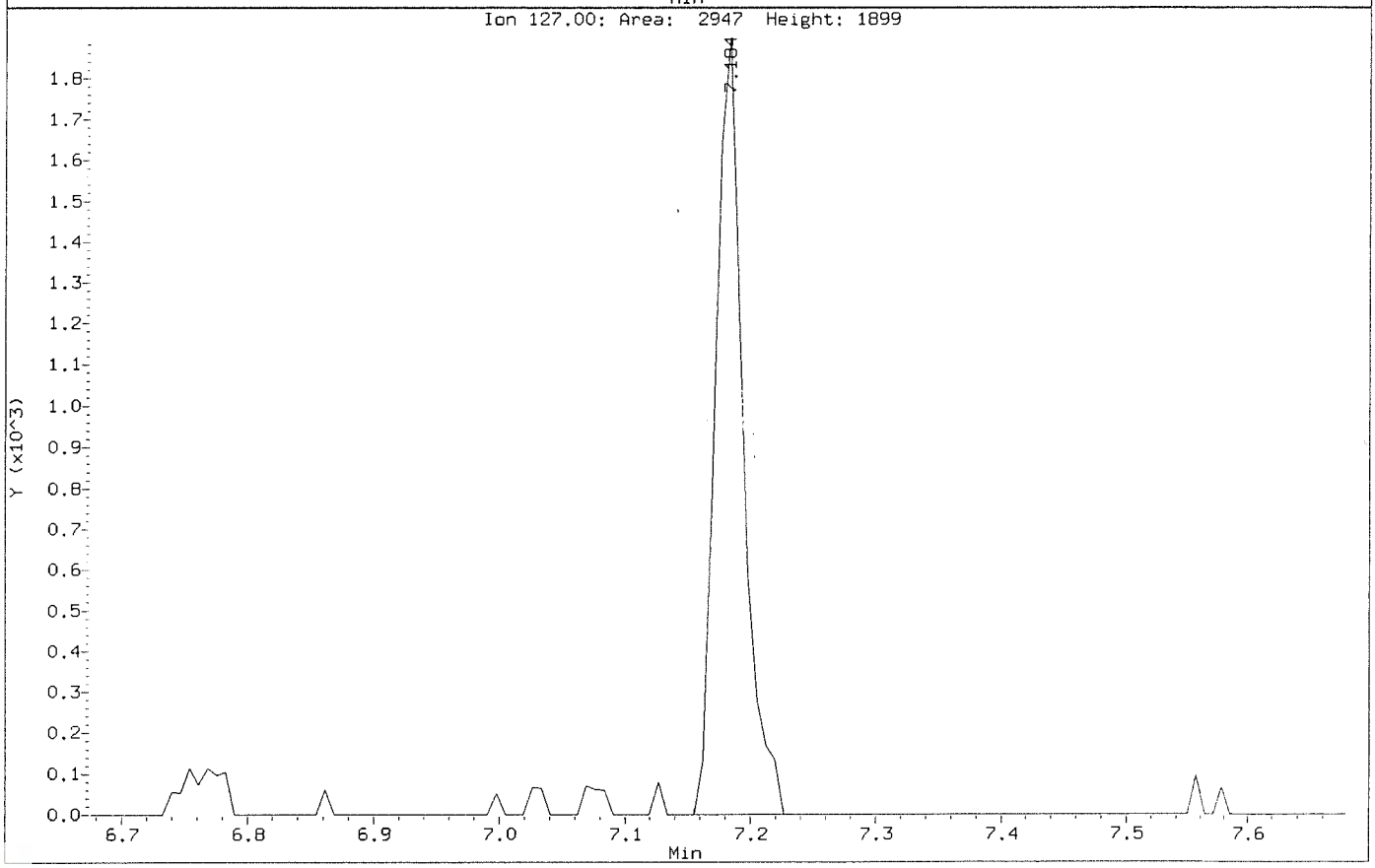


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Instrument: voa6.i
Client Sample ID: VSTD000.5

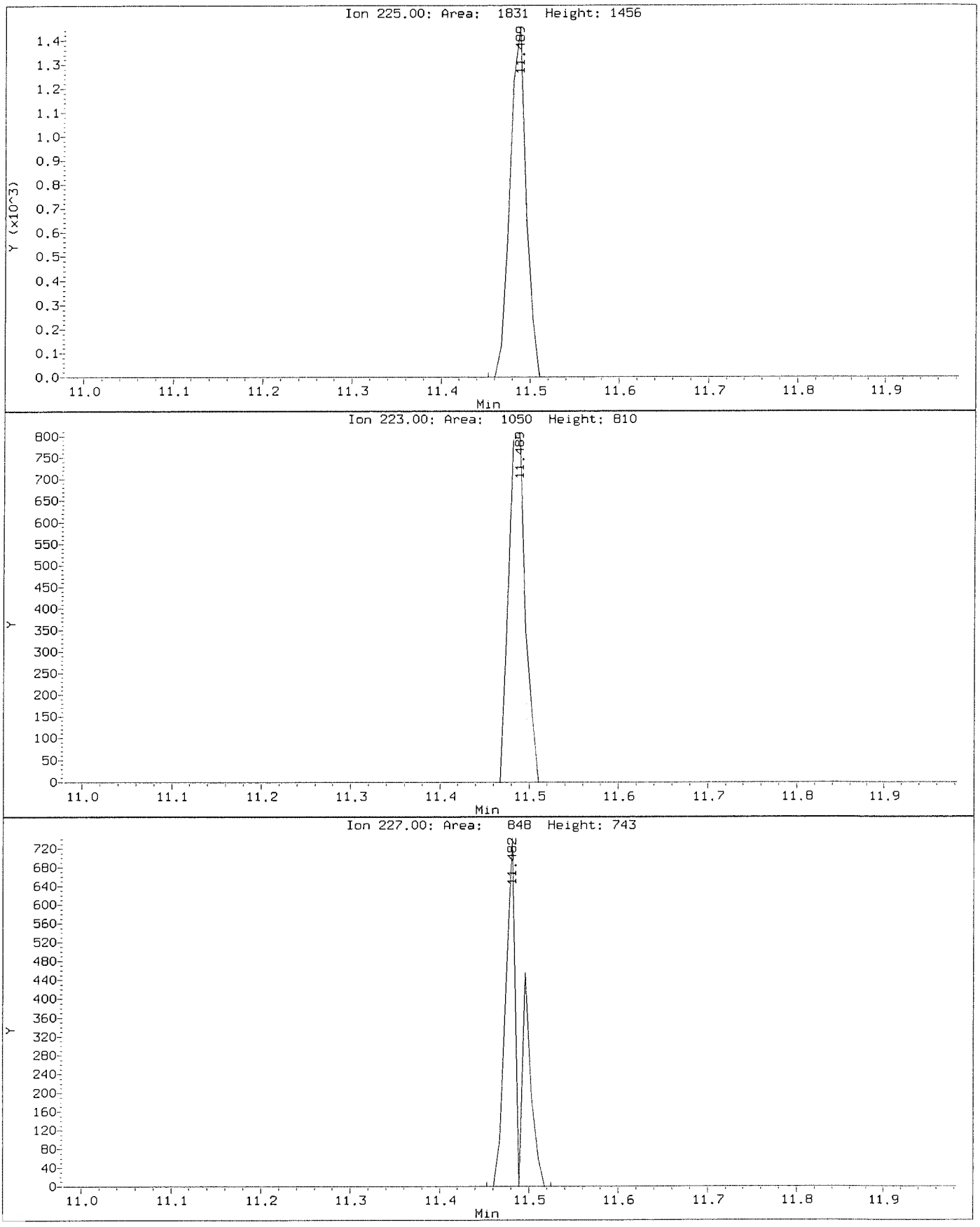
Compound: Dibromochloromethane
CAS Number: 124-48-1



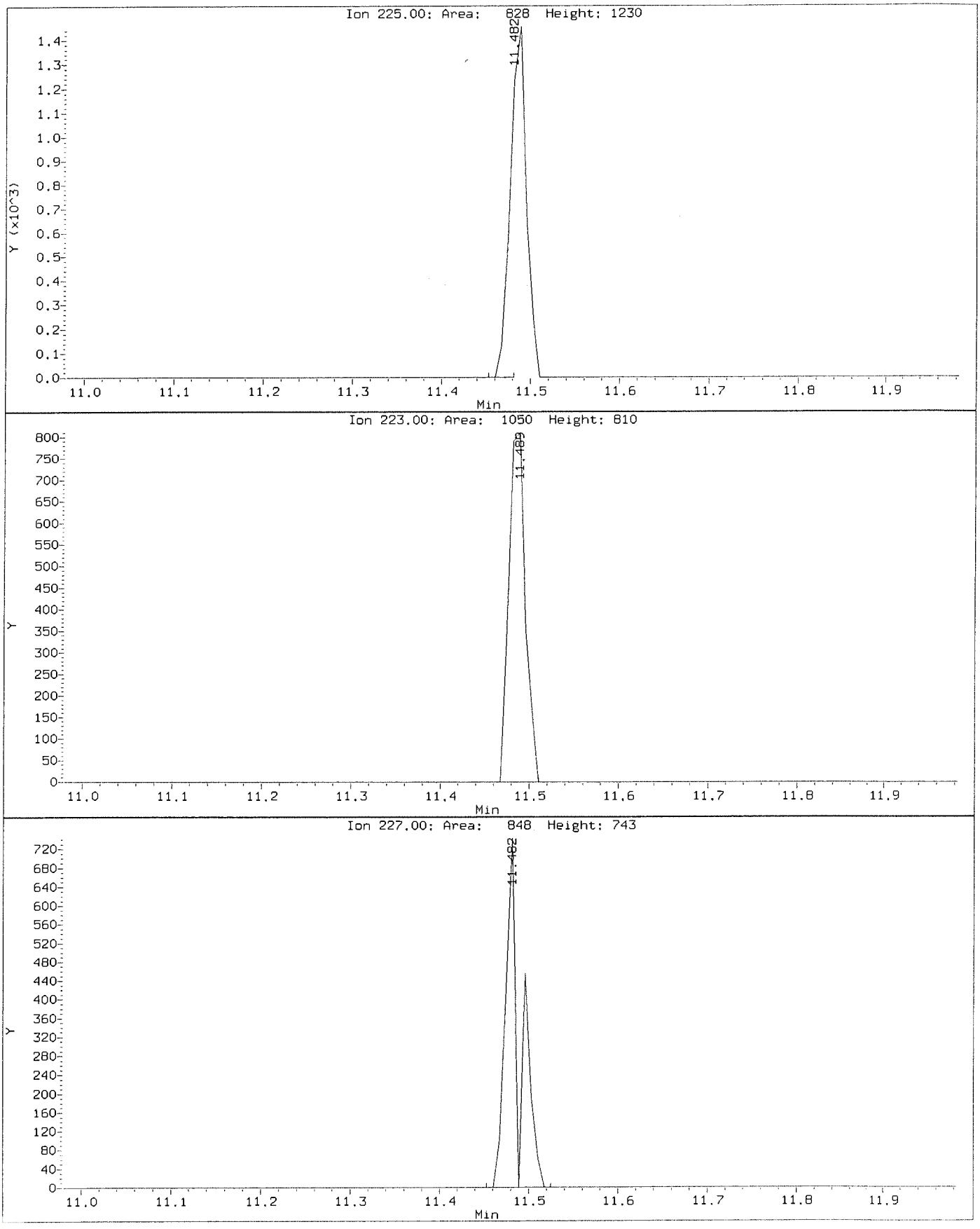
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



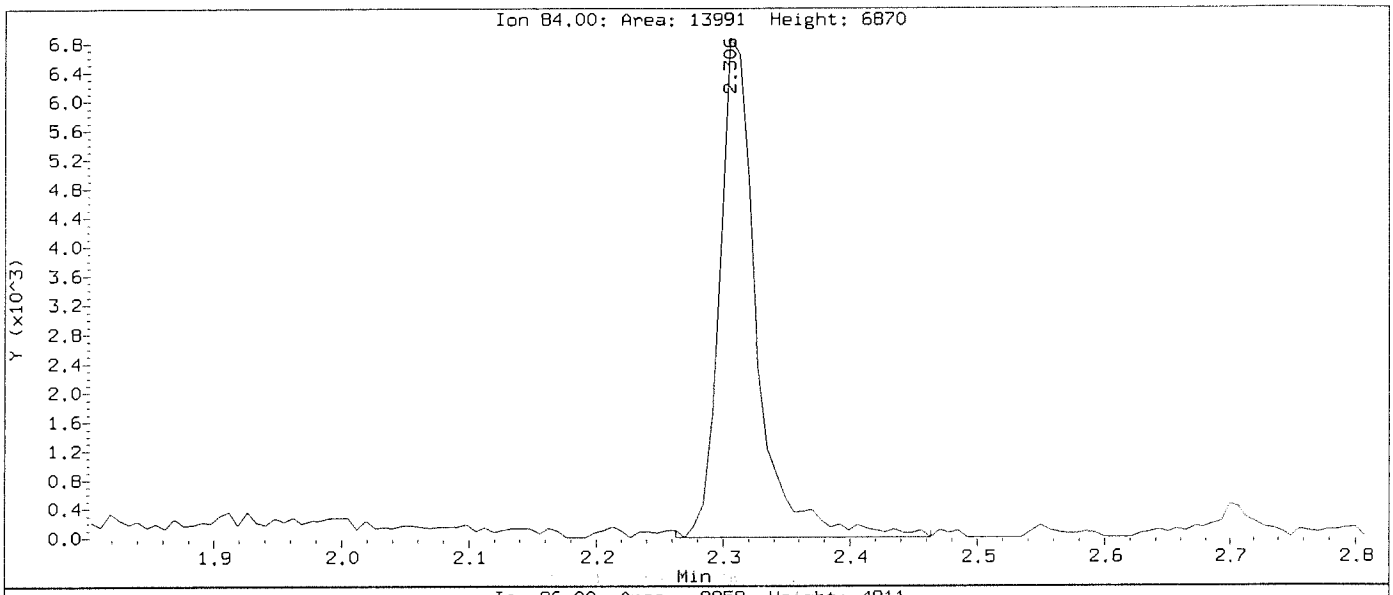
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Client Sample ID: VSTD000.5

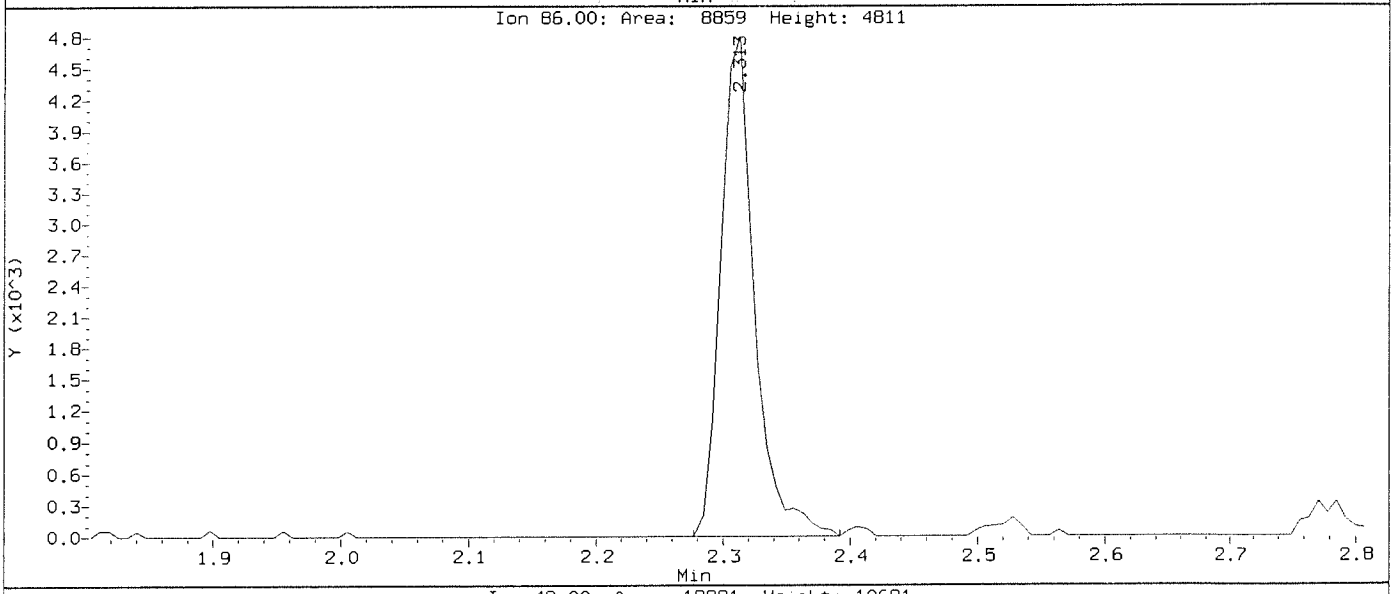
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

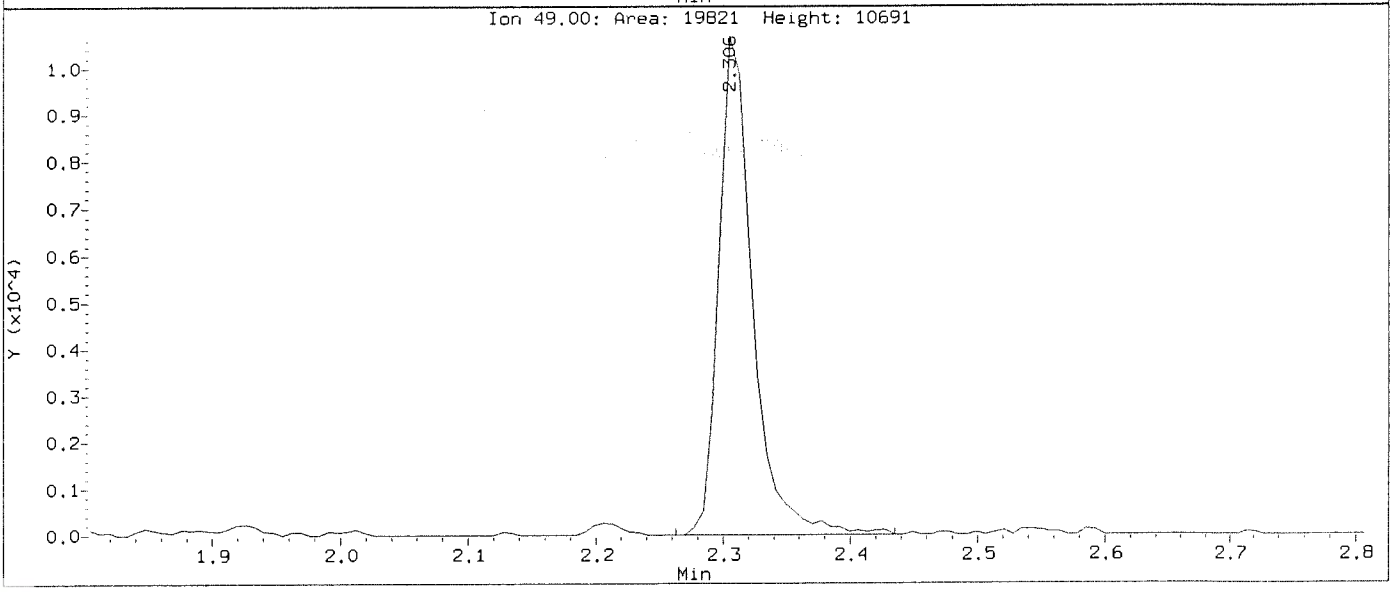


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

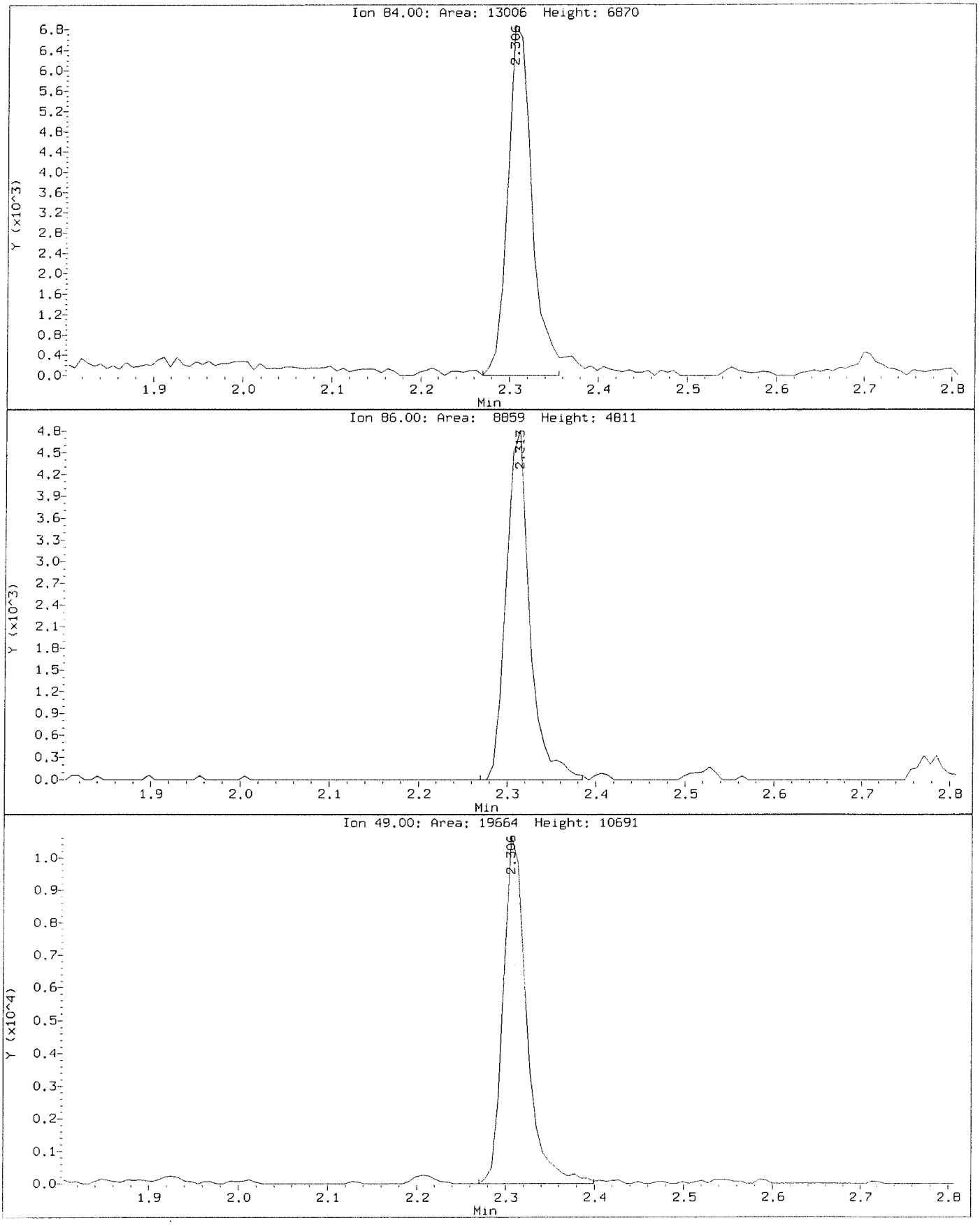


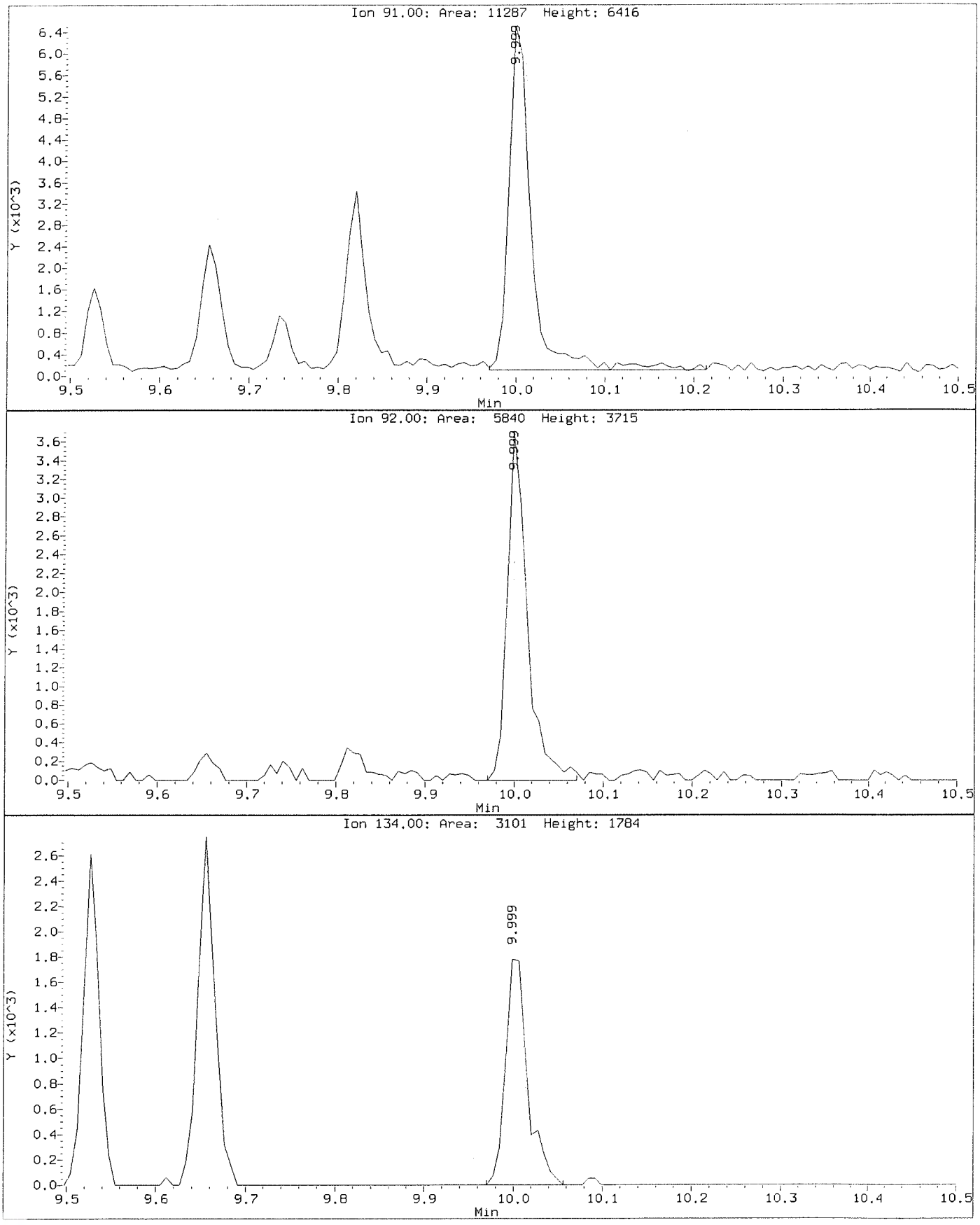
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



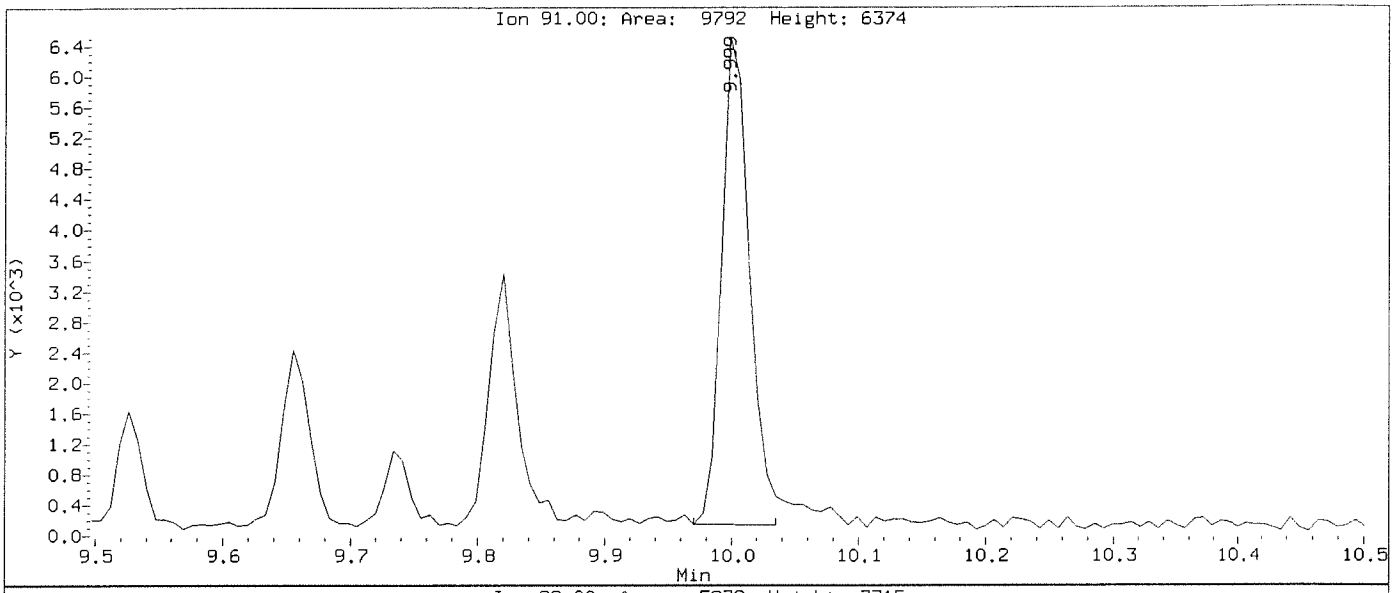
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Client Sample ID: VSTD000.5

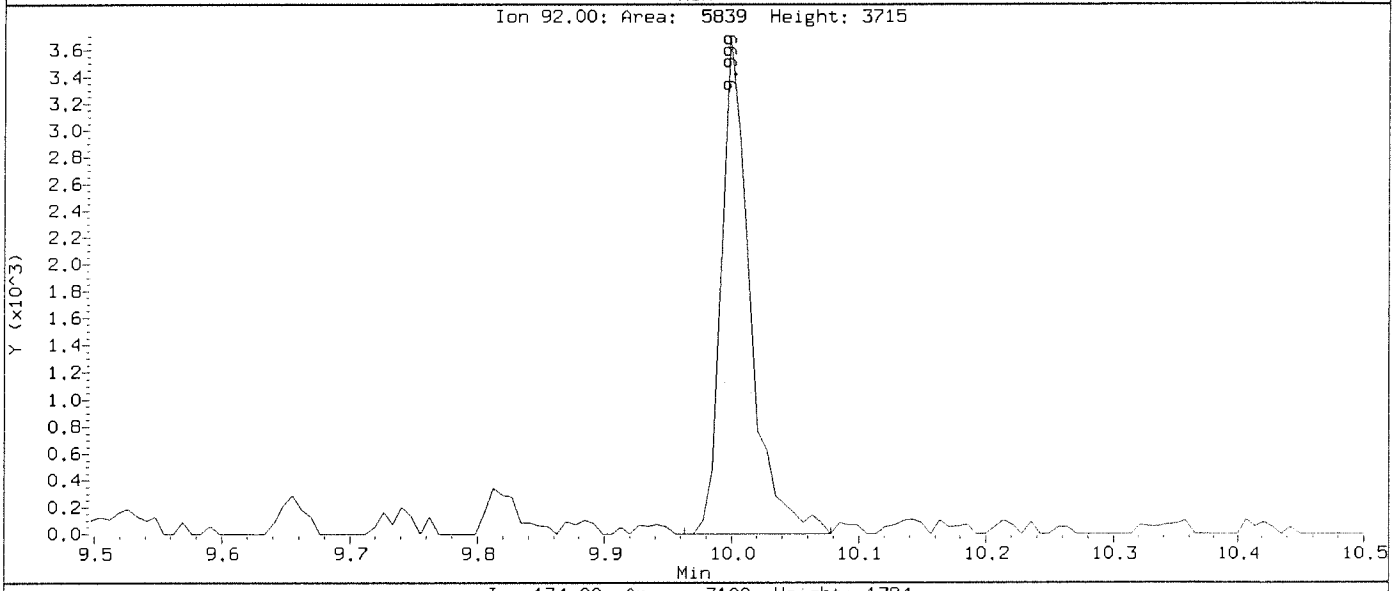
Compound: n-Butylbenzene
CAS Number: 104-51-8

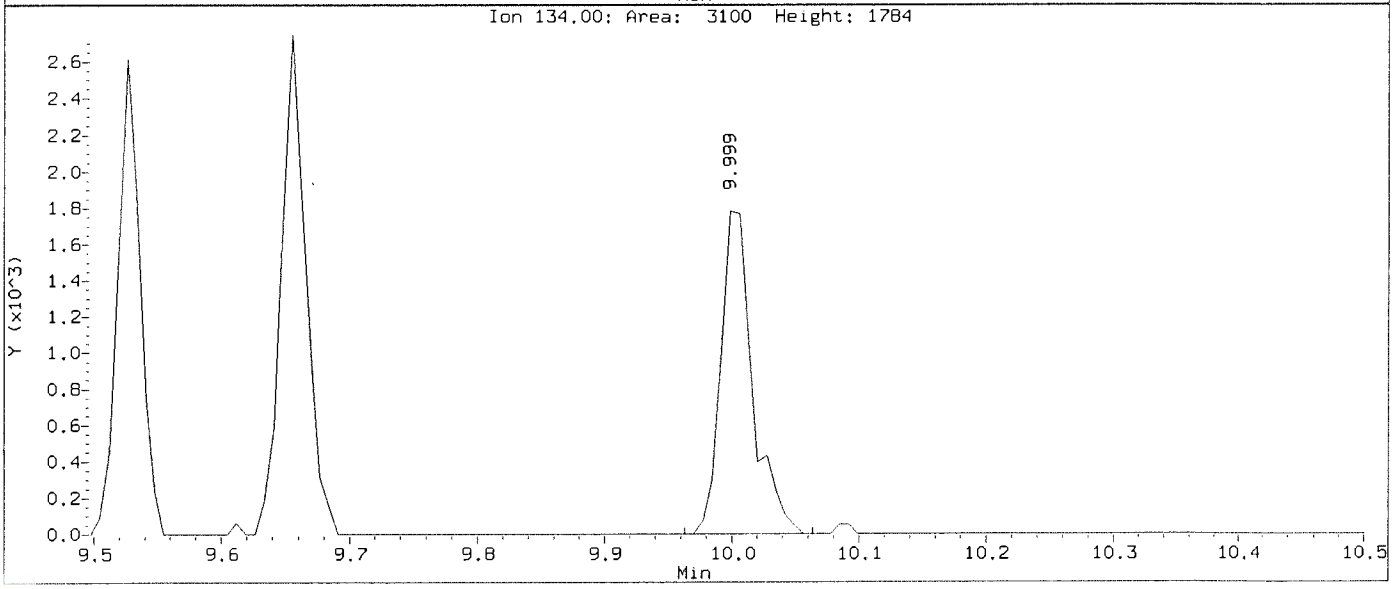


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

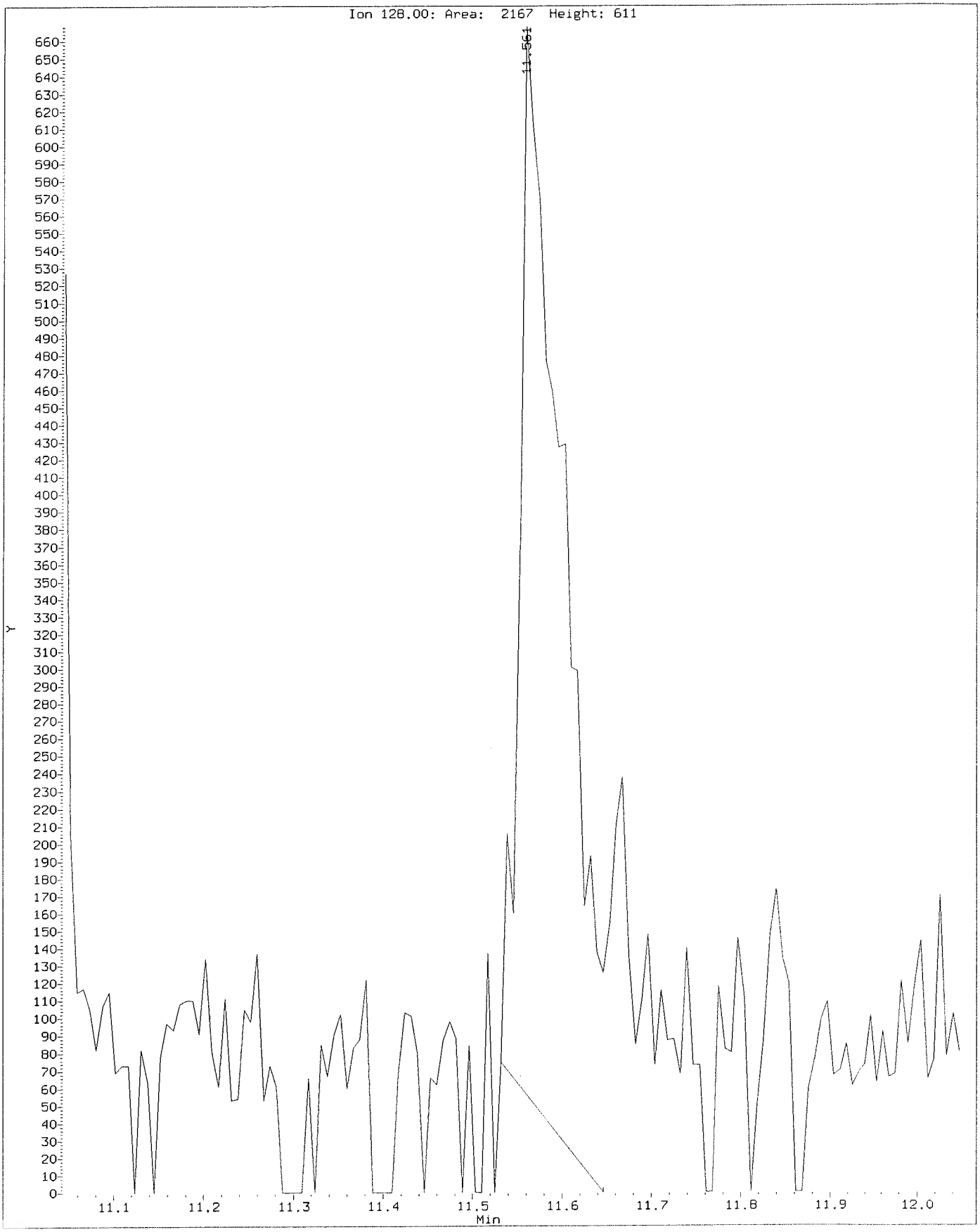


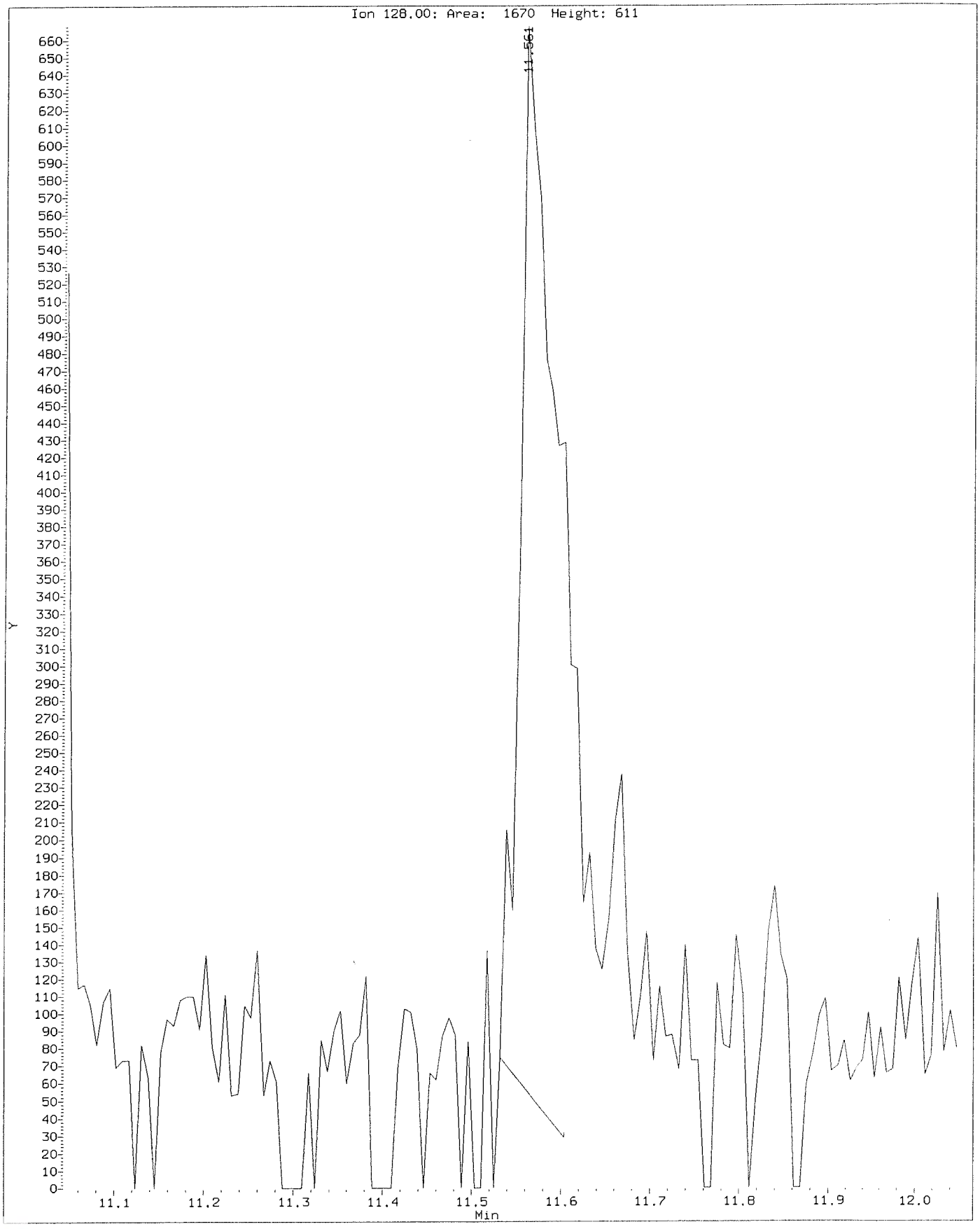
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



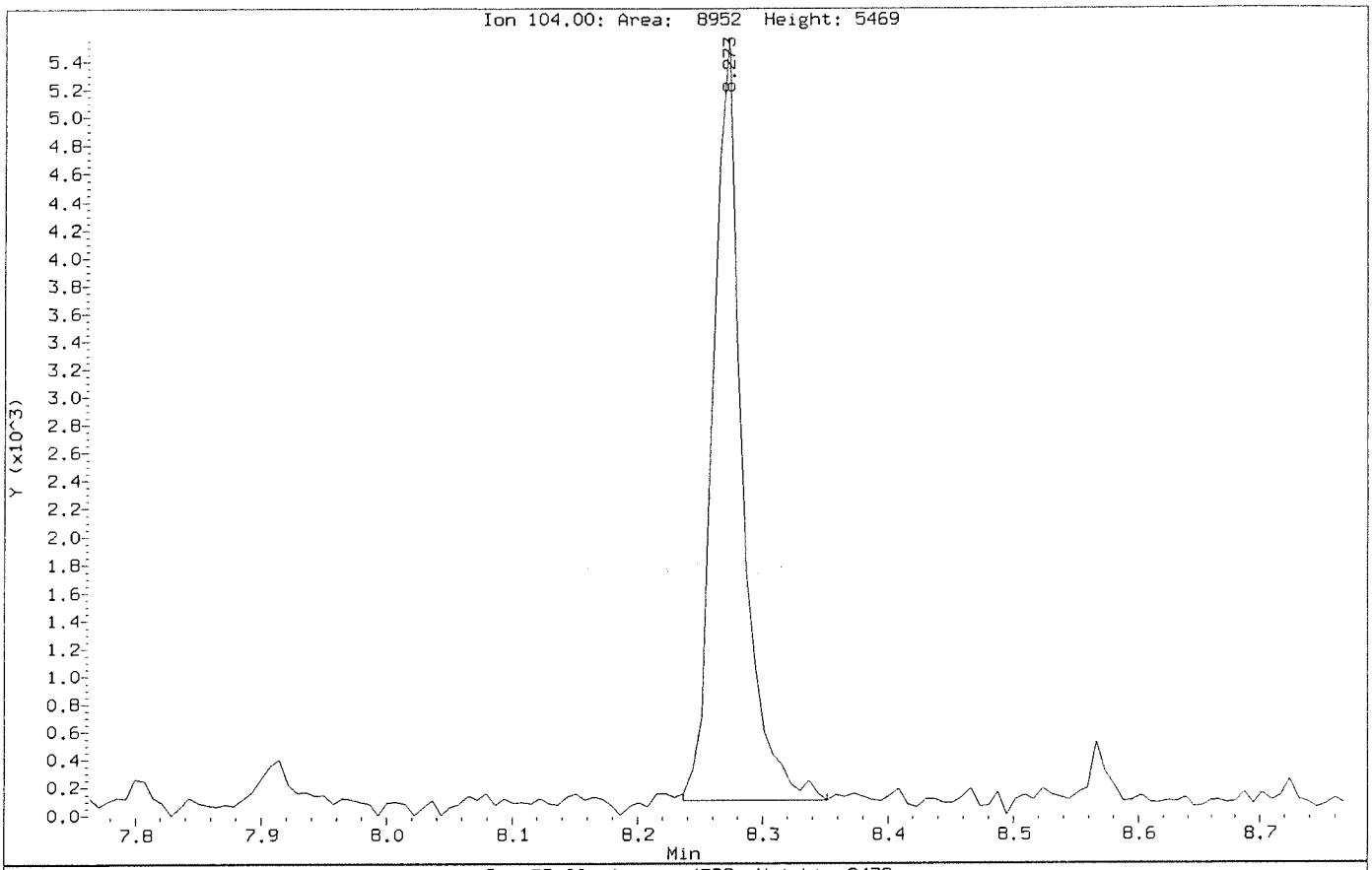
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Instrument: voa6.i
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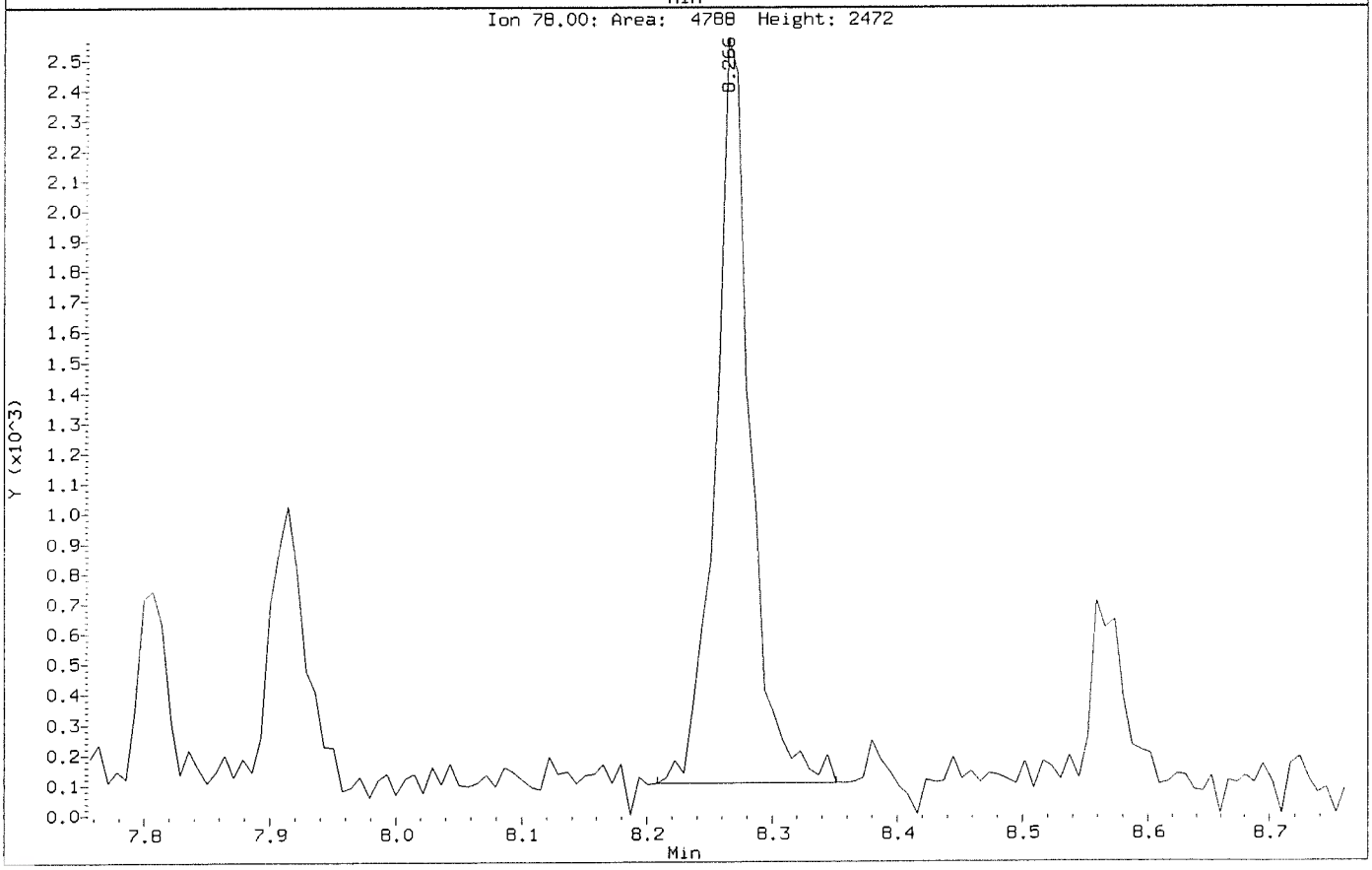
Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

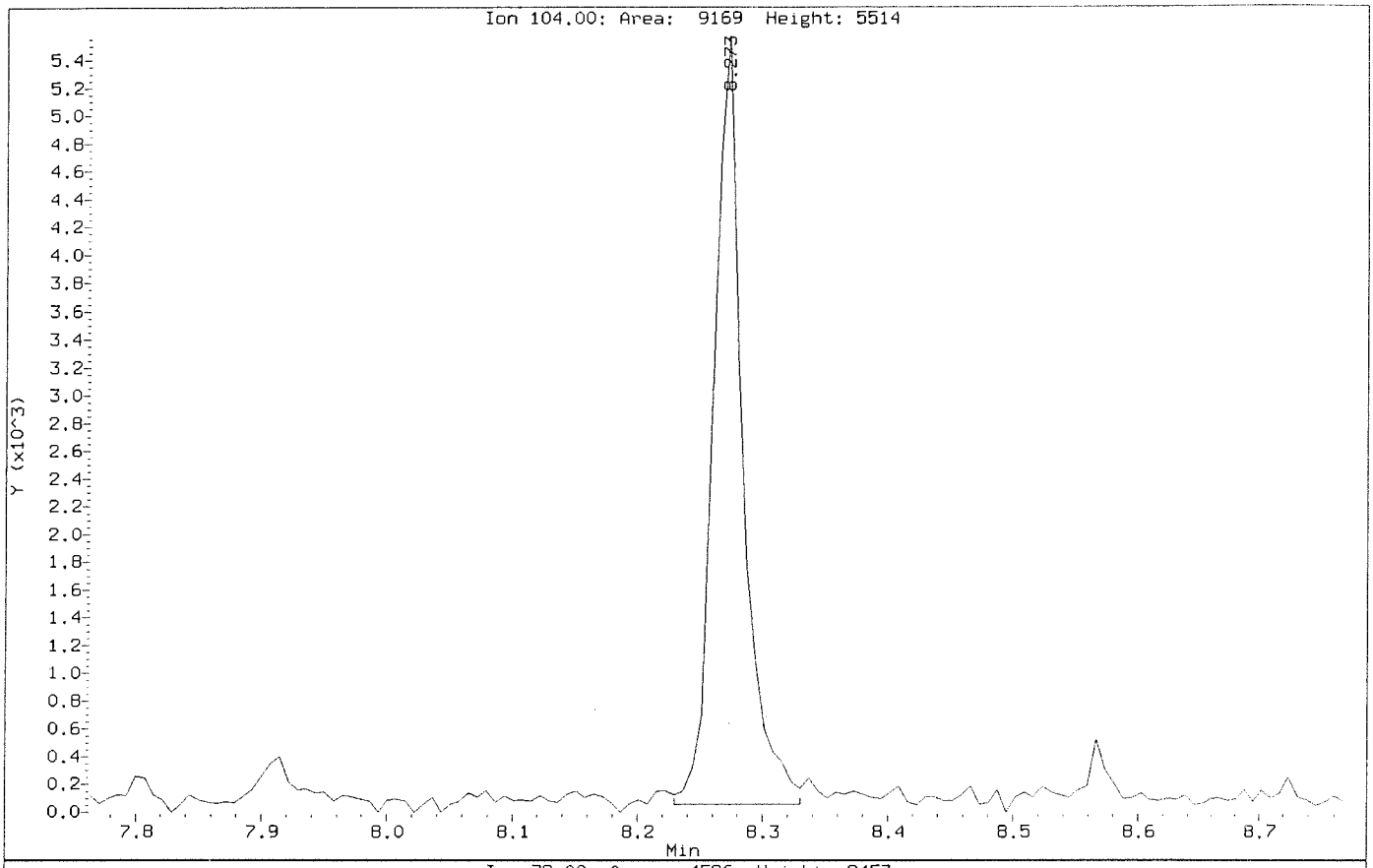
Compound: Styrene
CAS Number: 100-42-5

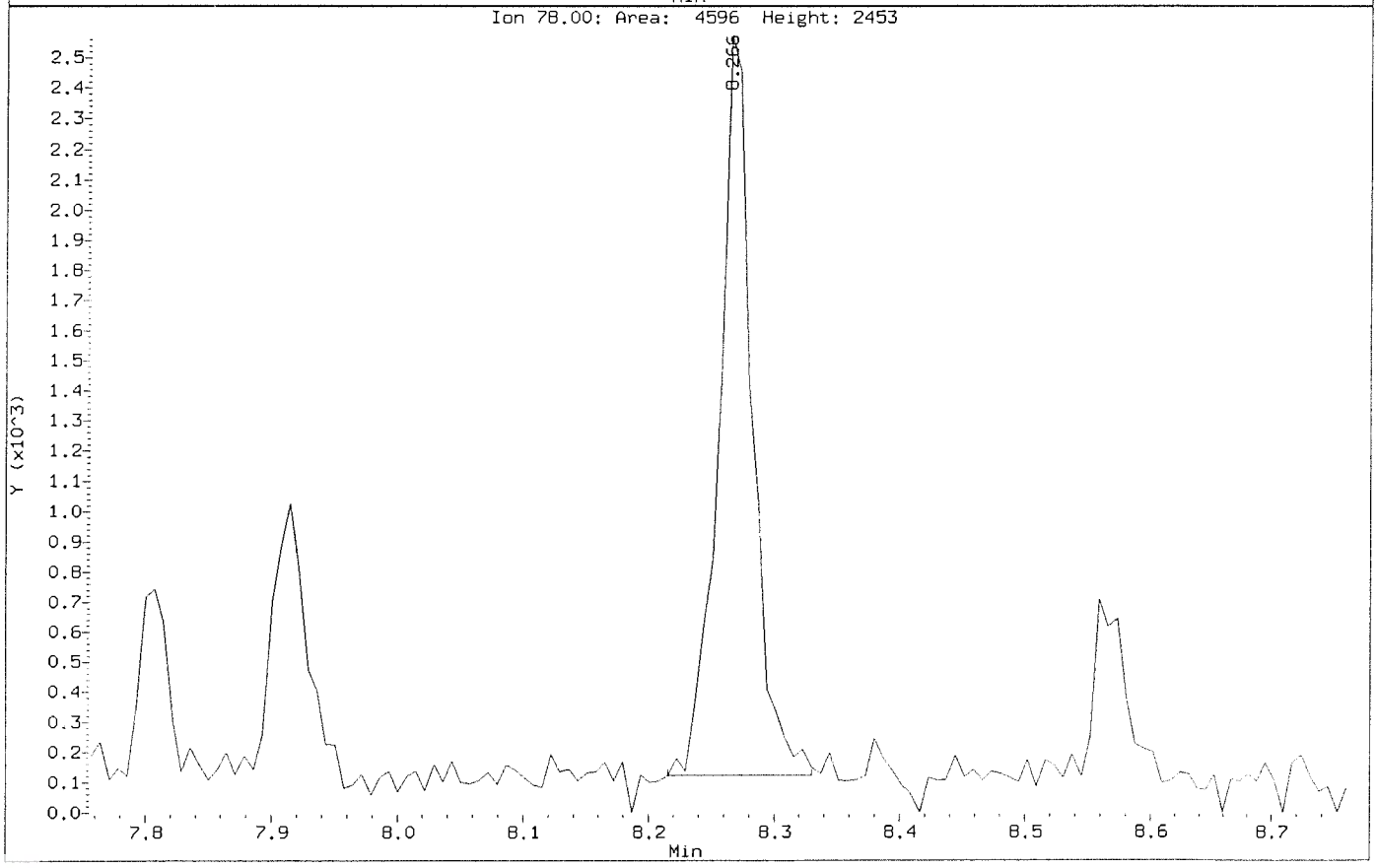


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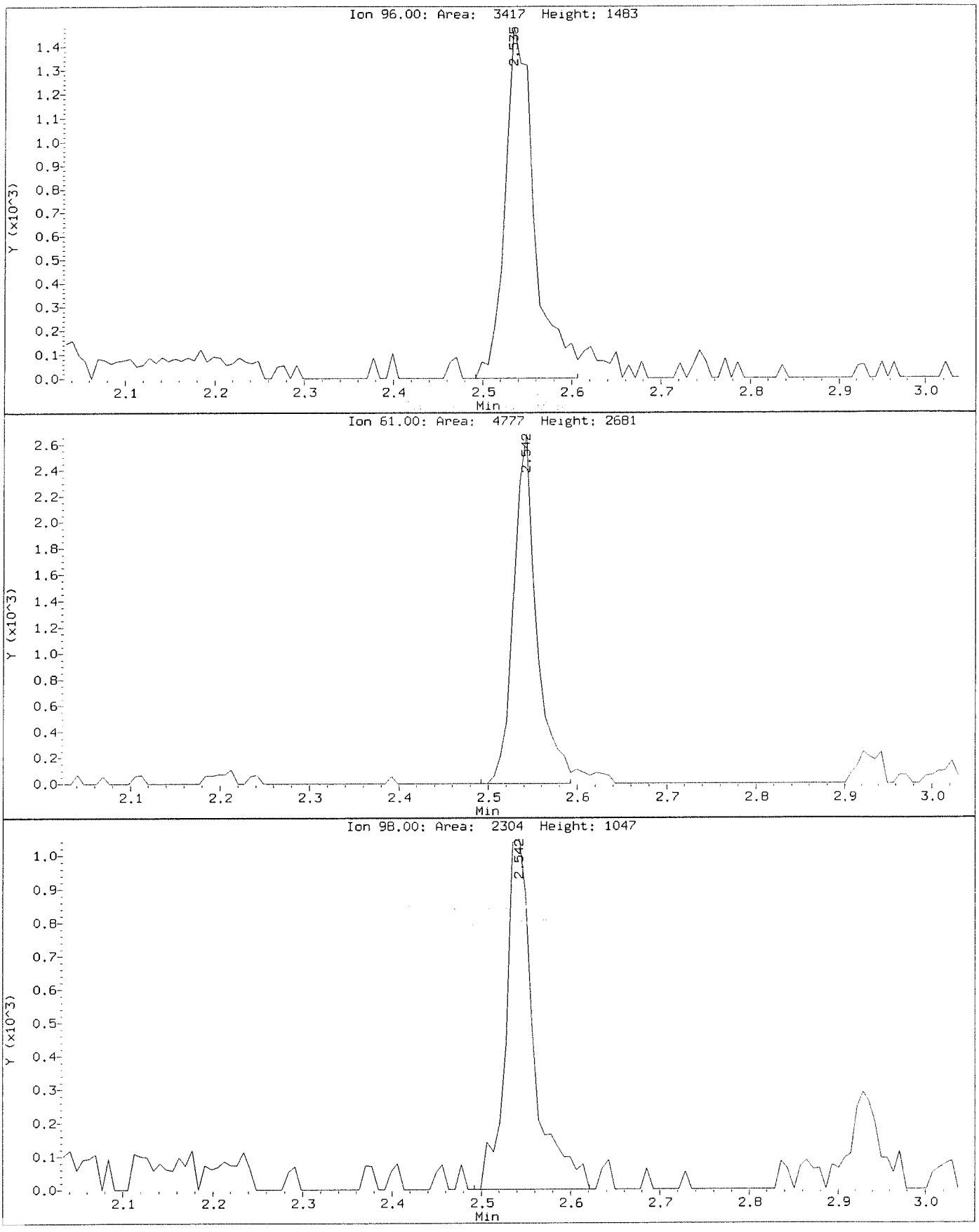
Compound: Styrene
CAS Number: 100-42-5



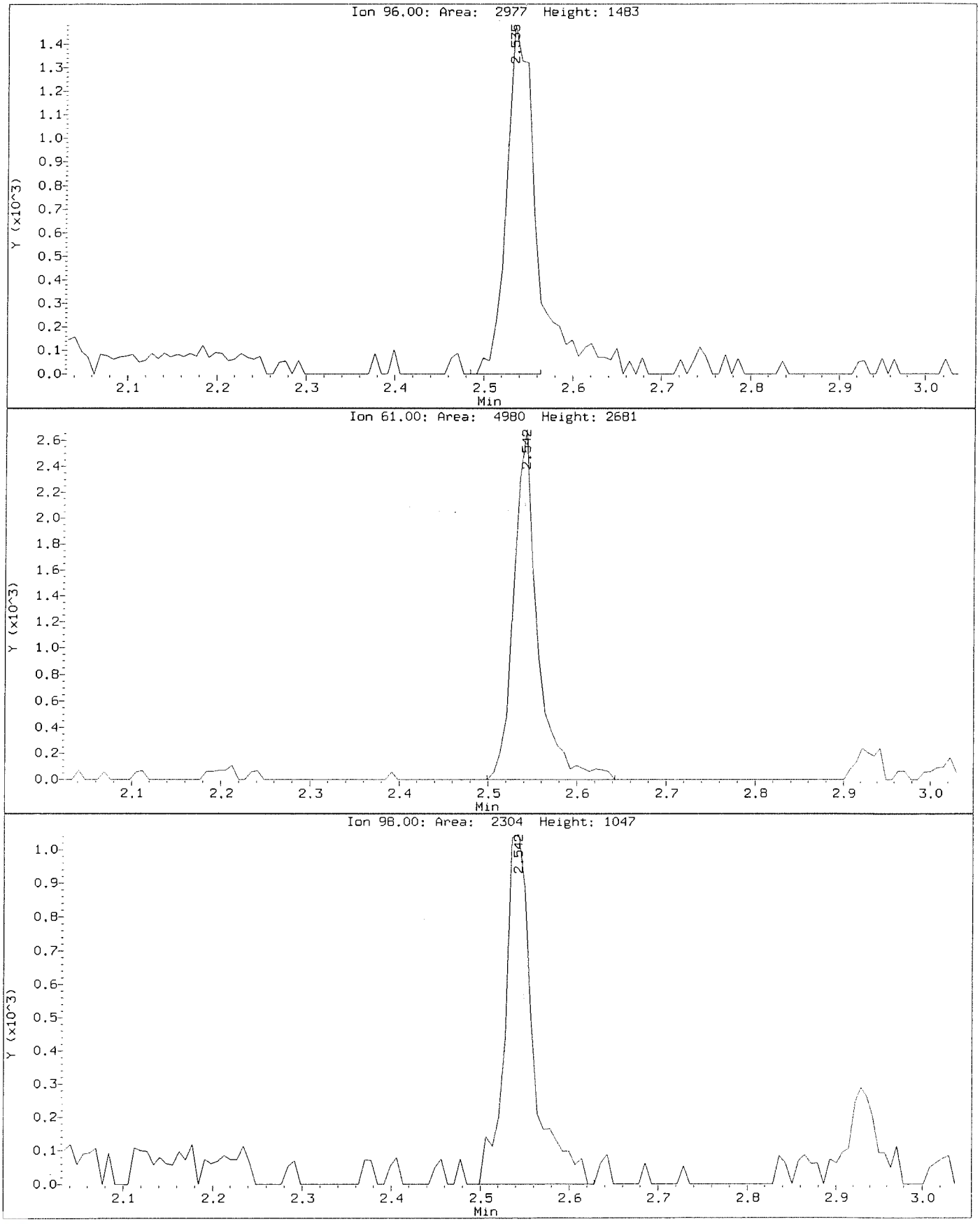
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-AUG-2020 12:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:04 Cal File: X080303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

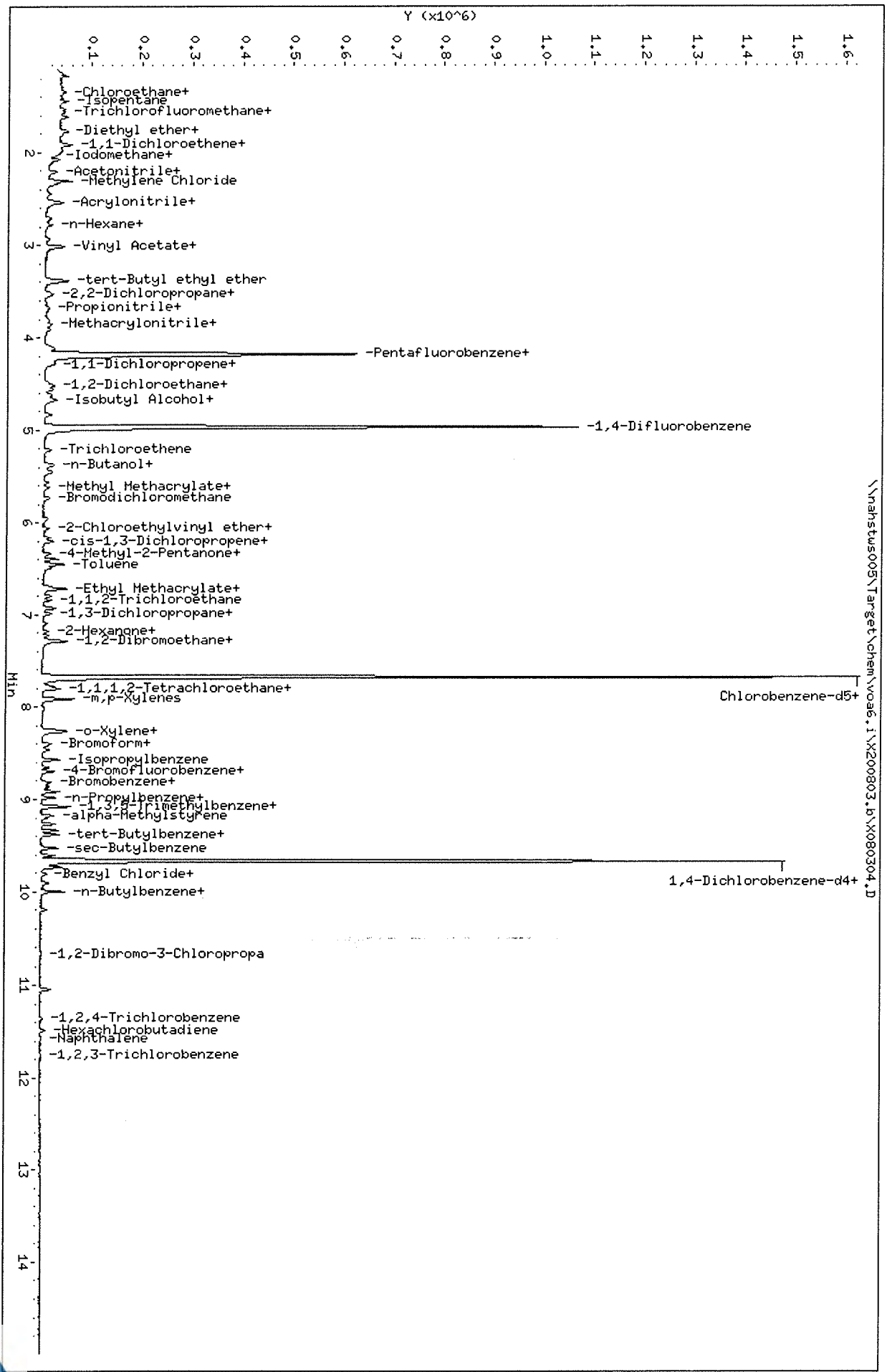
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 539031 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 824218 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 742459 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 360447 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 5491 | 1.00000 | 1.03(a) |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.070) | 6204 | 1.00000 | 0.98(a) |
| $ | 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 20151 | 1.00000 | 1.11(a) |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 7948 | 1.00000 | 1.14(a) |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 5052 | 1.00000 | 0.89(a) |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 7746 | 1.00000 | 0.93(a) |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 5190 | 1.00000 | 1.27(aM) |
| | 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 3800 | 1.00000 | 0.89(a) |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 8591 | 1.00000 | 0.81(a) |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 4098 | 1.00000 | 0.95(a) |
| | 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 6555 | 1.00000 | 0.94(a) |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.754 | 11.754 | (1.216) | 1040 | 1.00000 | 0.95(aM) |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 4319 | 1.00000 | 0.81(aM) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.352 | 11.352 | (1.174) | 1766 | 1.00000 | 0.33(aM) |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 16065 | 1.00000 | 0.83(a) |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.672 | 10.672 | (1.104) | 461 | 1.00000 | 1.67(aM) |
| | 57 1,2-Dibromoethane | 107 | 7.270 | 7.270 | (0.948) | 5188 | 1.00000 | 0.95(a) |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 9203 | 1.00000 | 0.90(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 7158 | 1.00000 | 0.89(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 5327 | 1.00000 | 0.88(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 16539 | 1.00000 | 0.87(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 9693 | 1.00000 | 0.85(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 7511 | 1.00000 | 0.90(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 10004 | 1.00000 | 0.89(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.509 | 3.509 | (0.838) | 6234 | 1.00000 | 0.81(a) |
| 24 | 2-Butanone | 43 | 3.624 | 3.624 | (0.865) | 4199 | 2.00000 | 1.58(aM) |
| 76 | 2-Chlorotoluene | 91 | 8.982 | 8.982 | (0.929) | 14320 | 1.00000 | 0.91(a) |
| 52 | 2-Hexanone | 43 | 7.098 | 7.098 | (0.925) | 7382 | 2.00000 | 1.58(a) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 16588 | 1.00000 | 0.91(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 17233 | 1.00000 | 0.86(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 11981 | 2.00000 | 1.74(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 5964 | 2.00000 | 2.13(aM) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 18524 | 1.00000 | 0.90(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 6199 | 1.00000 | 0.87(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 3452 | 1.00000 | 1.06(a) |
| 39 | Bromodichloromethane | 83 | 5.737 | 5.737 | (1.154) | 6632 | 1.00000 | 0.89(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 3380 | 1.00000 | 0.82(Ta) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 4659 | 1.00000 | 1.89(aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 24456 | 2.00000 | 1.84(a) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 7095 | 1.00000 | 0.96(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 12980 | 1.00000 | 0.89(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 3283 | 1.00000 | 0.85(a) |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.935) | 9174 | 1.00000 | 0.95(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 6446 | 1.00000 | 0.85(aM) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 5626 | 1.00000 | 0.94(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 7619 | 1.00000 | 0.87(a) |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 5073 | 1.00000 | 0.85(a) |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 3381 | 1.00000 | 0.94(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 5003 | 1.00000 | 0.94(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 7129 | 1.00000 | 0.94(a) |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 1845 | 1.00000 | 0.95(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 20764 | 1.00000 | 0.94(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 16885 | 2.00000 | 1.86(a) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 14851 | 1.00000 | 1.36(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 13125 | 1.00000 | 0.82(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 22125 | 1.00000 | 0.85(a) |
| 92 | Naphthalene | 128 | 11.560 | 11.560 | (1.196) | 3475 | 1.00000 | 1.12(a) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 8262 | 1.00000 | 0.92(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 19175 | 1.00000 | 0.87(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 13312 | 1.00000 | 0.86(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 14112 | 1.00000 | 0.86(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 4400 | 1.00000 | 0.93(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 20029 | 1.00000 | 0.92(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 4813 | 1.00000 | 0.95(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 7143 | 1.00000 | 0.89(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 4900 | 1.00000 | 0.83(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 7321 | 1.00000 | 0.92(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 5889 | 1.00000 | 0.84(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

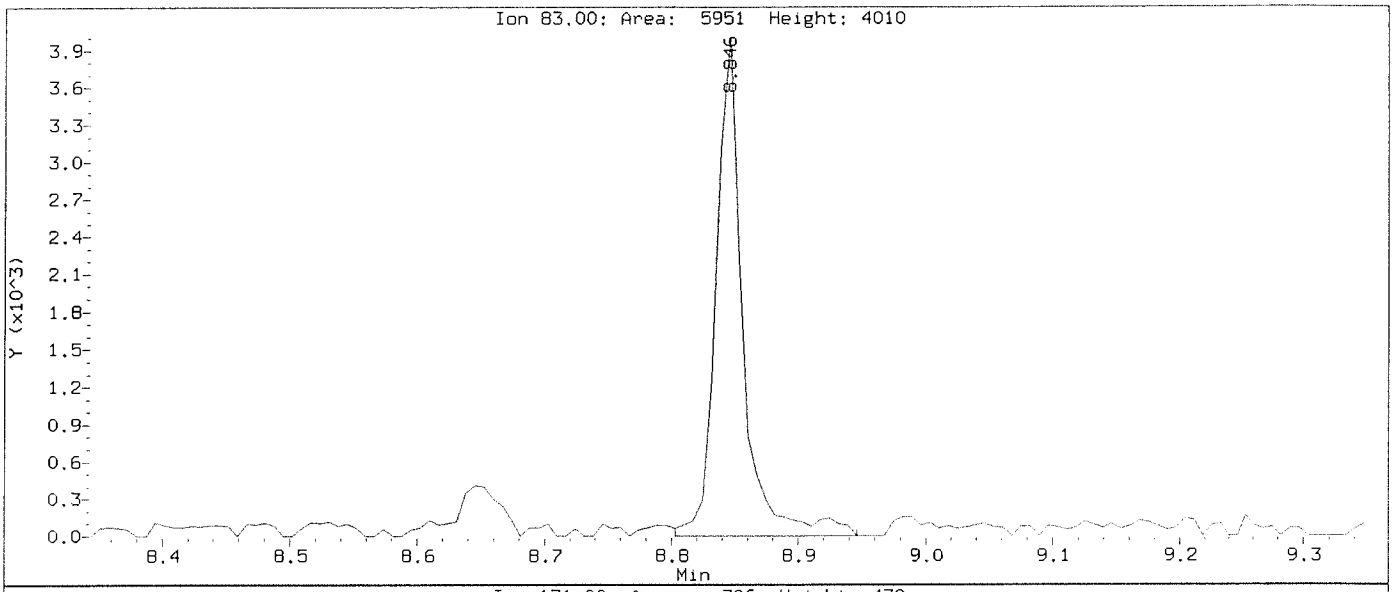


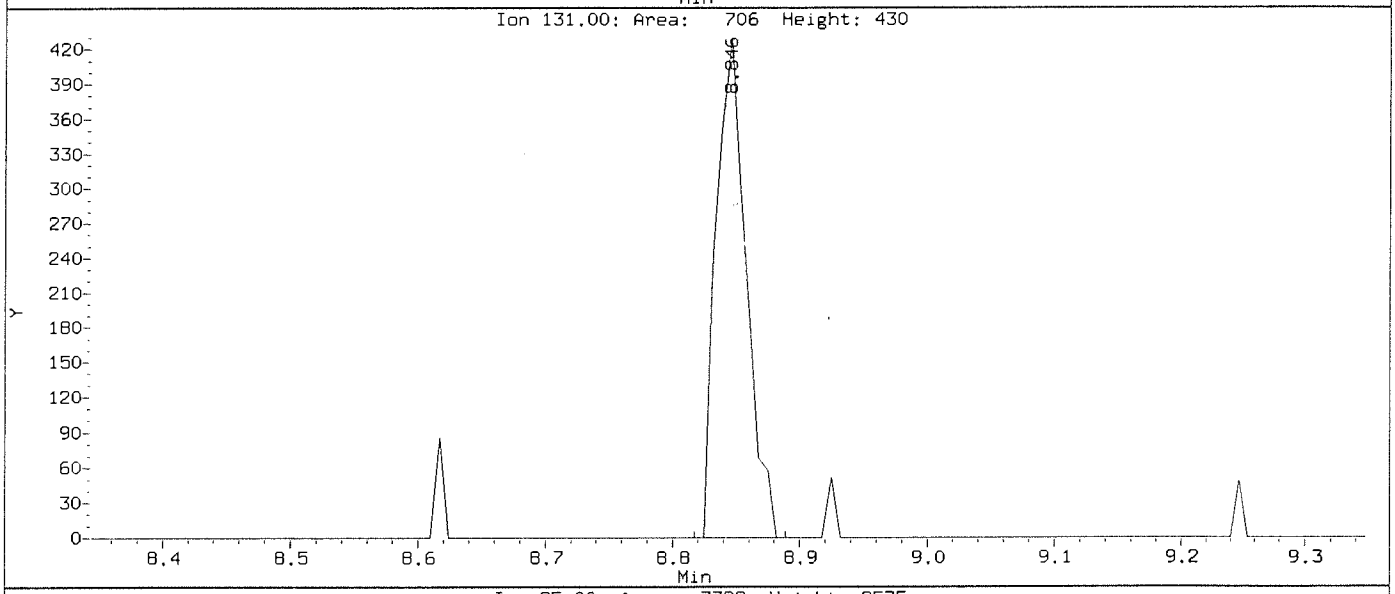

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Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

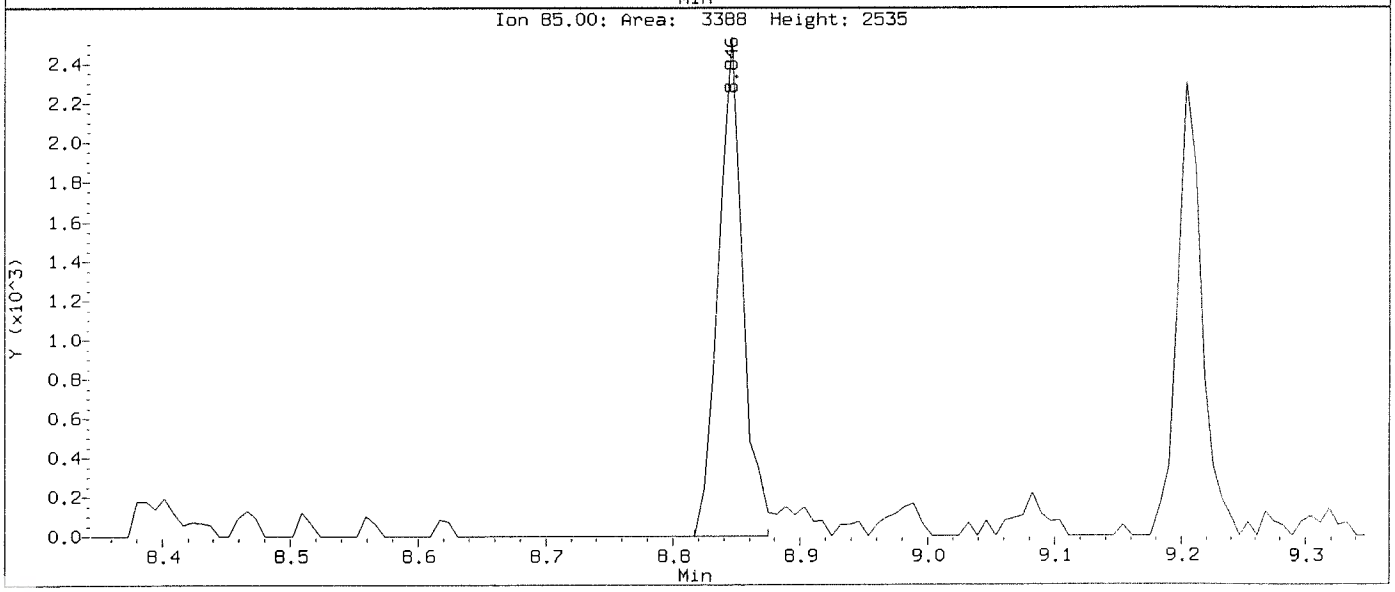
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Operator: PC
Column diameter: 0.18

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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

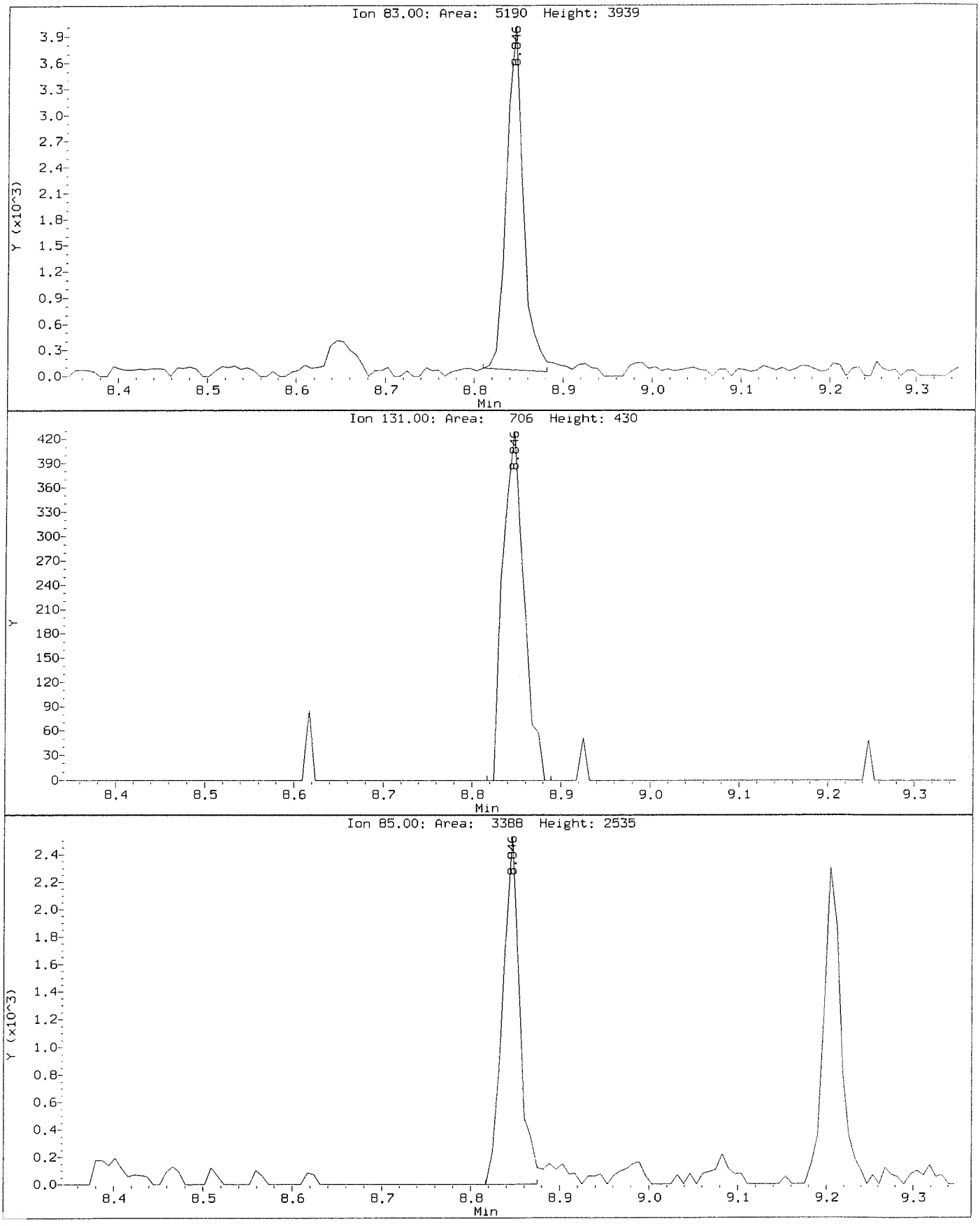


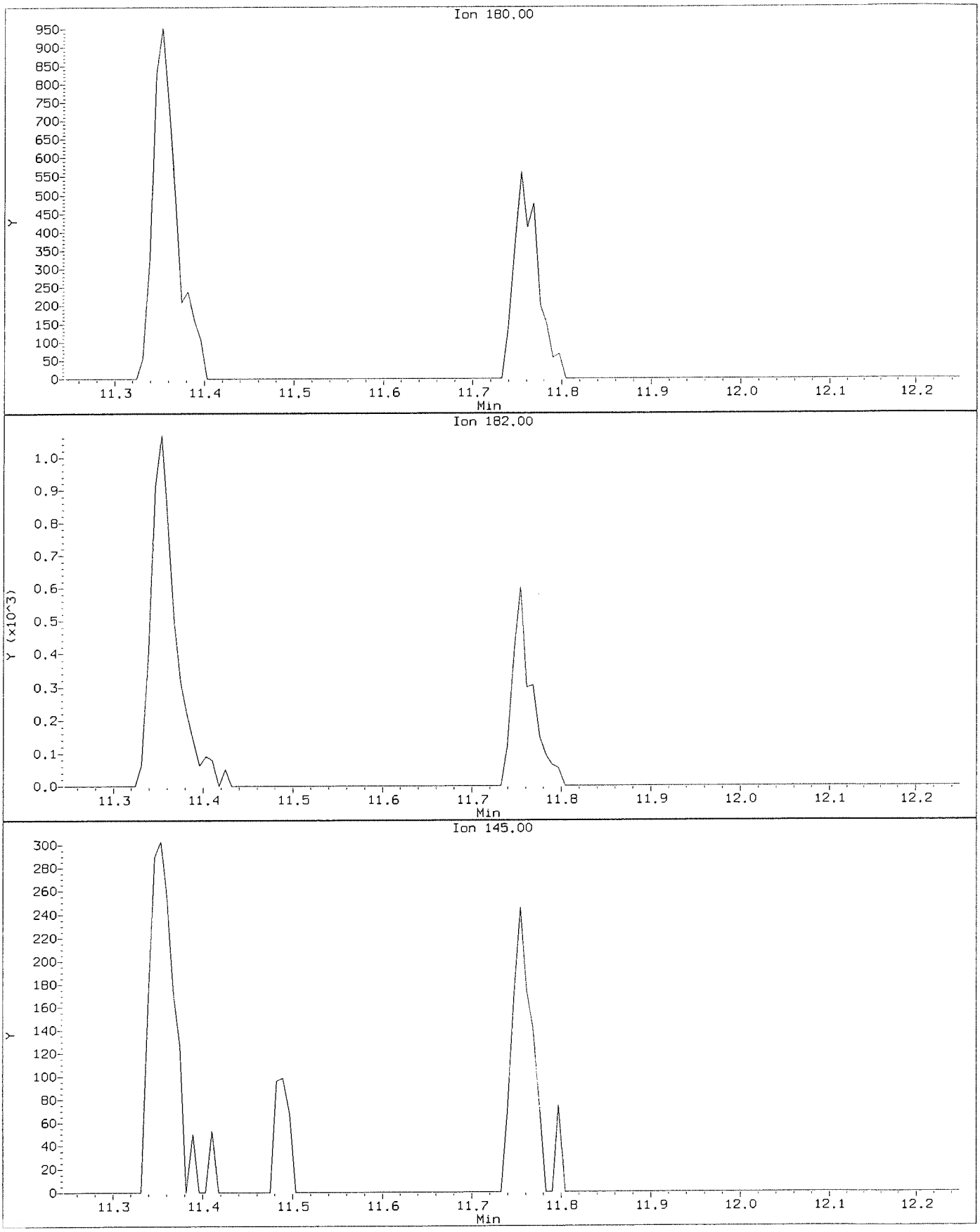
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Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



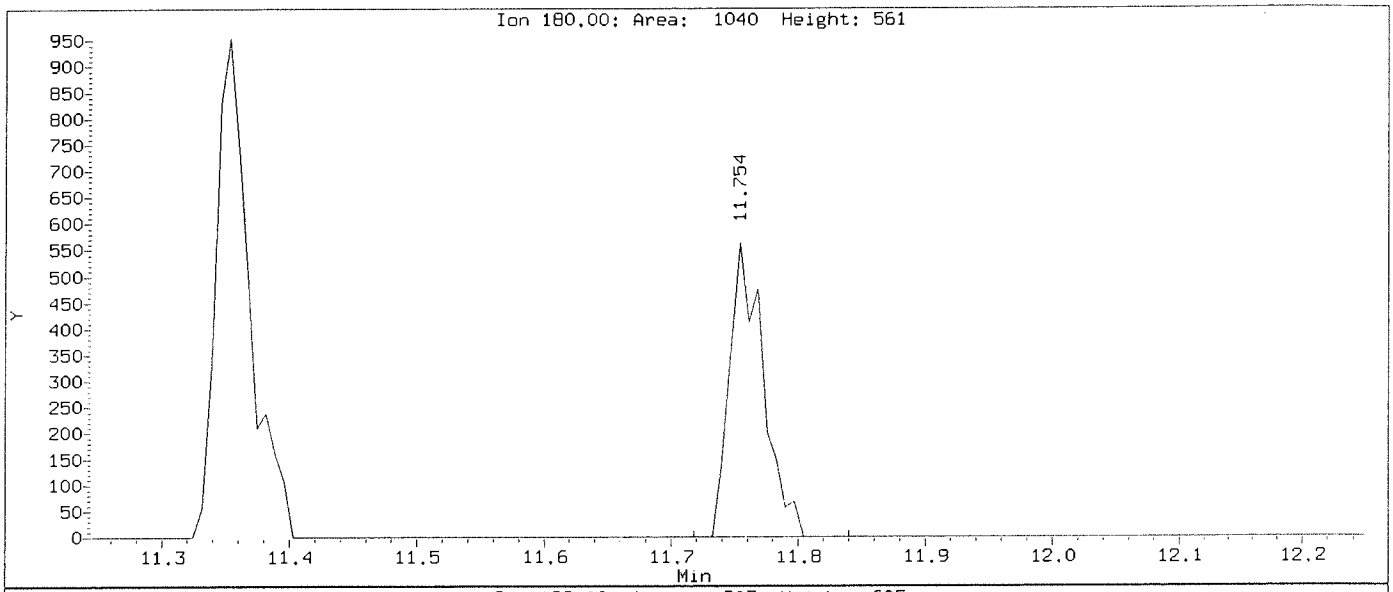
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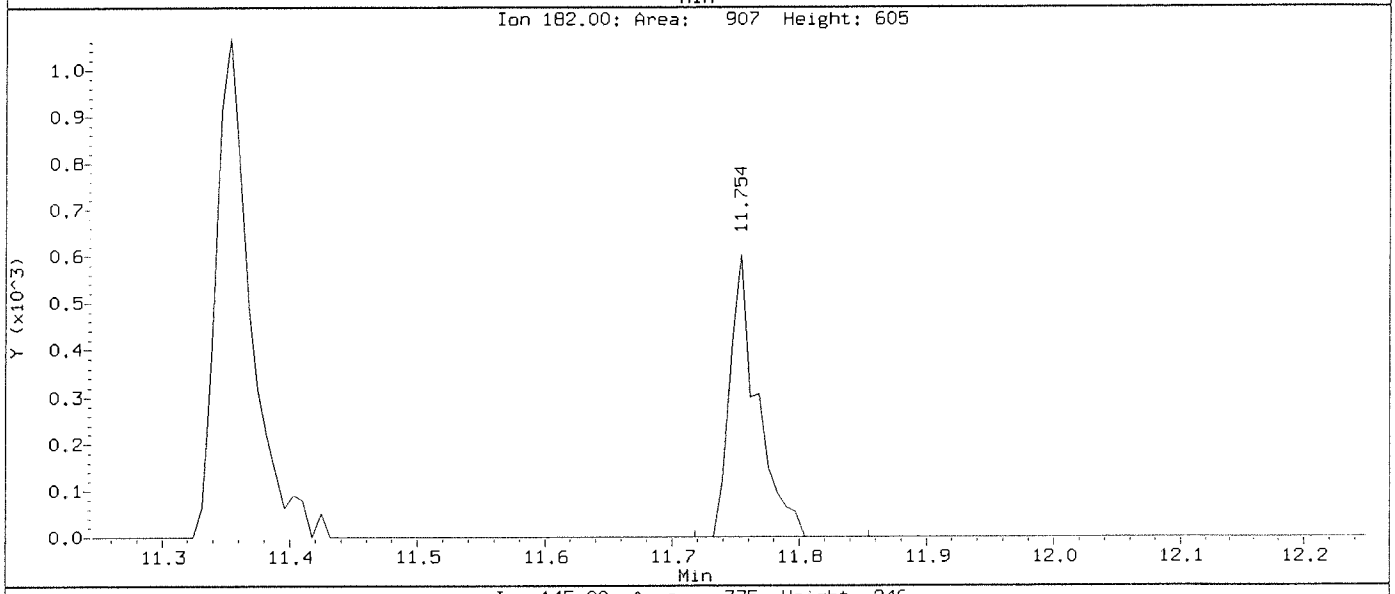
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CAS Number: 87-61-6

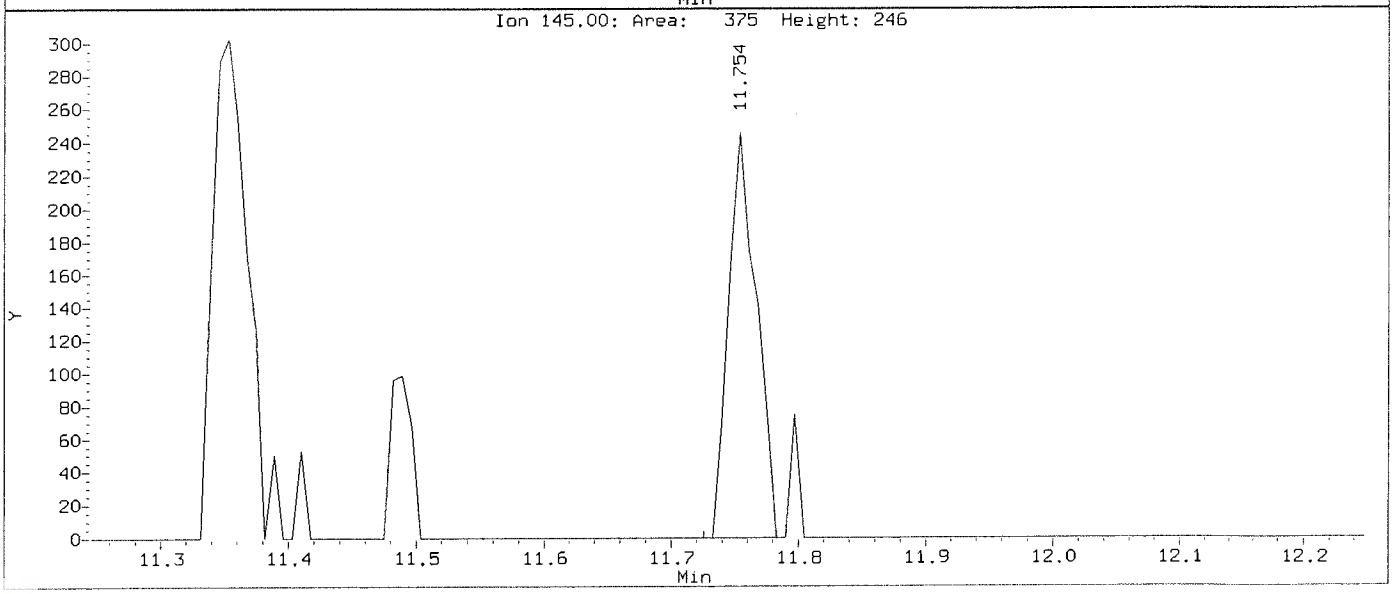


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

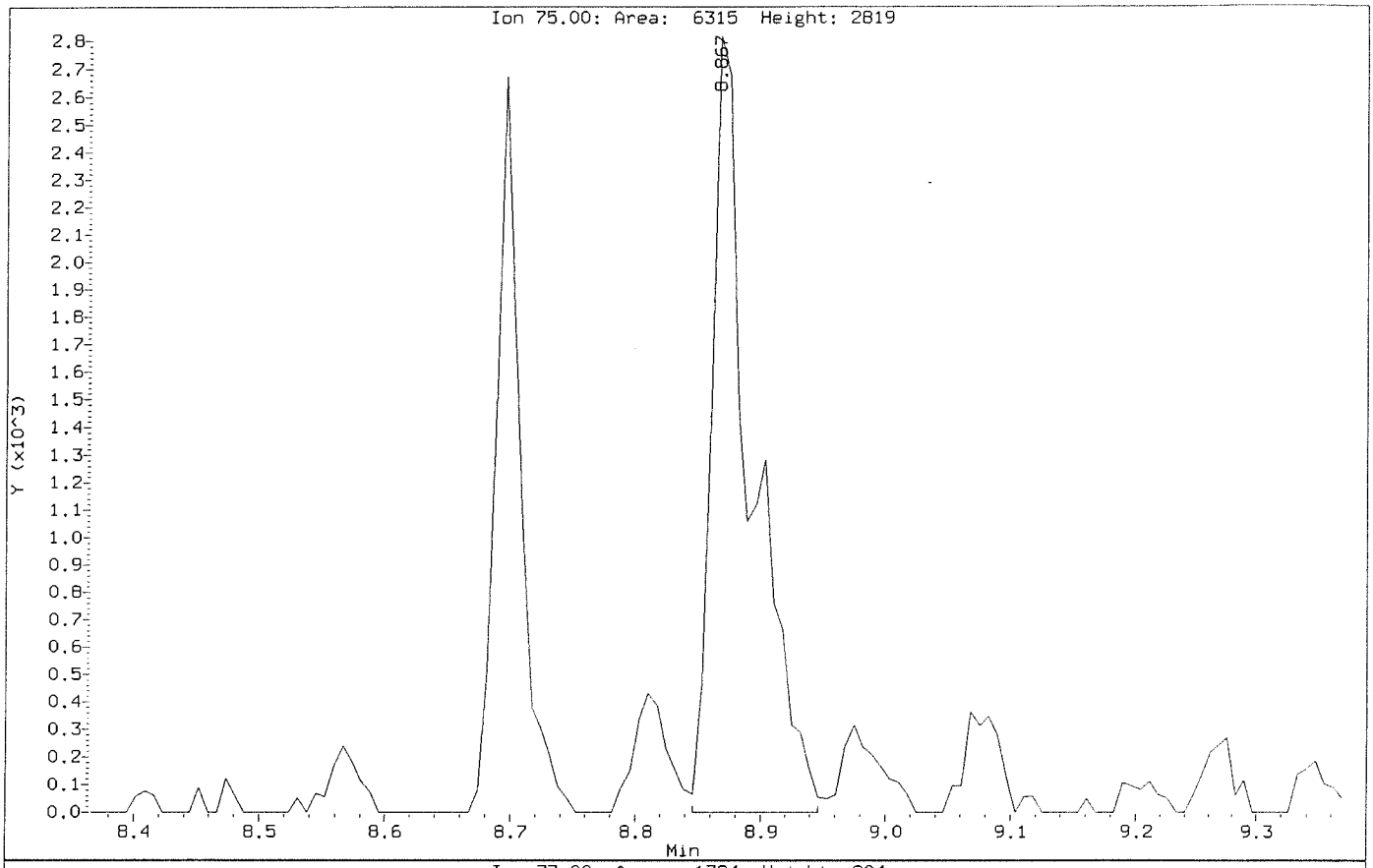


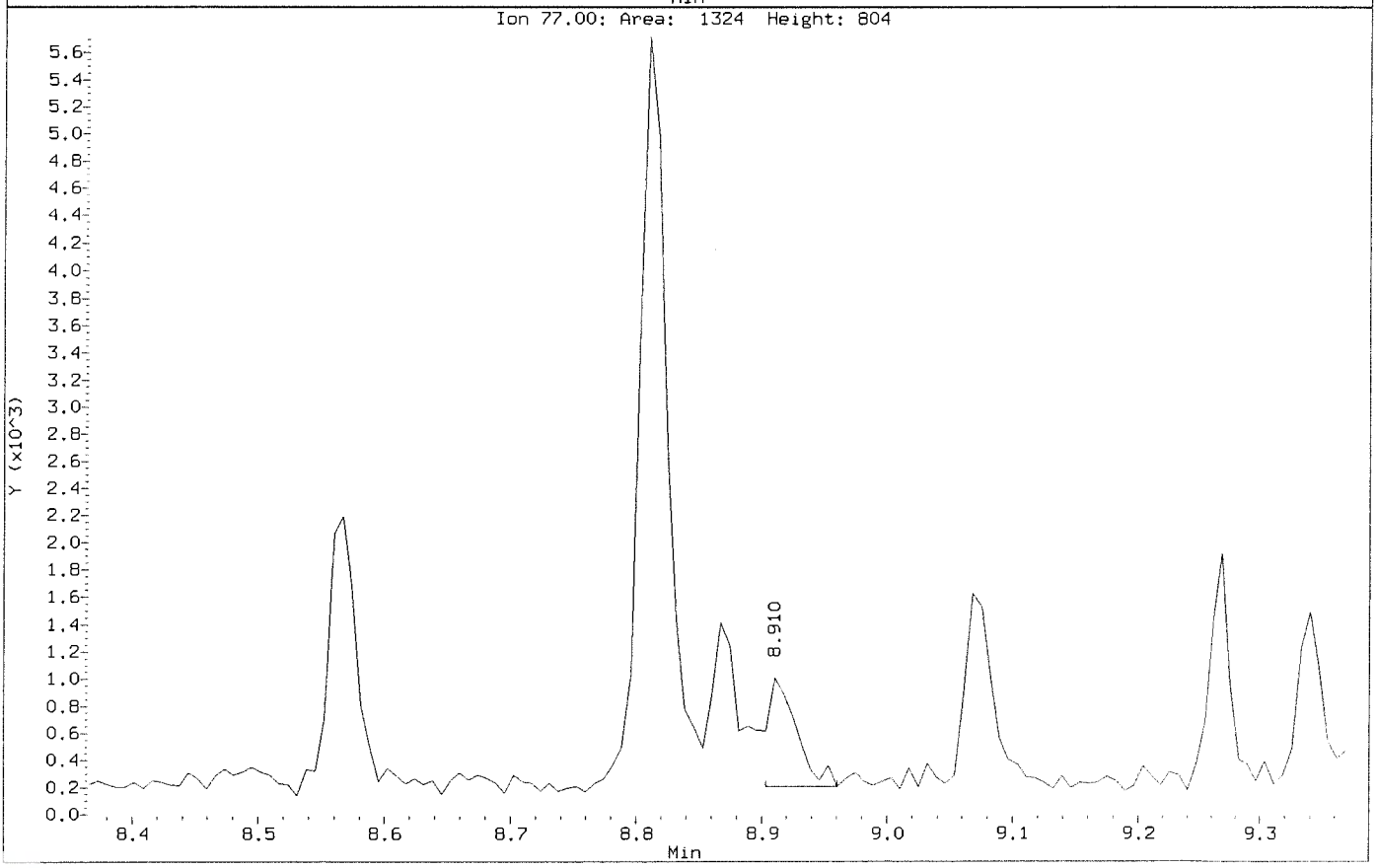



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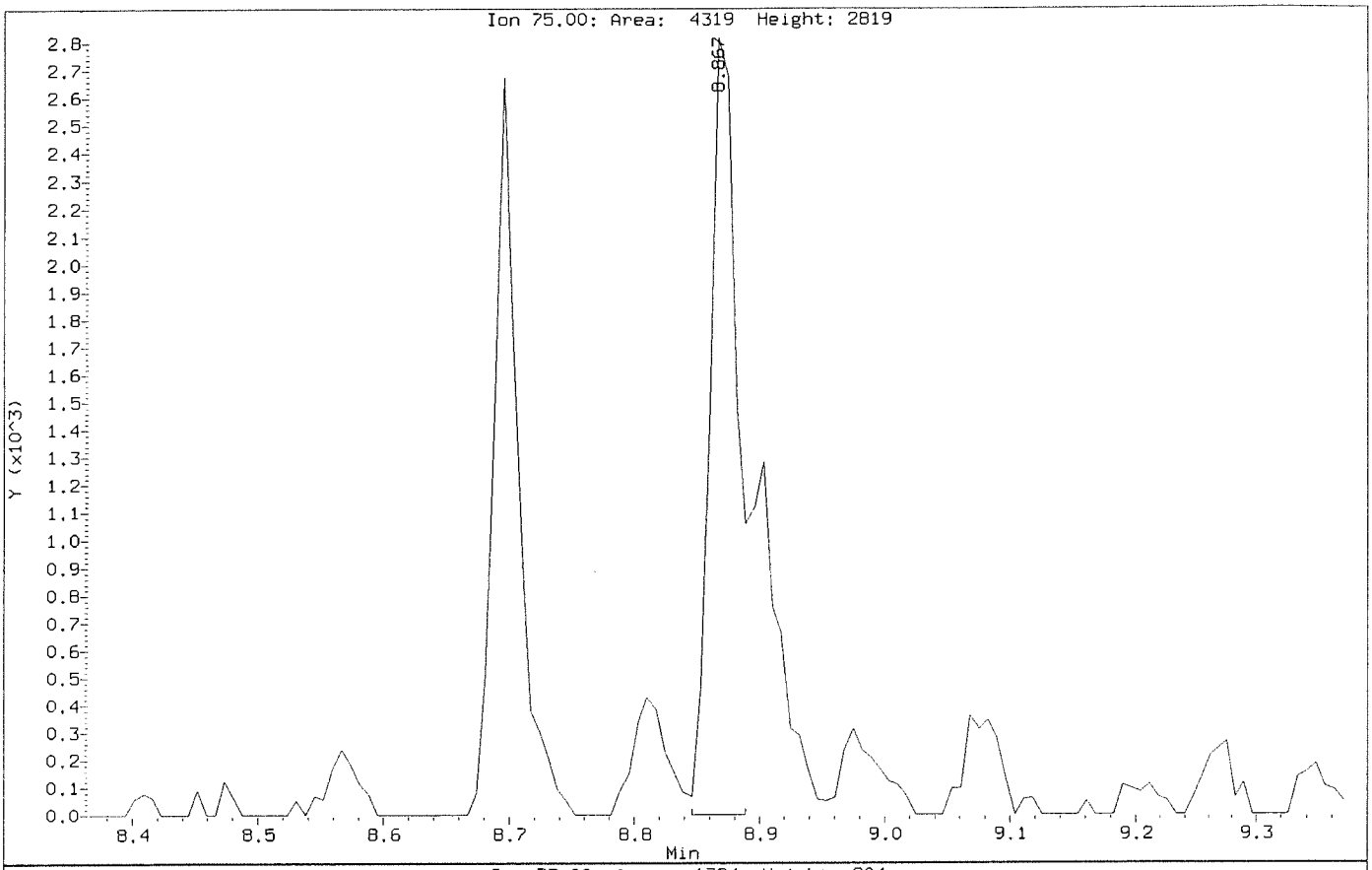
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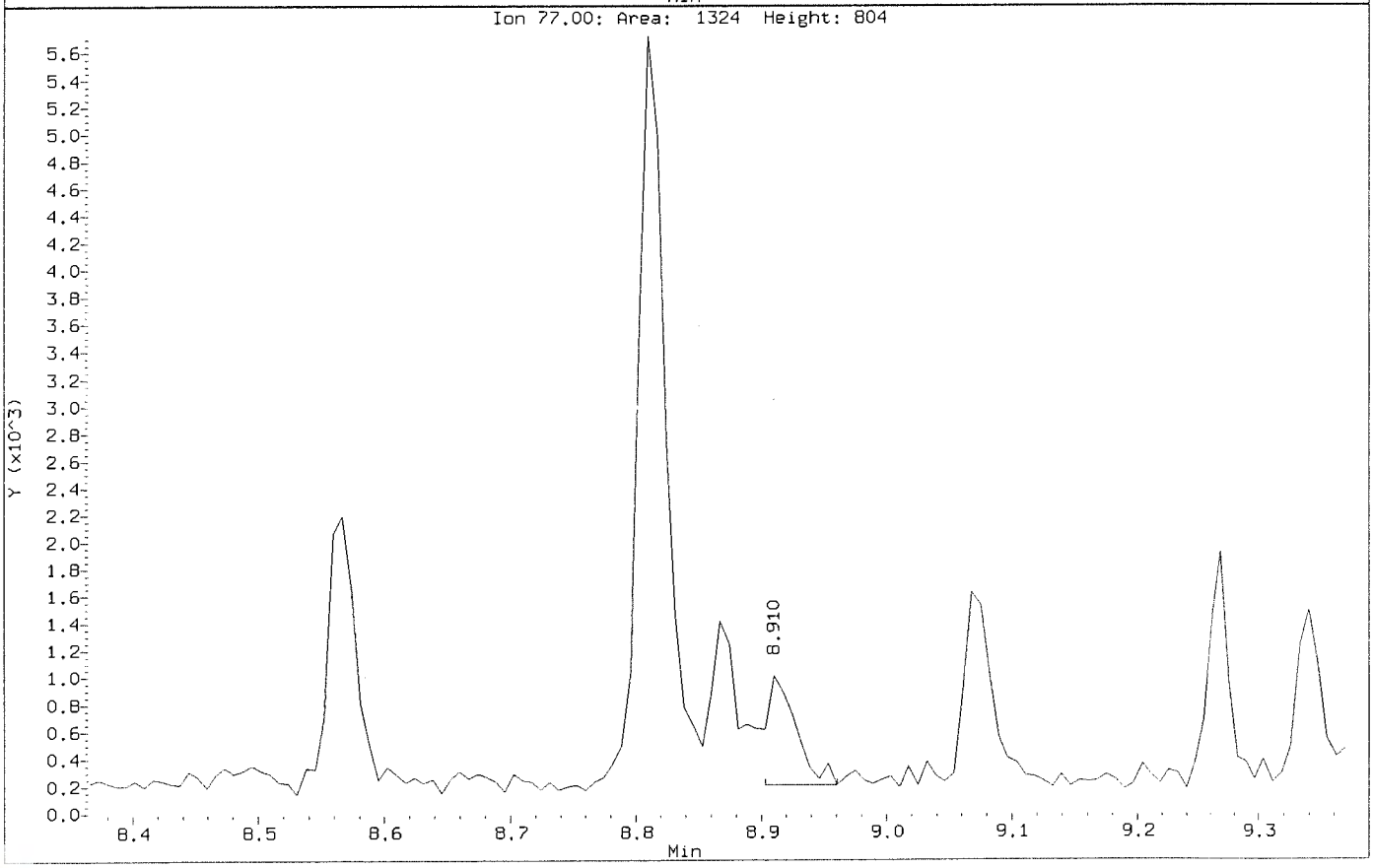


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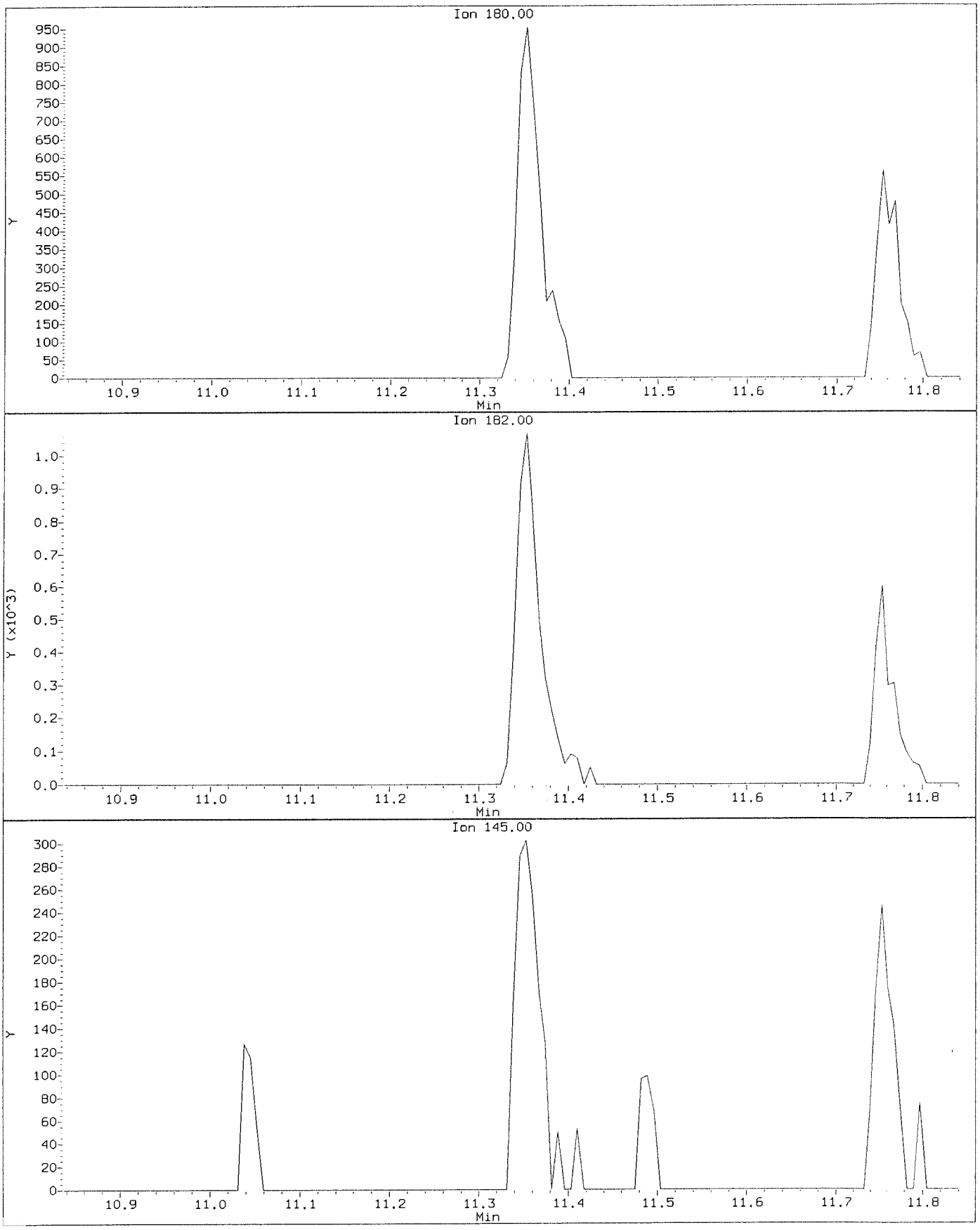
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CAS Number: 96-18-4



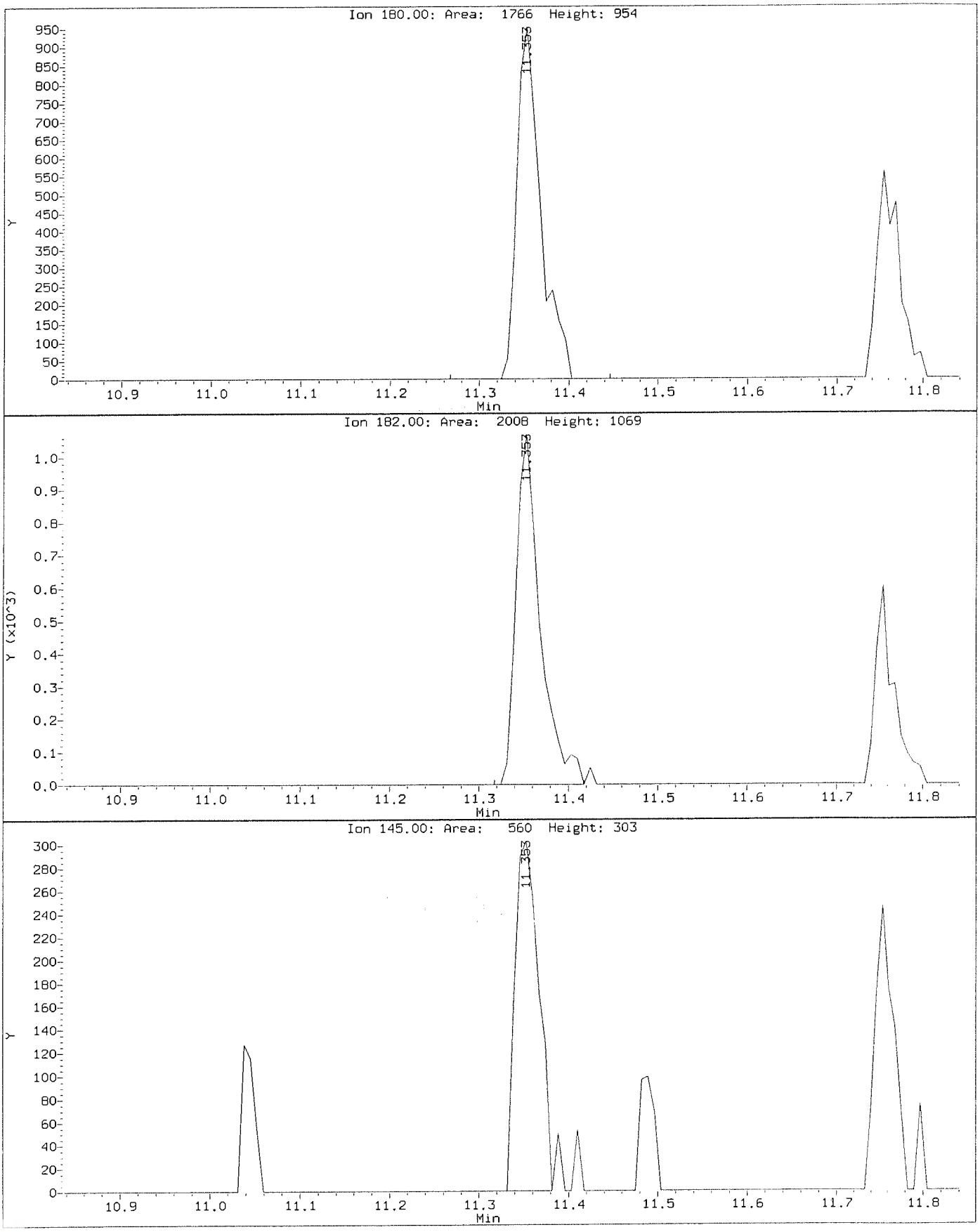
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



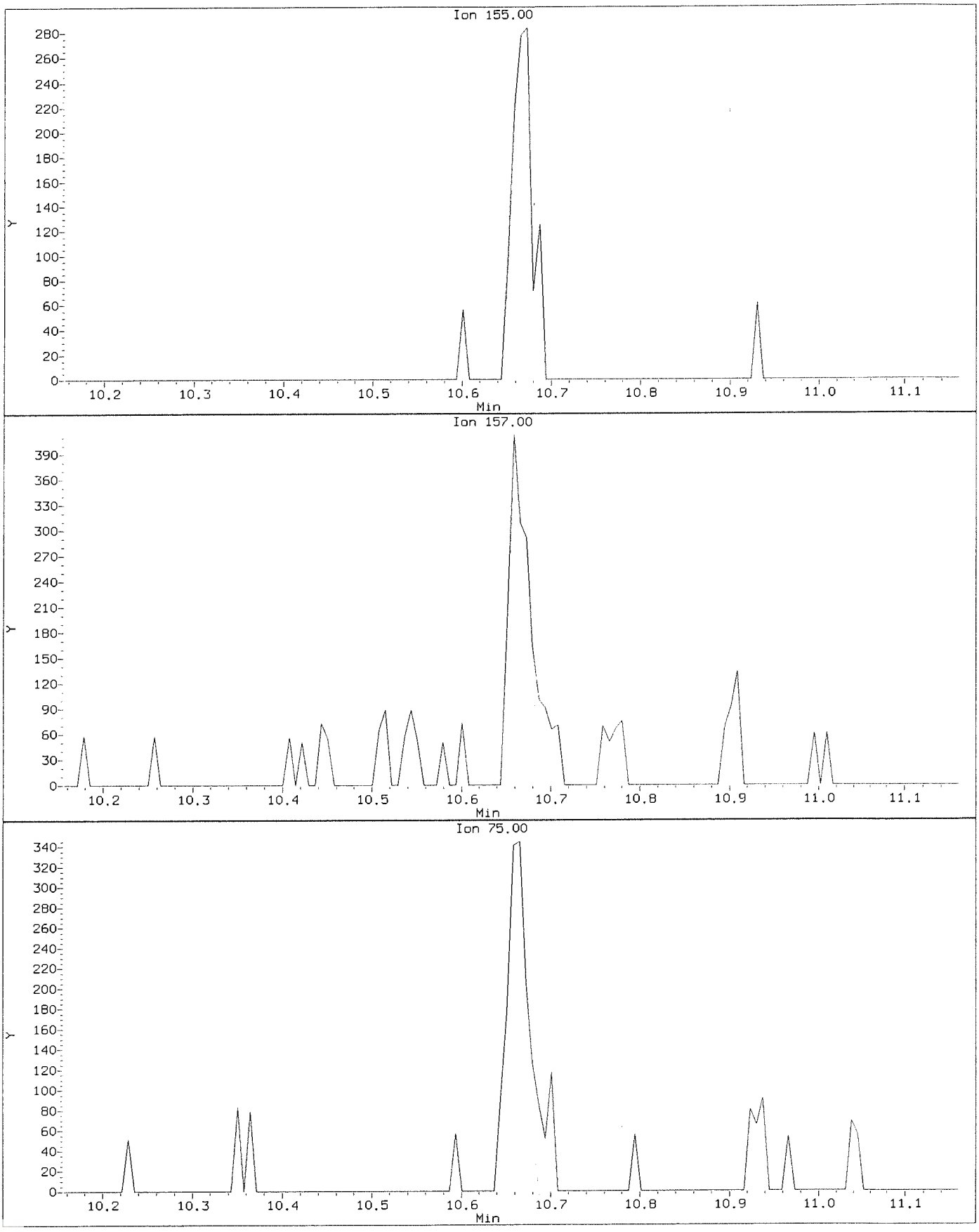
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



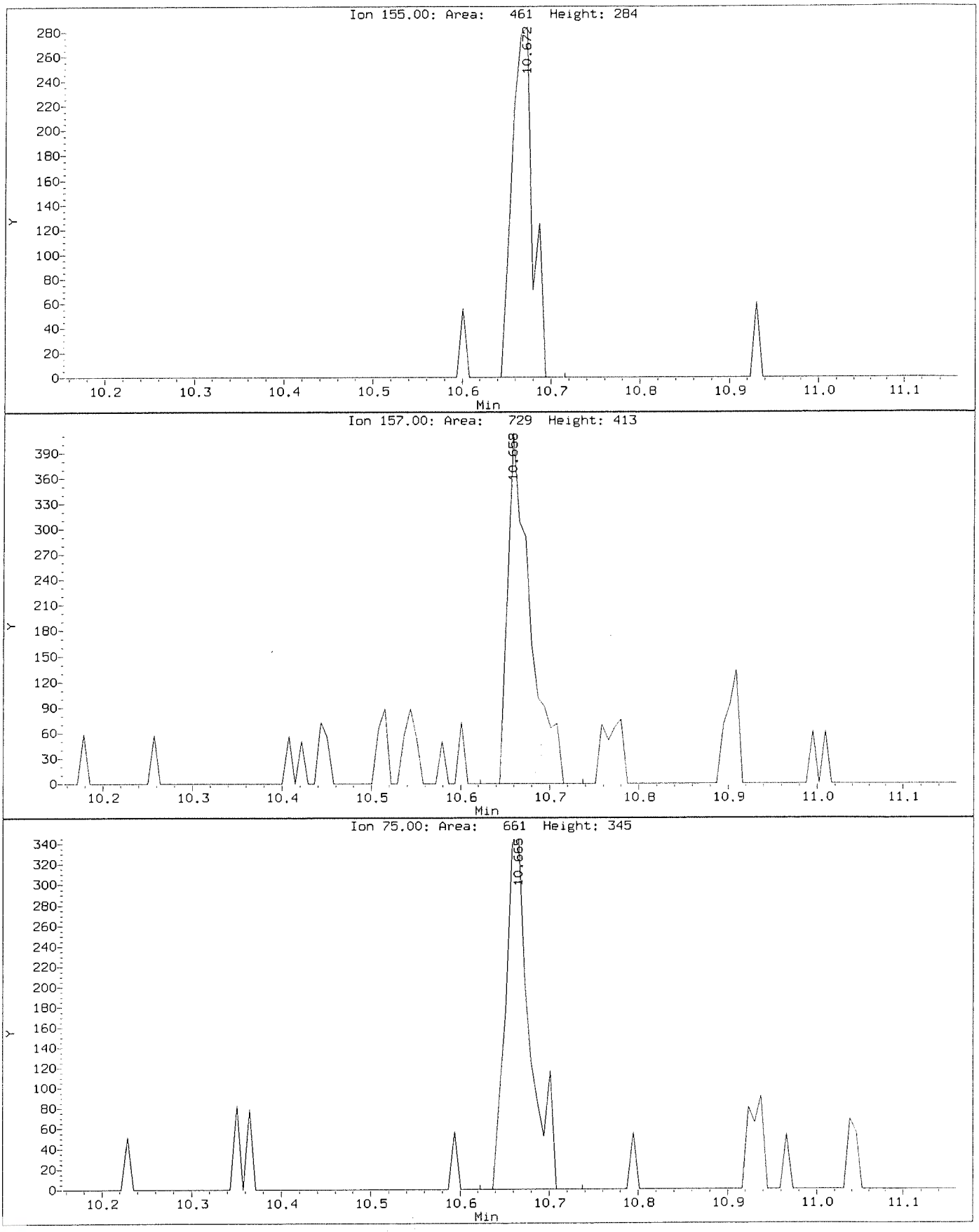
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



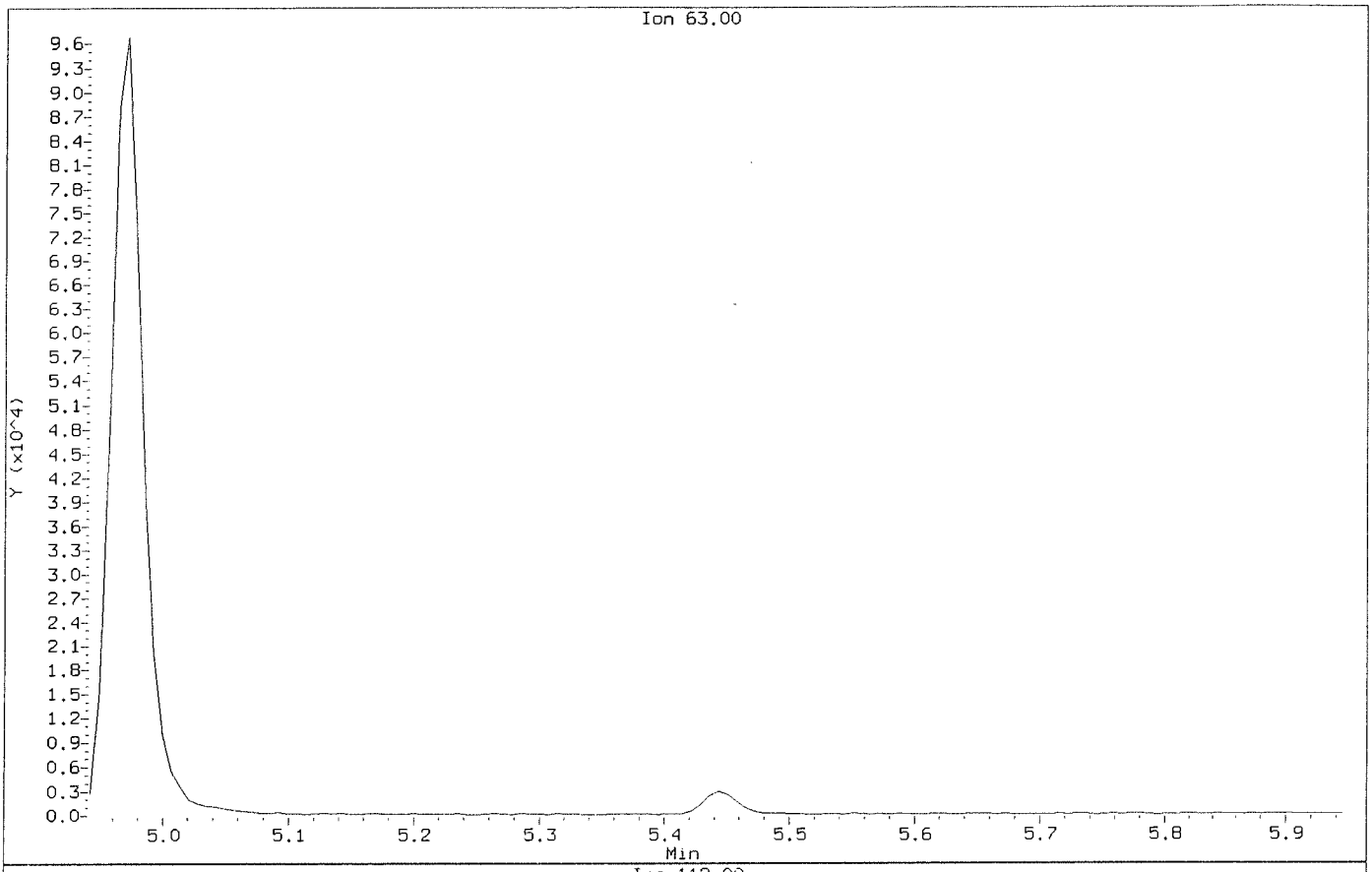
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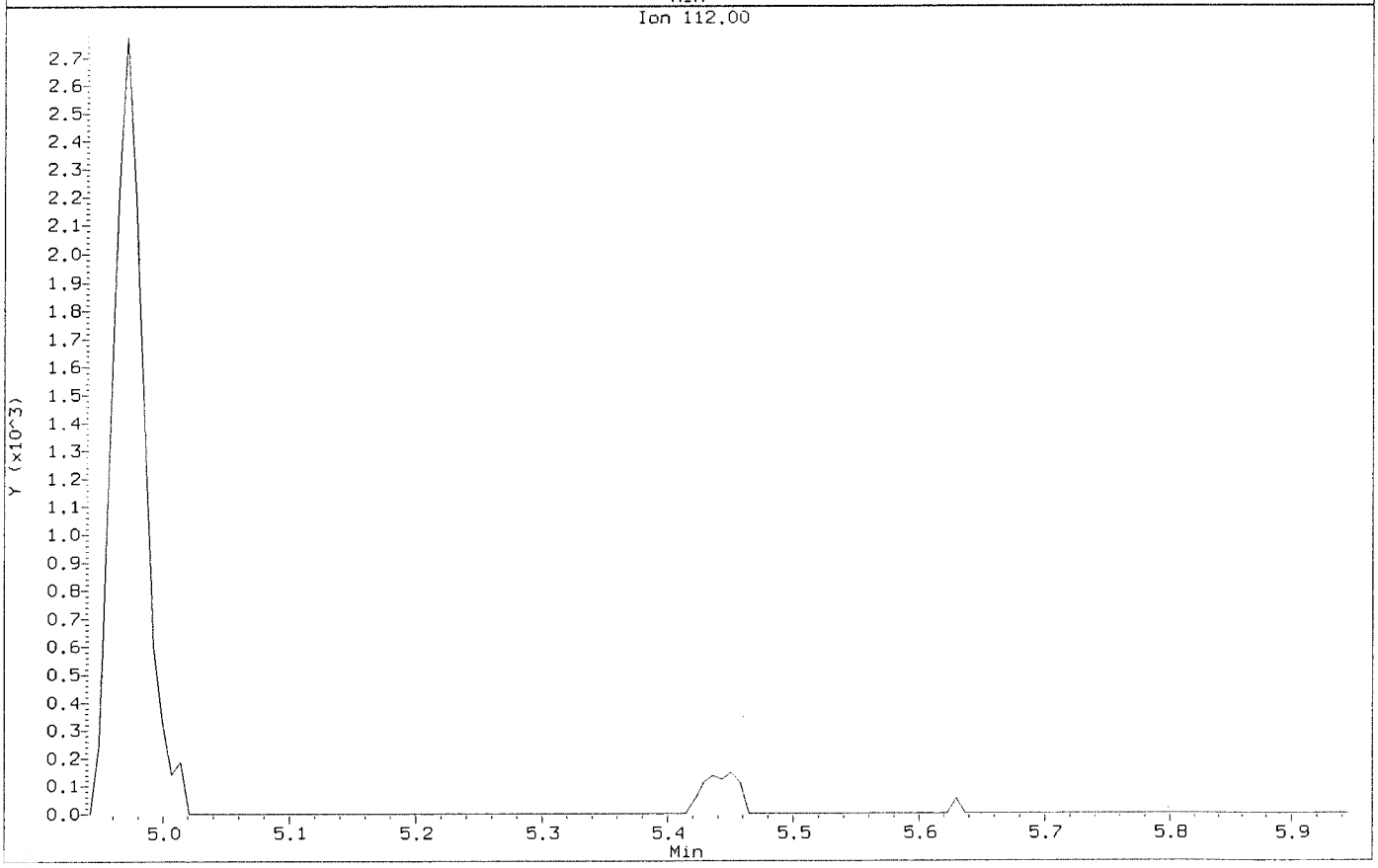
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
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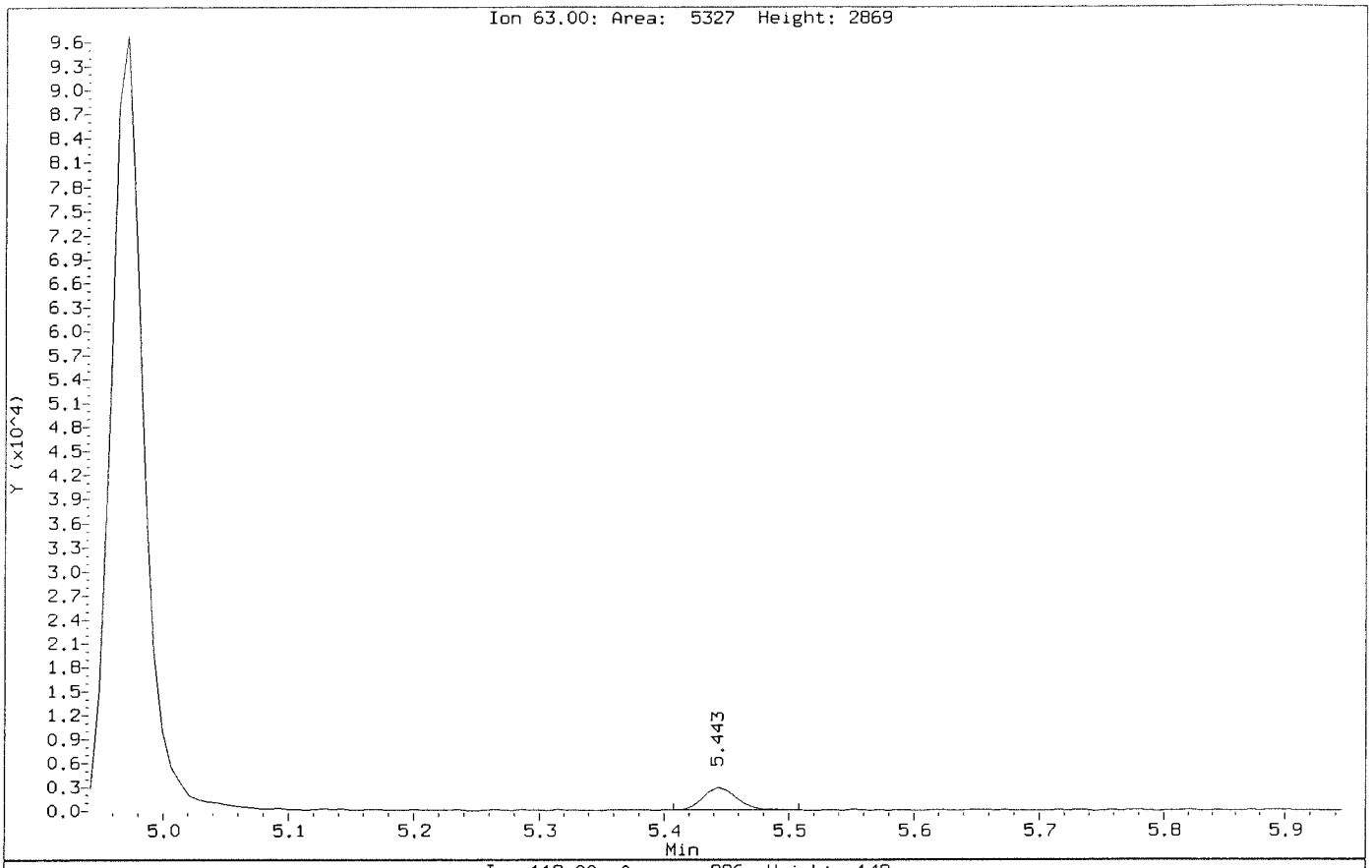
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

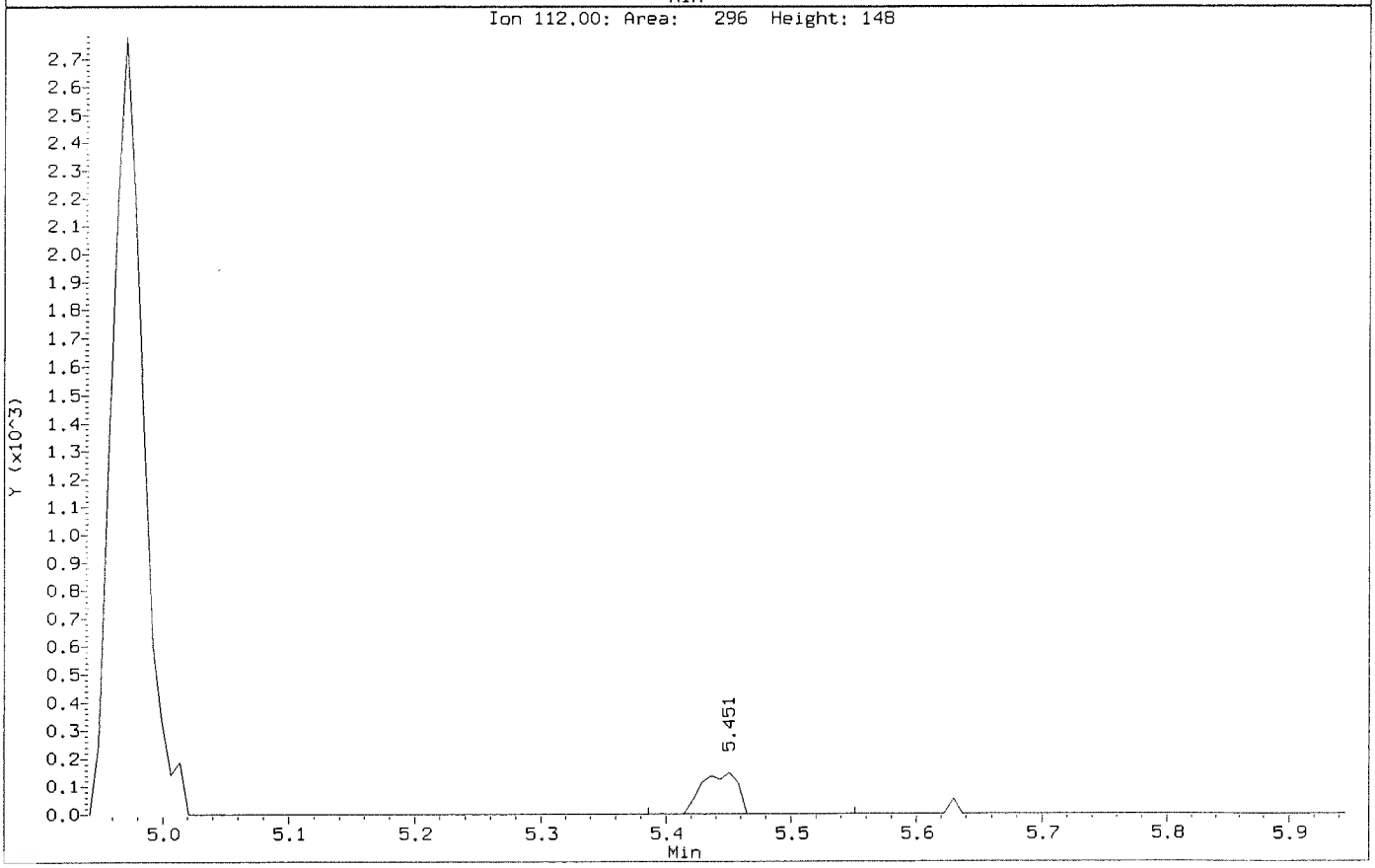


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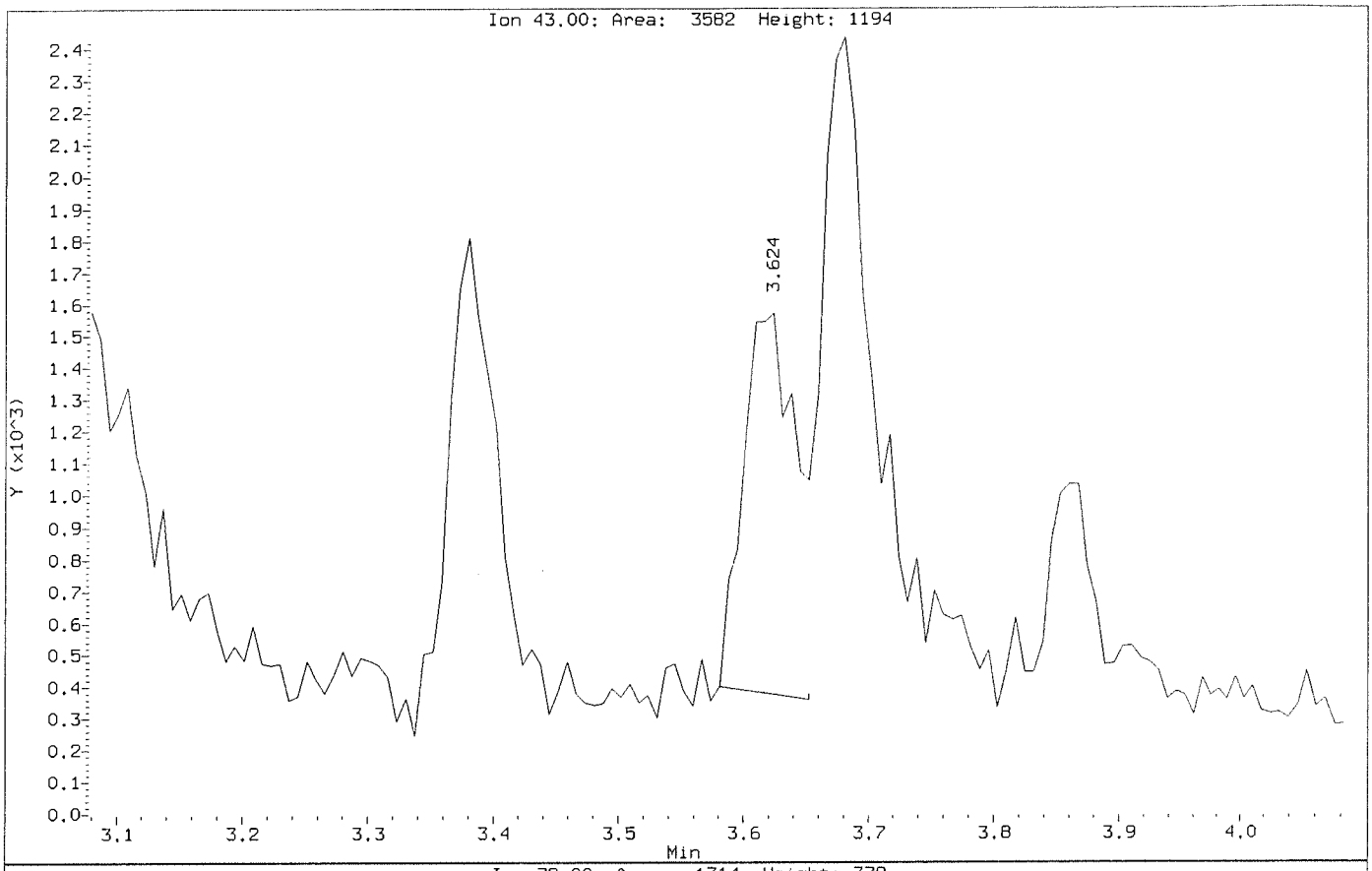
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CAS Number: 78-87-5

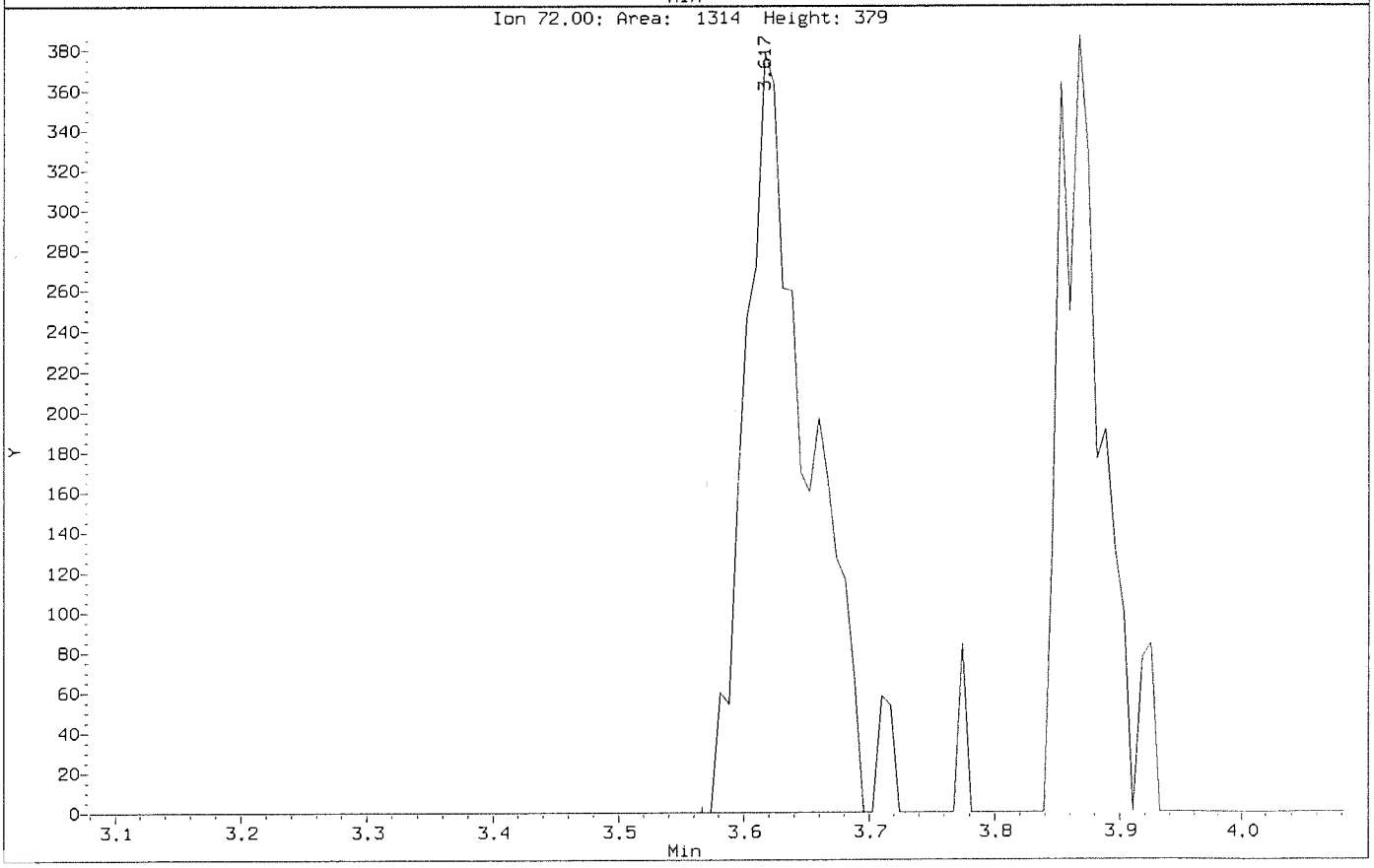


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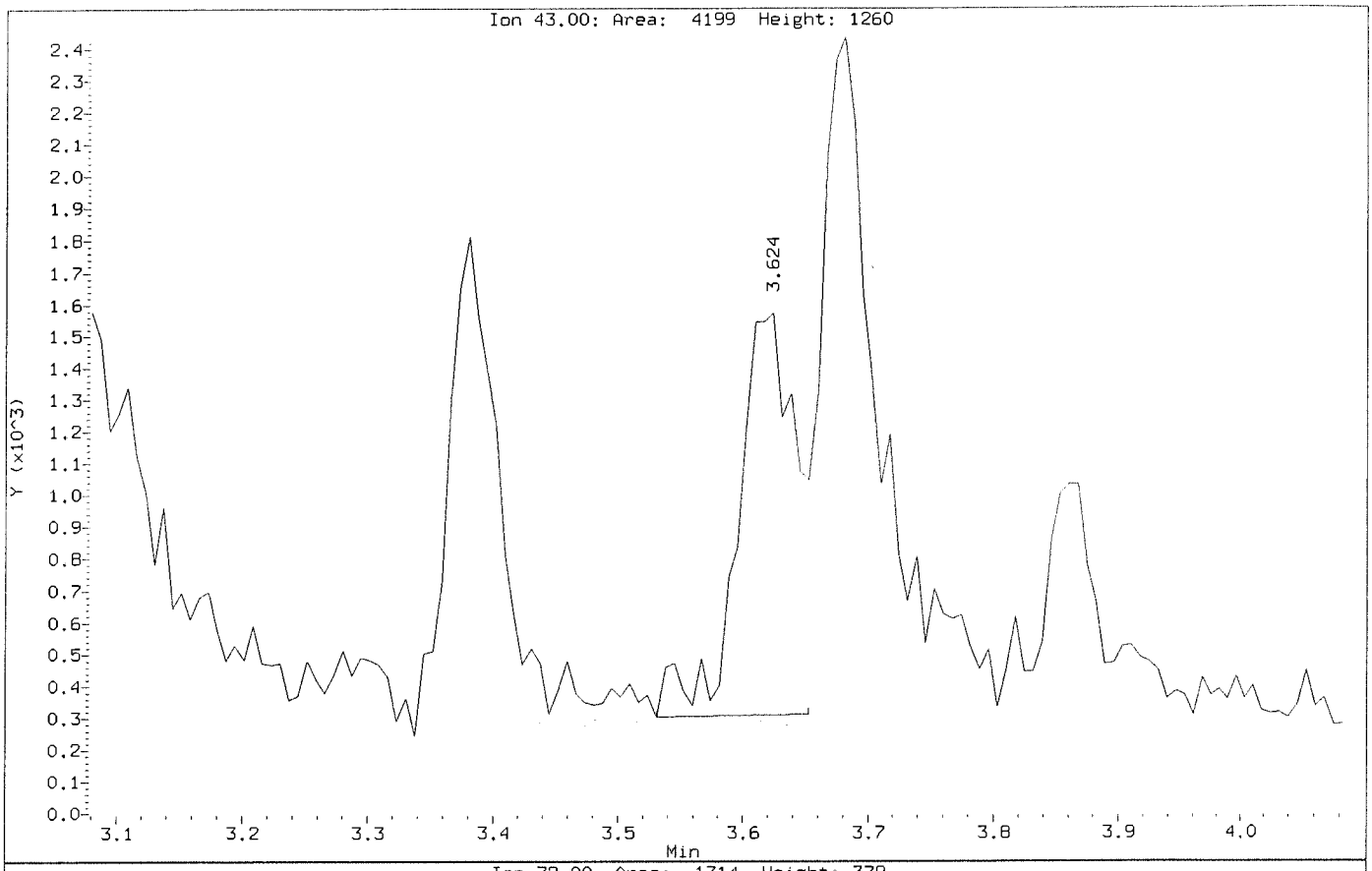
Compound: 2-Butanone
CAS Number: 78-93-3

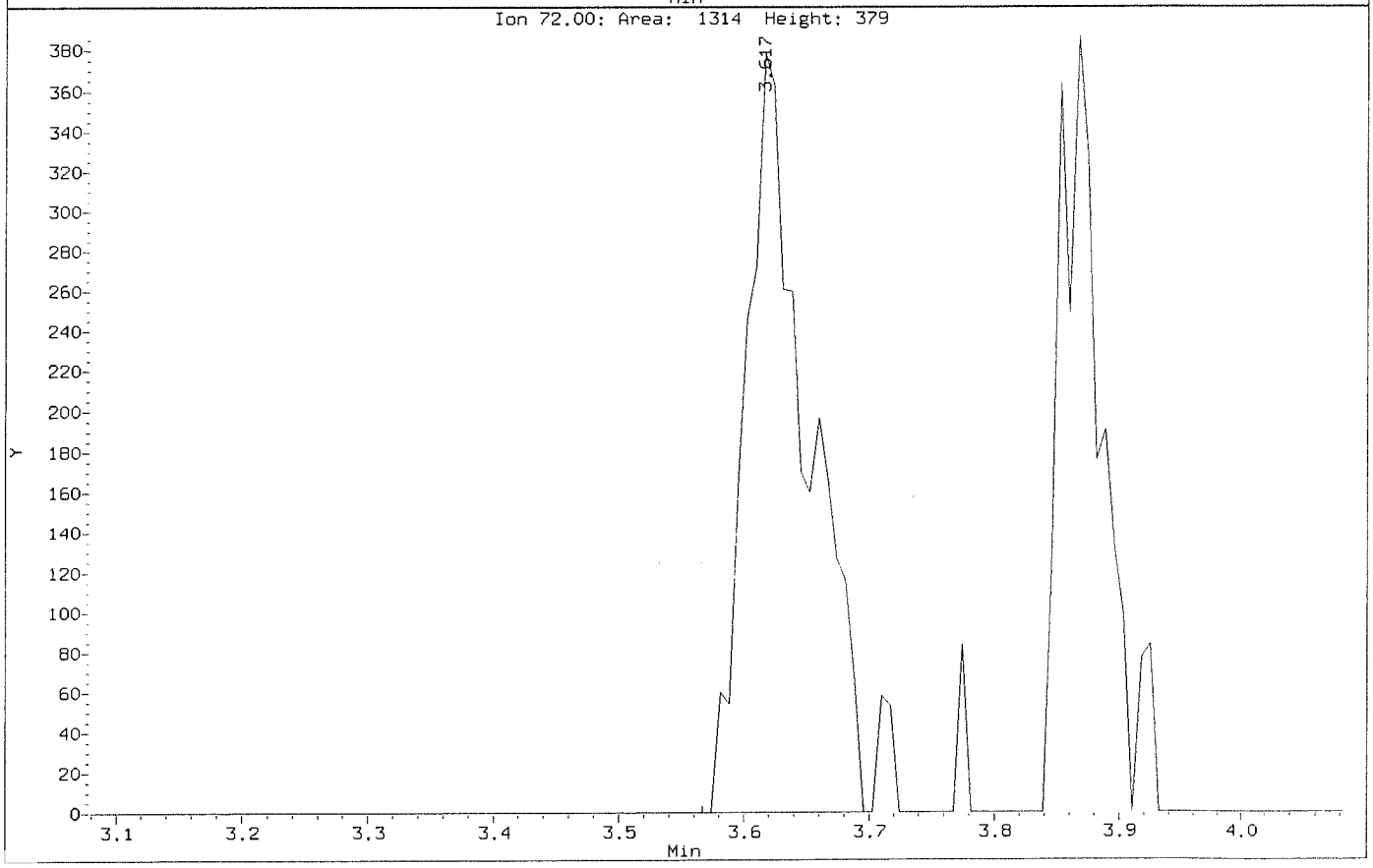


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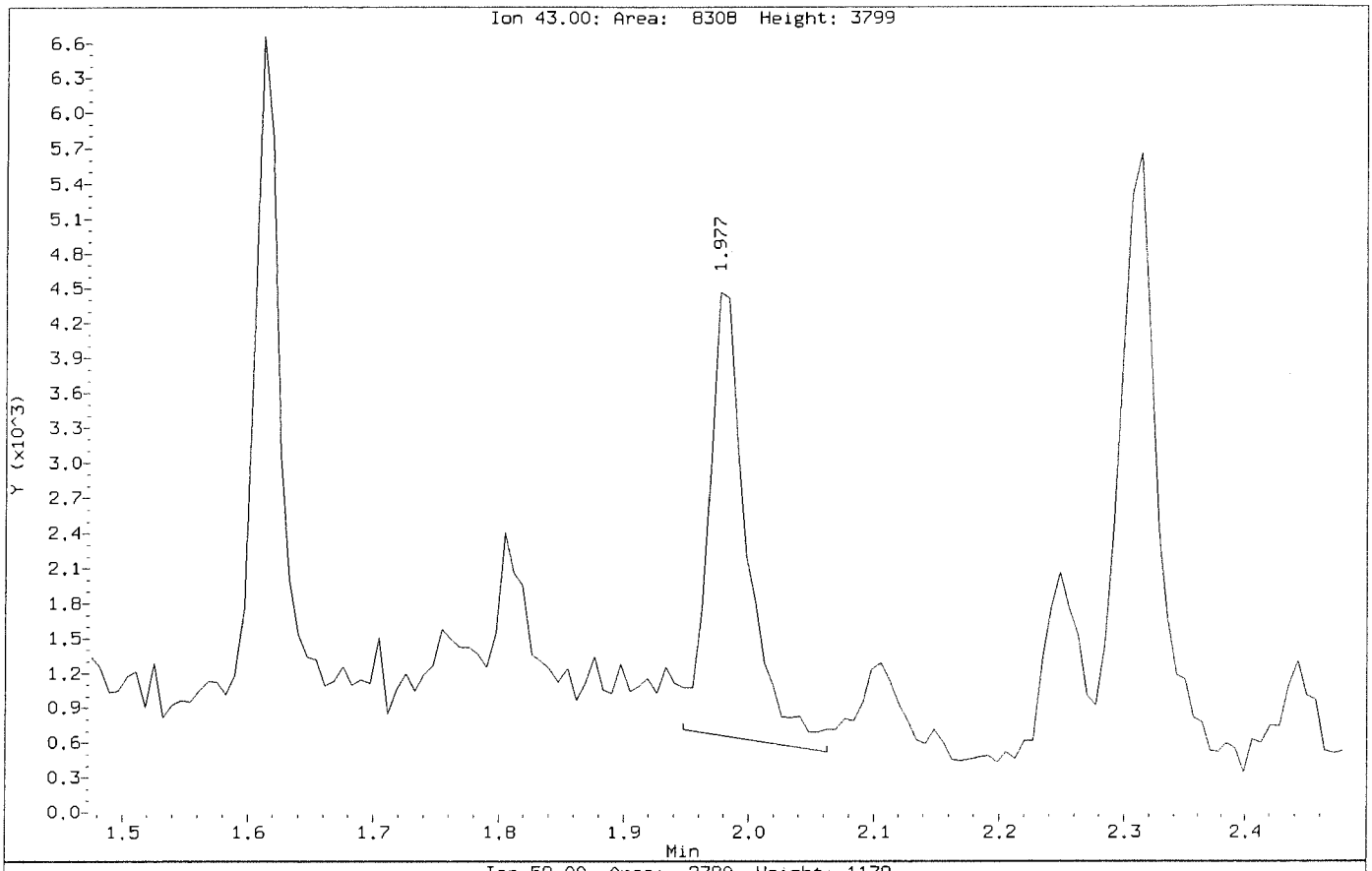
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CAS Number: 78-93-3

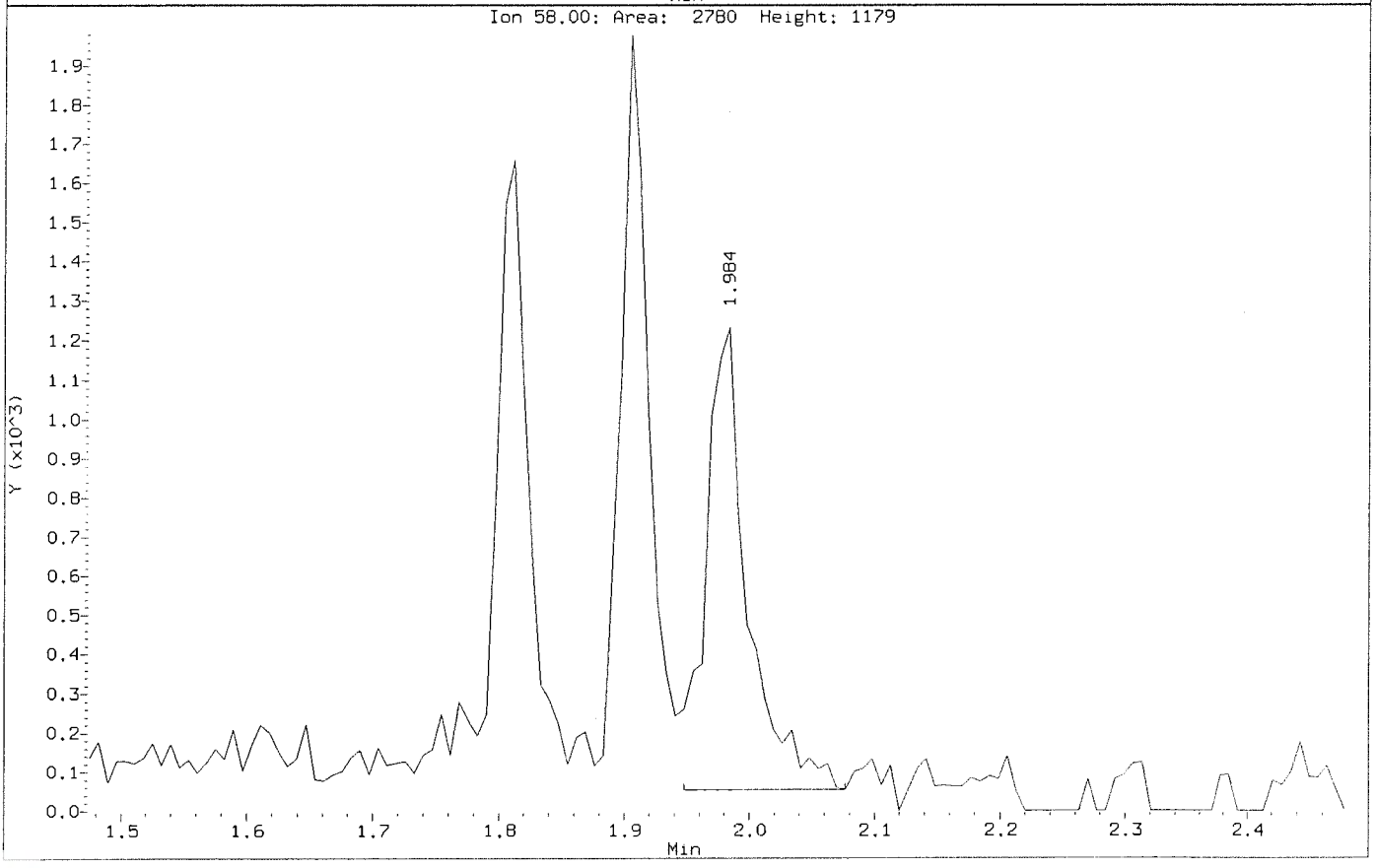


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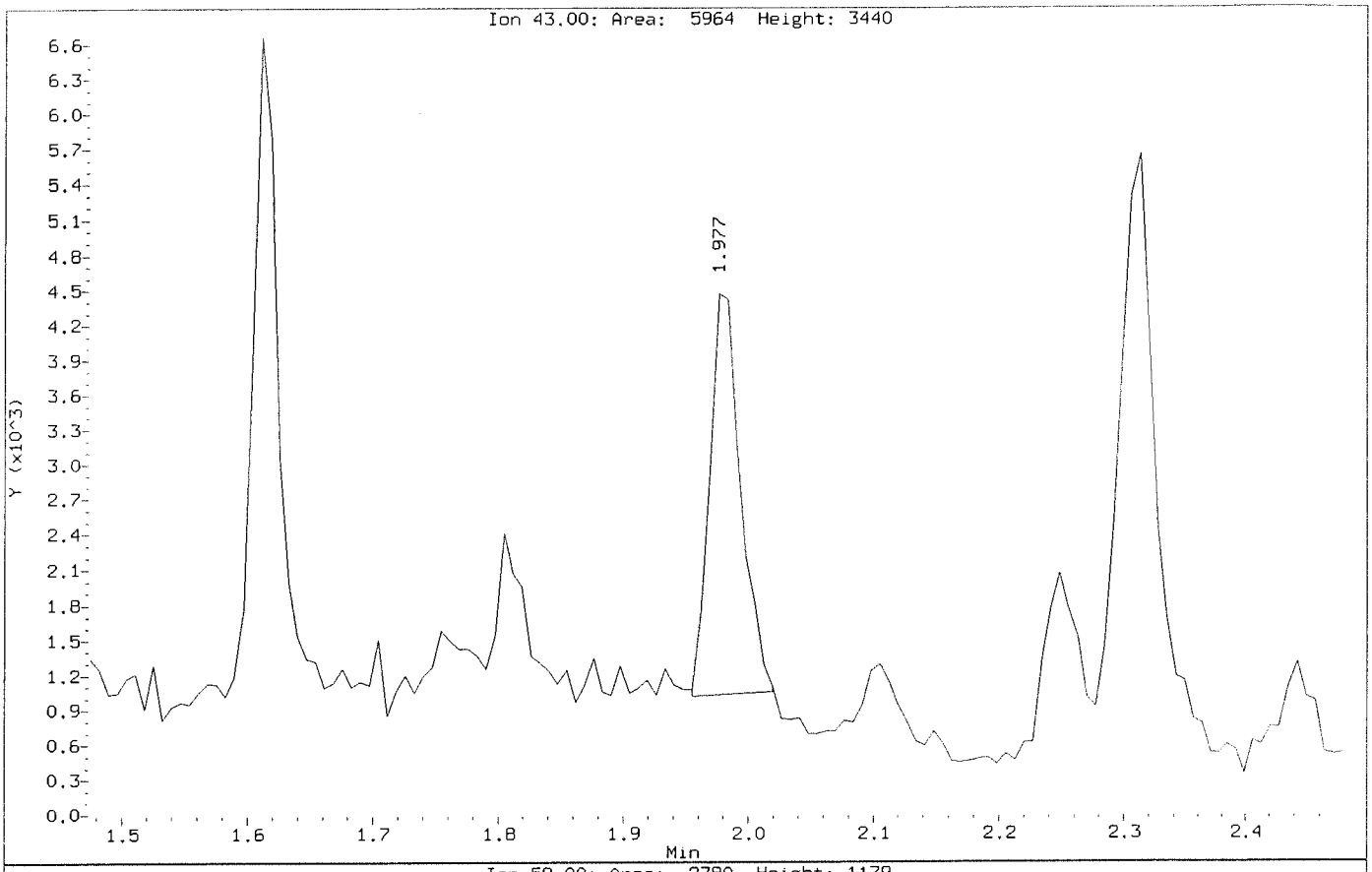
Compound: Acetone
CAS Number: 67-64-1

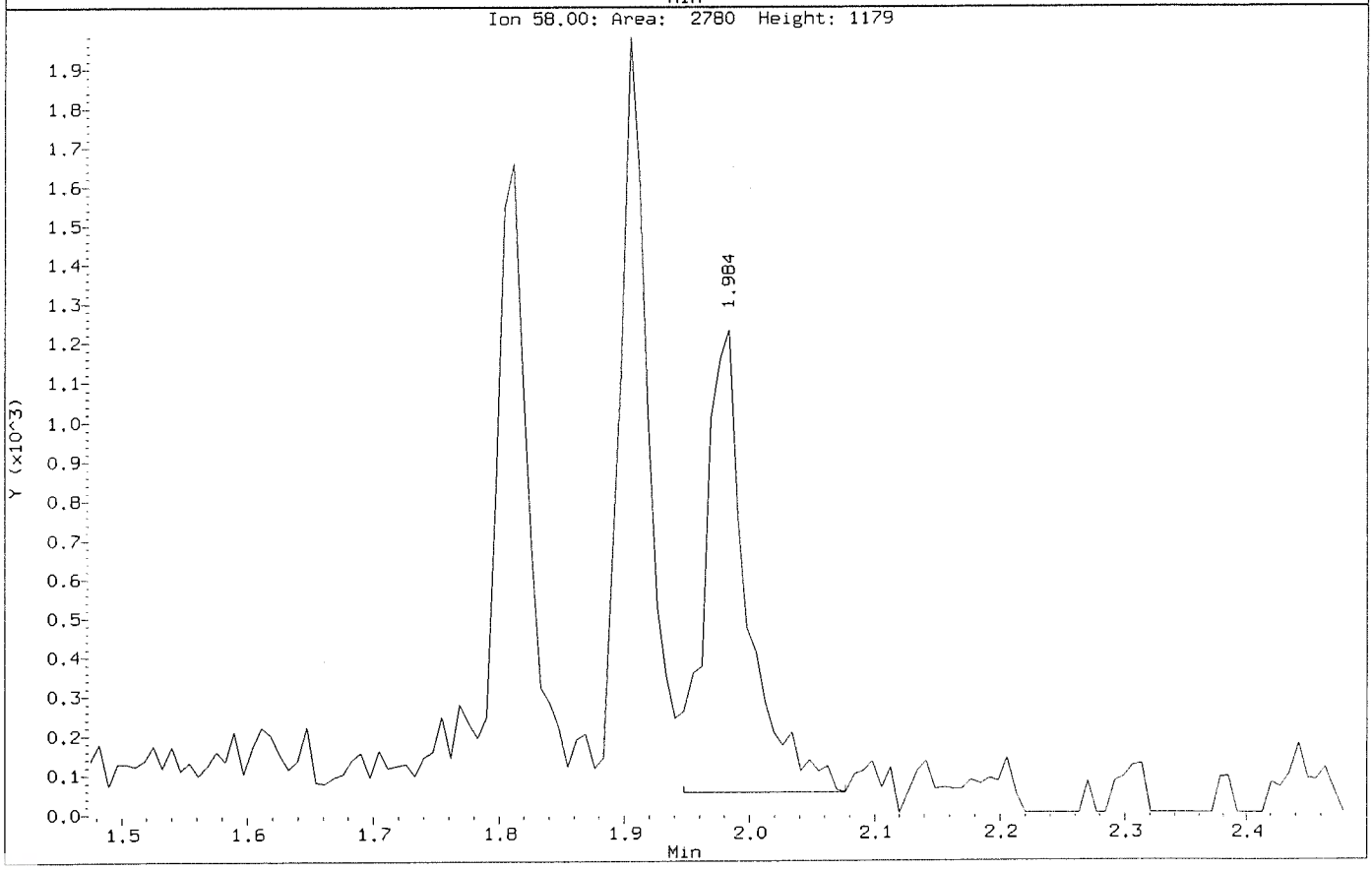


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Instrument: voa6.i
Client Sample ID: VSTD001

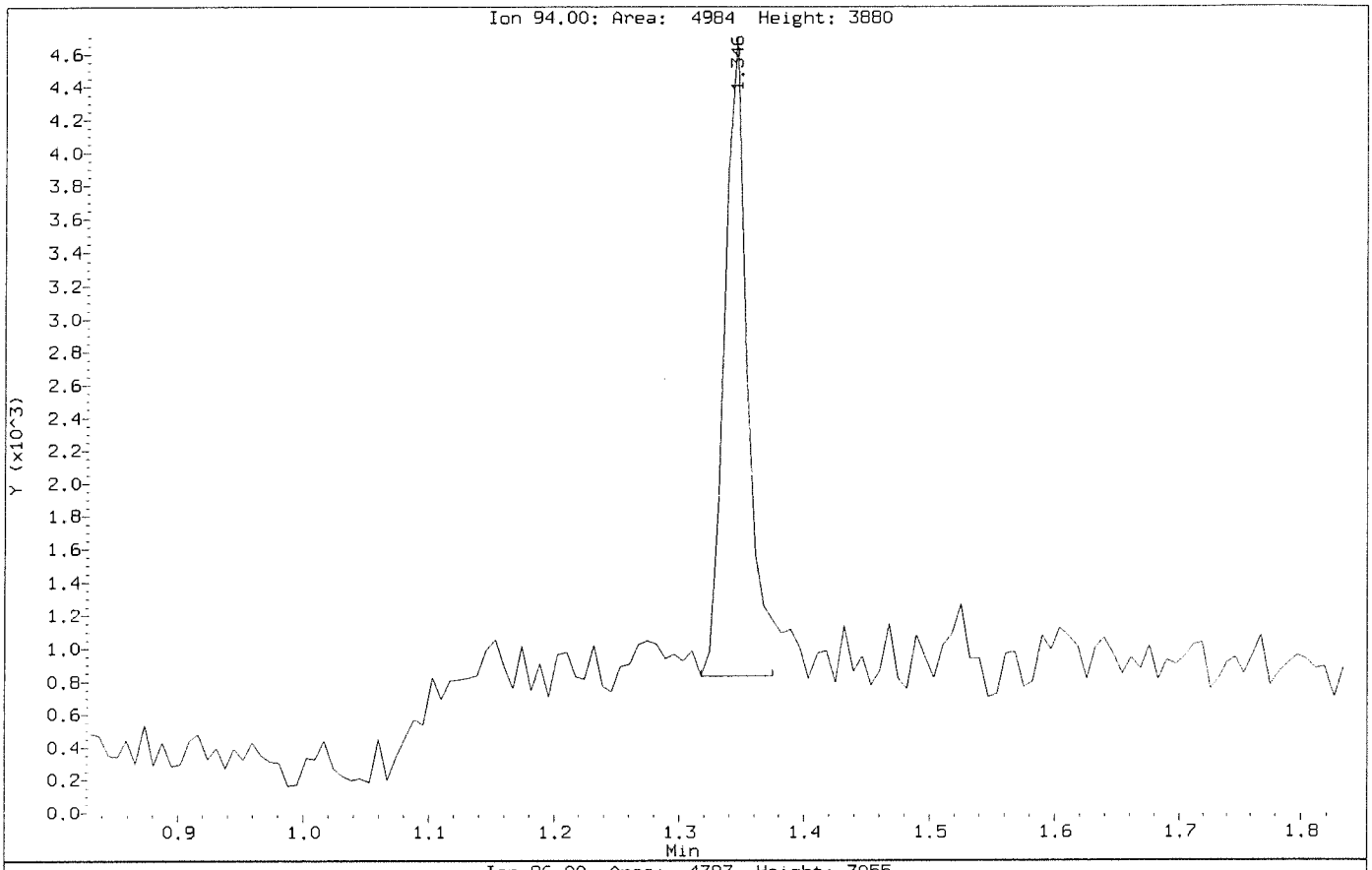
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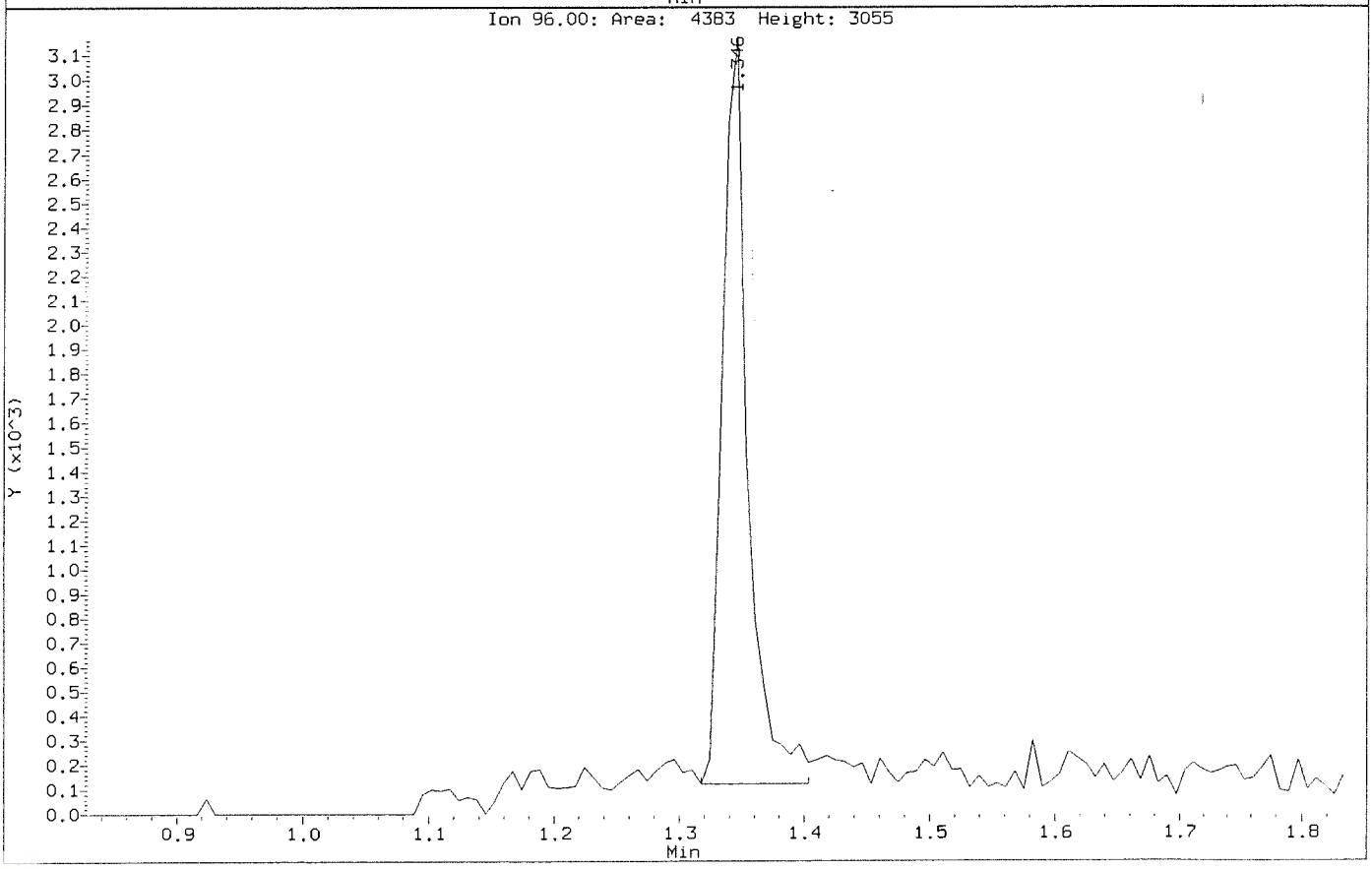


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Instrument: voa6.i
Client Sample ID: VSTD001

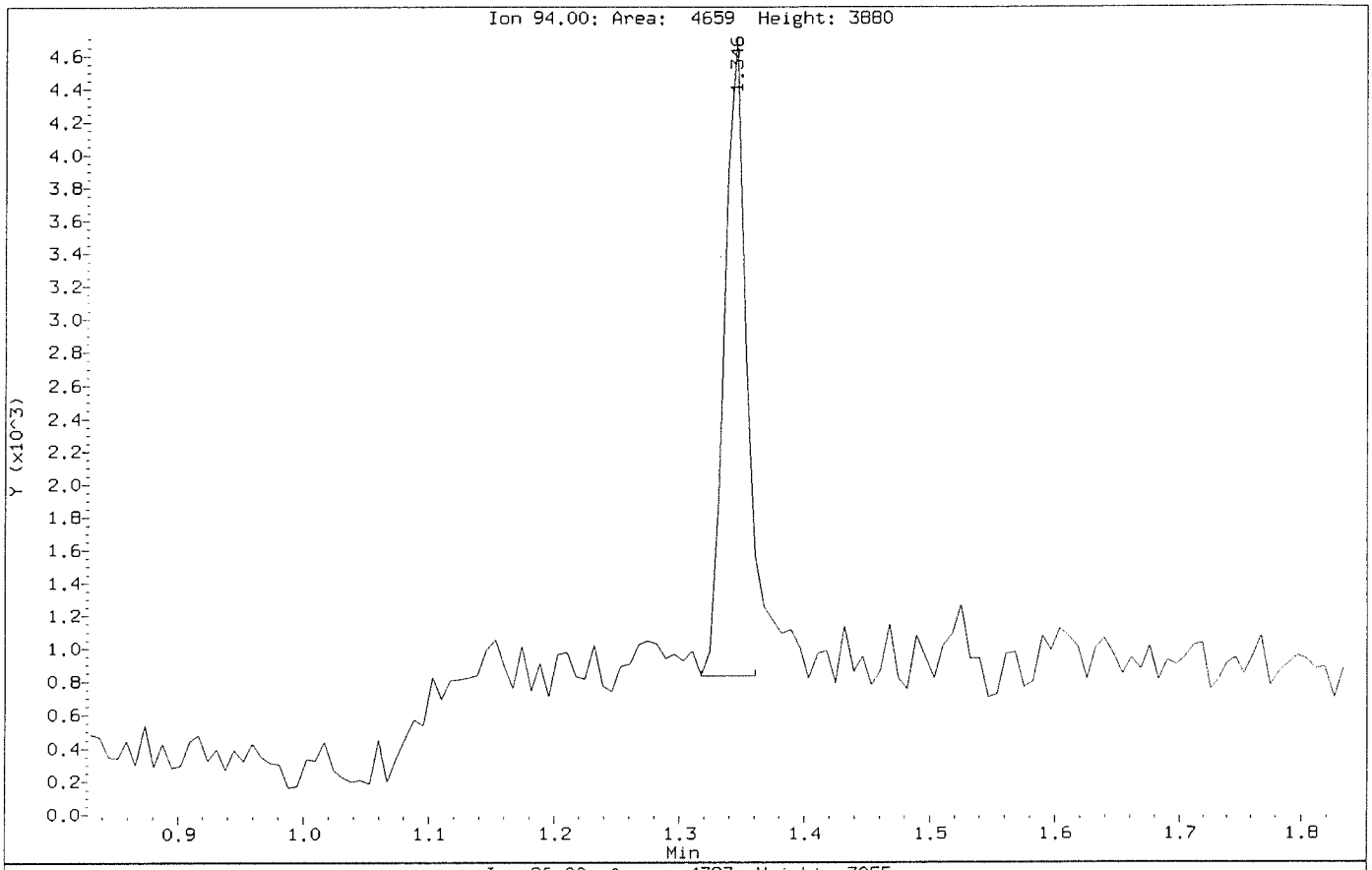
Compound: Bromomethane
CAS Number: 74-83-9

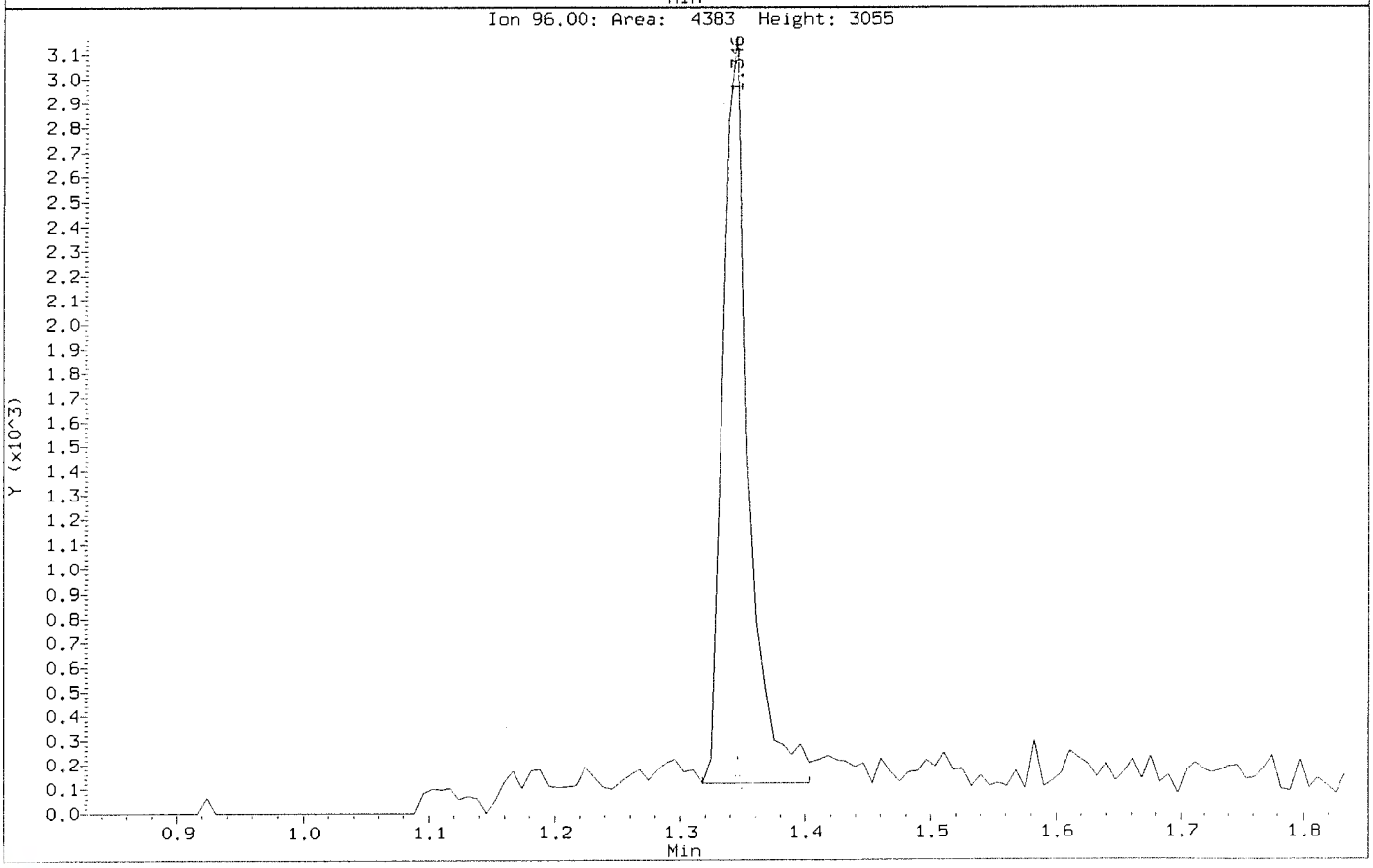


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

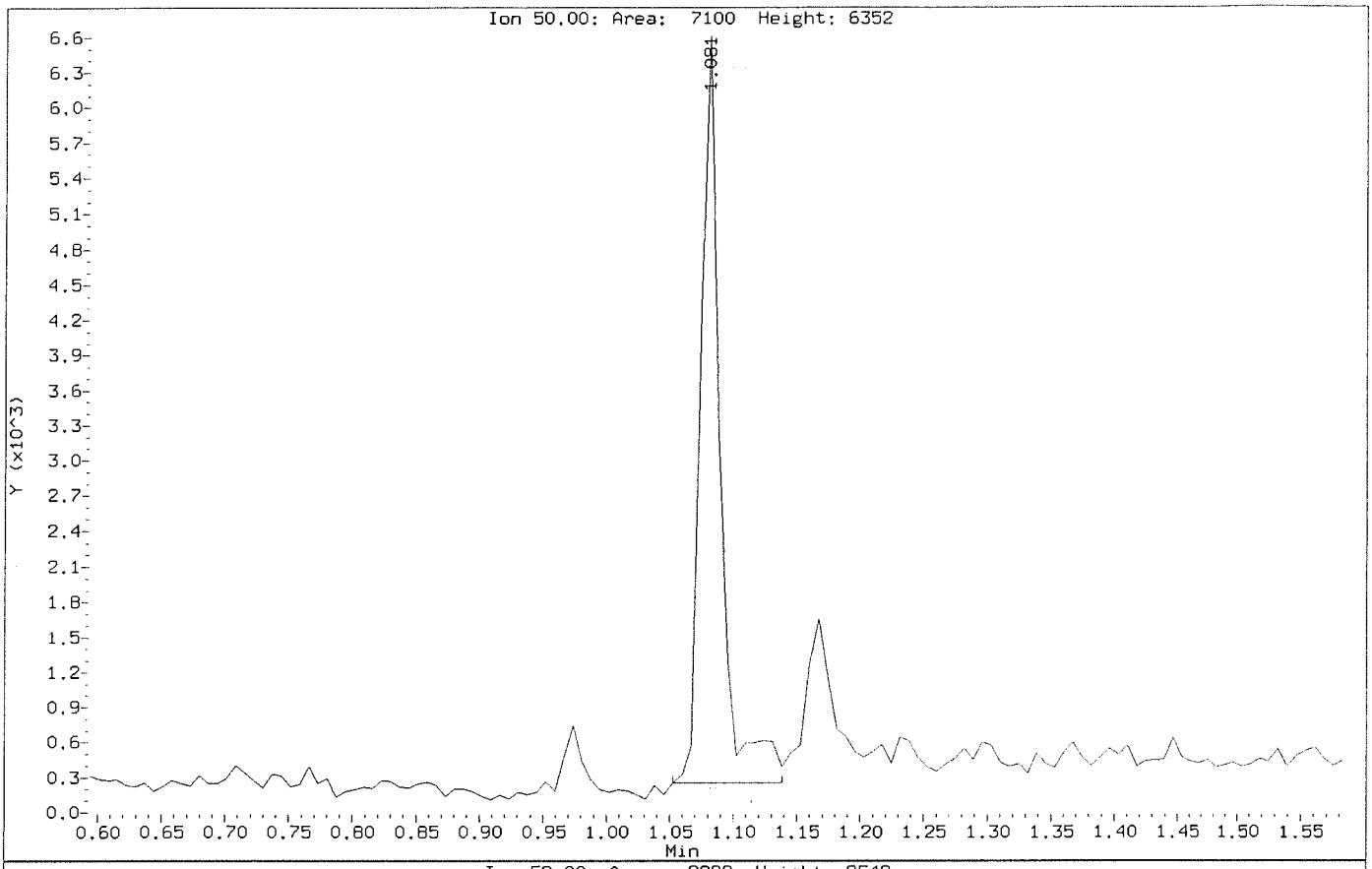
Compound: Bromomethane
CAS Number: 74-83-9

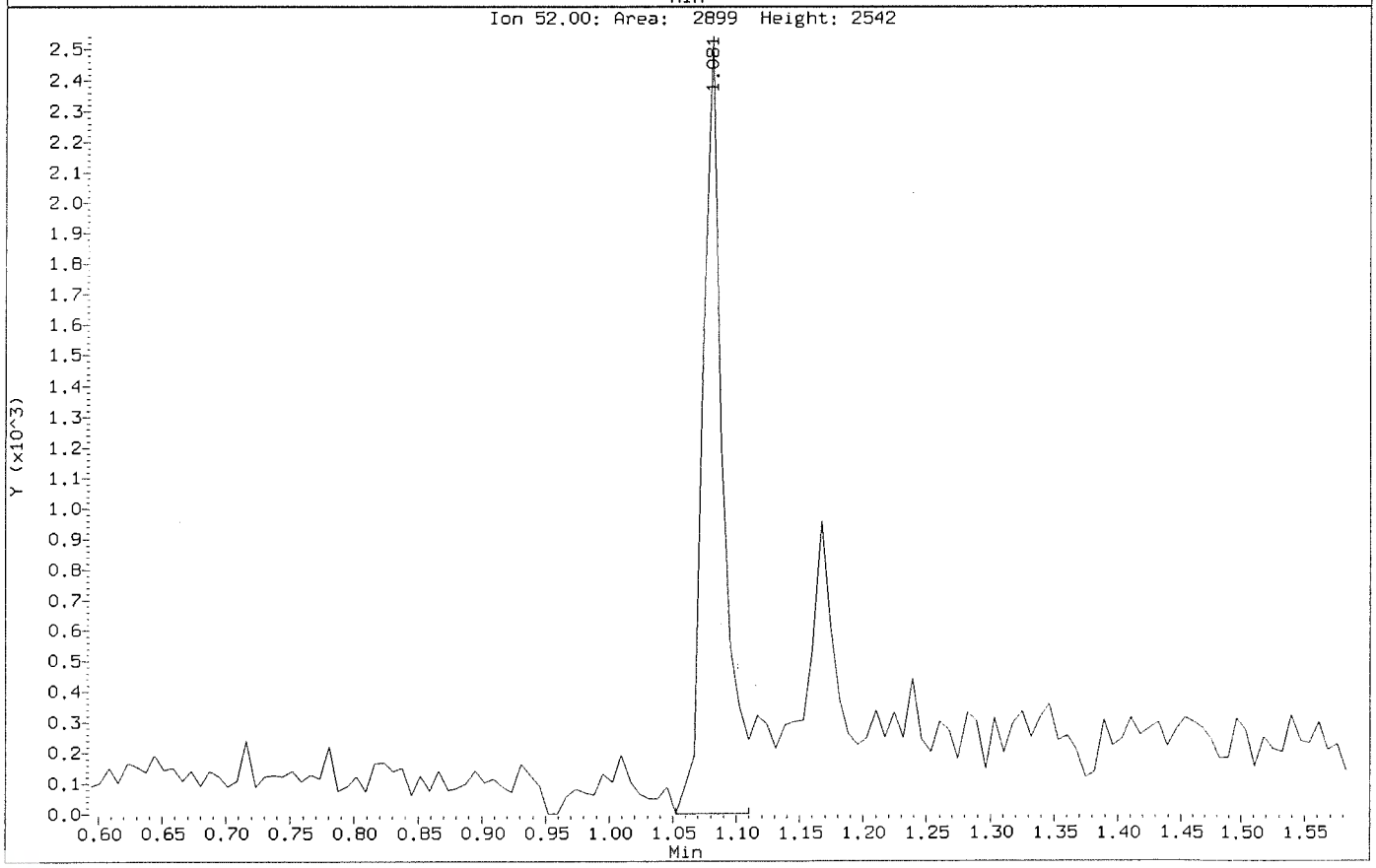


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

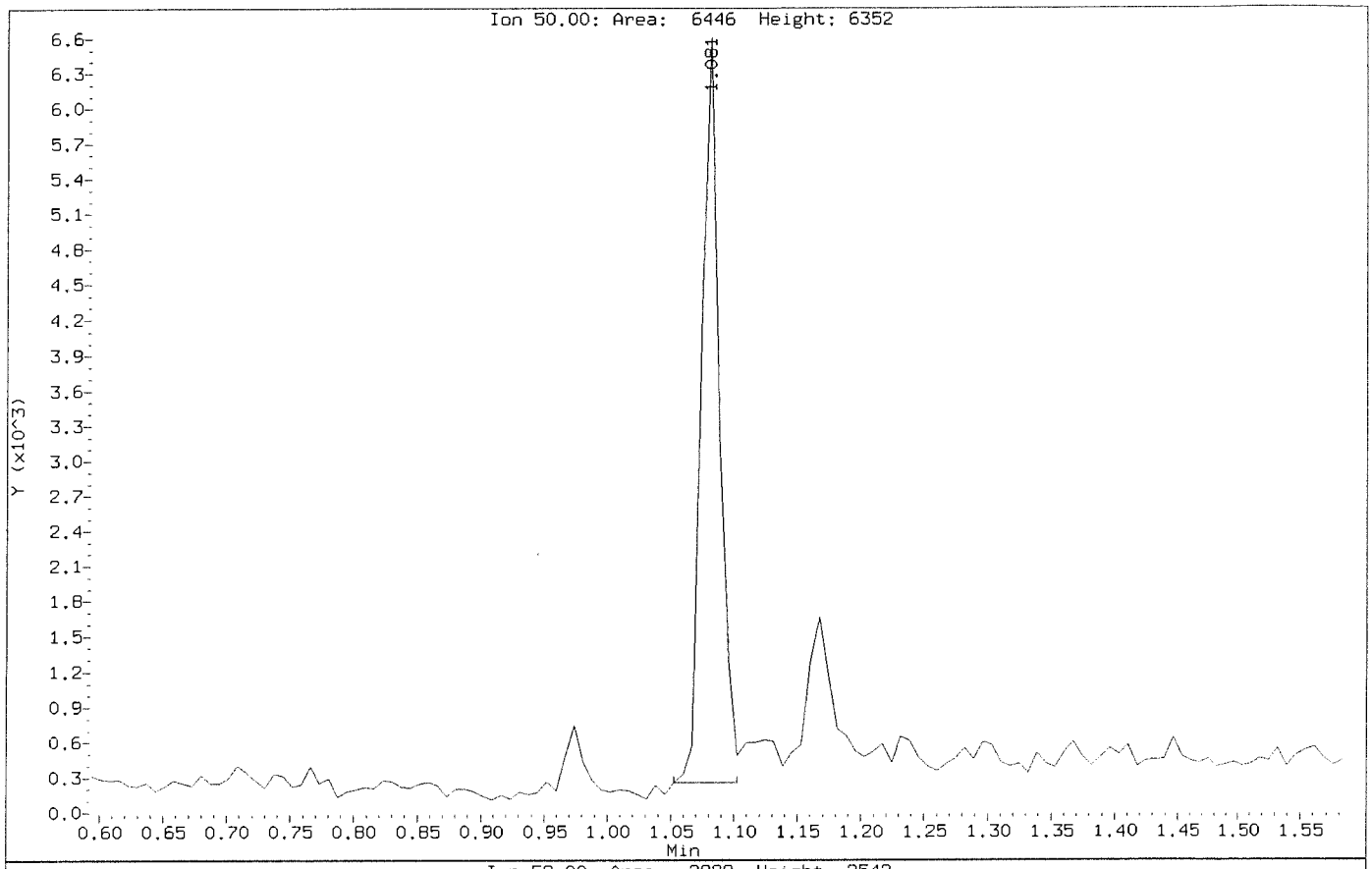
Compound: Chloromethane
CAS Number: 74-87-3

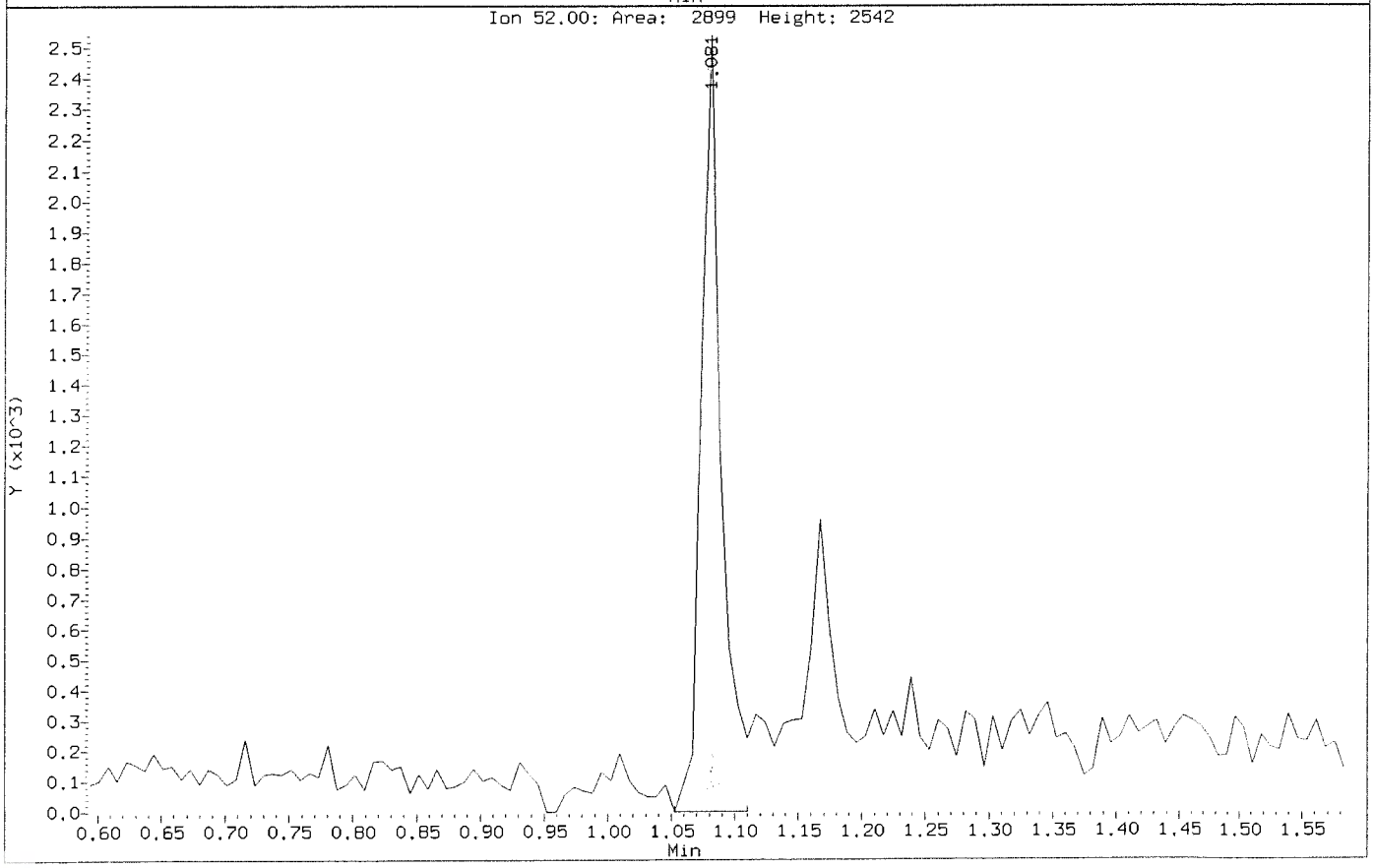


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Client Sample ID: VSTD001

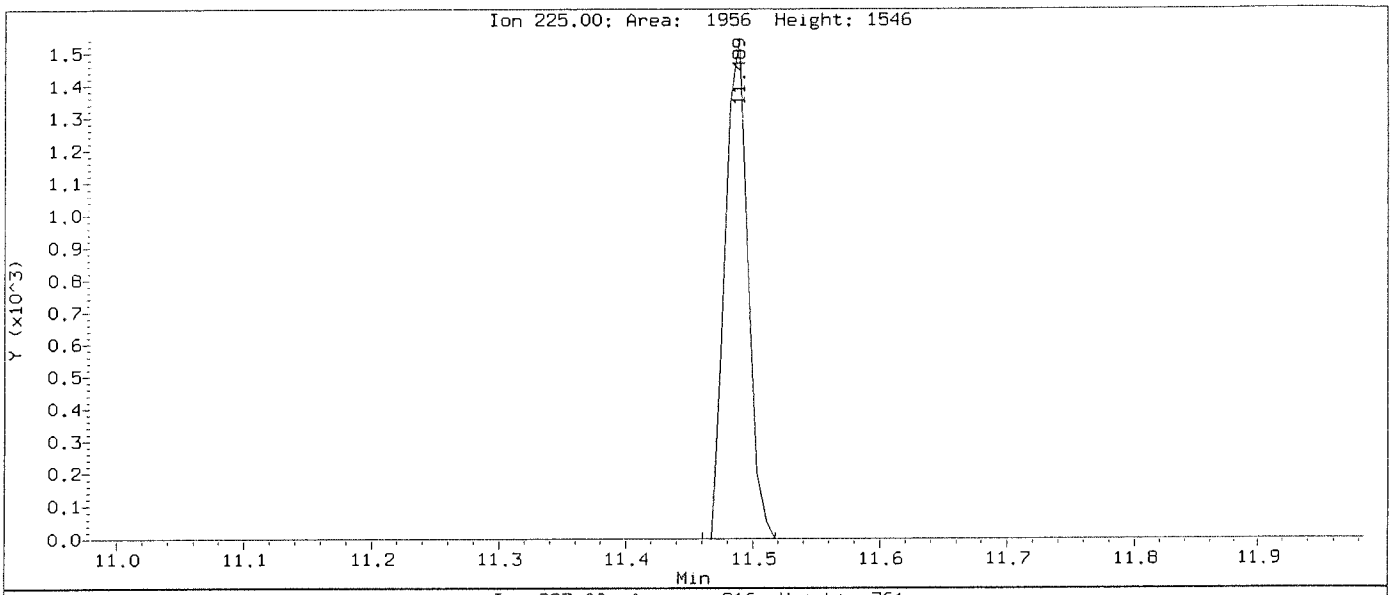
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CAS Number: 74-87-3

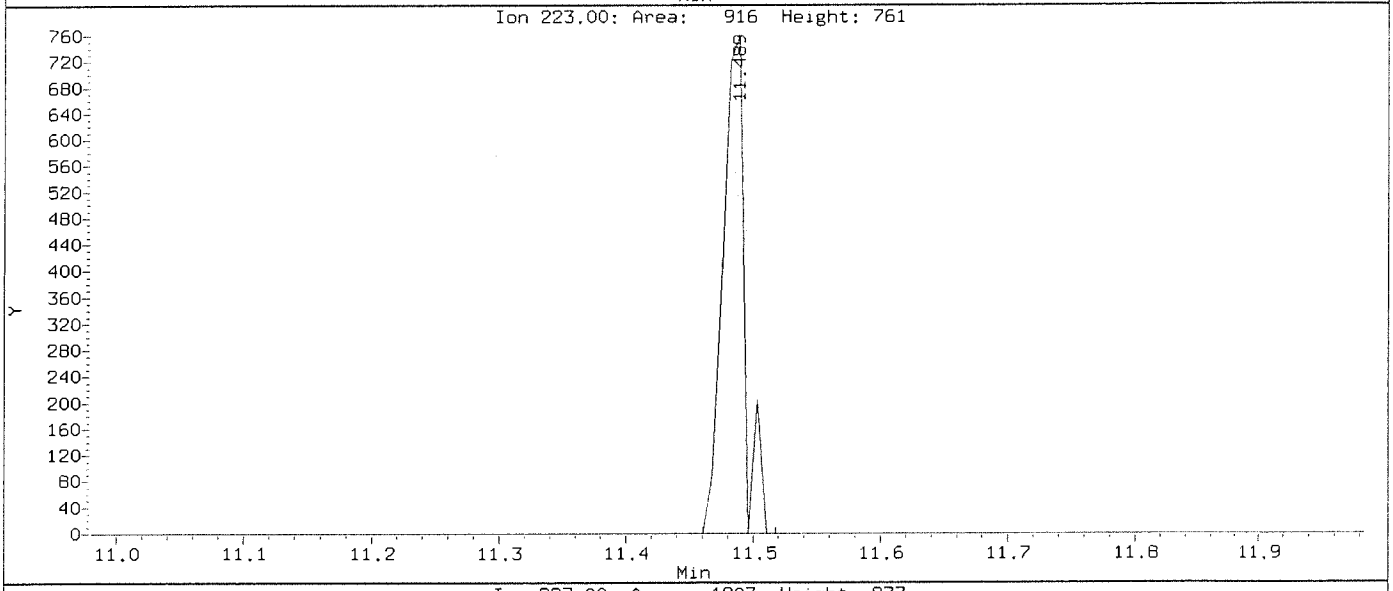


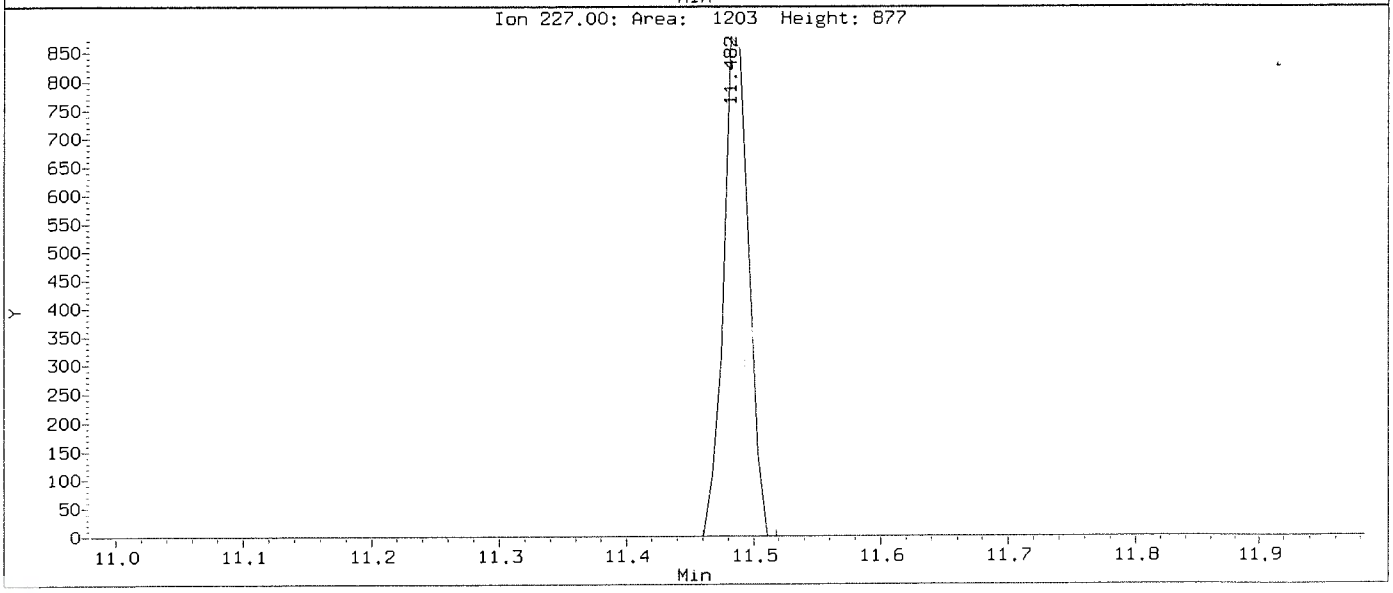



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

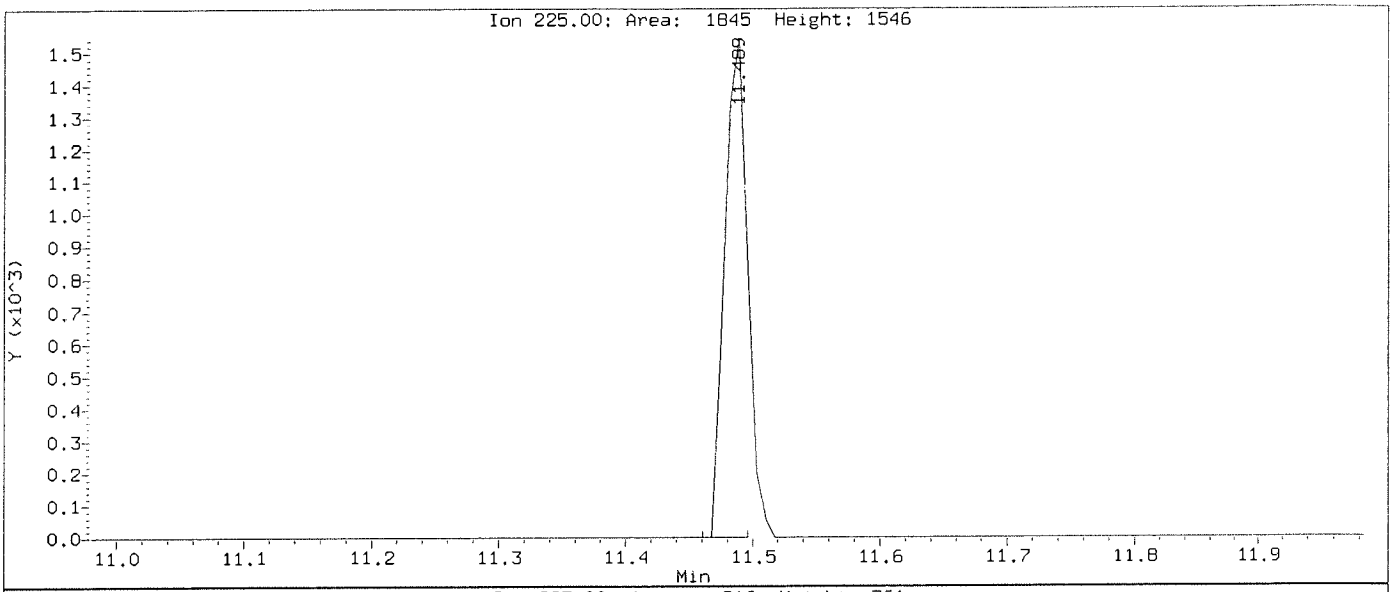


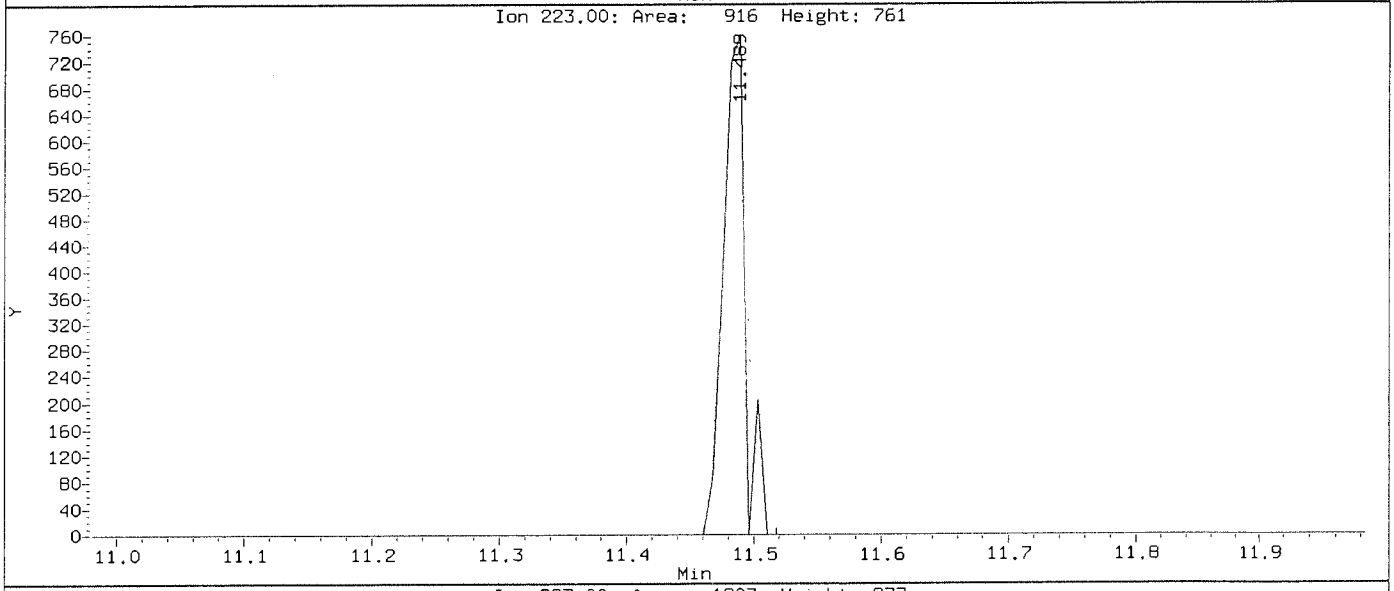



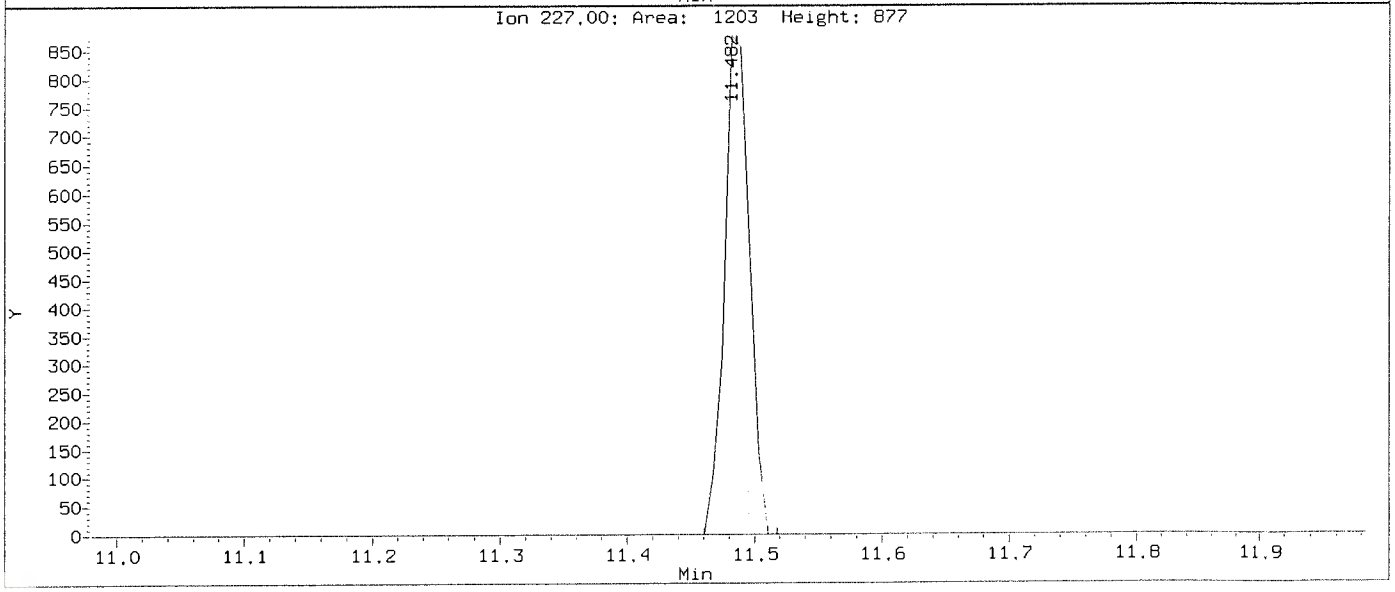



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-AUG-2020 13:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:52 Cal File: X080304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

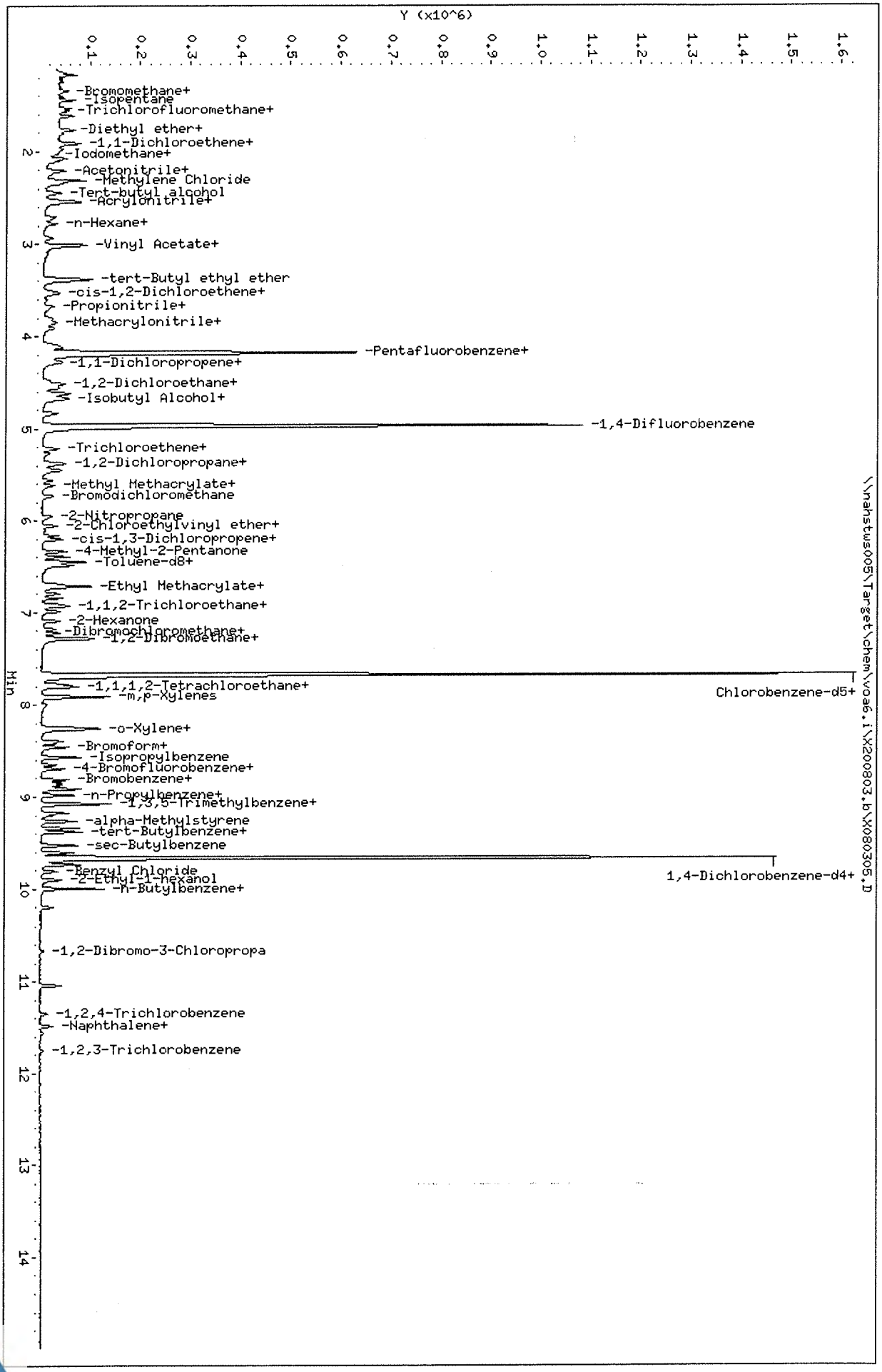
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.190 | 4.190 | (1.000) | 543911 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 829677 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 750905 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 351595 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 9821 | 2.00000 | 1.83(a) |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.070) | 10904 | 2.00000 | 1.72(a) |
| $ | 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 33751 | 2.00000 | 1.85(a) |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 13431 | 2.00000 | 1.91(a) |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 11831 | 2.00000 | 2.06(a) |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 15930 | 2.00000 | 1.90(a) |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.846 | 8.846 | (0.915) | 17450 | 2.00000 | 3.44(aM) |
| | 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 9338 | 2.00000 | 2.18(a) |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 20241 | 2.00000 | 1.90(a) |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 8194 | 2.00000 | 1.90(a) |
| | 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 14129 | 2.00000 | 2.02(a) |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.754 | 11.754 | (1.216) | 2318 | 2.00000 | 2.19(aM) |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 12900 | 2.00000 | 2.50(aM) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.345 | (1.173) | 5020 | 2.00000 | 2.01(a) |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 38643 | 2.00000 | 2.05(a) |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 1468 | 2.00000 | 3.66(a) |
| | 57 1,2-Dibromoethane | 107 | 7.270 | 7.270 | (0.948) | 11414 | 2.00000 | 2.07(a) |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 22043 | 2.00000 | 2.21(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 16305 | 2.00000 | 2.02(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 11836 | 2.00000 | 1.94(a) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 38031 | 2.00000 | 2.07(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 23923 | 2.00000 | 2.16(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 16738 | 2.00000 | 1.98(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.684 | 9.684 | (1.001) | 23830 | 2.00000 | 2.18(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 15659 | 2.00000 | 2.01(aM) |
| 24 | 2-Butanone | 43 | 3.602 | 3.602 | (0.860) | 10002 | 4.00000 | 3.75(a) |
| 76 | 2-Chlorotoluene | 91 | 8.982 | 8.982 | (0.929) | 32223 | 2.00000 | 2.11(a) |
| 52 | 2-Hexanone | 43 | 7.091 | 7.091 | (0.924) | 23886 | 4.00000 | 5.06 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 36388 | 2.00000 | 2.05(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 39097 | 2.00000 | 2.00(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 32995 | 4.00000 | 4.74(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 9756 | 4.00000 | 4.12(aM) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 39024 | 2.00000 | 1.89(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 14653 | 2.00000 | 2.13(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 7080 | 2.00000 | 2.15(a) |
| 39 | Bromodichloromethane | 83 | 5.730 | 5.730 | (1.153) | 14467 | 2.00000 | 1.93(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 9196 | 2.00000 | 2.20(Ta) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 9294 | 2.00000 | 3.10(a) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 47873 | 4.00000 | 3.57(a) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 13935 | 2.00000 | 1.88(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 29194 | 2.00000 | 1.98(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 7130 | 2.00000 | 1.84(a) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 19377 | 2.00000 | 1.99(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 15093 | 2.00000 | 1.97(a) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.531 | 3.531 | (0.843) | 11409 | 2.00000 | 1.90(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 16717 | 2.00000 | 1.91(a) |
| 55 | Dibromochloromethane | 129 | 7.177 | 7.177 | (0.936) | 13023 | 2.00000 | 2.16(a) |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 6946 | 2.00000 | 1.92(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 9815 | 2.00000 | 1.84(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 14170 | 2.00000 | 1.86(a) |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 4418 | 2.00000 | 2.34(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 42458 | 2.00000 | 1.90(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 35460 | 4.00000 | 3.86(a) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 20318 | 2.00000 | 2.34(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 30052 | 2.00000 | 1.93(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 49004 | 2.00000 | 1.93(a) |
| 92 | Naphthalene | 128 | 11.553 | 11.553 | (1.195) | 6258 | 2.00000 | 2.17(aM) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 17455 | 2.00000 | 1.93(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 41975 | 2.00000 | 1.96(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 33224 | 2.00000 | 2.12(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 31980 | 2.00000 | 2.00(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 8697 | 2.00000 | 1.82(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 43608 | 2.00000 | 1.98(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.542 | 2.542 | (0.607) | 9831 | 2.00000 | 1.92(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 15714 | 2.00000 | 1.96(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 11482 | 2.00000 | 1.95(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 14481 | 2.00000 | 1.80(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 12969 | 2.00000 | 1.85(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

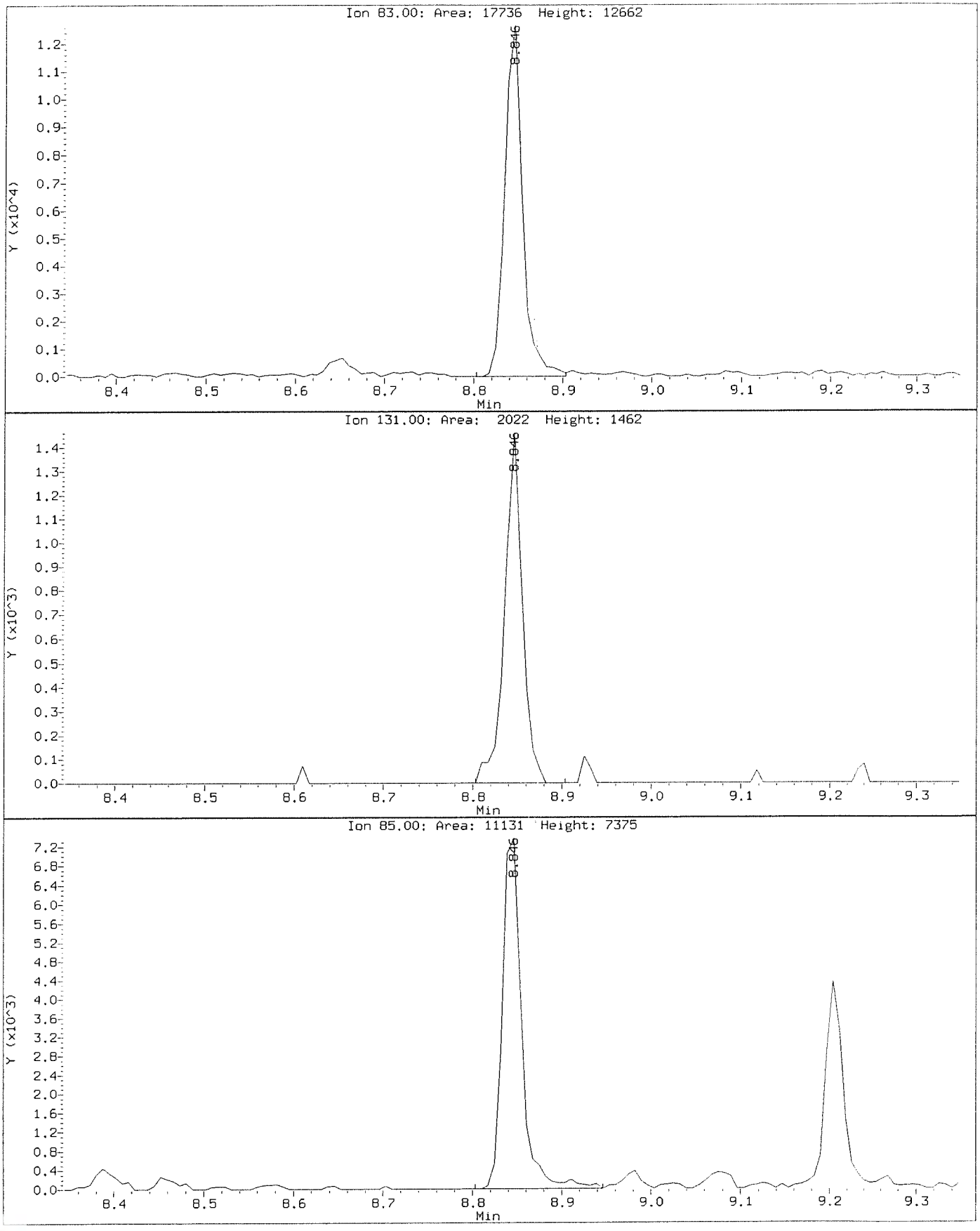



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Date : 03-AUG-2020 13:16
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

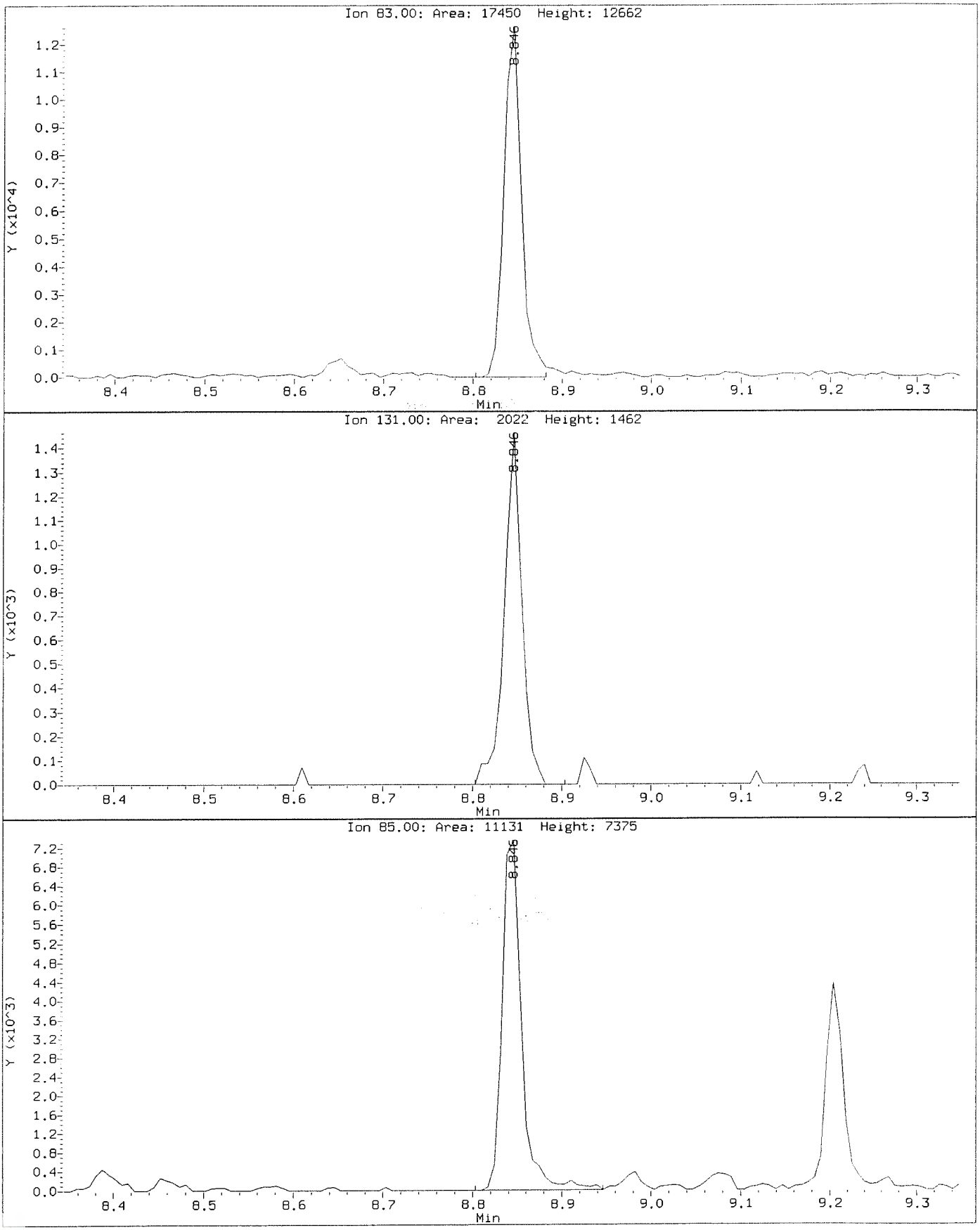
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



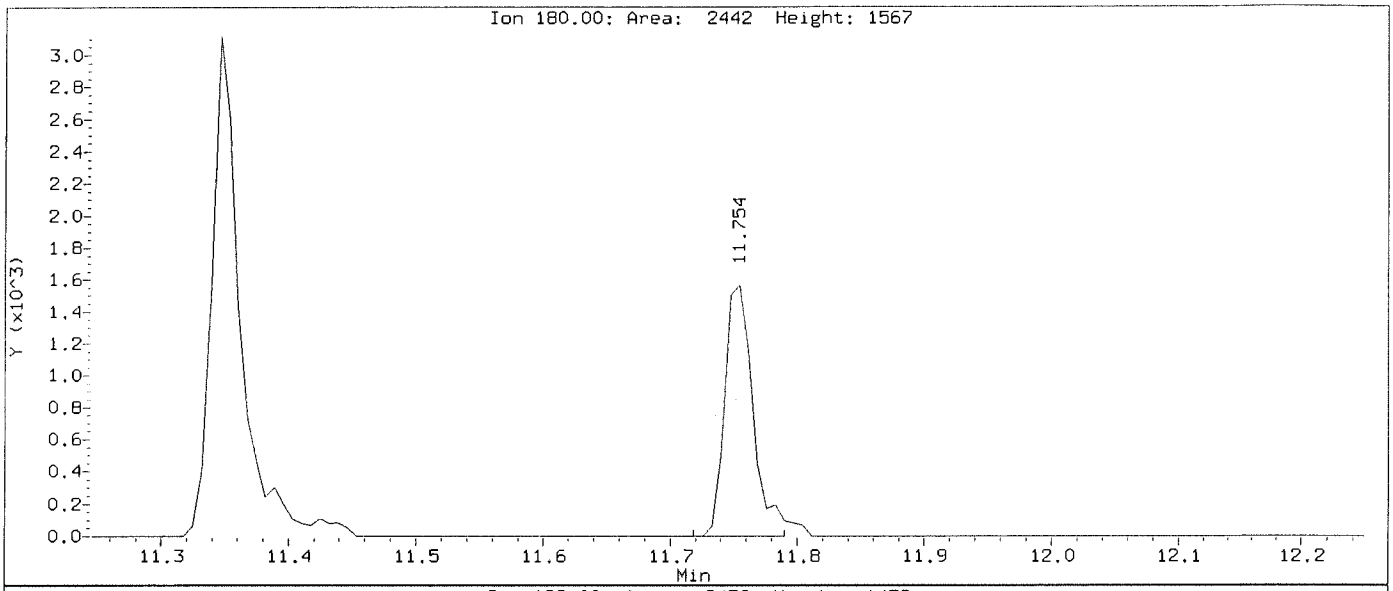
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

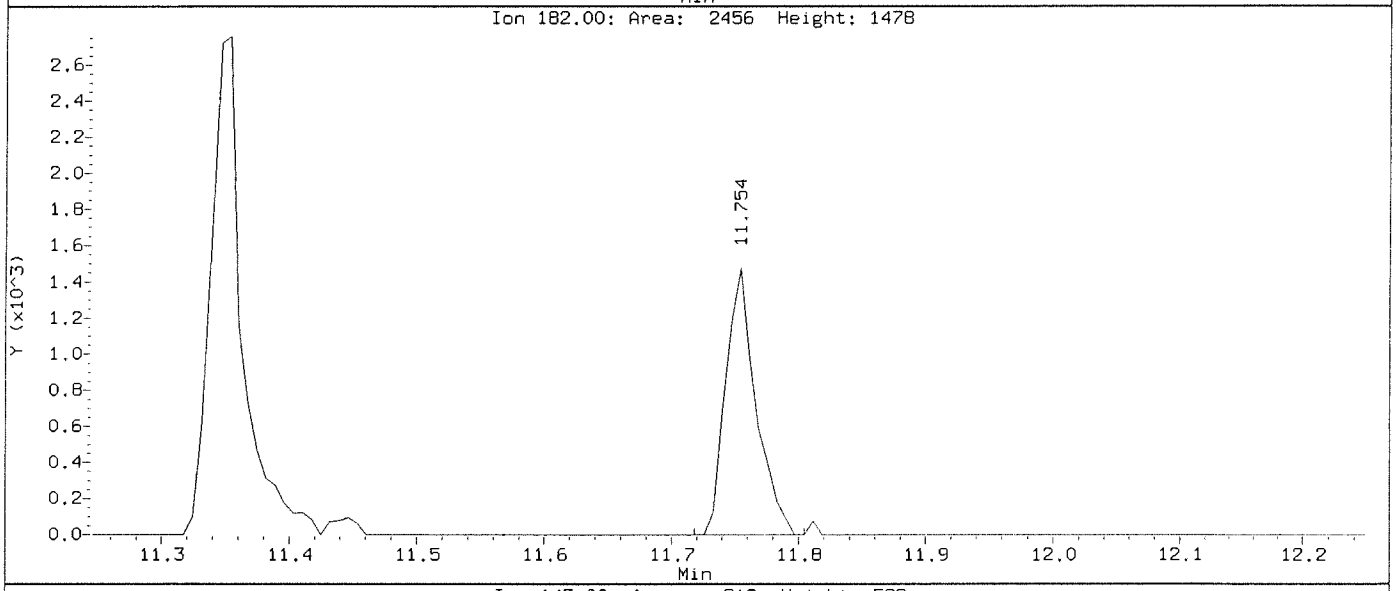
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

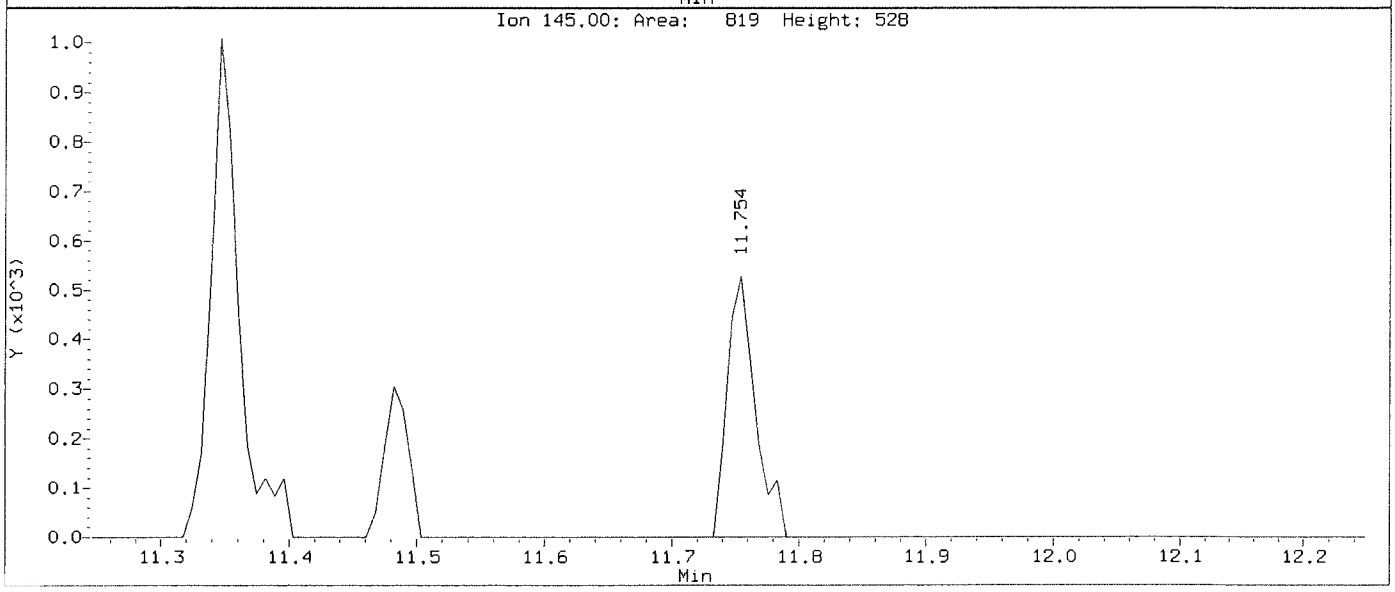


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

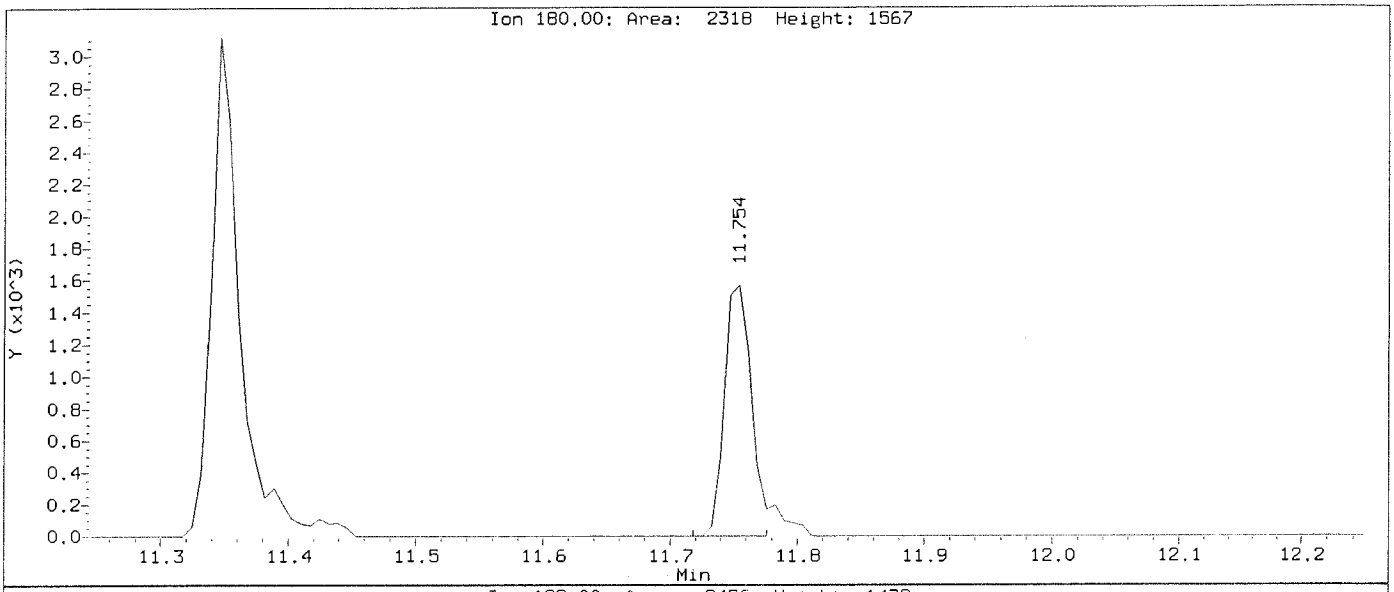


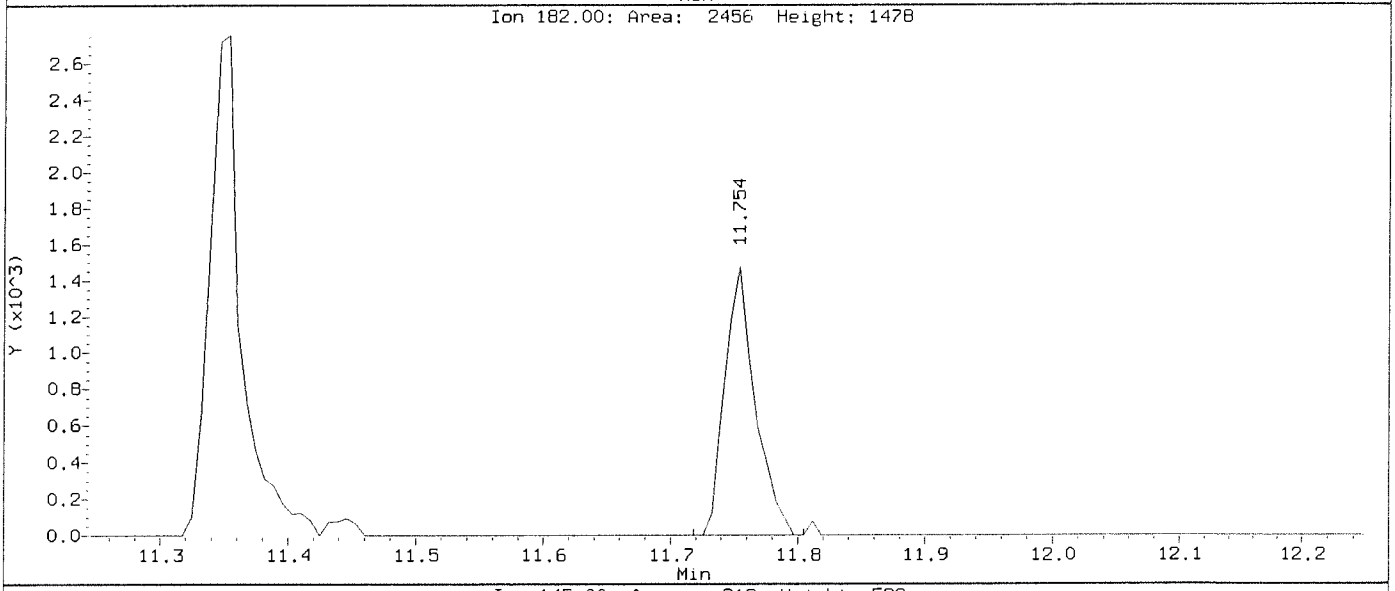



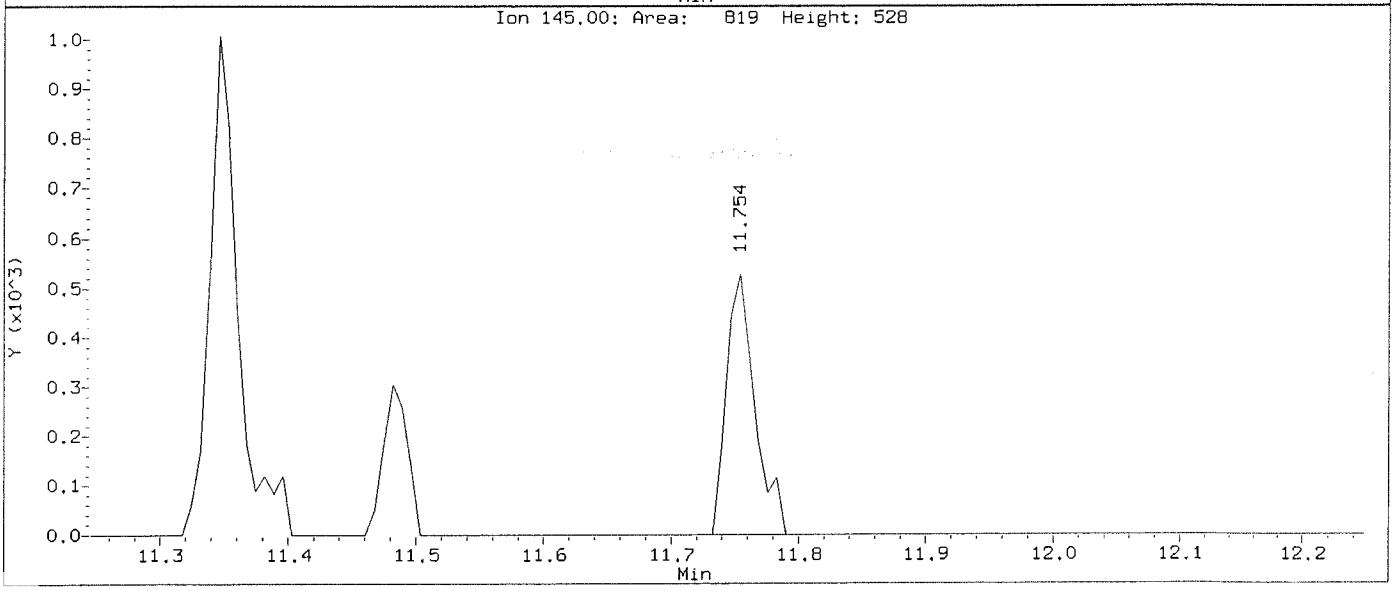



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

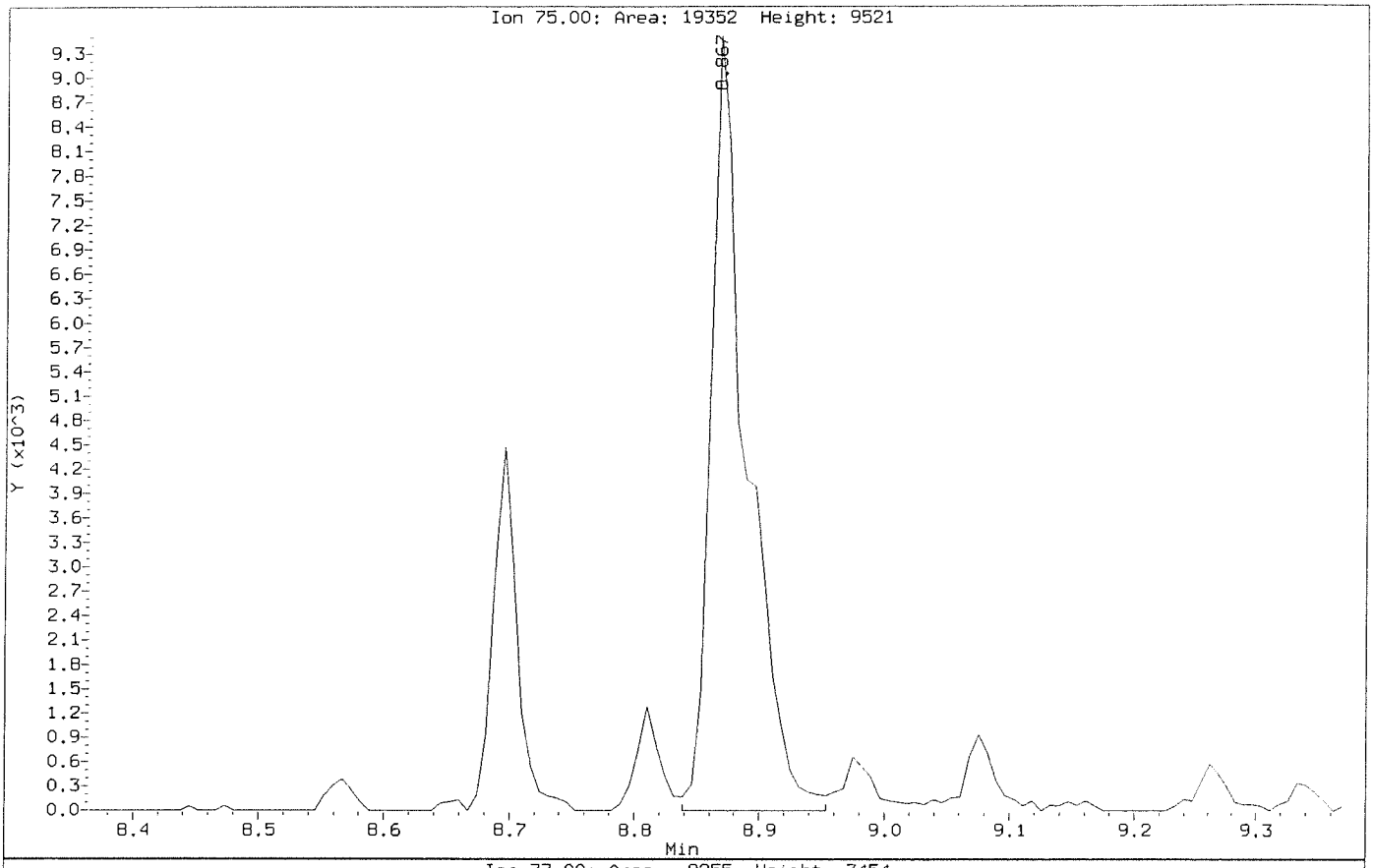


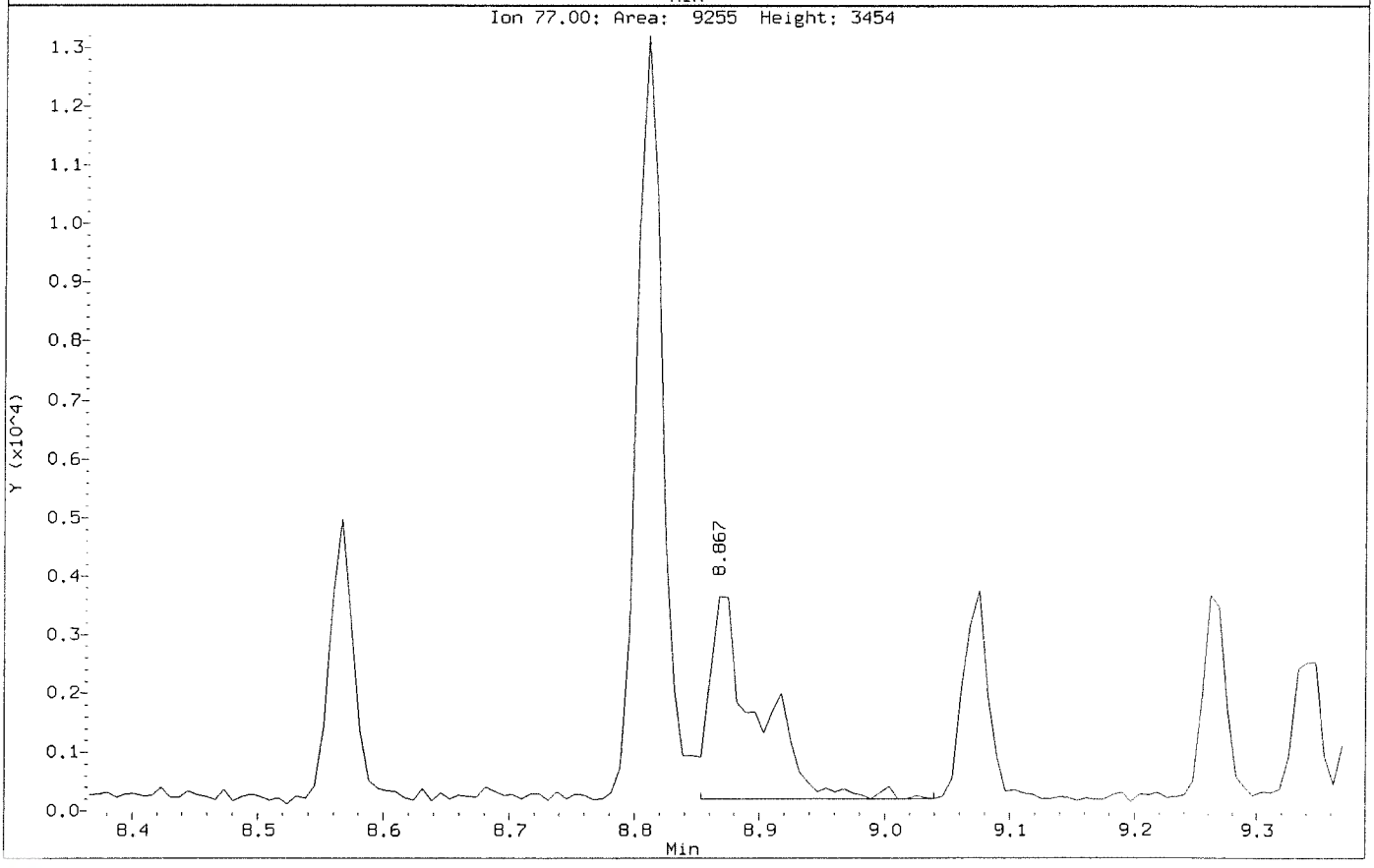



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

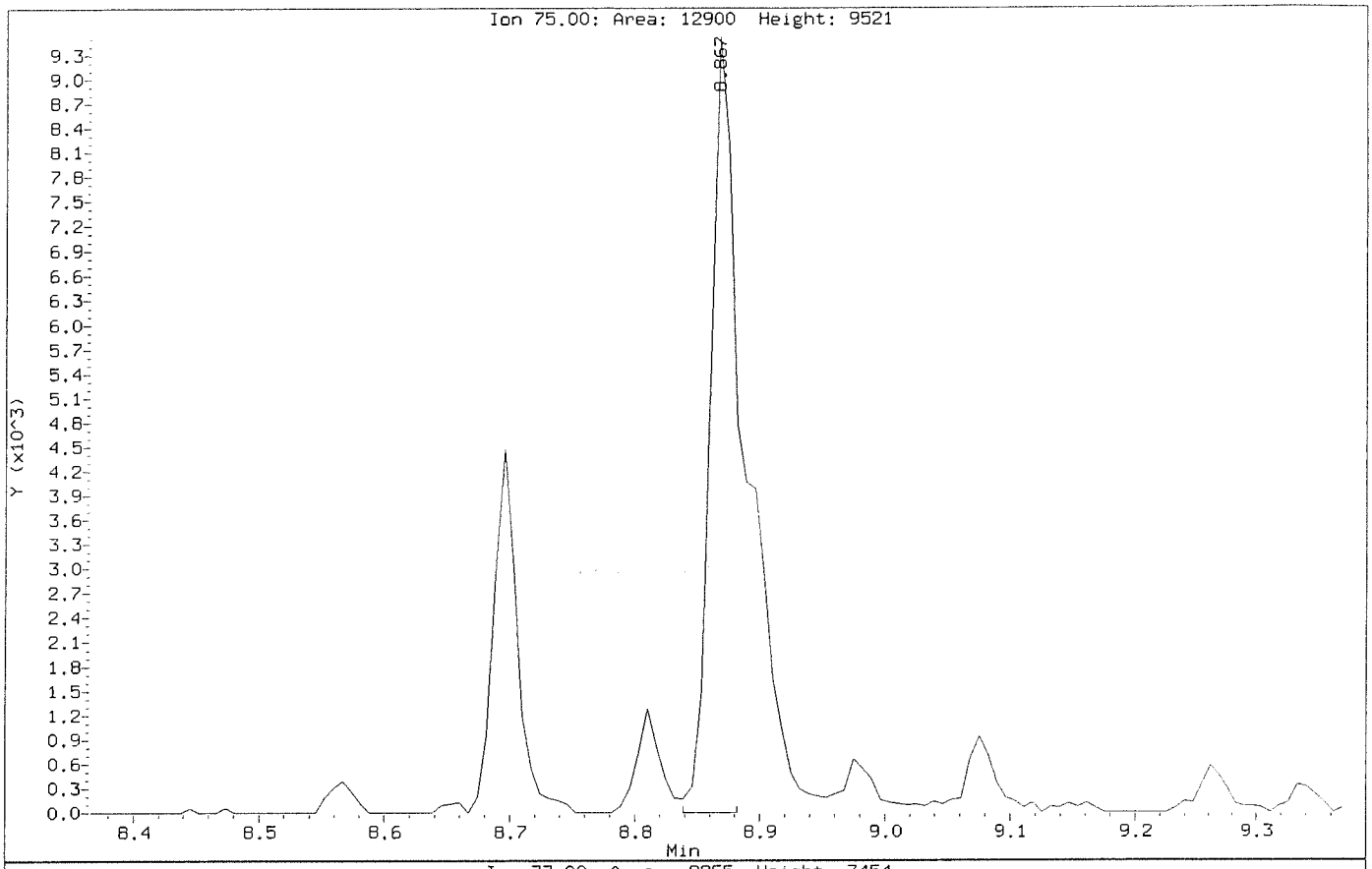
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

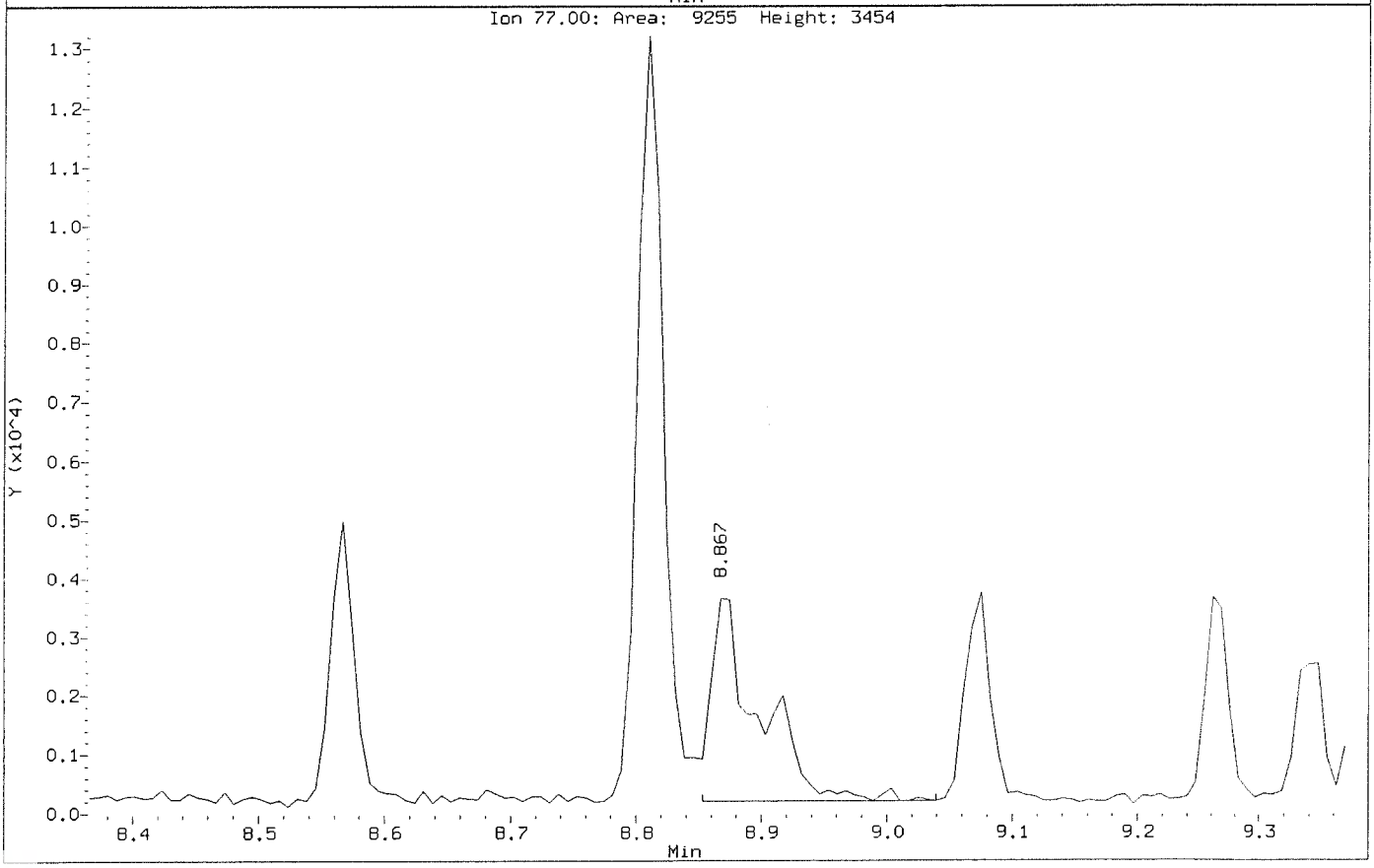


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

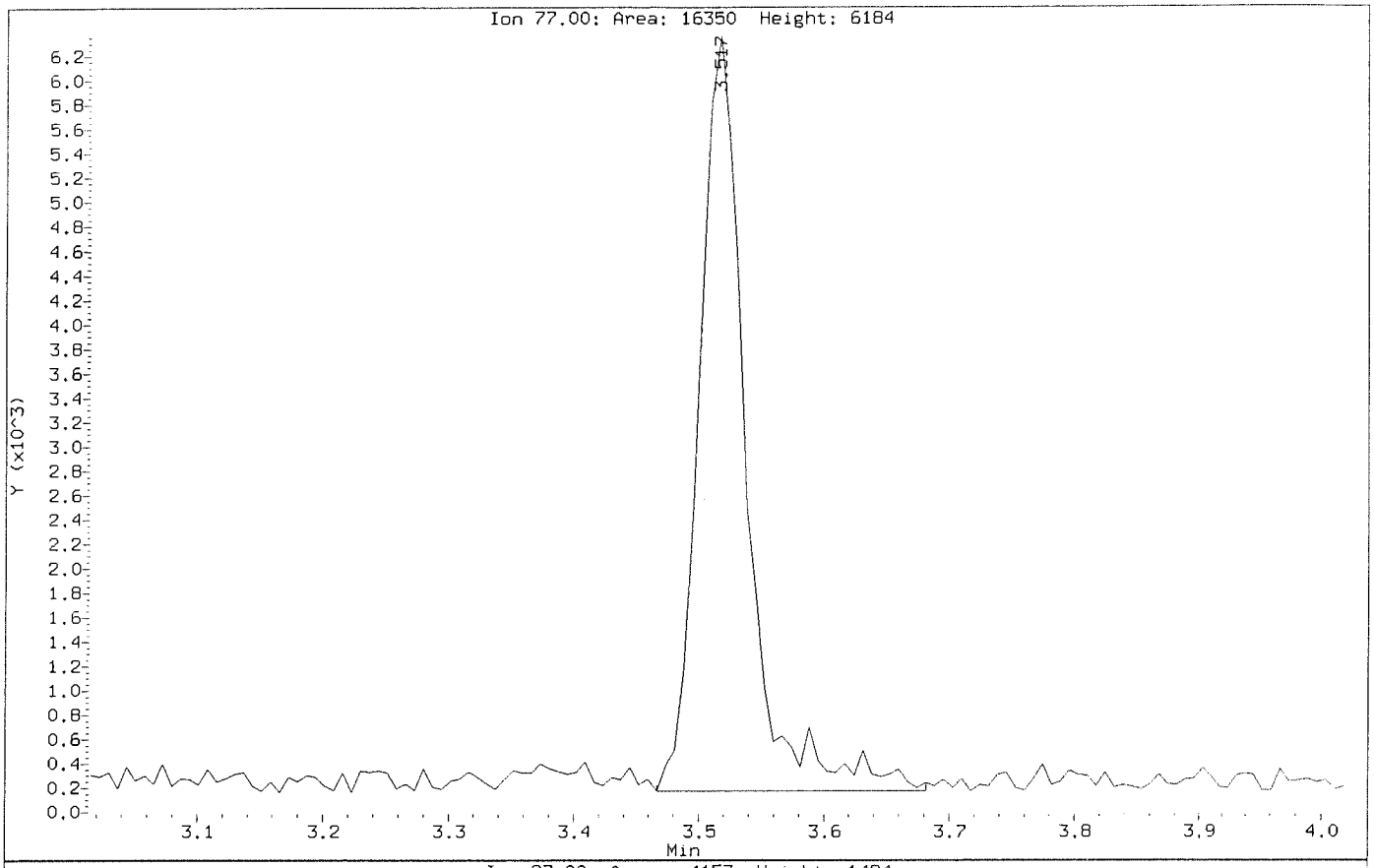
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

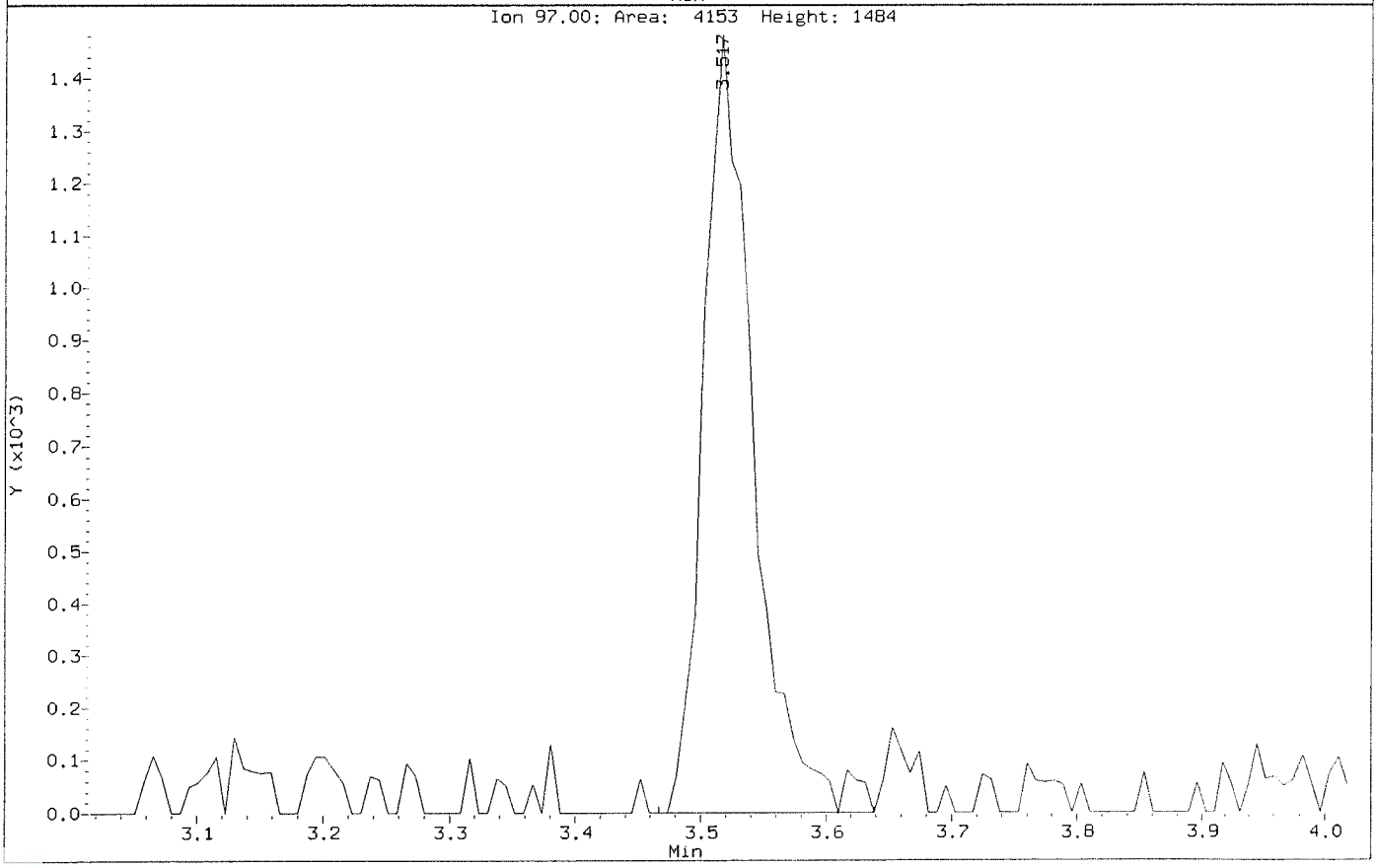


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Instrument: voa6.i
Client Sample ID: VSTD002

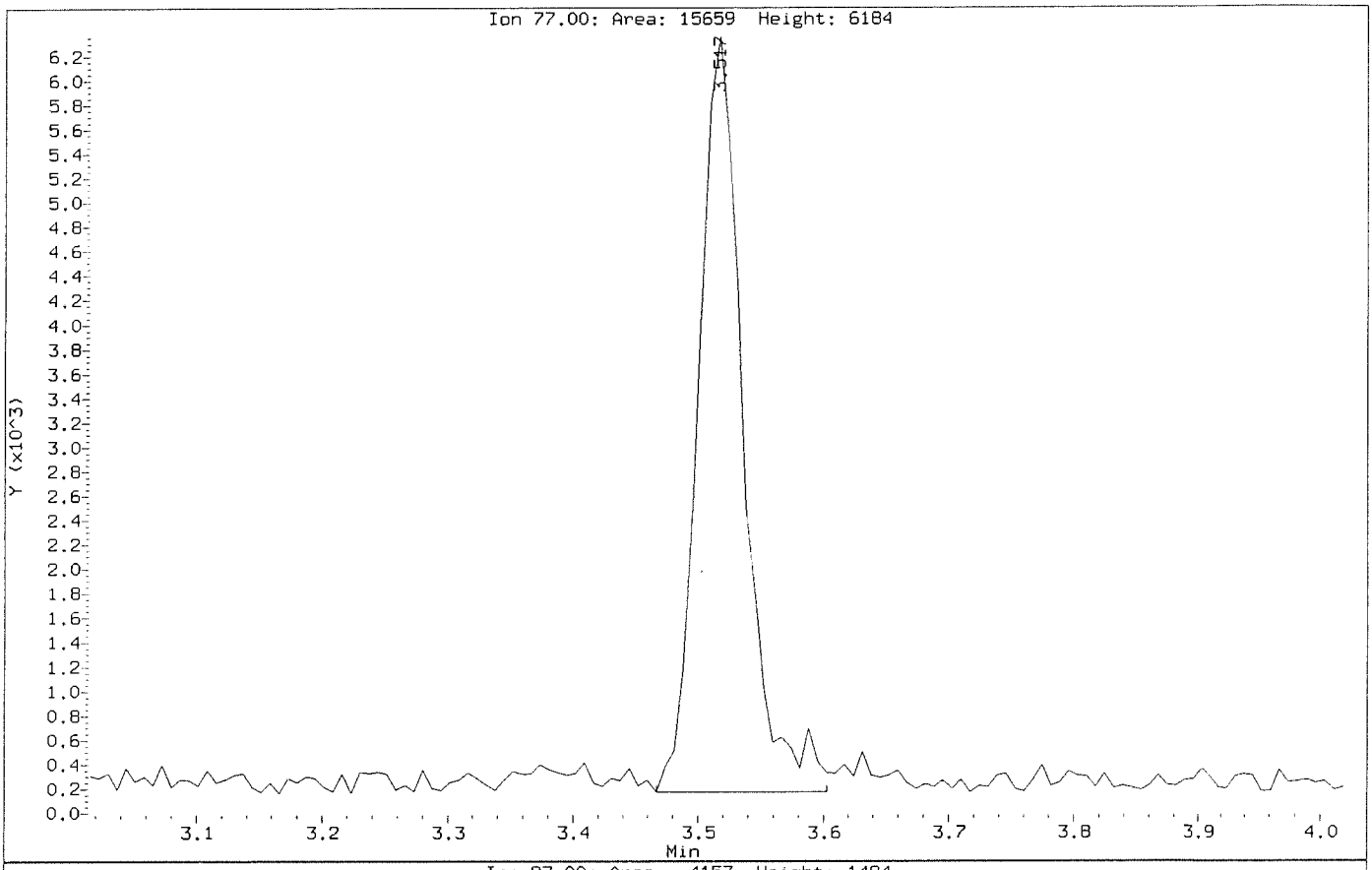
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

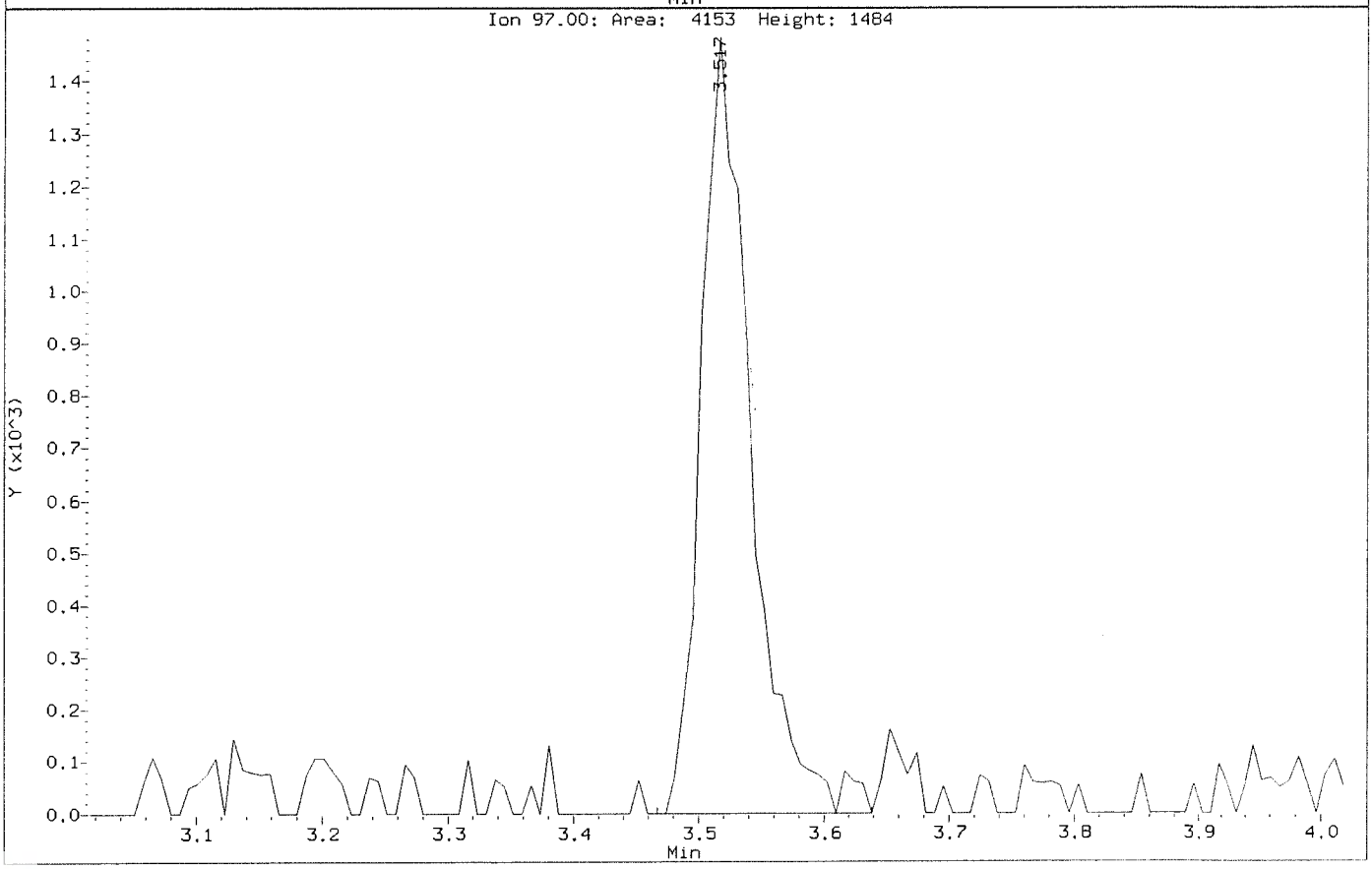


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Instrument: voa6.i
Client Sample ID: VSTD002

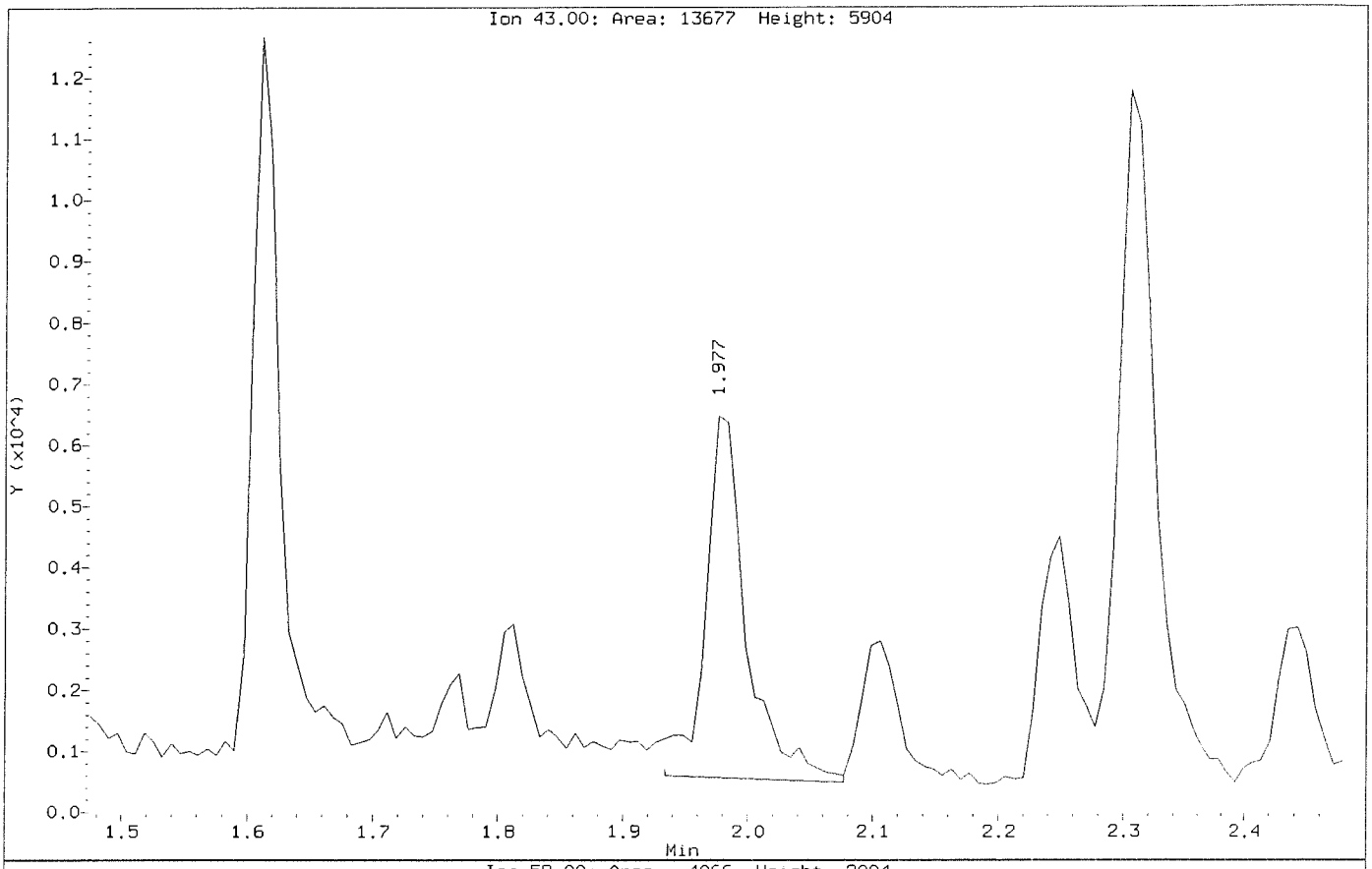
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CAS Number: 594-20-7

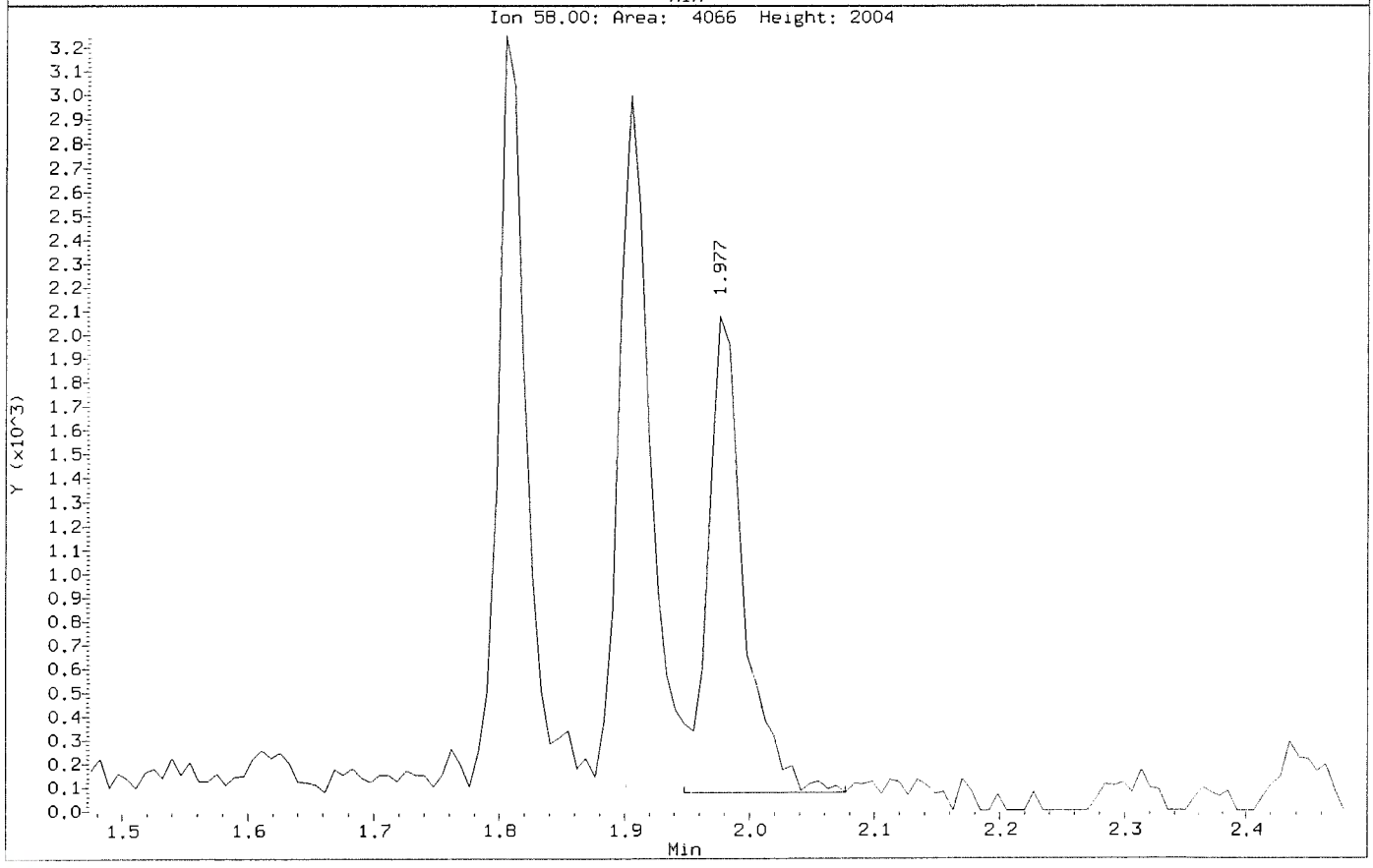


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Instrument: voa6.i
Client Sample ID: VSTD002

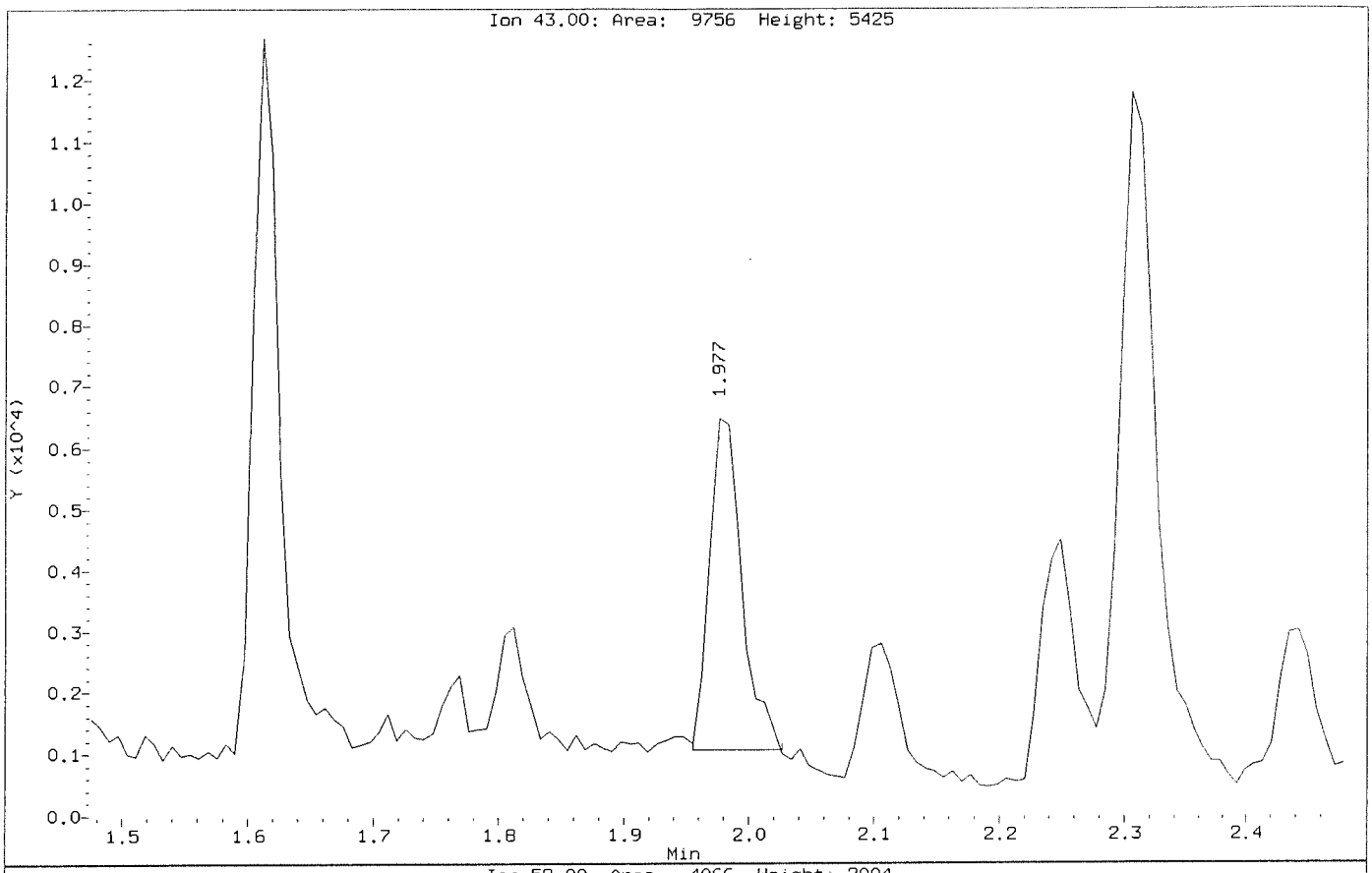
Compound: Acetone
CAS Number: 67-64-1

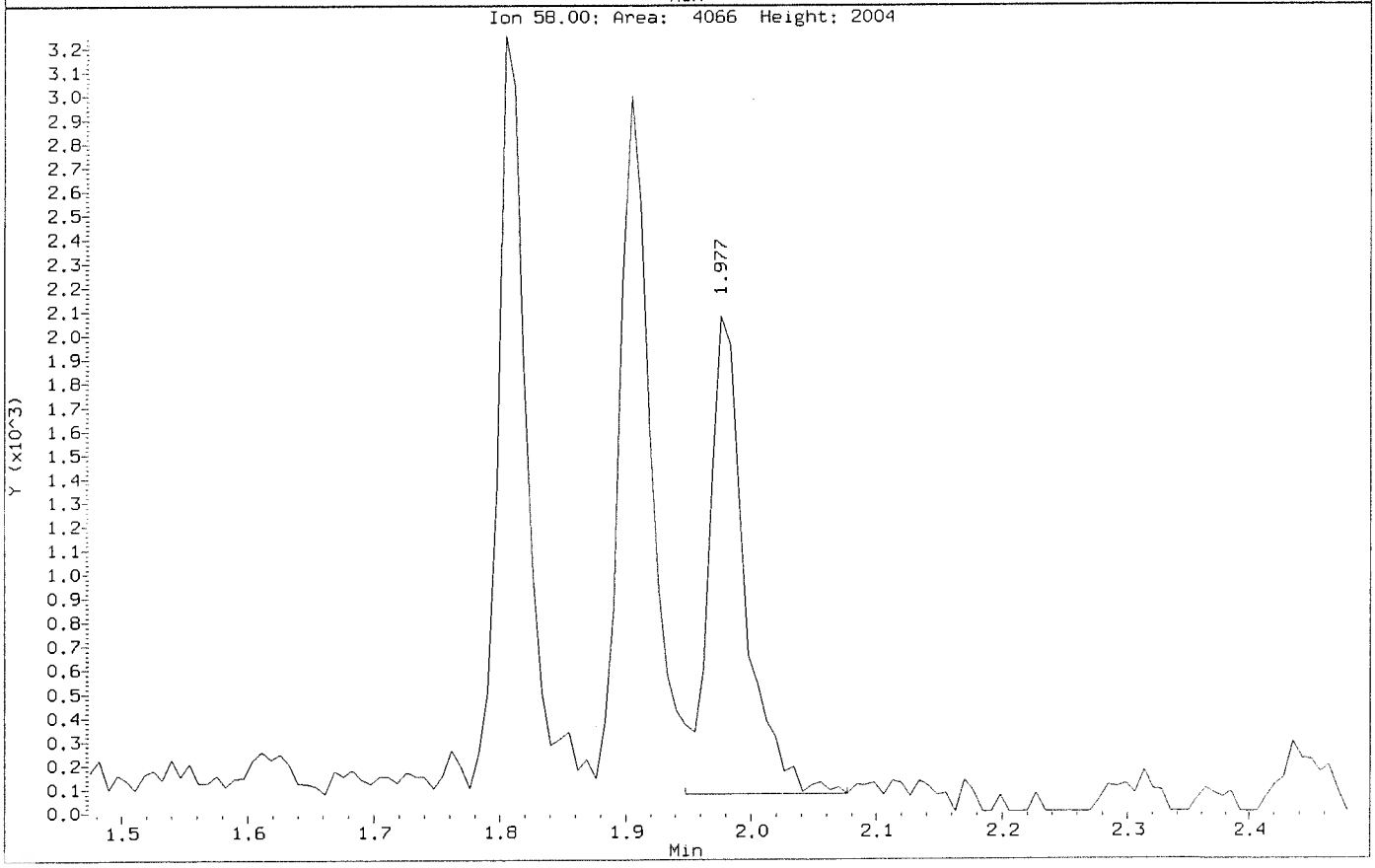


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Instrument: voa6.i
Client Sample ID: VSTD002

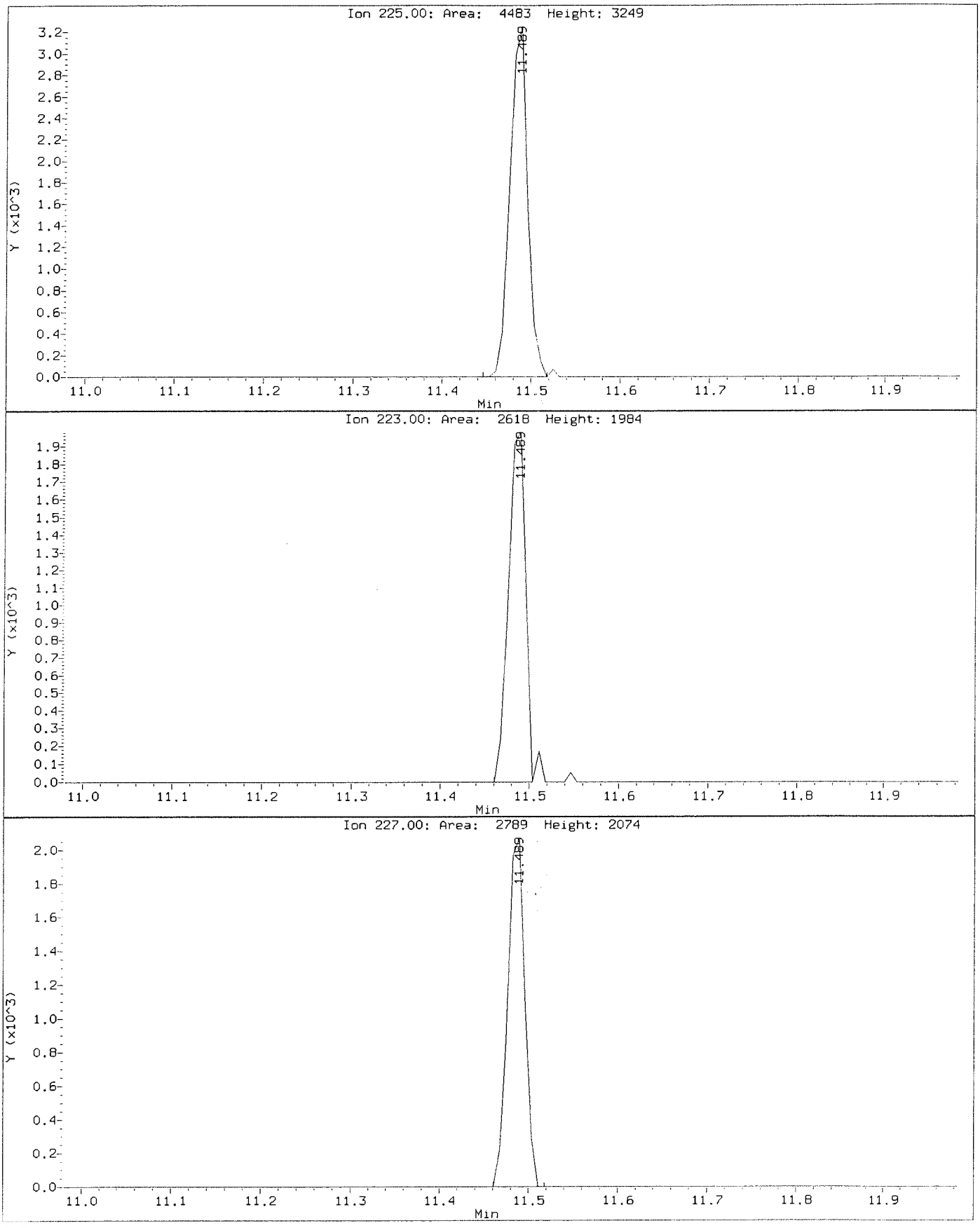
Compound: Acetone
CAS Number: 67-64-1



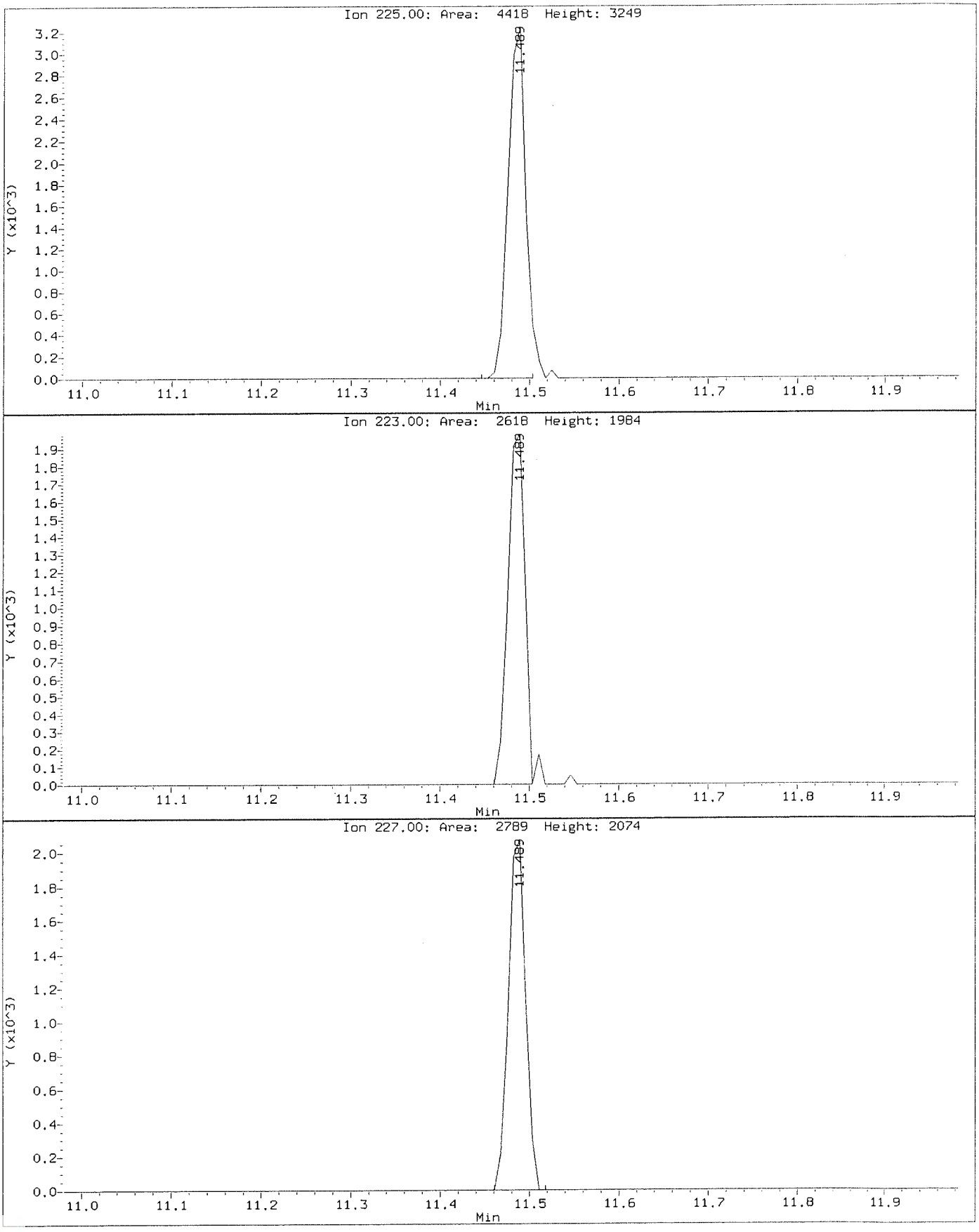
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



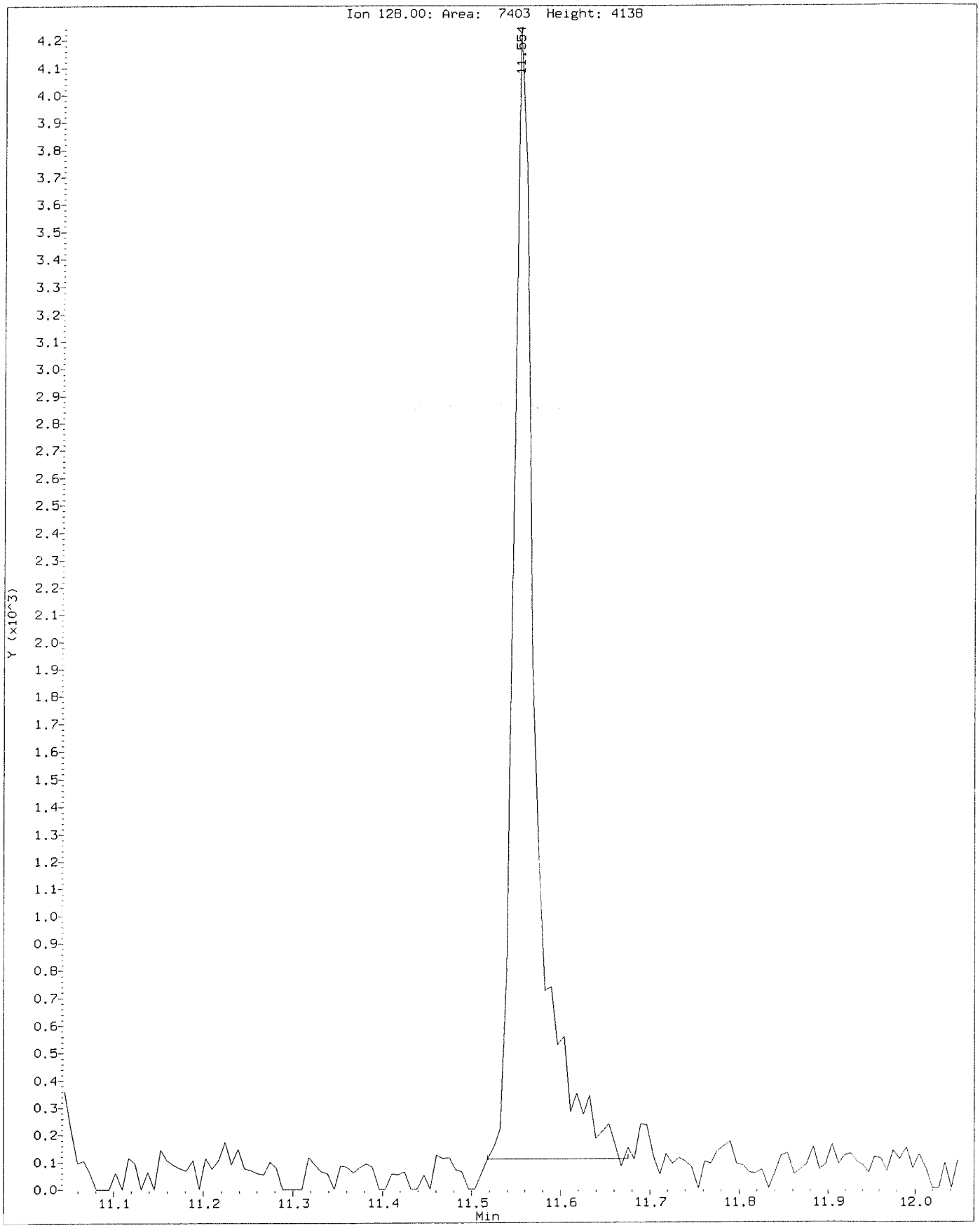
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



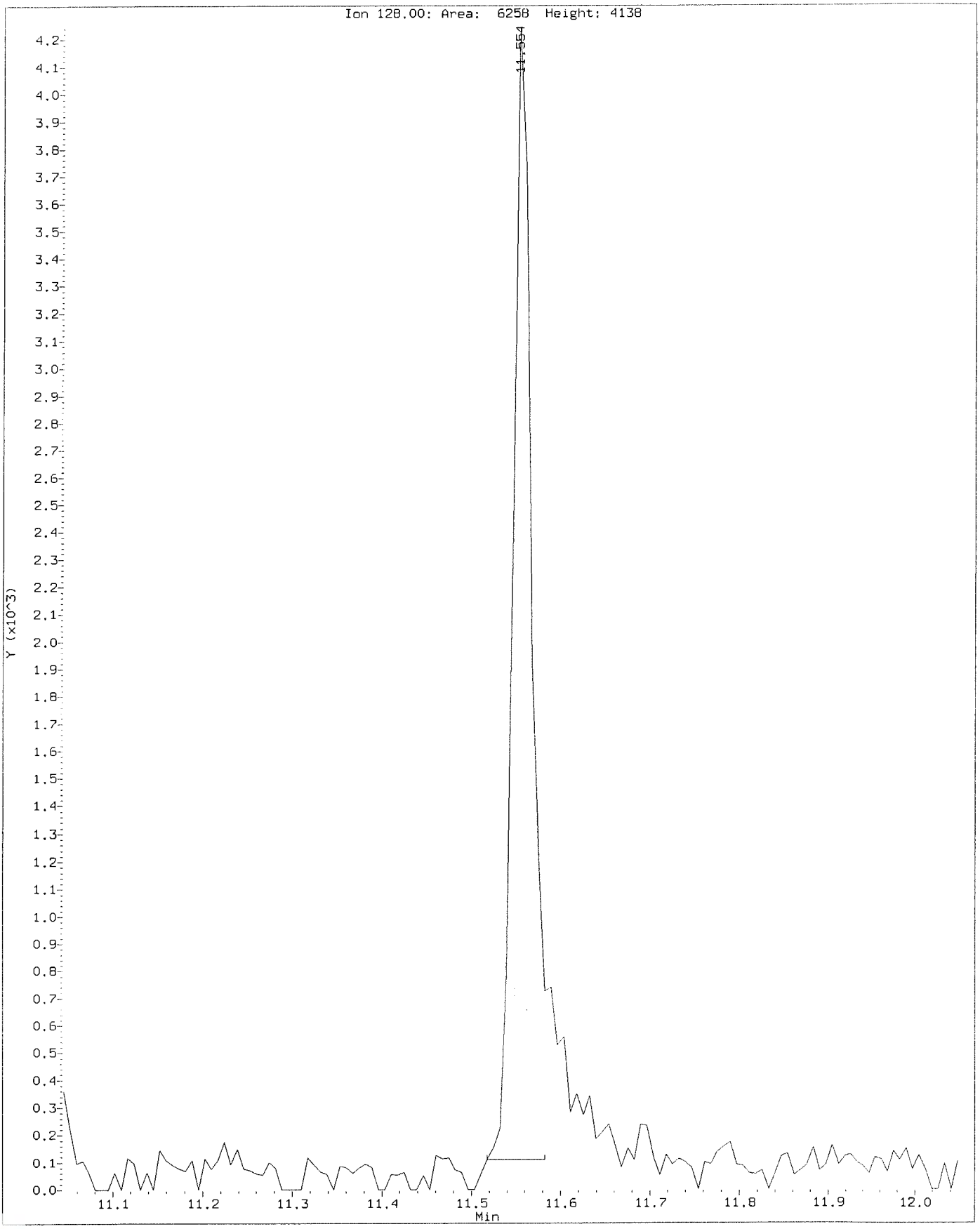
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-AUG-2020 13:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:16 Cal File: X080305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

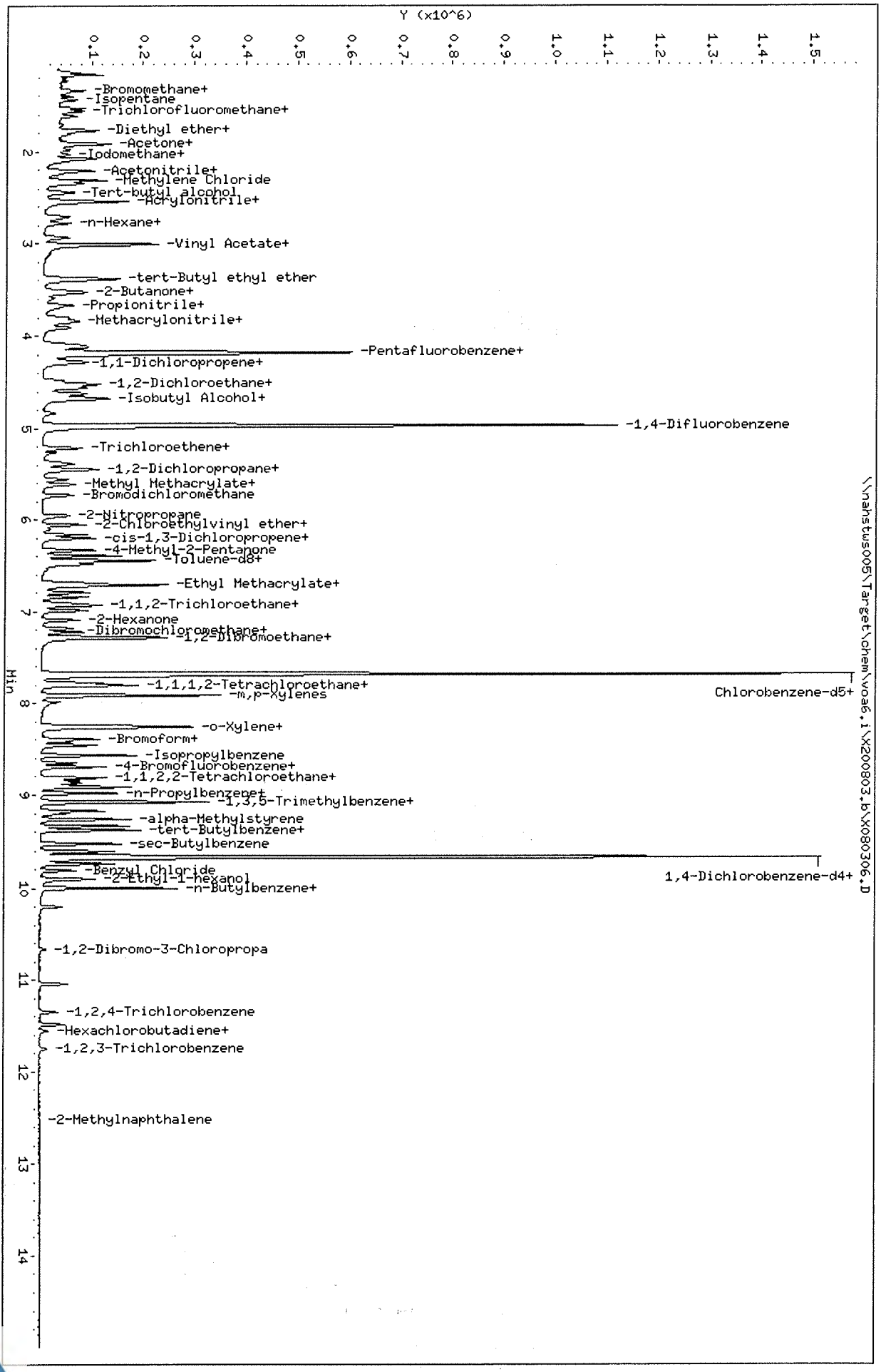
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 516466 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 799737 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 721427 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 341252 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 26560 | 5.00000 | 5.23 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 31226 | 5.00000 | 5.19 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 87842 | 5.00000 | 5.01 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 32773 | 5.00000 | 4.85(a) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 26918 | 5.00000 | 4.90(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 38495 | 5.00000 | 4.83(a) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 30714 | 5.00000 | 5.92 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 20819 | 5.00000 | 5.07 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 51675 | 5.00000 | 5.12 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 18682 | 5.00000 | 4.56(a) |
| 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 29787 | 5.00000 | 4.43(a) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.754 | 11.754 | (1.216) | 4970 | 5.00000 | 4.83(a) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 24998 | 5.00000 | 5.00(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.345 | (1.173) | 11491 | 5.00000 | 5.47 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 87365 | 5.00000 | 4.79(a) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 2687 | 5.00000 | 6.21 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 26427 | 5.00000 | 4.99(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 47718 | 5.00000 | 4.94(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 2
Report Date: 22-Aug-2020 11:54

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 39206 | 5.00000 | 5.06 |
| 42 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 30120 | 5.00000 | 5.13 |
| 75 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 84150 | 5.00000 | 4.71(a) |
| 83 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 51371 | 5.00000 | 4.78(a) |
| 54 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 41882 | 5.00000 | 5.16 |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 50800 | 5.00000 | 4.78(a) |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 37924 | 5.00000 | 5.14 |
| 24 2-Butanone | 43 | 3.595 | 3.595 | (0.858) | 24626 | 10.0000 | 9.72 |
| 76 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 73756 | 5.00000 | 4.98(a) |
| 52 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 46666 | 10.0000 | 10.30 |
| 77 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 84320 | 5.00000 | 4.89(a) |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 82617 | 5.00000 | 4.37(a) |
| 45 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 67354 | 10.0000 | 10.08 |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 22417 | 10.0000 | 11.51 |
| 37 Benzene | 78 | 4.519 | 4.519 | (0.909) | 96422 | 5.00000 | 4.85(a) |
| 74 Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 32917 | 5.00000 | 4.93(a) |
| 29 Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 14966 | 5.00000 | 4.80(a) |
| 39 Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 34225 | 5.00000 | 4.75(a) |
| 66 Bromoform | 173 | 8.416 | 8.416 | (1.097) | 19261 | 5.00000 | 4.81(a) |
| 6 Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 19557 | 5.00000 | 6.08 |
| 19 Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 115343 | 10.0000 | 9.07 |
| 34 Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 32904 | 5.00000 | 4.60(a) |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 69656 | 5.00000 | 4.92(a) |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 16878 | 5.00000 | 4.61(a) |
| 28 Chloroform | 83 | 3.910 | 3.910 | (0.933) | 45810 | 5.00000 | 4.96(a) |
| 3 Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 36080 | 5.00000 | 4.97(a) |
| 27 cis-1,2-Dichloroethene | 96 | 3.538 | 3.538 | (0.844) | 28232 | 5.00000 | 4.96(a) |
| 46 cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 41664 | 5.00000 | 4.94(a) |
| 55 Dibromochloromethane | 129 | 7.184 | 7.184 | (0.937) | 28435 | 5.00000 | 4.92(a) |
| 44 Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 17438 | 5.00000 | 5.01 |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 20209 | 5.00000 | 3.99(a) |
| 61 Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 34866 | 5.00000 | 4.77(a) |
| 91 Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 8440 | 5.00000 | 4.60(a) |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 99162 | 5.00000 | 4.62(a) |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 85878 | 10.0000 | 9.74 |
| 17 Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 36047 | 5.00000 | 5.57 |
| 87 n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 63779 | 5.00000 | 4.22(a) |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 111502 | 5.00000 | 4.53(a) |
| 92 Naphthalene | 128 | 11.553 | 11.553 | (1.195) | 16632 | 5.00000 | 6.16 |
| 63 o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 42060 | 5.00000 | 4.85(a) |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 89332 | 5.00000 | 4.30(a) |
| 64 Styrene | 104 | 8.265 | 8.265 | (1.078) | 74772 | 5.00000 | 4.97(a) |
| 78 tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 69721 | 5.00000 | 4.50(a) |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 21403 | 5.00000 | 4.66(a) |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 104074 | 5.00000 | 4.93(a) |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 23352 | 5.00000 | 4.82(a) |
| 51 trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 38875 | 5.00000 | 5.03 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 27117 | 5.00000 | 4.78(a) |
| 8 Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 33185 | 5.00000 | 4.36(a) |
| 5 Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 28782 | 5.00000 | 4.32(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

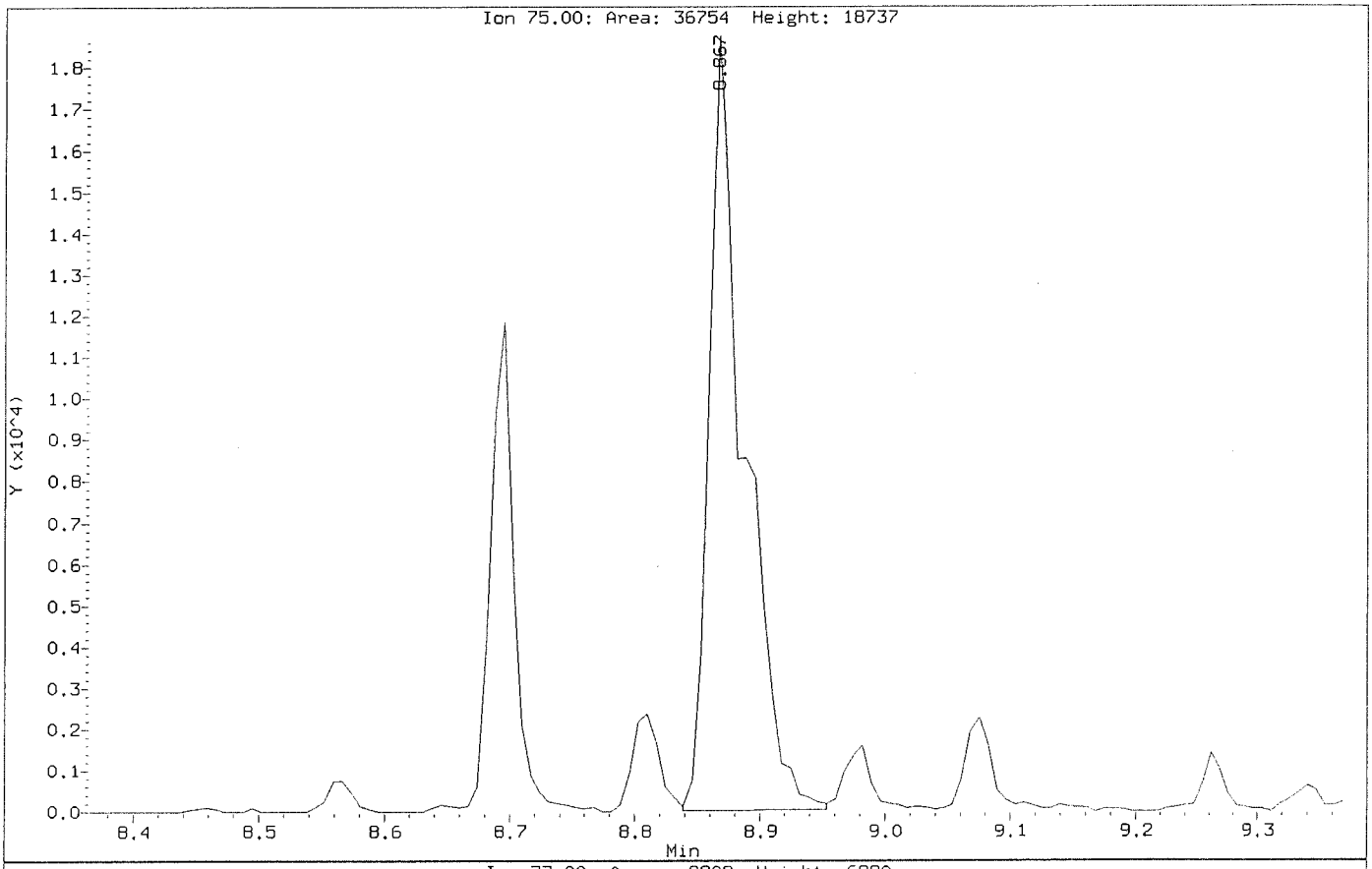


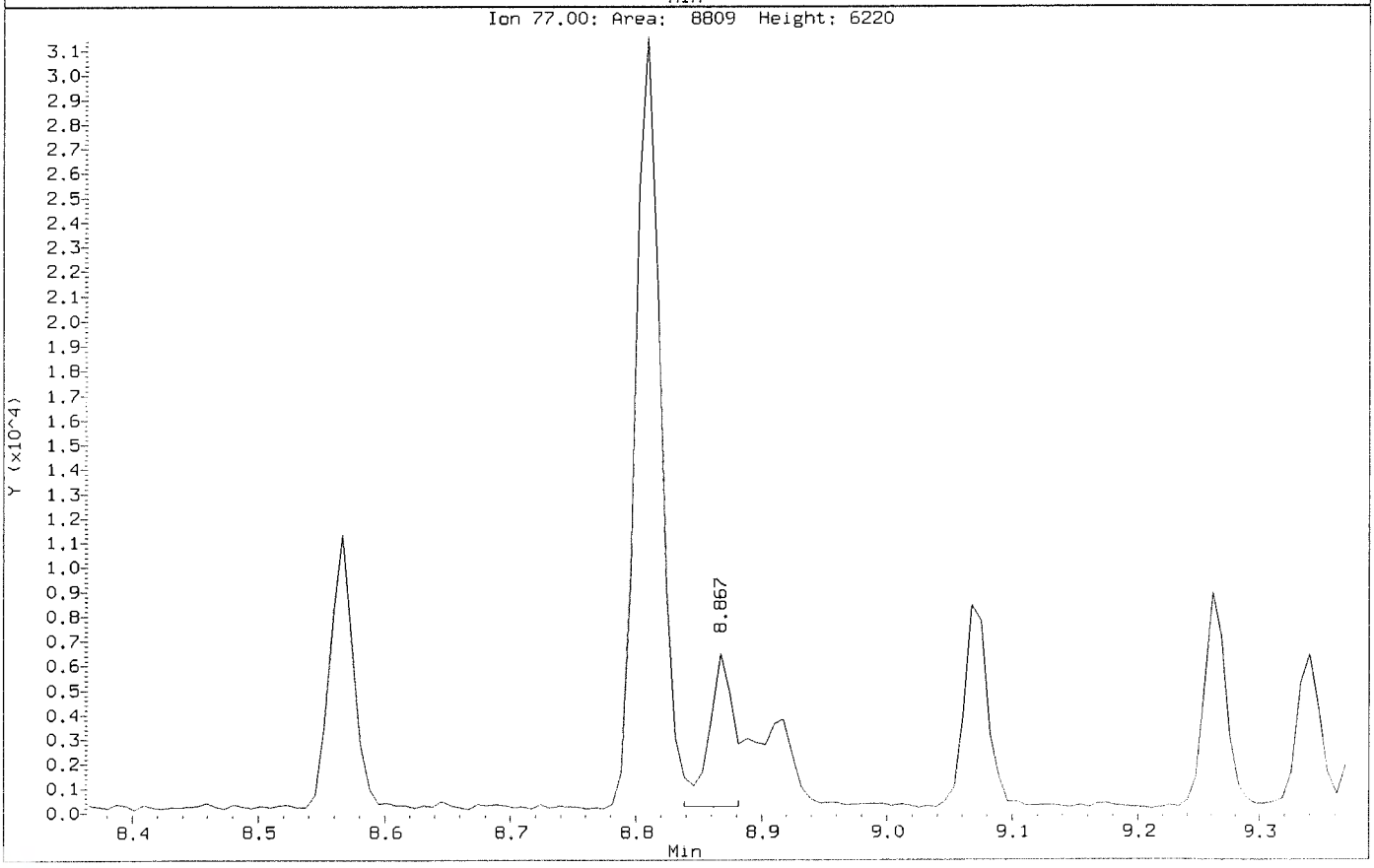

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Date : 03-AUG-2020 13:40
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

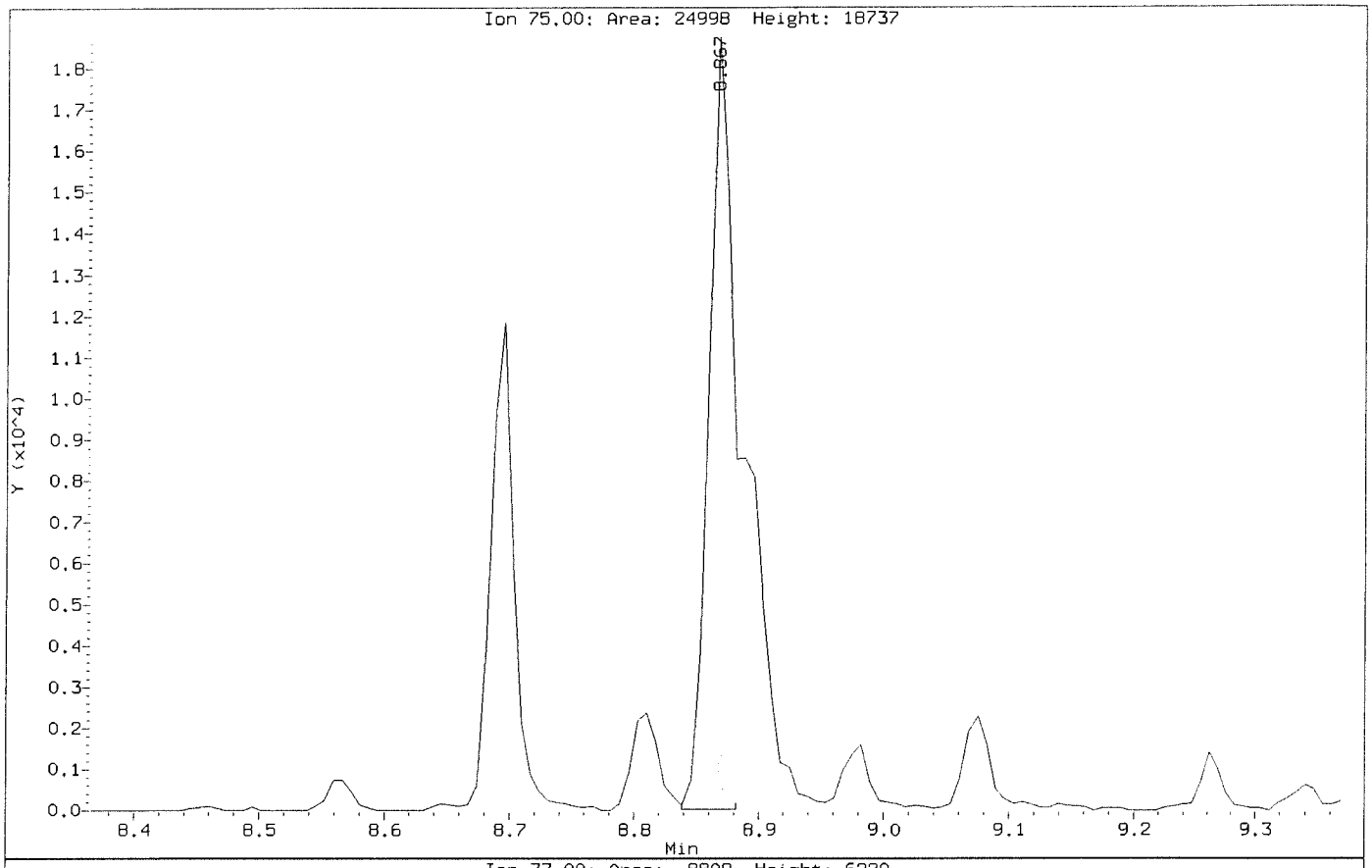
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

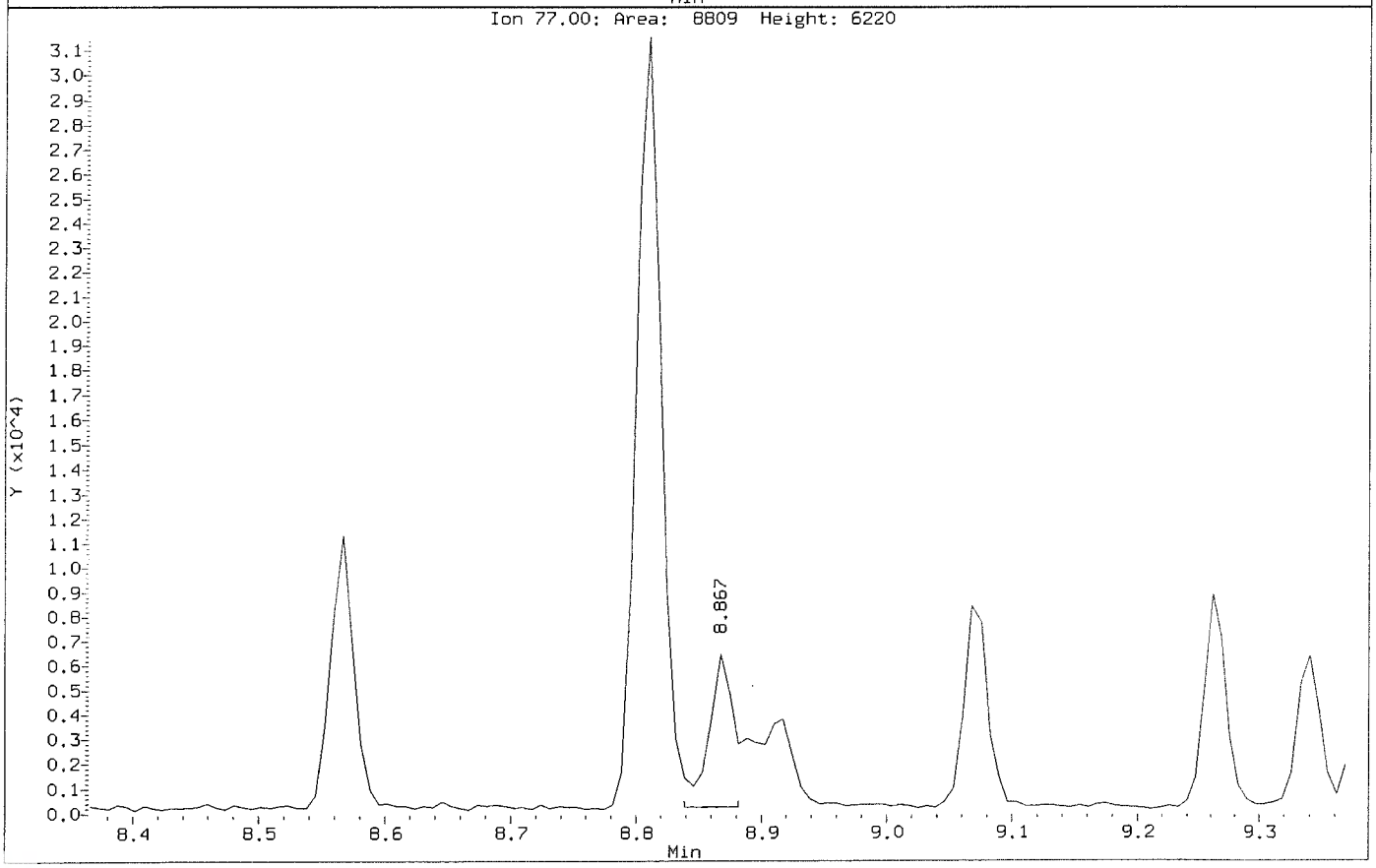


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



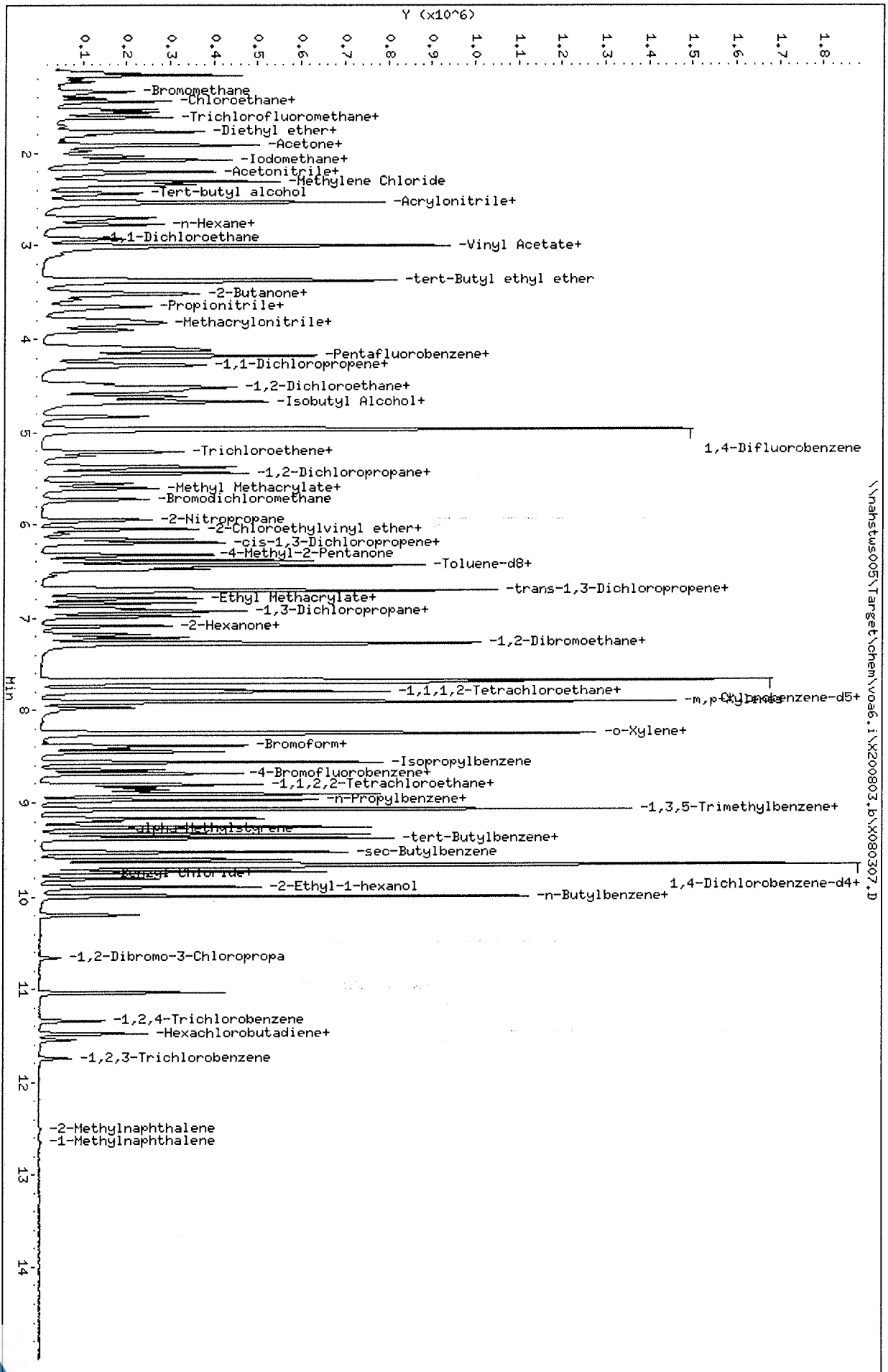
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-AUG-2020 14:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:40 Cal File: X080306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 527399 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 802950 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 728191 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.662 | (1.000) | 344410 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 100526 | 20.0000 | 19.40 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 118997 | 20.0000 | 19.38 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 349779 | 20.0000 | 19.80 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 131285 | 20.0000 | 19.26 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 105143 | 20.0000 | 18.96 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 157003 | 20.0000 | 19.32 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.915) | 110449 | 20.0000 | 20.13 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 79259 | 20.0000 | 19.12 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 204692 | 20.0000 | 19.86 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 85725 | 20.0000 | 20.51 |
| | 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 129183 | 20.0000 | 19.14 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 20139 | 20.0000 | 19.43 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 95152 | 20.0000 | 18.87(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 44232 | 20.0000 | 22.24 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 352711 | 20.0000 | 19.16 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 9119 | 20.0000 | 19.01 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 103868 | 20.0000 | 19.45 |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.035) | 184161 | 20.0000 | 18.90 |

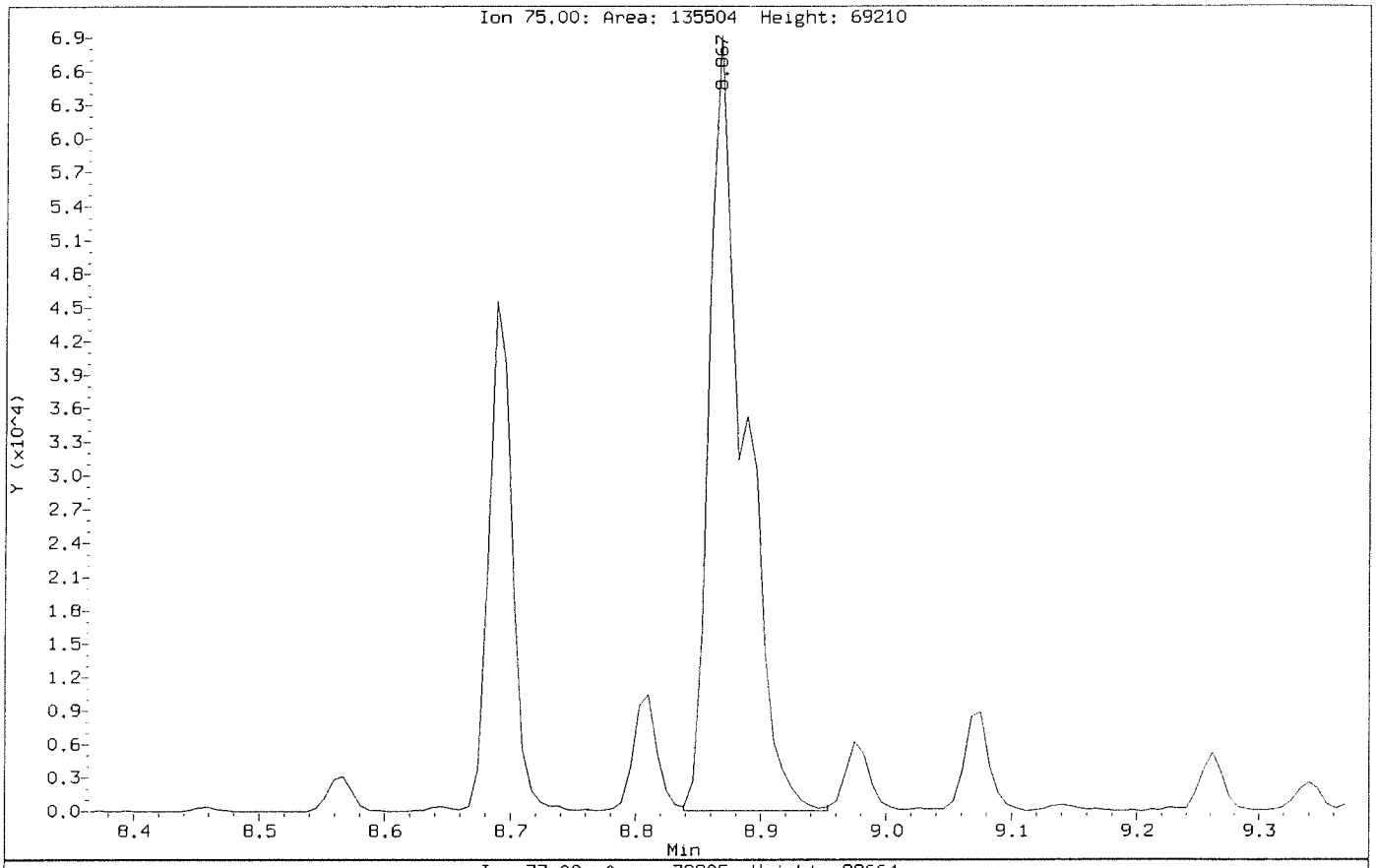


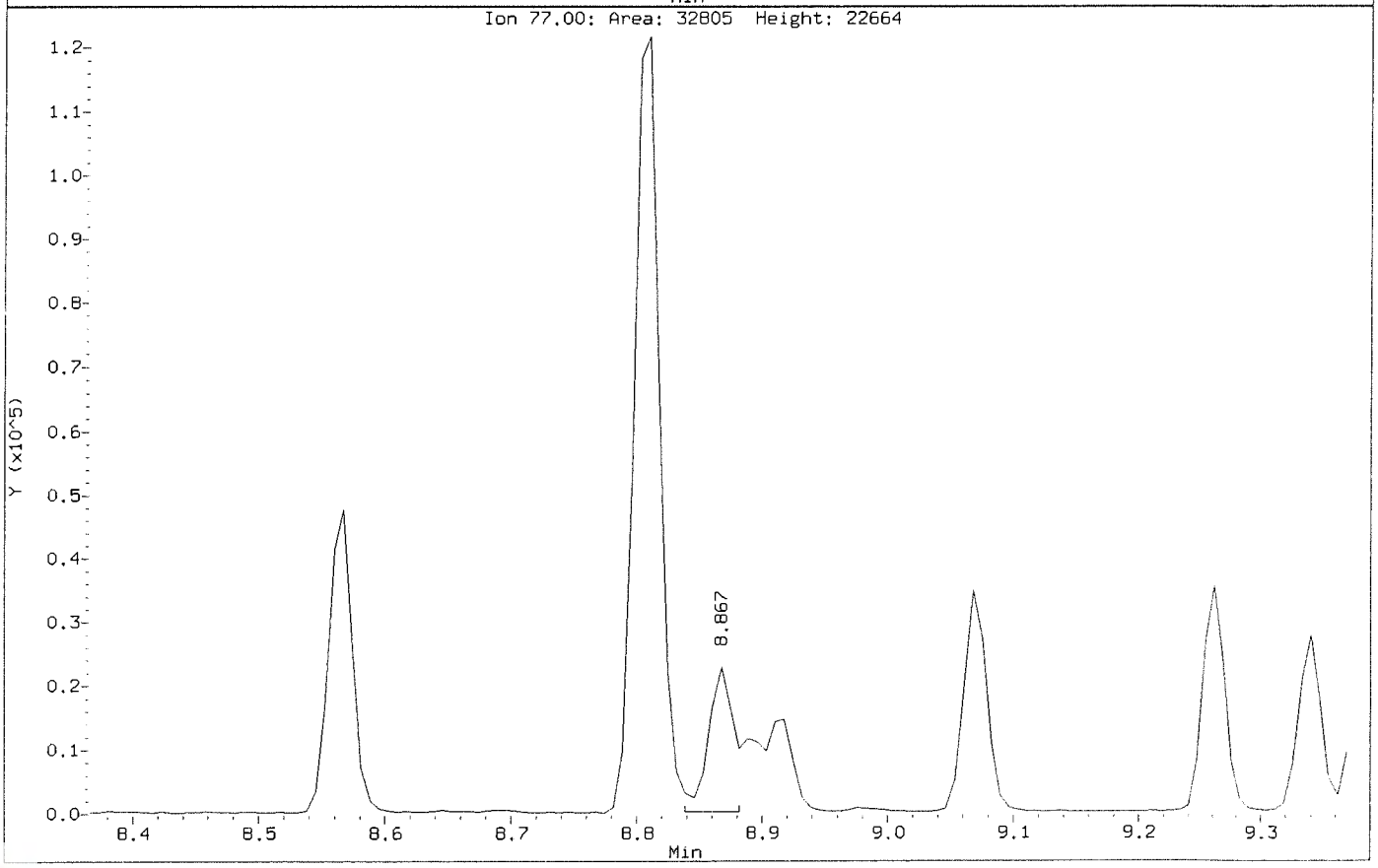

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Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080307.D
Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

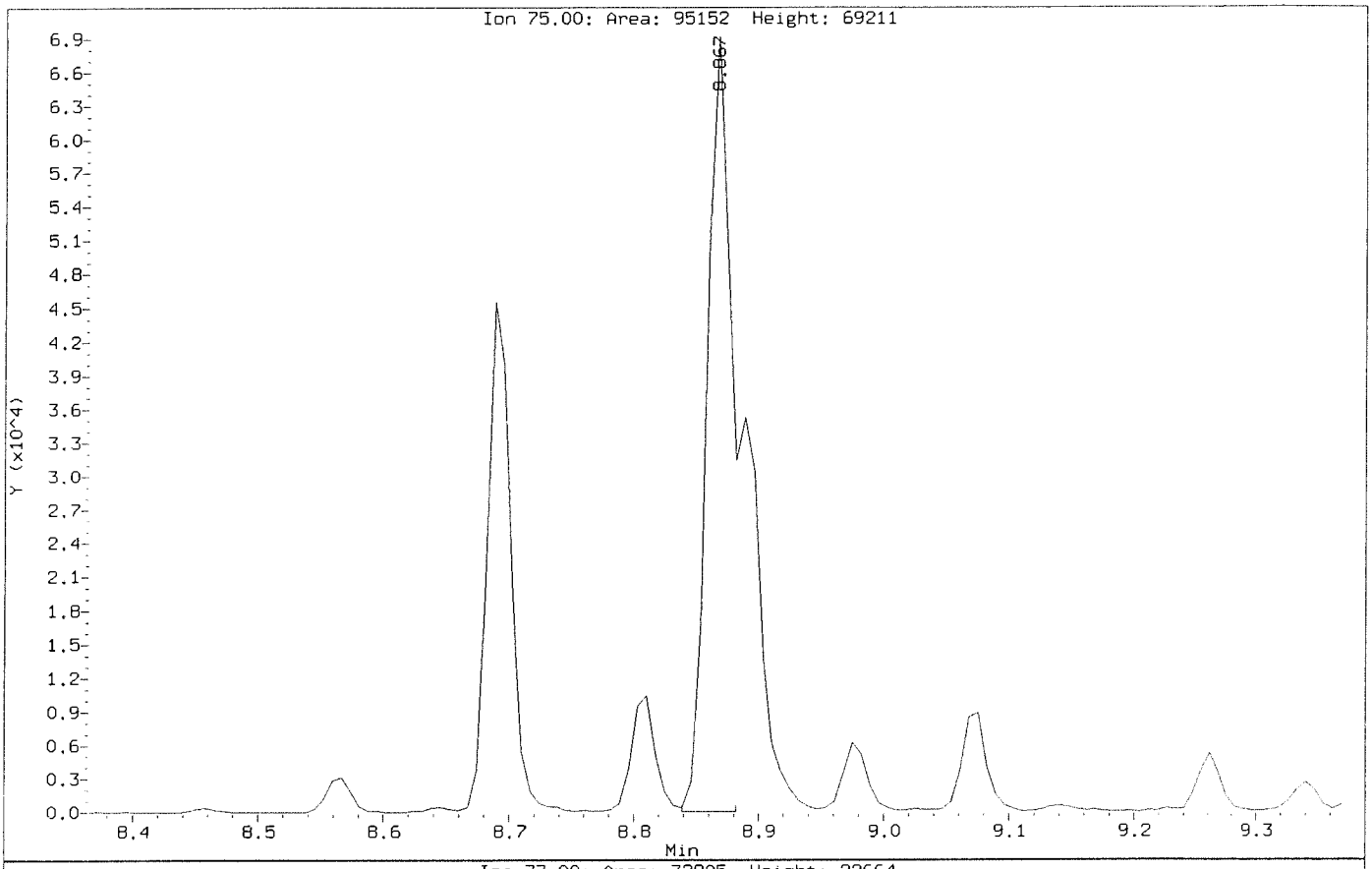
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

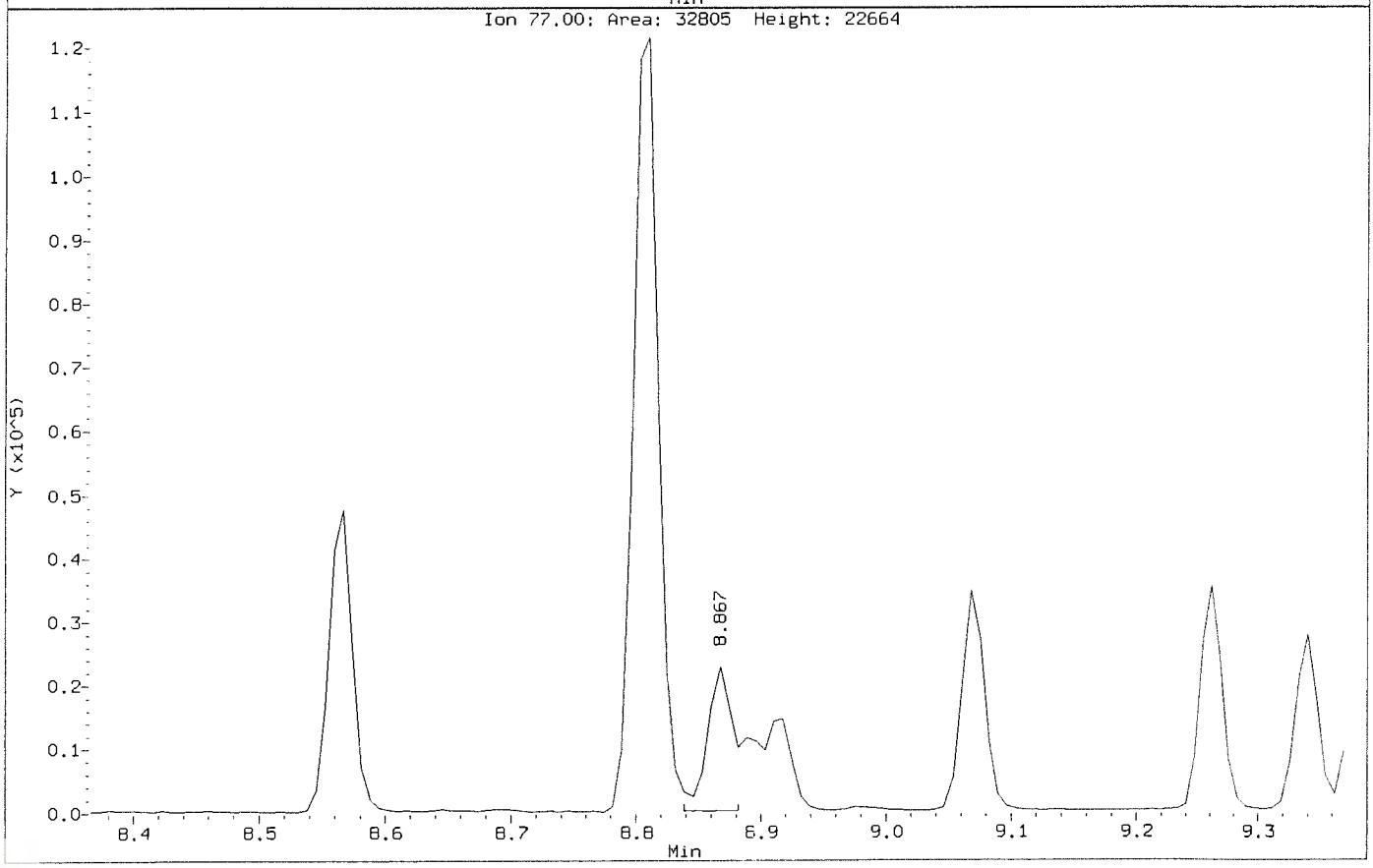


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D  Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Lab Smp Id: VSTD050  Client Smp ID: VSTD050
Inj Date  : 03-AUG-2020 14:28
Operator  : PC  Inst ID: voa6.i
Smp Info  : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i  Quant Type: ISTD
Cal Date  : 03-AUG-2020 14:04  Cal File: X080307.D
Als bottle: 9  Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

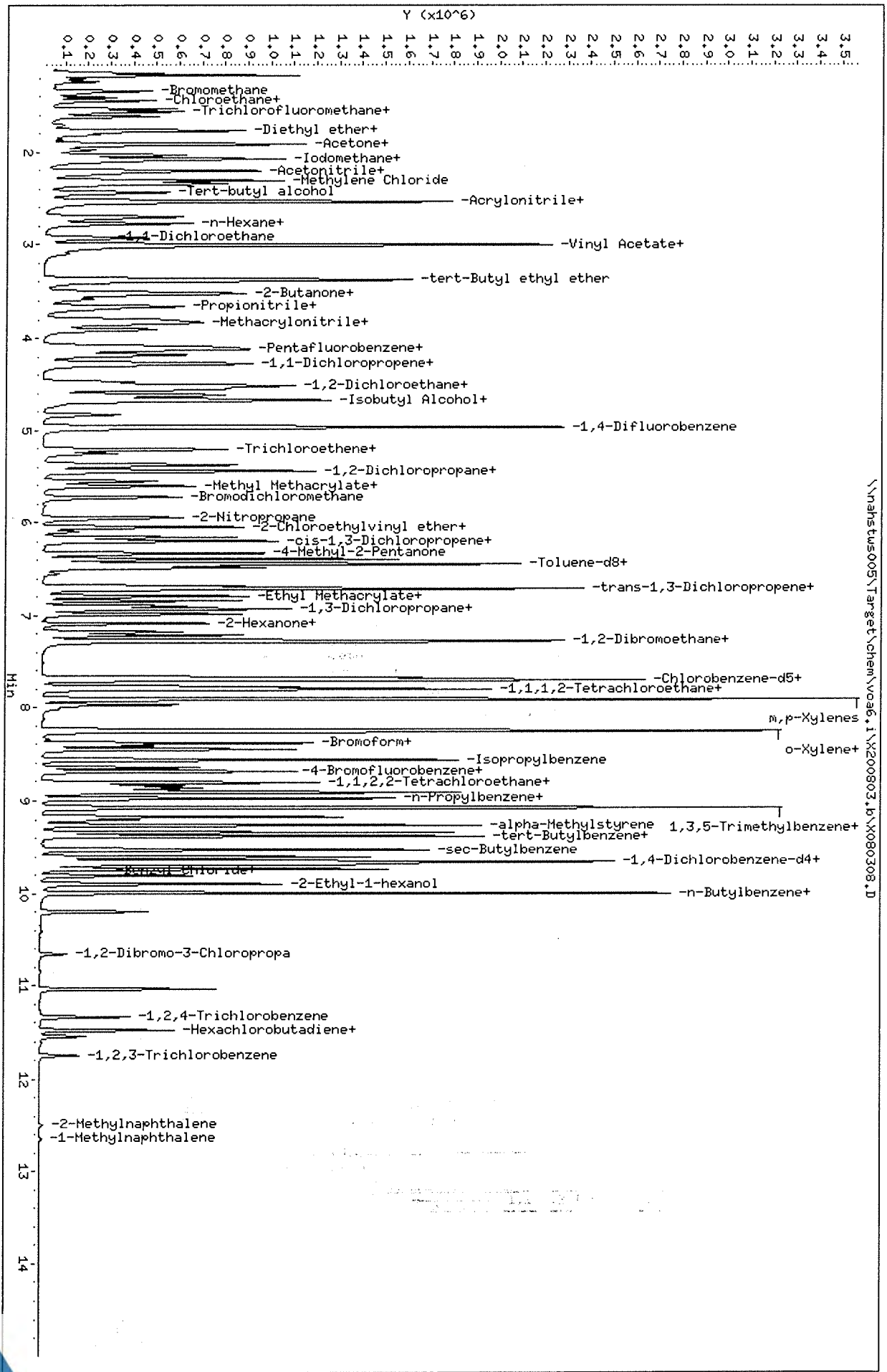
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 511920 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 771177 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 702771 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 336517 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 239584 | 50.0000 | 47.65 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 283572 | 50.0000 | 47.58 |
| $ 48 Toluene-d8 | 98 | 6.389 | 6.389 | (0.833) | 830682 | 50.0000 | 48.73 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 313797 | 50.0000 | 47.71 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 256851 | 50.0000 | 48.01 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 376263 | 50.0000 | 47.71 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 259509 | 50.0000 | 47.88 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 188669 | 50.0000 | 47.18 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 496869 | 50.0000 | 49.68 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 203794 | 50.0000 | 50.24 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 311586 | 50.0000 | 48.08 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 48796 | 50.0000 | 48.18 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 230185 | 50.0000 | 46.73(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 104906 | 50.0000 | 53.93 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 851116 | 50.0000 | 47.34 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 22898 | 50.0000 | 47.61 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 248315 | 50.0000 | 48.20 |
| 88 1,2-Dichlorobenzene | 146 | 9.992 | 9.992 | (1.033) | 448782 | 50.0000 | 47.14 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 363525 | 50.0000 | 48.68 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 280124 | 50.0000 | 49.49 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 841136 | 50.0000 | 47.83 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.993) | 505958 | 50.0000 | 47.83 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 384017 | 50.0000 | 48.63 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.684 | 9.684 | (1.001) | 496379 | 50.0000 | 47.45 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 350133 | 50.0000 | 47.95 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 256334 | 100.000 | 102.14 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 694810 | 50.0000 | 47.59 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 414221 | 100.000 | 93.88 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 801352 | 50.0000 | 47.17 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 892538 | 50.0000 | 47.89 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.324 | (0.824) | 601864 | 100.000 | 92.53 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 170545 | 100.000 | 95.52 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 930097 | 50.0000 | 48.61 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 308037 | 50.0000 | 46.79 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 143774 | 50.0000 | 46.59 |
| 39 | Bromodichloromethane | 83 | 5.730 | 5.730 | (1.153) | 331518 | 50.0000 | 47.75 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 185248 | 50.0000 | 47.50 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 165840 | 50.0000 | 47.10 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1239571 | 100.000 | 98.42 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 332646 | 50.0000 | 48.29 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 660196 | 50.0000 | 47.93 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 180055 | 50.0000 | 49.62 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 434838 | 50.0000 | 47.54 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 348334 | 50.0000 | 48.46 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 270912 | 50.0000 | 48.07 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 396564 | 50.0000 | 48.85 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 267830 | 50.0000 | 47.57 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 161578 | 50.0000 | 48.14 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 250906 | 50.0000 | 50.07 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 343587 | 50.0000 | 48.31 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 97456 | 50.0000 | 53.94 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 1013032 | 50.0000 | 48.52 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 825892 | 100.000 | 96.22 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 256910 | 50.0000 | 48.65 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 730650 | 50.0000 | 49.09 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1164933 | 50.0000 | 48.05 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 137510 | 50.0000 | 51.02 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 409054 | 50.0000 | 48.52 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 982268 | 50.0000 | 48.04 |
| 64 | Styrene | 104 | 8.258 | 8.258 | (1.077) | 713459 | 50.0000 | 48.73 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 726881 | 50.0000 | 47.67 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 211124 | 50.0000 | 47.25 |
| 50 | Toluene | 91 | 6.446 | 6.446 | (0.840) | 981156 | 50.0000 | 47.80 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 233416 | 50.0000 | 48.63 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 353535 | 50.0000 | 47.51 |
| 38 | Trichloroethene | 130 | 5.207 | 5.207 | (1.048) | 272294 | 50.0000 | 49.82 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 377358 | 50.0000 | 50.05 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 331269 | 50.0000 | 50.27 |

QC Flag Legend

M - Compound response manually integrated.

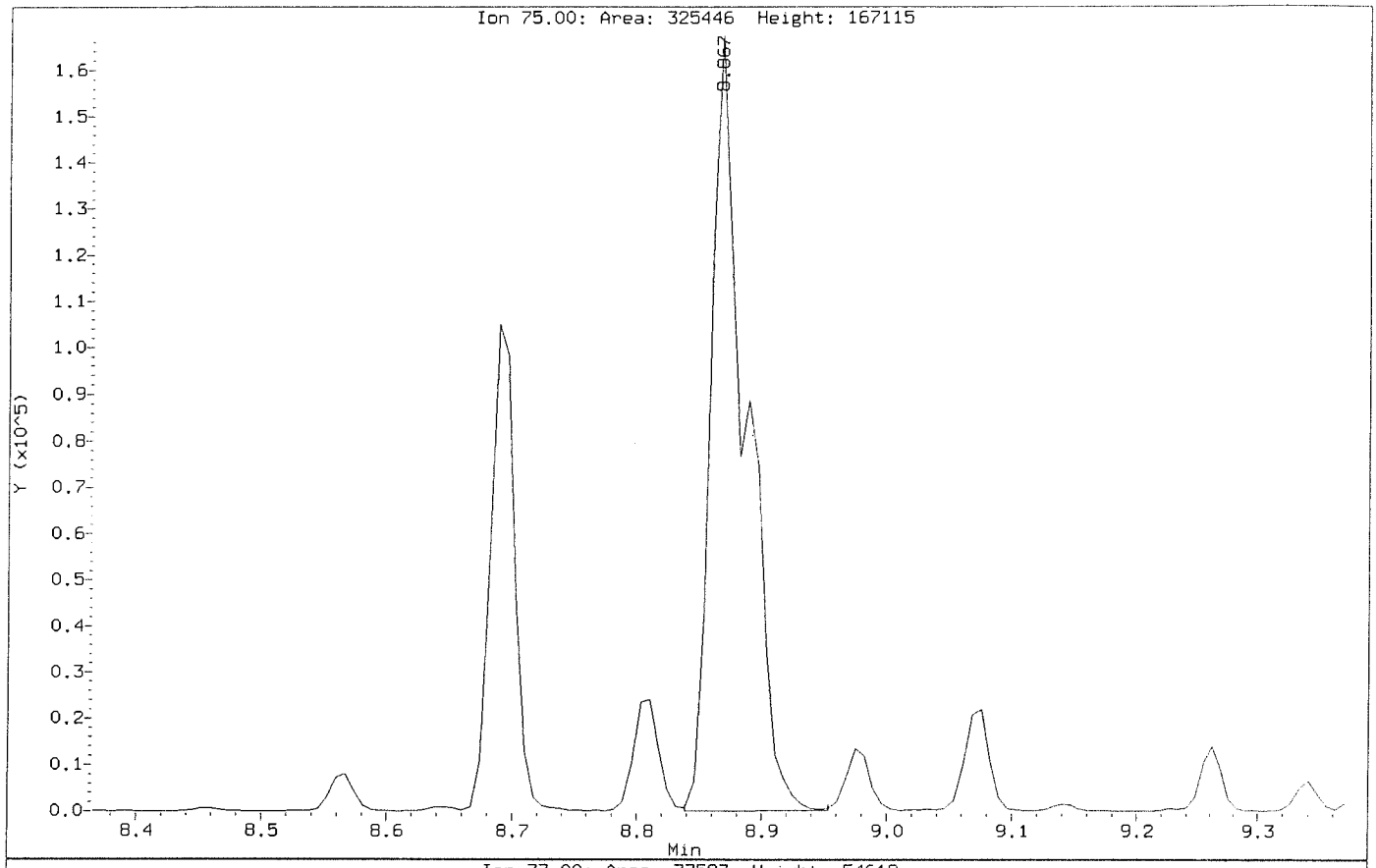


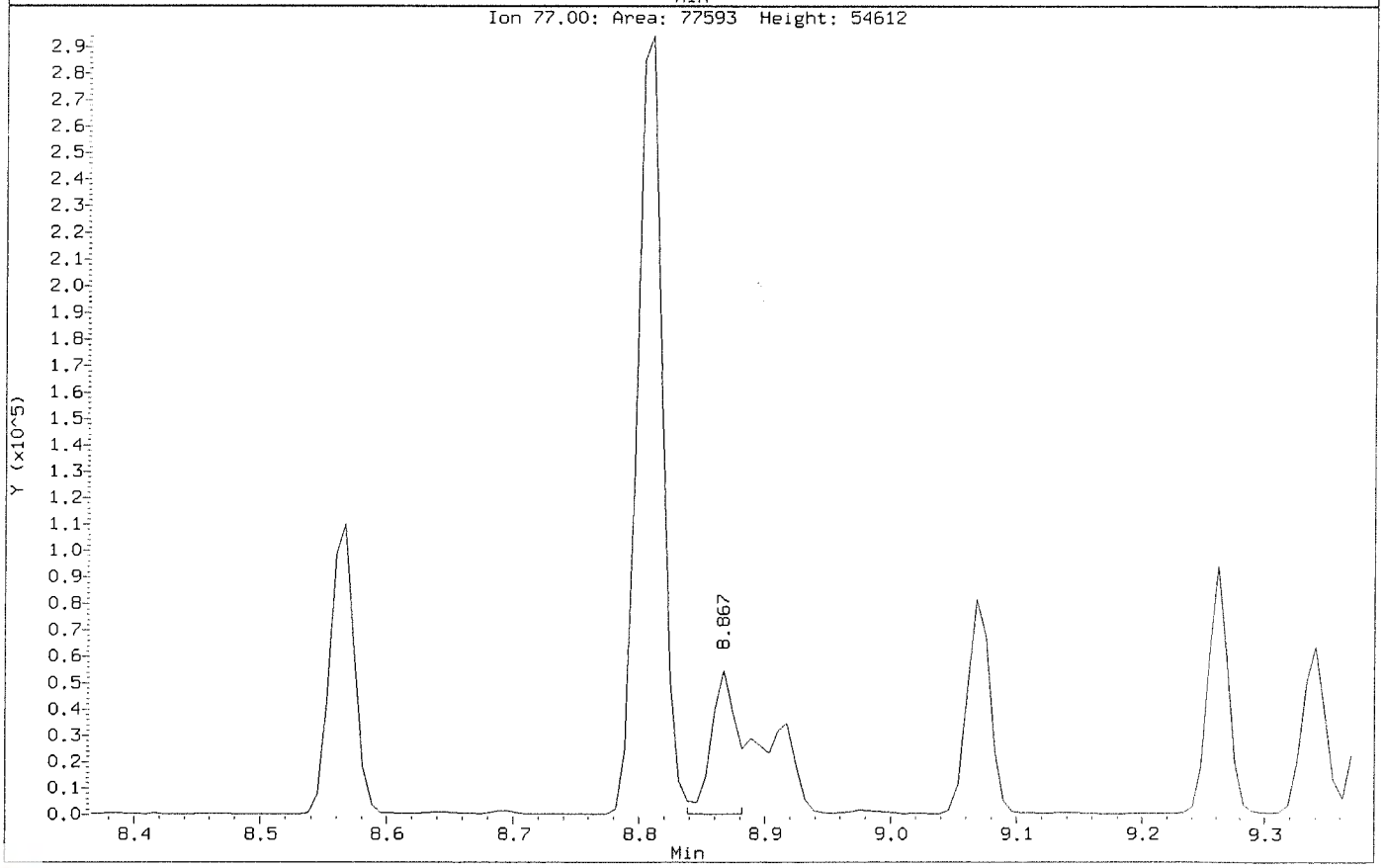

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Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080308.D
Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

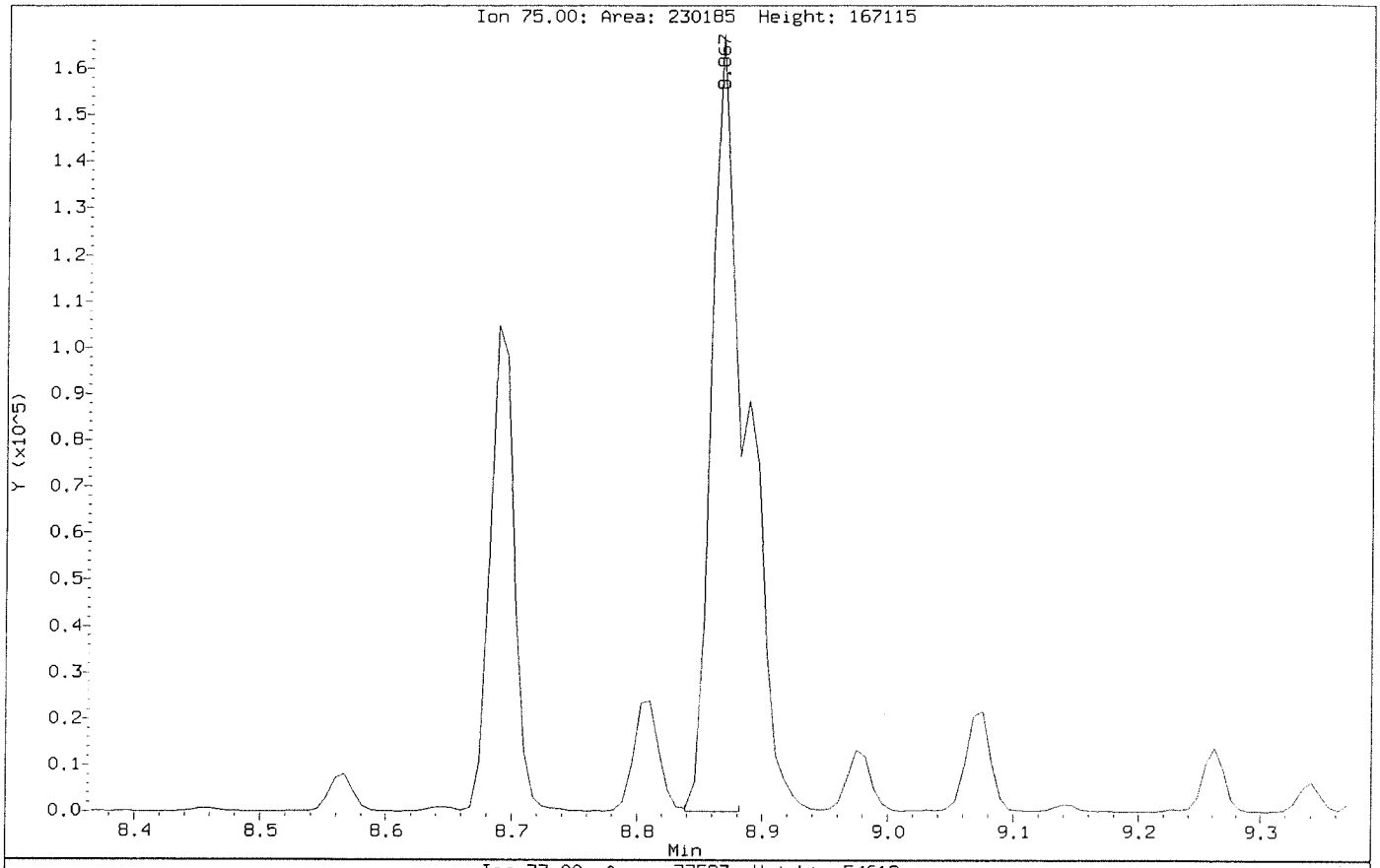
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

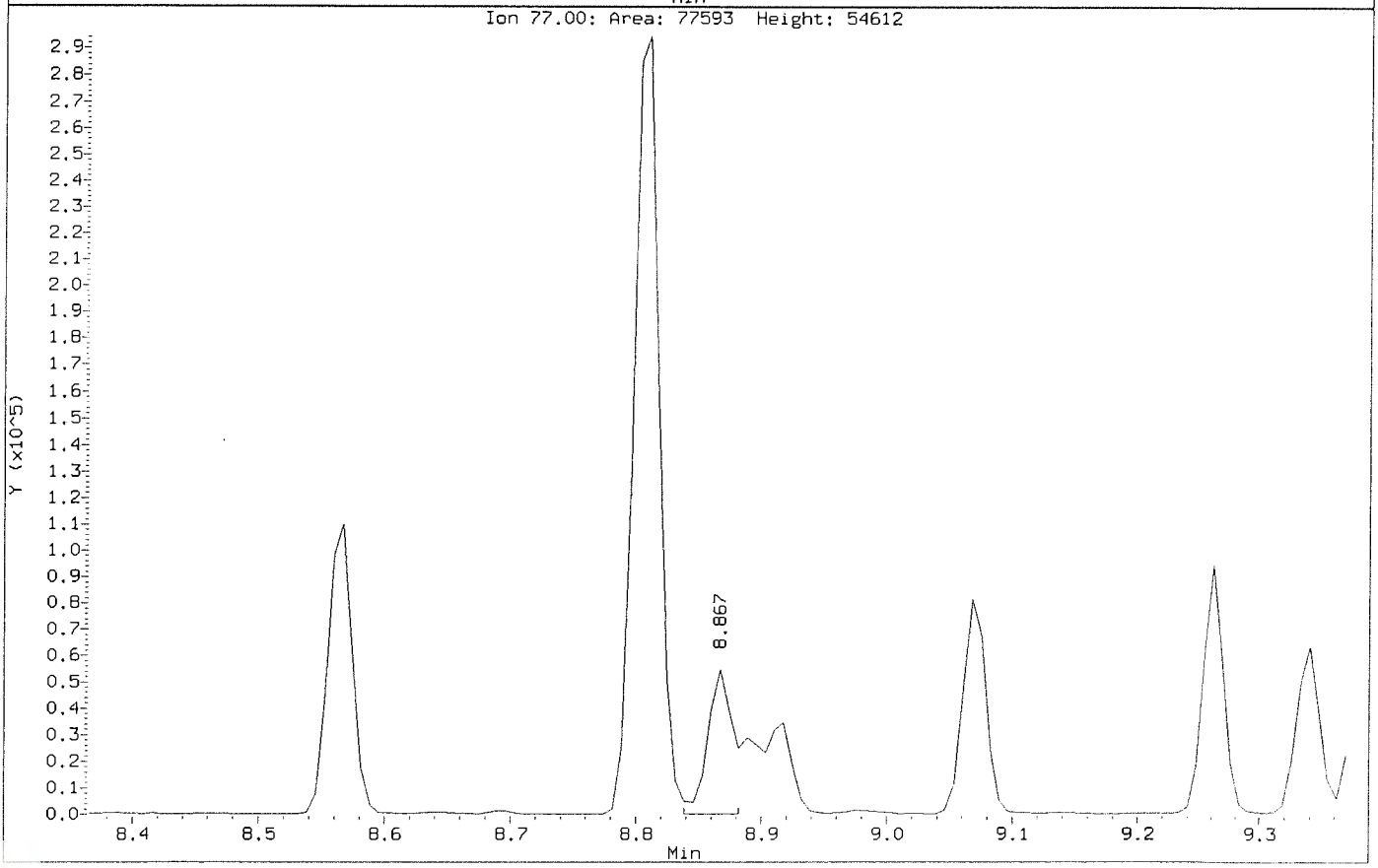


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D  Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Lab Smp Id: VSTD100  Client Smp ID: VSTD100
Inj Date  : 03-AUG-2020 14:52
Operator  : PC  Inst ID: voa6.i
Smp Info  : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i  Quant Type: ISTD
Cal Date  : 03-AUG-2020 14:28  Cal File: X080308.D
Als bottle: 10  Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

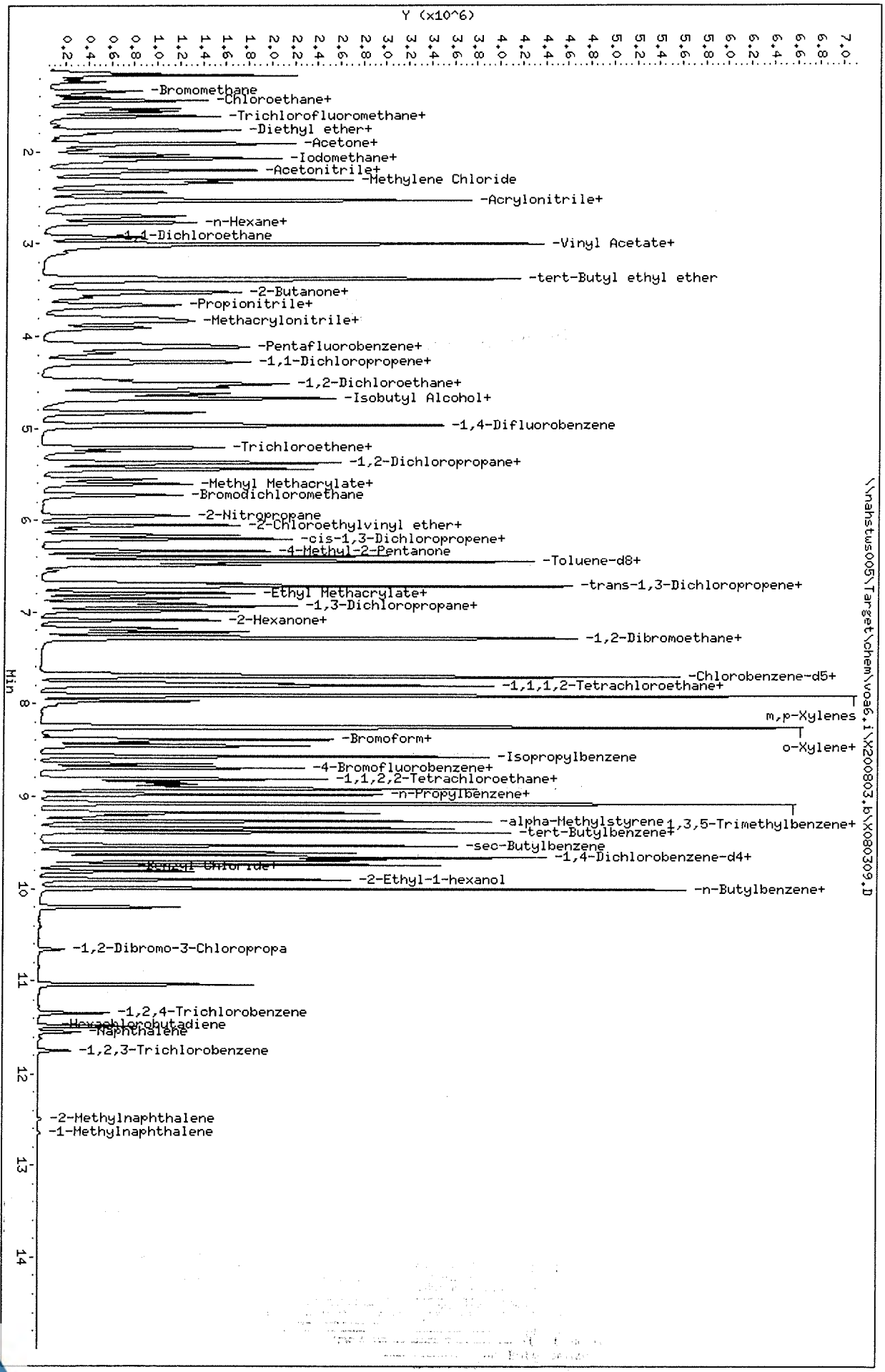
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 486833 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 732825 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 684816 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 323663 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 473016 | 100.000 | 98.93 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 567807 | 100.000 | 100.19 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 1639713 | 100.000 | 98.71 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 621420 | 100.000 | 96.97 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 508756 | 100.000 | 97.59 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 743006 | 100.000 | 99.08 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 505068 | 100.000 | 96.50 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 371422 | 100.000 | 95.31 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 966853 | 100.000 | 101.67 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 399194 | 100.000 | 103.48 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 619847 | 100.000 | 100.65 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 78990 | 100.000 | 81.10 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 447455 | 100.000 | 94.44(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 167486 | 100.000 | 88.32 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 1744071 | 100.000 | 100.86 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.657 | 10.657 | (1.102) | 44175 | 100.000 | 94.71 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 486059 | 100.000 | 96.82 |
| 88 1,2-Dichlorobenzene | 146 | 9.998 | 9.998 | (1.034) | 860972 | 100.000 | 94.04 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 709131 | 100.000 | 99.94 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 549204 | 100.000 | 102.11 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 1711898 | 100.000 | 101.21 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1000056 | 100.000 | 98.30 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 751120 | 100.000 | 97.62 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 985559 | 100.000 | 97.96 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 681466 | 100.000 | 98.14 |
| 24 | 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 505532 | 200.000 | 211.82(A) |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 1388843 | 100.000 | 98.90 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 827198 | 200.000 | 192.40 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.074 | (0.939) | 1630167 | 100.000 | 99.78 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 1843729 | 100.000 | 102.86 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 1209781 | 200.000 | 190.87 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 340970 | 200.000 | 202.00(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 1833540 | 100.000 | 100.84 |
| 74 | Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 616831 | 100.000 | 97.42 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 282659 | 100.000 | 96.32 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 654091 | 100.000 | 99.14 |
| 66 | Bromoform | 173 | 8.415 | 8.415 | (1.097) | 369358 | 100.000 | 97.21 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 329463 | 100.000 | 97.68 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 2437326 | 200.000 | 203.50(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 660151 | 100.000 | 100.85 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 1320195 | 100.000 | 98.36 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 350986 | 100.000 | 101.71 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 844067 | 100.000 | 97.04 |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 661182 | 100.000 | 96.72 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 527504 | 100.000 | 98.43 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 783645 | 100.000 | 101.58 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 530960 | 100.000 | 96.79 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 314468 | 100.000 | 98.60 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 502379 | 100.000 | 105.43 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 683526 | 100.000 | 98.63 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 144027 | 100.000 | 82.88 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 2047430 | 100.000 | 100.64 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 1666940 | 200.000 | 199.31 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 487953 | 100.000 | 98.54 |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 1490980 | 100.000 | 104.16 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 2376809 | 100.000 | 101.93 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 244768 | 100.000 | 91.71 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 812131 | 100.000 | 98.85 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 2014765 | 100.000 | 102.46 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 1389708 | 100.000 | 97.42 |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 1474330 | 100.000 | 100.54 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 429146 | 100.000 | 98.57 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 1938369 | 100.000 | 96.92 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 450443 | 100.000 | 98.69 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 699866 | 100.000 | 98.98 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 540855 | 100.000 | 104.13 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 735408 | 100.000 | 102.57 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 656263 | 100.000 | 104.72 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

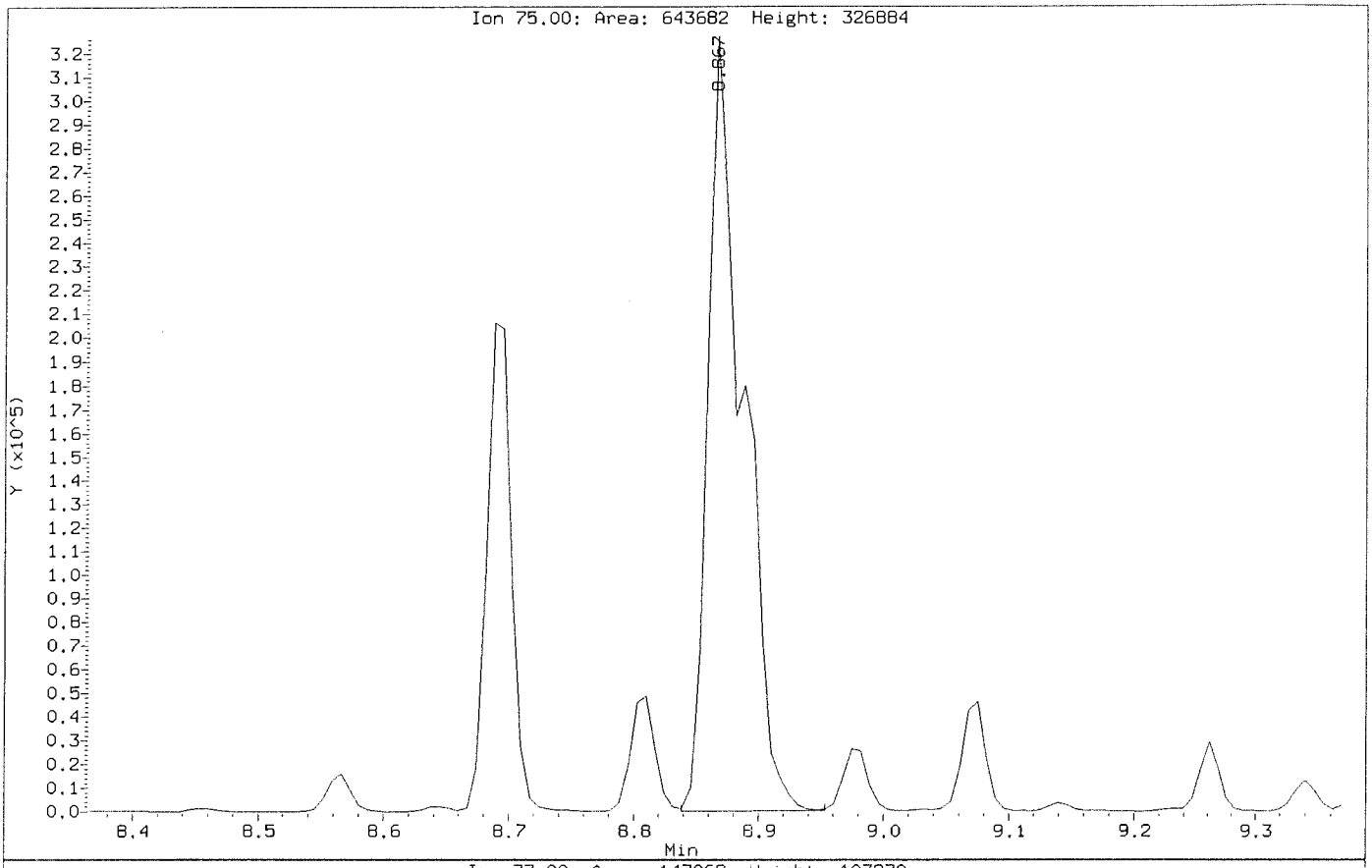


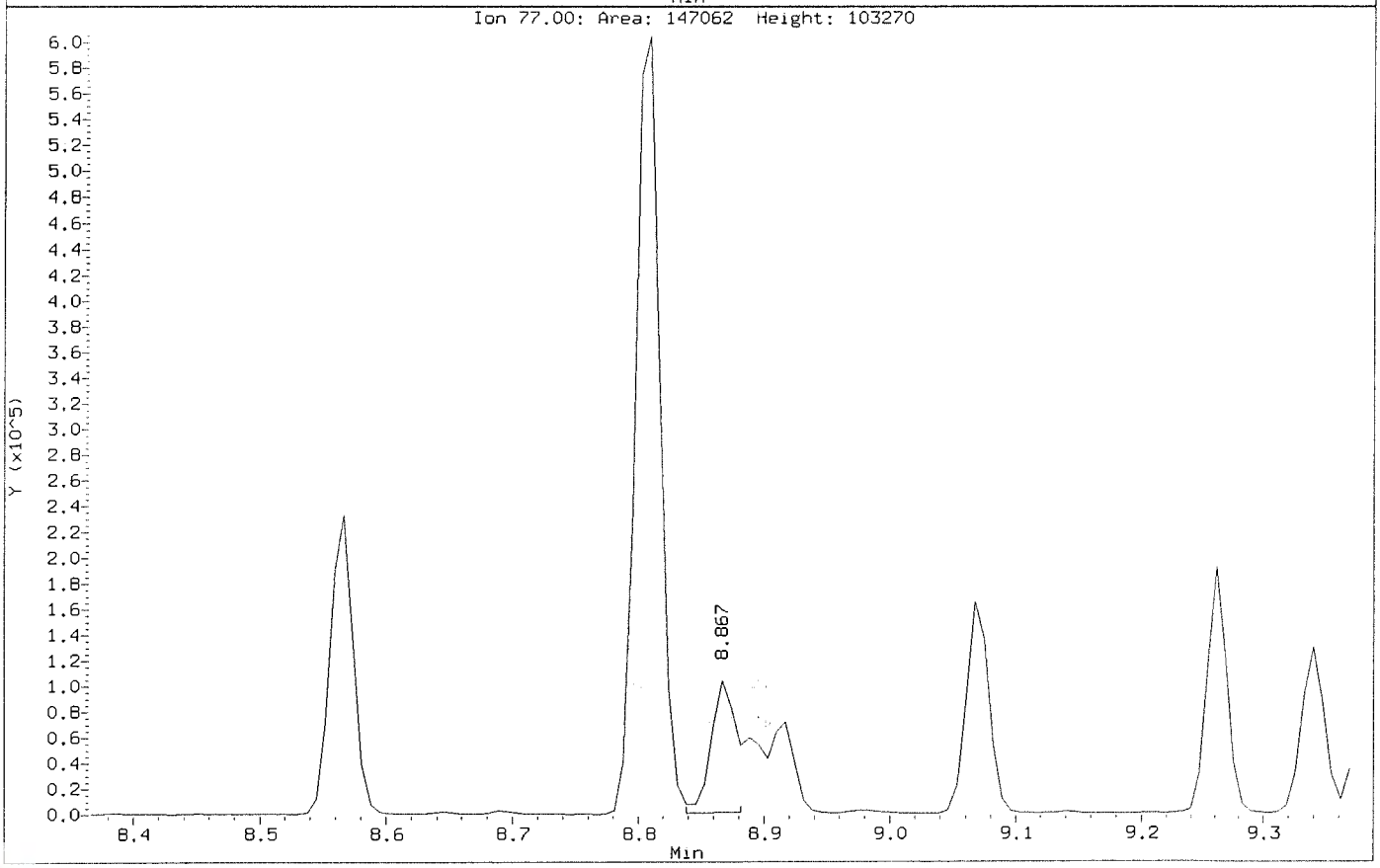

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Date : 03-AUG-2020 14:52
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

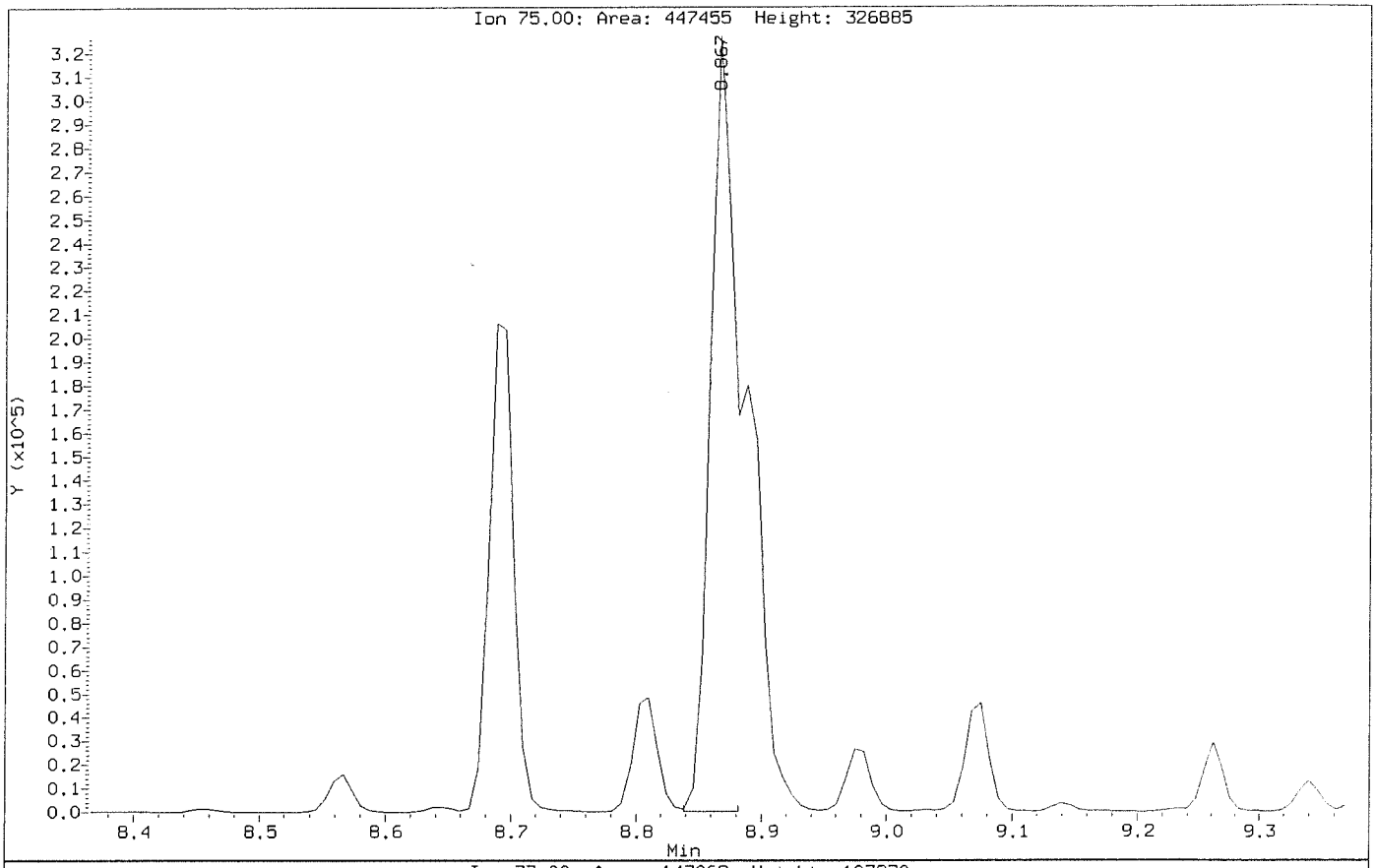
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

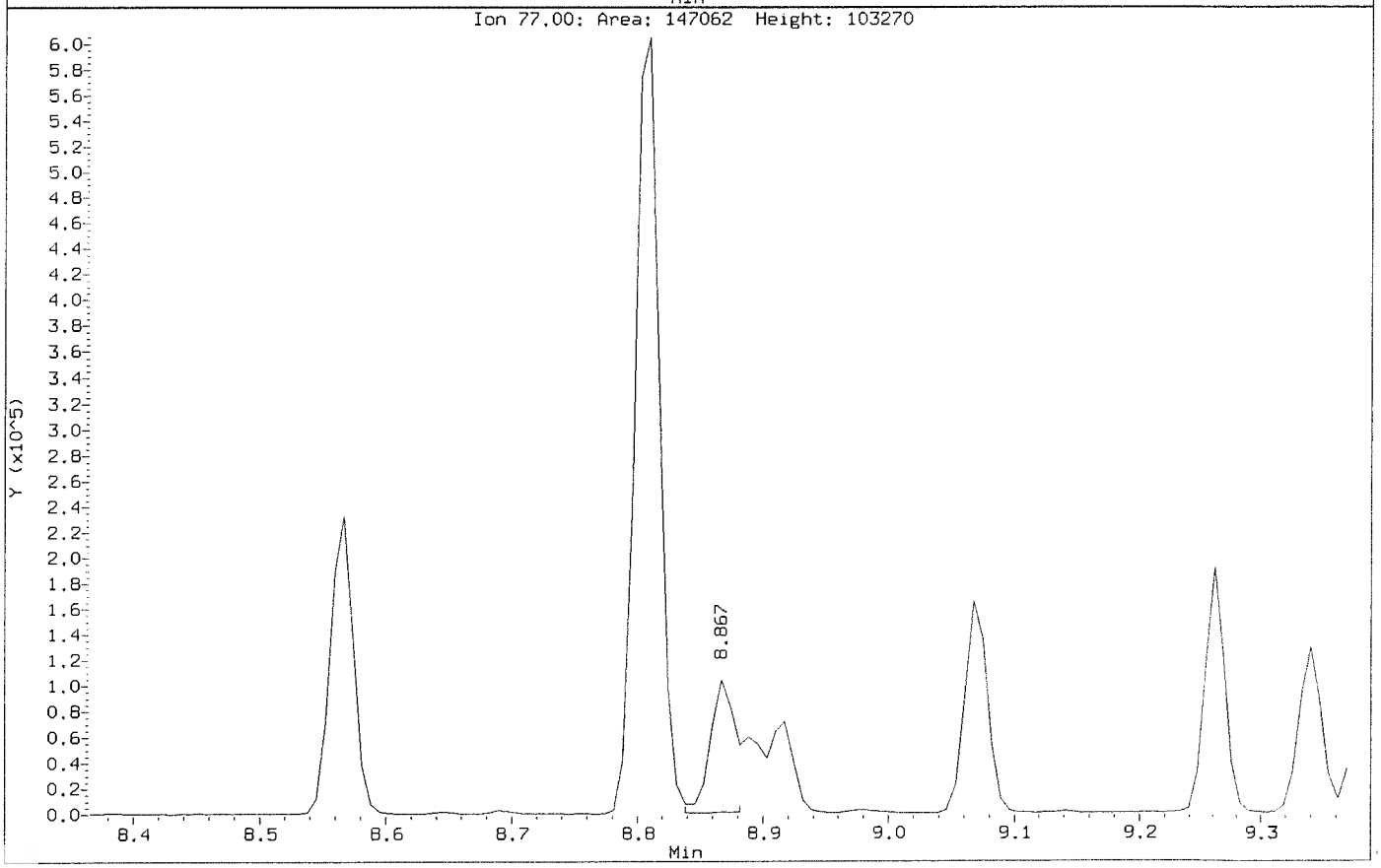


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-AUG-2020 15:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:52 Cal File: X080309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

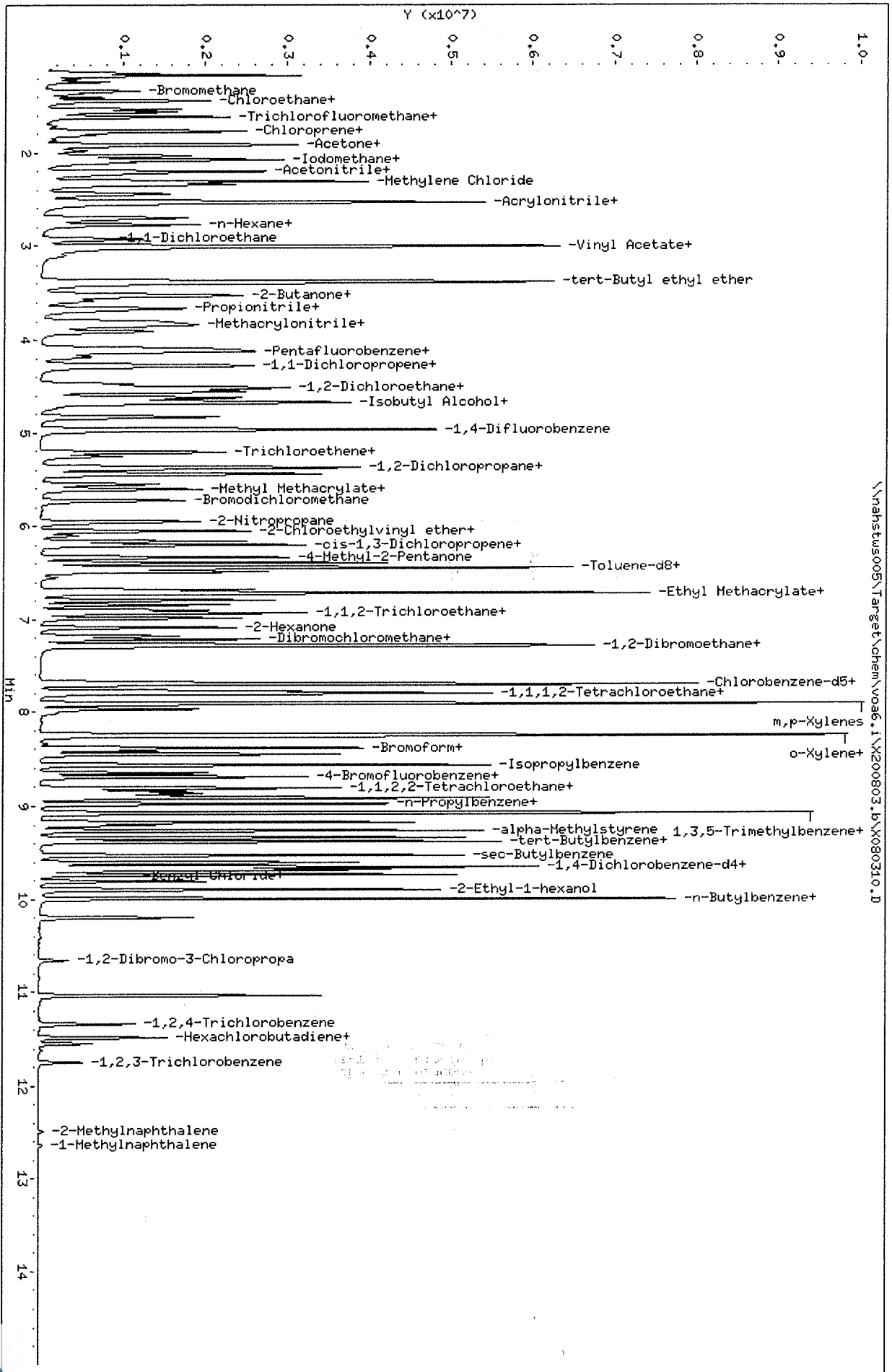
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 457081 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 697946 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 658557 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 308838 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 673356 | 150.000 | 150.01 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 814725 | 150.000 | 153.12 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 2334447 | 150.000 | 146.14 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 886803 | 150.000 | 143.91 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 731767 | 150.000 | 145.97 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 1070397 | 150.000 | 152.03 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 753290 | 150.000 | 150.61 |
| | 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 538173 | 150.000 | 143.61 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 1382538 | 150.000 | 154.84 |
| | 11 1,1-Dichloroethene | 96 | 1.912 | 1.912 | (0.456) | 571714 | 150.000 | 157.86 |
| | 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 893917 | 150.000 | 152.41 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 147859 | 150.000 | 159.09 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 653947 | 150.000 | 144.66(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 308625 | 150.000 | 163.97 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 2442964 | 150.000 | 148.06 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 68839 | 150.000 | 154.17 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 709453 | 150.000 | 146.95 |
| | 88 1,2-Dichlorobenzene | 146 | 9.991 | 9.991 | (1.033) | 1244688 | 150.000 | 142.48 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D Page 2
Report Date: 22-Aug-2020 11:54

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 1020218 | 150.000 | 150.97 |
| 42 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 786675 | 150.000 | 153.57 |
| 75 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 2403624 | 150.000 | 148.94 |
| 83 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1420086 | 150.000 | 146.29 |
| 54 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 1090826 | 150.000 | 147.42 |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 1405102 | 150.000 | 146.36 |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 969504 | 150.000 | 148.71 |
| 24 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 733748 | 300.000 | 327.46(A) |
| 76 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 1990724 | 150.000 | 148.57 |
| 52 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 1228653 | 300.000 | 297.18(A) |
| 77 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 2300761 | 150.000 | 147.59 |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 2591814 | 150.000 | 151.54 |
| 45 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 1784918 | 300.000 | 292.84(A) |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 481556 | 300.000 | 304.39(A) |
| 37 Benzene | 78 | 4.519 | 4.519 | (0.909) | 2633133 | 150.000 | 152.06 |
| 74 Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 875955 | 150.000 | 144.99 |
| 29 Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 397087 | 150.000 | 144.12 |
| 39 Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 949497 | 150.000 | 151.12 |
| 66 Bromoform | 173 | 8.416 | 8.416 | (1.097) | 545501 | 150.000 | 149.29 |
| 6 Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 475898 | 150.000 | 149.93 |
| 19 Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 3493168 | 300.000 | 310.65(A) |
| 34 Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 955431 | 150.000 | 153.26 |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 1894718 | 150.000 | 146.79 |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 503418 | 150.000 | 155.38 |
| 28 Chloroform | 83 | 3.910 | 3.910 | (0.933) | 1203889 | 150.000 | 147.42 |
| 3 Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 952989 | 150.000 | 148.49 |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 755671 | 150.000 | 150.19 |
| 46 cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 1139019 | 150.000 | 155.03 |
| 55 Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 768555 | 150.000 | 145.69 |
| 44 Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 458909 | 150.000 | 151.08 |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 732272 | 150.000 | 163.68 |
| 61 Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 984064 | 150.000 | 147.65 |
| 91 Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 270400 | 150.000 | 163.08 |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 2911603 | 150.000 | 148.83 |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 2378815 | 300.000 | 295.77(A) |
| 17 Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 693942 | 150.000 | 149.97 |
| 87 n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 2113477 | 150.000 | 154.74 |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 3384136 | 150.000 | 152.10 |
| 92 Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 435994 | 150.000 | 161.36 |
| 63 o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 1165295 | 150.000 | 147.50 |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 2872495 | 150.000 | 153.10 |
| 64 Styrene | 104 | 8.258 | 8.258 | (1.077) | 2029238 | 150.000 | 147.92 |
| 78 tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 2094345 | 150.000 | 149.68 |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 610841 | 150.000 | 145.91 |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 2766929 | 150.000 | 143.87 |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 647458 | 150.000 | 151.10 |
| 51 trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 1027204 | 150.000 | 152.54 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 766453 | 150.000 | 154.95 |
| 8 Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 1054115 | 150.000 | 156.59 |
| 5 Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 956993 | 150.000 | 162.65 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

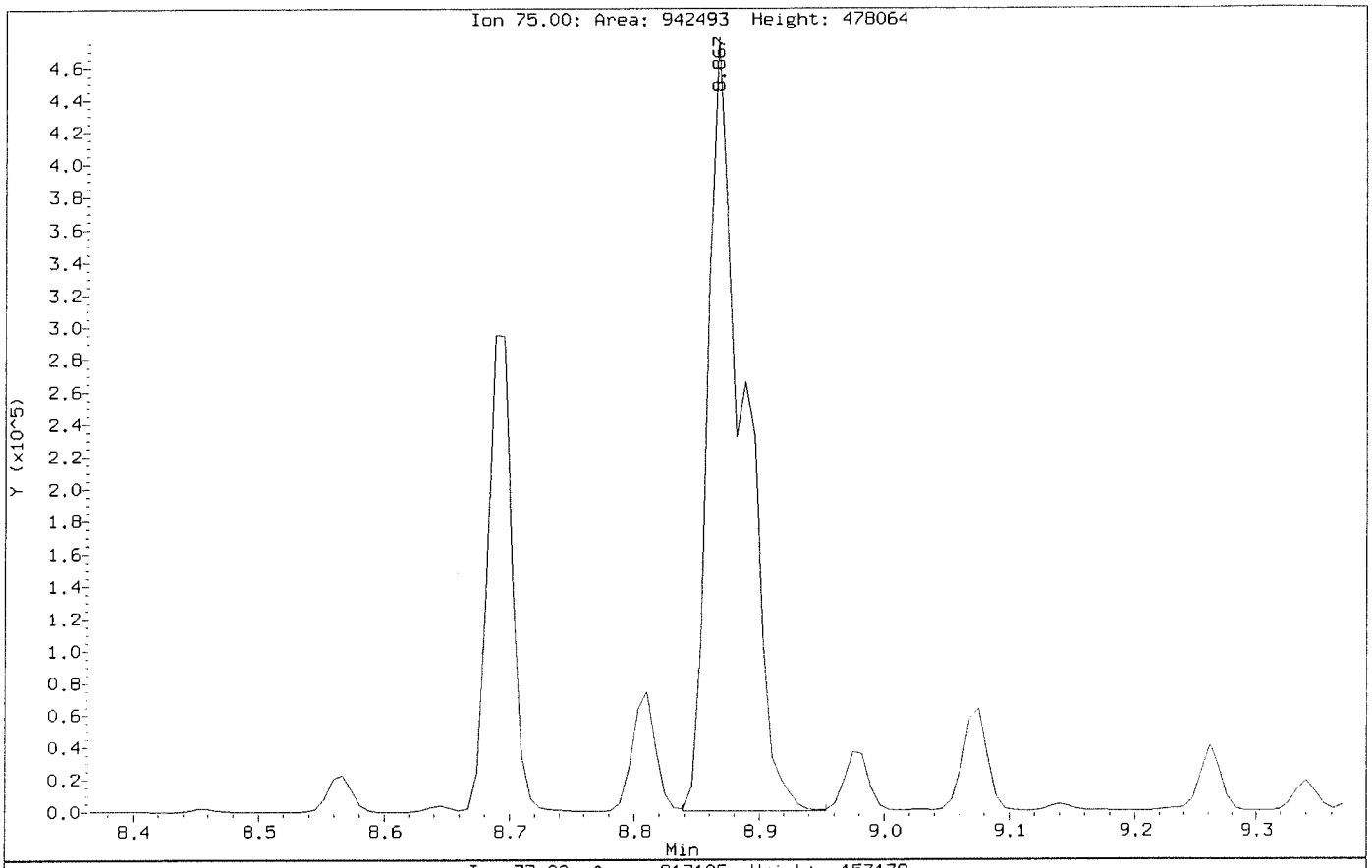


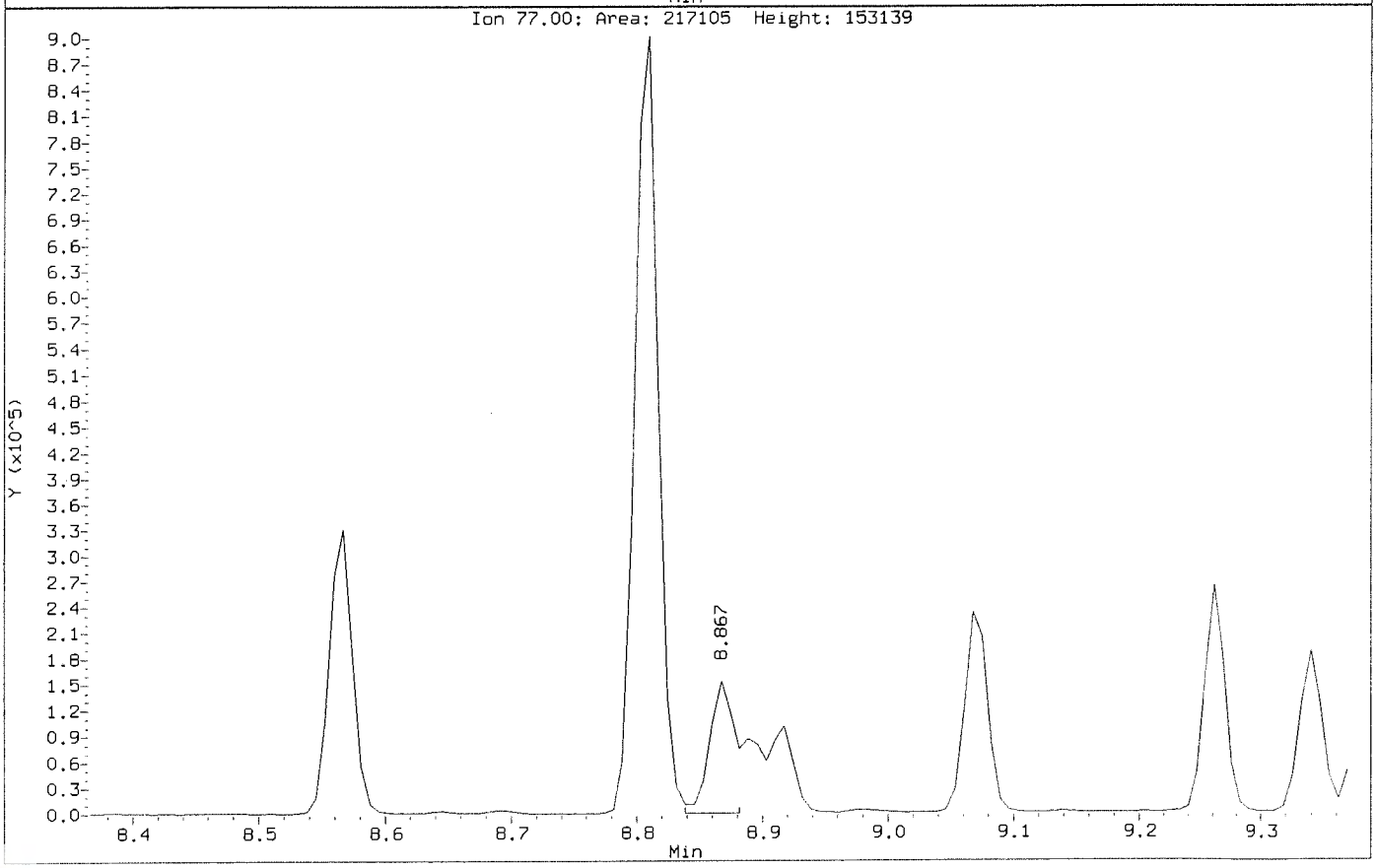

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Date : 03-AUG-2020 15:16
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

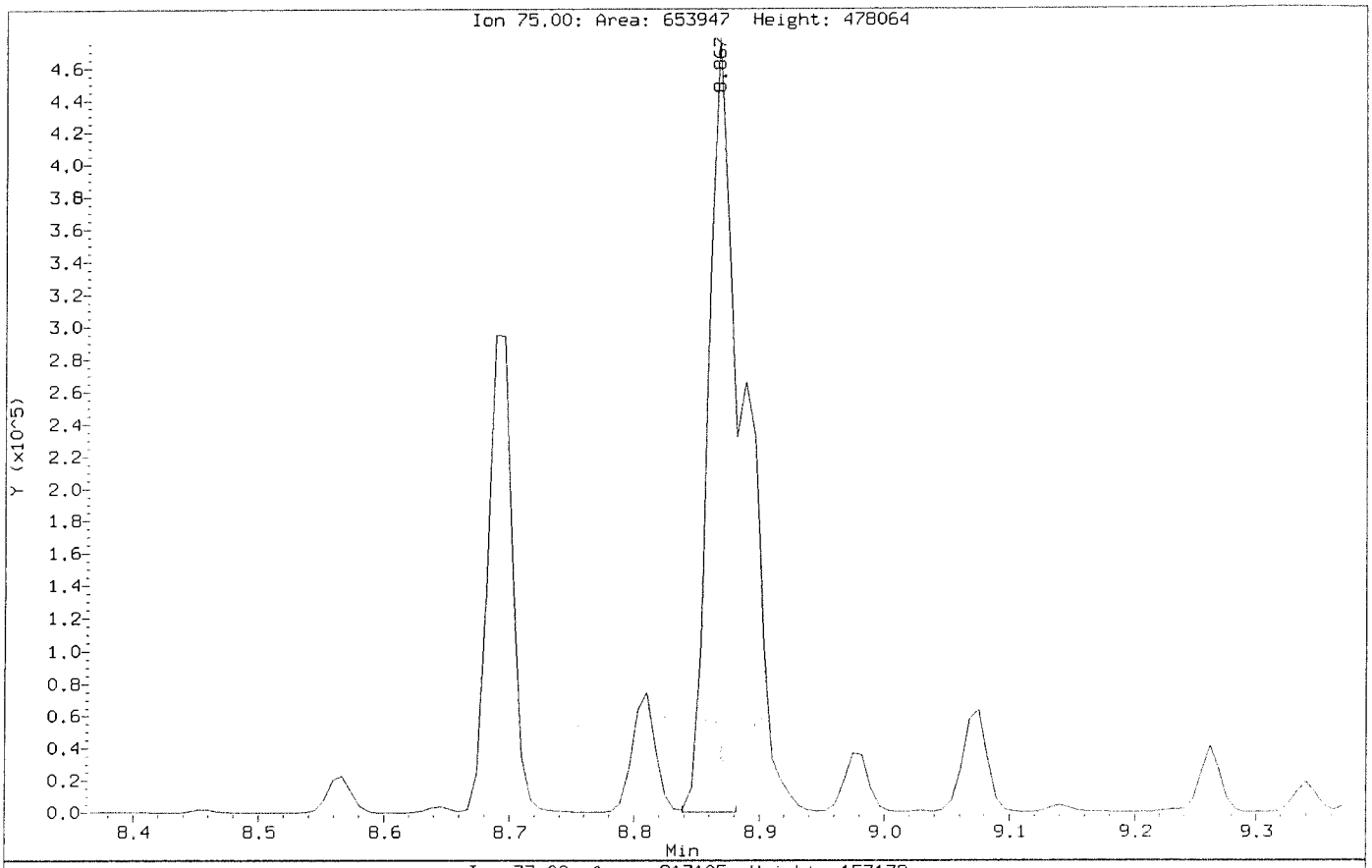
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

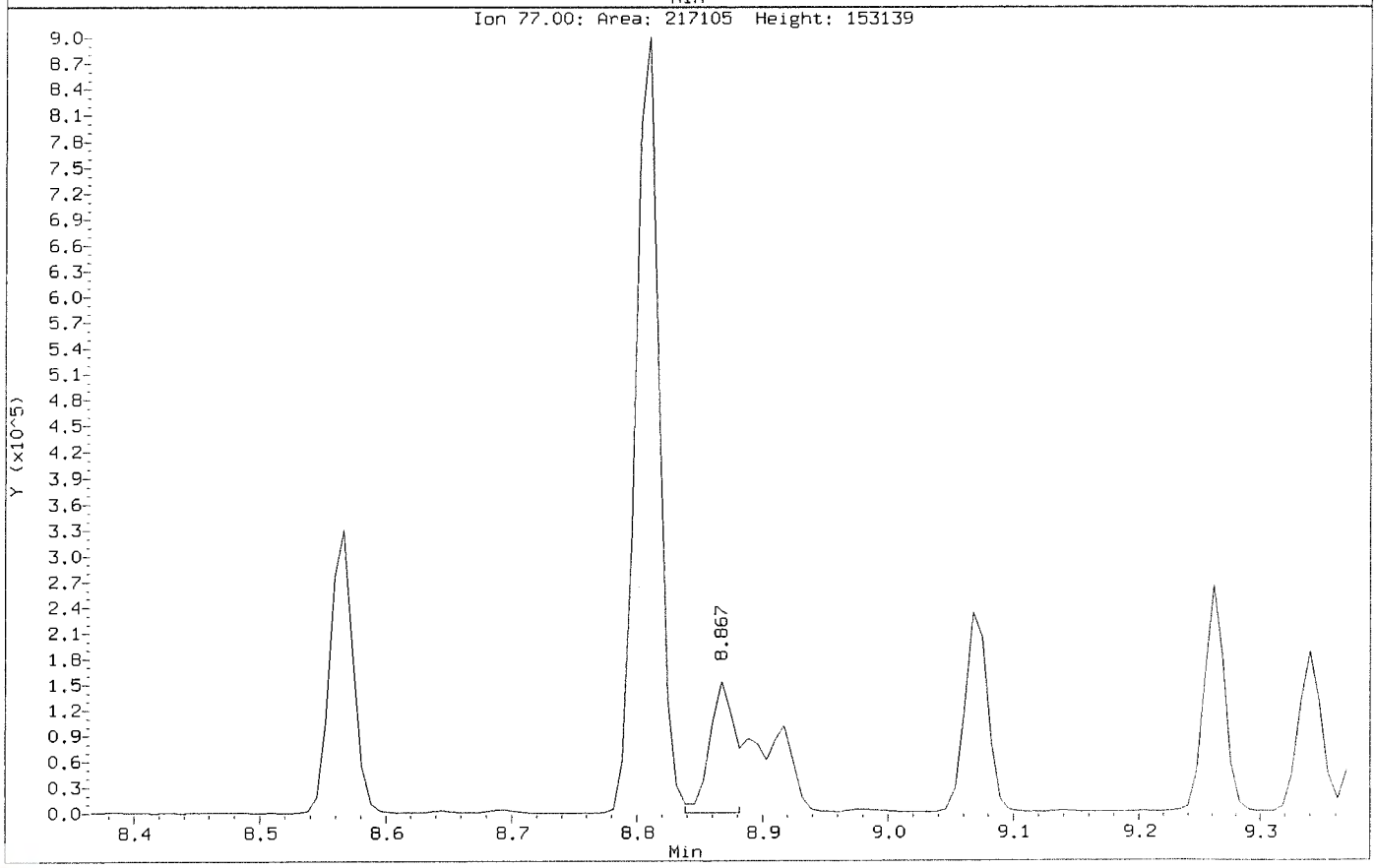


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-AUG-2020 15:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:16 Cal File: X080310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

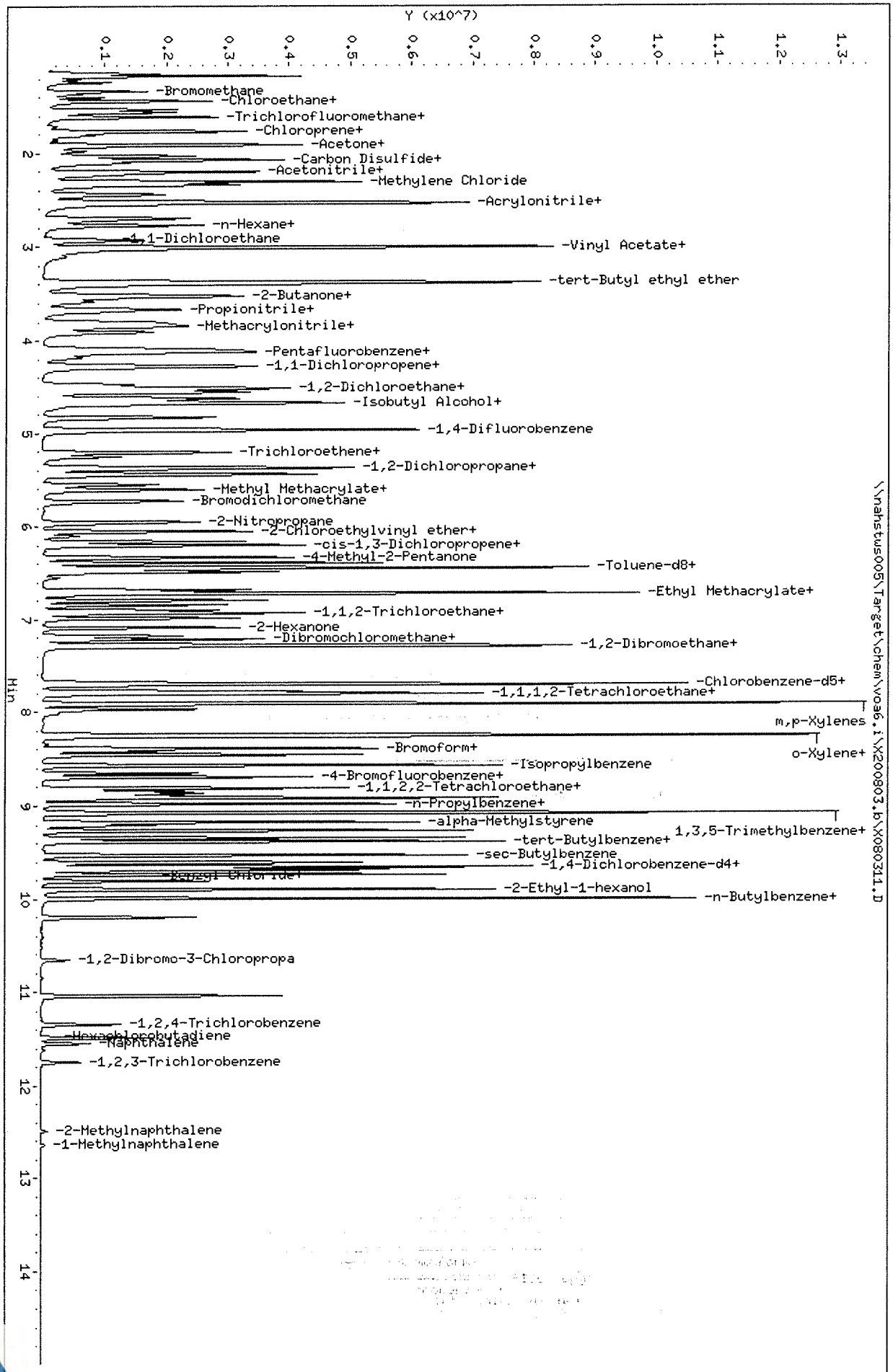
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 450865 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 691821 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 647390 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 303189 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 891470 | 200.000 | 201.34(A) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 1069168 | 200.000 | 203.72(A) |
| $ 48 Toluene-d8 | 98 | 6.389 | 6.389 | (0.833) | 3098306 | 200.000 | 197.30 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 1172448 | 200.000 | 193.54 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 957096 | 200.000 | 194.21 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 1427757 | 200.000 | 205.58(A) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 990670 | 200.000 | 201.64(A) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 709380 | 200.000 | 192.57 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 1845041 | 200.000 | 209.49(A) |
| 11 1,1-Dichloroethene | 96 | 1.912 | 1.912 | (0.456) | 760300 | 200.000 | 212.82(A) |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 1199113 | 200.000 | 206.26(A) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 174820 | 200.000 | 191.61 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 839680 | 200.000 | 189.20(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 360898 | 200.000 | 192.06 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 3263670 | 200.000 | 201.49(A) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 87710 | 200.000 | 199.86 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 931649 | 200.000 | 196.31 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 1639229 | 200.000 | 191.14 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 1348617 | 200.000 | 201.33(A) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 1043924 | 200.000 | 205.60(A) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 3217418 | 200.000 | 203.08(A) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1875338 | 200.000 | 196.78 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 1423457 | 200.000 | 195.70 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.684 | 9.684 | (1.001) | 1859620 | 200.000 | 197.32 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 1273388 | 200.000 | 198.01 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 968566 | 400.000 | 438.21(A) |
| 76 | 2-Chlorotoluene | 91 | 8.982 | 8.982 | (0.929) | 2643071 | 200.000 | 200.93(A) |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 1629397 | 400.000 | 400.90(A) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 3060362 | 200.000 | 199.98 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 3478638 | 200.000 | 207.19(A) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 2352996 | 400.000 | 392.71(A) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 618700 | 400.000 | 396.80(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 3502746 | 200.000 | 204.07(A) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 1163775 | 200.000 | 196.22 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 510770 | 200.000 | 187.94 |
| 39 | Bromodichloromethane | 83 | 5.730 | 5.730 | (1.153) | 1253129 | 200.000 | 201.21(A) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 720436 | 200.000 | 200.57(A) |
| 6 | Bromomethane | 94 | 1.331 | 1.331 | (0.318) | 632580 | 200.000 | 201.82(A) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 4690853 | 400.000 | 422.91(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 1290058 | 200.000 | 208.77(A) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 2498297 | 200.000 | 196.90 |
| 7 | Chloroethane | 64 | 1.396 | 1.396 | (0.333) | 661534 | 200.000 | 207.00(A) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 1599662 | 200.000 | 198.59 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 1298797 | 200.000 | 205.16(A) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 1003656 | 200.000 | 202.23(A) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 1492460 | 200.000 | 204.94(A) |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 1019362 | 200.000 | 196.57 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 603267 | 200.000 | 200.37(A) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 990164 | 200.000 | 224.38(A) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 1305080 | 200.000 | 199.20 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 306426 | 200.000 | 188.25 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 3908287 | 200.000 | 203.22(A) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 3158365 | 400.000 | 399.48(A) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 915440 | 200.000 | 201.03(A) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 2826639 | 200.000 | 210.81(A) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 4530646 | 200.000 | 207.43(A) |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 531999 | 200.000 | 194.12 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 1537247 | 200.000 | 197.93 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 3856474 | 200.000 | 209.37(A) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 2646814 | 200.000 | 196.27 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 2815545 | 200.000 | 204.97(A) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 820612 | 200.000 | 199.39 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 3655728 | 200.000 | 193.36 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 856683 | 200.000 | 202.68(A) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 1360653 | 200.000 | 203.85(A) |
| 38 | Trichloroethene | 130 | 5.207 | 5.207 | (1.048) | 1027730 | 200.000 | 209.61(A) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 1414911 | 200.000 | 213.08(A) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 1294651 | 200.000 | 223.07(A) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

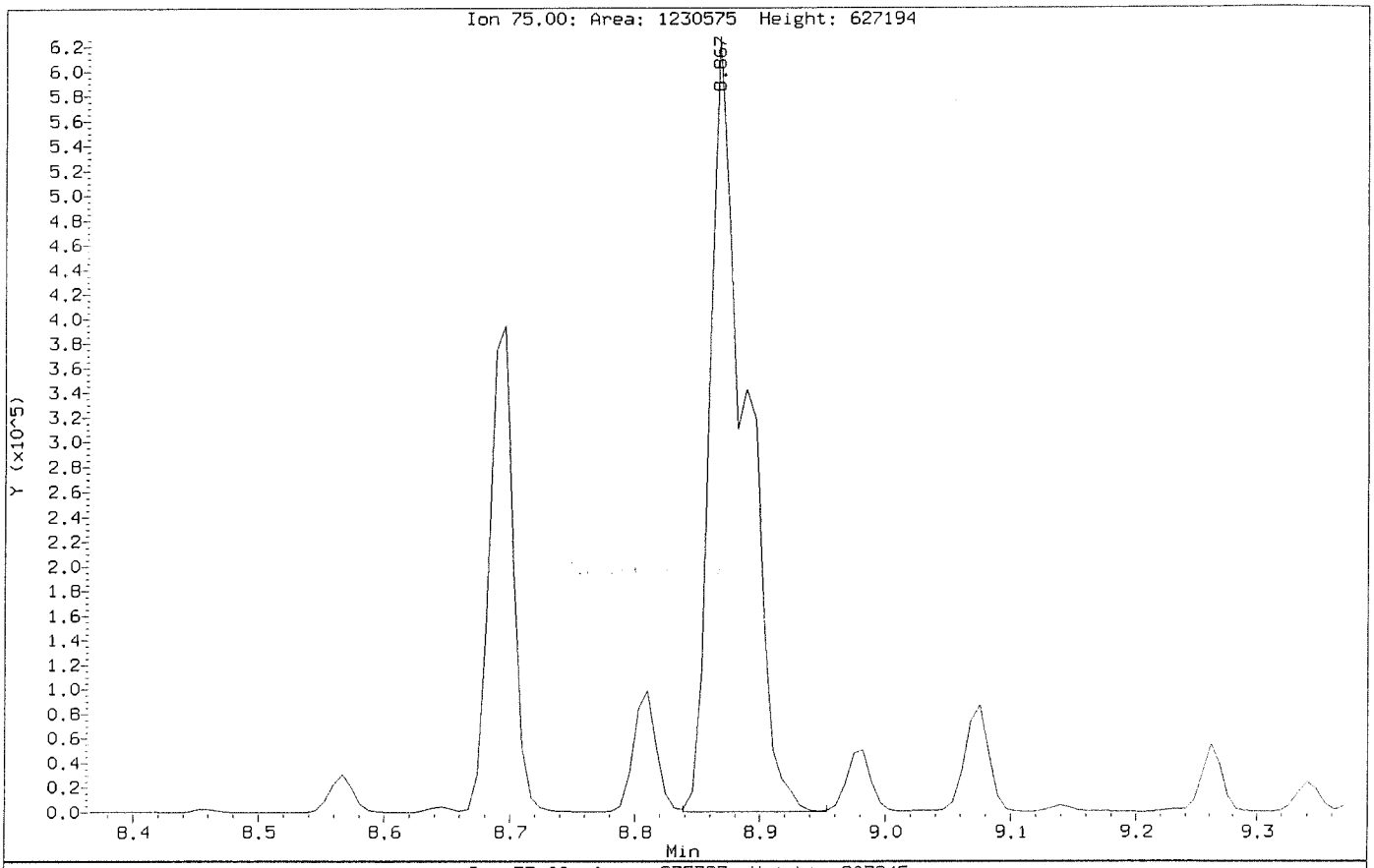


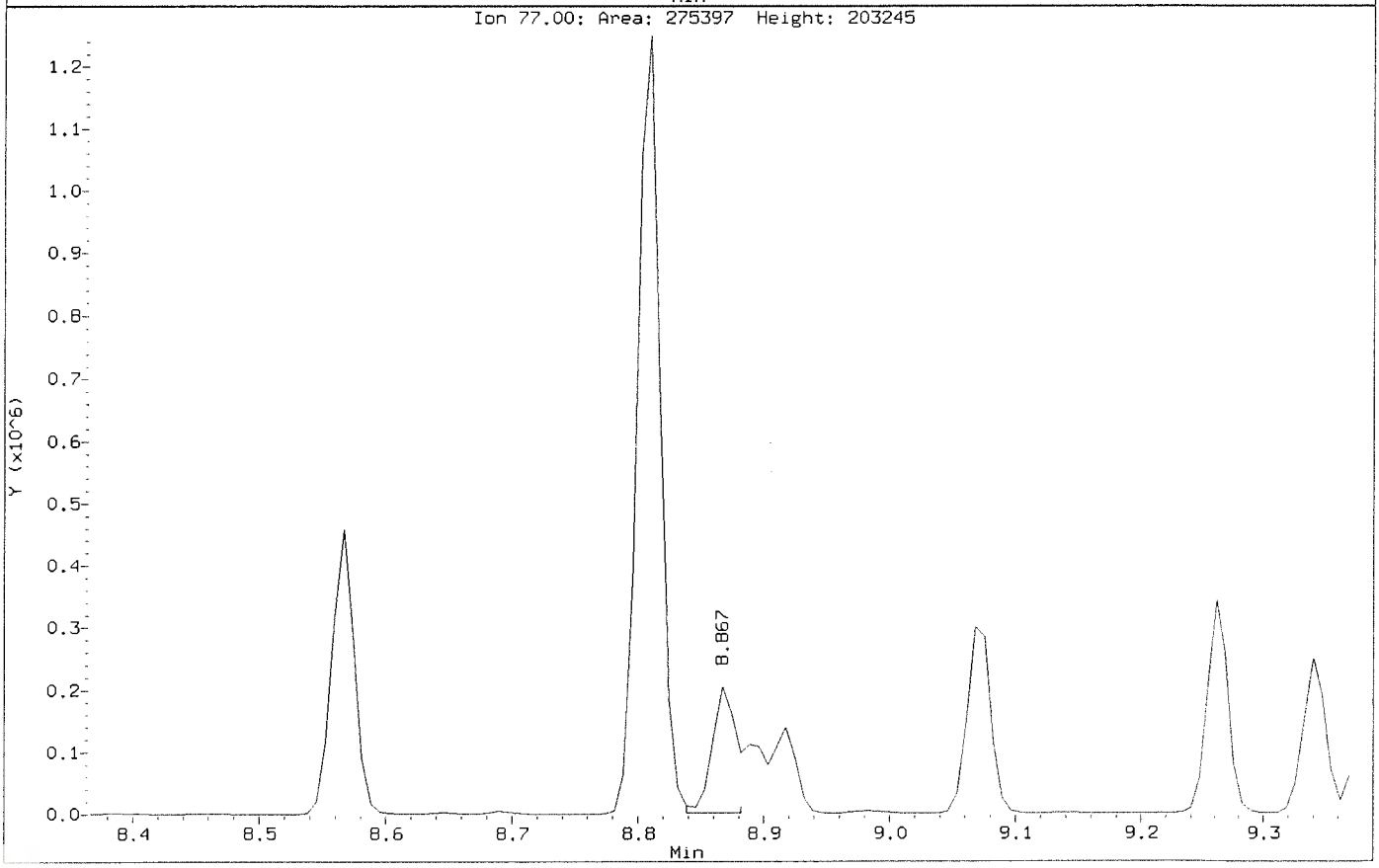

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Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

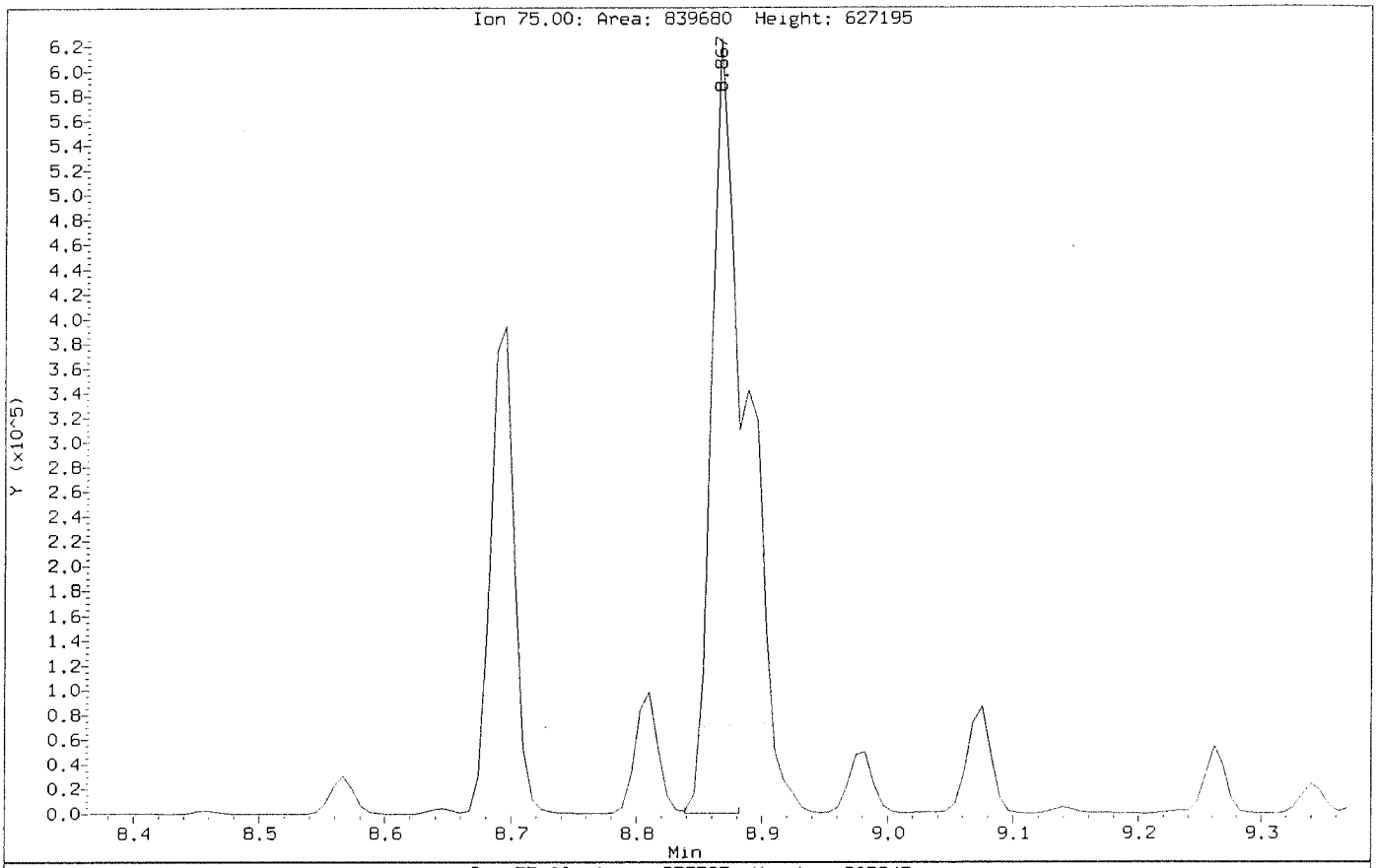
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

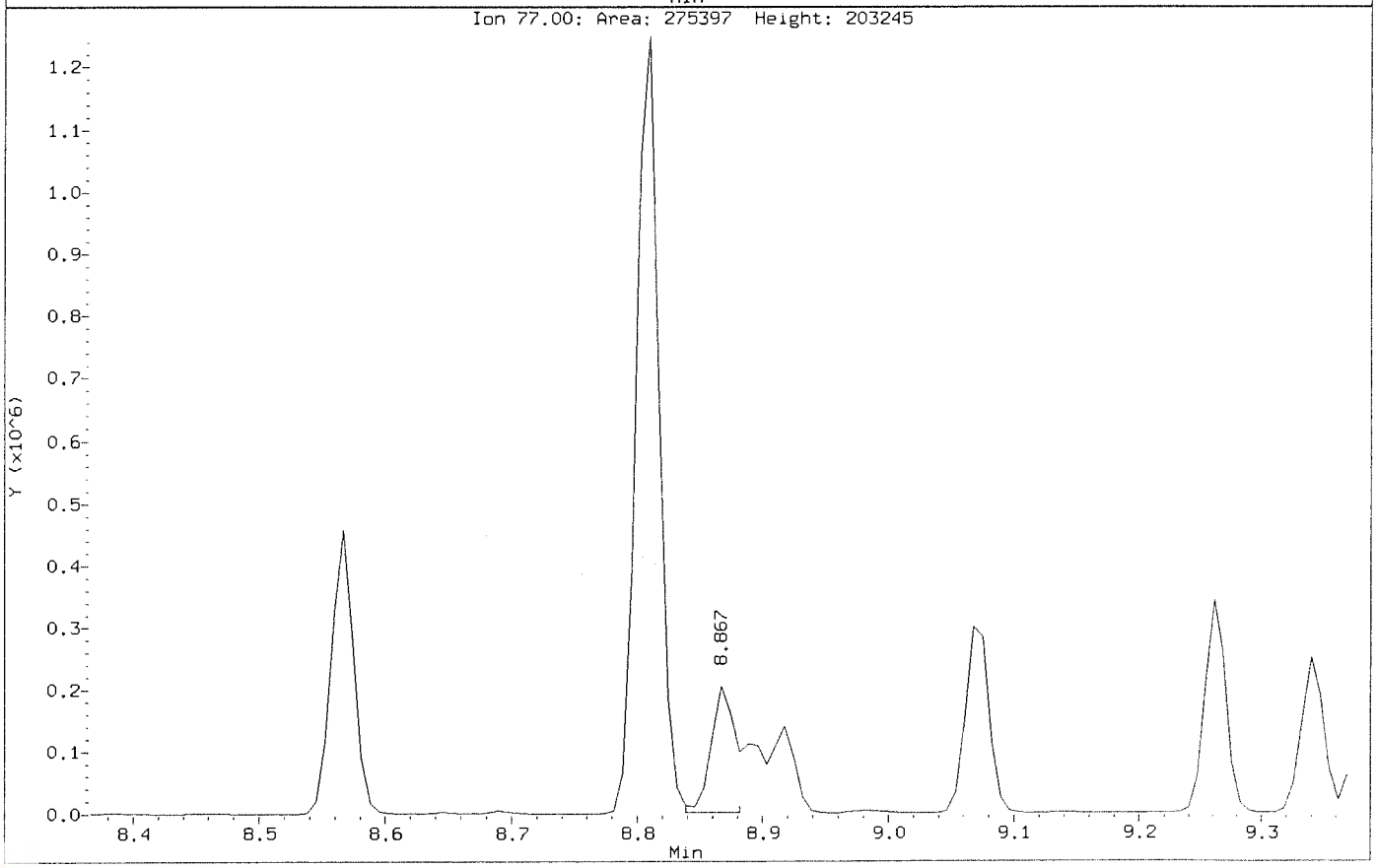


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D  Page 1
Report Date: 22-Aug-2020 12:06

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
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Inj Date  : 03-AUG-2020 16:51
Operator  : PC  Inst ID: voa6.i
Smp Info  : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i  Quant Type: ISTD
Cal Date  : 03-AUG-2020 15:40  Cal File: X080311.D
Als bottle: 15  QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

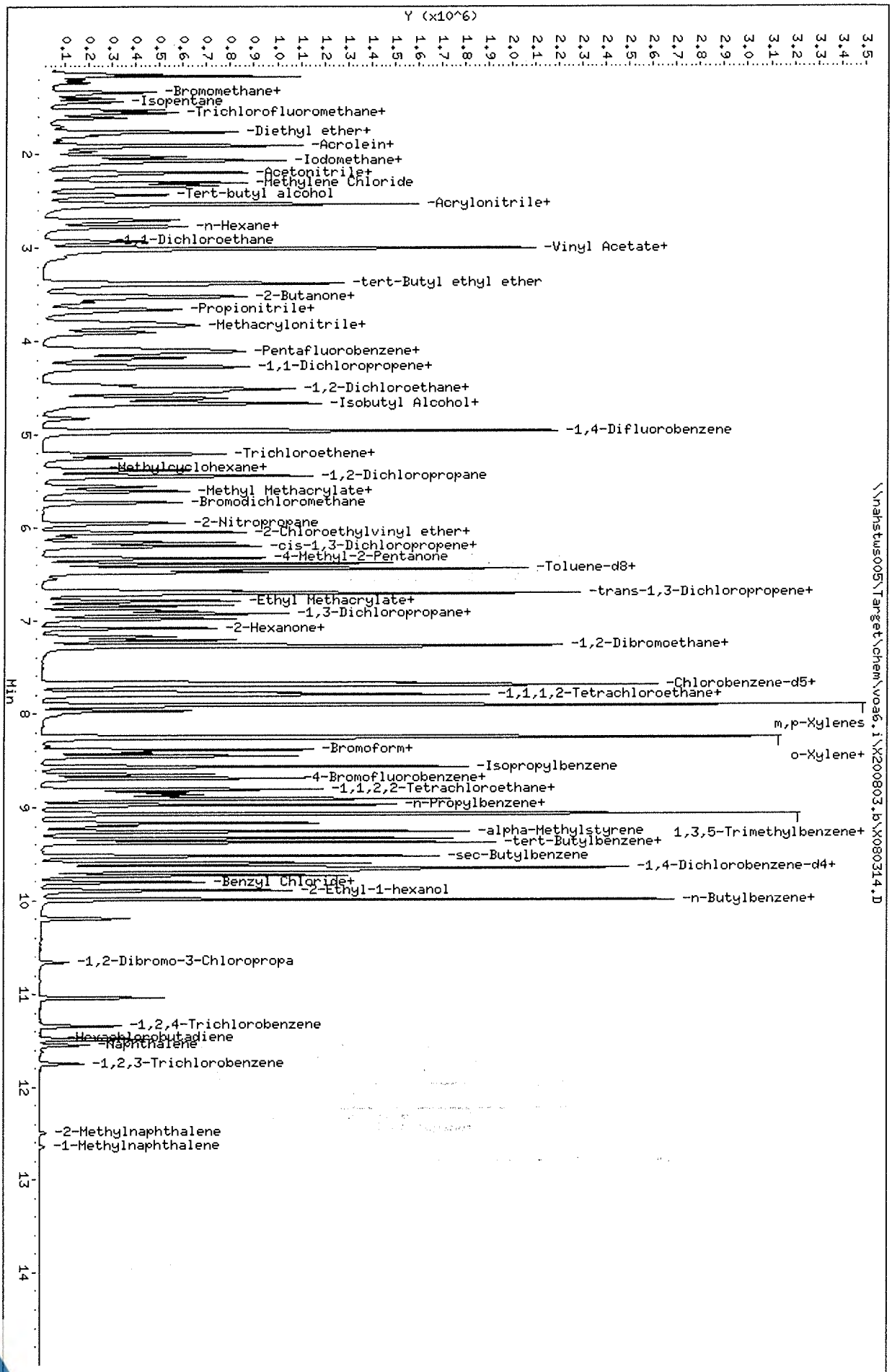
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 487811 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 737194 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 676175 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 325984 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 235982 | 49.2610 | 49.26 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 277053 | 48.7922 | 48.79 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 810392 | 49.4111 | 49.41 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.695 | (1.133) | 309544 | 48.9242 | 48.92 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 245824 | 47.7596 | 47.75 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 362002 | 48.1775 | 48.17 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.845 | (0.914) | 253503 | 48.2847 | 48.28 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.847 | (0.892) | 183527 | 47.7003 | 47.70 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 478275 | 50.1934 | 50.19 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.912 | (0.458) | 198134 | 51.2626 | 51.26 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.283 | (0.862) | 303153 | 48.9364 | 48.93 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 49347 | 50.3044 | 50.30 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 225070 | 47.1692 | 47.16(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 94358 | 50.1387 | 50.13 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.383 | (0.970) | 838876 | 48.1702 | 48.17 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 22001 | 47.2364 | 47.23 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 241523 | 48.7266 | 48.72 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 433731 | 47.0400 | 47.04 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 349700 | 48.9941 | 48.99 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 272227 | 50.3156 | 50.31 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 818750 | 48.0653 | 48.06 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.612 | (0.993) | 489054 | 47.7302 | 47.73 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 370552 | 48.7766 | 48.77 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.684 | (1.001) | 489689 | 48.3269 | 48.32 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 354577 | 50.9627 | 50.96 |
| 24 | 2-Butanone | 43 | 3.580 | 3.581 | (0.855) | 250811 | 104.882 | 104.88 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.982 | (0.928) | 683359 | 48.3181 | 48.31 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 404545 | 95.3001 | 95.30 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.075 | (0.939) | 792702 | 48.1785 | 48.17 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 869988 | 48.1945 | 48.19 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.331 | (0.824) | 585620 | 93.5781 | 93.57 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 173872 | 102.274 | 102.27 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 904308 | 49.4427 | 49.44 |
| 74 | Bromobenzene | 156 | 8.809 | 8.810 | (0.911) | 302326 | 47.4100 | 47.40 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.803 | (0.908) | 138253 | 47.0189 | 47.01 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.730 | (1.153) | 323350 | 48.7242 | 48.72 |
| 66 | Bromoform | 173 | 8.415 | 8.416 | (1.097) | 181296 | 48.3252 | 48.32 |
| 6 | Bromomethane | 94 | 1.338 | 1.331 | (0.320) | 179720 | 53.4789 | 53.47 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1217324 | 101.439 | 101.43 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 315836 | 47.9659 | 47.96 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 648373 | 48.9257 | 48.92 |
| 7 | Chloroethane | 64 | 1.403 | 1.396 | (0.335) | 176540 | 51.0584 | 51.05 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 417889 | 47.9496 | 47.94 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 337755 | 49.3134 | 49.31 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 262524 | 48.8914 | 48.89 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 387446 | 49.9295 | 49.92 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 256809 | 47.4144 | 47.41 |
| 44 | Dibromomethane | 93 | 5.557 | 5.558 | (1.118) | 155222 | 48.3826 | 48.38 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 241678 | 50.6204 | 50.62 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.807 | (1.017) | 332949 | 48.6572 | 48.65 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 84278 | 48.1556 | 48.15 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 975427 | 48.5621 | 48.56 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 807125 | 97.7420 | 97.74 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.306 | (0.550) | 246540 | 49.0057 | 49.00 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 708345 | 49.1343 | 49.13 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1130932 | 48.1580 | 48.15 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 139595 | 53.3922 | 53.39 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 395537 | 48.7621 | 48.76 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 948593 | 47.8994 | 47.89 |
| 64 | Styrene | 104 | 8.258 | 8.265 | (1.077) | 697467 | 49.5184 | 49.51 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 699293 | 47.3494 | 47.34 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 204313 | 47.5322 | 47.53 |
| 50 | Toluene | 91 | 6.446 | 6.453 | (0.840) | 953134 | 48.2682 | 48.26 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 223973 | 48.9770 | 48.97 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 345851 | 48.6275 | 48.62 |
| 38 | Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 264166 | 50.5627 | 50.56 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.561 | (0.373) | 357713 | 49.7923 | 49.79 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 318745 | 50.7622 | 50.76 |

QC Flag Legend

M - Compound response manually integrated.

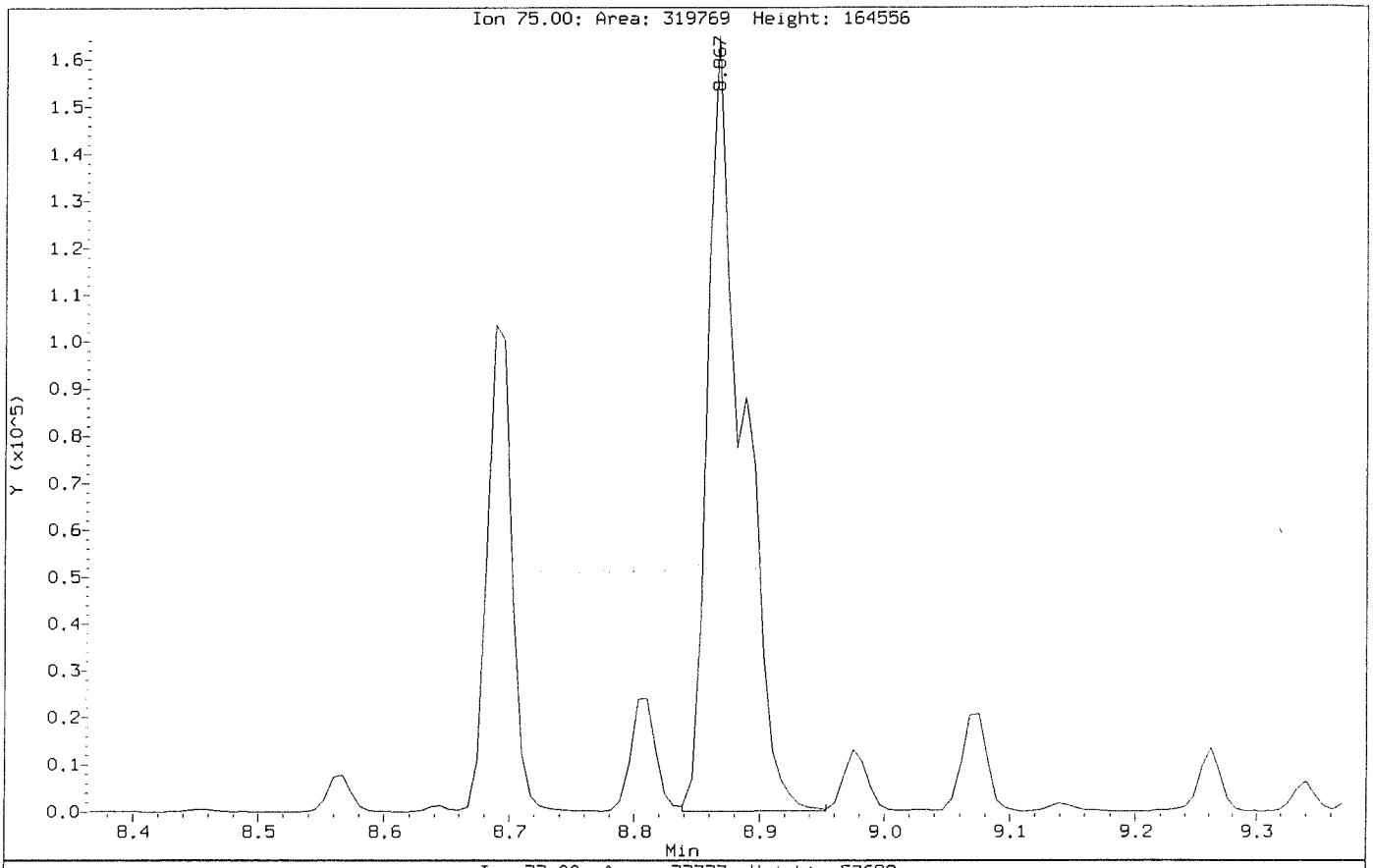


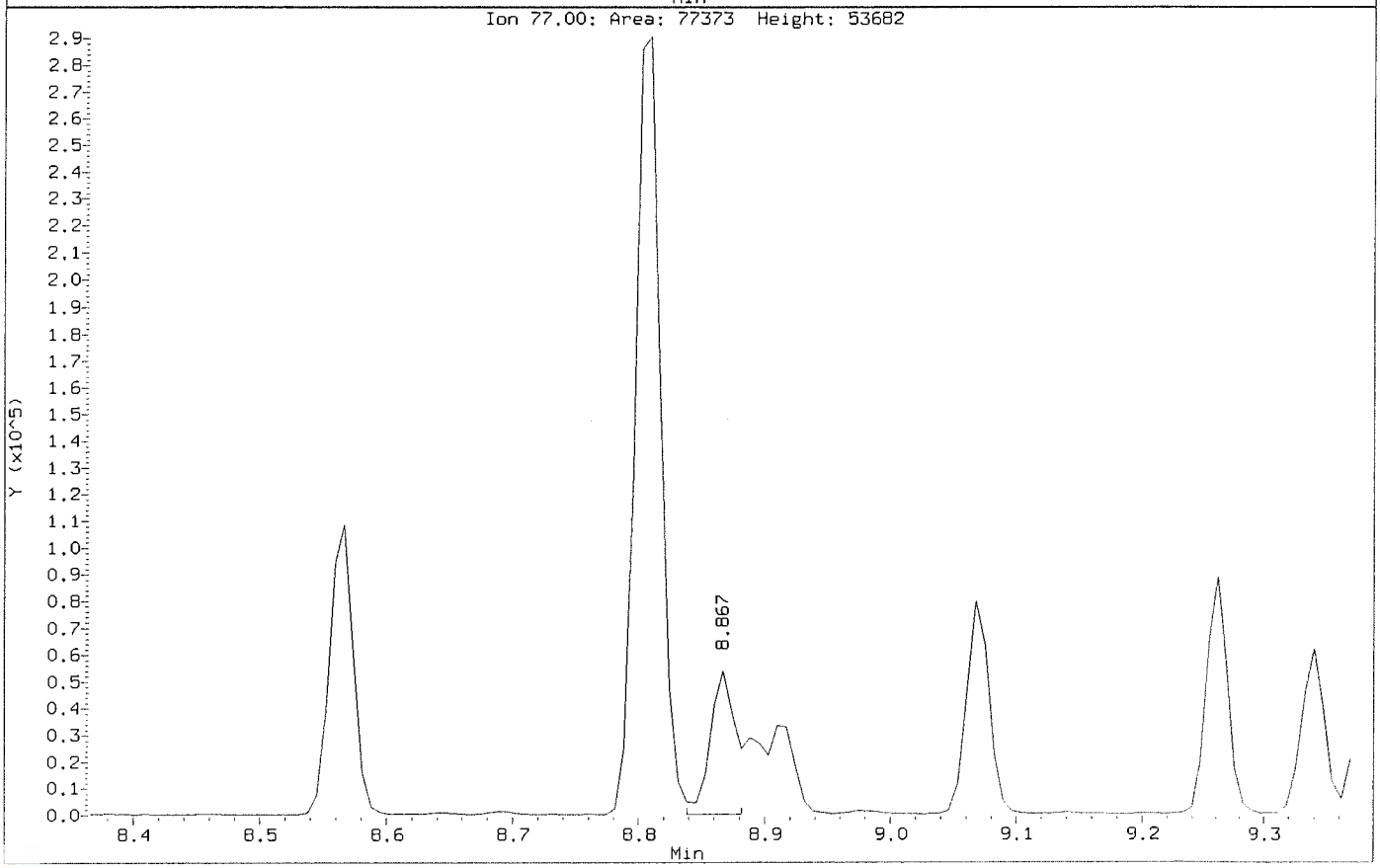

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Date : 03-AUG-2020 16:51
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Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

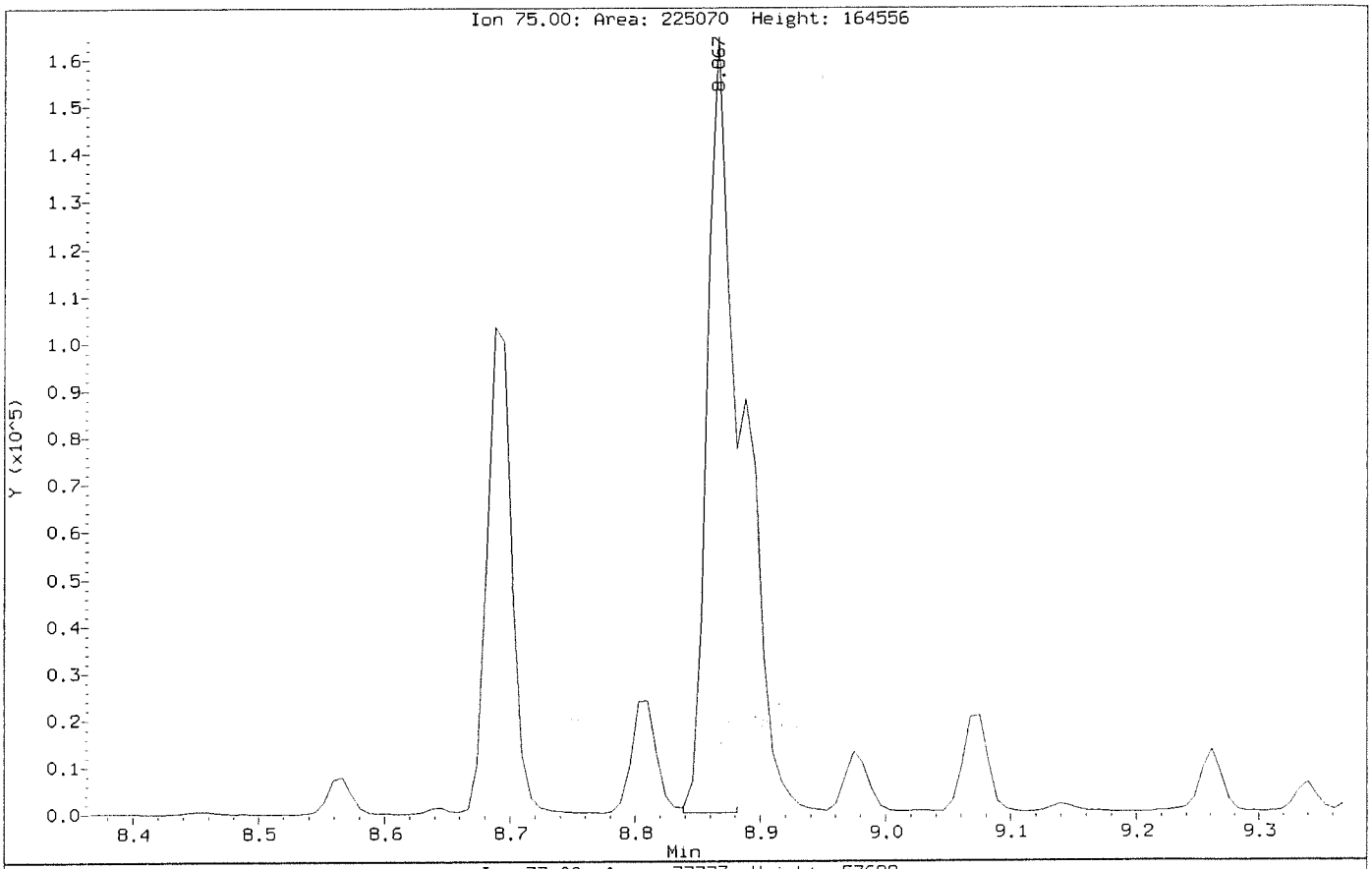
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

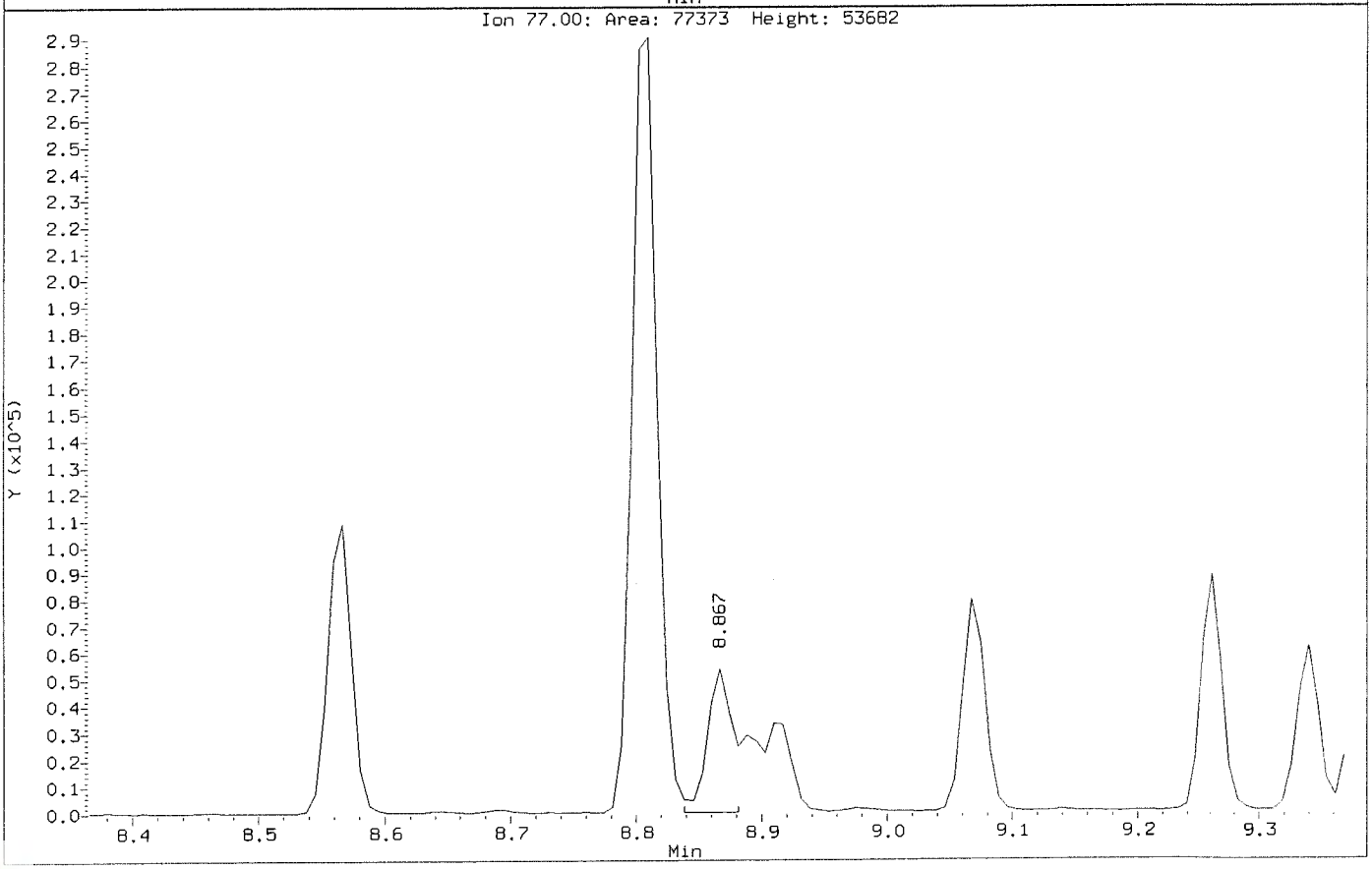


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Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080316.D
Lab Smp Id: VLCSW-200803 Client Smp ID: VLCSW-200803
Inj Date : 03-AUG-2020 17:39
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200803;VLCSW-200803;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:30 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 17 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

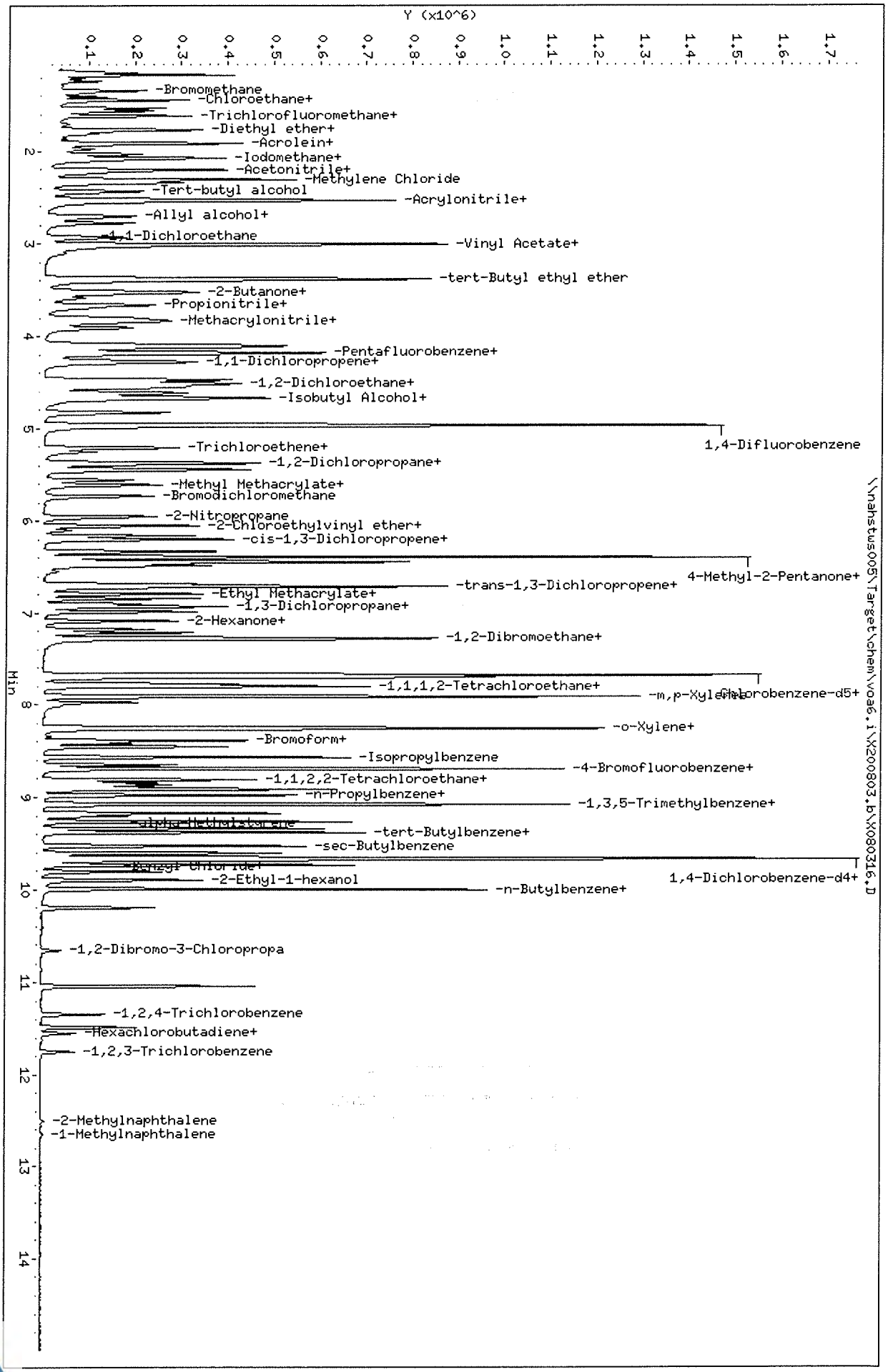
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 505511 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 765803 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 694842 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.669 | (1.000) | 339345 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 244395 | 49.2309 | 49.23 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 300309 | 51.0360 | 51.03 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 838729 | 49.7650 | 49.76 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.695 | (1.133) | 315189 | 48.4781 | 48.47 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 96981 | 18.3356 | 18.33 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 139335 | 17.8943 | 17.89 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.845 | (0.915) | 102348 | 18.9630 | 18.96 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.847 | (0.892) | 73256 | 18.5284 | 18.52 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 186741 | 18.9117 | 18.91 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.912 | (0.458) | 75792 | 18.9228 | 18.92 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 114759 | 17.8329 | 17.83 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 19753 | 19.3434 | 19.34 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 88509 | 17.8190 | 17.81(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 39779 | 20.2769 | 20.27 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 307754 | 16.9762 | 16.97 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 8786 | 18.6102 | 18.61 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 96731 | 18.9909 | 18.99 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.035) | 166041 | 17.2989 | 17.29 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080316.D Page 2
Report Date: 22-Aug-2020 12:31

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 143233 | 19.3177 | 19.31 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 109896 | 19.5532 | 19.55 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 295098 | 16.6418 | 16.64 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.612 | (0.994) | 183952 | 17.2463 | 17.24 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 149574 | 19.1598 | 19.15 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.684 | (1.002) | 182799 | 17.3299 | 17.32 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 135226 | 18.7553 | 18.75 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 97574 | 39.3741 | 39.37 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.982 | (0.929) | 254674 | 17.2982 | 17.29 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 160953 | 36.8977 | 36.89 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 292806 | 17.0954 | 17.09 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 299299 | 15.9274 | 15.92 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.331 | (0.824) | 240389 | 37.3806 | 37.38 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 73152 | 40.8863 | 40.88 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 356000 | 18.7370 | 18.73 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.912) | 117588 | 17.7138 | 17.71 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 55847 | 18.3281 | 18.32 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.730 | (1.153) | 129140 | 18.7326 | 18.73 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 71157 | 18.4576 | 18.45 |
| 6 | Bromomethane | 94 | 1.339 | 1.331 | (0.320) | 73558 | 21.5182 | 21.51 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 463735 | 37.2897 | 37.28 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 119785 | 17.5121 | 17.51 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 251730 | 18.4850 | 18.48 |
| 7 | Chloroethane | 64 | 1.403 | 1.396 | (0.335) | 67609 | 18.8690 | 18.86 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 167778 | 18.5772 | 18.57 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 131649 | 18.5482 | 18.54 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 105272 | 18.9190 | 18.91 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 154772 | 19.2001 | 19.20 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 101870 | 18.3029 | 18.30 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 63075 | 18.9259 | 18.92 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 88163 | 17.8195 | 17.81 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.807 | (1.017) | 125298 | 17.8191 | 17.81 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.188) | 35987 | 19.7530 | 19.75 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 348828 | 16.9000 | 16.90 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 298763 | 35.2079 | 35.20 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 104387 | 19.2078 | 19.20 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.035) | 240694 | 16.0384 | 16.03 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.923) | 397135 | 16.2452 | 16.24 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.195) | 54019 | 20.2288 | 20.22 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 151034 | 18.1194 | 18.11 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.986) | 322280 | 15.6329 | 15.63 |
| 64 | Styrene | 104 | 8.258 | 8.265 | (1.077) | 271395 | 18.7507 | 18.75 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.967) | 246069 | 16.0054 | 16.00 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 76227 | 17.2573 | 17.25 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 376893 | 18.5737 | 18.57 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 88225 | 18.6170 | 18.61 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 137862 | 18.6596 | 18.65 |
| 38 | Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 101845 | 18.7654 | 18.76 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 134805 | 18.1073 | 18.10 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 118093 | 18.1485 | 18.14 |

QC Flag Legend

M - Compound response manually integrated.

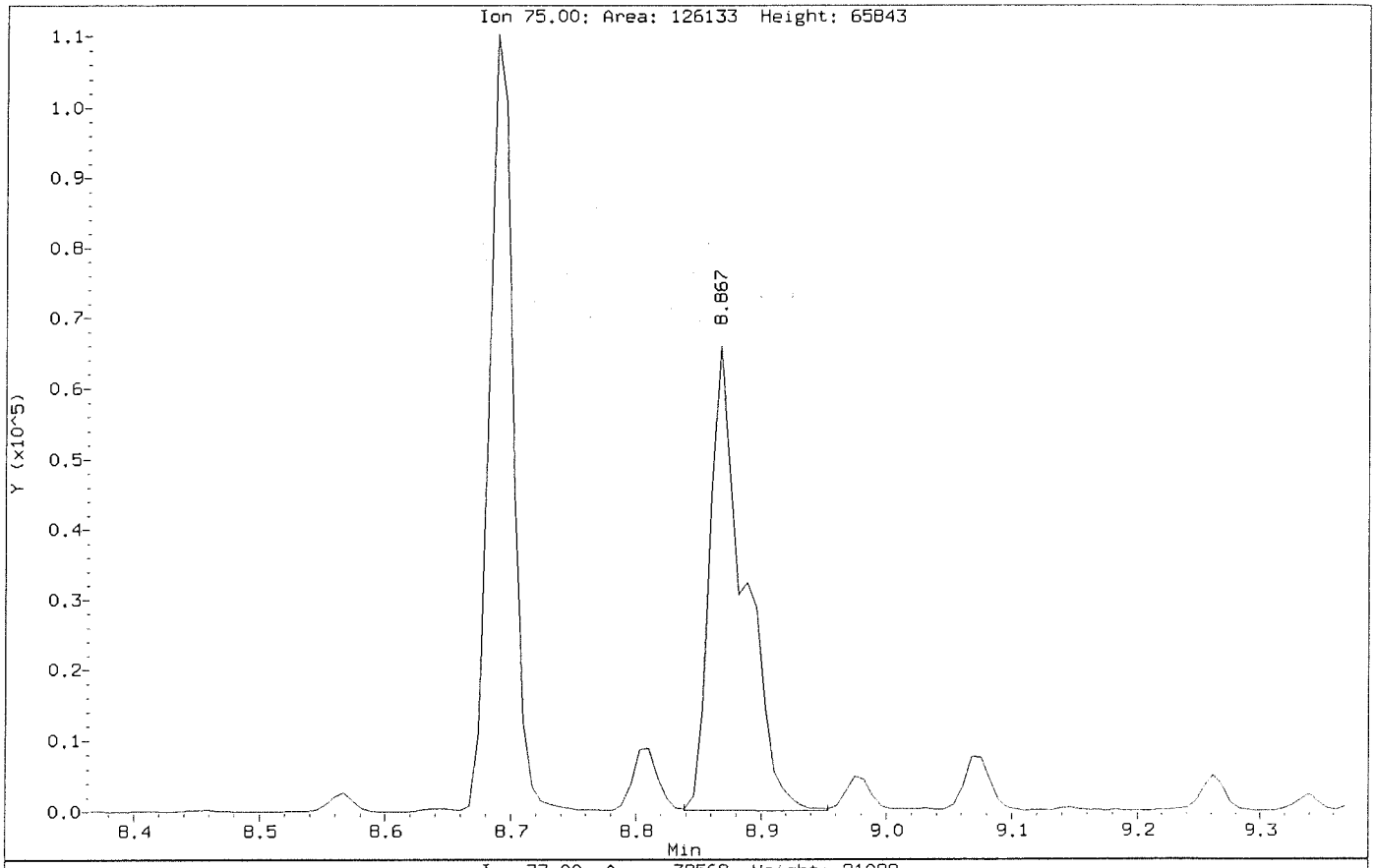


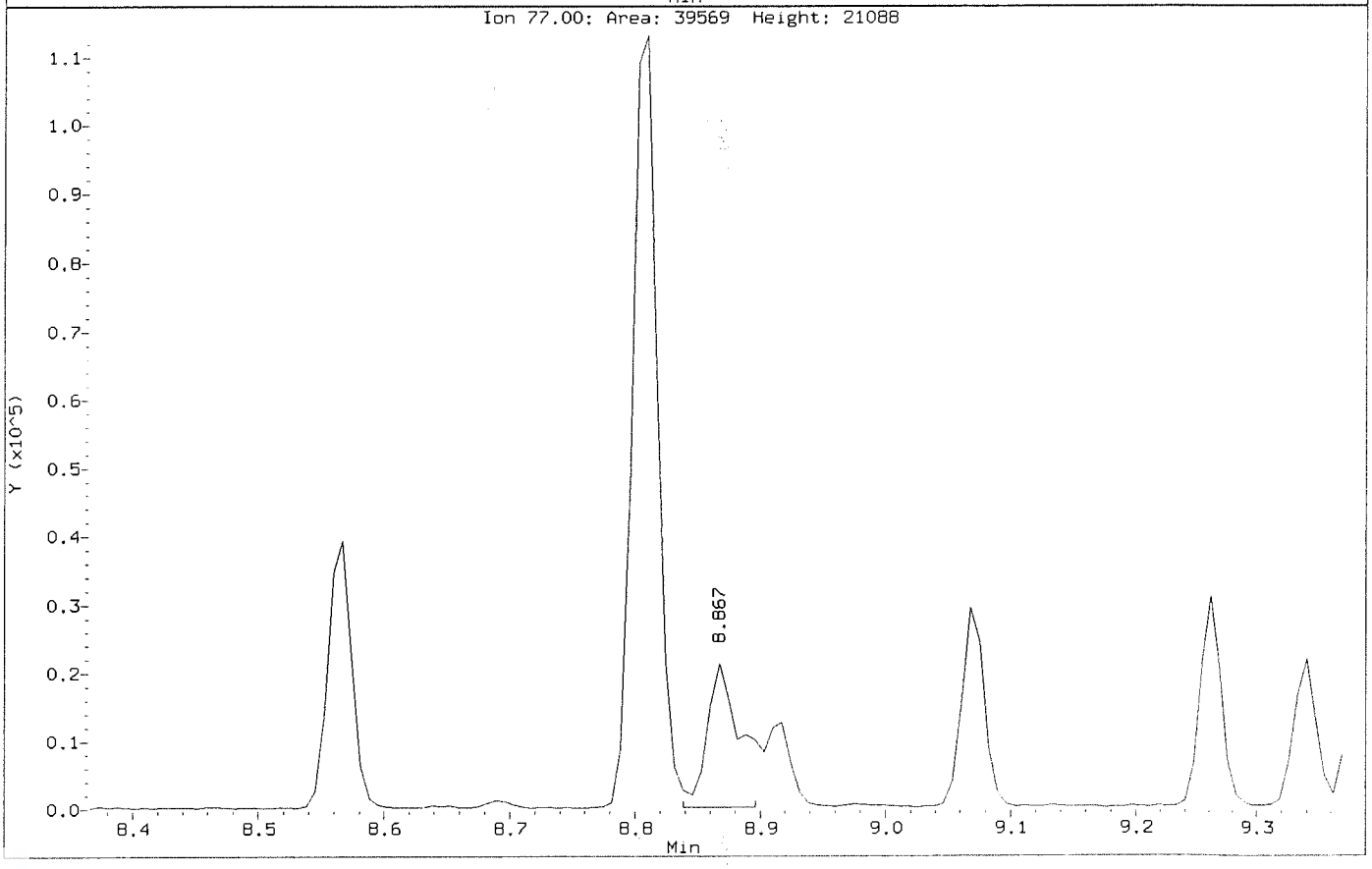

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080316.D
Date : 03-AUG-2020 17:39
Client ID: VLCSW-200803
Sample Info: VLCSW-200803;VLCSW-200803;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080316.D
Injection Date: 03-AUG-2020 17:39
Instrument: voa6.i
Client Sample ID: VLCSW-200803

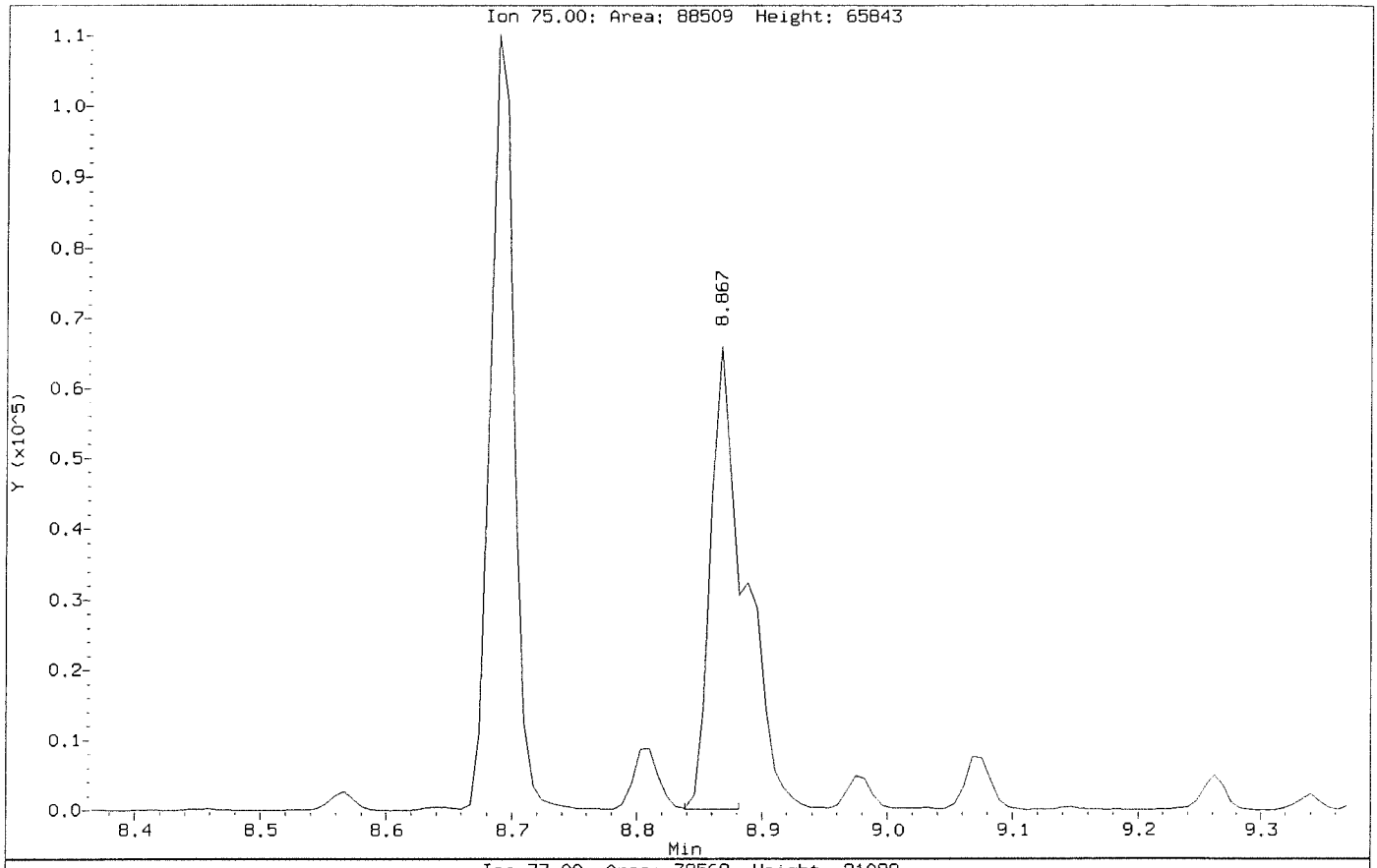
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

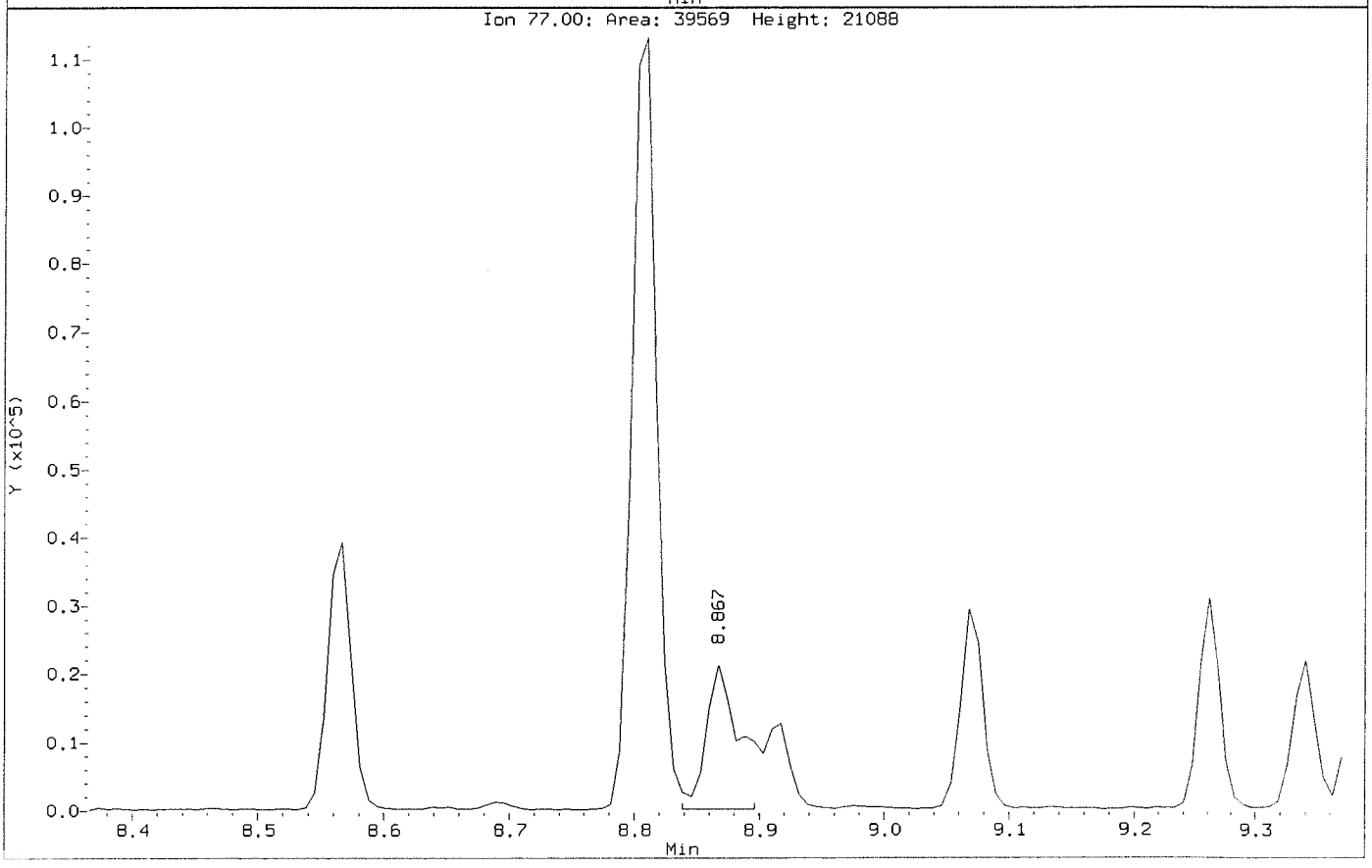


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080316.D
Injection Date: 03-AUG-2020 17:39
Instrument: voa6.i
Client Sample ID: VLCSW-200803

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080319.D
Lab Smp Id: VBLKW-200803 Client Smp ID: VBLKW-200803
Inj Date : 03-AUG-2020 18:52
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200803;VBLKW-200803;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:30 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

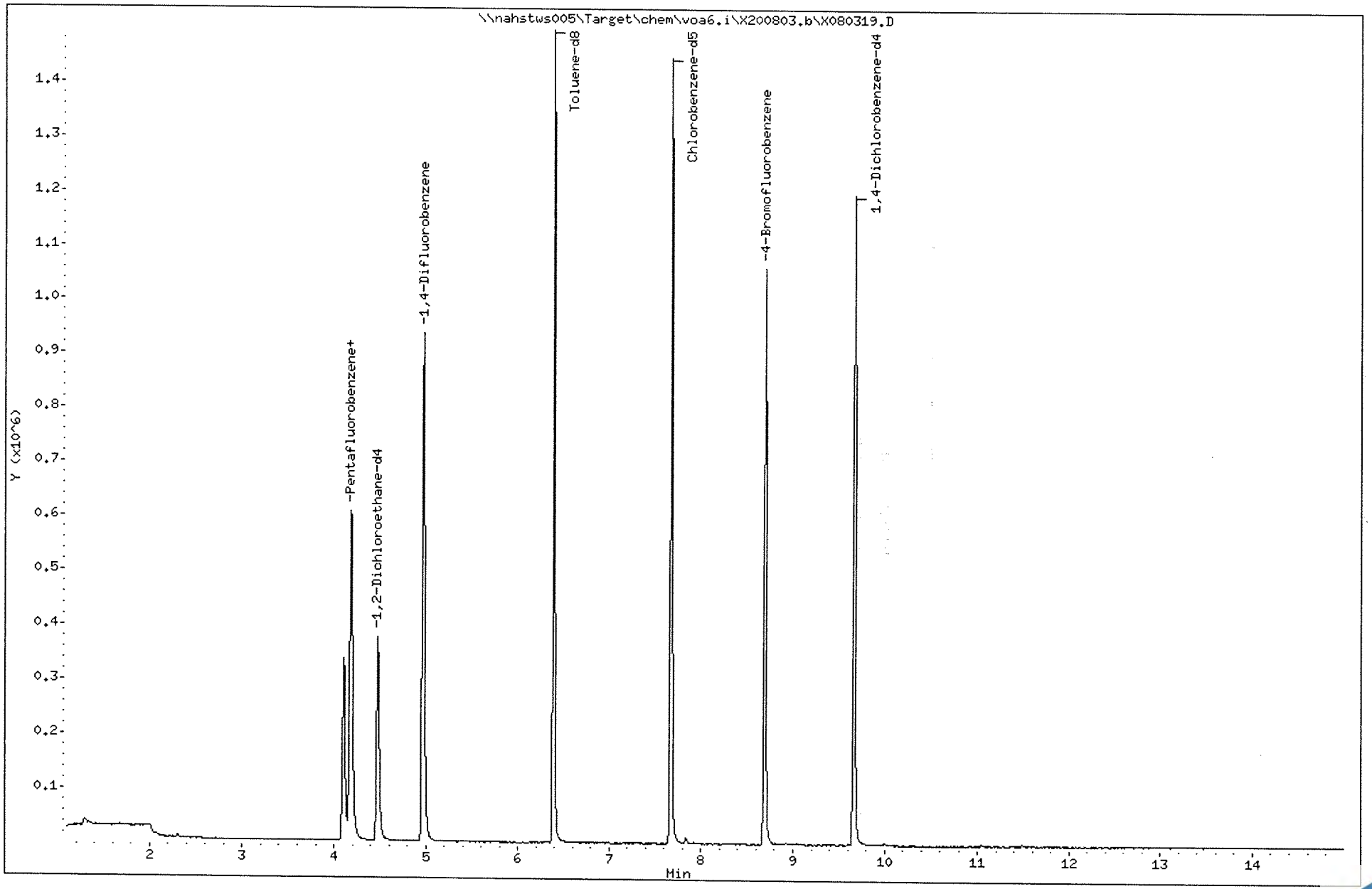
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 517121 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 756362 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 655305 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 305628 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 234749 | 46.2261 | 46.22 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 273193 | 45.3854 | 45.38 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 844352 | 53.1213 | 53.12 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 300591 | 49.0222 | 49.02 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080319.D
Date : 03-AUG-2020 18:52
Client ID: VBLKW-200803
Sample Info: VBLKW-200803;VBLKW-200803;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080324.D
Lab Smp Id: HS20070984-02 Client Smp ID: HS20070984-02
Inj Date : 03-AUG-2020 20:51
Operator : PC Inst ID: voa6.i
Smp Info : HS20070984-02;HS20070984-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:29 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

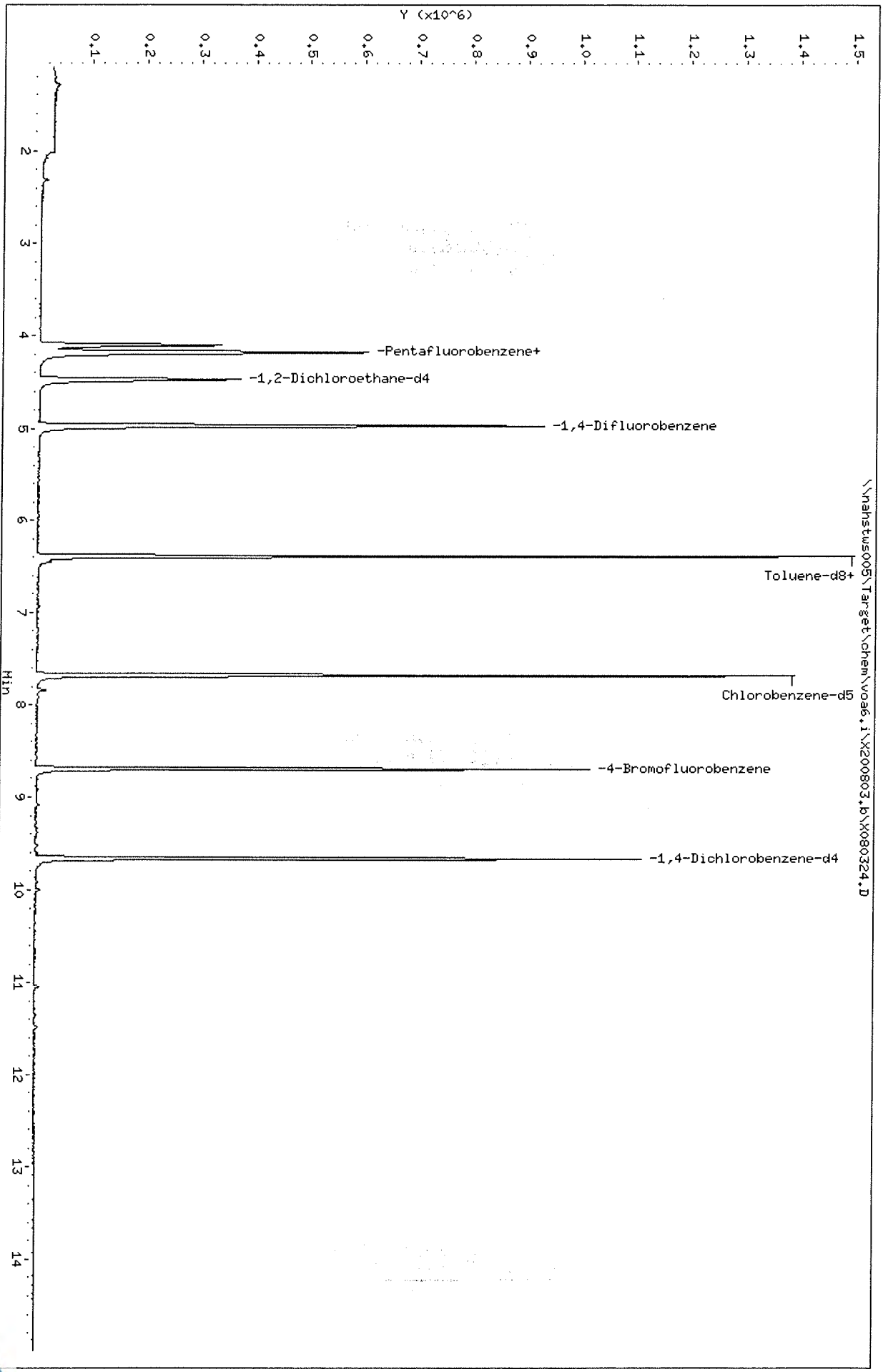
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 516248 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 743987 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 633305 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 282920 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 231559 | 45.6750 | 45.67 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 270847 | 45.0718 | 45.07 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 840912 | 54.7427 | 54.74 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 285732 | 48.2177 | 48.21 |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 10954 | 0.59228 | 0.59(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080324.D
Date : 03-AUG-2020 20:51
Client ID: HS200709B4-02
Sample Info: HS200709B4-02;HS200709B4-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080324.D



Date : 03-AUG-2020 20:51

Client ID: HS20070984-02

Instrument: voa6.i

Sample Info: HS20070984-02;HS20070984-02;;;

Purge Volume: 5.0

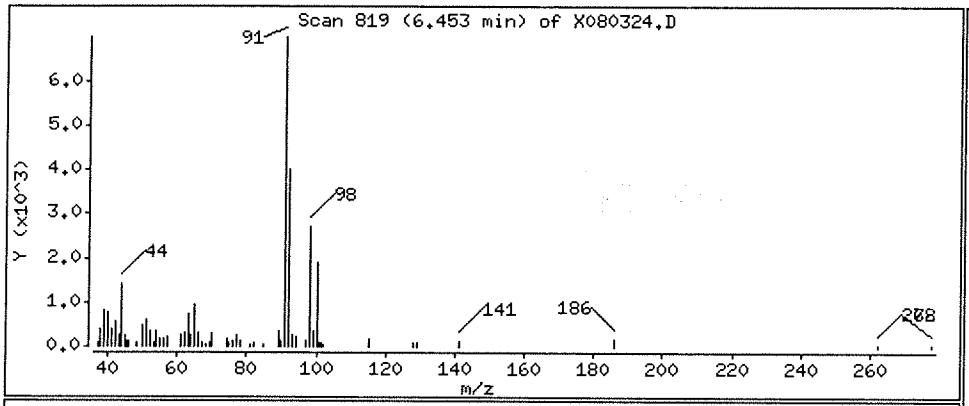
Operator: PC

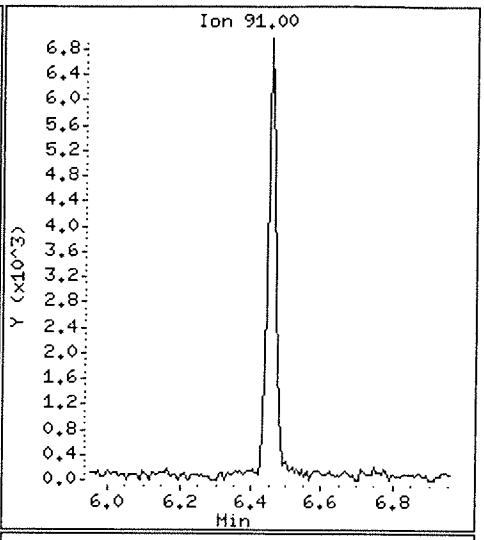
Column phase: DB624

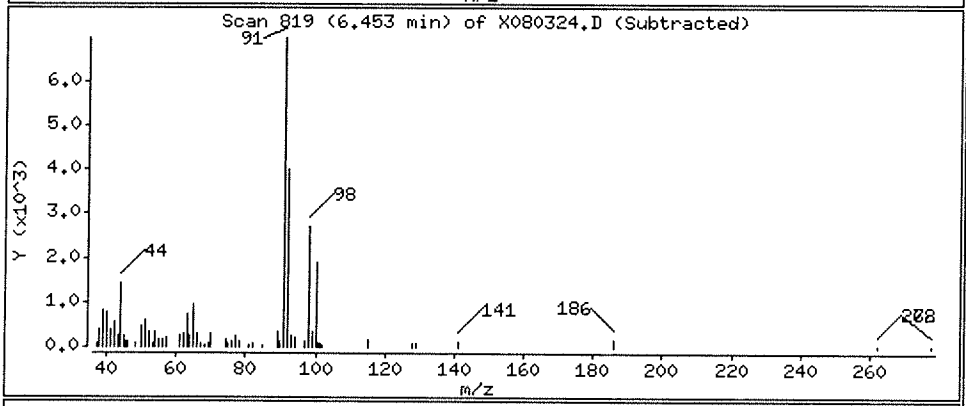
Column diameter: 0.18

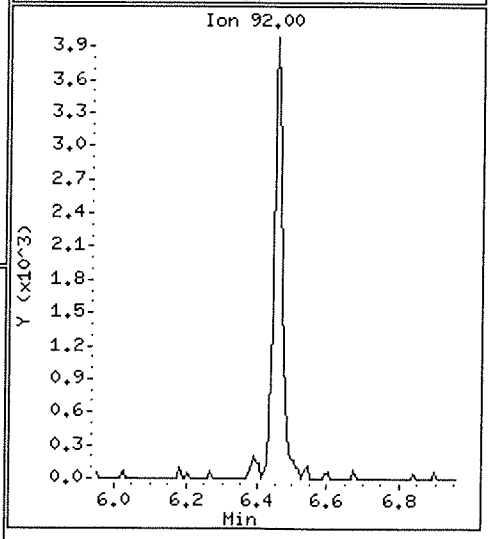
50 Toluene

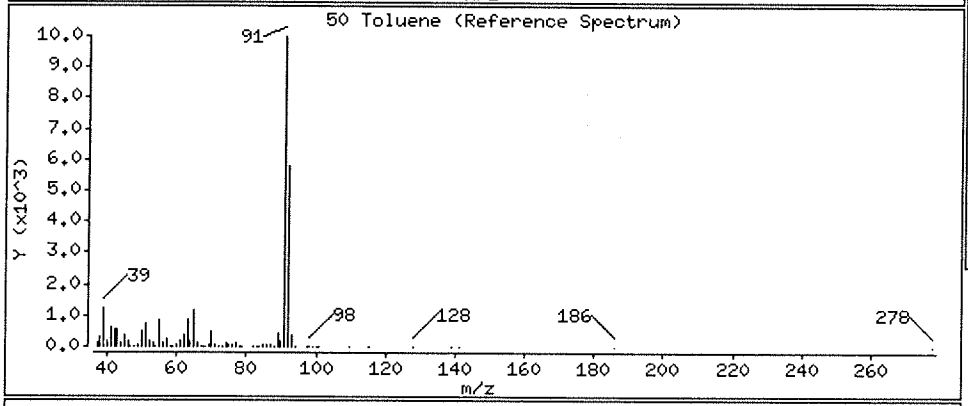
Concentration: 0.59 ug/l

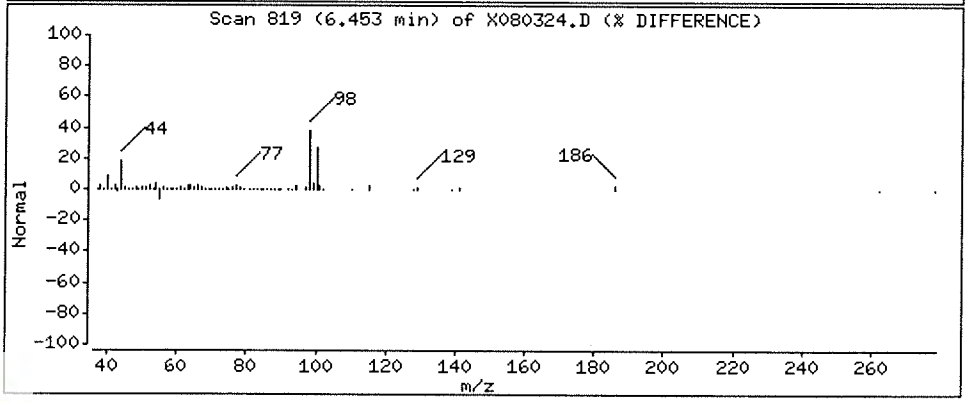


ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080325.D
Lab Smp Id: HS20070984-01 Client Smp ID: HS20070984-01
Inj Date : 03-AUG-2020 21:15
Operator : PC Inst ID: voa6.i
Smp Info : HS20070984-01;HS20070984-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:29 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

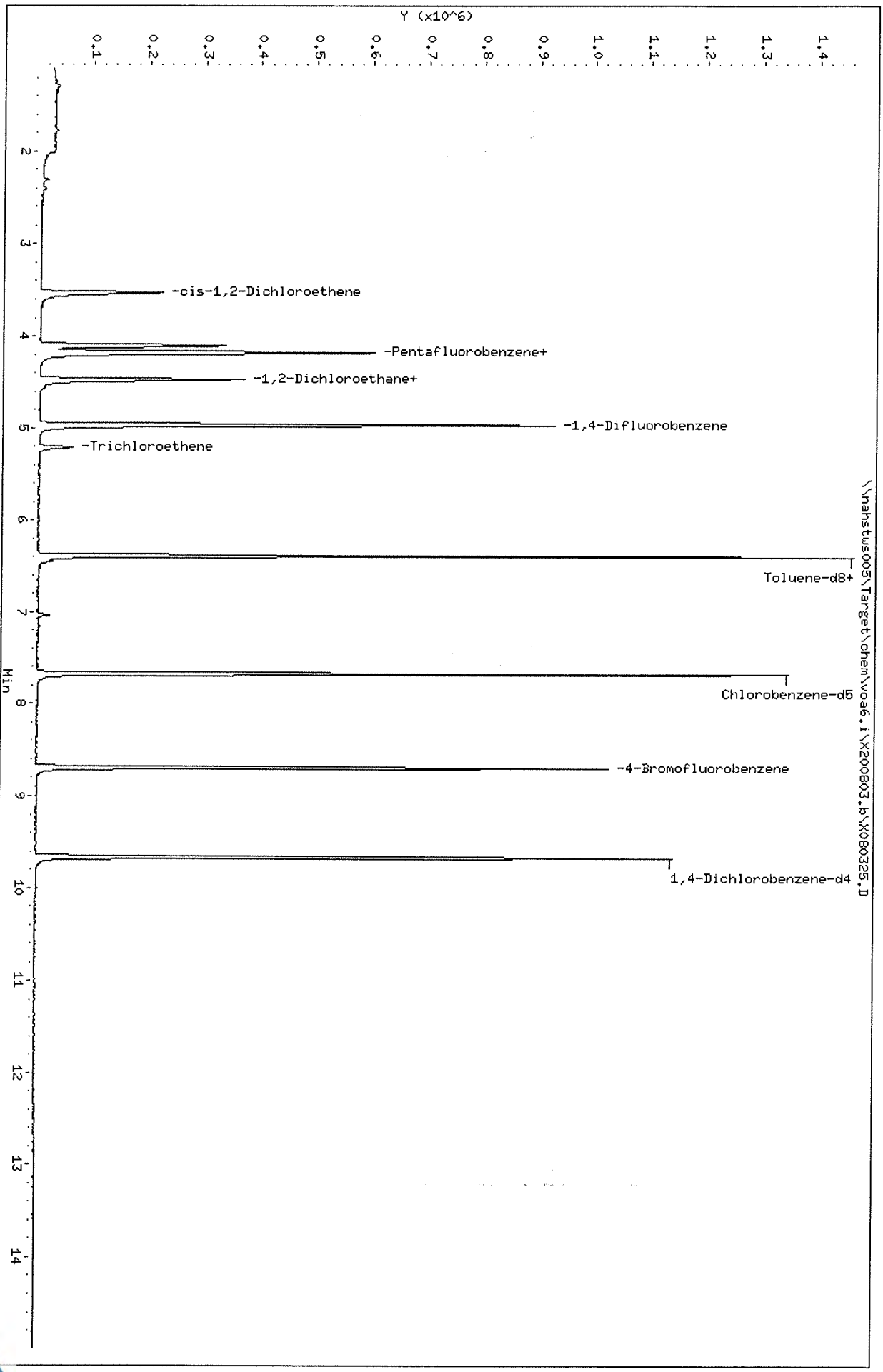
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 510343 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 744076 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 632088 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 291180 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 231632 | 46.2181 | 46.21 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 269926 | 45.4383 | 45.43 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 834423 | 54.4249 | 54.42 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 286444 | 48.4309 | 48.43 |
| 33 1,2-Dichloroethane | 62 | 4.569 | 4.562 | (0.919) | 5394 | 0.74873 | 0.74(a) |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 108665 | 19.3438 | 19.34 |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 12622 | 0.68378 | 0.68(a) |
| 38 Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 20110 | 3.81356 | 3.81(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080325.D
Date : 03-AUG-2020 21:15
Client ID: HS20070984-01
Sample Info: HS20070984-01;HS20070984-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080325.D



Date : 03-AUG-2020 21:15

Client ID: HS20070984-01

Instrument: voa6.i

Sample Info: HS20070984-01;HS20070984-01;;;

Purge Volume: 5.0

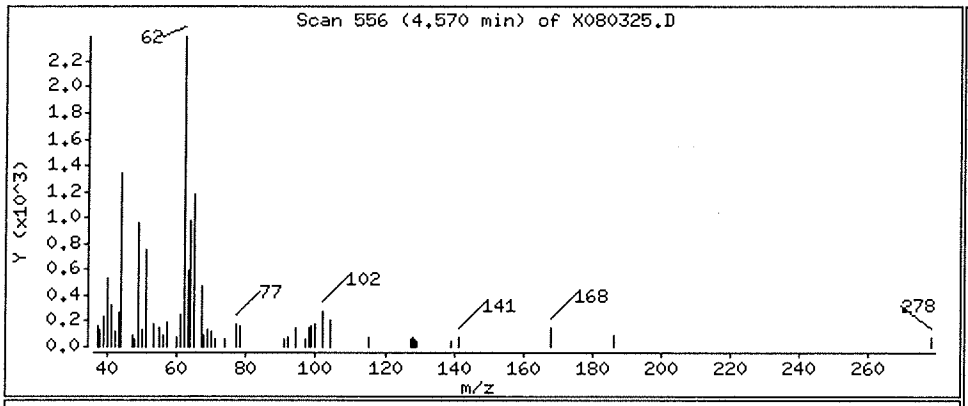
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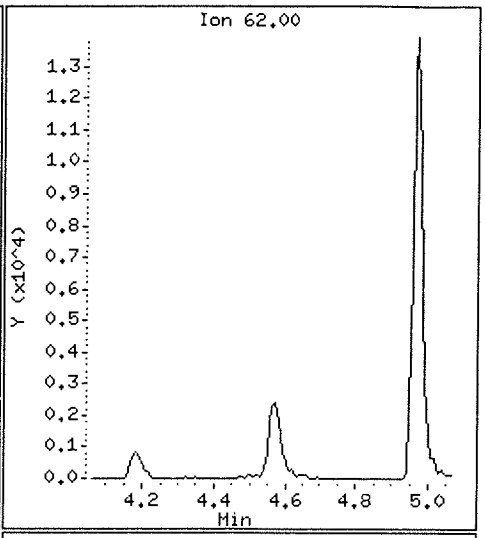
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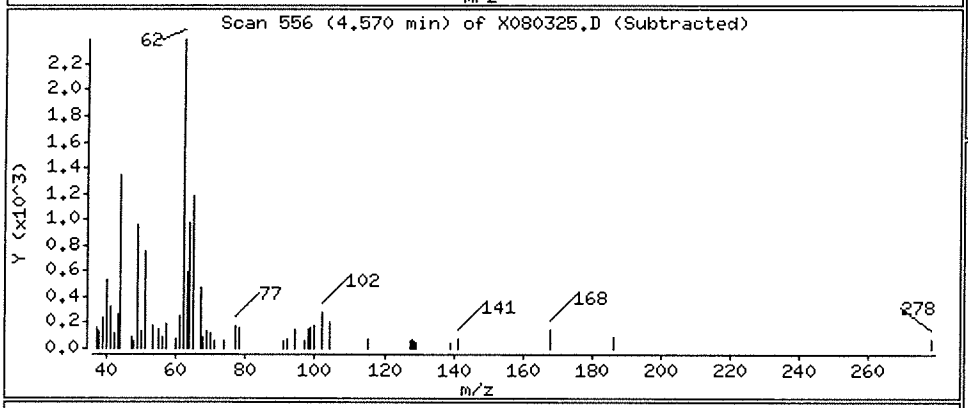
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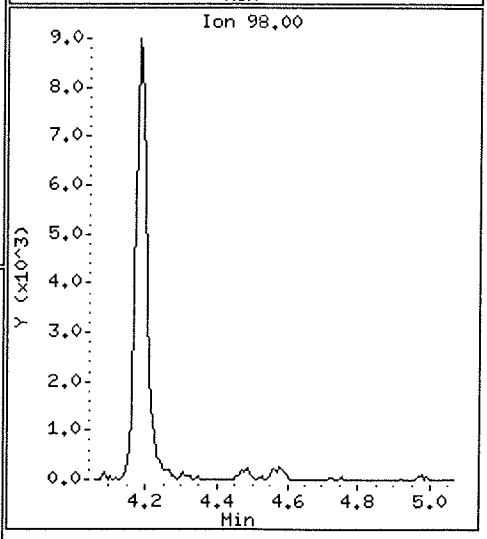
33 1,2-Dichloroethane

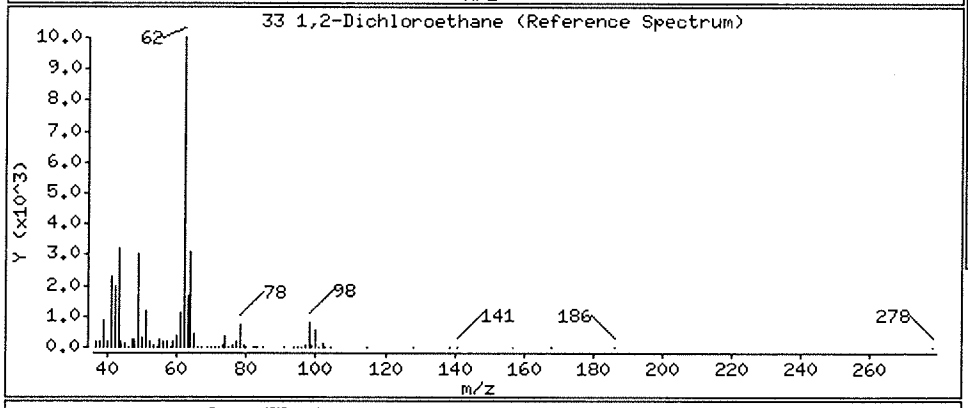
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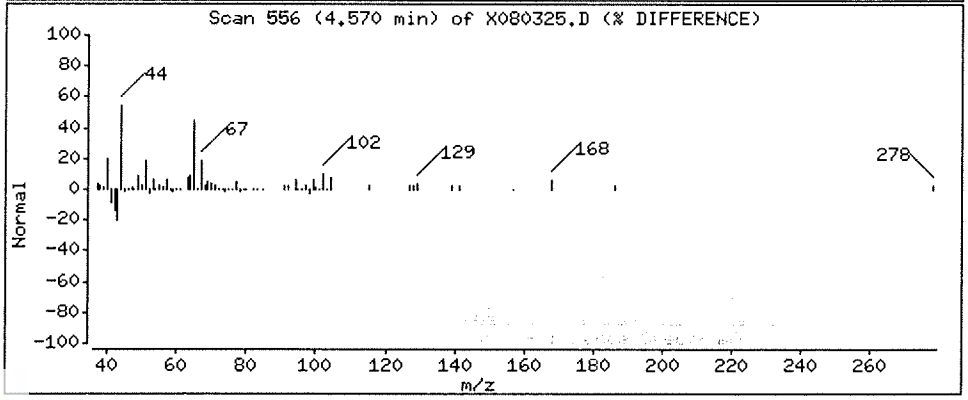


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Date : 03-AUG-2020 21:15

Client ID: HS20070984-01

Instrument: voa6.i

Sample Info: HS20070984-01;HS20070984-01;;;

Purge Volume: 5.0

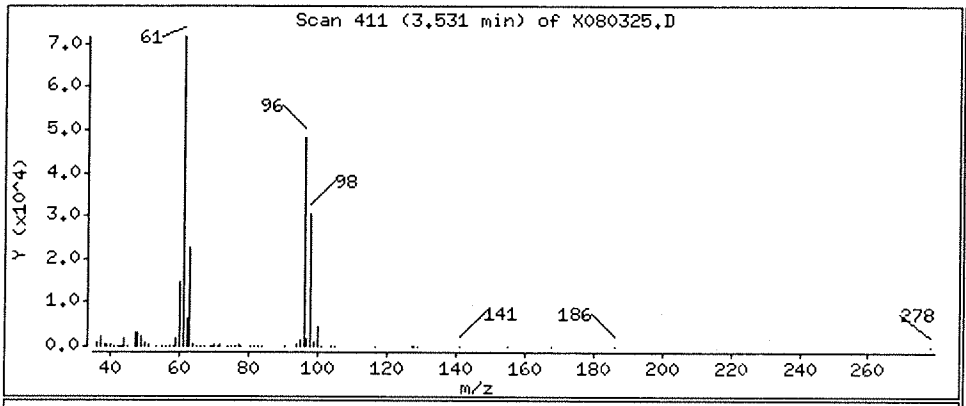
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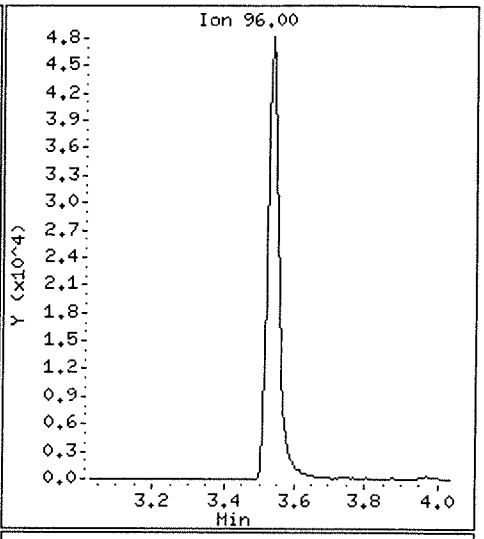
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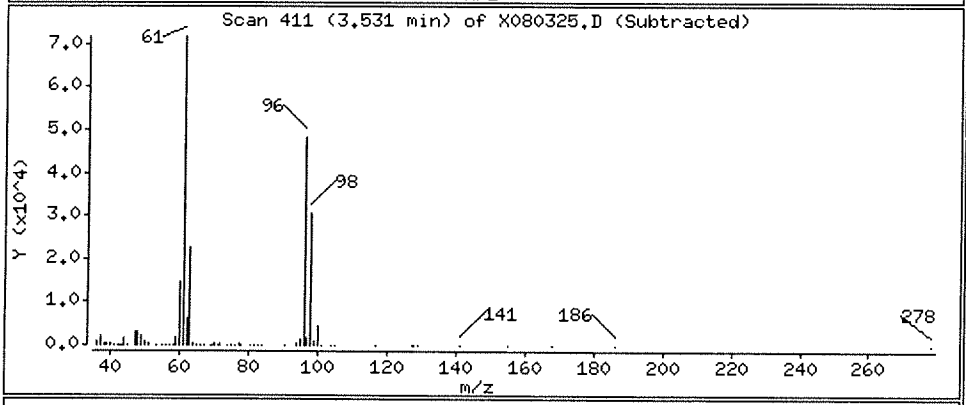
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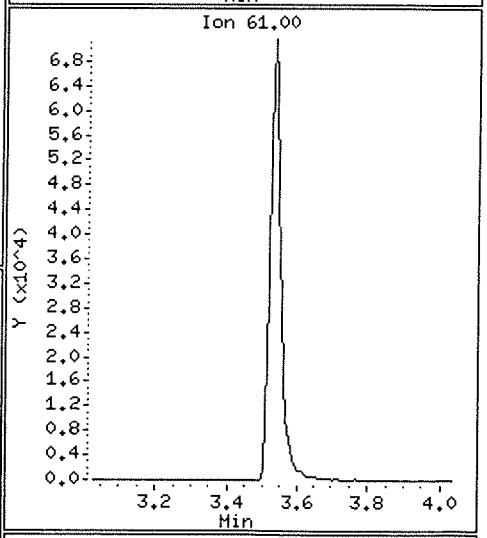
27 cis-1,2-Dichloroethene

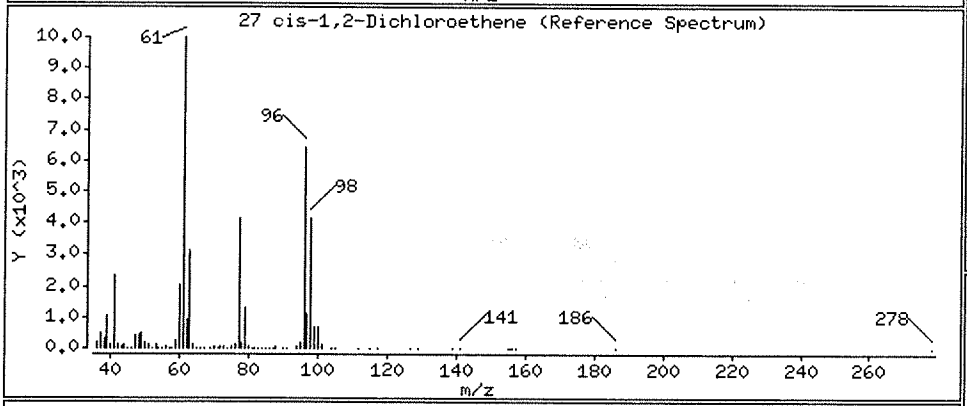
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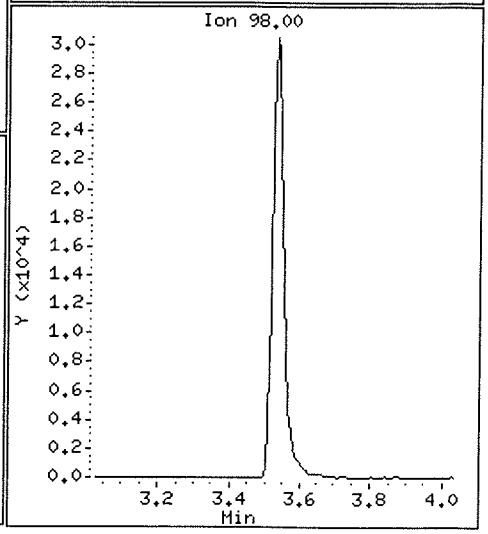


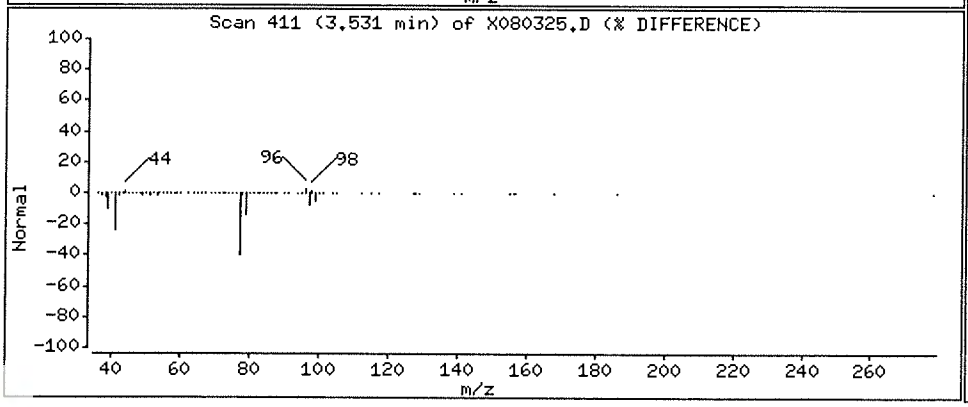



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080325.D



Date : 03-AUG-2020 21:15

Client ID: HS20070984-01

Instrument: voa6.i

Sample Info: HS20070984-01;HS20070984-01;;;

Purge Volume: 5.0

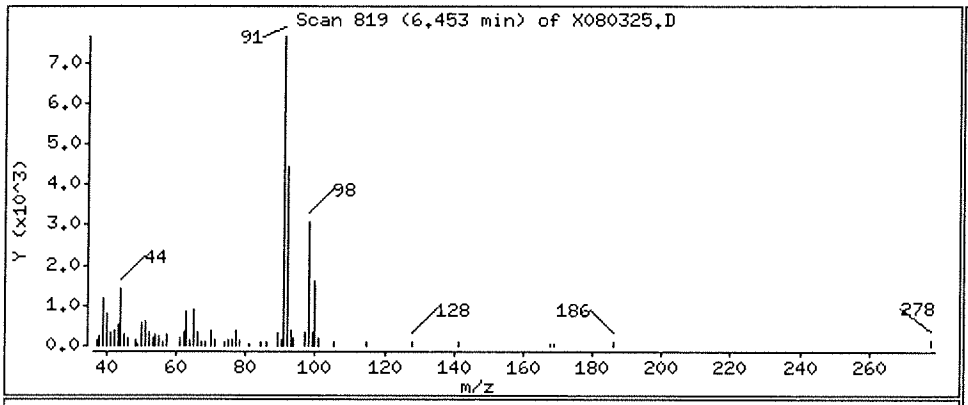
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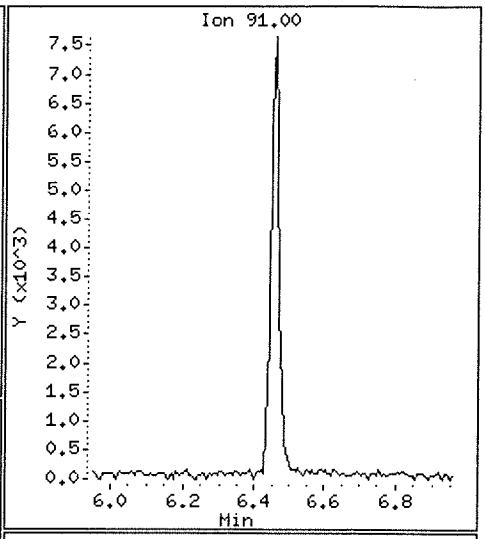
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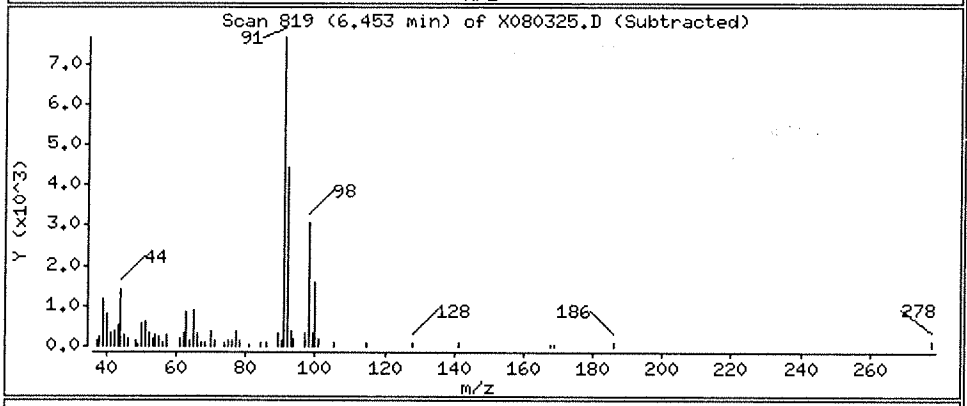
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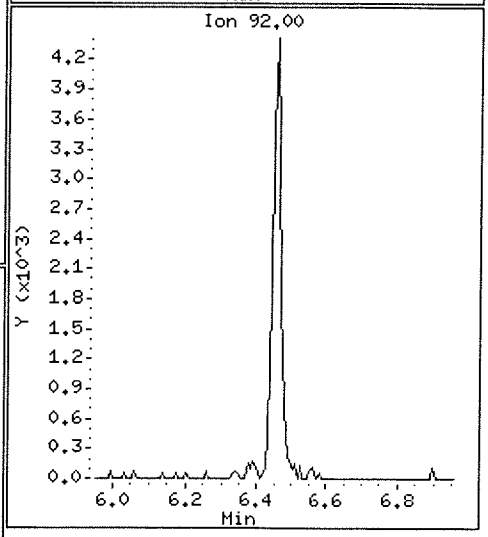
50 Toluene

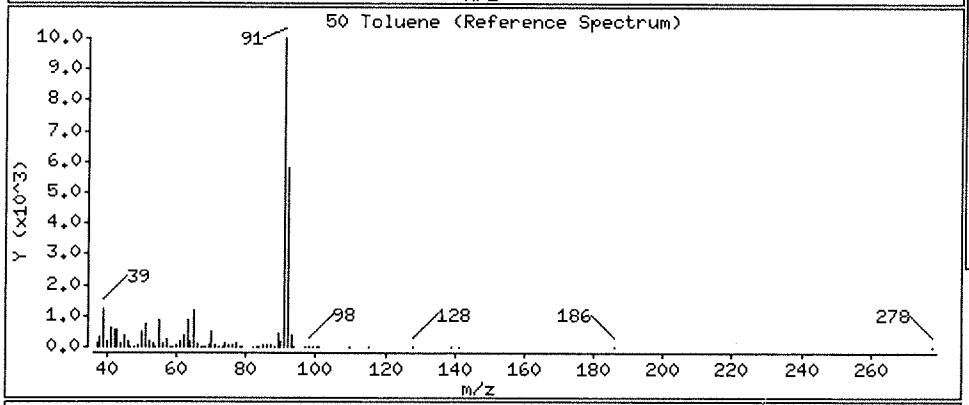
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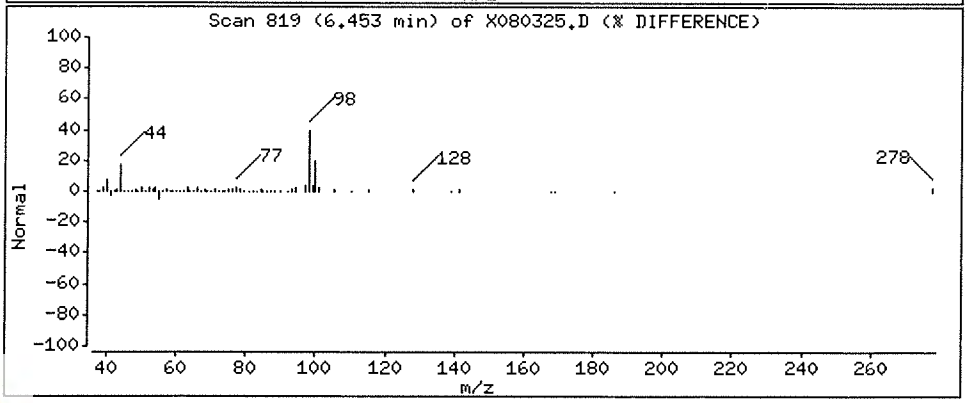


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Date : 03-AUG-2020 21:15

Client ID: HS20070984-01

Instrument: voa6.i

Sample Info: HS20070984-01;HS20070984-01;;;

Purge Volume: 5.0

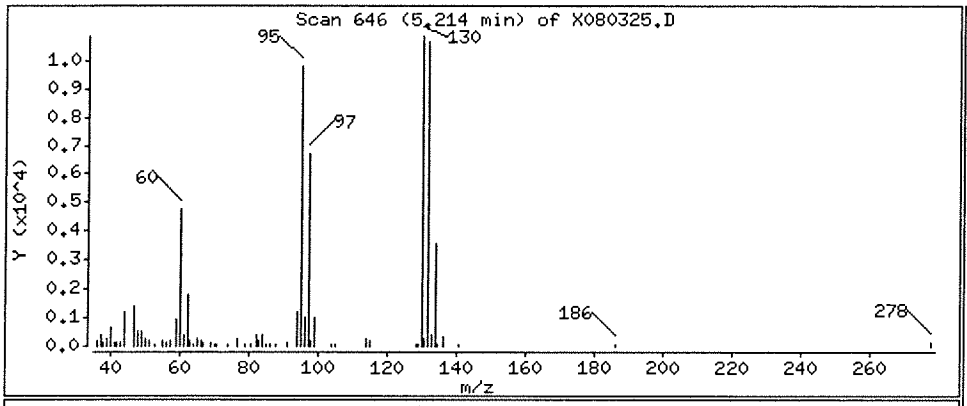
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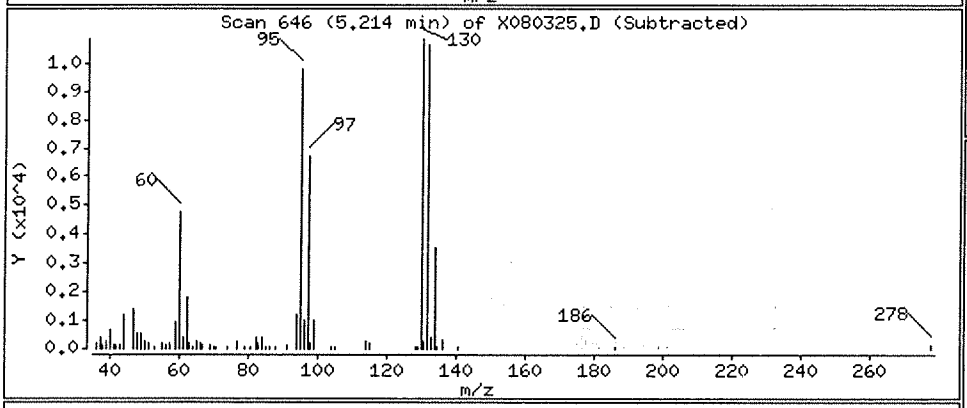
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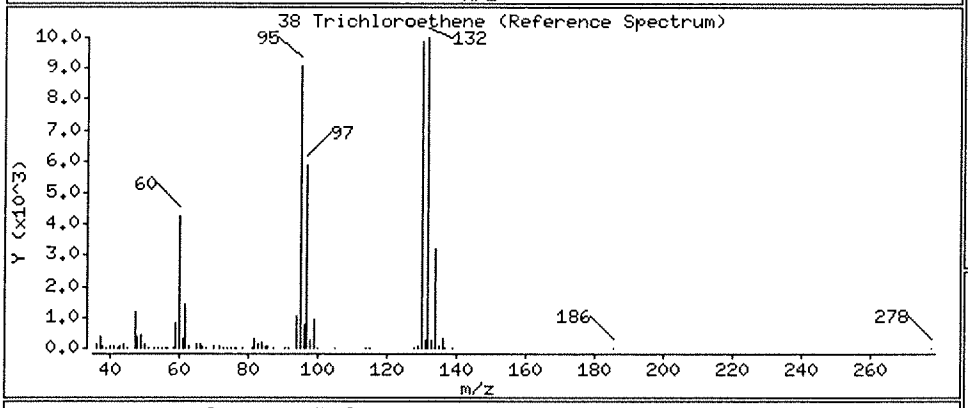
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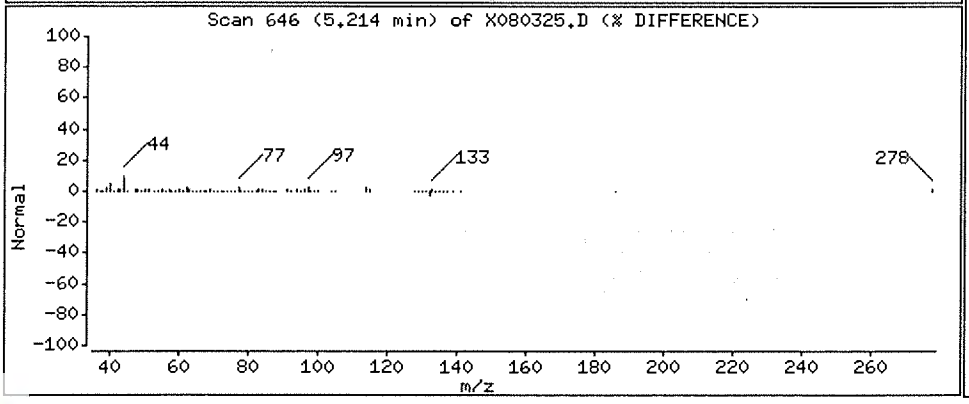
38 Trichloroethene

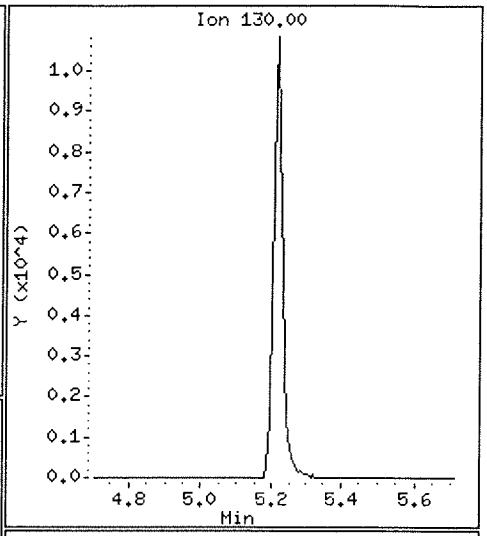
Concentration: 3.81 ug/l

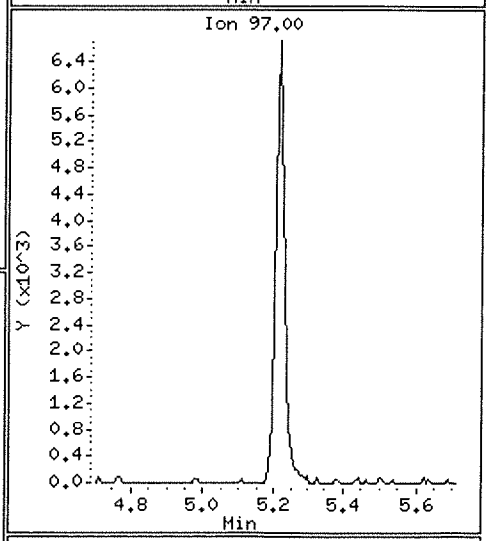


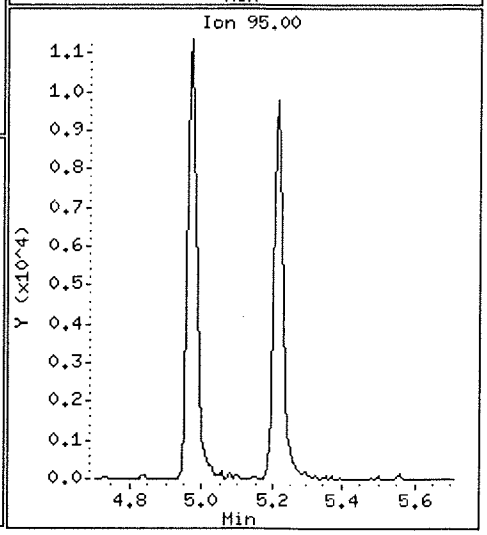



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080326.D Page 1
Report Date: 22-Aug-2020 12:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080326.D
Lab Smp Id: HS20070984-01MS Client Smp ID: HS20070984-01MS
Inj Date : 03-AUG-2020 21:39
Operator : PC Inst ID: voa6.i
Smp Info : HS20070984-01MS;HS20070984-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:30 dev.giga Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 27 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

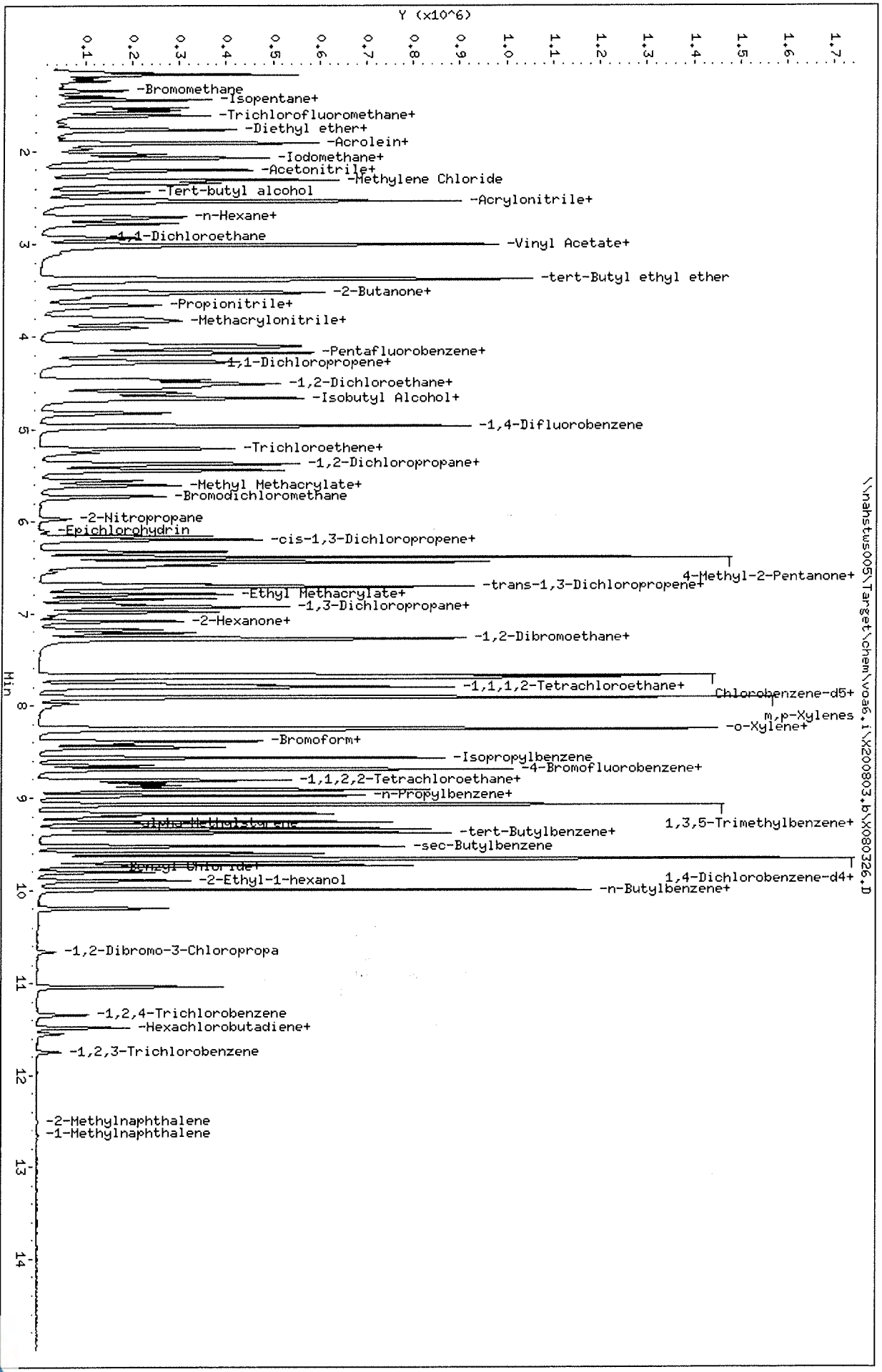
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 486130 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 727989 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 638250 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.669 | (1.000) | 297050 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 227484 | 47.6512 | 47.65 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 260710 | 46.0728 | 46.07 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 813855 | 52.5708 | 52.57 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.688 | 8.695 | (1.133) | 293414 | 49.1304 | 49.13 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 112677 | 23.1921 | 23.19 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 180063 | 24.0468 | 24.04 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.845 | (0.915) | 112528 | 23.7189 | 23.71 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.847 | (0.892) | 83930 | 23.1104 | 23.11 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 229792 | 24.1993 | 24.19 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.912 | (0.458) | 97597 | 25.3383 | 25.33 |
| | 32 1,1-Dichloropropene | 75 | 4.290 | 4.283 | (0.863) | 147280 | 24.0753 | 24.07 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 14770 | 16.5231 | 16.52 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 95679 | 22.0052 | 22.00(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.338 | (1.174) | 31932 | 18.5646 | 18.56 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 385656 | 24.3023 | 24.30 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 8006 | 19.3400 | 19.34 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 108583 | 23.2080 | 23.20 |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.035) | 187391 | 22.3030 | 22.30 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080326.D Page 2
Report Date: 22-Aug-2020 12:31

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 168306 | 23.8784 | 23.87 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 126624 | 23.6998 | 23.69 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 382963 | 24.6720 | 24.67 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.612 | (0.994) | 216448 | 23.1823 | 23.18 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 165687 | 23.1057 | 23.10 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.684 | (1.002) | 210038 | 22.7475 | 22.74 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 160915 | 23.2080 | 23.20 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 101081 | 42.4155 | 42.41 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.982 | (0.929) | 313612 | 24.3344 | 24.33 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 172703 | 43.1017 | 43.10 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 358385 | 23.9034 | 23.90 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 402076 | 24.4433 | 24.44 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.331 | (0.824) | 260850 | 44.1588 | 44.15 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 71940 | 41.8362 | 41.83 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 432092 | 23.9232 | 23.92 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.912) | 137015 | 23.5792 | 23.57 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 64263 | 21.9310 | 21.93 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.730 | (1.153) | 148005 | 22.5842 | 22.58 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 76232 | 21.5274 | 21.52 |
| 6 | Bromomethane | 94 | 1.339 | 1.331 | (0.320) | 76926 | 23.3433 | 23.34 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 583605 | 48.7996 | 48.79 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 157661 | 24.2467 | 24.24 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 296836 | 23.7300 | 23.72 |
| 7 | Chloroethane | 64 | 1.403 | 1.396 | (0.335) | 77809 | 22.5815 | 22.58(M) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 199842 | 23.0097 | 23.00 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 146699 | 21.4926 | 21.49 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 228353 | 42.6746 | 42.67 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 173588 | 22.6528 | 22.65 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 114555 | 22.4069 | 22.40 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 71711 | 22.6349 | 22.63 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 98166 | 20.6323 | 20.63 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.807 | (1.017) | 156473 | 24.2258 | 24.22 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.188) | 32574 | 20.4254 | 20.42 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 470989 | 24.8417 | 24.84 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 375869 | 48.2220 | 48.22 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 117001 | 22.6153 | 22.61 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.035) | 317922 | 24.2007 | 24.20 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.923) | 531896 | 24.8557 | 24.85 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.195) | 41949 | 17.9586 | 17.95 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 183049 | 23.9073 | 23.90 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.986) | 445387 | 24.6805 | 24.68 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 316396 | 23.7981 | 23.79 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.967) | 336303 | 24.9892 | 24.98 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 100331 | 24.7284 | 24.72 |
| 50 | Toluene | 91 | 6.446 | 6.453 | (0.840) | 463107 | 24.8460 | 24.84 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 108242 | 23.7515 | 23.75 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 155478 | 22.1370 | 22.13 |
| 38 | Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 142383 | 27.5974 | 27.59 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 174069 | 24.3135 | 24.31 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 146214 | 23.3660 | 23.36 |

QC Flag Legend

M - Compound response manually integrated.

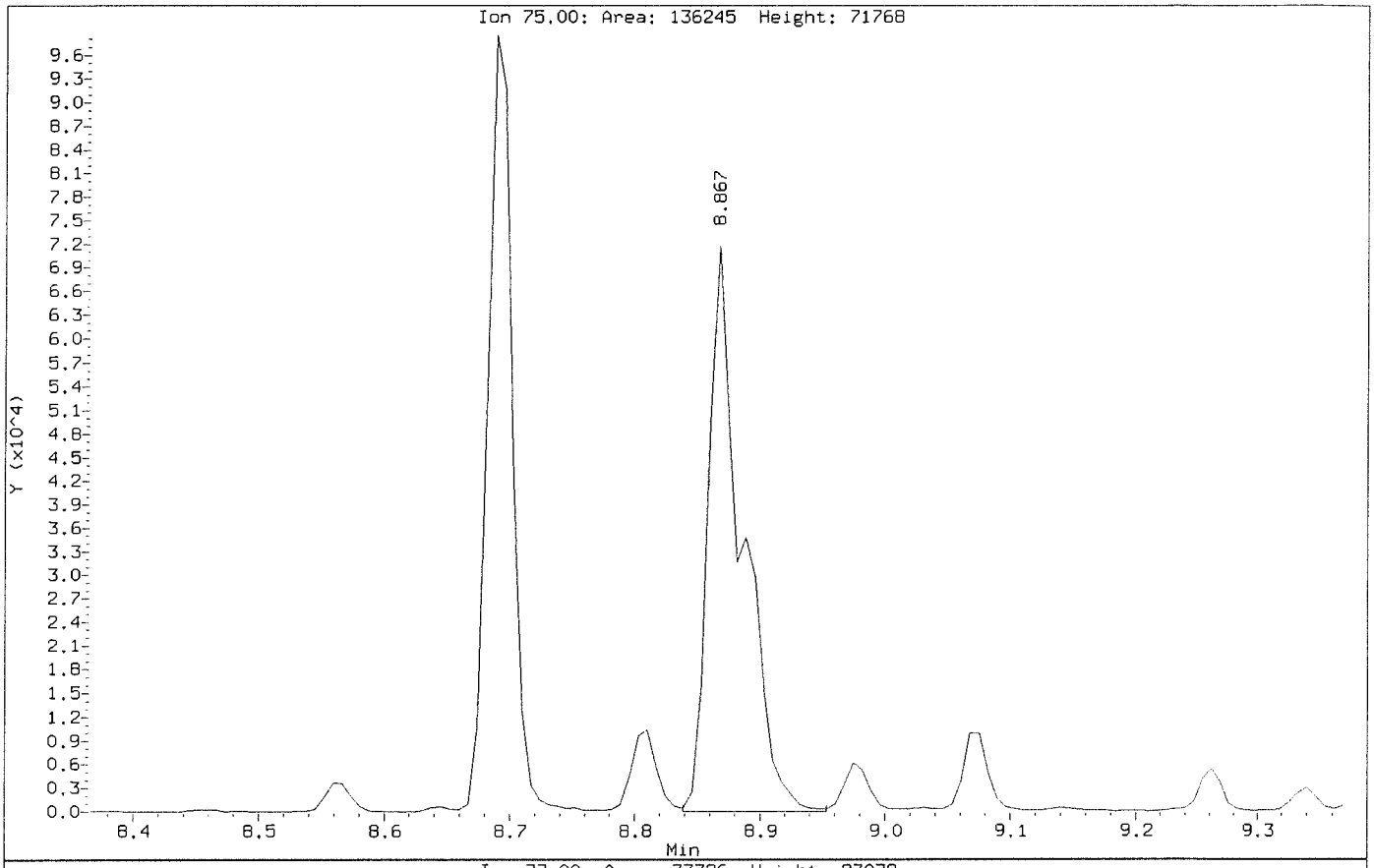


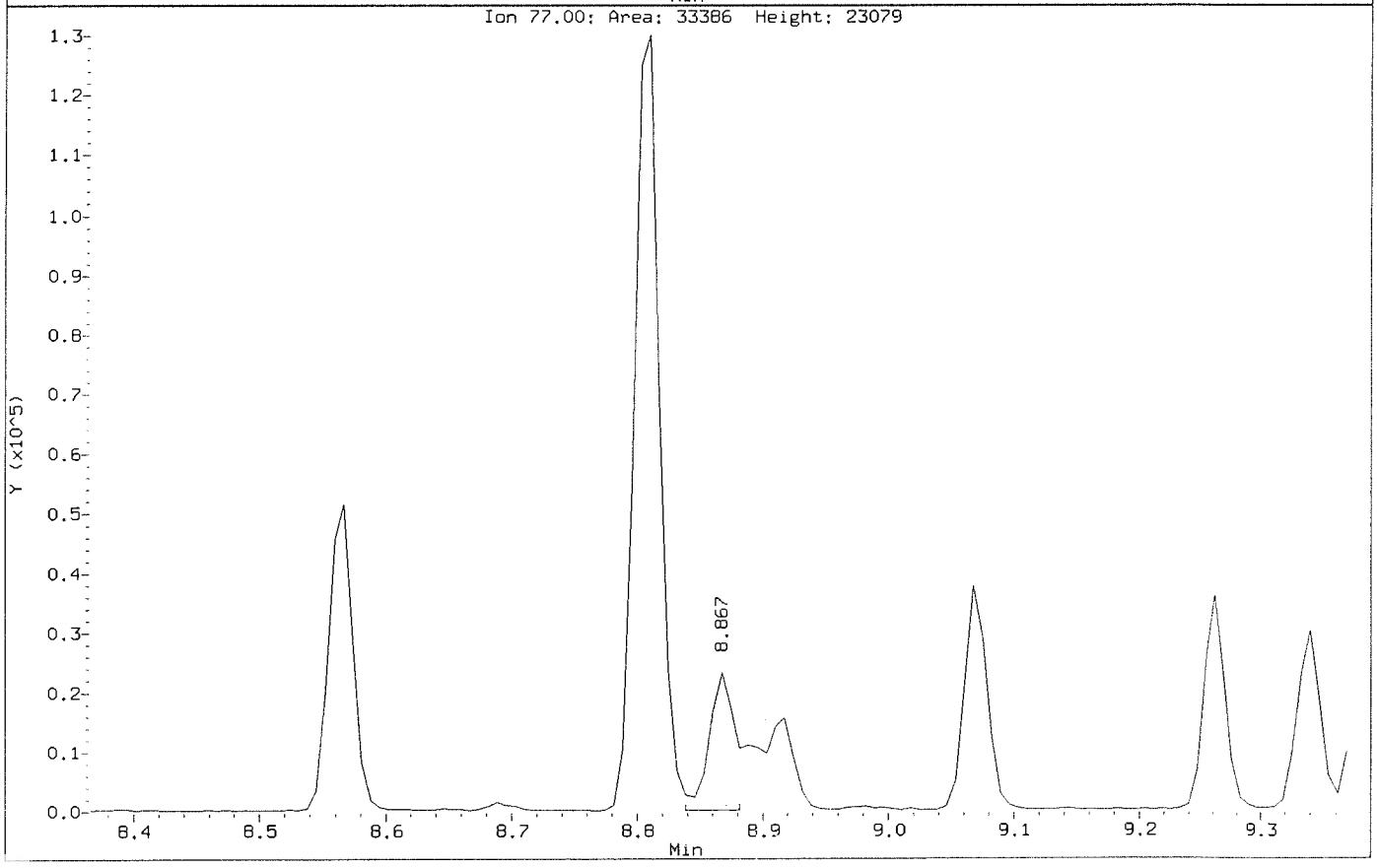

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Date : 03-AUG-2020 21:39
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Sample Info: HS200709B4-01MS;HS200709B4-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080326.D
Injection Date: 03-AUG-2020 21:39
Instrument: voa6.i
Client Sample ID: HS20070984-01MS

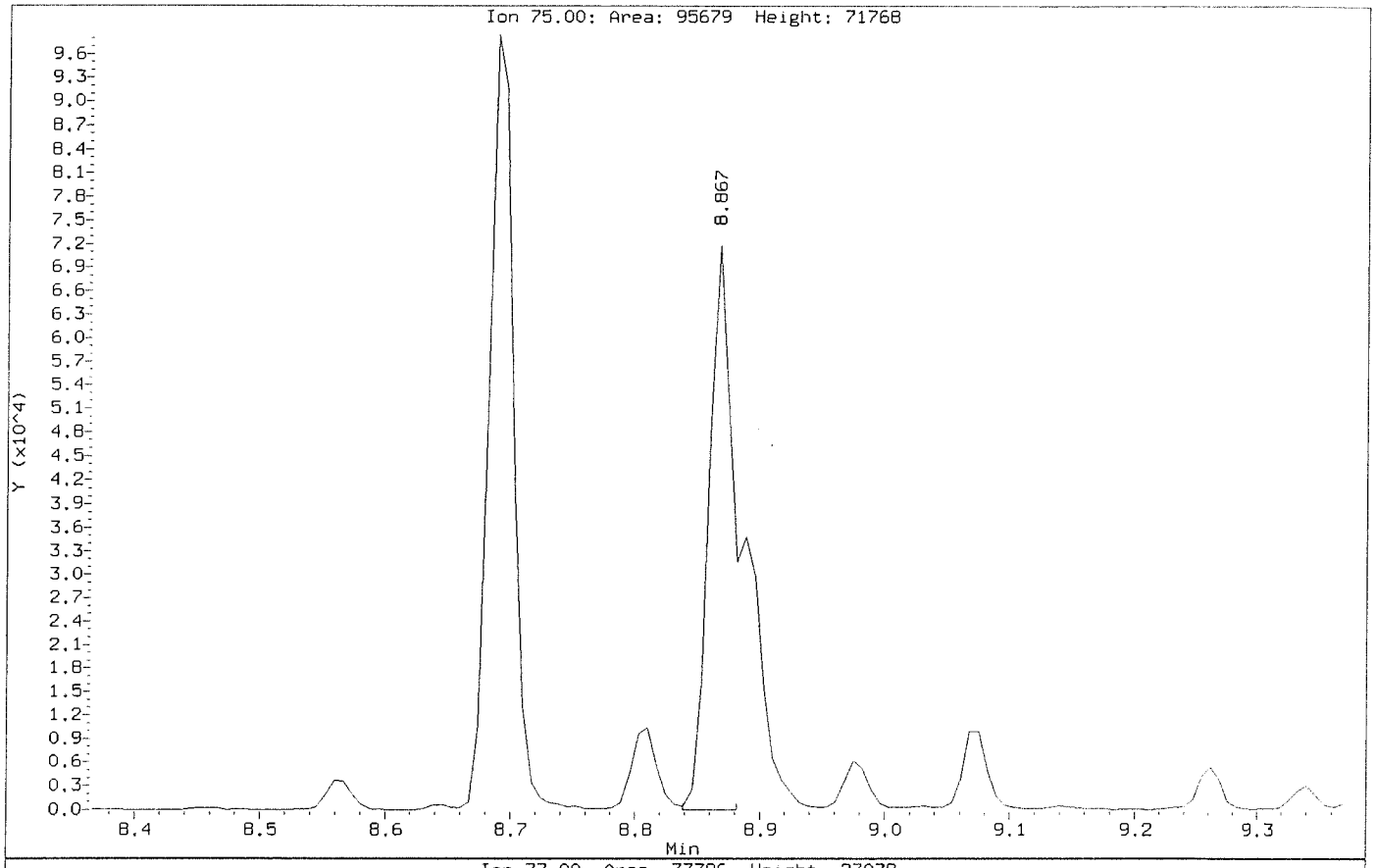
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

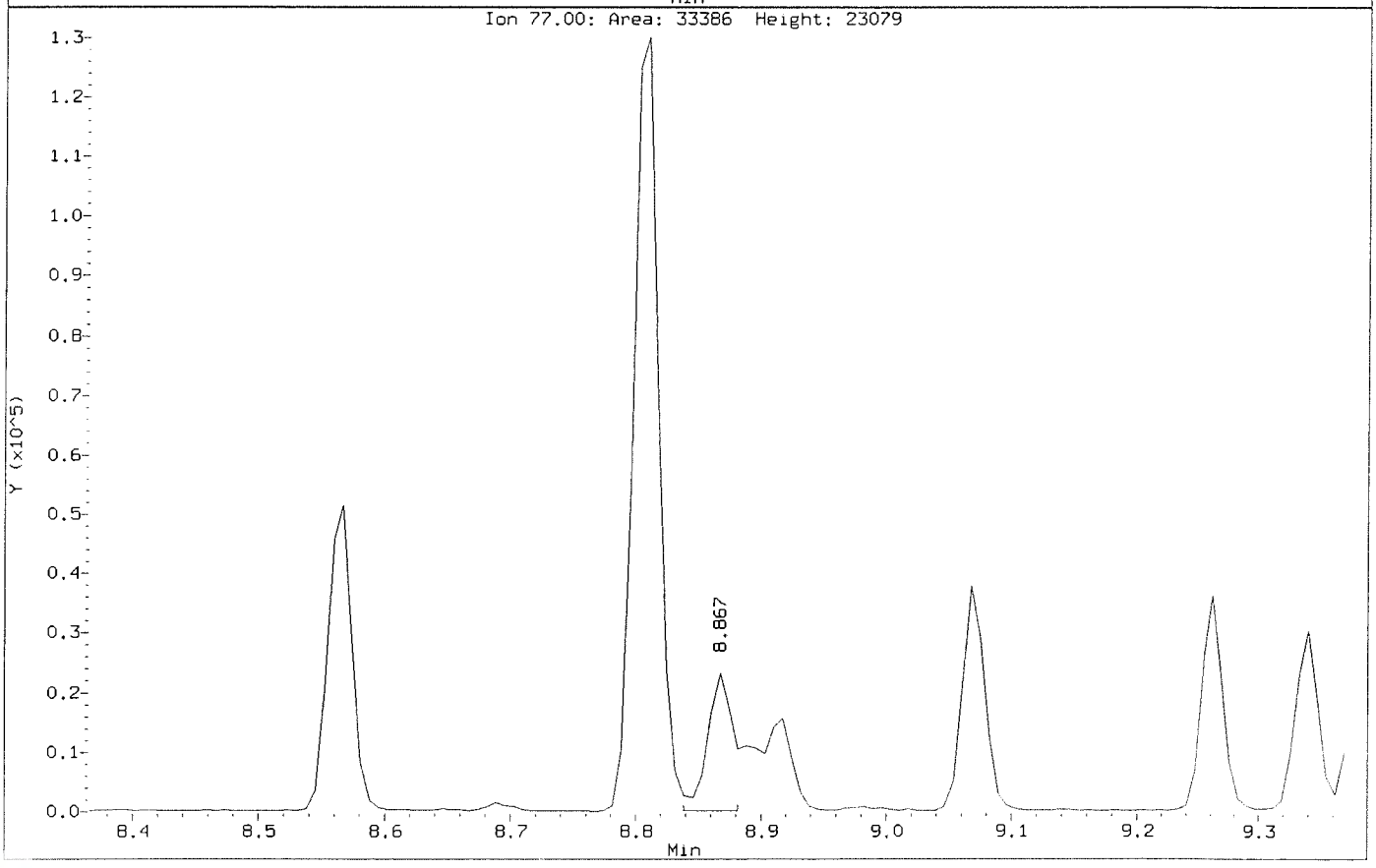


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Instrument: voa6.i
Client Sample ID: HS20070984-01MS

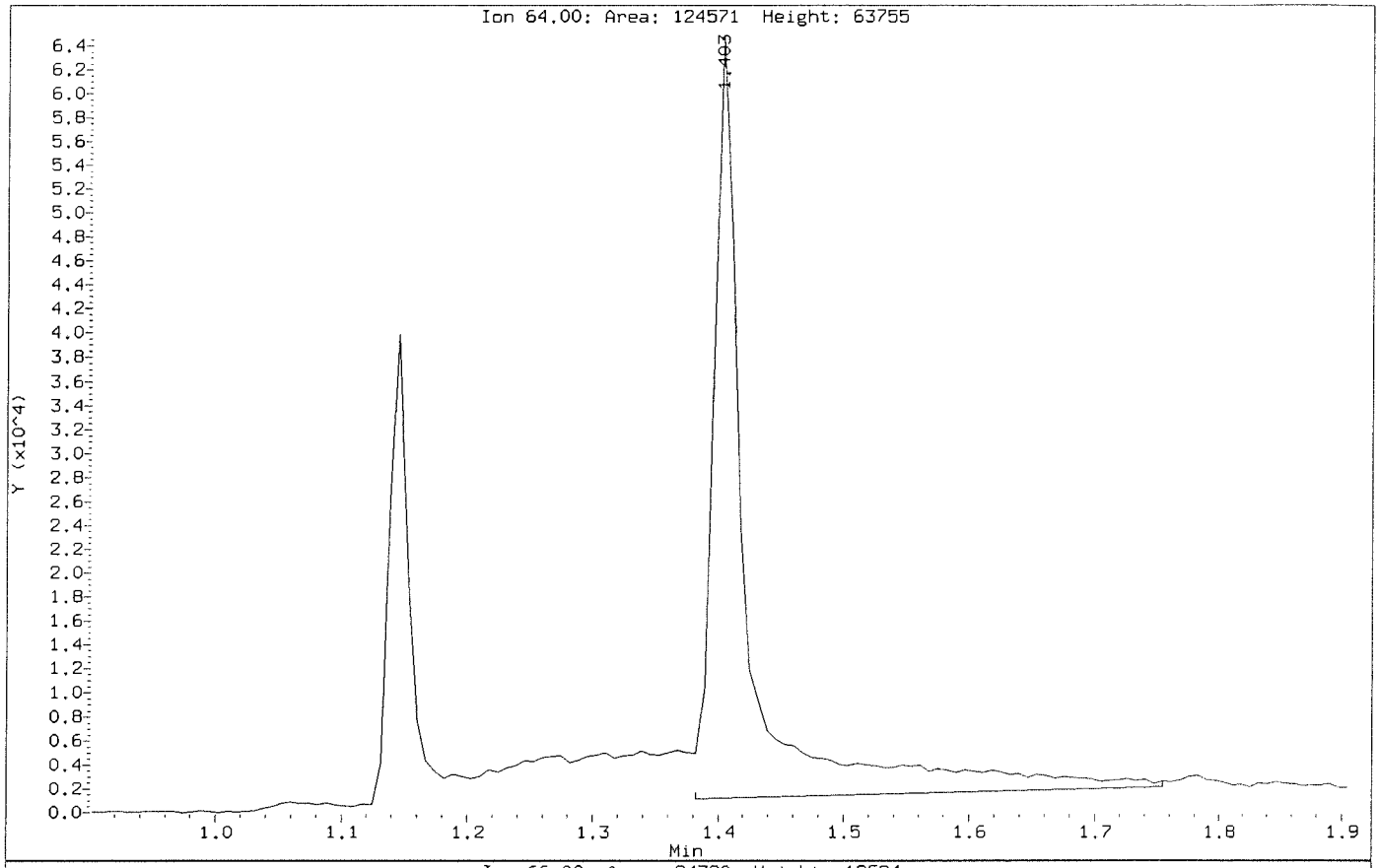
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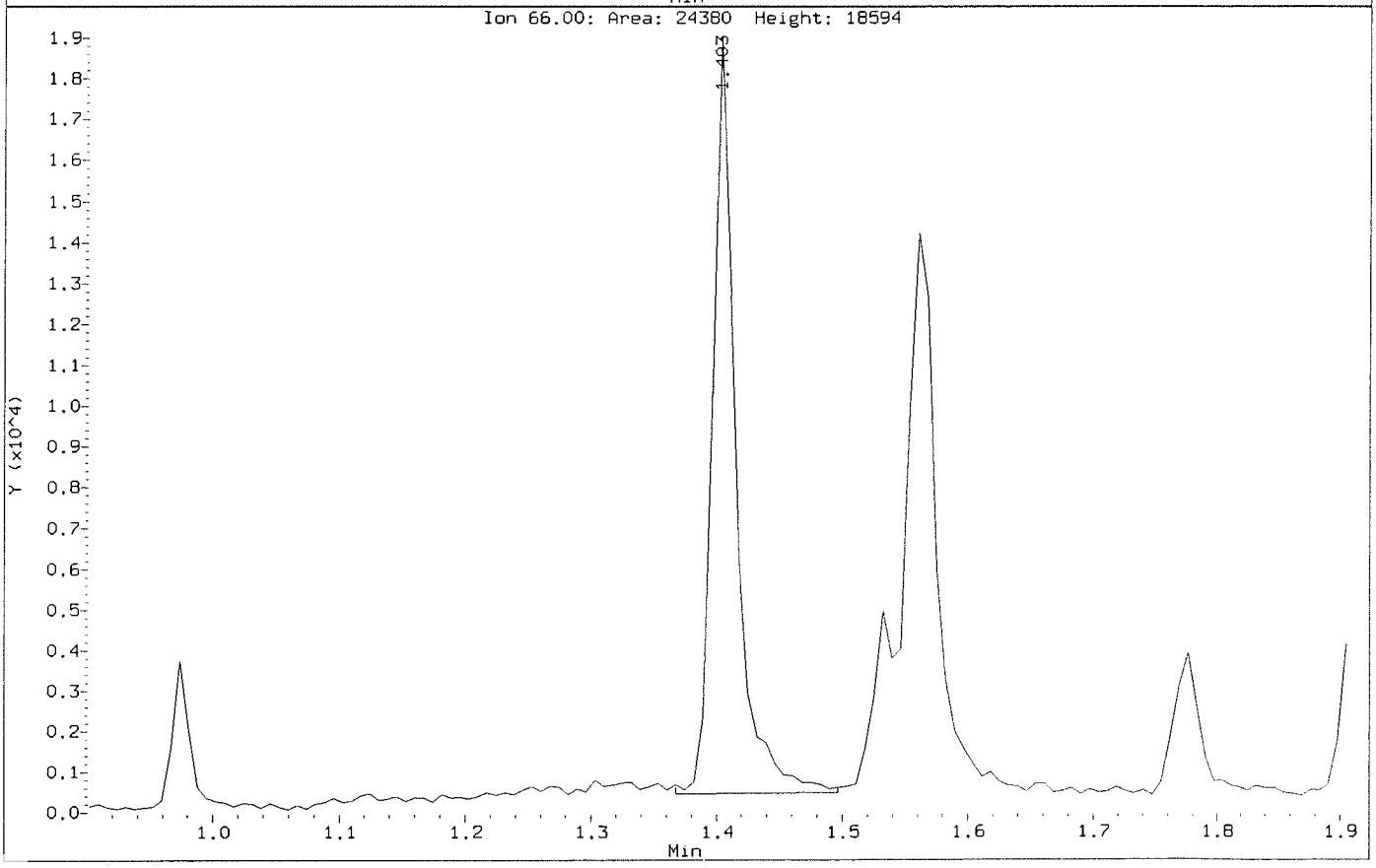


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Instrument: voa6.i
Client Sample ID: HS20070984-01MS

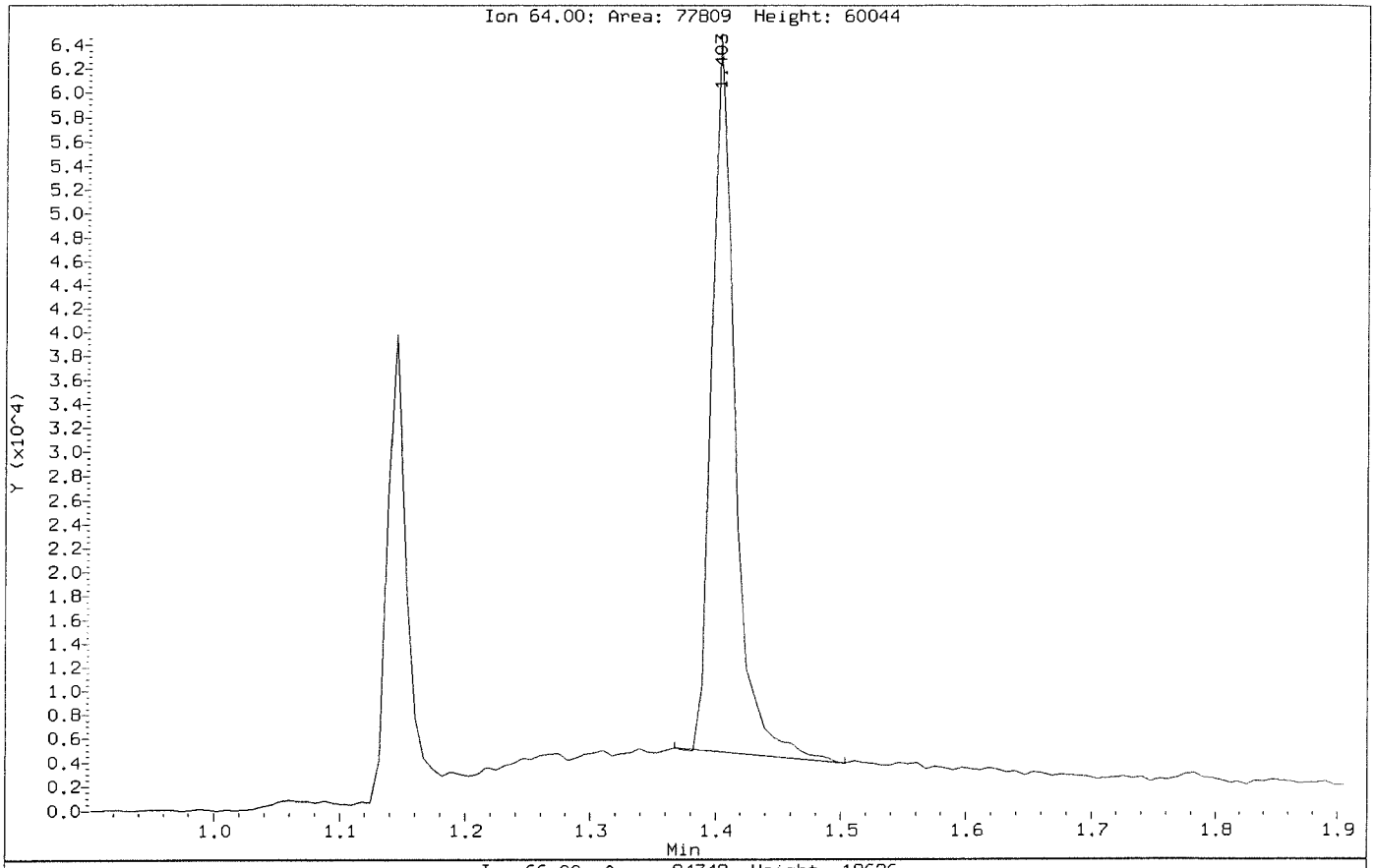
Compound: Chloroethane
CAS Number: 75-00-3

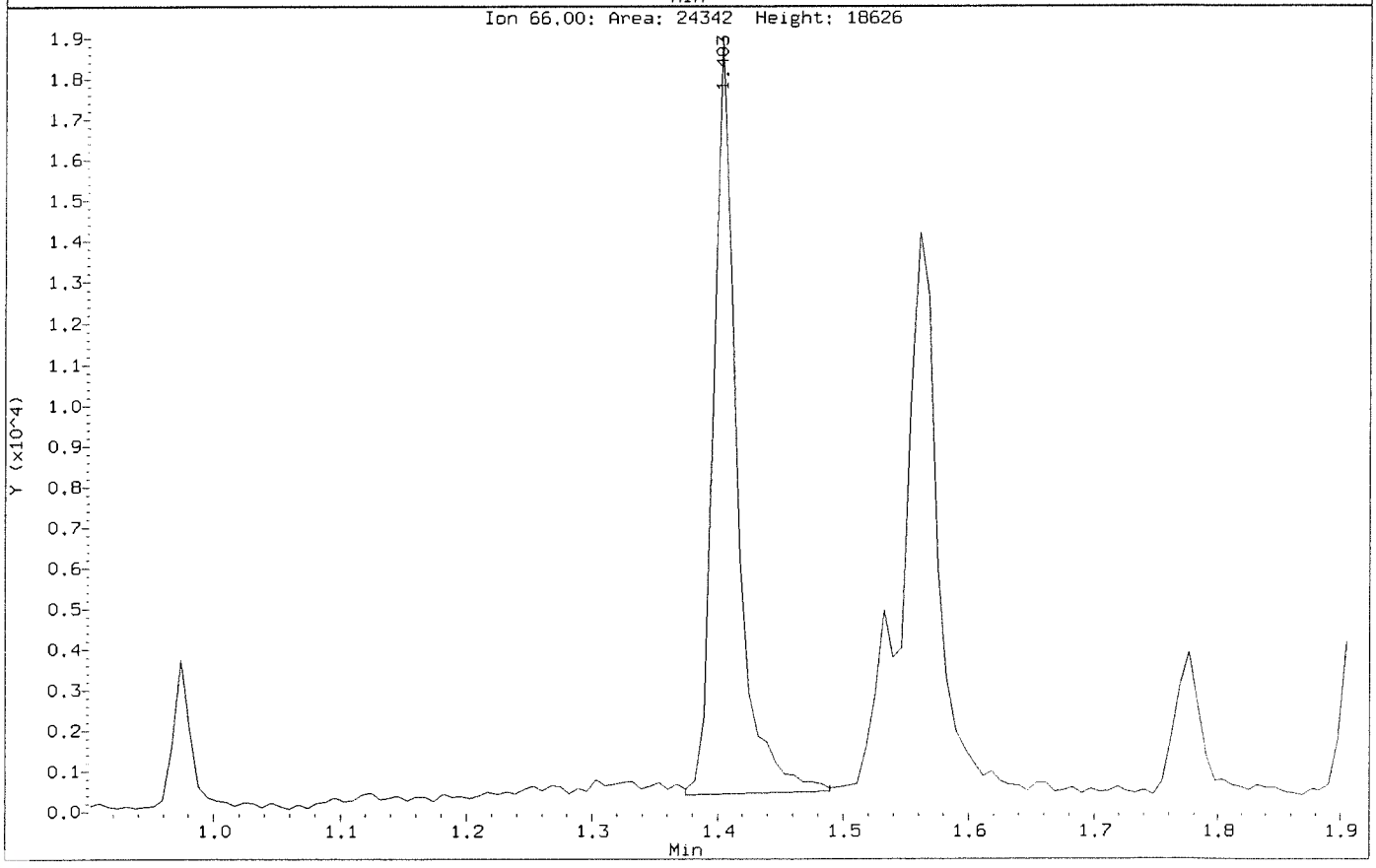


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Injection Date: 03-AUG-2020 21:39
Instrument: voa6.i
Client Sample ID: HS20070984-01MS

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080327.D  Page 1
Report Date: 22-Aug-2020 12:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080327.D
Lab Smp Id: HS20070984-01MSD  Client Smp ID: HS20070984-01MSD
Inj Date : 03-AUG-2020 22:04
Operator : PC  Inst ID: voa6.i
Smp Info : HS20070984-01MSD;HS20070984-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:30 dev.giga  Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40  Cal File: X080311.D
Als bottle: 27  QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 471439 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 691299 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 606476 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 273078 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 216727 | 46.8126 | 46.81 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 250362 | 45.6228 | 45.62 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 778820 | 52.9434 | 52.94 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.695 | (1.133) | 273475 | 48.1908 | 48.19 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 109229 | 23.6603 | 23.66 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 168170 | 23.1584 | 23.15 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.845 | (0.914) | 110883 | 25.3961 | 25.39 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.847 | (0.892) | 82016 | 23.7665 | 23.76 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 218593 | 23.7373 | 23.73 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.912 | (0.458) | 92126 | 24.6632 | 24.66 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.263 | (0.862) | 135731 | 23.3650 | 23.36 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 18204 | 22.1525 | 22.15 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 93633 | 23.4250 | 23.42(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.338 | (1.173) | 36799 | 23.3569 | 23.35 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 367913 | 25.2194 | 25.21 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.658 | (1.103) | 8377 | 21.9030 | 21.90 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 105456 | 23.7205 | 23.72 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 184646 | 23.9054 | 23.90 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080327.D Page 2
Report Date: 22-Aug-2020 12:31

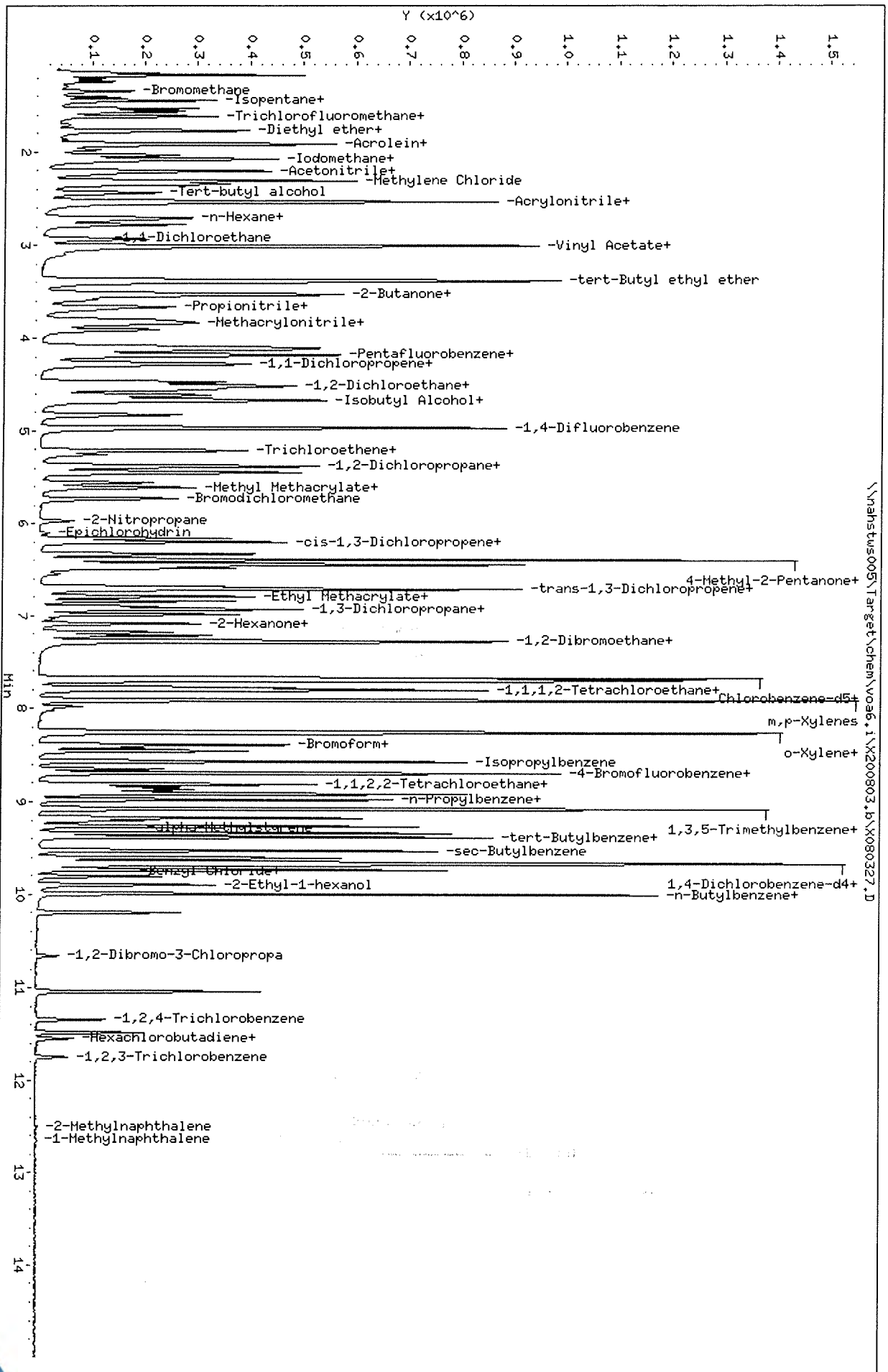
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 162996 | 24.3524 | 24.35 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 122481 | 24.1411 | 24.14 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 365800 | 25.6350 | 25.63 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.612 | (0.993) | 210311 | 24.5024 | 24.50 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 166544 | 24.4420 | 24.44 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.684 | (1.001) | 206105 | 24.2810 | 24.28 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 147787 | 21.9788 | 21.97 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 101717 | 44.0124 | 44.01 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.982 | (0.928) | 300551 | 25.3681 | 25.36 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 169597 | 44.5441 | 44.54 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 344625 | 25.0035 | 25.00 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 385730 | 25.5081 | 25.50 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.331 | (0.824) | 257268 | 45.8342 | 45.83 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 71596 | 42.9617 | 42.96 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 406995 | 23.7296 | 23.72 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 131984 | 24.7073 | 24.70 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 63165 | 22.2280 | 22.22 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.730 | (1.153) | 142665 | 22.9248 | 22.92 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 75538 | 22.4490 | 22.44 |
| 6 | Bromomethane | 94 | 1.339 | 1.331 | (0.320) | 72581 | 22.7289 | 22.72 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 540700 | 46.6209 | 46.62 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 146471 | 23.7213 | 23.72 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 283635 | 23.8626 | 23.86 |
| 7 | Chloroethane | 64 | 1.403 | 1.396 | (0.335) | 71641 | 21.4394 | 21.43(M) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 190984 | 22.6750 | 22.67 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 126782 | 19.1534 | 19.15 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 216002 | 41.6243 | 41.62 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 170295 | 23.4026 | 23.40 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 110764 | 22.8005 | 22.80 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 69809 | 23.2040 | 23.20 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 87864 | 19.0426 | 19.04 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.807 | (1.017) | 146994 | 23.9505 | 23.95 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 34440 | 23.4912 | 23.49 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 447650 | 24.8477 | 24.84 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 358384 | 48.3876 | 48.38 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 112323 | 22.3737 | 22.37 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 309598 | 25.6359 | 25.63 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 505864 | 25.7144 | 25.71 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 51472 | 23.9164 | 23.91 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 175652 | 24.1431 | 24.14 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 427209 | 25.7514 | 25.75 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 305153 | 24.1550 | 24.15 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 317679 | 25.6775 | 25.67 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 94285 | 24.4557 | 24.45 |
| 50 | Toluene | 91 | 6.446 | 6.453 | (0.840) | 442287 | 24.9722 | 24.97 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 101240 | 22.9074 | 22.90 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 147869 | 22.1710 | 22.17 |
| 38 | Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 134576 | 27.4686 | 27.46 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 159309 | 22.9453 | 22.94 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 133133 | 21.9386 | 21.93 |

QC Flag Legend

M - Compound response manually integrated.

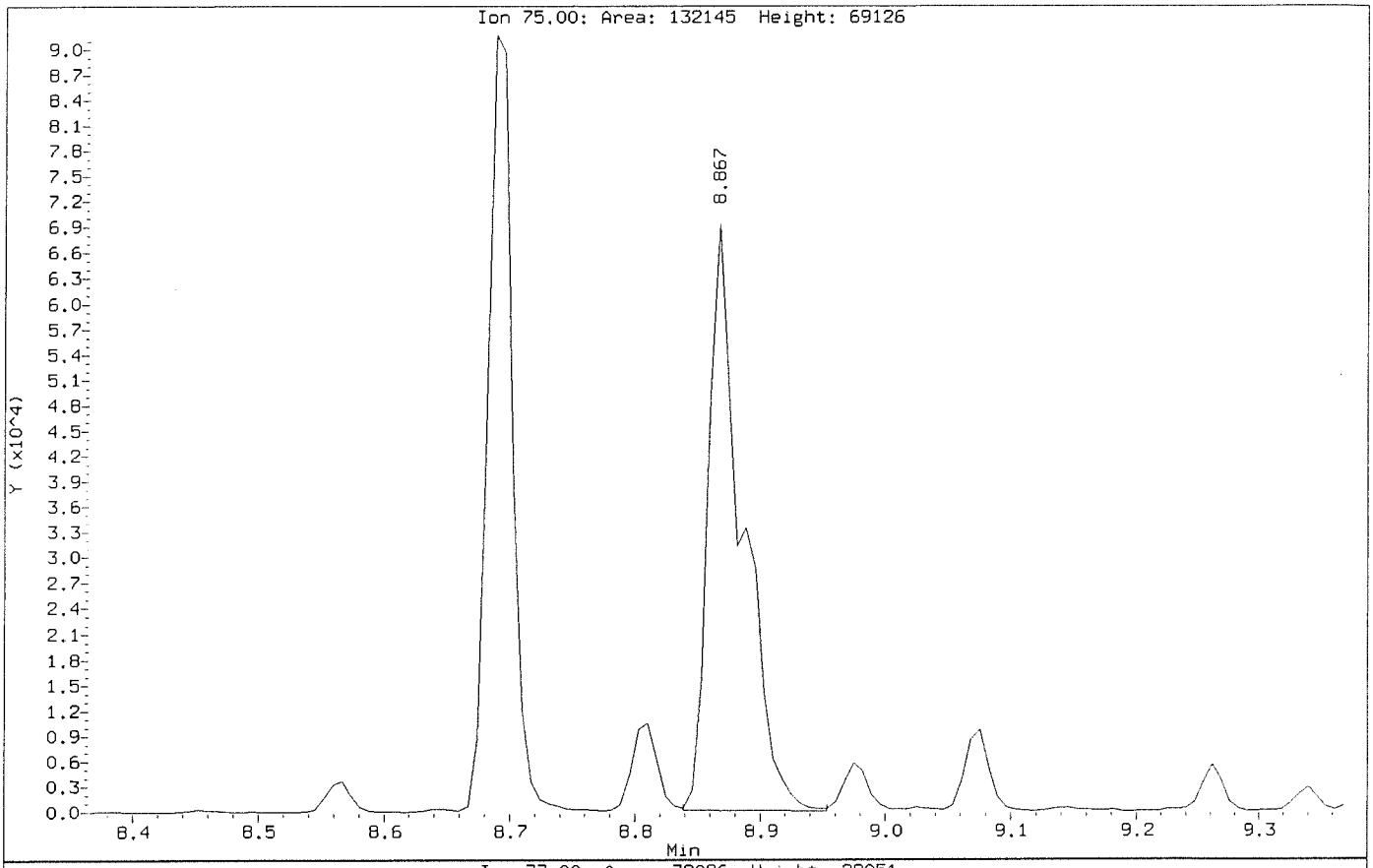
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Sample Info: HS20070984-01HSD;HS20070984-01HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

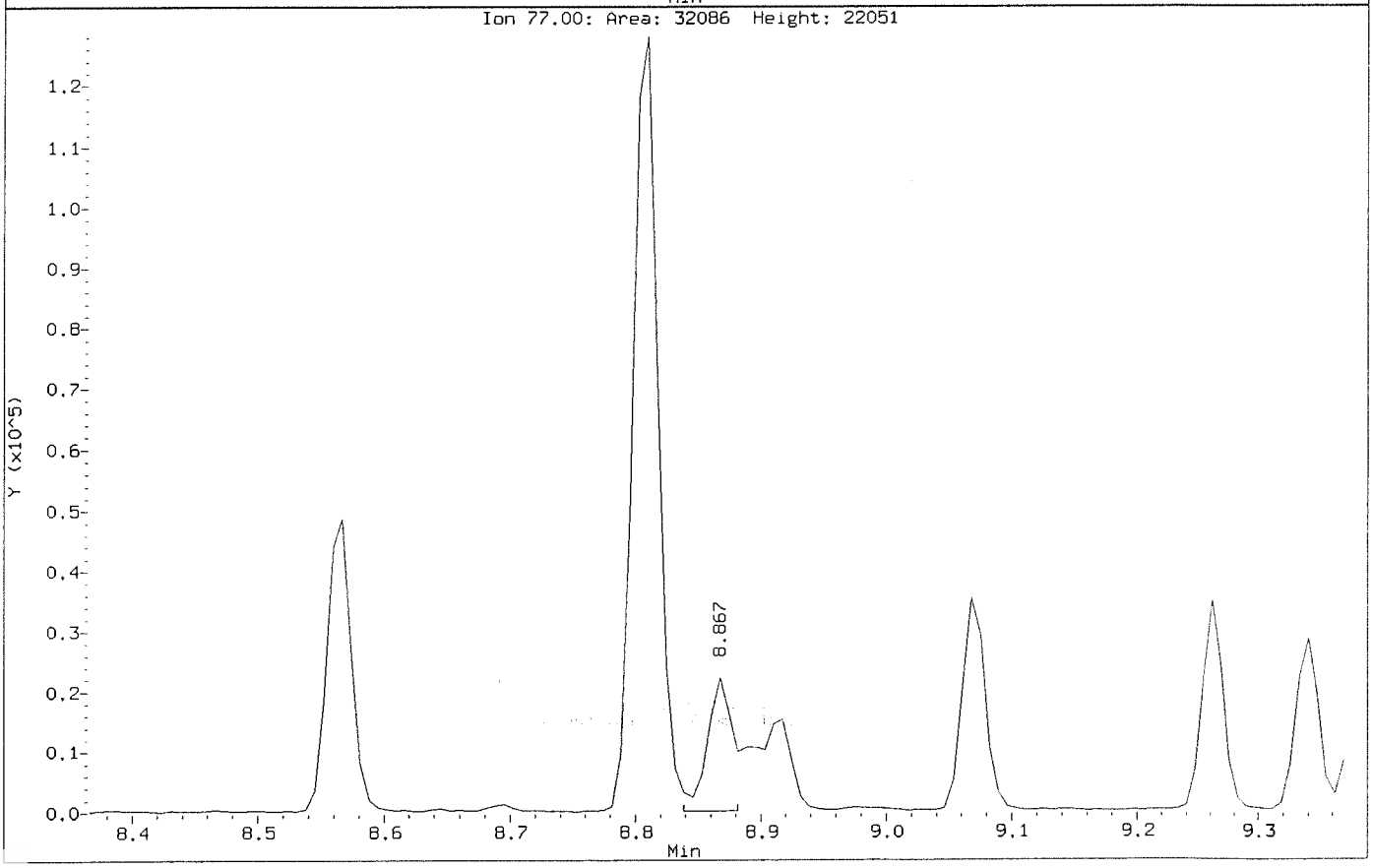
Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080327.D
Injection Date: 03-AUG-2020 22:04
Instrument: voa6.i
Client Sample ID: HS20070984-01MSD

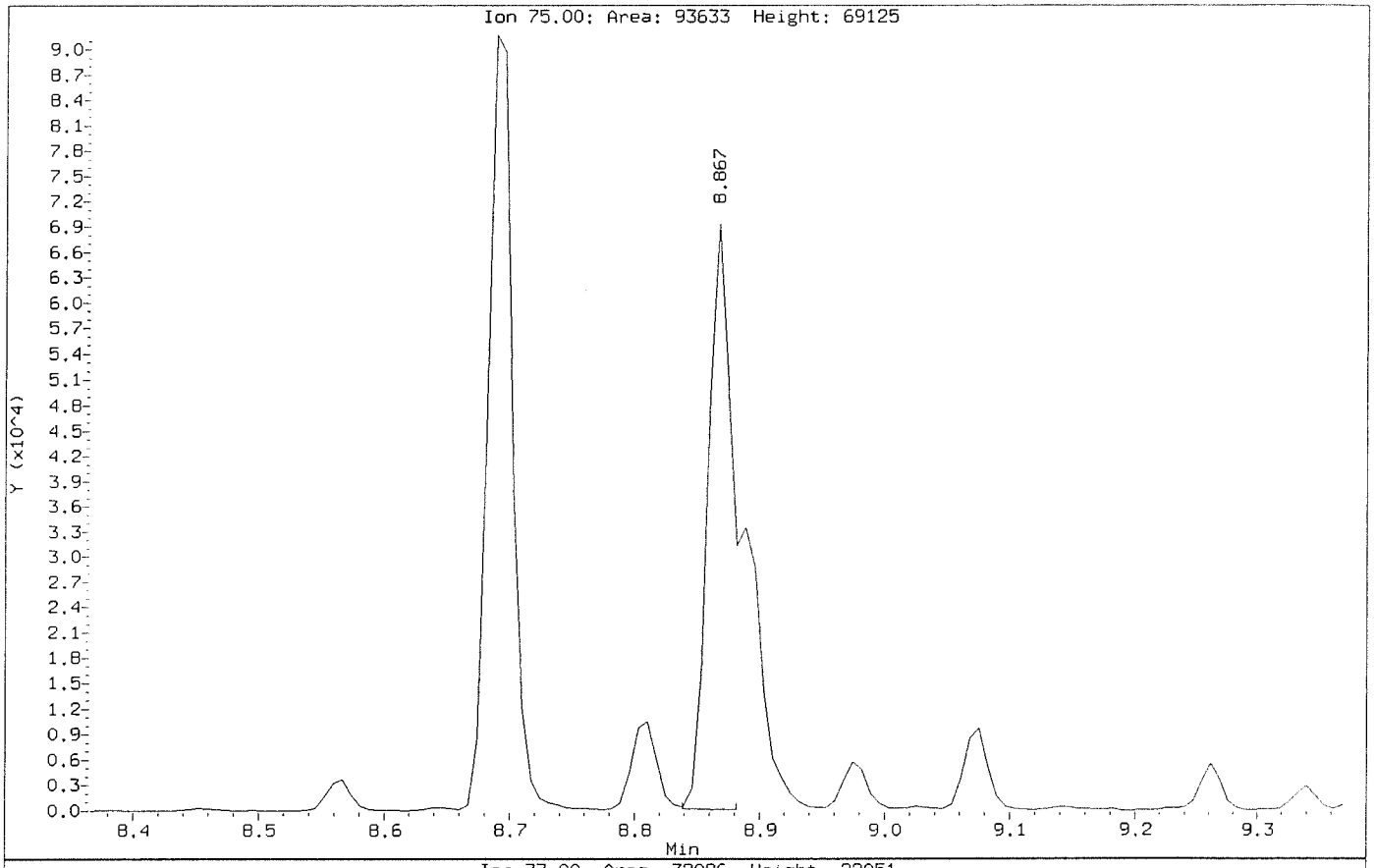
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

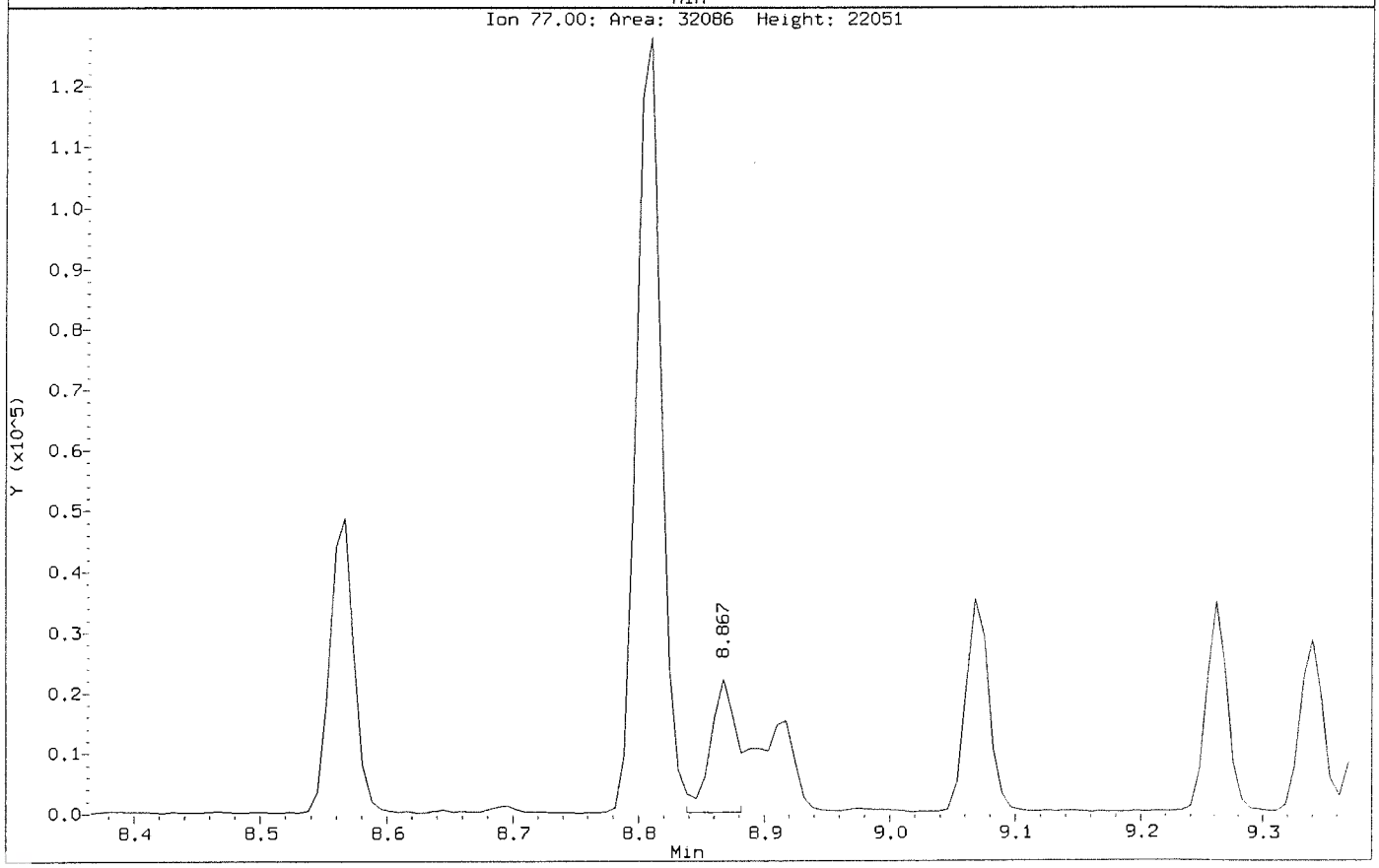


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Injection Date: 03-AUG-2020 22:04
Instrument: voa6.i
Client Sample ID: HS20070984-01MSD

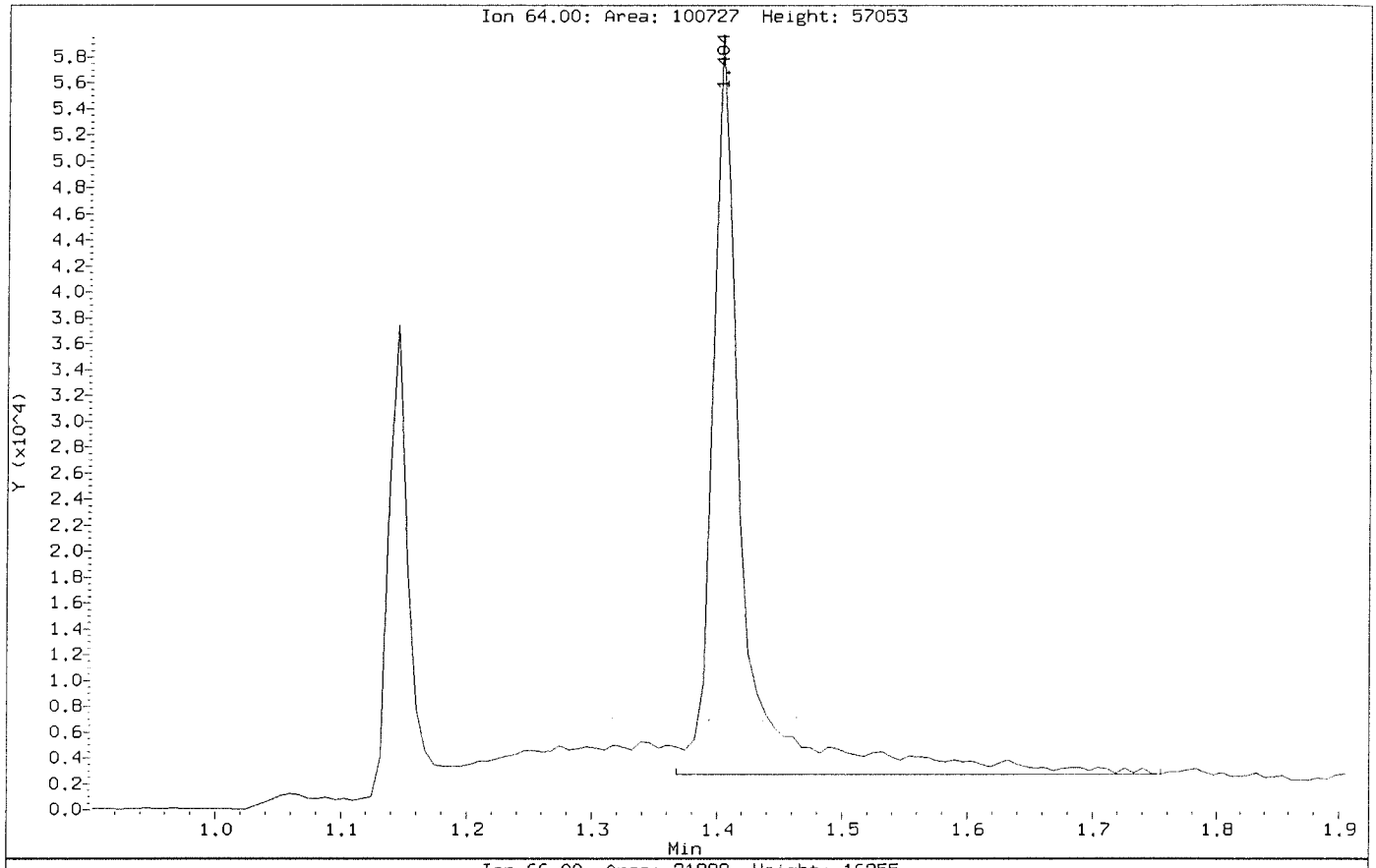
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

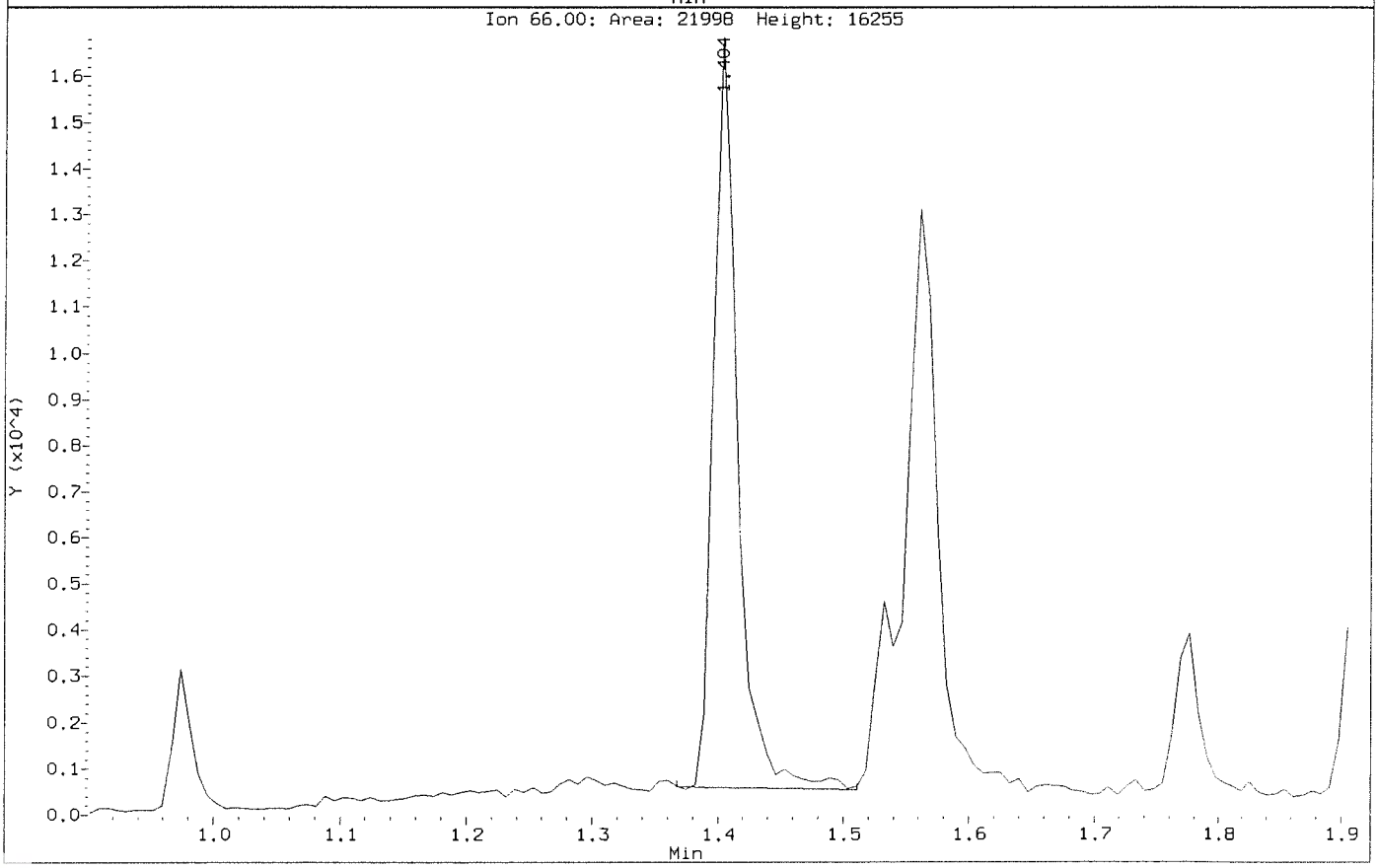


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080327.D
Injection Date: 03-AUG-2020 22:04
Instrument: voa6.i
Client Sample ID: HS20070984-01MSD

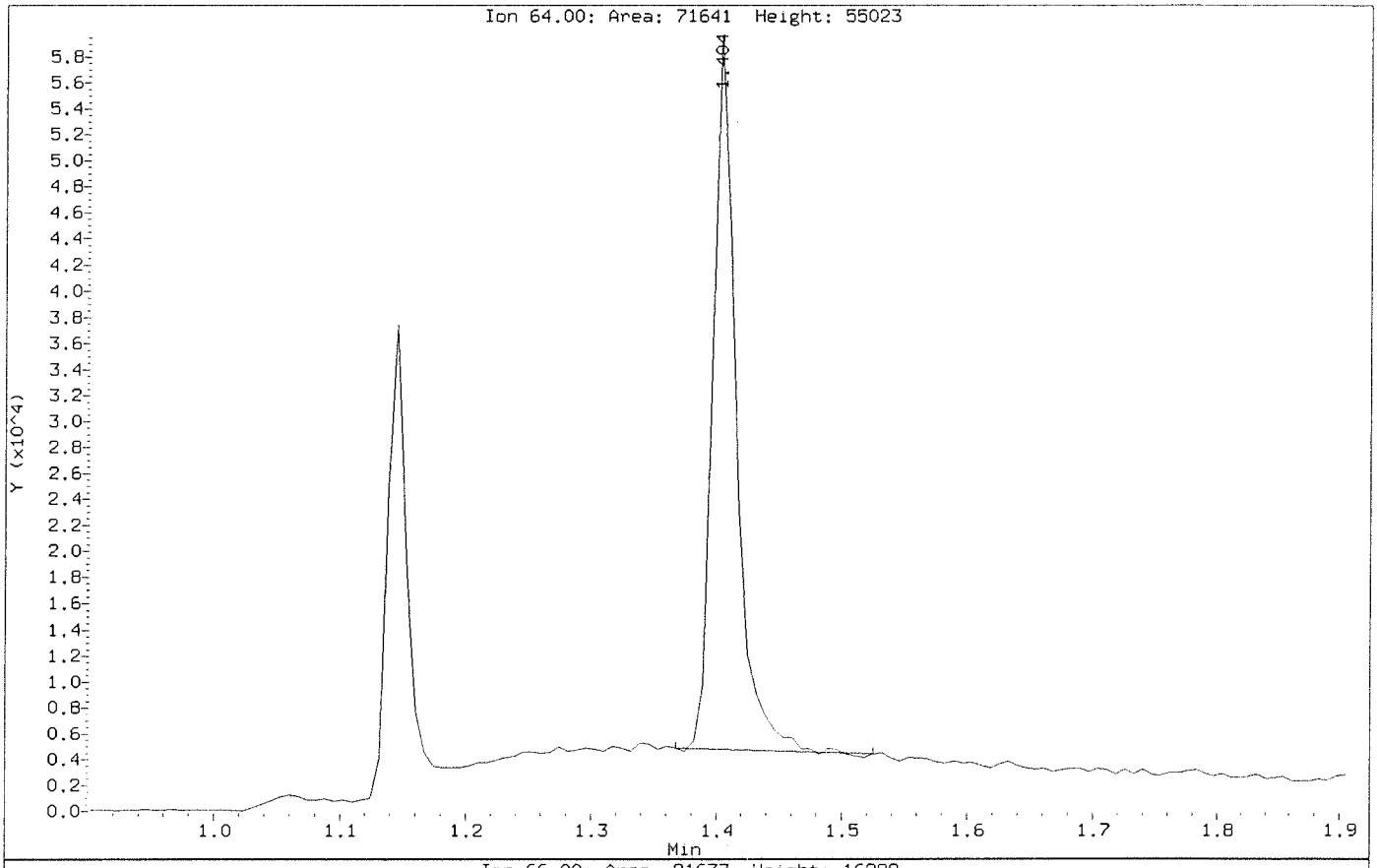
Compound: Chloroethane
CAS Number: 75-00-3

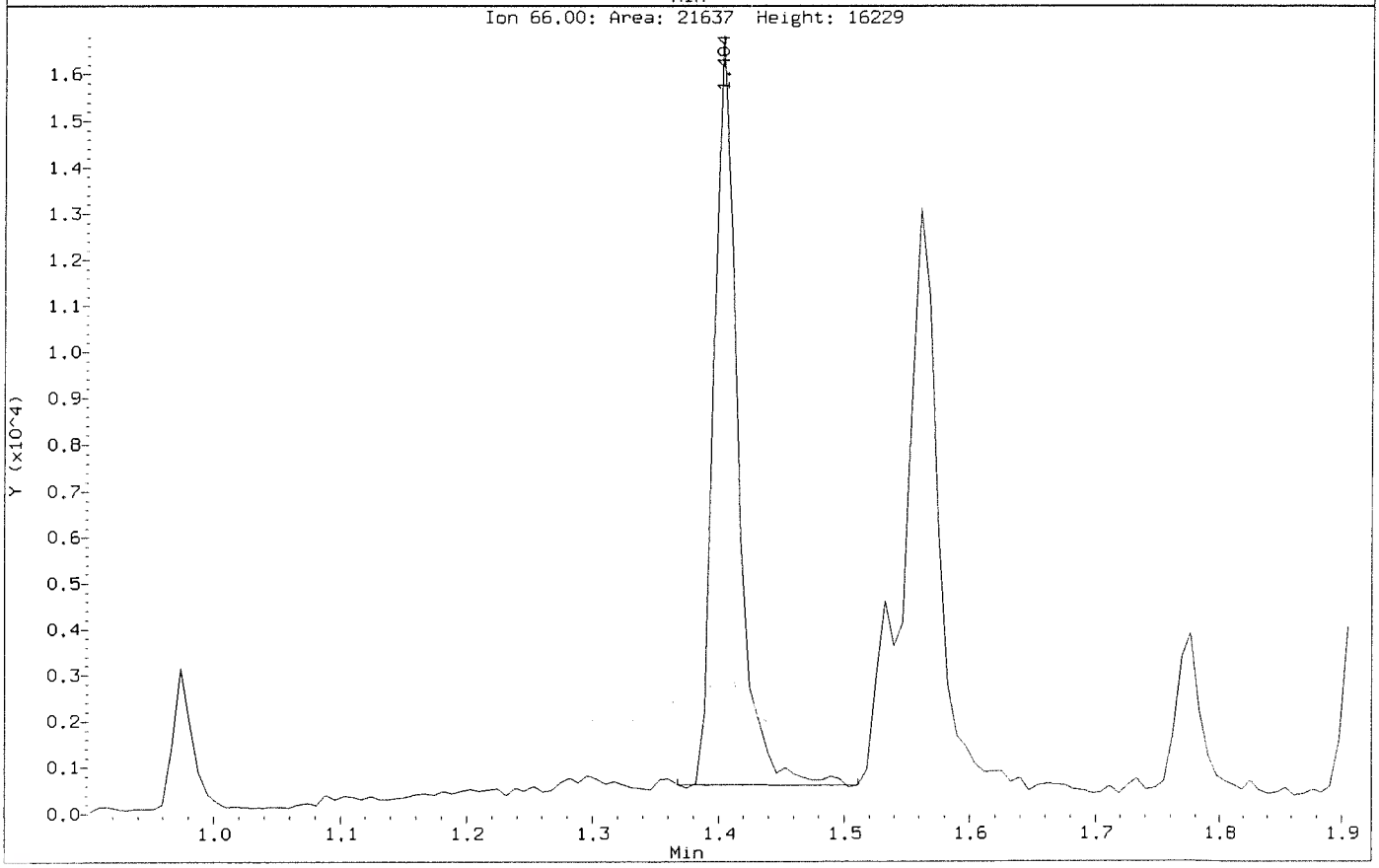


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080327.D
Injection Date: 03-AUG-2020 22:04
Instrument: voa6.i
Client Sample ID: HS20070984-01MSD

Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080328.D Page 1
Report Date: 22-Aug-2020 12:31

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080328.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 03-AUG-2020 22:27
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 12:31 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

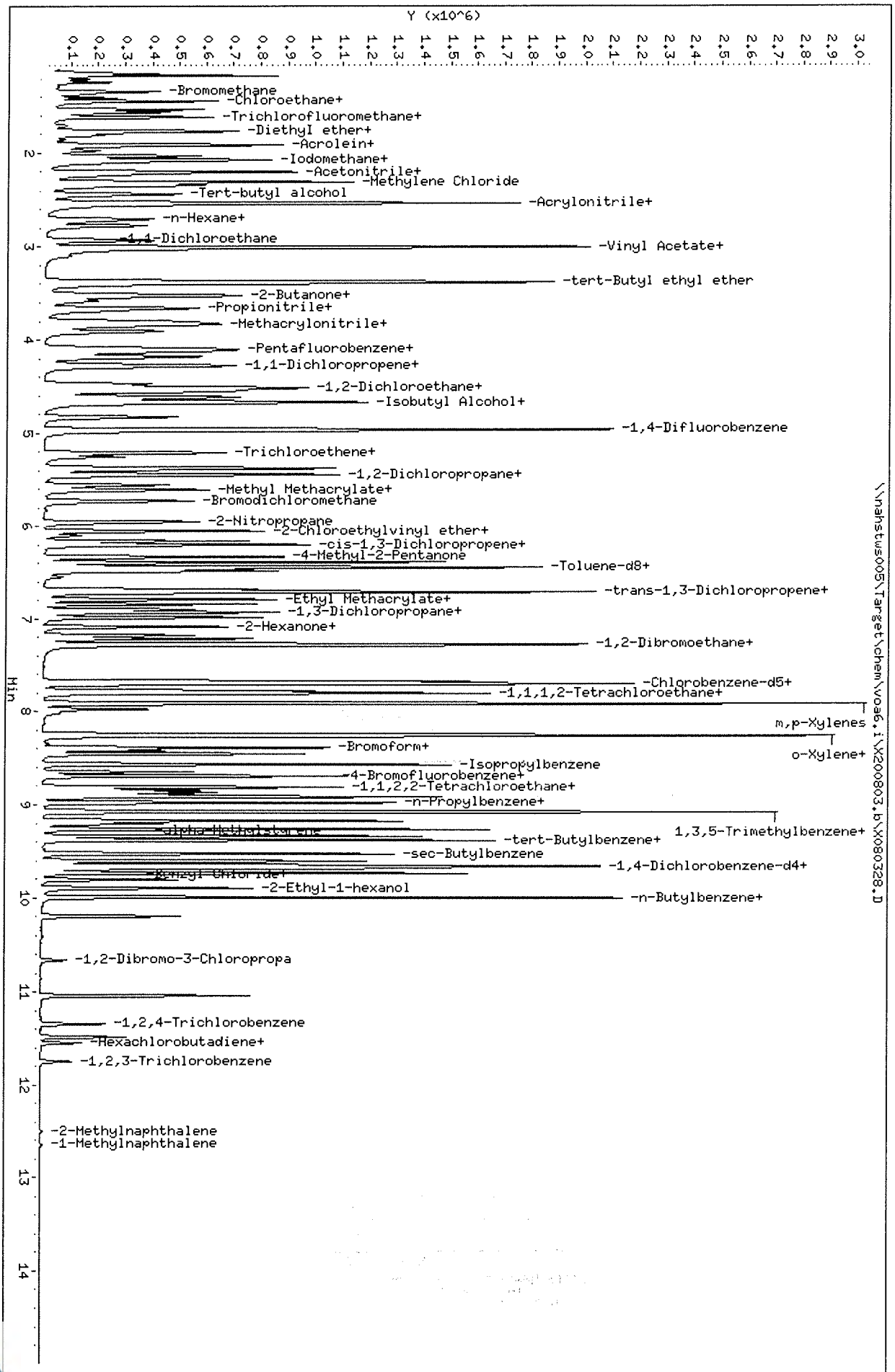
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 470128 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 737058 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 675115 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 313530 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 236308 | 50.0000 | 51.18 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 282552 | 50.0000 | 51.63 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 806090 | 50.0000 | 49.22 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 304937 | 50.0000 | 48.27 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 229495 | 50.0000 | 44.65 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 308502 | 50.0000 | 42.60 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 235665 | 50.0000 | 46.68 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 175260 | 50.0000 | 45.62 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 434945 | 50.0000 | 47.36 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 163830 | 50.0000 | 43.98 |
| | 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 246226 | 50.0000 | 39.75 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 33086 | 50.0000 | 35.06 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 205678 | 50.0000 | 44.81(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 67514 | 50.0000 | 37.39 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 715248 | 50.0000 | 42.70 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.657 | 10.657 | (1.102) | 18321 | 50.0000 | 41.00 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 228467 | 50.0000 | 46.16 |
| | 88 1,2-Dichlorobenzene | 146 | 9.998 | 9.998 | (1.034) | 381073 | 50.0000 | 42.97 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 335195 | 50.0000 | 46.97 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 254011 | 50.0000 | 46.95 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 687059 | 50.0000 | 41.93 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 428783 | 50.0000 | 43.51 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 350269 | 50.0000 | 46.17 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 428261 | 50.0000 | 43.94 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 261642 | 50.0000 | 39.01 |
| 24 | 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 231097 | 100.000 | 100.27 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 598088 | 50.0000 | 43.96 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 380253 | 100.000 | 89.71 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.074 | (0.939) | 692317 | 50.0000 | 43.74 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 683838 | 50.0000 | 39.38 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.324 | (0.824) | 559520 | 100.000 | 89.54 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 157641 | 100.000 | 96.15 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 817477 | 50.0000 | 44.70 |
| 74 | Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 277427 | 50.0000 | 45.23 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 130156 | 50.0000 | 45.93 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 302052 | 50.0000 | 45.52 |
| 66 | Bromoform | 173 | 8.415 | 8.415 | (1.097) | 167486 | 50.0000 | 44.71 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 150930 | 50.0000 | 46.68 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 998492 | 100.000 | 86.33 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 251805 | 50.0000 | 38.24 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 592004 | 50.0000 | 44.74 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 153901 | 50.0000 | 46.18 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 388594 | 50.0000 | 46.26 |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 278042 | 50.0000 | 42.12 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 242186 | 50.0000 | 46.80 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 352833 | 50.0000 | 45.47 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 244040 | 50.0000 | 45.12 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 148961 | 50.0000 | 46.43 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 182193 | 50.0000 | 39.59 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 287158 | 50.0000 | 42.03 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 54889 | 50.0000 | 32.60 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 805689 | 50.0000 | 40.17 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 695626 | 100.000 | 84.37 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 232628 | 50.0000 | 47.95 |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 532197 | 50.0000 | 38.38 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 923491 | 50.0000 | 40.88 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 100807 | 50.0000 | 40.42 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 353809 | 50.0000 | 43.68 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 729929 | 50.0000 | 38.32 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 628147 | 50.0000 | 44.66 |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 569897 | 50.0000 | 40.12 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 167846 | 50.0000 | 39.10 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 851304 | 50.0000 | 43.17 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 198305 | 50.0000 | 44.99 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 322311 | 50.0000 | 45.32 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 228838 | 50.0000 | 43.80 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 281061 | 50.0000 | 40.59 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 258462 | 50.0000 | 42.70 |

QC Flag Legend

M - Compound response manually integrated.

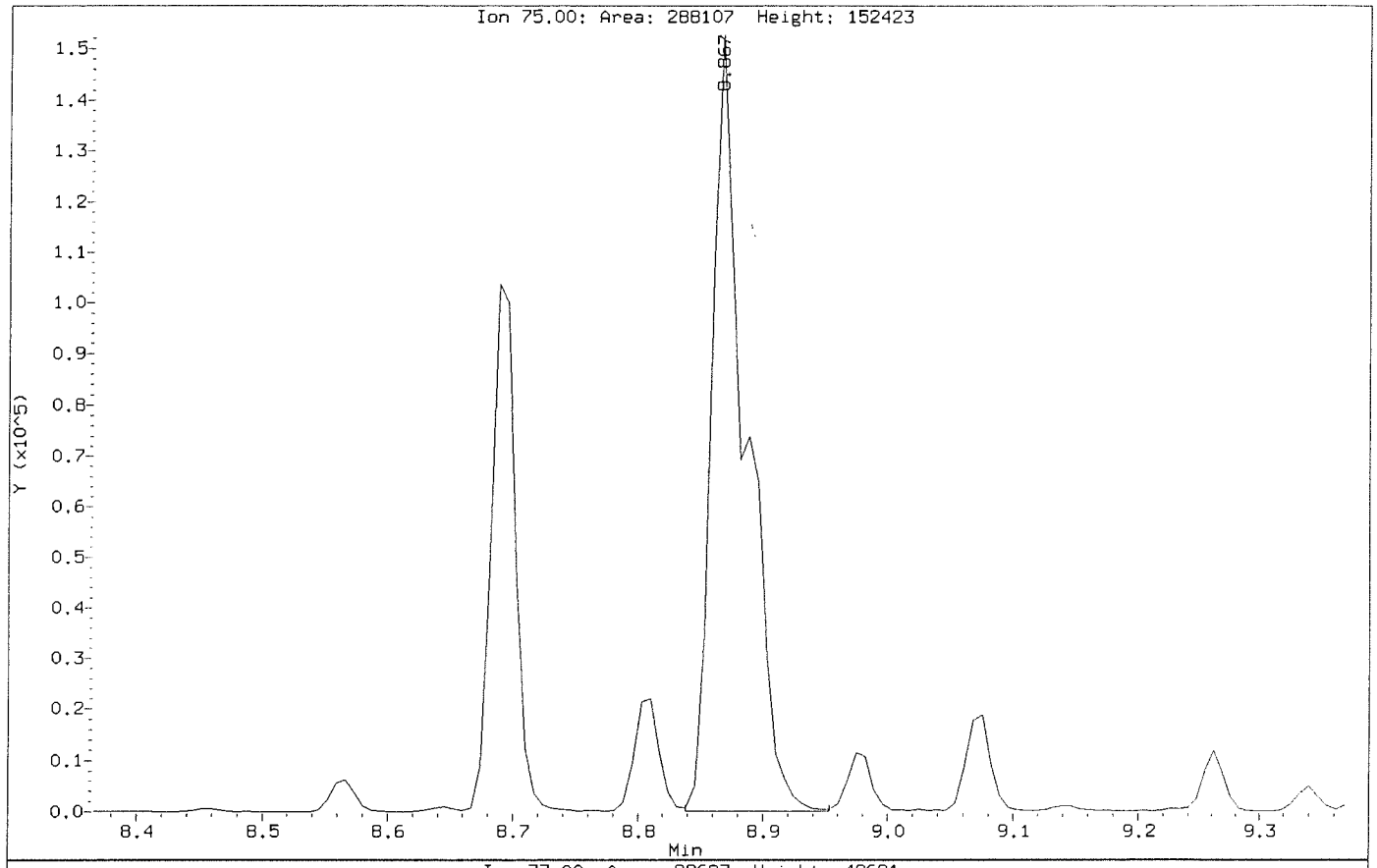


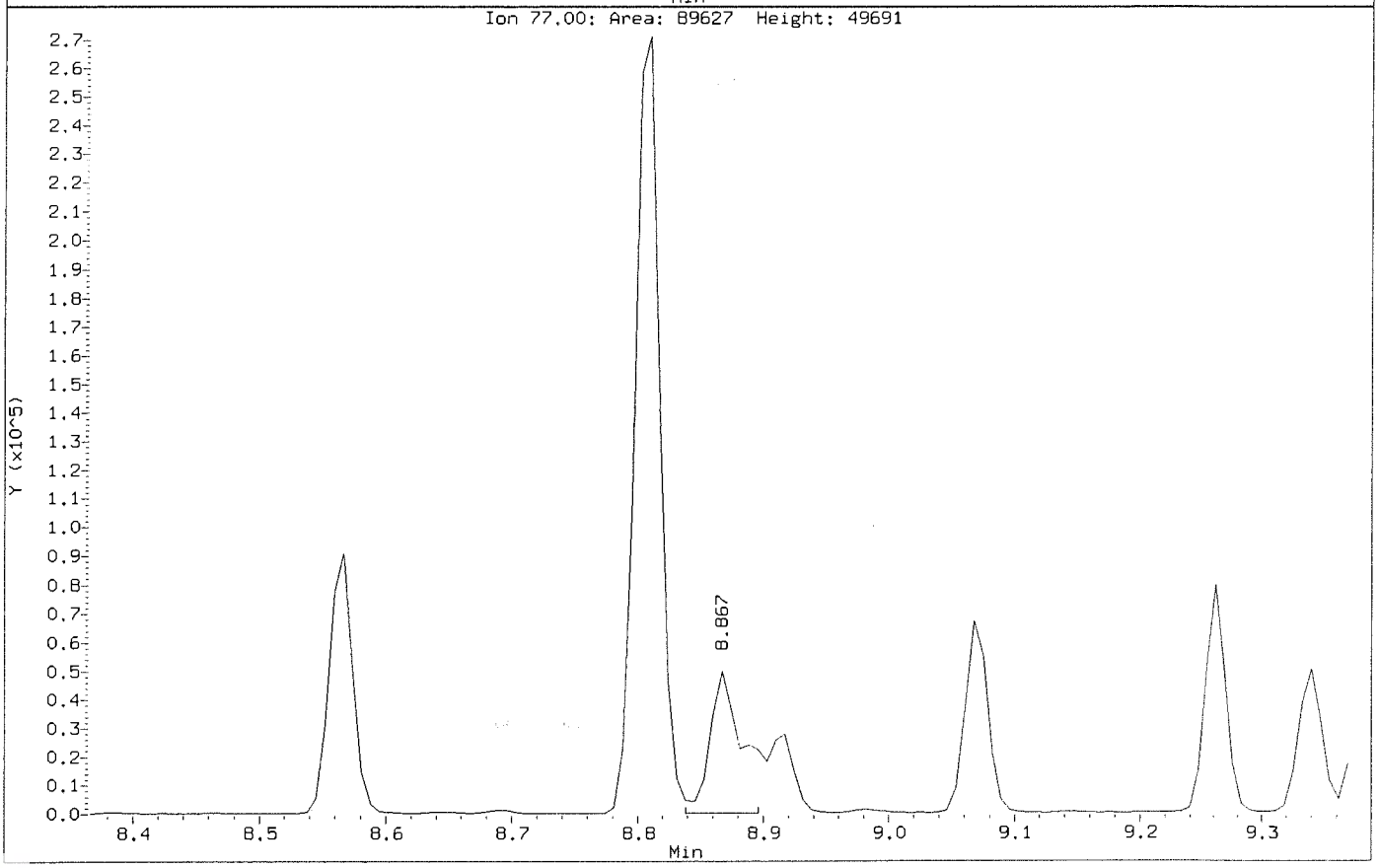

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080328.D
Date : 03-AUG-2020 22:27
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080328.D
Injection Date: 03-AUG-2020 22:27
Instrument: voa6.i
Client Sample ID: CCV-END

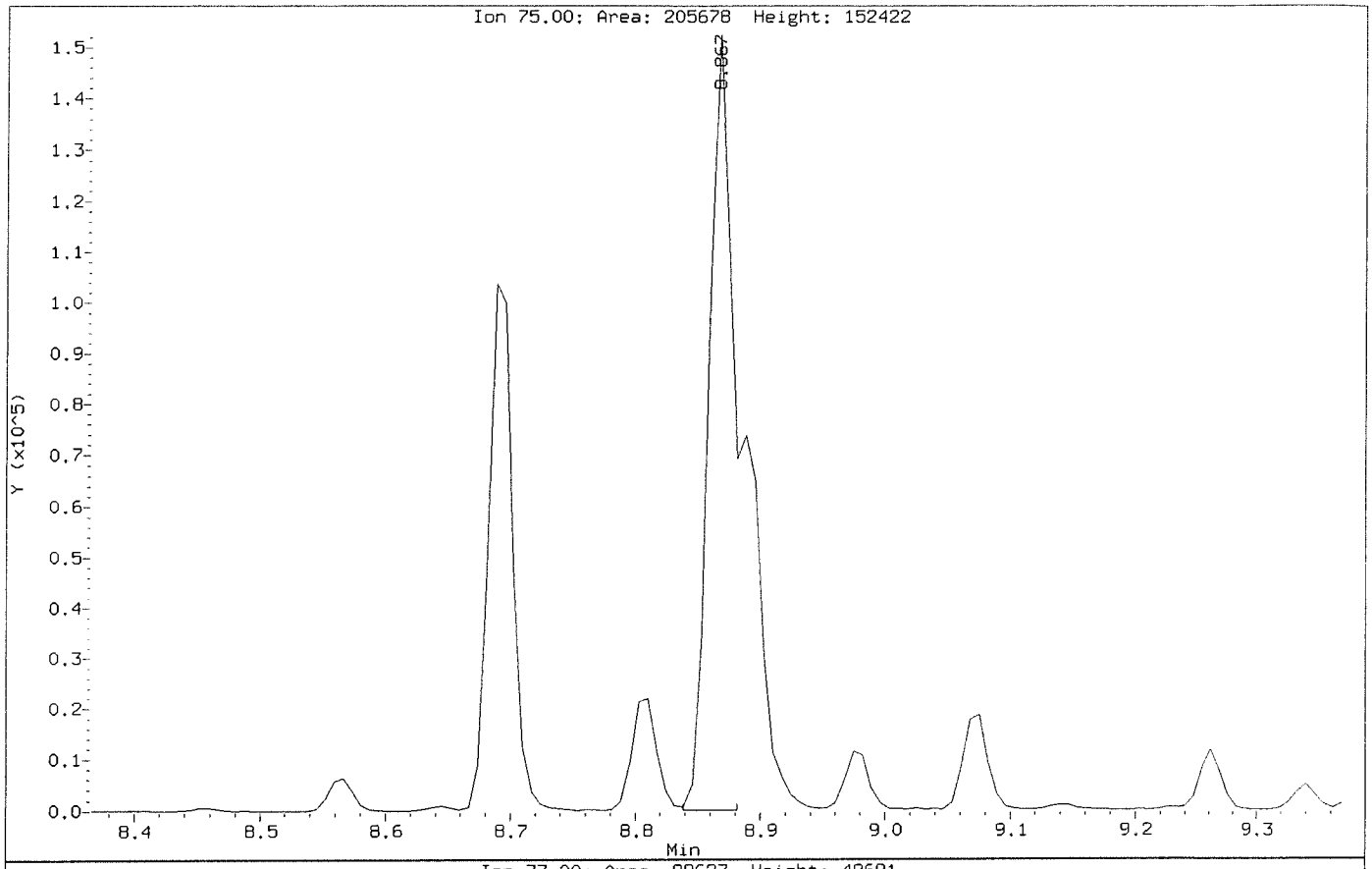
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

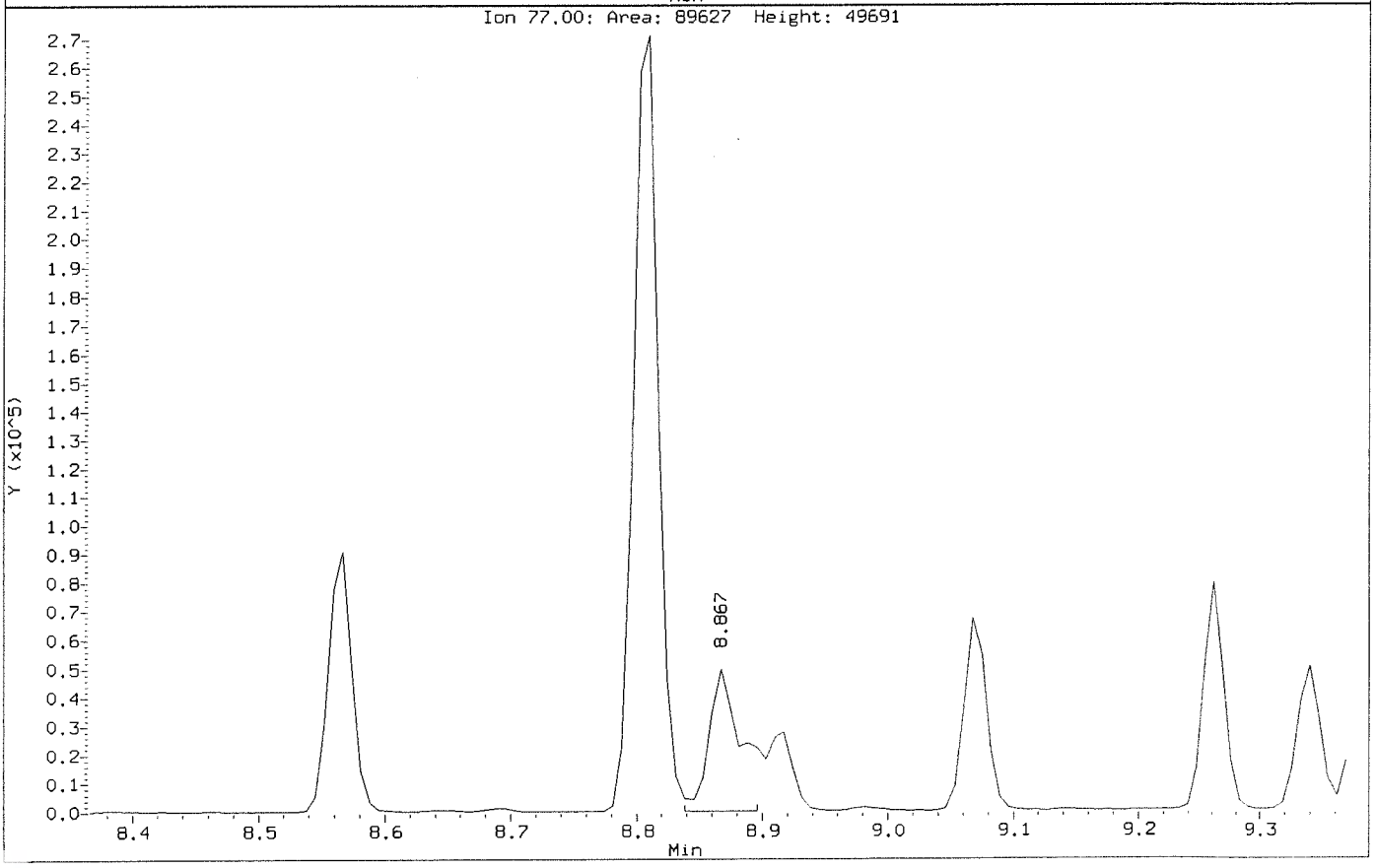


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Injection Date: 03-AUG-2020 22:27
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

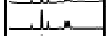
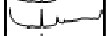


# HS20070984 Wet Chem Raw Data (9056_W)

ALS WO# HS20070984

Sequence: 072720
Last Update Operator: alshs.nouser

| CD | Name | Comment | Type | Position | Dilution | Level | Instrument Method | Processing Method | me | Status |
|---|---|---|---|---|---|---|---|---|---|---|
|  | STD1 | | Calibration | GB1 | 1.00 | 1 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD2 | | Calibration | GB2 | 1.00 | 2 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD3 | | Calibration | GB3 | 1.00 | 3 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD4 | | Calibration | GB4 | 1.00 | 4 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD5 | | Calibration | GB5 | 1.00 | 5 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD6 | | Calibration | GB6 | 1.00 | 6 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | ICV | | Unknown | GB7 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | ICB | | Unknown | BA3 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV | | Unknown | BA2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA3 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | MBLK-072720 | | Unknown | BB6 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | LCS-072720 | | Unknown | BA8 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV1 | | Unknown | BA4 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA5 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV | | Unknown | BA2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA3 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20070984-01 | 9056_W | Unknown | GB5 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20070984-01DF10 | 9056_W | Unknown | GB6 | 10.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20071033-03 | 9056_W | Unknown | GC1 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20071033-03MS | 9056_W | Unknown | GC2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20071033-03MSD | 9056_W | Unknown | GC3 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV1 | | Unknown | BA4 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA5 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20071147-05 | 9056_W | Unknown | GC8 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20071147-05MS | 9056_W | Unknown | GD1 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20071147-05MSD | 9056_W | Unknown | GD2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV | | Unknown | BA2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA3 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |

Sequence: 072720
Last Update Operator: alshs.nouser

| Inject Time |
|---|
| 6/2/2020 11:02:48 AM -05:00 |
| 6/2/2020 11:20:59 AM -05:00 |
| 6/2/2020 11:39:04 AM -05:00 |
| 6/2/2020 11:57:10 AM -05:00 |
| 6/2/2020 12:15:18 PM -05:00 |
| 6/2/2020 12:33:22 PM -05:00 |
| 6/2/2020 12:51:27 PM -05:00 |
| 6/2/2020 1:45:50 PM -05:00 |
| 7/27/2020 3:48:35 PM -05:00 |
| 7/27/2020 4:06:43 PM -05:00 |
| 7/27/2020 5:01:04 PM -05:00 |
| 7/27/2020 5:19:11 PM -05:00 |
| 7/27/2020 5:37:16 PM -05:00 |
| 7/27/2020 5:55:26 PM -05:00 |
| 7/27/2020 9:14:48 PM -05:00 |
| 7/27/2020 9:32:53 PM -05:00 |
| 7/27/2020 10:27:14 PM -05:00 |
| 7/27/2020 10:45:19 PM -05:00 |
| 7/27/2020 11:39:37 PM -05:00 |
| 7/27/2020 11:57:44 PM -05:00 |
| 7/28/2020 12:15:49 AM -05:00 |
| 7/28/2020 12:33:58 AM -05:00 |
| 7/28/2020 12:52:03 AM -05:00 |
| 7/28/2020 2:22:34 AM -05:00 |
| 7/28/2020 2:40:40 AM -05:00 |
| 7/28/2020 2:58:47 AM -05:00 |
| 7/28/2020 3:53:04 AM -05:00 |
| 7/28/2020 4:11:11 AM -05:00 |

Sequence: 072720
Injection #6: STD6

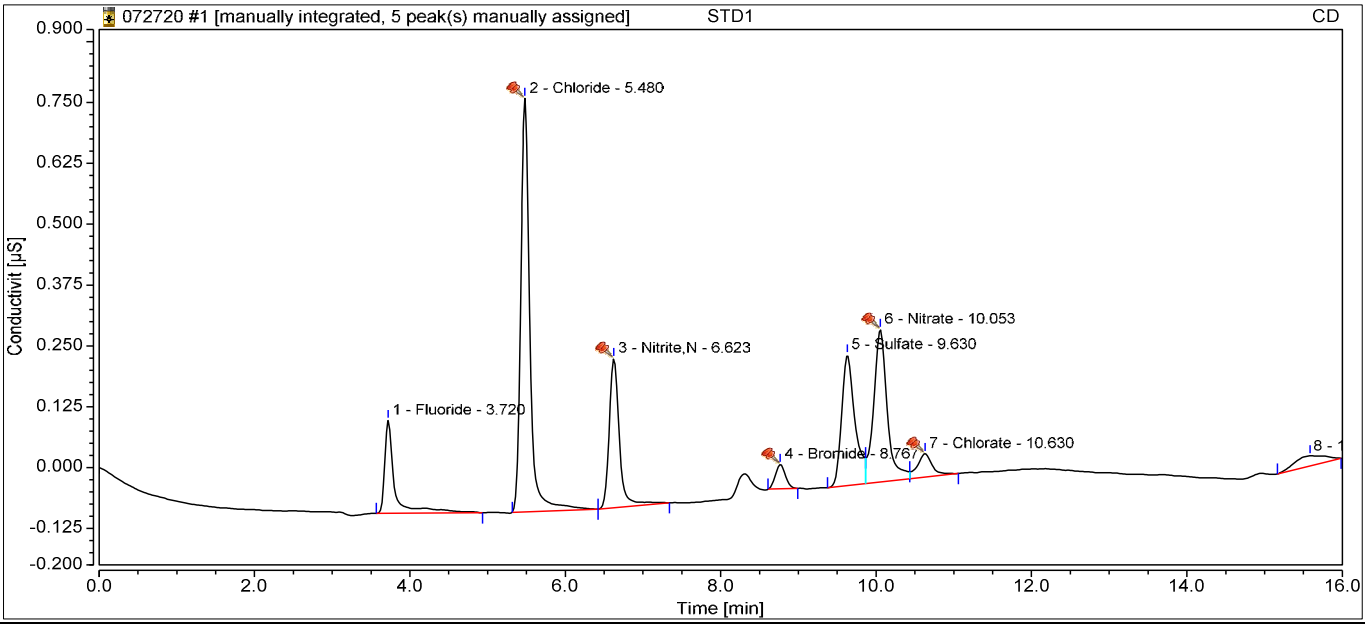
Calibration

| Peak No. | Peak Name | Cal.Type | Eval.Type | Number of Points | Rel.Std.Dev. % | Coeff.of Determination | C0 (Offset) | C1 (Slope) | C2 (Curve) |
|---|---|---|---|---|---|---|---|---|---|
| *1* | *Fluoride* | *Lin, WithOffset, 1/* | *Area* | *6* | *10.8139* | *0.99942* | *-0.0046* | *0.3376* | *0.0000* |
| 2 | Chloride | Lin, WithOffset, 1/ | Area | 6 | 3.4292 | 0.99994 | 0.0066 | 0.2216 | 0.0000 |
| 3 | Nitrite,N | Lin, WithOffset, 1/ | Area | 6 | 25.3231 | 0.99619 | 0.0124 | 0.4569 | 0.0000 |
| 4 | Bromide | Lin, WithOffset, 1/ | Area | 6 | 11.6783 | 0.99936 | -0.0023 | 0.0890 | 0.0000 |
| 5 | Sulfate | Lin, WithOffset, 1/ | Area | 6 | 4.6337 | 0.99991 | -0.0317 | 0.1582 | 0.0000 |
| 6 | Nitrate | Lin, WithOffset, 1/ | Area | 6 | 5.8899 | 0.99981 | 0.0058 | 0.5970 | 0.0000 |
| 7 | Chlorate | Lin, WithOffset, 1/ | Area | 6 | 15.6369 | 0.99851 | 0.0032 | 0.0971 | 0.0000 |
| 8 | Phosphate | Lin, WithOffset, 1/ | Area | 5 | 24.1443 | 0.99440 | -0.0555 | 0.1862 | 0.0000 |
| **Maximum** | | | | | **25.3231** | 0.99994 | | | |
| **Minimum** | | | | | 3.4292 | **0.99440** | | | |

*1 STD1*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD1** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB1** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 11:02** | *Sample Weight:* | **1.0000** |

Run Time:



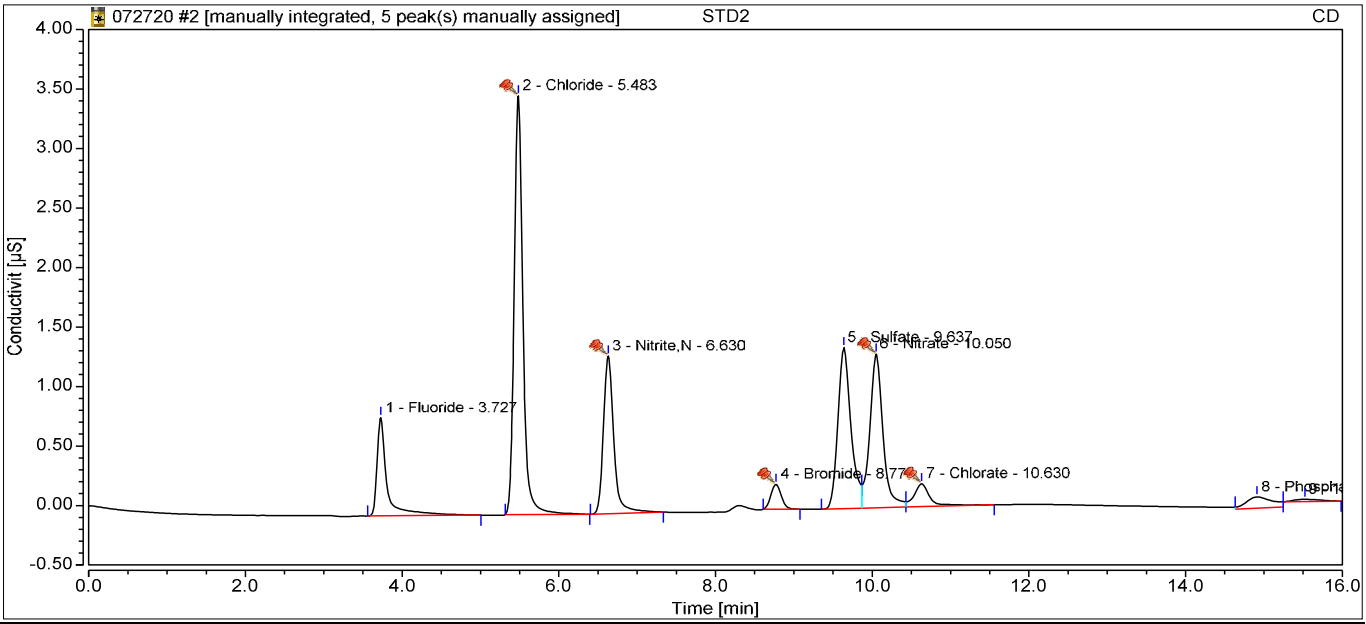

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.72 | Fluoride | BMB | 0.029 | 0.0982 | 0.0982 | 1.0000 |
| 2 | 5.48 | Chloride | BMB^ | 0.115 | 0.4904 | 0.4904 | 1.0000 |
| 3 | 6.62 | Nitrite,N | BMB*^ | 0.046 | 0.0745 | 0.0745 | 1.0000 |
| 4 | 8.77 | Bromide | BMB^ | 0.007 | 0.1093 | 0.1093 | 1.0000 |
| 5 | 9.63 | Sulfate | BM | 0.053 | 0.5374 | 0.5374 | 1.0000 |
| 6 | 10.05 | Nitrate | M ^ | 0.064 | 0.0969 | 0.0969 | 1.0000 |
| 7 | 10.63 | Chlorate | MB^ | 0.011 | 0.0775 | 0.0775 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.325** | | **1.48** | |

2 STD2

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD2** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB2** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 11:20** | *Sample Weight:* | **1.0000** |

Run Time:



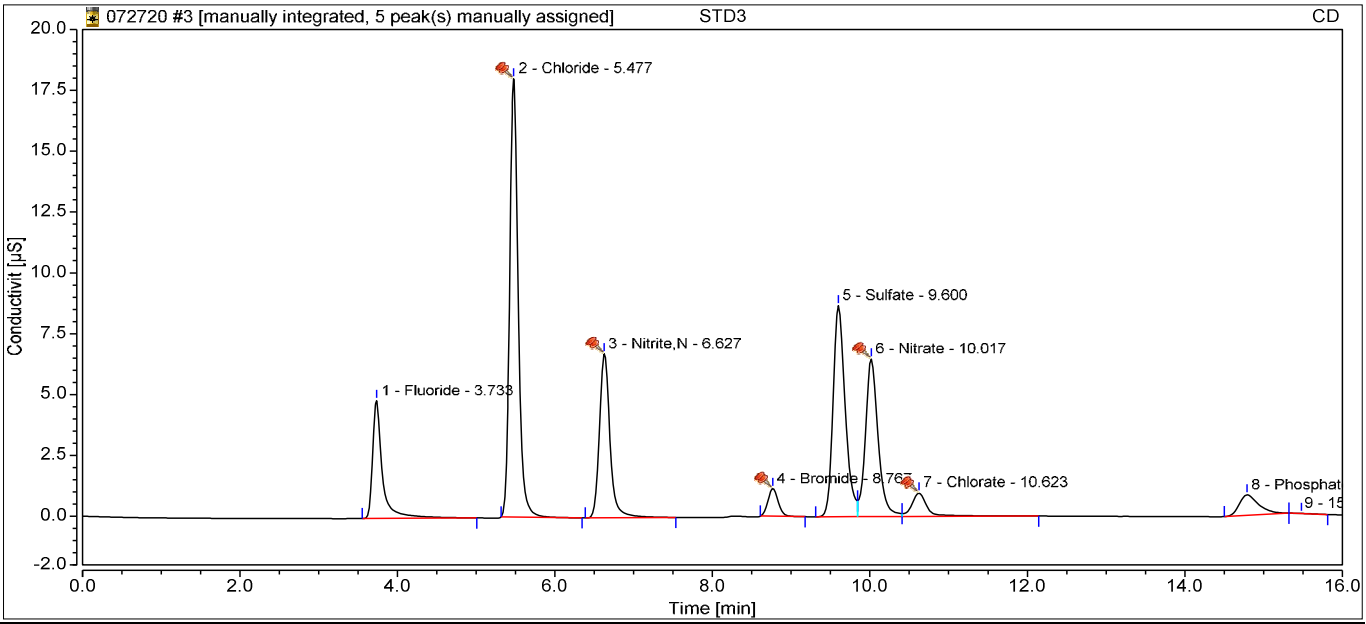

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.122 | 0.3761 | 0.3761 | 1.0000 |
| 2 | 5.48 | Chloride | BMB^ | 0.452 | 2.0081 | 2.0081 | 1.0000 |
| 3 | 6.63 | Nitrite,N | BMB*^ | 0.202 | 0.4159 | 0.4159 | 1.0000 |
| 4 | 8.77 | Bromide | BMB^ | 0.032 | 0.3810 | 0.3810 | 1.0000 |
| 5 | 9.64 | Sulfate | BM | 0.263 | 1.8631 | 1.8631 | 1.0000 |
| 6 | 10.05 | Nitrate | M ^ | 0.253 | 0.4135 | 0.4135 | 1.0000 |
| 7 | 10.63 | Chlorate | MB^ | 0.046 | 0.4359 | 0.4359 | 1.0000 |
| 8 | 14.91 | Phosphate | M * | 0.037 | 0.4982 | 0.4982 | 1.0000 |
| **Total:** | | | **0.000** | **1.407** | | **6.39** | |

*3 STD3*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD3** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB3** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 11:39** | *Sample Weight:* | **1.0000** |

Run Time:



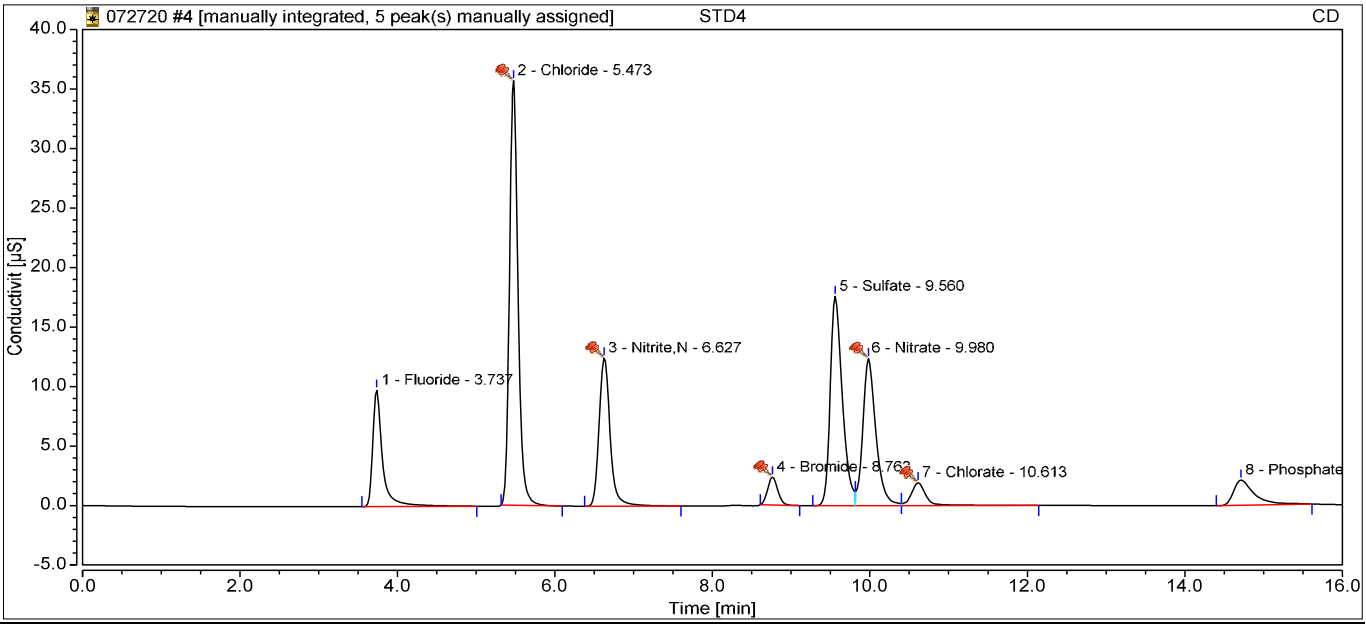

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.697 | 2.0782 | 2.0782 | 1.0000 |
| 2 | 5.48 | Chloride | BMB^ | 2.257 | 10.1575 | 10.1575 | 1.0000 |
| 3 | 6.63 | Nitrite,N | BMB*^ | 1.049 | 2.2692 | 2.2692 | 1.0000 |
| 4 | 8.77 | Bromide | BMB^ | 0.172 | 1.9524 | 1.9524 | 1.0000 |
| 5 | 9.60 | Sulfate | BM | 1.543 | 9.9532 | 9.9532 | 1.0000 |
| 6 | 10.02 | Nitrate | M ^ | 1.213 | 2.0220 | 2.0220 | 1.0000 |
| 7 | 10.62 | Chlorate | MB^ | 0.220 | 2.2332 | 2.2332 | 1.0000 |
| 8 | 14.79 | Phosphate | BMB | 0.243 | 1.6042 | 1.6042 | 1.0000 |
| **Total:** | | | **0.000** | **7.394** | | **32.27** | |

*4 STD4*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD4** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB4** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 11:57** | *Sample Weight:* | **1.0000** |

Run Time:



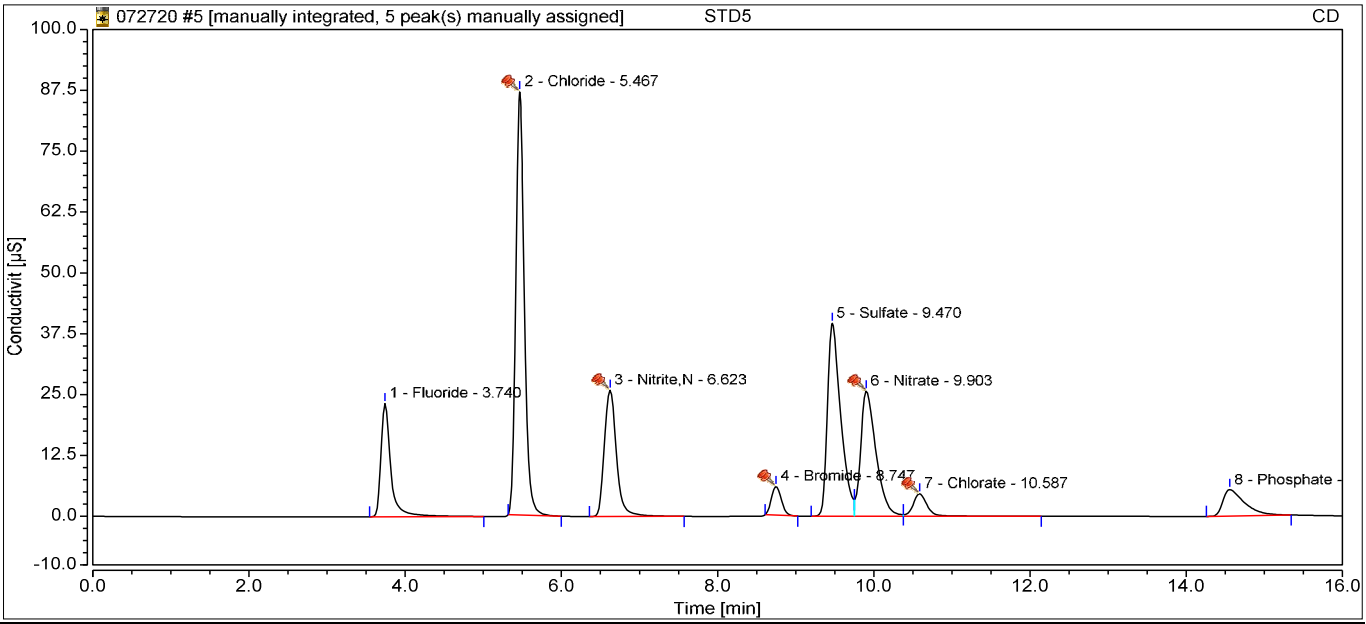

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 1.406 | 4.1793 | 4.1793 | 1.0000 |
| 2 | 5.47 | Chloride | BMB^ | 4.475 | 20.1656 | 20.1656 | 1.0000 |
| 3 | 6.63 | Nitrite,N | BMB*^ | 2.031 | 4.4170 | 4.4170 | 1.0000 |
| 4 | 8.76 | Bromide | BMB^ | 0.350 | 3.9560 | 3.9560 | 1.0000 |
| 5 | 9.56 | Sulfate | BM | 3.131 | 19.9943 | 19.9943 | 1.0000 |
| 6 | 9.98 | Nitrate | M ^ | 2.388 | 3.9909 | 3.9909 | 1.0000 |
| 7 | 10.61 | Chlorate | MB^ | 0.410 | 4.1864 | 4.1864 | 1.0000 |
| 8 | 14.71 | Phosphate | BMB* | 0.647 | 3.7708 | 3.7708 | 1.0000 |
| **Total:** | | | **0.000** | **14.837** | | **64.66** | |

*5 STD5*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD5** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB5** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 12:15** | *Sample Weight:* | **1.0000** |

Run Time:



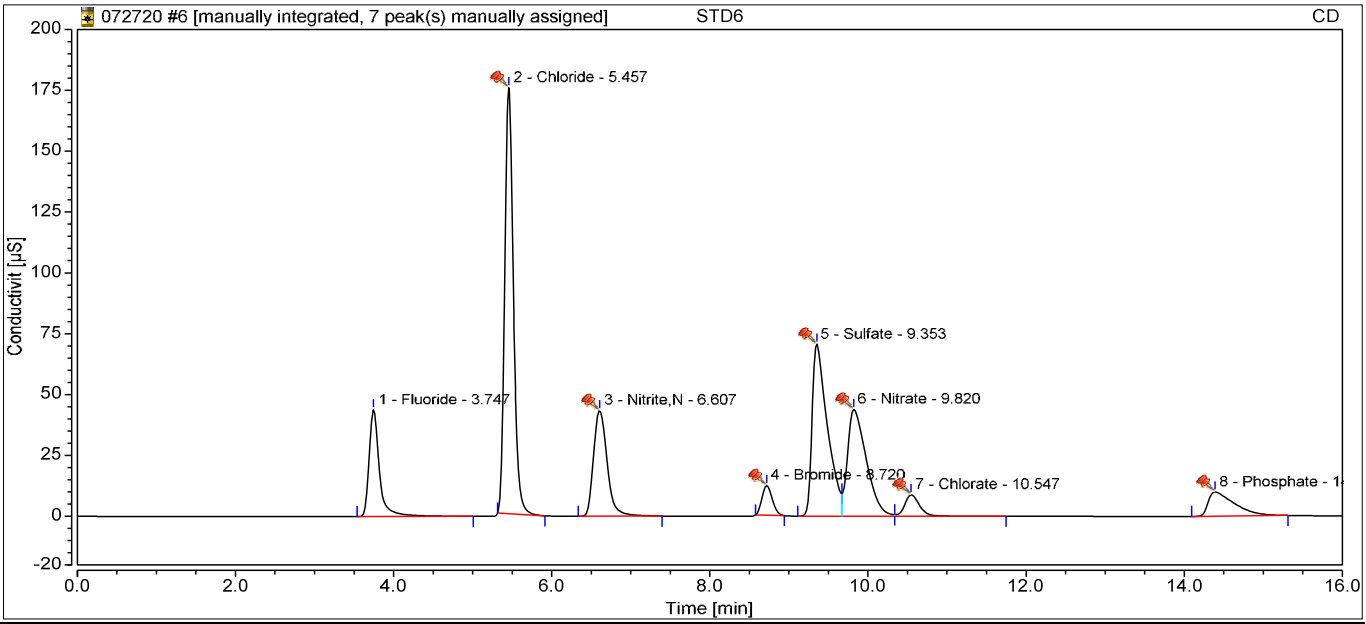

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 3.409 | 10.1112 | 10.1112 | 1.0000 |
| 2 | 5.47 | Chloride | BMB^ | 10.962 | 49.4436 | 49.4436 | 1.0000 |
| 3 | 6.62 | Nitrite,N | BMB*^ | 4.673 | 10.1996 | 10.1996 | 1.0000 |
| 4 | 8.75 | Bromide | BMB^ | 0.860 | 9.6874 | 9.6874 | 1.0000 |
| 5 | 9.47 | Sulfate | BM | 7.832 | 49.7141 | 49.7141 | 1.0000 |
| 6 | 9.90 | Nitrate | M ^ | 5.855 | 9.7981 | 9.7981 | 1.0000 |
| 7 | 10.59 | Chlorate | MB^ | 0.963 | 9.8794 | 9.8794 | 1.0000 |
| 8 | 14.56 | Phosphate | BMB* | 1.744 | 9.6675 | 9.6675 | 1.0000 |
| **Total:** | | | **0.000** | **36.299** | | **158.50** | |

*6 STD6*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD6** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB6** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 12:33** | *Sample Weight:* | **1.0000** |

Run Time:



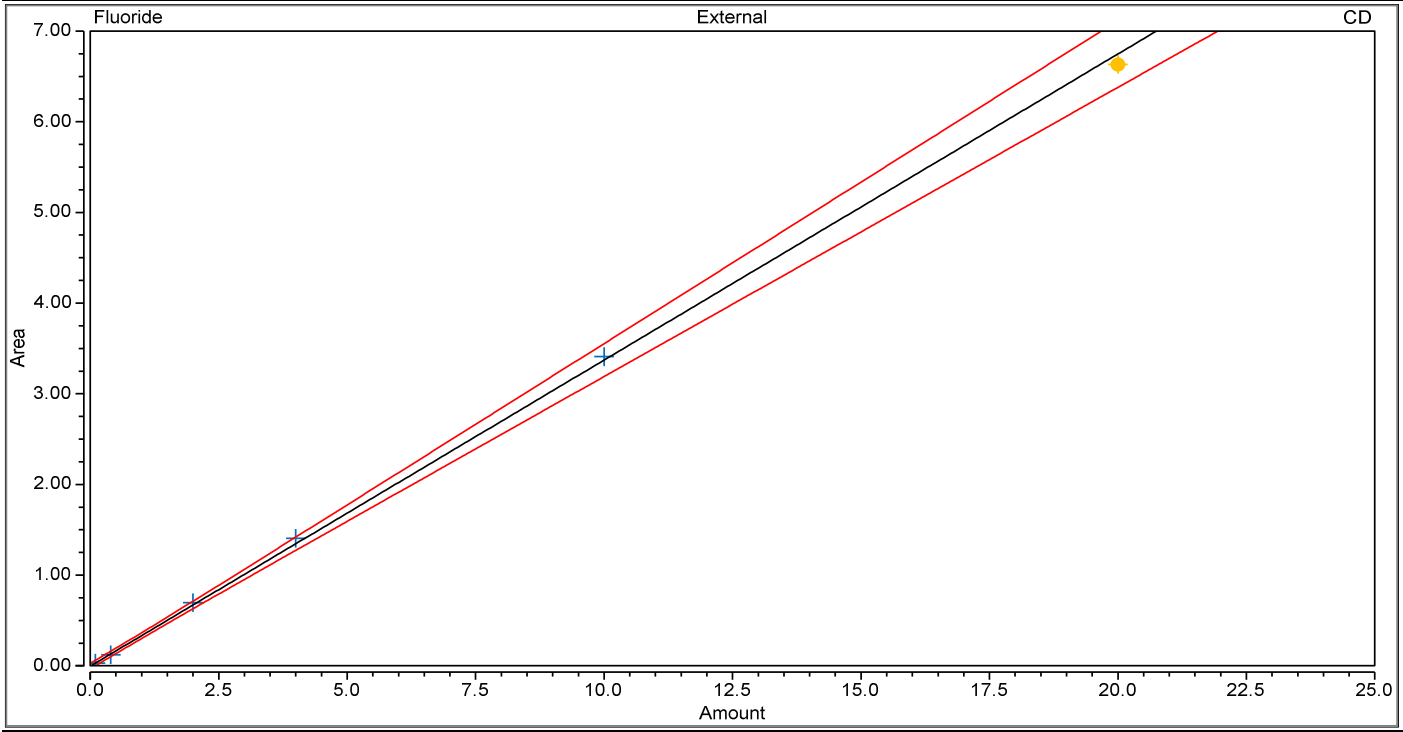

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.75 | Fluoride | BMB | 6.632 | 19.6569 | 19.6569 | 1.0000 |
| 2 | 5.46 | Chloride | BMB^ | 22.217 | 100.2349 | 100.2349 | 1.0000 |
| 3 | 6.61 | Nitrite,N | BMB*^ | 8.750 | 19.1238 | 19.1238 | 1.0000 |
| 4 | 8.72 | Bromide | BMB*^ | 1.815 | 20.4140 | 20.4140 | 1.0000 |
| 5 | 9.35 | Sulfate | BM ^ | 15.855 | 100.4380 | 100.4380 | 1.0000 |
| 6 | 9.82 | Nitrate | M ^ | 12.052 | 20.1786 | 20.1786 | 1.0000 |
| 7 | 10.55 | Chlorate | MB^ | 1.916 | 19.6877 | 19.6877 | 1.0000 |
| 8 | 14.39 | Phosphate | BMB*^ | 3.828 | 20.8593 | 20.8593 | 1.0000 |
| **Total:** | | | **0.000** | **73.065** | | **320.59** | |

# Calibration

| Calibration Details | Fluoride | | |
|---|---|---|---|
| *Calibration Type* | Lin, WithOffset, 1/A | *Offset (C0)* | -0.0046 |
| *Evaluation Type* | Area | *Slope (C1)* | 0.3376 |
| *Number of Calibration Points* | 6 | *Curve (C2)* | 0.0000 |
| *Number of disabled Calibration Points* | 0 | *R-Square* | 0.9994 |

**Calibration Plot** **Fluoride**



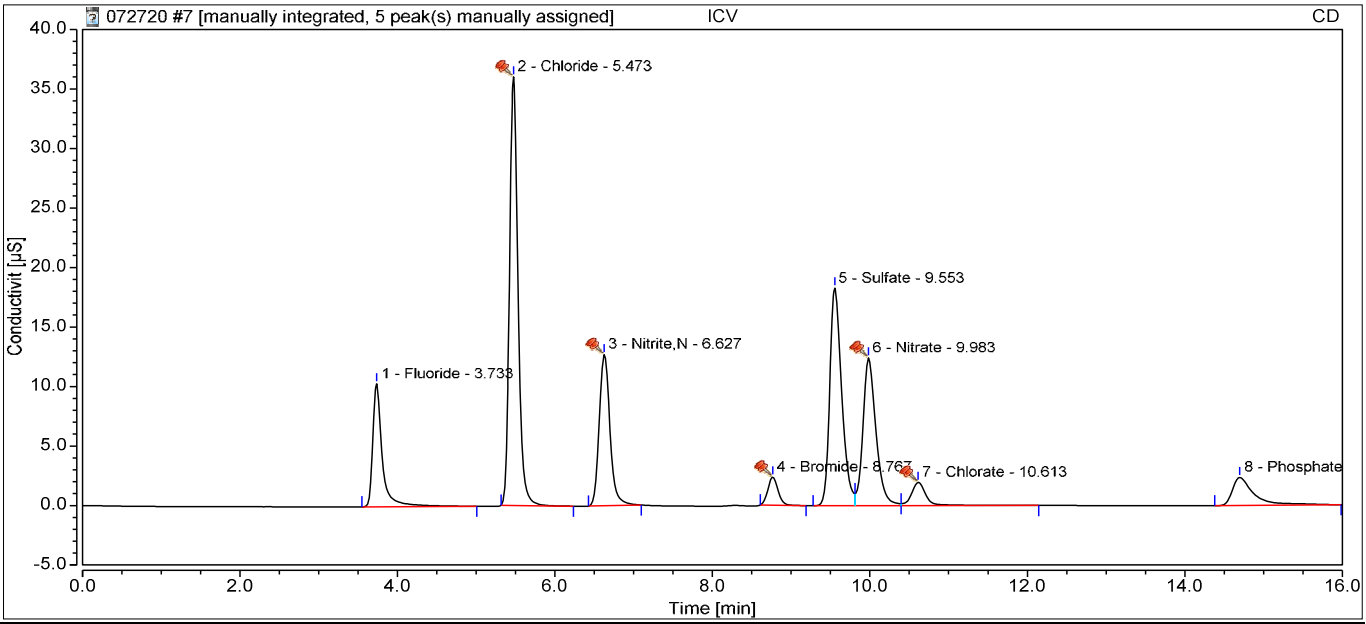

**Calibration Results** **Fluoride**

| No. | Injection Name | Calibration Level | X Value CD Fluoride | Y Value CD Fluoride | Y Value CD Fluoride | Area µS*min CD Fluoride | Height µS CD Fluoride |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | 1 | 0.1000 | 0.0285 | 0.0285 | 0.029 | 0.191 |
| 2 | STD2 | 2 | 0.4000 | 0.1224 | 0.1224 | 0.122 | 0.826 |
| 3 | STD3 | 3 | 2.0000 | 0.6970 | 0.6970 | 0.697 | 4.841 |
| 4 | STD4 | 4 | 4.0000 | 1.4064 | 1.4064 | 1.406 | 9.790 |
| 5 | STD5 | 5 | 10.0000 | 3.4092 | 3.4092 | 3.409 | 23.253 |
| 6 | STD6 | 6 | 20.0000 | 6.6320 | 6.6320 | 6.632 | 43.889 |

7 ICV

| | | | |
|---|---|---|---|
| *Sample Name:* | **ICV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB7** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 12:51** | *Sample Weight:* | **1.0000** |

Run Time:



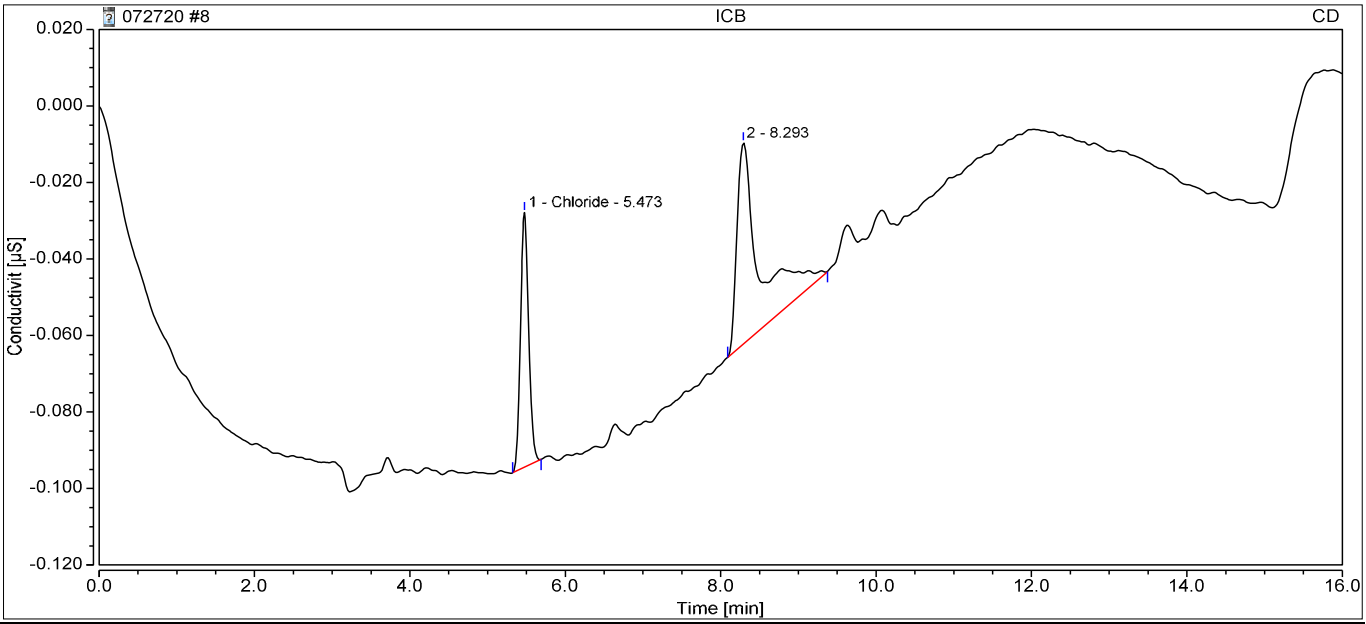

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 1.442 | 4.2839 | 4.2839 | 1.0000 |
| 2 | 5.47 | Chloride | BMB^ | 4.508 | 20.3168 | 20.3168 | 1.0000 |
| 3 | 6.63 | Nitrite,N | BMB*^ | 2.013 | 4.3785 | 4.3785 | 1.0000 |
| 4 | 8.77 | Bromide | BMB^ | 0.352 | 3.9794 | 3.9794 | 1.0000 |
| 5 | 9.55 | Sulfate | BM | 3.208 | 20.4827 | 20.4827 | 1.0000 |
| 6 | 9.98 | Nitrate | M ^ | 2.387 | 3.9894 | 3.9894 | 1.0000 |
| 7 | 10.61 | Chlorate | MB^ | 0.412 | 4.2081 | 4.2081 | 1.0000 |
| 8 | 14.70 | Phosphate | BMB | 0.762 | 4.3926 | 4.3926 | 1.0000 |
| **Total:** | | | **0.000** | **15.085** | | **66.03** | |

*8 ICB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **ICB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA3** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **06/02/2020 13:45** | *Sample Weight:* | **1.0000** |

Run Time:



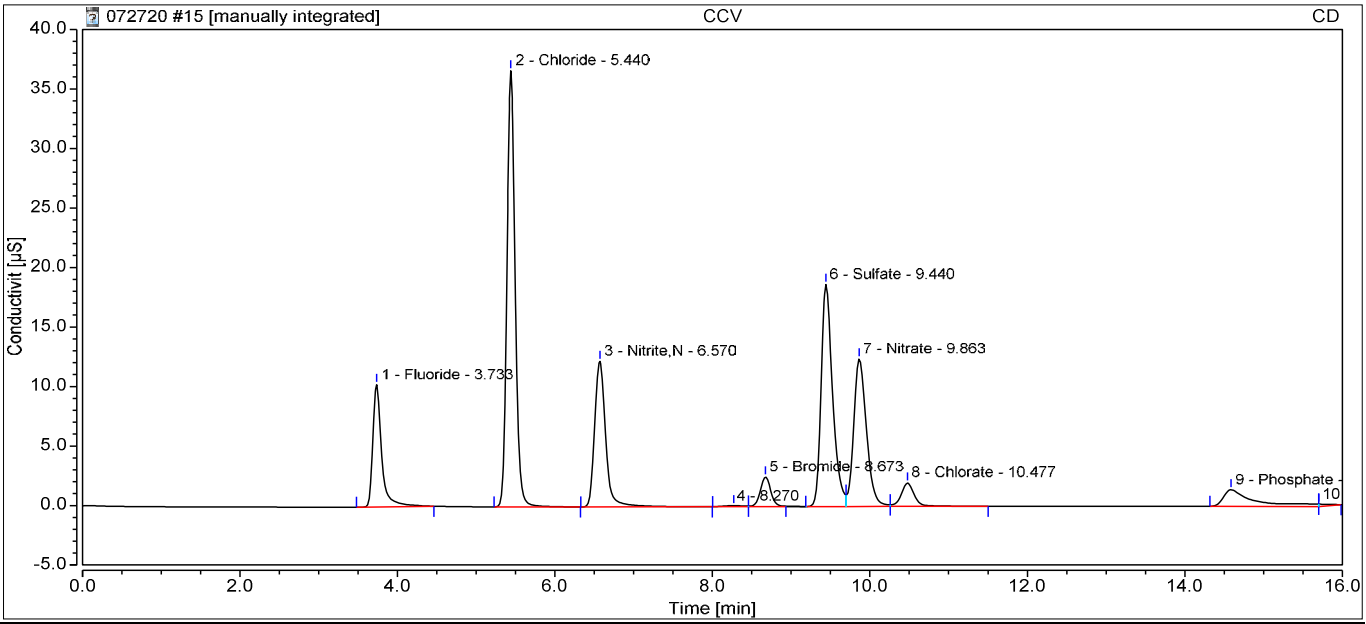

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.47 | Chloride | BMB | 0.008 | 0.0067 | 0.0067 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.008** | | **0.01** | |

*15 CCV*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 15:48** | *Sample Weight:* | **1.0000** |

Run Time:



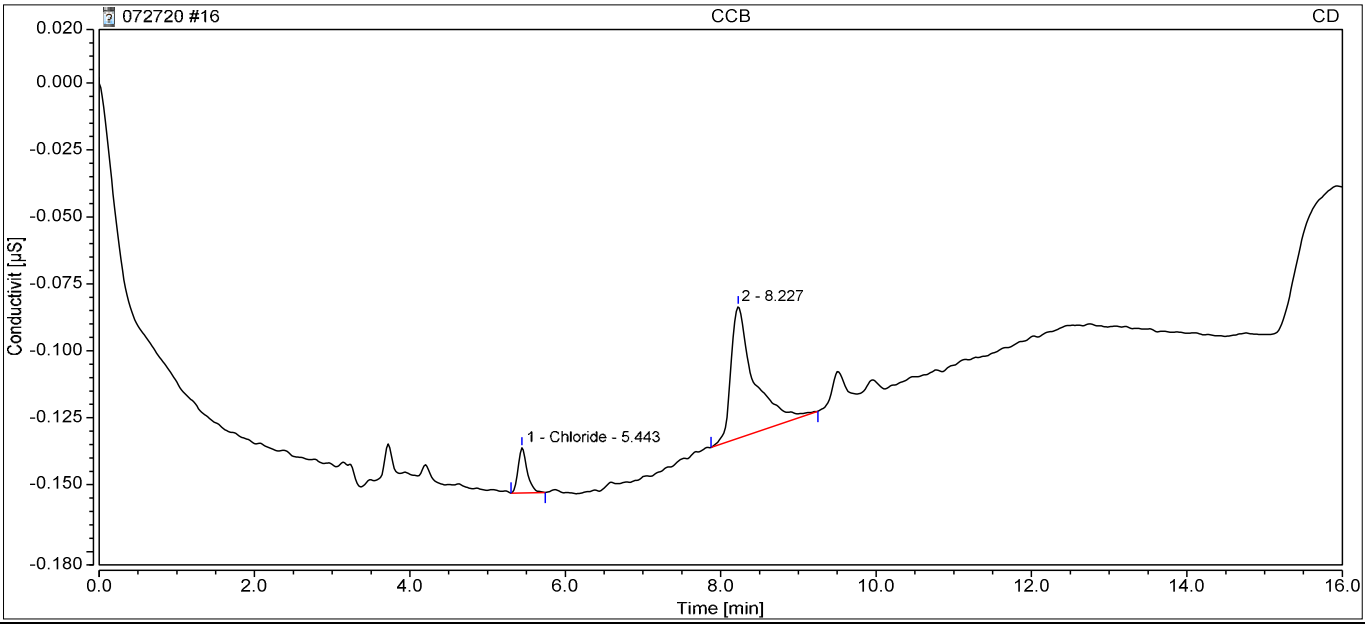

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB* | 1.333 | 3.9605 | 3.9605 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 4.453 | 20.0663 | 20.0663 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 1.981 | 4.3093 | 4.3093 | 1.0000 |
| 5 | 8.67 | Bromide | M * | 0.386 | 4.3553 | 4.3553 | 1.0000 |
| 6 | 9.44 | Sulfate | M | 3.152 | 20.1250 | 20.1250 | 1.0000 |
| 7 | 9.86 | Nitrate | M | 2.315 | 3.8676 | 3.8676 | 1.0000 |
| 8 | 10.48 | Chlorate | MB | 0.384 | 3.9156 | 3.9156 | 1.0000 |
| 9 | 14.59 | Phosphate | BM * | 0.633 | 3.6959 | 3.6959 | 1.0000 |
| **Total:** | | | **0.000** | **14.635** | | **64.30** | |

*16 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA3** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 16:06** | *Sample Weight:* | **1.0000** |

Run Time:



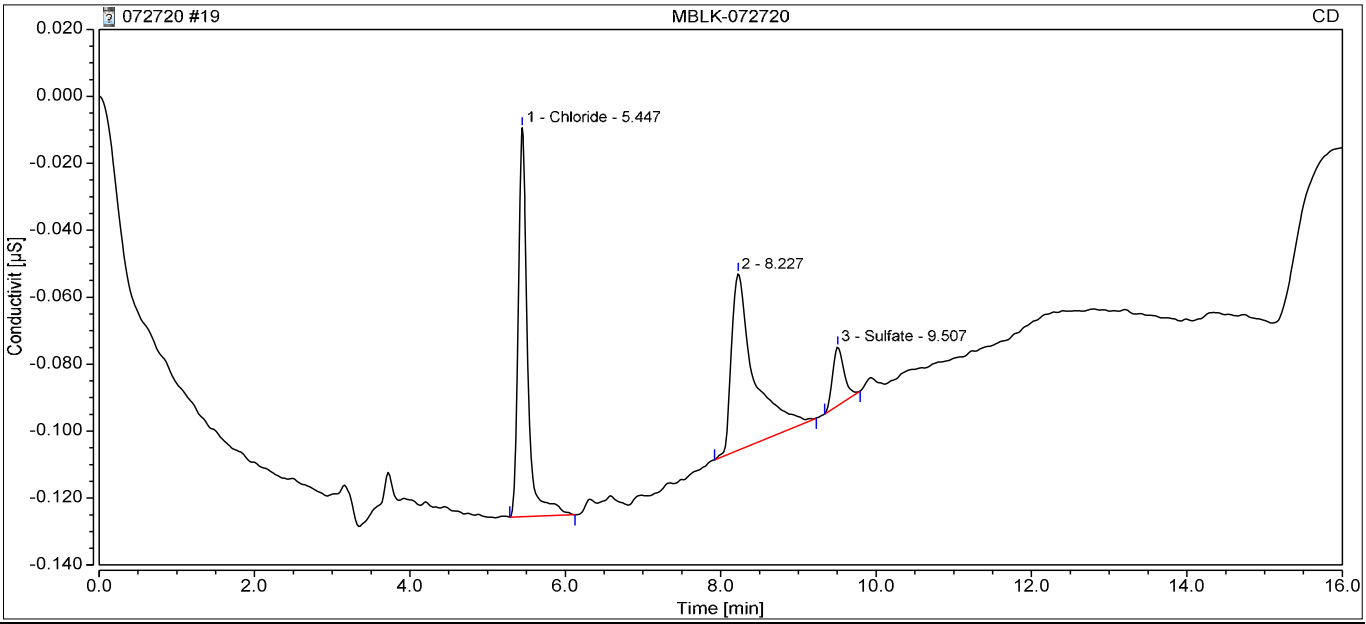

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.44 | Chloride | BMB | 0.002 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.002** | | **0.00** | |

19 MBLK-072720

| | | | |
|---|---|---|---|
| *Sample Name:* | **MBLK-072720** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BB6** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 17:01** | *Sample Weight:* | **1.0000** |

Run Time:



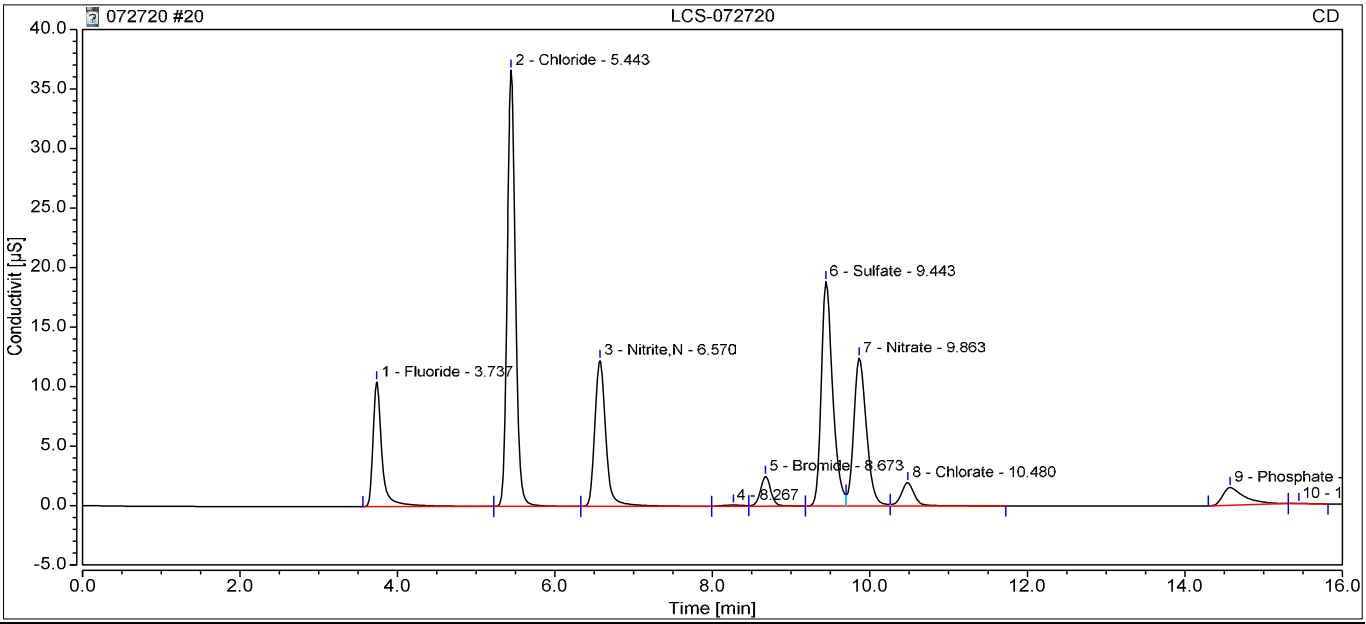

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.45 | Chloride | BMB | 0.016 | 0.0428 | 0.0428 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.51 | Sulfate | BMB | 0.003 | 0.2192 | 0.2192 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.019** | | **0.26** | |

*20 LCS-072720*

| | | | |
|---|---|---|---|
| *Sample Name:* | **LCS-072720** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA8** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 17:19** | *Sample Weight:* | **1.0000** |

Run Time:



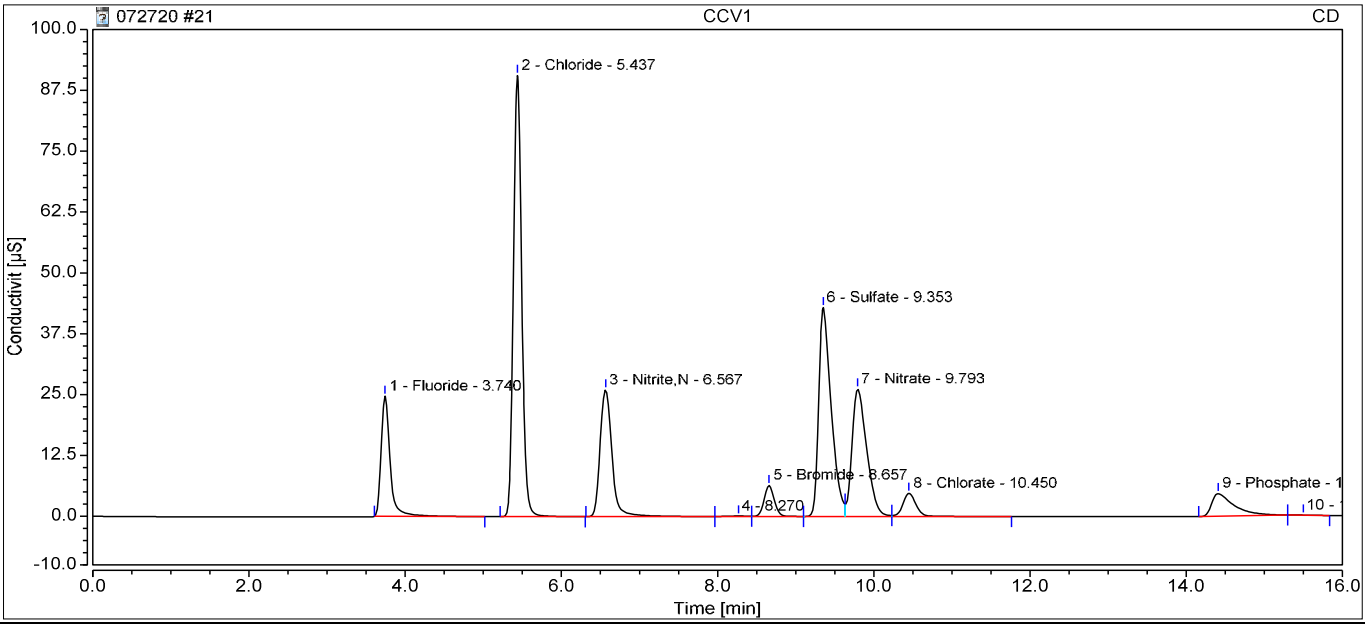

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 1.387 | 4.1218 | 4.1218 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 4.457 | 20.0826 | 20.0826 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 1.978 | 4.3029 | 4.3029 | 1.0000 |
| 5 | 8.67 | Bromide | M | 0.389 | 4.3980 | 4.3980 | 1.0000 |
| 6 | 9.44 | Sulfate | M | 3.186 | 20.3412 | 20.3412 | 1.0000 |
| 7 | 9.86 | Nitrate | M | 2.313 | 3.8645 | 3.8645 | 1.0000 |
| 8 | 10.48 | Chlorate | MB | 0.385 | 3.9353 | 3.9353 | 1.0000 |
| 9 | 14.57 | Phosphate | BMB | 0.479 | 2.8721 | 2.8721 | 1.0000 |
| **Total:** | | | **0.000** | **14.575** | | **63.92** | |

*21 CCV1*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV1** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA4** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 17:37** | *Sample Weight:* | **1.0000** |

Run Time:



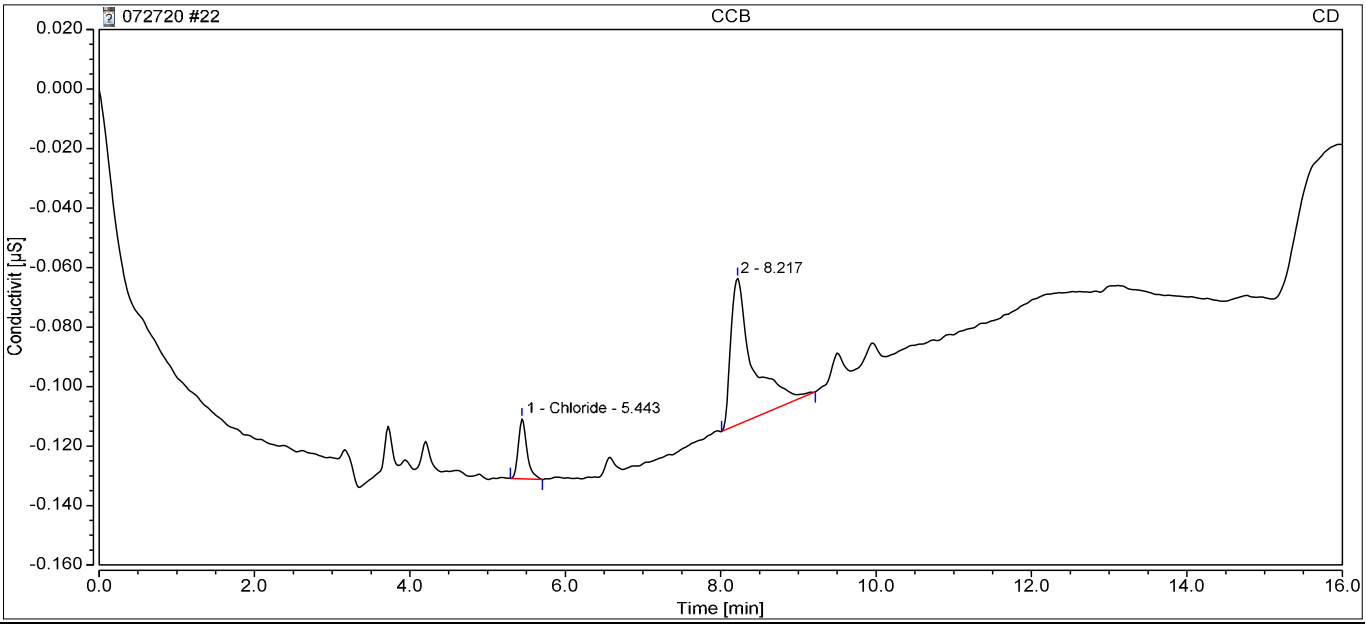

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 3.259 | 9.6657 | 9.6657 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 11.065 | 49.9078 | 49.9078 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 4.594 | 10.0274 | 10.0274 | 1.0000 |
| 5 | 8.66 | Bromide | M | 0.972 | 10.9439 | 10.9439 | 1.0000 |
| 6 | 9.35 | Sulfate | M | 7.953 | 50.4785 | 50.4785 | 1.0000 |
| 7 | 9.79 | Nitrate | M | 5.701 | 9.5403 | 9.5403 | 1.0000 |
| 8 | 10.45 | Chlorate | MB | 0.933 | 9.5765 | 9.5765 | 1.0000 |
| 9 | 14.41 | Phosphate | BMB | 1.544 | 8.5925 | 8.5925 | 1.0000 |
| **Total:** | | | **0.000** | **36.022** | | **158.73** | |

*22 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA5** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 17:55** | *Sample Weight:* | **1.0000** |

Run Time:



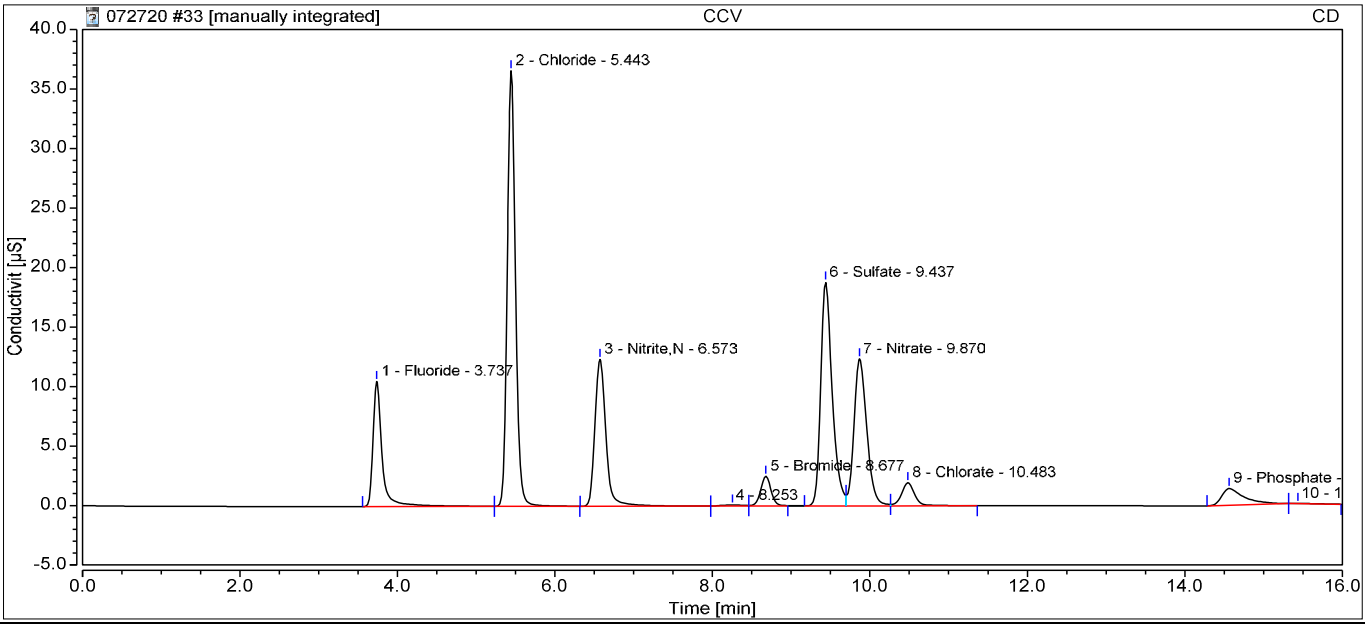

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.44 | Chloride | BMB | 0.003 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.003** | | **0.00** | |

*33 CCV*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 21:14** | *Sample Weight:* | **1.0000** |

Run Time:



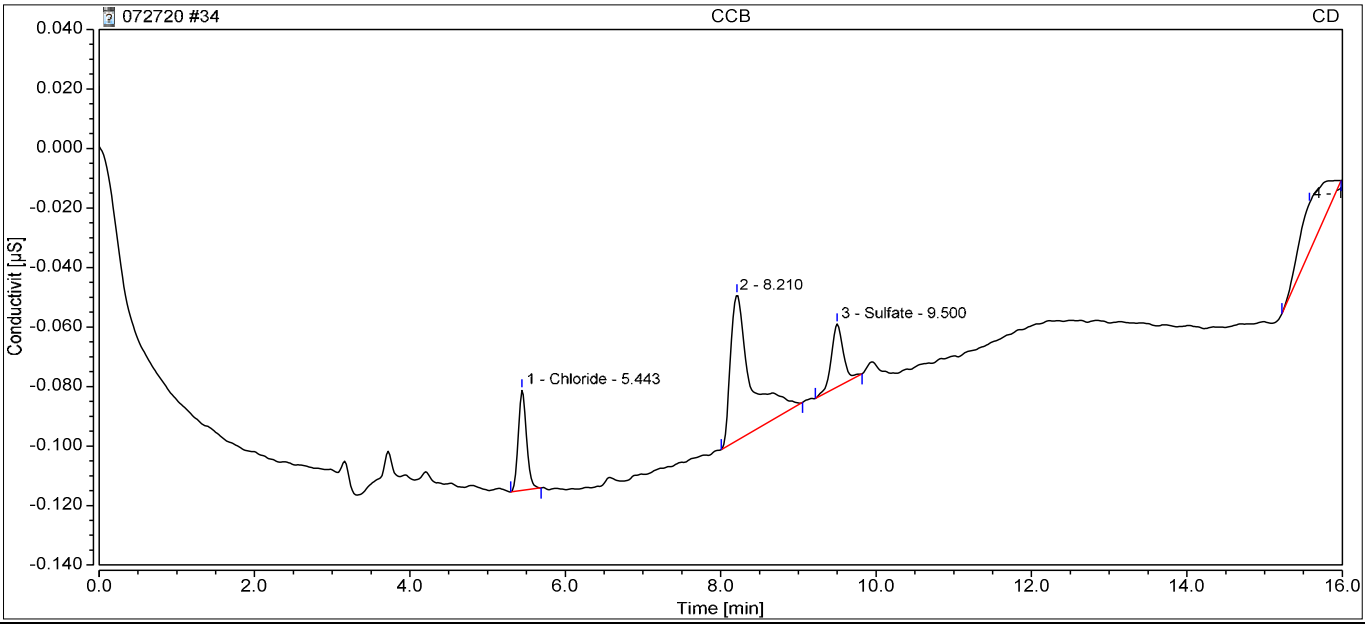

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 1.390 | 4.1317 | 4.1317 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 4.466 | 20.1239 | 20.1239 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 1.989 | 4.3252 | 4.3252 | 1.0000 |
| 5 | 8.68 | Bromide | M * | 0.385 | 4.3510 | 4.3510 | 1.0000 |
| 6 | 9.44 | Sulfate | M | 3.188 | 20.3526 | 20.3526 | 1.0000 |
| 7 | 9.87 | Nitrate | M | 2.315 | 3.8677 | 3.8677 | 1.0000 |
| 8 | 10.48 | Chlorate | MB | 0.380 | 3.8740 | 3.8740 | 1.0000 |
| 9 | 14.56 | Phosphate | BMB | 0.462 | 2.7781 | 2.7781 | 1.0000 |
| **Total:** | | | **0.000** | **14.573** | | **63.80** | |

*34 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA3** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 21:32** | *Sample Weight:* | **1.0000** |

Run Time:



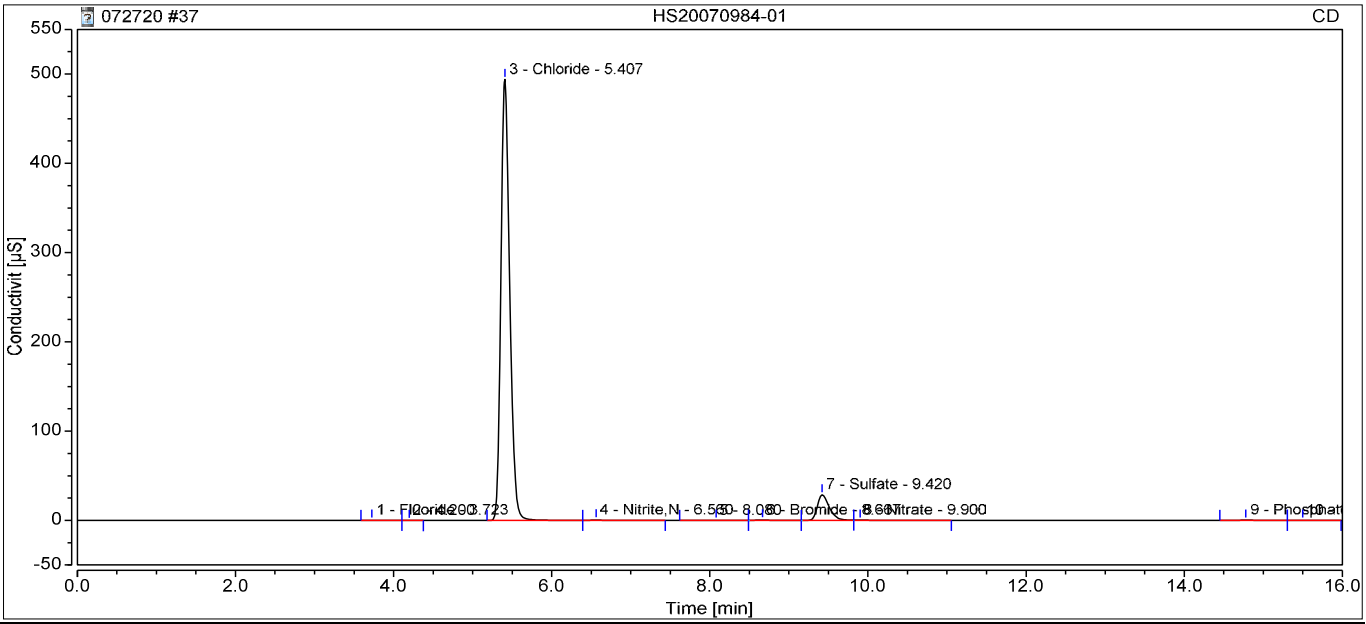

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.44 | Chloride | BMB | 0.004 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.50 | Sulfate | BMB | 0.004 | 0.2239 | 0.2239 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.008** | | **0.22** | |

*37 HS20070984-01*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20070984-01** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB5** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 22:27** | *Sample Weight:* | **1.0000** |

Run Time:



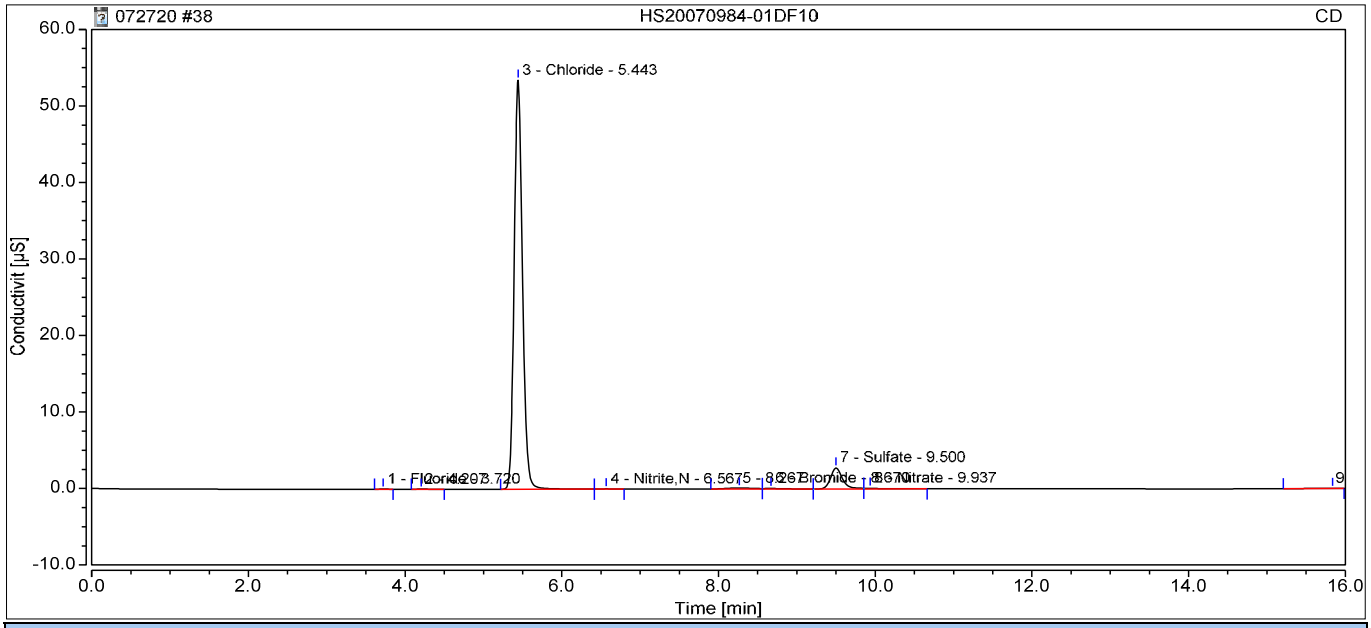

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.72 | Fluoride | BMB | 0.030 | 0.1031 | 0.1031 | 1.0000 |
| 3 | 5.41 | Chloride | BMB | 63.081 | 284.6571 | 284.6571 | 1.0000 |
| 4 | 6.56 | Nitrite,N | BMB | 0.076 | 0.1389 | 0.1389 | 1.0000 |
| 6 | 8.67 | Bromide | M | 0.103 | 1.1779 | 1.1779 | 1.0000 |
| 7 | 9.42 | Sulfate | M | 4.994 | 31.7750 | 31.7750 | 1.0000 |
| 8 | 9.90 | Nitrate | MB | 0.097 | 0.1530 | 0.1530 | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 9 | 14.78 | Phosphate | BMB | 0.069 | 0.6675 | 0.6675 | 1.0000 |
| **Total:** | | | **0.000** | **68.450** | | **318.67** | |

*38 HS20070984-01DF10*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20070984-01DF10** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GB6** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **10.0000** |
| *Recording Time:* | **07/27/2020 22:45** | *Sample Weight:* | **1.0000** |

Run Time:



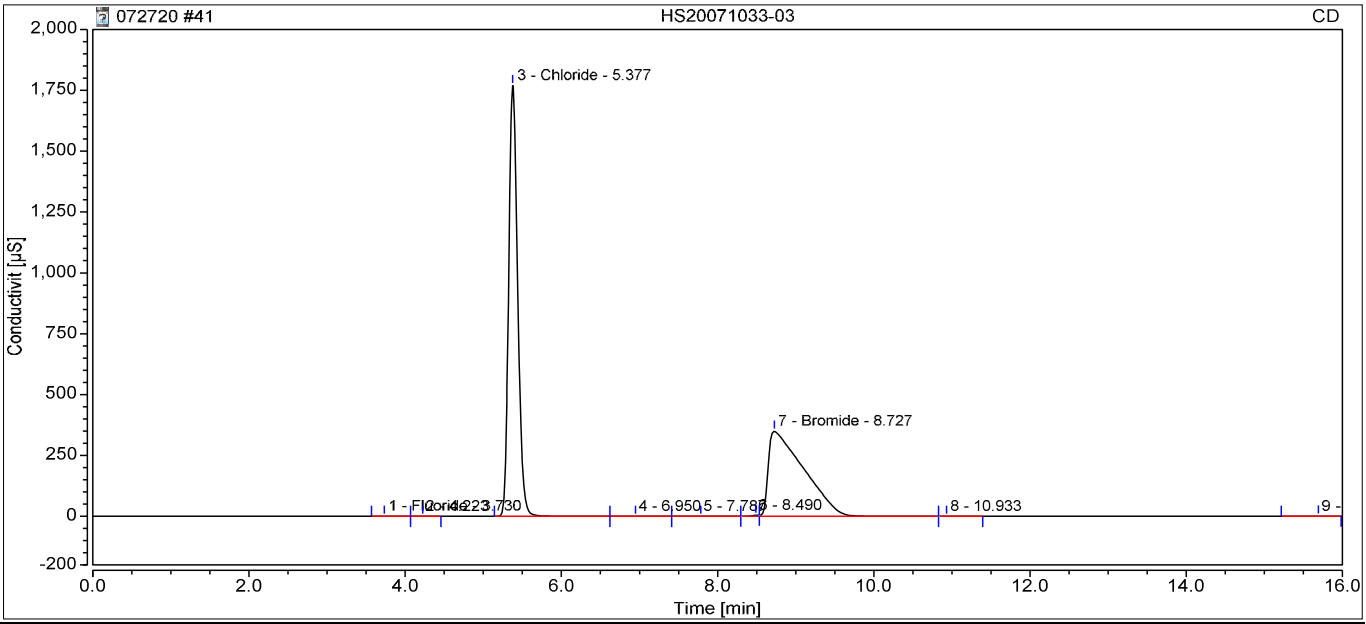

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.72 | Fluoride | BMB | 0.002 | 0.0207 | 0.2071 | 10.0000 |
| 3 | 5.44 | Chloride | BMB | 6.524 | 29.4119 | 294.1194 | 10.0000 |
| 4 | 6.57 | Nitrite,N | BMB | 0.006 | n.a. | n.a. | 10.0000 |
| 6 | 8.67 | Bromide | M | 0.024 | 0.2942 | 2.9418 | 10.0000 |
| 7 | 9.50 | Sulfate | M | 0.483 | 3.2559 | 32.5589 | 10.0000 |
| 8 | 9.94 | Nitrate | MB | 0.021 | 0.0261 | 0.2607 | 10.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| **Total:** | | | **0.000** | **7.061** | | **330.09** | |

*41 HS20071033-03*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20071033-03** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GC1** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 23:39** | *Sample Weight:* | **1.0000** |

Run Time:



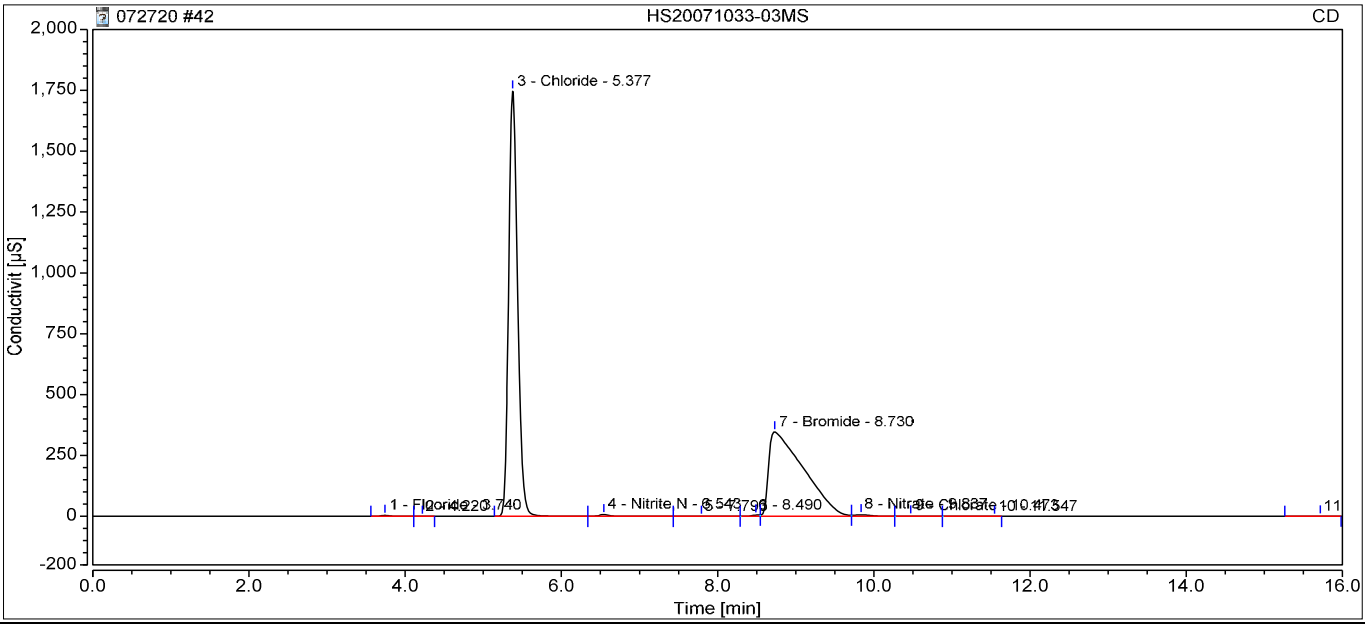

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.052 | 0.1688 | 0.1688 | 1.0000 |
| 3 | 5.38 | Chloride | BMB | 234.827 | 1059.7592 | 1059.7592 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 7 | 8.73 | Bromide | M | 182.634 | 2051.1049 | 2051.1049 | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **417.514** | | **3111.03** | |

*42 HS20071033-03MS*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20071033-03MS** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GC2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/27/2020 23:57** | *Sample Weight:* | **1.0000** |

Run Time:



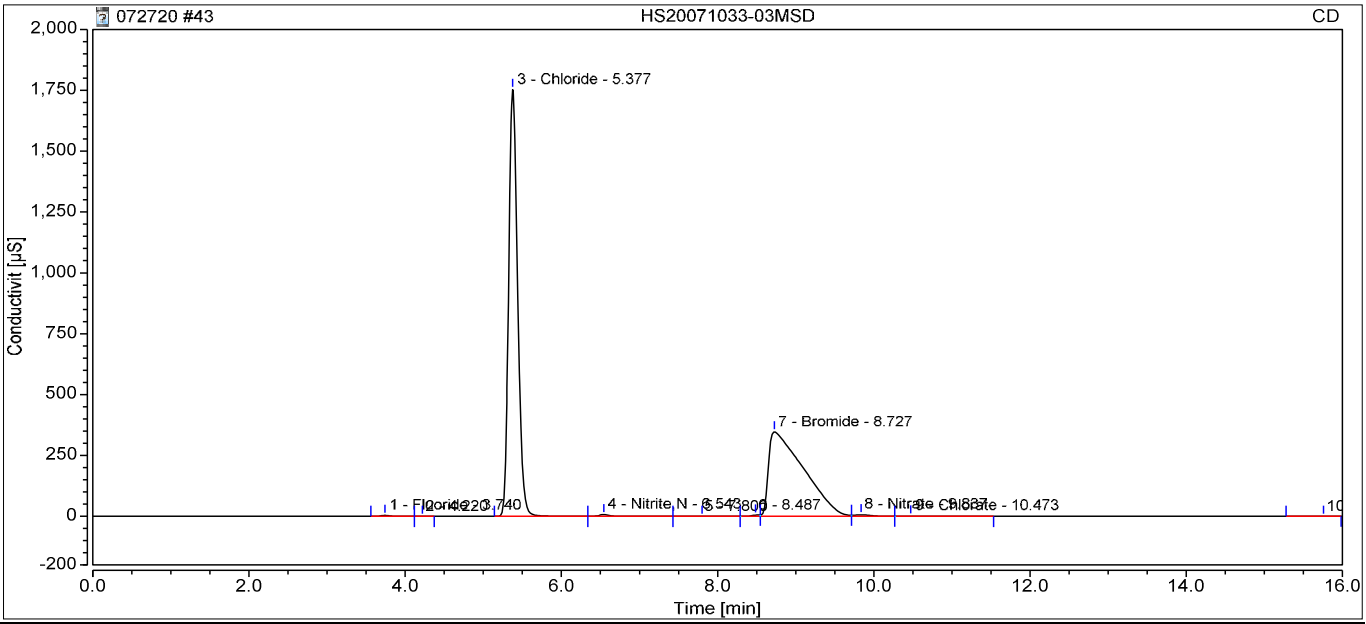

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 0.584 | 1.7429 | 1.7429 | 1.0000 |
| 3 | 5.38 | Chloride | BMB | 231.046 | 1042.6945 | 1042.6945 | 1.0000 |
| 4 | 6.54 | Nitrite,N | BMB | 1.043 | 2.2560 | 2.2560 | 1.0000 |
| 7 | 8.73 | Bromide | M | 179.396 | 2014.7415 | 2014.7415 | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 8 | 9.84 | Nitrate | M | 1.503 | 2.5088 | 2.5088 | 1.0000 |
| 9 | 10.47 | Chlorate | M | 0.239 | 2.4318 | 2.4318 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **413.812** | | **3066.38** | |

*43 HS20071033-03MSD*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20071033-03MSD** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GC3** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 00:15** | *Sample Weight:* | **1.0000** |

Run Time:



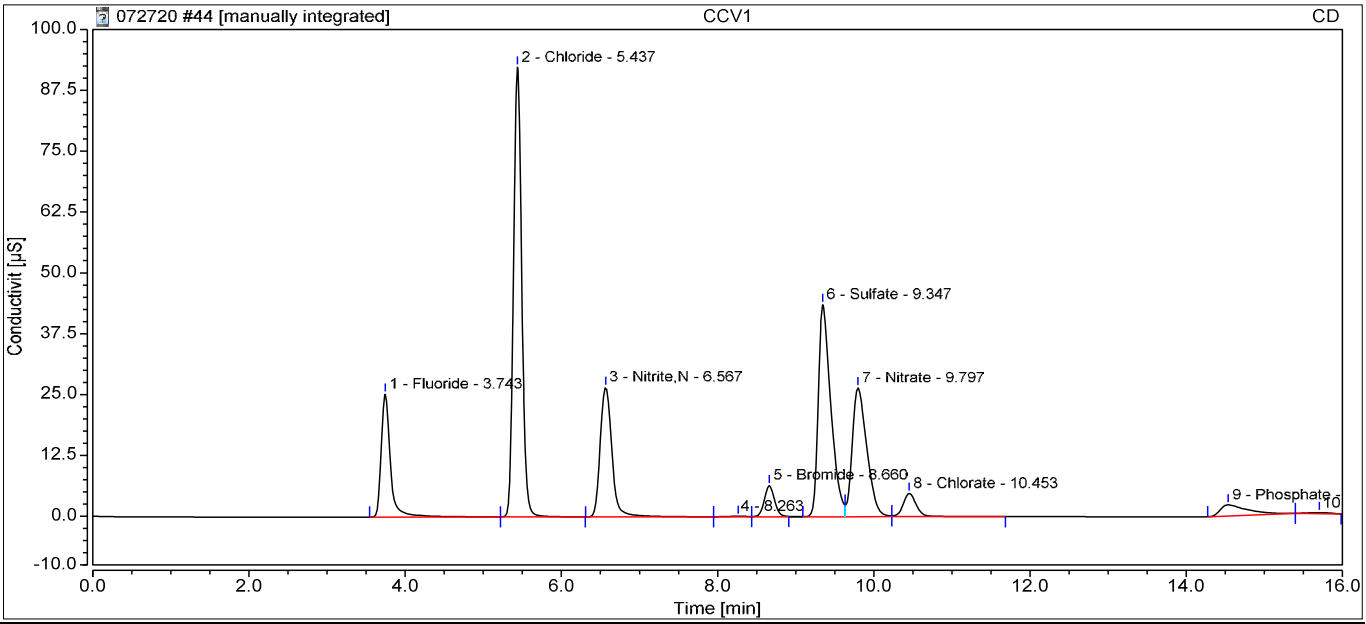

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 0.595 | 1.7766 | 1.7766 | 1.0000 |
| 3 | 5.38 | Chloride | BMB | 232.077 | 1047.3465 | 1047.3465 | 1.0000 |
| 4 | 6.54 | Nitrite,N | BMB | 1.049 | 2.2678 | 2.2678 | 1.0000 |
| 7 | 8.73 | Bromide | M | 180.013 | 2021.6644 | 2021.6644 | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 8 | 9.84 | Nitrate | M | 1.492 | 2.4887 | 2.4887 | 1.0000 |
| 9 | 10.47 | Chlorate | MB | 0.248 | 2.5230 | 2.5230 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **415.473** | | **3078.07** | |

*44 CCV1*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV1** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA4** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 00:33** | *Sample Weight:* | **1.0000** |

Run Time:



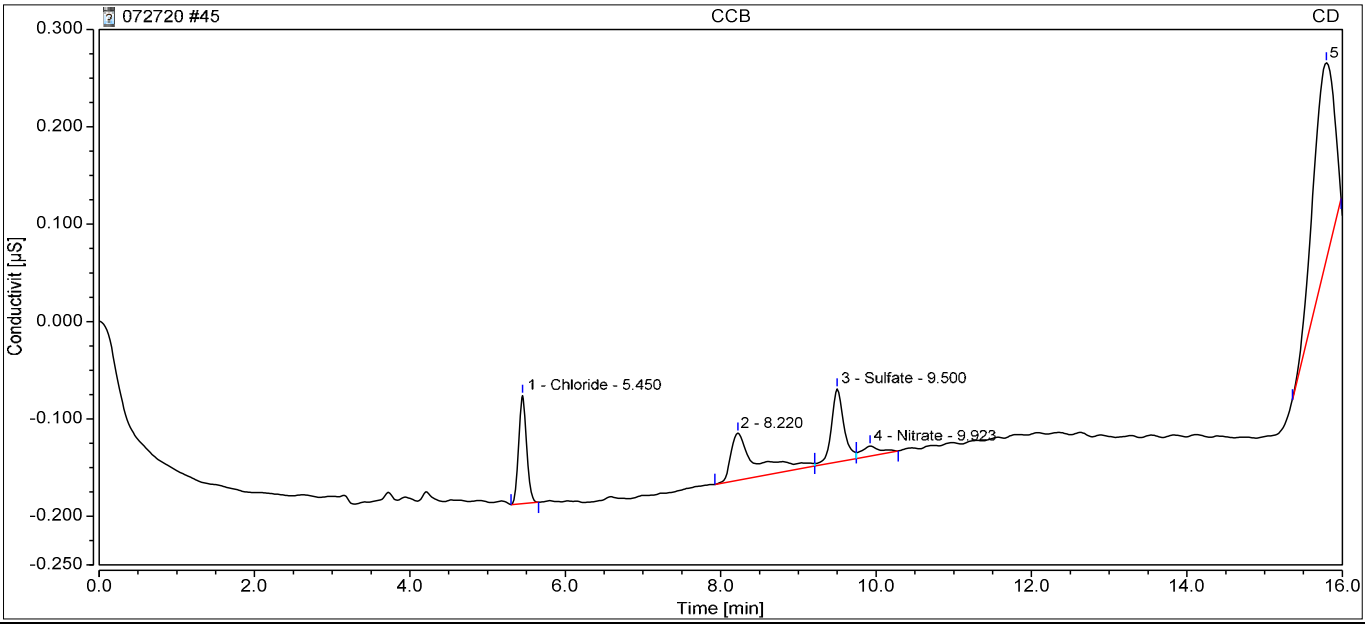

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 3.442 | 10.2099 | 10.2099 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 11.185 | 50.4504 | 50.4504 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 4.633 | 10.1124 | 10.1124 | 1.0000 |
| 5 | 8.66 | Bromide | M * | 0.972 | 10.9368 | 10.9368 | 1.0000 |
| 6 | 9.35 | Sulfate | M | 8.124 | 51.5650 | 51.5650 | 1.0000 |
| 7 | 9.80 | Nitrate | M | 5.729 | 9.5860 | 9.5860 | 1.0000 |
| 8 | 10.45 | Chlorate | MB | 0.945 | 9.6935 | 9.6935 | 1.0000 |
| 9 | 14.54 | Phosphate | BMB | 0.911 | 5.1897 | 5.1897 | 1.0000 |
| **Total:** | | | **0.000** | **35.941** | | **157.74** | |

*45 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA5** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 00:52** | *Sample Weight:* | **1.0000** |

Run Time:



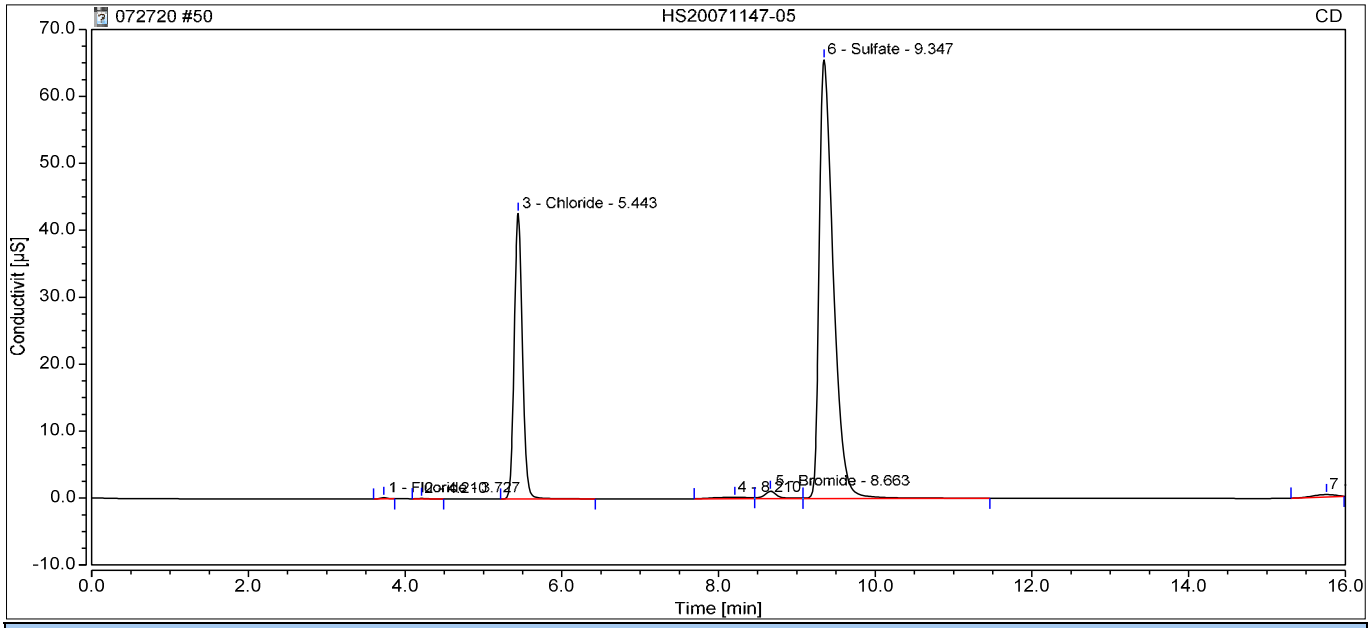

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.45 | Chloride | BMB | 0.013 | 0.0298 | 0.0298 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.50 | Sulfate | M | 0.014 | 0.2885 | 0.2885 | 1.0000 |
| 4 | 9.92 | Nitrate | MB | 0.003 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.030** | | **0.32** | |

50 HS20071147-05

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20071147-05** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GC8** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 02:22** | *Sample Weight:* | **1.0000** |

Run Time:

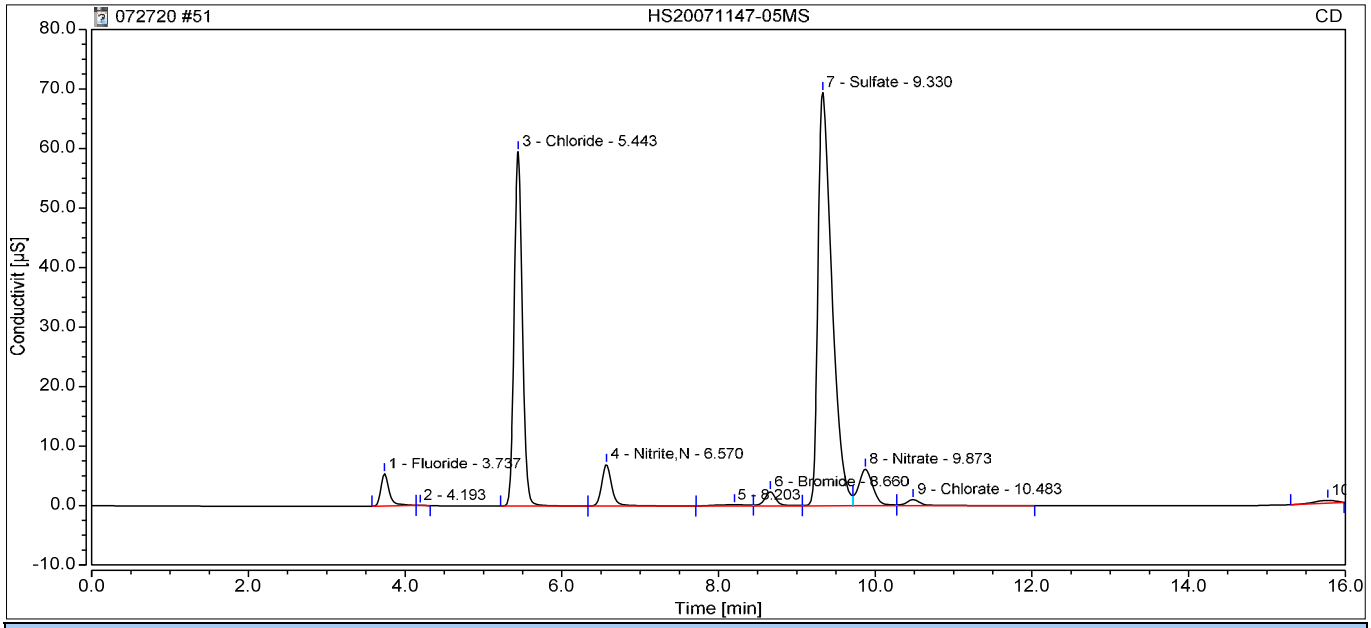



**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.019 | 0.0700 | 0.0700 | 1.0000 |
| 3 | 5.44 | Chloride | BMB | 5.143 | 23.1800 | 23.1800 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 5 | 8.66 | Bromide | M | 0.215 | 2.4453 | 2.4453 | 1.0000 |
| 6 | 9.35 | Sulfate | MB | 13.637 | 86.4197 | 86.4197 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **19.015** | | **112.11** | |

| | | | |
|---|---|---|---|
| *51* | *HS20071147-05MS* | | |
| *Sample Name:* | **HS20071147-05MS** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GD1** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 02:40** | *Sample Weight:* | **1.0000** |

Run Time:



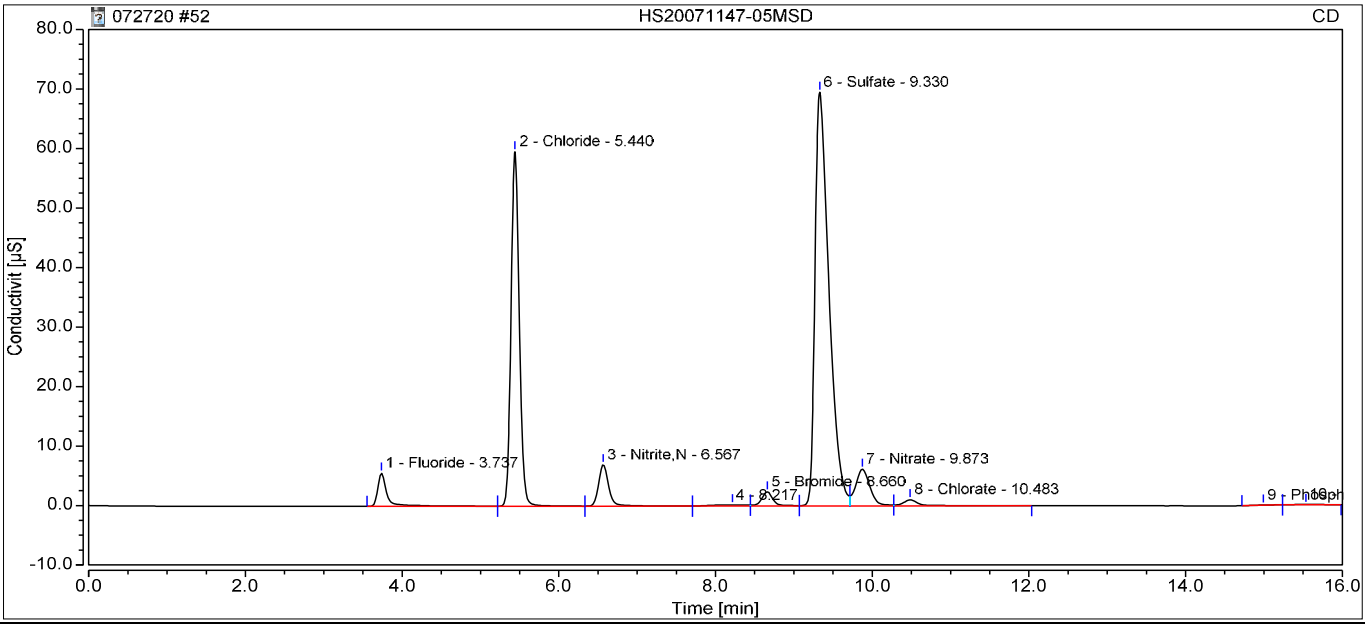

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 0.660 | 1.9677 | 1.9677 | 1.0000 |
| 3 | 5.44 | Chloride | BMB | 7.213 | 32.5223 | 32.5223 | 1.0000 |
| 4 | 6.57 | Nitrite,N | BMB | 1.050 | 2.2704 | 2.2704 | 1.0000 |
| 6 | 8.66 | Bromide | M | 0.404 | 4.5621 | 4.5621 | 1.0000 |
| 7 | 9.33 | Sulfate | M | 14.380 | 91.1161 | 91.1161 | 1.0000 |
| 8 | 9.87 | Nitrate | M | 1.316 | 2.1945 | 2.1945 | 1.0000 |
| 9 | 10.48 | Chlorate | MB | 0.245 | 2.4924 | 2.4924 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **25.268** | | **137.13** | |

52 HS20071147-05MSD

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20071147-05MSD** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **GD2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 02:58** | *Sample Weight:* | **1.0000** |

Run Time:



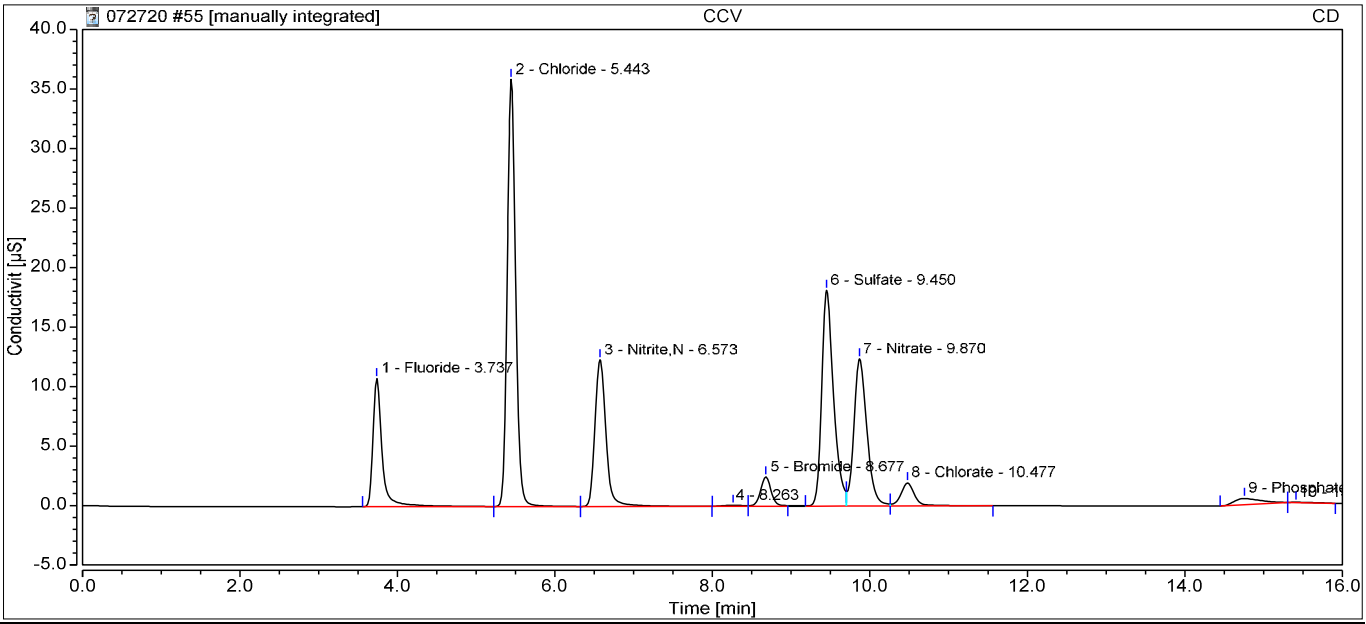

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 0.758 | 2.2577 | 2.2577 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 7.220 | 32.5540 | 32.5540 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 1.051 | 2.2727 | 2.2727 | 1.0000 |
| 5 | 8.66 | Bromide | M | 0.405 | 4.5711 | 4.5711 | 1.0000 |
| 6 | 9.33 | Sulfate | M | 14.392 | 91.1888 | 91.1888 | 1.0000 |
| 7 | 9.87 | Nitrate | M | 1.314 | 2.1913 | 2.1913 | 1.0000 |
| 8 | 10.48 | Chlorate | MB | 0.237 | 2.4116 | 2.4116 | 1.0000 |
| 9 | 14.99 | Phosphate | BMB | 0.011 | 0.3547 | 0.3547 | 1.0000 |
| **Total:** | | | **0.000** | **25.387** | | **137.80** | |

*55 CCV*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 03:53** | *Sample Weight:* | **1.0000** |

Run Time:



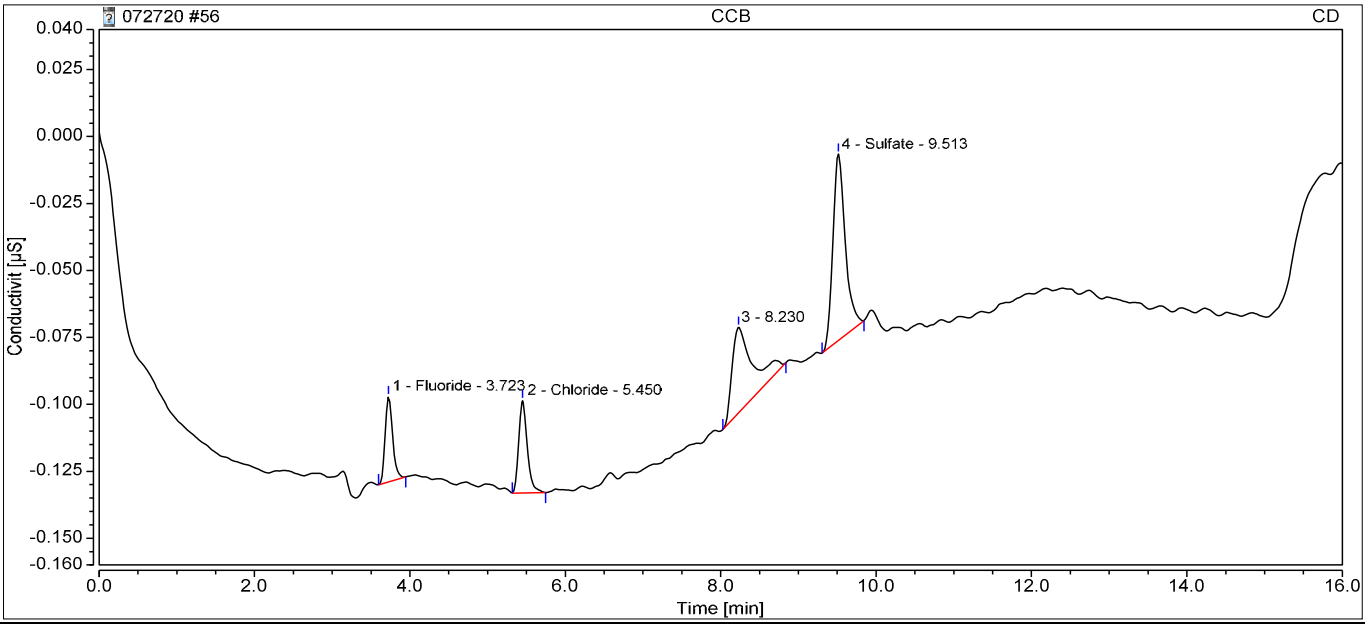

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 1.449 | 4.3049 | 4.3049 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 4.470 | 20.1419 | 20.1419 | 1.0000 |
| 3 | 6.57 | Nitrite,N | BMB | 1.996 | 4.3402 | 4.3402 | 1.0000 |
| 5 | 8.68 | Bromide | M * | 0.387 | 4.3697 | 4.3697 | 1.0000 |
| 6 | 9.45 | Sulfate | M | 3.179 | 20.2982 | 20.2982 | 1.0000 |
| 7 | 9.87 | Nitrate | M | 2.347 | 3.9221 | 3.9221 | 1.0000 |
| 8 | 10.48 | Chlorate | MB | 0.395 | 4.0330 | 4.0330 | 1.0000 |
| 9 | 14.76 | Phosphate | BMB | 0.198 | 1.3595 | 1.3595 | 1.0000 |
| **Total:** | | | **0.000** | **14.420** | | **62.77** | |

56 CCB

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA3** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **07/28/2020 04:11** | *Sample Weight:* | **1.0000** |

Run Time:




**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.72 | Fluoride | BMB | 0.004 | 0.0241 | 0.0241 | 1.0000 |
| 2 | 5.45 | Chloride | BMB | 0.004 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 4 | 9.51 | Sulfate | BMB | 0.013 | 0.2814 | 0.2814 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.021** | | **0.31** | |

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20071309

## Longhorn GW Treatment Plant Weekly Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**17-Aug-2020**



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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 17, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20071309**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Jul 29, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20071309

**SAMPLE SUMMARY**

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20071309-01 | LH18/24-SP650_072820 | Water | | 28-Jul-2020 14:00 | 29-Jul-2020 09:20 | ☐ |
| HS20071309-02 | LH18/24-SP650_072820-BIX | Water | | 28-Jul-2020 14:00 | 29-Jul-2020 09:20 | ☐ |



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**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc. **CASE NARRATIVE**
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20071309

## Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached

## WetChemistry by Method E350.3

### Batch ID: R365984

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method E365.3

### Batch ID: R365897

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.



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**ALS Houston, US** Date: 17-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20071309
Sample ID: LH18/24-SP650_072820
Lab ID:HS20071309-01
Collection Date: 28-Jul-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **AMMONIA AS N BY E350.3(ISE)** | | **Method:E350.3** | | | | | | Analyst: MZD |
| **Nitrogen, Ammonia (As N)** | **15** | a | **0.20** | **0.20** | **0.20** | **mg/L** | 1 | 31-Jul-2020 11:20 |
| **ORTHO PHOSPHATE (PO4) AS P BY E365.3** | | **Method:E365.3** | | | | | | Analyst: MZD |
| **Phosphorus, Total Orthophosphate (As P)** | **2.57** | a | **0.100** | **0.250** | **0.250** | **mg/L** | 10 | 30-Jul-2020 10:44 |
| **SUBCONTRACT ANALYSIS - TOC ANALYSIS** | | **Method:NA** | | | | | | Analyst: SUBK |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 13-Aug-2020 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.



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**ALS Houston, US** Date: 17-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20071309
Sample ID: LH18/24-SP650_072820-BIX
Lab ID:HS20071309-02
Collection Date: 28-Jul-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)** | | **Method:NA** | | | | | | Analyst: GR |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 06-Aug-2020 16:49 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.



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**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20071309

**DATES REPORT**

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** R365897 ( 0 ) | **Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3 | | | | **Matrix:** Water | |
| HS20071309-01 | LH18/24-SP650_072820 | 28 Jul 2020 14:00 | | | 30 Jul 2020 10:44 | 10 |
| **Batch ID:** R365984 ( 0 ) | **Test Name :** AMMONIA AS N BY E350.3(ISE) | | | | **Matrix:** Water | |
| HS20071309-01 | LH18/24-SP650_072820 | 28 Jul 2020 14:00 | | | 31 Jul 2020 11:20 | 1 |
| **Batch ID:** R366325 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) | | | | **Matrix:** Water | |
| HS20071309-02 | LH18/24-SP650_072820-BIX | 28 Jul 2020 14:00 | | | 06 Aug 2020 16:49 | 1 |
| **Batch ID:** R366700 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS | | | | **Matrix:** Water | |
| HS20071309-01 | LH18/24-SP650_072820 | 28 Jul 2020 14:00 | | | 13 Aug 2020 12:17 | 1 |



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**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20071309

**QC BATCH REPORT**

**Batch ID:** R365897 ( 0 ) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

**MBLK** Sample ID: **MBLK-365897** Units: **mg/L** Analysis Date: **30-Jul-2020 10:44**
Client ID: Run ID: **UV-2450_365897** SeqNo: **5679523** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.0250 | 0.0250 | | | | | | | | U |

**LCS** Sample ID: **LCS-365897** Units: **mg/L** Analysis Date: **30-Jul-2020 10:44**
Client ID: Run ID: **UV-2450_365897** SeqNo: **5679524** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.283 | 0.0250 | 0.25 | 0 | 113 | 85 - 115 | | | | |

**MS** Sample ID: **HS20071309-01MS** Units: **mg/L** Analysis Date: **30-Jul-2020 10:44**
Client ID: **LH18/24-SP650_072820** Run ID: **UV-2450_365897** SeqNo: **5679526** PrepDate: DF: **10**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 5.41 | 0.250 | 2.5 | 2.57 | 114 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20071309-01MSD** Units: **mg/L** Analysis Date: **30-Jul-2020 10:44**
Client ID: **LH18/24-SP650_072820** Run ID: **UV-2450_365897** SeqNo: **5679527** PrepDate: DF: **10**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 5.35 | 0.250 | 2.5 | 2.57 | 111 | 80 - 120 | 5.41 | 1.12 | 20 | |

**The following samples were analyzed in this batch:** HS20071309-01



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**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20071309

**QC BATCH REPORT**

**Batch ID: R365984 ( 0 )** **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

**MBLK** Sample ID: **MBLK-365984** Units: **mg/L** Analysis Date: **31-Jul-2020 11:20**
Client ID: Run ID: **WetChem_HS_365984** SeqNo: **5681312** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 0.20 | 0.20 | | | | | | | | U |

**LCS** Sample ID: **LCS-365984** Units: **mg/L** Analysis Date: **31-Jul-2020 11:20**
Client ID: Run ID: **WetChem_HS_365984** SeqNo: **5681313** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 10.52 | 0.20 | 10 | 0 | 105 | 80 - 120 | | | | |

**MS** Sample ID: **HS20071241-01MS** Units: **mg/L** Analysis Date: **31-Jul-2020 11:20**
Client ID: Run ID: **WetChem_HS_365984** SeqNo: **5681315** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 11.01 | 0.20 | 10 | 0.155 | 109 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20071241-01MSD** Units: **mg/L** Analysis Date: **31-Jul-2020 11:20**
Client ID: Run ID: **WetChem_HS_365984** SeqNo: **5681316** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 11.06 | 0.20 | 10 | 0.155 | 109 | 80 - 120 | 11.01 | 0.408 | 20 | |

**The following samples were analyzed in this batch:** HS20071309-01



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**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** **HS20071309**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |



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## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V009 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |



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**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20071309

**SAMPLE TRACKING**

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20071309-01 | LH18/24-SP650_072820 | Login | 7/29/2020 10:55:02 AM | JRM | WET206 |
| HS20071309-01 | LH18/24-SP650_072820 | Login | 7/29/2020 10:55:02 AM | JRM | WET206 |
| HS20071309-01 | LH18/24-SP650_072820 | Login | 7/29/2020 10:55:02 AM | JRM | Sub |
| HS20071309-02 | LH18/24-SP650_072820-BIX | Login | 7/29/2020 10:55:02 AM | JRM | Sub |



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**ALS Houston, US** Date: 17-Aug-20

## Sample Receipt Checklist

**Work Order ID:** HS20071309 **Date/Time Received:** **29-Jul-2020 09:20**

**Client Name:** Bhate Environmental **Received by:** **Paresh M. Giga**

| **Completed By:** | /S/ Jared R. Makan | 29-Jul-2020 10:59 | **Reviewed by:** | /S/ RJ Modashia | 29-Jul-2020 15:41 |
|---|---|---|---|---|---|
| | eSignature | Date/Time | | eSignature | Date/Time |

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Samplers name present on COC? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |

| | | |
|---|---|---|
| Temperature(s)/Thermometer(s): | 2.4°C/2.4°C UC/C | IR31 |
| Cooler(s)/Kit(s): | 5434 | |
| Date/Time sample(s) sent to storage: | 07/29/2020 11:00 | |

| | | | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ |
| pH adjusted? | Yes ☐ | No ☑ | N/A ☐ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



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# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.I Modashia



Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
**GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES**

Prepared By:
Scott Beesinger

P.O. Number

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | AMMONIA-N | TOTAL ORGANIC CARBON | ORTHO-PHOSPHATE | PERCHLORATE | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_072820 | Water | 07/28/20 / 14:00 | | 3 | X | X | | | H2SO4 | |
| LH18/24-SP650_072820 | Water | 07/28/20 / 14:00 | | 1 | | | X | | NONE | |
| LH18/24–SP650_072820_BIX | Water | 07/28/20 / 14:00 | | 1 | | | | X | NONE | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Additional Remarks: **Standard TAT on all parameters**

| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Beesinger | 07/28/20 | 14:30 | | 7/29/20 | 8:30 | | | | | | |

For Lab Use Only

| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

Remarks:

VIC

5434 2-4° +31 C11-3.0°

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

**HS20071309**

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples



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ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

5434

**CUSTODY SEAL**

Date: 7/28/20 Time: 1430
Name: Scott Beesinger
Company: BHATE

Seal Broken By: SM
Date: 07/29/20

5434 JUL 29 2020

Must Deliver Next Business Day
Time and Tempature Sensitive!

5434

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFASTRUCTURE
1203-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 02DEC19
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 18x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP 16-RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1251 0292 4611

WED - 29 JUL 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

#475872 07/28 SGRJ3/C6AG/8766



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August 06, 2020 Service Request No:E2000689

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**Laboratory Results for: HS20071309**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory July 29, 2020
For your reference, these analyses have been assigned our service request number **E2000689.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

# Certificate of Analysis

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www.alsglobal.com

**ALS Environmental**

| | | | |
|---|---|---|---|
| **Client:** | ALS Houston | **Service Request No.:** | E2000689 |
| **Project:** | HS20071309 | **Date Received:** | 07/29/20 |
| **Sample Matrix:** | Soil | | |

## CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

Two soil samples were received for analysis at ALS Environmental in Houston on 07/29/20.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

### Data Validation Notes and Discussion

**Precision and Accuracy:**

EQ2000317: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

DoD Certification is held for the method/matrix/analytes provided in this report.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*


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**Client:** ALS Environmental - US **Service Request:**E2000689
**Project:** HS20071309

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| E2000689-001 | LH18/24-SP650_072820-BIX | 7/28/2020 | 1400 |

# Service Request Summary

**Folder #:** **E2000689**
Client Name: ALS Environmental - US
Project Name: HS20071309
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/29/20
Internal Due Date: 8/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20071309
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 3D
**Pressure Gas:**

| Lab Samp No. | Client Samp No | Matrix | Collected | HOUSTON ClO4 DOD/6850 |
|---|---|---|---|---|
| E2000689-001 | LH18/24-SP650_072820-BIX | Ground Water | 07/28/20 1400 | **IV** |


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# Service Request Summary

**Folder #:** **E2000689**
Client Name: ALS Environmental - US
Project Name: HS20071309
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 07/29/20
Internal Due Date: 8/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20071309
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 3D
**Pressure Gas:**

## Test Comments:

| Group | Test/Method | Samples | Comments |
|---|---|---|---|
| Semivoa GCMS | ClO4 DOD/6850 | 1 | Level II due 8/12,level IV 8/19 |


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# Data Qualifiers

## Lab Standard

| | |
|---|---|
| + | Possible Tedlar bag artifact. |
| A | TIC is a suspected aldol-condensation product |
| B | Analyte found in the associated method blank as well as in the sample. |
| BC | Reported results are not blank corrected. |
| BH | The back section of the tube yielded higher results than the front. |
| BT | Results indicated possible breakthrough; back section >=10% front section. |
| C | Result identification confirmed. |
| D | Compound identified in an analysis at a secondary dilution factor |
| D | Spike was diluted out |
| DE | Reported results are corrected for desorption efficiency. |
| E | Estimated value. Concentration above calibration range |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| H1 | Sample analysis performed past holding time. See case narrative. |
| H2 | Initial analysis within holding time. Reanalysis for the required dilution was past holding time. |
| H3 | Sample was received and analyzed past holding time. |
| H4 | Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative. |
| I | Internal standard not within the specified limits. See case narrative. |
| J | Estimated Value. Concentration found below MRL. |
| K | A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate. |
| K | Analyte was detected above the method reporting limit prior to normalization. |
| L1 | Laboratory control sample recovery outside the specified limits; results may be biased high. |
| L2 | Laboratory control sample recovery outside the specified limits; results may be biased low. |
| L3 | Laboratory control sample recovery outside the specified limits. |
| M | Matrix interference; results may be biased high. |
| M | The duplicate injection precision not met. |
| M1 | Matrix interference due to coelution with a non-target compound; results may be biased high. |
| N | Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| P | Indicates chlorodiphenyl ether interference present at the retention time of the target compound. |
| P | Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns |
| Q | Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria. |
| R | Duplicate Precision not met. |
| R1 | Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated. |
| S | Surrogate recovery not within specified limits. |


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# Data Qualifiers

## Lab Standard

| | |
|---|---|
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| T | Analyte is a tentatively identified compound, result is estimated. |
| U | Compound was analyzed for, but was not detected (ND). |
| V1 | The continuing calibration verification standard was outside (biased high) the specified limits for this compound. |
| V2 | The continuing calibration verification standard was outside (biased low) the specified limits for this compound. |
| W | Result quantified, but the corresponding peak was detected outside the generated retention time window. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| X | See case narrative. |
| Y | Recovery outside limits |
| Y | The chromatogram resembles a petroleum product but does not match the calibration standard. |
| Z | The chromatogram does not resemble a petroleum product. |
| i | The MRL/MDL has been elevated due to a matrix interference. |


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# ALS Laboratory Group

**Acronyms**

| | |
|---|---|
| Cal | Calibration |
| Conc | CONCentration |
| Dioxin(s) | Polychlorinated dibenzo-p-dioxin(s) |
| EDL | Estimated Detection Limit |
| EMPC | Estimated Maximum Possible Concentration |
| Flags | Data qualifiers |
| Furan(s) | Polychlorinated dibenzofuran(s) |
| g | Grams |
| ICAL | Initial CALibration |
| ID | IDentifier |
| Ions | Masses monitored for the analyte during data acquisition |
| L | Liter (s) |
| LCS | Laboratory Control Sample |
| DLCS | Duplicate Laboratory Control Sample |
| MB | Method Blank |
| MCL | Method Calibration Limit |
| MDL | Method Detection Limit |
| mL | Milliliters |
| MS | Matrix Spiked sample |
| DMS | Duplicate Matrix Spiked sample |
| NO | Number of peaks meeting all identification criteria |
| PCDD(s) | Polychlorinated dibenzo-p-dioxin(s) |
| PCDF(s) | Polychlorinated dibenzofuran(s) |
| ppb | Parts per billion |
| ppm | Parts per million |
| ppq | Parts per quadrillion |
| ppt | Parts per trillion |
| QA | Quality Assurance |
| QC | Quality Control |
| Ratio | Ratio of areas from monitored ions for an analyte |
| % Rec. | Percent recovery |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RT | Retention Time |
| SDG | Sample Delivery Group |
| S/N | Signal-to-noise ratio |
| TEF | Toxicity Equivalence Factor |
| TEQ | Toxicity Equivalence Quotient |


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ALS Environmental

## State Certifications, Accreditations, and Licenses

| Agency | Number | Expire Date |
|---|---|---|
| American Association for Laboratory Accreditation | 2897.01 2020 | 11/30/2021 |
| Arkansas Department of Environmental Quality | 20-030-0 | 3/26/2021 |
| Department of Defense | A2LA 2897.01 | 11/30/2021 |
| Hawaii Department of Health | 2020 | 4/30/2021 |
| Illinois Environmental Protection Agency | 2000322020-4 | 5/9/2021 |
| Louisiana Department of Health and Hospitals | LA028-2020 | 12/31/2020 |
| Maine Department of Health and Human Services | 2020016 | 6/5/2022 |
| Minnesota Department of Health | 1785988 | 12/31/2020 |
| Nebraska Department of Health and Human Services | NE-OS-25-13 (2020) | 4/30/2021 |
| New Hampshire Environmental Laboratory Accreditation Program | 209420 | 4/24/2021 |
| New York Department of Health | 11707 | 3/31/2021 |
| Oklahoma Department of Environmental Quality | 2019-067 | 8/31/2020 |
| Tennessee Department of Environment and Concervation | 04016-2020 | 4/30/2021 |
| Texas Commision on Environmental Quality | T104704231-20-26 | 4/30/2021 |
| United States Department of Agriculture | P330-19-00299 | 10/10/2022 |
| Washington Department of Health | C819 | 11/14/2020 |



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# Chain of Custody

**ALS Environmental - Houston HRMS**
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www.alsglobal.com

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Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID:** **14391**

**SUBCONTRACT TO:**

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

**Phone:** +1 281 530 5656

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | Jumoke M. Lawal |
| **Email:** | jumoke.lawal@alsglobal.com |

**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20071309 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| **1.** | **HS20071309-02** | **LH18/24-SP650_072820-BIX** | **Water** | **28 Jul 2020 14:00** |
| | SUB_Perch-6850 | | | 12 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 7/29/20 12:30

Received By: LH Date/Time: 7/29/20 12:30

Cooler ID(s): Temperature(s):



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ALS Environmental

# Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID 1R31

Date/Time Received: 7/29/20

Initials: CG

Date/Time Logged in: 7/29/20

Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ Courier (CG) ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

| Cooler Tracking Number | COC ID | Date Opened | Time Opened | Opened By | Temp. °C | Temp Blank? |
|---|---|---|---|---|---|---|
| - | | 7/29/20 | 1230 | CG | 0.2 | ☒ |
| | | | | | | ☐ |
| | | | | | | ☐ |
| | | | | | | ☐ |

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
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**F:** +1 713 266 1599
**www.alsglobal.com**

# SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

**Cooler Custody Seals (desirable, mandatory if specified in SAP):**

- ✓ Intact on outside of cooler, signed and dated

**Chain-of-Custody (COC) documentation (mandatory):**

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

**Sample Integrity (mandatory):**

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

**Temperature Requirement (varies by sample matrix):**

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

# Preparation Information Benchsheets

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# *Preparation Information Benchsheet*

**Prep Run#:** 362574 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 7/30/20 08:39

| # | Lab Code | Client ID | B# | Method /Test | pH | Cl | Matrix | Amt. Ext. | Sample Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | E2000657-001 | GPW1_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 2 | E2000657-002 | GPW3_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 3 | E2000657-003 | GPW3_071620_a | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 4 | E2000657-004 | HBW1_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 5 | E2000657-005 | HBW10_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 6 | E2000657-006 | HBW7_071620 | .01 | 6850/ClO4 DOD | | | Surface Water | 10mL | |
| 7 | E2000669-001 | M3Q2011 | .01 | 6850/ClO4 DOD | | | Water | 10mL | |
| 8 | E2000671-001 | 16RW11-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 9 | E2000671-002 | 16IW20-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 10 | E2000671-003 | 16WW40-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 11 | E2000671-004 | 16WW12-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 12 | E2000671-005 | 16WW25-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 13 | E2000671-006 | 16WW26-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 14 | E2000671-007 | 16RW02-200721 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 15 | E2000672-001 | LH18/24-SP650_072120-BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 16 | E2000689-001 | LH18/24-SP650_072820-BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 17 | EQ2000317-01 | MB | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 18 | EQ2000317-02 | LCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 19 | EQ2000317-03 | DLCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |

## Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000657-001 100.00µL E2000657-002 100.00µL E2000657-003 100.00µL E2000657-004 100.00µL E2000657-005 100.00µL E2000657-006 100.00µL
EQ2000317-01 100.00µL EQ2000317-02 100.00µL EQ2000317-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000317-02 1.00µL EQ2000317-03 1.00µL

## Preparation Steps

Step: Preparation
Started: 7/30/20 08:39
Finished: 7/30/20 15:16
By: GRIVERA
Comments



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# *Preparation Information Benchsheet*

**Prep Run#:** 362574
**Team:** Semivoa GCMS/GRIVERA

**Prep WorkFlow:** GenExt28Day
**Prep Method:** Method

**Status:** Prepped
**Prep Date/Time:** 7/30/20 08:39

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No



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# Analytical Results

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**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Collected:** | 7/28/20 1400 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 7/29/20 |
| **Sample Name:** | LH18/24-SP650_072820-BIX | **Units:** | µg/L |
| **Lab Code:** | E2000689-001 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **35.9** | | 0.200 | 0.100 | 0.0500 | 2 | 7/30/20 | 8/5/20 11:48 | 362574 | 689792 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | µg/L |
| **Lab Code:** | EQ2000317-01 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | ND | U | 0.100 | 0.0500 | 0.0250 | 1 | 7/30/20 | 8/4/20 13:33 | 362574 | 689589 | |

# Accuracy & Precision

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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 4/20 |
| **Sample Matrix:** | Ground Water | | |

**Lab Control Sample Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Units:** | µg/L |
| **Prep Method:** | Method | **Basis:** | NA |
| | | **Extraction Lot:** | 362574 |

| | Lab Control Sample EQ2000317-02 | | | Duplicate Lab Control Sample EQ2000317-03 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.117 | 0.100 | 117 | 0.118 | 0.100 | 118 | 84 - 119 | <1 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



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**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000317-02 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.117** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/30/20 | 8/4/20 13:41 | 362574 | 689589 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000317-03 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.118** | | 0.100 | 0.0500 | 0.0250 | 1 | 7/30/20 | 8/4/20 13:49 | 362574 | 689589 | |

# Initial Calibration

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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**20200724**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200724_005 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 |
| 2 | PERCHLORATE2 | | 20200724_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 |
| 3 | PERCHLORATE3 | | 20200724_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 |
| 4 | PERCHLORATE4 | | 20200724_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 |
| 5 | PERCHLORATE5 | | 20200724_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 |
| 6 | PERCHLORATE6 | | 20200724_010 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 |
| 7 | PERCHLORATE7 | | 20200724_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | PERCHLORATE8 | | 20200724_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 |
| 9 | PERCHLORATE9 | | 20200724_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 |
| 10 | PERCHLORATE10 | | 20200724_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 |
| 11 | IB | | 20200724_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | PERCHLORATEICV | | 20200724_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 |
| 13 | IB | | 20200724_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | LODV | | 20200724_018 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | ICS | | 20200724_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | PERCHLORATE7 | | 20200724_020 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 17 | EQ2000302-04X10 | | 20200724_021 | Perchlorate6850b.lcm | 10x | ☒ | |
| 18 | EQ2000302-05X10DNU | | 20200724_022 | Perchlorate6850b.lcm | 10x | ☒ | |
| 19 | E2000626-001X2 | | 20200724_023 | Perchlorate6850b.lcm | 2x | ☒ | |
| 20 | E2000627-001X10 | | 20200724_024 | Perchlorate6850b.lcm | 10x | ☒ | |
| 21 | E2000627-005X100 | | 20200724_025 | Perchlorate6850b.lcm | 100x | ☒ | |
| 22 | E2000627-006X100 | | 20200724_026 | Perchlorate6850b.lcm | 100x | ☒ | |
| 23 | E2000627-009X1000 | | 20200724_027 | Perchlorate6850b.lcm | 1000x | ☒ | |
| 24 | E2000640-001X200 | | 20200724_028 | Perchlorate6850b.lcm | 200x | ☒ | |
| 25 | PERCHLORATE7 | | 20200724_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 26 | E2000660-001X10 | | 20200724_030 | Perchlorate6850b.lcm | 10x | ☒ | |
| 27 | E2000627-004X10 | | 20200724_031 | Perchlorate6850b.lcm | 10x | ☒ | |
| 28 | PERCHLORATE7 | | 20200724_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 29 | EQ2000302-05X10 | | 20200724_033 | Perchlorate6850b.lcm | 10x | ☒ | |
| 30 | PERCHLORATE7 | | 20200724_034 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 31 | E2000660-003X10 | | 20200724_035 | Perchlorate6850b.lcm | 10x | ☒ | |
| 32 | E2000660-004X10 | | 20200724_036 | Perchlorate6850b.lcm | 10x | ☒ | |
| 33 | E2000660-005X2 | | 20200724_037 | Perchlorate6850b.lcm | 2x | ☒ | |
| 34 | E2000660-006X10 | | 20200724_038 | Perchlorate6850b.lcm | 10x | ☒ | |
| 35 | PERCHLORATE7 | | 20200724_039 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 36 | EQ2000303-01 | | 20200724_040 | Perchlorate6850b.lcm | 1x | ☒ | |
| 37 | EQ2000303-02 | | 20200724_041 | Perchlorate6850b.lcm | 1x | ☒ | |
| 38 | EQ2000303-03 | | 20200724_042 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | E2000641-001X20 | | 20200724_043 | Perchlorate6850b.lcm | 20x | ☒ | |
| 40 | E2000641-002X20 | | 20200724_044 | Perchlorate6850b.lcm | 20x | ☒ | |
| 41 | E2000641-003X10 | | 20200724_045 | Perchlorate6850b.lcm | 10x | ☒ | |
| 42 | E2000641-004X20 | | 20200724_046 | Perchlorate6850b.lcm | 20x | ☒ | |
| 43 | E2000641-005X10 | | 20200724_047 | Perchlorate6850b.lcm | 10x | ☒ | |
| 44 | E2000641-006X10 | | 20200724_048 | Perchlorate6850b.lcm | 10x | ☒ | |
| 45 | E2000641-007X10 | | 20200724_049 | Perchlorate6850b.lcm | 10x | ☒ | |
| 46 | PERCHLORATE7 | | 20200724_050 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 47 | E2000641-008X10 | | 20200724_051 | Perchlorate6850b.lcm | 10x | ☒ | |
| 48 | E2000641-009X10 | | 20200724_052 | Perchlorate6850b.lcm | 10x | ☒ | |
| 49 | E2000648-001X10 | | 20200724_053 | Perchlorate6850b.lcm | 10x | ☒ | |
| 50 | E2000648-002X10 | | 20200724_054 | Perchlorate6850b.lcm | 10x | ☒ | |
| 51 | E2000648-003X20 | | 20200724_055 | Perchlorate6850b.lcm | 20x | ☒ | |
| 52 | E2000648-005X10 | | 20200724_056 | Perchlorate6850b.lcm | 10x | ☒ | |


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# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000016 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000016-01 | PERCHLORATE1 | 20200724_005 | 07/24/2020 11:48 |
| 02 | EC2000016-02 | PERCHLORATE2 | 20200724_006 | 07/24/2020 11:56 |
| 03 | EC2000016-03 | PERCHLORATE3 | 20200724_007 | 07/24/2020 12:04 |
| 04 | EC2000016-04 | PERCHLORATE4 | 20200724_008 | 07/24/2020 12:11 |
| 05 | EC2000016-05 | PERCHLORATE5 | 20200724_009 | 07/24/2020 12:19 |
| 06 | EC2000016-06 | PERCHLORATE6 | 20200724_010 | 07/24/2020 12:27 |
| 07 | EC2000016-07 | PERCHLORATE7 | 20200724_011 | 07/24/2020 12:35 |
| 08 | EC2000016-08 | PERCHLORATE8 | 20200724_012 | 07/24/2020 12:43 |
| 09 | EC2000016-09 | PERCHLORATE9 | 20200724_013 | 07/24/2020 12:51 |
| 10 | EC2000016-10 | PERCHLORATE10 | 20200724_014 | 07/24/2020 12:59 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 4.659** **Average RF = 0.121**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1283 | 02 | 0.5000 | 0.13 | 03 | 0.7000 | 0.1207 | 04 | 1.0000 | 0.1251 |
| 05 | 2.0000 | 0.1211 | 06 | 5.0000 | 0.1202 | 07 | 10.0000 | 0.1211 | 08 | 20.0000 | 0.1168 |
| 09 | 30.0000 | 0.1121 | 10 | 50.0000 | 0.1148 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.106 | 6.0 | 02 | 0.5000 | 0.537 | 7.4 | 03 | 0.7000 | 0.698 | -0.3 |
| 04 | 1.0000 | 1.03 | 3.4 | 05 | 2.0000 | 2.00 | 0.1 | 06 | 5.0000 | 4.97 | -0.7 |
| 07 | 10.0000 | 10.0 | 0.1 | 08 | 20.0000 | 19.3 | -3.5 | 09 | 30.0000 | 27.8 | -7.3 |
| 10 | 50.0000 | 47.4 | -5.1 | | | | | | | | |


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# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000016 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200724_016 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000016-11 | T | Average RF | 10 | 9.867 | ng/mL | -1.3 | <= 15 |


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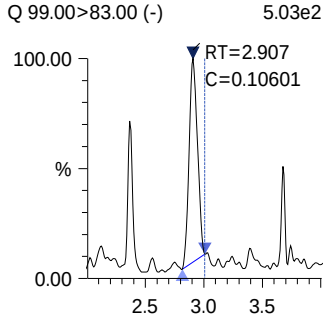
# PERCHLORATE1

Date acquired: 7/24/2020 11:48:19 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 7/24/2020 11:48:19 AM | 2348 | 0.10601 | 20200724_005 | 2.907 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 7/24/2020 11:48:19 AM | 183001 | 1.00000 | 20200724_005 | 2.903 | 25.0000 | 1.0000 | 5 |

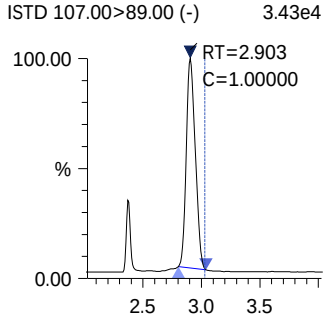
## Perchlorate

Conc 0.10601
Area 2348




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183001





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# PERCHLORATE2

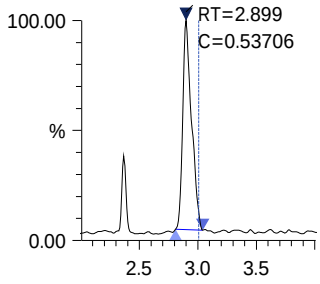
Date acquired: 7/24/2020 11:56:11 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 7/24/2020 11:56:11 AM | 11773 | 0.53706 | 20200724_006 | 2.899 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 7/24/2020 11:56:11 AM | 181125 | 1.00000 | 20200724_006 | 2.898 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.53706
Area 11773

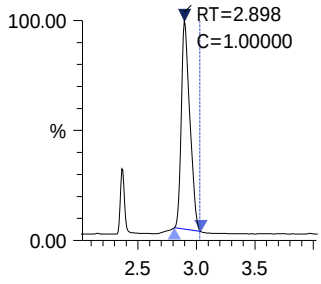
Q 99.00>83.00 (-) 2.32e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 181125

ISTD 107.00>89.00 (-) 3.62e4





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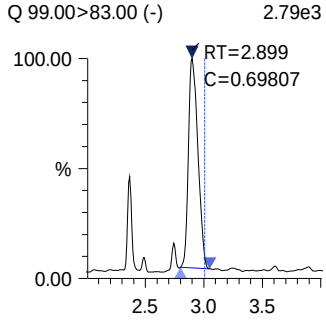
# PERCHLORATE3

Date acquired: 7/24/2020 12:04:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 7/24/2020 12:04:05 PM | 15258 | 0.69807 | 20200724_007 | 2.899 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 7/24/2020 12:04:05 PM | 180602 | 1.00000 | 20200724_007 | 2.896 | 25.0000 | 1.0000 | 7 |

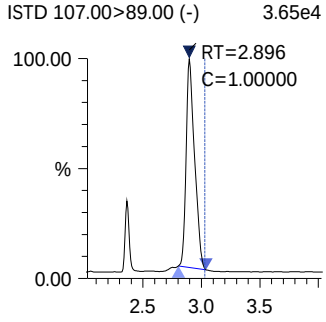
## Perchlorate

Conc 0.69807
Area 15258




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 180602





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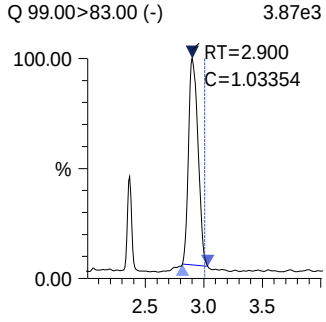
# PERCHLORATE4

Date acquired: 7/24/2020 12:11:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 7/24/2020 12:11:58 PM | 20922 | 1.03354 | 20200724_008 | 2.900 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 7/24/2020 12:11:58 PM | 167260 | 1.00000 | 20200724_008 | 2.902 | 25.0000 | 1.0000 | 8 |

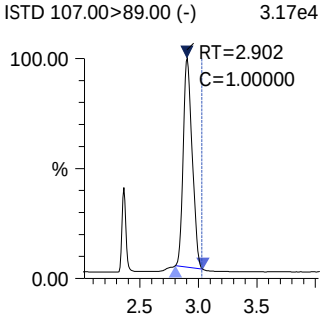
## Perchlorate

Conc 1.03354
Area 20922




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 167260





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# PERCHLORATE5

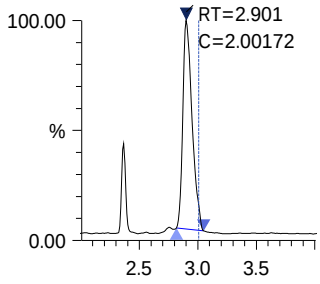
Date acquired: 7/24/2020 12:19:50 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 7/24/2020 12:19:50 PM | 39343 | 2.00172 | 20200724_009 | 2.901 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 7/24/2020 12:19:50 PM | 162397 | 1.00000 | 20200724_009 | 2.899 | 25.0000 | 1.0000 | 9 |

## Perchlorate

Conc 2.00172
Area 39343

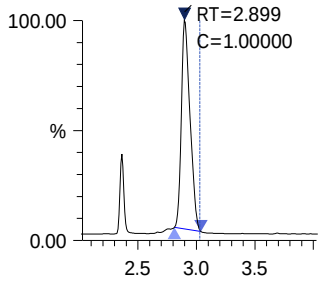
Q 99.00>83.00 (-) 7.39e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 162397

ISTD 107.00>89.00 (-) 3.19e4





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# PERCHLORATE6

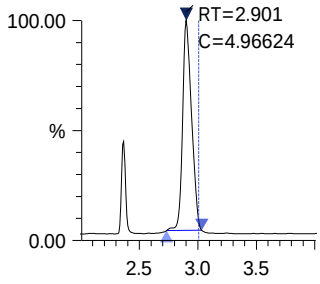
Date acquired: 7/24/2020 12:27:42 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 7/24/2020 12:27:42 PM | 102216 | 4.96624 | 20200724_010 | 2.901 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 7/24/2020 12:27:42 PM | 170060 | 1.00000 | 20200724_010 | 2.900 | 25.0000 | 1.0000 | 10 |

## Perchlorate

Conc 4.96624
Area 102216

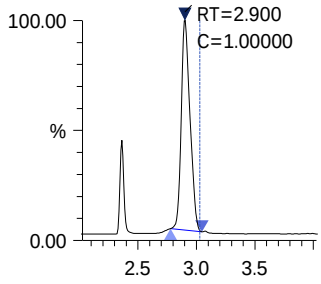
Q 99.00>83.00 (-) 1.97e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 170060

ISTD 107.00>89.00 (-) 3.28e4





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# PERCHLORATE7

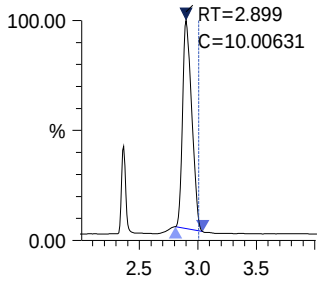
Date acquired: 7/24/2020 12:35:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 7/24/2020 12:35:33 PM | 187110 | 10.00631 | 20200724_011 | 2.899 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 7/24/2020 12:35:33 PM | 154502 | 1.00000 | 20200724_011 | 2.897 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 10.00631
Area 187110

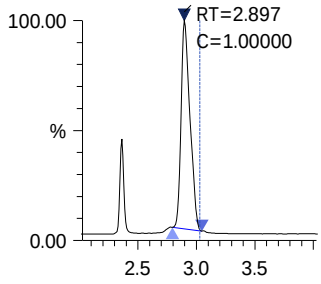
Q 99.00>83.00 (-) 3.54e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 154502

ISTD 107.00>89.00 (-) 2.97e4





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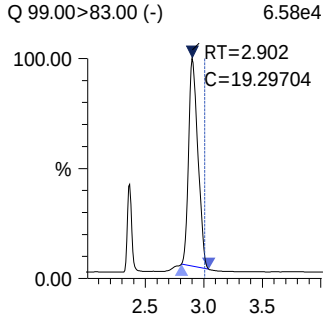
# PERCHLORATE8

Date acquired: 7/24/2020 12:43:26 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 7/24/2020 12:43:26 PM | 349524 | 19.29704 | 20200724_012 | 2.902 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 7/24/2020 12:43:26 PM | 149657 | 1.00000 | 20200724_012 | 2.900 | 25.0000 | 1.0000 | 11 |

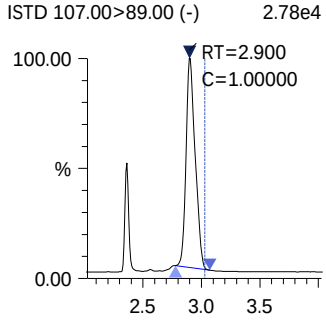
## Perchlorate

Conc 19.29704
Area 349524




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 149657





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# PERCHLORATE9

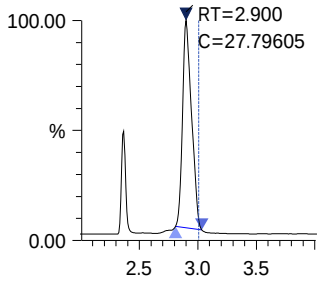
Date acquired: 7/24/2020 12:51:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 7/24/2020 12:51:22 PM | 465757 | 27.79605 | 20200724_013 | 2.900 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 7/24/2020 12:51:22 PM | 138448 | 1.00000 | 20200724_013 | 2.898 | 25.0000 | 1.0000 | 12 |

## Perchlorate

Conc 27.79605
Area 465757

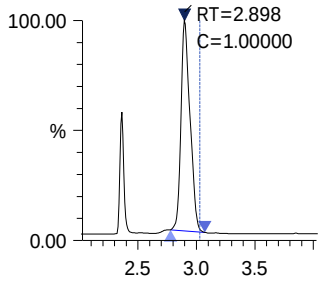
Q 99.00>83.00 (-) 9.05e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 138448

ISTD 107.00>89.00 (-) 2.59e4





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# PERCHLORATE10

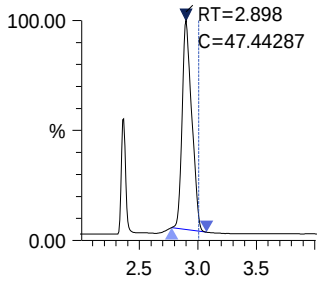
Date acquired: 7/24/2020 12:59:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 7/24/2020 12:59:14 PM | 708682 | 47.44287 | 20200724_014 | 2.898 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 7/24/2020 12:59:14 PM | 123422 | 1.00000 | 20200724_014 | 2.896 | 25.0000 | 1.0000 | 13 |

## Perchlorate

Conc 47.44287
Area 708682

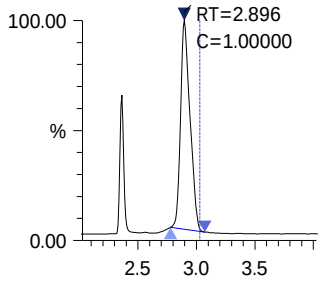
Q 99.00>83.00 (-) 1.28e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 123422

ISTD 107.00>89.00 (-) 2.23e4





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# PERCHLORATEICV

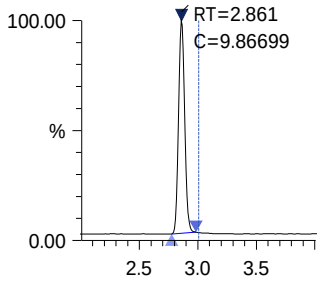
Date acquired: 7/24/2020 1:28:19 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200724\20200724_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 7/24/2020 1:28:19 PM | 231631 | 9.86699 | 20200724_016 | 2.861 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 7/24/2020 1:28:19 PM | 193964 | 1.00000 | 20200724_016 | 2.859 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 9.86699
Area 231631

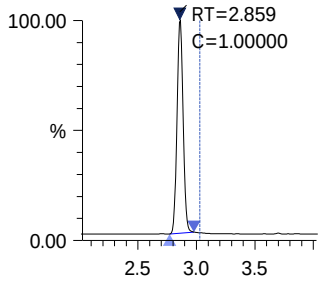
Q 99.00>83.00 (-) 6.30e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 193964

ISTD 107.00>89.00 (-) 5.33e4





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# Chromatograms and Selected Ion Monitoring

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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**20200804**

ALS Environmental

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | null | | 20200804_001 | Perchlorate6850b.lcm | 1x | ☒ | |
| 2 | null | | 20200804_002 | Perchlorate6850b.lcm | 1x | ☒ | |
| 3 | IB | | 20200804_003 | Perchlorate6850b.lcm | 1x | ☒ | |
| 4 | IB | | 20200804_004 | Perchlorate6850b.lcm | 1x | ☒ | |
| 5 | LODV | | 20200804_005 | Perchlorate6850b.lcm | 1x | ☒ | |
| 6 | ICS | | 20200804_006 | Perchlorate6850b.lcm | 1x | ☒ | |
| 7 | PERCHLORATE7 | | 20200804_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | EQ2000317-01 | | 20200804_008 | Perchlorate6850b.lcm | 1x | ☒ | |
| 9 | EQ2000317-02 | | 20200804_009 | Perchlorate6850b.lcm | 1x | ☒ | |
| 10 | EQ2000317-03 | | 20200804_010 | Perchlorate6850b.lcm | 1x | ☒ | |
| 11 | E2000657-001 | | 20200804_011 | Perchlorate6850b.lcm | 1x | ☒ | |
| 12 | E2000657-002 | | 20200804_012 | Perchlorate6850b.lcm | 1x | ☒ | |
| 13 | E2000657-003 | | 20200804_013 | Perchlorate6850b.lcm | 1x | ☒ | |
| 14 | E2000657-004 | | 20200804_014 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | EQ2000317-01 | | 20200804_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | EQ2000317-02 | | 20200804_016 | Perchlorate6850b.lcm | 1x | ☒ | |
| 17 | EQ2000317-03 | | 20200804_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 18 | PERCHLORATE7 | | 20200804_018 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 19 | E2000657-005 | | 20200804_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 20 | E2000657-006 | | 20200804_020 | Perchlorate6850b.lcm | 1x | ☒ | |
| 21 | PERCHLORATE7 | | 20200804_021 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 22 | E2000669-001 | | 20200804_022 | Perchlorate6850b.lcm | 1x | ☒ | |
| 23 | E2000671-001 | | 20200804_023 | Perchlorate6850b.lcm | 1x | ☒ | |
| 24 | E2000671-002 | | 20200804_024 | Perchlorate6850b.lcm | 1x | ☒ | |
| 25 | E2000671-003 | | 20200804_025 | Perchlorate6850b.lcm | 1x | ☒ | |
| 26 | E2000671-004 | | 20200804_026 | Perchlorate6850b.lcm | 1x | ☒ | |
| 27 | E2000671-005 | | 20200804_027 | Perchlorate6850b.lcm | 1x | ☒ | |
| 28 | E2000671-006 | | 20200804_028 | Perchlorate6850b.lcm | 1x | ☒ | |
| 29 | E2000671-007 | | 20200804_029 | Perchlorate6850b.lcm | 1x | ☒ | |
| 30 | E2000672-001 | | 20200804_030 | Perchlorate6850b.lcm | 1x | ☒ | |
| 31 | PERCHLORATE7 | | 20200804_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 32 | E2000689-001 | | 20200804_032 | Perchlorate6850b.lcm | 1x | ☒ | |
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**20200805**

**1st Review:** Kneir
**2nd Review:** Hvan

ALS Environmental

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/24/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000016

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments |
|---|---|---|---|---|---|---|---|
| 1 | null | | 20200805_001 | Perchlorate6850b.lcm | 1x | ☒ | |
| 2 | null | | 20200805_002 | Perchlorate6850b.lcm | 1x | ☒ | |
| 3 | IB | | 20200805_003 | Perchlorate6850b.lcm | 1x | ☒ | |
| 4 | IB | | 20200805_004 | Perchlorate6850b.lcm | 1x | ☒ | |
| 5 | LODV | | 20200805_005 | Perchlorate6850b.lcm | 1x | ☒ | |
| 6 | ICS | | 20200805_006 | Perchlorate6850b.lcm | 1x | ☒ | |
| 7 | PERCHLORATE7 | | 20200805_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 8 | E2000671-002x10 | | 20200805_008 | Perchlorate6850b.lcm | 10x | ☒ | |
| 9 | E2000671-003x10 | | 20200805_009 | Perchlorate6850b.lcm | 10x | ☒ | |
| 10 | E2000671-004x10 | | 20200805_010 | Perchlorate6850b.lcm | 10x | ☒ | |
| 11 | E2000671-005x10 | | 20200805_011 | Perchlorate6850b.lcm | 10x | ☒ | |
| 12 | E2000672-001x2 | | 20200805_012 | Perchlorate6850b.lcm | 2x | ☒ | |
| 13 | E2000689-001x2 | | 20200805_013 | Perchlorate6850b.lcm | 2x | ☒ | |
| 14 | PERCHLORATE7 | | 20200805_014 | Perchlorate6850b.lcm | 1x | ☒ | |
| 15 | EQ2000328-01 | | 20200805_015 | Perchlorate6850b.lcm | 1x | ☒ | |
| 16 | EQ2000328-02 | | 20200805_016 | Perchlorate6850b.lcm | 1x | ☒ | |
| 17 | EQ2000328-03 | | 20200805_017 | Perchlorate6850b.lcm | 1x | ☒ | |
| 18 | EQ2000328-04 | | 20200805_018 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 19 | EQ2000328-05 | | 20200805_019 | Perchlorate6850b.lcm | 1x | ☒ | |
| 20 | EQ2000328-06 | | 20200805_020 | Perchlorate6850b.lcm | 1x | ☒ | |
| 21 | EQ2000328-07 | | 20200805_021 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 22 | E2000674-001 | | 20200805_022 | Perchlorate6850b.lcm | 1x | ☒ | |
| 23 | E2000674-002 | | 20200805_023 | Perchlorate6850b.lcm | 1x | ☒ | |
| 24 | E2000674-003 | | 20200805_024 | Perchlorate6850b.lcm | 1x | ☒ | |
| 25 | PERCHLORATE7 | | 20200805_025 | Perchlorate6850b.lcm | 1x | ☒ | |
| 26 | E2000674-004 | | 20200805_026 | Perchlorate6850b.lcm | 1x | ☒ | |
| 27 | E2000674-005 | | 20200805_027 | Perchlorate6850b.lcm | 1x | ☒ | |
| 28 | E2000674-006 | | 20200805_028 | Perchlorate6850b.lcm | 1x | ☒ | |
| 29 | E2000674-007 | | 20200805_029 | Perchlorate6850b.lcm | 1x | ☒ | |
| 30 | E2000674-008 | | 20200805_030 | Perchlorate6850b.lcm | 1x | ☒ | |
| 31 | PERCHLORATE7 | | 20200805_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 32 | E2000674-002X10 | | 20200805_032 | Perchlorate6850b.lcm | 10x | ☒ | |
| 33 | E2000674-003X10 | | 20200805_033 | Perchlorate6850b.lcm | 10x | ☒ | |
| 34 | E2000674-005X10 | | 20200805_034 | Perchlorate6850b.lcm | 10x | ☒ | |
| 35 | E2000674-006X10 | | 20200805_035 | Perchlorate6850b.lcm | 10x | ☒ | |
| 36 | E2000674-008X10 | | 20200805_036 | Perchlorate6850b.lcm | 10x | ☒ | |
| 37 | PERCHLORATE7 | | 20200805_037 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 |
| 38 | EQ2000328-01 | | 20200805_038 | Perchlorate6850b.lcm | 1x | ☒ | |
| 39 | EQ2000328-04X10 | | 20200805_039 | Perchlorate6850b.lcm | 10x | ☒ | |
| 40 | EQ2000328-05X10 | | 20200805_040 | Perchlorate6850b.lcm | 10x | ☒ | |
| 41 | EQ2000328-06X10 | | 20200805_041 | Perchlorate6850b.lcm | 10x | ☒ | |
| 42 | EQ2000328-07X10 | | 20200805_042 | Perchlorate6850b.lcm | 10x | ☒ | |
| 43 | PERCHLORATE7 | | 20200805_043 | Perchlorate6850b.lcm | 1X | ☒ | 3100807-04 |
| 44 | | | | | | | |
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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 4/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_007 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689589 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.14 | 0.1210 | 0.1106 | -8.6 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 4/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_018 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689589 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.92 | 0.1210 | 0.1080 | -10.8 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 4/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_021 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689589 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.98 | 0.1210 | 0.1087 | -10.2 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 4/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_021 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689792 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.98 | 0.1210 | 0.1087 | -10.2 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 4/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_031 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689792 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.33 | 0.1210 | 0.1129 | -6.7 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 5/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200805\20200805_007 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689792 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.01 | 0.1210 | 0.1091 | -9.9 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/ 5/20 |

**Continuing Calibration Verification Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **Analytical Method:** | 6850 | **Calibration Date:** | 7/24/20 |
| **File ID:** | I:\LCMS01\DATA\20200805\20200805_014 | **Calibration ID:** | EC2000016 |
| | | **Analysis Lot:** | 689792 |
| | | **Units:** | ng/mL |

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.17 | 0.1210 | 0.1109 | -8.3 | NA | ± 15 % | Average RF |



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/4/20 12:30 |

**Internal Standard Area and RT Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_007 | **Lab Code:** | EQ2000326-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689589 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000326-01 | 240,602 | 2.88 |
| Method Blank | EQ2000317-01 | 237,618 | 2.87 |
| Lab Control Sample | EQ2000317-02 | 240,798 | 2.88 |
| Duplicate Lab Control Sample | EQ2000317-03 | 241,552 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/4/20 13:57 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_018 | **Lab Code:** | EQ2000326-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689589 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000326-02 | 233,712 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/4/20 14:21 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_021 | **Lab Code:** | EQ2000326-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689589 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000326-03 | 229,068 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/4/20 14:21 |

**Internal Standard Area and RT Summary**
**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_021 | **Lab Code:** | EQ2000329-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689792 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-01 | 229,068 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/4/20 15:50 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200804\20200804_031 | **Lab Code:** | EQ2000329-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689792 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-02 | 177,293 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/5/20 11:00 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200805\20200805_007 | **Lab Code:** | EQ2000329-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689792 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-03 | 212,867 | 2.88 |
| LH18/24-SP650_072820-BIX | E2000689-001 | 125,897 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000689 |
| **Project:** | HS20071309 | **Date Analyzed:** | 8/5/20 11:56 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200805\20200805_014 | **Lab Code:** | EQ2000329-04 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 689792 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 161,047 | 2.90 |
| | **Upper Limit ==>** | 241,571 | 4.90 |
| | **Lower Limit ==>** | 80,524 | 0.90 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000329-04 | 207,311 | 2.88 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



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Method File: I:\LCMS01\DATA\20200804\20200804.lcm

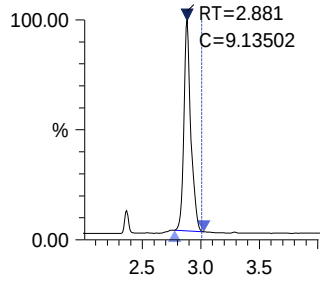
# PERCHLORATE7

Date acquired: 8/4/2020 12:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_007.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/4/2020 12:30:36 PM | 266011 | 9.13502 | 20200804_007 | 2.881 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/4/2020 12:30:36 PM | 240602 | 1.00000 | 20200804_007 | 2.880 | 25.0000 | 1.0000 | 4 |

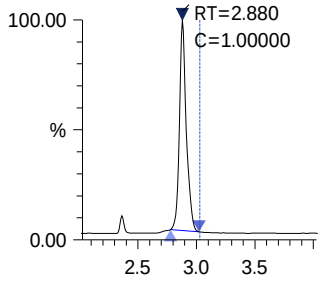
## Perchlorate

Conc 9.13502
Area 266011
Q 99.00>83.00 (-) 6.59e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 240602
ISTD 107.00>89.00 (-) 5.93e4





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Method File: I:\LCMS01\DATA\20200804\20200804.lcm

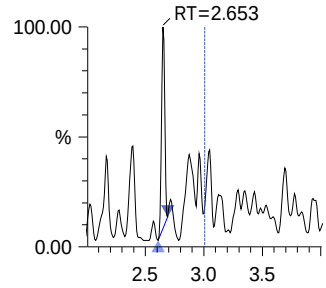
# EQ2000317-01

Date acquired: 8/4/2020 1:33:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_015.lcd
Vial: 36 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000317-01 | 8/4/2020 1:33:52 PM | ---- | ---- | 20200804_015 | ---- | 25.0000 | 1.0000 | 36 |
| Sodium Perchlorate-18O4_IS | EQ2000317-01 | 8/4/2020 1:33:52 PM | 237618 | 1.00000 | 20200804_015 | 2.870 | 25.0000 | 1.0000 | 36 |

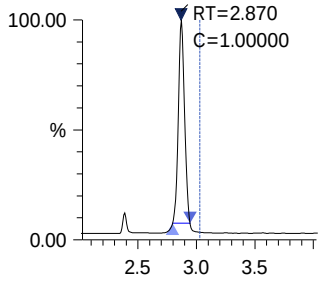
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 2.24e2




Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 237618
ISTD 107.00>89.00 (-) 6.74e4





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Method File: I:\LCMS01\DATA\20200804\20200804.lcm

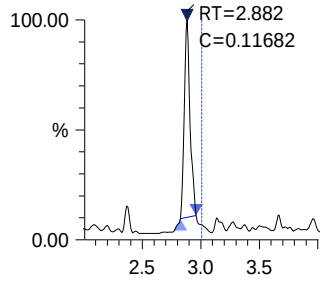
# EQ2000317-02

Date acquired: 8/4/2020 1:41:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_016.lcd
Vial: 37 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000317-02 | 8/4/2020 1:41:45 PM | 3404 | 0.11682 | 20200804_016 | 2.882 | 25.0000 | 1.0000 | 37 |
| Sodium Perchlorate-18O4_IS | EQ2000317-02 | 8/4/2020 1:41:45 PM | 240798 | 1.00000 | 20200804_016 | 2.880 | 25.0000 | 1.0000 | 37 |

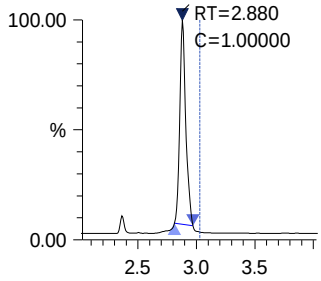
## Perchlorate

Conc 0.11682
Area 3404
Q 99.00>83.00 (-) 1.08e3




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 240798
ISTD 107.00>89.00 (-) 6.97e4





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Method File: I:\LCMS01\DATA\20200804\20200804.lcm

# EQ2000317-03

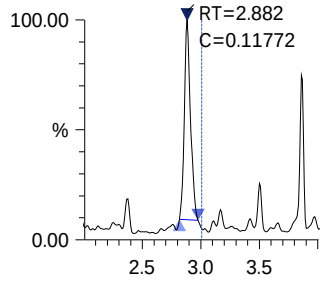
Date acquired: 8/4/2020 1:49:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_017.lcd
Vial: 38 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000317-03 | 8/4/2020 1:49:40 PM | 3442 | 0.11772 | 20200804_017 | 2.882 | 25.0000 | 1.0000 | 38 |
| Sodium Perchlorate-18O4_IS | EQ2000317-03 | 8/4/2020 1:49:40 PM | 241552 | 1.00000 | 20200804_017 | 2.880 | 25.0000 | 1.0000 | 38 |

Perchlorate

Conc 0.11772
Area 3442

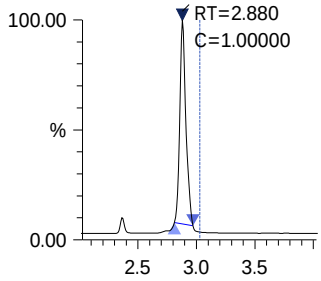
Q 99.00>83.00 (-) 1.01e3




Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 241552

ISTD 107.00>89.00 (-) 6.90e4





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Method File: I:\LCMS01\DATA\20200804\20200804.lcm

# PERCHLORATE7

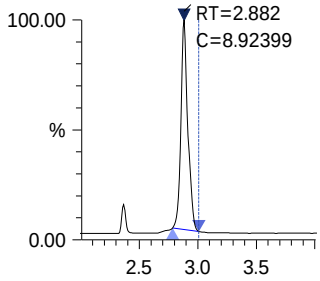
Date acquired: 8/4/2020 1:57:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200804\20200804_018.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/4/2020 1:57:33 PM | 252424 | 8.92399 | 20200804_018 | 2.882 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/4/2020 1:57:33 PM | 233712 | 1.00000 | 20200804_018 | 2.880 | 25.0000 | 1.0000 | 4 |

Perchlorate

Conc 8.92399
Area 252424

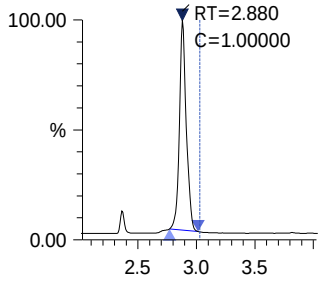
Q 99.00>83.00 (-) 6.31e4




Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 233712

ISTD 107.00>89.00 (-) 5.78e4





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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

August 12, 2020

**Analytical Report for Service Request No:** K2006498

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**RE: HS20071309**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory July 31, 2020
For your reference, these analyses have been assigned our service request number **K2006498.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Kelley Lovejoy

Kelley Lovejoy
Project Manager


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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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**Acronyms**

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |


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### Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated value. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |
| H | The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory. |

### Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. See case narrative. |
| J | The result is an estimated value. |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

### Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimated value. |
| J | The result is an estimated value. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

### Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |


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**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso**
**State Certifications, Accreditations, and Licenses**

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.


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# Case Narrative

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ALS Environmental

**Client:** ALS Environmental - US
**Project:** HS20071309
**Sample Matrix:** Water

**Service Request:** K2006498
**Date Received:** 07/31/2020

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

**Sample Receipt:**

One water sample was received for analysis at ALS Environmental on 07/31/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

**General Chemistry:**

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 08/12/2020

# Chain of Custody

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K20064 98

10450 Stancliff Rd, Ste 210
Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID: 14390**

**SUBCONTRACT TO:**

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

**Phone:** +1 360 501 3312

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | Jumoke M. Lawal |
| **Email:** | jumoke.lawal@alsglobal.com |

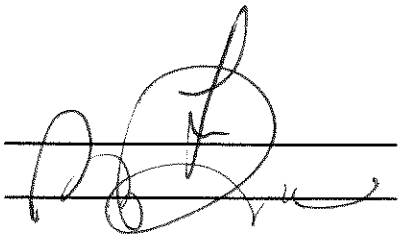
**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20071309 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| **1.** | **HS20071309-01** | **LH18/24-SP650_072820** | **Water** | **28 Jul 2020 14:00** |
| | TOC Analysis for DOD Level IV | | | 12 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: 

Date/Time: 7/30/2020 1800

Received By:

Date/Time: 7/31/20 0930

Cooler ID(s):

Temperature(s):



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PC KL

# Cooler Receipt and Preservation Form

Client AES - Houston Service Request K2006498

Received: 7/31/20 Opened: 7/31/20 By: BK Unloaded: 7/31/20 By: BK

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

| Temp Blank | Sample 1 | Sample 2 | Sample 3 | Sample 4 | IR GUN | Cooler / COC ID (NA) | Tracking Number NA | Filed |
|---|---|---|---|---|---|---|---|---|
| 0.7 | — | — | — | — | IR01 | | 189188788896 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

***Notes, Discrepancies, & Resolutions:*** _____



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# General Chemistry

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**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | K2006498 |
| **Project:** | HS20071309 | **Date Collected:** | 07/28/20 |
| **Sample Matrix:** | Water | **Date Received:** | 07/31/20 |
| **Analysis Method:** | SM 5310 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |

**Carbon, Total Organic**

| Sample Name | Lab Code | Result | LOQ | LOD | MDL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_072820 | K2006498-001 | **2.77** | 0.50 | 0.20 | 0.07 | 1 | 08/10/20 11:49 | |
| Method Blank | K2006498-MB | ND U | 0.50 | 0.20 | 0.07 | 1 | 08/10/20 11:49 | |



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**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | K2006498 |
| **Project:** | HS20071309 | **Date Analyzed:** | 08/10/20 |
| **Sample Matrix:** | Water | **Date Extracted:** | NA |

**Lab Control Sample Summary**
**Carbon, Total Organic**

| | | | |
|---|---|---|---|
| **Analysis Method:** | SM 5310 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 690342 |

| Sample Name | Lab Code | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Lab Control Sample | K2006498-LCS | 24.6 | 25.0 | 98 | 83-117 |



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**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US **Service Request:** K2006498
**Project:** HS20071309

## Continuing Calibration Verification (CCV) Summary

### Carbon, Total Organic

**Analysis Method:** SM 5310 C **Units:** mg/L

| | Analysis Lot | Lab Code | Date Analyzed | True Value | Measured Value | Percent Recovery | Acceptance Limits |
|---|---|---|---|---|---|---|---|
| CCV1 | 690342 | KQ2010989-03 | 08/10/20 11:49 | 25.0 | 24.8 | 99 | 90-110 |
| CCV2 | 690342 | KQ2010989-04 | 08/10/20 11:49 | 25.0 | 24.4 | 98 | 90-110 |
| CCV3 | 690342 | KQ2010989-10 | 08/10/20 11:49 | 25.0 | 24.4 | 98 | 90-110 |


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**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US **Service Request:**K2006498
**Project:** HS20071309

## Continuing Calibration Blank (CCB) Summary
### Carbon, Total Organic

**Analysis Method:** SM 5310 C **Units:**mg/L

| | Analysis Lot | Lab Code | Date Analyzed | LOQ | LOD | MDL | Result | Q |
|---|---|---|---|---|---|---|---|---|
| CCB1 | 690342 | KQ2010989-05 | 08/10/20 11:49 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB2 | 690342 | KQ2010989-06 | 08/10/20 11:49 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB3 | 690342 | KQ2010989-09 | 08/10/20 11:49 | 0.50 | 0.20 | 0.07 | ND | U |



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# Raw Data

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# General Chemistry

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Work Request # | 6332 | 6345 | 6376 | 6497 | 6257 | 6280 | 6330 | |
| Tier: | IV | II | IV | IV | IV | IV | IV | |
| Date Analyzed: | 8-10-20 | | 6331 IV | 6357 I | 6373 IV | 6498 IV | 6506 II | 6651 II |
| Analyst: | MK | | | | Run # | 690342 \| 690414 | | |
| Analysis: | TOC | | | | | | | |

**DATA QUALITY REPORT**
**INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no |
| 6. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| 7. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| 8. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| 9. | Are results for methods blanks all ND? | yes/no/NA |
| 10. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| 11. | Are all exceptions explained? | yes/no/NA |
| 12. | Have all applicable service requests been reviewed? | yes/no/NA |
| 13. | Are all samples labeled correctly? | yes/no/NA |
| 14. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V) | yes/no/NA |
| 15. | Are detection limits and units reported correctly? | yes/no/NA |
| 16. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 17. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**

Final Approved by: _____ Date: 8/11/20

DQREPORT



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# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 690414 **Method/Testcode:** SM 5310 C/TOC T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2006332-001 | Carbon, Total Organic | N/A | | Water | 0.65 mg/L | 10 mL | 0.65 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| K2006345-001 | Carbon, Total Organic | N/A | | Water | 0.59 mg/L | 10 mL | 0.59 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-002 | Carbon, Total Organic | N/A | | Water | 0.66 mg/L | 10 mL | 0.66 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-003 | Carbon, Total Organic | N/A | | Water | 0.81 mg/L | 10 mL | 0.81 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-004 | Carbon, Total Organic | N/A | | Water | 0.72 mg/L | 10 mL | 0.72 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-005 | Carbon, Total Organic | N/A | | Water | 0.68 mg/L | 10 mL | 0.68 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-006 | Carbon, Total Organic | N/A | | Water | 0.40 mg/L | 10 mL | 0.40 mg/L J | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-007 | Carbon, Total Organic | N/A | | Water | 0.96 mg/L | 10 mL | 0.96 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006345-008 | Carbon, Total Organic | N/A | | Water | 0.55 mg/L | 10 mL | 0.55 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | II |
| K2006376-001 | Carbon, Total Organic | N/A | | Water | 1.15 mg/L | 10 mL | 1.15 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| K2006376-002 | Carbon, Total Organic | N/A | | Water | 1.58 mg/L | 10 mL | 1.58 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| K2006376-003 | Carbon, Total Organic | N/A | | Water | 1.28 mg/L | 10 mL | 1.28 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| K2006497-001 | Carbon, Total Organic | N/A | | Ground Water | 4.11 mg/L | 10 mL | 4.11 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| K2006497-004 | Carbon, Total Organic | N/A | | Ground Water | 28.43 mg/L | 10 mL | 711 mg/L | 25 | 2 | 13 | | | 8/10/20 08:15:00 | N | IV |
| K2006497-005 | Carbon, Total Organic | N/A | | Ground Water | 3.34 mg/L | 10 mL | 3.34 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| K2006497-006 | Carbon, Total Organic | N/A | | Ground Water | 47.81 mg/L | 10 mL | 47.8 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-01 | Carbon, Total Organic | DUP | K2006376-003 | Water | 1.25 mg/L | 10 mL | 1.25 mg/L | 1 | 0.07 | 0.50 | | 2 | 8/10/20 08:15:00 | N | IV |
| KQ2011025-02 | Carbon, Total Organic | MS | K2006376-003 | Water | 27.72 mg/L | 10 mL | 27.7 mg/L | 1 | 0.07 | 0.50 | 106 | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-03 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-04 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-05 | Carbon, Total Organic | CCB | | Water | 0.02 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-06 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-07 | Carbon, Total Organic | CCV | | Water | 24.39 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-08 | Carbon, Total Organic | CCV | | Water | 24.42 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-09 | Carbon, Total Organic | CCV | | Water | 24.80 mg/L | 10 mL | 24.8 mg/L | 1 | | | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-10 | Carbon, Total Organic | CCV | | Water | 24.03 mg/L | 10 mL | 24.0 mg/L | 1 | | | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-11 | Carbon, Total Organic | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 08:15:00 | N | IV |
| KQ2011025-12 | Carbon, Total Organic | LCS | | Water | 24.40 mg/L | 10 mL | 24.4 mg/L | 1 | 0.07 | 0.50 | 98 | | 8/10/20 08:15:00 | N | IV |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 690342 **Method/Testcode:** SM 5310 C/TOC T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2006257-001 | Carbon, Total Organic | N/A | | Water | 0.91 mg/L | 10 mL | 0.91 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006280-001 | Carbon, Total Organic | N/A | | Ground Water | 4.58 mg/L | 10 mL | 4.58 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006280-002 | Carbon, Total Organic | N/A | | Ground Water | 8.08 mg/L | 10 mL | 8.08 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006280-003 | Carbon, Total Organic | N/A | | Ground Water | 9.97 mg/L | 10 mL | 9.97 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006330-001 | Carbon, Total Organic | N/A | | Water | 1.70 mg/L | 10 mL | 1.70 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006330-002 | Carbon, Total Organic | N/A | | Water | 1.51 mg/L | 10 mL | 1.51 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006330-003 | Carbon, Total Organic | N/A | | Water | 1.87 mg/L | 10 mL | 1.87 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006331-001 | Carbon, Total Organic | N/A | | Water | 0.88 mg/L | 10 mL | 0.88 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006331-002 | Carbon, Total Organic | N/A | | Water | 1.01 mg/L | 10 mL | 1.01 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | V |
| K2006357-001 | Carbon, Total Organic | N/A | | Water | 40.99 mg/L | 10 mL | 41.0 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | I |
| K2006373-001 | Carbon, Total Organic | N/A | | Water | 1.95 mg/L | 10 mL | 1.95 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | II |
| K2006498-001 | Carbon, Total Organic | N/A | | Water | 2.77 mg/L | 10 mL | 2.77 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | IV |
| K2006506-001 | Carbon, Total Organic | N/A | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | II |
| K2006651-001 | Carbon, Total Organic | N/A | | Water | 2.24 mg/L | 10 mL | 2.24 mg/L | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | II |
| KQ2010989-01 | Carbon, Total Organic | DUP | K2006373-001 | Water | 1.96 mg/L | 10 mL | 1.96 mg/L | 1 | 0.07 | 0.50 | | <1 | 8/10/20 11:49:00 | N | II |
| KQ2010989-02 | Carbon, Total Organic | MS | K2006373-001 | Water | 28.22 mg/L | 10 mL | 28.2 mg/L | 1 | 0.07 | 0.50 | 105 | | 8/10/20 11:49:00 | N | II |
| KQ2010989-03 | Carbon, Total Organic | CCV | | Water | 24.83 mg/L | 10 mL | 24.8 mg/L | 1 | | | | | 8/10/20 11:49:00 | N | II |
| KQ2010989-04 | Carbon, Total Organic | CCV | | Water | 24.39 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/10/20 11:49:00 | N | II |
| KQ2010989-05 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | II |
| KQ2010989-06 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | II |
| KQ2010989-07 | Carbon, Total Organic | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | II |
| KQ2010989-08 | Carbon, Total Organic | LCS | | Water | 24.61 mg/L | 10 mL | 24.6 mg/L | 1 | 0.07 | 0.50 | 98 | | 8/10/20 11:49:00 | N | II |
| KQ2010989-09 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/10/20 11:49:00 | N | V |
| KQ2010989-10 | Carbon, Total Organic | CCV | | Water | 24.42 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/10/20 11:49:00 | N | V |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

RIGHT SOLUTIONS | RIGHT PARTNER

690342
690414

# Schedule: 081020PART

**Version:** 5
**Instrument:** Fusion1
**Last Saved by:** Fusion1 (Fusion1)
**Last Saved on:** 2020/08/11 08:15 - Tuesday

| Position | Sample Type | Sample ID | Method ID (Calibration ID) | Reps | Use | State |
|---|---|---|---|---|---|---|
| (Clean) | Clean | Clean | | 1 | True | Ready |
| (Clean) | Clean | Clean | | 1 | True | Ready |
| (Clean) | Clean | Clean | | 1 | True | Ready |
| (Blank) | Blank | Reagent/Acid Blank | | 1 | True | Ready |
| D | Sample | RB | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 1 | Sample | MB1 | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| C | Check Standard | [TOC] LCS [24.0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 2 | Sample | ICS | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 3 | Sample | k2006373-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 4 | Sample | K2006373-001D | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 5 | Sample | K2006373-001MS | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 6 | Sample | K2006330-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 7 | Sample | K2006330-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 8 | Sample | K2006330-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 9 | Sample | K2006331-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 10 | Sample | K2006331-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 11 | Sample | K2006280-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 12 | Sample | K2006280-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 13 | Sample | K2006280-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 14 | Sample | K2006257-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 15 | Sample | K2006357-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 16 | Sample | K2006498-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 17 | Sample | K2006651-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 18 | Sample | K2006506-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 19 | Sample | K2006376-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 20 | Sample | MB2 | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| C | Check Standard | [TOC] LCS [24.0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 21 | Sample | K2006376-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 22 | Sample | K2006376-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 23 | Sample | K2006376-003D | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 24 | Sample | K2006376-003MS | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 25 | Sample | K2006497-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 26 | Sample | K2006497-004 25X | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 27 | Sample | K2006497-005 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 28 | Sample | K2006497-006 20X | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 29 | Sample | K2006345-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 30 | Sample | K2006345-002 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 31 | Sample | K2006345-003 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 32 | Sample | K2006345-004 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 33 | Sample | K2006345-005 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 34 | Sample | K2006345-006 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 35 | Sample | K2006345-007 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 36 | Sample | K2006345-008 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 37 | Sample | K2006332-001 | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| 38 | Sample | RB | CAS_salt_010711 (CAS_salt_010711) | 2 | True | Ready |
| B | Check Standard | [TOC] CCV 25 ppm [25 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |


RIGHT SOLUTIONS | RIGHT PARTNER

# Schedule: 081020PART

| Position | Sample Type | Sample ID | Method ID (Calibration ID) | Reps | Use | State |
|---|---|---|---|---|---|---|
| D | Check Standard | [TOC] CCB [0 ppm] | CAS_salt_010711 (CAS_salt_010711) | 1 | True | Ready |
| 1 | Sample | | CAS_salt_010711 (CAS_salt_010711) | 1 | False | Ready |
| | | | | | False | |



RIGHT SOLUTIONS | RIGHT PARTNER

# Fusion Report - 081020
# Monday, August 10, 2020 08:55 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/08/11 08:18 - Tuesday

## Report Summary Information

| | | | |
|---|---|---|---|
| Company Location: | Gen Chem Lab | | |
| Schedule Name: | 081020 | Engine Version: | 1.1.5.1 |
| Instrument Name: | Fusion1 | Firmware Version: | 1.2.0696 |
| Report Version: | 1 of 1 | Connection: | RS232 COM1 |
| Report Creation by Operators (schedule version): | Fusion1 (Fusion1) (v1)<br>Fusion1 (Fusion1) (v2)<br>Fusion1 (Fusion1) (v3)<br>Fusion1 (Fusion1) (v8)<br>Fusion1 (Fusion1) (v10) | | |
| Comment: | | | |

## Report Results

**Sample Type**: Clean — From Schedule Version 1

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (clean) | | Clean | 2020/08/10 08:55 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | 13.59 | 27.10 | 13.51 | 49.75 | 07:58 |
| | | | | | | |
| 2 | TC Clean | 14.25 | 27.50 | 13.25 | 49.52 | 07:15 |
| 3 | TC Clean | 3.51 | 16.73 | 13.23 | 49.83 | 07:00 |
| 4 | TC Clean | 2.18 | 15.49 | 13.31 | 49.61 | 07:02 |

**Sample Type**: Clean — From Schedule Version 1

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (clean) | | Clean | 2020/08/10 09:29 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | -0.11 | 13.08 | 13.19 | 49.85 | 07:59 |
| | | | | | | |
| 2 | TC Clean | 6.75 | 19.98 | 13.23 | 49.89 | 07:14 |
| 3 | TC Clean | 2.26 | 15.29 | 13.04 | 49.69 | 07:00 |


RIGHT SOLUTIONS | RIGHT PARTNER

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | TC Clean | 1.70 | 14.66 | 12.96 | 49.89 | 07:03 |

**Sample Type**: Clean From Schedule Version 1

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (clean) | | Clean | 2020/08/10 10:03 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | -0.12 | 12.95 | 13.07 | 49.69 | 05:20 |
| | | | | | | |
| 2 | TC Clean | 5.87 | 18.80 | 12.93 | 49.79 | 07:15 |
| 3 | TC Clean | 1.45 | 14.56 | 13.12 | 49.95 | 07:01 |
| 4 | TC Clean | 1.06 | 14.24 | 13.18 | 49.85 | 07:00 |

**Sample Type**: Blank (Creating v1431) From Schedule Version 2

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (blank) | | Reagent/Acid Blank | 2020/08/10 10:34 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | -0.38 | 12.81 | 13.19 | 49.55 | 05:15 |
| | | | | | | |
| 2 | TC Clean | 5.58 | 18.69 | 13.10 | 49.98 | 07:17 |
| 3 | TC Clean | 1.28 | 14.48 | 13.19 | 49.82 | 07:00 |
| 4 | TC Clean | 1.17 | 14.37 | 13.20 | 49.76 | 07:02 |
| | | | | | | |
| 5 | Reagent Blank | 5.19 | 18.27 | 13.09 | 49.97 | 08:09 |
| | | | | | | |
| 6 | Acid Blank | 0.27 | 13.25 | 12.98 | 49.61 | 05:31 |

**Sample Type**: Sample From Schedule Version 2

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | RB | 0.2109 ppm | 0.0000 ppm | 0.0000% | 2020/08/10 11:21 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.2109 | 2.1088 | 10.73 | 23.88 | 13.15 | 50.04 | 10:33 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |


RIGHT SOLUTIONS | RIGHT PARTNER

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 2

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.8308 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 11:35 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.8308 | 248.3083 | 184.08 | 197.28 | 13.20 | 49.97 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 2

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 11:50 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.88 | 22.18 | 13.30 | 49.99 | 10:34 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 2

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 1 | TOC | MB1 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/10 12:05 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.47 | 21.52 | 13.04 | 49.99 | 10:33 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS From Schedule Version 2

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [24.0 ppm] | 0 / infinity ( NA / NA ) | 24.6086 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 12:20 |



RIGHT SOLUTIONS | RIGHT PARTNER

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 24.6086 | 246.0858 | 182.52 | 195.71 | 13.19 | 49.95 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |

**Sample Type**: Sample From Schedule Version 2

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 2 | TOC | ICS | 0.5519 ppm | 0.0000 ppm | 0.0000% | 2020/08/10 12:34 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.5519 | 5.5187 | 13.12 | 26.29 | 13.17 | 50.03 | 10:31 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 3 | TOC | k2006373-001 | 1.9518 ppm | 0.0561 ppm | 2.8800% | 2020/08/10 12:49 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.9915 | 19.9154 | 23.22 | 36.45 | 13.24 | 49.99 | 10:28 |
| 2 | TOC | 1.9121 | 19.1213 | 22.66 | 35.92 | 13.26 | 50.00 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 4 | TOC | K2006373-001D | 1.9556 ppm | 0.0411 ppm | 2.1000% | 2020/08/10 13:17 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.9847 | 19.8469 | 23.17 | 36.39 | 13.22 | 50.01 | 10:26 |
| 2 | TOC | 1.9265 | 19.2653 | 22.76 | 35.91 | 13.15 | 50.05 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 5 | TOC | K2006373-001MS | 28.2182 ppm | 0.2043 ppm | 0.7200% | 2020/08/10 13:45 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 28.3627 | 283.6268 | 208.21 | 221.40 | 13.20 | 49.96 | 10:29 |
| 2 | TOC | 28.0737 | 280.7372 | 206.18 | 219.49 | 13.30 | 50.03 | 10:27 |


RIGHT SOLUTIONS | RIGHT PARTNER

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Sample — From Schedule Version 3

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 6 | TOC | K2006330-001 | 1.6954 ppm | 0.0526 ppm | 3.1000% | 2020/08/10 14:13 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.7327 | 17.3266 | 21.40 | 34.67 | 13.27 | 50.04 | 10:28 |
| 2 | TOC | 1.6582 | 16.5824 | 20.88 | 34.22 | 13.34 | 50.02 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Sample — From Schedule Version 8

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 7 | TOC | K2006330-002 | 1.5085 ppm | 0.0001 ppm | 0.0100% | 2020/08/10 14:41 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.5086 | 15.0856 | 19.83 | 33.00 | 13.17 | 49.98 | 10:29 |
| 2 | TOC | 1.5084 | 15.0842 | 19.83 | 32.96 | 13.13 | 49.99 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Sample — From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 8 | TOC | K2006330-003 | 1.8656 ppm | 0.0104 ppm | 0.5600% | 2020/08/10 15:09 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.8582 | 18.5825 | 22.28 | 35.40 | 13.12 | 50.00 | 10:28 |
| 2 | TOC | 1.8729 | 18.7293 | 22.39 | 35.66 | 13.27 | 49.99 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 9 | TOC | K2006331-001 | 0.8840 ppm | 0.0414 ppm | 4.6900% | 2020/08/10 15:37 |

| Rep | Base | ppm | µg | Adjusted | NDIR (Abs) | Baseline | Pressure | Run |
|---|---|---|---|---|---|---|---|---|


RIGHT SOLUTIONS | RIGHT PARTNER

| # | Analysis Type | | | (Abs) | | (Abs) | (psig) | Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.8547 | 8.5466 | 15.24 | 28.55 | 13.31 | 49.94 | 10:29 |
| 2 | TOC | 0.9132 | 9.1325 | 15.66 | 28.70 | 13.05 | 49.91 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.3916 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 16:05 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.3916 | 243.9161 | 181.00 | 194.02 | 13.02 | 49.89 | 10:34 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 16:20 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 9.18 | 22.18 | 13.00 | 49.89 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 10 | TOC | K2006331-002 | 1.0122 ppm | 0.0062 ppm | 0.6200% | 2020/08/10 16:35 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.0078 | 10.0776 | 16.32 | 29.38 | 13.06 | 49.94 | 10:26 |
| 2 | TOC | 1.0166 | 10.1660 | 16.38 | 29.41 | 13.03 | 49.94 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) | CAS_salt_010711 | CAS_salt_010711 |


RIGHT SOLUTIONS | RIGHT PARTNER

(v1431) (v4) (v38)

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 11 | TOC | K2006280-001 | 4.5755 ppm | 0.0744 ppm | 1.6300% | 2020/08/10 17:03 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 4.6281 | 46.2810 | 41.71 | 54.81 | 13.10 | 49.94 | 10:26 |
| 2 | TOC | 4.5229 | 45.2289 | 40.98 | 54.22 | 13.25 | 50.00 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 12 | TOC | K2006280-002 | 8.0784 ppm | 0.0939 ppm | 1.1600% | 2020/08/10 17:31 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.1448 | 81.4479 | 66.38 | 79.61 | 13.22 | 49.99 | 10:27 |
| 2 | TOC | 8.0119 | 80.1193 | 65.45 | 78.57 | 13.12 | 50.00 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 13 | TOC | K2006280-003 | 9.9674 ppm | 0.0659 ppm | 0.6600% | 2020/08/10 17:59 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 10.0140 | 100.1397 | 79.49 | 92.60 | 13.11 | 50.00 | 10:26 |
| 2 | TOC | 9.9207 | 99.2074 | 78.84 | 92.01 | 13.17 | 50.04 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 14 | TOC | K2006257-001 | 0.9093 ppm | 0.0326 ppm | 3.5800% | 2020/08/10 18:27 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.8863 | 8.8631 | 15.47 | 28.71 | 13.25 | 50.04 | 10:26 |
| 2 | TOC | 0.9324 | 9.3235 | 15.79 | 28.80 | 13.01 | 49.98 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 15 | TOC | K2006357-001 | 40.9877 ppm | 0.0236 ppm | 0.0600% | 2020/08/10 18:55 |

| Rep | Base | ppm | µg | Adjusted | NDIR (Abs) | Baseline | Pressure | Run |
|---|---|---|---|---|---|---|---|---|


RIGHT SOLUTIONS | RIGHT PARTNER

| # | Analysis Type | | | (Abs) | | (Abs) | (psig) | Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 41.0043 | 410.0433 | 296.89 | 310.11 | 13.22 | 50.02 | 10:27 |
| 2 | TOC | 40.9710 | 409.7098 | 296.65 | 309.94 | 13.29 | 50.01 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 16 | TOC | K2006498-001 | 2.7725 ppm | 0.3219 ppm | 11.6100% | 2020/08/10 19:23 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 3.0001 | 30.0011 | 30.29 | 43.72 | 13.43 | 49.99 | 10:27 |
| 2 | TOC | 2.5449 | 25.4494 | 27.10 | 40.40 | 13.30 | 50.04 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 17 | TOC | K2006651-001 | 2.2441 ppm | 0.0246 ppm | 1.1000% | 2020/08/10 19:51 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.2615 | 22.6154 | 25.11 | 38.47 | 13.36 | 49.95 | 10:31 |
| 2 | TOC | 2.2268 | 22.2675 | 24.87 | 38.13 | 13.26 | 49.96 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 18 | TOC | K2006506-001 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/10 20:19 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.83 | 22.12 | 13.29 | 49.94 | 10:26 |
| 2 | TOC | 0.0000 | 0.0000 | 8.72 | 21.85 | 13.13 | 49.95 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 19 | TOC | K2006376-001 | 1.1534 ppm | 0.0430 ppm | 3.7300% | 2020/08/10 20:47 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.1229 | 11.2295 | 17.13 | 30.17 | 13.05 | 49.93 | 10:29 |
| 2 | TOC | 1.1838 | 11.8382 | 17.55 | 30.64 | 13.09 | 49.97 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |



RIGHT SOLUTIONS | RIGHT PARTNER

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.4188 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 21:15 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.4188 | 244.1884 | 181.19 | 194.34 | 13.16 | 49.89 | 10:32 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 21:30 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 9.15 | 22.32 | 13.18 | 49.86 | 10:28 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 20 | TOC | MB2 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/10 21:45 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.98 | 21.99 | 13.01 | 49.89 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [24.0 ppm] | 0 / infinity ( NA / NA ) | 24.4024 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/10 21:59 |


RIGHT SOLUTIONS | RIGHT PARTNER

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 24.4024 | 244.0245 | 181.07 | 194.01 | 12.94 | 49.84 | 10:32 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |

**Sample Type**: Sample From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 21 | TOC | K2006376-002 | 1.5778 ppm | 0.0050 ppm | 0.3200% | 2020/08/10 22:14 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.5743 | 15.7428 | 20.29 | 33.29 | 12.99 | 49.80 | 10:27 |
| 2 | TOC | 1.5814 | 15.8141 | 20.34 | 33.46 | 13.11 | 49.89 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 22 | TOC | K2006376-003 | 1.2830 ppm | 0.0367 ppm | 2.8600% | 2020/08/10 22:42 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.3090 | 13.0898 | 18.43 | 31.63 | 13.20 | 49.83 | 10:27 |
| 2 | TOC | 1.2571 | 12.5709 | 18.07 | 31.19 | 13.12 | 49.81 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 23 | TOC | K2006376-003D | 1.2546 ppm | 0.0045 ppm | 0.3600% | 2020/08/10 23:10 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.2514 | 12.5139 | 18.03 | 31.22 | 13.19 | 49.77 | 10:29 |
| 2 | TOC | 1.2578 | 12.5781 | 18.07 | 31.32 | 13.25 | 49.93 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 24 | TOC | K2006376-003MS | 27.7238 ppm | 0.1223 ppm | 0.4400% | 2020/08/10 23:38 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 27.6374 | 276.3736 | 203.12 | 216.24 | 13.12 | 49.88 | 10:29 |
| 2 | TOC | 27.8103 | 278.1028 | 204.33 | 217.53 | 13.20 | 49.88 | 10:25 |


RIGHT SOLUTIONS | RIGHT PARTNER

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 25 | TOC | K2006497-001 | 4.1088 ppm | 0.0689 ppm | 1.6800% | 2020/08/11 00:06 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 4.1575 | 41.5752 | 38.41 | 51.46 | 13.05 | 49.89 | 10:25 |
| 2 | TOC | 4.0600 | 40.6001 | 37.73 | 50.78 | 13.05 | 49.88 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 26 | TOC | K2006497-004 25X | 28.4315 ppm | 0.0059 ppm | 0.0200% | 2020/08/11 00:34 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 28.4357 | 284.3567 | 208.72 | 221.85 | 13.13 | 49.88 | 10:29 |
| 2 | TOC | 28.4273 | 284.2726 | 208.66 | 221.86 | 13.20 | 49.88 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 27 | TOC | K2006497-005 | 3.3441 ppm | 0.1282 ppm | 3.8300% | 2020/08/11 01:02 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 3.4348 | 34.3477 | 33.34 | 46.49 | 13.15 | 49.85 | 10:26 |
| 2 | TOC | 3.2534 | 32.5344 | 32.07 | 45.30 | 13.23 | 49.87 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 28 | TOC | K2006497-006 | 47.8055 ppm | 0.4564 ppm | 0.9500% | 2020/08/11 01:30 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 48.1282 | 481.2824 | 346.86 | 359.97 | 13.11 | 49.91 | 10:28 |
| 2 | TOC | 47.4828 | 474.8275 | 342.33 | 355.53 | 13.20 | 49.88 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 10


RIGHT SOLUTIONS | RIGHT PARTNER

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.7965 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/11 01:58 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.7965 | 247.9647 | 183.83 | 197.18 | 13.34 | 49.93 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0208 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/11 02:13 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0208 | 0.2081 | 10.04 | 23.22 | 13.18 | 49.94 | 10:32 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 29 | TOC | K2006345-001 | 0.5919 ppm | 0.0067 ppm | 1.1200% | 2020/08/11 02:28 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.5966 | 5.9663 | 13.43 | 26.85 | 13.41 | 49.97 | 10:31 |
| 2 | TOC | 0.5872 | 5.8723 | 13.37 | 26.74 | 13.38 | 49.95 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 30 | TOC | K2006345-002 | 0.6574 ppm | 0.0176 ppm | 2.6800% | 2020/08/11 02:56 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.6699 | 6.6991 | 13.95 | 27.23 | 13.28 | 49.97 | 10:28 |
| 2 | TOC | 0.6450 | 6.4496 | 13.77 | 27.14 | 13.37 | 49.99 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|


RIGHT SOLUTIONS | RIGHT PARTNER

| | | | |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 31 | TOC | K2006345-003 | 0.8083 ppm | 0.0132 ppm | 1.6300% | 2020/08/11 03:24 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.7989 | 7.9892 | 14.85 | 28.51 | 13.66 | 49.99 | 10:29 |
| 2 | TOC | 0.8176 | 8.1759 | 14.98 | 28.41 | 13.42 | 50.04 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 32 | TOC | K2006345-004 | 0.7226 ppm | 0.0188 ppm | 2.6100% | 2020/08/11 03:52 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.7359 | 7.3591 | 14.41 | 27.78 | 13.37 | 50.03 | 10:30 |
| 2 | TOC | 0.7093 | 7.0925 | 14.22 | 27.64 | 13.42 | 50.03 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 33 | TOC | K2006345-005 | 0.6797 ppm | 0.0142 ppm | 2.0900% | 2020/08/11 04:20 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.6696 | 6.6962 | 13.95 | 27.22 | 13.27 | 50.06 | 10:26 |
| 2 | TOC | 0.6897 | 6.8972 | 14.09 | 27.33 | 13.24 | 50.06 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 34 | TOC | K2006345-006 | 0.3956 ppm | 0.0006 ppm | 0.1500% | 2020/08/11 04:48 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.3952 | 3.9520 | 12.02 | 25.28 | 13.26 | 50.06 | 10:30 |
| 2 | TOC | 0.3961 | 3.9606 | 12.03 | 25.34 | 13.31 | 50.07 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 35 | TOC | K2006345-007 | 0.9566 ppm | 0.0433 ppm | 4.5300% | 2020/08/11 05:16 |


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| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.9259 | 9.2594 | 15.74 | 29.02 | 13.28 | 50.04 | 10:26 |
| 2 | TOC | 0.9872 | 9.8724 | 16.17 | 29.78 | 13.61 | 50.06 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 36 | TOC | K2006345-008 | 0.5492 ppm | 0.0325 ppm | 5.9100% | 2020/08/11 05:44 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.5262 | 5.2621 | 12.94 | 26.39 | 13.45 | 50.04 | 10:25 |
| 2 | TOC | 0.5721 | 5.7211 | 13.26 | 26.71 | 13.45 | 50.04 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 37 | TOC | K2006332-001 | 0.6516 ppm | 0.0132 ppm | 2.0300% | 2020/08/11 06:12 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.6423 | 6.4225 | 13.75 | 27.06 | 13.31 | 50.04 | 10:28 |
| 2 | TOC | 0.6609 | 6.6093 | 13.89 | 27.18 | 13.30 | 50.05 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 38 | TOC | RB | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/11 06:40 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 7.95 | 21.50 | 13.55 | 50.04 | 10:28 |
| 2 | TOC | 0.0000 | 0.0000 | 8.38 | 21.83 | 13.45 | 50.07 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.0278 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/11 07:08 |

| Pos | Base Analysis | ID | Rep | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run |
|---|---|---|---|---|---|---|---|---|---|---|


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| | Type | | # | | | | | | | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.0278 | 240.2781 | 178.44 | 191.91 | 13.47 | 50.04 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/11 07:23 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 9.09 | 22.59 | 13.50 | 49.97 | 10:31 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 39 | TOC | MB3 | 0.0016 ppm | 0.0000 ppm | 0.0000% | 2020/08/11 07:38 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0016 | 0.0161 | 9.26 | 22.48 | 13.22 | 49.98 | 10:30 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2487 (IC) (v1431) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS From Schedule Version 10

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [25.0 ppm] | 0 / infinity ( NA / NA ) | 23.7533 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/11 07:52 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 23.7533 | 237.5325 | 176.52 | 189.89 | 13.38 | 49.92 | 10:28 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |



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**Sample Type**: Sample From Schedule Version 10

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 40 | TOC | | NaN | NaN | NaN% | 2020/08/11 08:07 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|

**Dilution** 1:10 **Method** CAS_salt_010711 (v4) **Calibration** CAS_salt_010711 (v38)

## Meta Data Used in this Report

**Blanks**

| Version | Reagent (Abs) | Acid (Abs) | DI IC (Abs) | DI TC (Abs) | DI TOC (Abs) | Save Time | Operator |
|---|---|---|---|---|---|---|---|
| v1430 | 1.9877 | 0.5570 | 0.0000 | 0.0000 | 0.0000 | 2020/08/08 14:36 | Fusion1 (Fusion1) |
| v1431 | 1.7293 | 0.2720 | 0.0000 | 0.0000 | 0.0000 | 2020/08/10 11:21 | Fusion1 (Fusion1) |

**Calibrations**

**Name: CAS_salt_010711 (TOC)**

Version: v38
Ver Creation: 2020/06/13 16:40
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC
Calibration curve formula: TOC: y = 7.015x + 9.892
$r^2$ value: TOC: $r^2$ = 0.99974

**Basic Analysis Type**: TOC

| Sample ID | Y Raw Value | X Expected | Message | End Time |
|---|---|---|---|---|
| DI Water | 9.5750 | 0.0000 | | 2020/06/13 15:13 |
| 0.500 ppm | 12.9010 | 0.5000 | | 2020/06/13 15:28 |
| 1.0 ppm | 15.6320 | 1.0000 | | 2020/06/13 15:42 |
| 5.0 ppm | 43.2510 | 5.0000 | | 2020/06/13 15:56 |
| 10 ppm | 82.4040 | 10.0000 | | 2020/06/13 16:11 |
| 25 ppm | 188.6880 | 25.0000 | | 2020/06/13 16:25 |
| 50 ppm | 358.6500 | 50.0000 | | 2020/06/13 16:39 |

**Methods**

**Name: CAS_salt_010711 (TOC)**


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Version: v4 Operator: Fusion1 (Fusion1)
Ver Creation: 2019/02/21 17:57
Comment:

| Parameter | Value |
|---|---|
| SampleVolume | 10.0 mL |
| Dilution | 1:10 |
| AcidVolume | 0.5 ml |
| ReagentVolume | 2.0 ml |
| UVReactorPrerinse | Off |
| UVReactorPrerinseVolume | 5.0 |
| NumberOfUVReactorPrerinses | 1 |
| ICSpargeTime | 1.00 mins |
| DetectorSweepFlow | 500 ml/min |
| PreSpargeTime | 2.00 mins |
| SystemFlow | 500 ml/min |

| Advanced Parameter | Value |
|---|---|
| NeedleRinseVolume | 5.0 ml |
| VialPrimeVolume | 2.0 ml |
| ICSamplePrimeVolume | 2.0 ml |
| ICSpargeRinseVolume | 12.0 ml |
| BaselineStabilizeTime | 0.70 min |
| DetectorPressureFlow | 150 ml/min |
| SyringeSpeedWaste | 10 |
| SyringeSpeedAcid | 7 |
| SyringeSpeedReagent | 7 |
| SyringeSpeedDIWater | 7 |
| NDIRPressurization | 60 psig |
| SyringeSpeedSampleDispense | 5 |
| SyringeSpeedSampleAspirate | 4 |
| SyringeSpeedUVDispense | 5 |
| SyringeSpeedUVAspirate | 5 |
| SyringeSpeedICDispense | 5 |
| SyringeSpeedICAspirate | 5 |
| NDIRPressureStabilize | 1.75 min |
| SampleMixing | Off |
| SampleMixingCycles | 1 |
| SampleMixingVolume | 10.0 |
| LowLevelFilterNDIR | Off |

## Acceptance / Approval

**Electronic Signatures**

| Report Version | User Name | Acceptance | Reason | Date |
|---|---|---|---|---|

## Report History

**Report History**

| Report Version | User Name | System Reason | User Reason | Date |
|---|---|---|---|---|
| 1 | Fusion1 (Fusion1) | Schedule completed | Schedule completed | 2020/08/11 08:17 |


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ALS Environmental

StarLIMS Run: 690342/690414

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-15-C 50 ppm LCS: 19-GEN-8-31I 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-4-G

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-32J

21 % H3PO4: 19-GEN-08-32I

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

| | |
|---|---|
| Analyzed By: MK | Date Analyzed: 8-10-20 |
| Reviewed By: | Date Reviewed: 8/11/20 |



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NIT-AMN-W-ISE/3523

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

# Ion Selective Electrode Logbook

| | |
|---|---|
| Analyst: MD | Date: 7/31/20 11:20 AM |
| Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F | |

| Probe Calibration Date: | Cal Std ID: | Probe ID: |
|---|---|---|
| 7/31/20 | 3140622(06-1D | V01-11806 |

| Std Level | | mV | Conc., mg/L: |
|---|---|---|---|
| STD 1 (mg/L): | 0.2 | 1363 | 0.200 |
| STD 2 (mg/L): | 1 | 977 | 0.995 |
| STD 3 (mg/L): | 5 | 560 | 4.997 |

| Sodium Thiosulfate ID: | | |
|---|---|---|
| Std Level | mV | Conc., mg/L: |
| STD 4 (mg/L): 10 | 404 | 10.002 |
| STD 5 (mg/L): 50 | −2.1 | 50.035 |

| | |
|---|---|
| LSC / MS Spike ID: | 3100601709 |
| ICV Cal STD ID: | 3140622 06 |
| DPD Reagent ID: | 3100602305 |

ICAL Date & Slope: 100.0% / −60.0mV

| WO # / SX # | Bottle # | Initial g or ml | Final Vol. ml | Dilution Factor | Initial Conc. mg/L | Final Conc. mg/L | Chlorine Check (+/−) | Comments |
|---|---|---|---|---|---|---|---|---|
| ICV | | 50ml | 50ml | | 10.840 | | | |
| CCB | | | | | 0.002 | | | |
| MBLK | | | | | 0.002 | | | |
| LCS | | | | | 10.524 | | | |
| HS2007-1249-01 | | | | | 0.152 | | −ve | |
| 1241-01 | | | | | 0.155 | | −ve | |
| 1309-01 | | | | | 14.992 | | −ve | |
| 1241-01MS | | | | | 11.011 | | | |
| 1241-01MSD | | | | | 11.056 | | | |
| 1364-01 | | | | | 0.120 | | −ve | |
| 1364-02 | | | | | 0.045 | | −ve | |
| 1364-03 | | | | | 0.026 | | −ve | |
| CCV | | | | | 9.374 | | | |
| CCB | | | | | 0.005 | | | |
| HS2007-1364-04 | | 1ml | 50ml | 50x | 3.492 | | −ve | |
| CCV | | 50ml | 50ml | | 9.476 | | | |
| CCB | | | | | 0.009 | | | |

| Batch ID: | Reported By | Reviewed By: |
|---|---|---|
| 365983 / 365984 | MD | KL |



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NIT-AMN-W-ISE/3523

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

# Ion Selective Electrode Logbook

| | |
|---|---|
| Analyst: MD | Date: 7/31/20 11:20 AM |
| Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F | |

| Probe Calibration Date: | Cal Std ID: | Probe ID: |
|---|---|---|
| 7/31/20 | 3140622(06-1D | X01-11806 |

| Std Level | | mV | Conc., mg/L: |
|---|---|---|---|
| STD 1 (mg/L): | 0.2 | 1363 | 0.200 |
| STD 2 (mg/L): | 1 | 977 | 0.995 |
| STD 3 (mg/L): | 5 | 560 | 4.997 |

| Sodium Thiosulfate ID: | | |
|---|---|---|
| Std Level | mV | Conc., mg/L: |
| STD 4 (mg/L): 10 | 404 | 10.002 |
| STD 5 (mg/L): 50 | −2.1 | 50.035 |

| | |
|---|---|
| LSC / MS Spike ID: | 3100601709 |
| ICV Cal STD ID: | 3140622 06 |
| DPD Reagent ID: | 3100602305 |

ICAL Date & Slope: 100.0% / −60.0mV

| WO # / SX # | Bottle # | Initial g or ml | Final Vol. ml | Dilution Factor | Initial Conc. mg/L | Final Conc. mg/L | Chlorine Check (+/−) | Comments |
|---|---|---|---|---|---|---|---|---|
| ICV | | 50ml | 50ml | | 10.840 | | | |
| CCB | | | | | 0.002 | | | |
| MBLK | | | | | 0.002 | | | |
| LCS | | | | | 10.524 | | | |
| HS2007-1249-01 | | | | | 0.152 | | −ve | |
| 1241-01 | | | | | 0.155 | | −ve | |
| 1309-01 | | | | | 14.992 | | −ve | |
| 1241-01 MS | | | | | 11.011 | | | |
| 1241-01 MSD | | | | | 11.056 | | | |
| 1364-01 | | | | | 0.120 | | −ve | |
| 1364-02 | | | | | 0.045 | | −ve | |
| 1364-03 | | | | | 0.026 | | −ve | |
| CCV | | | | | 9.374 | | | |
| CCB | | | | | 0.005 | | | |
| HS2007-1364-04 | | 1ml | 50ml | 50x | 3.492 | | −ve | |
| CCV | | 50ml | 50ml | | 9.476 | | | |
| CCB | | | | | 0.009 | | | |

| Batch ID: | Reported By | Reviewed By: |
|---|---|---|
| 365983 / 365984 | MD | KL |



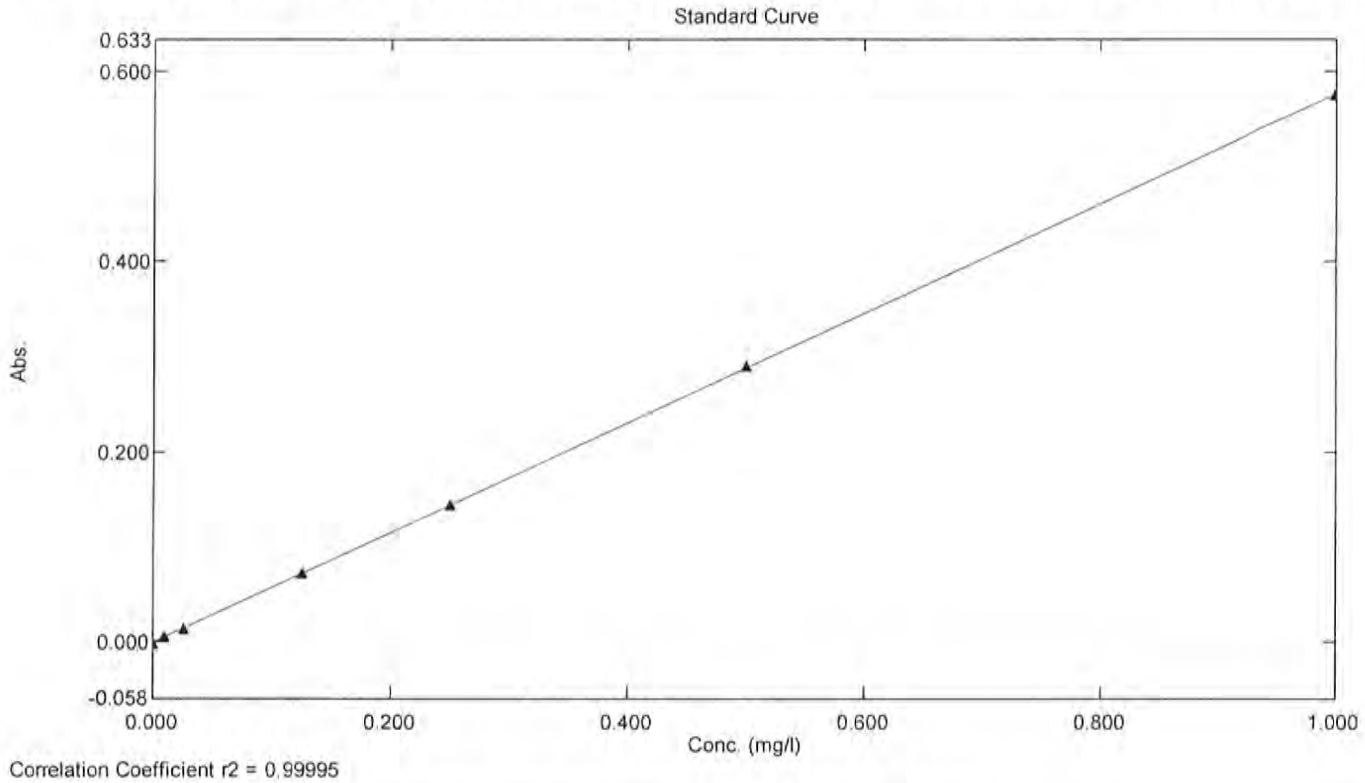
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# Standard Table Report

08/13/2020 01:10:46 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\073020_P_ORTHO.pho..p




Correlation Coefficient r2 = 0.99995

Standard Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Wgt.Facto | Comments |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | Standard | | 0.000 | -0.001 | 1.000 | |
| 2 | STD2 | Standard | | 0.010 | 0.005 | 1.000 | |
| 3 | STD3 | Standard | | 0.025 | 0.013 | 1.000 | |
| 4 | STD4 | Standard | | 0.125 | 0.073 | 1.000 | |
| 5 | STD5 | Standard | | 0.250 | 0.145 | 1.000 | |
| 6 | STD6 | Standard | | 0.500 | 0.290 | 1.000 | |
| 7 | STD7 | Standard | | 1.000 | 0.575 | 1.000 | |
| 8 | | | | | | | |

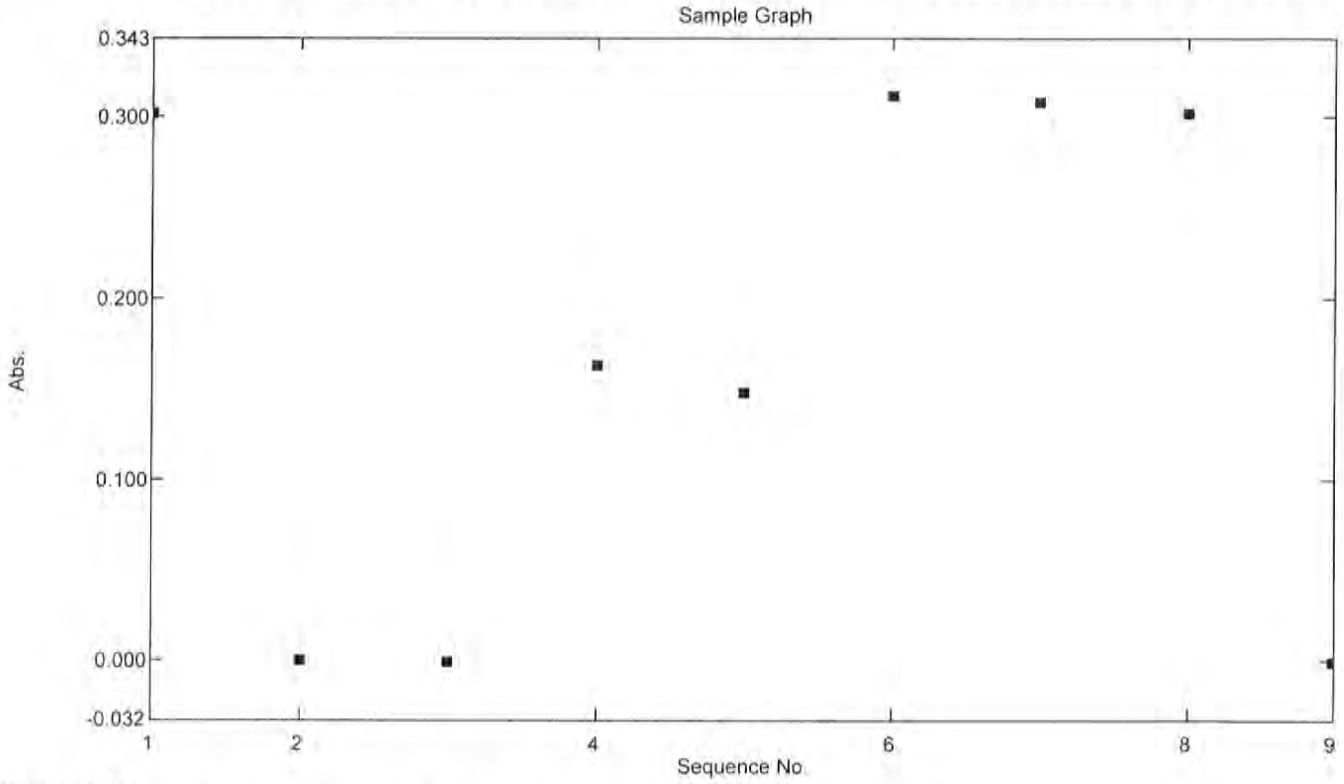


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# Sample Table Report

08/13/2020 01:10:49 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\073020_P_ORTHO.pho..p




Sample Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Comments |
|---|---|---|---|---|---|---|
| 1 | CCV | Unknown | | 0.524 | 0.302 | 314061705 WC-14 |
| 2 | CCB | Unknown | | -0.000 | 0.000 | |
| 3 | MBLK | Unknown | | -0.002 | -0.001 | |
| 4 | LCS | Unknown | | 0.283 | 0.163 | 314061704 WC-14 |
| 5 | HS20071309.01 | Unknown | | 0.257 | 0.148 | 10:44AM,PF:10X |
| 6 | HS20071309.01MS | Unknown | | 0.541 | 0.312 | 10:44AM,PF:10X |
| 7 | H20071309.01MSD | Unknown | | 0.535 | 0.309 | 10:45AM,PF:10X |
| 8 | CCV2 | Unknown | | 0.524 | 0.302 | |
| 9 | CCB2 | Unknown | | -0.001 | -0.001 | C-314062108 UV-11 |
| 10 | | | | | | |



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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20080196

## Longhorn GW Treatment Plant Weekly Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**28-Aug-2020**

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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# HS20080196 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20080196

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 27, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20080196**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 06, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20080196

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20080196-01 | LH18/24-SP650_080520 | Water | | 05-Aug-2020 14:00 | 06-Aug-2020 09:30 | ☐ |
| HS20080196-02 | LH18/24-SP650_080520-BIX | Water | | 05-Aug-2020 14:00 | 06-Aug-2020 09:30 | ☐ |

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc. **CASE NARRATIVE**
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20080196

## Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

## WetChemistry by Method E365.3

### Batch ID: R366412

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method E350.3

### Batch ID: R366363

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**ALS Houston, US** Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20080196

Sample ID: LH18/24-SP650_080520 Lab ID:HS20080196-01

Collection Date: 05-Aug-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **AMMONIA AS N BY E350.3(ISE)** | | **Method:E350.3** | | | | | | Analyst: MZD |
| **Nitrogen, Ammonia (As N)** | **9.9** | a | **0.20** | **0.20** | **0.20** | **mg/L** | 1 | 07-Aug-2020 10:45 |
| **ORTHO PHOSPHATE (PO4) AS P BY E365.3** | | **Method:E365.3** | | | | | | Analyst: MZD |
| **Phosphorus, Total Orthophosphate (As P)** | **2.20** | a | **0.100** | **0.250** | **0.250** | **mg/L** | 10 | 06-Aug-2020 14:36 |
| **SUBCONTRACT ANALYSIS - TOC ANALYSIS** | | **Method:NA** | | | | | | Analyst: SUBK |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 18-Aug-2020 10:01 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 27-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20080196
Sample ID: LH18/24-SP650_080520-BIX
Lab ID:HS20080196-02
Collection Date: 05-Aug-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)** | | **Method:NA** | | | | | | Analyst: GR |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 27-Aug-2020 17:43 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20080196

**DATES REPORT**

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** R366363 ( 0 ) | **Test Name :** AMMONIA AS N BY E350.3(ISE) | | | | **Matrix:** Water | |
| HS20080196-01 | LH18/24-SP650_080520 | 05 Aug 2020 14:00 | | | 07 Aug 2020 10:45 | 1 |
| **Batch ID:** R366412 ( 0 ) | **Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3 | | | | **Matrix:** Water | |
| HS20080196-01 | LH18/24-SP650_080520 | 05 Aug 2020 14:00 | | | 06 Aug 2020 14:36 | 10 |
| **Batch ID:** R366904 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS | | | | **Matrix:** Water | |
| HS20080196-01 | LH18/24-SP650_080520 | 05 Aug 2020 14:00 | | | 18 Aug 2020 10:01 | 1 |
| **Batch ID:** R367591 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) | | | | **Matrix:** Water | |
| HS20080196-02 | LH18/24-SP650_080520-BIX | 05 Aug 2020 14:00 | | | 27 Aug 2020 17:43 | 1 |

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20080196

**QC BATCH REPORT**

**Batch ID: R366363 ( 0 )** **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

**MBLK** Sample ID: **MBLK-366363** Units: **mg/L** Analysis Date: **07-Aug-2020 10:45**
Client ID: Run ID: **WetChem_HS_366363** SeqNo: **5688430** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 0.20 | 0.20 | | | | | | | | U |

**LCS** Sample ID: **LCS-366363** Units: **mg/L** Analysis Date: **07-Aug-2020 10:45**
Client ID: Run ID: **WetChem_HS_366363** SeqNo: **5688431** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 11.25 | 0.20 | 10 | 0 | 112 | 80 - 120 | | | | |

**MS** Sample ID: **HS20080091-01MS** Units: **mg/L** Analysis Date: **07-Aug-2020 10:45**
Client ID: Run ID: **WetChem_HS_366363** SeqNo: **5688434** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 11.52 | 0.20 | 10 | 0.311 | 112 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20080091-01MSD** Units: **mg/L** Analysis Date: **07-Aug-2020 10:45**
Client ID: Run ID: **WetChem_HS_366363** SeqNo: **5688435** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Ammonia (As N) | 11.45 | 0.20 | 10 | 0.311 | 111 | 80 - 120 | 11.52 | 0.635 | 20 | |

**The following samples were analyzed in this batch:** HS20080196-01

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** HS20080196

**QC BATCH REPORT**

**Batch ID:** R366412 ( 0 ) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

**MBLK** Sample ID: **MBLK-366412** Units: **mg/L** Analysis Date: **06-Aug-2020 14:36**
Client ID: Run ID: **UV-2450_366412** SeqNo: **5689393** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.0250 | 0.0250 | | | | | | | | U |

**LCS** Sample ID: **LCS-366412** Units: **mg/L** Analysis Date: **06-Aug-2020 14:36**
Client ID: Run ID: **UV-2450_366412** SeqNo: **5689394** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.241 | 0.0250 | 0.25 | 0 | 96.4 | 85 - 115 | | | | |

**MS** Sample ID: **HS20080198-04MS** Units: **mg/L** Analysis Date: **06-Aug-2020 14:36**
Client ID: Run ID: **UV-2450_366412** SeqNo: **5689396** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.26 | 0.0250 | 0.25 | 0.001 | 104 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20080198-04MSD** Units: **mg/L** Analysis Date: **06-Aug-2020 14:36**
Client ID: Run ID: **UV-2450_366412** SeqNo: **5689397** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As P) | 0.247 | 0.0250 | 0.25 | 0.001 | 98.4 | 80 - 120 | 0.26 | 5.13 | 20 | |

**The following samples were analyzed in this batch:** HS20080196-01

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**WorkOrder:** **HS20080196**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V010 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

**ALS Houston, US** Date: 27-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Weekly Samples
**Work Order:** HS20080196

## SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20080196-01 | LH18/24-SP650_080520 | Login | 8/6/2020 1:10:36 PM | PMG | WET273 |
| HS20080196-01 | LH18/24-SP650_080520 | Login | 8/6/2020 1:10:36 PM | PMG | WET273 |
| HS20080196-01 | LH18/24-SP650_080520 | Login | 8/6/2020 1:10:36 PM | PMG | Sub |
| HS20080196-02 | LH18/24-SP650_080520-BIX | Login | 8/6/2020 1:10:36 PM | PMG | Sub |

**ALS Houston, US** Date: 27-Aug-20

## Sample Receipt Checklist

**Work Order ID:** HS20080196 **Date/Time Received:** 06-Aug-2020 09:30

**Client Name:** Bhate Environmental **Received by:** Jared R. Makan

**Completed By:** /S/ Paresh M. Giga (eSignature) 06-Aug-2020 13:12 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 06-Aug-2020 20:13 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:None |
| Samplers name present on COC? | Yes ☐ | No ☑ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Temperature(s)/Thermometer(s): | 1.5C U/C | IR31 | |
| Cooler(s)/Kit(s): | 45285 | | |
| Date/Time sample(s) sent to storage: | 8/6/2020 13:20 | | |
| Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ |
| pH adjusted? | Yes ☐ | No ☑ | N/A ☐ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia



Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
**GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES**

Prepared By:
Scott Beesinger

P.O. Number

**HS20080196**
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | Analyses: AMMONIA-N | TOTAL ORGANIC CARBON | ORTHO-PHOSPHATE | PERCHLORATE | | | | | | | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_080520 | Water | 08/05/20 / 14:00 | | 3 | X | X | | | | | | | | | H2SO4 | |
| LH18/24-SP650_080520 | Water | 08/05/20 / 14:00 | | 1 | | | X | | | | | | | | NONE | |
| LH18/24--SP650_080520_BIX | Water | 08/05/20 / 14:00 | | 1 | | | | X | | | | | | | NONE | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Additional Remarks: **Standard TAT on all parameters**

| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Beesinger | 08/05/20 | 14:30 | | | | | | | | | |

**For Lab Use Only**

| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| J. MASSON | 8/6/20 | 09:30 | | | | | | | |

Remarks: Cooler 45285 10231
Temp 1.5°C CFO

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

45285

**CUSTODY SEAL**

Date: 8/5/20 Time: 1430
Name: Scott Beesinger
Company: Battle

Seal Broken By:
Date: 08/06/20

45285

Must Del
Time an

803
917
10:30 A
1

45285

ORIGIN ID:SGRA (903) 930-6183
SCOTT BEESINGER
APTIM ENVIROMENTAL & INFRASTRUCTURE
1209-B EAST GRAND AVE
PMB 202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 170CT18
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP 67-RJ

RMA:

FedEx Express

FedEx
TRK# 4380 9533 6791
0221

THU - 06 AUG 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

#425872 08/05 5688J/2709/8766

August 27, 2020 Service Request No:E2000716

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**Laboratory Results for: HS20080196**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 06, 2020
For your reference, these analyses have been assigned our service request number **E2000716.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

# Certificate of Analysis

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Environmental**

| | | | |
|---|---|---|---|
| **Client:** | ALS Houston | **Service Request No.:** | E2000716 |
| **Project:** | HS20080196 | **Date Received:** | 08/06/20 |
| **Sample Matrix:** | W | | |

## CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/06/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

### Data Validation Notes and Discussion

**Precision and Accuracy:**

EQ2000359: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The MS and MSD were performed on unrelated samples. The LCS and LCSD recovery passed.

DOD Certification is held for the method/matrix/analytes provided in this report.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*

**Client:** ALS Environmental - US **Service Request:**E2000716
**Project:** HS20080196

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| E2000716-001 | LH18/24-SP650_080520-BIX | 8/5/2020 | 1400 |

# Service Request Summary

**Folder #:** **E2000716**
Client Name: ALS Environmental - US
Project Name: HS20080196
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/06/20
Internal Due Date: 8/20/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080196
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 3D
**Pressure Gas:**

| Lab Samp No. | Client Samp No | Matrix | Collected | HOUSTON ClO4 DOD/6850 |
|---|---|---|---|---|
| E2000716-001 | LH18/24-SP650_080520-BIX | Water | 08/05/20 1400 | **IV** |

# Service Request Summary

**Folder #:** **E2000716**
Client Name: ALS Environmental - US
Project Name: HS20080196
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/06/20
Internal Due Date: 8/20/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080196
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 3D
**Pressure Gas:**

## Test Comments:

| Group | Test/Method | Samples | Comments |
|---|---|---|---|
| Semivoa GCMS | ClO4 DOD/6850 | 1 | Level II due 8/20,level IV 8/27 |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| + | Possible Tedlar bag artifact. |
| A | TIC is a suspected aldol-condensation product |
| B | Analyte found in the associated method blank as well as in the sample. |
| BC | Reported results are not blank corrected. |
| BH | The back section of the tube yielded higher results than the front. |
| BT | Results indicated possible breakthrough; back section >=10% front section. |
| C | Result identification confirmed. |
| D | Compound identified in an analysis at a secondary dilution factor |
| D | Spike was diluted out |
| DE | Reported results are corrected for desorption efficiency. |
| E | Estimated value. Concentration above calibration range |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| H1 | Sample analysis performed past holding time. See case narrative. |
| H2 | Initial analysis within holding time. Reanalysis for the required dilution was past holding time. |
| H3 | Sample was received and analyzed past holding time. |
| H4 | Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative. |
| I | Internal standard not within the specified limits. See case narrative. |
| J | Estimated Value. Concentration found below MRL. |
| K | A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate. |
| K | Analyte was detected above the method reporting limit prior to normalization. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| L1 | Laboratory control sample recovery outside the specified limits; results may be biased high. |
| L2 | Laboratory control sample recovery outside the specified limits; results may be biased low. |
| L3 | Laboratory control sample recovery outside the specified limits. |
| M | Matrix interference; results may be biased high. |
| M | The duplicate injection precision not met. |
| M1 | Matrix interference due to coelution with a non-target compound; results may be biased high. |
| N | Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| P | Indicates chlorodiphenyl ether interference present at the retention time of the target compound. |
| P | Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns |
| Q | Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria. |
| R | Duplicate Precision not met. |
| R1 | Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated. |
| S | Surrogate recovery not within specified limits. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| T | Analyte is a tentatively identified compound, result is estimated. |
| U | Compound was analyzed for, but was not detected (ND). |
| V1 | The continuing calibration verification standard was outside (biased high) the specified limits for this compound. |
| V2 | The continuing calibration verification standard was outside (biased low) the specified limits for this compound. |
| W | Result quantified, but the corresponding peak was detected outside the generated retention time window. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| X | See case narrative. |
| Y | Recovery outside limits |
| Y | The chromatogram resembles a petroleum product but does not match the calibration standard. |
| Z | The chromatogram does not resemble a petroleum product. |
| i | The MRL/MDL has been elevated due to a matrix interference. |

# ALS Laboratory Group

**Acronyms**

| | |
|---|---|
| Cal | Calibration |
| Conc | CONCentration |
| Dioxin(s) | Polychlorinated dibenzo-p-dioxin(s) |
| EDL | Estimated Detection Limit |
| EMPC | Estimated Maximum Possible Concentration |
| Flags | Data qualifiers |
| Furan(s) | Polychlorinated dibenzofuran(s) |
| g | Grams |
| ICAL | Initial CALibration |
| ID | IDentifier |
| Ions | Masses monitored for the analyte during data acquisition |
| L | Liter (s) |
| LCS | Laboratory Control Sample |
| DLCS | Duplicate Laboratory Control Sample |
| MB | Method Blank |
| MCL | Method Calibration Limit |
| MDL | Method Detection Limit |
| mL | Milliliters |
| MS | Matrix Spiked sample |
| DMS | Duplicate Matrix Spiked sample |
| NO | Number of peaks meeting all identification criteria |
| PCDD(s) | Polychlorinated dibenzo-p-dioxin(s) |
| PCDF(s) | Polychlorinated dibenzofuran(s) |
| ppb | Parts per billion |
| ppm | Parts per million |
| ppq | Parts per quadrillion |
| ppt | Parts per trillion |
| QA | Quality Assurance |
| QC | Quality Control |
| Ratio | Ratio of areas from monitored ions for an analyte |
| % Rec. | Percent recovery |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RT | Retention Time |
| SDG | Sample Delivery Group |
| S/N | Signal-to-noise ratio |
| TEF | Toxicity Equivalence Factor |
| TEQ | Toxicity Equivalence Quotient |

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ALS Environmental

## State Certifications, Accreditations, and Licenses

| Agency | Number | Expire Date |
|---|---|---|
| American Association for Laboratory Accreditation | 2897.01 2020 | 11/30/2021 |
| Arkansas Department of Environmental Quality | 20-030-0 | 3/26/2021 |
| Department of Defense | A2LA 2897.01 | 11/30/2021 |
| Hawaii Department of Health | 2020 | 4/30/2021 |
| Illinois Environmental Protection Agency | 2000322020-4 | 5/9/2021 |
| Louisiana Department of Health and Hospitals | LA028-2020 | 12/31/2020 |
| Maine Department of Health and Human Services | 2020016 | 6/5/2022 |
| Minnesota Department of Health | 1785988 | 12/31/2020 |
| Nebraska Department of Health and Human Services | NE-OS-25-13 (2020) | 4/30/2021 |
| Nevada Department of Concervation and Natural Resources | TX026932021-1 | 7/31/2021 |
| New Hampshire Environmental Laboratory Accreditation Program | 209420 | 4/24/2021 |
| New York Department of Health | 11707 | 3/31/2021 |
| Oklahoma Department of Environmental Quality | 2019-067 | 8/31/2020 |
| Tennessee Department of Environment and Concervation | 04016-2020 | 4/30/2021 |
| Texas Commision on Environmental Quality | T104704231-20-26 | 4/30/2021 |
| United States Department of Agriculture | P330-19-00299 | 10/10/2022 |
| Washington Department of Health | C819 | 11/14/2020 |



ALS

# Chain of Custody

**ALS Environmental - Houston HRMS**
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www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID:** **14453**

**SUBCONTRACT TO:**

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

**Phone:** +1 281 530 5656

**CUSTOMER INFORMATION:**

**Company:** ALS Houston
**Contact:** RJ Modashia
**Address:** 10450 Stancliff Rd, Ste 210
**Phone:** +1 281 530 5656
**Email:** RJ.Modashia@alsglobal.com
**Alternate Contact:**
**Email:**

**INVOICE INFORMATION:**

**Company:** ALS Houston
**Contact:** Accounts Payable
**Address:** 10450 Stancliff Rd, Ste 210
**Phone:** +1 281 530 5656
**Reference:** HS20080196
**TSR:** Danielle Winnings

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| 1. | **HS20080196-02** | **LH18/24-SP650_080520-BIX** | **Water** | **05 Aug 2020 14:00** |
| | SUB_Perch-6850 | | | 20 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: _____

Received By: _____ Date/Time: 8/6/20 1905

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

# Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 1031

Date/Time Received: 8/6/20 Initials: CH

Date/Time Logged in: 8/7/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

| Cooler Tracking Number | COC ID | Date Opened | Time Opened | Opened By | Temp. °C | Temp Blank? |
|---|---|---|---|---|---|---|
| - | | 8/6/20 | 1909 | CH | 3.3 | ☒ |
| | | | | | | ☐ |
| | | | | | | ☐ |
| | | | | | | ☐ |

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
**T:** +1 713 266 1599
**F:** +1 713 266 1599
**www.alsglobal.com**

# SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

**Cooler Custody Seals (desirable, mandatory if specified in SAP):**

- ✓ Intact on outside of cooler, signed and dated

**Chain-of-Custody (COC) documentation (mandatory):**

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

**Sample Integrity (mandatory):**

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

**Temperature Requirement (varies by sample matrix):**

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

# Preparation Information Benchsheets

**ALS Environmental - Houston HRMS**
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Phone (713)266-1599 Fax (713)266-0130
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# *Preparation Information Benchsheet*

**Prep Run#:** 364168 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/24/20 09:31

| # | Lab Code | Client ID | B# | Method /Test | pH | Cl | Matrix | Amt. Ext. | Sample Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | E2000716-001 | LH18/24-SP650_080520-BIX | .01 | 6850/ClO4 DOD | | | Water | 10mL | |
| 2 | E2000739-001 | LH18/24-SP650_081120_BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 3 | E2000740-001 | LH18/24-SP140_081120 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 4 | E2000741-001 | LH18/24-SP650_081120_BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 5 | E2000742-001 | LHSMW01-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 6 | E2000742-002 | 04WW04-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 7 | E2000742-003 | 04WW08-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 8 | E2000742-004 | 04WW08-200810-FD | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 9 | E2000742-005 | 04WW02-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 10 | E2000742-006 | 04WW06-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 11 | E2000742-007 | LHSMW02-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 12 | E2000742-008 | 04WW11-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 13 | E2000742-009 | 04WW01-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 14 | E2000742-010 | 04WW05-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 15 | E2000742-011 | 04WW09-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 16 | E2000742-012 | 04WW10-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 17 | E2000742-013 | 04WW07-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 18 | E2000742-014 | 04WW07-200811-FD | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 19 | E2000759-001 | 16WW58-200817 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 20 | E2000759-002 | 16WW57-200817 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 21 | EQ2000359-01 | MB | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 22 | EQ2000359-02 | LCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 23 | EQ2000359-03 | DLCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 24 | EQ2000359-04 | 04WW10-200811 MS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 25 | EQ2000359-05 | 04WW10-200811 DMS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 26 | EQ2000359-06 | 16WW57-200817 MS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 27 | EQ2000359-07 | 16WW57-200817 DMS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |

**Spiking Solutions**

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E2000716-001 | 100.00µL | E2000739-001 | 100.00µL | E2000740-001 | 100.00µL | E2000741-001 | 100.00µL | E2000742-001 | 100.00µL | E2000742-002 | 100.00µL |
| E2000742-003 | 100.00µL | E2000742-004 | 100.00µL | E2000742-005 | 100.00µL | E2000742-006 | 100.00µL | E2000742-007 | 100.00µL | E2000742-008 | 100.00µL |
| E2000742-009 | 100.00µL | E2000742-010 | 100.00µL | E2000742-011 | 100.00µL | E2000742-012 | 100.00µL | E2000742-013 | 100.00µL | E2000742-014 | 100.00µL |
| E2000759-001 | 100.00µL | E2000759-002 | 100.00µL | EQ2000359-01 | 100.00µL | EQ2000359-02 | 100.00µL | EQ2000359-03 | 100.00µL | EQ2000359-04 | 100.00µL |

# *Preparation Information Benchsheet*

**Prep Run#:** 364168 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/24/20 09:31

EQ2000359-05 100.00µL EQ2000359-06 100.00µL EQ2000359-07 100.00µL

| Name: | Perchlorate Intermediate Stock1 | Inventory ID | 209764 | Logbook Ref: | Perchlorate Int. Stock1 51820 | Expires On: | 11/18/2020 |
|---|---|---|---|---|---|---|---|

EQ2000359-02 1.00µL EQ2000359-03 1.00µL EQ2000359-04 1.00µL EQ2000359-05 1.00µL EQ2000359-06 1.00µL EQ2000359-07 1.00µL

## Preparation Steps

Step: Preparation
Started: 8/24/20 09:31
Finished: 8/25/20 17:54
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

# Analytical Results

**ALS Environmental - Houston HRMS**
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**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | 8/ 5/20 1400 |
| **Sample Matrix:** | Water | **Date Received:** | 8/ 6/20 |
| **Sample Name:** | LH18/24-SP650_080520-BIX | **Units:** | µg/L |
| **Lab Code:** | E2000716-001 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.923** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 16:15 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-01 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | ND | U | 0.100 | 0.0500 | 0.0250 | 1 | 8/24/20 | 8/25/20 18:56 | 364168 | 692783 | |

# Accuracy & Precision

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**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196
**Sample Matrix:** Water

**Service Request:** E2000716
**Date Analyzed:** 8/26/20

## Lab Control Sample Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**Prep Method:** Method

**Units:** µg/L
**Basis:** NA

**Extraction Lot:** 364168

| | Lab Control Sample EQ2000359-02 | | | Duplicate Lab Control Sample EQ2000359-03 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.108 | 0.100 | 108 | 0.100 | 0.100 | 100 | 84 - 119 | 8 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-02 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.108** | | 0.100 | 0.0500 | 0.0250 | 1 | 8/24/20 | 8/26/20 15:35 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-03 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.100** | | 0.100 | 0.0500 | 0.0250 | 1 | 8/24/20 | 8/26/20 15:27 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| | | **Date Analyzed:** | 8/26/20 |

## Matrix Spike Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | E2000742-012 | **Basis:** | NA |

**Analytical Method:** 6850
**Prep Method:** Method

| | | Batch QCMS Matrix Spike EQ2000359-04 | | | | Batch QCDMS Duplicate Matrix Spike EQ2000359-05 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.339 | 0.459 | 0.100 | 120 | * | 0.428 | 0.100 | 89 | 84 - 119 | 7 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-04 | **Basis:** | NA |
| **Run Type:** | Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.459** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 15:43 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-05 | **Basis:** | NA |
| **Run Type:** | Duplicate Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.428** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 15:51 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| | | **Date Analyzed:** | 8/26/20 |

## Matrix Spike Summary

## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | E2000759-002 | **Basis:** | NA |

**Analytical Method:** 6850
**Prep Method:** Method

| | | Batch QCMS | | | | Batch QCDMS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Matrix Spike** | | | | **Duplicate Matrix Spike** | | | | | |
| | | EQ2000359-06 | | | | EQ2000359-07 | | | | | |
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | | **Result** | **Spike Amount** | **% Rec** | | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.454 | 0.530 | 0.100 | 76 | # | 0.558 | 0.100 | 105 | # | 84 - 119 | 5 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-06 | **Basis:** | NA |
| **Run Type:** | Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.530** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 15:59 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-07 | **Basis:** | NA |
| **Run Type:** | Duplicate Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.558** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 16:07 | 364168 | 692775 | |

# Initial Calibration

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200819**

ALS Environmental

**ICAL Date:** 7/19/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000022

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200819_005 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 | 8/19/2020 10:42 |
| 2 | PERCHLORATE2 | | 20200819_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 | 8/19/2020 10:50 |
| 3 | PERCHLORATE3 | | 20200819_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 | 8/19/2020 10:58 |
| 4 | PERCHLORATE4 | | 20200819_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 | 8/19/2020 11:06 |
| 5 | PERCHLORATE5 | | 20200819_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 | 8/19/2020 11:14 |
| 6 | PERCHLORATE6 | | 20200819_010 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 | 8/19/2020 11:22 |
| 7 | PERCHLORATE7 | | 20200819_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 11:30 |
| 8 | PERCHLORATE8 | | 20200819_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 | 8/19/2020 11:38 |
| 9 | PERCHLORATE9 | | 20200819_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 | 8/19/2020 11:45 |
| 10 | PERCHLORATE10 | | 20200819_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 | 8/19/2020 11:53 |
| 11 | PERCHLORATEICV | | 20200819_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 | 8/19/2020 12:09 |
| 12 | LODV | | 20200819_017 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:17 |
| 13 | EQ2000337-01 | | 20200819_019 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:38 |
| 14 | EQ2000337-02 | | 20200819_020 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:46 |
| 15 | EQ2000337-03 | | 20200819_021 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:53 |
| 16 | E2000723-001 | | 20200819_022 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 13:01 |
| 17 | PERCHLORATE7 | | 20200819_023 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 13:09 |
| 18 | E2000680-002X10 | | 20200819_024 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:17 |
| 19 | E2000680-004X2 | | 20200819_025 | Perchlorate6850b.lcm | 2x | ☒ | | 8/19/2020 13:25 |
| 20 | E2000680-007X10 | | 20200819_026 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:33 |
| 21 | E2000680-009X10 | | 20200819_027 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:41 |
| 22 | E2000680-010X10 | | 20200819_028 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:49 |
| 23 | E2000680-011X10 | | 20200819_029 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:57 |
| 24 | EQ2000327-01 | | 20200819_030 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:04 |
| 25 | EQ2000327-02 | | 20200819_031 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:12 |
| 26 | EQ2000327-03 | | 20200819_033 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:21 |
| 27 | PERCHLORATE7 | | 20200819_034 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 14:29 |
| 28 | E2000735-001 | | 20200819_035 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:37 |
| 29 | E2000735-002 | | 20200819_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:45 |
| 30 | E2000735-003 | | 20200819_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:53 |
| 31 | E2000735-004 | | 20200819_038 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:01 |
| 32 | E2000735-005 | | 20200819_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:09 |
| 33 | E2000735-006 | | 20200819_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:16 |
| 34 | E2000735-007 | | 20200819_041 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:24 |
| 35 | E2000735-008 | | 20200819_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:32 |
| 36 | E2000735-009 | | 20200819_043 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:44 |
| 37 | PERCHLORATE7 | | 20200819_044 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 15:52 |
| 38 | E2000735-010 | | 20200819_045 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:00 |
| 39 | E2000735-011 | | 20200819_046 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:08 |
| 40 | E2000735-013 | | 20200819_047 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:16 |
| 41 | E2000735-014 | | 20200819_048 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:24 |
| 42 | E2000735-015 | | 20200819_049 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:32 |
| 43 | E2000735-016 | | 20200819_050 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:40 |
| 44 | E2000735-017 | | 20200819_051 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:47 |
| 45 | E2000735-018 | | 20200819_052 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:55 |
| 46 | E2000735-019 | | 20200819_053 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:03 |
| 47 | PERCHLORATE7 | | 20200819_054 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 17:11 |
| 48 | EQ2000339-01 | | 20200819_055 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:19 |
| 49 | EQ2000339-02 | | 20200819_056 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:27 |
| 50 | EQ2000339-03 | | 20200819_057 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:35 |
| 51 | E2000712-001 | | 20200819_058 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:43 |
| 52 | E2000712-002 | | 20200819_059 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:51 |
| 53 | E2000712-003 | | 20200819_060 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:59 |
| 54 | IB | | 20200819_061 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:08 |
| 55 | IB | | 20200819_062 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:16 |
| 56 | IB | | 20200819_063 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:24 |
| 57 | IB | | 20200819_064 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:32 |
| 58 | PERCHLORATE7 | | 20200819_065 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 18:40 |
| 59 | E2000712-004 | | 20200819_066 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:48 |
| 60 | E2000712-005 | | 20200819_067 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:56 |
| 61 | E2000712-006 | | 20200819_068 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:04 |

**20200819**

ALS Environmental

**ICAL Date:** 7/19/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000022

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 62 | E2000712-007 | | 20200819_069 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:12 |
| 63 | E2000694-012 | | 20200819_070 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:19 |
| 64 | E2000694-012MS | | 20200819_071 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:27 |
| 65 | E2000694-012MSD | | 20200819_072 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:35 |
| 66 | E2000711-001 | | 20200819_073 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:43 |
| 67 | E2000711-002 | | 20200819_074 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:51 |
| 68 | E2000724-001 | | 20200819_075 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:59 |
| 69 | PERCHLORATE7 | | 20200819_076 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 20:07 |
| 70 | E2000724-002 | | 20200819_077 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:15 |
| 71 | E2000724-003 | | 20200819_078 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:22 |
| 72 | E2000724-004 | | 20200819_079 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:30 |
| 73 | E2000728-001 | | 20200819_080 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:38 |
| 74 | E2000728-002 | | 20200819_081 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:46 |
| 75 | E2000729-001 | | 20200819_082 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:54 |
| 76 | R2006493-001 | | 20200819_083 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:02 |
| 77 | R2006493-003 | | 20200819_084 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:10 |
| 78 | R2006493-005 | | 20200819_085 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:18 |
| 79 | R2006493-007 | | 20200819_086 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:26 |
| 80 | PERCHLORATE7 | | 20200819_087 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 21:33 |
| 81 | R2006493-009 | | 20200819_088 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:41 |
| 82 | R2006493-011 | | 20200819_089 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:49 |
| 83 | R2006493-013 | | 20200819_090 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:57 |
| 84 | R2006493-015 | | 20200819_091 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:05 |
| 85 | PERCHLORATE7 | | 20200819_092 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 22:13 |
| 86 | EQ2000338-01 | | 20200819_093 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:21 |
| 87 | EQ2000338-02 | | 20200819_094 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:29 |
| 88 | EQ2000338-03 | | 20200819_095 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:37 |
| 89 | EQ2000338-04 | | 20200819_096 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:44 |
| 90 | EQ2000338-05 | | 20200819_097 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:52 |
| 91 | R2006532-001 | | 20200819_098 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:00 |
| 92 | R2006532-003 | | 20200819_099 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:08 |
| 93 | R2006532-005 | | 20200819_100 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:16 |
| 94 | R2006532-007 | | 20200819_101 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:24 |
| 95 | R2006532-009 | | 20200819_102 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:32 |
| 96 | PERCHLORATE7 | | 20200819_103 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 23:40 |
| 97 | R2006532-011 | | 20200819_104 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:47 |
| 98 | R2006555-002 | | 20200819_105 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:55 |
| 99 | R2006555-004 | | 20200819_106 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:03 |
| 100 | R2006555-006 | | 20200819_107 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:11 |
| 101 | R2006555-008 | | 20200819_108 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:19 |
| 102 | R2006555-010 | | 20200819_109 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:27 |
| 103 | R2006555-012 | | 20200819_110 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:35 |
| 104 | R2006617-001 | | 20200819_111 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:43 |
| 105 | R2006617-003 | | 20200819_112 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:50 |
| 106 | R2006617-005 | | 20200819_113 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:58 |
| 107 | PERCHLORATE7 | | 20200819_114 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/20/2020 1:06 |
| 108 | R2006617-007 | | 20200819_115 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 1:14 |
| 109 | R2006617-009 | | 20200819_116 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 1:22 |
| 110 | R2006617-010 | | 20200819_117 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 1:30 |
| 111 | PERCHLORATE7 | | 20200819_118 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/20/2020 1:38 |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000022 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000022-01 | PERCHLORATE1 | 20200819_005 | 08/19/2020 10:42 |
| 02 | EC2000022-02 | PERCHLORATE2 | 20200819_006 | 08/19/2020 10:50 |
| 03 | EC2000022-03 | PERCHLORATE3 | 20200819_007 | 08/19/2020 10:58 |
| 04 | EC2000022-04 | PERCHLORATE4 | 20200819_008 | 08/19/2020 11:06 |
| 05 | EC2000022-05 | PERCHLORATE5 | 20200819_009 | 08/19/2020 11:14 |
| 06 | EC2000022-06 | PERCHLORATE6 | 20200819_010 | 08/19/2020 11:22 |
| 07 | EC2000022-07 | PERCHLORATE7 | 20200819_011 | 08/19/2020 11:30 |
| 08 | EC2000022-08 | PERCHLORATE8 | 20200819_012 | 08/19/2020 11:38 |
| 09 | EC2000022-09 | PERCHLORATE9 | 20200819_013 | 08/19/2020 11:45 |
| 10 | EC2000022-10 | PERCHLORATE10 | 20200819_014 | 08/19/2020 11:53 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 5.952** **Average RF = 0.1131**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1299 | 02 | 0.5000 | 0.113 | 03 | 0.7000 | 0.1123 | 04 | 1.0000 | 0.1147 |
| 05 | 2.0000 | 0.1134 | 06 | 5.0000 | 0.1082 | 07 | 10.0000 | 0.1069 | 08 | 20.0000 | 0.1158 |
| 09 | 30.0000 | 0.1094 | 10 | 50.0000 | 0.107 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.115 | 14.9 | 02 | 0.5000 | 0.500 | -0.1 | 03 | 0.7000 | 0.695 | -0.7 |
| 04 | 1.0000 | 1.01 | 1.5 | 05 | 2.0000 | 2.01 | 0.3 | 06 | 5.0000 | 4.78 | -4.3 |
| 07 | 10.0000 | 9.46 | -5.4 | 08 | 20.0000 | 20.5 | 2.4 | 09 | 30.0000 | 29.0 | -3.2 |
| 10 | 50.0000 | 47.3 | -5.4 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000022 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200819_016 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000022-11 | T | Average RF | 10 | 9.352 | ng/mL | -6.5 | <= 15 |

ALS Group Houston

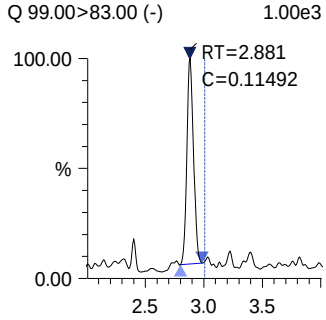
# PERCHLORATE1

Date acquired: 8/19/2020 10:42:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 8/19/2020 10:42:37 AM | 3802 | 0.11492 | 20200819_005 | 2.881 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 8/19/2020 10:42:37 AM | 292622 | 1.00000 | 20200819_005 | 2.877 | 25.0000 | 1.0000 | 5 |

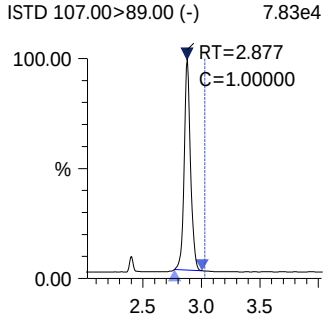
## Perchlorate

Conc 0.11492
Area 3802




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292622



ALS Group Houston

# PERCHLORATE2

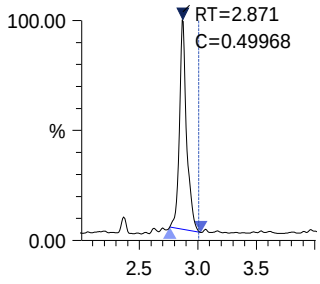
Date acquired: 8/19/2020 10:50:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 8/19/2020 10:50:33 AM | 18036 | 0.49968 | 20200819_006 | 2.871 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 8/19/2020 10:50:33 AM | 319274 | 1.00000 | 20200819_006 | 2.870 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.49968
Area 18036

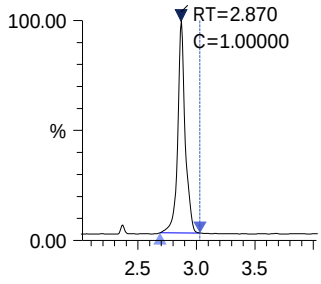
Q 99.00>83.00 (-) 4.32e3




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 319274

ISTD 107.00>89.00 (-) 7.26e4



ALS Group Houston

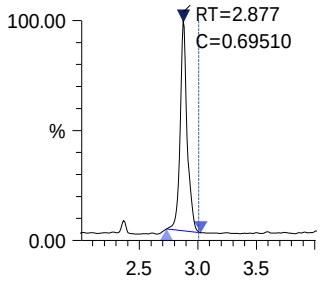
# PERCHLORATE3

Date acquired: 8/19/2020 10:58:27 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 8/19/2020 10:58:27 AM | 24394 | 0.69510 | 20200819_007 | 2.877 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 8/19/2020 10:58:27 AM | 310422 | 1.00000 | 20200819_007 | 2.874 | 25.0000 | 1.0000 | 7 |

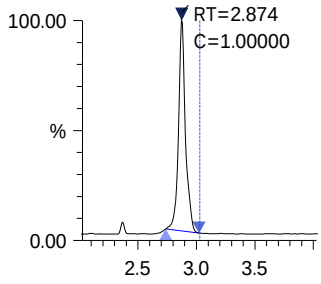
## Perchlorate

Conc 0.69510
Area 24394
Q 99.00>83.00 (-) 5.99e3




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 310422
ISTD 107.00>89.00 (-) 7.56e4



ALS Group Houston

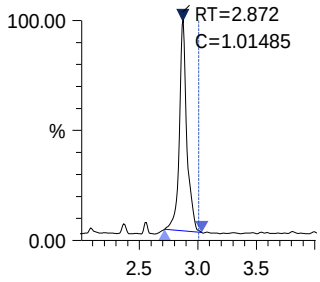
# PERCHLORATE4

Date acquired: 8/19/2020 11:06:22 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 8/19/2020 11:06:22 AM | 33591 | 1.01485 | 20200819_008 | 2.872 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 8/19/2020 11:06:22 AM | 292786 | 1.00000 | 20200819_008 | 2.872 | 25.0000 | 1.0000 | 8 |

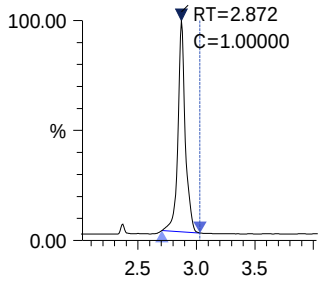
## Perchlorate

Conc 1.01485
Area 33591
Q 99.00>83.00 (-) 7.70e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292786
ISTD 107.00>89.00 (-) 6.80e4



ALS Group Houston

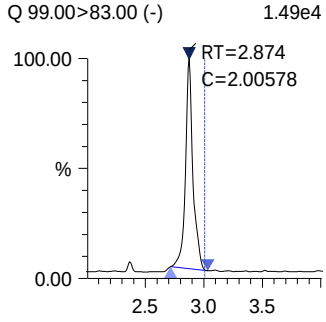
# PERCHLORATE5

Date acquired: 8/19/2020 11:14:18 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 8/19/2020 11:14:18 AM | 65114 | 2.00578 | 20200819_009 | 2.874 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 8/19/2020 11:14:18 AM | 287158 | 1.00000 | 20200819_009 | 2.873 | 25.0000 | 1.0000 | 9 |

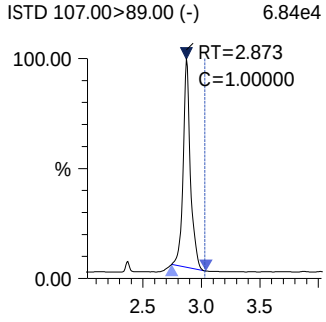
## Perchlorate

Conc 2.00578
Area 65114




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 287158



ALS Group Houston

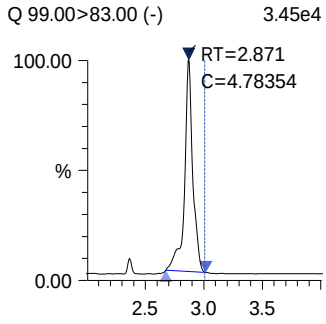
# PERCHLORATE6

Date acquired: 8/19/2020 11:22:10 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 8/19/2020 11:22:10 AM | 167892 | 4.78354 | 20200819_010 | 2.871 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 8/19/2020 11:22:10 AM | 310462 | 1.00000 | 20200819_010 | 2.870 | 25.0000 | 1.0000 | 10 |

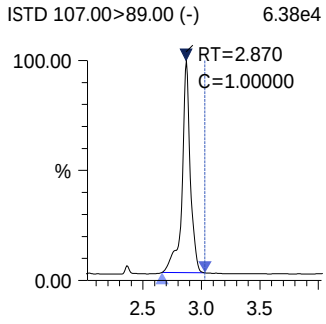
## Perchlorate

Conc 4.78354
Area 167892




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 310462



ALS Group Houston

# PERCHLORATE7

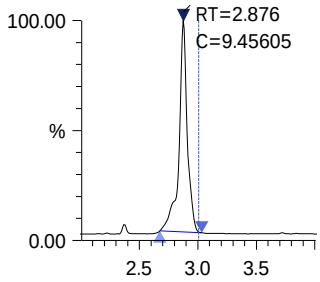
Date acquired: 8/19/2020 11:30:05 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/19/2020 11:30:05 AM | 309830 | 9.45605 | 20200819_011 | 2.876 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/19/2020 11:30:05 AM | 289828 | 1.00000 | 20200819_011 | 2.875 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.45605
Area 309830

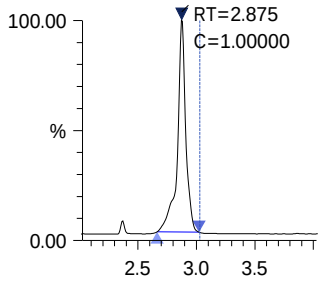
Q 99.00>83.00 (-) 6.35e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 289828

ISTD 107.00>89.00 (-) 5.81e4



ALS Group Houston

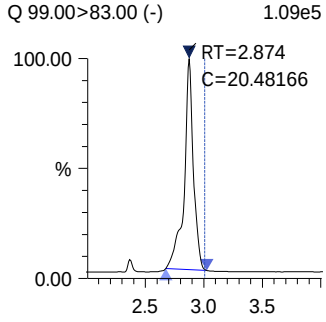
# PERCHLORATE8

Date acquired: 8/19/2020 11:38:00 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 8/19/2020 11:38:00 AM | 587088 | 20.48166 | 20200819_012 | 2.874 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 8/19/2020 11:38:00 AM | 253551 | 1.00000 | 20200819_012 | 2.873 | 25.0000 | 1.0000 | 11 |

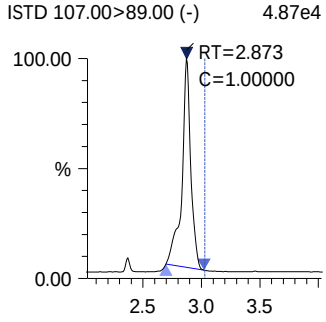
## Perchlorate

Conc 20.48166
Area 587088




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 253551



ALS Group Houston

# PERCHLORATE9

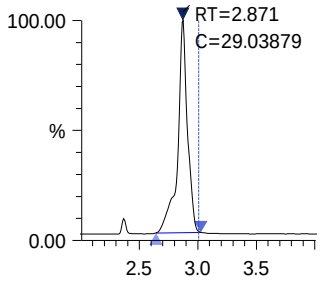
Date acquired: 8/19/2020 11:45:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 8/19/2020 11:45:53 AM | 849278 | 29.03879 | 20200819_013 | 2.871 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 8/19/2020 11:45:53 AM | 258702 | 1.00000 | 20200819_013 | 2.870 | 25.0000 | 1.0000 | 12 |

## Perchlorate

Conc 29.03879
Area 849278

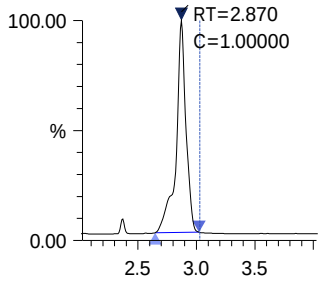
Q 99.00>83.00 (-) 1.48e5




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 258702

ISTD 107.00>89.00 (-) 4.43e4



ALS Group Houston

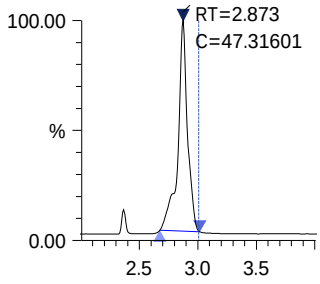
# PERCHLORATE10

Date acquired: 8/19/2020 11:53:48 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 8/19/2020 11:53:48 AM | 1220253 | 47.31601 | 20200819_014 | 2.873 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 8/19/2020 11:53:48 AM | 228123 | 1.00000 | 20200819_014 | 2.871 | 25.0000 | 1.0000 | 13 |

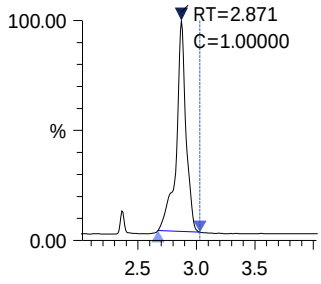
## Perchlorate

Conc 47.31601
Area 1220253
Q 99.00>83.00 (-) 2.17e5




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 228123
ISTD 107.00>89.00 (-) 3.99e4



ALS Group Houston

# PERCHLORATEICV

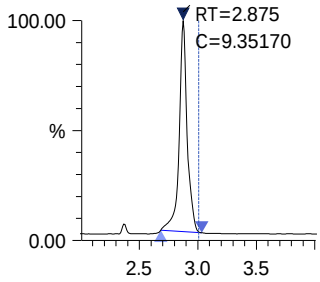
Date acquired: 8/19/2020 12:09:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 8/19/2020 12:09:35 PM | 294031 | 9.35170 | 20200819_016 | 2.875 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 8/19/2020 12:09:35 PM | 278118 | 1.00000 | 20200819_016 | 2.873 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 9.35170
Area 294031

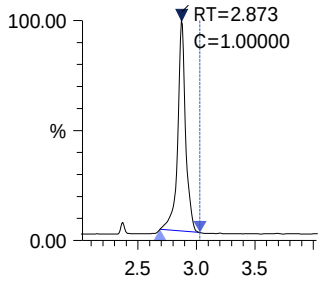
Q 99.00>83.00 (-) 6.27e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 278118

ISTD 107.00>89.00 (-) 5.98e4



**20200826**

ALS Environmental

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000023

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200826_024 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 | 8/26/2020 11:55 |
| 2 | PERCHLORATE2 | | 20200826_025 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 | 8/26/2020 12:03 |
| 3 | PERCHLORATE3 | | 20200826_026 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 | 8/26/2020 12:11 |
| 4 | PERCHLORATE4 | | 20200826_027 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 | 8/26/2020 12:19 |
| 5 | PERCHLORATE5 | | 20200826_028 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 | 8/26/2020 12:27 |
| 6 | PERCHLORATE6 | | 20200826_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 | 8/26/2020 12:35 |
| 7 | PERCHLORATE7 | | 20200826_030 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 12:42 |
| 8 | PERCHLORATE8 | | 20200826_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 | 8/26/2020 12:50 |
| 9 | PERCHLORATE9 | | 20200826_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 | 8/26/2020 12:58 |
| 10 | PERCHLORATE10 | | 20200826_033 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 | 8/26/2020 13:06 |
| 11 | IB | | 20200826_034 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 13:14 |
| 12 | PERCHLORATEICV | | 20200826_035 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 | 8/26/2020 14:26 |
| 13 | IB | | 20200826_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:34 |
| 14 | LODV | | 20200826_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:42 |
| 15 | PERCHLORATE7 | | 20200826_038 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 14:50 |
| 16 | EQ2000359-01 | | 20200826_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:12 |
| 17 | EQ2000359-02 | | 20200826_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:19 |
| 18 | EQ2000359-03 | | 20200826_041 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:27 |
| 19 | EQ2000359-02 | | 20200826_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:35 |
| 20 | EQ2000359-04X10 | | 20200826_043 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:43 |
| 21 | EQ2000359-05X10 | | 20200826_044 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:51 |
| 22 | EQ2000359-06X10 | | 20200826_045 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:59 |
| 23 | EQ2000359-07X10 | | 20200826_046 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:07 |
| 24 | E2000716-001X10 | | 20200826_047 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:15 |
| 25 | E2000739-001X10 | | 20200826_048 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:23 |
| 26 | PERCHLORATE7 | | 20200826_049 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 16:30 |
| 27 | E2000740-001X200 | | 20200826_050 | Perchlorate6850b.lcm | 200x | ☒ | | 8/26/2020 16:38 |
| 28 | E2000741-001X10 | | 20200826_051 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:46 |
| 29 | E2000742-001X2 | | 20200826_052 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 16:54 |
| 30 | E2000742-002X2 | | 20200826_053 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 17:02 |
| 31 | E2000742-003X10 | | 20200826_054 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:10 |
| 32 | E2000742-004X10 | | 20200826_055 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:18 |
| 33 | E2000742-006X10 | | 20200826_056 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:26 |
| 34 | PERCHLORATE7 | | 20200826_057 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 17:33 |
| 35 | E2000742-009X10 | | 20200826_058 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:41 |
| 36 | E2000742-010X10 | | 20200826_059 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:49 |
| 37 | E2000742-011X10 | | 20200826_060 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:57 |
| 38 | E2000742-012X10 | | 20200826_061 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:05 |
| 39 | E2000742-013X10 | | 20200826_062 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:13 |
| 40 | E2000742-014X10 | | 20200826_063 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:21 |
| 41 | E2000759-001X10 | | 20200826_064 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:29 |
| 42 | E2000759-002X10 | | 20200826_065 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:36 |
| 43 | PERCHLORATE7 | | 20200826_066 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 18:44 |
| 44 | EQ2000369-01 | | 20200826_067 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 18:52 |
| 45 | EQ2000369-02 | | 20200826_068 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:00 |
| 46 | EQ2000369-03 | | 20200826_069 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:08 |
| 47 | EQ2000369-04 | | 20200826_070 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:16 |
| 48 | EQ2000369-05 | | 20200826_071 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:24 |
| 49 | E2000764-001 | | 20200826_072 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:32 |
| 50 | E2000764-002 | | 20200826_073 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:40 |
| 51 | E2000764-003 | | 20200826_074 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:47 |
| 52 | E2000764-004 | | 20200826_075 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:55 |
| 53 | E2000764-005 | | 20200826_076 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:03 |
| 54 | PERCHLORATE7 | | 20200826_077 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 20:11 |
| 55 | E2000764-006 | | 20200826_078 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:19 |
| 56 | E2000764-007 | | 20200826_079 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:27 |
| 57 | E2000764-008 | | 20200826_080 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:35 |
| 58 | E2000764-009 | | 20200826_081 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:43 |
| 59 | E2000764-010 | | 20200826_082 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:51 |
| 60 | E2000764-011 | | 20200826_083 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:58 |
| 61 | E2000764-012 | | 20200826_084 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:06 |

**20200826**

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000023**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 62 | E2000764-013 | | 20200826_085 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:14 |
| 63 | E2000764-014 | | 20200826_086 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:22 |
| 64 | E2000764-015 | | 20200826_087 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:30 |
| 65 | PERCHLORATE7 | | 20200826_088 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 21:38 |
| 66 | E2000764-016 | | 20200826_089 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:46 |
| 67 | E2000764-017 | | 20200826_090 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:54 |
| 68 | E2000764-018 | | 20200826_091 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:01 |
| 69 | PERCHLORATE7 | | 20200826_092 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 22:09 |
| 70 | EQ2000367-01 | | 20200826_093 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:17 |
| 71 | EQ2000367-02 | | 20200826_094 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:25 |
| 72 | EQ2000367-03 | | 20200826_095 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:33 |
| 73 | EQ2000367-04 | | 20200826_096 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:41 |
| 74 | EQ2000367-05 | | 20200826_097 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:49 |
| 75 | R2006746-001 | | 20200826_098 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:57 |
| 76 | R2006746-002 | | 20200826_099 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:04 |
| 77 | R2006777-001 | | 20200826_100 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:12 |
| 78 | R2006777-002 | | 20200826_101 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:20 |
| 79 | R2006777-003 | | 20200826_102 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:28 |
| 80 | PERCHLORATE7 | | 20200826_103 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 23:36 |
| 81 | R2006777-004 | | 20200826_104 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:44 |
| 82 | R2006777-005 | | 20200826_105 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:52 |
| 83 | R2006777-006 | | 20200826_106 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:00 |
| 84 | R2006777-007 | | 20200826_107 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:08 |
| 85 | R2006777-008 | | 20200826_108 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:15 |
| 86 | R2006805-001 | | 20200826_109 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:23 |
| 87 | R2006805-002 | | 20200826_110 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:31 |
| 88 | PERCHLORATE7 | | 20200826_111 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/27/2020 0:39 |
| 89 | | | | | | | | |
| 90 | | | | | | | | |
| 91 | | | | | | | | |
| 92 | | | | | | | | |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000023 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000023-01 | PERCHLORATE1 | 20200826_024 | 08/26/2020 11:55 |
| 02 | EC2000023-02 | PERCHLORATE2 | 20200826_025 | 08/26/2020 12:03 |
| 03 | EC2000023-03 | PERCHLORATE3 | 20200826_026 | 08/26/2020 12:11 |
| 04 | EC2000023-04 | PERCHLORATE4 | 20200826_027 | 08/26/2020 12:19 |
| 05 | EC2000023-05 | PERCHLORATE5 | 20200826_028 | 08/26/2020 12:27 |
| 06 | EC2000023-06 | PERCHLORATE6 | 20200826_029 | 08/26/2020 12:35 |
| 07 | EC2000023-07 | PERCHLORATE7 | 20200826_030 | 08/26/2020 12:42 |
| 08 | EC2000023-08 | PERCHLORATE8 | 20200826_031 | 08/26/2020 12:50 |
| 09 | EC2000023-09 | PERCHLORATE9 | 20200826_032 | 08/26/2020 12:58 |
| 10 | EC2000023-10 | PERCHLORATE10 | 20200826_033 | 08/26/2020 13:06 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 5.546** **Average RF = 0.1085**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1181 | 02 | 0.5000 | 0.1137 | 03 | 0.7000 | 0.1087 | 04 | 1.0000 | 0.1168 |
| 05 | 2.0000 | 0.1092 | 06 | 5.0000 | 0.1056 | 07 | 10.0000 | 0.1014 | 08 | 20.0000 | 0.1048 |
| 09 | 30.0000 | 0.1049 | 10 | 50.0000 | 0.1012 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.109 | 8.9 | 02 | 0.5000 | 0.524 | 4.8 | 03 | 0.7000 | 0.702 | 0.2 |
| 04 | 1.0000 | 1.08 | 7.7 | 05 | 2.0000 | 2.01 | 0.7 | 06 | 5.0000 | 4.87 | -2.6 |
| 07 | 10.0000 | 9.35 | -6.5 | 08 | 20.0000 | 19.3 | -3.3 | 09 | 30.0000 | 29.0 | -3.3 |
| 10 | 50.0000 | 46.7 | -6.6 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000023 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200826_035 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000023-11 | T | Average RF | 10 | 9.690 | ng/mL | -3.1 | <= 15 |

ALS Group Houston

# PERCHLORATE1

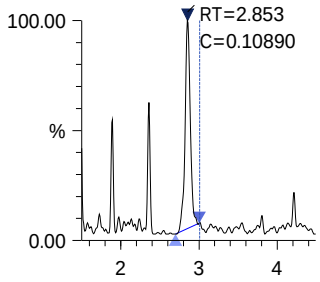
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 8/26/2020 11:55:32 AM | 2254 | 0.10890 | 20200826_024 | 2.853 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 8/26/2020 11:55:32 AM | 190859 | 1.00000 | 20200826_024 | 2.852 | 25.0000 | 1.0000 | 5 |

## Perchlorate

Conc 0.10890
Area 2254

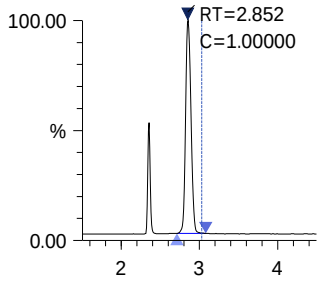
Q 99.00>83.00 (-) 4.92e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

# PERCHLORATE2

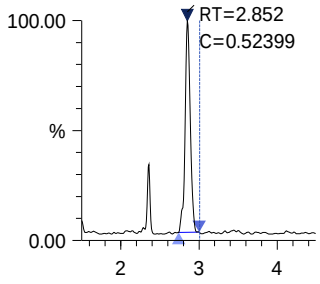
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 8/26/2020 12:03:28 PM | 11013 | 0.52399 | 20200826_025 | 2.852 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 8/26/2020 12:03:28 PM | 193789 | 1.00000 | 20200826_025 | 2.850 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.52399
Area 11013

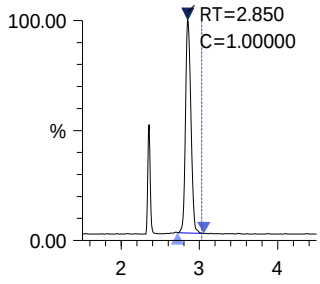
Q 99.00>83.00 (-) 2.37e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

# PERCHLORATE3

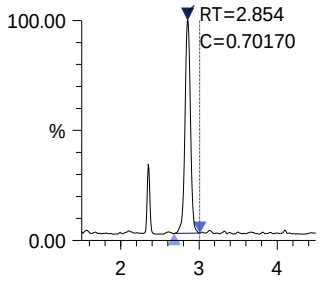
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 8/26/2020 12:11:22 PM | 15252 | 0.70170 | 20200826_026 | 2.854 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 8/26/2020 12:11:22 PM | 200410 | 1.00000 | 20200826_026 | 2.849 | 25.0000 | 1.0000 | 7 |

## Perchlorate

Conc 0.70170
Area 15252

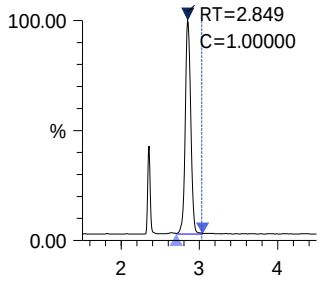
Q 99.00>83.00 (-) 3.07e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

# PERCHLORATE4

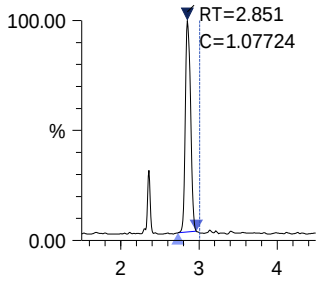
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 8/26/2020 12:19:17 PM | 21473 | 1.07724 | 20200826_027 | 2.851 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 8/26/2020 12:19:17 PM | 183791 | 1.00000 | 20200826_027 | 2.851 | 25.0000 | 1.0000 | 8 |

## Perchlorate

Conc 1.07724
Area 21473

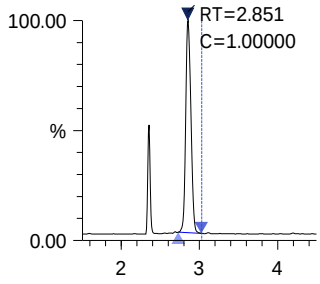
Q 99.00>83.00 (-) 4.54e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

# PERCHLORATE5

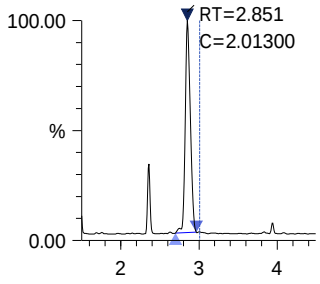
Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 8/26/2020 12:27:10 PM | 40038 | 2.01300 | 20200826_028 | 2.851 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 8/26/2020 12:27:10 PM | 183386 | 1.00000 | 20200826_028 | 2.849 | 25.0000 | 1.0000 | 9 |

## Perchlorate

Conc 2.01300
Area 40038

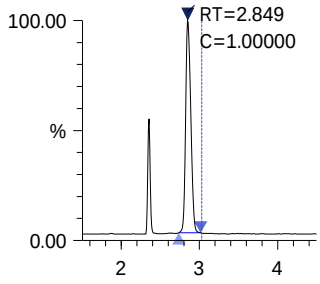
Q 99.00>83.00 (-) 8.76e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

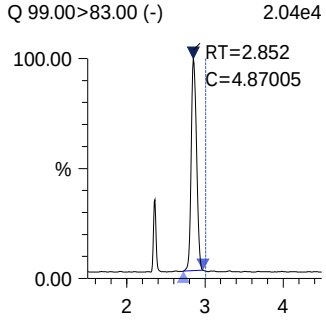
# PERCHLORATE6

Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 8/26/2020 12:35:02 PM | 98121 | 4.87005 | 20200826_029 | 2.852 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 8/26/2020 12:35:02 PM | 185768 | 1.00000 | 20200826_029 | 2.850 | 25.0000 | 1.0000 | 10 |

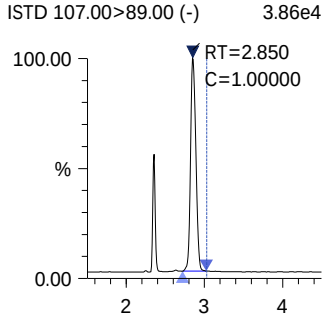
## Perchlorate

Conc 4.87005
Area 98121




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768



ALS Group Houston

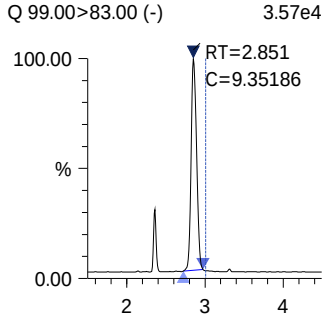
# PERCHLORATE7

Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/26/2020 12:42:57 PM | 174248 | 9.35186 | 20200826_030 | 2.851 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/26/2020 12:42:57 PM | 171796 | 1.00000 | 20200826_030 | 2.850 | 25.0000 | 1.0000 | 4 |

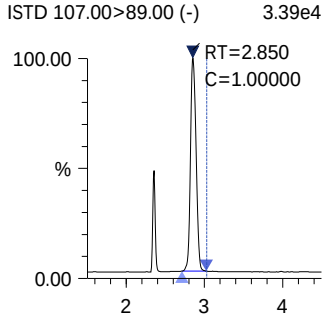
## Perchlorate

Conc 9.35186
Area 174248




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

# PERCHLORATE8

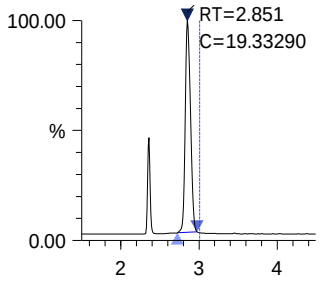
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 8/26/2020 12:50:51 PM | 337010 | 19.33290 | 20200826_031 | 2.851 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 8/26/2020 12:50:51 PM | 160727 | 1.00000 | 20200826_031 | 2.850 | 25.0000 | 1.0000 | 11 |

## Perchlorate

Conc 19.33290
Area 337010

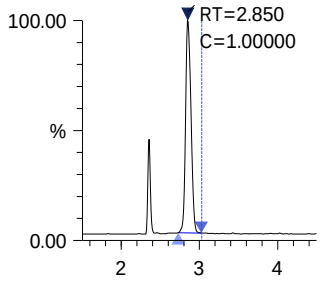
Q 99.00>83.00 (-) 7.14e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



ALS Group Houston

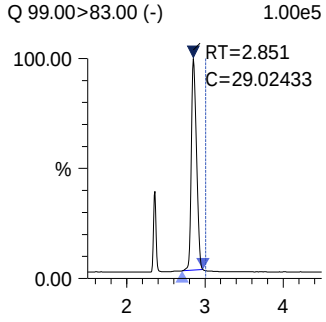
# PERCHLORATE9

Date acquired: 8/26/2020 12:58:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 8/26/2020 12:58:44 PM | 466342 | 29.02433 | 20200826_032 | 2.851 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 8/26/2020 12:58:44 PM | 148144 | 1.00000 | 20200826_032 | 2.849 | 25.0000 | 1.0000 | 12 |

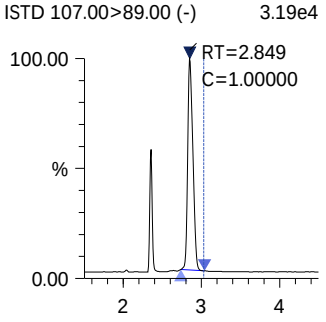
## Perchlorate

Conc 29.02433
Area 466342




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



ALS Group Houston

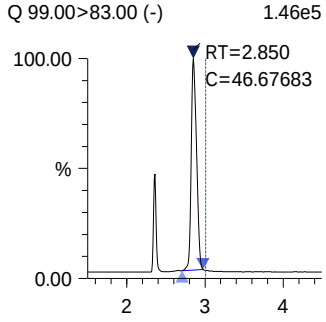
# PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 8/26/2020 1:06:40 PM | 694738 | 46.67683 | 20200826_033 | 2.850 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 8/26/2020 1:06:40 PM | 137234 | 1.00000 | 20200826_033 | 2.849 | 25.0000 | 1.0000 | 13 |

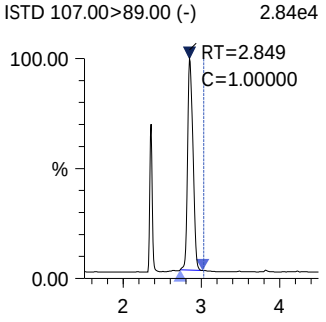
## Perchlorate

Conc 46.67683
Area 694738




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



ALS Group Houston

# PERCHLORATEICV

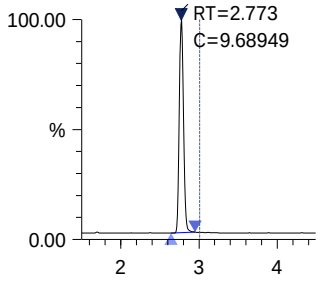
Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 8/26/2020 2:26:45 PM | 257692 | 9.68949 | 20200826_035 | 2.773 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 8/26/2020 2:26:45 PM | 245213 | 1.00000 | 20200826_035 | 2.771 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 9.68949
Area 257692

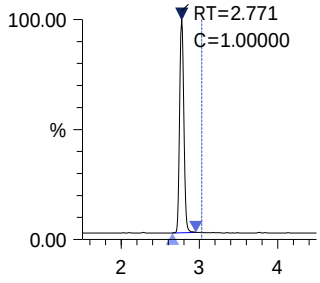
Q 99.00>83.00 (-) 7.12e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213

ISTD 107.00>89.00 (-) 6.83e4



# Chromatograms and Selected Ion Monitoring

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200825**

**1st Review:** Grivera
**2nd Review:** Hvan

ALS Environmental

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 7/19/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000022**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | IB | | 20200825_017 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 16:49 |
| 2 | IB | | 20200825_018 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 16:57 |
| 3 | IB | | 20200825_019 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:05 |
| 4 | IB | | 20200825_020 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:13 |
| 5 | null | | 20200825_021 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:20 |
| 6 | null | | 20200825_022 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:25 |
| 7 | null | | 20200825_023 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:30 |
| 8 | null | | 20200825_024 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:34 |
| 9 | IB | | 20200825_025 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:40 |
| 10 | IB | | 20200825_027 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 18:22 |
| 11 | PERCHLORATE7 | | 20200825_028 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 18:32 |
| 12 | LODV | | 20200825_029 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 18:40 |
| 13 | PERCHLORATE7 | | 20200825_030 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 18:48 |
| 14 | EQ2000359-01 | | 20200825_031 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 18:56 |
| 15 | EQ2000359-02 | | 20200825_032 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:04 |
| 16 | EQ2000359-03 | | 20200825_033 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:12 |
| 17 | EQ2000359-04 | | 20200825_034 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:19 |
| 18 | EQ2000359-05 | | 20200825_035 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:27 |
| 19 | EQ2000359-06 | | 20200825_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:35 |
| 20 | EQ2000359-07 | | 20200825_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:43 |
| 21 | E2000716-001 | | 20200825_038 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:51 |
| 22 | E2000739-001 | | 20200825_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:59 |
| 23 | E2000740-001 | | 20200825_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:07 |
| 24 | PERCHLORATE7 | | 20200825_041 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 20:15 |
| 25 | E2000741-001 | | 20200825_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:22 |
| 26 | E2000742-001 | | 20200825_043 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:30 |
| 27 | E2000742-002 | | 20200825_044 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:38 |
| 28 | E2000742-003 | | 20200825_045 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:46 |
| 29 | E2000742-004 | | 20200825_046 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:54 |
| 30 | E2000742-005 | | 20200825_047 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:02 |
| 31 | E2000742-006 | | 20200825_048 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:10 |
| 32 | E2000742-007 | | 20200825_049 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:18 |
| 33 | E2000742-008 | | 20200825_050 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:26 |
| 34 | E2000742-009 | | 20200825_051 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:33 |
| 35 | PERCHLORATE7 | | 20200825_052 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 21:41 |
| 36 | E2000742-010 | | 20200825_053 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:49 |
| 37 | E2000742-011 | | 20200825_054 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:57 |
| 38 | E2000742-012 | | 20200825_055 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:05 |
| 39 | E2000742-013 | | 20200825_056 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:13 |
| 40 | E2000742-014 | | 20200825_057 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:21 |
| 41 | E2000759-001 | | 20200825_058 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:29 |
| 42 | E2000759-002 | | 20200825_059 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:36 |
| 43 | PERCHLORATE7 | | 20200825_060 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 22:44 |
| 44 | | | | | | | | |
| 45 | | | | | | | | |
| 46 | | | | | | | | |
| 47 | | | | | | | | |
| 48 | | | | | | | | |

**20200826**

ALS Environmental

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000023**

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200826_024 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 | 8/26/2020 11:55 |
| 2 | PERCHLORATE2 | | 20200826_025 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 | 8/26/2020 12:03 |
| 3 | PERCHLORATE3 | | 20200826_026 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 | 8/26/2020 12:11 |
| 4 | PERCHLORATE4 | | 20200826_027 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 | 8/26/2020 12:19 |
| 5 | PERCHLORATE5 | | 20200826_028 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 | 8/26/2020 12:27 |
| 6 | PERCHLORATE6 | | 20200826_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 | 8/26/2020 12:35 |
| 7 | PERCHLORATE7 | | 20200826_030 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 12:42 |
| 8 | PERCHLORATE8 | | 20200826_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 | 8/26/2020 12:50 |
| 9 | PERCHLORATE9 | | 20200826_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 | 8/26/2020 12:58 |
| 10 | PERCHLORATE10 | | 20200826_033 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 | 8/26/2020 13:06 |
| 11 | IB | | 20200826_034 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 13:14 |
| 12 | PERCHLORATEICV | | 20200826_035 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 | 8/26/2020 14:26 |
| 13 | IB | | 20200826_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:34 |
| 14 | LODV | | 20200826_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:42 |
| 15 | PERCHLORATE7 | | 20200826_038 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 14:50 |
| 16 | EQ2000359-01 | | 20200826_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:12 |
| 17 | EQ2000359-02 | | 20200826_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:19 |
| 18 | EQ2000359-03 | | 20200826_041 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:27 |
| 19 | EQ2000359-02 | | 20200826_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:35 |
| 20 | EQ2000359-04X10 | | 20200826_043 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:43 |
| 21 | EQ2000359-05X10 | | 20200826_044 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:51 |
| 22 | EQ2000359-06X10 | | 20200826_045 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:59 |
| 23 | EQ2000359-07X10 | | 20200826_046 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:07 |
| 24 | E2000716-001X10 | | 20200826_047 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:15 |
| 25 | E2000739-001X10 | | 20200826_048 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:23 |
| 26 | PERCHLORATE7 | | 20200826_049 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 16:30 |
| 27 | E2000740-001X200 | | 20200826_050 | Perchlorate6850b.lcm | 200x | ☒ | | 8/26/2020 16:38 |
| 28 | E2000741-001X10 | | 20200826_051 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:46 |
| 29 | E2000742-001X2 | | 20200826_052 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 16:54 |
| 30 | E2000742-002X2 | | 20200826_053 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 17:02 |
| 31 | E2000742-003X10 | | 20200826_054 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:10 |
| 32 | E2000742-004X10 | | 20200826_055 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:18 |
| 33 | E2000742-006X10 | | 20200826_056 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:26 |
| 34 | PERCHLORATE7 | | 20200826_057 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 17:33 |
| 35 | E2000742-009X10 | | 20200826_058 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:41 |
| 36 | E2000742-010X10 | | 20200826_059 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:49 |
| 37 | E2000742-011X10 | | 20200826_060 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:57 |
| 38 | E2000742-012X10 | | 20200826_061 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:05 |
| 39 | E2000742-013X10 | | 20200826_062 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:13 |
| 40 | E2000742-014X10 | | 20200826_063 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:21 |
| 41 | E2000759-001X10 | | 20200826_064 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:29 |
| 42 | E2000759-002X10 | | 20200826_065 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:36 |
| 43 | PERCHLORATE7 | | 20200826_066 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 18:44 |
| 44 | EQ2000369-01 | | 20200826_067 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 18:52 |
| 45 | EQ2000369-02 | | 20200826_068 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:00 |
| 46 | EQ2000369-03 | | 20200826_069 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:08 |
| 47 | EQ2000369-04 | | 20200826_070 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:16 |
| 48 | EQ2000369-05 | | 20200826_071 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:24 |
| 49 | E2000764-001 | | 20200826_072 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:32 |
| 50 | E2000764-002 | | 20200826_073 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:40 |
| 51 | E2000764-003 | | 20200826_074 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:47 |
| 52 | E2000764-004 | | 20200826_075 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:55 |
| 53 | E2000764-005 | | 20200826_076 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:03 |
| 54 | PERCHLORATE7 | | 20200826_077 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 20:11 |
| 55 | E2000764-006 | | 20200826_078 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:19 |
| 56 | E2000764-007 | | 20200826_079 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:27 |
| 57 | E2000764-008 | | 20200826_080 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:35 |
| 58 | E2000764-009 | | 20200826_081 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:43 |
| 59 | E2000764-010 | | 20200826_082 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:51 |
| 60 | E2000764-011 | | 20200826_083 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:58 |
| 61 | E2000764-012 | | 20200826_084 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:06 |

**20200826**

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000023**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 62 | E2000764-013 | | 20200826_085 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:14 |
| 63 | E2000764-014 | | 20200826_086 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:22 |
| 64 | E2000764-015 | | 20200826_087 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:30 |
| 65 | PERCHLORATE7 | | 20200826_088 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 21:38 |
| 66 | E2000764-016 | | 20200826_089 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:46 |
| 67 | E2000764-017 | | 20200826_090 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:54 |
| 68 | E2000764-018 | | 20200826_091 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:01 |
| 69 | PERCHLORATE7 | | 20200826_092 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 22:09 |
| 70 | EQ2000367-01 | | 20200826_093 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:17 |
| 71 | EQ2000367-02 | | 20200826_094 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:25 |
| 72 | EQ2000367-03 | | 20200826_095 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:33 |
| 73 | EQ2000367-04 | | 20200826_096 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:41 |
| 74 | EQ2000367-05 | | 20200826_097 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:49 |
| 75 | R2006746-001 | | 20200826_098 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:57 |
| 76 | R2006746-002 | | 20200826_099 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:04 |
| 77 | R2006777-001 | | 20200826_100 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:12 |
| 78 | R2006777-002 | | 20200826_101 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:20 |
| 79 | R2006777-003 | | 20200826_102 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:28 |
| 80 | PERCHLORATE7 | | 20200826_103 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 23:36 |
| 81 | R2006777-004 | | 20200826_104 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:44 |
| 82 | R2006777-005 | | 20200826_105 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:52 |
| 83 | R2006777-006 | | 20200826_106 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:00 |
| 84 | R2006777-007 | | 20200826_107 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:08 |
| 85 | R2006777-008 | | 20200826_108 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:15 |
| 86 | R2006805-001 | | 20200826_109 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:23 |
| 87 | R2006805-002 | | 20200826_110 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:31 |
| 88 | PERCHLORATE7 | | 20200826_111 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/27/2020 0:39 |
| 89 | | | | | | | | |
| 90 | | | | | | | | |
| 91 | | | | | | | | |
| 92 | | | | | | | | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_038

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.96 | 0.1085 | 0.09719 | -10.4 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_049

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.65 | 0.1085 | 0.1047 | -3.5 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_057

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.59 | 0.1085 | 0.1040 | -4.1 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_066

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.71 | 0.1085 | 0.1053 | -2.9 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/25/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200825\20200825_030

**Calibration Date:** 8/19/20
**Calibration ID:** EC2000022
**Analysis Lot:** 692783
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.23 | 0.1131 | 0.1043 | -7.7 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/25/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200825\20200825_041

**Calibration Date:** 8/19/20
**Calibration ID:** EC2000022
**Analysis Lot:** 692783
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.78 | 0.1131 | 0.1105 | -2.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/25/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200825\20200825_052

**Calibration Date:** 8/19/20
**Calibration ID:** EC2000022
**Analysis Lot:** 692783
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.00 | 0.1131 | 0.1018 | -10.0 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Analyzed:** | 8/26/20 14:50 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200826\20200826_038 | **Lab Code:** | EQ2000370-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692775 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-01 | 168,655 | 2.85 |
| Duplicate Lab Control Sample | EQ2000359-03 | 222,420 | 2.86 |
| Lab Control Sample | EQ2000359-02 | 218,301 | 2.86 |
| Batch QCMS | EQ2000359-04 | 136,805 | 2.85 |
| Batch QCDMS | EQ2000359-05 | 144,861 | 2.85 |
| Batch QCMS | EQ2000359-06 | 127,802 | 2.85 |
| Batch QCDMS | EQ2000359-07 | 144,838 | 2.85 |
| LH18/24-SP650_080520-BIX | E2000716-001 | 145,137 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Analyzed:** | 8/26/20 16:30 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200826\20200826_049 | **Lab Code:** | EQ2000370-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692775 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-02 | 159,403 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Analyzed:** | 8/26/20 17:33 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200826\20200826_057 | **Lab Code:** | EQ2000370-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692775 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-03 | 153,993 | 2.86 |
| Batch QC | E2000742-012 | 141,019 | 2.85 |
| Batch QC | E2000759-002 | 131,720 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080196

**Service Request:** E2000716
**Date Analyzed:** 8/26/20 18:44

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200826\20200826_066
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000370-04
**Analysis Lot:** 692775
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-04 | 147,883 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Analyzed:** | 8/25/20 18:48 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200825\20200825_030 | **Lab Code:** | EQ2000371-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692783 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 284,293 | 2.87 |
| | **Upper Limit ==>** | 426,440 | 4.87 |
| | **Lower Limit ==>** | 142,147 | 0.87 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000371-01 | 185,913 | 2.86 |
| Method Blank | EQ2000359-01 | 246,634 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Analyzed:** | 8/25/20 20:15 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200825\20200825_041 | **Lab Code:** | EQ2000371-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692783 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 284,293 | 2.87 |
| | **Upper Limit ==>** | 426,440 | 4.87 |
| | **Lower Limit ==>** | 142,147 | 0.87 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000371-02 | 148,398 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000716 |
| **Project:** | HS20080196 | **Date Analyzed:** | 8/25/20 21:41 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200825\20200825_052 | **Lab Code:** | EQ2000371-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692783 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 284,293 | 2.87 |
| | **Upper Limit ==>** | 426,440 | 4.87 |
| | **Lower Limit ==>** | 142,147 | 0.87 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000371-03 | 176,558 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

ALS Group Houston

# PERCHLORATE7

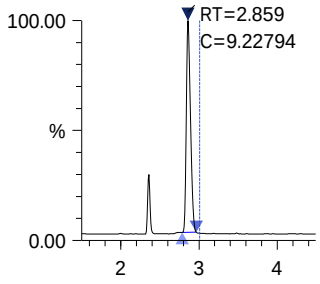
Date acquired: 8/25/2020 6:48:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/25/2020 6:48:17 PM | 193948 | 9.22794 | 20200825_030 | 2.859 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/25/2020 6:48:17 PM | 185913 | 1.00000 | 20200825_030 | 2.859 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.22794
Area 193948

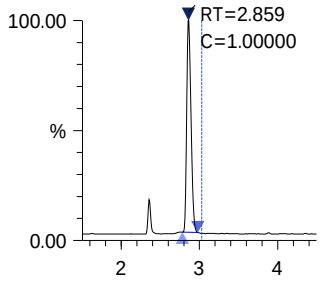
Q 99.00>83.00 (-) 5.19e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185913

ISTD 107.00>89.00 (-) 4.80e4



ALS Group Houston

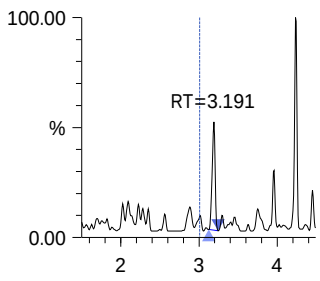
# EQ2000359-01

Date acquired: 8/25/2020 6:56:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_031.lcd
Vial: 1 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-01 | 8/25/2020 6:56:11 PM | ---- | ---- | 20200825_031 | ---- | 25.0000 | 1.0000 | 1 |
| Sodium Perchlorate-18O4_IS | EQ2000359-01 | 8/25/2020 6:56:11 PM | 246634 | 1.00000 | 20200825_031 | 2.856 | 25.0000 | 1.0000 | 1 |

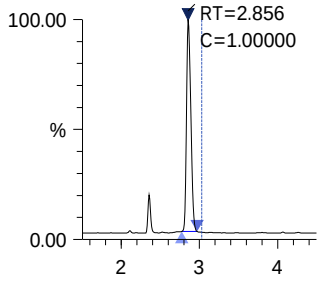
## Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 5.44e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 246634
ISTD 107.00>89.00 (-) 6.33e4



ALS Group Houston

# PERCHLORATE7

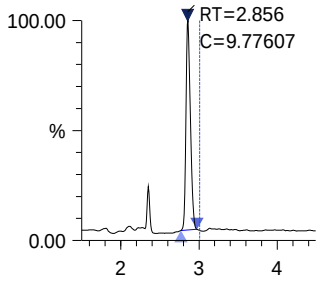
Date acquired: 8/25/2020 8:15:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_041.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/25/2020 8:15:05 PM | 164008 | 9.77607 | 20200825_041 | 2.856 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/25/2020 8:15:05 PM | 148398 | 1.00000 | 20200825_041 | 2.853 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.77607
Area 164008

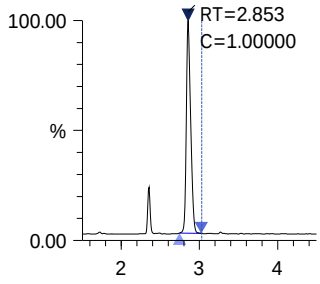
Q 99.00>83.00 (-) 4.18e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148398

ISTD 107.00>89.00 (-) 3.81e4



ALS Group Houston

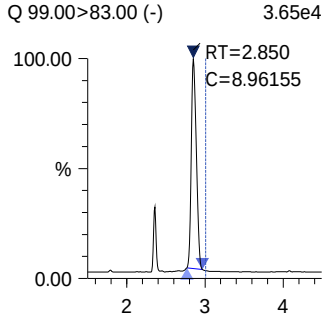
# PERCHLORATE7

Date acquired: 8/26/2020 2:50:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_038.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/26/2020 2:50:21 PM | 163923 | 8.96155 | 20200826_038 | 2.850 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/26/2020 2:50:21 PM | 168655 | 1.00000 | 20200826_038 | 2.849 | 25.0000 | 1.0000 | 4 |

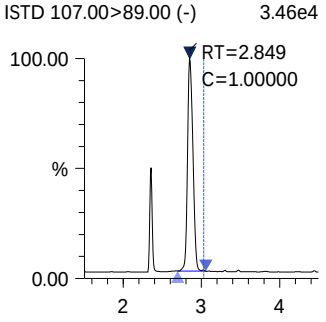
## Perchlorate

Conc 8.96155
Area 163923




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168655



ALS Group Houston

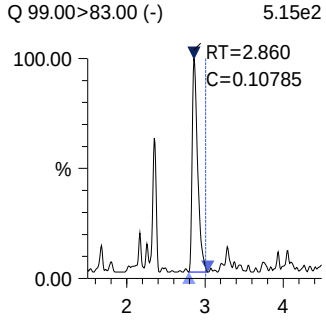
# EQ2000359-02

Date acquired: 8/26/2020 3:35:46 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_042.lcd
Vial: 2 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-02 | 8/26/2020 3:35:46 PM | 2554 | 0.10785 | 20200826_042 | 2.860 | 25.0000 | 1.0000 | 2 |
| Sodium Perchlorate-18O4_IS | EQ2000359-02 | 8/26/2020 3:35:46 PM | 218301 | 1.00000 | 20200826_042 | 2.861 | 25.0000 | 1.0000 | 2 |

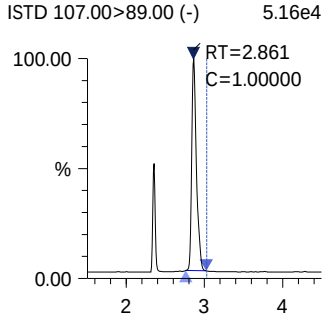
## Perchlorate

Conc 0.10785
Area 2554




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 218301



ALS Group Houston

# EQ2000359-03

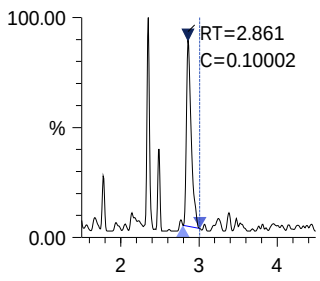
Date acquired: 8/26/2020 3:27:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_041.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-03 | 8/26/2020 3:27:52 PM | 2413 | 0.10002 | 20200826_041 | 2.861 | 25.0000 | 1.0000 | 3 |
| Sodium Perchlorate-18O4_IS | EQ2000359-03 | 8/26/2020 3:27:52 PM | 222420 | 1.00000 | 20200826_041 | 2.861 | 25.0000 | 1.0000 | 3 |

## Perchlorate

Conc 0.10002
Area 2413

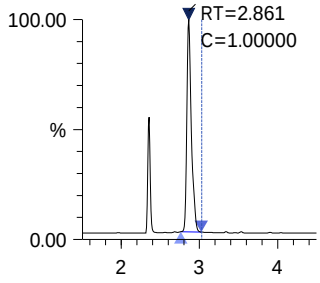
Q 99.00>83.00 (-) 6.41e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222420

ISTD 107.00>89.00 (-) 5.49e4



ALS Group Houston

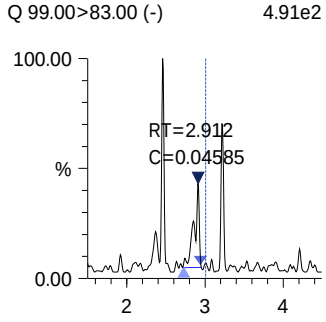
# EQ2000359-04X10

Date acquired: 8/26/2020 3:43:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_043.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-04X10 | 8/26/2020 3:43:38 PM | 680 | 0.04585 | 20200826_043 | 2.912 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | EQ2000359-04X10 | 8/26/2020 3:43:38 PM | 136805 | 1.00000 | 20200826_043 | 2.846 | 25.0000 | 1.0000 | 4 |

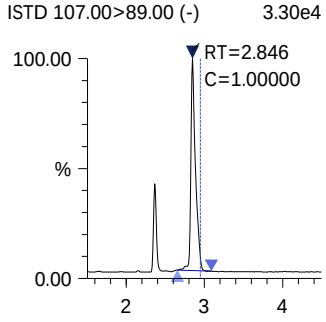
Perchlorate

Conc 0.04585
Area 680




Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 136805



ALS Group Houston

# EQ2000359-05X10

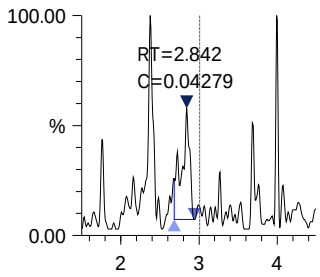
Date acquired: 8/26/2020 3:51:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_044.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-05X10 | 8/26/2020 3:51:31 PM | 672 | 0.04279 | 20200826_044 | 2.842 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | EQ2000359-05X10 | 8/26/2020 3:51:31 PM | 144861 | 1.00000 | 20200826_044 | 2.847 | 25.0000 | 1.0000 | 5 |

## Perchlorate

Conc 0.04279
Area 672

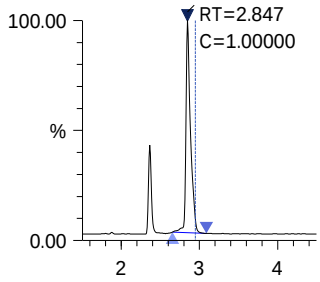
Q 99.00>83.00 (-) 1.77e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144861

ISTD 107.00>89.00 (-) 3.54e4



ALS Group Houston

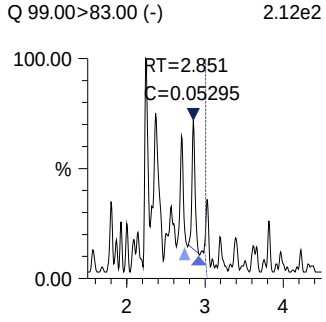
# EQ2000359-06X10

Date acquired: 8/26/2020 3:59:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_045.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-06X10 | 8/26/2020 3:59:24 PM | 734 | 0.05295 | 20200826_045 | 2.851 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | EQ2000359-06X10 | 8/26/2020 3:59:24 PM | 127802 | 1.00000 | 20200826_045 | 2.850 | 25.0000 | 1.0000 | 6 |

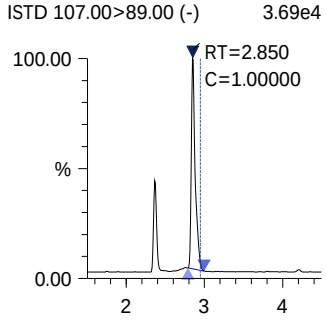
## Perchlorate

Conc 0.05295
Area 734




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 127802



ALS Group Houston

# EQ2000359-07X10

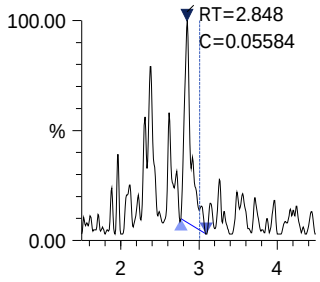
Date acquired: 8/26/2020 4:07:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-07X10 | 8/26/2020 4:07:16 PM | 878 | 0.05584 | 20200826_046 | 2.848 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | EQ2000359-07X10 | 8/26/2020 4:07:16 PM | 144838 | 1.00000 | 20200826_046 | 2.851 | 25.0000 | 1.0000 | 7 |

## Perchlorate

Conc 0.05584
Area 878

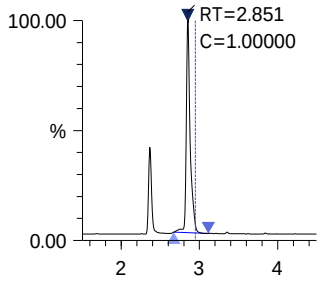
Q 99.00>83.00 (-) 1.53e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144838

ISTD 107.00>89.00 (-) 4.13e4



ALS Group Houston

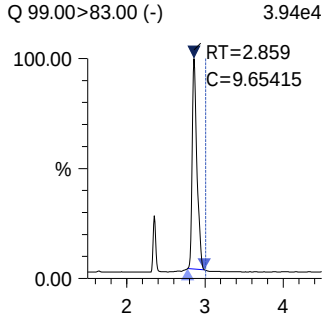
# PERCHLORATE7

Date acquired: 8/26/2020 4:30:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_049.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/26/2020 4:30:55 PM | 166904 | 9.65415 | 20200826_049 | 2.859 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/26/2020 4:30:55 PM | 159403 | 1.00000 | 20200826_049 | 2.858 | 25.0000 | 1.0000 | 4 |

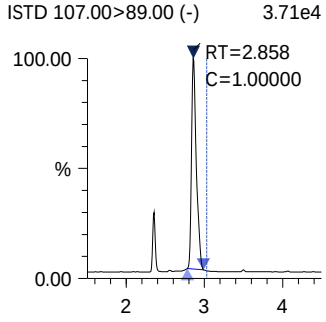
## Perchlorate

Conc 9.65415
Area 166904




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 159403



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

August 17, 2020

**Analytical Report for Service Request No:** K2006876

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**RE: HS20080196**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 11, 2020
For your reference, these analyses have been assigned our service request number **K2006876.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

for Kelley Lovejoy
Project Manager


RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

## Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated value. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |
| H | The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory. |

## Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. See case narrative. |
| J | The result is an estimated value. |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimated value. |
| J | The result is an estimated value. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso**
**State Certifications, Accreditations, and Licenses**

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water- | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

# Case Narrative

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Environmental

**Client:** ALS Environmental - US
**Project:** HS20080196
**Sample Matrix:** Water

**Service Request:** K2006876
**Date Received:** 08/11/2020

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

**Sample Receipt:**

One water sample was received for analysis at ALS Environmental on 08/11/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

**General Chemistry:**

No significant anomalies were noted with this analysis.

Approved by _____ Date 08/17/2020

# Chain of Custody

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2006876

10450 Stancliff Rd, Ste 210
Houston, TX 77099
**T:** +1 281 530 5656
**F:** +1 281 530 5887
**www.alsglobal.com**

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense** **COC ID:** **14452**

**SUBCONTRACT TO:**

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

**Phone:** +1 360 501 3312

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | |
| **Email:** | |

**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20080196 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| **1.** | **HS20080196-01** | **LH18/24-SP650_080520** | **Water** | **05 Aug 2020 14:00** |
| | TOC Analysis for DOD Level IV | | | 20 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 8/10/2020 1800

Received By: _____ Date/Time: 8/11/20 0930

Cooler ID(s): _____ Temperature(s): _____

PM KL

# Cooler Receipt and Preservation Form

Client ALS/Houston Service Request K20 2006876

Received: 8/11/20 Opened: 8/11/20 By: [signature] Unloaded: 8/11/20 By: [signature]

1. Samples were received via? USPS (Fed Ex) UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) (Cooler) Box Envelope Other _____ NA
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

| Temp Blank | Sample Temp | IR Gun | Cooler #/COC ID / NA | Out of temp indicate with "X" | PM Notified If out of temp | Tracking Number NA | Filed |
|---|---|---|---|---|---|---|---|
| 1.2 | — | IR01 | 14452 | | | 1891 8879 1923 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Notes, Discrepancies, Resolutions: _____

# General Chemistry

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | K2006876 |
| **Project:** | HS20080196 | **Date Collected:** | 08/5/20 |
| **Sample Matrix:** | Water | **Date Received:** | 08/11/20 |
| **Analysis Method:** | SM 5310 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |

## Carbon, Total Organic

| Sample Name | Lab Code | Result | LOQ | LOD | MDL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_080520 | K2006876-001 | **2.01** | 0.50 | 0.20 | 0.07 | 1 | 08/13/20 15:55 | |
| Method Blank | K2006876-MB | ND U | 0.50 | 0.20 | 0.07 | 1 | 08/13/20 15:55 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | K2006876 |
| **Project:** | HS20080196 | **Date Analyzed:** | 08/13/20 |
| **Sample Matrix:** | Water | **Date Extracted:** | NA |

**Lab Control Sample Summary**
**Carbon, Total Organic**

| | | | |
|---|---|---|---|
| **Analysis Method:** | SM 5310 C | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |
| | | **Analysis Lot:** | 691094 |

| Sample Name | Lab Code | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|---|
| Lab Control Sample | K2006876-LCS | 22.9 | 25.0 | 92 | 83-117 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US **Service Request:** K2006876
**Project:** HS20080196

## Continuing Calibration Verification (CCV) Summary

### Carbon, Total Organic

**Analysis Method:** SM 5310 C **Units:** mg/L

| | Analysis Lot | Lab Code | Date Analyzed | True Value | Measured Value | Percent Recovery | Acceptance Limits |
|---|---|---|---|---|---|---|---|
| CCV1 | 691094 | KQ2011408-07 | 08/13/20 15:55 | 25.0 | 24.2 | 97 | 90-110 |
| CCV2 | 691094 | KQ2011408-08 | 08/13/20 15:55 | 25.0 | 24.4 | 97 | 90-110 |
| CCV3 | 691094 | KQ2011408-09 | 08/13/20 15:55 | 25.0 | 24.1 | 96 | 90-110 |
| CCV4 | 691094 | KQ2011408-18 | 08/13/20 15:55 | 25.0 | 23.7 | 95 | 90-110 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US **Service Request:**K2006876
**Project:** HS20080196

## Continuing Calibration Blank (CCB) Summary
### Carbon, Total Organic

**Analysis Method:** SM 5310 C **Units:**mg/L

| | Analysis Lot | Lab Code | Date Analyzed | LOQ | LOD | MDL | Result | Q |
|---|---|---|---|---|---|---|---|---|
| CCB1 | 691094 | KQ2011408-10 | 08/13/20 15:55 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB2 | 691094 | KQ2011408-11 | 08/13/20 15:55 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB3 | 691094 | KQ2011408-12 | 08/13/20 15:55 | 0.50 | 0.20 | 0.07 | ND | U |
| CCB4 | 691094 | KQ2011408-17 | 08/13/20 15:55 | 0.50 | 0.20 | 0.07 | ND | U |

# Raw Data

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

# General Chemistry

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Work Request # 6479 6757 6811 6852 6194 6410 6438

Tier: II II II II I I IV

Date Analyzed: 8-13-20 6480 IV 6876 IV 6607 II

Analyst: MK

Run # 691025/691094 691095

Analysis: TOC/DOC

## DATA QUALITY REPORT
## INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

| | | |
|---|---|---|
| 1. | Is the method name and number correct and appropriate? | yes/no/NA |
| 2. | Holding times met for all analyses and for all samples? | yes/no/NA |
| 3. | Are calculations correct? | yes/no/NA |
| 4. | Is the reporting basis correct? (Dry Weight) | yes/no/NA |
| 5. | All quality control criteria met? | yes/no |
| 6. | Is the calibration curve correlation coefficient ≥ 0.995? | yes/no/NA |
| 7. | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? | yes/no/NA |
| 8. | Are ICVs, CCVs, and CCBs all within acceptance limits? | yes/no/NA |
| 9. | Are results for methods blanks all ND? | yes/no/NA |
| 10. | Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) | yes/no/NA |
| 11. | Are all exceptions explained? | yes/no/NA |
| 12. | Have all applicable service requests been reviewed? | yes/no/NA |
| 13. | Are all samples labeled correctly? | yes/no/NA |
| 14. | Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V) | yes/no/NA |
| 15. | Are detection limits and units reported correctly? | yes/no/NA |
| 16. | Is the unused space on the benchsheet crossed out? | yes/no/NA |
| 17. | Was analysis turned in by the due date? (n-2) (If not record SR#) | yes/no/NA |

**COMMENTS:**

Final Approved by: _____ Date: 8/17/20

DQREPORT

# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 691025 **Method/Testcode:** SM 5310 C/TOC T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2006479-001 | Carbon, Total Organic | N/A | | Water | 29.43 mg/L | 10 mL | 29.4 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-002 | Carbon, Total Organic | N/A | | Water | 10.51 mg/L | 10 mL | 10.5 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-003 | Carbon, Total Organic | N/A | | Water | 8.25 mg/L | 10 mL | 8.25 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-004 | Carbon, Total Organic | N/A | | Water | 4.11 mg/L | 10 mL | 4.11 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-005 | Carbon, Total Organic | N/A | | Water | 0.09 mg/L | 10 mL | 0.09 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-006 | Carbon, Total Organic | N/A | | Water | 0.32 mg/L | 10 mL | 0.32 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-007 | Carbon, Total Organic | N/A | | Water | 0.09 mg/L | 10 mL | 0.09 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-008 | Carbon, Total Organic | N/A | | Water | 3.84 mg/L | 10 mL | 3.84 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-009 | Carbon, Total Organic | N/A | | Water | 8.66 mg/L | 10 mL | 8.66 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-010 | Carbon, Total Organic | N/A | | Water | 29.15 mg/L | 10 mL | 29.1 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-011 | Carbon, Total Organic | N/A | | Water | 0.26 mg/L | 10 mL | 0.26 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006479-012 | Carbon, Total Organic | N/A | | Water | 0.42 mg/L | 10 mL | 0.42 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006757-001 | Carbon, Total Organic | N/A | | Water | 1.18 mg/L | 10 mL | 1.18 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006757-002 | Carbon, Total Organic | N/A | | Water | 0.78 mg/L | 10 mL | 0.78 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006757-003 | Carbon, Total Organic | N/A | | Water | 0.82 mg/L | 10 mL | 0.82 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006757-004 | Carbon, Total Organic | N/A | | Water | 0.81 mg/L | 10 mL | 0.81 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006811-001 | Carbon, Total Organic | N/A | | Water | 2.56 mg/L | 10 mL | 2.56 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| K2006852-001 | Carbon, Total Organic | N/A | | Water | 21.36 mg/L | 10 mL | 534 mg/L | 25 | 2 | 13 | | | 8/13/20 11:30:00 | N | I |
| KQ2011273-01 | Carbon, Total Organic | CCV | | Water | 24.59 mg/L | 10 mL | 24.6 mg/L | 1 | | | | | 8/13/20 11:30:00 | N | III |
| KQ2011273-02 | Carbon, Total Organic | CCV | | Water | 24.37 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/13/20 11:30:00 | N | III |
| KQ2011273-03 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | III |
| KQ2011273-04 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | III |
| KQ2011273-05 | Carbon, Total Organic | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | III |
| KQ2011273-06 | Carbon, Total Organic | LCS | | Water | 23.22 mg/L | 10 mL | 23.2 mg/L | 1 | 0.07 | 0.50 | 93 | | 8/13/20 11:30:00 | N | III |
| KQ2011273-07 | Carbon, Total Organic | DUP | K2006811-001 | Water | 2.53 mg/L | 10 mL | 2.53 mg/L | 1 | 0.07 | 0.50 | | 1 | 8/13/20 11:30:00 | N | II |
| KQ2011273-08 | Carbon, Total Organic | MS | K2006811-001 | Water | 29.82 mg/L | 10 mL | 29.8 mg/L | 1 | 0.07 | 0.50 | 109 | | 8/13/20 11:30:00 | N | II |
| KQ2011273-09 | Carbon, Total Organic | CCV | | Water | 24.22 mg/L | 10 mL | 24.2 mg/L | 1 | | | | | 8/13/20 11:30:00 | N | II |
| KQ2011273-10 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |
| KQ2011273-11 | Carbon, Total Organic | CCV | | Water | 24.37 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/13/20 11:30:00 | N | II |
| KQ2011273-12 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 11:30:00 | N | II |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 691094 **Method/Testcode:** SM 5310 C/TOC T

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2006194-009 | Carbon, Total Organic | N/A | | Drinking Water | 8.16 mg/L | 10 mL | 8.16 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | I |
| K2006410-001 | Carbon, Total Organic | N/A | | Ground Water | 9.09 mg/L | 10 mL | 9.09 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | I |
| K2006410-002 | Carbon, Total Organic | N/A | | Ground Water | 16.57 mg/L | 10 mL | 16.6 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | I |
| K2006410-003 | Carbon, Total Organic | N/A | | Ground Water | 10.03 mg/L | 10 mL | 20.1 mg/L | 2 | 0.2 | 1.0 | | | 8/13/20 15:55:00 | N | I |
| K2006410-004 | Carbon, Total Organic | N/A | | Ground Water | 3.88 mg/L | 10 mL | 19.4 mg/L | 5 | 0.4 | 2.5 | | | 8/13/20 15:55:00 | N | I |
| K2006410-005 | Carbon, Total Organic | N/A | | Ground Water | 20.82 mg/L | 10 mL | 41.6 mg/L | 2 | 0.2 | 1.0 | | | 8/13/20 15:55:00 | N | I |
| K2006438-001 | Carbon, Total Organic | N/A | | Water | 1.83 mg/L | 10 mL | 1.83 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| K2006438-002 | Carbon, Total Organic | N/A | | Water | 1.82 mg/L | 10 mL | 1.82 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| K2006480-001 | Carbon, Total Organic | N/A | | Water | 1.78 mg/L | 10 mL | 1.78 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| K2006876-001 | Carbon, Total Organic | N/A | | Water | 2.01 mg/L | 10 mL | 2.01 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-03 | Carbon, Total Organic | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-04 | Carbon, Total Organic | LCS | | Water | 22.89 mg/L | 10 mL | 22.9 mg/L | 1 | 0.07 | 0.50 | 92 | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-07 | Carbon, Total Organic | CCV | | Water | 24.22 mg/L | 10 mL | 24.2 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-08 | Carbon, Total Organic | CCV | | Water | 24.37 mg/L | 10 mL | 24.4 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-09 | Carbon, Total Organic | CCV | | Water | 24.08 mg/L | 10 mL | 24.1 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-10 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-11 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-12 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-13 | Carbon, Total Organic | DUP | K2006438-001 | Water | 1.83 mg/L | 10 mL | 1.83 mg/L | 1 | 0.07 | 0.50 | | <1 | 8/13/20 15:55:00 | N | IV |
| KQ2011408-14 | Carbon, Total Organic | MS | K2006438-001 | Water | 29.29 mg/L | 10 mL | 29.3 mg/L | 1 | 0.07 | 0.50 | 110 | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-15 | Carbon, Total Organic | DUP | K2006410-001 | Ground Water | 9.24 mg/L | 10 mL | 9.24 mg/L | 1 | 0.07 | 0.50 | | 2 | 8/13/20 15:55:00 | N | I |
| KQ2011408-16 | Carbon, Total Organic | MS | K2006410-001 | Ground Water | 35.68 mg/L | 10 mL | 35.7 mg/L | 1 | 0.07 | 0.50 | 106 | | 8/13/20 15:55:00 | N | I |
| KQ2011408-17 | Carbon, Total Organic | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | IV |
| KQ2011408-18 | Carbon, Total Organic | CCV | | Water | 23.74 mg/L | 10 mL | 23.7 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | IV |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 691095 **Method/Testcode:** SM 5310 C/TOC D

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2006607-001 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 2.51 mg/L | 10 mL | 2.51 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-002 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.96 mg/L | 10 mL | 0.96 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-003 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.49 mg/L | 10 mL | 0.49 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-004 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.62 mg/L | 10 mL | 0.62 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-005 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.34 mg/L | 10 mL | 0.34 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-006 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.14 mg/L | 10 mL | 0.14 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-007 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.31 mg/L | 10 mL | 0.31 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-008 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.53 mg/L | 10 mL | 0.53 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-009 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.07 mg/L | 10 mL | 0.07 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-010 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.69 mg/L | 10 mL | 0.69 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-011 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 1.21 mg/L | 10 mL | 1.21 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-012 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.78 mg/L | 10 mL | 0.78 mg/L | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-013 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.43 mg/L | 10 mL | 0.43 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| K2006607-014 | Carbon, Dissolved Organic (DOC) | N/A | | Water | 0.46 mg/L | 10 mL | 0.46 mg/L J | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| KQ2011407-01 | Carbon, Dissolved Organic (DOC) | DUP | K2006607-001 | Water | 2.45 mg/L | 10 mL | 2.45 mg/L | 1 | 0.07 | 0.50 | | 2 | 8/13/20 15:55:00 | N | II |
| KQ2011407-02 | Carbon, Dissolved Organic (DOC) | MS | K2006607-001 | Water | 29.51 mg/L | 10 mL | 29.5 mg/L | 1 | 0.07 | 0.50 | 108 | | 8/13/20 15:55:00 | N | II |
| KQ2011407-03 | Carbon, Dissolved Organic (DOC) | MB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| KQ2011407-04 | Carbon, Dissolved Organic (DOC) | LCS | | Water | 25.32 mg/L | 10 mL | 25.3 mg/L | 1 | 0.07 | 0.50 | 101 | | 8/13/20 15:55:00 | N | II |
| KQ2011407-05 | Carbon, Dissolved Organic (DOC) | CCV | | Water | 24.08 mg/L | 10 mL | 24.1 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | II |
| KQ2011407-06 | Carbon, Dissolved Organic (DOC) | CCV | | Water | 24.28 mg/L | 10 mL | 24.3 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | II |
| KQ2011407-07 | Carbon, Dissolved Organic (DOC) | CCV | | Water | 23.74 mg/L | 10 mL | 23.7 mg/L | 1 | | | | | 8/13/20 15:55:00 | N | II |
| KQ2011407-08 | Carbon, Dissolved Organic (DOC) | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |
| KQ2011407-09 | Carbon, Dissolved Organic (DOC) | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Analytical Results Summary

**Instrument Name:** K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 691095 **Method/Testcode:** SM 5310 C/TOC D

| Lab Code | Target Analytes | QC | Parent Sample | Matrix | Raw Result | Sample Amt. | Final Result | Dil | MDL | PQL | % Rec | % RSD | Date Analyzed | QC? | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KQ2011407-10 | Carbon, Dissolved Organic (DOC) | CCB | | Water | 0.00 mg/L | 10 mL | 0.50 mg/L U | 1 | 0.07 | 0.50 | | | 8/13/20 15:55:00 | N | II |

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

# Fusion Report - 081320
# Thursday, August 13, 2020 11:04 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/08/17 08:07 - Monday

## Report Summary Information

| | | | |
|---|---|---|---|
| Company Location: | Gen Chem Lab | | |
| Schedule Name: | 081320 | Engine Version: | 1.1.5.1 |
| Instrument Name: | Fusion1 | Firmware Version: | 1.2.0696 |
| Report Version: | 1 of 1 | Connection: | RS232 COM1 |
| Report Creation by Operators (schedule version): | Fusion1 (Fusion1) (v1)<br>Fusion1 (Fusion1) (v2)<br>Fusion1 (Fusion1) (v5)<br>Fusion1 (Fusion1) (v11)<br>Fusion1 (Fusion1) (v12)<br>Fusion1 (Fusion1) (v13) | | |
| Comment: | | | |

## Report Results

**Sample Type**: Clean — From Schedule Version 1

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◈ | (clean) | | Clean | 2020/08/13 11:04 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | 13.08 | 26.34 | 13.27 | 49.69 | 05:32 |
| | | | | | | |
| 2 | TC Clean | 9.85 | 23.05 | 13.20 | 49.73 | 07:18 |
| 3 | TC Clean | 1.58 | 14.87 | 13.28 | 49.96 | 07:01 |
| 4 | TC Clean | 0.83 | 14.02 | 13.19 | 49.78 | 07:02 |

**Sample Type**: Clean — From Schedule Version 1

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◈ | (clean) | | Clean | 2020/08/13 11:36 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | -0.38 | 12.77 | 13.14 | 49.61 | 05:28 |
| | | | | | | |
| 2 | TC Clean | 3.26 | 16.37 | 13.11 | 49.89 | 07:17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | TC Clean | 0.71 | 13.70 | 12.98 | 49.81 | 06:58 |
| 4 | TC Clean | 0.15 | 13.17 | 13.01 | 49.85 | 07:02 |

**Sample Type**: Clean From Schedule Version 2

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (clean) | | Clean | 2020/08/13 12:08 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | 8.64 | 21.62 | 12.98 | 49.64 | 05:28 |
| | | | | | | |
| 2 | TC Clean | 4.73 | 17.78 | 13.05 | 49.89 | 07:18 |
| 3 | TC Clean | 1.30 | 14.18 | 12.88 | 49.93 | 06:59 |
| 4 | TC Clean | 0.21 | 13.31 | 13.09 | 50.02 | 04:03 |

**Sample Type**: Blank (Creating v1434) From Schedule Version 5

| | Pos | Analysis Type | Sample ID | Start Time |
|---|---|---|---|---|
| ◆ | (blank) | | Reagent/Acid Blank | 2020/08/13 12:36 |

| Rep # | Base Analysis Type | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|
| 1 | IC Clean | -0.38 | 12.76 | 13.14 | 49.57 | 05:26 |
| | | | | | | |
| 2 | TC Clean | 3.02 | 15.90 | 12.88 | 49.92 | 04:04 |
| 3 | TC Clean | 0.97 | 13.81 | 12.85 | 49.95 | 03:48 |
| 4 | TC Clean | 0.36 | 13.35 | 12.99 | 49.94 | 03:49 |
| | | | | | | |
| 5 | Reagent Blank | 4.88 | 17.77 | 12.89 | 49.94 | 05:10 |
| | | | | | | |
| 6 | Acid Blank | 0.09 | 13.21 | 13.12 | 49.46 | 05:28 |

**Sample Type**: Sample From Schedule Version 11

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | RB | 0.0813 ppm | 0.0000 ppm | 0.0000% | 2020/08/13 13:10 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0813 | 0.8134 | 9.80 | 23.02 | 13.22 | 50.13 | 10:32 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 12

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.5856 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 13:25 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.5856 | 245.8563 | 182.36 | 195.43 | 13.07 | 50.06 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 12

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 13:40 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.81 | 21.82 | 13.01 | 50.18 | 10:32 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 12

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 1 | TOC | MB1 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/13 13:55 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.15 | 21.29 | 13.14 | 50.22 | 10:32 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS From Schedule Version 12

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [24.0 ppm] | 0 / infinity ( NA / NA ) | 23.2244 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 14:09 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 23.2244 | 232.2437 | 172.81 | 185.84 | 13.03 | 50.15 | 10:28 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |

**Sample Type**: Sample From Schedule Version 12

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 2 | TOC | ICS | 0.1995 ppm | 0.0000 ppm | 0.0000% | 2020/08/13 14:24 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.1995 | 1.9952 | 10.63 | 23.75 | 13.12 | 50.21 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 3 | TOC | 6811 MK 81720 K2006810-001 | 2.5572 ppm | 0.0108 ppm | 0.4200% | 2020/08/13 14:39 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.5648 | 25.6480 | 27.22 | 40.25 | 13.03 | 50.18 | 10:29 |
| 2 | TOC | 2.5495 | 25.4955 | 27.11 | 40.08 | 12.97 | 50.24 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 4 | TOC | 6811-1D MK 81720 K2006810-001D | 2.5310 ppm | 0.0615 ppm | 2.4300% | 2020/08/13 15:07 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.5745 | 25.7449 | 27.29 | 40.29 | 13.00 | 50.20 | 10:28 |
| 2 | TOC | 2.4875 | 24.8753 | 26.68 | 39.78 | 13.10 | 50.12 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 5 | TOC | 6811 MK 81720 K2006810-001MS | 29.8203 ppm | 0.0265 ppm | 0.0900% | 2020/08/13 15:35 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 29.8015 | 298.0154 | 218.28 | 231.38 | 13.10 | 50.16 | 10:27 |
| 2 | TOC | 29.8390 | 298.3903 | 218.54 | 231.76 | 13.22 | 50.09 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Sample From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 6 | TOC | K2006852-001 25X | 21.3634 ppm | 0.8707 ppm | 4.0800% | 2020/08/13 16:03 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 20.7477 | 207.4771 | 154.77 | 167.86 | 13.09 | 50.11 | 10:31 |
| 2 | TOC | 21.9791 | 219.7911 | 163.41 | 176.35 | 12.95 | 50.11 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 7 | TOC | K2006757-001 | 1.1823 ppm | 0.5669 ppm | 47.9500% | 2020/08/13 16:31 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.5832 | 15.8316 | 20.33 | 33.29 | 12.95 | 50.10 | 10:27 |
| 2 | TOC | 0.7814 | 7.8143 | 14.71 | 27.96 | 13.25 | 50.08 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 8 | TOC | K2006757-002 | 0.7816 ppm | 0.0153 ppm | 1.9600% | 2020/08/13 16:59 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.7924 | 7.9241 | 14.79 | 27.95 | 13.16 | 50.05 | 10:26 |
| 2 | TOC | 0.7707 | 7.7074 | 14.64 | 27.54 | 12.90 | 50.02 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 9 | TOC | K2006757-003 | 0.8194 ppm | 0.0415 ppm | 5.0700% | 2020/08/13 17:27 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.8487 | 8.4872 | 15.18 | 28.29 | 13.11 | 50.06 | 10:27 |
| 2 | TOC | 0.7900 | 7.8999 | 14.77 | 27.92 | 13.15 | 50.04 | 10:30 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.3721 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 17:55 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.3721 | 243.7208 | 180.86 | 193.97 | 13.11 | 50.06 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 18:10 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.66 | 21.77 | 13.11 | 50.11 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 10 | TOC | K2006757-004 | 0.8072 ppm | 0.0054 ppm | 0.6700% | 2020/08/13 18:25 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.8111 | 8.1108 | 14.92 | 28.03 | 13.11 | 50.14 | 10:28 |
| 2 | TOC | 0.8034 | 8.0339 | 14.86 | 27.90 | 13.03 | 50.08 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 11 | TOC | K2006582-001 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/13 18:53 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.18 | 21.41 | 13.23 | 50.11 | 10:30 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2 | TOC | 0.0000 | 0.0000 | 8.34 | 21.56 | 13.22 | 50.15 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 12 | TOC | K2006479-001 | 29.4285 ppm | 0.0919 ppm | 0.3100% | 2020/08/13 19:21 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 29.4935 | 294.9348 | 216.12 | 229.10 | 12.98 | 50.14 | 10:29 |
| 2 | TOC | 29.3635 | 293.6347 | 215.21 | 228.25 | 13.04 | 50.15 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 13 | TOC | K2006479-002 | 10.5142 ppm | 0.1447 ppm | 1.3800% | 2020/08/13 19:49 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 10.6165 | 106.1646 | 83.70 | 96.77 | 13.07 | 50.12 | 10:27 |
| 2 | TOC | 10.4119 | 104.1189 | 82.27 | 95.36 | 13.10 | 50.12 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 14 | TOC | K2006479-003 | 8.2502 ppm | 0.0883 ppm | 1.0700% | 2020/08/13 20:17 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.3126 | 83.1262 | 67.54 | 80.60 | 13.06 | 50.17 | 10:28 |
| 2 | TOC | 8.1877 | 81.8775 | 66.66 | 79.79 | 13.13 | 50.09 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 15 | TOC | K2006479-004 | 4.1144 ppm | 0.0236 ppm | 0.5700% | 2020/08/13 20:45 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 4.1311 | 41.3105 | 38.21 | 51.20 | 12.99 | 50.17 | 10:25 |
| 2 | TOC | 4.0977 | 40.9769 | 37.97 | 51.10 | 13.13 | 50.05 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ◆ | 16 | TOC | K2006479-005 | 0.0920 ppm | 0.0327 ppm | 35.4900% | 2020/08/13 21:13 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.1151 | 1.1513 | 10.04 | 23.14 | 13.11 | 50.02 | 10:27 |
| 2 | TOC | 0.0689 | 0.6894 | 9.71 | 22.78 | 13.07 | 50.07 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 17 | TOC | K2006479-006 | 0.3153 ppm | 0.0326 ppm | 10.3200% | 2020/08/13 21:41 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.2923 | 2.9233 | 11.28 | 24.42 | 13.14 | 49.99 | 10:29 |
| 2 | TOC | 0.3384 | 3.3837 | 11.60 | 24.72 | 13.12 | 49.92 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 18 | TOC | K2006479-007 | 0.0913 ppm | 0.0059 ppm | 6.5200% | 2020/08/13 22:09 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0870 | 0.8705 | 9.84 | 23.04 | 13.20 | 50.03 | 10:31 |
| 2 | TOC | 0.0955 | 0.9546 | 9.90 | 23.18 | 13.28 | 49.98 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 19 | TOC | K2006479-008 | 3.8439 ppm | 0.0143 ppm | 0.3700% | 2020/08/13 22:37 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 3.8541 | 38.5407 | 36.26 | 49.35 | 13.09 | 49.99 | 10:28 |
| 2 | TOC | 3.8338 | 38.3383 | 36.12 | 49.17 | 13.05 | 50.01 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm

From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.2200 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 23:05 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.2200 | 242.1998 | 179.79 | 192.92 | 13.13 | 49.98 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB

From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 23:20 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.53 | 21.64 | 13.11 | 49.95 | 10:31 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample

From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 20 | TOC | MB2 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/13 23:34 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.16 | 21.22 | 13.06 | 50.08 | 10:30 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> LCS

From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [24.0 ppm] | 0 / infinity ( NA / NA ) | 22.8945 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/13 23:49 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 22.8945 | 228.9450 | 170.49 | 183.73 | 13.24 | 50.01 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos C |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 25 ppmC |

**Sample Type**: Sample From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 21 | TOC | K2006479-009 | 8.6577 ppm | 0.1727 ppm | 1.9900% | 2020/08/14 00:04 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.7798 | 87.7978 | 70.82 | 83.95 | 13.13 | 49.99 | 10:24 |
| 2 | TOC | 8.5356 | 85.3558 | 69.10 | 82.15 | 13.05 | 49.98 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 22 | TOC | K2006479-010 | 29.1498 ppm | 0.0152 ppm | 0.0500% | 2020/08/14 00:32 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 29.1391 | 291.3908 | 213.63 | 226.63 | 13.00 | 49.95 | 10:30 |
| 2 | TOC | 29.1606 | 291.6061 | 213.78 | 226.80 | 13.02 | 49.95 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 23 | TOC | K2006479-011 | 0.2588 ppm | 0.0619 ppm | 23.9100% | 2020/08/14 01:00 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.3026 | 3.0259 | 11.35 | 24.61 | 13.26 | 49.94 | 10:29 |
| 2 | TOC | 0.2151 | 2.1506 | 10.74 | 23.86 | 13.12 | 49.95 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 24 | TOC | K2006479-012 | 0.4154 ppm | 0.0534 ppm | 12.8600% | 2020/08/14 01:28 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.3776 | 3.7757 | 11.88 | 25.10 | 13.22 | 49.95 | 10:27 |
| 2 | TOC | 0.4531 | 4.5313 | 12.41 | 25.66 | 13.25 | 49.97 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 25 | TOC | K2006438-001 | 1.8333 ppm | 0.0103 ppm | 0.5600% | 2020/08/14 01:56 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.8261 | 18.2608 | 22.04 | 35.31 | 13.27 | 49.98 | 10:28 |
| 2 | TOC | 1.8406 | 18.4062 | 22.14 | 35.37 | 13.23 | 50.00 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 26 | TOC | K2006438-001D | 1.8341 ppm | 0.0080 ppm | 0.4300% | 2020/08/14 02:24 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.8285 | 18.2850 | 22.06 | 35.36 | 13.30 | 50.00 | 10:28 |
| 2 | TOC | 1.8398 | 18.3976 | 22.13 | 35.31 | 13.17 | 50.02 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 27 | TOC | K2006438-001MS | 29.2892 ppm | 0.2276 ppm | 0.7800% | 2020/08/14 02:52 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 29.1282 | 291.2825 | 213.56 | 226.92 | 13.36 | 50.01 | 10:26 |
| 2 | TOC | 29.4501 | 294.5014 | 215.82 | 229.04 | 13.23 | 50.04 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 28 | TOC | K2006438-002 | 1.8172 ppm | 0.0159 ppm | 0.8800% | 2020/08/14 03:20 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.8285 | 18.2850 | 22.06 | 35.22 | 13.16 | 50.06 | 10:30 |
| 2 | TOC | 1.8060 | 18.0598 | 21.90 | 35.06 | 13.16 | 50.04 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.3712 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 03:48 |

| Pos | Base Analysis | ID | Rep | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run |
|---|---|---|---|---|---|---|---|---|---|---|

| | Type | | # | | | | | | | Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.3712 | 243.7123 | 180.85 | 194.03 | 13.17 | 50.09 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 04:02 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 9.25 | 22.53 | 13.29 | 50.08 | 10:31 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

**Sample Type**: Sample From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 29 | TOC | K2006876-001 | 2.0132 ppm | 0.0610 ppm | 3.0300% | 2020/08/14 04:17 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.0563 | 20.5630 | 23.65 | 36.82 | 13.17 | 50.07 | 10:28 |
| 2 | TOC | 1.9701 | 19.7006 | 23.05 | 36.50 | 13.46 | 50.12 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 30 | TOC | K2006410-001 | 9.0851 ppm | 0.0052 ppm | 0.0600% | 2020/08/14 04:45 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 9.0814 | 90.8142 | 72.93 | 86.24 | 13.31 | 50.09 | 10:31 |
| 2 | TOC | 9.0888 | 90.8884 | 72.98 | 86.18 | 13.19 | 50.12 | 10:29 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 31 | TOC | K2006410-001D | 9.2439 ppm | 0.0742 ppm | 0.8000% | 2020/08/14 05:13 |

| Rep | Base | | | Adjusted | | Baseline | Pressure | Run |
|---|---|---|---|---|---|---|---|---|

| # | Analysis Type | ppm | µg | (Abs) | NDIR (Abs) | (Abs) | (psig) | Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 9.2964 | 92.9640 | 74.44 | 87.68 | 13.24 | 50.16 | 10:27 |
| 2 | TOC | 9.1915 | 91.9148 | 73.70 | 86.89 | 13.19 | 50.14 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 32 | TOC | K2006410-001MS | 35.6791 ppm | 0.0073 ppm | 0.0200% | 2020/08/14 05:42 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 35.6842 | 356.8422 | 259.55 | 272.82 | 13.27 | 50.17 | 10:25 |
| 2 | TOC | 35.6740 | 356.7396 | 259.48 | 272.61 | 13.13 | 50.17 | 10:30 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 33 | TOC | K2006410-002 | 16.5657 ppm | 0.1153 ppm | 0.7000% | 2020/08/14 06:10 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 16.4842 | 164.8417 | 124.86 | 138.14 | 13.28 | 50.19 | 10:28 |
| 2 | TOC | 16.6473 | 166.4726 | 126.01 | 139.36 | 13.36 | 50.22 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 34 | TOC | K2006410-003 2X | 10.0340 ppm | 0.0230 ppm | 0.2300% | 2020/08/14 06:38 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 10.0177 | 100.1773 | 79.50 | 93.08 | 13.58 | 50.20 | 10:29 |
| 2 | TOC | 10.0502 | 100.5023 | 79.73 | 93.30 | 13.58 | 50.18 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 35 | TOC | K2006410-004 5X | 3.8799 ppm | 0.1312 ppm | 3.3800% | 2020/08/14 07:06 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 3.9727 | 39.7267 | 37.10 | 50.40 | 13.30 | 50.16 | 10:29 |
| 2 | TOC | 3.7871 | 37.8707 | 35.79 | 49.20 | 13.40 | 50.13 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

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| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 20.7481 | 207.4814 | 154.77 | 168.33 | 13.56 | 50.13 | 10:30 |
| 2 | TOC | 20.8973 | 208.9726 | 155.82 | 169.39 | 13.57 | 50.13 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 37 | TOC | K206480-001 | 1.7751 ppm | 0.0872 ppm | 4.9100% | 2020/08/14 08:02 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.8368 | 18.3677 | 22.11 | 35.32 | 13.20 | 50.12 | 10:26 |
| 2 | TOC | 1.7135 | 17.1346 | 21.25 | 34.54 | 13.29 | 50.10 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 38 | TOC | 6607-FB | 0.0349 ppm | 0.0494 ppm | 141.4200% | 2020/08/14 08:30 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.47 | 21.58 | 13.11 | 50.08 | 10:25 |
| 2 | TOC | 0.0698 | 0.6980 | 9.72 | 22.95 | 13.24 | 50.08 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.0777 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 08:58 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.0777 | 240.7771 | 178.79 | 192.01 | 13.22 | 50.08 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 09:13 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.88 | 21.92 | 13.04 | 50.10 | 10:30 |

**Completion State**: Success - Criteria met.
**Success Action**: Do Nothing
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)
**STD Conc - Pos D**: 0 ppmC

**Sample Type**: Sample — From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 39 | TOC | MB3 | 0.0000 ppm | 0.0000 ppm | 0.0000% | 2020/08/14 09:28 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0000 | 0.0000 | 8.46 | 21.43 | 12.98 | 50.11 | 10:29 |

**Dilution**: 1:10
**Blank Contribution**: (TC) 9.2284 (IC) (v1434)
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)

**Sample Type**: Check Standard --> LCS — From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | C | TOC | 25.0000 | 1:1 | [TOC] LCS [25.0 ppm] | 0 / infinity ( NA / NA ) | 25.3167 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 09:42 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| C | TOC | 25.0 ppm | 1 | 25.3167 | 253.1666 | 187.48 | 200.46 | 12.98 | 50.11 | 10:31 |

**Completion State**: Success - Criteria met.
**Success Action**: Do Nothing
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)
**STD Conc - Pos C**: 25 ppmC

**Sample Type**: Sample — From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 40 | TOC | K2006607-001* | 2.5059 ppm | 0.0718 ppm | 2.8600% | 2020/08/14 09:57 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.5567 | 25.5667 | 27.16 | 40.17 | 13.01 | 50.14 | 10:28 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2 | TOC | 2.4552 | 24.5517 | 26.45 | 39.36 | 12.91 | 50.22 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 41 | TOC | K2006607-001D* | 2.4503 ppm | 0.0350 ppm | 1.4300% | 2020/08/14 10:25 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 2.4750 | 24.7499 | 26.59 | 39.68 | 13.09 | 50.15 | 10:32 |
| 2 | TOC | 2.4255 | 24.2552 | 26.24 | 39.26 | 13.02 | 50.23 | 10:23 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 42 | TOC | K2006607-001MS* | 29.5098 ppm | 0.4592 ppm | 1.5600% | 2020/08/14 10:53 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 29.1851 | 291.8513 | 213.96 | 227.03 | 13.07 | 50.16 | 10:30 |
| 2 | TOC | 29.8345 | 298.3447 | 218.51 | 231.63 | 13.12 | 50.19 | 10:30 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 43 | TOC | K2006607-002* | 0.9591 ppm | 0.0110 ppm | 1.1500% | 2020/08/14 11:21 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.9514 | 9.5136 | 15.90 | 29.14 | 13.24 | 50.19 | 10:27 |
| 2 | TOC | 0.9669 | 9.6690 | 16.01 | 29.19 | 13.18 | 50.17 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 44 | TOC | K2006607-003* | 0.4928 ppm | 0.0347 ppm | 7.0400% | 2020/08/14 11:49 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.5173 | 5.1728 | 12.86 | 25.85 | 12.99 | 50.22 | 10:26 |
| 2 | TOC | 0.4682 | 4.6824 | 12.51 | 25.62 | 13.11 | 50.15 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ◆ | 45 | TOC | K2006607-004* | 0.6218 ppm | 0.0046 ppm | 0.7500% | 2020/08/14 12:17 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.6185 | 6.1849 | 13.57 | 26.63 | 13.06 | 50.18 | 10:28 |
| 2 | TOC | 0.6251 | 6.2505 | 13.61 | 26.70 | 13.08 | 50.24 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 46 | TOC | K2006607-005* | 0.3374 ppm | 0.0041 ppm | 1.2200% | 2020/08/14 12:45 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.3404 | 3.4037 | 11.62 | 24.70 | 13.08 | 50.14 | 10:29 |
| 2 | TOC | 0.3345 | 3.3452 | 11.58 | 24.65 | 13.08 | 50.17 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 47 | TOC | K2006607-006* | 0.1416 ppm | 0.0004 ppm | 0.2800% | 2020/08/14 13:13 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.1414 | 1.4136 | 10.22 | 23.30 | 13.08 | 50.20 | 10:25 |
| 2 | TOC | 0.1419 | 1.4193 | 10.22 | 23.40 | 13.17 | 50.14 | 10:23 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 24.2820 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 13:41 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 24.2820 | 242.8199 | 180.23 | 193.34 | 13.11 | 50.25 | 10:30 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 13

| | | | Concentration | | | Min / Max | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

| | Pos | BAT | (ppm) | Dil | Sample ID | (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 13:56 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.77 | 21.84 | 13.06 | 50.19 | 10:32 |

**Completion State**: Success - Criteria met.
**Success Action**: Do Nothing
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)
**STD Conc - Pos D**: 0 ppmC

**Sample Type**: Sample — From Schedule Version 13

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 48 | TOC | K2006607-007* | 0.3079 ppm | 0.0007 ppm | 0.2300% | 2020/08/14 14:11 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.3074 | 3.0744 | 11.38 | 24.42 | 13.03 | 50.25 | 10:28 |
| 2 | TOC | 0.3084 | 3.0844 | 11.39 | 24.31 | 12.92 | 50.21 | 10:25 |

**Dilution**: 1:10
**Blank Contribution**: (TC) 9.2284 (IC) (v1434)
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 49 | TOC | K2006607-008* | 0.5295 ppm | 0.0215 ppm | 4.0600% | 2020/08/14 14:39 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.5446 | 5.4465 | 13.05 | 26.03 | 12.98 | 50.17 | 10:27 |
| 2 | TOC | 0.5143 | 5.1428 | 12.84 | 26.01 | 13.17 | 50.22 | 10:27 |

**Dilution**: 1:10
**Blank Contribution**: (TC) 9.2284 (IC) (v1434)
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 50 | TOC | K2006607-009* | 0.0730 ppm | 0.0180 ppm | 24.7200% | 2020/08/14 15:07 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.0602 | 0.6025 | 9.65 | 22.75 | 13.10 | 50.13 | 10:26 |
| 2 | TOC | 0.0858 | 0.8576 | 9.83 | 22.90 | 13.07 | 50.18 | 10:26 |

**Dilution**: 1:10
**Blank Contribution**: (TC) 9.2284 (IC) (v1434)
**Method**: CAS_salt_010711 (v4)
**Calibration**: CAS_salt_010711 (v38)

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 51 | TOC | K2006607-010* | 0.6875 ppm | 0.0524 ppm | 7.6200% | 2020/08/14 15:35 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.6504 | 6.5042 | 13.79 | 26.78 | 12.99 | 50.13 | 10:28 |
| 2 | TOC | 0.7246 | 7.2455 | 14.31 | 27.15 | 12.84 | 50.16 | 10:31 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 52 | TOC | K2006607-011* | 1.2101 ppm | 0.0010 ppm | 0.0800% | 2020/08/14 16:03 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 1.2094 | 12.0938 | 17.71 | 30.75 | 13.03 | 50.11 | 10:25 |
| 2 | TOC | 1.2108 | 12.1081 | 17.72 | 30.84 | 13.12 | 50.10 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 53 | TOC | K2006607-012* | 0.7813 ppm | 0.0157 ppm | 2.0100% | 2020/08/14 16:31 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.7924 | 7.9241 | 14.79 | 27.92 | 13.13 | 50.15 | 10:26 |
| 2 | TOC | 0.7702 | 7.7017 | 14.63 | 27.79 | 13.16 | 50.11 | 10:30 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 54 | TOC | K2006607-013* | 0.4273 ppm | 0.0010 ppm | 0.2400% | 2020/08/14 16:59 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.4266 | 4.2661 | 12.22 | 25.41 | 13.19 | 50.14 | 10:29 |
| 2 | TOC | 0.4280 | 4.2804 | 12.23 | 25.42 | 13.19 | 50.14 | 10:27 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◈ | 55 | TOC | K2006607-014* | 0.4557 ppm | 0.0435 ppm | 9.5600% | 2020/08/14 17:27 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.4865 | 4.8649 | 12.64 | 25.77 | 13.13 | 50.15 | 10:32 |
| 2 | TOC | 0.4249 | 4.2490 | 12.21 | 25.44 | 13.23 | 50.17 | 10:28 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) | CAS_salt_010711 | CAS_salt_010711 |

(v1434) (v4) (v38)

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 56 | TOC | K2006660-001 | 0.8199 ppm | 0.0160 ppm | 1.9500% | 2020/08/14 17:55 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 0.8312 | 8.3118 | 15.06 | 28.18 | 13.12 | 50.12 | 10:27 |
| 2 | TOC | 0.8085 | 8.0852 | 14.90 | 28.03 | 13.13 | 50.14 | 10:25 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

| | Pos | Analysis Type | Sample ID | Result (ppmC) | Std. Dev. (ppmC) | RSD | Start Time |
|---|---|---|---|---|---|---|---|
| ◆ | 57 | TOC | K2006194-009 | 8.1636 ppm | 0.0414 ppm | 0.5100% | 2020/08/14 18:23 |

| Rep # | Base Analysis Type | ppm | µg | Adjusted (Abs) | NDIR (Abs) | Baseline (Abs) | Pressure (psig) | Run Time |
|---|---|---|---|---|---|---|---|---|
| 1 | TOC | 8.1343 | 81.3429 | 66.29 | 79.47 | 13.18 | 50.19 | 10:28 |
| 2 | TOC | 8.1929 | 81.9288 | 66.70 | 79.77 | 13.07 | 50.20 | 10:26 |

| Dilution | Blank Contribution | Method | Calibration |
|---|---|---|---|
| 1:10 | (TC) 9.2284 (IC) (v1434) | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) |

**Sample Type**: Check Standard --> CCV 25 ppm From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | B | TOC | 25.0000 | 1:2 | [TOC] CCV 25 ppm [25 ppm] | 0 / infinity ( NA / NA ) | 23.7359 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 18:52 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| B | TOC | 25 ppm | 1 | 23.7359 | 237.3586 | 176.40 | 189.68 | 13.29 | 50.21 | 10:33 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos B |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 50 ppmC |

**Sample Type**: Check Standard --> CCB From Schedule Version 13

| | Pos | BAT | Concentration (ppm) | Dil | Sample ID | Min / Max (% dev) | Result | Std. Dev. | RSD | Start Time |
|---|---|---|---|---|---|---|---|---|---|---|
| ◆ | D | TOC | 0.0000 | 1:1 | [TOC] CCB [0 ppm] | 0 / infinity ( NA / NA ) | 0.0000 ppm (PASS) | 0.0000 ppm | 0% | 2020/08/14 19:06 |

| Pos | Base Analysis Type | ID | Rep # | ppm | µg | Adjusted | NDIR | Baseline | Pressure | Run Time |
|---|---|---|---|---|---|---|---|---|---|---|
| D | TOC | 0 ppm | 1 | 0.0000 | 0.0000 | 8.70 | 21.96 | 13.26 | 50.23 | 10:29 |

| Completion State | Success Action | Method | Calibration | STD Conc - Pos D |
|---|---|---|---|---|
| Success - Criteria met. | Do Nothing | CAS_salt_010711 (v4) | CAS_salt_010711 (v38) | 0 ppmC |

## Meta Data Used in this Report

### Blanks

| Version | Reagent (Abs) | Acid (Abs) | DI IC (Abs) | DI TC (Abs) | DI TOC (Abs) | Save Time | Operator |
|---|---|---|---|---|---|---|---|
| v1433 | 1.5827 | 0.0320 | 0.0000 | 0.0000 | 0.0000 | 2020/08/12 11:21 | Fusion1 (Fusion1) |
| v1434 | 1.6277 | 0.0870 | 0.0000 | 0.0000 | 0.0000 | 2020/08/13 13:10 | Fusion1 (Fusion1) |

### Calibrations

**Name: CAS_salt_010711 (TOC)**

Version: v38
Ver Creation: 2020/06/13 16:40
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC
Calibration curve formula: TOC: y = 7.015x + 9.892
$r^2$ value: TOC: $r^2$ = 0.99974

**Basic Analysis Type**: TOC

| Sample ID | Y Raw Value | X Expected | Message | End Time |
|---|---|---|---|---|
| DI Water | 9.5750 | 0.0000 | | 2020/06/13 15:13 |
| 0.500 ppm | 12.9010 | 0.5000 | | 2020/06/13 15:28 |
| 1.0 ppm | 15.6320 | 1.0000 | | 2020/06/13 15:42 |
| 5.0 ppm | 43.2510 | 5.0000 | | 2020/06/13 15:56 |
| 10 ppm | 82.4040 | 10.0000 | | 2020/06/13 16:11 |
| 25 ppm | 188.6880 | 25.0000 | | 2020/06/13 16:25 |
| 50 ppm | 358.6500 | 50.0000 | | 2020/06/13 16:39 |

### Methods

**Name: CAS_salt_010711 (TOC)**

Version: v4
Ver Creation: 2019/02/21 17:57
Comment:
Operator: Fusion1 (Fusion1)

| Parameter | Value | Advanced Parameter | Value |
|---|---|---|---|
| SampleVolume | 10.0 mL | NeedleRinseVolume | 5.0 ml |
| | | | |

| | | | |
|---|---|---|---|
| Dilution | 1:10 | VialPrimeVolume | 2.0 ml |
| AcidVolume | 0.5 ml | ICSamplePrimeVolume | 2.0 ml |
| ReagentVolume | 2.0 ml | ICSpargeRinseVolume | 12.0 ml |
| UVReactorPrerinse | Off | BaselineStabilizeTime | 0.70 min |
| UVReactorPrerinseVolume | 5.0 | DetectorPressureFlow | 150 ml/min |
| NumberOfUVReactorPrerinses | 1 | SyringeSpeedWaste | 10 |
| ICSpargeTime | 1.00 mins | SyringeSpeedAcid | 7 |
| DetectorSweepFlow | 500 ml/min | SyringeSpeedReagent | 7 |
| PreSpargeTime | 2.00 mins | SyringeSpeedDIWater | 7 |
| SystemFlow | 500 ml/min | NDIRPressurization | 60 psig |
| | | SyringeSpeedSampleDispense | 5 |
| | | SyringeSpeedSampleAspirate | 4 |
| | | SyringeSpeedUVDispense | 5 |
| | | SyringeSpeedUVAspirate | 5 |
| | | SyringeSpeedICDispense | 5 |
| | | SyringeSpeedICAspirate | 5 |
| | | NDIRPressureStabilize | 1.75 min |
| | | SampleMixing | Off |
| | | SampleMixingCycles | 1 |
| | | SampleMixingVolume | 10.0 |
| | | LowLevelFilterNDIR | Off |

## Acceptance / Approval

**Electronic Signatures**

| Report Version | User Name | Acceptance | Reason | Date |
|---|---|---|---|---|

## Report History

**Report History**

| Report Version | User Name | System Reason | User Reason | Date |
|---|---|---|---|---|
| 1 | Fusion1 (Fusion1) | Schedule completed | Schedule completed | 2020/08/14 19:21 |

ALS Environmental

| | |
|---|---|
| StarLIMS Run: | 691025/691094/691095 |
| Analysis: | DOC/TOC |
| Method: | SM 5310 C, 9060A, 415.1, 9060 |

CCV: 19-GEN-8-15-C 50 ppm LCS: 19-GEN-8-31I 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-J

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-32J

21 % H3PO4: 19-GEN-08-32I

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

| | | | |
|---|---|---|---|
| Analyzed By: | MK | Date Analyzed: | 8-13-20 |
| Reviewed By: | | Date Reviewed: | 8/17/20 |

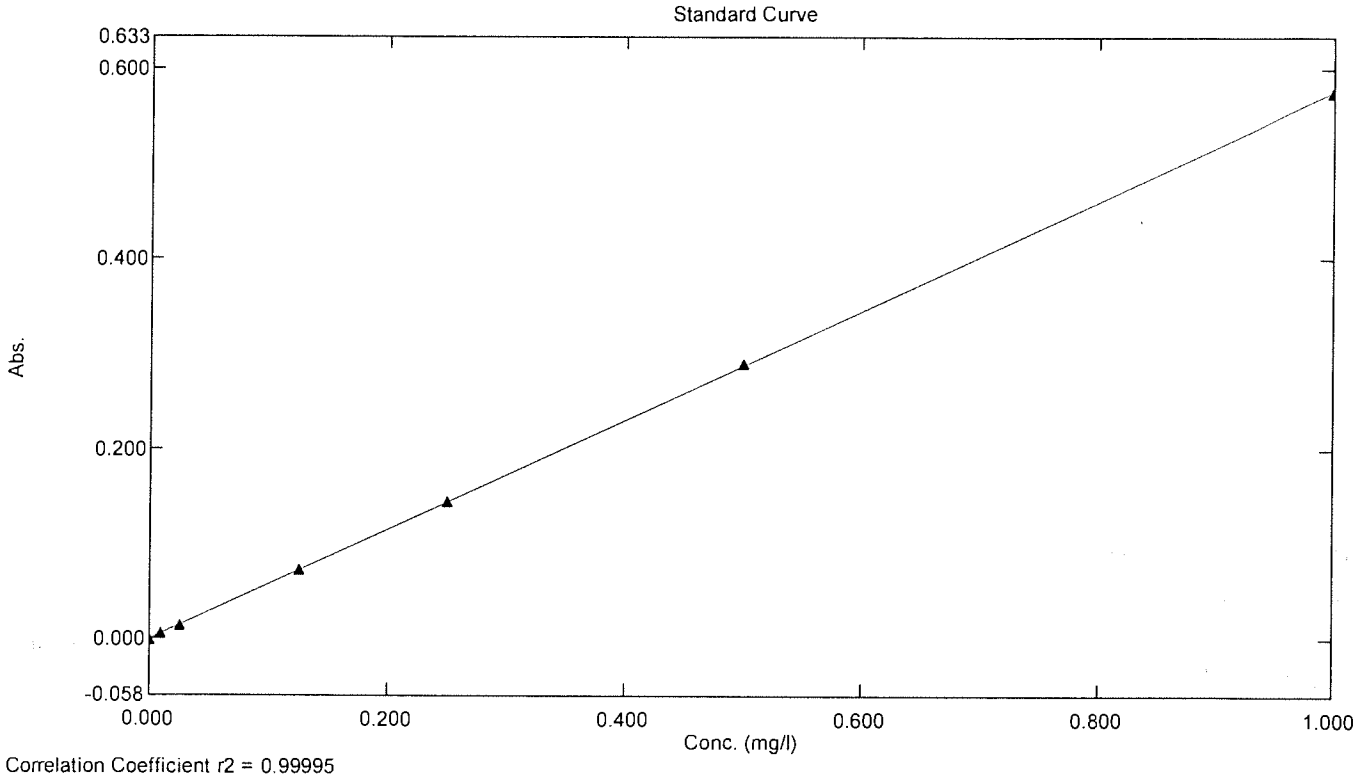
# HS20080196 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20080196

# Standard Table Report

08/25/2020 11:15:33 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\080620_P_ORTHO.pho..p




Correlation Coefficient r2 = 0.99995

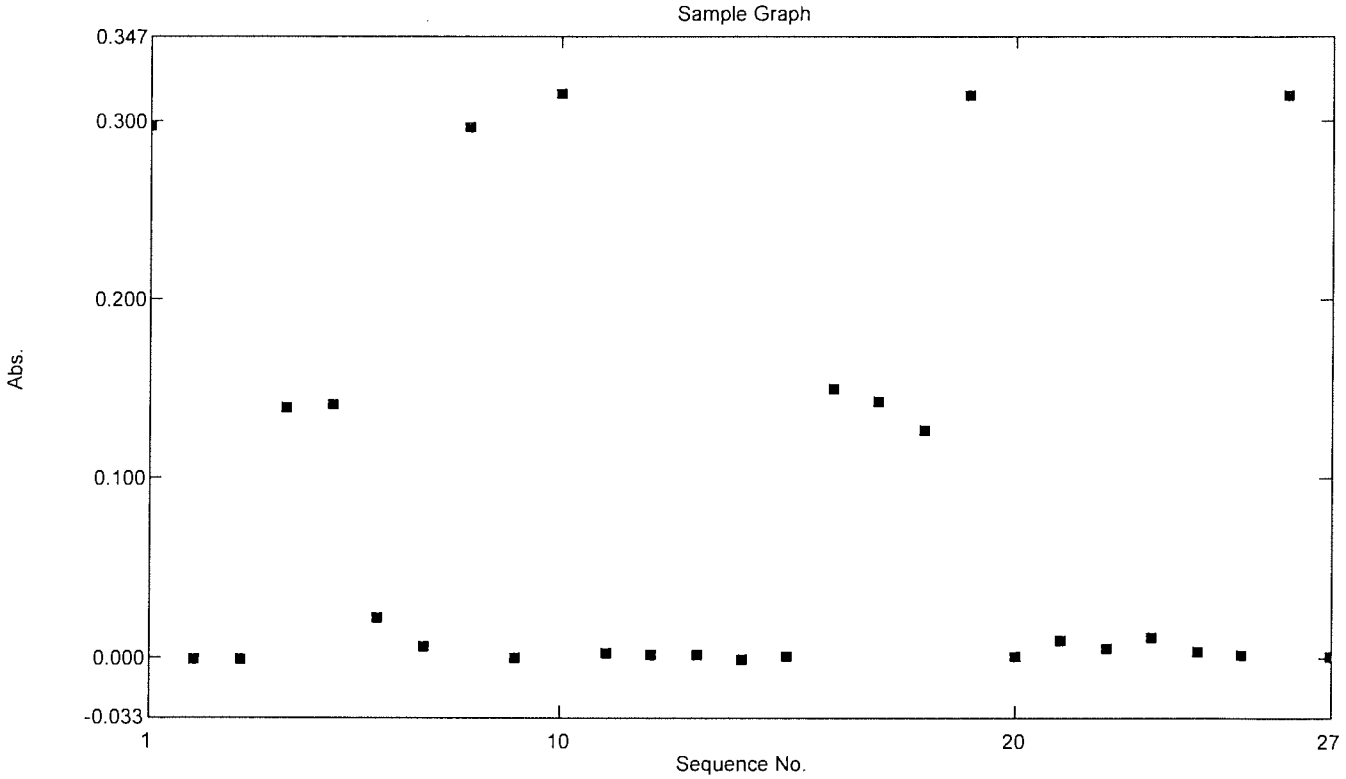
Standard Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Wgt.Facto | Comments |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | Standard | | 0.000 | -0.001 | 1.000 | |
| 2 | STD2 | Standard | | 0.010 | 0.005 | 1.000 | |
| 3 | STD3 | Standard | | 0.025 | 0.013 | 1.000 | |
| 4 | STD4 | Standard | | 0.125 | 0.073 | 1.000 | |
| 5 | STD5 | Standard | | 0.250 | 0.145 | 1.000 | |
| 6 | STD6 | Standard | | 0.500 | 0.290 | 1.000 | |
| 7 | STD7 | Standard | | 1.000 | 0.575 | 1.000 | |
| 8 | | | | | | | |

# Sample Table Report

08/25/2020 11:15:36 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\080620_P_ORTHO.pho..p



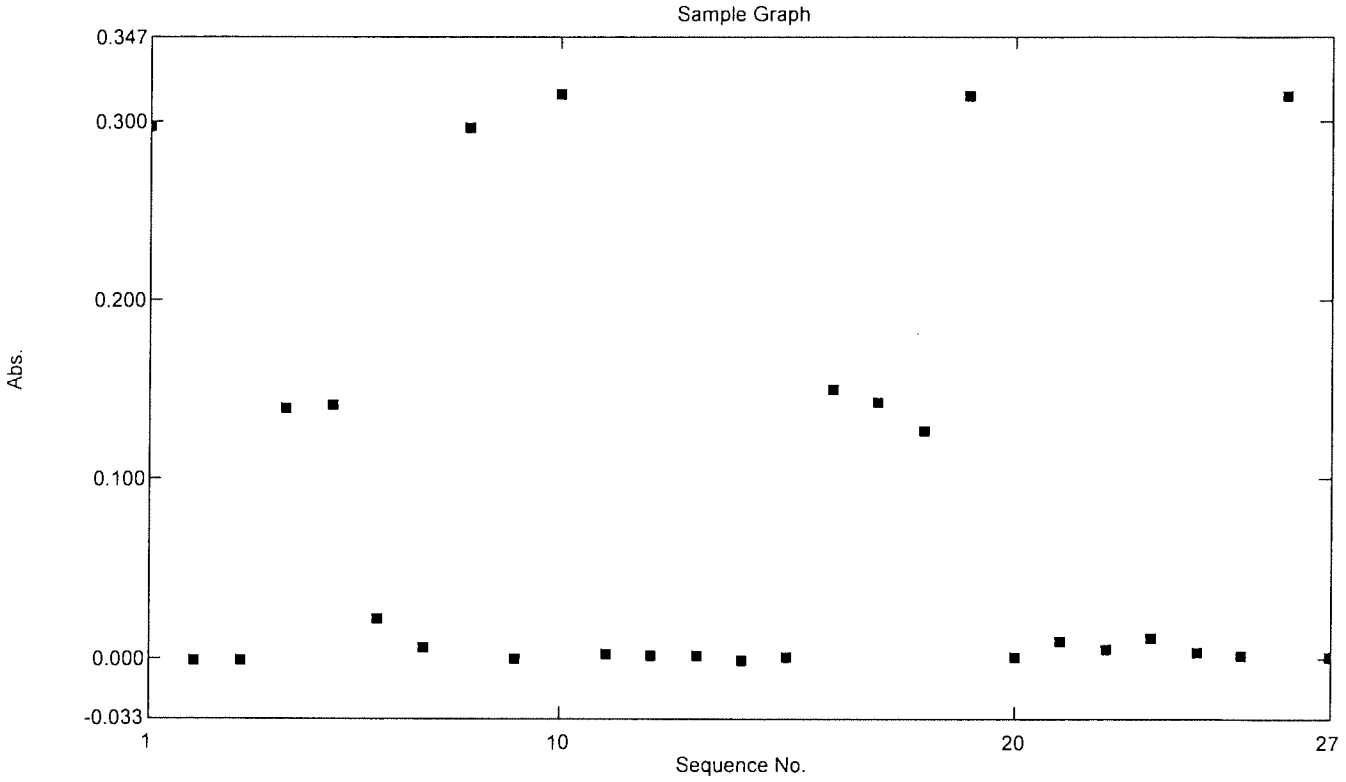

Sample Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Comments |
|---|---|---|---|---|---|---|
| 1 | CCV | Unknown | | 0.515 | 0.297 | 314061705 WC-14 |
| 2 | CCB | Unknown | | -0.003 | -0.002 | |
| 3 | MBLK | Unknown | | -0.003 | -0.002 | |
| 4 | LCS | Unknown | | 0.241 | 0.139 | 314061704 WC-14 |
| 5 | LCSD | Unknown | | 0.245 | 0.141 | |
| 6 | HS20080142.01 | Unknown | | 0.038 | 0.022 | PF:50X,11:08AM,SAMP LE MATRIX |
| 7 | HS20080142.01. | Unknown | | 0.010 | 0.006 | PF:200X |
| 8 | CCV2 | Unknown | | 0.513 | 0.296 | |
| 9 | CCB2 | Unknown | | -0.001 | -0.001 | C-314062505 UV-11 |
| 10 | CCV3 | Unknown | | 0.547 | 0.315 | |
| 11 | CCB3 | Unknown | | 0.004 | 0.002 | |
| 12 | HS20080198.01 | Unknown | | 0.002 | 0.001 | 02:33PM |
| 13 | HS20080198.02 | Unknown | | 0.002 | 0.001 | 02:34PM |
| 14 | HS20080198.03 | Unknown | | -0.002 | -0.001 | 02:34PM |
| 15 | HS20080198.04 | Unknown | | 0.001 | 0.001 | 02:35PM |
| 16 | HS20080198.04MS | Unknown | | 0.260 | 0.150 | 02:35PM |
| 17 | HS20080198.04MS D | Unknown | | 0.247 | 0.143 | 02:36PM |
| 18 | HS2008196.01 | Unknown | | 0.220 | 0.127 | PF:10X,02:36PM |
| 19 | CCV4 | Unknown | | 0.545 | 0.314 | |

# Sample Table Report

08/25/2020 11:15:36 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\080620_P_ORTHO.pho..p




Sample Table

| | Sample ID | Type | Ex | Conc | WL880.0 | Comments |
|---|---|---|---|---|---|---|
| 20 | CCB4 | Unknown | | 0.000 | 0.000 | |
| 21 | HS20080163.01 | Unknown | | 0.017 | 0.010 | 03:46PM |
| 22 | HS20080163.02 | Unknown | | 0.008 | 0.005 | 03:47PM |
| 23 | HS20080163.03 | Unknown | | 0.019 | 0.011 | 03:48PM |
| 24 | HS20080163.04 | Unknown | | 0.005 | 0.003 | 03:48PM |
| 25 | HS20080163.05 | Unknown | | 0.003 | 0.002 | 03:49PM |
| 26 | CCV5 | Unknown | | 0.544 | 0.314 | |
| 27 | CCB5 | Unknown | | 0.000 | 0.000 | |
| 28 | | | | | | |

# HS20080196 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20080196

NJT-AMN-W- IBE 13543

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

# Ion Selective Electrode Logbook

| | |
|---|---|
| Analyst: MD | Date: 8/7/20 10:45AM |
| Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F | |

| Probe Calibration Date: | Cal Std ID: | Probe ID: |
|---|---|---|
| 8/7/20 | 3140622 (06-11) | X01-11886 |

| Std Level | | mV | Conc., mg/L: |
|---|---|---|---|
| STD 1 (mg/L): | 0.2 | 136.0 | 0.200 |
| STD 2 (mg/L): | 1 | 96.9 | 1.001 |
| STD 3 (mg/L): | 5 | 56.9 | 5.000 |

Sodium Thiosulfate ID: —

| Std Level | mV | Conc., mg/L: |
|---|---|---|
| STD 4 (mg/L): 10 | 40.6 | 10.38 |
| STD 5 (mg/L): 50 | -1.2 | 50.033 |

LSC / MS Spike ID: 3100602320
ICV Cal STD ID: 3140622(06-11)
DPD Reagent ID: 3100602305

ICAL Date & Slope: 10/6/20 / -60.0mV

| WO # / SX # | Bottle # | Initial g or ml | Final Vol. ml | Dilution Factor | Initial Conc. mg/L | Final Conc. mg/L | Chlorine Check ( +/ – ) | Comments |
|---|---|---|---|---|---|---|---|---|
| CCV | | 50ml | 50ml | | 10.080 | | | |
| CCB | | | | | 0.002 | | | |
| MBLK | | | | | 0.003 | | | |
| LCS | | | | | 11.246 | | | |
| HS200801196-01 | | | | | 9.912 | | -ve | |
| 91-01 | | | | | 0.311 | | -ve | |
| 91-01MS | | | | | 11.525 | | | |
| 91-01MSD | | | | | 11.452 | | | |
| 87-01 | | | | | 0.352 | | -ve | |
| CCV | | 50ml | 50ml | | 9.980 | | | |
| CCB | | | | | 0.008 | | | |

| Batch ID: | Reported By | Reviewed By: |
|---|---|---|
| 366361 / 366363 | MD | KL |


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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20080212

## Longhorn GW Treatment Plant Bi Weekly Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**11-Sep-2020**

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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  - Trip Blank
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
- HS20080212 8260_W_DOD Raw Data
- HS20080212 Wet Chem Raw Data (9056_W)

# HS20080212 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20080212

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 17, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20080212**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Aug 06, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**Work Order:** HS20080212

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20080212-01 | LH18/24-SP650_080520 | Water | | 05-Aug-2020 14:00 | 06-Aug-2020 09:30 | ☐ |
| HS20080212-02 | Trip Blank | Water | | 05-Aug-2020 00:00 | 06-Aug-2020 09:30 | ☐ |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc. **CASE NARRATIVE**
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**Work Order:** HS20080212

## Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached.

## GCMS Volatiles by Method SW8260

### Batch ID: R366532

**Sample ID: LH18/24-SP650_080520 (HS20080212-01MS)**

• MS/MSD failed QC limits for multiple compounds.

**Sample ID: LH18/24-SP650_080520 (HS20080212-01MSD)**

• The RPD between the MS and MSD was outside of the control limit. 1,2,4-Trichlorobenzene, Hexachlorobutadiene

## WetChemistry by Method SW9056

### Batch ID: R366794

**Sample ID: HS20080519-01MS**

• MS and MSD are for an unrelated sample (Chloride)

**ALS Houston, US** Date: 17-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20080212
Sample ID: LH18/24-SP650_080520 Lab ID:HS20080212-01
Collection Date: 05-Aug-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| **1,2-Dichloroethane** | **0.74** | J | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 10-Aug-2020 13:59 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 17-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20080212
Sample ID: LH18/24-SP650_080520 Lab ID:HS20080212-01
Collection Date: 05-Aug-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| **cis-1,2-Dichloroethene** | **20** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 10-Aug-2020 13:59 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Toluene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| **Trichloroethene** | **4.6** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 10-Aug-2020 13:59 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:59 |
| *Surr: 1,2-Dichloroethane-d4* | *92.2* | | | **0** | *81-118* | *%REC* | *1* | *10-Aug-2020 13:59* |
| *Surr: 4-Bromofluorobenzene* | *96.4* | | | **0** | *85-114* | *%REC* | *1* | *10-Aug-2020 13:59* |
| *Surr: Dibromofluoromethane* | *93.1* | | | **0** | *80-119* | *%REC* | *1* | *10-Aug-2020 13:59* |
| *Surr: Toluene-d8* | *106* | | | **0** | *89-112* | *%REC* | *1* | *10-Aug-2020 13:59* |
| **ANIONS BY SW9056A** | | **Method:SW9056** | | | | | | Analyst: YP |
| **Chloride** | **312** | | **2.00** | **5.00** | **5.00** | **mg/L** | 10 | 14-Aug-2020 03:14 |
| **Sulfate** | **31.3** | | **0.200** | **0.500** | **0.500** | **mg/L** | 1 | 14-Aug-2020 02:56 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 17-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20080212

Sample ID: Trip Blank Lab ID:HS20080212-02

Collection Date: 05-Aug-2020 00:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 17-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:HS20080212
Sample ID: Trip Blank
Lab ID:HS20080212-02
Collection Date: 05-Aug-2020 00:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| cis-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Toluene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Trichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 10-Aug-2020 13:35 |
| *Surr: 1,2-Dichloroethane-d4* | *90.9* | | | **0** | *81-118* | *%REC* | *1* | *10-Aug-2020 13:35* |
| *Surr: 4-Bromofluorobenzene* | *95.5* | | | **0** | *85-114* | *%REC* | *1* | *10-Aug-2020 13:35* |
| *Surr: Dibromofluoromethane* | *93.6* | | | **0** | *80-119* | *%REC* | *1* | *10-Aug-2020 13:35* |
| *Surr: Toluene-d8* | *108* | | | **0** | *89-112* | *%REC* | *1* | *10-Aug-2020 13:35* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**DATES REPORT**

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** R366532 ( 0 ) | **Test Name :** VOLATILES ORGANICS BY METHOD 8260C | | | | **Matrix:** Water | |
| HS20080212-01 | LH18/24-SP650_080520 | 05 Aug 2020 14:00 | | | 10 Aug 2020 13:59 | 1 |
| HS20080212-02 | Trip Blank | 05 Aug 2020 00:00 | | | 10 Aug 2020 13:35 | 1 |
| **Batch ID:** R366794 ( 0 ) | **Test Name :** ANIONS BY SW9056A | | | | **Matrix:** Water | |
| HS20080212-01 | LH18/24-SP650_080520 | 05 Aug 2020 14:00 | | | 14 Aug 2020 03:14 | 10 |
| HS20080212-01 | LH18/24-SP650_080520 | 05 Aug 2020 14:00 | | | 14 Aug 2020 02:56 | 1 |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200810** Units: **UG/L** Analysis Date: **10-Aug-2020 13:11**
Client ID: Run ID: **VOA6_366532** SeqNo: **5695840** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,1-Trichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,2-Trichloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloropropene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dibromo-3-chloropropane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dibromoethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,3,5-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,4-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 2,2-Dichloropropane | 0.50 | 1.0 | | | | | | | | U |
| 2-Butanone | 1.0 | 2.0 | | | | | | | | U |
| 2-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 2-Hexanone | 2.0 | 2.0 | | | | | | | | U |
| 4-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Isopropyltoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Methyl-2-pentanone | 2.0 | 2.0 | | | | | | | | U |
| Acetone | 1.0 | 2.0 | | | | | | | | U |
| Benzene | 0.50 | 1.0 | | | | | | | | U |
| Bromobenzene | 1.0 | 1.0 | | | | | | | | U |
| Bromochloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromodichloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromoform | 1.0 | 1.0 | | | | | | | | U |
| Bromomethane | 1.0 | 1.0 | | | | | | | | U |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200810** Units: **UG/L** Analysis Date: **10-Aug-2020 13:11**
Client ID: Run ID: **VOA6_366532** SeqNo: **5695840** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 1.0 | 2.0 | | | | | | | | U |
| Carbon tetrachloride | 1.0 | 1.0 | | | | | | | | U |
| Chlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| Chloroethane | 1.0 | 1.0 | | | | | | | | U |
| Chloroform | 0.50 | 1.0 | | | | | | | | U |
| Chloromethane | 0.50 | 1.0 | | | | | | | | U |
| cis-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| cis-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Dibromochloromethane | 1.0 | 1.0 | | | | | | | | U |
| Dibromomethane | 0.50 | 1.0 | | | | | | | | U |
| Dichlorodifluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Ethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Hexachlorobutadiene | 1.0 | 1.0 | | | | | | | | U |
| Isopropylbenzene | 1.0 | 1.0 | | | | | | | | U |
| m,p-Xylene | 1.0 | 2.0 | | | | | | | | U |
| Methylene chloride | 1.0 | 2.0 | | | | | | | | U |
| Naphthalene | 1.0 | 1.0 | | | | | | | | U |
| n-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| n-Propylbenzene | 1.0 | 1.0 | | | | | | | | U |
| o-Xylene | 1.0 | 1.0 | | | | | | | | U |
| sec-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Styrene | 1.0 | 1.0 | | | | | | | | U |
| tert-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Tetrachloroethene | 1.0 | 1.0 | | | | | | | | U |
| Toluene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Trichloroethene | 0.50 | 1.0 | | | | | | | | U |
| Trichlorofluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Vinyl chloride | 0.50 | 1.0 | | | | | | | | U |
| *Surr: 1,2-Dichloroethane-d4* | *46.06* | *1.0* | *50* | *0* | *92.1* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *47.98* | *1.0* | *50* | *0* | *96.0* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *46.41* | *1.0* | *50* | *0* | *92.8* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *53.64* | *1.0* | *50* | *0* | *107* | *89 - 112* | | | | |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200810** Units: **UG/L** Analysis Date: **10-Aug-2020 12:23**
Client ID: Run ID: **VOA6_366532** SeqNo: **5695839** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.74 | 1.0 | 20 | 0 | 93.7 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 18.87 | 1.0 | 20 | 0 | 94.3 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.81 | 1.0 | 20 | 0 | 104 | 71 - 121 | | | | |
| 1,1,2-Trichloroethane | 19.98 | 1.0 | 20 | 0 | 99.9 | 80 - 119 | | | | |
| 1,1-Dichloroethane | 20.87 | 1.0 | 20 | 0 | 104 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 19.63 | 1.0 | 20 | 0 | 98.2 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 18.76 | 1.0 | 20 | 0 | 93.8 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 21.86 | 1.0 | 20 | 0 | 109 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 19.5 | 1.0 | 20 | 0 | 97.5 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 23.59 | 1.0 | 20 | 0 | 118 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 19.09 | 1.0 | 20 | 0 | 95.5 | 76 - 124 | | | | |
| 1,2-Dibromo-3-chloropropane | 20.69 | 1.0 | 20 | 0 | 103 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 20.21 | 1.0 | 20 | 0 | 101 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 19.04 | 1.0 | 20 | 0 | 95.2 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 20.14 | 1.0 | 20 | 0 | 101 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 20.74 | 1.0 | 20 | 0 | 104 | 78 - 122 | | | | |
| 1,3,5-Trimethylbenzene | 18.77 | 1.0 | 20 | 0 | 93.8 | 75 - 124 | | | | |
| 1,3-Dichlorobenzene | 18.92 | 1.0 | 20 | 0 | 94.6 | 80 - 119 | | | | |
| 1,3-Dichloropropane | 20.33 | 1.0 | 20 | 0 | 102 | 80 - 119 | | | | |
| 1,4-Dichlorobenzene | 18.98 | 1.0 | 20 | 0 | 94.9 | 79 - 118 | | | | |
| 2,2-Dichloropropane | 20.43 | 1.0 | 20 | 0 | 102 | 60 - 139 | | | | |
| 2-Butanone | 43.97 | 2.0 | 40 | 0 | 110 | 56 - 143 | | | | |
| 2-Chlorotoluene | 19.13 | 1.0 | 20 | 0 | 95.6 | 79 - 122 | | | | |
| 2-Hexanone | 40.72 | 2.0 | 40 | 0 | 102 | 57 - 139 | | | | |
| 4-Chlorotoluene | 19.15 | 1.0 | 20 | 0 | 95.7 | 78 - 122 | | | | |
| 4-Isopropyltoluene | 18.54 | 1.0 | 20 | 0 | 92.7 | 77 - 127 | | | | |
| 4-Methyl-2-pentanone | 39.5 | 2.0 | 40 | 0 | 98.7 | 67 - 130 | | | | |
| Acetone | 45.37 | 2.0 | 40 | 0 | 113 | 39 - 160 | | | | |
| Benzene | 20.02 | 1.0 | 20 | 0 | 100 | 79 - 120 | | | | |
| Bromobenzene | 19.11 | 1.0 | 20 | 0 | 95.5 | 80 - 120 | | | | |
| Bromochloromethane | 19.31 | 1.0 | 20 | 0 | 96.5 | 78 - 123 | | | | |
| Bromodichloromethane | 19.56 | 1.0 | 20 | 0 | 97.8 | 79 - 125 | | | | |
| Bromoform | 19.25 | 1.0 | 20 | 0 | 96.2 | 66 - 130 | | | | |
| Bromomethane | 23.37 | 1.0 | 20 | 0 | 117 | 53 - 141 | | | | |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200810** Units: **UG/L** Analysis Date: **10-Aug-2020 12:23**
Client ID: Run ID: **VOA6_366532** SeqNo: **5695839** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 39.2 | 2.0 | 40 | 0 | 98.0 | 64 - 133 | | | | |
| Carbon tetrachloride | 17.73 | 1.0 | 20 | 0 | 88.7 | 72 - 136 | | | | |
| Chlorobenzene | 19.42 | 1.0 | 20 | 0 | 97.1 | 82 - 118 | | | | |
| Chloroethane | 19.75 | 1.0 | 20 | 0 | 98.7 | 60 - 138 | | | | |
| Chloroform | 19.88 | 1.0 | 20 | 0 | 99.4 | 79 - 124 | | | | |
| Chloromethane | 19.55 | 1.0 | 20 | 0 | 97.7 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 20.34 | 1.0 | 20 | 0 | 102 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 20.28 | 1.0 | 20 | 0 | 101 | 75 - 124 | | | | |
| Dibromochloromethane | 19.27 | 1.0 | 20 | 0 | 96.4 | 74 - 126 | | | | |
| Dibromomethane | 19.99 | 1.0 | 20 | 0 | 99.9 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 16.93 | 1.0 | 20 | 0 | 84.7 | 32 - 152 | | | | |
| Ethylbenzene | 18.85 | 1.0 | 20 | 0 | 94.3 | 79 - 121 | | | | |
| Hexachlorobutadiene | 23.67 | 1.0 | 20 | 0 | 118 | 66 - 134 | | | | |
| Isopropylbenzene | 18.6 | 1.0 | 20 | 0 | 93.0 | 72 - 131 | | | | |
| m,p-Xylene | 38.1 | 2.0 | 40 | 0 | 95.2 | 80 - 121 | | | | |
| Methylene chloride | 19.81 | 2.0 | 20 | 0 | 99.0 | 74 - 124 | | | | |
| Naphthalene | 24.35 | 1.0 | 20 | 0 | 122 | 61 - 128 | | | | |
| n-Butylbenzene | 18.97 | 1.0 | 20 | 0 | 94.9 | 75 - 128 | | | | |
| n-Propylbenzene | 18.7 | 1.0 | 20 | 0 | 93.5 | 76 - 126 | | | | |
| o-Xylene | 19.31 | 1.0 | 20 | 0 | 96.6 | 78 - 122 | | | | |
| sec-Butylbenzene | 18.07 | 1.0 | 20 | 0 | 90.3 | 77 - 126 | | | | |
| Styrene | 19.19 | 1.0 | 20 | 0 | 95.9 | 78 - 123 | | | | |
| tert-Butylbenzene | 18.17 | 1.0 | 20 | 0 | 90.8 | 78 - 124 | | | | |
| Tetrachloroethene | 18.2 | 1.0 | 20 | 0 | 91.0 | 74 - 129 | | | | |
| Toluene | 19.54 | 1.0 | 20 | 0 | 97.7 | 80 - 121 | | | | |
| trans-1,2-Dichloroethene | 19.89 | 1.0 | 20 | 0 | 99.5 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 19.8 | 1.0 | 20 | 0 | 99.0 | 73 - 127 | | | | |
| Trichloroethene | 19.86 | 1.0 | 20 | 0 | 99.3 | 79 - 123 | | | | |
| Trichlorofluoromethane | 18.47 | 1.0 | 20 | 0 | 92.4 | 65 - 141 | | | | |
| Vinyl chloride | 18.83 | 1.0 | 20 | 0 | 94.1 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *49.67* | *1.0* | *50* | *0* | *99.3* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *48.45* | *1.0* | *50* | *0* | *96.9* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *48.97* | *1.0* | *50* | *0* | *97.9* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *49* | *1.0* | *50* | *0* | *98.0* | *89 - 112* | | | | |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20080212-01MS** Units: **UG/L** Analysis Date: **10-Aug-2020 14:47**
Client ID: **LH18/24-SP650_080520** Run ID: **VOA6_366532** SeqNo: **5695843** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 24.28 | 1.0 | 20 | 0 | 121 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 24.3 | 1.0 | 20 | 0 | 122 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 27.46 | 1.0 | 20 | 0 | 137 | 71 - 121 | | | | S |
| 1,1,2-Trichloroethane | 24.71 | 1.0 | 20 | 0 | 124 | 80 - 119 | | | | S |
| 1,1-Dichloroethane | 24.6 | 1.0 | 20 | 0 | 123 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 25.56 | 1.0 | 20 | 0 | 128 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 25.12 | 1.0 | 20 | 0 | 126 | 78 - 125 | | | | S |
| 1,2,3-Trichlorobenzene | 25.53 | 1.0 | 20 | 0 | 128 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 25.08 | 1.0 | 20 | 0 | 125 | 73 - 122 | | | | S |
| 1,2,4-Trichlorobenzene | 28.68 | 1.0 | 20 | 0 | 143 | 69 - 130 | | | | S |
| 1,2,4-Trimethylbenzene | 26.95 | 1.0 | 20 | 0 | 135 | 76 - 124 | | | | S |
| 1,2-Dibromo-3-chloropropane | 25.41 | 1.0 | 20 | 0 | 127 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 24.27 | 1.0 | 20 | 0 | 121 | 77 - 121 | | | | S |
| 1,2-Dichlorobenzene | 25.59 | 1.0 | 20 | 0 | 128 | 80 - 119 | | | | S |
| 1,2-Dichloroethane | 23.98 | 1.0 | 20 | 0.7419 | 116 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 24.72 | 1.0 | 20 | 0 | 124 | 78 - 122 | | | | S |
| 1,3,5-Trimethylbenzene | 26.67 | 1.0 | 20 | 0 | 133 | 75 - 124 | | | | S |
| 1,3-Dichlorobenzene | 26.07 | 1.0 | 20 | 0 | 130 | 80 - 119 | | | | S |
| 1,3-Dichloropropane | 25.03 | 1.0 | 20 | 0 | 125 | 80 - 119 | | | | S |
| 1,4-Dichlorobenzene | 25.99 | 1.0 | 20 | 0 | 130 | 79 - 118 | | | | S |
| 2,2-Dichloropropane | 25.5 | 1.0 | 20 | 0 | 127 | 60 - 139 | | | | |
| 2-Butanone | 45.04 | 2.0 | 40 | 0 | 113 | 56 - 143 | | | | |
| 2-Chlorotoluene | 27.03 | 1.0 | 20 | 0 | 135 | 79 - 122 | | | | S |
| 2-Hexanone | 46.02 | 2.0 | 40 | 0 | 115 | 57 - 139 | | | | |
| 4-Chlorotoluene | 26.47 | 1.0 | 20 | 0 | 132 | 78 - 122 | | | | S |
| 4-Isopropyltoluene | 26.47 | 1.0 | 20 | 0 | 132 | 77 - 127 | | | | S |
| 4-Methyl-2-pentanone | 46.9 | 2.0 | 40 | 0 | 117 | 67 - 130 | | | | |
| Acetone | 42.63 | 2.0 | 40 | 0 | 107 | 39 - 160 | | | | |
| Benzene | 24.39 | 1.0 | 20 | 0 | 122 | 79 - 120 | | | | S |
| Bromobenzene | 25.61 | 1.0 | 20 | 0 | 128 | 80 - 120 | | | | S |
| Bromochloromethane | 22.09 | 1.0 | 20 | 0 | 110 | 78 - 123 | | | | |
| Bromodichloromethane | 23.27 | 1.0 | 20 | 0 | 116 | 79 - 125 | | | | |
| Bromoform | 23.32 | 1.0 | 20 | 0 | 117 | 66 - 130 | | | | |
| Bromomethane | 24.36 | 1.0 | 20 | 0 | 122 | 53 - 141 | | | | |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20080212-01MS** Units: **UG/L** Analysis Date: **10-Aug-2020 14:47**
Client ID: **LH18/24-SP650_080520** Run ID: **VOA6_366532** SeqNo: **5695843** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 49 | 2.0 | 40 | 0 | 122 | 64 - 133 | | | | |
| Carbon tetrachloride | 24.26 | 1.0 | 20 | 0 | 121 | 72 - 136 | | | | |
| Chlorobenzene | 25.02 | 1.0 | 20 | 0 | 125 | 82 - 118 | | | | S |
| Chloroethane | 23.53 | 1.0 | 20 | 0 | 118 | 60 - 138 | | | | |
| Chloroform | 23.27 | 1.0 | 20 | 0 | 116 | 79 - 124 | | | | |
| Chloromethane | 22.07 | 1.0 | 20 | 0 | 110 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 44.55 | 1.0 | 20 | 20.12 | 122 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 23.17 | 1.0 | 20 | 0 | 116 | 75 - 124 | | | | |
| Dibromochloromethane | 23.84 | 1.0 | 20 | 0 | 119 | 74 - 126 | | | | |
| Dibromomethane | 22.9 | 1.0 | 20 | 0 | 115 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 20.69 | 1.0 | 20 | 0 | 103 | 32 - 152 | | | | |
| Ethylbenzene | 26.1 | 1.0 | 20 | 0 | 130 | 79 - 121 | | | | S |
| Hexachlorobutadiene | 34.63 | 1.0 | 20 | 0 | 173 | 66 - 134 | | | | S |
| Isopropylbenzene | 26.07 | 1.0 | 20 | 0 | 130 | 72 - 131 | | | | |
| m,p-Xylene | 51.46 | 2.0 | 40 | 0 | 129 | 80 - 121 | | | | S |
| Methylene chloride | 22.61 | 2.0 | 20 | 0 | 113 | 74 - 124 | | | | |
| Naphthalene | 28.84 | 1.0 | 20 | 0 | 144 | 61 - 128 | | | | S |
| n-Butylbenzene | 27.71 | 1.0 | 20 | 0 | 139 | 75 - 128 | | | | S |
| n-Propylbenzene | 27.15 | 1.0 | 20 | 0 | 136 | 76 - 126 | | | | S |
| o-Xylene | 25.81 | 1.0 | 20 | 0 | 129 | 78 - 122 | | | | S |
| sec-Butylbenzene | 26.95 | 1.0 | 20 | 0 | 135 | 77 - 126 | | | | S |
| Styrene | 24.84 | 1.0 | 20 | 0 | 124 | 78 - 123 | | | | S |
| tert-Butylbenzene | 26.62 | 1.0 | 20 | 0 | 133 | 78 - 124 | | | | S |
| Tetrachloroethene | 26.88 | 1.0 | 20 | 0 | 134 | 74 - 129 | | | | S |
| Toluene | 25.85 | 1.0 | 20 | 0 | 129 | 80 - 121 | | | | S |
| trans-1,2-Dichloroethene | 24.57 | 1.0 | 20 | 0 | 123 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 22.54 | 1.0 | 20 | 0 | 113 | 73 - 127 | | | | |
| Trichloroethene | 29.39 | 1.0 | 20 | 4.601 | 124 | 79 - 123 | | | | S |
| Trichlorofluoromethane | 24.41 | 1.0 | 20 | 0 | 122 | 65 - 141 | | | | |
| Vinyl chloride | 25.03 | 1.0 | 20 | 0 | 125 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *46.37* | *1.0* | *50* | *0* | *92.7* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *47.8* | *1.0* | *50* | *0* | *95.6* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *47.39* | *1.0* | *50* | *0* | *94.8* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *53.93* | *1.0* | *50* | *0* | *108* | *89 - 112* | | | | |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20080212-01MSD** Units: **UG/L** Analysis Date: **10-Aug-2020 15:11**
Client ID: **LH18/24-SP650_080520** Run ID: **VOA6_366532** SeqNo: **5695844** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 23.2 | 1.0 | 20 | 0 | 116 | 78 - 124 | 24.28 | 4.55 | 20 | |
| 1,1,1-Trichloroethane | 23.33 | 1.0 | 20 | 0 | 117 | 74 - 131 | 24.3 | 4.1 | 20 | |
| 1,1,2,2-Tetrachloroethane | 25.45 | 1.0 | 20 | 0 | 127 | 71 - 121 | 27.46 | 7.61 | 20 | S |
| 1,1,2-Trichloroethane | 23.87 | 1.0 | 20 | 0 | 119 | 80 - 119 | 24.71 | 3.43 | 20 | S |
| 1,1-Dichloroethane | 23.7 | 1.0 | 20 | 0 | 118 | 77 - 125 | 24.6 | 3.74 | 20 | |
| 1,1-Dichloroethene | 24.31 | 1.0 | 20 | 0 | 122 | 71 - 131 | 25.56 | 5.01 | 20 | |
| 1,1-Dichloropropene | 24.35 | 1.0 | 20 | 0 | 122 | 78 - 125 | 25.12 | 3.12 | 20 | |
| 1,2,3-Trichlorobenzene | 21.36 | 1.0 | 20 | 0 | 107 | 69 - 129 | 25.53 | 17.8 | 20 | |
| 1,2,3-Trichloropropane | 23.31 | 1.0 | 20 | 0 | 117 | 73 - 122 | 25.08 | 7.33 | 20 | |
| 1,2,4-Trichlorobenzene | 21.73 | 1.0 | 20 | 0 | 109 | 69 - 130 | 28.68 | 27.6 | 20 | R |
| 1,2,4-Trimethylbenzene | 23.57 | 1.0 | 20 | 0 | 118 | 76 - 124 | 26.95 | 13.4 | 20 | |
| 1,2-Dibromo-3-chloropropane | 25.36 | 1.0 | 20 | 0 | 127 | 62 - 128 | 25.41 | 0.207 | 20 | |
| 1,2-Dibromoethane | 23.92 | 1.0 | 20 | 0 | 120 | 77 - 121 | 24.27 | 1.43 | 20 | |
| 1,2-Dichlorobenzene | 23.28 | 1.0 | 20 | 0 | 116 | 80 - 119 | 25.59 | 9.45 | 20 | |
| 1,2-Dichloroethane | 24.35 | 1.0 | 20 | 0.7419 | 118 | 73 - 128 | 23.98 | 1.51 | 20 | |
| 1,2-Dichloropropane | 24.46 | 1.0 | 20 | 0 | 122 | 78 - 122 | 24.72 | 1.03 | 20 | S |
| 1,3,5-Trimethylbenzene | 23.81 | 1.0 | 20 | 0 | 119 | 75 - 124 | 26.67 | 11.4 | 20 | |
| 1,3-Dichlorobenzene | 23.33 | 1.0 | 20 | 0 | 117 | 80 - 119 | 26.07 | 11.1 | 20 | |
| 1,3-Dichloropropane | 24.15 | 1.0 | 20 | 0 | 121 | 80 - 119 | 25.03 | 3.54 | 20 | S |
| 1,4-Dichlorobenzene | 23.36 | 1.0 | 20 | 0 | 117 | 79 - 118 | 25.99 | 10.6 | 20 | |
| 2,2-Dichloropropane | 24.47 | 1.0 | 20 | 0 | 122 | 60 - 139 | 25.5 | 4.11 | 20 | |
| 2-Butanone | 46.76 | 2.0 | 40 | 0 | 117 | 56 - 143 | 45.04 | 3.75 | 20 | |
| 2-Chlorotoluene | 24 | 1.0 | 20 | 0 | 120 | 79 - 122 | 27.03 | 11.9 | 20 | |
| 2-Hexanone | 47.2 | 2.0 | 40 | 0 | 118 | 57 - 139 | 46.02 | 2.53 | 20 | |
| 4-Chlorotoluene | 23.6 | 1.0 | 20 | 0 | 118 | 78 - 122 | 26.47 | 11.5 | 20 | |
| 4-Isopropyltoluene | 23.36 | 1.0 | 20 | 0 | 117 | 77 - 127 | 26.47 | 12.5 | 20 | |
| 4-Methyl-2-pentanone | 47.36 | 2.0 | 40 | 0 | 118 | 67 - 130 | 46.9 | 0.988 | 20 | |
| Acetone | 42.88 | 2.0 | 40 | 0 | 107 | 39 - 160 | 42.63 | 0.563 | 20 | |
| Benzene | 24.01 | 1.0 | 20 | 0 | 120 | 79 - 120 | 24.39 | 1.57 | 20 | S |
| Bromobenzene | 23.23 | 1.0 | 20 | 0 | 116 | 80 - 120 | 25.61 | 9.74 | 20 | |
| Bromochloromethane | 21.9 | 1.0 | 20 | 0 | 109 | 78 - 123 | 22.09 | 0.864 | 20 | |
| Bromodichloromethane | 22.8 | 1.0 | 20 | 0 | 114 | 79 - 125 | 23.27 | 2.07 | 20 | |
| Bromoform | 22.57 | 1.0 | 20 | 0 | 113 | 66 - 130 | 23.32 | 3.25 | 20 | |
| Bromomethane | 23.52 | 1.0 | 20 | 0 | 118 | 53 - 141 | 24.36 | 3.52 | 20 | |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366532 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20080212-01MSD** Units: **UG/L** Analysis Date: **10-Aug-2020 15:11**
Client ID: **LH18/24-SP650_080520** Run ID: **VOA6_366532** SeqNo: **5695844** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 47.02 | 2.0 | 40 | 0 | 118 | 64 - 133 | 49 | 4.12 | 20 | |
| Carbon tetrachloride | 23.54 | 1.0 | 20 | 0 | 118 | 72 - 136 | 24.26 | 3.02 | 20 | |
| Chlorobenzene | 23.7 | 1.0 | 20 | 0 | 119 | 82 - 118 | 25.02 | 5.41 | 20 | S |
| Chloroethane | 22.86 | 1.0 | 20 | 0 | 114 | 60 - 138 | 23.53 | 2.87 | 20 | |
| Chloroform | 22.71 | 1.0 | 20 | 0 | 114 | 79 - 124 | 23.27 | 2.44 | 20 | |
| Chloromethane | 20.69 | 1.0 | 20 | 0 | 103 | 50 - 139 | 22.07 | 6.48 | 20 | |
| cis-1,2-Dichloroethene | 43.16 | 1.0 | 20 | 20.12 | 115 | 78 - 123 | 44.55 | 3.18 | 20 | |
| cis-1,3-Dichloropropene | 23.25 | 1.0 | 20 | 0 | 116 | 75 - 124 | 23.17 | 0.32 | 20 | |
| Dibromochloromethane | 23.22 | 1.0 | 20 | 0 | 116 | 74 - 126 | 23.84 | 2.61 | 20 | |
| Dibromomethane | 23.27 | 1.0 | 20 | 0 | 116 | 79 - 123 | 22.9 | 1.61 | 20 | |
| Dichlorodifluoromethane | 19.5 | 1.0 | 20 | 0 | 97.5 | 32 - 152 | 20.69 | 5.91 | 20 | |
| Ethylbenzene | 24.54 | 1.0 | 20 | 0 | 123 | 79 - 121 | 26.1 | 6.13 | 20 | S |
| Hexachlorobutadiene | 20.24 | 1.0 | 20 | 0 | 101 | 66 - 134 | 34.63 | 52.4 | 20 | R |
| Isopropylbenzene | 24.07 | 1.0 | 20 | 0 | 120 | 72 - 131 | 26.07 | 8 | 20 | |
| m,p-Xylene | 48.83 | 2.0 | 40 | 0 | 122 | 80 - 121 | 51.46 | 5.24 | 20 | S |
| Methylene chloride | 22.05 | 2.0 | 20 | 0 | 110 | 74 - 124 | 22.61 | 2.49 | 20 | |
| Naphthalene | 25.89 | 1.0 | 20 | 0 | 129 | 61 - 128 | 28.84 | 10.8 | 20 | S |
| n-Butylbenzene | 23.76 | 1.0 | 20 | 0 | 119 | 75 - 128 | 27.71 | 15.4 | 20 | |
| n-Propylbenzene | 23.68 | 1.0 | 20 | 0 | 118 | 76 - 126 | 27.15 | 13.6 | 20 | |
| o-Xylene | 24.21 | 1.0 | 20 | 0 | 121 | 78 - 122 | 25.81 | 6.4 | 20 | |
| sec-Butylbenzene | 23.26 | 1.0 | 20 | 0 | 116 | 77 - 126 | 26.95 | 14.7 | 20 | |
| Styrene | 23.71 | 1.0 | 20 | 0 | 119 | 78 - 123 | 24.84 | 4.63 | 20 | |
| tert-Butylbenzene | 23.36 | 1.0 | 20 | 0 | 117 | 78 - 124 | 26.62 | 13 | 20 | |
| Tetrachloroethene | 24.82 | 1.0 | 20 | 0 | 124 | 74 - 129 | 26.88 | 7.98 | 20 | |
| Toluene | 24.7 | 1.0 | 20 | 0 | 123 | 80 - 121 | 25.85 | 4.56 | 20 | S |
| trans-1,2-Dichloroethene | 23.62 | 1.0 | 20 | 0 | 118 | 75 - 124 | 24.57 | 3.95 | 20 | |
| trans-1,3-Dichloropropene | 22.7 | 1.0 | 20 | 0 | 114 | 73 - 127 | 22.54 | 0.741 | 20 | |
| Trichloroethene | 28.9 | 1.0 | 20 | 4.601 | 121 | 79 - 123 | 29.39 | 1.7 | 20 | |
| Trichlorofluoromethane | 23.06 | 1.0 | 20 | 0 | 115 | 65 - 141 | 24.41 | 5.67 | 20 | |
| Vinyl chloride | 23.7 | 1.0 | 20 | 0 | 119 | 58 - 137 | 25.03 | 5.44 | 20 | |
| *Surr: 1,2-Dichloroethane-d4* | *47.11* | *1.0* | *50* | *0* | *94.2* | *81 - 118* | *46.37* | *1.6* | *20* | |
| *Surr: 4-Bromofluorobenzene* | *49.18* | *1.0* | *50* | *0* | *98.4* | *85 - 114* | *47.8* | *2.85* | *20* | |
| *Surr: Dibromofluoromethane* | *46.92* | *1.0* | *50* | *0* | *93.8* | *80 - 119* | *47.39* | *1* | *20* | |
| *Surr: Toluene-d8* | *51.78* | *1.0* | *50* | *0* | *104* | *89 - 112* | *53.93* | *4.05* | *20* | |

**ALS Houston, US** Date: 17-Aug-20

| | |
|---|---|
| **Client:** | Bhate Environmental Associates, Inc. |
| **Project:** | Longhorn GW Treatment Plant Bi Weekly Samples |
| **WorkOrder:** | HS20080212 |

**QC BATCH REPORT**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | **R366532 ( 0 )** | **Instrument:** | **VOA6** | **Method:** | **VOLATILES ORGANICS BY METHOD 8260C** |

**The following samples were analyzed in this batch:** HS20080212-01 HS20080212-02

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** HS20080212

**QC BATCH REPORT**

**Batch ID:** R366794 ( 0 ) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

**MBLK** Sample ID: **MBLK-081320** Units: **mg/L** Analysis Date: **14-Aug-2020 04:26**
Client ID: Run ID: **ICS-Integrion_366794** SeqNo: **5701180** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.500 | 0.500 | | | | | | | | U |
| Sulfate | 0.500 | 0.500 | | | | | | | | U |

**LCS** Sample ID: **LCS-081320** Units: **mg/L** Analysis Date: **14-Aug-2020 10:44**
Client ID: Run ID: **ICS-Integrion_366794** SeqNo: **5701181** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 19.36 | 0.500 | 20 | 0 | 96.8 | 80 - 120 | | | | |
| Sulfate | 18.93 | 0.500 | 20 | 0 | 94.6 | 80 - 120 | | | | |

**MS** Sample ID: **HS20080519-01MS** Units: **mg/L** Analysis Date: **13-Aug-2020 23:02**
Client ID: Run ID: **ICS-Integrion_366794** SeqNo: **5701170** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 188.9 | 0.500 | 10 | 182.9 | 59.1 | 80 - 120 | | | | SEO |
| Sulfate | 9.698 | 0.500 | 10 | 0.2457 | 94.5 | 80 - 120 | | | | |

**MSD** Sample ID: **HS20080519-01MSD** Units: **mg/L** Analysis Date: **13-Aug-2020 23:20**
Client ID: Run ID: **ICS-Integrion_366794** SeqNo: **5701171** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 189.4 | 0.500 | 10 | 182.9 | 65.0 | 80 - 120 | 188.9 | 0.309 | 20 | SEO |
| Sulfate | 9.764 | 0.500 | 10 | 0.2457 | 95.2 | 80 - 120 | 9.698 | 0.674 | 20 | |

**The following samples were analyzed in this batch:** HS20080212-01

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**WorkOrder:** **HS20080212**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| Unit Reported | Description |
|---|---|
| mg/L | Milligrams per Liter |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V009 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

**ALS Houston, US** Date: 17-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Bi Weekly Samples
**Work Order:** HS20080212

**SAMPLE TRACKING**

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20080212-01 | LH18/24-SP650_080520 | Login | 8/6/2020 4:27:17 PM | NDR | WET206 |
| HS20080212-01 | LH18/24-SP650_080520 | Login | 8/6/2020 4:27:17 PM | NDR | VOA157 |
| HS20080212-02 | Trip Blank | Login | 8/6/2020 4:27:17 PM | NDR | VOA157 |

**ALS Houston, US** Date: 17-Aug-20

## Sample Receipt Checklist

**Work Order ID:** HS20080212 **Date/Time Received:** 06-Aug-2020 09:30

**Client Name:** Bhate Environmental **Received by:** Paresh M. Giga

| **Completed By:** | /S/ Jared R. Makan | 06-Aug-2020 16:39 | **Reviewed by:** | /S/ RJ Modashia | 07-Aug-2020 13:48 |
|---|---|---|---|---|---|
| | eSignature | Date/Time | | eSignature | Date/Time |

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:None |
| Samplers name present on COC? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Temperature(s)/Thermometer(s): | 1.5c u/c | | IR # 31 |
| Cooler(s)/Kit(s): | 45285 | | |
| Date/Time sample(s) sent to storage: | 08/06/2020 17:00 | | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia



Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
**GROUNDWATER TREATMENT PLANT**
**BI-WEEKLY SAMPLES**

Prepared By:
Scott Beesinger

P.O Number

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | Analyses: VOC | Analyses: CHLORIDE, SULFATE | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_080520 | Water | 08/05/20 / 14:00 | | 3 | 3 | | HCL | |
| LH18/24-SP650_080520 | Water | 08/05/20 / 14:00 | | 1 | | 1 | NONE | |
| Trip Blank | Water | 08/05/20 | | 2 | 2 | | HCL | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**HS20080212**
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Additional Remarks: **Standard TAT**

| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Beesinger | 08/05/20 | 14:30 | | | | | | | | | |

**For Lab Use Only**

| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| J. Mercado | 8/6/20 | 09.30 | | | | | | | |

Remarks: Cooler 45285 11231
Temp 1.5°C ok

(Word) S:\I-ees\Forms\Chain of Custody - BiWeekly

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

45285

**CUSTODY SEAL**

Date: 8/5/20 Time: 1430
Name: Scott Beesinger
Company: ENMTX

Seal Broken By:
Date: 08/06/20

45285

Must Deli
Time an

45285



# HS20080212 8260_W_DOD Raw Data

ALS WO# HS20080212

# MSVOA06 -Logbook

**Batch:** 41322 **Analyst:** Presenta Cabascango

**Date:** 08-03-2020 **Reviewer:**

**Method:** 8260 **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BFB | TUNE | 08-03-2020 11:16 am | 1.00 | 50 mL | 50 mL | X080301.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 2 | VSTD000.25 | ICAL1 | 08-03-2020 11:40 am | 1.00 | 50 mL | 50 mL | X080302.D | Liquid | Y | NA |
| | *0.10 uL cal std/100 mL DI* | | | | | | | | | |
| 3 | VSTD000.5 | ICAL2 | 08-03-2020 12:04 pm | 1.00 | 50 mL | 50 mL | X080303.D | Liquid | Y | NA |
| | *0.10 uL cal std/50 mL DI* | | | | | | | | | |
| 4 | VSTD001 | ICAL3 | 08-03-2020 12:52 pm | 1.00 | 50 mL | 50 mL | X080304.D | Liquid | Y | NA |
| | *0.20 uL cal std/50 mL DI* | | | | | | | | | |
| 5 | VSTD002 | ICAL4 | 08-03-2020 01:16 pm | 1.00 | 50 mL | 50 mL | X080305.D | Liquid | Y | NA |
| | *0.40 uL cal std/50 mL DI* | | | | | | | | | |
| 6 | VSTD005 | ICAL5 | 08-03-2020 01:40 pm | 1.00 | 50 mL | 50 mL | X080306.D | Liquid | Y | NA |
| | *1.0 uL cal std/50 mL DI* | | | | | | | | | |
| 7 | VSTD020 | ICAL6 | 08-03-2020 02:04 pm | 1.00 | 50 mL | 50 mL | X080307.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 8 | VSTD050 | ICAL7 | 08-03-2020 02:28 pm | 1.00 | 50 mL | 50 mL | X080308.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 9 | VSTD100 | ICAL8 | 08-03-2020 02:52 pm | 1.00 | 50 mL | 50 mL | X080309.D | Liquid | Y | NA |
| | *20 uL cal std/50 mL DI* | | | | | | | | | |
| 10 | VSTD150 | ICAL9 | 08-03-2020 03:16 pm | 1.00 | 50 mL | 50 mL | X080310.D | Liquid | Y | NA |
| | *30 uL cal std/50 mL DI* | | | | | | | | | |
| 11 | VSTD200 | ICAL | 08-03-2020 03:40 pm | 1.00 | 50 mL | 50 mL | X080311.D | Liquid | Y | NA |
| | *40 uL cal std/50 mL DI* | | | | | | | | | |
| 12 | BLANK | SAMP | 08-03-2020 04:04 pm | 1.00 | 50 mL | 50 mL | X080312.D | Liquid | Y | NA |
| 13 | BLANK | SAMP | 08-03-2020 04:28 pm | 1.00 | 50 mL | 50 mL | X080313.D | Liquid | Y | NA |
| 14 | ICV | CCV | 08-03-2020 04:51 pm | 1.00 | 50 mL | 50 mL | X080314.D | Liquid | Y | NA |
| | *10 uL ical std/50 mL DI* | | | | | | | | | |
| 15 | BLANK | SAMP | 08-03-2020 05:16 pm | 1.00 | 50 mL | 50 mL | X080315.D | Liquid | Y | NA |
| 16 | VLCSW-200803 | LCS | 08-03-2020 05:39 pm | 1.00 | 50 mL | 50 mL | X080316.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 17 | BLANK | SAMP | 08-03-2020 06:04 pm | 1.00 | 50 mL | 50 mL | X080317.D | Liquid | Y | NA |
| 18 | BLANK | SAMP | 08-03-2020 06:28 pm | 1.00 | 50 mL | 50 mL | X080318.D | Liquid | Y | NA |
| 19 | VBLKW-200803 | MBLK | 08-03-2020 06:52 pm | 1.00 | 50 mL | 50 mL | X080319.D | Liquid | Y | NA |
| 20 | HS20070575-13 | SAMP | 08-03-2020 07:16 pm | 1.00 | 50 mL | 50 mL | X080320.D | Liquid | Y | NA |
| 21 | HS20070575-14 | SAMP | 08-03-2020 07:40 pm | 1.00 | 50 mL | 50 mL | X080321.D | Liquid | Y | NA |
| 22 | HS20070575-15 | SAMP | 08-03-2020 08:03 pm | 1.00 | 50 mL | 50 mL | X080322.D | Liquid | Y | NA |
| 23 | HS20070575-16 | SAMP | 08-03-2020 08:27 pm | 1.00 | 50 mL | 50 mL | X080323.D | Liquid | Y | NA |
| 24 | HS20070984-02 | SAMP | 08-03-2020 08:51 pm | 1.00 | 50 mL | 50 mL | X080324.D | Liquid | Y | <2 |
| 25 | HS20070984-01 | SAMP | 08-03-2020 09:15 pm | 1.00 | 50 mL | 50 mL | X080325.D | Liquid | Y | <2 |
| 26 | HS20070984-01MS | MS | 08-03-2020 09:39 pm | 1.00 | 50 mL | 50 mL | X080326.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 27 | HS20070984-01MSD | MSD | 08-03-2020 10:04 pm | 1.00 | 50 mL | 50 mL | X080327.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 28 | CCV-END | CCV | 08-03-2020 10:27 pm | 1.00 | 50 mL | 50 mL | X080328.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |

# MSVOA06 -Logbook

| Chemical | Value |
|---|---|
| SURR SPK ID | 31106-38-06 |
| IS ID | 31106-38-06 |
| CAL STD ID | 31106-41-01/02 |
| BFB ID | 31106-38-06 |
| pH Paper | 634-64-10 |

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 50.00 | 49.92 | 100 | 80-120 |
| trans-1,3-Dichloroprope | 50.00 | 48.62 | 97 | 80-120 |
| 1,3-Dichlorobenzene | 50.00 | 47.73 | 95 | 80-120 |
| 2,2-Dichloropropane | 50.00 | 50.96 | 102 | 80-120 |
| 1,1-Dichloropropene | 50.00 | 48.93 | 98 | 80-120 |
| Dibromomethane | 50.00 | 48.38 | 97 | 80-120 |
| 1,2-Dibromoethane | 50.00 | 48.72 | 97 | 80-120 |
| trans-1,2-Dichloroethen | 50.00 | 48.97 | 98 | 80-120 |
| 1,1,1,2-Tetrachloroetha | 50.00 | 47.75 | 96 | 80-120 |
| 1,1,1-Trichloroethane | 50.00 | 48.17 | 96 | 80-120 |
| 1,1,2,2-Tetrachloroetha | 50.00 | 48.28 | 96 | 80-120 |
| 1,1,2-Trichloroethane | 50.00 | 47.70 | 95 | 80-120 |
| 1,1-Dichloroethane | 50.00 | 50.19 | 100 | 80-120 |
| 1,1-Dichloroethene | 50.00 | 51.26 | 102 | 80-120 |
| Trichloroethene | 50.00 | 50.56 | 101 | 80-120 |
| 1,2,3-Trichlorobenzene | 50.00 | 50.30 | 101 | 80-120 |
| Trichlorofluoromethane | 50.00 | 49.79 | 100 | 80-120 |
| 1,2,4-Trichlorobenzene | 50.00 | 50.13 | 100 | 80-120 |
| 1,2,4-Trimethylbenzene | 50.00 | 48.17 | 96 | 80-120 |
| Tetrachloroethene | 50.00 | 47.53 | 95 | 80-120 |
| 1,2-Dichlorobenzene | 50.00 | 47.04 | 94 | 80-120 |
| 1,2-Dichloroethane | 50.00 | 48.99 | 98 | 80-120 |
| 1,2-Dichloropropane | 50.00 | 50.31 | 101 | 80-120 |
| 1,3,5-Trimethylbenzene | 50.00 | 48.06 | 96 | 80-120 |
| 1,3-Dichloropropane | 50.00 | 48.77 | 98 | 80-120 |
| 1,4-Dichlorobenzene | 50.00 | 48.32 | 97 | 80-120 |
| Toluene | 50.00 | 48.26 | 96 | 80-120 |
| 2-Butanone | 100.00 | 104.88 | 105 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| 2-Chlorotoluene | 50.00 | 48.31 | 97 | 80-120 |
| 2-Hexanone | 100.00 | 95.30 | 95 | 80-120 |
| 4-Chlorotoluene | 50.00 | 48.17 | 96 | 80-120 |
| tert-Butylbenzene | 50.00 | 47.34 | 95 | 80-120 |
| 4-Methyl-2-Pentanone | 100.00 | 93.57 | 94 | 80-120 |
| Acetone | 100.00 | 102.27 | 102 | 80-120 |
| Benzene | 50.00 | 49.44 | 99 | 80-120 |
| Bromobenzene | 50.00 | 47.40 | 95 | 80-120 |
| Bromochloromethane | 50.00 | 47.01 | 94 | 80-120 |
| Bromodichloromethane | 50.00 | 48.72 | 97 | 80-120 |
| Bromoform | 50.00 | 48.32 | 97 | 80-120 |
| Bromomethane | 50.00 | 53.47 | 107 | 80-120 |
| Carbon Disulfide | 100.00 | 101.43 | 101 | 80-120 |
| Carbon Tetrachloride | 50.00 | 47.96 | 96 | 80-120 |
| Chlorobenzene | 50.00 | 48.92 | 98 | 80-120 |
| Chloroethane | 50.00 | 51.05 | 102 | 80-120 |
| Chloroform | 50.00 | 47.94 | 96 | 80-120 |
| Chloromethane | 50.00 | 49.31 | 99 | 80-120 |
| cis-1,2-Dichloroethene | 50.00 | 48.89 | 98 | 80-120 |
| Dibromochloromethane | 50.00 | 47.41 | 95 | 80-120 |
| Dichlorodifluoromethane | 50.00 | 50.62 | 101 | 80-120 |
| Ethylbenzene | 50.00 | 48.65 | 97 | 80-120 |
| Hexachlorobutadiene | 50.00 | 48.15 | 96 | 80-120 |
| Isopropylbenzene | 50.00 | 48.56 | 97 | 80-120 |
| m,p-Xylenes | 100.00 | 97.74 | 98 | 80-120 |
| Methylene Chloride | 50.00 | 49.00 | 98 | 80-120 |
| n-Butylbenzene | 50.00 | 49.13 | 98 | 80-120 |
| n-Propylbenzene | 50.00 | 48.15 | 96 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| Naphthalene | 50.00 | 53.39 | 107 | 80-120 |
| o-Xylene | 50.00 | 48.76 | 98 | 80-120 |
| sec-Butylbenzene | 50.00 | 47.89 | 96 | 80-120 |
| Styrene | 50.00 | 49.51 | 99 | 80-120 |
| Vinyl Chloride | 50.00 | 50.76 | 102 | 80-120 |
| 1,2,3-Trichloropropane | 50.00 | 47.16 | 94 | 80-120 |
| p-Isopropyltoluene | 50.00 | 48.19 | 96 | 80-120 |
| 1,2-Dibromo-3-Chloropro | 50.00 | 47.23 | 94 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

# FORM 5
## VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Lab File ID: X080301 BFB Injection Date: 08/03/20

Instrument ID: VOA6 BFB Injection Time: 1116

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 24.4 |
| 75 | 30.0 - 60.0% of mass 95 | 50.1 |
| 95 | Base Peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.4 |
| 173 | Less than 2.0% of mass 174 | 0.4 ( 0.6)1 |
| 174 | Greater than 50.0% of mass 95 | 67.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.2 ( 7.8)1 |
| 176 | 95.0 - 101.0% of mass 174 | 64.3 ( 95.6)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 7.2)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD000.25 | VSTD000.25 | X080302 | 08/03/20 | 1140 |
| 02 | VSTD000.5 | VSTD000.5 | X080303 | 08/03/20 | 1204 |
| 03 | VSTD001 | VSTD001 | X080304 | 08/03/20 | 1252 |
| 04 | VSTD002 | VSTD002 | X080305 | 08/03/20 | 1316 |
| 05 | VSTD005 | VSTD005 | X080306 | 08/03/20 | 1340 |
| 06 | VSTD020 | VSTD020 | X080307 | 08/03/20 | 1404 |
| 07 | VSTD050 | VSTD050 | X080308 | 08/03/20 | 1428 |
| 08 | VSTD100 | VSTD100 | X080309 | 08/03/20 | 1452 |
| 09 | VSTD150 | VSTD150 | X080310 | 08/03/20 | 1516 |
| 10 | VSTD200 | VSTD200 | X080311 | 08/03/20 | 1540 |
| 11 | ICV | ICV | X080314 | 08/03/20 | 1651 |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
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| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | | 0.618 | 0.462 | 0.504 | 0.521 | 0.500 |
| trans-1,3-Dichloropropene | | 0.569 | 0.433 | 0.473 | 0.486 | 0.461 |
| 1,3-Dichlorobenzene | | 1.974 | 1.344 | 1.701 | 1.505 | 1.492 |
| 2,2-Dichloropropane | | 0.884 | 0.578 | 0.720 | 0.734 | 0.705 |
| 1,1-Dichloropropene | | 0.496 | 0.398 | 0.426 | 0.372 | 0.402 |
| Dibromomethane | | 0.256 | 0.205 | 0.209 | 0.218 | 0.208 |
| 1,2-Dibromoethane | | 0.419 | 0.349 | 0.380 | 0.366 | 0.356 |
| trans-1,2-Dichloroethene | | 0.547 | 0.446 | 0.452 | 0.452 | 0.455 |
| 1,1,1,2-Tetrachloroethane | | 0.480 | 0.340 | 0.394 | 0.373 | 0.361 |
| 1,1,1-Trichloroethane | | 0.921 | 0.718 | 0.732 | 0.745 | 0.744 |
| 1,1,2,2-Tetrachloroethane | | 3887 | 5190 | 17450 | 30714 | 110449 |
| 1,1,2-Trichloroethane | | 0.347 | 0.256 | 0.311 | 0.288 | 0.272 |
| 1,1-Dichloroethane | | 1.097 | 0.797 | 0.930 | 1.000 | 0.970 |
| 1,1-Dichloroethene | | 0.394 | 0.380 | 0.377 | 0.362 | 0.406 |
| Trichloroethene | | 0.395 | 0.297 | 0.346 | 0.339 | 0.352 |
| 1,2,3-Trichlorobenzene | | 0.182 | 0.144 | 0.165 | 0.146 | 0.146 |
| Trichlorofluoromethane | | 0.868 | 0.679 | 0.666 | 0.642 | 0.726 |
| 1,2,4-Trichlorobenzene | | 1350 | 1766 | 5020 | 11491 | 44232 |
| 1,2,4-Trimethylbenzene | | 3.392 | 2.228 | 2.748 | 2.560 | 2.560 |
| Tetrachloroethene | | 0.427 | 0.296 | 0.290 | 0.297 | 0.311 |
| 1,2-Dichlorobenzene | | 1.790 | 1.277 | 1.567 | 1.398 | 1.337 |
| 1,2-Dichloroethane | | 0.539 | 0.434 | 0.491 | 0.490 | 0.473 |
| 1,2-Dichloropropane | | 0.391 | 0.323 | 0.357 | 0.377 | 0.365 |
| 1,3,5-Trimethylbenzene | | 3.105 | 2.294 | 2.704 | 2.466 | 2.554 |
| 1,3-Dichloropropane | | 0.666 | 0.506 | 0.557 | 0.580 | 0.549 |
| 1,4-Dichlorobenzene | | 1.897 | 1.388 | 1.694 | 1.489 | 1.472 |
| Toluene | | 1.857 | 1.349 | 1.452 | 1.443 | 1.418 |
| 2-Butanone | | 0.257 | 0.195 | 0.230 | 0.238 | 0.240 |
| 2-Chlorotoluene | | 2.466 | 1.986 | 2.291 | 2.161 | 2.080 |
| 2-Hexanone | | 0.338 | 0.248 | 0.398 | 0.323 | 0.295 |
| 4-Chlorotoluene | | 3.038 | 2.301 | 2.587 | 2.471 | 2.409 |
| tert-Butylbenzene | | 2.850 | 1.958 | 2.274 | 2.043 | 2.244 |
| 4-Methyl-2-Pentanone | | 0.544 | 0.403 | 0.549 | 0.467 | 0.426 |
| Acetone | | 6244 | 5964 | 9756 | 22417 | 71506 |
| Benzene | | 1.472 | 1.124 | 1.176 | 1.206 | 1.207 |
| Bromobenzene | | 1.240 | 0.860 | 1.042 | 0.964 | 0.923 |
| Bromochloromethane | | 0.351 | 0.320 | 0.325 | 0.290 | 0.282 |
| Bromodichloromethane | | 0.576 | 0.402 | 0.436 | 0.428 | 0.426 |
| Bromoform | | 0.354 | 0.228 | 0.306 | 0.267 | 0.255 |
| Bromomethane | | 2498 | 4659 | 9294 | 19557 | 69521 |
| Carbon Disulfide | | 1.479 | 1.134 | 1.100 | 1.117 | 1.204 |
| Carbon Tetrachloride | | 0.528 | 0.430 | 0.420 | 0.411 | 0.425 |
| Chlorobenzene | | 1.247 | 0.874 | 0.972 | 0.966 | 0.933 |
| Chloroethane | | 0.430 | 0.304 | 0.328 | 0.327 | 0.355 |

# FORM 6
# VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| Chloroform | | 1.068 | 0.851 | 0.891 | 0.887 | 0.861 |
| Chloromethane | | 0.888 | 0.598 | 0.694 | 0.698 | 0.666 |
| cis-1,2-Dichloroethene | | 0.641 | 0.522 | 0.524 | 0.547 | 0.541 |
| Dibromochloromethane | | 0.509 | 0.342 | 0.434 | 0.394 | 0.374 |
| Dichlorodifluoromethane | | 0.532 | 0.464 | 0.451 | 0.391 | 0.476 |
| Ethylbenzene | | 0.637 | 0.480 | 0.472 | 0.483 | 0.491 |
| Hexachlorobutadiene | | 0.235 | 0.256 | 0.314 | 0.247 | 0.306 |
| Isopropylbenzene | | 1.798 | 1.398 | 1.414 | 1.374 | 1.464 |
| m,p-Xylenes | | 0.741 | 0.568 | 0.590 | 0.595 | 0.593 |
| Methylene Chloride | | 13006 | 14851 | 20318 | 36047 | 113086 |
| n-Butylbenzene | | 2.783 | 1.821 | 2.137 | 1.869 | 2.205 |
| n-Propylbenzene | | 4.521 | 3.069 | 3.484 | 3.267 | 3.554 |
| Naphthalene | | 1670 | 3475 | 6258 | 16632 | 55065 |
| o-Xylene | | 0.741 | 0.556 | 0.581 | 0.583 | 0.578 |
| sec-Butylbenzene | | 3.747 | 2.660 | 2.985 | 2.618 | 3.017 |
| Styrene | | 1.248 | 0.896 | 1.106 | 1.036 | 1.008 |
| Vinyl Chloride | | 0.723 | 0.546 | 0.596 | 0.557 | 0.633 |
| 1,2,3-Trichloropropane | | 0.874 | 0.599 | 0.917 | 0.732 | 0.691 |
| p-Isopropyltoluene | | 3.431 | 2.390 | 2.780 | 2.421 | 2.730 |
| 1,2-Dibromo-3-Chloropropane | | 394 | 461 | 1468 | 2687 | 9119 |
| 1,2-Dichloroethane-d4 | | 0.669 | 0.575 | 0.501 | 0.605 | 0.564 |
| Dibromofluoromethane | | 0.528 | 0.509 | 0.451 | 0.514 | 0.476 |
| Toluene-d8 | | 1.258 | 1.357 | 1.124 | 1.218 | 1.201 |
| 4-Bromofluorobenzene | | 0.521 | 0.535 | 0.447 | 0.454 | 0.451 |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.514 | 0.535 | 0.544 | 0.539 |
| trans-1,3-Dichloropropene | 0.458 | 0.478 | 0.490 | 0.492 |
| 1,3-Dichlorobenzene | 1.504 | 1.545 | 1.533 | 1.546 |
| 2,2-Dichloropropane | 0.684 | 0.700 | 0.707 | 0.706 |
| 1,1-Dichloropropene | 0.404 | 0.423 | 0.427 | 0.433 |
| Dibromomethane | 0.210 | 0.214 | 0.219 | 0.218 |
| 1,2-Dibromoethane | 0.353 | 0.355 | 0.359 | 0.360 |
| trans-1,2-Dichloroethene | 0.456 | 0.463 | 0.472 | 0.475 |
| 1,1,1,2-Tetrachloroethane | 0.365 | 0.371 | 0.370 | 0.370 |
| 1,1,1-Trichloroethane | 0.735 | 0.763 | 0.781 | 0.792 |
| 1,1,2,2-Tetrachloroethane | 259509 | 505068 | 753290 | 990670 |
| 1,1,2-Trichloroethane | 0.268 | 0.271 | 0.272 | 0.274 |
| 1,1-Dichloroethane | 0.970 | 0.993 | 1.008 | 1.023 |
| 1,1-Dichloroethene | 0.398 | 0.410 | 0.417 | 0.422 |
| Trichloroethene | 0.353 | 0.369 | 0.366 | 0.371 |
| 1,2,3-Trichlorobenzene | 0.145 | 0.122 | 0.160 | 0.144 |
| Trichlorofluoromethane | 0.737 | 0.755 | 0.769 | 0.784 |
| 1,2,4-Trichlorobenzene | 104906 | 167486 | 308625 | 360898 |
| 1,2,4-Trimethylbenzene | 2.529 | 2.694 | 2.637 | 2.691 |
| Tetrachloroethene | 0.300 | 0.313 | 0.309 | 0.317 |
| 1,2-Dichlorobenzene | 1.334 | 1.330 | 1.343 | 1.352 |
| 1,2-Dichloroethane | 0.471 | 0.484 | 0.487 | 0.487 |
| 1,2-Dichloropropane | 0.363 | 0.375 | 0.376 | 0.377 |
| 1,3,5-Trimethylbenzene | 2.500 | 2.644 | 2.594 | 2.653 |
| 1,3-Dichloropropane | 0.546 | 0.548 | 0.552 | 0.550 |
| 1,4-Dichlorobenzene | 1.475 | 1.522 | 1.516 | 1.533 |
| Toluene | 1.396 | 1.415 | 1.400 | 1.412 |
| 2-Butanone | 0.250 | 0.260 | 0.268 | 0.268 |
| 2-Chlorotoluene | 2.065 | 2.146 | 2.149 | 2.179 |
| 2-Hexanone | 0.295 | 0.302 | 0.311 | 0.315 |
| 4-Chlorotoluene | 2.381 | 2.518 | 2.483 | 2.523 |
| tert-Butylbenzene | 2.160 | 2.278 | 2.260 | 2.322 |
| 4-Methyl-2-Pentanone | 0.428 | 0.442 | 0.452 | 0.454 |
| Acetone | 170545 | 340970 | 481556 | 618700 |
| Benzene | 1.206 | 1.251 | 1.258 | 1.266 |
| Bromobenzene | 0.915 | 0.953 | 0.945 | 0.960 |
| Bromochloromethane | 0.281 | 0.290 | 0.290 | 0.283 |
| Bromodichloromethane | 0.430 | 0.446 | 0.453 | 0.453 |
| Bromoform | 0.264 | 0.270 | 0.276 | 0.278 |
| Bromomethane | 165840 | 329463 | 475898 | 632580 |
| Carbon Disulfide | 1.211 | 1.252 | 1.274 | 1.300 |
| Carbon Tetrachloride | 0.431 | 0.450 | 0.456 | 0.466 |
| Chlorobenzene | 0.939 | 0.964 | 0.959 | 0.965 |
| Chloroethane | 0.352 | 0.360 | 0.367 | 0.367 |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| Chloroform | 0.849 | 0.867 | 0.878 | 0.887 |
| Chloromethane | 0.680 | 0.679 | 0.695 | 0.720 |
| cis-1,2-Dichloroethene | 0.529 | 0.542 | 0.551 | 0.556 |
| Dibromochloromethane | 0.381 | 0.388 | 0.389 | 0.394 |
| Dichlorodifluoromethane | 0.490 | 0.516 | 0.534 | 0.549 |
| Ethylbenzene | 0.489 | 0.499 | 0.498 | 0.504 |
| Hexachlorobutadiene | 0.290 | 0.222 | 0.292 | 0.253 |
| Isopropylbenzene | 1.441 | 1.495 | 1.474 | 1.509 |
| m,p-Xylenes | 0.588 | 0.608 | 0.602 | 0.610 |
| Methylene Chloride | 256910 | 487953 | 693942 | 915440 |
| n-Butylbenzene | 2.171 | 2.303 | 2.281 | 2.331 |
| n-Propylbenzene | 3.462 | 3.672 | 3.652 | 3.736 |
| Naphthalene | 137510 | 244768 | 435994 | 531999 |
| o-Xylene | 0.582 | 0.593 | 0.590 | 0.594 |
| sec-Butylbenzene | 2.919 | 3.112 | 3.100 | 3.180 |
| Styrene | 1.015 | 1.015 | 1.027 | 1.022 |
| Vinyl Chloride | 0.647 | 0.674 | 0.698 | 0.718 |
| 1,2,3-Trichloropropane | 0.684 | 0.691 | 0.706 | 0.692 |
| p-Isopropyltoluene | 2.652 | 2.848 | 2.797 | 2.868 |
| 1,2-Dibromo-3-Chloropropane | 22898 | 44175 | 68839 | 87710 |
| 1,2-Dichloroethane-d4 | 0.554 | 0.583 | 0.594 | 0.593 |
| Dibromofluoromethane | 0.468 | 0.486 | 0.491 | 0.494 |
| Toluene-d8 | 1.182 | 1.197 | 1.182 | 1.196 |
| 4-Bromofluorobenzene | 0.446 | 0.454 | 0.449 | 0.453 |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

| COMPOUND | CURVE | COEFFICENTS A0 | A1 | A2 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | AVRG | | 0.52631108 | | 8.055 | 15.000 |
| trans-1,3-Dichloropropene | AVRG | | 0.48238639 | | 7.750 | 15.000 |
| 1,3-Dichlorobenzene | AVRG | | 1.57158280 | | 11.203 | 15.000 |
| 2,2-Dichloropropane | AVRG | | 0.71314301 | | 10.968 | 15.000 |
| 1,1-Dichloropropene | AVRG | | 0.42016302 | | 8.160 | 15.000 |
| Dibromomethane | AVRG | | 0.21759689 | | 7.106 | 15.000 |
| 1,2-Dibromoethane | AVRG | | 0.36652489 | | 5.926 | 15.000 |
| trans-1,2-Dichloroethene | AVRG | | 0.46872891 | | 6.594 | 15.000 |
| 1,1,1,2-Tetrachloroethane | AVRG | | 0.38060507 | | 10.480 | 15.000 |
| 1,1,1-Trichloroethane | AVRG | | 0.77016692 | | 7.945 | 15.000 |
| 1,1,2,2-Tetrachloroethane | LINR | 7.722e-003 | 1.23187232 | | 0.9994783 | 0.9900000 |
| 1,1,2-Trichloroethane | AVRG | | 0.28450466 | | 9.857 | 15.000 |
| 1,1-Dichloroethane | AVRG | | 0.97667293 | | 8.336 | 15.000 |
| 1,1-Dichloroethene | AVRG | | 0.39616599 | | 5.052 | 15.000 |
| Trichloroethene | AVRG | | 0.35435187 | | 7.661 | 15.000 |
| 1,2,3-Trichlorobenzene | AVRG | | 0.15046244 | | 11.203 | 15.000 |
| Trichlorofluoromethane | AVRG | | 0.73636136 | | 9.380 | 15.000 |
| 1,2,4-Trichlorobenzene | 2ORDR | -1.1e-002 | 3.58766703 | -0.2952283 | 0.9906334 | 0.9900000 |
| 1,2,4-Trimethylbenzene | AVRG | | 2.67111779 | | 11.604 | 15.000 |
| Tetrachloroethene | AVRG | | 0.31784777 | | 13.220 | 15.000 |
| 1,2-Dichlorobenzene | AVRG | | 1.41425088 | | 11.530 | 15.000 |
| 1,2-Dichloroethane | AVRG | | 0.48410523 | | 5.599 | 15.000 |
| 1,2-Dichloropropane | AVRG | | 0.36695807 | | 5.225 | 15.000 |
| 1,3,5-Trimethylbenzene | AVRG | | 2.61272360 | | 8.480 | 15.000 |
| 1,3-Dichloropropane | AVRG | | 0.56175693 | | 7.766 | 15.000 |
| 1,4-Dichlorobenzene | AVRG | | 1.55419344 | | 9.792 | 15.000 |
| Toluene | AVRG | | 1.46017119 | | 10.382 | 15.000 |
| 2-Butanone | AVRG | | 0.24511086 | | 9.425 | 15.000 |
| 2-Chlorotoluene | AVRG | | 2.16926792 | | 6.442 | 15.000 |
| 2-Hexanone | AVRG | | 0.31389491 | | 12.771 | 15.000 |
| 4-Chlorotoluene | AVRG | | 2.52365549 | | 8.359 | 15.000 |
| tert-Butylbenzene | AVRG | | 2.26526404 | | 11.041 | 15.000 |
| 4-Methyl-2-Pentanone | AVRG | | 0.46275648 | | 11.014 | 15.000 |
| Acetone | LINR | -2.14e-002 | 5.79885157 | | 0.9996587 | 0.9900000 |
| Benzene | AVRG | | 1.24051491 | | 7.846 | 15.000 |
| Bromobenzene | AVRG | | 0.97809166 | | 11.206 | 15.000 |
| Bromochloromethane | AVRG | | 0.30138449 | | 8.187 | 15.000 |
| Bromodichloromethane | AVRG | | 0.45010731 | | 11.069 | 15.000 |
| Bromoform | AVRG | | 0.27741236 | | 12.753 | 15.000 |
| Bromomethane | LINR | 1.309e-002 | 2.86760046 | | 0.9995243 | 0.9900000 |
| Carbon Disulfide | AVRG | | 1.23004403 | | 9.502 | 15.000 |
| Carbon Tetrachloride | AVRG | | 0.44659821 | | 7.968 | 15.000 |
| Chlorobenzene | AVRG | | 0.97993823 | | 10.682 | 15.000 |
| Chloroethane | AVRG | | 0.35440033 | | 9.973 | 15.000 |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

| COMPOUND | CURVE | COEFFICENTS A0 | A1 | A2 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| Chloroform | AVRG | | 0.89329334 | | 7.561 | 15.000 |
| Chloromethane | AVRG | | 0.70202961 | | 11.036 | 15.000 |
| cis-1,2-Dichloroethene | AVRG | | 0.55037038 | | 6.534 | 15.000 |
| Dibromochloromethane | AVRG | | 0.40050806 | | 11.789 | 15.000 |
| Dichlorodifluoromethane | AVRG | | 0.48936200 | | 10.210 | 15.000 |
| Ethylbenzene | AVRG | | 0.50598922 | | 9.941 | 15.000 |
| Hexachlorobutadiene | AVRG | | 0.26843621 | | 12.210 | 15.000 |
| Isopropylbenzene | AVRG | | 1.48528003 | | 8.449 | 15.000 |
| m,p-Xylenes | AVRG | | 0.61061949 | | 8.238 | 15.000 |
| Methylene Chloride | LINR | -2.76e-002 | 1.99382468 | | 0.9998680 | 0.9900000 |
| n-Butylbenzene | AVRG | | 2.21122856 | | 12.709 | 15.000 |
| n-Propylbenzene | AVRG | | 3.60198062 | | 11.195 | 15.000 |
| Naphthalene | 2ORDR | -2.54e-003 | 2.59173673 | -0.2152357 | 0.9947090 | 0.9900000 |
| o-Xylene | AVRG | | 0.59981322 | | 9.042 | 15.000 |
| sec-Butylbenzene | AVRG | | 3.03754823 | | 10.849 | 15.000 |
| Styrene | AVRG | | 1.04152018 | | 9.045 | 15.000 |
| Vinyl Chloride | AVRG | | 0.64360842 | | 10.284 | 15.000 |
| 1,2,3-Trichloropropane | AVRG | | 0.73186776 | | 13.664 | 15.000 |
| p-Isopropyltoluene | AVRG | | 2.76878531 | | 10.947 | 15.000 |
| 1,2-Dibromo-3-Chloropropane | LINR | 1.588e-002 | 13.7625896 | | 0.9986959 | 0.9900000 |
| 1,2-Dichloroethane-d4 | AVRG | | 0.58201048 | | 7.676 | 15.000 |
| Dibromofluoromethane | AVRG | | 0.49101450 | | 4.895 | 15.000 |
| Toluene-d8 | AVRG | | 1.21277844 | | 5.331 | 15.000 |
| 4-Bromofluorobenzene | AVRG | | 0.46785309 | | 7.389 | 15.000 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D



Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

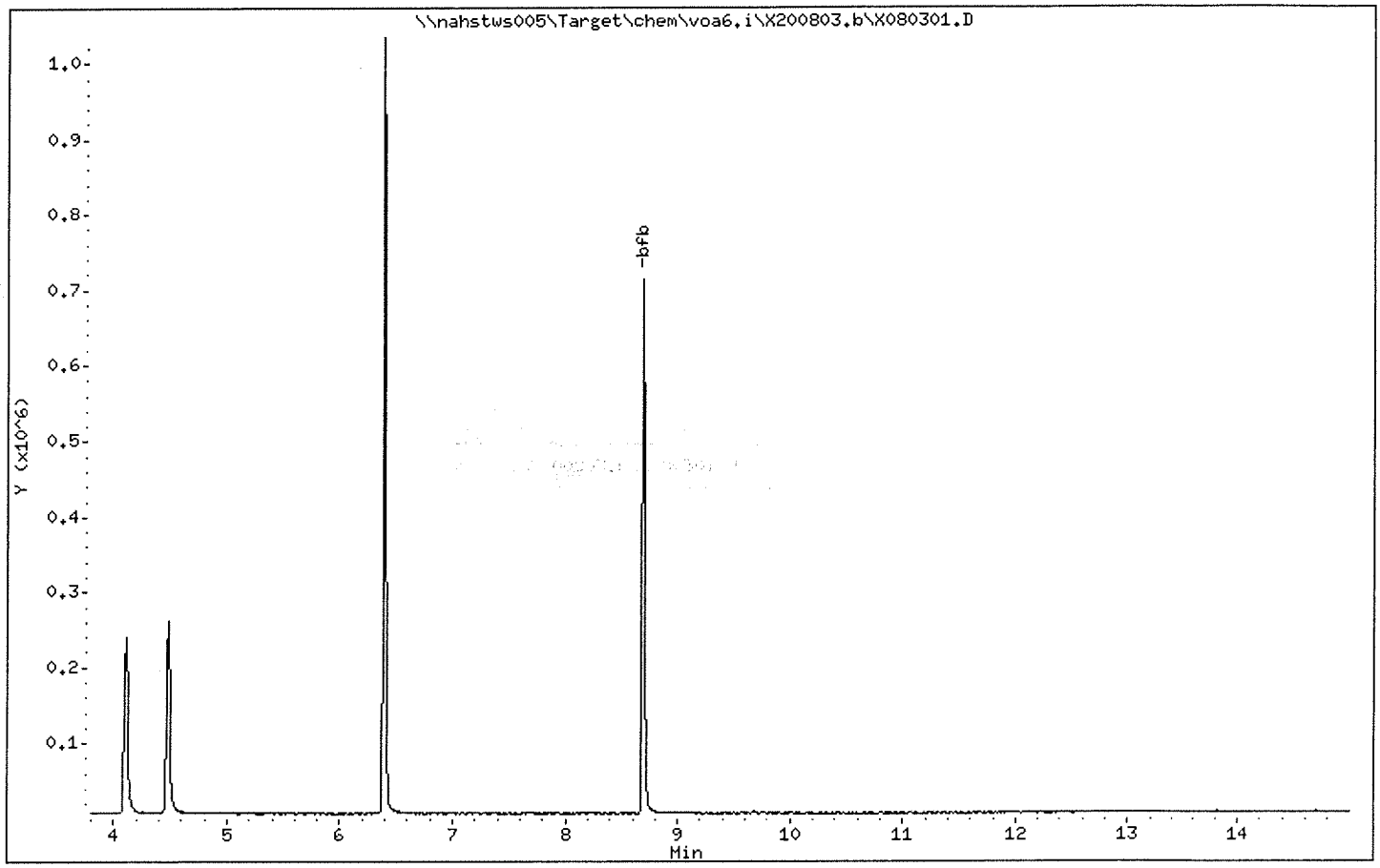
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

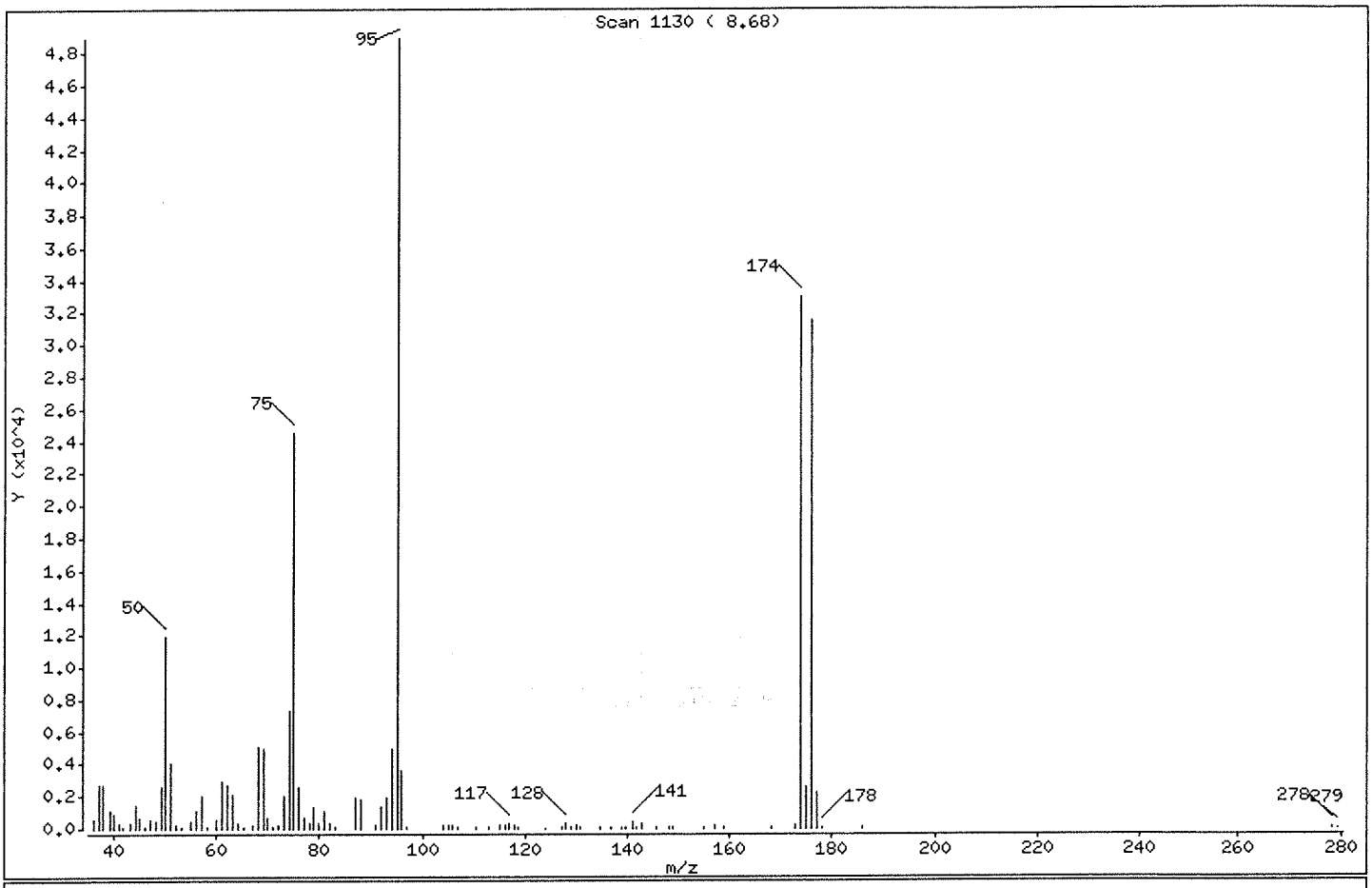
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 24.40 |
| 75 | 30.00 - 60.00% of mass 95 | 50.11 |
| 96 | 5.00 - 9.00% of mass 95 | 7.35 |
| 173 | Less than 2.00% of mass 174 | 0.43 ( 0.63) |
| 174 | Greater than 50.00% of mass 95 | 67.28 |
| 175 | 5.00 - 9.00% of mass 174 | 5.25 ( 7.80) |
| 176 | 95.00 - 101.00% of mass 174 | 64.32 ( 95.60) |
| 177 | 5.00 - 9.00% of mass 176 | 4.66 ( 7.25) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D

Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X080301.D
Spectrum: Scan 1130 ( 8.68)
Location of Maximum: 95.00
Number of points: 94

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 531 | 62.00 | 2722 | 92.00 | 1357 | 136.80 | 58 |
| 37.00 | 2708 | 63.00 | 2090 | 93.00 | 1937 | 139.00 | 114 |
| 38.00 | 2689 | 64.10 | 333 | 94.00 | 5003 | 139.80 | 109 |
| 39.10 | 1102 | 65.10 | 152 | 95.00 | 48920 | 141.00 | 492 |
| 39.90 | 914 | 67.00 | 172 | 96.00 | 3597 | 141.70 | 68 |
| 41.00 | 390 | 68.00 | 5065 | 97.10 | 159 | 142.90 | 325 |
| 41.80 | 147 | 69.00 | 4934 | 104.10 | 247 | 145.60 | 116 |
| 43.10 | 318 | 70.00 | 640 | 105.00 | 192 | 148.00 | 163 |
| 44.10 | 1442 | 71.10 | 132 | 105.90 | 238 | 149.00 | 64 |
| 44.90 | 624 | 71.90 | 198 | 107.00 | 73 | 155.00 | 128 |
| 46.10 | 63 | 73.00 | 2073 | 110.60 | 59 | 156.90 | 179 |
| 47.00 | 559 | 74.00 | 7325 | 113.00 | 90 | 159.00 | 102 |
| 48.00 | 397 | 75.00 | 24512 | 114.90 | 227 | 168.00 | 114 |
| 49.10 | 2563 | 76.00 | 2607 | 116.00 | 174 | 172.90 | 208 |
| 50.00 | 11935 | 76.90 | 632 | 116.80 | 351 | 173.90 | 32912 |
| 51.00 | 4006 | 78.00 | 348 | 117.80 | 175 | 174.90 | 2566 |
| 52.10 | 210 | 78.90 | 1387 | 118.70 | 154 | 175.90 | 31464 |
| 53.00 | 122 | 79.90 | 370 | 123.90 | 56 | 176.90 | 2280 |
| 55.00 | 461 | 80.90 | 1139 | 127.10 | 81 | 178.00 | 150 |
| 56.10 | 1076 | 81.90 | 296 | 127.90 | 291 | 186.00 | 89 |
| 57.00 | 2018 | 82.90 | 133 | 128.80 | 113 | 277.90 | 149 |
| 58.20 | 143 | 87.00 | 1966 | 129.90 | 205 | 279.20 | 55 |
| 60.00 | 526 | 87.90 | 1834 | 130.90 | 98 | | |
| 61.00 | 2907 | 91.00 | 222 | 134.80 | 63 | | |

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 03-AUG-2020 11:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 572408 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 867920 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 763638 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 355732 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 1662 | 0.25000 | 0.29(a) |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.490 | 4.490 | (1.072) | 2175 | 0.25000 | 0.32(Ta) |
| $ | 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 6945 | 0.25000 | 0.37(a) |
| $ | 69 4-Bromofluorobenzene | 95 | 8.702 | 8.702 | (1.134) | 3200 | 0.25000 | 0.44(aM) |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 1428 | 0.25000 | 0.24(a) |
| | 31 1,1,1-Trichloroethane | 97 | 4.096 | 4.096 | (0.978) | 2319 | 0.25000 | 0.26(a) |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 1974 | 0.25000 | 0.72(aM) |
| | 53 1,1,2-Trichloroethane | 83 | 6.854 | 6.854 | (0.894) | 1511 | 0.25000 | 0.34(aM) |
| | 22 1,1-Dichloroethane | 63 | 2.936 | 2.936 | (0.701) | 3028 | 0.25000 | 0.27(a) |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 1378 | 0.25000 | 0.30(a) |
| | 32 1,1-Dichloropropene | 75 | 4.297 | 4.297 | (0.865) | 2193 | 0.25000 | 0.30(a) |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.768 | 11.768 | (1.217) | 168 | 0.25000 | 0.15(aM) |
| | 71 1,2,3-Trichloropropane | 75 | 8.874 | 8.874 | (0.918) | 1435 | 0.25000 | 0.27(aM) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.374 | 11.374 | (1.176) | 428 | 0.25000 | (aM) |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 5138 | 0.25000 | 0.27(a) |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.686 | 10.686 | (1.105) | 50 | 0.25000 | 0.89(aM) |
| | 57 1,2-Dibromoethane | 107 | 7.277 | 7.277 | (0.949) | 1365 | 0.25000 | 0.24(a) |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 2418 | 0.25000 | 0.24(a) |

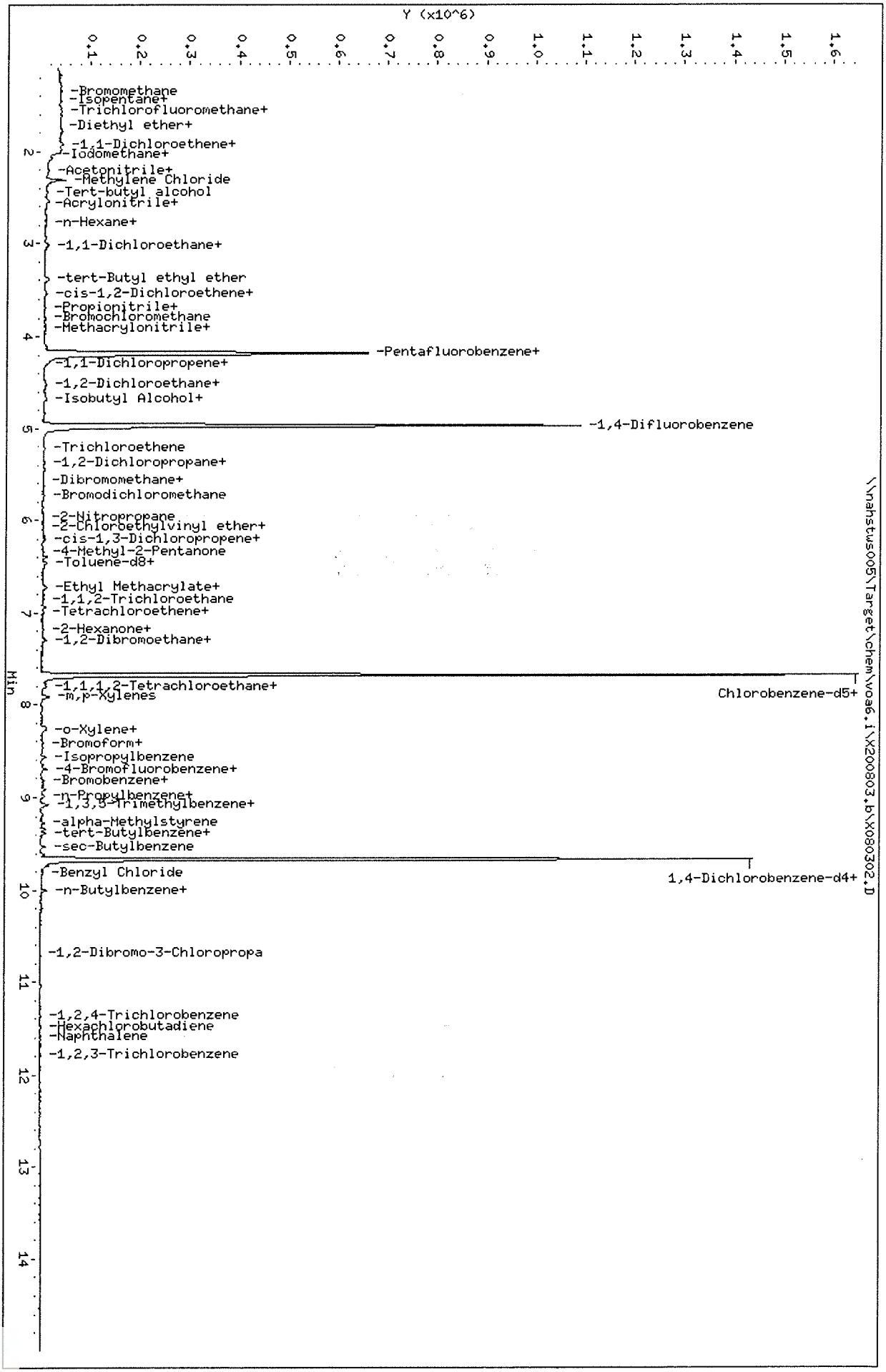
Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 2225 | 0.25000 | 0.26 (a) |
| 42 | 1,2-Dichloropropane | 63 | 5.450 | 5.450 | (1.097) | 1294 | 0.25000 | 0.20 (aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 4991 | 0.25000 | 0.26 (a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 2610 | 0.25000 | 0.23 (a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 2288 | 0.25000 | 0.26 (aM) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 3060 | 0.25000 | 0.27 (a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 2227 | 0.25000 | 0.27 (aM) |
| 24 | 2-Butanone | 43 | 3.638 | 3.638 | (0.868) | 1048 | 0.50000 | 0.37 (aM) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 4316 | 0.25000 | 0.27 (a) |
| 52 | 2-Hexanone | 43 | 7.112 | 7.112 | (0.927) | 2498 | 0.50000 | 0.52 (a) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 4822 | 0.25000 | 0.26 (a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 5222 | 0.25000 | 0.26 (a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 3501 | 0.50000 | 0.49 (a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 4869 | 0.50000 | 1.39 (aM) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 5575 | 0.25000 | 0.25 (a) |
| 74 | Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 1749 | 0.25000 | 0.25 (a) |
| 29 | Bromochloromethane | 128 | 3.795 | 3.795 | (0.906) | 1013 | 0.25000 | 0.29 (aM) |
| 39 | Bromodichloromethane | 83 | 5.737 | 5.737 | (1.154) | 2345 | 0.25000 | 0.30 (aM) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 1002 | 0.25000 | 0.23 (aM) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 1280 | 0.25000 | 0.97 (aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 6971 | 0.50000 | 0.49 (a) |
| 34 | Carbon Tetrachloride | 117 | 4.275 | 4.275 | (0.860) | 2189 | 0.25000 | 0.28 (a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 4245 | 0.25000 | 0.28 (a) |
| 7 | Chloroethane | 64 | 1.410 | 1.410 | (0.337) | 1194 | 0.25000 | 0.29 (aM) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 2183 | 0.25000 | 0.21 (a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 2410 | 0.25000 | 0.29 (a) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.545 | 3.545 | (0.846) | 1634 | 0.25000 | 0.25 (a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 2355 | 0.25000 | 0.25 (a) |
| 55 | Dibromochloromethane | 129 | 7.183 | 7.183 | (0.937) | 1646 | 0.25000 | 0.26 (a) |
| 44 | Dibromomethane | 93 | 5.565 | 5.565 | (1.120) | 1127 | 0.25000 | 0.29 (a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 1555 | 0.25000 | 0.27 (aM) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 2026 | 0.25000 | 0.26 (aM) |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 351 | 0.25000 | 0.18 (aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 5606 | 0.25000 | 0.24 (a) |
| 62 | m,p-Xylenes | 106 | 7.914 | 7.914 | (1.032) | 4680 | 0.50000 | 0.50 (a) |
| 17 | Methylene Chloride | 84 | 2.313 | 2.313 | (0.552) | 13192 | 0.25000 | 0.91 (aM) |
| 87 | n-Butylbenzene | 91 | 10.006 | 10.006 | (1.035) | 4073 | 0.25000 | 0.25 (a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 6307 | 0.25000 | 0.24 (a) |
| 92 | Naphthalene | 128 | 11.589 | 11.589 | (1.199) | 698 | 0.25000 | 0.12 (aM) |
| 63 | o-Xylene | 106 | 8.251 | 8.251 | (1.076) | 2471 | 0.25000 | 0.26 (a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 5521 | 0.25000 | 0.25 (a) |
| 64 | Styrene | 104 | 8.272 | 8.272 | (1.078) | 3575 | 0.25000 | 0.22 (a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 4130 | 0.25000 | 0.25 (a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 1260 | 0.25000 | 0.25 (a) |
| 50 | Toluene | 91 | 6.460 | 6.460 | (0.842) | 6876 | 0.25000 | 0.30 (aM) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.542 | 2.542 | (0.607) | 1215 | 0.25000 | 0.22 (aM) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 2328 | 0.25000 | 0.27 (aM) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 1542 | 0.25000 | 0.25 (a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 1948 | 0.25000 | 0.23 (a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 1889 | 0.25000 | 0.25 (a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Report Date: 22-Aug-2020 11:54

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080302.D
Date : 03-AUG-2020 11:40
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-AUG-2020 12:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 11:40 Cal File: X080302.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

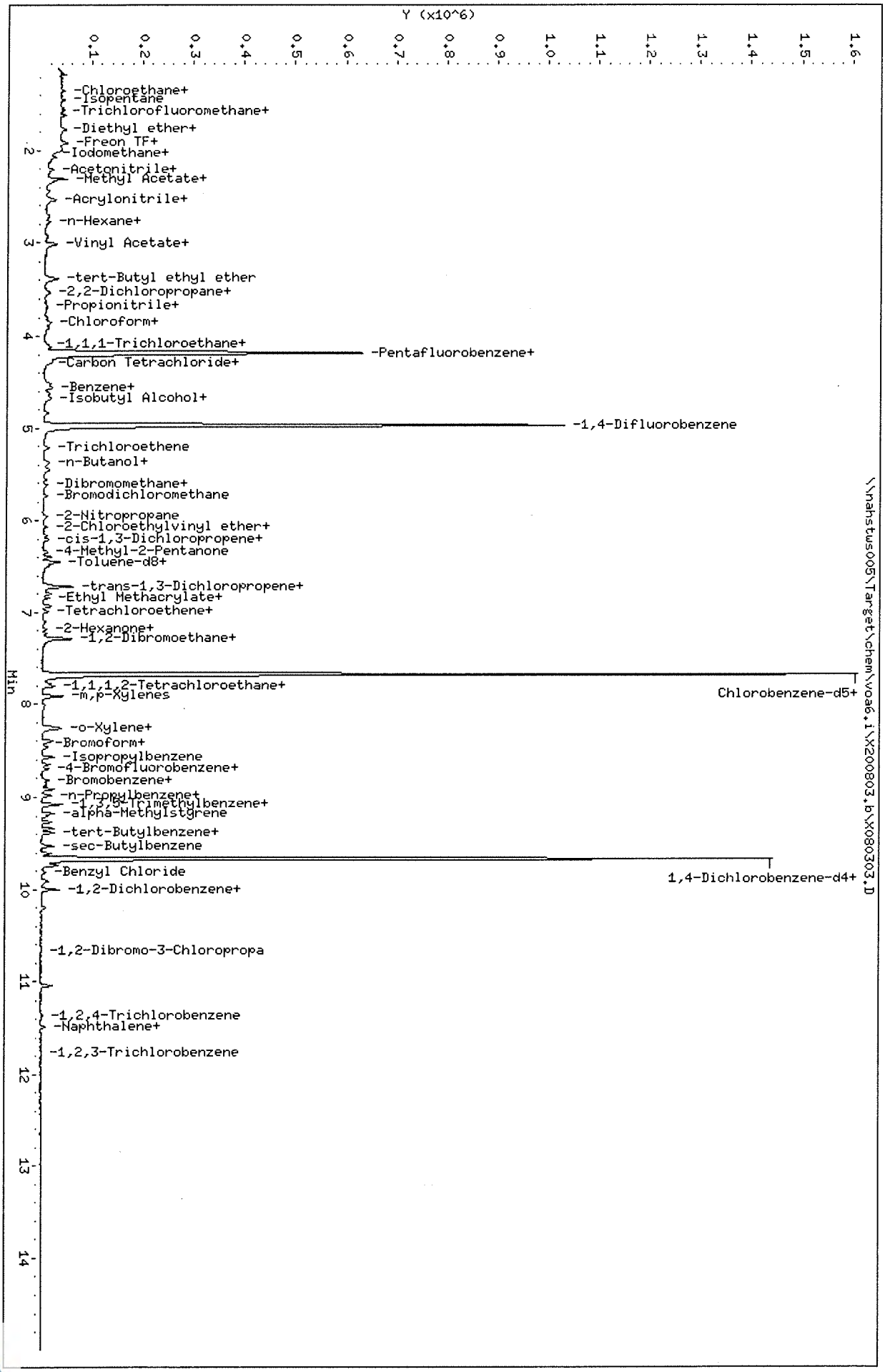
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 544079 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 825062 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 734728 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 351808 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.110 | 4.110 | (0.981) | 2875 | 0.50000 | 0.53(a) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.490 | 4.490 | (1.072) | 3638 | 0.50000 | 0.57(aM) |
| $ 48 Toluene-d8 | 98 | 6.395 | 6.395 | (0.834) | 9247 | 0.50000 | 0.51(a) |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 3831 | 0.50000 | 0.55(a) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 3529 | 0.50000 | 0.63(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 5010 | 0.50000 | 0.59(aM) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 3887 | 0.50000 | 1.06(aM) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 2550 | 0.50000 | 0.60(aM) |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 5969 | 0.50000 | 0.56(a) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 2144 | 0.50000 | 0.49(aM) |
| 32 1,1-Dichloropropene | 75 | 4.297 | 4.297 | (0.865) | 4094 | 0.50000 | 0.59(aM) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.761 | 11.761 | (1.216) | 642 | 0.50000 | 0.60(aM) |
| 71 1,2,3-Trichloropropane | 75 | 8.874 | 8.874 | (0.918) | 3074 | 0.50000 | 0.59(aM) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.359 | 11.359 | (1.175) | 1350 | 0.50000 | 0.14(aM) |
| 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 11934 | 0.50000 | 0.63(aM) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 394 | 0.50000 | 1.56(aM) |
| 57 1,2-Dibromoethane | 107 | 7.269 | 7.269 | (0.948) | 3081 | 0.50000 | 0.57(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.998 | 9.998 | (1.034) | 6299 | 0.50000 | 0.63(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D Page 2
Report Date: 22-Aug-2020 11:54

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 4445 | 0.50000 | 0.55(aM) |
| 42 1,2-Dichloropropane | 63 | 5.450 | 5.450 | (1.097) | 3223 | 0.50000 | 0.53(aM) |
| 75 1,3,5-Trimethylbenzene | 105 | 9.074 | 9.074 | (0.939) | 10923 | 0.50000 | 0.59(a) |
| 83 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 6943 | 0.50000 | 0.62(a) |
| 54 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 4895 | 0.50000 | 0.59(aM) |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 6675 | 0.50000 | 0.61(aM) |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 4808 | 0.50000 | 0.61(aM) |
| 24 2-Butanone | 43 | 3.609 | 3.609 | (0.862) | 2796 | 1.00000 | 1.04(a) |
| 76 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 8675 | 0.50000 | 0.56(aM) |
| 52 2-Hexanone | 43 | 7.105 | 7.105 | (0.926) | 4973 | 1.00000 | 1.07(aM) |
| 77 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 10688 | 0.50000 | 0.60(aM) |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 12071 | 0.50000 | 0.61(aM) |
| 45 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 7990 | 1.00000 | 1.17(a) |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 6244 | 1.00000 | 2.25(aM) |
| 37 Benzene | 78 | 4.526 | 4.526 | (0.911) | 12142 | 0.50000 | 0.59(a) |
| 74 Bromobenzene | 156 | 8.817 | 8.817 | (0.912) | 4364 | 0.50000 | 0.63(a) |
| 29 Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 1908 | 0.50000 | 0.58(aM) |
| 39 Bromodichloromethane | 83 | 5.736 | 5.736 | (1.154) | 4753 | 0.50000 | 0.63(aM) |
| 66 Bromoform | 173 | 8.415 | 8.415 | (1.097) | 2599 | 0.50000 | 0.63(Ta) |
| 6 Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 2498 | 0.50000 | 1.31(aM) |
| 19 Carbon Disulfide | 76 | 2.076 | 2.076 | (0.496) | 16094 | 1.00000 | 1.20(a) |
| 34 Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 4361 | 0.50000 | 0.59(a) |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 9164 | 0.50000 | 0.63(a) |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 2338 | 0.50000 | 0.60(a) |
| 28 Chloroform | 83 | 3.917 | 3.917 | (0.935) | 5814 | 0.50000 | 0.59(a) |
| 3 Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 4829 | 0.50000 | 0.63(aM) |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 3487 | 0.50000 | 0.58(aM) |
| 46 cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 5096 | 0.50000 | 0.58(a) |
| 55 Dibromochloromethane | 129 | 7.183 | 7.183 | (0.937) | 3742 | 0.50000 | 0.63(aM) |
| 44 Dibromomethane | 93 | 5.565 | 5.565 | (1.120) | 2117 | 0.50000 | 0.58(a) |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 2895 | 0.50000 | 0.54(a) |
| 61 Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 4683 | 0.50000 | 0.62(a) |
| 91 Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 828 | 0.50000 | 0.43(aM) |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 13211 | 0.50000 | 0.60(a) |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 10883 | 1.00000 | 1.21(a) |
| 17 Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 13006 | 0.50000 | 1.00(aM) |
| 87 n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 9792 | 0.50000 | 0.62(aM) |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 15904 | 0.50000 | 0.62(a) |
| 92 Naphthalene | 128 | 11.560 | 11.560 | (1.196) | 1670 | 0.50000 | 0.48(aM) |
| 63 o-Xylene | 106 | 8.251 | 8.251 | (1.076) | 5447 | 0.50000 | 0.61(a) |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 13181 | 0.50000 | 0.61(a) |
| 64 Styrene | 104 | 8.272 | 8.272 | (1.078) | 9169 | 0.50000 | 0.59(aM) |
| 78 tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 10025 | 0.50000 | 0.62(a) |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 3139 | 0.50000 | 0.67(a) |
| 50 Toluene | 91 | 6.453 | 6.453 | (0.841) | 13642 | 0.50000 | 0.63(a) |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 2977 | 0.50000 | 0.58(aM) |
| 51 trans-1,3-Dichloropropene | 75 | 6.696 | 6.696 | (1.347) | 4694 | 0.50000 | 0.58(a) |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 3262 | 0.50000 | 0.55(a) |
| 8 Trichlorofluoromethane | 101 | 1.568 | 1.568 | (0.374) | 4721 | 0.50000 | 0.58(a) |
| 5 Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 3935 | 0.50000 | 0.56(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

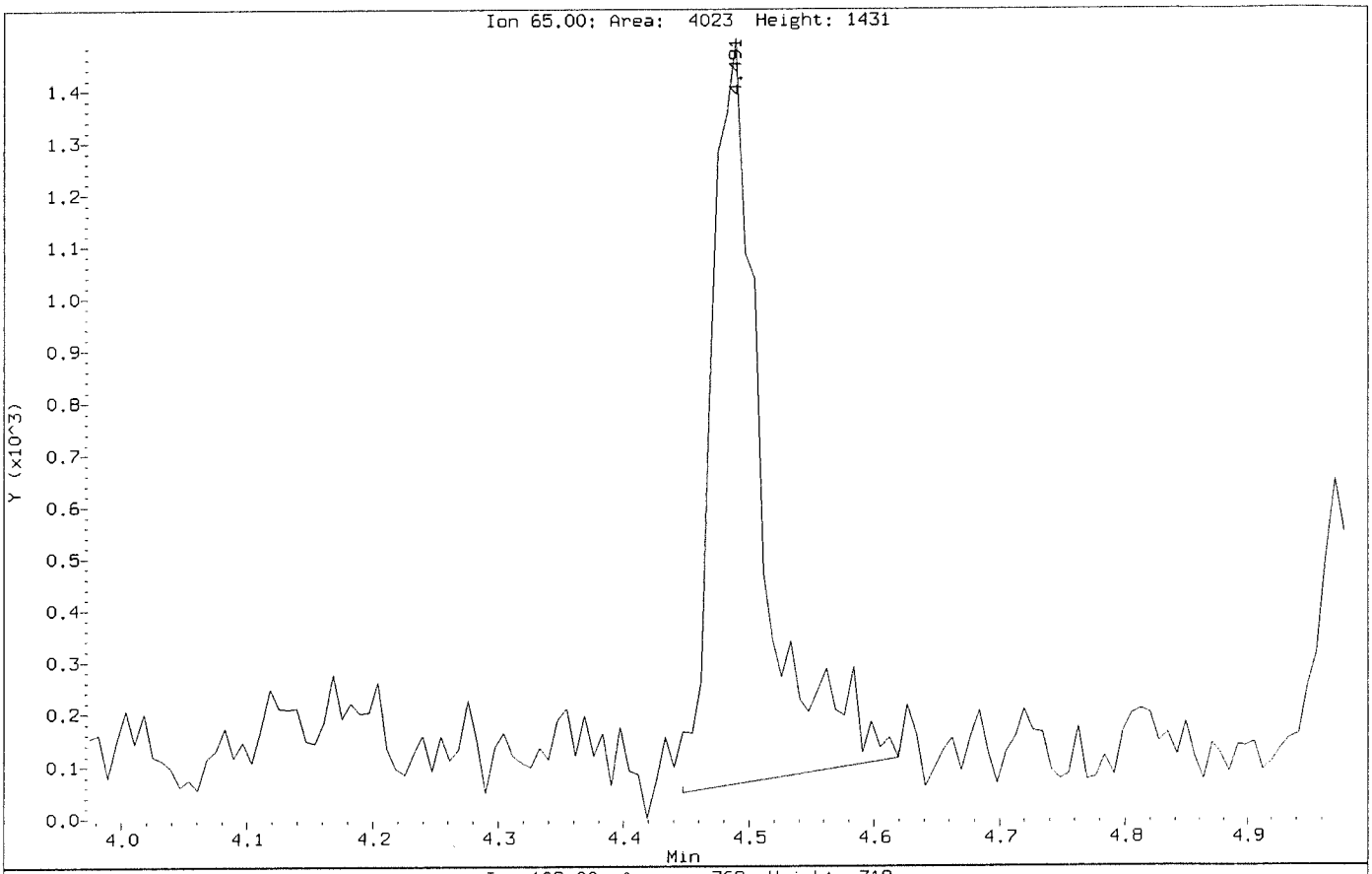


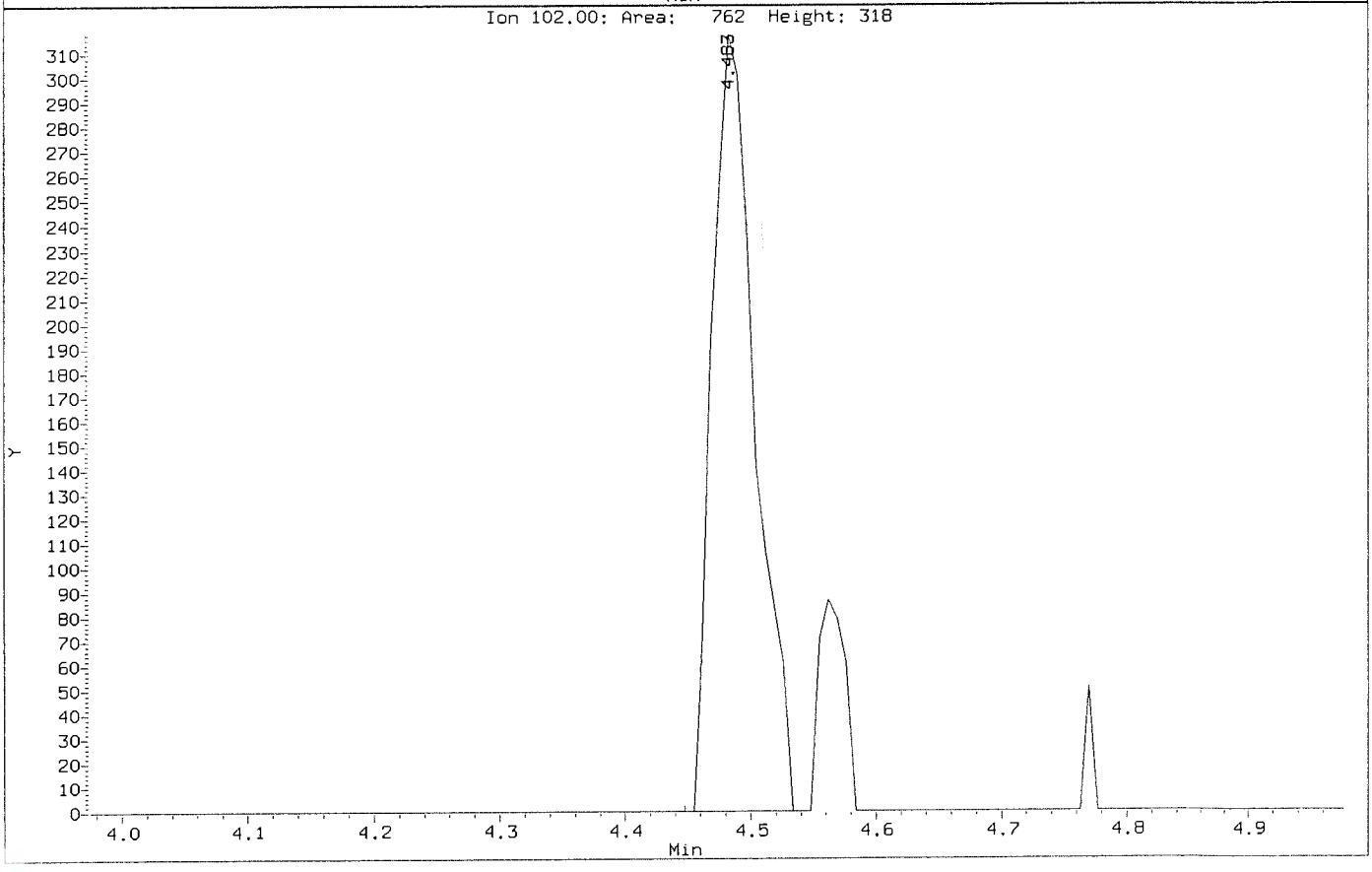

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Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

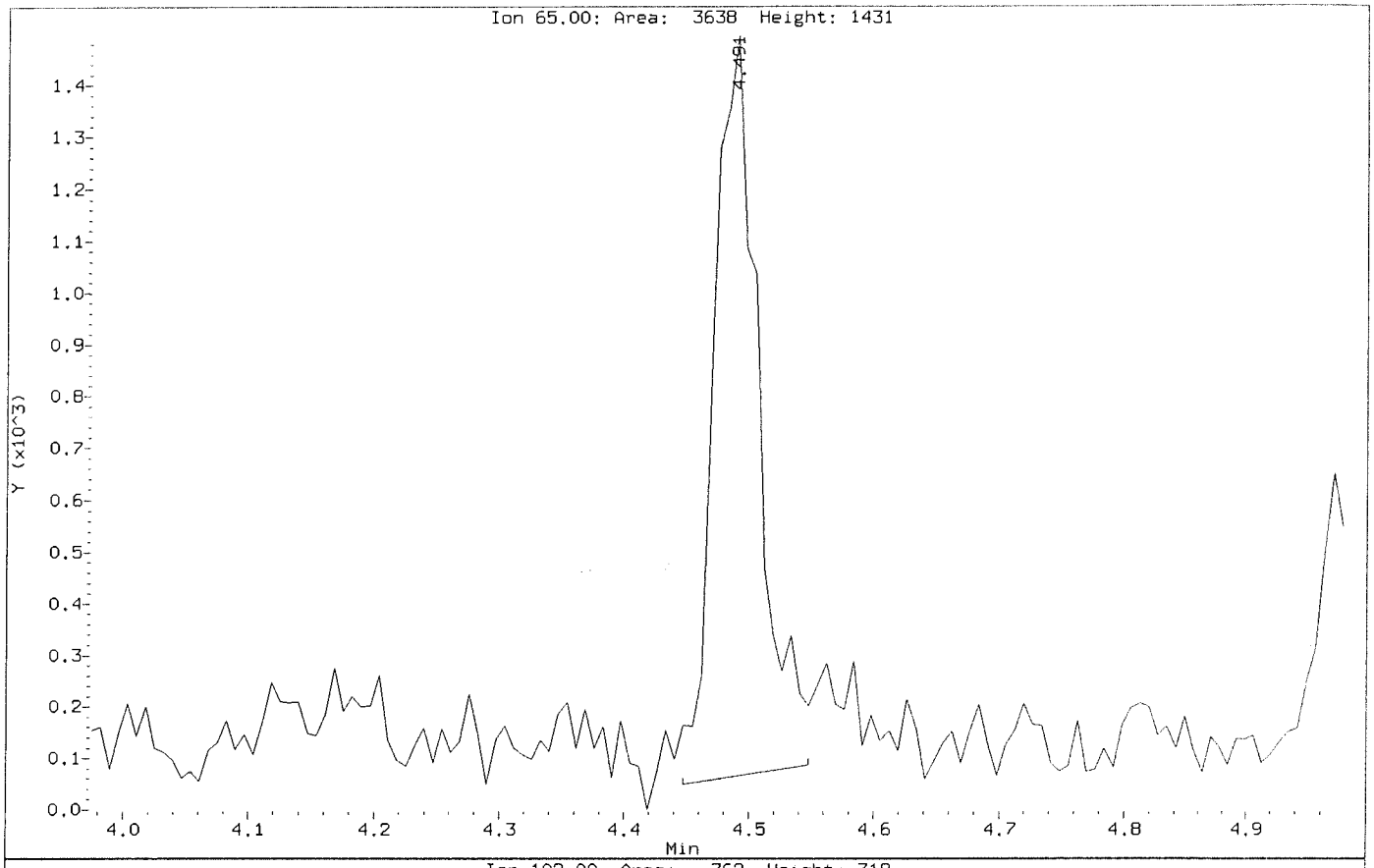
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

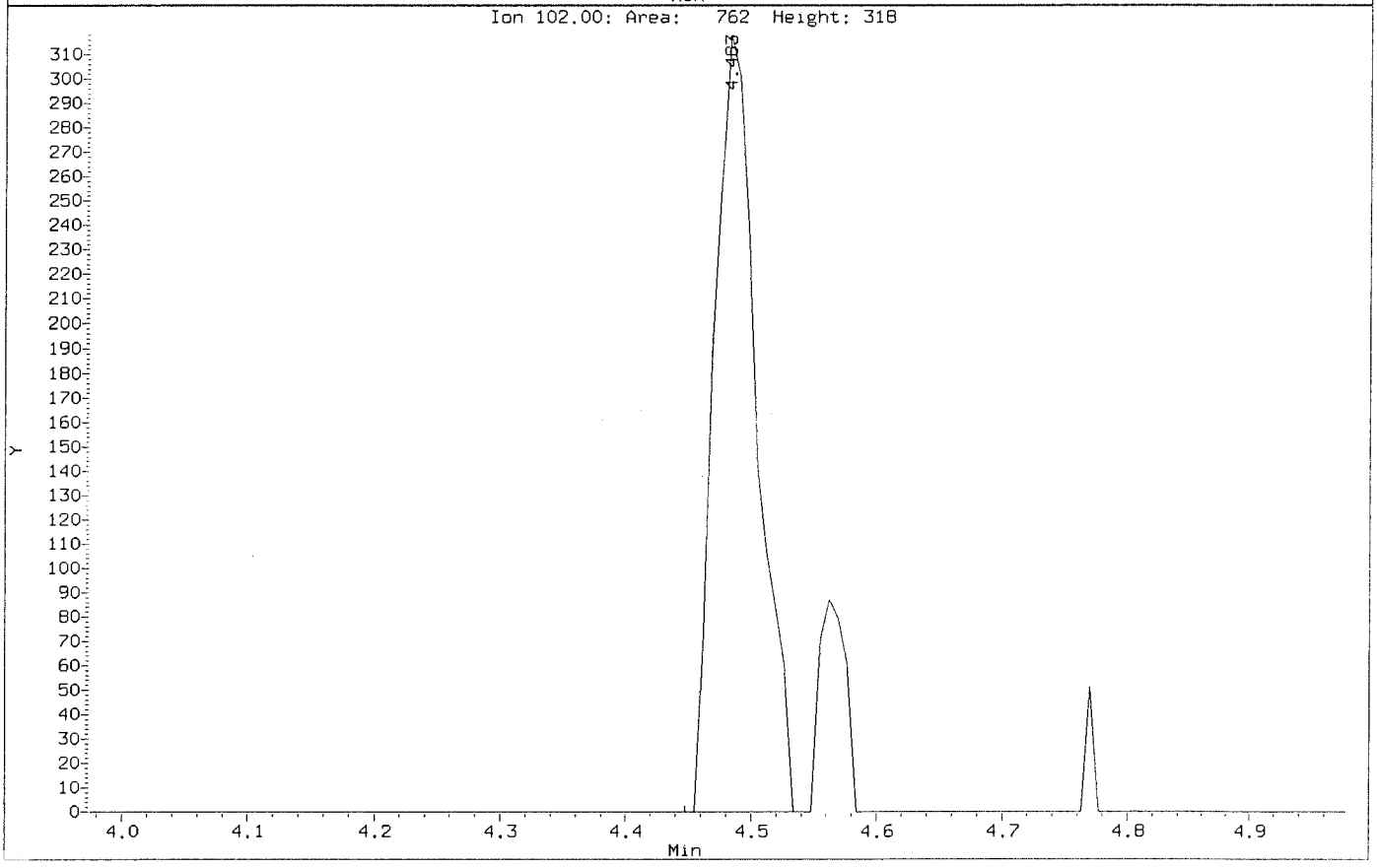


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Instrument: voa6.i
Client Sample ID: VSTD000.5

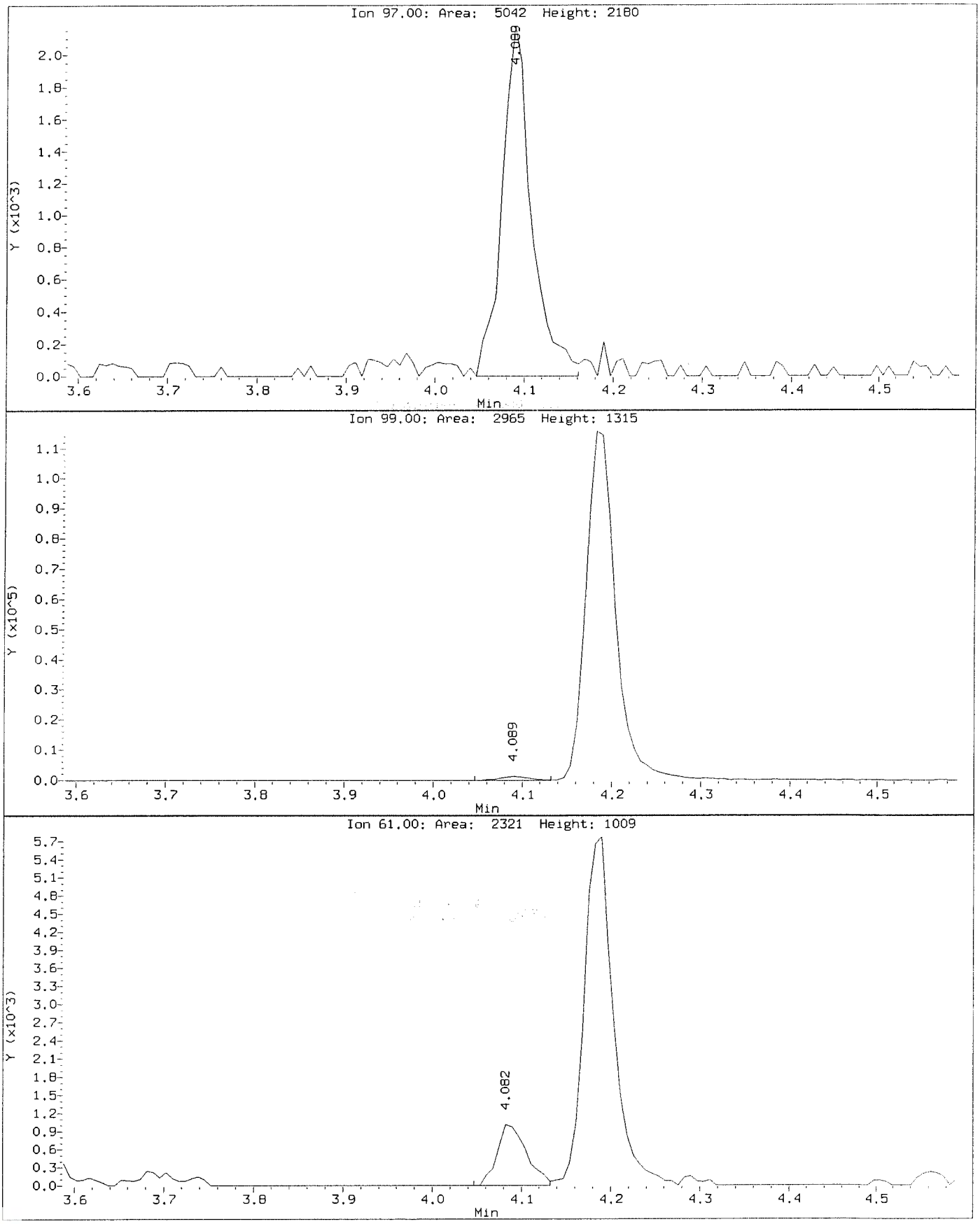
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CAS Number: 17060-07-0



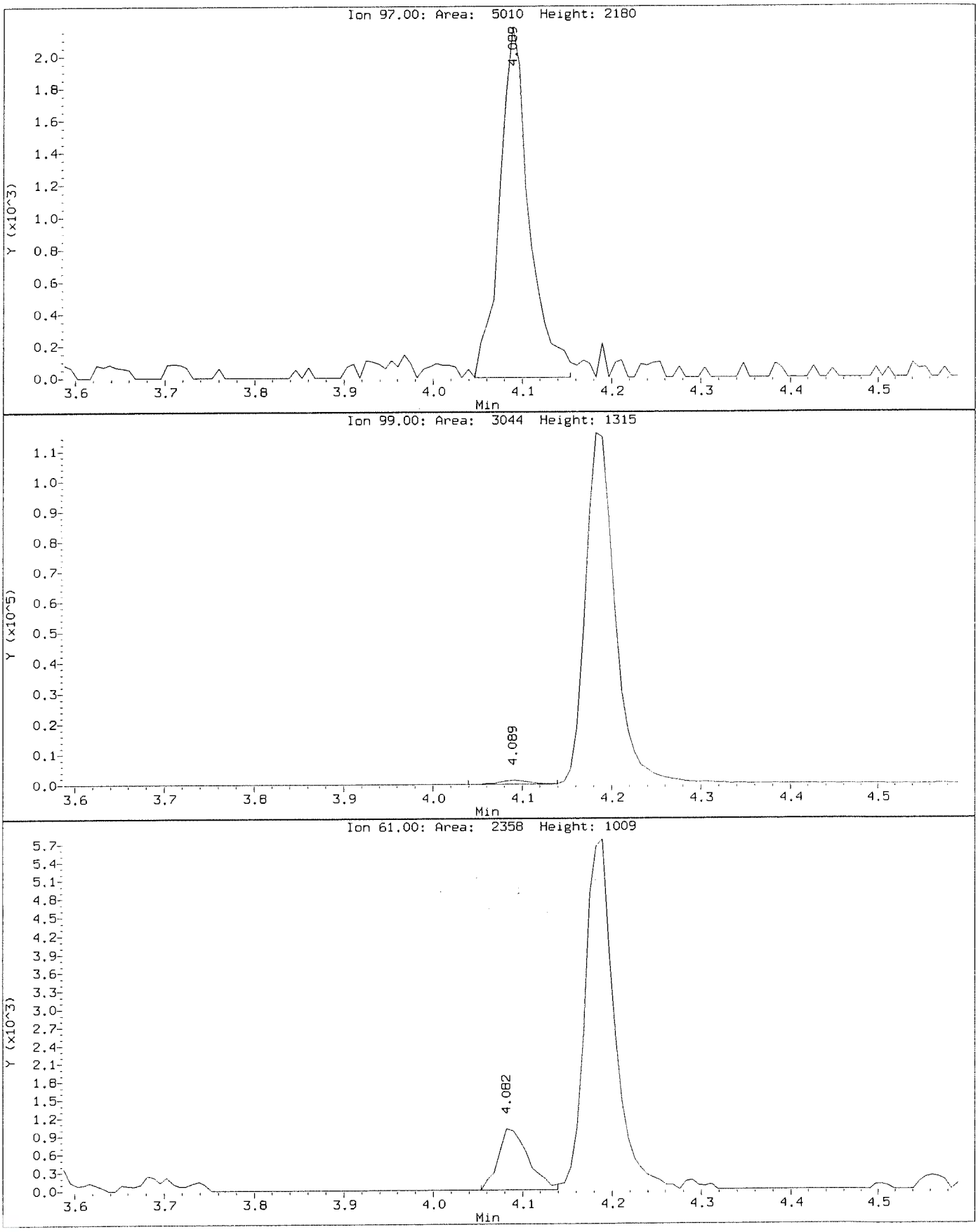
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6



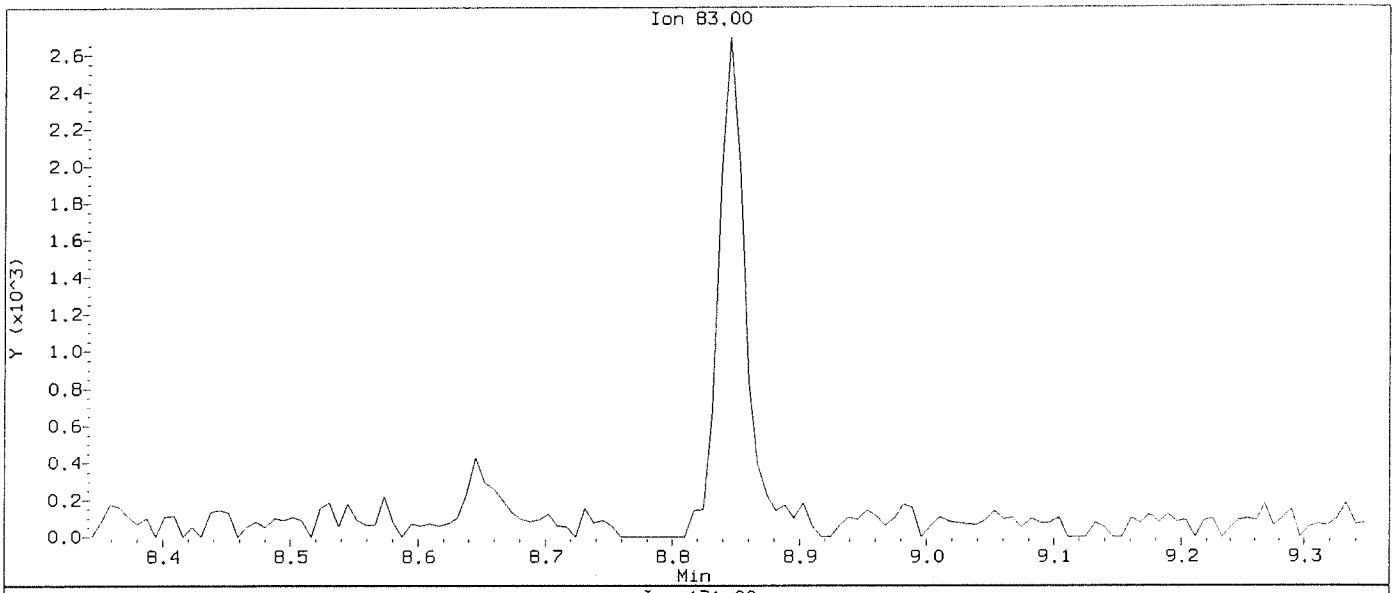
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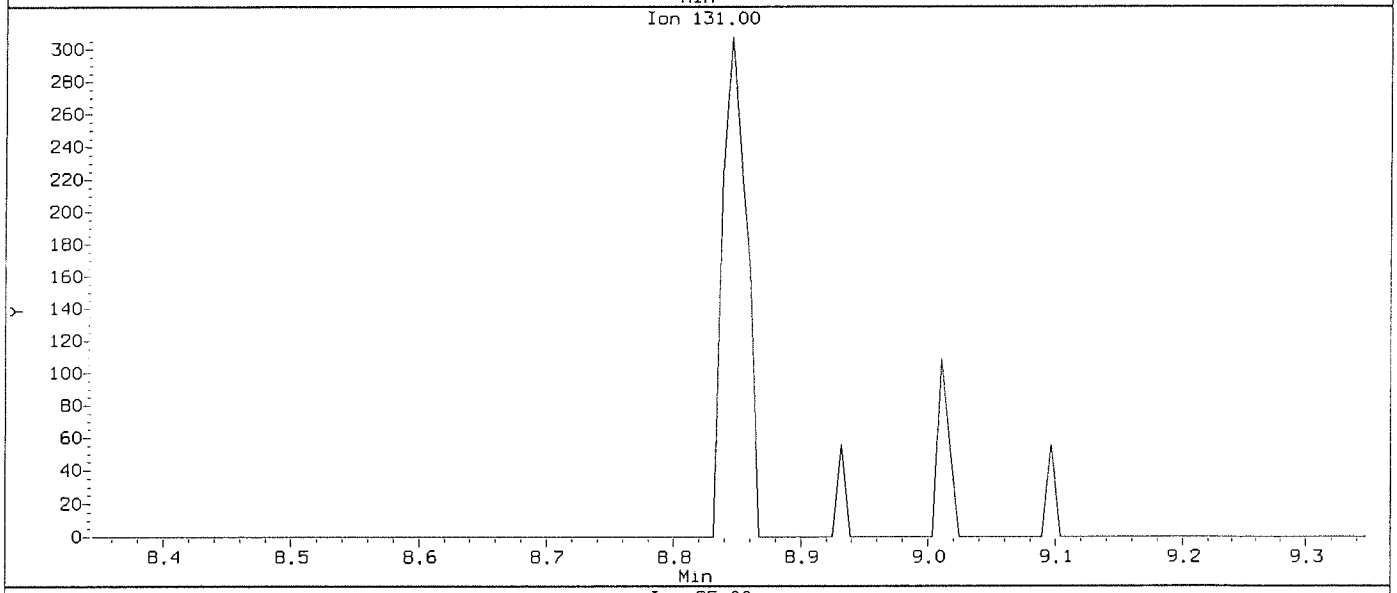
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CAS Number: 71-55-6

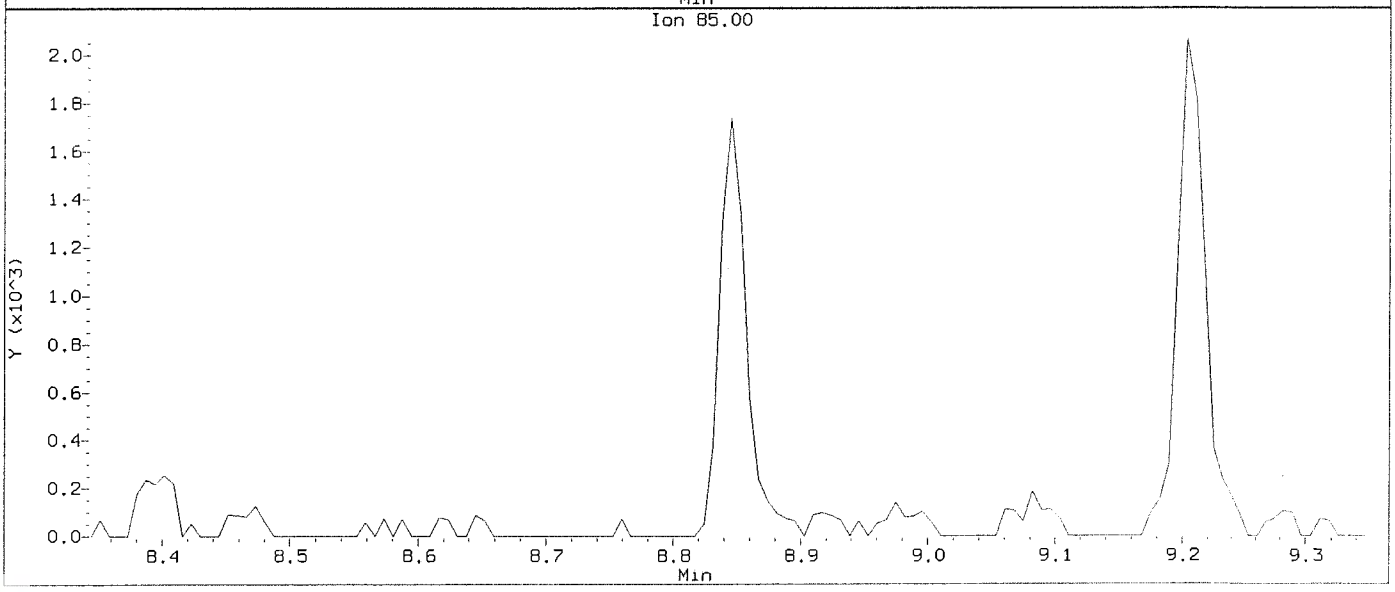


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

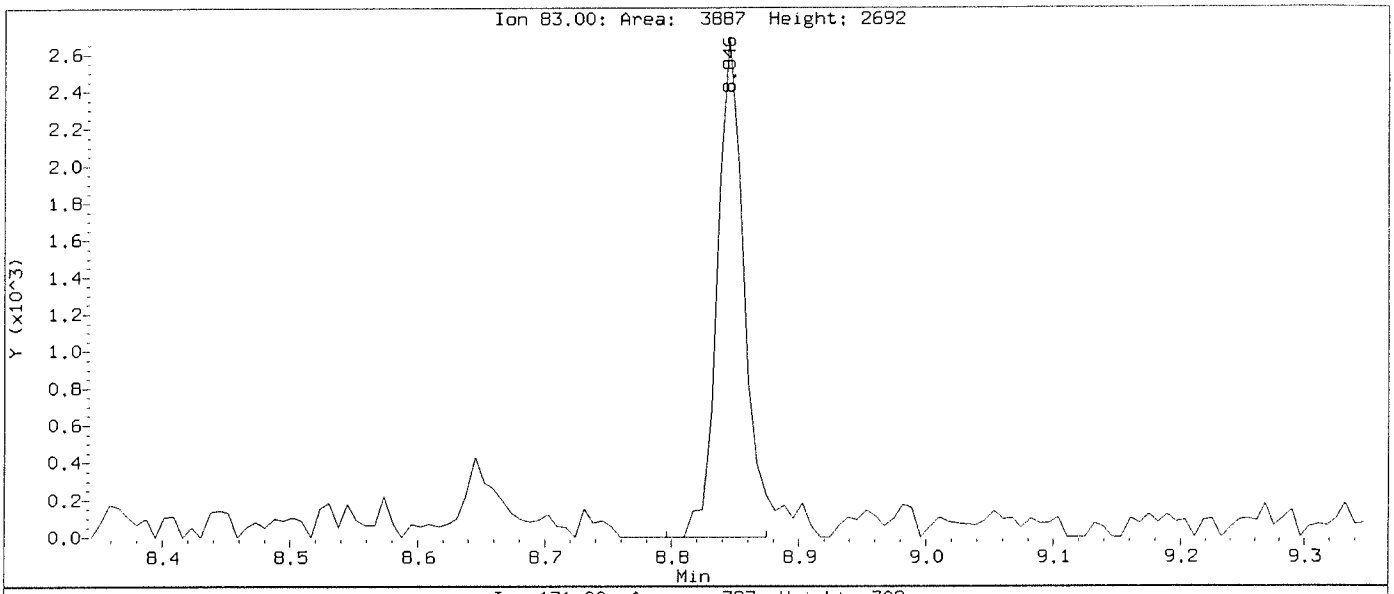


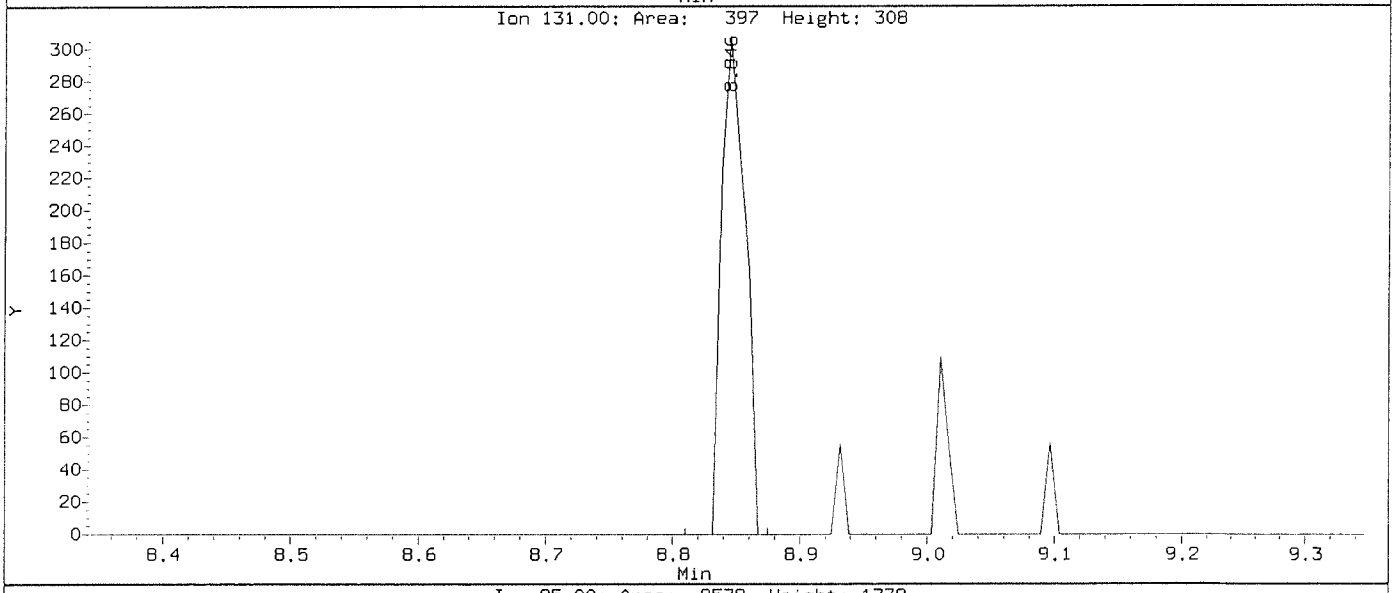



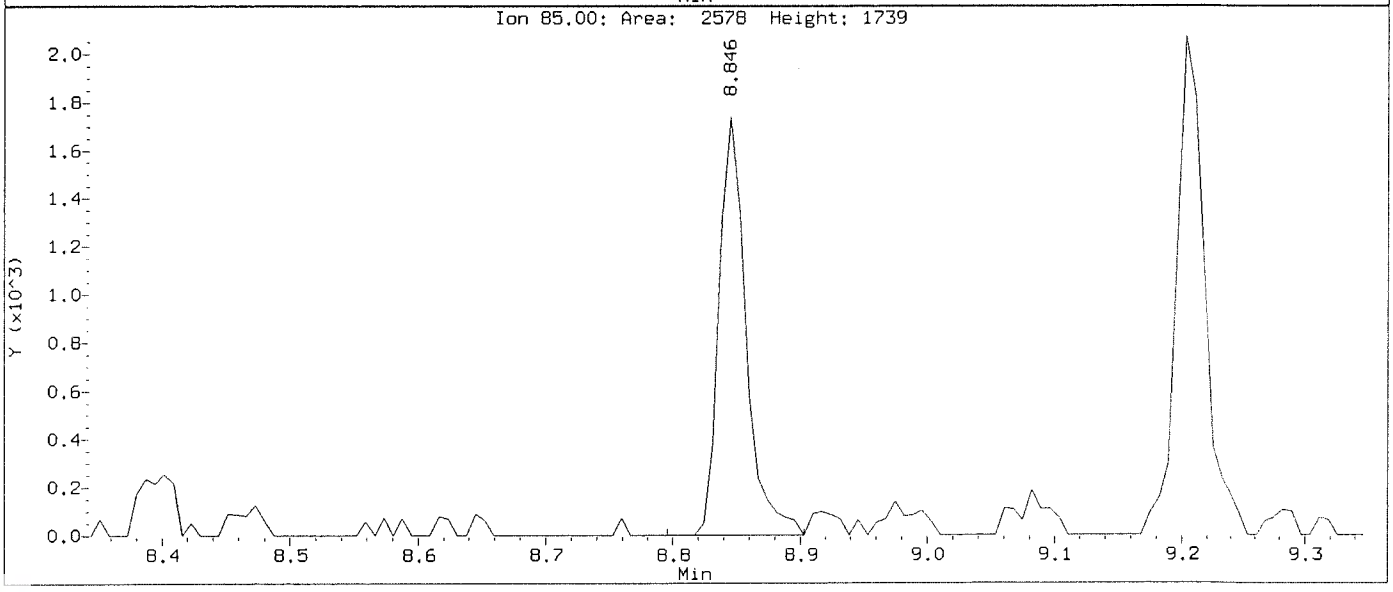



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

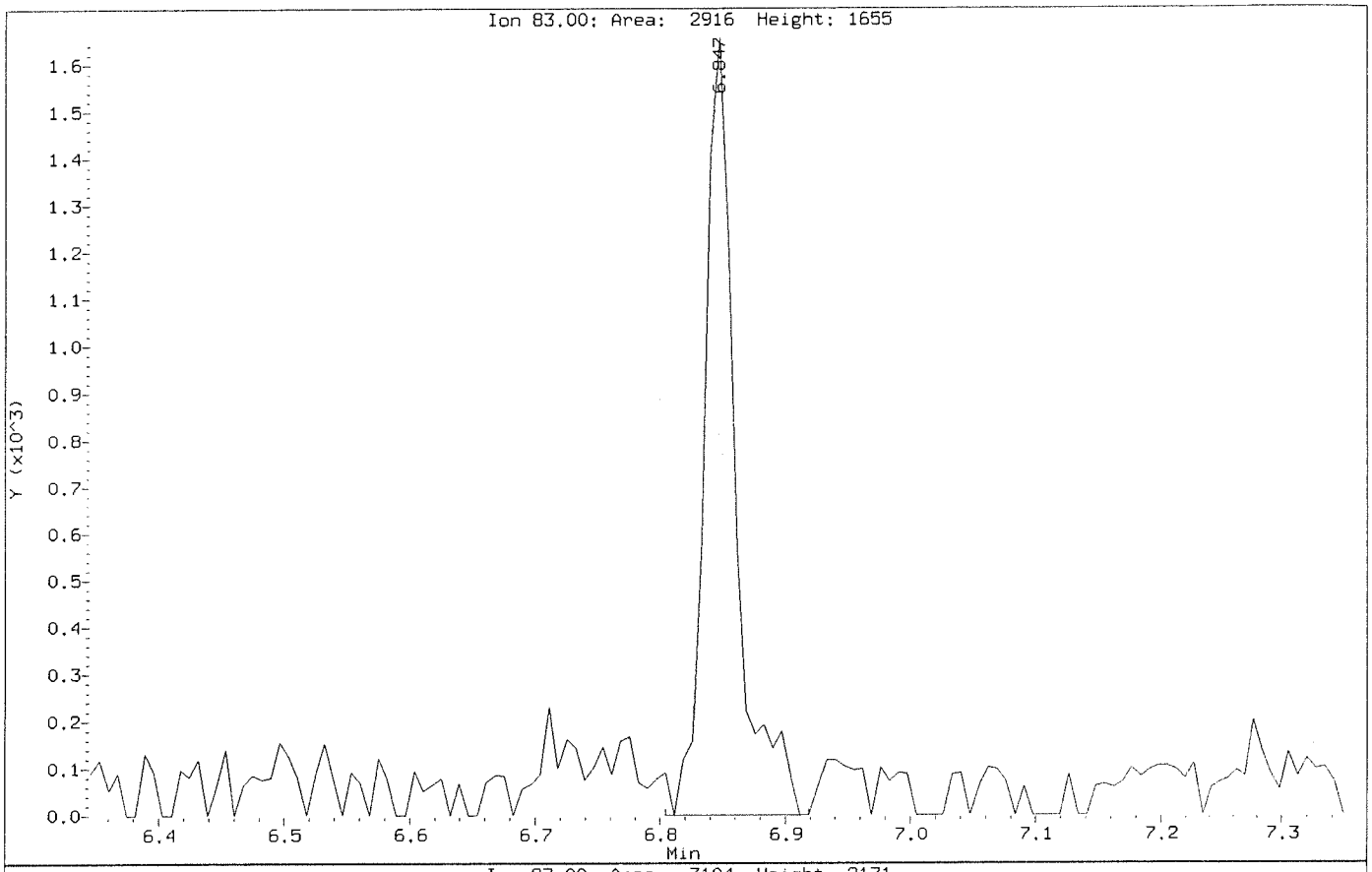


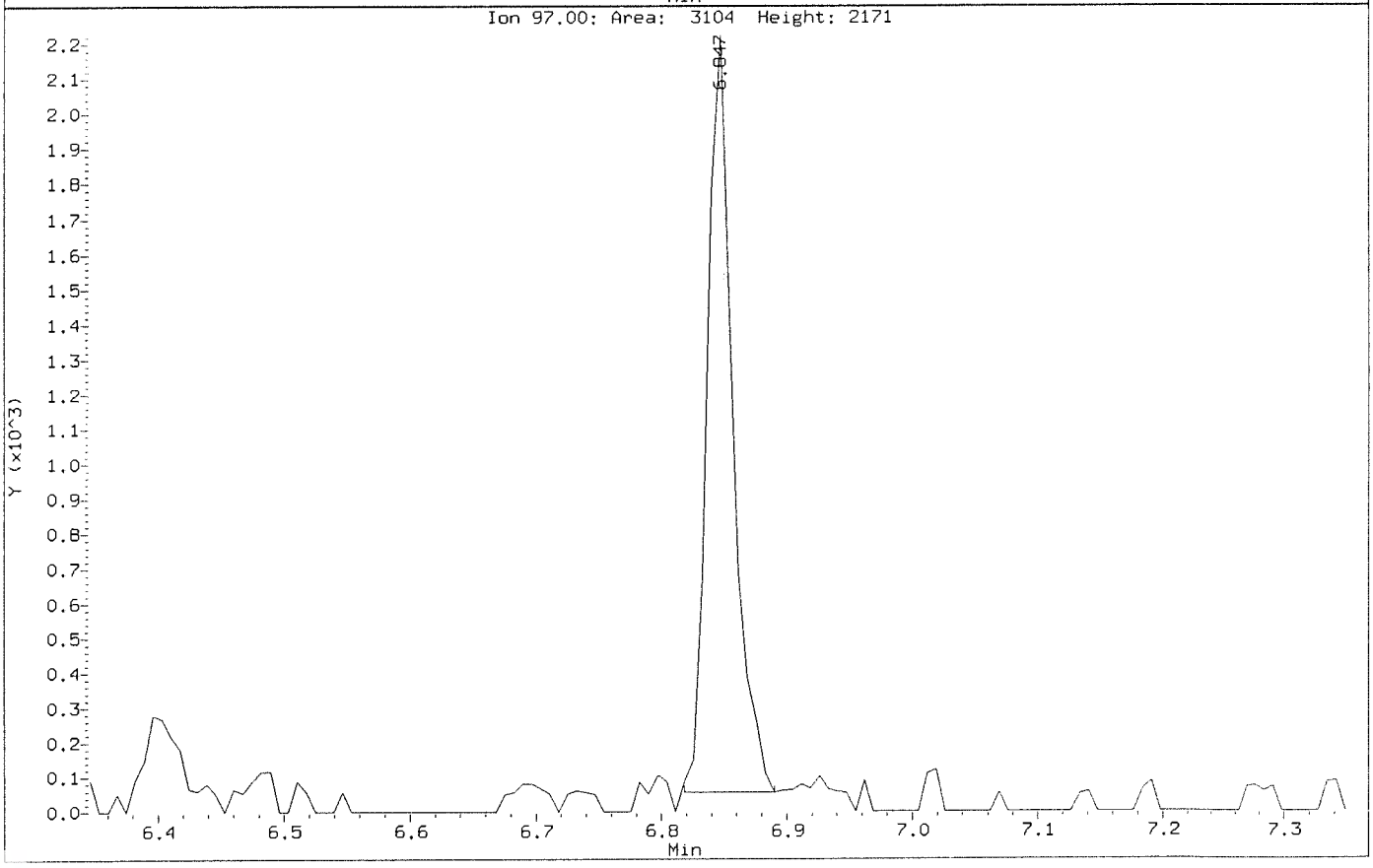



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

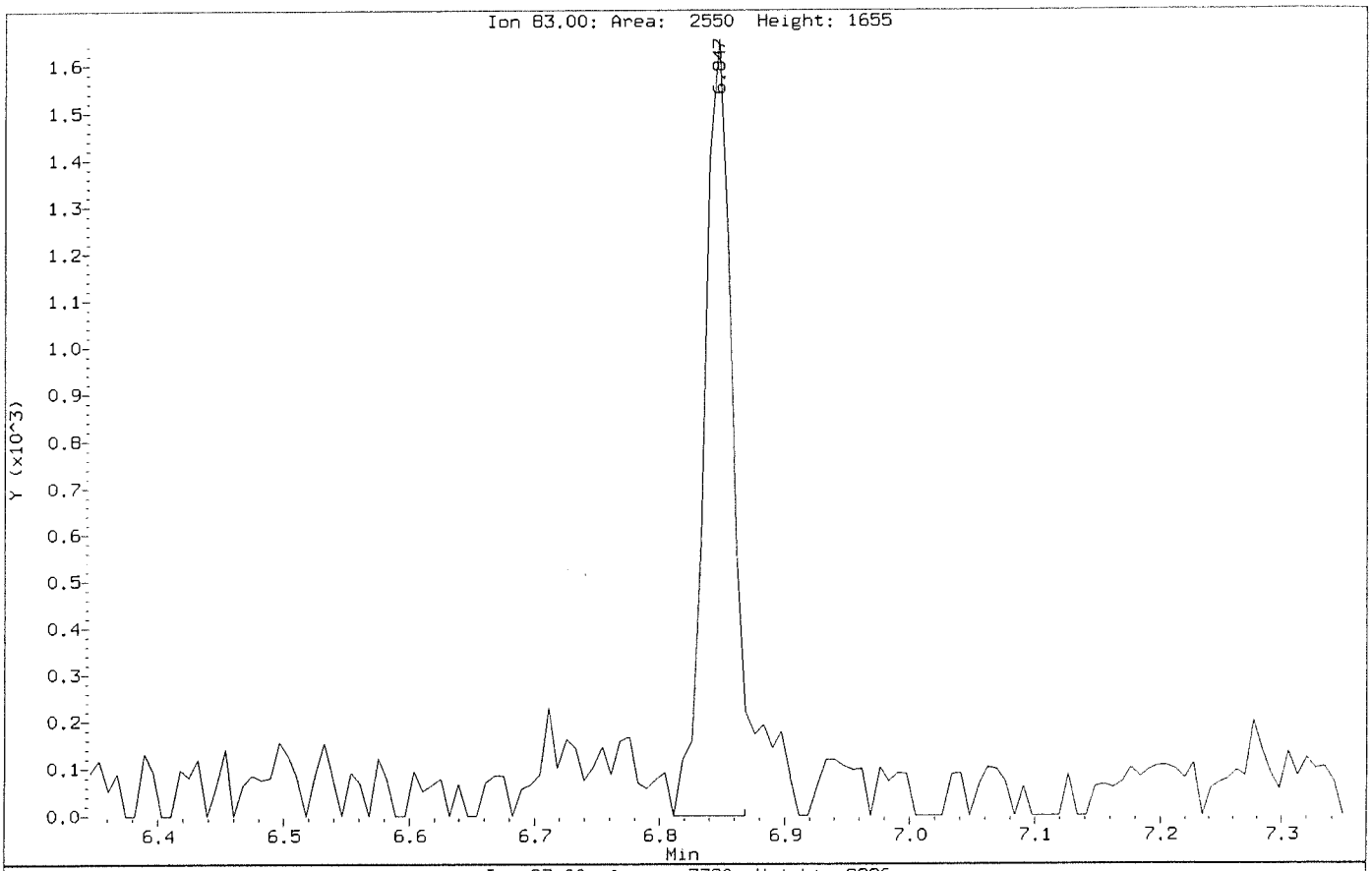
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

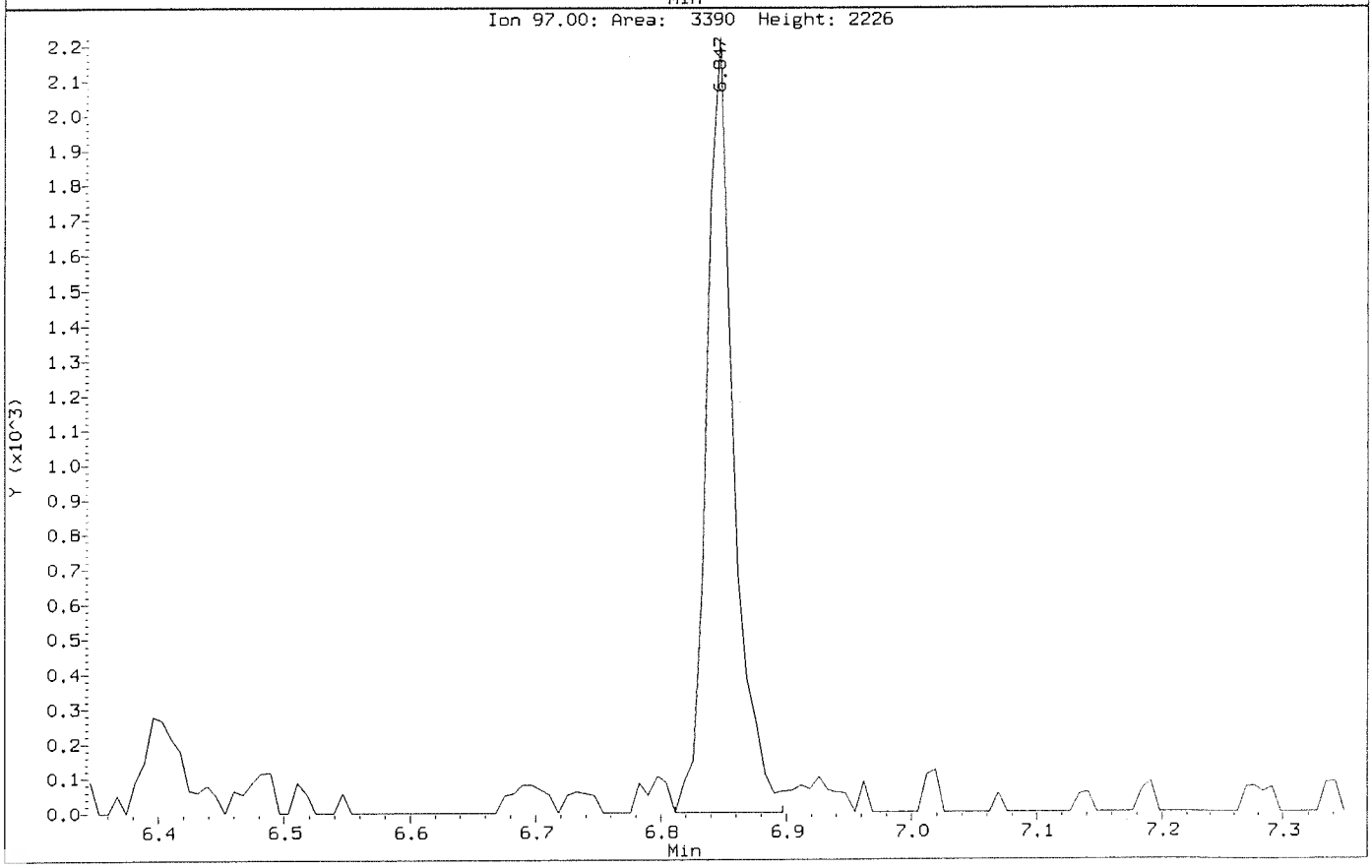


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

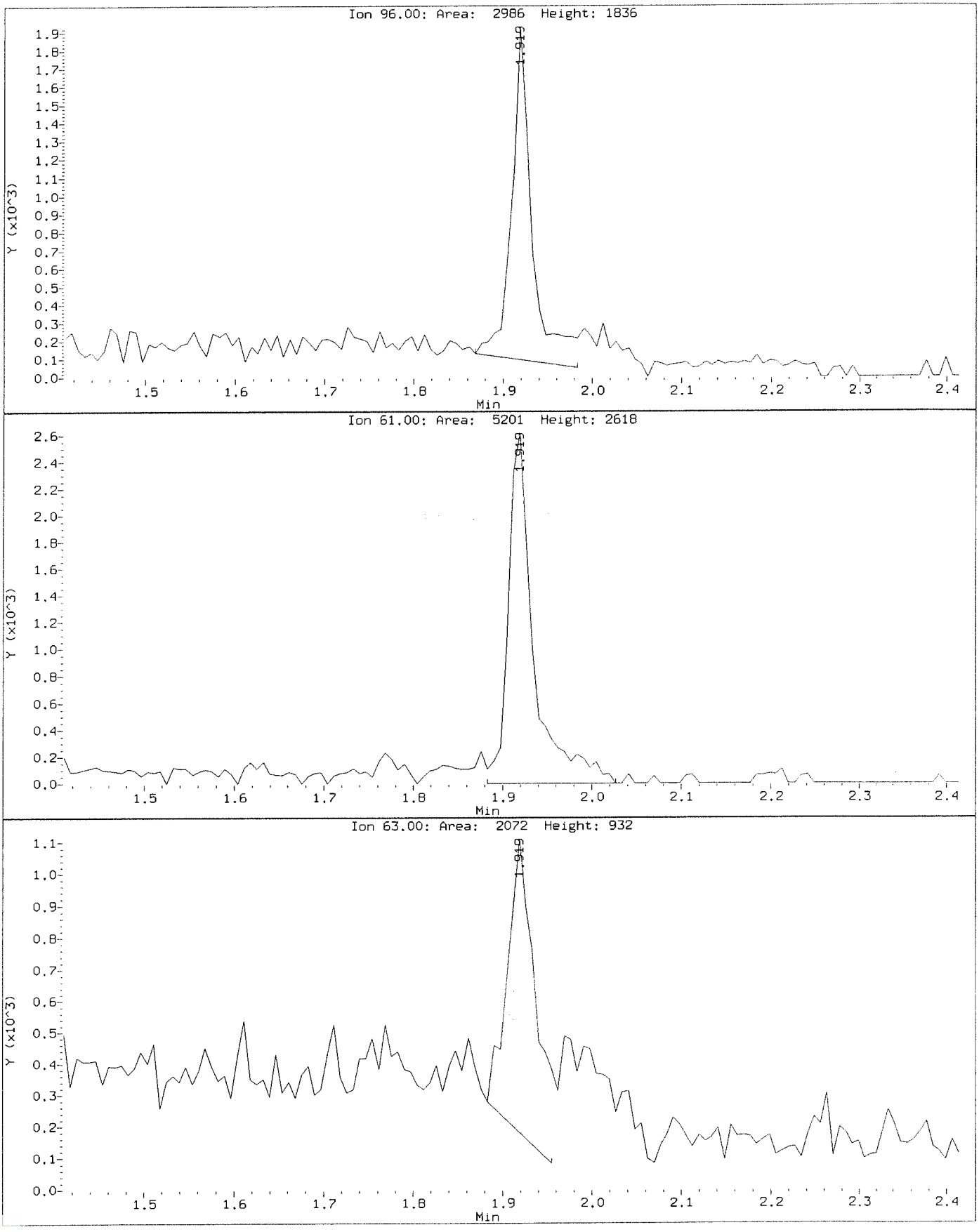
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5



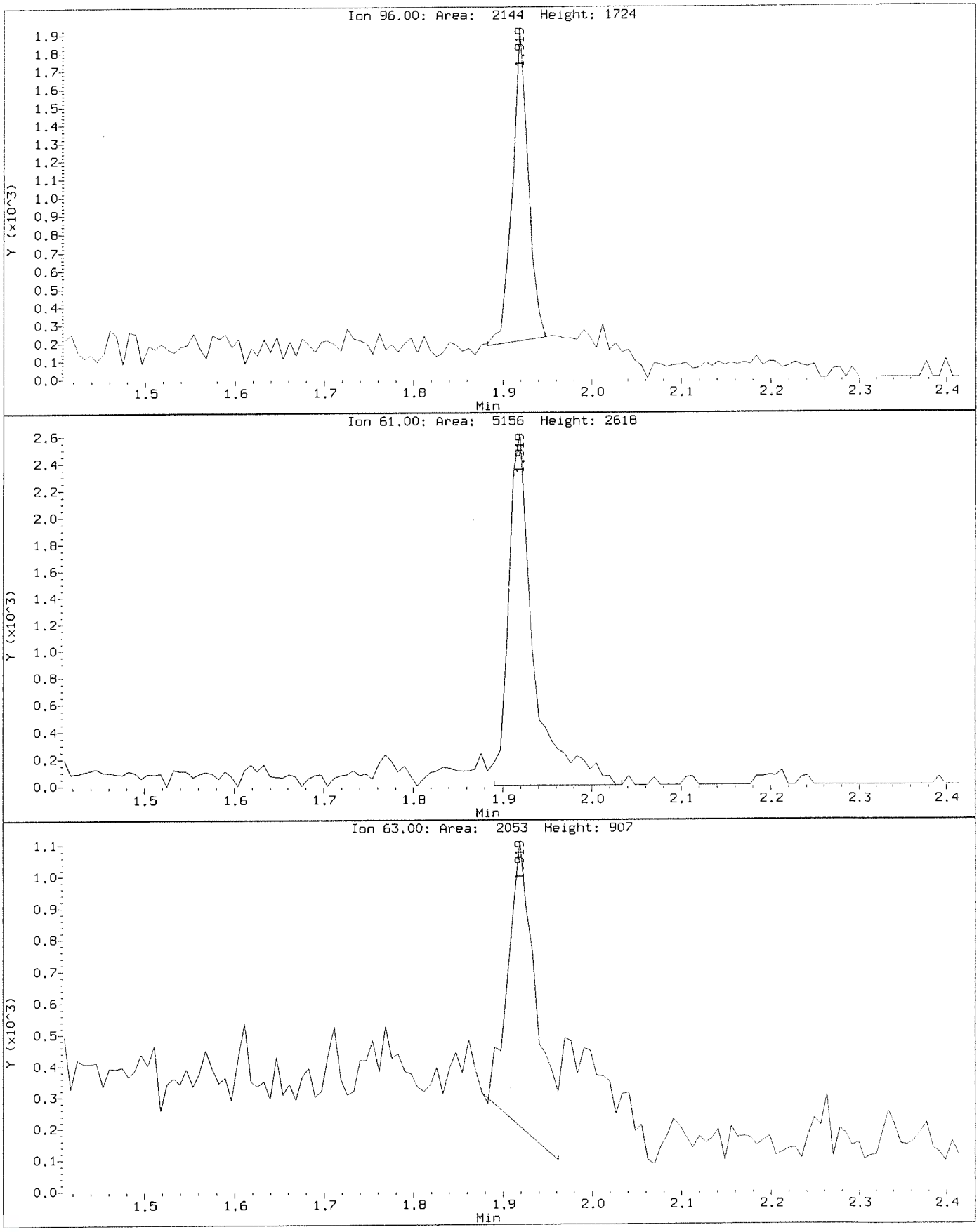
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



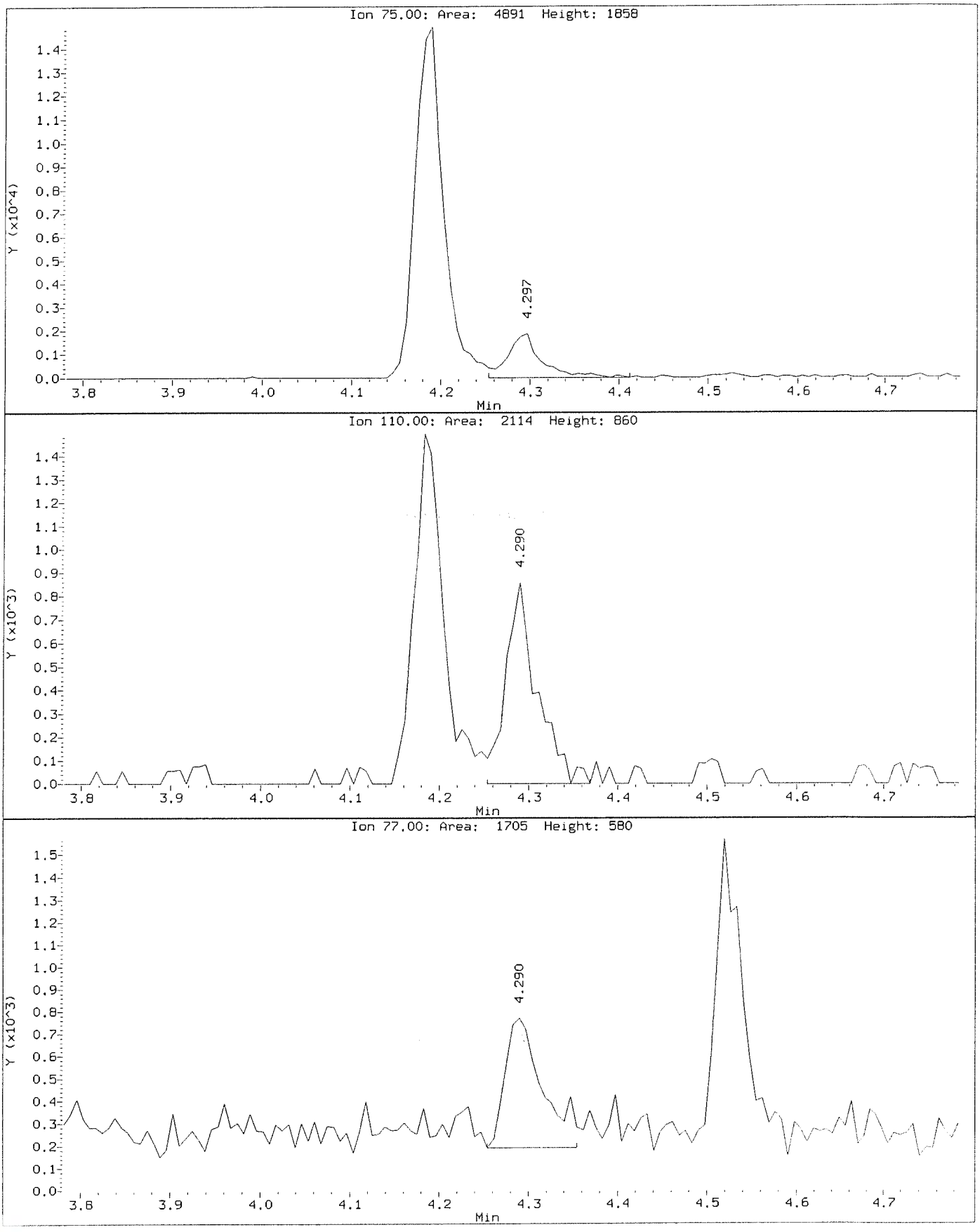
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



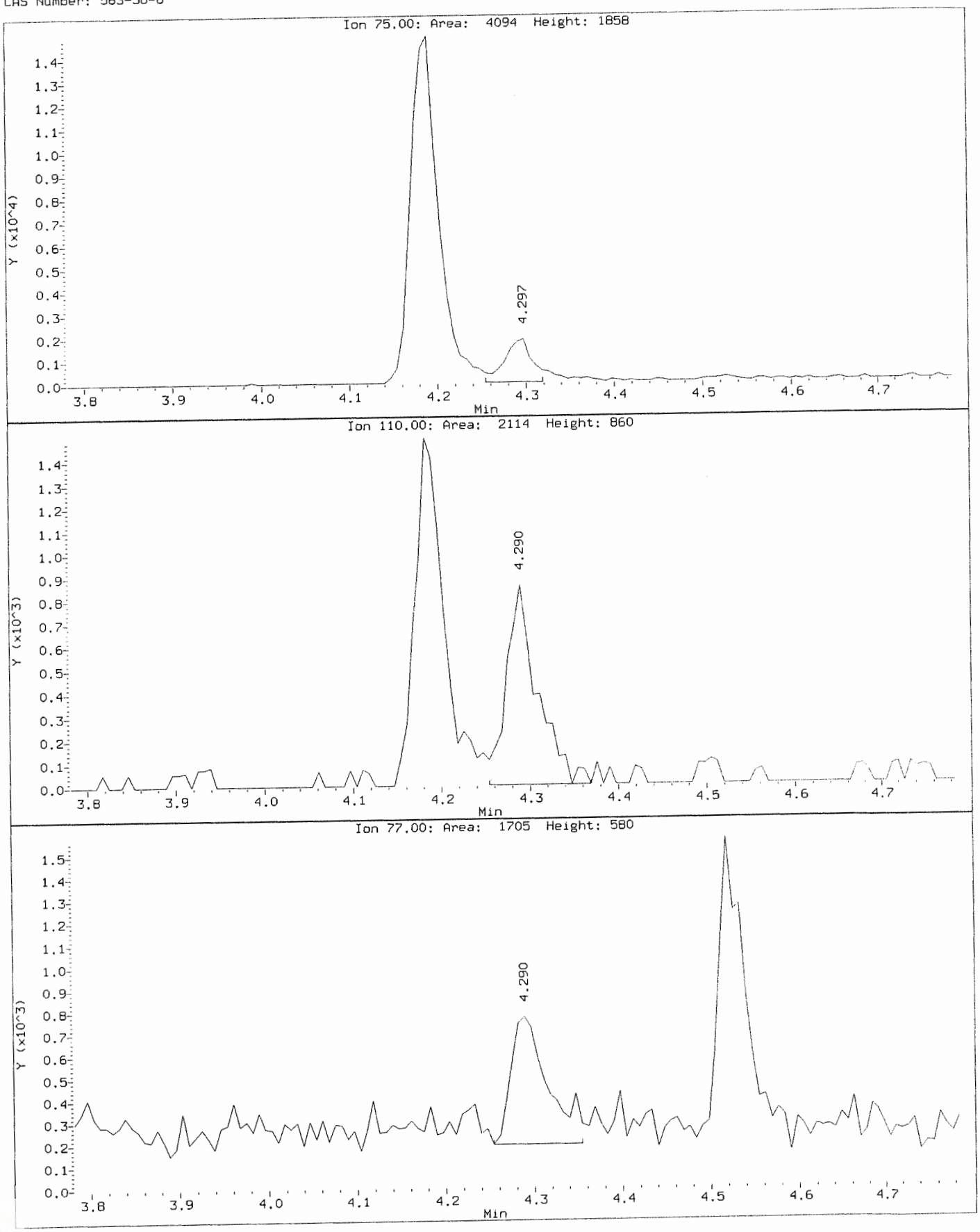
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



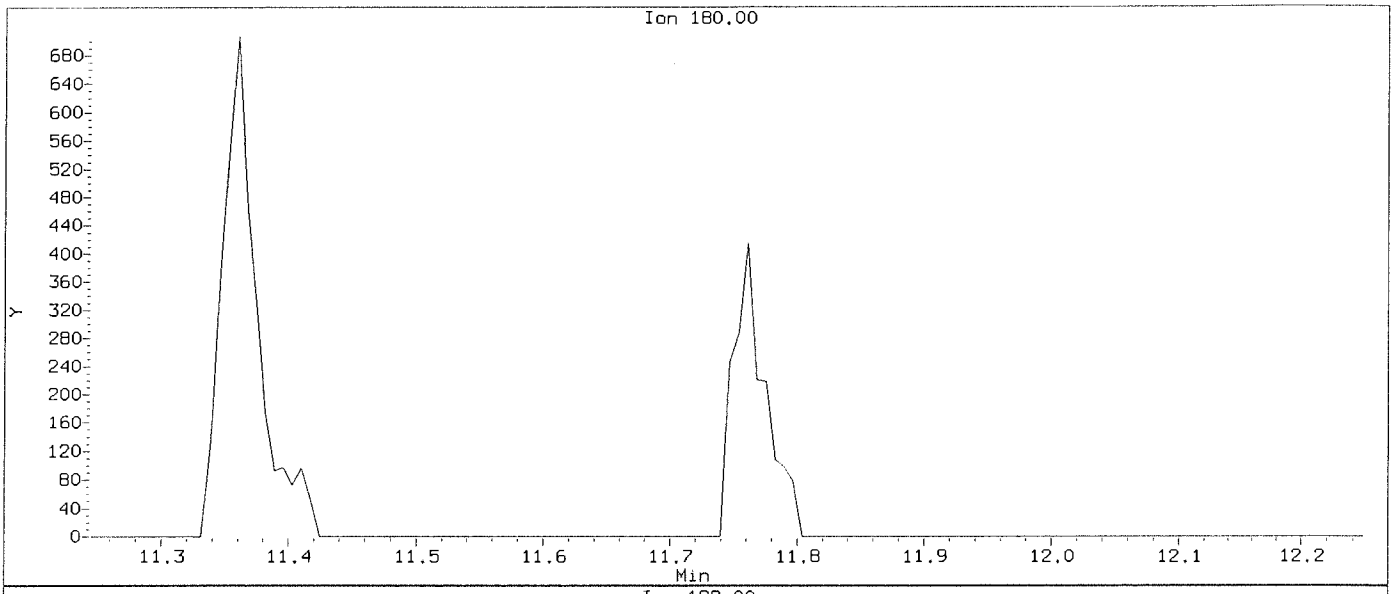
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Client Sample ID: VSTD000.5

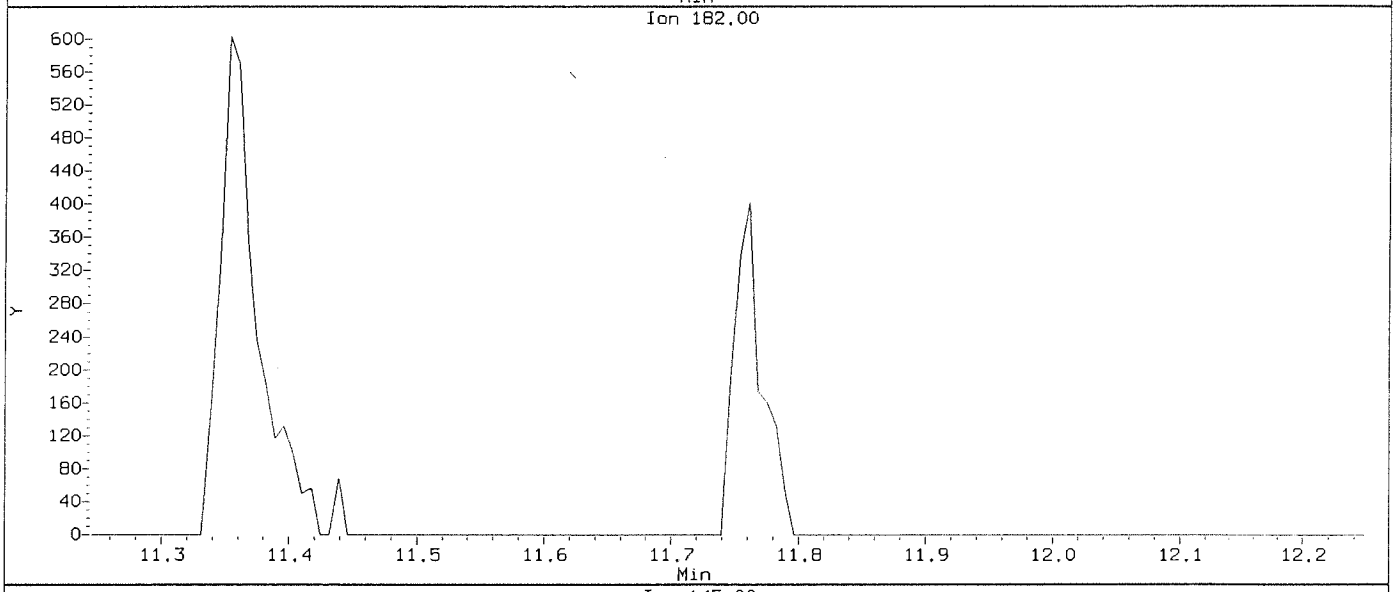
Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

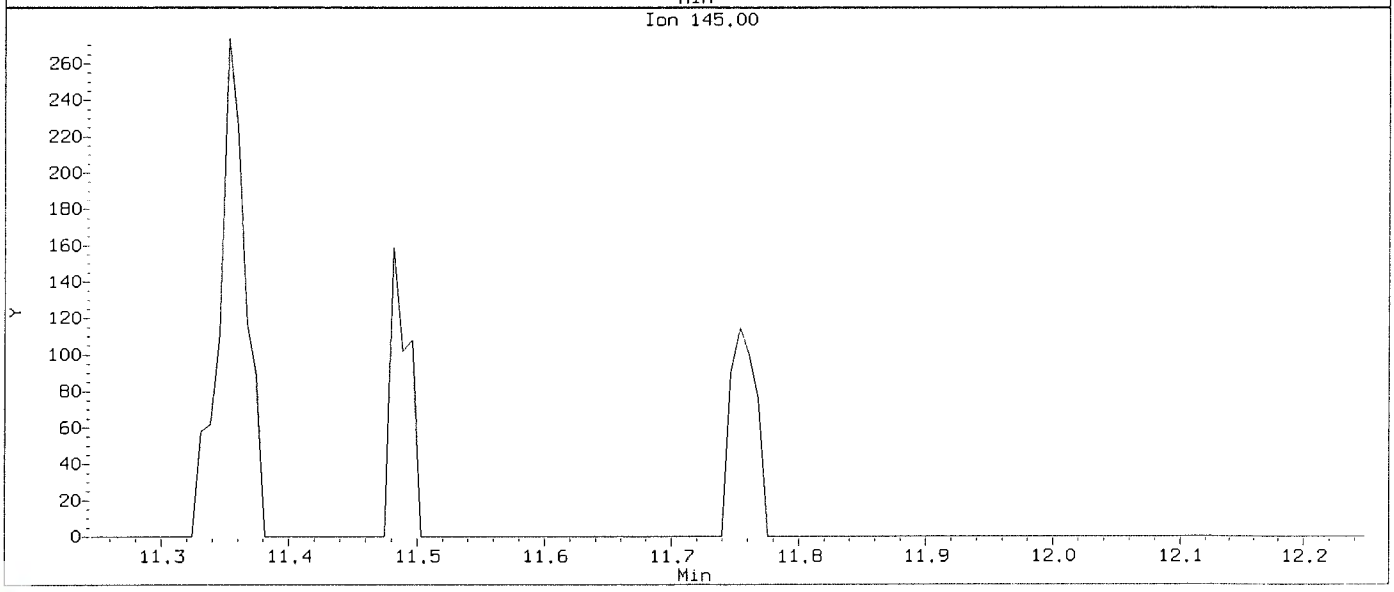


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

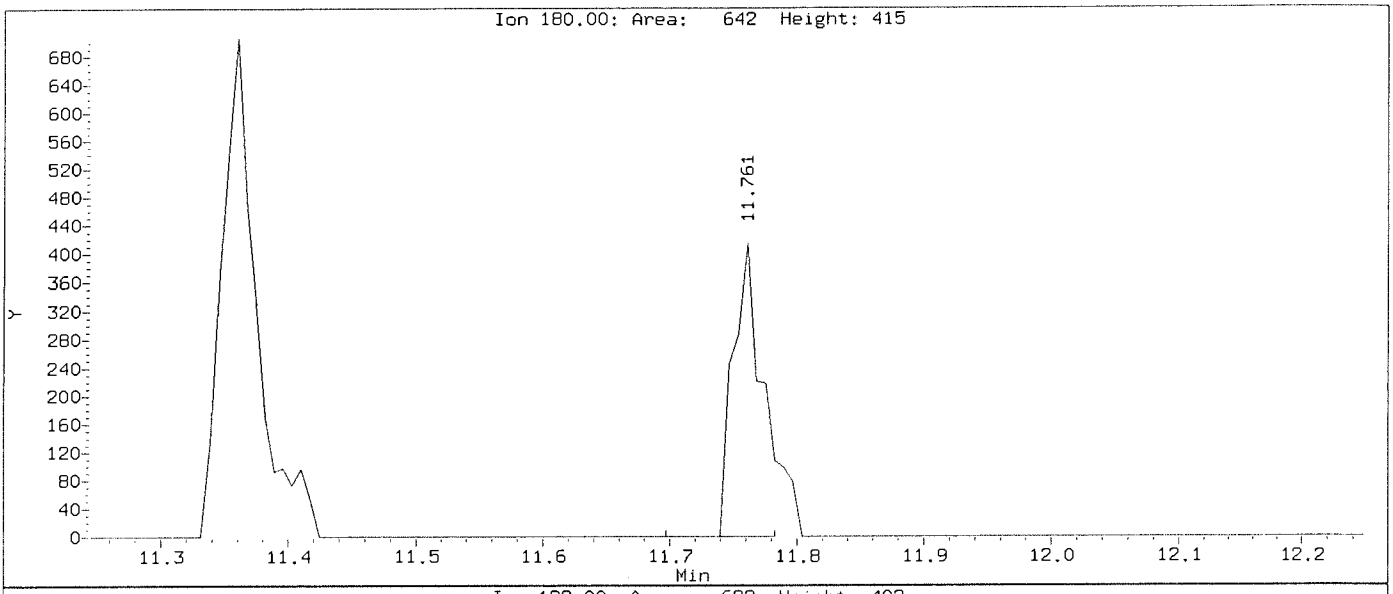


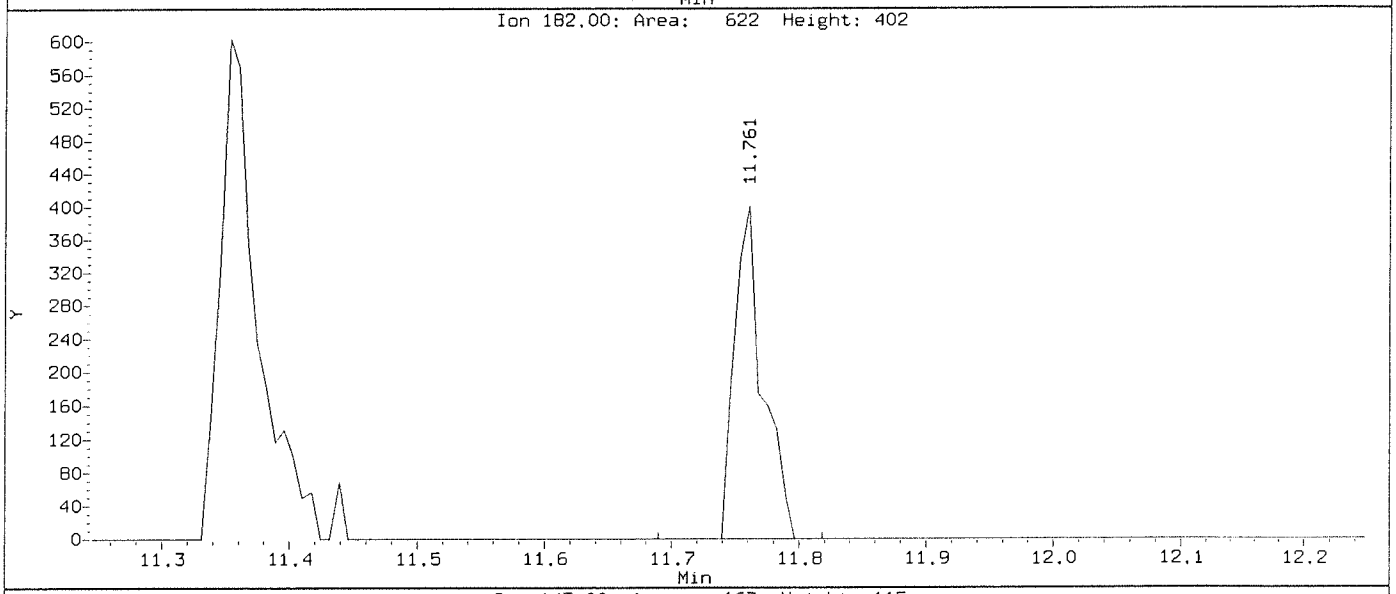



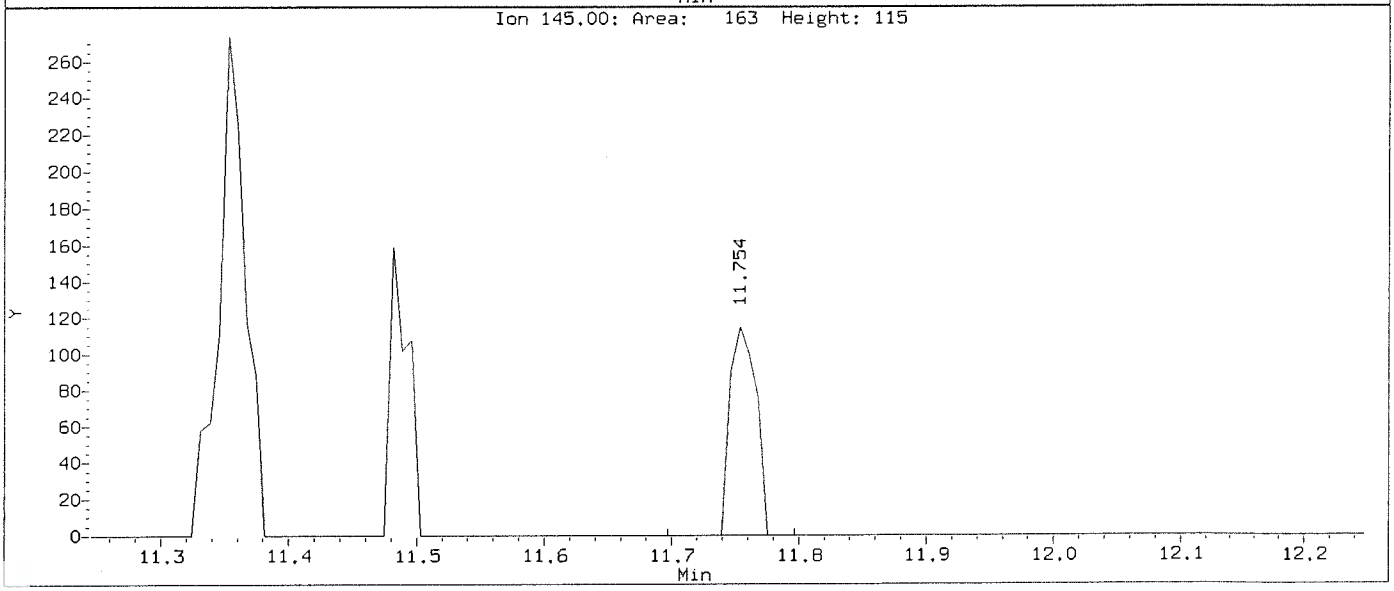



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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

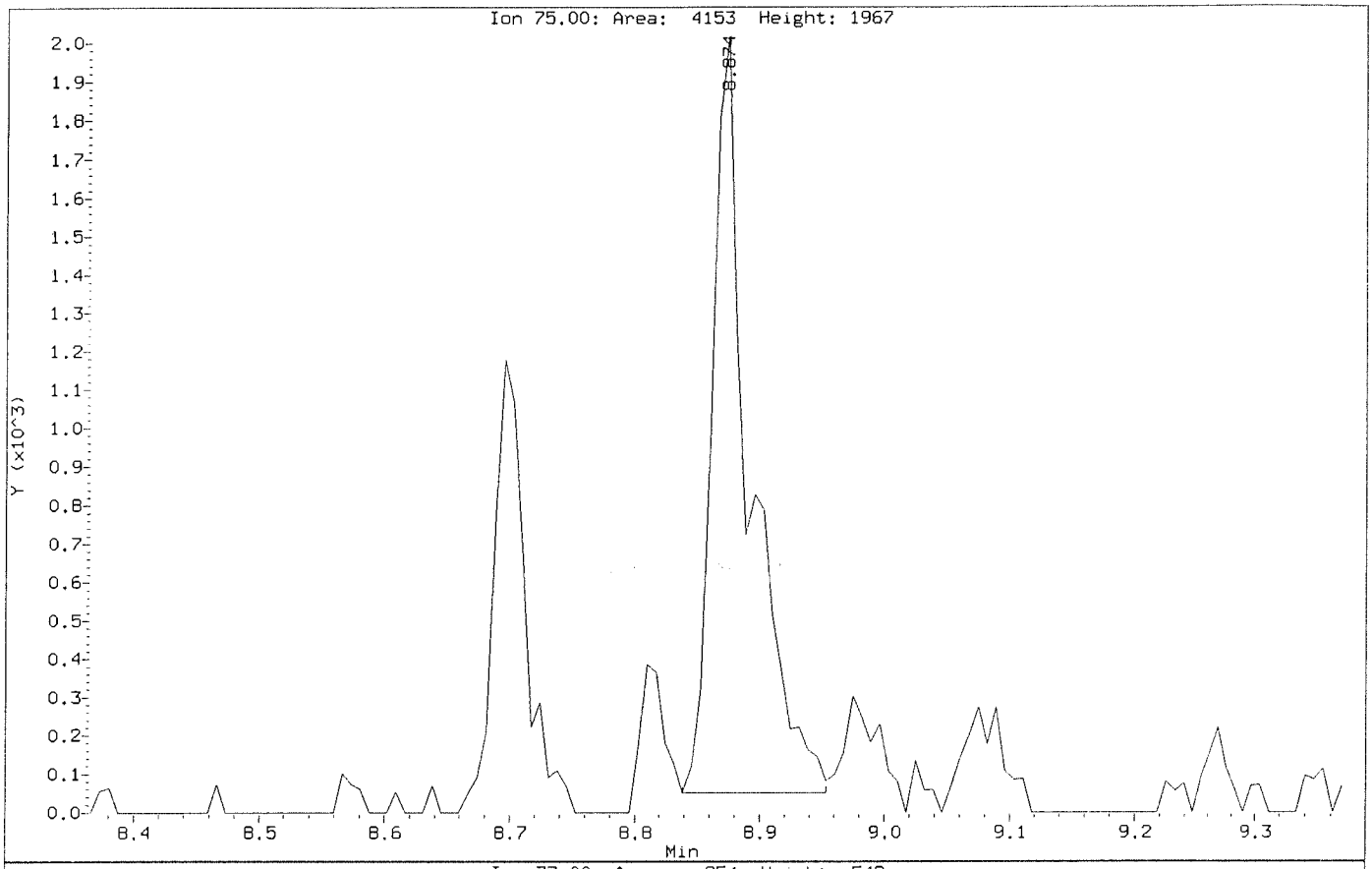


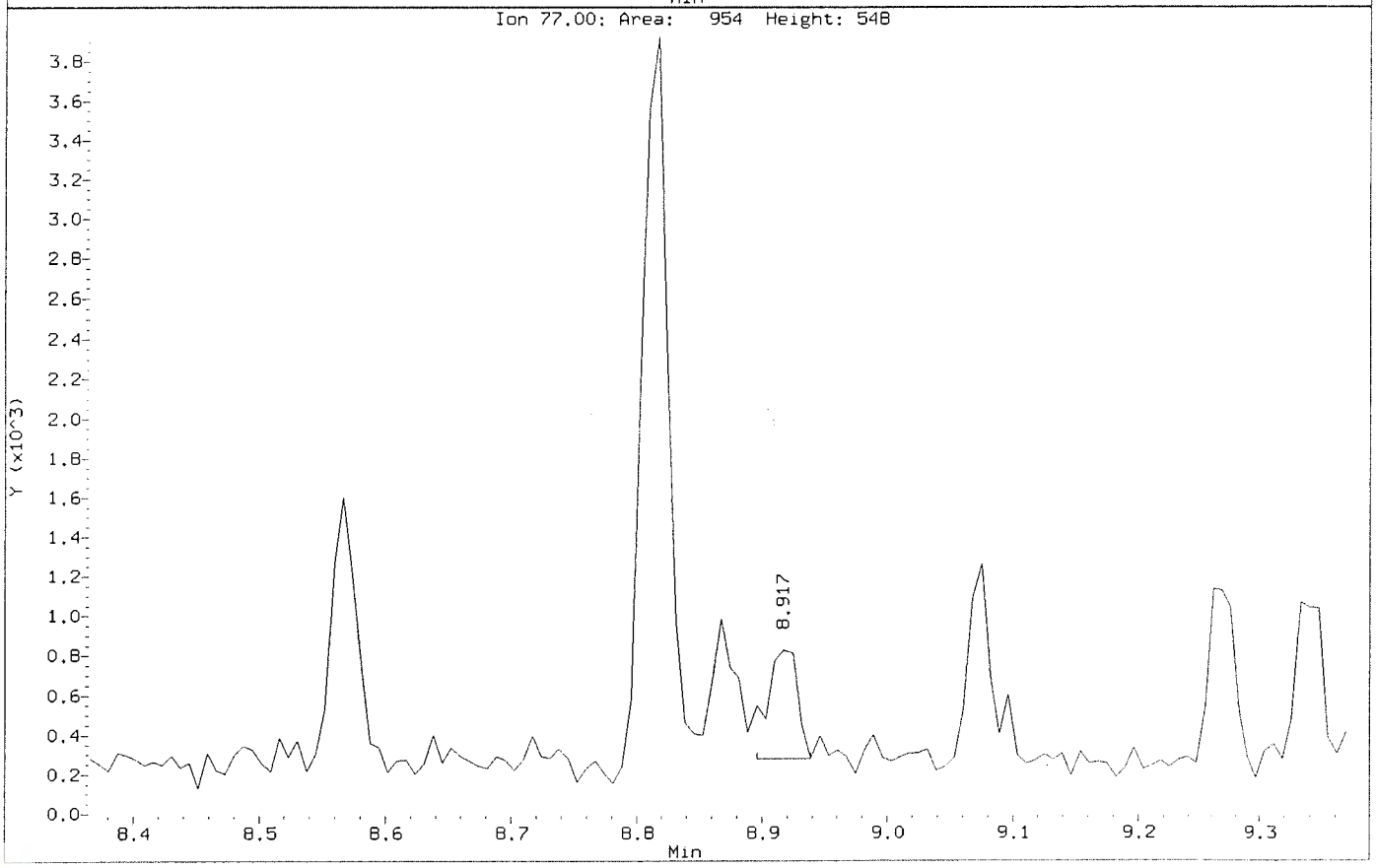



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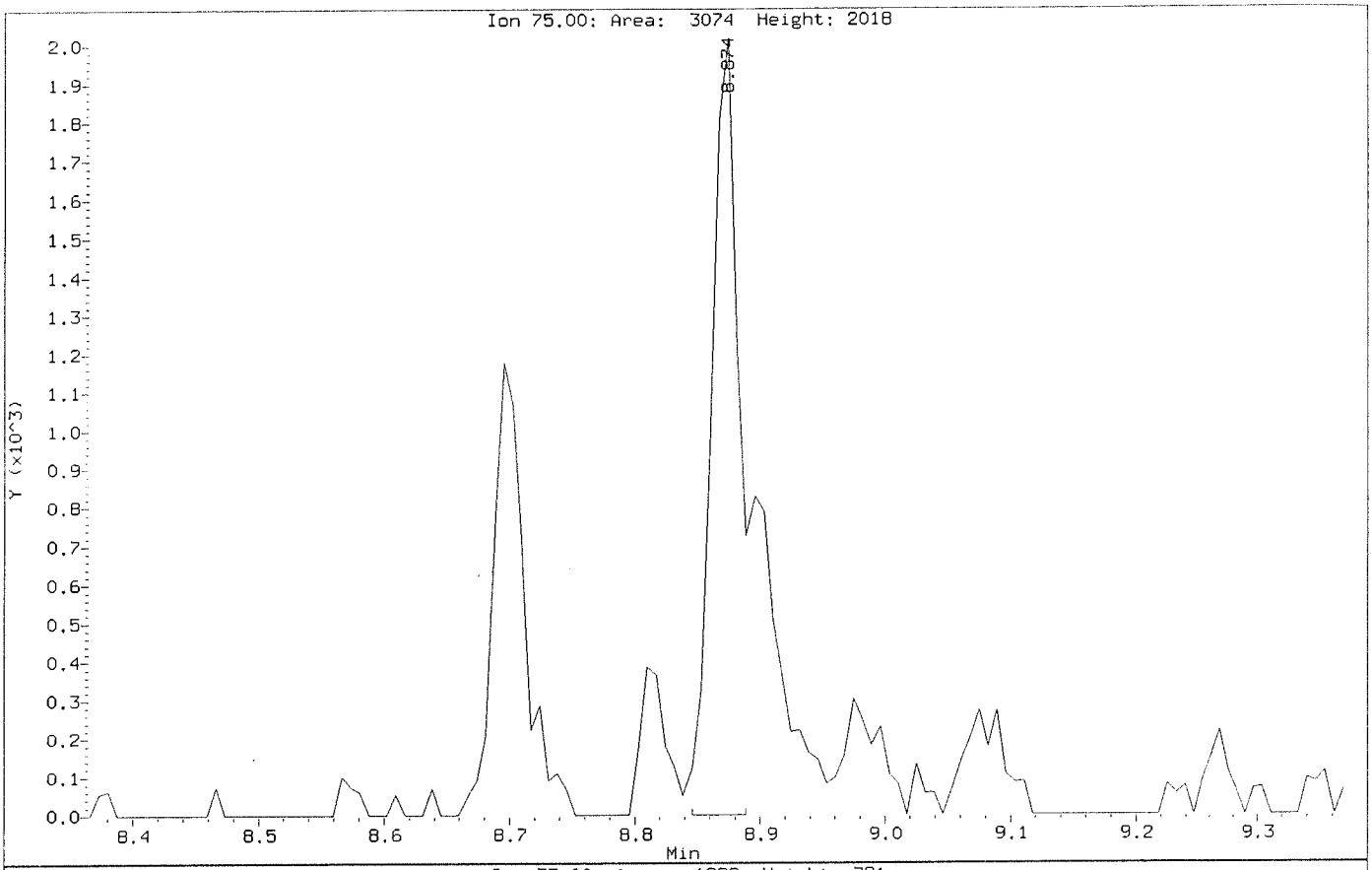
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

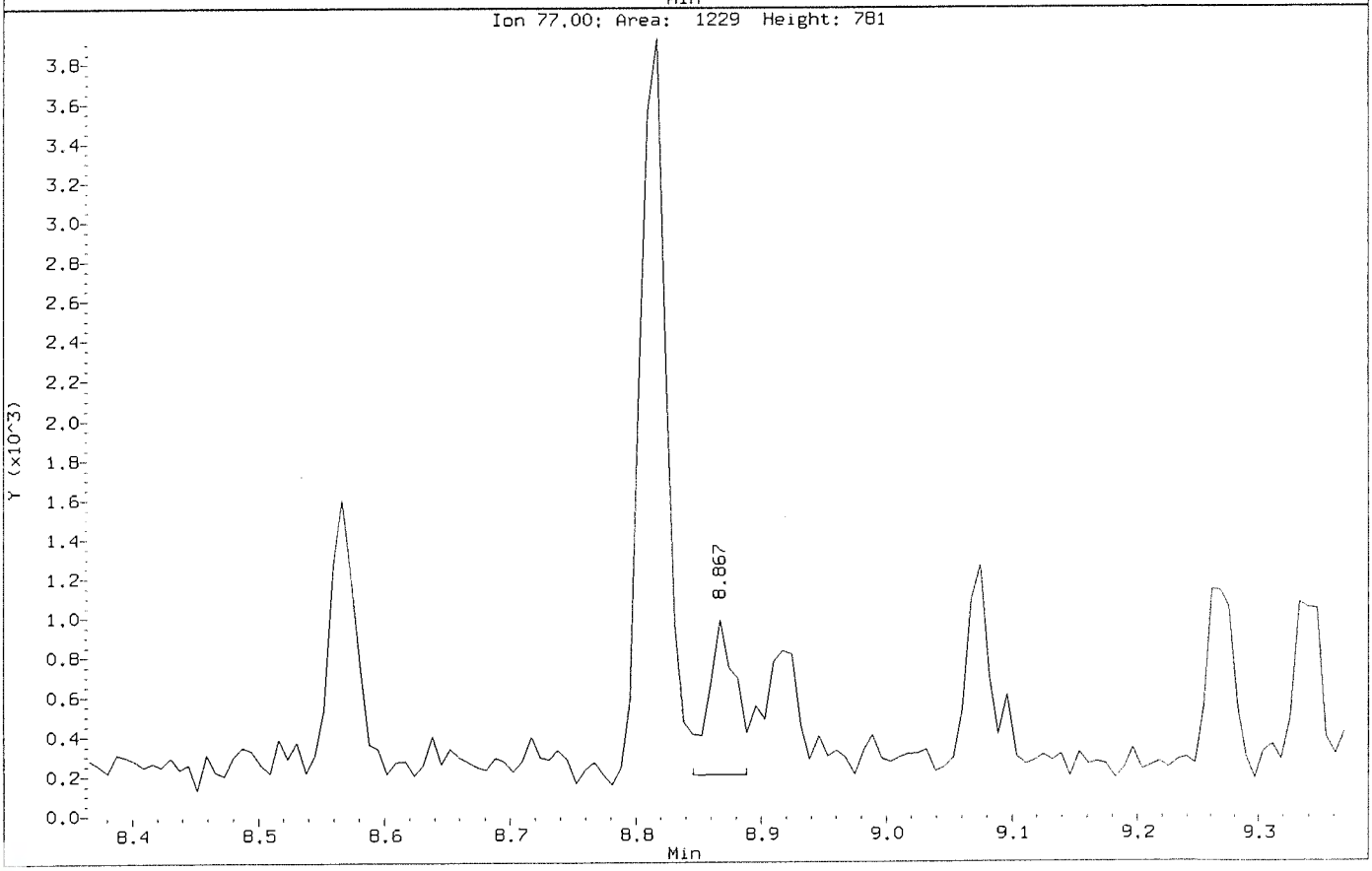


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Instrument: voa6.i
Client Sample ID: VSTD000.5

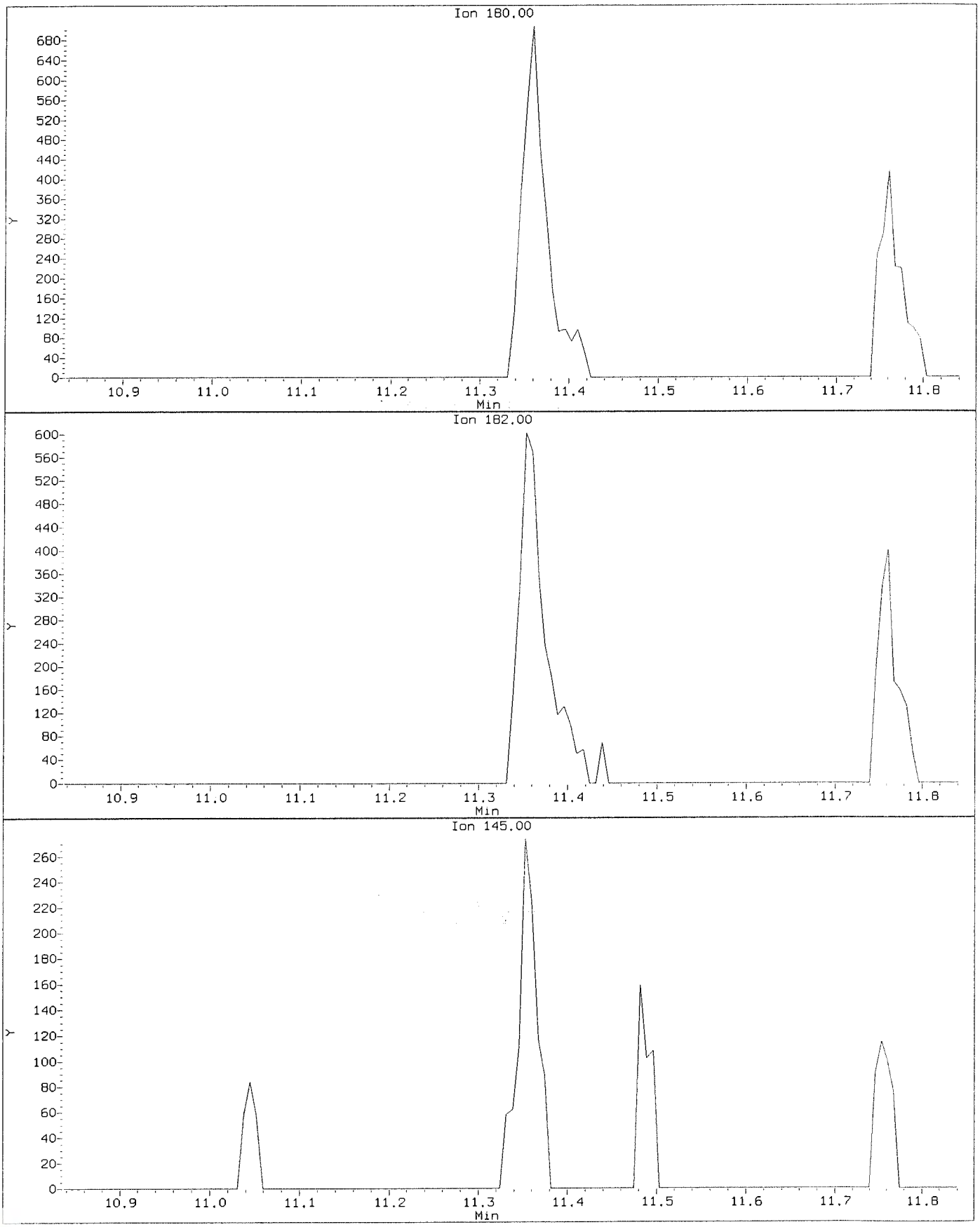
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



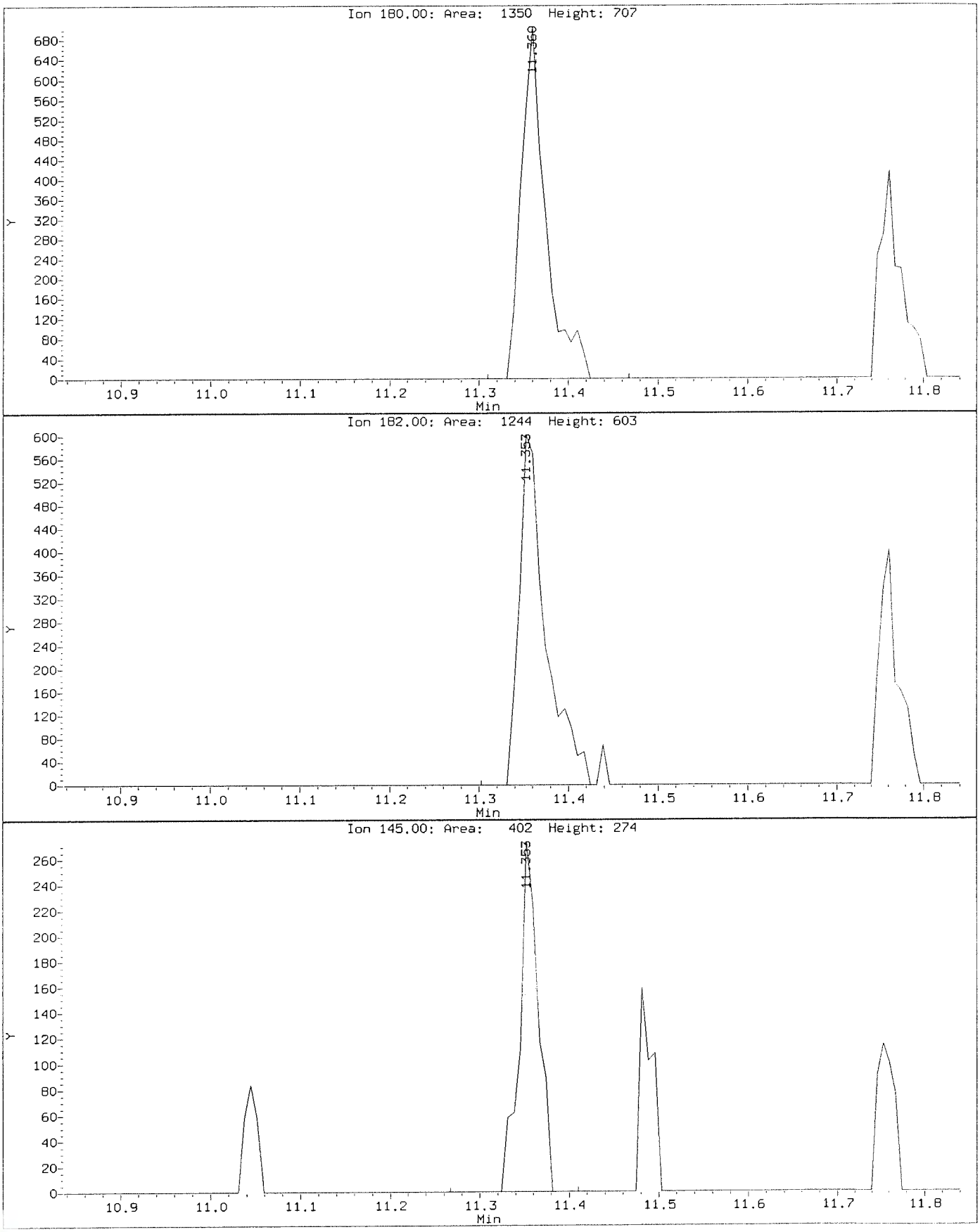
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



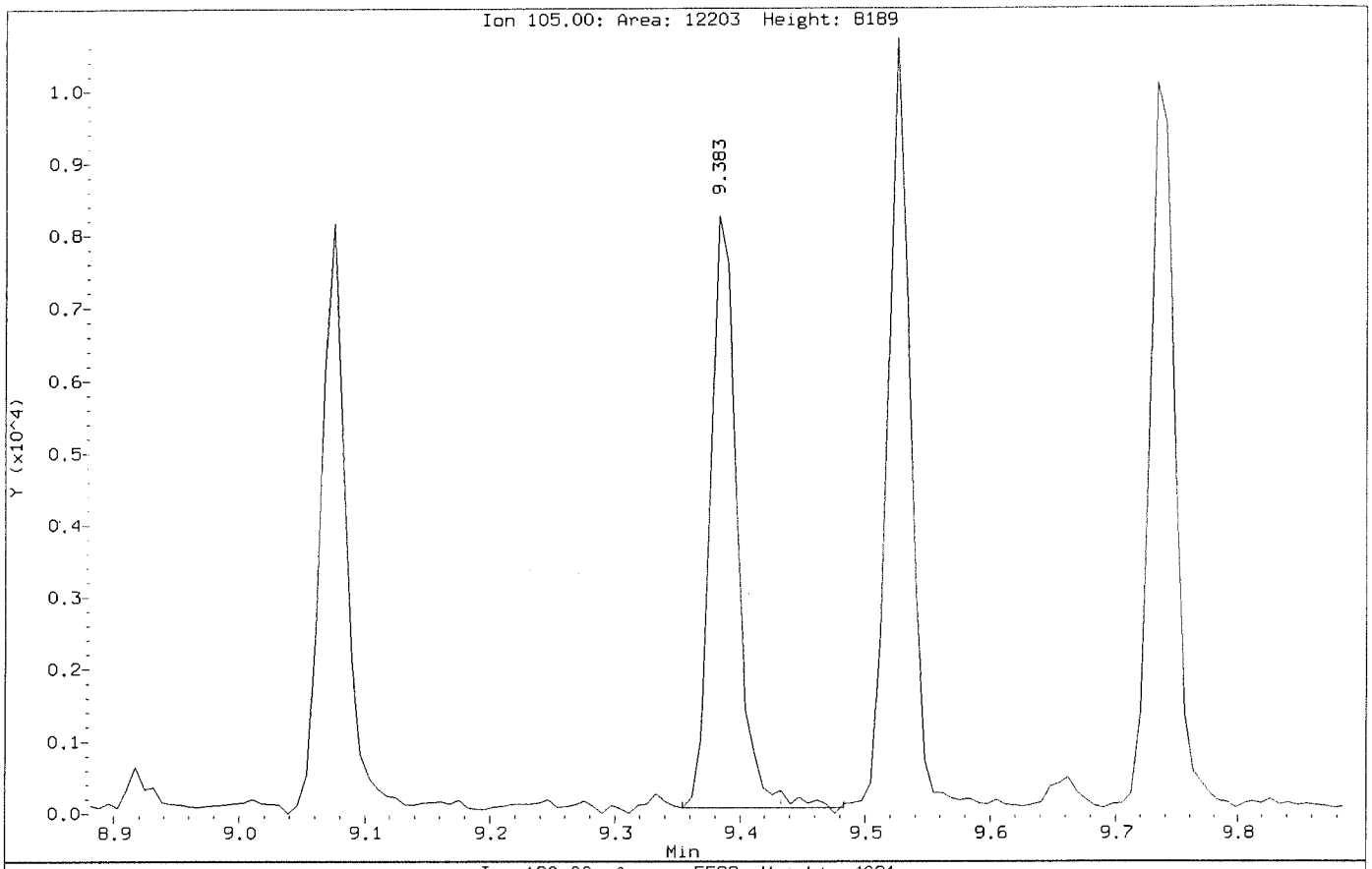
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Instrument: voa6.i
Client Sample ID: VSTD000.5

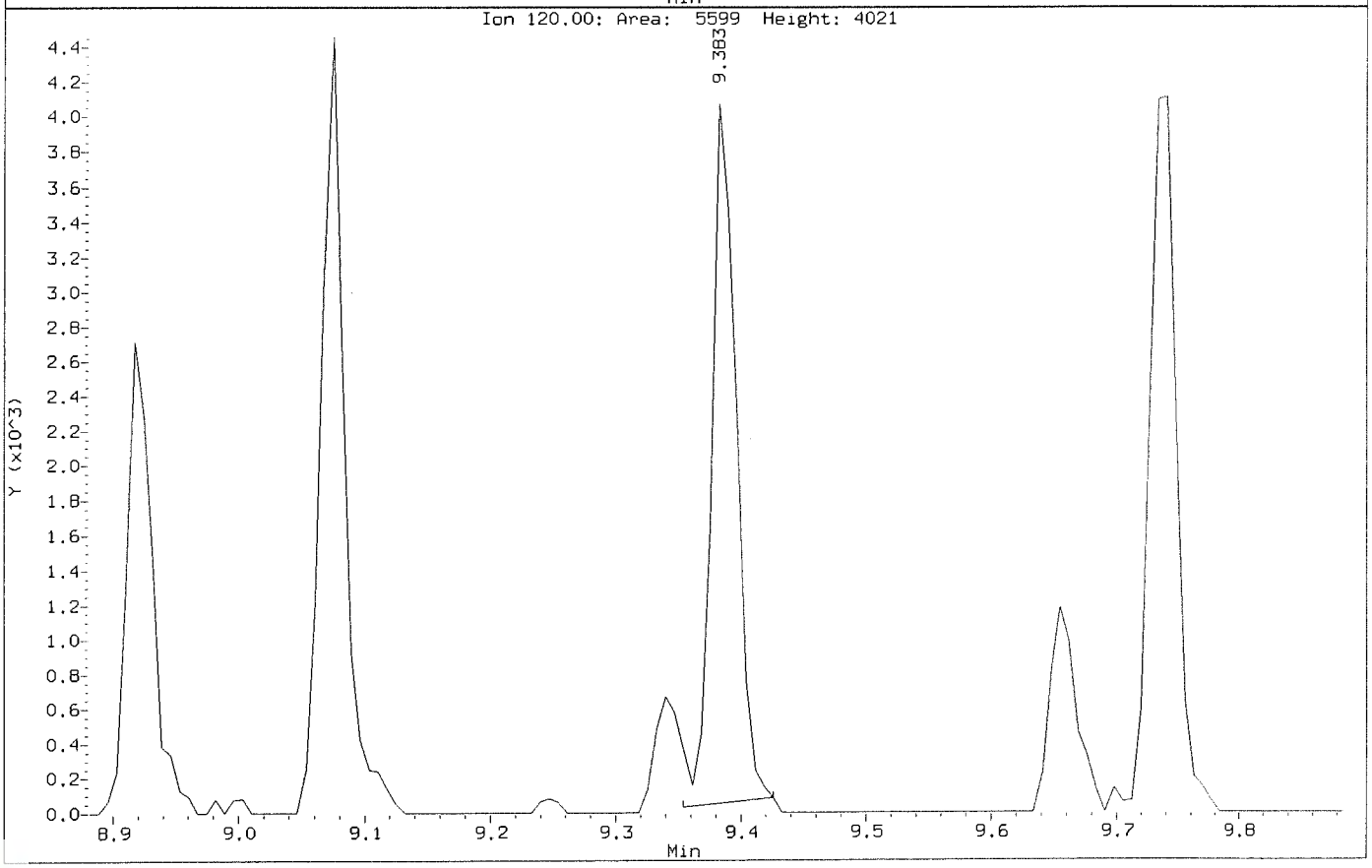
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

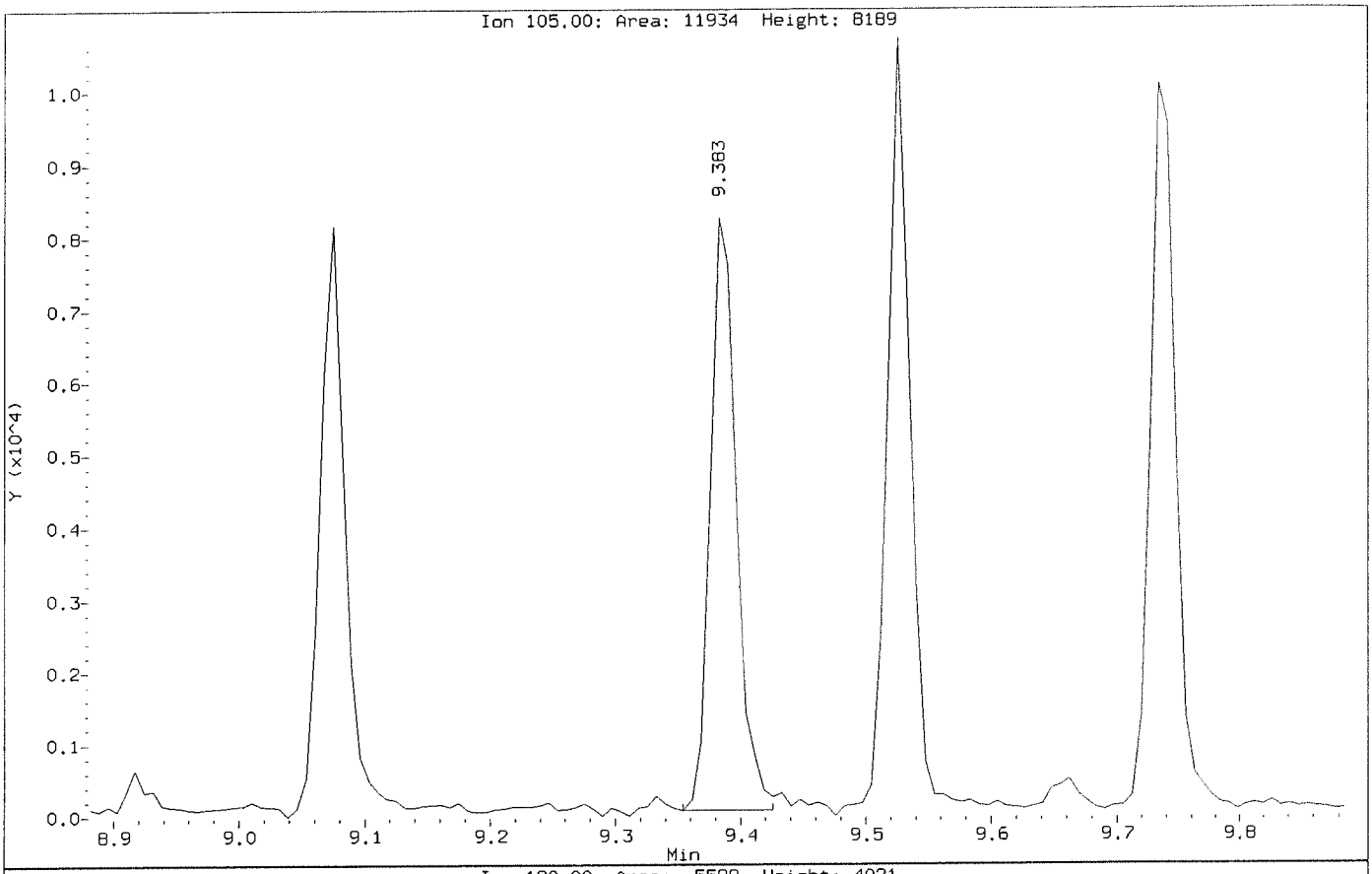
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6

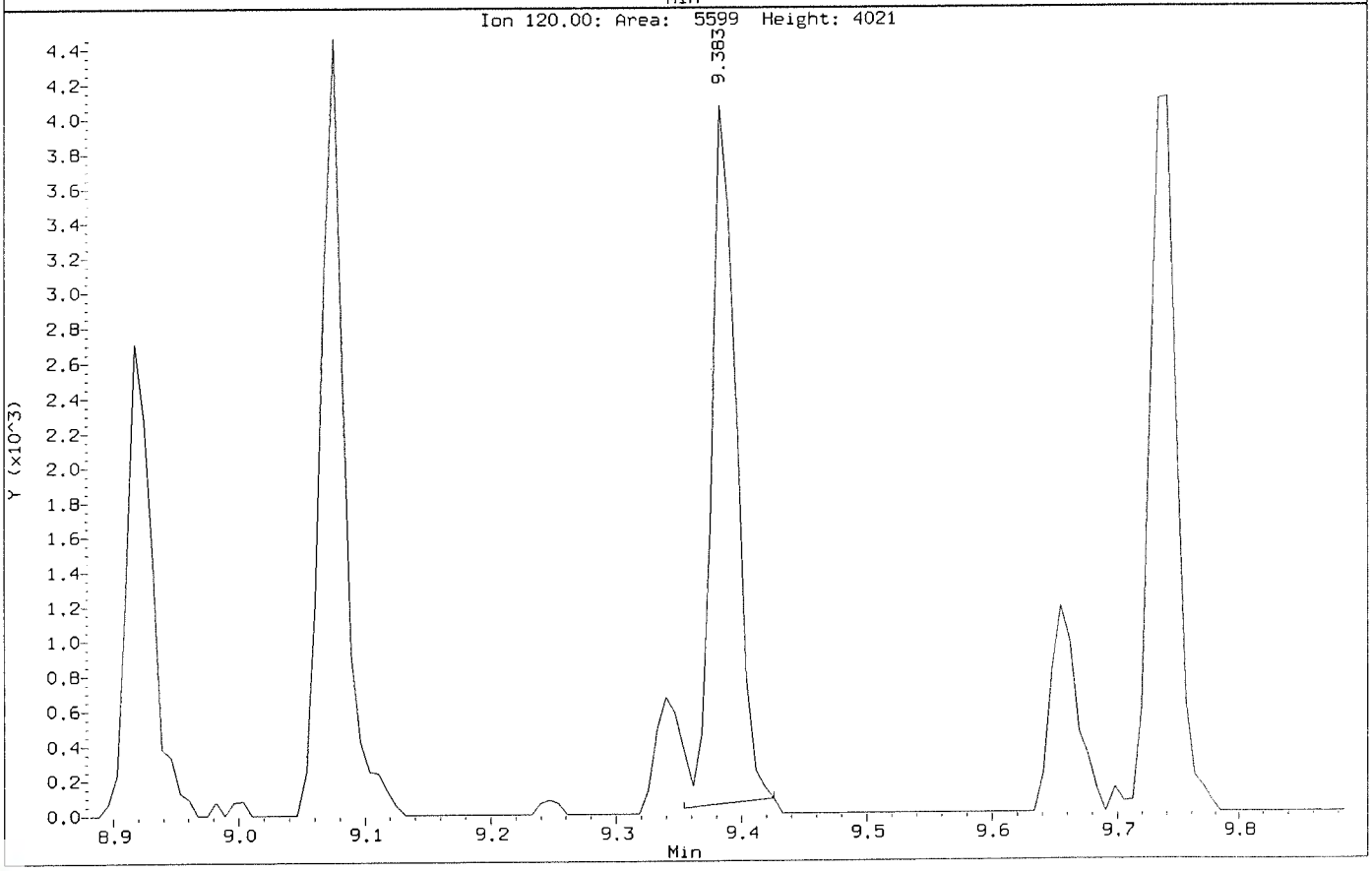


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

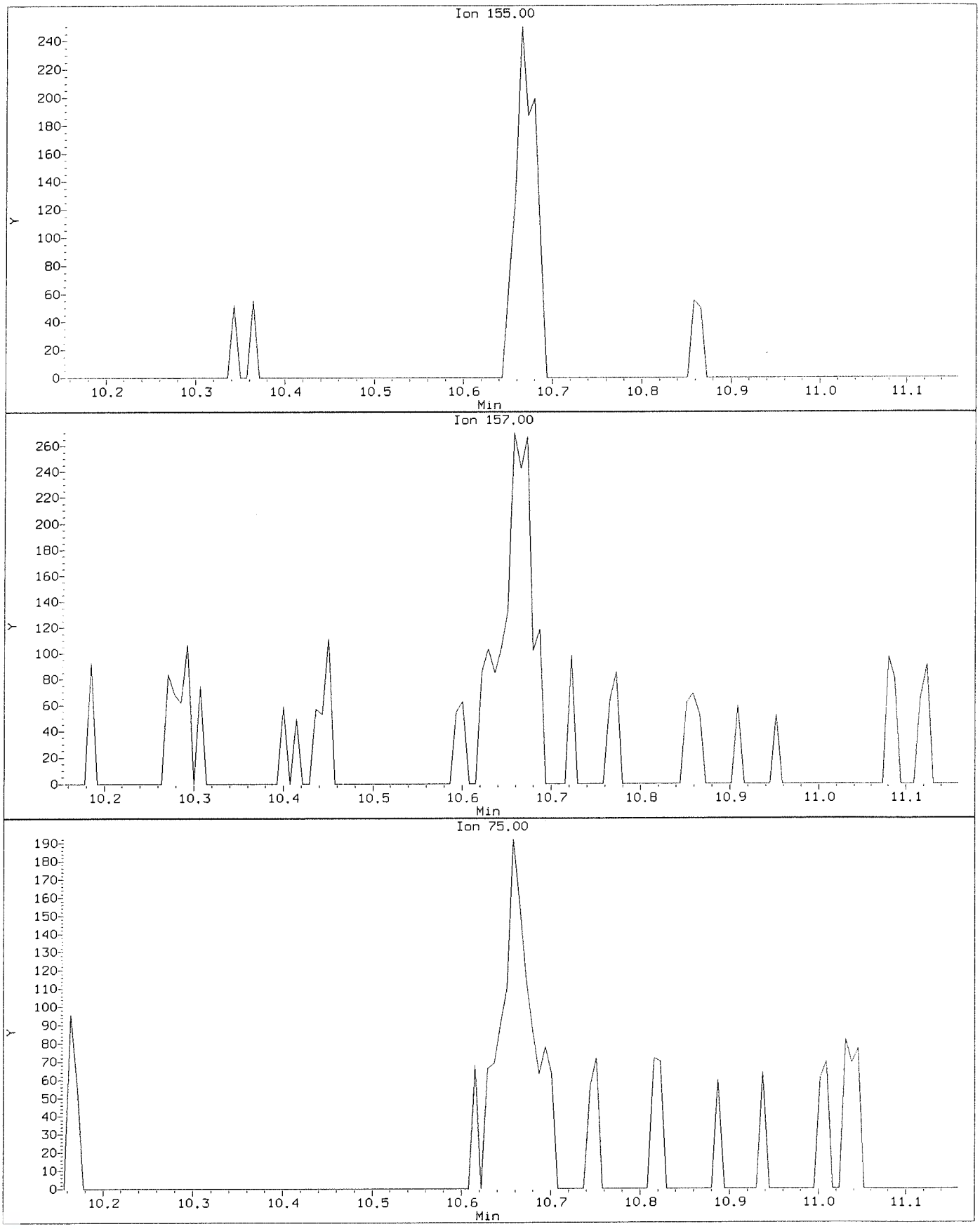
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



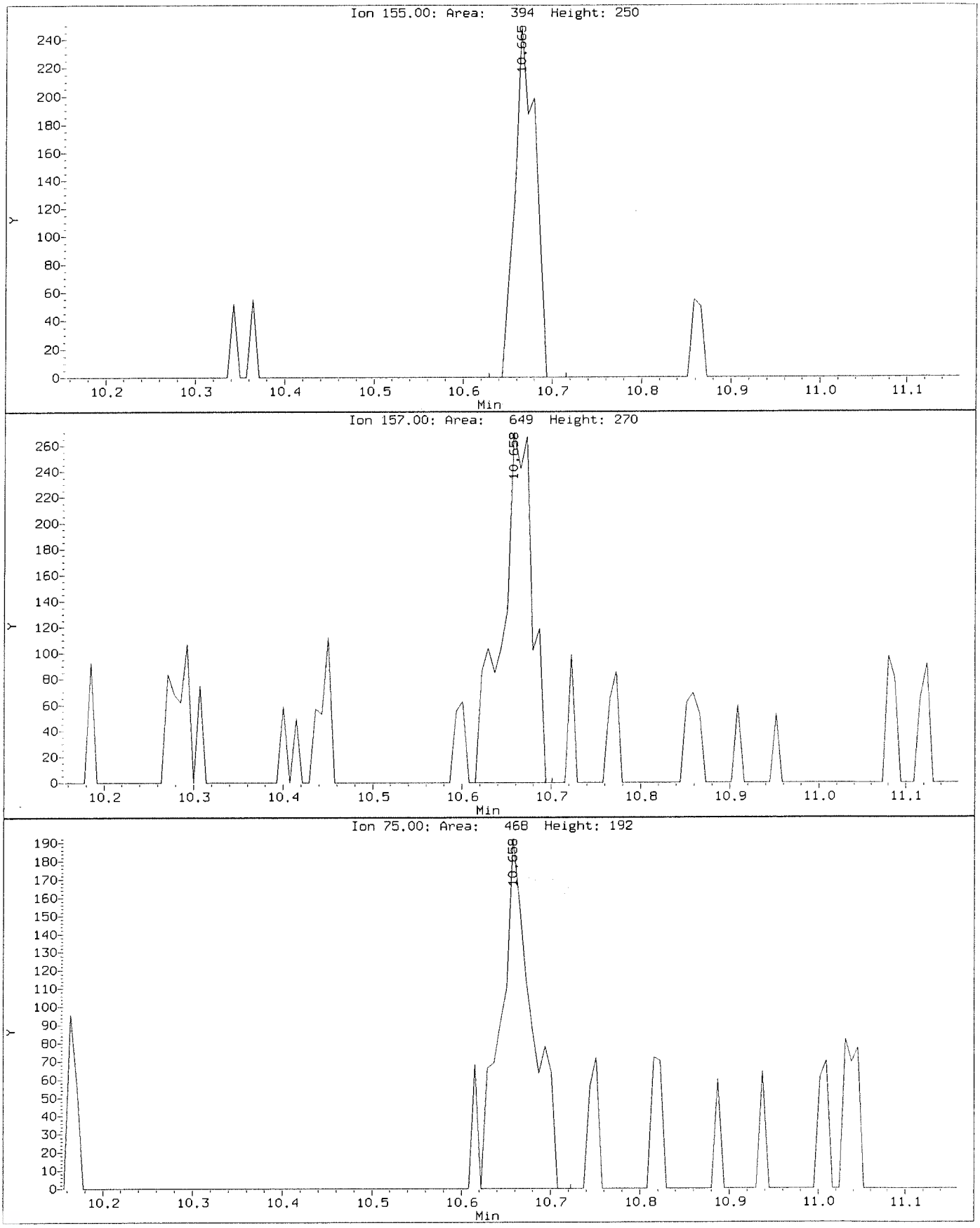
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



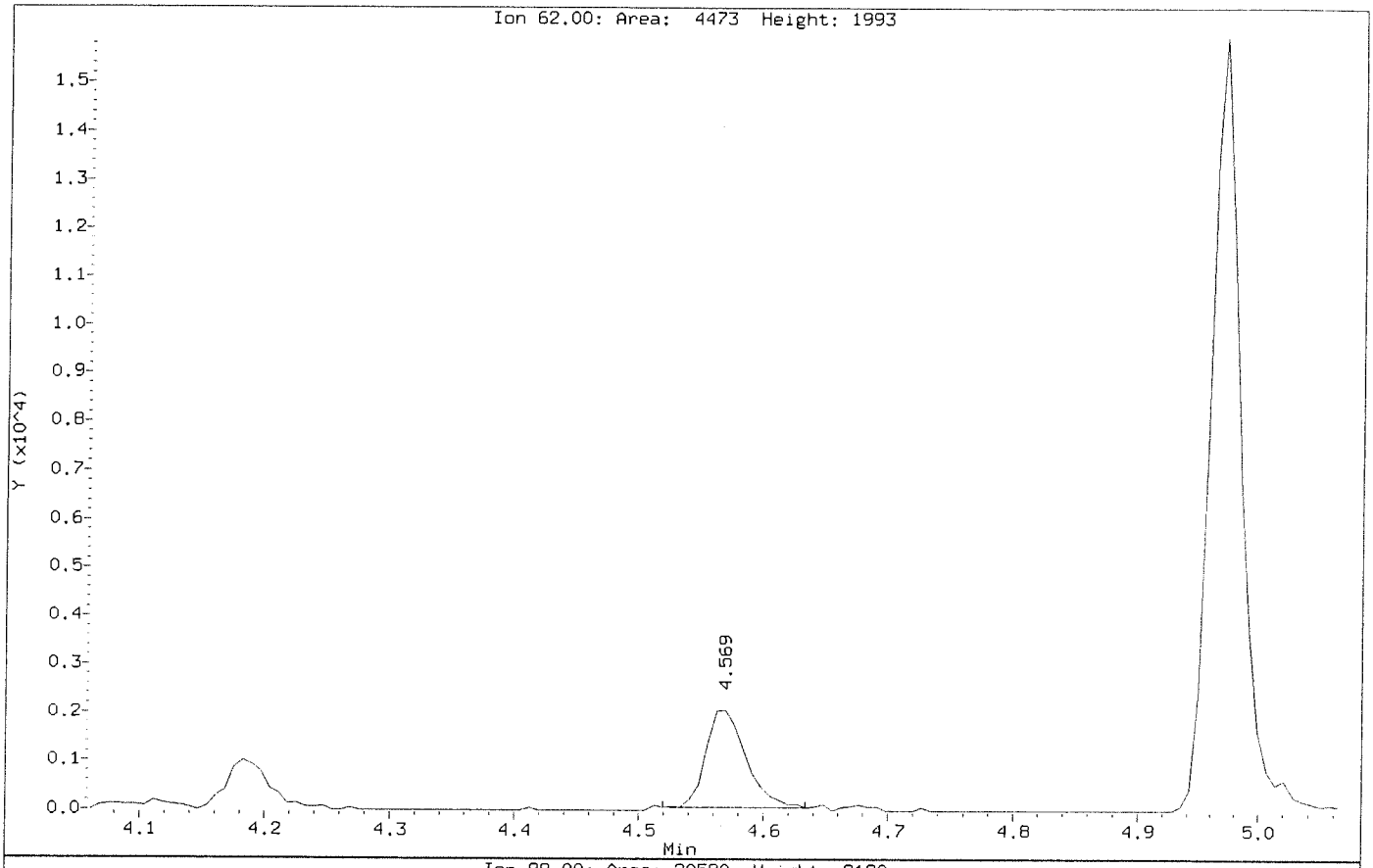
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Client Sample ID: VSTD000.5

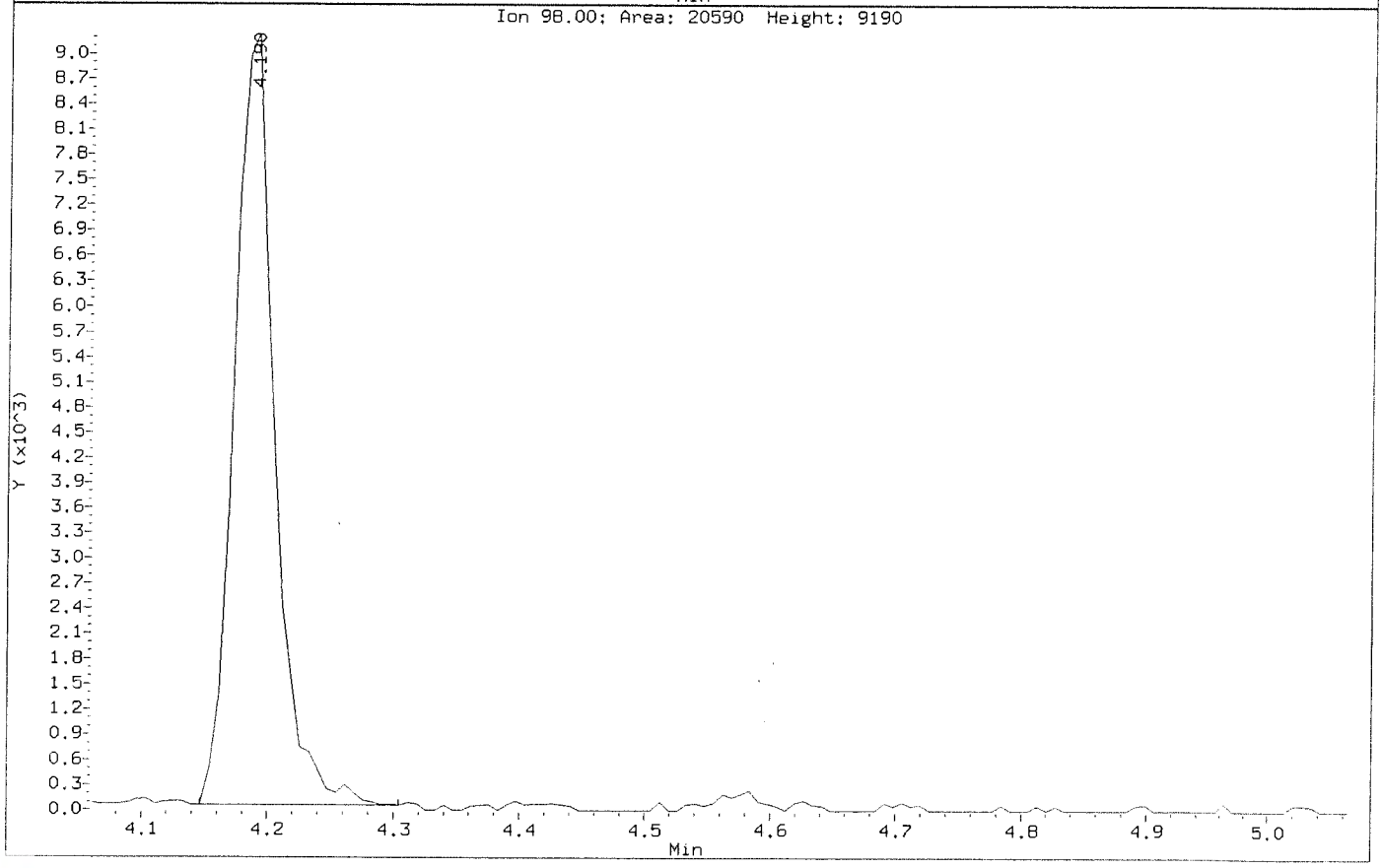
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

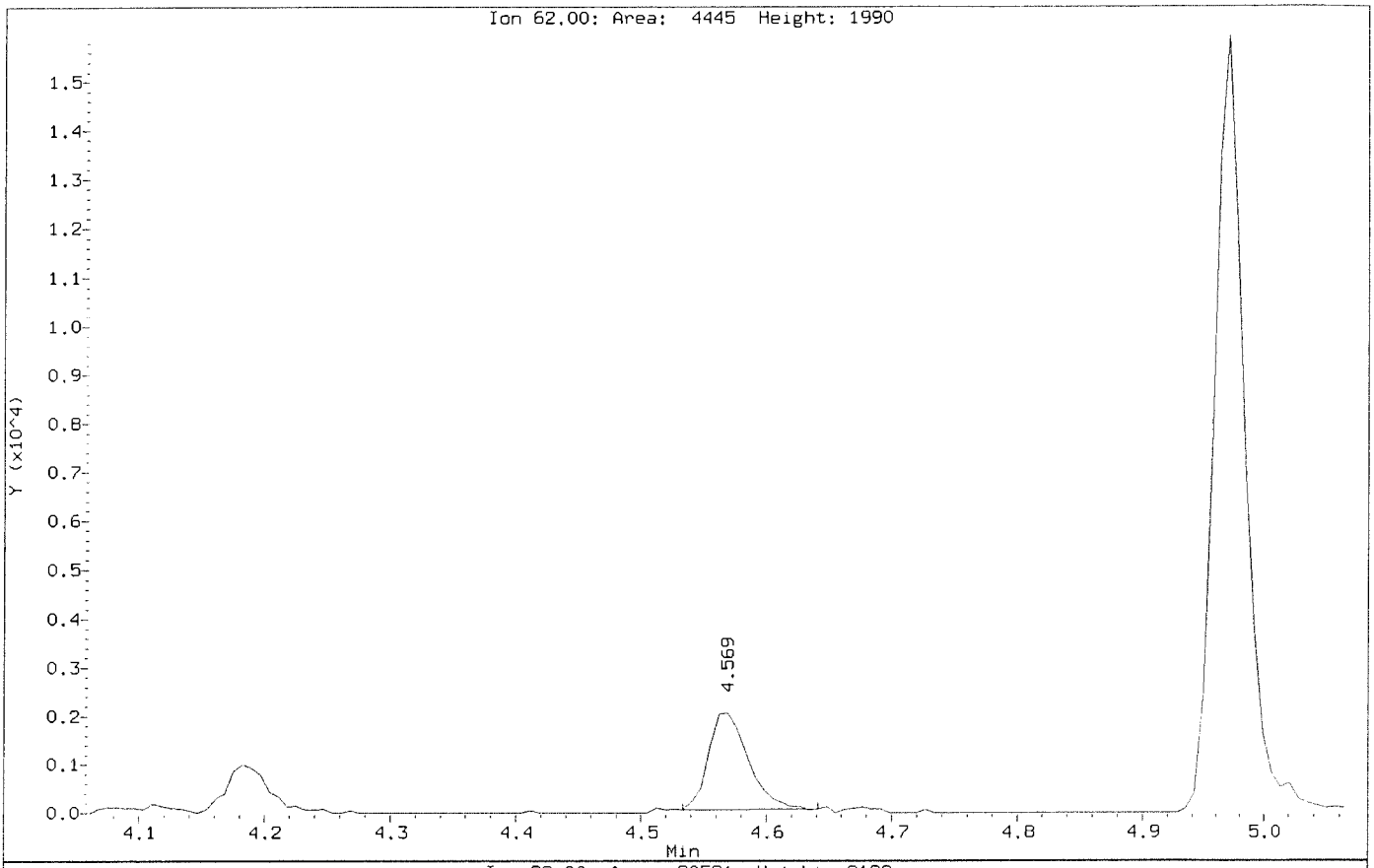
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

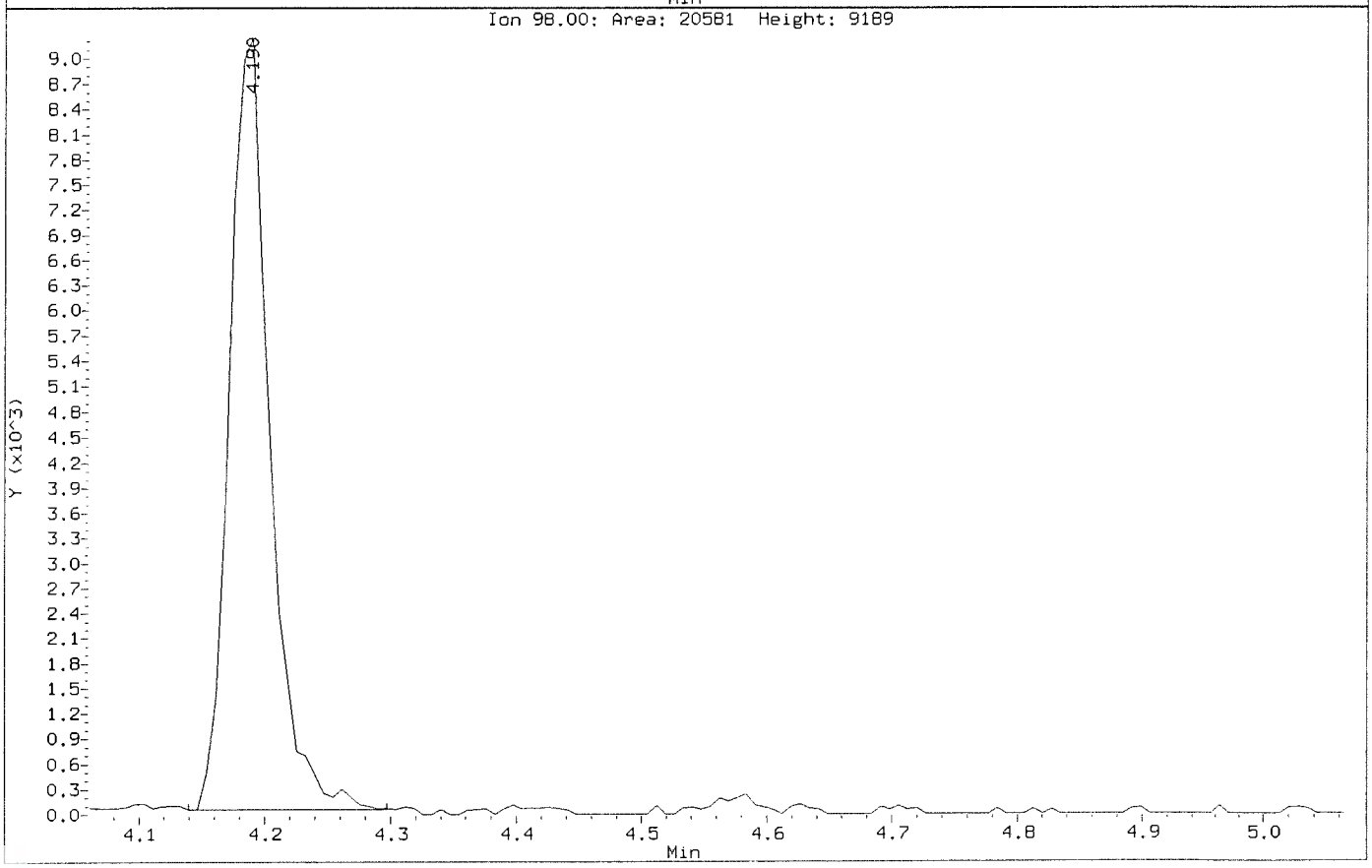


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

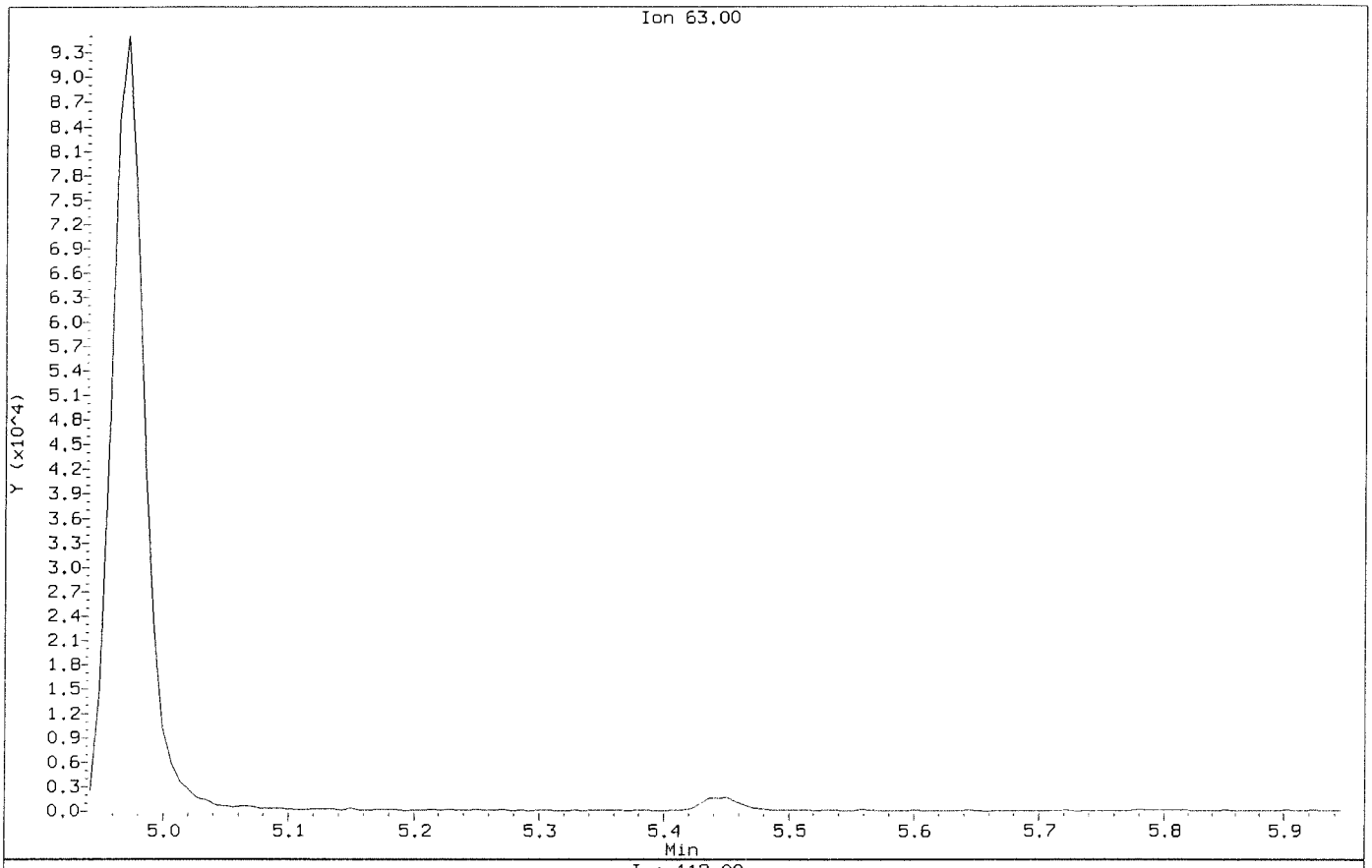
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

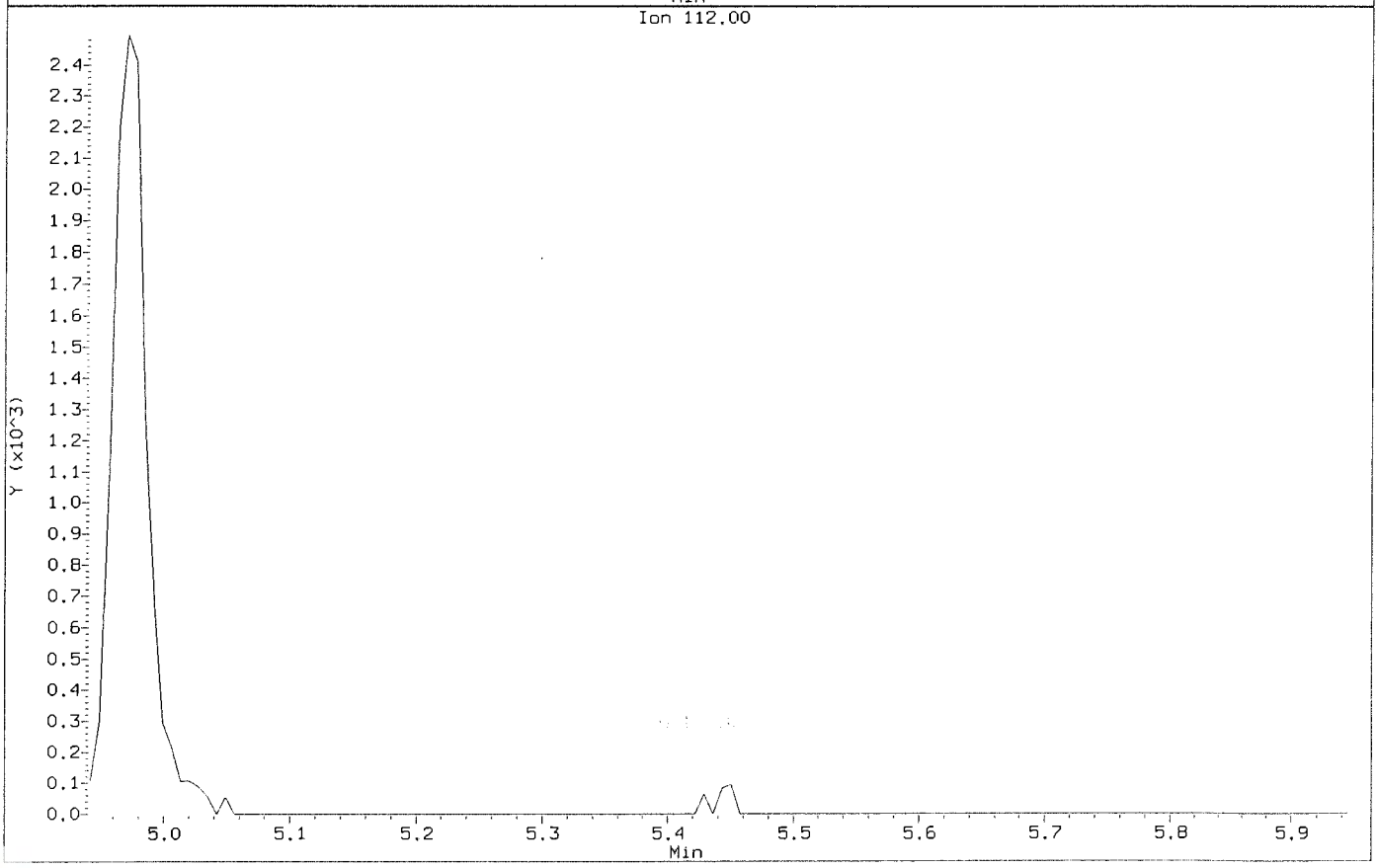


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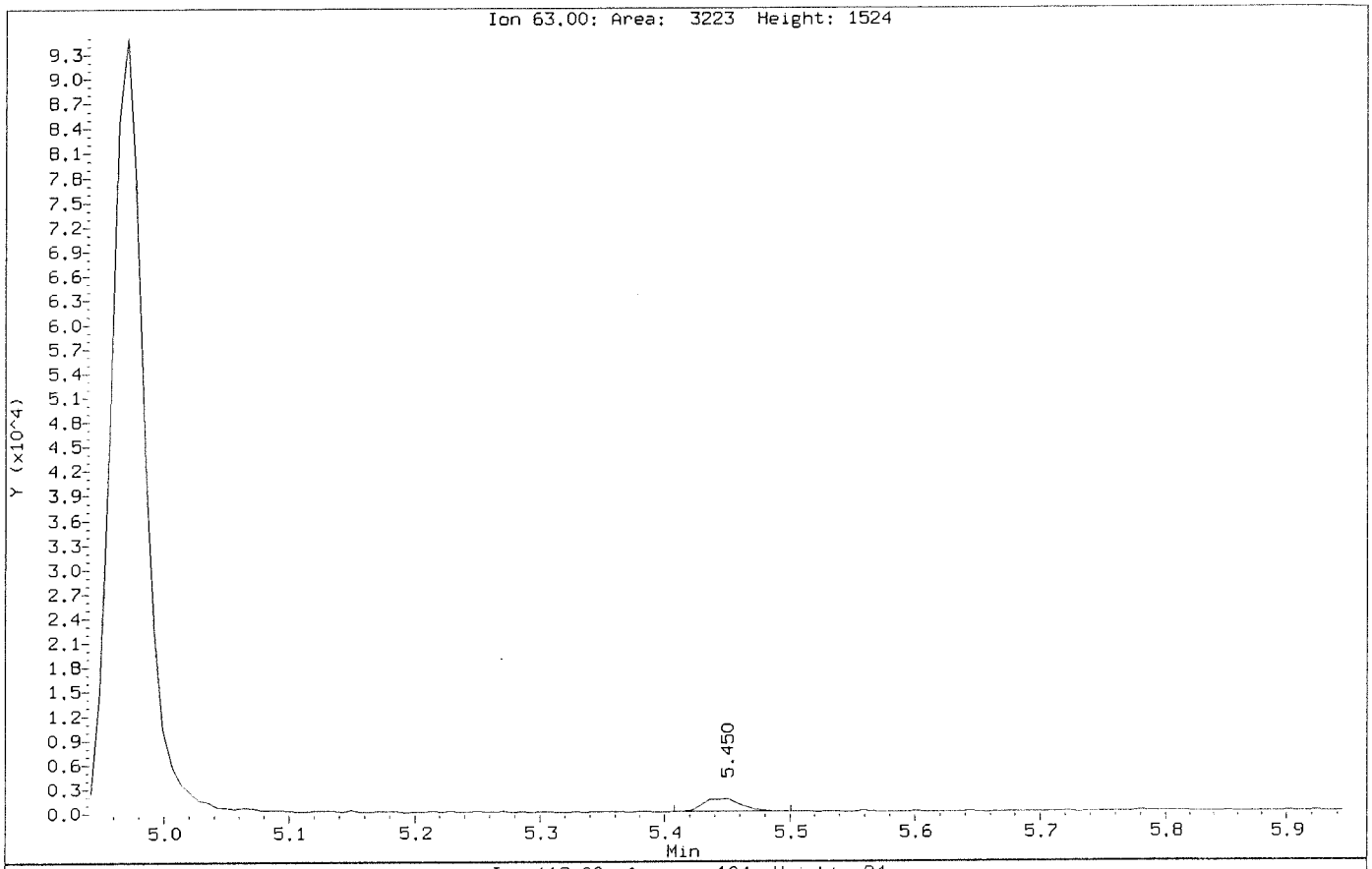
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

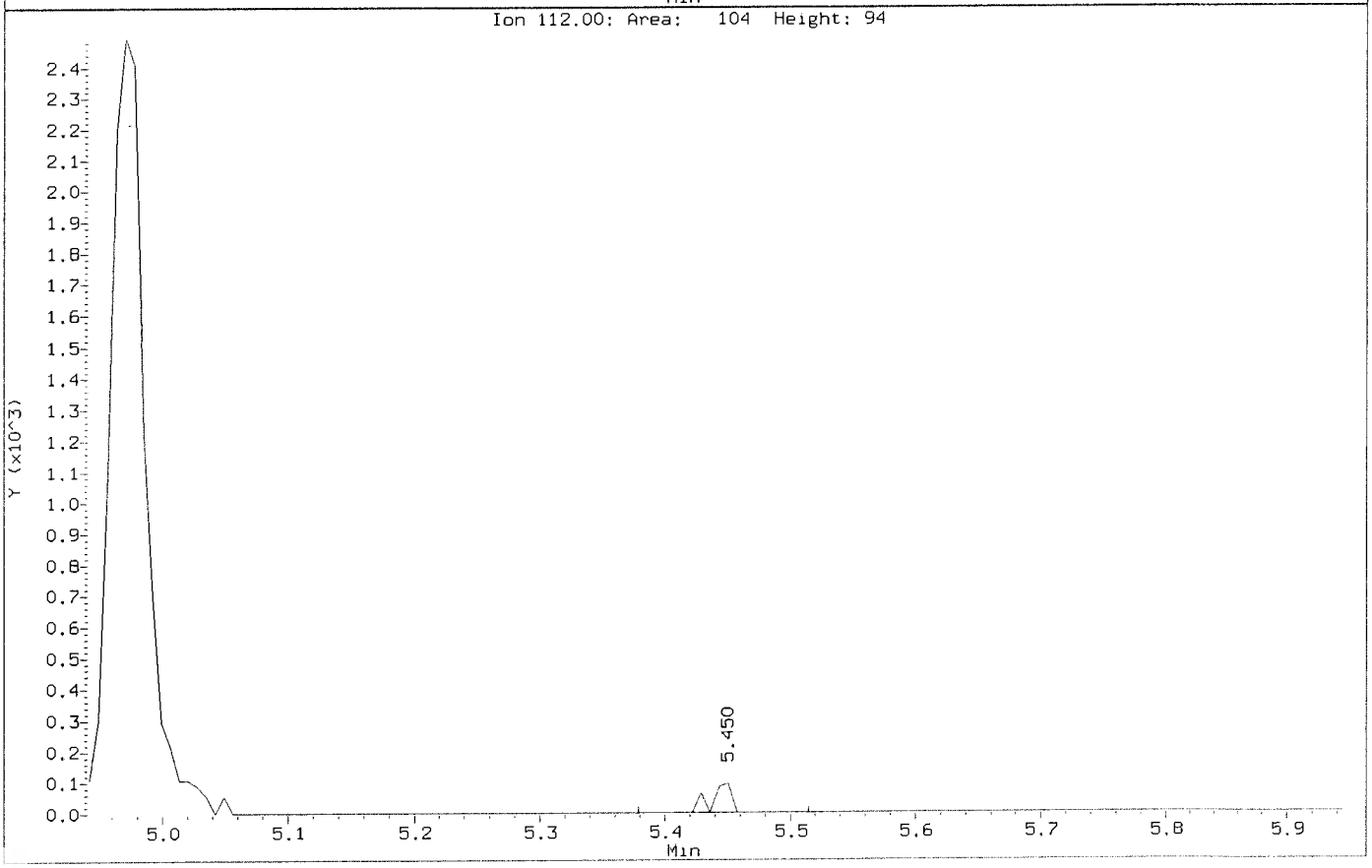


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Instrument: voa6.i
Client Sample ID: VSTD000.5

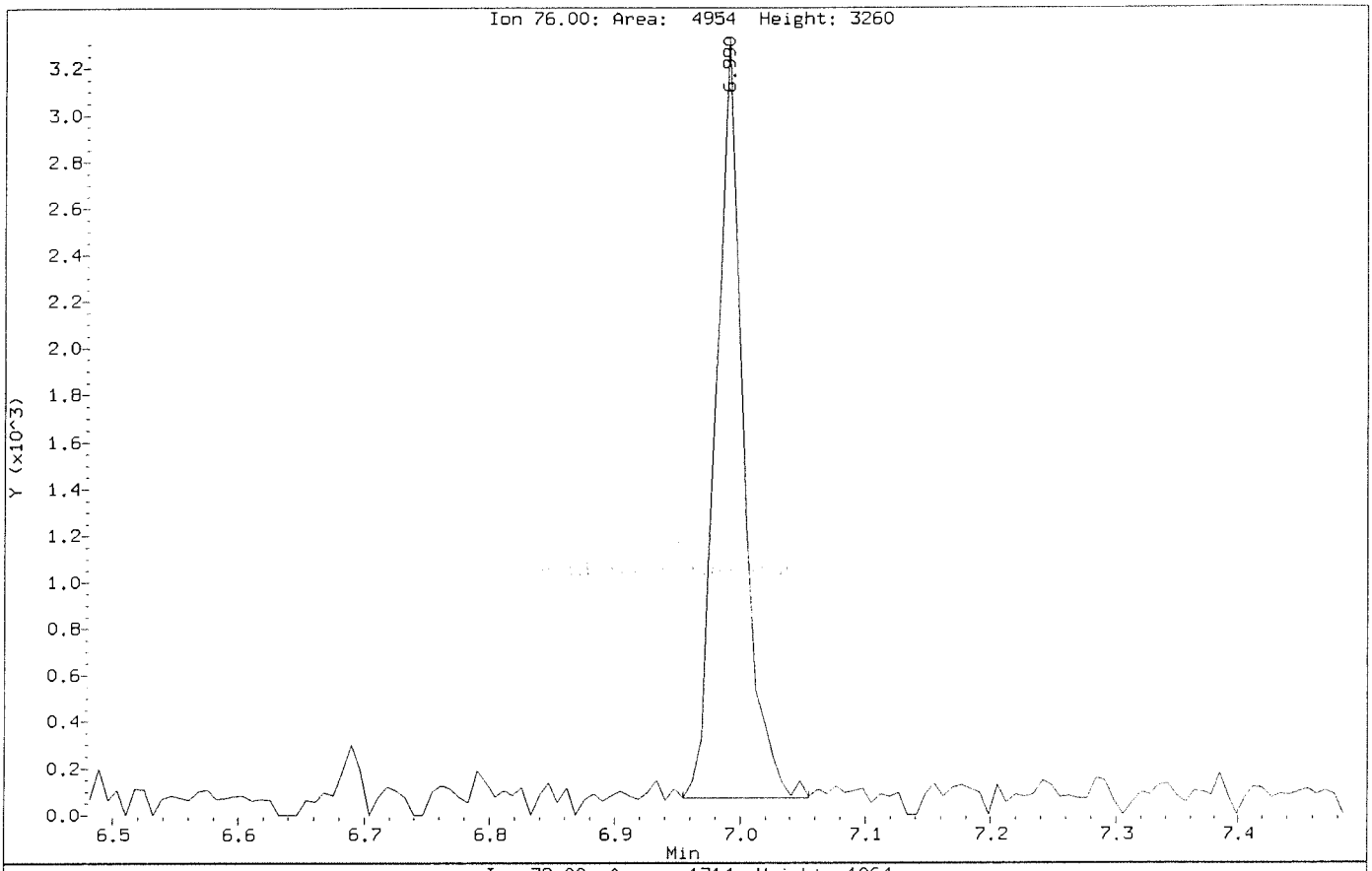
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

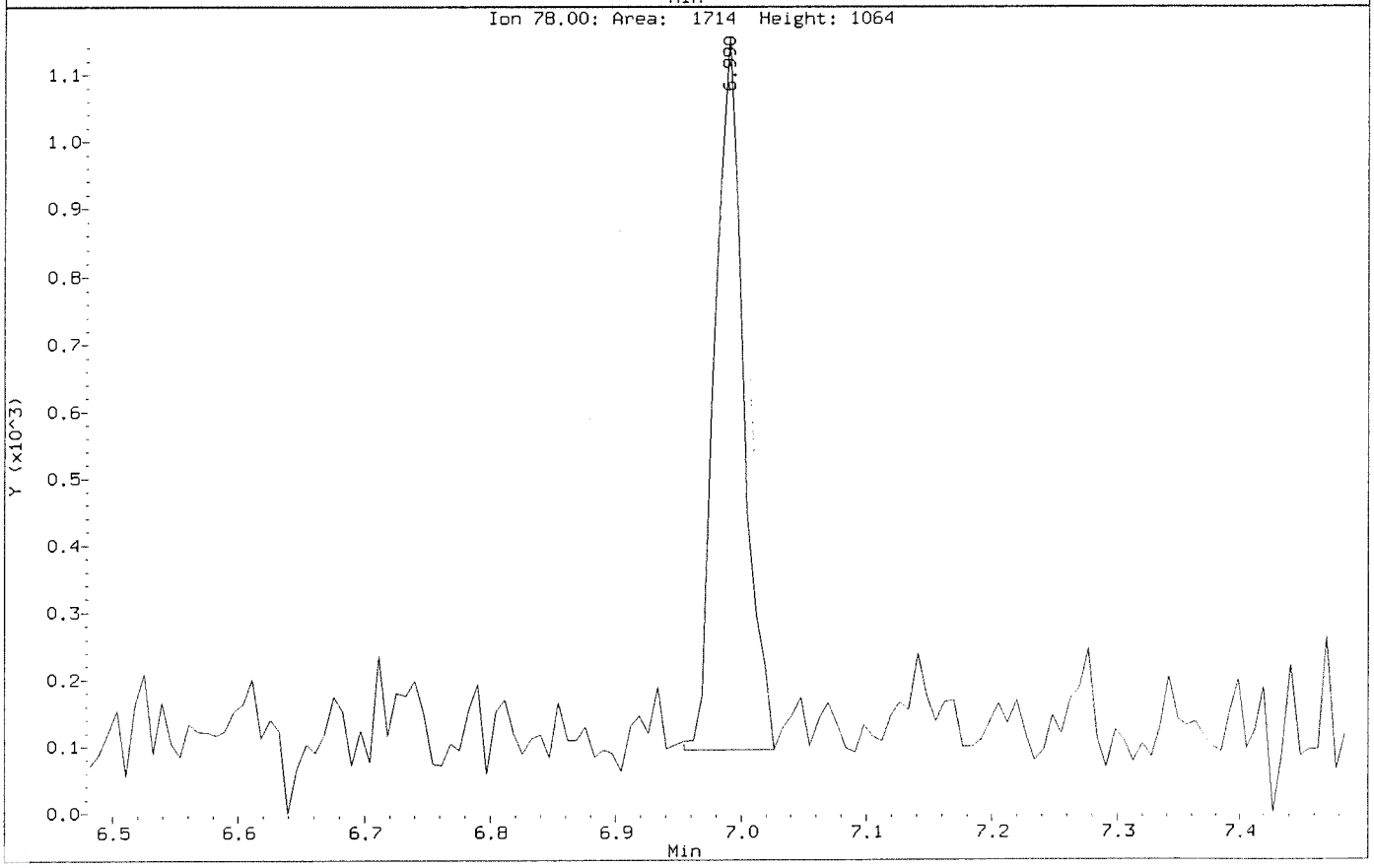


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Instrument: voa6.i
Client Sample ID: VSTD000.5

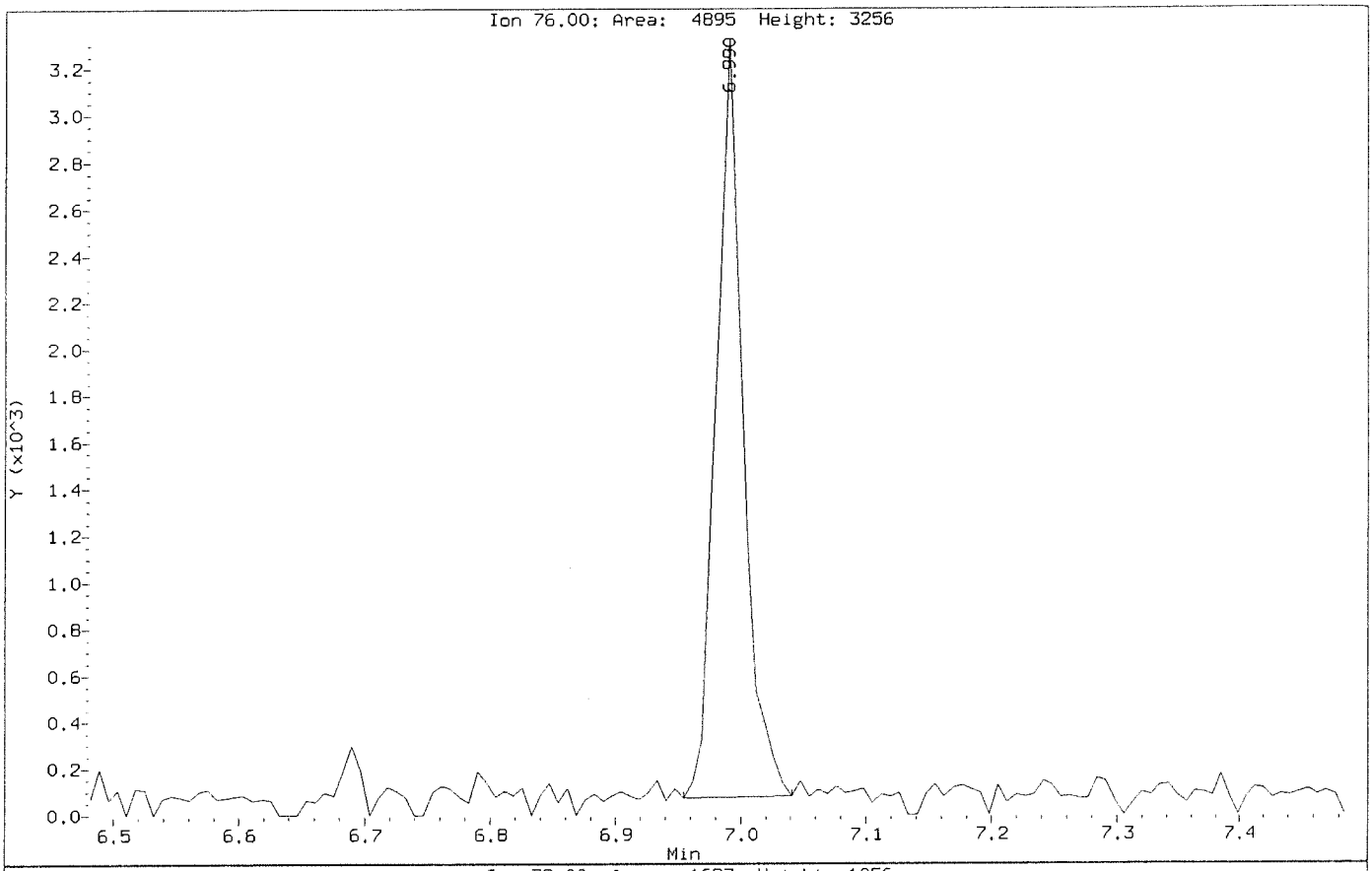
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

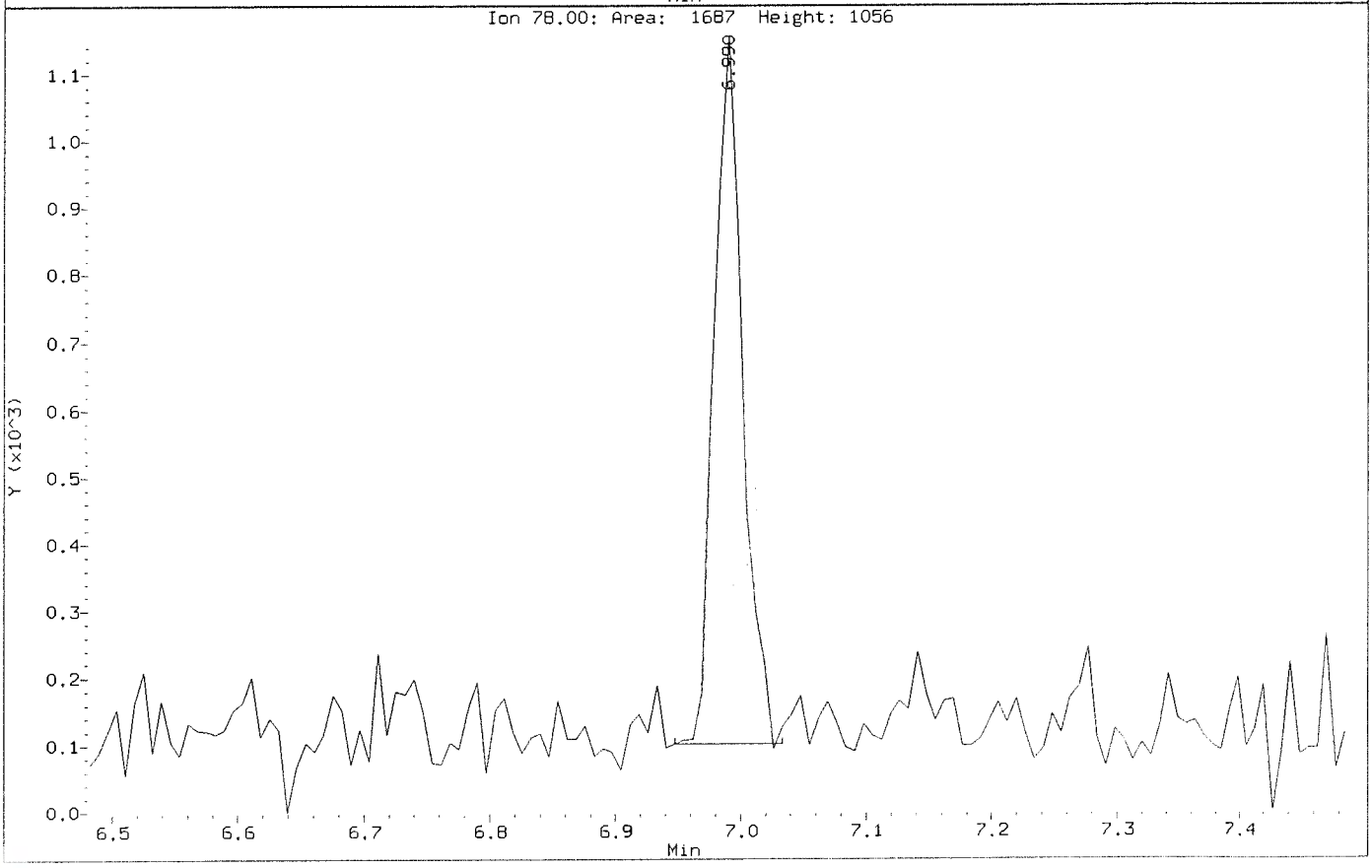


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Instrument: voa6.i
Client Sample ID: VSTD000.5

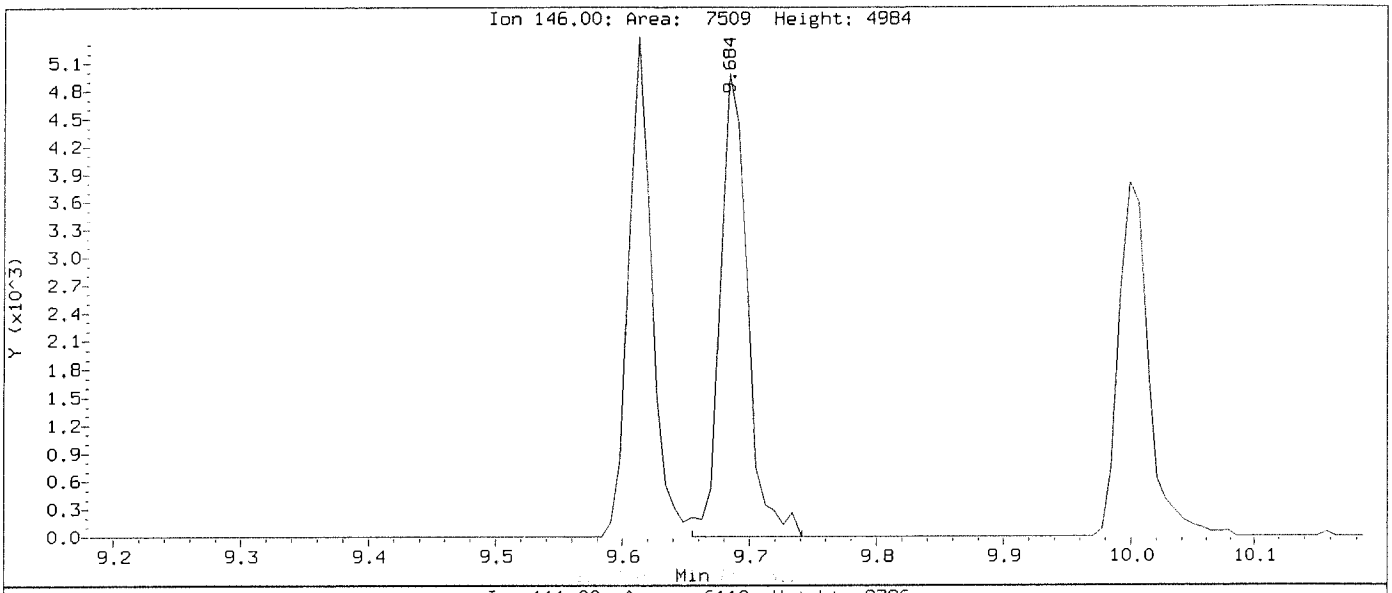
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

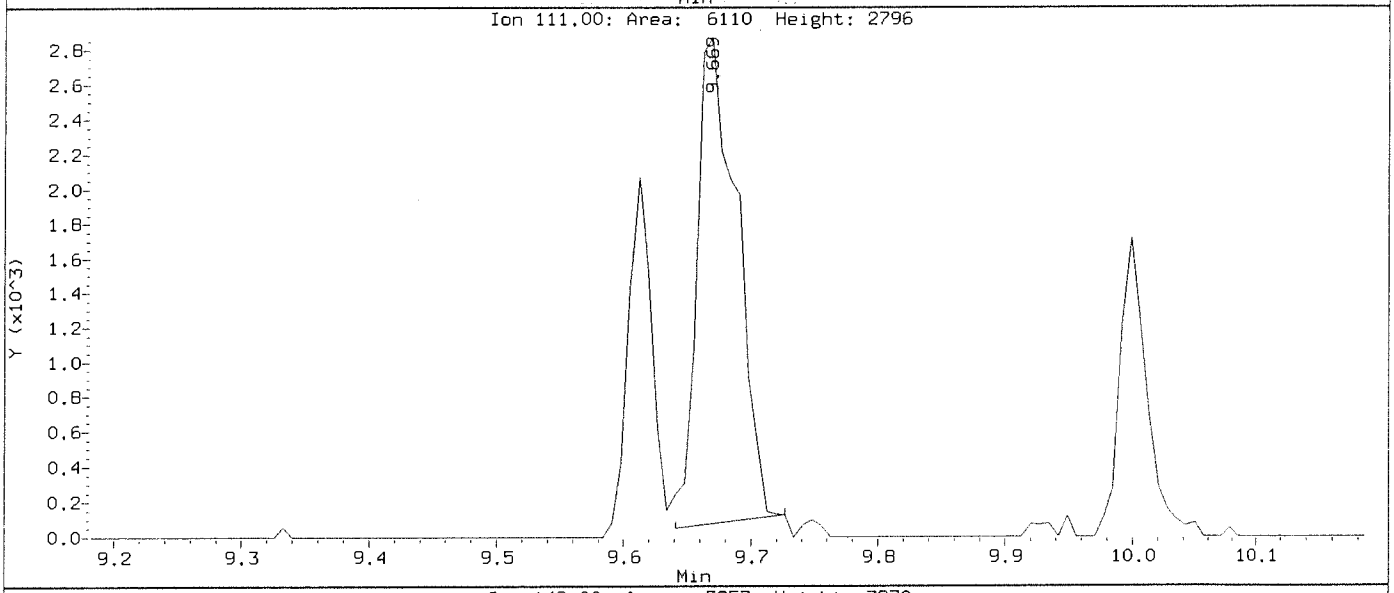


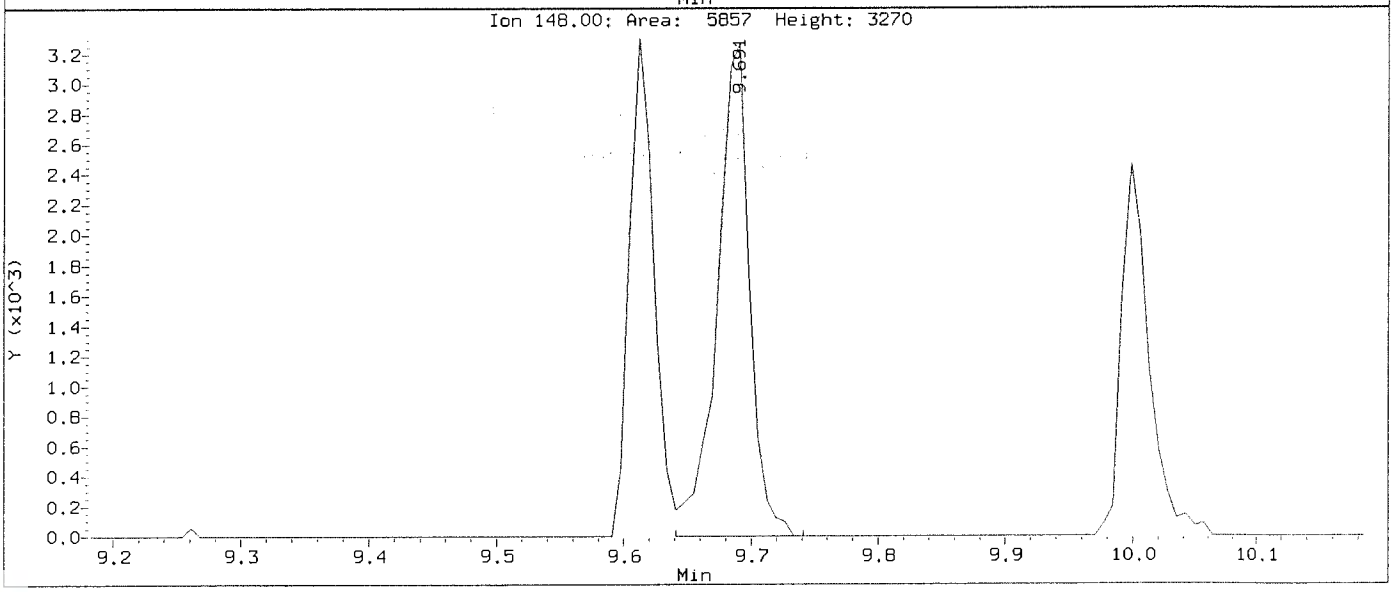



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

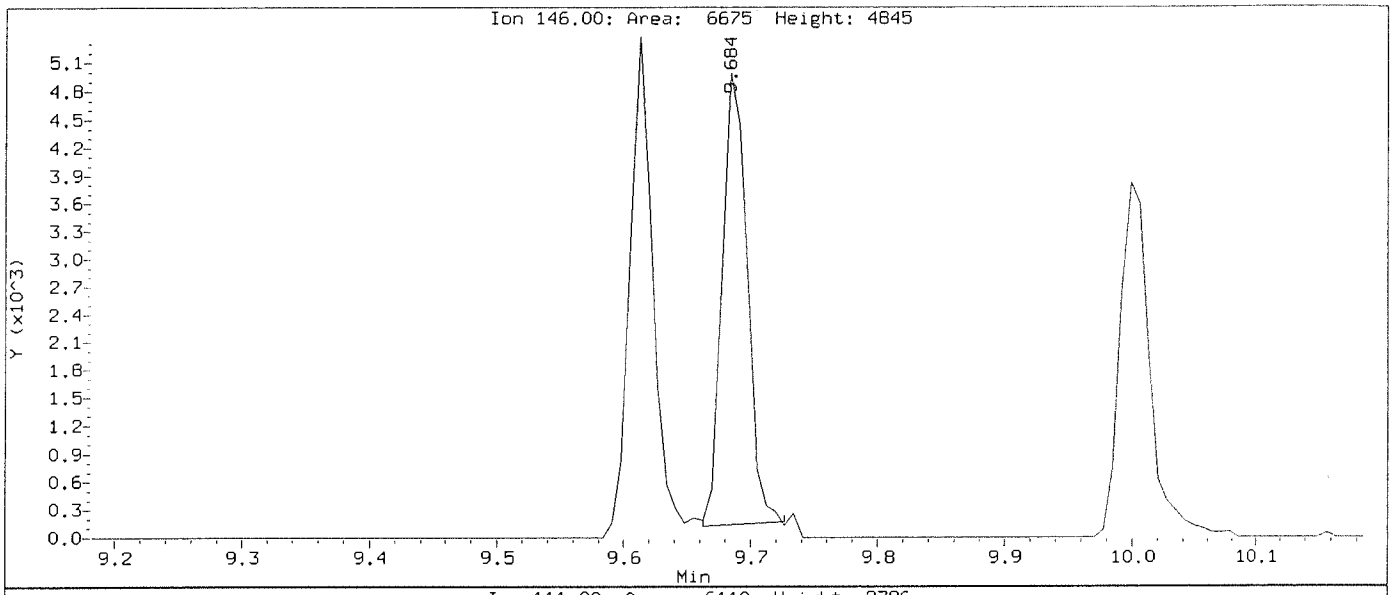


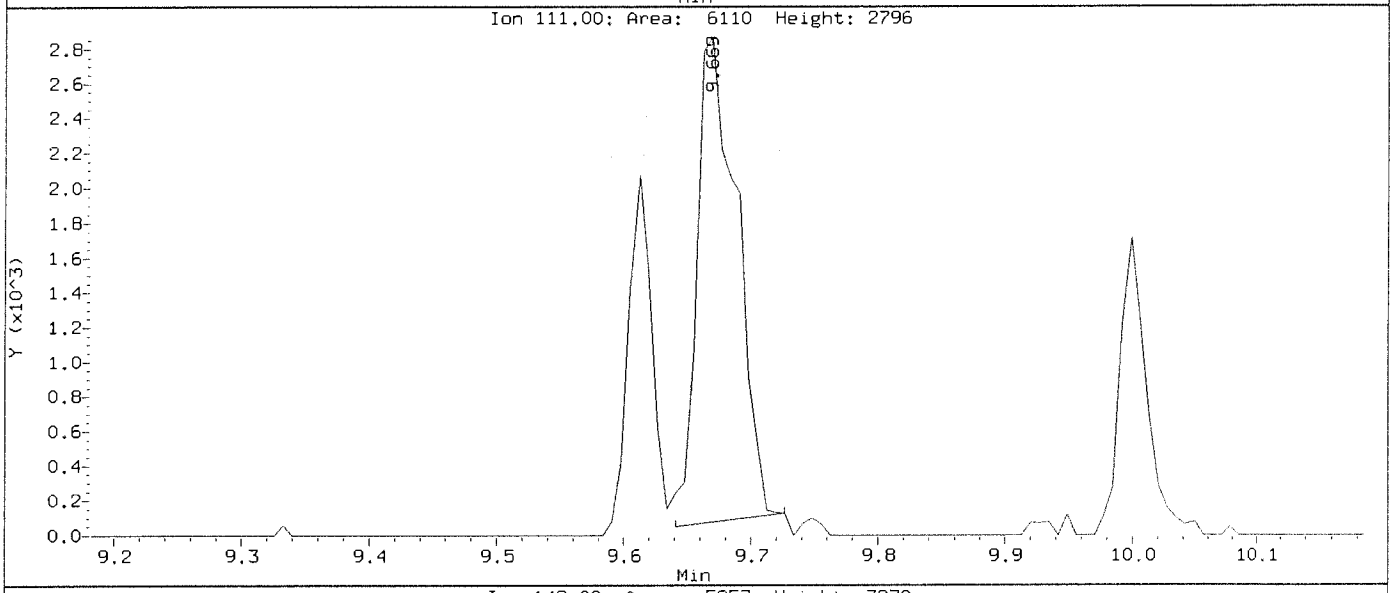



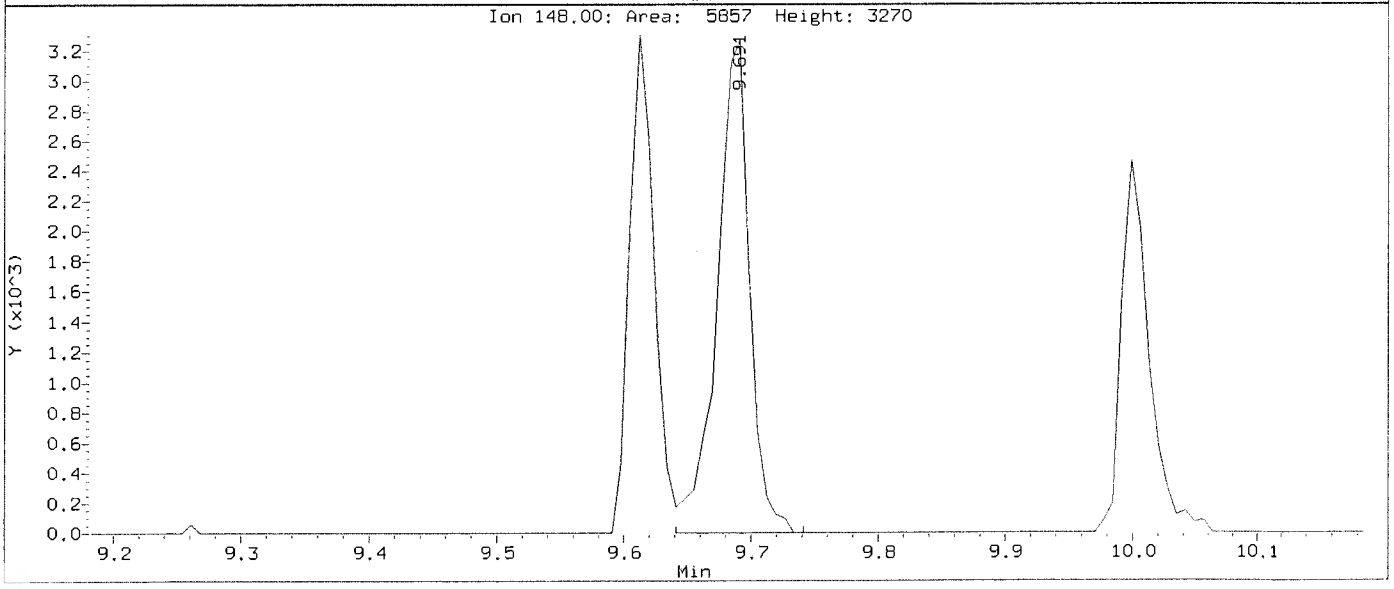



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

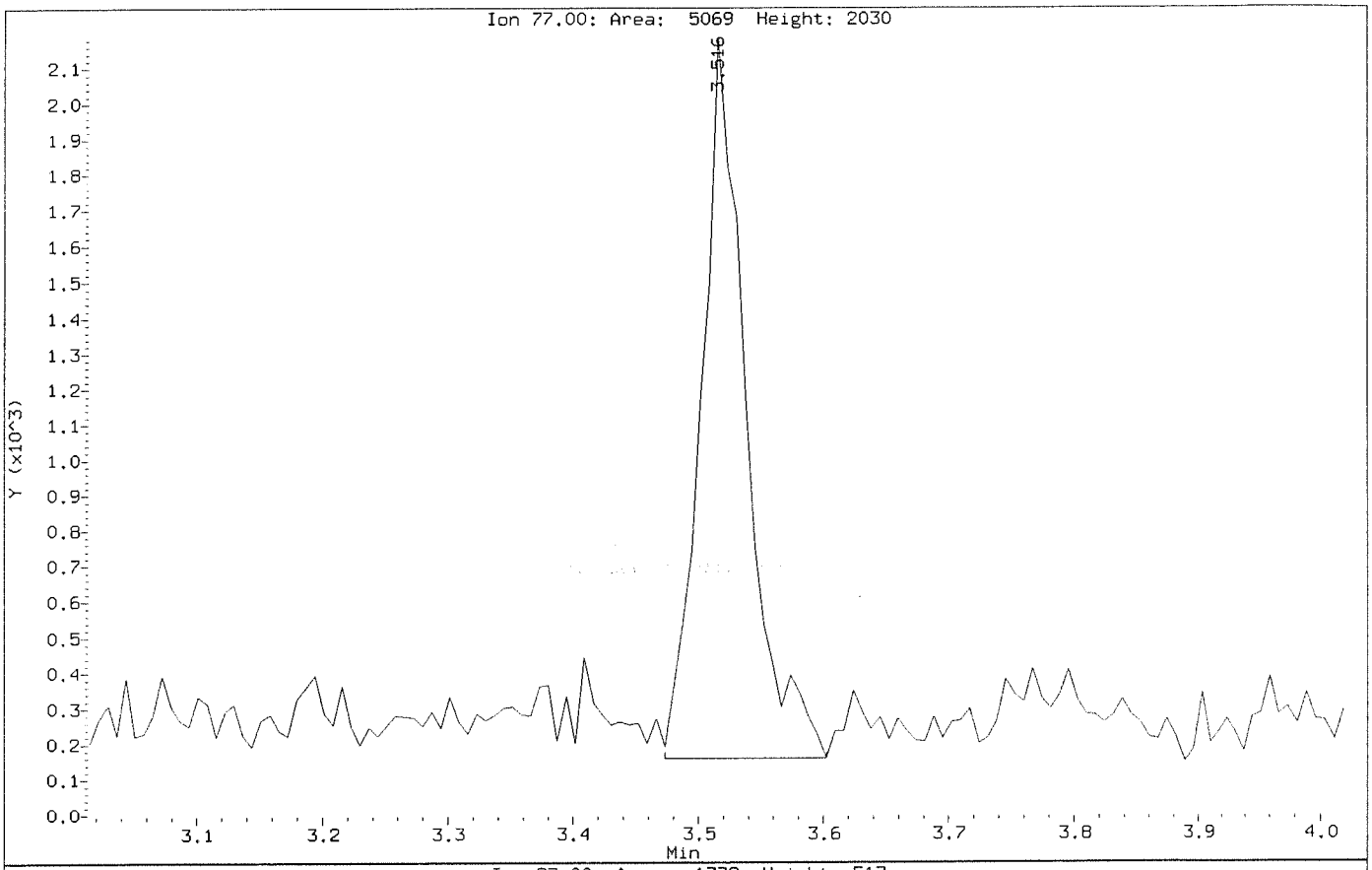


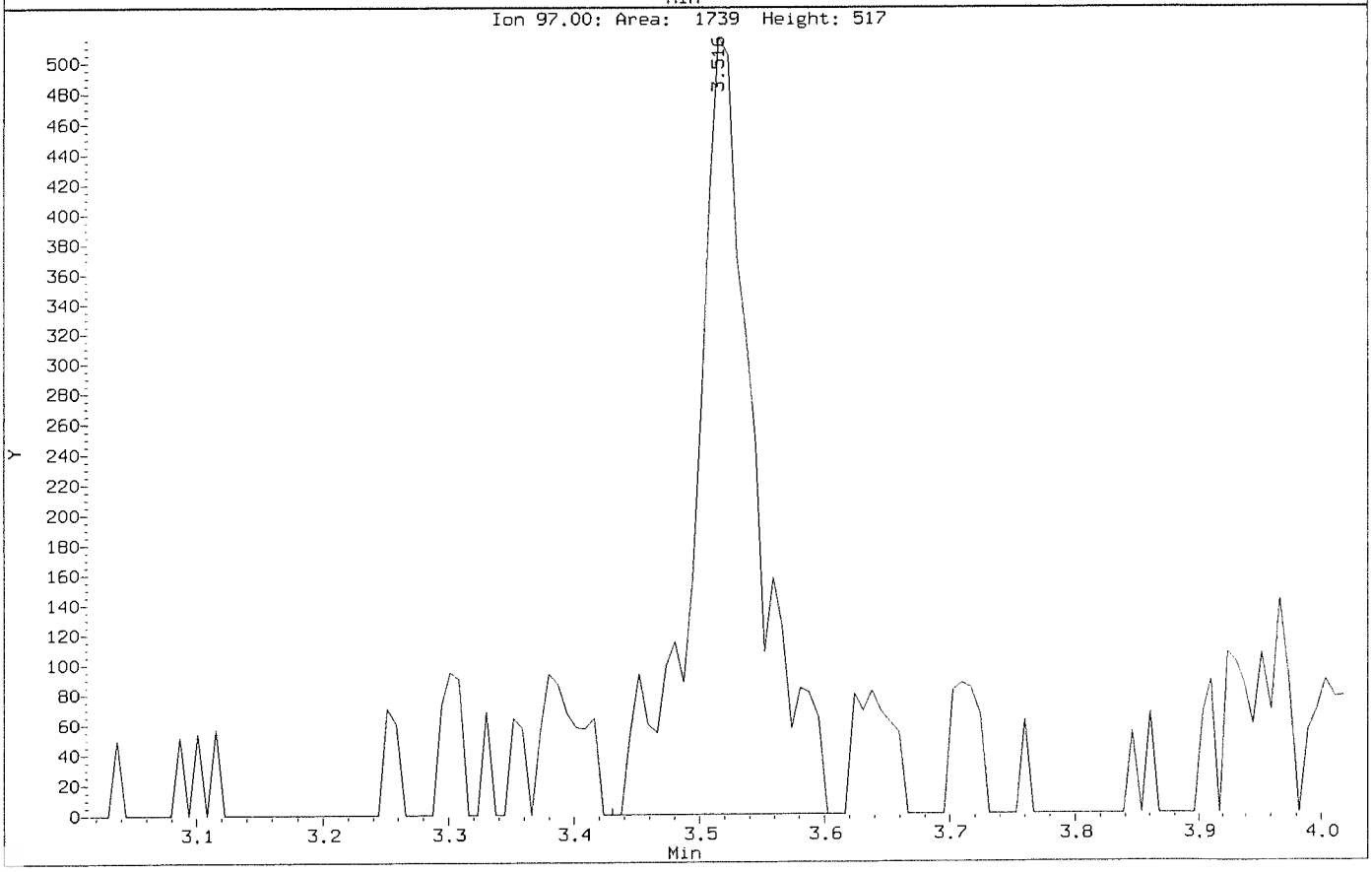



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Instrument: voa6.i
Client Sample ID: VSTD000.5

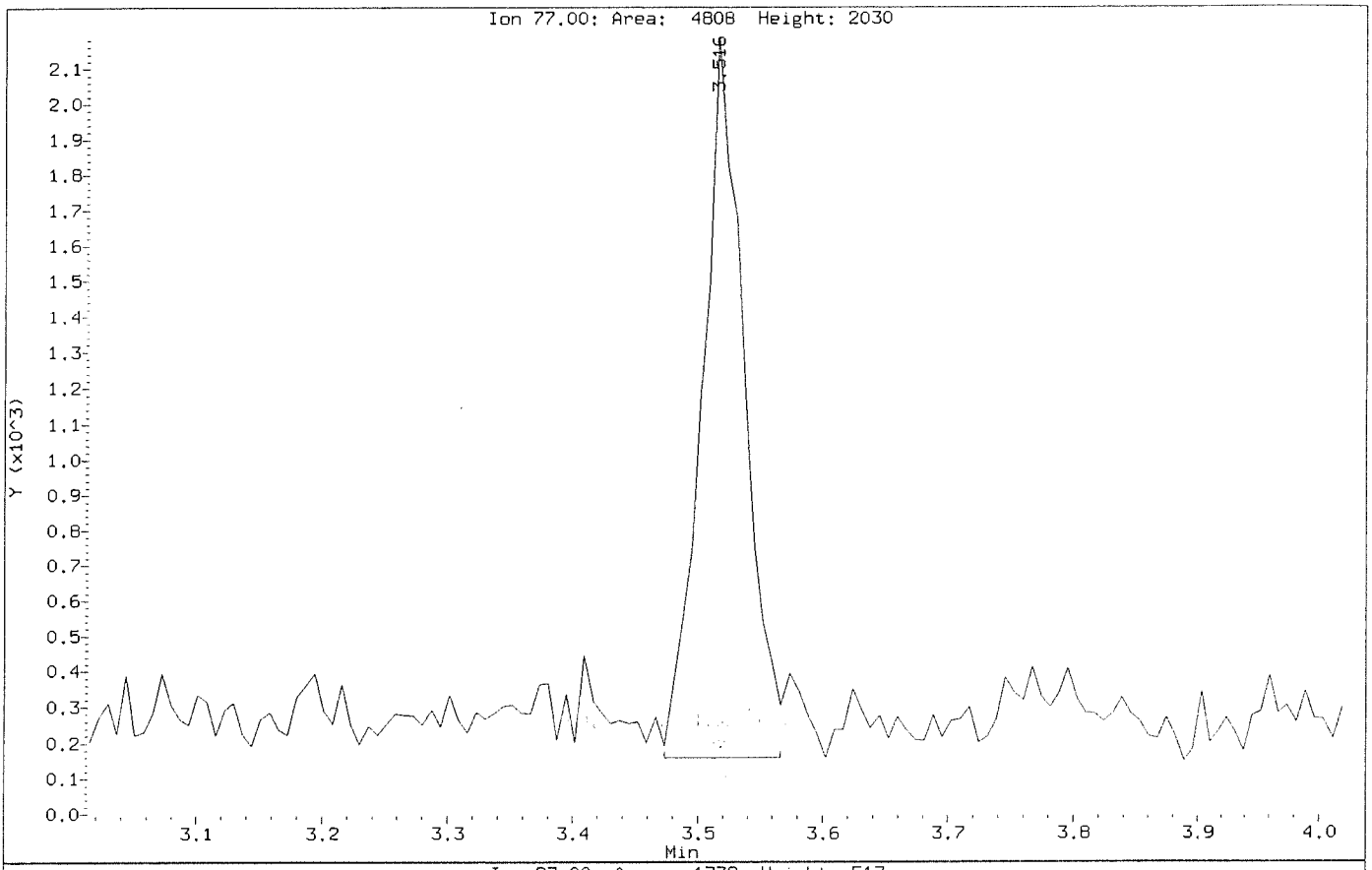
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

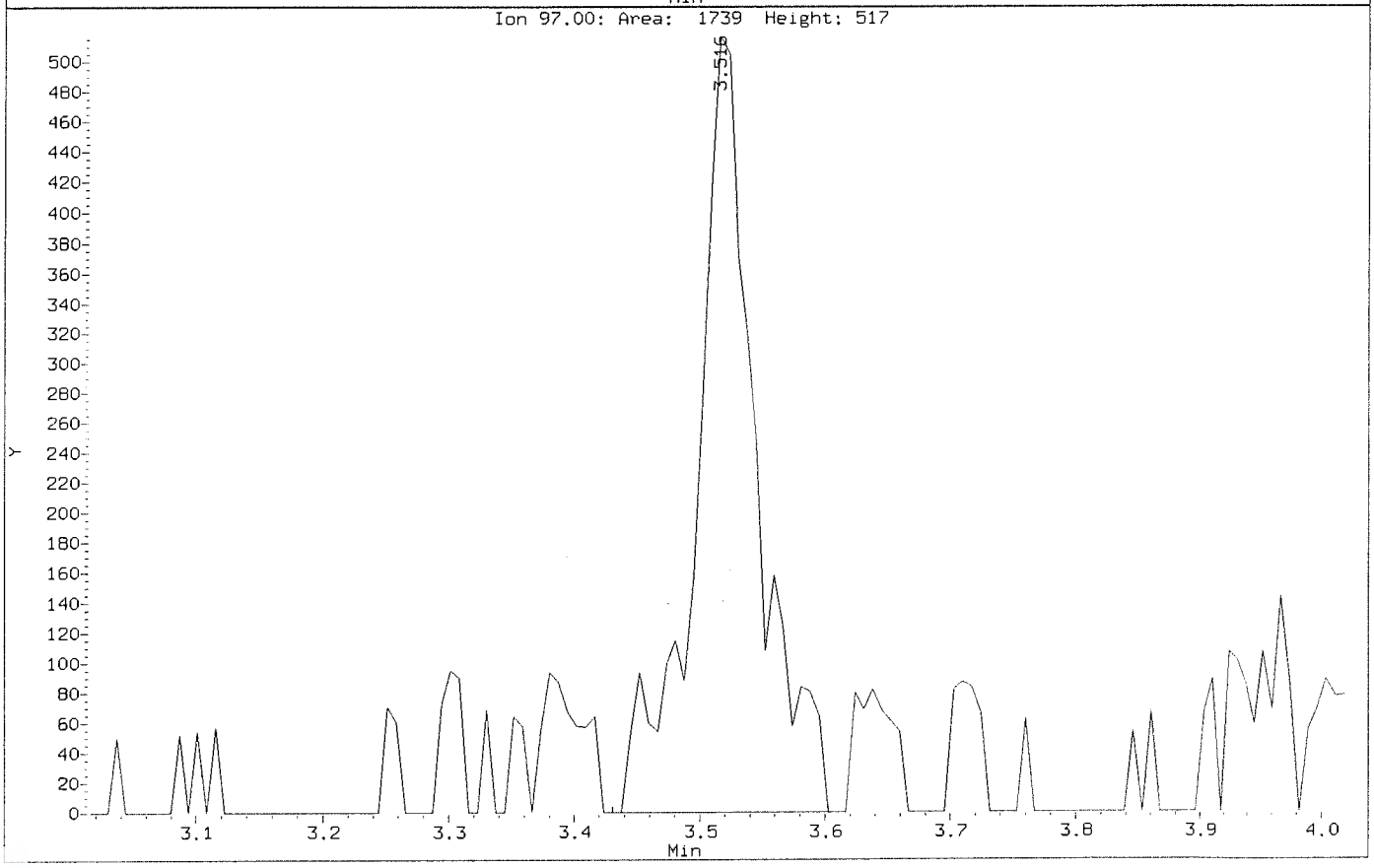


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Instrument: voa6.i
Client Sample ID: VSTD000.5

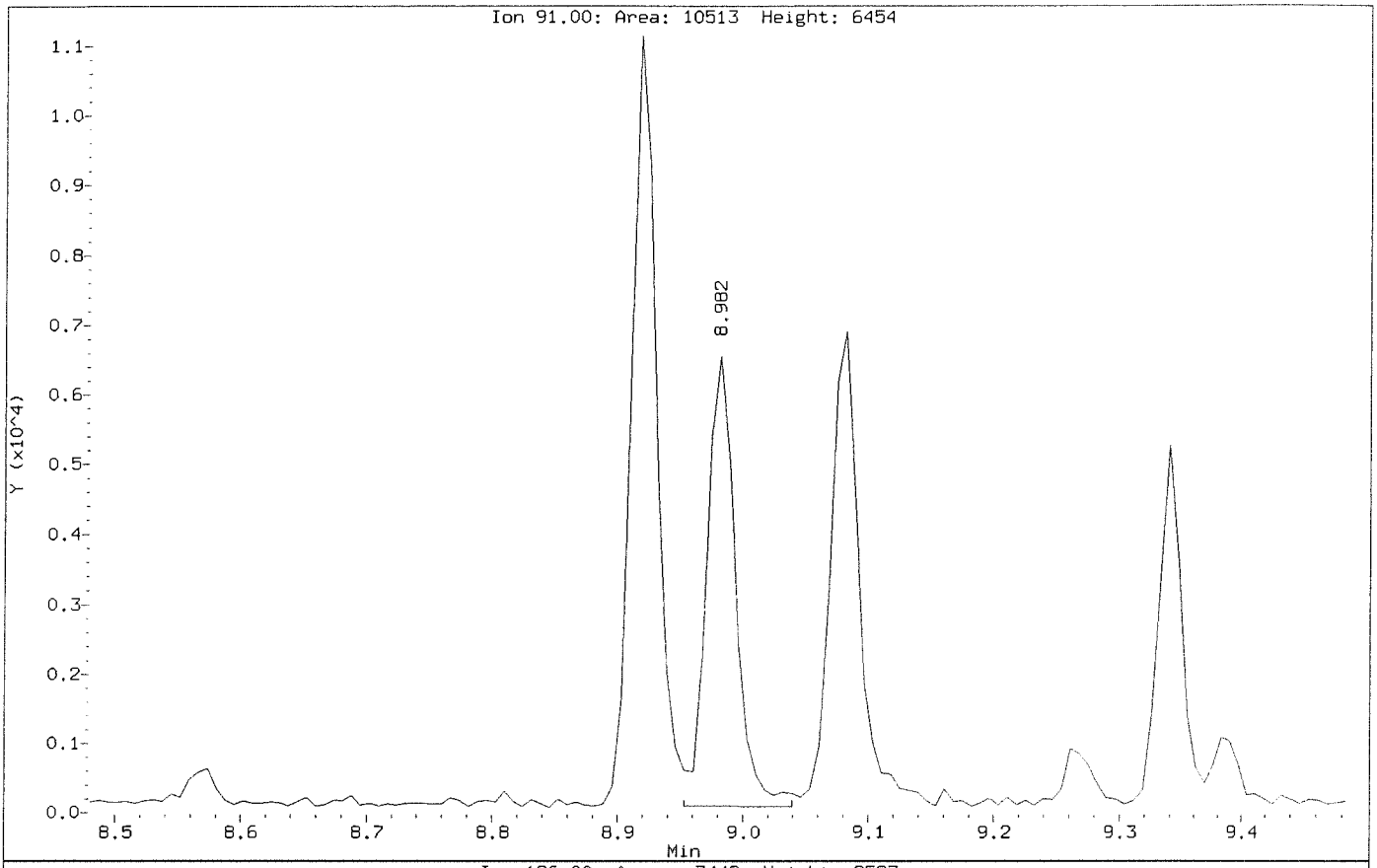
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

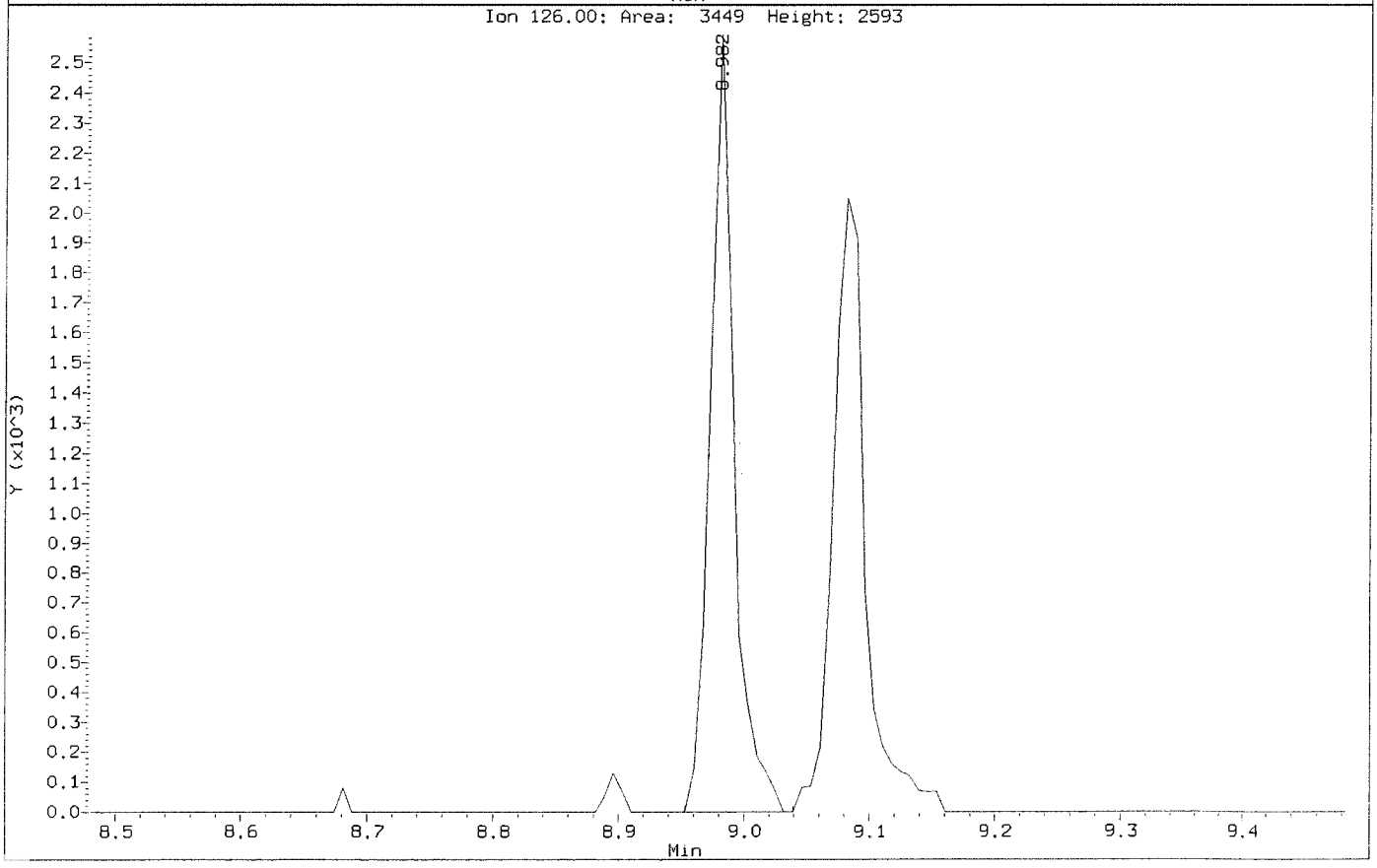


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Client Sample ID: VSTD000.5

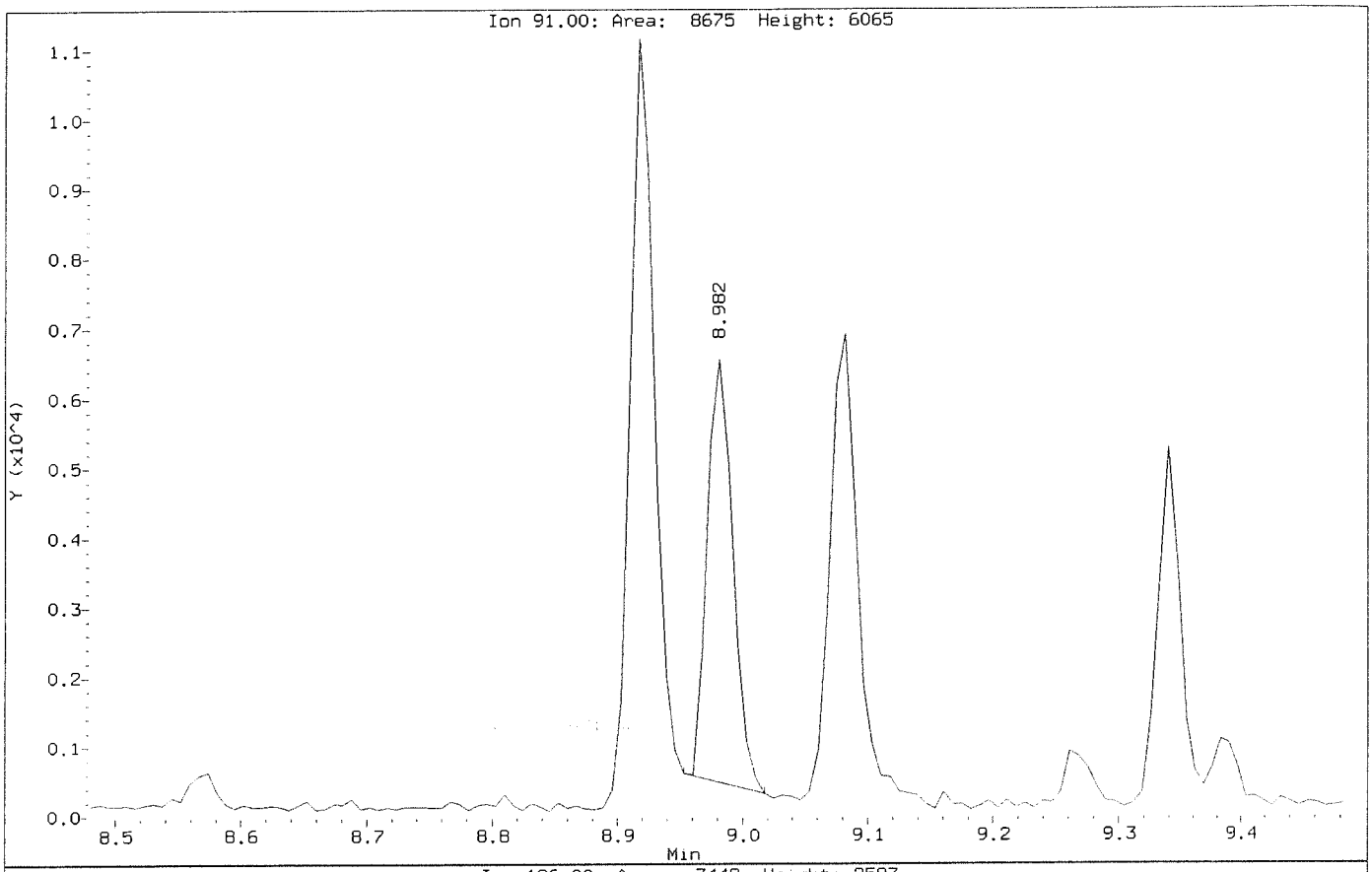
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

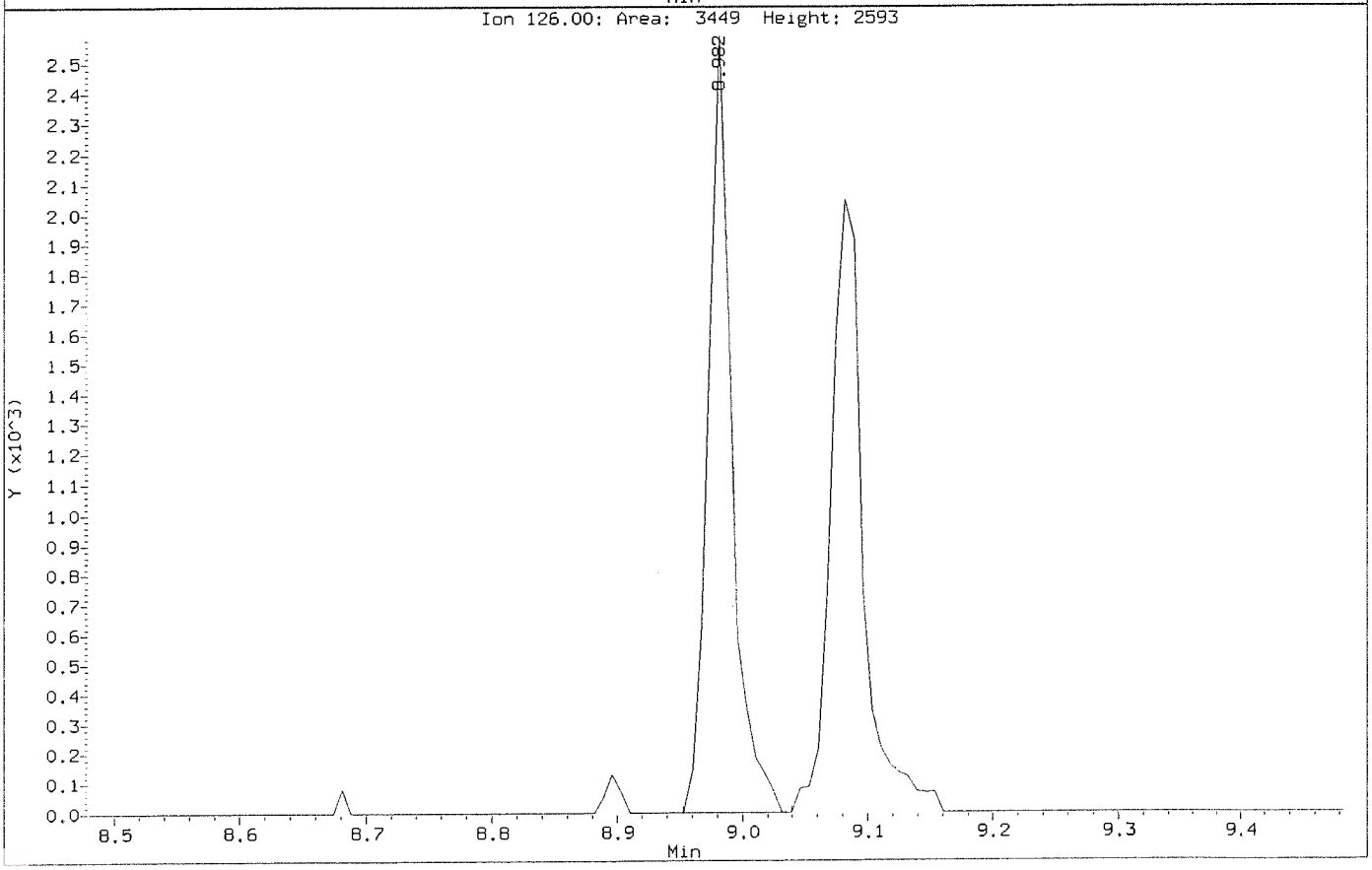


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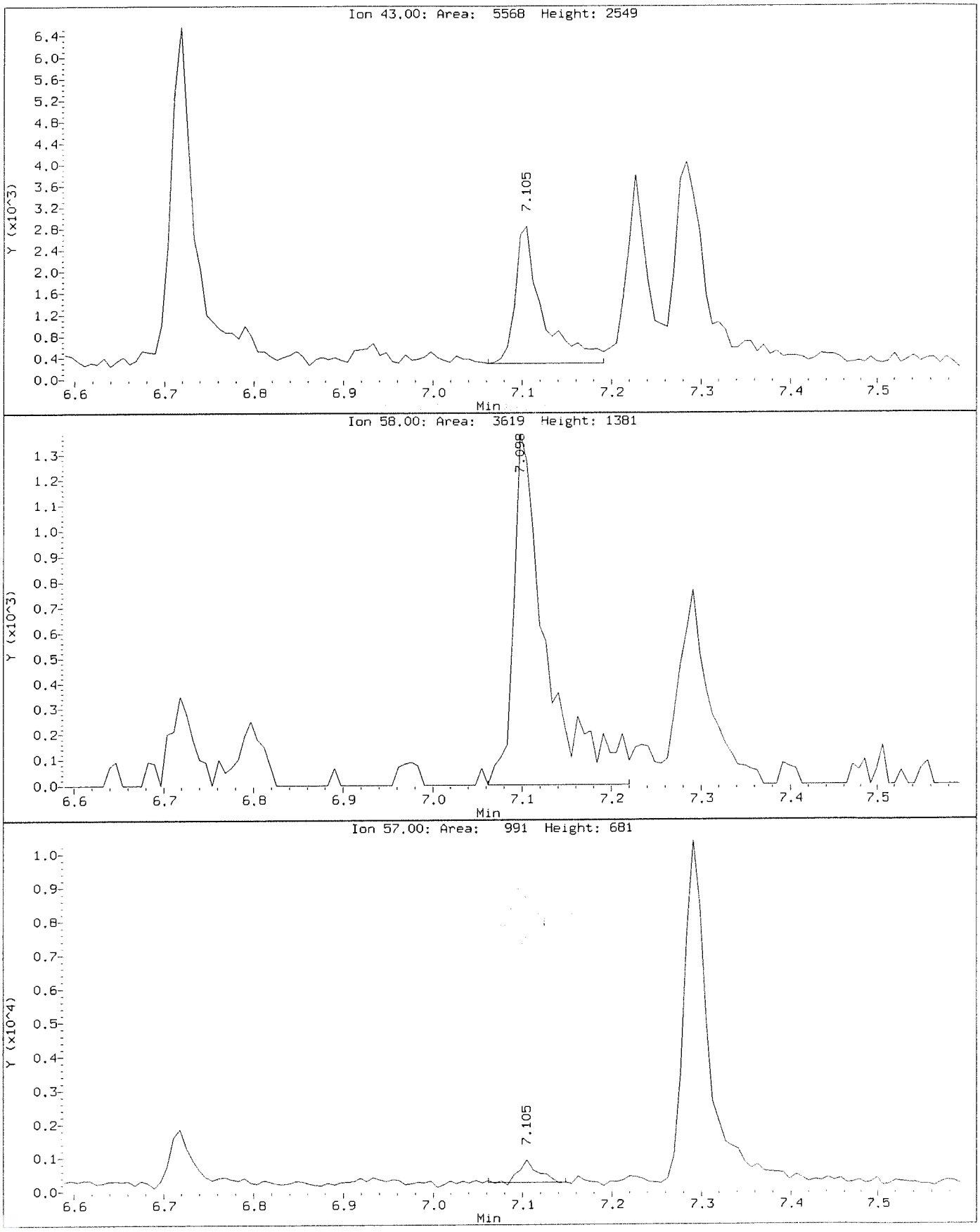
Compound: 2-Chlorotoluene
CAS Number: 95-49-8



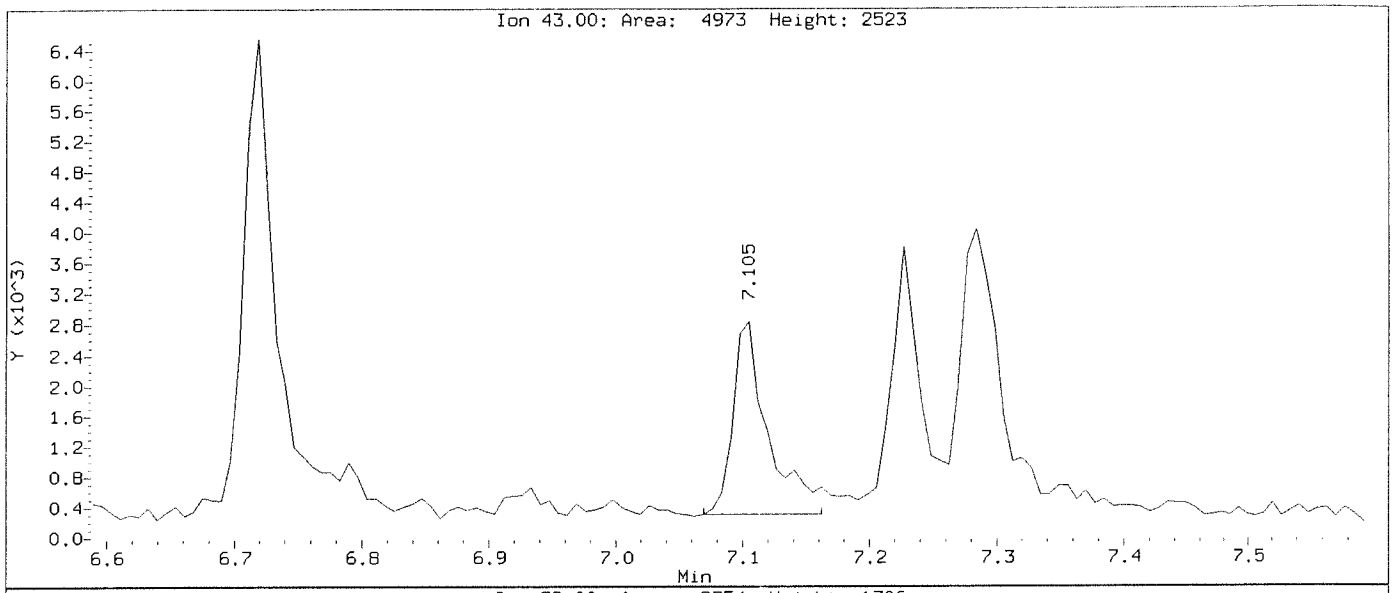
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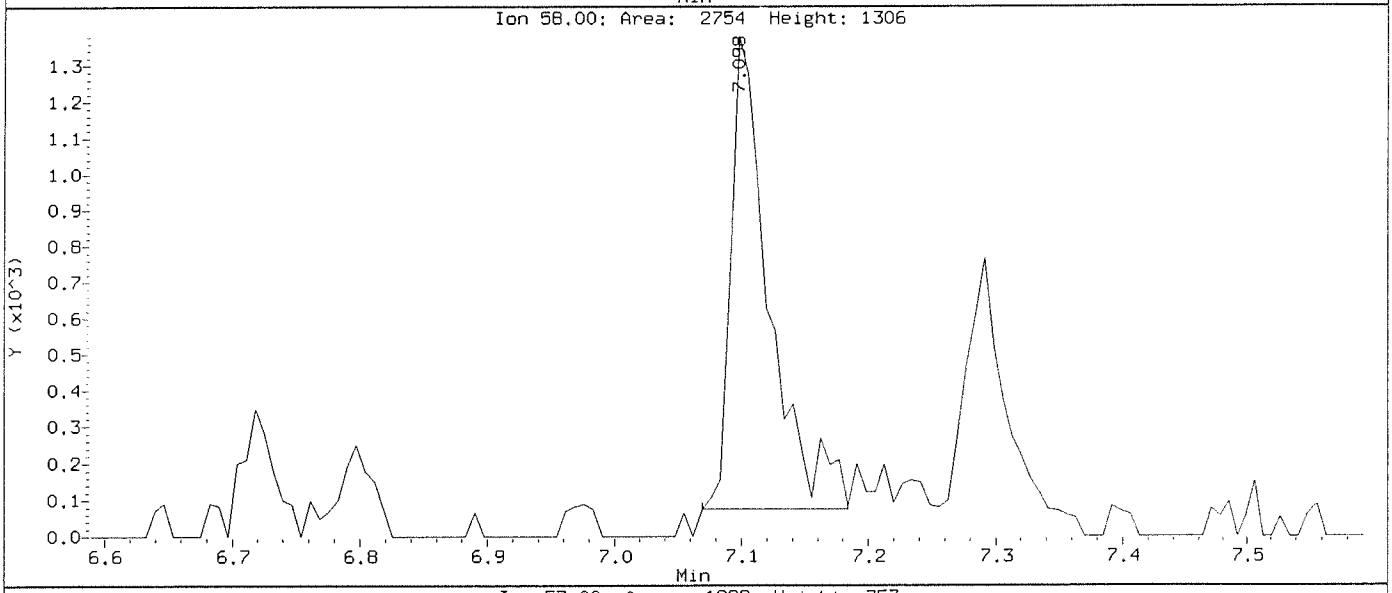
Compound: 2-Hexanone
CAS Number: 591-78-6

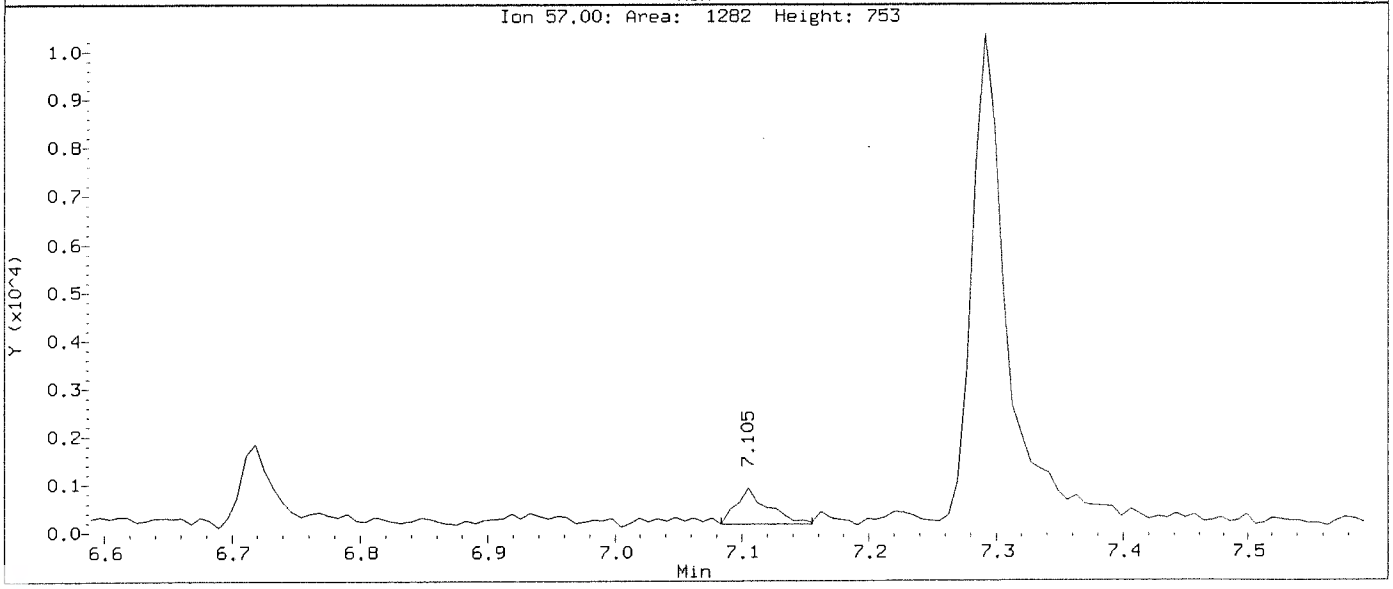


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6

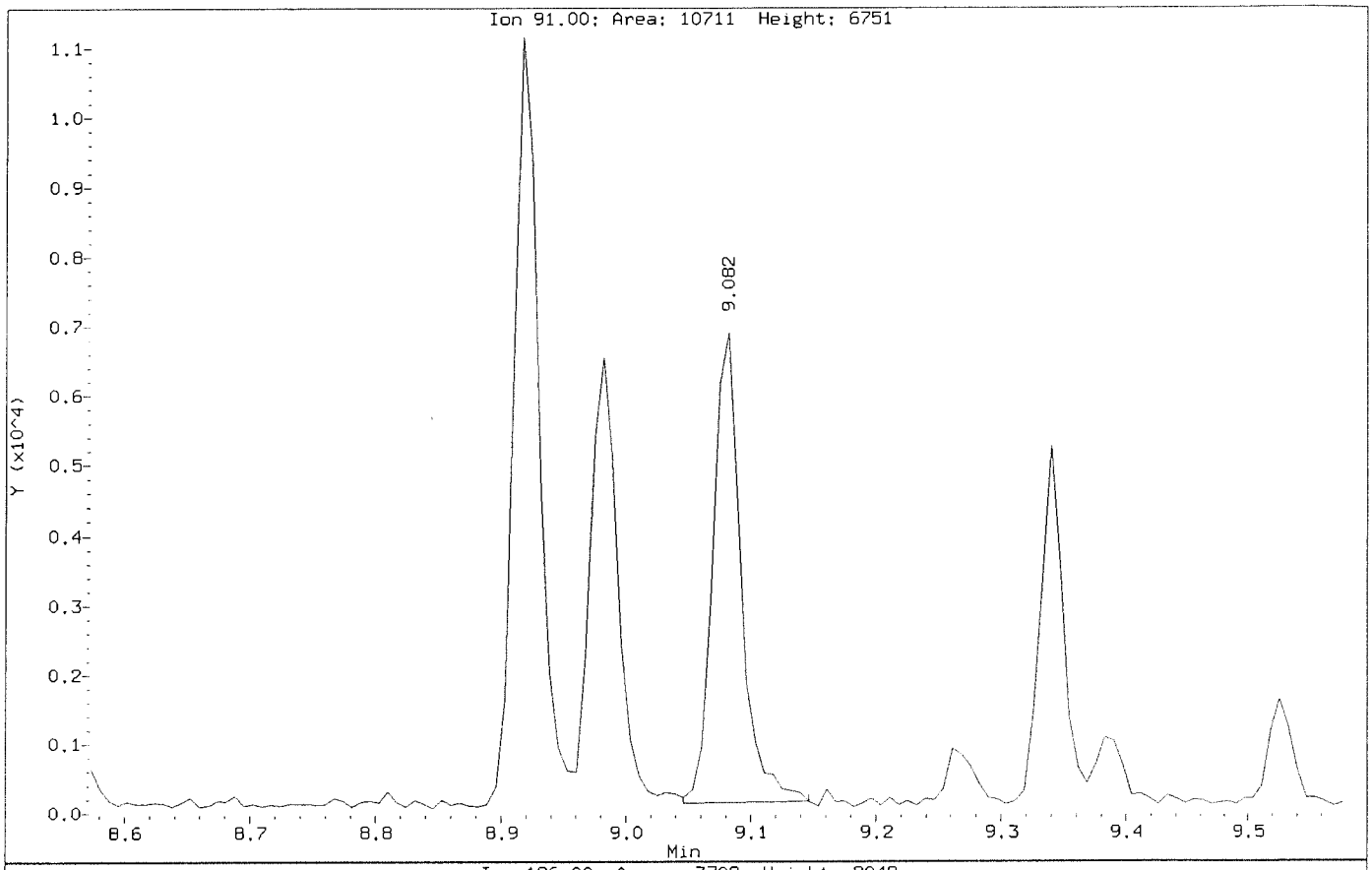


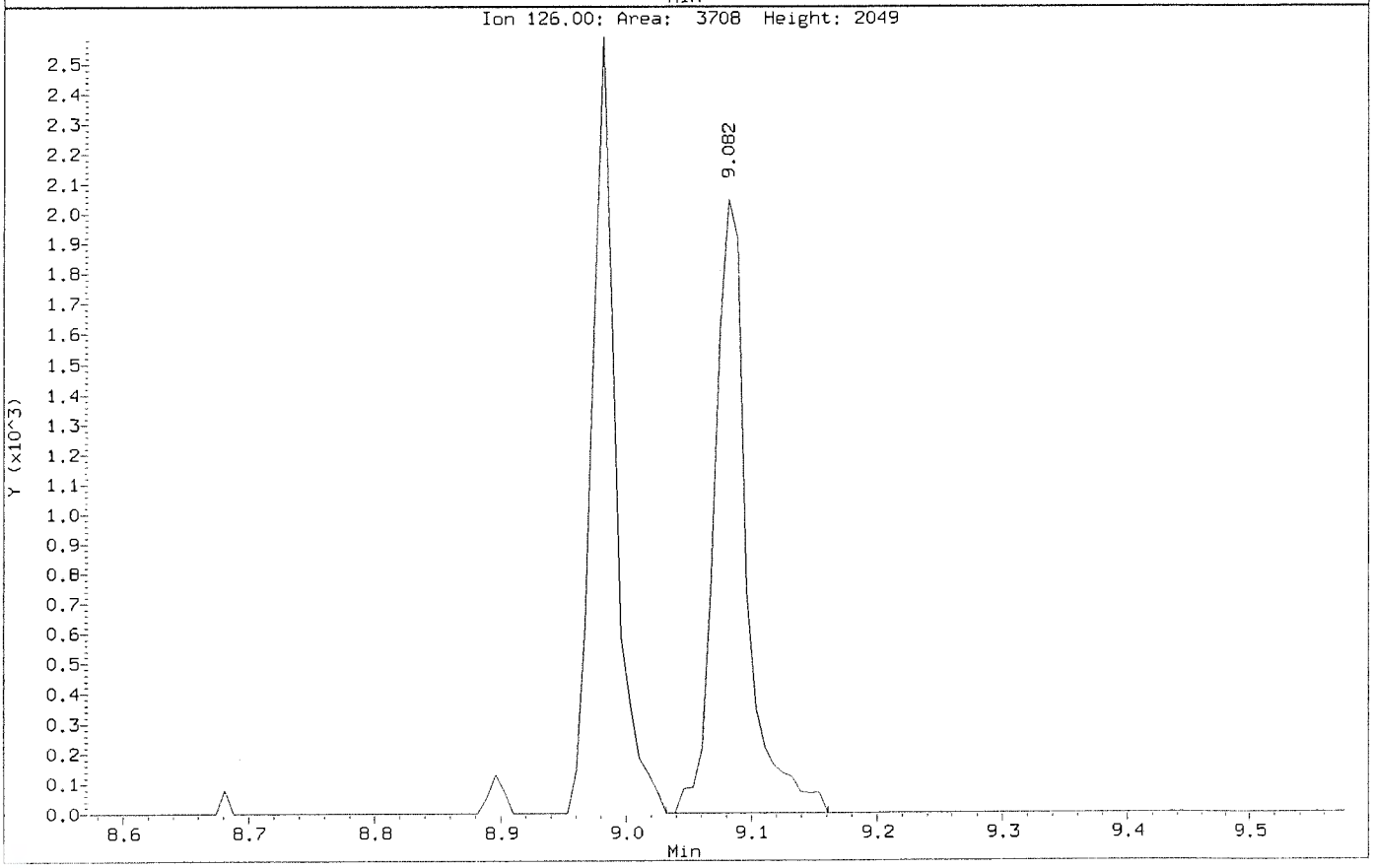



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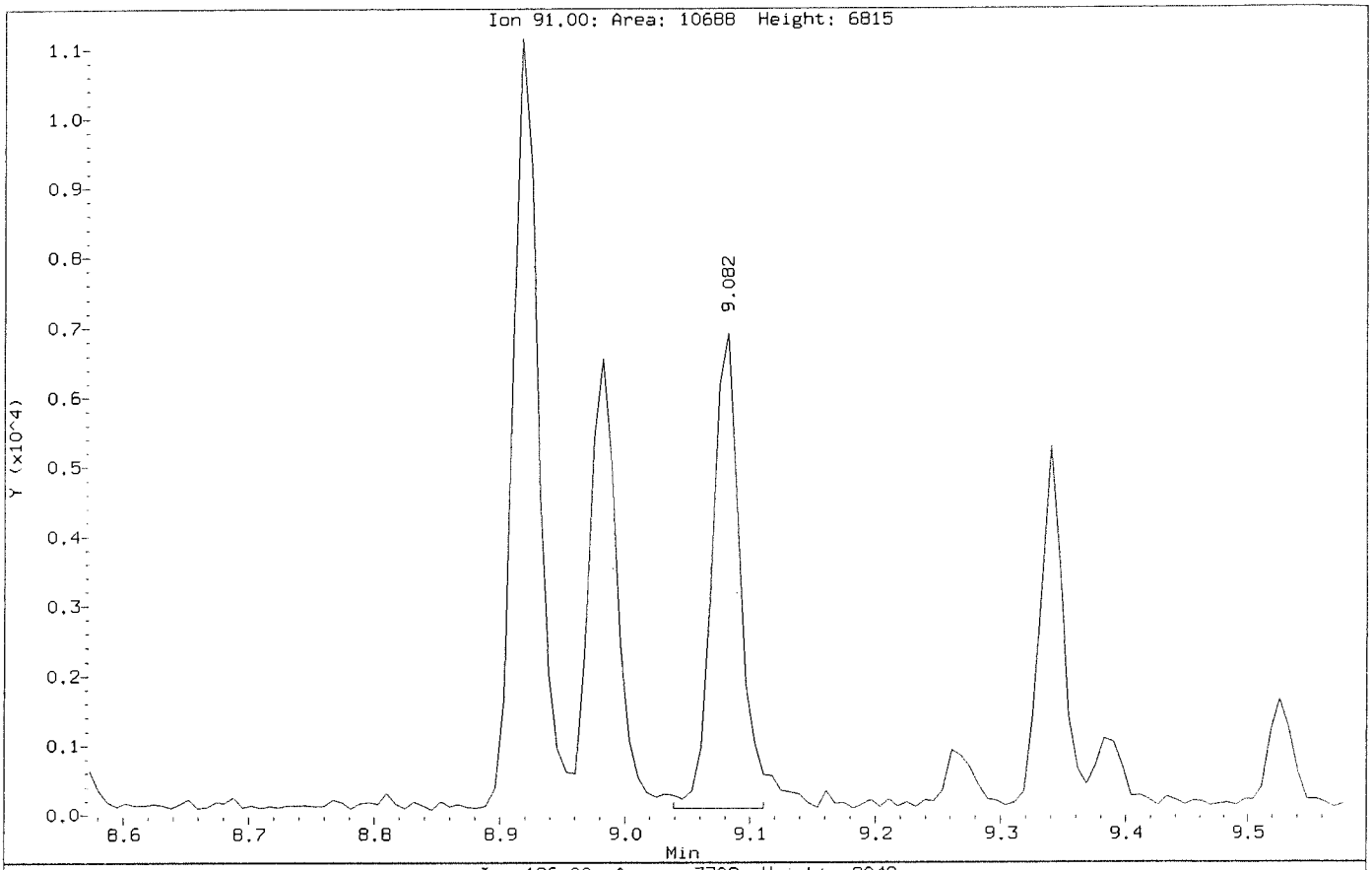
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

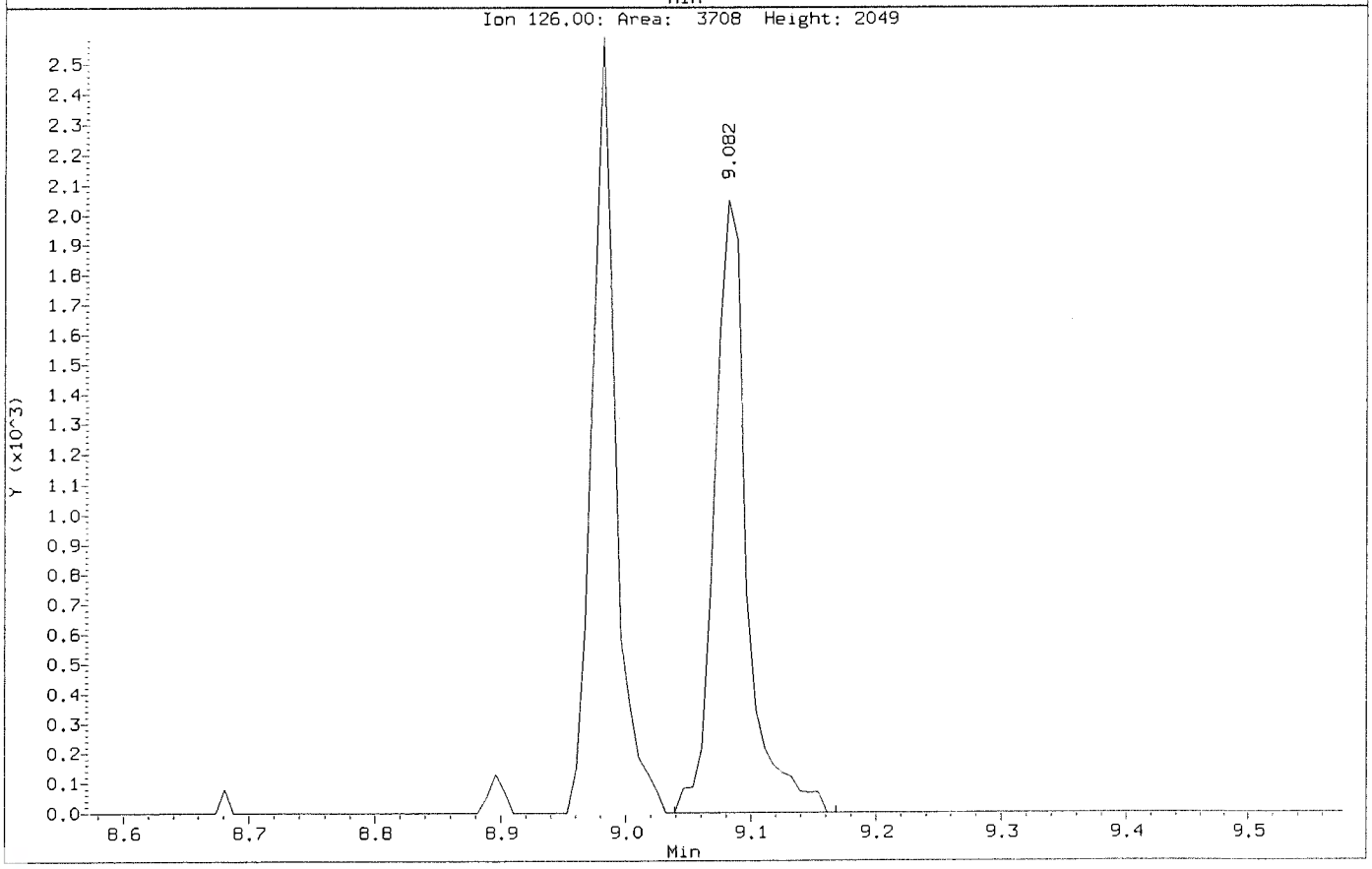


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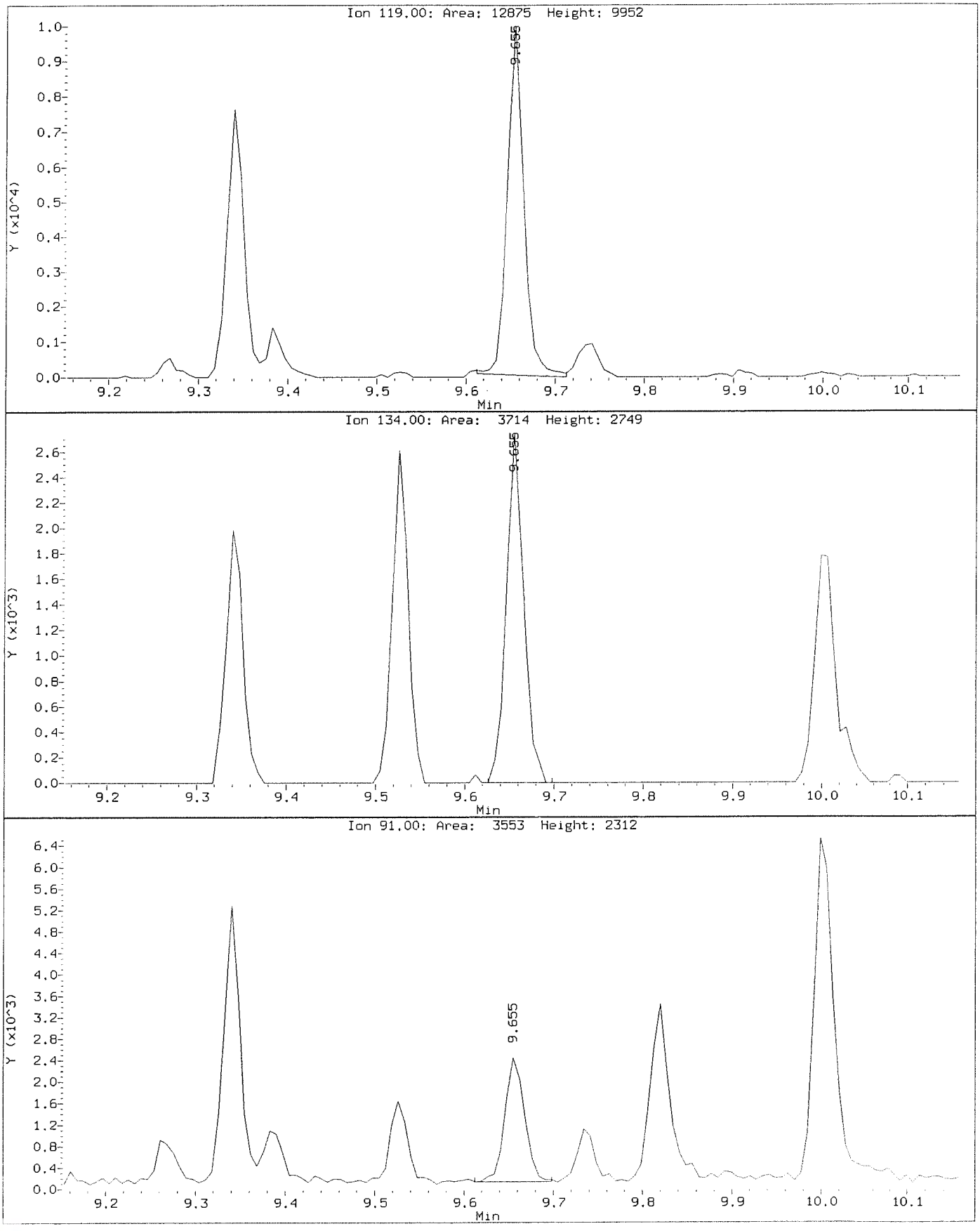
Compound: 4-Chlorotoluene
CAS Number: 106-43-4



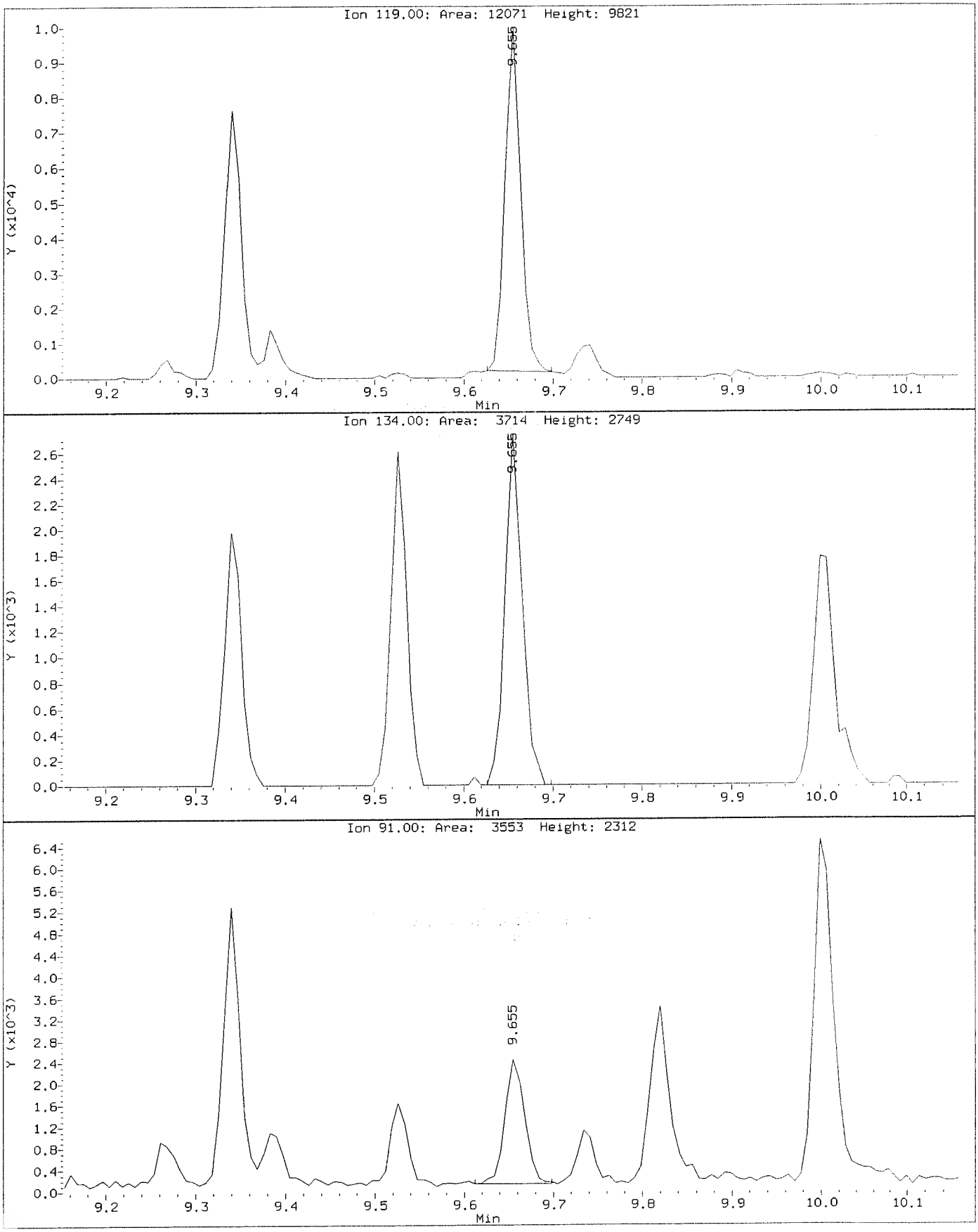
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



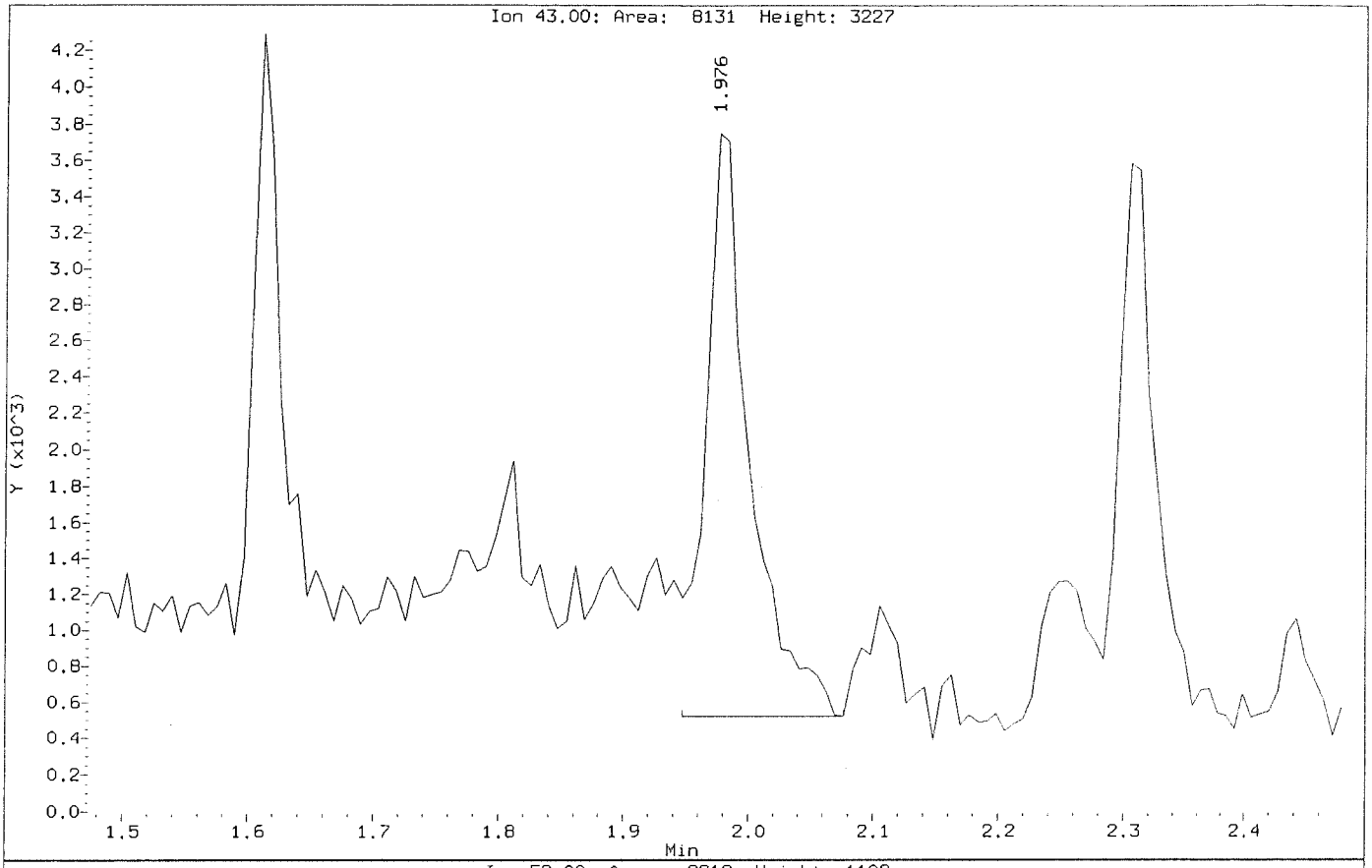
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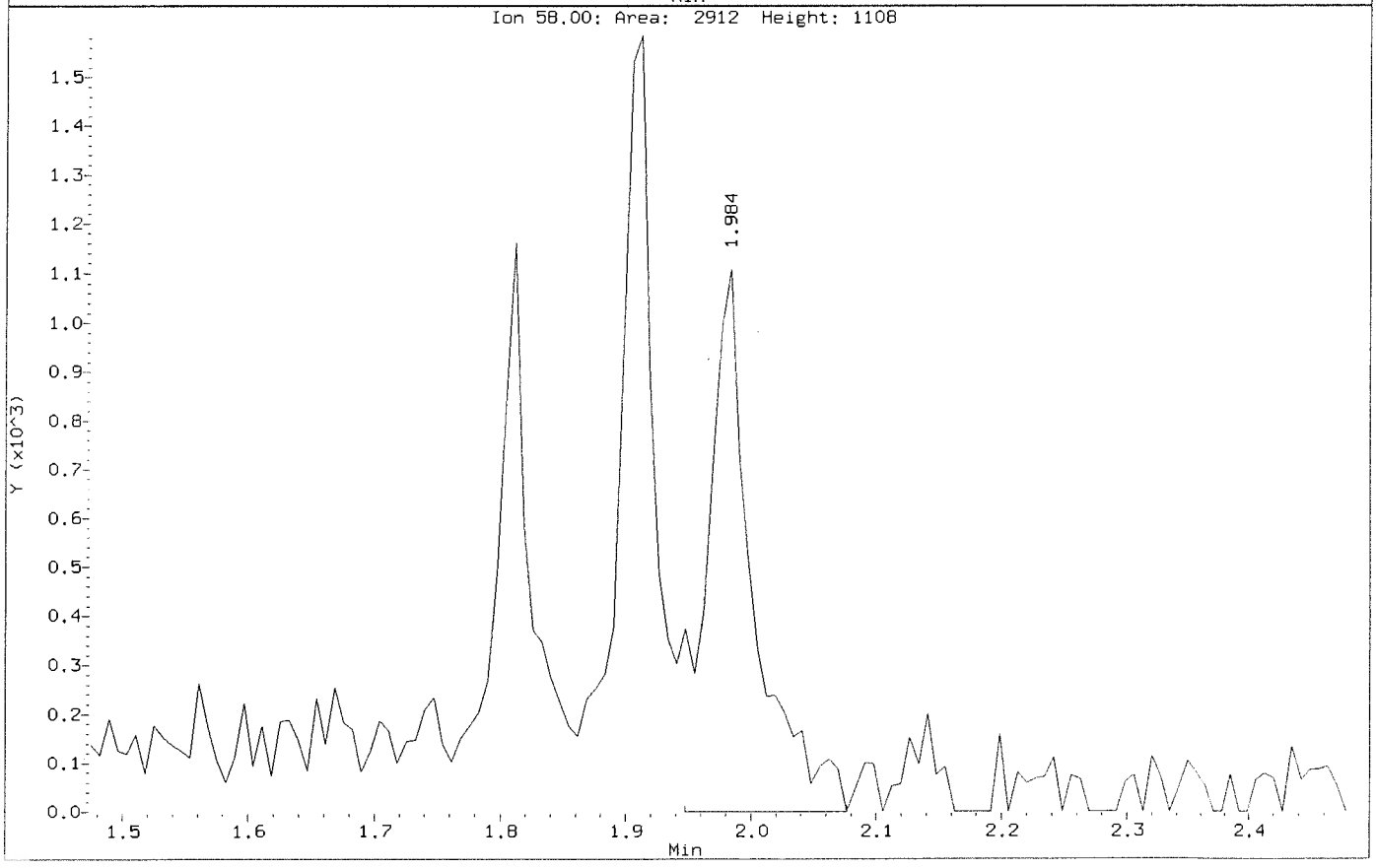
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



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Instrument: voa6.i
Client Sample ID: VSTD000.5

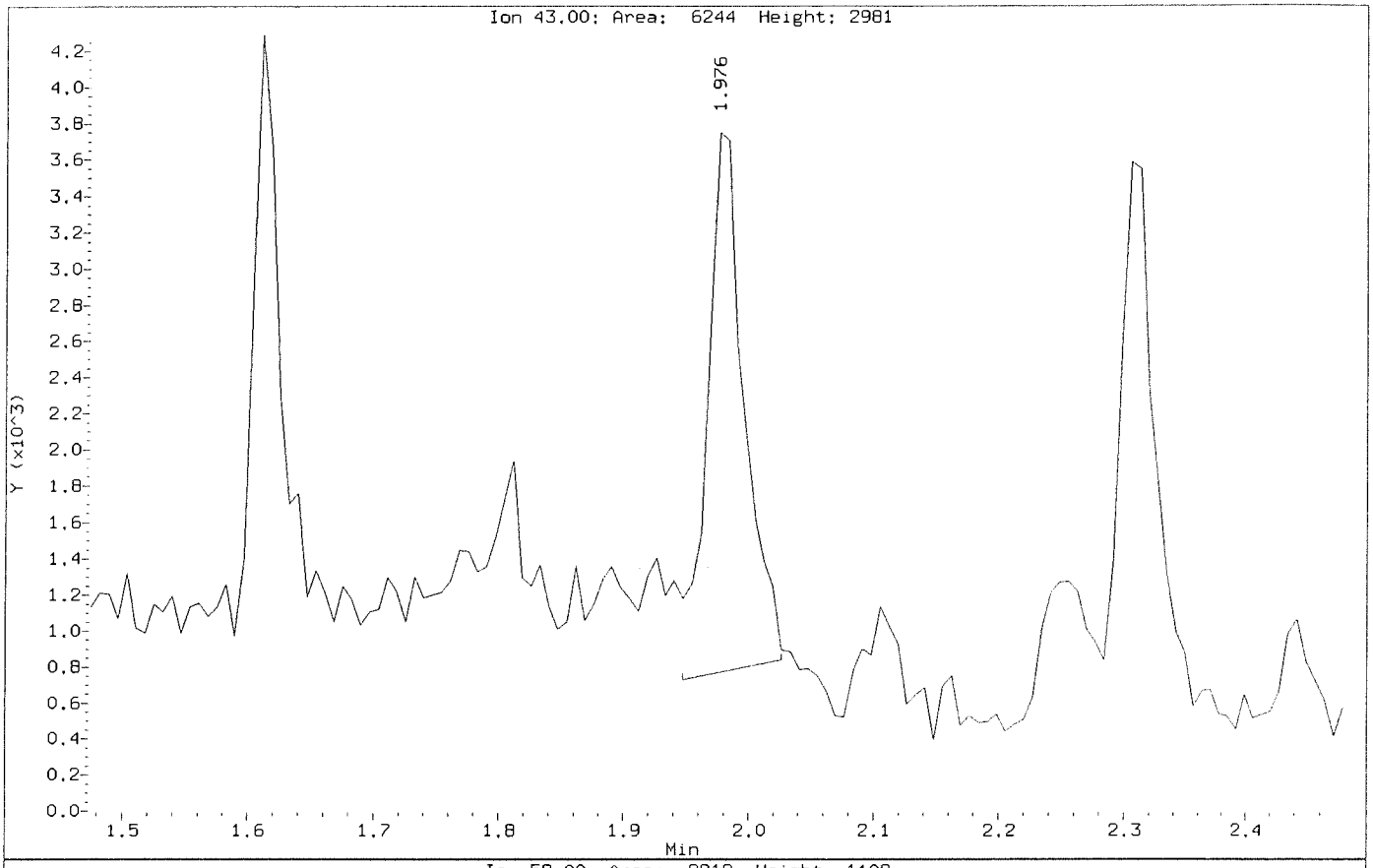
Compound: Acetone
CAS Number: 67-64-1

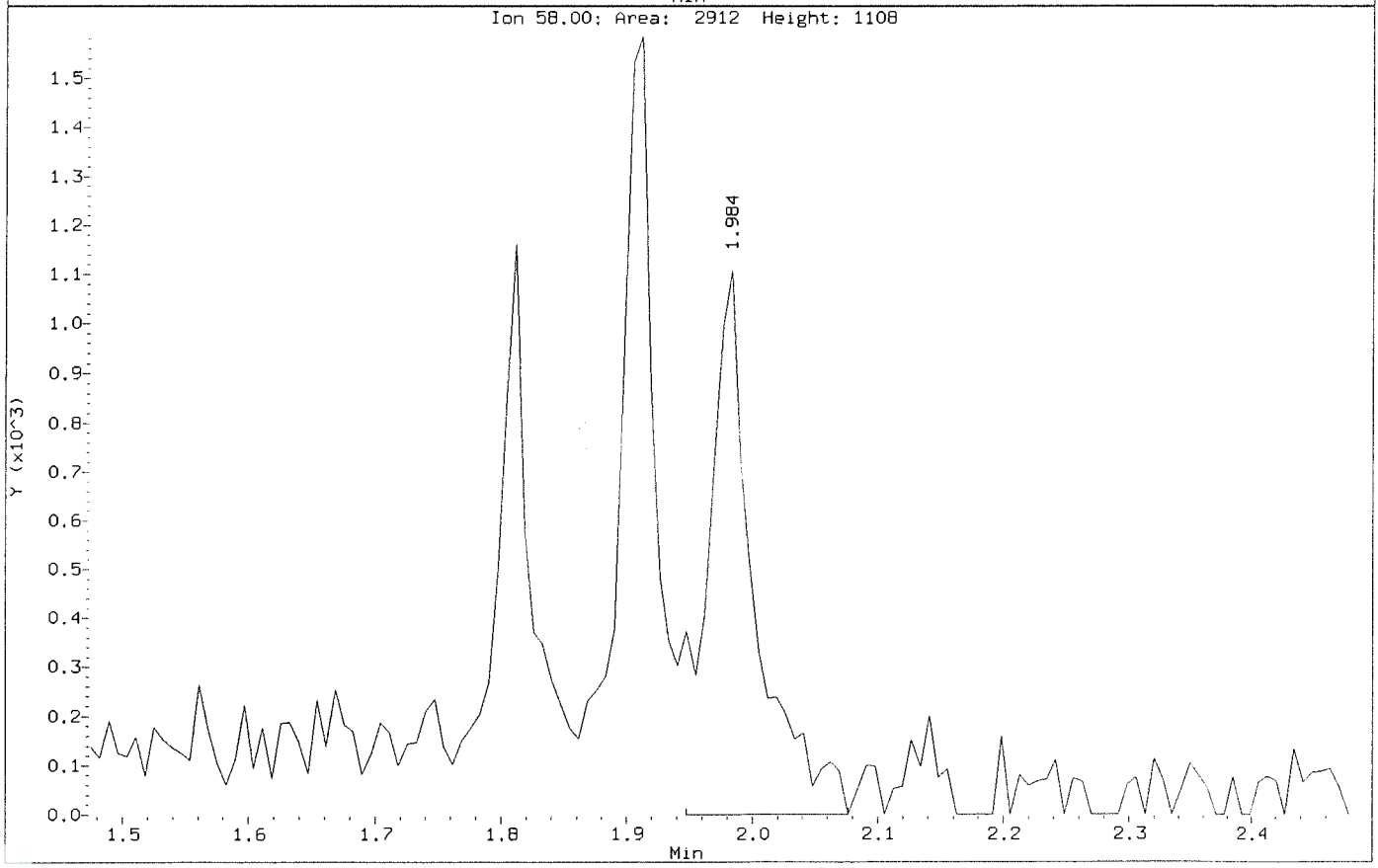


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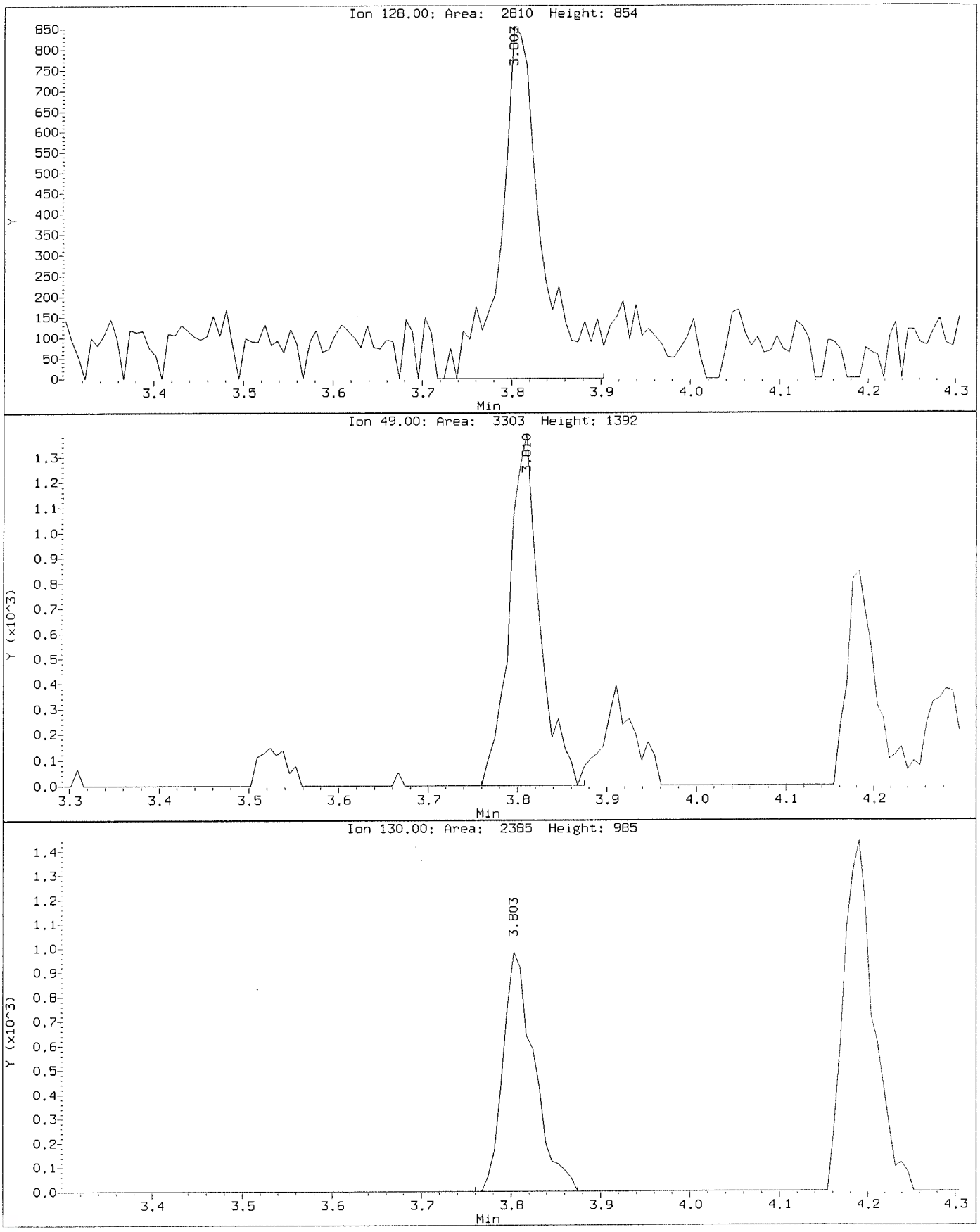
Compound: Acetone
CAS Number: 67-64-1



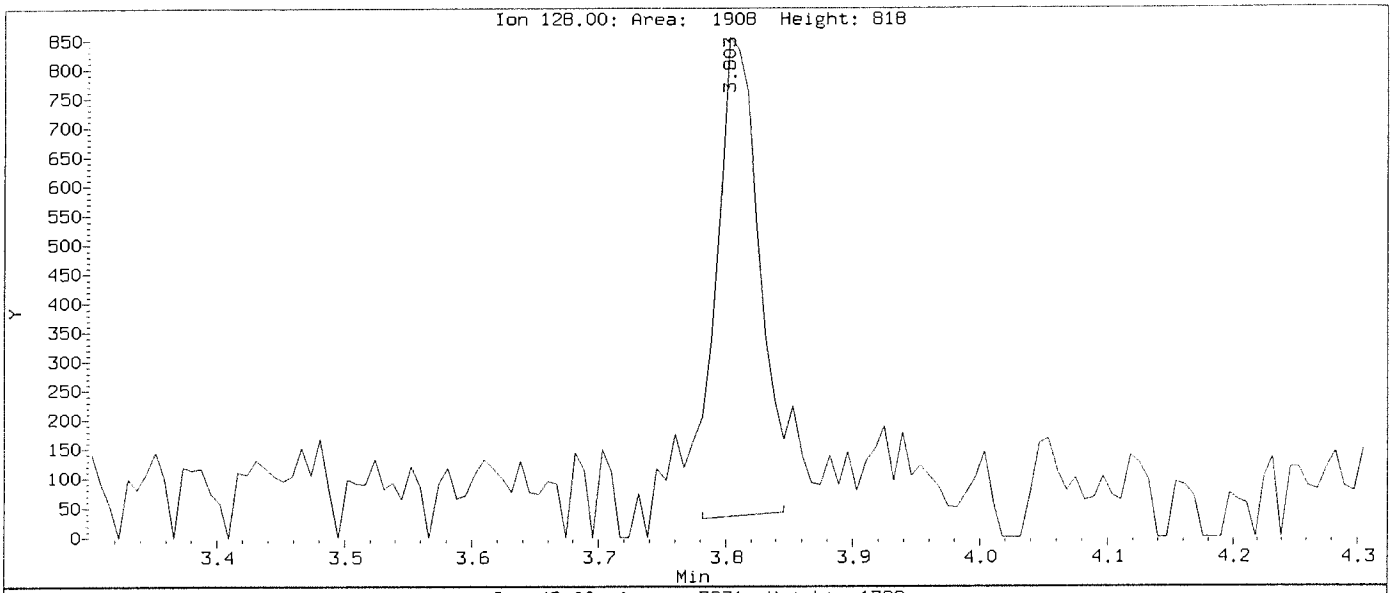
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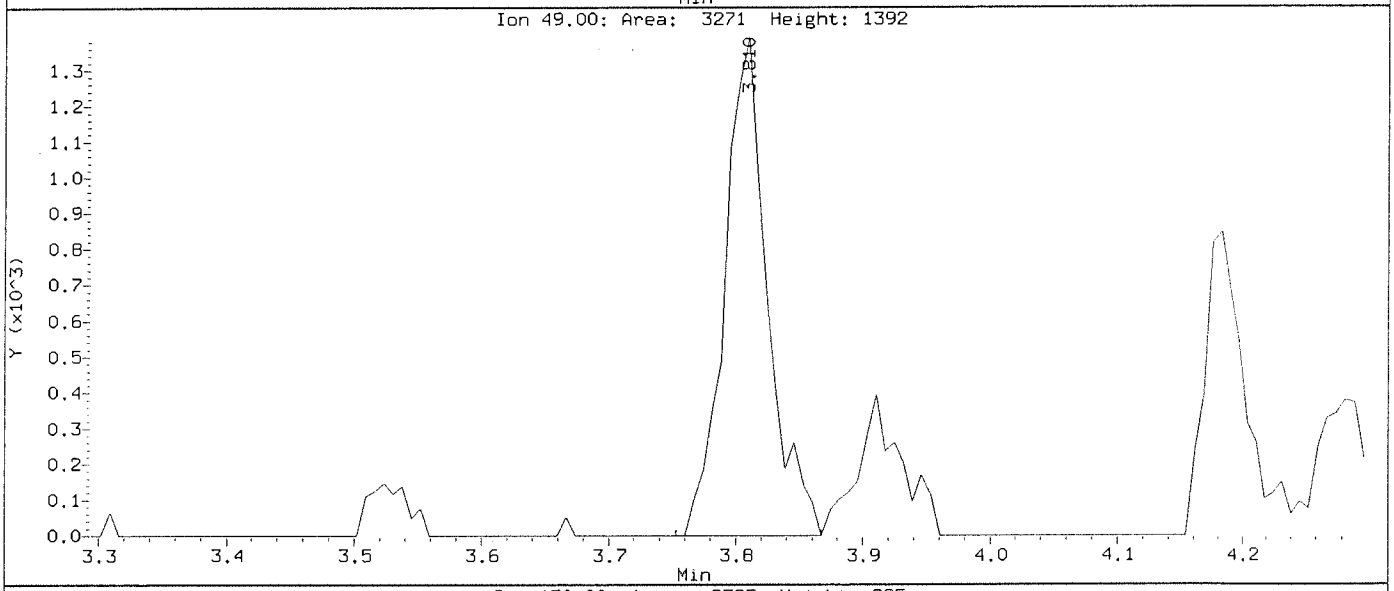
Compound: Bromochloromethane
CAS Number: 74-97-5

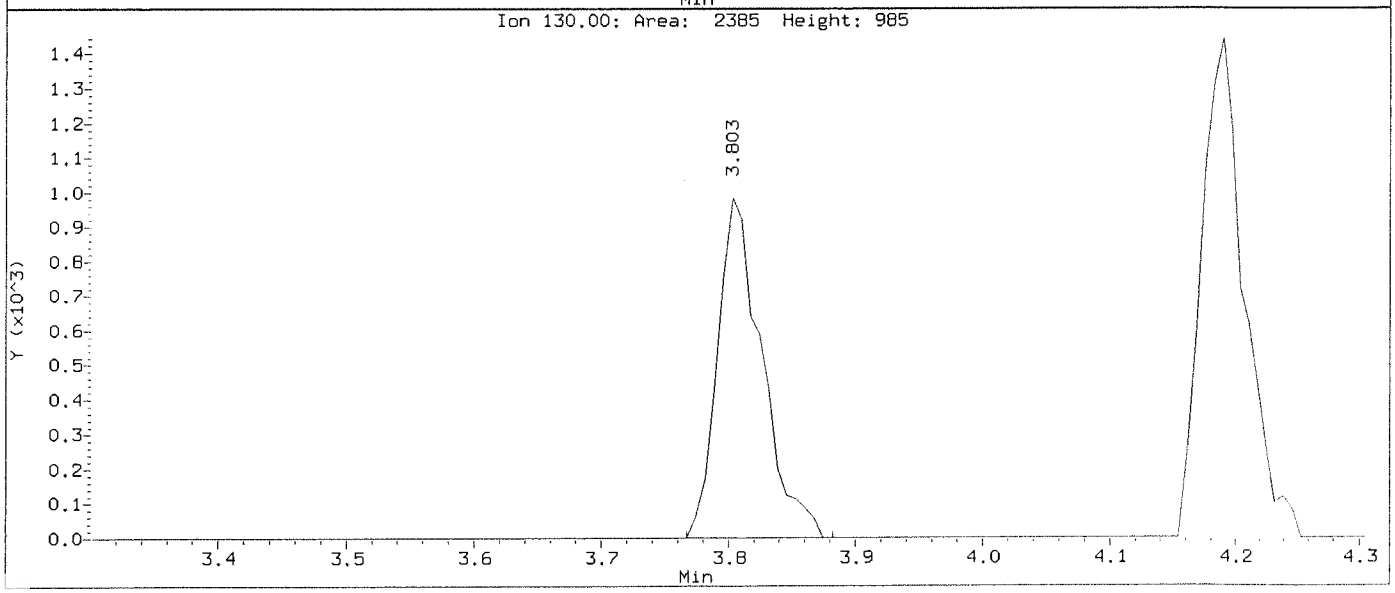


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

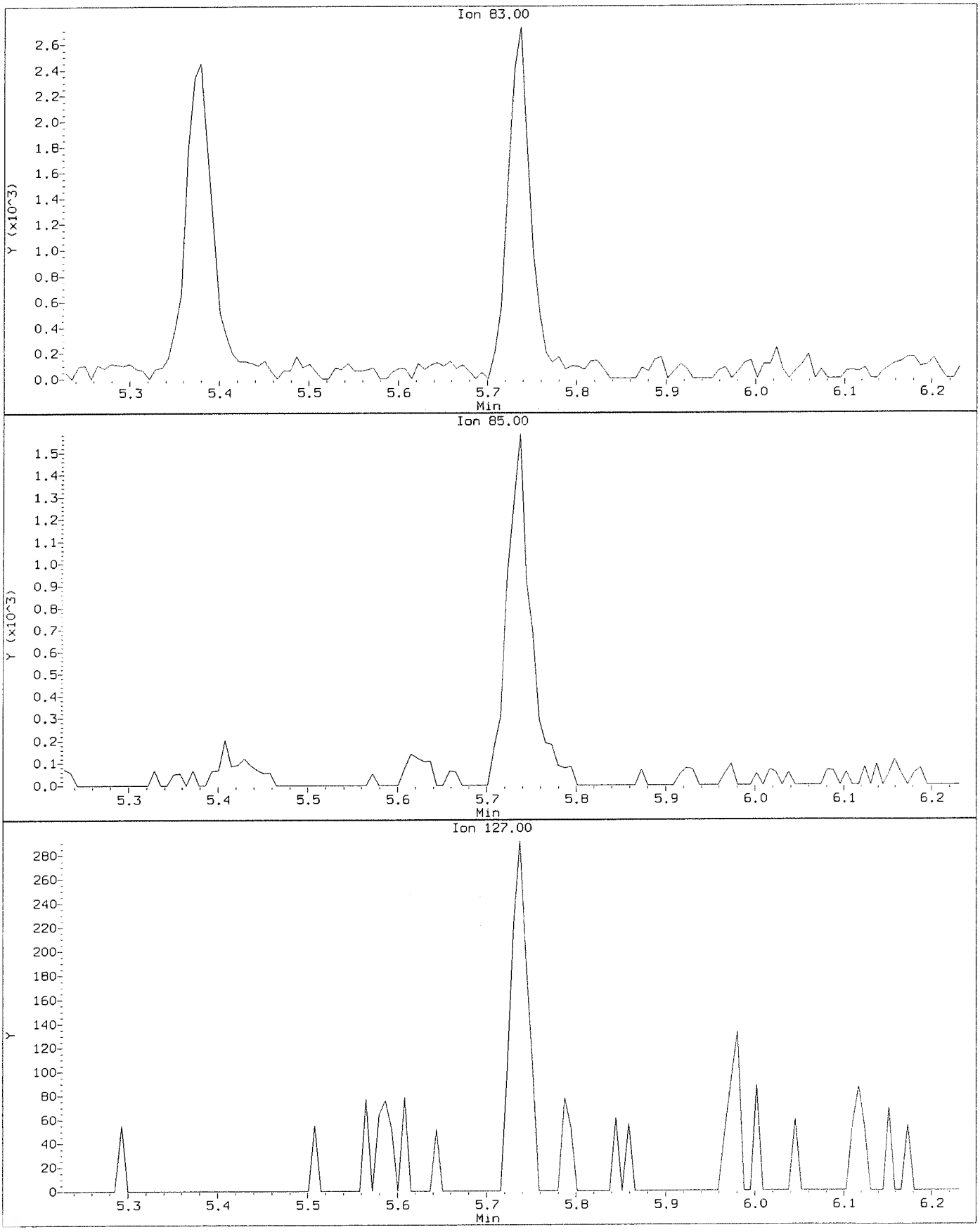


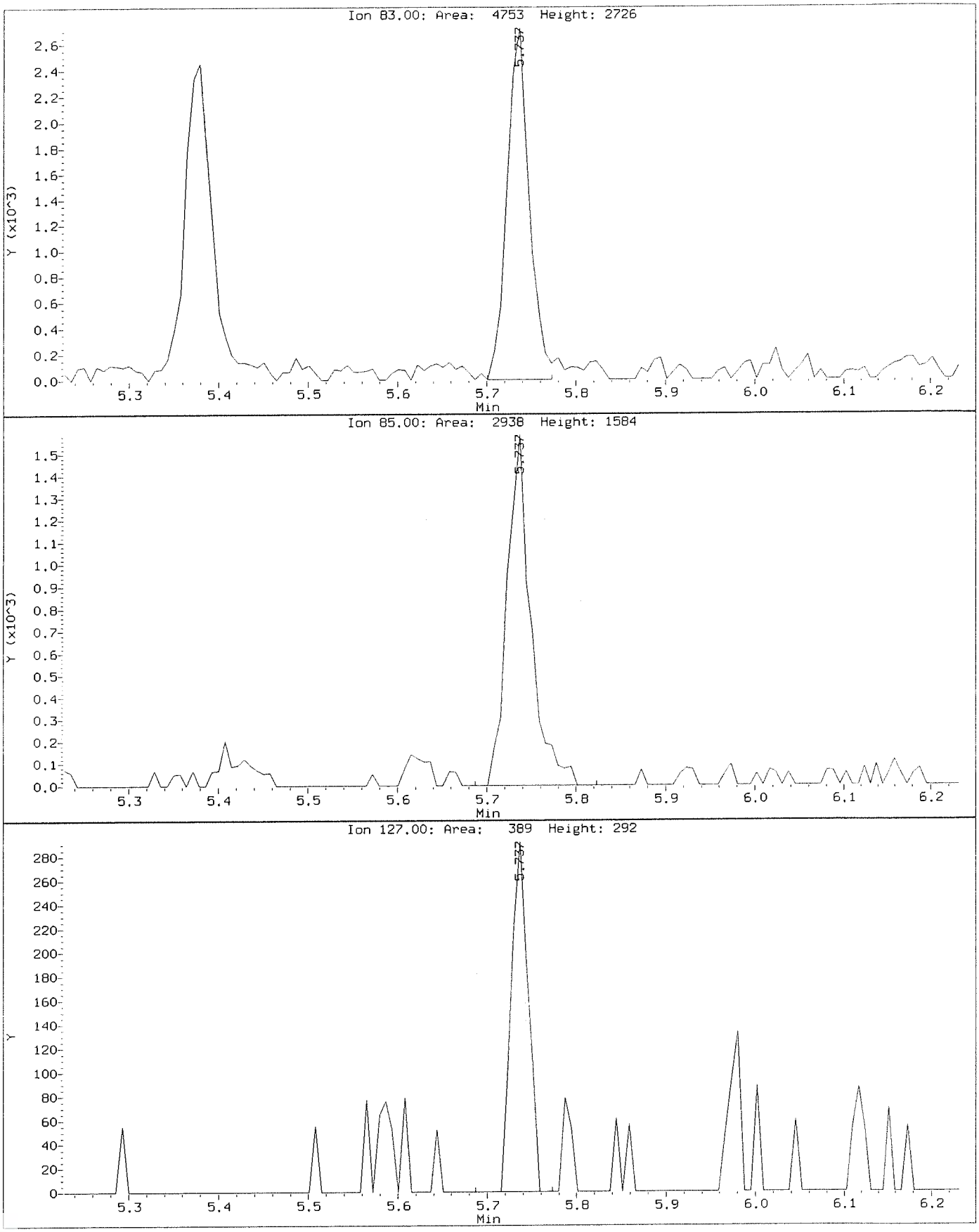
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



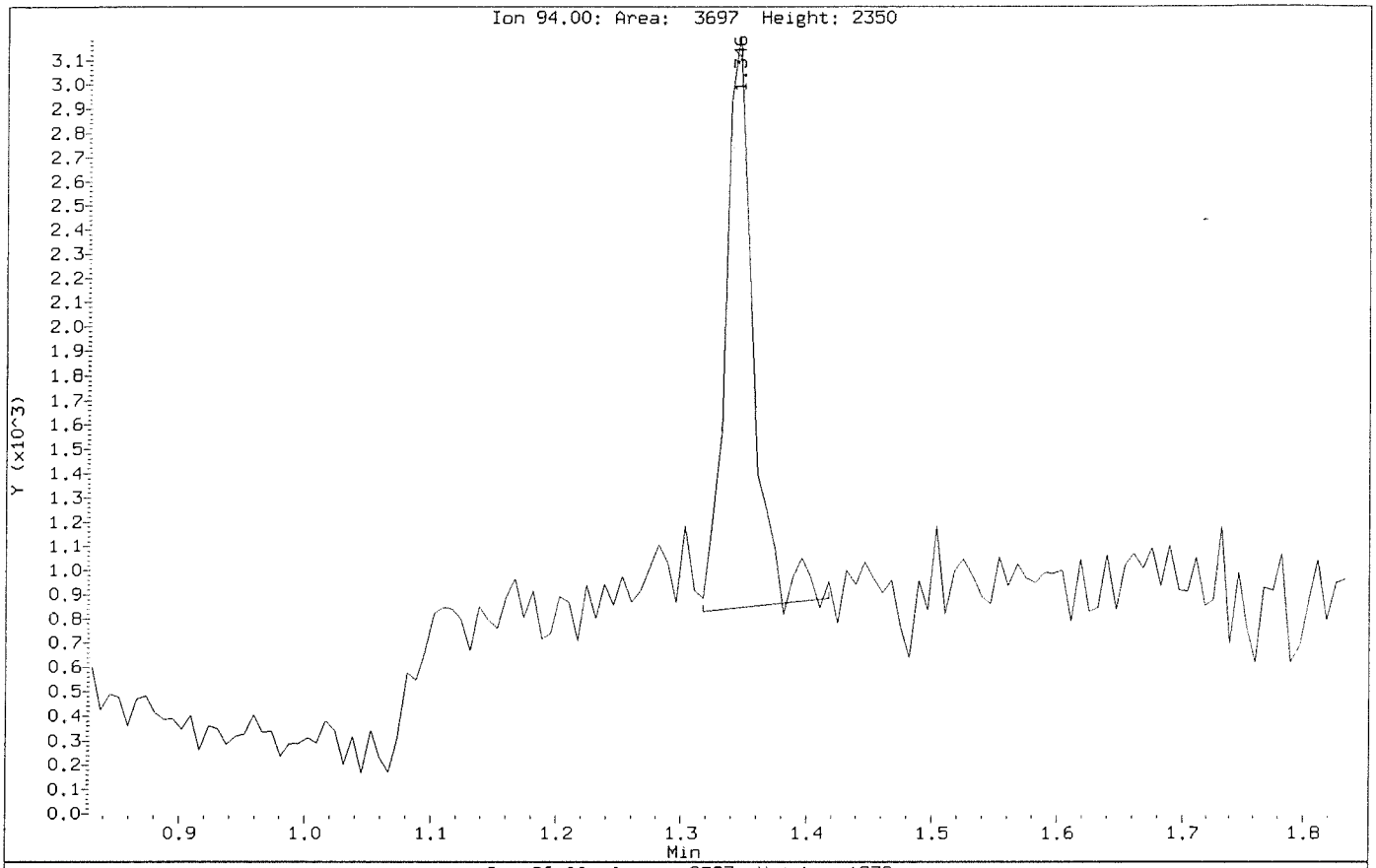
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Instrument: voa6.i
Client Sample ID: VSTD000.5

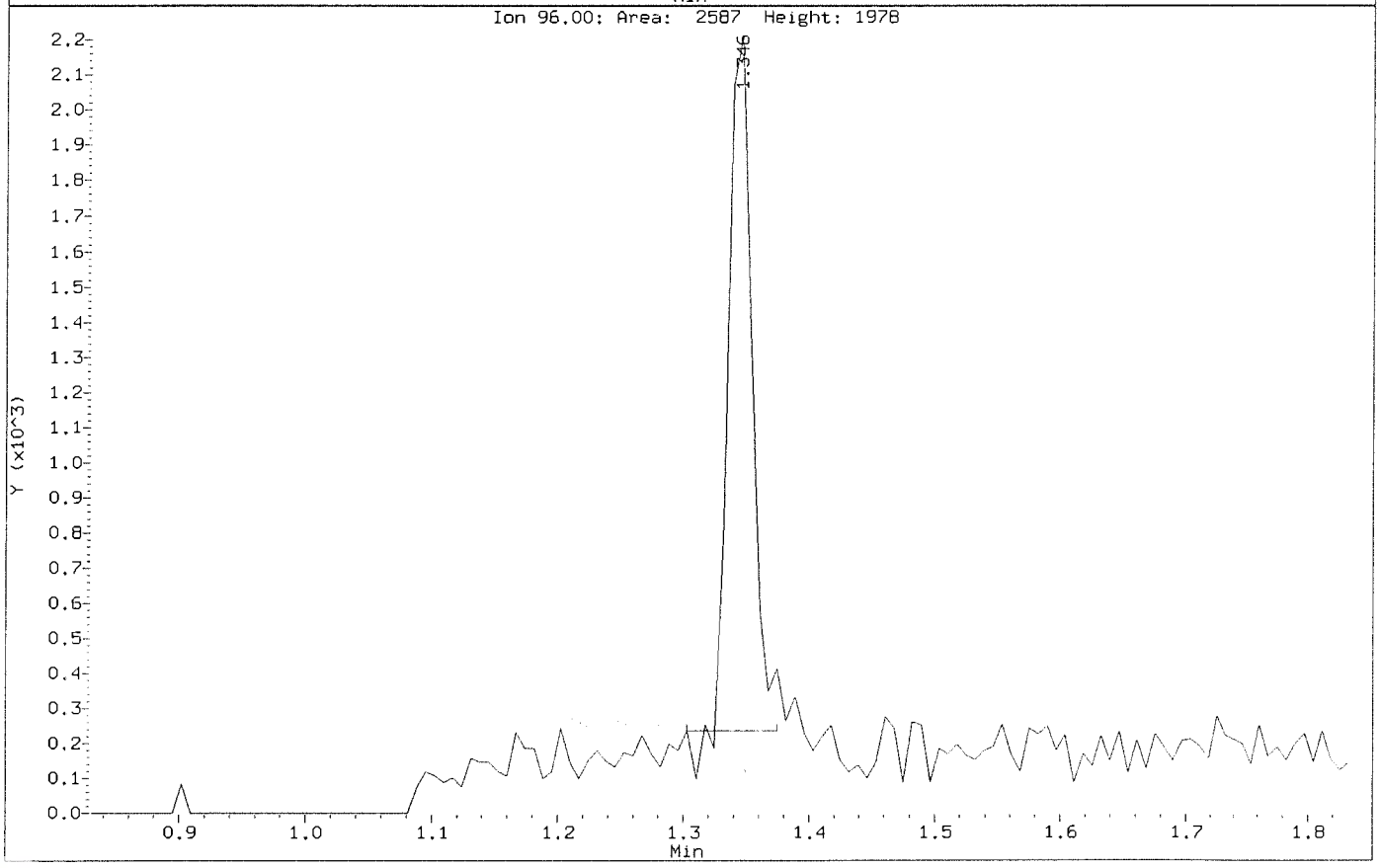
Compound: Bromodichloromethane
CAS Number: 75-27-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

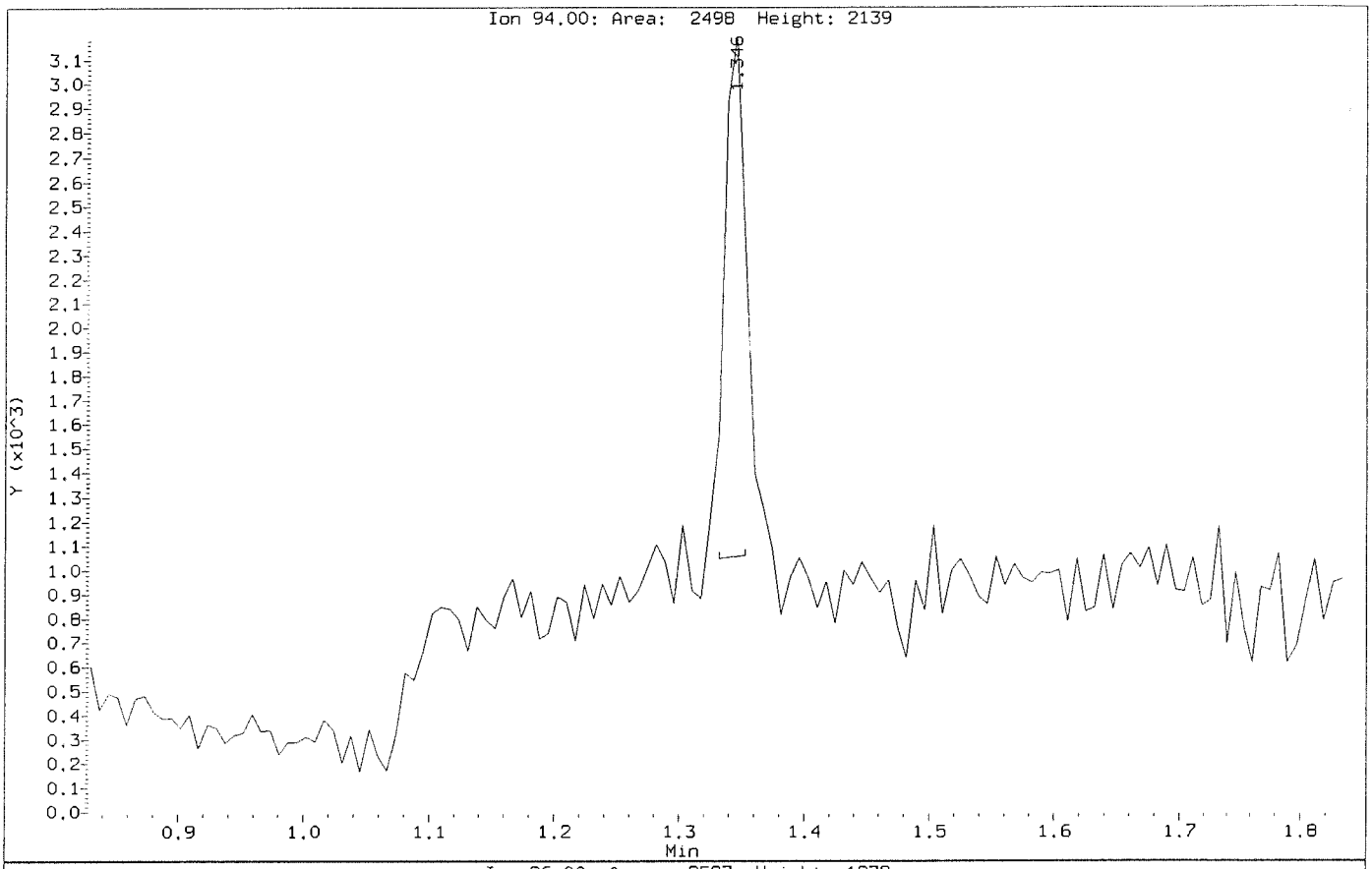
Compound: Bromomethane
CAS Number: 74-83-9

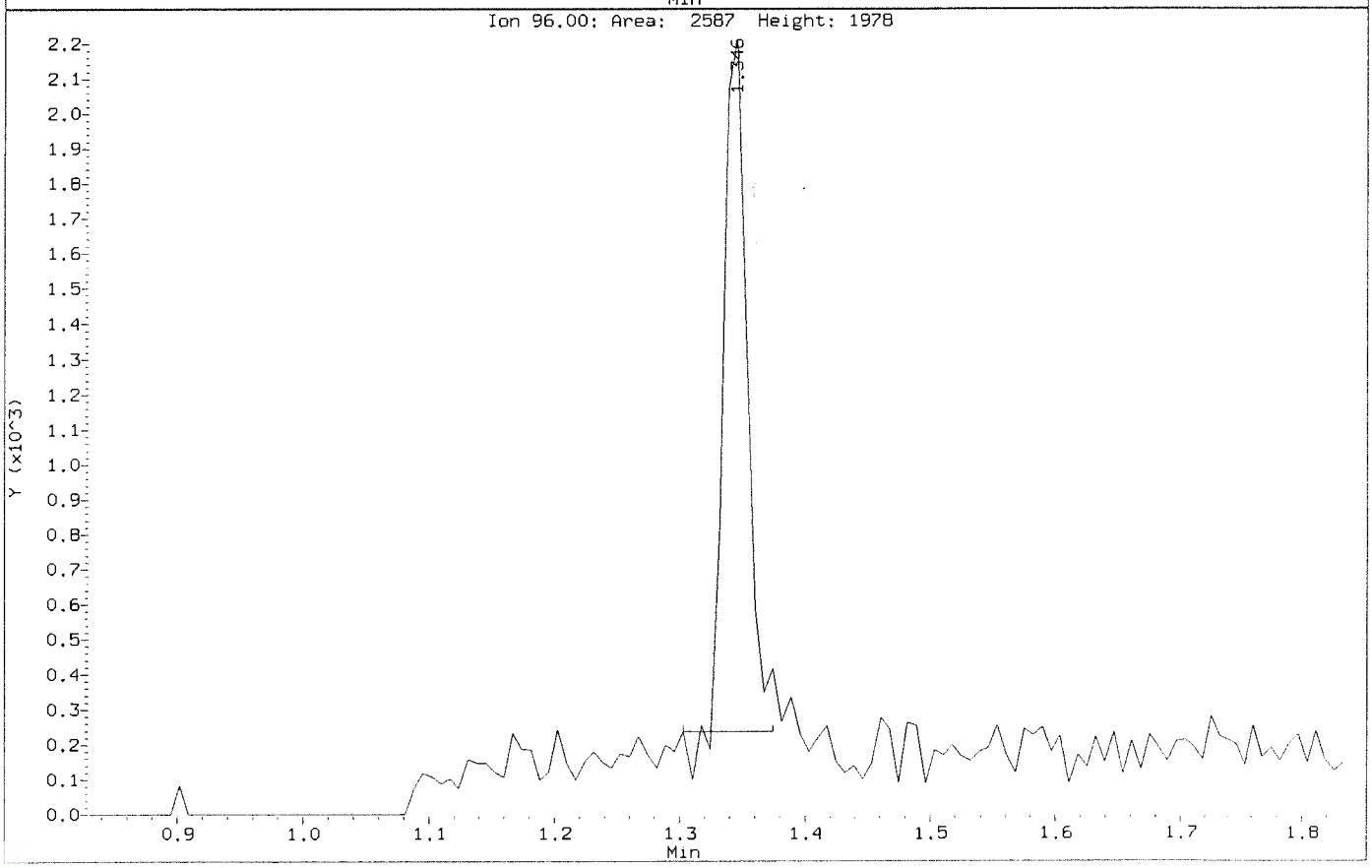


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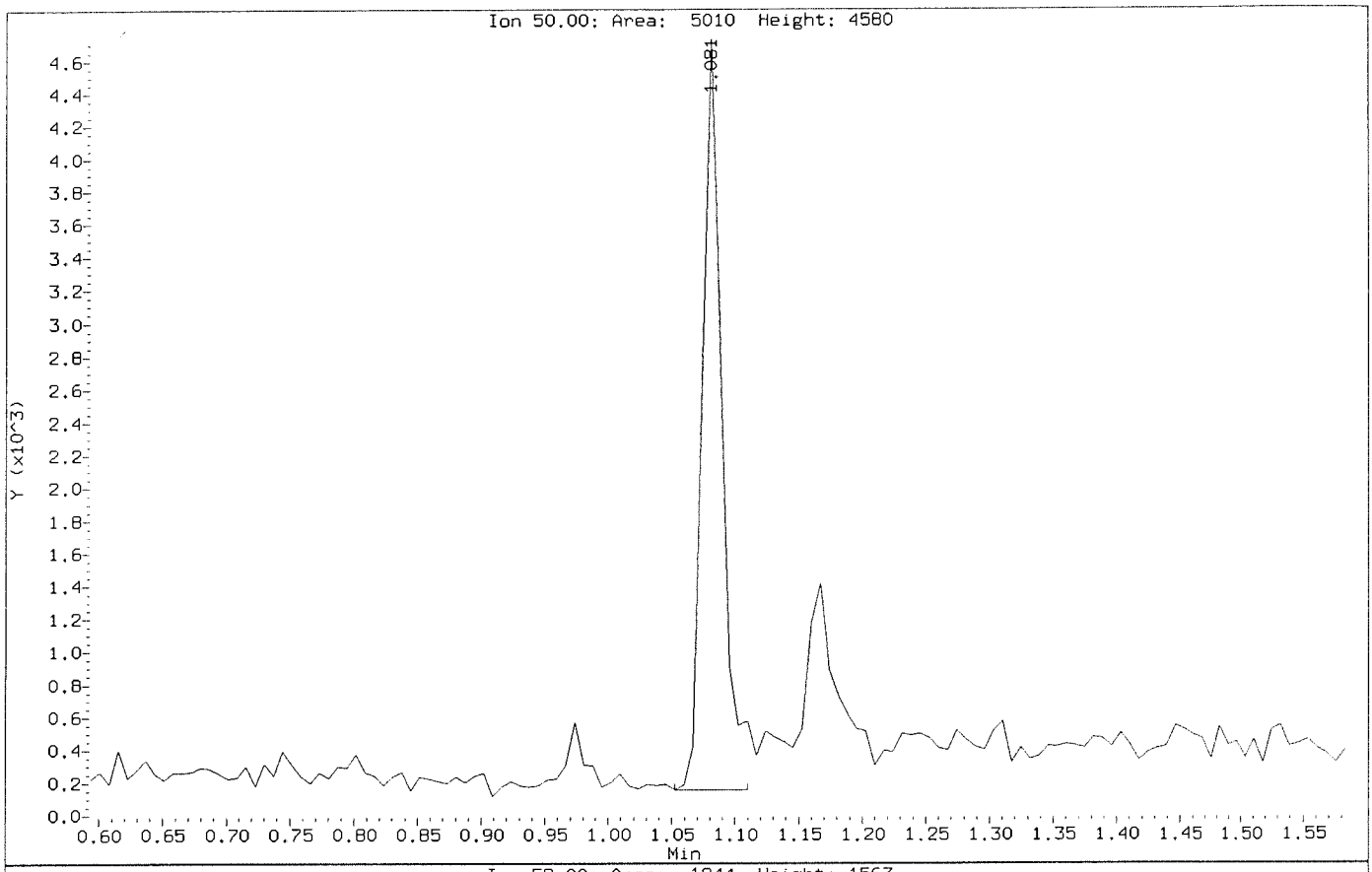
Compound: Bromomethane
CAS Number: 74-83-9

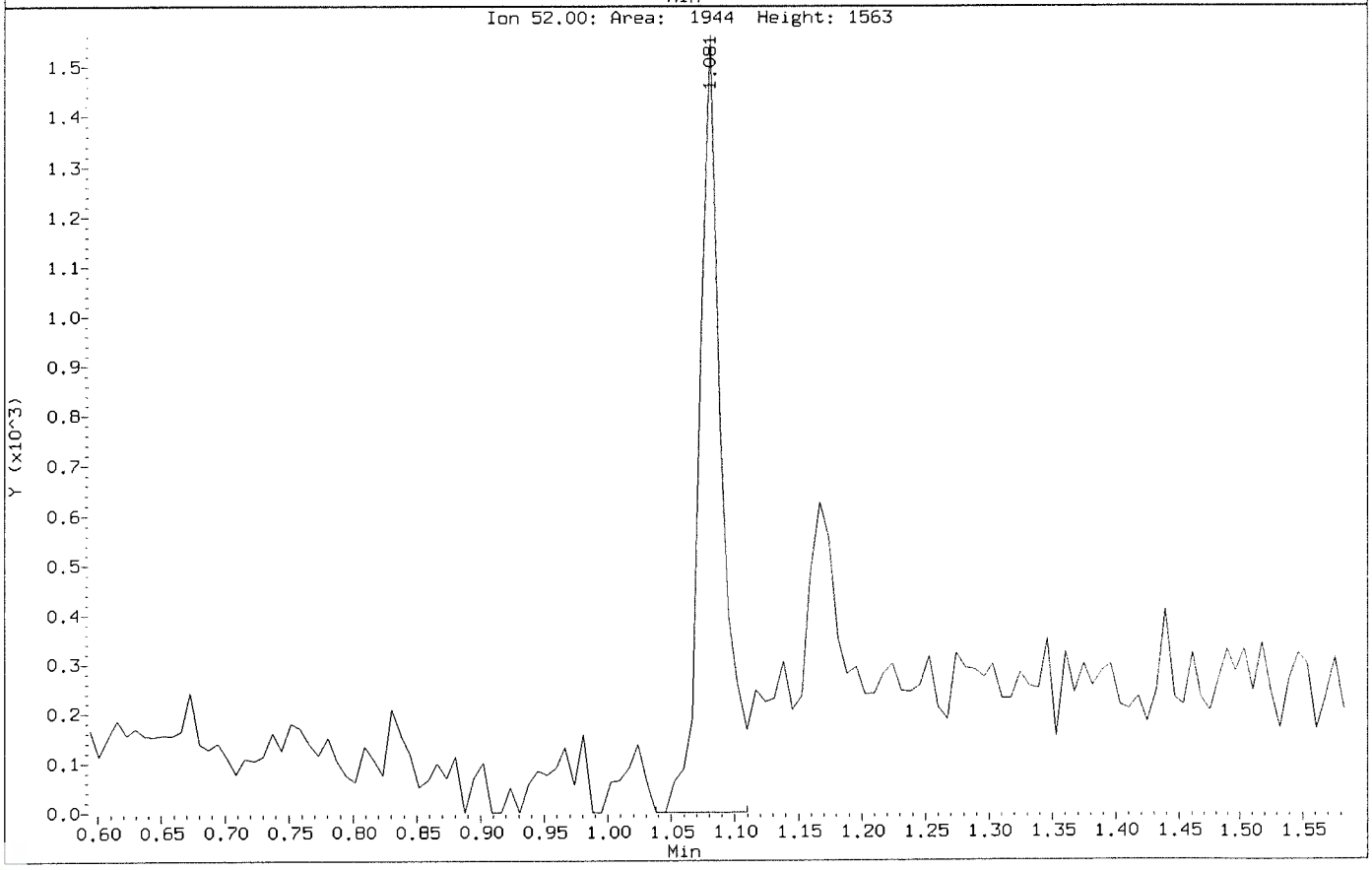


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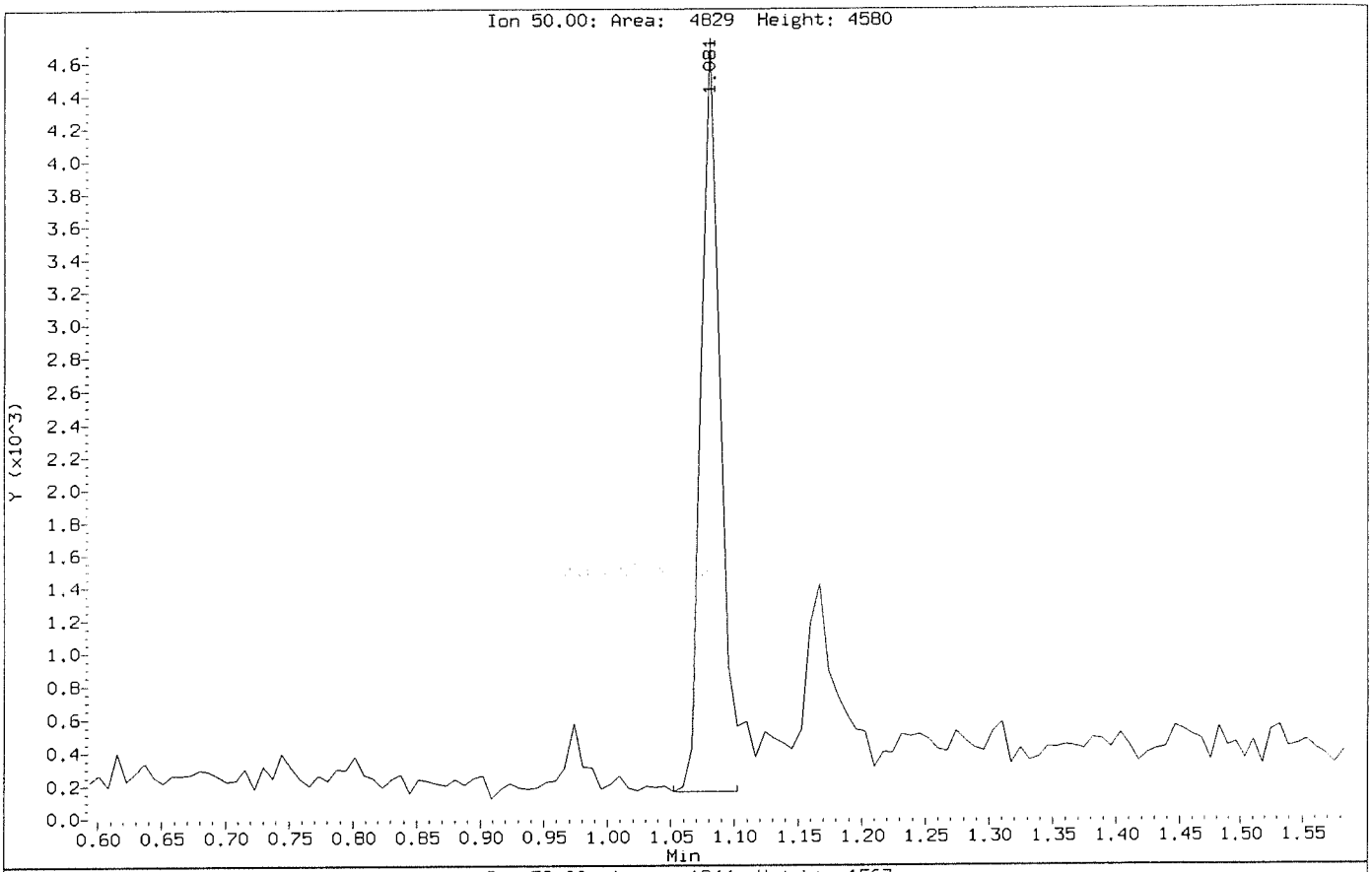
Compound: Chloromethane
CAS Number: 74-87-3

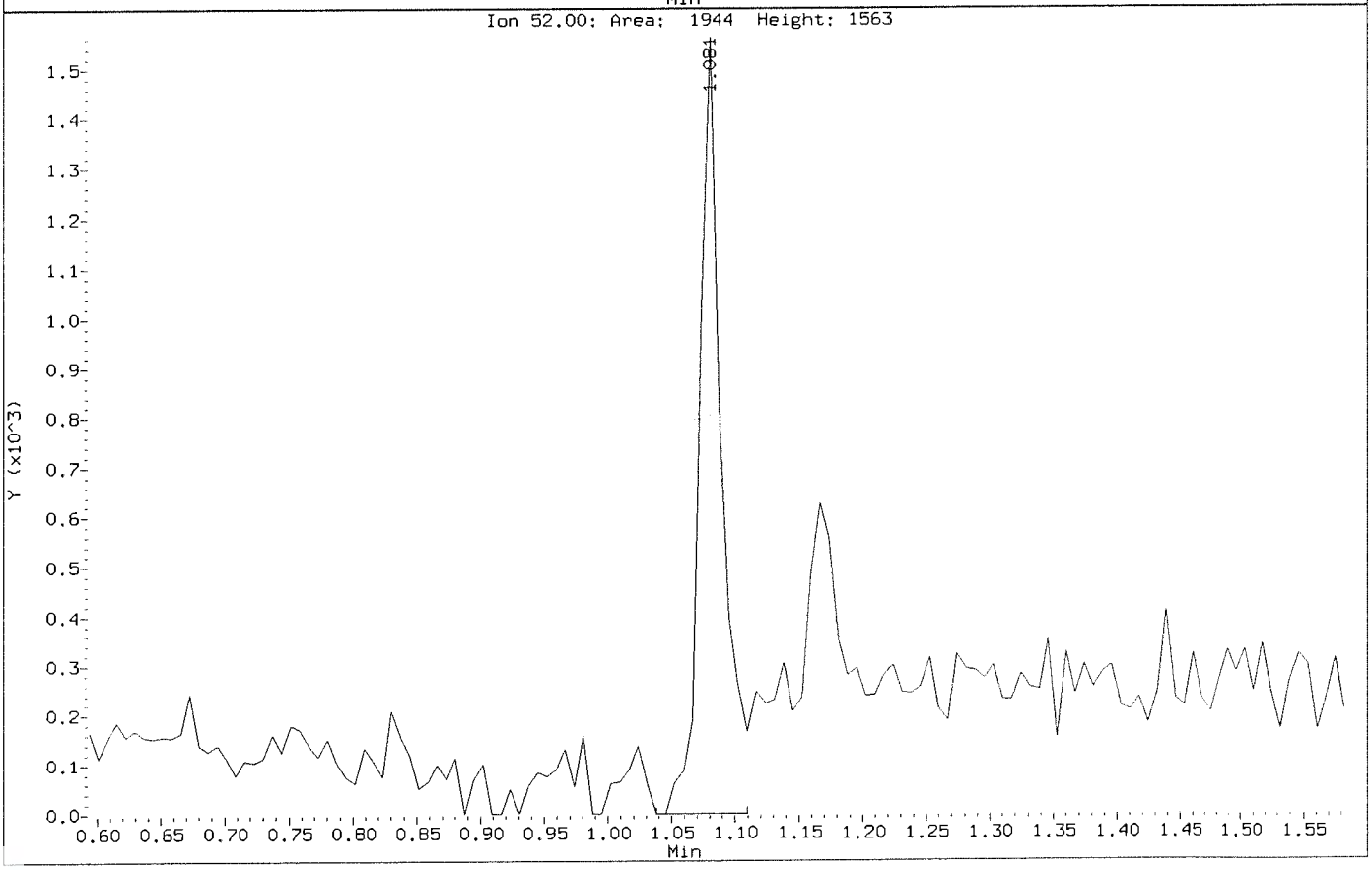


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Instrument: voa6.i
Client Sample ID: VSTD000.5

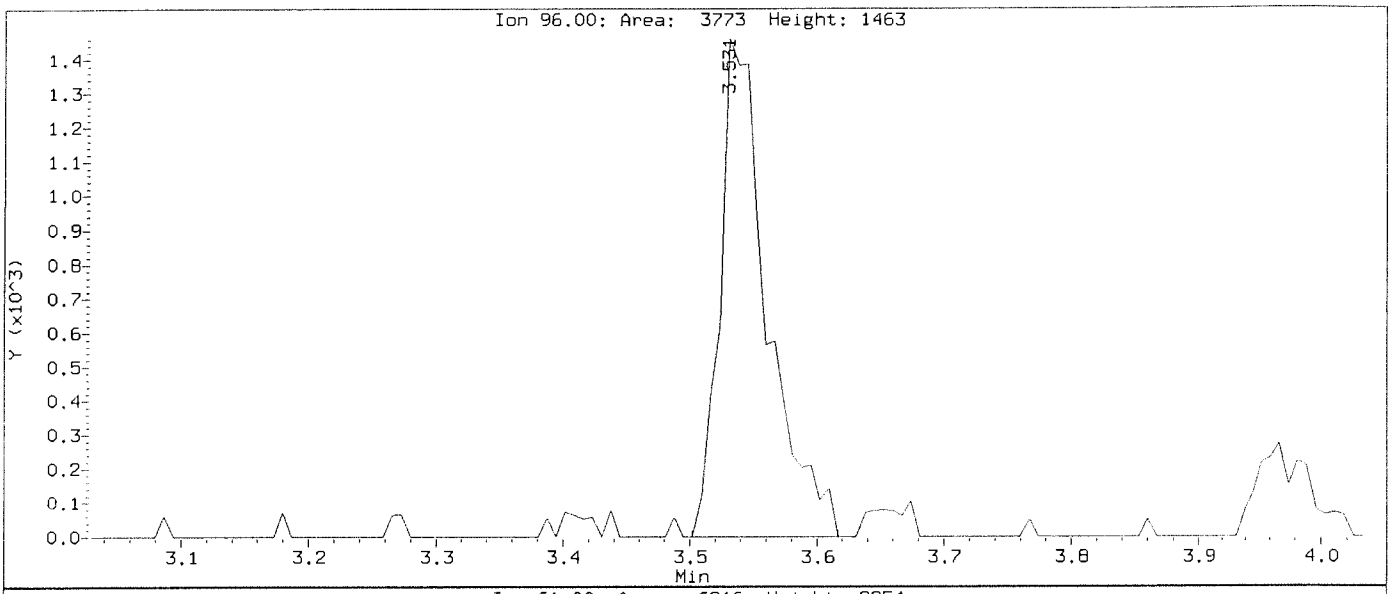
Compound: Chloromethane
CAS Number: 74-87-3

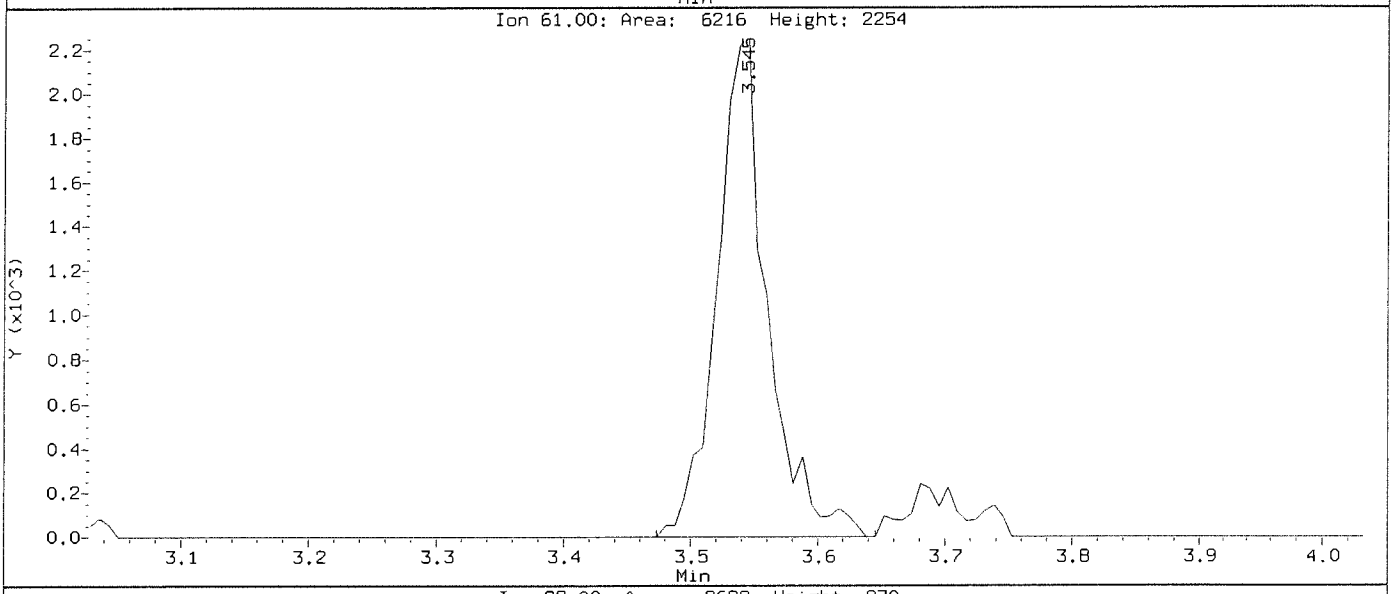


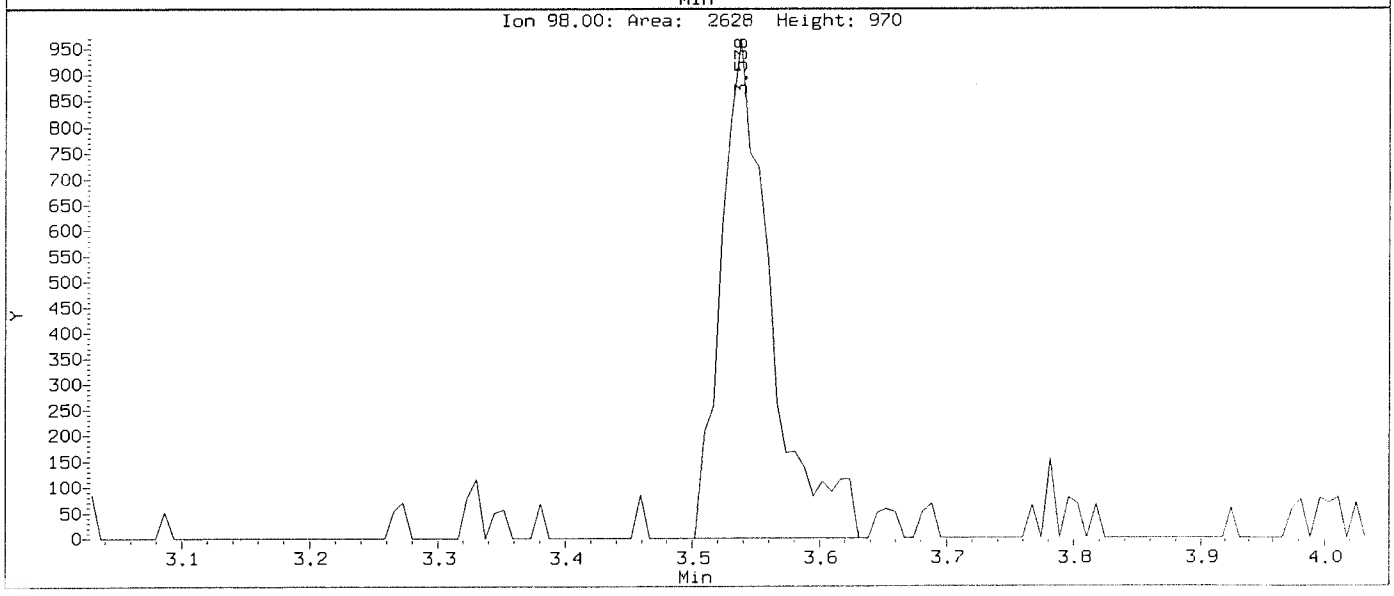



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2

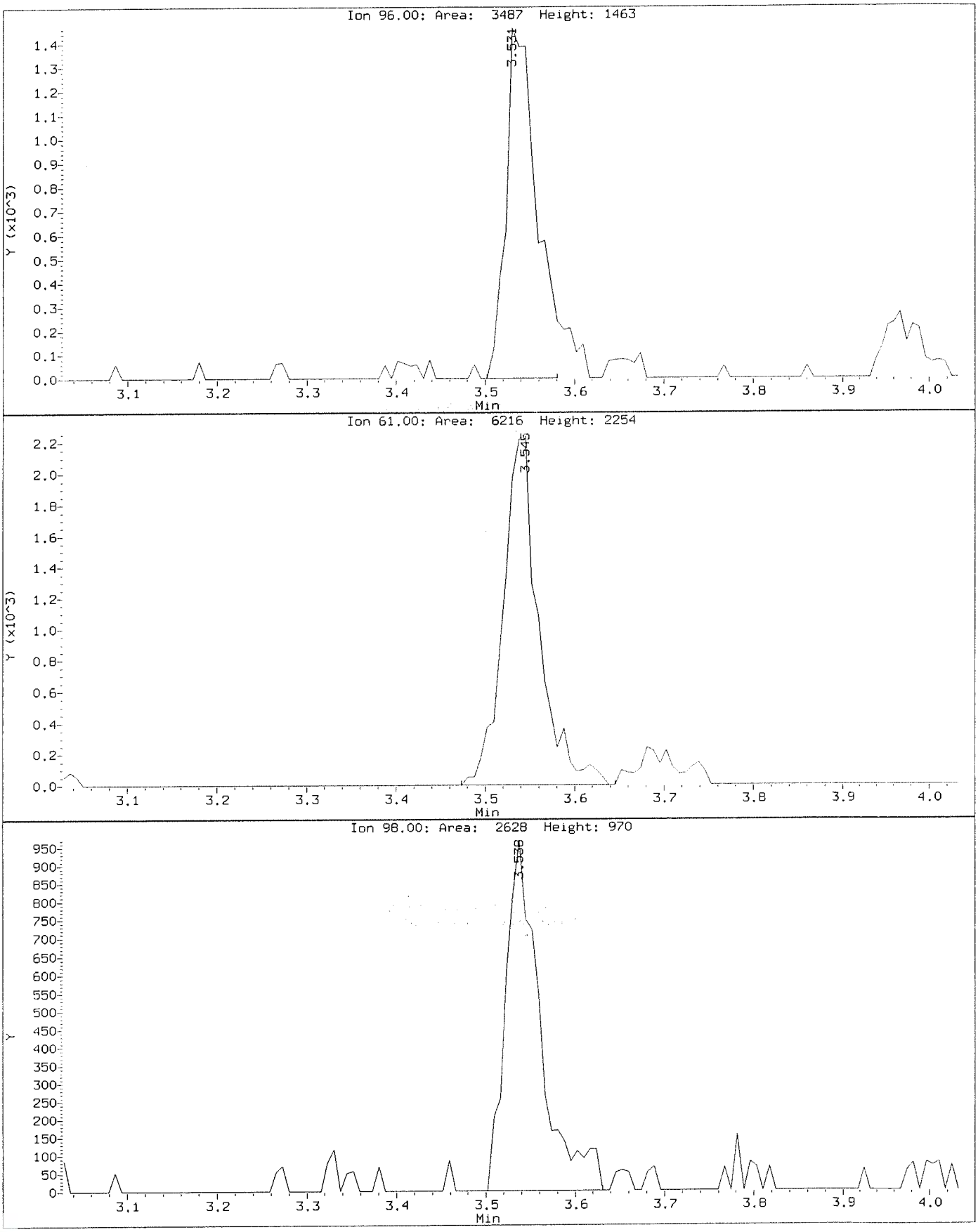


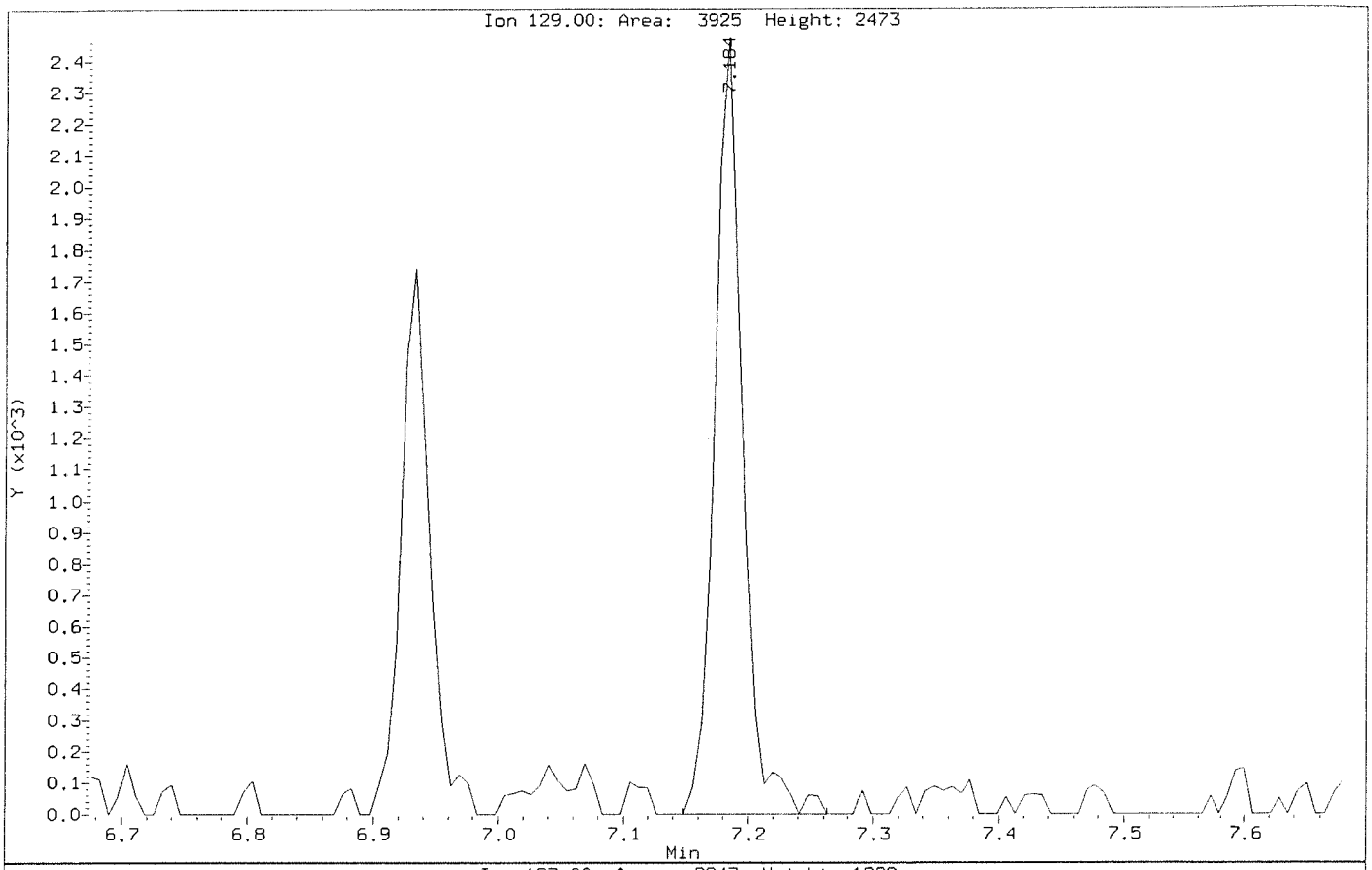
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

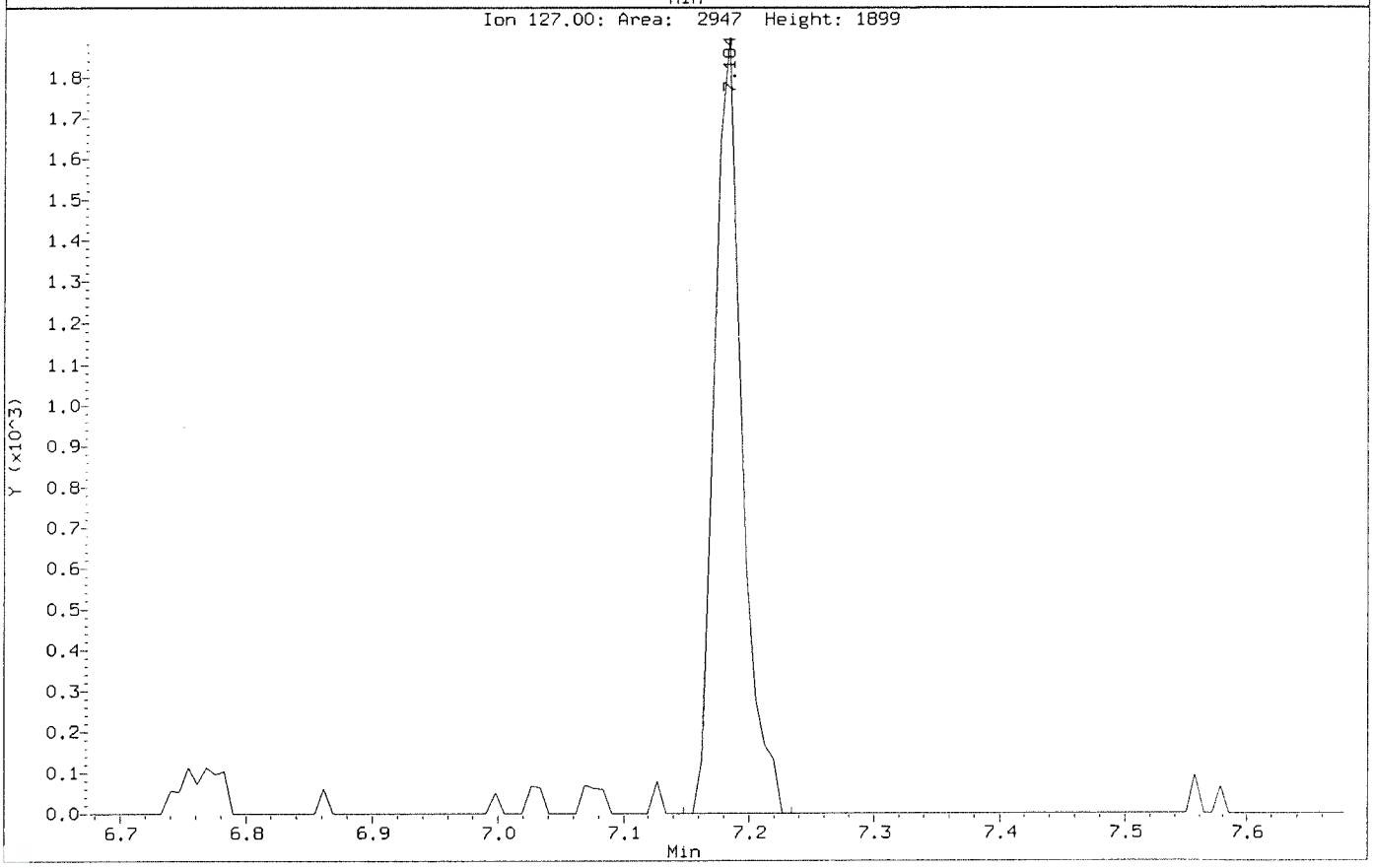
Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

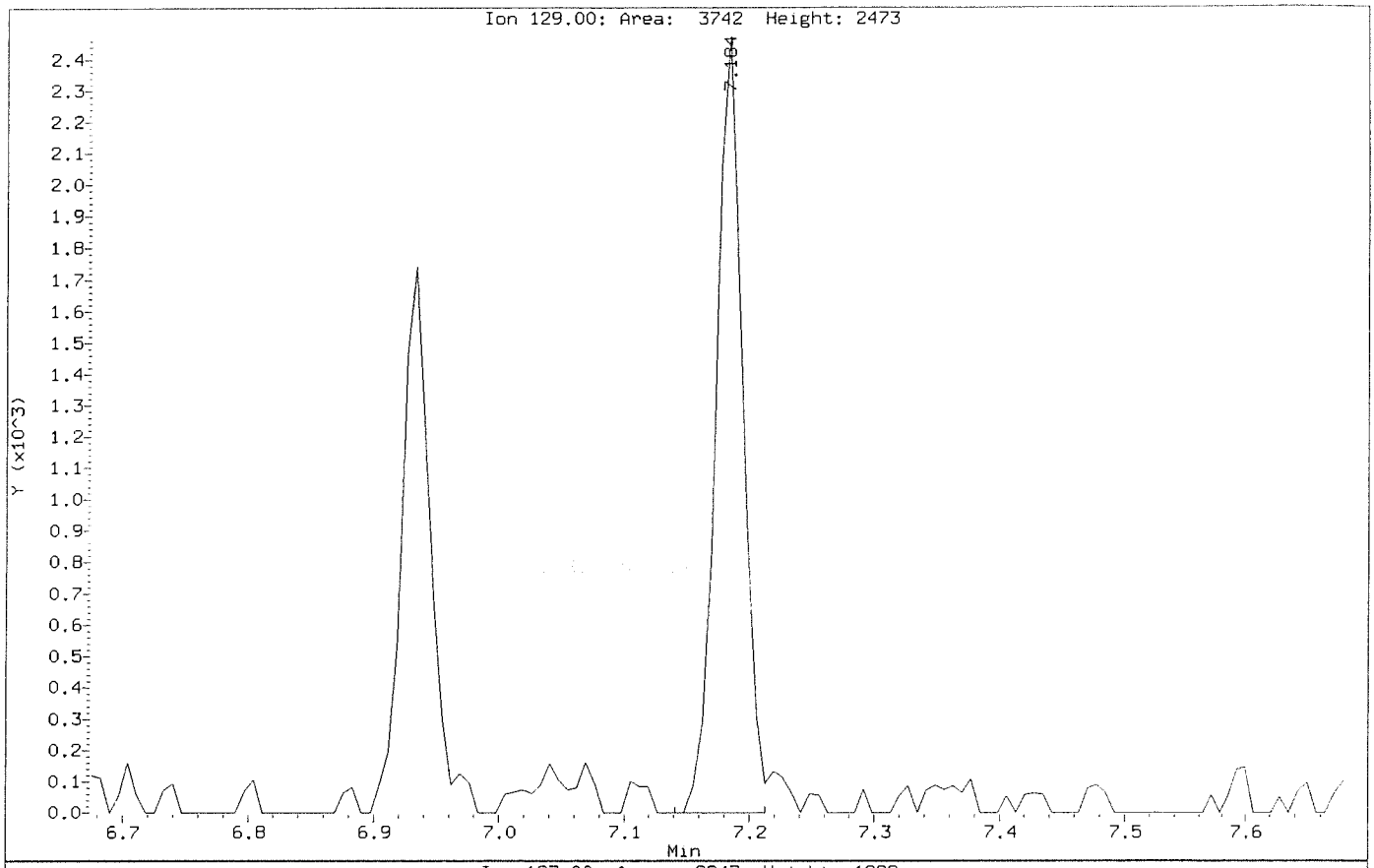
Compound: Dibromochloromethane
CAS Number: 124-48-1

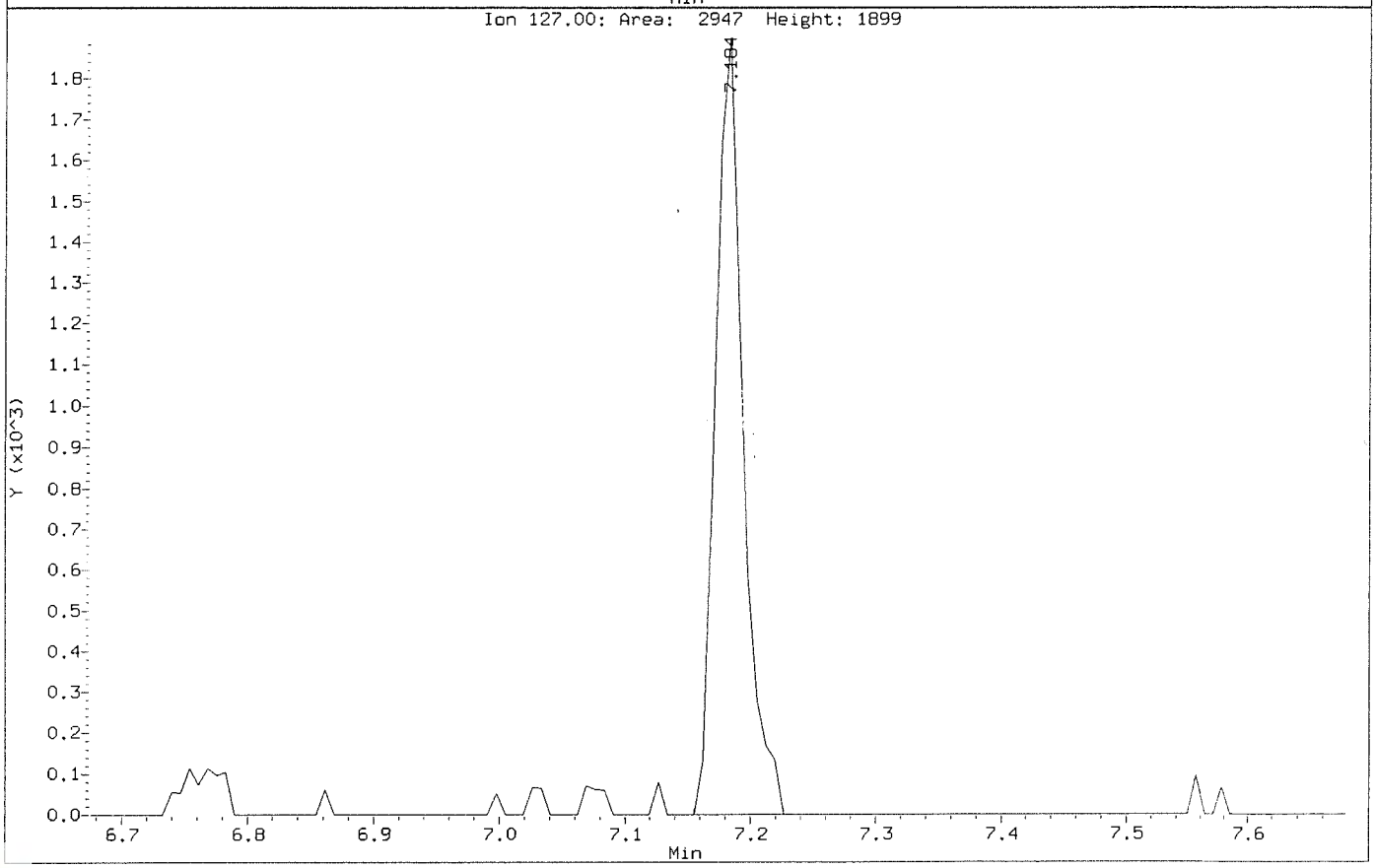


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Instrument: voa6.i
Client Sample ID: VSTD000.5

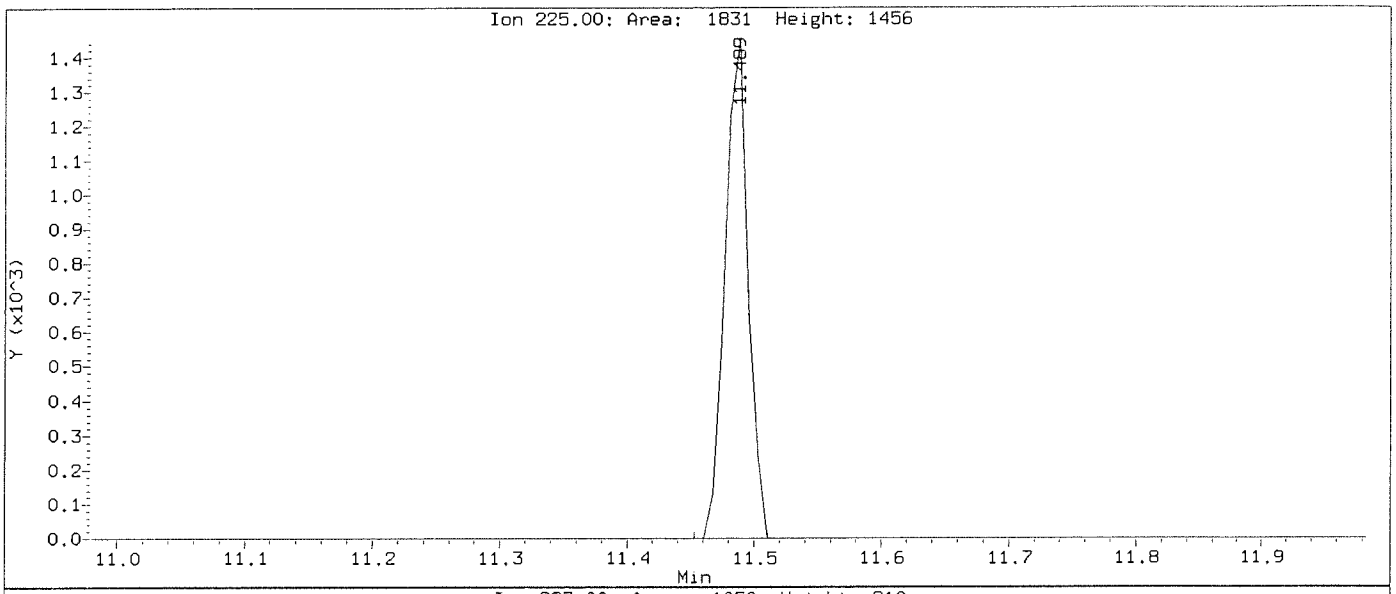
Compound: Dibromochloromethane
CAS Number: 124-48-1

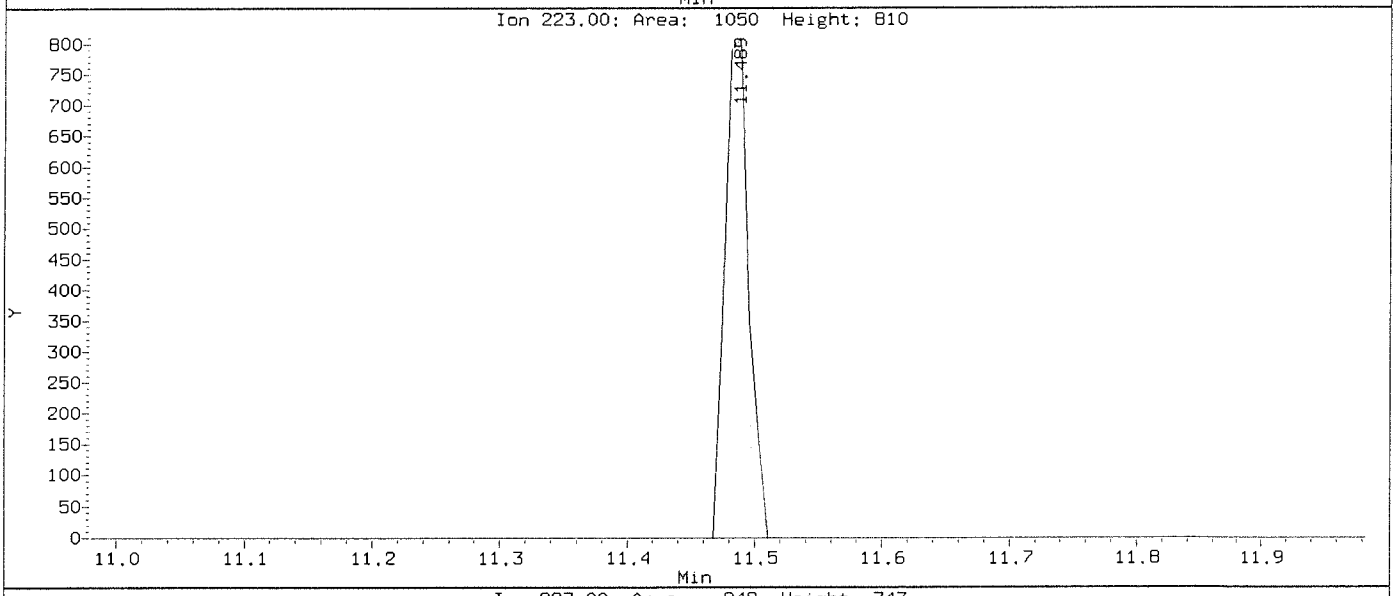


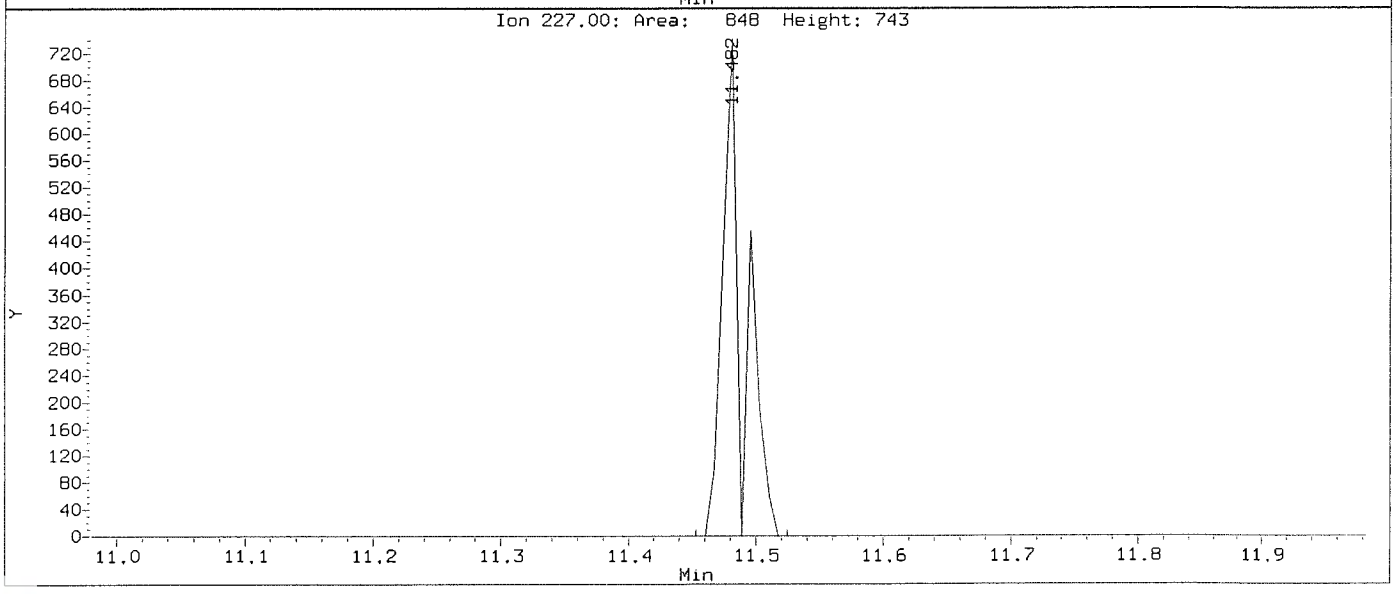



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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

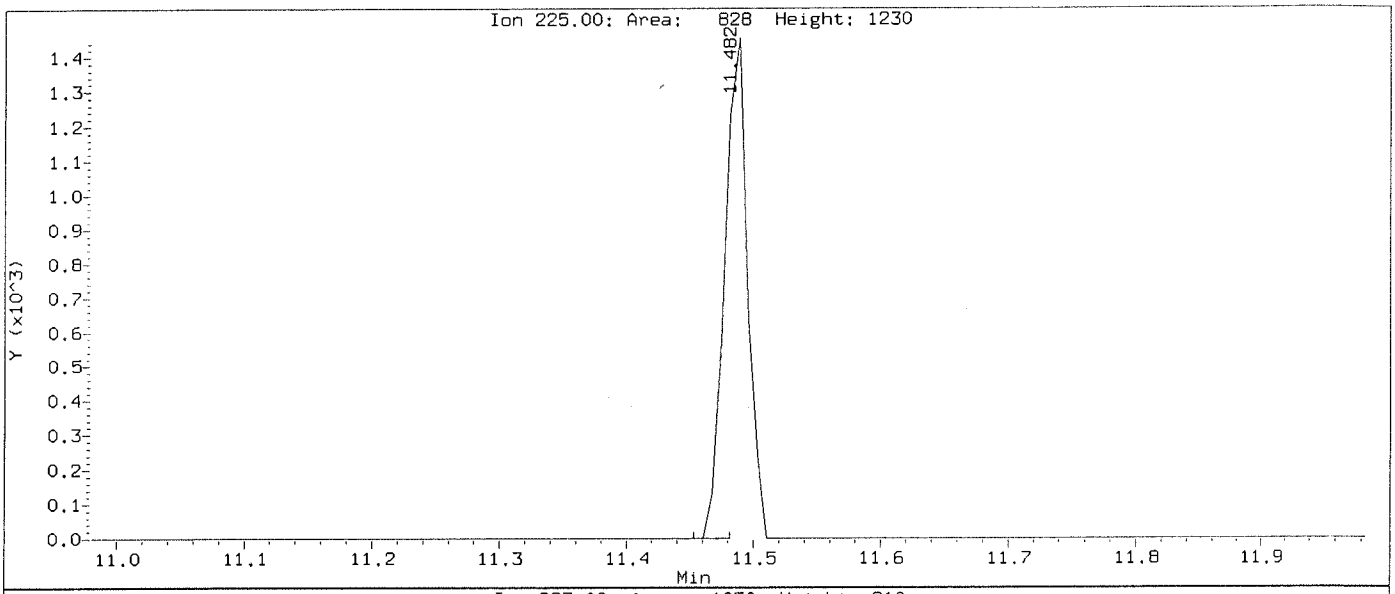


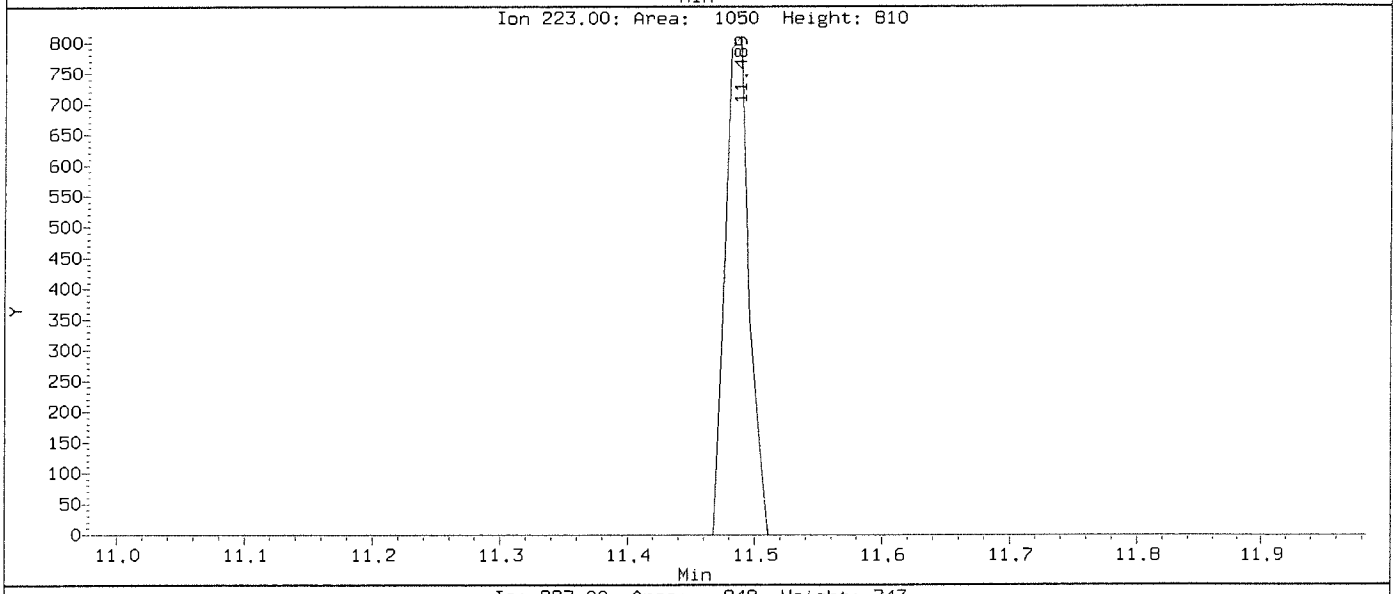



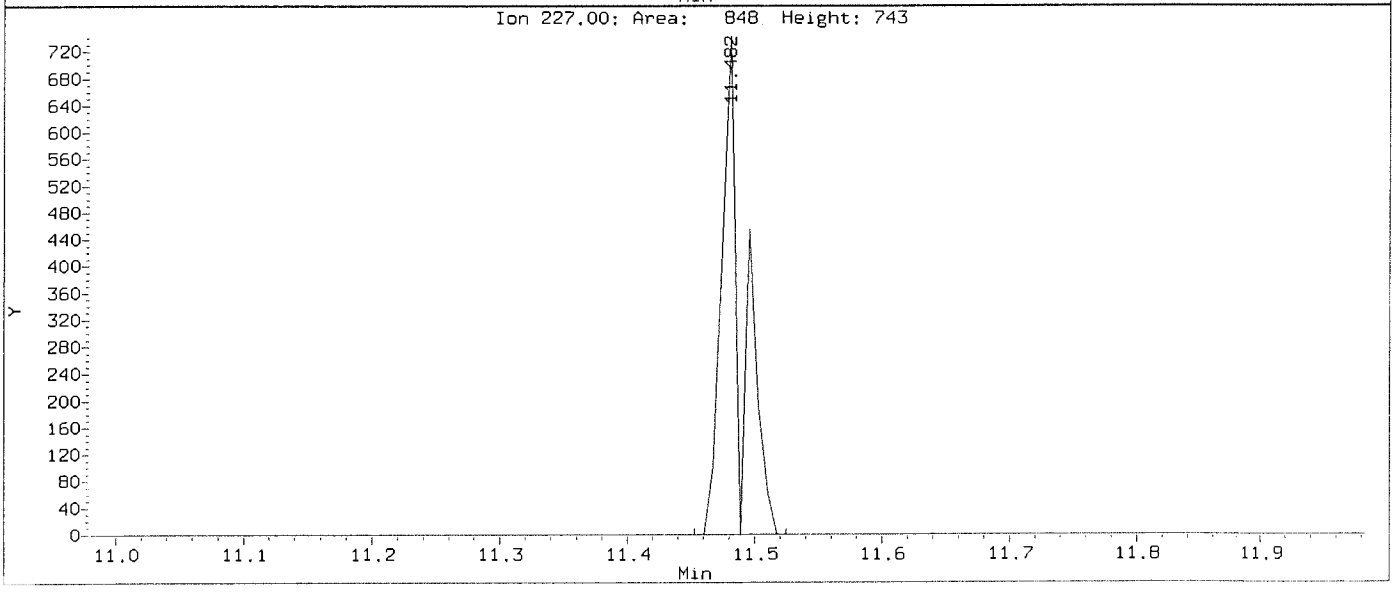



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

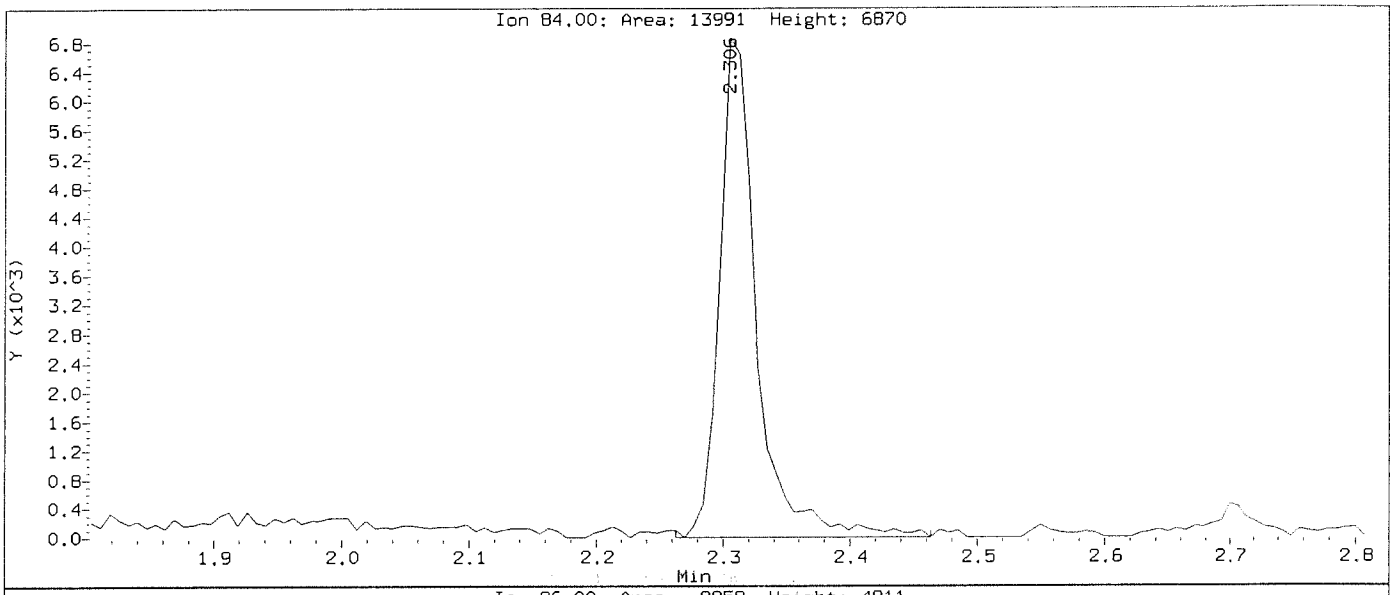


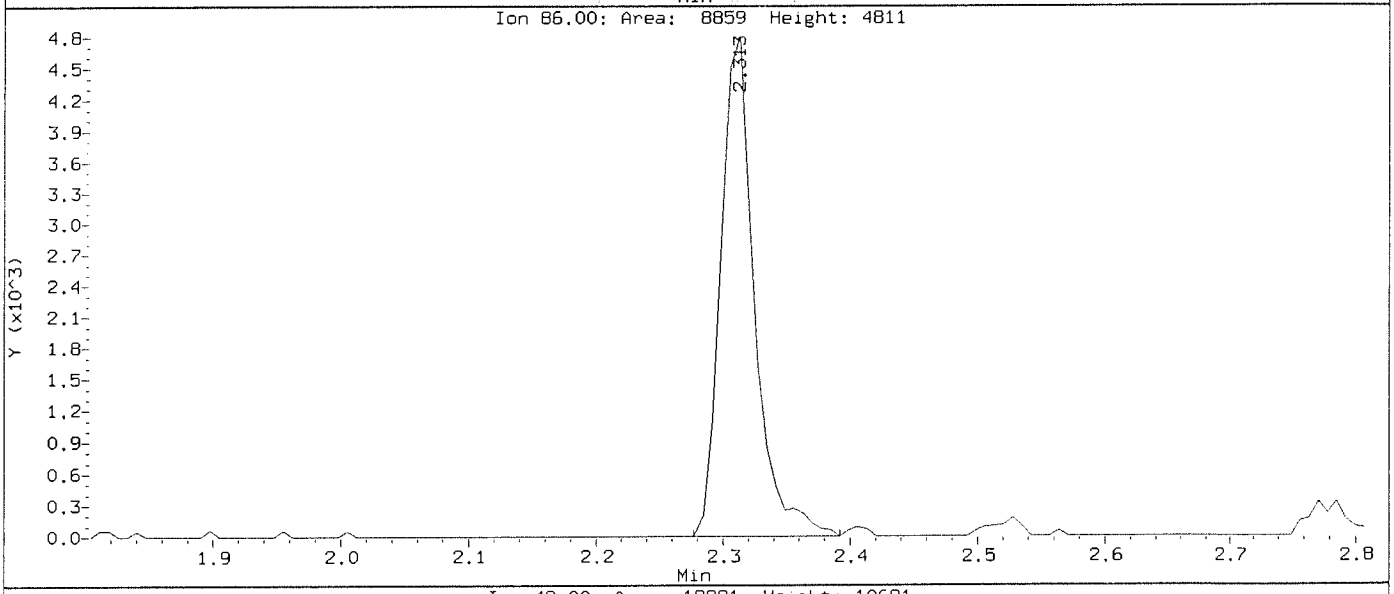



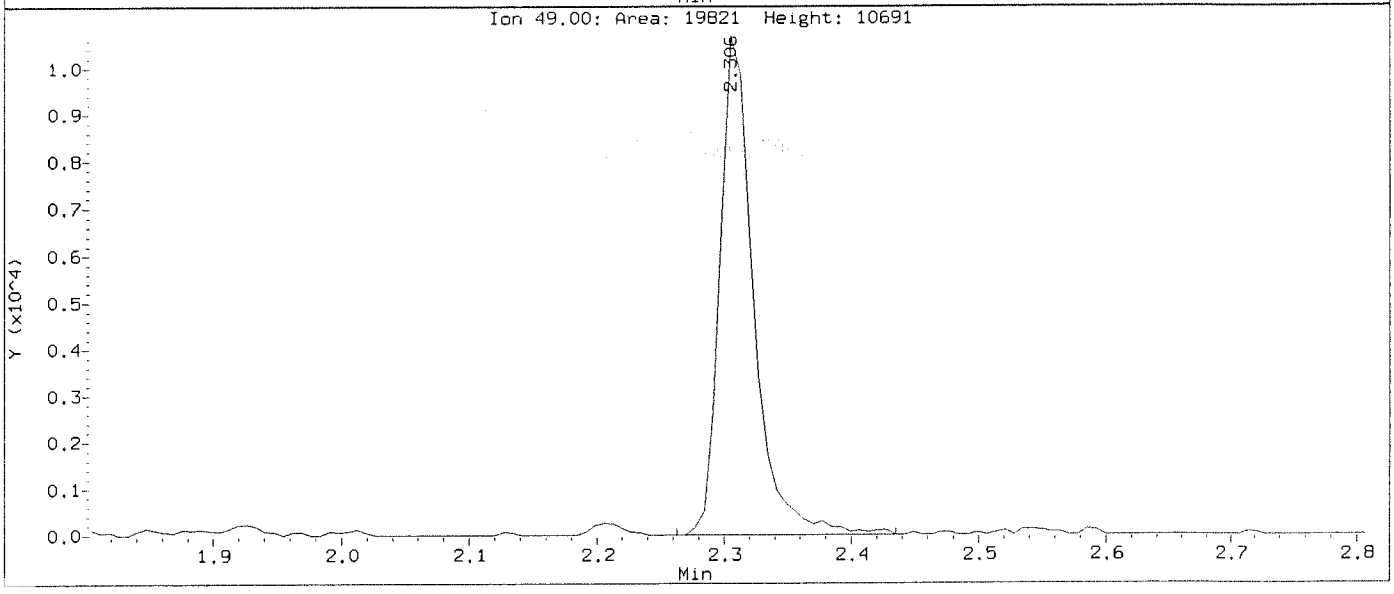



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

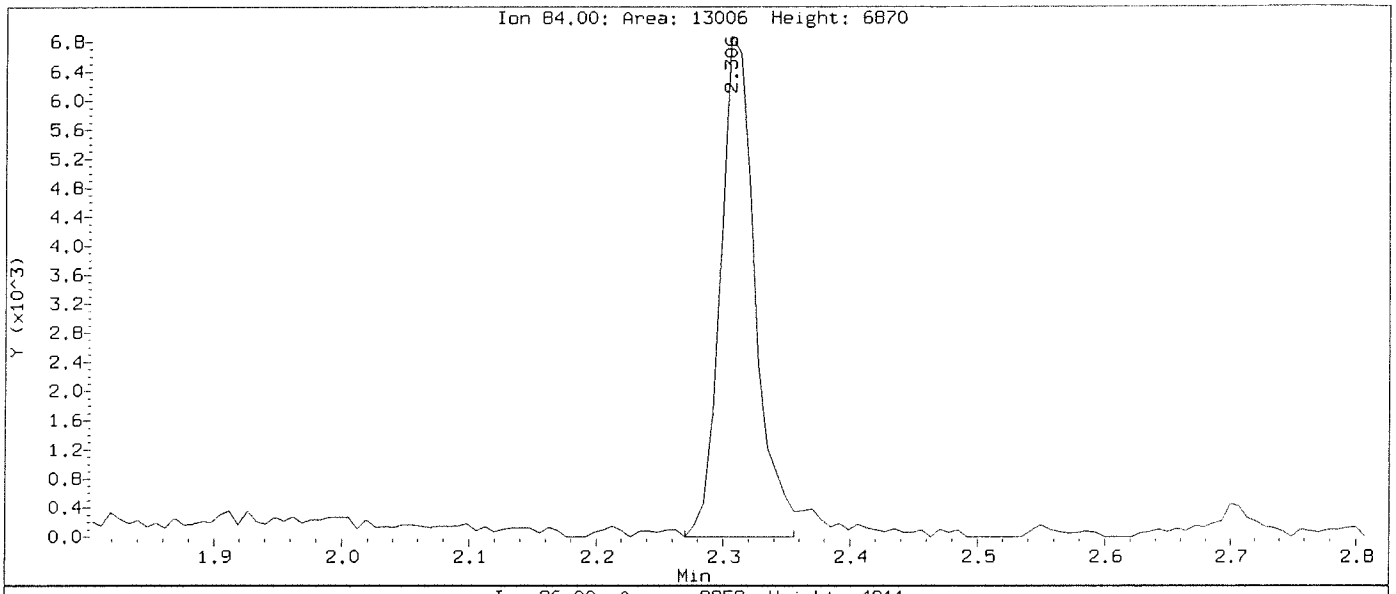


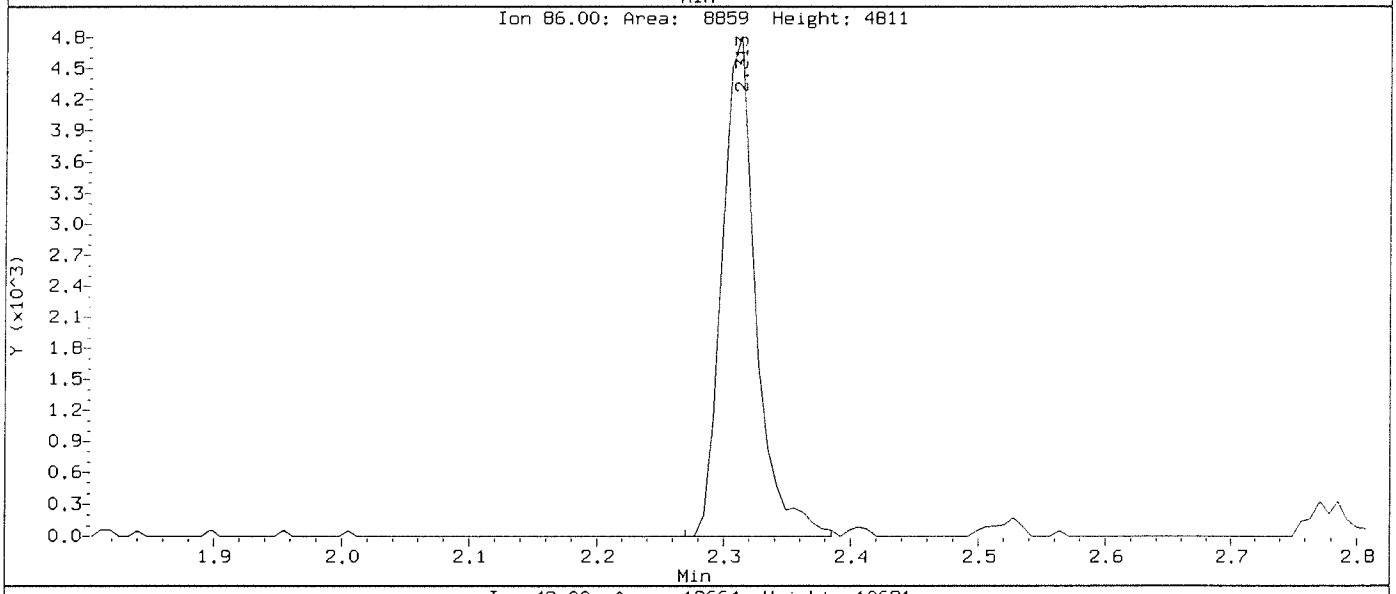



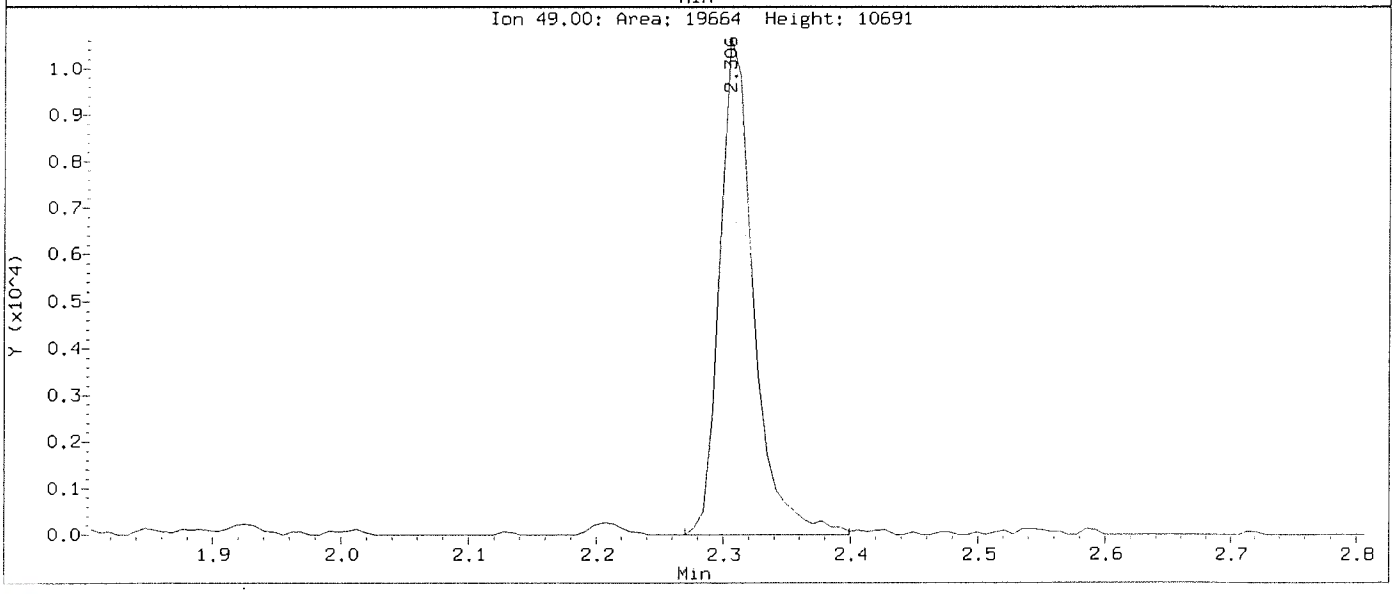



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2

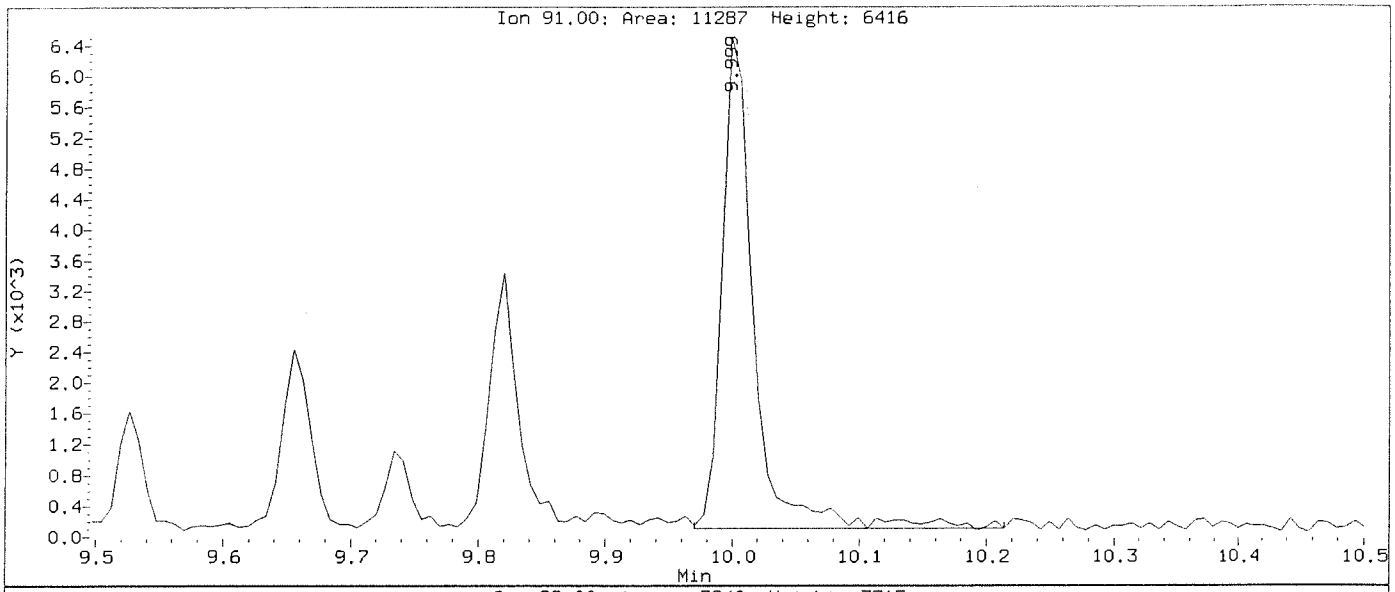


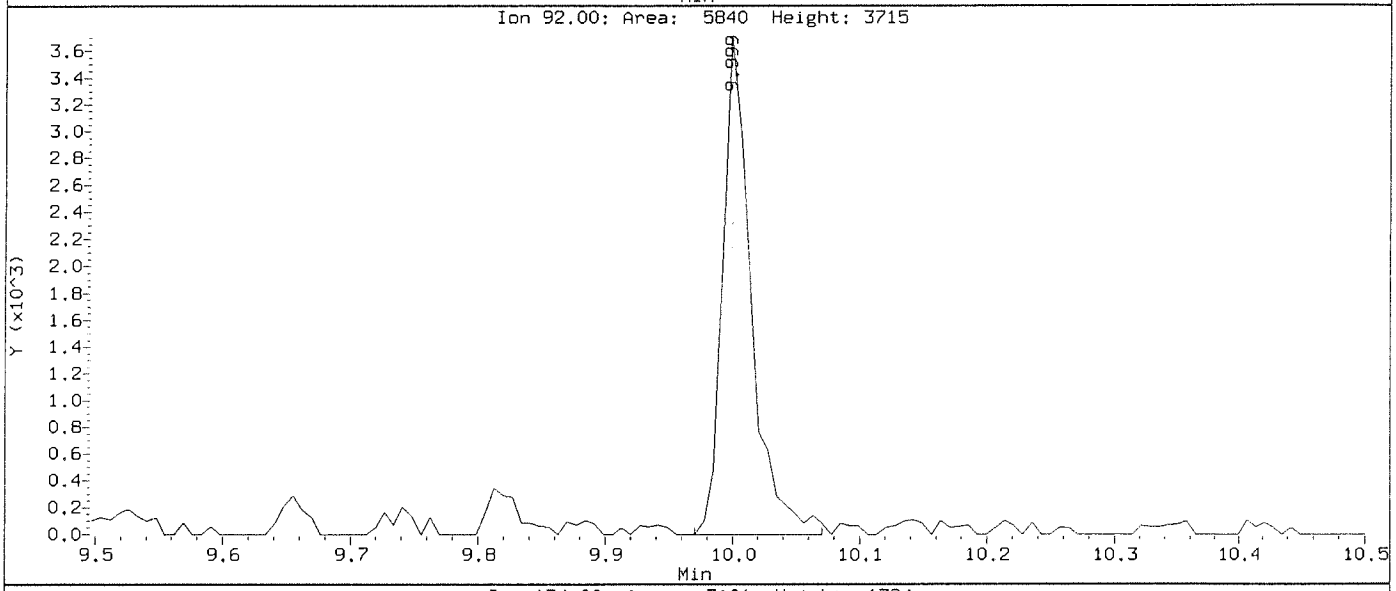



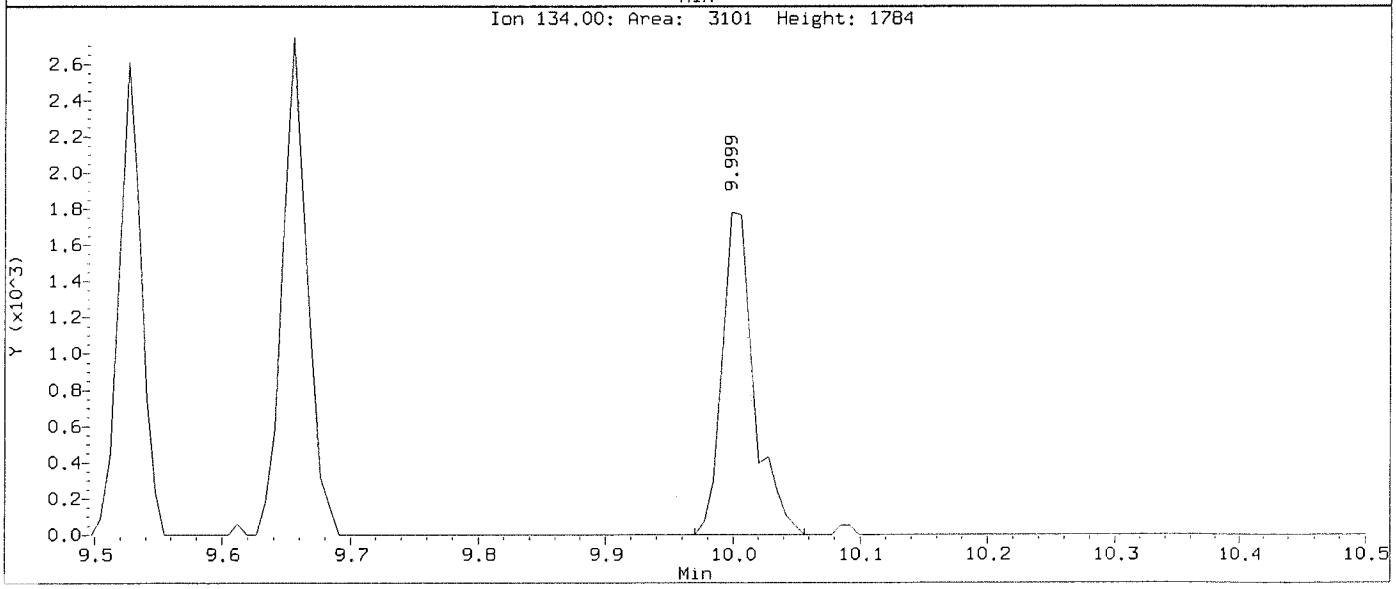



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

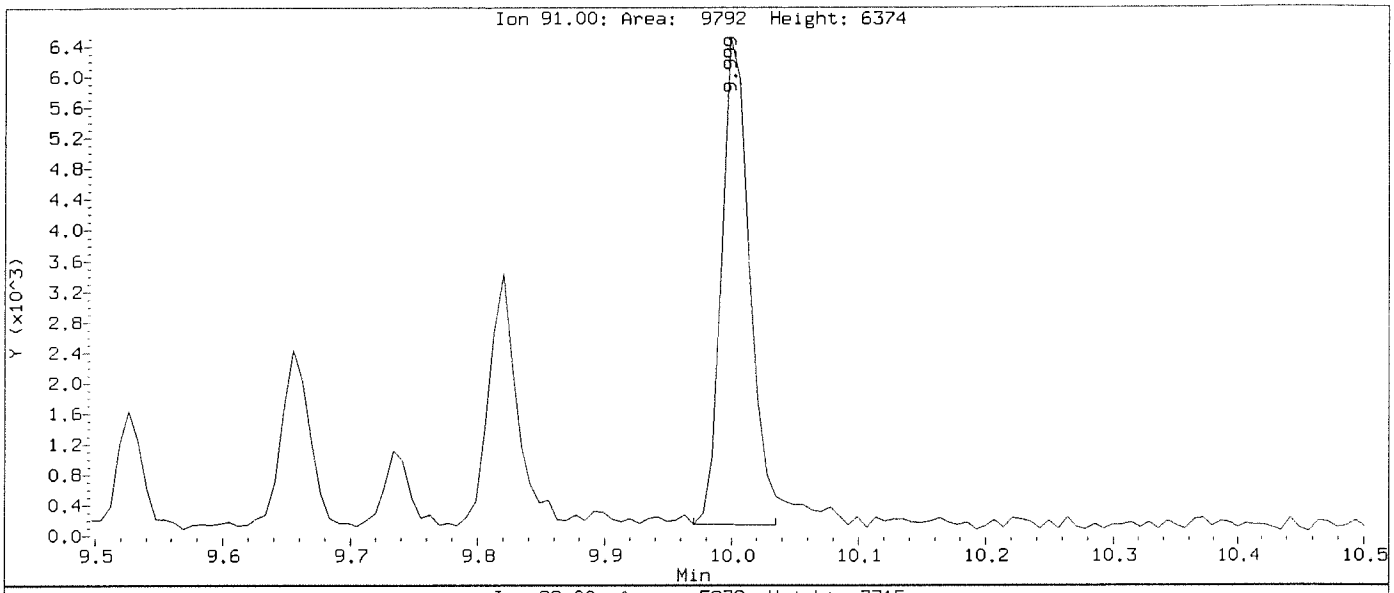


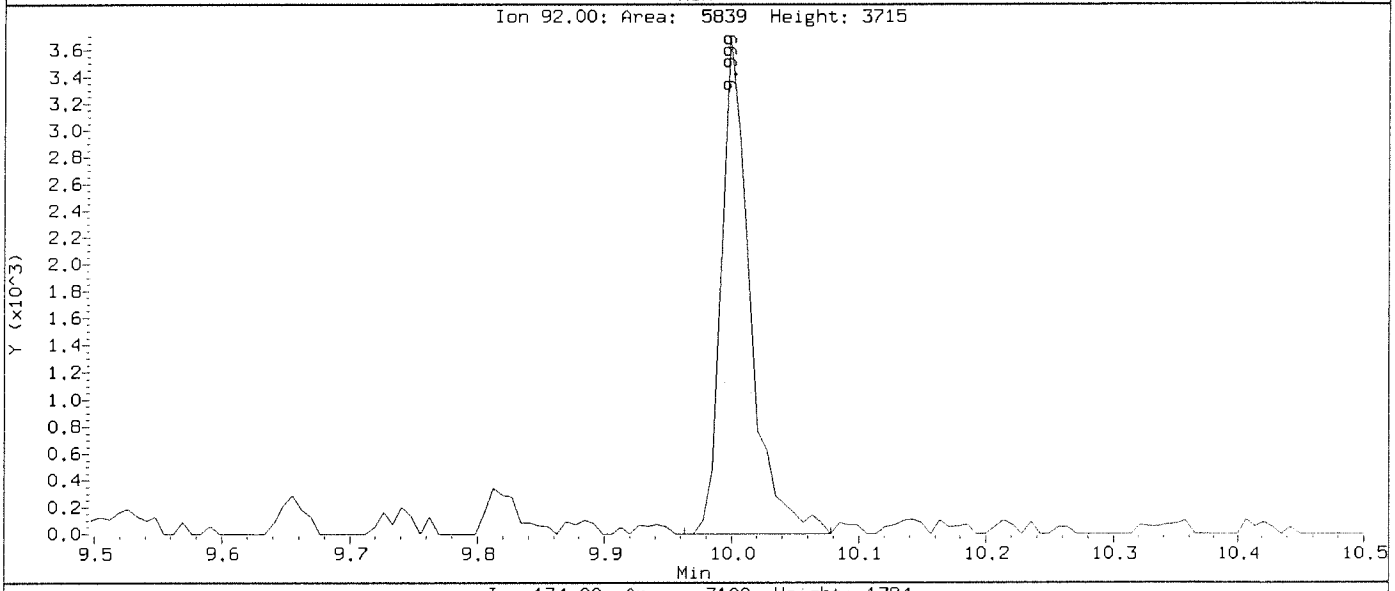



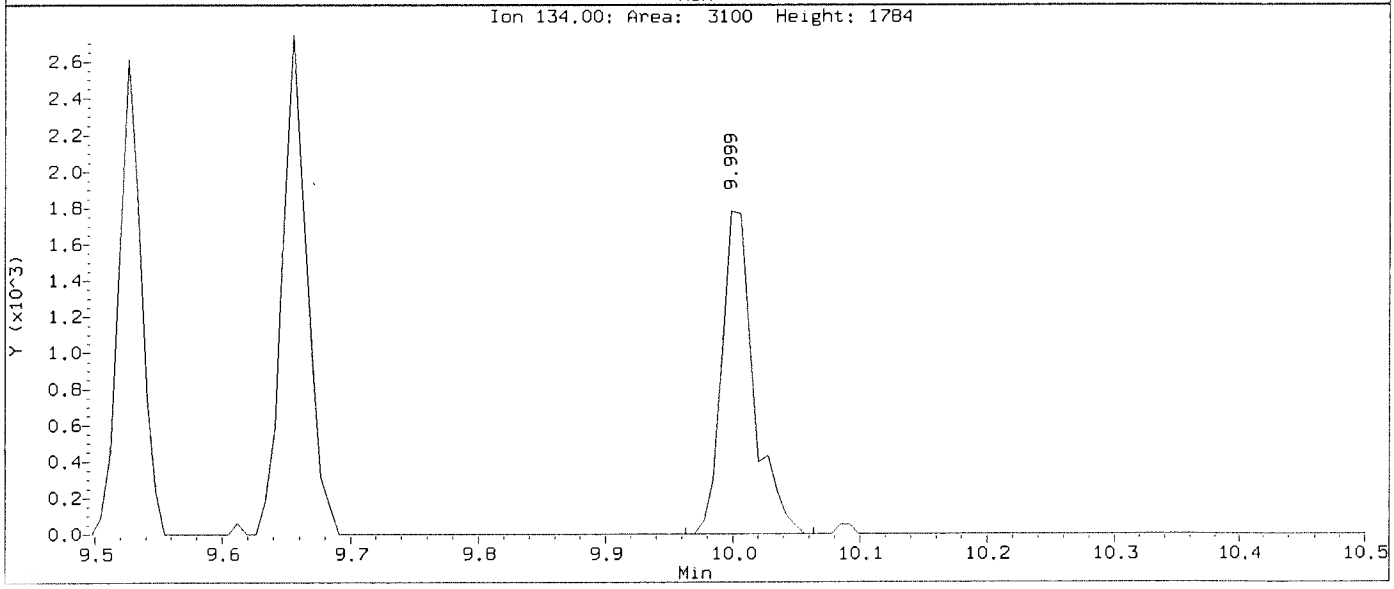



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: n-Butylbenzene
CAS Number: 104-51-8

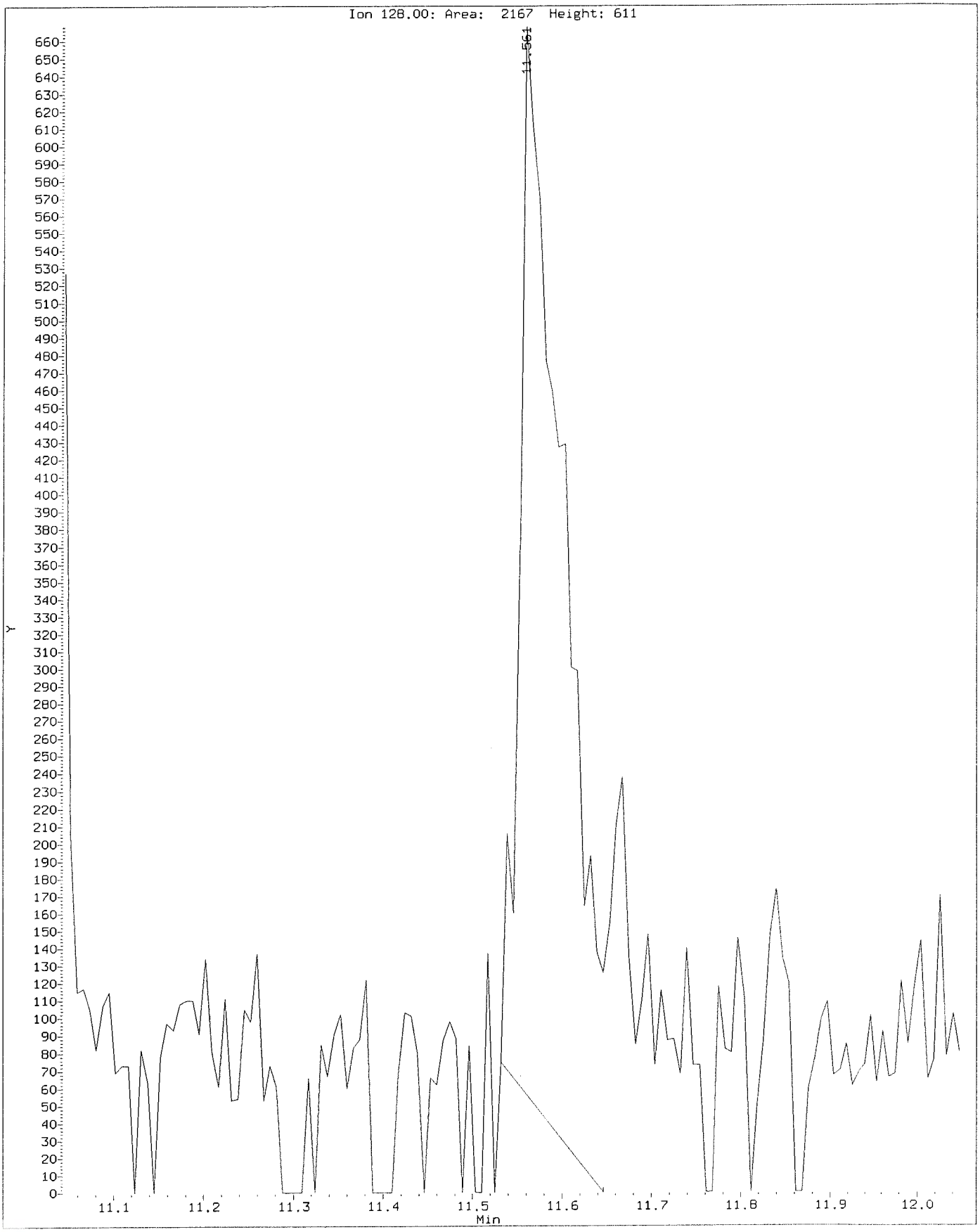


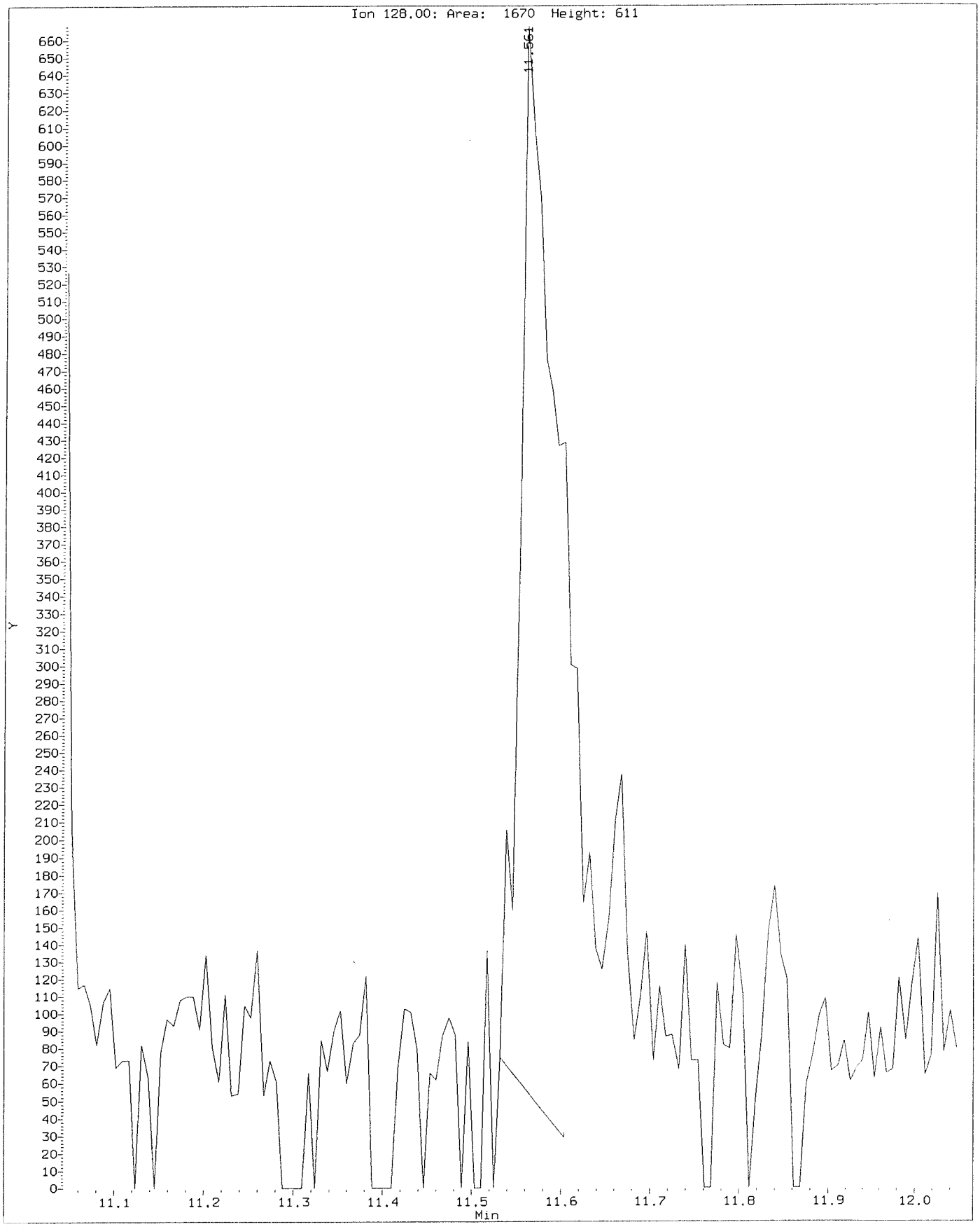
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



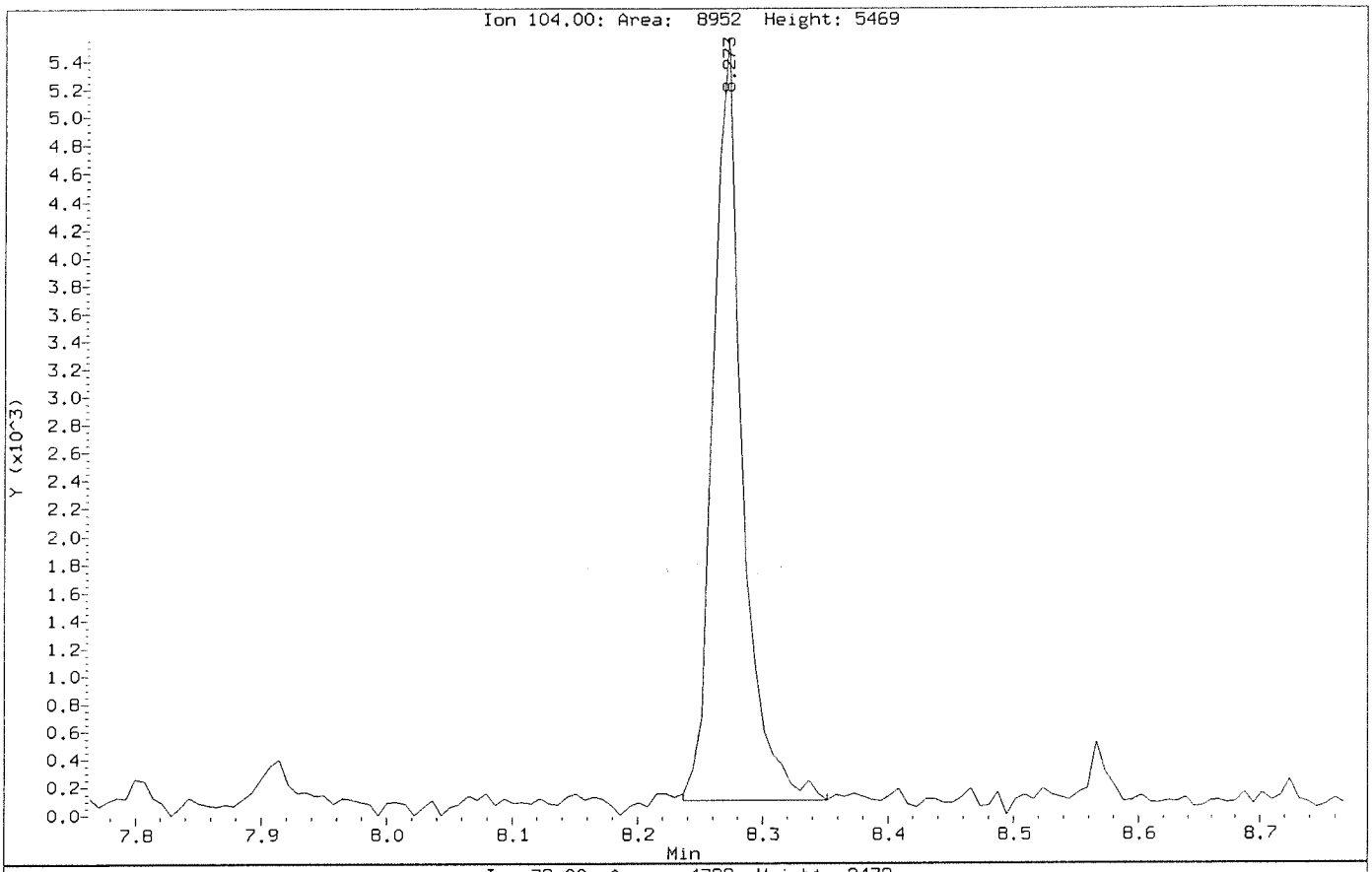
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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

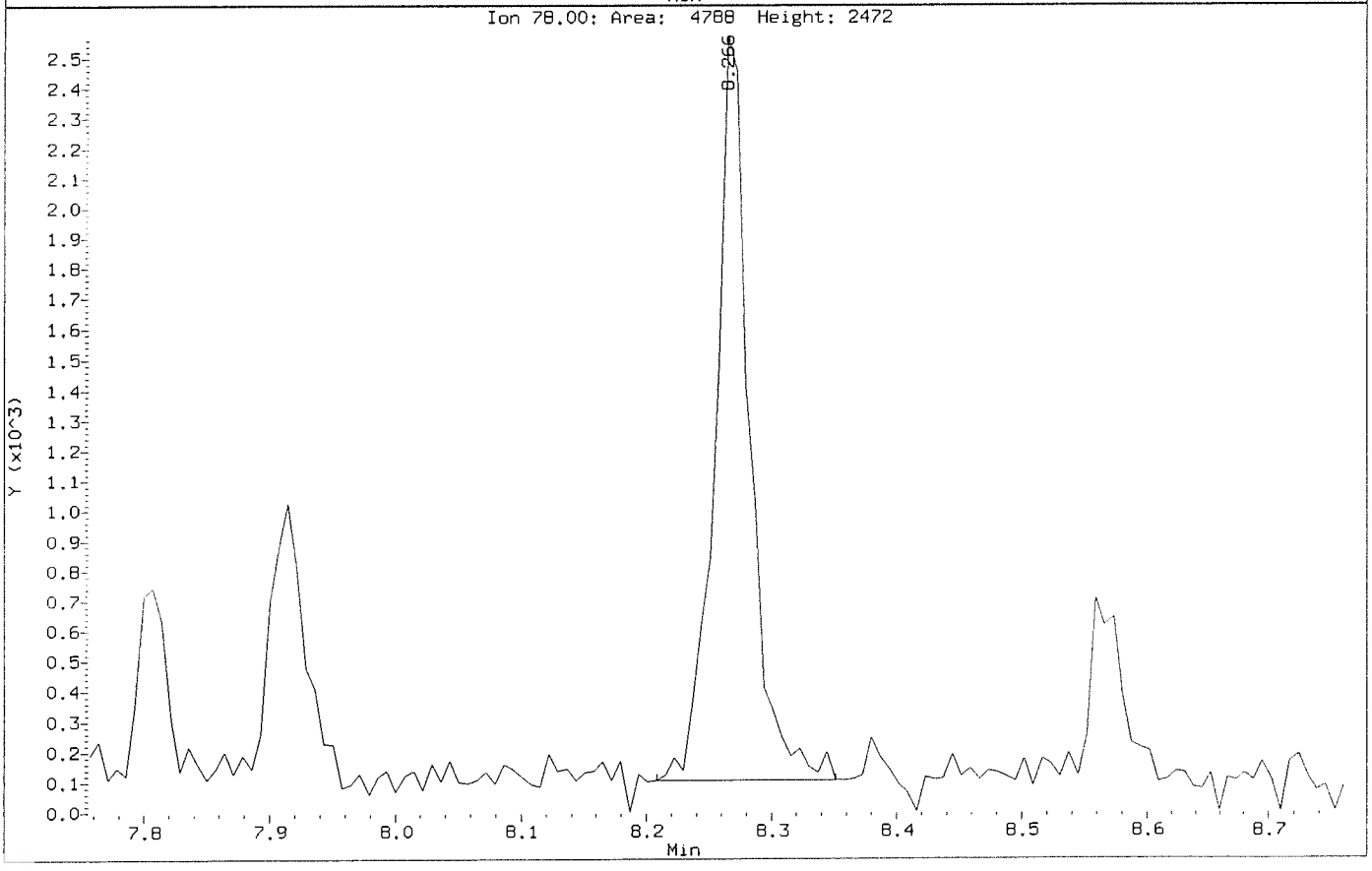
Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

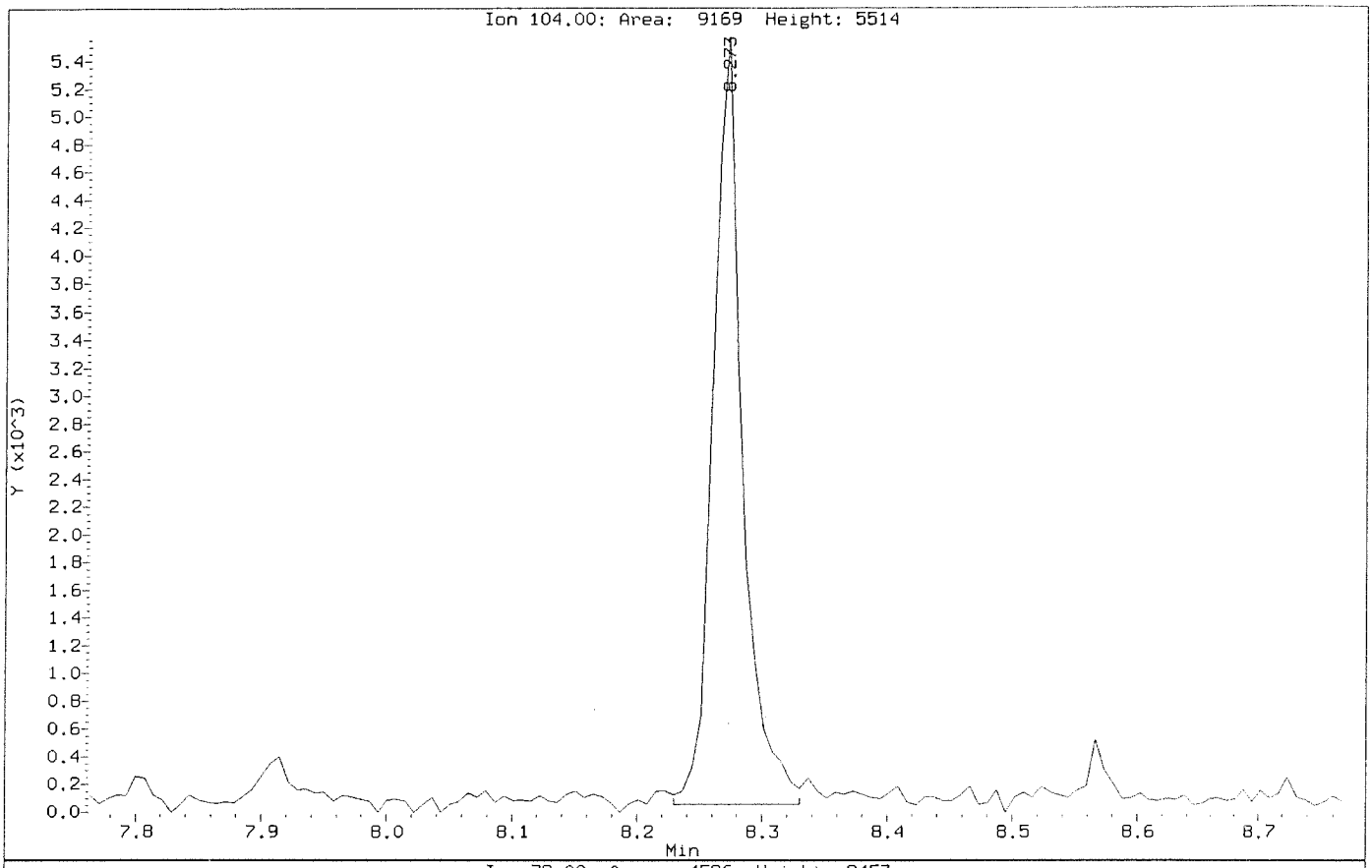
Compound: Styrene
CAS Number: 100-42-5

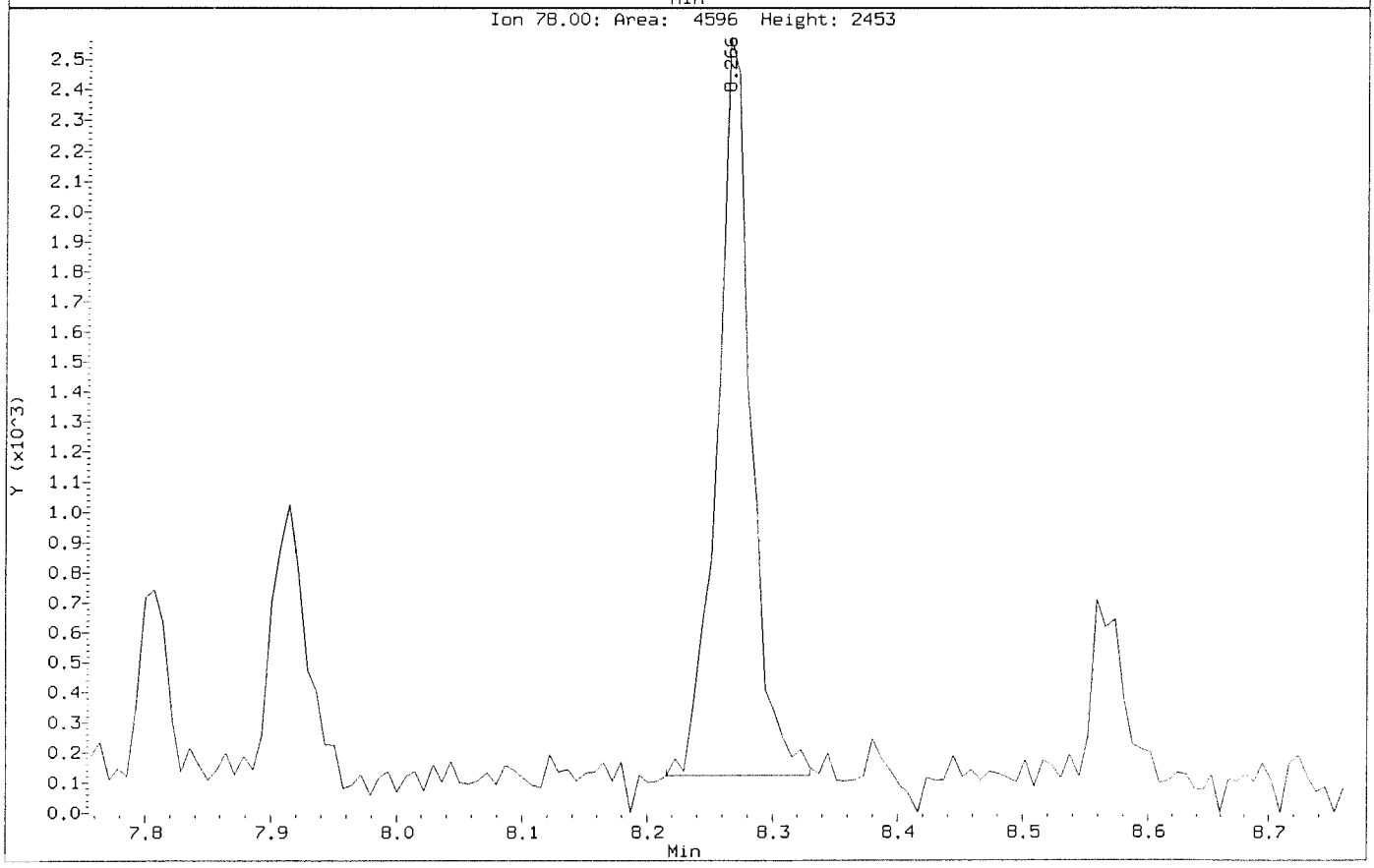


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Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

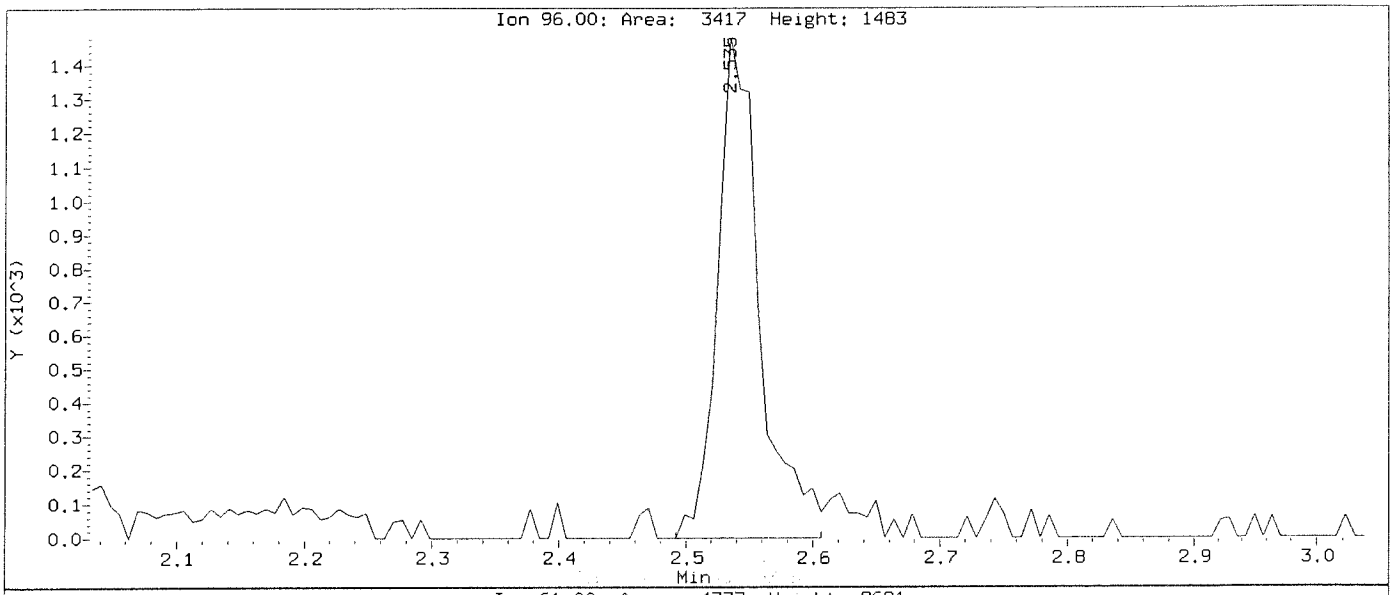
Compound: Styrene
CAS Number: 100-42-5

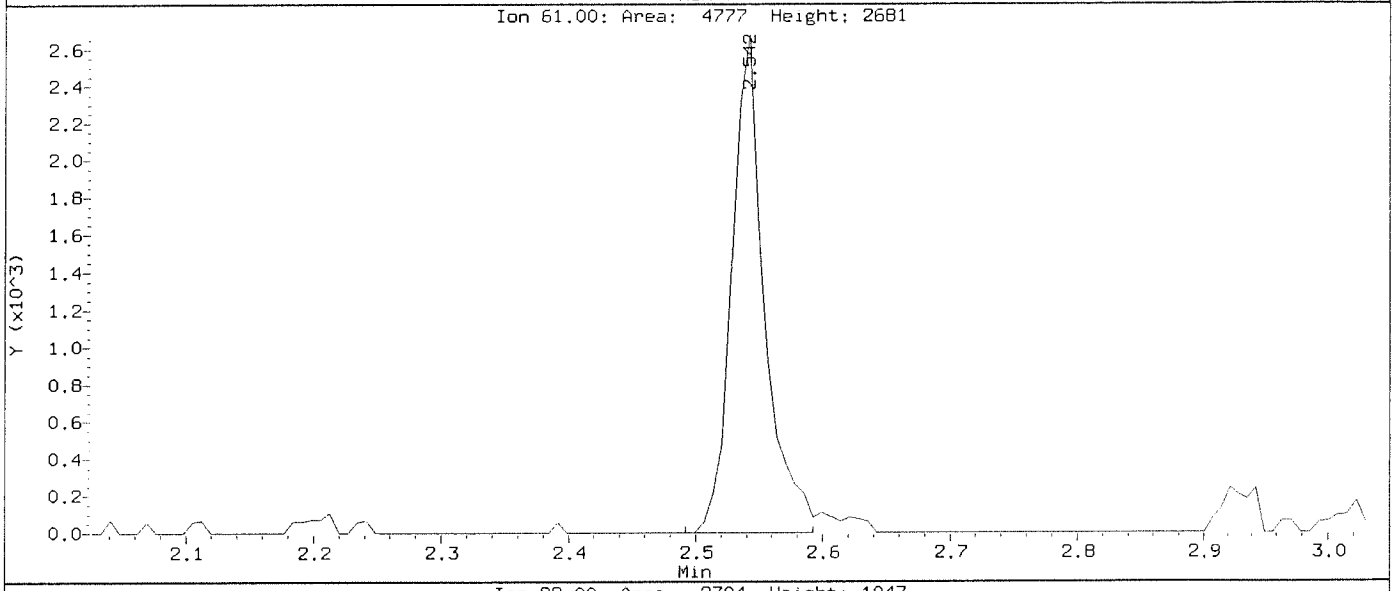


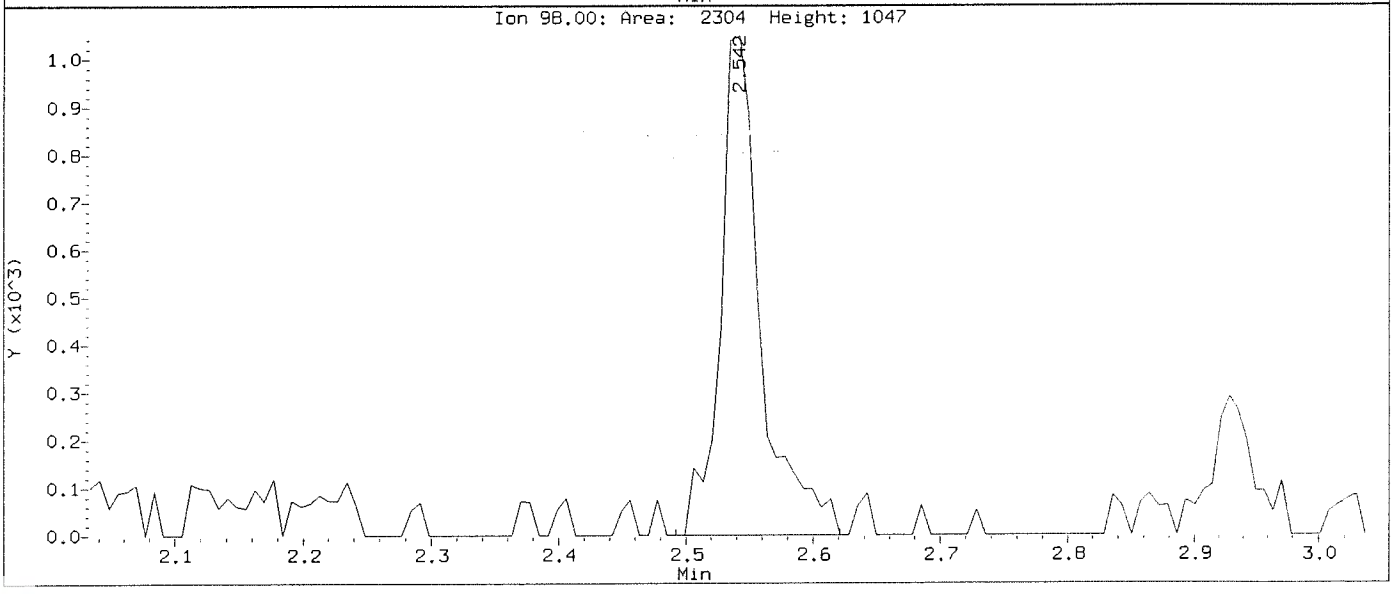



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

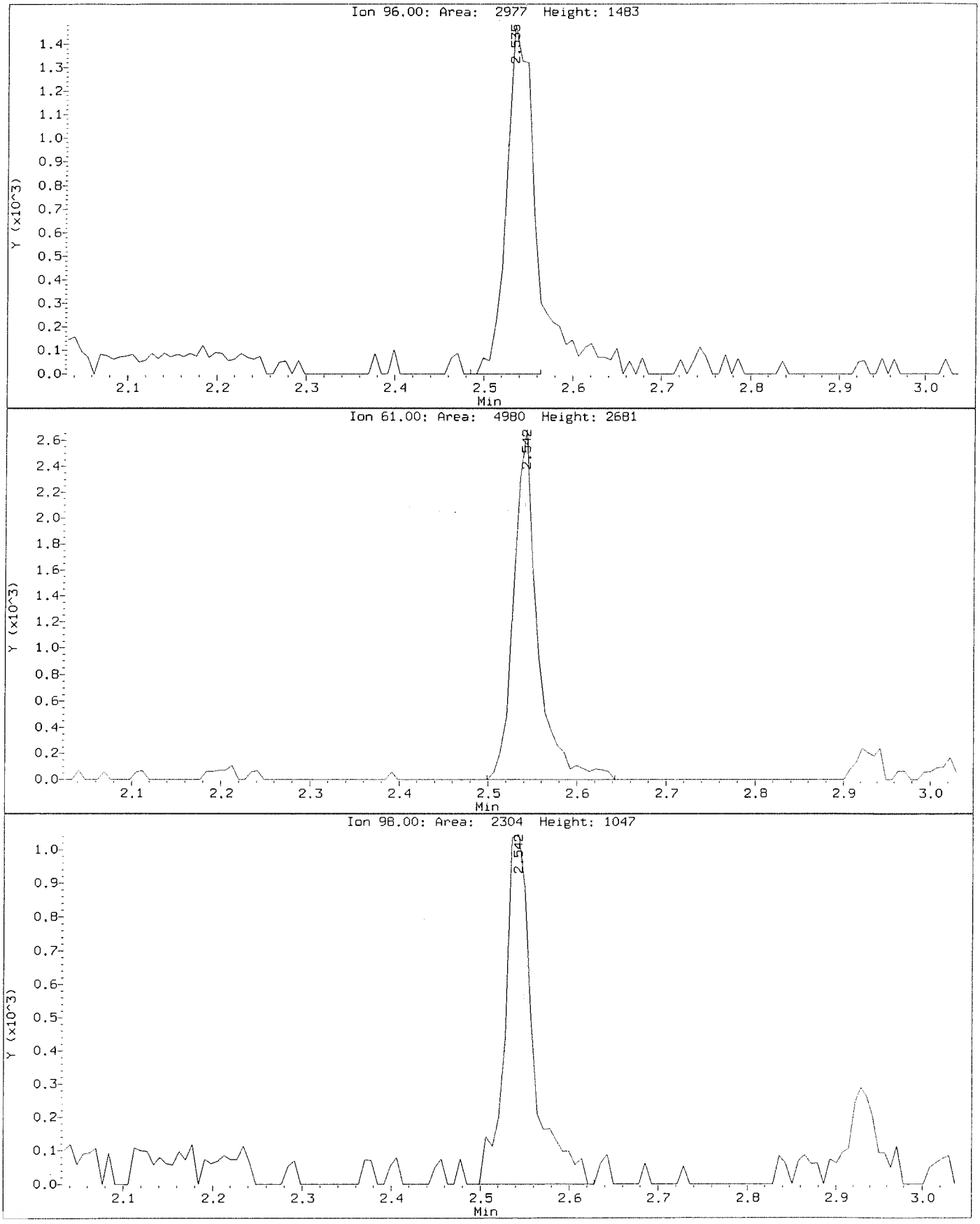


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080303.D
Injection Date: 03-AUG-2020 12:04
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-AUG-2020 12:52
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:04 Cal File: X080303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

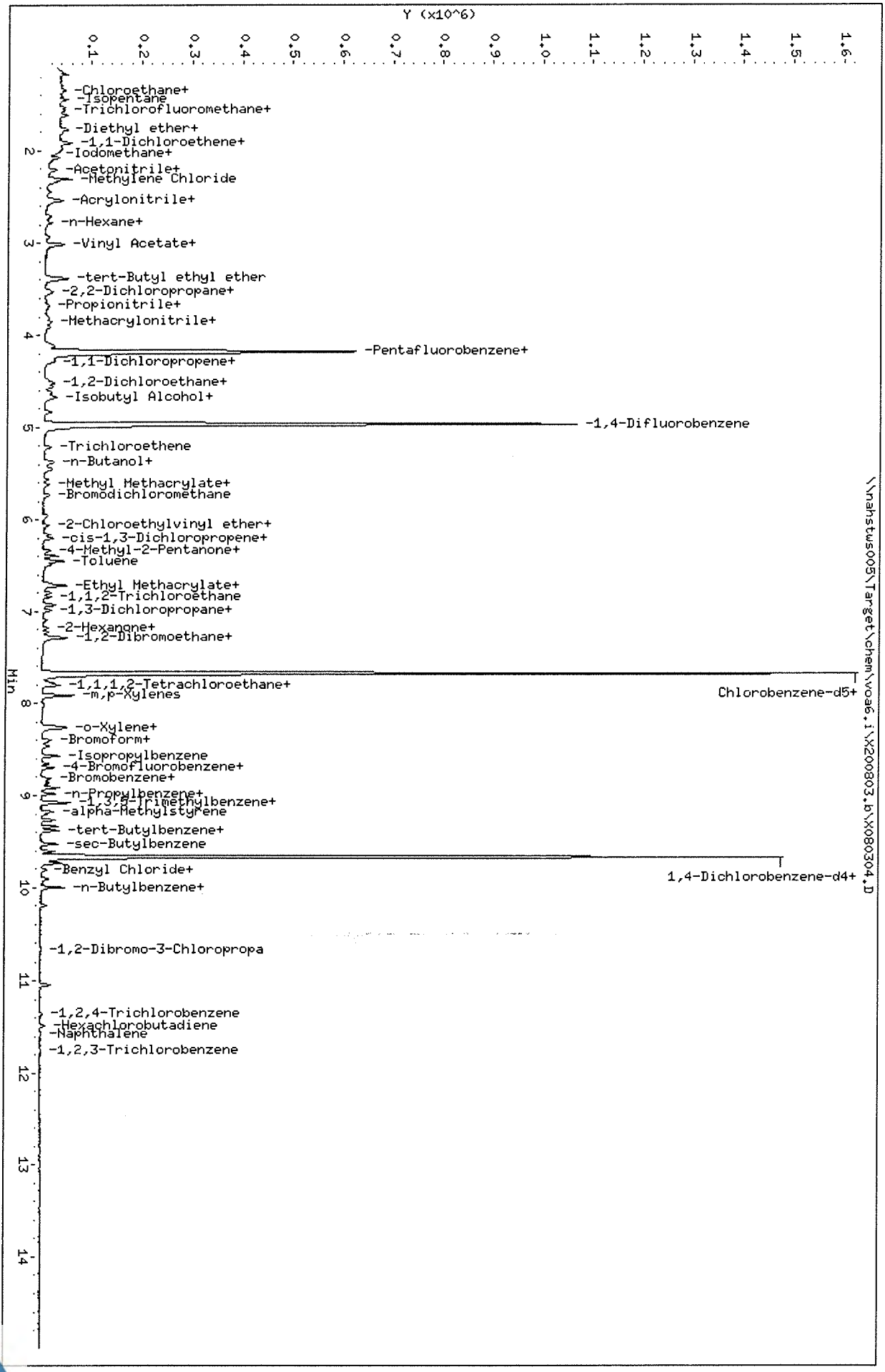
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 539031 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 824218 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 742459 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 360447 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 5491 | 1.00000 | 1.03(a) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.070) | 6204 | 1.00000 | 0.98(a) |
| $ 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 20151 | 1.00000 | 1.11(a) |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 7948 | 1.00000 | 1.14(a) |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 5052 | 1.00000 | 0.89(a) |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 7746 | 1.00000 | 0.93(a) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 5190 | 1.00000 | 1.27(aM) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 3800 | 1.00000 | 0.89(a) |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 8591 | 1.00000 | 0.81(a) |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 4098 | 1.00000 | 0.95(a) |
| 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 6555 | 1.00000 | 0.94(a) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.754 | 11.754 | (1.216) | 1040 | 1.00000 | 0.95(aM) |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 4319 | 1.00000 | 0.81(aM) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.352 | 11.352 | (1.174) | 1766 | 1.00000 | 0.33(aM) |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 16065 | 1.00000 | 0.83(a) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.672 | 10.672 | (1.104) | 461 | 1.00000 | 1.67(aM) |
| 57 1,2-Dibromoethane | 107 | 7.270 | 7.270 | (0.948) | 5188 | 1.00000 | 0.95(a) |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 9203 | 1.00000 | 0.90(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.569 | 4.569 | (0.919) | 7158 | 1.00000 | 0.89(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 5327 | 1.00000 | 0.88(aM) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 16539 | 1.00000 | 0.87(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 9693 | 1.00000 | 0.85(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 7511 | 1.00000 | 0.90(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 10004 | 1.00000 | 0.89(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.509 | 3.509 | (0.838) | 6234 | 1.00000 | 0.81(a) |
| 24 | 2-Butanone | 43 | 3.624 | 3.624 | (0.865) | 4199 | 2.00000 | 1.58(aM) |
| 76 | 2-Chlorotoluene | 91 | 8.982 | 8.982 | (0.929) | 14320 | 1.00000 | 0.91(a) |
| 52 | 2-Hexanone | 43 | 7.098 | 7.098 | (0.925) | 7382 | 2.00000 | 1.58(a) |
| 77 | 4-Chlorotoluene | 91 | 9.082 | 9.082 | (0.939) | 16588 | 1.00000 | 0.91(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 17233 | 1.00000 | 0.86(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.338 | 6.338 | (0.826) | 11981 | 2.00000 | 1.74(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 5964 | 2.00000 | 2.13(aM) |
| 37 | Benzene | 78 | 4.526 | 4.526 | (0.911) | 18524 | 1.00000 | 0.90(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 6199 | 1.00000 | 0.87(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 3452 | 1.00000 | 1.06(a) |
| 39 | Bromodichloromethane | 83 | 5.737 | 5.737 | (1.154) | 6632 | 1.00000 | 0.89(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 3380 | 1.00000 | 0.82(Ta) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 4659 | 1.00000 | 1.89(aM) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 24456 | 2.00000 | 1.84(a) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 7095 | 1.00000 | 0.96(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 12980 | 1.00000 | 0.89(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 3283 | 1.00000 | 0.85(a) |
| 28 | Chloroform | 83 | 3.917 | 3.917 | (0.935) | 9174 | 1.00000 | 0.95(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 6446 | 1.00000 | 0.85(aM) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 5626 | 1.00000 | 0.94(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.166 | 6.166 | (1.241) | 7619 | 1.00000 | 0.87(a) |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 5073 | 1.00000 | 0.85(a) |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 3381 | 1.00000 | 0.94(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 5003 | 1.00000 | 0.94(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 7129 | 1.00000 | 0.94(a) |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 1845 | 1.00000 | 0.95(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 20764 | 1.00000 | 0.94(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 16885 | 2.00000 | 1.86(a) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 14851 | 1.00000 | 1.36(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 13125 | 1.00000 | 0.82(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 22125 | 1.00000 | 0.85(a) |
| 92 | Naphthalene | 128 | 11.560 | 11.560 | (1.196) | 3475 | 1.00000 | 1.12(a) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 8262 | 1.00000 | 0.92(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 19175 | 1.00000 | 0.87(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 13312 | 1.00000 | 0.86(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 14112 | 1.00000 | 0.86(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 4400 | 1.00000 | 0.93(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 20029 | 1.00000 | 0.92(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 4813 | 1.00000 | 0.95(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 7143 | 1.00000 | 0.89(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 4900 | 1.00000 | 0.83(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 7321 | 1.00000 | 0.92(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 5889 | 1.00000 | 0.84(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

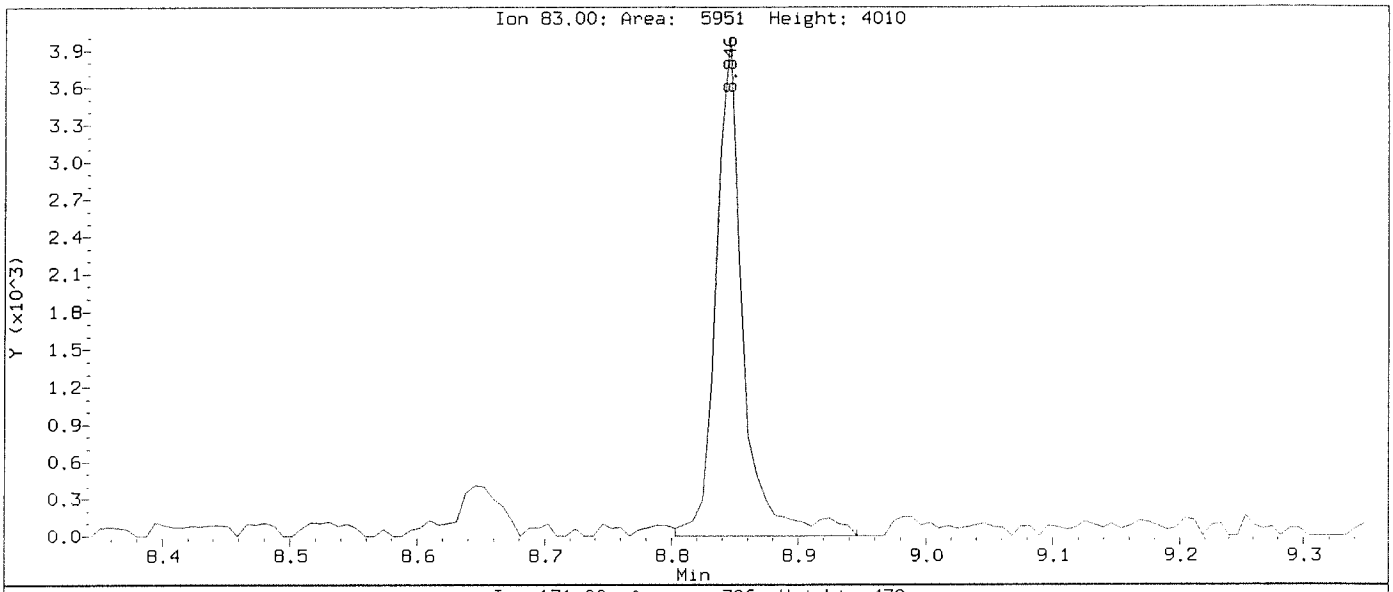


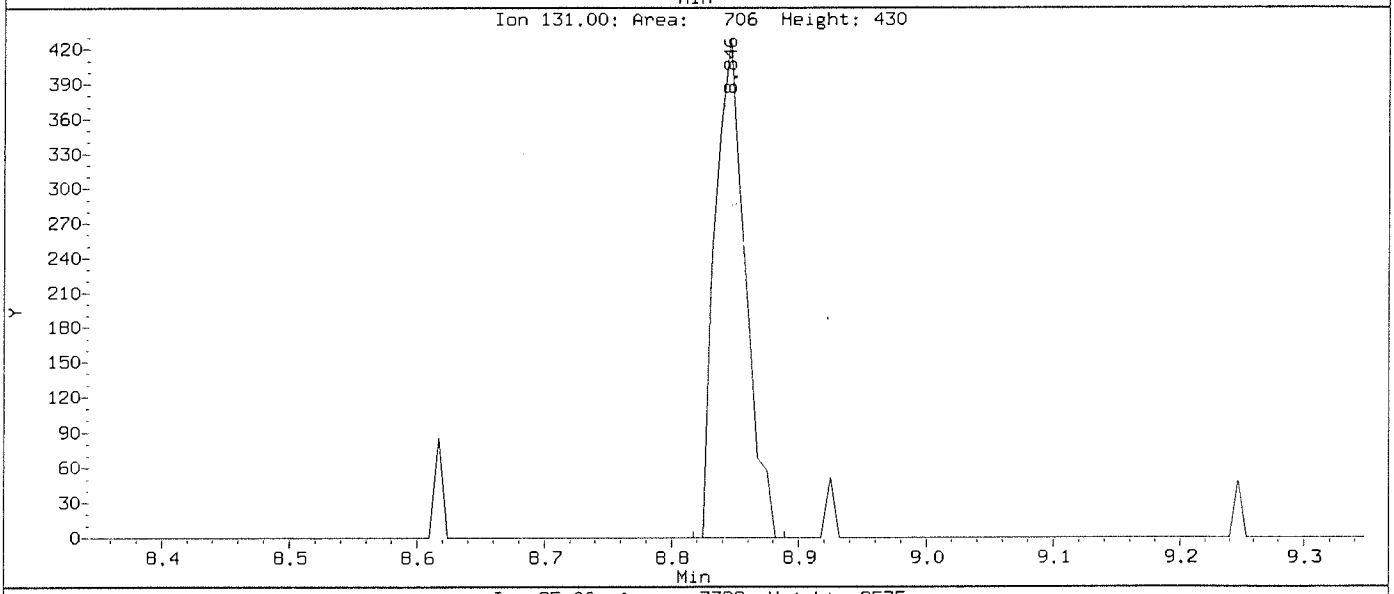

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Sample Info: VSTD001;VSTD001;1;3;;
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Column phase: DB624

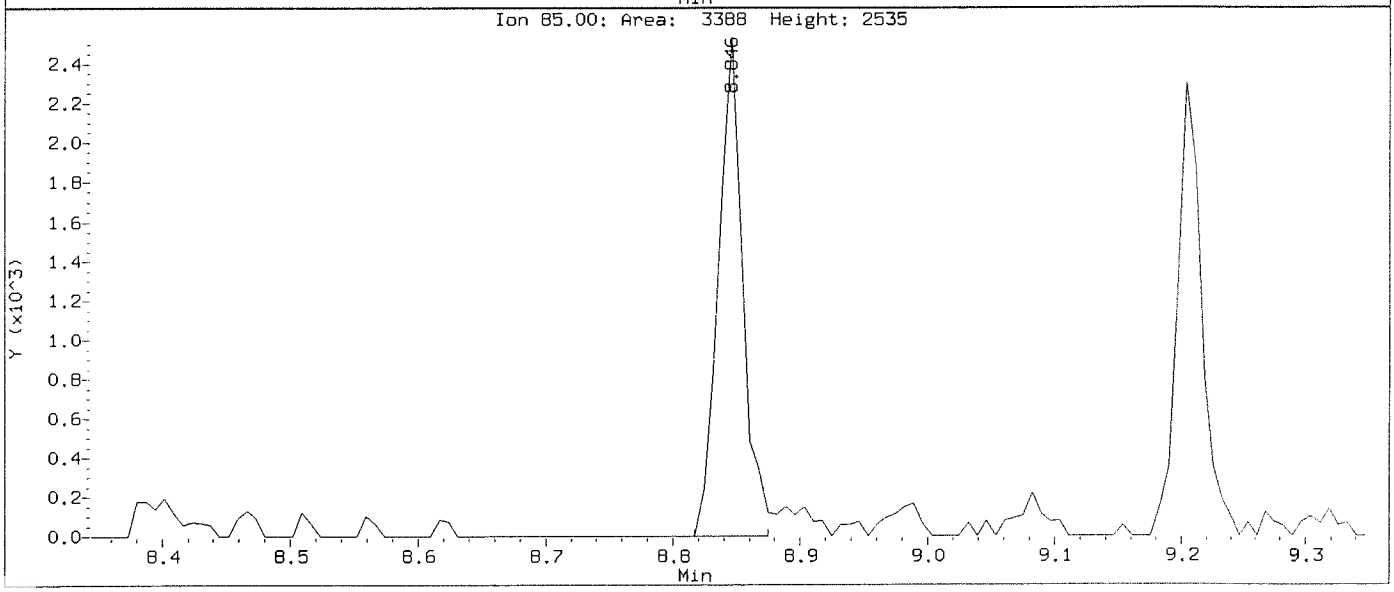
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

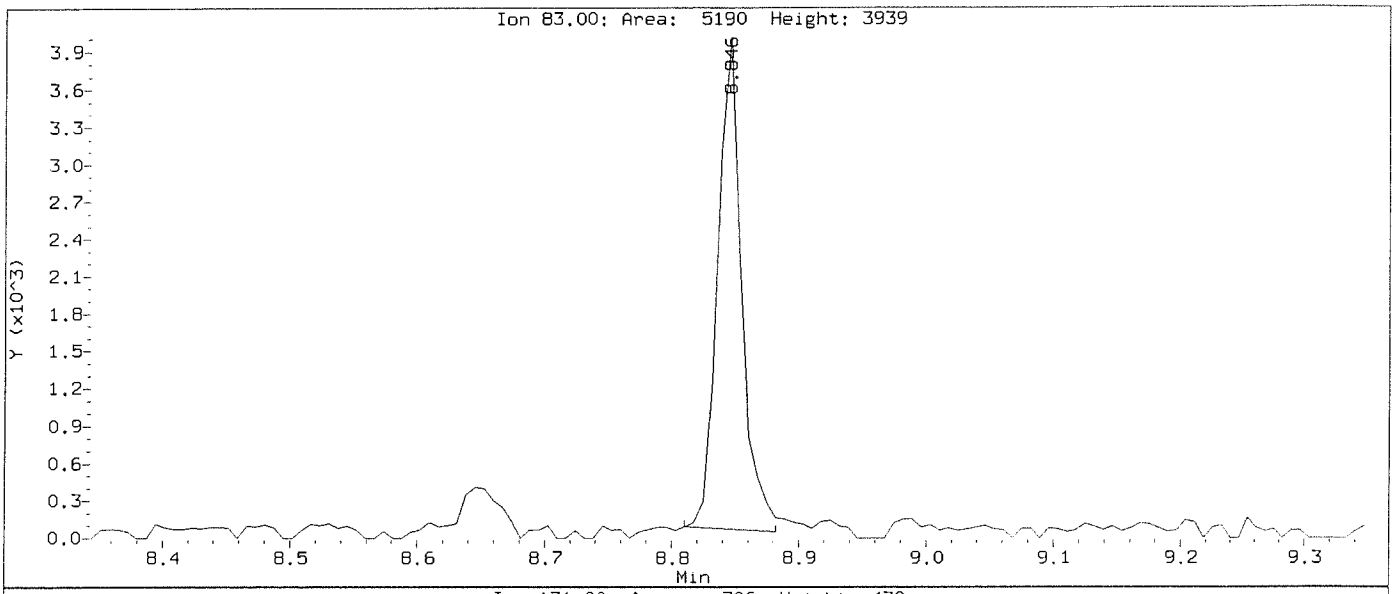


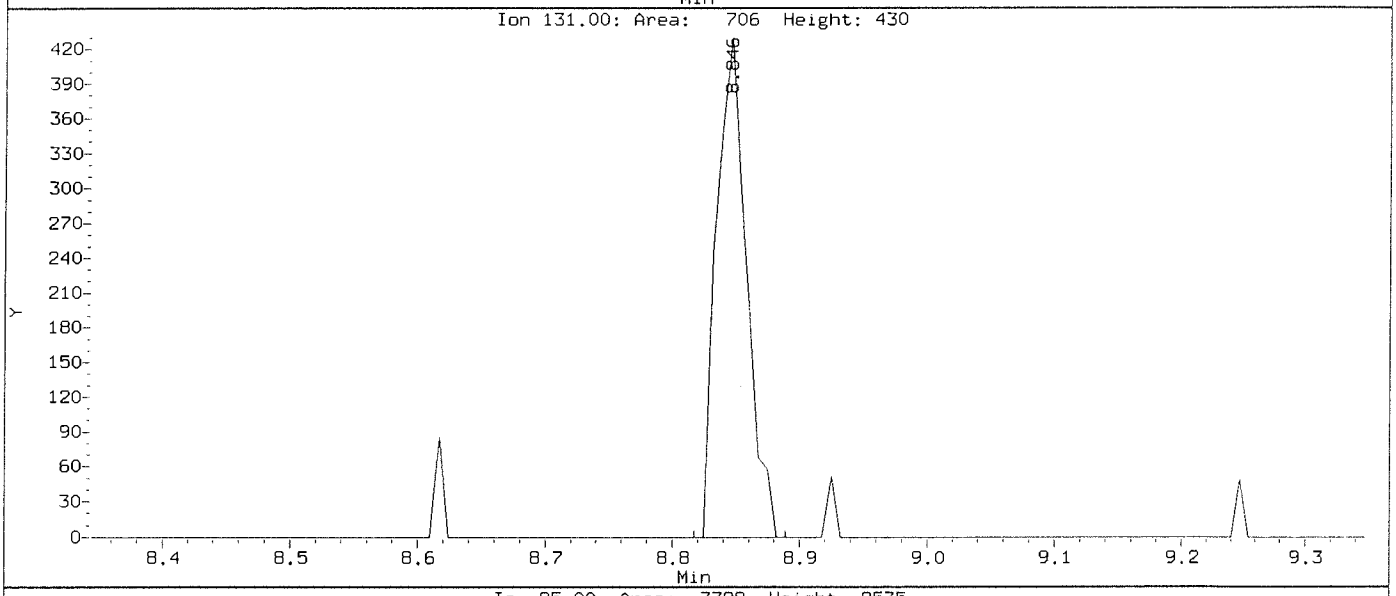



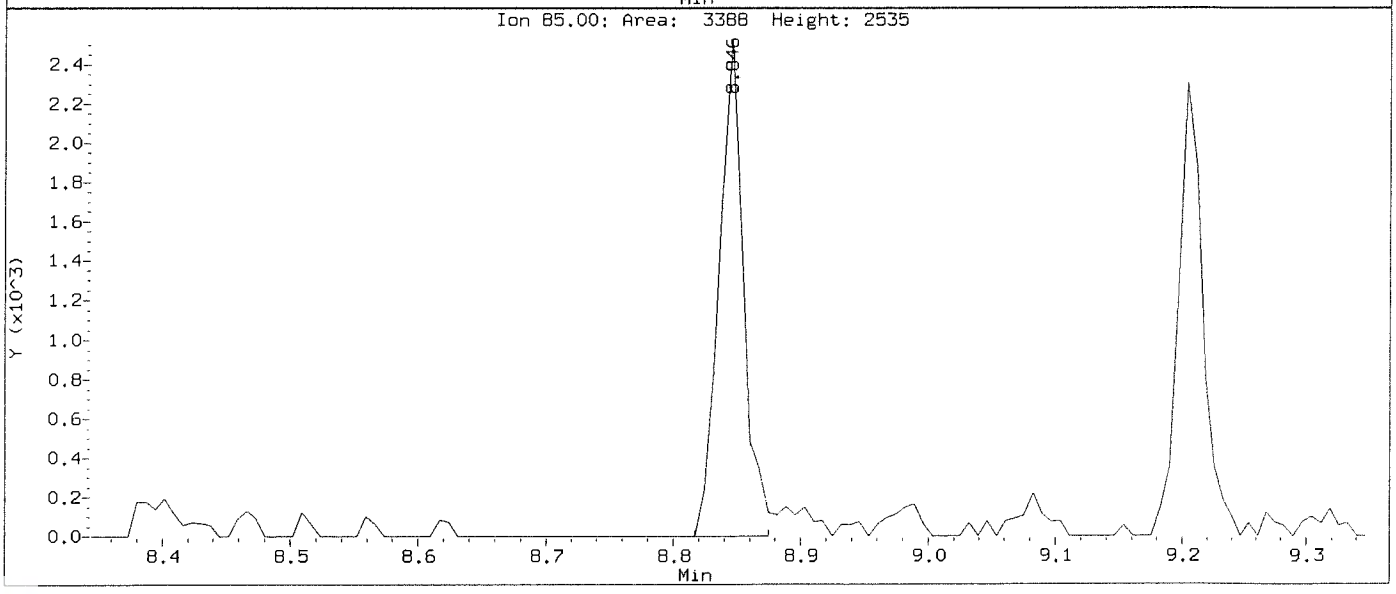



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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

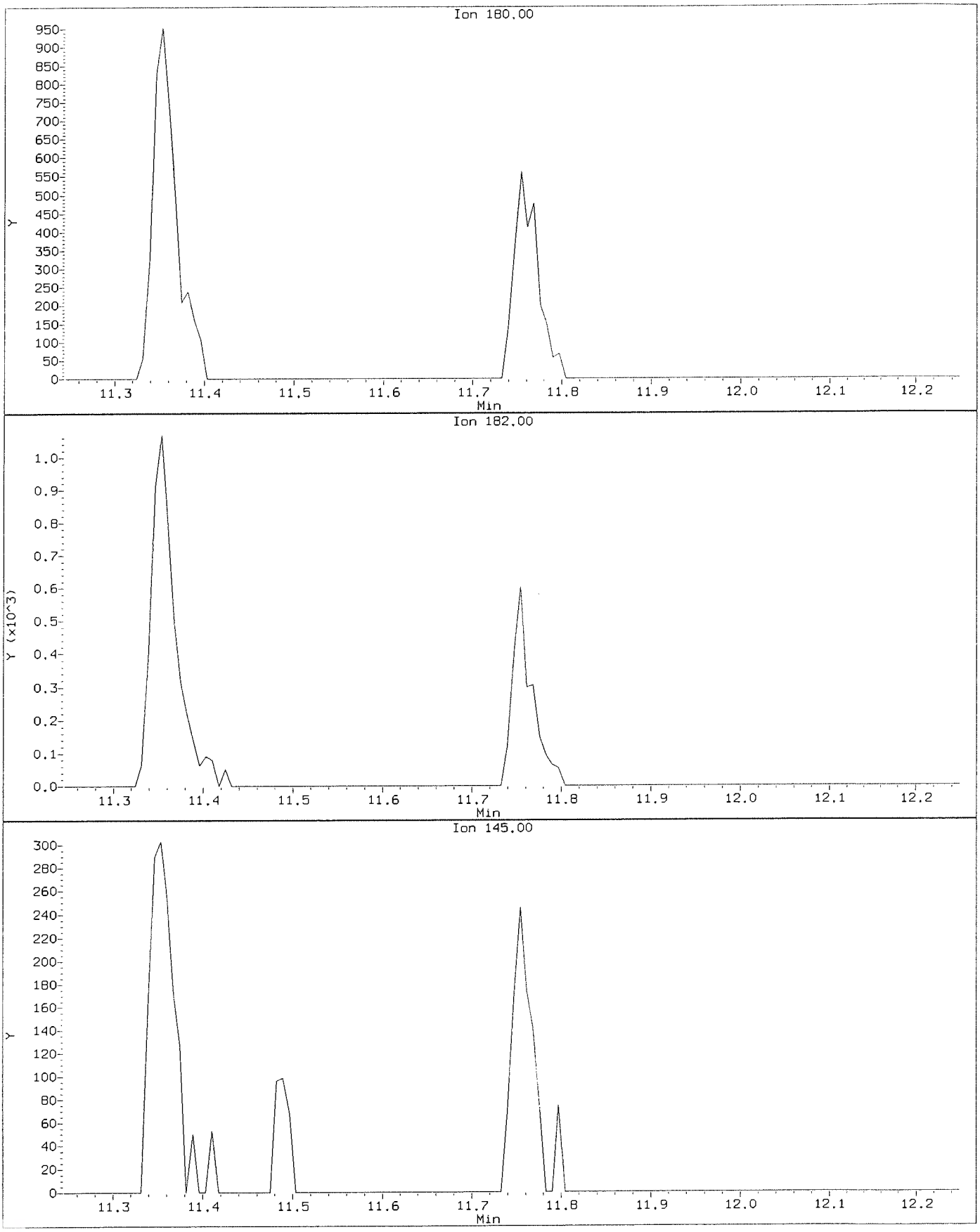


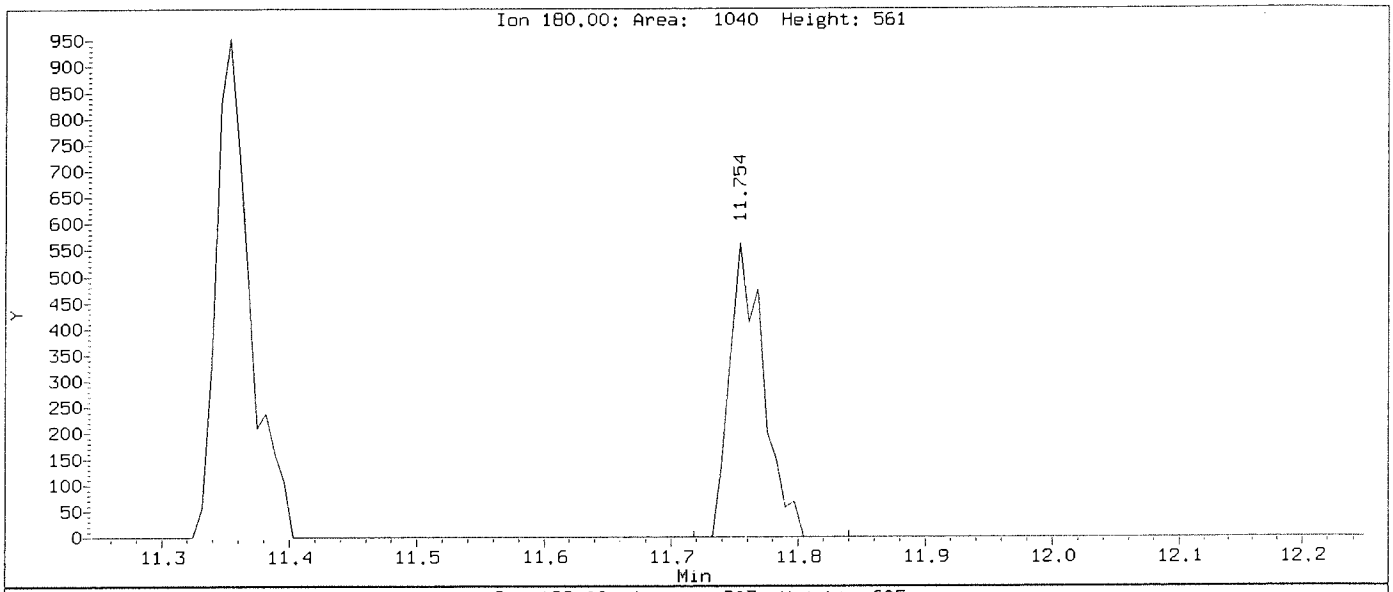
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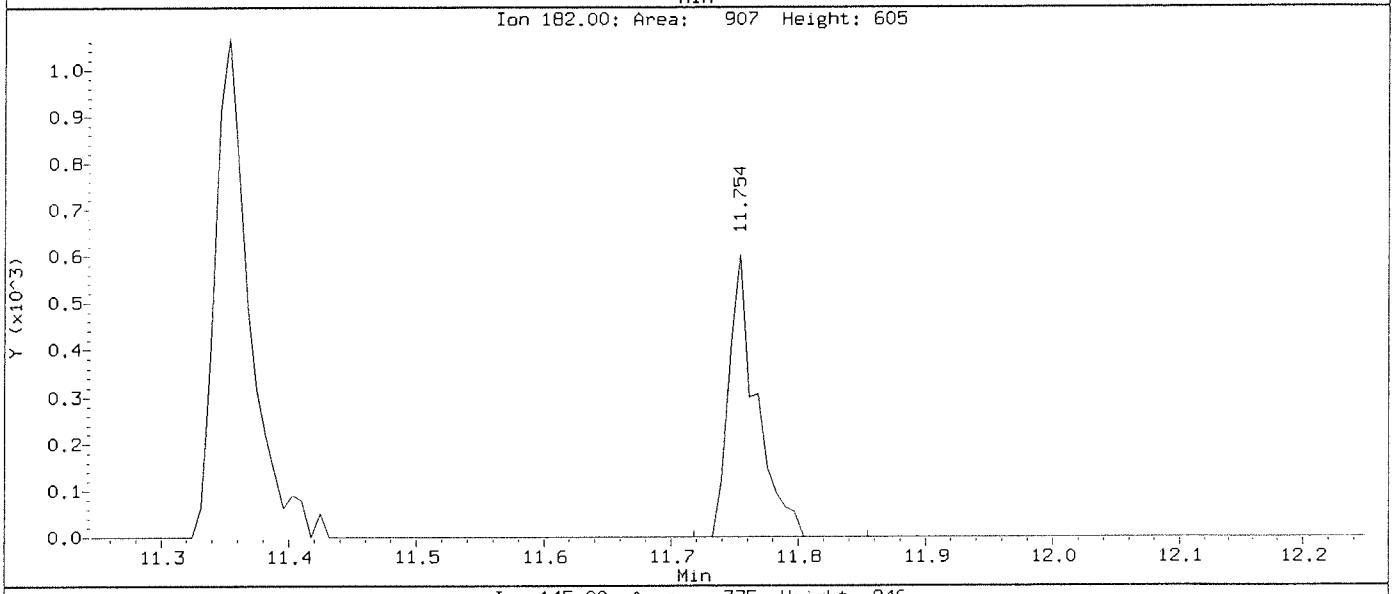
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

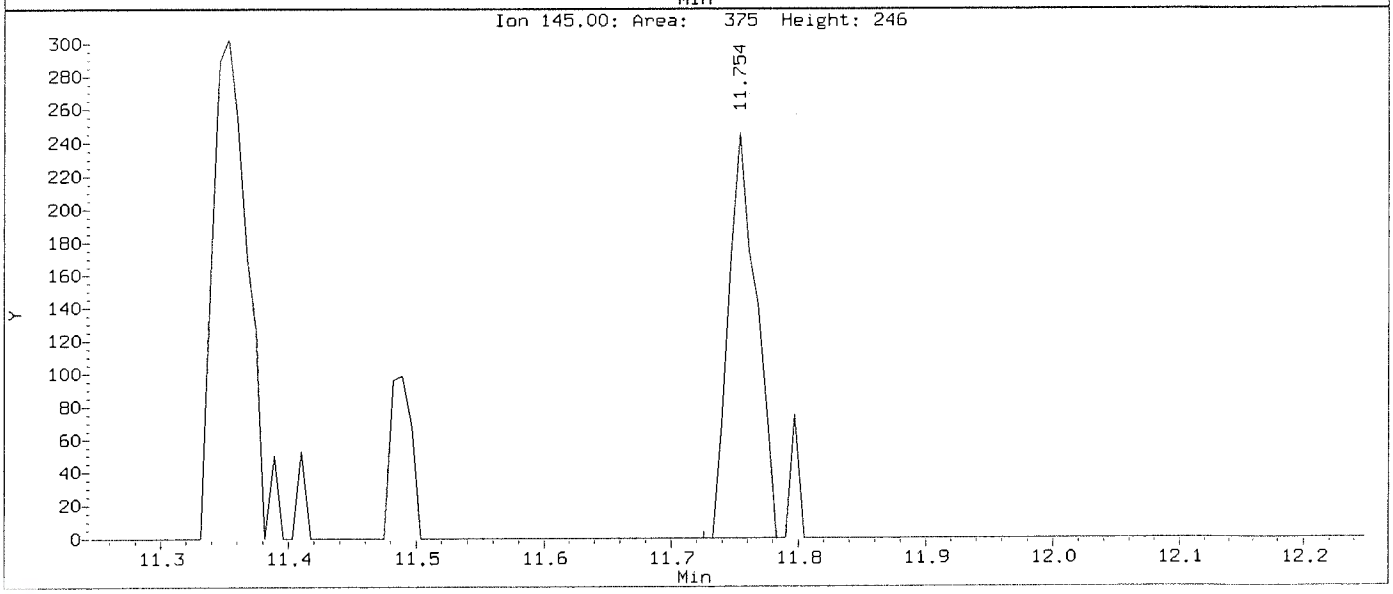


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

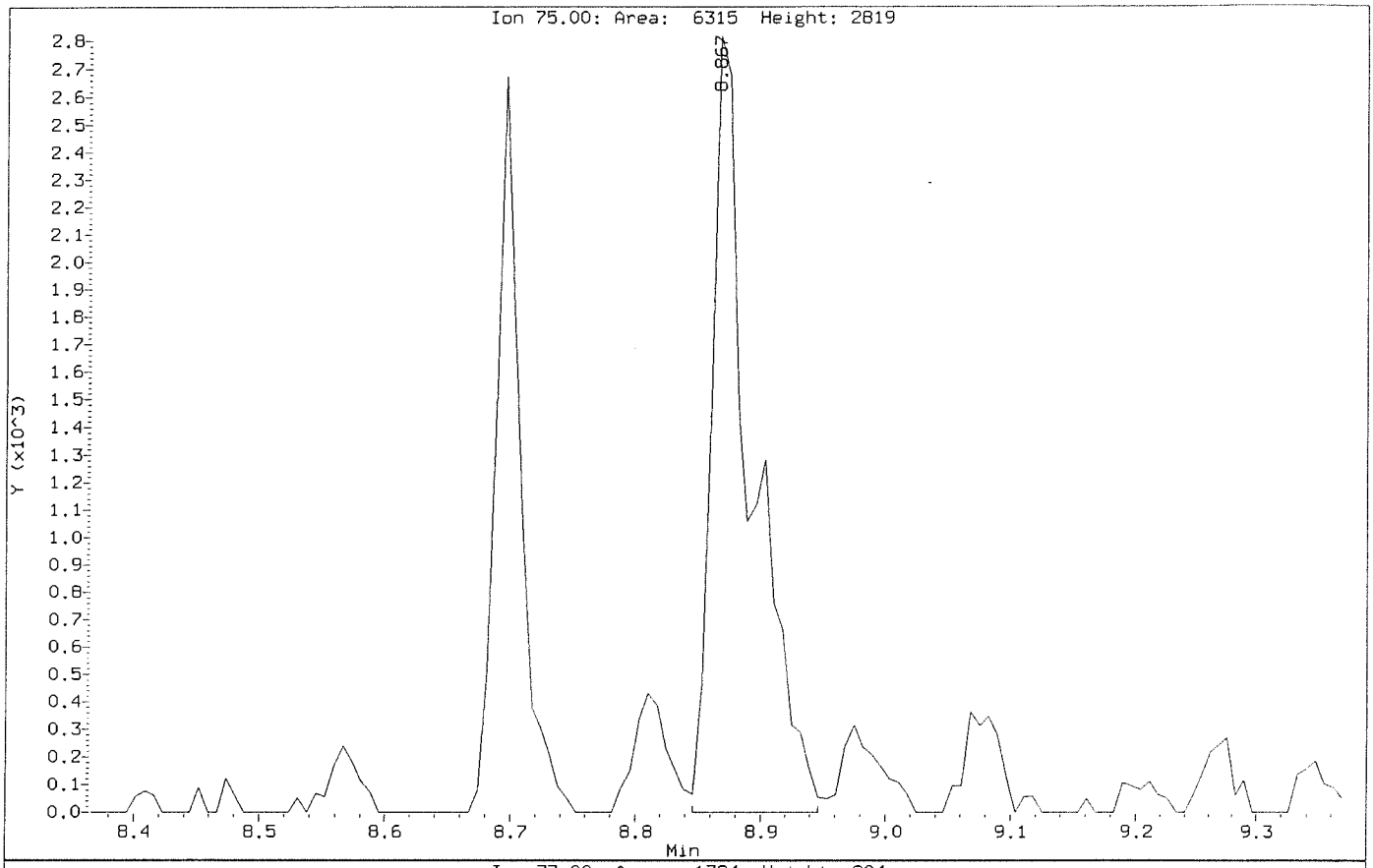


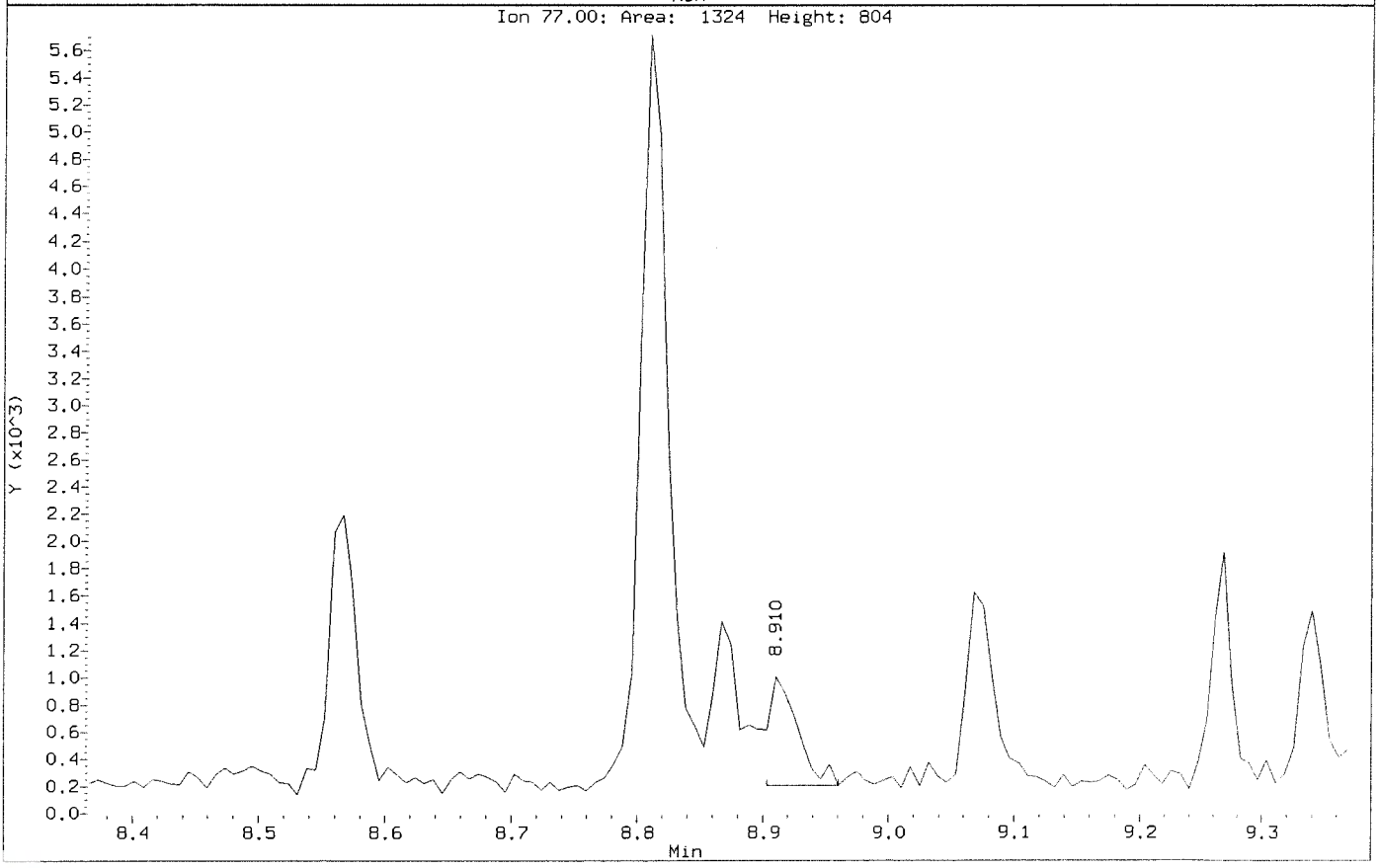



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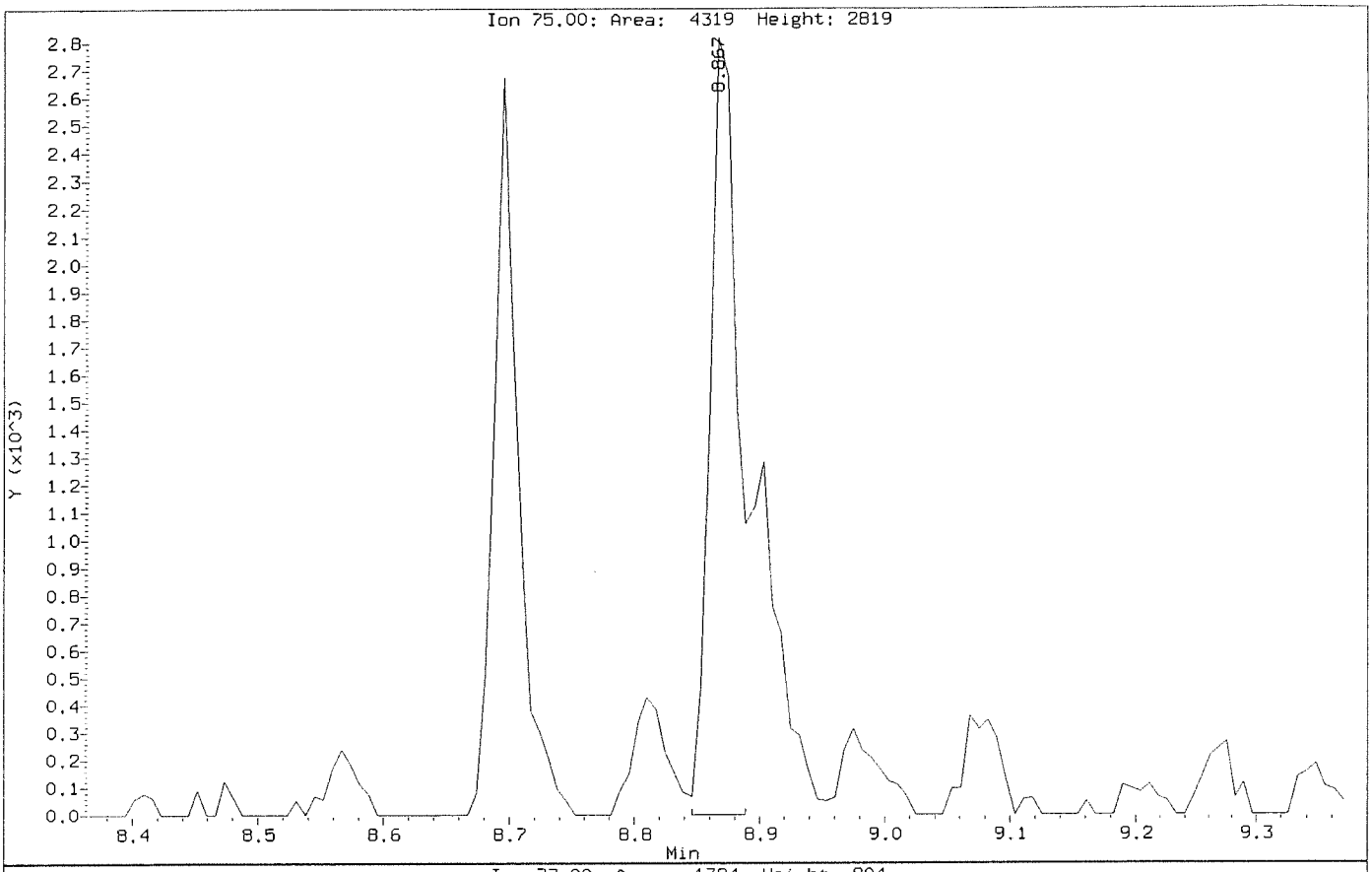
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CAS Number: 96-18-4

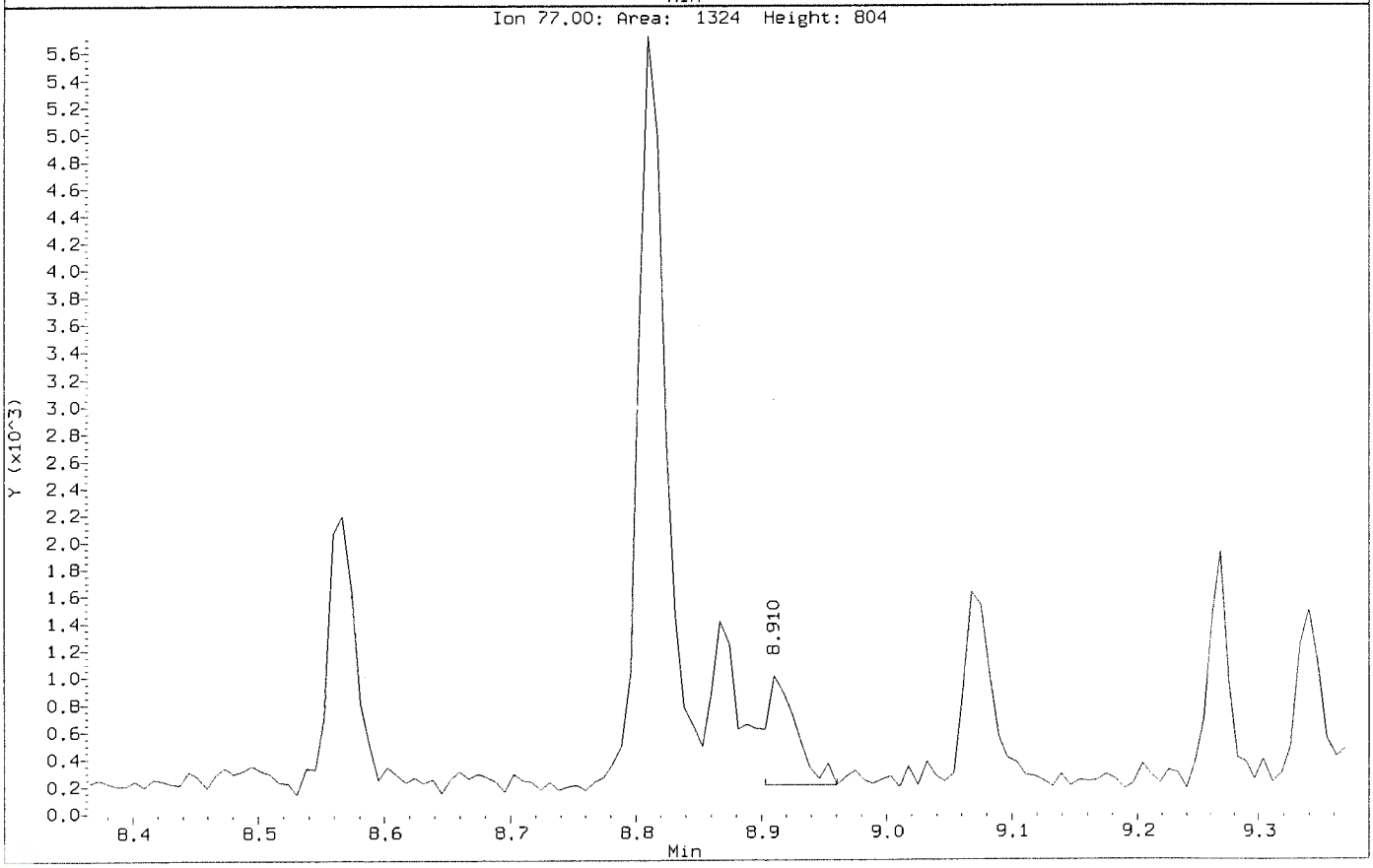


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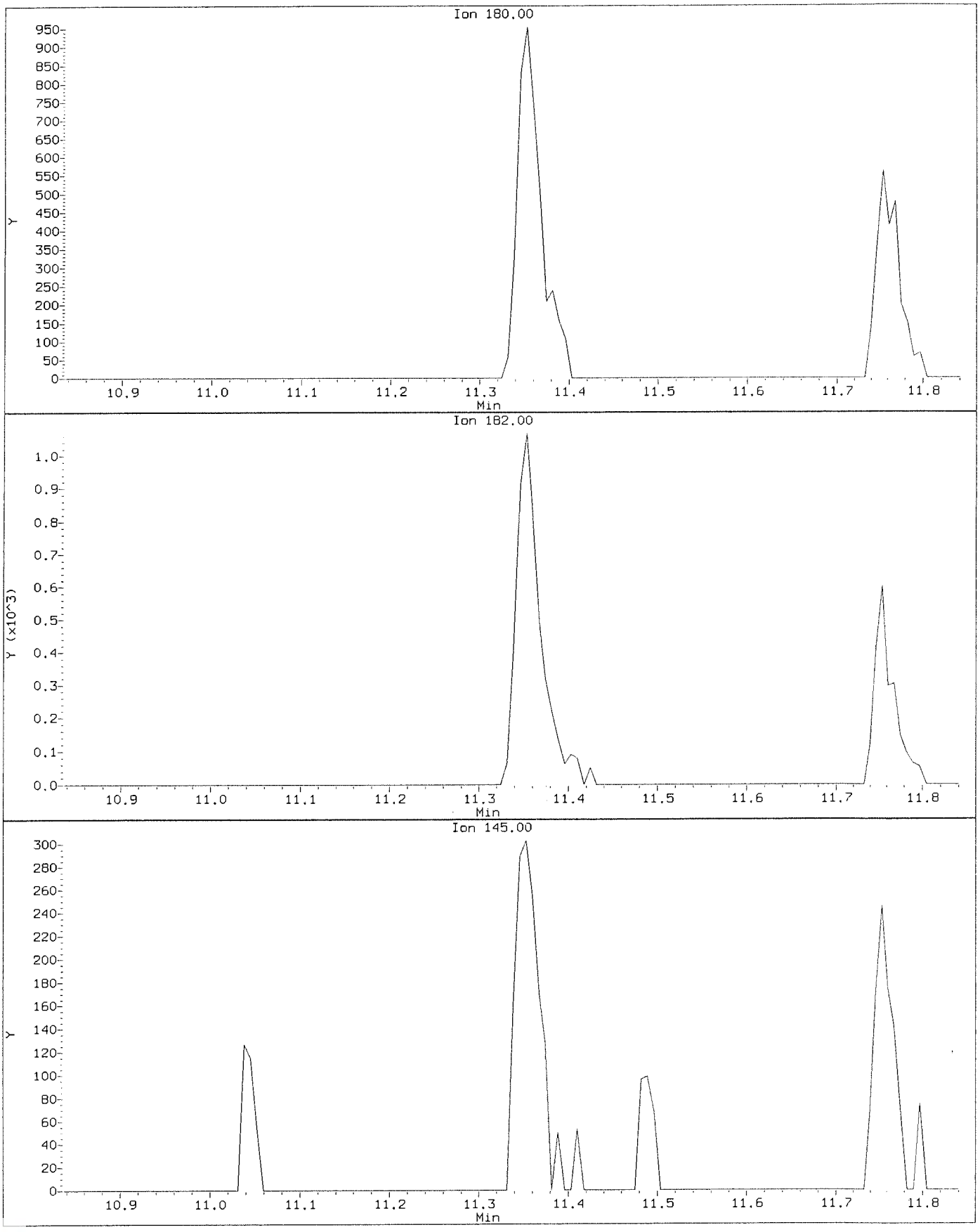
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



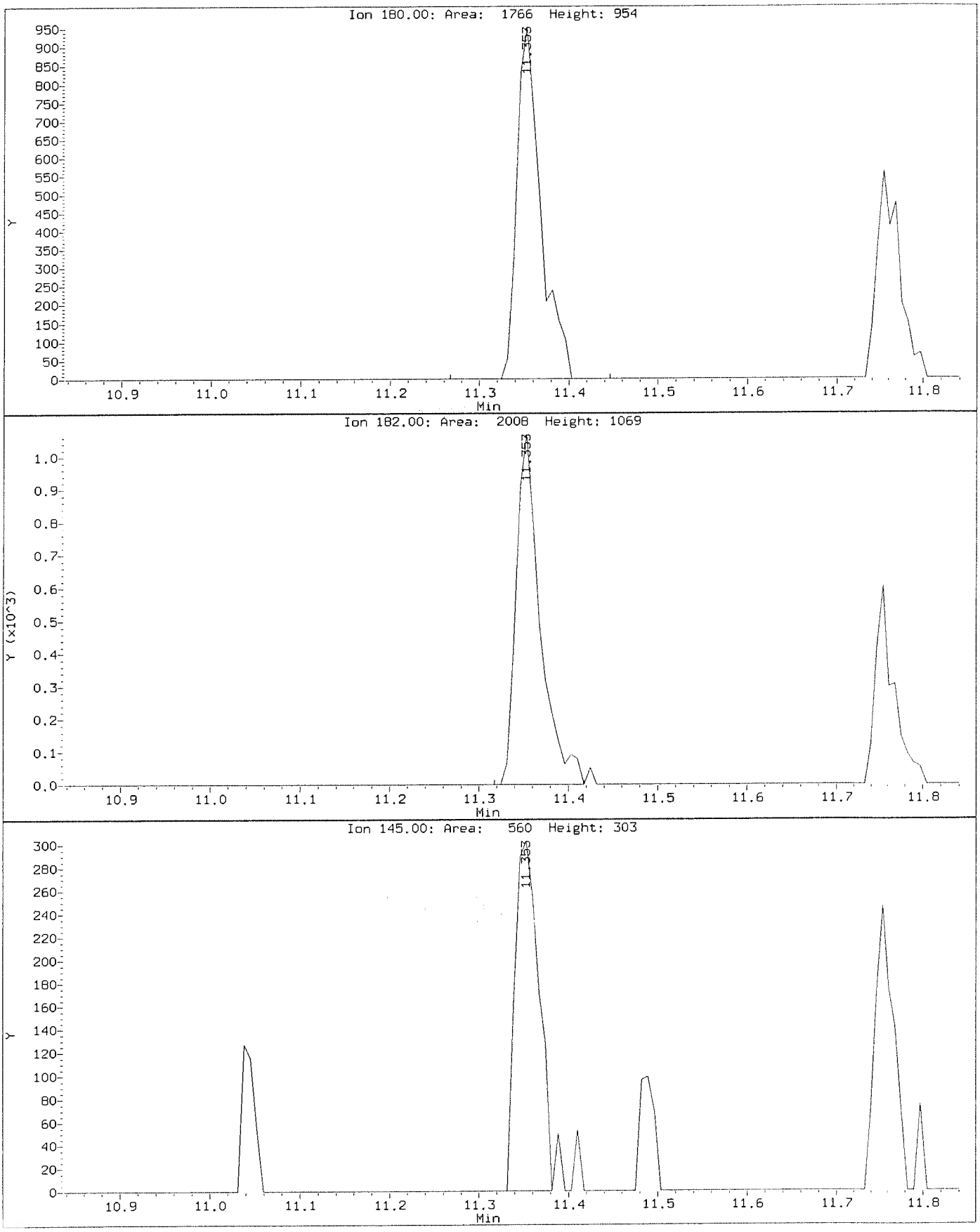
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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



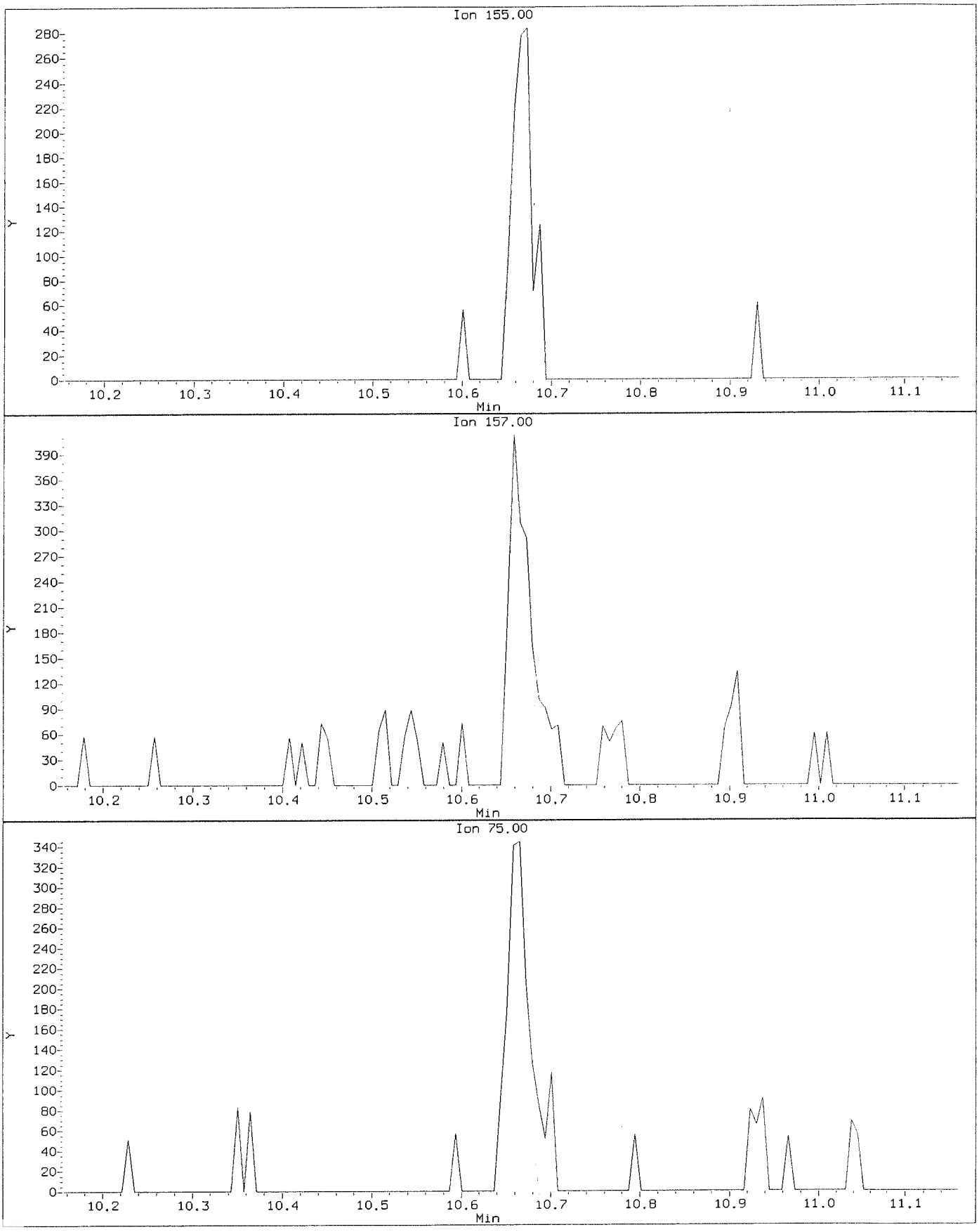
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Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



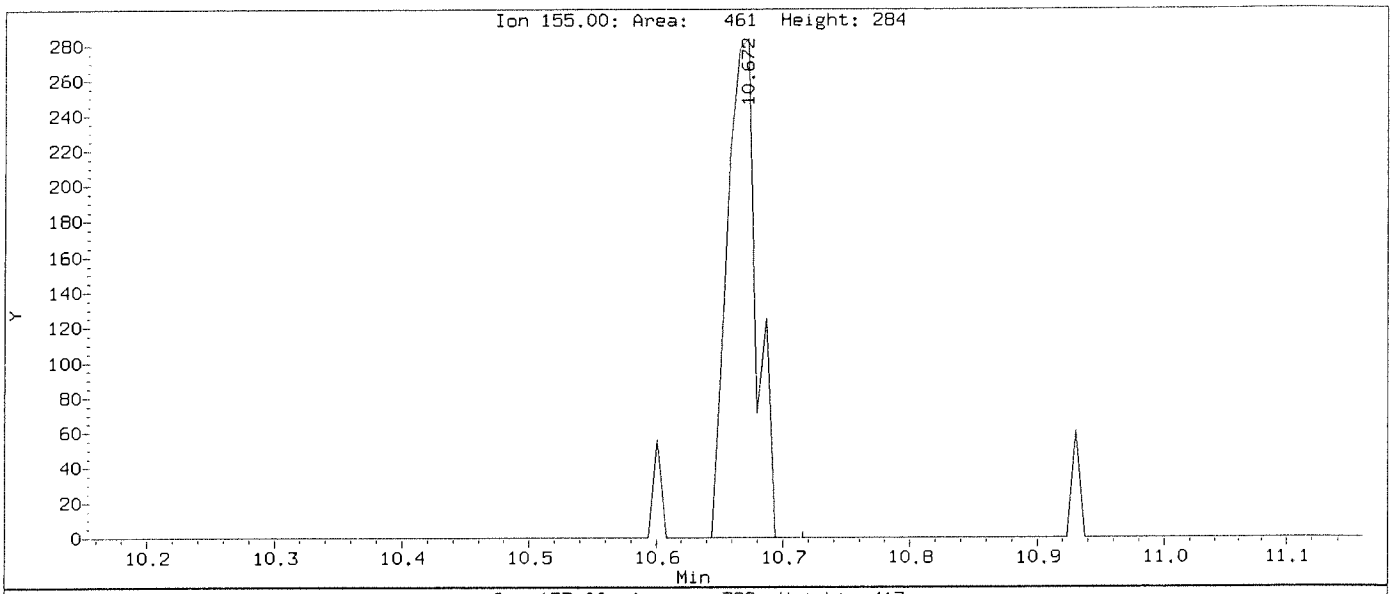
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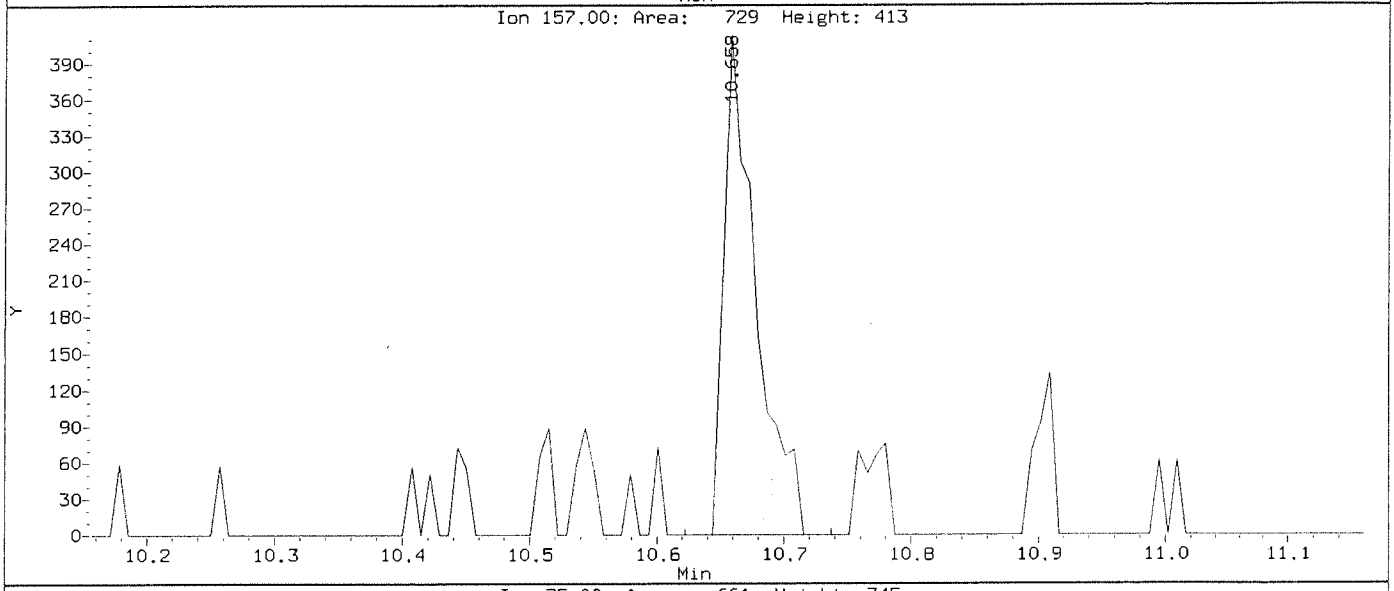
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

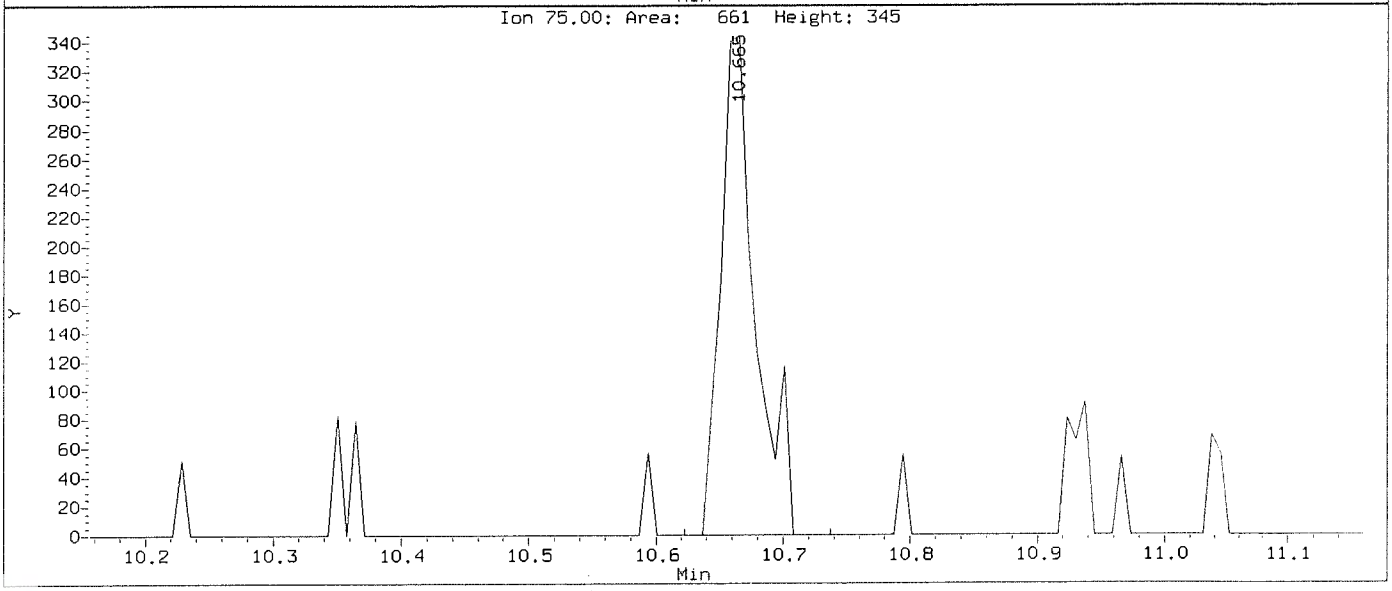


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Injection Date: 03-AUG-2020 12:52
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Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

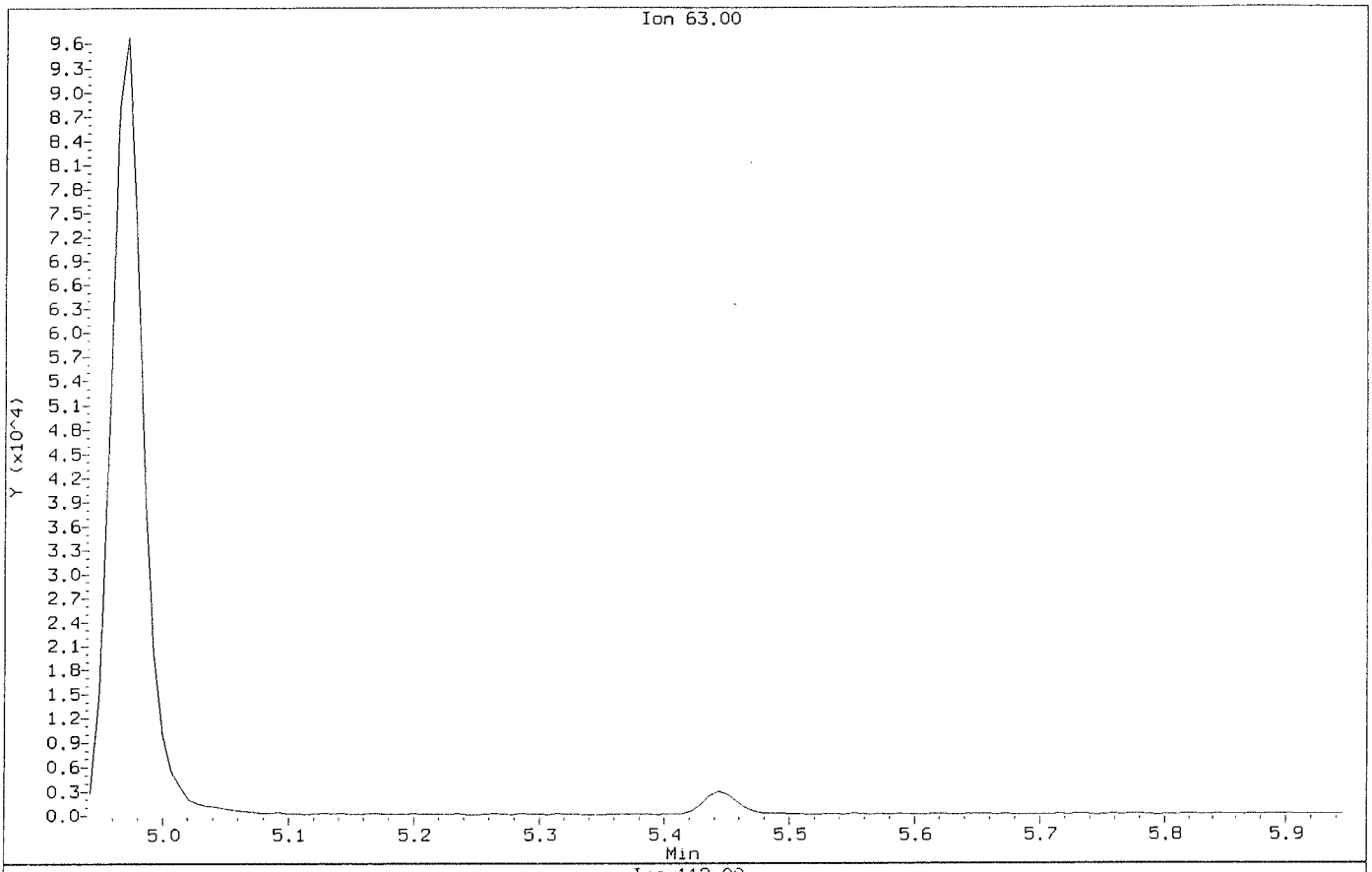


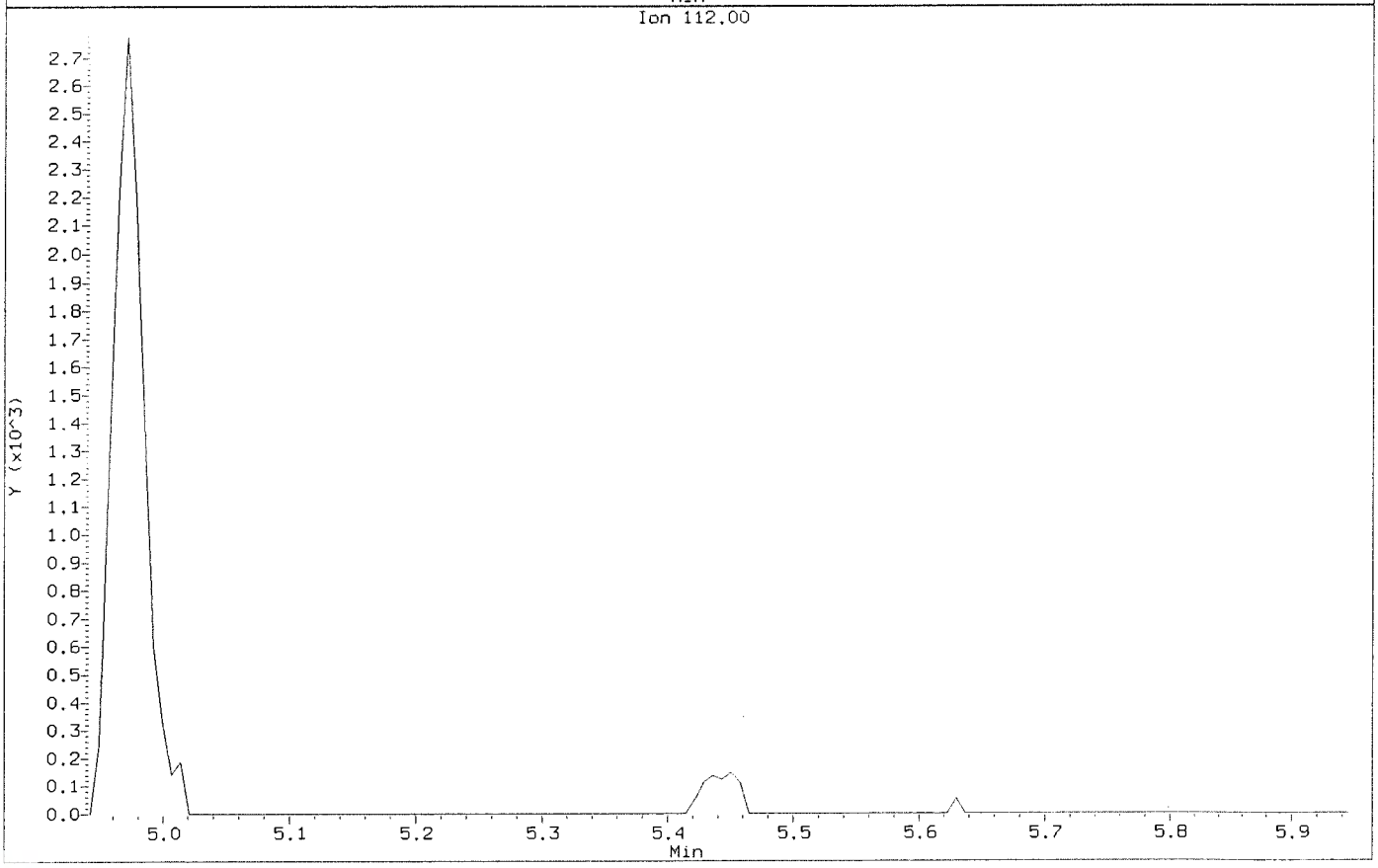



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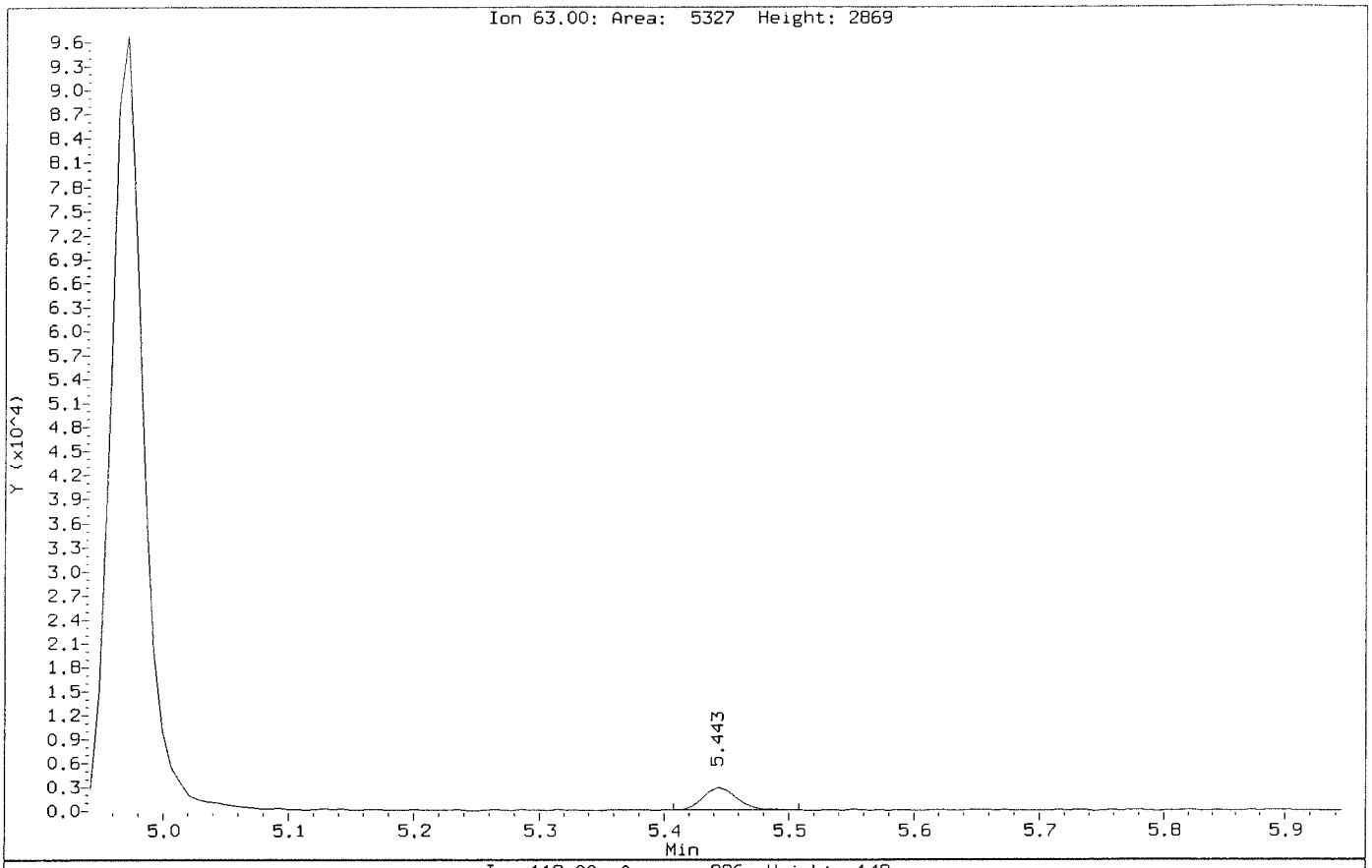
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

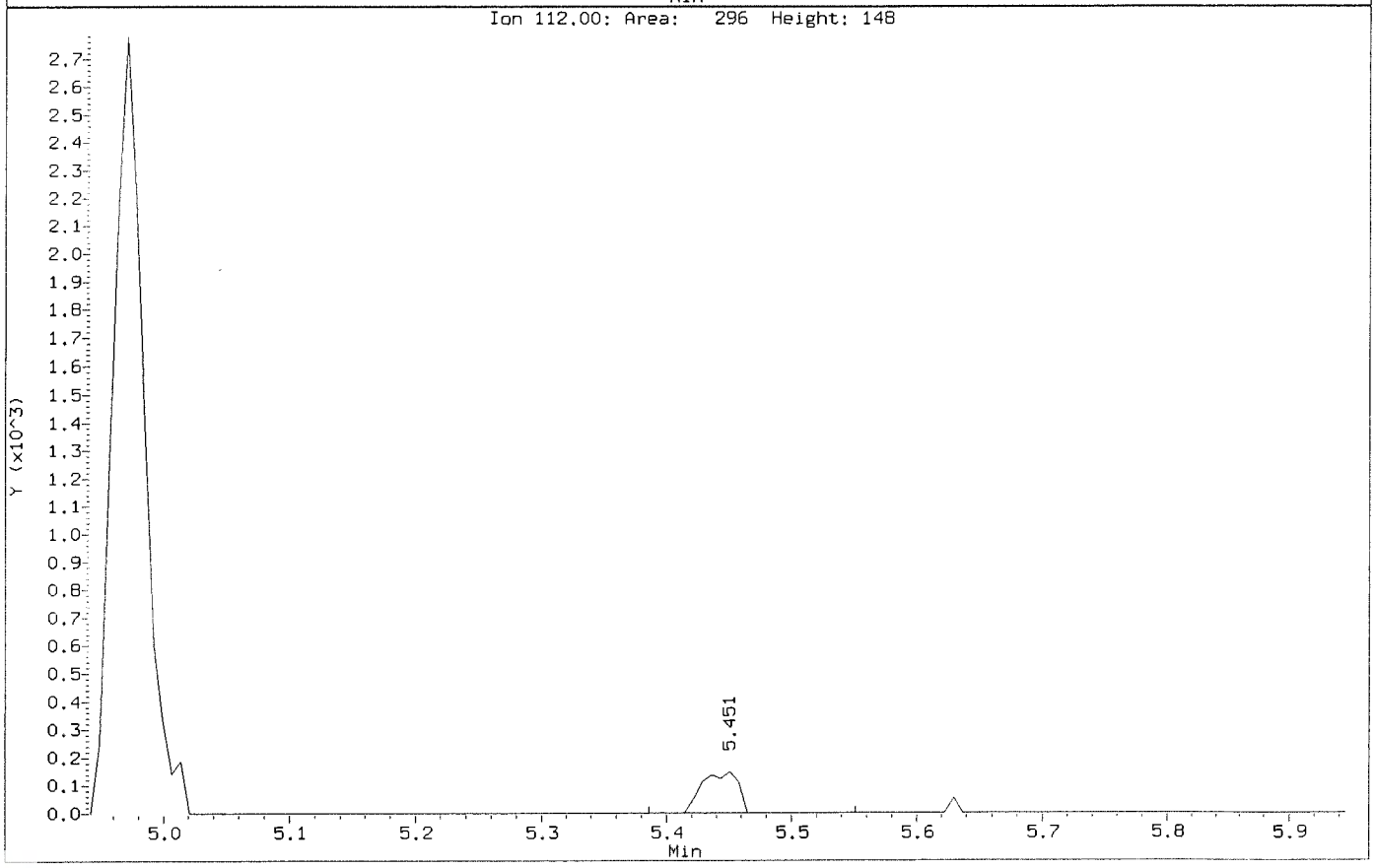


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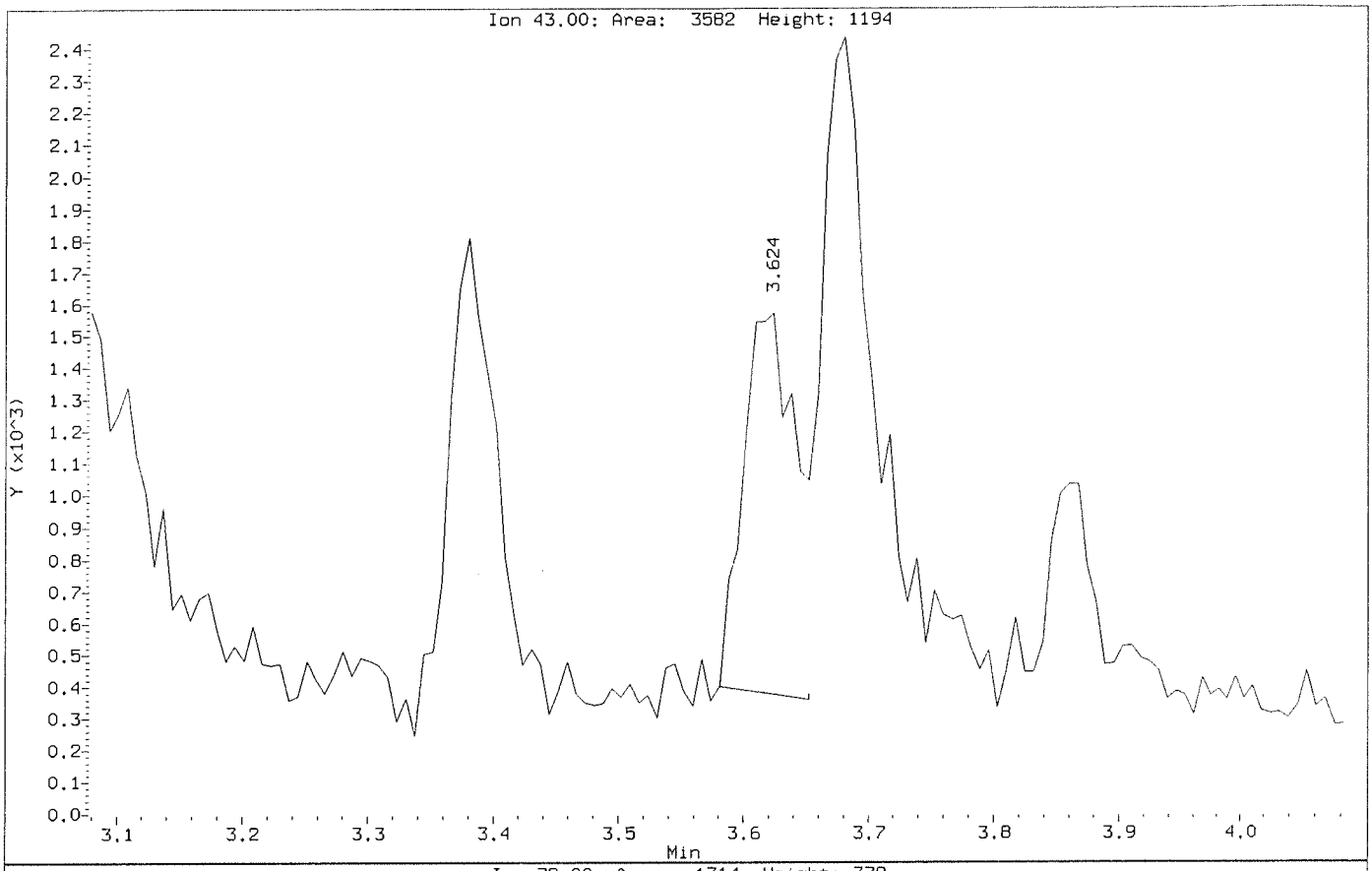
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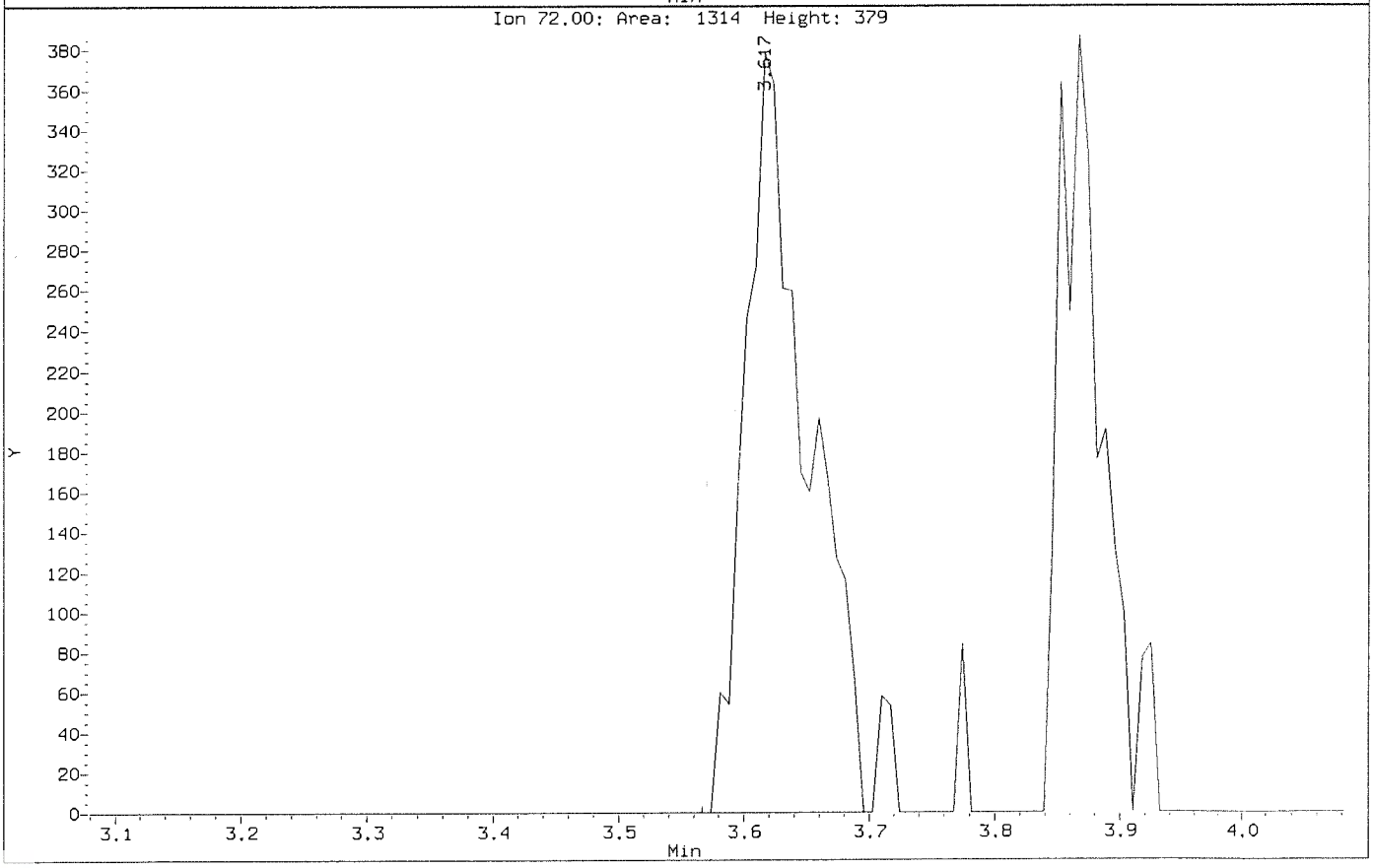


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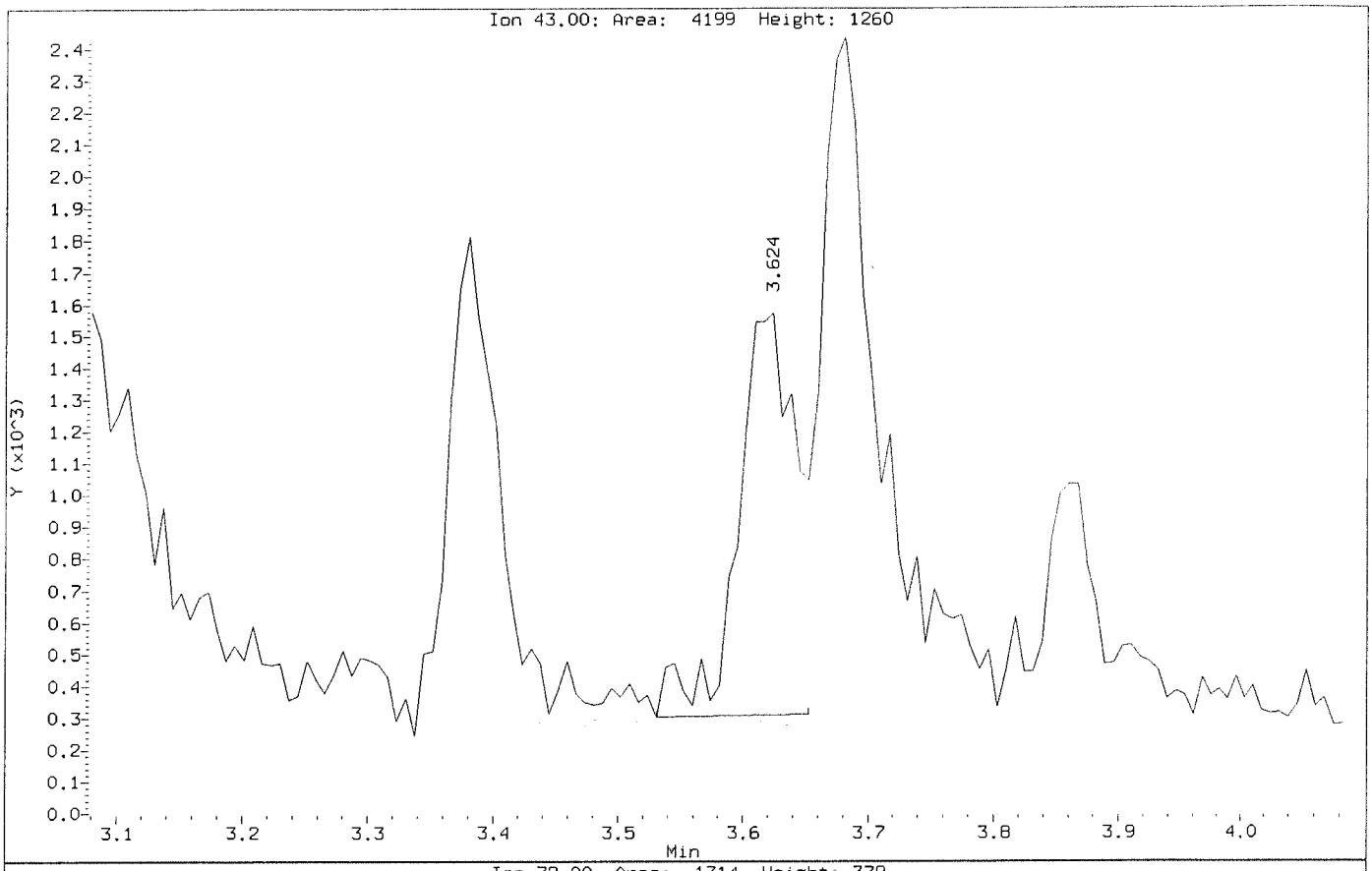
Compound: 2-Butanone
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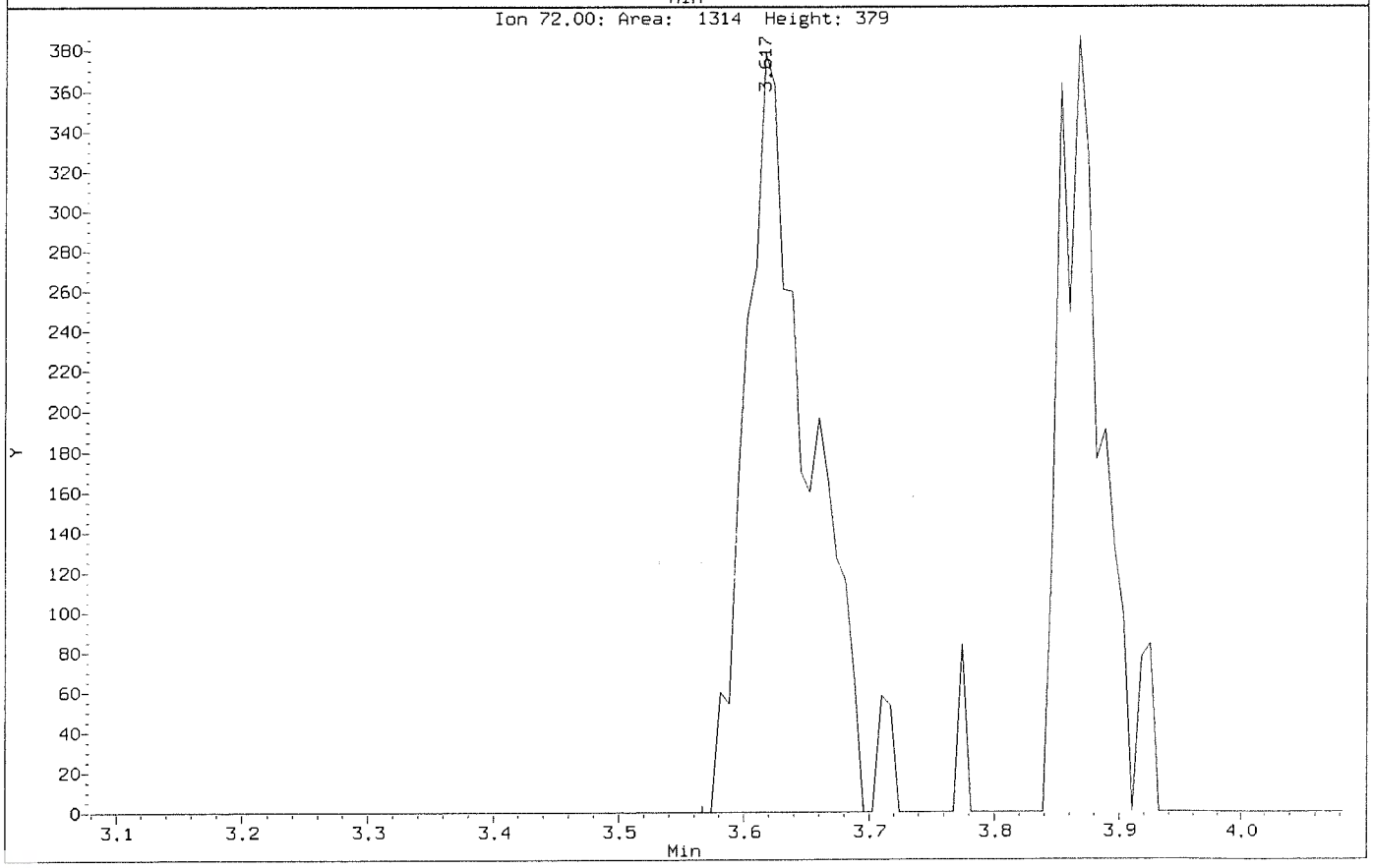


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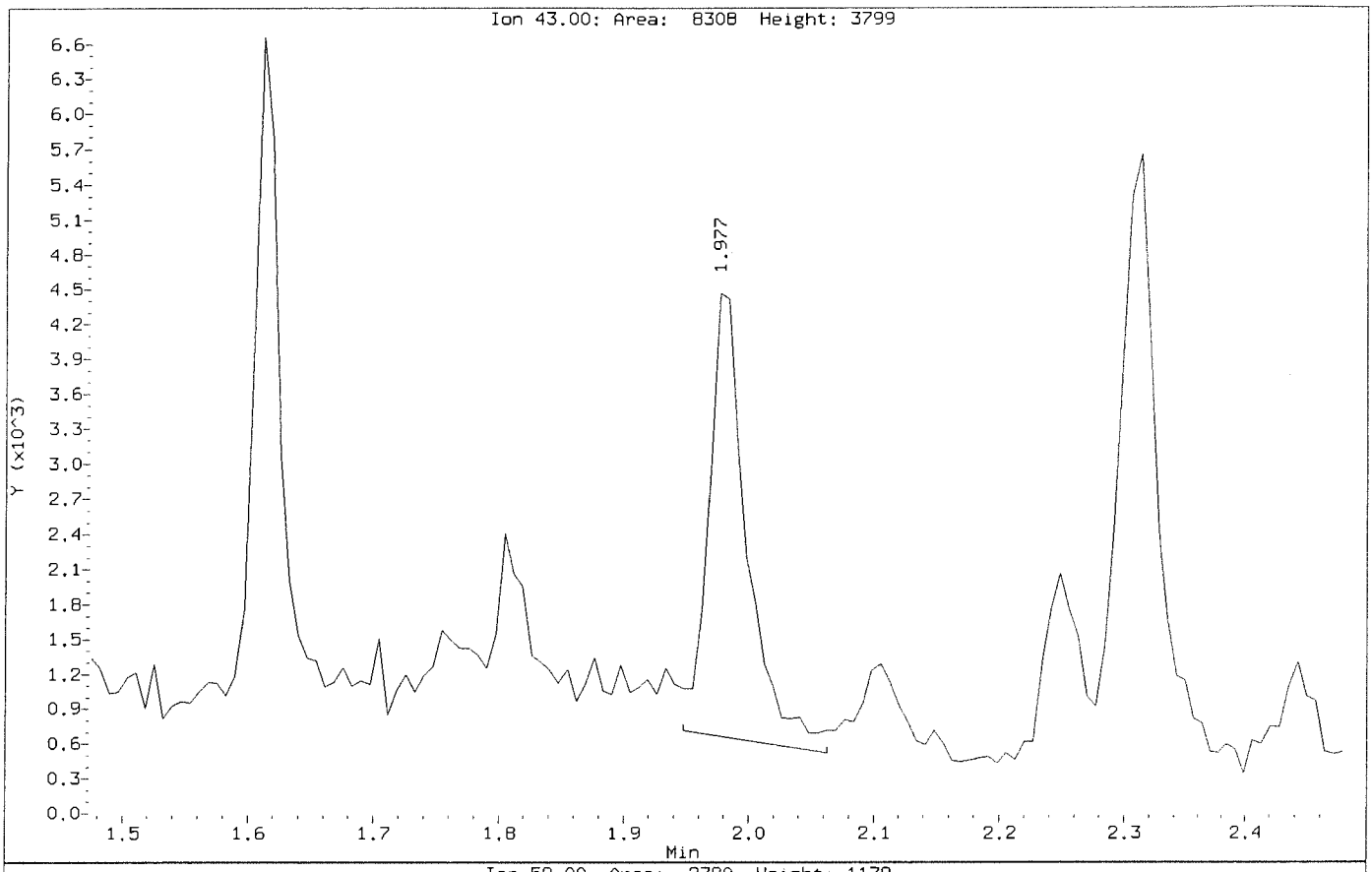
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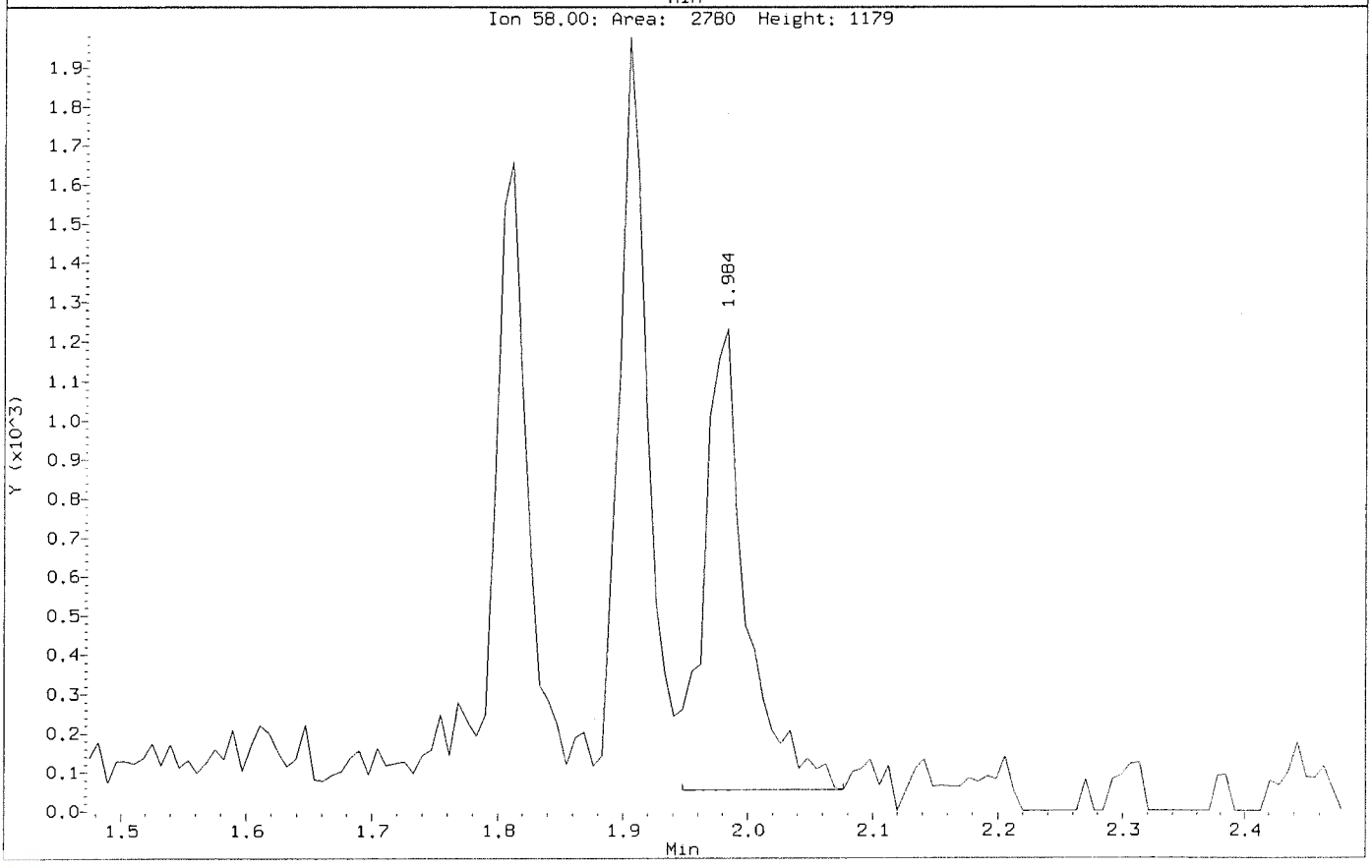


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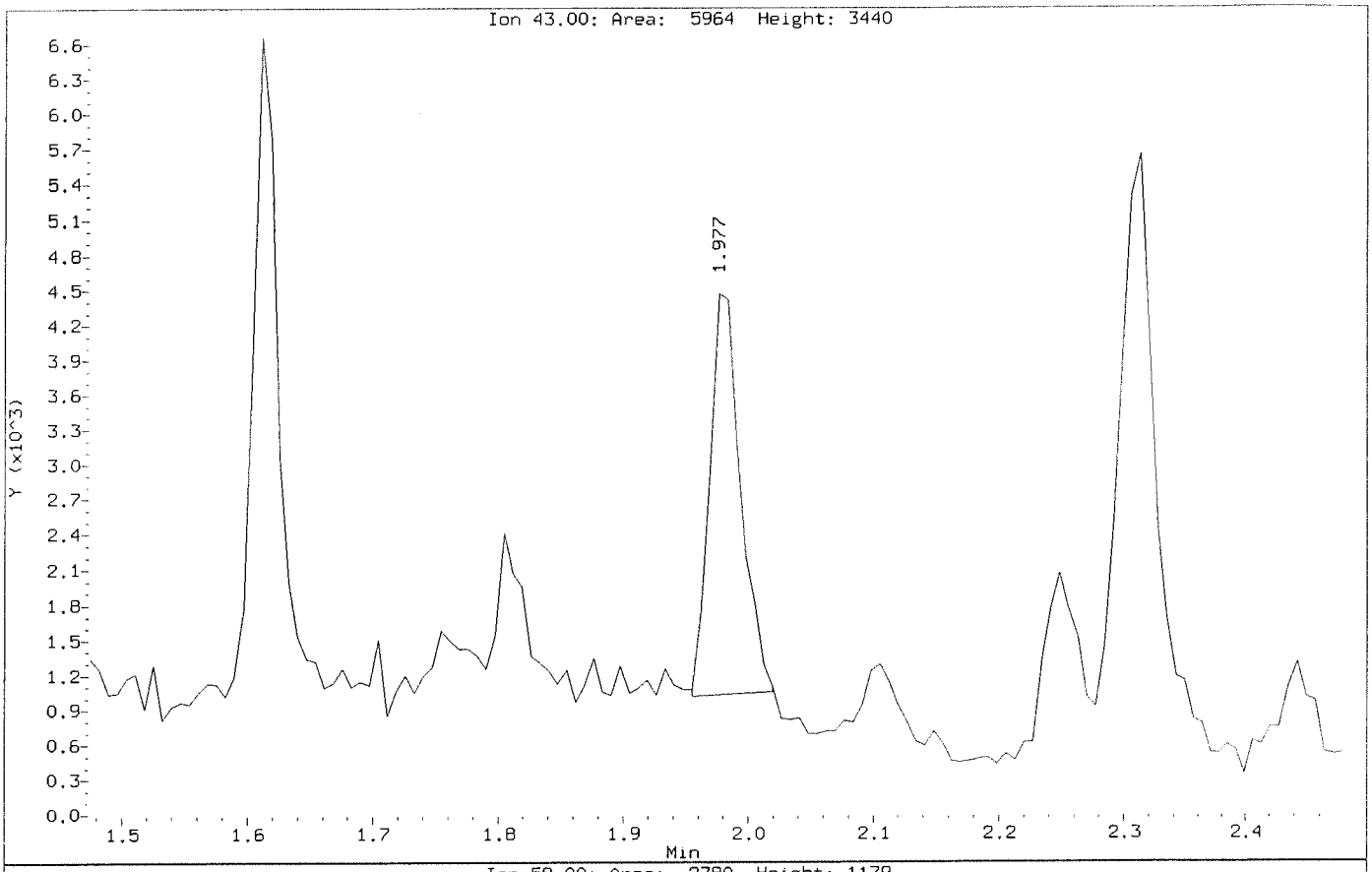
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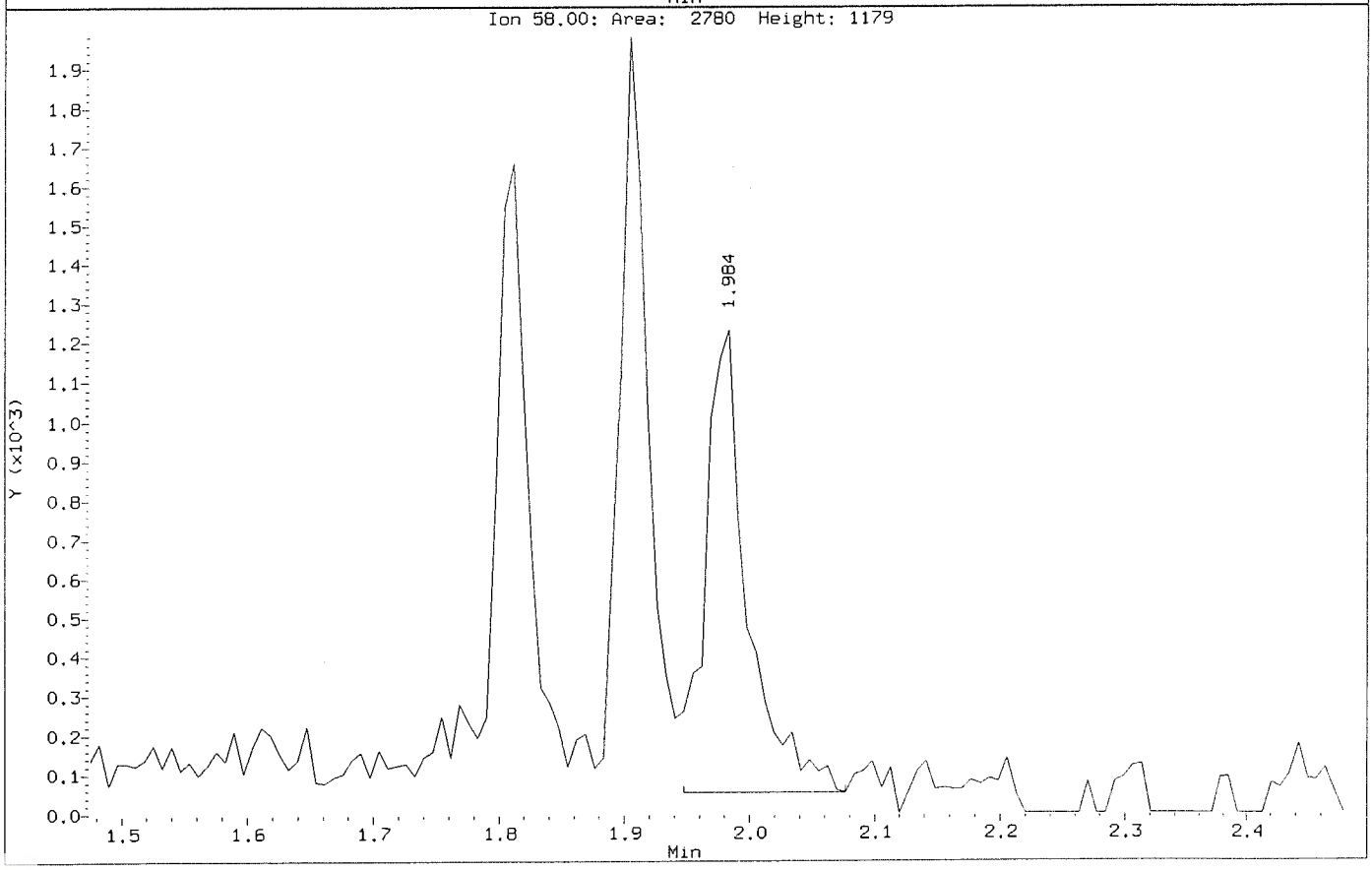


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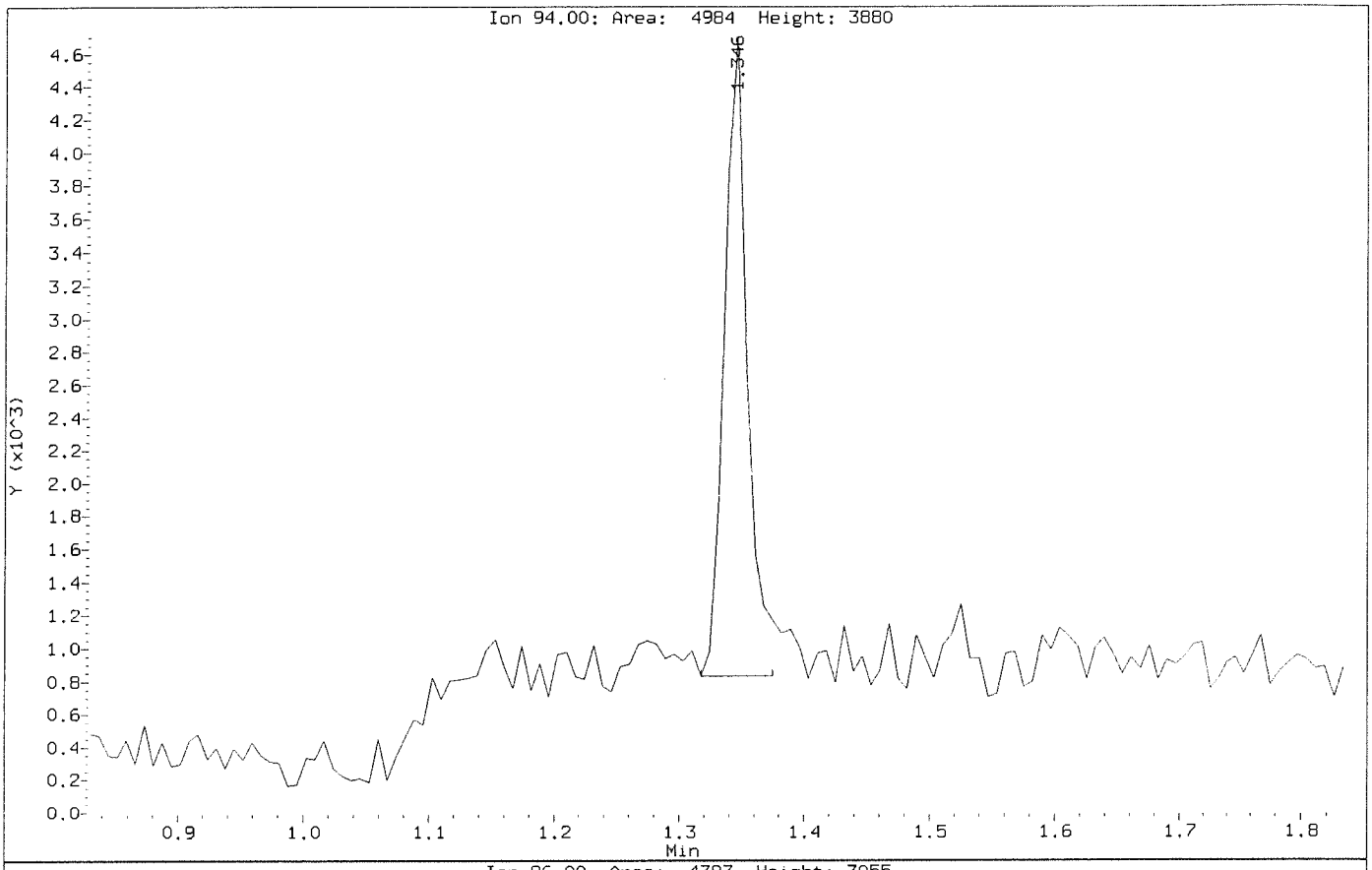
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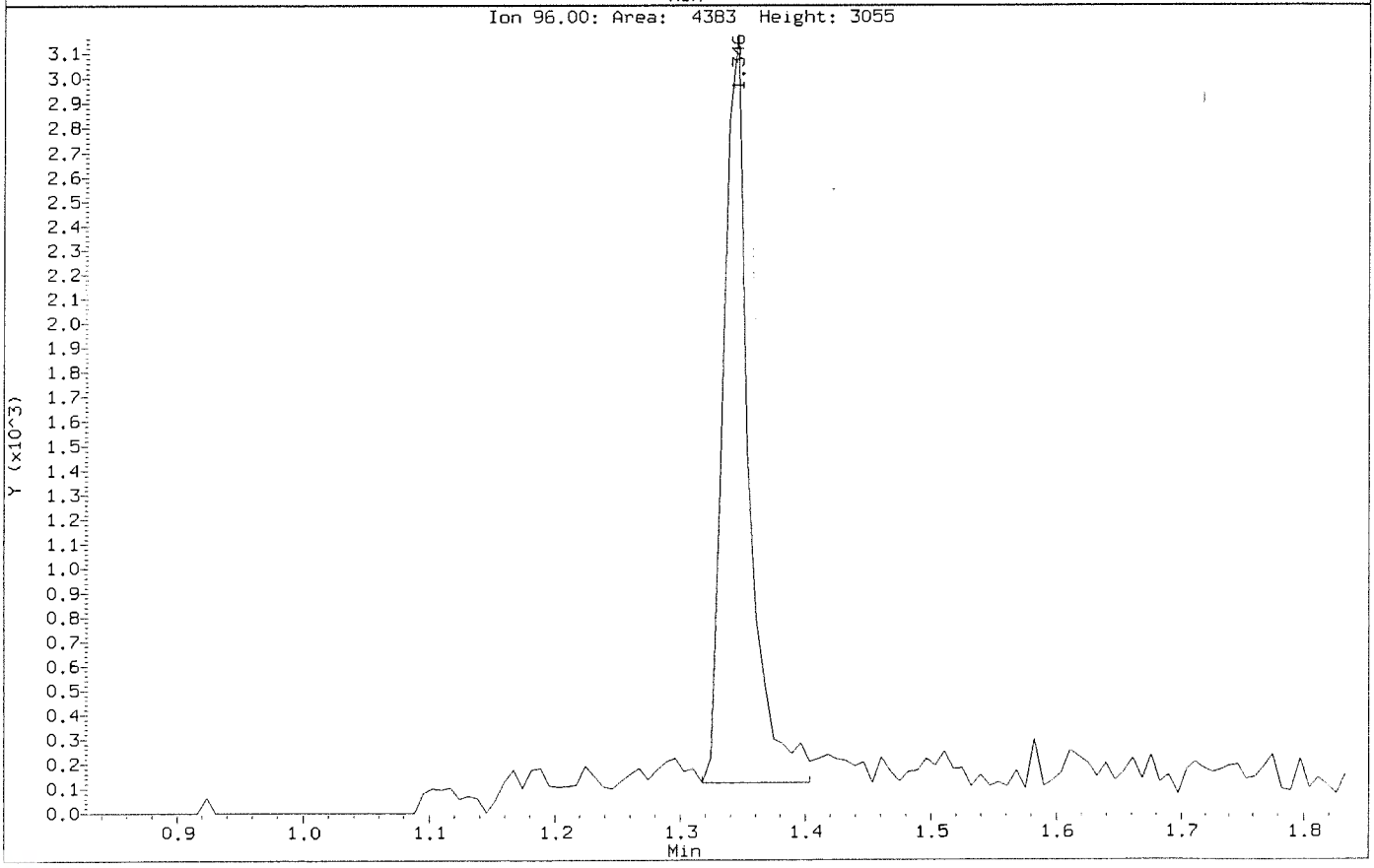


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Client Sample ID: VSTD001

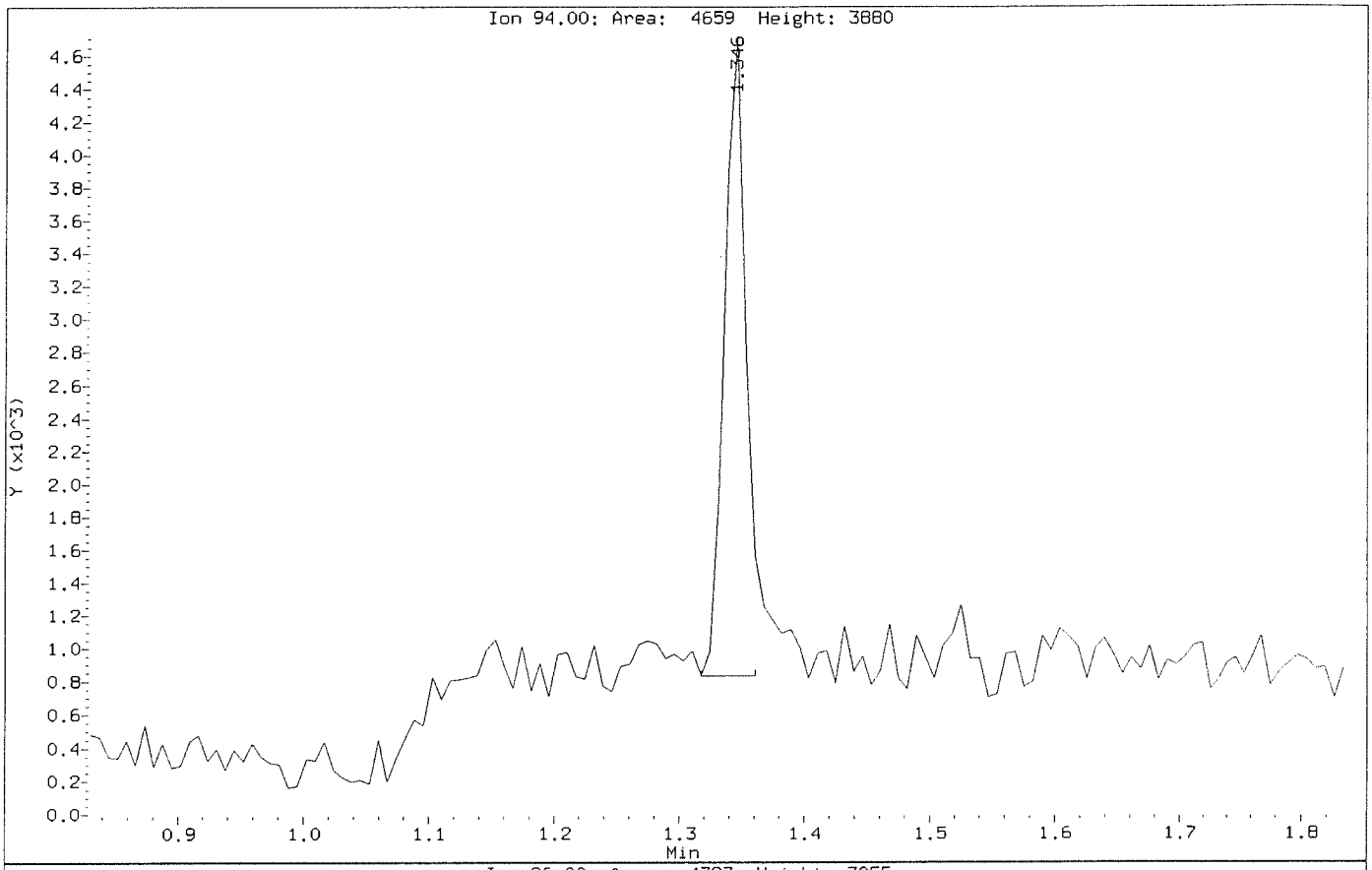
Compound: Bromomethane
CAS Number: 74-83-9

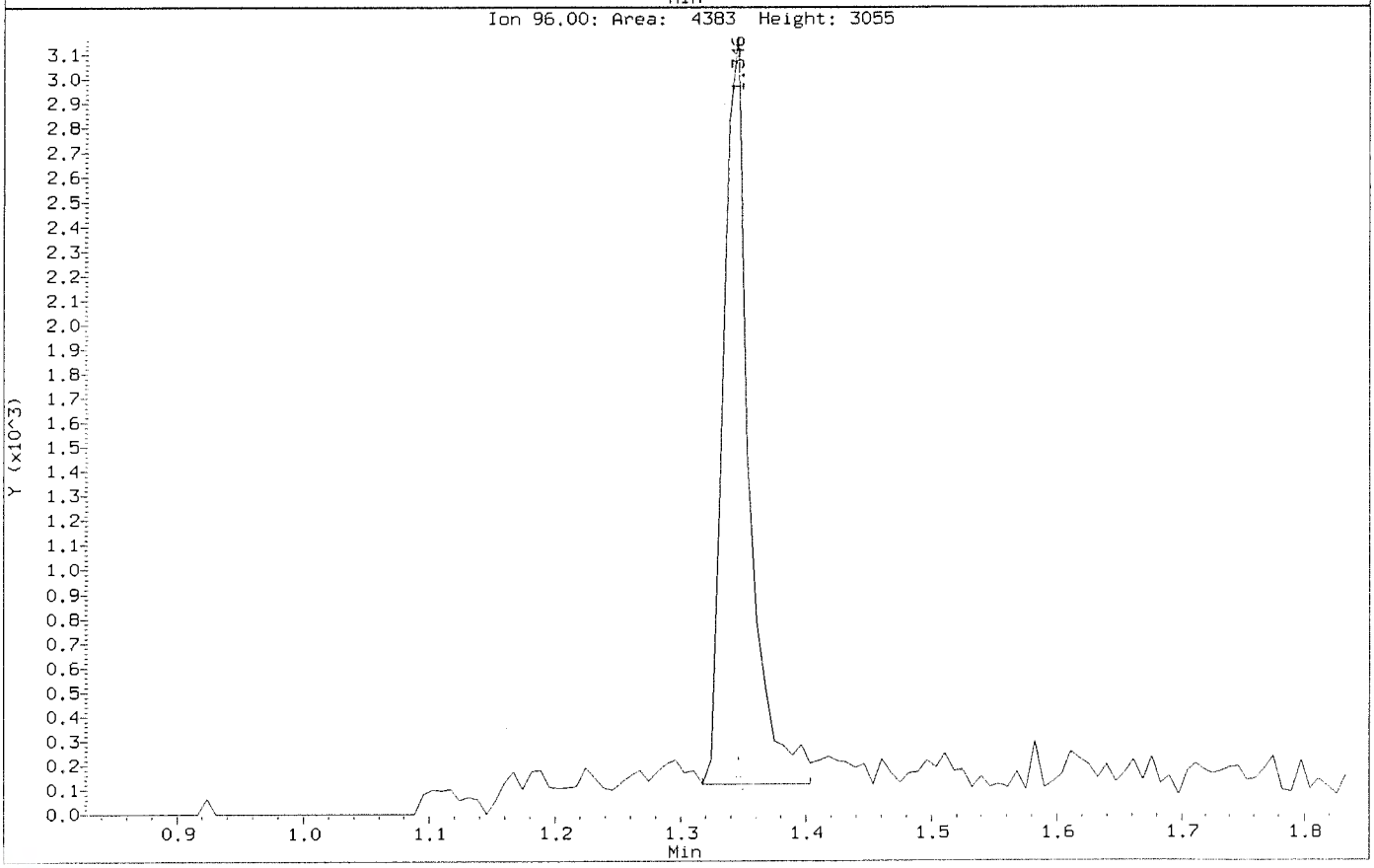


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

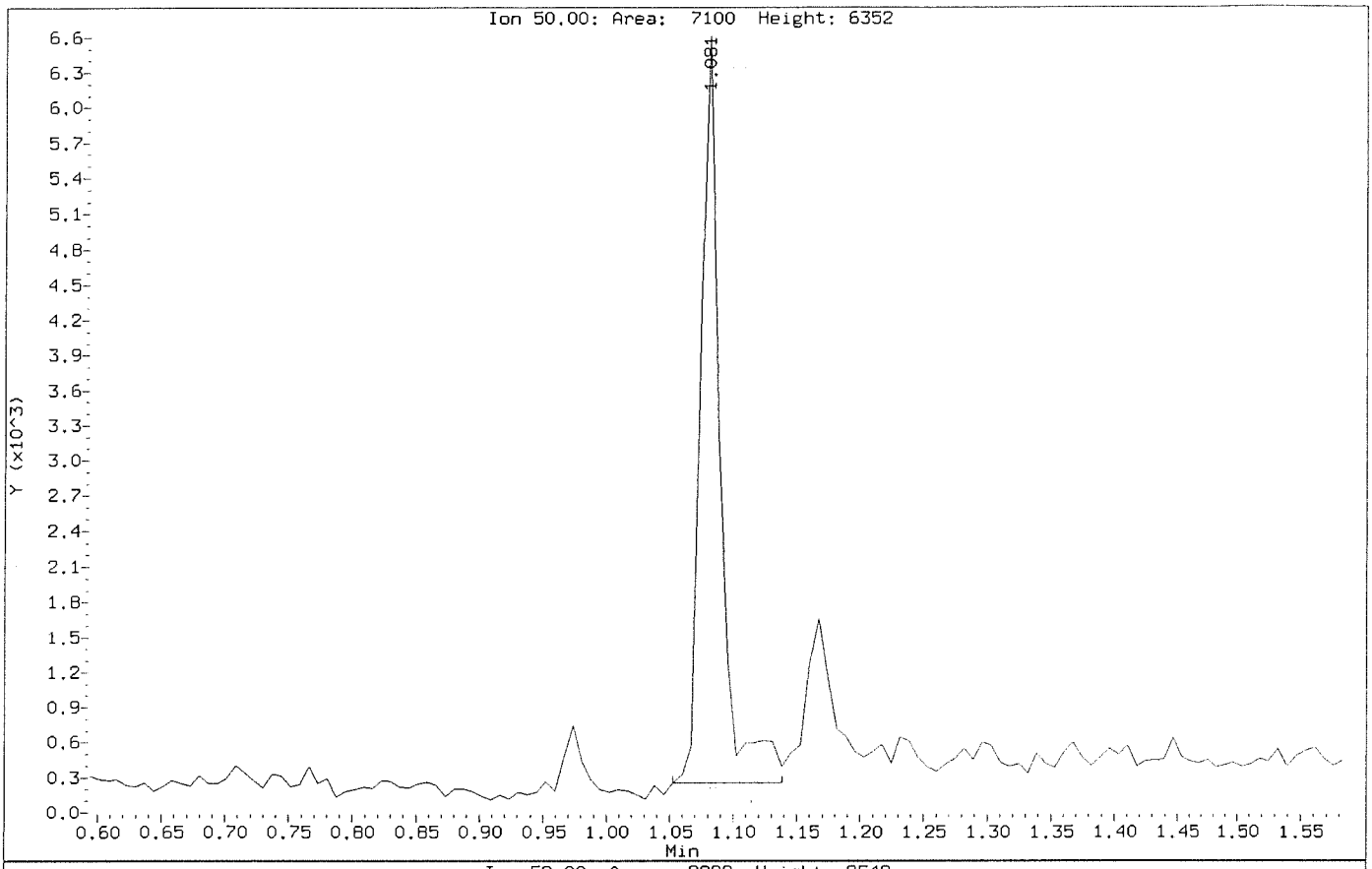
Compound: Bromomethane
CAS Number: 74-83-9

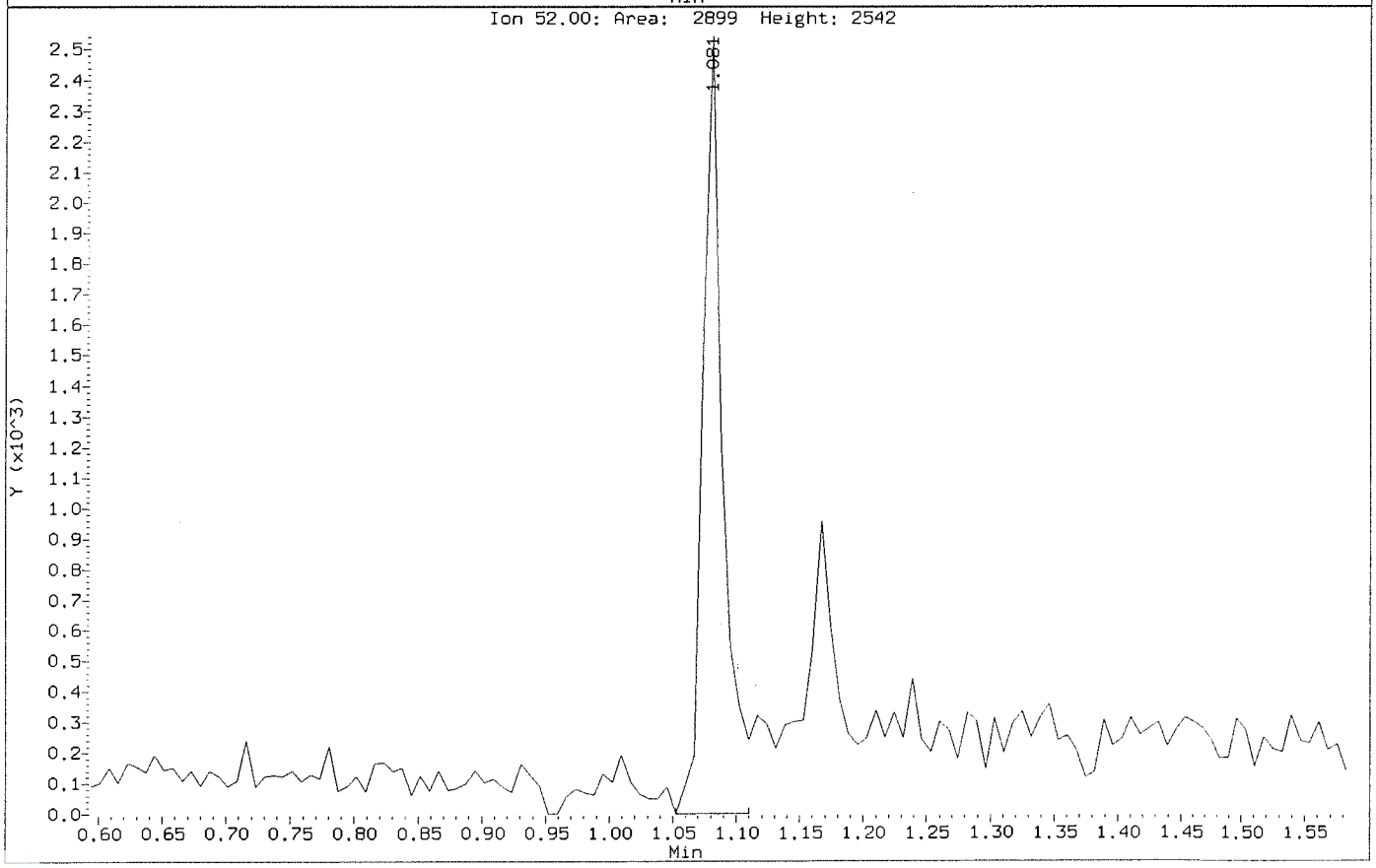


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

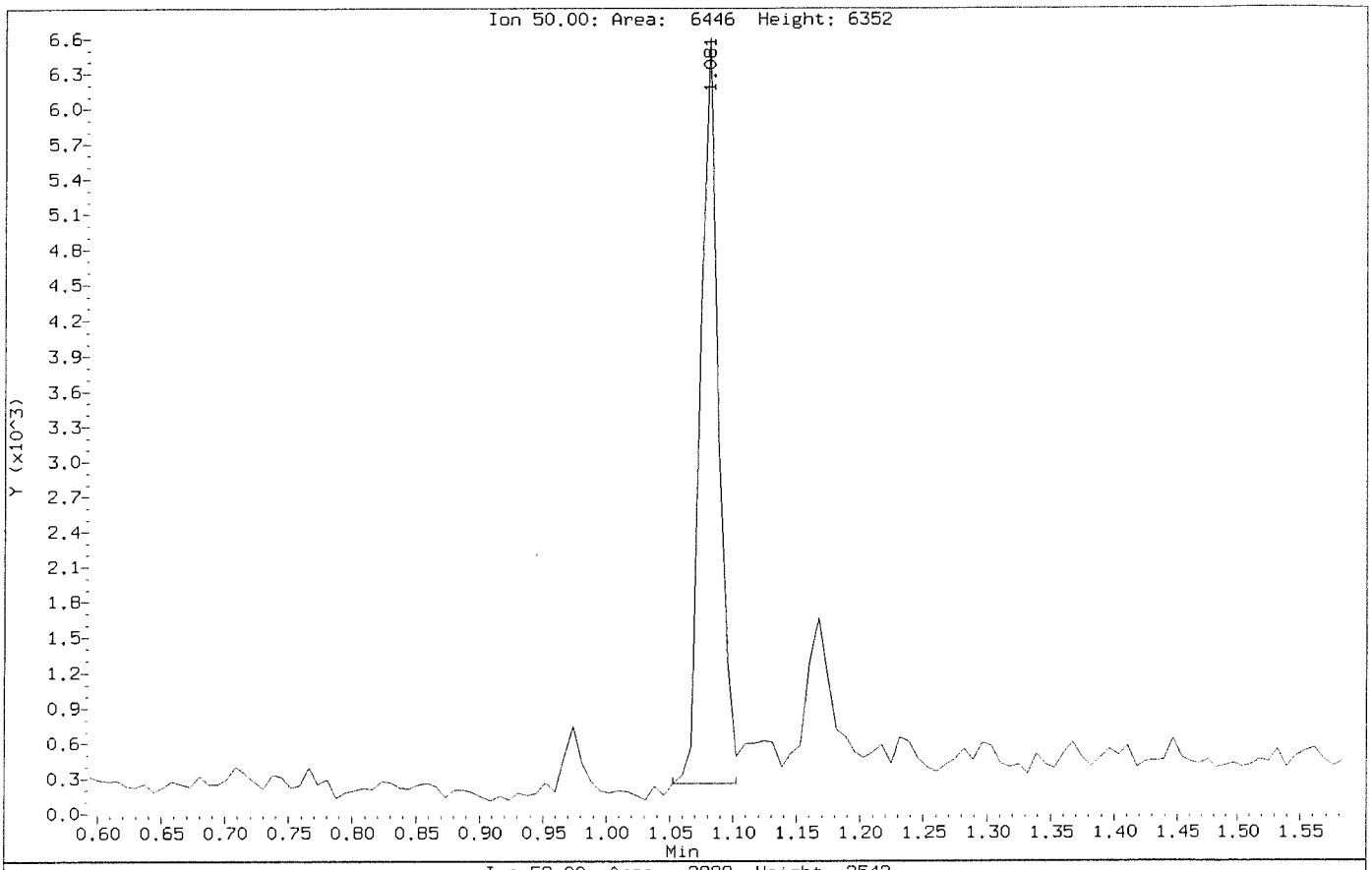
Compound: Chloromethane
CAS Number: 74-87-3

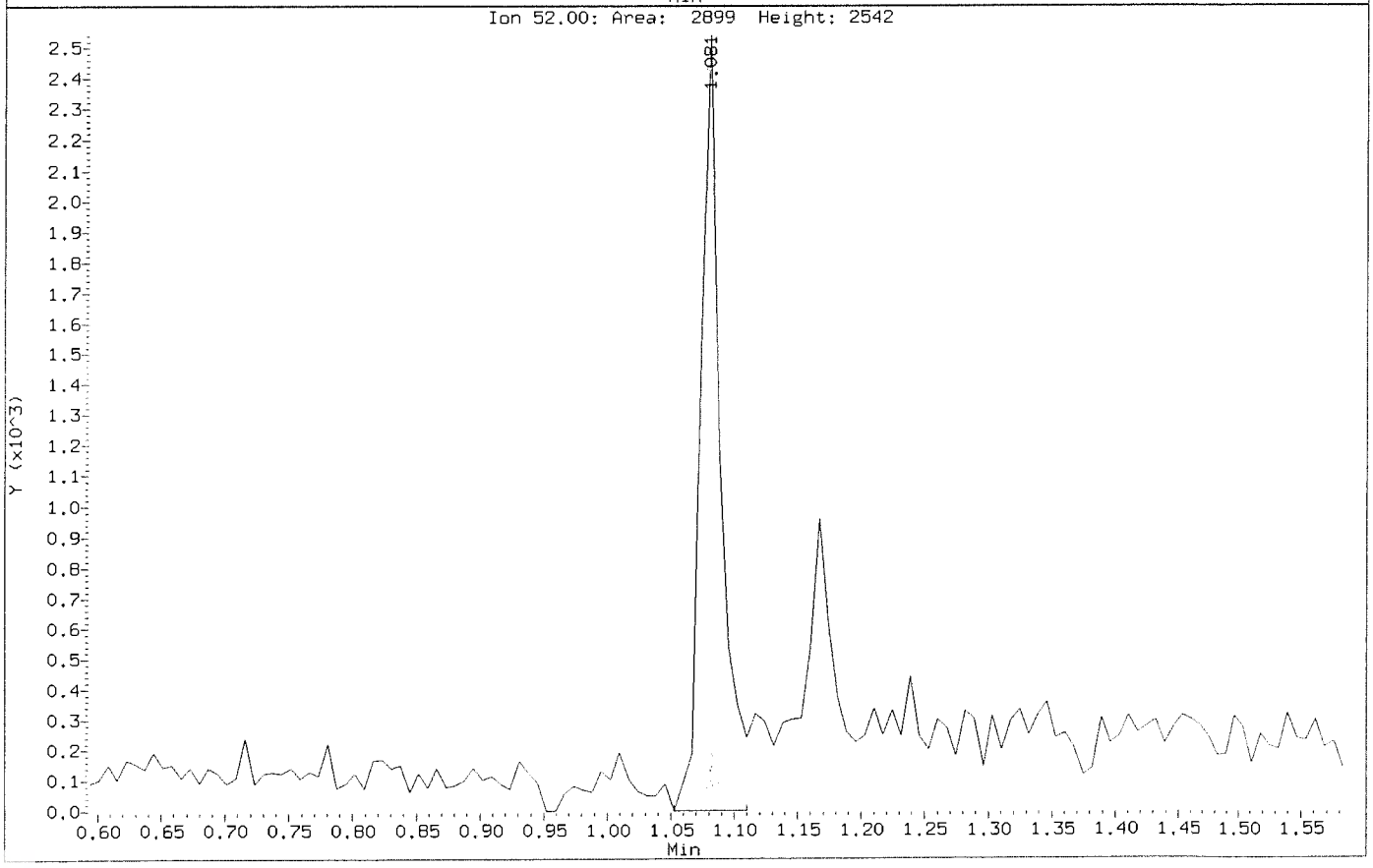


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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
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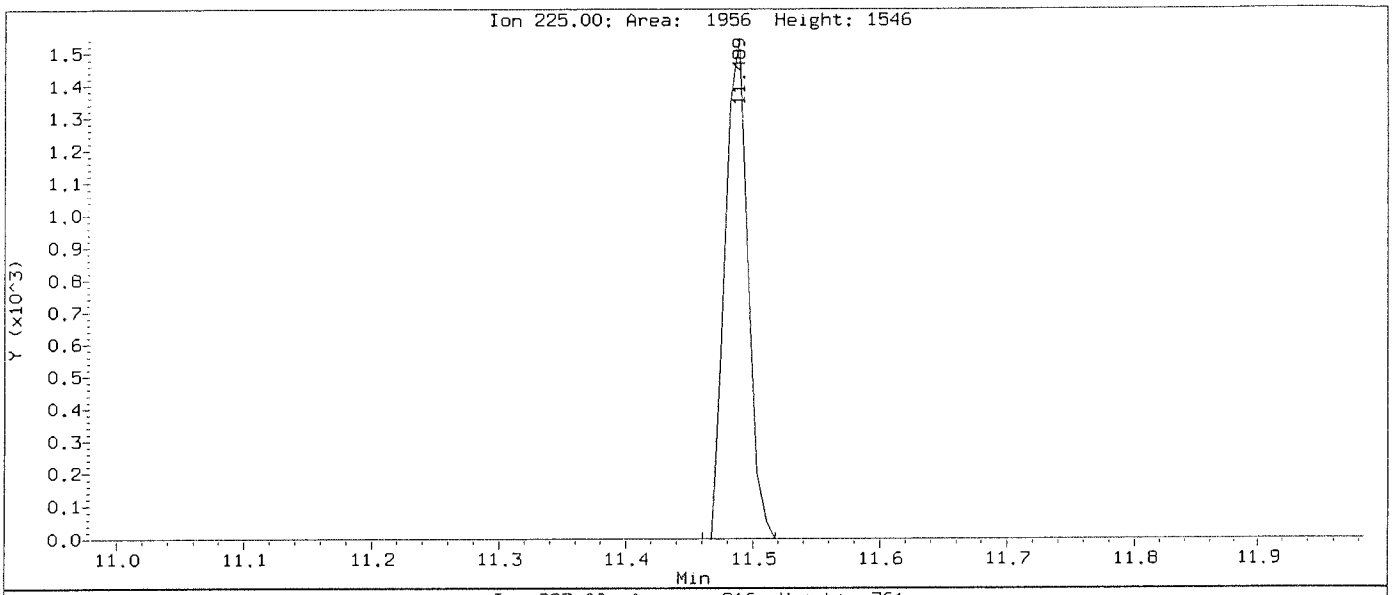
Compound: Chloromethane
CAS Number: 74-87-3

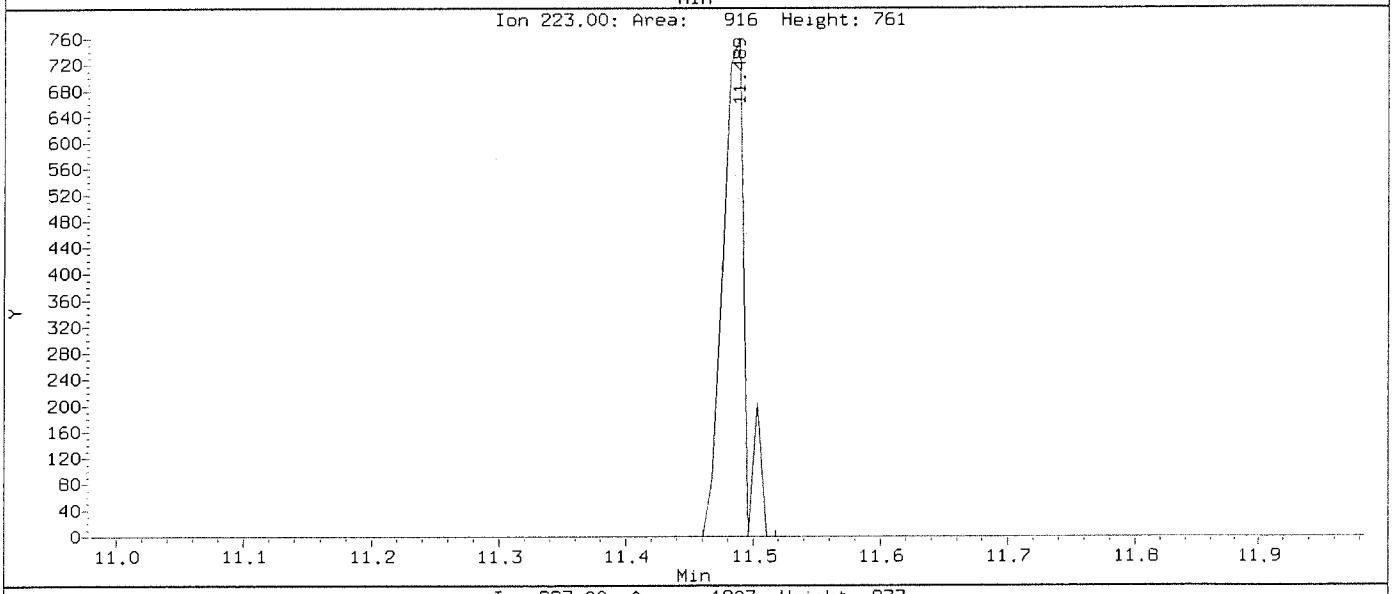


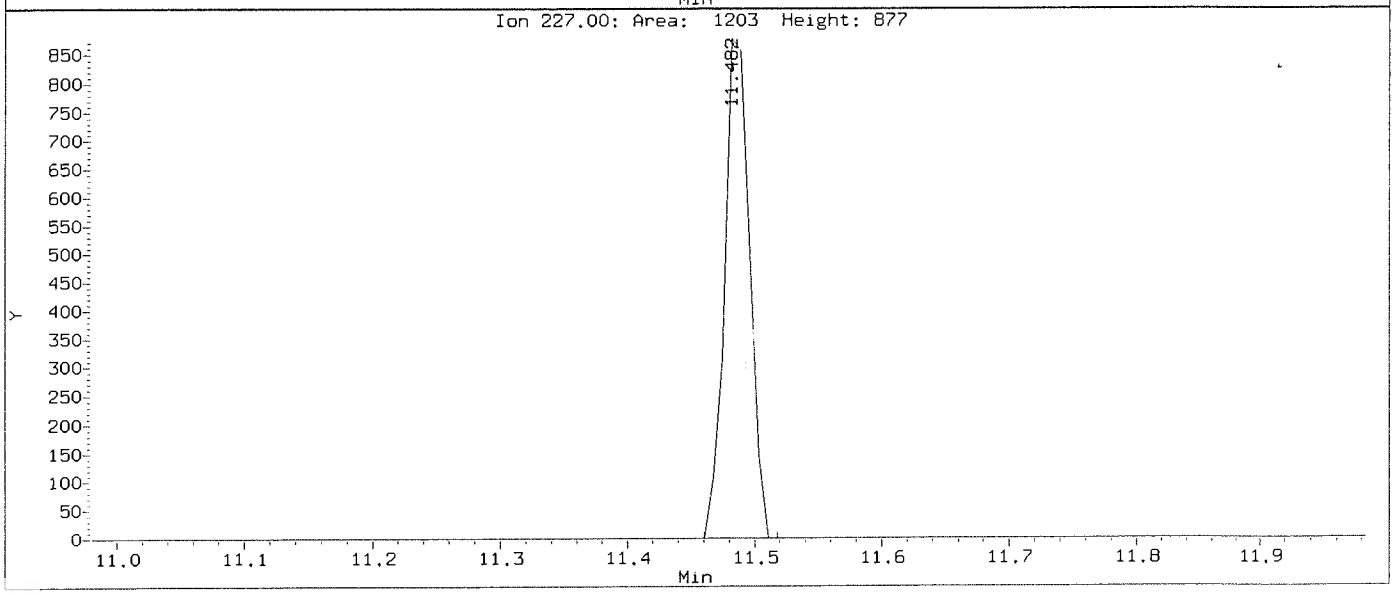



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Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

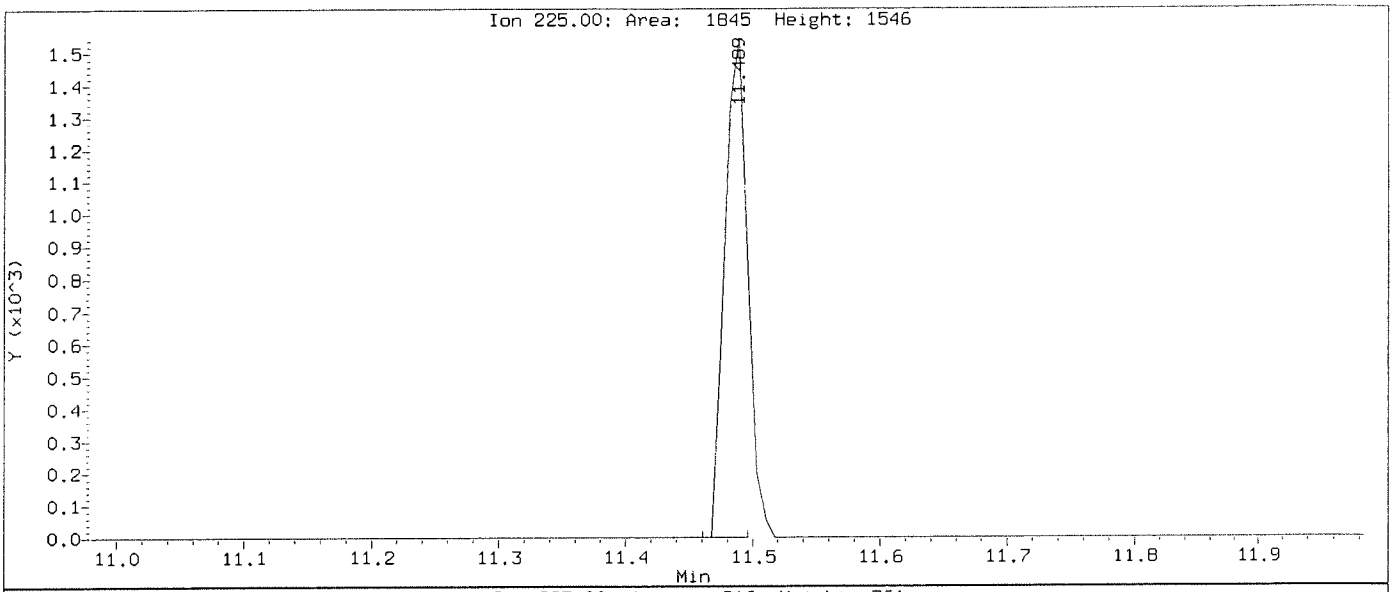


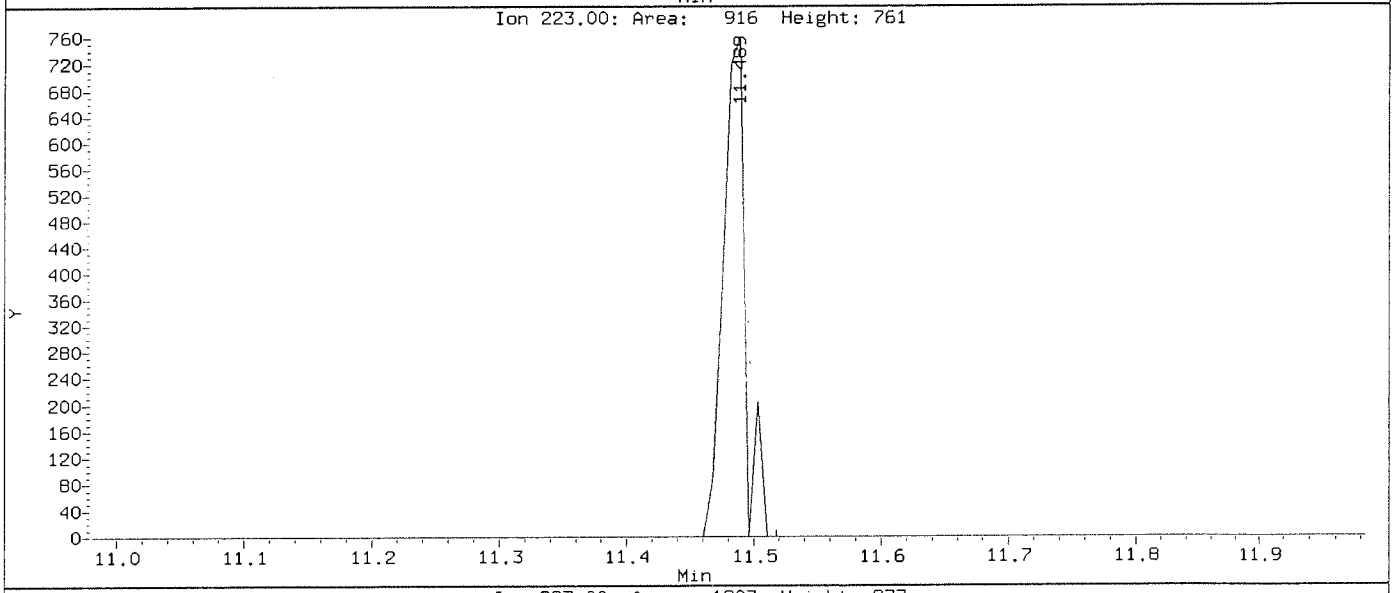



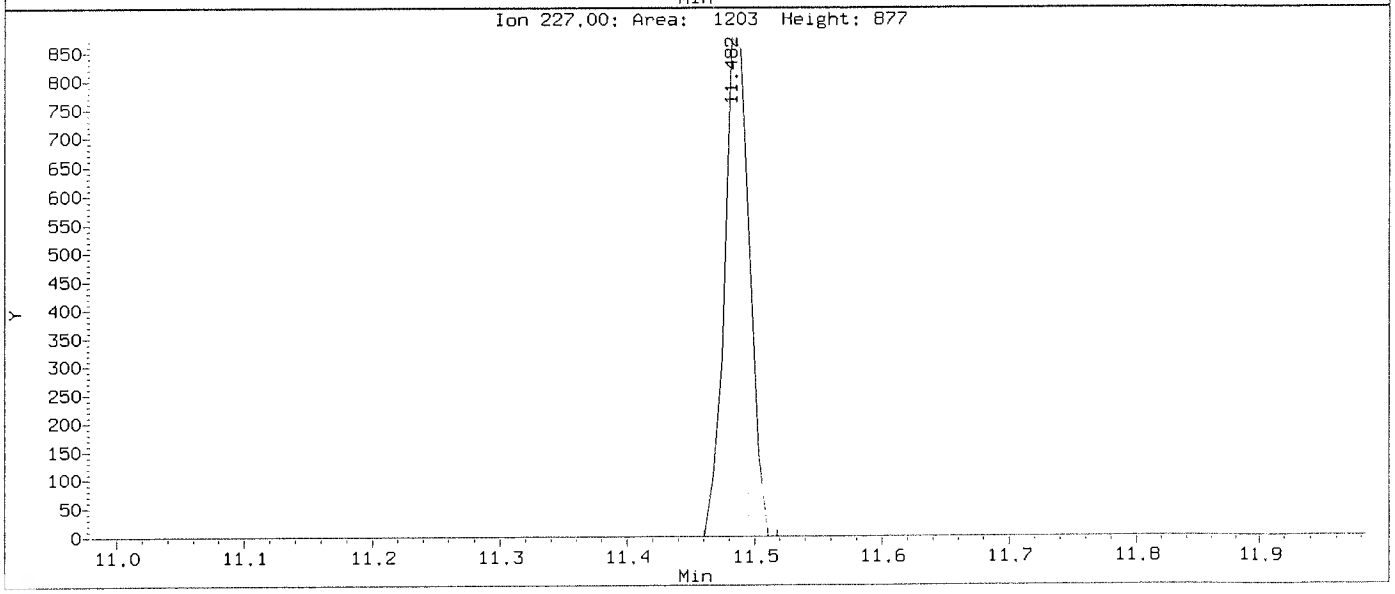



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080304.D
Injection Date: 03-AUG-2020 12:52
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-AUG-2020 13:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 12:52 Cal File: X080304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

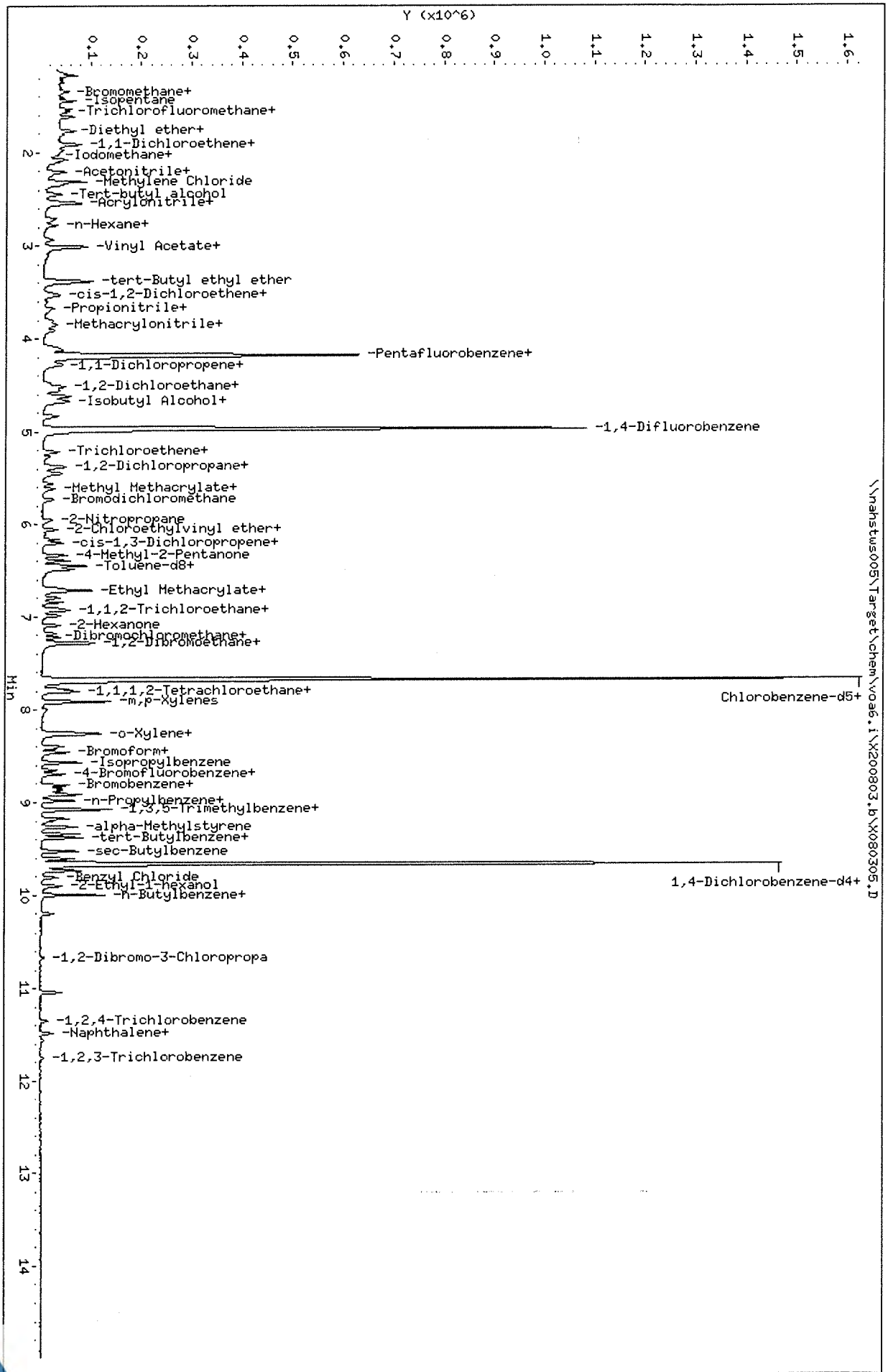
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.190 | 4.190 | (1.000) | 543911 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 829677 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 750905 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 351595 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 9821 | 2.00000 | 1.83(a) |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.483 | 4.483 | (1.070) | 10904 | 2.00000 | 1.72(a) |
| $ | 48 Toluene-d8 | 98 | 6.396 | 6.396 | (0.834) | 33751 | 2.00000 | 1.85(a) |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 13431 | 2.00000 | 1.91(a) |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 11831 | 2.00000 | 2.06(a) |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 15930 | 2.00000 | 1.90(a) |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.846 | 8.846 | (0.915) | 17450 | 2.00000 | 3.44(aM) |
| | 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 9338 | 2.00000 | 2.18(a) |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 20241 | 2.00000 | 1.90(a) |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 8194 | 2.00000 | 1.90(a) |
| | 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 14129 | 2.00000 | 2.02(a) |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.754 | 11.754 | (1.216) | 2318 | 2.00000 | 2.19(aM) |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 12900 | 2.00000 | 2.50(aM) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.345 | (1.173) | 5020 | 2.00000 | 2.01(a) |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 38643 | 2.00000 | 2.05(a) |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 1468 | 2.00000 | 3.66(a) |
| | 57 1,2-Dibromoethane | 107 | 7.270 | 7.270 | (0.948) | 11414 | 2.00000 | 2.07(a) |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 22043 | 2.00000 | 2.21(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 16305 | 2.00000 | 2.02(a) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 11836 | 2.00000 | 1.94(a) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.075 | 9.075 | (0.939) | 38031 | 2.00000 | 2.07(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 23923 | 2.00000 | 2.16(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.990 | 6.990 | (0.911) | 16738 | 2.00000 | 1.98(a) |
| 84 | 1,4-Dichlorobenzene | 146 | 9.684 | 9.684 | (1.001) | 23830 | 2.00000 | 2.18(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 15659 | 2.00000 | 2.01(aM) |
| 24 | 2-Butanone | 43 | 3.602 | 3.602 | (0.860) | 10002 | 4.00000 | 3.75(a) |
| 76 | 2-Chlorotoluene | 91 | 8.982 | 8.982 | (0.929) | 32223 | 2.00000 | 2.11(a) |
| 52 | 2-Hexanone | 43 | 7.091 | 7.091 | (0.924) | 23886 | 4.00000 | 5.06 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 36388 | 2.00000 | 2.05(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 39097 | 2.00000 | 2.00(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 32995 | 4.00000 | 4.74(a) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 9756 | 4.00000 | 4.12(aM) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 39024 | 2.00000 | 1.89(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 14653 | 2.00000 | 2.13(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 7080 | 2.00000 | 2.15(a) |
| 39 | Bromodichloromethane | 83 | 5.730 | 5.730 | (1.153) | 14467 | 2.00000 | 1.93(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 9196 | 2.00000 | 2.20(Ta) |
| 6 | Bromomethane | 94 | 1.346 | 1.346 | (0.321) | 9294 | 2.00000 | 3.10(a) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 47873 | 4.00000 | 3.57(a) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 13935 | 2.00000 | 1.88(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 29194 | 2.00000 | 1.98(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 7130 | 2.00000 | 1.84(a) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 19377 | 2.00000 | 1.99(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 15093 | 2.00000 | 1.97(a) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.531 | 3.531 | (0.843) | 11409 | 2.00000 | 1.90(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 16717 | 2.00000 | 1.91(a) |
| 55 | Dibromochloromethane | 129 | 7.177 | 7.177 | (0.936) | 13023 | 2.00000 | 2.16(a) |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 6946 | 2.00000 | 1.92(a) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 9815 | 2.00000 | 1.84(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 14170 | 2.00000 | 1.86(a) |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 4418 | 2.00000 | 2.34(aM) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 42458 | 2.00000 | 1.90(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 35460 | 4.00000 | 3.86(a) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 20318 | 2.00000 | 2.34(a) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 30052 | 2.00000 | 1.93(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 49004 | 2.00000 | 1.93(a) |
| 92 | Naphthalene | 128 | 11.553 | 11.553 | (1.195) | 6258 | 2.00000 | 2.17(aM) |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 17455 | 2.00000 | 1.93(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 41975 | 2.00000 | 1.96(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 33224 | 2.00000 | 2.12(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 31980 | 2.00000 | 2.00(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 8697 | 2.00000 | 1.82(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 43608 | 2.00000 | 1.98(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.542 | 2.542 | (0.607) | 9831 | 2.00000 | 1.92(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 15714 | 2.00000 | 1.96(a) |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 11482 | 2.00000 | 1.95(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 14481 | 2.00000 | 1.80(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 12969 | 2.00000 | 1.85(a) |

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

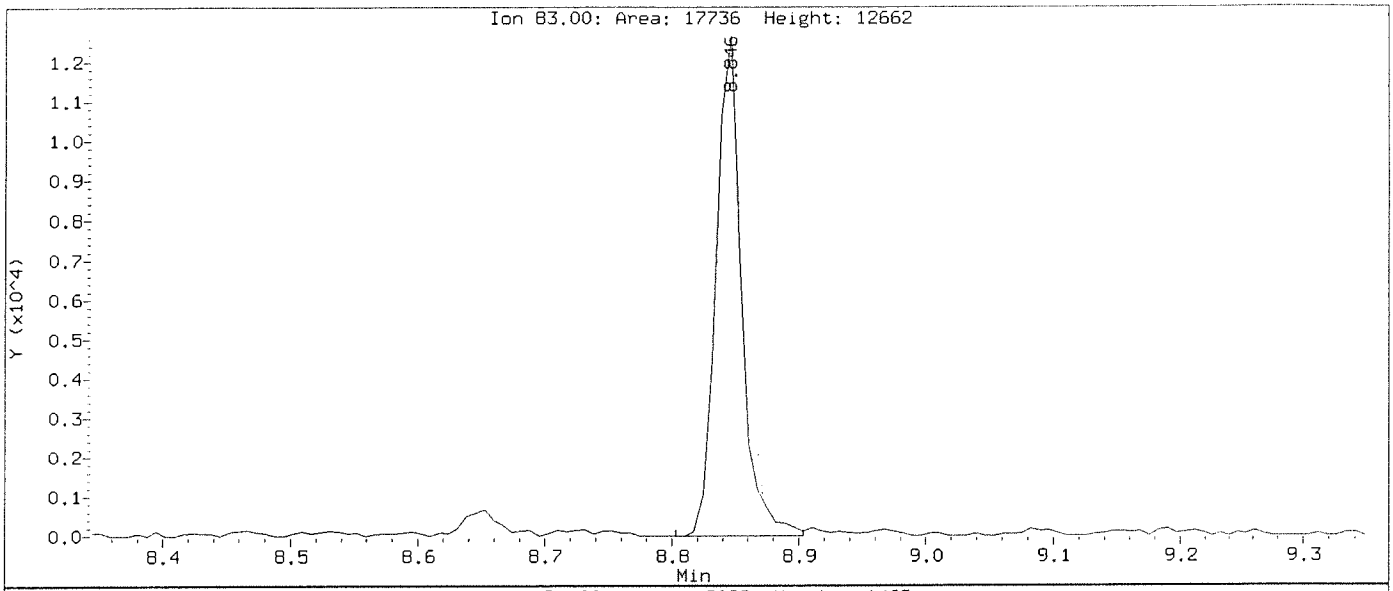


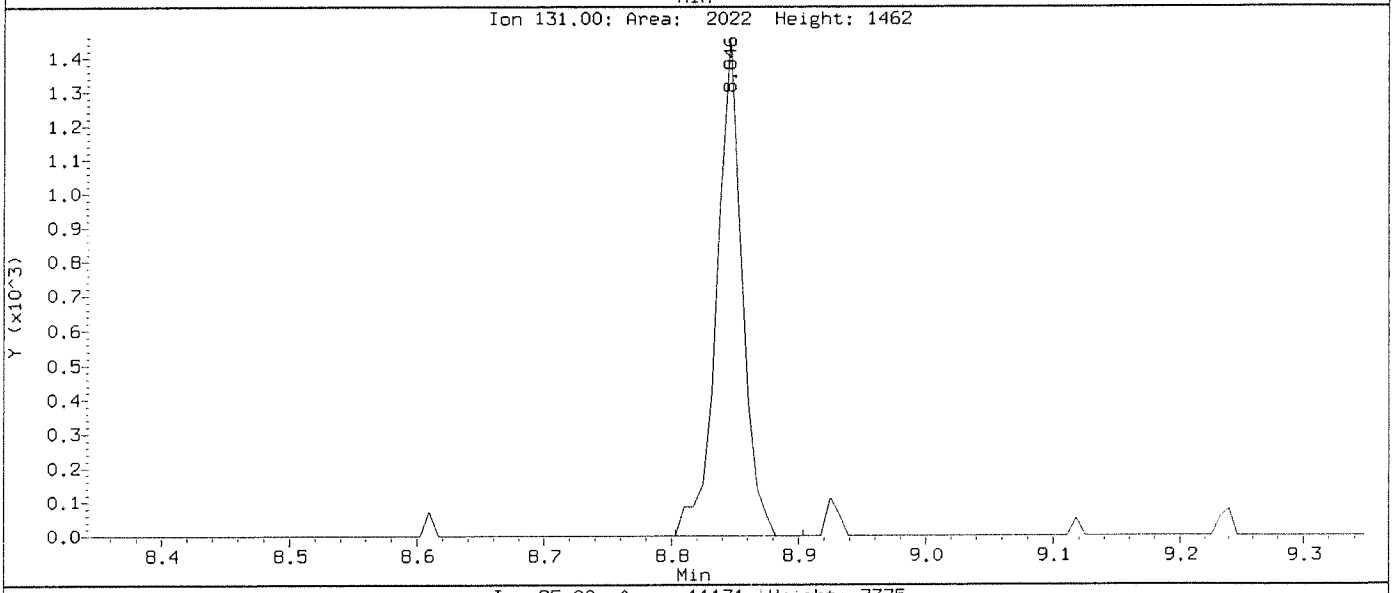

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Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

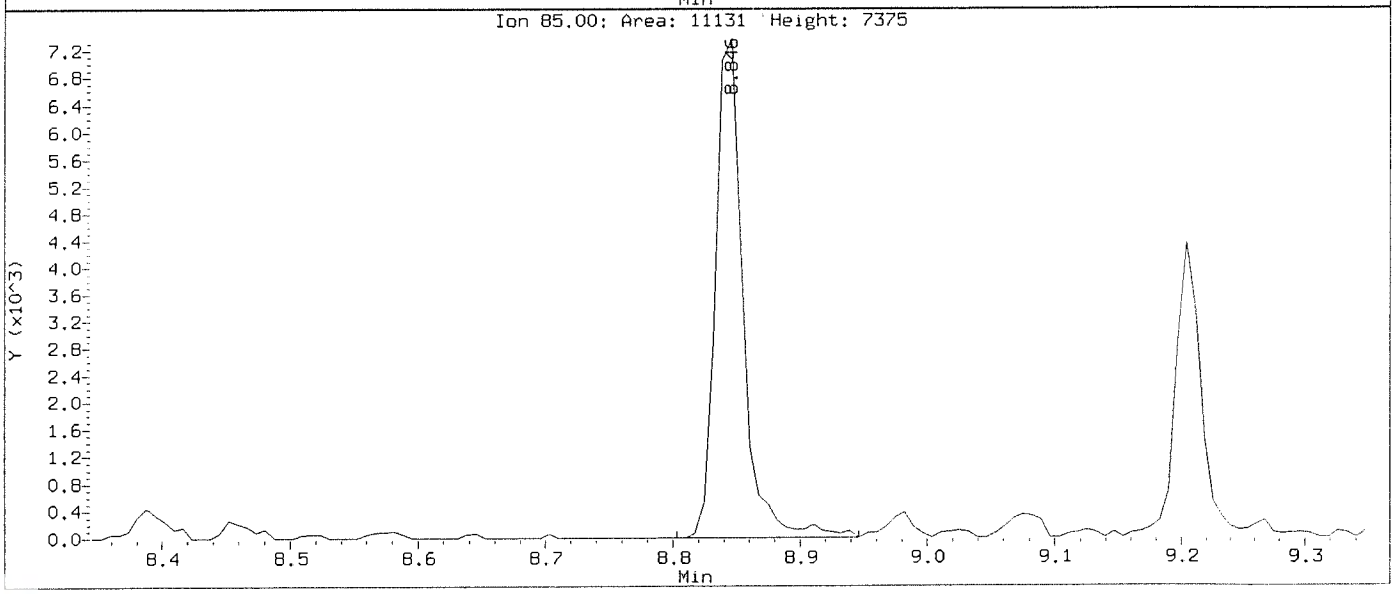
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

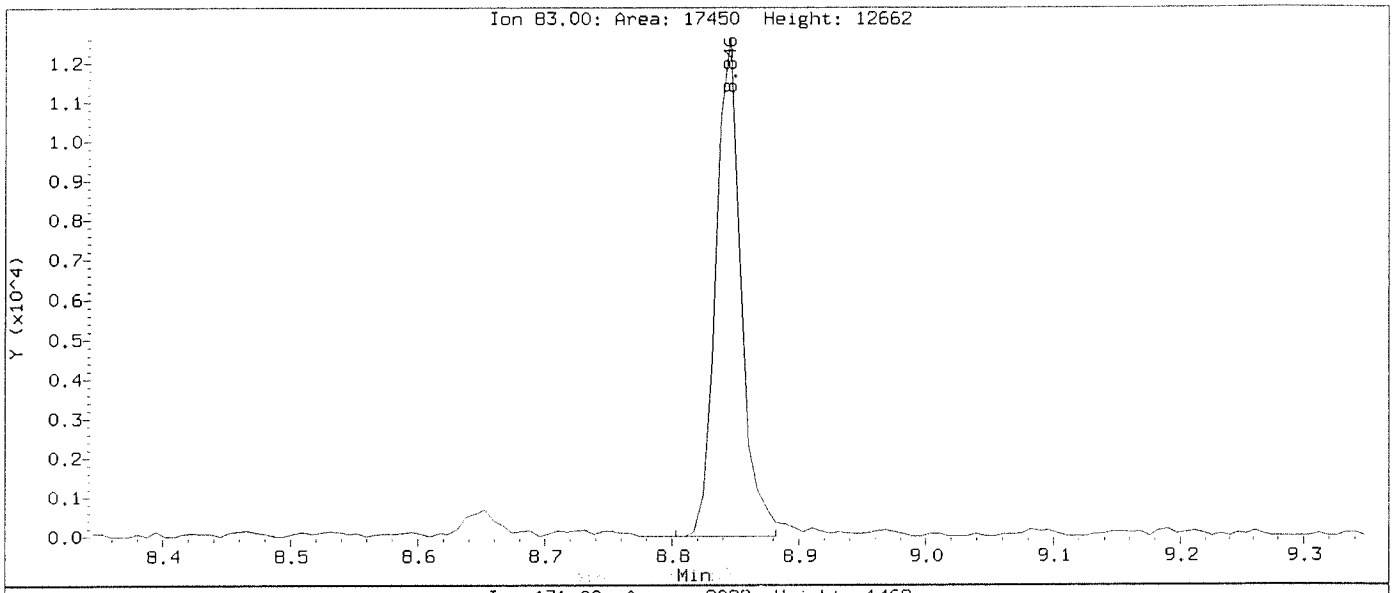


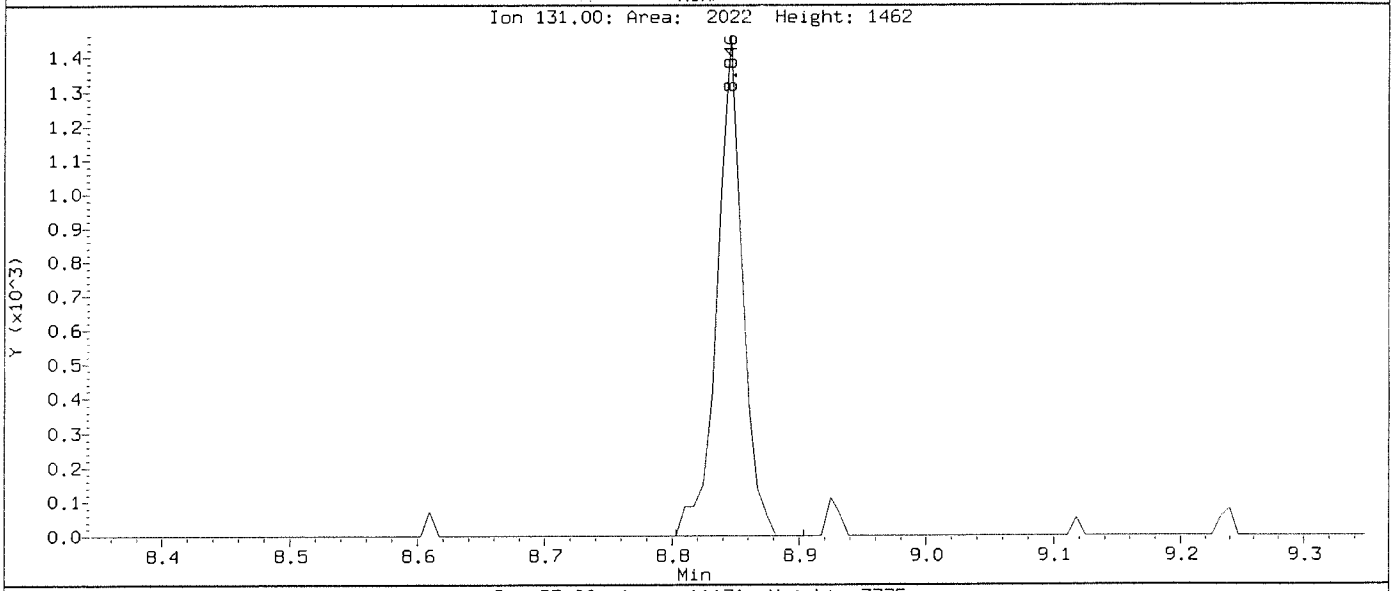



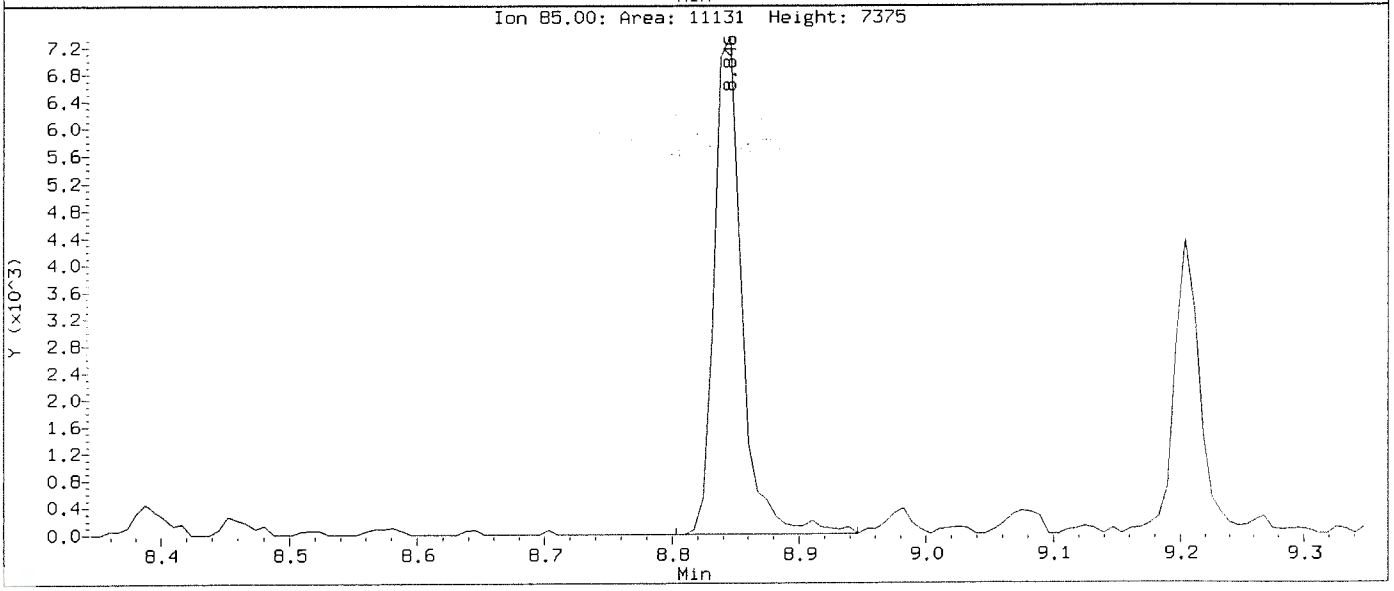



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

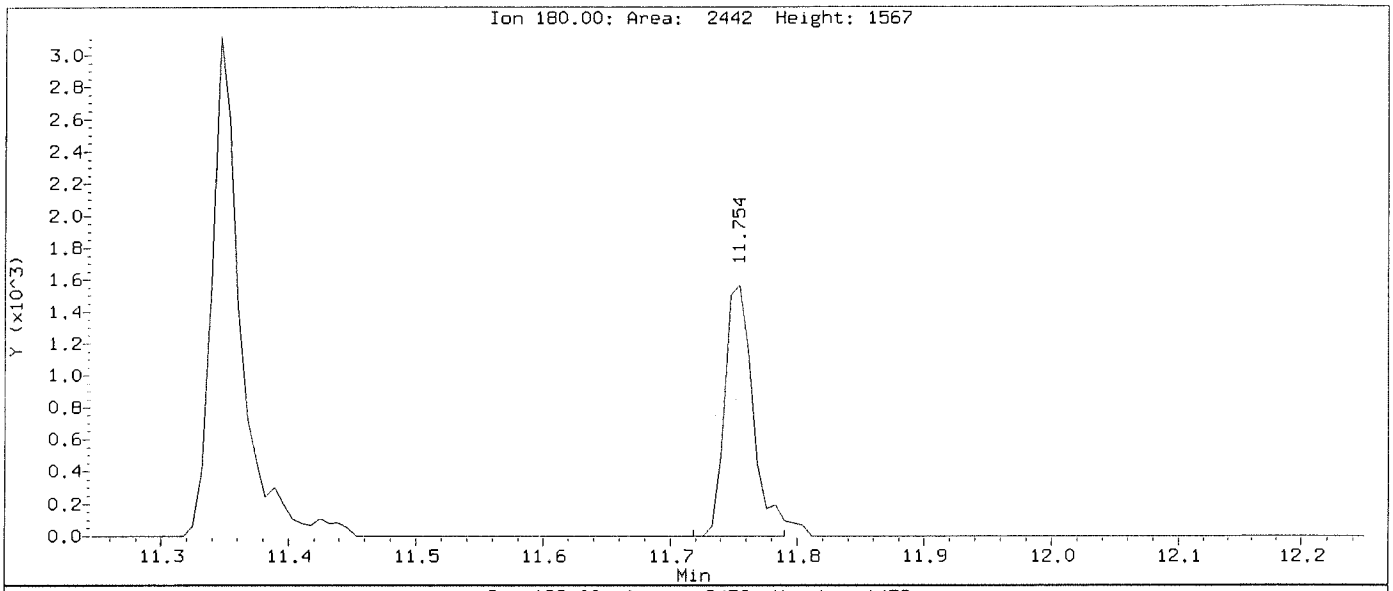


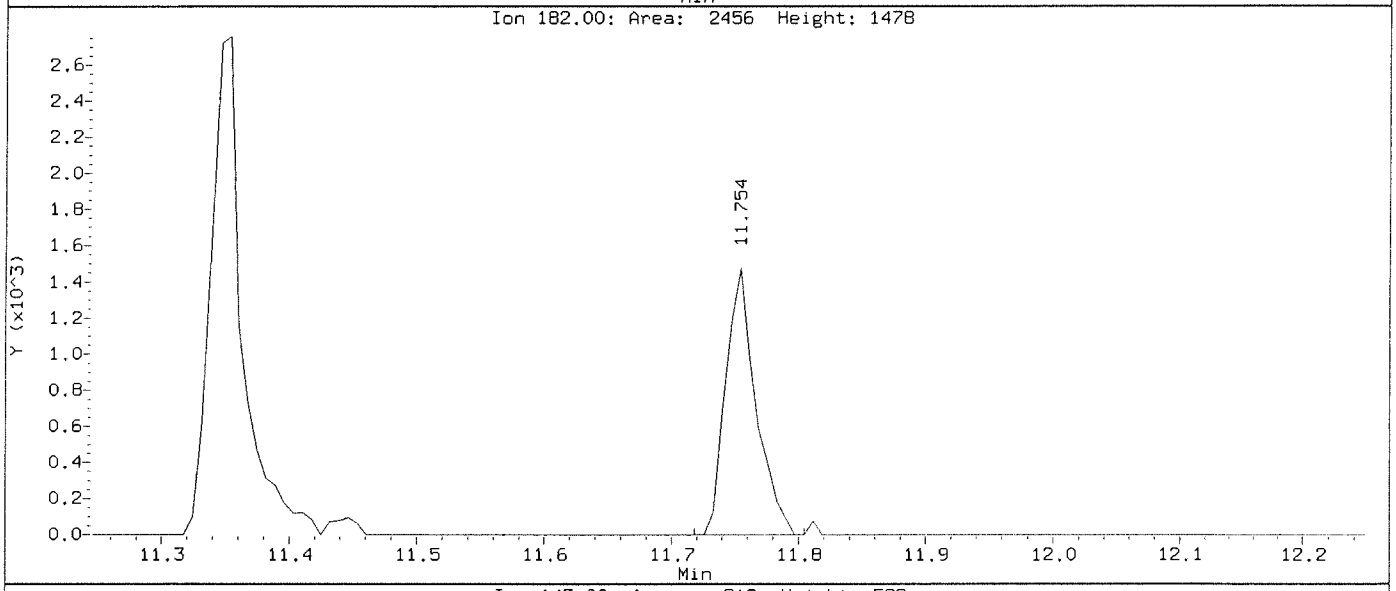



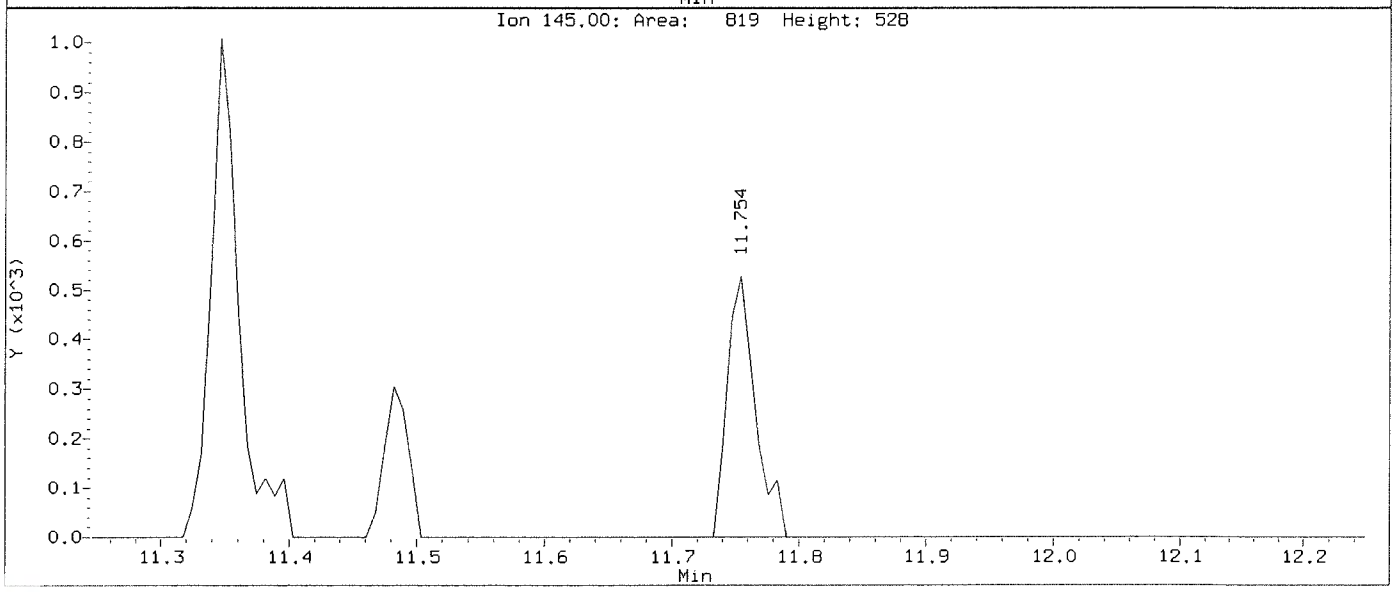



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

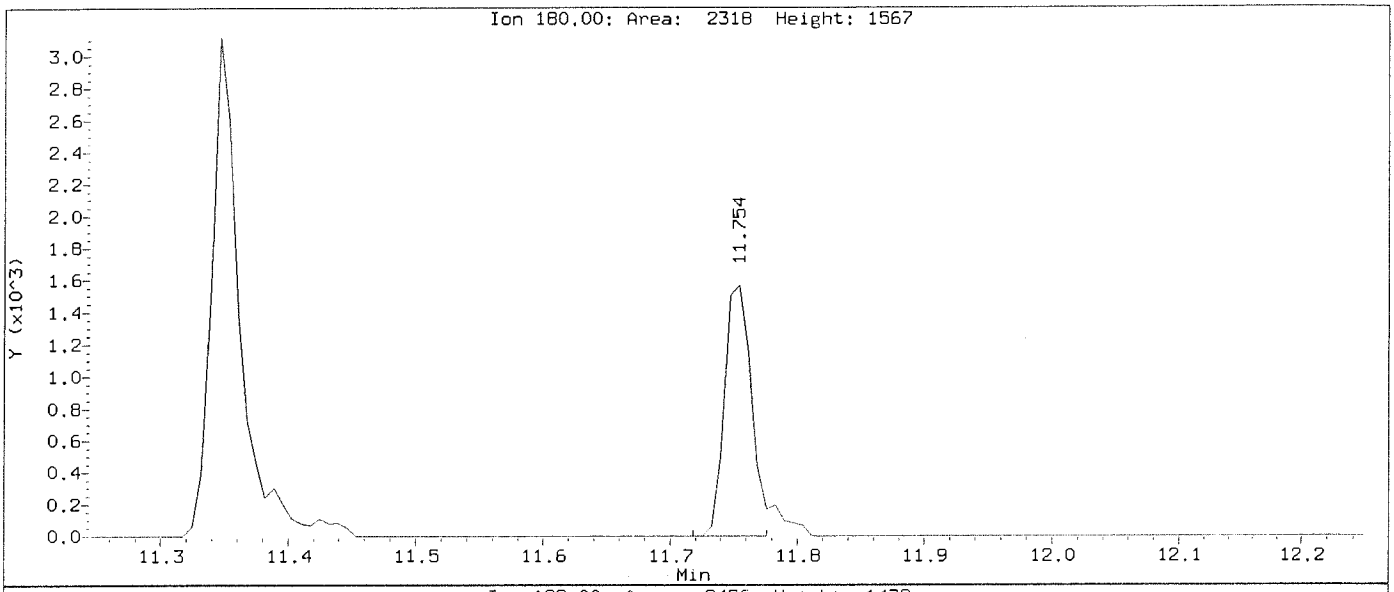


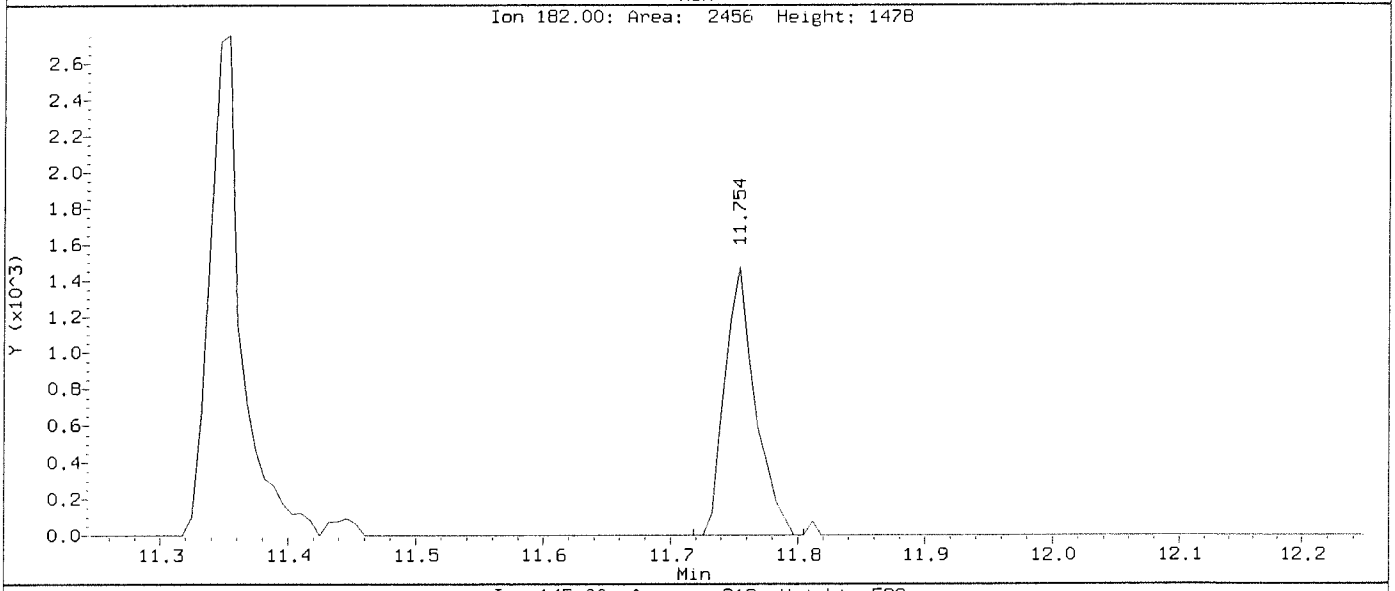



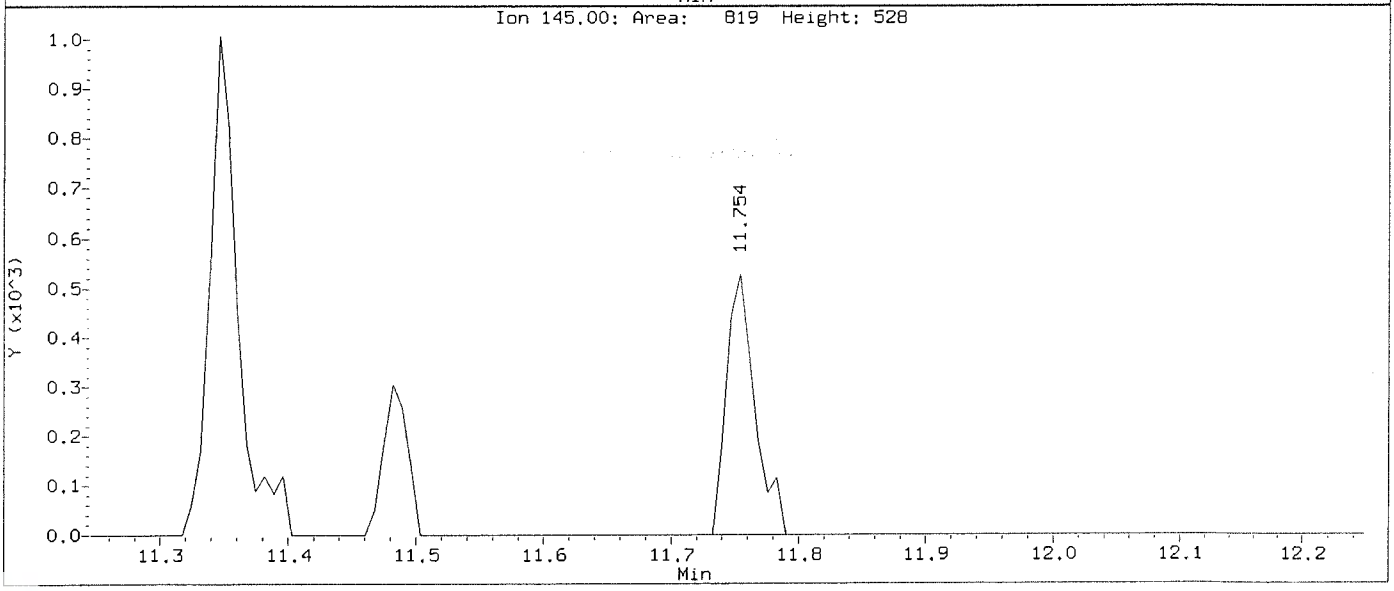



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

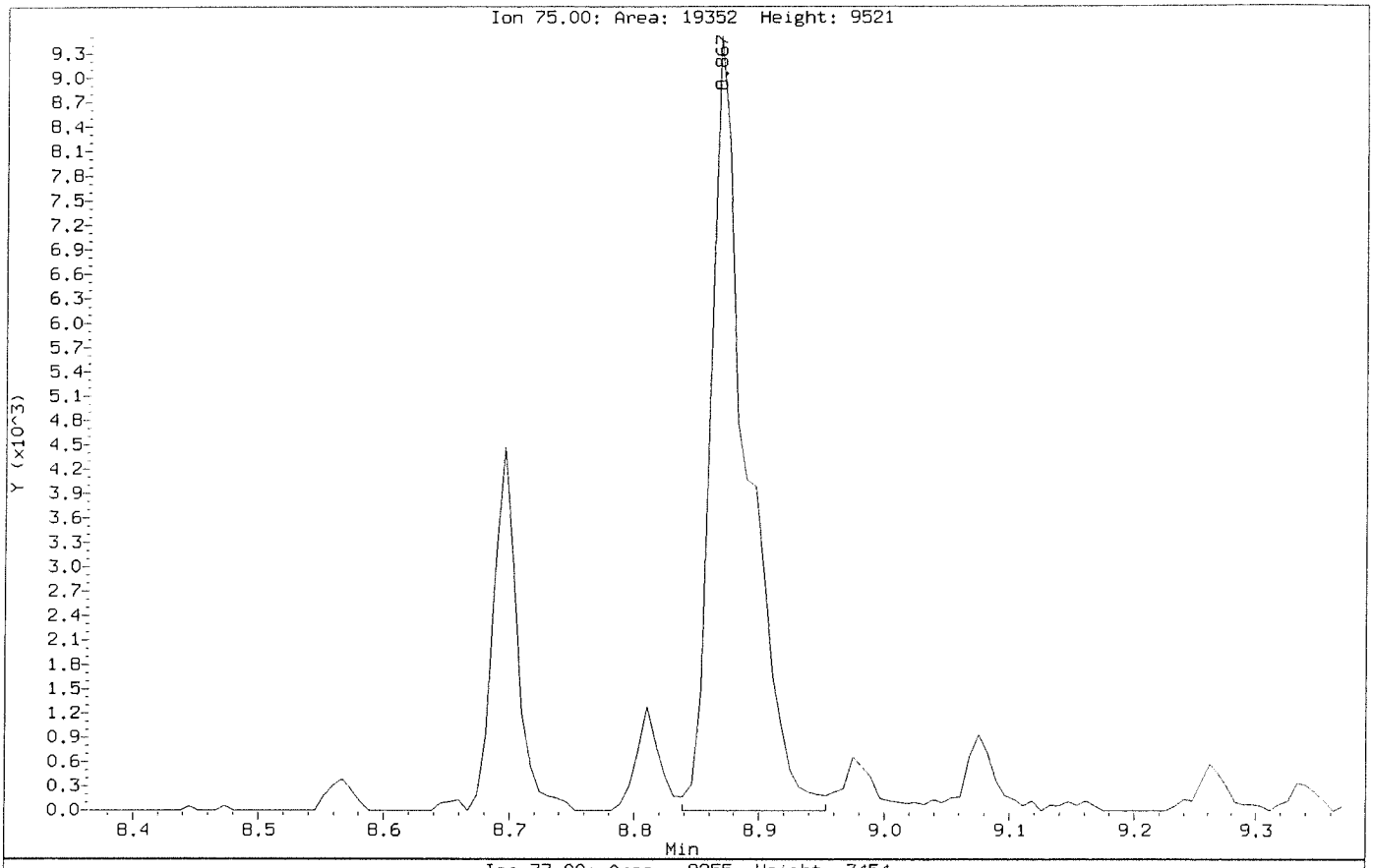


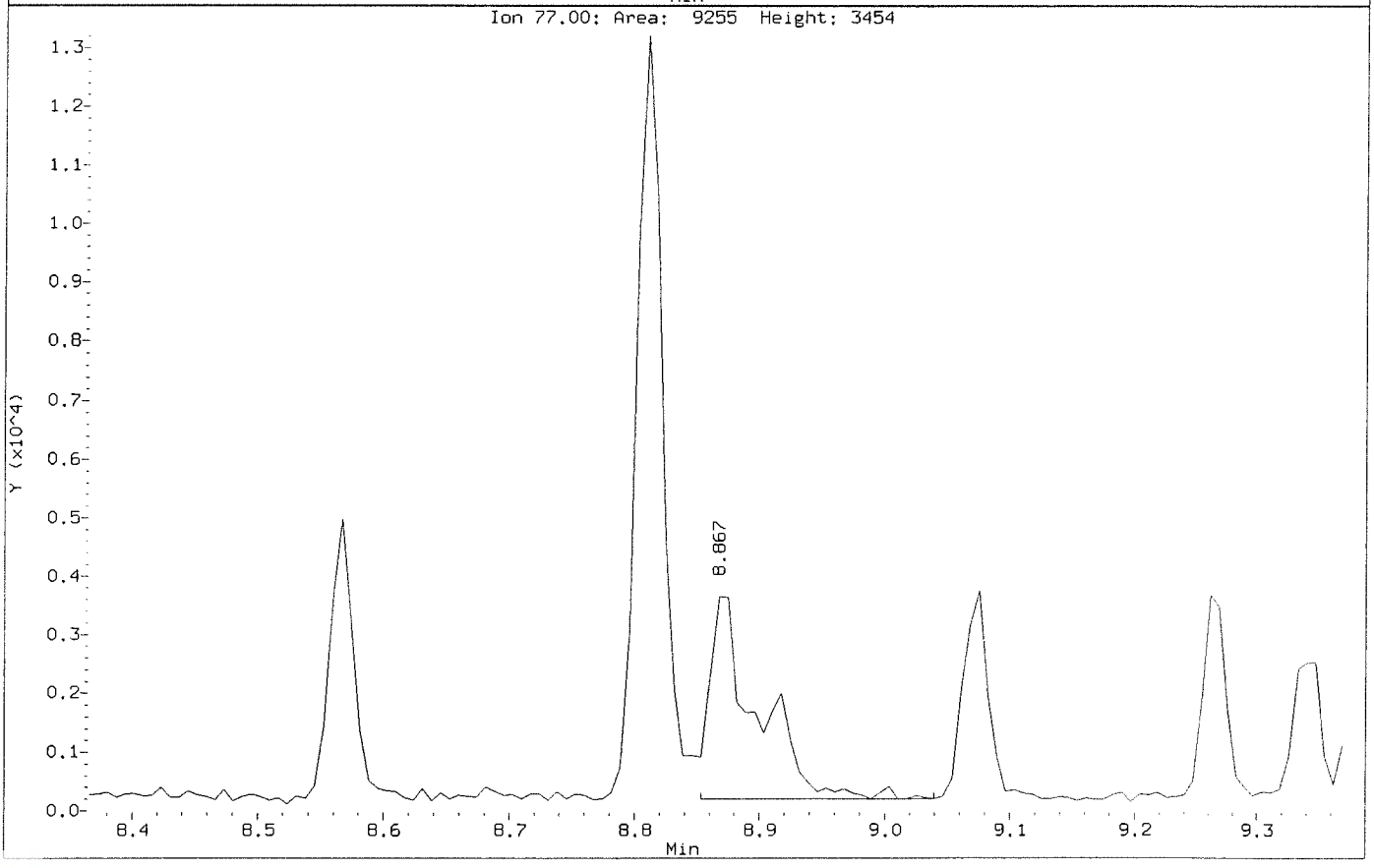



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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

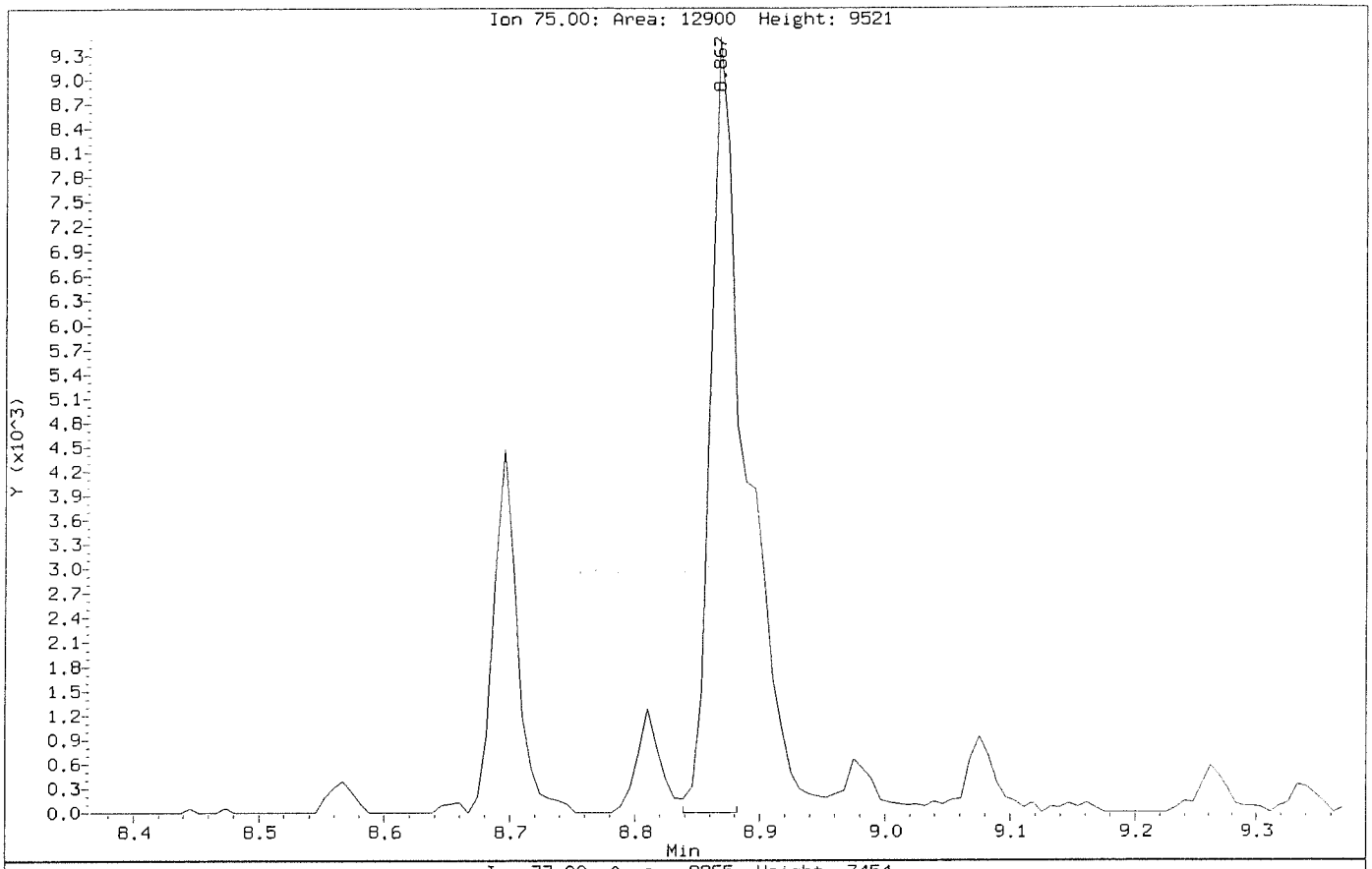
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

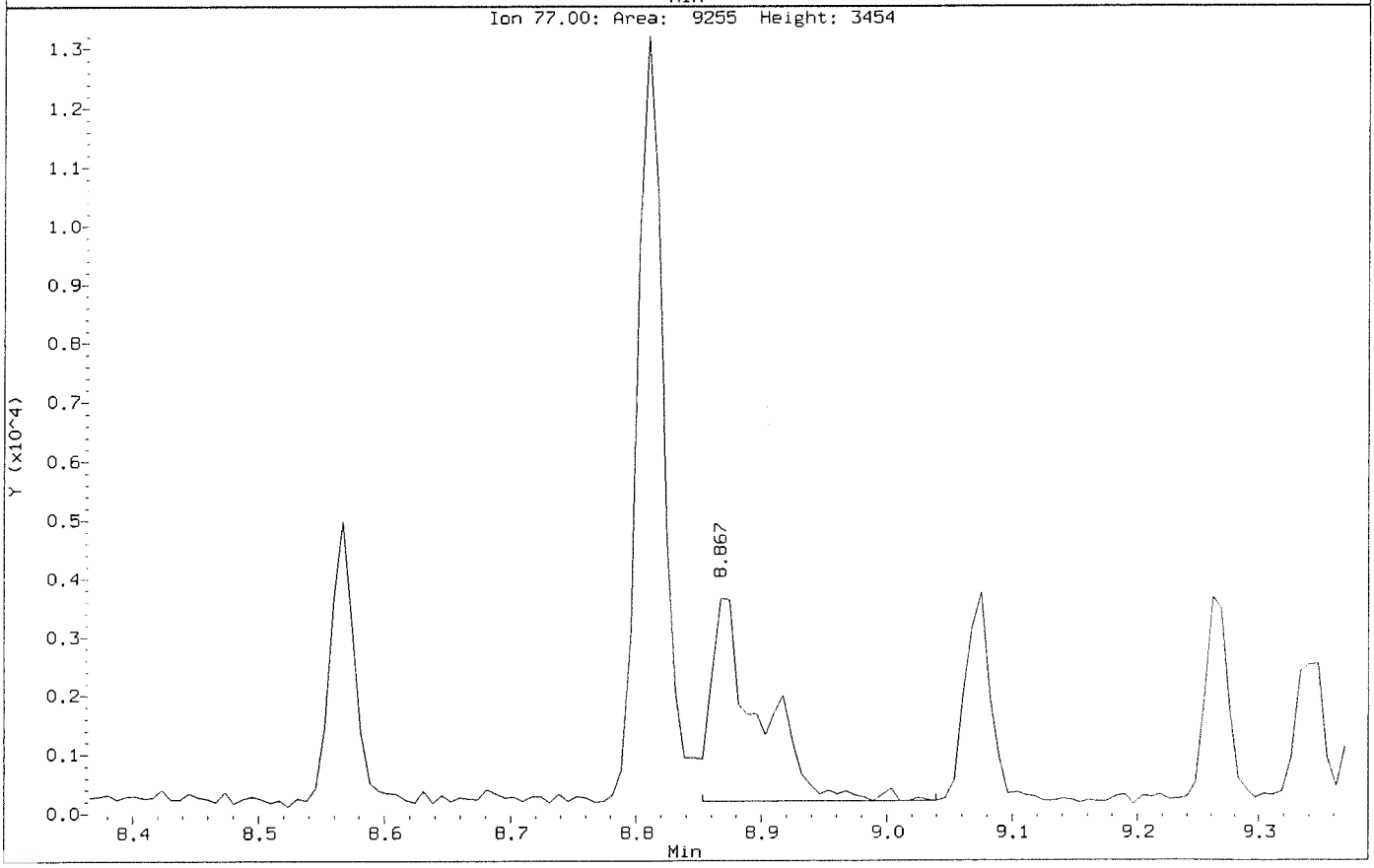


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Instrument: voa6.i
Client Sample ID: VSTD002

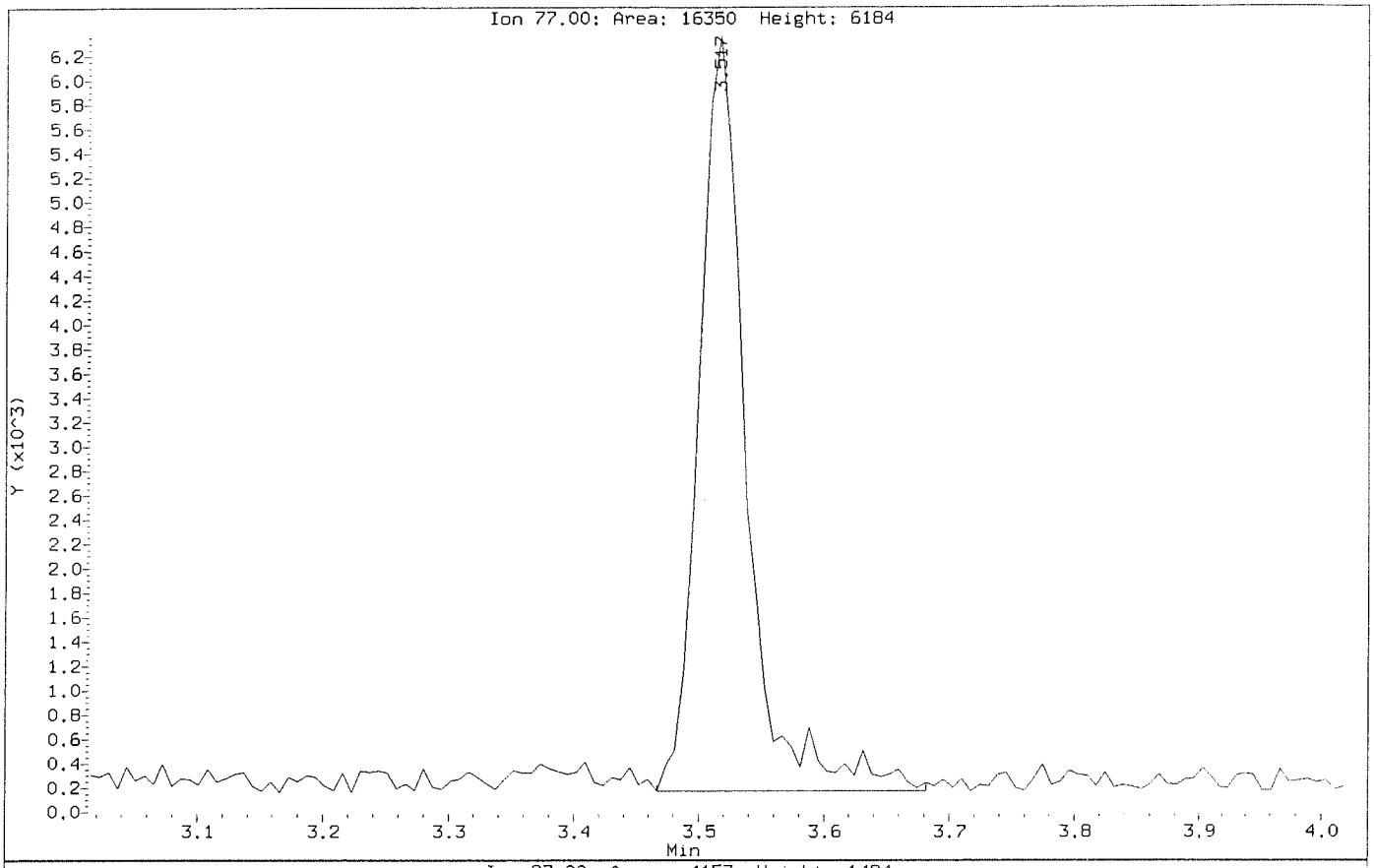
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

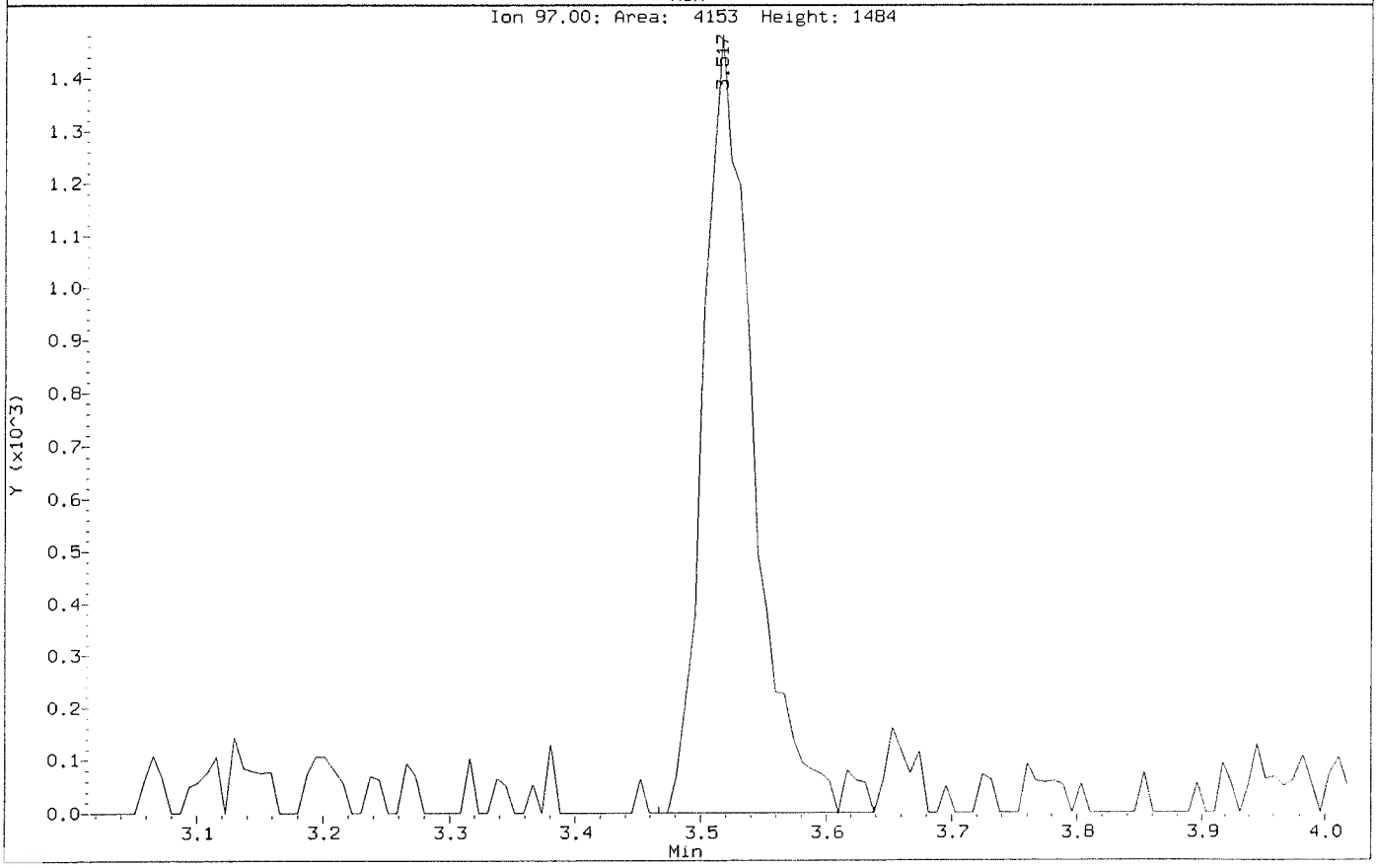


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

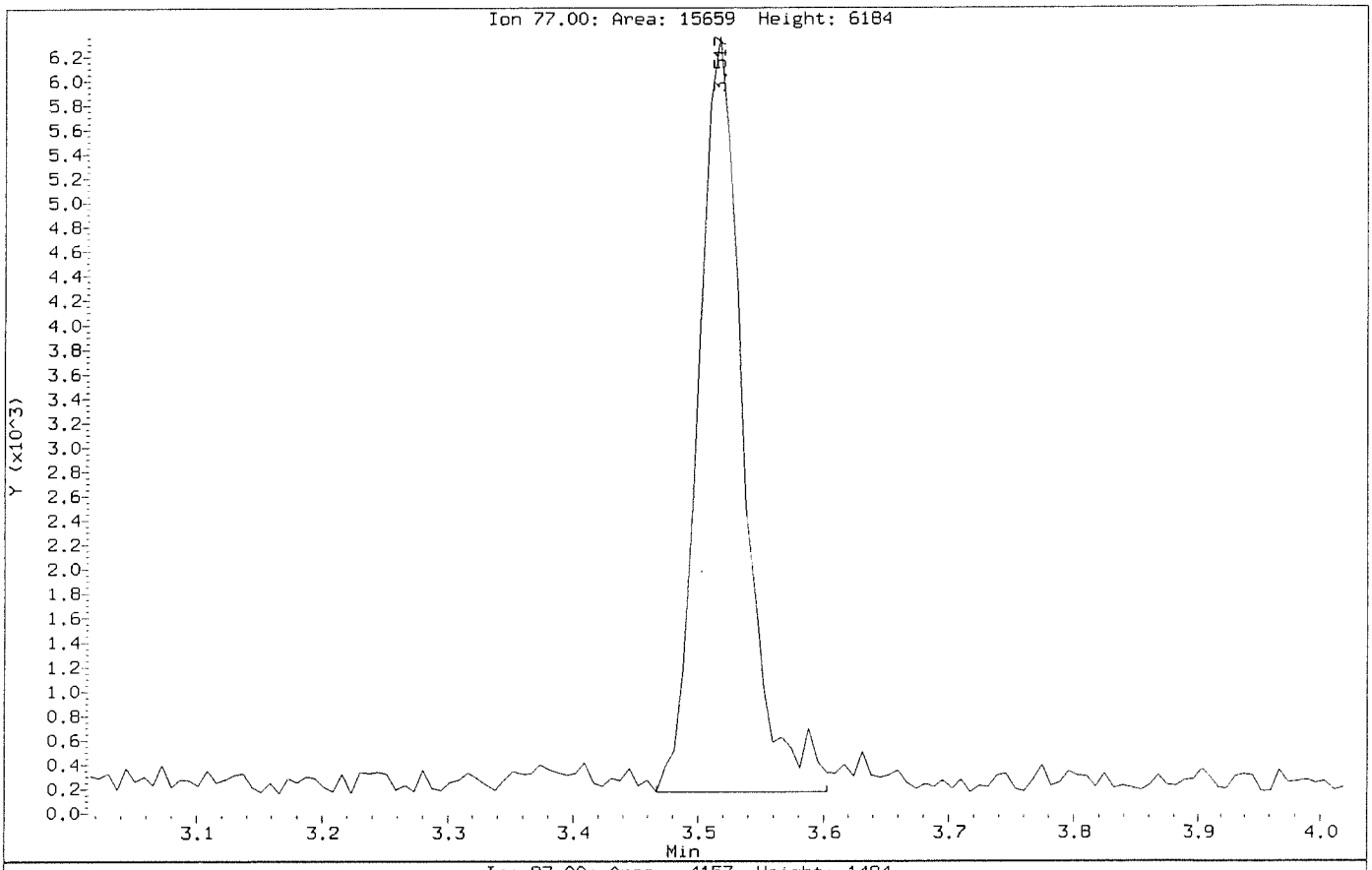
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

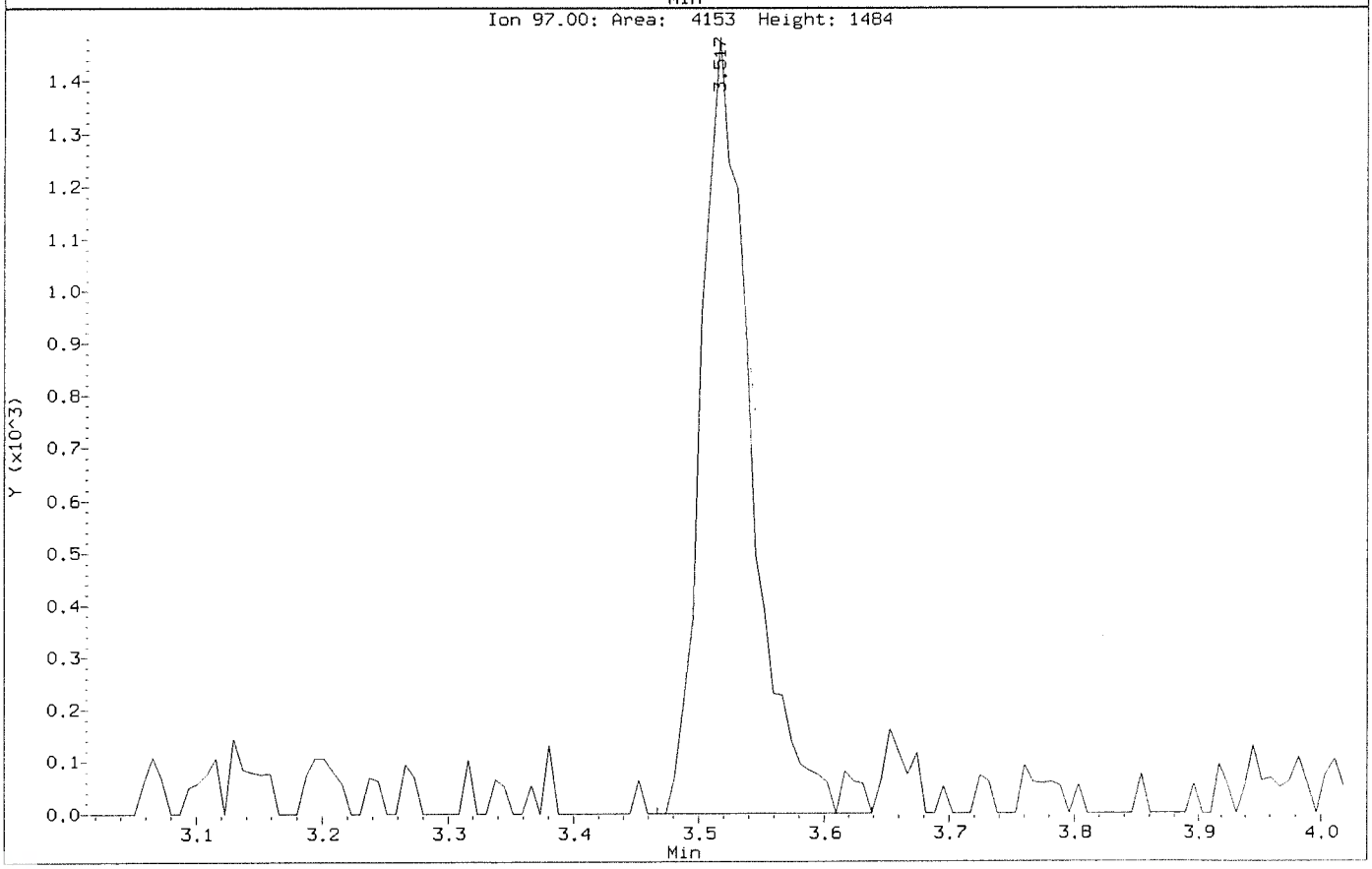


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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

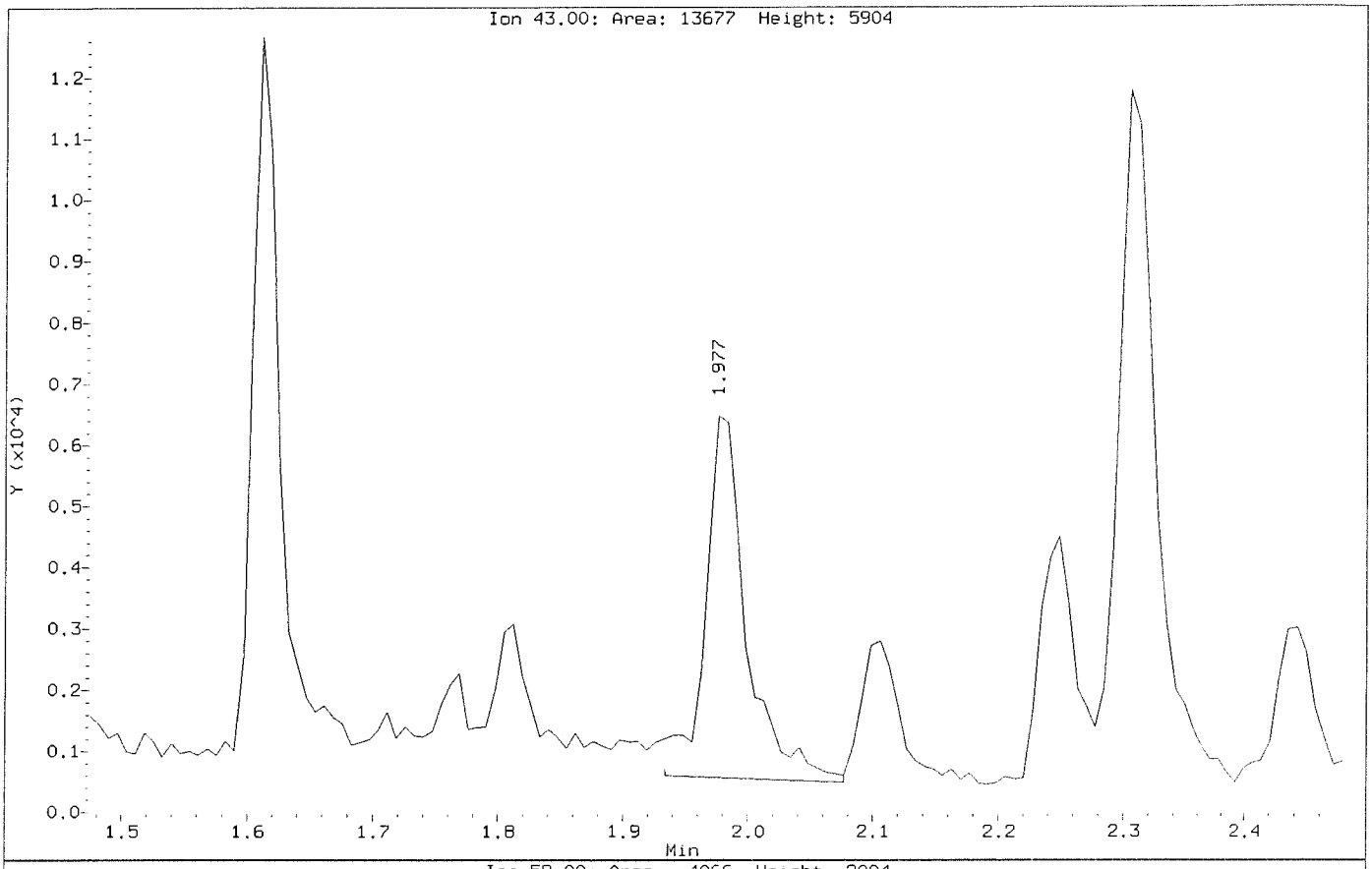
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

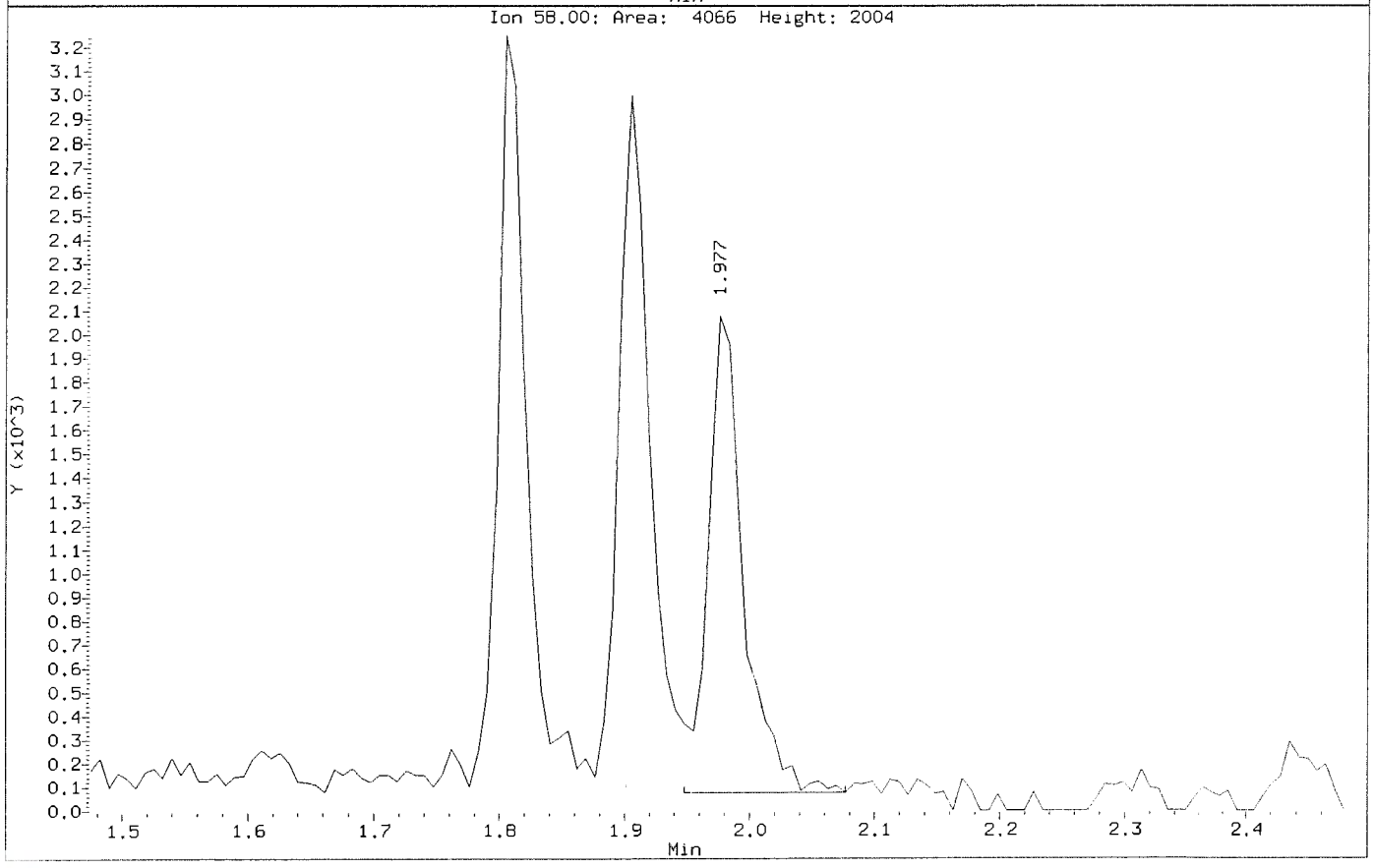


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Instrument: voa6.i
Client Sample ID: VSTD002

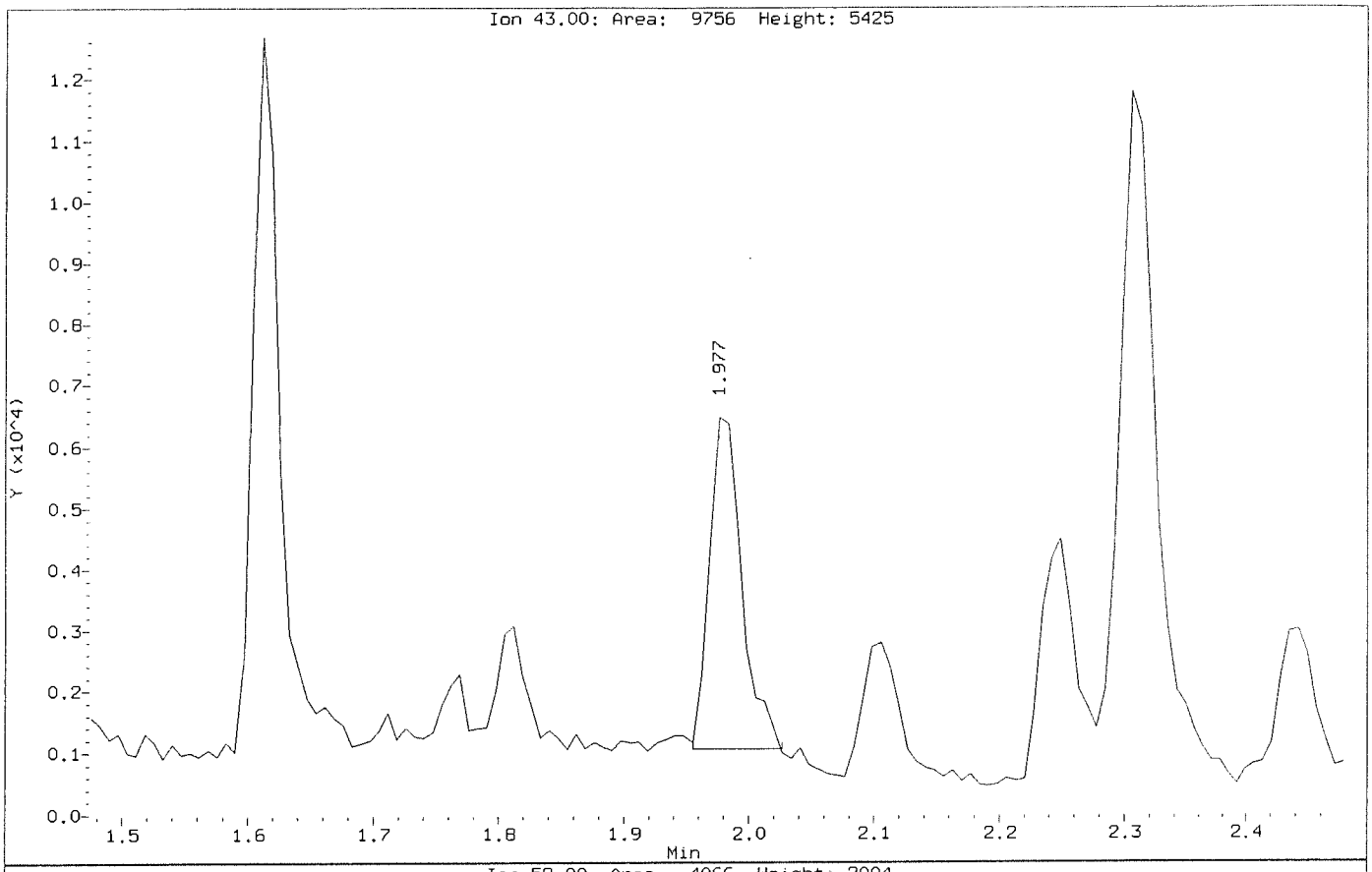
Compound: Acetone
CAS Number: 67-64-1

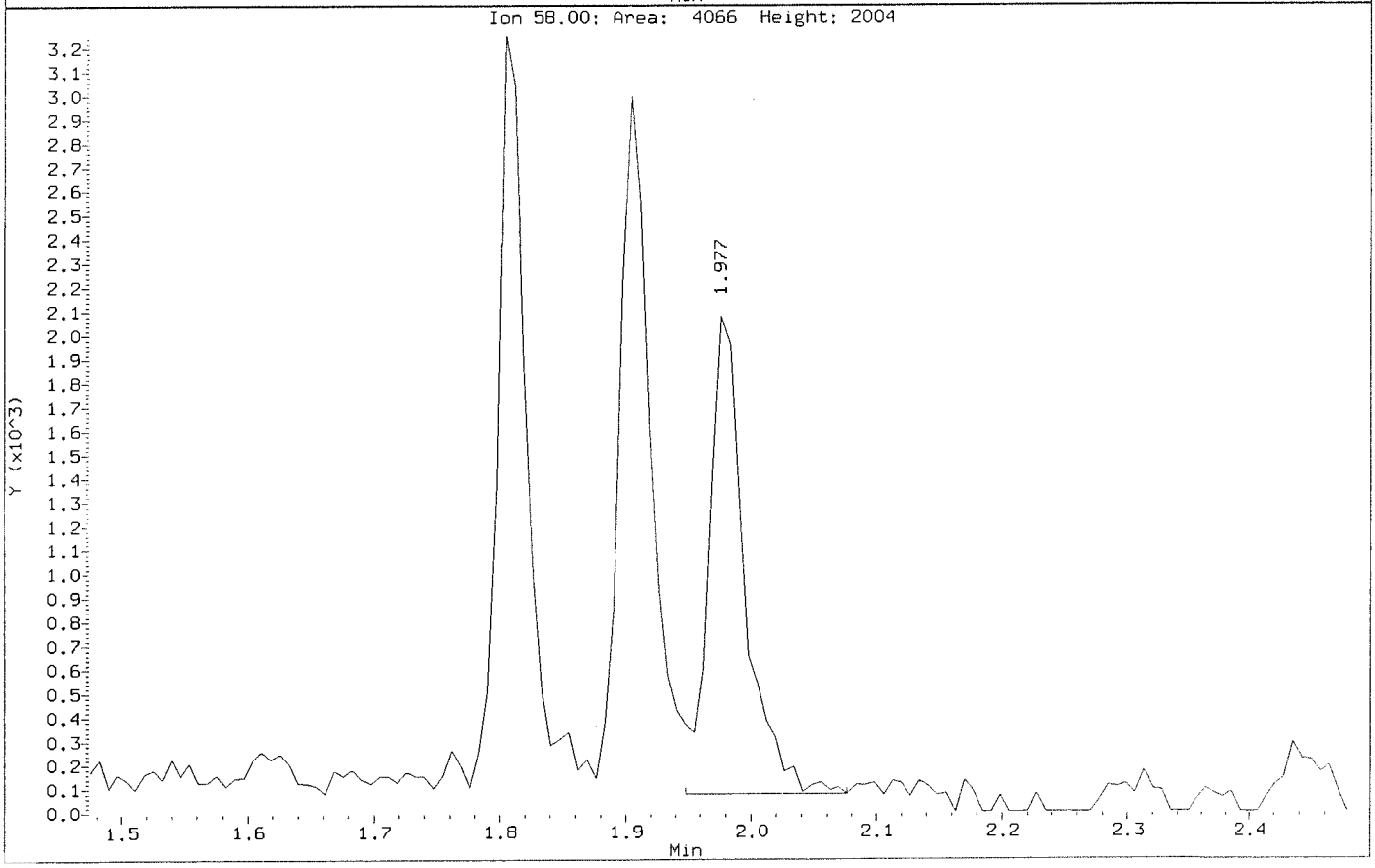


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Instrument: voa6.i
Client Sample ID: VSTD002

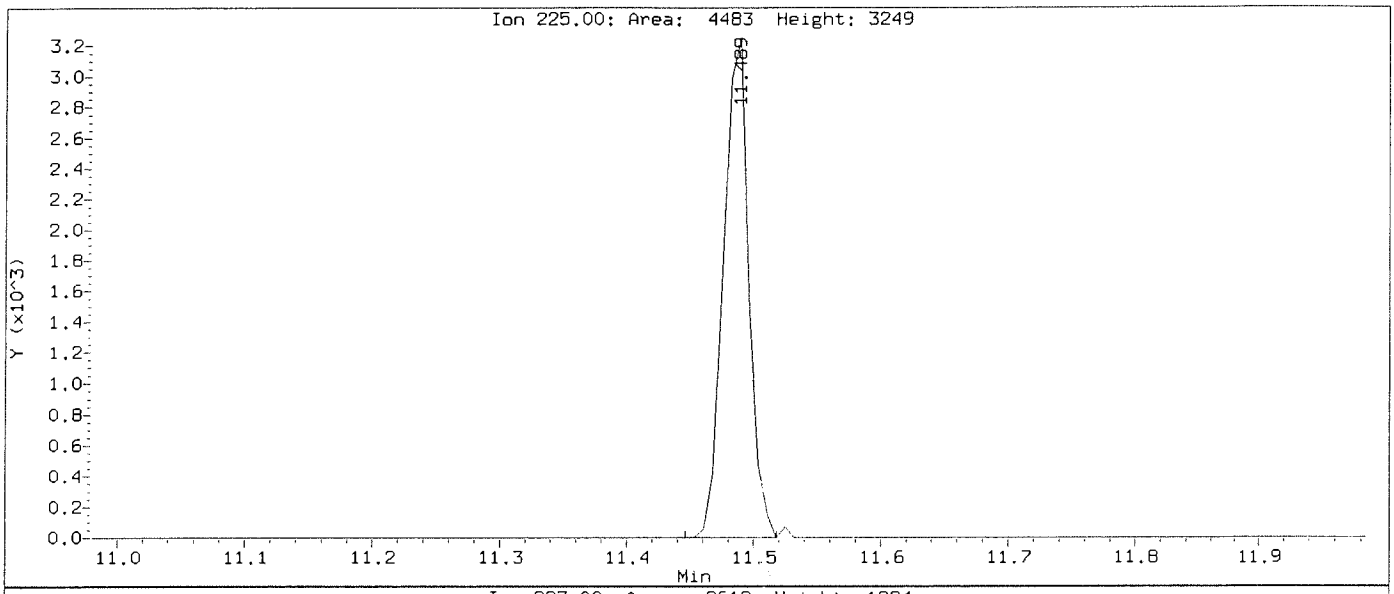
Compound: Acetone
CAS Number: 67-64-1

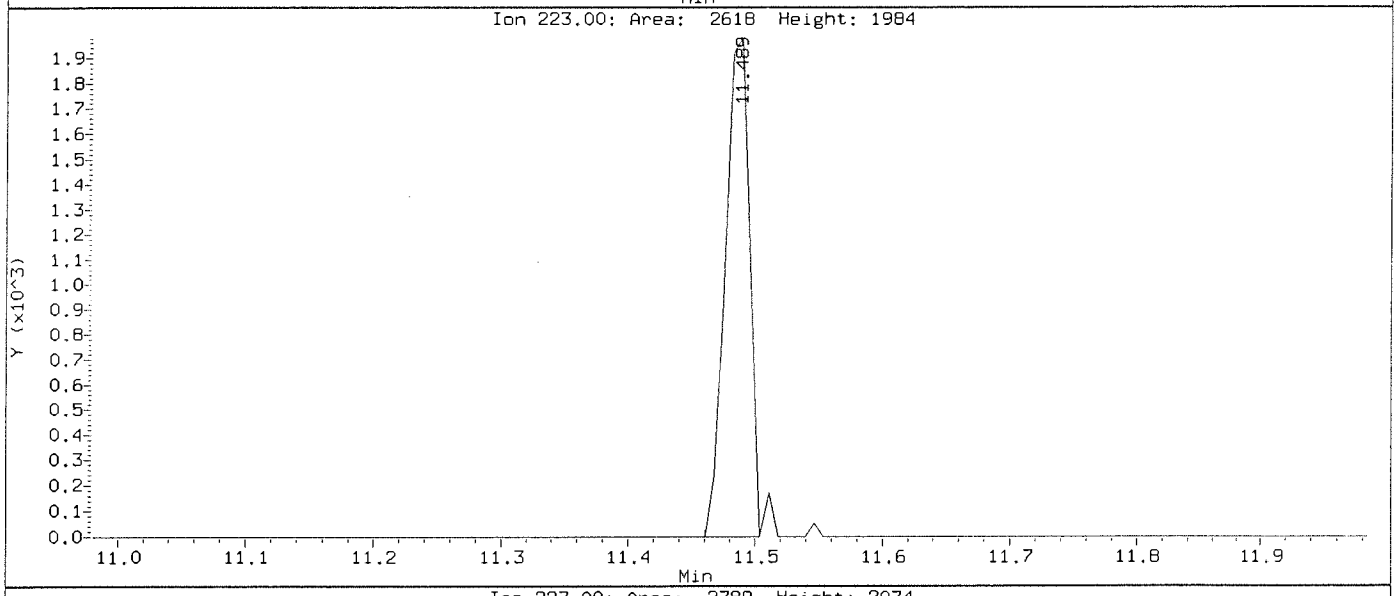


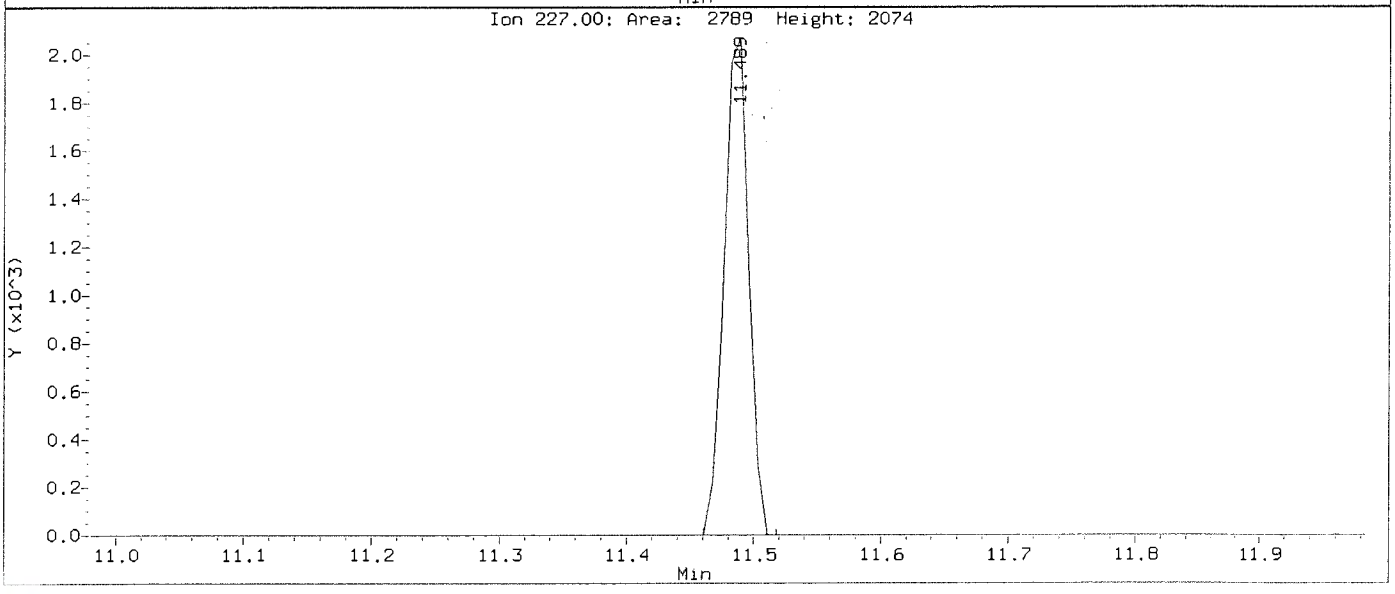



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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

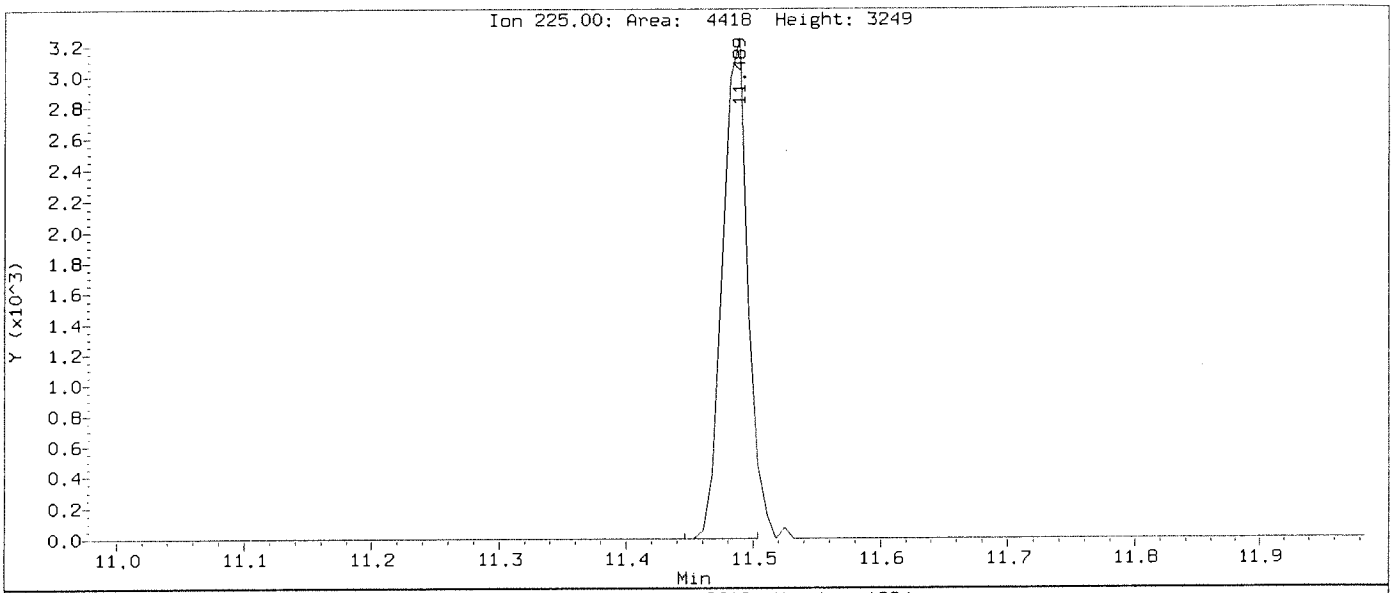


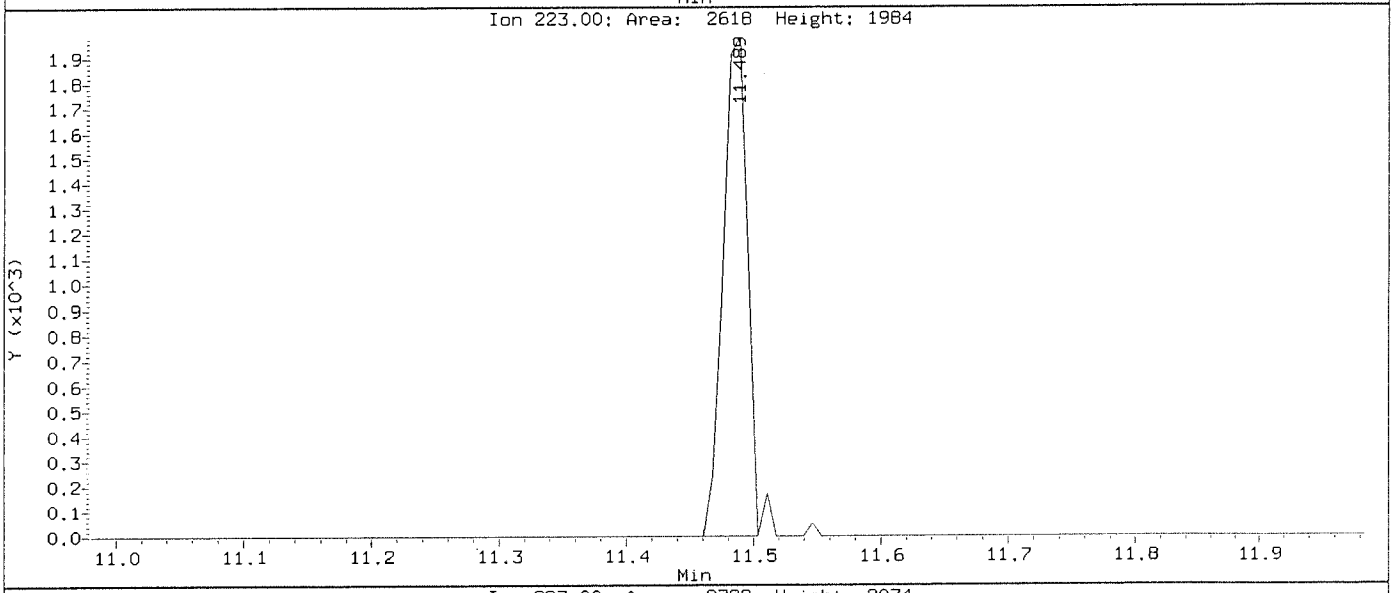



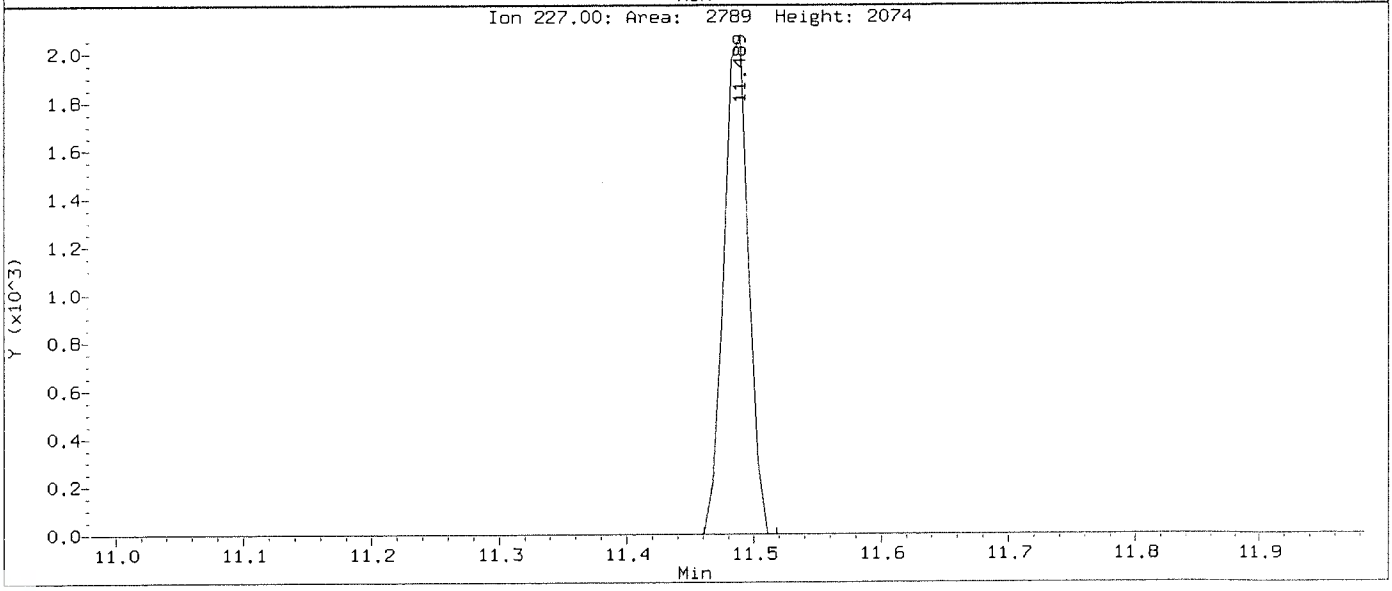



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

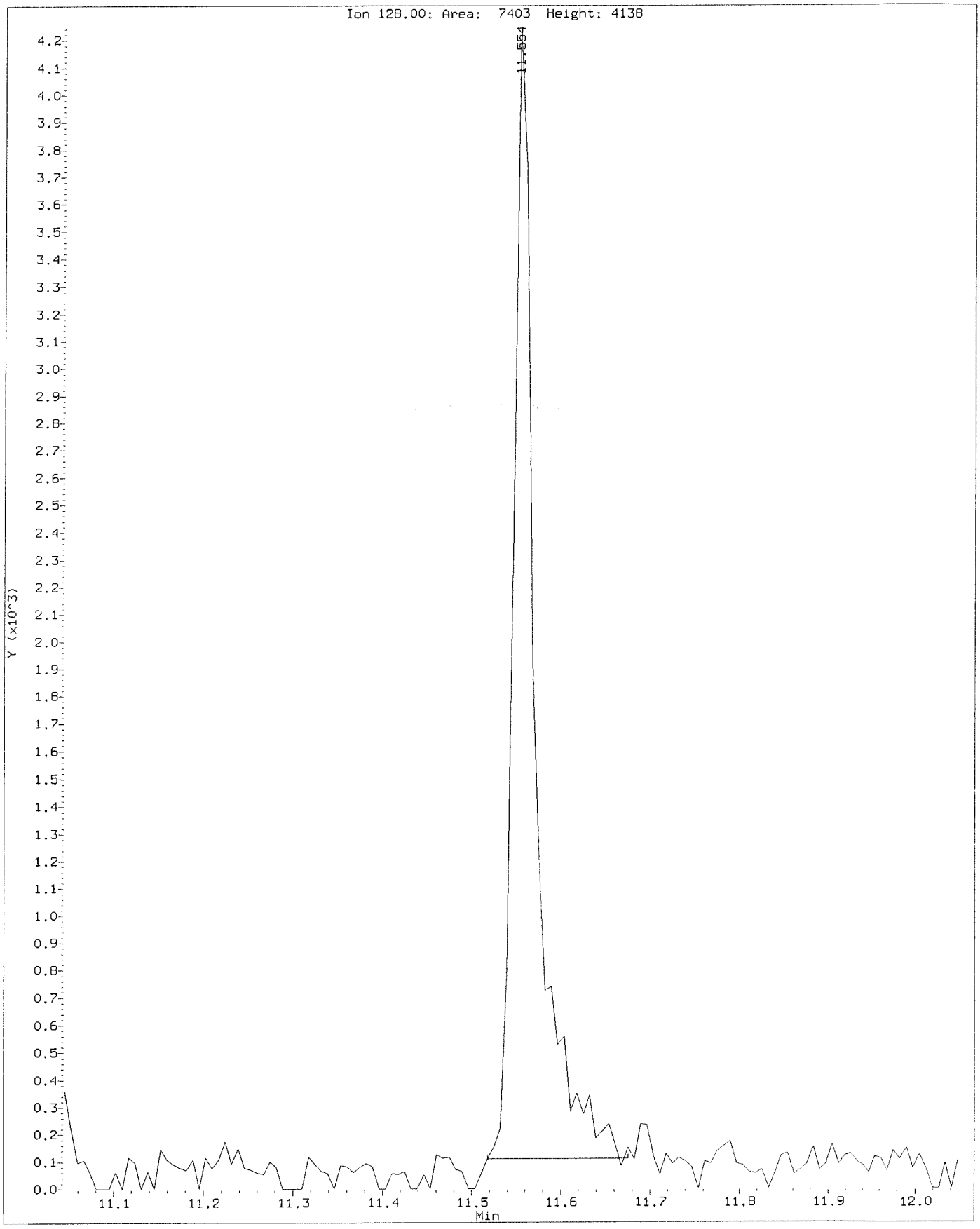


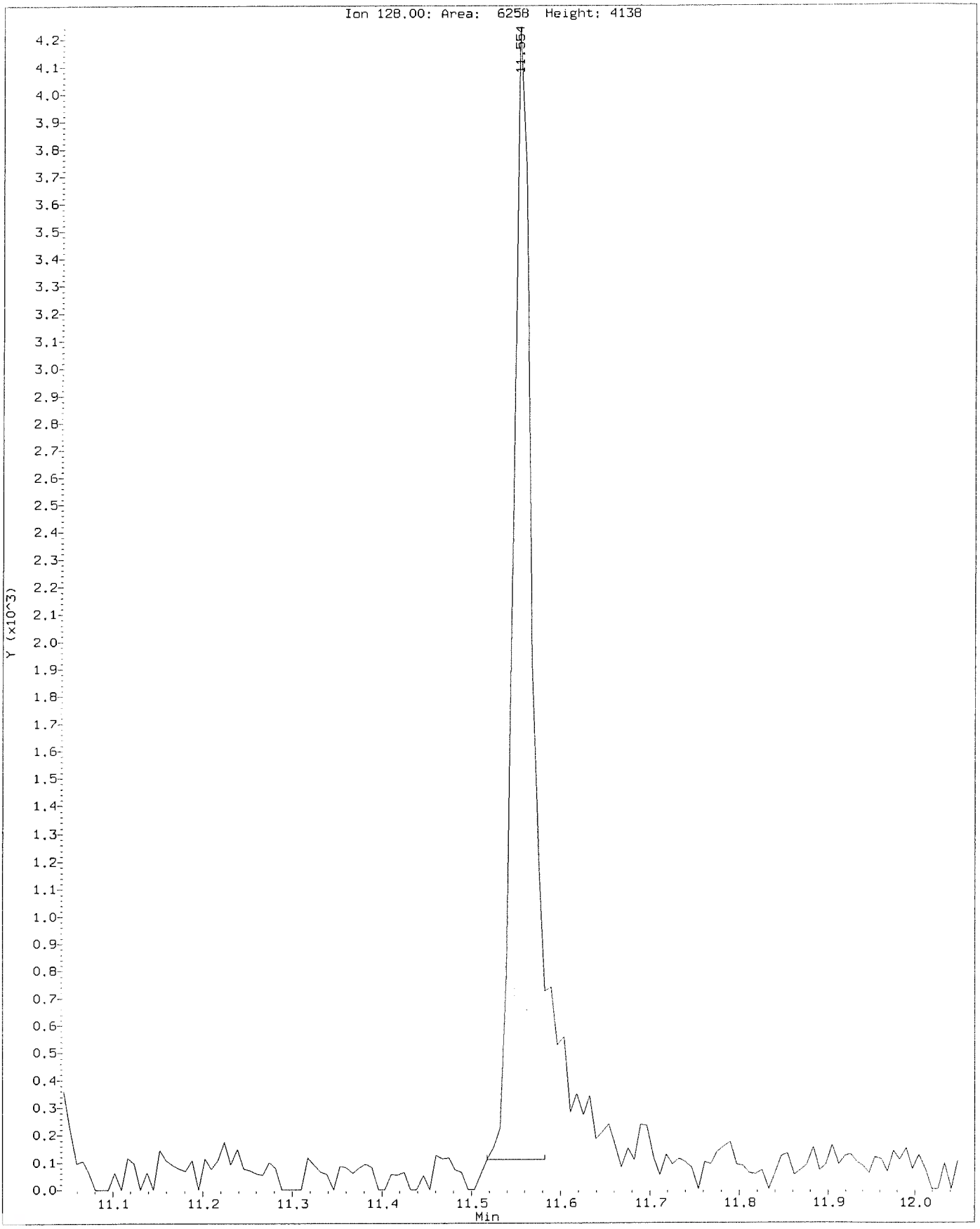
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Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080305.D
Injection Date: 03-AUG-2020 13:16
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-AUG-2020 13:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:16 Cal File: X080305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

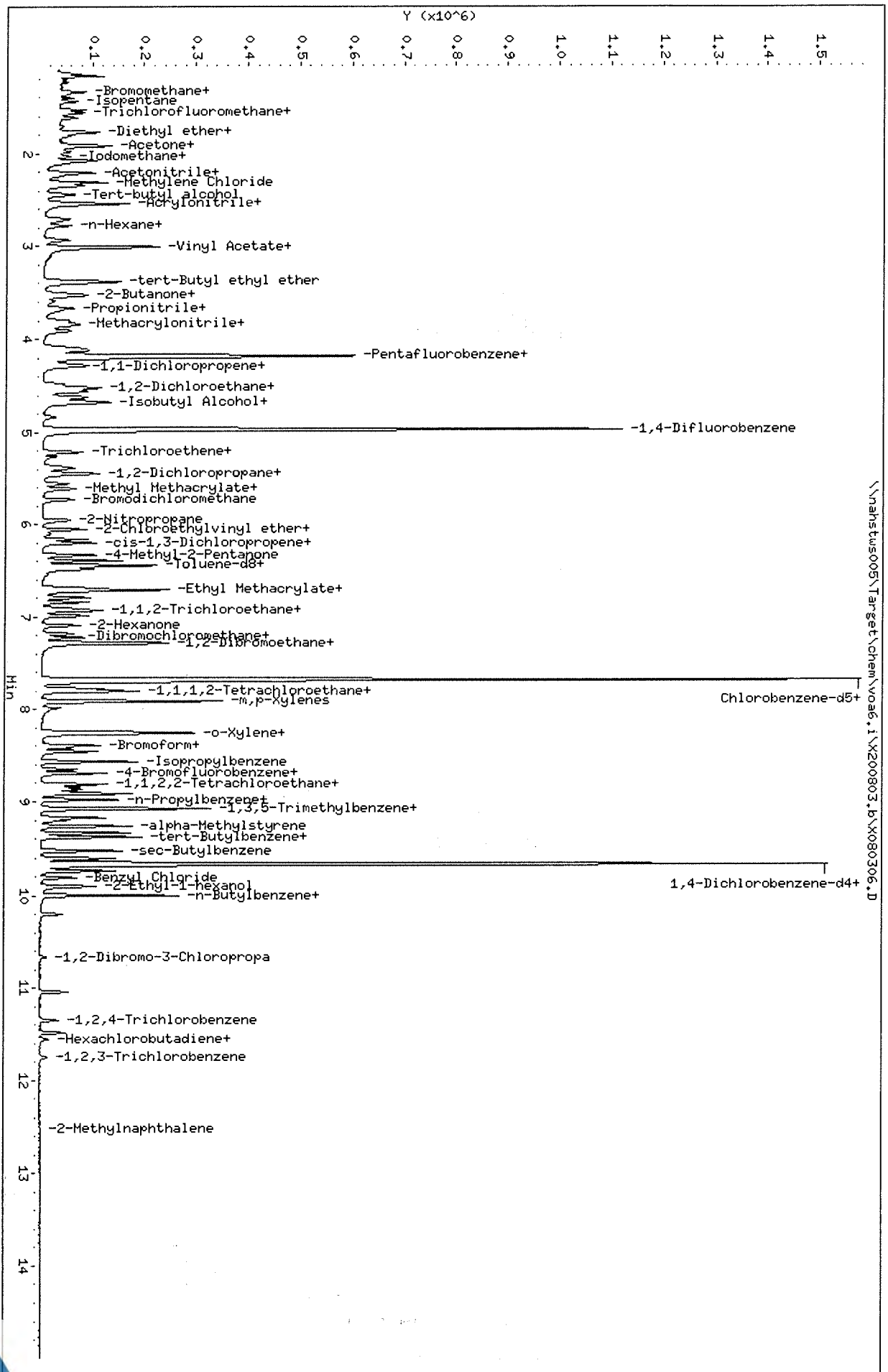
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 516466 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 799737 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 721427 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 341252 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.111 | 4.111 | (0.981) | 26560 | 5.00000 | 5.23 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 31226 | 5.00000 | 5.19 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 87842 | 5.00000 | 5.01 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 32773 | 5.00000 | 4.85(a) |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 26918 | 5.00000 | 4.90(a) |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 38495 | 5.00000 | 4.83(a) |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 30714 | 5.00000 | 5.92 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 20819 | 5.00000 | 5.07 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 51675 | 5.00000 | 5.12 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 18682 | 5.00000 | 4.56(a) |
| | 32 1,1-Dichloropropene | 75 | 4.290 | 4.290 | (0.863) | 29787 | 5.00000 | 4.43(a) |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.754 | 11.754 | (1.216) | 4970 | 5.00000 | 4.83(a) |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 24998 | 5.00000 | 5.00(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.345 | 11.345 | (1.173) | 11491 | 5.00000 | 5.47 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 87365 | 5.00000 | 4.79(a) |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.665 | 10.665 | (1.103) | 2687 | 5.00000 | 6.21 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 26427 | 5.00000 | 4.99(a) |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 47718 | 5.00000 | 4.94(a) |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 39206 | 5.00000 | 5.06 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 30120 | 5.00000 | 5.13 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 84150 | 5.00000 | 4.71(a) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 51371 | 5.00000 | 4.78(a) |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 41882 | 5.00000 | 5.16 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 50800 | 5.00000 | 4.78(a) |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 37924 | 5.00000 | 5.14 |
| 24 | 2-Butanone | 43 | 3.595 | 3.595 | (0.858) | 24626 | 10.0000 | 9.72 |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 73756 | 5.00000 | 4.98(a) |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 46666 | 10.0000 | 10.30 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 84320 | 5.00000 | 4.89(a) |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 82617 | 5.00000 | 4.37(a) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 67354 | 10.0000 | 10.08 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 22417 | 10.0000 | 11.51 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 96422 | 5.00000 | 4.85(a) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 32917 | 5.00000 | 4.93(a) |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 14966 | 5.00000 | 4.80(a) |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 34225 | 5.00000 | 4.75(a) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 19261 | 5.00000 | 4.81(a) |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 19557 | 5.00000 | 6.08 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 115343 | 10.0000 | 9.07 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 32904 | 5.00000 | 4.60(a) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 69656 | 5.00000 | 4.92(a) |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 16878 | 5.00000 | 4.61(a) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 45810 | 5.00000 | 4.96(a) |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 36080 | 5.00000 | 4.97(a) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.538 | 3.538 | (0.844) | 28232 | 5.00000 | 4.96(a) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 41664 | 5.00000 | 4.94(a) |
| 55 | Dibromochloromethane | 129 | 7.184 | 7.184 | (0.937) | 28435 | 5.00000 | 4.92(a) |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 17438 | 5.00000 | 5.01 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 20209 | 5.00000 | 3.99(a) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 34866 | 5.00000 | 4.77(a) |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 8440 | 5.00000 | 4.60(a) |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 99162 | 5.00000 | 4.62(a) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 85878 | 10.0000 | 9.74 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 36047 | 5.00000 | 5.57 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 63779 | 5.00000 | 4.22(a) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 111502 | 5.00000 | 4.53(a) |
| 92 | Naphthalene | 128 | 11.553 | 11.553 | (1.195) | 16632 | 5.00000 | 6.16 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 42060 | 5.00000 | 4.85(a) |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 89332 | 5.00000 | 4.30(a) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 74772 | 5.00000 | 4.97(a) |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 69721 | 5.00000 | 4.50(a) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 21403 | 5.00000 | 4.66(a) |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 104074 | 5.00000 | 4.93(a) |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 23352 | 5.00000 | 4.82(a) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.689 | 6.689 | (1.346) | 38875 | 5.00000 | 5.03 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 27117 | 5.00000 | 4.78(a) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 33185 | 5.00000 | 4.36(a) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 28782 | 5.00000 | 4.32(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

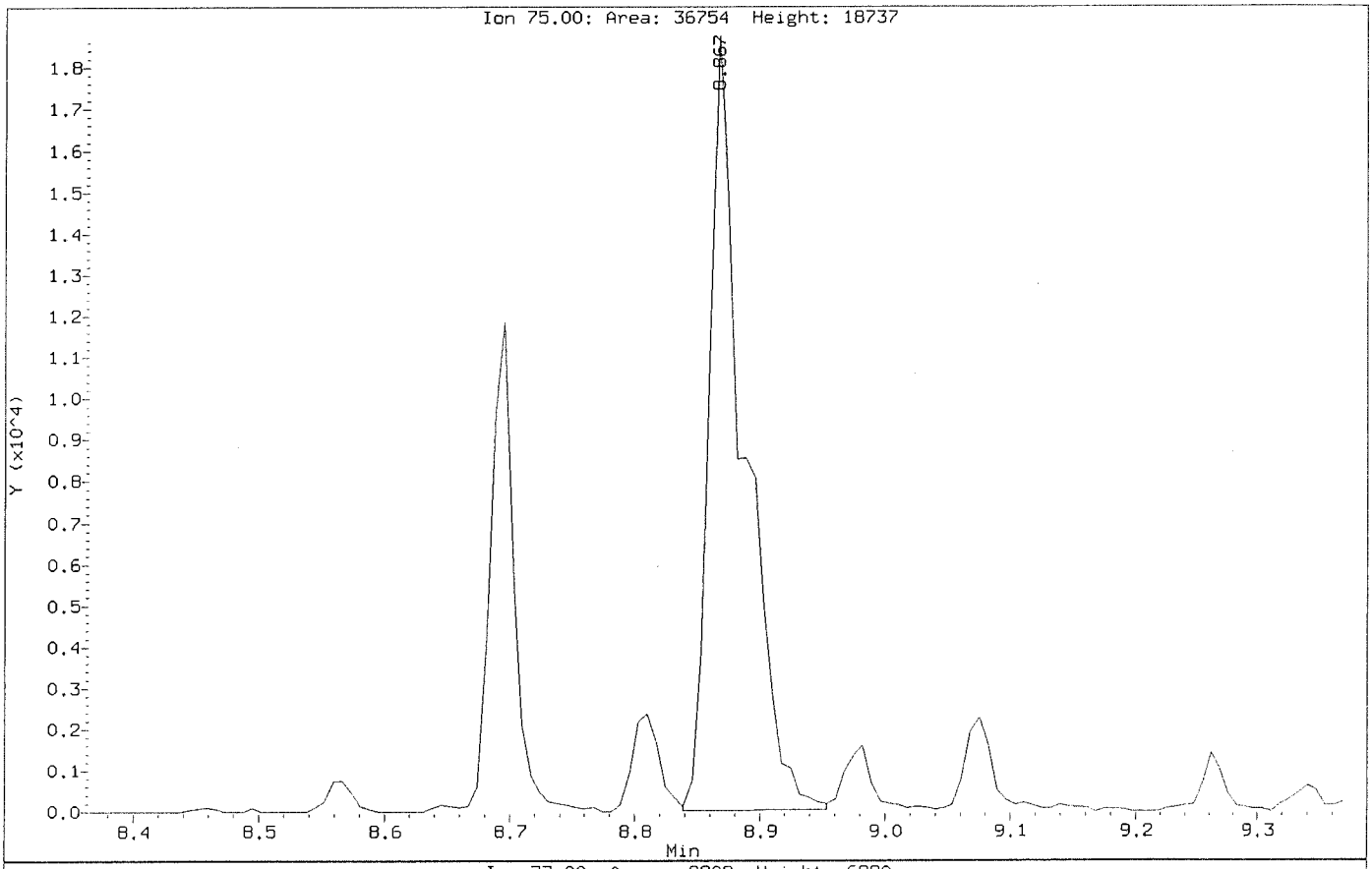


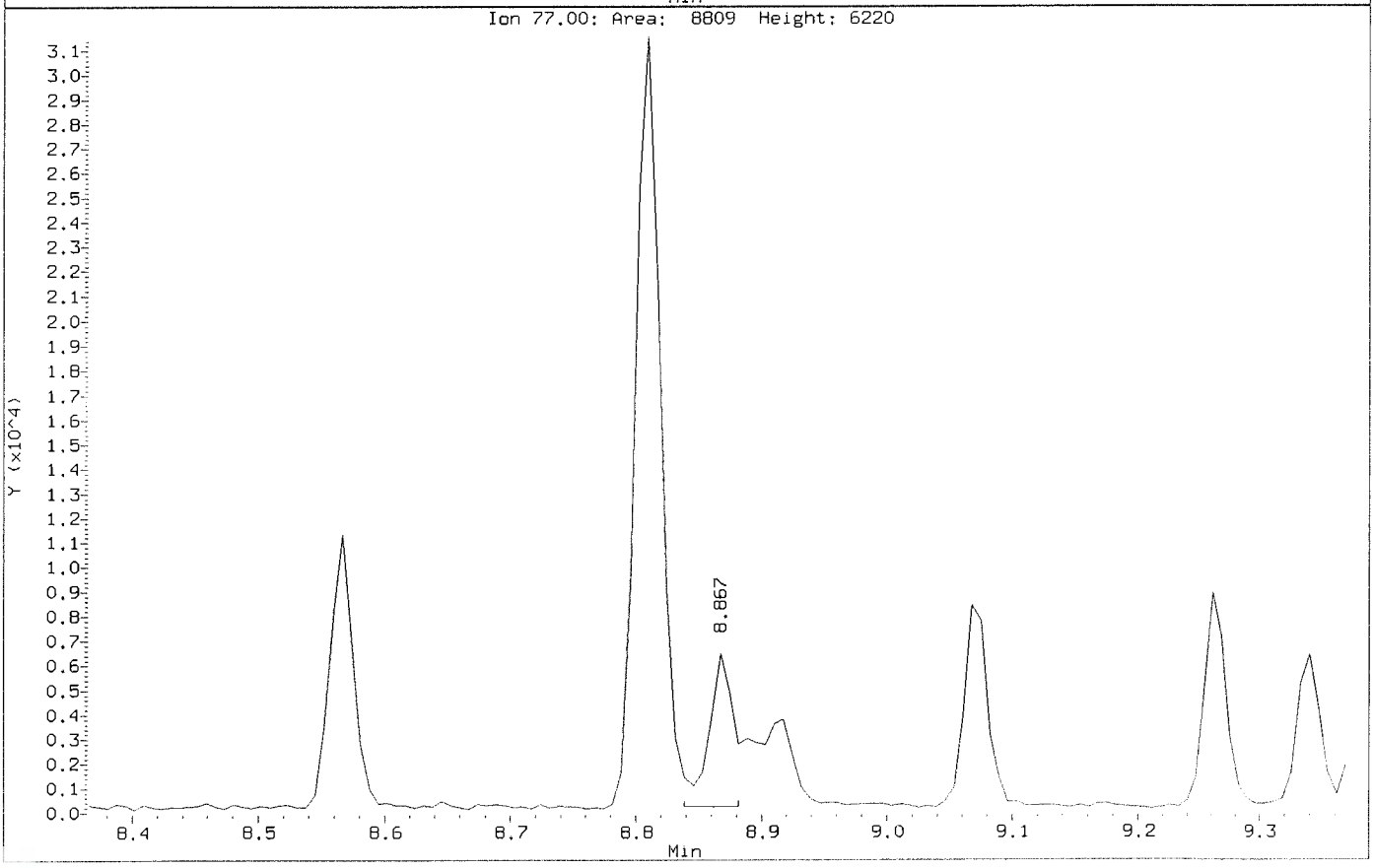

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Date : 03-AUG-2020 13:40
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

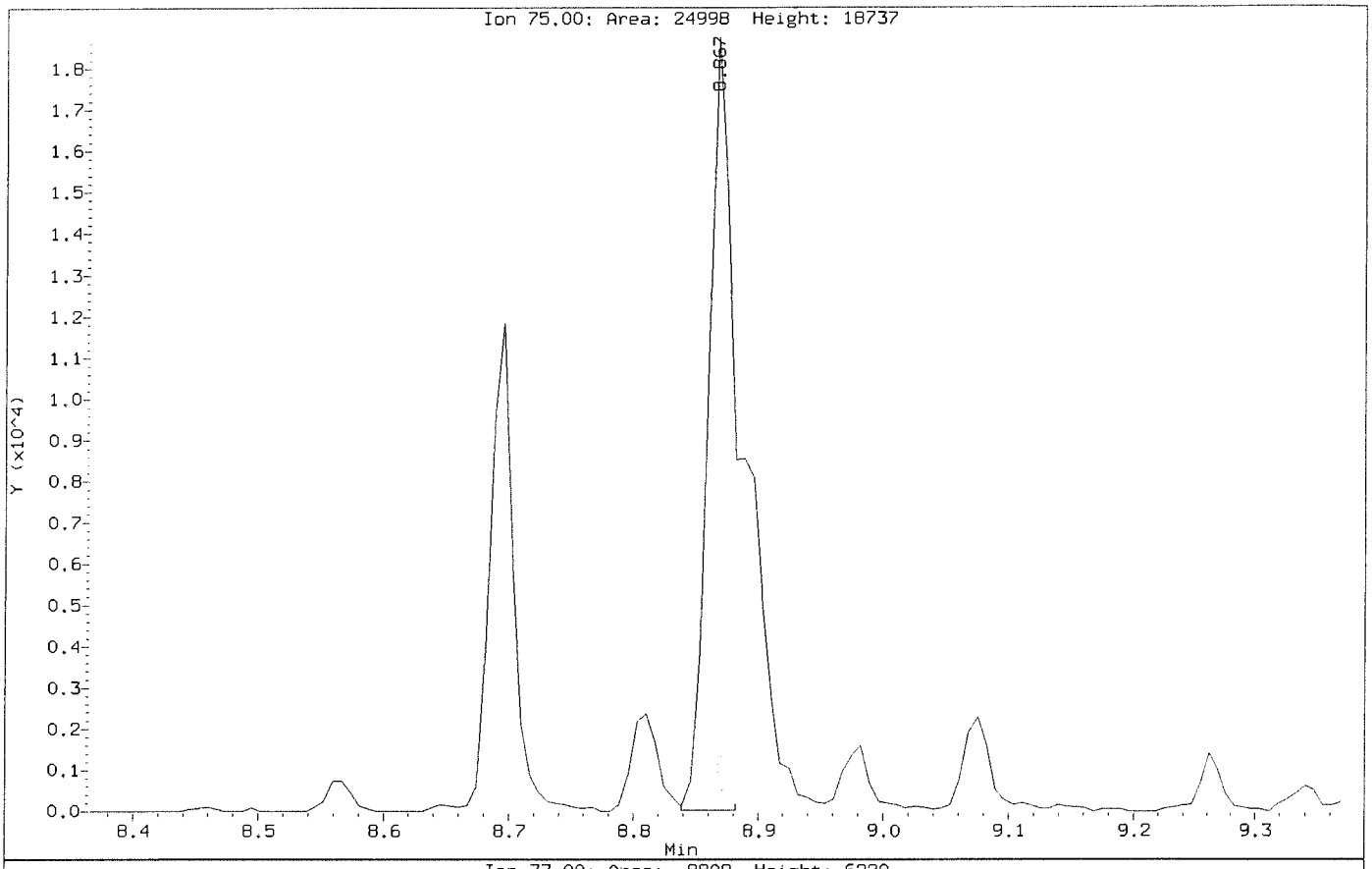
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

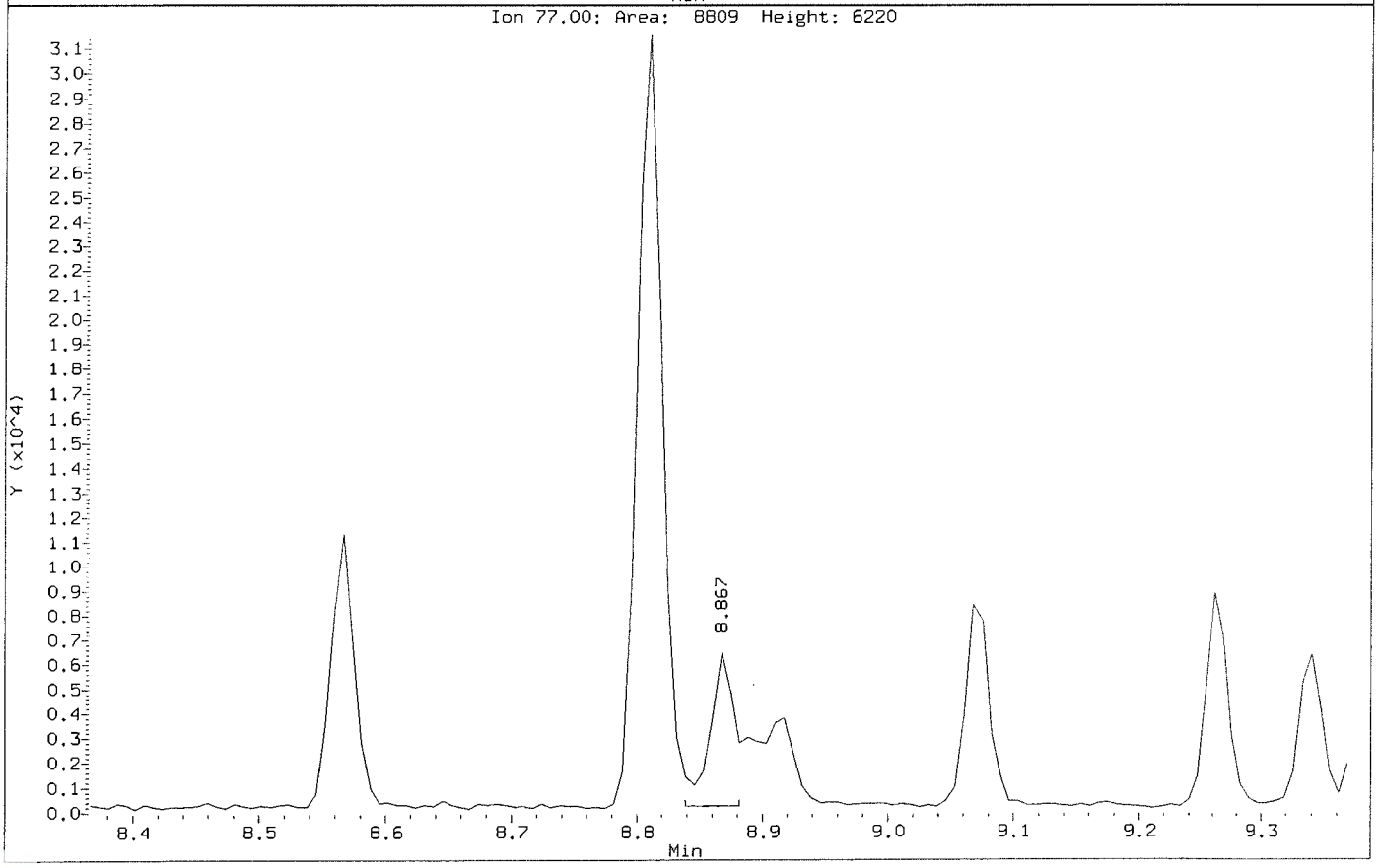


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080306.D
Injection Date: 03-AUG-2020 13:40
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D Page 1
Report Date: 22-Aug-2020 11:54

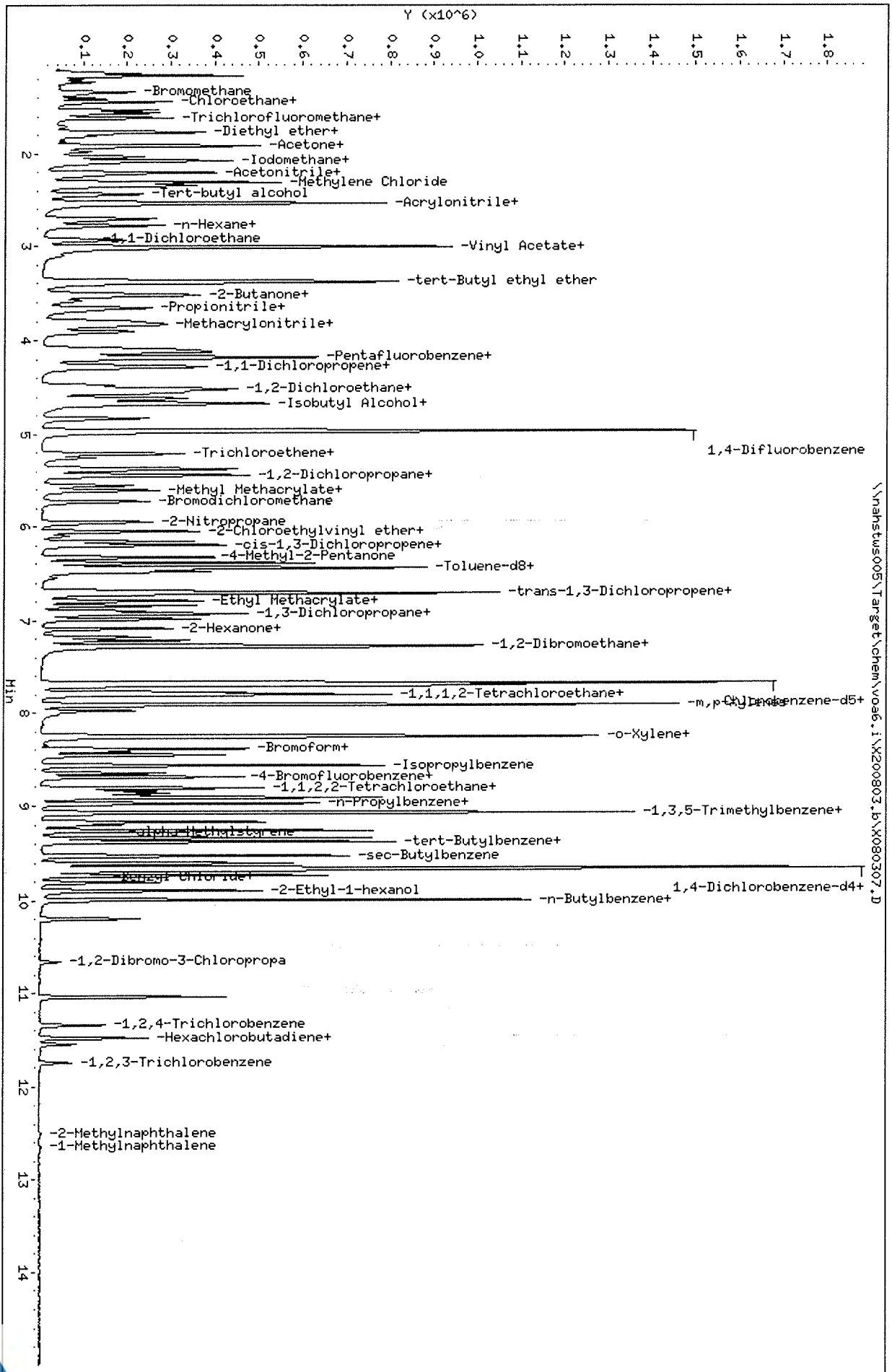
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-AUG-2020 14:04
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 13:40 Cal File: X080306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 527399 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 802950 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 728191 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.662 | (1.000) | 344410 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 100526 | 20.0000 | 19.40 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 118997 | 20.0000 | 19.38 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 349779 | 20.0000 | 19.80 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 131285 | 20.0000 | 19.26 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 105143 | 20.0000 | 18.96 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 157003 | 20.0000 | 19.32 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.915) | 110449 | 20.0000 | 20.13 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 79259 | 20.0000 | 19.12 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 204692 | 20.0000 | 19.86 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 85725 | 20.0000 | 20.51 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 129183 | 20.0000 | 19.14 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 20139 | 20.0000 | 19.43 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 95152 | 20.0000 | 18.87(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 44232 | 20.0000 | 22.24 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 352711 | 20.0000 | 19.16 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 9119 | 20.0000 | 19.01 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 103868 | 20.0000 | 19.45 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.035) | 184161 | 20.0000 | 18.90 |

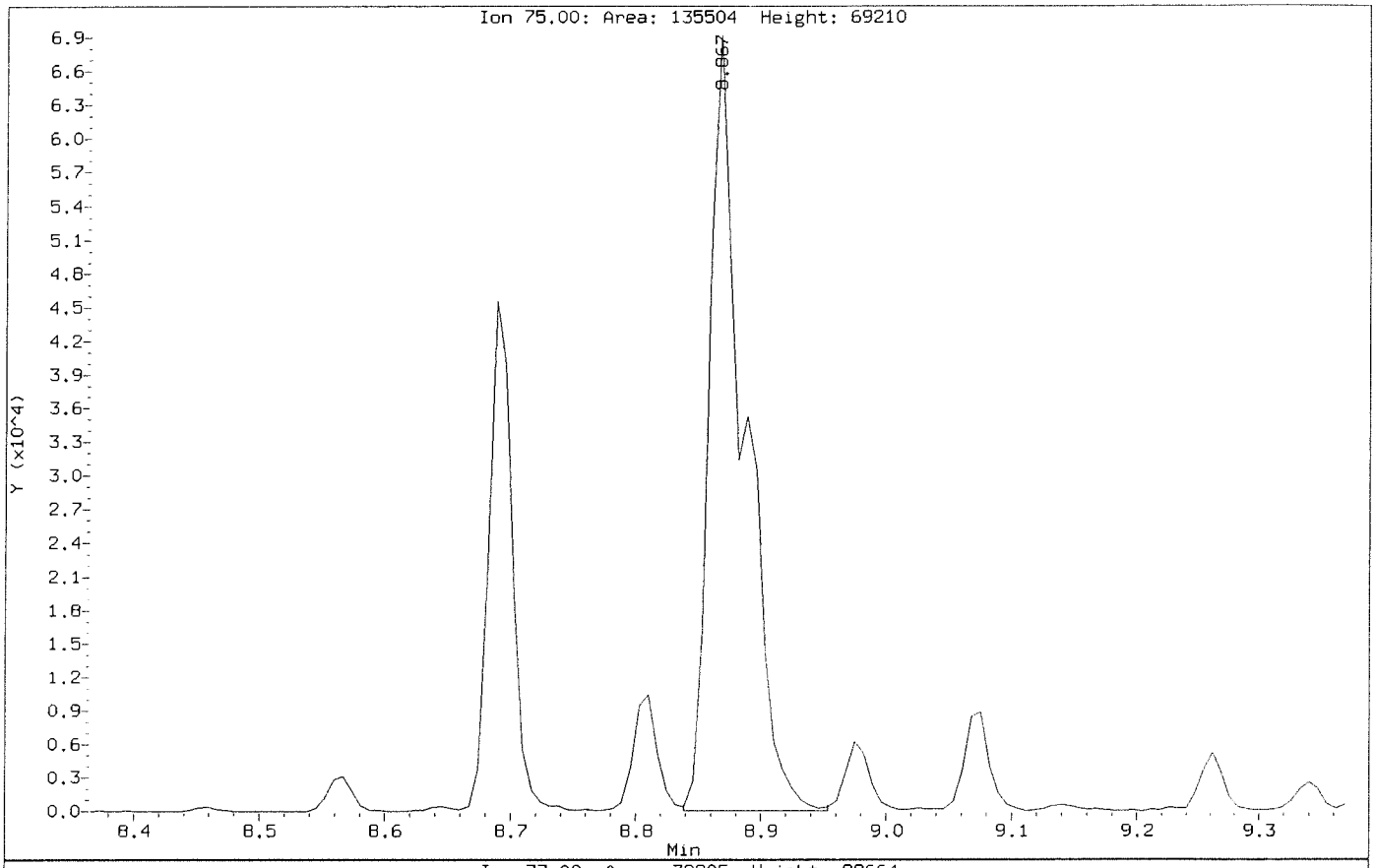


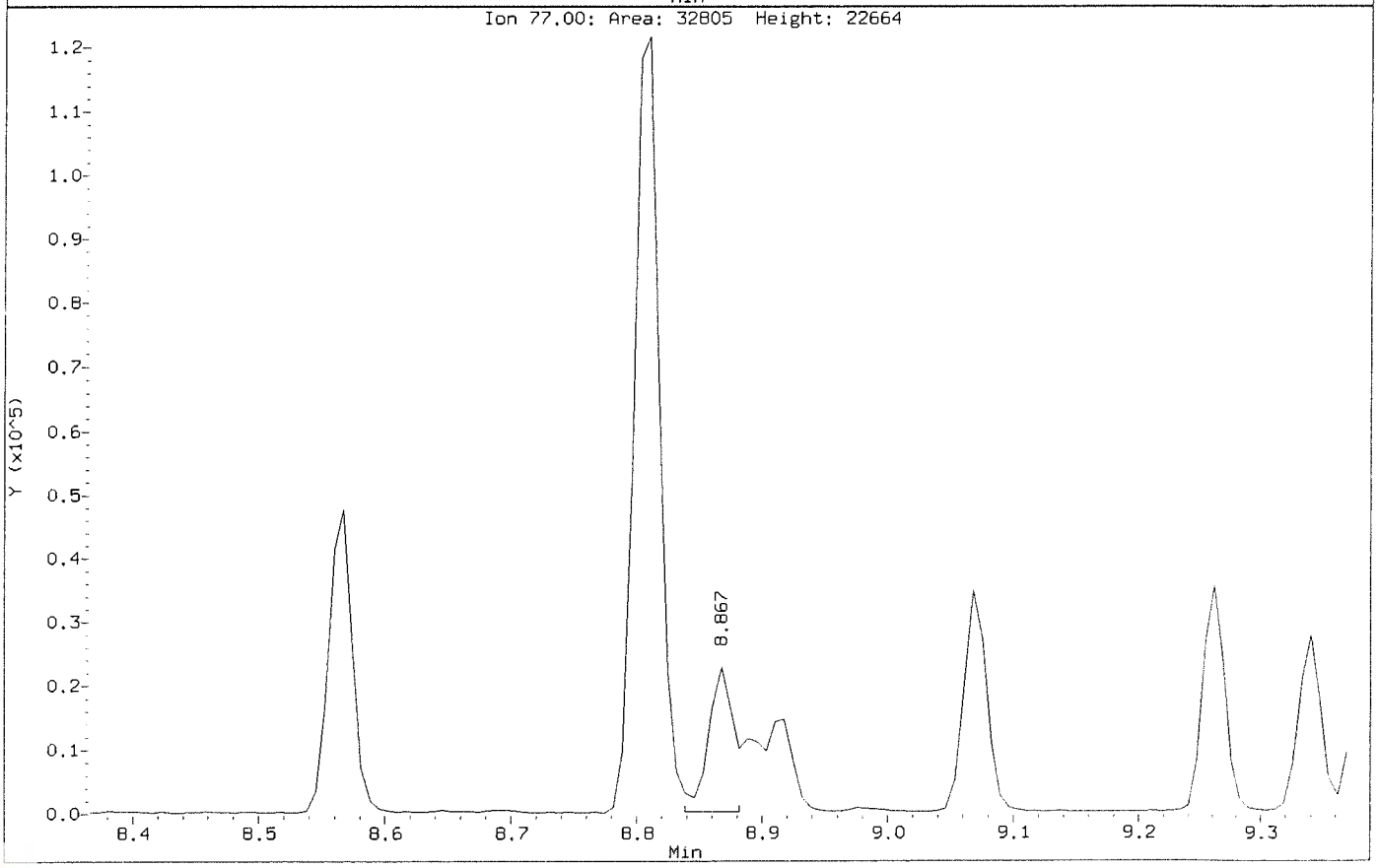

Data File: \\nahstus005\Target\chem\voa6.i\X200803.b\X080307.D
Date : 03-AUG-2020 14:04
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080307.D
Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

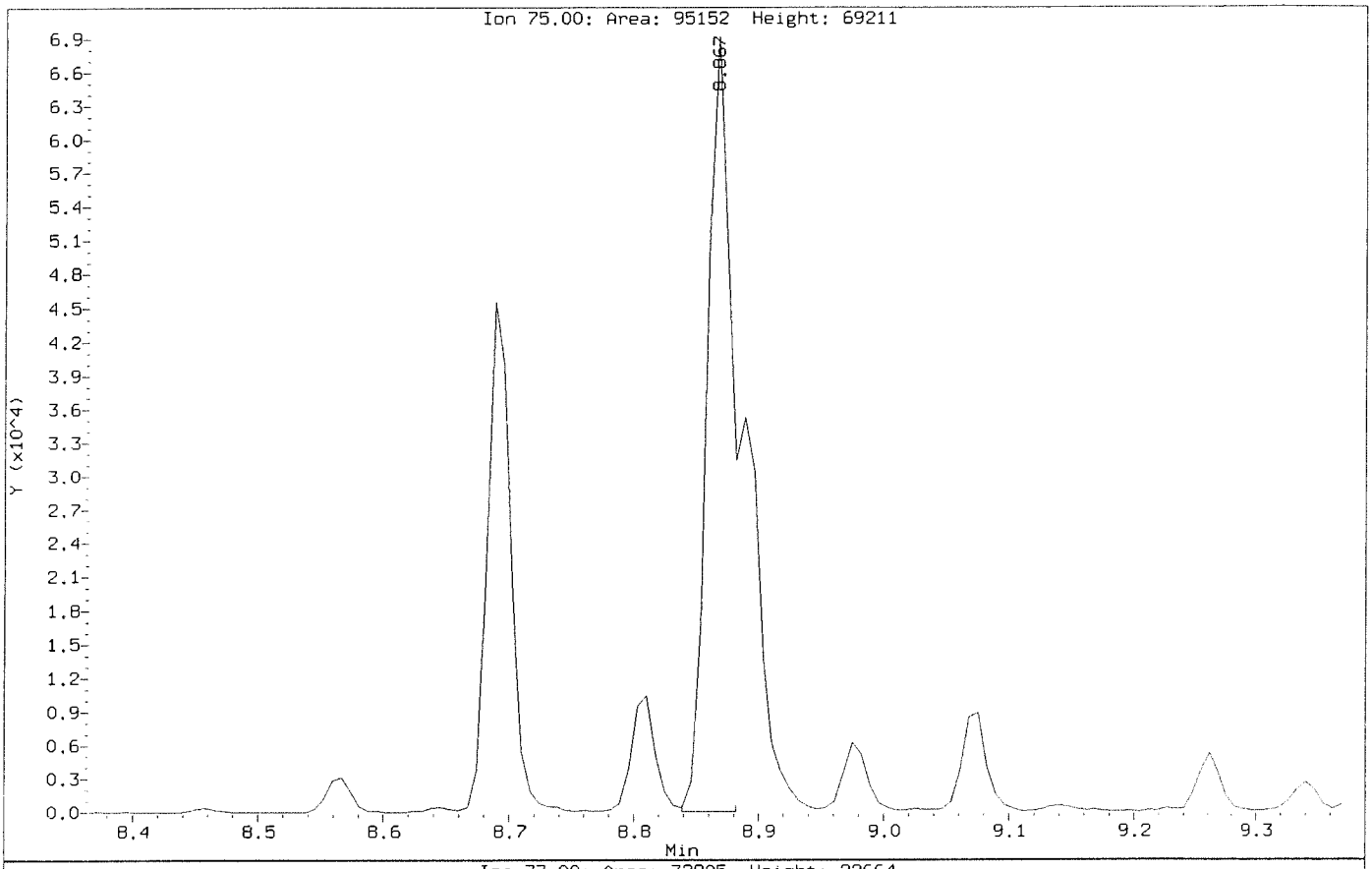
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

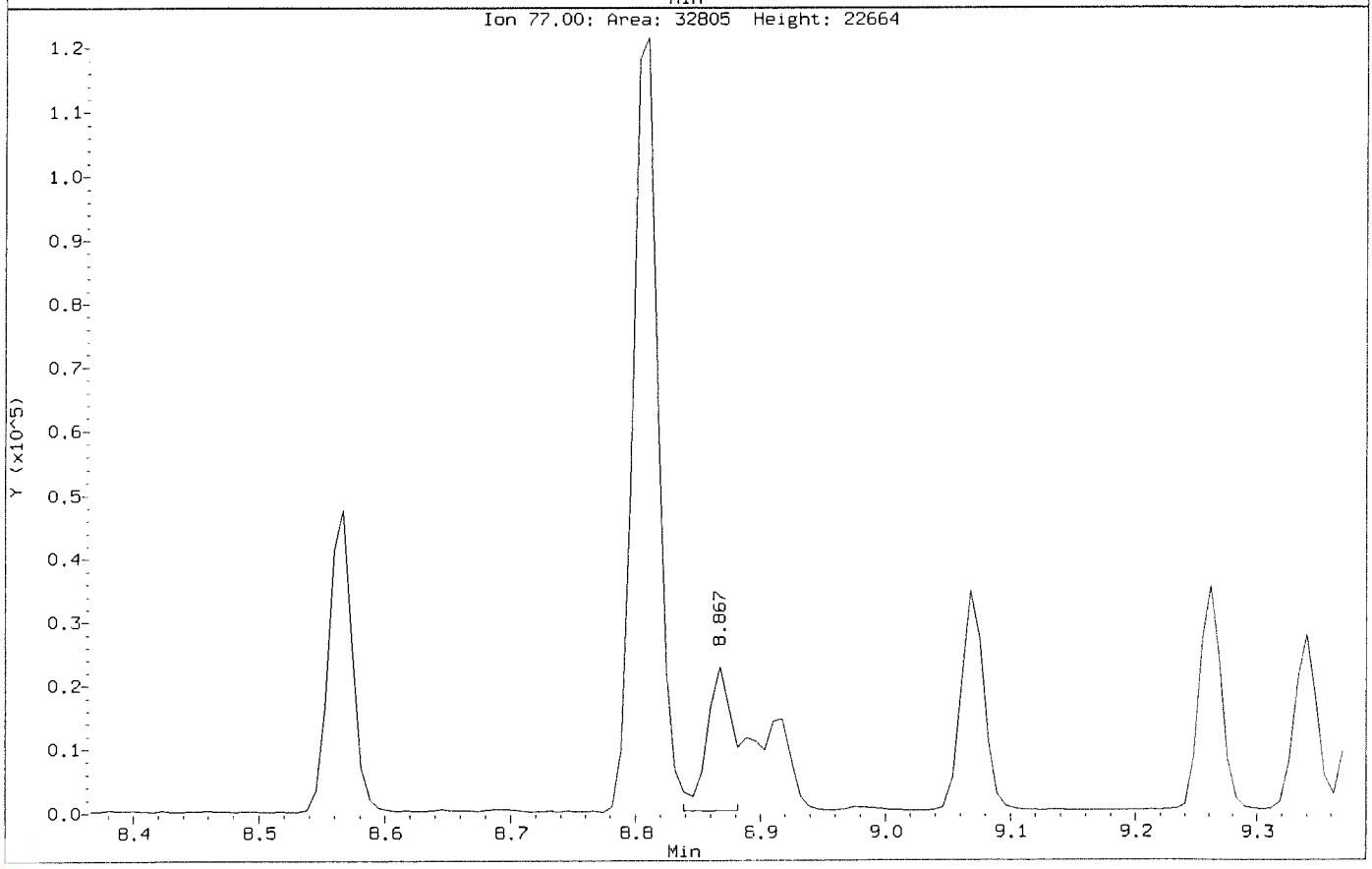


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080307.D
Injection Date: 03-AUG-2020 14:04
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 03-AUG-2020 14:28
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:04 Cal File: X080307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

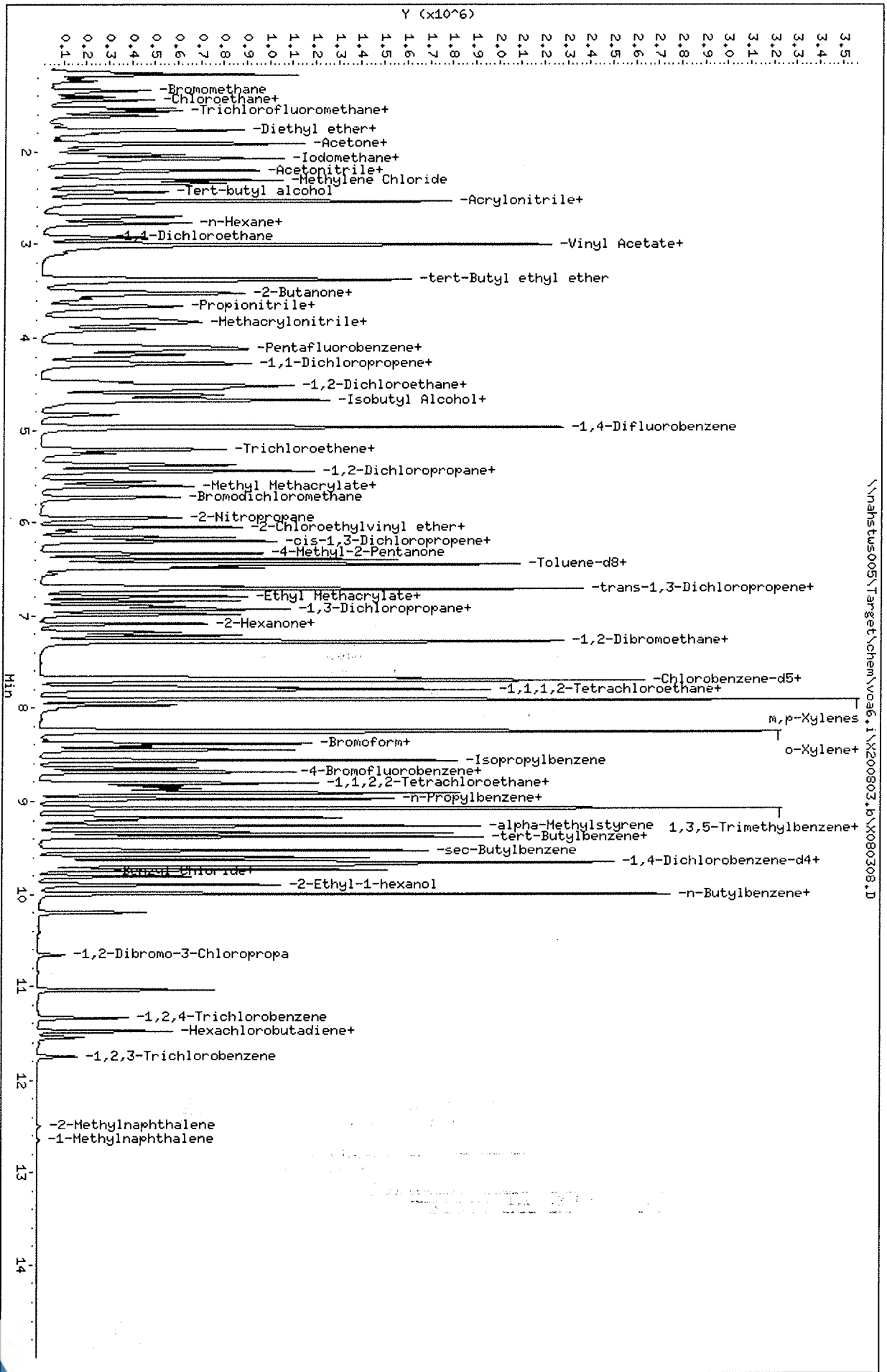
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 511920 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 771177 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 702771 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 336517 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 239584 | 50.0000 | 47.65 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 283572 | 50.0000 | 47.58 |
| $ | 48 Toluene-d8 | 98 | 6.389 | 6.389 | (0.833) | 830682 | 50.0000 | 48.73 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 313797 | 50.0000 | 47.71 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 256851 | 50.0000 | 48.01 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 376263 | 50.0000 | 47.71 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 259509 | 50.0000 | 47.88 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 188669 | 50.0000 | 47.18 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 496869 | 50.0000 | 49.68 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 203794 | 50.0000 | 50.24 |
| | 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 311586 | 50.0000 | 48.08 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 48796 | 50.0000 | 48.18 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 230185 | 50.0000 | 46.73(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 104906 | 50.0000 | 53.93 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 851116 | 50.0000 | 47.34 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 22898 | 50.0000 | 47.61 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 248315 | 50.0000 | 48.20 |
| | 88 1,2-Dichlorobenzene | 146 | 9.992 | 9.992 | (1.033) | 448782 | 50.0000 | 47.14 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 363525 | 50.0000 | 48.68 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 280124 | 50.0000 | 49.49 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 841136 | 50.0000 | 47.83 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.993) | 505958 | 50.0000 | 47.83 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 384017 | 50.0000 | 48.63 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.684 | 9.684 | (1.001) | 496379 | 50.0000 | 47.45 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 350133 | 50.0000 | 47.95 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 256334 | 100.000 | 102.14 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 694810 | 50.0000 | 47.59 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 414221 | 100.000 | 93.88 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 801352 | 50.0000 | 47.17 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 892538 | 50.0000 | 47.89 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.324 | (0.824) | 601864 | 100.000 | 92.53 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 170545 | 100.000 | 95.52 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 930097 | 50.0000 | 48.61 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 308037 | 50.0000 | 46.79 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 143774 | 50.0000 | 46.59 |
| 39 | Bromodichloromethane | 83 | 5.730 | 5.730 | (1.153) | 331518 | 50.0000 | 47.75 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 185248 | 50.0000 | 47.50 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 165840 | 50.0000 | 47.10 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1239571 | 100.000 | 98.42 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 332646 | 50.0000 | 48.29 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 660196 | 50.0000 | 47.93 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 180055 | 50.0000 | 49.62 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 434838 | 50.0000 | 47.54 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 348334 | 50.0000 | 48.46 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 270912 | 50.0000 | 48.07 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 396564 | 50.0000 | 48.85 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 267830 | 50.0000 | 47.57 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 161578 | 50.0000 | 48.14 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 250906 | 50.0000 | 50.07 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 343587 | 50.0000 | 48.31 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 97456 | 50.0000 | 53.94 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 1013032 | 50.0000 | 48.52 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 825892 | 100.000 | 96.22 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 256910 | 50.0000 | 48.65 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 730650 | 50.0000 | 49.09 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1164933 | 50.0000 | 48.05 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 137510 | 50.0000 | 51.02 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 409054 | 50.0000 | 48.52 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 982268 | 50.0000 | 48.04 |
| 64 | Styrene | 104 | 8.258 | 8.258 | (1.077) | 713459 | 50.0000 | 48.73 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 726881 | 50.0000 | 47.67 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 211124 | 50.0000 | 47.25 |
| 50 | Toluene | 91 | 6.446 | 6.446 | (0.840) | 981156 | 50.0000 | 47.80 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 233416 | 50.0000 | 48.63 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 353535 | 50.0000 | 47.51 |
| 38 | Trichloroethene | 130 | 5.207 | 5.207 | (1.048) | 272294 | 50.0000 | 49.82 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 377358 | 50.0000 | 50.05 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 331269 | 50.0000 | 50.27 |

QC Flag Legend

M - Compound response manually integrated.

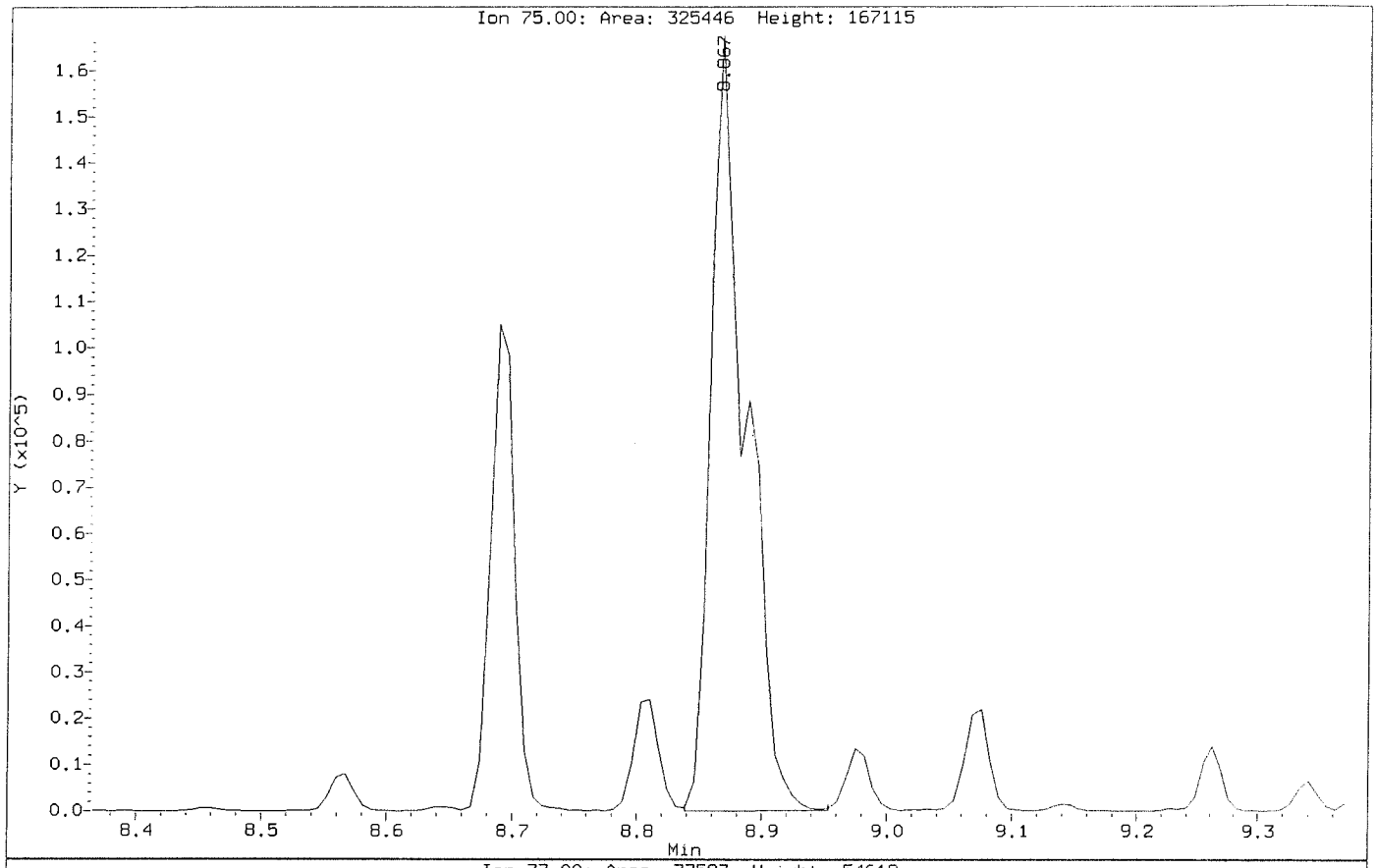


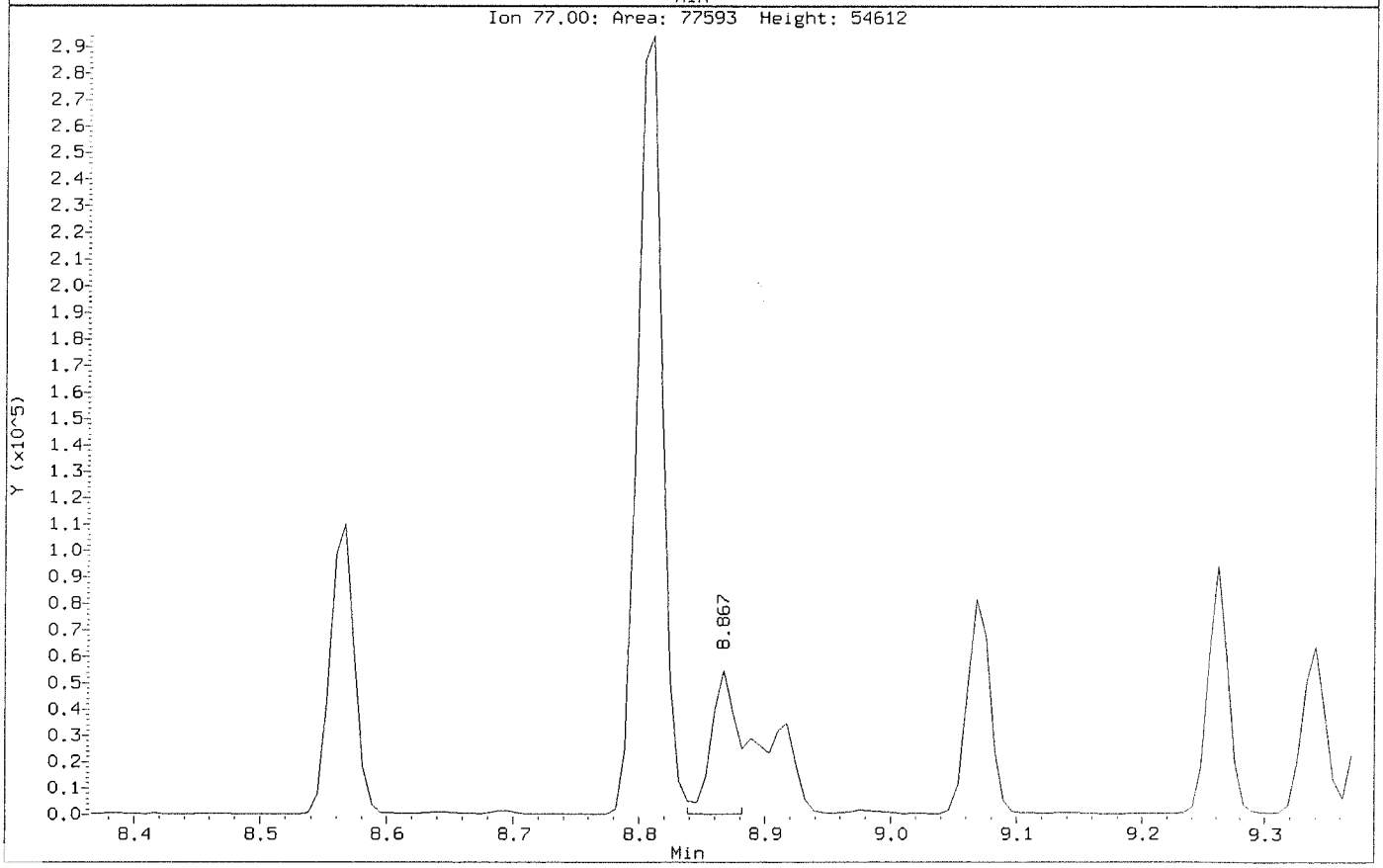

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Date : 03-AUG-2020 14:28
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080308.D
Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

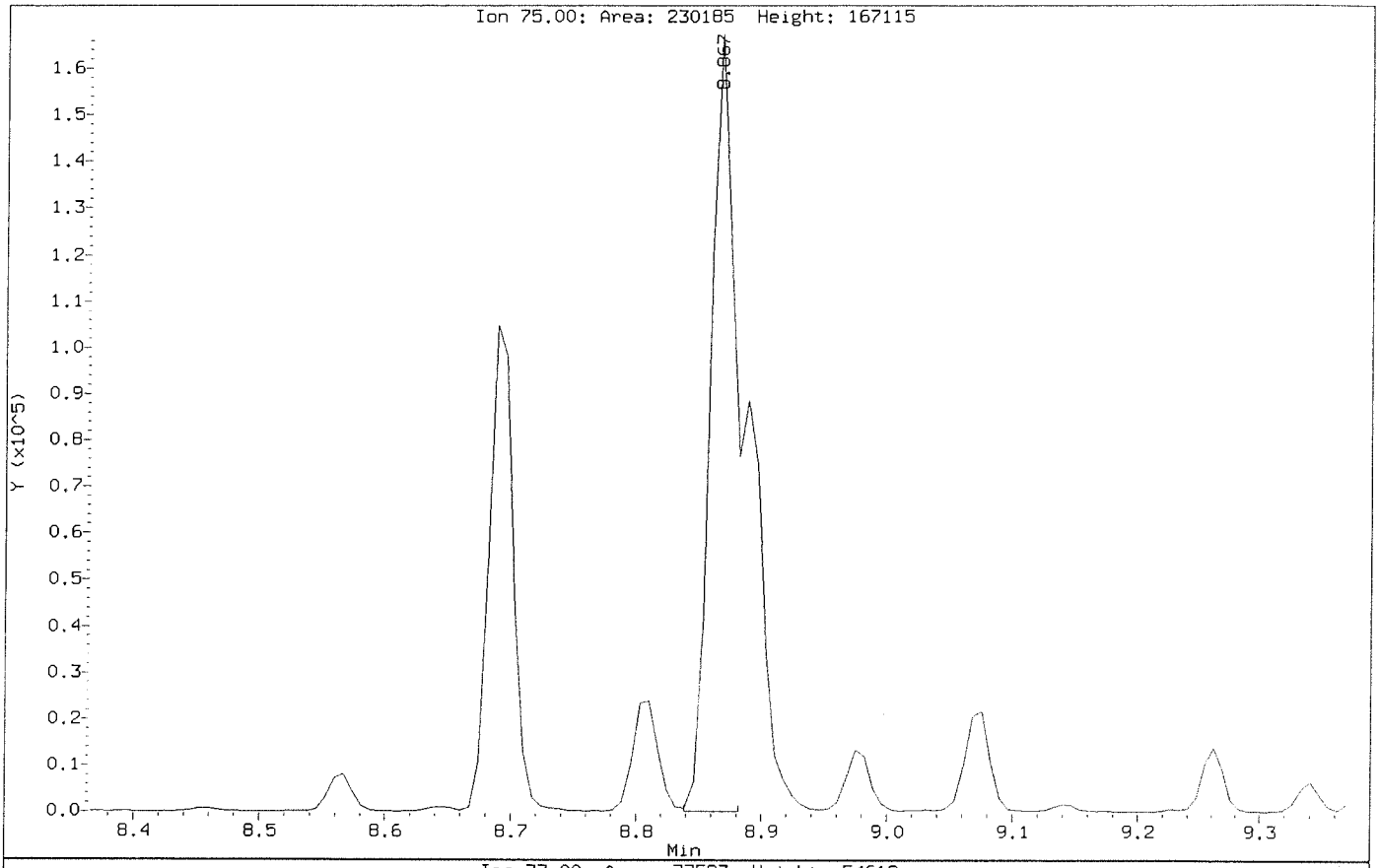
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

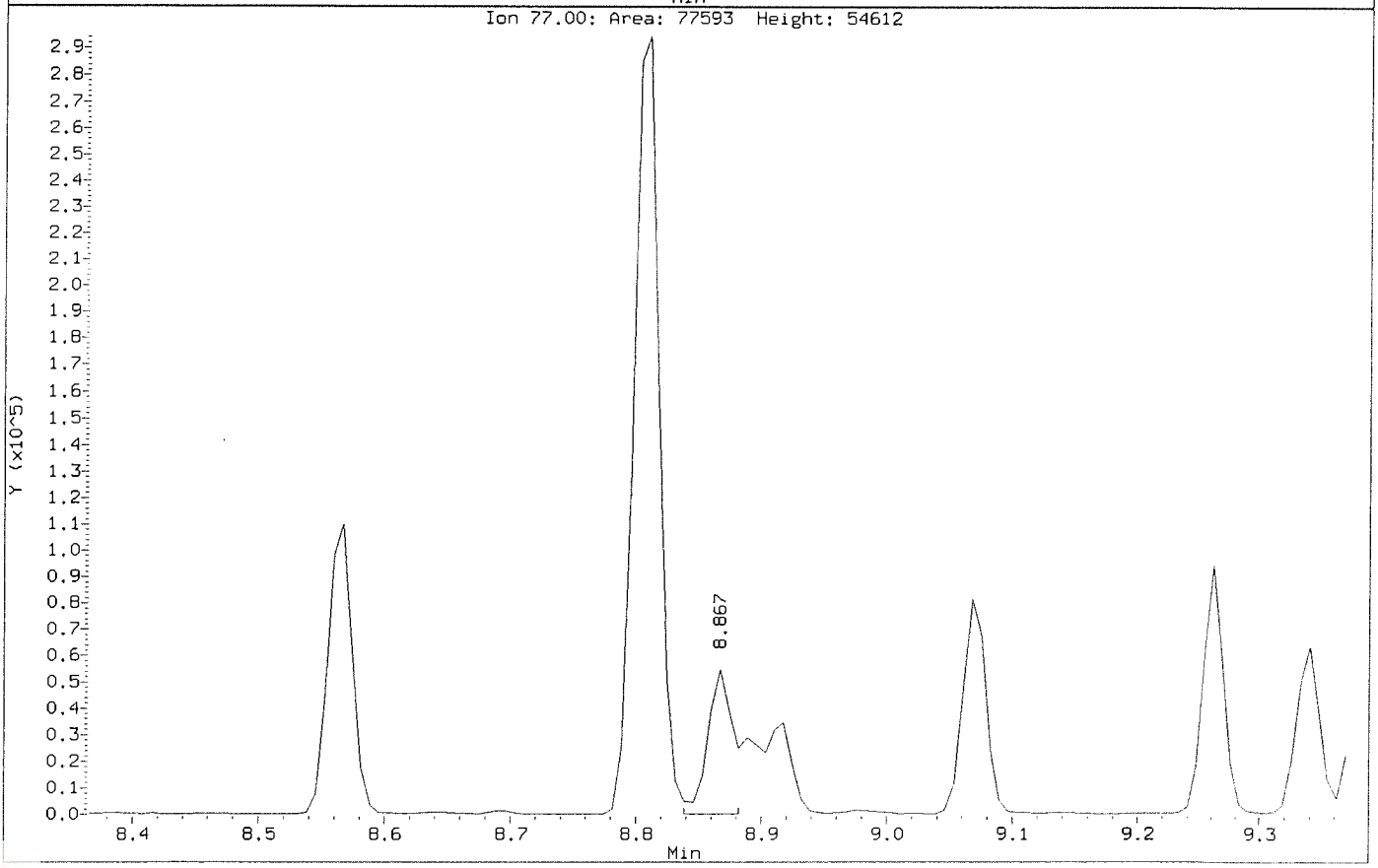


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080308.D
Injection Date: 03-AUG-2020 14:28
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D  Page 1
Report Date: 22-Aug-2020 11:54

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Lab Smp Id: VSTD100  Client Smp ID: VSTD100
Inj Date  : 03-AUG-2020 14:52
Operator  : PC  Inst ID: voa6.i
Smp Info  : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method    : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i  Quant Type: ISTD
Cal Date  : 03-AUG-2020 14:28  Cal File: X080308.D
Als bottle: 10  Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE  Compound Sublist: bhate.sub
Target Version:  4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

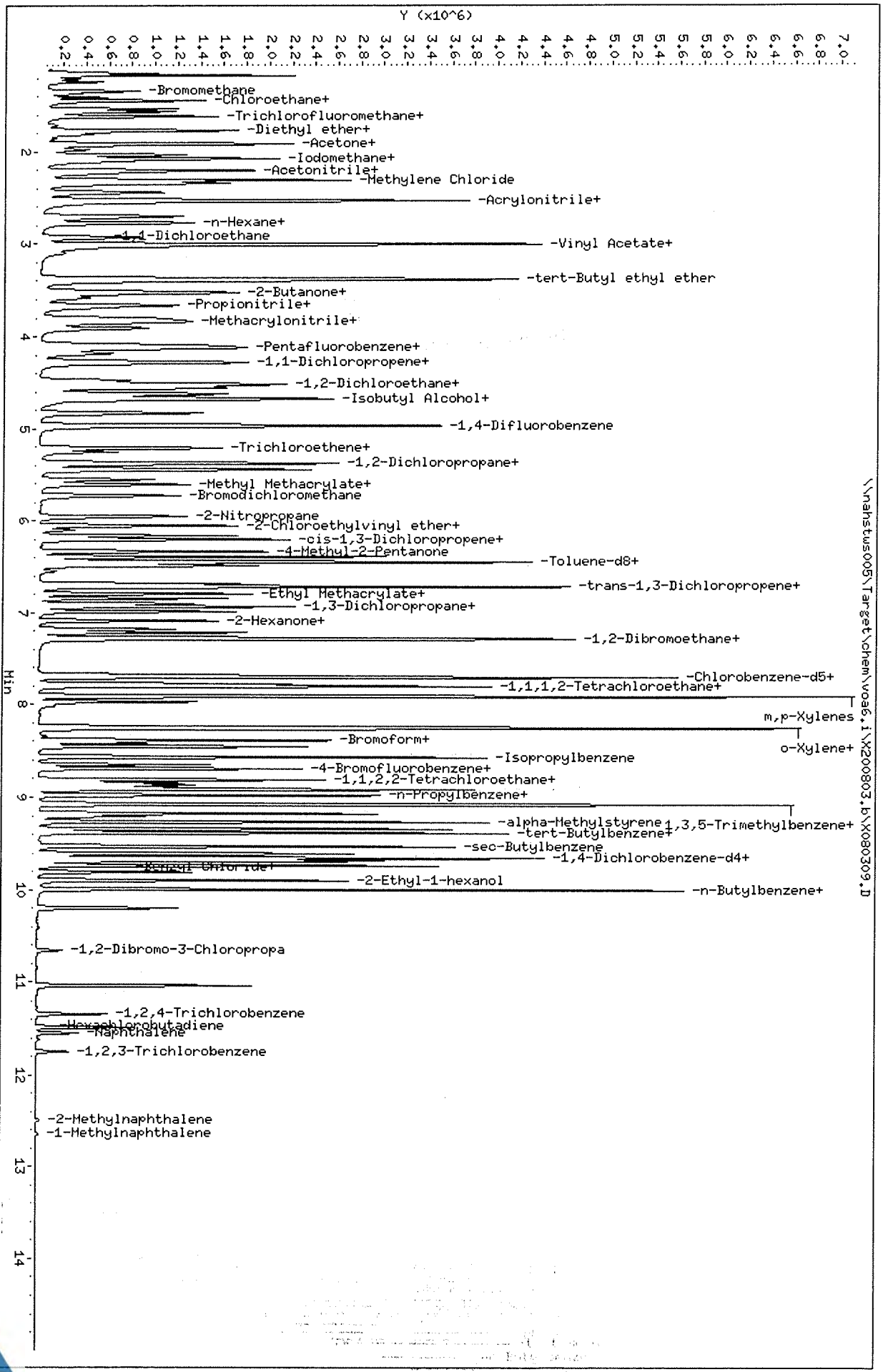
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 486833 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 732825 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 684816 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 323663 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 473016 | 100.000 | 98.93 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 567807 | 100.000 | 100.19 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 1639713 | 100.000 | 98.71 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 621420 | 100.000 | 96.97 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 508756 | 100.000 | 97.59 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 743006 | 100.000 | 99.08 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 505068 | 100.000 | 96.50 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 371422 | 100.000 | 95.31 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 966853 | 100.000 | 101.67 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 399194 | 100.000 | 103.48 |
| | 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 619847 | 100.000 | 100.65 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 78990 | 100.000 | 81.10 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 447455 | 100.000 | 94.44(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 167486 | 100.000 | 88.32 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 1744071 | 100.000 | 100.86 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.657 | 10.657 | (1.102) | 44175 | 100.000 | 94.71 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 486059 | 100.000 | 96.82 |
| | 88 1,2-Dichlorobenzene | 146 | 9.998 | 9.998 | (1.034) | 860972 | 100.000 | 94.04 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 709131 | 100.000 | 99.94 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 549204 | 100.000 | 102.11 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 1711898 | 100.000 | 101.21 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1000056 | 100.000 | 98.30 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 751120 | 100.000 | 97.62 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 985559 | 100.000 | 97.96 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 681466 | 100.000 | 98.14 |
| 24 | 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 505532 | 200.000 | 211.82(A) |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 1388843 | 100.000 | 98.90 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 827198 | 200.000 | 192.40 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.074 | (0.939) | 1630167 | 100.000 | 99.78 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 1843729 | 100.000 | 102.86 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 1209781 | 200.000 | 190.87 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 340970 | 200.000 | 202.00(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 1833540 | 100.000 | 100.84 |
| 74 | Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 616831 | 100.000 | 97.42 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 282659 | 100.000 | 96.32 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 654091 | 100.000 | 99.14 |
| 66 | Bromoform | 173 | 8.415 | 8.415 | (1.097) | 369358 | 100.000 | 97.21 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 329463 | 100.000 | 97.68 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 2437326 | 200.000 | 203.50(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 660151 | 100.000 | 100.85 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 1320195 | 100.000 | 98.36 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 350986 | 100.000 | 101.71 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 844067 | 100.000 | 97.04 |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 661182 | 100.000 | 96.72 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 527504 | 100.000 | 98.43 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 783645 | 100.000 | 101.58 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 530960 | 100.000 | 96.79 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 314468 | 100.000 | 98.60 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 502379 | 100.000 | 105.43 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 683526 | 100.000 | 98.63 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 144027 | 100.000 | 82.88 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 2047430 | 100.000 | 100.64 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 1666940 | 200.000 | 199.31 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 487953 | 100.000 | 98.54 |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 1490980 | 100.000 | 104.16 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 2376809 | 100.000 | 101.93 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 244768 | 100.000 | 91.71 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 812131 | 100.000 | 98.85 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 2014765 | 100.000 | 102.46 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 1389708 | 100.000 | 97.42 |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 1474330 | 100.000 | 100.54 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 429146 | 100.000 | 98.57 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 1938369 | 100.000 | 96.92 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 450443 | 100.000 | 98.69 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 699866 | 100.000 | 98.98 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 540855 | 100.000 | 104.13 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 735408 | 100.000 | 102.57 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 656263 | 100.000 | 104.72 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

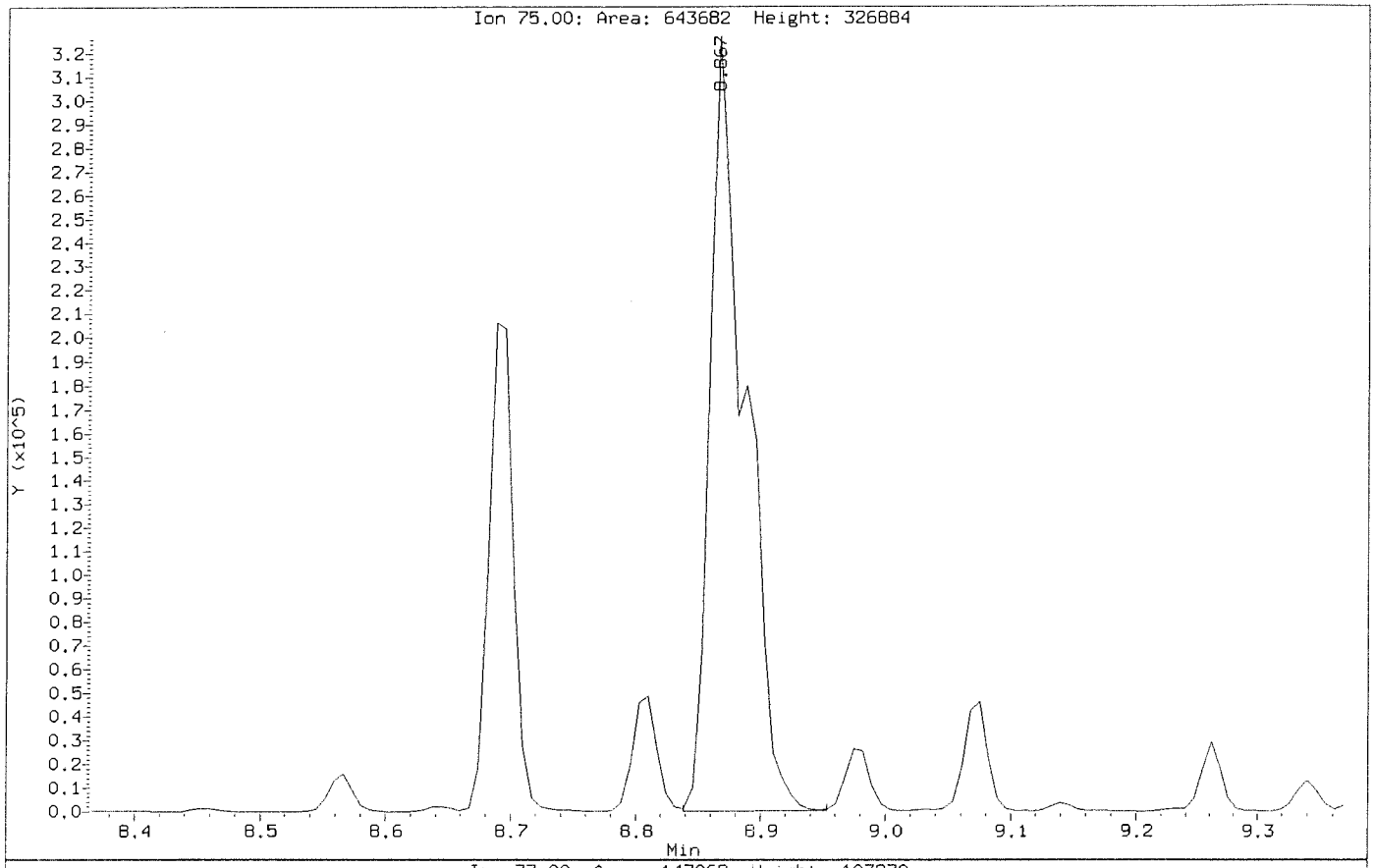


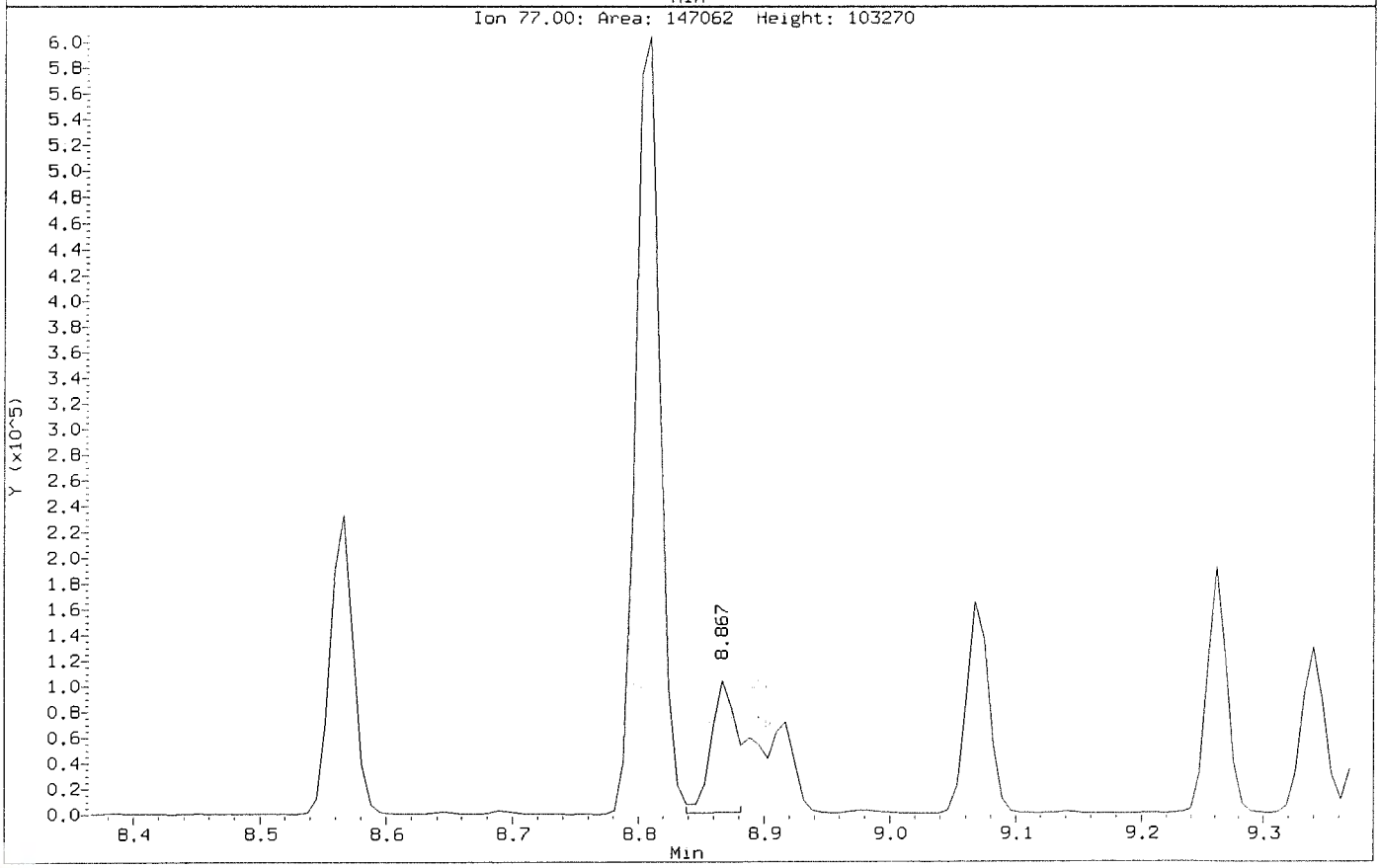

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

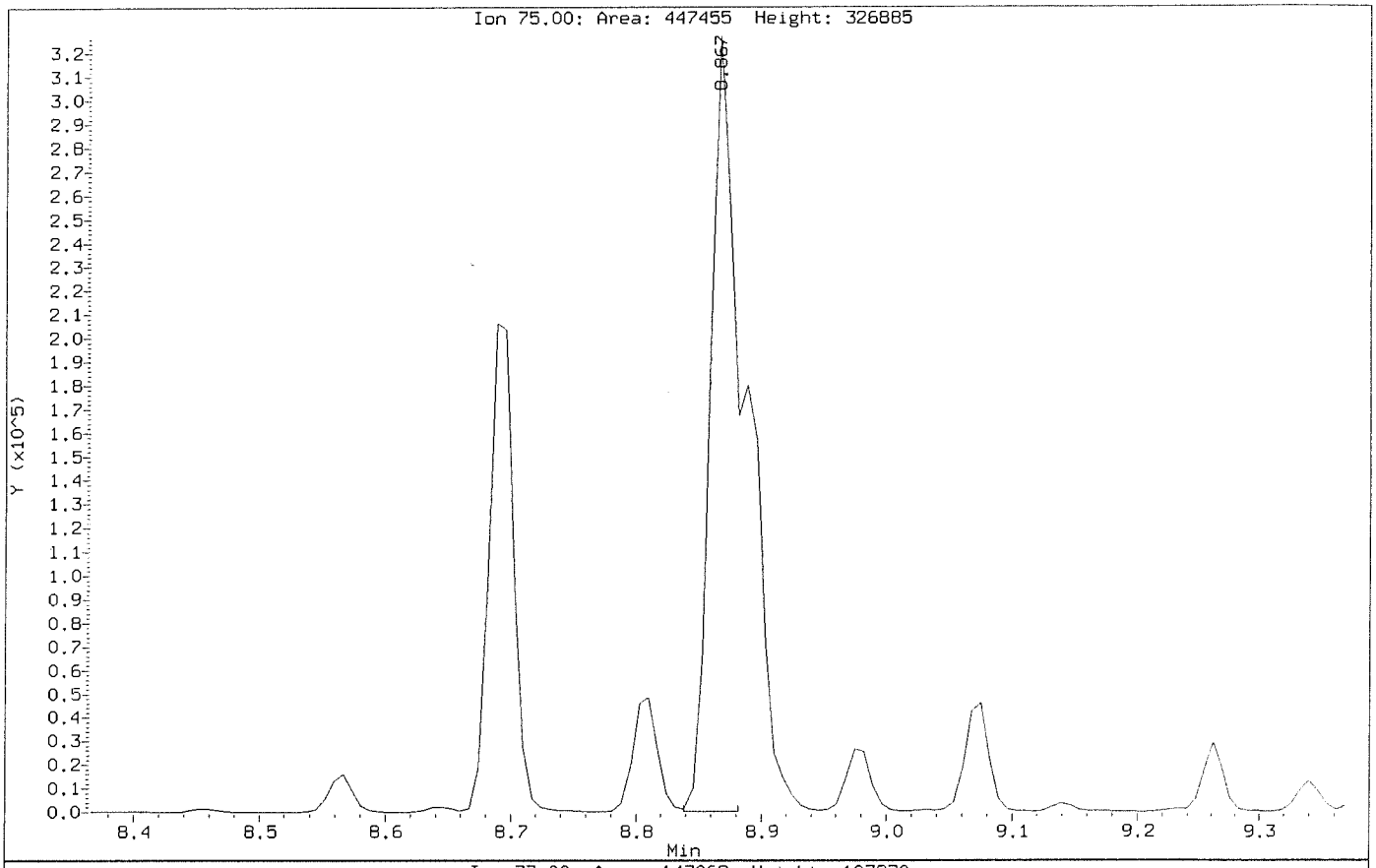
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

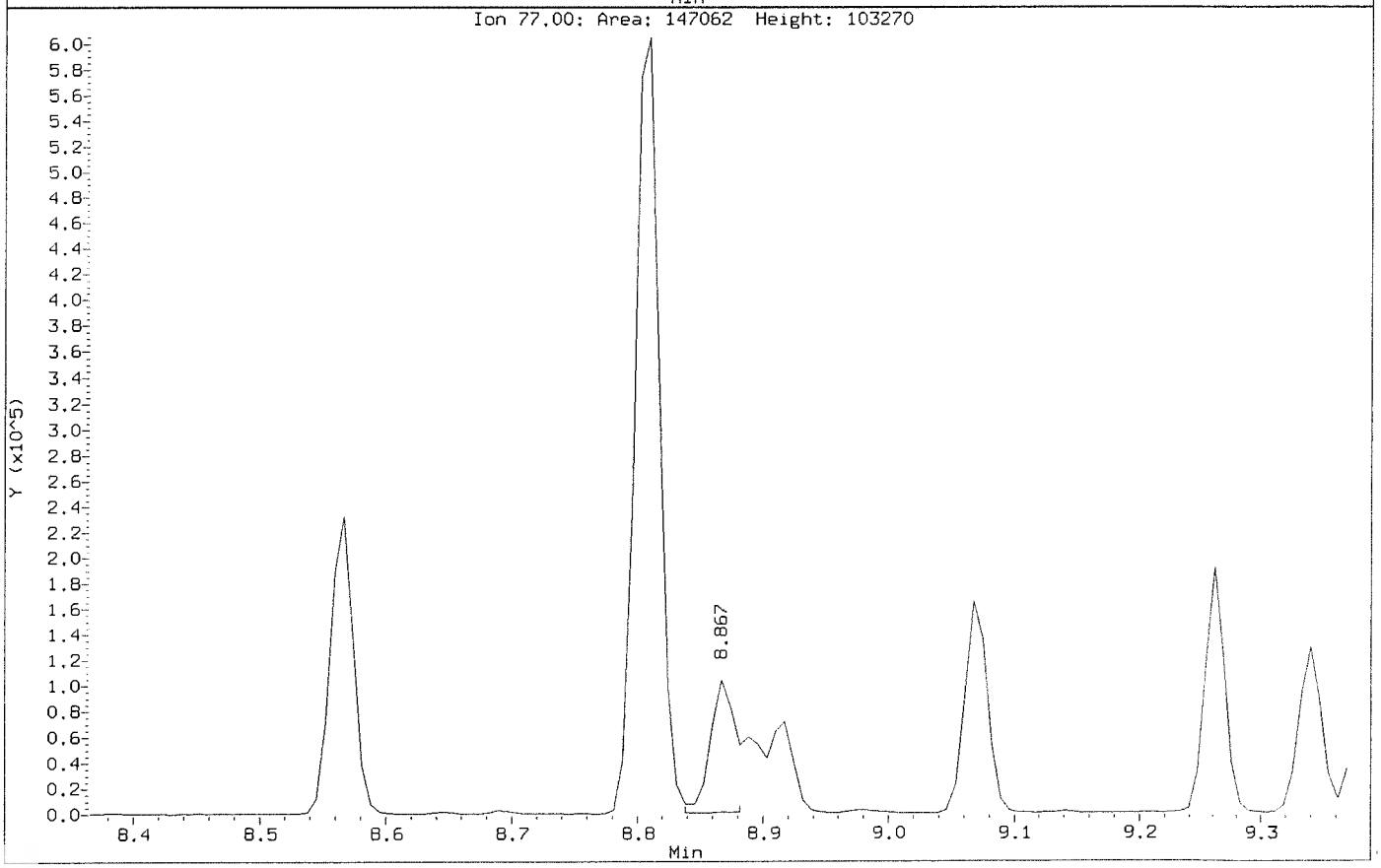


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080309.D
Injection Date: 03-AUG-2020 14:52
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-AUG-2020 15:16
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:52 Cal File: X080309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 457081 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 697946 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 658557 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 308838 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 673356 | 150.000 | 150.01 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 814725 | 150.000 | 153.12 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 2334447 | 150.000 | 146.14 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 886803 | 150.000 | 143.91 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 731767 | 150.000 | 145.97 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 1070397 | 150.000 | 152.03 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 753290 | 150.000 | 150.61 |
| | 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 538173 | 150.000 | 143.61 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 1382538 | 150.000 | 154.84 |
| | 11 1,1-Dichloroethene | 96 | 1.912 | 1.912 | (0.456) | 571714 | 150.000 | 157.86 |
| | 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 893917 | 150.000 | 152.41 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 147859 | 150.000 | 159.09 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 653947 | 150.000 | 144.66(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 308625 | 150.000 | 163.97 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 2442964 | 150.000 | 148.06 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 68839 | 150.000 | 154.17 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 709453 | 150.000 | 146.95 |
| | 88 1,2-Dichlorobenzene | 146 | 9.991 | 9.991 | (1.033) | 1244688 | 150.000 | 142.48 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 1020218 | 150.000 | 150.97 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 786675 | 150.000 | 153.57 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 2403624 | 150.000 | 148.94 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1420086 | 150.000 | 146.29 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 1090826 | 150.000 | 147.42 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 1405102 | 150.000 | 146.36 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 969504 | 150.000 | 148.71 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 733748 | 300.000 | 327.46(A) |
| 76 | 2-Chlorotoluene | 91 | 8.981 | 8.981 | (0.929) | 1990724 | 150.000 | 148.57 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 1228653 | 300.000 | 297.18(A) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 2300761 | 150.000 | 147.59 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 2591814 | 150.000 | 151.54 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 1784918 | 300.000 | 292.84(A) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 481556 | 300.000 | 304.39(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 2633133 | 150.000 | 152.06 |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 875955 | 150.000 | 144.99 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 397087 | 150.000 | 144.12 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 949497 | 150.000 | 151.12 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 545501 | 150.000 | 149.29 |
| 6 | Bromomethane | 94 | 1.339 | 1.339 | (0.320) | 475898 | 150.000 | 149.93 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 3493168 | 300.000 | 310.65(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 955431 | 150.000 | 153.26 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 1894718 | 150.000 | 146.79 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 503418 | 150.000 | 155.38 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 1203889 | 150.000 | 147.42 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 952989 | 150.000 | 148.49 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 755671 | 150.000 | 150.19 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 1139019 | 150.000 | 155.03 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 768555 | 150.000 | 145.69 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 458909 | 150.000 | 151.08 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 732272 | 150.000 | 163.68 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.800 | (1.017) | 984064 | 150.000 | 147.65 |
| 91 | Hexachlorobutadiene | 225 | 11.489 | 11.489 | (1.188) | 270400 | 150.000 | 163.08 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 2911603 | 150.000 | 148.83 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 2378815 | 300.000 | 295.77(A) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 693942 | 150.000 | 149.97 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 2113477 | 150.000 | 154.74 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 3384136 | 150.000 | 152.10 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 435994 | 150.000 | 161.36 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 1165295 | 150.000 | 147.50 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 2872495 | 150.000 | 153.10 |
| 64 | Styrene | 104 | 8.258 | 8.258 | (1.077) | 2029238 | 150.000 | 147.92 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 2094345 | 150.000 | 149.68 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 610841 | 150.000 | 145.91 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 2766929 | 150.000 | 143.87 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 647458 | 150.000 | 151.10 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 1027204 | 150.000 | 152.54 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 766453 | 150.000 | 154.95 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 1054115 | 150.000 | 156.59 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 956993 | 150.000 | 162.65 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

00991558

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D

Date : 03-AUG-2020 15:16

Client ID: VSTD150

Sample Info: VSTD150;VSTD150;1;9;;

Purge Volume: 5.0

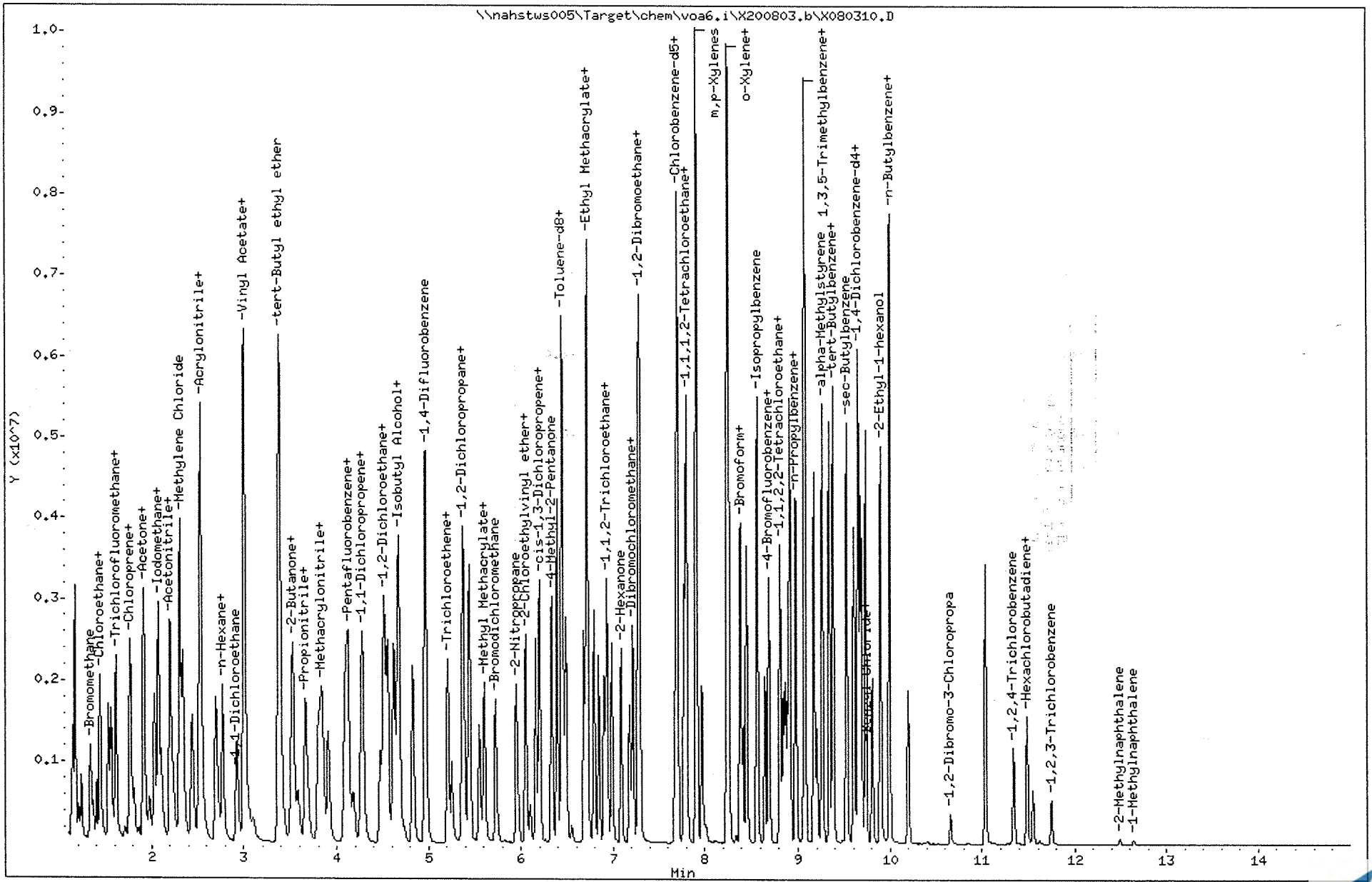
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Instrument: voa6.i

Operator: PC

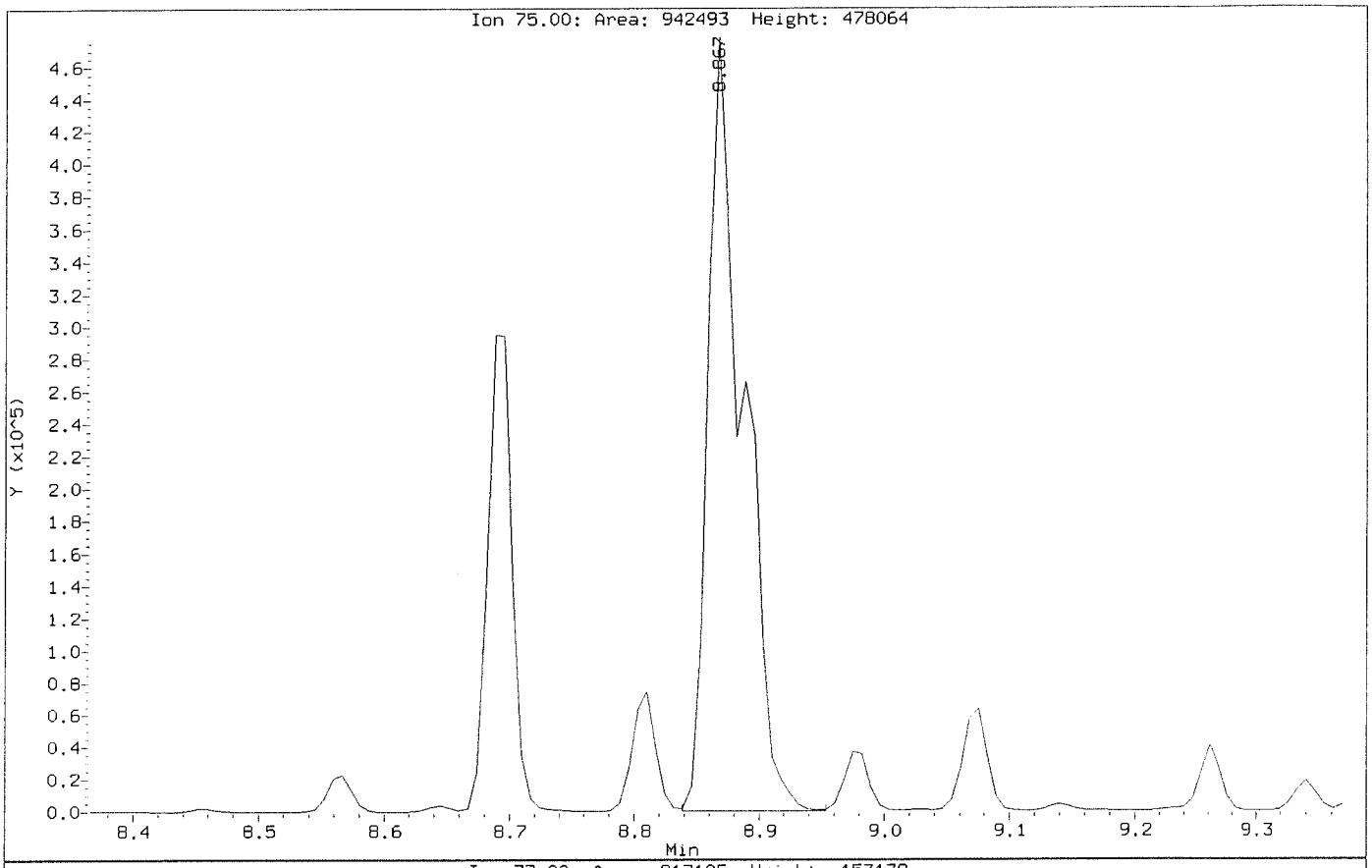
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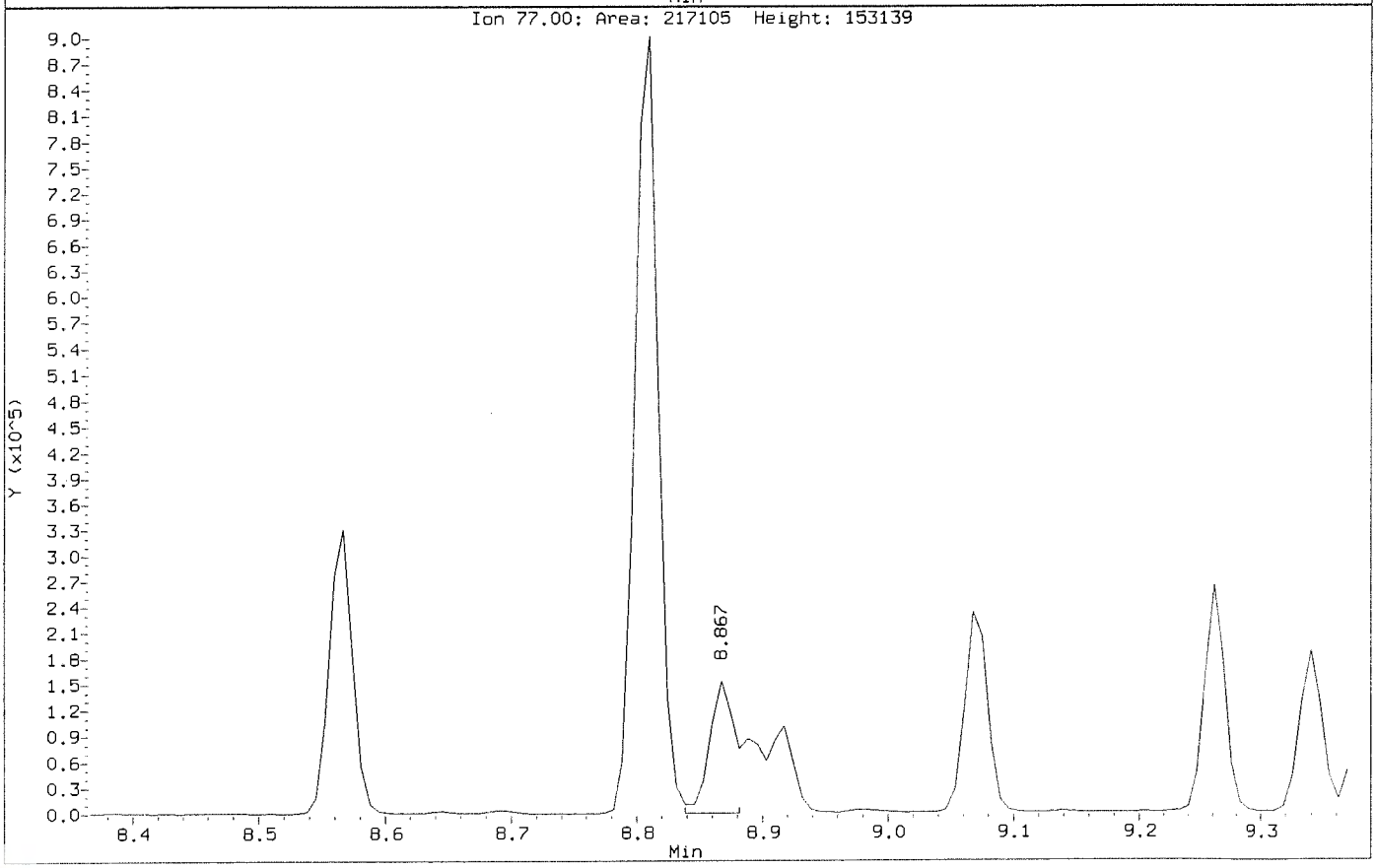




Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

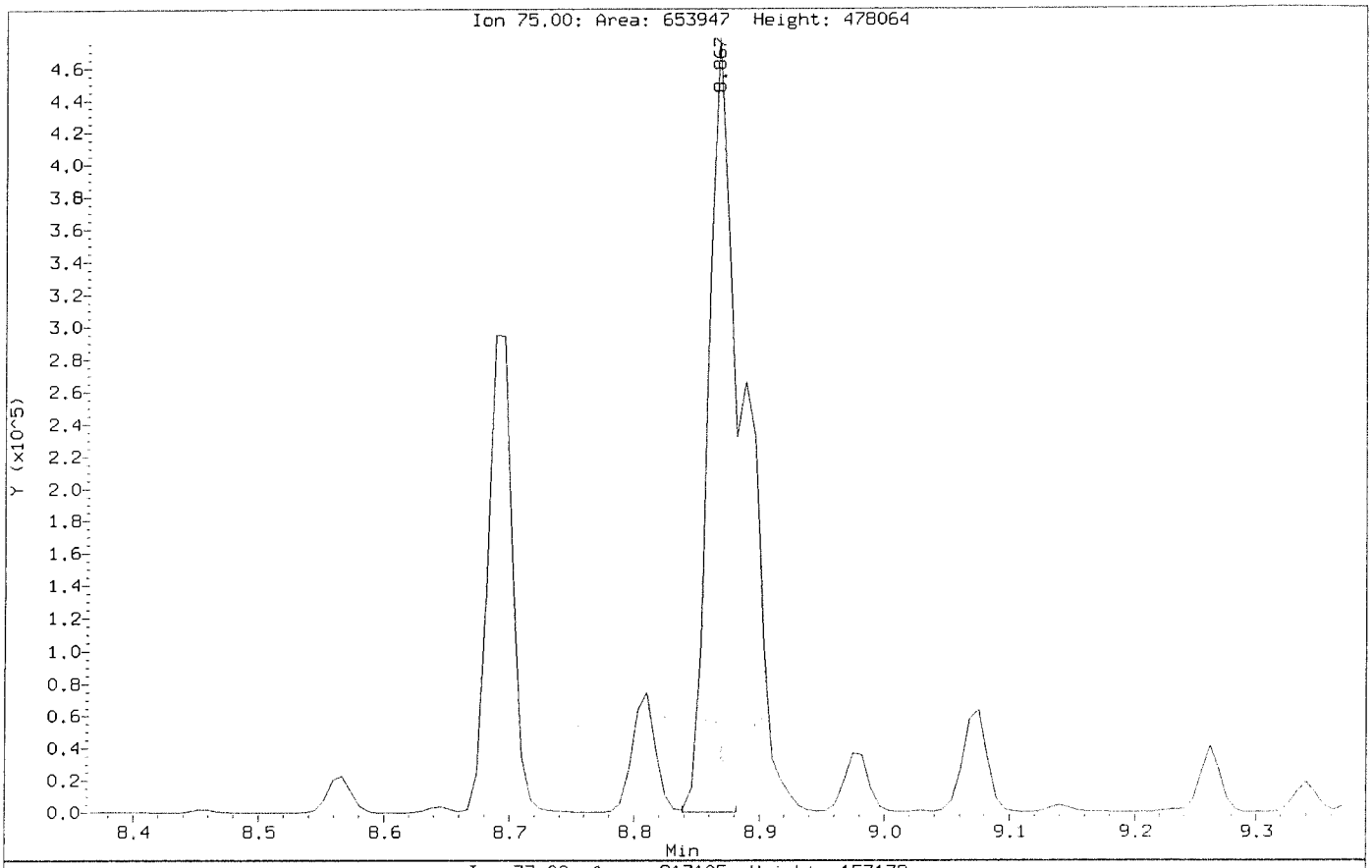
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

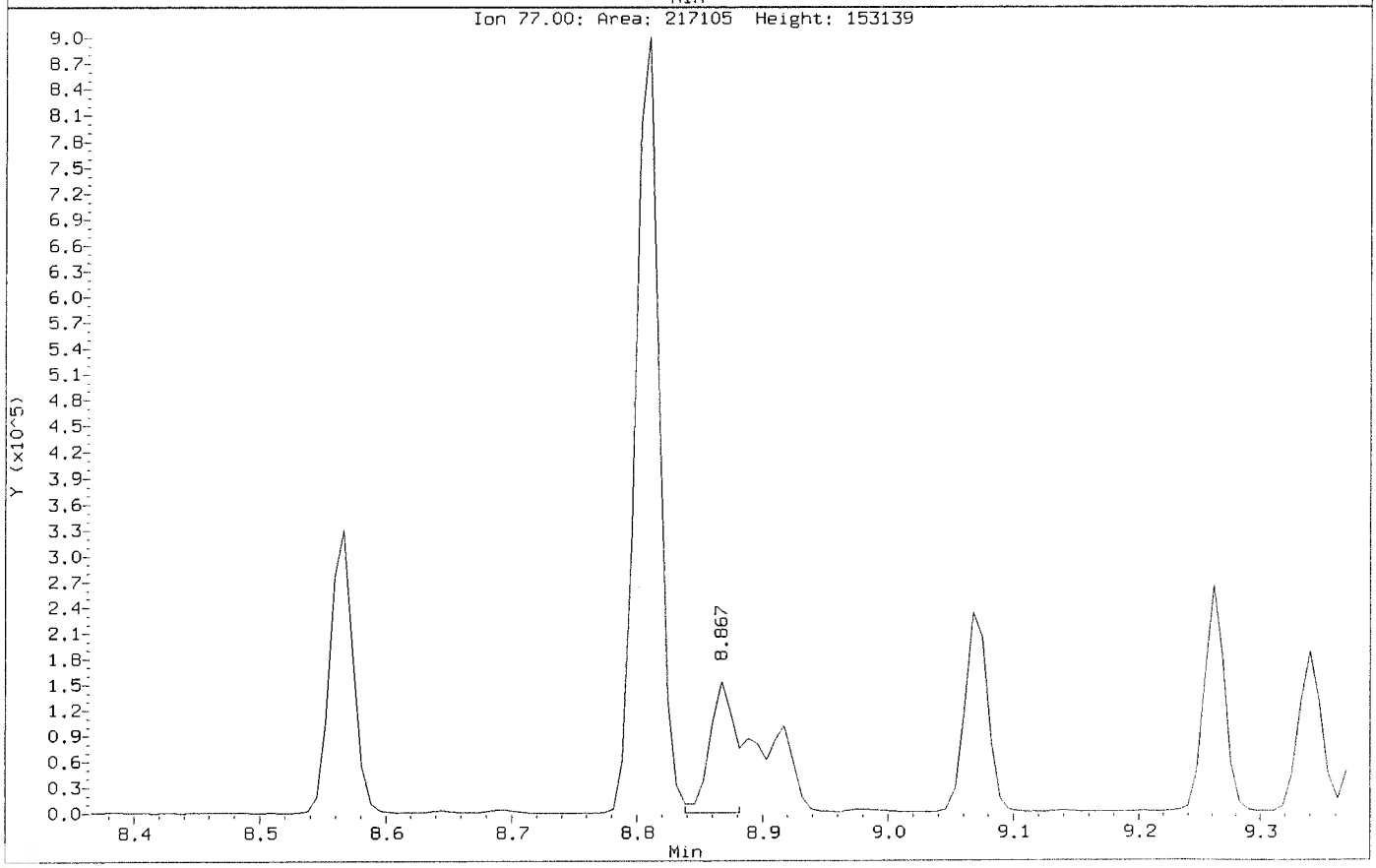


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080310.D
Injection Date: 03-AUG-2020 15:16
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-AUG-2020 15:40
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:16 Cal File: X080310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

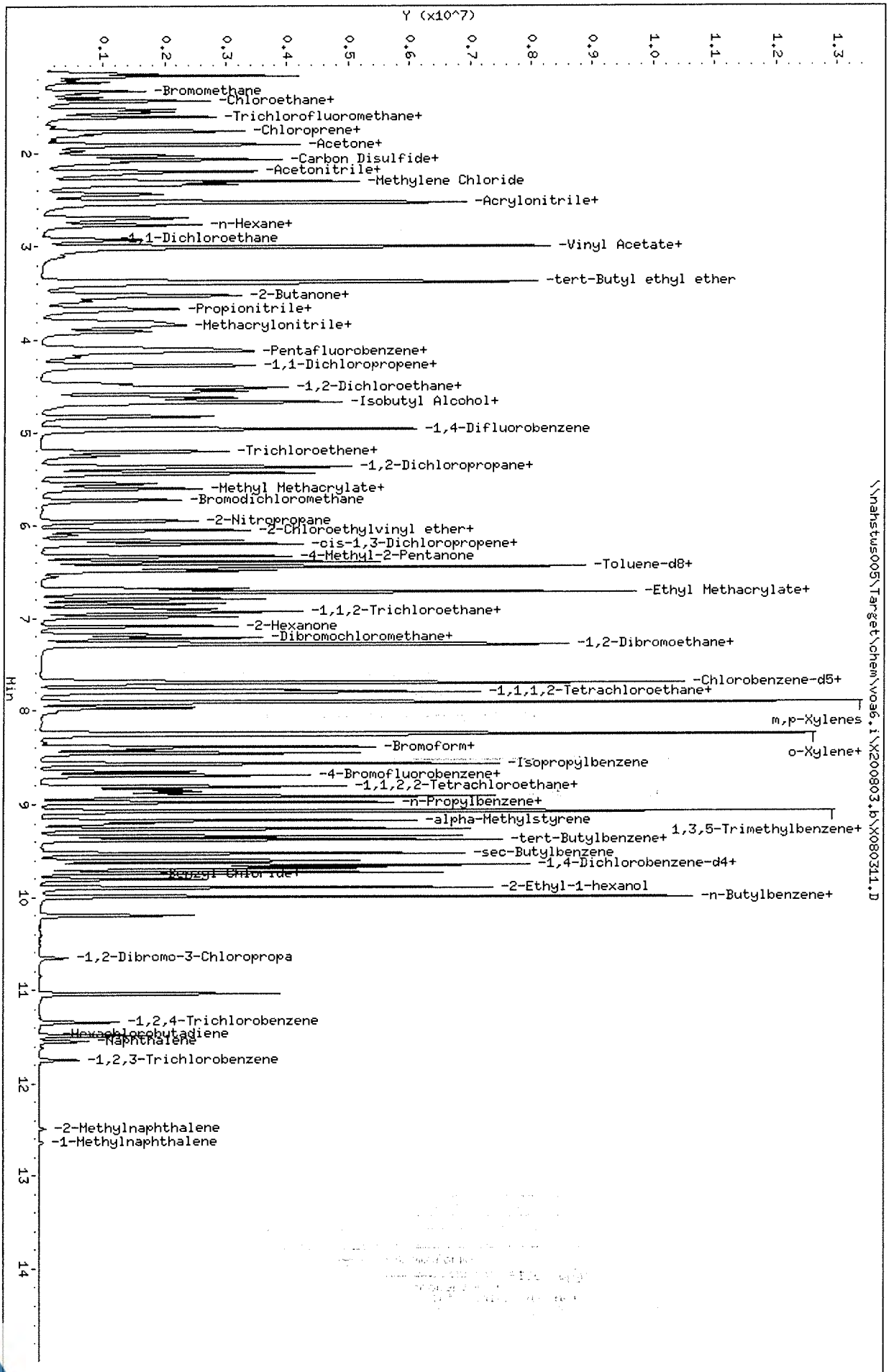
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 450865 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 691821 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 647390 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 303189 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 891470 | 200.000 | 201.34(A) |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 1069168 | 200.000 | 203.72(A) |
| $ 48 Toluene-d8 | 98 | 6.389 | 6.389 | (0.833) | 3098306 | 200.000 | 197.30 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 1172448 | 200.000 | 193.54 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 957096 | 200.000 | 194.21 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 1427757 | 200.000 | 205.58(A) |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 990670 | 200.000 | 201.64(A) |
| 53 1,1,2-Trichloroethane | 83 | 6.847 | 6.847 | (0.893) | 709380 | 200.000 | 192.57 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 1845041 | 200.000 | 209.49(A) |
| 11 1,1-Dichloroethene | 96 | 1.912 | 1.912 | (0.456) | 760300 | 200.000 | 212.82(A) |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.283 | (0.862) | 1199113 | 200.000 | 206.26(A) |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 174820 | 200.000 | 191.61 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 839680 | 200.000 | 189.20(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 360898 | 200.000 | 192.06 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.970) | 3263670 | 200.000 | 201.49(A) |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 87710 | 200.000 | 199.86 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 931649 | 200.000 | 196.31 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 1639229 | 200.000 | 191.14 |

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D Page 2
Report Date: 22-Aug-2020 11:54

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 1348617 | 200.000 | 201.33(A) |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 1043924 | 200.000 | 205.60(A) |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 3217418 | 200.000 | 203.08(A) |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.612 | (0.994) | 1875338 | 200.000 | 196.78 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 1423457 | 200.000 | 195.70 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.684 | 9.684 | (1.001) | 1859620 | 200.000 | 197.32 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 1273388 | 200.000 | 198.01 |
| 24 | 2-Butanone | 43 | 3.581 | 3.581 | (0.855) | 968566 | 400.000 | 438.21(A) |
| 76 | 2-Chlorotoluene | 91 | 8.982 | 8.982 | (0.929) | 2643071 | 200.000 | 200.93(A) |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 1629397 | 400.000 | 400.90(A) |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 3060362 | 200.000 | 199.98 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 3478638 | 200.000 | 207.19(A) |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 2352996 | 400.000 | 392.71(A) |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 618700 | 400.000 | 396.80(A) |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 3502746 | 200.000 | 204.07(A) |
| 74 | Bromobenzene | 156 | 8.810 | 8.810 | (0.911) | 1163775 | 200.000 | 196.22 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 510770 | 200.000 | 187.94 |
| 39 | Bromodichloromethane | 83 | 5.730 | 5.730 | (1.153) | 1253129 | 200.000 | 201.21(A) |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 720436 | 200.000 | 200.57(A) |
| 6 | Bromomethane | 94 | 1.331 | 1.331 | (0.318) | 632580 | 200.000 | 201.82(A) |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 4690853 | 400.000 | 422.91(A) |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 1290058 | 200.000 | 208.77(A) |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 2498297 | 200.000 | 196.90 |
| 7 | Chloroethane | 64 | 1.396 | 1.396 | (0.333) | 661534 | 200.000 | 207.00(A) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 1599662 | 200.000 | 198.59 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 1298797 | 200.000 | 205.16(A) |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 1003656 | 200.000 | 202.23(A) |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 1492460 | 200.000 | 204.94(A) |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 1019362 | 200.000 | 196.57 |
| 44 | Dibromomethane | 93 | 5.558 | 5.558 | (1.118) | 603267 | 200.000 | 200.37(A) |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 990164 | 200.000 | 224.38(A) |
| 61 | Ethylbenzene | 106 | 7.807 | 7.807 | (1.018) | 1305080 | 200.000 | 199.20 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 306426 | 200.000 | 188.25 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 3908287 | 200.000 | 203.22(A) |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 3158365 | 400.000 | 399.48(A) |
| 17 | Methylene Chloride | 84 | 2.306 | 2.306 | (0.550) | 915440 | 200.000 | 201.03(A) |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 2826639 | 200.000 | 210.81(A) |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 4530646 | 200.000 | 207.43(A) |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 531999 | 200.000 | 194.12 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 1537247 | 200.000 | 197.93 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 3856474 | 200.000 | 209.37(A) |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 2646814 | 200.000 | 196.27 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 2815545 | 200.000 | 204.97(A) |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 820612 | 200.000 | 199.39 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 3655728 | 200.000 | 193.36 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 856683 | 200.000 | 202.68(A) |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 1360653 | 200.000 | 203.85(A) |
| 38 | Trichloroethene | 130 | 5.207 | 5.207 | (1.048) | 1027730 | 200.000 | 209.61(A) |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.561 | (0.373) | 1414911 | 200.000 | 213.08(A) |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 1294651 | 200.000 | 223.07(A) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

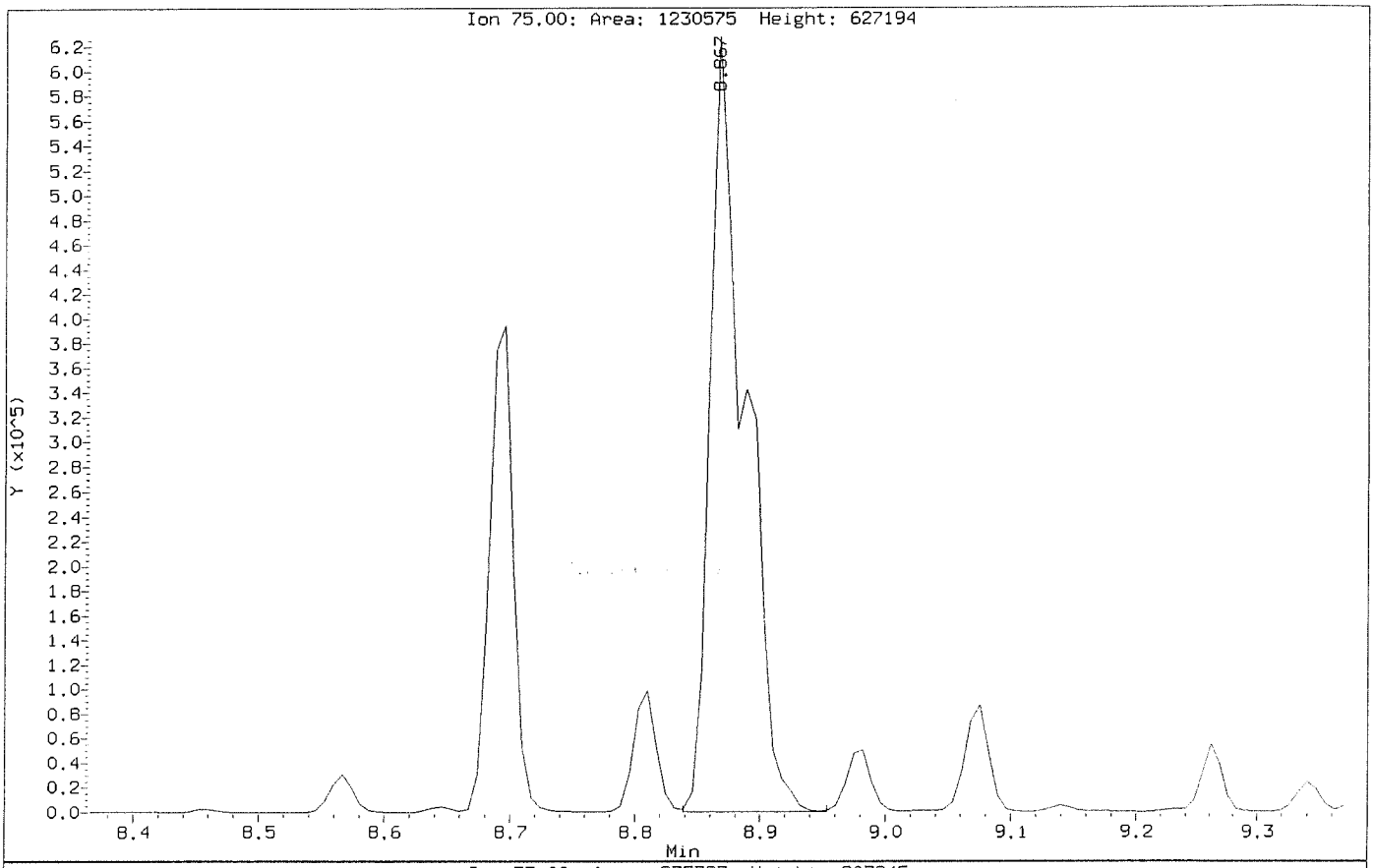


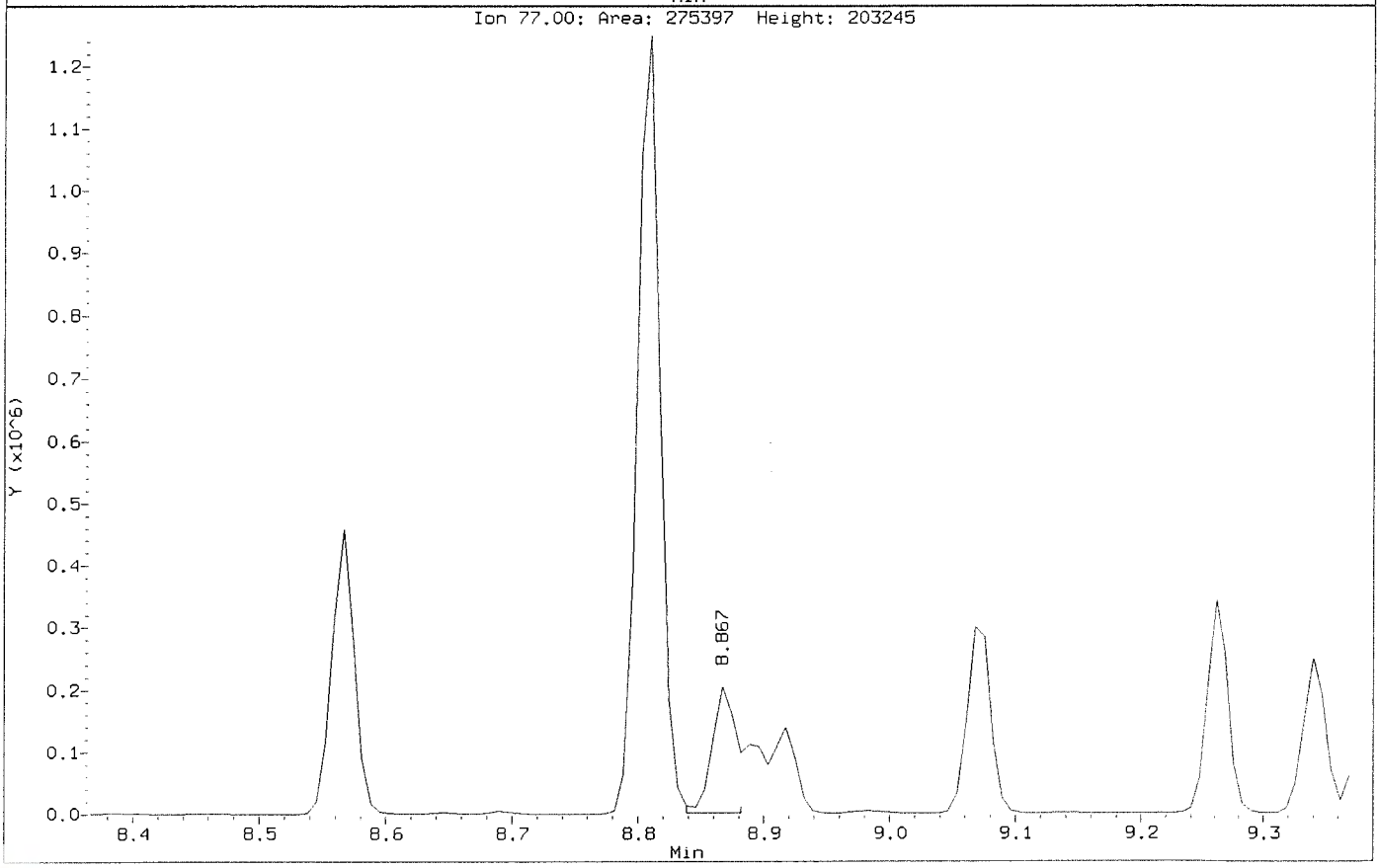

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Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

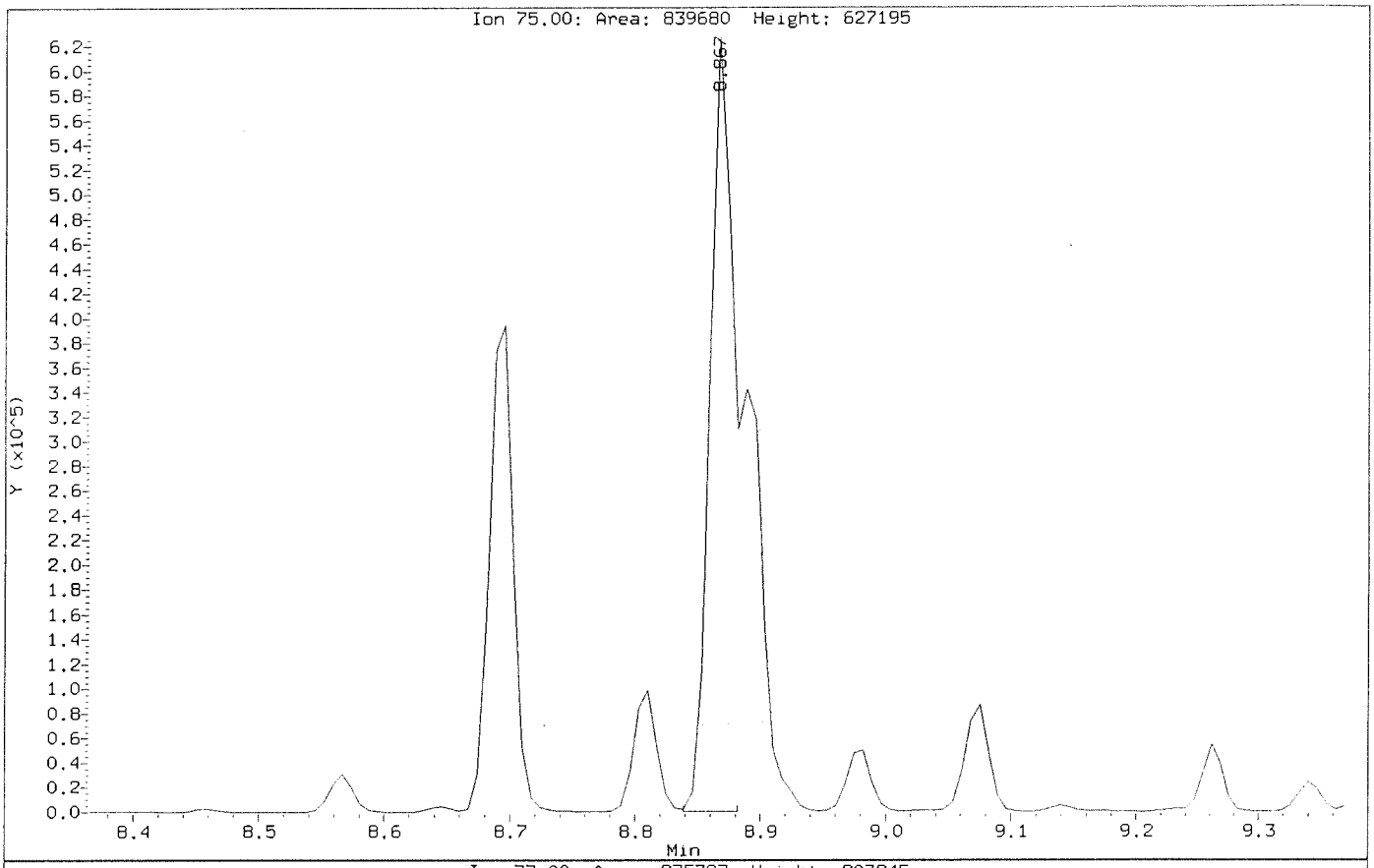
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

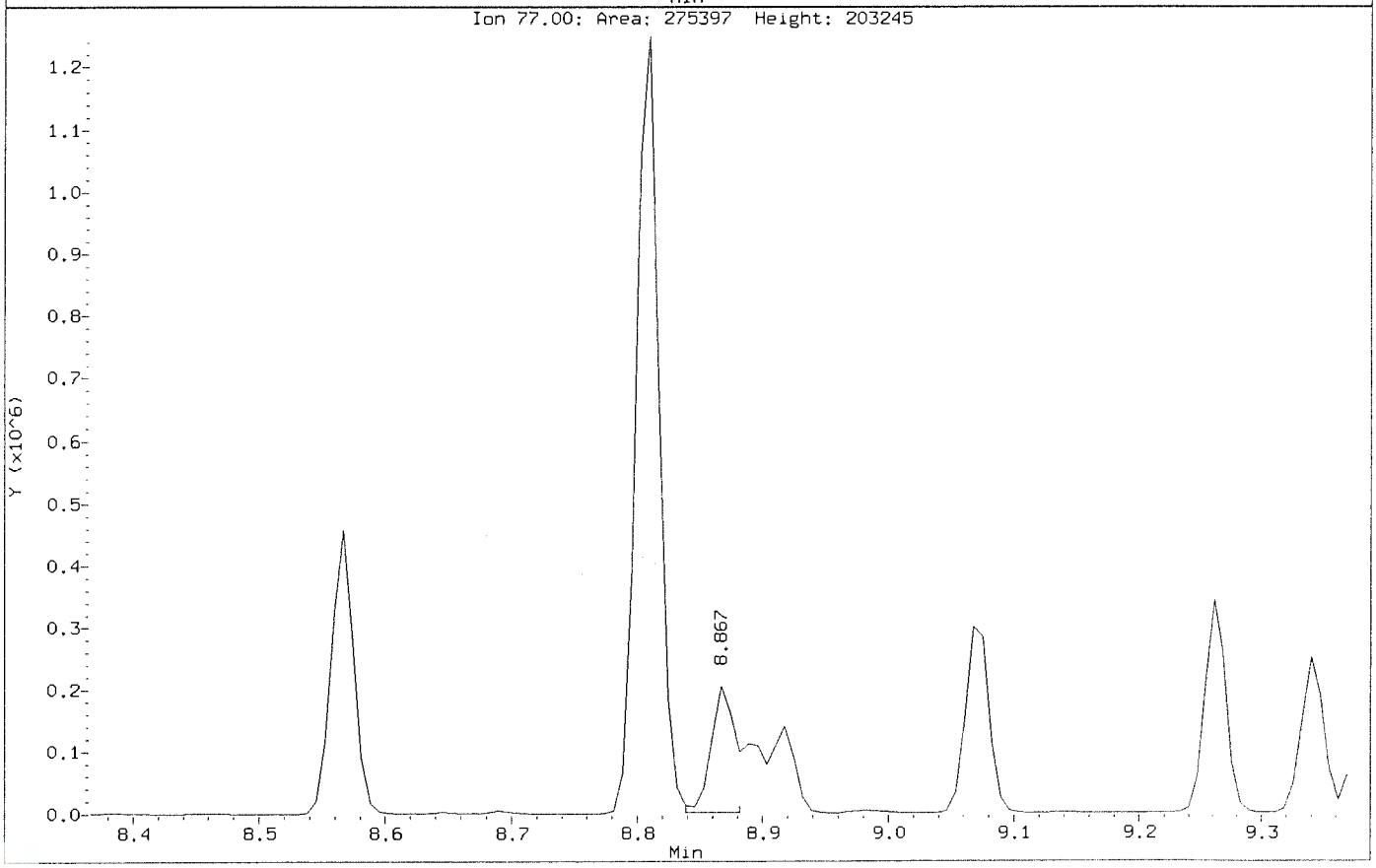


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080311.D
Injection Date: 03-AUG-2020 15:40
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 03-AUG-2020 16:51
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200803.b\8260W.m
Meth Date : 22-Aug-2020 11:54 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 15:40 Cal File: X080311.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

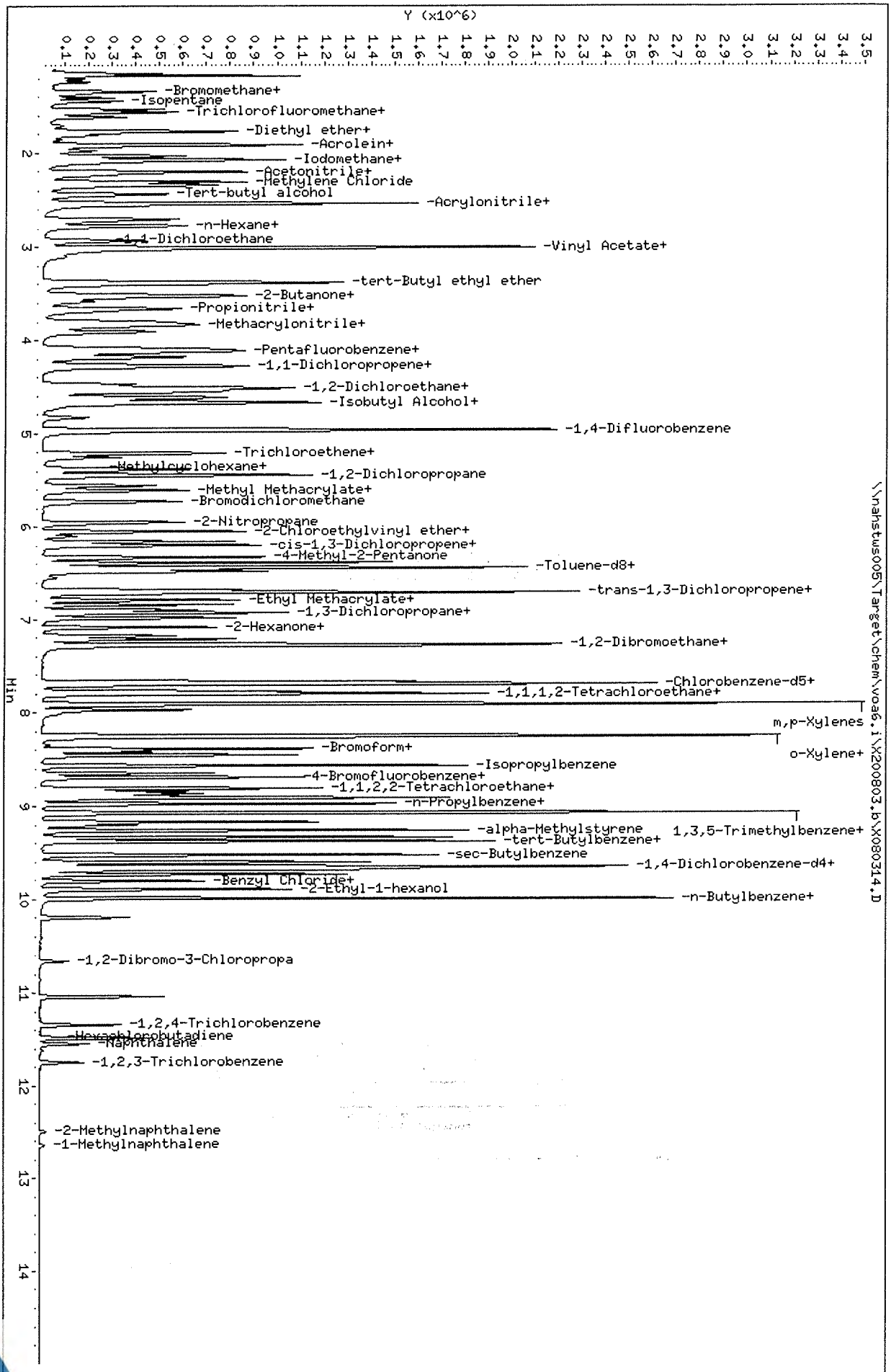
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 487811 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 737194 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 676175 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 325984 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 235982 | 49.2610 | 49.26 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 277053 | 48.7922 | 48.79 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.389 | (0.833) | 810392 | 49.4111 | 49.41 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.695 | (1.133) | 309544 | 48.9242 | 48.92 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 245824 | 47.7596 | 47.75 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 362002 | 48.1775 | 48.17 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.845 | (0.914) | 253503 | 48.2847 | 48.28 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.847 | (0.892) | 183527 | 47.7003 | 47.70 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 478275 | 50.1934 | 50.19 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.912 | (0.458) | 198134 | 51.2626 | 51.26 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.283 | (0.862) | 303153 | 48.9364 | 48.93 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 49347 | 50.3044 | 50.30 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 225070 | 47.1692 | 47.16(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 94358 | 50.1387 | 50.13 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.383 | (0.970) | 838876 | 48.1702 | 48.17 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.102) | 22001 | 47.2364 | 47.23 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 241523 | 48.7266 | 48.72 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.999 | (1.034) | 433731 | 47.0400 | 47.04 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 349700 | 48.9941 | 48.99 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 272227 | 50.3156 | 50.31 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 818750 | 48.0653 | 48.06 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.605 | 9.612 | (0.993) | 489054 | 47.7302 | 47.73 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 370552 | 48.7766 | 48.77 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.684 | (1.001) | 489689 | 48.3269 | 48.32 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 354577 | 50.9627 | 50.96 |
| 24 | 2-Butanone | 43 | 3.580 | 3.581 | (0.855) | 250811 | 104.882 | 104.88 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.982 | (0.928) | 683359 | 48.3181 | 48.31 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 404545 | 95.3001 | 95.30 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.075 | (0.939) | 792702 | 48.1785 | 48.17 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 869988 | 48.1945 | 48.19 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.324 | 6.331 | (0.824) | 585620 | 93.5781 | 93.57 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 173872 | 102.274 | 102.27 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 904308 | 49.4427 | 49.44 |
| 74 | Bromobenzene | 156 | 8.809 | 8.810 | (0.911) | 302326 | 47.4100 | 47.40 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.803 | (0.908) | 138253 | 47.0189 | 47.01 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.730 | (1.153) | 323350 | 48.7242 | 48.72 |
| 66 | Bromoform | 173 | 8.415 | 8.416 | (1.097) | 181296 | 48.3252 | 48.32 |
| 6 | Bromomethane | 94 | 1.338 | 1.331 | (0.320) | 179720 | 53.4789 | 53.47 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1217324 | 101.439 | 101.43 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 315836 | 47.9659 | 47.96 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 648373 | 48.9257 | 48.92 |
| 7 | Chloroethane | 64 | 1.403 | 1.396 | (0.335) | 176540 | 51.0584 | 51.05 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 417889 | 47.9496 | 47.94 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 337755 | 49.3134 | 49.31 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 262524 | 48.8914 | 48.89 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 387446 | 49.9295 | 49.92 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 256809 | 47.4144 | 47.41 |
| 44 | Dibromomethane | 93 | 5.557 | 5.558 | (1.118) | 155222 | 48.3826 | 48.38 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 241678 | 50.6204 | 50.62 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.807 | (1.017) | 332949 | 48.6572 | 48.65 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 84278 | 48.1556 | 48.15 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 975427 | 48.5621 | 48.56 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 807125 | 97.7420 | 97.74 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.306 | (0.550) | 246540 | 49.0057 | 49.00 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.034) | 708345 | 49.1343 | 49.13 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1130932 | 48.1580 | 48.15 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 139595 | 53.3922 | 53.39 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 395537 | 48.7621 | 48.76 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 948593 | 47.8994 | 47.89 |
| 64 | Styrene | 104 | 8.258 | 8.265 | (1.077) | 697467 | 49.5184 | 49.51 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.966) | 699293 | 47.3494 | 47.34 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 204313 | 47.5322 | 47.53 |
| 50 | Toluene | 91 | 6.446 | 6.453 | (0.840) | 953134 | 48.2682 | 48.26 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 223973 | 48.9770 | 48.97 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 345851 | 48.6275 | 48.62 |
| 38 | Trichloroethene | 130 | 5.214 | 5.207 | (1.049) | 264166 | 50.5627 | 50.56 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.561 | (0.373) | 357713 | 49.7923 | 49.79 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 318745 | 50.7622 | 50.76 |

QC Flag Legend

M - Compound response manually integrated.

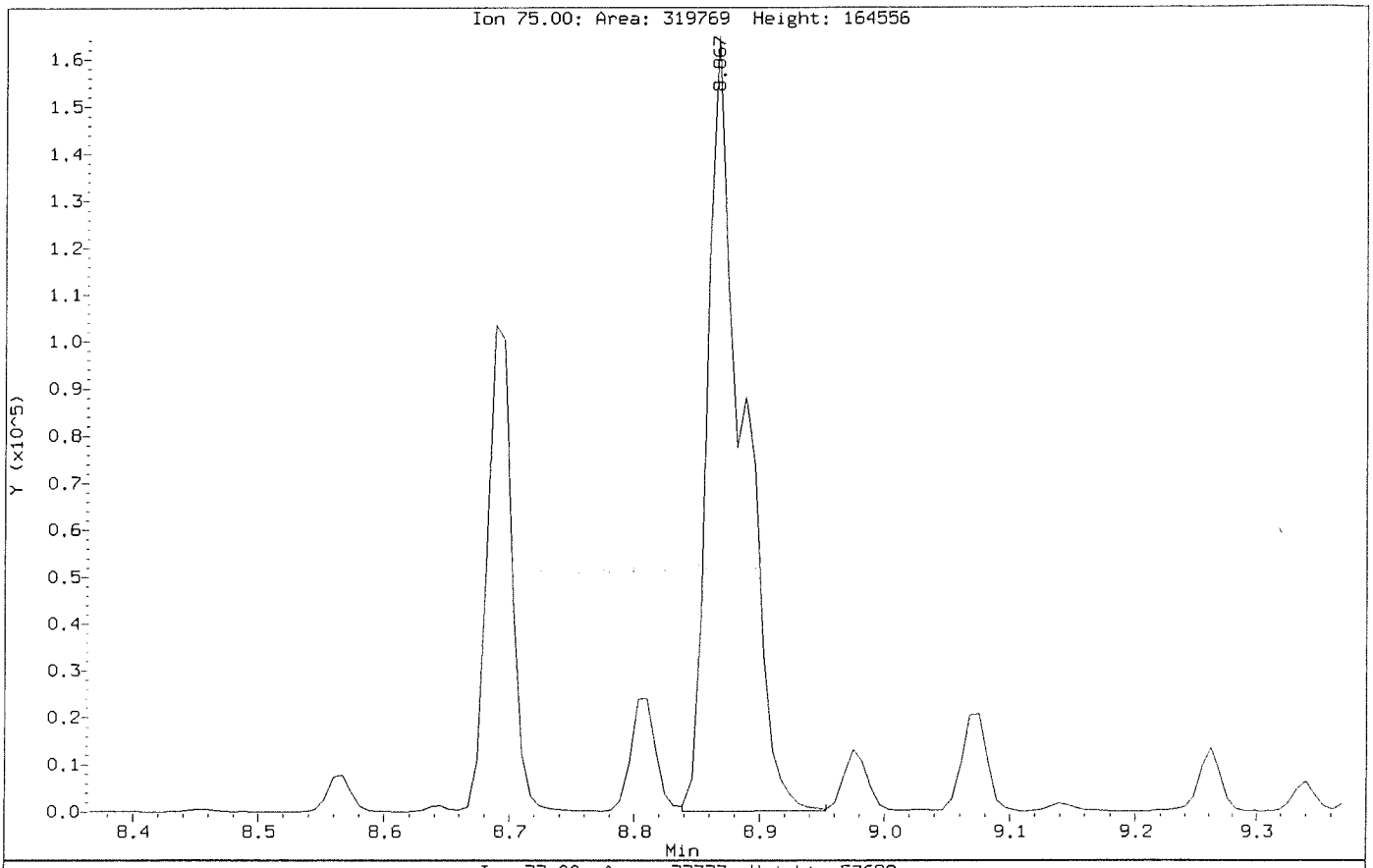


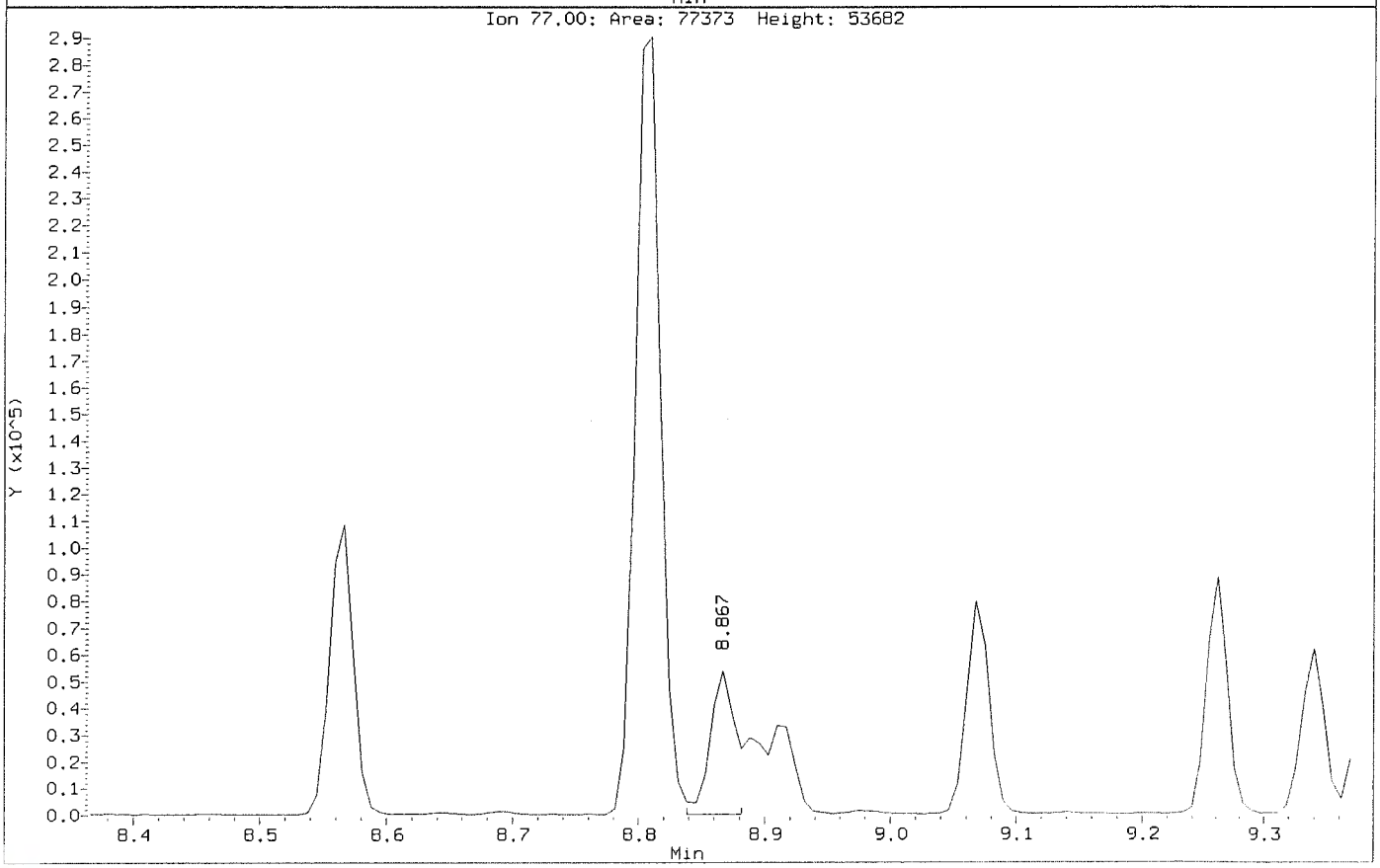

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Date : 03-AUG-2020 16:51
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\Before\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

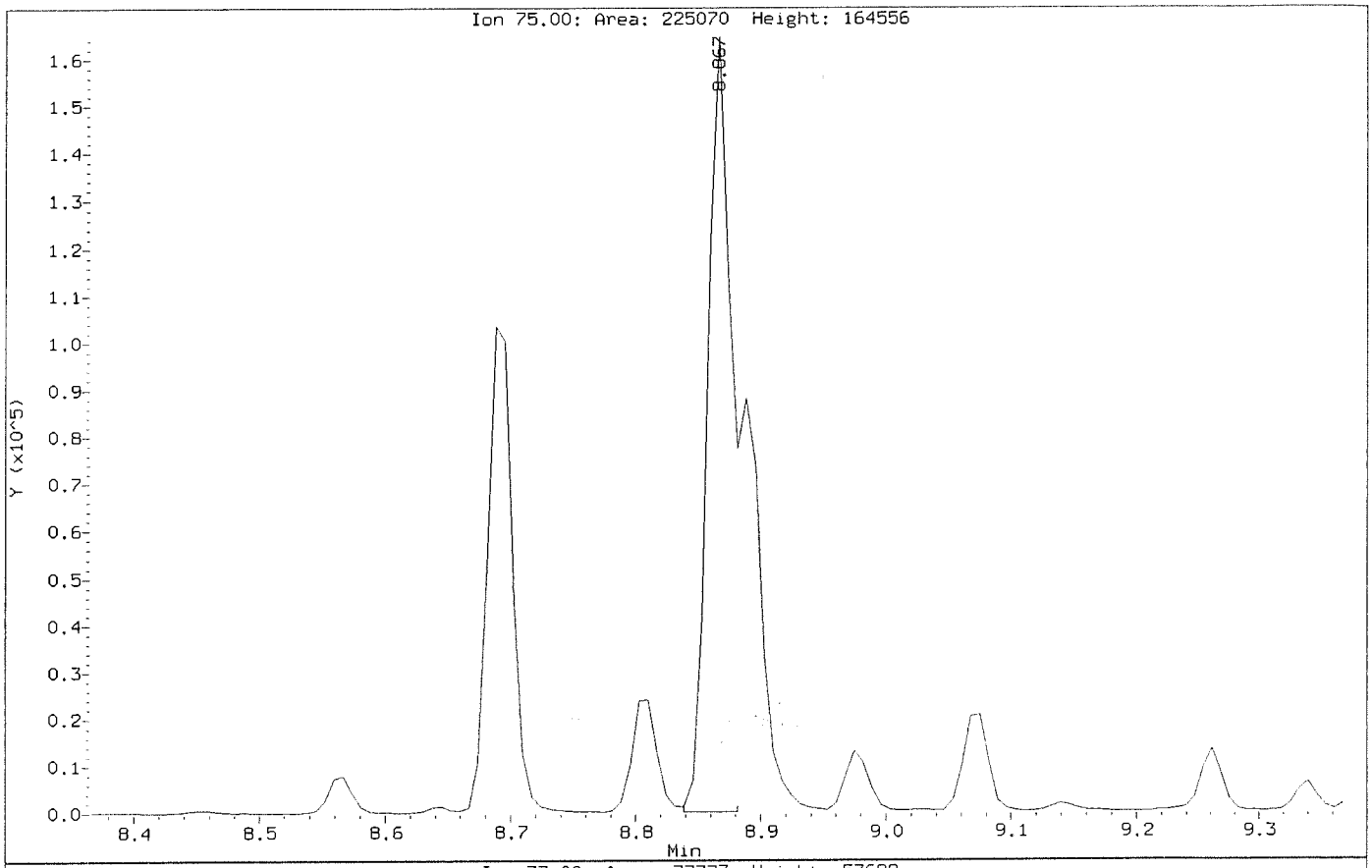
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

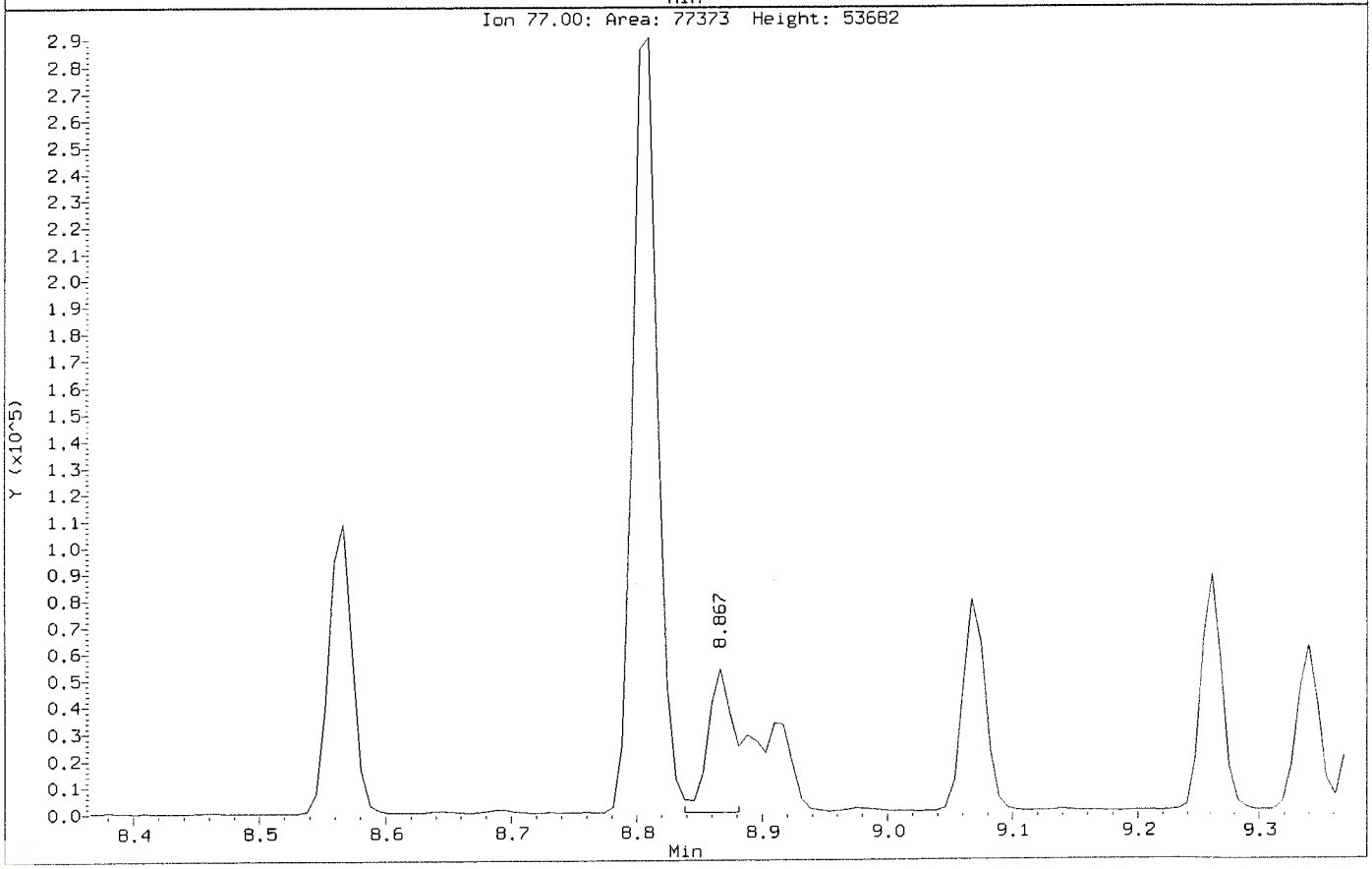


Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080314.D
Injection Date: 03-AUG-2020 16:51
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



# MSVOA06 -Logbook

**Batch:** 41393 **Analyst:** Presenta Cabascango

**Date:** 08-10-2020 **Reviewer:**

**Method:** 8260 **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BFB | TUNE | 08-10-2020 10:47 am | 1.00 | 50 mL | 50 mL | X081001.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 2 | CCV | CCV | 08-10-2020 11:11 am | 1.00 | 50 mL | 50 mL | X081002a.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 3 | CCV | CCV | 08-10-2020 11:35 am | 1.00 | 50 mL | 50 mL | X081003.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 4 | CCB | SAMP | 08-10-2020 11:59 am | 1.00 | 50 mL | 50 mL | X081004.D | Liquid | Y | NA |
| 5 | VLCSW-200810 | LCS | 08-10-2020 12:23 pm | 1.00 | 50 mL | 50 mL | X081005.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 6 | BLANK | SAMP | 08-10-2020 12:47 pm | 1.00 | 50 mL | 50 mL | X081006.D | Liquid | Y | NA |
| 7 | VBLKW-200810 | MBLK | 08-10-2020 01:11 pm | 1.00 | 50 mL | 50 mL | X081007.D | Liquid | Y | NA |
| 8 | HS20080212-02 | SAMP | 08-10-2020 01:35 pm | 1.00 | 50 mL | 50 mL | X081008.D | Liquid | Y | <2 |
| 9 | HS20080212-01 | SAMP | 08-10-2020 01:59 pm | 1.00 | 50 mL | 50 mL | X081009.D | Liquid | Y | <2 |
| 10 | HS20080168-08 | SAMP | 08-10-2020 02:23 pm | 1.00 | 50 mL | 50 mL | X081010.D | Liquid | Y | <2 |
| 11 | HS20080212-01MS | MS | 08-10-2020 02:47 pm | 1.00 | 50 mL | 50 mL | X081011.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 12 | HS20080212-01MSD | MSD | 08-10-2020 03:11 pm | 1.00 | 50 mL | 50 mL | X081012.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 13 | HS20080198-03 | SAMP | 08-10-2020 03:35 pm | 10.00 | 5 mL | 50 mL | X081013.D | Liquid | Y | <2 |
| 14 | CCV-END | CCV | 08-10-2020 03:59 pm | 1.00 | 50 mL | 50 mL | X081014.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 15 | HS20080242-06 | SAMP | 08-10-2020 04:23 pm | 1.00 | 50 mL | 50 mL | X081015.D | Liquid | Y | <2 |
| 16 | HS20080242-10 | SAMP | 08-10-2020 04:47 pm | 1.00 | 50 mL | 50 mL | X081016.D | Liquid | Y | <2 |
| 17 | HS20080242-11 | SAMP | 08-10-2020 05:11 pm | 1.00 | 50 mL | 50 mL | X081017.D | Liquid | Y | <2 |
| 18 | HS20080242-12 | SAMP | 08-10-2020 05:35 pm | 1.00 | 50 mL | 50 mL | X081018.D | Liquid | Y | <2 |
| 19 | HS20080243-01 | SAMP | 08-10-2020 05:59 pm | 1.00 | 50 mL | 50 mL | X081019.D | Liquid | Y | <2 |
| 20 | HS20080243-03 | SAMP | 08-10-2020 06:23 pm | 1.00 | 50 mL | 50 mL | X081020.D | Liquid | Y | <2 |
| 21 | HS20080335-07 | SAMP | 08-10-2020 06:47 pm | 1.00 | 50 mL | 50 mL | X081021.D | Liquid | Y | <2 |
| 22 | HS20080335-10 | SAMP | 08-10-2020 07:11 pm | 1.00 | 50 mL | 50 mL | X081022.D | Liquid | Y | <2 |
| 23 | HS20080335-02 | SAMP | 08-10-2020 07:35 pm | 100.0( | 500 µL | 50 mL | X081023.D | Liquid | Y | <2 |
| 24 | HS20080352-06 | SAMP | 08-10-2020 08:00 pm | 1.00 | 50 mL | 50 mL | X081024.D | Liquid | Y | <2 |
| 25 | HS20080352-07 | SAMP | 08-10-2020 08:24 pm | 1.00 | 50 mL | 50 mL | X081025.D | Liquid | Y | <2 |
| 26 | HS20080351-04 | SAMP | 08-10-2020 08:48 pm | 1.00 | 50 mL | 50 mL | X081026.D | Liquid | Y | <2 |
| 27 | HS20080351-05 | SAMP | 08-10-2020 09:12 pm | 1.00 | 50 mL | 50 mL | X081027.D | Liquid | Y | <2 |
| 28 | HS20080346-03 | SAMP | 08-10-2020 09:36 pm | 1.00 | 50 mL | 50 mL | X081028.D | Liquid | Y | <2 |
| 29 | HS20080346-05 | SAMP | 08-10-2020 10:00 pm | 1.00 | 50 mL | 50 mL | X081029.D | Liquid | Y | <2 |
| 30 | HS20080318-01 | SAMP | 08-10-2020 10:24 pm | 1.00 | 50 mL | 50 mL | X081030.D | Liquid | Y | <2 |
| 31 | BFB | TUNE | 08-10-2020 10:48 pm | 1.00 | 50 mL | 50 mL | Y081001.D | Liquid | Y | na |
| | *Auto find/ purged* | | | | | | | | | |
| 32 | CCV | CCV | 08-10-2020 11:12 pm | 1.00 | 50 mL | 50 mL | Y081002a.D | Liquid | Y | na |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 33 | CCV | CCV | 08-10-2020 11:36 pm | 1.00 | 50 mL | 50 mL | Y081003.D | Liquid | Y | na |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 34 | CCB | SAMP | 08-11-2020 12:00 am | 1.00 | 50 mL | 50 mL | Y081004.D | Liquid | Y | na |
| 35 | VLCSW-200810 | LCS | 08-11-2020 12:24 am | 1.00 | 50 mL | 50 mL | Y081005.D | Liquid | Y | na |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |

# MSVOA06 -Logbook

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 36 | BLANK | SAMP | 08-11-2020 12:48 am | 1.00 | 50 mL | 50 mL | Y081006.D | Liquid | Y | na |
| 37 | VBLKW-200810 | MBLK | 08-11-2020 01:12 am | 1.00 | 50 mL | 50 mL | Y081007.D | Liquid | Y | na |
| 38 | HS20080327-01 | SAMP | 08-11-2020 01:36 am | 1.00 | 50 mL | 50 mL | Y081008.D | Liquid | Y | <2 |
| 39 | HS20080327-01MS | MS | 08-11-2020 02:00 am | 1.00 | 50 mL | 50 mL | Y081009.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 40 | HS20080327-01MSD | MSD | 08-11-2020 02:24 am | 1.00 | 50 mL | 50 mL | Y081010.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mLsamp* | | | | | | | | | |
| 41 | HS20080327-02 | SAMP | 08-11-2020 02:48 am | 1.00 | 50 mL | 50 mL | Y081011.D | Liquid | Y | <2 |
| 42 | HS20080330-06 | SAMP | 08-11-2020 03:12 am | 1.00 | 50 mL | 50 mL | Y081012.D | Liquid | Y | na |
| | *neat samples* | | | | | | | | | |
| 43 | HS20080330-04 | SAMP | 08-11-2020 03:36 am | 1.00 | 50 mL | 50 mL | Y081013.D | Liquid | Y | na |
| 44 | HS20080330-01 | SAMP | 08-11-2020 04:00 am | 1.00 | 50 mL | 50 mL | Y081014.D | Liquid | Y | na |
| 45 | HS20080330-02 | SAMP | 08-11-2020 04:24 am | 1.00 | 50 mL | 50 mL | Y081015.D | Liquid | Y | na |
| 46 | HS20080330-03 | SAMP | 08-11-2020 04:48 am | 1.00 | 50 mL | 50 mL | Y081016.D | Liquid | Y | na |
| 47 | HS20080330-05 | SAMP | 08-11-2020 05:12 am | 1.00 | 50 mL | 50 mL | Y081017.D | Liquid | Y | na |
| 48 | HS20080327-03 | SAMP | 08-11-2020 05:36 am | 1.00 | 50 mL | 50 mL | Y081018.D | Liquid | Y | <2 |
| 49 | HS20080327-04 | SAMP | 08-11-2020 06:01 am | 1.00 | 50 mL | 50 mL | Y081019.D | Liquid | Y | <2 |
| 50 | HS20080327-05 | SAMP | 08-11-2020 06:25 am | 1.00 | 50 mL | 50 mL | Y081020.D | Liquid | Y | <2 |
| 51 | HS20080327-06 | SAMP | 08-11-2020 06:49 am | 1.00 | 50 mL | 50 mL | Y081021.D | Liquid | Y | <2 |
| 52 | HS20080327-07 | SAMP | 08-11-2020 07:13 am | 1.00 | 50 mL | 50 mL | Y081022.D | Liquid | Y | <2 |
| 53 | HS20080339-12 | SAMP | 08-11-2020 07:37 am | 1.00 | 50 mL | 50 mL | Y081023.D | Liquid | Y | <2 |
| 54 | HS20080339-13 | SAMP | 08-11-2020 08:01 am | 1.00 | 50 mL | 50 mL | Y081024.D | Liquid | Y | <2 |
| 55 | HS20080339-01 | SAMP | 08-11-2020 08:25 am | 1.00 | 50 mL | 50 mL | Y081025.D | Liquid | Y | <2 |
| 56 | HS20080339-02 | SAMP | 08-11-2020 08:49 am | 1.00 | 50 mL | 50 mL | Y081026.D | Liquid | Y | <2 |
| 57 | HS20080339-04 | SAMP | 08-11-2020 09:13 am | 1.00 | 50 mL | 50 mL | Y081027.D | Liquid | Y | <2 |
| 58 | HS20080339-05 | SAMP | 08-11-2020 09:37 am | 1.00 | 50 mL | 50 mL | Y081028.D | Liquid | Y | <2 |
| 59 | HS20080339-06 | SAMP | 08-11-2020 10:01 am | 1.00 | 50 mL | 50 mL | Y081029.D | Liquid | Y | <2 |

| Chemical | Value |
|---|---|
| SURR SPK ID | 31106-42-06 |
| IS ID | 31106-42-06 |
| CAL STD ID | 31106-42-01/02 |
| BFB ID | 31106-42-06 |
| pH Paper | 634-64-10 |

# FORM 2
## WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

| | CLIENT SAMPLE NO. | SMC1 (DCE) # | SMC2 # | SMC3 (TOL) # | OTHER # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | VLCSW-200810 | 99 | 98 | 98 | 97 | 0 |
| 02 | VBLKW-200810 | 92 | 93 | 107 | 96 | 0 |
| 03 | HS20080212-02 | 91 | 94 | 108 | 95 | 0 |
| 04 | HS20080212-01 | 92 | 93 | 106 | 96 | 0 |
| 05 | HS20080212-01 | 93 | 95 | 108 | 96 | 0 |
| 06 | HS20080212-01 | 94 | 94 | 104 | 98 | 0 |
| 07 | | | | | | |
| 08 | | | | | | |
| 09 | | | | | | |
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| 12 | | | | | | |
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| 27 | | | | | | |
| 28 | | | | | | |

| | | QC LIMITS |
|---|---|---|
| SMC1 (DCE) | = 1,2-Dichloroethane-d4 | ( 0-130) |
| SMC2 | = Dibromofluoromethane | ( 0-130) |
| SMC3 (TOL) | = Toluene-d8 | ( 0-130) |
| OTHER | = 4-Bromofluorobenzene | ( 0-130) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200810

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Lab File ID: X081007 Lab Sample ID: VBLKW-200810

Date Analyzed: 08/10/20 Time Analyzed: 1311

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | VLCSW-200810 | VLCSW-200810 | X081005 | 1223 |
| 02 | HS20080212-0 | HS20080212-02 | X081008 | 1335 |
| 03 | HS20080212-0 | HS20080212-01 | X081009 | 1359 |
| 04 | HS20080212-0 | HS20080212-01M | X081011 | 1447 |
| 05 | HS20080212-0 | HS20080212-01M | X081012 | 1511 |
| 06 | | | | |
| 07 | | | | |
| 08 | | | | |
| 09 | | | | |
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| 30 | | | | |

COMMENTS:

# FORM 5
## VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Lab File ID: X081001 BFB Injection Date: 08/10/20

Instrument ID: VOA6 BFB Injection Time: 1047

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 20.9 |
| 75 | 30.0 - 60.0% of mass 95 | 47.8 |
| 95 | Base Peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.3 |
| 173 | Less than 2.0% of mass 174 | 0.7 ( 0.9)1 |
| 174 | Greater than 50.0% of mass 95 | 78.8 |
| 175 | 5.0 - 9.0% of mass 174 | 5.7 ( 7.2)1 |
| 176 | 95.0 - 101.0% of mass 174 | 76.8 ( 97.5)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.3 ( 6.9)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | CCV | CCV | X081003 | 08/10/20 | 1135 |
| 02 | VLCSW-200810 | VLCSW-200810 | X081005 | 08/10/20 | 1223 |
| 03 | VBLKW-200810 | VBLKW-200810 | X081007 | 08/10/20 | 1311 |
| 04 | HS20080212-0 | HS20080212-02 | X081008 | 08/10/20 | 1335 |
| 05 | HS20080212-0 | HS20080212-01 | X081009 | 08/10/20 | 1359 |
| 06 | HS20080212-0 | HS20080212-01M | X081011 | 08/10/20 | 1447 |
| 07 | HS20080212-0 | HS20080212-01M | X081012 | 08/10/20 | 1511 |
| 08 | CCV-END | CCV-END | X081014 | 08/10/20 | 1559 |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
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| 22 | | | | | |

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Instrument ID: VOA6 Calibration Date: 08/10/20 Time: 1135

Lab File ID: X081003 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.5260000 | 0.5669992 | 0.5669992 | 0.2 | -7.79 | 20.00 | AVRG |
| trans-1,3-Dichloropropene | 0.4820000 | 0.5071668 | 0.5071668 | 0.1 | -5.22 | 20.00 | AVRG |
| 1,3-Dichlorobenzene | 1.5720000 | 1.5817449 | 1.5817449 | 0.6 | -0.62 | 20.00 | AVRG |
| 2,2-Dichloropropane | 0.7130000 | 0.7640046 | 0.7640046 | 0.1 | -7.15 | 20.00 | AVRG |
| 1,1-Dichloropropene | 0.4200000 | 0.4236277 | 0.4236277 | 0.1 | -0.86 | 20.00 | AVRG |
| Dibromomethane | 0.2170000 | 0.2318519 | 0.2318519 | 0.1 | -6.84 | 20.00 | AVRG |
| 1,2-Dibromoethane | 0.3660000 | 0.3805797 | 0.3805797 | 0.1 | -3.98 | 20.00 | AVRG |
| trans-1,2-Dichloroethene | 0.4690000 | 0.5006130 | 0.5006130 | 0.1 | -6.74 | 20.00 | AVRG |
| 1,1,1,2-Tetrachloroethane | 0.3800000 | 0.3842284 | 0.3842284 | 0.1 | -1.11 | 20.00 | AVRG |
| 1,1,1-Trichloroethane | 0.7700000 | 0.7757101 | 0.7757101 | 0.1 | -0.74 | 20.00 | AVRG |
| 1,1,2,2-Tetrachloroethane | 54.364738 | 50.000000 | 0.8763676 | 0.3 | -8.73 | 20.00 | LINR |
| 1,1,2-Trichloroethane | 0.2840000 | 0.2951963 | 0.2951963 | 0.1 | -3.94 | 20.00 | AVRG |
| 1,1-Dichloroethane | 0.9760000 | 1.0697218 | 1.0697218 | 0.2 | -9.60 | 20.00 | AVRG |
| 1,1-Dichloroethene | 0.3960000 | 0.4201719 | 0.4201719 | 0.1 | -6.10 | 20.00 | AVRG |
| Trichloroethene | 0.3540000 | 0.3763265 | 0.3763265 | 0.2 | -6.31 | 20.00 | AVRG |
| 1,2,3-Trichlorobenzene | 0.1500000 | 0.1413714 | 0.1413714 | 0.01 | 5.75 | 20.00 | AVRG |
| Trichlorofluoromethane | 0.7360000 | 0.7403942 | 0.7403942 | 0.1 | -0.60 | 20.00 | AVRG |
| 1,2,4-Trichlorobenzene | 49.207542 | 50.000000 | 0.2840077 | 0.1 | 1.58 | 20.00 | 2RDR |
| 1,2,4-Trimethylbenzene | 2.6710000 | 2.6537255 | 2.6537255 | 0.1 | 0.65 | 20.00 | AVRG |
| Tetrachloroethene | 0.3180000 | 0.3031869 | 0.3031869 | 0.2 | 4.66 | 20.00 | AVRG |
| 1,2-Dichlorobenzene | 1.4140000 | 1.4042441 | 1.4042441 | 0.4 | 0.69 | 20.00 | AVRG |
| 1,2-Dichloroethane | 0.4840000 | 0.5146931 | 0.5146931 | 0.1 | -6.34 | 20.00 | AVRG |
| 1,2-Dichloropropane | 0.3670000 | 0.4025379 | 0.4025379 | 0.1 | -9.68 | 20.00 | AVRG |
| 1,3,5-Trimethylbenzene | 2.6130000 | 2.5480724 | 2.5480724 | 0.1 | 2.48 | 20.00 | AVRG |
| 1,3-Dichloropropane | 0.5620000 | 0.5900482 | 0.5900482 | 0.1 | -4.99 | 20.00 | AVRG |
| 1,4-Dichlorobenzene | 1.5540000 | 1.5716897 | 1.5716897 | 0.4 | -1.14 | 20.00 | AVRG |
| Toluene | 1.4600000 | 1.4696222 | 1.4696222 | 0.4 | -0.66 | 20.00 | AVRG |
| 2-Butanone | 0.2450000 | 0.2897274 | 0.2897274 | 0.1 | -18.26 | 20.00 | AVRG |
| 2-Chlorotoluene | 2.1690000 | 2.1853142 | 2.1853142 | 0.1 | -0.75 | 20.00 | AVRG |
| 2-Hexanone | 0.3140000 | 0.3300948 | 0.3300948 | 0.1 | -5.12 | 20.00 | AVRG |
| 4-Chlorotoluene | 2.5230000 | 2.5359555 | 2.5359555 | 0.1 | -0.51 | 20.00 | AVRG |
| tert-Butylbenzene | 2.2650000 | 2.1313257 | 2.1313257 | 0.1 | 5.90 | 20.00 | AVRG |
| 4-Methyl-2-Pentanone | 0.4630000 | 0.4792872 | 0.4792872 | 0.1 | -3.52 | 20.00 | AVRG |
| Acetone | 111.22544 | 100.00000 | 0.1936529 | 0.1 | -11.22 | 20.00 | LINR |
| Benzene | 1.2410000 | 1.3169992 | 1.3169992 | 0.5 | -6.12 | 20.00 | AVRG |
| Bromobenzene | 0.9780000 | 0.9976727 | 0.9976727 | 0.1 | -2.01 | 20.00 | AVRG |
| Bromochloromethane | 0.3010000 | 0.3065359 | 0.3065359 | 0.1 | -1.84 | 20.00 | AVRG |
| Bromodichloromethane | 0.4500000 | 0.4744991 | 0.4744991 | 0.2 | -5.44 | 20.00 | AVRG |
| Bromoform | 0.2780000 | 0.2862438 | 0.2862438 | 0.1 | -2.96 | 20.00 | AVRG |
| Bromomethane | 55.183022 | 50.000000 | 0.3803066 | 0.1 | -10.37 | 20.00 | LINR |
| Carbon Disulfide | 1.2300000 | 1.2898971 | 1.2898971 | 0.1 | -4.87 | 20.00 | AVRG |
| Carbon Tetrachloride | 0.4460000 | 0.4307682 | 0.4307682 | 0.1 | 3.42 | 20.00 | AVRG |

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date: 08/10/20 Time: 1135

Lab File ID: X081003 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| Chlorobenzene | 0.9800000 | 0.9930173 | 0.9930173 | 0.5 | -1.33 | 20.00 | AVRG |
| Chloroethane | 0.3540000 | 0.3737571 | 0.3737571 | 0.1 | -5.58 | 20.00 | AVRG |
| Chloroform | 0.8930000 | 0.9313365 | 0.9313365 | 0.2 | -4.29 | 20.00 | AVRG |
| Chloromethane | 0.7020000 | 0.7204001 | 0.7204001 | 0.1 | -2.62 | 20.00 | AVRG |
| cis-1,2-Dichloroethene | 0.5500000 | 0.5860679 | 0.5860679 | 0.1 | -6.56 | 20.00 | AVRG |
| Dibromochloromethane | 0.4000000 | 0.4057969 | 0.4057969 | 0.1 | -1.45 | 20.00 | AVRG |
| Dichlorodifluoromethane | 0.4890000 | 0.4700480 | 0.4700480 | 0.1 | 3.88 | 20.00 | AVRG |
| Ethylbenzene | 0.5060000 | 0.5004179 | 0.5004179 | 0.1 | 1.10 | 20.00 | AVRG |
| Hexachlorobutadiene | 0.2680000 | 0.2197678 | 0.2197678 | 0.1 | 18.00 | 20.00 | AVRG |
| Isopropylbenzene | 1.4850000 | 1.4273224 | 1.4273224 | 0.1 | 3.88 | 20.00 | AVRG |
| m,p-Xylenes | 0.6100000 | 0.6042986 | 0.6042986 | 0.1 | 0.93 | 20.00 | AVRG |
| Methylene Chloride | 52.777970 | 50.000000 | 0.5432397 | 0.1 | -5.56 | 20.00 | LINR |
| n-Butylbenzene | 2.2110000 | 2.0895014 | 2.0895014 | 0.5 | 5.50 | 20.00 | AVRG |
| n-Propylbenzene | 3.6020000 | 3.5088727 | 3.5088727 | 0.1 | 2.58 | 20.00 | AVRG |
| Naphthalene | 56.776964 | 50.000000 | 0.4564177 | 0.2 | -13.55 | 20.00 | 2RDR |
| o-Xylene | 0.6000000 | 0.6002550 | 0.6002550 | 0.3 | -0.04 | 20.00 | AVRG |
| sec-Butylbenzene | 3.0380000 | 2.8177561 | 2.8177561 | 0.1 | 7.25 | 20.00 | AVRG |
| Styrene | 1.0410000 | 1.0543607 | 1.0543607 | 0.3 | -1.28 | 20.00 | AVRG |
| Vinyl Chloride | 0.6440000 | 0.6710690 | 0.6710690 | 0.1 | -4.20 | 20.00 | AVRG |
| 1,2,3-Trichloropropane | 0.7320000 | 0.7643240 | 0.7643240 | 0.1 | -4.42 | 20.00 | AVRG |
| p-Isopropyltoluene | 2.7680000 | 2.6109305 | 2.6109305 | 0.1 | 5.67 | 20.00 | AVRG |
| 1,2-Dibromo-3-Chloropropane | 52.325380 | 50.000000 | 7.49e-002 | 0.05 | -4.65 | 20.00 | LINR |
| 1,2-Dichloroethane-d4 | 0.5820000 | 0.5698194 | 0.5698194 | 0.1 | 2.09 | 20.00 | AVRG |
| Dibromofluoromethane | 0.4910000 | 0.4808967 | 0.4808967 | 0.1 | 2.06 | 20.00 | AVRG |
| Toluene-d8 | 1.2130000 | 1.1664517 | 1.1664517 | 0.1 | 3.84 | 20.00 | AVRG |
| 4-Bromofluorobenzene | 0.4680000 | 0.4494476 | 0.4494476 | 0.1 | 3.96 | 20.00 | AVRG |

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Instrument ID: VOA6 Calibration Date: 08/10/20 Time: 1559

Lab File ID: X081014 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.5260000 | 0.5169374 | 0.5169374 | 0.2 | 1.72 | 50.00 | AVRG |
| trans-1,3-Dichloropropene | 0.4820000 | 0.4637039 | 0.4637039 | 0.1 | 3.80 | 50.00 | AVRG |
| 1,3-Dichlorobenzene | 1.5720000 | 1.4552667 | 1.4552667 | 0.6 | 7.42 | 50.00 | AVRG |
| 2,2-Dichloropropane | 0.7130000 | 0.6687958 | 0.6687958 | 0.1 | 6.20 | 50.00 | AVRG |
| 1,1-Dichloropropene | 0.4200000 | 0.3938700 | 0.3938700 | 0.1 | 6.22 | 50.00 | AVRG |
| Dibromomethane | 0.2170000 | 0.2141023 | 0.2141023 | 0.1 | 1.34 | 50.00 | AVRG |
| 1,2-Dibromoethane | 0.3660000 | 0.3581252 | 0.3581252 | 0.1 | 2.15 | 50.00 | AVRG |
| trans-1,2-Dichloroethene | 0.4690000 | 0.4716703 | 0.4716703 | 0.1 | -0.57 | 50.00 | AVRG |
| 1,1,1,2-Tetrachloroethane | 0.3800000 | 0.3555359 | 0.3555359 | 0.1 | 6.44 | 50.00 | AVRG |
| 1,1,1-Trichloroethane | 0.7700000 | 0.7450598 | 0.7450598 | 0.1 | 3.24 | 50.00 | AVRG |
| 1,1,2,2-Tetrachloroethane | 50.722775 | 50.000000 | 0.8172387 | 0.3 | -1.44 | 50.00 | LINR |
| 1,1,2-Trichloroethane | 0.2840000 | 0.2749256 | 0.2749256 | 0.1 | 3.20 | 50.00 | AVRG |
| 1,1-Dichloroethane | 0.9760000 | 1.0121118 | 1.0121118 | 0.2 | -3.70 | 50.00 | AVRG |
| 1,1-Dichloroethene | 0.3960000 | 0.4044297 | 0.4044297 | 0.1 | -2.13 | 50.00 | AVRG |
| Trichloroethene | 0.3540000 | 0.3501432 | 0.3501432 | 0.2 | 1.09 | 50.00 | AVRG |
| 1,2,3-Trichlorobenzene | 0.1500000 | 0.1131685 | 0.1131685 | 0.01 | 24.55 | 50.00 | AVRG |
| Trichlorofluoromethane | 0.7360000 | 0.7011691 | 0.7011691 | 0.1 | 4.73 | 50.00 | AVRG |
| 1,2,4-Trichlorobenzene | 40.789244 | 50.000000 | 0.2349849 | 0.1 | 18.42 | 50.00 | 2RDR |
| 1,2,4-Trimethylbenzene | 2.6710000 | 2.5171633 | 2.5171633 | 0.1 | 5.76 | 50.00 | AVRG |
| Tetrachloroethene | 0.3180000 | 0.2924349 | 0.2924349 | 0.2 | 8.04 | 50.00 | AVRG |
| 1,2-Dichlorobenzene | 1.4140000 | 1.3040989 | 1.3040989 | 0.4 | 7.77 | 50.00 | AVRG |
| 1,2-Dichloroethane | 0.4840000 | 0.4797181 | 0.4797181 | 0.1 | 0.88 | 50.00 | AVRG |
| 1,2-Dichloropropane | 0.3670000 | 0.3737636 | 0.3737636 | 0.1 | -1.84 | 50.00 | AVRG |
| 1,3,5-Trimethylbenzene | 2.6130000 | 2.4343071 | 2.4343071 | 0.1 | 6.84 | 50.00 | AVRG |
| 1,3-Dichloropropane | 0.5620000 | 0.5505850 | 0.5505850 | 0.1 | 2.03 | 50.00 | AVRG |
| 1,4-Dichlorobenzene | 1.5540000 | 1.4629752 | 1.4629752 | 0.4 | 5.86 | 50.00 | AVRG |
| Toluene | 1.4600000 | 1.3931993 | 1.3931993 | 0.4 | 4.58 | 50.00 | AVRG |
| 2-Butanone | 0.2450000 | 0.2800168 | 0.2800168 | 0.1 | -14.29 | 50.00 | AVRG |
| 2-Chlorotoluene | 2.1690000 | 2.0522084 | 2.0522084 | 0.1 | 5.38 | 50.00 | AVRG |
| 2-Hexanone | 0.3140000 | 0.3224749 | 0.3224749 | 0.1 | -2.70 | 50.00 | AVRG |
| 4-Chlorotoluene | 2.5230000 | 2.3817266 | 2.3817266 | 0.1 | 5.60 | 50.00 | AVRG |
| tert-Butylbenzene | 2.2650000 | 2.0796044 | 2.0796044 | 0.1 | 8.18 | 50.00 | AVRG |
| 4-Methyl-2-Pentanone | 0.4630000 | 0.4632593 | 0.4632593 | 0.1 | -0.06 | 50.00 | AVRG |
| Acetone | 104.44535 | 100.00000 | 0.1819607 | 0.1 | -4.44 | 50.00 | LINR |
| Benzene | 1.2410000 | 1.2287972 | 1.2287972 | 0.5 | 0.98 | 50.00 | AVRG |
| Bromobenzene | 0.9780000 | 0.9144106 | 0.9144106 | 0.1 | 6.50 | 50.00 | AVRG |
| Bromochloromethane | 0.3010000 | 0.2905646 | 0.2905646 | 0.1 | 3.47 | 50.00 | AVRG |
| Bromodichloromethane | 0.4500000 | 0.4353134 | 0.4353134 | 0.2 | 3.26 | 50.00 | AVRG |
| Bromoform | 0.2780000 | 0.2663963 | 0.2663963 | 0.1 | 4.17 | 50.00 | AVRG |
| Bromomethane | 52.109546 | 50.000000 | 0.3588707 | 0.1 | -4.22 | 50.00 | LINR |
| Carbon Disulfide | 1.2300000 | 1.2274197 | 1.2274197 | 0.1 | 0.21 | 50.00 | AVRG |
| Carbon Tetrachloride | 0.4460000 | 0.4048747 | 0.4048747 | 0.1 | 9.22 | 50.00 | AVRG |

# FORM 7B
## VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008021

Instrument ID: VOA6 Calibration Date: 08/10/20 Time: 1559

Lab File ID: X081014 Init. Calib. Date(s): 08/03/20 08/03/20

Init. Calib. Times: 1140 1540

GC Column: DB624 ID: 0.18 (mm)

| COMPOUND | RRF or AMOUNT | RRF50.000 or AMOUNT | CCAL RRF50.000 | MIN RRF | %D or %DRIFT | MAX %D or %DRIFT | CURV TYPE |
|---|---|---|---|---|---|---|---|
| Chlorobenzene | 0.9800000 | 0.9381200 | 0.9381200 | 0.5 | 4.27 | 50.00 | AVRG |
| Chloroethane | 0.3540000 | 0.3604035 | 0.3604035 | 0.1 | -1.81 | 50.00 | AVRG |
| Chloroform | 0.8930000 | 0.8832153 | 0.8832153 | 0.2 | 1.10 | 50.00 | AVRG |
| Chloromethane | 0.7020000 | 0.6530951 | 0.6530951 | 0.1 | 6.97 | 50.00 | AVRG |
| cis-1,2-Dichloroethene | 0.5500000 | 0.5528536 | 0.5528536 | 0.1 | -0.52 | 50.00 | AVRG |
| Dibromochloromethane | 0.4000000 | 0.3811165 | 0.3811165 | 0.1 | 4.72 | 50.00 | AVRG |
| Dichlorodifluoromethane | 0.4890000 | 0.4309389 | 0.4309389 | 0.1 | 11.87 | 50.00 | AVRG |
| Ethylbenzene | 0.5060000 | 0.4796942 | 0.4796942 | 0.1 | 5.20 | 50.00 | AVRG |
| Hexachlorobutadiene | 0.2680000 | 0.1918242 | 0.1918242 | 0.1 | 28.42 | 50.00 | AVRG |
| Isopropylbenzene | 1.4850000 | 1.3929309 | 1.3929309 | 0.1 | 6.20 | 50.00 | AVRG |
| m,p-Xylenes | 0.6100000 | 0.5775433 | 0.5775433 | 0.1 | 5.32 | 50.00 | AVRG |
| Methylene Chloride | 50.026338 | 50.000000 | 0.5156382 | 0.1 | -0.05 | 50.00 | LINR |
| n-Butylbenzene | 2.2110000 | 2.0312335 | 2.0312335 | 0.5 | 8.13 | 50.00 | AVRG |
| n-Propylbenzene | 3.6020000 | 3.3440689 | 3.3440689 | 0.1 | 7.16 | 50.00 | AVRG |
| Naphthalene | 46.661572 | 50.000000 | 0.3725875 | 0.2 | 6.68 | 50.00 | 2RDR |
| o-Xylene | 0.6000000 | 0.5763902 | 0.5763902 | 0.3 | 3.93 | 50.00 | AVRG |
| sec-Butylbenzene | 3.0380000 | 2.7525174 | 2.7525174 | 0.1 | 9.40 | 50.00 | AVRG |
| Styrene | 1.0410000 | 0.9930082 | 0.9930082 | 0.3 | 4.61 | 50.00 | AVRG |
| Vinyl Chloride | 0.6440000 | 0.6409645 | 0.6409645 | 0.1 | 0.47 | 50.00 | AVRG |
| 1,2,3-Trichloropropane | 0.7320000 | 0.7066356 | 0.7066356 | 0.1 | 3.46 | 50.00 | AVRG |
| p-Isopropyltoluene | 2.7680000 | 2.5391875 | 2.5391875 | 0.1 | 8.27 | 50.00 | AVRG |
| 1,2-Dibromo-3-Chloropropane | 48.363617 | 50.000000 | 6.91e-002 | 0.05 | 3.27 | 50.00 | LINR |
| 1,2-Dichloroethane-d4 | 0.5820000 | 0.5831874 | 0.5831874 | 0.1 | -0.20 | 50.00 | AVRG |
| Dibromofluoromethane | 0.4910000 | 0.4862991 | 0.4862991 | 0.1 | 0.96 | 50.00 | AVRG |
| Toluene-d8 | 1.2130000 | 1.1673853 | 1.1673853 | 0.1 | 3.76 | 50.00 | AVRG |
| 4-Bromofluorobenzene | 0.4680000 | 0.4437901 | 0.4437901 | 0.1 | 5.17 | 50.00 | AVRG |

# FORM 8
## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Lab File ID (Standard): X081003 Date Analyzed: 08/10/20

Instrument ID: VOA6 Time Analyzed: 1135

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

| | | IS1(CBZ) AREA # | RT # | IS2(DFB) AREA # | RT # | IS3(DCB) AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 673667 | 7.67 | 720680 | 4.97 | 316252 | 9.66 |
| | UPPER LIMIT | 1347334 | 8.17 | 1441360 | 5.47 | 632504 | 10.16 |
| | LOWER LIMIT | 336834 | 7.17 | 360340 | 4.47 | 158126 | 9.16 |
| | CLIENT SAMPLE NO. | | | | | | |
| 01 | VLCSW-200810 | 683738 | 7.67 | 746930 | 4.97 | 323494 | 9.67 |
| 02 | VBLKW-200810 | 644713 | 7.67 | 747488 | 4.97 | 292259 | 9.67 |
| 03 | HS20080212-02 | 643389 | 7.67 | 749340 | 4.97 | 275634 | 9.67 |
| 04 | HS20080212-01 | 656247 | 7.67 | 752471 | 4.97 | 305188 | 9.67 |
| 05 | HS20080212-01 | 616719 | 7.67 | 718513 | 4.97 | 276558 | 9.66 |
| 06 | HS20080212-01 | 624149 | 7.67 | 704317 | 4.97 | 297853 | 9.66 |
| 07 | | | | | | | |
| 08 | | | | | | | |
| 09 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# FORM 8
## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080212

Lab File ID (Standard): X081003 Date Analyzed: 08/10/20

Instrument ID: VOA6 Time Analyzed: 1135

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

| | CLIENT SAMPLE NO. | IS4 AREA # | RT # | AREA # | RT # | AREA # | RT # |
|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 471488 | 4.19 | | | | |
| | UPPER LIMIT | 942976 | 4.69 | | | | |
| | LOWER LIMIT | 235744 | 3.69 | | | | |
| 01 | VLCSW-200810 | 490510 | 4.19 | | | | |
| 02 | VBLKW-200810 | 503534 | 4.19 | | | | |
| 03 | HS20080212-02 | 509708 | 4.19 | | | | |
| 04 | HS20080212-01 | 512881 | 4.19 | | | | |
| 05 | HS20080212-01 | 482307 | 4.19 | | | | |
| 06 | HS20080212-01 | 475256 | 4.19 | | | | |
| 07 | | | | | | | |
| 08 | | | | | | | |
| 09 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081001.D

Date : 10-AUG-2020 10:47

Client ID: BFB

Instrument: voa6.i

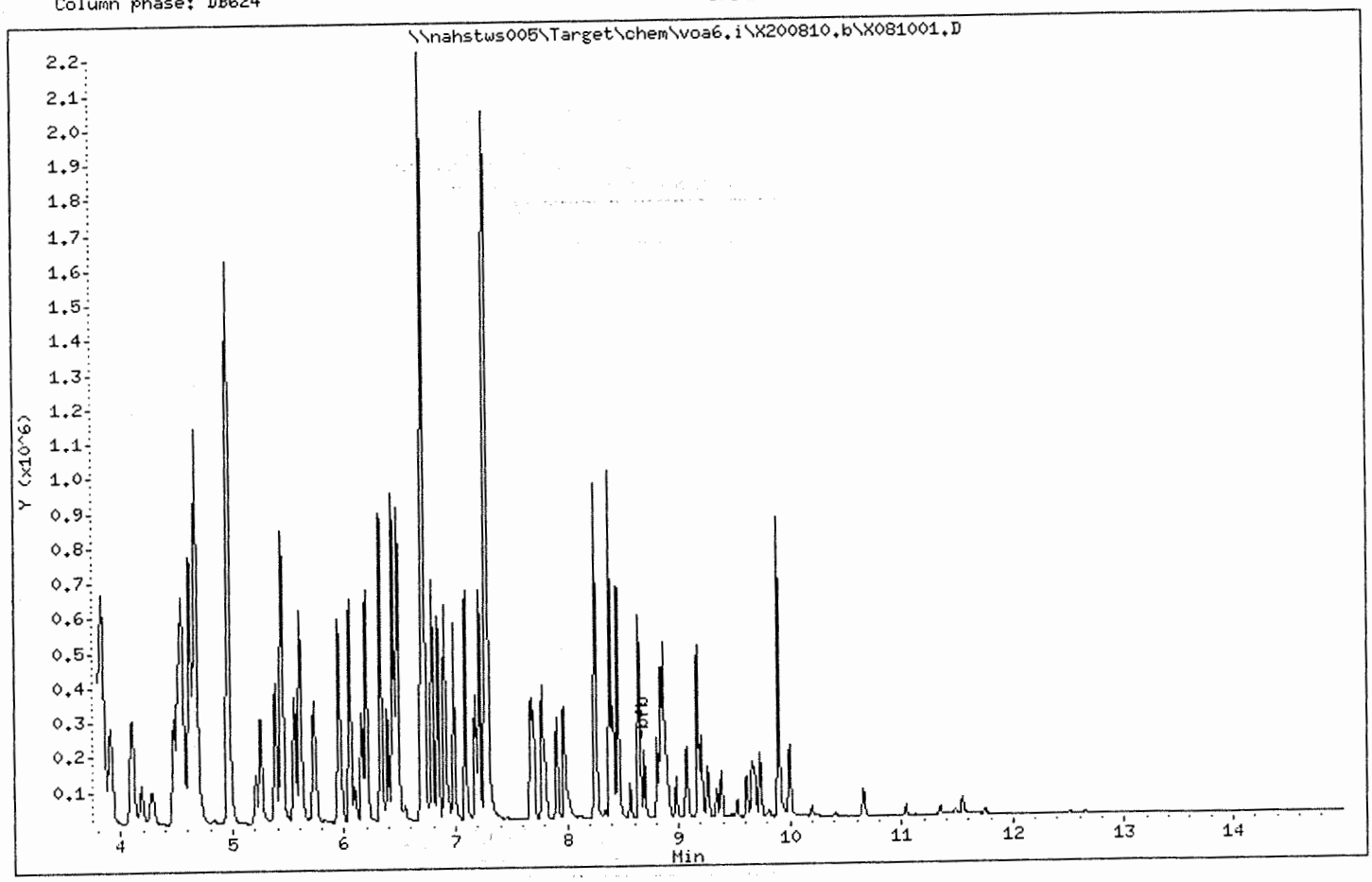
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081001.D



Date : 10-AUG-2020 10:47

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

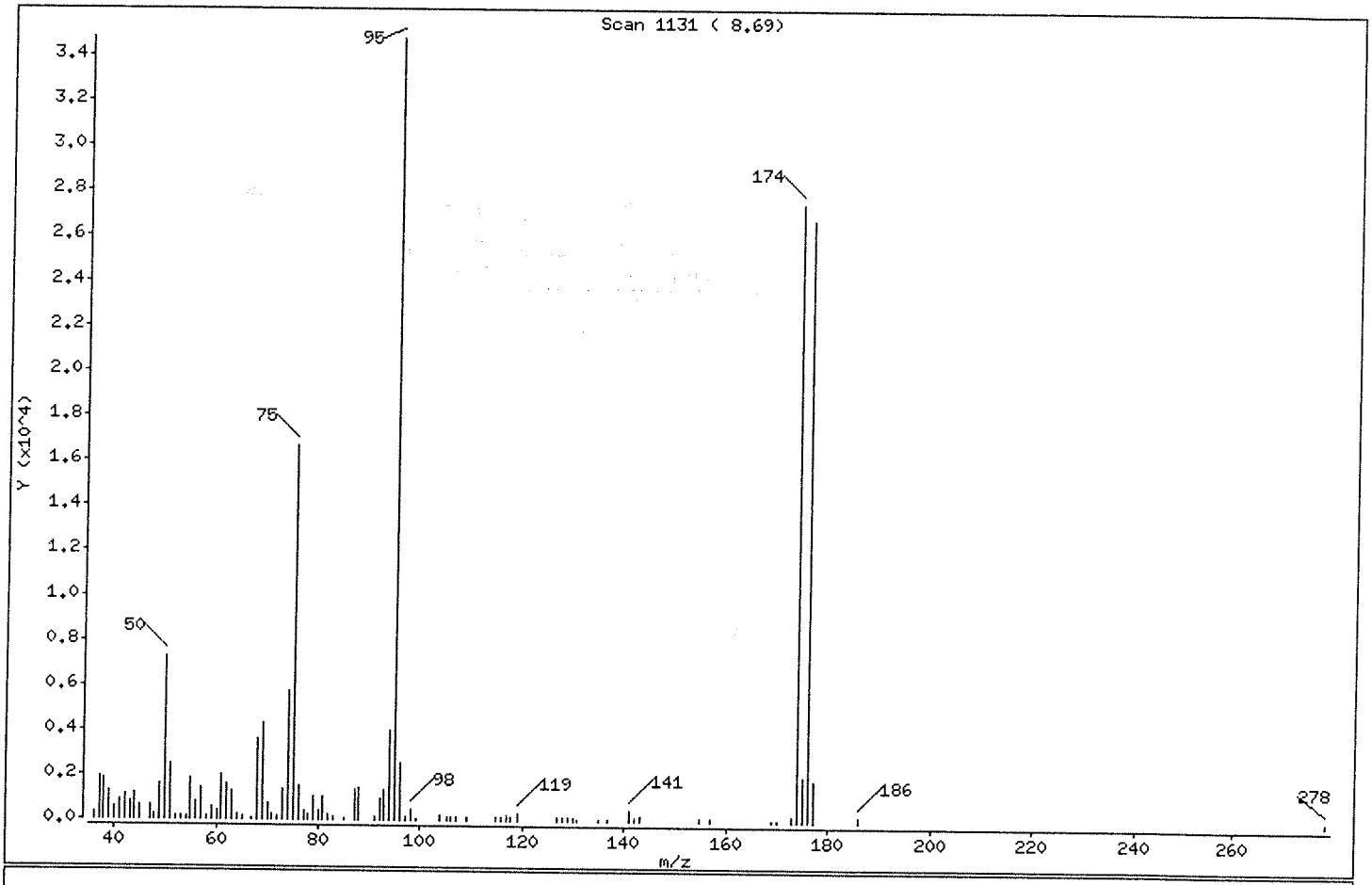
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 20.92 |
| 75 | 30.00 - 60.00% of mass 95 | 47.80 |
| 96 | 5.00 - 9.00% of mass 95 | 7.26 |
| 173 | Less than 2.00% of mass 174 | 0.75 ( 0.95) |
| 174 | Greater than 50.00% of mass 95 | 78.76 |
| 175 | 5.00 - 9.00% of mass 174 | 5.66 ( 7.19) |
| 176 | 95.00 - 101.00% of mass 174 | 76.78 ( 97.49) |
| 177 | 5.00 - 9.00% of mass 176 | 5.31 ( 6.92) |

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081001.D

Date : 10-AUG-2020 10:47

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X081001.D
Spectrum: Scan 1131 ( 8.69)
Location of Maximum: 95.00
Number of points: 89

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 345 | 60.00 | 385 | 85.10 | 59 | 127.80 | 183 |
| 37.00 | 1882 | 61.00 | 2025 | 87.00 | 1397 | 128.90 | 135 |
| 38.00 | 1811 | 62.00 | 1577 | 87.90 | 1455 | 130.00 | 124 |
| 38.90 | 1266 | 63.00 | 1275 | 90.90 | 152 | 130.70 | 87 |
| 40.00 | 548 | 64.00 | 235 | 91.90 | 937 | 135.00 | 56 |
| 41.10 | 920 | 65.00 | 147 | 92.90 | 1368 | 136.60 | 57 |
| 42.00 | 1103 | 67.00 | 71 | 93.90 | 3971 | 140.80 | 504 |
| 43.00 | 809 | 68.00 | 3626 | 95.00 | 34832 | 142.00 | 178 |
| 44.00 | 1204 | 69.00 | 4315 | 96.00 | 2530 | 142.90 | 247 |
| 45.00 | 673 | 70.10 | 713 | 96.90 | 148 | 154.90 | 152 |
| 47.00 | 627 | 70.90 | 252 | 97.90 | 490 | 156.90 | 159 |
| 47.80 | 214 | 72.00 | 183 | 99.10 | 116 | 168.80 | 71 |
| 48.90 | 1569 | 73.00 | 1400 | 103.80 | 248 | 169.90 | 83 |
| 50.00 | 7288 | 74.00 | 5733 | 105.00 | 121 | 172.90 | 260 |
| 51.00 | 2519 | 75.00 | 16648 | 105.80 | 158 | 173.90 | 27432 |
| 52.00 | 133 | 76.00 | 1530 | 106.90 | 195 | 174.90 | 1972 |
| 53.00 | 163 | 77.00 | 438 | 109.00 | 178 | 175.90 | 26744 |
| 54.00 | 164 | 77.90 | 220 | 114.80 | 141 | 176.90 | 1851 |
| 55.00 | 1875 | 78.80 | 1078 | 115.80 | 177 | 185.80 | 252 |
| 56.00 | 794 | 79.90 | 361 | 116.80 | 223 | 278.10 | 172 |
| 57.00 | 1416 | 80.80 | 1071 | 117.70 | 169 | | |
| 58.00 | 191 | 81.80 | 239 | 118.90 | 282 | | |
| 59.10 | 548 | 82.90 | 199 | 126.70 | 200 | | |

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081003.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 10-AUG-2020 11:35
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:16 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

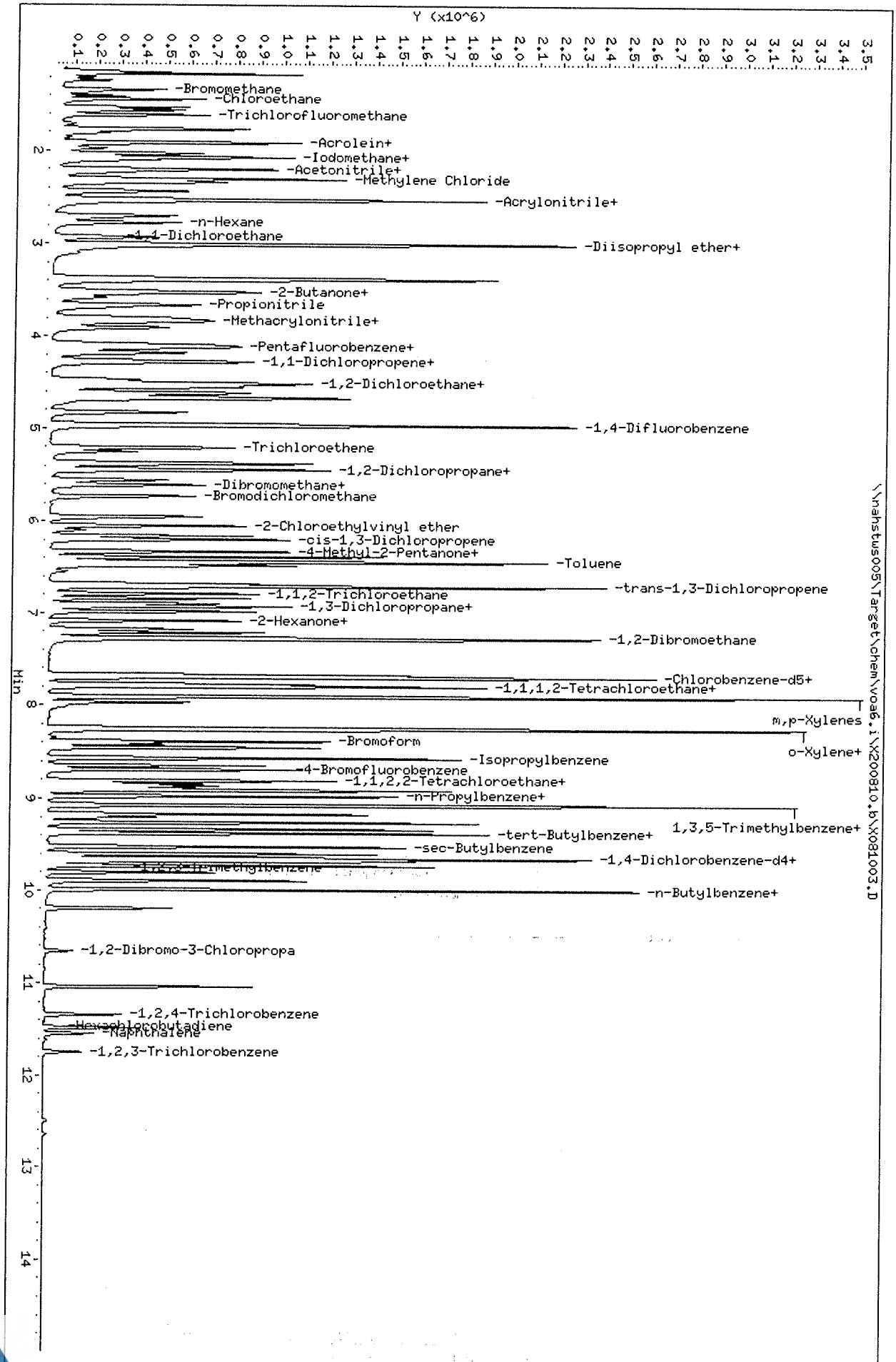
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 471488 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 720680 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 673667 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.662 | (1.000) | 316252 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 226737 | 50.0000 | 48.96 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 268663 | 50.0000 | 48.95 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 785800 | 50.0000 | 48.09 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 302778 | 50.0000 | 48.03 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 258842 | 50.0000 | 50.47 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 365738 | 50.0000 | 50.35 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.915) | 277153 | 50.0000 | 54.36 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 198864 | 50.0000 | 51.87 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 504361 | 50.0000 | 54.76 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 198106 | 50.0000 | 53.02 |
| 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 305300 | 50.0000 | 50.41 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 44709 | 50.0000 | 46.97 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 241719 | 50.0000 | 52.21(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 89818 | 50.0000 | 49.20 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 839246 | 50.0000 | 49.67 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 23683 | 50.0000 | 52.32 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 256384 | 50.0000 | 51.91 |
| 88 1,2-Dichlorobenzene | 146 | 9.991 | 9.991 | (1.034) | 444095 | 50.0000 | 49.64 |

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081003.D Page 2
Report Date: 11-Sep-2020 15:16

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 370929 | 50.0000 | 53.15 |
| 42 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 290101 | 50.0000 | 54.84 |
| 75 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 805833 | 50.0000 | 48.76 |
| 83 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.994) | 500230 | 50.0000 | 50.32 |
| 54 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 397496 | 50.0000 | 52.51 |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.002) | 497050 | 50.0000 | 50.56 |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 360219 | 50.0000 | 53.56 |
| 24 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 273206 | 100.000 | 118.20 |
| 76 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.929) | 691110 | 50.0000 | 50.36 |
| 52 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 444748 | 100.000 | 105.16 |
| 77 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 802001 | 50.0000 | 50.24 |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 825712 | 50.0000 | 47.14 |
| 45 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 645760 | 100.000 | 103.57 |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 182610 | 100.000 | 111.22 |
| 37 Benzene | 78 | 4.519 | 4.519 | (0.909) | 949135 | 50.0000 | 53.08 |
| 74 Bromobenzene | 156 | 8.809 | 8.809 | (0.912) | 315516 | 50.0000 | 51.00 |
| 29 Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 144528 | 50.0000 | 50.85 |
| 39 Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 341962 | 50.0000 | 52.70 |
| 66 Bromoform | 173 | 8.416 | 8.416 | (1.097) | 192833 | 50.0000 | 51.59 |
| 6 Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 179310 | 50.0000 | 55.18 |
| 19 Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1216342 | 100.000 | 104.86 |
| 34 Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 310446 | 50.0000 | 48.22 |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 668963 | 50.0000 | 50.66 |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 176222 | 50.0000 | 52.73 |
| 28 Chloroform | 83 | 3.910 | 3.910 | (0.933) | 439114 | 50.0000 | 52.12 |
| 3 Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 339660 | 50.0000 | 51.30 |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 276324 | 50.0000 | 53.24 |
| 46 cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 408625 | 50.0000 | 53.86 |
| 55 Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 273372 | 50.0000 | 50.66 |
| 44 Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 167091 | 50.0000 | 53.27 |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 221622 | 50.0000 | 48.02 |
| 61 Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 337115 | 50.0000 | 49.44 |
| 91 Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.188) | 69502 | 50.0000 | 40.93 |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 961540 | 50.0000 | 48.04 |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 814192 | 100.000 | 98.96 |
| 17 Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 256131 | 50.0000 | 52.77 |
| 87 n-Butylbenzene | 91 | 9.999 | 9.999 | (1.035) | 660809 | 50.0000 | 47.24 |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.923) | 1109688 | 50.0000 | 48.70 |
| 92 Naphthalene | 128 | 11.546 | 11.546 | (1.195) | 144343 | 50.0000 | 56.77 |
| 63 o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 404372 | 50.0000 | 50.03 |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.986) | 891121 | 50.0000 | 46.38 |
| 64 Styrene | 104 | 8.258 | 8.258 | (1.077) | 710288 | 50.0000 | 50.61 |
| 78 tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.967) | 674036 | 50.0000 | 47.04 |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 204247 | 50.0000 | 47.69 |
| 50 Toluene | 91 | 6.446 | 6.446 | (0.840) | 990036 | 50.0000 | 50.32 |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 236033 | 50.0000 | 53.40 |
| 51 trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 365505 | 50.0000 | 52.56 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 271211 | 50.0000 | 53.10 |
| 8 Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 349087 | 50.0000 | 50.27 |
| 5 Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 316401 | 50.0000 | 52.13 |

QC Flag Legend

M - Compound response manually integrated.

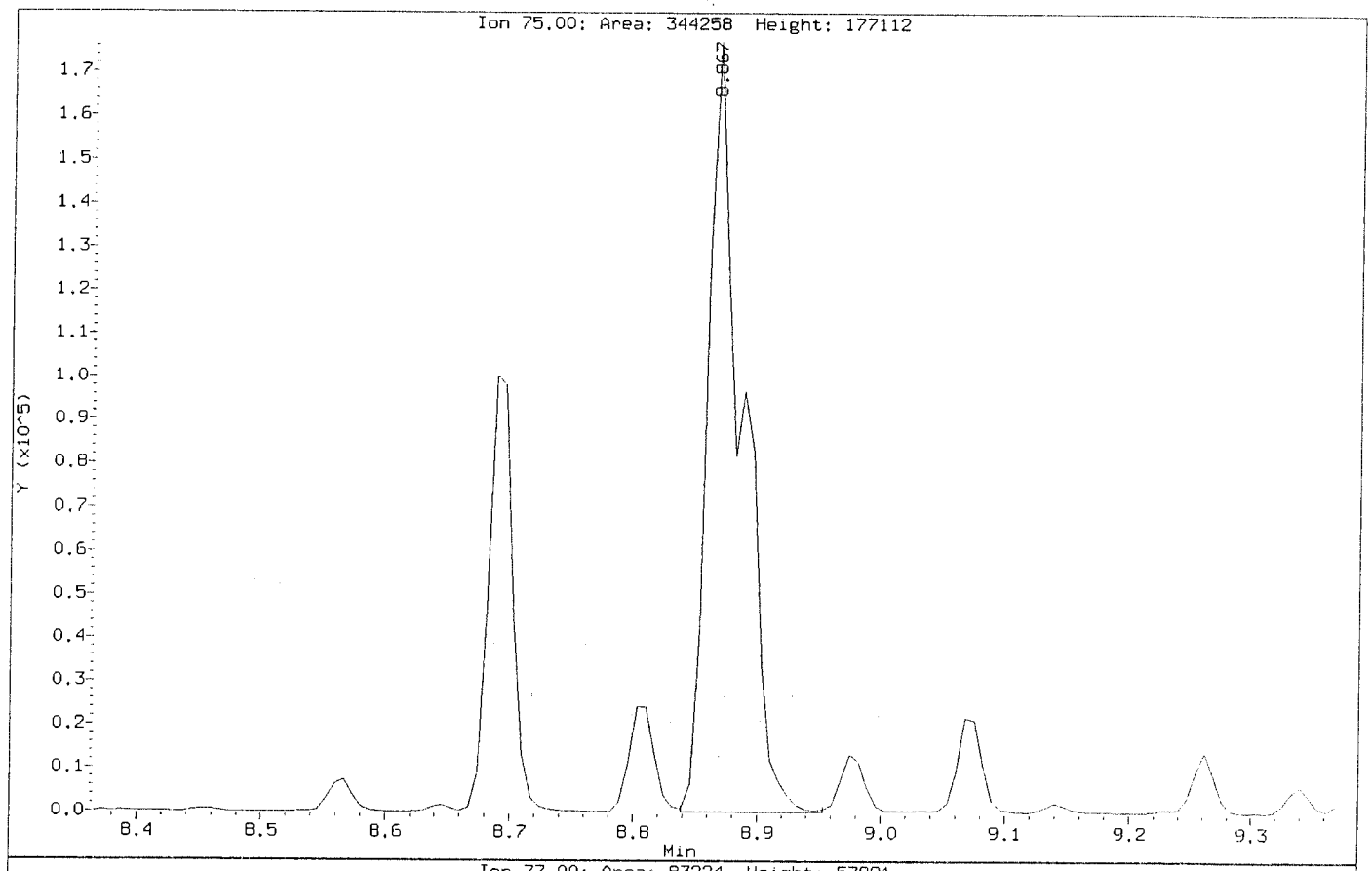


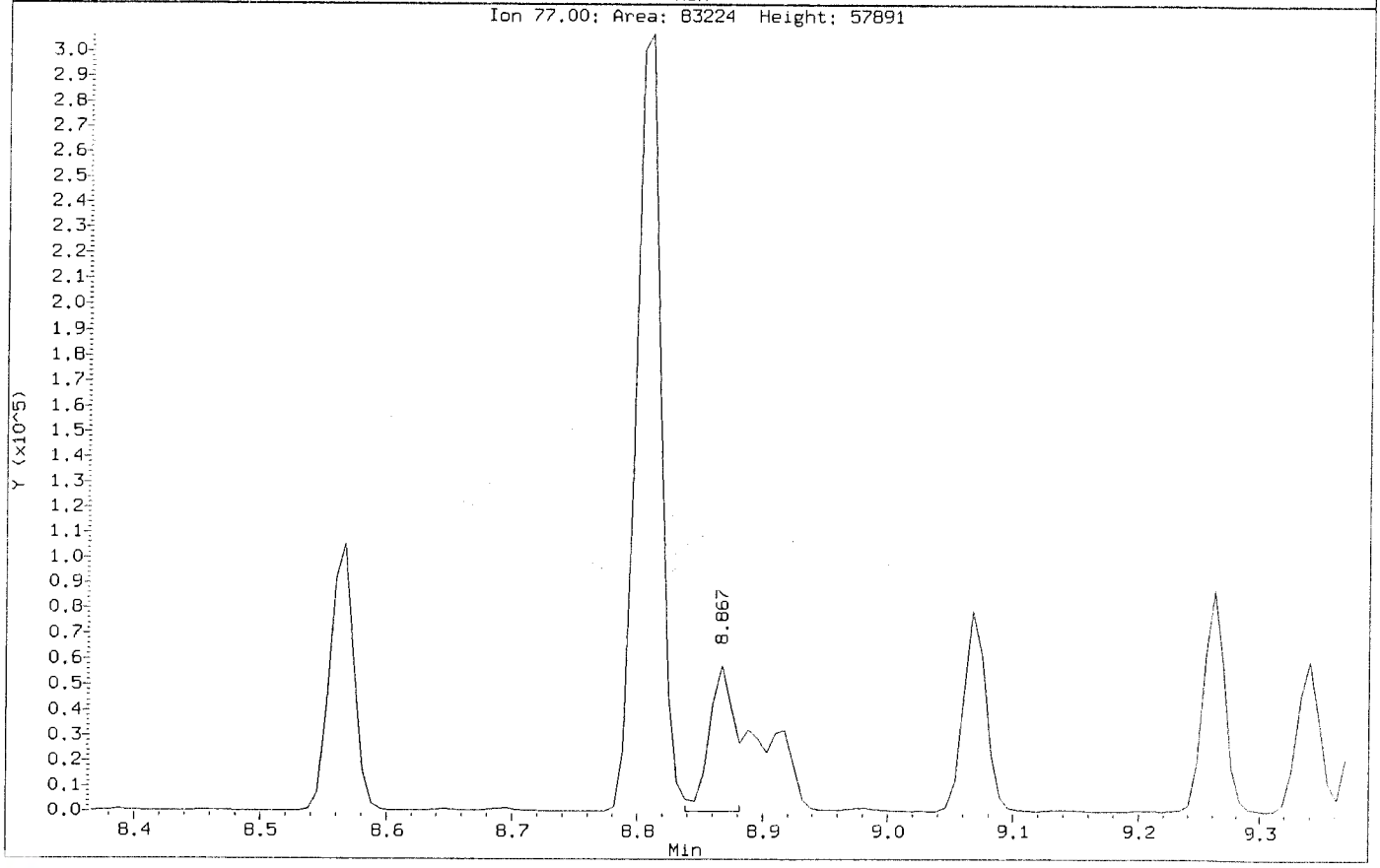

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Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\Before\X081003.D
Injection Date: 10-AUG-2020 11:35
Instrument: voa6.i
Client Sample ID: CCV

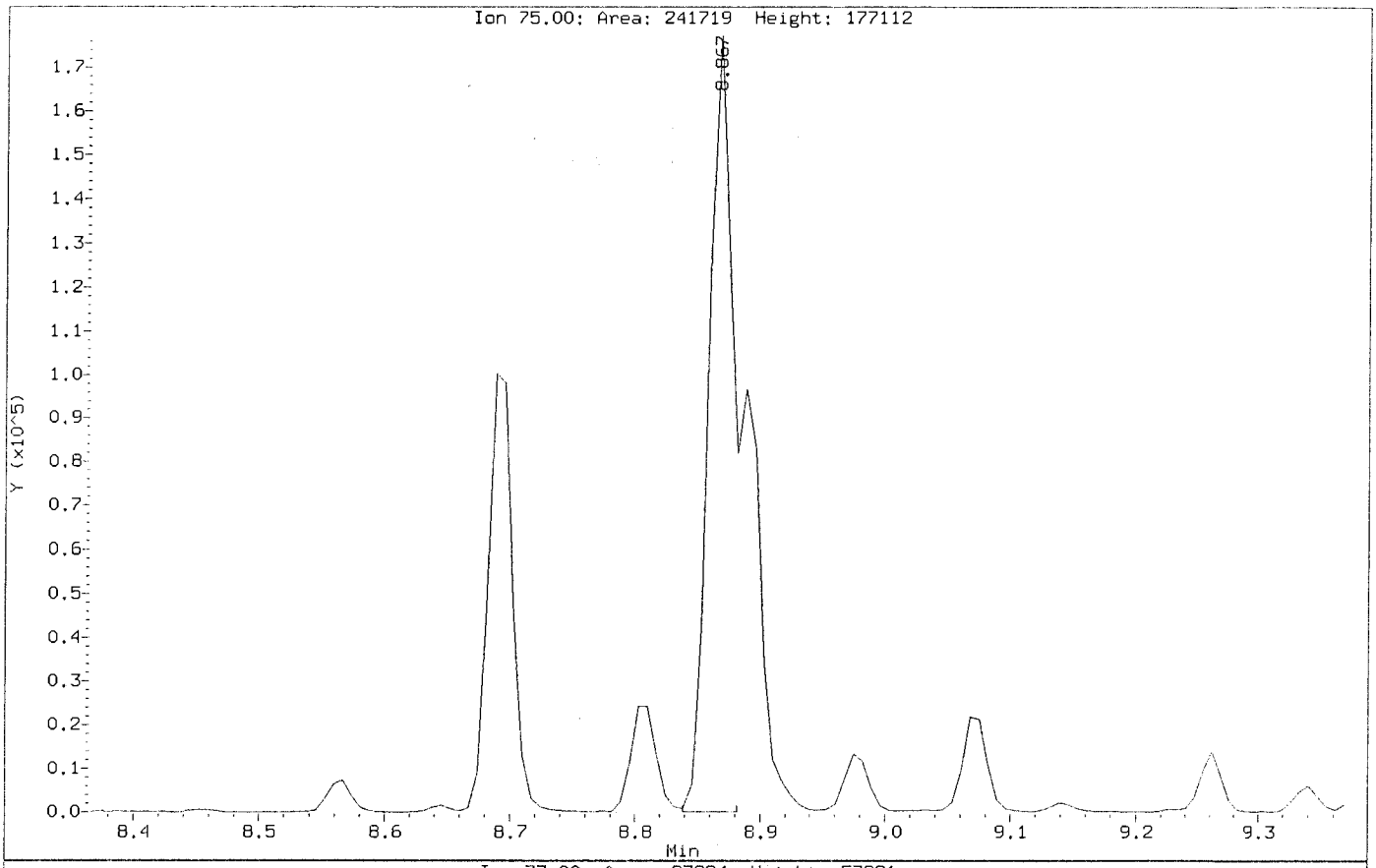
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

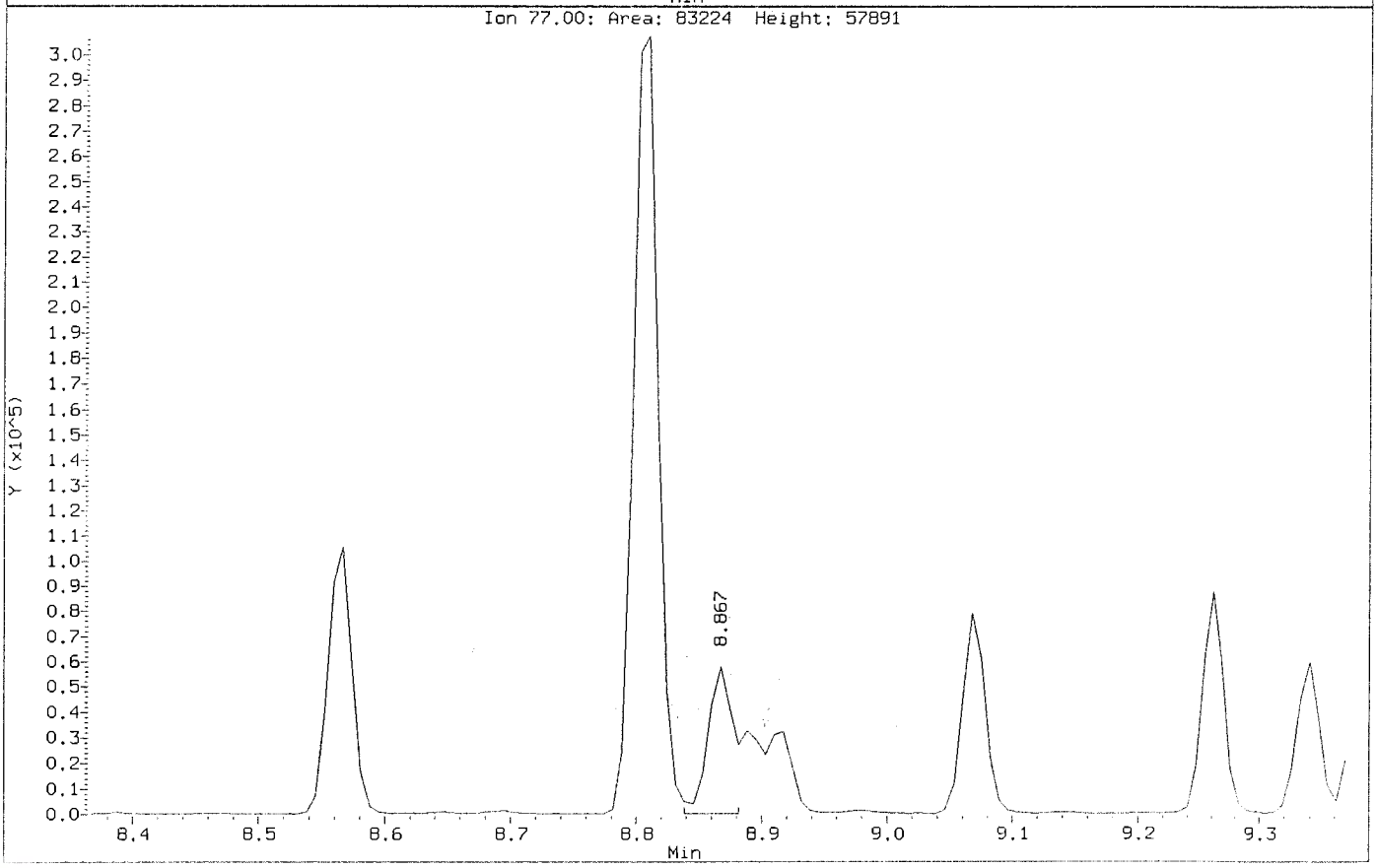


Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081003.D
Injection Date: 10-AUG-2020 11:35
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081005.D
Lab Smp Id: VLCSW-200810 Client Smp ID: VLCSW-200810
Inj Date : 10-AUG-2020 12:23
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200810;VLCSW-200810;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:16 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

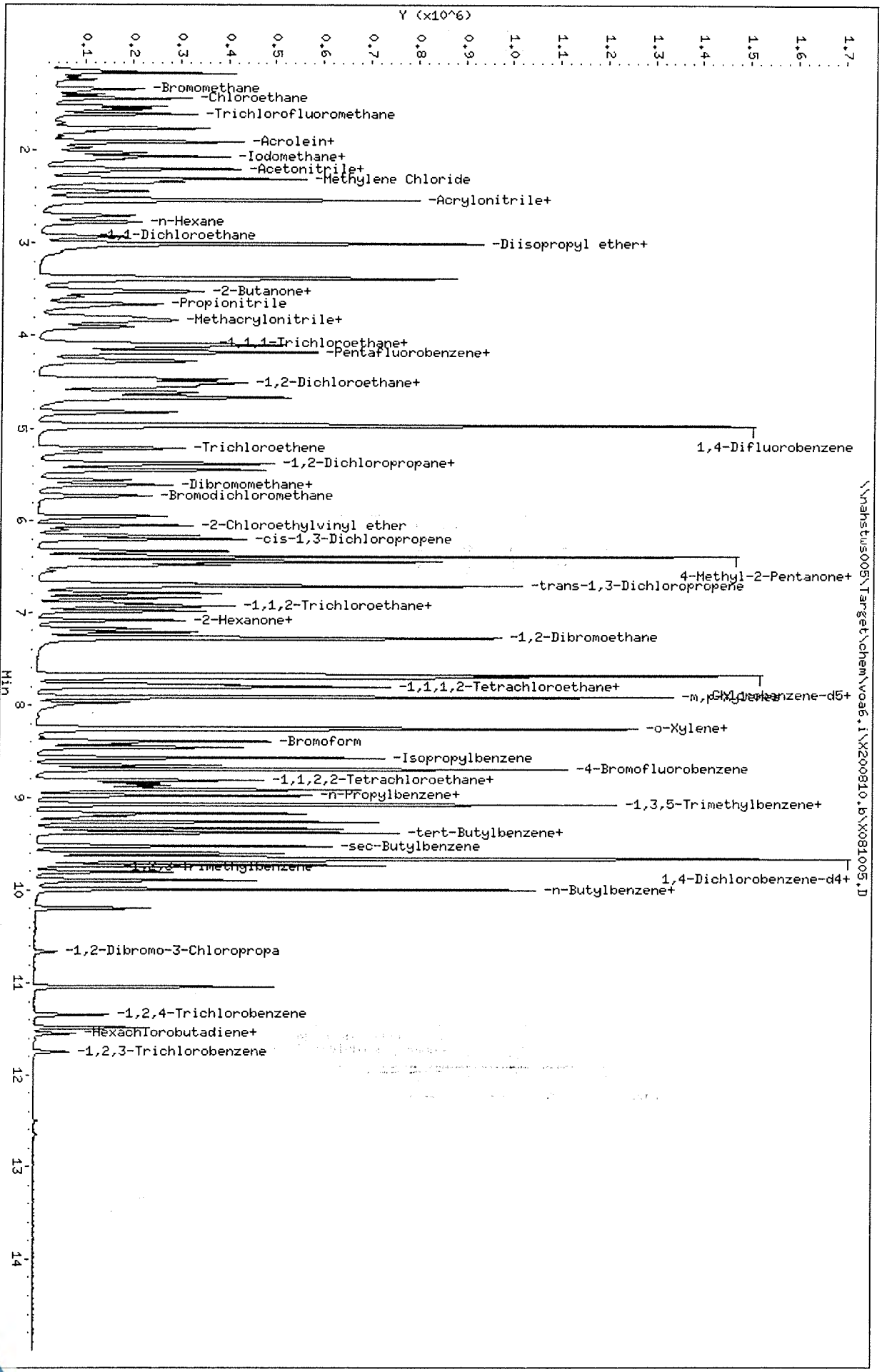
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * 1 | Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 490510 | 50.0000 | |
| * 36 | 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 746930 | 50.0000 | |
| * 47 | Chlorobenzene-d5 | 117 | 7.670 | 7.671 | (1.000) | 683738 | 50.0000 | |
| * 70 | 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.662 | (1.000) | 323494 | 50.0000 | |
| $ 30 | Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 235873 | 48.9673 | 48.96 |
| $ 35 | 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 283605 | 49.6713 | 49.67 |
| $ 48 | Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 812626 | 48.9993 | 48.99 |
| $ 69 | 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 310003 | 48.4548 | 48.45 |
| 60 | 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 97553 | 18.7433 | 18.74 |
| 31 | 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 142546 | 18.8665 | 18.86 |
| 68 | 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.914) | 107264 | 20.8093 | 20.80 |
| 53 | 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 77742 | 19.9824 | 19.98 |
| 22 | 1,1-Dichloroethane | 63 | 2.928 | 2.929 | (0.699) | 199940 | 20.8676 | 20.86 |
| 11 | 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 76293 | 19.6304 | 19.63 |
| 32 | 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 117742 | 18.7587 | 18.75 |
| 93 | 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 21281 | 21.8609 | 21.86 |
| 71 | 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 92321 | 19.4972 | 19.49(M) |
| 90 | 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 44023 | 23.5901 | 23.59 |
| 79 | 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.383 | (0.970) | 329979 | 19.0940 | 19.09 |
| 89 | 1,2-Dibromo-3-Chloropropane | 155 | 10.657 | 10.658 | (1.102) | 9352 | 20.6872 | 20.68 |
| 57 | 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 101286 | 20.2081 | 20.20 |
| 88 | 1,2-Dichlorobenzene | 146 | 9.998 | 9.991 | (1.034) | 174254 | 19.0441 | 19.04 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 145673 | 20.1432 | 20.14 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 113707 | 20.7425 | 20.74 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 317227 | 18.7664 | 18.76 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.605 | (0.994) | 192423 | 18.9245 | 18.92 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 156205 | 20.3342 | 20.33 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 190885 | 18.9832 | 18.98 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 142939 | 20.4313 | 20.43 |
| 24 | 2-Butanone | 43 | 3.587 | 3.580 | (0.856) | 105719 | 43.9656 | 43.96 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 268464 | 19.1283 | 19.12 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 174787 | 40.7198 | 40.71 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.075 | (0.939) | 312661 | 19.1491 | 19.14 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 332202 | 18.5446 | 18.54 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 249943 | 39.4974 | 39.49 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 78563 | 45.3679 | 45.36 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 370921 | 20.0156 | 20.01 |
| 74 | Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 120900 | 19.1052 | 19.10 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.803 | (0.908) | 57085 | 19.3074 | 19.30 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 131491 | 19.5556 | 19.55 |
| 66 | Bromoform | 173 | 8.415 | 8.416 | (1.097) | 73020 | 19.2485 | 19.24 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 77704 | 23.3682 | 23.36 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 473026 | 39.2000 | 39.20 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 118318 | 17.7347 | 17.73 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 260182 | 19.4160 | 19.41 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 68653 | 19.7464 | 19.74 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 174215 | 19.8799 | 19.87 |
| 3 | Chloromethane | 50 | 1.080 | 1.081 | (0.258) | 134625 | 19.5476 | 19.54 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 109823 | 20.3404 | 20.34 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 159479 | 20.2839 | 20.28 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 105545 | 19.2711 | 19.27 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 64965 | 19.9856 | 19.98 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 81280 | 16.9307 | 16.93 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 130436 | 18.8511 | 18.85 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 41112 | 23.6718 | 23.67 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 377862 | 18.6040 | 18.60 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 318102 | 38.0957 | 38.09 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 104233 | 19.8060 | 19.80 |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.999 | (1.034) | 271428 | 18.9725 | 18.97 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 435822 | 18.7013 | 18.70 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 62084 | 24.3466 | 24.34 |
| 63 | o-Xylene | 106 | 8.243 | 8.244 | (1.075) | 158397 | 19.3113 | 19.31 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 355031 | 18.0654 | 18.06 |
| 64 | Styrene | 104 | 8.265 | 8.258 | (1.078) | 273259 | 19.1861 | 19.18 |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.340 | (0.966) | 266227 | 18.1651 | 18.16 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 79106 | 18.2000 | 18.19 |
| 50 | Toluene | 91 | 6.453 | 6.446 | (0.841) | 390218 | 19.5427 | 19.54 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 91464 | 19.8907 | 19.89 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 142651 | 19.7957 | 19.79 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 105148 | 19.8635 | 19.86 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 133455 | 18.4742 | 18.47 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 118880 | 18.8282 | 18.82 |

QC Flag Legend

M - Compound response manually integrated.

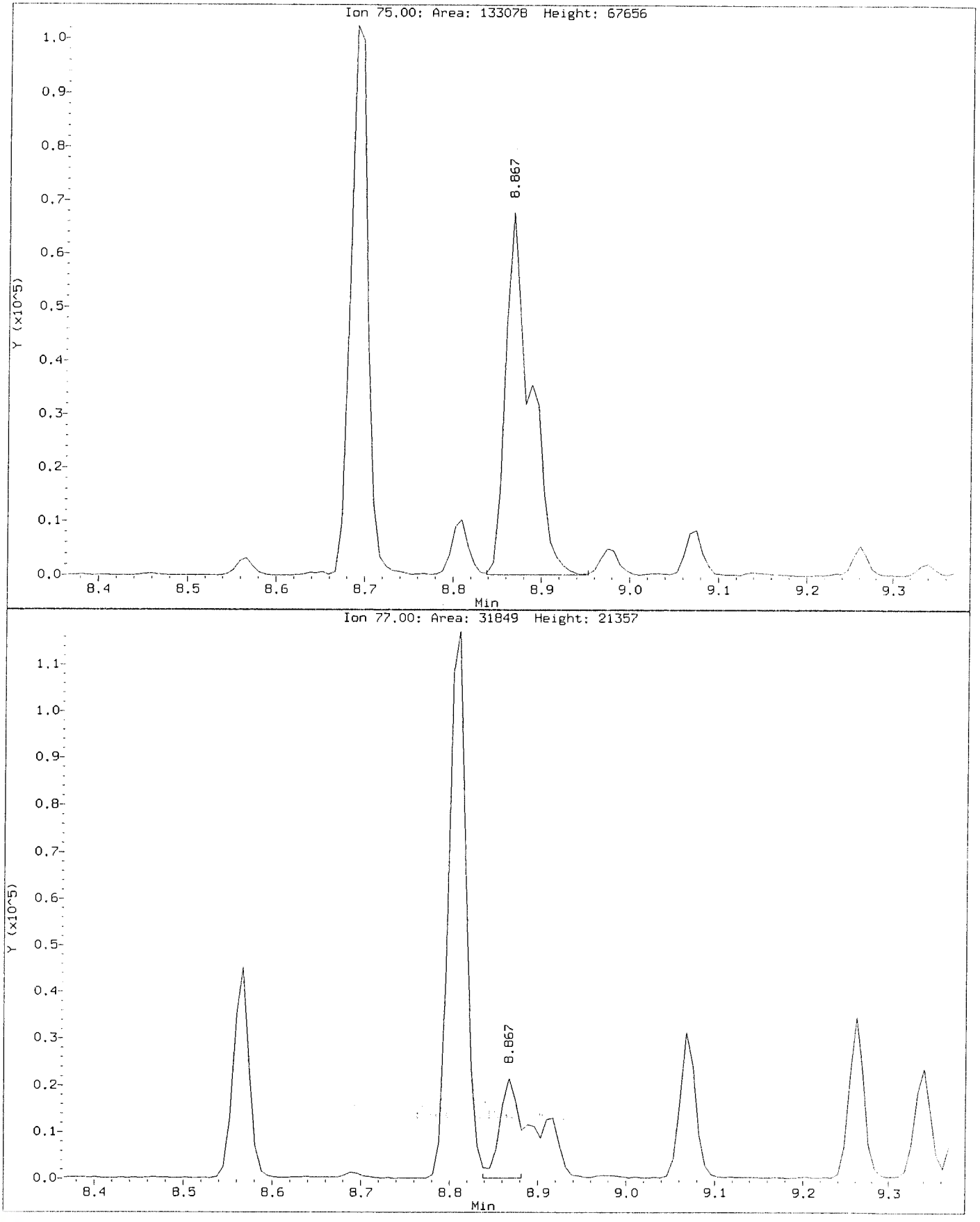



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Date : 10-AUG-2020 12:23
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Sample Info: VLCSW-200810;VLCSW-200810;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

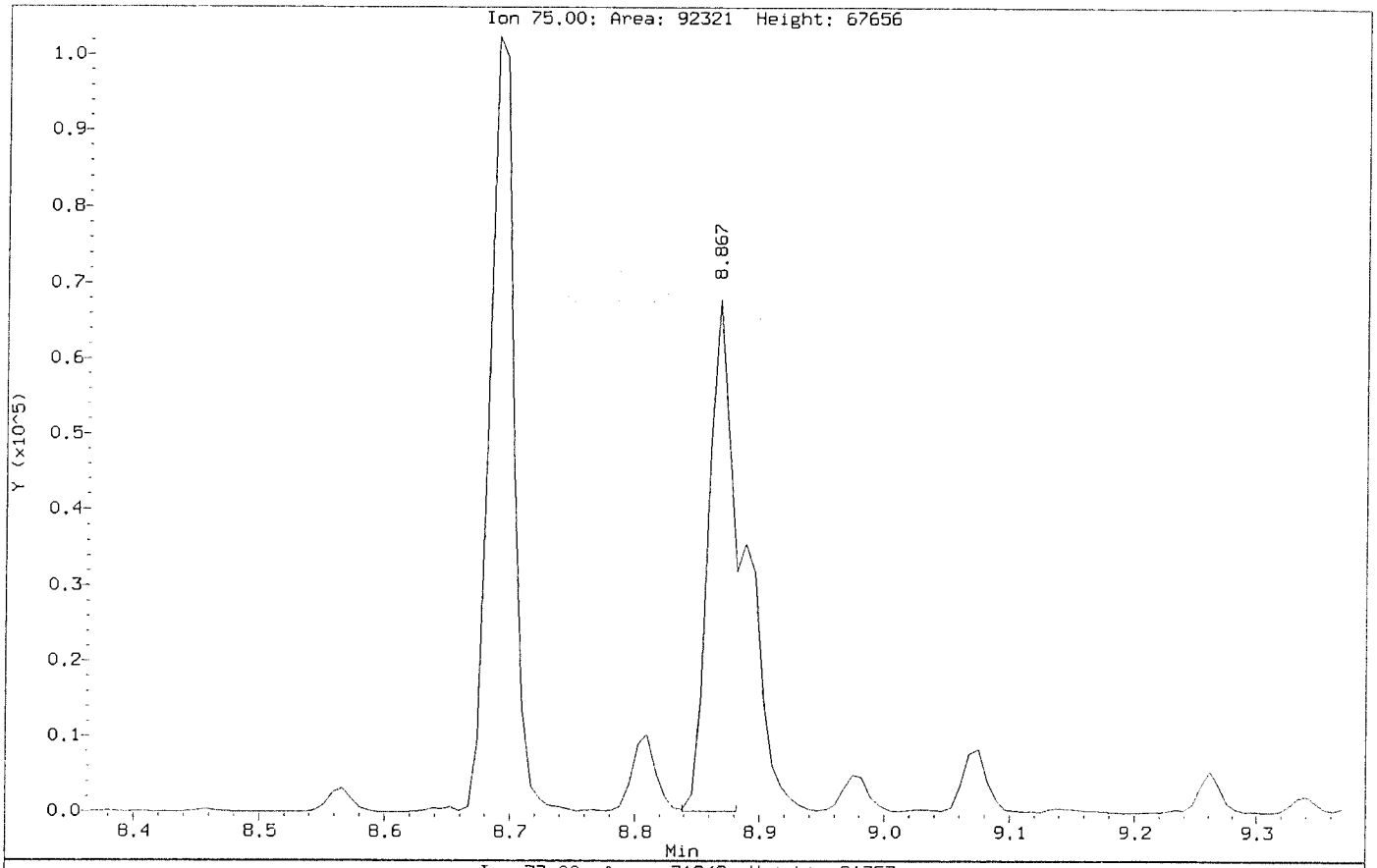
Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\Before\X081005.D
Injection Date: 10-AUG-2020 12:23
Instrument: voa6.i
Client Sample ID: VLCSW-200810

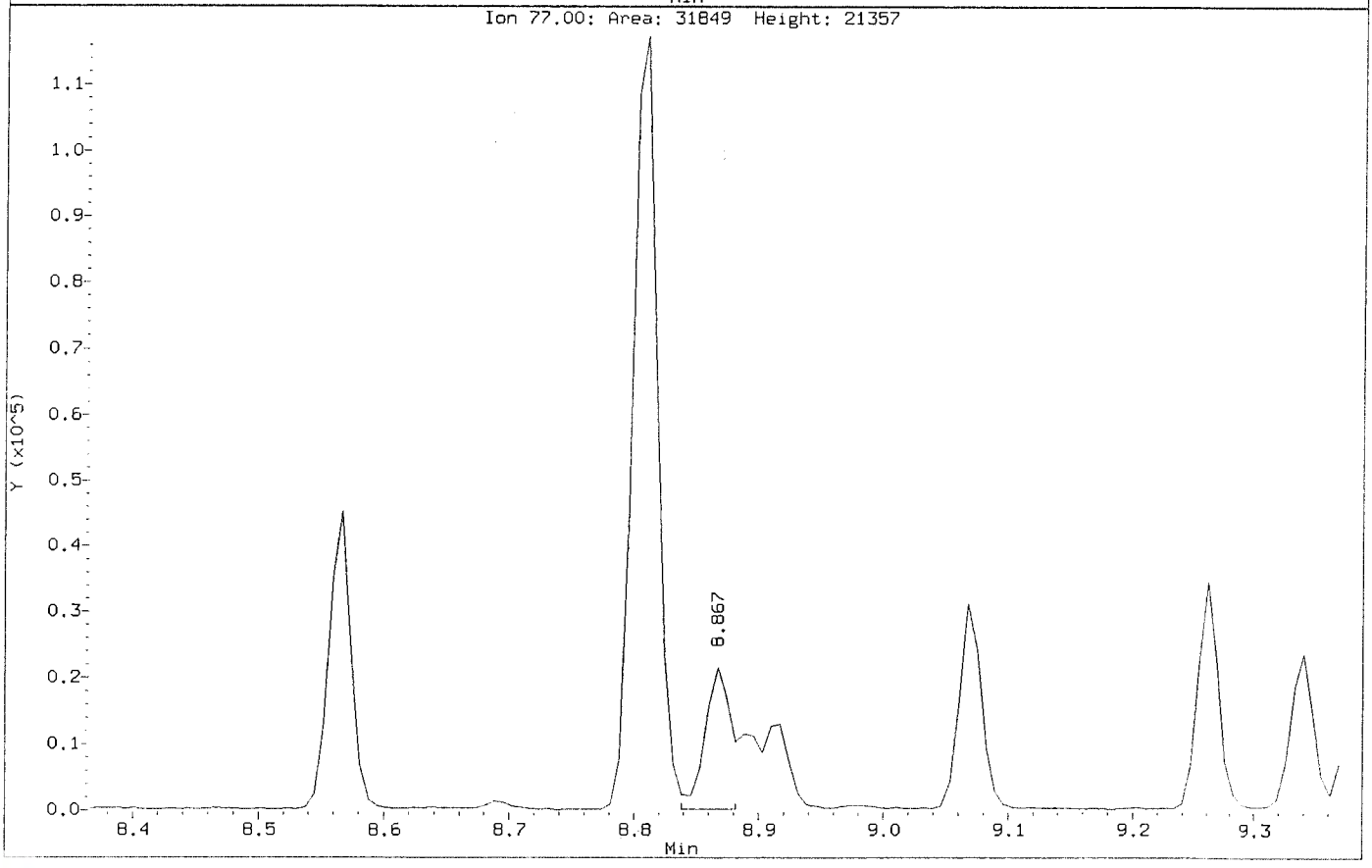
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081005.D
Injection Date: 10-AUG-2020 12:23
Instrument: voa6.i
Client Sample ID: VLCSW-200810

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081007.D
Lab Smp Id: VBLKW-200810 Client Smp ID: VBLKW-200810
Inj Date : 10-AUG-2020 13:11
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200810;VBLKW-200810;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:16 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 503534 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 747488 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 644713 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.662 | (1.000) | 292259 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 229500 | 46.4119 | 46.41 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 269972 | 46.0606 | 46.06 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 838834 | 53.6412 | 53.64 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.688 | (1.134) | 289475 | 47.9850 | 47.98 |

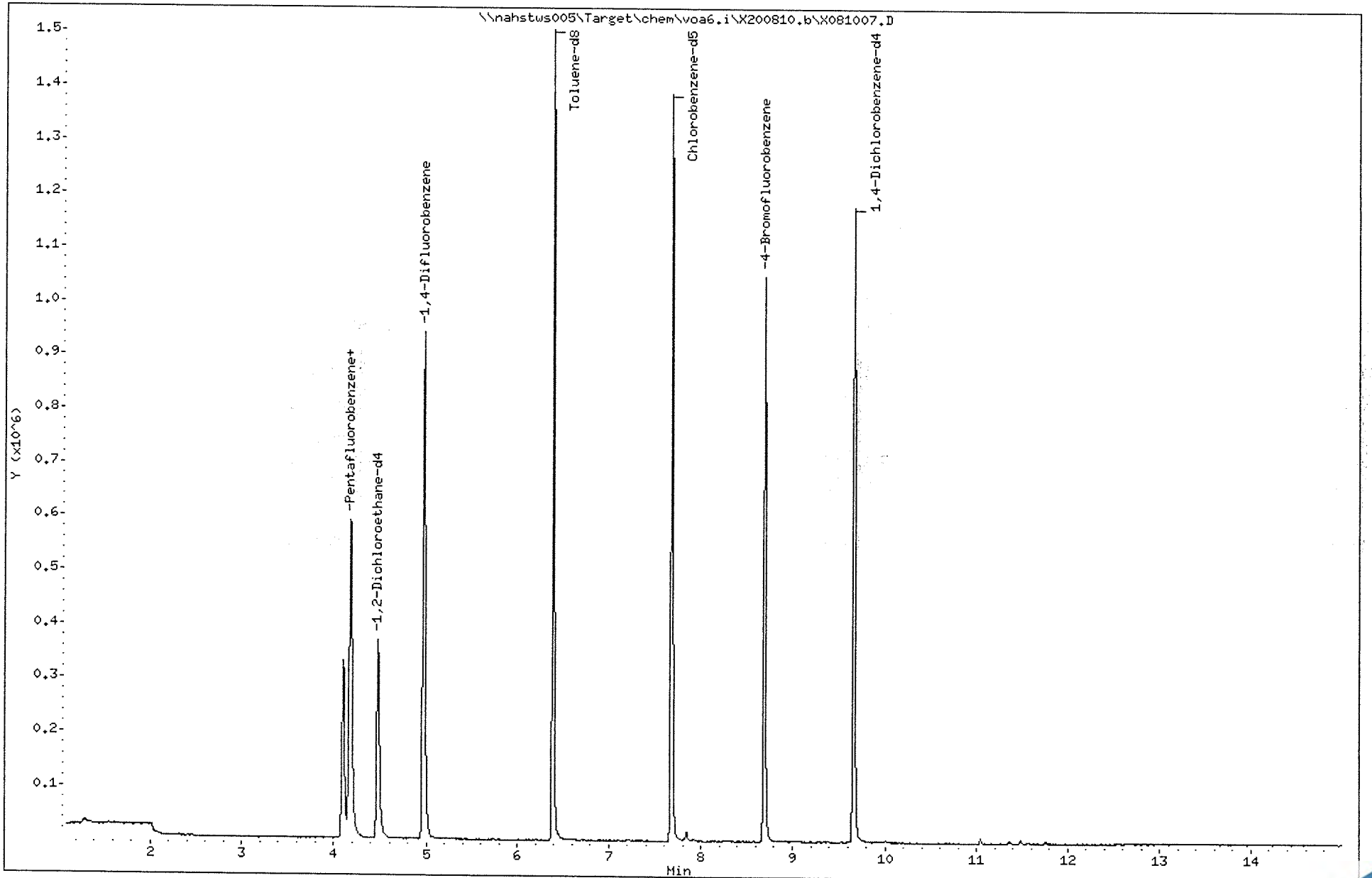
00991600

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081007.D
Date : 10-AUG-2020 13:11
Client ID: VBLKW-200810
Sample Info: VBLKW-200810;VBLKW-200810;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081008.D
Lab Smp Id: HS20080212-02 Client Smp ID: HS20080212-02
Inj Date : 10-AUG-2020 13:35
Operator : PC Inst ID: voa6.i
Smp Info : HS20080212-02;HS20080212-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:14 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | CONCENTRATIONS FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 509708 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 749340 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 643389 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.662 | (1.000) | 275634 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 234152 | 46.7791 | 46.77 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 269602 | 45.4403 | 45.44 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 838996 | 53.7619 | 53.76 |
| $ 69 4-Bromofluorobenzene | 95 | 8.695 | 8.688 | (1.134) | 287395 | 47.7382 | 47.73 |

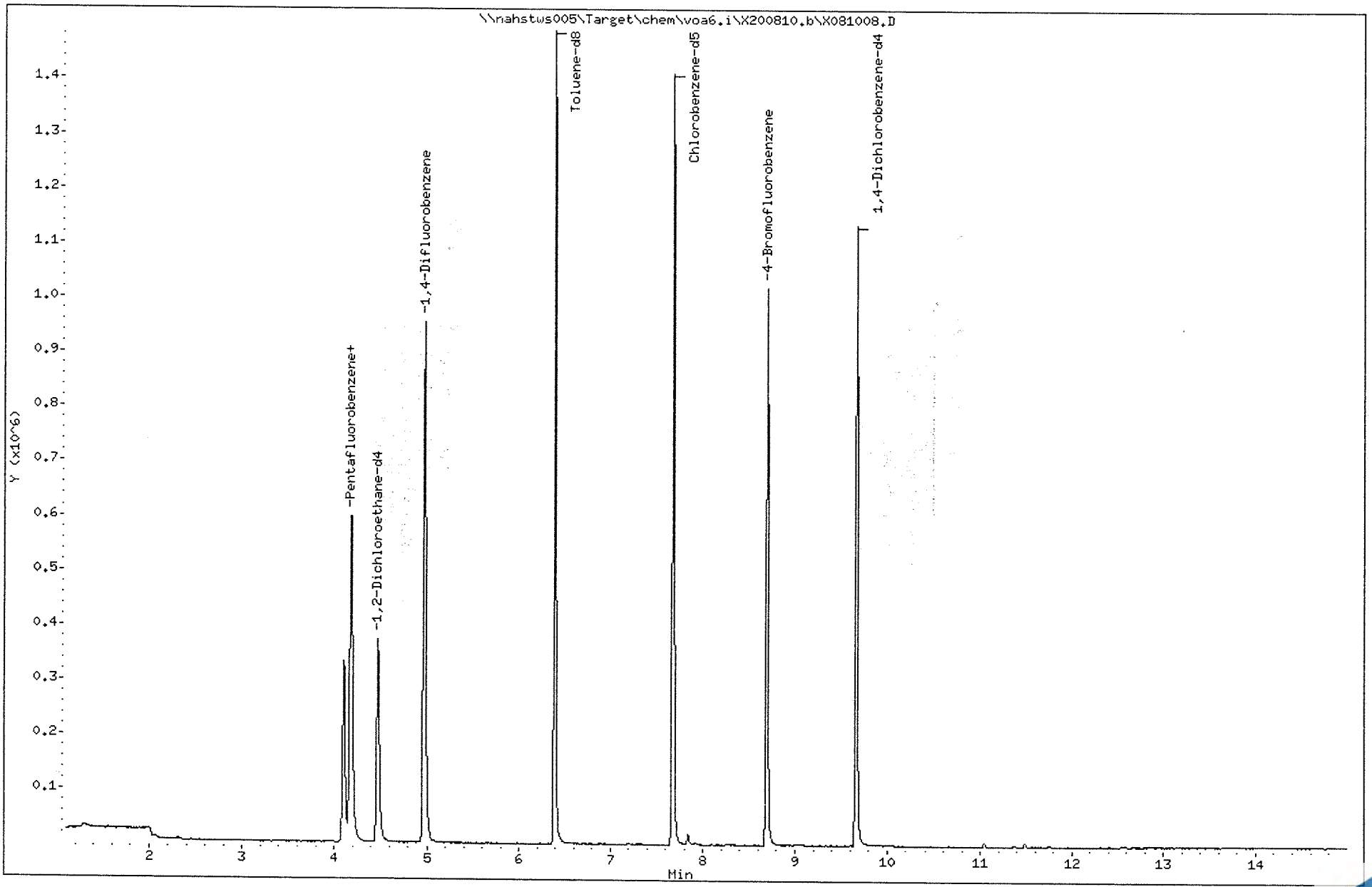
00991602

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081008.D
Date : 10-AUG-2020 13:35
Client ID: HS20080212-02
Sample Info: HS20080212-02;HS20080212-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081009.D
Lab Smp Id: HS20080212-01 Client Smp ID: HS20080212-01
Inj Date : 10-AUG-2020 13:59
Operator : PC Inst ID: voa6.i
Smp Info : HS20080212-01;HS20080212-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:14 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 512881 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 752471 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 656247 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.662 | (1.000) | 305188 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 234410 | 46.5409 | 46.54 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 275241 | 46.1037 | 46.10 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 843155 | 52.9698 | 52.96 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.688 | (1.134) | 296024 | 48.2081 | 48.20 |
| | 33 1,2-Dichloroethane | 62 | 4.569 | 4.562 | (0.919) | 5405 | 0.74188 | 0.74(a) |
| | 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 113578 | 20.1184 | 20.11 |
| | 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 24534 | 4.60059 | 4.60(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

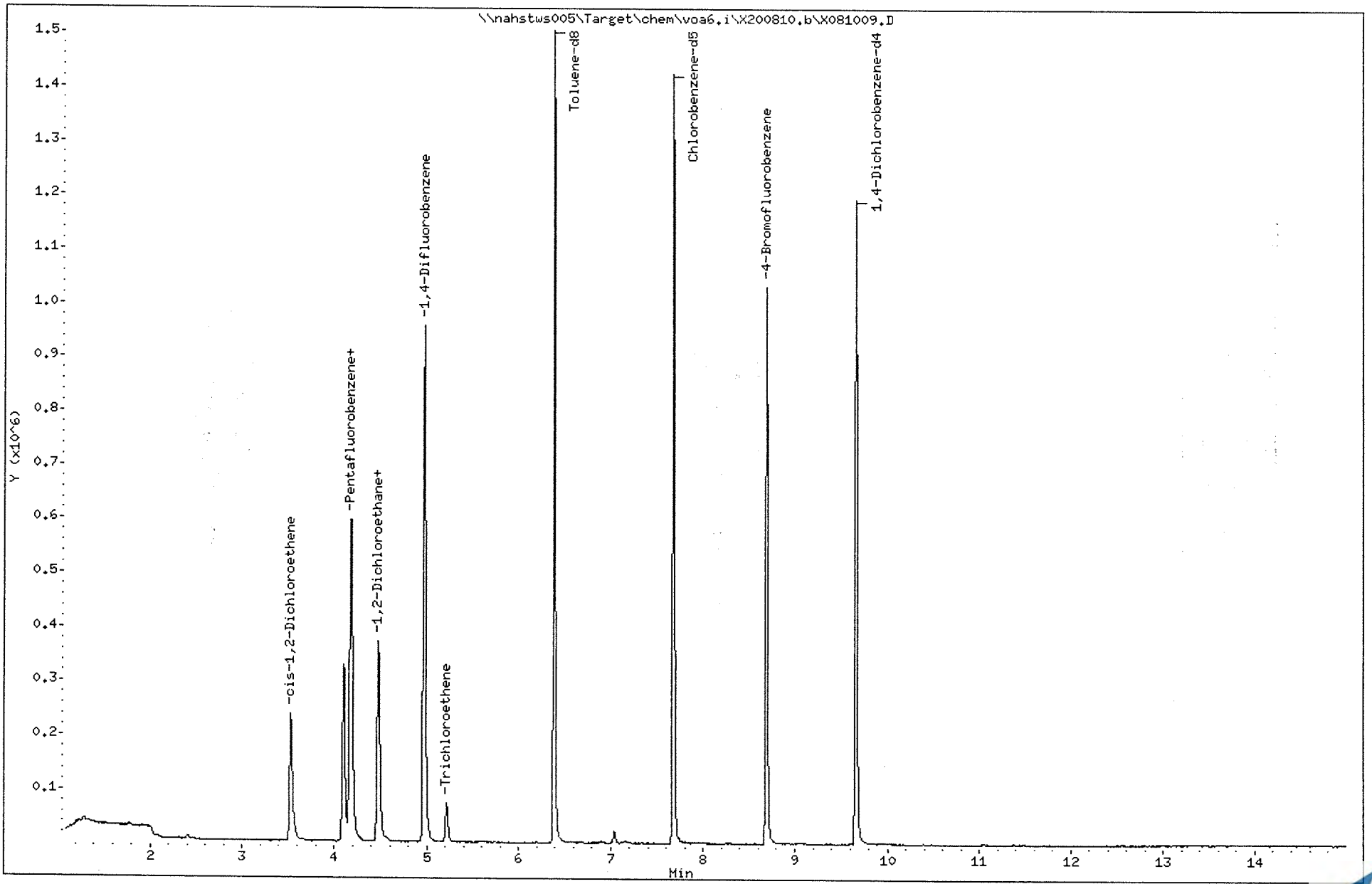
00991604

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081009.D
Date : 10-AUG-2020 13:59
Client ID: HS20080212-01
Sample Info: HS20080212-01;HS20080212-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18





Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081009.D

Date : 10-AUG-2020 13:59

Client ID: HS20080212-01

Instrument: voa6.i

Sample Info: HS20080212-01;HS20080212-01;;;

Purge Volume: 5.0

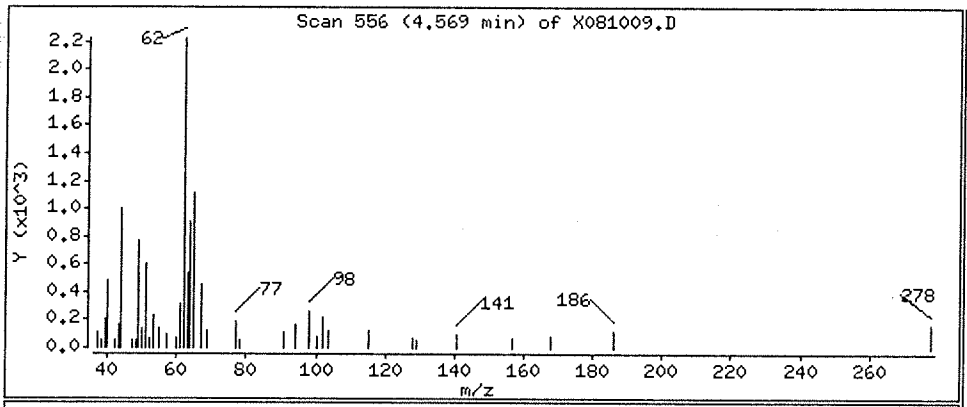
Operator: PC

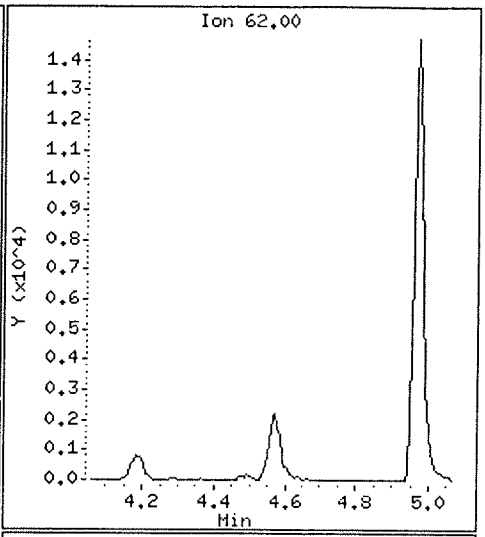
Column phase: DB624

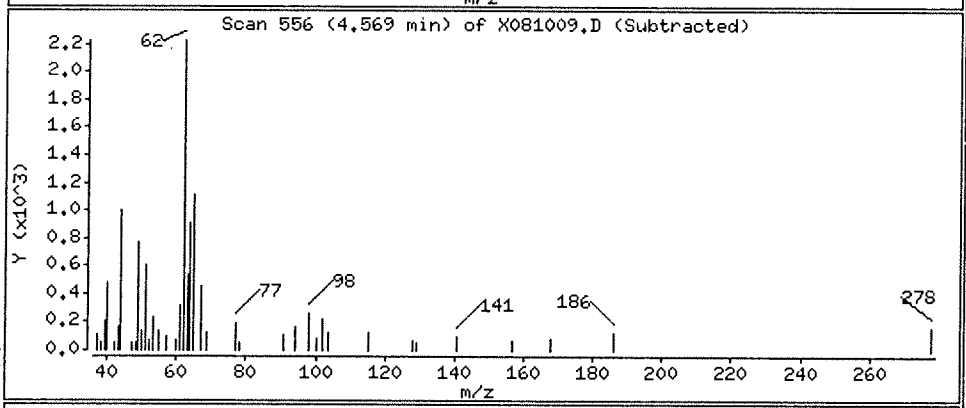
Column diameter: 0.18

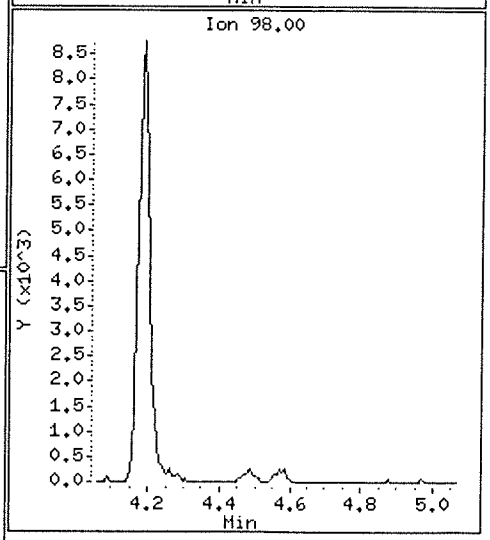
33 1,2-Dichloroethane

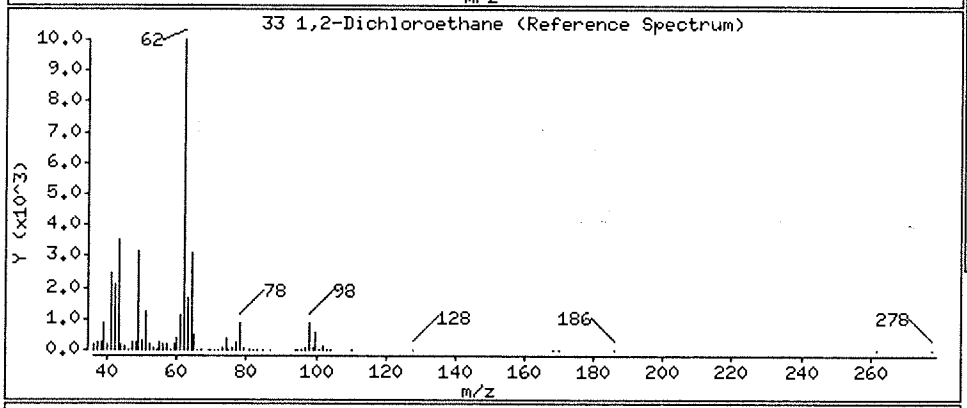
Concentration: 0.74 ug/l

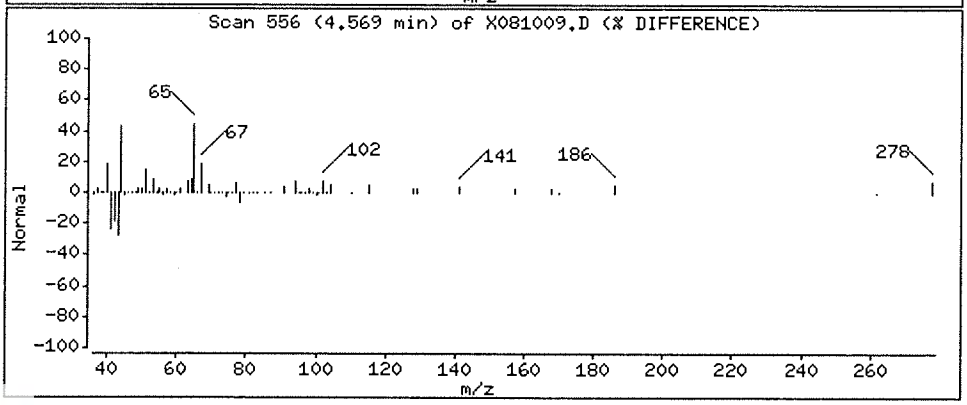


Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081009.D



Date : 10-AUG-2020 13:59

Client ID: HS20080212-01

Instrument: voa6.i

Sample Info: HS20080212-01;HS20080212-01;;;

Purge Volume: 5.0

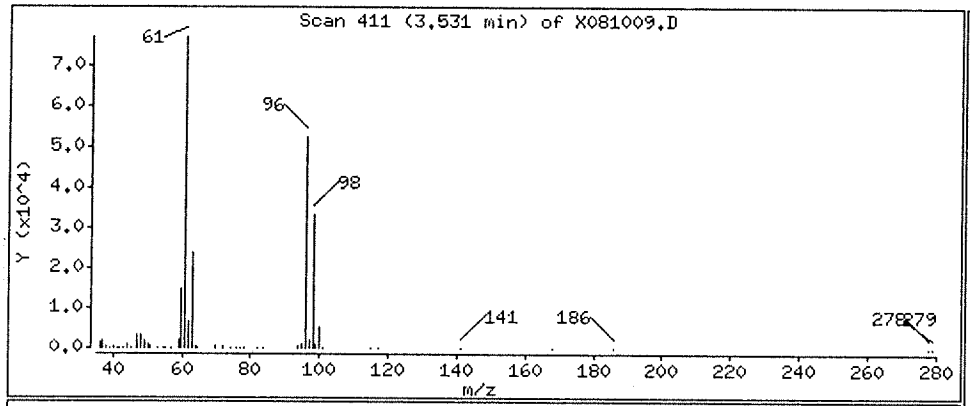
Operator: PC

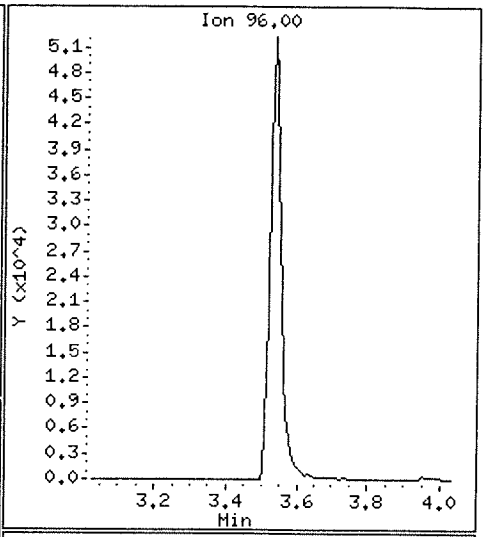
Column phase: DB624

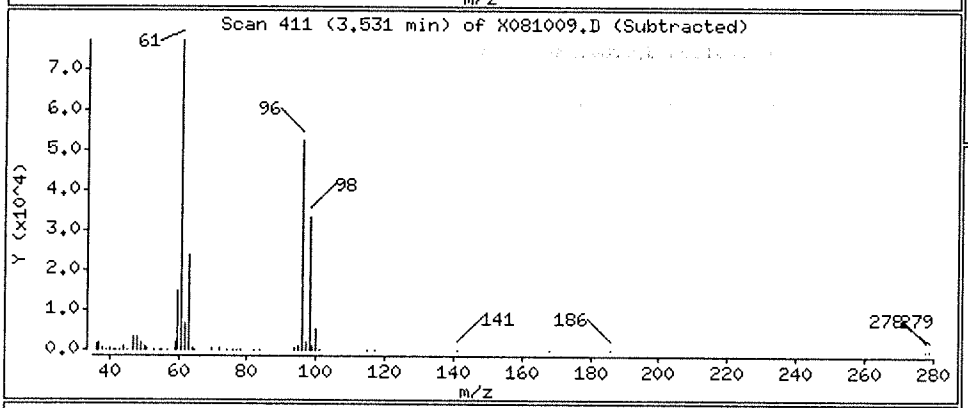
Column diameter: 0.18

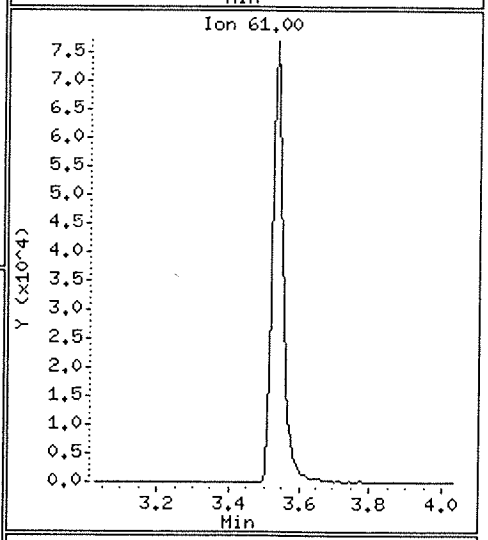
27 cis-1,2-Dichloroethene

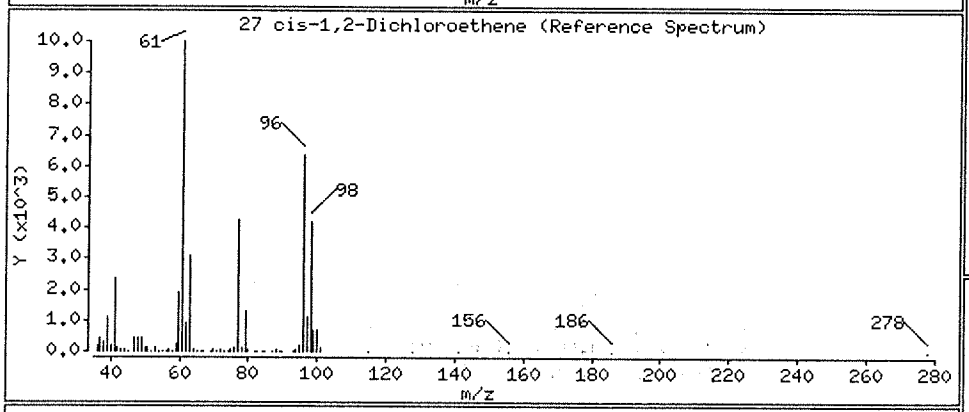
Concentration: 20.11 ug/l

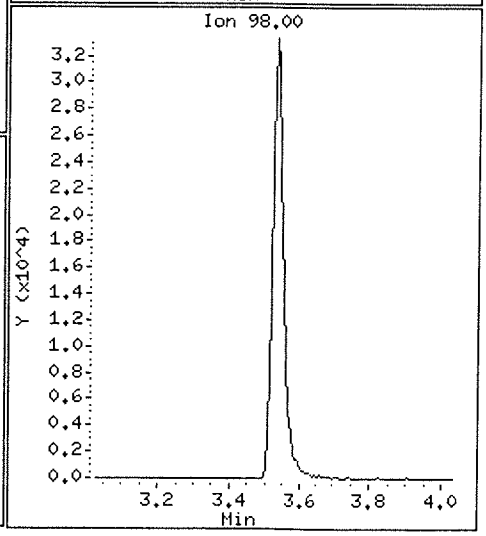


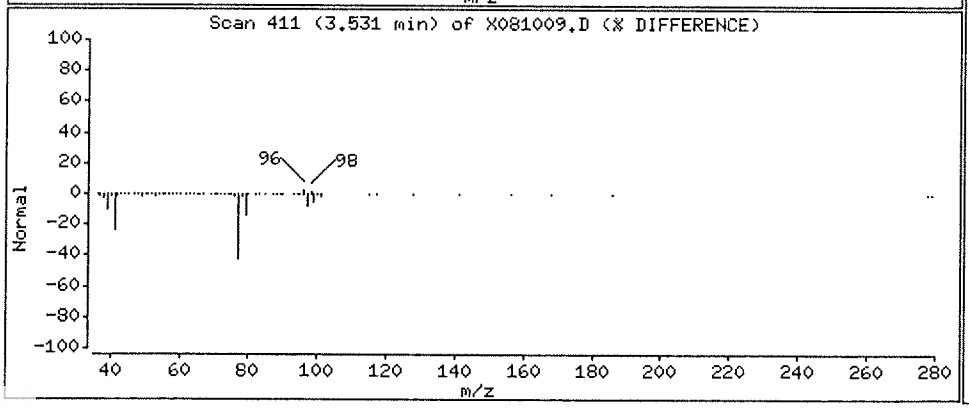



Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081009.D

Date : 10-AUG-2020 13:59

Client ID: HS20080212-01

Instrument: voa6.i

Sample Info: HS20080212-01;HS20080212-01;;;

Purge Volume: 5.0

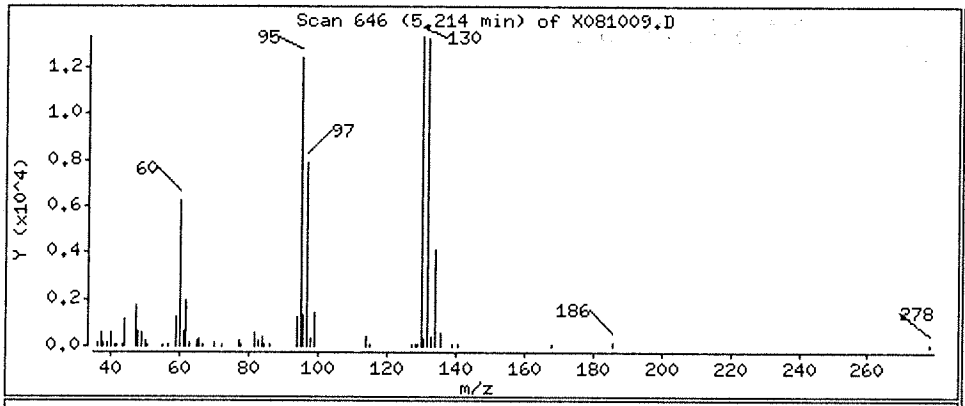
Operator: PC

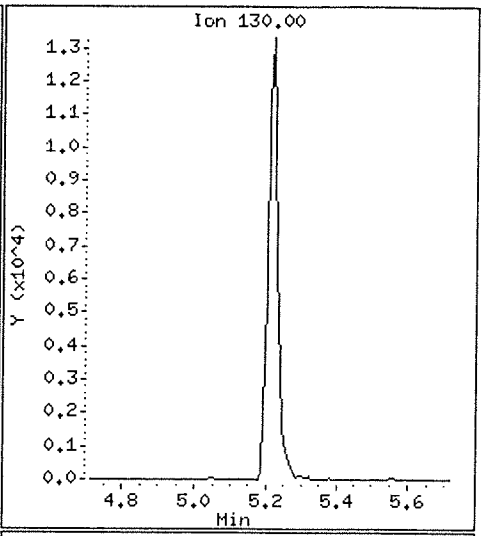
Column phase: DB624

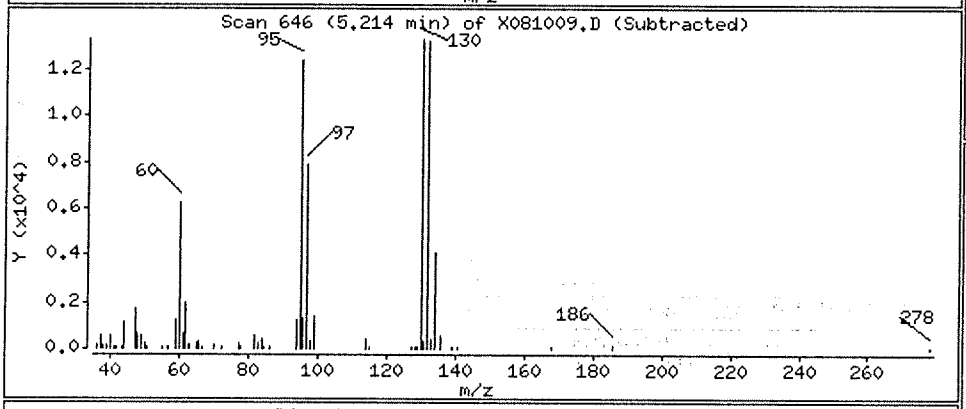
Column diameter: 0.18

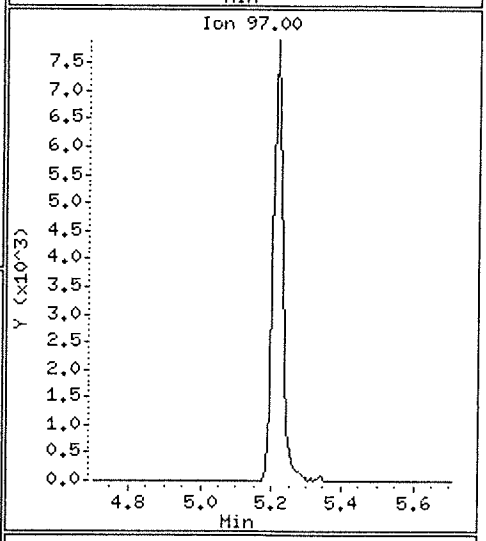
38 Trichloroethene

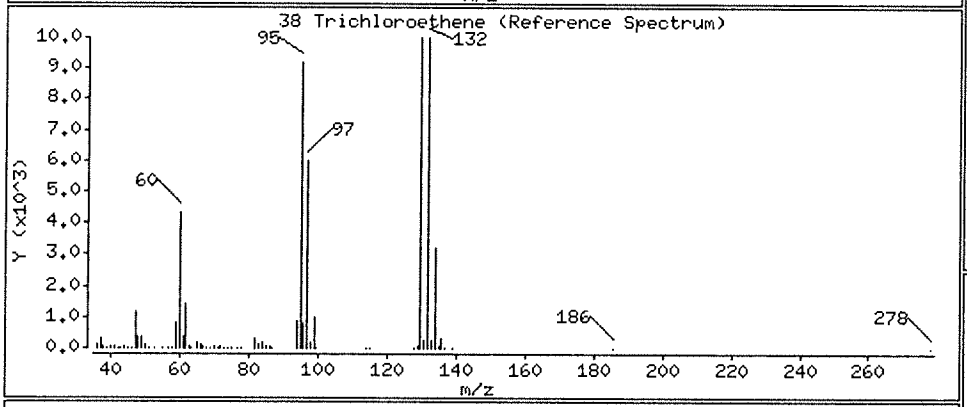
Concentration: 4.60 ug/l

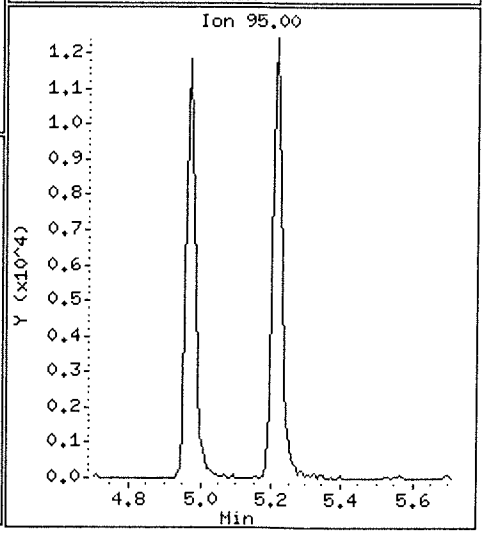


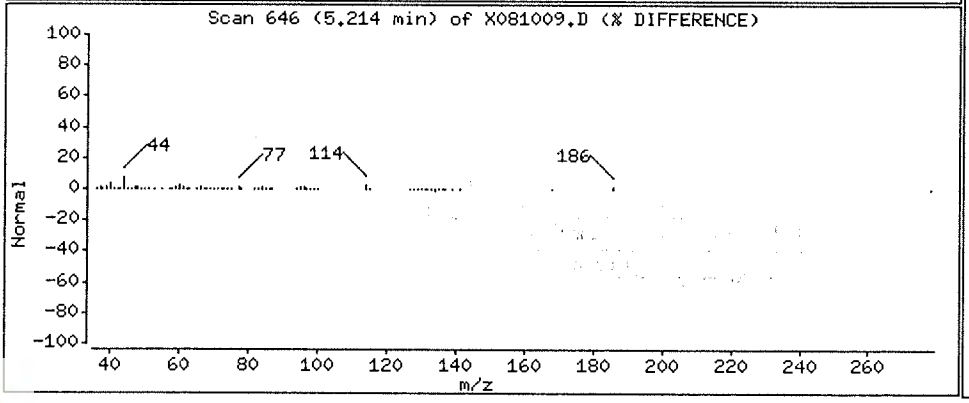



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081011.D
Lab Smp Id: HS20080212-01MS Client Smp ID: HS20080212-01MS
Inj Date : 10-AUG-2020 14:47
Operator : PC Inst ID: voa6.i
Smp Info : HS20080212-01MS;HS20080212-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:16 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 11 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

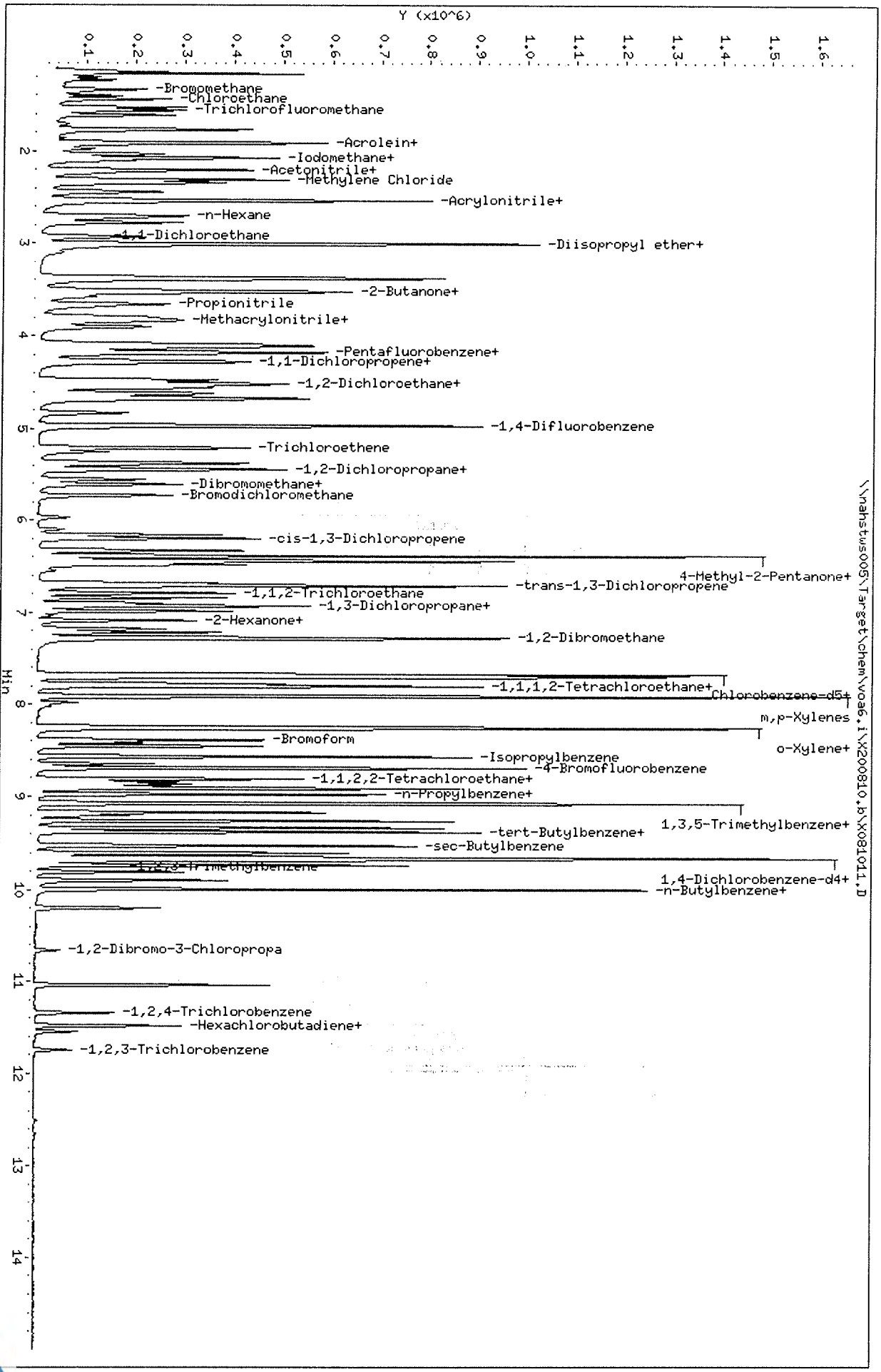
| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 482307 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 718513 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 616719 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.662 | (1.000) | 276558 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 224468 | 47.3922 | 47.39 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 260304 | 46.3657 | 46.36 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 806661 | 53.9253 | 53.92 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.688 | (1.134) | 275826 | 47.7979 | 47.79 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 113985 | 24.2804 | 24.28 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 180543 | 24.3020 | 24.30 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.915) | 121562 | 27.4598 | 27.45 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 86697 | 24.7057 | 24.70 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 231768 | 24.6009 | 24.60 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 97689 | 25.5632 | 25.56 |
| | 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 151691 | 25.1233 | 25.12 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 21245 | 25.5277 | 25.52 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 101543 | 25.0843 | 25.08(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 45690 | 28.6849 | 28.68 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 398190 | 26.9514 | 26.95 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 9893 | 25.4095 | 25.40 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 109699 | 24.2651 | 24.26 |
| | 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.991 | (1.035) | 200157 | 25.5875 | 25.58 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| 33 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 166831 | 23.9813 | 23.98 |
| 42 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 130343 | 24.7176 | 24.71 |
| 75 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 385486 | 26.6747 | 26.67 |
| 83 1,3-Dichlorobenzene | 146 | 9.605 | 9.605 | (0.994) | 226640 | 26.0725 | 26.07 |
| 54 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 173403 | 25.0260 | 25.02 |
| 84 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.002) | 223414 | 25.9890 | 25.98 |
| 26 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 175409 | 25.4989 | 25.49 |
| 24 2-Butanone | 43 | 3.588 | 3.580 | (0.856) | 106499 | 45.0432 | 45.04 |
| 76 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.929) | 324342 | 27.0317 | 27.03 |
| 52 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 178159 | 46.0157 | 46.01 |
| 77 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 369432 | 26.4660 | 26.46 |
| 82 p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 405352 | 26.4683 | 26.46 |
| 45 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 267672 | 46.8957 | 46.89 |
| 10 Acetone | 43 | 1.976 | 1.976 | (0.472) | 72703 | 42.6350 | 42.63 |
| 37 Benzene | 78 | 4.519 | 4.519 | (0.909) | 434740 | 24.3873 | 24.38 |
| 74 Bromobenzene | 156 | 8.810 | 8.809 | (0.912) | 138566 | 25.6130 | 25.61 |
| 29 Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 64209 | 22.0862 | 22.08 |
| 39 Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 150530 | 23.2725 | 23.27 |
| 66 Bromoform | 173 | 8.416 | 8.416 | (1.097) | 79781 | 23.3161 | 23.31 |
| 6 Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 79755 | 24.3642 | 24.36 |
| 19 Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 581390 | 48.9997 | 48.99 |
| 34 Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 155672 | 24.2565 | 24.25 |
| 59 Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 302387 | 25.0177 | 25.01 |
| 7 Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 80436 | 23.5290 | 23.52 (M) |
| 28 Chloroform | 83 | 3.910 | 3.910 | (0.933) | 200495 | 23.2678 | 23.26 |
| 3 Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 149464 | 22.0713 | 22.07 |
| 27 cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 236536 | 44.5542 | 44.55 |
| 46 cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 175276 | 23.1748 | 23.17 |
| 55 Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 117752 | 23.8363 | 23.83 |
| 44 Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 71613 | 22.9021 | 22.90 |
| 2 Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 97671 | 20.6910 | 20.69 |
| 61 Ethylbenzene | 106 | 7.800 | 7.799 | (1.017) | 162864 | 26.0956 | 26.09 |
| 91 Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.188) | 51417 | 34.6298 | 34.62 |
| 67 Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 477676 | 26.0740 | 26.07 |
| 62 m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 387569 | 51.4590 | 51.45 |
| 17 Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 116044 | 22.6076 | 22.60 |
| 87 n-Butylbenzene | 91 | 9.999 | 9.999 | (1.035) | 338968 | 27.7146 | 27.71 |
| 73 n-Propylbenzene | 91 | 8.917 | 8.917 | (0.923) | 540922 | 27.1505 | 27.15 |
| 92 Naphthalene | 128 | 11.546 | 11.546 | (1.195) | 63008 | 28.8382 | 28.83 |
| 63 o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 190938 | 25.8083 | 25.80 |
| 81 sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.986) | 452870 | 26.9547 | 26.95 |
| 64 Styrene | 104 | 8.265 | 8.258 | (1.078) | 319075 | 24.8375 | 24.83 |
| 78 tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.967) | 333566 | 26.6224 | 26.62 |
| 56 Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 105394 | 26.8831 | 26.88 |
| 50 Toluene | 91 | 6.453 | 6.446 | (0.841) | 465614 | 25.8526 | 25.85 |
| 20 trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 111110 | 24.5741 | 24.57 |
| 51 trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 156225 | 22.5367 | 22.53 |
| 38 Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 149676 | 29.3936 | 29.39 |
| 8 Trichlorofluoromethane | 101 | 1.561 | 1.560 | (0.373) | 173379 | 24.4091 | 24.40 |
| 5 Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 155388 | 25.0289 | 25.02 |

QC Flag Legend

M - Compound response manually integrated.

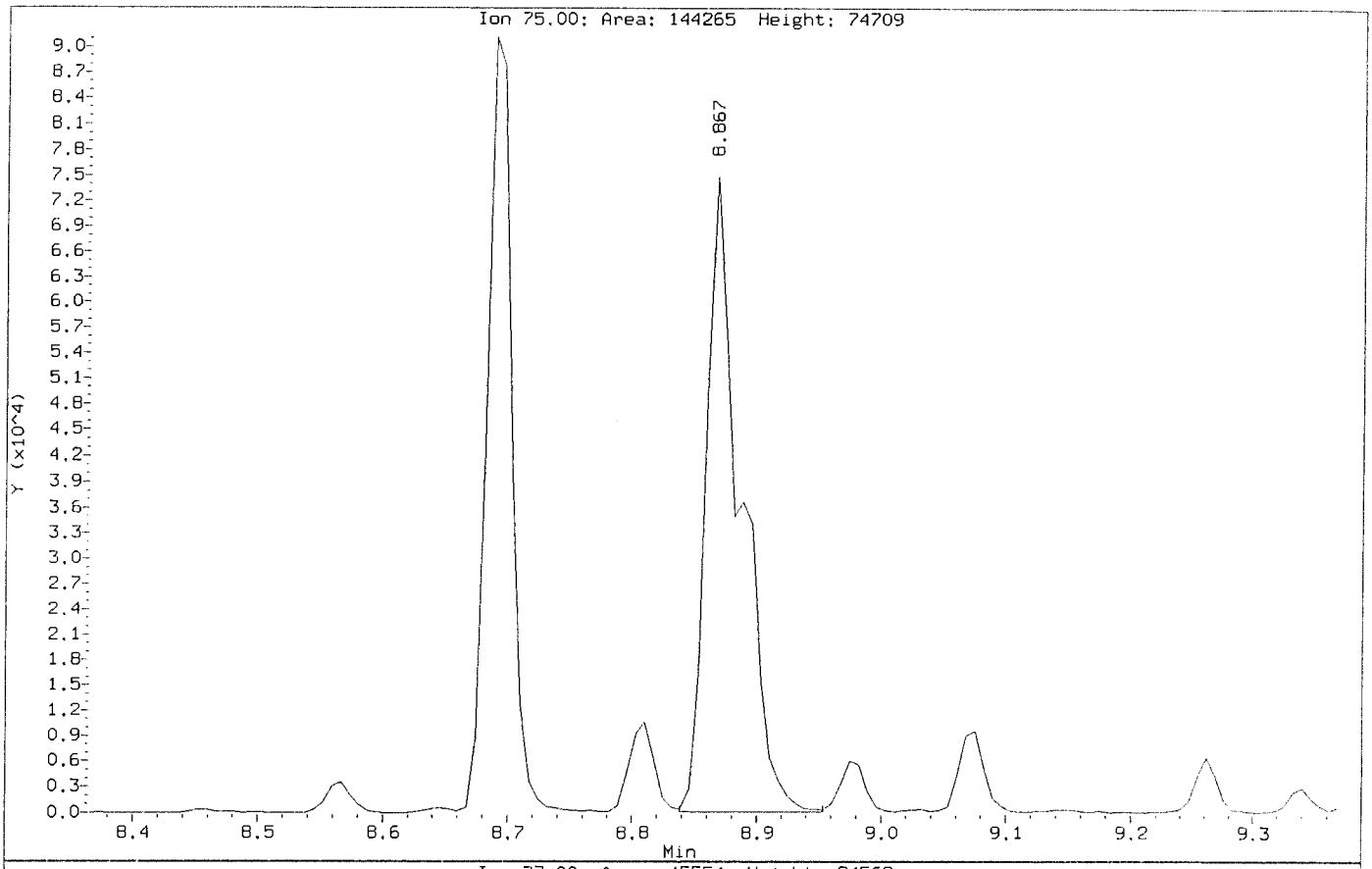


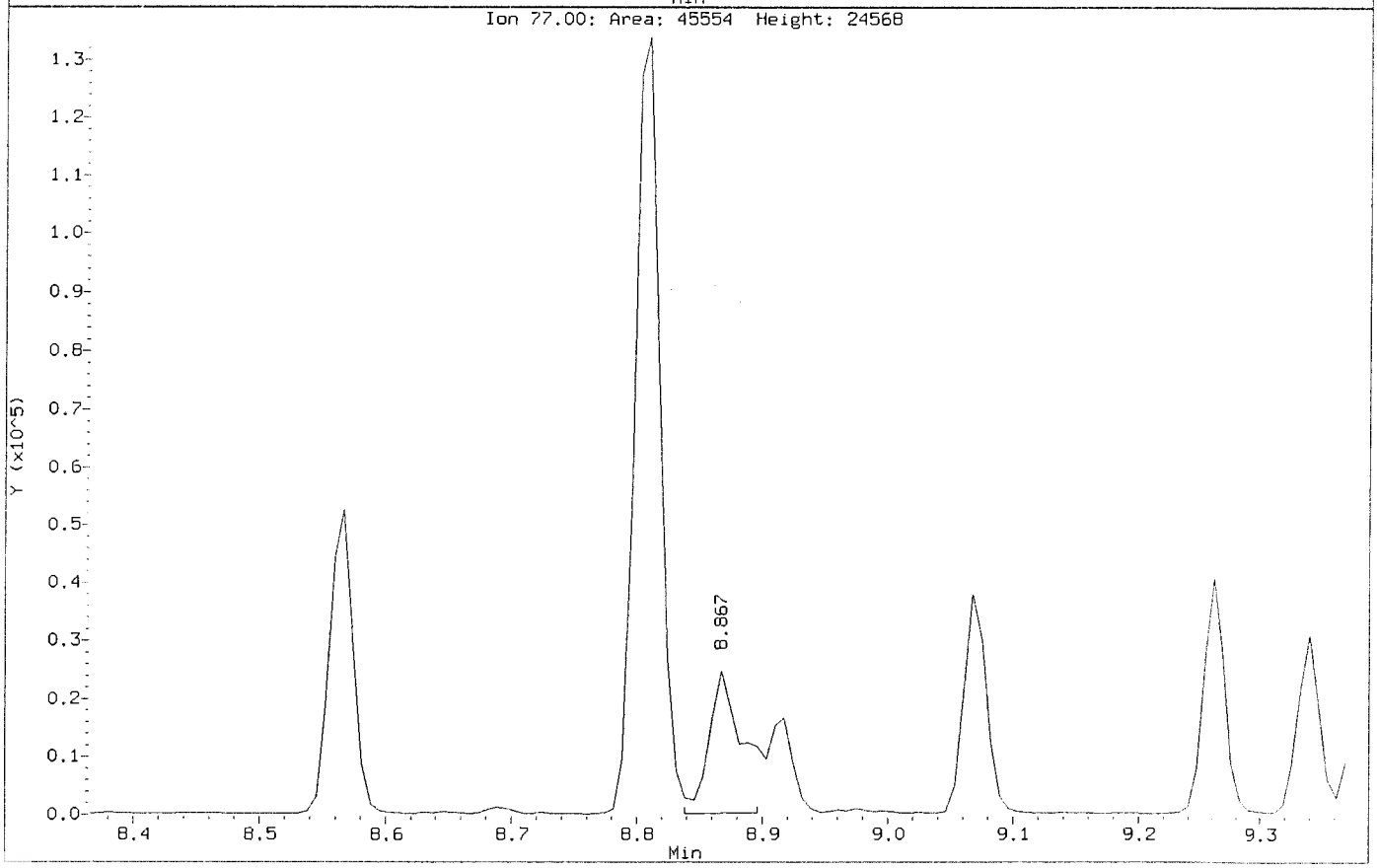

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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\Before\X081011.D
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Instrument: voa6.i
Client Sample ID: HS20080212-01MS

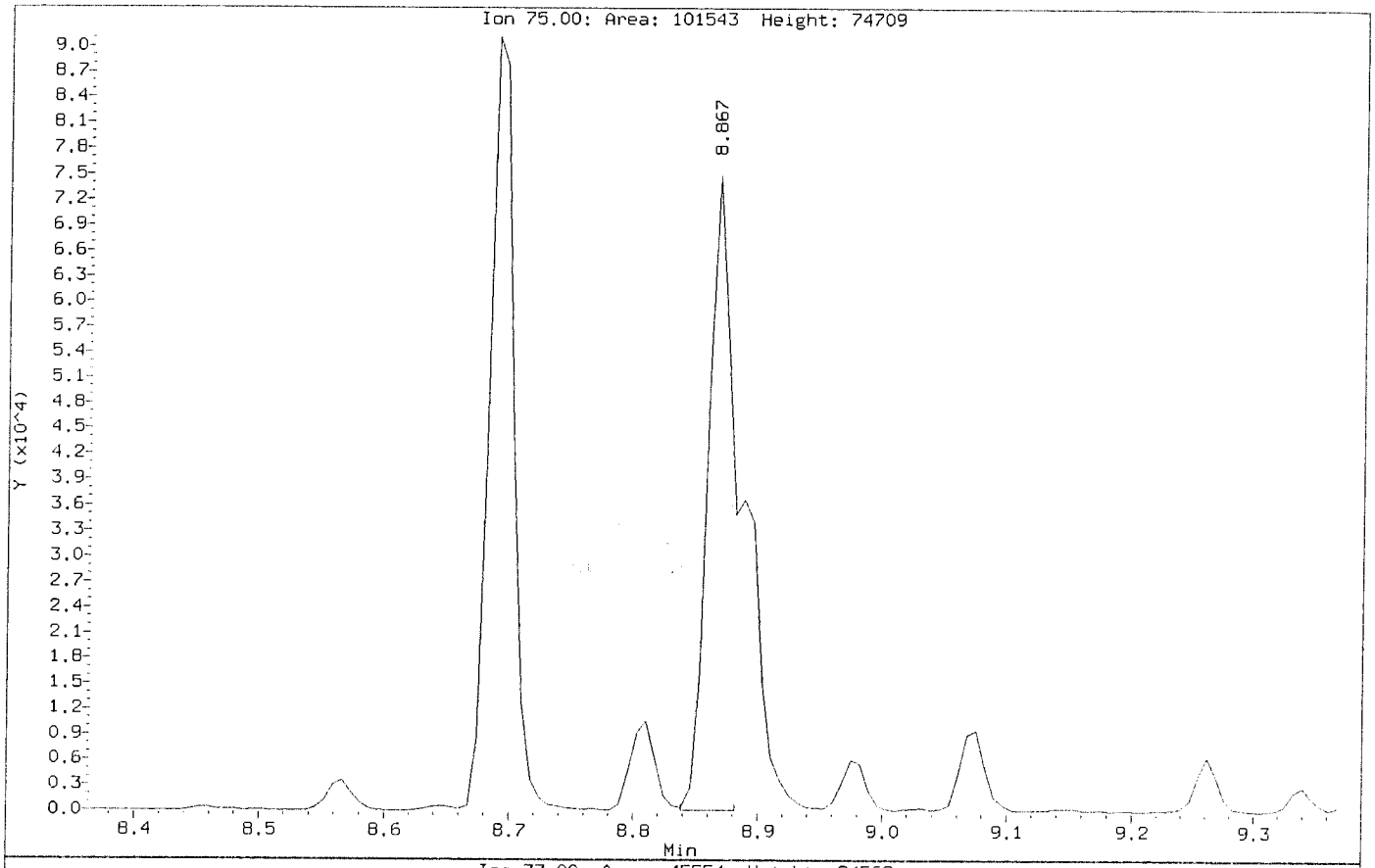
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CAS Number: 96-18-4

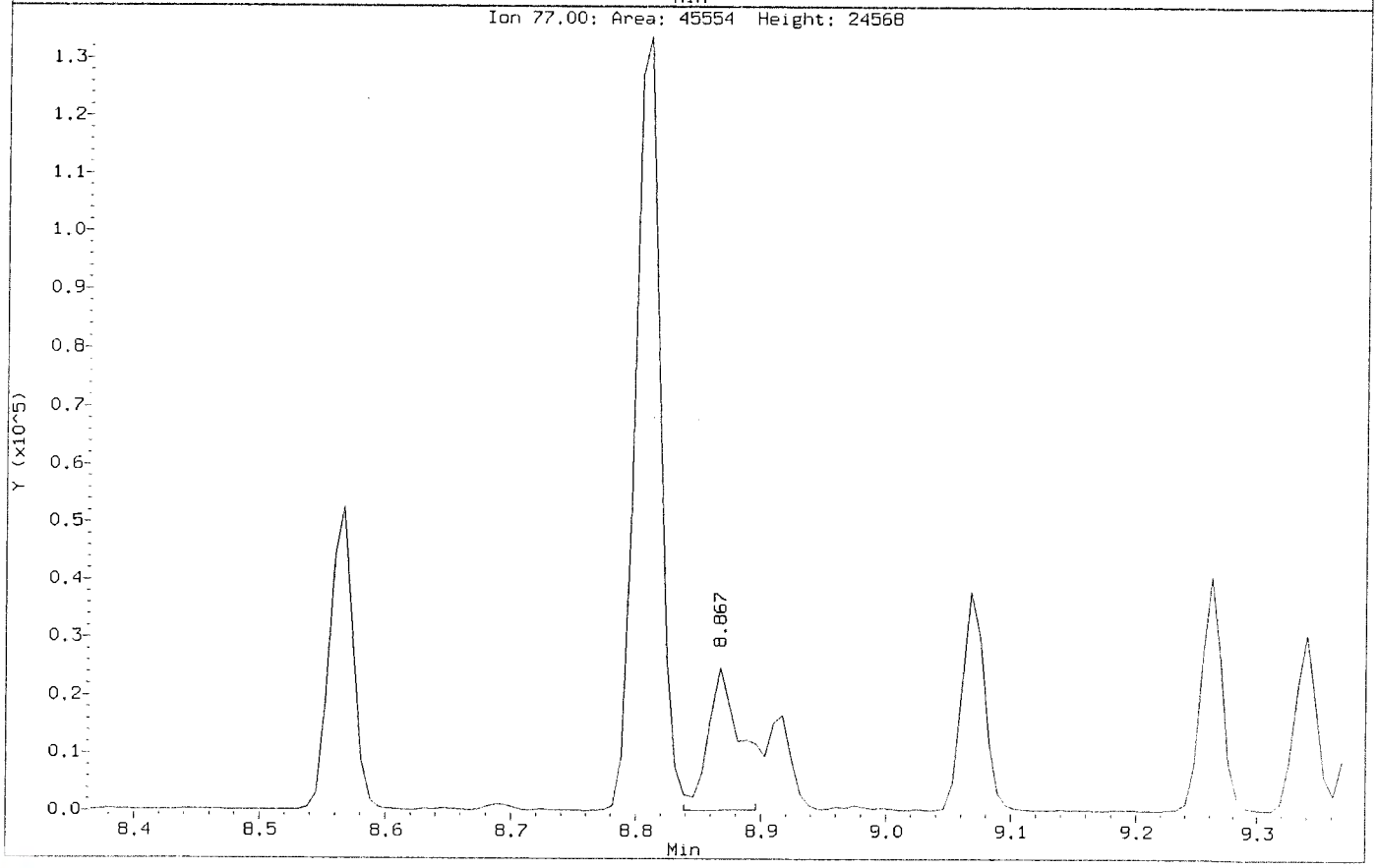


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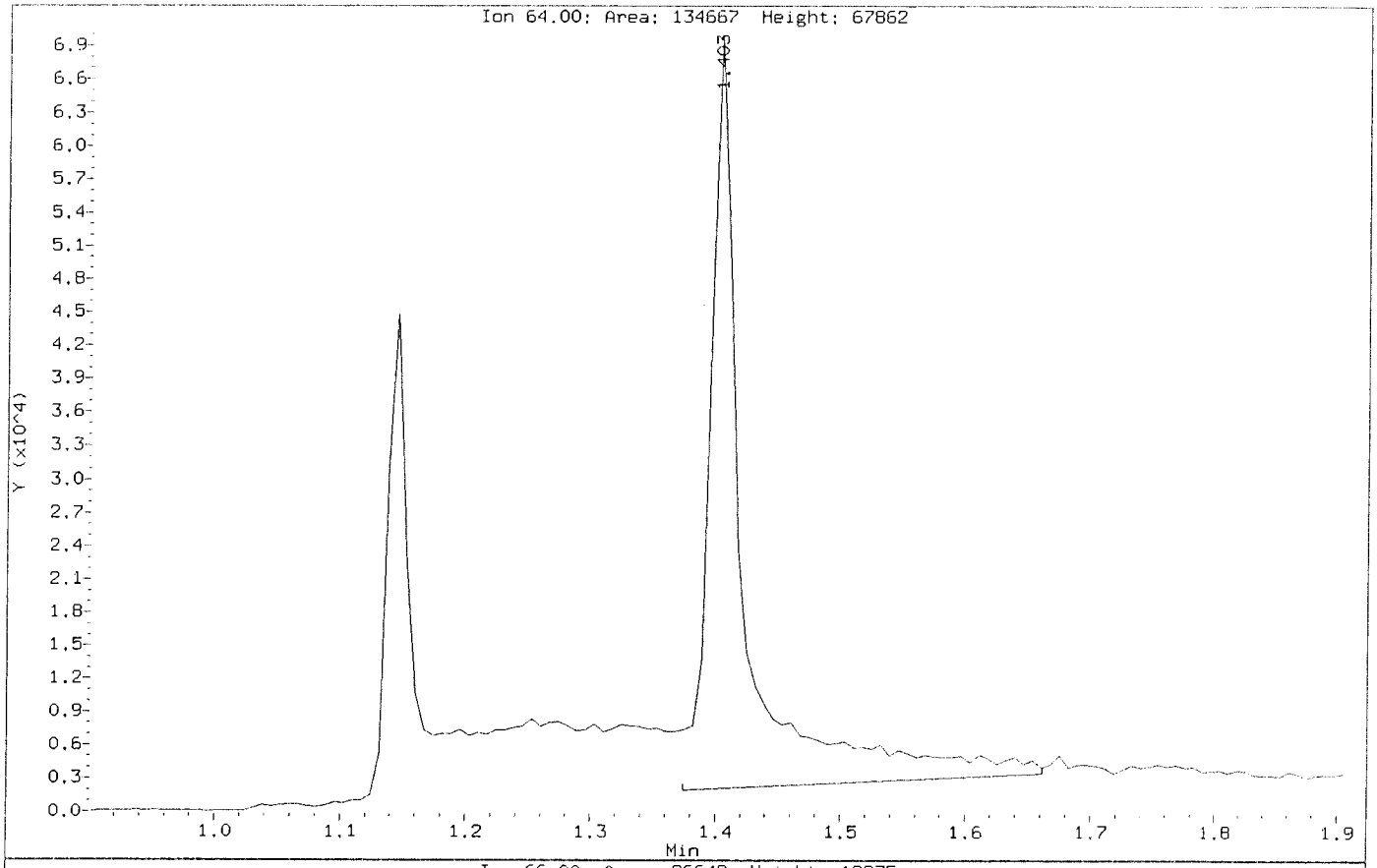
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CAS Number: 96-18-4

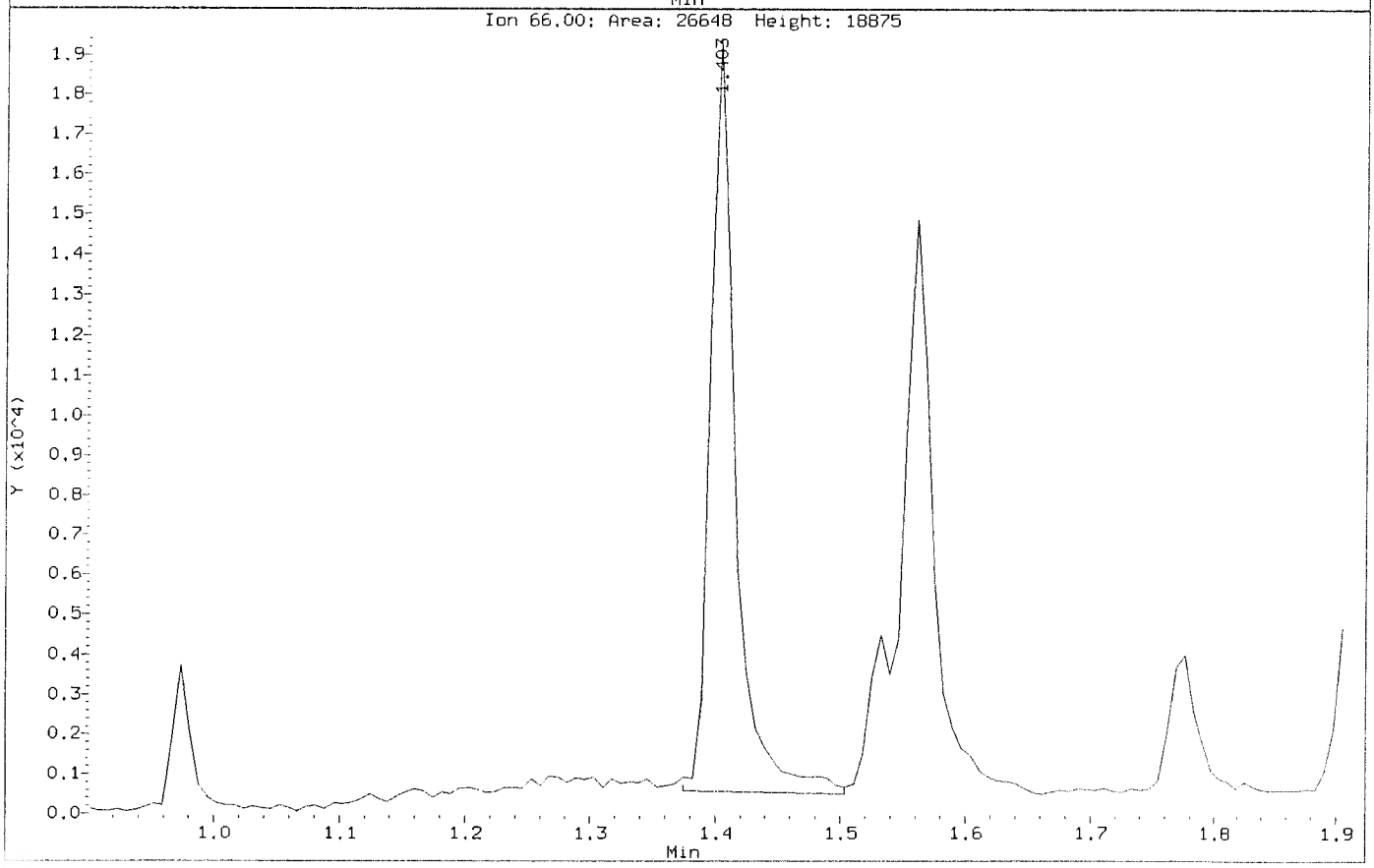


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Client Sample ID: HS20080212-01MS

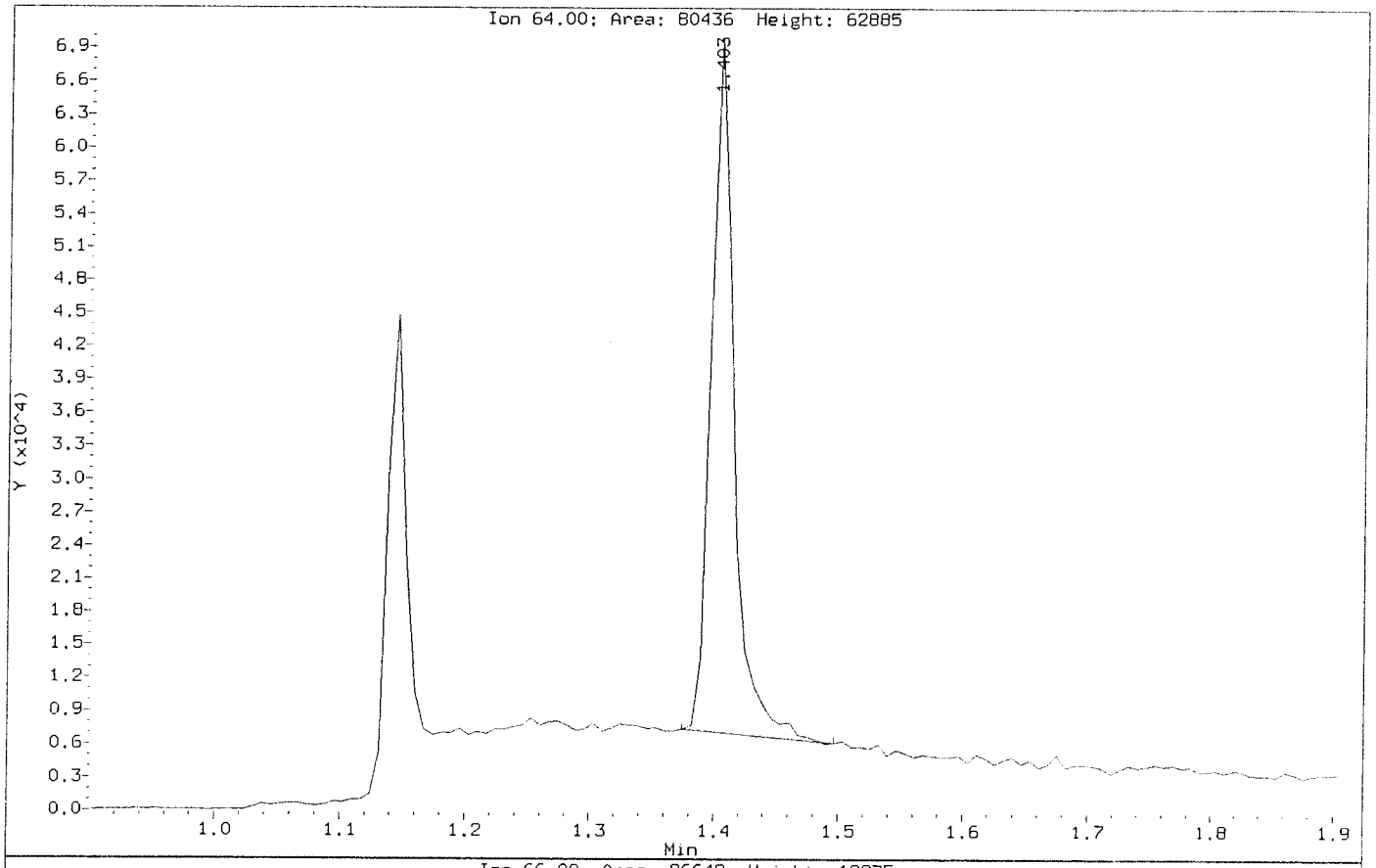
Compound: Chloroethane
CAS Number: 75-00-3

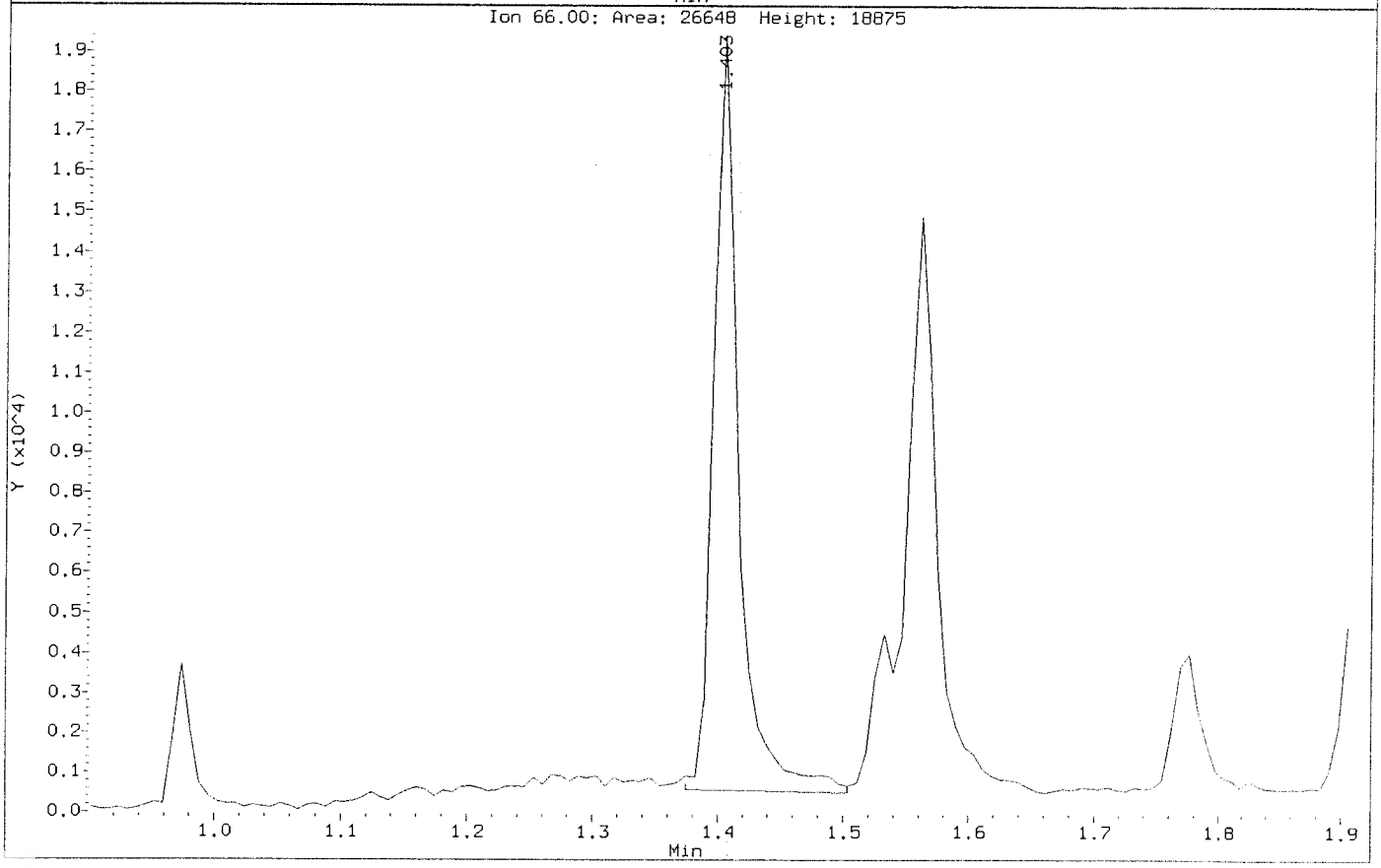


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Injection Date: 10-AUG-2020 14:47
Instrument: voa6.i
Client Sample ID: HS200B0212-01MS

Compound: Chloroethane
CAS Number: 75-00-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081012.D
Lab Smp Id: HS20080212-01MSD Client Smp ID: HS20080212-01MSD
Inj Date : 10-AUG-2020 15:11
Operator : PC Inst ID: voa6.i
Smp Info : HS20080212-01MSD;HS20080212-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:16 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 11 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

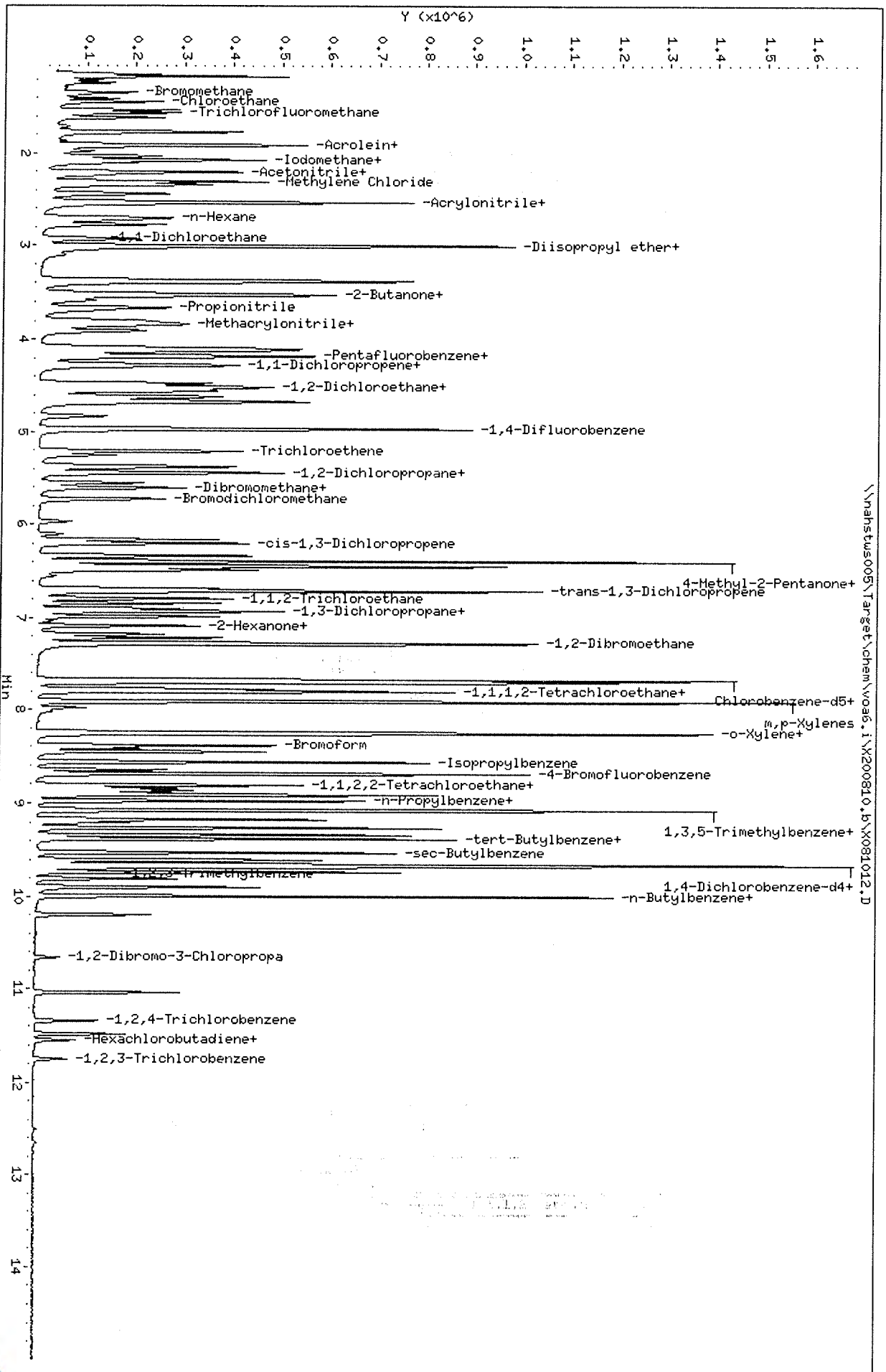
| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|
| * 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 475256 | 50.0000 | |
| * 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 704317 | 50.0000 | |
| * 47 Chlorobenzene-d5 | 117 | 7.671 | 7.671 | (1.000) | 624149 | 50.0000 | |
| * 70 1,4-Dichlorobenzene-d4 | 152 | 9.662 | 9.662 | (1.000) | 297853 | 50.0000 | |
| $ 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 218980 | 46.9194 | 46.91 |
| $ 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 260623 | 47.1112 | 47.11 |
| $ 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 783976 | 51.7849 | 51.78 |
| $ 69 4-Bromofluorobenzene | 95 | 8.688 | 8.688 | (1.133) | 287208 | 49.1778 | 49.17 |
| 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 110231 | 23.2012 | 23.20 |
| 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 170764 | 23.3267 | 23.32 |
| 68 1,1,2,2-Tetrachloroethane | 83 | 8.838 | 8.838 | (0.915) | 121189 | 25.4470 | 25.44 |
| 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 84781 | 23.8721 | 23.87 |
| 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 219999 | 23.6981 | 23.69 |
| 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 91557 | 24.3140 | 24.31 |
| 32 1,1-Dichloropropene | 75 | 4.283 | 4.282 | (0.862) | 144132 | 24.3525 | 24.35 |
| 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.216) | 19141 | 21.3552 | 21.35 |
| 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.918) | 101626 | 23.3099 | 23.30(M) |
| 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 37370 | 21.7258 | 21.72 |
| 79 1,2,4-Trimethylbenzene | 105 | 9.383 | 9.383 | (0.971) | 375092 | 23.5729 | 23.57 |
| 89 1,2-Dibromo-3-Chloropropane | 155 | 10.658 | 10.658 | (1.103) | 10632 | 25.3569 | 25.35 |
| 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 109439 | 23.9194 | 23.91 |
| 88 1,2-Dichlorobenzene | 146 | 9.999 | 9.991 | (1.035) | 196123 | 23.2793 | 23.27 |

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081012.D Page 2
Report Date: 11-Sep-2020 15:16

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/l) | FINAL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 166027 | 24.3467 | 24.34 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 126459 | 24.4644 | 24.46 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 370505 | 23.8050 | 23.80 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.612 | 9.605 | (0.995) | 218405 | 23.3289 | 23.32 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 169383 | 24.1548 | 24.15 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.002) | 216323 | 23.3650 | 23.36 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 165892 | 24.4732 | 24.47 |
| 24 | 2-Butanone | 43 | 3.588 | 3.580 | (0.856) | 108952 | 46.7644 | 46.76 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.929) | 310095 | 23.9966 | 23.99 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 184929 | 47.1957 | 47.19 |
| 77 | 4-Chlorotoluene | 91 | 9.075 | 9.075 | (0.939) | 354746 | 23.5969 | 23.59 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 385362 | 23.3640 | 23.36 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 273587 | 47.3614 | 47.36 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 72035 | 42.8759 | 42.87 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 419512 | 24.0074 | 24.00 |
| 74 | Bromobenzene | 156 | 8.810 | 8.809 | (0.912) | 135371 | 23.2335 | 23.23 |
| 29 | Bromochloromethane | 128 | 3.803 | 3.803 | (0.908) | 62726 | 21.8962 | 21.89 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 144537 | 22.7963 | 22.79 |
| 66 | Bromoform | 173 | 8.416 | 8.416 | (1.097) | 78158 | 22.5699 | 22.56 |
| 6 | Bromomethane | 94 | 1.339 | 1.338 | (0.320) | 75798 | 23.5222 | 23.52 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 549773 | 47.0224 | 47.02 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 148063 | 23.5359 | 23.53 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 289914 | 23.7002 | 23.70 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 77014 | 22.8622 | 22.86(M) |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 192800 | 22.7068 | 22.70 |
| 3 | Chloromethane | 50 | 1.081 | 1.081 | (0.258) | 138037 | 20.6863 | 20.68 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 225782 | 43.1595 | 43.15 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 172364 | 23.2491 | 23.24 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 116103 | 23.2228 | 23.22 |
| 44 | Dibromomethane | 93 | 5.558 | 5.557 | (1.118) | 71340 | 23.2746 | 23.27 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 90720 | 19.5036 | 19.50 |
| 61 | Ethylbenzene | 106 | 7.800 | 7.799 | (1.017) | 155024 | 24.5437 | 24.54 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.188) | 32372 | 20.2440 | 20.24 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 446266 | 24.0695 | 24.06 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 372212 | 48.8317 | 48.83 |
| 17 | Methylene Chloride | 84 | 2.306 | 2.305 | (0.550) | 111700 | 22.0523 | 22.05 |
| 87 | n-Butylbenzene | 91 | 9.999 | 9.999 | (1.035) | 312958 | 23.7586 | 23.75 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.923) | 508135 | 23.6813 | 23.68 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.195) | 60825 | 25.8874 | 25.88 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 181262 | 24.2088 | 24.20 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.986) | 420946 | 23.2633 | 23.26 |
| 64 | Styrene | 104 | 8.265 | 8.258 | (1.078) | 308303 | 23.7133 | 23.71 |
| 78 | tert-Butylbenzene | 119 | 9.340 | 9.340 | (0.967) | 315254 | 23.3620 | 23.36 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 98481 | 24.8208 | 24.82 |
| 50 | Toluene | 91 | 6.453 | 6.446 | (0.841) | 450208 | 24.6997 | 24.69 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 105249 | 23.6232 | 23.62 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 154278 | 22.7044 | 22.70 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 144249 | 28.8988 | 28.89 |
| 8 | Trichlorofluoromethane | 101 | 1.561 | 1.560 | (0.373) | 161423 | 23.0631 | 23.06 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 145013 | 23.7043 | 23.70 |

QC Flag Legend

M - Compound response manually integrated.

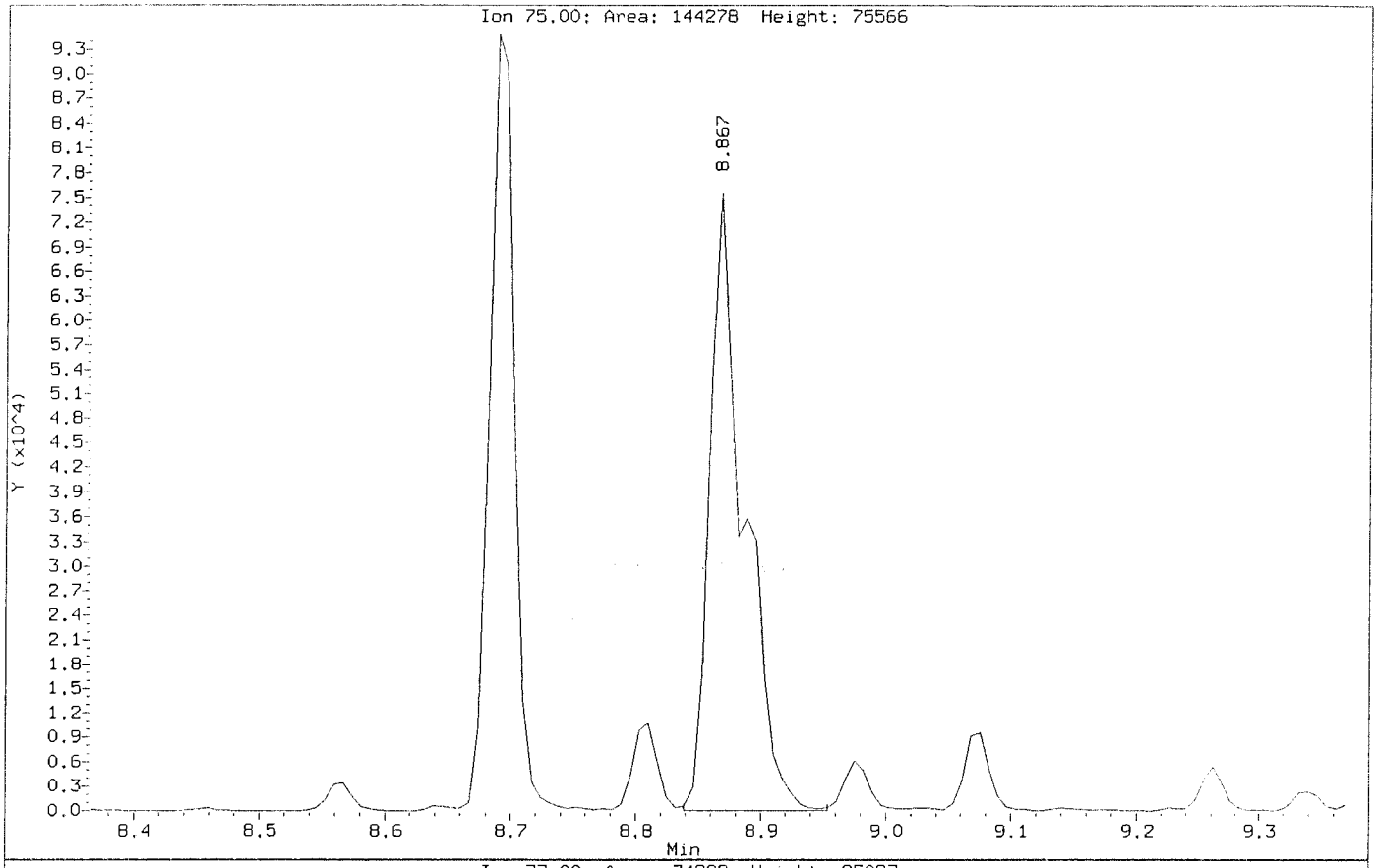


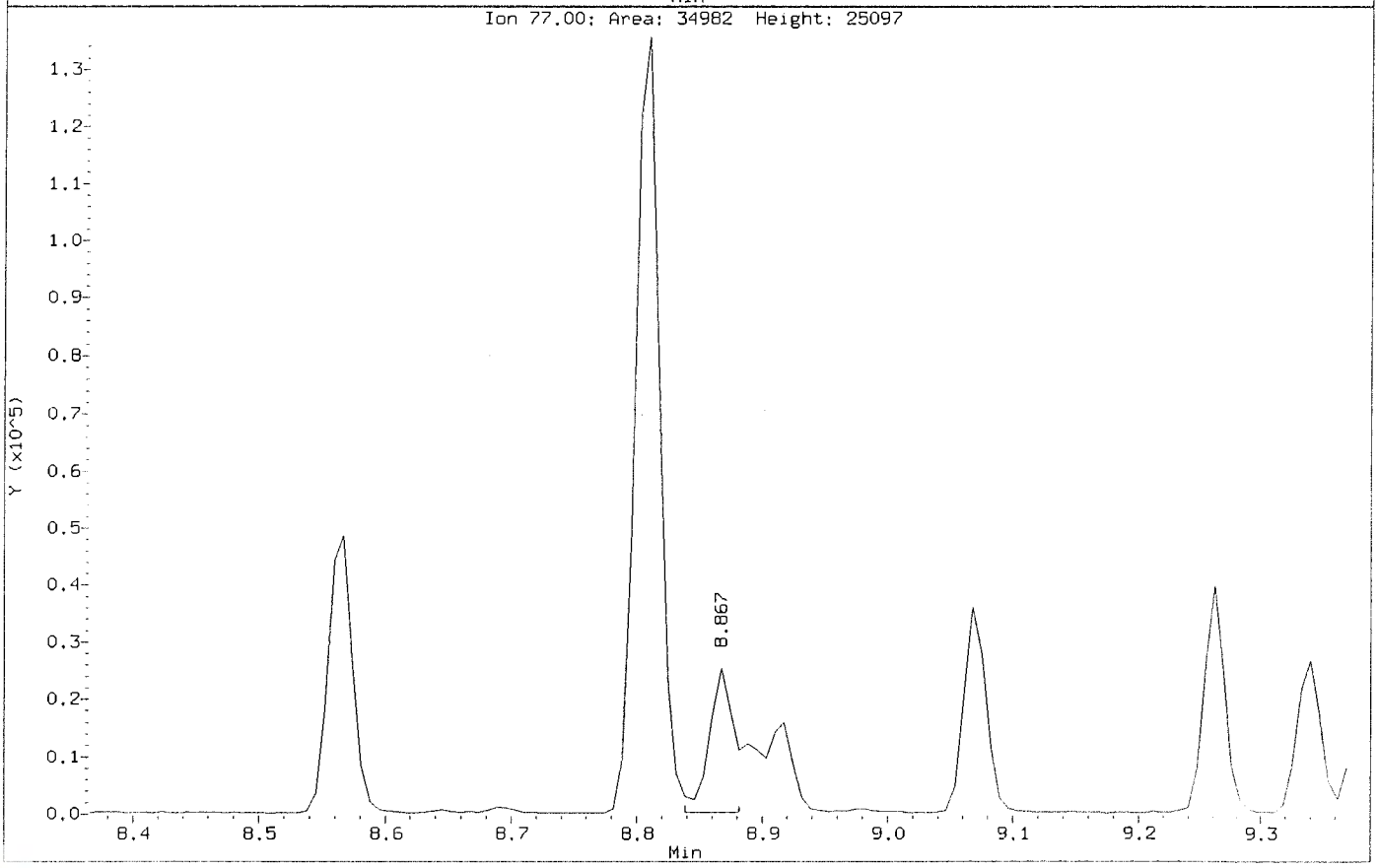

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Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\Before\X081012.D
Injection Date: 10-AUG-2020 15:11
Instrument: voa6.i
Client Sample ID: HS20080212-01MSD

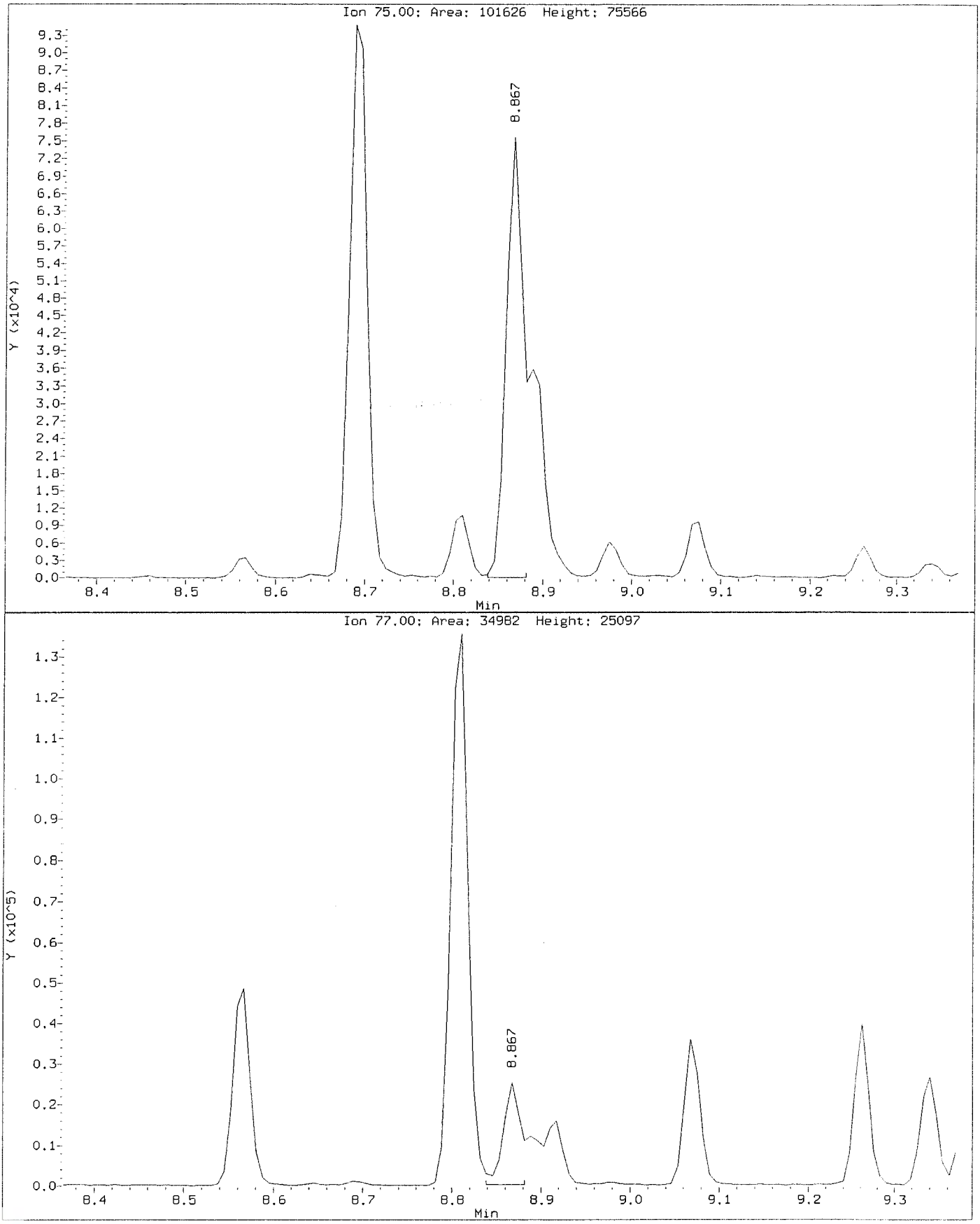
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



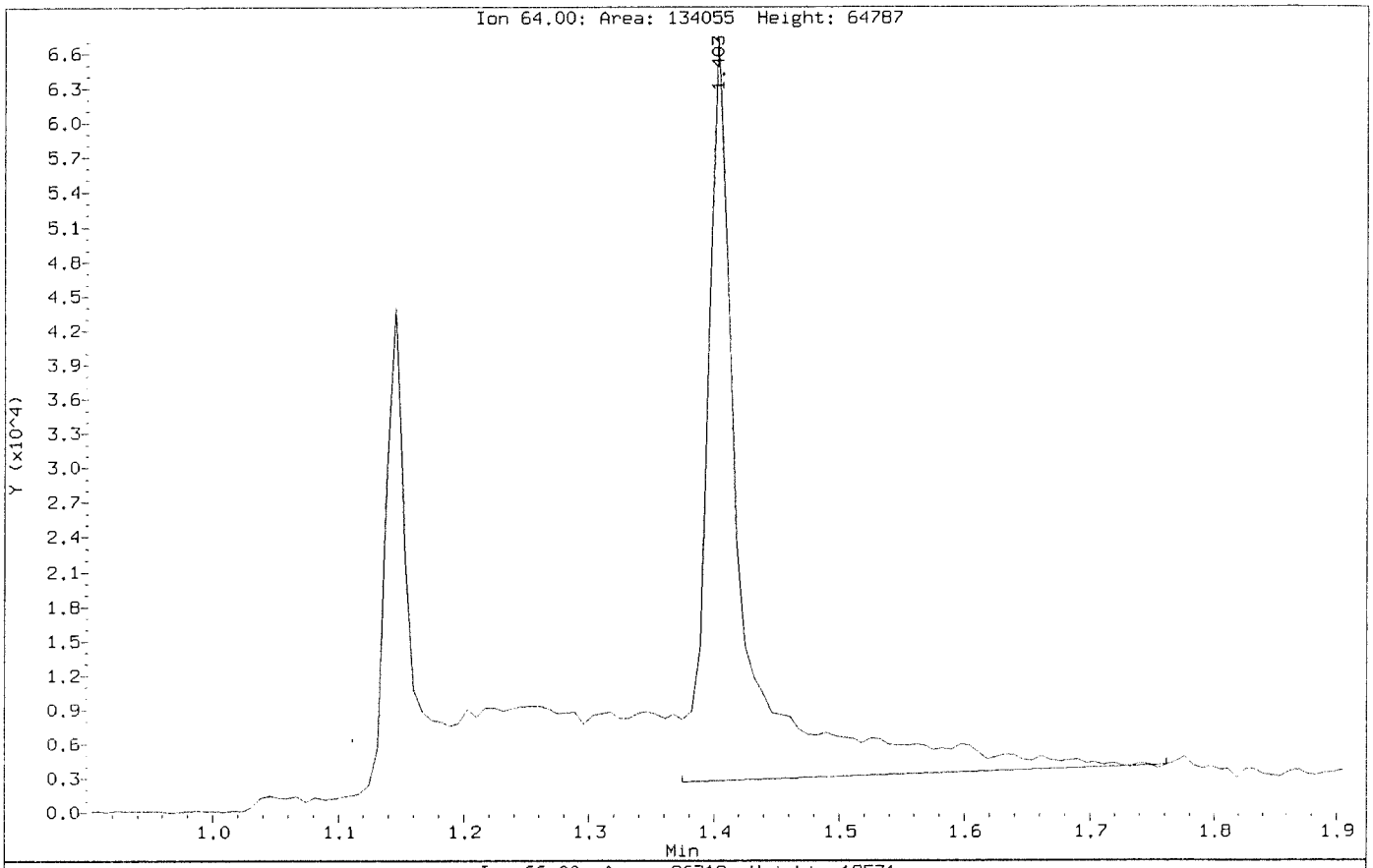
Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081012.D
Injection Date: 10-AUG-2020 15:11
Instrument: voa6.i
Client Sample ID: HS20080212-01MSD

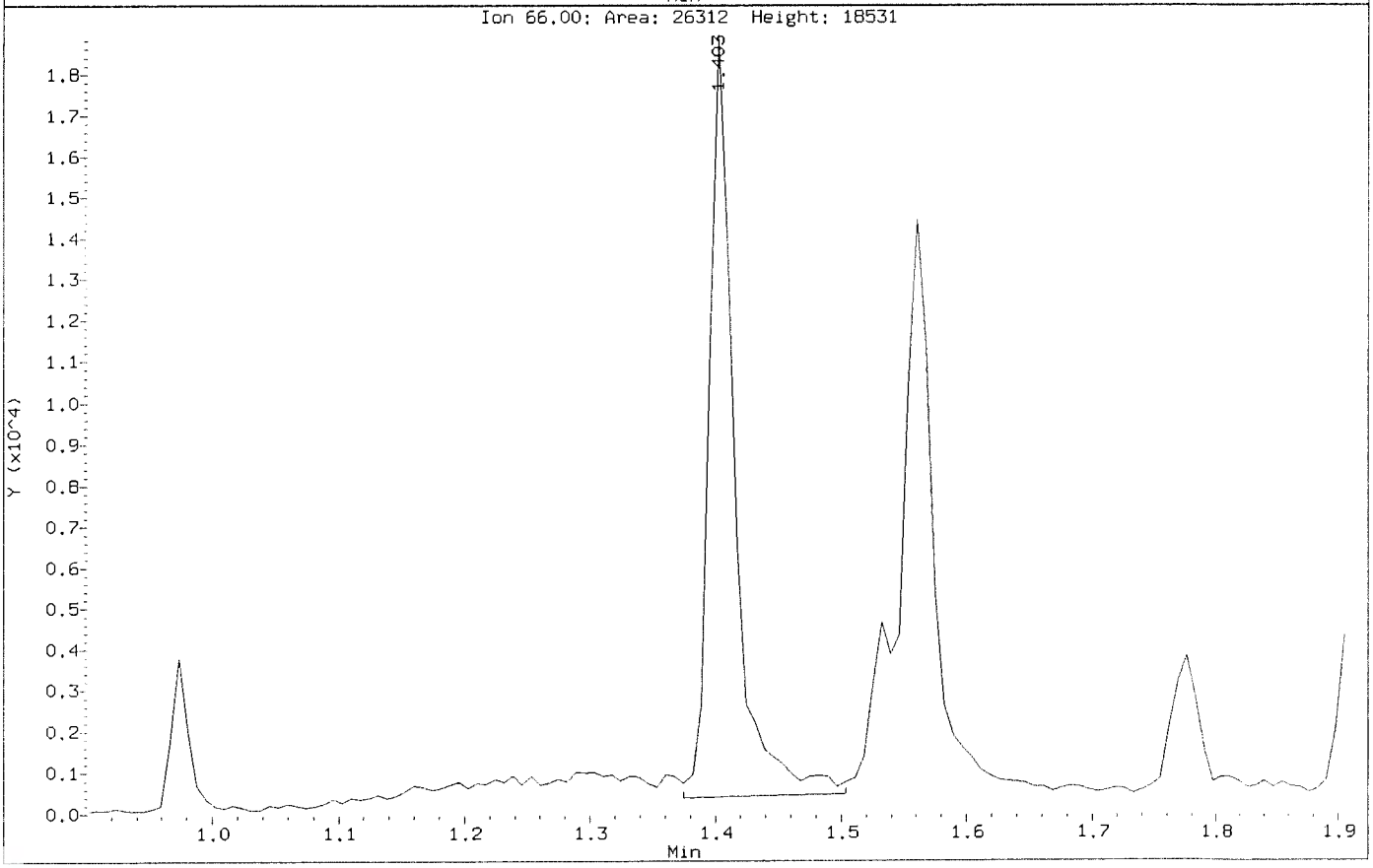
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\Before\X081012.D
Injection Date: 10-AUG-2020 15:11
Instrument: voa6.i
Client Sample ID: HS20080212-01MSD

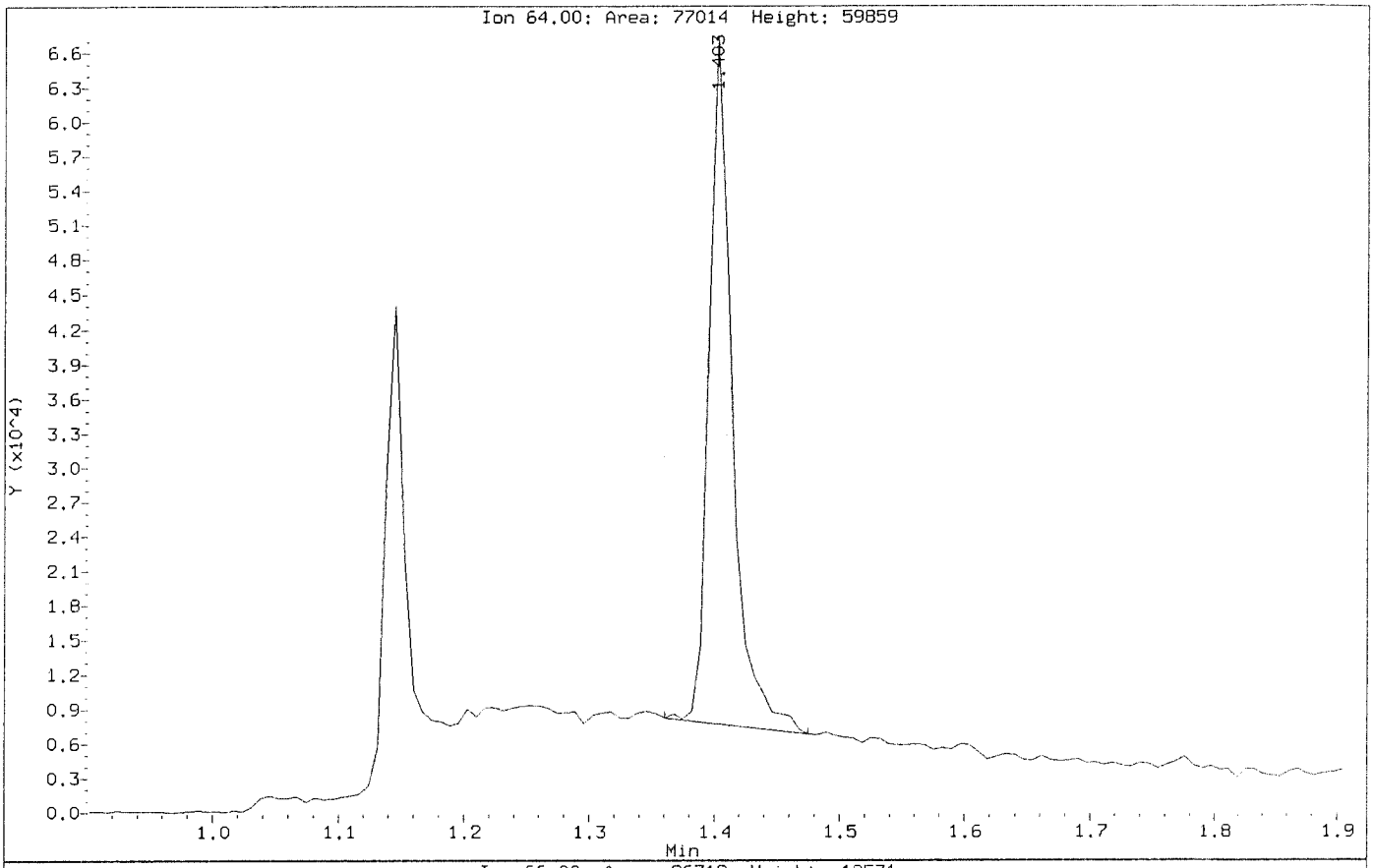
Compound: Chloroethane
CAS Number: 75-00-3

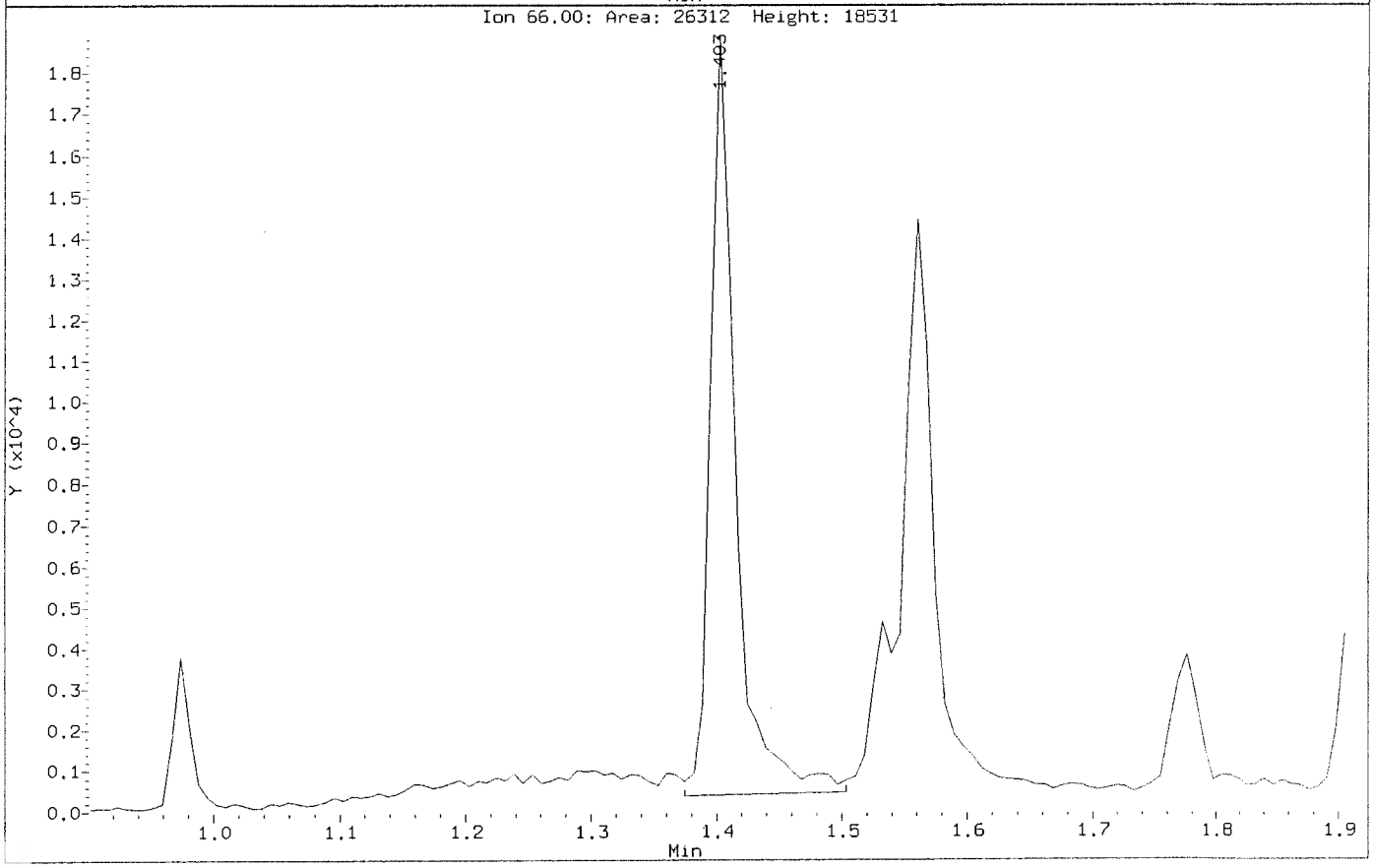


Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081012.D
Injection Date: 10-AUG-2020 15:11
Instrument: voa6.i
Client Sample ID: HS20080212-01MSD

Compound: Chloroethane
CAS Number: 75-00-3



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200810.b\X081014.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 10-AUG-2020 15:59
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200810.b\8260W.m
Meth Date : 11-Sep-2020 15:16 voa6.i Quant Type: ISTD
Cal Date : 03-AUG-2020 14:28 Cal File: X080308.D
Als bottle: 13 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.000 | Dilution Factor |
| Uf | 5.000 | ng unit correction factor |
| Vo | 5.000 | sample purged |
| Cpnd Variable | | Local Compound Variable |

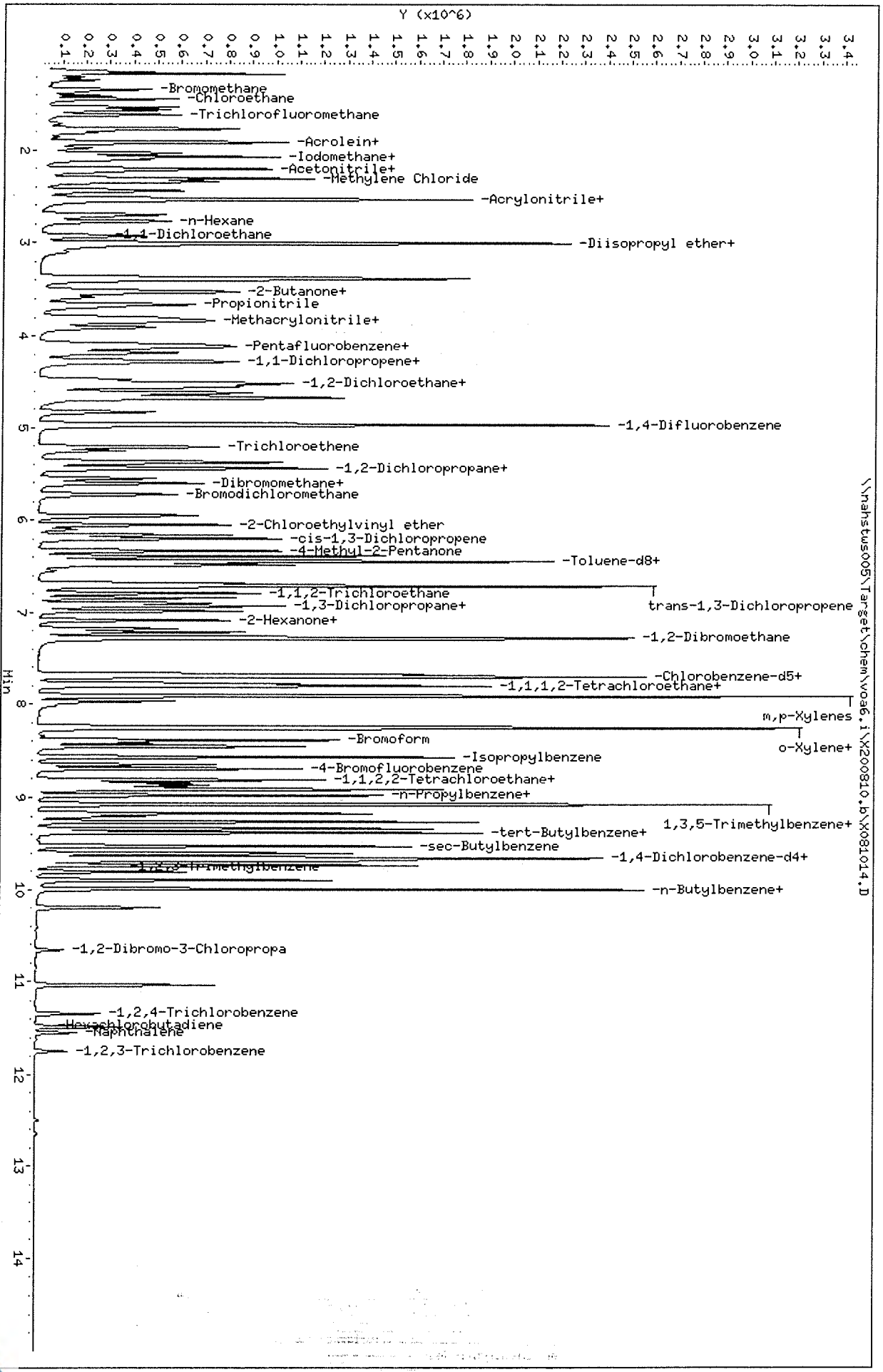
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| * | 1 Pentafluorobenzene | 168 | 4.189 | 4.189 | (1.000) | 479532 | 50.0000 | |
| * | 36 1,4-Difluorobenzene | 114 | 4.970 | 4.970 | (1.000) | 743593 | 50.0000 | |
| * | 47 Chlorobenzene-d5 | 117 | 7.670 | 7.670 | (1.000) | 685520 | 50.0000 | |
| * | 70 1,4-Dichlorobenzene-d4 | 152 | 9.669 | 9.669 | (1.000) | 327821 | 50.0000 | |
| $ | 30 Dibromofluoromethane | 113 | 4.103 | 4.103 | (0.979) | 233196 | 50.0000 | 49.51 |
| $ | 35 1,2-Dichloroethane-d4 | 65 | 4.476 | 4.476 | (1.068) | 279657 | 50.0000 | 50.10 |
| $ | 48 Toluene-d8 | 98 | 6.388 | 6.388 | (0.833) | 800266 | 50.0000 | 48.12 |
| $ | 69 4-Bromofluorobenzene | 95 | 8.695 | 8.695 | (1.134) | 304227 | 50.0000 | 47.42 |
| | 60 1,1,1,2-Tetrachloroethane | 131 | 7.778 | 7.778 | (1.014) | 243727 | 50.0000 | 46.70 |
| | 31 1,1,1-Trichloroethane | 97 | 4.089 | 4.089 | (0.976) | 357280 | 50.0000 | 48.37 |
| | 68 1,1,2,2-Tetrachloroethane | 83 | 8.845 | 8.845 | (0.915) | 267908 | 50.0000 | 50.72 |
| | 53 1,1,2-Trichloroethane | 83 | 6.840 | 6.840 | (0.892) | 188467 | 50.0000 | 48.31 |
| | 22 1,1-Dichloroethane | 63 | 2.929 | 2.929 | (0.699) | 485340 | 50.0000 | 51.81 |
| | 11 1,1-Dichloroethene | 96 | 1.919 | 1.919 | (0.458) | 193937 | 50.0000 | 51.04 |
| | 32 1,1-Dichloropropene | 75 | 4.282 | 4.282 | (0.862) | 292879 | 50.0000 | 46.87 |
| | 93 1,2,3-Trichlorobenzene | 180 | 11.746 | 11.746 | (1.215) | 37099 | 50.0000 | 37.60 |
| | 71 1,2,3-Trichloropropane | 75 | 8.867 | 8.867 | (0.917) | 231650 | 50.0000 | 48.27(M) |
| | 90 1,2,4-Trichlorobenzene | 180 | 11.338 | 11.338 | (1.173) | 77033 | 50.0000 | 40.78 |
| | 79 1,2,4-Trimethylbenzene | 105 | 9.382 | 9.382 | (0.970) | 825179 | 50.0000 | 47.11 |
| | 89 1,2-Dibromo-3-Chloropropane | 155 | 10.657 | 10.657 | (1.102) | 22662 | 50.0000 | 48.36 |
| | 57 1,2-Dibromoethane | 107 | 7.262 | 7.262 | (0.947) | 245502 | 50.0000 | 48.85 |
| | 88 1,2-Dichlorobenzene | 146 | 9.991 | 9.991 | (1.033) | 427511 | 50.0000 | 46.10 |

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081014.D Page 2
Report Date: 11-Sep-2020 15:16

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ug/l) | AMOUNTS ON-COL ( ug/l) |
|---|---|---|---|---|---|---|---|---|
| 33 | 1,2-Dichloroethane | 62 | 4.562 | 4.562 | (0.918) | 356715 | 50.0000 | 49.54 |
| 42 | 1,2-Dichloropropane | 63 | 5.443 | 5.443 | (1.095) | 277928 | 50.0000 | 50.92 |
| 75 | 1,3,5-Trimethylbenzene | 105 | 9.067 | 9.067 | (0.938) | 798017 | 50.0000 | 46.58 |
| 83 | 1,3-Dichlorobenzene | 146 | 9.604 | 9.604 | (0.993) | 477067 | 50.0000 | 46.29 |
| 54 | 1,3-Dichloropropane | 76 | 6.983 | 6.983 | (0.910) | 377437 | 50.0000 | 49.00 |
| 84 | 1,4-Dichlorobenzene | 146 | 9.683 | 9.683 | (1.001) | 479594 | 50.0000 | 47.06 |
| 26 | 2,2-Dichloropropane | 77 | 3.516 | 3.516 | (0.839) | 320709 | 50.0000 | 46.89 |
| 24 | 2-Butanone | 43 | 3.580 | 3.580 | (0.855) | 268554 | 100.000 | 114.24 |
| 76 | 2-Chlorotoluene | 91 | 8.974 | 8.974 | (0.928) | 672757 | 50.0000 | 47.30 |
| 52 | 2-Hexanone | 43 | 7.090 | 7.090 | (0.924) | 442126 | 100.000 | 102.73 |
| 77 | 4-Chlorotoluene | 91 | 9.074 | 9.074 | (0.939) | 780780 | 50.0000 | 47.18 |
| 82 | p-Isopropyltoluene | 119 | 9.655 | 9.655 | (0.999) | 832399 | 50.0000 | 45.85 |
| 45 | 4-Methyl-2-Pentanone | 43 | 6.331 | 6.331 | (0.825) | 635147 | 100.000 | 100.10 |
| 10 | Acetone | 43 | 1.976 | 1.976 | (0.472) | 174512 | 100.000 | 104.44 |
| 37 | Benzene | 78 | 4.519 | 4.519 | (0.909) | 913725 | 50.0000 | 49.52 |
| 74 | Bromobenzene | 156 | 8.809 | 8.809 | (0.911) | 299763 | 50.0000 | 46.74 |
| 29 | Bromochloromethane | 128 | 3.802 | 3.802 | (0.908) | 139335 | 50.0000 | 48.20 |
| 39 | Bromodichloromethane | 83 | 5.729 | 5.729 | (1.153) | 323696 | 50.0000 | 48.35 |
| 66 | Bromoform | 173 | 8.415 | 8.415 | (1.097) | 182620 | 50.0000 | 48.01 |
| 6 | Bromomethane | 94 | 1.338 | 1.338 | (0.320) | 172090 | 50.0000 | 52.10 |
| 19 | Carbon Disulfide | 76 | 2.069 | 2.069 | (0.494) | 1177174 | 100.000 | 99.78 |
| 34 | Carbon Tetrachloride | 117 | 4.268 | 4.268 | (0.859) | 301062 | 50.0000 | 45.32 |
| 59 | Chlorobenzene | 112 | 7.699 | 7.699 | (1.004) | 643100 | 50.0000 | 47.86 |
| 7 | Chloroethane | 64 | 1.403 | 1.403 | (0.335) | 172825 | 50.0000 | 50.84 |
| 28 | Chloroform | 83 | 3.910 | 3.910 | (0.933) | 423530 | 50.0000 | 49.43 |
| 3 | Chloromethane | 50 | 1.080 | 1.080 | (0.258) | 313180 | 50.0000 | 46.51 |
| 27 | cis-1,2-Dichloroethene | 96 | 3.530 | 3.530 | (0.843) | 265111 | 50.0000 | 50.22 |
| 46 | cis-1,3-Dichloropropene | 75 | 6.159 | 6.159 | (1.239) | 384391 | 50.0000 | 49.10 |
| 55 | Dibromochloromethane | 129 | 7.176 | 7.176 | (0.936) | 261263 | 50.0000 | 47.57 |
| 44 | Dibromomethane | 93 | 5.557 | 5.557 | (1.118) | 159205 | 50.0000 | 49.19 |
| 2 | Dichlorodifluoromethane | 85 | 0.973 | 0.973 | (0.232) | 206649 | 50.0000 | 44.03 |
| 61 | Ethylbenzene | 106 | 7.799 | 7.799 | (1.017) | 328840 | 50.0000 | 47.40 |
| 91 | Hexachlorobutadiene | 225 | 11.481 | 11.481 | (1.187) | 62884 | 50.0000 | 35.72 |
| 67 | Isopropylbenzene | 105 | 8.566 | 8.566 | (1.117) | 954882 | 50.0000 | 46.89 |
| 62 | m,p-Xylenes | 106 | 7.907 | 7.907 | (1.031) | 791835 | 100.000 | 94.58 |
| 17 | Methylene Chloride | 84 | 2.305 | 2.305 | (0.550) | 247265 | 50.0000 | 50.02 |
| 87 | n-Butylbenzene | 91 | 9.998 | 9.998 | (1.034) | 665881 | 50.0000 | 45.92 |
| 73 | n-Propylbenzene | 91 | 8.917 | 8.917 | (0.922) | 1096256 | 50.0000 | 46.41 |
| 92 | Naphthalene | 128 | 11.546 | 11.546 | (1.194) | 122142 | 50.0000 | 46.66 |
| 63 | o-Xylene | 106 | 8.244 | 8.244 | (1.075) | 395127 | 50.0000 | 48.04 |
| 81 | sec-Butylbenzene | 105 | 9.526 | 9.526 | (0.985) | 902333 | 50.0000 | 45.30 |
| 64 | Styrene | 104 | 8.265 | 8.265 | (1.078) | 680727 | 50.0000 | 47.67 |
| 78 | tert-Butylbenzene | 119 | 9.339 | 9.339 | (0.966) | 681738 | 50.0000 | 45.90 |
| 56 | Tetrachloroethene | 164 | 6.933 | 6.933 | (0.904) | 200470 | 50.0000 | 46.00 |
| 50 | Toluene | 91 | 6.453 | 6.453 | (0.841) | 955066 | 50.0000 | 47.70 |
| 20 | trans-1,2-Dichloroethene | 96 | 2.535 | 2.535 | (0.605) | 226181 | 50.0000 | 50.31 |
| 51 | trans-1,3-Dichloropropene | 75 | 6.682 | 6.682 | (1.344) | 344807 | 50.0000 | 48.06 |
| 38 | Trichloroethene | 130 | 5.214 | 5.214 | (1.049) | 260364 | 50.0000 | 49.40 |
| 8 | Trichlorofluoromethane | 101 | 1.560 | 1.560 | (0.373) | 336233 | 50.0000 | 47.61 |
| 5 | Vinyl Chloride | 62 | 1.145 | 1.145 | (0.273) | 307363 | 50.0000 | 49.79 |

QC Flag Legend

M - Compound response manually integrated.

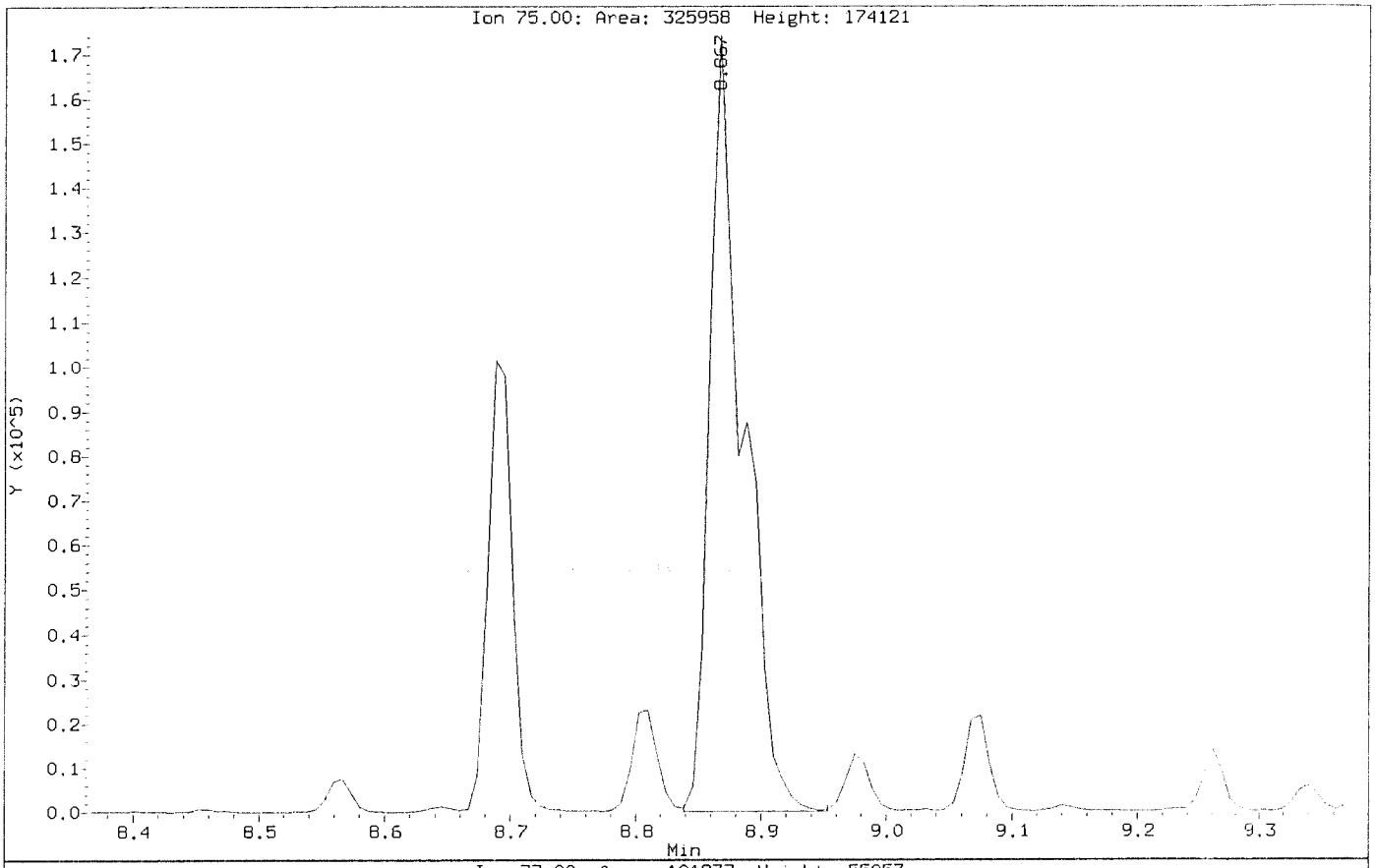


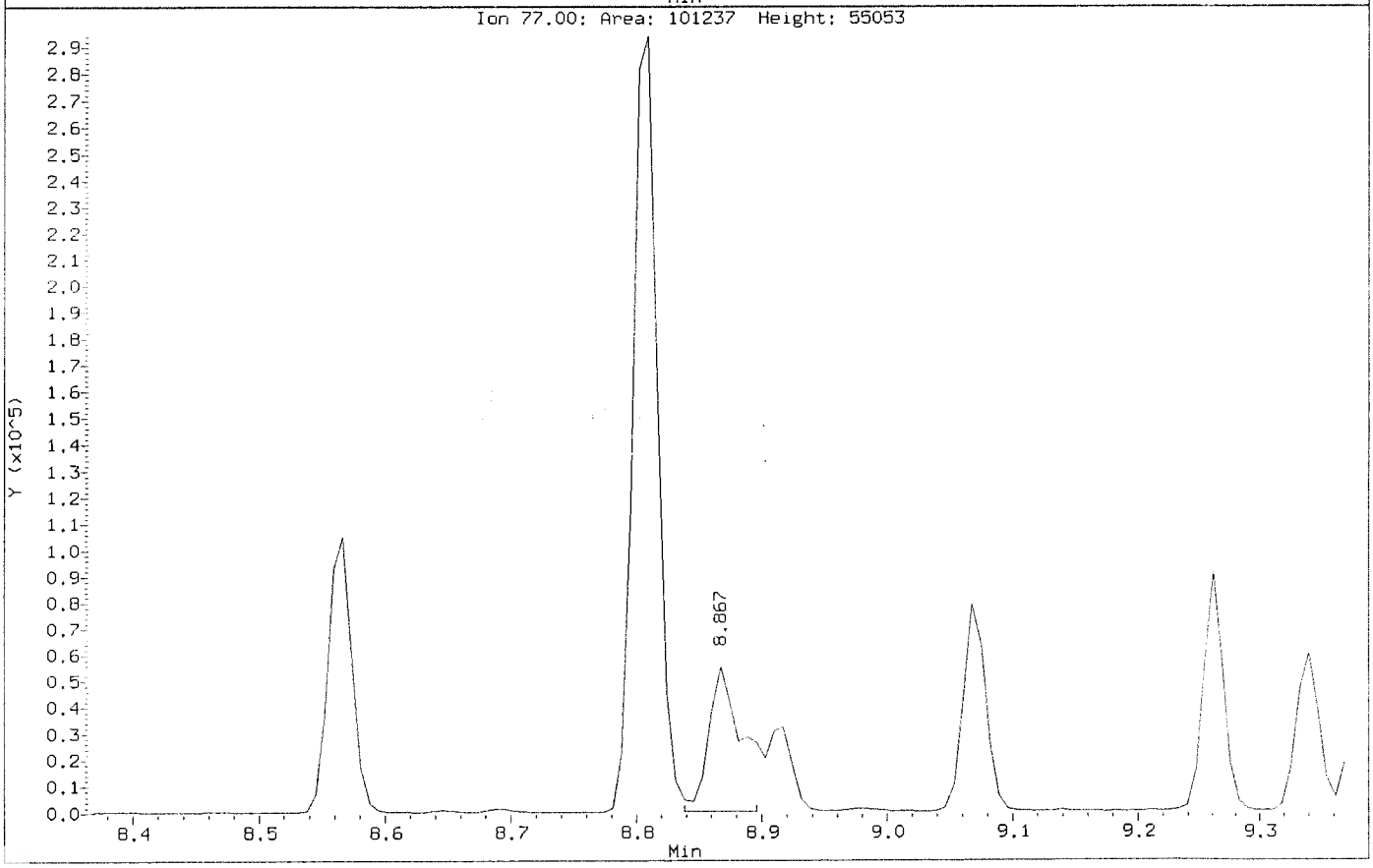

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081014.D
Date : 10-AUG-2020 15:59
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\Before\X081014.D
Injection Date: 10-AUG-2020 15:59
Instrument: voa6.i
Client Sample ID: CCV-END

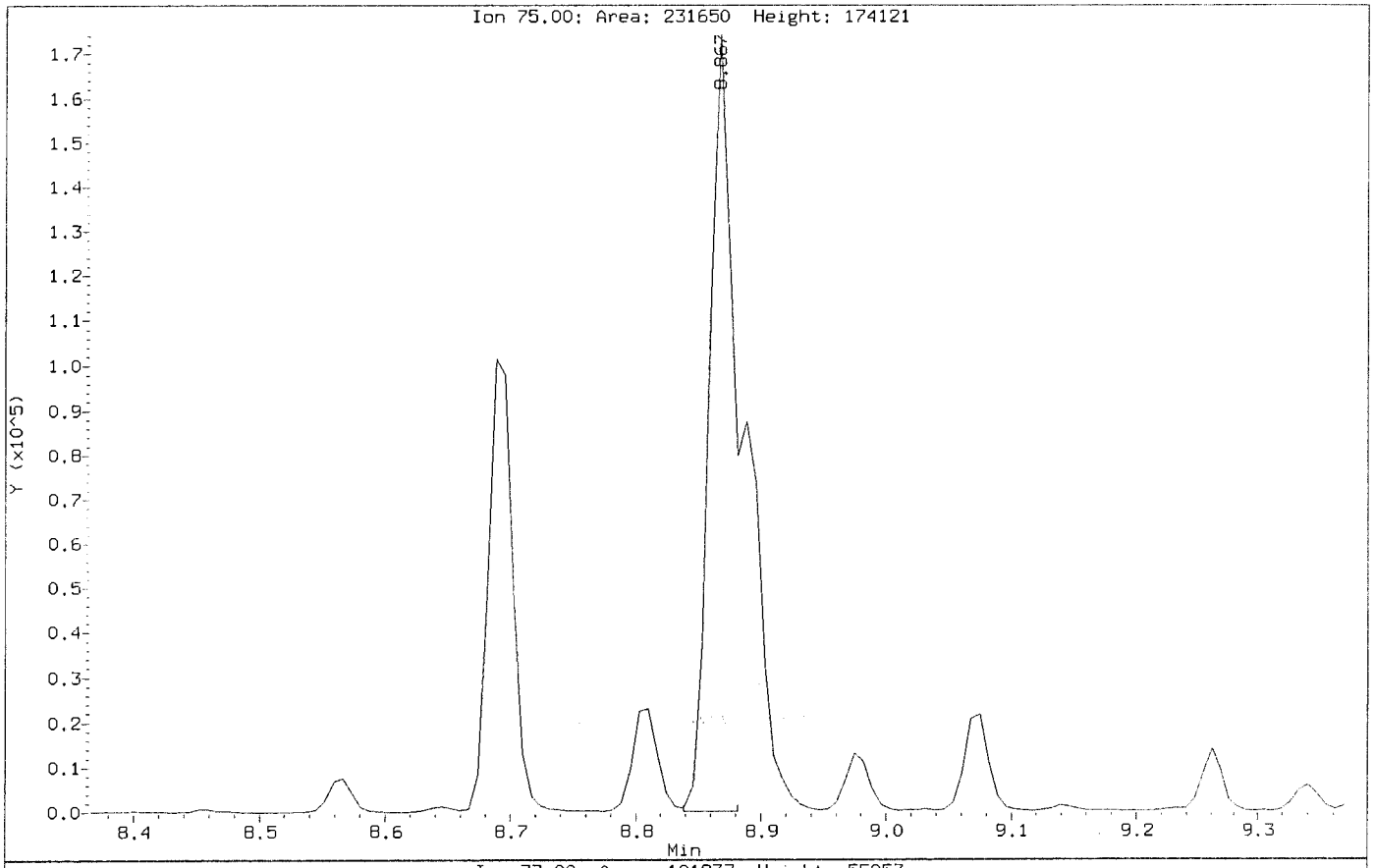
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

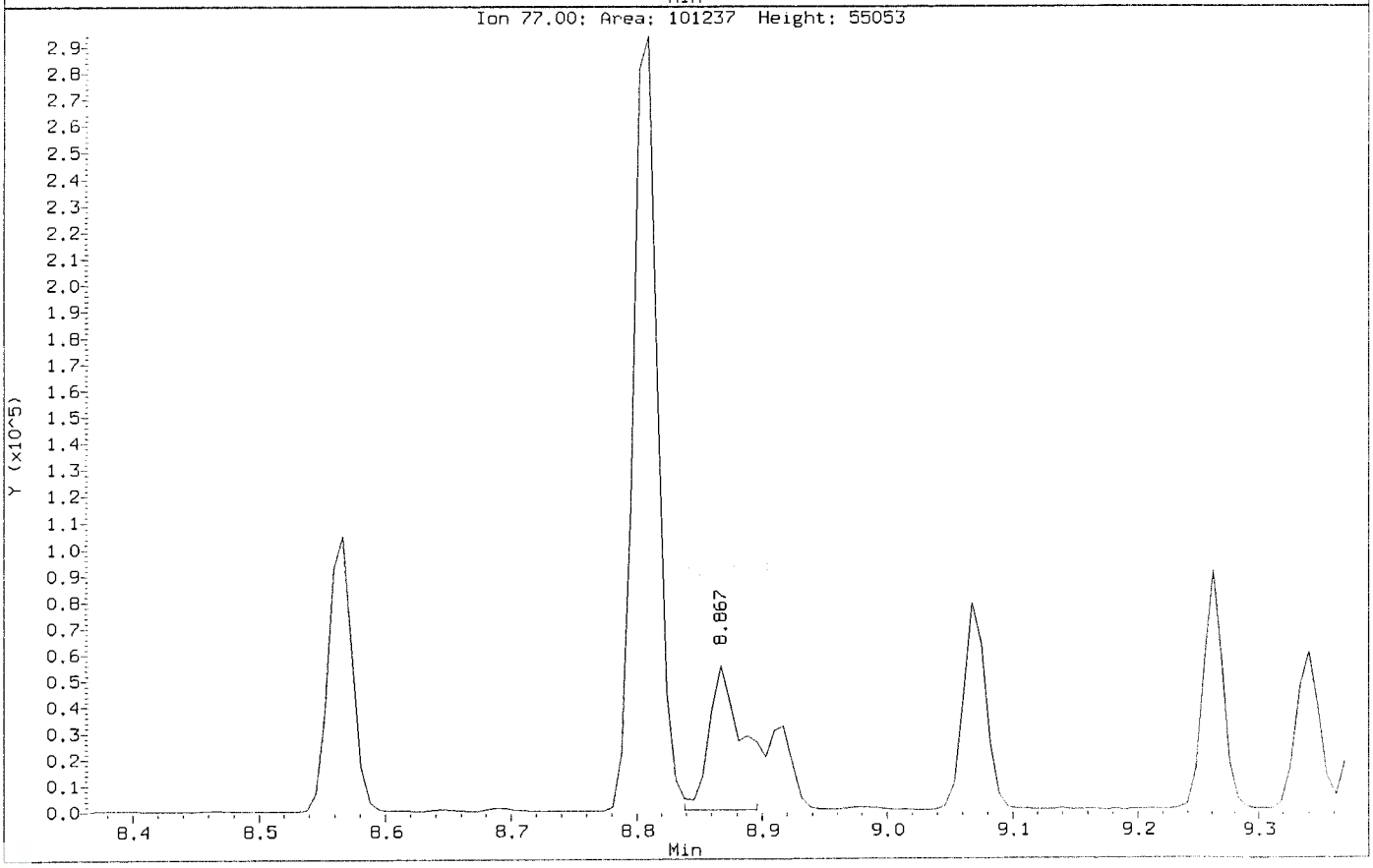


Data File: \\nahstws005\Target\chem\voa6.i\X200810.b\X081014.D
Injection Date: 10-AUG-2020 15:59
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



# HS20080212 Wet Chem Raw Data (9056_W)

ALS WO# HS20080212

Sequence: 081320
Last Update Operator: alshs.nouser

| CD | Name | Comment | Type | Position | Dilution | Level | Instrument Method | Processing Method | me | Status |
|---|---|---|---|---|---|---|---|---|---|---|
|  | STD1 | | Calibration | BD1 | 1.00 | 1 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD2 | | Calibration | BD2 | 1.00 | 2 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD3 | | Calibration | BD3 | 1.00 | 3 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD4 | | Calibration | BD4 | 1.00 | 4 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD5 | | Calibration | BD5 | 1.00 | 5 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | STD6 | | Calibration | BD6 | 1.00 | 6 | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | ICV | | Unknown | BD7 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | ICB | | Unknown | BD8 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV1 | | Unknown | BA4 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA5 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20080519-01 | | Unknown | RC6 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20080519-01MS | | Unknown | RC7 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20080519-01MSD | | Unknown | RC8 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV | | Unknown | BA2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BB6 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20080212-01 | | Unknown | RD8 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | HS20080212-01DF10 | | Unknown | RE1 | 10.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV1 | | Unknown | BA4 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BA5 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | MBLK-081320 | | Unknown | BC8 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | LCS-081320 | | Unknown | BB2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCV | | Unknown | BA2 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |
|  | CCB | | Unknown | BB6 | 1.00 | | Anions Program 06022020.1 | Anions Processing Method | 5.0 | Finished |

Sequence: 081320
Last Update Operator: alshs.nouser

| Inject Time |
|---|
| 8/11/2020 10:46:45 AM -05:00 |
| 8/11/2020 11:04:45 AM -05:00 |
| 8/11/2020 11:22:45 AM -05:00 |
| 8/11/2020 11:40:48 AM -05:00 |
| 8/11/2020 11:58:48 AM -05:00 |
| 8/11/2020 12:16:48 PM -05:00 |
| 8/11/2020 12:34:48 PM -05:00 |
| 8/11/2020 12:52:50 PM -05:00 |
| 8/13/2020 9:14:14 PM -05:00 |
| 8/13/2020 9:32:14 PM -05:00 |
| 8/13/2020 10:44:17 PM -05:00 |
| 8/13/2020 11:02:18 PM -05:00 |
| 8/13/2020 11:20:18 PM -05:00 |
| 8/14/2020 12:50:22 AM -05:00 |
| 8/14/2020 1:08:22 AM -05:00 |
| 8/14/2020 2:56:28 AM -05:00 |
| 8/14/2020 3:14:28 AM -05:00 |
| 8/14/2020 3:50:30 AM -05:00 |
| 8/14/2020 4:08:30 AM -05:00 |
| 8/14/2020 4:26:30 AM -05:00 |
| 8/14/2020 10:44:52 AM -05:00 |
| 8/14/2020 11:20:59 AM -05:00 |
| 8/14/2020 11:39:02 AM -05:00 |

Sequence: 081320
Injection #6: STD6

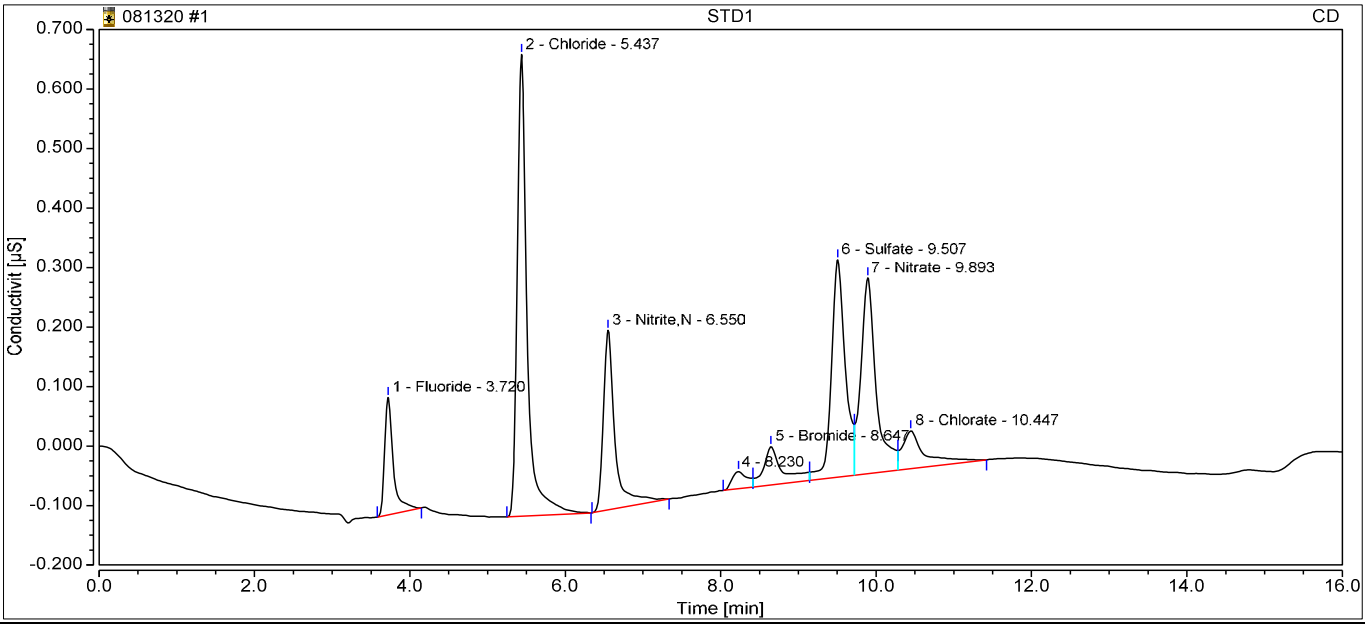
Calibration

| Peak No. | Peak Name | Cal.Type | Eval.Type | Number of Points | Rel.Std.Dev. % | Coeff.of Determination | C0 (Offset) | C1 (Slope) | C2 (Curve) |
|---|---|---|---|---|---|---|---|---|---|
| *1* | *Fluoride* | *Lin, WithOffset, 1/* | *Area* | *6* | *17.3553* | *0.99849* | *-0.0040* | *0.3537* | *0.0000* |
| 2 | Chloride | Lin, WithOffset, 1/ | Area | 6 | 5.4804 | 0.99983 | 0.0129 | 0.2289 | 0.0000 |
| 3 | Nitrite,N | Lin, WithOffset, 1/ | Area | 6 | 26.1376 | 0.99573 | 0.0186 | 0.4711 | 0.0000 |
| 5 | Bromide | Lin, WithOffset, 1/ | Area | 6 | 0.9346 | 0.99999 | 0.0083 | 0.1008 | 0.0000 |
| 6 | Sulfate | Lin, WithOffset, 1/ | Area | 6 | 5.2843 | 0.99985 | -0.0019 | 0.1602 | 0.0000 |
| 7 | Nitrate | Lin, WithOffset, 1/ | Area | 6 | 4.5248 | 0.99988 | 0.0144 | 0.6154 | 0.0000 |
| 8 | Chlorate | Lin, WithOffset, 1/ | Area | 6 | 13.4374 | 0.99837 | 0.0139 | 0.1019 | 0.0000 |
| 10 | Phosphate | Lin, WithOffset, 1/ | Area | 5 | 18.5357 | 0.99714 | -0.0737 | 0.1942 | 0.0000 |
| **Maximum** | | | | | **26.1376** | 0.99999 | | | |
| **Minimum** | | | | | 0.9346 | **0.99573** | | | |

*1 STD1*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD1** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD1** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 10:46** | *Sample Weight:* | **1.0000** |

Run Time:



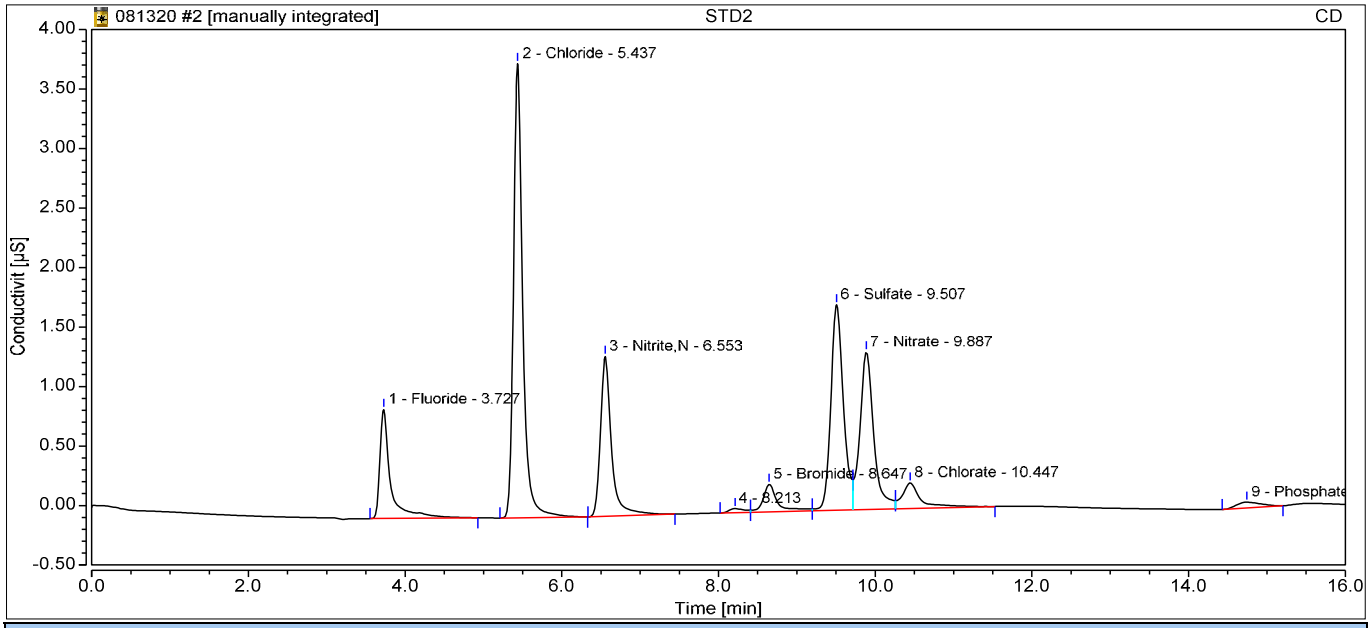

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.72 | Fluoride | BMB | 0.025 | 0.0833 | 0.0833 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 0.116 | 0.4487 | 0.4487 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 0.052 | 0.0715 | 0.0715 | 1.0000 |
| 5 | 8.65 | Bromide | M | 0.018 | 0.0997 | 0.0997 | 1.0000 |
| 6 | 9.51 | Sulfate | M | 0.076 | 0.4861 | 0.4861 | 1.0000 |
| 7 | 9.89 | Nitrate | M | 0.075 | 0.0985 | 0.0985 | 1.0000 |
| 8 | 10.45 | Chlorate | MB | 0.021 | 0.0734 | 0.0734 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.384** | | **1.36** | |

2 STD2

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD2** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD2** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 11:04** | *Sample Weight:* | **1.0000** |

Run Time:



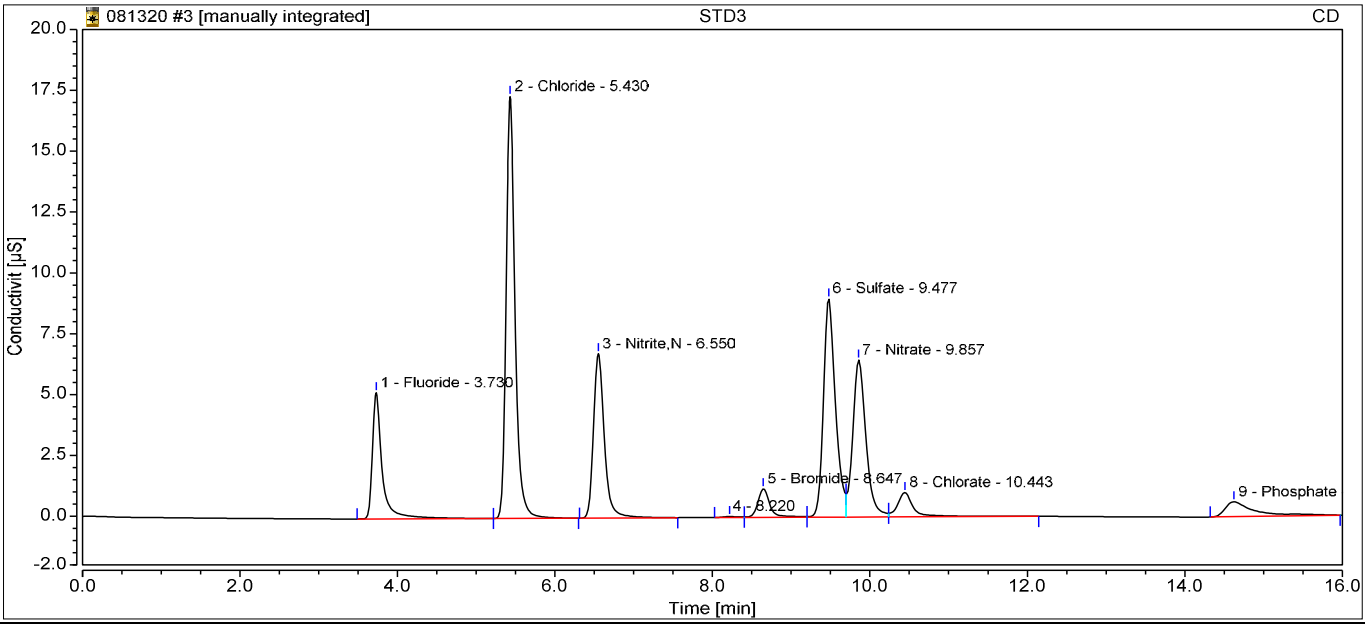

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.145 | 0.4204 | 0.4204 | 1.0000 |
| 2 | 5.44 | Chloride | BMB | 0.518 | 2.2084 | 2.2084 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 0.221 | 0.4294 | 0.4294 | 1.0000 |
| 5 | 8.65 | Bromide | M | 0.049 | 0.4041 | 0.4041 | 1.0000 |
| 6 | 9.51 | Sulfate | M | 0.321 | 2.0151 | 2.0151 | 1.0000 |
| 7 | 9.89 | Nitrate | M | 0.270 | 0.4147 | 0.4147 | 1.0000 |
| 8 | 10.45 | Chlorate | MB | 0.060 | 0.4536 | 0.4536 | 1.0000 |
| 9 | 14.74 | Phosphate | BMB | 0.018 | 0.4703 | 0.4703 | 1.0000 |
| **Total:** | | | **0.000** | **1.601** | | **6.82** | |

*3 STD3*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD3** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD3** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 11:22** | *Sample Weight:* | **1.0000** |

Run Time:



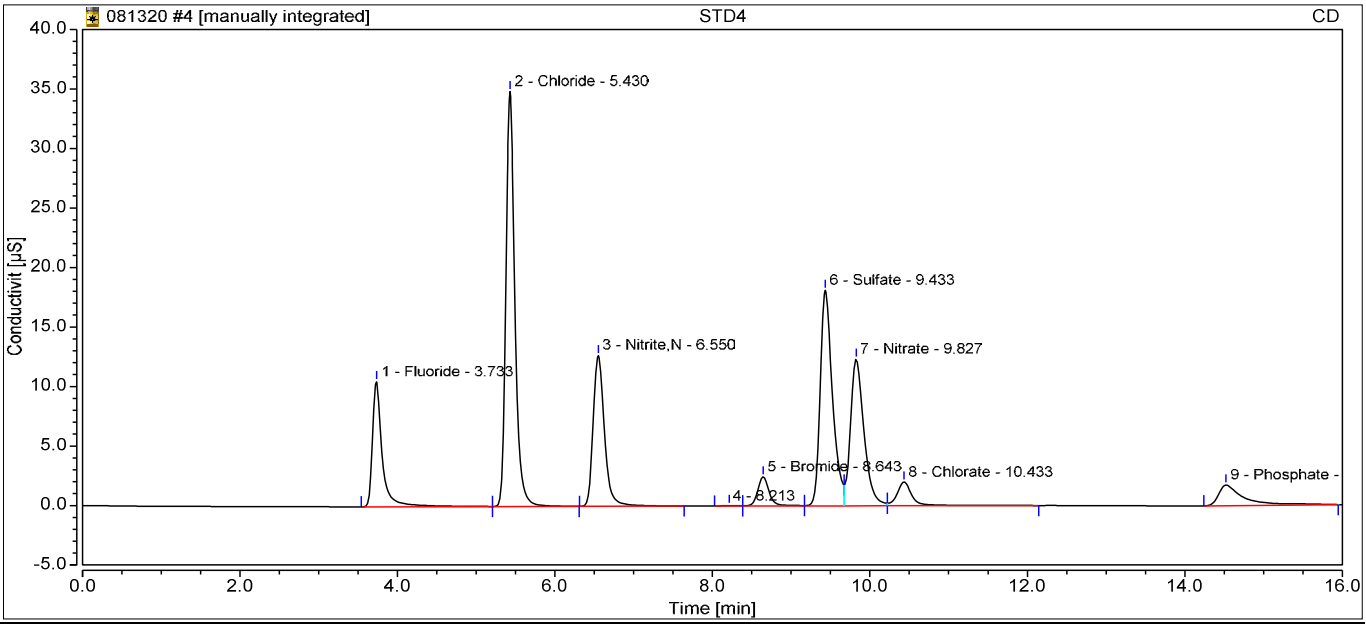

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.745 | 2.1166 | 2.1166 | 1.0000 |
| 2 | 5.43 | Chloride | BMB | 2.291 | 9.9533 | 9.9533 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 1.077 | 2.2460 | 2.2460 | 1.0000 |
| 5 | 8.65 | Bromide | M | 0.209 | 1.9882 | 1.9882 | 1.0000 |
| 6 | 9.48 | Sulfate | M | 1.595 | 9.9688 | 9.9688 | 1.0000 |
| 7 | 9.86 | Nitrate | M | 1.238 | 1.9883 | 1.9883 | 1.0000 |
| 8 | 10.44 | Chlorate | MB | 0.239 | 2.2038 | 2.2038 | 1.0000 |
| 9 | 14.62 | Phosphate | BM * | 0.269 | 1.7634 | 1.7634 | 1.0000 |
| **Total:** | | | **0.000** | **7.661** | | **32.23** | |

*4 STD4*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD4** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD4** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 11:40** | *Sample Weight:* | **1.0000** |

Run Time:



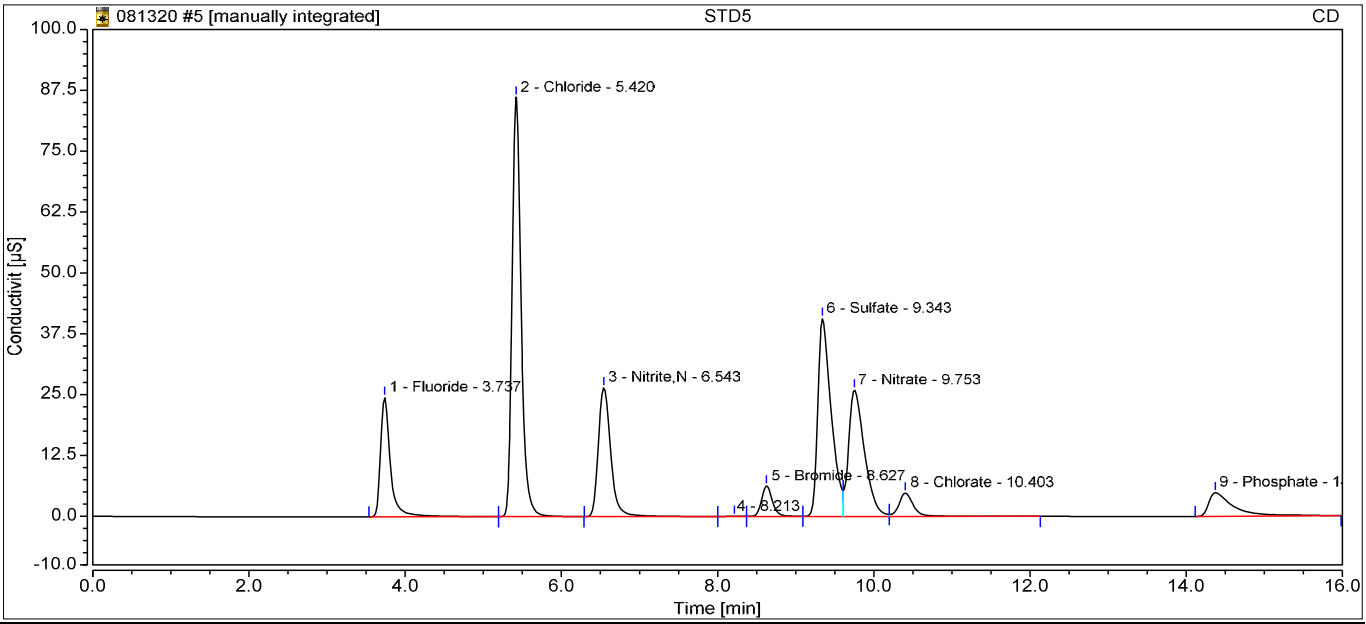

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 1.504 | 4.2630 | 4.2630 | 1.0000 |
| 2 | 5.43 | Chloride | BMB | 4.613 | 20.0986 | 20.0986 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB* | 2.104 | 4.4276 | 4.4276 | 1.0000 |
| 5 | 8.64 | Bromide | M | 0.411 | 3.9946 | 3.9946 | 1.0000 |
| 6 | 9.43 | Sulfate | M | 3.273 | 20.4465 | 20.4465 | 1.0000 |
| 7 | 9.83 | Nitrate | M | 2.444 | 3.9482 | 3.9482 | 1.0000 |
| 8 | 10.43 | Chlorate | MB | 0.443 | 4.2079 | 4.2079 | 1.0000 |
| 9 | 14.52 | Phosphate | BM * | 0.648 | 3.7157 | 3.7157 | 1.0000 |
| **Total:** | | | **0.000** | **15.439** | | **65.10** | |

5 STD5

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD5** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD5** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 11:58** | *Sample Weight:* | **1.0000** |

Run Time:



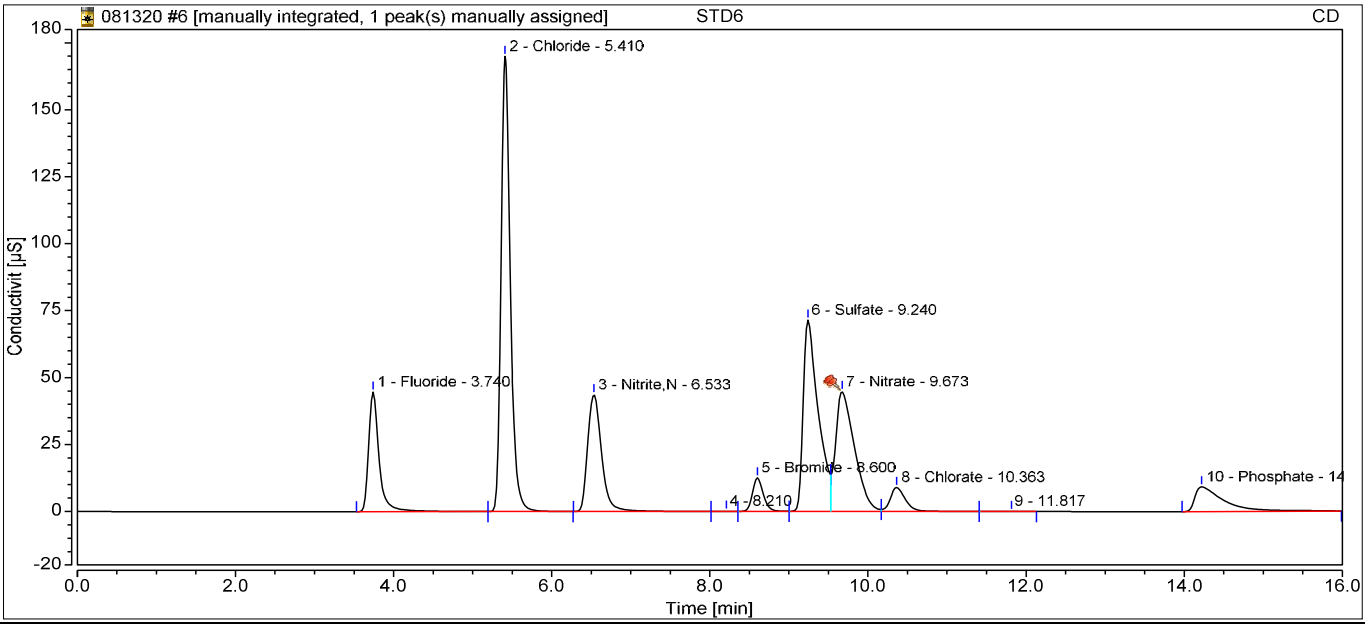

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 3.611 | 10.2228 | 10.2228 | 1.0000 |
| 2 | 5.42 | Chloride | BMB | 11.462 | 50.0272 | 50.0272 | 1.0000 |
| 3 | 6.54 | Nitrite,N | BMB | 4.877 | 10.3135 | 10.3135 | 1.0000 |
| 5 | 8.63 | Bromide | M | 1.014 | 9.9796 | 9.9796 | 1.0000 |
| 6 | 9.34 | Sulfate | M | 8.089 | 50.5200 | 50.5200 | 1.0000 |
| 7 | 9.75 | Nitrate | M | 6.097 | 9.8832 | 9.8832 | 1.0000 |
| 8 | 10.40 | Chlorate | MB | 1.032 | 9.9918 | 9.9918 | 1.0000 |
| 9 | 14.37 | Phosphate | BM * | 1.834 | 9.8223 | 9.8223 | 1.0000 |
| **Total:** | | | **0.000** | **38.017** | | **160.76** | |

*6 STD6*

| | | | |
|---|---|---|---|
| *Sample Name:* | **STD6** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD6** | *Channel:* | **CD** |
| *Sample Type:* | **Calibration Standard** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 12:16** | *Sample Weight:* | **1.0000** |

Run Time:



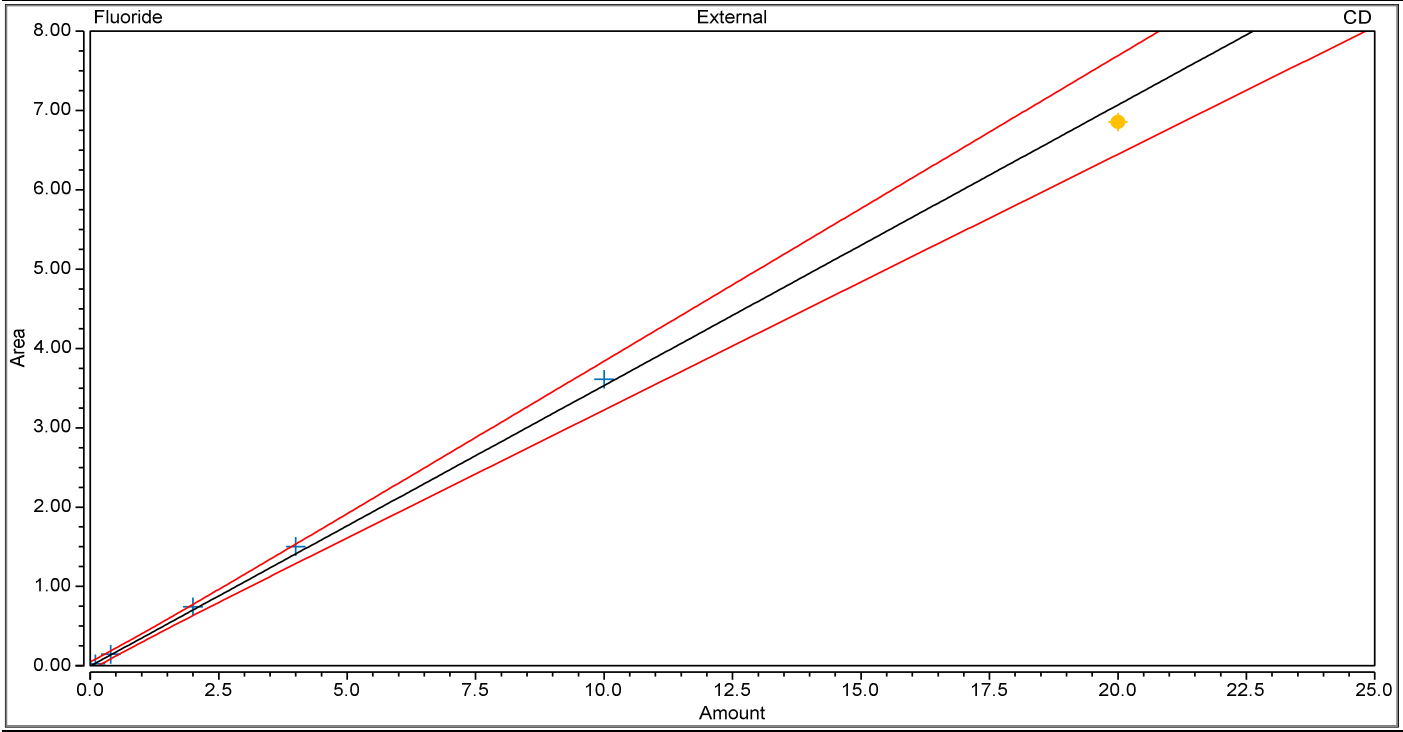

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 6.855 | 19.3940 | 19.3940 | 1.0000 |
| 2 | 5.41 | Chloride | BMB | 22.844 | 99.7639 | 99.7639 | 1.0000 |
| 3 | 6.53 | Nitrite,N | BMB | 8.975 | 19.0121 | 19.0121 | 1.0000 |
| 5 | 8.60 | Bromide | M | 2.028 | 20.0338 | 20.0338 | 1.0000 |
| 6 | 9.24 | Sulfate | M | 15.864 | 99.0635 | 99.0635 | 1.0000 |
| 7 | 9.67 | Nitrate | M ^ | 12.426 | 20.1671 | 20.1671 | 1.0000 |
| 8 | 10.36 | Chlorate | M | 2.009 | 19.5694 | 19.5694 | 1.0000 |
| 10 | 14.22 | Phosphate | BM * | 3.933 | 20.6283 | 20.6283 | 1.0000 |
| **Total:** | | | **0.000** | **74.933** | | **317.63** | |

# Calibration

| Calibration Details | Fluoride | | |
|---|---|---|---|
| *Calibration Type* | Lin, WithOffset, 1/A | *Offset (C0)* | -0.0040 |
| *Evaluation Type* | Area | *Slope (C1)* | 0.3537 |
| *Number of Calibration Points* | 6 | *Curve (C2)* | 0.0000 |
| *Number of disabled Calibration Points* | 0 | *R-Square* | 0.9985 |

**Calibration Plot** **Fluoride**



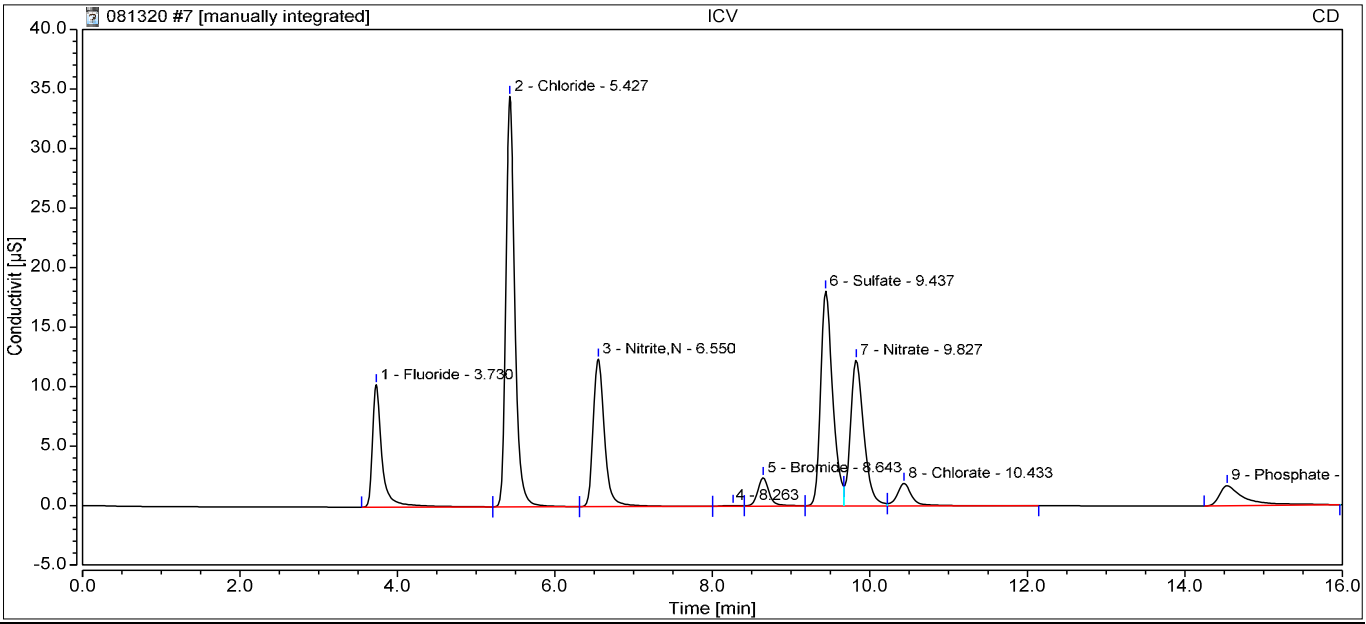

**Calibration Results** **Fluoride**

| No. | Injection Name | Calibration Level | X Value CD Fluoride | Y Value CD Fluoride | Y Value CD Fluoride | Area µS*min CD Fluoride | Height µS CD Fluoride |
|---|---|---|---|---|---|---|---|
| 1 | STD1 | 1 | 0.1000 | 0.0254 | 0.0254 | 0.025 | 0.197 |
| 2 | STD2 | 2 | 0.4000 | 0.1446 | 0.1446 | 0.145 | 0.916 |
| 3 | STD3 | 3 | 2.0000 | 0.7445 | 0.7445 | 0.745 | 5.182 |
| 4 | STD4 | 4 | 4.0000 | 1.5036 | 1.5036 | 1.504 | 10.507 |
| 5 | STD5 | 5 | 10.0000 | 3.6113 | 3.6113 | 3.611 | 24.538 |
| 6 | STD6 | 6 | 20.0000 | 6.8547 | 6.8547 | 6.855 | 44.677 |

7 ICV

| | | | |
|---|---|---|---|
| *Sample Name:* | **ICV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD7** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 12:34** | *Sample Weight:* | **1.0000** |

Run Time:



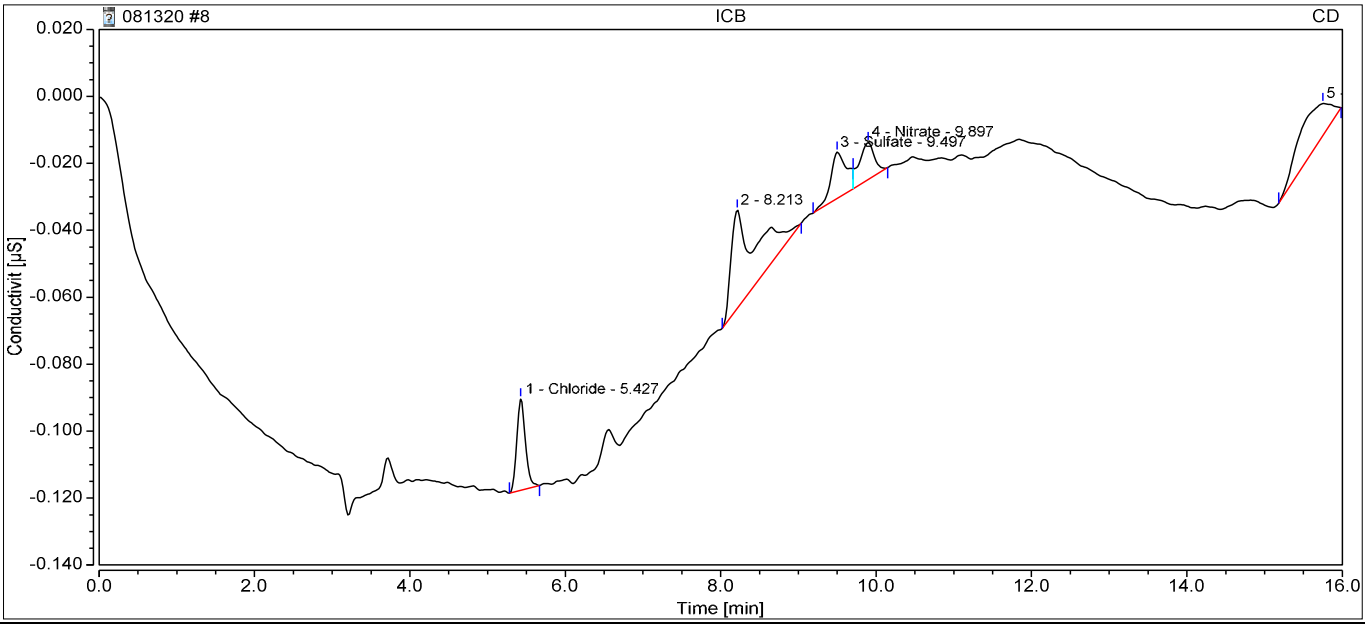

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 1.447 | 4.1020 | 4.1020 | 1.0000 |
| 2 | 5.43 | Chloride | BMB | 4.553 | 19.8399 | 19.8399 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 2.061 | 4.3359 | 4.3359 | 1.0000 |
| 5 | 8.64 | Bromide | M | 0.413 | 4.0106 | 4.0106 | 1.0000 |
| 6 | 9.44 | Sulfate | M | 3.227 | 20.1622 | 20.1622 | 1.0000 |
| 7 | 9.83 | Nitrate | M | 2.405 | 3.8850 | 3.8850 | 1.0000 |
| 8 | 10.43 | Chlorate | MB | 0.422 | 4.0019 | 4.0019 | 1.0000 |
| 9 | 14.54 | Phosphate | BM * | 0.631 | 3.6292 | 3.6292 | 1.0000 |
| **Total:** | | | **0.000** | **15.159** | | **63.97** | |

*8 ICB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **ICB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BD8** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/11/2020 12:52** | *Sample Weight:* | **1.0000** |

Run Time:



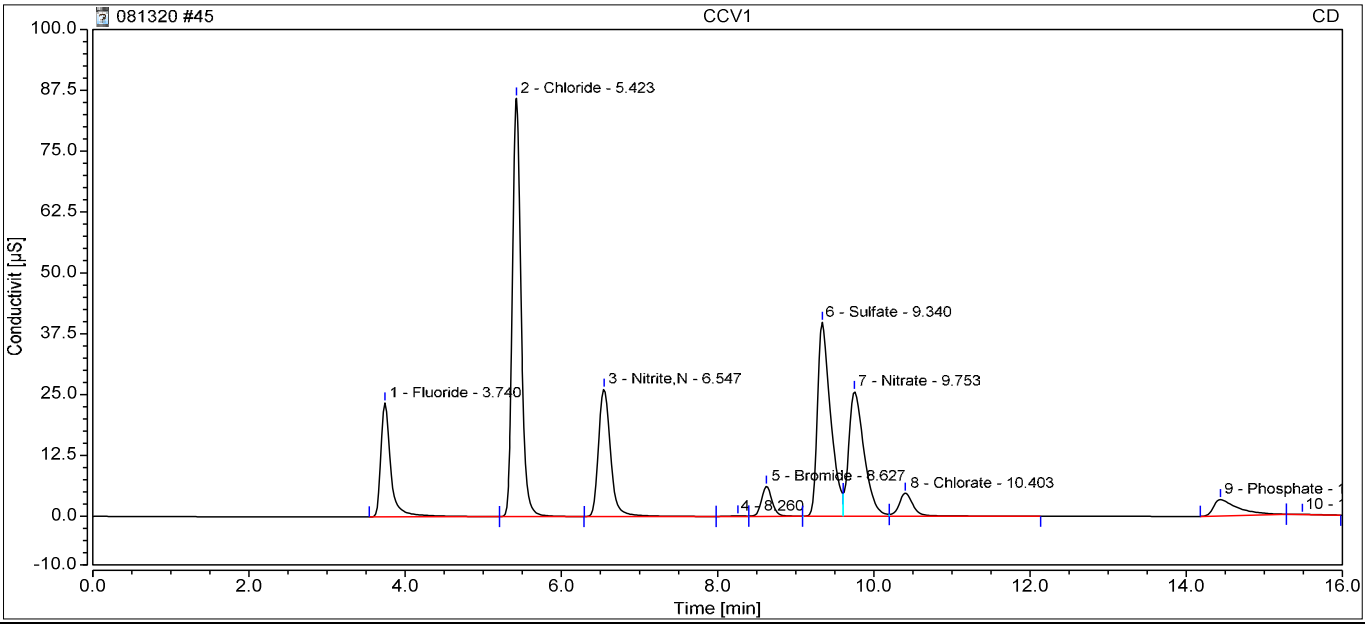

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.43 | Chloride | BMB | 0.004 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.50 | Sulfate | BM | 0.003 | 0.0318 | 0.0318 | 1.0000 |
| 4 | 9.90 | Nitrate | MB | 0.003 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.009** | | **0.03** | |

*45 CCV1*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV1** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA4** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/13/2020 21:14** | *Sample Weight:* | **1.0000** |

Run Time:



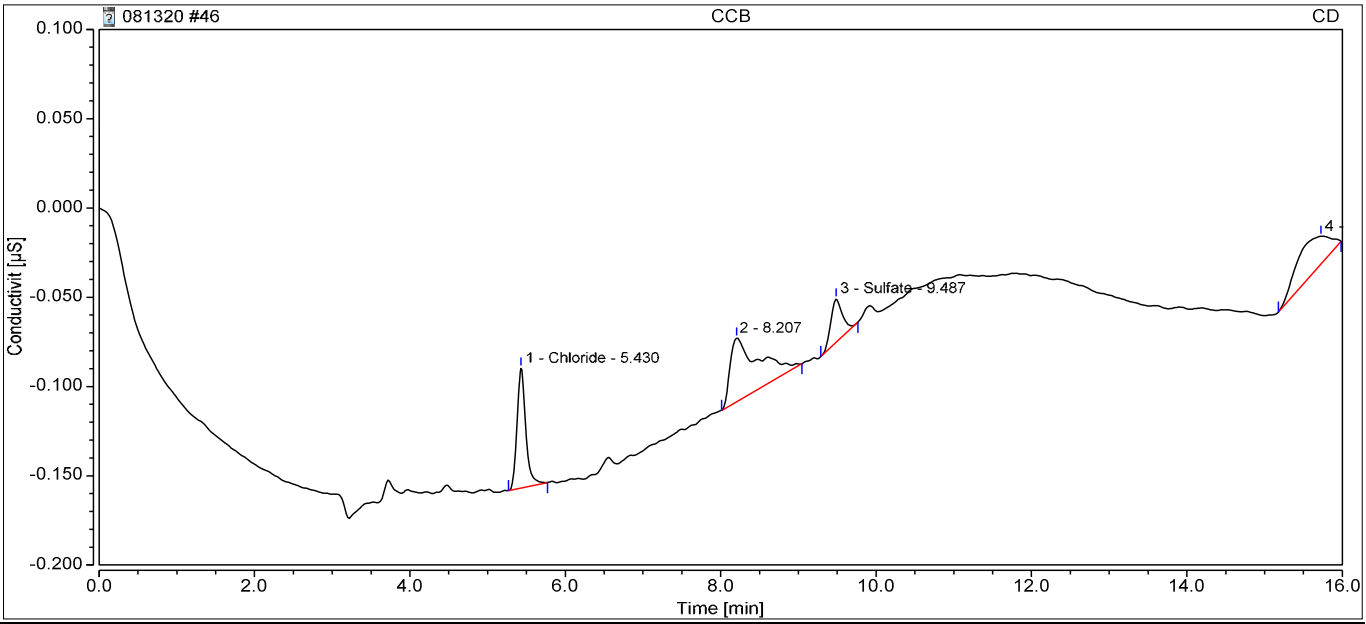

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 3.462 | 9.7998 | 9.7998 | 1.0000 |
| 2 | 5.42 | Chloride | BMB | 11.030 | 48.1396 | 48.1396 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 4.704 | 9.9470 | 9.9470 | 1.0000 |
| 5 | 8.63 | Bromide | M | 0.982 | 9.6596 | 9.6596 | 1.0000 |
| 6 | 9.34 | Sulfate | M | 7.804 | 48.7414 | 48.7414 | 1.0000 |
| 7 | 9.75 | Nitrate | M | 5.874 | 9.5202 | 9.5202 | 1.0000 |
| 8 | 10.40 | Chlorate | MB | 1.023 | 9.8984 | 9.8984 | 1.0000 |
| 9 | 14.44 | Phosphate | BMB | 1.204 | 6.5759 | 6.5759 | 1.0000 |
| **Total:** | | | **0.000** | **36.082** | | **152.28** | |

*46 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA5** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/13/2020 21:32** | *Sample Weight:* | **1.0000** |

Run Time:



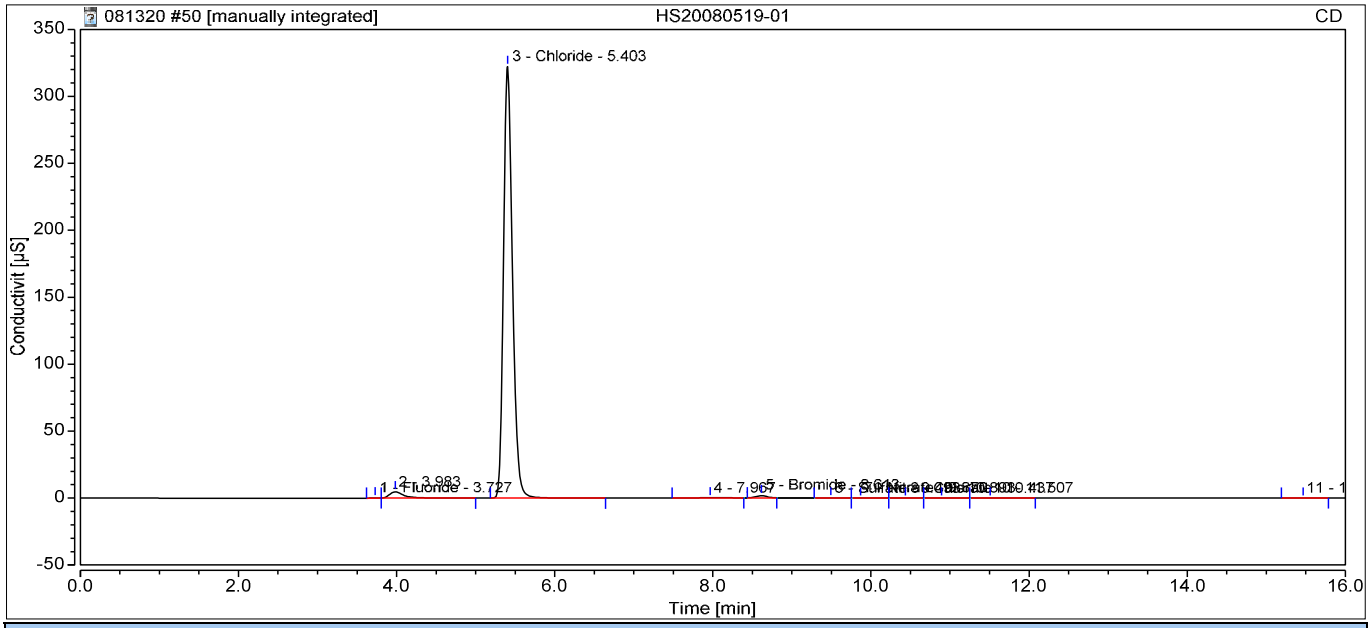

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.43 | Chloride | BMB | 0.009 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.49 | Sulfate | BMB | 0.004 | 0.0380 | 0.0380 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.013** | | **0.04** | |

*50 HS20080519-01*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20080519-01** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **RC6** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/13/2020 22:44** | *Sample Weight:* | **1.0000** |

Run Time:



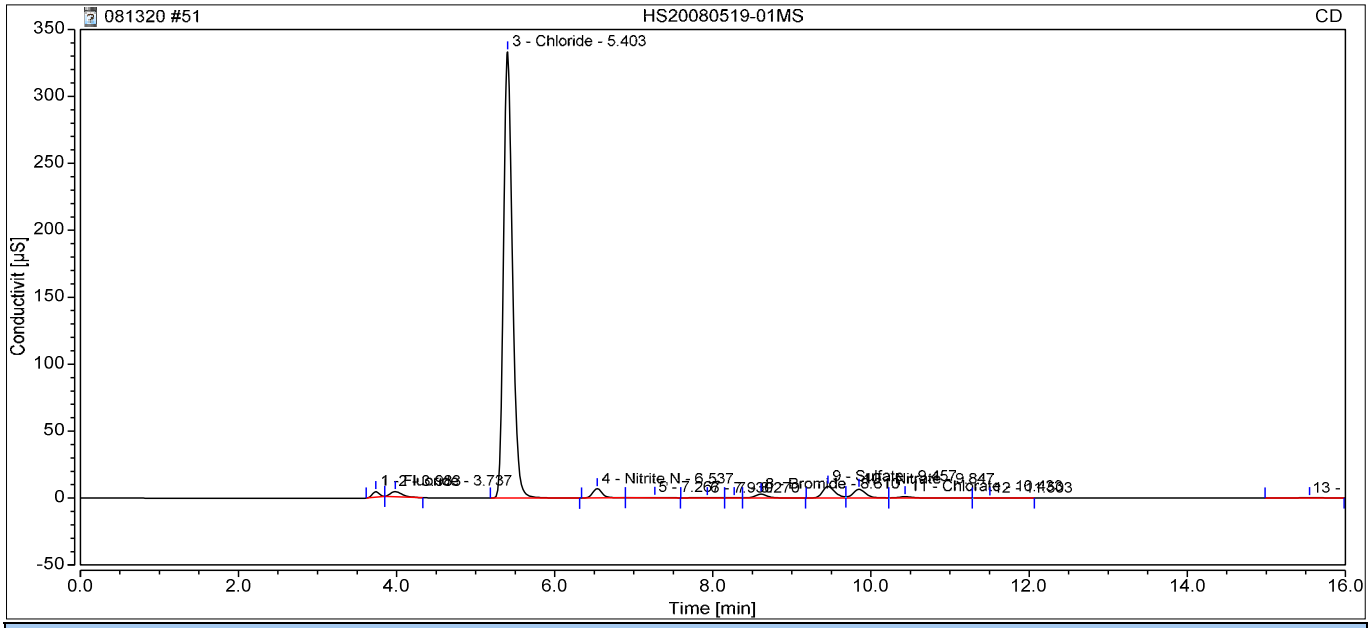

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 0.018 | 0.0629 | 0.0629 | 1.0000 |
| 3 | 5.40 | Chloride | BMB | 41.882 | 182.9473 | 182.9473 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 5 | 8.61 | Bromide | M * | 0.330 | 3.1955 | 3.1955 | 1.0000 |
| 6 | 9.49 | Sulfate | M | 0.037 | 0.2457 | 0.2457 | 1.0000 |
| 7 | 9.87 | Nitrate | M | 0.027 | 0.0200 | 0.0200 | 1.0000 |
| 8 | 10.44 | Chlorate | M | 0.016 | 0.0164 | 0.0164 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **42.310** | | **186.49** | |

*51 HS20080519-01MS*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20080519-01MS** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **RC7** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/13/2020 23:02** | *Sample Weight:* | **1.0000** |

Run Time:



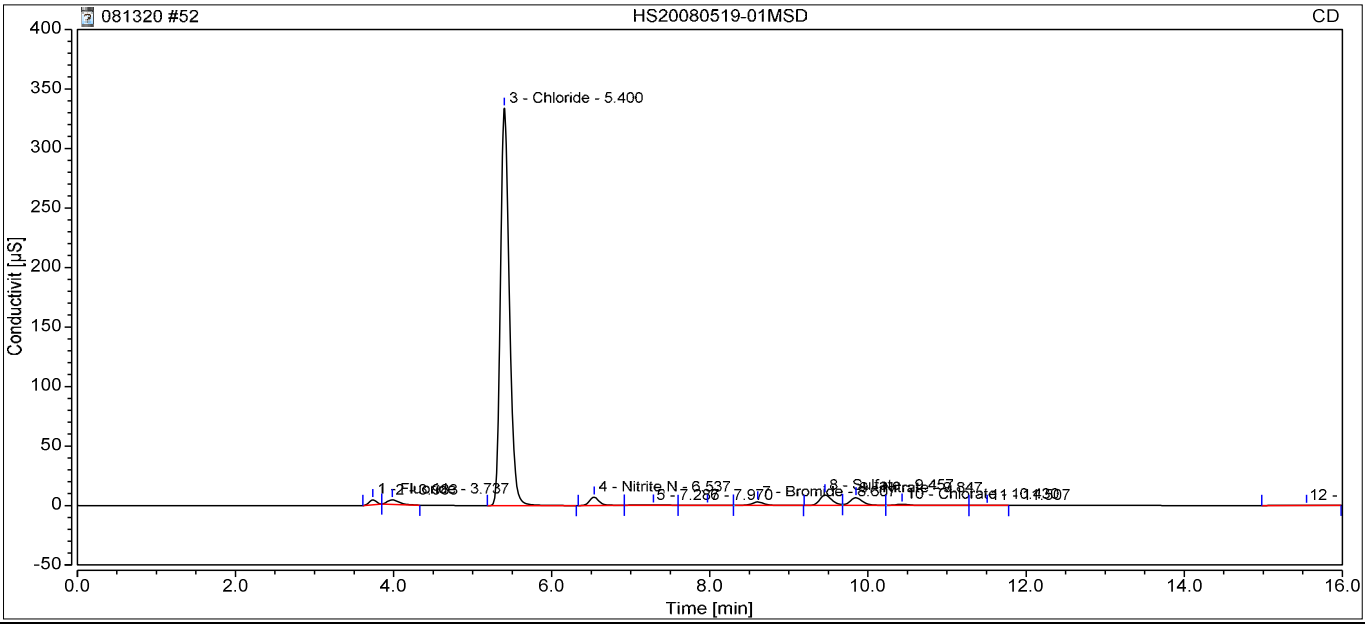

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 0.424 | 1.2112 | 1.2112 | 1.0000 |
| 3 | 5.40 | Chloride | BMB | 43.235 | 188.8599 | 188.8599 | 1.0000 |
| 4 | 6.54 | Nitrite,N | BMB | 0.978 | 2.0370 | 2.0370 | 1.0000 |
| 8 | 8.61 | Bromide | MB | 0.515 | 5.0303 | 5.0303 | 1.0000 |
| 9 | 9.46 | Sulfate | BM | 1.551 | 9.6980 | 9.6980 | 1.0000 |
| 10 | 9.85 | Nitrate | M | 1.211 | 1.9445 | 1.9445 | 1.0000 |
| 11 | 10.43 | Chlorate | M | 0.214 | 1.9625 | 1.9625 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **48.129** | | **210.74** | |

52 *HS20080519-01MSD*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20080519-01MSD** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **RC8** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/13/2020 23:20** | *Sample Weight:* | **1.0000** |

Run Time:



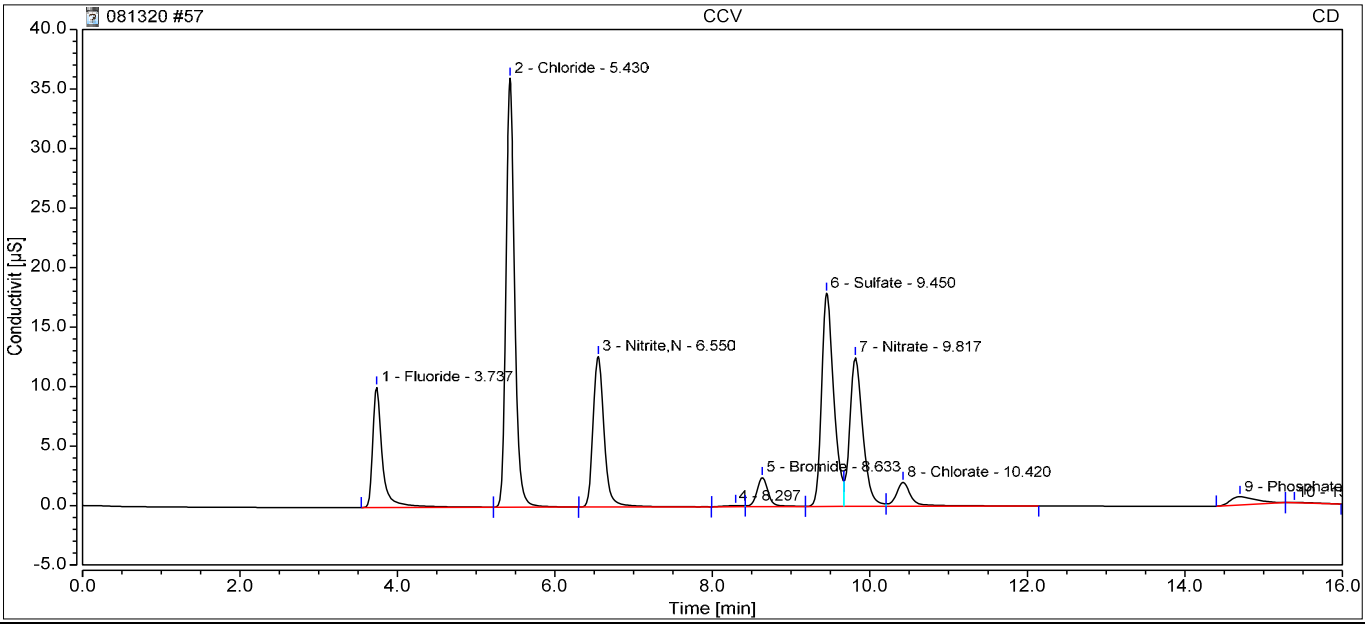

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 0.436 | 1.2442 | 1.2442 | 1.0000 |
| 3 | 5.40 | Chloride | BMB | 43.369 | 189.4452 | 189.4452 | 1.0000 |
| 4 | 6.54 | Nitrite,N | BMB | 0.986 | 2.0530 | 2.0530 | 1.0000 |
| 7 | 8.61 | Bromide | MB | 0.535 | 5.2195 | 5.2195 | 1.0000 |
| 8 | 9.46 | Sulfate | BM | 1.562 | 9.7636 | 9.7636 | 1.0000 |
| 9 | 9.85 | Nitrate | M | 1.216 | 1.9518 | 1.9518 | 1.0000 |
| 10 | 10.43 | Chlorate | M | 0.217 | 1.9901 | 1.9901 | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **48.319** | | **211.67** | |

*57 CCV*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 00:50** | *Sample Weight:* | **1.0000** |

Run Time:



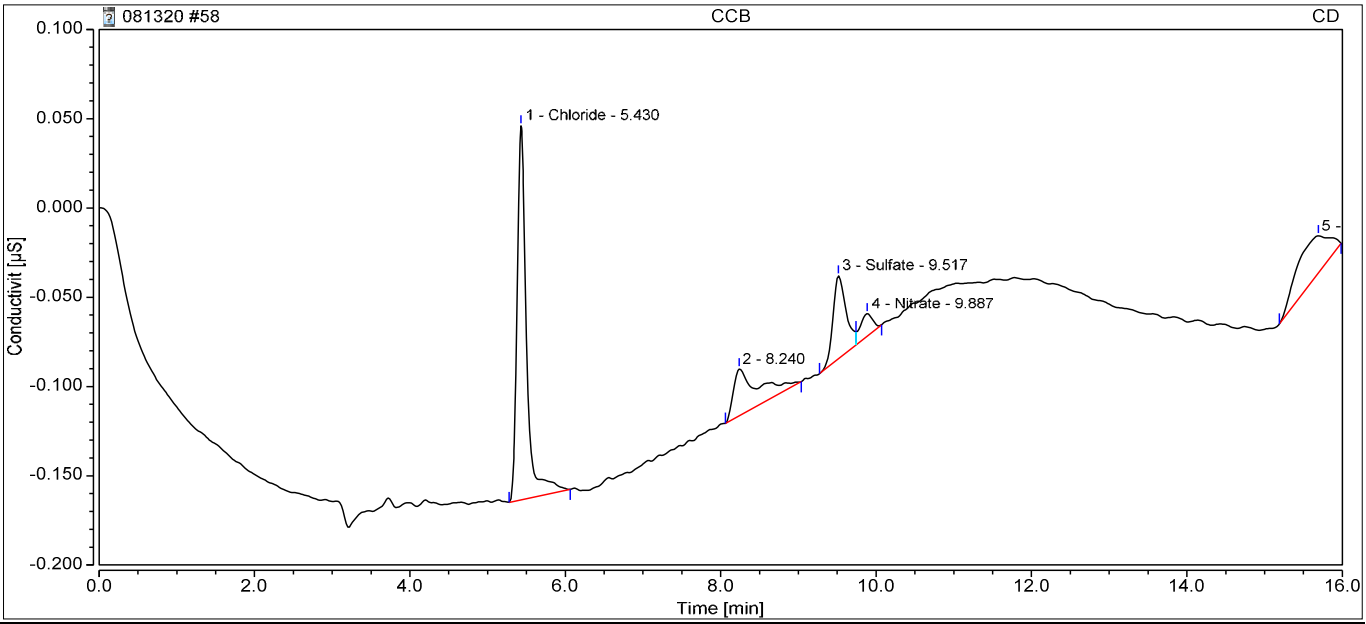

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 1.439 | 4.0798 | 4.0798 | 1.0000 |
| 2 | 5.43 | Chloride | BMB | 4.607 | 20.0722 | 20.0722 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 2.056 | 4.3253 | 4.3253 | 1.0000 |
| 5 | 8.63 | Bromide | M | 0.410 | 3.9836 | 3.9836 | 1.0000 |
| 6 | 9.45 | Sulfate | M | 3.218 | 20.1036 | 20.1036 | 1.0000 |
| 7 | 9.82 | Nitrate | M | 2.399 | 3.8741 | 3.8741 | 1.0000 |
| 8 | 10.42 | Chlorate | MB | 0.459 | 4.3670 | 4.3670 | 1.0000 |
| 9 | 14.70 | Phosphate | BMB | 0.261 | 1.7228 | 1.7228 | 1.0000 |
| **Total:** | | | **0.000** | **14.848** | | **62.53** | |

*58 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BB6** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 01:08** | *Sample Weight:* | **1.0000** |

Run Time:



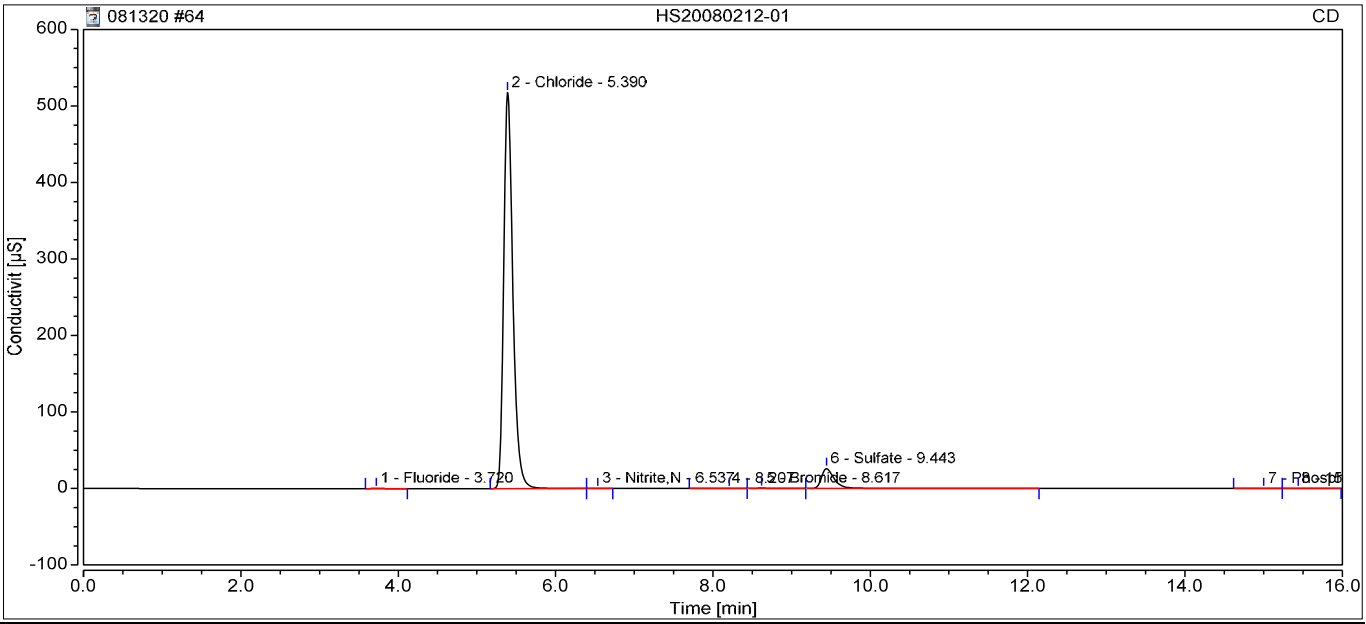

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.43 | Chloride | BMB | 0.029 | 0.0723 | 0.0723 | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.52 | Sulfate | BM | 0.009 | 0.0683 | 0.0683 | 1.0000 |
| 4 | 9.89 | Nitrate | MB | 0.002 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.041** | | **0.14** | |

64 HS20080212-01

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20080212-01** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **RD8** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 02:56** | *Sample Weight:* | **1.0000** |

Run Time:



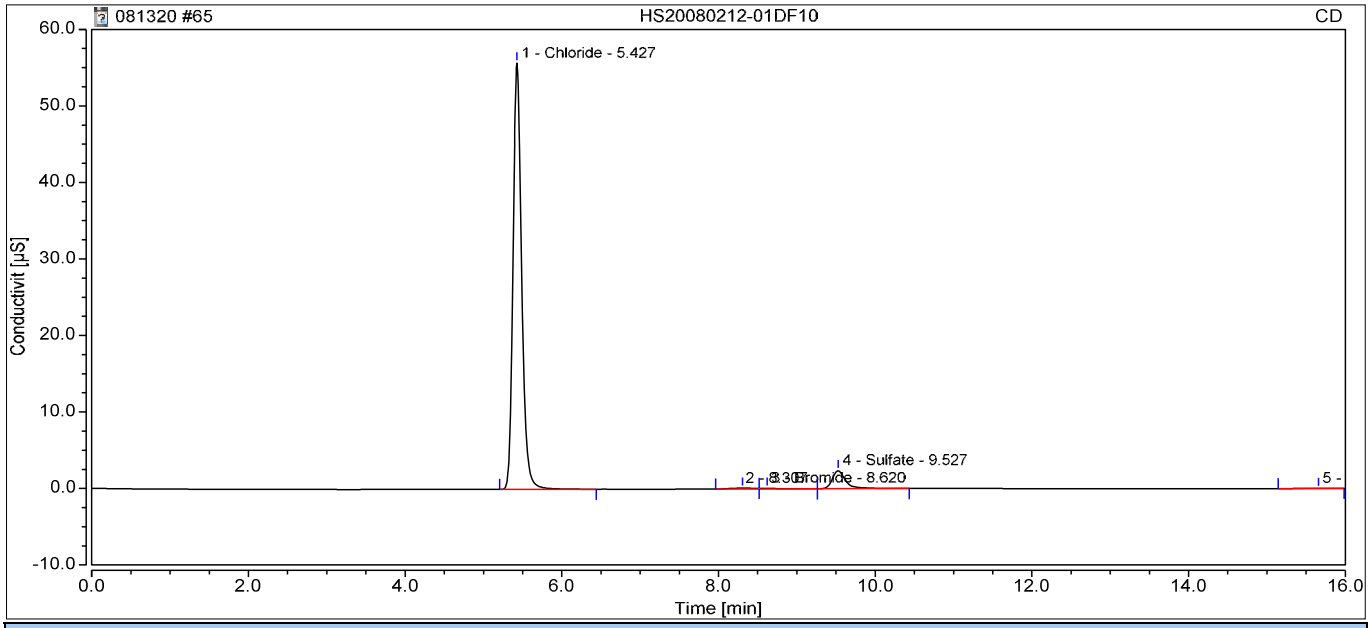

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.72 | Fluoride | BMB | 0.028 | 0.0893 | 0.0893 | 1.0000 |
| 2 | 5.39 | Chloride | BMB | 69.781 | 304.8556 | 304.8556 | 1.0000 |
| 3 | 6.54 | Nitrite,N | BMB | 0.016 | n.a. | n.a. | 1.0000 |
| 5 | 8.62 | Bromide | M | 0.125 | 1.1537 | 1.1537 | 1.0000 |
| 6 | 9.44 | Sulfate | MB | 5.007 | 31.2762 | 31.2762 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 7 | 15.00 | Phosphate | BMB | 0.026 | 0.5128 | 0.5128 | 1.0000 |
| **Total:** | | | **0.000** | **74.983** | | **337.89** | |

*65 HS20080212-01DF10*

| | | | |
|---|---|---|---|
| *Sample Name:* | **HS20080212-01DF10** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **RE1** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **10.0000** |
| *Recording Time:* | **08/14/2020 03:14** | *Sample Weight:* | **1.0000** |

Run Time:



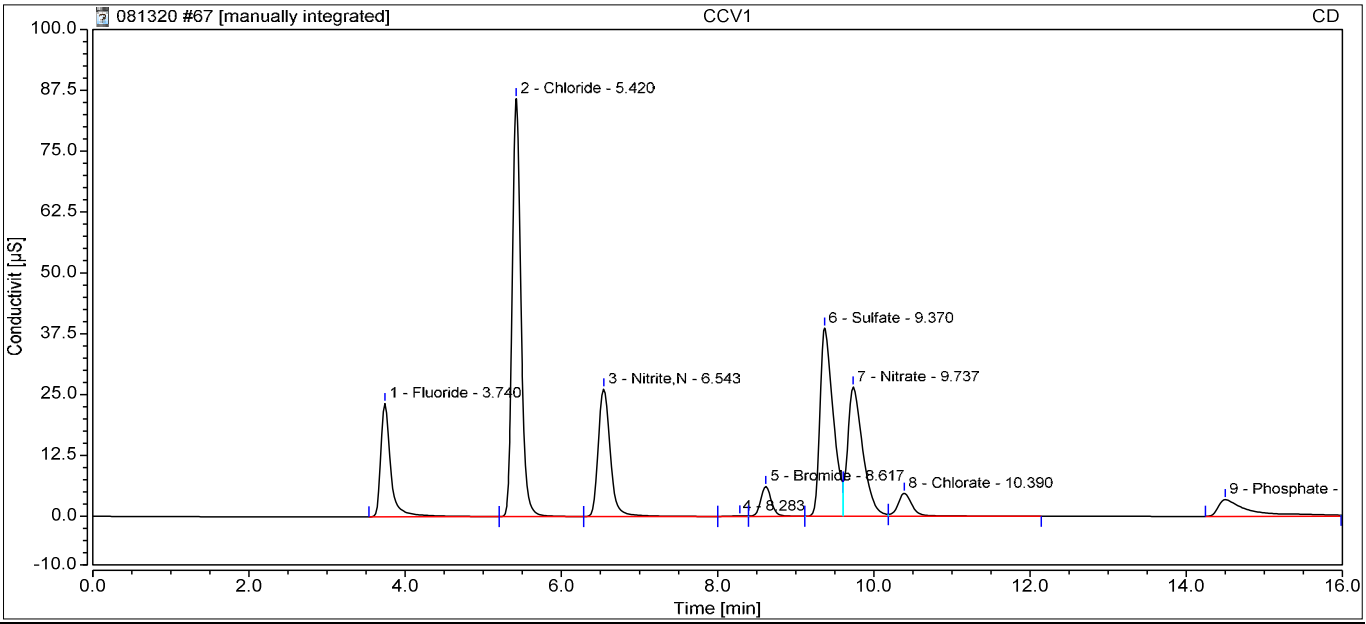

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| 1 | 5.43 | Chloride | BMB | 7.151 | 31.1917 | 311.9169 | 10.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| 3 | 8.62 | Bromide | MB | 0.026 | 0.1741 | 1.7415 | 10.0000 |
| 4 | 9.53 | Sulfate | BMB | 0.468 | 2.9313 | 29.3134 | 10.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 10.0000 |
| **Total:** | | | **0.000** | **7.645** | | **342.97** | |

*67 CCV1*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV1** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA4** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 03:50** | *Sample Weight:* | **1.0000** |

Run Time:



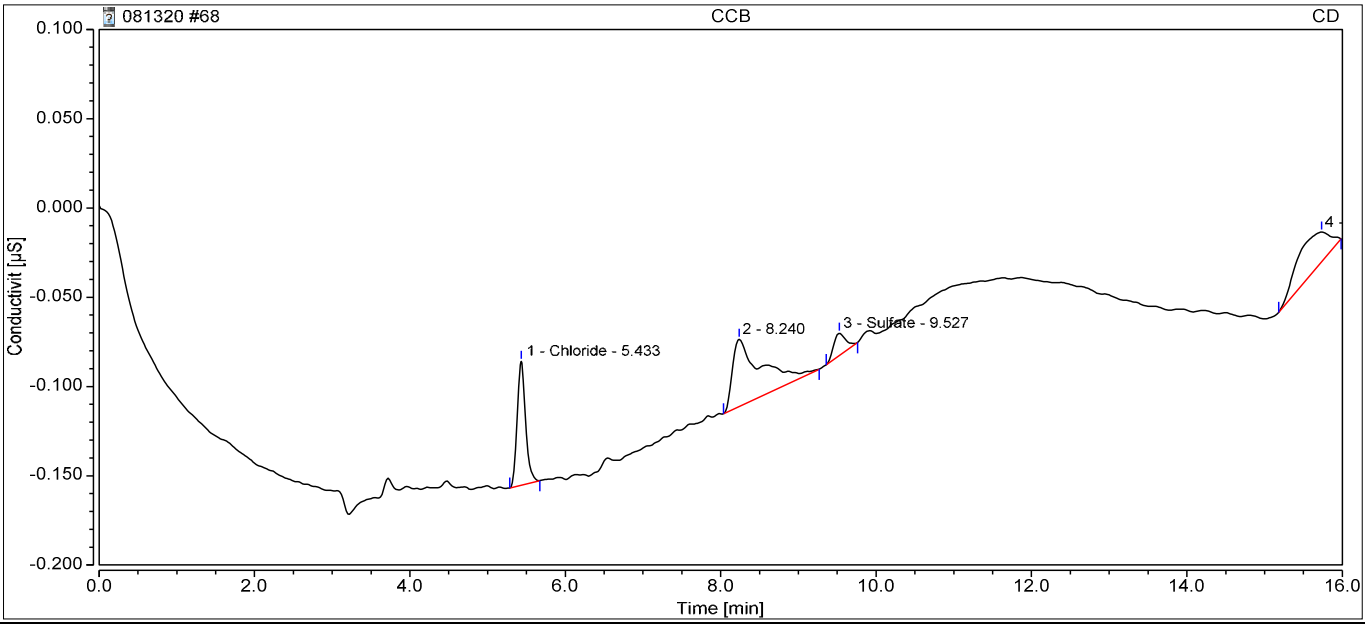

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.74 | Fluoride | BMB | 3.452 | 9.7732 | 9.7732 | 1.0000 |
| 2 | 5.42 | Chloride | BMB | 11.019 | 48.0920 | 48.0920 | 1.0000 |
| 3 | 6.54 | Nitrite,N | BMB | 4.701 | 9.9399 | 9.9399 | 1.0000 |
| 5 | 8.62 | Bromide | M | 0.983 | 9.6720 | 9.6720 | 1.0000 |
| 6 | 9.37 | Sulfate | M | 7.632 | 47.6661 | 47.6661 | 1.0000 |
| 7 | 9.74 | Nitrate | M | 6.000 | 9.7259 | 9.7259 | 1.0000 |
| 8 | 10.39 | Chlorate | MB | 1.022 | 9.8861 | 9.8861 | 1.0000 |
| 9 | 14.50 | Phosphate | BM * | 1.682 | 9.0395 | 9.0395 | 1.0000 |
| **Total:** | | | **0.000** | **36.492** | | **153.79** | |

*68 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA5** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 04:08** | *Sample Weight:* | **1.0000** |

Run Time:



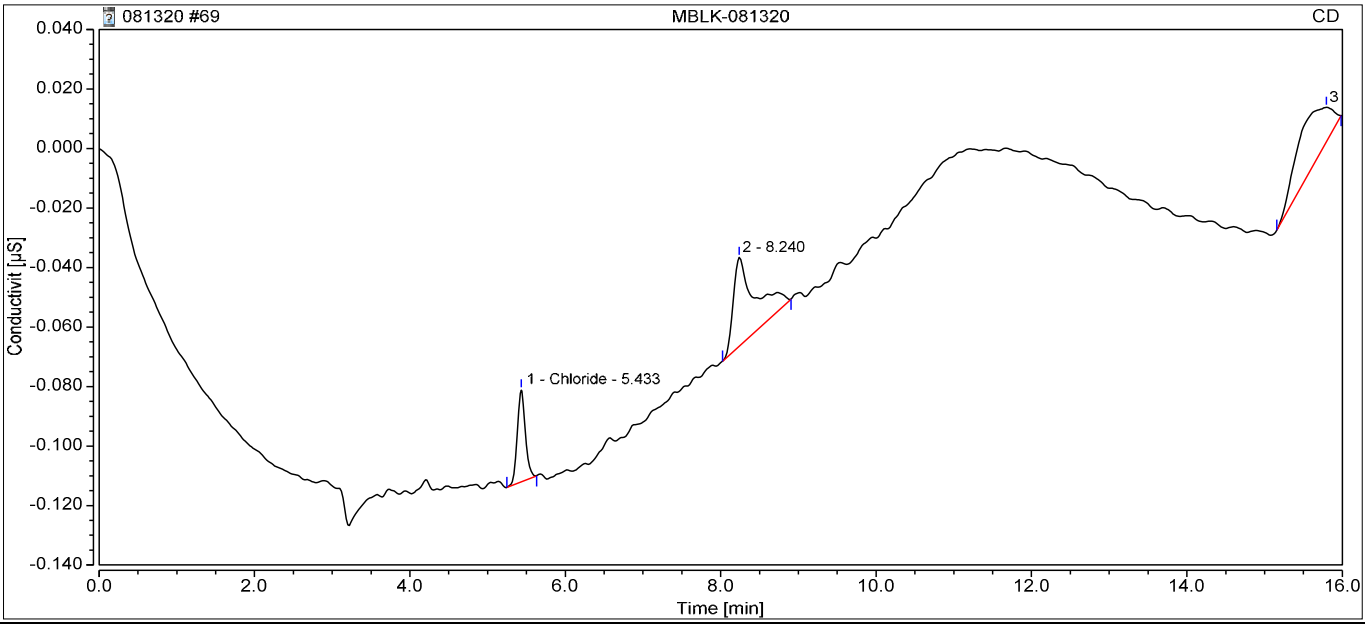

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.43 | Chloride | BMB | 0.009 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.53 | Sulfate | BMB | 0.002 | 0.0258 | 0.0258 | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.011** | | **0.03** | |

*69 MBLK-081320*

| | | | |
|---|---|---|---|
| *Sample Name:* | **MBLK-081320** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BC8** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 04:26** | *Sample Weight:* | **1.0000** |

Run Time:



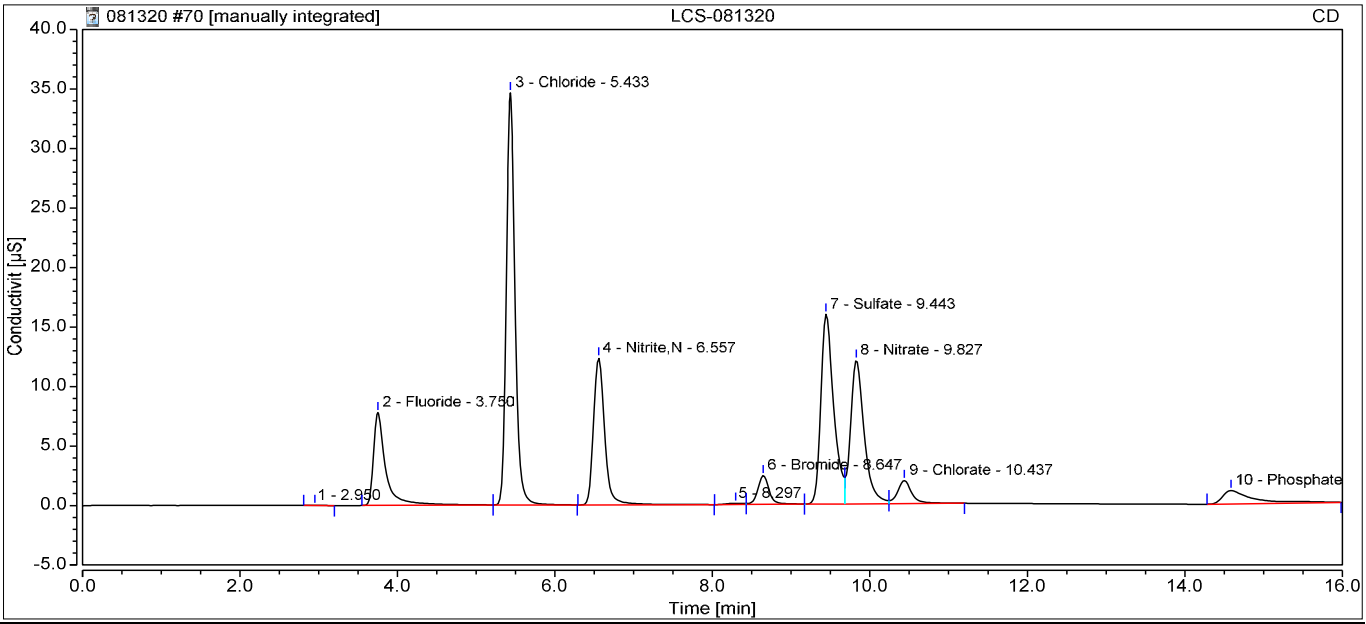

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.43 | Chloride | BMB | 0.004 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Sulfate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.004** | | **0.00** | |

70 LCS-081320

| | | | |
|---|---|---|---|
| *Sample Name:* | **LCS-081320** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BB2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 10:44** | *Sample Weight:* | **1.0000** |

Run Time:



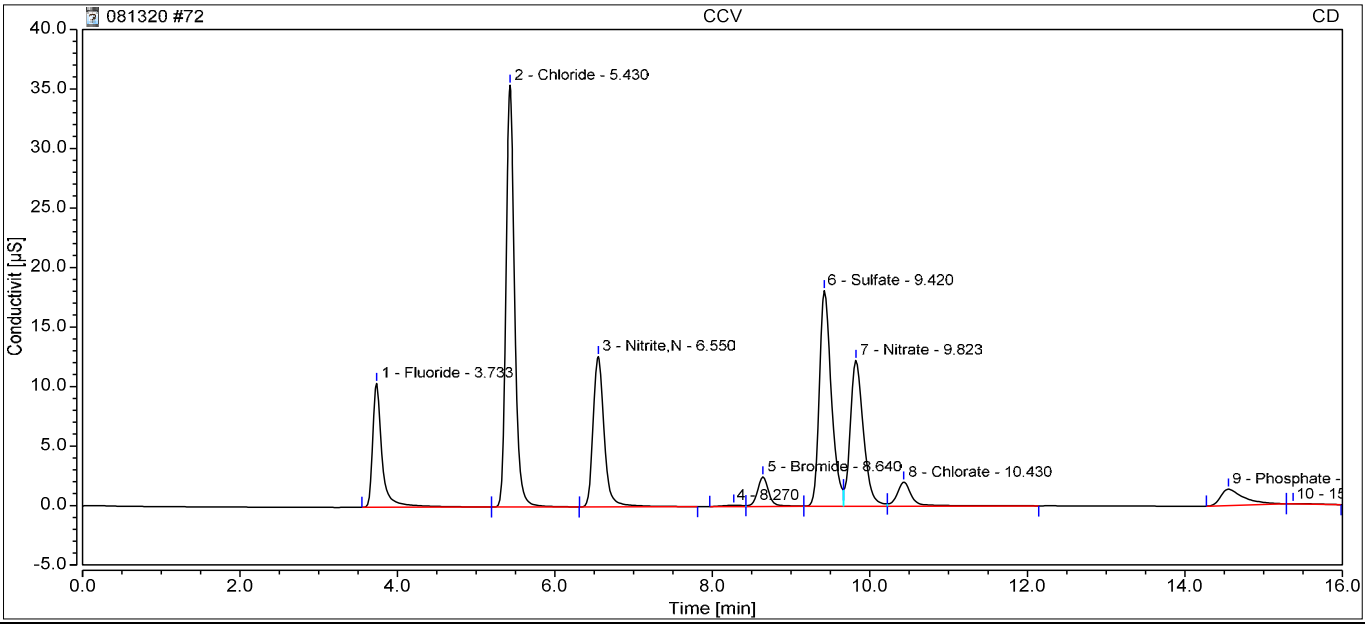

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 2 | 3.75 | Fluoride | BMB | 1.396 | 3.9585 | 3.9585 | 1.0000 |
| 3 | 5.43 | Chloride | BMB | 4.443 | 19.3574 | 19.3574 | 1.0000 |
| 4 | 6.56 | Nitrite,N | BMB | 2.030 | 4.2697 | 4.2697 | 1.0000 |
| 6 | 8.65 | Bromide | M * | 0.402 | 3.9081 | 3.9081 | 1.0000 |
| 7 | 9.44 | Sulfate | M * | 3.029 | 18.9257 | 18.9257 | 1.0000 |
| 8 | 9.83 | Nitrate | M * | 2.409 | 3.8912 | 3.8912 | 1.0000 |
| 9 | 10.44 | Chlorate | MB* | 0.407 | 3.8582 | 3.8582 | 1.0000 |
| 10 | 14.59 | Phosphate | BMB | 0.502 | 2.9620 | 2.9620 | 1.0000 |
| **Total:** | | | **0.000** | **14.618** | | **61.13** | |

72 CCV

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BA2** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 11:20** | *Sample Weight:* | **1.0000** |

Run Time:



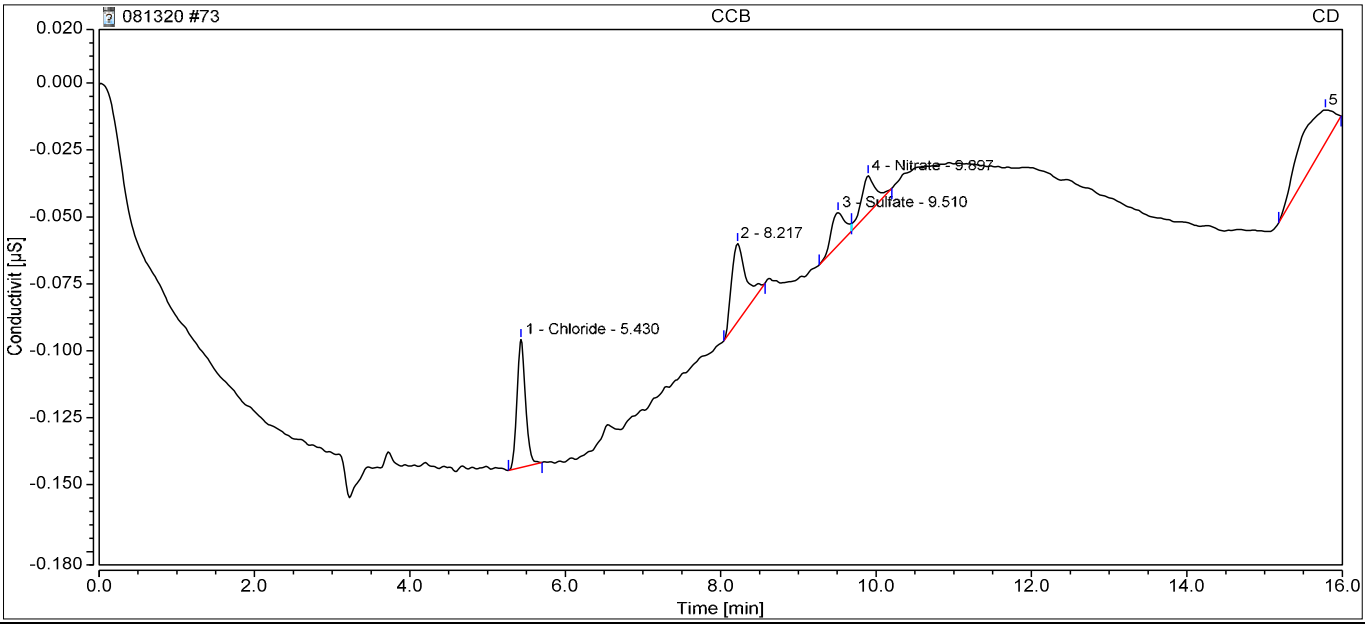

**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | 3.73 | Fluoride | BMB | 1.442 | 4.0888 | 4.0888 | 1.0000 |
| 2 | 5.43 | Chloride | BMB | 4.512 | 19.6614 | 19.6614 | 1.0000 |
| 3 | 6.55 | Nitrite,N | BMB | 2.048 | 4.3077 | 4.3077 | 1.0000 |
| 5 | 8.64 | Bromide | M | 0.410 | 3.9865 | 3.9865 | 1.0000 |
| 6 | 9.42 | Sulfate | M | 3.211 | 20.0629 | 20.0629 | 1.0000 |
| 7 | 9.82 | Nitrate | M | 2.367 | 3.8221 | 3.8221 | 1.0000 |
| 8 | 10.43 | Chlorate | MB | 0.445 | 4.2287 | 4.2287 | 1.0000 |
| 9 | 14.55 | Phosphate | BMB | 0.463 | 2.7654 | 2.7654 | 1.0000 |
| **Total:** | | | **0.000** | **14.899** | | **62.92** | |

*73 CCB*

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB** | *Injection Volume:* | **5.00** |
| *Vial Number:* | **BB6** | *Channel:* | **CD** |
| *Sample Type:* | **Unknown** | *Wavelength:* | **210** |
| *Control Program:* | **Anions Program 06022020.1** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **Anions Processing Method** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **08/14/2020 11:39** | *Sample Weight:* | **1.0000** |

Run Time:




**Integration Results**

| No. | Retention min | Peak Name | Peak Type | Area µS*min | Amount ppm | Concentration ppm | Dilution |
|---|---|---|---|---|---|---|---|
| n.a. | n.a. | Fluoride | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 1 | 5.43 | Chloride | BMB | 0.006 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Nitrite,N | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Bromide | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| 3 | 9.51 | Sulfate | BM | 0.002 | 0.0274 | 0.0274 | 1.0000 |
| 4 | 9.90 | Nitrate | MB | 0.003 | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Chlorate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| n.a. | n.a. | Phosphate | n.a. | n.a. | n.a. | n.a. | 1.0000 |
| **Total:** | | | **0.000** | **0.012** | | **0.03** | |

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# WorkOrder: HS20080473

## Longhorn GW Treatment Plant Monthly Effluent Samples

## Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

**14-Sep-2020**

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

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HS20080473 Wet Chem Raw Data (Cr6_W_7196_DOD)

# HS20080473 Longhorn GW Treatment Plant Monthly Effluent Samples Final

ALS WO# HS20080473

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 28, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20080473**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Aug 12, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**Work Order:** HS20080473

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20080473-01 | LH18/24-SP650_081120 | Water | | 11-Aug-2020 14:00 | 12-Aug-2020 10:25 | ☐ |
| HS20080473-02 | LH18/24-SP650_081120_BIX | Water | | 11-Aug-2020 14:00 | 12-Aug-2020 10:25 | ☐ |
| HS20080473-03 | Trip Blank | Water | CG 060320 -202 | 11-Aug-2020 00:00 | 12-Aug-2020 10:25 | ☐ |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc. **CASE NARRATIVE**
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**Work Order:** HS20080473

## Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

## GCMS Semivolatiles by Method SW8270SIM

### Batch ID: 156460

**Sample ID: LH18/24-SP650_081120 (HS20080473-01)**

• The surrogate recoveries could not be determined due to dilution below the calibration range.

**Sample ID: LCSD-156460**

• LCS/LCSD RPD exceeded the laboratory acceptance limit

## GCMS Volatiles by Method SW8260

### Batch ID: R366685

**Sample ID: LH18/24-SP650_081120 (HS20080473-01MS)**

• MS/MSD failed QC limits for several compounds.

The RPD between the MS and MSD was outside of the control limit. 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene

## Metals by Method SW6020

### Batch ID: 156348

**Sample ID: HS20080198-04MS**

• MS/MSD and DUPs are for an unrelated sample

## WetChemistry by Method SW7196

### Batch ID: R366666

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**ALS Houston, US** Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20080473
Sample ID: LH18/24-SP650_081120 Lab ID:HS20080473-01
Collection Date: 11-Aug-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| **1,2-Dichloroethane** | **0.70** | J | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 12-Aug-2020 13:54 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20080473
Sample ID: LH18/24-SP650_081120 Lab ID:HS20080473-01
Collection Date: 11-Aug-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | | **Method:SW8260** | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| **cis-1,2-Dichloroethene** | **17** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 12-Aug-2020 13:54 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Toluene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| **Trichloroethene** | **3.7** | | **0.20** | **0.50** | **1.0** | **UG/L** | 1 | 12-Aug-2020 13:54 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:54 |
| *Surr: 1,2-Dichloroethane-d4* | *91.1* | | | **0** | *81-118* | *%REC* | *1* | *12-Aug-2020 13:54* |
| *Surr: 4-Bromofluorobenzene* | *96.6* | | | **0** | *85-114* | *%REC* | *1* | *12-Aug-2020 13:54* |
| *Surr: Dibromofluoromethane* | *93.1* | | | **0** | *80-119* | *%REC* | *1* | *12-Aug-2020 13:54* |
| *Surr: Toluene-d8* | *107* | | | **0** | *89-112* | *%REC* | *1* | *12-Aug-2020 13:54* |
| **SEMIVOLATILES SIM** | | **Method:SW8270SIM** | | | | Prep:SW3510 / 18-Aug-2020 | | Analyst: ACN |
| **1,4-Dioxane** | **2.2** | a | **1.0** | **1.0** | **1.0** | **ug/L** | 100 | 27-Aug-2020 19:01 |
| *Surr: 2-Fluorobiphenyl* | *0* | *S* | | 0 | *40-140* | *%REC* | *100* | *27-Aug-2020 19:01* |
| *Surr: 4-Terphenyl-d14* | *0* | *S* | | 0 | *40-140* | *%REC* | *100* | *27-Aug-2020 19:01* |
| *Surr: Nitrobenzene-d5* | *0* | *S* | | 0 | *40-140* | *%REC* | *100* | *27-Aug-2020 19:01* |
| **METALS BY ICPMS BY SW6020A** | | **Method:SW6020** | | | | Prep:SW3010A / 14-Aug-2020 | | Analyst: JHD |
| **Barium** | **0.553** | | **0.00190** | **0.00250** | **0.00500** | **mg/L** | 1 | 19-Aug-2020 18:18 |
| Lead | 0.00100 | U | 0.000600 | 0.00100 | 0.00500 | mg/L | 1 | 19-Aug-2020 18:18 |
| Selenium | 0.00250 | U | 0.00110 | 0.00250 | 0.00500 | mg/L | 1 | 19-Aug-2020 18:18 |
| Silver | 0.000500 | U | 0.000200 | 0.000500 | 0.00500 | mg/L | 1 | 19-Aug-2020 18:18 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc.
**ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20080473
Sample ID: LH18/24-SP650_081120
Lab ID:HS20080473-01
Collection Date: 11-Aug-2020 14:00
Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY SW7196A** | **Method:SW7196** | | | | | | | Analyst: KVL |
| Chromium, Hexavalent | 0.0100 | U | 0.00600 | 0.0100 | 0.0100 | mg/L | 1 | 12-Aug-2020 13:15 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20080473

Sample ID: LH18/24-SP650_081120_BIX Lab ID:HS20080473-02

Collection Date: 11-Aug-2020 14:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)** | | **Method:NA** | | | | | | Analyst: GR |
| Subcontract Analysis | See Attached | | 0 | 0 | | NA | 1 | 27-Aug-2020 17:43 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20080473
Sample ID: Trip Blank Lab ID:HS20080473-03
Collection Date: 11-Aug-2020 00:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| 1,1,1,2-Tetrachloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,1,1-Trichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,1,2,2-Tetrachloroethane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,1,2-Trichloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,1-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,1-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,1-Dichloropropene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2,3-Trichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2,3-Trichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2,4-Trichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2,4-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2-Dibromo-3-chloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2-Dibromoethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2-Dichloroethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,2-Dichloropropane | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,3,5-Trimethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,3-Dichloropropane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 2,2-Dichloropropane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 2-Butanone | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 2-Chlorotoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 2-Hexanone | 2.0 | U | 1.0 | 2.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 4-Chlorotoluene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 4-Isopropyltoluene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| 4-Methyl-2-pentanone | 2.0 | U | 0.70 | 2.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Acetone | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Benzene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Bromobenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Bromochloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Bromodichloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Bromoform | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Bromomethane | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Carbon disulfide | 1.0 | U | 0.60 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Carbon tetrachloride | 1.0 | U | 0.50 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Chlorobenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Chloroethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Chloroform | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Houston, US** Date: 28-Aug-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20080473
Sample ID: Trip Blank Lab ID:HS20080473-03
Collection Date: 11-Aug-2020 00:00 Matrix:Water

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES ORGANICS BY METHOD 8260C** | **Method:SW8260** | | | | | | | Analyst: PC |
| Chloromethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| cis-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| cis-1,3-Dichloropropene | 0.50 | U | 0.10 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Dibromochloromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Dibromomethane | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Dichlorodifluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Ethylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Hexachlorobutadiene | 1.0 | U | 1.0 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Isopropylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| m,p-Xylene | 1.0 | U | 0.50 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Methylene chloride | 1.0 | U | 0.40 | 1.0 | 2.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| n-Butylbenzene | 1.0 | U | 0.40 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| n-Propylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Naphthalene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| o-Xylene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| sec-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Styrene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| tert-Butylbenzene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Tetrachloroethene | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Toluene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| trans-1,2-Dichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| trans-1,3-Dichloropropene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Trichloroethene | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Trichlorofluoromethane | 1.0 | U | 0.30 | 1.0 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| Vinyl chloride | 0.50 | U | 0.20 | 0.50 | 1.0 | UG/L | 1 | 12-Aug-2020 13:30 |
| *Surr: 1,2-Dichloroethane-d4* | *90.8* | | | **0** | *81-118* | *%REC* | *1* | *12-Aug-2020 13:30* |
| *Surr: 4-Bromofluorobenzene* | *94.5* | | | **0** | *85-114* | *%REC* | *1* | *12-Aug-2020 13:30* |
| *Surr: Dibromofluoromethane* | *92.9* | | | **0** | *80-119* | *%REC* | *1* | *12-Aug-2020 13:30* |
| *Surr: Toluene-d8* | *108* | | | **0** | *89-112* | *%REC* | *1* | *12-Aug-2020 13:30* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Weight / Prep Log**

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**Batch ID:** 156348 **Start Date:** 14 Aug 2020 08:00 **End Date:** 14 Aug 2020 12:00
**Method:** WATER - SW3010A **Prep Code:** 3010A

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20080473-01 | | 10 (mL) | 10 (mL) | 1 |

**Batch ID:** 156460 **Start Date:** 18 Aug 2020 12:18 **End Date:** 18 Aug 2020 15:00
**Method:** SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20080473-01 | 1 | 1000 (mL) | 1 (mL) | 0.001 |

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

## DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** 156348 ( 0 ) | **Test Name :** METALS BY ICPMS BY SW6020A | | | | **Matrix:** Water | |
| HS20080473-01 | LH18/24-SP650_081120 | 11 Aug 2020 14:00 | | 14 Aug 2020 12:00 | 19 Aug 2020 18:18 | 1 |
| **Batch ID:** 156460 ( 0 ) | **Test Name :** SEMIVOLATILES SIM | | | | **Matrix:** Water | |
| HS20080473-01 | LH18/24-SP650_081120 | 11 Aug 2020 14:00 | | 18 Aug 2020 12:18 | 27 Aug 2020 19:01 | 100 |
| **Batch ID:** R366666 ( 0 ) | **Test Name :** HEXAVALENT CHROMIUM BY SW7196A | | | | **Matrix:** Water | |
| HS20080473-01 | LH18/24-SP650_081120 | 11 Aug 2020 14:00 | | | 12 Aug 2020 13:15 | 1 |
| **Batch ID:** R366685 ( 0 ) | **Test Name :** VOLATILES ORGANICS BY METHOD 8260C | | | | **Matrix:** Water | |
| HS20080473-01 | LH18/24-SP650_081120 | 11 Aug 2020 14:00 | | | 12 Aug 2020 13:54 | 1 |
| HS20080473-03 | Trip Blank | 11 Aug 2020 00:00 | | | 12 Aug 2020 13:30 | 1 |
| **Batch ID:** R367591 ( 0 ) | **Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850) | | | | **Matrix:** Water | |
| HS20080473-02 | LH18/24-SP650_081120_BIX | 11 Aug 2020 14:00 | | | 27 Aug 2020 17:43 | 1 |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID: 156348 ( 0 )** **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

**MBLK** Sample ID: **MBLK-156348** Units: **mg/L** Analysis Date: **19-Aug-2020 16:59**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707329** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.00250 | 0.00500 | | | | | | | | U |
| Lead | 0.00100 | 0.00500 | | | | | | | | U |
| Selenium | 0.00250 | 0.00500 | | | | | | | | U |
| Silver | 0.000500 | 0.00500 | | | | | | | | U |

**LCS** Sample ID: **LCS-156348** Units: **mg/L** Analysis Date: **19-Aug-2020 17:01**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707330** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.0468 | 0.00500 | 0.05 | 0 | 93.6 | 86 - 114 | | | | |
| Lead | 0.04578 | 0.00500 | 0.05 | 0 | 91.6 | 88 - 115 | | | | |
| Selenium | 0.05061 | 0.00500 | 0.05 | 0 | 101 | 80 - 120 | | | | |
| Silver | 0.04562 | 0.00500 | 0.05 | 0 | 91.2 | 85 - 116 | | | | |

**MS** Sample ID: **HS20080223-05MS** Units: **mg/L** Analysis Date: **19-Aug-2020 18:09**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707358** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1089 | 0.00500 | 0.05 | 0.05567 | 106 | 86 - 114 | | | | |
| Lead | 0.0487 | 0.00500 | 0.05 | 0.000678 | 96.0 | 88 - 115 | | | | |
| Selenium | 0.04846 | 0.00500 | 0.05 | 0.0004 | 96.1 | 80 - 120 | | | | |
| Silver | 0.04804 | 0.00500 | 0.05 | -0.000038 | 96.2 | 85 - 116 | | | | |

**MS** Sample ID: **HS20080198-04MS** Units: **mg/L** Analysis Date: **19-Aug-2020 17:15**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707336** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.5562 | 0.00500 | 0.05 | 0.5117 | 88.9 | 86 - 114 | | | | O |
| Lead | 0.04666 | 0.00500 | 0.05 | 0.000047 | 93.2 | 88 - 115 | | | | |
| Selenium | 0.04884 | 0.00500 | 0.05 | 0.000233 | 97.2 | 80 - 120 | | | | |
| Silver | 0.04559 | 0.00500 | 0.05 | -0.000046 | 91.3 | 85 - 116 | | | | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID: 156348 ( 0 )** **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

**MS** Sample ID: **HS20080189-02MS** Units: **mg/L** Analysis Date: **19-Aug-2020 17:41**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707346** PrepDate: **14-Aug-2020** DF: **2**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1622 | 0.0100 | 0.05 | 0.1087 | 107 | 86 - 114 | | | | |
| Lead | 0.04961 | 0.0100 | 0.05 | 0.000992 | 97.2 | 88 - 115 | | | | |
| Selenium | 0.05207 | 0.0100 | 0.05 | 0.000801 | 103 | 80 - 120 | | | | |
| Silver | 0.04525 | 0.0100 | 0.05 | -0.000049 | 90.6 | 85 - 116 | | | | |

**MSD** Sample ID: **HS20080223-05MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 18:11**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707359** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1034 | 0.00500 | 0.05 | 0.05567 | 95.5 | 86 - 114 | 0.1089 | 5.13 | 20 | |
| Lead | 0.04683 | 0.00500 | 0.05 | 0.000678 | 92.3 | 88 - 115 | 0.0487 | 3.9 | 20 | |
| Selenium | 0.04795 | 0.00500 | 0.05 | 0.0004 | 95.1 | 80 - 120 | 0.04846 | 1.05 | 20 | |
| Silver | 0.04537 | 0.00500 | 0.05 | -0.000038 | 90.8 | 85 - 116 | 0.04804 | 5.72 | 20 | |

**MSD** Sample ID: **HS20080198-04MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:17**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707337** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.5499 | 0.00500 | 0.05 | 0.5117 | 76.4 | 86 - 114 | 0.5562 | 1.13 | 20 | SO |
| Lead | 0.04632 | 0.00500 | 0.05 | 0.000047 | 92.5 | 88 - 115 | 0.04666 | 0.736 | 20 | |
| Selenium | 0.04979 | 0.00500 | 0.05 | 0.000233 | 99.1 | 80 - 120 | 0.04884 | 1.92 | 20 | |
| Silver | 0.04514 | 0.00500 | 0.05 | -0.000046 | 90.4 | 85 - 116 | 0.04559 | 0.999 | 20 | |

**MSD** Sample ID: **HS20080189-02MSD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:43**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707347** PrepDate: **14-Aug-2020** DF: **2**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1638 | 0.0100 | 0.05 | 0.1087 | 110 | 86 - 114 | 0.1622 | 0.942 | 20 | |
| Lead | 0.05101 | 0.0100 | 0.05 | 0.000992 | 100 | 88 - 115 | 0.04961 | 2.78 | 20 | |
| Selenium | 0.05113 | 0.0100 | 0.05 | 0.000801 | 101 | 80 - 120 | 0.05207 | 1.83 | 20 | |
| Silver | 0.04626 | 0.0100 | 0.05 | -0.000049 | 92.6 | 85 - 116 | 0.04525 | 2.21 | 20 | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID: 156348 ( 0 )** **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

**PDS** Sample ID: **HS20080223-05PDS** Units: **mg/L** Analysis Date: **19-Aug-2020 18:14**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707360** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1717 | 0.00500 | 0.1 | 0.05567 | 116 | 80 - 120 | | | | |
| Lead | 0.1142 | 0.00500 | 0.1 | 0.000678 | 114 | 80 - 120 | | | | |
| Silver | 0.1132 | 0.00500 | 0.1 | -0.000038 | 113 | 80 - 120 | | | | |

**PDS** Sample ID: **HS20080198-04PDS** Units: **mg/L** Analysis Date: **19-Aug-2020 17:20**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707338** PrepDate: **14-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.6497 | 0.00500 | 0.1 | 0.5117 | 138 | 80 - 120 | | | | SO |

**SD** Sample ID: **HS20080223-05SD** Units: **mg/L** Analysis Date: **19-Aug-2020 18:07**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707357** PrepDate: **14-Aug-2020** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.05734 | 0.0250 | | | | | 0.05567 | 3.01 | 10 | |
| Lead | 0.00500 | 0.0250 | | | | | 0.000678 | 0 | 10 | U |
| Selenium | 0.0125 | 0.0250 | | | | | 0.0004 | 0 | 10 | U |
| Silver | 0.00250 | 0.0250 | | | | | -0.000038 | 0 | 10 | U |

**SD** Sample ID: **HS20080198-04SD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:13**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707335** PrepDate: **14-Aug-2020** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.5007 | 0.0250 | | | | | 0.5117 | 2.16 | 10 | |
| Lead | 0.00500 | 0.0250 | | | | | 0.000047 | 0 | 10 | U |
| Selenium | 0.0125 | 0.0250 | | | | | 0.000233 | 0 | 10 | U |
| Silver | 0.00250 | 0.0250 | | | | | -0.000046 | 0 | 10 | U |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID: 156348 ( 0 )** **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

**SD** Sample ID: **HS20080189-02SD** Units: **mg/L** Analysis Date: **19-Aug-2020 17:39**
Client ID: Run ID: **ICPMS05_367010** SeqNo: **5707345** PrepDate: **14-Aug-2020** DF: **10**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.1062 | 0.0500 | | | | | 0.1087 | 2.33 | 10 | |
| Lead | 0.0100 | 0.0500 | | | | | 0.000992 | 0 | 10 | U |
| Selenium | 0.0250 | 0.0500 | | | | | 0.000801 | 0 | 10 | U |
| Silver | 0.00500 | 0.0500 | | | | | -0.000049 | 0 | 10 | U |

**The following samples were analyzed in this batch:** HS20080473-01

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID: 156460 ( 0 )** **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

**MBLK** Sample ID: **MBLK-156460** Units: **ug/L** Analysis Date: **27-Aug-2020 17:45**
Client ID: Run ID: **SV-6_367602** SeqNo: **5718090** PrepDate: **18-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.010 | 0.010 | | | | | | | | U |
| *Surr: 2-Fluorobiphenyl* | *0.07167* | *0* | *0.08* | *0* | *89.6* | *40 - 140* | | | | |
| *Surr: 4-Terphenyl-d14* | *0.0574* | *0* | *0.08* | *0* | *71.7* | *40 - 140* | | | | |
| *Surr: Nitrobenzene-d5* | *0.09823* | *0* | *0.08* | *0* | *123* | *40 - 140* | | | | |

**LCS** Sample ID: **LCS-156460** Units: **ug/L** Analysis Date: **27-Aug-2020 18:04**
Client ID: Run ID: **SV-6_367602** SeqNo: **5718091** PrepDate: **18-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.08803 | 0.010 | 0.08 | 0 | 110 | 40 - 140 | | | | |
| *Surr: 2-Fluorobiphenyl* | *0.06785* | *0* | *0.08* | *0* | *84.8* | *40 - 140* | | | | |
| *Surr: 4-Terphenyl-d14* | *0.07262* | *0* | *0.08* | *0* | *90.8* | *40 - 140* | | | | |
| *Surr: Nitrobenzene-d5* | *0.07638* | *0* | *0.08* | *0* | *95.5* | *40 - 140* | | | | |

**LCSD** Sample ID: **LCSD-156460** Units: **ug/L** Analysis Date: **27-Aug-2020 18:23**
Client ID: Run ID: **SV-6_367602** SeqNo: **5718092** PrepDate: **18-Aug-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.07121 | 0.010 | 0.08 | 0 | 89.0 | 40 - 140 | 0.08803 | 21.1 | 20 | R |
| *Surr: 2-Fluorobiphenyl* | *0.07073* | *0* | *0.08* | *0* | *88.4* | *40 - 140* | *0.06785* | *4.15* | *20* | |
| *Surr: 4-Terphenyl-d14* | *0.0557* | *0* | *0.08* | *0* | *69.6* | *40 - 140* | *0.07262* | *26.4* | *20* | R |
| *Surr: Nitrobenzene-d5* | *0.07857* | *0* | *0.08* | *0* | *98.2* | *40 - 140* | *0.07638* | *2.83* | *20* | |

**The following samples were analyzed in this batch:** HS20080473-01

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200812** Units: **UG/L** Analysis Date: **12-Aug-2020 13:06**
Client ID: Run ID: **VOA6_366685** SeqNo: **5698845** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,1-Trichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1,2,2-Tetrachloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1,2-Trichloroethane | 1.0 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| 1,1-Dichloropropene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,3-Trichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2,4-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dibromo-3-chloropropane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dibromoethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,2-Dichloroethane | 0.50 | 1.0 | | | | | | | | U |
| 1,2-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,3,5-Trimethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 1,3-Dichloropropane | 1.0 | 1.0 | | | | | | | | U |
| 1,4-Dichlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| 2,2-Dichloropropane | 0.50 | 1.0 | | | | | | | | U |
| 2-Butanone | 1.0 | 2.0 | | | | | | | | U |
| 2-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 2-Hexanone | 2.0 | 2.0 | | | | | | | | U |
| 4-Chlorotoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Isopropyltoluene | 1.0 | 1.0 | | | | | | | | U |
| 4-Methyl-2-pentanone | 2.0 | 2.0 | | | | | | | | U |
| Acetone | 1.0 | 2.0 | | | | | | | | U |
| Benzene | 0.50 | 1.0 | | | | | | | | U |
| Bromobenzene | 1.0 | 1.0 | | | | | | | | U |
| Bromochloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromodichloromethane | 0.50 | 1.0 | | | | | | | | U |
| Bromoform | 1.0 | 1.0 | | | | | | | | U |
| Bromomethane | 1.0 | 1.0 | | | | | | | | U |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MBLK** Sample ID: **VBLKW-200812** Units: **UG/L** Analysis Date: **12-Aug-2020 13:06**
Client ID: Run ID: **VOA6_366685** SeqNo: **5698845** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 1.0 | 2.0 | | | | | | | | U |
| Carbon tetrachloride | 1.0 | 1.0 | | | | | | | | U |
| Chlorobenzene | 1.0 | 1.0 | | | | | | | | U |
| Chloroethane | 1.0 | 1.0 | | | | | | | | U |
| Chloroform | 0.50 | 1.0 | | | | | | | | U |
| Chloromethane | 0.50 | 1.0 | | | | | | | | U |
| cis-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| cis-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Dibromochloromethane | 1.0 | 1.0 | | | | | | | | U |
| Dibromomethane | 0.50 | 1.0 | | | | | | | | U |
| Dichlorodifluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Ethylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Hexachlorobutadiene | 1.0 | 1.0 | | | | | | | | U |
| Isopropylbenzene | 1.0 | 1.0 | | | | | | | | U |
| m,p-Xylene | 1.0 | 2.0 | | | | | | | | U |
| Methylene chloride | 1.0 | 2.0 | | | | | | | | U |
| Naphthalene | 1.0 | 1.0 | | | | | | | | U |
| n-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| n-Propylbenzene | 1.0 | 1.0 | | | | | | | | U |
| o-Xylene | 1.0 | 1.0 | | | | | | | | U |
| sec-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Styrene | 1.0 | 1.0 | | | | | | | | U |
| tert-Butylbenzene | 1.0 | 1.0 | | | | | | | | U |
| Tetrachloroethene | 1.0 | 1.0 | | | | | | | | U |
| Toluene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,2-Dichloroethene | 0.50 | 1.0 | | | | | | | | U |
| trans-1,3-Dichloropropene | 0.50 | 1.0 | | | | | | | | U |
| Trichloroethene | 0.50 | 1.0 | | | | | | | | U |
| Trichlorofluoromethane | 1.0 | 1.0 | | | | | | | | U |
| Vinyl chloride | 0.50 | 1.0 | | | | | | | | U |
| *Surr: 1,2-Dichloroethane-d4* | *45.07* | *1.0* | *50* | *0* | *90.1* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *47.57* | *1.0* | *50* | *0* | *95.1* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *46.59* | *1.0* | *50* | *0* | *93.2* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *53.16* | *1.0* | *50* | *0* | *106* | *89 - 112* | | | | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200812** Units: **UG/L** Analysis Date: **12-Aug-2020 12:18**
Client ID: Run ID: **VOA6_366685** SeqNo: **5698844** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.69 | 1.0 | 20 | 0 | 93.4 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 18.45 | 1.0 | 20 | 0 | 92.3 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.34 | 1.0 | 20 | 0 | 102 | 71 - 121 | | | | |
| 1,1,2-Trichloroethane | 20.12 | 1.0 | 20 | 0 | 101 | 80 - 119 | | | | |
| 1,1-Dichloroethane | 20.26 | 1.0 | 20 | 0 | 101 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 19.68 | 1.0 | 20 | 0 | 98.4 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 18.9 | 1.0 | 20 | 0 | 94.5 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 22.9 | 1.0 | 20 | 0 | 114 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 18.66 | 1.0 | 20 | 0 | 93.3 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 24.66 | 1.0 | 20 | 0 | 123 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 19.74 | 1.0 | 20 | 0 | 98.7 | 76 - 124 | | | | |
| 1,2-Dibromo-3-chloropropane | 19.73 | 1.0 | 20 | 0 | 98.6 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 20.03 | 1.0 | 20 | 0 | 100 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 19.27 | 1.0 | 20 | 0 | 96.3 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 19.77 | 1.0 | 20 | 0 | 98.8 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 20.41 | 1.0 | 20 | 0 | 102 | 78 - 122 | | | | |
| 1,3,5-Trimethylbenzene | 19.55 | 1.0 | 20 | 0 | 97.8 | 75 - 124 | | | | |
| 1,3-Dichlorobenzene | 19.29 | 1.0 | 20 | 0 | 96.4 | 80 - 119 | | | | |
| 1,3-Dichloropropane | 20.06 | 1.0 | 20 | 0 | 100 | 80 - 119 | | | | |
| 1,4-Dichlorobenzene | 19.32 | 1.0 | 20 | 0 | 96.6 | 79 - 118 | | | | |
| 2,2-Dichloropropane | 19.72 | 1.0 | 20 | 0 | 98.6 | 60 - 139 | | | | |
| 2-Butanone | 43.39 | 2.0 | 40 | 0 | 108 | 56 - 143 | | | | |
| 2-Chlorotoluene | 19.71 | 1.0 | 20 | 0 | 98.6 | 79 - 122 | | | | |
| 2-Hexanone | 39.95 | 2.0 | 40 | 0 | 99.9 | 57 - 139 | | | | |
| 4-Chlorotoluene | 19.44 | 1.0 | 20 | 0 | 97.2 | 78 - 122 | | | | |
| 4-Isopropyltoluene | 19.92 | 1.0 | 20 | 0 | 99.6 | 77 - 127 | | | | |
| 4-Methyl-2-pentanone | 39.43 | 2.0 | 40 | 0 | 98.6 | 67 - 130 | | | | |
| Acetone | 48.1 | 2.0 | 40 | 0 | 120 | 39 - 160 | | | | |
| Benzene | 19.89 | 1.0 | 20 | 0 | 99.5 | 79 - 120 | | | | |
| Bromobenzene | 18.85 | 1.0 | 20 | 0 | 94.2 | 80 - 120 | | | | |
| Bromochloromethane | 18.94 | 1.0 | 20 | 0 | 94.7 | 78 - 123 | | | | |
| Bromodichloromethane | 18.93 | 1.0 | 20 | 0 | 94.7 | 79 - 125 | | | | |
| Bromoform | 18.53 | 1.0 | 20 | 0 | 92.7 | 66 - 130 | | | | |
| Bromomethane | 22.46 | 1.0 | 20 | 0 | 112 | 53 - 141 | | | | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**LCS** Sample ID: **VLCSW-200812** Units: **UG/L** Analysis Date: **12-Aug-2020 12:18**
Client ID: Run ID: **VOA6_366685** SeqNo: **5698844** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 39.03 | 2.0 | 40 | 0 | 97.6 | 64 - 133 | | | | |
| Carbon tetrachloride | 17.9 | 1.0 | 20 | 0 | 89.5 | 72 - 136 | | | | |
| Chlorobenzene | 19.52 | 1.0 | 20 | 0 | 97.6 | 82 - 118 | | | | |
| Chloroethane | 20.92 | 1.0 | 20 | 0 | 105 | 60 - 138 | | | | |
| Chloroform | 19.36 | 1.0 | 20 | 0 | 96.8 | 79 - 124 | | | | |
| Chloromethane | 18.39 | 1.0 | 20 | 0 | 91.9 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 19.81 | 1.0 | 20 | 0 | 99.1 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 19.67 | 1.0 | 20 | 0 | 98.3 | 75 - 124 | | | | |
| Dibromochloromethane | 18.91 | 1.0 | 20 | 0 | 94.5 | 74 - 126 | | | | |
| Dibromomethane | 19.69 | 1.0 | 20 | 0 | 98.5 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 17.79 | 1.0 | 20 | 0 | 89.0 | 32 - 152 | | | | |
| Ethylbenzene | 19.34 | 1.0 | 20 | 0 | 96.7 | 79 - 121 | | | | |
| Hexachlorobutadiene | 25.14 | 1.0 | 20 | 0 | 126 | 66 - 134 | | | | |
| Isopropylbenzene | 19.75 | 1.0 | 20 | 0 | 98.7 | 72 - 131 | | | | |
| m,p-Xylene | 38.99 | 2.0 | 40 | 0 | 97.5 | 80 - 121 | | | | |
| Methylene chloride | 19.15 | 2.0 | 20 | 0 | 95.7 | 74 - 124 | | | | |
| Naphthalene | 22.6 | 1.0 | 20 | 0 | 113 | 61 - 128 | | | | |
| n-Butylbenzene | 20.43 | 1.0 | 20 | 0 | 102 | 75 - 128 | | | | |
| n-Propylbenzene | 19.46 | 1.0 | 20 | 0 | 97.3 | 76 - 126 | | | | |
| o-Xylene | 19.46 | 1.0 | 20 | 0 | 97.3 | 78 - 122 | | | | |
| sec-Butylbenzene | 19.74 | 1.0 | 20 | 0 | 98.7 | 77 - 126 | | | | |
| Styrene | 19.53 | 1.0 | 20 | 0 | 97.6 | 78 - 123 | | | | |
| tert-Butylbenzene | 19.28 | 1.0 | 20 | 0 | 96.4 | 78 - 124 | | | | |
| Tetrachloroethene | 19.05 | 1.0 | 20 | 0 | 95.2 | 74 - 129 | | | | |
| Toluene | 19.54 | 1.0 | 20 | 0 | 97.7 | 80 - 121 | | | | |
| trans-1,2-Dichloroethene | 19.93 | 1.0 | 20 | 0 | 99.7 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 19.23 | 1.0 | 20 | 0 | 96.2 | 73 - 127 | | | | |
| Trichloroethene | 19.44 | 1.0 | 20 | 0 | 97.2 | 79 - 123 | | | | |
| Trichlorofluoromethane | 19 | 1.0 | 20 | 0 | 95.0 | 65 - 141 | | | | |
| Vinyl chloride | 19.18 | 1.0 | 20 | 0 | 95.9 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *48.6* | *1.0* | *50* | *0* | *97.2* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *47.48* | *1.0* | *50* | *0* | *95.0* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *47.24* | *1.0* | *50* | *0* | *94.5* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *48.57* | *1.0* | *50* | *0* | *97.1* | *89 - 112* | | | | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20080473-01MS** Units: **UG/L** Analysis Date: **12-Aug-2020 15:30**
Client ID: **LH18/24-SP650_081120** Run ID: **VOA6_366685** SeqNo: **5698848** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 23.24 | 1.0 | 20 | 0 | 116 | 78 - 124 | | | | |
| 1,1,1-Trichloroethane | 23.44 | 1.0 | 20 | 0 | 117 | 74 - 131 | | | | |
| 1,1,2,2-Tetrachloroethane | 25.47 | 1.0 | 20 | 0 | 127 | 71 - 121 | | | | S |
| 1,1,2-Trichloroethane | 24.09 | 1.0 | 20 | 0 | 120 | 80 - 119 | | | | S |
| 1,1-Dichloroethane | 23.82 | 1.0 | 20 | 0 | 119 | 77 - 125 | | | | |
| 1,1-Dichloroethene | 25.03 | 1.0 | 20 | 0 | 125 | 71 - 131 | | | | |
| 1,1-Dichloropropene | 24.95 | 1.0 | 20 | 0 | 125 | 78 - 125 | | | | |
| 1,2,3-Trichlorobenzene | 18.18 | 1.0 | 20 | 0 | 90.9 | 69 - 129 | | | | |
| 1,2,3-Trichloropropane | 23.78 | 1.0 | 20 | 0 | 119 | 73 - 122 | | | | |
| 1,2,4-Trichlorobenzene | 20.47 | 1.0 | 20 | 0 | 102 | 69 - 130 | | | | |
| 1,2,4-Trimethylbenzene | 26.01 | 1.0 | 20 | 0 | 130 | 76 - 124 | | | | S |
| 1,2-Dibromo-3-chloropropane | 24.45 | 1.0 | 20 | 0 | 122 | 62 - 128 | | | | |
| 1,2-Dibromoethane | 24.13 | 1.0 | 20 | 0 | 121 | 77 - 121 | | | | |
| 1,2-Dichlorobenzene | 23.79 | 1.0 | 20 | 0 | 119 | 80 - 119 | | | | |
| 1,2-Dichloroethane | 23.76 | 1.0 | 20 | 0.6973 | 115 | 73 - 128 | | | | |
| 1,2-Dichloropropane | 24.54 | 1.0 | 20 | 0 | 123 | 78 - 122 | | | | S |
| 1,3,5-Trimethylbenzene | 25.87 | 1.0 | 20 | 0 | 129 | 75 - 124 | | | | S |
| 1,3-Dichlorobenzene | 24.61 | 1.0 | 20 | 0 | 123 | 80 - 119 | | | | S |
| 1,3-Dichloropropane | 24.02 | 1.0 | 20 | 0 | 120 | 80 - 119 | | | | S |
| 1,4-Dichlorobenzene | 24.28 | 1.0 | 20 | 0 | 121 | 79 - 118 | | | | S |
| 2,2-Dichloropropane | 23.68 | 1.0 | 20 | 0 | 118 | 60 - 139 | | | | |
| 2-Butanone | 45.52 | 2.0 | 40 | 0 | 114 | 56 - 143 | | | | |
| 2-Chlorotoluene | 25.59 | 1.0 | 20 | 0 | 128 | 79 - 122 | | | | S |
| 2-Hexanone | 46.12 | 2.0 | 40 | 0 | 115 | 57 - 139 | | | | |
| 4-Chlorotoluene | 24.97 | 1.0 | 20 | 0 | 125 | 78 - 122 | | | | S |
| 4-Isopropyltoluene | 25.87 | 1.0 | 20 | 0 | 129 | 77 - 127 | | | | S |
| 4-Methyl-2-pentanone | 46.59 | 2.0 | 40 | 0 | 116 | 67 - 130 | | | | |
| Acetone | 42.88 | 2.0 | 40 | 0 | 107 | 39 - 160 | | | | |
| Benzene | 24.45 | 1.0 | 20 | 0 | 122 | 79 - 120 | | | | S |
| Bromobenzene | 23.82 | 1.0 | 20 | 0 | 119 | 80 - 120 | | | | |
| Bromochloromethane | 21.33 | 1.0 | 20 | 0 | 107 | 78 - 123 | | | | |
| Bromodichloromethane | 22.93 | 1.0 | 20 | 0 | 115 | 79 - 125 | | | | |
| Bromoform | 22.65 | 1.0 | 20 | 0 | 113 | 66 - 130 | | | | |
| Bromomethane | 25.56 | 1.0 | 20 | 0 | 128 | 53 - 141 | | | | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MS** Sample ID: **HS20080473-01MS** Units: **UG/L** Analysis Date: **12-Aug-2020 15:30**
Client ID: **LH18/24-SP650_081120** Run ID: **VOA6_366685** SeqNo: **5698848** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 47.59 | 2.0 | 40 | 0 | 119 | 64 - 133 | | | | |
| Carbon tetrachloride | 23.73 | 1.0 | 20 | 0 | 119 | 72 - 136 | | | | |
| Chlorobenzene | 24.13 | 1.0 | 20 | 0 | 121 | 82 - 118 | | | | S |
| Chloroethane | 24.85 | 1.0 | 20 | 0 | 124 | 60 - 138 | | | | |
| Chloroform | 22.64 | 1.0 | 20 | 0 | 113 | 79 - 124 | | | | |
| Chloromethane | 20.27 | 1.0 | 20 | 0 | 101 | 50 - 139 | | | | |
| cis-1,2-Dichloroethene | 40.56 | 1.0 | 20 | 17.22 | 117 | 78 - 123 | | | | |
| cis-1,3-Dichloropropene | 23.51 | 1.0 | 20 | 0 | 118 | 75 - 124 | | | | |
| Dibromochloromethane | 22.58 | 1.0 | 20 | 0 | 113 | 74 - 126 | | | | |
| Dibromomethane | 23.37 | 1.0 | 20 | 0 | 117 | 79 - 123 | | | | |
| Dichlorodifluoromethane | 20.42 | 1.0 | 20 | 0 | 102 | 32 - 152 | | | | |
| Ethylbenzene | 25.62 | 1.0 | 20 | 0 | 128 | 79 - 121 | | | | S |
| Hexachlorobutadiene | 21.22 | 1.0 | 20 | 0 | 106 | 66 - 134 | | | | |
| Isopropylbenzene | 25.76 | 1.0 | 20 | 0 | 129 | 72 - 131 | | | | |
| m,p-Xylene | 50.78 | 2.0 | 40 | 0 | 127 | 80 - 121 | | | | S |
| Methylene chloride | 22.23 | 2.0 | 20 | 0 | 111 | 74 - 124 | | | | |
| Naphthalene | 25.95 | 1.0 | 20 | 0 | 130 | 61 - 128 | | | | S |
| n-Butylbenzene | 26.22 | 1.0 | 20 | 0 | 131 | 75 - 128 | | | | S |
| n-Propylbenzene | 26.25 | 1.0 | 20 | 0 | 131 | 76 - 126 | | | | S |
| o-Xylene | 24.94 | 1.0 | 20 | 0 | 125 | 78 - 122 | | | | S |
| sec-Butylbenzene | 26.29 | 1.0 | 20 | 0 | 131 | 77 - 126 | | | | S |
| Styrene | 23.61 | 1.0 | 20 | 0 | 118 | 78 - 123 | | | | |
| tert-Butylbenzene | 26.26 | 1.0 | 20 | 0 | 131 | 78 - 124 | | | | S |
| Tetrachloroethene | 25.74 | 1.0 | 20 | 0 | 129 | 74 - 129 | | | | |
| Toluene | 25.65 | 1.0 | 20 | 0 | 128 | 80 - 121 | | | | S |
| trans-1,2-Dichloroethene | 23.72 | 1.0 | 20 | 0 | 119 | 75 - 124 | | | | |
| trans-1,3-Dichloropropene | 22.67 | 1.0 | 20 | 0 | 113 | 73 - 127 | | | | |
| Trichloroethene | 28.55 | 1.0 | 20 | 3.692 | 124 | 79 - 123 | | | | S |
| Trichlorofluoromethane | 24.02 | 1.0 | 20 | 0 | 120 | 65 - 141 | | | | |
| Vinyl chloride | 24.04 | 1.0 | 20 | 0 | 120 | 58 - 137 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *45.33* | *1.0* | *50* | *0* | *90.7* | *81 - 118* | | | | |
| *Surr: 4-Bromofluorobenzene* | *48.96* | *1.0* | *50* | *0* | *97.9* | *85 - 114* | | | | |
| *Surr: Dibromofluoromethane* | *46.65* | *1.0* | *50* | *0* | *93.3* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *52.03* | *1.0* | *50* | *0* | *104* | *89 - 112* | | | | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20080473-01MSD** Units: **UG/L** Analysis Date: **12-Aug-2020 15:54**
Client ID: **LH18/24-SP650_081120** Run ID: **VOA6_366685** SeqNo: **5698849** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 22.96 | 1.0 | 20 | 0 | 115 | 78 - 124 | 23.24 | 1.22 | 20 | |
| 1,1,1-Trichloroethane | 22.96 | 1.0 | 20 | 0 | 115 | 74 - 131 | 23.44 | 2.07 | 20 | |
| 1,1,2,2-Tetrachloroethane | 25.66 | 1.0 | 20 | 0 | 128 | 71 - 121 | 25.47 | 0.754 | 20 | S |
| 1,1,2-Trichloroethane | 24.01 | 1.0 | 20 | 0 | 120 | 80 - 119 | 24.09 | 0.345 | 20 | S |
| 1,1-Dichloroethane | 23.38 | 1.0 | 20 | 0 | 117 | 77 - 125 | 23.82 | 1.87 | 20 | |
| 1,1-Dichloroethene | 24.2 | 1.0 | 20 | 0 | 121 | 71 - 131 | 25.03 | 3.37 | 20 | |
| 1,1-Dichloropropene | 24.07 | 1.0 | 20 | 0 | 120 | 78 - 125 | 24.95 | 3.56 | 20 | |
| 1,2,3-Trichlorobenzene | 26.81 | 1.0 | 20 | 0 | 134 | 69 - 129 | 18.18 | 38.4 | 20 | SR |
| 1,2,3-Trichloropropane | 23.63 | 1.0 | 20 | 0 | 118 | 73 - 122 | 23.78 | 0.641 | 20 | |
| 1,2,4-Trichlorobenzene | 27.39 | 1.0 | 20 | 0 | 137 | 69 - 130 | 20.47 | 28.9 | 20 | SR |
| 1,2,4-Trimethylbenzene | 24.94 | 1.0 | 20 | 0 | 125 | 76 - 124 | 26.01 | 4.2 | 20 | S |
| 1,2-Dibromo-3-chloropropane | 25.54 | 1.0 | 20 | 0 | 128 | 62 - 128 | 24.45 | 4.35 | 20 | |
| 1,2-Dibromoethane | 23.93 | 1.0 | 20 | 0 | 120 | 77 - 121 | 24.13 | 0.838 | 20 | |
| 1,2-Dichlorobenzene | 23.35 | 1.0 | 20 | 0 | 117 | 80 - 119 | 23.79 | 1.88 | 20 | |
| 1,2-Dichloroethane | 24 | 1.0 | 20 | 0.6973 | 117 | 73 - 128 | 23.76 | 1.01 | 20 | |
| 1,2-Dichloropropane | 24.61 | 1.0 | 20 | 0 | 123 | 78 - 122 | 24.54 | 0.276 | 20 | S |
| 1,3,5-Trimethylbenzene | 25.14 | 1.0 | 20 | 0 | 126 | 75 - 124 | 25.87 | 2.83 | 20 | S |
| 1,3-Dichlorobenzene | 23.98 | 1.0 | 20 | 0 | 120 | 80 - 119 | 24.61 | 2.58 | 20 | S |
| 1,3-Dichloropropane | 23.93 | 1.0 | 20 | 0 | 120 | 80 - 119 | 24.02 | 0.359 | 20 | S |
| 1,4-Dichlorobenzene | 23.75 | 1.0 | 20 | 0 | 119 | 79 - 118 | 24.28 | 2.18 | 20 | S |
| 2,2-Dichloropropane | 22.82 | 1.0 | 20 | 0 | 114 | 60 - 139 | 23.68 | 3.72 | 20 | |
| 2-Butanone | 46.6 | 2.0 | 40 | 0 | 116 | 56 - 143 | 45.52 | 2.34 | 20 | |
| 2-Chlorotoluene | 24.74 | 1.0 | 20 | 0 | 124 | 79 - 122 | 25.59 | 3.39 | 20 | S |
| 2-Hexanone | 46.47 | 2.0 | 40 | 0 | 116 | 57 - 139 | 46.12 | 0.768 | 20 | |
| 4-Chlorotoluene | 24.46 | 1.0 | 20 | 0 | 122 | 78 - 122 | 24.97 | 2.06 | 20 | S |
| 4-Isopropyltoluene | 25.48 | 1.0 | 20 | 0 | 127 | 77 - 127 | 25.87 | 1.53 | 20 | S |
| 4-Methyl-2-pentanone | 46.55 | 2.0 | 40 | 0 | 116 | 67 - 130 | 46.59 | 0.0845 | 20 | |
| Acetone | 43.95 | 2.0 | 40 | 0 | 110 | 39 - 160 | 42.88 | 2.48 | 20 | |
| Benzene | 23.74 | 1.0 | 20 | 0 | 119 | 79 - 120 | 24.45 | 2.95 | 20 | |
| Bromobenzene | 23.26 | 1.0 | 20 | 0 | 116 | 80 - 120 | 23.82 | 2.41 | 20 | |
| Bromochloromethane | 21.58 | 1.0 | 20 | 0 | 108 | 78 - 123 | 21.33 | 1.14 | 20 | |
| Bromodichloromethane | 22.4 | 1.0 | 20 | 0 | 112 | 79 - 125 | 22.93 | 2.33 | 20 | |
| Bromoform | 22.16 | 1.0 | 20 | 0 | 111 | 66 - 130 | 22.65 | 2.17 | 20 | |
| Bromomethane | 24.07 | 1.0 | 20 | 0 | 120 | 53 - 141 | 25.56 | 5.99 | 20 | |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID:** R366685 ( 0 ) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

**MSD** Sample ID: **HS20080473-01MSD** Units: **UG/L** Analysis Date: **12-Aug-2020 15:54**
Client ID: **LH18/24-SP650_081120** Run ID: **VOA6_366685** SeqNo: **5698849** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 45.91 | 2.0 | 40 | 0 | 115 | 64 - 133 | 47.59 | 3.6 | 20 | |
| Carbon tetrachloride | 23.01 | 1.0 | 20 | 0 | 115 | 72 - 136 | 23.73 | 3.06 | 20 | |
| Chlorobenzene | 23.39 | 1.0 | 20 | 0 | 117 | 82 - 118 | 24.13 | 3.09 | 20 | |
| Chloroethane | 22.66 | 1.0 | 20 | 0 | 113 | 60 - 138 | 24.85 | 9.23 | 20 | |
| Chloroform | 22.39 | 1.0 | 20 | 0 | 112 | 79 - 124 | 22.64 | 1.12 | 20 | |
| Chloromethane | 20.66 | 1.0 | 20 | 0 | 103 | 50 - 139 | 20.27 | 1.88 | 20 | |
| cis-1,2-Dichloroethene | 39.43 | 1.0 | 20 | 17.22 | 111 | 78 - 123 | 40.56 | 2.83 | 20 | |
| cis-1,3-Dichloropropene | 22.98 | 1.0 | 20 | 0 | 115 | 75 - 124 | 23.51 | 2.3 | 20 | |
| Dibromochloromethane | 22.64 | 1.0 | 20 | 0 | 113 | 74 - 126 | 22.58 | 0.272 | 20 | |
| Dibromomethane | 23.32 | 1.0 | 20 | 0 | 117 | 79 - 123 | 23.37 | 0.242 | 20 | |
| Dichlorodifluoromethane | 19.35 | 1.0 | 20 | 0 | 96.7 | 32 - 152 | 20.42 | 5.4 | 20 | |
| Ethylbenzene | 23.87 | 1.0 | 20 | 0 | 119 | 79 - 121 | 25.62 | 7.08 | 20 | |
| Hexachlorobutadiene | 25.54 | 1.0 | 20 | 0 | 128 | 66 - 134 | 21.22 | 18.5 | 20 | |
| Isopropylbenzene | 24.81 | 1.0 | 20 | 0 | 124 | 72 - 131 | 25.76 | 3.79 | 20 | |
| m,p-Xylene | 48.08 | 2.0 | 40 | 0 | 120 | 80 - 121 | 50.78 | 5.46 | 20 | |
| Methylene chloride | 21.58 | 2.0 | 20 | 0 | 108 | 74 - 124 | 22.23 | 2.97 | 20 | |
| Naphthalene | 29.09 | 1.0 | 20 | 0 | 145 | 61 - 128 | 25.95 | 11.4 | 20 | S |
| n-Butylbenzene | 25.84 | 1.0 | 20 | 0 | 129 | 75 - 128 | 26.22 | 1.47 | 20 | S |
| n-Propylbenzene | 25.56 | 1.0 | 20 | 0 | 128 | 76 - 126 | 26.25 | 2.66 | 20 | S |
| o-Xylene | 24.06 | 1.0 | 20 | 0 | 120 | 78 - 122 | 24.94 | 3.61 | 20 | |
| sec-Butylbenzene | 25.71 | 1.0 | 20 | 0 | 129 | 77 - 126 | 26.29 | 2.2 | 20 | S |
| Styrene | 23.34 | 1.0 | 20 | 0 | 117 | 78 - 123 | 23.61 | 1.16 | 20 | |
| tert-Butylbenzene | 25.56 | 1.0 | 20 | 0 | 128 | 78 - 124 | 26.26 | 2.71 | 20 | S |
| Tetrachloroethene | 24.7 | 1.0 | 20 | 0 | 124 | 74 - 129 | 25.74 | 4.12 | 20 | |
| Toluene | 24.31 | 1.0 | 20 | 0 | 122 | 80 - 121 | 25.65 | 5.33 | 20 | S |
| trans-1,2-Dichloroethene | 23.18 | 1.0 | 20 | 0 | 116 | 75 - 124 | 23.72 | 2.31 | 20 | |
| trans-1,3-Dichloropropene | 22.32 | 1.0 | 20 | 0 | 112 | 73 - 127 | 22.67 | 1.54 | 20 | |
| Trichloroethene | 27.22 | 1.0 | 20 | 3.692 | 118 | 79 - 123 | 28.55 | 4.77 | 20 | |
| Trichlorofluoromethane | 23.23 | 1.0 | 20 | 0 | 116 | 65 - 141 | 24.02 | 3.33 | 20 | |
| Vinyl chloride | 22.83 | 1.0 | 20 | 0 | 114 | 58 - 137 | 24.04 | 5.16 | 20 | |
| *Surr: 1,2-Dichloroethane-d4* | *44.9* | *1.0* | *50* | *0* | *89.8* | *81 - 118* | *45.33* | *0.971* | *20* | |
| *Surr: 4-Bromofluorobenzene* | *49.18* | *1.0* | *50* | *0* | *98.4* | *85 - 114* | *48.96* | *0.468* | *20* | |
| *Surr: Dibromofluoromethane* | *46.72* | *1.0* | *50* | *0* | *93.4* | *80 - 119* | *46.65* | *0.147* | *20* | |
| *Surr: Toluene-d8* | *52.05* | *1.0* | *50* | *0* | *104* | *89 - 112* | *52.03* | *0.0462* | *20* | |

**ALS Houston, US** Date: 28-Aug-20

| | |
|---|---|
| **Client:** | Bhate Environmental Associates, Inc. |
| **Project:** | Longhorn GW Treatment Plant Monthly Effluent Samples |
| **WorkOrder:** | HS20080473 |

**QC BATCH REPORT**

| | | | | | |
|---|---|---|---|---|---|
| **Batch ID:** | **R366685 ( 0 )** | **Instrument:** | **VOA6** | **Method:** | **VOLATILES ORGANICS BY METHOD 8260C** |

**The following samples were analyzed in this batch:** HS20080473-01 HS20080473-03

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** HS20080473

**QC BATCH REPORT**

**Batch ID: R366666 ( 0 )** **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

**MBLK** Sample ID: **MBLK-R366666** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: Run ID: **UV-2450_366666** SeqNo: **5698362** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.0100 | 0.0100 | | | | | | | | U |

**LCS** Sample ID: **LCS-R366666** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: Run ID: **UV-2450_366666** SeqNo: **5698361** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.249 | 0.0100 | 0.25 | 0 | 99.6 | 90 - 111 | | | | |

**MS** Sample ID: **HS20080473-01MS** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: **LH18/24-SP650_081120** Run ID: **UV-2450_366666** SeqNo: **5698364** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.251 | 0.0100 | 0.25 | 0 | 100 | 90 - 111 | | | | |

**MSD** Sample ID: **HS20080473-01MSD** Units: **mg/L** Analysis Date: **12-Aug-2020 13:15**
Client ID: **LH18/24-SP650_081120** Run ID: **UV-2450_366666** SeqNo: **5698363** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium, Hexavalent | 0.253 | 0.0100 | 0.25 | 0 | 101 | 90 - 111 | 0.251 | 0.794 | 20 | |

**The following samples were analyzed in this batch:** HS20080473-01

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**WorkOrder:** **HS20080473**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| California | 2919, 2020-2021 | 30-Apr-2021 |
| Dept of Defense | ANAB L2231 V010 | 22-Dec-2021 |
| Florida | E87611-30-07/01/2020 | 30-Jun-2021 |
| Illinois | 2000322020-4 | 09-May-2021 |
| Kentucky | 123043, 2020-2021 | 30-Apr-2021 |
| Louisiana | 03087, 2020-2021 | 30-Jun-2021 |
| Maryland | 343, 2019-2020 | 30-Sep-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| North Dakota | R-193 2020-2021 | 30-Apr-2021 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

**ALS Houston, US** Date: 28-Aug-20

**Client:** Bhate Environmental Associates, Inc.
**Project:** Longhorn GW Treatment Plant Monthly Effluent Samples
**Work Order:** HS20080473

**SAMPLE TRACKING**

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---|---|---|---|---|---|
| HS20080473-01 | LH18/24-SP650_081120 | Login | 8/12/2020 12:13:06 PM | JRM | EXT068 |
| HS20080473-01 | LH18/24-SP650_081120 | Login | 8/12/2020 12:13:06 PM | JRM | WET024 |
| HS20080473-01 | LH18/24-SP650_081120 | Login | 8/12/2020 12:13:06 PM | JRM | MET044 |
| HS20080473-01 | LH18/24-SP650_081120 | Login | 8/12/2020 12:13:06 PM | JRM | VOA184 |
| HS20080473-02 | LH18/24-SP650_081120_BIX | Login | 8/12/2020 12:13:06 PM | JRM | Sub |
| HS20080473-03 | Trip Blank | Login | 8/12/2020 12:13:06 PM | JRM | VOA184 |

**ALS Houston, US** Date: 28-Aug-20

## Sample Receipt Checklist

**Work Order ID:** HS20080473 **Date/Time Received:** 12-Aug-2020 10:25

**Client Name:** Bhate Environmental **Received by:** Paresh M. Giga

| **Completed By:** | /S/ Jared R. Makan | 12-Aug-2020 12:28 | **Reviewed by:** | /S/ RJ Modashia | 12-Aug-2020 16:04 |
|---|---|---|---|---|---|
| | eSignature | Date/Time | | eSignature | Date/Time |

Matrices: **Water** Carrier name: **ALS Courier**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Samplers name present on COC? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |

| | | |
|---|---|---|
| Temperature(s)/Thermometer(s): | 2.8°C/2.8°C UC/C | IR31 |
| Cooler(s)/Kit(s): | 44977 | |
| Date/Time sample(s) sent to storage: | 08/12/2020 12:30 | |

| | | | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ |
| pH adjusted? | Yes ☐ | No ☑ | N/A ☐ |
| pH adjusted by: | | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

# CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 – 5656 ATTN: RJ Modashia



Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
**GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES**

Prepared By:
Scott Beesinger

P.O. Number

| Field Sample I.D. | Sample Matrix | Date / Time | MS / MSD | No. OF CONTAINERS | Analyses: VOLATILES | SILVER, SELENIUM, LEAD, BARIUM | HEXAVALENT CHROMIUM | 1, 4 - DIOXANE | PERCHLORATE | | | | | | Remarks (Preservatives, etc.) | Lab I.D.# |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LH18/24-SP650_081120 | Water | 08/11/20 / 14:00 | | 3 | X | | | | | | | | | | HCL | |
| LH18/24-SP650_081120 | Water | 08/11/20 / 14:00 | | 2 | | | X | X | | | | | | | NONE | |
| LH18/24-SP650_081120_BIX | Water | 08/11/20 / 14:00 | | 1 | | | | | X | | | | | | NONE | |
| LH18/24-SP650_081120 | Water | 08/11/20 / 14:00 | | 1 | | X | | | | | | | | | HNO3 | |
| Trip Blank | Water | 08/11/20 | | 2 | X | | | | | | | | | | HCL | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Additional Remarks: **Standard TAT**

| Relinquished By: | Date | Time | Received By: | Date | Time | Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott Beesinger | 08/11/20 | 14:30 | | 8/12/2020 | 10:25 | | | | | | |

For Lab Use Only

| Received At Lab By: | Date | Time | Airbill No. | Opened By: | Date | Time | Temp of Container | Seal No. | Condition |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

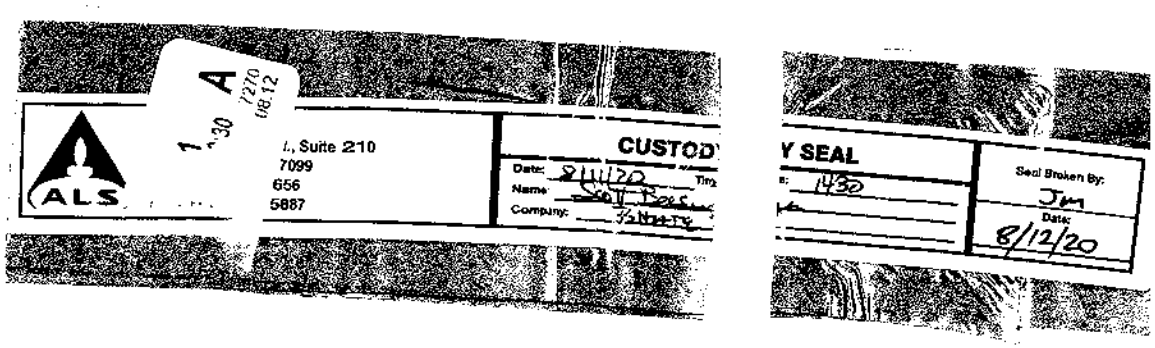
Remarks:

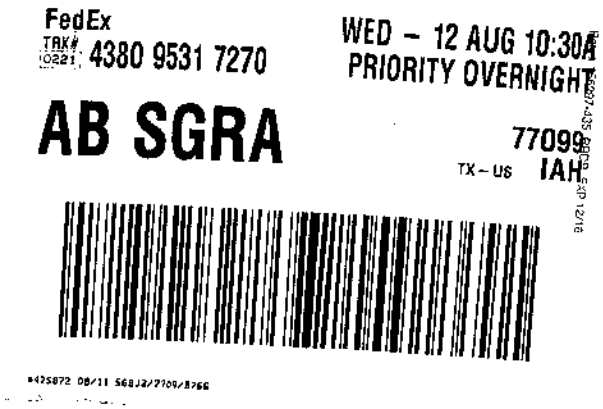
**HS20080473**

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Effluent Sam

4UP77 VIC. 2-8° +31 cf 6.0

(Word) S:\M-ces\Forms\Chain of Custody - BiWeekly


ALS
., Suite 210
7099
656
5887
CUSTOD
Date:
Name:
Company:
Y SEAL
Seal Broken By:
Jm
Date:
8/12/20


FedEx
TRK# 0221 4380 9531 7270
WED – 12 AUG 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX – US IAH

August 27, 2020 Service Request No:E2000739

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

**Laboratory Results for: HS20080473**

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory August 13, 2020
For your reference, these analyses have been assigned our service request number **E2000739.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

# Certificate of Analysis

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Environmental**

| | | | |
|---|---|---|---|
| **Client:** | ALS Houston | **Service Request No.:** | E2000739 |
| **Project:** | HS20080473 | **Date Received:** | 08/13/20 |
| **Sample Matrix:** | W | | |

## CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 08/13/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

### Data Validation Notes and Discussion

**Precision and Accuracy:**

EQ2000359: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The MS and MSD were performed on unrelated samples. The LCS and LCSD recovery passed.

DOD Certification is held for the method/matrix/analytes provided in this report.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:**E2000739

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| E2000739-001 | LH18/24-SP650_081120_BIX | 8/11/2020 | 1400 |

# Service Request Summary

**Folder #:** **E2000739**
Client Name: ALS Environmental - US
Project Name: HS20080473
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/13/20
Internal Due Date: 8/26/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080473
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 3C
**Pressure Gas:**

| Lab Samp No. | Client Samp No | Matrix | Collected | HOUSTON ClO4 DOD/6850 |
|---|---|---|---|---|
| E2000739-001 | LH18/24-SP650_081120_BIX | Ground Water | 08/11/20 1400 | **IV** |

# Service Request Summary

**Folder #:** **E2000739**
Client Name: ALS Environmental - US
Project Name: HS20080473
Project Number:

**Report To:** RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 08/13/20
Internal Due Date: 8/26/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20080473
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
**Location:** EHRMS-WIC 3C
**Pressure Gas:**

## Test Comments:

| Group | Test/Method | Samples | Comments |
|---|---|---|---|
| Semivoa GCMS | ClO4 DOD/6850 | 1 | Level II due 8/26,level IV 9/2 |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| + | Possible Tedlar bag artifact. |
| A | TIC is a suspected aldol-condensation product |
| B | Analyte found in the associated method blank as well as in the sample. |
| BC | Reported results are not blank corrected. |
| BH | The back section of the tube yielded higher results than the front. |
| BT | Results indicated possible breakthrough; back section >=10% front section. |
| C | Result identification confirmed. |
| D | Compound identified in an analysis at a secondary dilution factor |
| D | Spike was diluted out |
| DE | Reported results are corrected for desorption efficiency. |
| E | Estimated value. Concentration above calibration range |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| H1 | Sample analysis performed past holding time. See case narrative. |
| H2 | Initial analysis within holding time. Reanalysis for the required dilution was past holding time. |
| H3 | Sample was received and analyzed past holding time. |
| H4 | Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative. |
| I | Internal standard not within the specified limits. See case narrative. |
| J | Estimated Value. Concentration found below MRL. |
| K | A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate. |
| K | Analyte was detected above the method reporting limit prior to normalization. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| L1 | Laboratory control sample recovery outside the specified limits; results may be biased high. |
| L2 | Laboratory control sample recovery outside the specified limits; results may be biased low. |
| L3 | Laboratory control sample recovery outside the specified limits. |
| M | Matrix interference; results may be biased high. |
| M | The duplicate injection precision not met. |
| M1 | Matrix interference due to coelution with a non-target compound; results may be biased high. |
| N | Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |

# Data Qualifiers

## Lab Standard

| | |
|---|---|
| P | Indicates chlorodiphenyl ether interference present at the retention time of the target compound. |
| P | Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns |
| Q | Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria. |
| R | Duplicate Precision not met. |
| R1 | Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated. |
| S | Surrogate recovery not within specified limits. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| T | Analyte is a tentatively identified compound, result is estimated. |
| U | Compound was analyzed for, but was not detected (ND). |
| V1 | The continuing calibration verification standard was outside (biased high) the specified limits for this compound. |
| V2 | The continuing calibration verification standard was outside (biased low) the specified limits for this compound. |
| W | Result quantified, but the corresponding peak was detected outside the generated retention time window. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| X | See case narrative. |
| Y | Recovery outside limits |
| Y | The chromatogram resembles a petroleum product but does not match the calibration standard. |
| Z | The chromatogram does not resemble a petroleum product. |
| i | The MRL/MDL has been elevated due to a matrix interference. |

# ALS Laboratory Group

**Acronyms**

| | |
|---|---|
| Cal | Calibration |
| Conc | CONCentration |
| Dioxin(s) | Polychlorinated dibenzo-p-dioxin(s) |
| EDL | Estimated Detection Limit |
| EMPC | Estimated Maximum Possible Concentration |
| Flags | Data qualifiers |
| Furan(s) | Polychlorinated dibenzofuran(s) |
| g | Grams |
| ICAL | Initial CALibration |
| ID | IDentifier |
| Ions | Masses monitored for the analyte during data acquisition |
| L | Liter (s) |
| LCS | Laboratory Control Sample |
| DLCS | Duplicate Laboratory Control Sample |
| MB | Method Blank |
| MCL | Method Calibration Limit |
| MDL | Method Detection Limit |
| mL | Milliliters |
| MS | Matrix Spiked sample |
| DMS | Duplicate Matrix Spiked sample |
| NO | Number of peaks meeting all identification criteria |
| PCDD(s) | Polychlorinated dibenzo-p-dioxin(s) |
| PCDF(s) | Polychlorinated dibenzofuran(s) |
| ppb | Parts per billion |
| ppm | Parts per million |
| ppq | Parts per quadrillion |
| ppt | Parts per trillion |
| QA | Quality Assurance |
| QC | Quality Control |
| Ratio | Ratio of areas from monitored ions for an analyte |
| % Rec. | Percent recovery |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RT | Retention Time |
| SDG | Sample Delivery Group |
| S/N | Signal-to-noise ratio |
| TEF | Toxicity Equivalence Factor |
| TEQ | Toxicity Equivalence Quotient |

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ALS Environmental

## State Certifications, Accreditations, and Licenses

| Agency | Number | Expire Date |
|---|---|---|
| American Association for Laboratory Accreditation | 2897.01 2020 | 11/30/2021 |
| Arkansas Department of Environmental Quality | 20-030-0 | 3/26/2021 |
| Department of Defense | A2LA 2897.01 | 11/30/2021 |
| Hawaii Department of Health | 2020 | 4/30/2021 |
| Illinois Environmental Protection Agency | 2000322020-4 | 5/9/2021 |
| Louisiana Department of Health and Hospitals | LA028-2020 | 12/31/2020 |
| Maine Department of Health and Human Services | 2020016 | 6/5/2022 |
| Minnesota Department of Health | 1785988 | 12/31/2020 |
| Nebraska Department of Health and Human Services | NE-OS-25-13 (2020) | 4/30/2021 |
| Nevada Department of Concervation and Natural Resources | TX026932021-1 | 7/31/2021 |
| New Hampshire Environmental Laboratory Accreditation Program | 209420 | 4/24/2021 |
| New York Department of Health | 11707 | 3/31/2021 |
| Oklahoma Department of Environmental Quality | 2019-067 | 8/31/2020 |
| Tennessee Department of Environment and Concervation | 04016-2020 | 4/30/2021 |
| Texas Commision on Environmental Quality | T104704231-20-26 | 4/30/2021 |
| United States Department of Agriculture | P330-19-00299 | 10/10/2022 |
| Washington Department of Health | C819 | 11/14/2020 |



ALS

# Chain of Custody

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

E2000739 5
ALS Laboratory Group
HS20080473

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

# Subcontract Chain of Custody

**SAMPLING STATE:** **Dept of Defense**

**COC ID:** **14487**

**SUBCONTRACT TO:**

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

**Phone:** +1 281 530 5656

**CUSTOMER INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | RJ Modashia |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Email:** | RJ.Modashia@alsglobal.com |
| **Alternate Contact:** | Jumoke M. Lawal |
| **Email:** | jumoke.lawal@alsglobal.com |

**INVOICE INFORMATION:**

| | |
|---|---|
| **Company:** | ALS Houston |
| **Contact:** | Accounts Payable |
| **Address:** | 10450 Stancliff Rd, Ste 210 |
| **Phone:** | +1 281 530 5656 |
| **Reference:** | HS20080473 |
| **TSR:** | Danielle Winnings |

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| 1. | **HS20080473-02** | **LH18/24-SP650_081120_BIX** | **Water** | **11 Aug 2020 14:00** |
| | SUB_Perch-6850 | | | 26 Aug 2020 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** DOD IV (DoD Data Package)

Relinquished By: J. Mulcahy Date/Time:

Received By: Date/Time: 8/17/20 1746

Cooler ID(s): Temperature(s):

00991706

ALS Environmental

# Cooler Receipt Form

Project Chemist CC

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 8/13/12c Initials: JM Date/Time Logged in: 8/13/12c Initials CC

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No — If yes, how many and where?
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

| Cooler Tracking Number | COC ID | Date Opened | Time Opened | Opened By | Temp. °C | Temp Blank? |
|---|---|---|---|---|---|---|
| – | | 8/13/12c | 1346 | CC | 1.9 | ☒ |
| | | | | | | ☐ |
| | | | | | | ☐ |
| | | | | | | ☐ |

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000739 5
ALS Laboratory Group
HS20080473

10450 Stancliff Rd., Suite 210
Houston, TX 77099
**T:** +1 713 266 1599
**F:** +1 713 266 1599
**www.alsglobal.com**

# SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

**Cooler Custody Seals (desirable, mandatory if specified in SAP):**

- ✓ Intact on outside of cooler, signed and dated

**Chain-of-Custody (COC) documentation (mandatory):**

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

**Sample Integrity (mandatory):**

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

**Temperature Requirement (varies by sample matrix):**

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

# Preparation Information Benchsheets

**ALS Environmental - Houston HRMS**
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

# *Preparation Information Benchsheet*

**Prep Run#:** 364168 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
**Team:** Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 8/24/20 09:31

| # | Lab Code | Client ID | B# | Method /Test | pH | Cl | Matrix | Amt. Ext. | Sample Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | E2000716-001 | LH18/24-SP650_080520-BIX | .01 | 6850/ClO4 DOD | | | Water | 10mL | |
| 2 | E2000739-001 | LH18/24-SP650_081120_BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 3 | E2000740-001 | LH18/24-SP140_081120 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 4 | E2000741-001 | LH18/24-SP650_081120_BIX | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 5 | E2000742-001 | LHSMW01-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 6 | E2000742-002 | 04WW04-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 7 | E2000742-003 | 04WW08-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 8 | E2000742-004 | 04WW08-200810-FD | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 9 | E2000742-005 | 04WW02-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 10 | E2000742-006 | 04WW06-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 11 | E2000742-007 | LHSMW02-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 12 | E2000742-008 | 04WW11-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 13 | E2000742-009 | 04WW01-200810 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 14 | E2000742-010 | 04WW05-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 15 | E2000742-011 | 04WW09-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 16 | E2000742-012 | 04WW10-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 17 | E2000742-013 | 04WW07-200811 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 18 | E2000742-014 | 04WW07-200811-FD | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 19 | E2000759-001 | 16WW58-200817 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 20 | E2000759-002 | 16WW57-200817 | .01 | 6850/ClO4 DOD | | | Ground Water | 10mL | |
| 21 | EQ2000359-01 | MB | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 22 | EQ2000359-02 | LCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 23 | EQ2000359-03 | DLCS | | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 24 | EQ2000359-04 | 04WW10-200811 MS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 25 | EQ2000359-05 | 04WW10-200811 DMS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 26 | EQ2000359-06 | 16WW57-200817 MS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |
| 27 | EQ2000359-07 | 16WW57-200817 DMS | .01 | 6850/ClO4 DOD | | | Liquid | 10mL | |

**Spiking Solutions**

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E2000716-001 | 100.00µL | E2000739-001 | 100.00µL | E2000740-001 | 100.00µL | E2000741-001 | 100.00µL | E2000742-001 | 100.00µL | E2000742-002 | 100.00µL |
| E2000742-003 | 100.00µL | E2000742-004 | 100.00µL | E2000742-005 | 100.00µL | E2000742-006 | 100.00µL | E2000742-007 | 100.00µL | E2000742-008 | 100.00µL |
| E2000742-009 | 100.00µL | E2000742-010 | 100.00µL | E2000742-011 | 100.00µL | E2000742-012 | 100.00µL | E2000742-013 | 100.00µL | E2000742-014 | 100.00µL |
| E2000759-001 | 100.00µL | E2000759-002 | 100.00µL | EQ2000359-01 | 100.00µL | EQ2000359-02 | 100.00µL | EQ2000359-03 | 100.00µL | EQ2000359-04 | 100.00µL |

# *Preparation Information Benchsheet*

**Prep Run#:** 364168
**Team:** Semivoa GCMS/GRIVERA
**Prep WorkFlow:** GenExt28Day
**Prep Method:** Method
**Status:** Prepped
**Prep Date/Time:** 8/24/20 09:31

EQ2000359-05 100.00µL EQ2000359-06 100.00µL EQ2000359-07 100.00µL

| Name: | Perchlorate Intermediate Stock1 | Inventory ID | 209764 | Logbook Ref: | Perchlorate Int. Stock1 51820 | Expires On: | 11/18/2020 |
|---|---|---|---|---|---|---|---|

EQ2000359-02 1.00µL EQ2000359-03 1.00µL EQ2000359-04 1.00µL EQ2000359-05 1.00µL EQ2000359-06 1.00µL EQ2000359-07 1.00µL

## Preparation Steps

Step: Preparation
Started: 8/24/20 09:31
Finished: 8/25/20 17:54
By: GRIVERA
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

# Analytical Results

**ALS Environmental - Houston HRMS**
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**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | 8/11/20 1400 |
| **Sample Matrix:** | Ground Water | **Date Received:** | 8/13/20 |
| **Sample Name:** | LH18/24-SP650_081120_BIX | **Units:** | µg/L |
| **Lab Code:** | E2000739-001 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.256** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 16:23 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-01 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | ND | U | 0.100 | 0.0500 | 0.0250 | 1 | 8/24/20 | 8/25/20 18:56 | 364168 | 692783 | |

# Accuracy & Precision

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10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473
**Sample Matrix:** Ground Water

**Service Request:** E2000739
**Date Analyzed:** 8/26/20

## Lab Control Sample Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**Prep Method:** Method

**Units:** µg/L
**Basis:** NA

**Extraction Lot:** 364168

| | Lab Control Sample EQ2000359-02 | | | Duplicate Lab Control Sample EQ2000359-03 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.108 | 0.100 | 108 | 0.100 | 0.100 | 100 | 84 - 119 | 8 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-02 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.108** | | 0.100 | 0.0500 | 0.0250 | 1 | 8/24/20 | 8/26/20 15:35 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-03 | **Basis:** | NA |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.100** | | 0.100 | 0.0500 | 0.0250 | 1 | 8/24/20 | 8/26/20 15:27 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| | | **Date Analyzed:** | 8/26/20 |

## Matrix Spike Summary

## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | E2000742-012 | **Basis:** | NA |

**Analytical Method:** 6850
**Prep Method:** Method

| | | Batch QCMS Matrix Spike EQ2000359-04 | | | | Batch QCDMS Duplicate Matrix Spike EQ2000359-05 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.339 | 0.459 | 0.100 | 120 | * | 0.428 | 0.100 | 89 | 84 - 119 | 7 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-04 | **Basis:** | NA |
| **Run Type:** | Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.459** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 15:43 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-05 | **Basis:** | NA |
| **Run Type:** | Duplicate Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.428** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 15:51 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| | | **Date Analyzed:** | 8/26/20 |

## Matrix Spike Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

| | | | |
|---|---|---|---|
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | E2000759-002 | **Basis:** | NA |

**Analytical Method:** 6850
**Prep Method:** Method

| | | Batch QCMS Matrix Spike EQ2000359-06 | | | | Batch QCDMS Duplicate Matrix Spike EQ2000359-07 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | | **Result** | **Spike Amount** | **% Rec** | | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perchlorate | 0.454 | 0.530 | 0.100 | 76 | # | 0.558 | 0.100 | 105 | # | 84 - 119 | 5 | 15 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-06 | **Basis:** | NA |
| **Run Type:** | Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.530** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 15:59 | 364168 | 692775 | |

**ALS Group USA, Corp. dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Collected:** | NA |
| **Sample Matrix:** | Ground Water | **Date Received:** | NA |
| **Sample Name:** | Batch QC | **Units:** | µg/L |
| **Lab Code:** | EQ2000359-07 | **Basis:** | NA |
| **Run Type:** | Duplicate Matrix Spike | | |

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

**Analytical Method:** 6850
**Prep Method:** Method

| Analyte Name | Result | Q | LOQ | LOD | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Analysis Lot | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | **0.558** | J | 1.00 | 0.500 | 0.250 | 10 | 8/24/20 | 8/26/20 16:07 | 364168 | 692775 | |

# Initial Calibration

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200819**

ALS Environmental

**ICAL Date:** 7/19/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000022

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200819_005 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 | 8/19/2020 10:42 |
| 2 | PERCHLORATE2 | | 20200819_006 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 | 8/19/2020 10:50 |
| 3 | PERCHLORATE3 | | 20200819_007 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 | 8/19/2020 10:58 |
| 4 | PERCHLORATE4 | | 20200819_008 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 | 8/19/2020 11:06 |
| 5 | PERCHLORATE5 | | 20200819_009 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 | 8/19/2020 11:14 |
| 6 | PERCHLORATE6 | | 20200819_010 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 | 8/19/2020 11:22 |
| 7 | PERCHLORATE7 | | 20200819_011 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 11:30 |
| 8 | PERCHLORATE8 | | 20200819_012 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 | 8/19/2020 11:38 |
| 9 | PERCHLORATE9 | | 20200819_013 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 | 8/19/2020 11:45 |
| 10 | PERCHLORATE10 | | 20200819_014 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 | 8/19/2020 11:53 |
| 11 | PERCHLORATEICV | | 20200819_016 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 | 8/19/2020 12:09 |
| 12 | LODV | | 20200819_017 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:17 |
| 13 | EQ2000337-01 | | 20200819_019 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:38 |
| 14 | EQ2000337-02 | | 20200819_020 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:46 |
| 15 | EQ2000337-03 | | 20200819_021 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 12:53 |
| 16 | E2000723-001 | | 20200819_022 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 13:01 |
| 17 | PERCHLORATE7 | | 20200819_023 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 13:09 |
| 18 | E2000680-002X10 | | 20200819_024 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:17 |
| 19 | E2000680-004X2 | | 20200819_025 | Perchlorate6850b.lcm | 2x | ☒ | | 8/19/2020 13:25 |
| 20 | E2000680-007X10 | | 20200819_026 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:33 |
| 21 | E2000680-009X10 | | 20200819_027 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:41 |
| 22 | E2000680-010X10 | | 20200819_028 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:49 |
| 23 | E2000680-011X10 | | 20200819_029 | Perchlorate6850b.lcm | 10x | ☒ | | 8/19/2020 13:57 |
| 24 | EQ2000327-01 | | 20200819_030 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:04 |
| 25 | EQ2000327-02 | | 20200819_031 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:12 |
| 26 | EQ2000327-03 | | 20200819_033 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:21 |
| 27 | PERCHLORATE7 | | 20200819_034 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 14:29 |
| 28 | E2000735-001 | | 20200819_035 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:37 |
| 29 | E2000735-002 | | 20200819_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:45 |
| 30 | E2000735-003 | | 20200819_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 14:53 |
| 31 | E2000735-004 | | 20200819_038 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:01 |
| 32 | E2000735-005 | | 20200819_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:09 |
| 33 | E2000735-006 | | 20200819_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:16 |
| 34 | E2000735-007 | | 20200819_041 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:24 |
| 35 | E2000735-008 | | 20200819_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:32 |
| 36 | E2000735-009 | | 20200819_043 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 15:44 |
| 37 | PERCHLORATE7 | | 20200819_044 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 15:52 |
| 38 | E2000735-010 | | 20200819_045 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:00 |
| 39 | E2000735-011 | | 20200819_046 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:08 |
| 40 | E2000735-013 | | 20200819_047 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:16 |
| 41 | E2000735-014 | | 20200819_048 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:24 |
| 42 | E2000735-015 | | 20200819_049 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:32 |
| 43 | E2000735-016 | | 20200819_050 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:40 |
| 44 | E2000735-017 | | 20200819_051 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:47 |
| 45 | E2000735-018 | | 20200819_052 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 16:55 |
| 46 | E2000735-019 | | 20200819_053 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:03 |
| 47 | PERCHLORATE7 | | 20200819_054 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 17:11 |
| 48 | EQ2000339-01 | | 20200819_055 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:19 |
| 49 | EQ2000339-02 | | 20200819_056 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:27 |
| 50 | EQ2000339-03 | | 20200819_057 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:35 |
| 51 | E2000712-001 | | 20200819_058 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:43 |
| 52 | E2000712-002 | | 20200819_059 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:51 |
| 53 | E2000712-003 | | 20200819_060 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 17:59 |
| 54 | IB | | 20200819_061 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:08 |
| 55 | IB | | 20200819_062 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:16 |
| 56 | IB | | 20200819_063 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:24 |
| 57 | IB | | 20200819_064 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:32 |
| 58 | PERCHLORATE7 | | 20200819_065 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 18:40 |
| 59 | E2000712-004 | | 20200819_066 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:48 |
| 60 | E2000712-005 | | 20200819_067 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 18:56 |
| 61 | E2000712-006 | | 20200819_068 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:04 |

**20200819**

ALS Environmental

**ICAL Date:** 7/19/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000022

**1st Review:** Kneir
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 62 | E2000712-007 | | 20200819_069 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:12 |
| 63 | E2000694-012 | | 20200819_070 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:19 |
| 64 | E2000694-012MS | | 20200819_071 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:27 |
| 65 | E2000694-012MSD | | 20200819_072 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:35 |
| 66 | E2000711-001 | | 20200819_073 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:43 |
| 67 | E2000711-002 | | 20200819_074 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:51 |
| 68 | E2000724-001 | | 20200819_075 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 19:59 |
| 69 | PERCHLORATE7 | | 20200819_076 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 20:07 |
| 70 | E2000724-002 | | 20200819_077 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:15 |
| 71 | E2000724-003 | | 20200819_078 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:22 |
| 72 | E2000724-004 | | 20200819_079 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:30 |
| 73 | E2000728-001 | | 20200819_080 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:38 |
| 74 | E2000728-002 | | 20200819_081 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:46 |
| 75 | E2000729-001 | | 20200819_082 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 20:54 |
| 76 | R2006493-001 | | 20200819_083 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:02 |
| 77 | R2006493-003 | | 20200819_084 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:10 |
| 78 | R2006493-005 | | 20200819_085 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:18 |
| 79 | R2006493-007 | | 20200819_086 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:26 |
| 80 | PERCHLORATE7 | | 20200819_087 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 21:33 |
| 81 | R2006493-009 | | 20200819_088 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:41 |
| 82 | R2006493-011 | | 20200819_089 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:49 |
| 83 | R2006493-013 | | 20200819_090 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 21:57 |
| 84 | R2006493-015 | | 20200819_091 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:05 |
| 85 | PERCHLORATE7 | | 20200819_092 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 22:13 |
| 86 | EQ2000338-01 | | 20200819_093 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:21 |
| 87 | EQ2000338-02 | | 20200819_094 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:29 |
| 88 | EQ2000338-03 | | 20200819_095 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:37 |
| 89 | EQ2000338-04 | | 20200819_096 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:44 |
| 90 | EQ2000338-05 | | 20200819_097 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 22:52 |
| 91 | R2006532-001 | | 20200819_098 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:00 |
| 92 | R2006532-003 | | 20200819_099 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:08 |
| 93 | R2006532-005 | | 20200819_100 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:16 |
| 94 | R2006532-007 | | 20200819_101 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:24 |
| 95 | R2006532-009 | | 20200819_102 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:32 |
| 96 | PERCHLORATE7 | | 20200819_103 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/19/2020 23:40 |
| 97 | R2006532-011 | | 20200819_104 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:47 |
| 98 | R2006555-002 | | 20200819_105 | Perchlorate6850b.lcm | 1x | ☒ | | 8/19/2020 23:55 |
| 99 | R2006555-004 | | 20200819_106 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:03 |
| 100 | R2006555-006 | | 20200819_107 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:11 |
| 101 | R2006555-008 | | 20200819_108 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:19 |
| 102 | R2006555-010 | | 20200819_109 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:27 |
| 103 | R2006555-012 | | 20200819_110 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:35 |
| 104 | R2006617-001 | | 20200819_111 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:43 |
| 105 | R2006617-003 | | 20200819_112 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:50 |
| 106 | R2006617-005 | | 20200819_113 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 0:58 |
| 107 | PERCHLORATE7 | | 20200819_114 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/20/2020 1:06 |
| 108 | R2006617-007 | | 20200819_115 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 1:14 |
| 109 | R2006617-009 | | 20200819_116 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 1:22 |
| 110 | R2006617-010 | | 20200819_117 | Perchlorate6850b.lcm | 1x | ☒ | | 8/20/2020 1:30 |
| 111 | PERCHLORATE7 | | 20200819_118 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/20/2020 1:38 |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000022 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000022-01 | PERCHLORATE1 | 20200819_005 | 08/19/2020 10:42 |
| 02 | EC2000022-02 | PERCHLORATE2 | 20200819_006 | 08/19/2020 10:50 |
| 03 | EC2000022-03 | PERCHLORATE3 | 20200819_007 | 08/19/2020 10:58 |
| 04 | EC2000022-04 | PERCHLORATE4 | 20200819_008 | 08/19/2020 11:06 |
| 05 | EC2000022-05 | PERCHLORATE5 | 20200819_009 | 08/19/2020 11:14 |
| 06 | EC2000022-06 | PERCHLORATE6 | 20200819_010 | 08/19/2020 11:22 |
| 07 | EC2000022-07 | PERCHLORATE7 | 20200819_011 | 08/19/2020 11:30 |
| 08 | EC2000022-08 | PERCHLORATE8 | 20200819_012 | 08/19/2020 11:38 |
| 09 | EC2000022-09 | PERCHLORATE9 | 20200819_013 | 08/19/2020 11:45 |
| 10 | EC2000022-10 | PERCHLORATE10 | 20200819_014 | 08/19/2020 11:53 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 5.952** **Average RF = 0.1131**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1299 | 02 | 0.5000 | 0.113 | 03 | 0.7000 | 0.1123 | 04 | 1.0000 | 0.1147 |
| 05 | 2.0000 | 0.1134 | 06 | 5.0000 | 0.1082 | 07 | 10.0000 | 0.1069 | 08 | 20.0000 | 0.1158 |
| 09 | 30.0000 | 0.1094 | 10 | 50.0000 | 0.107 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.115 | 14.9 | 02 | 0.5000 | 0.500 | -0.1 | 03 | 0.7000 | 0.695 | -0.7 |
| 04 | 1.0000 | 1.01 | 1.5 | 05 | 2.0000 | 2.01 | 0.3 | 06 | 5.0000 | 4.78 | -4.3 |
| 07 | 10.0000 | 9.46 | -5.4 | 08 | 20.0000 | 20.5 | 2.4 | 09 | 30.0000 | 29.0 | -3.2 |
| 10 | 50.0000 | 47.3 | -5.4 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000022 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200819_016 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000022-11 | T | Average RF | 10 | 9.352 | ng/mL | -6.5 | <= 15 |

ALS Group Houston

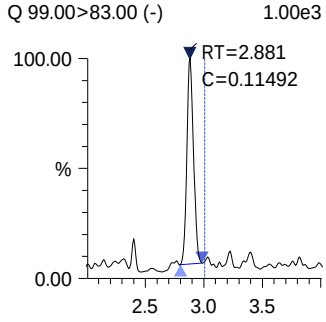
# PERCHLORATE1

Date acquired: 8/19/2020 10:42:37 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_005.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 8/19/2020 10:42:37 AM | 3802 | 0.11492 | 20200819_005 | 2.881 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 8/19/2020 10:42:37 AM | 292622 | 1.00000 | 20200819_005 | 2.877 | 25.0000 | 1.0000 | 5 |

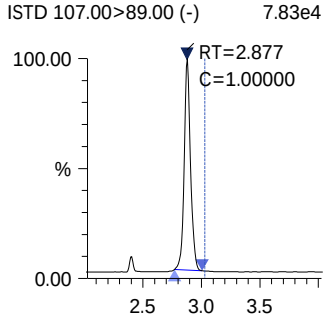
## Perchlorate

Conc 0.11492
Area 3802




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292622



ALS Group Houston

# PERCHLORATE2

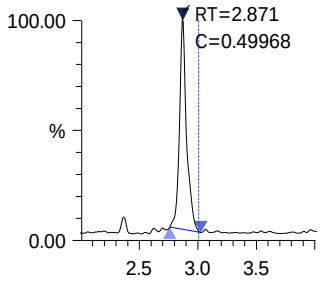
Date acquired: 8/19/2020 10:50:33 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_006.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 8/19/2020 10:50:33 AM | 18036 | 0.49968 | 20200819_006 | 2.871 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 8/19/2020 10:50:33 AM | 319274 | 1.00000 | 20200819_006 | 2.870 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.49968
Area 18036

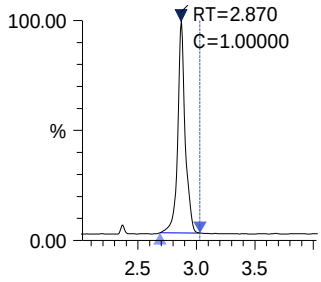
Q 99.00>83.00 (-) 4.32e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 319274

ISTD 107.00>89.00 (-) 7.26e4



ALS Group Houston

# PERCHLORATE3

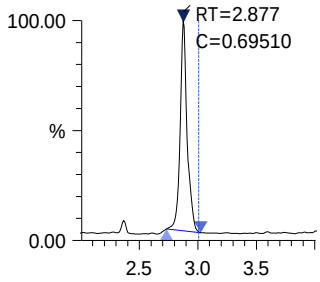
Date acquired: 8/19/2020 10:58:27 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_007.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 8/19/2020 10:58:27 AM | 24394 | 0.69510 | 20200819_007 | 2.877 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 8/19/2020 10:58:27 AM | 310422 | 1.00000 | 20200819_007 | 2.874 | 25.0000 | 1.0000 | 7 |

## Perchlorate

Conc 0.69510
Area 24394

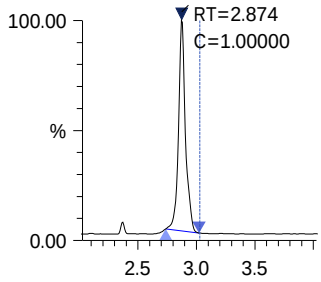
Q 99.00>83.00 (-) 5.99e3




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 310422

ISTD 107.00>89.00 (-) 7.56e4



ALS Group Houston

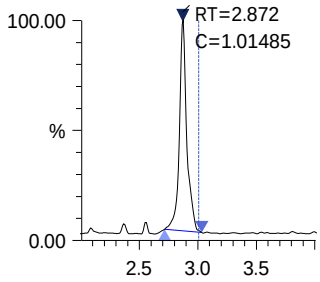
# PERCHLORATE4

Date acquired: 8/19/2020 11:06:22 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_008.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 8/19/2020 11:06:22 AM | 33591 | 1.01485 | 20200819_008 | 2.872 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 8/19/2020 11:06:22 AM | 292786 | 1.00000 | 20200819_008 | 2.872 | 25.0000 | 1.0000 | 8 |

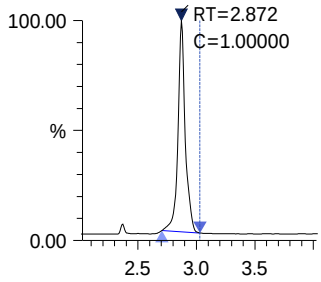
## Perchlorate

Conc 1.01485
Area 33591
Q 99.00>83.00 (-) 7.70e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 292786
ISTD 107.00>89.00 (-) 6.80e4



ALS Group Houston

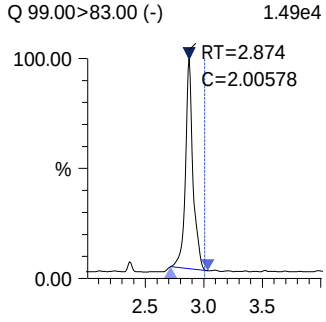
# PERCHLORATE5

Date acquired: 8/19/2020 11:14:18 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_009.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 8/19/2020 11:14:18 AM | 65114 | 2.00578 | 20200819_009 | 2.874 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 8/19/2020 11:14:18 AM | 287158 | 1.00000 | 20200819_009 | 2.873 | 25.0000 | 1.0000 | 9 |

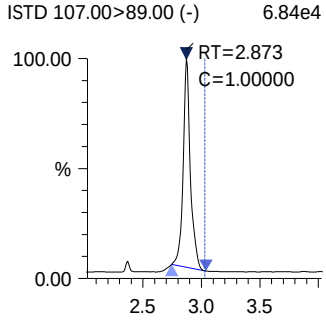
## Perchlorate

Conc 2.00578
Area 65114




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 287158



ALS Group Houston

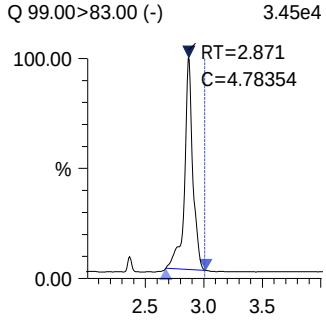
# PERCHLORATE6

Date acquired: 8/19/2020 11:22:10 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_010.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 8/19/2020 11:22:10 AM | 167892 | 4.78354 | 20200819_010 | 2.871 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 8/19/2020 11:22:10 AM | 310462 | 1.00000 | 20200819_010 | 2.870 | 25.0000 | 1.0000 | 10 |

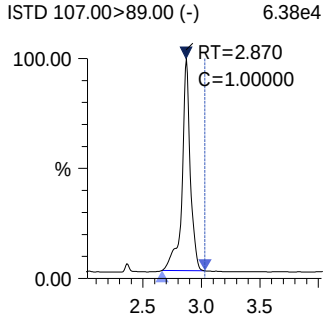
## Perchlorate

Conc 4.78354
Area 167892




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 310462



ALS Group Houston

# PERCHLORATE7

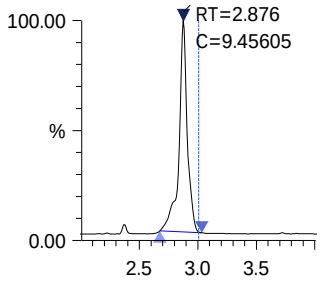
Date acquired: 8/19/2020 11:30:05 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_011.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/19/2020 11:30:05 AM | 309830 | 9.45605 | 20200819_011 | 2.876 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/19/2020 11:30:05 AM | 289828 | 1.00000 | 20200819_011 | 2.875 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.45605
Area 309830

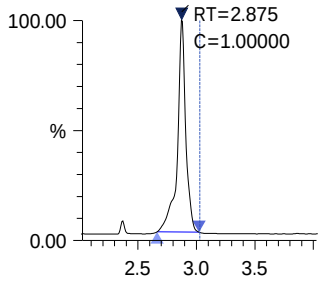
Q 99.00>83.00 (-) 6.35e4




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 289828

ISTD 107.00>89.00 (-) 5.81e4



ALS Group Houston

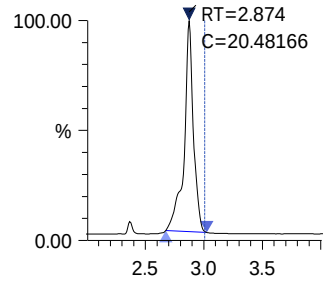
# PERCHLORATE8

Date acquired: 8/19/2020 11:38:00 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 8/19/2020 11:38:00 AM | 587088 | 20.48166 | 20200819_012 | 2.874 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 8/19/2020 11:38:00 AM | 253551 | 1.00000 | 20200819_012 | 2.873 | 25.0000 | 1.0000 | 11 |

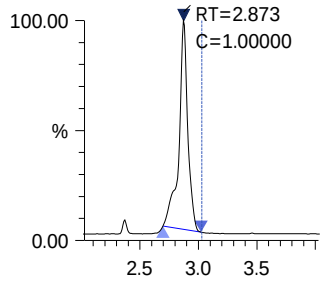
## Perchlorate

Conc 20.48166
Area 587088




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 253551



ALS Group Houston

# PERCHLORATE9

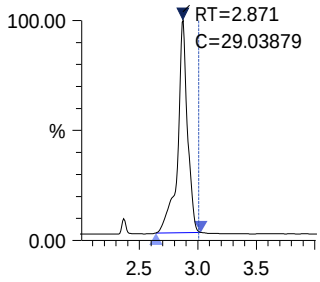
Date acquired: 8/19/2020 11:45:53 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_013.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 8/19/2020 11:45:53 AM | 849278 | 29.03879 | 20200819_013 | 2.871 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 8/19/2020 11:45:53 AM | 258702 | 1.00000 | 20200819_013 | 2.870 | 25.0000 | 1.0000 | 12 |

## Perchlorate

Conc 29.03879
Area 849278

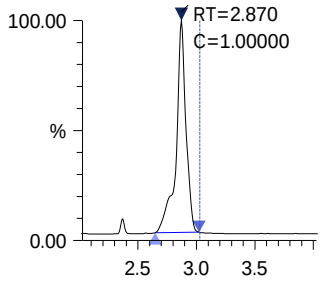
Q 99.00>83.00 (-) 1.48e5




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 258702

ISTD 107.00>89.00 (-) 4.43e4



ALS Group Houston

# PERCHLORATE10

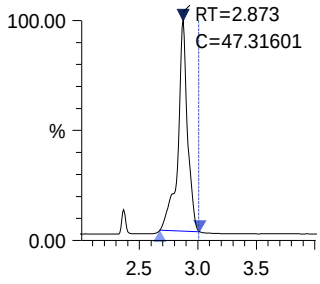
Date acquired: 8/19/2020 11:53:48 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_014.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 8/19/2020 11:53:48 AM | 1220253 | 47.31601 | 20200819_014 | 2.873 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 8/19/2020 11:53:48 AM | 228123 | 1.00000 | 20200819_014 | 2.871 | 25.0000 | 1.0000 | 13 |

## Perchlorate

Conc 47.31601
Area 1220253

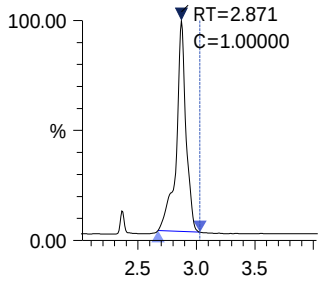
Q 99.00>83.00 (-) 2.17e5




## Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 228123

ISTD 107.00>89.00 (-) 3.99e4



ALS Group Houston

# PERCHLORATEICV

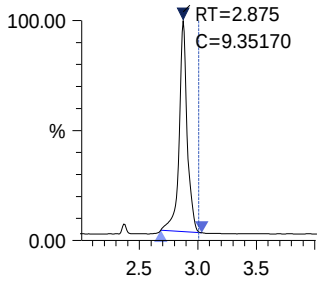
Date acquired: 8/19/2020 12:09:35 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200819\20200819_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 8/19/2020 12:09:35 PM | 294031 | 9.35170 | 20200819_016 | 2.875 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 8/19/2020 12:09:35 PM | 278118 | 1.00000 | 20200819_016 | 2.873 | 25.0000 | 1.0000 | 14 |

## Perchlorate

Conc 9.35170
Area 294031

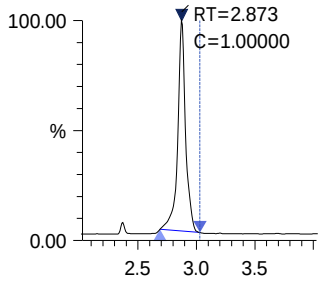
Q 99.00>83.00 (-) 6.27e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 278118

ISTD 107.00>89.00 (-) 5.98e4



**20200826**

ALS Environmental

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000023**

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200826_024 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 | 8/26/2020 11:55 |
| 2 | PERCHLORATE2 | | 20200826_025 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 | 8/26/2020 12:03 |
| 3 | PERCHLORATE3 | | 20200826_026 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 | 8/26/2020 12:11 |
| 4 | PERCHLORATE4 | | 20200826_027 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 | 8/26/2020 12:19 |
| 5 | PERCHLORATE5 | | 20200826_028 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 | 8/26/2020 12:27 |
| 6 | PERCHLORATE6 | | 20200826_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 | 8/26/2020 12:35 |
| 7 | PERCHLORATE7 | | 20200826_030 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 12:42 |
| 8 | PERCHLORATE8 | | 20200826_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 | 8/26/2020 12:50 |
| 9 | PERCHLORATE9 | | 20200826_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 | 8/26/2020 12:58 |
| 10 | PERCHLORATE10 | | 20200826_033 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 | 8/26/2020 13:06 |
| 11 | IB | | 20200826_034 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 13:14 |
| 12 | PERCHLORATEICV | | 20200826_035 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 | 8/26/2020 14:26 |
| 13 | IB | | 20200826_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:34 |
| 14 | LODV | | 20200826_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:42 |
| 15 | PERCHLORATE7 | | 20200826_038 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 14:50 |
| 16 | EQ2000359-01 | | 20200826_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:12 |
| 17 | EQ2000359-02 | | 20200826_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:19 |
| 18 | EQ2000359-03 | | 20200826_041 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:27 |
| 19 | EQ2000359-02 | | 20200826_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:35 |
| 20 | EQ2000359-04X10 | | 20200826_043 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:43 |
| 21 | EQ2000359-05X10 | | 20200826_044 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:51 |
| 22 | EQ2000359-06X10 | | 20200826_045 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:59 |
| 23 | EQ2000359-07X10 | | 20200826_046 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:07 |
| 24 | E2000716-001X10 | | 20200826_047 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:15 |
| 25 | E2000739-001X10 | | 20200826_048 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:23 |
| 26 | PERCHLORATE7 | | 20200826_049 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 16:30 |
| 27 | E2000740-001X200 | | 20200826_050 | Perchlorate6850b.lcm | 200x | ☒ | | 8/26/2020 16:38 |
| 28 | E2000741-001X10 | | 20200826_051 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:46 |
| 29 | E2000742-001X2 | | 20200826_052 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 16:54 |
| 30 | E2000742-002X2 | | 20200826_053 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 17:02 |
| 31 | E2000742-003X10 | | 20200826_054 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:10 |
| 32 | E2000742-004X10 | | 20200826_055 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:18 |
| 33 | E2000742-006X10 | | 20200826_056 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:26 |
| 34 | PERCHLORATE7 | | 20200826_057 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 17:33 |
| 35 | E2000742-009X10 | | 20200826_058 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:41 |
| 36 | E2000742-010X10 | | 20200826_059 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:49 |
| 37 | E2000742-011X10 | | 20200826_060 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:57 |
| 38 | E2000742-012X10 | | 20200826_061 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:05 |
| 39 | E2000742-013X10 | | 20200826_062 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:13 |
| 40 | E2000742-014X10 | | 20200826_063 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:21 |
| 41 | E2000759-001X10 | | 20200826_064 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:29 |
| 42 | E2000759-002X10 | | 20200826_065 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:36 |
| 43 | PERCHLORATE7 | | 20200826_066 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 18:44 |
| 44 | EQ2000369-01 | | 20200826_067 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 18:52 |
| 45 | EQ2000369-02 | | 20200826_068 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:00 |
| 46 | EQ2000369-03 | | 20200826_069 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:08 |
| 47 | EQ2000369-04 | | 20200826_070 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:16 |
| 48 | EQ2000369-05 | | 20200826_071 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:24 |
| 49 | E2000764-001 | | 20200826_072 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:32 |
| 50 | E2000764-002 | | 20200826_073 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:40 |
| 51 | E2000764-003 | | 20200826_074 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:47 |
| 52 | E2000764-004 | | 20200826_075 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:55 |
| 53 | E2000764-005 | | 20200826_076 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:03 |
| 54 | PERCHLORATE7 | | 20200826_077 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 20:11 |
| 55 | E2000764-006 | | 20200826_078 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:19 |
| 56 | E2000764-007 | | 20200826_079 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:27 |
| 57 | E2000764-008 | | 20200826_080 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:35 |
| 58 | E2000764-009 | | 20200826_081 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:43 |
| 59 | E2000764-010 | | 20200826_082 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:51 |
| 60 | E2000764-011 | | 20200826_083 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:58 |
| 61 | E2000764-012 | | 20200826_084 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:06 |

**20200826**

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000023**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 62 | E2000764-013 | | 20200826_085 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:14 |
| 63 | E2000764-014 | | 20200826_086 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:22 |
| 64 | E2000764-015 | | 20200826_087 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:30 |
| 65 | PERCHLORATE7 | | 20200826_088 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 21:38 |
| 66 | E2000764-016 | | 20200826_089 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:46 |
| 67 | E2000764-017 | | 20200826_090 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:54 |
| 68 | E2000764-018 | | 20200826_091 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:01 |
| 69 | PERCHLORATE7 | | 20200826_092 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 22:09 |
| 70 | EQ2000367-01 | | 20200826_093 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:17 |
| 71 | EQ2000367-02 | | 20200826_094 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:25 |
| 72 | EQ2000367-03 | | 20200826_095 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:33 |
| 73 | EQ2000367-04 | | 20200826_096 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:41 |
| 74 | EQ2000367-05 | | 20200826_097 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:49 |
| 75 | R2006746-001 | | 20200826_098 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:57 |
| 76 | R2006746-002 | | 20200826_099 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:04 |
| 77 | R2006777-001 | | 20200826_100 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:12 |
| 78 | R2006777-002 | | 20200826_101 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:20 |
| 79 | R2006777-003 | | 20200826_102 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:28 |
| 80 | PERCHLORATE7 | | 20200826_103 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 23:36 |
| 81 | R2006777-004 | | 20200826_104 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:44 |
| 82 | R2006777-005 | | 20200826_105 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:52 |
| 83 | R2006777-006 | | 20200826_106 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:00 |
| 84 | R2006777-007 | | 20200826_107 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:08 |
| 85 | R2006777-008 | | 20200826_108 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:15 |
| 86 | R2006805-001 | | 20200826_109 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:23 |
| 87 | R2006805-002 | | 20200826_110 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:31 |
| 88 | PERCHLORATE7 | | 20200826_111 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/27/2020 0:39 |
| 89 | | | | | | | | |
| 90 | | | | | | | | |
| 91 | | | | | | | | |
| 92 | | | | | | | | |

# *Initial Calibration - Detailed Report*

**Calibration ID:** EC2000023 **Instrument ID:** E-LCMS-01
**Column Name:** 1

| # | Lab Code | Sample Name | File Location | Aquisition Date |
|---|---|---|---|---|
| 01 | EC2000023-01 | PERCHLORATE1 | 20200826_024 | 08/26/2020 11:55 |
| 02 | EC2000023-02 | PERCHLORATE2 | 20200826_025 | 08/26/2020 12:03 |
| 03 | EC2000023-03 | PERCHLORATE3 | 20200826_026 | 08/26/2020 12:11 |
| 04 | EC2000023-04 | PERCHLORATE4 | 20200826_027 | 08/26/2020 12:19 |
| 05 | EC2000023-05 | PERCHLORATE5 | 20200826_028 | 08/26/2020 12:27 |
| 06 | EC2000023-06 | PERCHLORATE6 | 20200826_029 | 08/26/2020 12:35 |
| 07 | EC2000023-07 | PERCHLORATE7 | 20200826_030 | 08/26/2020 12:42 |
| 08 | EC2000023-08 | PERCHLORATE8 | 20200826_031 | 08/26/2020 12:50 |
| 09 | EC2000023-09 | PERCHLORATE9 | 20200826_032 | 08/26/2020 12:58 |
| 10 | EC2000023-10 | PERCHLORATE10 | 20200826_033 | 08/26/2020 13:06 |

**Analyte** **Curve Fit** **Weighting**

**Perchlorate** **Average RF** **RSD = 5.546** **Average RF = 0.1085**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.1181 | 02 | 0.5000 | 0.1137 | 03 | 0.7000 | 0.1087 | 04 | 1.0000 | 0.1168 |
| 05 | 2.0000 | 0.1092 | 06 | 5.0000 | 0.1056 | 07 | 10.0000 | 0.1014 | 08 | 20.0000 | 0.1048 |
| 09 | 30.0000 | 0.1049 | 10 | 50.0000 | 0.1012 | | | | | | |

**Analyte**

**Perchlorate**

| # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D | # | Amount | Calculated Conc | %D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.1000 | 0.109 | 8.9 | 02 | 0.5000 | 0.524 | 4.8 | 03 | 0.7000 | 0.702 | 0.2 |
| 04 | 1.0000 | 1.08 | 7.7 | 05 | 2.0000 | 2.01 | 0.7 | 06 | 5.0000 | 4.87 | -2.6 |
| 07 | 10.0000 | 9.35 | -6.5 | 08 | 20.0000 | 19.3 | -3.3 | 09 | 30.0000 | 29.0 | -3.3 |
| 10 | 50.0000 | 46.7 | -6.6 | | | | | | | | |

# *Initial Calibration Verification Summary Report*

| | | | |
|---|---|---|---|
| **Calibration ID:** | EC2000023 | **Instrument ID:** | E-LCMS-01 |
| **Datafile ID:** | 20200826_035 | **Column Name:** | 1 |

| Analyte | Lab Code | Type | Curve Fit | True Value | Calc Conc | Units | Result | Criteria |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | EC2000023-11 | T | Average RF | 10 | 9.690 | ng/mL | -3.1 | <= 15 |

ALS Group Houston

# PERCHLORATE1

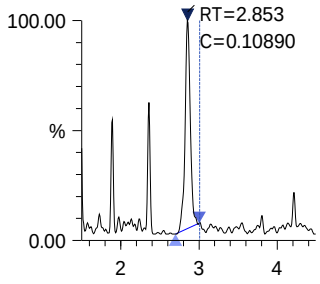
Date acquired: 8/26/2020 11:55:32 AM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_024.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE1 | 8/26/2020 11:55:32 AM | 2254 | 0.10890 | 20200826_024 | 2.853 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE1 | 8/26/2020 11:55:32 AM | 190859 | 1.00000 | 20200826_024 | 2.852 | 25.0000 | 1.0000 | 5 |

## Perchlorate

Conc 0.10890
Area 2254

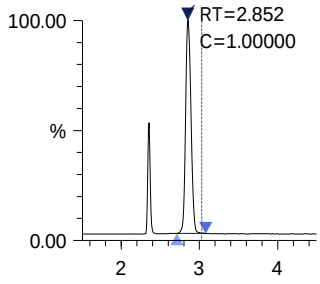
Q 99.00>83.00 (-) 4.92e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 190859

ISTD 107.00>89.00 (-) 3.91e4



ALS Group Houston

# PERCHLORATE2

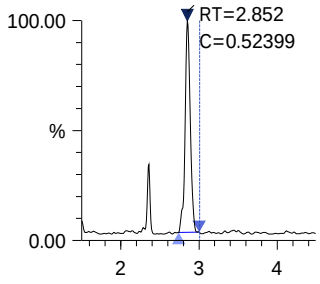
Date acquired: 8/26/2020 12:03:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_025.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE2 | 8/26/2020 12:03:28 PM | 11013 | 0.52399 | 20200826_025 | 2.852 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE2 | 8/26/2020 12:03:28 PM | 193789 | 1.00000 | 20200826_025 | 2.850 | 25.0000 | 1.0000 | 6 |

## Perchlorate

Conc 0.52399
Area 11013

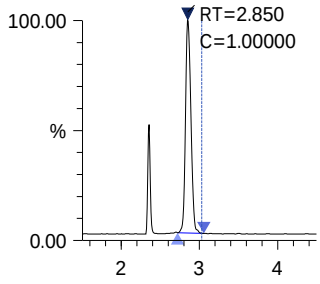
Q 99.00>83.00 (-) 2.37e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 193789

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

# PERCHLORATE3

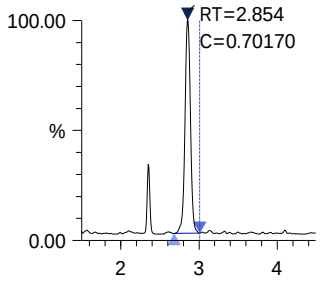
Date acquired: 8/26/2020 12:11:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_026.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE3 | 8/26/2020 12:11:22 PM | 15252 | 0.70170 | 20200826_026 | 2.854 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE3 | 8/26/2020 12:11:22 PM | 200410 | 1.00000 | 20200826_026 | 2.849 | 25.0000 | 1.0000 | 7 |

## Perchlorate

Conc 0.70170
Area 15252

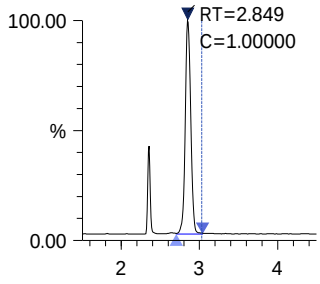
Q 99.00>83.00 (-) 3.07e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 200410

ISTD 107.00>89.00 (-) 4.03e4



ALS Group Houston

# PERCHLORATE4

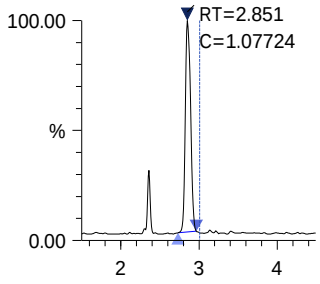
Date acquired: 8/26/2020 12:19:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_027.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE4 | 8/26/2020 12:19:17 PM | 21473 | 1.07724 | 20200826_027 | 2.851 | 25.0000 | 1.0000 | 8 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE4 | 8/26/2020 12:19:17 PM | 183791 | 1.00000 | 20200826_027 | 2.851 | 25.0000 | 1.0000 | 8 |

## Perchlorate

Conc 1.07724
Area 21473

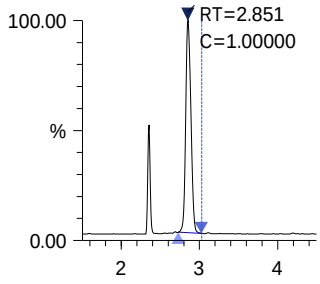
Q 99.00>83.00 (-) 4.54e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183791

ISTD 107.00>89.00 (-) 3.92e4



ALS Group Houston

# PERCHLORATE5

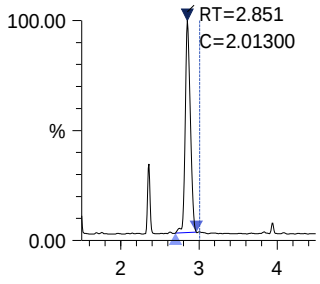
Date acquired: 8/26/2020 12:27:10 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_028.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE5 | 8/26/2020 12:27:10 PM | 40038 | 2.01300 | 20200826_028 | 2.851 | 25.0000 | 1.0000 | 9 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE5 | 8/26/2020 12:27:10 PM | 183386 | 1.00000 | 20200826_028 | 2.849 | 25.0000 | 1.0000 | 9 |

## Perchlorate

Conc 2.01300
Area 40038

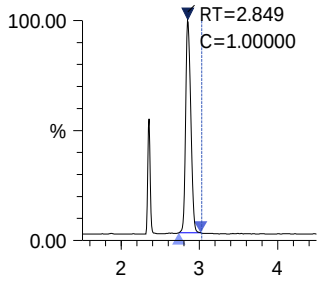
Q 99.00>83.00 (-) 8.76e3




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 183386

ISTD 107.00>89.00 (-) 3.95e4



ALS Group Houston

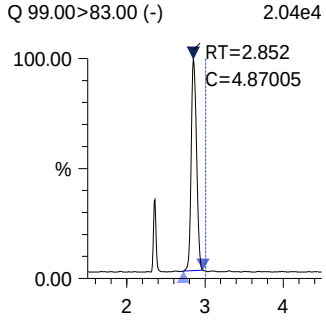
# PERCHLORATE6

Date acquired: 8/26/2020 12:35:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_029.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE6 | 8/26/2020 12:35:02 PM | 98121 | 4.87005 | 20200826_029 | 2.852 | 25.0000 | 1.0000 | 10 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE6 | 8/26/2020 12:35:02 PM | 185768 | 1.00000 | 20200826_029 | 2.850 | 25.0000 | 1.0000 | 10 |

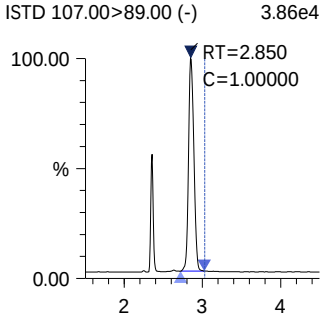
## Perchlorate

Conc 4.87005
Area 98121




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185768



ALS Group Houston

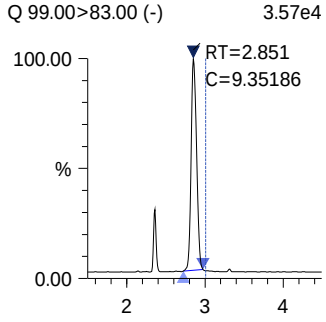
# PERCHLORATE7

Date acquired: 8/26/2020 12:42:57 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/26/2020 12:42:57 PM | 174248 | 9.35186 | 20200826_030 | 2.851 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/26/2020 12:42:57 PM | 171796 | 1.00000 | 20200826_030 | 2.850 | 25.0000 | 1.0000 | 4 |

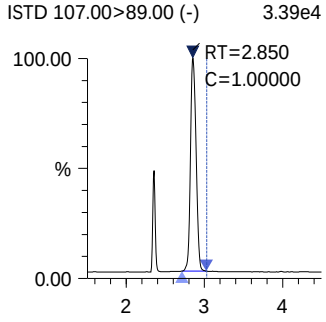
## Perchlorate

Conc 9.35186
Area 174248




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 171796



ALS Group Houston

# PERCHLORATE8

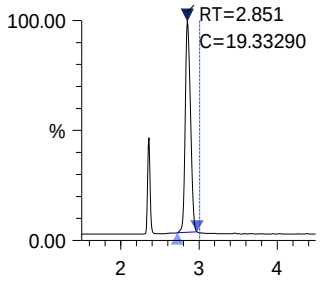
Date acquired: 8/26/2020 12:50:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_031.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE8 | 8/26/2020 12:50:51 PM | 337010 | 19.33290 | 20200826_031 | 2.851 | 25.0000 | 1.0000 | 11 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE8 | 8/26/2020 12:50:51 PM | 160727 | 1.00000 | 20200826_031 | 2.850 | 25.0000 | 1.0000 | 11 |

## Perchlorate

Conc 19.33290
Area 337010

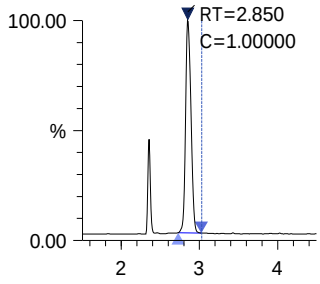
Q 99.00>83.00 (-) 7.14e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 160727

ISTD 107.00>89.00 (-) 3.30e4



ALS Group Houston

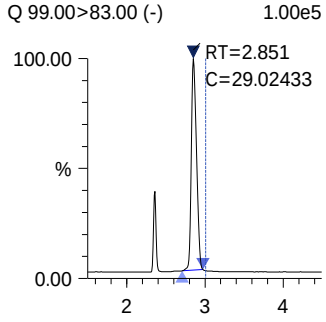
# PERCHLORATE9

Date acquired: 8/26/2020 12:58:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_032.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE9 | 8/26/2020 12:58:44 PM | 466342 | 29.02433 | 20200826_032 | 2.851 | 25.0000 | 1.0000 | 12 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE9 | 8/26/2020 12:58:44 PM | 148144 | 1.00000 | 20200826_032 | 2.849 | 25.0000 | 1.0000 | 12 |

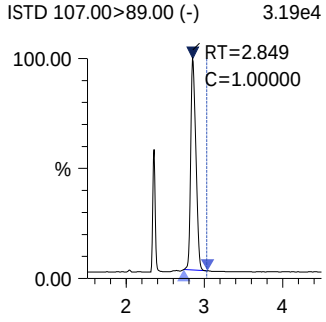
## Perchlorate

Conc 29.02433
Area 466342




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148144



ALS Group Houston

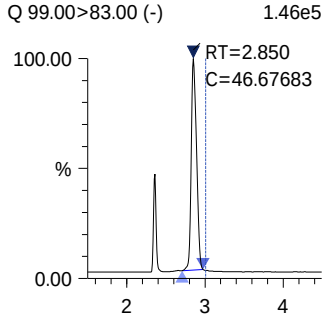
# PERCHLORATE10

Date acquired: 8/26/2020 1:06:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_033.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE10 | 8/26/2020 1:06:40 PM | 694738 | 46.67683 | 20200826_033 | 2.850 | 25.0000 | 1.0000 | 13 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE10 | 8/26/2020 1:06:40 PM | 137234 | 1.00000 | 20200826_033 | 2.849 | 25.0000 | 1.0000 | 13 |

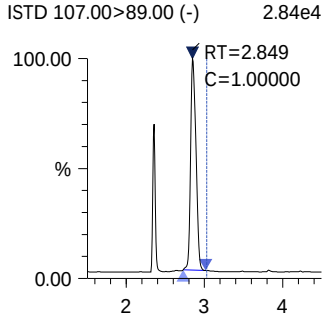
## Perchlorate

Conc 46.67683
Area 694738




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 137234



ALS Group Houston

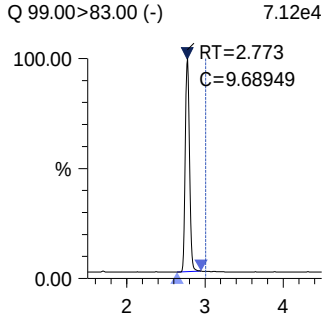
# PERCHLORATEICV

Date acquired: 8/26/2020 2:26:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_035.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATEICV | 8/26/2020 2:26:45 PM | 257692 | 9.68949 | 20200826_035 | 2.773 | 25.0000 | 1.0000 | 14 |
| Sodium Perchlorate-18O4_IS | PERCHLORATEICV | 8/26/2020 2:26:45 PM | 245213 | 1.00000 | 20200826_035 | 2.771 | 25.0000 | 1.0000 | 14 |

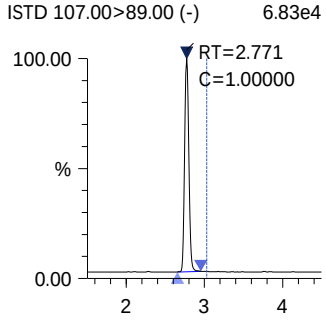
## Perchlorate

Conc 9.68949
Area 257692




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 245213



# Chromatograms and Selected Ion Monitoring

**ALS Environmental - Houston HRMS**
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

**20200825**

ALS Environmental

**ICAL Date:** 7/19/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000022

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | IB | | 20200825_017 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 16:49 |
| 2 | IB | | 20200825_018 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 16:57 |
| 3 | IB | | 20200825_019 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:05 |
| 4 | IB | | 20200825_020 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:13 |
| 5 | null | | 20200825_021 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:20 |
| 6 | null | | 20200825_022 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:25 |
| 7 | null | | 20200825_023 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:30 |
| 8 | null | | 20200825_024 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:34 |
| 9 | IB | | 20200825_025 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 17:40 |
| 10 | IB | | 20200825_027 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 18:22 |
| 11 | PERCHLORATE7 | | 20200825_028 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 18:32 |
| 12 | LODV | | 20200825_029 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 18:40 |
| 13 | PERCHLORATE7 | | 20200825_030 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 18:48 |
| 14 | EQ2000359-01 | | 20200825_031 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 18:56 |
| 15 | EQ2000359-02 | | 20200825_032 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:04 |
| 16 | EQ2000359-03 | | 20200825_033 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:12 |
| 17 | EQ2000359-04 | | 20200825_034 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:19 |
| 18 | EQ2000359-05 | | 20200825_035 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:27 |
| 19 | EQ2000359-06 | | 20200825_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:35 |
| 20 | EQ2000359-07 | | 20200825_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:43 |
| 21 | E2000716-001 | | 20200825_038 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:51 |
| 22 | E2000739-001 | | 20200825_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 19:59 |
| 23 | E2000740-001 | | 20200825_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:07 |
| 24 | PERCHLORATE7 | | 20200825_041 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 20:15 |
| 25 | E2000741-001 | | 20200825_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:22 |
| 26 | E2000742-001 | | 20200825_043 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:30 |
| 27 | E2000742-002 | | 20200825_044 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:38 |
| 28 | E2000742-003 | | 20200825_045 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:46 |
| 29 | E2000742-004 | | 20200825_046 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 20:54 |
| 30 | E2000742-005 | | 20200825_047 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:02 |
| 31 | E2000742-006 | | 20200825_048 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:10 |
| 32 | E2000742-007 | | 20200825_049 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:18 |
| 33 | E2000742-008 | | 20200825_050 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:26 |
| 34 | E2000742-009 | | 20200825_051 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:33 |
| 35 | PERCHLORATE7 | | 20200825_052 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 21:41 |
| 36 | E2000742-010 | | 20200825_053 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:49 |
| 37 | E2000742-011 | | 20200825_054 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 21:57 |
| 38 | E2000742-012 | | 20200825_055 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:05 |
| 39 | E2000742-013 | | 20200825_056 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:13 |
| 40 | E2000742-014 | | 20200825_057 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:21 |
| 41 | E2000759-001 | | 20200825_058 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:29 |
| 42 | E2000759-002 | | 20200825_059 | Perchlorate6850b.lcm | 1x | ☒ | | 8/25/2020 22:36 |
| 43 | PERCHLORATE7 | | 20200825_060 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/25/2020 22:44 |
| 44 | | | | | | | | |
| 45 | | | | | | | | |
| 46 | | | | | | | | |
| 47 | | | | | | | | |
| 48 | | | | | | | | |

**20200826**

ALS Environmental

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** EC2000023

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | PERCHLORATE1 | | 20200826_024 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-05 | 8/26/2020 11:55 |
| 2 | PERCHLORATE2 | | 20200826_025 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-06 | 8/26/2020 12:03 |
| 3 | PERCHLORATE3 | | 20200826_026 | Perchlorate6850b.lcm | 1x | ☒ | 3100806-07 | 8/26/2020 12:11 |
| 4 | PERCHLORATE4 | | 20200826_027 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-01 | 8/26/2020 12:19 |
| 5 | PERCHLORATE5 | | 20200826_028 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-02 | 8/26/2020 12:27 |
| 6 | PERCHLORATE6 | | 20200826_029 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-03 | 8/26/2020 12:35 |
| 7 | PERCHLORATE7 | | 20200826_030 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 12:42 |
| 8 | PERCHLORATE8 | | 20200826_031 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-05 | 8/26/2020 12:50 |
| 9 | PERCHLORATE9 | | 20200826_032 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-06 | 8/26/2020 12:58 |
| 10 | PERCHLORATE10 | | 20200826_033 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-07 | 8/26/2020 13:06 |
| 11 | IB | | 20200826_034 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 13:14 |
| 12 | PERCHLORATEICV | | 20200826_035 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-08 | 8/26/2020 14:26 |
| 13 | IB | | 20200826_036 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:34 |
| 14 | LODV | | 20200826_037 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 14:42 |
| 15 | PERCHLORATE7 | | 20200826_038 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 14:50 |
| 16 | EQ2000359-01 | | 20200826_039 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:12 |
| 17 | EQ2000359-02 | | 20200826_040 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:19 |
| 18 | EQ2000359-03 | | 20200826_041 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:27 |
| 19 | EQ2000359-02 | | 20200826_042 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 15:35 |
| 20 | EQ2000359-04X10 | | 20200826_043 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:43 |
| 21 | EQ2000359-05X10 | | 20200826_044 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:51 |
| 22 | EQ2000359-06X10 | | 20200826_045 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 15:59 |
| 23 | EQ2000359-07X10 | | 20200826_046 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:07 |
| 24 | E2000716-001X10 | | 20200826_047 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:15 |
| 25 | E2000739-001X10 | | 20200826_048 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:23 |
| 26 | PERCHLORATE7 | | 20200826_049 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 16:30 |
| 27 | E2000740-001X200 | | 20200826_050 | Perchlorate6850b.lcm | 200x | ☒ | | 8/26/2020 16:38 |
| 28 | E2000741-001X10 | | 20200826_051 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 16:46 |
| 29 | E2000742-001X2 | | 20200826_052 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 16:54 |
| 30 | E2000742-002X2 | | 20200826_053 | Perchlorate6850b.lcm | 2x | ☒ | | 8/26/2020 17:02 |
| 31 | E2000742-003X10 | | 20200826_054 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:10 |
| 32 | E2000742-004X10 | | 20200826_055 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:18 |
| 33 | E2000742-006X10 | | 20200826_056 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:26 |
| 34 | PERCHLORATE7 | | 20200826_057 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 17:33 |
| 35 | E2000742-009X10 | | 20200826_058 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:41 |
| 36 | E2000742-010X10 | | 20200826_059 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:49 |
| 37 | E2000742-011X10 | | 20200826_060 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 17:57 |
| 38 | E2000742-012X10 | | 20200826_061 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:05 |
| 39 | E2000742-013X10 | | 20200826_062 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:13 |
| 40 | E2000742-014X10 | | 20200826_063 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:21 |
| 41 | E2000759-001X10 | | 20200826_064 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:29 |
| 42 | E2000759-002X10 | | 20200826_065 | Perchlorate6850b.lcm | 10x | ☒ | | 8/26/2020 18:36 |
| 43 | PERCHLORATE7 | | 20200826_066 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 18:44 |
| 44 | EQ2000369-01 | | 20200826_067 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 18:52 |
| 45 | EQ2000369-02 | | 20200826_068 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:00 |
| 46 | EQ2000369-03 | | 20200826_069 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:08 |
| 47 | EQ2000369-04 | | 20200826_070 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:16 |
| 48 | EQ2000369-05 | | 20200826_071 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:24 |
| 49 | E2000764-001 | | 20200826_072 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:32 |
| 50 | E2000764-002 | | 20200826_073 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:40 |
| 51 | E2000764-003 | | 20200826_074 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:47 |
| 52 | E2000764-004 | | 20200826_075 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 19:55 |
| 53 | E2000764-005 | | 20200826_076 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:03 |
| 54 | PERCHLORATE7 | | 20200826_077 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 20:11 |
| 55 | E2000764-006 | | 20200826_078 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:19 |
| 56 | E2000764-007 | | 20200826_079 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:27 |
| 57 | E2000764-008 | | 20200826_080 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:35 |
| 58 | E2000764-009 | | 20200826_081 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:43 |
| 59 | E2000764-010 | | 20200826_082 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:51 |
| 60 | E2000764-011 | | 20200826_083 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 20:58 |
| 61 | E2000764-012 | | 20200826_084 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:06 |

**20200826**

ALS Environmental

**ICAL Date:** 8/26/2020
**Cal. Std. xp:** 11/18/2020
**ICAL ID:** **EC2000023**

**1st Review:** Grivera
**2nd Review:** Hvan

**Injection Log**
**LCMS01 -Shimadzu 8050**

**Mobile Phases** **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

| | | | File Name | Acquisition Method | Dilution | R | Comments | Date/Time |
|---|---|---|---|---|---|---|---|---|
| 62 | E2000764-013 | | 20200826_085 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:14 |
| 63 | E2000764-014 | | 20200826_086 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:22 |
| 64 | E2000764-015 | | 20200826_087 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:30 |
| 65 | PERCHLORATE7 | | 20200826_088 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 21:38 |
| 66 | E2000764-016 | | 20200826_089 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:46 |
| 67 | E2000764-017 | | 20200826_090 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 21:54 |
| 68 | E2000764-018 | | 20200826_091 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:01 |
| 69 | PERCHLORATE7 | | 20200826_092 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 22:09 |
| 70 | EQ2000367-01 | | 20200826_093 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:17 |
| 71 | EQ2000367-02 | | 20200826_094 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:25 |
| 72 | EQ2000367-03 | | 20200826_095 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:33 |
| 73 | EQ2000367-04 | | 20200826_096 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:41 |
| 74 | EQ2000367-05 | | 20200826_097 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:49 |
| 75 | R2006746-001 | | 20200826_098 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 22:57 |
| 76 | R2006746-002 | | 20200826_099 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:04 |
| 77 | R2006777-001 | | 20200826_100 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:12 |
| 78 | R2006777-002 | | 20200826_101 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:20 |
| 79 | R2006777-003 | | 20200826_102 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:28 |
| 80 | PERCHLORATE7 | | 20200826_103 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/26/2020 23:36 |
| 81 | R2006777-004 | | 20200826_104 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:44 |
| 82 | R2006777-005 | | 20200826_105 | Perchlorate6850b.lcm | 1x | ☒ | | 8/26/2020 23:52 |
| 83 | R2006777-006 | | 20200826_106 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:00 |
| 84 | R2006777-007 | | 20200826_107 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:08 |
| 85 | R2006777-008 | | 20200826_108 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:15 |
| 86 | R2006805-001 | | 20200826_109 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:23 |
| 87 | R2006805-002 | | 20200826_110 | Perchlorate6850b.lcm | 1x | ☒ | | 8/27/2020 0:31 |
| 88 | PERCHLORATE7 | | 20200826_111 | Perchlorate6850b.lcm | 1x | ☒ | 3100807-04 | 8/27/2020 0:39 |
| 89 | | | | | | | | |
| 90 | | | | | | | | |
| 91 | | | | | | | | |
| 92 | | | | | | | | |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_038

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 8.96 | 0.1085 | 0.09719 | -10.4 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_049

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.65 | 0.1085 | 0.1047 | -3.5 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_057

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.59 | 0.1085 | 0.1040 | -4.1 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/26/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200826\20200826_066

**Calibration Date:** 8/26/20
**Calibration ID:** EC2000023
**Analysis Lot:** 692775
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.71 | 0.1085 | 0.1053 | -2.9 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/25/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200825\20200825_030

**Calibration Date:** 8/19/20
**Calibration ID:** EC2000022
**Analysis Lot:** 692783
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.23 | 0.1131 | 0.1043 | -7.7 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/25/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200825\20200825_041

**Calibration Date:** 8/19/20
**Calibration ID:** EC2000022
**Analysis Lot:** 692783
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.78 | 0.1131 | 0.1105 | -2.2 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/25/20

## Continuing Calibration Verification Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**Analytical Method:** 6850
**File ID:** I:\LCMS01\DATA\20200825\20200825_052

**Calibration Date:** 8/19/20
**Calibration ID:** EC2000022
**Analysis Lot:** 692783
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | %D | %Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perchlorate | 10.0 | 9.00 | 0.1131 | 0.1018 | -10.0 | NA | ± 15 % | Average RF |

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

**Client:** ALS Environmental - US
**Project:** HS20080473

**Service Request:** E2000739
**Date Analyzed:** 8/26/20 14:50

## Internal Standard Area and RT Summary
## Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

**File ID:** I:\LCMS01\DATA\20200826\20200826_038
**Instrument ID:** E-LCMS-01
**Analytical Method:** 6850

**Lab Code:** EQ2000370-01
**Analysis Lot:** 692775
**Signal ID:** 1

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-01 | 168,655 | 2.85 |
| Duplicate Lab Control Sample | EQ2000359-03 | 222,420 | 2.86 |
| Lab Control Sample | EQ2000359-02 | 218,301 | 2.86 |
| Batch QCMS | EQ2000359-04 | 136,805 | 2.85 |
| Batch QCDMS | EQ2000359-05 | 144,861 | 2.85 |
| Batch QCMS | EQ2000359-06 | 127,802 | 2.85 |
| Batch QCDMS | EQ2000359-07 | 144,838 | 2.85 |
| LH18/24-SP650_081120_BIX | E2000739-001 | 149,708 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Analyzed:** | 8/26/20 16:30 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200826\20200826_049 | **Lab Code:** | EQ2000370-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692775 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-02 | 159,403 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Analyzed:** | 8/26/20 17:33 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200826\20200826_057 | **Lab Code:** | EQ2000370-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692775 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-03 | 153,993 | 2.86 |
| Batch QC | E2000742-012 | 141,019 | 2.85 |
| Batch QC | E2000759-002 | 131,720 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Analyzed:** | 8/26/20 18:44 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200826\20200826_066 | **Lab Code:** | EQ2000370-04 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692775 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 175,590 | 2.85 |
| | **Upper Limit ==>** | 263,385 | 4.85 |
| | **Lower Limit ==>** | 87,795 | 0.85 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000370-04 | 147,883 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Analyzed:** | 8/25/20 18:48 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200825\20200825_030 | **Lab Code:** | EQ2000371-01 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692783 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 284,293 | 2.87 |
| | **Upper Limit ==>** | 426,440 | 4.87 |
| | **Lower Limit ==>** | 142,147 | 0.87 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000371-01 | 185,913 | 2.86 |
| Method Blank | EQ2000359-01 | 246,634 | 2.86 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Analyzed:** | 8/25/20 20:15 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200825\20200825_041 | **Lab Code:** | EQ2000371-02 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692783 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 284,293 | 2.87 |
| | **Upper Limit ==>** | 426,440 | 4.87 |
| | **Lower Limit ==>** | 142,147 | 0.87 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000371-02 | 148,398 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**ALS Group USA, Corp. dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | ALS Environmental - US | **Service Request:** | E2000739 |
| **Project:** | HS20080473 | **Date Analyzed:** | 8/25/20 21:41 |

**Internal Standard Area and RT Summary**

**Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry**

| | | | |
|---|---|---|---|
| **File ID:** | I:\LCMS01\DATA\20200825\20200825_052 | **Lab Code:** | EQ2000371-03 |
| **Instrument ID:** | E-LCMS-01 | **Analysis Lot:** | 692783 |
| **Analytical Method:** | 6850 | **Signal ID:** | 1 |

| | | Sodium Perchlorate-18O4 | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **ICAL Average ==>** | 284,293 | 2.87 |
| | **Upper Limit ==>** | 426,440 | 4.87 |
| | **Lower Limit ==>** | 142,147 | 0.87 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | EQ2000371-03 | 176,558 | 2.85 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

ALS Group Houston

# PERCHLORATE7

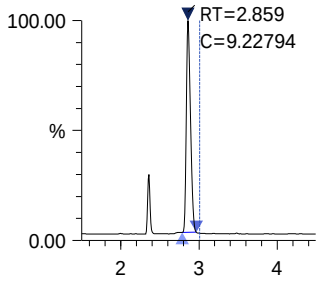
Date acquired: 8/25/2020 6:48:17 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_030.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/25/2020 6:48:17 PM | 193948 | 9.22794 | 20200825_030 | 2.859 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/25/2020 6:48:17 PM | 185913 | 1.00000 | 20200825_030 | 2.859 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.22794
Area 193948

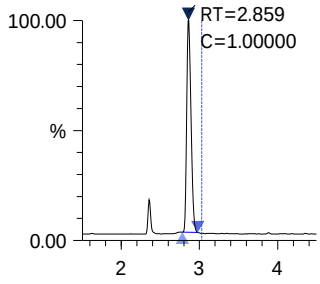
Q 99.00>83.00 (-) 5.19e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 185913

ISTD 107.00>89.00 (-) 4.80e4



ALS Group Houston

# EQ2000359-01

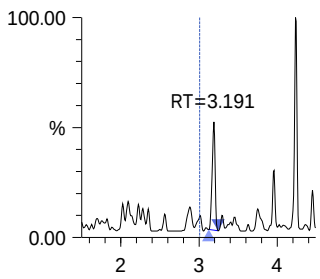
Date acquired: 8/25/2020 6:56:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_031.lcd
Vial: 1 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-01 | 8/25/2020 6:56:11 PM | ---- | ---- | 20200825_031 | ---- | 25.0000 | 1.0000 | 1 |
| Sodium Perchlorate-18O4_IS | EQ2000359-01 | 8/25/2020 6:56:11 PM | 246634 | 1.00000 | 20200825_031 | 2.856 | 25.0000 | 1.0000 | 1 |

## Perchlorate

Conc ----
Area ----

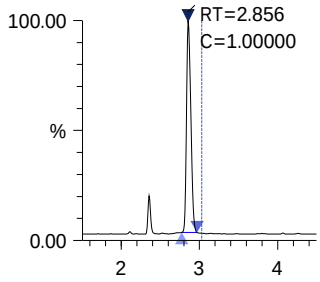
Q 99.00>83.00 (-) 5.44e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 246634

ISTD 107.00>89.00 (-) 6.33e4



ALS Group Houston

# PERCHLORATE7

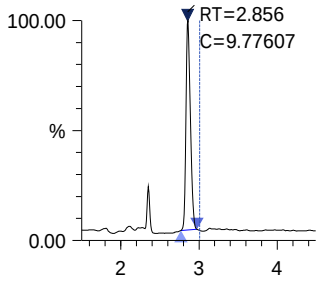
Date acquired: 8/25/2020 8:15:05 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200825\20200825_041.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/25/2020 8:15:05 PM | 164008 | 9.77607 | 20200825_041 | 2.856 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/25/2020 8:15:05 PM | 148398 | 1.00000 | 20200825_041 | 2.853 | 25.0000 | 1.0000 | 4 |

## Perchlorate

Conc 9.77607
Area 164008

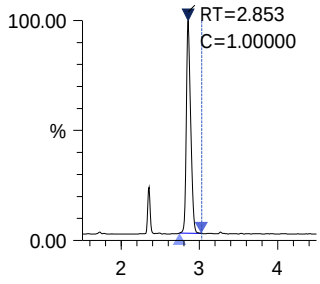
Q 99.00>83.00 (-) 4.18e4




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 148398

ISTD 107.00>89.00 (-) 3.81e4



ALS Group Houston

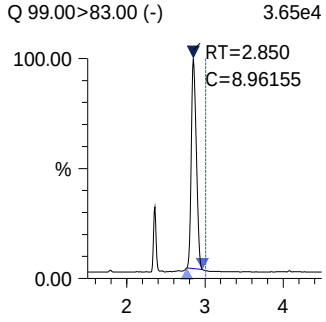
# PERCHLORATE7

Date acquired: 8/26/2020 2:50:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_038.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/26/2020 2:50:21 PM | 163923 | 8.96155 | 20200826_038 | 2.850 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/26/2020 2:50:21 PM | 168655 | 1.00000 | 20200826_038 | 2.849 | 25.0000 | 1.0000 | 4 |

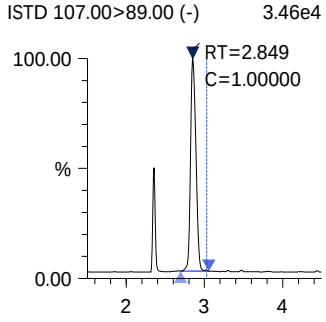
## Perchlorate

Conc 8.96155
Area 163923




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 168655



ALS Group Houston

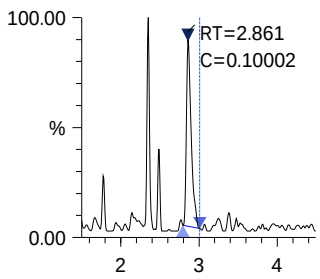
# EQ2000359-03

Date acquired: 8/26/2020 3:27:52 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_041.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-03 | 8/26/2020 3:27:52 PM | 2413 | 0.10002 | 20200826_041 | 2.861 | 25.0000 | 1.0000 | 3 |
| Sodium Perchlorate-18O4_IS | EQ2000359-03 | 8/26/2020 3:27:52 PM | 222420 | 1.00000 | 20200826_041 | 2.861 | 25.0000 | 1.0000 | 3 |

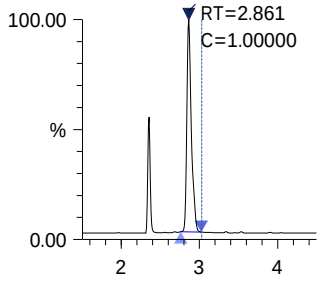
## Perchlorate

Conc 0.10002
Area 2413
Q 99.00>83.00 (-) 6.41e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 222420
ISTD 107.00>89.00 (-) 5.49e4



ALS Group Houston

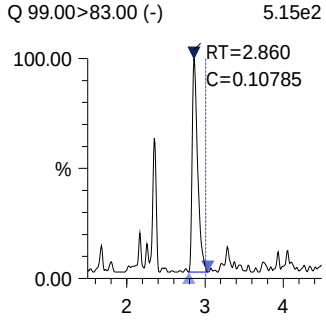
# EQ2000359-02

Date acquired: 8/26/2020 3:35:46 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_042.lcd
Vial: 2 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-02 | 8/26/2020 3:35:46 PM | 2554 | 0.10785 | 20200826_042 | 2.860 | 25.0000 | 1.0000 | 2 |
| Sodium Perchlorate-18O4_IS | EQ2000359-02 | 8/26/2020 3:35:46 PM | 218301 | 1.00000 | 20200826_042 | 2.861 | 25.0000 | 1.0000 | 2 |

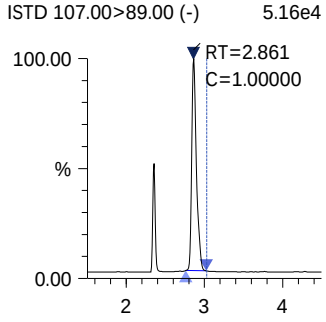
## Perchlorate

Conc 0.10785
Area 2554




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 218301



ALS Group Houston

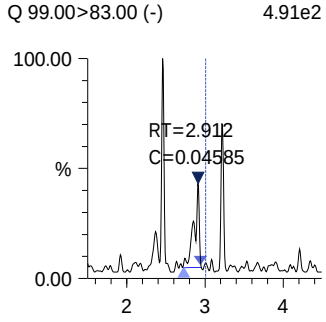
# EQ2000359-04X10

Date acquired: 8/26/2020 3:43:38 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_043.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-04X10 | 8/26/2020 3:43:38 PM | 680 | 0.04585 | 20200826_043 | 2.912 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | EQ2000359-04X10 | 8/26/2020 3:43:38 PM | 136805 | 1.00000 | 20200826_043 | 2.846 | 25.0000 | 1.0000 | 4 |

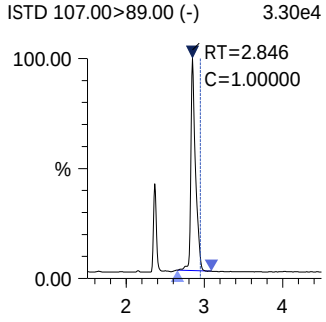
## Perchlorate

Conc 0.04585
Area 680




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 136805



ALS Group Houston

# EQ2000359-05X10

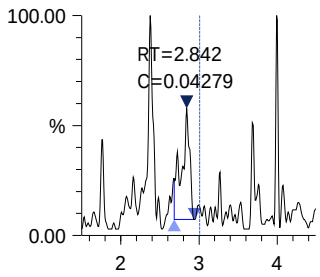
Date acquired: 8/26/2020 3:51:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_044.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-05X10 | 8/26/2020 3:51:31 PM | 672 | 0.04279 | 20200826_044 | 2.842 | 25.0000 | 1.0000 | 5 |
| Sodium Perchlorate-18O4_IS | EQ2000359-05X10 | 8/26/2020 3:51:31 PM | 144861 | 1.00000 | 20200826_044 | 2.847 | 25.0000 | 1.0000 | 5 |

## Perchlorate

Conc 0.04279
Area 672

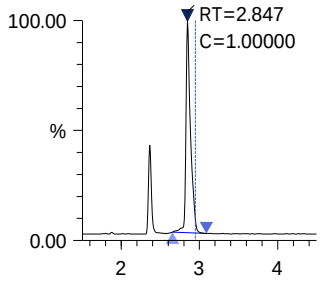
Q 99.00>83.00 (-) 1.77e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144861

ISTD 107.00>89.00 (-) 3.54e4



ALS Group Houston

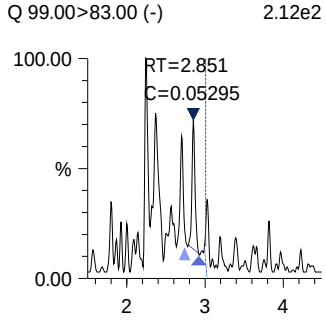
# EQ2000359-06X10

Date acquired: 8/26/2020 3:59:24 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_045.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-06X10 | 8/26/2020 3:59:24 PM | 734 | 0.05295 | 20200826_045 | 2.851 | 25.0000 | 1.0000 | 6 |
| Sodium Perchlorate-18O4_IS | EQ2000359-06X10 | 8/26/2020 3:59:24 PM | 127802 | 1.00000 | 20200826_045 | 2.850 | 25.0000 | 1.0000 | 6 |

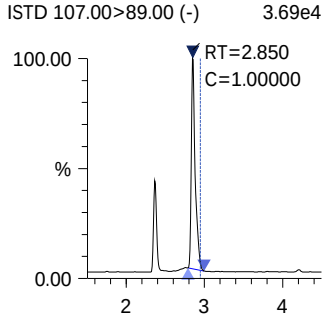
## Perchlorate

Conc 0.05295
Area 734




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 127802



ALS Group Houston

# EQ2000359-07X10

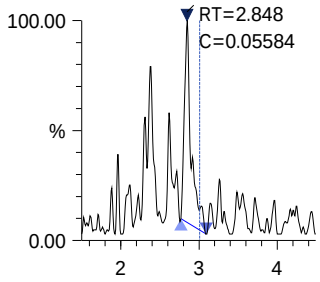
Date acquired: 8/26/2020 4:07:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_046.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 5

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | EQ2000359-07X10 | 8/26/2020 4:07:16 PM | 878 | 0.05584 | 20200826_046 | 2.848 | 25.0000 | 1.0000 | 7 |
| Sodium Perchlorate-18O4_IS | EQ2000359-07X10 | 8/26/2020 4:07:16 PM | 144838 | 1.00000 | 20200826_046 | 2.851 | 25.0000 | 1.0000 | 7 |

## Perchlorate

Conc 0.05584
Area 878

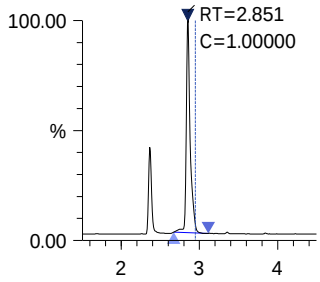
Q 99.00>83.00 (-) 1.53e2




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 144838

ISTD 107.00>89.00 (-) 4.13e4



ALS Group Houston

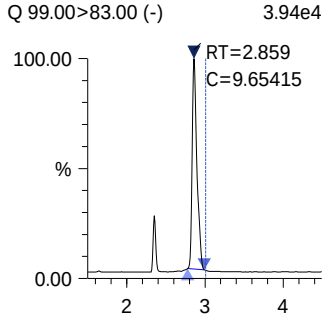
# PERCHLORATE7

Date acquired: 8/26/2020 4:30:55 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200826\20200826_049.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

| Name | Sample ID | Acquired Date | Area | Conc. | Data Filename | Found RT | Inj Vol | ISTD Amount | Vial |
|---|---|---|---|---|---|---|---|---|---|
| Perchlorate | PERCHLORATE7 | 8/26/2020 4:30:55 PM | 166904 | 9.65415 | 20200826_049 | 2.859 | 25.0000 | 1.0000 | 4 |
| Sodium Perchlorate-18O4_IS | PERCHLORATE7 | 8/26/2020 4:30:55 PM | 159403 | 1.00000 | 20200826_049 | 2.858 | 25.0000 | 1.0000 | 4 |

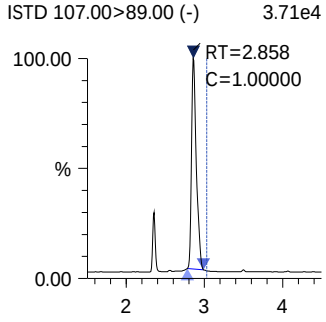
## Perchlorate

Conc 9.65415
Area 166904




## Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 159403



# HS20080473 8260_W_DOD Raw Data

ALS WO# HS20080473

# MSVOA06 -Logbook

**Batch:** 41322 **Analyst:** Presenta Cabascango

**Date:** 08-03-2020 **Reviewer:**

**Method:** 8260 **Laboratory:** Houston

**Comments:**

| # | Samp ID | Type | Analyzed | DF | Init Wt/Vol | Final Vol | File ID | Matrix | Status | pH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BFB | TUNE | 08-03-2020 11:16 am | 1.00 | 50 mL | 50 mL | X080301.D | Liquid | Y | NA |
| | *Auto find/ purged* | | | | | | | | | |
| 2 | VSTD000.25 | ICAL1 | 08-03-2020 11:40 am | 1.00 | 50 mL | 50 mL | X080302.D | Liquid | Y | NA |
| | *0.10 uL cal std/100 mL DI* | | | | | | | | | |
| 3 | VSTD000.5 | ICAL2 | 08-03-2020 12:04 pm | 1.00 | 50 mL | 50 mL | X080303.D | Liquid | Y | NA |
| | *0.10 uL cal std/50 mL DI* | | | | | | | | | |
| 4 | VSTD001 | ICAL3 | 08-03-2020 12:52 pm | 1.00 | 50 mL | 50 mL | X080304.D | Liquid | Y | NA |
| | *0.20 uL cal std/50 mL DI* | | | | | | | | | |
| 5 | VSTD002 | ICAL4 | 08-03-2020 01:16 pm | 1.00 | 50 mL | 50 mL | X080305.D | Liquid | Y | NA |
| | *0.40 uL cal std/50 mL DI* | | | | | | | | | |
| 6 | VSTD005 | ICAL5 | 08-03-2020 01:40 pm | 1.00 | 50 mL | 50 mL | X080306.D | Liquid | Y | NA |
| | *1.0 uL cal std/50 mL DI* | | | | | | | | | |
| 7 | VSTD020 | ICAL6 | 08-03-2020 02:04 pm | 1.00 | 50 mL | 50 mL | X080307.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 8 | VSTD050 | ICAL7 | 08-03-2020 02:28 pm | 1.00 | 50 mL | 50 mL | X080308.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |
| 9 | VSTD100 | ICAL8 | 08-03-2020 02:52 pm | 1.00 | 50 mL | 50 mL | X080309.D | Liquid | Y | NA |
| | *20 uL cal std/50 mL DI* | | | | | | | | | |
| 10 | VSTD150 | ICAL9 | 08-03-2020 03:16 pm | 1.00 | 50 mL | 50 mL | X080310.D | Liquid | Y | NA |
| | *30 uL cal std/50 mL DI* | | | | | | | | | |
| 11 | VSTD200 | ICAL | 08-03-2020 03:40 pm | 1.00 | 50 mL | 50 mL | X080311.D | Liquid | Y | NA |
| | *40 uL cal std/50 mL DI* | | | | | | | | | |
| 12 | BLANK | SAMP | 08-03-2020 04:04 pm | 1.00 | 50 mL | 50 mL | X080312.D | Liquid | Y | NA |
| 13 | BLANK | SAMP | 08-03-2020 04:28 pm | 1.00 | 50 mL | 50 mL | X080313.D | Liquid | Y | NA |
| 14 | ICV | CCV | 08-03-2020 04:51 pm | 1.00 | 50 mL | 50 mL | X080314.D | Liquid | Y | NA |
| | *10 uL ical std/50 mL DI* | | | | | | | | | |
| 15 | BLANK | SAMP | 08-03-2020 05:16 pm | 1.00 | 50 mL | 50 mL | X080315.D | Liquid | Y | NA |
| 16 | VLCSW-200803 | LCS | 08-03-2020 05:39 pm | 1.00 | 50 mL | 50 mL | X080316.D | Liquid | Y | NA |
| | *4.0 uL cal std/50 mL DI* | | | | | | | | | |
| 17 | BLANK | SAMP | 08-03-2020 06:04 pm | 1.00 | 50 mL | 50 mL | X080317.D | Liquid | Y | NA |
| 18 | BLANK | SAMP | 08-03-2020 06:28 pm | 1.00 | 50 mL | 50 mL | X080318.D | Liquid | Y | NA |
| 19 | VBLKW-200803 | MBLK | 08-03-2020 06:52 pm | 1.00 | 50 mL | 50 mL | X080319.D | Liquid | Y | NA |
| 20 | HS20070575-13 | SAMP | 08-03-2020 07:16 pm | 1.00 | 50 mL | 50 mL | X080320.D | Liquid | Y | NA |
| 21 | HS20070575-14 | SAMP | 08-03-2020 07:40 pm | 1.00 | 50 mL | 50 mL | X080321.D | Liquid | Y | NA |
| 22 | HS20070575-15 | SAMP | 08-03-2020 08:03 pm | 1.00 | 50 mL | 50 mL | X080322.D | Liquid | Y | NA |
| 23 | HS20070575-16 | SAMP | 08-03-2020 08:27 pm | 1.00 | 50 mL | 50 mL | X080323.D | Liquid | Y | NA |
| 24 | HS20070984-02 | SAMP | 08-03-2020 08:51 pm | 1.00 | 50 mL | 50 mL | X080324.D | Liquid | Y | <2 |
| 25 | HS20070984-01 | SAMP | 08-03-2020 09:15 pm | 1.00 | 50 mL | 50 mL | X080325.D | Liquid | Y | <2 |
| 26 | HS20070984-01MS | MS | 08-03-2020 09:39 pm | 1.00 | 50 mL | 50 mL | X080326.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 27 | HS20070984-01MSD | MSD | 08-03-2020 10:04 pm | 1.00 | 50 mL | 50 mL | X080327.D | Liquid | Y | <2 |
| | *3.5 uL cal std/40 mL samp* | | | | | | | | | |
| 28 | CCV-END | CCV | 08-03-2020 10:27 pm | 1.00 | 50 mL | 50 mL | X080328.D | Liquid | Y | NA |
| | *10 uL cal std/50 mL DI* | | | | | | | | | |

# MSVOA06 -Logbook

| Chemical | Value |
|---|---|
| SURR SPK ID | 31106-38-06 |
| IS ID | 31106-38-06 |
| CAL STD ID | 31106-41-01/02 |
| BFB ID | 31106-38-06 |
| pH Paper | 634-64-10 |

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 50.00 | 49.92 | 100 | 80-120 |
| trans-1,3-Dichloroprope | 50.00 | 48.62 | 97 | 80-120 |
| 1,3-Dichlorobenzene | 50.00 | 47.73 | 95 | 80-120 |
| 2,2-Dichloropropane | 50.00 | 50.96 | 102 | 80-120 |
| 1,1-Dichloropropene | 50.00 | 48.93 | 98 | 80-120 |
| Dibromomethane | 50.00 | 48.38 | 97 | 80-120 |
| 1,2-Dibromoethane | 50.00 | 48.72 | 97 | 80-120 |
| trans-1,2-Dichloroethen | 50.00 | 48.97 | 98 | 80-120 |
| 1,1,1,2-Tetrachloroetha | 50.00 | 47.75 | 96 | 80-120 |
| 1,1,1-Trichloroethane | 50.00 | 48.17 | 96 | 80-120 |
| 1,1,2,2-Tetrachloroetha | 50.00 | 48.28 | 96 | 80-120 |
| 1,1,2-Trichloroethane | 50.00 | 47.70 | 95 | 80-120 |
| 1,1-Dichloroethane | 50.00 | 50.19 | 100 | 80-120 |
| 1,1-Dichloroethene | 50.00 | 51.26 | 102 | 80-120 |
| Trichloroethene | 50.00 | 50.56 | 101 | 80-120 |
| 1,2,3-Trichlorobenzene | 50.00 | 50.30 | 101 | 80-120 |
| Trichlorofluoromethane | 50.00 | 49.79 | 100 | 80-120 |
| 1,2,4-Trichlorobenzene | 50.00 | 50.13 | 100 | 80-120 |
| 1,2,4-Trimethylbenzene | 50.00 | 48.17 | 96 | 80-120 |
| Tetrachloroethene | 50.00 | 47.53 | 95 | 80-120 |
| 1,2-Dichlorobenzene | 50.00 | 47.04 | 94 | 80-120 |
| 1,2-Dichloroethane | 50.00 | 48.99 | 98 | 80-120 |
| 1,2-Dichloropropane | 50.00 | 50.31 | 101 | 80-120 |
| 1,3,5-Trimethylbenzene | 50.00 | 48.06 | 96 | 80-120 |
| 1,3-Dichloropropane | 50.00 | 48.77 | 98 | 80-120 |
| 1,4-Dichlorobenzene | 50.00 | 48.32 | 97 | 80-120 |
| Toluene | 50.00 | 48.26 | 96 | 80-120 |
| 2-Butanone | 100.00 | 104.88 | 105 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| 2-Chlorotoluene | 50.00 | 48.31 | 97 | 80-120 |
| 2-Hexanone | 100.00 | 95.30 | 95 | 80-120 |
| 4-Chlorotoluene | 50.00 | 48.17 | 96 | 80-120 |
| tert-Butylbenzene | 50.00 | 47.34 | 95 | 80-120 |
| 4-Methyl-2-Pentanone | 100.00 | 93.57 | 94 | 80-120 |
| Acetone | 100.00 | 102.27 | 102 | 80-120 |
| Benzene | 50.00 | 49.44 | 99 | 80-120 |
| Bromobenzene | 50.00 | 47.40 | 95 | 80-120 |
| Bromochloromethane | 50.00 | 47.01 | 94 | 80-120 |
| Bromodichloromethane | 50.00 | 48.72 | 97 | 80-120 |
| Bromoform | 50.00 | 48.32 | 97 | 80-120 |
| Bromomethane | 50.00 | 53.47 | 107 | 80-120 |
| Carbon Disulfide | 100.00 | 101.43 | 101 | 80-120 |
| Carbon Tetrachloride | 50.00 | 47.96 | 96 | 80-120 |
| Chlorobenzene | 50.00 | 48.92 | 98 | 80-120 |
| Chloroethane | 50.00 | 51.05 | 102 | 80-120 |
| Chloroform | 50.00 | 47.94 | 96 | 80-120 |
| Chloromethane | 50.00 | 49.31 | 99 | 80-120 |
| cis-1,2-Dichloroethene | 50.00 | 48.89 | 98 | 80-120 |
| Dibromochloromethane | 50.00 | 47.41 | 95 | 80-120 |
| Dichlorodifluoromethane | 50.00 | 50.62 | 101 | 80-120 |
| Ethylbenzene | 50.00 | 48.65 | 97 | 80-120 |
| Hexachlorobutadiene | 50.00 | 48.15 | 96 | 80-120 |
| Isopropylbenzene | 50.00 | 48.56 | 97 | 80-120 |
| m,p-Xylenes | 100.00 | 97.74 | 98 | 80-120 |
| Methylene Chloride | 50.00 | 49.00 | 98 | 80-120 |
| n-Butylbenzene | 50.00 | 49.13 | 98 | 80-120 |
| n-Propylbenzene | 50.00 | 48.15 | 96 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Matrix Spike - Sample No.: ICV

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMOUNT () | % REC # | QC. LIMITS REC. |
|---|---|---|---|---|
| Naphthalene | 50.00 | 53.39 | 107 | 80-120 |
| o-Xylene | 50.00 | 48.76 | 98 | 80-120 |
| sec-Butylbenzene | 50.00 | 47.89 | 96 | 80-120 |
| Styrene | 50.00 | 49.51 | 99 | 80-120 |
| Vinyl Chloride | 50.00 | 50.76 | 102 | 80-120 |
| 1,2,3-Trichloropropane | 50.00 | 47.16 | 94 | 80-120 |
| p-Isopropyltoluene | 50.00 | 48.19 | 96 | 80-120 |
| 1,2-Dibromo-3-Chloropro | 50.00 | 47.23 | 94 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

# FORM 5
## VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Lab File ID: X080301 BFB Injection Date: 08/03/20

Instrument ID: VOA6 BFB Injection Time: 1116

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 24.4 |
| 75 | 30.0 - 60.0% of mass 95 | 50.1 |
| 95 | Base Peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.4 |
| 173 | Less than 2.0% of mass 174 | 0.4 ( 0.6)1 |
| 174 | Greater than 50.0% of mass 95 | 67.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.2 ( 7.8)1 |
| 176 | 95.0 - 101.0% of mass 174 | 64.3 ( 95.6)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 7.2)2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD000.25 | VSTD000.25 | X080302 | 08/03/20 | 1140 |
| 02 | VSTD000.5 | VSTD000.5 | X080303 | 08/03/20 | 1204 |
| 03 | VSTD001 | VSTD001 | X080304 | 08/03/20 | 1252 |
| 04 | VSTD002 | VSTD002 | X080305 | 08/03/20 | 1316 |
| 05 | VSTD005 | VSTD005 | X080306 | 08/03/20 | 1340 |
| 06 | VSTD020 | VSTD020 | X080307 | 08/03/20 | 1404 |
| 07 | VSTD050 | VSTD050 | X080308 | 08/03/20 | 1428 |
| 08 | VSTD100 | VSTD100 | X080309 | 08/03/20 | 1452 |
| 09 | VSTD150 | VSTD150 | X080310 | 08/03/20 | 1516 |
| 10 | VSTD200 | VSTD200 | X080311 | 08/03/20 | 1540 |
| 11 | ICV | ICV | X080314 | 08/03/20 | 1651 |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20080473

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | | 0.618 | 0.462 | 0.504 | 0.521 | 0.500 |
| trans-1,3-Dichloropropene | | 0.569 | 0.433 | 0.473 | 0.486 | 0.461 |
| 1,3-Dichlorobenzene | | 1.974 | 1.344 | 1.701 | 1.505 | 1.492 |
| 2,2-Dichloropropane | | 0.884 | 0.578 | 0.720 | 0.734 | 0.705 |
| 1,1-Dichloropropene | | 0.496 | 0.398 | 0.426 | 0.372 | 0.402 |
| Dibromomethane | | 0.256 | 0.205 | 0.209 | 0.218 | 0.208 |
| 1,2-Dibromoethane | | 0.419 | 0.349 | 0.380 | 0.366 | 0.356 |
| trans-1,2-Dichloroethene | | 0.547 | 0.446 | 0.452 | 0.452 | 0.455 |
| 1,1,1,2-Tetrachloroethane | | 0.480 | 0.340 | 0.394 | 0.373 | 0.361 |
| 1,1,1-Trichloroethane | | 0.921 | 0.718 | 0.732 | 0.745 | 0.744 |
| 1,1,2,2-Tetrachloroethane | | 3887 | 5190 | 17450 | 30714 | 110449 |
| 1,1,2-Trichloroethane | | 0.347 | 0.256 | 0.311 | 0.288 | 0.272 |
| 1,1-Dichloroethane | | 1.097 | 0.797 | 0.930 | 1.000 | 0.970 |
| 1,1-Dichloroethene | | 0.394 | 0.380 | 0.377 | 0.362 | 0.406 |
| Trichloroethene | | 0.395 | 0.297 | 0.346 | 0.339 | 0.352 |
| 1,2,3-Trichlorobenzene | | 0.182 | 0.144 | 0.165 | 0.146 | 0.146 |
| Trichlorofluoromethane | | 0.868 | 0.679 | 0.666 | 0.642 | 0.726 |
| 1,2,4-Trichlorobenzene | | 1350 | 1766 | 5020 | 11491 | 44232 |
| 1,2,4-Trimethylbenzene | | 3.392 | 2.228 | 2.748 | 2.560 | 2.560 |
| Tetrachloroethene | | 0.427 | 0.296 | 0.290 | 0.297 | 0.311 |
| 1,2-Dichlorobenzene | | 1.790 | 1.277 | 1.567 | 1.398 | 1.337 |
| 1,2-Dichloroethane | | 0.539 | 0.434 | 0.491 | 0.490 | 0.473 |
| 1,2-Dichloropropane | | 0.391 | 0.323 | 0.357 | 0.377 | 0.365 |
| 1,3,5-Trimethylbenzene | | 3.105 | 2.294 | 2.704 | 2.466 | 2.554 |
| 1,3-Dichloropropane | | 0.666 | 0.506 | 0.557 | 0.580 | 0.549 |
| 1,4-Dichlorobenzene | | 1.897 | 1.388 | 1.694 | 1.489 | 1.472 |
| Toluene | | 1.857 | 1.349 | 1.452 | 1.443 | 1.418 |
| 2-Butanone | | 0.257 | 0.195 | 0.230 | 0.238 | 0.240 |
| 2-Chlorotoluene | | 2.466 | 1.986 | 2.291 | 2.161 | 2.080 |
| 2-Hexanone | | 0.338 | 0.248 | 0.398 | 0.323 | 0.295 |
| 4-Chlorotoluene | | 3.038 | 2.301 | 2.587 | 2.471 | 2.409 |
| tert-Butylbenzene | | 2.850 | 1.958 | 2.274 | 2.043 | 2.244 |
| 4-Methyl-2-Pentanone | | 0.544 | 0.403 | 0.549 | 0.467 | 0.426 |
| Acetone | | 6244 | 5964 | 9756 | 22417 | 71506 |
| Benzene | | 1.472 | 1.124 | 1.176 | 1.206 | 1.207 |
| Bromobenzene | | 1.240 | 0.860 | 1.042 | 0.964 | 0.923 |
| Bromochloromethane | | 0.351 | 0.320 | 0.325 | 0.290 | 0.282 |
| Bromodichloromethane | | 0.576 | 0.402 | 0.436 | 0.428 | 0.426 |
| Bromoform | | 0.354 | 0.228 | 0.306 | 0.267 | 0.255 |
| Bromomethane | | 2498 | 4659 | 9294 | 19557 | 69521 |
| Carbon Disulfide | | 1.479 | 1.134 | 1.100 | 1.117 | 1.204 |
| Carbon Tetrachloride | | 0.528 | 0.430 | 0.420 | 0.411 | 0.425 |
| Chlorobenzene | | 1.247 | 0.874 | 0.972 | 0.966 | 0.933 |
| Chloroethane | | 0.430 | 0.304 | 0.328 | 0.327 | 0.355 |

FORM VI VOA

# FORM 6
# VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF0.25: X080302 RF0.5: X080303 RF1: X080304
RF2: X080305 RF5: X080306 RF20: X080307

| COMPOUND | RF0.25 | RF0.5 | RF1 | RF2 | RF5 | RF20 |
|---|---|---|---|---|---|---|
| Chloroform | | 1.068 | 0.851 | 0.891 | 0.887 | 0.861 |
| Chloromethane | | 0.888 | 0.598 | 0.694 | 0.698 | 0.666 |
| cis-1,2-Dichloroethene | | 0.641 | 0.522 | 0.524 | 0.547 | 0.541 |
| Dibromochloromethane | | 0.509 | 0.342 | 0.434 | 0.394 | 0.374 |
| Dichlorodifluoromethane | | 0.532 | 0.464 | 0.451 | 0.391 | 0.476 |
| Ethylbenzene | | 0.637 | 0.480 | 0.472 | 0.483 | 0.491 |
| Hexachlorobutadiene | | 0.235 | 0.256 | 0.314 | 0.247 | 0.306 |
| Isopropylbenzene | | 1.798 | 1.398 | 1.414 | 1.374 | 1.464 |
| m,p-Xylenes | | 0.741 | 0.568 | 0.590 | 0.595 | 0.593 |
| Methylene Chloride | | 13006 | 14851 | 20318 | 36047 | 113086 |
| n-Butylbenzene | | 2.783 | 1.821 | 2.137 | 1.869 | 2.205 |
| n-Propylbenzene | | 4.521 | 3.069 | 3.484 | 3.267 | 3.554 |
| Naphthalene | | 1670 | 3475 | 6258 | 16632 | 55065 |
| o-Xylene | | 0.741 | 0.556 | 0.581 | 0.583 | 0.578 |
| sec-Butylbenzene | | 3.747 | 2.660 | 2.985 | 2.618 | 3.017 |
| Styrene | | 1.248 | 0.896 | 1.106 | 1.036 | 1.008 |
| Vinyl Chloride | | 0.723 | 0.546 | 0.596 | 0.557 | 0.633 |
| 1,2,3-Trichloropropane | | 0.874 | 0.599 | 0.917 | 0.732 | 0.691 |
| p-Isopropyltoluene | | 3.431 | 2.390 | 2.780 | 2.421 | 2.730 |
| 1,2-Dibromo-3-Chloropropane | | 394 | 461 | 1468 | 2687 | 9119 |
| 1,2-Dichloroethane-d4 | | 0.669 | 0.575 | 0.501 | 0.605 | 0.564 |
| Dibromofluoromethane | | 0.528 | 0.509 | 0.451 | 0.514 | 0.476 |
| Toluene-d8 | | 1.258 | 1.357 | 1.124 | 1.218 | 1.201 |
| 4-Bromofluorobenzene | | 0.521 | 0.535 | 0.447 | 0.454 | 0.451 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| cis-1,3-Dichloropropene | 0.514 | 0.535 | 0.544 | 0.539 |
| trans-1,3-Dichloropropene | 0.458 | 0.478 | 0.490 | 0.492 |
| 1,3-Dichlorobenzene | 1.504 | 1.545 | 1.533 | 1.546 |
| 2,2-Dichloropropane | 0.684 | 0.700 | 0.707 | 0.706 |
| 1,1-Dichloropropene | 0.404 | 0.423 | 0.427 | 0.433 |
| Dibromomethane | 0.210 | 0.214 | 0.219 | 0.218 |
| 1,2-Dibromoethane | 0.353 | 0.355 | 0.359 | 0.360 |
| trans-1,2-Dichloroethene | 0.456 | 0.463 | 0.472 | 0.475 |
| 1,1,1,2-Tetrachloroethane | 0.365 | 0.371 | 0.370 | 0.370 |
| 1,1,1-Trichloroethane | 0.735 | 0.763 | 0.781 | 0.792 |
| 1,1,2,2-Tetrachloroethane | 259509 | 505068 | 753290 | 990670 |
| 1,1,2-Trichloroethane | 0.268 | 0.271 | 0.272 | 0.274 |
| 1,1-Dichloroethane | 0.970 | 0.993 | 1.008 | 1.023 |
| 1,1-Dichloroethene | 0.398 | 0.410 | 0.417 | 0.422 |
| Trichloroethene | 0.353 | 0.369 | 0.366 | 0.371 |
| 1,2,3-Trichlorobenzene | 0.145 | 0.122 | 0.160 | 0.144 |
| Trichlorofluoromethane | 0.737 | 0.755 | 0.769 | 0.784 |
| 1,2,4-Trichlorobenzene | 104906 | 167486 | 308625 | 360898 |
| 1,2,4-Trimethylbenzene | 2.529 | 2.694 | 2.637 | 2.691 |
| Tetrachloroethene | 0.300 | 0.313 | 0.309 | 0.317 |
| 1,2-Dichlorobenzene | 1.334 | 1.330 | 1.343 | 1.352 |
| 1,2-Dichloroethane | 0.471 | 0.484 | 0.487 | 0.487 |
| 1,2-Dichloropropane | 0.363 | 0.375 | 0.376 | 0.377 |
| 1,3,5-Trimethylbenzene | 2.500 | 2.644 | 2.594 | 2.653 |
| 1,3-Dichloropropane | 0.546 | 0.548 | 0.552 | 0.550 |
| 1,4-Dichlorobenzene | 1.475 | 1.522 | 1.516 | 1.533 |
| Toluene | 1.396 | 1.415 | 1.400 | 1.412 |
| 2-Butanone | 0.250 | 0.260 | 0.268 | 0.268 |
| 2-Chlorotoluene | 2.065 | 2.146 | 2.149 | 2.179 |
| 2-Hexanone | 0.295 | 0.302 | 0.311 | 0.315 |
| 4-Chlorotoluene | 2.381 | 2.518 | 2.483 | 2.523 |
| tert-Butylbenzene | 2.160 | 2.278 | 2.260 | 2.322 |
| 4-Methyl-2-Pentanone | 0.428 | 0.442 | 0.452 | 0.454 |
| Acetone | 170545 | 340970 | 481556 | 618700 |
| Benzene | 1.206 | 1.251 | 1.258 | 1.266 |
| Bromobenzene | 0.915 | 0.953 | 0.945 | 0.960 |
| Bromochloromethane | 0.281 | 0.290 | 0.290 | 0.283 |
| Bromodichloromethane | 0.430 | 0.446 | 0.453 | 0.453 |
| Bromoform | 0.264 | 0.270 | 0.276 | 0.278 |
| Bromomethane | 165840 | 329463 | 475898 | 632580 |
| Carbon Disulfide | 1.211 | 1.252 | 1.274 | 1.300 |
| Carbon Tetrachloride | 0.431 | 0.450 | 0.456 | 0.466 |
| Chlorobenzene | 0.939 | 0.964 | 0.959 | 0.965 |
| Chloroethane | 0.352 | 0.360 | 0.367 | 0.367 |

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

LAB FILE ID: RF50: X080308 RF100: X080309 RF150: X080310
RF200: X080311

| COMPOUND | RF50 | RF100 | RF150 | RF200 |
|---|---|---|---|---|
| Chloroform | 0.849 | 0.867 | 0.878 | 0.887 |
| Chloromethane | 0.680 | 0.679 | 0.695 | 0.720 |
| cis-1,2-Dichloroethene | 0.529 | 0.542 | 0.551 | 0.556 |
| Dibromochloromethane | 0.381 | 0.388 | 0.389 | 0.394 |
| Dichlorodifluoromethane | 0.490 | 0.516 | 0.534 | 0.549 |
| Ethylbenzene | 0.489 | 0.499 | 0.498 | 0.504 |
| Hexachlorobutadiene | 0.290 | 0.222 | 0.292 | 0.253 |
| Isopropylbenzene | 1.441 | 1.495 | 1.474 | 1.509 |
| m,p-Xylenes | 0.588 | 0.608 | 0.602 | 0.610 |
| Methylene Chloride | 256910 | 487953 | 693942 | 915440 |
| n-Butylbenzene | 2.171 | 2.303 | 2.281 | 2.331 |
| n-Propylbenzene | 3.462 | 3.672 | 3.652 | 3.736 |
| Naphthalene | 137510 | 244768 | 435994 | 531999 |
| o-Xylene | 0.582 | 0.593 | 0.590 | 0.594 |
| sec-Butylbenzene | 2.919 | 3.112 | 3.100 | 3.180 |
| Styrene | 1.015 | 1.015 | 1.027 | 1.022 |
| Vinyl Chloride | 0.647 | 0.674 | 0.698 | 0.718 |
| 1,2,3-Trichloropropane | 0.684 | 0.691 | 0.706 | 0.692 |
| p-Isopropyltoluene | 2.652 | 2.848 | 2.797 | 2.868 |
| 1,2-Dibromo-3-Chloropropane | 22898 | 44175 | 68839 | 87710 |
| 1,2-Dichloroethane-d4 | 0.554 | 0.583 | 0.594 | 0.593 |
| Dibromofluoromethane | 0.468 | 0.486 | 0.491 | 0.494 |
| Toluene-d8 | 1.182 | 1.197 | 1.182 | 1.196 |
| 4-Bromofluorobenzene | 0.446 | 0.454 | 0.449 | 0.453 |

FORM VI VOA

# FORM 6
## VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

| COMPOUND | CURVE | COEFFICENTS A0 | COEFFICENTS A1 | COEFFICENTS A2 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | AVRG | | 0.52631108 | | 8.055 | 15.000 |
| trans-1,3-Dichloropropene | AVRG | | 0.48238639 | | 7.750 | 15.000 |
| 1,3-Dichlorobenzene | AVRG | | 1.57158280 | | 11.203 | 15.000 |
| 2,2-Dichloropropane | AVRG | | 0.71314301 | | 10.968 | 15.000 |
| 1,1-Dichloropropene | AVRG | | 0.42016302 | | 8.160 | 15.000 |
| Dibromomethane | AVRG | | 0.21759689 | | 7.106 | 15.000 |
| 1,2-Dibromoethane | AVRG | | 0.36652489 | | 5.926 | 15.000 |
| trans-1,2-Dichloroethene | AVRG | | 0.46872891 | | 6.594 | 15.000 |
| 1,1,1,2-Tetrachloroethane | AVRG | | 0.38060507 | | 10.480 | 15.000 |
| 1,1,1-Trichloroethane | AVRG | | 0.77016692 | | 7.945 | 15.000 |
| 1,1,2,2-Tetrachloroethane | LINR | 7.722e-003 | 1.23187232 | | 0.9994783 | 0.9900000 |
| 1,1,2-Trichloroethane | AVRG | | 0.28450466 | | 9.857 | 15.000 |
| 1,1-Dichloroethane | AVRG | | 0.97667293 | | 8.336 | 15.000 |
| 1,1-Dichloroethene | AVRG | | 0.39616599 | | 5.052 | 15.000 |
| Trichloroethene | AVRG | | 0.35435187 | | 7.661 | 15.000 |
| 1,2,3-Trichlorobenzene | AVRG | | 0.15046244 | | 11.203 | 15.000 |
| Trichlorofluoromethane | AVRG | | 0.73636136 | | 9.380 | 15.000 |
| 1,2,4-Trichlorobenzene | 2ORDR | -1.1e-002 | 3.58766703 | -0.2952283 | 0.9906334 | 0.9900000 |
| 1,2,4-Trimethylbenzene | AVRG | | 2.67111779 | | 11.604 | 15.000 |
| Tetrachloroethene | AVRG | | 0.31784777 | | 13.220 | 15.000 |
| 1,2-Dichlorobenzene | AVRG | | 1.41425088 | | 11.530 | 15.000 |
| 1,2-Dichloroethane | AVRG | | 0.48410523 | | 5.599 | 15.000 |
| 1,2-Dichloropropane | AVRG | | 0.36695807 | | 5.225 | 15.000 |
| 1,3,5-Trimethylbenzene | AVRG | | 2.61272360 | | 8.480 | 15.000 |
| 1,3-Dichloropropane | AVRG | | 0.56175693 | | 7.766 | 15.000 |
| 1,4-Dichlorobenzene | AVRG | | 1.55419344 | | 9.792 | 15.000 |
| Toluene | AVRG | | 1.46017119 | | 10.382 | 15.000 |
| 2-Butanone | AVRG | | 0.24511086 | | 9.425 | 15.000 |
| 2-Chlorotoluene | AVRG | | 2.16926792 | | 6.442 | 15.000 |
| 2-Hexanone | AVRG | | 0.31389491 | | 12.771 | 15.000 |
| 4-Chlorotoluene | AVRG | | 2.52365549 | | 8.359 | 15.000 |
| tert-Butylbenzene | AVRG | | 2.26526404 | | 11.041 | 15.000 |
| 4-Methyl-2-Pentanone | AVRG | | 0.46275648 | | 11.014 | 15.000 |
| Acetone | LINR | -2.14e-002 | 5.79885157 | | 0.9996587 | 0.9900000 |
| Benzene | AVRG | | 1.24051491 | | 7.846 | 15.000 |
| Bromobenzene | AVRG | | 0.97809166 | | 11.206 | 15.000 |
| Bromochloromethane | AVRG | | 0.30138449 | | 8.187 | 15.000 |
| Bromodichloromethane | AVRG | | 0.45010731 | | 11.069 | 15.000 |
| Bromoform | AVRG | | 0.27741236 | | 12.753 | 15.000 |
| Bromomethane | LINR | 1.309e-002 | 2.86760046 | | 0.9995243 | 0.9900000 |
| Carbon Disulfide | AVRG | | 1.23004403 | | 9.502 | 15.000 |
| Carbon Tetrachloride | AVRG | | 0.44659821 | | 7.968 | 15.000 |
| Chlorobenzene | AVRG | | 0.97993823 | | 10.682 | 15.000 |
| Chloroethane | AVRG | | 0.35440033 | | 9.973 | 15.000 |

# FORM 6
# VOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2008047

Instrument ID: VOA6 Calibration Date(s): 08/03/20 08/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1140 1540

| COMPOUND | CURVE | COEFFICENTS A0 | A1 | A2 | %RSD OR R^2 | MAX %RSD OR R^2 |
|---|---|---|---|---|---|---|
| Chloroform | AVRG | | 0.89329334 | | 7.561 | 15.000 |
| Chloromethane | AVRG | | 0.70202961 | | 11.036 | 15.000 |
| cis-1,2-Dichloroethene | AVRG | | 0.55037038 | | 6.534 | 15.000 |
| Dibromochloromethane | AVRG | | 0.40050806 | | 11.789 | 15.000 |
| Dichlorodifluoromethane | AVRG | | 0.48936200 | | 10.210 | 15.000 |
| Ethylbenzene | AVRG | | 0.50598922 | | 9.941 | 15.000 |
| Hexachlorobutadiene | AVRG | | 0.26843621 | | 12.210 | 15.000 |
| Isopropylbenzene | AVRG | | 1.48528003 | | 8.449 | 15.000 |
| m,p-Xylenes | AVRG | | 0.61061949 | | 8.238 | 15.000 |
| Methylene Chloride | LINR | -2.76e-002 | 1.99382468 | | 0.9998680 | 0.9900000 |
| n-Butylbenzene | AVRG | | 2.21122856 | | 12.709 | 15.000 |
| n-Propylbenzene | AVRG | | 3.60198062 | | 11.195 | 15.000 |
| Naphthalene | 2ORDR | -2.54e-003 | 2.59173673 | -0.2152357 | 0.9947090 | 0.9900000 |
| o-Xylene | AVRG | | 0.59981322 | | 9.042 | 15.000 |
| sec-Butylbenzene | AVRG | | 3.03754823 | | 10.849 | 15.000 |
| Styrene | AVRG | | 1.04152018 | | 9.045 | 15.000 |
| Vinyl Chloride | AVRG | | 0.64360842 | | 10.284 | 15.000 |
| 1,2,3-Trichloropropane | AVRG | | 0.73186776 | | 13.664 | 15.000 |
| p-Isopropyltoluene | AVRG | | 2.76878531 | | 10.947 | 15.000 |
| 1,2-Dibromo-3-Chloropropane | LINR | 1.588e-002 | 13.7625896 | | 0.9986959 | 0.9900000 |
| 1,2-Dichloroethane-d4 | AVRG | | 0.58201048 | | 7.676 | 15.000 |
| Dibromofluoromethane | AVRG | | 0.49101450 | | 4.895 | 15.000 |
| Toluene-d8 | AVRG | | 1.21277844 | | 5.331 | 15.000 |
| 4-Bromofluorobenzene | AVRG | | 0.46785309 | | 7.389 | 15.000 |

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200803.b\X080301.D



Date : 03-AUG-2020 11:16

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

