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# United States Environmental Protection Agency
## Region 9 Laboratory

**1337 S. 46th Street Building 201**
**Richmond, CA 94804**

**Date:** **7/8/2021**

**Subject:** **Analytical Testing Results - Project R21S04**
**WorkOrder** **2106036**

**From:** **Peter Husby, Director**
**EPA Region 9 Laboratory**
**EMD-3-1**

**To:** **Alana Lee**
**California Site Cleanup Section 3**
**SFD-7-3**

Attached are the results from the analysis of samples from the **MEW OU1 FY2021 Vapor Intrusion Investigation** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Audrey Johnson at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Bob Hopeman, the Lab Project Manager at (510)412-2300.

**Analyses included in this report:**

Volatile Organic Compounds by GC/MS

United States Environmental Protection Agency
# Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

**Project Manager:** Alana Lee
**Project Number:** R21S04
**Project:** MEW OU1 FY2021 Vapor Intrusion Investigation

**California Site Cleanup Section 3**
**75 Hawthorne Street**
**San Francisco CA, 94105**

**WorkOrder: 2106036**
**Reported:** 07/08/21 16:15

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| G6-014-3ft-G | 2106036-01 | Air | 06/22/21 06:50 | 06/25/21 13:19 |
| F7-002-3ft-G | 2106036-02 | Air | 06/22/21 07:12 | 06/25/21 13:19 |
| F6-035-3ft-G | 2106036-03 | Air | 06/22/21 07:23 | 06/25/21 13:19 |
| F6-023-3ft-G | 2106036-04 | Air | 06/22/21 07:40 | 06/25/21 13:19 |
| F6-023-3ft-D-G | 2106036-05 | Air | 06/22/21 07:40 | 06/25/21 13:19 |
| F6-010-3ft-G | 2106036-06 | Air | 06/22/21 07:52 | 06/25/21 13:19 |
| F6-006-3ft-G | 2106036-07 | Air | 06/22/21 08:11 | 06/25/21 13:19 |
| F6-025-3ft-G | 2106036-08 | Air | 06/23/21 13:07 | 06/25/21 13:19 |

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**California Site Cleanup Section 3**
**75 Hawthorne Street**
**San Francisco CA, 94105**

**WorkOrder: 2106036**
**Reported:** 07/08/21 16:15

## Sample Results

| Analyte | Reanalysis / Extract | Result | Qualifiers / Comments | Quantitation Limit | Units | Batch | Prepared | Analyzed | Method |
|---|---|---|---|---|---|---|---|---|---|
| **Lab ID: 2106036-01** | | | | | | | | | **Air - Sampled: 06/22/21 06:50** |
| **Sample ID: G6-014-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 5.7 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 8.8 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 8.8 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 9 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | ND | U | 8.8 | " | " | " | " | TO-15 |
| Chloroform | | ND | U | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | ND | U | 12 | " | " | " | " | TO-15 |
| Tetrachloroethene | | ND | U | 15 | " | " | " | " | TO-15 |
| **Lab ID: 2106036-02** | | | | | | | | | **Air - Sampled: 06/22/21 07:12** |
| **Sample ID: F7-002-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 5.8 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 9 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 9 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 9.2 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | ND | U | 9 | " | " | " | " | TO-15 |
| Chloroform | | ND | U | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | ND | U | 12 | " | " | " | " | TO-15 |
| Tetrachloroethene | | ND | U | 15 | " | " | " | " | TO-15 |
| **Lab ID: 2106036-03** | | | | | | | | | **Air - Sampled: 06/22/21 07:23** |
| **Sample ID: F6-035-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 5.6 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 8.9 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| Chloroform | | ND | U | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | ND | U | 12 | " | " | " | " | TO-15 |
| Tetrachloroethene | | ND | U | 15 | " | " | " | " | TO-15 |
| **Lab ID: 2106036-04** | | | | | | | | | **Air - Sampled: 06/22/21 07:40** |
| **Sample ID: F6-023-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 5.6 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 8.9 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| Chloroform | | ND | U | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | 9.9 | C1, J | 12 | " | " | " | " | TO-15 |

United States Environmental Protection Agency
# Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

**Project Manager:** Alana Lee
**Project Number:** R21S04
**Project:** MEW OU1 FY2021 Vapor Intrusion Investigation

**California Site Cleanup Section 3**
**75 Hawthorne Street**
**San Francisco CA, 94105**

**WorkOrder: 2106036**
**Reported:** 07/08/21 16:15

## Sample Results

| Analyte | Reanalysis / Extract | Result | Qualifiers / Comments | Quantitation Limit | Units | Batch | Prepared | Analyzed | Method |
|---|---|---|---|---|---|---|---|---|---|
| **Lab ID: 2106036-04** | | | | | | | | | **Air - Sampled: 06/22/21 07:40** |
| **Sample ID: F6-023-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Tetrachloroethene | | ND | U | 15 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| **Lab ID: 2106036-05** | | | | | | | | | **Air - Sampled: 06/22/21 07:40** |
| **Sample ID: F6-023-3ft-D-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 5.6 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 8.9 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | ND | U | 8.7 | " | " | " | " | TO-15 |
| Chloroform | | ND | U | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | 11 | C1, J | 12 | " | " | " | " | TO-15 |
| Tetrachloroethene | | ND | U | 15 | " | " | " | " | TO-15 |
| **Lab ID: 2106036-06** | | | | | | | | | **Air - Sampled: 06/22/21 07:52** |
| **Sample ID: F6-010-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 6 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 9.3 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 9.3 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 9.5 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | 58 | | 9.3 | " | " | " | " | TO-15 |
| Chloroform | | 16 | | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | 250 | | 13 | " | " | " | " | TO-15 |
| Tetrachloroethene | | 8.1 | C1, J | 16 | " | " | " | " | TO-15 |
| **Lab ID: 2106036-07** | | | | | | | | | **Air - Sampled: 06/22/21 08:11** |
| **Sample ID: F6-006-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 6.1 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 9.4 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 9.4 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 9.6 | " | " | " | " | TO-15 |
| cis-1,2-Dichloroethene | | 10 | | 9.4 | " | " | " | " | TO-15 |
| Chloroform | | ND | U | 12 | " | " | " | " | TO-15 |
| Trichloroethene | | 47 | | 13 | " | " | " | " | TO-15 |
| Tetrachloroethene | | ND | U | 16 | " | " | " | " | TO-15 |
| **Lab ID: 2106036-08** | | | | | | | | | **Air - Sampled: 06/23/21 13:07** |
| **Sample ID: F6-025-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| Vinyl chloride | | ND | U | 5.6 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| 1,1-Dichloroethene | | ND | U | 8.8 | " | " | " | " | TO-15 |
| trans-1,2-Dichloroethene | | ND | U | 8.8 | " | " | " | " | TO-15 |
| 1,1-Dichloroethane | | ND | U | 8.9 | " | " | " | " | TO-15 |

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| | | |
|---|---|---|
| **Project Manager:** Alana Lee | **California Site Cleanup Section 3** | **WorkOrder: 2106036** |
| **Project Number:** R21S04 | **75 Hawthorne Street** | **Reported:** 07/08/21 16:15 |
| **Project:** MEW OU1 FY2021 Vapor Intrusion Investigation | **San Francisco CA, 94105** | |

## Sample Results

| Analyte | Reanalysis / Extract | Result | Qualifiers / Comments | Quantitation Limit | Units | Batch | Prepared | Analyzed | Method |
|---|---|---|---|---|---|---|---|---|---|
| **Lab ID: 2106036-08** | | | | | | | | | **Air - Sampled: 06/23/21 13:07** |
| **Sample ID: F6-025-3ft-G** | | | | | | | | | **Volatile Organic Compounds by TO-15** |
| cis-1,2-Dichloroethene | | 8.9 | | 8.8 | ug/m³ Air | B21F079 | 06/28/21 | 06/28/21 | TO-15 |
| Chloroform | | 5.5 | C1, J | 11 | " | " | " | " | TO-15 |
| Trichloroethene | | 63 | | 12 | " | " | " | " | TO-15 |
| Tetrachloroethene | | ND | U | 15 | " | " | " | " | TO-15 |

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## Volatile Organic Compounds by TO-15 - Quality Control

## EPA Region 9 Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B21F079 - Air_Can_Pressure** | | | | | | | | | | |
| **Blank (B21F079-BLK1)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| Vinyl chloride | ND | 2.6 | ug/m³ Air | | | | | | | U |
| 1,1-Dichloroethene | ND | 4.0 | ug/m³ Air | | | | | | | U |
| trans-1,2-Dichloroethene | ND | 4.0 | ug/m³ Air | | | | | | | U |
| 1,1-Dichloroethane | ND | 4.0 | ug/m³ Air | | | | | | | U |
| cis-1,2-Dichloroethene | ND | 4.0 | ug/m³ Air | | | | | | | U |
| Chloroform | ND | 4.9 | ug/m³ Air | | | | | | | U |
| Benzene | ND | 3.2 | ug/m³ Air | | | | | | | U |
| Trichloroethene | ND | 5.4 | ug/m³ Air | | | | | | | U |
| Tetrachloroethene | ND | 6.8 | ug/m³ Air | | | | | | | U |
| **LCS (B21F079-BS1)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| 1,2-Dichlorotetrafluoroethane | 55.8 | 7.0 | ug/m³ Air | 71.2 | | 78 | 74-116 | | | |
| Chloromethane | 18.0 | 2.1 | ug/m³ Air | 21.9 | | 82 | 73-113 | | | |
| Vinyl chloride | 23.1 | 2.6 | ug/m³ Air | 27.6 | | 84 | 68-119 | | | |
| Bromomethane | 33.0 | 3.9 | ug/m³ Air | 41.5 | | 79 | 71-122 | | | |
| Chloroethane | 22.3 | 2.6 | ug/m³ Air | 27.9 | | 80 | 73-116 | | | |
| Trichlorofluoromethane | 50.2 | 5.6 | ug/m³ Air | 61.2 | | 82 | 74-120 | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 67.2 | 7.7 | ug/m³ Air | 84.2 | | 80 | 63-126 | | | |
| 1,1-Dichloroethene | 35.5 | 4.0 | ug/m³ Air | 43.2 | | 82 | 69-119 | | | |
| Dichloromethane | 29.8 | 6.9 | ug/m³ Air | 37.8 | | 79 | 76-110 | | | |
| trans-1,2-Dichloroethene | 34.0 | 4.0 | ug/m³ Air | 40.8 | | 83 | 78-113 | | | |
| 1,1-Dichloroethane | 34.7 | 4.0 | ug/m³ Air | 42.1 | | 82 | 76-113 | | | |
| cis-1,2-Dichloroethene | 36.2 | 4.0 | ug/m³ Air | 43.6 | | 83 | 74-116 | | | |
| Chloroform | 44.1 | 4.9 | ug/m³ Air | 52.7 | | 84 | 77-115 | | | |
| 1,1,1-Trichloroethane | 50.2 | 5.5 | ug/m³ Air | 59.4 | | 84 | 77-117 | | | |
| Carbon tetrachloride | 57.4 | 6.3 | ug/m³ Air | 67.9 | | 85 | 75-121 | | | |
| Benzene | 31.0 | 3.2 | ug/m³ Air | 35.1 | | 88 | 81-115 | | | |
| 1,2-Dichloroethane | 38.7 | 4.0 | ug/m³ Air | 42.9 | | 90 | 74-128 | | | |
| Trichloroethene | 50.0 | 5.4 | ug/m³ Air | 58.5 | | 86 | 82-113 | | | |
| 1,2-Dichloropropane | 44.3 | 4.6 | ug/m³ Air | 49.9 | | 89 | 78-119 | | | |
| cis-1,3-Dichloropropene | 44.3 | 4.5 | ug/m³ Air | 49.9 | | 89 | 82-117 | | | |
| Toluene | 36.0 | 3.8 | ug/m³ Air | 41.0 | | 88 | 80-120 | | | |
| trans-1,3-Dichloropropene | 38.7 | 4.5 | ug/m³ Air | 44.9 | | 86 | 81-122 | | | |
| 1,1,2-Trichloroethane | 51.5 | 5.5 | ug/m³ Air | 59.4 | | 87 | 81-121 | | | |
| Tetrachloroethene | 62.5 | 6.8 | ug/m³ Air | 73.2 | | 85 | 69-122 | | | |
| 1,2-Dibromoethane (EDB) | 69.9 | 7.7 | ug/m³ Air | 82.9 | | 84 | 81-121 | | | |
| Chlorobenzene | 43.5 | 4.6 | ug/m³ Air | 50.6 | | 86 | 80-122 | | | |
| Ethylbenzene | 41.4 | 4.3 | ug/m³ Air | 46.4 | | 89 | 80-125 | | | |
| m&p-Xylene | 84.8 | 8.7 | ug/m³ Air | 93.7 | | 90 | 80-128 | | | |
| o-Xylene | 39.3 | 4.3 | ug/m³ Air | 43.0 | | 91 | 79-130 | | | |
| Styrene | 41.2 | 4.3 | ug/m³ Air | 46.8 | | 88 | 76-133 | | | |

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| **Project Number:** R21S04 | **75 Hawthorne Street** | **Reported:** 07/08/21 16:15 |
| **Project:** MEW OU1 FY2021 Vapor Intrusion Investigation | **San Francisco CA, 94105** | |

## Volatile Organic Compounds by TO-15 - Quality Control

## EPA Region 9 Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B21F079 - Air_Can_Pressure** | | | | | | | | | | |
| **LCS (B21F079-BS1)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| 1,1,2,2-Tetrachloroethane | 61.2 | 6.9 | ug/m³ Air | 68.6 | | 89 | 78-132 | | | |
| 1,3,5-Trimethylbenzene | 49.6 | 4.9 | ug/m³ Air | 54.0 | | 92 | 78-133 | | | |
| 1,2,4-Trimethylbenzene | 48.4 | 4.9 | ug/m³ Air | 52.6 | | 92 | 78-133 | | | |
| 1,3-Dichlorobenzene | 51.9 | 6.0 | ug/m³ Air | 62.5 | | 83 | 76-133 | | | |
| 1,4-Dichlorobenzene | 51.1 | 6.0 | ug/m³ Air | 63.1 | | 81 | 75-134 | | | |
| 1,2-Dichlorobenzene | 52.8 | 6.0 | ug/m³ Air | 61.3 | | 86 | 77-134 | | | |
| 1,2,4-Trichlorobenzene | 58.4 | 7.4 | ug/m³ Air | 77.9 | | 75 | 70-133 | | | |
| Hexachlorobutadiene | 104 | 11 | ug/m³ Air | 117 | | 89 | 74-130 | | | |
| **Duplicate (B21F079-DUP1)** | | **Source: 2106036-01** | | Prepared & Analyzed: 06/28/21 | | | | | | |
| Vinyl chloride | ND | 5.7 | ug/m³ Air | | ND | | | | 20 | U |
| 1,1-Dichloroethene | ND | 8.8 | ug/m³ Air | | ND | | | | 20 | U |
| trans-1,2-Dichloroethene | ND | 8.8 | ug/m³ Air | | ND | | | | 20 | U |
| 1,1-Dichloroethane | ND | 9.0 | ug/m³ Air | | ND | | | | 20 | U |
| cis-1,2-Dichloroethene | ND | 8.8 | ug/m³ Air | | ND | | | | 20 | U |
| Chloroform | ND | 11 | ug/m³ Air | | ND | | | | 20 | U |
| Trichloroethene | ND | 12 | ug/m³ Air | | ND | | | | 20 | U |
| Tetrachloroethene | ND | 15 | ug/m³ Air | | ND | | | | 20 | U |
| **Batch S21F072 - B21F079** | | | | | | | | | | |
| **Instrument Blank (S21F072-IBL1)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| 1,2-Dichlorotetrafluoroethane | ND | 7.0 | ppbv | | | | | | | U |
| Chloromethane | ND | 2.1 | ppbv | | | | | | | U |
| Vinyl chloride | ND | 2.6 | ppbv | | | | | | | U |
| Bromomethane | ND | 3.9 | ppbv | | | | | | | U |
| Chloroethane | ND | 2.6 | ppbv | | | | | | | U |
| Trichlorofluoromethane | ND | 5.6 | ppbv | | | | | | | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 7.7 | ppbv | | | | | | | U |
| 1,1-Dichloroethene | ND | 4.0 | ppbv | | | | | | | U |
| Dichloromethane | ND | 6.9 | ppbv | | | | | | | U |
| trans-1,2-Dichloroethene | ND | 4.0 | ppbv | | | | | | | U |
| 1,1-Dichloroethane | ND | 4.0 | ppbv | | | | | | | U |
| cis-1,2-Dichloroethene | ND | 4.0 | ppbv | | | | | | | U |
| Chloroform | ND | 4.9 | ppbv | | | | | | | U |
| 1,1,1-Trichloroethane | ND | 5.5 | ppbv | | | | | | | U |
| Carbon tetrachloride | ND | 6.3 | ppbv | | | | | | | U |
| Benzene | ND | 3.2 | ppbv | | | | | | | U |
| 1,2-Dichloroethane | ND | 4.0 | ppbv | | | | | | | U |
| Trichloroethene | ND | 5.4 | ppbv | | | | | | | U |
| 1,2-Dichloropropane | ND | 4.6 | ppbv | | | | | | | U |
| cis-1,3-Dichloropropene | ND | 4.5 | ppbv | | | | | | | U |
| Toluene | ND | 3.8 | ppbv | | | | | | | U |
| trans-1,3-Dichloropropene | ND | 4.5 | ppbv | | | | | | | U |

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| **Project:** MEW OU1 FY2021 Vapor Intrusion Investigation | **San Francisco CA, 94105** | |

## Volatile Organic Compounds by TO-15 - Quality Control

## EPA Region 9 Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch S21F072 - B21F079** | | | | | | | | | | |
| **Instrument Blank (S21F072-IBL1)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.5 | ppbv | | | | | | | U |
| Tetrachloroethene | ND | 6.8 | ppbv | | | | | | | U |
| 1,2-Dibromoethane (EDB) | ND | 7.7 | ppbv | | | | | | | U |
| Chlorobenzene | ND | 4.6 | ppbv | | | | | | | U |
| Ethylbenzene | ND | 4.3 | ppbv | | | | | | | U |
| m&p-Xylene | ND | 8.7 | ppbv | | | | | | | U |
| o-Xylene | ND | 4.3 | ppbv | | | | | | | U |
| Styrene | ND | 4.3 | ppbv | | | | | | | U |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | ppbv | | | | | | | U |
| 1,3,5-Trimethylbenzene | ND | 4.9 | ppbv | | | | | | | U |
| 1,2,4-Trimethylbenzene | ND | 4.9 | ppbv | | | | | | | U |
| 1,3-Dichlorobenzene | ND | 6.0 | ppbv | | | | | | | U |
| 1,4-Dichlorobenzene | ND | 6.0 | ppbv | | | | | | | U |
| 1,2-Dichlorobenzene | ND | 6.0 | ppbv | | | | | | | U |
| 1,2,4-Trichlorobenzene | ND | 7.4 | ppbv | | | | | | | U |
| Hexachlorobutadiene | ND | 11 | ppbv | | | | | | | U |
| **Instrument Blank (S21F072-IBL2)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| 1,2-Dichlorotetrafluoroethane | ND | 7.0 | ppbv | | | | | | | U |
| Chloromethane | ND | 2.1 | ppbv | | | | | | | U |
| Vinyl chloride | ND | 2.6 | ppbv | | | | | | | U |
| Bromomethane | ND | 3.9 | ppbv | | | | | | | U |
| Chloroethane | ND | 2.6 | ppbv | | | | | | | U |
| Trichlorofluoromethane | ND | 5.6 | ppbv | | | | | | | U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 7.7 | ppbv | | | | | | | U |
| 1,1-Dichloroethene | ND | 4.0 | ppbv | | | | | | | U |
| Dichloromethane | ND | 6.9 | ppbv | | | | | | | U |
| trans-1,2-Dichloroethene | ND | 4.0 | ppbv | | | | | | | U |
| 1,1-Dichloroethane | ND | 4.0 | ppbv | | | | | | | U |
| cis-1,2-Dichloroethene | ND | 4.0 | ppbv | | | | | | | U |
| Chloroform | ND | 4.9 | ppbv | | | | | | | U |
| 1,1,1-Trichloroethane | ND | 5.5 | ppbv | | | | | | | U |
| Carbon tetrachloride | ND | 6.3 | ppbv | | | | | | | U |
| Benzene | ND | 3.2 | ppbv | | | | | | | U |
| 1,2-Dichloroethane | ND | 4.0 | ppbv | | | | | | | U |
| Trichloroethene | ND | 5.4 | ppbv | | | | | | | U |
| 1,2-Dichloropropane | ND | 4.6 | ppbv | | | | | | | U |
| cis-1,3-Dichloropropene | ND | 4.5 | ppbv | | | | | | | U |
| Toluene | ND | 3.8 | ppbv | | | | | | | U |
| trans-1,3-Dichloropropene | ND | 4.5 | ppbv | | | | | | | U |
| 1,1,2-Trichloroethane | ND | 5.5 | ppbv | | | | | | | U |
| Tetrachloroethene | ND | 6.8 | ppbv | | | | | | | U |
| 1,2-Dibromoethane (EDB) | ND | 7.7 | ppbv | | | | | | | U |

United States Environmental Protection Agency
# Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

| | | |
|---|---|---|
| **Project Manager:** Alana Lee | **California Site Cleanup Section 3** | **WorkOrder: 2106036** |
| **Project Number:** R21S04 | **75 Hawthorne Street** | **Reported:** 07/08/21 16:15 |
| **Project:** MEW OU1 FY2021 Vapor Intrusion Investigation | **San Francisco CA, 94105** | |

## Volatile Organic Compounds by TO-15 - Quality Control

## EPA Region 9 Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch S21F072 - B21F079** | | | | | | | | | | |
| **Instrument Blank (S21F072-IBL2)** | | | | Prepared & Analyzed: 06/28/21 | | | | | | |
| Chlorobenzene | ND | 4.6 | ppbv | | | | | | | U |
| Ethylbenzene | ND | 4.3 | ppbv | | | | | | | U |
| m&p-Xylene | ND | 8.7 | ppbv | | | | | | | U |
| o-Xylene | ND | 4.3 | ppbv | | | | | | | U |
| Styrene | ND | 4.3 | ppbv | | | | | | | U |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | ppbv | | | | | | | U |
| 1,3,5-Trimethylbenzene | ND | 4.9 | ppbv | | | | | | | U |
| 1,2,4-Trimethylbenzene | ND | 4.9 | ppbv | | | | | | | U |
| 1,3-Dichlorobenzene | ND | 6.0 | ppbv | | | | | | | U |
| 1,4-Dichlorobenzene | ND | 6.0 | ppbv | | | | | | | U |
| 1,2-Dichlorobenzene | ND | 6.0 | ppbv | | | | | | | U |
| 1,2,4-Trichlorobenzene | ND | 7.4 | ppbv | | | | | | | U |
| Hexachlorobutadiene | ND | 11 | ppbv | | | | | | | U |

United States Environmental Protection Agency
# Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

| | | |
|---|---|---|
| **Project Manager:** Alana Lee | **California Site Cleanup Section 3** | **WorkOrder: 2106036** |
| **Project Number:** R21S04 | **75 Hawthorne Street** | **Reported:** 07/08/21 16:15 |
| **Project:** MEW OU1 FY2021 Vapor Intrusion Investigation | **San Francisco CA, 94105** | |

## Qualifiers and Comments

| | |
|---|---|
| J | The reported result for this analyte should be considered an estimated value. |
| C1 | The reported concentration for this analyte is below the quantitation limit. |
| U | Not Detected |
| NR | Not Reported |
| RE1, RE2, etc: | Result is from a sample re-analysis. |

United States Environmental Protection Agency
# Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

| | | |
|---|---|---|
| **Project Manager:** Alana Lee | **California Site Cleanup Section 3** | **WorkOrder: 2106036** |
| **Project Number:** R21S04 | **75 Hawthorne Street** | **Reported:** 07/08/21 16:15 |
| **Project:** MEW OU1 FY2021 Vapor Intrusion Investigation | **San Francisco CA, 94105** | |

Sample Receiving:

For lab ID 2106036-08, the sample ID on COC is F6-027-3ft-G, ID on Can F6-025-3ft-G. This sample was logged in and is reported per the ID on Can, F6-025-3ft-G. TD 06/25/21 JB 7/8/21

**WORK ORDER**

**Printed: 6/28/2021 9:05:59AM**

**2106036**

## EPA Region 9 Laboratory

**Client:** **California Site Cleanup Section 3**
**Project:** **MEW OU1 FY2021 Vapor Intrusion Investigation**
**Project Number:** **R21S04**

**Report To:**
California Site Cleanup Section 3
Alana Lee
75 Hawthorne Street
San Francisco, CA 94105
Phone: (415) 972-3141
Fax: (415) 947-3526

**Project Contact**
California Site Cleanup Section 3
Alana Lee
75 Hawthorne Street
San Francisco, CA 94105
Phone :(415) 972-3141
Fax: (415) 947-3526

| Shipping Containers | Description | Temp C | Custody Seals? | Containers Intact? | Labels COC Agree? | Preservation Confirmed? | Received on Ice? | Comments |
|---|---|---|---|---|---|---|---|---|
| Box1 | Box 1 | 22 | Yes | Yes | No | No | No | |

| | | | |
|---|---|---|---|
| Date Due: | 07/09/21 17:00 (14 day TAT) | SDG: | 21176D |
| Received By: | Tatyana Dadiomov | Date Received: | 06/25/21 13:19 |
| Logged In By: | Tatyana Dadiomov | Date Logged In: | 06/25/21 13:27 |

| Analysis | Hold Time Expires | Comments |
|---|---|---|
| **2106036-01 G6-014-3ft-G [Air] Sampled 06/22/21 06:50 (GMT-08:00) Pacific Time (US &** | | **Can# 1997** |
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |
| **2106036-02 F7-002-3ft-G [Air] Sampled 06/22/21 07:12 (GMT-08:00) Pacific Time (US &** | | **Can# 2002** |
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |
| **2106036-03 F6-035-3ft-G [Air] Sampled 06/22/21 07:23 (GMT-08:00) Pacific Time (US &** | | **Can# 648** |
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |
| **2106036-04 F6-023-3ft-G [Air] Sampled 06/22/21 07:40 (GMT-08:00) Pacific Time (US &** | | **Can# 863** |
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |
| **2106036-05 F6-023-3ft-D-G [Air] Sampled 06/22/21 07:40 (GMT-08:00) Pacific Time (US &** | | **Can# 856** |
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |
| **2106036-06 F6-010-3ft-G [Air] Sampled 06/22/21 07:52 (GMT-08:00) Pacific Time (US &** | | **Can# 870** |
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |

**WORK ORDER**

**Printed: 6/28/2021 9:05:59AM**

**2106036**

## EPA Region 9 Laboratory

**Client:** **California Site Cleanup Section 3** **Project Number:** **R21S04**
**Project:** **MEW OU1 FY2021 Vapor Intrusion Investigation**

| Analysis | Hold Time Expires | Comments |
|---|---|---|

| Analysis | Expires | Comments |
|---|---|---|

**2106036-07 F6-006-3ft-G [Air] Sampled 06/22/21 08:11 (GMT-08:00) Pacific Time (US &** **Can# 651**

| | | |
|---|---|---|
| VOCs, Soil Gas | 07/22/21 | check COC for requested analytes |

**2106036-08 F6-025-3ft-G [Air] Sampled 06/23/21 13:07 (GMT-08:00) Pacific Time (US &** **Can# 636**

| | | |
|---|---|---|
| VOCs, Soil Gas | 07/23/21 | check COC for requested analytes |

Reviewed By

Date

| U.S. Environmental Protection Agency | CHAIN OF CUSTODY RECORD | EPA REGION 9<br>75 Hawthorne Street<br>San Francisco, California 94105 |
|---|---|---|
| Project / Case Number:<br>R21S04 - MEW (M6) OU1 | FY21 MEW OU1 Vapor Intrusion and Sewer Pathway | EPA Project Manager contact:<br>Alana Lee, 415-972-3141<br>Lee.Alana@epa.gov |
| EPA R9 Laboratory - Richmond, CA | Ray Chavira / Michael Schulman / Kelsey Bartling | Analysis: TCE, cis & trans 1,2-DCE, PCE, vinyl choride, 1,1 DCE, 1,1-DCA, chloroform - 21-day TAT requested |

| Sample ID | Canister ID | Comp | Grab | Date | Time | Initial Pressure | Final Pressure | TCE Screen ($\mu g/m^3$) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| G6-014-3ft-G | 1997 | | X | 6/22/2021 | 6:50 | -30 | 0 | | |
| F7-002-3ft-G | 2002 | | X | 6/22/2021 | 7:12 | -30 | 0 | | |
| F6-035-3ft-G | 648 | | X | 6/22/2021 | 7:23 | -30 | 0 | | |
| F6-023-3ft-G | 863 | | X | 6/22/2021 | 7:40 | -30 | 0 | | |
| F6-023-3ft-D-G | 856 | | X | 6/22/2021 | 7:40 | -30 | 0 | | Duplicate |
| F6-010-3ft-G | 870 | | X | 6/22/2021 | 7:52 | -30 | 0 | | |
| F6-006-3ft-G | 651 | | X | 6/22/2021 | 8:00 | -30 | 0 | | |
| F6-027-3ft-G | 636 | | X | 6/23/2021 | 13:07 | -30 | 0 | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

6/23/21

| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Date/Time | | Relinquished by: (Signature) |
|---|---|---|---|---|---|
| Alana Lee | 6/25/21 1302 | | | | |
| Received by Laboratory by: (Signature) | Date/Time | | Temp | (Y/N/None) | |
| [illegible] | 6-25-21 13:19 | | | | |



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Cooler/Box/Env 1 of 1

U.S. Environmental Protection Agency
Region 9 Richmond Laboratory

1337 South 46th Street
Richmond, CA 94804

# Sample Receipt Checklist

Note in WO memo any items outside acceptable limits.

**Project No:** R21304 **Work Order No(s):** 2106036 **Date:** 6/25/21 **by** TD

**CUSTODY SEALS Are Intact?** ☐ Yes ☐ No ☒ N/A-none

Check if applies: ☐ External Seals ☐ Internal Seals ☐ Hand Delivered

**TEMPERATURE** 22 °C

**Within Acceptable Range?** (If preservation is "store cool at 4°C," use 0-6°C for acceptable range.) ☐ Yes ☐ No ☒ Ambient OK

Measured by: ☒ IR thermometer ☐ Probe thermometer inserted in provided temp. blank

☐ Provided Temp Blank was not used because _____

Check if applies: ☐ No ice present ☐ Insufficient/Melted Ice ☐ Tissue Received Frozen

☐ Still cooling (sampled today & iced) ☐ Delivery Delay ☐ Previously Frozen

**SAMPLE CONTAINERS Are Intact?** ☒ Yes ☐ No

Check if applies and identify sample IDs in comments:

☐ Bottle/Jar/Vial broken ☐ Cap broken or loose ☐ Insufficient sample amount

☐ Other _____

**CHAIN OF CUSTODY**

**COC forms are present?** ☒ Yes ☐ No

**COC forms are consistent with sample labels?** ☐ Yes ☒ No ☐ N/A-no COC form

Check if applies: ☐ Missing "relinquished by" signature

**TAT and analyses match TDF or scheduling?** ☒ Yes ☐ No

Check if applies: ☐ Preliminary Results ☐ Rush Request ☐ 7-day TAT

**Samples are received within hold times?** ☒ Yes ☐ No ☐ N/A-no hold times

Check if applies: ☐ Expires soon; notify analyst ☐ Expired

**All shipping and sample containers are accounted for?** ☒ Yes ☐ No

**PRESERVATION / FILTRATION**

**Samples were filtered in field?** ☐ Yes ☐ No ☒ N/A

**Filtration is correctly identified on samples?** ☐ Yes ☐ No ☒ N/A

Check if applies: ☐ Analyst to filter

Check if applies: ☐ Notify analyst to check for methyl mercury analysis and low-level mercury analysis by 1631

**Samples were preserved in field?** ☐ Yes ☐ No ☒ N/A

Check if applies: ☐ Analyst to preserve ☐ Sample Receiving to preserve (see page 2)

**Preservation is correctly identified on samples?** ☐ Yes ☐ No ☒ N/A

**Field-preserved samples (excluding VOA vials for VOC analyses) have correct pH?** ☐ Yes ☐ No ☒ N/A

Check if verified:

☐ Sulfide: pH >9 NaOH/Zinc acetate

☐ Cyanide: pH >12 NaOH

☐ Metals: pH <2 $HNO_3$

☐ Ferrous Iron: pH <2 HCl

☐ TOC/DOC: pH <2 $H_2SO_4/H_3PO_4$ (not HCl)

☐ Ammonia / Nitrate/Nitrite / TKN / Phosphorus: pH <2 H2SO4

☐ Other: _____

**FOLLOW-UP / COMMENTS / UNUSUAL CHARACTERISTICS OBSERVED** (for example, sample is pink):

Sample ID on COC F6-027-3/4-6, Sample ID on can F6-025-3/4-6. Logged in per contains.



FORM #: Q016
REV #: 2
REV. DATE: 07/29/19

# BATCH

## B21F079

Batch Date: 06/28/2021

Batch Matrix: Air

Batch Analyses:

VOCs, Soil Gas

# PREPARATION BENCH SHEET

## B21F079

**EPA Region 9 Laboratory**

Project: R21S04

**Printed: 6/28/2021 11:57:44AM**

**Matrix: Air** **Analysis: VOCs, Soil Gas** **Prepared using: Air - Air_Can_Pressure**

| Lab Number | Sample Name | Prepared | Initial | Final | Spike ID | Source ID | ul Spike | Can # | Initial PSI | Final PSI | Initial DF | Final DF | Prepared By | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2106036-01 A | G6-014-3ft-G | 06/28/21 11:21 | 200 | 200 | | | | 1997 | 14.62 | 32.42 | 1 | 2.22 | LLH | check COC for requested analytes |
| 2106036-02 A | F7-002-3ft-G | 06/28/21 11:23 | 200 | 200 | | | | 2002 | 14.14 | 32.19 | 1 | 2.28 | LLH | check COC for requested analytes |
| 2106036-03 A | F6-035-3ft-G | 06/28/21 11:26 | 200 | 200 | | | | 648 | 14.67 | 32.20 | 1 | 2.19 | LLH | check COC for requested analytes |
| 2106036-04 A | F6-023-3ft-G | 06/28/21 11:29 | 200 | 200 | | | | 863 | 14.63 | 32.02 | 1 | 2.19 | LLH | check COC for requested analytes |
| 2106036-05 A | F6-023-3ft-D -G | 06/28/21 11:32 | 200 | 200 | | | | 856 | 14.64 | 32.14 | 1 | 2.20 | LLH | check COC for requested analytes |
| 2106036-06 A | F6-010-3ft-G | 06/28/21 11:35 | 200 | 200 | | | | 870 | 13.70 | 32.12 | 1 | 2.34 | LLH | check COC for requested analytes |
| 2106036-07 A | F6-006-3ft-G | 06/28/21 11:38 | 200 | 200 | | | | 651 | 13.43 | 32.02 | 1 | 2.38 | LLH | check COC for requested analytes |
| 2106036-08 A | F6-025-3ft-G | 06/28/21 11:41 | 200 | 200 | | | | 636 | 14.53 | 32.08 | 1 | 2.21 | LLH | check COC for requested analytes |
| B21F079-BLK1 | Blank | 06/28/21 11:15 | 200 | 200 | | | | | | | | | LLH | |
| B21F079-BS1 | LCS | 06/28/21 11:15 | 200 | 200 | 2124080 | | 100000 | | | | | | LLH | |
| B21F079-DUP1 | Duplicate | 06/28/21 11:15 | 200 | 200 | | 2106036-01 | | 1997 | 14.62 | 32.42 | 1 | 2.22 | LLH | |

**Batch Comments**

**PREPARATION BENCH SHEET**

# B21F079

**EPA Region 9 Laboratory**

Project: R21S04

**Printed: 6/28/2021 11:57:44AM**

**Matrix: Air** **Analysis: QC** **Prepared using: Air - Air_Can_Pressure**

| Lab Number | Sample Name | Prepared | Initial | Final | Spike ID | Source ID | ul Spike | Can # | Initial PSI | Final PSI | Initial DF | Final DF | Prepared By | Extraction Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Reagents

| Reagent # | Description |
|---|---|

Page 19 of 344 2106036 DATA_PKG (Rev0).PDF 07/08/21 16:19:20

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# TO15 DILUTION LOGBOOK

#19020

| DATE/ INITIAL | TIME | LAB SAMPLE # | CLIENT SAMPLE # | CAN ID | INITIAL PRESSURE (PSI) | INITIAL VOL (mL) | FINAL VOL (mL) | FINAL PRESSURE (PSI) | AMBIENT PRESSURE Hg/(PSI) | DILUTION FACTOR |
|---|---|---|---|---|---|---|---|---|---|---|
| 06/28/21 | 1121 | 2106036-01 | G6-014-3ff-G | 1497 | 14.62 | 400 | 400 | 32.42 | 29.71/14.59 | 2.22 |
| LH | 1123 | -02 | F7-002- | 2002 | 14.14 | | | 32.19 | | 2.28 |
| | 1126 | -03 | F6-035- | 1048 | 14.67 | | | 32.20 | | 2.19 |
| | 1129 | -04 | F6-023- | 863 | 14.63 | | | 32.02 | | 2.19 |
| | 1132 | -05 | F6-023-3ff-D-G | 856 | 14.64 | | | 32.14 | | 2.20 |
| | 1135 | -06 | F6-010-3ff-G | 870 | 13.70 | | | 32.12 | | 2.34 |
| | 1138 | -07 | F6-006- | 1051 | 13.43 | | | 32.02 | | 2.38 |
| | 1141 | -08 | F6-025- | 1036 | 14.53 | | | 32.08 | | 2.21 |

LH 06/29/21

USEPA REGION 9 LABORATORY

TO15 DILUTION LOGBOOK 12-14-16.xls

Reviewed by: [signature]

Date: 6/29/21





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# Calibration

## 2106006

Calibration Date: 06/10/2021

Instrument: HP5973K

Calibration Analyses:

VOCs, Soil Gas

Table of Contents

Method Path : D:\msdchem\1\2021\METHOD\
Method File : 061021K_TO15AA.M
Title : TO15
Last Update : Fri Jun 11 09:34:37 2021
Response Via : Initial Calibration

**REVIEWED**
**By EM at 9:41 am, Jun 11, 2021**

Calibration Files
1 =061021K02.D 2 =061021K03.D 5 =061021K04.D 10 =061021K05.D 15 =061021K06.D
20 =061021K07.D

| | | Compound | 1 | 2 | 5 | 10 | 15 | 20 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | BROMOCHLOROMETHANE | ----------ISTD---------- | | | | | | | |
| 2) | T | Propene | 0.706 | 0.727 | 0.612 | 0.555 | 0.553 | 0.549 | 0.617 | 13.07 |
| 3) | T | Dichlorodifluo... | 2.032 | 2.173 | 1.782 | 1.617 | 1.591 | 1.585 | 1.797 | 14.00 |
| 4) | T | 1,2-Dichlorote... | 2.166 | 2.304 | 1.883 | 1.718 | 1.697 | 1.700 | 1.912 | 13.80 |
| 5) | T | Chloromethane | 0.713 | 0.758 | 0.620 | 0.560 | 0.551 | 0.546 | 0.625 | 14.57 |
| 6) | T | Vinyl chloride | 1.115 | 1.215 | 1.000 | 0.902 | 0.885 | 0.875 | 0.999 | 14.01 |
| 7) | T | 1,3-Butadiene | 0.960 | 0.961 | 0.796 | 0.722 | 0.708 | 0.698 | 0.808 | 15.28 |
| 8) | T | Bromomethane | 0.659 | 0.714 | 0.582 | 0.520 | 0.509 | 0.507 | 0.582 | 15.03 |
| 9) | T | Chloroethane | 0.411 | 0.463 | 0.378 | 0.337 | 0.332 | 0.329 | 0.375 | 14.31 |
| 10) | T | Bromoethene | 0.685 | 0.702 | 0.588 | 0.545 | 0.539 | 0.543 | 0.601 | 12.43 |
| 11) | T | Trichlorofluor... | 1.706 | 1.844 | 1.508 | 1.350 | 1.320 | 1.311 | 1.507 | 14.88 |
| 12) | T | 1,1,2-Trichlor... | 1.218 | 1.344 | 1.088 | 0.979 | 0.961 | 0.958 | 1.091 | 14.60 |
| 13) | T | 1,1-Dichloroet... | 0.983 | 1.100 | 0.937 | 0.872 | 0.864 | 0.869 | 0.938 | 9.88 |
| 14) | T | Acetone | 1.331 | 1.278 | 1.041 | 0.943 | 0.925 | 0.918 | 1.073 | 17.30 |
| 15) | T | Carbon disulfide | 2.299 | 2.331 | 1.896 | 1.705 | 1.665 | 1.655 | 1.925 | 16.33 |
| 16) | T | 2-Propanol | 0.994 | 1.030 | 0.912 | 0.884 | 0.898 | 0.914 | 0.939 | 6.30 |
| 17) | T | Allyl chloride | 0.850 | 0.913 | 0.770 | 0.726 | 0.720 | 0.727 | 0.784 | 10.21 |
| 18) | T | Dichloromethane | 1.066 | 0.995 | 0.761 | 0.662 | 0.638 | 0.628 | 0.792 | 24.28 |
| 19) | T | tert-Butyl met... | 2.006 | 2.173 | 1.903 | 1.799 | 1.815 | 1.836 | 1.922 | 7.52 |
| 20) | T | trans-1,2-Dich... | 1.087 | 1.151 | 0.950 | 0.869 | 0.852 | 0.847 | 0.960 | 13.61 |
| 21) | T | Hexane | 1.203 | 1.323 | 1.140 | 1.076 | 1.072 | 1.071 | 1.147 | 8.76 |
| 22) | T | 1,1-Dichloroet... | 1.319 | 1.453 | 1.180 | 1.064 | 1.044 | 1.042 | 1.184 | 14.39 |
| 23) | T | Vinyl acetate | 1.260 | 1.417 | 1.298 | 1.259 | 1.277 | 1.299 | 1.302 | 4.55 |
| 24) | T | cis-1,2-Dichlo... | 0.848 | 0.955 | 0.810 | 0.752 | 0.744 | 0.749 | 0.810 | 10.17 |
| 25) | T | 2-Butanone (MEK) | 0.406 | 0.436 | 0.373 | 0.348 | 0.349 | 0.352 | 0.377 | 9.66 |
| 26) | T | Ethyl acetate | 0.258 | 0.265 | 0.232 | 0.205 | 0.202 | 0.204 | 0.228 | 12.47 |
| 27) | T | Tetrahydrofuran | 0.962 | 1.028 | 0.876 | 0.814 | 0.807 | 0.811 | 0.883 | 10.51 |
| 28) | T | Chloroform | 1.440 | 1.586 | 1.290 | 1.167 | 1.142 | 1.133 | 1.293 | 14.33 |
| 29) | T | Cyclohexane | 1.223 | 1.323 | 1.142 | 1.057 | 1.050 | 1.057 | 1.142 | 9.78 |
| 30) | T | 1,1,1-Trichlor... | 1.387 | 1.526 | 1.271 | 1.156 | 1.135 | 1.136 | 1.268 | 12.65 |
| 31) | T | Carbon tetrach... | 1.435 | 1.573 | 1.318 | 1.199 | 1.189 | 1.189 | 1.317 | 12.08 |
| 32) | I | 1,4-DIFLUOROBENZENE | ----------ISTD---------- | | | | | | | |
| 33) | T | Benzene | 0.743 | 0.822 | 0.681 | 0.620 | 0.596 | 0.596 | 0.676 | 13.52 |
| 34) | T | 2,2,4-Trimethy... | 1.231 | 1.343 | 1.180 | 1.109 | 1.082 | 1.088 | 1.172 | 8.68 |
| 35) | T | 1,2-Dichloroet... | 0.308 | 0.335 | 0.278 | 0.255 | 0.246 | 0.247 | 0.278 | 13.06 |
| 36) | T | Heptane | 0.435 | 0.482 | 0.423 | 0.399 | 0.392 | 0.397 | 0.421 | 8.06 |
| 37) | T | Trichloroethene | 0.312 | 0.349 | 0.293 | 0.271 | 0.264 | 0.266 | 0.292 | 11.40 |
| 38) | T | 1,2-Dichloropr... | 0.266 | 0.293 | 0.250 | 0.228 | 0.222 | 0.221 | 0.247 | 11.65 |
| 39) | T | 1,4-Dioxane | 0.173 | 0.164 | 0.146 | 0.138 | 0.135 | 0.135 | 0.149 | 10.98 |
| 40) | T | Bromodichlorom... | 0.569 | 0.596 | 0.492 | 0.455 | 0.443 | 0.441 | 0.499 | 13.50 |
| 41) | T | cis-1,3-Dichlo... | 0.349 | 0.406 | 0.358 | 0.346 | 0.342 | 0.349 | 0.358 | 6.75 |
| 42) | T | 4-Methyl-2-pen... | 0.612 | 0.637 | 0.561 | 0.533 | 0.528 | 0.535 | 0.568 | 8.13 |
| 43) | I | CHLOROBENZENE-d5 | ----------ISTD---------- | | | | | | | |
| 44) | T | Toluene | 0.818 | 0.945 | 0.807 | 0.749 | 0.725 | 0.724 | 0.795 | 10.54 |
| 45) | T | trans-1,3-Dich... | 0.316 | 0.364 | 0.332 | 0.317 | 0.312 | 0.315 | 0.326 | 6.10 |
| 46) | T | 1,1,2-Trichlor... | 0.291 | 0.328 | 0.269 | 0.251 | 0.242 | 0.242 | 0.270 | 12.50 |
| 47) | T | Tetrachloroethene | 0.440 | 0.504 | 0.424 | 0.391 | 0.380 | 0.382 | 0.420 | 11.38 |
| 48) | T | 2-Hexanone | 0.553 | 0.594 | 0.528 | 0.508 | 0.502 | 0.505 | 0.532 | 6.82 |
| 49) | T | Chlorodibromom... | 0.582 | 0.610 | 0.522 | 0.488 | 0.478 | 0.483 | 0.527 | 10.69 |
| 50) | T | 1,2-Dibromoeth... | 0.405 | 0.449 | 0.383 | 0.354 | 0.345 | 0.347 | 0.381 | 10.75 |
| 51) | T | Chlorobenzene | 0.732 | 0.810 | 0.672 | 0.614 | 0.590 | 0.590 | 0.668 | 13.29 |
| 52) | T | Ethylbenzene | 1.139 | 1.295 | 1.107 | 1.021 | 0.996 | 0.996 | 1.092 | 10.62 |
| 53) | T | m&p-Xylene | 0.829 | 0.966 | 0.835 | 0.787 | 0.776 | 0.783 | 0.829 | 8.59 |
| 54) | T | o-Xylene | 0.840 | 1.017 | 0.897 | 0.847 | 0.839 | 0.849 | 0.881 | 7.93 |
| 55) | T | Styrene | 0.599 | 0.725 | 0.647 | 0.620 | 0.614 | 0.622 | 0.638 | 7.14 |
| 56) | T | Bromoform | 0.559 | 0.604 | 0.530 | 0.510 | 0.505 | 0.516 | 0.537 | 7.09 |
| 57) | T | 1,1,2,2-Tetrac... | 0.691 | 0.780 | 0.658 | 0.609 | 0.588 | 0.590 | 0.653 | 11.44 |
| 58) | T | 4-Ethyltoluene | 1.386 | 1.579 | 1.426 | 1.357 | 1.350 | 1.367 | 1.411 | 6.17 |
| 59) | T | 1,3,5-Trimethy... | 0.939 | 1.133 | 0.996 | 0.949 | 0.921 | 0.927 | 0.978 | 8.27 |

Table of Contents

Method Path : D:\msdchem\1\2021\METHOD\
Method File : 061021K_TO15AA.M
Title : TO15

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 60) | T | 1,2,4-Trimethy... | 0.875 | 1.093 | 0.995 | 0.953 | 0.944 | 0.958 | 0.970 | 7.44 |
| 61) | T | 1,3-Dichlorobe... | 0.711 | 0.801 | 0.699 | 0.659 | 0.647 | 0.652 | 0.695 | 8.35 |
| 62) | T | 1,4-Dichlorobe... | 0.676 | 0.776 | 0.680 | 0.645 | 0.634 | 0.639 | 0.675 | 7.85 |
| 63) | T | Benzyl chloride | 0.776 | 0.863 | 0.835 | 0.840 | 0.847 | 0.875 | 0.839 | 4.09 |
| 64) | T | 1,2-Dichlorobe... | 0.718 | 0.814 | 0.704 | 0.662 | 0.647 | 0.654 | 0.700 | 8.99 |
| 65) | T | 1,2,4-Trichlor... | 0.549 | 0.634 | 0.587 | 0.572 | 0.576 | 0.587 | 0.584 | 4.78 |
| 66) | T | Hexachlorobuta... | 0.669 | 0.761 | 0.660 | 0.636 | 0.639 | 0.654 | 0.670 | 6.95 |

(#) = Out of Range

**SCV REPORT**

**REVIEWED**
**By EM at 9:41 am, Jun 11, 2021**

Instrument Name: HP5973K
Sample Name: S21F026-SCV1
Misc Info: 10ppbv
Date Acquired: 6/10/2021 19:16
QLast Update: Fri Jun 11 09:34:37 2021
Operator: EM

| # | Name | Ret Time | Amount | Concentration | %R | QC | LIMIT | STATUS | |
|---|---|---|---|---|---|---|---|---|---|
| 1) | BROMOCHLOROMETHANE | 16.31 | #N/A | 23.40 | #N/A | 70.0 | 130.0 | #N/A | Internal |
| 2) | Propene | 5.02 | 11.00 | 9.95 | 90% | 70.0 | 130.0 | pass | Subset |
| 3) | Dichlorodifluoromethane | 5.12 | 11.00 | 10.44 | 95% | 70.0 | 130.0 | pass | Primary |
| 4) | 1,2-Dichlorotetrafluoroethane | 5.50 | 11.00 | 9.70 | 88% | 70.0 | 130.0 | pass | Primary |
| 5) | Chloromethane | 5.75 | 11.00 | 10.63 | 97% | 70.0 | 130.0 | pass | Primary |
| 6) | Vinyl chloride | 6.08 | 11.00 | 10.70 | 97% | 70.0 | 130.0 | pass | Primary |
| 7) | 1,3-Butadiene | 6.18 | 9.60 | 10.27 | 107% | 70.0 | 130.0 | pass | Subset |
| 8) | Bromomethane | 7.25 | 11.00 | 10.07 | 92% | 70.0 | 130.0 | pass | Primary |
| 9) | Chloroethane | 7.63 | 11.00 | 10.72 | 97% | 70.0 | 130.0 | pass | Primary |
| 10) | Bromoethene | 8.26 | 11.00 | 10.40 | 95% | 70.0 | 130.0 | pass | Subset |
| 11) | Trichlorofluoromethane | 8.39 | 11.00 | 10.80 | 98% | 70.0 | 130.0 | pass | Primary |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.38 | 11.00 | 10.81 | 98% | 70.0 | 130.0 | pass | Primary |
| 13) | 1,1-Dichloroethene | 10.52 | 12.00 | 11.03 | 92% | 70.0 | 130.0 | pass | Primary |
| 14) | Acetone | 11.08 | 11.00 | 10.07 | 92% | 70.0 | 130.0 | pass | Subset |
| 15) | Carbon disulfide | 11.20 | 12.00 | 10.61 | 88% | 70.0 | 130.0 | pass | Subset |
| 16) | 2-Propanol | 11.60 | 10.00 | 8.83 | 88% | 70.0 | 130.0 | pass | Subset |
| 17) | Allyl chloride | 11.96 | 12.00 | 10.88 | 91% | 70.0 | 130.0 | pass | Subset |
| 18) | Dichloromethane | 12.48 | 12.00 | 9.88 | 82% | 70.0 | 130.0 | pass | Primary |
| 19) | tert-Butyl methyl ether (MTBE) | 13.02 | 11.00 | 9.97 | 91% | 70.0 | 130.0 | pass | Subset |
| 20) | trans-1,2-Dichloroethene | 13.11 | 10.00 | 10.46 | 105% | 70.0 | 130.0 | pass | Subset |
| 21) | Hexane | 13.59 | 11.00 | 10.48 | 95% | 70.0 | 130.0 | pass | Subset |
| 22) | 1,1-Dichloroethane | 14.39 | 12.00 | 10.64 | 89% | 70.0 | 130.0 | pass | Primary |
| 23) | Vinyl acetate | 14.49 | 10.00 | 10.85 | 108% | 70.0 | 130.0 | pass | Subset |
| 24) | cis-1,2-Dichloroethene | 15.77 | 12.00 | 11.56 | 96% | 70.0 | 130.0 | pass | Primary |
| 25) | 2-Butanone (MEK) | 15.86 | 11.00 | 10.22 | 93% | 70.0 | 130.0 | pass | Subset |
| 26) | Ethyl acetate | 15.87 | 11.00 | 10.10 | 92% | 70.0 | 130.0 | pass | Subset |
| 27) | Tetrahydrofuran | 16.29 | 9.90 | 9.61 | 97% | 70.0 | 130.0 | pass | Subset |
| 28) | Chloroform | 16.44 | 11.00 | 10.77 | 98% | 70.0 | 130.0 | pass | Primary |
| 29) | Cyclohexane | 16.61 | 11.00 | 10.60 | 96% | 70.0 | 130.0 | pass | Subset |
| 30) | 1,1,1-Trichloroethane | 16.70 | 10.00 | 10.33 | 103% | 70.0 | 130.0 | pass | Primary |
| 31) | Carbon tetrachloride | 16.93 | 11.00 | 10.74 | 98% | 70.0 | 130.0 | pass | Primary |
| 32) | 1,4-DIFLUOROBENZENE | 18.22 | #N/A | 23.20 | #N/A | 70.0 | 130.0 | #N/A | Internal |
| 33) | Benzene | 17.43 | 11.00 | 11.00 | 100% | 70.0 | 130.0 | pass | Primary |
| 34) | 2,2,4-Trimethylpentane | 17.30 | 11.00 | 10.40 | 95% | 70.0 | 130.0 | pass | Subset |
| 35) | 1,2-Dichloroethane | 17.65 | 11.00 | 10.62 | 97% | 70.0 | 130.0 | pass | Primary |
| 36) | Heptane | 17.67 | 11.00 | 10.57 | 96% | 70.0 | 130.0 | pass | Subset |
| 37) | Trichloroethene | 18.62 | 11.00 | 11.60 | 105% | 70.0 | 130.0 | pass | Primary |
| 38) | 1,2-Dichloropropane | 19.14 | 11.00 | 10.93 | 99% | 70.0 | 130.0 | pass | Primary |
| 39) | 1,4-Dioxane | 19.31 | 12.00 | 9.17 | 76% | 70.0 | 130.0 | pass | Subset |
| 40) | Bromodichloromethane | 19.59 | 11.00 | 9.39 | 85% | 70.0 | 130.0 | pass | Subset |
| 41) | cis-1,3-Dichloropropene | 20.34 | 11.00 | 11.01 | 100% | 70.0 | 130.0 | pass | Primary |
| 42) | 4-Methyl-2-pentanone (MIBK) | 20.55 | 11.00 | 9.01 | 82% | 70.0 | 130.0 | pass | Subset |
| 43) | CHLOROBENZENE-d5 | 23.08 | #N/A | 21.40 | #N/A | 70.0 | 130.0 | #N/A | Internal |
| 44) | Toluene | 20.80 | 11.00 | 11.28 | 103% | 70.0 | 130.0 | pass | Primary |
| 45) | trans-1,3-Dichloropropene | 21.28 | 11.00 | 10.87 | 99% | 70.0 | 130.0 | pass | Primary |
| 46) | 1,1,2-Trichloroethane | 21.59 | 11.00 | 10.97 | 100% | 70.0 | 130.0 | pass | Primary |
| 47) | Tetrachloroethene | 21.64 | 11.00 | 10.86 | 99% | 70.0 | 130.0 | pass | Primary |
| 48) | 2-Hexanone | 21.89 | 11.00 | 8.63 | 78% | 70.0 | 130.0 | pass | Subset |
| 49) | Chlorodibromomethane | 22.20 | 11.00 | 9.77 | 89% | 70.0 | 130.0 | pass | Subset |
| 50) | 1,2-Dibromoethane (EDB) | 22.43 | 11.00 | 10.99 | 100% | 70.0 | 130.0 | pass | Primary |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51) | Chlorobenzene | 23.12 | 11.00 | 11.11 | 101% | 70.0 | 130.0 | pass | Primary |
| 52) | Ethylbenzene | 23.19 | 11.00 | 11.07 | 101% | 70.0 | 130.0 | pass | Primary |
| 53) | m&p-Xylene | 23.37 | 22.00 | 22.41 | 102% | 70.0 | 130.0 | pass | Primary |
| 54) | o-Xylene | 24.02 | 11.00 | 10.46 | 95% | 70.0 | 130.0 | pass | Primary |
| 55) | Styrene | 24.06 | 11.00 | 11.93 | 108% | 70.0 | 130.0 | pass | Primary |
| 56) | Bromoform | 24.47 | 12.00 | 10.38 | 86% | 70.0 | 130.0 | pass | Subset |
| 57) | 1,1,2,2-Tetrachloroethane | 25.15 | 11.00 | 9.93 | 90% | 70.0 | 130.0 | pass | Primary |
| 58) | 4-Ethyltoluene | 25.35 | 11.00 | 10.32 | 94% | 70.0 | 130.0 | pass | Subset |
| 59) | 1,3,5-Trimethylbenzene | 25.44 | 11.00 | 11.45 | 104% | 70.0 | 130.0 | pass | Primary |
| 60) | 1,2,4-Trimethylbenzene | 26.05 | 11.00 | 11.67 | 106% | 70.0 | 130.0 | pass | Primary |
| 61) | 1,3-Dichlorobenzene | 26.61 | 11.00 | 11.47 | 104% | 70.0 | 130.0 | pass | Primary |
| 62) | 1,4-Dichlorobenzene | 26.76 | 11.00 | 11.88 | 108% | 70.0 | 130.0 | pass | Primary |
| 63) | Benzyl chloride | 26.98 | 10.00 | 10.97 | 110% | 70.0 | 130.0 | pass | Subset |
| 64) | 1,2-Dichlorobenzene | 27.37 | 11.00 | 11.15 | 101% | 70.0 | 130.0 | pass | Primary |
| 65) | 1,2,4-Trichlorobenzene | 29.84 | 11.00 | 12.21 | 111% | 70.0 | 130.0 | pass | Primary |
| 66) | Hexachlorobutadiene | 29.94 | 11.00 | 10.81 | 98% | 70.0 | 130.0 | pass | Primary |

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# RT DUPLICATE REPORT

Instrument Name: HP5973K
Sample Name: S21F026-CAL4
Misc Info: 10ppbv
Date Acquired: 6/10/2021 16:47
QLast Update: Fri Jun 11 09:34:37 2021
Operator: EM

| # | Name | RT | CONC | Qion | |
|---|---|---|---|---|---|
| 1) | BROMOCHLOROMETHANE | 16.307 | 23.400 | 49 | 16.283 |
| 2) | Propene | 5.010 | 10.134 | 41.1 | |
| 3) | Dichlorodifluoromethane | 5.113 | 10.243 | 85 | |
| 4) | 1,2-Dichlorotetrafluoroethane | 5.503 | 10.062 | 85 | |
| 5) | Chloromethane | 5.740 | 10.484 | 50 | |
| 6) | Vinyl chloride | 6.081 | 10.919 | 62 | |
| 7) | 1,3-Butadiene | 6.178 | 10.181 | 54 | |
| 8) | Bromomethane | 7.242 | 10.411 | 93.9 | |
| 9) | Chloroethane | 7.614 | 10.456 | 64 | |
| 10) | Bromoethene | 8.265 | 10.076 | 105.9 | |
| 11) | Trichlorofluoromethane | 8.380 | 10.594 | 100.9 | |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.369 | 10.667 | 150.9 | |
| 13) | 1,1-Dichloroethene | 10.515 | 11.058 | 61 | |
| 14) | Acetone | 11.087 | 9.386 | 43.1 | |
| 15) | Carbon disulfide | 11.203 | 10.057 | 75.9 | |
| 16) | 2-Propanol | 11.604 | 9.881 | 45.1 | |
| 17) | Allyl chloride | 11.957 | 10.931 | 41.1 | |
| 18) | Dichloromethane | 12.480 | 9.815 | 49 | |
| 19) | tert-Butyl methyl ether (MTBE) | 13.022 | 10.205 | 73.1 | |
| 20) | trans-1,2-Dichloroethene | 13.107 | 10.215 | 61 | |
| 21) | Hexane | 13.588 | 10.521 | 57.1 | |
| 22) | 1,1-Dichloroethane | 14.391 | 10.203 | 63 | |
| 23) | Vinyl acetate | 14.494 | 11.825 | 43.1 | |
| 24) | cis-1,2-Dichloroethene | 15.772 | 11.160 | 61 | |
| 25) | 2-Butanone (MEK) | 15.857 | 10.155 | 72.1 | |
| 26) | Ethyl acetate | 15.869 | 10.284 | 61 | |
| 27) | Tetrahydrofuran | 16.283 | 9.161 | 42.1 | |
| 28) | Chloroform | 16.441 | 10.622 | 82.9 | |
| 29) | Cyclohexane | 16.611 | 10.907 | 56.1 | |
| 30) | 1,1,1-Trichloroethane | 16.690 | 10.887 | 97 | |
| 31) | Carbon tetrachloride | 16.928 | 10.868 | 116.9 | |
| 32) | 1,4-DIFLUOROBENZENE | 18.211 | 23.200 | 114 | 17.670 |
| 33) | Benzene | 17.432 | 11.225 | 78 | 17.305 |
| 34) | 2,2,4-Trimethylpentane | 17.305 | 11.142 | 57.1 | |
| 35) | 1,2-Dichloroethane | 17.651 | 10.767 | 62 | |
| 36) | Heptane | 17.670 | 11.136 | 43.1 | |
| 37) | Trichloroethene | 18.619 | 11.154 | 129.9 | |
| 38) | 1,2-Dichloropropane | 19.136 | 11.154 | 63 | |
| 39) | 1,4-Dioxane | 19.312 | 10.726 | 88 | |
| 40) | Bromodichloromethane | 19.592 | 10.565 | 82.9 | |
| 41) | cis-1,3-Dichloropropene | 20.340 | 11.965 | 75 | |
| 42) | 4-Methyl-2-pentanone (MIBK) | 20.547 | 10.022 | 43.1 | |

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| | | | | | |
|---|---|---|---|---|---|
| 43) | CHLOROBENZENE-d5 | 23.078 | 21.400 | 117 | 22.433 |
| 44) | Toluene | 20.797 | 11.386 | 91.1 | |
| 45) | trans-1,3-Dichloropropene | 21.277 | 11.014 | 75 | |
| 46) | 1,1,2-Trichloroethane | 21.588 | 11.174 | 96.9 | |
| 47) | Tetrachloroethene | 21.636 | 11.077 | 165.9 | |
| 48) | 2-Hexanone | 21.880 | 9.578 | 43.1 | |
| 49) | Chlorodibromomethane | 22.202 | 10.572 | 128.9 | |
| 50) | 1,2-Dibromoethane (EDB) | 22.433 | 11.242 | 106.9 | |
| 51) | Chlorobenzene | 23.127 | 11.204 | 112 | |
| 52) | Ethylbenzene | 23.188 | 11.086 | 91.1 | |
| 53) | m&p-Xylene | 23.370 | 22.738 | 91.1 | |
| 54) | o-Xylene | 24.021 | 10.546 | 91.1 | |
| 55) | Styrene | 24.064 | 11.938 | 104.1 | |
| 56) | Bromoform | 24.471 | 11.412 | 172.8 | |
| 57) | 1,1,2,2-Tetrachloroethane | 25.153 | 10.339 | 82.9 | |
| 58) | 4-Ethyltoluene | 25.353 | 10.842 | 105.1 | |
| 59) | 1,3,5-Trimethylbenzene | 25.445 | 11.818 | 105.1 | |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 11.694 | 105.1 | |
| 61) | 1,3-Dichlorobenzene | 26.613 | 11.061 | 146 | |
| 62) | 1,4-Dichlorobenzene | 26.759 | 11.378 | 146 | |
| 63) | Benzyl chloride | 26.984 | 10.387 | 91.1 | 0.000 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 10.726 | 146 | 0.000 |
| 65) | 1,2,4-Trichlorobenzene | 29.837 | 11.915 | 179.9 | 0.000 |
| 66) | Hexachlorobutadiene | 29.940 | 11.558 | 224.8 | 0.000 |

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# CHEMSTATION CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S21F026-SCV1
Misc Info: 10ppbv
Date Acquired: 6/10/2021 19:16
QLast Update: Fri Jun 11 09:34:37 202
Operator: EM

| # | Name | L1 | L2 | L3 | L4 | L5 | L6 |
|---|---|---|---|---|---|---|---|
| 1) | BROMOCHLOROMETHANE | 23.40 | 23.40 | 23.40 | 23.40 | 23.40 | 23.40 |
| 2) | Propene | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 3) | Dichlorodifluoromethane | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 4) | 1,2-Dichlorotetrafluoroethane | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 5) | Chloromethane | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 6) | Vinyl chloride | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 7) | 1,3-Butadiene | 1.03 | 2.06 | 5.15 | 10.30 | 15.45 | 20.60 |
| 8) | Bromomethane | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 9) | Chloroethane | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 10) | Bromoethene | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 11) | Trichlorofluoromethane | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 13) | 1,1-Dichloroethene | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 14) | Acetone | 0.98 | 1.96 | 4.90 | 9.80 | 14.70 | 19.60 |
| 15) | Carbon disulfide | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 16) | 2-Propanol | 0.93 | 1.86 | 4.65 | 9.30 | 13.95 | 18.60 |
| 17) | Allyl chloride | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 18) | Dichloromethane | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 19) | tert-Butyl methyl ether (MTBE) | 0.99 | 1.98 | 4.95 | 9.90 | 14.85 | 19.80 |
| 20) | trans-1,2-Dichloroethene | 1.03 | 2.06 | 5.15 | 10.30 | 15.45 | 20.60 |
| 21) | Hexane | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 22) | 1,1-Dichloroethane | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 23) | Vinyl acetate | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 24) | cis-1,2-Dichloroethene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 25) | 2-Butanone (MEK) | 1.00 | 2.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| 26) | Ethyl acetate | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 27) | Tetrahydrofuran | 0.91 | 1.82 | 4.55 | 9.10 | 13.65 | 18.20 |
| 28) | Chloroform | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 29) | Cyclohexane | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 30) | 1,1,1-Trichloroethane | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 31) | Carbon tetrachloride | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 32) | 1,4-DIFLUOROBENZENE | 23.20 | 23.20 | 23.20 | 23.20 | 23.20 | 23.20 |
| 33) | Benzene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 34) | 2,2,4-Trimethylpentane | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 35) | 1,2-Dichloroethane | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 36) | Heptane | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 37) | Trichloroethene | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 38) | 1,2-Dichloropropane | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 39) | 1,4-Dioxane | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 40) | Bromodichloromethane | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 41) | cis-1,3-Dichloropropene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 42) | 4-Methyl-2-pentanone (MIBK) | 0.96 | 1.92 | 4.80 | 9.60 | 14.40 | 19.20 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 43) | CHLOROBENZENE-d5 | 21.40 | 21.40 | 21.40 | 21.40 | 21.40 | 21.40 |
| 44) | Toluene | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 45) | trans-1,3-Dichloropropene | 0.99 | 1.98 | 4.95 | 9.90 | 14.85 | 19.80 |
| 46) | 1,1,2-Trichloroethane | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 47) | Tetrachloroethene | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 48) | 2-Hexanone | 0.90 | 1.80 | 4.50 | 9.00 | 13.50 | 18.00 |
| 49) | Chlorodibromomethane | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 50) | 1,2-Dibromoethane (EDB) | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 51) | Chlorobenzene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 52) | Ethylbenzene | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 53) | m&p-Xylene | 2.16 | 4.32 | 10.80 | 21.60 | 32.40 | 43.20 |
| 54) | o-Xylene | 0.99 | 1.98 | 4.95 | 9.90 | 14.85 | 19.80 |
| 55) | Styrene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 56) | Bromoform | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 57) | 1,1,2,2-Tetrachloroethane | 1.00 | 2.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| 58) | 4-Ethyltoluene | 1.00 | 2.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| 59) | 1,3,5-Trimethylbenzene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 60) | 1,2,4-Trimethylbenzene | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 61) | 1,3-Dichlorobenzene | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 62) | 1,4-Dichlorobenzene | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 63) | Benzyl chloride | 0.90 | 1.80 | 4.50 | 9.00 | 13.50 | 18.00 |
| 64) | 1,2-Dichlorobenzene | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 65) | 1,2,4-Trichlorobenzene | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 66) | Hexachlorobutadiene | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |

**C:\MSDChem\1\DATA\10255KAA\10255KC4.D**

# CALIBRATION AREA REPORT

Instrument Name: HP5973K
Sample Name: S21F026-SCV1
Misc Info: 10ppbv
Date Acquired: 6/10/2021 19:16
QLast Update: Fri Jun 11 09:34:37 2021
Operator: EM

| # | Name | L1 | L2 | L3 | L4 | L5 | L6 |
|---|---|---|---|---|---|---|---|
| 1) | BROMOCHLOROMETHANE | 195019 | 194315 | 198079 | 200660 | 202463 | 205786 |
| 2) | Propene | 5999 | 12314 | 26415 | 48587 | 73239 | 98432 |
| 3) | Dichlorodifluoromethane | 17609 | 37531 | 78432 | 144227 | 214679 | 289921 |
| 4) | 1,2-Dichlorotetrafluoroethane | 18414 | 39035 | 81309 | 150261 | 224675 | 305067 |
| 5) | Chloromethane | 6302 | 13342 | 27835 | 50915 | 75740 | 101843 |
| 6) | Vinyl chloride | 10036 | 21789 | 45694 | 83536 | 124093 | 166118 |
| 7) | 1,3-Butadiene | 8240 | 16442 | 34714 | 63806 | 94666 | 126382 |
| 8) | Bromomethane | 5874 | 12696 | 26379 | 47721 | 70683 | 95351 |
| 9) | Chloroethane | 3630 | 8153 | 16980 | 30620 | 45716 | 61417 |
| 10) | Bromoethene | 5827 | 11895 | 25389 | 47700 | 71294 | 97483 |
| 11) | Trichlorofluoromethane | 15494 | 33390 | 69553 | 126178 | 186730 | 251415 |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 11162 | 24550 | 50676 | 92385 | 137250 | 185281 |
| 13) | 1,1-Dichloroethene | 8928 | 19921 | 43235 | 81524 | 122233 | 166656 |
| 14) | Acetone | 10868 | 20798 | 43196 | 79205 | 117687 | 158293 |
| 15) | Carbon disulfide | 19923 | 40254 | 83449 | 152038 | 224750 | 302656 |
| 16) | 2-Propanol | 7707 | 15915 | 35882 | 70496 | 108399 | 149557 |
| 17) | Allyl chloride | 7648 | 16383 | 35200 | 67191 | 100866 | 138086 |
| 18) | Dichloromethane | 9685 | 18015 | 35111 | 61875 | 90291 | 120422 |
| 19) | tert-Butyl methyl ether (MTBE) | 16552 | 35731 | 79749 | 152708 | 233253 | 319690 |
| 20) | trans-1,2-Dichloroethene | 9327 | 19695 | 41435 | 76789 | 113954 | 153445 |
| 21) | Hexane | 10226 | 22404 | 49232 | 94102 | 141901 | 192135 |
| 22) | 1,1-Dichloroethane | 11429 | 25103 | 51960 | 94858 | 140877 | 190544 |
| 23) | Vinyl acetate | 11548 | 25885 | 60437 | 118727 | 182325 | 251412 |
| 24) | cis-1,2-Dichloroethene | 7775 | 17451 | 37733 | 70933 | 106267 | 144948 |
| 25) | 2-Butanone (MEK) | 3384 | 7246 | 15766 | 29873 | 45280 | 61828 |
| 26) | Ethyl acetate | 2193 | 4481 | 10026 | 17935 | 26782 | 36531 |
| 27) | Tetrahydrofuran | 7297 | 15536 | 33726 | 63504 | 95308 | 129871 |
| 28) | Chloroform | 12960 | 28446 | 58970 | 108079 | 160103 | 215198 |
| 29) | Cyclohexane | 10910 | 23509 | 51718 | 96943 | 145804 | 198980 |
| 30) | 1,1,1-Trichloroethane | 12597 | 27631 | 58633 | 108013 | 160557 | 217732 |
| 31) | Carbon tetrachloride | 12920 | 28222 | 60245 | 111072 | 166623 | 225810 |
| 32) | 1,4-DIFLUOROBENZENE | 600313 | 596153 | 602429 | 606406 | 621993 | 630160 |
| 33) | Benzene | 21136 | 46490 | 97313 | 178244 | 263783 | 355941 |
| 34) | 2,2,4-Trimethylpentane | 33454 | 72451 | 160848 | 304411 | 456712 | 620845 |
| 35) | 1,2-Dichloroethane | 8440 | 18238 | 38222 | 70659 | 104965 | 142361 |
| 36) | Heptane | 11820 | 25988 | 57725 | 109433 | 165528 | 226699 |
| 37) | Trichloroethene | 8805 | 19528 | 41517 | 77117 | 115663 | 157312 |
| 38) | 1,2-Dichloropropane | 7437 | 16242 | 35079 | 64311 | 96262 | 129817 |
| 39) | 1,4-Dioxane | 4665 | 8790 | 19719 | 37615 | 56569 | 76367 |
| 40) | Bromodichloromethane | 15321 | 31833 | 66441 | 123677 | 185412 | 249199 |
| 41) | cis-1,3-Dichloropropene | 9923 | 22979 | 51148 | 99415 | 151215 | 208652 |
| 42) | 4-Methyl-2-pentanone (MIBK) | 15204 | 31424 | 69980 | 133762 | 203874 | 278849 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 43) | CHLOROBENZENE-d5 | 542244 | 539785 | 549722 | 557350 | 576762 | 588629 |
| 44) | Toluene | 22593 | 51939 | 112949 | 212492 | 319482 | 434304 |
| 45) | trans-1,3-Dichloropropene | 7937 | 18180 | 42184 | 81644 | 124758 | 171760 |
| 46) | 1,1,2-Trichloroethane | 8039 | 18017 | 37722 | 71178 | 106712 | 144936 |
| 47) | Tetrachloroethene | 12041 | 27481 | 58819 | 110028 | 165793 | 226980 |
| 48) | 2-Hexanone | 12614 | 26981 | 61084 | 119017 | 182529 | 250047 |
| 49) | Chlorodibromomethane | 15054 | 31403 | 68391 | 129626 | 197198 | 270912 |
| 50) | 1,2-Dibromoethane (EDB) | 11096 | 24442 | 53142 | 99673 | 150557 | 206025 |
| 51) | Chlorobenzene | 20408 | 44940 | 94894 | 175915 | 262304 | 356985 |
| 52) | Ethylbenzene | 30876 | 69916 | 152095 | 284516 | 430681 | 586180 |
| 53) | m&p-Xylene | 45375 | 105228 | 231555 | 442932 | 677463 | 930582 |
| 54) | o-Xylene | 21065 | 50788 | 114033 | 218393 | 335734 | 462210 |
| 55) | Styrene | 16685 | 40229 | 91412 | 177560 | 273035 | 376469 |
| 56) | Bromoform | 15009 | 32319 | 72132 | 140785 | 216585 | 300715 |
| 57) | 1,1,2,2-Tetrachloroethane | 17516 | 39372 | 84516 | 158555 | 237619 | 324757 |
| 58) | 4-Ethyltoluene | 35114 | 79677 | 183100 | 353363 | 545662 | 751882 |
| 59) | 1,3,5-Trimethylbenzene | 26181 | 62900 | 140752 | 272020 | 409554 | 560806 |
| 60) | 1,2,4-Trimethylbenzene | 23717 | 59023 | 136738 | 265572 | 408516 | 564139 |
| 61) | 1,3-Dichlorobenzene | 18728 | 42003 | 93389 | 178580 | 271998 | 373063 |
| 62) | 1,4-Dichlorobenzene | 17982 | 41108 | 91643 | 176464 | 269298 | 369341 |
| 63) | Benzyl chloride | 17703 | 39200 | 96498 | 196900 | 308319 | 433144 |
| 64) | 1,2-Dichlorobenzene | 18564 | 41905 | 92228 | 175795 | 266879 | 366882 |
| 65) | 1,2,4-Trichlorobenzene | 14609 | 33560 | 79174 | 156556 | 244401 | 339111 |
| 66) | Hexachlorobutadiene | 18650 | 42248 | 93260 | 182167 | 284137 | 395521 |

# CHEMSTATION VS LIMS CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S21F026-SCV1
Misc Info: 10ppbv
Date Acquired: 6/10/2021 19:16
QLast Update: Fri Jun 11 09:34:37 202
Operator: EM

| # | Name | L1 | L2 | L3 | L4 | L5 | L6 |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 5 | 10 | 15 | 20 |
| 1) | BROMOCHLOROMETHANE | | | | | | |
| 2) | Propene | OK | OK | OK | OK | OK | OK |
| 3) | Dichlorodifluoromethane | OK | OK | OK | OK | OK | OK |
| 4) | 1,2-Dichlorotetrafluoroethane | OK | OK | OK | OK | OK | OK |
| 5) | Chloromethane | OK | OK | OK | OK | OK | OK |
| 6) | Vinyl chloride | OK | OK | OK | OK | OK | OK |
| 7) | 1,3-Butadiene | OK | OK | OK | OK | OK | OK |
| 8) | Bromomethane | OK | OK | OK | OK | OK | OK |
| 9) | Chloroethane | OK | OK | OK | OK | OK | OK |
| 10) | Bromoethene | OK | OK | OK | OK | OK | OK |
| 11) | Trichlorofluoromethane | OK | OK | OK | OK | OK | OK |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | OK | OK | OK | OK | OK | OK |
| 13) | 1,1-Dichloroethene | OK | OK | OK | OK | OK | OK |
| 14) | Acetone | OK | OK | OK | OK | OK | OK |
| 15) | Carbon disulfide | OK | OK | OK | OK | OK | OK |
| 16) | 2-Propanol | OK | OK | OK | OK | OK | OK |
| 17) | Allyl chloride | OK | OK | OK | OK | OK | OK |
| 18) | Dichloromethane | OK | OK | OK | OK | OK | OK |
| 19) | tert-Butyl methyl ether (MTBE) | OK | OK | OK | OK | OK | OK |
| 20) | trans-1,2-Dichloroethene | OK | OK | OK | OK | OK | OK |
| 21) | Hexane | OK | OK | OK | OK | OK | OK |
| 22) | 1,1-Dichloroethane | OK | OK | OK | OK | OK | OK |
| 23) | Vinyl acetate | OK | OK | OK | OK | OK | OK |
| 24) | cis-1,2-Dichloroethene | OK | OK | OK | OK | OK | OK |
| 25) | 2-Butanone (MEK) | OK | OK | OK | OK | OK | OK |
| 26) | Ethyl acetate | OK | OK | OK | OK | OK | OK |
| 27) | Tetrahydrofuran | OK | OK | OK | OK | OK | OK |
| 28) | Chloroform | OK | OK | OK | OK | OK | OK |
| 29) | Cyclohexane | OK | OK | OK | OK | OK | OK |
| 30) | 1,1,1-Trichloroethane | OK | OK | OK | OK | OK | OK |
| 31) | Carbon tetrachloride | OK | OK | OK | OK | OK | OK |
| 32) | 1,4-DIFLUOROBENZENE | | | | | | |
| 33) | Benzene | OK | OK | OK | OK | OK | OK |
| 34) | 2,2,4-Trimethylpentane | OK | OK | OK | OK | OK | OK |
| 35) | 1,2-Dichloroethane | OK | OK | OK | OK | OK | OK |
| 36) | Heptane | OK | OK | OK | OK | OK | OK |
| 37) | Trichloroethene | OK | OK | OK | OK | OK | OK |
| 38) | 1,2-Dichloropropane | OK | OK | OK | OK | OK | OK |
| 39) | 1,4-Dioxane | OK | OK | OK | OK | OK | OK |
| 40) | Bromodichloromethane | OK | OK | OK | OK | OK | OK |
| 41) | cis-1,3-Dichloropropene | OK | OK | OK | OK | OK | OK |
| 42) | 4-Methyl-2-pentanone (MIBK) | OK | OK | OK | OK | OK | OK |
| 43) | CHLOROBENZENE-d5 | | | | | | |
| 44) | Toluene | OK | OK | OK | OK | OK | OK |
| 45) | trans-1,3-Dichloropropene | OK | OK | OK | OK | OK | OK |
| 46) | 1,1,2-Trichloroethane | OK | OK | OK | OK | OK | OK |
| 47) | Tetrachloroethene | OK | OK | OK | OK | OK | OK |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 48) | 2-Hexanone | OK | OK | OK | OK | OK | OK |
| 49) | Chlorodibromomethane | OK | OK | OK | OK | OK | OK |
| 50) | 1,2-Dibromoethane (EDB) | OK | OK | OK | OK | OK | OK |
| 51) | Chlorobenzene | OK | OK | OK | OK | OK | OK |
| 52) | Ethylbenzene | OK | OK | OK | OK | OK | OK |
| 53) | m&p-Xylene | OK | OK | OK | OK | OK | OK |
| 54) | o-Xylene | OK | OK | OK | OK | OK | OK |
| 55) | Styrene | OK | OK | OK | OK | OK | OK |
| 56) | Bromoform | OK | OK | OK | OK | OK | OK |
| 57) | 1,1,2,2-Tetrachloroethane | OK | OK | OK | OK | OK | OK |
| 58) | 4-Ethyltoluene | OK | OK | OK | OK | OK | OK |
| 59) | 1,3,5-Trimethylbenzene | OK | OK | OK | OK | OK | OK |
| 60) | 1,2,4-Trimethylbenzene | OK | OK | OK | OK | OK | OK |
| 61) | 1,3-Dichlorobenzene | OK | OK | OK | OK | OK | OK |
| 62) | 1,4-Dichlorobenzene | OK | OK | OK | OK | OK | OK |
| 63) | Benzyl chloride | OK | OK | OK | OK | OK | OK |
| 64) | 1,2-Dichlorobenzene | OK | OK | OK | OK | OK | OK |
| 65) | 1,2,4-Trichlorobenzene | OK | OK | OK | OK | OK | OK |
| 66) | Hexachlorobutadiene | OK | OK | OK | OK | OK | OK |

# LIMS CONCENTRATION REPORT

Instrument Name: HP5973K
Sample Name: S21F026-SCV1
Misc Info: 10ppbv
Date Acquired: 6/10/2021 19:16
QLast Update: Fri Jun 11 09:34:37 20
Operator: EM

| # | Name | Amount | L1 | L2 | L3 | L4 | L5 | L6 |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 5 | 10 | 15 | 20 |
| 1) | BROMOCHLOROMETHANE | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 2) | Propene | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 3) | Dichlorodifluoromethane | 0.0208 | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 4) | 1,2-Dichlorotetrafluoroethane | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 5) | Chloromethane | 0.0212 | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 6) | Vinyl chloride | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 7) | 1,3-Butadiene | 0.0206 | 1.03 | 2.06 | 5.15 | 10.30 | 15.45 | 20.60 |
| 8) | Bromomethane | 0.0214 | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 9) | Chloroethane | 0.0212 | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 10) | Bromoethene | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 11) | Trichlorofluoromethane | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 13) | 1,1-Dichloroethene | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 14) | Acetone | 0.0196 | 0.98 | 1.96 | 4.90 | 9.80 | 14.70 | 19.60 |
| 15) | Carbon disulfide | 0.0208 | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 16) | 2-Propanol | 0.0186 | 0.93 | 1.86 | 4.65 | 9.30 | 13.95 | 18.60 |
| 17) | Allyl chloride | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 18) | Dichloromethane | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 19) | tert-Butyl methyl ether (MTBE) | 0.0198 | 0.99 | 1.98 | 4.95 | 9.90 | 14.85 | 19.80 |
| 20) | trans-1,2-Dichloroethene | 0.0206 | 1.03 | 2.06 | 5.15 | 10.30 | 15.45 | 20.60 |
| 21) | Hexane | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 22) | 1,1-Dichloroethane | 0.0208 | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 23) | Vinyl acetate | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 24) | cis-1,2-Dichloroethene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 25) | 2-Butanone (MEK) | 0.02 | 1.00 | 2.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| 26) | Ethyl acetate | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 27) | Tetrahydrofuran | 0.0182 | 0.91 | 1.82 | 4.55 | 9.10 | 13.65 | 18.20 |
| 28) | Chloroform | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 29) | Cyclohexane | 0.0214 | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 30) | 1,1,1-Trichloroethane | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 31) | Carbon tetrachloride | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 32) | 1,4-DIFLUOROBENZENE | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 33) | Benzene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 34) | 2,2,4-Trimethylpentane | 0.021 | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 35) | 1,2-Dichloroethane | 0.0212 | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 36) | Heptane | 0.021 | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 37) | Trichloroethene | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 38) | 1,2-Dichloropropane | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 39) | 1,4-Dioxane | 0.0208 | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 40) | Bromodichloromethane | 0.0208 | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 41) | cis-1,3-Dichloropropene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 42) | 4-Methyl-2-pentanone (MIBK) | 0.0192 | 0.96 | 1.92 | 4.80 | 9.60 | 14.40 | 19.20 |
| 43) | CHLOROBENZENE-d5 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| 44) | Toluene | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 45) | trans-1,3-Dichloropropene | 0.0198 | 0.99 | 1.98 | 4.95 | 9.90 | 14.85 | 19.80 |
| 46) | 1,1,2-Trichloroethane | 0.0218 | 1.09 | 2.18 | 5.45 | 10.90 | 16.35 | 21.80 |
| 47) | Tetrachloroethene | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 48) | 2-Hexanone | 0.018 | 0.90 | 1.80 | 4.50 | 9.00 | 13.50 | 18.00 |
| 49) | Chlorodibromomethane | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 50) | 1,2-Dibromoethane (EDB) | 0.0216 | 1.08 | 2.16 | 5.40 | 10.80 | 16.20 | 21.60 |
| 51) | Chlorobenzene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 52) | Ethylbenzene | 0.0214 | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 53) | m&p-Xylene | 0.0432 | 2.16 | 4.32 | 10.80 | 21.60 | 32.40 | 43.20 |
| 54) | o-Xylene | 0.0198 | 0.99 | 1.98 | 4.95 | 9.90 | 14.85 | 19.80 |
| 55) | Styrene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 56) | Bromoform | 0.0212 | 1.06 | 2.12 | 5.30 | 10.60 | 15.90 | 21.20 |
| 57) | 1,1,2,2-Tetrachloroethane | 0.02 | 1.00 | 2.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| 58) | 4-Ethyltoluene | 0.02 | 1.00 | 2.00 | 5.00 | 10.00 | 15.00 | 20.00 |
| 59) | 1,3,5-Trimethylbenzene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |
| 60) | 1,2,4-Trimethylbenzene | 0.0214 | 1.07 | 2.14 | 5.35 | 10.70 | 16.05 | 21.40 |
| 61) | 1,3-Dichlorobenzene | 0.0208 | 1.04 | 2.08 | 5.20 | 10.40 | 15.60 | 20.80 |
| 62) | 1,4-Dichlorobenzene | 0.021 | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 63) | Benzyl chloride | 0.018 | 0.90 | 1.80 | 4.50 | 9.00 | 13.50 | 18.00 |
| 64) | 1,2-Dichlorobenzene | 0.0204 | 1.02 | 2.04 | 5.10 | 10.20 | 15.30 | 20.40 |
| 65) | 1,2,4-Trichlorobenzene | 0.021 | 1.05 | 2.10 | 5.25 | 10.50 | 15.75 | 21.00 |
| 66) | Hexachlorobutadiene | 0.022 | 1.10 | 2.20 | 5.50 | 11.00 | 16.50 | 22.00 |

# SEQUENCE

## S21F026

Sequence Date: 06/10/2021

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

# ANALYST / REVIEWER - DATA REVIEW CHECKLIST

| | | | |
|---|---|---|---|
| BATCH #: | B21F033 | SEQUENCE #: | S21F026 06/10/21 |
| BATCH #: | ICAL; +CAN CERTIFICATION | ANALYSIS: | TO15 HP5973K |

| | CHECKLIST ITEM | N/A | ANALYST Y/N | REVIEWER Y/N | IDENTIFY OUTLIERS / COMMENTS |
|---|---|---|---|---|---|
| DOCUMENTATION | ANALYST: Bench sheet(s) attached?<br>REVIEWER: Bench sheet(s) reviewed? | ☐ | Y | Y | |
| | ANALYST: Sequence log(s) attached?<br>REVIEWER: Sequence log(s) reviewed? | ☐ | Y | Y | |
| | ANALYST: Every run has a PDF in LIMS?<br>REVIEWER: Every PDF reviewed? | ☐ | Y | Y | |
| INITIAL CALIBRATION | Date of Initial Calibration used:<br>If applicable, note date of "Last Update" in Comments. | 06/10/21<br>Fri Jun 11 09:34:37 2021 | | | |
| | Initial Calibration ID (LIMS number): | 2106006/ S21F026 | | | |
| | ICAL within QC criteria? | ☐ | Y | Y | OK |
| | SCV within QC criteria? | ☐ | Y | Y | OK |
| INSTRUMENT / QC CHECKS | Tune or degradation checks within QC criteria? | ☐ | Y | Y | PASSED |
| | CCV(s) within QC criteria? | ☑ | | | SHARES QC |
| | QLS(s) within QC criteria? | ☑ | | | SHARES QC |
| | CB(s) or storage blank(s) within QC criteria? | ☑ | | | |
| | Other instrument checks within QC criteria?<br>Specify if applicable. | ☑ | | | |
| BATCH QCs | Method blanks < 1/2 QL? | ☐ | Y | Y | CLEAN |
| | LCS(s) or SRM(s) within QC criteria? | ☐ | Y | Y | OK |
| | MSs/MSDs and/or DUPs within QC criteria? | ☑ | | | |
| | Other method-specific QCs within QC criteria?<br>Specify if applicable. | ☑ | | | |

# ANALYST / REVIEWER - DATA REVIEW CHECKLIST

| | | | |
|---|---|---|---|
| BATCH #: | B21F033 | SEQUENCE #: | S21F026 06/10/21 |
| BATCH #: | ICAL; +CAN CERTIFICATION | ANALYSIS: | TO15 HP5973K |

| | CHECKLIST ITEM | N/A | ANALYST Y/N | REVIEWER Y/N | IDENTIFY OUTLIERS / COMMENTS |
|---|---|---|---|---|---|
| IS / SS | Internal standards within QC criteria? | ☐ | Y | Y | |
| | Surrogates within QC criteria? | ✔ | | | |
| SAMPLE DATA | Were samples prepared & analyzed within holding time? | ✔ | | | |
| | If samples need to be re-run, were RE(s) made in LIMS? | ✔ | | | |
| | Do any samples need to be re-digested or re-extracted? | ✔ | | | |
| | Were all data qualifiers appropriately applied? | ✔ | | | |
| | Are problems, anomalies, discrepancies documented in LIMS? Specify if applicable. | ✔ | | | |
| MANUAL INT | Were manual integrations performed and documented? Specify if applicable. | ✔ | | | |

| | | |
|---|---|---|
| APPROVALS | ANALYST INITIALS & DATE: | EM 06/11/21 |
| | REVIEWED BY: | ZIYAD RAJABI (Affiliate) Digitally signed by ZIYAD RAJABI (Affiliate) Date: 2021.07.07 11:12:04 -07'00' SIGN HERE |

COMMENTS

# Injection Log

Directory: d:\msdchem\1\2021\DATA\061021K_FSA

Table of Contents

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 31 | 061021K01.D | 1. | S21F026-TUN1 | BFB 1920101 | 10 Jun 2021 13:35 |
| 2 | 31 | 061021K02.D | 1. | S21F026-CAL1 | 1ppbv | 10 Jun 2021 14:23 |
| 3 | 32 | 061021K03.D | 1. | S21F026-CAL2 | 2ppbv | 10 Jun 2021 15:10 |
| 4 | 32 | 061021K04.D | 1. | S21F026-CAL3 | 5ppbv | 10 Jun 2021 15:58 |
| 5 | 32 | 061021K05.D | 1. | S21F026-CAL4 | 10ppbv | 10 Jun 2021 16:47 |
| 6 | 32 | 061021K06.D | 1. | S21F026-CAL5 | 15ppbv | 10 Jun 2021 17:36 |
| 7 | 32 | 061021K07.D | 1. | S21F026-CAL6 | 20ppbv | 10 Jun 2021 18:26 |
| 8 | 39 | 061021K08.D | 1. | S21F026-SCV1 | 10ppbv | 10 Jun 2021 19:16 |
| 9 | 38 | 061021K09.D | 1. | S21F026SCV1 | 10ppbv | 10 Jun 2021 20:07 |
| 10 | 32 | 061021K10.D | 1. | B21F033-BS1 | 10ppbv | 10 Jun 2021 20:55 |
| 11 | 33 | 061021K11.D | 1. | B21F033-BLK1 | 200mL BLANK | 10 Jun 2021 21:45 |
| 12 | 36 | 061021K12.D | 1. | CAN R9-033 | 200mL RECERTIFICATION | 10 Jun 2021 22:36 |
| 13 | 37 | 061021K13.D | 1. | CAN R9-038 | 200mL RECERTIFICATION | 10 Jun 2021 23:26 |
| 14 | 31 | PRIME1.D | 1. | PRIME1 | 10ppbv | 10 Jun 2021 11:54 |
| 15 | 32 | PRIME2.D | 1. | PRIME2 | 10ppbv | 10 Jun 2021 12:46 |

GC/MS QA-QC Check Report

Table of Contents

Tune File : D:\msdchem\1\2021\DATA\061021K_FSA\061021K01.D
Tune Time : 10 Jun 2021 1:35 pm

Daily Calibration File : D:\msdchem\1\2021\DATA\061021K_FSA\061021K05.D

| File | Sample | Surrogate Recovery % | Internal Standard Responses | | |
|---|---|---|---|---|---|
| | | | 200660 | 606406 | 557350 |
| 061021K02.D | S21F026-CAL1 | 195019 | 600313 | 542244 | |
| 061021K03.D | S21F026-CAL2 | 194315 | 596153 | 539785 | |
| 061021K04.D | S21F026-CAL3 | 198079 | 602429 | 549722 | |
| 061021K05.D | S21F026-CAL4 | 200660 | 606406 | 557350 | |
| 061021K06.D | S21F026-CAL5 | 202463 | 621993 | 576762 | |
| 061021K07.D | S21F026-CAL6 | 205786 | 630160 | 588629 | |
| 061021K08.D | S21F026-SCV1 | 205841 | 633221 | 582477 | |
| 061021K09.D | S21F026SCV | 208245 | 644582 | 590053 | |
| 061021K10.D | B21F033-BS1 | 213153 | 648504 | 594432 | |
| 061021K11.D | B21F033-BLK1 | 203853 | 646823 | 569459 | |
| 061021K12.D | CAN R9-033 | 199563 | 628129 | 559568 | |
| 061021K13.D | CAN R9-038 | 192669 | 606574 | 537756 | |

(fails) - fails 24hr time check * - fails criteria

Created: Fri Jun 11 09:56:55 2021 HP5973K

# Sequence Report

6/11/2021 09:55:00 AM

| Name | Inlet | Pos. | Int Std | Cal Std | Sample | Method | Inject | Status |
|---|---|---|---|---|---|---|---|---|
| BFB | Three | T1 | 40 | 40 | 50 | TO-15_A.CTD3 | 6/10/2021 1:35:22 PM | Completed |
| CAL1 | Three | T1 | 40 | 0 | 20 | TO-15_A.CTD3 | 6/10/2021 2:23:10 PM | Completed |
| CAL2 | Three | T2 | 40 | 0 | 20 | TO-15_A.CTD3 | 6/10/2021 3:10:56 PM | Completed |
| CAL3 | Three | T2 | 40 | 0 | 50 | TO-15_A.CTD3 | 6/10/2021 3:58:45 PM | Completed |
| CAL4 | Three | T2 | 40 | 0 | 100 | TO-15_A.CTD3 | 6/10/2021 4:47:08 PM | Completed |
| CAL5 | Three | T2 | 40 | 0 | 150 | TO-15_A.CTD3 | 6/10/2021 5:36:24 PM | Completed |
| CAL6 | Three | T2 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/10/2021 6:26:33 PM | Completed |
| SCV1 | Three | T8 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/10/2021 7:16:51 PM | Completed |
| SCV1 | Three | T8 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/10/2021 8:07:13 PM | Completed |
| BS1 | Three | T2 | 40 | 0 | 100 | TO-15_A.CTD3 | 6/10/2021 8:55:42 PM | Completed |
| BLANK | Three | T3 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/10/2021 9:45:50 PM | Completed |
| CAN R9-033 | Three | T6 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/10/2021 10:36:13 PM | Completed |
| CAN R9-038 | Three | T7 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/10/2021 11:26:39 PM | Completed |

# Analysis Sequence

**S21F026**

**Project:**
**Analysis:**

**Instrument:** HP5973K **Calibration ID:** 2106006 Printed: 06/11/2021 10:14 am

| Lab Number | Sample Name | Order | Analyzed Date | STD ID | ISTD ID | Sequenced By | File ID | Comments |
|---|---|---|---|---|---|---|---|---|
| S21F026-TUN1 | BFB Tune | 1 | 6/10/21 13:35 | 1920101 | | EM | 061021K01.D | |
| S21F026-CAL1 | CAL STD | 2 | 6/10/21 14:23 | 2124074 | | EM | 061021K02.D | |
| S21F026-CAL2 | CAL STD | 3 | 6/10/21 15:10 | 2124075 | | EM | 061021K03.D | |
| S21F026-CAL3 | CAL STD | 4 | 6/10/21 15:58 | 2124076 | | EM | 061021K04.D | |
| S21F026-CAL4 | CAL STD | 5 | 6/10/21 16:47 | 2124077 | | EM | 061021K05.D | |
| S21F026-CAL5 | CAL STD | 6 | 6/10/21 17:36 | 2124078 | | EM | 061021K06.D | |
| S21F026-CAL6 | CAL STD | 7 | 6/10/21 18:26 | 2124079 | | EM | 061021K07.D | |
| S21F026-SCV1 | SCV | 8 | 6/10/21 19:16 | 2124081 | | EM | 061021K08.D | |
| B21F033-BS1 | LCS | 9 | 6/10/21 20:55 | | | EM | 061021K10.D | |
| B21F033-BLK1 | Blank | 10 | 6/10/21 21:45 | | 2104093 | EM | 061021K11.D | |

**Sequence Comments**

**Reagents**

| Reagent # | Description |
|---|---|

# SEQUENCE DATA

## S21F026

# S21F026-TUN1

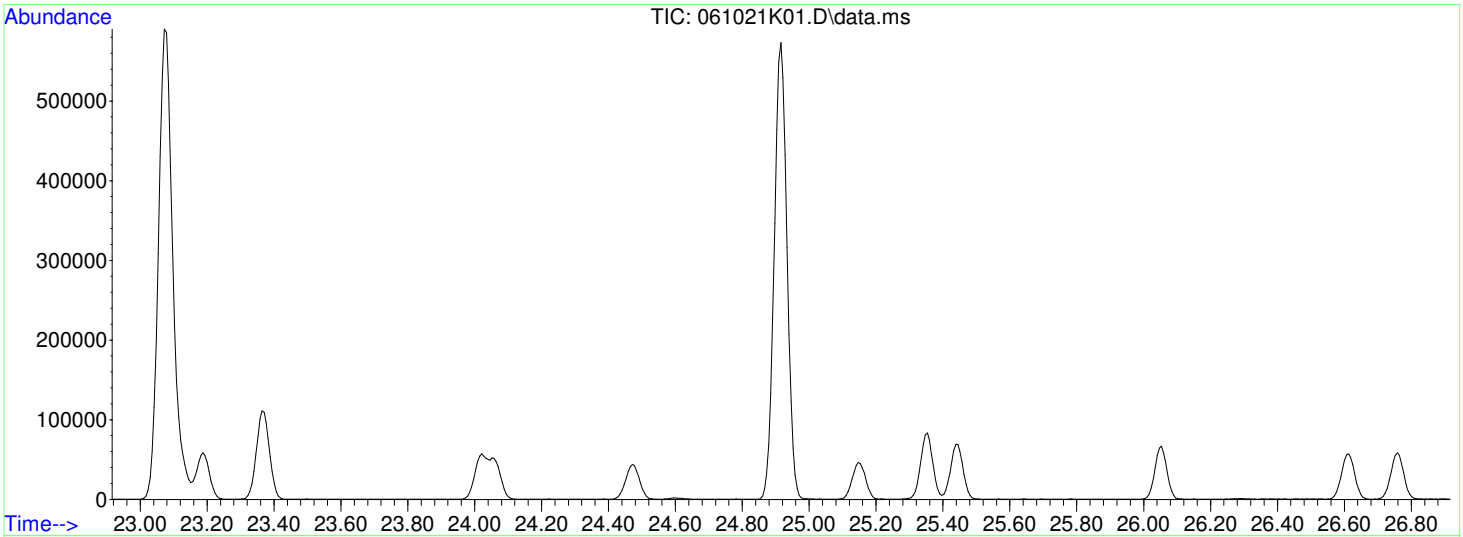
Table of Contents

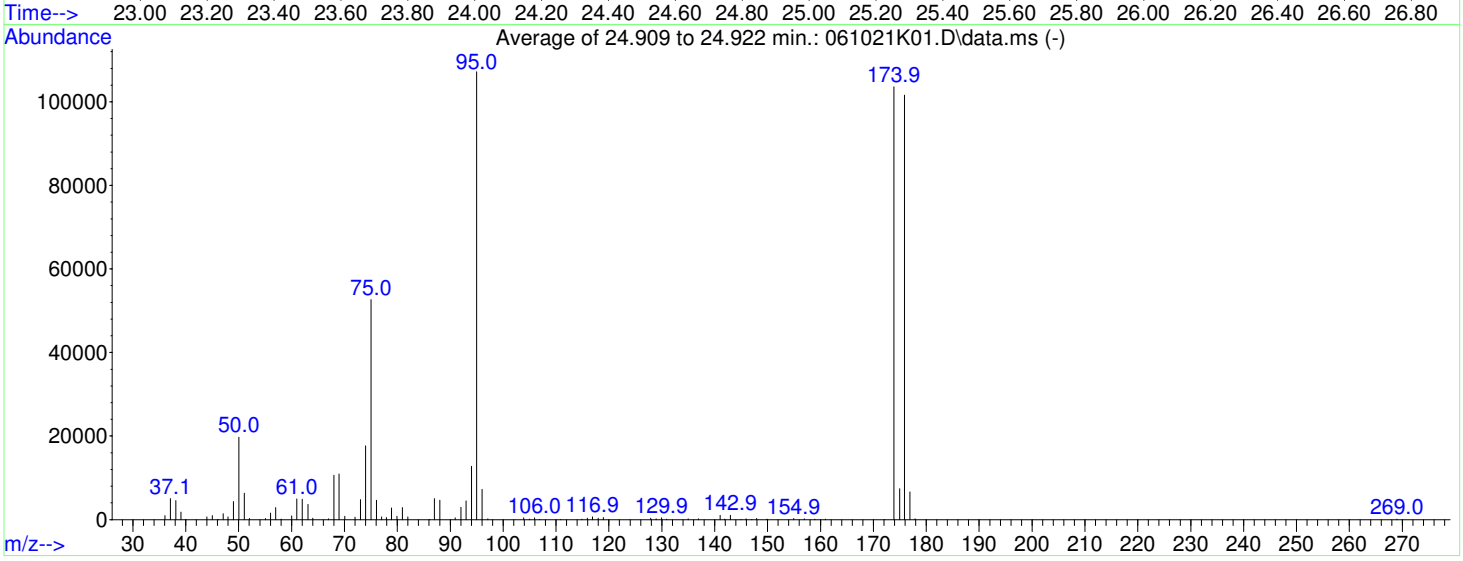
Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K01.D
InstName : HP5973K
Acq On : 10 Jun 2021 1:35 pm
Operator : EM
Sample : S21F026-TUN1
Misc : BFB 1920101
ALS Vial : 31 Sample Multiplier: 1

**REVIEWED**
**By EM at 3:51 pm, Jun 10, 2021**

Integration File: lscint.p

Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Title : TO15
Last Update : Thu Jun 10 13:26:28 2021




AutoFind: Scans 3325, 3326, 3327; Background Corrected with Scan 3310

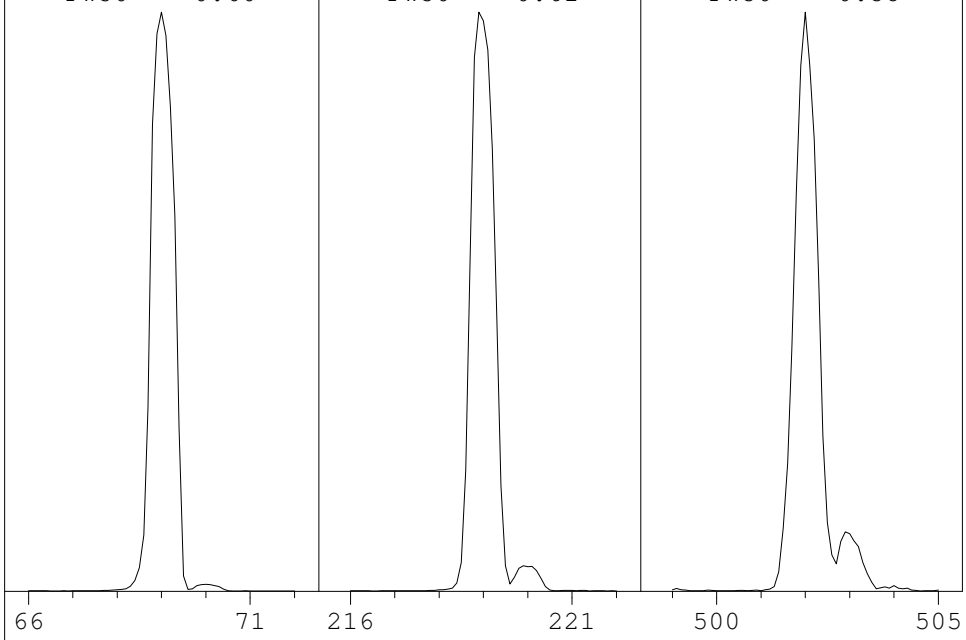
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.4 | 19693 | PASS |
| 75 | 95 | 30 | 66 | 49.1 | 52677 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 107237 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 7268 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 96.6 | 103584 | PASS |
| 175 | 174 | 4 | 9 | 7.1 | 7398 | PASS |
| 176 | 174 | 93 | 101 | 98.1 | 101595 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 6645 | PASS |

Autotune

Thu Jun 10 11:08:03 2021 Instrum

C:\MSDCHEM\1\5973N\atune.u US82321658

| Mass | 69.00 | Mass | 218.90 | Mass | 502.00 |
|---|---|---|---|---|---|
| Ab | 514004 | Ab | 304313 | Ab | 27308 |
| Pw50 | 0.60 | Pw50 | 0.61 | Pw50 | 0.58 |

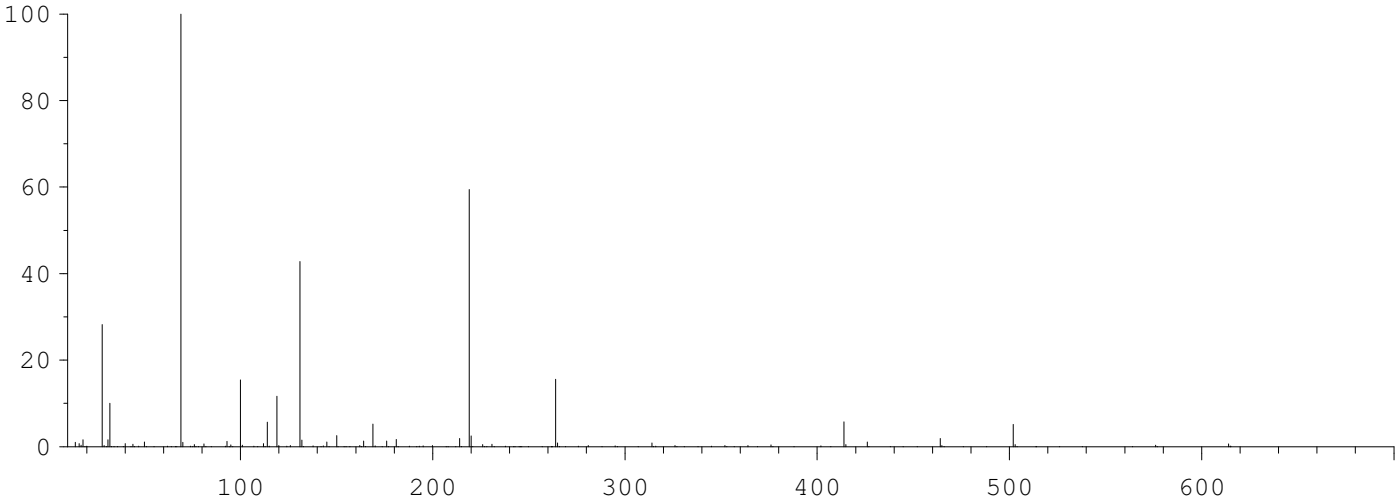



| | | | |
|---|---|---|---|
| Ion Pol | Pos | MassGain | 81 |
| | | MassOffs | -9 |
| Emission | 34.6 | AmuGain | 1985 |
| EIEnrgy | 69.9 | AmuOffs | 132 |
| Filament | 1 | Wid219 | -0.026 |
| | | DC Pol | Pos |
| Repeller | 34.81 | | |
| IonFcus | 87.3 | HEDEnab | On |
| EntLens | 21.5 | EMVolts | 1200 |
| EntOffs | 17.57 | | |
| | | Samples | 8 |
| PFTBA | Open | Averages | 3 |
| | | Stepsize | 0.10 |

Temperatures and Pressures:

| | | | |
|---|---|---|---|
| MS Source | 230 | Turbo Speed | 100 |
| MS Quad | 150 | | |

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
160 peaks Base: 69.00 Abundance: 469888




| Mass | Abund | Rel Abund | Iso Mass | Iso Abund | Iso Ratio |
|---|---|---|---|---|---|
| 69.00 | 469888 | 100.00 | 70.00 | 4898 | 1.04 |
| 219.00 | 279424 | 59.47 | 220.00 | 11831 | 4.23 |
| 502.00 | 24088 | 5.13 | 503.00 | 2312 | 9.60 |

Air/Water Check: H20~1.58% N2~28.22% O2~10.05% CO2~0.57% N2/H2O~1783.56%

Column(1) Flow: 0.873 Column(2): 0 ml/min. Interface Temp: 230

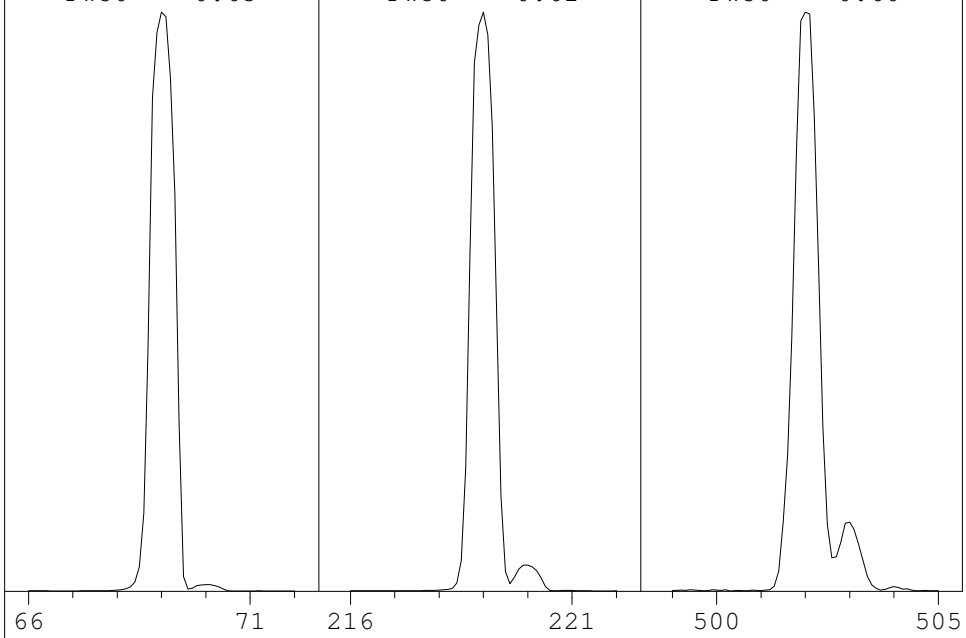
Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 174453
Repeller Maximum 35 volts using ion 219; Gain Factor 1.74

MassGain Values(Samples): 82(3) 82(2) 82(1) 82(0) 81(FS)

| TARGET MASS: | 50 | 69 | 131 | 219 | 414 | 502 | 800 |
|---|---|---|---|---|---|---|---|
| Amu Offset: | 132.0 | 132.0 | 132.0 | 132.0 | 132.0 | 132.0 | 132.0 |
| Entrance Lens Offset: | 17.6 | 17.6 | 17.6 | 17.6 | 17.6 | 17.6 | 17.6 |

Thu Jun 10 11:24:30 2021 Instrum
C:\msdchem\1\5973N\bfb061021K.U 0582321658

| Mass | 69.00 | Mass | 219.00 | Mass | 502.00 |
|---|---|---|---|---|---|
| Ab | 486689 | Ab | 284300 | Ab | 21906 |
| Pw50 | 0.63 | Pw50 | 0.61 | Pw50 | 0.60 |

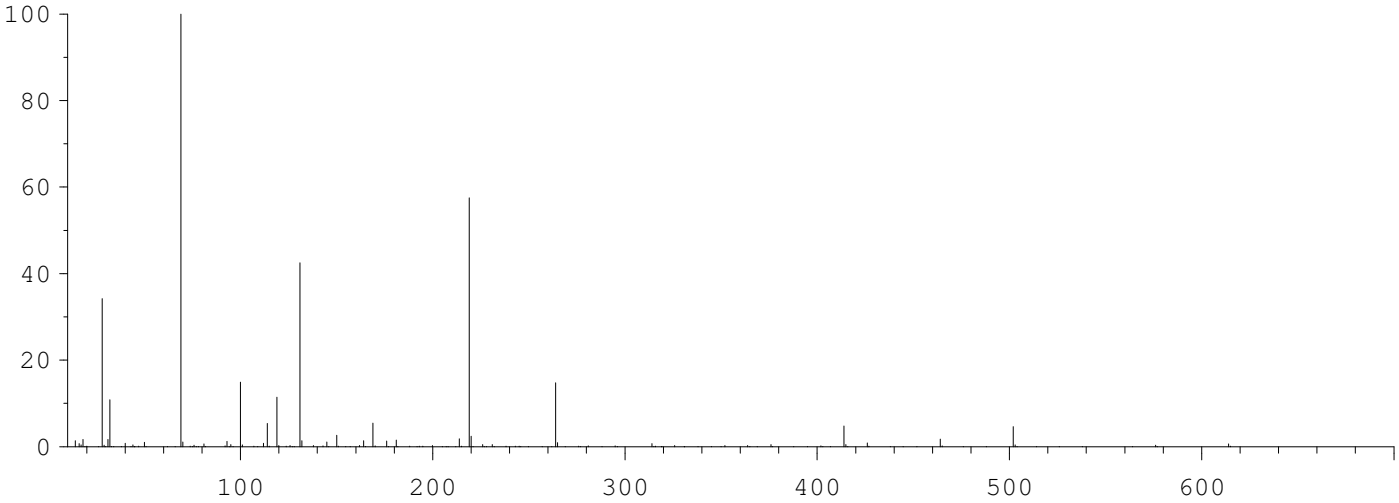



| | | | |
|---|---|---|---|
| Ion Pol | Pos | MassGain | 80 |
| | | MassOffs | -9 |
| Emission | 34.6 | AmuGain | 1989 |
| EIEnrgy | 69.9 | AmuOffs | 131 |
| Filament | 1 | Wid219 | -0.030 |
| | | DC Pol | Pos |
| Repeller | 34.98 | | |
| IonFcus | 88.3 | HEDEnab | On |
| EntLens | 21.5 | EMVolts | 1188 |
| EntOffs | 18.57 | | |
| | | Samples | 8 |
| PFTBA | Open | Averages | 3 |
| | | Stepsize | 0.10 |

Temperatures and Pressures:

| | | | |
|---|---|---|---|
| MS Source | 230 | Turbo Speed | 100 |
| MS Quad | 150 | | |

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
151 peaks Base: 69.00 Abundance: 456128




| Mass | Abund | Rel Abund | Iso Mass | Iso Abund | Iso Ratio |
|---|---|---|---|---|---|
| 69.00 | 456128 | 100.00 | 70.00 | 4930 | 1.08 |
| 219.00 | 262272 | 57.50 | 220.00 | 11044 | 4.21 |
| 502.00 | 20960 | 4.60 | 503.00 | 1895 | 9.04 |

Air/Water Check: H20~1.69% N2~34.19% O2~10.84% CO2~0.44% N2/H2O~2018.22%

Column(1) Flow: 0.873 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 156205
Repeller Maximum 35 volts using ion 219; Gain Factor 1.56

MassGain Values(Samples): 80(3) 80(2) 81(1) 81(0) 80(FS)

| TARGET MASS: | 50 | 69 | 131 | 219 | 414 | 502 | 800 |
|---|---|---|---|---|---|---|---|
| Amu Offset: | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 |
| Entrance Lens Offset: | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 |

# S21F026-CAL1

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K02.D
InstName : HP5973K
Acq On : 10 Jun 2021 2:23 pm
Operator : EM
Sample : S21F026-CAL1
Misc : 1ppbv
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 11 09:31:32 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 195019 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 600313 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.072 | 117 | 542244 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.004 | 41 | 5999 | 1.29 | ppbv | | 96 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 17609 | 1.29 | ppbv | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 5.497 | 85 | 18414 | 1.27 | ppbv | | 98 |
| 5) Chloromethane | 5.740 | 50 | 6302 | 1.34 | ppbv | | 98 |
| 6) Vinyl chloride | 6.074 | 62 | 10036 | 1.35 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.178 | 54 | 8240 | 1.35 | ppbv | | 88 |
| 8) Bromomethane | 7.236 | 94 | 5874 | 1.32 | ppbv | | 99 |
| 9) Chloroethane | 7.614 | 64 | 3630 | 1.28 | ppbv | | 93 |
| 10) Bromoethene | 8.246 | 106 | 5827 | 1.27 | ppbv | | 99 |
| 11) Trichlorofluoromethane | 8.380 | 101 | 15494 | 1.34 | ppbv | | 99 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.370 | 151 | 11162 | 1.33 | ppbv | | 100 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 8928 | 1.25 | ppbv | | 99 |
| 14) Acetone | 11.087 | 43 | 10868 | 1.33 | ppbv | | 98 |
| 15) Carbon disulfide | 11.203 | 76 | 19923 | 1.36 | ppbv | | 95 |
| 16) 2-Propanol | 11.617 | 45 | 7707 | 1.11 | ppbv | | 92 |
| 17) Allyl chloride | 11.963 | 41 | 7648 | 1.28 | ppbv | | 96 |
| 18) Dichloromethane | 12.480 | 49 | 9685 | 1.58 | ppbv | | 99 |
| 19) tert-Butyl methyl ethe... | 13.028 | 73 | 16552 | 1.14 | ppbv | | 98 |
| 20) trans-1,2-Dichloroethene | 13.101 | 61 | 9327 | 1.28 | ppbv | | 99 |
| 21) Hexane | 13.588 | 57 | 10226 | 1.18 | ppbv | | 96 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 11429 | 1.26 | ppbv | | 96 |
| 23) Vinyl acetate | 14.500 | 43 | 11548 | 1.18 | ppbv | | 98 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 7775 | 1.26 | ppbv | # | 100 |
| 25) 2-Butanone (MEK) | 15.869 | 72 | 3384 | 1.18 | ppbv | # | 92 |
| 26) Ethyl acetate | 15.863 | 61 | 2193 | 1.29 | ppbv | # | 93 |
| 27) Tetrahydrofuran | 16.295 | 42 | 7297 | 1.08 | ppbv | | 99 |
| 28) Chloroform | 16.441 | 83 | 12960 | 1.31 | ppbv | | 100 |
| 29) Cyclohexane | 16.617 | 56 | 10910 | 1.26 | ppbv | | 99 |
| 30) 1,1,1-Trichloroethane | 16.690 | 97 | 12597 | 1.31 | ppbv | | 100 |
| 31) Carbon tetrachloride | 16.922 | 117 | 12920 | 1.30 | ppbv | | 98 |
| 33) Benzene | 17.433 | 78 | 21136 | 1.34 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 33454 | 1.24 | ppbv | | 97 |
| 35) 1,2-Dichloroethane | 17.645 | 62 | 8440 | 1.30 | ppbv | | 97 |
| 36) Heptane | 17.670 | 43 | 11820 | 1.22 | ppbv | | 99 |
| 37) Trichloroethene | 18.619 | 130 | 8805 | 1.29 | ppbv | | 99 |
| 38) 1,2-Dichloropropane | 19.130 | 63 | 7437 | 1.30 | ppbv | | 98 |
| 39) 1,4-Dioxane | 19.318 | 88 | 4665 | 1.34 | ppbv | | 96 |
| 40) Bromodichloromethane | 19.592 | 83 | 15321 | 1.32 | ppbv | | 100 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 9923 | 1.21 | ppbv | | 99 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 15204 | 1.15 | ppbv | | 97 |
| 44) Toluene | 20.797 | 91 | 22593 | 1.24 | ppbv | | 99 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 7937 | 1.10 | ppbv | | 99 |
| 46) 1,1,2-Trichloroethane | 21.588 | 97 | 8039 | 1.30 | ppbv | | 98 |
| 47) Tetrachloroethene | 21.636 | 166 | 12041 | 1.25 | ppbv | | 99 |
| 48) 2-Hexanone | 21.886 | 43 | 12614 | 1.04 | ppbv | | 97 |
| 49) Chlorodibromomethane | 22.196 | 129 | 15054 | 1.26 | ppbv | | 98 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 11096 | 1.29 | ppbv | | 100 |
| 51) Chlorobenzene | 23.121 | 112 | 20408 | 1.34 | ppbv | # | 83 |
| 52) Ethylbenzene | 23.188 | 91 | 30876 | 1.24 | ppbv | | 100 |
| 53) m&p-Xylene | 23.370 | 91 | 45375 | 2.39 | ppbv | | 100 |
| 54) o-Xylene | 24.015 | 91 | 21065 | 1.05 | ppbv | | 100 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K02.D
InstName : HP5973K
Acq On : 10 Jun 2021 2:23 pm
Operator : EM
Sample : S21F026-CAL1
Misc : 1ppbv
ALS Vial : 31 Sample Multiplier: 1

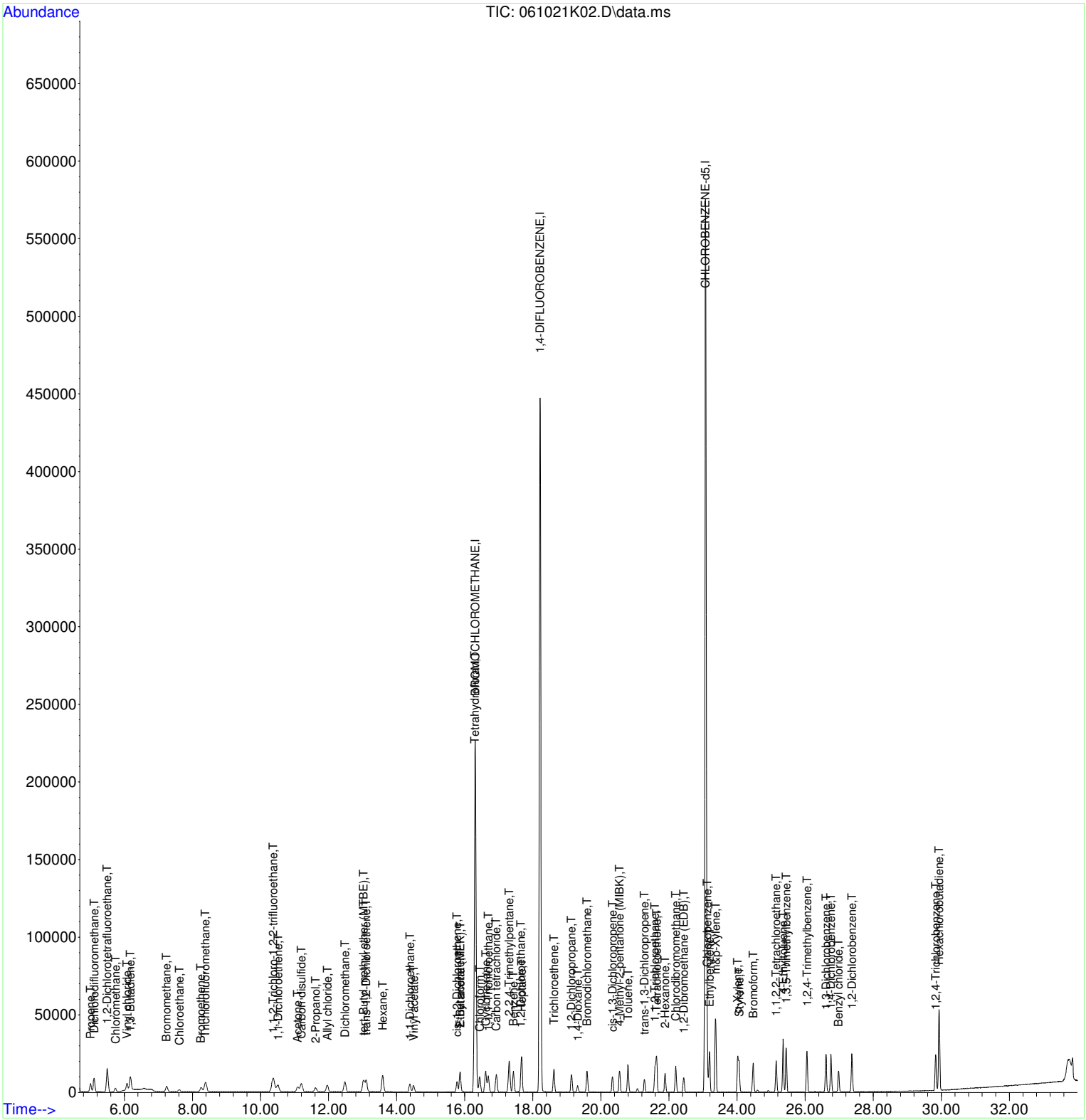
Quant Time: Jun 11 09:31:32 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

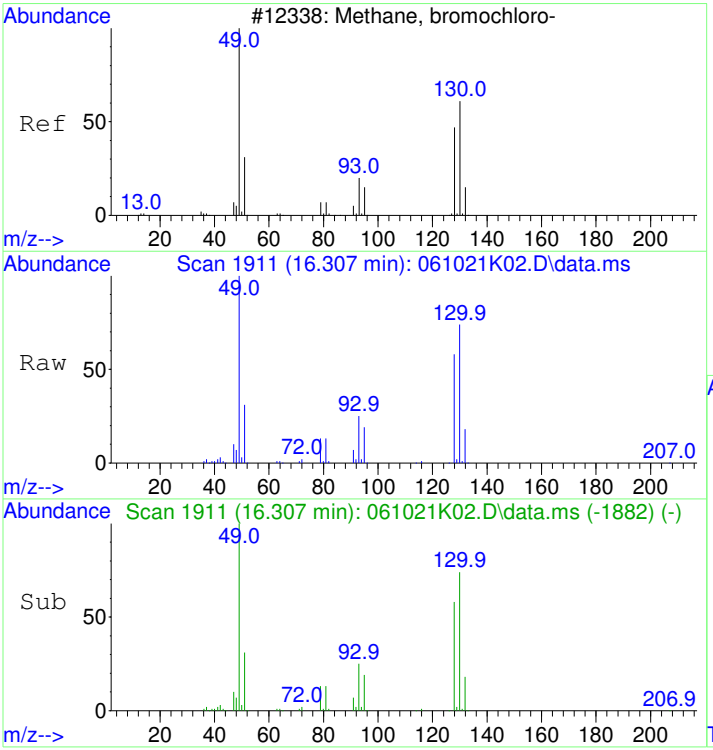
| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.064 | 104 | 16685 | 1.15 | ppbv | 99 |
| 56) | Bromoform | 24.471 | 173 | 15009 | 1.25 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.147 | 83 | 17516 | 1.17 | ppbv | 100 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 35114 | 1.11 | ppbv | 100 |
| 59) | 1,3,5-Trimethylbenzene | 25.445 | 105 | 26181 | 1.17 | ppbv | 99 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 23717 | 1.07 | ppbv | 99 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 18728 | 1.19 | ppbv | 99 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 17982 | 1.19 | ppbv | 99 |
| 63) | Benzyl chloride | 26.978 | 91 | 17703 | 0.96 | ppbv | 98 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 18564 | 1.16 | ppbv | 99 |
| 65) | 1,2,4-Trichlorobenzene | 29.831 | 180 | 14609 | 1.14 | ppbv | 99 |
| 66) | Hexachlorobutadiene | 29.934 | 225 | 18650 | 1.22 | ppbv | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K02.D
InstName : HP5973K
Acq On : 10 Jun 2021 2:23 pm
Operator : EM
Sample : S21F026-CAL1
Misc : 1ppbv
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 11 09:31:32 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

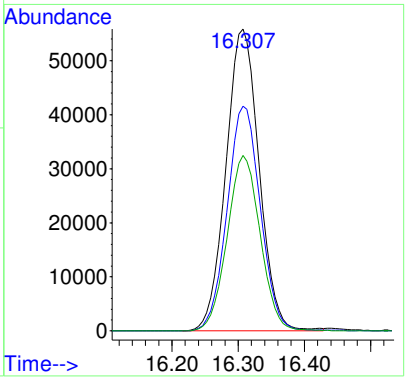


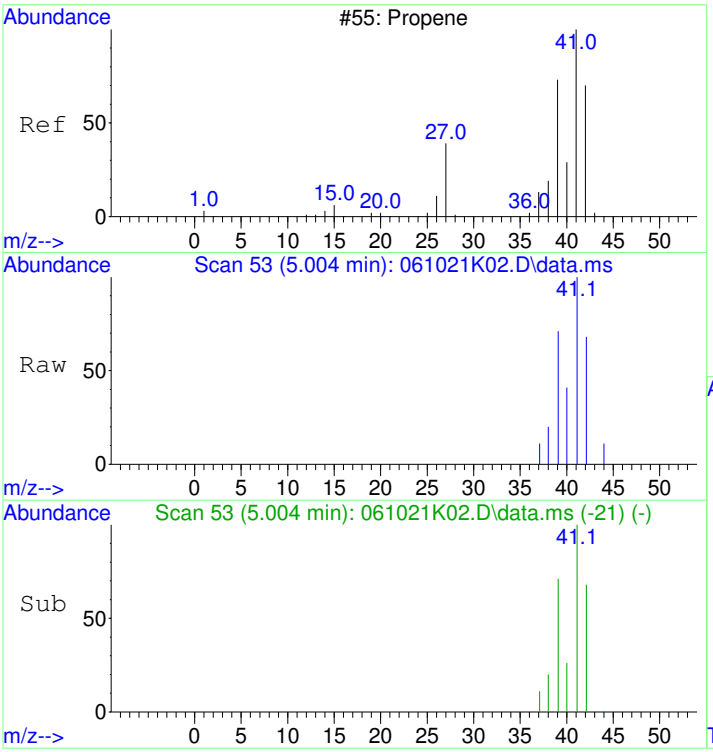



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 49 Resp: 195019

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 74.5 | 53.3 | 93.3 |
| 128 | 57.1 | 37.1 | 77.1 |

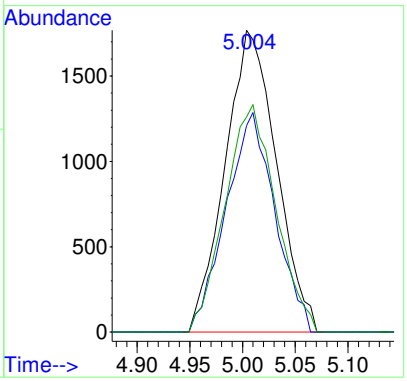


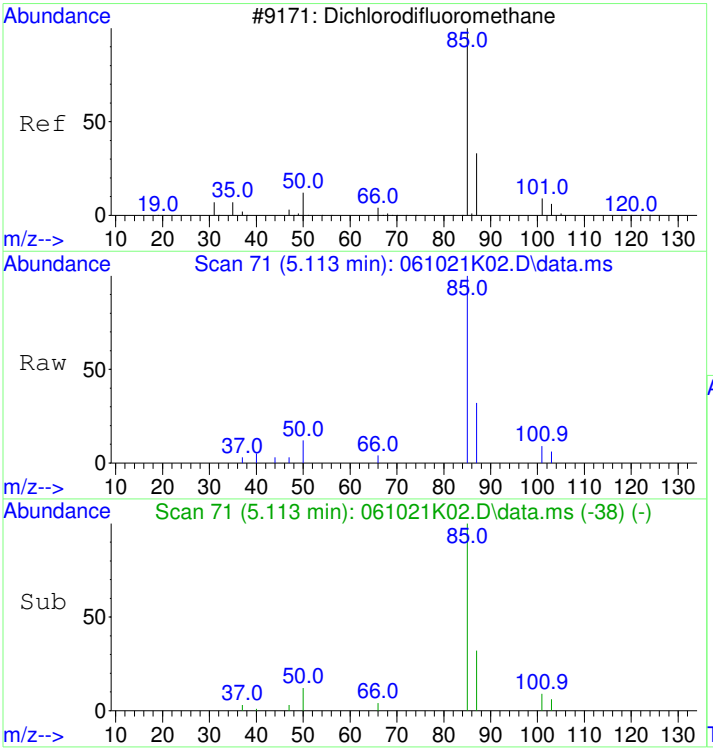




#2
Propene
Concen: 1.29 ppbv
RT: 5.004 min Scan# 53
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 41 Resp: 5999

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 42 | 69.1 | 46.5 | 86.5 |
| 39 | 74.6 | 51.2 | 91.2 |

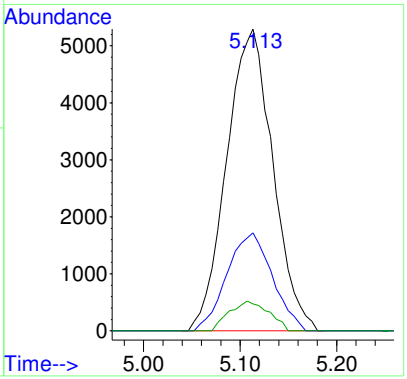


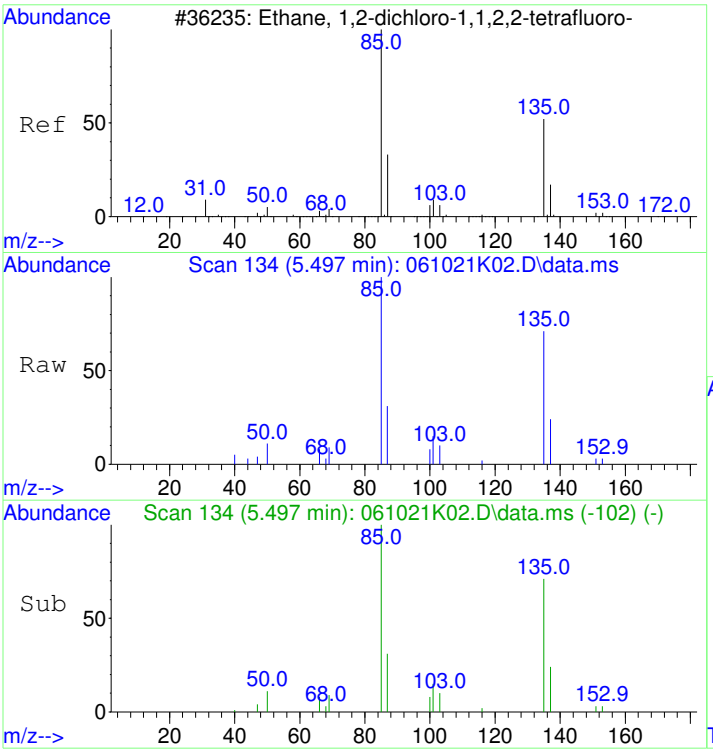



#3
Dichlorodifluoromethane
Concen: 1.29 ppbv
RT: 5.113 min Scan# 71
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 85 Resp: 17609

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.8 | 12.3 | 52.3 |
| 101 | 8.4 | 0.0 | 29.1 |

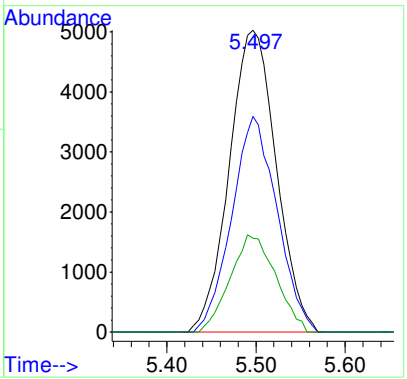


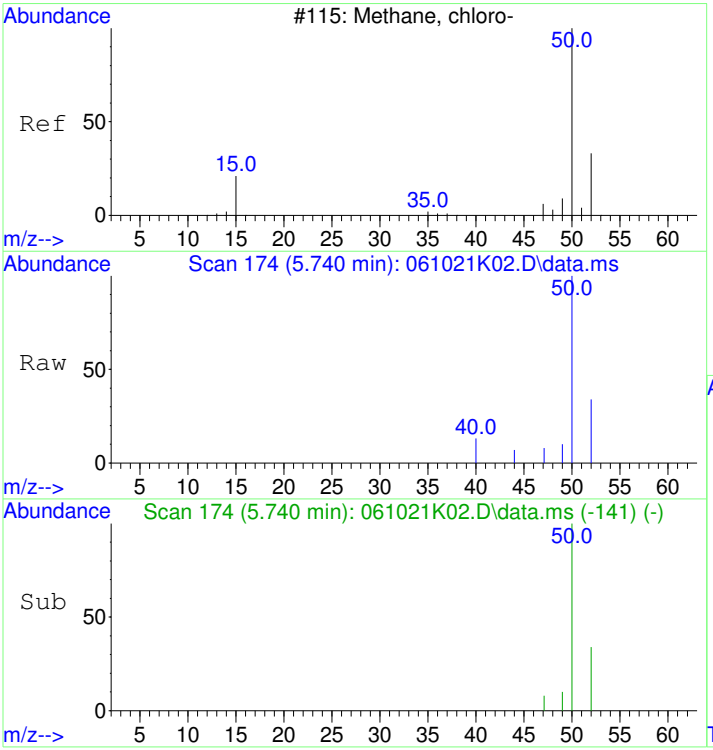




#4
1,2-Dichlorotetrafluoroethane
Concen: 1.27 ppbv
RT: 5.497 min Scan# 134
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 85 Resp: 18414

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 135 | 68.7 | 49.9 | 89.9 |
| 87 | 31.0 | 12.0 | 52.0 |

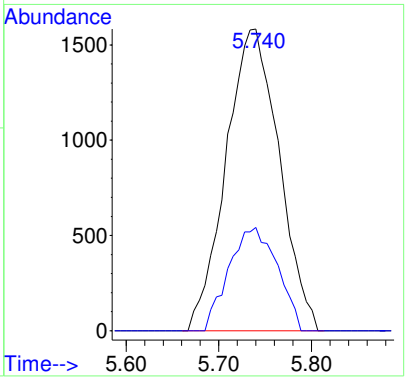


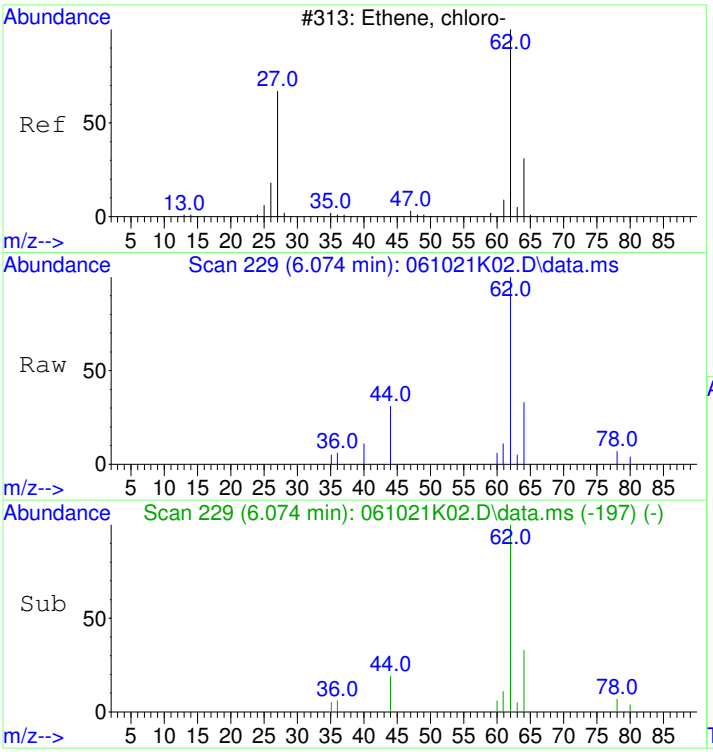



#5
Chloromethane
Concen: 1.34 ppbv
RT: 5.740 min Scan# 174
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 50 Resp: 6302

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.2 | 12.5 | 52.5 |

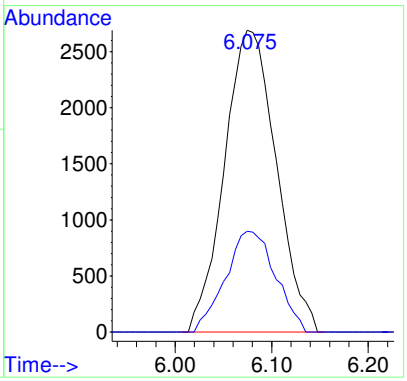


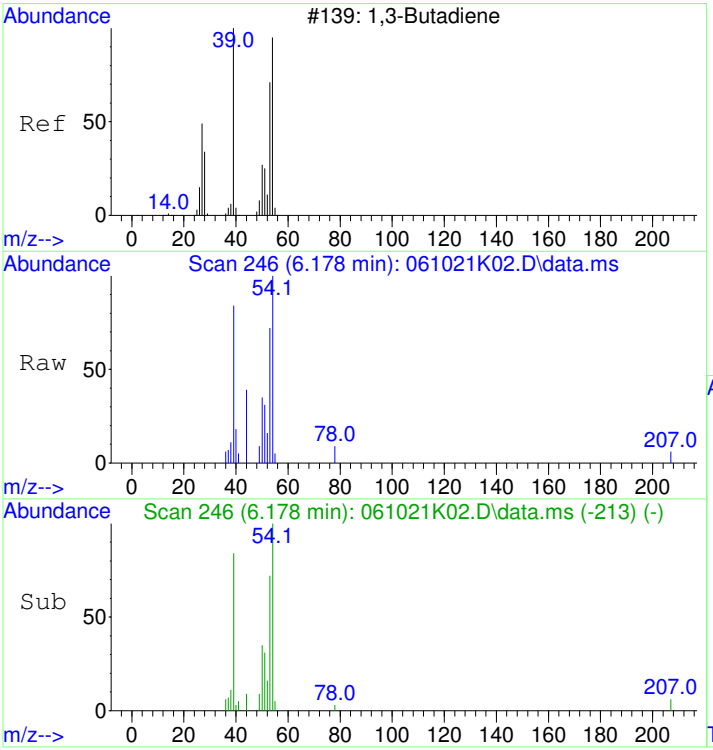




#6
Vinyl chloride
Concen: 1.35 ppbv
RT: 6.074 min Scan# 229
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 62 Resp: 10036

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.2 | 12.2 | 52.2 |

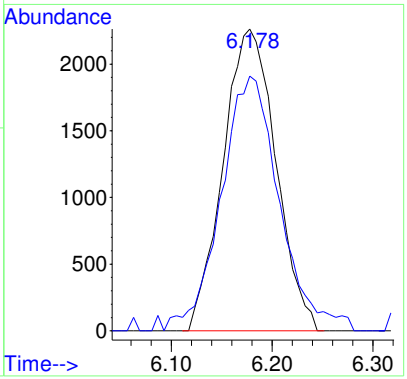


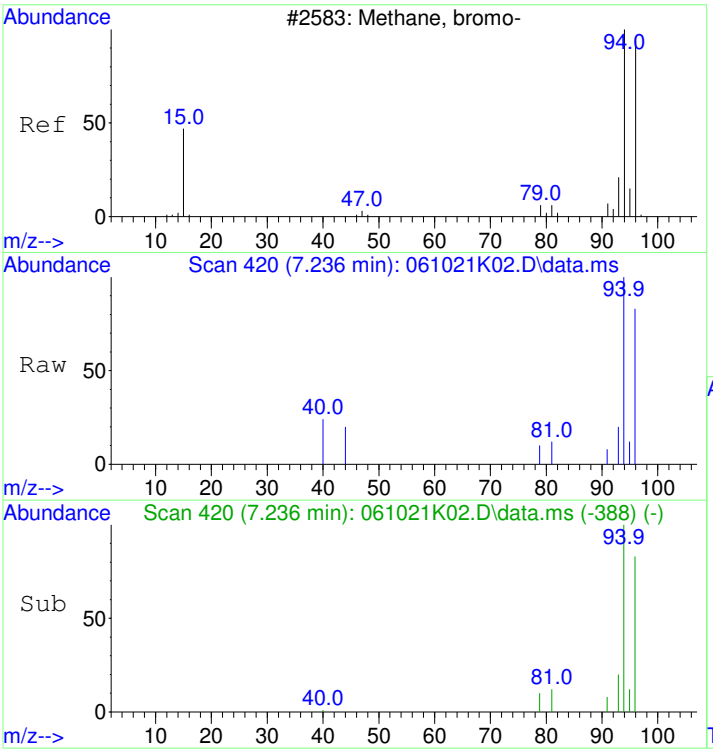



#7
1,3-Butadiene
Concen: 1.35 ppbv
RT: 6.178 min Scan# 246
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 54 Resp: 8240

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 93.3 | 62.6 | 102.6 |

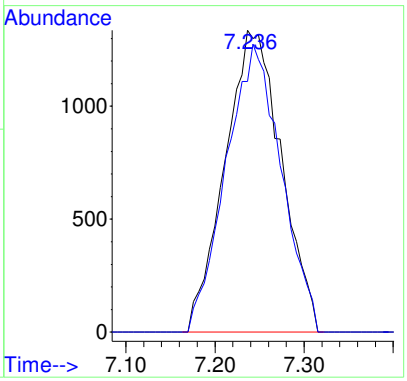


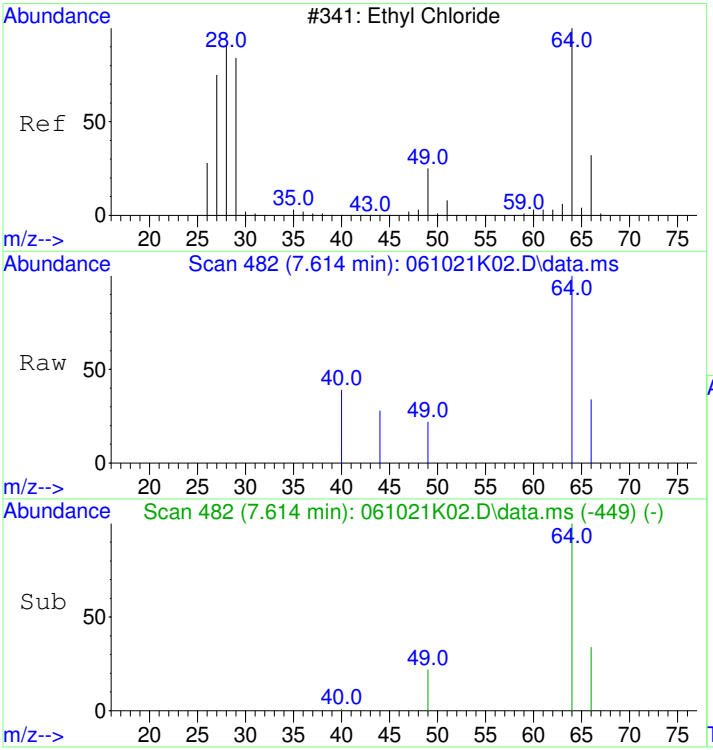




#8
Bromomethane
Concen: 1.32 ppbv
RT: 7.236 min Scan# 420
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 94 Resp: 5874

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 93.1 | 74.2 | 114.2 |

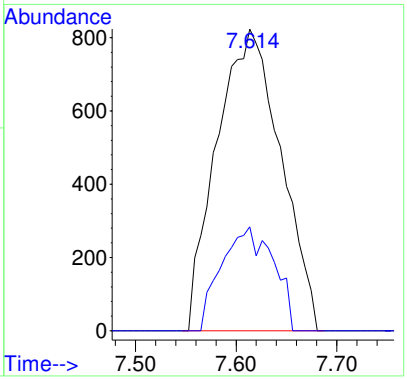


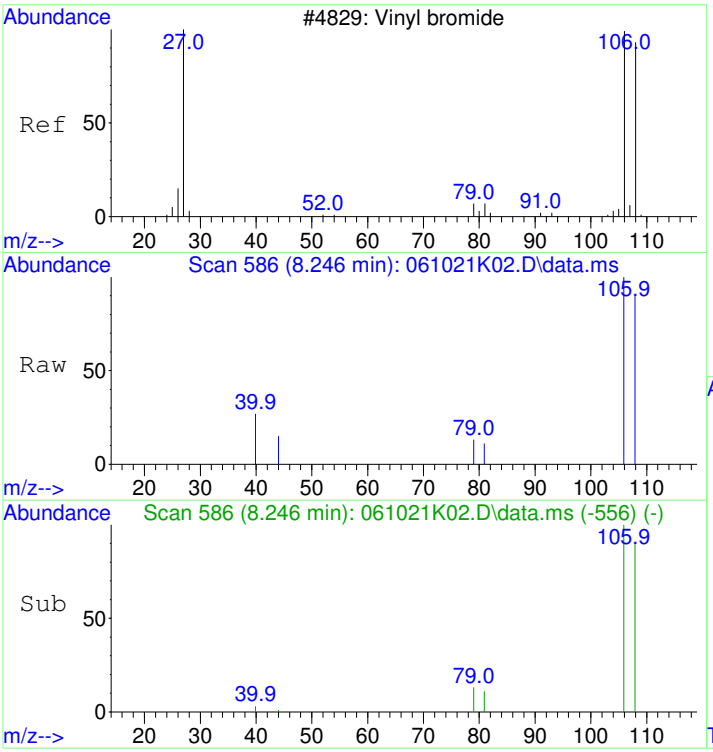



#9
Chloroethane
Concen: 1.28 ppbv
RT: 7.614 min Scan# 482
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 64 Resp: 3630

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 28.0 | 11.7 | 51.7 |

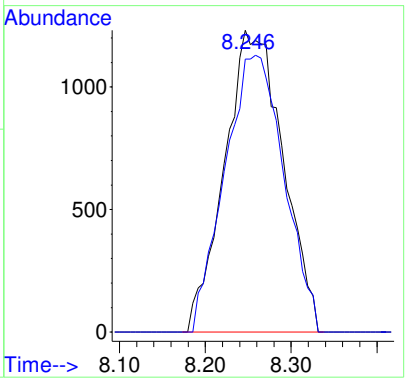


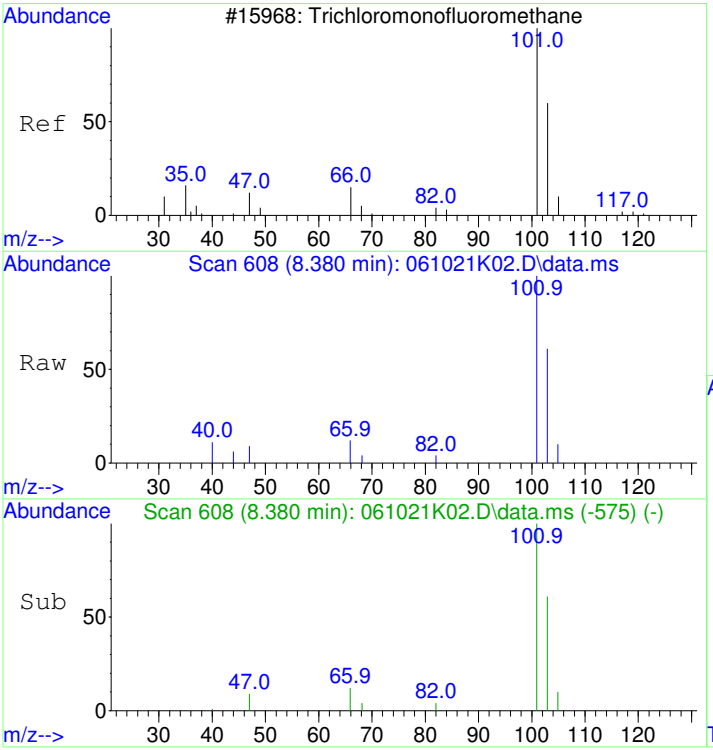




#10
Bromoethene
Concen: 1.27 ppbv
RT: 8.246 min Scan# 586
Delta R.T. -0.018 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:106 Resp: 5827

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 108 | 92.8 | 0.0 | 214.1 |

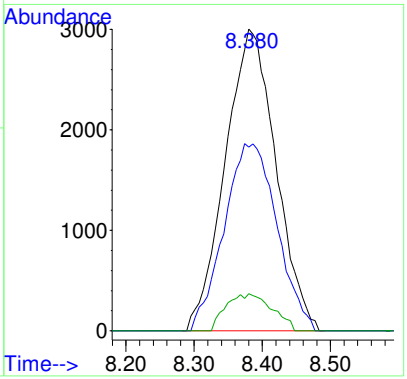


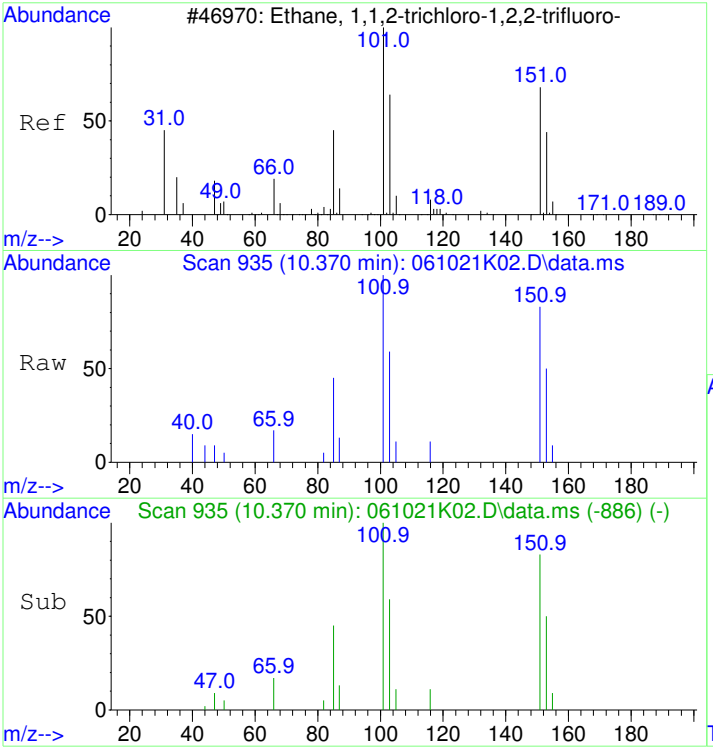



#11
Trichlorofluoromethane
Concen: 1.34 ppbv
RT: 8.380 min Scan# 608
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:101 Resp: 15494

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.6 | 45.3 | 85.3 |
| 66 | 11.2 | 0.0 | 32.5 |

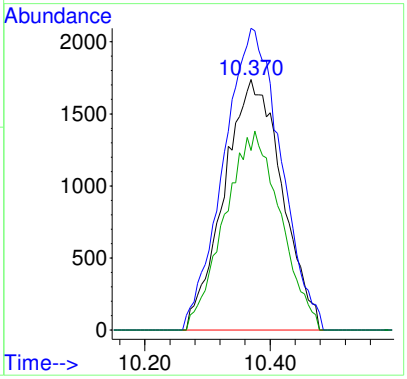


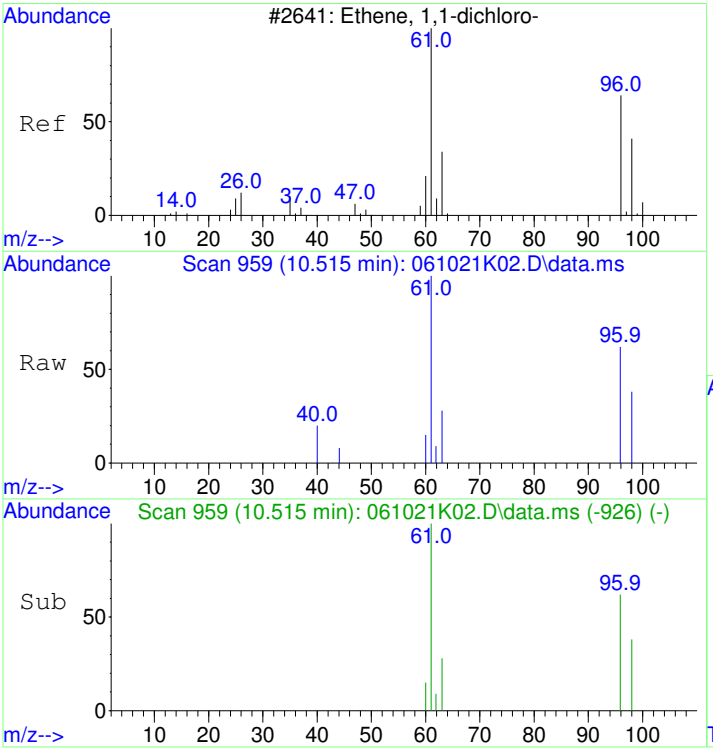




#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 1.33 ppbv
RT: 10.370 min Scan# 935
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:151 Resp: 11162

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 119.3 | 98.9 | 138.9 |
| 103 | 76.4 | 55.9 | 95.9 |

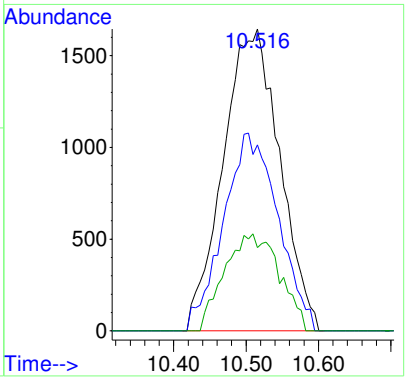


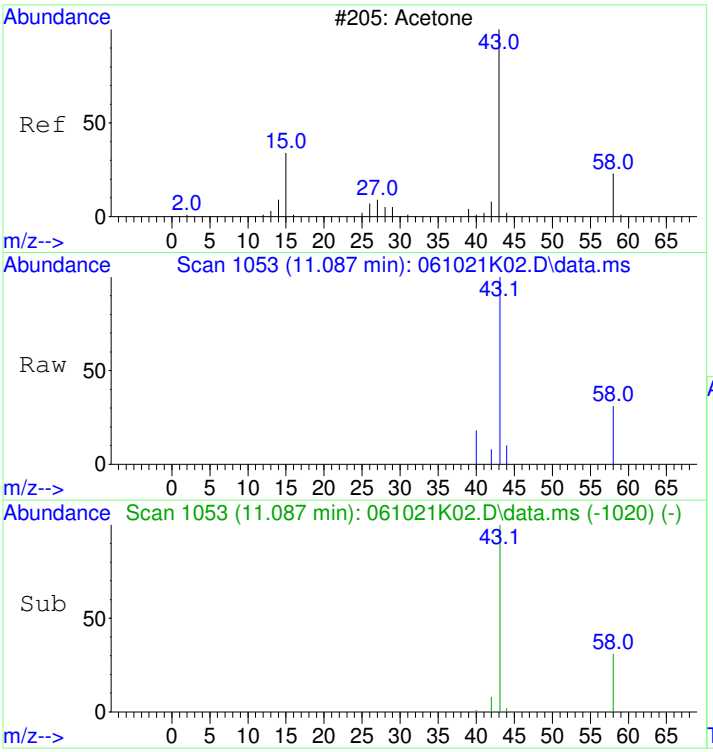



#13
1,1-Dichloroethene
Concen: 1.25 ppbv
RT: 10.515 min Scan# 959
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 61 Resp: 8928

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 63.0 | 41.9 | 81.9 |
| 63 | 31.2 | 11.8 | 51.8 |

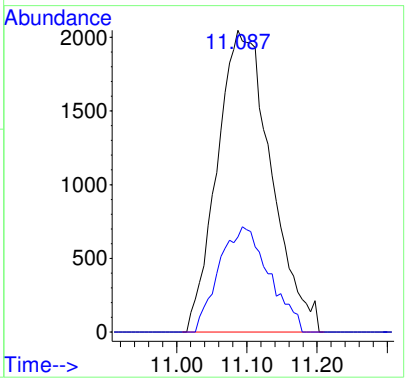


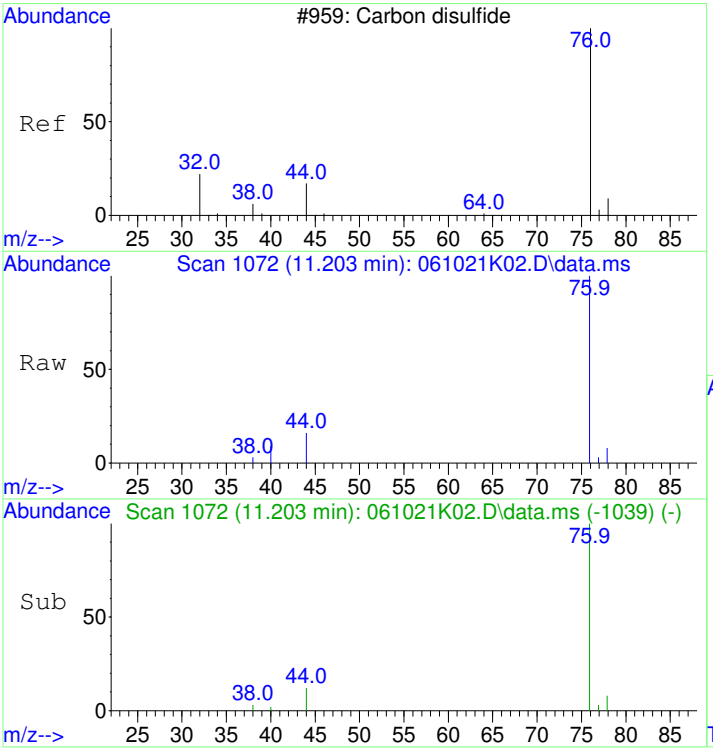




#14
Acetone
Concen: 1.33 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 43 Resp: 10868

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.6 | 13.5 | 53.5 |

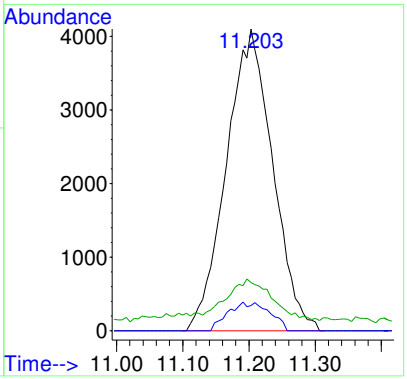


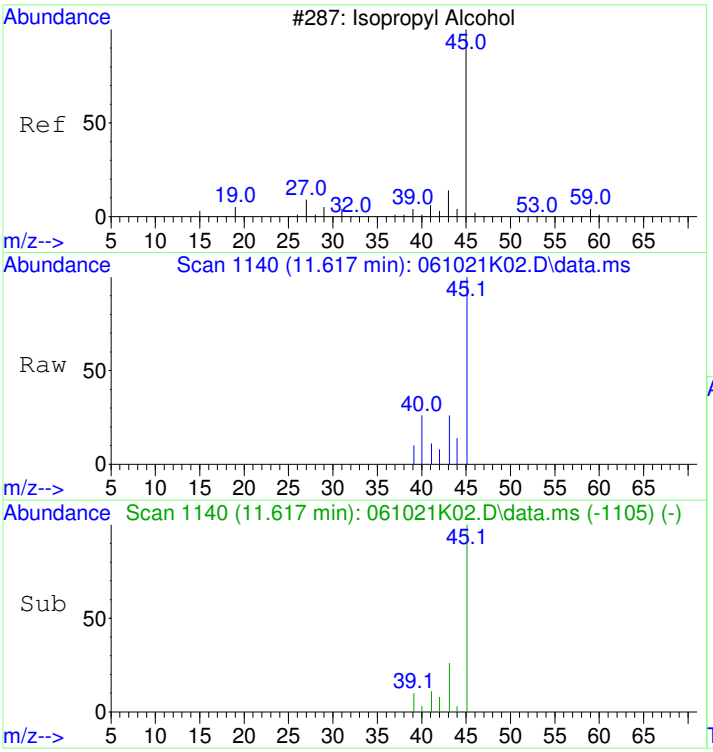



#15
Carbon disulfide
Concen: 1.36 ppbv
RT: 11.203 min Scan# 1072
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 76 Resp: 19923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 8.5 | 0.0 | 29.1 |
| 44 | 10.9 | 0.0 | 33.5 |

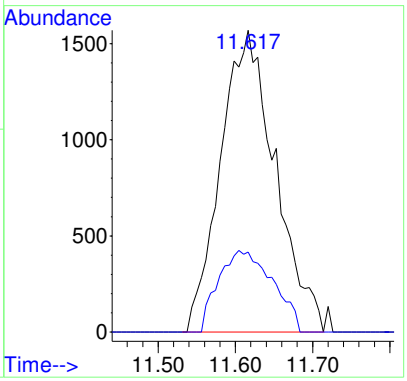


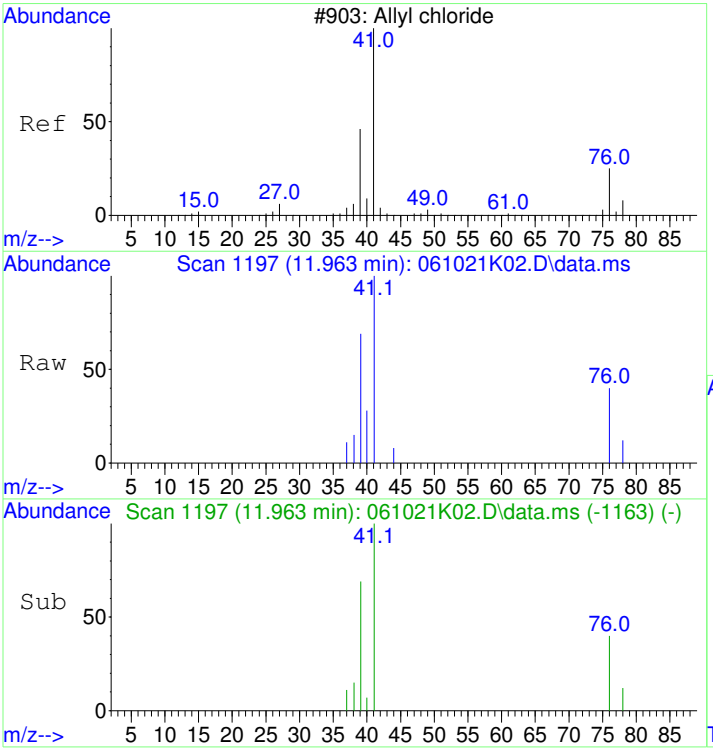




#16
2-Propanol
Concen: 1.11 ppbv
RT: 11.617 min Scan# 1140
Delta R.T. 0.012 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 45 Resp: 7707

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 26.9 | 3.0 | 43.0 |

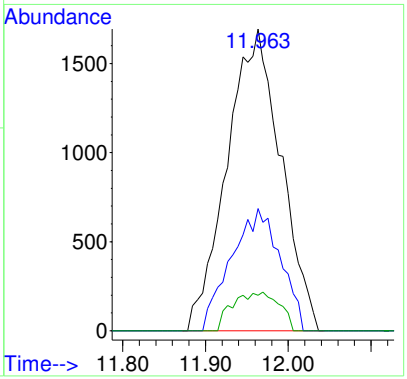


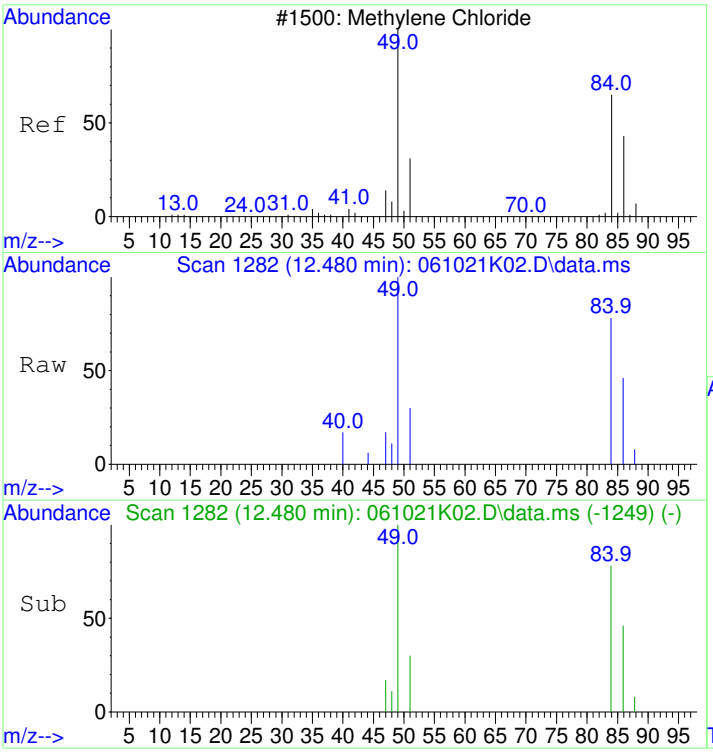



#17
Allyl chloride
Concen: 1.28 ppbv
RT: 11.963 min Scan# 1197
Delta R.T. 0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 41 Resp: 7648

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 76 | 36.9 | 19.0 | 59.0 |
| 78 | 11.1 | 0.0 | 32.7 |

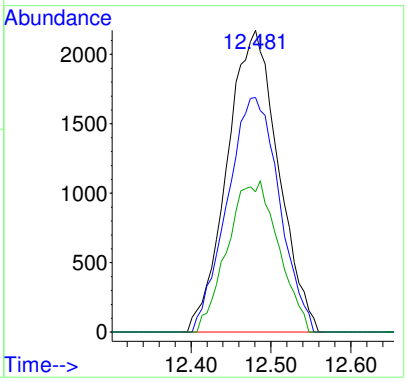


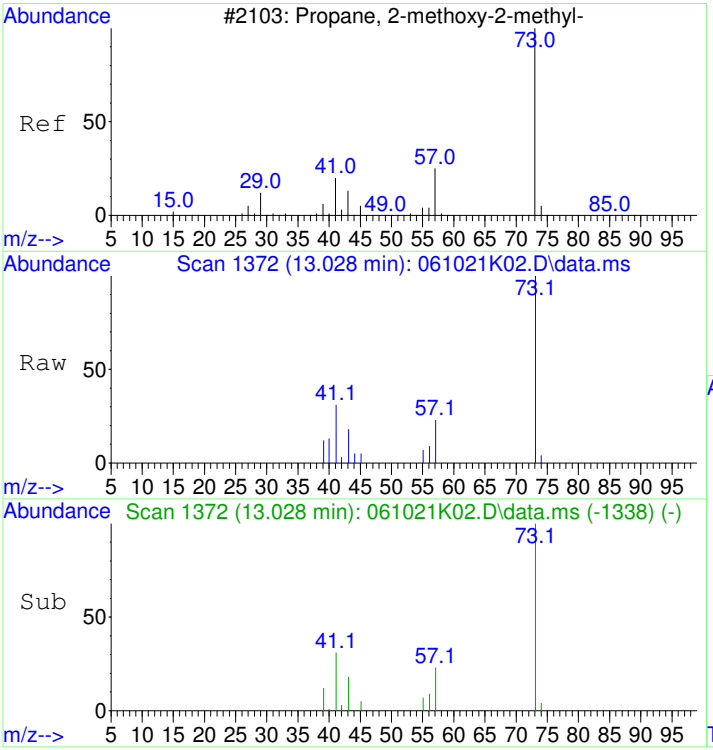




#18
Dichloromethane
Concen: 1.58 ppbv
RT: 12.480 min Scan# 1282
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 49 Resp: 9685

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 78.9 | 59.0 | 99.0 |
| 86 | 49.6 | 30.5 | 70.5 |

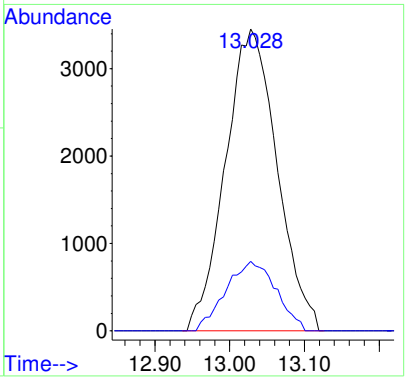


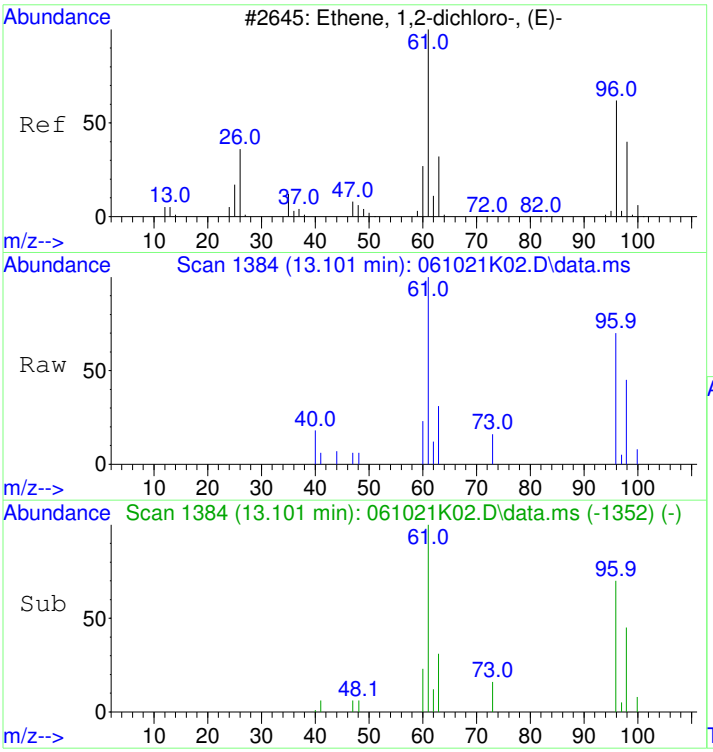



#19
tert-Butyl methyl ether (MTBE)
Concen: 1.14 ppbv
RT: 13.028 min Scan# 1372
Delta R.T. 0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 73 Resp: 16552

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 22.4 | 3.1 | 43.1 |

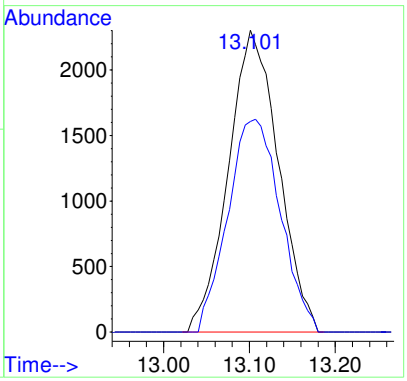


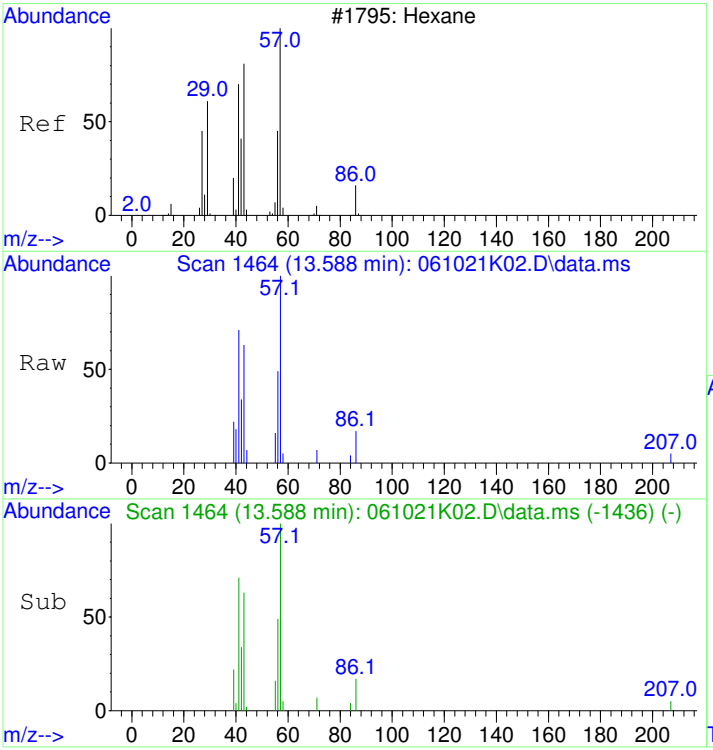




#20
trans-1,2-Dichloroethene
Concen: 1.28 ppbv
RT: 13.101 min Scan# 1384
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 61 Resp: 9327

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 74.0 | 52.8 | 92.8 |

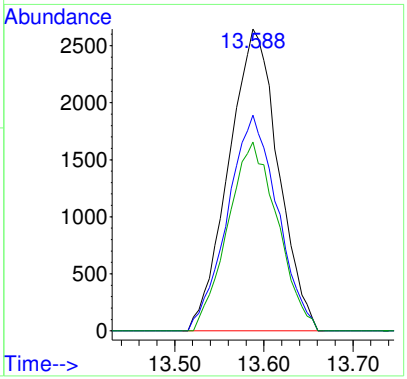


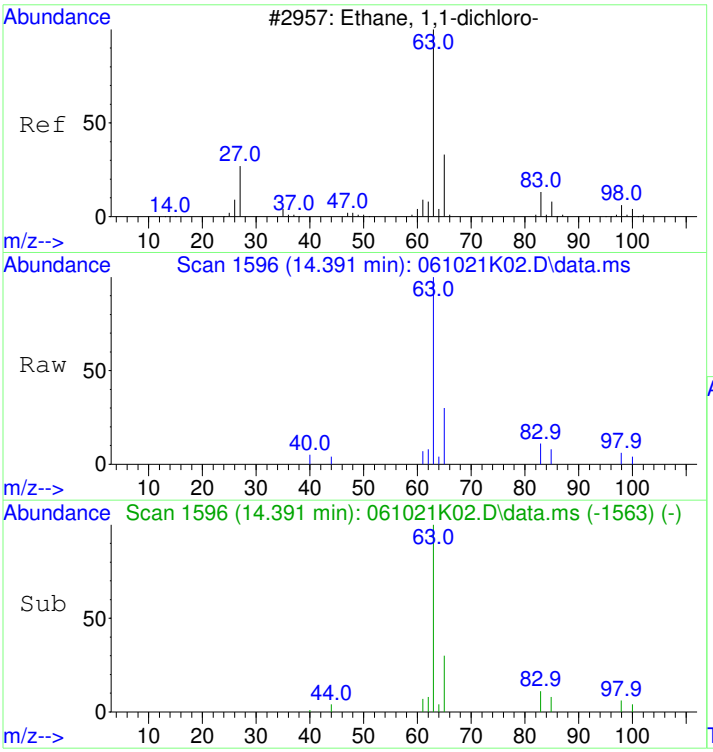



#21
Hexane
Concen: 1.18 ppbv
RT: 13.588 min Scan# 1464
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 57 Resp: 10226

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 71.8 | 47.0 | 87.0 |
| 43 | 62.8 | 42.0 | 82.0 |

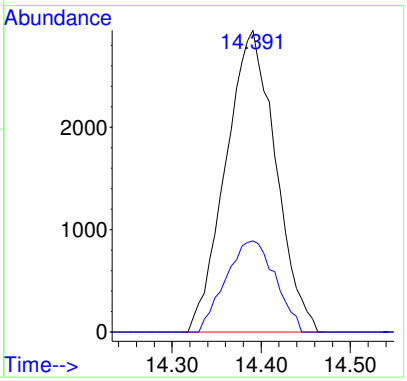


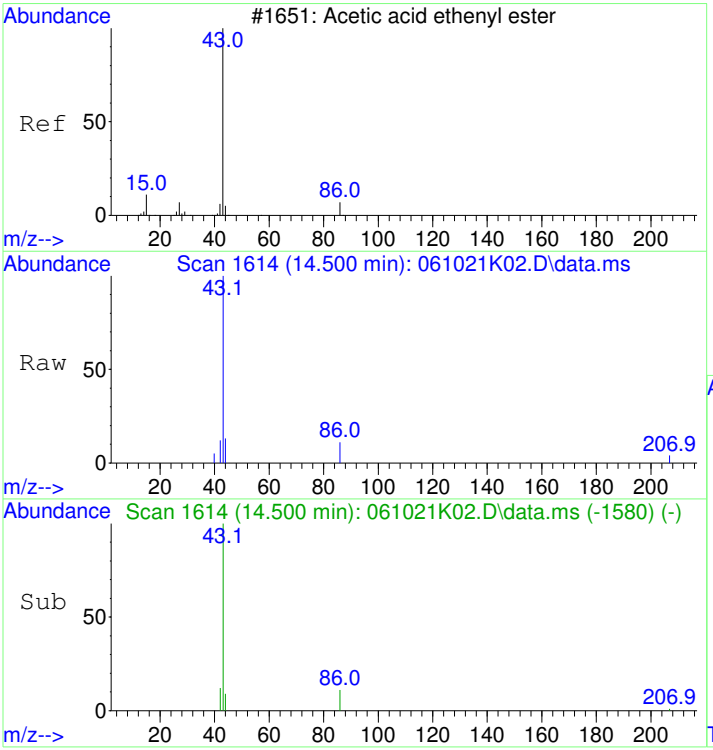




#22
1,1-Dichloroethane
Concen: 1.26 ppbv
RT: 14.391 min Scan# 1596
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 63 Resp: 11429

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 30.0 | 12.1 | 52.1 |

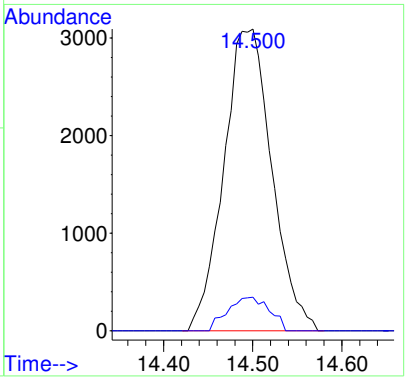


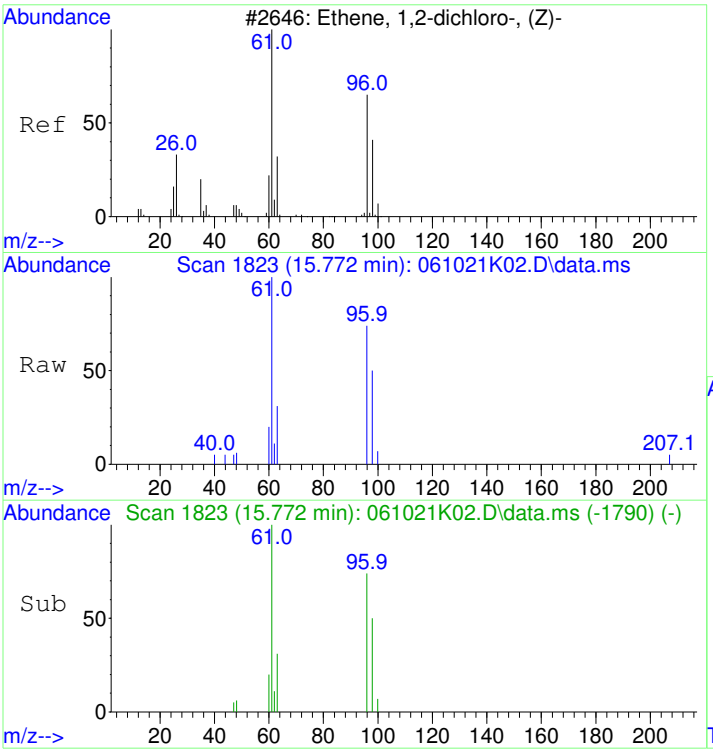



#23
Vinyl acetate
Concen: 1.18 ppbv
RT: 14.500 min Scan# 1614
Delta R.T. 0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 43 Resp: 11548

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 9.7 | 0.0 | 30.5 |

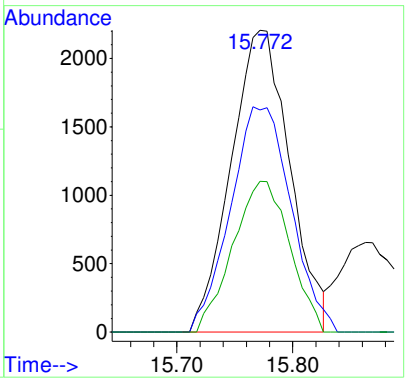


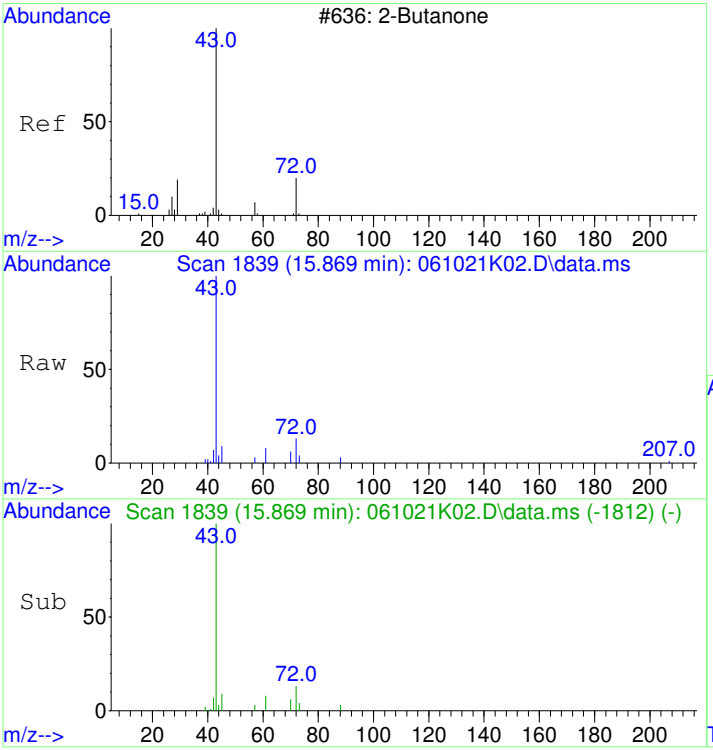




#24
cis-1,2-Dichloroethene
Concen: 1.26 ppbv
RT: 15.772 min Scan# 1823
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 61 Resp: 7775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 77.2 | 57.1 | 97.1 |
| 98 | 0.0 | 0.0 | 20.0 |

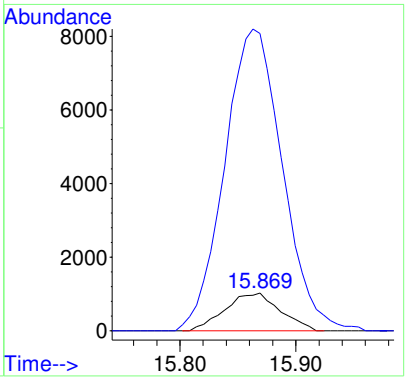


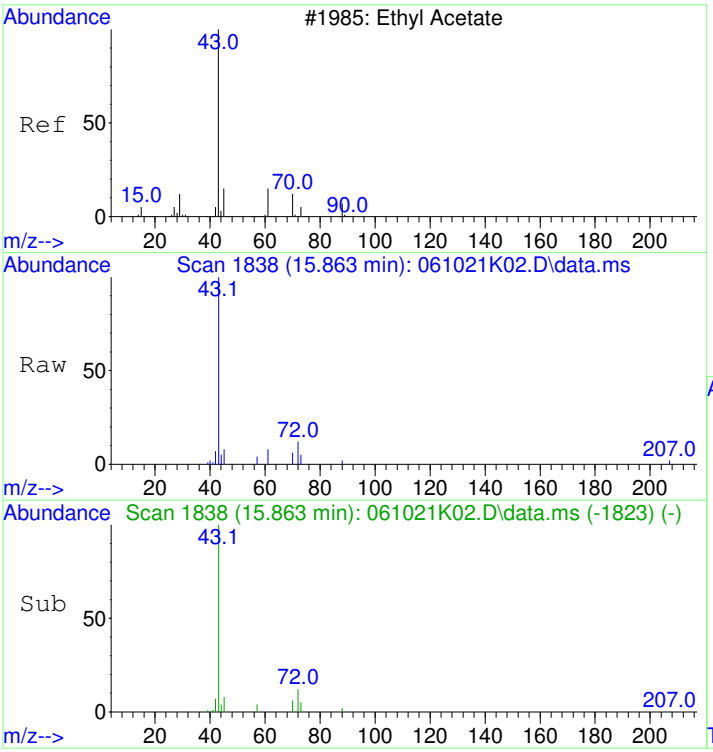



#25
2-Butanone (MEK)
Concen: 1.18 ppbv
RT: 15.869 min Scan# 1839
Delta R.T. 0.012 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 72 Resp: 3384

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 841.9 | 801.3 | 821.3# |

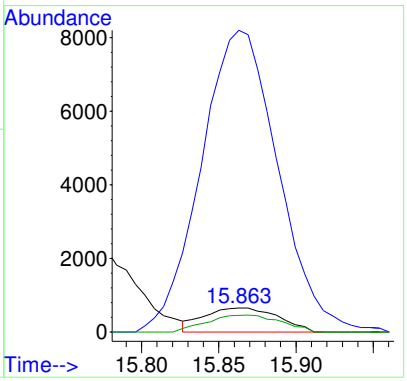


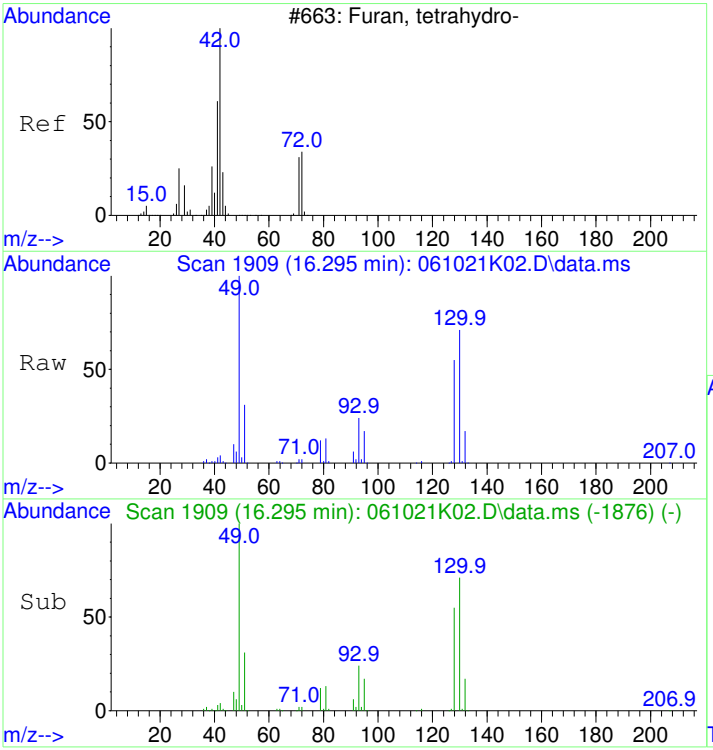




#26
Ethyl acetate
Concen: 1.29 ppbv
RT: 15.863 min Scan# 1838
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 61 Resp: 2193

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 43 | 1299.2 | 1327.1 | 1347.1# |
| 70 | 70.1 | 67.3 | 87.3 |

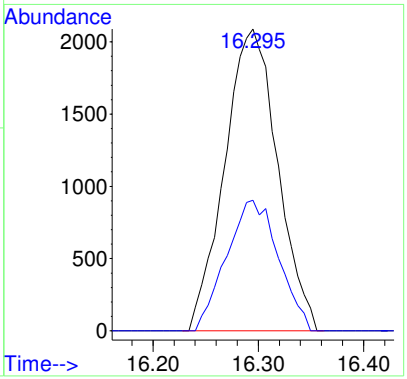


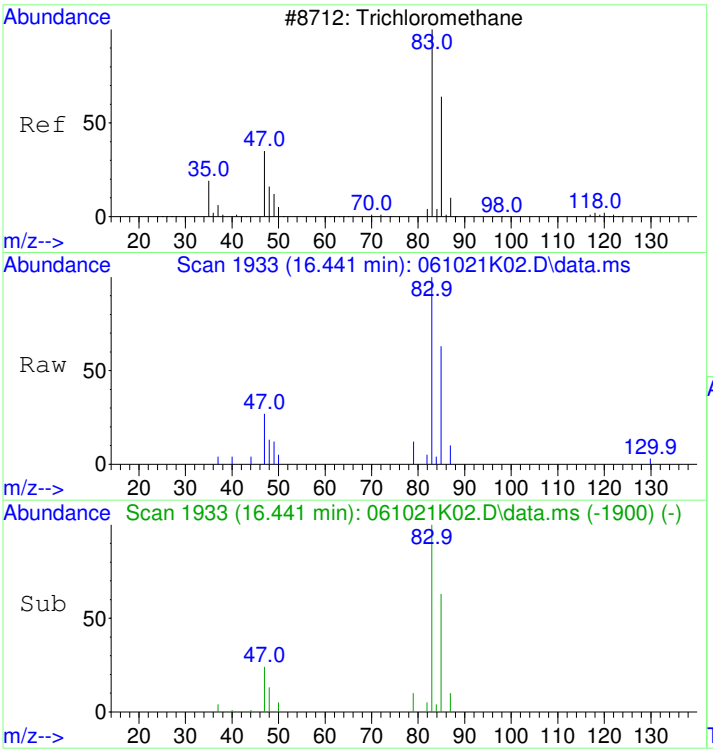



#27
Tetrahydrofuran
Concen: 1.08 ppbv
RT: 16.295 min Scan# 1909
Delta R.T. 0.012 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 42 Resp: 7297

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 42.5 | 22.9 | 62.9 |

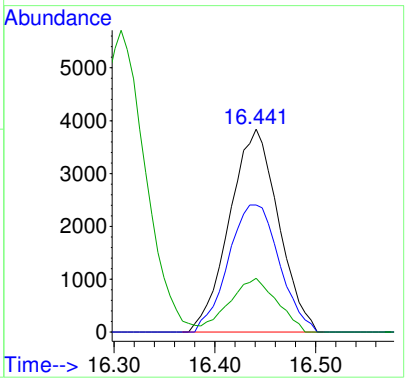


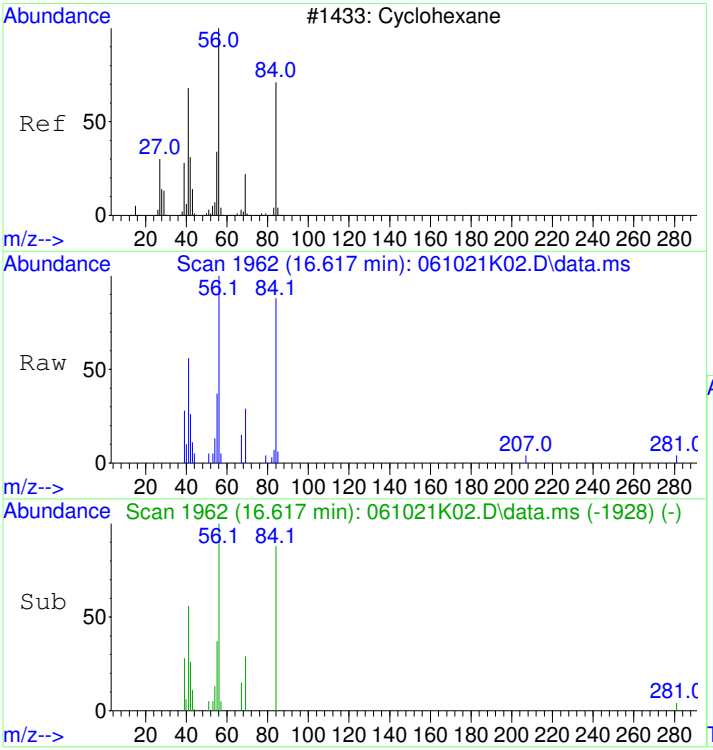




#28
Chloroform
Concen: 1.31 ppbv
RT: 16.441 min Scan# 1933
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 83 Resp: 12960

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.3 | 45.0 | 85.0 |
| 47 | 22.8 | 2.9 | 42.9 |

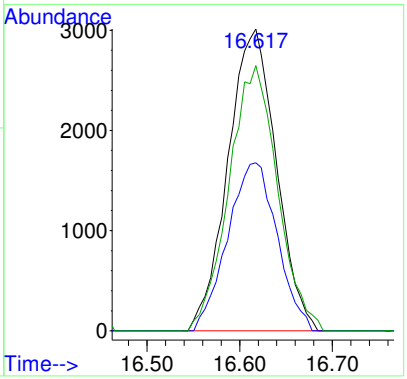


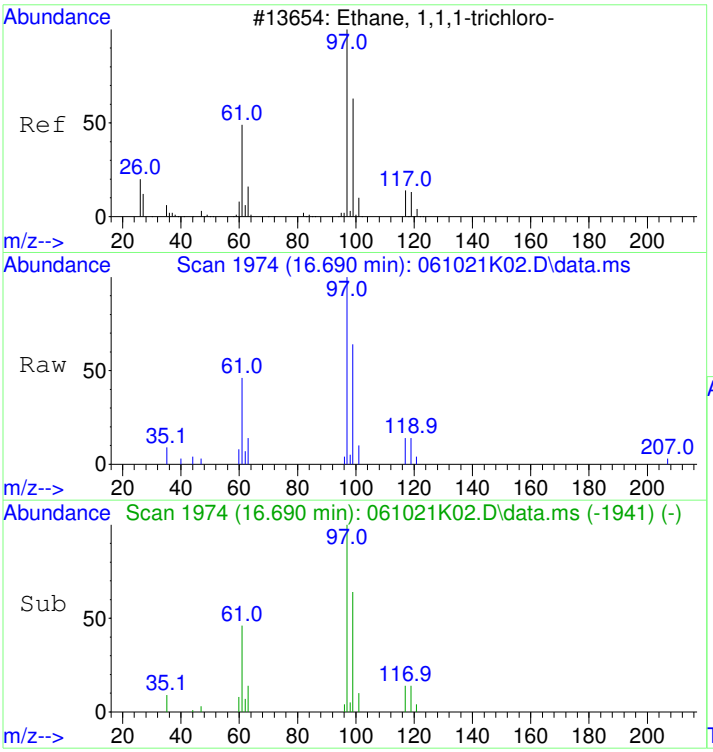



#29
Cyclohexane
Concen: 1.26 ppbv
RT: 16.617 min Scan# 1962
Delta R.T. 0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 56 Resp: 10910

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 41 | 57.0 | 34.9 | 74.9 |
| 84 | 88.2 | 68.7 | 108.7 |

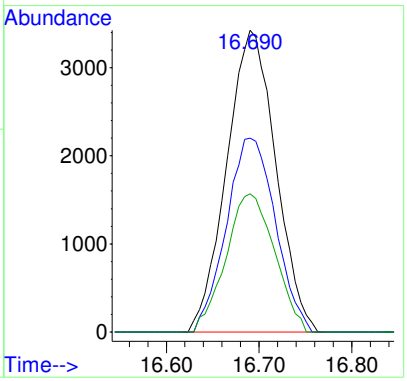


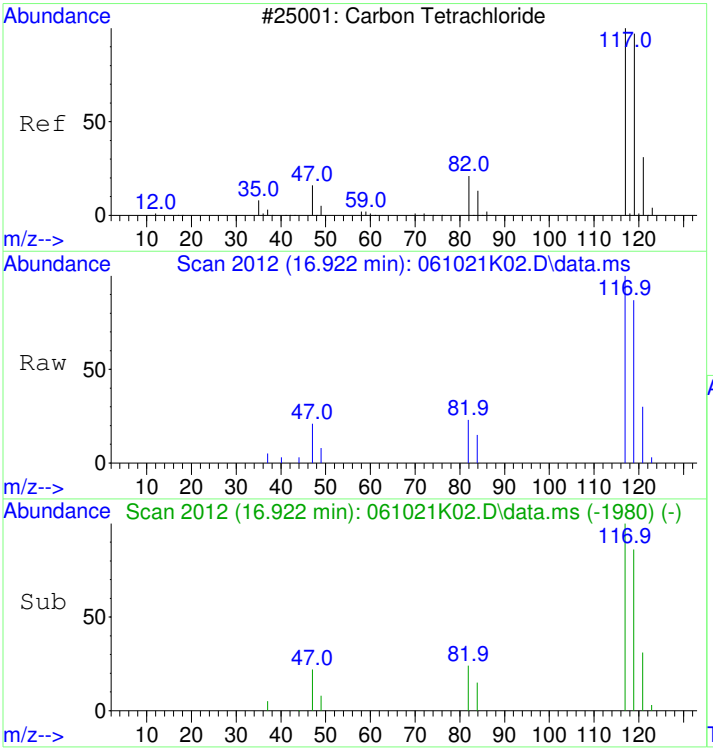




#30
1,1,1-Trichloroethane
Concen: 1.31 ppbv
RT: 16.690 min Scan# 1974
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 97 Resp: 12597

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 64.2 | 44.2 | 84.2 |
| 61 | 45.4 | 24.9 | 64.9 |

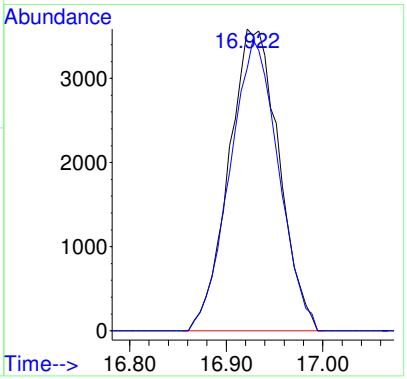


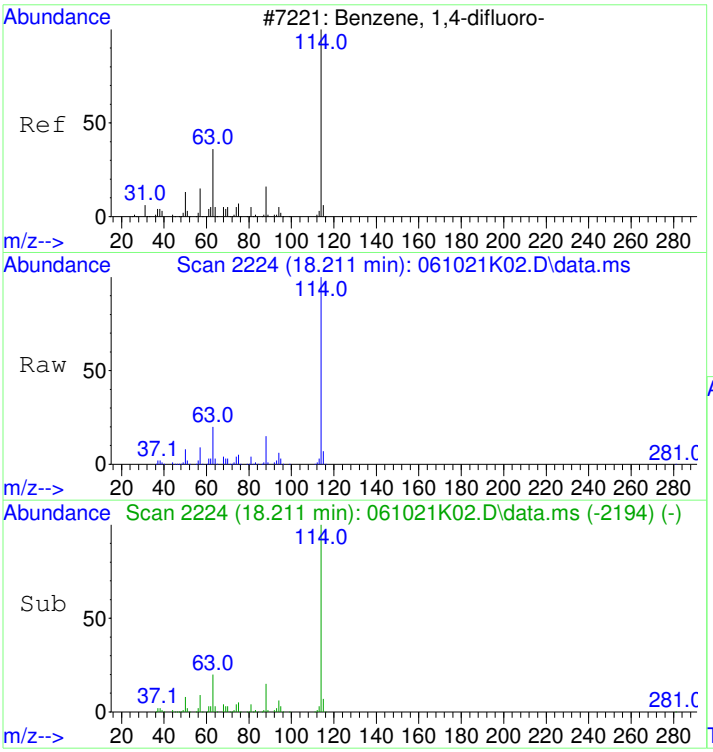



#31
Carbon tetrachloride
Concen: 1.30 ppbv
RT: 16.922 min Scan# 2012
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:117 Resp: 12920

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 93.9 | 76.1 | 116.1 |

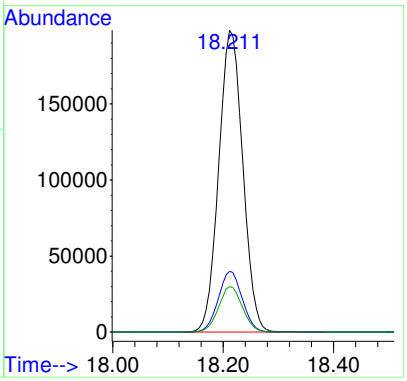


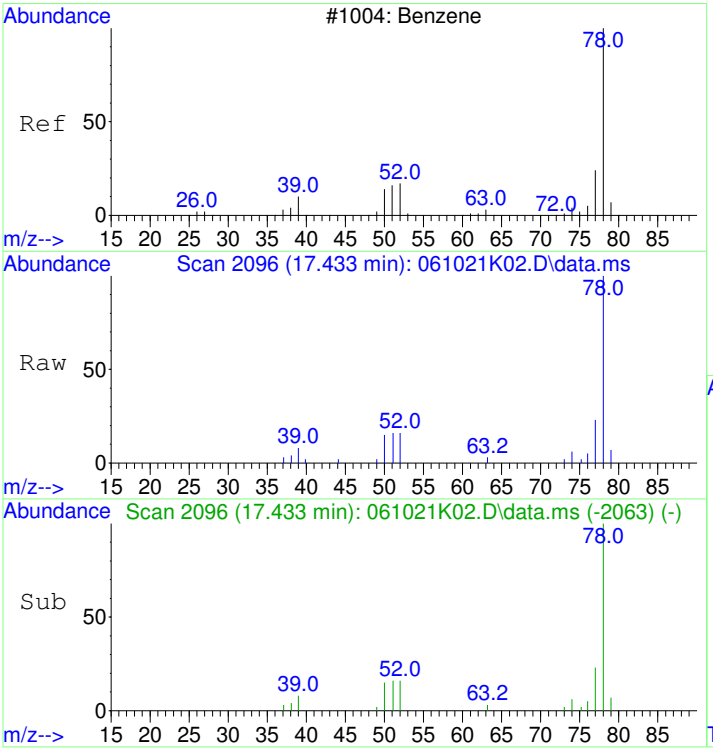




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.211 min Scan# 2224
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:114 Resp: 600313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.9 | 0.0 | 39.9 |
| 88 | 14.9 | 0.0 | 34.8 |

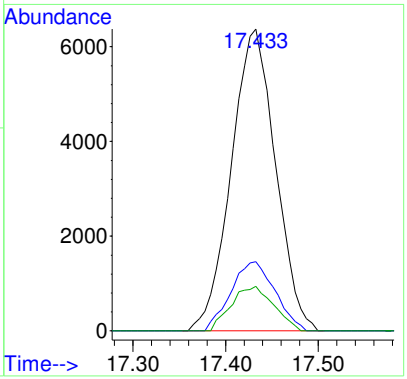


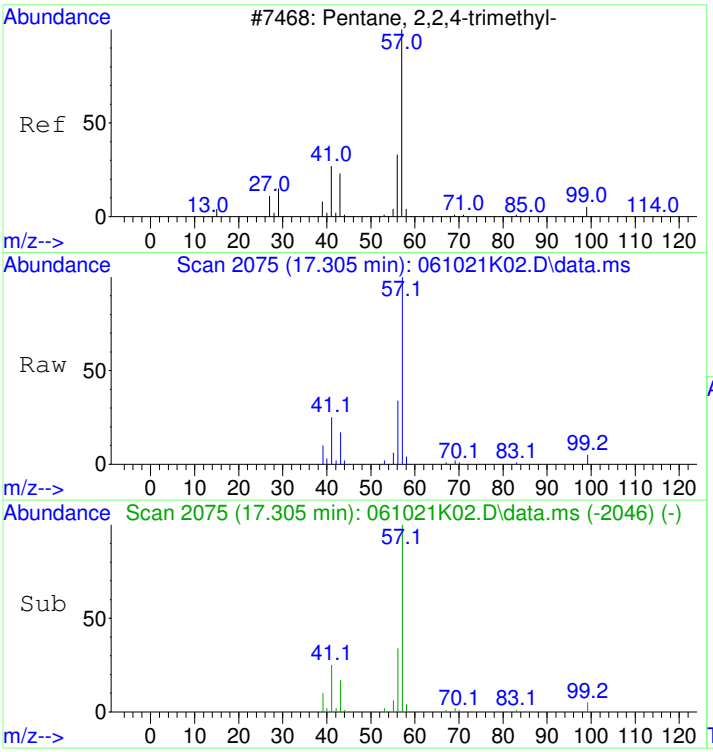



#33
Benzene
Concen: 1.34 ppbv
RT: 17.433 min Scan# 2096
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 78 Resp: 21136

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 22.8 | 3.0 | 43.0 |
| 50 | 14.1 | 0.0 | 34.4 |

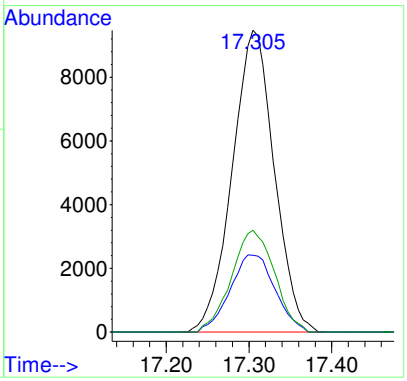


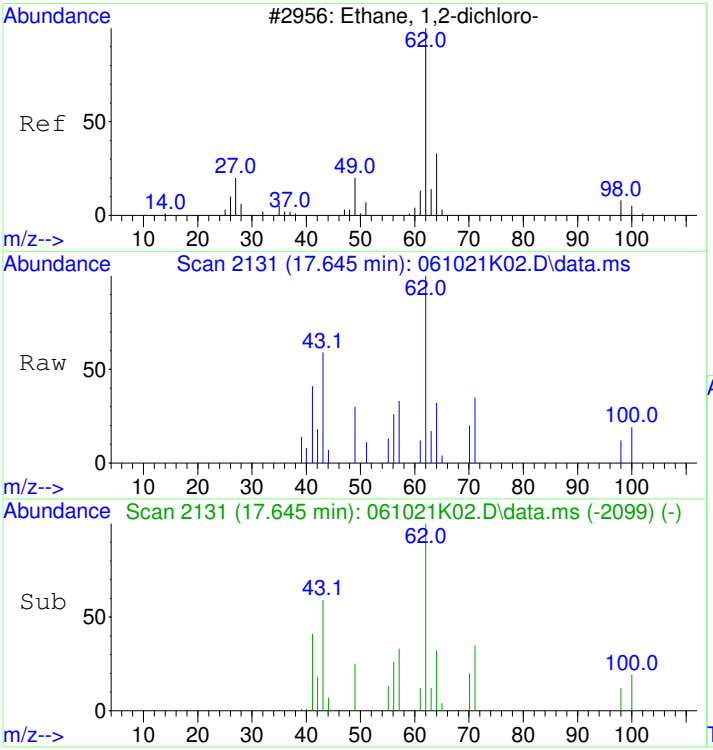




#34
2,2,4-Trimethylpentane
Concen: 1.24 ppbv
RT: 17.305 min Scan# 2075
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 57 Resp: 33454

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 27.3 | 5.1 | 45.1 |
| 56 | 34.5 | 13.5 | 53.5 |

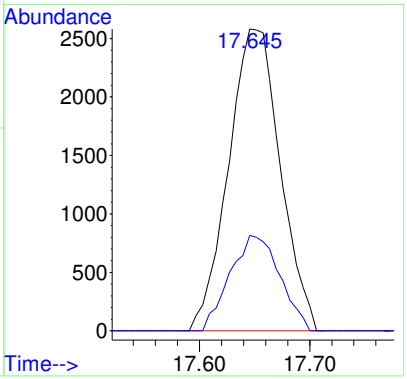


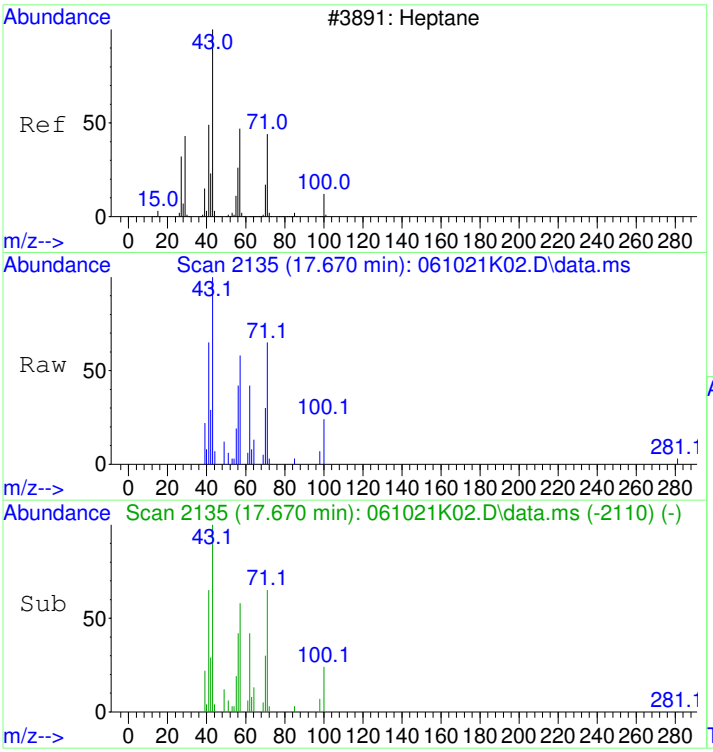



#35
1,2-Dichloroethane
Concen: 1.30 ppbv
RT: 17.645 min Scan# 2131
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 62 Resp: 8440

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.4 | 12.2 | 52.2 |

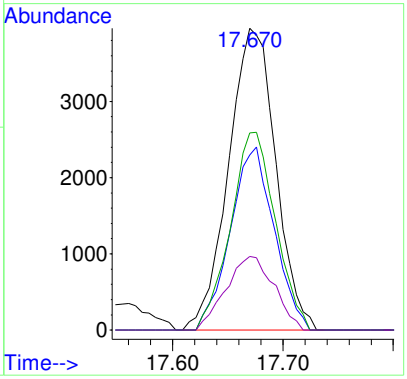


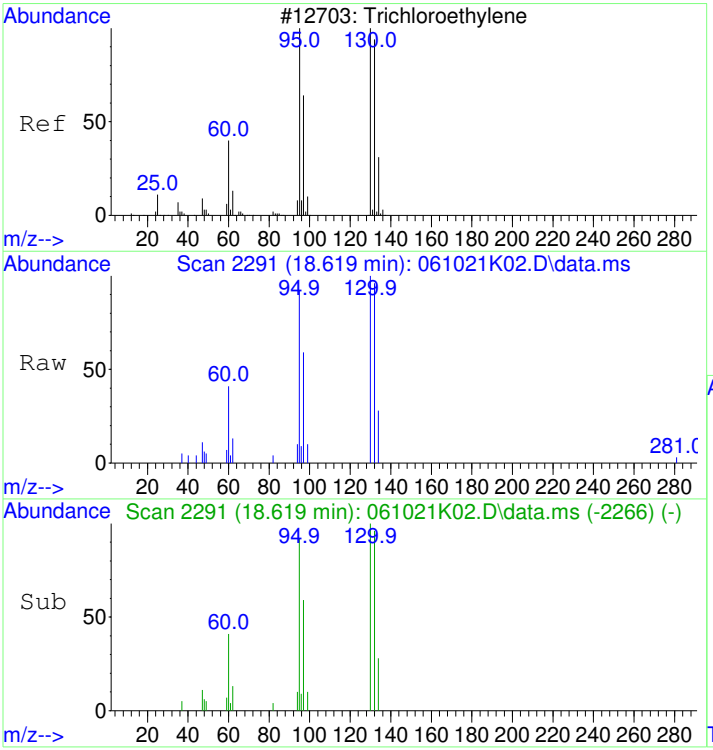




#36
Heptane
Concen: 1.22 ppbv
RT: 17.670 min Scan# 2135
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 43 Resp: 11820

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 56.3 | 37.1 | 77.1 |
| 71 | 62.3 | 43.6 | 83.6 |
| 100 | 24.7 | 4.8 | 44.8 |

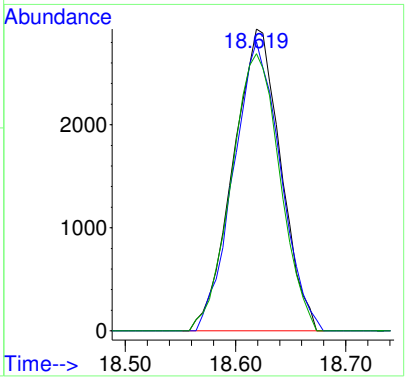


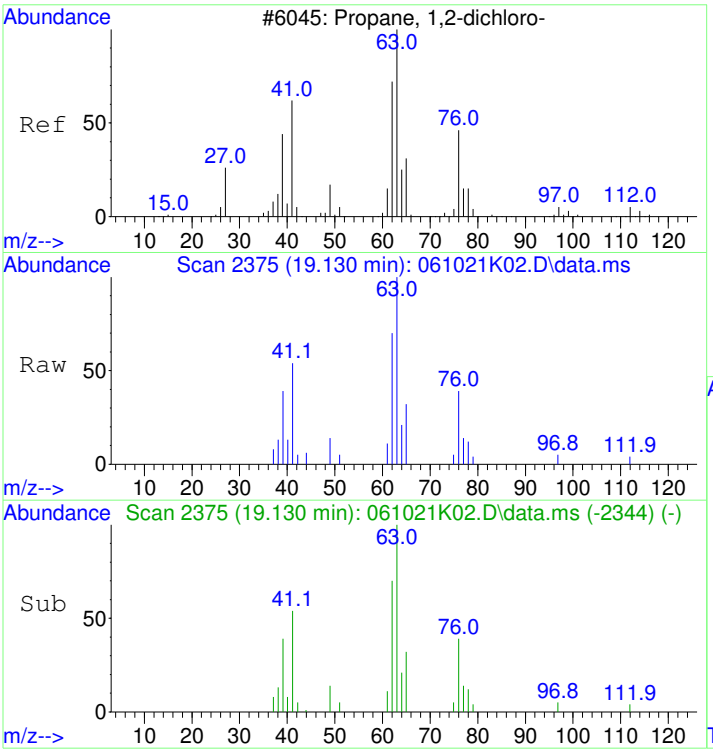



#37
Trichloroethene
Concen: 1.29 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:130 Resp: 8805

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 94.8 | 75.9 | 115.9 |
| 95 | 93.8 | 72.6 | 112.6 |

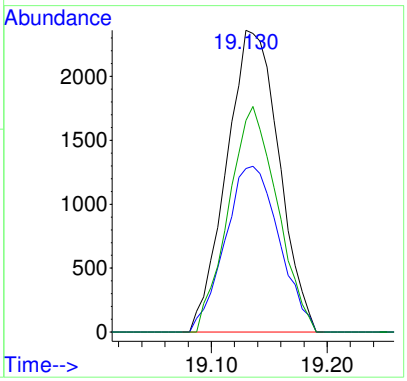


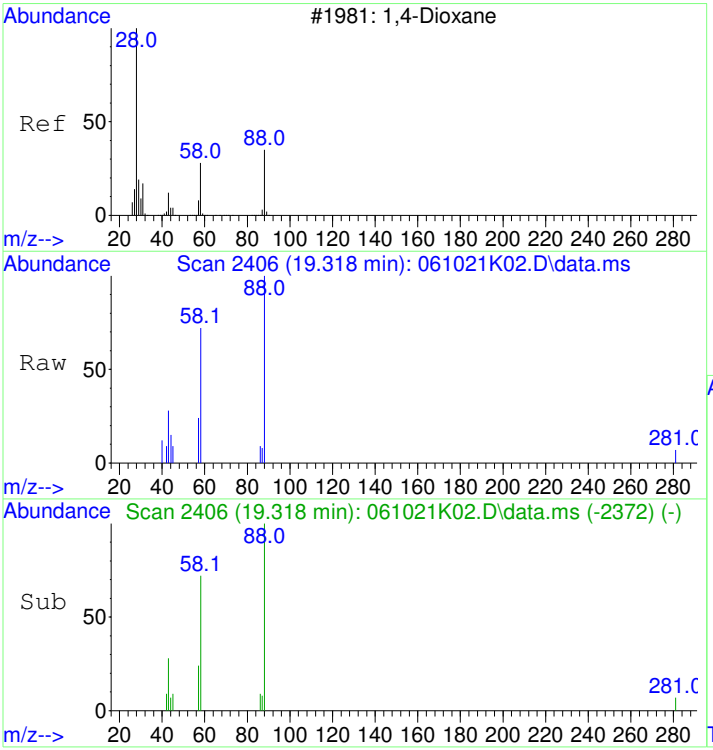




#38
1,2-Dichloropropane
Concen: 1.30 ppbv
RT: 19.130 min Scan# 2375
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 63 Resp: 7437

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 41 | 56.5 | 33.9 | 73.9 |
| 62 | 69.3 | 50.4 | 90.4 |

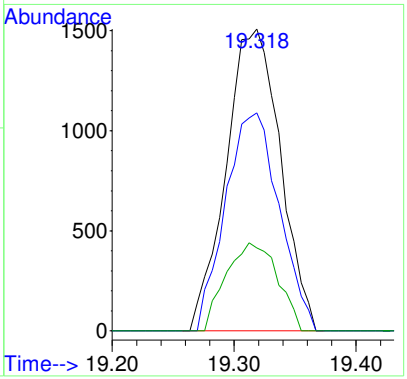


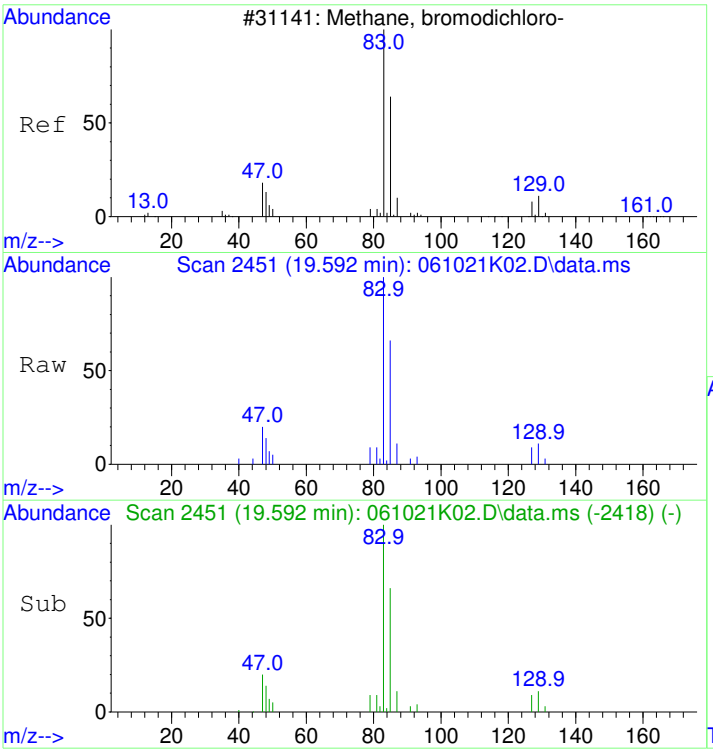



#39
1,4-Dioxane
Concen: 1.34 ppbv
RT: 19.318 min Scan# 2406
Delta R.T. 0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 88 Resp: 4665

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 71.5 | 47.1 | 87.1 |
| 43 | 27.7 | 8.1 | 48.1 |

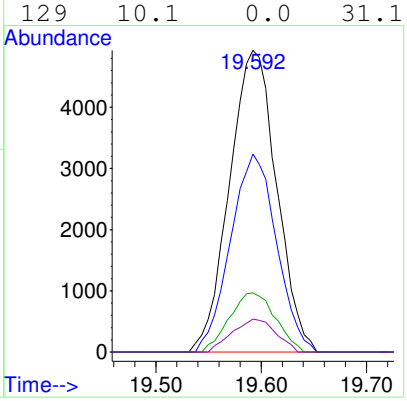


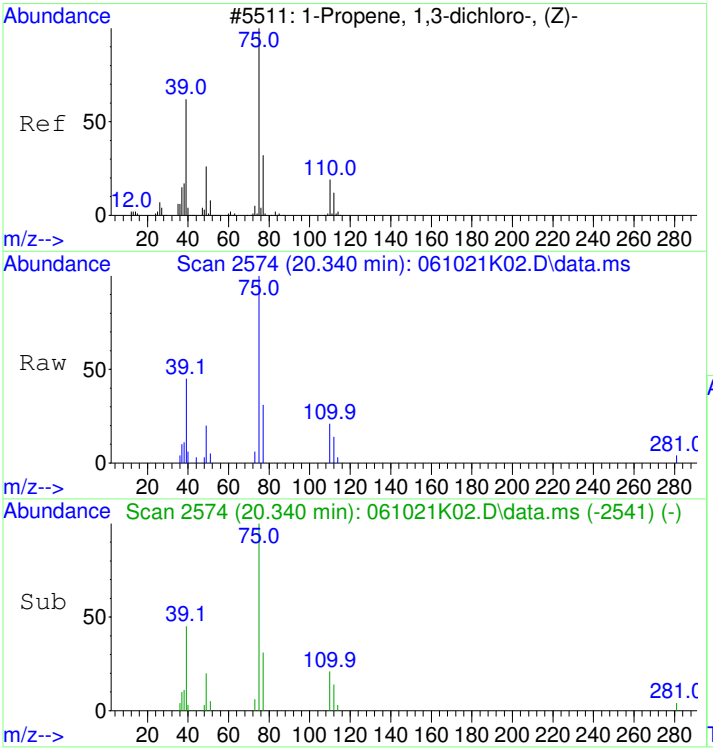




#40
Bromodichloromethane
Concen: 1.32 ppbv
RT: 19.592 min Scan# 2451
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 83 Resp: 15321

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.0 | 44.0 | 84.0 |
| 47 | 19.2 | 0.0 | 39.0 |
| 129 | 10.1 | 0.0 | 31.1 |

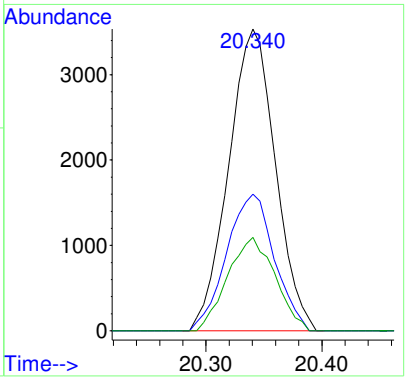


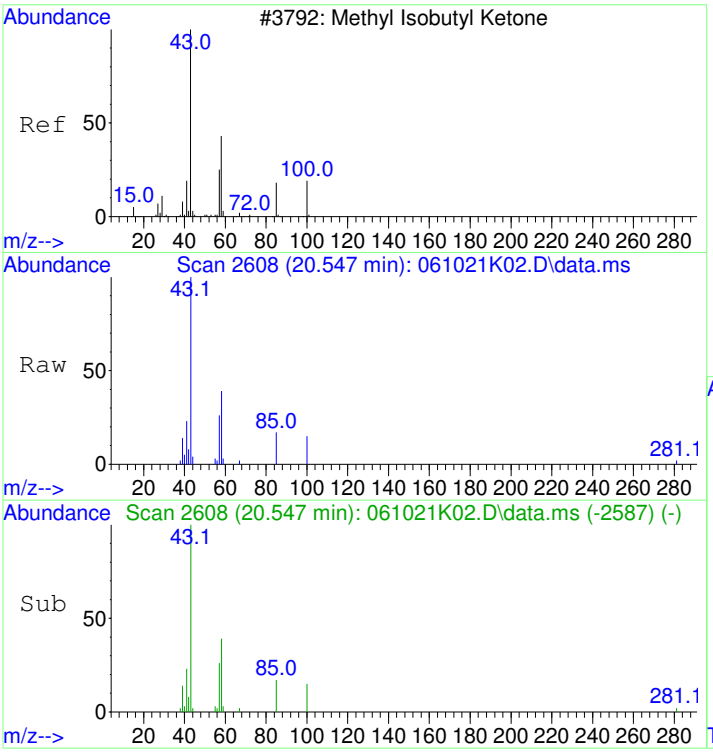



#41
cis-1,3-Dichloropropene
Concen: 1.21 ppbv
RT: 20.340 min Scan# 2574
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 75 Resp: 9923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 39 | 46.3 | 25.0 | 65.0 |
| 77 | 31.4 | 11.5 | 51.5 |

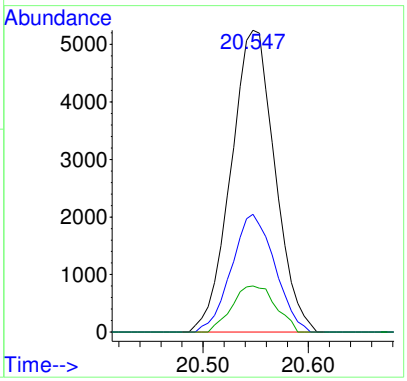


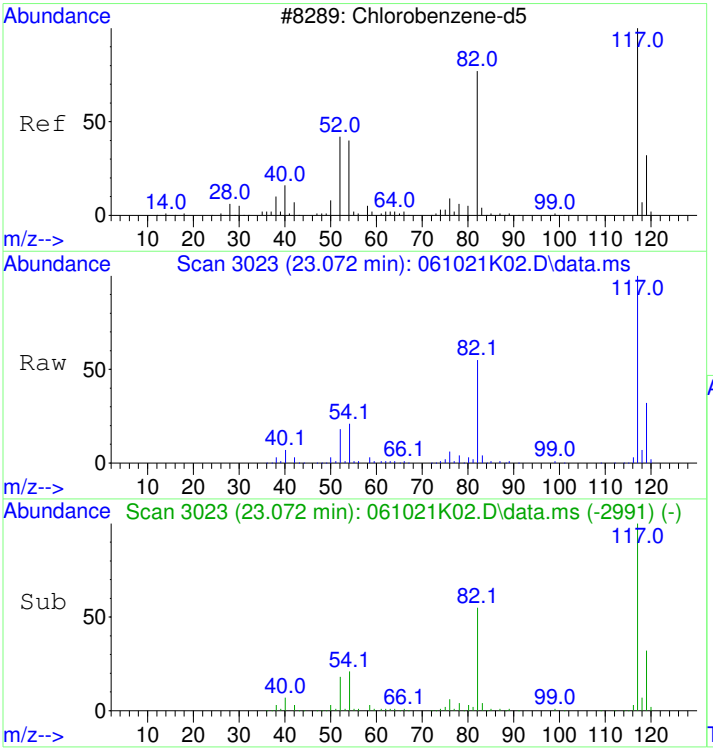




#42
4-Methyl-2-pentanone (MIBK)
Concen: 1.15 ppbv
RT: 20.547 min Scan# 2608
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 43 Resp: 15204

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 38.4 | 20.6 | 60.6 |
| 100 | 15.2 | 0.0 | 35.7 |

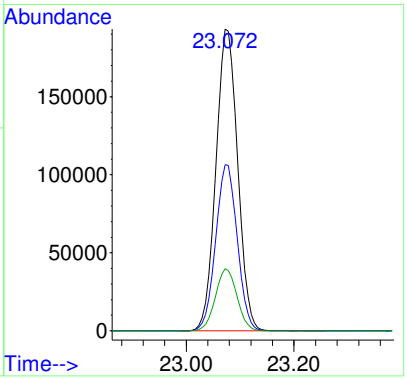


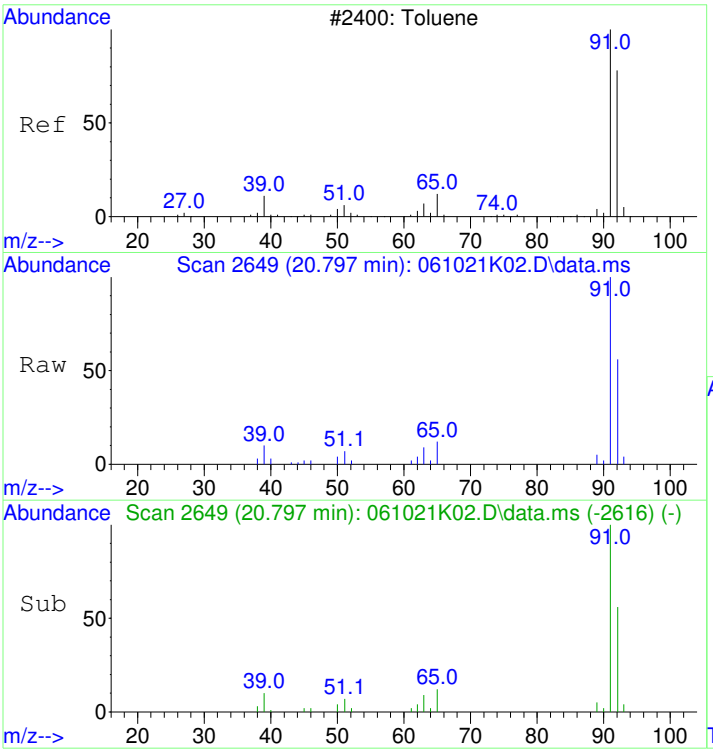



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.072 min Scan# 3023
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:117 Resp: 542244

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.6 | 34.8 | 74.8 |
| 54 | 20.4 | 0.6 | 40.6 |

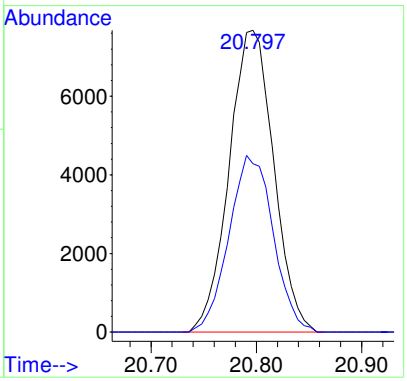


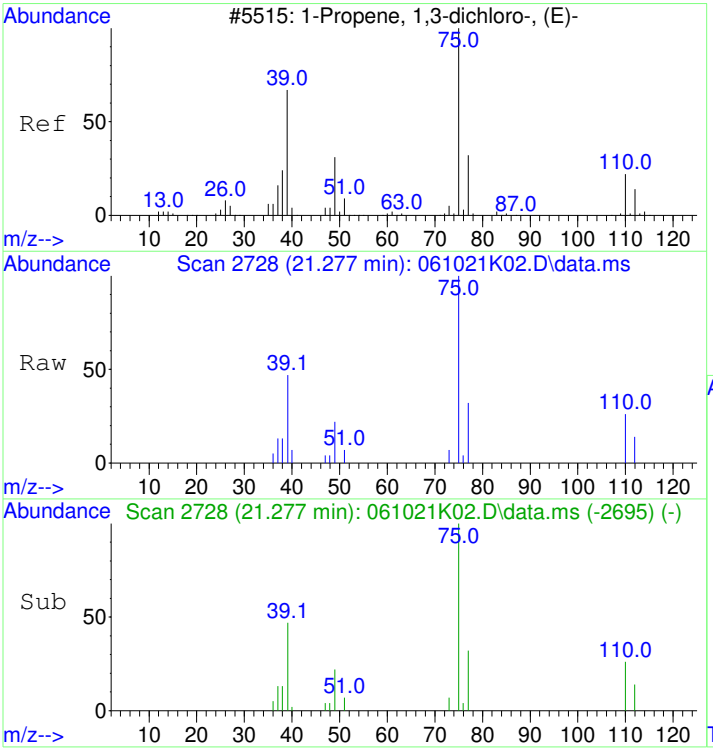




#44
Toluene
Concen: 1.24 ppbv
RT: 20.797 min Scan# 2649
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 91 Resp: 22593

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.2 | 39.2 | 79.2 |

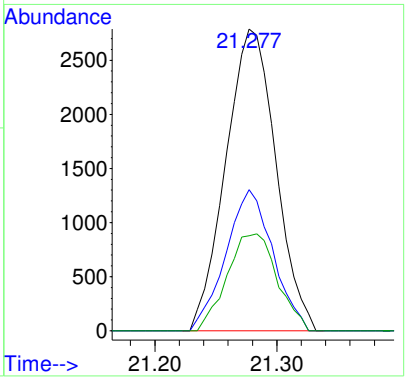


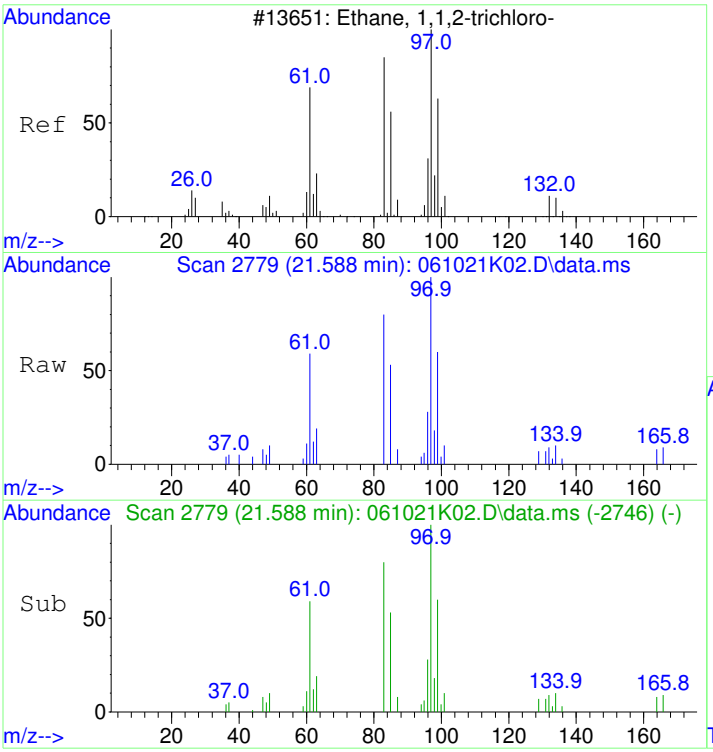



#45
trans-1,3-Dichloropropene
Concen: 1.10 ppbv
RT: 21.277 min Scan# 2728
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 75 Resp: 7937

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 39 | 44.0 | 24.8 | 64.8 |
| 77 | 32.1 | 11.6 | 51.6 |

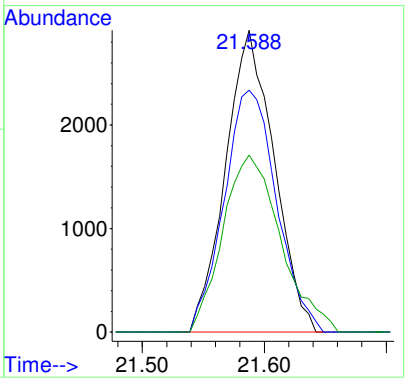


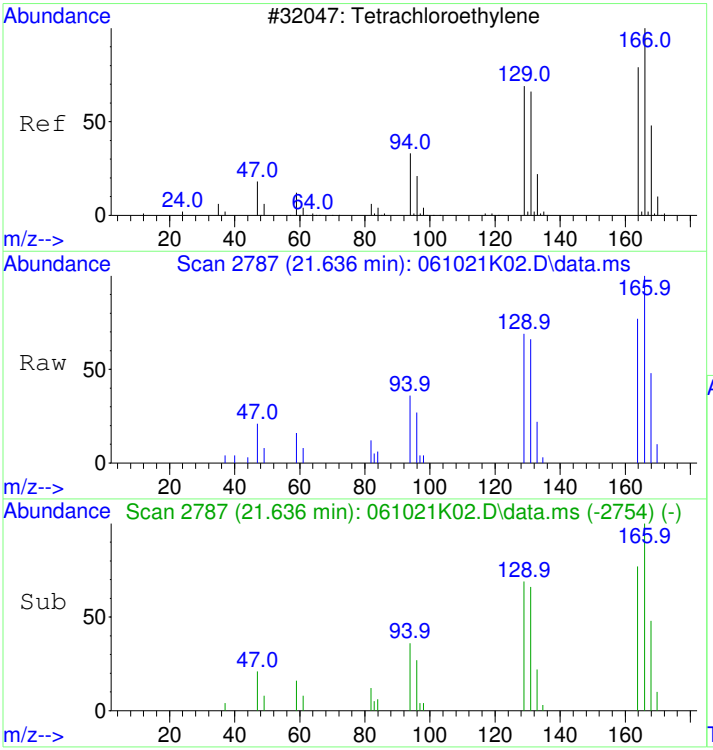




#46
1,1,2-Trichloroethane
Concen: 1.30 ppbv
RT: 21.588 min Scan# 2779
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 97 Resp: 8039

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 87.0 | 68.4 | 108.4 |
| 61 | 70.0 | 48.2 | 88.2 |

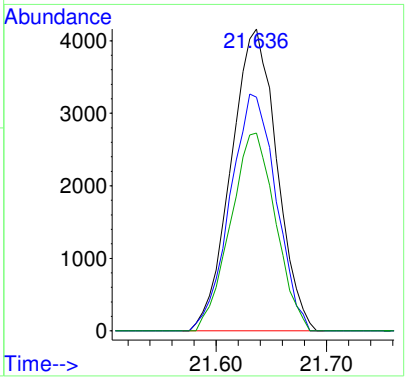


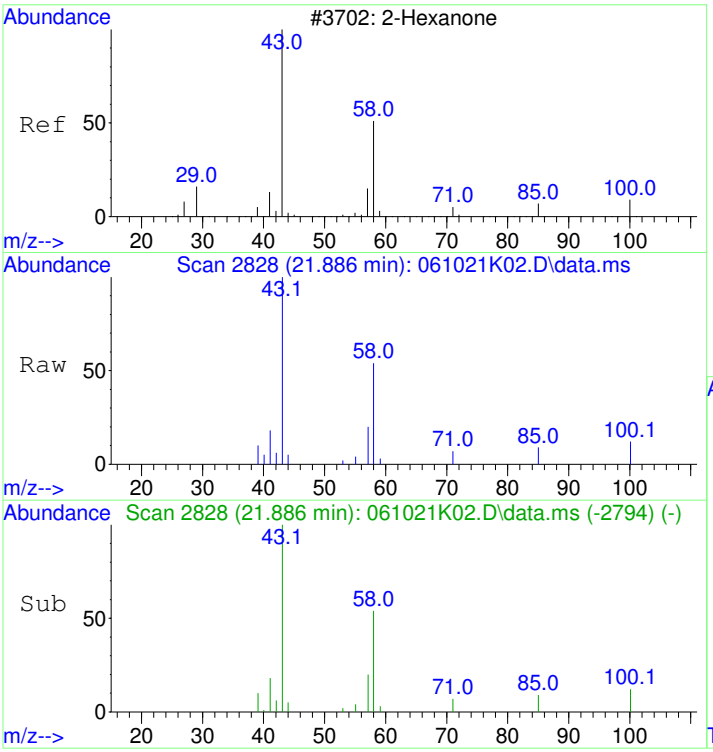



#47
Tetrachloroethene
Concen: 1.25 ppbv
RT: 21.636 min Scan# 2787
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:166 Resp: 12041

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.7 | 58.0 | 98.0 |
| 131 | 64.5 | 44.8 | 84.8 |

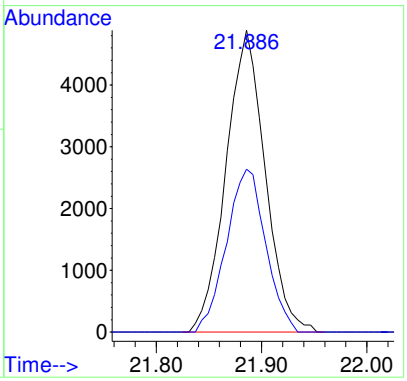


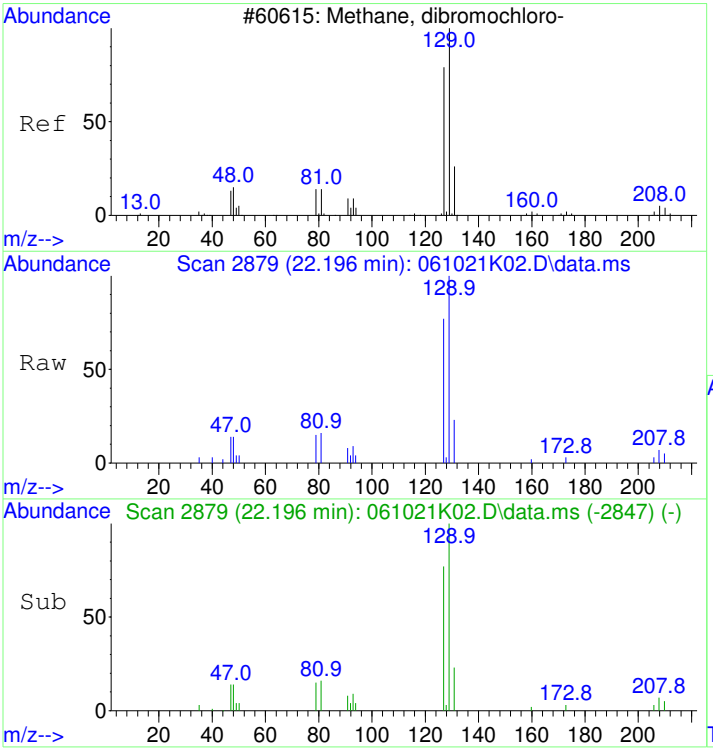




#48
2-Hexanone
Concen: 1.04 ppbv
RT: 21.886 min Scan# 2828
Delta R.T. 0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 43 Resp: 12614

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 54.0 | 36.3 | 76.3 |

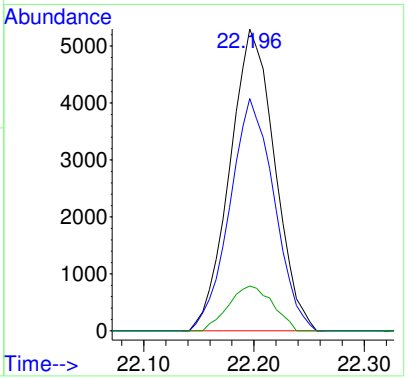


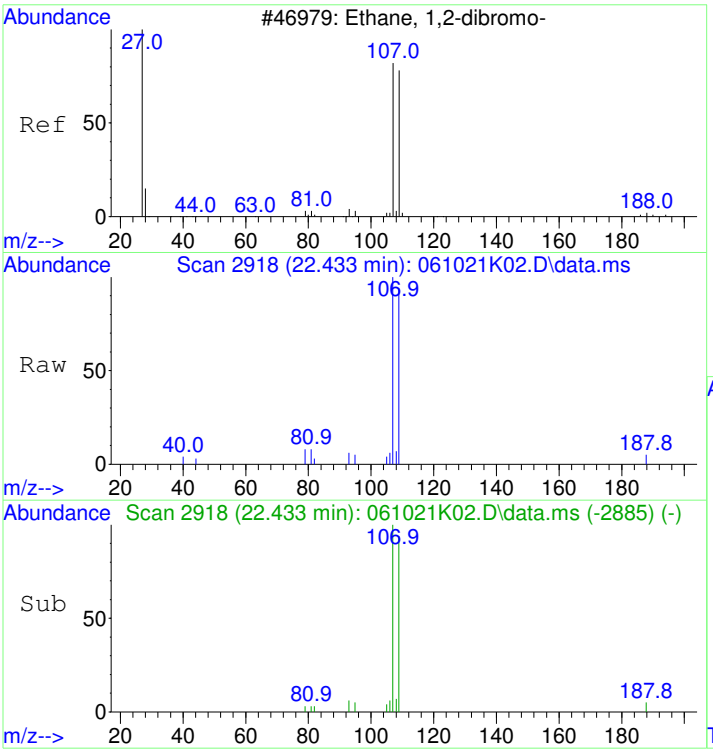



#49
Chlorodibromomethane
Concen: 1.26 ppbv
RT: 22.196 min Scan# 2879
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:129 Resp: 15054

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 76.0 | 57.6 | 97.6 |
| 79 | 14.6 | 0.0 | 34.8 |

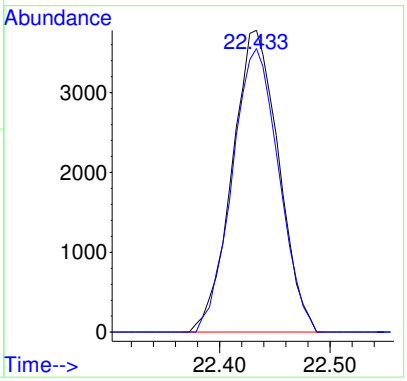


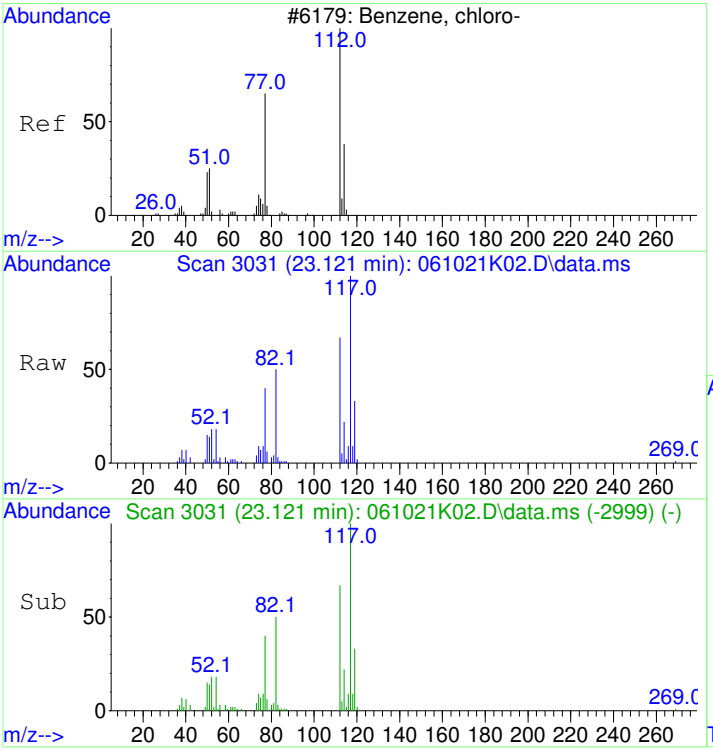




#50
1,2-Dibromoethane (EDB)
Concen: 1.29 ppbv
RT: 22.433 min Scan# 2918
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:107 Resp: 11096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 94.3 | 74.6 | 114.6 |

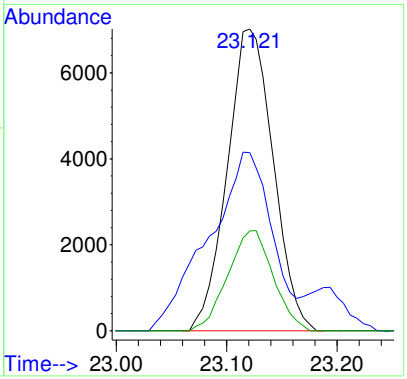


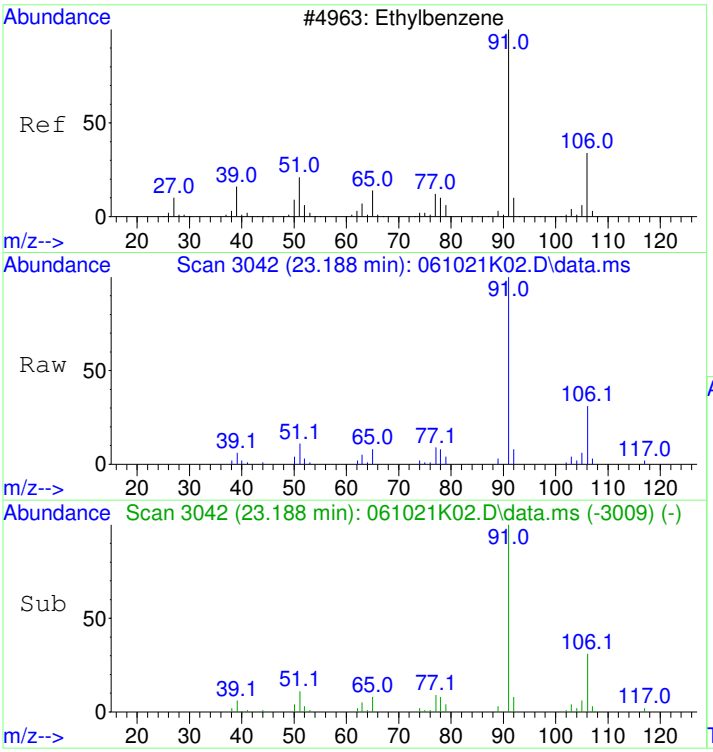



#51
Chlorobenzene
Concen: 1.34 ppbv
RT: 23.121 min Scan# 3031
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:112 Resp: 20408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 93.7 | 53.3 | 93.3# |
| 114 | 32.8 | 12.0 | 52.0 |

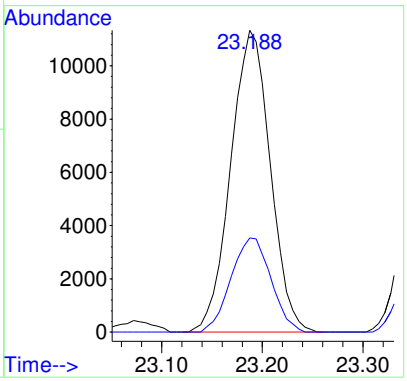


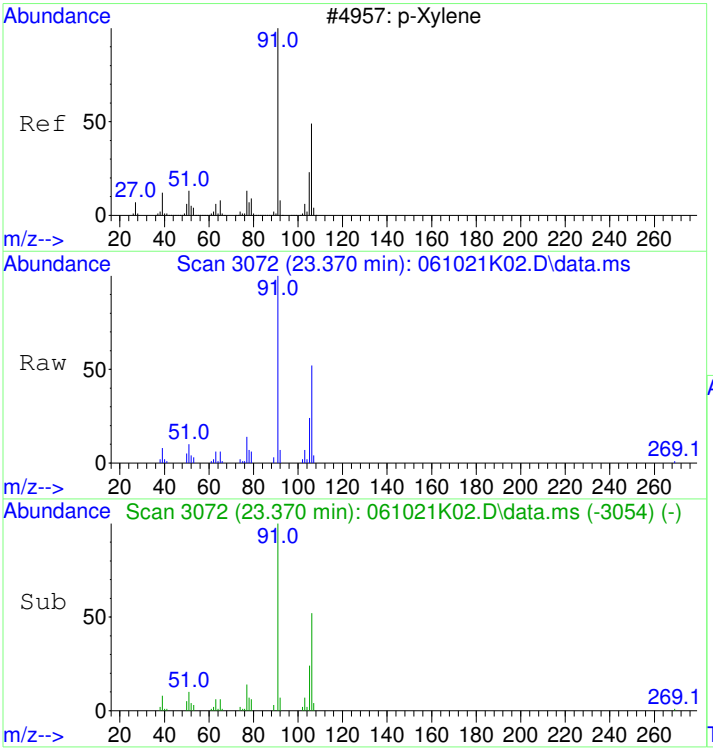




#52
Ethylbenzene
Concen: 1.24 ppbv
RT: 23.188 min Scan# 3042
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 91 Resp: 30876

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.6 | 11.8 | 51.8 |

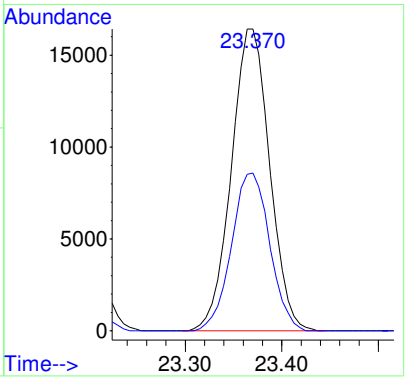


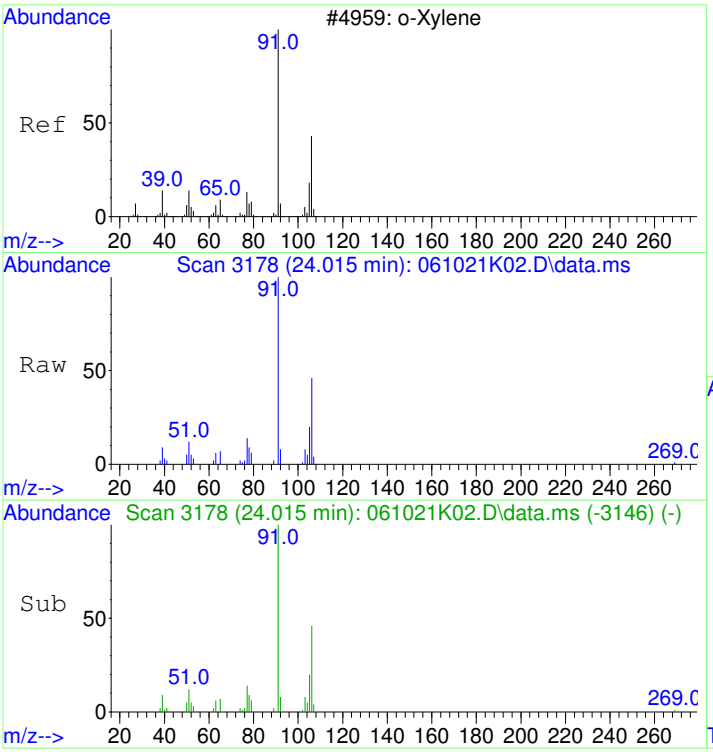



#53
m&p-Xylene
Concen: 2.39 ppbv
RT: 23.370 min Scan# 3072
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 91 Resp: 45375

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 52.0 | 31.9 | 71.9 |

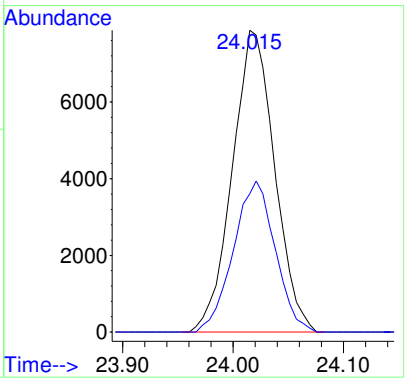


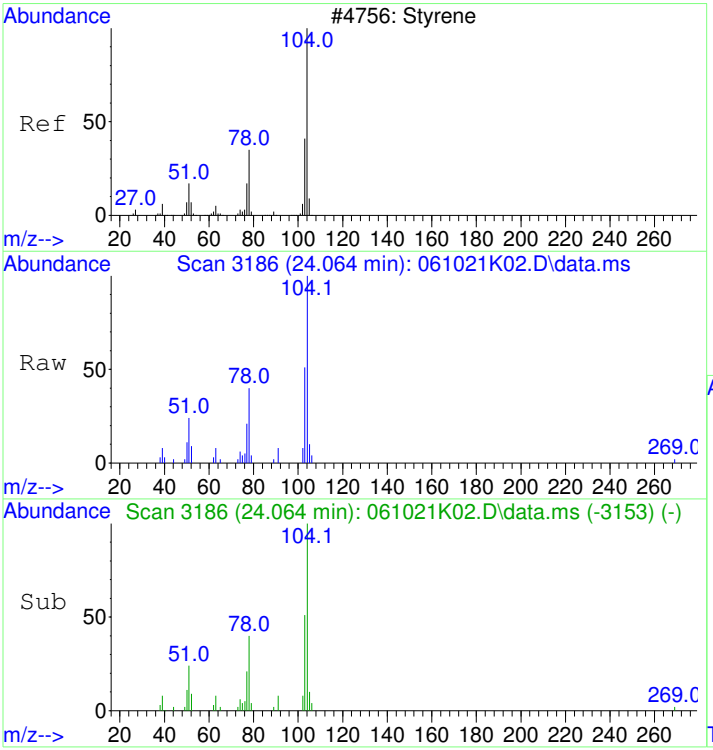




#54
o-Xylene
Concen: 1.05 ppbv
RT: 24.015 min Scan# 3178
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 91 Resp: 21065

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 49.4 | 29.3 | 69.3 |

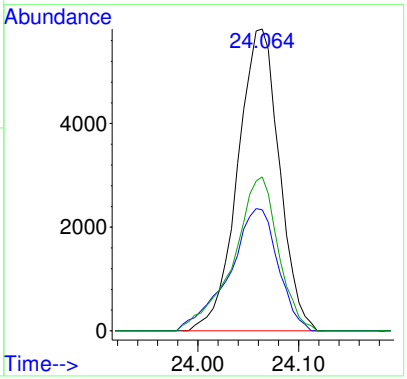


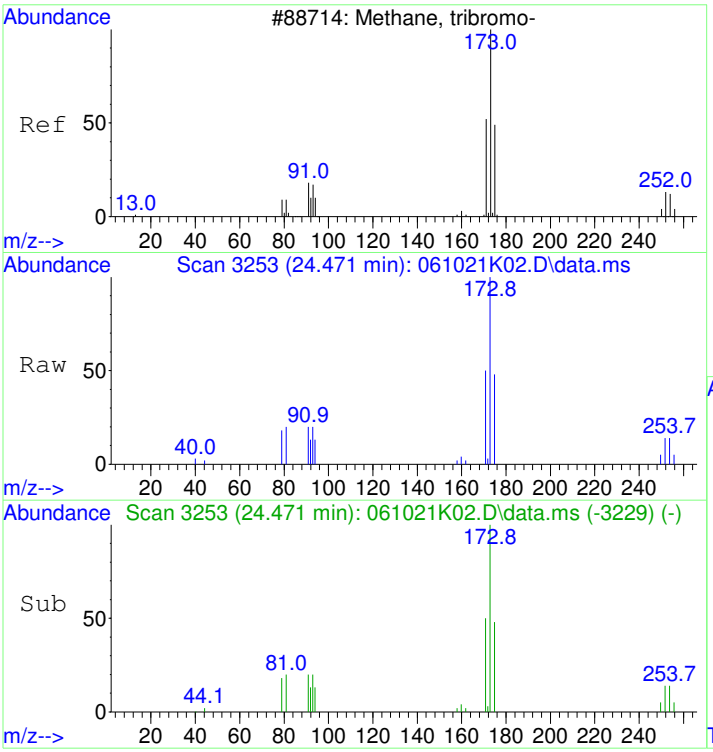



#55
Styrene
Concen: 1.15 ppbv
RT: 24.064 min Scan# 3186
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:104 Resp: 16685

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 47.3 | 26.6 | 66.6 |
| 103 | 55.0 | 33.8 | 73.8 |

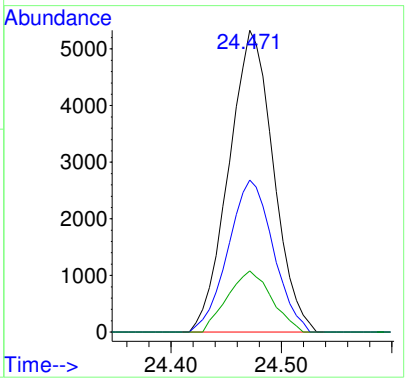


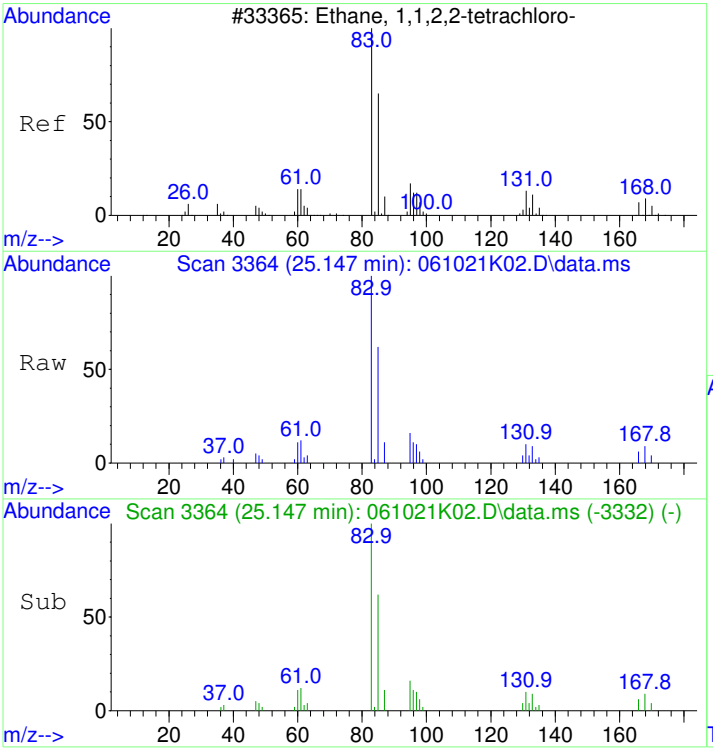




#56
Bromoform
Concen: 1.25 ppbv
RT: 24.471 min Scan# 3253
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:173 Resp: 15009

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 171 | 51.0 | 31.2 | 71.2 |
| 91 | 20.0 | 0.0 | 40.0 |

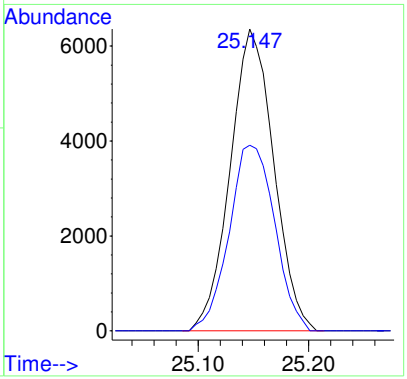


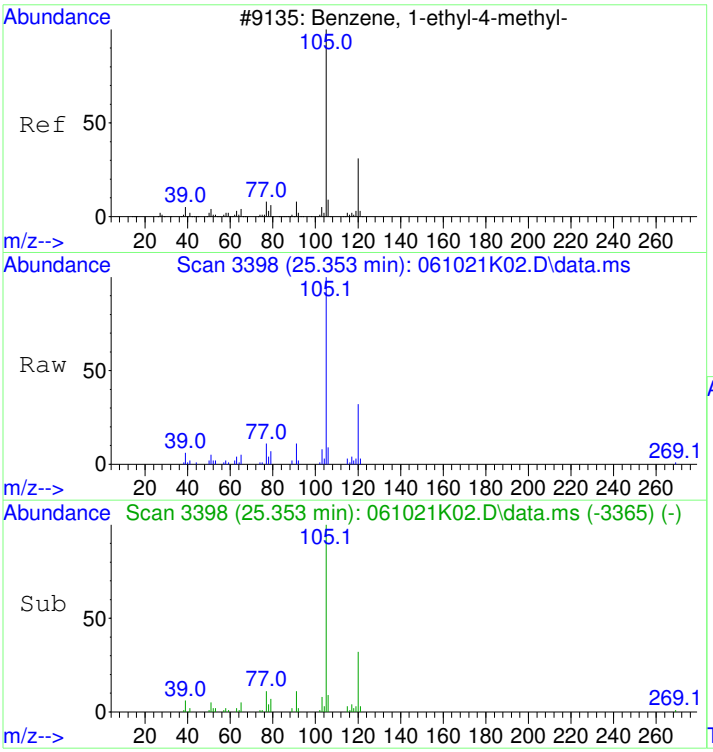



#57
1,1,2,2-Tetrachloroethane
Concen: 1.17 ppbv
RT: 25.147 min Scan# 3364
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 83 Resp: 17516

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.3 | 44.0 | 84.0 |

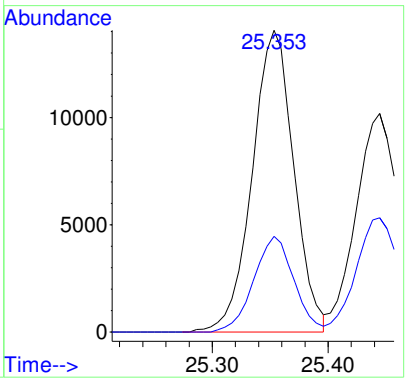


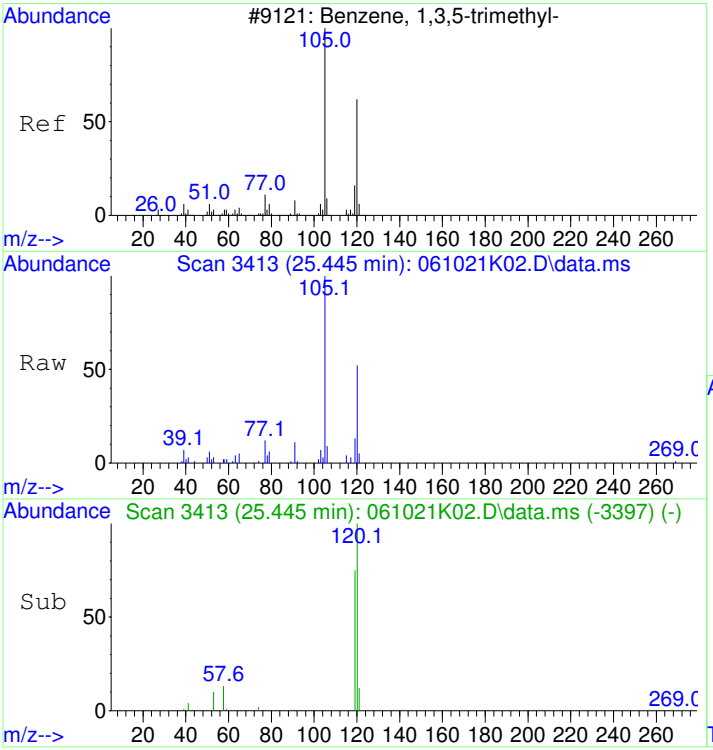




#58
4-Ethyltoluene
Concen: 1.11 ppbv
RT: 25.353 min Scan# 3398
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:105 Resp: 35114

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.6 | 10.6 | 50.6 |

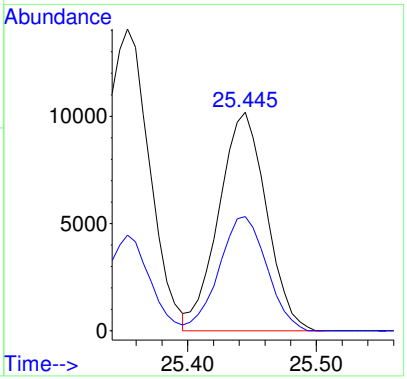


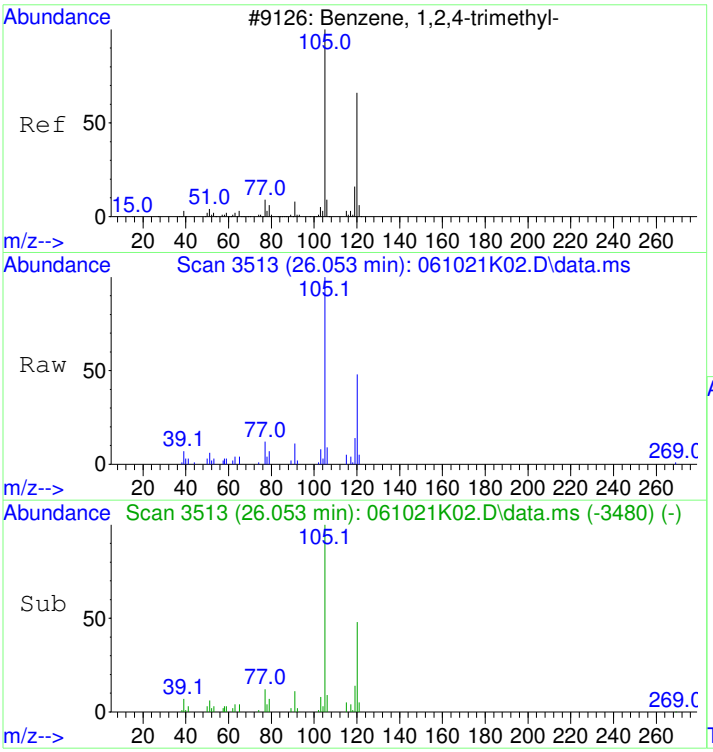



#59
1,3,5-Trimethylbenzene
Concen: 1.17 ppbv
RT: 25.445 min Scan# 3413
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:105 Resp: 26181

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 52.3 | 31.9 | 71.9 |

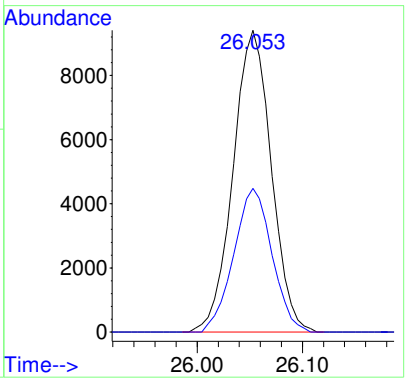


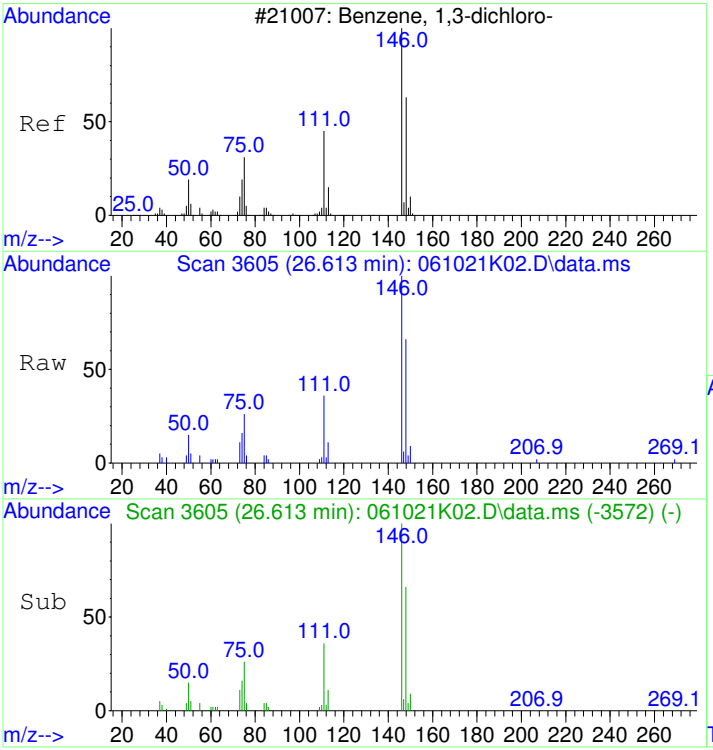




#60
1,2,4-Trimethylbenzene
Concen: 1.07 ppbv
RT: 26.053 min Scan# 3513
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:105 Resp: 23717

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.6 | 28.6 | 68.6 |

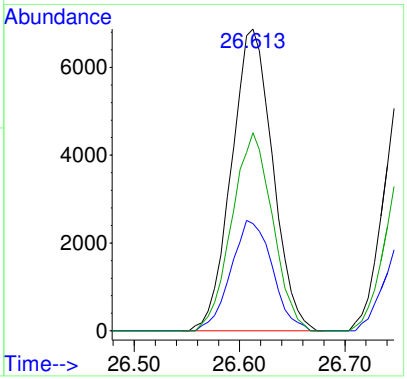


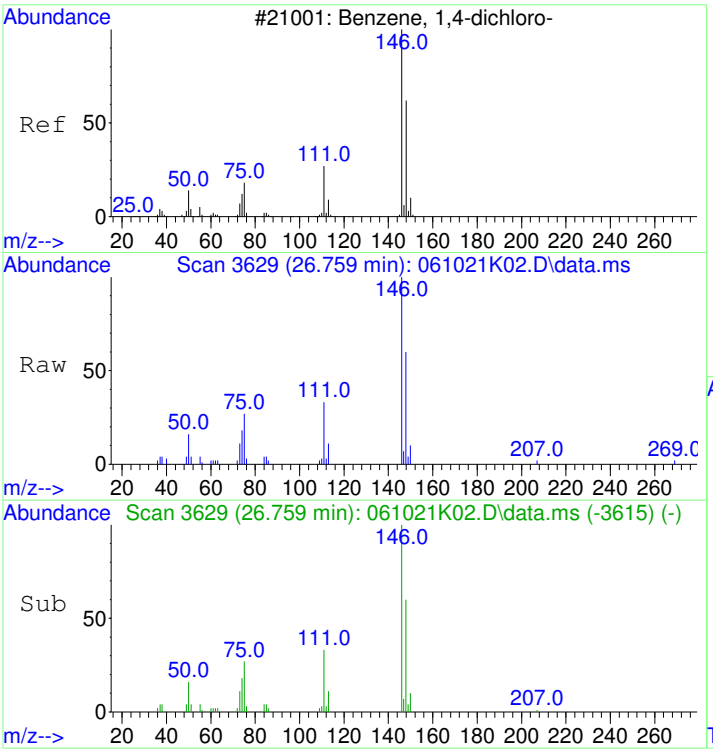



#61
1,3-Dichlorobenzene
Concen: 1.19 ppbv
RT: 26.613 min Scan# 3605
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:146 Resp: 18728

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 36.7 | 17.2 | 57.2 |
| 148 | 64.7 | 44.0 | 84.0 |

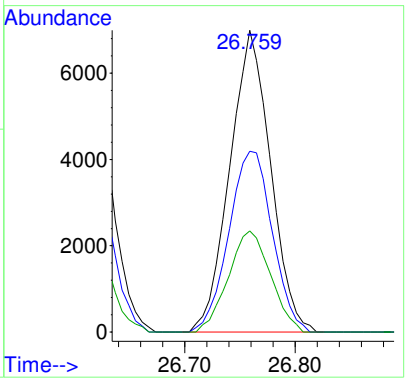


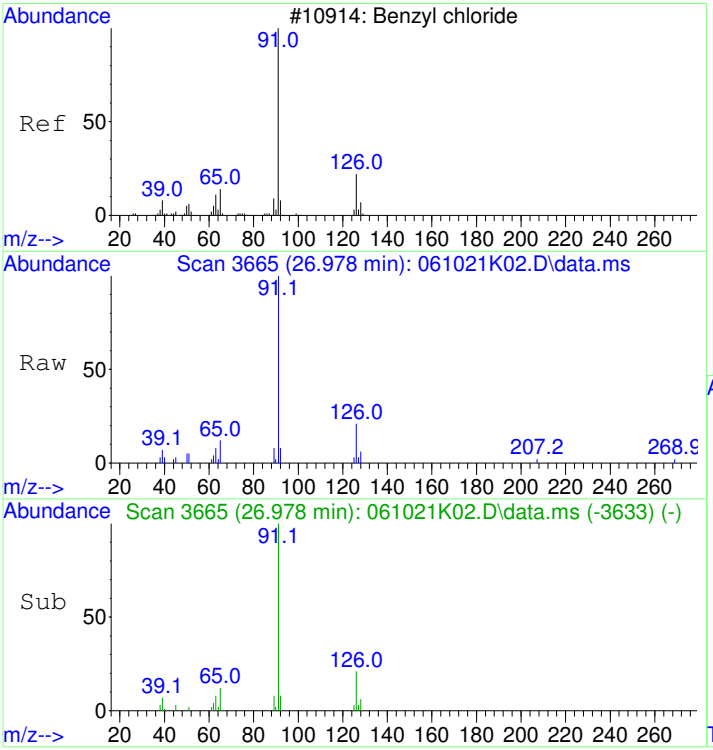




#62
1,4-Dichlorobenzene
Concen: 1.19 ppbv
RT: 26.759 min Scan# 3629
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:146 Resp: 17982

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 64.1 | 44.0 | 84.0 |
| 111 | 34.8 | 15.7 | 55.7 |

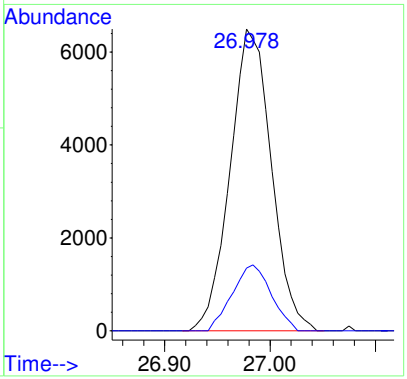


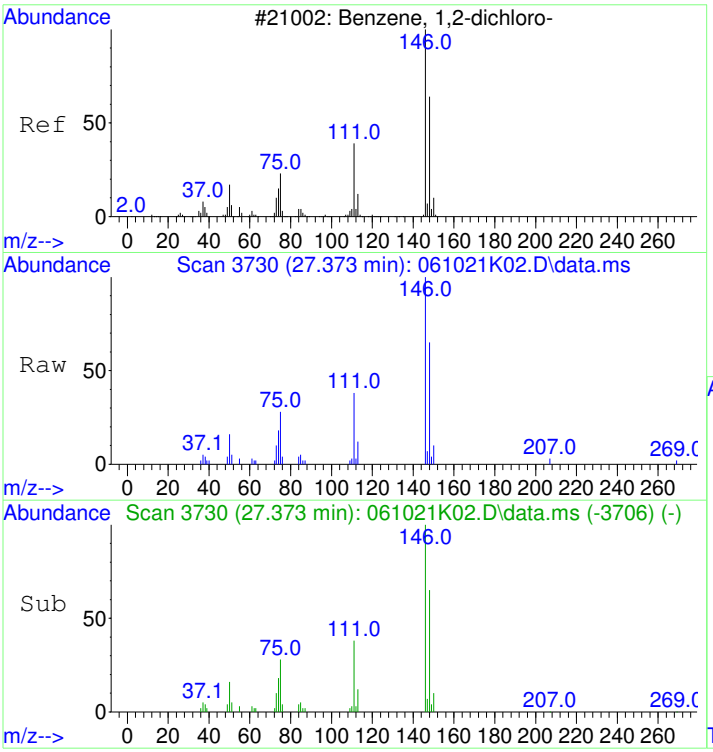



#63
Benzyl chloride
Concen: 0.96 ppbv
RT: 26.978 min Scan# 3665
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion: 91 Resp: 17703

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 20.6 | 1.4 | 41.4 |

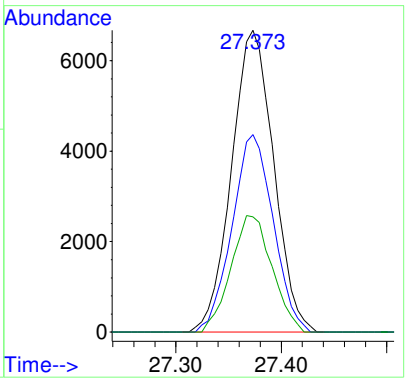


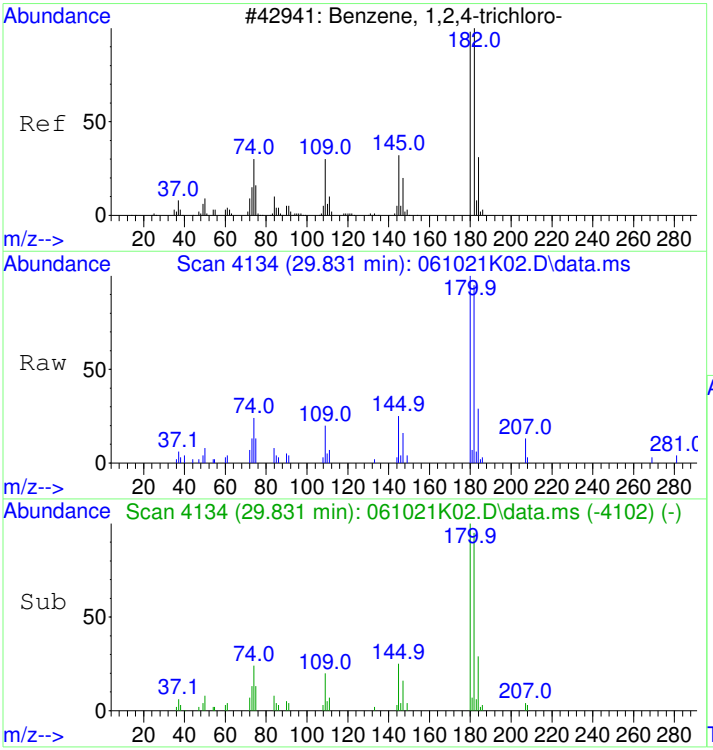




#64
1,2-Dichlorobenzene
Concen: 1.16 ppbv
RT: 27.373 min Scan# 3730
Delta R.T. 0.000 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:146 Resp: 18564

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 63.9 | 43.9 | 83.9 |
| 111 | 37.6 | 18.5 | 58.5 |

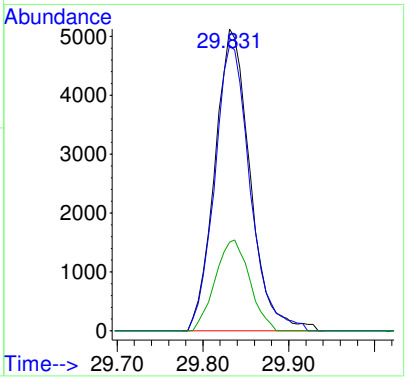


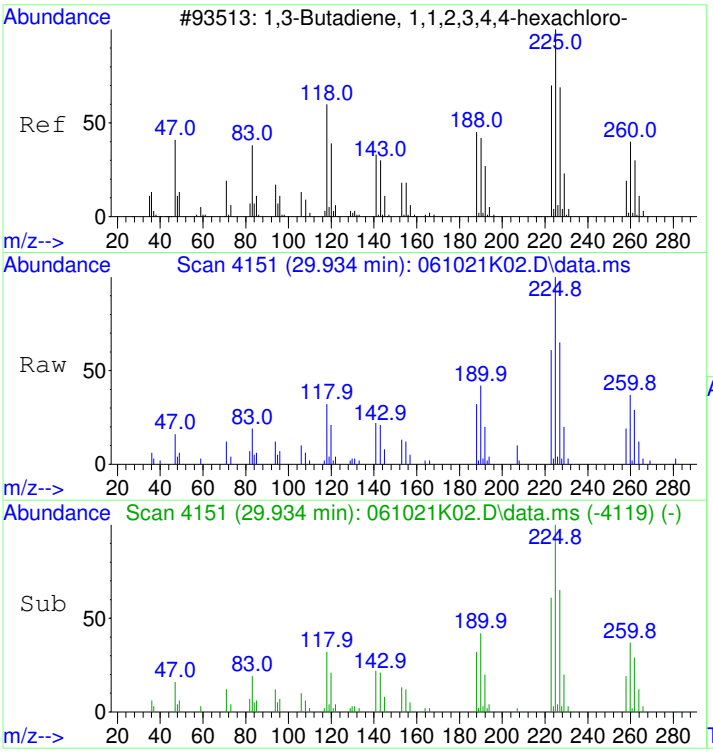



#65
1,2,4-Trichlorobenzene
Concen: 1.14 ppbv
RT: 29.831 min Scan# 4134
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:180 Resp: 14609

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 95.1 | 76.0 | 116.0 |
| 184 | 29.3 | 10.5 | 50.5 |

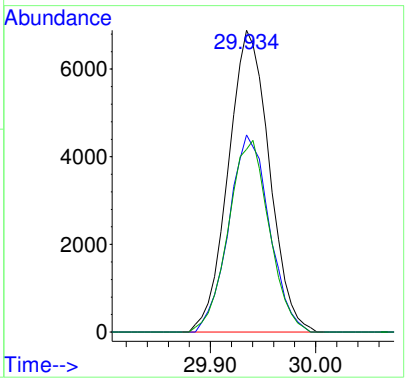



#66
Hexachlorobutadiene
Concen: 1.22 ppbv
RT: 29.934 min Scan# 4151
Delta R.T. -0.006 min
Lab File: 061021K02.D
Acq: 10 Jun 2021 2:23 pm

Tgt Ion:225 Resp: 18650

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 227 | 64.7 | 44.4 | 84.4 |
| 223 | 63.3 | 42.7 | 82.7 |



# S21F026-CAL2

# Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K03.D
InstName : HP5973K
Acq On : 10 Jun 2021 3:10 pm
Operator : EM
Sample : S21F026-CAL2
Misc : 2ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:33:44 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:33:32 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 194315 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 596153 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 539785 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.016 | 41 | 12314 | 2.65 | ppbv | | 99 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 37531 | 2.75 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.503 | 85 | 39035 | 2.70 | ppbv | | 100 |
| 5) Chloromethane | 5.734 | 50 | 13342 | 2.84 | ppbv | | 99 |
| 6) Vinyl chloride | 6.081 | 62 | 21789 | 2.94 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.184 | 54 | 16442 | 2.71 | ppbv | | 95 |
| 8) Bromomethane | 7.249 | 94 | 12696 | 2.86 | ppbv | | 99 |
| 9) Chloroethane | 7.614 | 64 | 8153 | 2.88 | ppbv | | 98 |
| 10) Bromoethene | 8.258 | 106 | 11895 | 2.59 | ppbv | | 100 |
| 11) Trichlorofluoromethane | 8.386 | 101 | 33390 | 2.89 | ppbv | | 99 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.370 | 151 | 24550 | 2.93 | ppbv | | 99 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 19921 | 2.79 | ppbv | | 99 |
| 14) Acetone | 11.087 | 43 | 20798 | 2.55 | ppbv | | 99 |
| 15) Carbon disulfide | 11.197 | 76 | 40254 | 2.75 | ppbv | | 96 |
| 16) 2-Propanol | 11.617 | 45 | 15915 | 2.30 | ppbv | | 90 |
| 17) Allyl chloride | 11.969 | 41 | 16383 | 2.75 | ppbv | | 98 |
| 18) Dichloromethane | 12.487 | 49 | 18015 | 2.95 | ppbv | | 99 |
| 19) tert-Butyl methyl ethe... | 13.028 | 73 | 35731 | 2.47 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 19695 | 2.71 | ppbv | | 100 |
| 21) Hexane | 13.594 | 57 | 22404 | 2.59 | ppbv | | 97 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 25103 | 2.79 | ppbv | | 98 |
| 23) Vinyl acetate | 14.494 | 43 | 25885 | 2.66 | ppbv | | 99 |
| 24) cis-1,2-Dichloroethene | 15.778 | 61 | 17451 | 2.84 | ppbv | # | 98 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 7246 | 2.54 | ppbv | | 98 |
| 26) Ethyl acetate | 15.869 | 61 | 4481 | 2.65 | ppbv | # | 98 |
| 27) Tetrahydrofuran | 16.289 | 42 | 15536 | 2.31 | ppbv | | 98 |
| 28) Chloroform | 16.441 | 83 | 28446 | 2.89 | ppbv | | 100 |
| 29) Cyclohexane | 16.617 | 56 | 23509 | 2.73 | ppbv | | 99 |
| 30) 1,1,1-Trichloroethane | 16.696 | 97 | 27631 | 2.88 | ppbv | | 99 |
| 31) Carbon tetrachloride | 16.934 | 117 | 28222 | 2.85 | ppbv | | 99 |
| 33) Benzene | 17.426 | 78 | 46490 | 2.98 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 72451 | 2.70 | ppbv | | 98 |
| 35) 1,2-Dichloroethane | 17.652 | 62 | 18238 | 2.83 | ppbv | | 100 |
| 36) Heptane | 17.676 | 43 | 25988 | 2.69 | ppbv | | 100 |
| 37) Trichloroethene | 18.619 | 130 | 19528 | 2.87 | ppbv | | 100 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 16242 | 2.87 | ppbv | | 98 |
| 39) 1,4-Dioxane | 19.312 | 88 | 8790 | 2.55 | ppbv | | 97 |
| 40) Bromodichloromethane | 19.592 | 83 | 31833 | 2.77 | ppbv | | 99 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 22979 | 2.81 | ppbv | | 99 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 31424 | 2.39 | ppbv | | 99 |
| 44) Toluene | 20.797 | 91 | 51939 | 2.87 | ppbv | | 100 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 18180 | 2.53 | ppbv | | 100 |
| 46) 1,1,2-Trichloroethane | 21.588 | 97 | 18017 | 2.92 | ppbv | | 98 |
| 47) Tetrachloroethene | 21.636 | 166 | 27481 | 2.86 | ppbv | | 99 |
| 48) 2-Hexanone | 21.886 | 43 | 26981 | 2.24 | ppbv | | 98 |
| 49) Chlorodibromomethane | 22.196 | 129 | 31403 | 2.64 | ppbv | | 99 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 24442 | 2.85 | ppbv | | 100 |
| 51) Chlorobenzene | 23.121 | 112 | 44940 | 2.96 | ppbv | | 94 |
| 52) Ethylbenzene | 23.188 | 91 | 69916 | 2.81 | ppbv | | 100 |
| 53) m&p-Xylene | 23.364 | 91 | 105228 | 5.58 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 50788 | 2.53 | ppbv | | 99 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K03.D
InstName : HP5973K
Acq On : 10 Jun 2021 3:10 pm
Operator : EM
Sample : S21F026-CAL2
Misc : 2ppbv
ALS Vial : 32 Sample Multiplier: 1

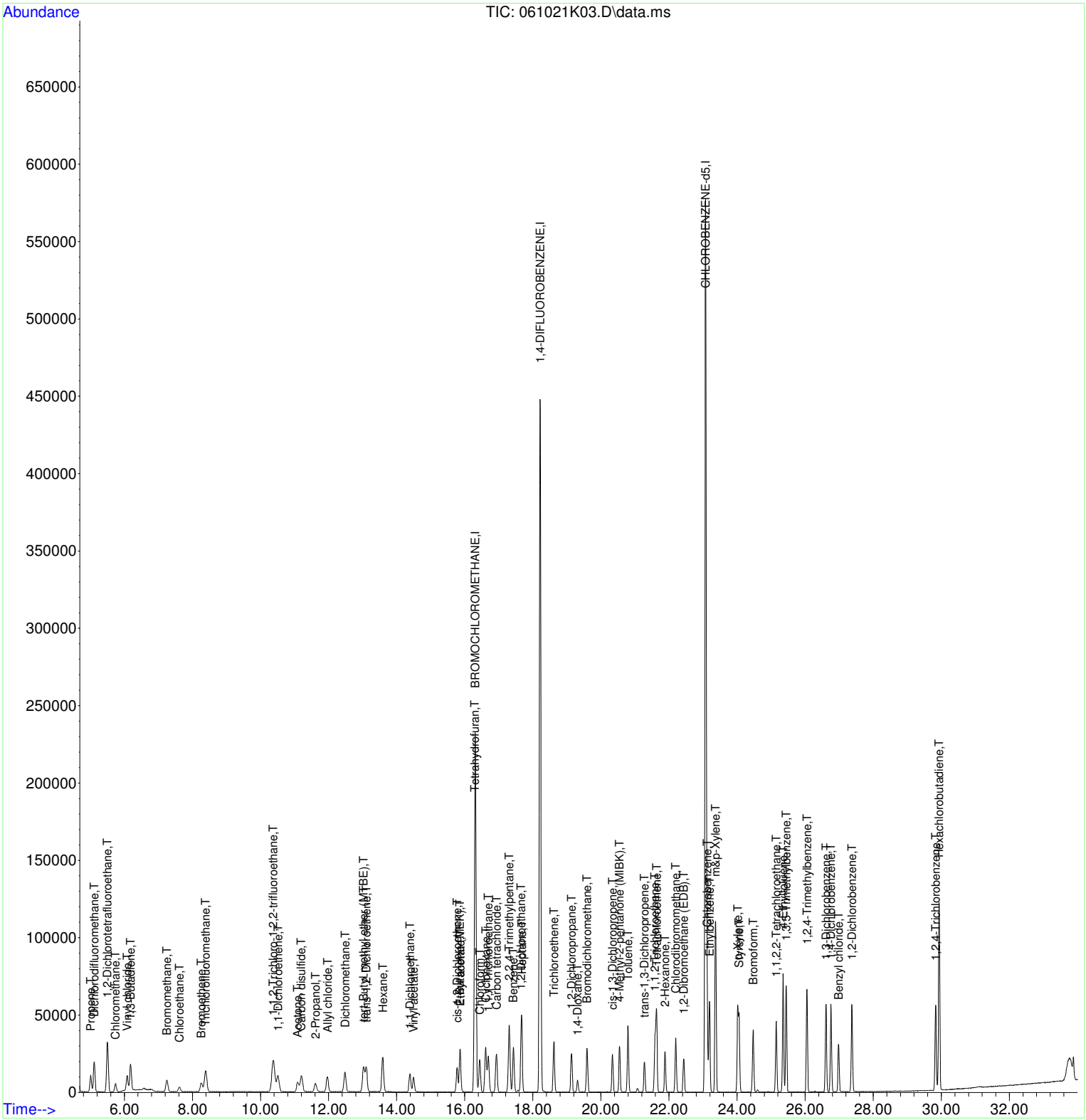
Quant Time: Jun 11 09:33:44 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:33:32 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.058 | 104 | 40229 | 2.79 | ppbv | 99 |
| 56) | Bromoform | 24.471 | 173 | 32319 | 2.70 | ppbv | 99 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.153 | 83 | 39372 | 2.65 | ppbv | 99 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 79677 | 2.52 | ppbv | 100 |
| 59) | 1,3,5-Trimethylbenzene | 25.445 | 105 | 62900 | 2.82 | ppbv | 99 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 59023 | 2.68 | ppbv | 100 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 42003 | 2.69 | ppbv | 99 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 41108 | 2.74 | ppbv | 99 |
| 63) | Benzyl chloride | 26.984 | 91 | 39200 | 2.14 | ppbv | 99 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 41905 | 2.64 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.831 | 180 | 33560 | 2.64 | ppbv | 98 |
| 66) | Hexachlorobutadiene | 29.934 | 225 | 42248 | 2.77 | ppbv | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K03.D
InstName : HP5973K
Acq On : 10 Jun 2021 3:10 pm
Operator : EM
Sample : S21F026-CAL2
Misc : 2ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:33:44 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:33:32 2021
Response via : Initial Calibration



# S21F026-CAL3

# Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K04.D
InstName : HP5973K
Acq On : 10 Jun 2021 3:58 pm
Operator : EM
Sample : S21F026-CAL3
Misc : 5ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:34:00 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:33:51 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 198079 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 602429 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 549722 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 26415 | 5.58 | ppbv | | 99 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 78432 | 5.64 | ppbv | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 5.497 | 85 | 81309 | 5.52 | ppbv | | 99 |
| 5) Chloromethane | 5.740 | 50 | 27835 | 5.81 | ppbv | | 100 |
| 6) Vinyl chloride | 6.081 | 62 | 45694 | 6.05 | ppbv | | 99 |
| 7) 1,3-Butadiene | 6.178 | 54 | 34714 | 5.61 | ppbv | | 98 |
| 8) Bromomethane | 7.243 | 94 | 26379 | 5.83 | ppbv | | 100 |
| 9) Chloroethane | 7.620 | 64 | 16980 | 5.87 | ppbv | | 99 |
| 10) Bromoethene | 8.259 | 106 | 25389 | 5.43 | ppbv | | 99 |
| 11) Trichlorofluoromethane | 8.380 | 101 | 69553 | 5.92 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.382 | 151 | 50676 | 5.93 | ppbv | | 100 |
| 13) 1,1-Dichloroethene | 10.510 | 61 | 43235 | 5.94 | ppbv | | 100 |
| 14) Acetone | 11.087 | 43 | 43196 | 5.19 | ppbv | | 99 |
| 15) Carbon disulfide | 11.203 | 76 | 83449 | 5.59 | ppbv | | 96 |
| 16) 2-Propanol | 11.605 | 45 | 35882 | 5.09 | ppbv | | 96 |
| 17) Allyl chloride | 11.963 | 41 | 35200 | 5.80 | ppbv | | 100 |
| 18) Dichloromethane | 12.481 | 49 | 35111 | 5.64 | ppbv | | 100 |
| 19) tert-Butyl methyl ethe... | 13.022 | 73 | 79749 | 5.40 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.101 | 61 | 41435 | 5.58 | ppbv | | 100 |
| 21) Hexane | 13.588 | 57 | 49232 | 5.58 | ppbv | | 98 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 51960 | 5.66 | ppbv | | 100 |
| 23) Vinyl acetate | 14.488 | 43 | 60437 | 6.10 | ppbv | | 100 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 37733 | 6.01 | ppbv | # | 99 |
| 25) 2-Butanone (MEK) | 15.851 | 72 | 15766 | 5.43 | ppbv | # | 97 |
| 26) Ethyl acetate | 15.863 | 61 | 10026 | 5.82 | ppbv | # | 89 |
| 27) Tetrahydrofuran | 16.289 | 42 | 33726 | 4.93 | ppbv | | 99 |
| 28) Chloroform | 16.441 | 83 | 58970 | 5.87 | ppbv | | 100 |
| 29) Cyclohexane | 16.611 | 56 | 51718 | 5.89 | ppbv | | 100 |
| 30) 1,1,1-Trichloroethane | 16.697 | 97 | 58633 | 5.99 | ppbv | | 100 |
| 31) Carbon tetrachloride | 16.928 | 117 | 60245 | 5.97 | ppbv | | 100 |
| 33) Benzene | 17.433 | 78 | 97313 | 6.17 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 160848 | 5.93 | ppbv | | 99 |
| 35) 1,2-Dichloroethane | 17.652 | 62 | 38222 | 5.86 | ppbv | | 100 |
| 36) Heptane | 17.676 | 43 | 57725 | 5.91 | ppbv | | 99 |
| 37) Trichloroethene | 18.619 | 130 | 41517 | 6.04 | ppbv | | 100 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 35079 | 6.12 | ppbv | | 99 |
| 39) 1,4-Dioxane | 19.312 | 88 | 19719 | 5.66 | ppbv | | 99 |
| 40) Bromodichloromethane | 19.592 | 83 | 66441 | 5.71 | ppbv | | 99 |
| 41) cis-1,3-Dichloropropene | 20.341 | 75 | 51148 | 6.20 | ppbv | | 99 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 69980 | 5.28 | ppbv | | 100 |
| 44) Toluene | 20.797 | 91 | 112949 | 6.14 | ppbv | | 100 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 42184 | 5.77 | ppbv | | 99 |
| 46) 1,1,2-Trichloroethane | 21.588 | 97 | 37722 | 6.00 | ppbv | | 99 |
| 47) Tetrachloroethene | 21.636 | 166 | 58819 | 6.00 | ppbv | | 100 |
| 48) 2-Hexanone | 21.886 | 43 | 61084 | 4.98 | ppbv | | 100 |
| 49) Chlorodibromomethane | 22.202 | 129 | 68391 | 5.66 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 53142 | 6.08 | ppbv | | 100 |
| 51) Chlorobenzene | 23.121 | 112 | 94894 | 6.13 | ppbv | | 98 |
| 52) Ethylbenzene | 23.188 | 91 | 152095 | 6.01 | ppbv | | 100 |
| 53) m&p-Xylene | 23.370 | 91 | 231555 | 12.05 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 114033 | 5.58 | ppbv | | 99 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K04.D
InstName : HP5973K
Acq On : 10 Jun 2021 3:58 pm
Operator : EM
Sample : S21F026-CAL3
Misc : 5ppbv
ALS Vial : 32 Sample Multiplier: 1

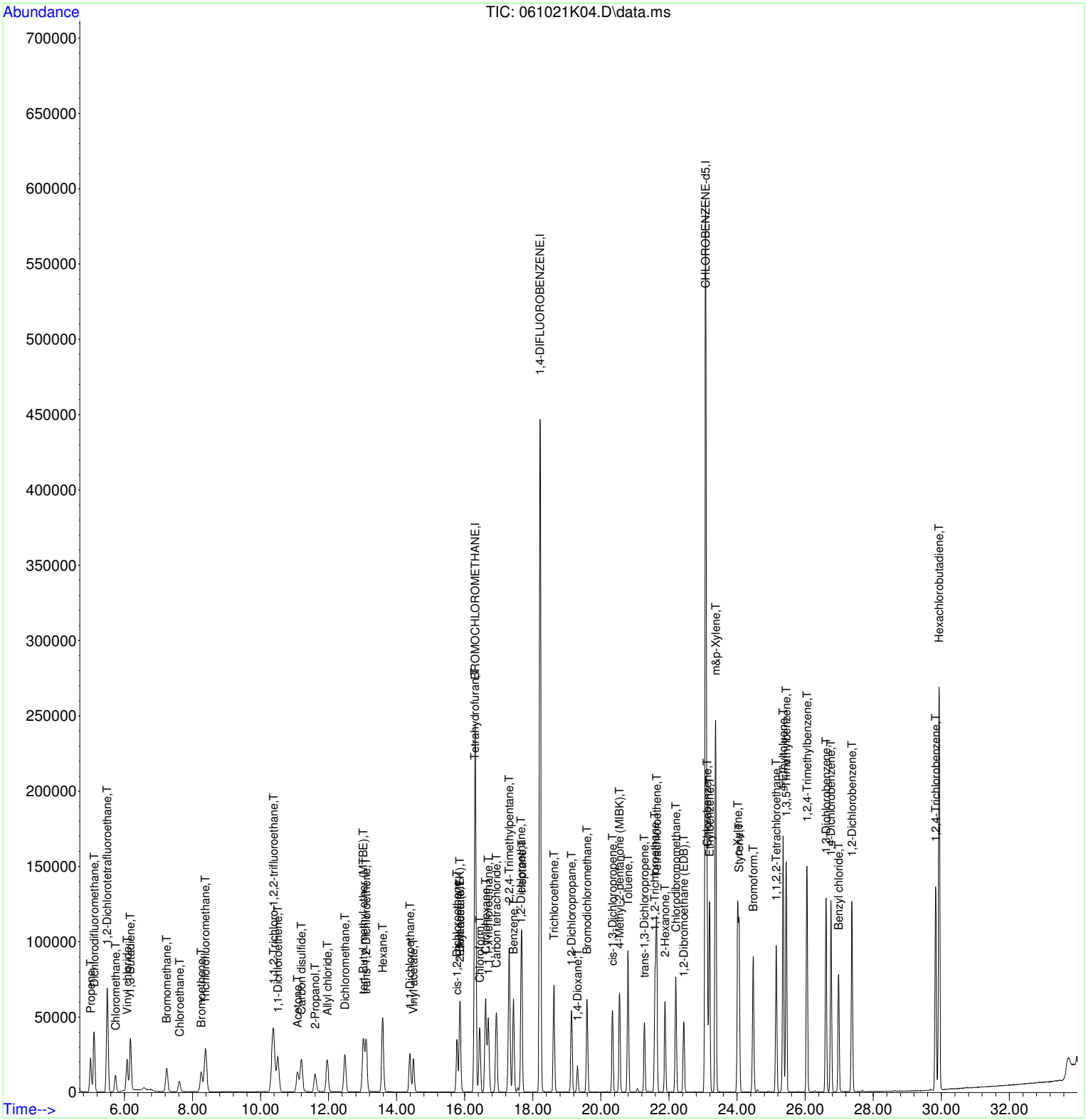
Quant Time: Jun 11 09:34:00 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:33:51 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.058 | 104 | 91412 | 6.23 | ppbv | 100 |
| 56) | Bromoform | 24.471 | 173 | 72132 | 5.93 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.153 | 83 | 84516 | 5.59 | ppbv | 99 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 183100 | 5.70 | ppbv | 100 |
| 59) | 1,3,5-Trimethylbenzene | 25.445 | 105 | 140752 | 6.20 | ppbv | 100 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 136738 | 6.10 | ppbv | 100 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 93389 | 5.86 | ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 91643 | 5.99 | ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 96498 | 5.16 | ppbv | 100 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 92228 | 5.71 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.831 | 180 | 79174 | 6.11 | ppbv | 99 |
| 66) | Hexachlorobutadiene | 29.934 | 225 | 93260 | 6.00 | ppbv | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K04.D
InstName : HP5973K
Acq On : 10 Jun 2021 3:58 pm
Operator : EM
Sample : S21F026-CAL3
Misc : 5ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:34:00 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:33:51 2021
Response via : Initial Calibration



# S21F026-CAL4

# Evaluate Continuing Calibration Report

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
InstName : HP5973K
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

**REVIEWED**
**By EM at 9:41 am, Jun 11, 2021**

Quant Time: Jun 11 09:30:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | BROMOCHLOROMETHANE | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 2 | T | Propene | 0.617 | 0.555 | 10.0 | 100 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 1.797 | 1.617 | 10.0 | 100 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 1.912 | 1.718 | 10.1 | 100 | 0.00 |
| 5 | T | Chloromethane | 0.625 | 0.560 | 10.4 | 100 | 0.00 |
| 6 | T | Vinyl chloride | 0.999 | 0.902 | 9.7 | 100 | 0.00 |
| 7 | T | 1,3-Butadiene | 0.808 | 0.722 | 10.6 | 100 | 0.00 |
| 8 | T | Bromomethane | 0.582 | 0.520 | 10.7 | 100 | 0.00 |
| 9 | T | Chloroethane | 0.375 | 0.337 | 10.1 | 100 | 0.00 |
| 10 | T | Bromoethene | 0.601 | 0.545 | 9.3 | 100 | 0.00 |
| 11 | T | Trichlorofluoromethane | 1.507 | 1.350 | 10.4 | 100 | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-trifl | 1.091 | 0.979 | 10.3 | 100 | 0.00 |
| 13 | T | 1,1-Dichloroethene | 0.938 | 0.872 | 7.0 | 100 | 0.00 |
| 14 | T | Acetone | 1.073 | 0.943 | 12.1 | 100 | 0.00 |
| 15 | T | Carbon disulfide | 1.925 | 1.705 | 11.4 | 100 | 0.00 |
| 16 | T | 2-Propanol | 0.939 | 0.884 | 5.9 | 100 | 0.00 |
| 17 | T | Allyl chloride | 0.784 | 0.726 | 7.4 | 100 | 0.00 |
| 18 | T | Dichloromethane | 0.792 | 0.662 | 16.4 | 100 | 0.00 |
| 19 | T | tert-Butyl methyl ether (MT | 1.922 | 1.799 | 6.4 | 100 | 0.00 |
| 20 | T | trans-1,2-Dichloroethene | 0.960 | 0.869 | 9.5 | 100 | 0.00 |
| 21 | T | Hexane | 1.147 | 1.076 | 6.2 | 100 | 0.00 |
| 22 | T | 1,1-Dichloroethane | 1.184 | 1.064 | 10.1 | 100 | 0.00 |
| 23 | T | Vinyl acetate | 1.302 | 1.259 | 3.3 | 100 | 0.00 |
| 24 | T | cis-1,2-Dichloroethene | 0.810 | 0.752 | 7.2 | 100 | 0.00 |
| 25 | T | 2-Butanone (MEK) | 0.377 | 0.348 | 7.7 | 100 | 0.00 |
| 26 | T | Ethyl acetate | 0.228 | 0.205 | 10.1 | 100 | 0.00 |
| 27 | T | Tetrahydrofuran | 0.883 | 0.814 | 7.8 | 100 | 0.00 |
| 28 | T | Chloroform | 1.293 | 1.167 | 9.7 | 100 | 0.00 |
| 29 | T | Cyclohexane | 1.142 | 1.057 | 7.4 | 100 | 0.00 |
| 30 | T | 1,1,1-Trichloroethane | 1.268 | 1.156 | 8.8 | 100 | 0.00 |
| 31 | T | Carbon tetrachloride | 1.317 | 1.199 | 9.0 | 100 | 0.00 |
| 32 | I | 1,4-DIFLUOROBENZENE | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 33 | T | Benzene | 0.676 | 0.620 | 8.3 | 100 | 0.00 |
| 34 | T | 2,2,4-Trimethylpentane | 1.172 | 1.109 | 5.4 | 100 | 0.00 |
| 35 | T | 1,2-Dichloroethane | 0.278 | 0.255 | 8.3 | 100 | 0.00 |
| 36 | T | Heptane | 0.421 | 0.399 | 5.2 | 100 | 0.00 |
| 37 | T | Trichloroethene | 0.292 | 0.271 | 7.2 | 100 | 0.00 |
| 38 | T | 1,2-Dichloropropane | 0.247 | 0.228 | 7.7 | 100 | 0.00 |
| 39 | T | 1,4-Dioxane | 0.149 | 0.138 | 7.4 | 100 | 0.00 |
| 40 | T | Bromodichloromethane | 0.499 | 0.455 | 8.8 | 100 | 0.00 |
| 41 | T | cis-1,3-Dichloropropene | 0.358 | 0.346 | 3.4 | 100 | 0.00 |
| 42 | T | 4-Methyl-2-pentanone (MIBK) | 0.568 | 0.533 | 6.2 | 100 | 0.00 |
| 43 | I | CHLOROBENZENE-d5 | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 44 | T | Toluene | 0.795 | 0.749 | 5.8 | 100 | 0.00 |
| 45 | T | trans-1,3-Dichloropropene | 0.326 | 0.317 | 2.8 | 100 | 0.00 |
| 46 | T | 1,1,2-Trichloroethane | 0.270 | 0.251 | 7.0 | 100 | 0.00 |
| 47 | T | Tetrachloroethene | 0.420 | 0.391 | 6.9 | 100 | 0.00 |
| 48 | T | 2-Hexanone | 0.532 | 0.508 | 4.5 | 100 | 0.00 |
| 49 | T | Chlorodibromomethane | 0.527 | 0.488 | 7.4 | 100 | 0.00 |
| 50 | T | 1,2-Dibromoethane (EDB) | 0.381 | 0.354 | 7.1 | 100 | 0.00 |
| 51 | T | Chlorobenzene | 0.668 | 0.614 | 8.1 | 100 | 0.00 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
InstName : HP5973K
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:30:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 52 T | Ethylbenzene | 1.092 | 1.021 | 6.5 | 100 | 0.00 |
| 53 T | m&p-Xylene | 0.829 | 0.787 | 5.1 | 100 | 0.00 |
| 54 T | o-Xylene | 0.881 | 0.847 | 3.9 | 100 | 0.00 |
| 55 T | Styrene | 0.638 | 0.620 | 2.8 | 100 | 0.00 |
| 56 T | Bromoform | 0.537 | 0.510 | 5.0 | 100 | 0.00 |
| 57 T | 1,1,2,2-Tetrachloroethane | 0.653 | 0.609 | 6.7 | 100 | 0.00 |
| 58 T | 4-Ethyltoluene | 1.411 | 1.357 | 3.8 | 100 | 0.00 |
| 59 T | 1,3,5-Trimethylbenzene | 0.978 | 0.949 | 3.0 | 100 | 0.00 |
| 60 T | 1,2,4-Trimethylbenzene | 0.970 | 0.953 | 1.8 | 100 | 0.00 |
| 61 T | 1,3-Dichlorobenzene | 0.695 | 0.659 | 5.2 | 100 | 0.00 |
| 62 T | 1,4-Dichlorobenzene | 0.675 | 0.645 | 4.4 | 100 | 0.00 |
| 63 T | Benzyl chloride | 0.839 | 0.840 | -0.1 | 100 | 0.00 |
| 64 T | 1,2-Dichlorobenzene | 0.700 | 0.662 | 5.4 | 100 | 0.00 |
| 65 T | 1,2,4-Trichlorobenzene | 0.584 | 0.572 | 2.1 | 100 | 0.00 |
| 66 T | Hexachlorobutadiene | 0.670 | 0.636 | 5.1 | 100 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
InstName : HP5973K
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:30:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 200660 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 606406 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 557350 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 48587 | 10.13 | ppbv | | 100 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 144227 | 10.24 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.503 | 85 | 150261 | 10.06 | ppbv | | 100 |
| 5) Chloromethane | 5.740 | 50 | 50915 | 10.48 | ppbv | | 100 |
| 6) Vinyl chloride | 6.080 | 62 | 83536 | 10.92 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.178 | 54 | 63806 | 10.18 | ppbv | | 100 |
| 8) Bromomethane | 7.242 | 94 | 47721 | 10.41 | ppbv | | 100 |
| 9) Chloroethane | 7.614 | 64 | 30620 | 10.46 | ppbv | | 100 |
| 10) Bromoethene | 8.265 | 106 | 47700 | 10.08 | ppbv | | 100 |
| 11) Trichlorofluoromethane | 8.380 | 101 | 126178 | 10.59 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.369 | 151 | 92385 | 10.67 | ppbv | | 100 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 81524 | 11.06 | ppbv | | 100 |
| 14) Acetone | 11.087 | 43 | 79205 | 9.39 | ppbv | | 100 |
| 15) Carbon disulfide | 11.203 | 76 | 152038 | 10.06 | ppbv | | 100 |
| 16) 2-Propanol | 11.604 | 45 | 70496 | 9.88 | ppbv | | 100 |
| 17) Allyl chloride | 11.957 | 41 | 67191 | 10.93 | ppbv | | 100 |
| 18) Dichloromethane | 12.480 | 49 | 61875 | 9.81 | ppbv | | 100 |
| 19) tert-Butyl methyl ethe... | 13.022 | 73 | 152708 | 10.20 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 76789 | 10.21 | ppbv | | 100 |
| 21) Hexane | 13.588 | 57 | 94102 | 10.52 | ppbv | | 100 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 94858 | 10.20 | ppbv | | 100 |
| 23) Vinyl acetate | 14.494 | 43 | 118727 | 11.82 | ppbv | | 100 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 70933 | 11.16 | ppbv | # | 100 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 29873 | 10.15 | ppbv | | 100 |
| 26) Ethyl acetate | 15.869 | 61 | 17935 | 10.28 | ppbv | | 100 |
| 27) Tetrahydrofuran | 16.283 | 42 | 63504 | 9.16 | ppbv | | 100 |
| 28) Chloroform | 16.441 | 83 | 108079 | 10.62 | ppbv | | 100 |
| 29) Cyclohexane | 16.611 | 56 | 96943 | 10.91 | ppbv | | 100 |
| 30) 1,1,1-Trichloroethane | 16.690 | 97 | 108013 | 10.89 | ppbv | | 100 |
| 31) Carbon tetrachloride | 16.928 | 117 | 111072 | 10.87 | ppbv | | 100 |
| 33) Benzene | 17.432 | 78 | 178244 | 11.23 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 304411 | 11.14 | ppbv | | 100 |
| 35) 1,2-Dichloroethane | 17.651 | 62 | 70659 | 10.77 | ppbv | | 100 |
| 36) Heptane | 17.670 | 43 | 109433 | 11.14 | ppbv | | 100 |
| 37) Trichloroethene | 18.619 | 130 | 77117 | 11.15 | ppbv | | 100 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 64311 | 11.15 | ppbv | | 100 |
| 39) 1,4-Dioxane | 19.312 | 88 | 37615 | 10.73 | ppbv | | 100 |
| 40) Bromodichloromethane | 19.592 | 83 | 123677 | 10.56 | ppbv | | 100 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 99415 | 11.96 | ppbv | | 100 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 133762 | 10.02 | ppbv | | 100 |
| 44) Toluene | 20.797 | 91 | 212492 | 11.39 | ppbv | | 100 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 81644 | 11.01 | ppbv | | 100 |
| 46) 1,1,2-Trichloroethane | 21.588 | 97 | 71178 | 11.17 | ppbv | | 100 |
| 47) Tetrachloroethene | 21.636 | 166 | 110028 | 11.08 | ppbv | | 100 |
| 48) 2-Hexanone | 21.880 | 43 | 119017 | 9.58 | ppbv | | 100 |
| 49) Chlorodibromomethane | 22.202 | 129 | 129626 | 10.57 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 99673 | 11.24 | ppbv | | 100 |
| 51) Chlorobenzene | 23.127 | 112 | 175915 | 11.20 | ppbv | | 100 |
| 52) Ethylbenzene | 23.188 | 91 | 284516 | 11.09 | ppbv | | 100 |
| 53) m&p-Xylene | 23.370 | 91 | 442932 | 22.74 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 218393 | 10.55 | ppbv | | 100 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
InstName : HP5973K
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

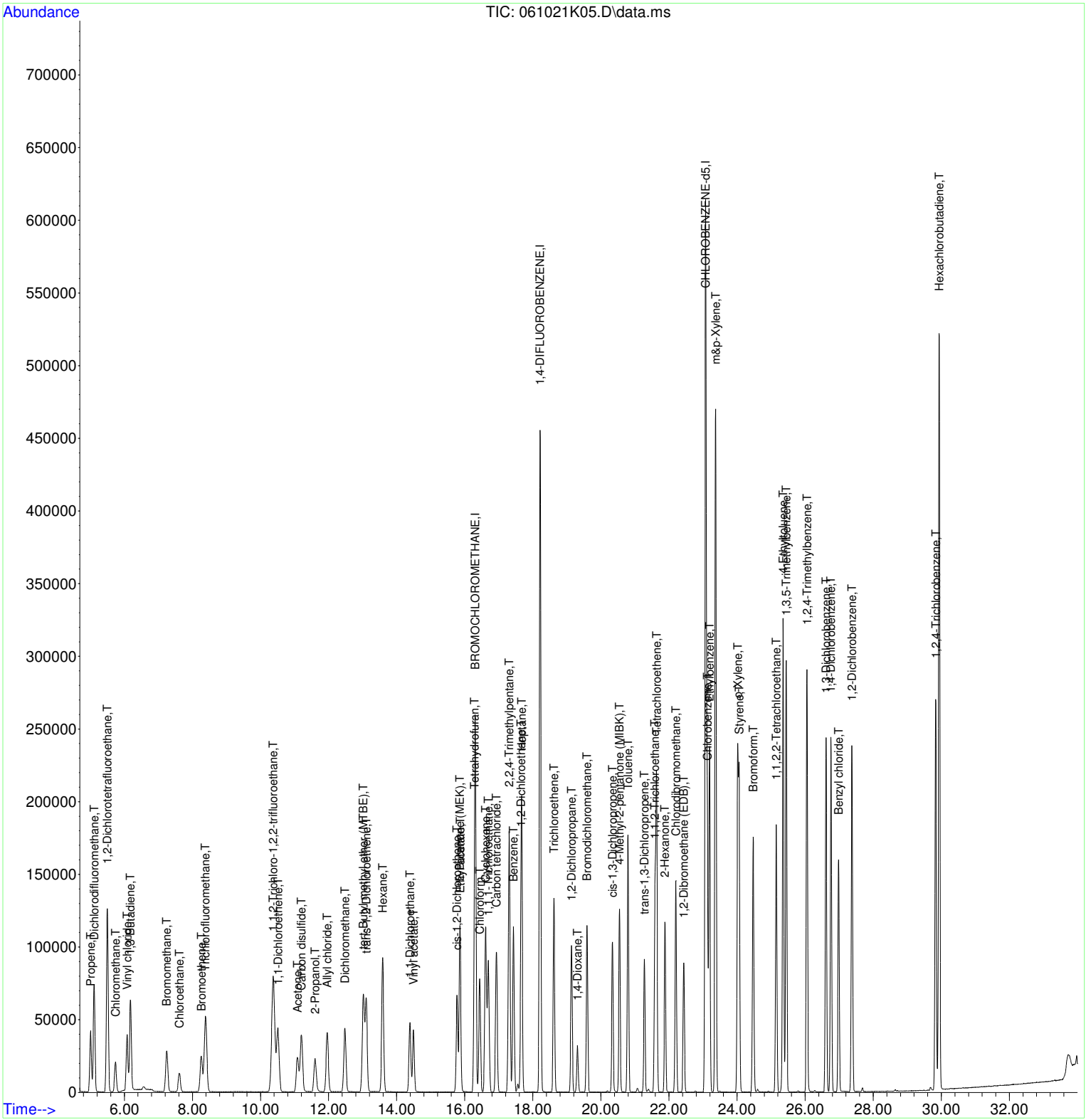
Quant Time: Jun 11 09:30:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

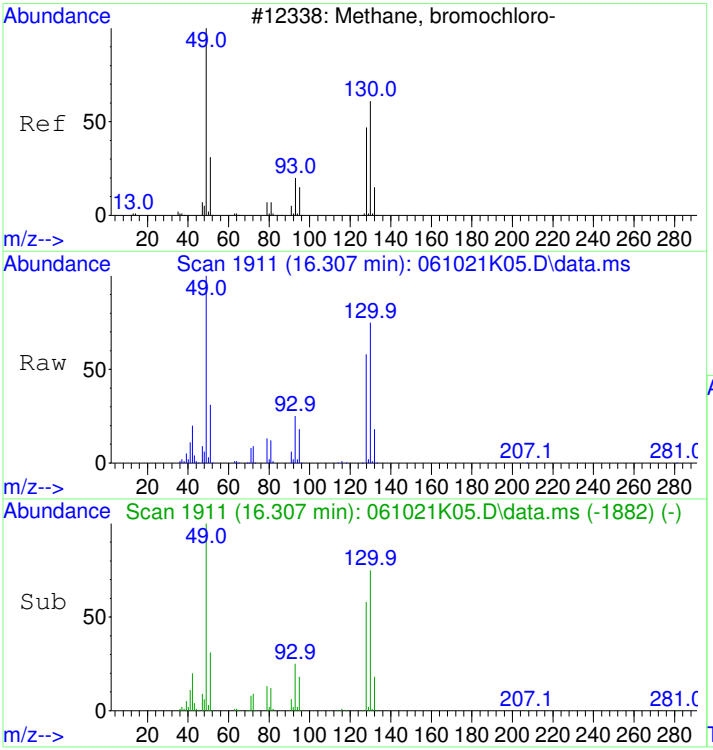
| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.064 | 104 | 177560 | 11.94 | ppbv | 100 |
| 56) | Bromoform | 24.471 | 173 | 140785 | 11.41 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.153 | 83 | 158555 | 10.34 | ppbv | 100 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 353363 | 10.84 | ppbv | 100 |
| 59) | 1,3,5-Trimethylbenzene | 25.445 | 105 | 272020 | 11.82 | ppbv | 100 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 265572 | 11.69 | ppbv | 100 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 178580 | 11.06 | ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 176464 | 11.38 | ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 196900 | 10.39 | ppbv | 100 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 175795 | 10.73 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.837 | 180 | 156556 | 11.91 | ppbv | 100 |
| 66) | Hexachlorobutadiene | 29.940 | 225 | 182167 | 11.56 | ppbv | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
InstName : HP5973K
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:30:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:30:23 2021
Response via : Initial Calibration

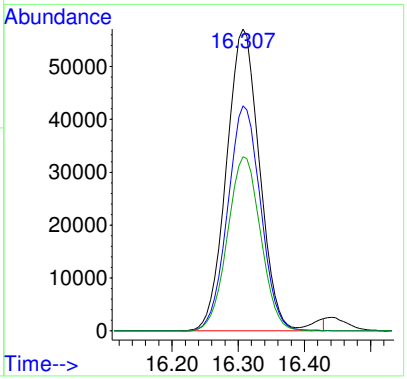


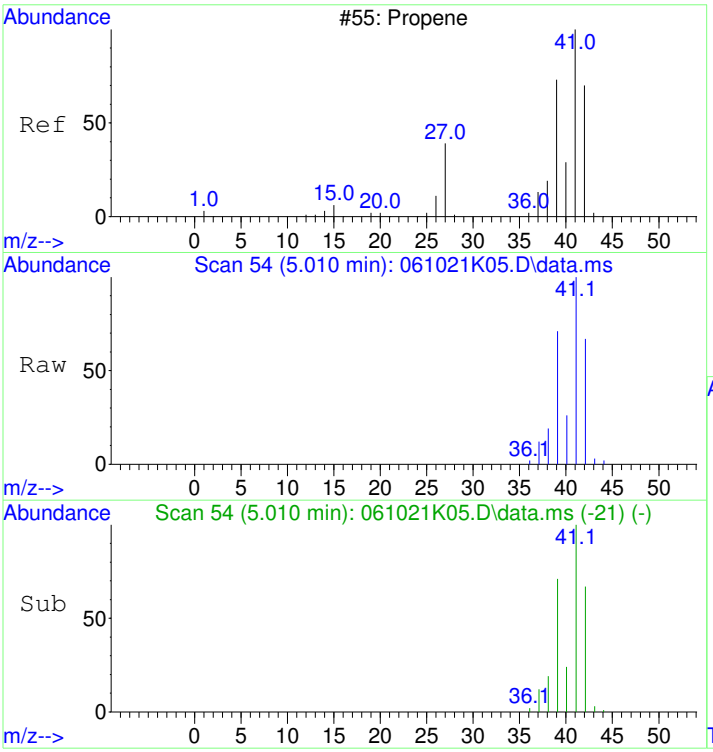



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 49 Resp: 200660

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 73.3 | 53.3 | 93.3 |
| 128 | 57.1 | 37.1 | 77.1 |

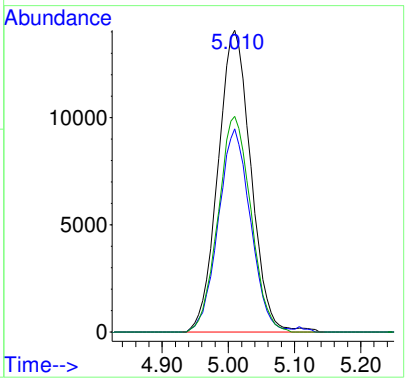


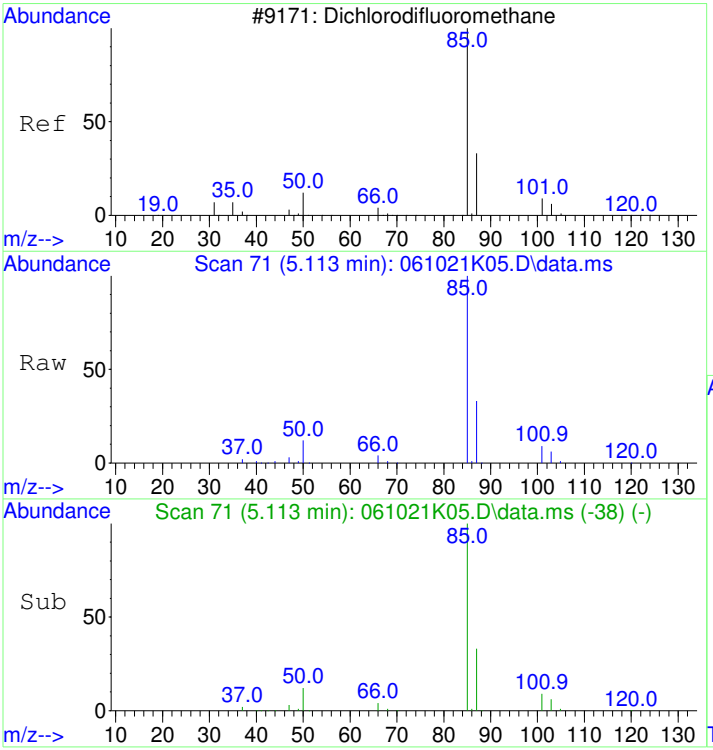




#2
Propene
Concen: 10.13 ppbv
RT: 5.010 min Scan# 54
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 41 Resp: 48587

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 42 | 66.5 | 46.5 | 86.5 |
| 39 | 71.2 | 51.2 | 91.2 |

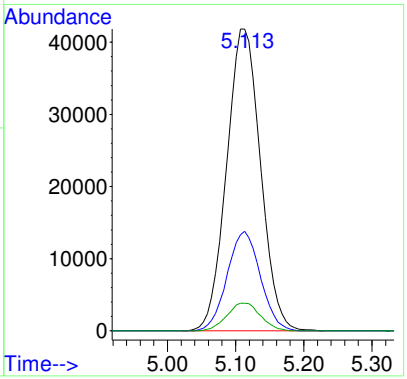


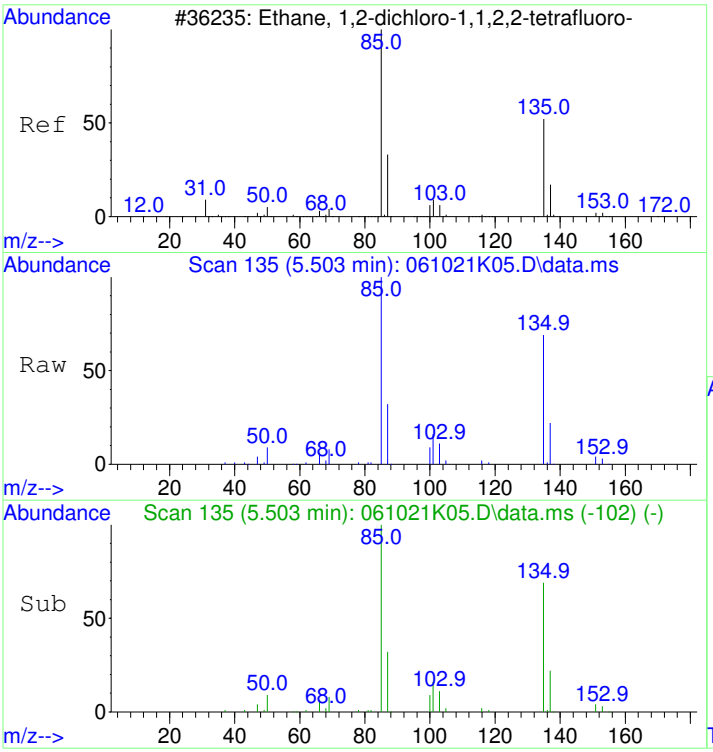



#3
Dichlorodifluoromethane
Concen: 10.24 ppbv
RT: 5.113 min Scan# 71
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 85 Resp: 144227

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.3 | 12.3 | 52.3 |
| 101 | 9.1 | 0.0 | 29.1 |

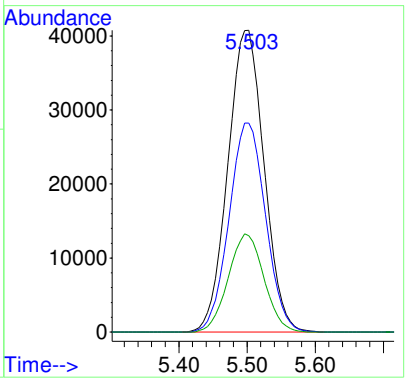


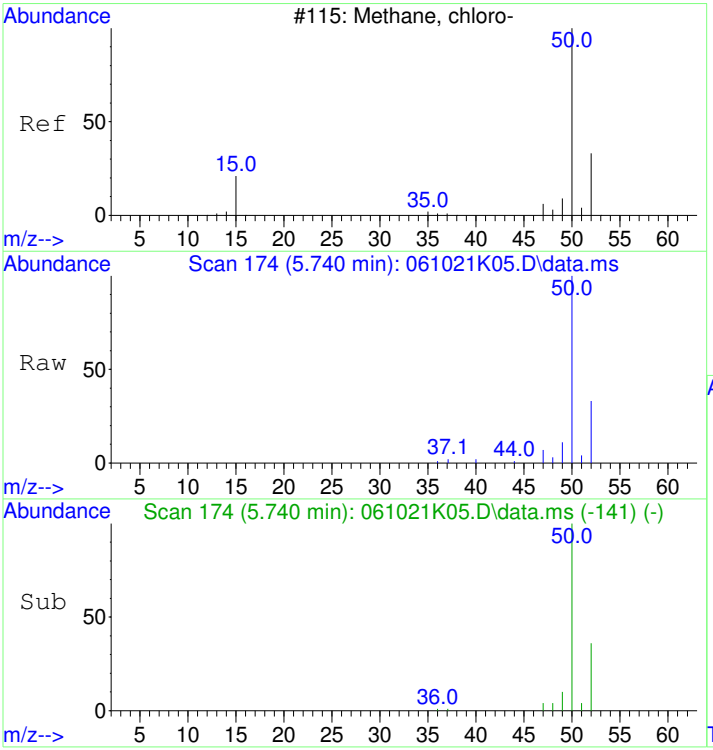




#4
1,2-Dichlorotetrafluoroethane
Concen: 10.06 ppbv
RT: 5.503 min Scan# 135
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 85 Resp: 150261

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 135 | 69.9 | 49.9 | 89.9 |
| 87 | 32.0 | 12.0 | 52.0 |

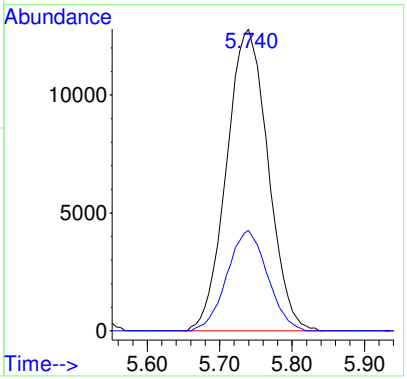


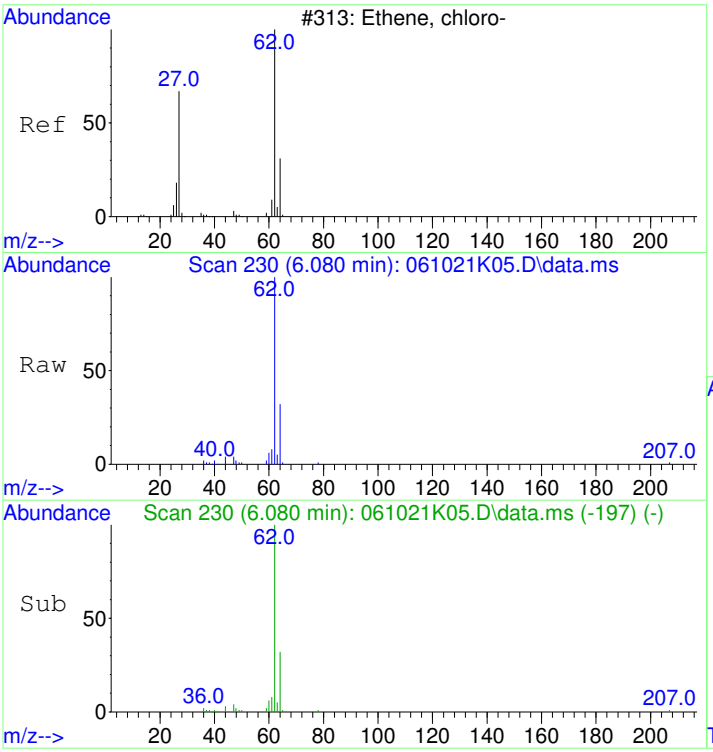



#5
Chloromethane
Concen: 10.48 ppbv
RT: 5.740 min Scan# 174
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 50 Resp: 50915

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 32.5 | 12.5 | 52.5 |

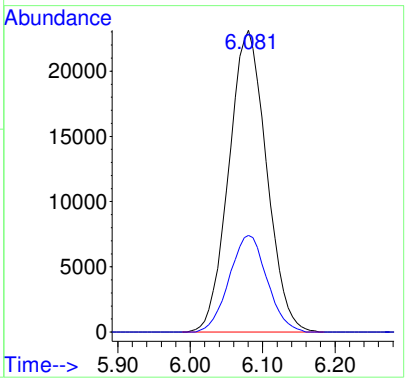


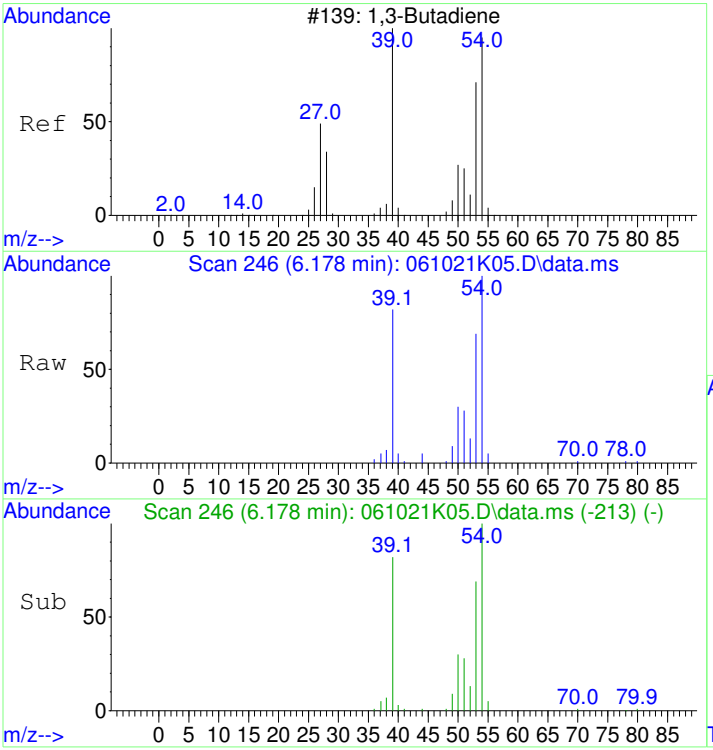




#6
Vinyl chloride
Concen: 10.92 ppbv
RT: 6.080 min Scan# 230
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 62 Resp: 83536

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.2 | 12.2 | 52.2 |

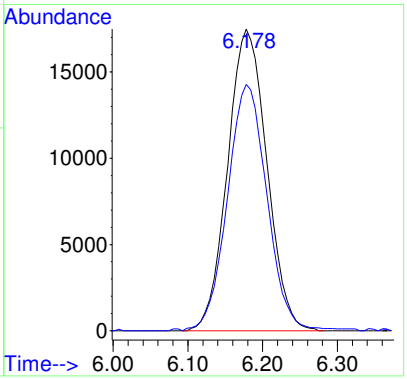


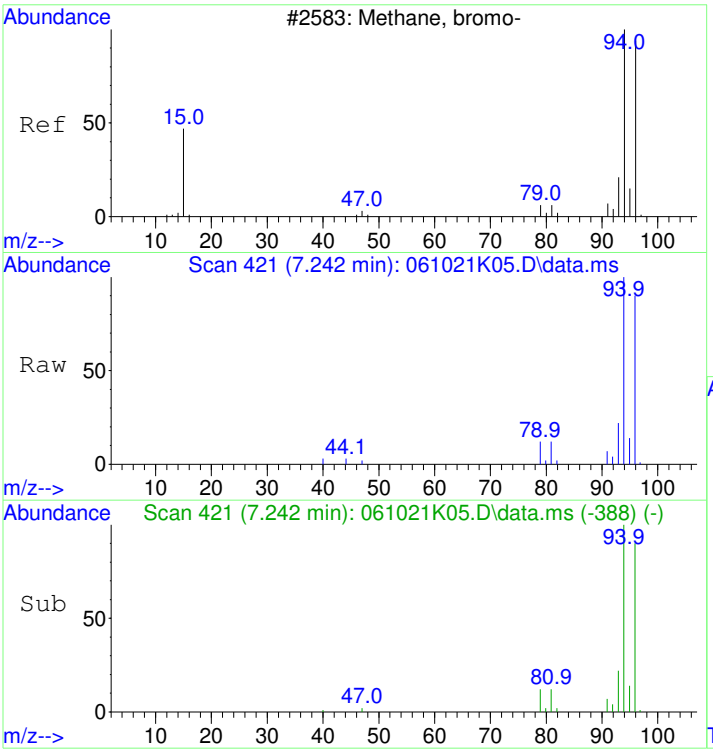



#7
1,3-Butadiene
Concen: 10.18 ppbv
RT: 6.178 min Scan# 246
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 54 Resp: 63806

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 54 | 100 | | |
| 39 | 82.6 | 62.6 | 102.6 |

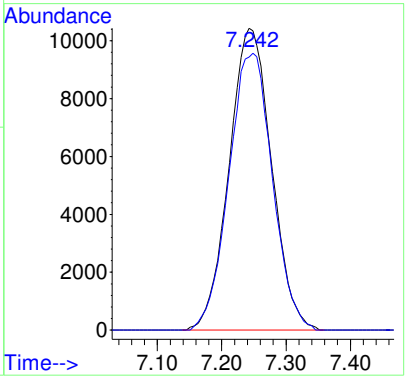


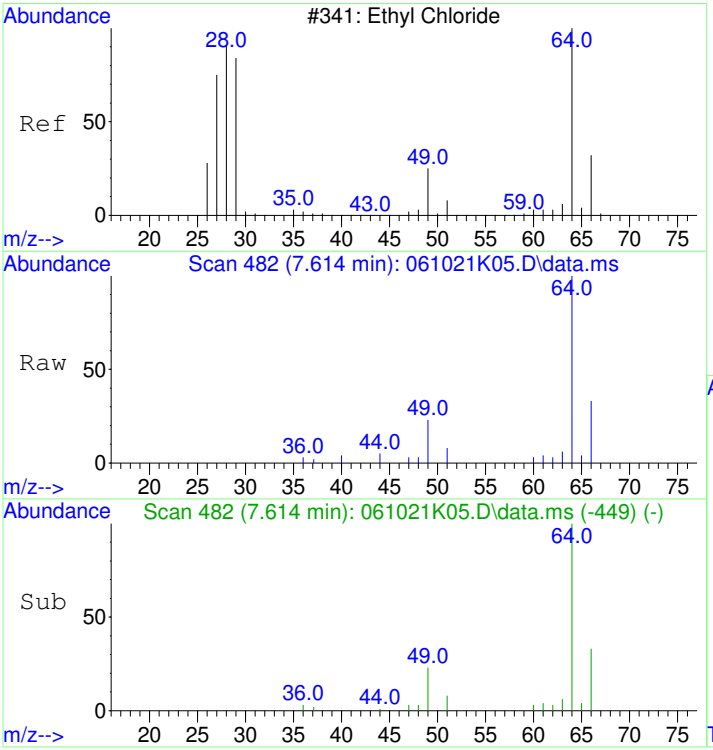




#8
Bromomethane
Concen: 10.41 ppbv
RT: 7.242 min Scan# 421
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 94 Resp: 47721

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 94.2 | 74.2 | 114.2 |

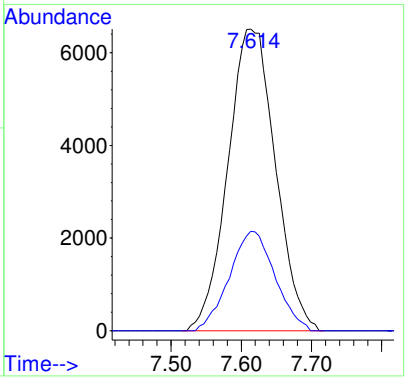


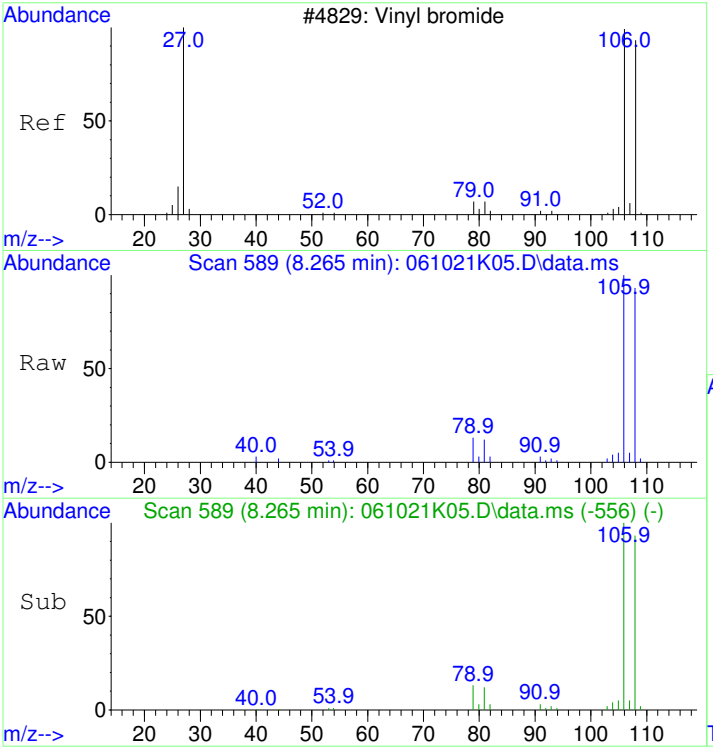



#9
Chloroethane
Concen: 10.46 ppbv
RT: 7.614 min Scan# 482
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 64 Resp: 30620

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 31.7 | 11.7 | 51.7 |

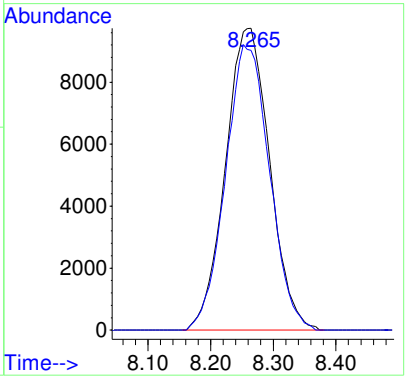


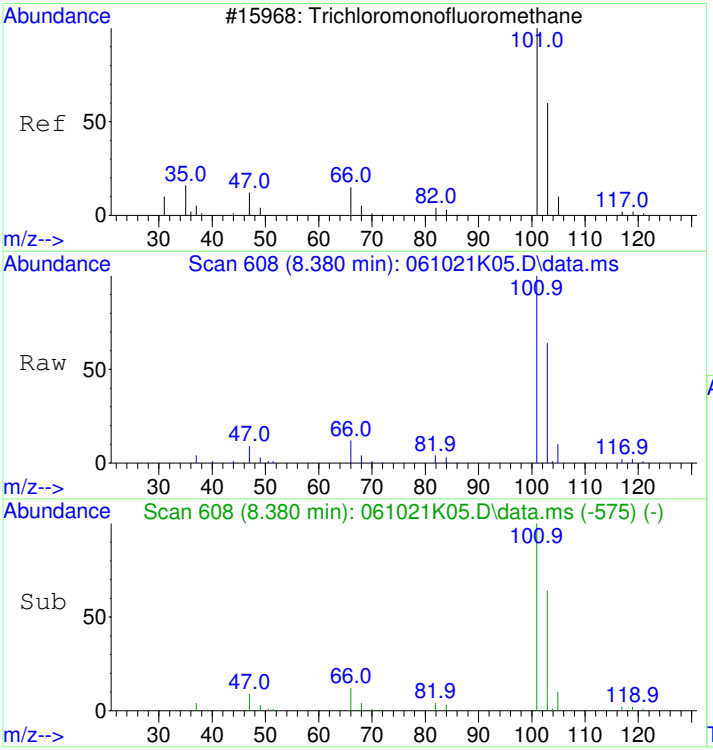




#10
Bromoethene
Concen: 10.08 ppbv
RT: 8.265 min Scan# 589
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:106 Resp: 47700

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 108 | 94.1 | 0.0 | 214.1 |

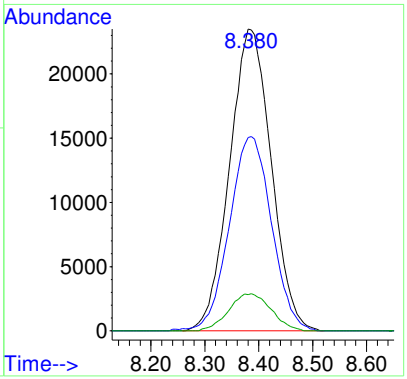


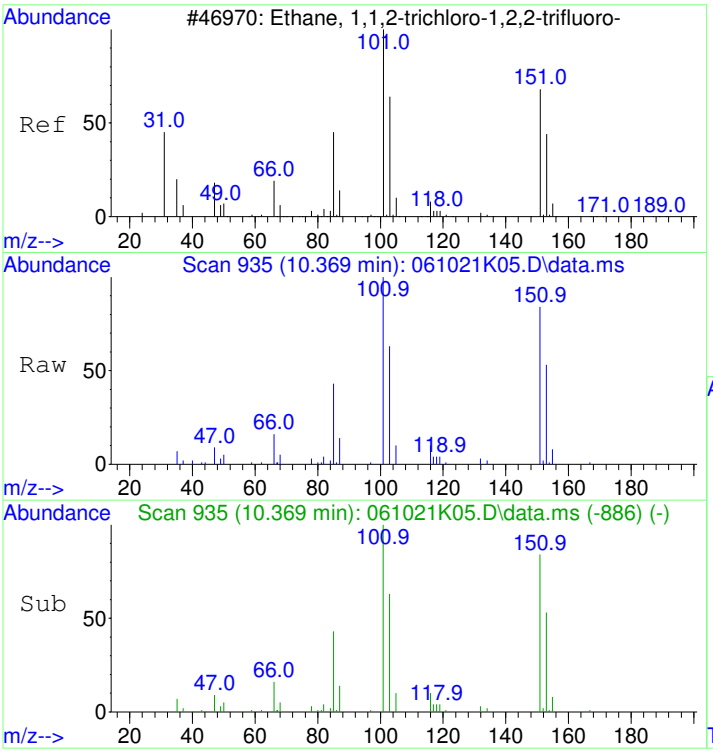



#11
Trichlorofluoromethane
Concen: 10.59 ppbv
RT: 8.380 min Scan# 608
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:101 Resp: 126178

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.3 | 45.3 | 85.3 |
| 66 | 12.5 | 0.0 | 32.5 |

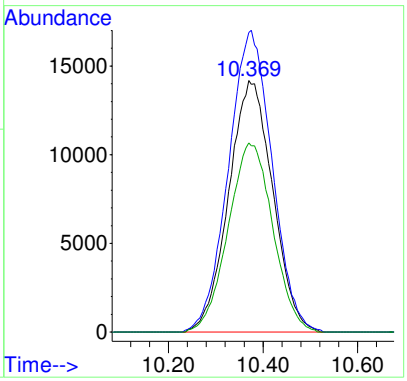


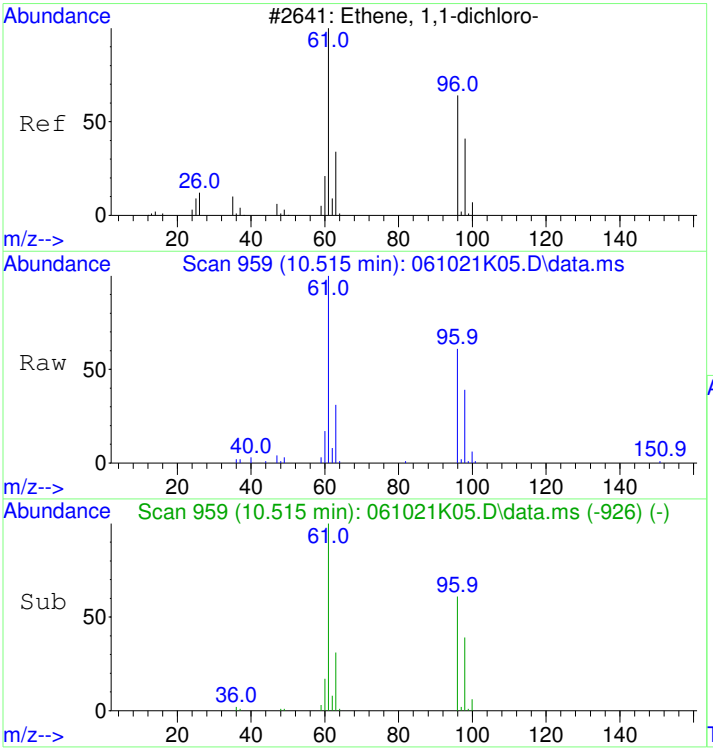




#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 10.67 ppbv
RT: 10.369 min Scan# 935
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:151 Resp: 92385

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 118.9 | 98.9 | 138.9 |
| 103 | 75.9 | 55.9 | 95.9 |

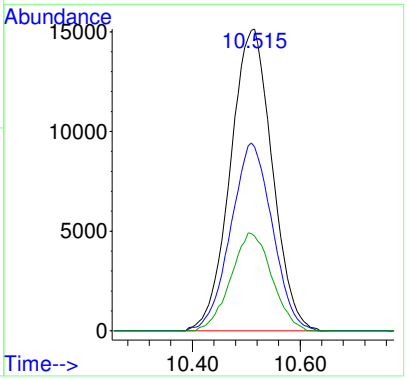


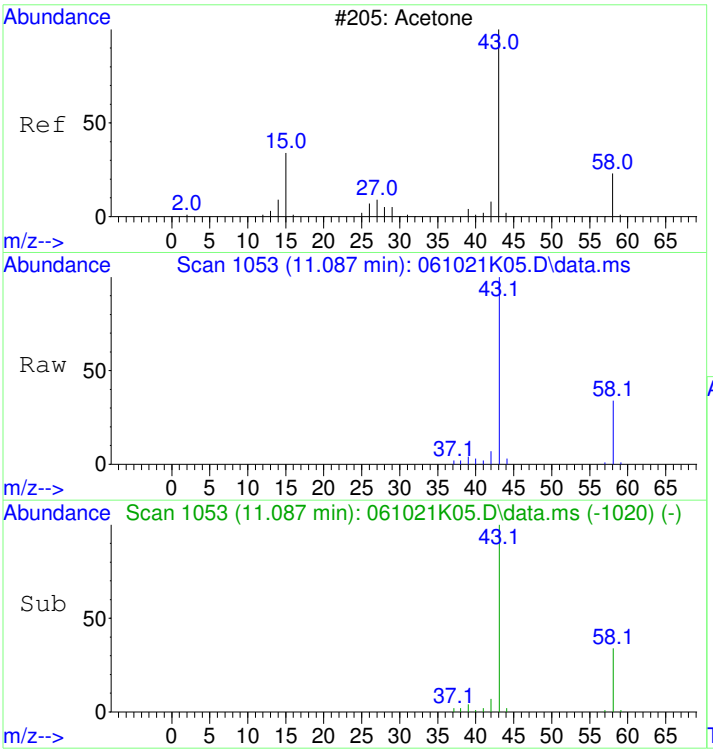



#13
1,1-Dichloroethene
Concen: 11.06 ppbv
RT: 10.515 min Scan# 959
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 61 Resp: 81524

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 61.9 | 41.9 | 81.9 |
| 63 | 31.8 | 11.8 | 51.8 |

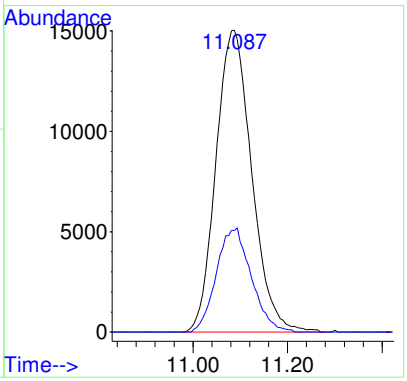


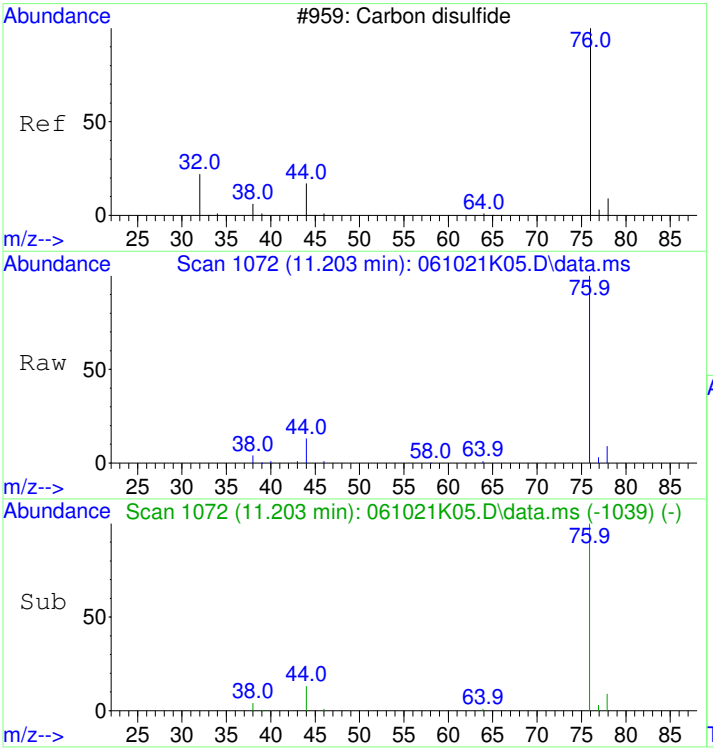




#14
Acetone
Concen: 9.39 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 43 Resp: 79205

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.5 | 13.5 | 53.5 |

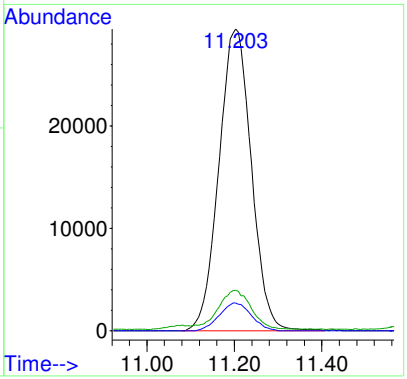


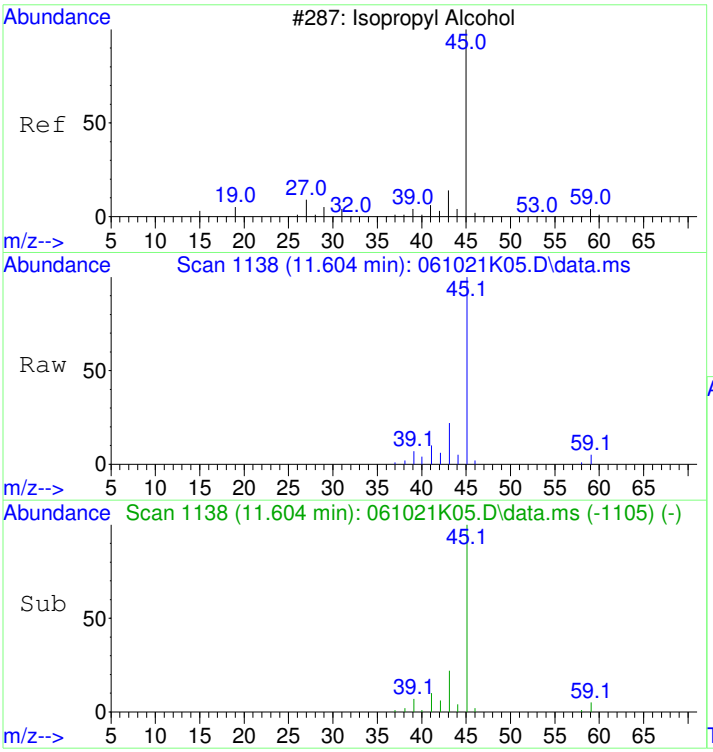



#15
Carbon disulfide
Concen: 10.06 ppbv
RT: 11.203 min Scan# 1072
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 76 Resp: 152038

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 9.1 | 0.0 | 29.1 |
| 44 | 13.5 | 0.0 | 33.5 |

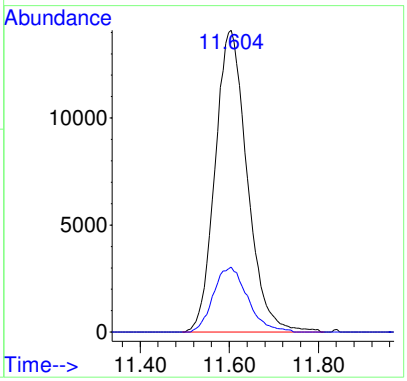


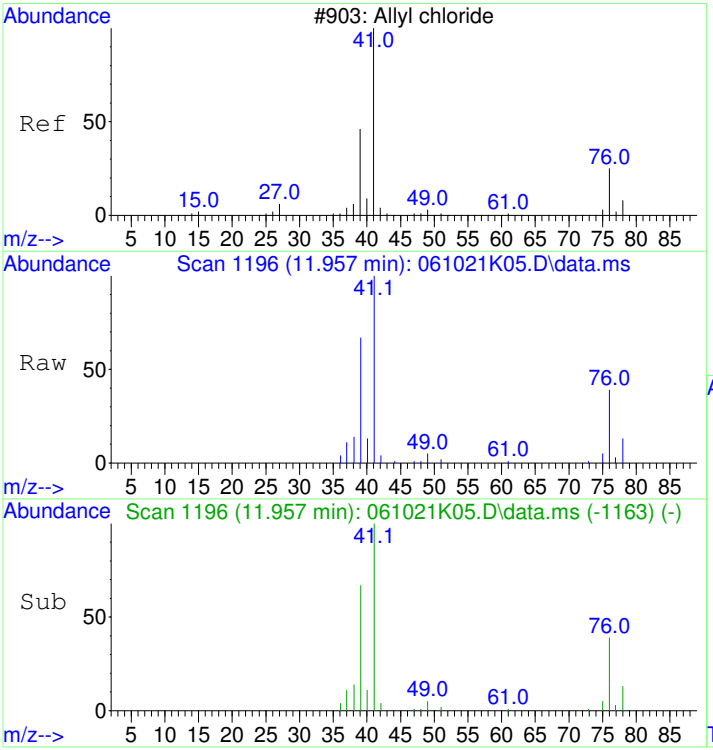




#16
2-Propanol
Concen: 9.88 ppbv
RT: 11.604 min Scan# 1138
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 45 Resp: 70496

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 23.0 | 3.0 | 43.0 |

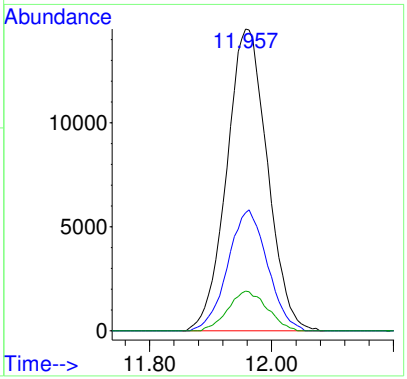


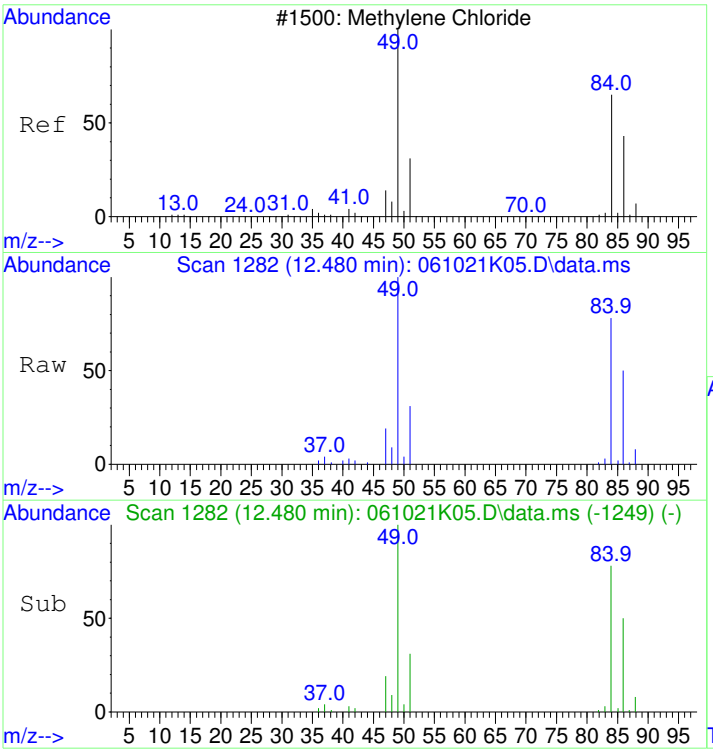



#17
Allyl chloride
Concen: 10.93 ppbv
RT: 11.957 min Scan# 1196
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 41 Resp: 67191

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 76 | 39.0 | 19.0 | 59.0 |
| 78 | 12.7 | 0.0 | 32.7 |

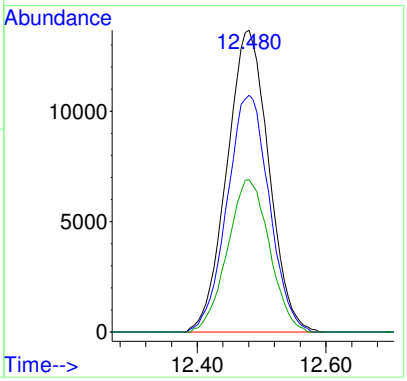


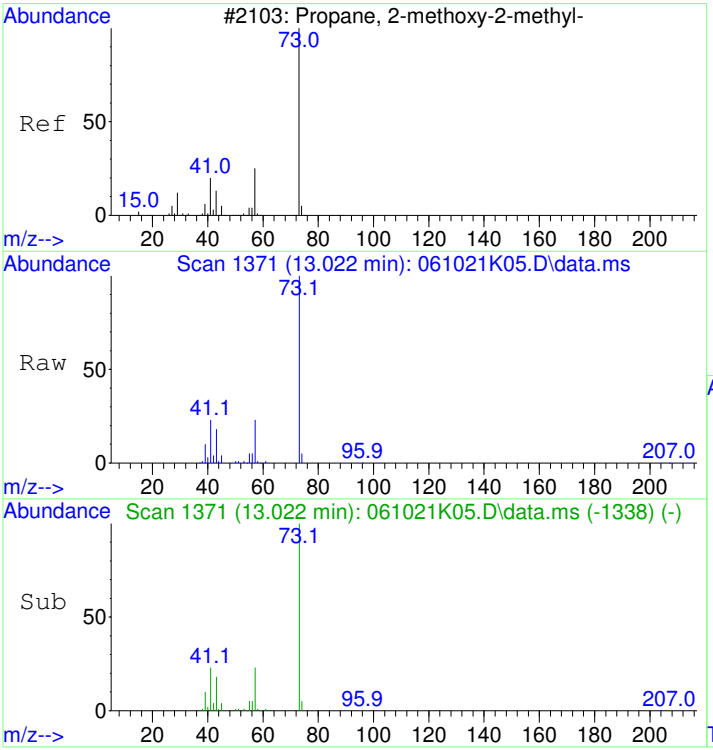




#18
Dichloromethane
Concen: 9.81 ppbv
RT: 12.480 min Scan# 1282
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 49 Resp: 61875

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 84 | 79.0 | 59.0 | 99.0 |
| 86 | 50.5 | 30.5 | 70.5 |

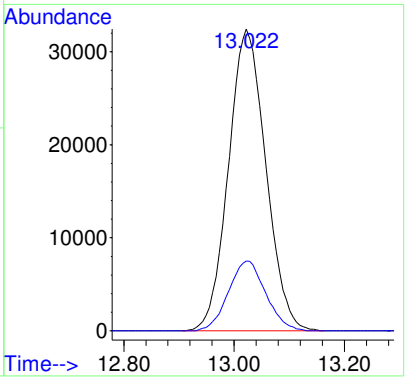


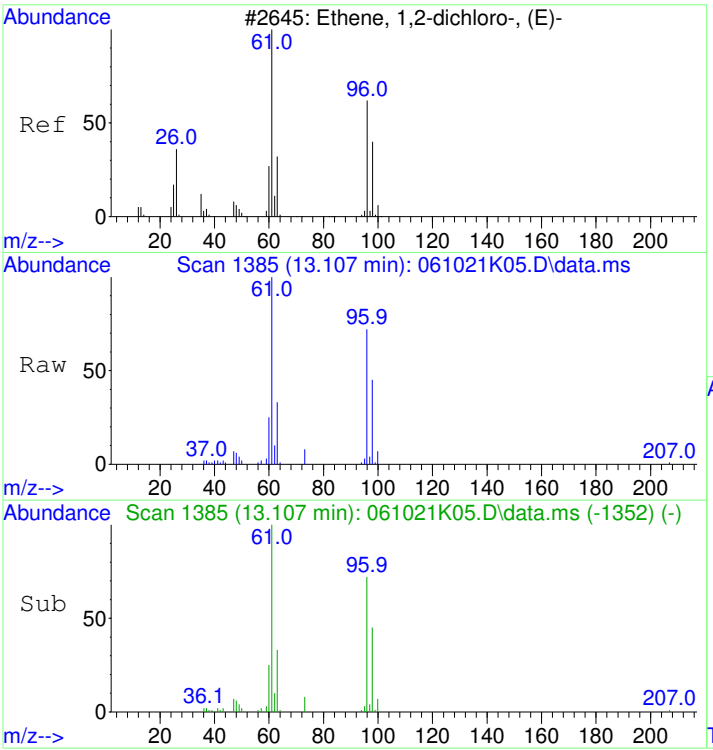



#19
tert-Butyl methyl ether (MTBE)
Concen: 10.20 ppbv
RT: 13.022 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 73 Resp: 152708

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 23.1 | 3.1 | 43.1 |

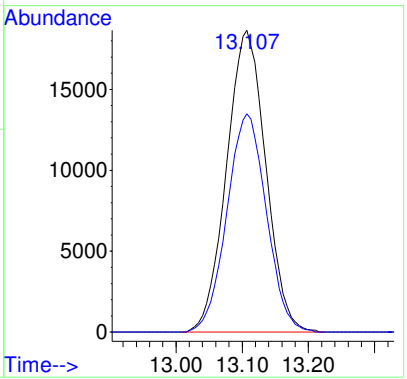


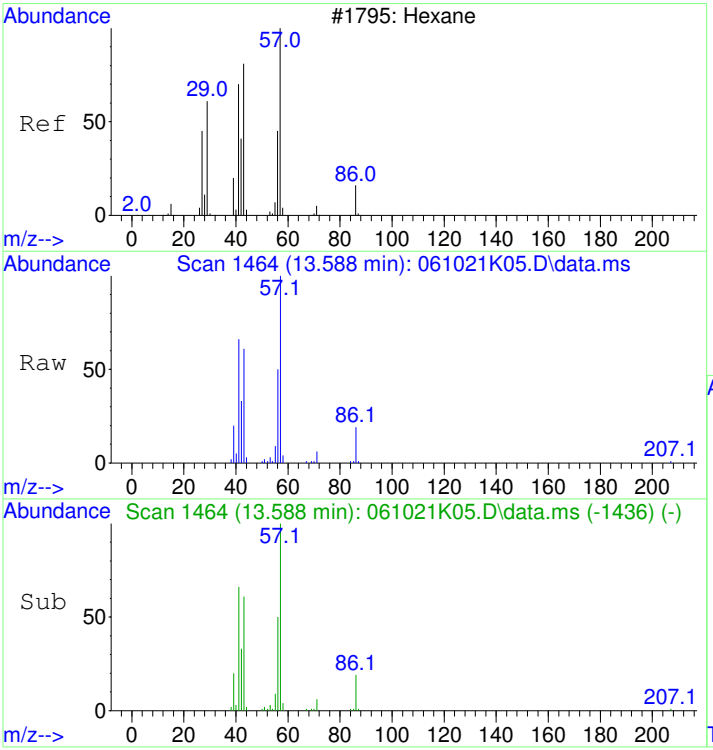




#20
trans-1,2-Dichloroethene
Concen: 10.21 ppbv
RT: 13.107 min Scan# 1385
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 61 Resp: 76789

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 72.8 | 52.8 | 92.8 |

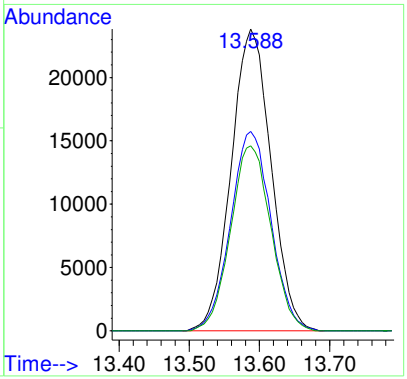


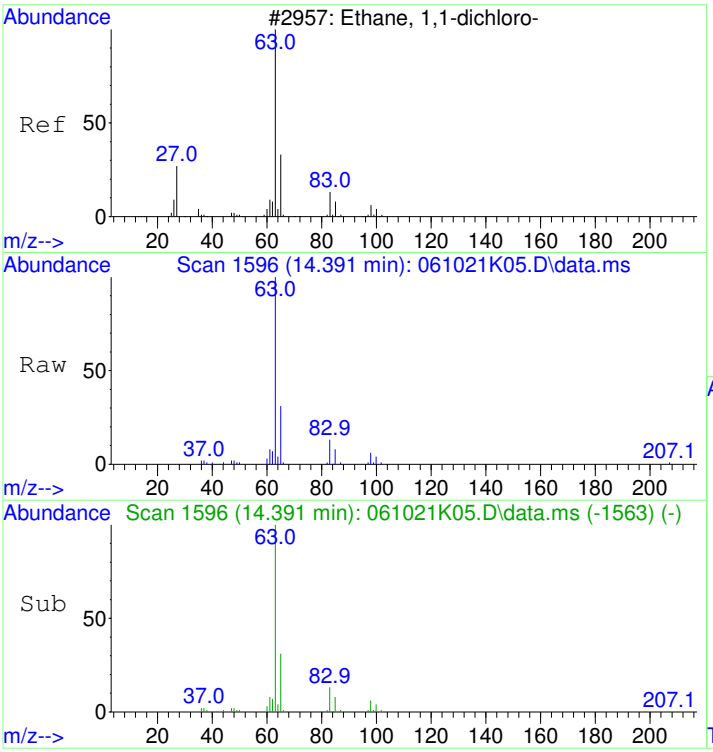



#21
Hexane
Concen: 10.52 ppbv
RT: 13.588 min Scan# 1464
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 57 Resp: 94102

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 67.0 | 47.0 | 87.0 |
| 43 | 62.0 | 42.0 | 82.0 |

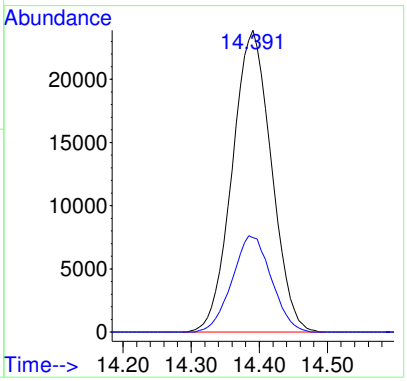


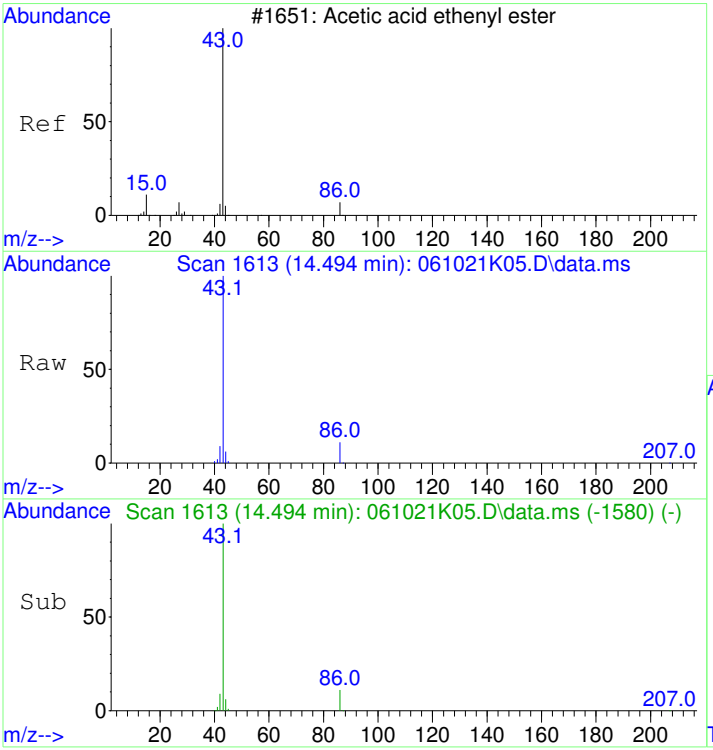




#22
1,1-Dichloroethane
Concen: 10.20 ppbv
RT: 14.391 min Scan# 1596
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 63 Resp: 94858

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 32.1 | 12.1 | 52.1 |

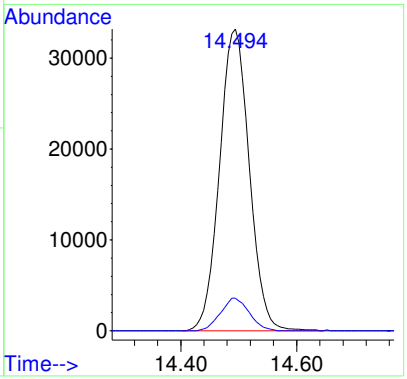


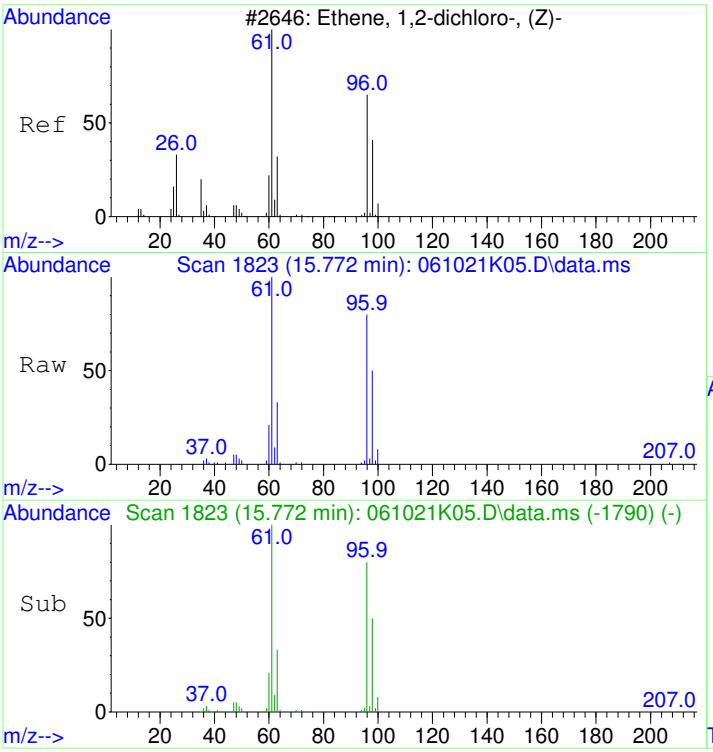



#23
Vinyl acetate
Concen: 11.82 ppbv
RT: 14.494 min Scan# 1613
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 43 Resp: 118727

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 10.5 | 0.0 | 30.5 |

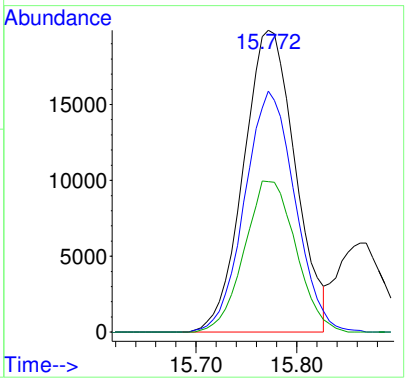


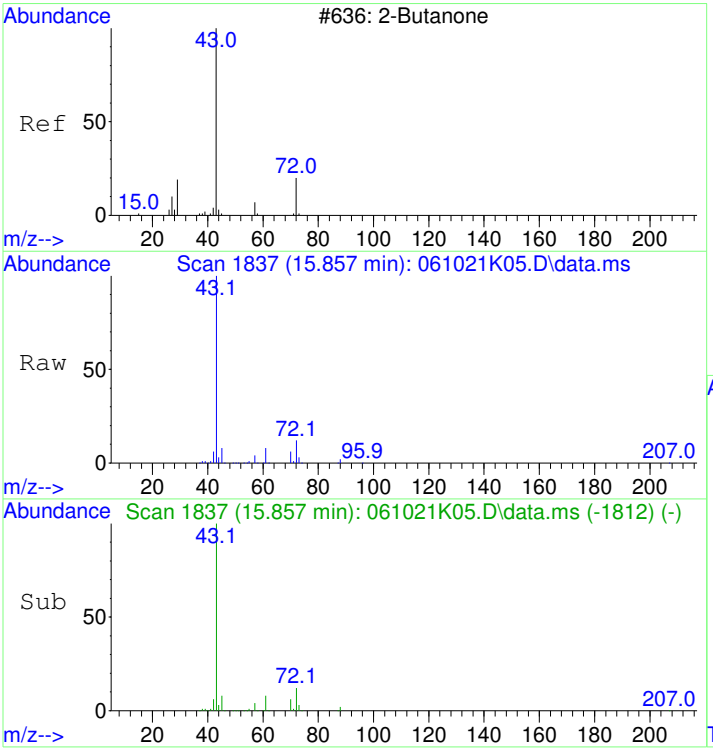




#24
cis-1,2-Dichloroethene
Concen: 11.16 ppbv
RT: 15.772 min Scan# 1823
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 61 Resp: 70933

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 77.1 | 57.1 | 97.1 |
| 98 | 0.0 | 0.0 | 20.0 |

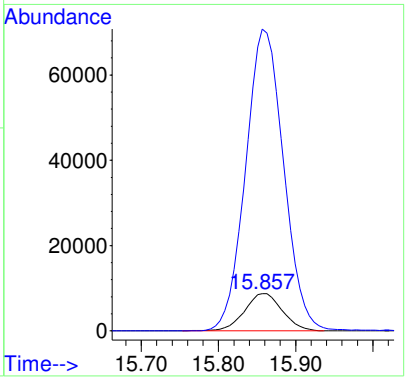


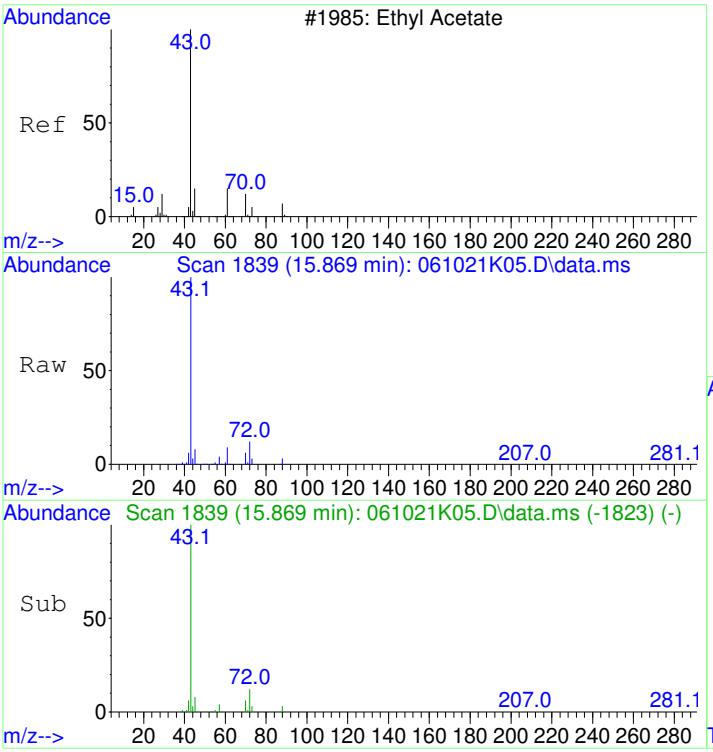



#25
2-Butanone (MEK)
Concen: 10.15 ppbv
RT: 15.857 min Scan# 1837
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 72 Resp: 29873

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 811.3 | 801.3 | 821.3 |

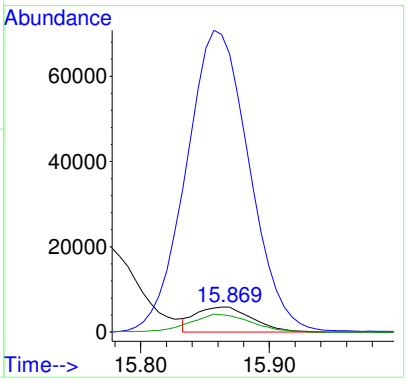


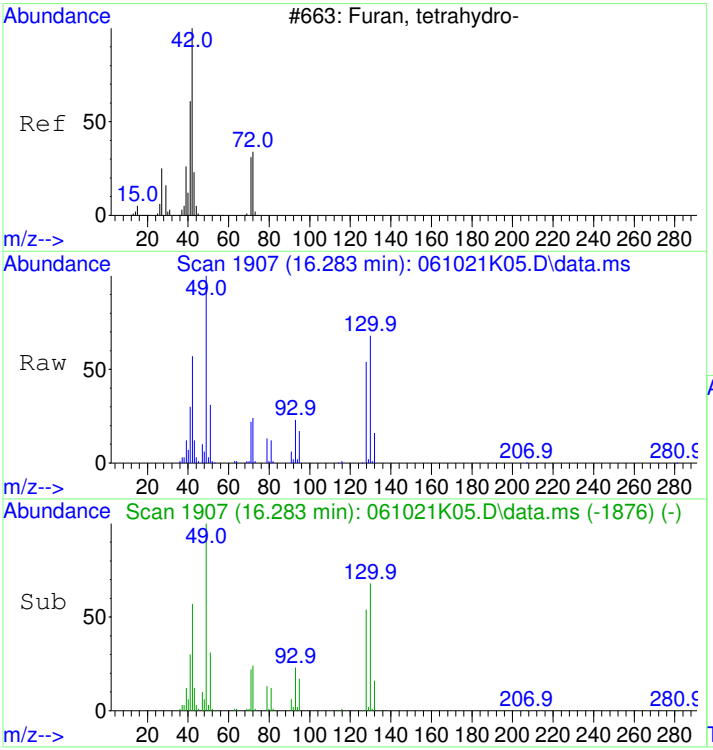




#26
Ethyl acetate
Concen: 10.28 ppbv
RT: 15.869 min Scan# 1839
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 61 Resp: 17935

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 43 | 1337.1 | 1327.1 | 1347.1 |
| 70 | 77.3 | 67.3 | 87.3 |

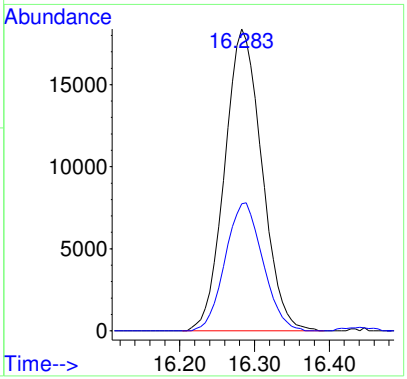


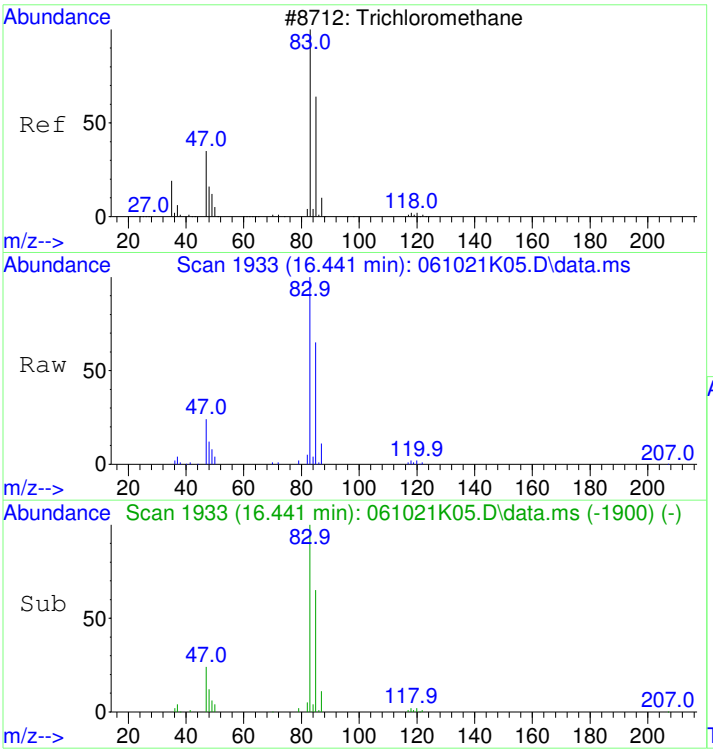



#27
Tetrahydrofuran
Concen: 9.16 ppbv
RT: 16.283 min Scan# 1907
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 42 Resp: 63504

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 72 | 42.9 | 22.9 | 62.9 |

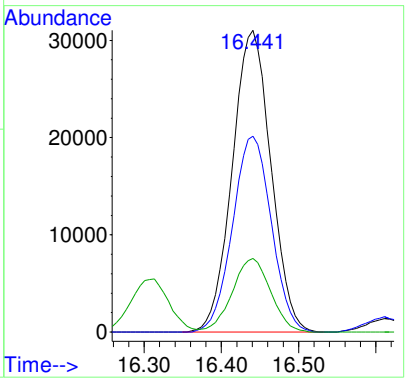


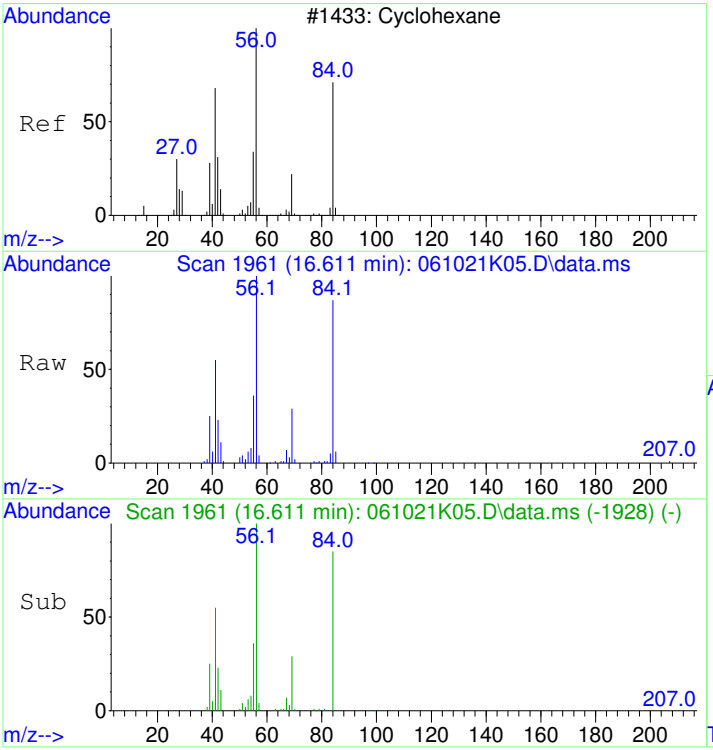




#28
Chloroform
Concen: 10.62 ppbv
RT: 16.441 min Scan# 1933
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 83 Resp: 108079

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.0 | 45.0 | 85.0 |
| 47 | 22.9 | 2.9 | 42.9 |

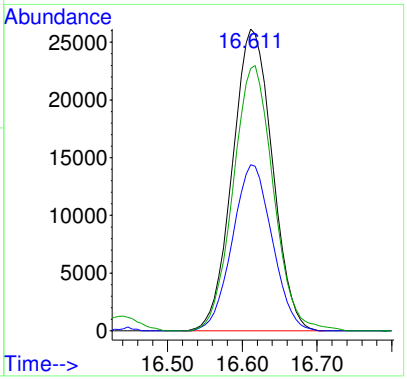


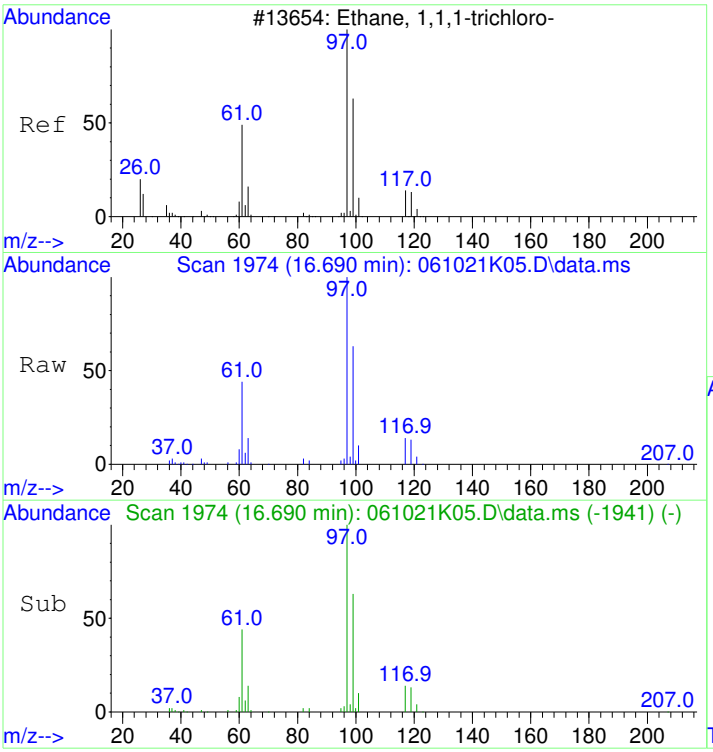



#29
Cyclohexane
Concen: 10.91 ppbv
RT: 16.611 min Scan# 1961
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 56 Resp: 96943

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 41 | 54.9 | 34.9 | 74.9 |
| 84 | 88.7 | 68.7 | 108.7 |

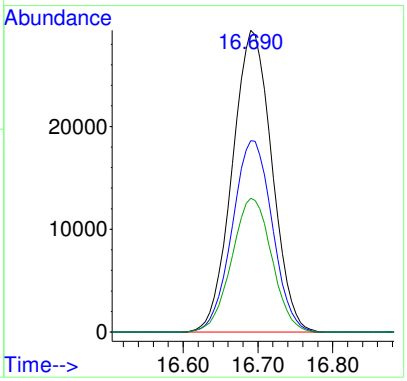


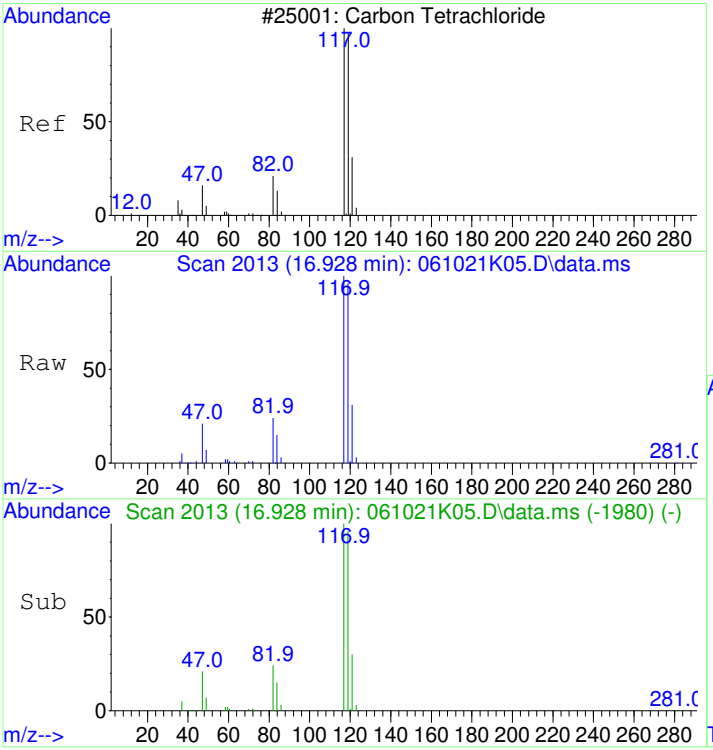




#30
1,1,1-Trichloroethane
Concen: 10.89 ppbv
RT: 16.690 min Scan# 1974
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 97 Resp: 108013

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 64.2 | 44.2 | 84.2 |
| 61 | 44.9 | 24.9 | 64.9 |

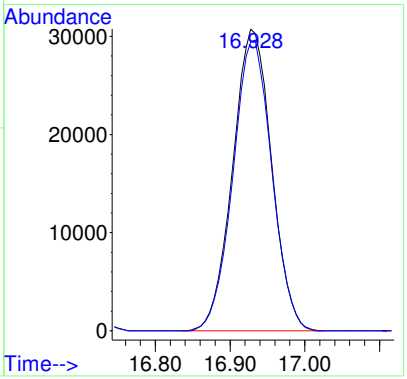


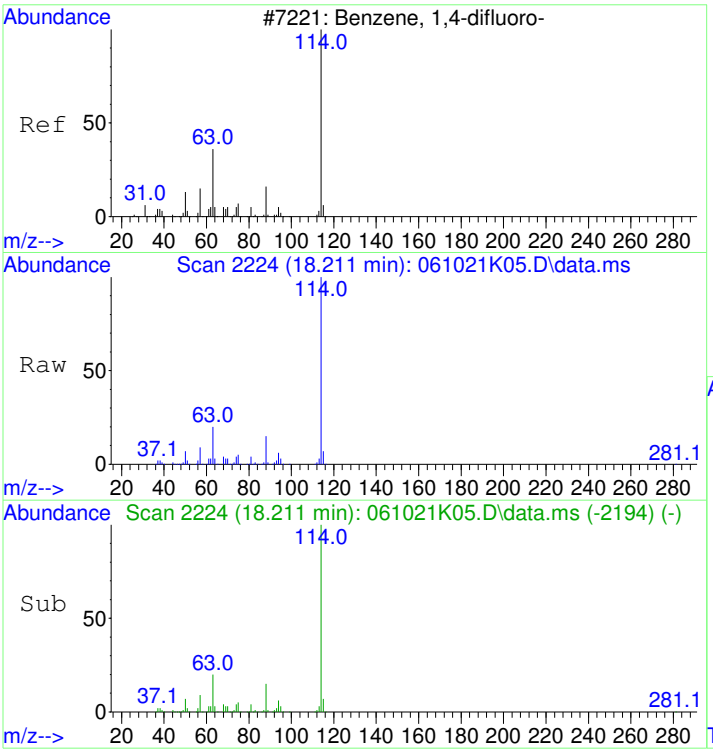



#31
Carbon tetrachloride
Concen: 10.87 ppbv
RT: 16.928 min Scan# 2013
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:117 Resp: 111072

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.1 | 76.1 | 116.1 |

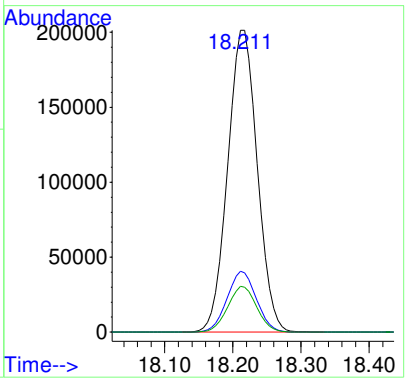


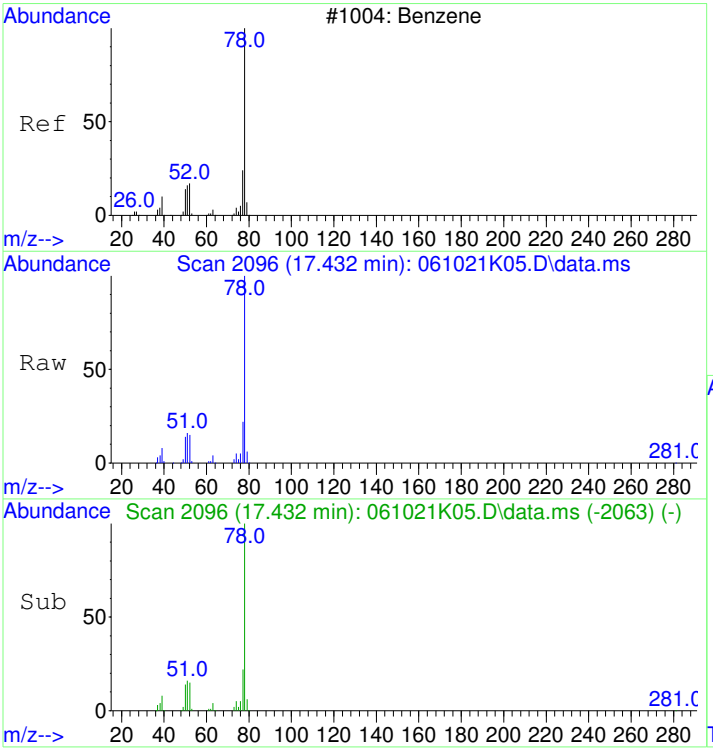




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.211 min Scan# 2224
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:114 Resp: 606406

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.9 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

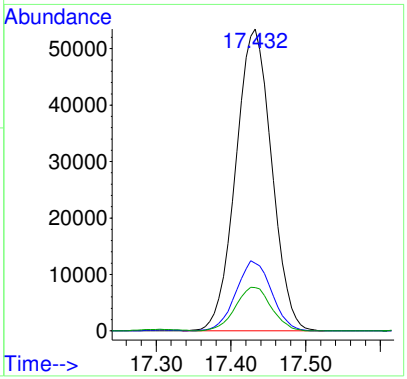


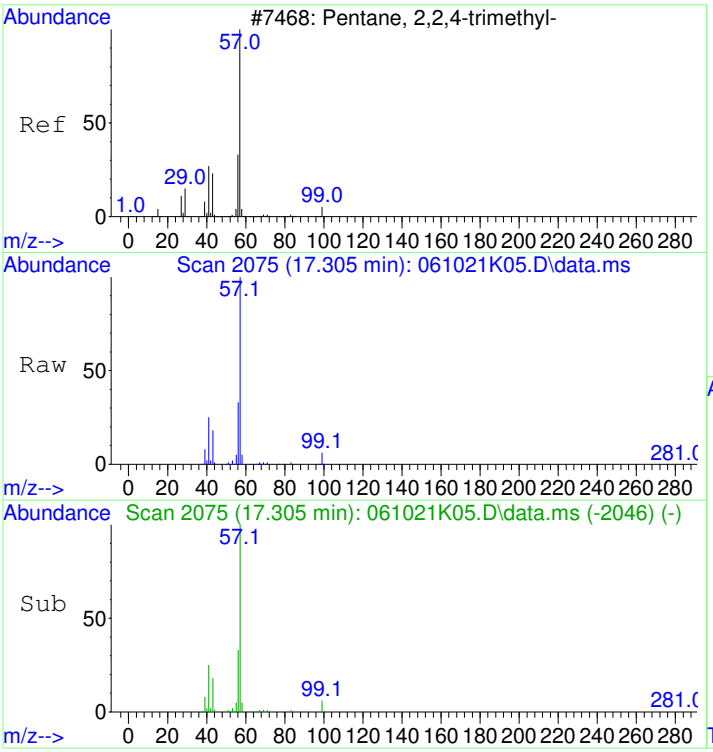



#33
Benzene
Concen: 11.23 ppbv
RT: 17.432 min Scan# 2096
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 78 Resp: 178244

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.0 | 3.0 | 43.0 |
| 50 | 14.4 | 0.0 | 34.4 |

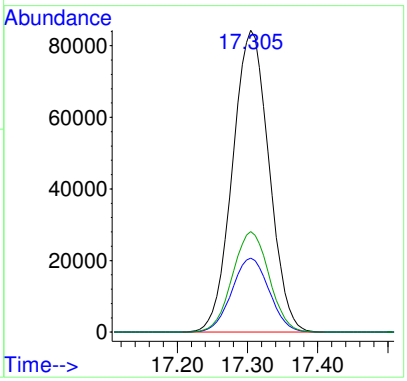


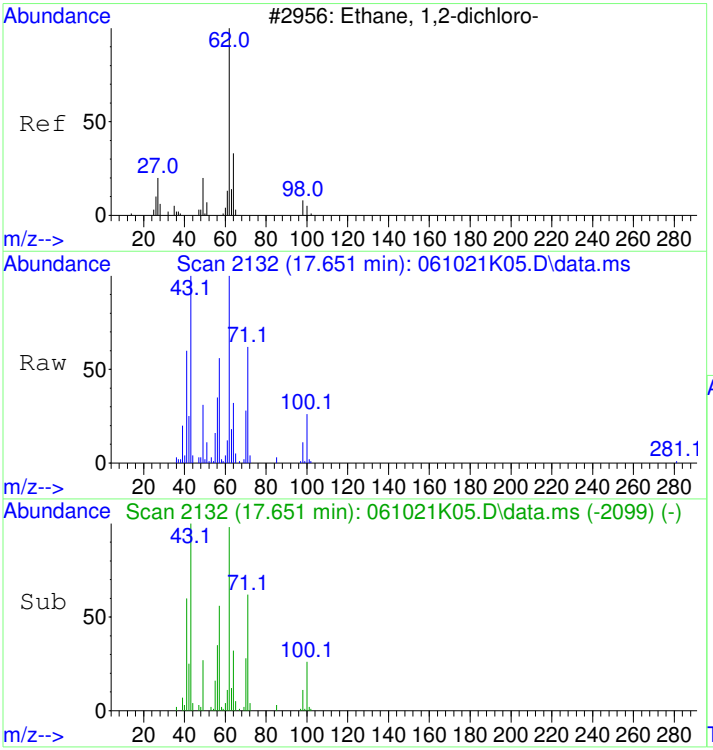




#34
2,2,4-Trimethylpentane
Concen: 11.14 ppbv
RT: 17.305 min Scan# 2075
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 57 Resp: 304411

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 41 | 25.1 | 5.1 | 45.1 |
| 56 | 33.5 | 13.5 | 53.5 |

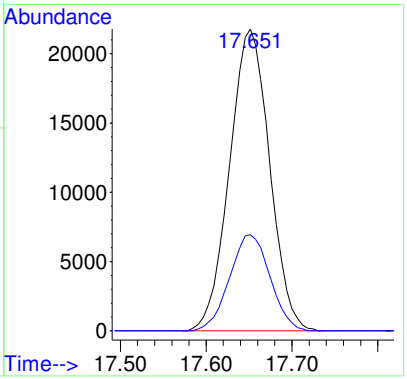


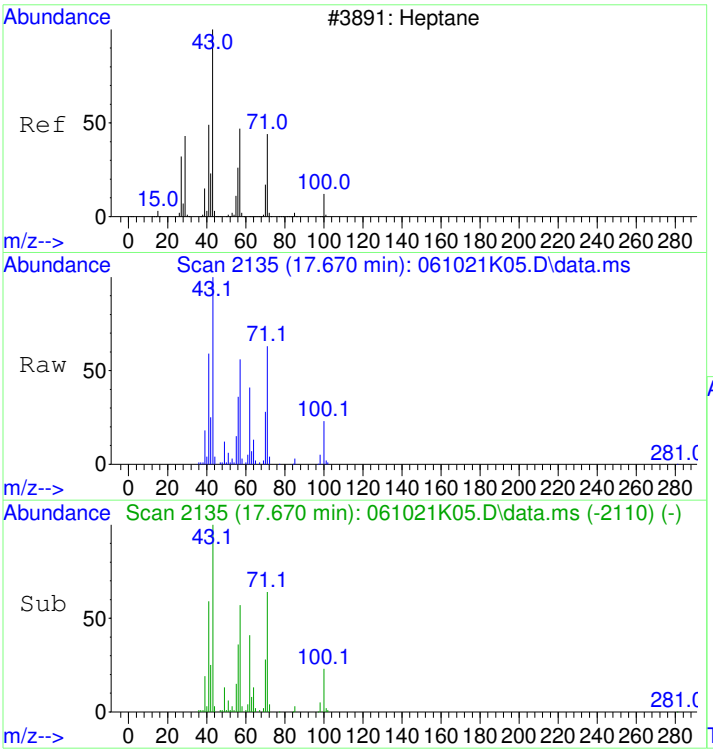



#35
1,2-Dichloroethane
Concen: 10.77 ppbv
RT: 17.651 min Scan# 2132
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 62 Resp: 70659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.2 | 12.2 | 52.2 |

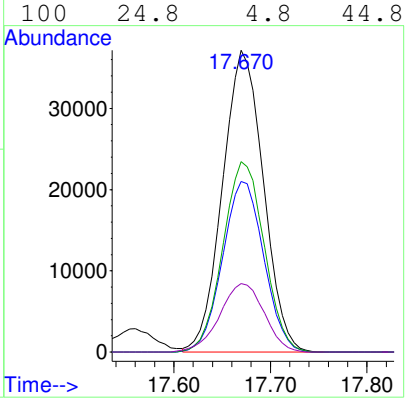


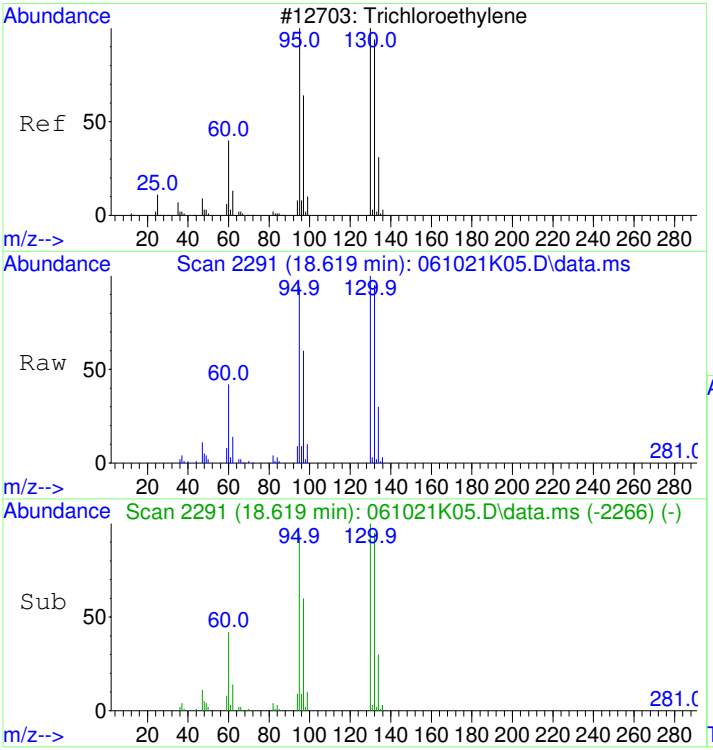




#36
Heptane
Concen: 11.14 ppbv
RT: 17.670 min Scan# 2135
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 43 Resp: 109433

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 57.1 | 37.1 | 77.1 |
| 71 | 63.6 | 43.6 | 83.6 |
| 100 | 24.8 | 4.8 | 44.8 |

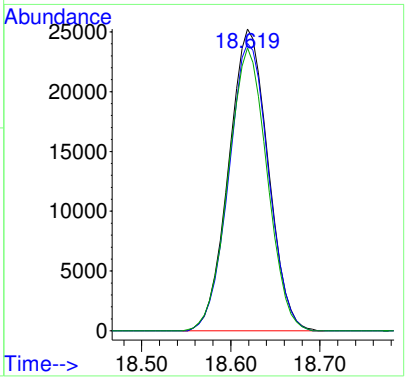


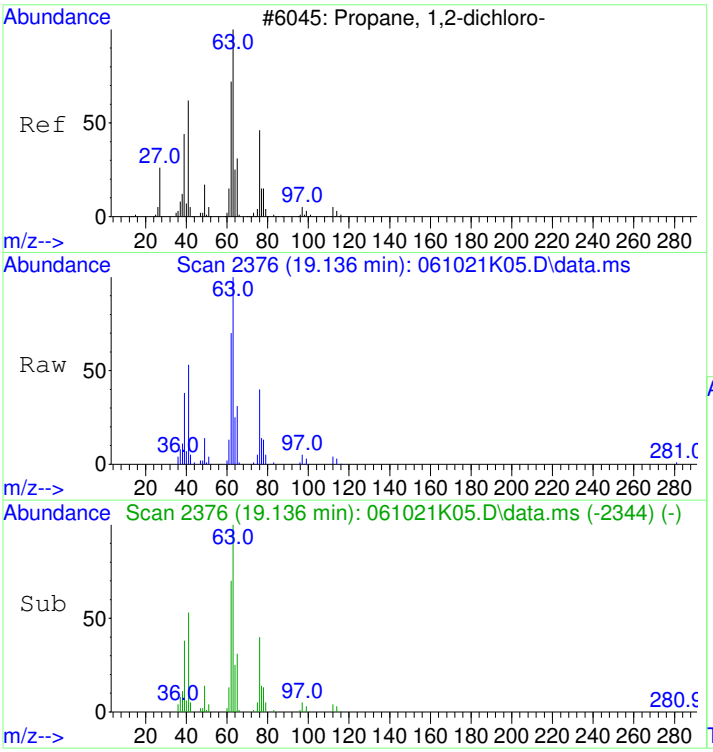



#37
Trichloroethene
Concen: 11.15 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:130 Resp: 77117

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.9 | 75.9 | 115.9 |
| 95 | 92.6 | 72.6 | 112.6 |

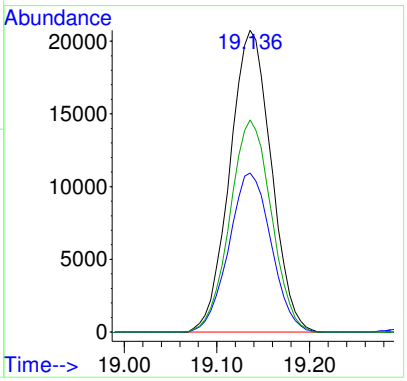


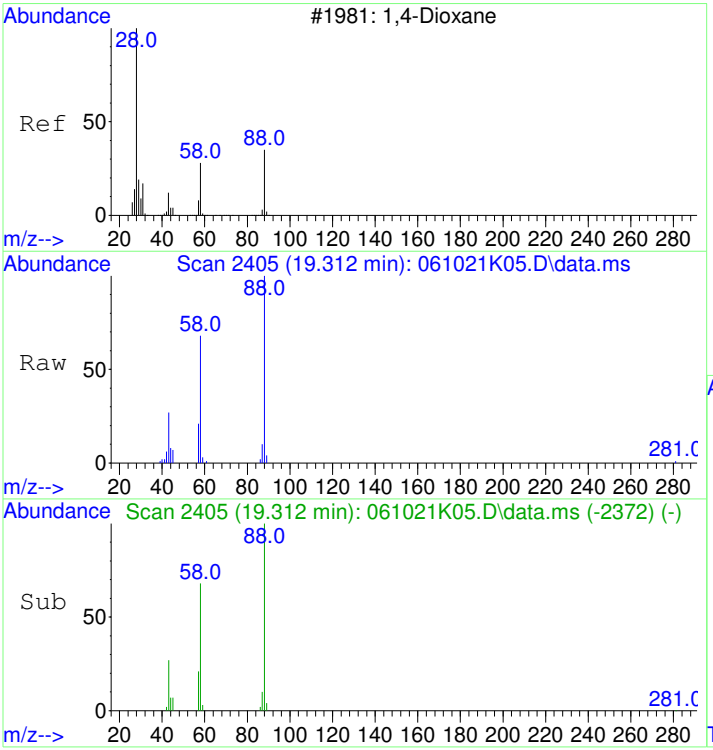




#38
1,2-Dichloropropane
Concen: 11.15 ppbv
RT: 19.136 min Scan# 2376
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 63 Resp: 64311

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 41 | 53.9 | 33.9 | 73.9 |
| 62 | 70.4 | 50.4 | 90.4 |

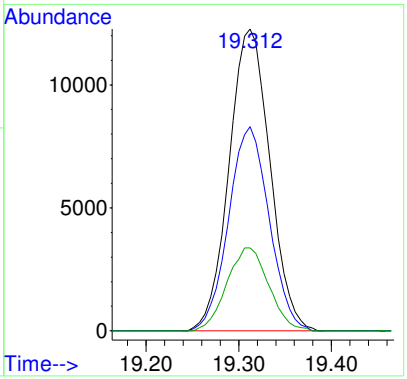


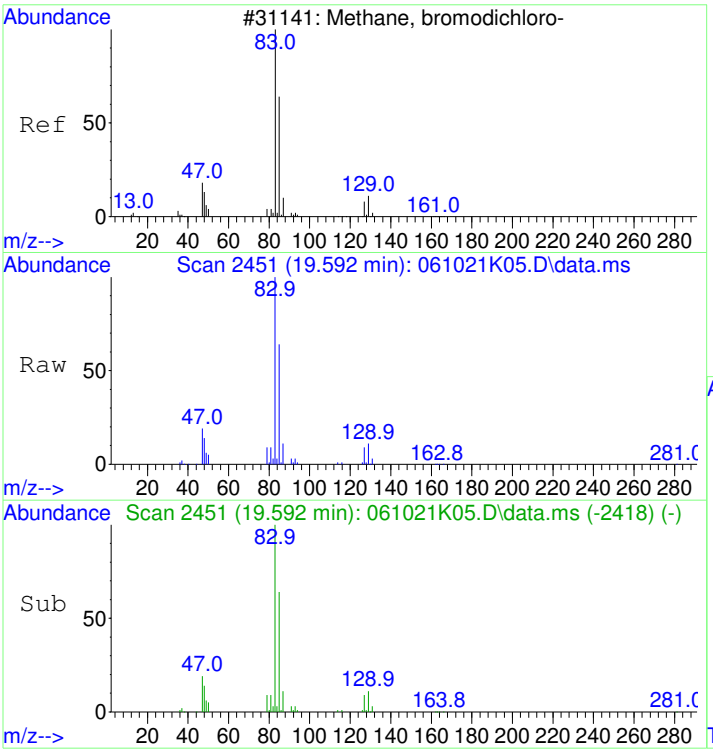



#39
1,4-Dioxane
Concen: 10.73 ppbv
RT: 19.312 min Scan# 2405
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 88 Resp: 37615

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 67.1 | 47.1 | 87.1 |
| 43 | 28.1 | 8.1 | 48.1 |

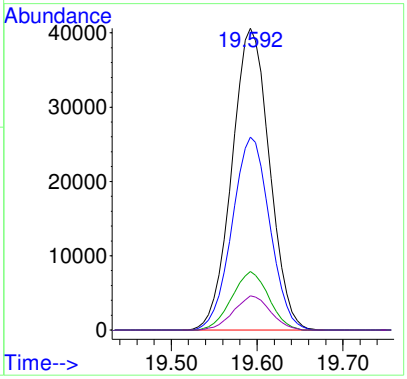


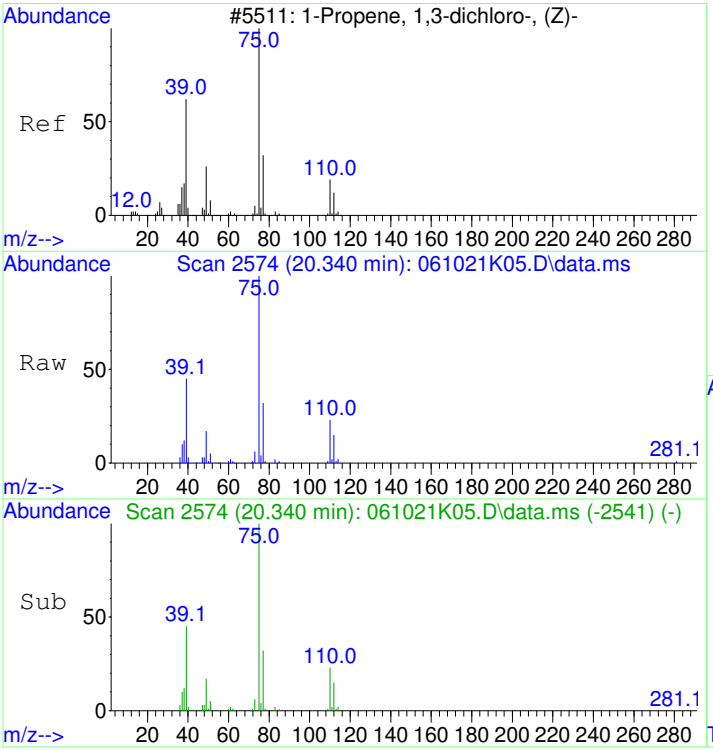




#40
Bromodichloromethane
Concen: 10.56 ppbv
RT: 19.592 min Scan# 2451
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 83 Resp: 123677

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.0 | 44.0 | 84.0 |
| 47 | 19.0 | 0.0 | 39.0 |
| 129 | 11.1 | 0.0 | 31.1 |

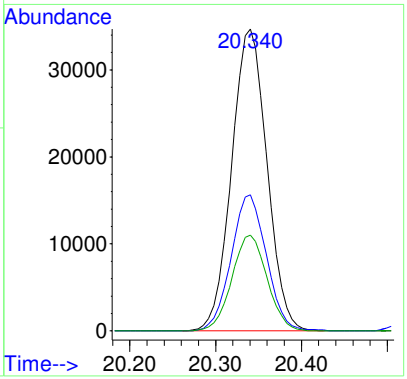


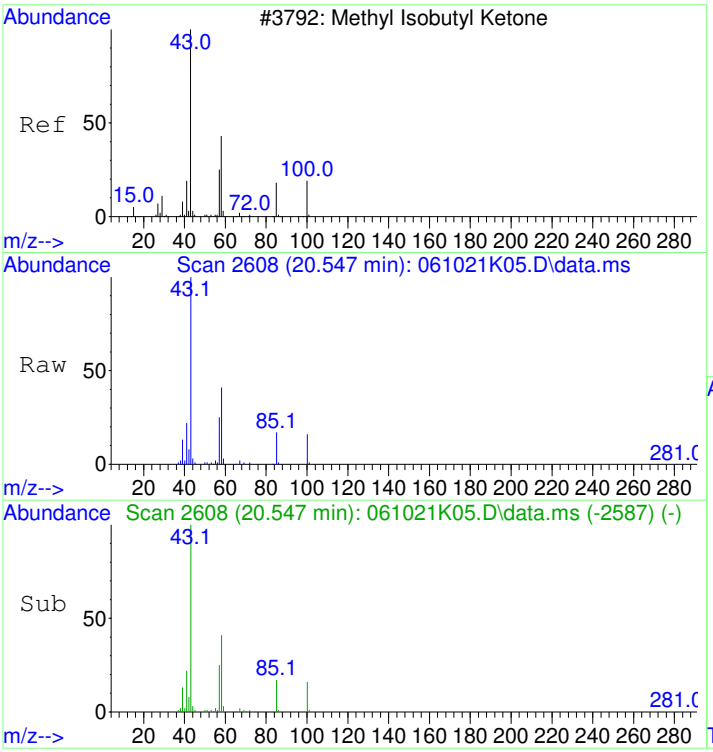



#41
cis-1,3-Dichloropropene
Concen: 11.96 ppbv
RT: 20.340 min Scan# 2574
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 75 Resp: 99415

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 39 | 45.0 | 25.0 | 65.0 |
| 77 | 31.5 | 11.5 | 51.5 |

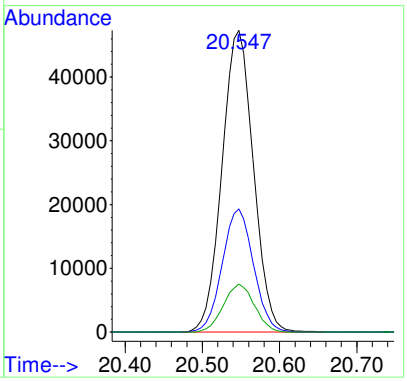


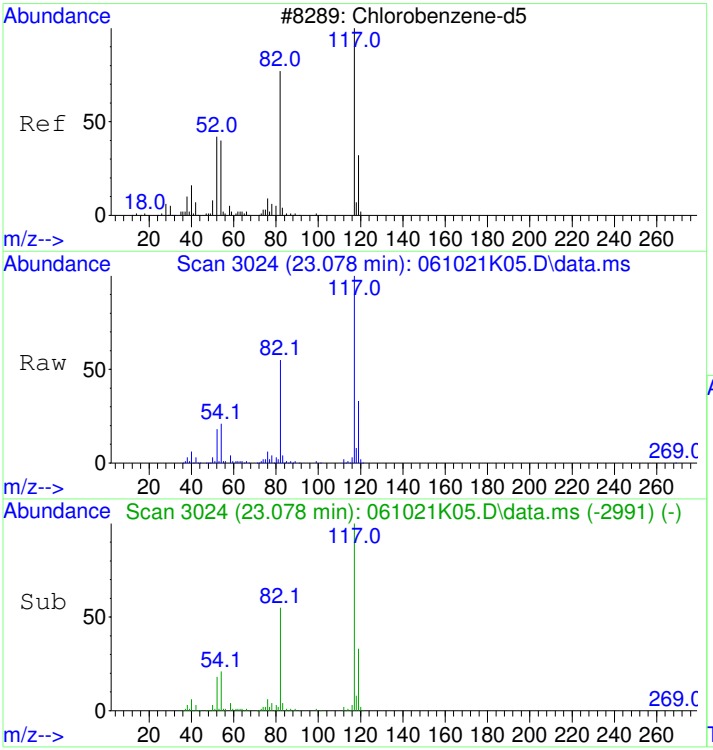




#42
4-Methyl-2-pentanone (MIBK)
Concen: 10.02 ppbv
RT: 20.547 min Scan# 2608
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 43 Resp: 133762

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 40.6 | 20.6 | 60.6 |
| 100 | 15.7 | 0.0 | 35.7 |

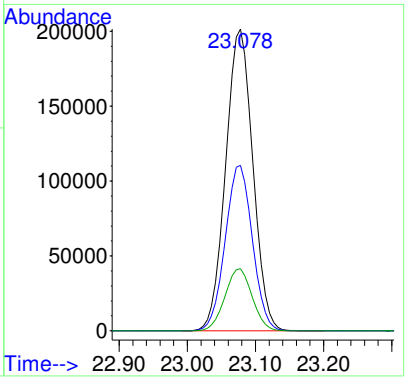


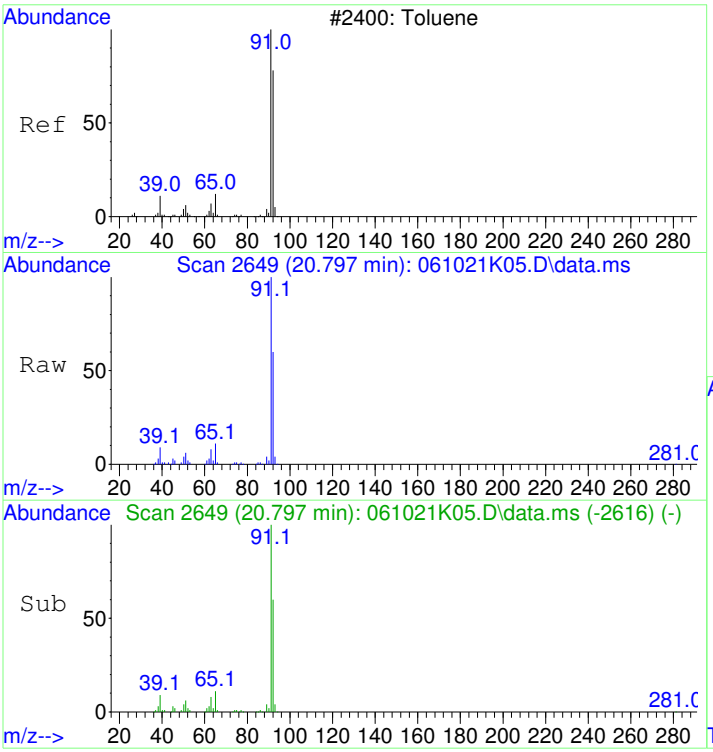



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:117 Resp: 557350

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.8 | 34.8 | 74.8 |
| 54 | 20.6 | 0.6 | 40.6 |

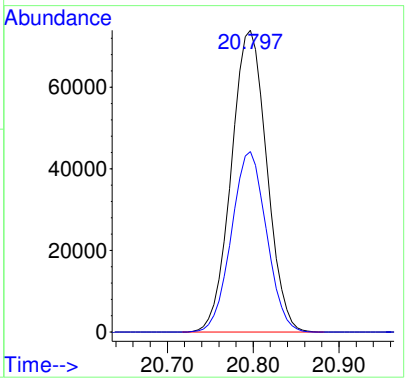


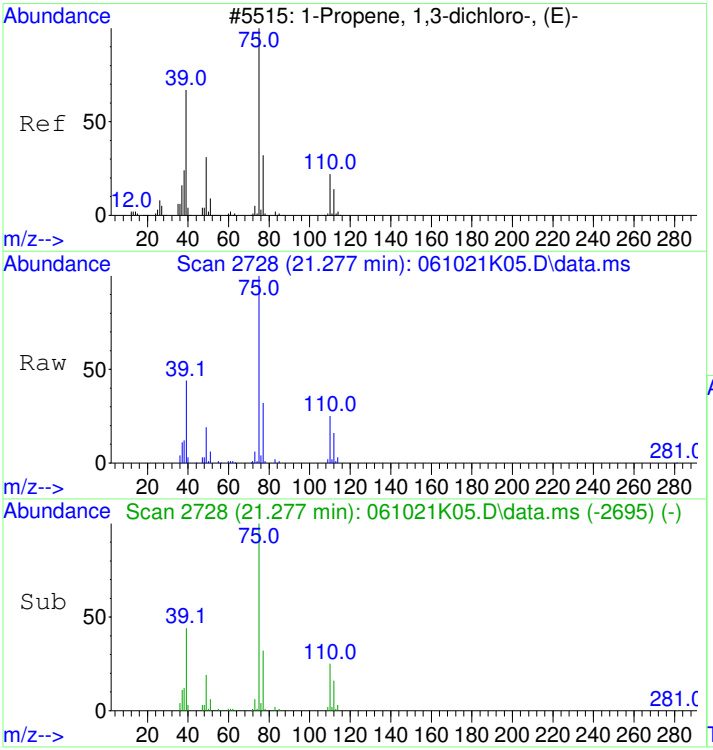




#44
Toluene
Concen: 11.39 ppbv
RT: 20.797 min Scan# 2649
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 91 Resp: 212492

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.2 | 39.2 | 79.2 |

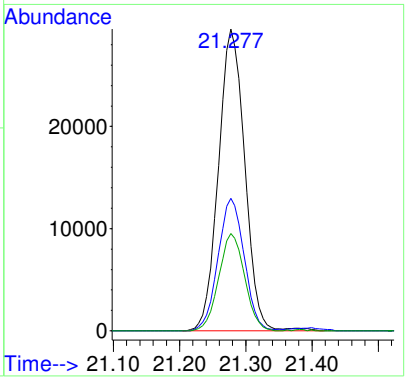


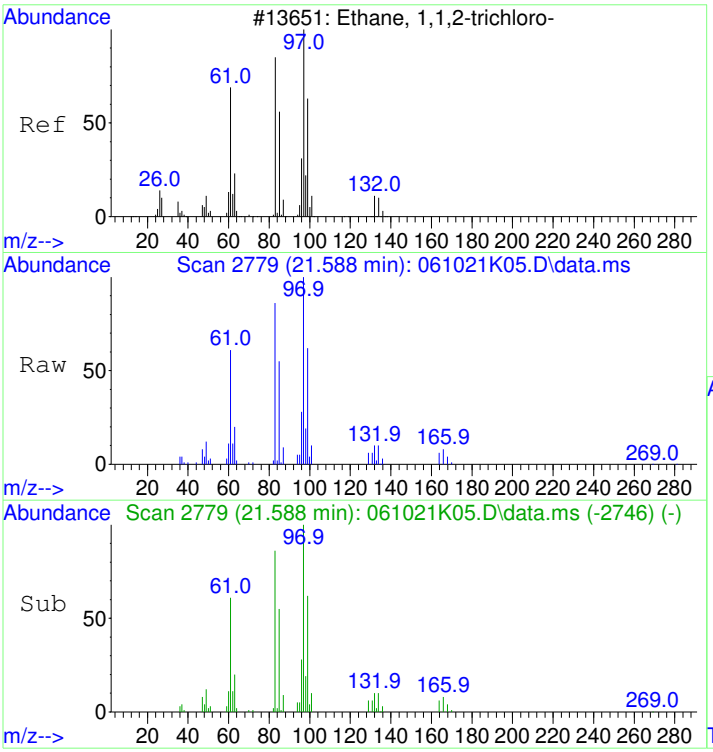



#45
trans-1,3-Dichloropropene
Concen: 11.01 ppbv
RT: 21.277 min Scan# 2728
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 75 Resp: 81644

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 39 | 44.8 | 24.8 | 64.8 |
| 77 | 31.6 | 11.6 | 51.6 |

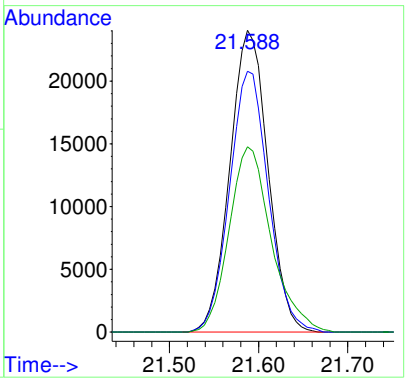


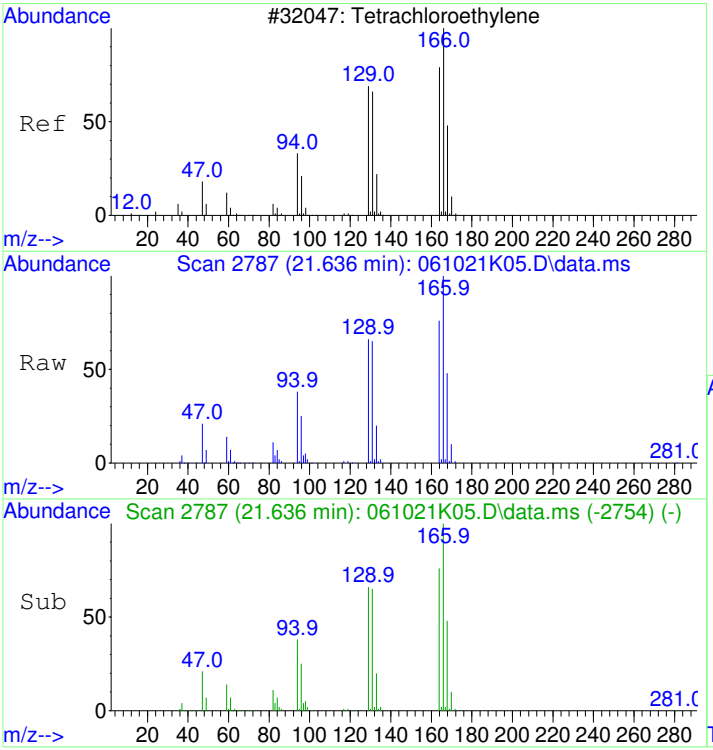




#46
1,1,2-Trichloroethane
Concen: 11.17 ppbv
RT: 21.588 min Scan# 2779
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 97 Resp: 71178

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 88.4 | 68.4 | 108.4 |
| 61 | 68.2 | 48.2 | 88.2 |

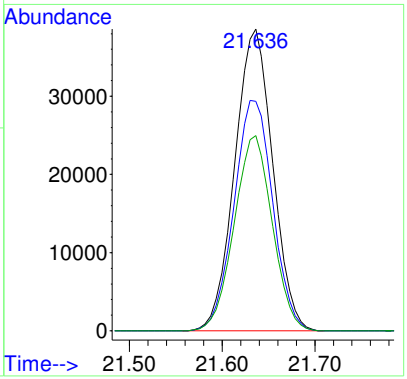


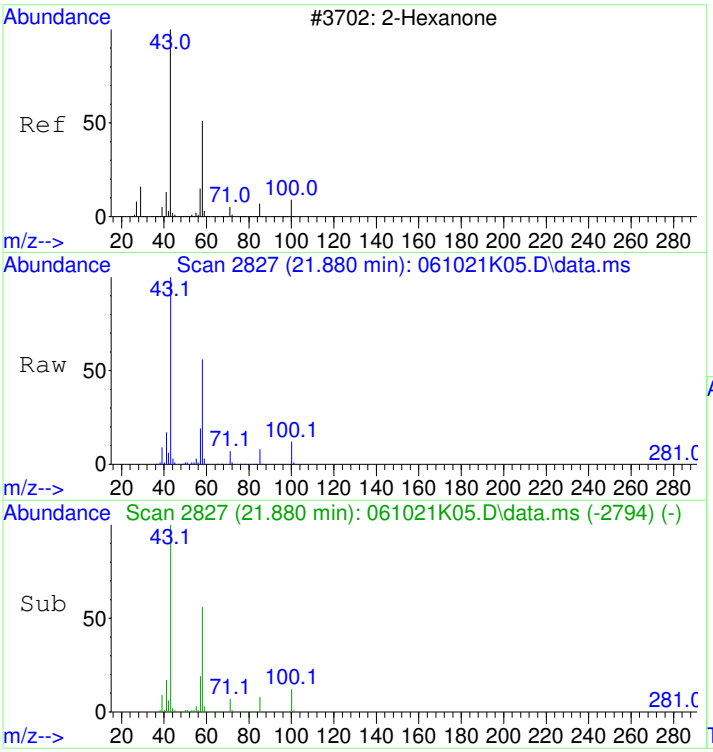



#47
Tetrachloroethene
Concen: 11.08 ppbv
RT: 21.636 min Scan# 2787
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:166 Resp: 110028

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.0 | 58.0 | 98.0 |
| 131 | 64.8 | 44.8 | 84.8 |

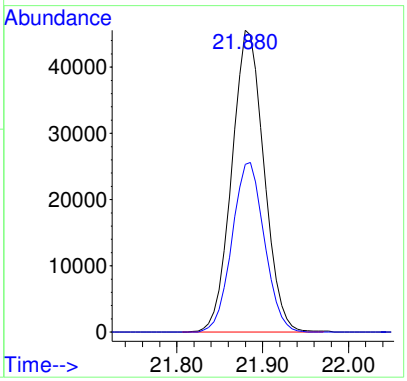


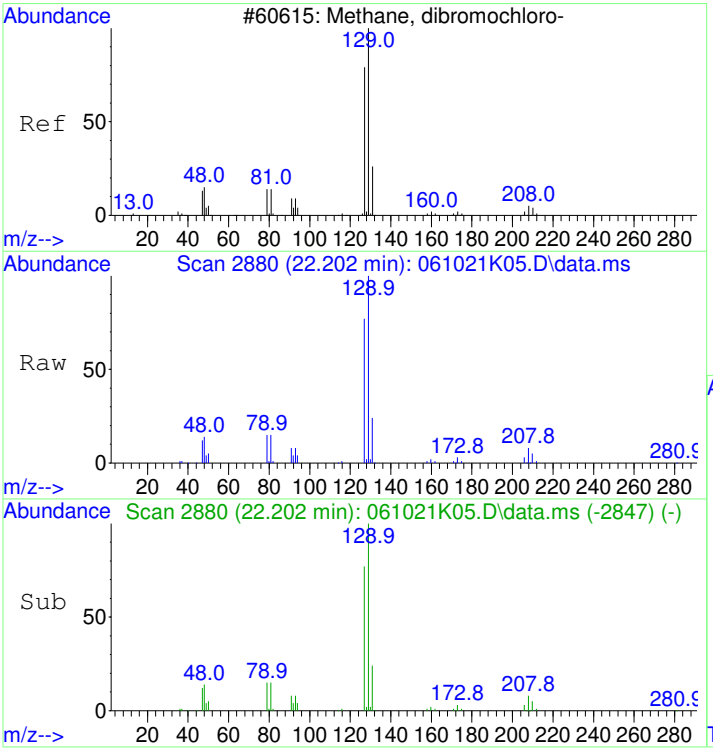




#48
2-Hexanone
Concen: 9.58 ppbv
RT: 21.880 min Scan# 2827
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 43 Resp: 119017

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 56.3 | 36.3 | 76.3 |

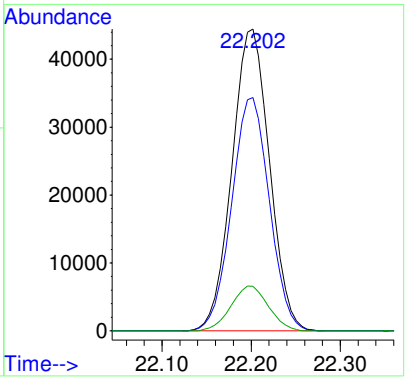


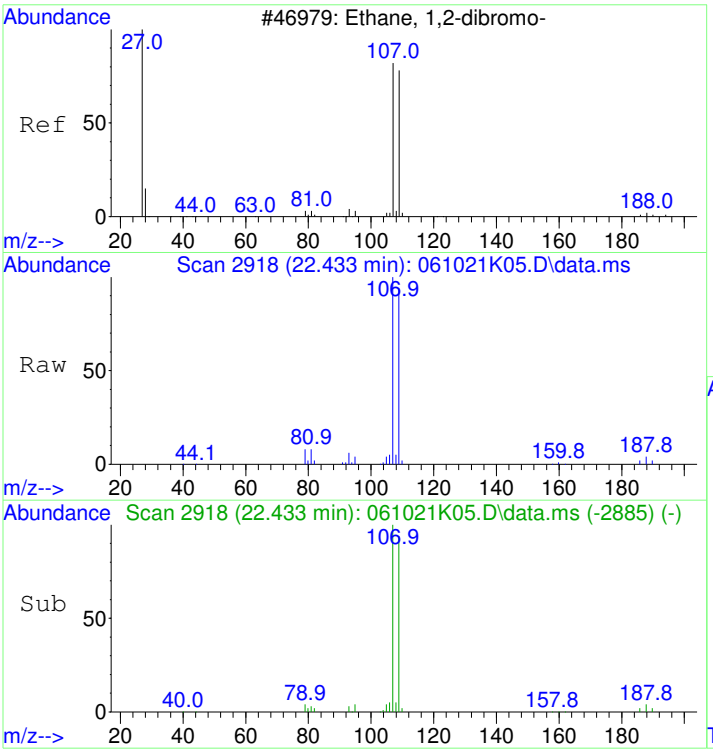



#49
Chlorodibromomethane
Concen: 10.57 ppbv
RT: 22.202 min Scan# 2880
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:129 Resp: 129626

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 77.6 | 57.6 | 97.6 |
| 79 | 14.8 | 0.0 | 34.8 |

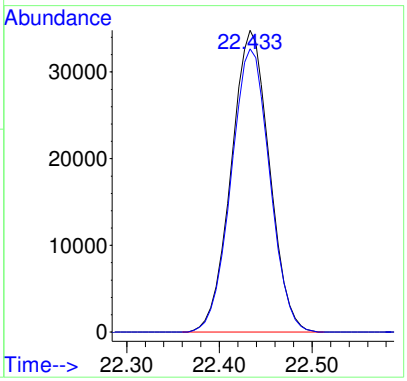


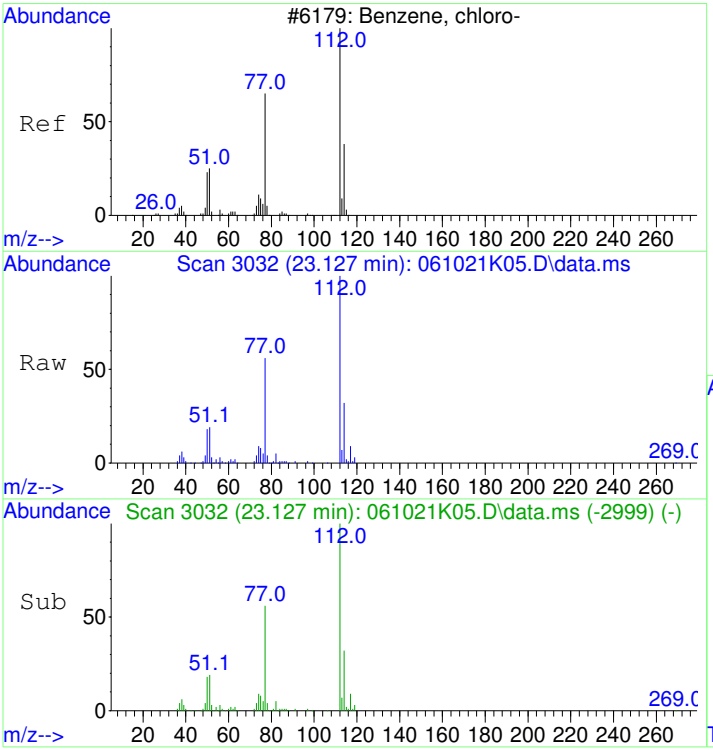




#50
1,2-Dibromoethane (EDB)
Concen: 11.24 ppbv
RT: 22.433 min Scan# 2918
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:107 Resp: 99673

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 94.6 | 74.6 | 114.6 |

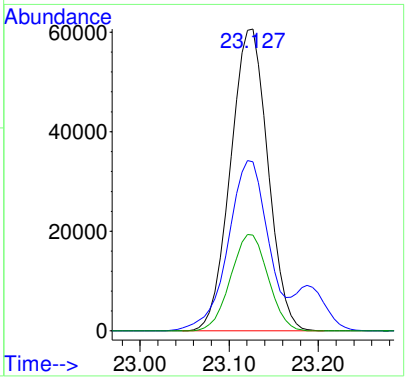


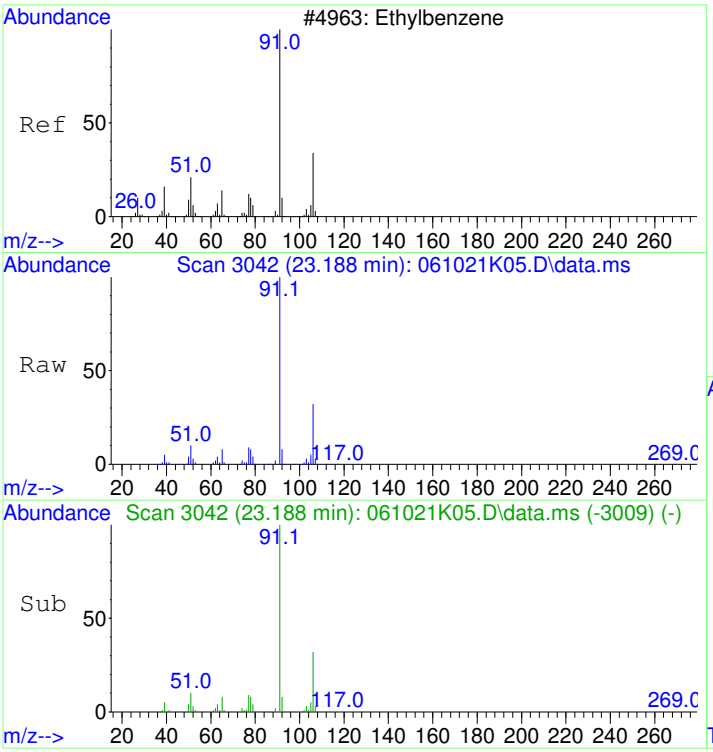



#51
Chlorobenzene
Concen: 11.20 ppbv
RT: 23.127 min Scan# 3032
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:112 Resp: 175915

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 73.3 | 53.3 | 93.3 |
| 114 | 32.0 | 12.0 | 52.0 |

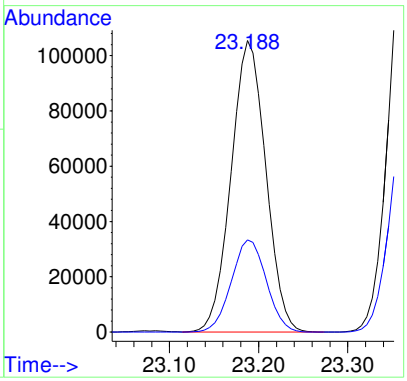


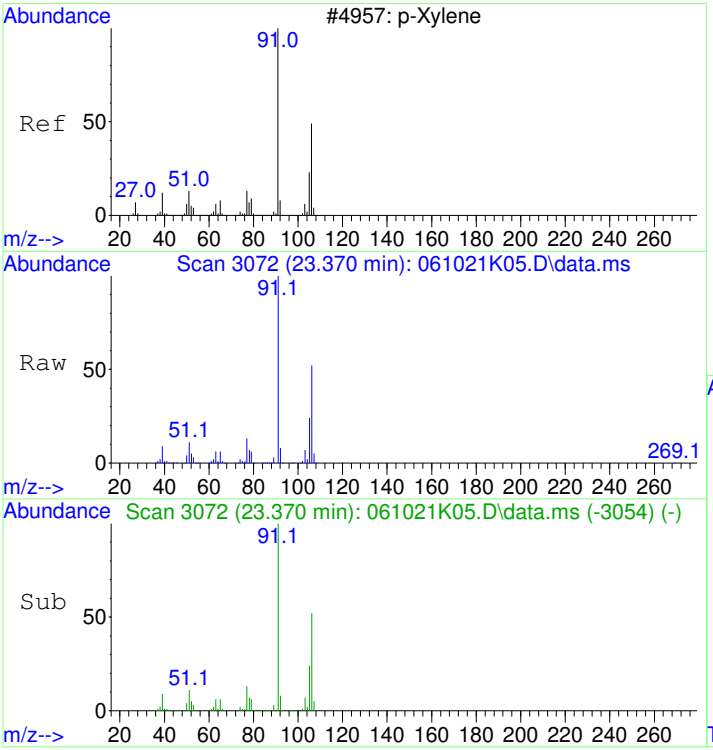




#52
Ethylbenzene
Concen: 11.09 ppbv
RT: 23.188 min Scan# 3042
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 91 Resp: 284516

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.8 | 11.8 | 51.8 |

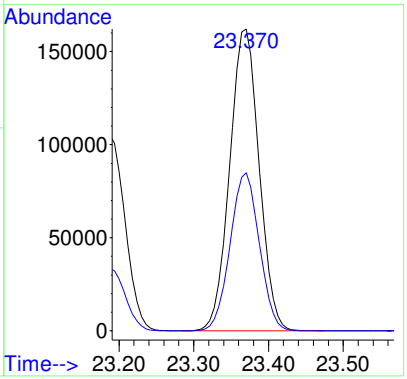


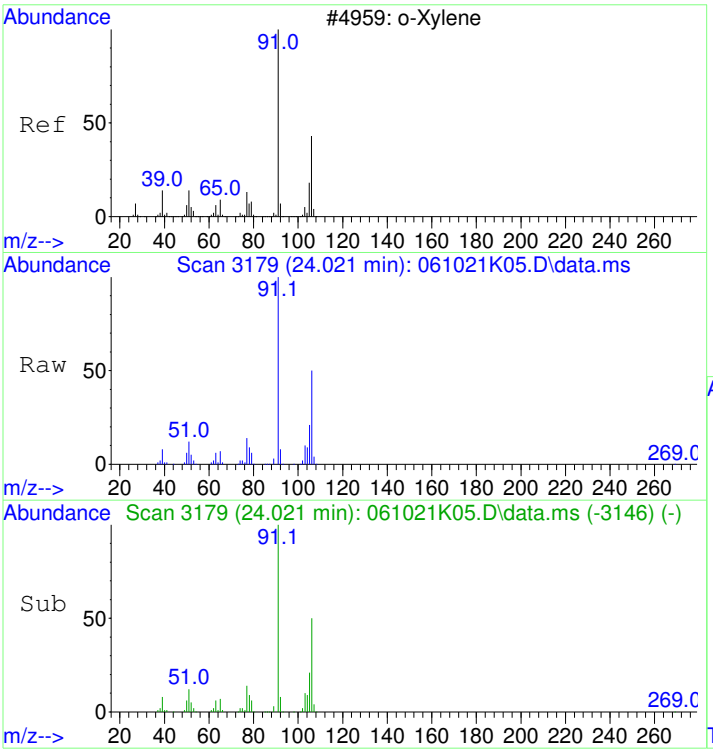



#53
m&p-Xylene
Concen: 22.74 ppbv
RT: 23.370 min Scan# 3072
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 91 Resp: 442932

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 51.9 | 31.9 | 71.9 |

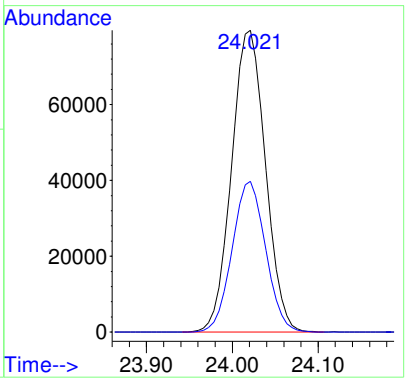


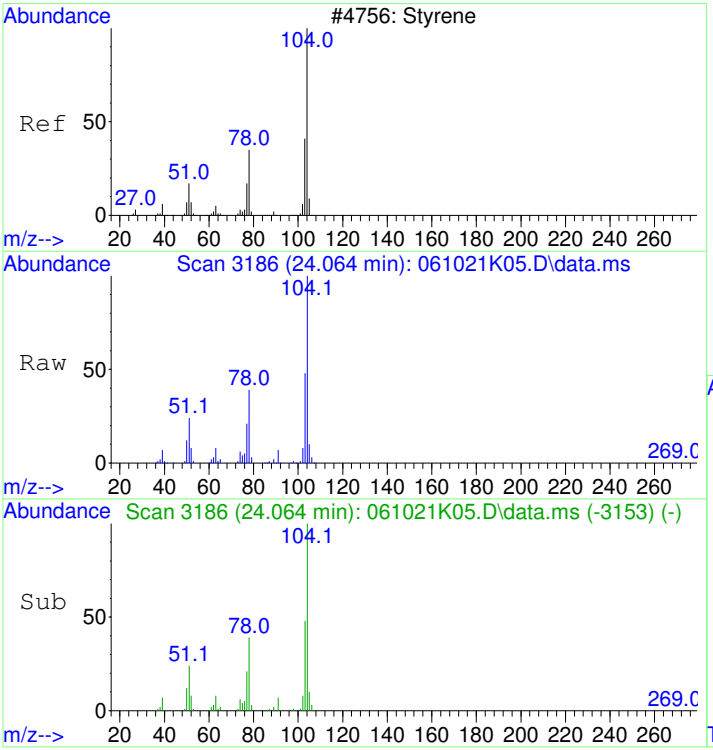




#54
o-Xylene
Concen: 10.55 ppbv
RT: 24.021 min Scan# 3179
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 91 Resp: 218393

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 49.3 | 29.3 | 69.3 |

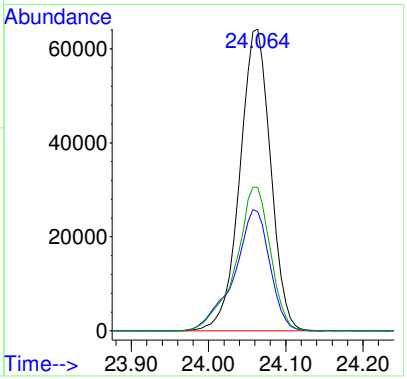


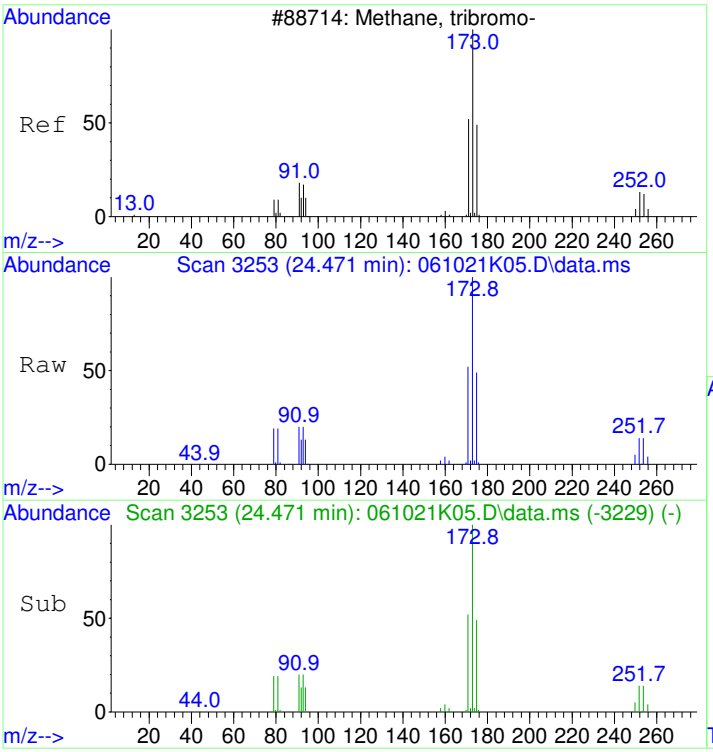



#55
Styrene
Concen: 11.94 ppbv
RT: 24.064 min Scan# 3186
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:104 Resp: 177560

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 46.6 | 26.6 | 66.6 |
| 103 | 53.8 | 33.8 | 73.8 |

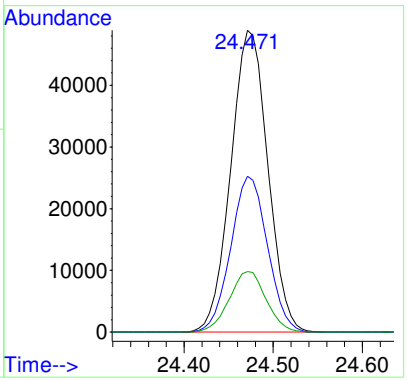


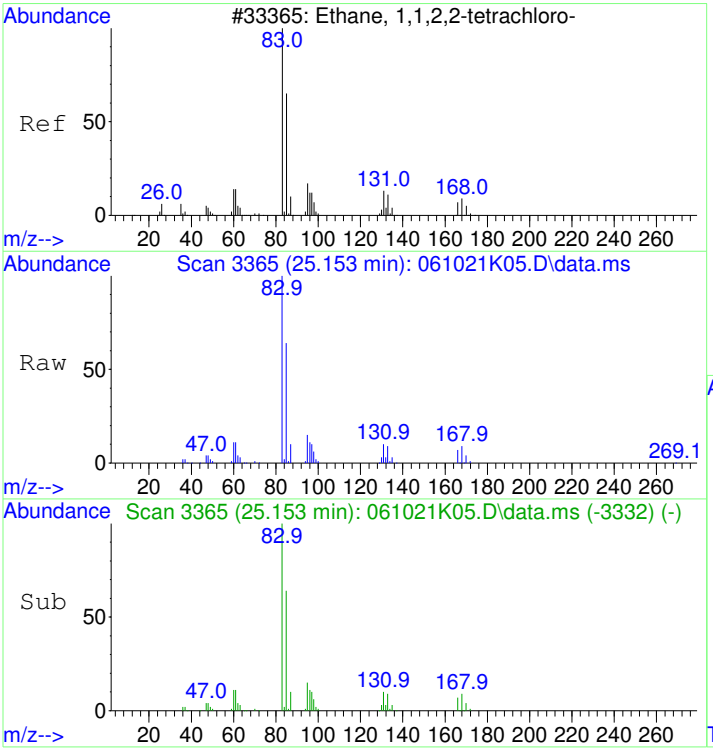




#56
Bromoform
Concen: 11.41 ppbv
RT: 24.471 min Scan# 3253
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:173 Resp: 140785

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 171 | 51.2 | 31.2 | 71.2 |
| 91 | 20.0 | 0.0 | 40.0 |

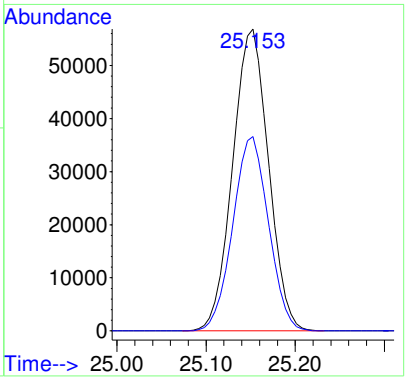


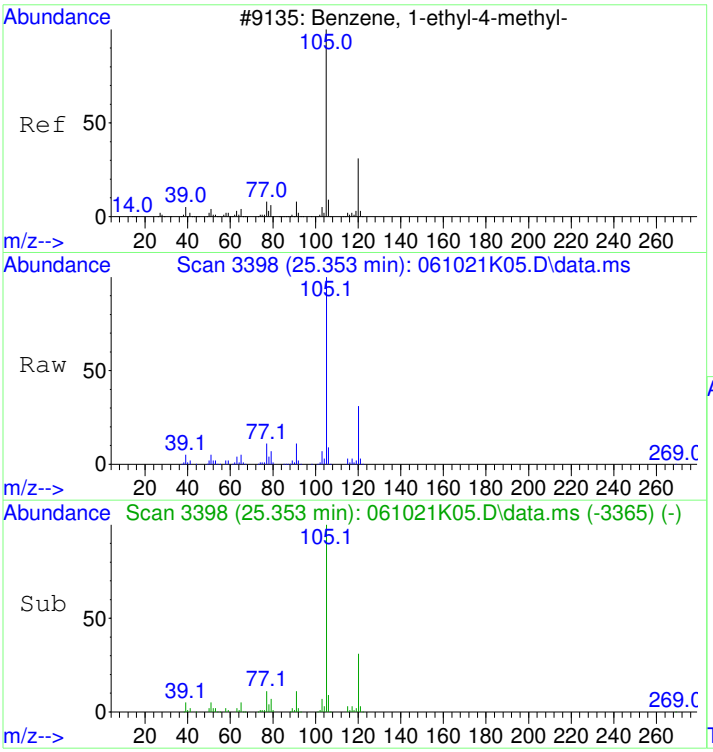



#57
1,1,2,2-Tetrachloroethane
Concen: 10.34 ppbv
RT: 25.153 min Scan# 3365
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 83 Resp: 158555

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.0 | 44.0 | 84.0 |

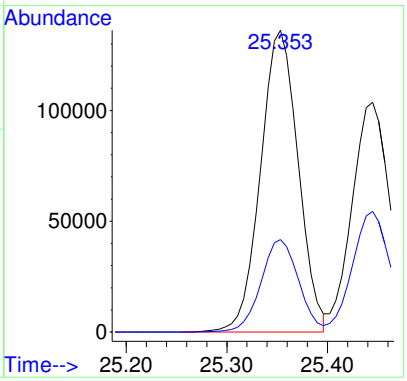


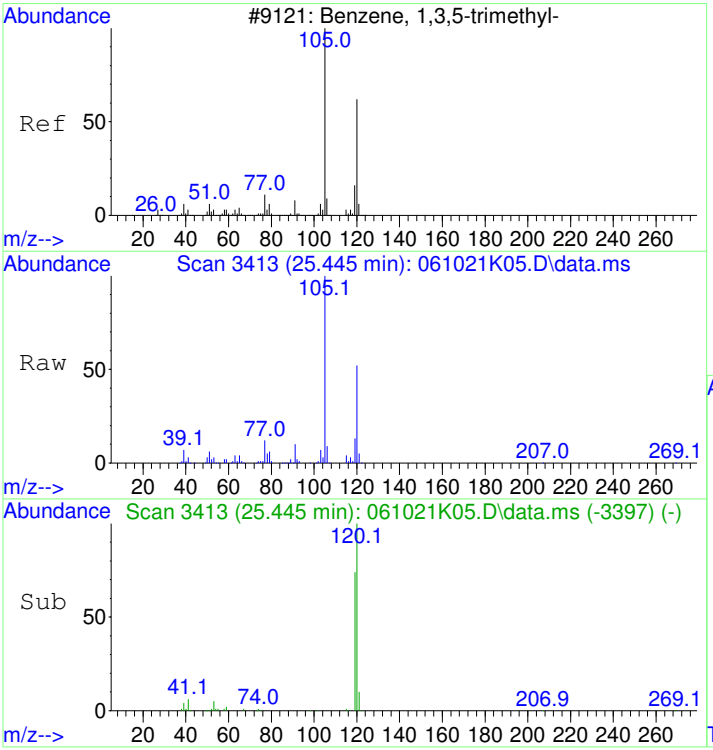




#58
4-Ethyltoluene
Concen: 10.84 ppbv
RT: 25.353 min Scan# 3398
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:105 Resp: 353363

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.6 | 10.6 | 50.6 |

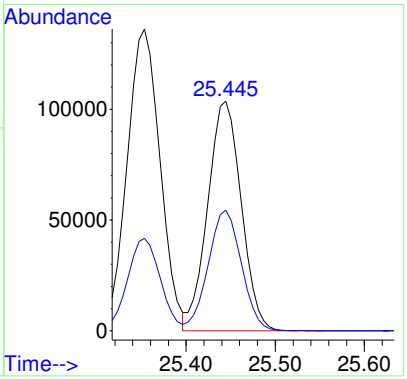


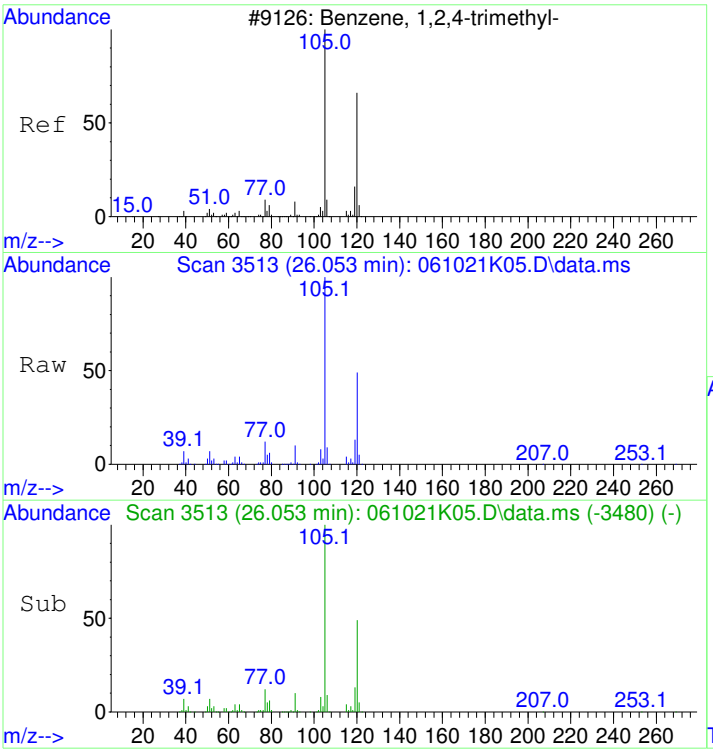



#59
1,3,5-Trimethylbenzene
Concen: 11.82 ppbv
RT: 25.445 min Scan# 3413
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:105 Resp: 272020

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 51.9 | 31.9 | 71.9 |

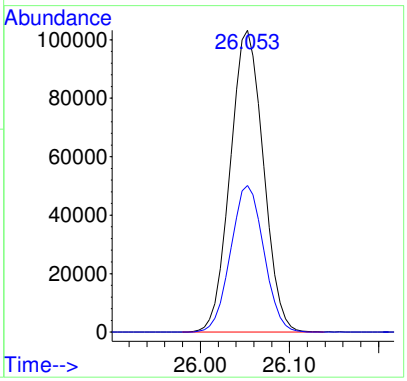


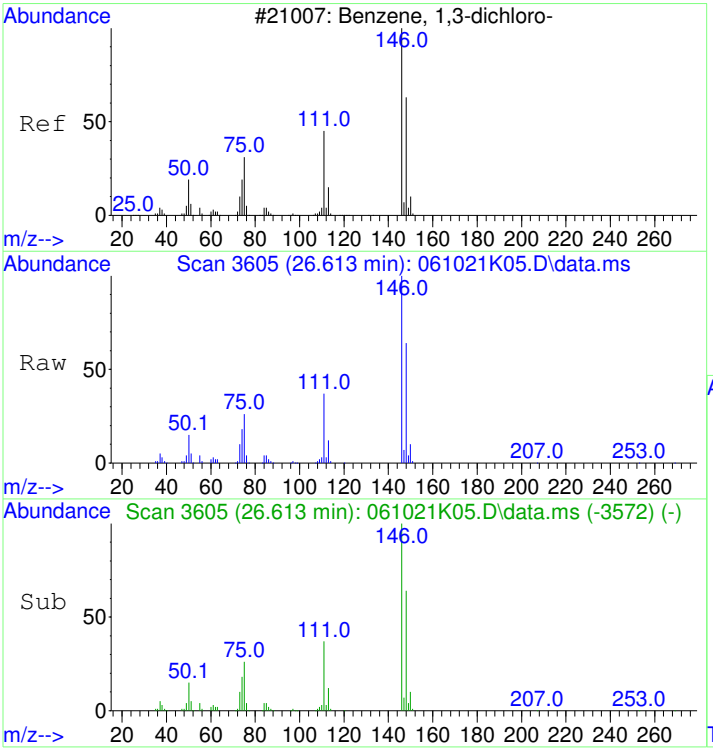




#60
1,2,4-Trimethylbenzene
Concen: 11.69 ppbv
RT: 26.053 min Scan# 3513
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:105 Resp: 265572

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.6 | 28.6 | 68.6 |

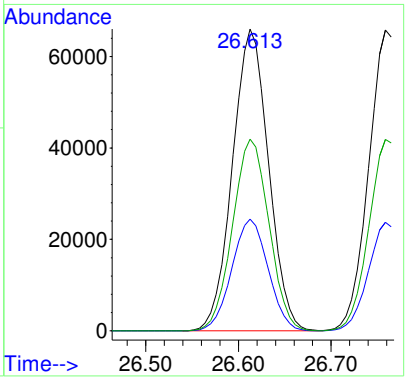


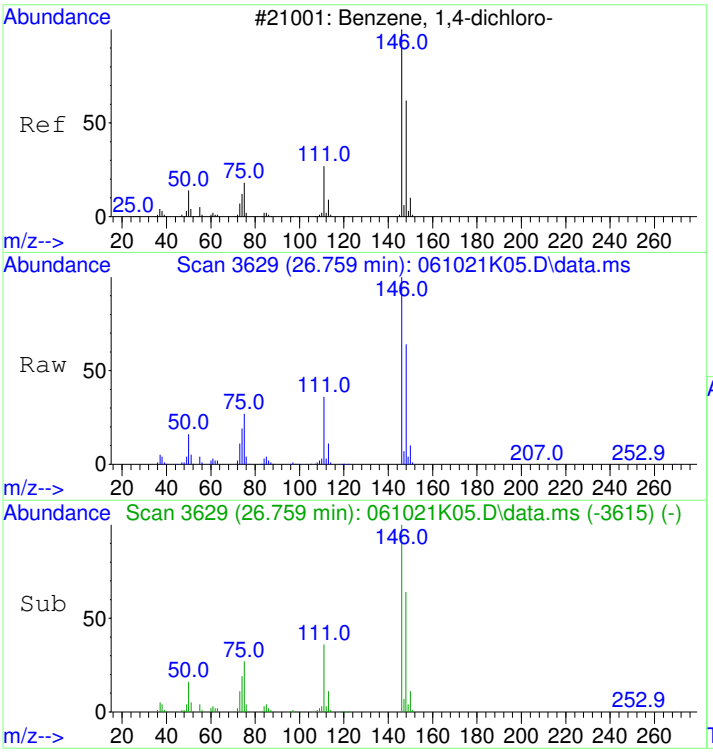



#61
1,3-Dichlorobenzene
Concen: 11.06 ppbv
RT: 26.613 min Scan# 3605
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:146 Resp: 178580

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 37.2 | 17.2 | 57.2 |
| 148 | 64.0 | 44.0 | 84.0 |

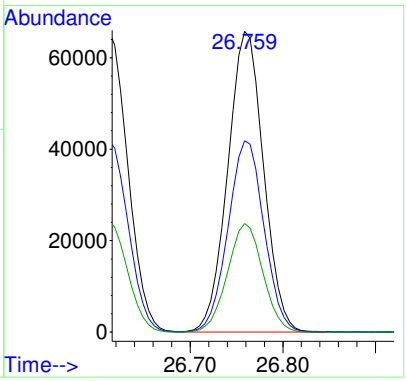


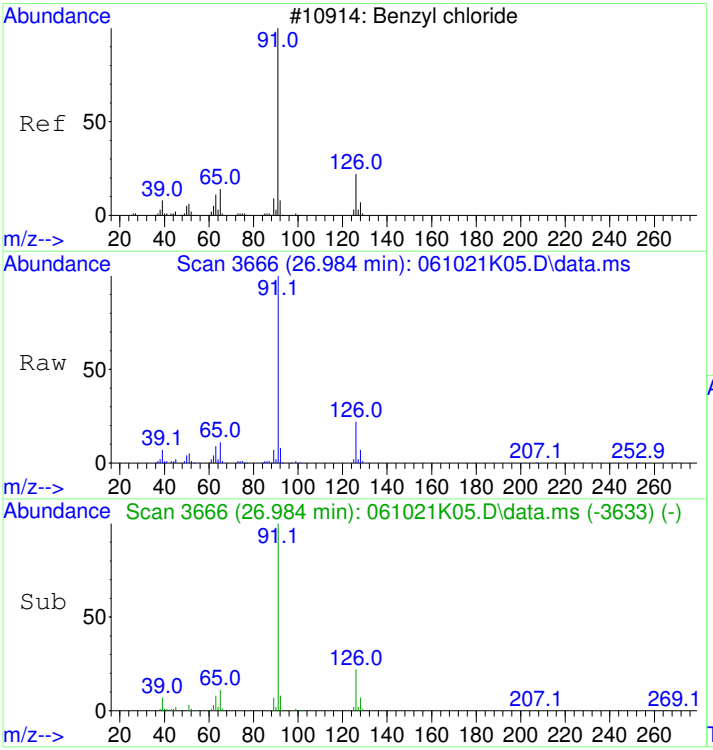




#62
1,4-Dichlorobenzene
Concen: 11.38 ppbv
RT: 26.759 min Scan# 3629
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:146 Resp: 176464

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 64.0 | 44.0 | 84.0 |
| 111 | 35.7 | 15.7 | 55.7 |

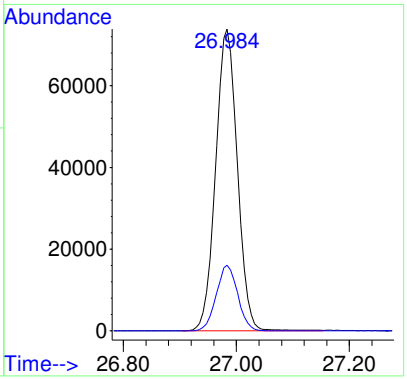


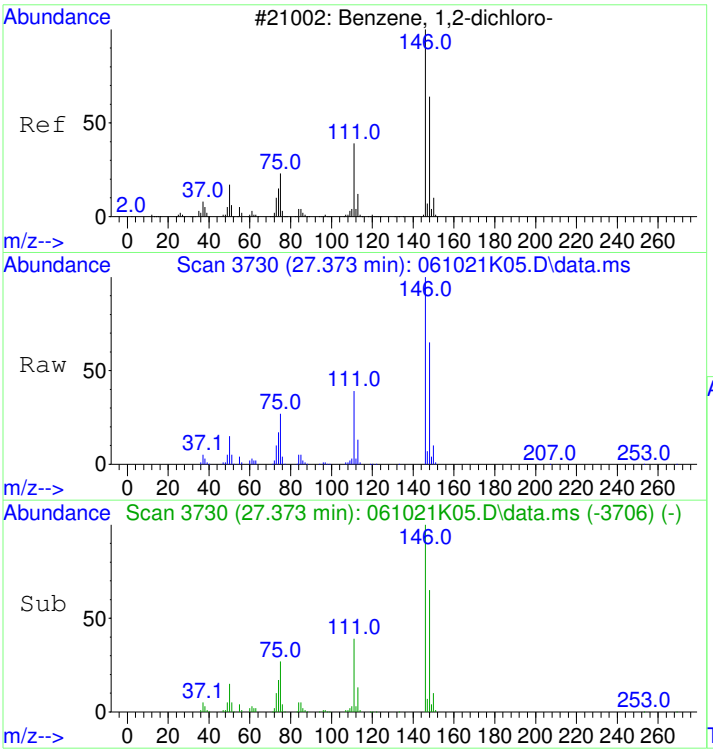



#63
Benzyl chloride
Concen: 10.39 ppbv
RT: 26.984 min Scan# 3666
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion: 91 Resp: 196900

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 21.4 | 1.4 | 41.4 |

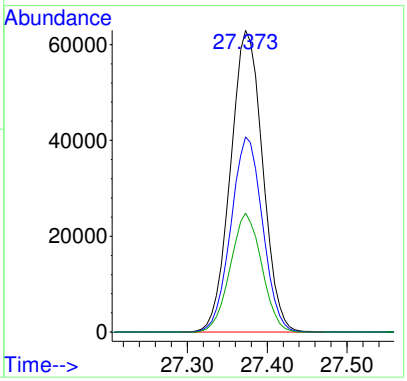


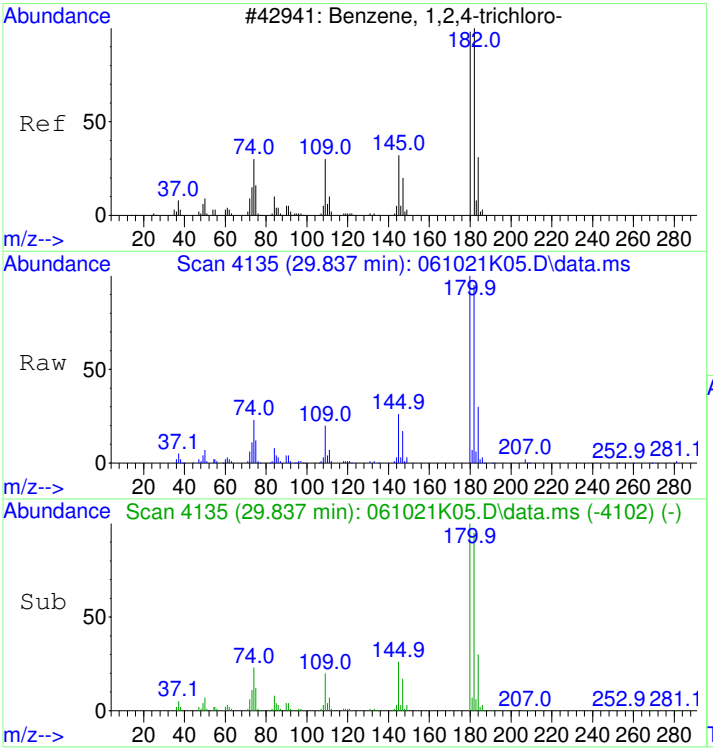




#64
1,2-Dichlorobenzene
Concen: 10.73 ppbv
RT: 27.373 min Scan# 3730
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:146 Resp: 175795

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 63.9 | 43.9 | 83.9 |
| 111 | 38.5 | 18.5 | 58.5 |

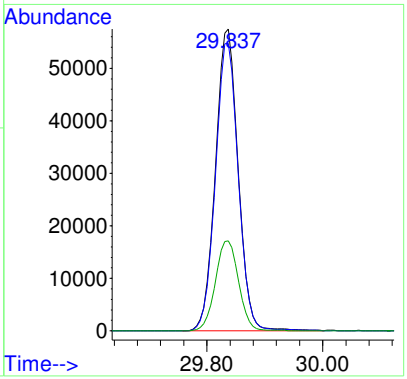


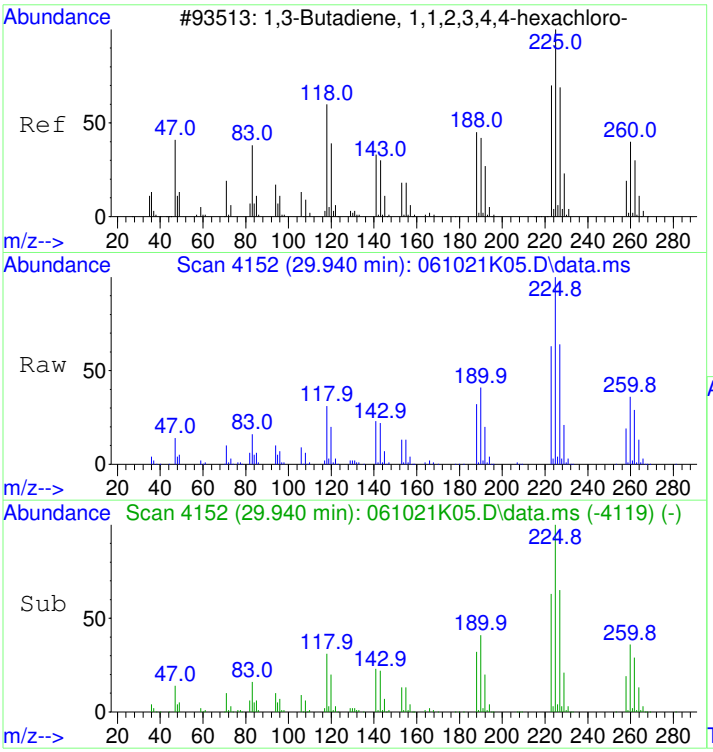



#65
1,2,4-Trichlorobenzene
Concen: 11.91 ppbv
RT: 29.837 min Scan# 4135
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:180 Resp: 156556

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 96.0 | 76.0 | 116.0 |
| 184 | 30.5 | 10.5 | 50.5 |

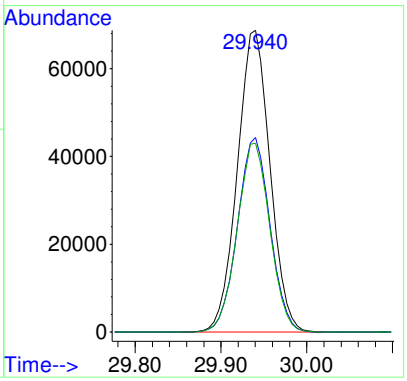



#66
Hexachlorobutadiene
Concen: 11.56 ppbv
RT: 29.940 min Scan# 4152
Delta R.T. 0.000 min
Lab File: 061021K05.D
Acq: 10 Jun 2021 4:47 pm

Tgt Ion:225 Resp: 182167

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 227 | 64.4 | 44.4 | 84.4 |
| 223 | 62.7 | 42.7 | 82.7 |



# LSC Area Percent Report

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 2 Min Area: 1 % of largest Peak
Start Thrs: 0.6 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Tangent else baseline drop >
Peak separation: 5

Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Title : TO15

Signal : TIC: 061021K05.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.010 | 43 | 54 | 61 | rBB | 36315 | 109499 | 5.95% | 0.434% |
| 2 | 5.113 | 61 | 71 | 82 | rBB | 68695 | 214250 | 11.65% | 0.849% |
| 3 | 5.503 | 117 | 135 | 156 | rBB2 | 126220 | 466320 | 25.35% | 1.847% |
| 4 | 5.740 | 160 | 174 | 197 | rBB | 20647 | 80242 | 4.36% | 0.318% |
| 5 | 6.081 | 219 | 230 | 237 | rBB | 30769 | 94516 | 5.14% | 0.374% |
| 6 | 6.178 | 237 | 246 | 258 | rBB2 | 54572 | 179136 | 9.74% | 0.709% |
| 7 | 7.249 | 405 | 422 | 458 | rBB2 | 28076 | 128597 | 6.99% | 0.509% |
| 8 | 7.614 | 465 | 482 | 499 | rBB2 | 12805 | 57877 | 3.15% | 0.229% |
| 9 | 8.258 | 575 | 588 | 597 | rBB2 | 16758 | 65930 | 3.58% | 0.261% |
| 10 | 10.369 | 911 | 935 | 1022 | rBB4 | 79697 | 743887 | 40.44% | 2.946% |
| 11 | 11.081 | 1040 | 1052 | 1061 | rBB2 | 15182 | 60057 | 3.26% | 0.238% |
| 12 | 11.203 | 1063 | 1072 | 1086 | rBB | 28709 | 115324 | 6.27% | 0.457% |
| 13 | 11.604 | 1119 | 1138 | 1179 | rBB | 22888 | 115771 | 6.29% | 0.459% |
| 14 | 11.957 | 1180 | 1196 | 1263 | rBB | 40744 | 187676 | 10.20% | 0.743% |
| 15 | 12.480 | 1263 | 1282 | 1304 | rBB | 43654 | 195544 | 10.63% | 0.774% |
| 16 | 13.022 | 1351 | 1371 | 1445 | rBB2 | 67222 | 575271 | 31.27% | 2.278% |
| 17 | 13.588 | 1447 | 1464 | 1525 | rBB | 92342 | 370748 | 20.15% | 1.468% |
| 18 | 14.391 | 1584 | 1596 | 1605 | rBB | 41553 | 147501 | 8.02% | 0.584% |
| 19 | 14.494 | 1605 | 1613 | 1624 | rBB | 36351 | 109890 | 5.97% | 0.435% |
| 20 | 15.772 | 1814 | 1823 | 1829 | rBB | 48183 | 135786 | 7.38% | 0.538% |
| 21 | 15.857 | 1829 | 1837 | 1848 | rBB | 96584 | 283332 | 15.40% | 1.122% |
| 22 | 16.307 | 1895 | 1911 | 1923 | rBB2 | 256511 | 944376 | 51.33% | 3.740% |
| 23 | 16.441 | 1923 | 1933 | 1946 | rBB | 74667 | 246134 | 13.38% | 0.975% |
| 24 | 16.611 | 1947 | 1961 | 1990 | rBB2 | 113669 | 754716 | 41.03% | 2.989% |
| 25 | 16.928 | 1997 | 2013 | 2035 | rBB | 96349 | 349162 | 18.98% | 1.383% |
| 26 | 17.305 | 2061 | 2075 | 2087 | rBB | 174646 | 613405 | 33.34% | 2.429% |
| 27 | 17.432 | 2087 | 2096 | 2107 | rBB | 108766 | 341722 | 18.58% | 1.353% |
| 28 | 17.670 | 2121 | 2135 | 2148 | rBB2 | 202581 | 656892 | 35.71% | 2.602% |
| 29 | 18.211 | 2207 | 2224 | 2253 | rBB | 455447 | 1360122 | 73.93% | 5.387% |
| 30 | 18.619 | 2277 | 2291 | 2308 | rBB | 133523 | 406879 | 22.12% | 1.611% |
| 31 | 19.136 | 2364 | 2376 | 2391 | rBB | 100818 | 310914 | 16.90% | 1.231% |
| 32 | 19.312 | 2391 | 2405 | 2429 | rBB | 31952 | 98116 | 5.33% | 0.389% |
| 33 | 19.592 | 2439 | 2451 | 2482 | rBB | 114682 | 347691 | 18.90% | 1.377% |
| 34 | 20.340 | 2561 | 2574 | 2593 | rBB | 103143 | 296690 | 16.13% | 1.175% |
| 35 | 20.547 | 2593 | 2608 | 2633 | rBB | 125769 | 354879 | 19.29% | 1.406% |
| 36 | 20.797 | 2633 | 2649 | 2672 | rBB | 177051 | 504528 | 27.43% | 1.998% |
| 37 | 21.277 | 2717 | 2728 | 2741 | rBB | 91202 | 245816 | 13.36% | 0.974% |
| 38 | 21.630 | 2767 | 2786 | 2805 | rBB2 | 221521 | 988278 | 53.72% | 3.914% |
| 39 | 21.880 | 2816 | 2827 | 2855 | rBB | 117007 | 309392 | 16.82% | 1.225% |
| 40 | 22.202 | 2867 | 2880 | 2905 | rBB | 145478 | 425502 | 23.13% | 1.685% |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: lscint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 2 Min Area: 1 % of largest Peak
Start Thrs: 0.6 Max Peaks: 100
Stop Thrs : 0.5 Peak Location: TOP

If leading or trailing edge < 100 prefer < Tangent else baseline drop >
Peak separation: 5

Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Title : TO15

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 22.433 | 2905 | 2918 | 2935 | rBB | 89049 | 255629 | 13.90% | 1.012% |
| 42 | 23.078 | 3014 | 3024 | 3037 | rBB2 | 575339 | 1839636 | 100.00% | 7.286% |
| 43 | 23.188 | 3037 | 3042 | 3050 | rBB | 182477 | 395138 | 21.48% | 1.565% |
| 44 | 23.370 | 3057 | 3072 | 3087 | rBB | 469872 | 1277548 | 69.45% | 5.060% |
| 45 | 24.021 | 3165 | 3179 | 3239 | rBB2 | 240140 | 1162676 | 63.20% | 4.605% |
| 46 | 24.471 | 3239 | 3253 | 3269 | rBB | 175477 | 503263 | 27.36% | 1.993% |
| 47 | 25.153 | 3350 | 3365 | 3383 | rBB | 183900 | 512018 | 27.83% | 2.028% |
| 48 | 25.353 | 3387 | 3398 | 3405 | rBB | 312769 | 774157 | 42.08% | 3.066% |
| 49 | 25.445 | 3405 | 3413 | 3422 | rBB | 285164 | 705899 | 38.37% | 2.796% |
| 50 | 26.053 | 3502 | 3513 | 3545 | rBB | 290744 | 749583 | 40.75% | 2.969% |
| 51 | 26.613 | 3594 | 3605 | 3617 | rBB | 243640 | 658828 | 35.81% | 2.609% |
| 52 | 26.759 | 3617 | 3629 | 3647 | rBB | 243916 | 652763 | 35.48% | 2.585% |
| 53 | 26.984 | 3652 | 3666 | 3715 | rBB | 159769 | 427954 | 23.26% | 1.695% |
| 54 | 27.373 | 3715 | 3730 | 3767 | rBB | 238205 | 660643 | 35.91% | 2.616% |
| 55 | 29.831 | 4125 | 4134 | 4143 | rBB | 261152 | 681147 | 37.03% | 2.698% |

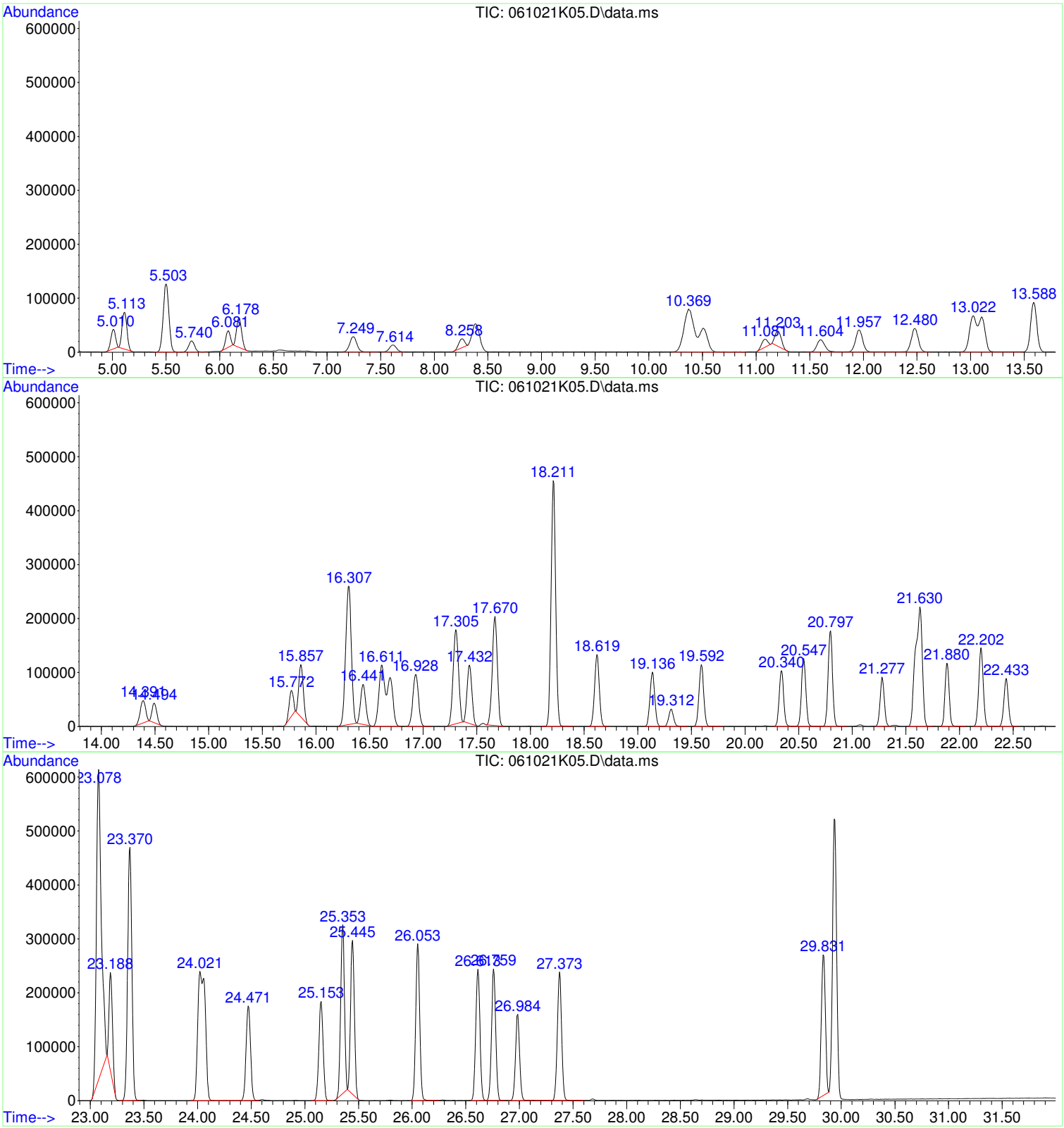
Sum of corrected areas: 25249250

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15

TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p



Library Search Compound Report

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K05.D
Acq On : 10 Jun 2021 4:47 pm
Operator : EM
Sample : S21F026-CAL4
Misc : 10ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15

TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p

No Library Search Compounds Detected
**********

Tentatively Identified Compound (LSC) summary

```
  Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
  Data File : 061021K05.D
  Acq On    : 10 Jun 2021   4:47 pm
  Operator  : EM
  Sample    : S21F026-CAL4
  Misc      : 10ppbv
  ALS Vial  : 32   Sample Multiplier: 1

  Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
  Quant Title  : TO15

  TIC Library   : C:\Database\NIST02.L
  TIC Integration Parameters: lscint.p

                                                      |--Internal Standard---|
  TIC Top Hit name      RT  EstConc Units Response |#    RT     Resp  Conc|
-------------------------------------------------------------------------------
```

# S21F026-CAL5

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K06.D
InstName : HP5973K
Acq On : 10 Jun 2021 5:36 pm
Operator : EM
Sample : S21F026-CAL5
Misc : 15ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:34:15 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:06 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 202463 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 621993 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 576762 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 73239 | 14.56 | ppbv | | 98 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 214679 | 14.58 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.502 | 85 | 224675 | 14.38 | ppbv | | 100 |
| 5) Chloromethane | 5.740 | 50 | 75740 | 14.88 | ppbv | | 100 |
| 6) Vinyl chloride | 6.080 | 62 | 124093 | 15.37 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.184 | 54 | 94666 | 14.37 | ppbv | | 99 |
| 8) Bromomethane | 7.248 | 94 | 70683 | 14.77 | ppbv | | 100 |
| 9) Chloroethane | 7.620 | 64 | 45716 | 14.88 | ppbv | | 100 |
| 10) Bromoethene | 8.264 | 106 | 71294 | 14.45 | ppbv | | 99 |
| 11) Trichlorofluoromethane | 8.380 | 101 | 186730 | 15.03 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.382 | 151 | 137250 | 15.23 | ppbv | | 100 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 122233 | 15.89 | ppbv | | 100 |
| 14) Acetone | 11.081 | 43 | 117687 | 13.35 | ppbv | | 100 |
| 15) Carbon disulfide | 11.203 | 76 | 224750 | 14.22 | ppbv | | 100 |
| 16) 2-Propanol | 11.598 | 45 | 108399 | 14.38 | ppbv | | 98 |
| 17) Allyl chloride | 11.963 | 41 | 100866 | 15.71 | ppbv | | 99 |
| 18) Dichloromethane | 12.480 | 49 | 90291 | 13.79 | ppbv | | 100 |
| 19) tert-Butyl methyl ethe... | 13.022 | 73 | 233253 | 14.88 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 113954 | 14.48 | ppbv | | 99 |
| 21) Hexane | 13.594 | 57 | 141901 | 15.17 | ppbv | | 100 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 140877 | 14.49 | ppbv | | 100 |
| 23) Vinyl acetate | 14.494 | 43 | 182325 | 17.26 | ppbv | | 100 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 106267 | 16.00 | ppbv | # | 100 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 45280 | 14.71 | ppbv | | 98 |
| 26) Ethyl acetate | 15.863 | 61 | 26782 | 14.47 | ppbv | | 99 |
| 27) Tetrahydrofuran | 16.283 | 42 | 95308 | 13.16 | ppbv | | 99 |
| 28) Chloroform | 16.441 | 83 | 160103 | 15.06 | ppbv | | 100 |
| 29) Cyclohexane | 16.617 | 56 | 145804 | 15.65 | ppbv | | 100 |
| 30) 1,1,1-Trichloroethane | 16.696 | 97 | 160557 | 15.44 | ppbv | | 100 |
| 31) Carbon tetrachloride | 16.934 | 117 | 166623 | 15.49 | ppbv | | 100 |
| 33) Benzene | 17.432 | 78 | 263783 | 15.49 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 456712 | 15.56 | ppbv | | 100 |
| 35) 1,2-Dichloroethane | 17.651 | 62 | 104965 | 14.95 | ppbv | | 100 |
| 36) Heptane | 17.670 | 43 | 165528 | 15.70 | ppbv | | 100 |
| 37) Trichloroethene | 18.619 | 130 | 115663 | 15.66 | ppbv | | 100 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 96262 | 15.54 | ppbv | | 99 |
| 39) 1,4-Dioxane | 19.312 | 88 | 56569 | 15.10 | ppbv | | 100 |
| 40) Bromodichloromethane | 19.592 | 83 | 185412 | 14.78 | ppbv | | 100 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 151215 | 16.95 | ppbv | | 100 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 203874 | 14.28 | ppbv | | 99 |
| 44) Toluene | 20.797 | 91 | 319482 | 15.85 | ppbv | | 100 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 124758 | 15.39 | ppbv | | 100 |
| 46) 1,1,2-Trichloroethane | 21.587 | 97 | 106712 | 15.56 | ppbv | | 100 |
| 47) Tetrachloroethene | 21.636 | 166 | 165793 | 15.50 | ppbv | | 99 |
| 48) 2-Hexanone | 21.879 | 43 | 182529 | 13.61 | ppbv | | 100 |
| 49) Chlorodibromomethane | 22.202 | 129 | 197198 | 14.85 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 150557 | 15.69 | ppbv | | 100 |
| 51) Chlorobenzene | 23.127 | 112 | 262304 | 15.48 | ppbv | | 99 |
| 52) Ethylbenzene | 23.187 | 91 | 430681 | 15.54 | ppbv | | 100 |
| 53) m&p-Xylene | 23.370 | 91 | 677463 | 32.25 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 335734 | 15.04 | ppbv | | 100 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K06.D
InstName : HP5973K
Acq On : 10 Jun 2021 5:36 pm
Operator : EM
Sample : S21F026-CAL5
Misc : 15ppbv
ALS Vial : 32 Sample Multiplier: 1

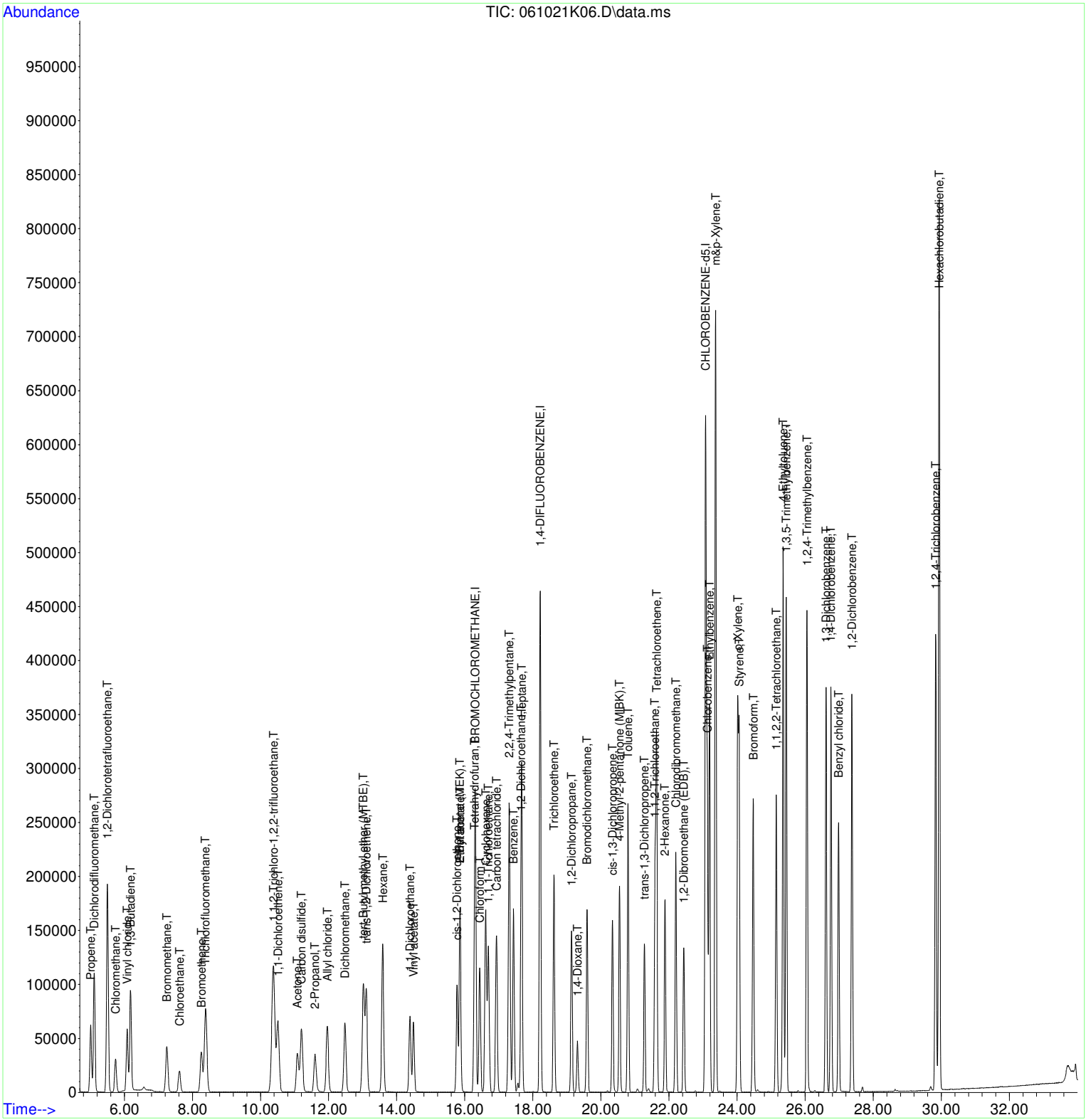
Quant Time: Jun 11 09:34:15 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:06 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.063 | 104 | 273035 | 16.98 | ppbv | 99 |
| 56) | Bromoform | 24.477 | 173 | 216585 | 16.14 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.152 | 83 | 237619 | 14.36 | ppbv | 99 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 545662 | 15.44 | ppbv | 99 |
| 59) | 1,3,5-Trimethylbenzene | 25.444 | 105 | 409554 | 16.49 | ppbv | 99 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 408516 | 16.66 | ppbv | 100 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 271998 | 15.56 | ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 269298 | 15.98 | ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 308319 | 14.83 | ppbv | 100 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 266879 | 15.09 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.831 | 180 | 244401 | 16.96 | ppbv | 100 |
| 66) | Hexachlorobutadiene | 29.940 | 225 | 284137 | 16.76 | ppbv | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K06.D
InstName : HP5973K
Acq On : 10 Jun 2021 5:36 pm
Operator : EM
Sample : S21F026-CAL5
Misc : 15ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:34:15 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:06 2021
Response via : Initial Calibration



# S21F026-CAL6

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K07.D
InstName : HP5973K
Acq On : 10 Jun 2021 6:26 pm
Operator : EM
Sample : S21F026-CAL6
Misc : 20ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:34:31 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:22 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 205786 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 630160 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 588629 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 98432 | 18.65 | ppbv | | 100 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 289921 | 18.82 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.503 | 85 | 305067 | 18.64 | ppbv | | 100 |
| 5) Chloromethane | 5.740 | 50 | 101843 | 19.07 | ppbv | | 100 |
| 6) Vinyl chloride | 6.080 | 62 | 166118 | 19.52 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.178 | 54 | 126382 | 18.28 | ppbv | | 99 |
| 8) Bromomethane | 7.248 | 94 | 95351 | 19.10 | ppbv | | 100 |
| 9) Chloroethane | 7.620 | 64 | 61417 | 19.11 | ppbv | | 100 |
| 10) Bromoethene | 8.264 | 106 | 97483 | 18.94 | ppbv | | 100 |
| 11) Trichlorofluoromethane | 8.392 | 101 | 251415 | 19.42 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.375 | 151 | 185281 | 19.74 | ppbv | | 99 |
| 13) 1,1-Dichloroethene | 10.509 | 61 | 166656 | 20.74 | ppbv | | 100 |
| 14) Acetone | 11.081 | 43 | 158293 | 17.20 | ppbv | | 100 |
| 15) Carbon disulfide | 11.203 | 76 | 302656 | 18.34 | ppbv | | 100 |
| 16) 2-Propanol | 11.598 | 45 | 149557 | 18.77 | ppbv | | 96 |
| 17) Allyl chloride | 11.957 | 41 | 138086 | 20.56 | ppbv | | 99 |
| 18) Dichloromethane | 12.480 | 49 | 120422 | 17.68 | ppbv | | 100 |
| 19) tert-Butyl methyl ethe... | 13.022 | 73 | 319690 | 19.45 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 153445 | 18.65 | ppbv | | 99 |
| 21) Hexane | 13.588 | 57 | 192135 | 19.59 | ppbv | | 99 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 190544 | 18.77 | ppbv | | 100 |
| 23) Vinyl acetate | 14.494 | 43 | 251412 | 22.64 | ppbv | | 100 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 144948 | 20.89 | ppbv | # | 100 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 61828 | 19.19 | ppbv | # | 96 |
| 26) Ethyl acetate | 15.863 | 61 | 36531 | 18.80 | ppbv | | 99 |
| 27) Tetrahydrofuran | 16.283 | 42 | 129871 | 17.17 | ppbv | | 100 |
| 28) Chloroform | 16.441 | 83 | 215198 | 19.40 | ppbv | | 100 |
| 29) Cyclohexane | 16.611 | 56 | 198980 | 20.39 | ppbv | | 99 |
| 30) 1,1,1-Trichloroethane | 16.690 | 97 | 217732 | 20.02 | ppbv | | 100 |
| 31) Carbon tetrachloride | 16.934 | 117 | 225810 | 20.03 | ppbv | | 100 |
| 33) Benzene | 17.432 | 78 | 355941 | 19.98 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 620845 | 20.17 | ppbv | | 100 |
| 35) 1,2-Dichloroethane | 17.651 | 62 | 142361 | 19.41 | ppbv | | 100 |
| 36) Heptane | 17.670 | 43 | 226699 | 20.50 | ppbv | | 100 |
| 37) Trichloroethene | 18.619 | 130 | 157312 | 20.39 | ppbv | | 99 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 129817 | 20.00 | ppbv | | 99 |
| 39) 1,4-Dioxane | 19.312 | 88 | 76367 | 19.49 | ppbv | | 100 |
| 40) Bromodichloromethane | 19.592 | 83 | 249199 | 18.95 | ppbv | | 99 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 208652 | 22.23 | ppbv | | 100 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 278849 | 18.66 | ppbv | | 100 |
| 44) Toluene | 20.797 | 91 | 434304 | 20.46 | ppbv | | 99 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 171760 | 19.91 | ppbv | | 100 |
| 46) 1,1,2-Trichloroethane | 21.587 | 97 | 144936 | 20.07 | ppbv | | 100 |
| 47) Tetrachloroethene | 21.636 | 166 | 226980 | 20.20 | ppbv | | 99 |
| 48) 2-Hexanone | 21.879 | 43 | 250047 | 17.64 | ppbv | | 99 |
| 49) Chlorodibromomethane | 22.202 | 129 | 270912 | 19.31 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 206025 | 20.34 | ppbv | | 99 |
| 51) Chlorobenzene | 23.121 | 112 | 356985 | 20.01 | ppbv | | 99 |
| 52) Ethylbenzene | 23.187 | 91 | 586180 | 20.09 | ppbv | | 99 |
| 53) m&p-Xylene | 23.370 | 91 | 930582 | 42.05 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 462210 | 19.65 | ppbv | | 99 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K07.D
InstName : HP5973K
Acq On : 10 Jun 2021 6:26 pm
Operator : EM
Sample : S21F026-CAL6
Misc : 20ppbv
ALS Vial : 32 Sample Multiplier: 1

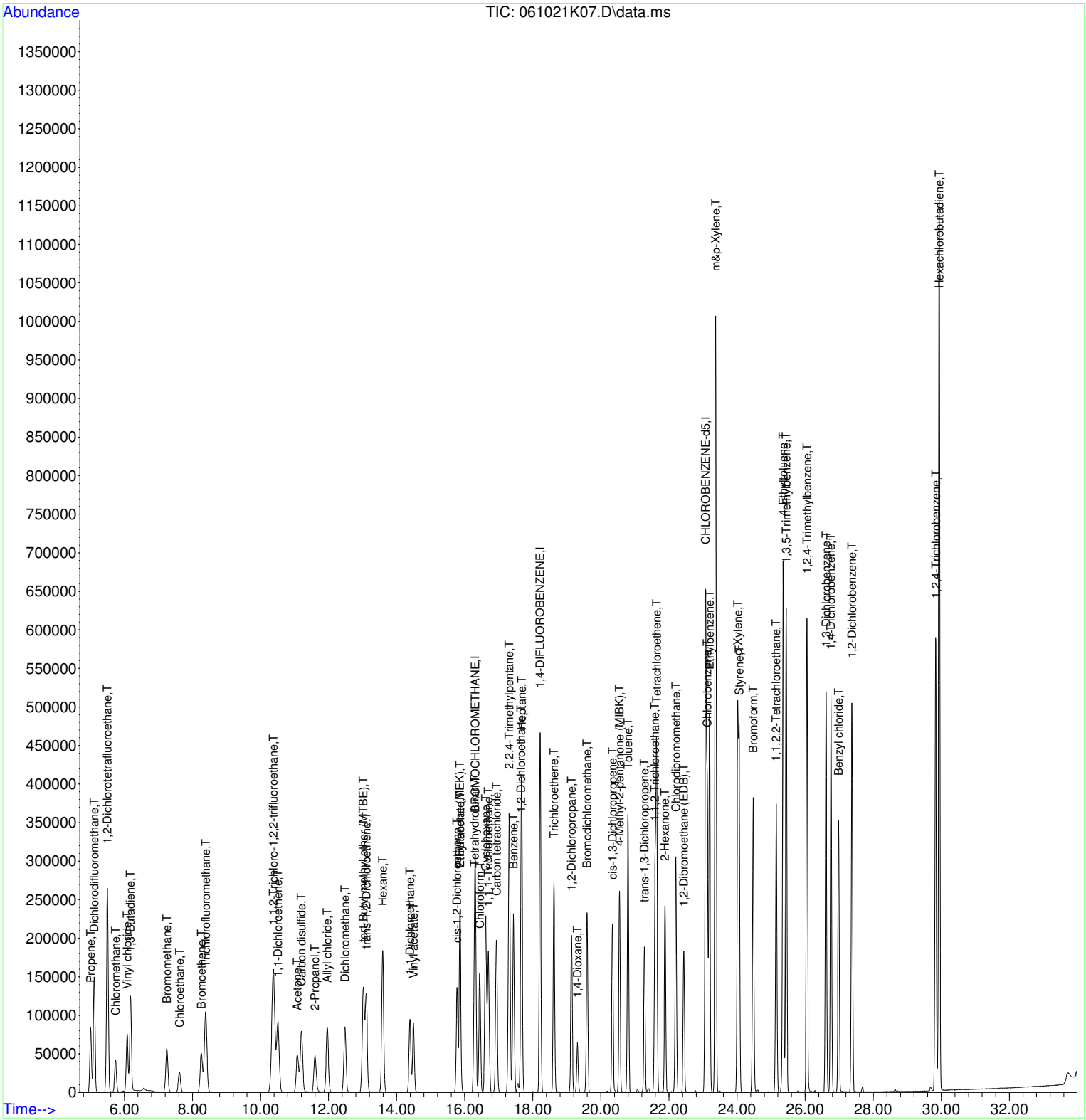
Quant Time: Jun 11 09:34:31 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:22 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 55) | Styrene | 24.064 | 104 | 376469 | 22.17 ppbv | 99 |
| 56) | Bromoform | 24.471 | 173 | 300715 | 21.13 ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.146 | 83 | 324757 | 18.64 ppbv | 100 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 751882 | 20.07 ppbv | 100 |
| 59) | 1,3,5-Trimethylbenzene | 25.444 | 105 | 560806 | 21.47 ppbv | 99 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 564139 | 21.83 ppbv | 100 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 373063 | 20.19 ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 369341 | 20.65 ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 433144 | 19.55 ppbv | 99 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 366882 | 19.67 ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.837 | 180 | 339111 | 22.03 ppbv | 100 |
| 66) | Hexachlorobutadiene | 29.940 | 225 | 395521 | 22.15 ppbv | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K07.D
InstName : HP5973K
Acq On : 10 Jun 2021 6:26 pm
Operator : EM
Sample : S21F026-CAL6
Misc : 20ppbv
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 11 09:34:31 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:22 2021
Response via : Initial Calibration



# S21F026-SCV1

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K08.D
InstName : HP5973K
Acq On : 10 Jun 2021 7:16 pm
Operator : EM
Sample : S21F026-SCV1
Misc : 10ppbv
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Jun 11 09:35:45 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 205841 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 633221 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 582477 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.016 | 41 | 54018 | 9.95 | ppbv | | 100 |
| 3) Dichlorodifluoromethane | 5.119 | 85 | 165002 | 10.44 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.502 | 85 | 163125 | 9.70 | ppbv | | 95 |
| 5) Chloromethane | 5.746 | 50 | 58414 | 10.63 | ppbv | | 100 |
| 6) Vinyl chloride | 6.080 | 62 | 94029 | 10.70 | ppbv | | 99 |
| 7) 1,3-Butadiene | 6.184 | 54 | 72946 | 10.27 | ppbv | | 99 |
| 8) Bromomethane | 7.255 | 94 | 51553 | 10.07 | ppbv | | 99 |
| 9) Chloroethane | 7.626 | 64 | 35372 | 10.72 | ppbv | | 99 |
| 10) Bromoethene | 8.264 | 106 | 54958 | 10.40 | ppbv | | 100 |
| 11) Trichlorofluoromethane | 8.386 | 101 | 143178 | 10.80 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.382 | 151 | 103769 | 10.81 | ppbv | | 99 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 90973 | 11.03 | ppbv | | 100 |
| 14) Acetone | 11.081 | 43 | 95006 | 10.07 | ppbv | | 100 |
| 15) Carbon disulfide | 11.203 | 76 | 179613 | 10.61 | ppbv | | 97 |
| 16) 2-Propanol | 11.604 | 45 | 72925 | 8.83 | ppbv | | 99 |
| 17) Allyl chloride | 11.963 | 41 | 75029 | 10.88 | ppbv | | 100 |
| 18) Dichloromethane | 12.480 | 49 | 68834 | 9.88 | ppbv | | 100 |
| 19) tert-Butyl methyl ethe... | 13.022 | 73 | 168561 | 9.97 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 88327 | 10.46 | ppbv | | 100 |
| 21) Hexane | 13.588 | 57 | 105821 | 10.48 | ppbv | | 100 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 110734 | 10.64 | ppbv | | 99 |
| 23) Vinyl acetate | 14.494 | 43 | 124213 | 10.85 | ppbv | | 100 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 82328 | 11.56 | ppbv | # | 99 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 33928 | 10.22 | ppbv | | 98 |
| 26) Ethyl acetate | 15.869 | 61 | 20222 | 10.10 | ppbv | | 100 |
| 27) Tetrahydrofuran | 16.289 | 42 | 74645 | 9.61 | ppbv | | 99 |
| 28) Chloroform | 16.441 | 83 | 122507 | 10.77 | ppbv | | 100 |
| 29) Cyclohexane | 16.611 | 56 | 106442 | 10.60 | ppbv | | 99 |
| 30) 1,1,1-Trichloroethane | 16.696 | 97 | 115305 | 10.33 | ppbv | | 100 |
| 31) Carbon tetrachloride | 16.927 | 117 | 124440 | 10.74 | ppbv | | 100 |
| 33) Benzene | 17.432 | 78 | 203126 | 11.00 | ppbv | | 100 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 332840 | 10.40 | ppbv | | 100 |
| 35) 1,2-Dichloroethane | 17.651 | 62 | 80615 | 10.62 | ppbv | | 100 |
| 36) Heptane | 17.670 | 43 | 121559 | 10.57 | ppbv | | 100 |
| 37) Trichloroethene | 18.619 | 130 | 92554 | 11.60 | ppbv | | 100 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 73584 | 10.93 | ppbv | | 99 |
| 39) 1,4-Dioxane | 19.312 | 88 | 37229 | 9.17 | ppbv | | 99 |
| 40) Bromodichloromethane | 19.592 | 83 | 128022 | 9.39 | ppbv | | 100 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 107699 | 11.01 | ppbv | | 100 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 139572 | 9.01 | ppbv | | 99 |
| 44) Toluene | 20.797 | 91 | 243860 | 11.28 | ppbv | | 99 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 96464 | 10.87 | ppbv | | 99 |
| 46) 1,1,2-Trichloroethane | 21.587 | 97 | 80745 | 10.97 | ppbv | | 100 |
| 47) Tetrachloroethene | 21.636 | 166 | 124217 | 10.86 | ppbv | | 100 |
| 48) 2-Hexanone | 21.886 | 43 | 124866 | 8.63 | ppbv | | 100 |
| 49) Chlorodibromomethane | 22.202 | 129 | 140253 | 9.77 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 113790 | 10.99 | ppbv | | 99 |
| 51) Chlorobenzene | 23.121 | 112 | 201994 | 11.11 | ppbv | | 100 |
| 52) Ethylbenzene | 23.187 | 91 | 329200 | 11.07 | ppbv | | 100 |
| 53) m&p-Xylene | 23.370 | 91 | 505940 | 22.41 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 250903 | 10.46 | ppbv | | 100 |

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K08.D
InstName : HP5973K
Acq On : 10 Jun 2021 7:16 pm
Operator : EM
Sample : S21F026-SCV1
Misc : 10ppbv
ALS Vial : 39 Sample Multiplier: 1

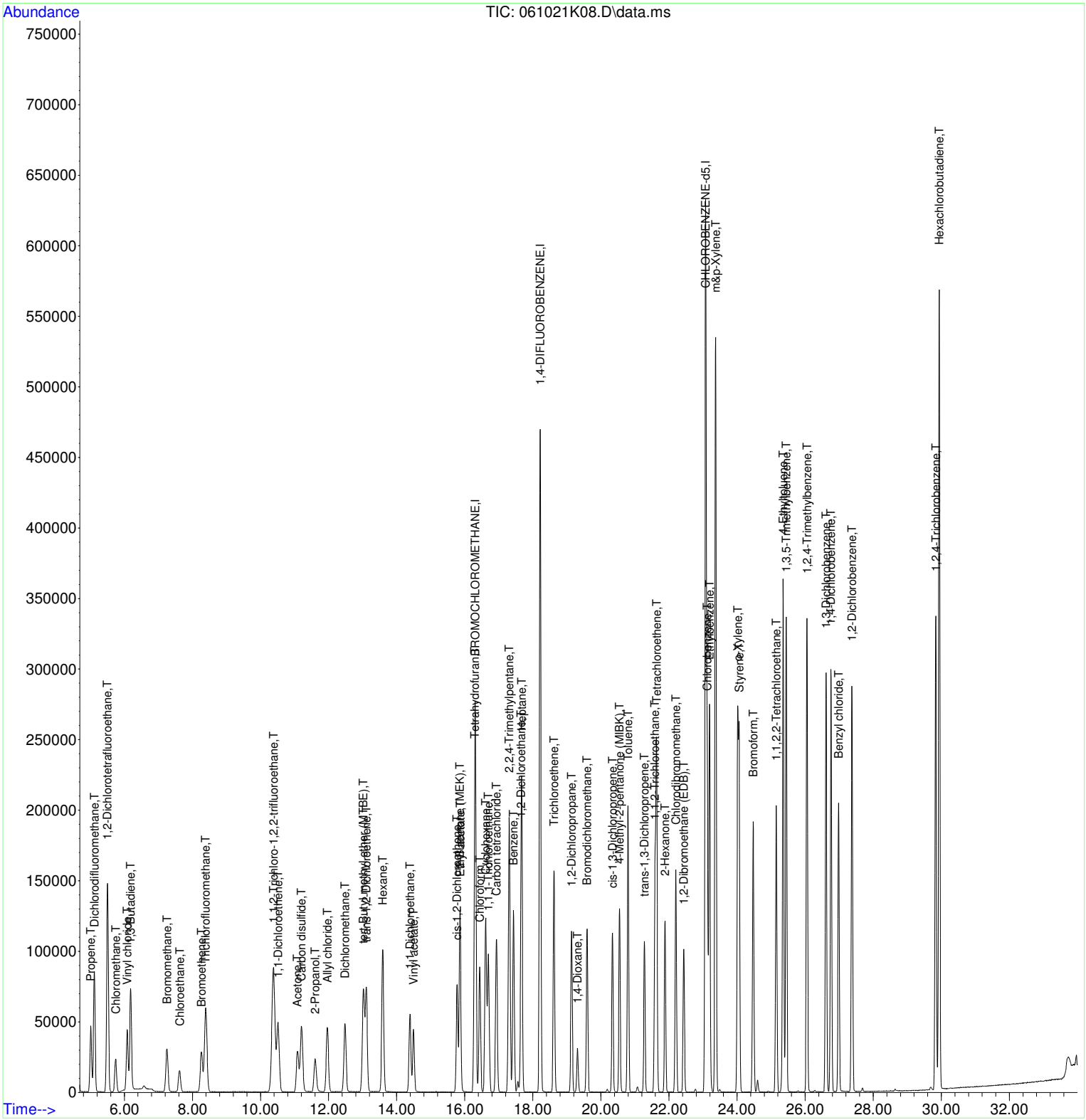
Quant Time: Jun 11 09:35:45 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.063 | 104 | 207133 | 11.93 | ppbv | 100 |
| 56) | Bromoform | 24.471 | 173 | 151762 | 10.38 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.152 | 83 | 176458 | 9.93 | ppbv | 100 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 396441 | 10.32 | ppbv | 100 |
| 59) | 1,3,5-Trimethylbenzene | 25.444 | 105 | 304690 | 11.45 | ppbv | 99 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 308024 | 11.67 | ppbv | 100 |
| 61) | 1,3-Dichlorobenzene | 26.612 | 146 | 216876 | 11.47 | ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.758 | 146 | 218310 | 11.88 | ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 250641 | 10.97 | ppbv | 100 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 212404 | 11.15 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.837 | 180 | 194185 | 12.21 | ppbv | 99 |
| 66) | Hexachlorobutadiene | 29.940 | 225 | 197135 | 10.81 | ppbv | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\061021K_FSA\
Data File : 061021K08.D
InstName : HP5973K
Acq On : 10 Jun 2021 7:16 pm
Operator : EM
Sample : S21F026-SCV1
Misc : 10ppbv
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Jun 11 09:35:45 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration



# SEQUENCE

## S21F072

Sequence Date: 06/28/2021

Instrument: HP5973K

Sequence Analyses:

VOCs, Soil Gas

# ANALYST / REVIEWER - DATA REVIEW CHECKLIST

| | | | |
|---|---|---|---|
| BATCH #: | B21F079 | SEQUENCE #: | S21F072 06/28/21 |
| BATCH #: | N / A | ANALYSIS: | TO15 HP5973K |

| | CHECKLIST ITEM | N/A | ANALYST Y/N | REVIEWER Y/N | IDENTIFY OUTLIERS / COMMENTS |
|---|---|---|---|---|---|
| DOCUMENTATION | ANALYST: Bench sheet(s) attached?<br>REVIEWER: Bench sheet(s) reviewed? | ☐ | Y | Y | |
| | ANALYST: Sequence log(s) attached?<br>REVIEWER: Sequence log(s) reviewed? | ☐ | Y | Y | |
| | ANALYST: Every run has a PDF in LIMS?<br>REVIEWER: Every PDF reviewed? | ☐ | Y | Y | |
| INITIAL CALIBRATION | Date of Initial Calibration used:<br>If applicable, note date of "Last Update" in Comments. | 06/10/21<br>Fri Jun 11 09:34:37 2021 | | | |
| | Initial Calibration ID (LIMS number): | 2106006 / S21F026 | | | |
| | ICAL within QC criteria? | ☑ | | | OK |
| | SCV within QC criteria? | ☑ | | | OK |
| INSTRUMENT / QC CHECKS | Tune or degradation checks within QC criteria? | ☐ | Y | Y | PASSED |
| | CCV(s) within QC criteria? | ☐ | Y | Y | OK |
| | QLS(s) within QC criteria? | ☐ | Y | Y | OK |
| | CB(s) or storage blank(s) within QC criteria? | ☑ | | | |
| | Other instrument checks within QC criteria?<br>Specify if applicable. | ☑ | | | |
| BATCH QCs | Method blanks < 1/2 QL? | ☐ | Y | Y | CLEAN |
| | LCS(s) or SRM(s) within QC criteria? | ☐ | Y | Y | OK |
| | MSs/MSDs and/or DUPs within QC criteria? | ☐ | Y | Y | |
| | Other method-specific QCs within QC criteria?<br>Specify if applicable. | ☑ | | | |

# ANALYST / REVIEWER - DATA REVIEW CHECKLIST

| | | | |
|---|---|---|---|
| BATCH #: | B21F079 | SEQUENCE #: | S21F072 06/28/21 |
| BATCH #: | N / A | ANALYSIS: | TO15 HP5973K |

| | CHECKLIST ITEM | N/A | ANALYST Y/N | REVIEWER Y/N | IDENTIFY OUTLIERS / COMMENTS |
|---|---|---|---|---|---|
| IS / SS | Internal standards within QC criteria? | ☐ | Y | Y | |
| | Surrogates within QC criteria? | ☑ | | | |
| SAMPLE DATA | Were samples prepared & analyzed within holding time? | ☐ | Y | Y | |
| | If samples need to be re-run, were RE(s) made in LIMS? | ☑ | | | |
| | Do any samples need to be re-digested or re-extracted? | ☑ | | | |
| | Were all data qualifiers appropriately applied? | ☐ | Y | Y | |
| | Are problems, anomalies, discrepancies documented in LIMS? Specify if applicable. | ☑ | | | |
| MANUAL INT | Were manual integrations performed and documented? Specify if applicable. | ☑ | | | |

| | | |
|---|---|---|
| APPROVALS | ANALYST INITIALS & DATE: | LLH 06/29/21 |
| | REVIEWED BY: | ZIYAD RAJABI (Affiliate) Digitally signed by ZIYAD RAJABI (Affiliate) Date: 2021.07.07 11:18:02 -07'00' SIGN HERE |

COMMENTS

FORM #: Q015
REV #: 1

# Injection Log

Directory: d:\MSDCHEM\1\2021\DATA\062821K_FSA

Table of Contents

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 31 | 062821K01.D | 1. | S21F072-TUN1 | BFB 1920101 | 28 Jun 2021 11:15 |
| 2 | 32 | 062821K02.D | 1. | S21F072-CCV1@B21F079-BS1 | 10ppbv 2124077@2124080 | 28 Jun 2021 12:03 |
| 3 | 31 | 062821K03.D | 1. | S21F072-CRL1 | 1ppbv 2124074 | 28 Jun 2021 12:51 |
| 4 | 33 | 062821K04.D | 1. | B21F079-BLK1 | 200mL BLANK | 28 Jun 2021 13:41 |
| 5 | 17 | 062821K05.D | 2.22 | 2106036-01 | 200mL G6-014-3ft-G | 28 Jun 2021 14:31 |
| 6 | 17 | 062821K06.D | 2.22 | B21F079-DUP1 | 200mL 2106036-01 | 28 Jun 2021 15:22 |
| 7 | 18 | 062821K07.D | 2.28 | 2106036-02 | 200mL F7-002-3ft-G | 28 Jun 2021 16:12 |
| 8 | 19 | 062821K08.D | 2.19 | 2106036-03 | 200mL F6-035-3ft-G | 28 Jun 2021 17:03 |
| 9 | 10 | 062821K09.D | 2.19 | 2106036-04 | 200mL F6-023-3ft-G | 28 Jun 2021 17:53 |
| 10 | 33 | 062821K10.D | 1. | S21F072-IBL1 | 200mL BLANK | 28 Jun 2021 18:43 |
| 11 | 11 | 062821K11.D | 2.2 | 2106036-05 | 200mL F6-023-3ft-D-G | 28 Jun 2021 19:34 |
| 12 | 12 | 062821K12.D | 2.34 | 2106036-06 | 200mL F6-010-3ft-G | 28 Jun 2021 20:24 |
| 13 | 21 | 062821K13.D | 2.38 | 2106036-07 | 200mL F6-006-3ft-G | 28 Jun 2021 21:15 |
| 14 | 22 | 062821K14.D | 2.21 | 2106036-08 | 200mL F6-025-3ft-G | 28 Jun 2021 22:05 |
| 15 | 33 | 062821K15.D | 1. | S21F072-IBL2 | 200mL BLANK | 28 Jun 2021 22:56 |

GC/MS QA-QC Check Report

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Tune File : D:\msdchem\1\2021\DATA\062821K_FSA\062821K01.D
Tune Time : 28 Jun 2021 11:15 am

Daily Calibration File : D:\msdchem\1\2021\DATA\062821K_FSA\062821K02.D

| File | Sample | Surrogate Recovery % | Internal Standard Responses | |
|---|---|---|---|---|
| | | 180027 | 521457 | 489179 |
| 062821K02.D | S21F072-CCV1 | 180027 | 521457 | 489179 |
| 062821K03.D | S21F072-CRL1 | 174505 | 520247 | 471665 |
| 062821K04.D | B21F079-BLK1 | 172740 | 523625 | 470514 |
| 062821K05.D | 2106036-01 | 172293 | 518602 | 472908 |
| 062821K06.D | B21F079-DUP1 | 170843 | 512139 | 463999 |
| 062821K07.D | 2106036-02 | 166572 | 500660 | 453859 |
| 062821K08.D | 2106036-03 | 167908 | 504697 | 456638 |
| 062821K09.D | 2106036-04 | 163726 | 492241 | 446843 |
| 062821K10.D | S21F072-IBL1 | 165858 | 500105 | 450119 |
| 062821K11.D | 2106036-05 | 165945 | 494167 | 449749 |
| 062821K12.D | 2106036-06 | 171862 | 501498 | 457970 |
| 062821K13.D | 2106036-07 | 168706 | 497511 | 449831 |
| 062821K14.D | 2106036-08 | 169248 | 496830 | 451651 |
| 062821K15.D | S21F072-IBL2 | 167237 | 496209 | 446927 |

(fails) - fails 24hr time check * - fails criteria

Created: Tue Jun 29 09:10:59 2021 HP5973K

# Analysis Sequence

## S21F072

**Project:** R21S04
**Analysis:** VOCs, Soil Gas

**Instrument:** HP5973K **Calibration ID:** UNASSIGNE

Printed: 06/29/2021 10:45 am

| Lab Number | Sample Name | Order | Analyzed Date | STD ID | ISTD ID | Sequenced By | File ID | Comments |
|---|---|---|---|---|---|---|---|---|
| S21F072-TUN1 | BFB Tune | 1 | 6/28/21 11:15 | 1920101 | | LLH | 062821K01.D | |
| S21F072-CCV1 | CCV - TO15 | 2 | 6/28/21 12:03 | 2124077 | | LLH | 062821K02.D | |
| B21F079-BS1 | LCS | 3 | 6/28/21 12:03 | | | LLH | 062821K02.D | |
| S21F072-CRL1 | CRL - TO15 | 4 | 6/28/21 12:51 | 2124074 | | LLH | 062821K03.D | |
| B21F079-BLK1 | Blank | 5 | 6/28/21 13:41 | | 2104093 | LLH | 062821K04.D | |
| 2106036-01 A | G6-014-3ft-G | 6 | 6/28/21 14:31 | | 2104093 | LLH | 062821K05.D | |
| B21F079-DUP1 | Duplicate | 7 | 6/28/21 15:22 | | 2104093 | LLH | 062821K06.D | |
| 2106036-02 A | F7-002-3ft-G | 8 | 6/28/21 16:12 | | 2104093 | LLH | 062821K07.D | |
| 2106036-03 A | F6-035-3ft-G | 9 | 6/28/21 17:03 | | 2104093 | LLH | 062821K08.D | |
| 2106036-04 A | F6-023-3ft-G | 10 | 6/28/21 17:53 | | 2104093 | LLH | 062821K09.D | |
| S21F072-IBL1 | IBL | 11 | 6/28/21 18:43 | | 2104093 | LLH | 062821K10.D | |
| 2106036-05 A | F6-023-3ft-D-G | 12 | 6/28/21 19:34 | | 2104093 | LLH | 062821K11.D | |
| 2106036-06 A | F6-010-3ft-G | 13 | 6/28/21 20:24 | | 2104093 | LLH | 062821K12.D | |
| 2106036-07 A | F6-006-3ft-G | 14 | 6/28/21 21:15 | | 2104093 | LLH | 062821K13.D | |
| 2106036-08 A | F6-025-3ft-G | 15 | 6/28/21 22:05 | | 2104093 | LLH | 062821K14.D | |
| S21F072-IBL2 | IBL | 16 | 6/28/21 22:56 | | 2104093 | LLH | 062821K15.D | |

**Sequence Comments**

**Reagents**

| Reagent # | Description |
|---|---|



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# Analysis Sequence

**S21F072**

**(Continued)**

**Project:** R21S04
**Analysis:** VOCs, Soil Gas

**Instrument:** HP5973K **Calibration ID:** UNASSIGNE

Printed: 06/29/2021 10:45 am

| Lab Number | Sample Name | Order | Analyzed Date | STD ID | ISTD ID | Sequenced By | File ID | Comments |
|---|---|---|---|---|---|---|---|---|





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# Sequence Report

| I | Name | Inlet | Pos. | Int Std | Cal Std | Sample | Method | Inject | Status |
|---|---|---|---|---|---|---|---|---|---|
| | BFB | Three | T1 | 40 | 40 | 50 | TO-15_A.CTD3 | 6/28/2021 11:15:07 AM | Completed |
| | CCV | Three | T2 | 40 | 0 | 100 | TO-15_A.CTD3 | 6/28/2021 12:03:39 PM | Completed |
| | CRL | Three | T1 | 40 | 0 | 20 | TO-15_A.CTD3 | 6/28/2021 12:51:11 PM | Completed |
| | BLANK | Three | T3 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 1:41:35 PM | Completed |
| | 2106036-01 | One | T7 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 2:31:51 PM | Completed |
| | 2106036-01 DUP | One | T7 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 3:22:29 PM | Completed |
| | 2106036-02 | One | T8 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 4:12:49 PM | Completed |
| | 2106036-03 | One | T9 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 5:03:20 PM | Completed |
| | 2106036-04 | One | T10 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 5:53:37 PM | Completed |
| | S21F072-IBL1 | Three | T3 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 6:43:49 PM | Completed |
| | 2106036-01 | One | T11 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 7:34:12 PM | Completed |
| | 2106036-01 | One | T12 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 8:24:46 PM | Completed |
| | 2106036-01 | Two | T1 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 9:15:23 PM | Completed |
| | 2106036-01 | Two | T2 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 10:05:43 PM | Completed |
| | S21F072-IBL2 | Three | T3 | 40 | 0 | 200 | TO-15_A.CTD3 | 6/28/2021 10:56:00 PM | Completed |

# SEQUENCE DATA

## S21F072

# S21F072-TUN1

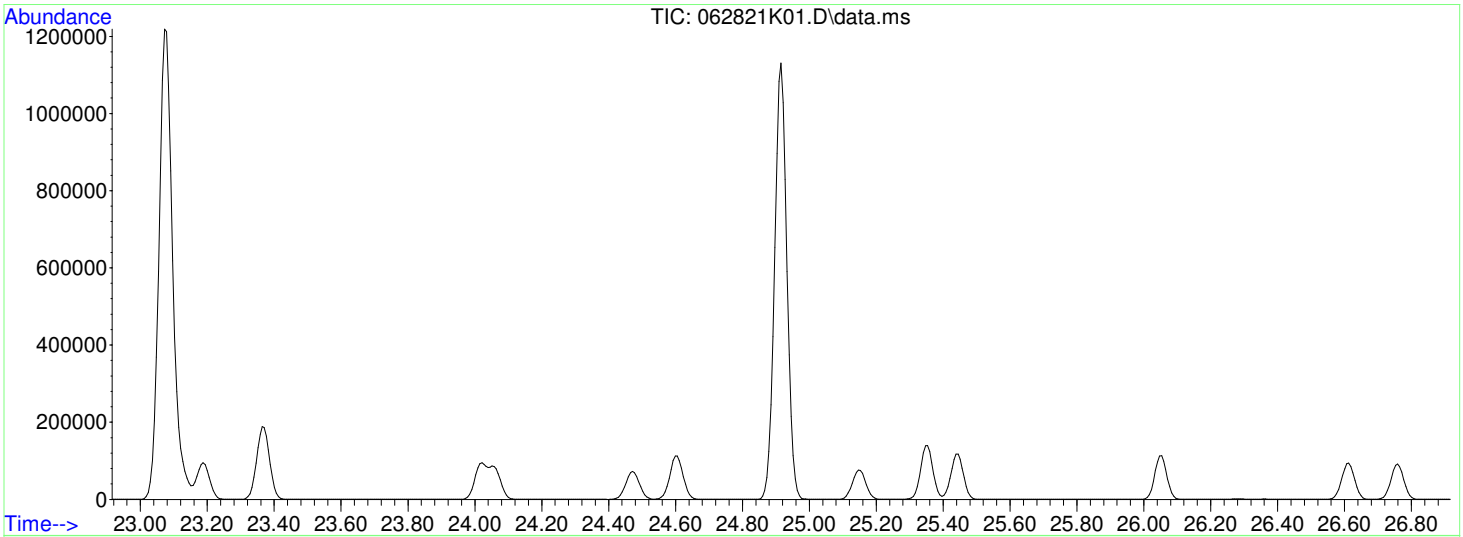
Table of Contents

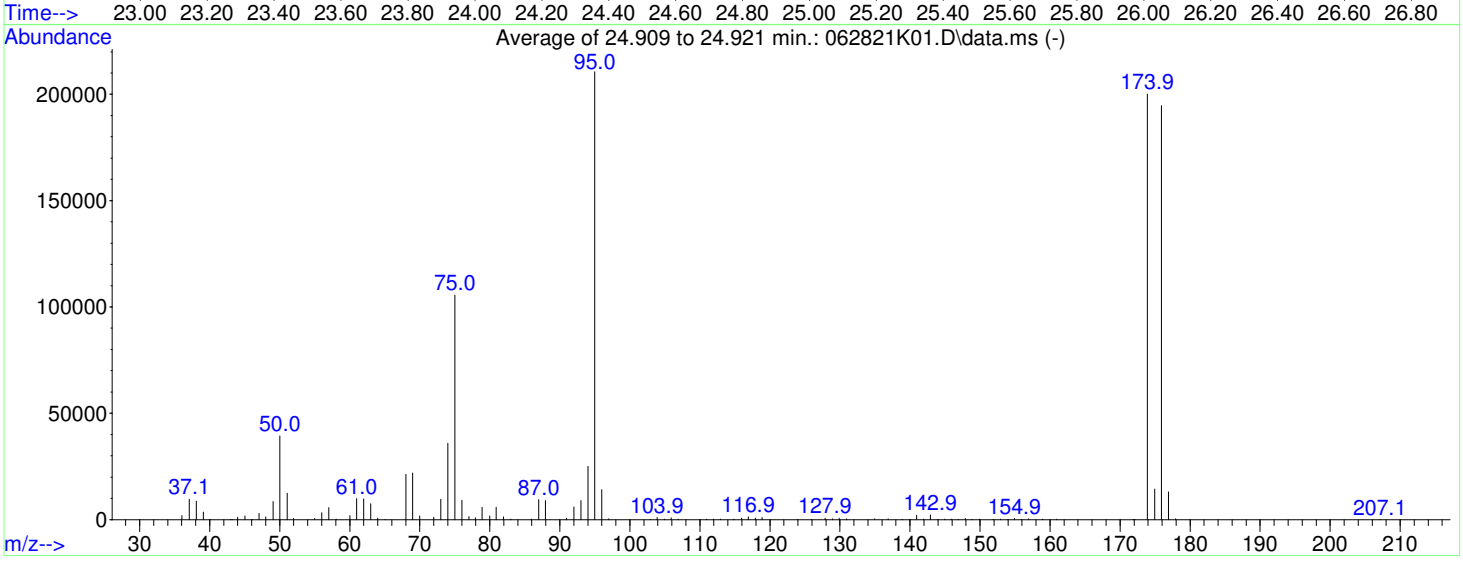
Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K01.D
InstName : HP5973K
Acq On : 28 Jun 2021 11:15 am
Operator : LLH
Sample : S21F072-TUN1
Misc : BFB 1920101
ALS Vial : 31 Sample Multiplier: 1

**REVIEWED**
**By LLH at 11:52 am, Jun 28, 2021**

Integration File: lscint.p

Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Title : TO15
Last Update : Fri Jun 11 09:34:37 2021



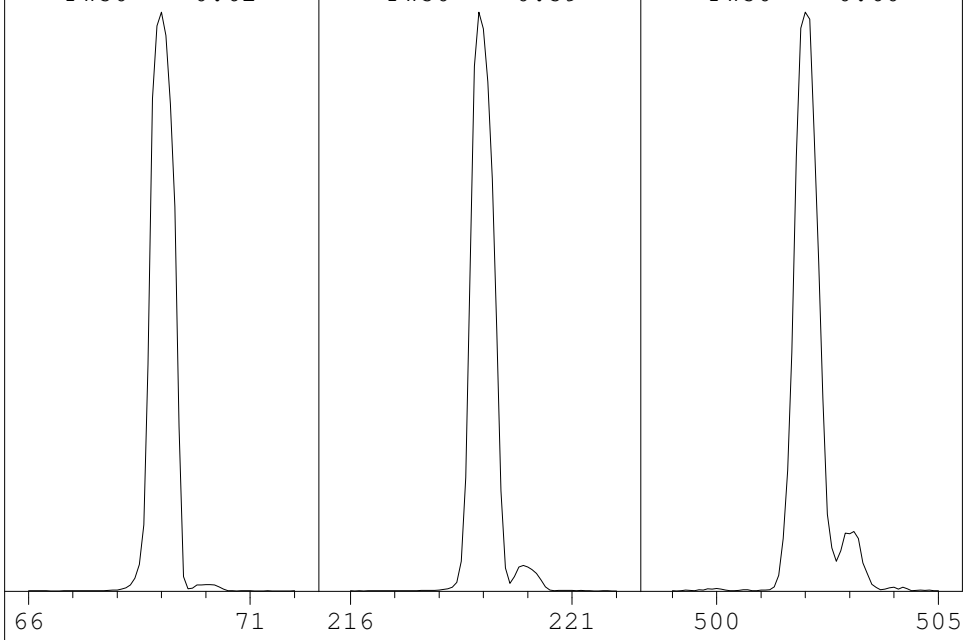




AutoFind: Scans 3325, 3326, 3327; Background Corrected with Scan 3310

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.7 | 39405 | PASS |
| 75 | 95 | 30 | 66 | 50.1 | 105523 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 210667 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 14099 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 95.0 | 200128 | PASS |
| 175 | 174 | 4 | 9 | 7.2 | 14417 | PASS |
| 176 | 174 | 93 | 101 | 97.2 | 194581 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 13026 | PASS |

Mon Jun 28 11:50:50 2021 Instrum
C:\msdchem\1\5973N\bfb062821K.U 0582321658

| Mass | 69.00 | Mass | 218.90 | Mass | 502.00 |
|---|---|---|---|---|---|
| Ab | 487605 | Ab | 284718 | Ab | 22593 |
| Pw50 | 0.62 | Pw50 | 0.59 | Pw50 | 0.60 |

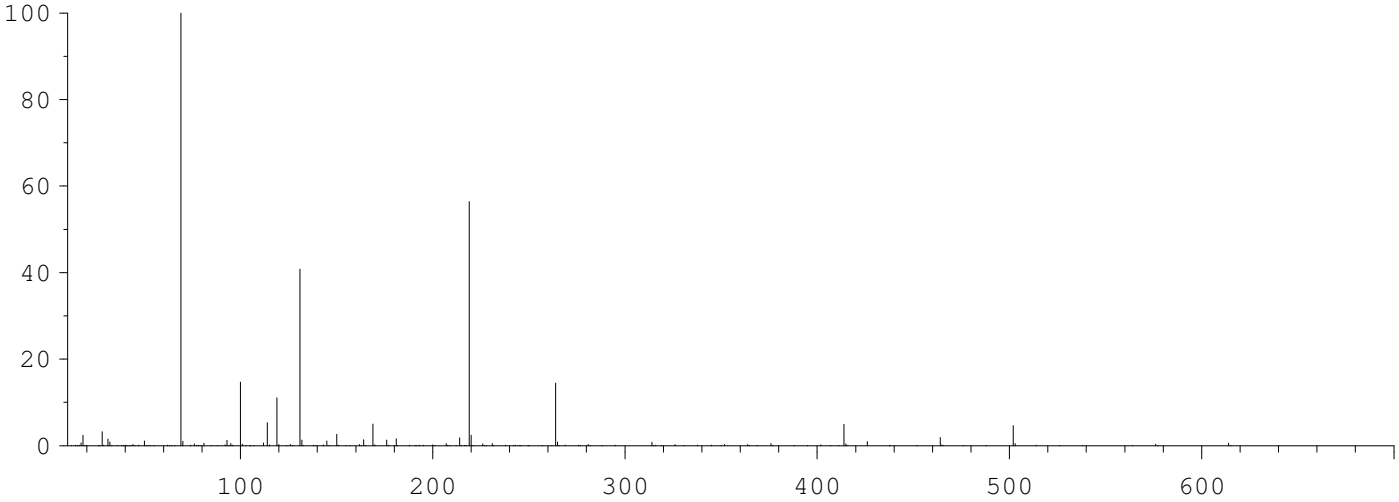



| | | | |
|---|---|---|---|
| Ion Pol | Pos | MassGain | 80 |
| | | MassOffs | -9 |
| Emission | 34.6 | AmuGain | 1989 |
| EIEnrgy | 69.9 | AmuOffs | 131 |
| Filament | 1 | Wid219 | -0.030 |
| | | DC Pol | Pos |
| Repeller | 34.98 | | |
| IonFcus | 88.3 | HEDEnab | On |
| EntLens | 21.5 | EMVolts | 1188 |
| EntOffs | 18.57 | | |
| | | Samples | 8 |
| PFTBA | Open | Averages | 3 |
| | | Stepsize | 0.10 |

Temperatures and Pressures:

| | | | |
|---|---|---|---|
| MS Source | 230 | Turbo Speed | 100 |
| MS Quad | 150 | | |

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
170 peaks Base: 69.00 Abundance: 455552




| Mass | Abund | Rel Abund | Iso Mass | Iso Abund | Iso Ratio |
|---|---|---|---|---|---|
| 69.00 | 455552 | 100.00 | 70.00 | 4639 | 1.02 |
| 219.00 | 257088 | 56.43 | 220.00 | 11015 | 4.28 |
| 502.00 | 21080 | 4.63 | 503.00 | 2149 | 10.19 |

Air/Water Check: H20~2.43% N2~3.19% O2~0.86% CO2~0.30% N2/H2O~131.20%

Column(1) Flow: 0.873 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 141675
Repeller Maximum 35 volts using ion 219; Gain Factor 1.42

MassGain Values(Samples): 80(3) 80(2) 81(1) 81(0) 80(FS)

| TARGET MASS: | 50 | 69 | 131 | 219 | 414 | 502 | 800 |
|---|---|---|---|---|---|---|---|
| Amu Offset: | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 |
| Entrance Lens Offset: | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 |

# S21F072-CCV1

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

**REVIEWED**
**By LLH at 12:40 pm, Jun 28, 2021**

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | BROMOCHLOROMETHANE | 1.000 | 1.000 | 0.0 | 90 | 0.00 |
| 2 | T | Propene | 0.617 | 0.507 | 17.8 | 82 | 0.00 |
| 3 | T | Dichlorodifluoromethane | 1.797 | 1.415 | 21.3 | 79 | 0.00 |
| 4 | T | 1,2-Dichlorotetrafluoroetha | 1.912 | 1.498 | 21.7 | 78 | 0.00 |
| 5 | T | Chloromethane | 0.625 | 0.514 | 17.8 | 82 | 0.00 |
| 6 | T | Vinyl chloride | 0.999 | 0.836 | 16.3 | 83 | 0.00 |
| 7 | T | 1,3-Butadiene | 0.808 | 0.688 | 14.9 | 85 | 0.00 |
| 8 | T | Bromomethane | 0.582 | 0.462 | 20.6 | 80 | 0.00 |
| 9 | T | Chloroethane | 0.375 | 0.300 | 20.0 | 80 | 0.00 |
| 10 | T | Bromoethene | 0.601 | 0.470 | 21.8 | 77 | 0.00 |
| 11 | T | Trichlorofluoromethane | 1.507 | 1.236 | 18.0 | 82 | 0.00 |
| 12 | T | 1,1,2-Trichloro-1,2,2-trifl | 1.091 | 0.871 | 20.2 | 80 | 0.00 |
| 13 | T | 1,1-Dichloroethene | 0.938 | 0.772 | 17.7 | 79 | 0.00 |
| 14 | T | Acetone | 1.073 | 0.879 | 18.1 | 84 | 0.00 |
| 15 | T | Carbon disulfide | 1.925 | 1.549 | 19.5 | 82 | 0.00 |
| 16 | T | 2-Propanol | 0.939 | 0.780 | 16.9 | 79 | 0.00 |
| 17 | T | Allyl chloride | 0.784 | 0.667 | 14.9 | 82 | 0.00 |
| 18 | T | Dichloromethane | 0.792 | 0.625 | 21.1 | 85 | 0.00 |
| 19 | T | tert-Butyl methyl ether (MT | 1.922 | 1.572 | 18.2 | 78 | 0.00 |
| 20 | T | trans-1,2-Dichloroethene | 0.960 | 0.799 | 16.8 | 82 | 0.00 |
| 21 | T | Hexane | 1.147 | 0.964 | 16.0 | 80 | 0.00 |
| 22 | T | 1,1-Dichloroethane | 1.184 | 0.976 | 17.6 | 82 | 0.00 |
| 23 | T | Vinyl acetate | 1.302 | 1.129 | 13.3 | 80 | 0.00 |
| 24 | T | cis-1,2-Dichloroethene | 0.810 | 0.673 | 16.9 | 80 | 0.00 |
| 25 | T | 2-Butanone (MEK) | 0.377 | 0.314 | 16.7 | 81 | 0.00 |
| 26 | T | Ethyl acetate | 0.228 | 0.197 | 13.6 | 86 | 0.00 |
| 27 | T | Tetrahydrofuran | 0.883 | 0.770 | 12.8 | 85 | 0.00 |
| 28 | T | Chloroform | 1.293 | 1.082 | 16.3 | 83 | 0.00 |
| 29 | T | Cyclohexane | 1.142 | 0.991 | 13.2 | 84 | 0.00 |
| 30 | T | 1,1,1-Trichloroethane | 1.268 | 1.071 | 15.5 | 83 | 0.00 |
| 31 | T | Carbon tetrachloride | 1.317 | 1.114 | 15.4 | 83 | 0.00 |
| 32 | I | 1,4-DIFLUOROBENZENE | 1.000 | 1.000 | 0.0 | 86 | 0.00 |
| 33 | T | Benzene | 0.676 | 0.598 | 11.5 | 83 | 0.00 |
| 34 | T | 2,2,4-Trimethylpentane | 1.172 | 1.069 | 8.8 | 83 | 0.00 |
| 35 | T | 1,2-Dichloroethane | 0.278 | 0.251 | 9.7 | 85 | 0.00 |
| 36 | T | Heptane | 0.421 | 0.403 | 4.3 | 87 | 0.00 |
| 37 | T | Trichloroethene | 0.292 | 0.250 | 14.4 | 79 | 0.00 |
| 38 | T | 1,2-Dichloropropane | 0.247 | 0.219 | 11.3 | 83 | 0.00 |
| 39 | T | 1,4-Dioxane | 0.149 | 0.128 | 14.1 | 79 | 0.00 |
| 40 | T | Bromodichloromethane | 0.499 | 0.440 | 11.8 | 83 | 0.00 |
| 41 | T | cis-1,3-Dichloropropene | 0.358 | 0.318 | 11.2 | 79 | 0.00 |
| 42 | T | 4-Methyl-2-pentanone (MIBK) | 0.568 | 0.531 | 6.5 | 86 | 0.00 |
| 43 | I | CHLOROBENZENE-d5 | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 44 | T | Toluene | 0.795 | 0.696 | 12.5 | 82 | 0.00 |
| 45 | T | trans-1,3-Dichloropropene | 0.326 | 0.281 | 13.8 | 78 | 0.00 |
| 46 | T | 1,1,2-Trichloroethane | 0.270 | 0.234 | 13.3 | 82 | 0.00 |
| 47 | T | Tetrachloroethene | 0.420 | 0.359 | 14.5 | 80 | 0.00 |
| 48 | T | 2-Hexanone | 0.532 | 0.488 | 8.3 | 84 | 0.00 |
| 49 | T | Chlorodibromomethane | 0.527 | 0.453 | 14.0 | 81 | 0.00 |
| 50 | T | 1,2-Dibromoethane (EDB) | 0.381 | 0.321 | 15.7 | 79 | 0.00 |
| 51 | T | Chlorobenzene | 0.668 | 0.574 | 14.1 | 82 | 0.00 |

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 52 | T | Ethylbenzene | 1.092 | 0.974 | 10.8 | 84 | 0.00 |
| 53 | T | m&p-Xylene | 0.829 | 0.750 | 9.5 | 84 | 0.00 |
| 54 | T | o-Xylene | 0.881 | 0.806 | 8.5 | 84 | 0.00 |
| 55 | T | Styrene | 0.638 | 0.562 | 11.9 | 80 | 0.00 |
| 56 | T | Bromoform | 0.537 | 0.479 | 10.8 | 82 | 0.00 |
| 57 | T | 1,1,2,2-Tetrachloroethane | 0.653 | 0.582 | 10.9 | 84 | 0.00 |
| 58 | T | 4-Ethyltoluene | 1.411 | 1.275 | 9.6 | 82 | 0.00 |
| 59 | T | 1,3,5-Trimethylbenzene | 0.978 | 0.897 | 8.3 | 83 | 0.00 |
| 60 | T | 1,2,4-Trimethylbenzene | 0.970 | 0.892 | 8.0 | 82 | 0.00 |
| 61 | T | 1,3-Dichlorobenzene | 0.695 | 0.577 | 17.0 | 77 | 0.00 |
| 62 | T | 1,4-Dichlorobenzene | 0.675 | 0.547 | 19.0 | 74 | 0.00 |
| 63 | T | Benzyl chloride | 0.839 | 0.706 | 15.9 | 74 | 0.00 |
| 64 | T | 1,2-Dichlorobenzene | 0.700 | 0.603 | 13.9 | 80 | 0.00 |
| 65 | T | 1,2,4-Trichlorobenzene | 0.584 | 0.438 | 25.0 | 67 | 0.00 |
| 66 | T | Hexachlorobutadiene | 0.670 | 0.597 | 10.9 | 82 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 180027 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 521457 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 489179 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 39778 | 8.38 | ppbv | | 98 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 113253 | 8.19 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.503 | 85 | 117528 | 7.99 | ppbv | | 99 |
| 5) Chloromethane | 5.740 | 50 | 41952 | 8.73 | ppbv | | 99 |
| 6) Vinyl chloride | 6.081 | 62 | 69438 | 9.04 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.184 | 54 | 54515 | 8.77 | ppbv | | 97 |
| 8) Bromomethane | 7.243 | 94 | 38043 | 8.50 | ppbv | | 99 |
| 9) Chloroethane | 7.620 | 64 | 24444 | 8.47 | ppbv | | 100 |
| 10) Bromoethene | 8.265 | 106 | 36861 | 7.98 | ppbv | | 100 |
| 11) Trichlorofluoromethane | 8.380 | 101 | 103623 | 8.94 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.376 | 151 | 73731 | 8.78 | ppbv | | 99 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 64741 | 8.97 | ppbv | | 98 |
| 14) Acetone | 11.081 | 43 | 66287 | 8.03 | ppbv | | 98 |
| 15) Carbon disulfide | 11.203 | 76 | 123915 | 8.37 | ppbv | | 99 |
| 16) 2-Propanol | 11.598 | 45 | 55780 | 7.72 | ppbv | | 95 |
| 17) Allyl chloride | 11.963 | 41 | 55388 | 9.18 | ppbv | | 98 |
| 18) Dichloromethane | 12.480 | 49 | 52388 | 8.60 | ppbv | | 96 |
| 19) tert-Butyl methyl ethe... | 13.028 | 73 | 119709 | 8.10 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 63333 | 8.58 | ppbv | | 97 |
| 21) Hexane | 13.588 | 57 | 75627 | 8.57 | ppbv | | 95 |
| 22) 1,1-Dichloroethane | 14.385 | 63 | 78113 | 8.58 | ppbv | | 99 |
| 23) Vinyl acetate | 14.494 | 43 | 95574 | 9.54 | ppbv | | 98 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 56942 | 9.14 | ppbv | # | 98 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 24127 | 8.31 | ppbv | # | 90 |
| 26) Ethyl acetate | 15.863 | 61 | 15442 | 8.82 | ppbv | # | 96 |
| 27) Tetrahydrofuran | 16.283 | 42 | 53910 | 7.94 | ppbv | | 97 |
| 28) Chloroform | 16.441 | 83 | 89916 | 9.04 | ppbv | | 98 |
| 29) Cyclohexane | 16.611 | 56 | 81547 | 9.28 | ppbv | | 97 |
| 30) 1,1,1-Trichloroethane | 16.696 | 97 | 89825 | 9.21 | ppbv | | 99 |
| 31) Carbon tetrachloride | 16.928 | 117 | 92536 | 9.13 | ppbv | | 100 |
| 33) Benzene | 17.433 | 78 | 147760 | 9.72 | ppbv | | 99 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 252212 | 9.57 | ppbv | | 99 |
| 35) 1,2-Dichloroethane | 17.652 | 62 | 59810 | 9.57 | ppbv | | 99 |
| 36) Heptane | 17.670 | 43 | 95067 | 10.04 | ppbv | | 97 |
| 37) Trichloroethene | 18.619 | 130 | 61273 | 9.32 | ppbv | | 99 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 53177 | 9.59 | ppbv | | 98 |
| 39) 1,4-Dioxane | 19.312 | 88 | 29893 | 8.94 | ppbv | | 98 |
| 40) Bromodichloromethane | 19.592 | 83 | 102768 | 9.16 | ppbv | | 99 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 78666 | 9.77 | ppbv | | 98 |
| 42) 4-Methyl-2-pentanone (... | 20.541 | 43 | 114657 | 8.99 | ppbv | | 97 |
| 44) Toluene | 20.797 | 91 | 173364 | 9.55 | ppbv | | 100 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 63555 | 8.53 | ppbv | | 99 |
| 46) 1,1,2-Trichloroethane | 21.588 | 97 | 58397 | 9.45 | ppbv | | 98 |
| 47) Tetrachloroethene | 21.636 | 166 | 88525 | 9.22 | ppbv | | 99 |
| 48) 2-Hexanone | 21.880 | 43 | 100407 | 8.26 | ppbv | | 97 |
| 49) Chlorodibromomethane | 22.202 | 129 | 105605 | 8.76 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 79192 | 9.10 | ppbv | | 100 |
| 51) Chlorobenzene | 23.121 | 112 | 144266 | 9.45 | ppbv | | 99 |
| 52) Ethylbenzene | 23.188 | 91 | 238138 | 9.54 | ppbv | | 100 |
| 53) m&p-Xylene | 23.364 | 91 | 370414 | 19.54 | ppbv | | 99 |
| 54) o-Xylene | 24.021 | 91 | 182424 | 9.05 | ppbv | | 99 |

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.058 | 104 | 141242 | 9.69 | ppbv | 99 |
| 56) | Bromoform | 24.471 | 173 | 116127 | 9.45 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.153 | 83 | 133107 | 8.92 | ppbv | 100 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 291444 | 9.04 | ppbv | 99 |
| 59) | 1,3,5-Trimethylbenzene | 25.439 | 105 | 225521 | 10.09 | ppbv | 100 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 218269 | 9.85 | ppbv | 99 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 137245 | 8.64 | ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 131315 | 8.51 | ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 145277 | 7.57 | ppbv | 98 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 140572 | 8.79 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.831 | 180 | 105153 | 7.87 | ppbv | 99 |
| 66) | Hexachlorobutadiene | 29.934 | 225 | 150020 | 9.80 | ppbv | 99 |

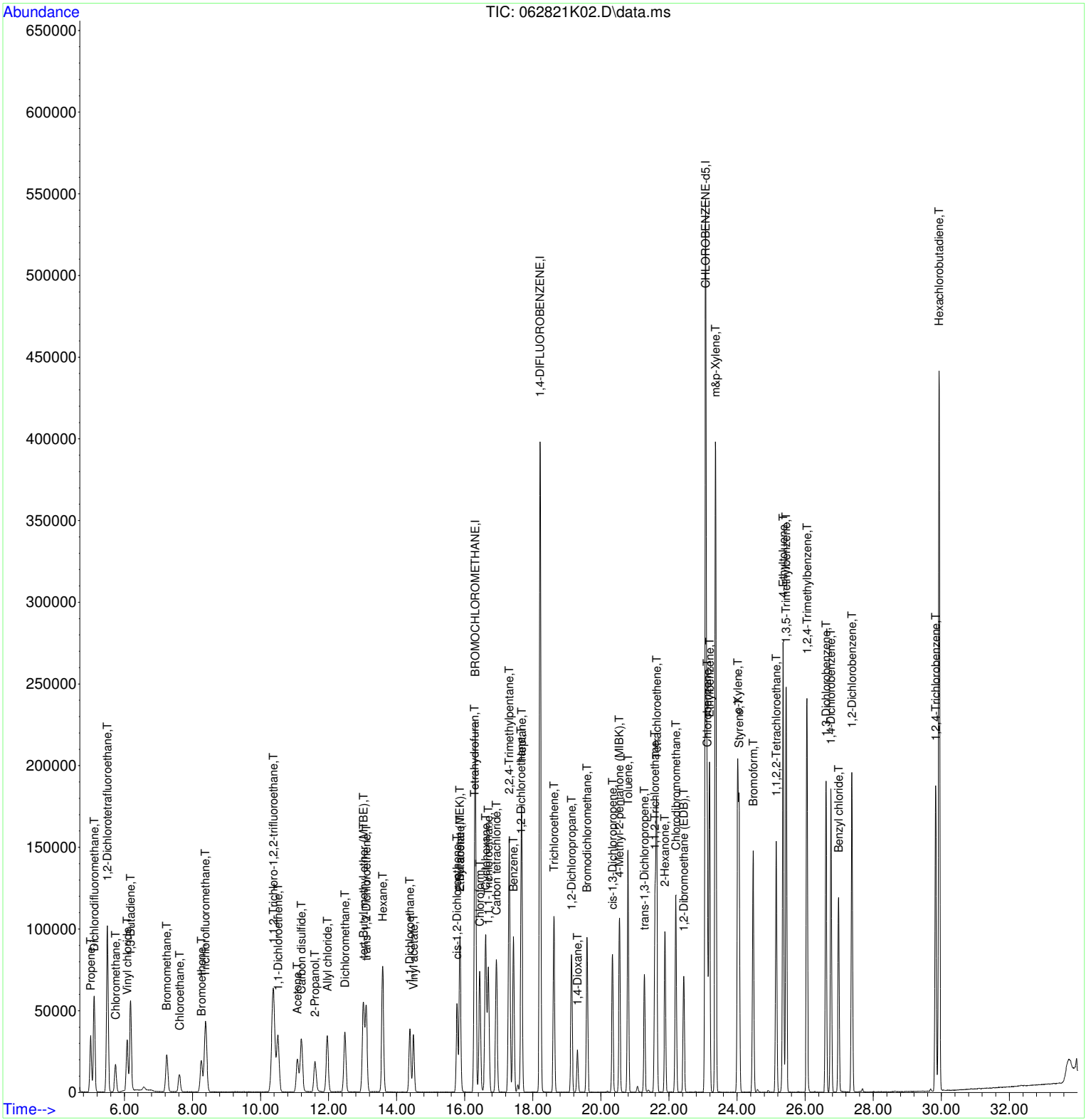
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration



# B21F079-BS1

**REVIEWED**
**By LLH at 12:41 pm, Jun 28, 2021**

## LCS REPORT

Instrument Name: HP5973K
Sample Name: S21F072-CCV1@B21F079-BS1
Misc Info: 10ppbv 2124077@2124080
Date Acquired: 6/28/2021 12:03
QLast Update: Fri Jun 11 09:34:37 2021
Operator: LLH

| # | Name | Ret Time | Amount | Concentration | %R | QC | LIMIT | STATUS |
|---|---|---|---|---|---|---|---|---|
| 1) | BROMOCHLOROMETHANE | 16.31 | #N/A | 23.40 | #N/A | 70.0 | 130.0 | #N/A |
| 2) | Propene | 5.01 | 10.20 | 8.38 | 82% | 72.0 | 114.0 | pass |
| 3) | Dichlorodifluoromethane | 5.11 | 10.40 | 8.19 | 79% | 73.0 | 120.0 | pass |
| 4) | 1,2-Dichlorotetrafluoroethane | 5.50 | 10.20 | 7.99 | 78% | 74.0 | 116.0 | pass |
| 5) | Chloromethane | 5.74 | 10.60 | 8.73 | 82% | 73.0 | 113.0 | pass |
| 6) | Vinyl chloride | 6.08 | 10.80 | 9.04 | 84% | 68.0 | 119.0 | pass |
| 7) | 1,3-Butadiene | 6.18 | 10.30 | 8.77 | 85% | 68.0 | 120.0 | pass |
| 8) | Bromomethane | 7.24 | 10.70 | 8.50 | 79% | 71.0 | 122.0 | pass |
| 9) | Chloroethane | 7.62 | 10.60 | 8.47 | 80% | 73.0 | 116.0 | pass |
| 10) | Bromoethene | 8.26 | 10.20 | 7.98 | 78% | 64.0 | 123.0 | pass |
| 11) | Trichlorofluoromethane | 8.38 | 10.90 | 8.94 | 82% | 74.0 | 120.0 | pass |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.38 | 11.00 | 8.78 | 80% | 63.0 | 126.0 | pass |
| 13) | 1,1-Dichloroethene | 10.52 | 10.90 | 8.97 | 82% | 69.0 | 119.0 | pass |
| 14) | Acetone | 11.08 | 9.80 | 8.03 | 82% | 79.0 | 114.0 | pass |
| 15) | Carbon disulfide | 11.20 | 10.40 | 8.37 | 80% | 75.0 | 120.0 | pass |
| 16) | 2-Propanol | 11.60 | 9.30 | 7.72 | 83% | 66.0 | 119.0 | pass |
| 17) | Allyl chloride | 11.96 | 10.80 | 9.18 | 85% | 72.0 | 116.0 | pass |
| 18) | Dichloromethane | 12.48 | 10.90 | 8.60 | 79% | 76.0 | 110.0 | pass |
| 19) | tert-Butyl methyl ether (MTBE) | 13.03 | 9.90 | 8.10 | 82% | 61.0 | 124.0 | pass |
| 20) | trans-1,2-Dichloroethene | 13.11 | 10.30 | 8.58 | 83% | 78.0 | 113.0 | pass |
| 21) | Hexane | 13.59 | 10.20 | 8.57 | 84% | 76.0 | 116.0 | pass |
| 22) | 1,1-Dichloroethane | 14.38 | 10.40 | 8.58 | 82% | 76.0 | 113.0 | pass |
| 23) | Vinyl acetate | 14.49 | 11.00 | 9.54 | 87% | 71.0 | 117.0 | pass |
| 24) | cis-1,2-Dichloroethene | 15.77 | 11.00 | 9.14 | 83% | 74.0 | 116.0 | pass |
| 25) | 2-Butanone (MEK) | 15.86 | 10.00 | 8.31 | 83% | 73.0 | 124.0 | pass |
| 26) | Ethyl acetate | 15.86 | 10.20 | 8.82 | 86% | 71.0 | 122.0 | pass |
| 27) | Tetrahydrofuran | 16.28 | 9.10 | 7.94 | 87% | 79.0 | 119.0 | pass |
| 28) | Chloroform | 16.44 | 10.80 | 9.04 | 84% | 77.0 | 115.0 | pass |
| 29) | Cyclohexane | 16.61 | 10.70 | 9.28 | 87% | 76.0 | 114.0 | pass |
| 30) | 1,1,1-Trichloroethane | 16.70 | 10.90 | 9.21 | 84% | 77.0 | 117.0 | pass |
| 31) | Carbon tetrachloride | 16.93 | 10.80 | 9.13 | 85% | 75.0 | 121.0 | pass |
| 32) | 1,4-DIFLUOROBENZENE | 18.21 | #N/A | 23.20 | #N/A | 70.0 | 130.0 | #N/A |
| 33) | Benzene | 17.43 | 11.00 | 9.72 | 88% | 81.0 | 115.0 | pass |
| 34) | 2,2,4-Trimethylpentane | 17.30 | 10.50 | 9.57 | 91% | 77.0 | 120.0 | pass |
| 35) | 1,2-Dichloroethane | 17.65 | 10.60 | 9.57 | 90% | 74.0 | 128.0 | pass |
| 36) | Heptane | 17.67 | 10.50 | 10.04 | 96% | 73.0 | 128.0 | pass |
| 37) | Trichloroethene | 18.62 | 10.90 | 9.32 | 86% | 82.0 | 113.0 | pass |
| 38) | 1,2-Dichloropropane | 19.14 | 10.80 | 9.59 | 89% | 78.0 | 119.0 | pass |
| 39) | 1,4-Dioxane | 19.31 | 10.40 | 8.94 | 86% | 73.0 | 120.0 | pass |
| 40) | Bromodichloromethane | 19.59 | 10.40 | 9.16 | 88% | 79.0 | 124.0 | pass |
| 41) | cis-1,3-Dichloropropene | 20.34 | 11.00 | 9.77 | 89% | 82.0 | 117.0 | pass |
| 42) | 4-Methyl-2-pentanone (MIBK) | 20.54 | 9.60 | 8.99 | 94% | 67.0 | 136.0 | pass |
| 43) | CHLOROBENZENE-d5 | 23.08 | #N/A | 21.40 | #N/A | 70.0 | 130.0 | #N/A |
| 44) | Toluene | 20.80 | 10.90 | 9.55 | 88% | 80.0 | 120.0 | pass |
| 45) | trans-1,3-Dichloropropene | 21.28 | 9.90 | 8.53 | 86% | 81.0 | 122.0 | pass |
| 46) | 1,1,2-Trichloroethane | 21.59 | 10.90 | 9.45 | 87% | 81.0 | 121.0 | pass |
| 47) | Tetrachloroethene | 21.64 | 10.80 | 9.22 | 85% | 69.0 | 122.0 | pass |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 48) | 2-Hexanone | 21.88 | 9.00 | 8.26 | 92% | 61.0 | 140.0 | pass |
| 49) | Chlorodibromomethane | 22.20 | 10.20 | 8.76 | 86% | 82.0 | 128.0 | pass |
| 50) | 1,2-Dibromoethane (EDB) | 22.43 | 10.80 | 9.10 | 84% | 80.0 | 121.0 | pass |
| 51) | Chlorobenzene | 23.12 | 11.00 | 9.45 | 86% | 80.0 | 122.0 | pass |
| 52) | Ethylbenzene | 23.19 | 10.70 | 9.54 | 89% | 80.0 | 125.0 | pass |
| 53) | m&p-Xylene | 23.36 | 21.60 | 19.54 | 90% | 80.0 | 128.0 | pass |
| 54) | o-Xylene | 24.02 | 9.90 | 9.05 | 91% | 79.0 | 130.0 | pass |
| 55) | Styrene | 24.06 | 11.00 | 9.69 | 88% | 76.0 | 133.0 | pass |
| 56) | Bromoform | 24.47 | 10.60 | 9.45 | 89% | 82.0 | 136.0 | pass |
| 57) | 1,1,2,2-Tetrachloroethane | 25.15 | 10.00 | 8.92 | 89% | 78.0 | 132.0 | pass |
| 58) | 4-Ethyltoluene | 25.35 | 10.00 | 9.04 | 90% | 77.0 | 133.0 | pass |
| 59) | 1,3,5-Trimethylbenzene | 25.44 | 11.00 | 10.09 | 92% | 78.0 | 133.0 | pass |
| 60) | 1,2,4-Trimethylbenzene | 26.05 | 10.70 | 9.85 | 92% | 78.0 | 133.0 | pass |
| 61) | 1,3-Dichlorobenzene | 26.61 | 10.40 | 8.64 | 83% | 76.0 | 133.0 | pass |
| 62) | 1,4-Dichlorobenzene | 26.76 | 10.50 | 8.51 | 81% | 75.0 | 134.0 | pass |
| 63) | Benzyl chloride | 26.98 | 9.00 | 7.57 | 84% | 73.0 | 144.0 | pass |
| 64) | 1,2-Dichlorobenzene | 27.37 | 10.20 | 8.79 | 86% | 77.0 | 134.0 | pass |
| 65) | 1,2,4-Trichlorobenzene | 29.83 | 10.50 | 7.87 | 75% | 70.0 | 133.0 | pass |
| 66) | Hexachlorobutadiene | 29.93 | 11.00 | 9.80 | 89% | 74.0 | 130.0 | pass |

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 180027 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 521457 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 489179 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 39778 | 8.38 | ppbv | | 98 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 113253 | 8.19 | ppbv | | 100 |
| 4) 1,2-Dichlorotetrafluor... | 5.503 | 85 | 117528 | 7.99 | ppbv | | 99 |
| 5) Chloromethane | 5.740 | 50 | 41952 | 8.73 | ppbv | | 99 |
| 6) Vinyl chloride | 6.081 | 62 | 69438 | 9.04 | ppbv | | 100 |
| 7) 1,3-Butadiene | 6.184 | 54 | 54515 | 8.77 | ppbv | | 97 |
| 8) Bromomethane | 7.243 | 94 | 38043 | 8.50 | ppbv | | 99 |
| 9) Chloroethane | 7.620 | 64 | 24444 | 8.47 | ppbv | | 100 |
| 10) Bromoethene | 8.265 | 106 | 36861 | 7.98 | ppbv | | 100 |
| 11) Trichlorofluoromethane | 8.380 | 101 | 103623 | 8.94 | ppbv | | 100 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.376 | 151 | 73731 | 8.78 | ppbv | | 99 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 64741 | 8.97 | ppbv | | 98 |
| 14) Acetone | 11.081 | 43 | 66287 | 8.03 | ppbv | | 98 |
| 15) Carbon disulfide | 11.203 | 76 | 123915 | 8.37 | ppbv | | 99 |
| 16) 2-Propanol | 11.598 | 45 | 55780 | 7.72 | ppbv | | 95 |
| 17) Allyl chloride | 11.963 | 41 | 55388 | 9.18 | ppbv | | 98 |
| 18) Dichloromethane | 12.480 | 49 | 52388 | 8.60 | ppbv | | 96 |
| 19) tert-Butyl methyl ethe... | 13.028 | 73 | 119709 | 8.10 | ppbv | | 100 |
| 20) trans-1,2-Dichloroethene | 13.107 | 61 | 63333 | 8.58 | ppbv | | 97 |
| 21) Hexane | 13.588 | 57 | 75627 | 8.57 | ppbv | | 95 |
| 22) 1,1-Dichloroethane | 14.385 | 63 | 78113 | 8.58 | ppbv | | 99 |
| 23) Vinyl acetate | 14.494 | 43 | 95574 | 9.54 | ppbv | | 98 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 56942 | 9.14 | ppbv | # | 98 |
| 25) 2-Butanone (MEK) | 15.857 | 72 | 24127 | 8.31 | ppbv | # | 90 |
| 26) Ethyl acetate | 15.863 | 61 | 15442 | 8.82 | ppbv | # | 96 |
| 27) Tetrahydrofuran | 16.283 | 42 | 53910 | 7.94 | ppbv | | 97 |
| 28) Chloroform | 16.441 | 83 | 89916 | 9.04 | ppbv | | 98 |
| 29) Cyclohexane | 16.611 | 56 | 81547 | 9.28 | ppbv | | 97 |
| 30) 1,1,1-Trichloroethane | 16.696 | 97 | 89825 | 9.21 | ppbv | | 99 |
| 31) Carbon tetrachloride | 16.928 | 117 | 92536 | 9.13 | ppbv | | 100 |
| 33) Benzene | 17.433 | 78 | 147760 | 9.72 | ppbv | | 99 |
| 34) 2,2,4-Trimethylpentane | 17.305 | 57 | 252212 | 9.57 | ppbv | | 99 |
| 35) 1,2-Dichloroethane | 17.652 | 62 | 59810 | 9.57 | ppbv | | 99 |
| 36) Heptane | 17.670 | 43 | 95067 | 10.04 | ppbv | | 97 |
| 37) Trichloroethene | 18.619 | 130 | 61273 | 9.32 | ppbv | | 99 |
| 38) 1,2-Dichloropropane | 19.136 | 63 | 53177 | 9.59 | ppbv | | 98 |
| 39) 1,4-Dioxane | 19.312 | 88 | 29893 | 8.94 | ppbv | | 98 |
| 40) Bromodichloromethane | 19.592 | 83 | 102768 | 9.16 | ppbv | | 99 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 78666 | 9.77 | ppbv | | 98 |
| 42) 4-Methyl-2-pentanone (... | 20.541 | 43 | 114657 | 8.99 | ppbv | | 97 |
| 44) Toluene | 20.797 | 91 | 173364 | 9.55 | ppbv | | 100 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 63555 | 8.53 | ppbv | | 99 |
| 46) 1,1,2-Trichloroethane | 21.588 | 97 | 58397 | 9.45 | ppbv | | 98 |
| 47) Tetrachloroethene | 21.636 | 166 | 88525 | 9.22 | ppbv | | 99 |
| 48) 2-Hexanone | 21.880 | 43 | 100407 | 8.26 | ppbv | | 97 |
| 49) Chlorodibromomethane | 22.202 | 129 | 105605 | 8.76 | ppbv | | 100 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 79192 | 9.10 | ppbv | | 100 |
| 51) Chlorobenzene | 23.121 | 112 | 144266 | 9.45 | ppbv | | 99 |
| 52) Ethylbenzene | 23.188 | 91 | 238138 | 9.54 | ppbv | | 100 |
| 53) m&p-Xylene | 23.364 | 91 | 370414 | 19.54 | ppbv | | 99 |
| 54) o-Xylene | 24.021 | 91 | 182424 | 9.05 | ppbv | | 99 |

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

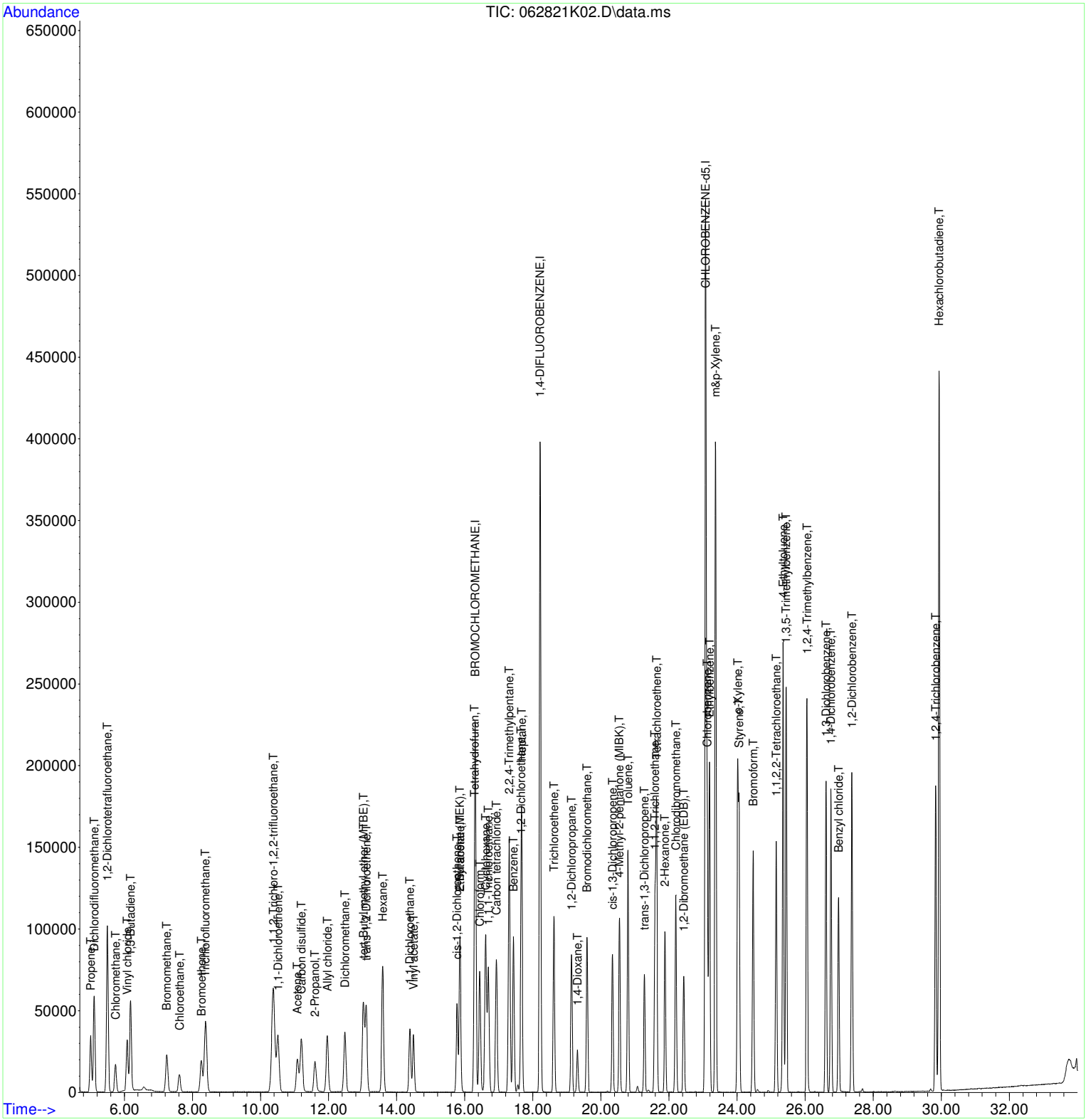
Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 55) | Styrene | 24.058 | 104 | 141242 | 9.69 | ppbv | 99 |
| 56) | Bromoform | 24.471 | 173 | 116127 | 9.45 | ppbv | 100 |
| 57) | 1,1,2,2-Tetrachloroethane | 25.153 | 83 | 133107 | 8.92 | ppbv | 100 |
| 58) | 4-Ethyltoluene | 25.353 | 105 | 291444 | 9.04 | ppbv | 99 |
| 59) | 1,3,5-Trimethylbenzene | 25.439 | 105 | 225521 | 10.09 | ppbv | 100 |
| 60) | 1,2,4-Trimethylbenzene | 26.053 | 105 | 218269 | 9.85 | ppbv | 99 |
| 61) | 1,3-Dichlorobenzene | 26.613 | 146 | 137245 | 8.64 | ppbv | 100 |
| 62) | 1,4-Dichlorobenzene | 26.759 | 146 | 131315 | 8.51 | ppbv | 100 |
| 63) | Benzyl chloride | 26.984 | 91 | 145277 | 7.57 | ppbv | 98 |
| 64) | 1,2-Dichlorobenzene | 27.373 | 146 | 140572 | 8.79 | ppbv | 100 |
| 65) | 1,2,4-Trichlorobenzene | 29.831 | 180 | 105153 | 7.87 | ppbv | 99 |
| 66) | Hexachlorobutadiene | 29.934 | 225 | 150020 | 9.80 | ppbv | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K02.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:03 pm
Operator : LLH
Sample : S21F072-CCV1@B21F079-BS1
Misc : 10ppbv 2124077@2124080
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jun 28 12:37:59 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration



# S21F072-CRL1

**REVIEWED**
**By LLH at 2:18 pm, Jun 28, 2021**

## QLS REPORT

Instrument Name: HP5973K
Sample Name: S21F072-CRL1
Misc Info: 1ppbv 2124074
Date Acquired: 6/28/2021 12:51
QLast Update: Fri Jun 11 09:34:37 2021
Operator: LLH

| # | Name | Ret Time | Amount | Concentration | %R | QC | LIMIT | STATUS | TYPE |
|---|---|---|---|---|---|---|---|---|---|
| 1) | BROMOCHLOROMETHANE | 16.31 | #N/A | 23.40 | #N/A | 60.0 | 140.0 | #N/A | Internal |
| 2) | Propene | 5.01 | 1.02 | 1.19 | 116% | 60.0 | 140.0 | pass | Subset |
| 3) | Dichlorodifluoromethane | 5.11 | 1.04 | 1.10 | 106% | 60.0 | 140.0 | pass | Primary |
| 4) | 1,2-Dichlorotetrafluoroethane | 5.50 | 1.02 | 1.07 | 105% | 60.0 | 140.0 | pass | Primary |
| 5) | Chloromethane | 5.73 | 1.06 | 1.19 | 112% | 60.0 | 140.0 | pass | Primary |
| 6) | Vinyl chloride | 6.08 | 1.08 | 1.23 | 114% | 60.0 | 140.0 | pass | Primary |
| 7) | 1,3-Butadiene | 6.18 | 1.03 | 1.26 | 123% | 60.0 | 140.0 | pass | Subset |
| 8) | Bromomethane | 7.24 | 1.07 | 1.12 | 105% | 60.0 | 140.0 | pass | Primary |
| 9) | Chloroethane | 7.61 | 1.06 | 1.08 | 102% | 60.0 | 140.0 | pass | Primary |
| 10) | Bromoethene | 8.27 | 1.02 | 0.98 | 96% | 60.0 | 140.0 | pass | Subset |
| 11) | Trichlorofluoromethane | 8.37 | 1.09 | 1.14 | 104% | 60.0 | 140.0 | pass | Primary |
| 12) | 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.36 | 1.10 | 1.12 | 102% | 60.0 | 140.0 | pass | Primary |
| 13) | 1,1-Dichloroethene | 10.52 | 1.09 | 1.01 | 93% | 60.0 | 140.0 | pass | Primary |
| 14) | Acetone | 11.09 | 0.98 | 1.13 | 116% | 60.0 | 140.0 | pass | Subset |
| 15) | Carbon disulfide | 11.20 | 1.04 | 1.14 | 109% | 60.0 | 140.0 | pass | Subset |
| 16) | 2-Propanol | 11.61 | 0.93 | 0.82 | 88% | 60.0 | 140.0 | pass | Subset |
| 17) | Allyl chloride | 11.95 | 1.08 | 1.01 | 94% | 60.0 | 140.0 | pass | Subset |
| 18) | Dichloromethane | 12.47 | 1.09 | 1.38 | 126% | 60.0 | 140.0 | pass | Primary |
| 19) | tert-Butyl methyl ether (MTBE) | 13.03 | 0.99 | 0.85 | 85% | 60.0 | 140.0 | pass | Subset |
| 20) | trans-1,2-Dichloroethene | 13.11 | 1.03 | 1.09 | 106% | 60.0 | 140.0 | pass | Subset |
| 21) | Hexane | 13.59 | 1.02 | 0.89 | 87% | 60.0 | 140.0 | pass | Subset |
| 22) | 1,1-Dichloroethane | 14.39 | 1.04 | 1.09 | 105% | 60.0 | 140.0 | pass | Primary |
| 23) | Vinyl acetate | 14.49 | 1.10 | 0.89 | 81% | 60.0 | 140.0 | pass | Subset |
| 24) | cis-1,2-Dichloroethene | 15.77 | 1.10 | 1.00 | 91% | 60.0 | 140.0 | pass | Primary |
| 25) | 2-Butanone (MEK) | 15.87 | 1.00 | 0.96 | 96% | 60.0 | 140.0 | pass | Subset |
| 26) | Ethyl acetate | 15.86 | 1.02 | 1.06 | 103% | 60.0 | 140.0 | pass | Subset |
| 27) | Tetrahydrofuran | 16.29 | 0.91 | 0.91 | 100% | 60.0 | 140.0 | pass | Subset |
| 28) | Chloroform | 16.43 | 1.08 | 1.15 | 107% | 60.0 | 140.0 | pass | Primary |
| 29) | Cyclohexane | 16.62 | 1.07 | 1.01 | 94% | 60.0 | 140.0 | pass | Subset |
| 30) | 1,1,1-Trichloroethane | 16.70 | 1.09 | 1.13 | 104% | 60.0 | 140.0 | pass | Primary |
| 31) | Carbon tetrachloride | 16.93 | 1.08 | 1.08 | 100% | 60.0 | 140.0 | pass | Primary |
| 32) | 1,4-DIFLUOROBENZENE | 18.21 | #N/A | 23.20 | #N/A | 60.0 | 140.0 | #N/A | Internal |
| 33) | Benzene | 17.43 | 1.10 | 1.12 | 102% | 60.0 | 140.0 | pass | Primary |
| 34) | 2,2,4-Trimethylpentane | 17.31 | 1.05 | 0.98 | 93% | 60.0 | 140.0 | pass | Subset |
| 35) | 1,2-Dichloroethane | 17.65 | 1.06 | 1.13 | 106% | 60.0 | 140.0 | pass | Primary |
| 36) | Heptane | 17.68 | 1.05 | 1.01 | 96% | 60.0 | 140.0 | pass | Subset |
| 37) | Trichloroethene | 18.62 | 1.09 | 1.07 | 98% | 60.0 | 140.0 | pass | Primary |
| 38) | 1,2-Dichloropropane | 19.14 | 1.08 | 1.08 | 100% | 60.0 | 140.0 | pass | Primary |
| 39) | 1,4-Dioxane | 19.32 | 1.04 | 1.01 | 97% | 60.0 | 140.0 | pass | Subset |
| 40) | Bromodichloromethane | 19.59 | 1.04 | 1.16 | 111% | 60.0 | 140.0 | pass | Subset |
| 41) | cis-1,3-Dichloropropene | 20.34 | 1.10 | 0.93 | 85% | 60.0 | 140.0 | pass | Primary |
| 42) | 4-Methyl-2-pentanone (MIBK) | 20.55 | 0.96 | 0.96 | 100% | 60.0 | 140.0 | pass | Subset |
| 43) | CHLOROBENZENE-d5 | 23.07 | #N/A | 21.40 | #N/A | 60.0 | 140.0 | #N/A | Internal |
| 44) | Toluene | 20.80 | 1.09 | 0.98 | 90% | 60.0 | 140.0 | pass | Primary |
| 45) | trans-1,3-Dichloropropene | 21.28 | 0.99 | 0.82 | 83% | 60.0 | 140.0 | pass | Primary |
| 46) | 1,1,2-Trichloroethane | 21.59 | 1.09 | 1.12 | 103% | 60.0 | 140.0 | pass | Primary |
| 47) | Tetrachloroethene | 21.63 | 1.08 | 1.06 | 98% | 60.0 | 140.0 | pass | Primary |
| 48) | 2-Hexanone | 21.89 | 0.90 | 0.86 | 96% | 60.0 | 140.0 | pass | Subset |
| 49) | Chlorodibromomethane | 22.20 | 1.02 | 1.05 | 103% | 60.0 | 140.0 | pass | Subset |
| 50) | 1,2-Dibromoethane (EDB) | 22.43 | 1.08 | 1.05 | 97% | 60.0 | 140.0 | pass | Primary |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51) | Chlorobenzene | 23.12 | 1.10 | 1.16 | 106% | 60.0 | 140.0 | pass | Primary |
| 52) | Ethylbenzene | 23.19 | 1.07 | 1.03 | 96% | 60.0 | 140.0 | pass | Primary |
| 53) | m&p-Xylene | 23.37 | 2.16 | 1.97 | 91% | 60.0 | 140.0 | pass | Primary |
| 54) | o-Xylene | 24.02 | 0.99 | 0.80 | 80% | 60.0 | 140.0 | pass | Primary |
| 55) | Styrene | 24.06 | 1.10 | 0.90 | 82% | 60.0 | 140.0 | pass | Primary |
| 56) | Bromoform | 24.47 | 1.06 | 1.02 | 96% | 60.0 | 140.0 | pass | Subset |
| 57) | 1,1,2,2-Tetrachloroethane | 25.15 | 1.00 | 1.01 | 101% | 60.0 | 140.0 | pass | Primary |
| 58) | 4-Ethyltoluene | 25.35 | 1.00 | 0.83 | 83% | 60.0 | 140.0 | pass | Subset |
| 59) | 1,3,5-Trimethylbenzene | 25.44 | 1.10 | 0.94 | 86% | 60.0 | 140.0 | pass | Primary |
| 60) | 1,2,4-Trimethylbenzene | 26.05 | 1.07 | 0.79 | 74% | 60.0 | 140.0 | pass | Primary |
| 61) | 1,3-Dichlorobenzene | 26.61 | 1.04 | 0.91 | 87% | 60.0 | 140.0 | pass | Primary |
| 62) | 1,4-Dichlorobenzene | 26.76 | 1.05 | 0.87 | 82% | 60.0 | 140.0 | pass | Primary |
| 63) | Benzyl chloride | 26.98 | 0.90 | 0.70 | 78% | 60.0 | 140.0 | pass | Subset |
| 64) | 1,2-Dichlorobenzene | 27.38 | 1.02 | 0.92 | 90% | 60.0 | 140.0 | pass | Primary |
| 65) | 1,2,4-Trichlorobenzene | 29.84 | 1.05 | 0.76 | 73% | 60.0 | 140.0 | pass | Primary |
| 66) | Hexachlorobutadiene | 29.94 | 1.10 | 1.01 | 92% | 60.0 | 140.0 | pass | Primary |

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K03.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:51 pm
Operator : LLH
Sample : S21F072-CRL1
Misc : 1ppbv 2124074
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 28 14:15:18 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 174505 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 520247 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.072 | 117 | 471665 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 5.010 | 41 | 5464 | 1.19 | ppbv | | 96 |
| 3) Dichlorodifluoromethane | 5.113 | 85 | 14794 | 1.10 | ppbv | | 99 |
| 4) 1,2-Dichlorotetrafluor... | 5.503 | 85 | 15288 | 1.07 | ppbv | | 99 |
| 5) Chloromethane | 5.734 | 50 | 5543 | 1.19 | ppbv | | 96 |
| 6) Vinyl chloride | 6.081 | 62 | 9142 | 1.23 | ppbv | | 98 |
| 7) 1,3-Butadiene | 6.184 | 54 | 7603 | 1.26 | ppbv | | 94 |
| 8) Bromomethane | 7.242 | 94 | 4855 | 1.12 | ppbv | | 96 |
| 9) Chloroethane | 7.608 | 64 | 3017 | 1.08 | ppbv | | 88 |
| 10) Bromoethene | 8.271 | 106 | 4376 | 0.98 | ppbv | | 97 |
| 11) Trichlorofluoromethane | 8.374 | 101 | 12776 | 1.14 | ppbv | | 99 |
| 12) 1,1,2-Trichloro-1,2,2-... | 10.357 | 151 | 9095 | 1.12 | ppbv | # | 1 |
| 13) 1,1-Dichloroethene | 10.515 | 61 | 7077 | 1.01 | ppbv | | 96 |
| 14) Acetone | 11.087 | 43 | 9060 | 1.13 | ppbv | | 94 |
| 15) Carbon disulfide | 11.203 | 76 | 16302 | 1.14 | ppbv | | 96 |
| 16) 2-Propanol | 11.611 | 45 | 5753 | 0.82 | ppbv | | 82 |
| 17) Allyl chloride | 11.951 | 41 | 5920 | 1.01 | ppbv | | 94 |
| 18) Dichloromethane | 12.474 | 49 | 8137 | 1.38 | ppbv | | 95 |
| 19) tert-Butyl methyl ethe... | 13.034 | 73 | 12122 | 0.85 | ppbv | | 99 |
| 20) trans-1,2-Dichloroethene | 13.113 | 61 | 7791 | 1.09 | ppbv | | 97 |
| 21) Hexane | 13.588 | 57 | 7586 | 0.89 | ppbv | | 89 |
| 22) 1,1-Dichloroethane | 14.391 | 63 | 9637 | 1.09 | ppbv | | 97 |
| 23) Vinyl acetate | 14.494 | 43 | 8686 | 0.89 | ppbv | | 94 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 6013 | 1.00 | ppbv | # | 99 |
| 25) 2-Butanone (MEK) | 15.869 | 72 | 2702 | 0.96 | ppbv | # | 84 |
| 26) Ethyl acetate | 15.863 | 61 | 1791 | 1.06 | ppbv | # | 96 |
| 27) Tetrahydrofuran | 16.295 | 42 | 5963 | 0.91 | ppbv | | 92 |
| 28) Chloroform | 16.435 | 83 | 11106 | 1.15 | ppbv | | 97 |
| 29) Cyclohexane | 16.617 | 56 | 8583 | 1.01 | ppbv | | 95 |
| 30) 1,1,1-Trichloroethane | 16.696 | 97 | 10693 | 1.13 | ppbv | | 98 |
| 31) Carbon tetrachloride | 16.928 | 117 | 10637 | 1.08 | ppbv | | 98 |
| 33) Benzene | 17.433 | 78 | 17044 | 1.12 | ppbv | | 99 |
| 34) 2,2,4-Trimethylpentane | 17.311 | 57 | 25663 | 0.98 | ppbv | | 94 |
| 35) 1,2-Dichloroethane | 17.651 | 62 | 7034 | 1.13 | ppbv | | 99 |
| 36) Heptane | 17.676 | 43 | 9570 | 1.01 | ppbv | | 96 |
| 37) Trichloroethene | 18.619 | 130 | 6991 | 1.07 | ppbv | | 99 |
| 38) 1,2-Dichloropropane | 19.142 | 63 | 5997 | 1.08 | ppbv | | 95 |
| 39) 1,4-Dioxane | 19.318 | 88 | 3380 | 1.01 | ppbv | | 93 |
| 40) Bromodichloromethane | 19.592 | 83 | 12935 | 1.16 | ppbv | | 99 |
| 41) cis-1,3-Dichloropropene | 20.340 | 75 | 7490 | 0.93 | ppbv | | 97 |
| 42) 4-Methyl-2-pentanone (... | 20.547 | 43 | 12208 | 0.96 | ppbv | | 95 |
| 44) Toluene | 20.797 | 91 | 17200 | 0.98 | ppbv | | 99 |
| 45) trans-1,3-Dichloropropene | 21.277 | 75 | 5880 | 0.82 | ppbv | | 96 |
| 46) 1,1,2-Trichloroethane | 21.594 | 97 | 6663 | 1.12 | ppbv | | 97 |
| 47) Tetrachloroethene | 21.630 | 166 | 9821 | 1.06 | ppbv | | 98 |
| 48) 2-Hexanone | 21.886 | 43 | 10090 | 0.86 | ppbv | | 93 |
| 49) Chlorodibromomethane | 22.196 | 129 | 12191 | 1.05 | ppbv | | 98 |
| 50) 1,2-Dibromoethane (EDB) | 22.433 | 107 | 8816 | 1.05 | ppbv | | 99 |
| 51) Chlorobenzene | 23.121 | 112 | 17141 | 1.16 | ppbv | # | 81 |
| 52) Ethylbenzene | 23.188 | 91 | 24838 | 1.03 | ppbv | | 98 |
| 53) m&p-Xylene | 23.370 | 91 | 36051 | 1.97 | ppbv | | 100 |
| 54) o-Xylene | 24.021 | 91 | 15463 | 0.80 | ppbv | | 100 |

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K03.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:51 pm
Operator : LLH
Sample : S21F072-CRL1
Misc : 1ppbv 2124074
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 28 14:15:18 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

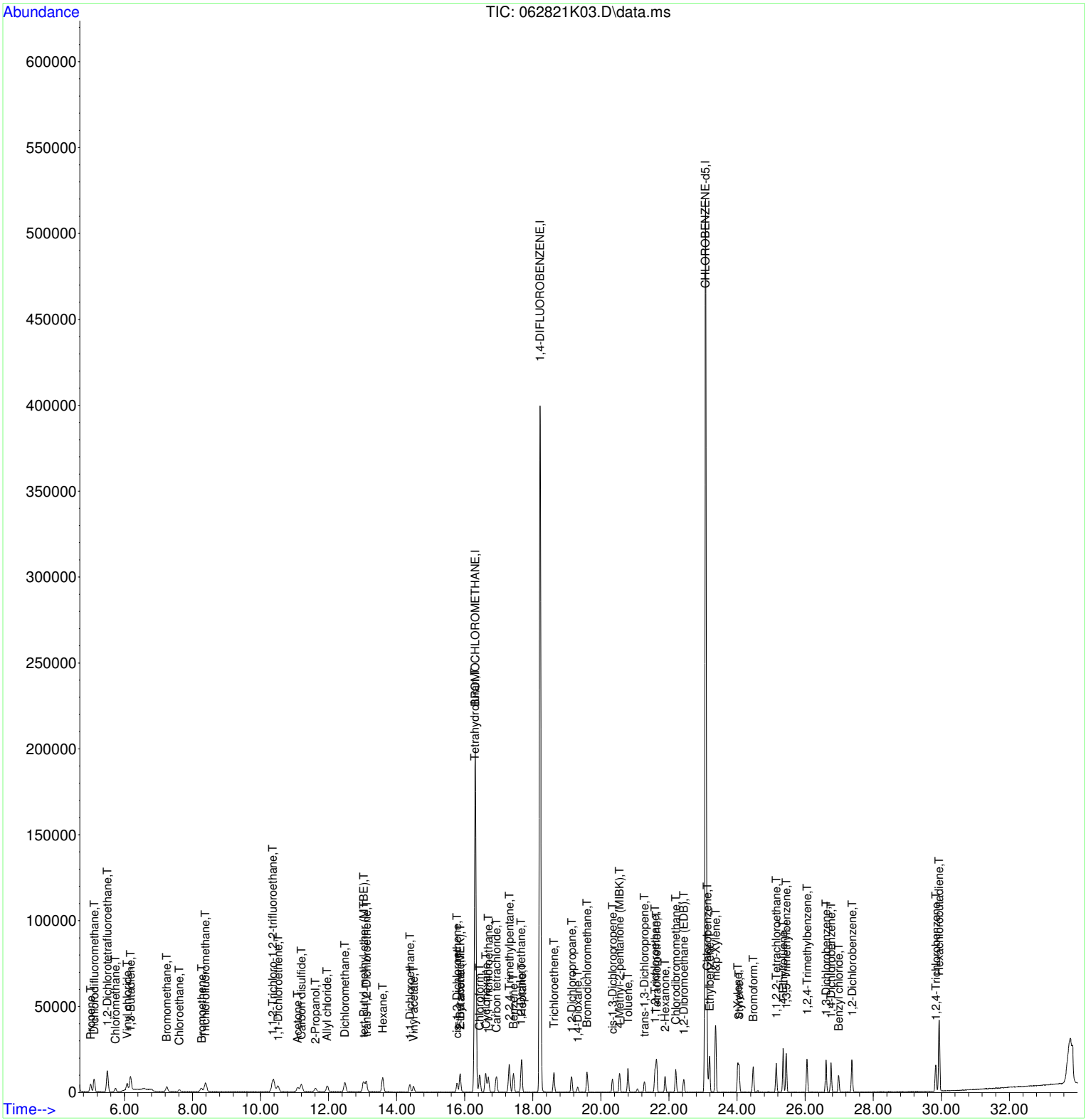
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 55) Styrene | 24.058 | 104 | 12663 | 0.90 ppbv | 99 |
| 56) Bromoform | 24.471 | 173 | 12097 | 1.02 ppbv | 99 |
| 57) 1,1,2,2-Tetrachloroethane | 25.153 | 83 | 14469 | 1.01 ppbv | 100 |
| 58) 4-Ethyltoluene | 25.353 | 105 | 25950 | 0.83 ppbv | 99 |
| 59) 1,3,5-Trimethylbenzene | 25.445 | 105 | 20333 | 0.94 ppbv | 100 |
| 60) 1,2,4-Trimethylbenzene | 26.053 | 105 | 16935 | 0.79 ppbv | 98 |
| 61) 1,3-Dichlorobenzene | 26.613 | 146 | 13861 | 0.91 ppbv | 100 |
| 62) 1,4-Dichlorobenzene | 26.765 | 146 | 12880 | 0.87 ppbv | 99 |
| 63) Benzyl chloride | 26.984 | 91 | 13016 | 0.70 ppbv | 97 |
| 64) 1,2-Dichlorobenzene | 27.379 | 146 | 14236 | 0.92 ppbv | 99 |
| 65) 1,2,4-Trichlorobenzene | 29.837 | 180 | 9831 | 0.76 ppbv | 99 |
| 66) Hexachlorobutadiene | 29.934 | 225 | 14972 | 1.01 ppbv | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K03.D
InstName : HP5973K
Acq On : 28 Jun 2021 12:51 pm
Operator : LLH
Sample : S21F072-CRL1
Misc : 1ppbv 2124074
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jun 28 14:15:18 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration



# B21F079-BLK1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K04.D
InstName : HP5973K
Acq On : 28 Jun 2021 1:41 pm
Operator : LLH
Sample : B21F079-BLK1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 28 14:17:10 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 172740 | 23.40 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 523625 | 23.20 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 470514 | 21.40 | ppbv | 0.00 |

Target Compounds Qvalue

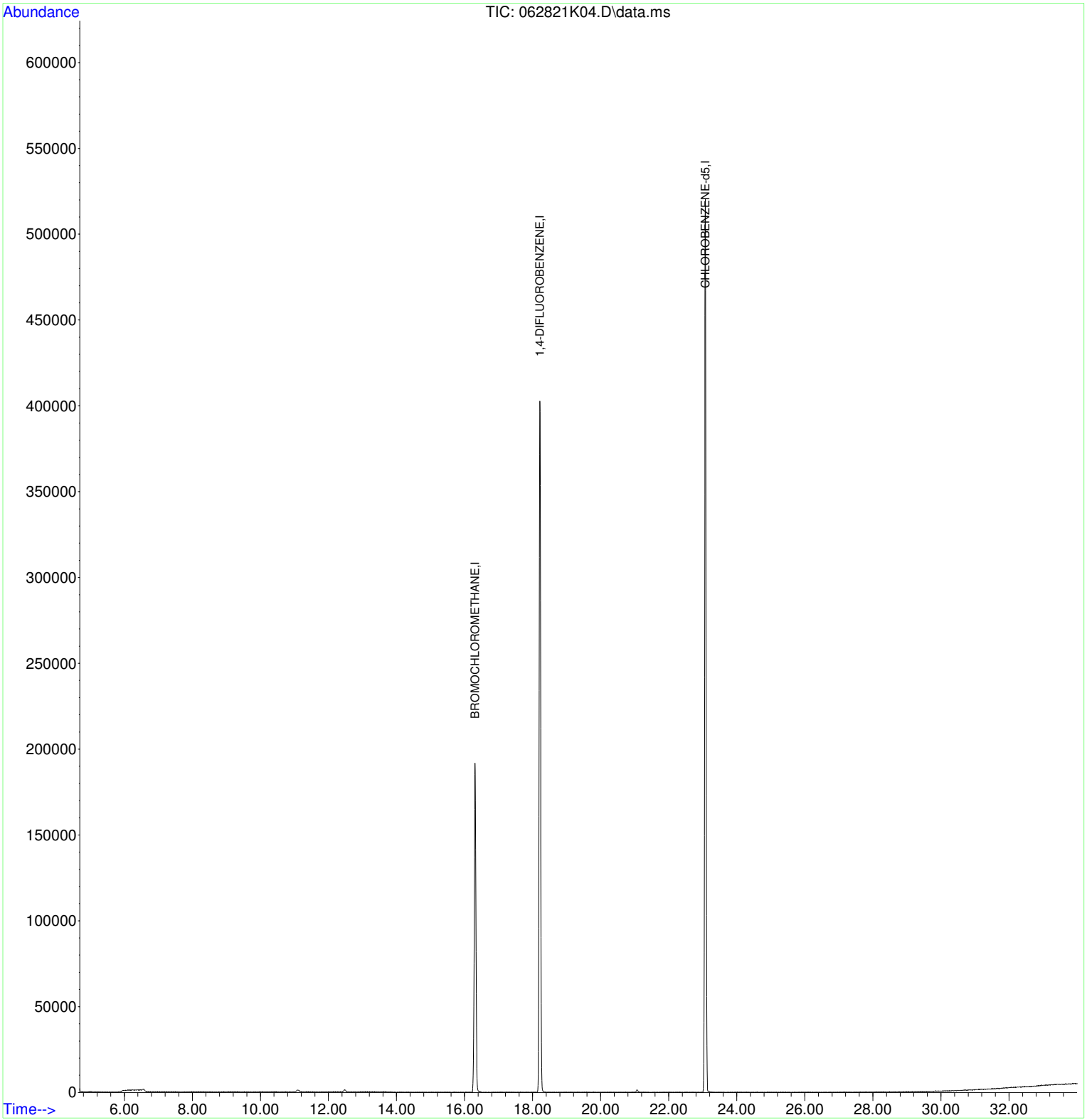
(#) = qualifier out of range (m) = manual integration (+) = signals summed

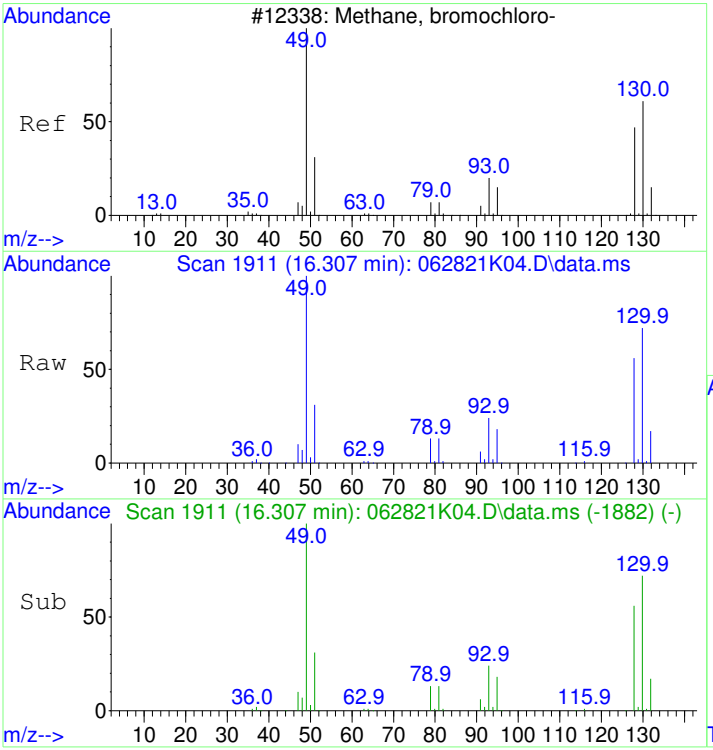
**REVIEWED**
**By LLH at 2:17 pm, Jun 28, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K04.D
InstName : HP5973K
Acq On : 28 Jun 2021 1:41 pm
Operator : LLH
Sample : B21F079-BLK1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 28 14:17:10 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

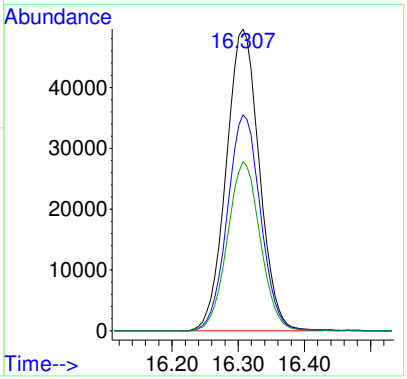


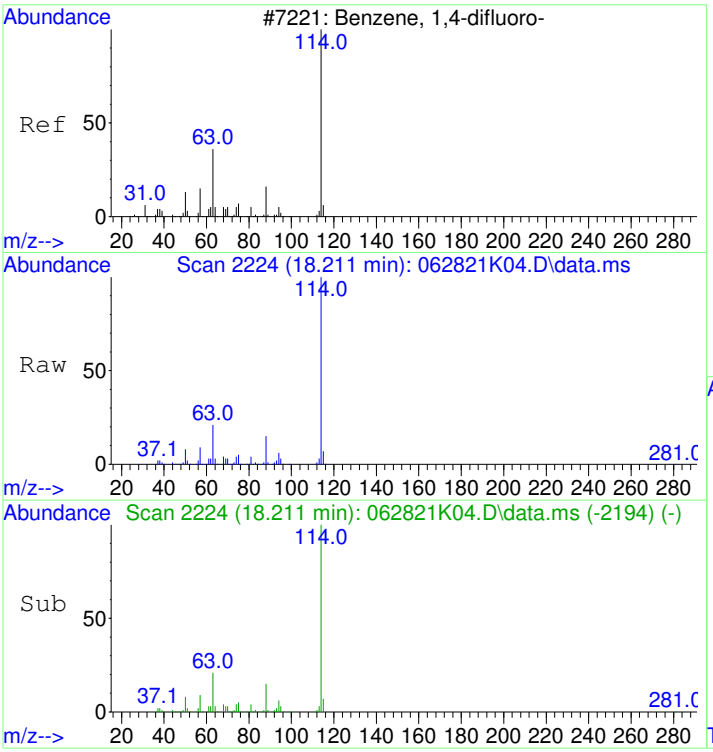



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K04.D
Acq: 28 Jun 2021 1:41 pm

Tgt Ion: 49 Resp: 172740

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 71.6 | 53.3 | 93.3 |
| 128 | 55.1 | 37.1 | 77.1 |

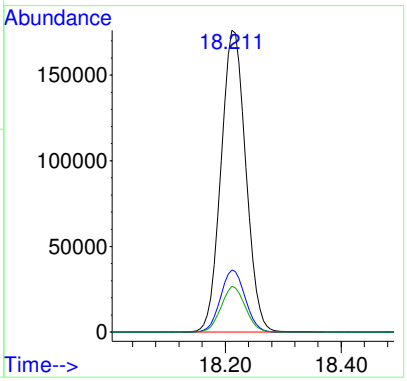


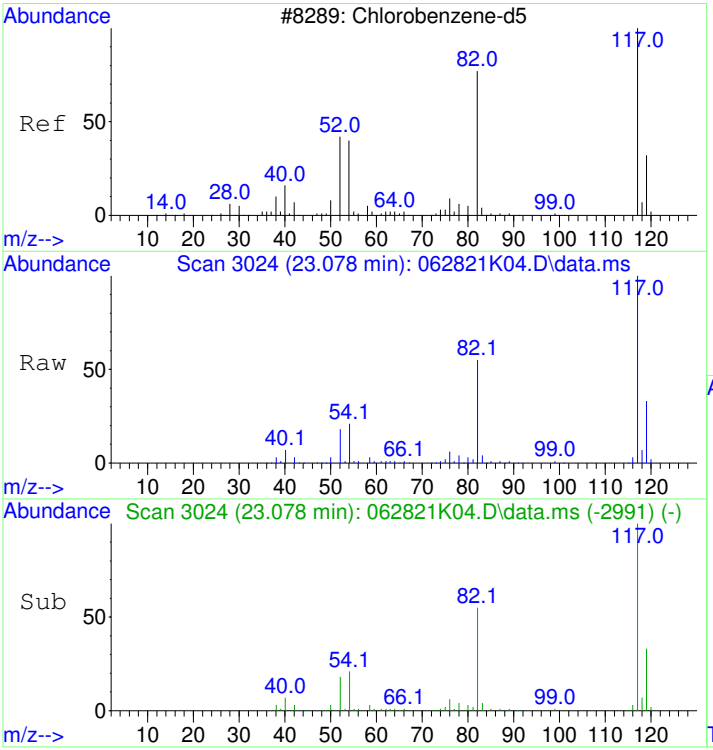




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.211 min Scan# 2224
Delta R.T. 0.000 min
Lab File: 062821K04.D
Acq: 28 Jun 2021 1:41 pm

Tgt Ion:114 Resp: 523625

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.5 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

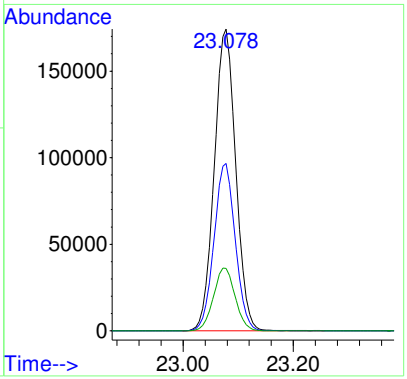





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K04.D
Acq: 28 Jun 2021 1:41 pm

Tgt Ion:117 Resp: 470514

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.9 | 34.8 | 74.8 |
| 54 | 21.0 | 0.6 | 40.6 |



# 2106036-01

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K05.D
InstName : HP5973K
Acq On : 28 Jun 2021 2:31 pm
Operator : LLH
Sample : 2106036-01
Misc : 200mL G6-014-3ft-G
ALS Vial : 17 Sample Multiplier: 2.22

REPORT

Quant Time: Jun 28 15:43:26 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 172293 | 23.40 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 518602 | 23.20 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 472908 | 21.40 ppbv | 0.00 |
| Target Compounds | | | | | Qvalue |
| 14) Acetone | 11.087 | 43 | 16573 | 2.10 ppbv | 97 |

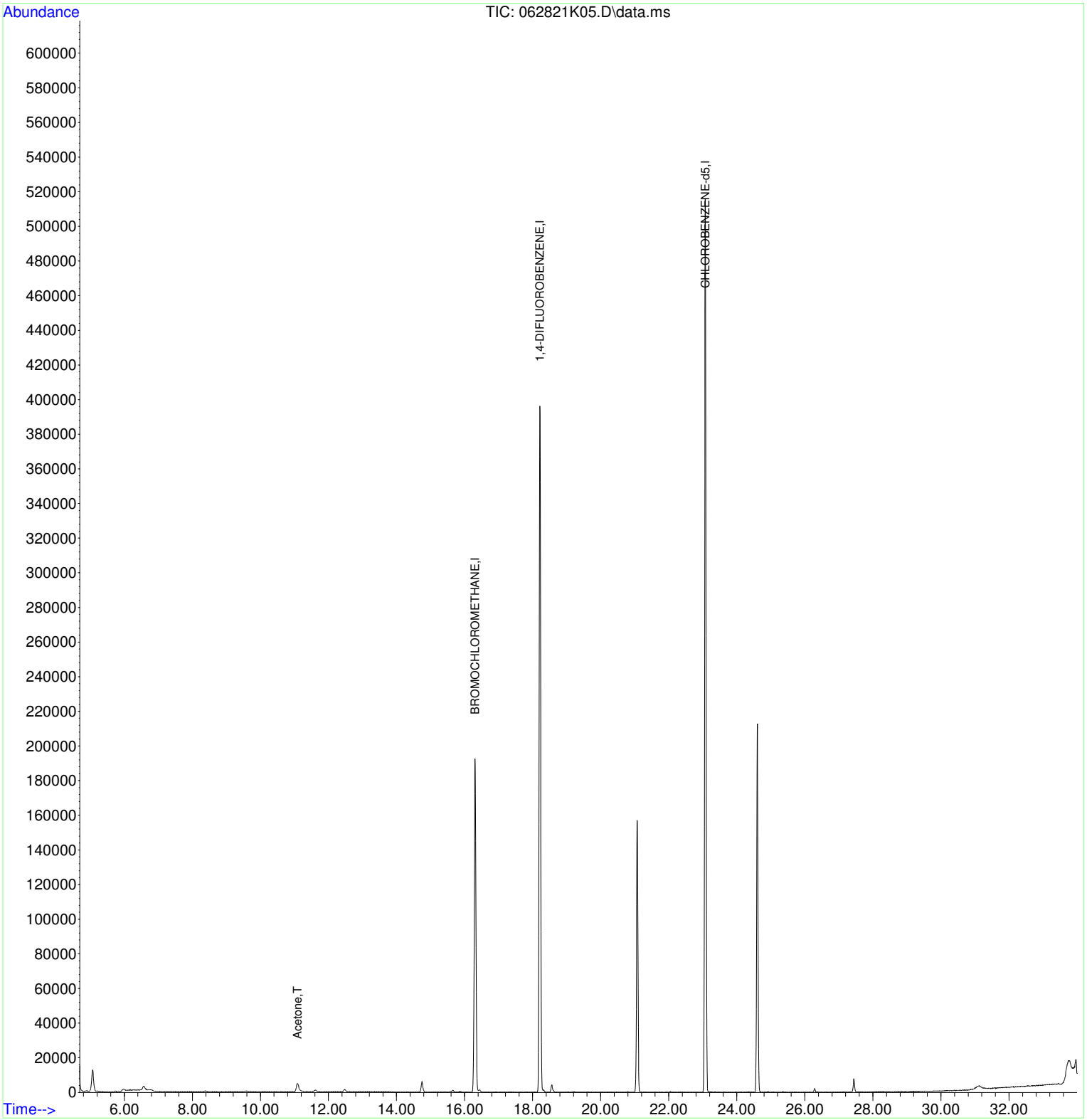
(#) = qualifier out of range (m) = manual integration (+) = signals summed

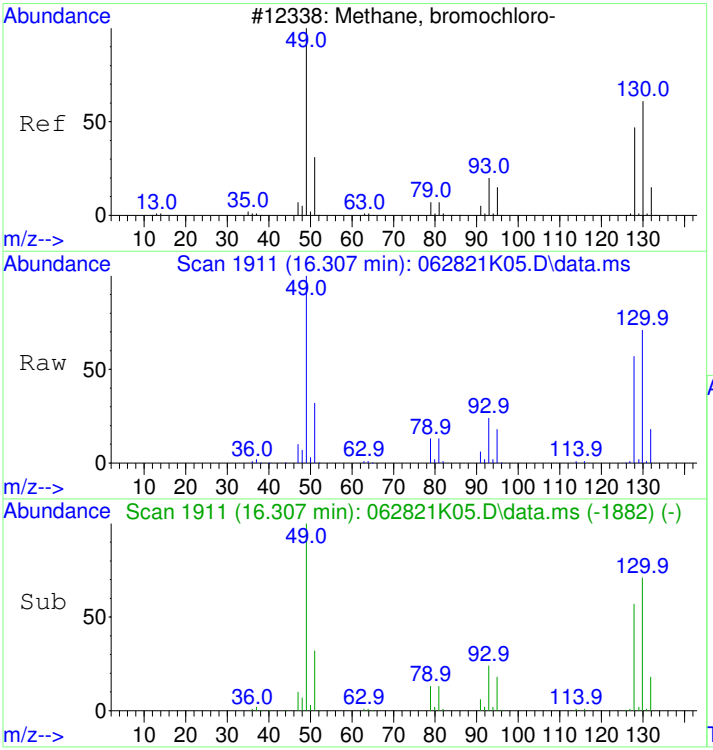
**REVIEWED**
**By LLH at 9:53 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K05.D
InstName : HP5973K
Acq On : 28 Jun 2021 2:31 pm
Operator : LLH
Sample : 2106036-01
Misc : 200mL G6-014-3ft-G
ALS Vial : 17 Sample Multiplier: 2.22

Quant Time: Jun 28 15:43:26 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

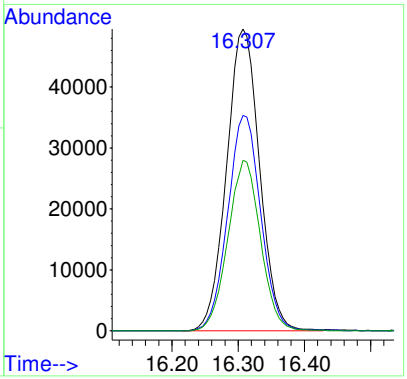


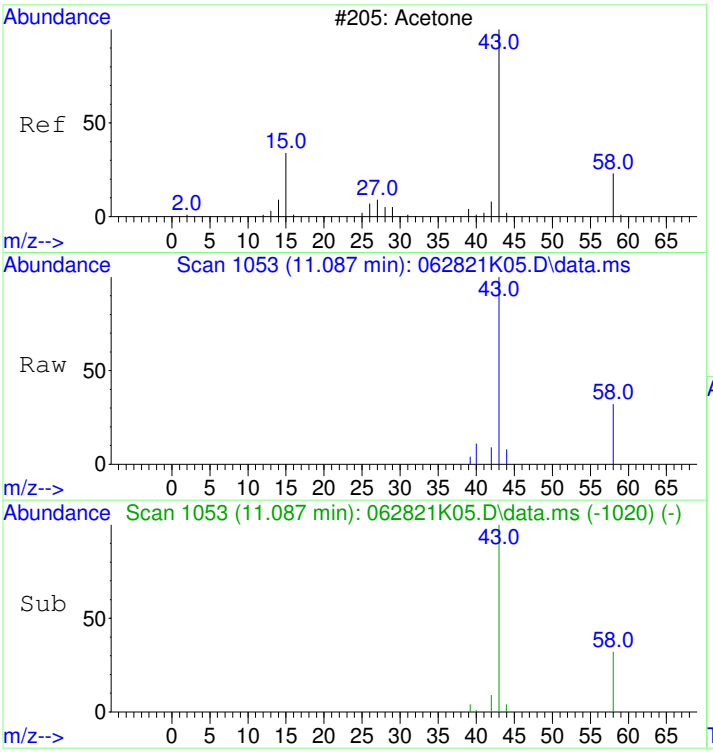



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K05.D
Acq: 28 Jun 2021 2:31 pm

Tgt Ion: 49 Resp: 172293

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 71.3 | 53.3 | 93.3 |
| 128 | 55.0 | 37.1 | 77.1 |

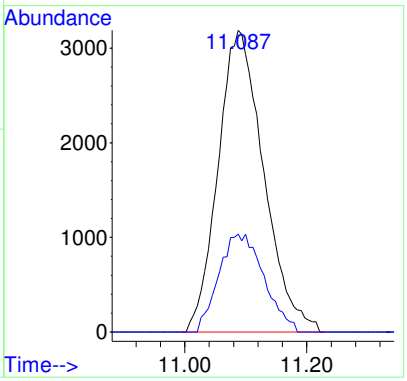


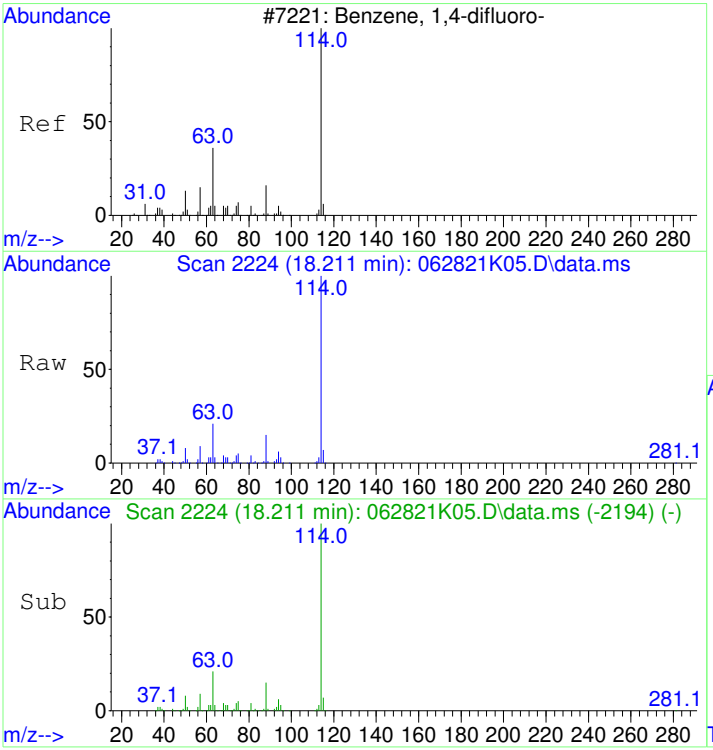




#14
Acetone
Concen: 2.10 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. 0.000 min
Lab File: 062821K05.D
Acq: 28 Jun 2021 2:31 pm

Tgt Ion: 43 Resp: 16573

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.0 | 13.5 | 53.5 |

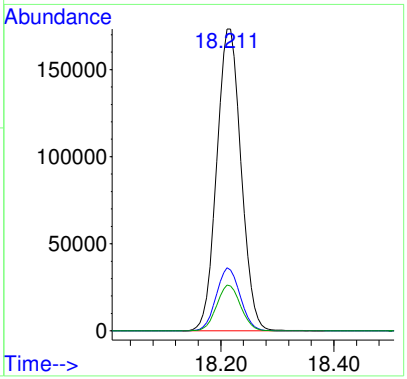


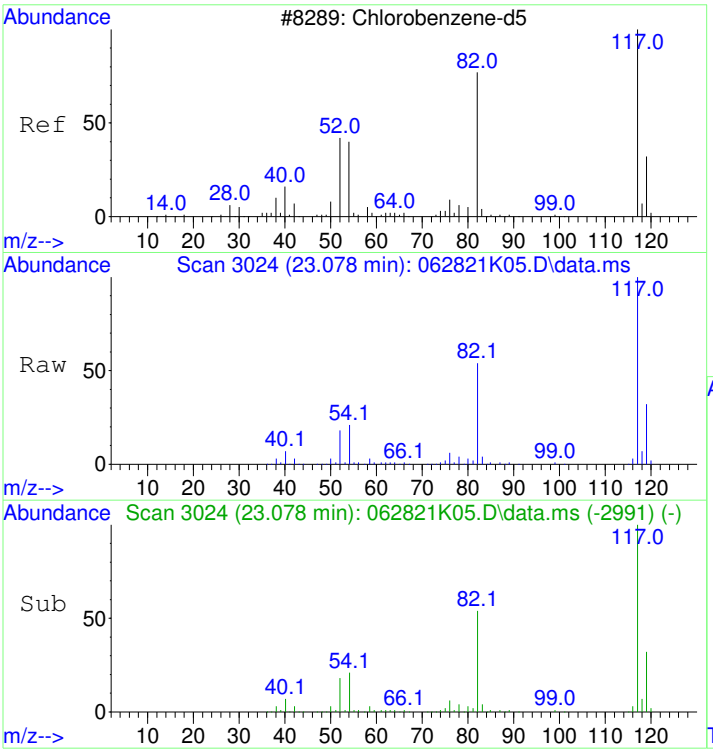



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.211 min Scan# 2224
Delta R.T. 0.000 min
Lab File: 062821K05.D
Acq: 28 Jun 2021 2:31 pm

Tgt Ion:114 Resp: 518602

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.5 | 0.0 | 39.9 |
| 88 | 14.9 | 0.0 | 34.8 |

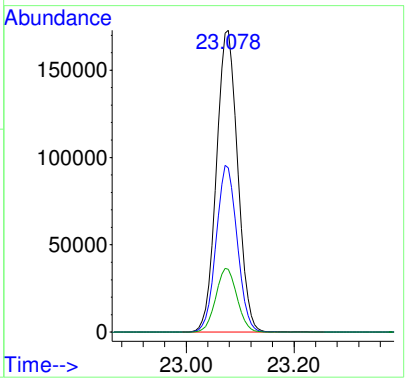



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K05.D
Acq: 28 Jun 2021 2:31 pm

Tgt Ion:117 Resp: 472908

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.7 | 34.8 | 74.8 |
| 54 | 21.1 | 0.6 | 40.6 |



# B21F079-DUP1

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K06.D
InstName : HP5973K
Acq On : 28 Jun 2021 3:22 pm
Operator : LLH
Sample : B21F079-DUP1
Misc : 200mL 2106036-01
ALS Vial : 17 Sample Multiplier: 2.22

REPORT

Quant Time: Jun 28 15:57:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 170843 | 23.40 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 512139 | 23.20 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 463999 | 21.40 ppbv | 0.00 |
| Target Compounds | | | | | Qvalue |
| 14) Acetone | 11.087 | 43 | 15807 | 2.02 ppbv | 98 |

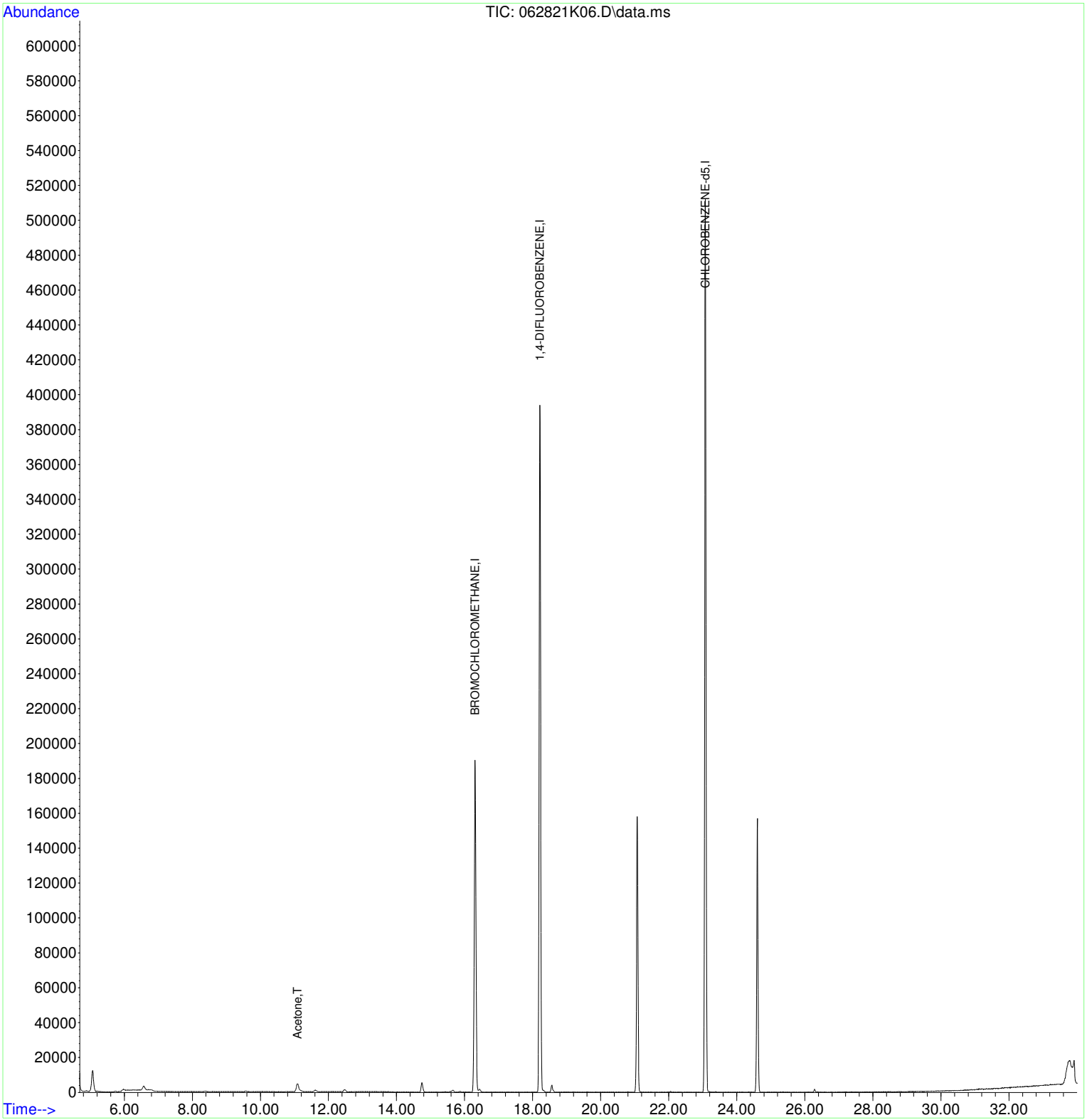
(#) = qualifier out of range (m) = manual integration (+) = signals summed

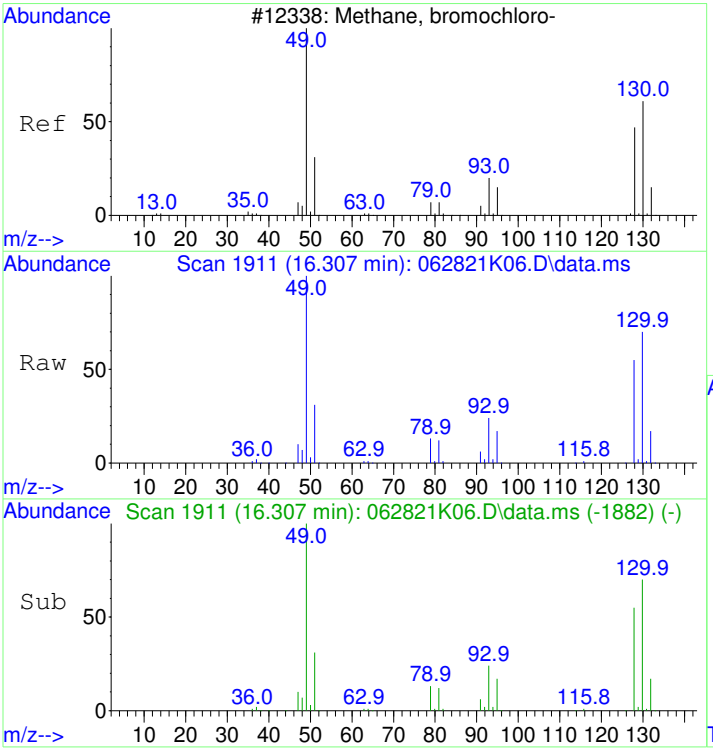
**REVIEWED**
**By LLH at 9:53 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K06.D
InstName : HP5973K
Acq On : 28 Jun 2021 3:22 pm
Operator : LLH
Sample : B21F079-DUP1
Misc : 200mL 2106036-01
ALS Vial : 17 Sample Multiplier: 2.22

Quant Time: Jun 28 15:57:29 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

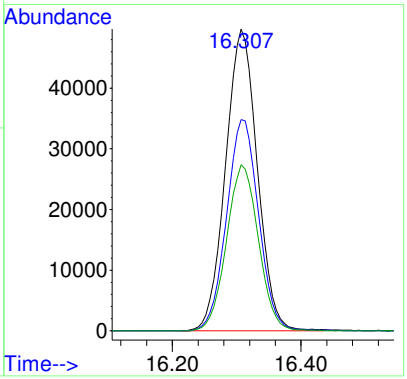


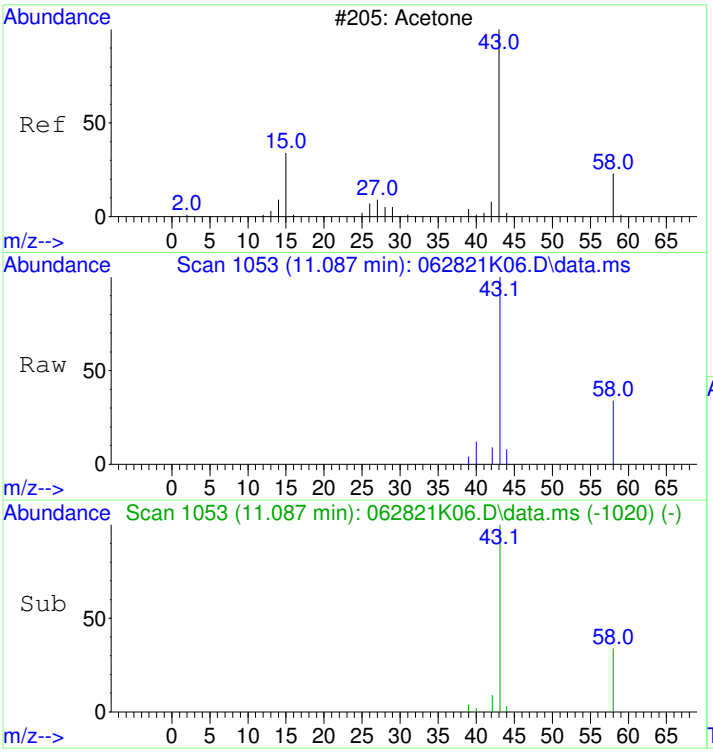



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.000 min
Lab File: 062821K06.D
Acq: 28 Jun 2021 3:22 pm

Tgt Ion: 49 Resp: 170843

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 70.6 | 53.3 | 93.3 |
| 128 | 54.7 | 37.1 | 77.1 |

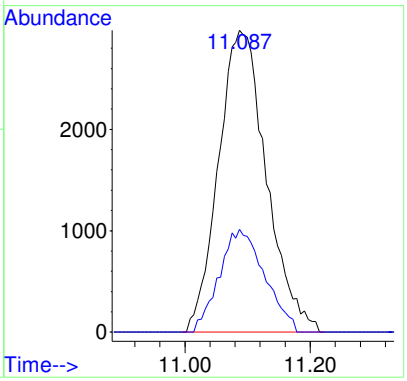


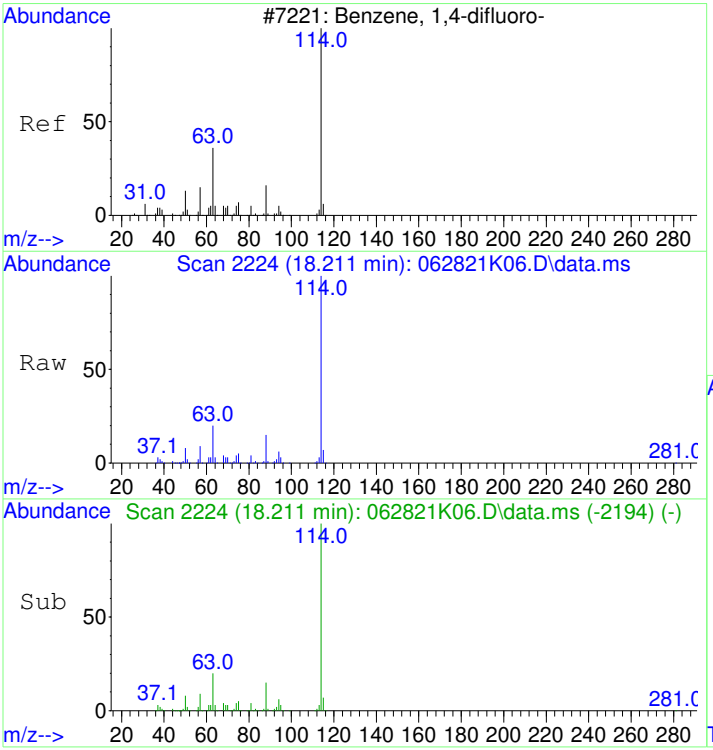




#14
Acetone
Concen: 2.02 ppbv
RT: 11.087 min Scan# 1053
Delta R.T. -0.000 min
Lab File: 062821K06.D
Acq: 28 Jun 2021 3:22 pm

Tgt Ion: 43 Resp: 15807

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.1 | 13.5 | 53.5 |

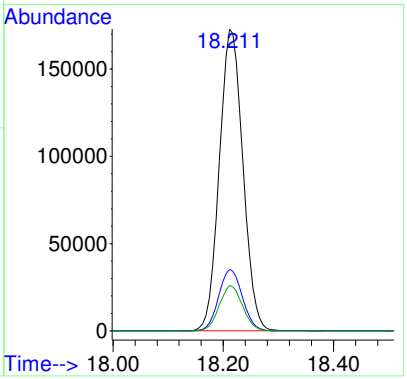


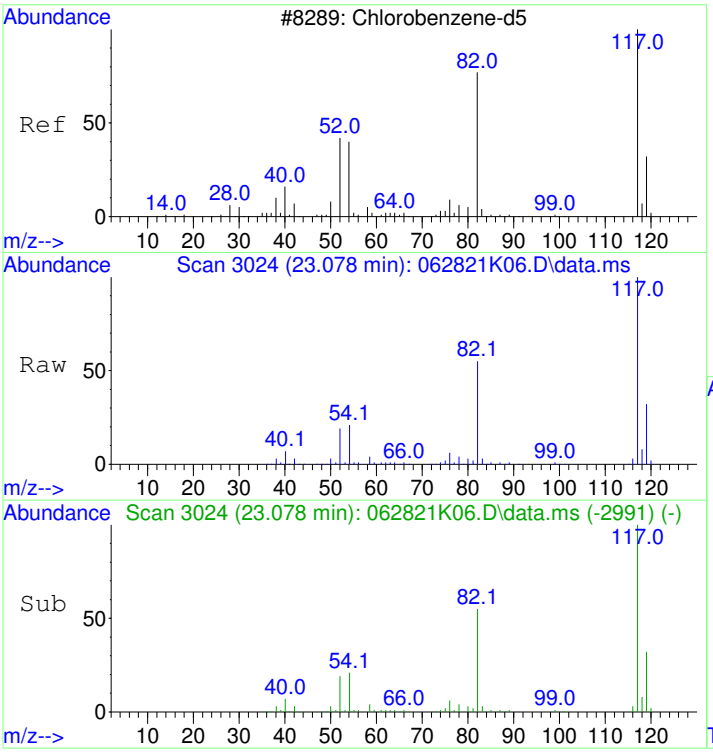



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.211 min Scan# 2224
Delta R.T. 0.000 min
Lab File: 062821K06.D
Acq: 28 Jun 2021 3:22 pm

Tgt Ion:114 Resp: 512139

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.4 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

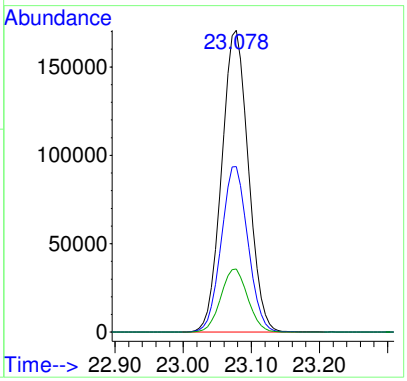



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.000 min
Lab File: 062821K06.D
Acq: 28 Jun 2021 3:22 pm

Tgt Ion:117 Resp: 463999

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.7 | 34.8 | 74.8 |
| 54 | 21.0 | 0.6 | 40.6 |



# 2106036-02

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K07.D
InstName : HP5973K
Acq On : 28 Jun 2021 4:12 pm
Operator : LLH
Sample : 2106036-02
Misc : 200mL F7-002-3ft-G
ALS Vial : 18 Sample Multiplier: 2.28

REPORT

Quant Time: Jun 29 09:08:13 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

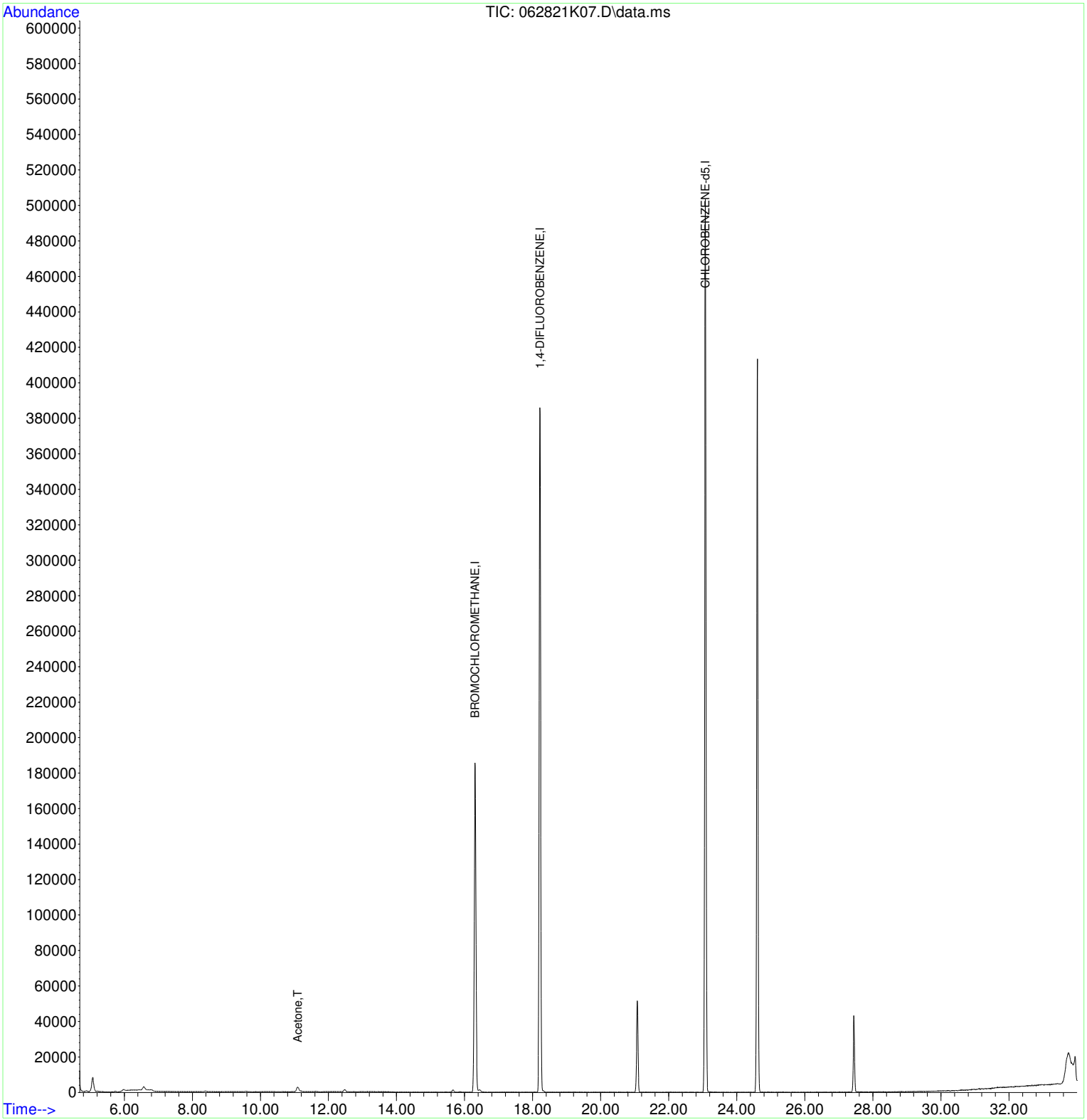
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 166572 | 23.40 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 500660 | 23.20 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 453859 | 21.40 ppbv | 0.00 |
| Target Compounds | | | | | Qvalue |
| 14) Acetone | 11.093 | 43 | 9193 | 1.20 ppbv | 96 |

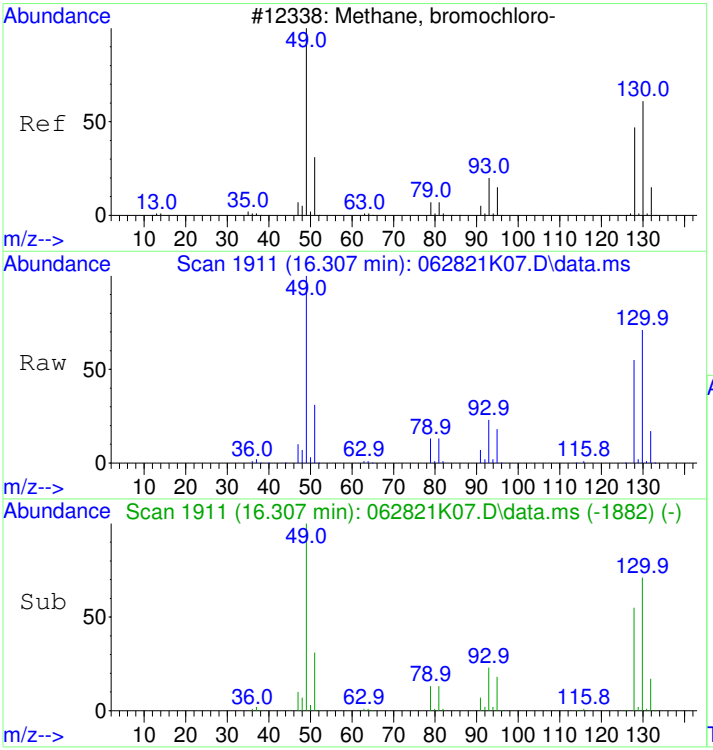
(#) = qualifier out of range (m) = manual integration (+) = signals summed

**REVIEWED**
**By LLH at 9:53 am, Jun 29, 2021**

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K07.D
InstName : HP5973K
Acq On : 28 Jun 2021 4:12 pm
Operator : LLH
Sample : 2106036-02
Misc : 200mL F7-002-3ft-G
ALS Vial : 18 Sample Multiplier: 2.28

Quant Time: Jun 29 09:08:13 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

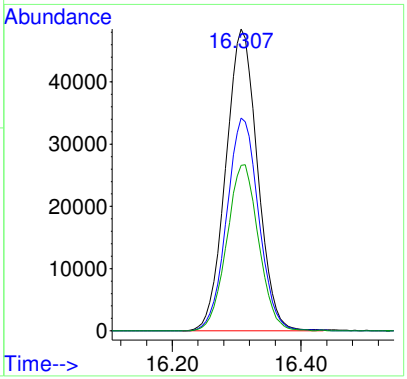


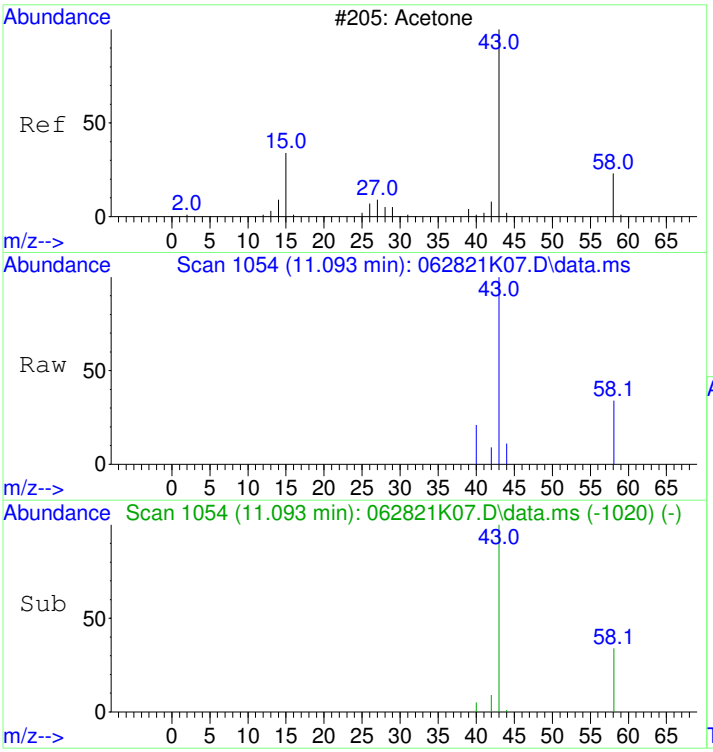



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K07.D
Acq: 28 Jun 2021 4:12 pm

Tgt Ion: 49 Resp: 166572

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 71.0 | 53.3 | 93.3 |
| 128 | 54.8 | 37.1 | 77.1 |

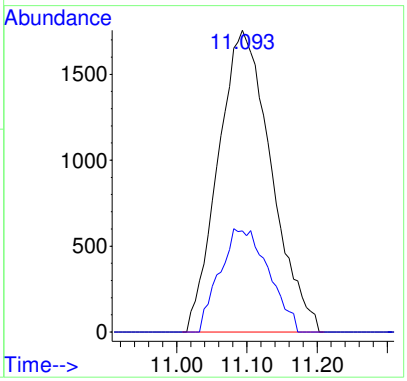


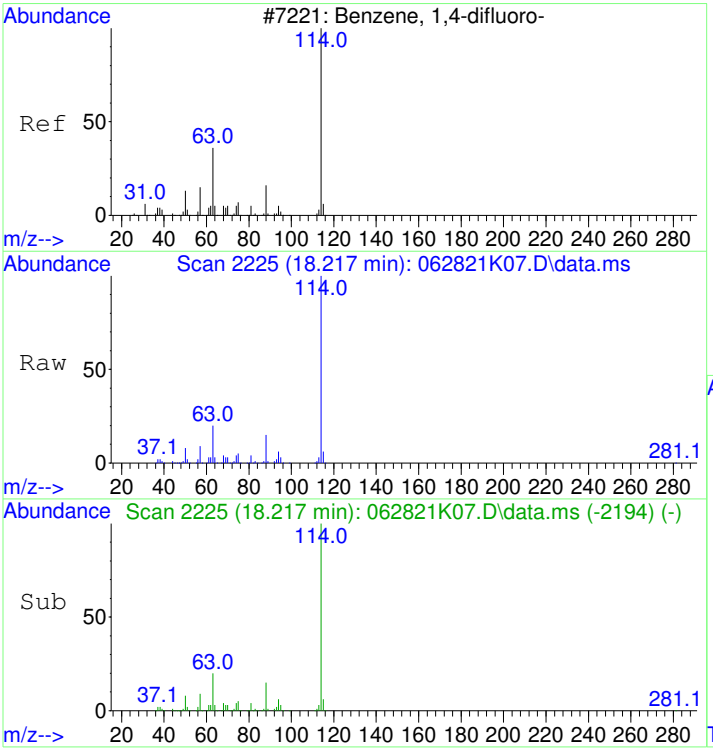




#14
Acetone
Concen: 1.20 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 062821K07.D
Acq: 28 Jun 2021 4:12 pm

Tgt Ion: 43 Resp: 9193

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.5 | 13.5 | 53.5 |

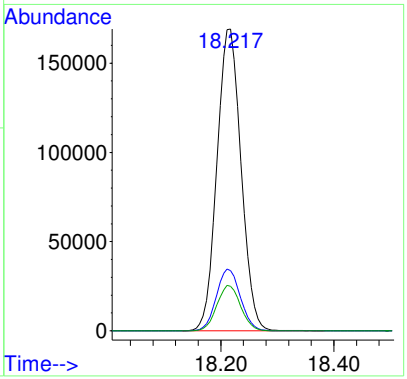


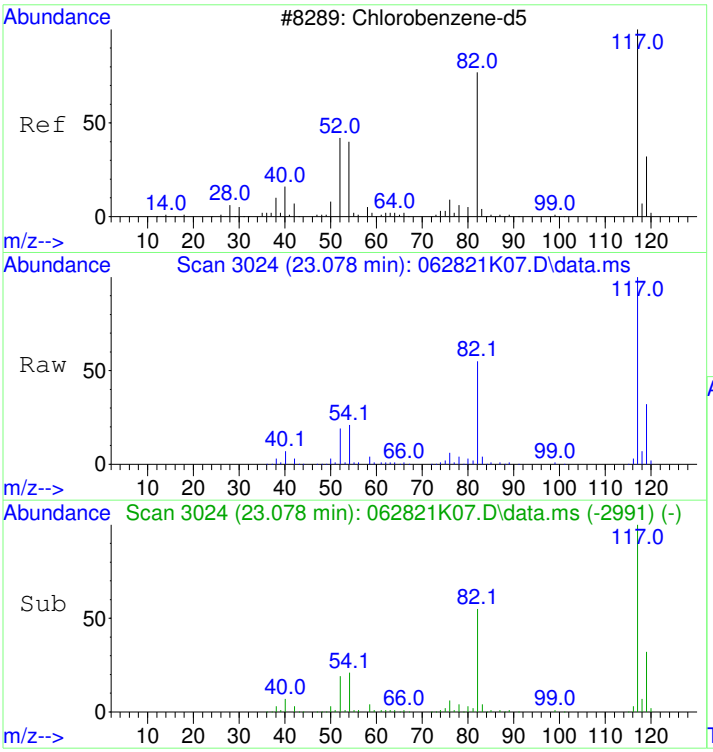



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K07.D
Acq: 28 Jun 2021 4:12 pm

Tgt Ion:114 Resp: 500660

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.4 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

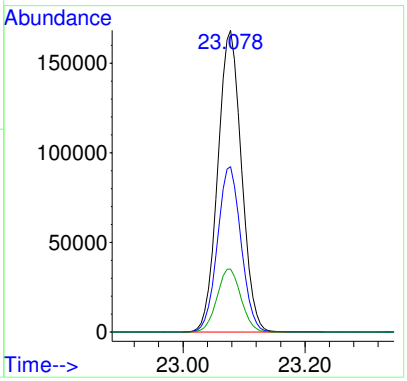



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K07.D
Acq: 28 Jun 2021 4:12 pm

Tgt Ion:117 Resp: 453859

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.8 | 34.8 | 74.8 |
| 54 | 21.2 | 0.6 | 40.6 |



# 2106036-03

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K08.D
InstName : HP5973K
Acq On : 28 Jun 2021 5:03 pm
Operator : LLH
Sample : 2106036-03
Misc : 200mL F6-035-3ft-G
ALS Vial : 19 Sample Multiplier: 2.19

REPORT

Quant Time: Jun 29 09:08:24 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 167908 | 23.40 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 504697 | 23.20 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 456638 | 21.40 | ppbv | 0.00 |
| Target Compounds | | | | | | Qvalue |
| 14) Acetone | 11.093 | 43 | 5883 | 0.76 | ppbv | 93 |
| 16) 2-Propanol | 11.610 | 45 | 14489 | 2.15 | ppbv | 79 |

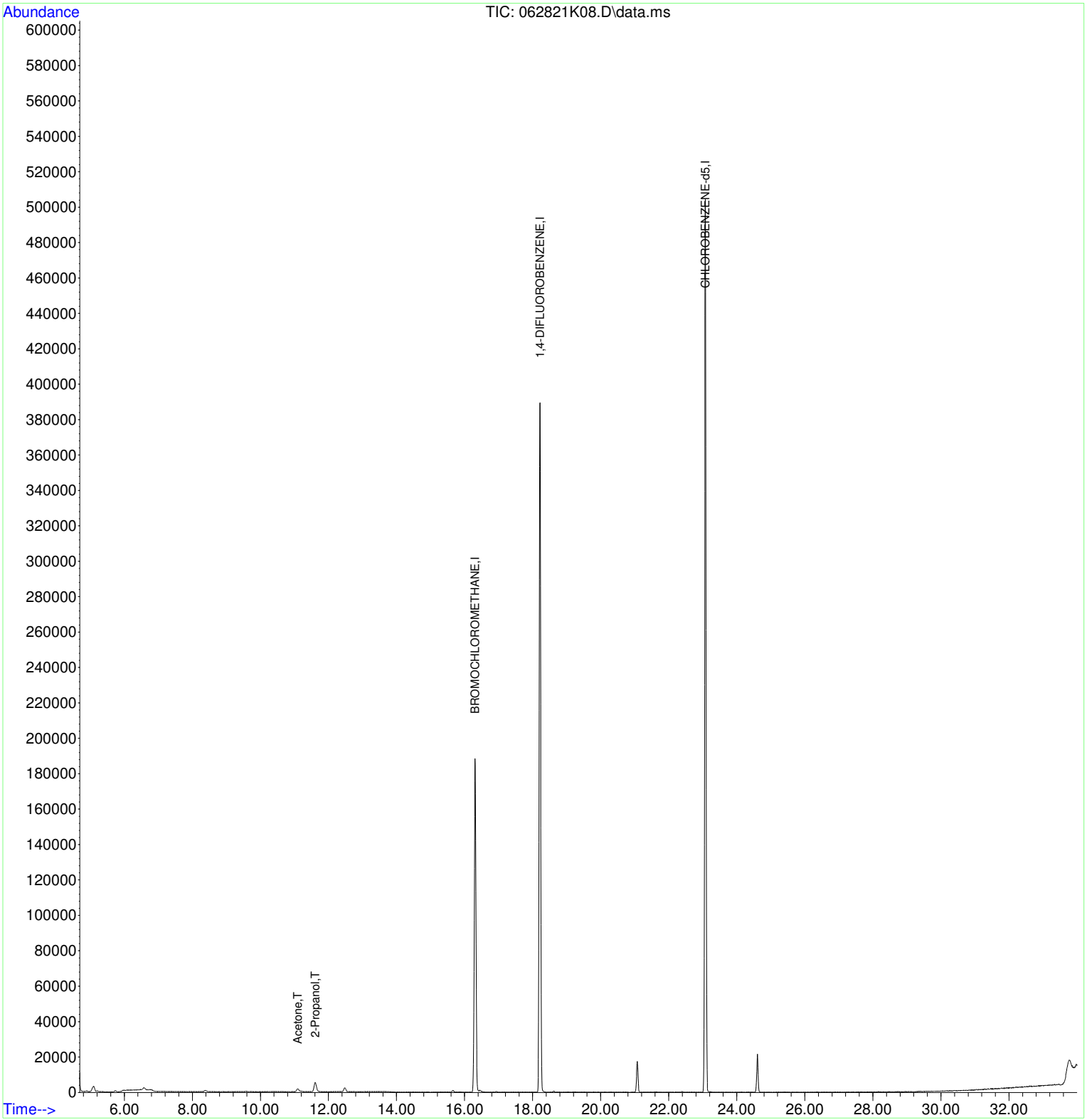
(#) = qualifier out of range (m) = manual integration (+) = signals summed

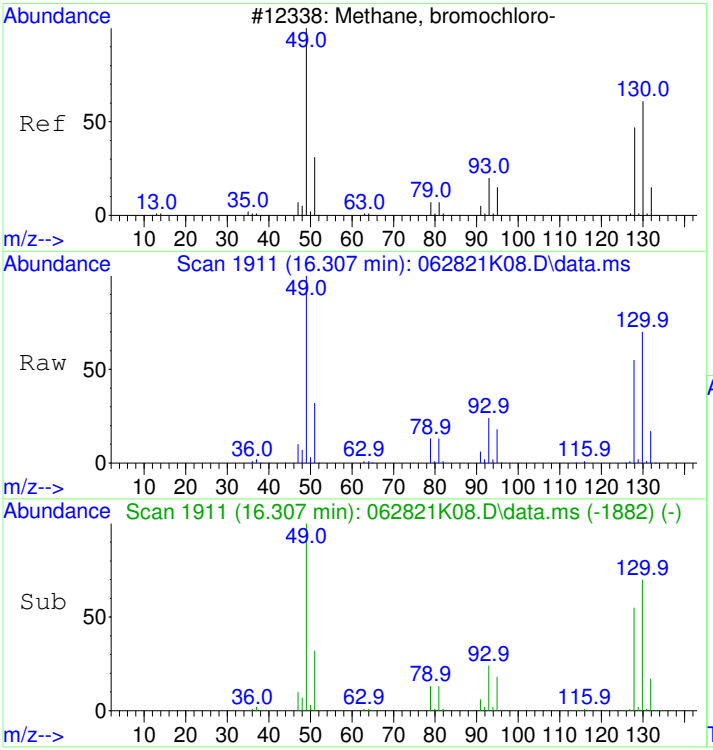
**REVIEWED**
**By LLH at 9:54 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K08.D
InstName : HP5973K
Acq On : 28 Jun 2021 5:03 pm
Operator : LLH
Sample : 2106036-03
Misc : 200mL F6-035-3ft-G
ALS Vial : 19 Sample Multiplier: 2.19

Quant Time: Jun 29 09:08:24 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

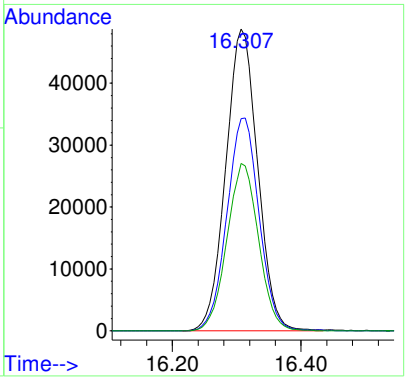


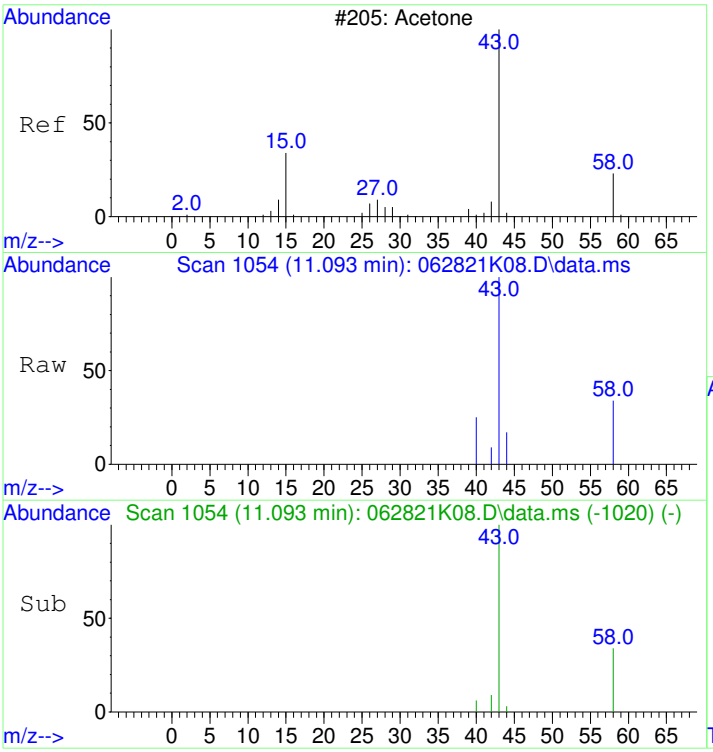



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.000 min
Lab File: 062821K08.D
Acq: 28 Jun 2021 5:03 pm

Tgt Ion: 49 Resp: 167908

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 71.2 | 53.3 | 93.3 |
| 128 | 54.5 | 37.1 | 77.1 |

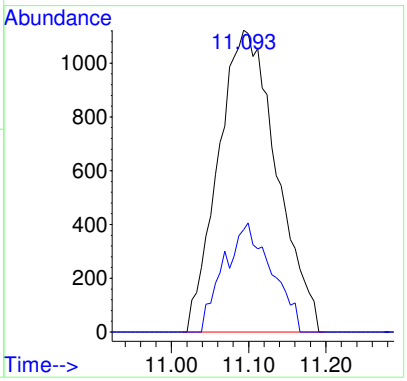


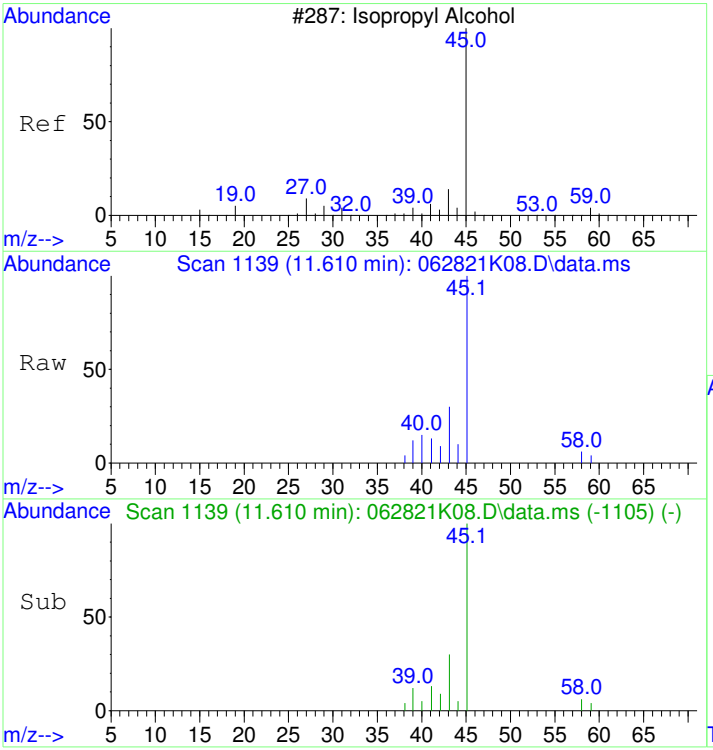




#14
Acetone
Concen: 0.76 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 062821K08.D
Acq: 28 Jun 2021 5:03 pm

Tgt Ion: 43 Resp: 5883

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.5 | 13.5 | 53.5 |

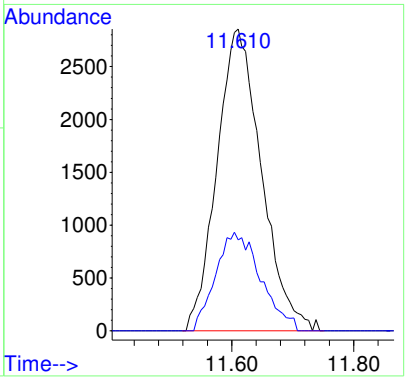


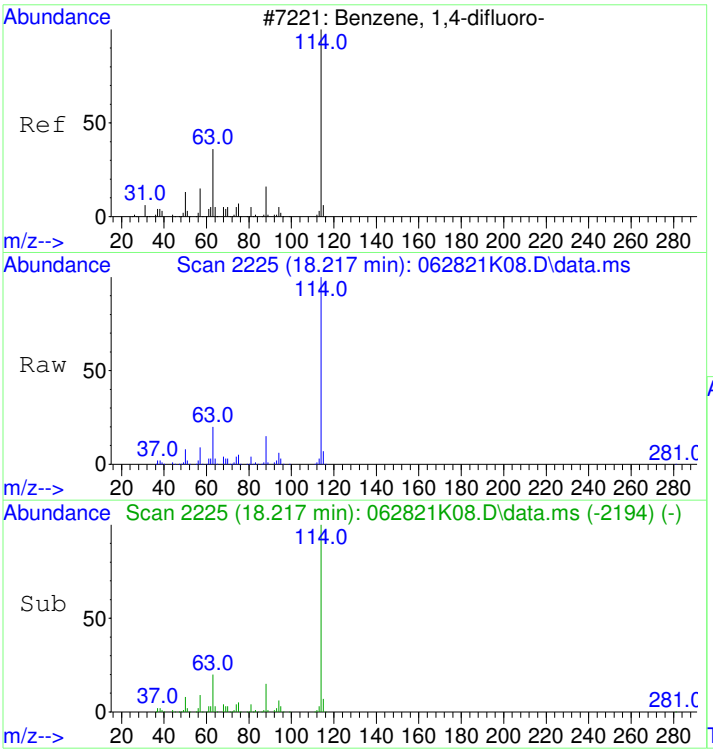



#16
2-Propanol
Concen: 2.15 ppbv
RT: 11.610 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 062821K08.D
Acq: 28 Jun 2021 5:03 pm

Tgt Ion: 45 Resp: 14489

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 33.0 | 3.0 | 43.0 |

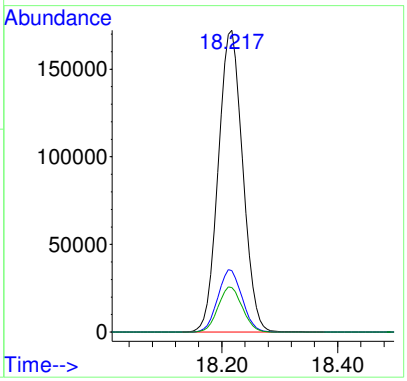


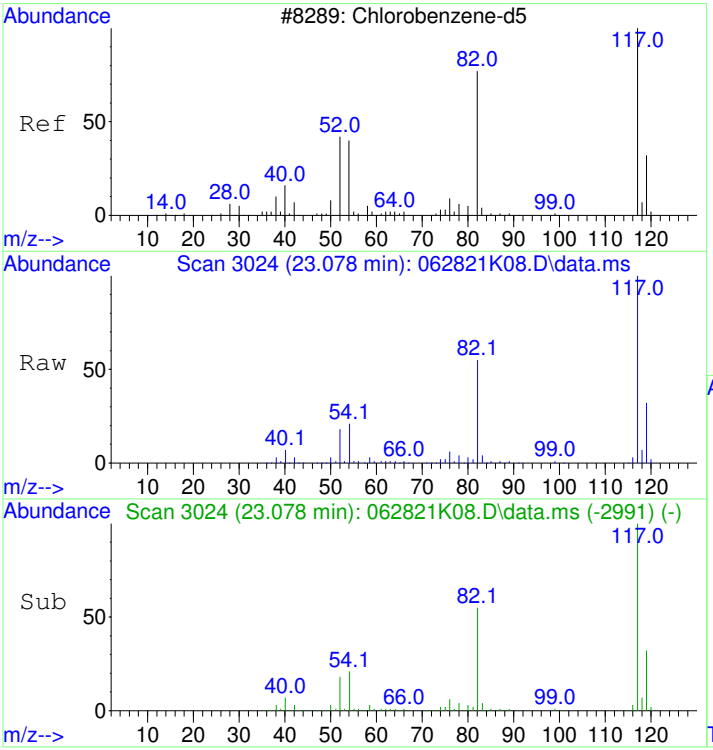




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K08.D
Acq: 28 Jun 2021 5:03 pm

Tgt Ion:114 Resp: 504697

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.5 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

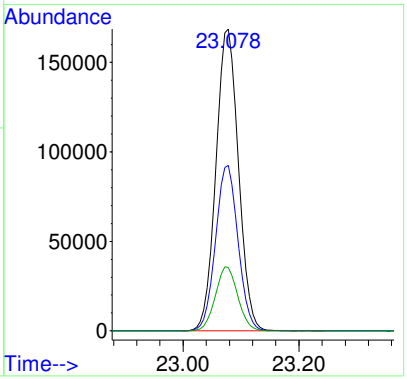





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.000 min
Lab File: 062821K08.D
Acq: 28 Jun 2021 5:03 pm

Tgt Ion:117 Resp: 456638

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.5 | 34.8 | 74.8 |
| 54 | 21.1 | 0.6 | 40.6 |



# 2106036-04

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K09.D
InstName : HP5973K
Acq On : 28 Jun 2021 5:53 pm
Operator : LLH
Sample : 2106036-04
Misc : 200mL F6-023-3ft-G
ALS Vial : 10 Sample Multiplier: 2.19

REPORT

Quant Time: Jun 29 09:08:36 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 163726 | 23.40 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 492241 | 23.20 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 446843 | 21.40 | ppbv | 0.00 |
| Target Compounds | | | | | | Qvalue |
| 14) Acetone | 11.093 | 43 | 8396 | 1.12 | ppbv | 97 |
| 37) Trichloroethene | 18.619 | 130 | 5206 | 0.84 | ppbv | 98 |

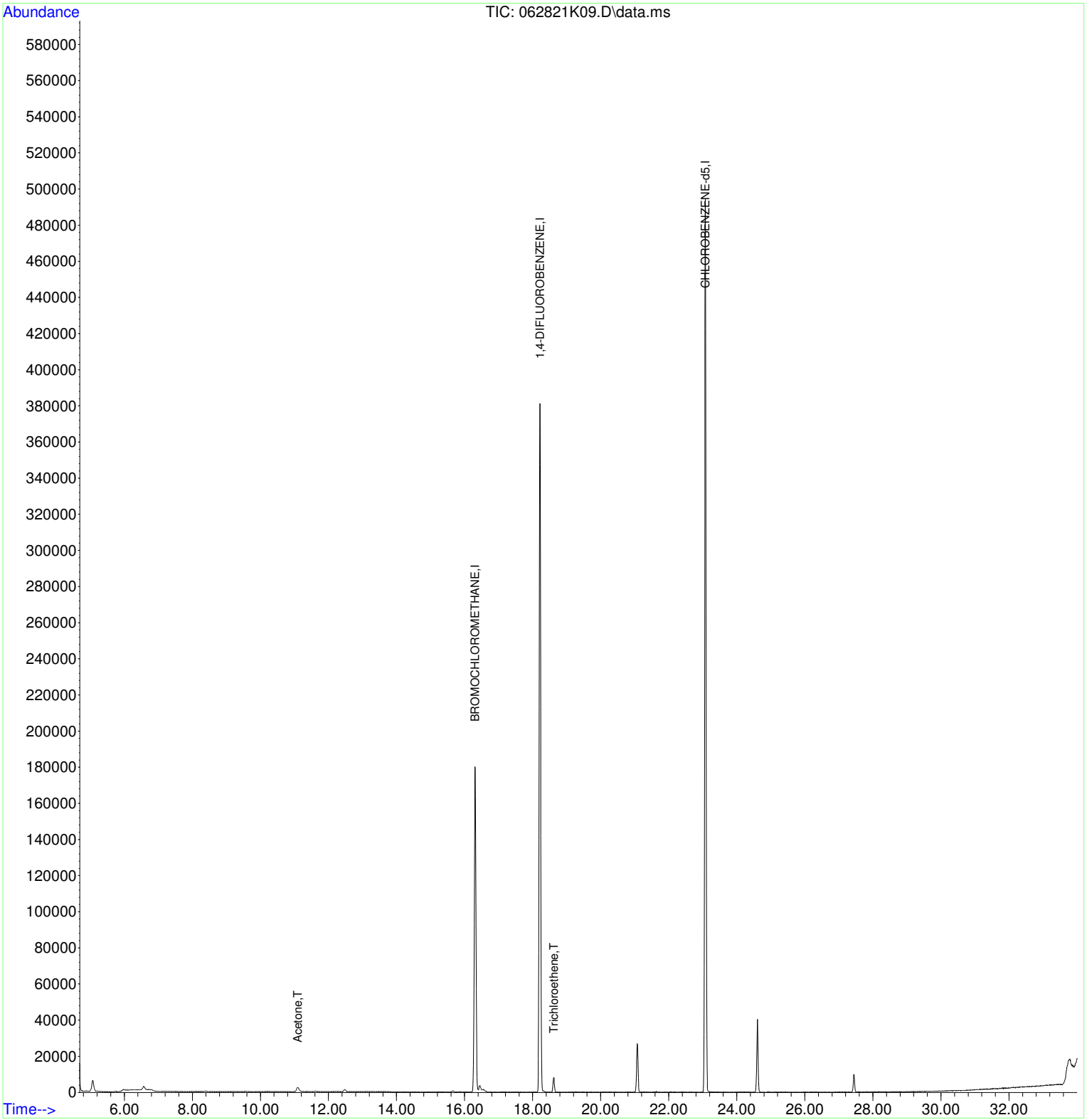
(#) = qualifier out of range (m) = manual integration (+) = signals summed

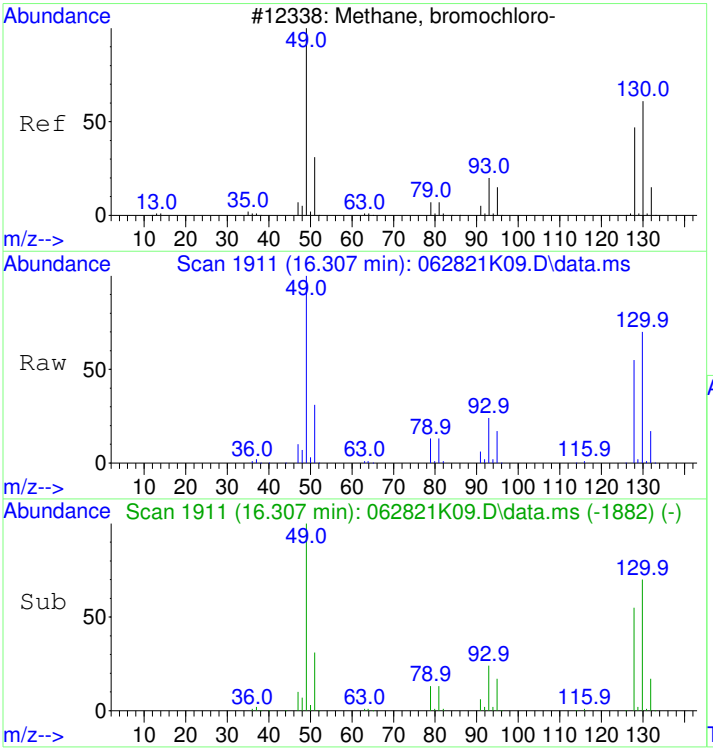
**REVIEWED**
**By LLH at 10:28 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K09.D
InstName : HP5973K
Acq On : 28 Jun 2021 5:53 pm
Operator : LLH
Sample : 2106036-04
Misc : 200mL F6-023-3ft-G
ALS Vial : 10 Sample Multiplier: 2.19

Quant Time: Jun 29 09:08:36 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

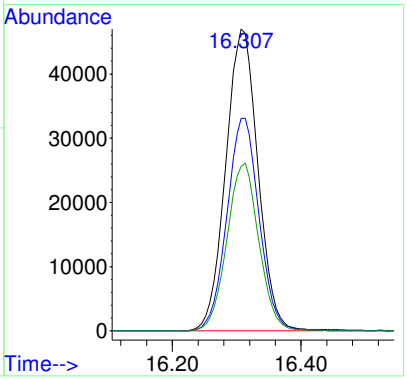


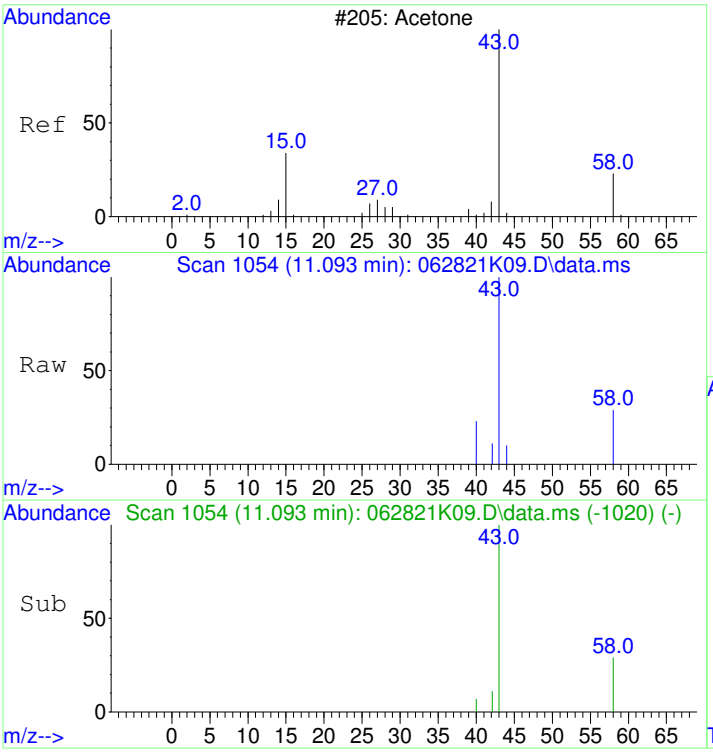



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.000 min
Lab File: 062821K09.D
Acq: 28 Jun 2021 5:53 pm

Tgt Ion: 49 Resp: 163726

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 70.2 | 53.3 | 93.3 |
| 128 | 54.4 | 37.1 | 77.1 |

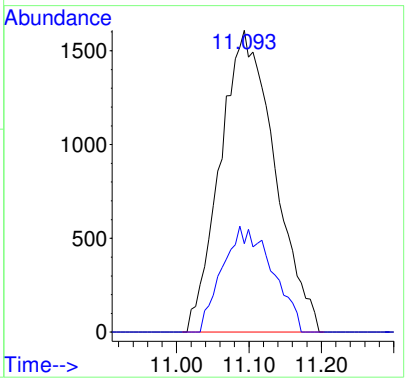


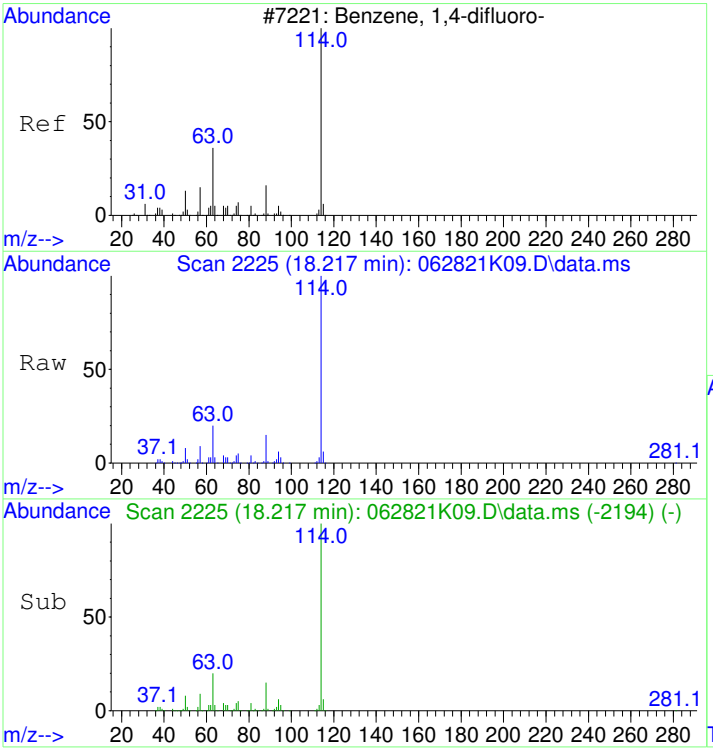




#14
Acetone
Concen: 1.12 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 062821K09.D
Acq: 28 Jun 2021 5:53 pm

Tgt Ion: 43 Resp: 8396

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.0 | 13.5 | 53.5 |

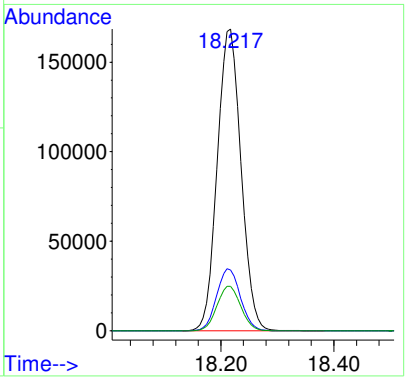


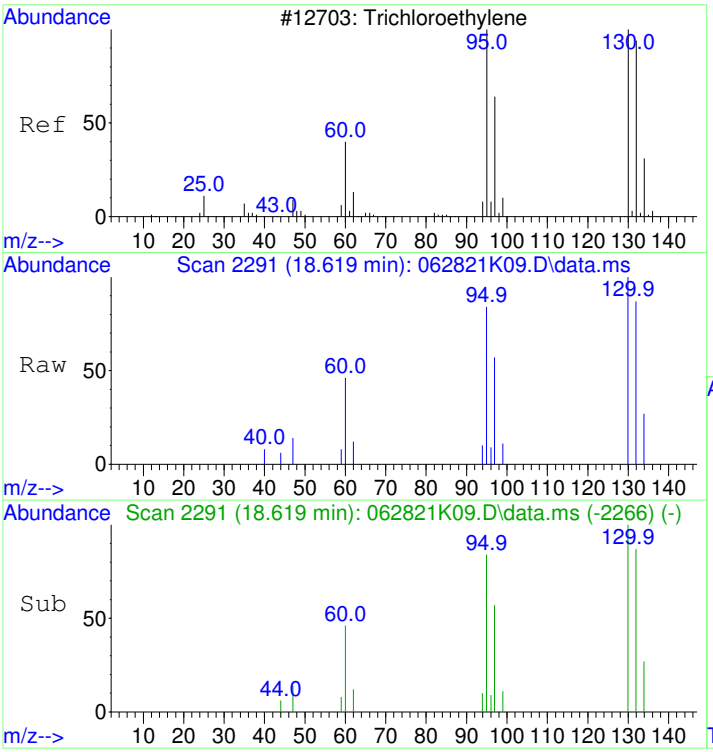



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K09.D
Acq: 28 Jun 2021 5:53 pm

Tgt Ion:114 Resp: 492241

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.6 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

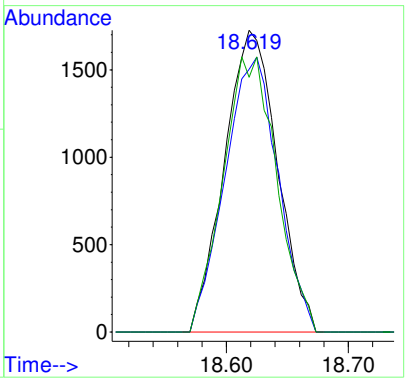


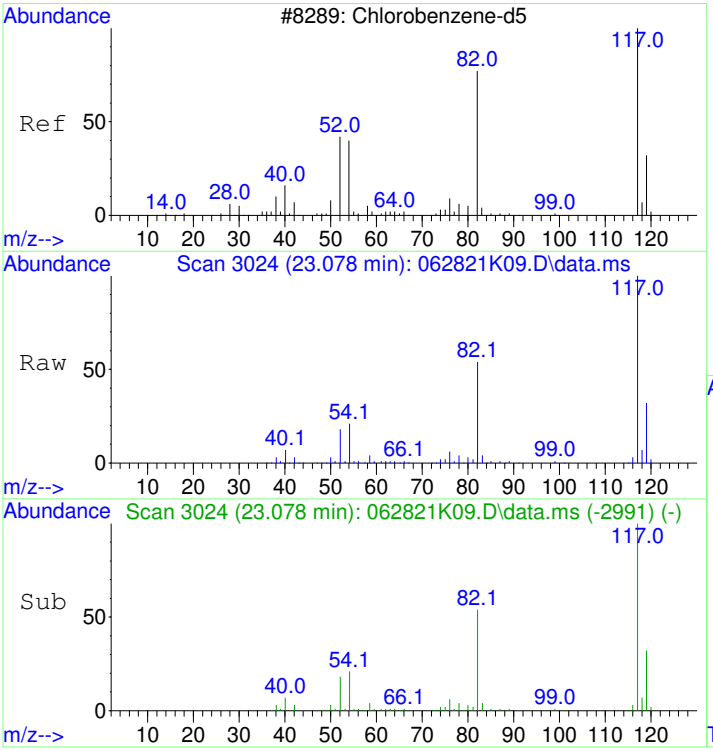




#37
Trichloroethene
Concen: 0.84 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. -0.000 min
Lab File: 062821K09.D
Acq: 28 Jun 2021 5:53 pm

Tgt Ion:130 Resp: 5206

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 91.5 | 75.9 | 115.9 |
| 95 | 92.5 | 72.6 | 112.6 |

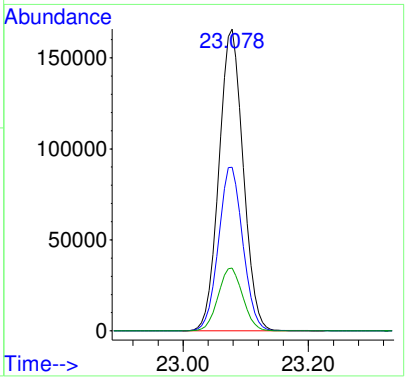





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.000 min
Lab File: 062821K09.D
Acq: 28 Jun 2021 5:53 pm

Tgt Ion:117 Resp: 446843

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.5 | 34.8 | 74.8 |
| 54 | 21.1 | 0.6 | 40.6 |



# S21F072-IBL1

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K10.D
InstName : HP5973K
Acq On : 28 Jun 2021 6:43 pm
Operator : LLH
Sample : S21F072-IBL1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 29 09:08:46 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 165858 | 23.40 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 500105 | 23.20 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 450119 | 21.40 ppbv | 0.00 |

Target Compounds Qvalue

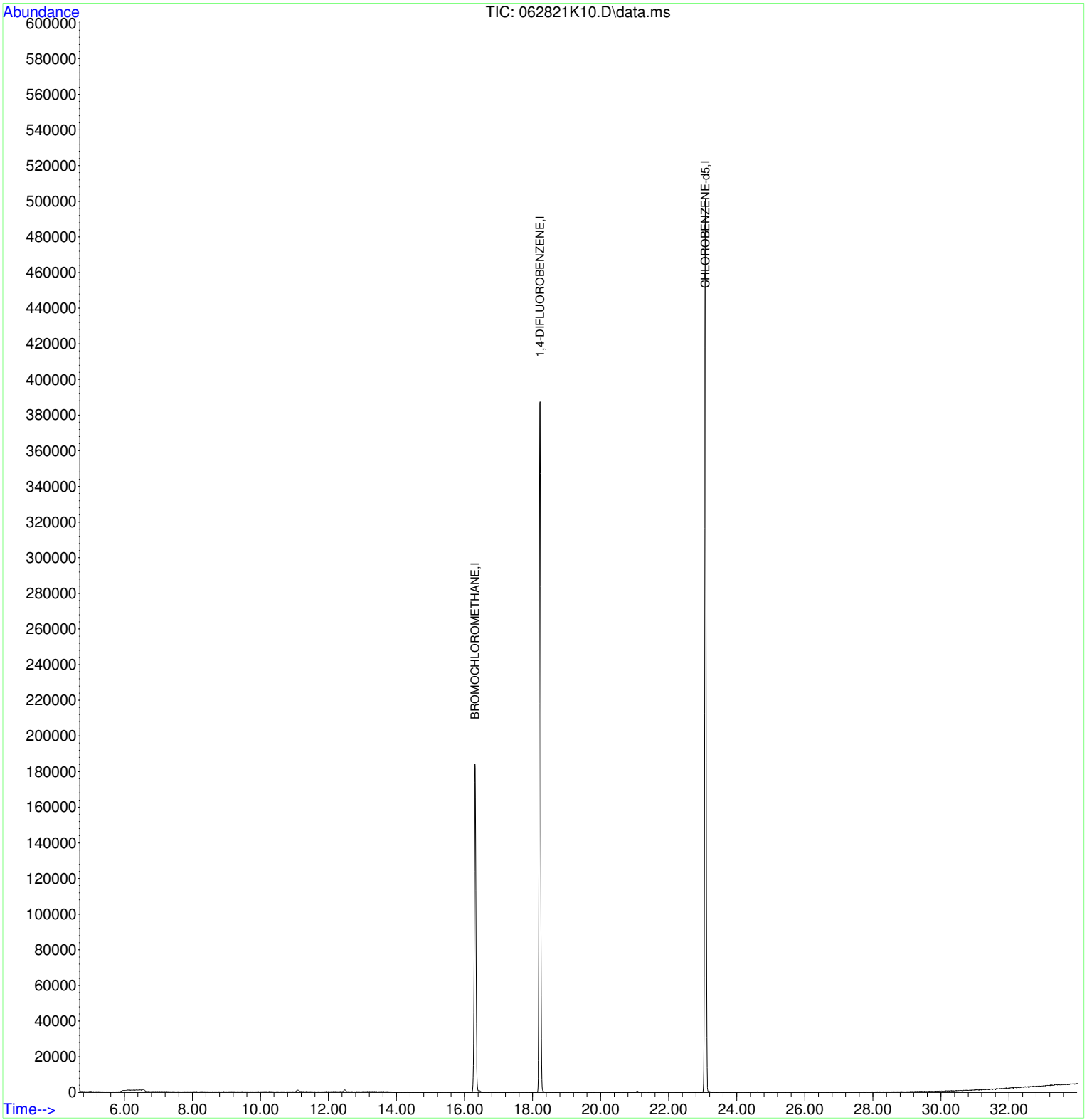
(#) = qualifier out of range (m) = manual integration (+) = signals summed

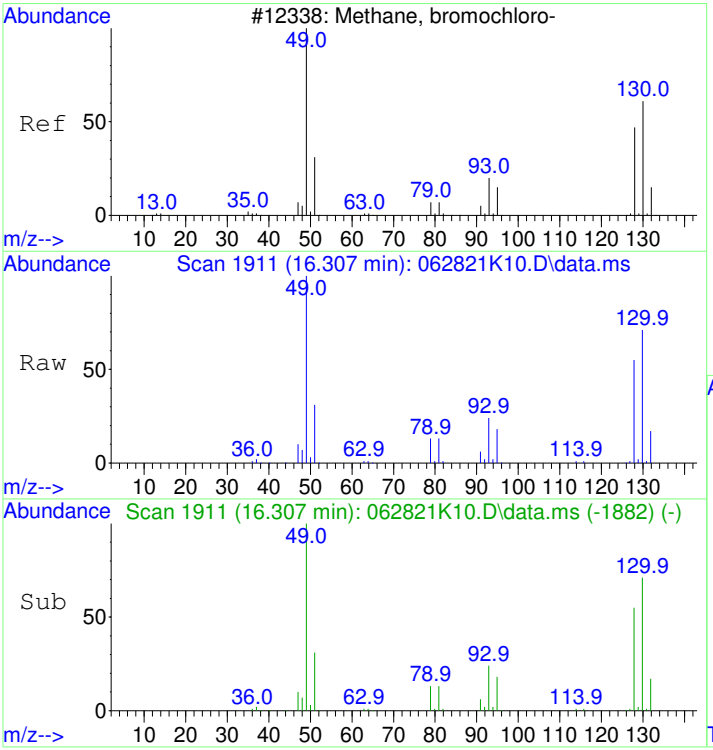
**REVIEWED**
**By LLH at 9:08 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K10.D
InstName : HP5973K
Acq On : 28 Jun 2021 6:43 pm
Operator : LLH
Sample : S21F072-IBL1
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 29 09:08:46 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

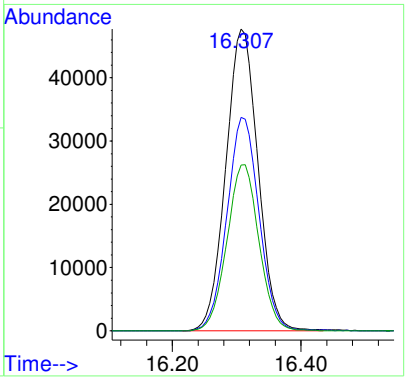


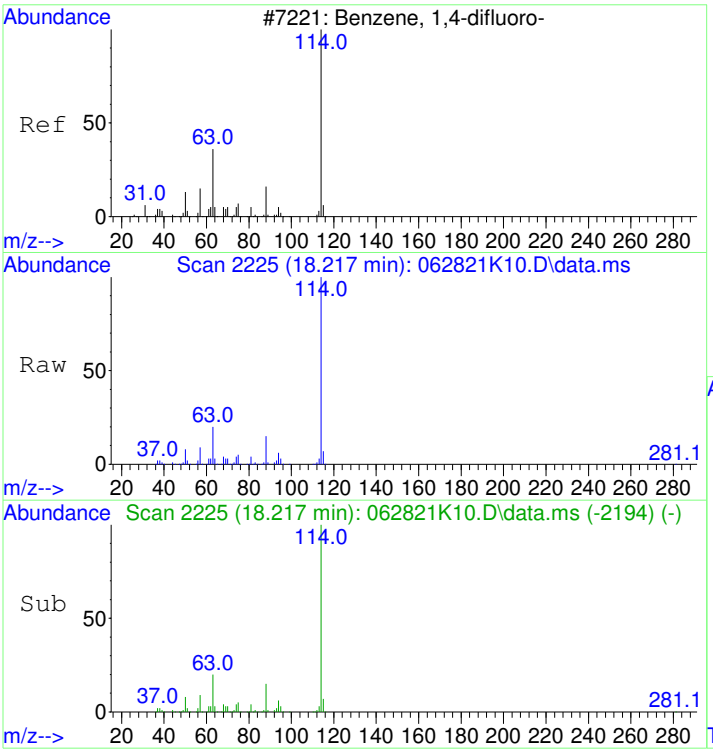



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K10.D
Acq: 28 Jun 2021 6:43 pm

Tgt Ion: 49 Resp: 165858

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 70.5 | 53.3 | 93.3 |
| 128 | 54.3 | 37.1 | 77.1 |

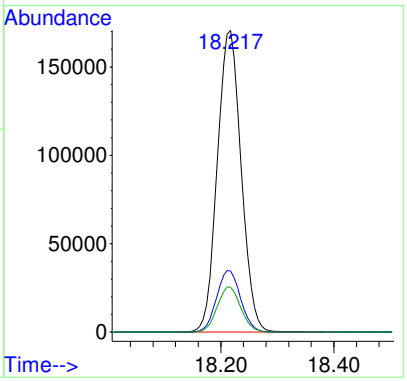


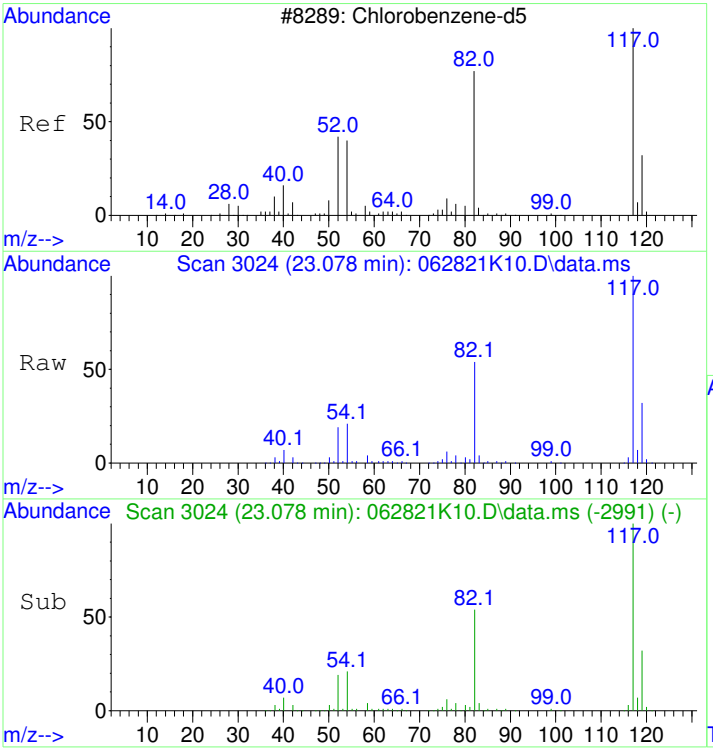




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K10.D
Acq: 28 Jun 2021 6:43 pm

Tgt Ion:114 Resp: 500105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.5 | 0.0 | 39.9 |
| 88 | 14.7 | 0.0 | 34.8 |

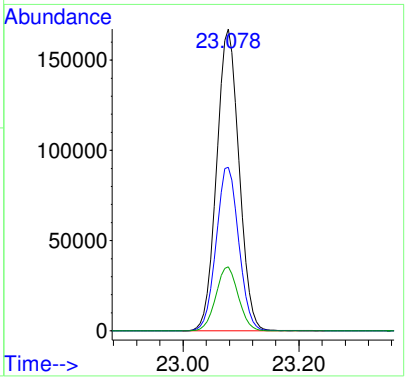





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K10.D
Acq: 28 Jun 2021 6:43 pm

Tgt Ion:117 Resp: 450119

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.6 | 34.8 | 74.8 |
| 54 | 21.2 | 0.6 | 40.6 |



# 2106036-05

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K11.D
InstName : HP5973K
Acq On : 28 Jun 2021 7:34 pm
Operator : LLH
Sample : 2106036-05
Misc : 200mL F6-023-3ft-D-G
ALS Vial : 11 Sample Multiplier: 2.2

REPORT

Quant Time: Jun 29 09:09:02 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 165945 | 23.40 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 494167 | 23.20 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 449749 | 21.40 | ppbv | 0.00 |
| Target Compounds | | | | | | Qvalue |
| 14) Acetone | 11.100 | 43 | 7153 | 0.94 | ppbv | 96 |
| 37) Trichloroethene | 18.619 | 130 | 5901 | 0.95 | ppbv | 99 |

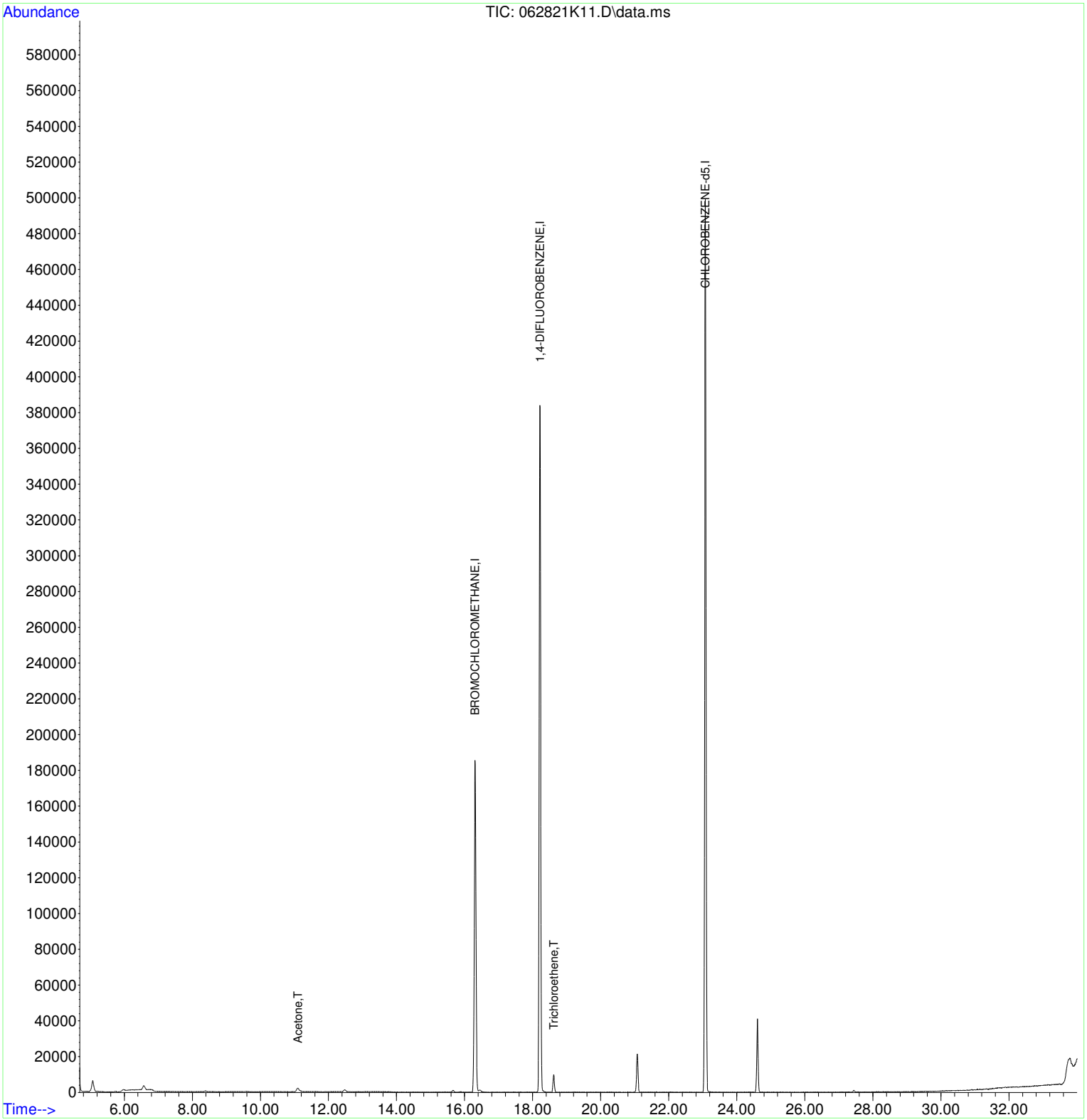
(#) = qualifier out of range (m) = manual integration (+) = signals summed

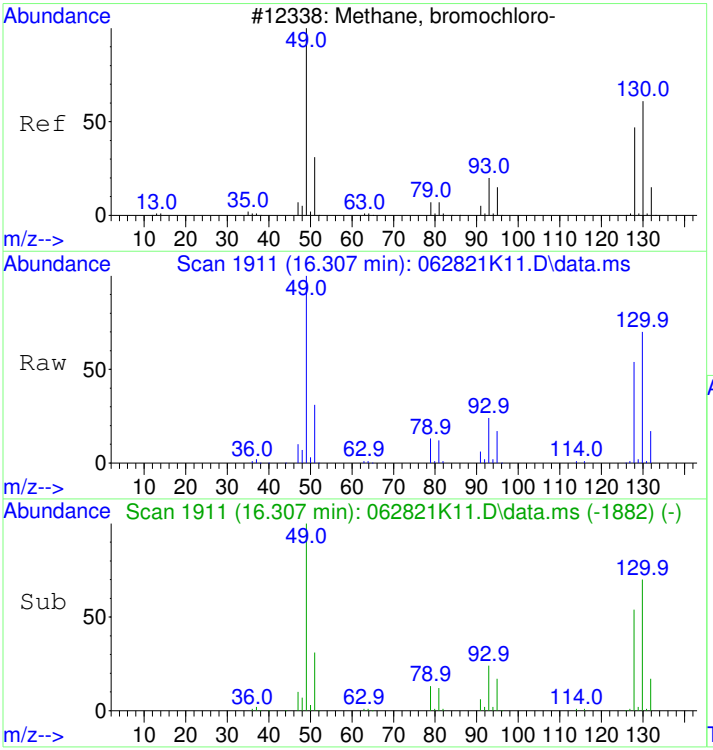
**REVIEWED**
**By LLH at 10:30 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K11.D
InstName : HP5973K
Acq On : 28 Jun 2021 7:34 pm
Operator : LLH
Sample : 2106036-05
Misc : 200mL F6-023-3ft-D-G
ALS Vial : 11 Sample Multiplier: 2.2

Quant Time: Jun 29 09:09:02 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

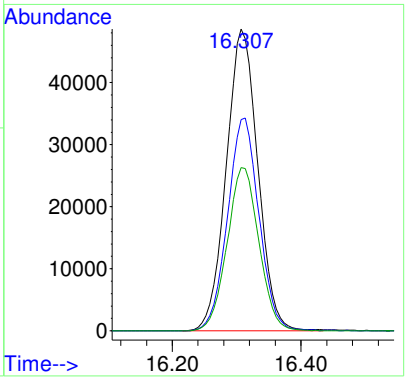


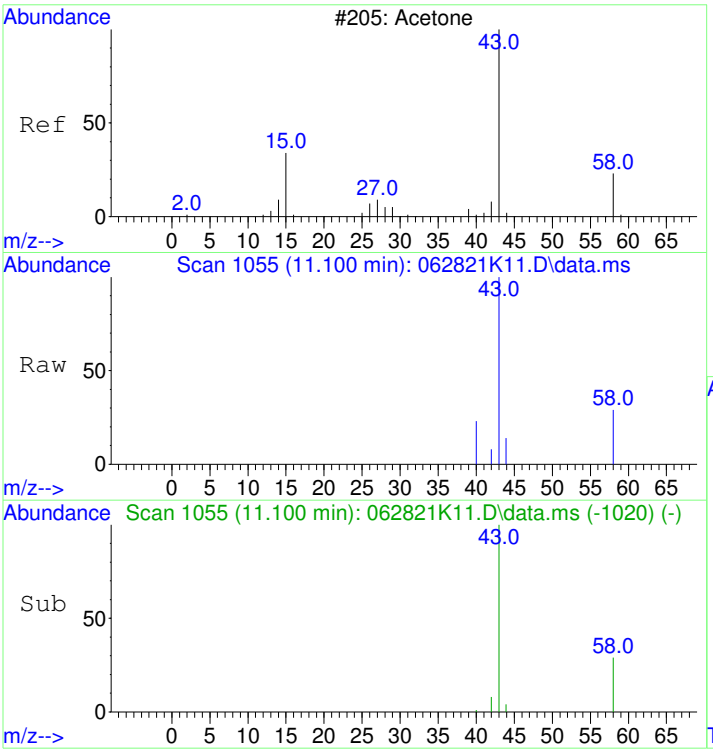



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K11.D
Acq: 28 Jun 2021 7:34 pm

Tgt Ion: 49 Resp: 165945

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 70.0 | 53.3 | 93.3 |
| 128 | 53.9 | 37.1 | 77.1 |

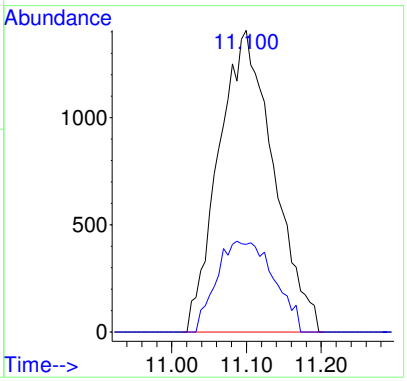


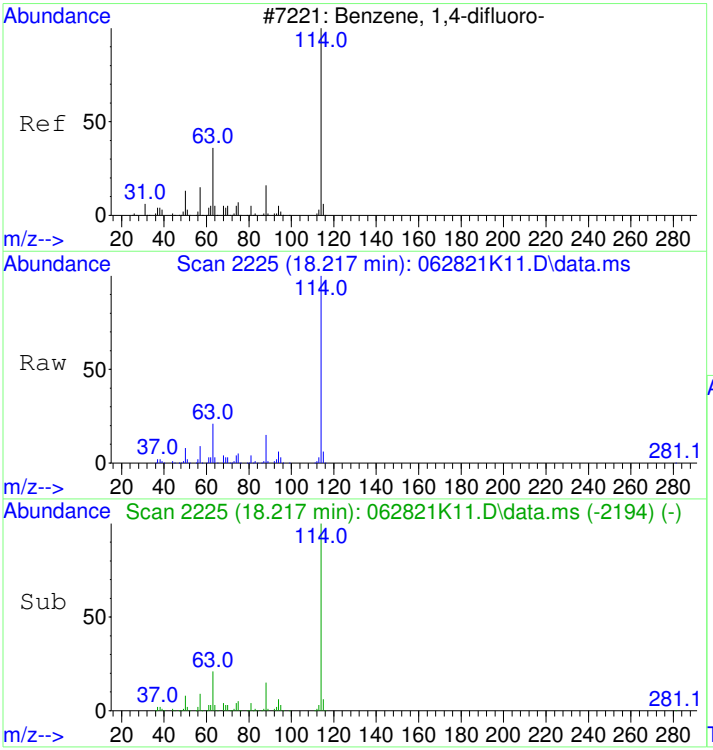




#14
Acetone
Concen: 0.94 ppbv
RT: 11.100 min Scan# 1055
Delta R.T. 0.012 min
Lab File: 062821K11.D
Acq: 28 Jun 2021 7:34 pm

Tgt Ion: 43 Resp: 7153

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 31.4 | 13.5 | 53.5 |

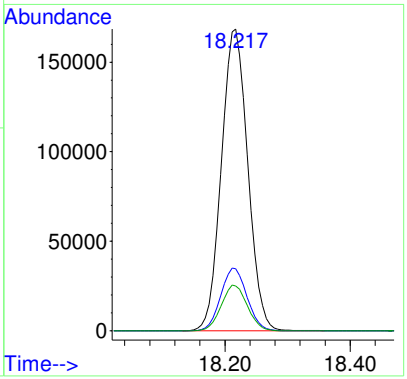


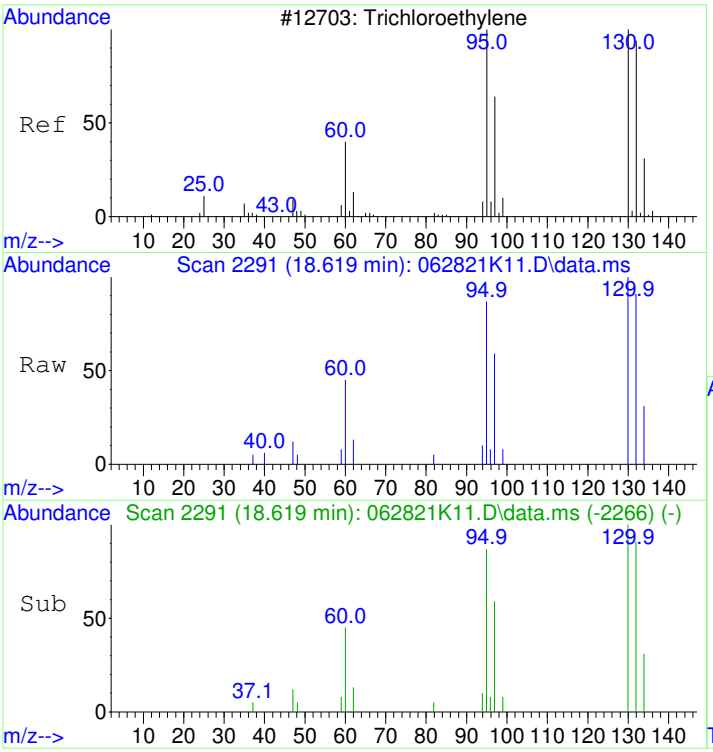



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K11.D
Acq: 28 Jun 2021 7:34 pm

Tgt Ion:114 Resp: 494167

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.7 | 0.0 | 39.9 |
| 88 | 14.9 | 0.0 | 34.8 |

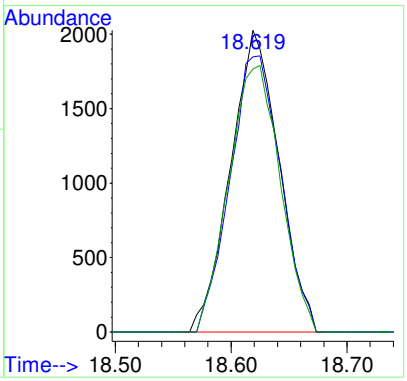


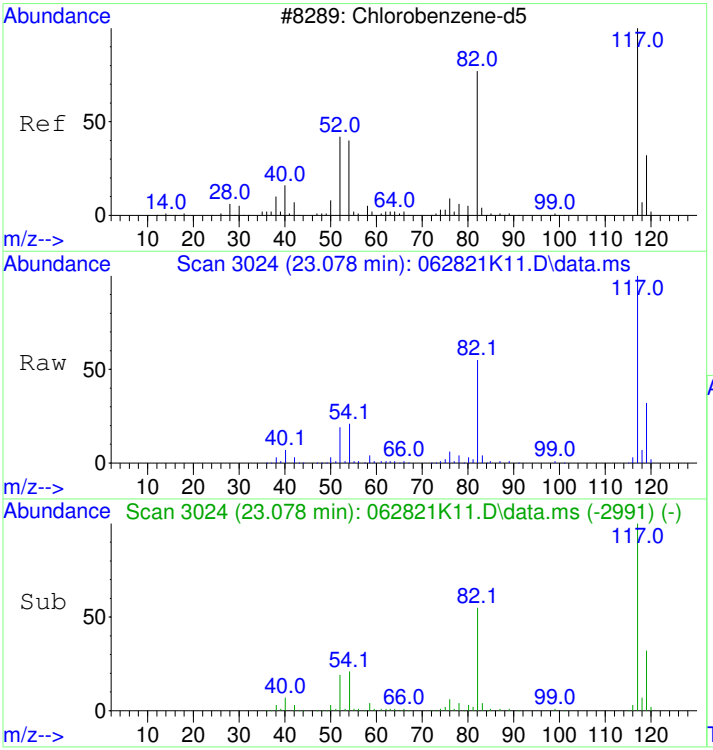




#37
Trichloroethene
Concen: 0.95 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. 0.000 min
Lab File: 062821K11.D
Acq: 28 Jun 2021 7:34 pm

Tgt Ion:130 Resp: 5901

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.7 | 75.9 | 115.9 |
| 95 | 93.7 | 72.6 | 112.6 |

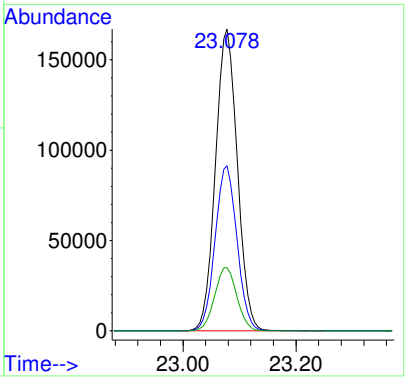





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K11.D
Acq: 28 Jun 2021 7:34 pm

Tgt Ion:117 Resp: 449749

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.7 | 34.8 | 74.8 |
| 54 | 21.2 | 0.6 | 40.6 |



# 2106036-06

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K12.D
InstName : HP5973K
Acq On : 28 Jun 2021 8:24 pm
Operator : LLH
Sample : 2106036-06
Misc : 200mL F6-010-3ft-G
ALS Vial : 12 Sample Multiplier: 2.34

REPORT

Quant Time: Jun 29 09:09:14 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 171862 | 23.40 | ppbv | | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 501498 | 23.20 | ppbv | | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 457970 | 21.40 | ppbv | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 14) Acetone | 11.100 | 43 | 12195 | 1.55 | ppbv | | 95 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 37349 | 6.28 | ppbv | # | 98 |
| 28) Chloroform | 16.435 | 83 | 13115 | 1.38 | ppbv | | 98 |
| 37) Trichloroethene | 18.619 | 130 | 126994 | 20.09 | ppbv | | 99 |
| 47) Tetrachloroethene | 21.636 | 166 | 4580 | 0.51 | ppbv | | 99 |

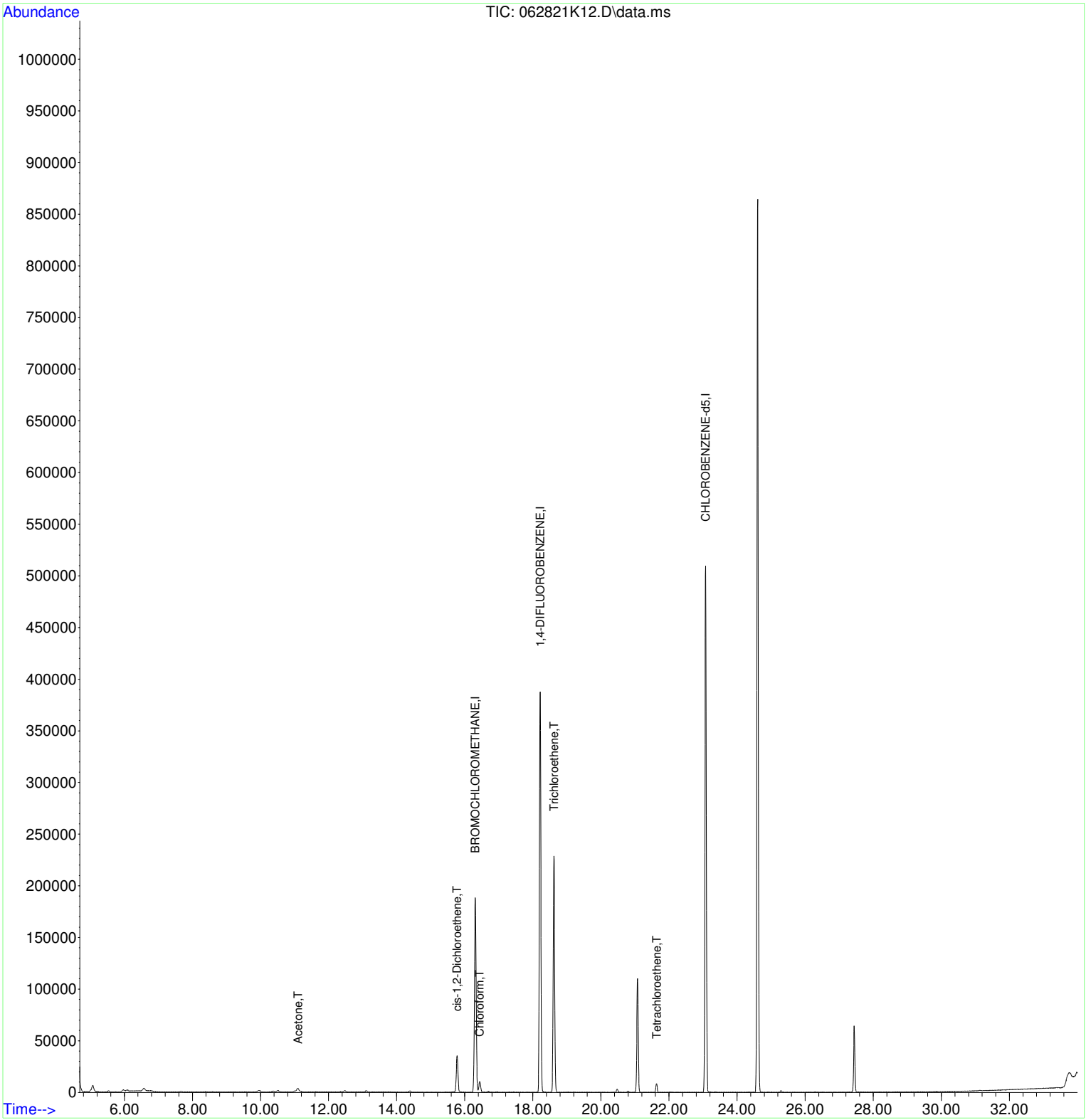
(#) = qualifier out of range (m) = manual integration (+) = signals summed

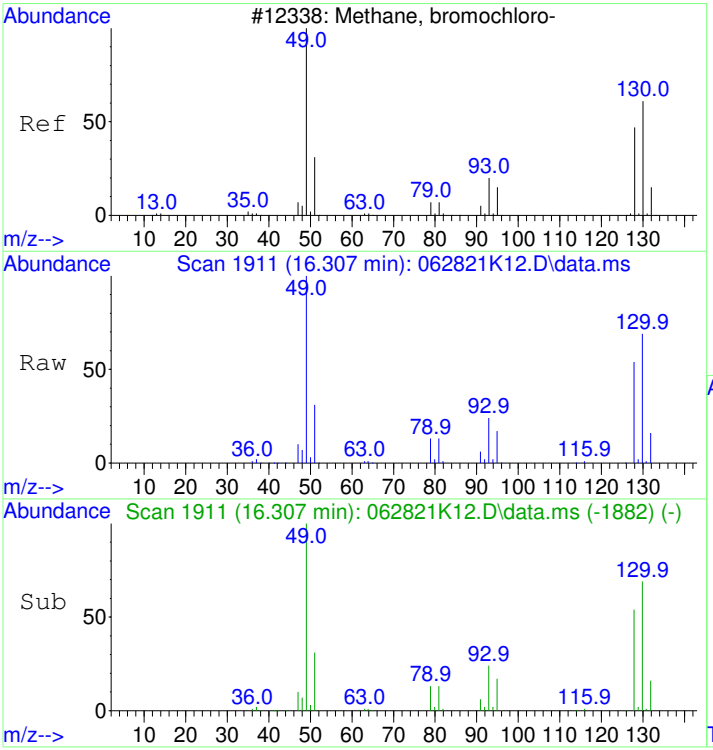
**REVIEWED**
**By LLH at 10:31 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K12.D
InstName : HP5973K
Acq On : 28 Jun 2021 8:24 pm
Operator : LLH
Sample : 2106036-06
Misc : 200mL F6-010-3ft-G
ALS Vial : 12 Sample Multiplier: 2.34

Quant Time: Jun 29 09:09:14 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

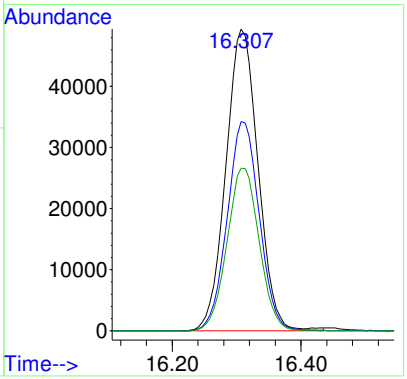


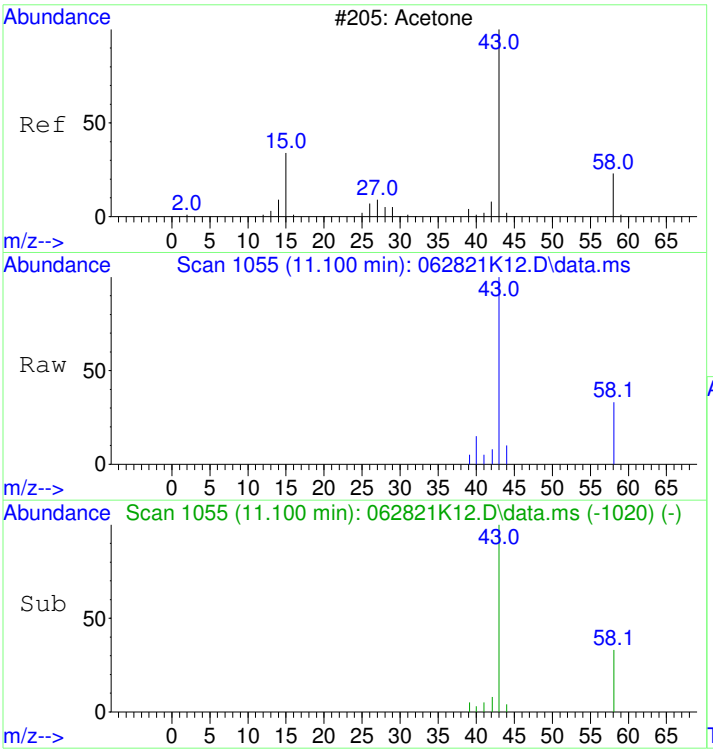



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion: 49 Resp: 171862

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 69.0 | 53.3 | 93.3 |
| 128 | 53.4 | 37.1 | 77.1 |

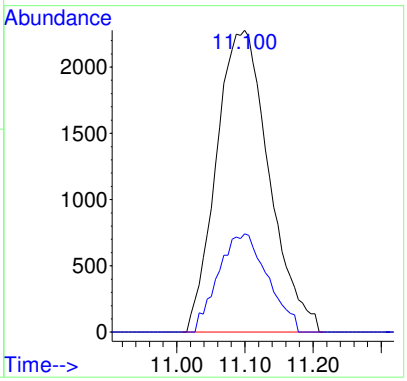


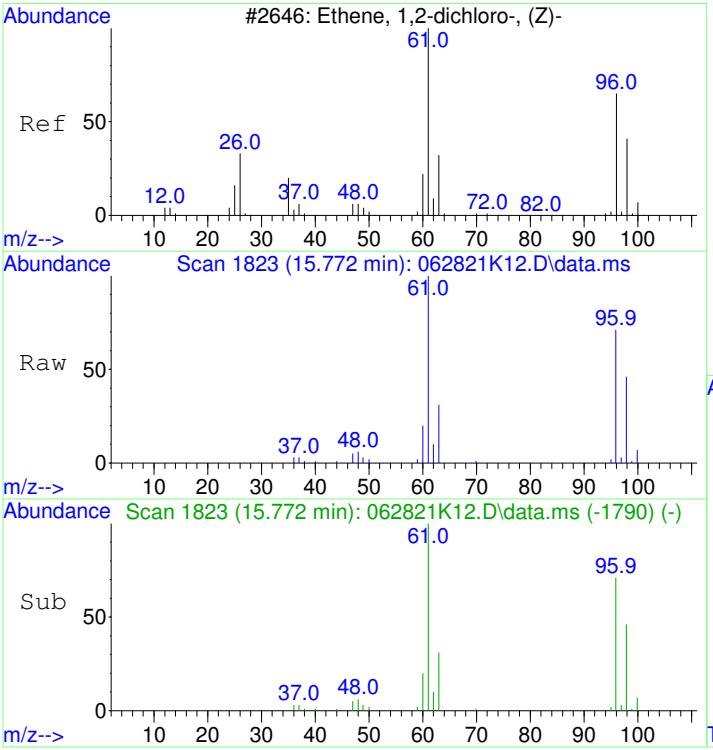




#14
Acetone
Concen: 1.55 ppbv
RT: 11.100 min Scan# 1055
Delta R.T. 0.012 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion: 43 Resp: 12195

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 30.5 | 13.5 | 53.5 |

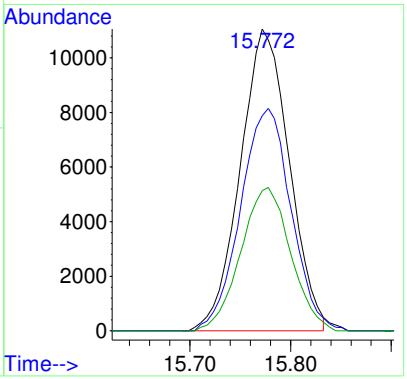


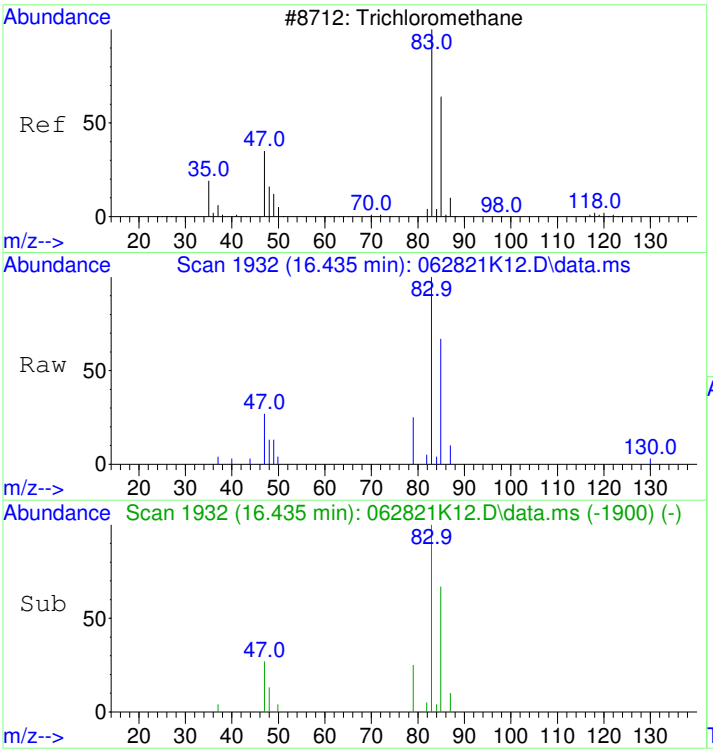



#24
cis-1,2-Dichloroethene
Concen: 6.28 ppbv
RT: 15.772 min Scan# 1823
Delta R.T. 0.000 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion: 61 Resp: 37349

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 75.6 | 57.1 | 97.1 |
| 98 | 0.0 | 0.0 | 20.0 |

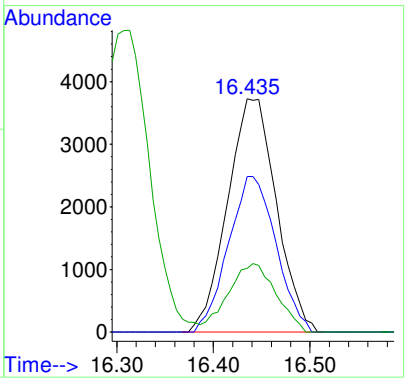


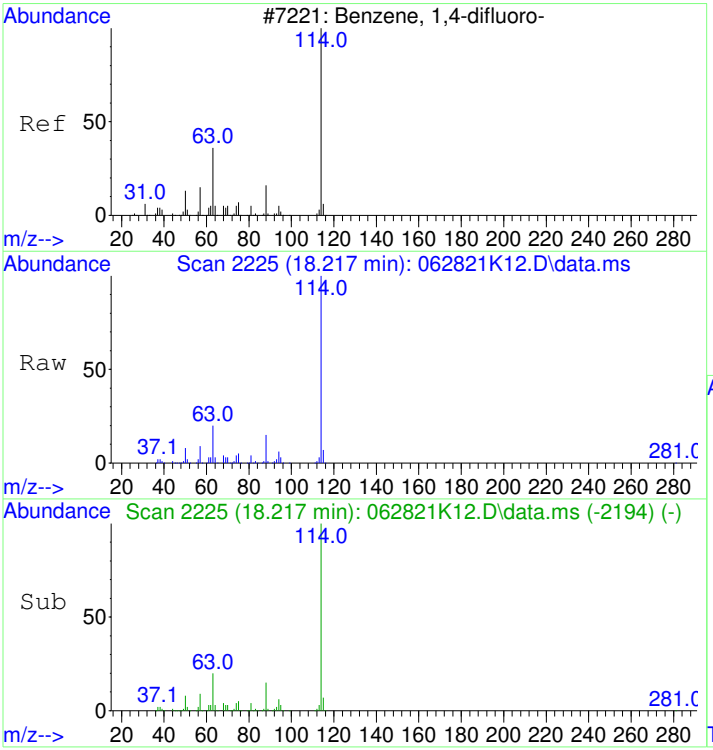




#28
Chloroform
Concen: 1.38 ppbv
RT: 16.435 min Scan# 1932
Delta R.T. -0.006 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion: 83 Resp: 13115

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.8 | 45.0 | 85.0 |
| 47 | 25.7 | 2.9 | 42.9 |

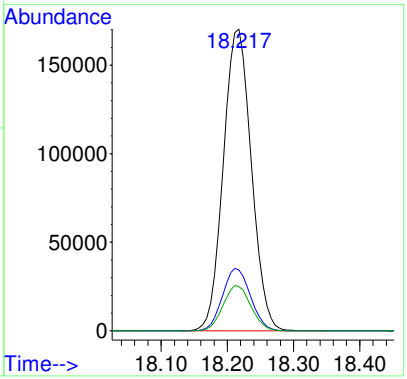


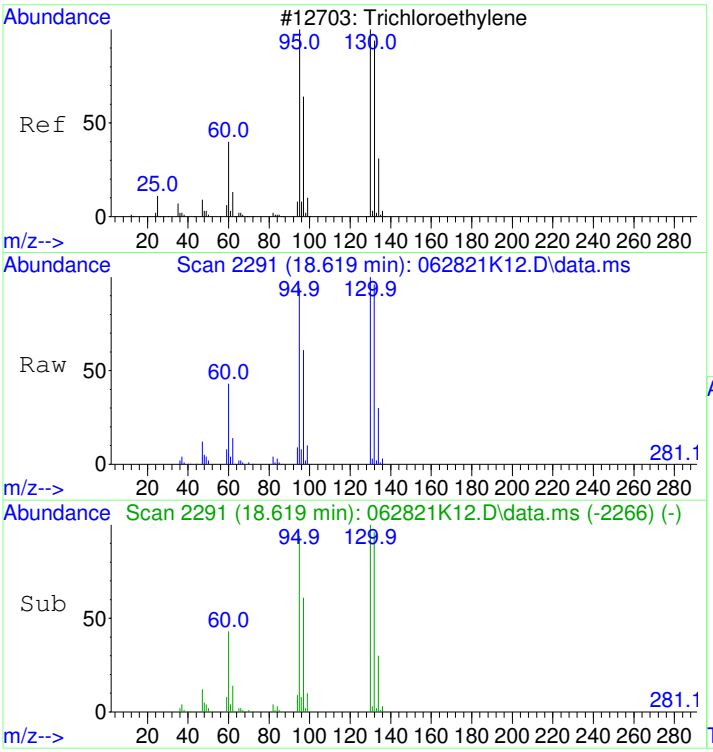



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion:114 Resp: 501498

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.7 | 0.0 | 39.9 |
| 88 | 14.9 | 0.0 | 34.8 |

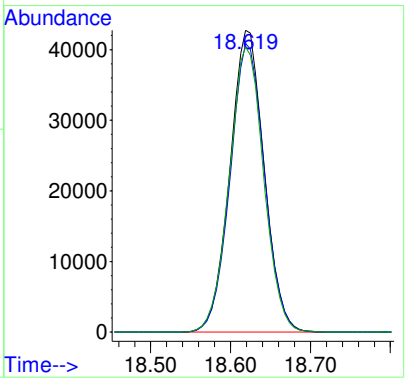


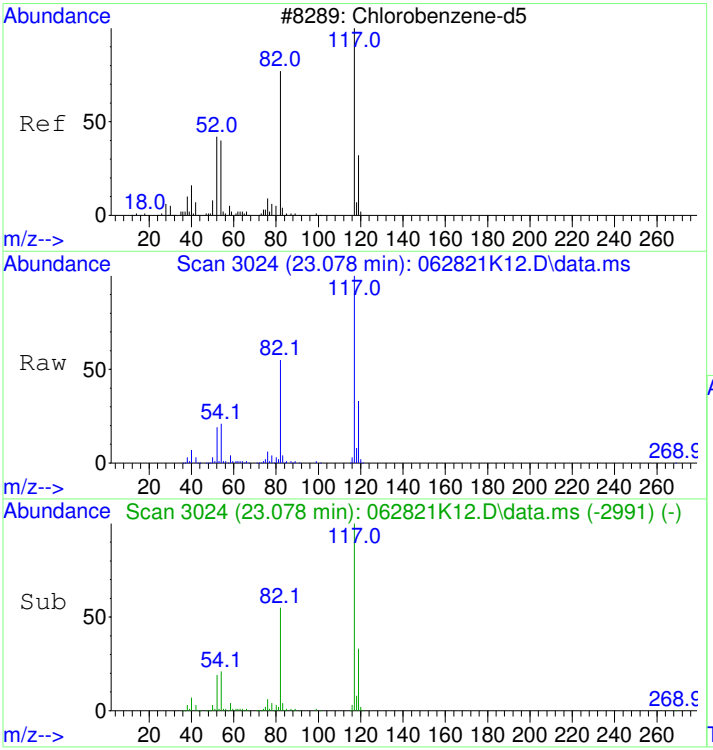




#37
Trichloroethene
Concen: 20.09 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. 0.000 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion:130 Resp: 126994

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.9 | 75.9 | 115.9 |
| 95 | 95.0 | 72.6 | 112.6 |

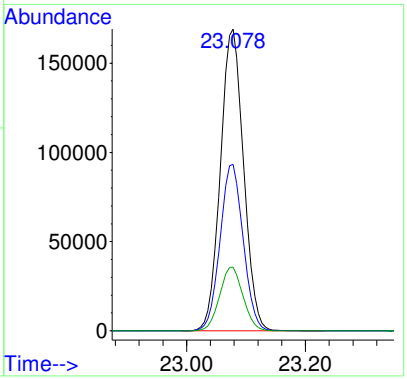


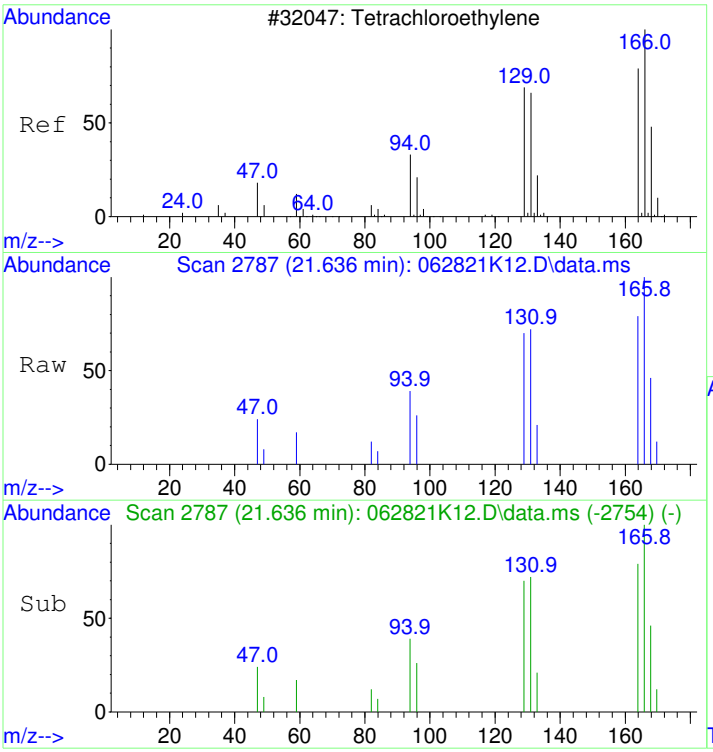



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion:117 Resp: 457970

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.1 | 34.8 | 74.8 |
| 54 | 21.3 | 0.6 | 40.6 |

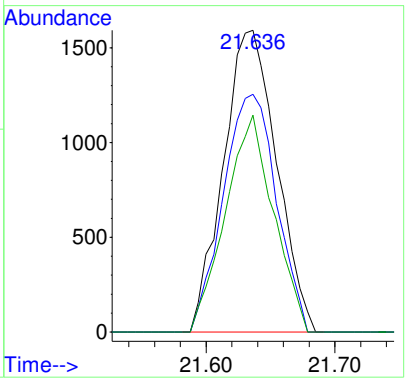



#47
Tetrachloroethene
Concen: 0.51 ppbv
RT: 21.636 min Scan# 2787
Delta R.T. 0.000 min
Lab File: 062821K12.D
Acq: 28 Jun 2021 8:24 pm

Tgt Ion:166 Resp: 4580

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.7 | 58.0 | 98.0 |
| 131 | 65.0 | 44.8 | 84.8 |



# 2106036-07

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K13.D
InstName : HP5973K
Acq On : 28 Jun 2021 9:15 pm
Operator : LLH
Sample : 2106036-07
Misc : 200mL F6-006-3ft-G
ALS Vial : 21 Sample Multiplier: 2.38

REPORT

Quant Time: Jun 29 09:09:41 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

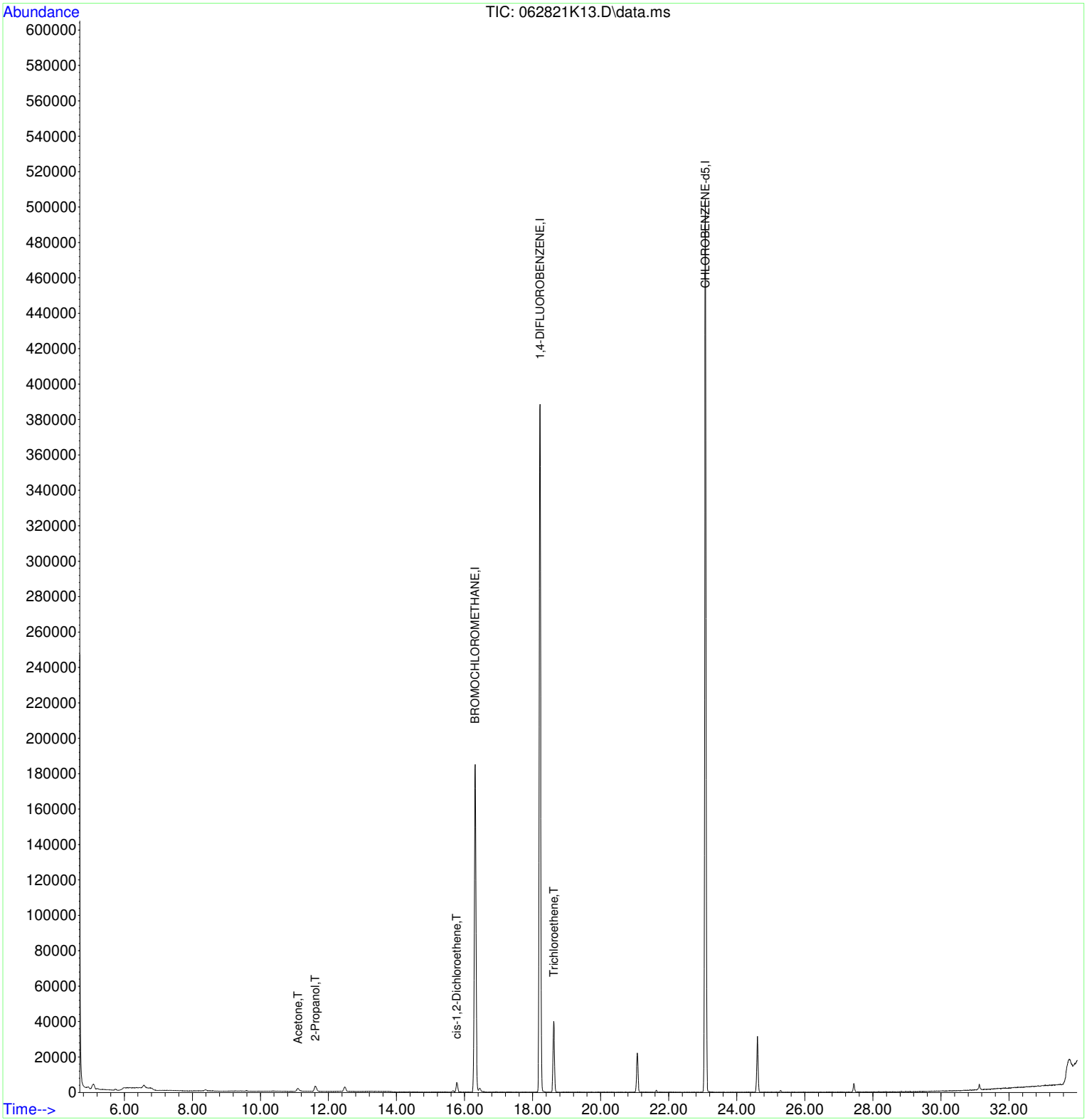
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 168706 | 23.40 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 497511 | 23.20 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 449831 | 21.40 | ppbv | 0.00 |
| Target Compounds | | | | | | Qvalue |
| 14) Acetone | 11.100 | 43 | 5860 | 0.76 | ppbv | 93 |
| 16) 2-Propanol | 11.611 | 45 | 7775 | 1.15 | ppbv | 69 |
| 24) cis-1,2-Dichloroethene | 15.766 | 61 | 6268 | 1.07 | ppbv # | 98 |
| 37) Trichloroethene | 18.619 | 130 | 22805 | 3.64 | ppbv | 99 |

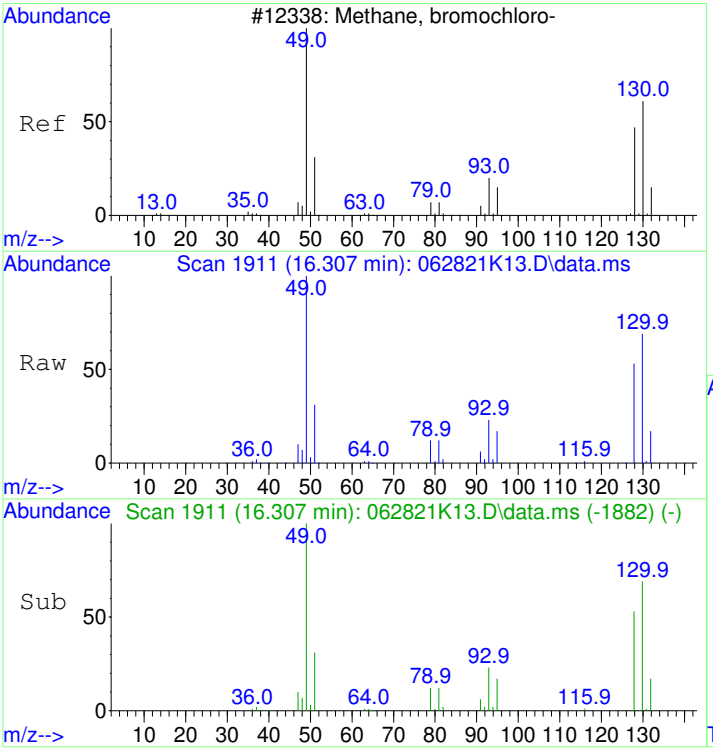
(#) = qualifier out of range (m) = manual integration (+) = signals summed

**REVIEWED**
**By LLH at 10:31 am, Jun 29, 2021**

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K13.D
InstName : HP5973K
Acq On : 28 Jun 2021 9:15 pm
Operator : LLH
Sample : 2106036-07
Misc : 200mL F6-006-3ft-G
ALS Vial : 21 Sample Multiplier: 2.38

Quant Time: Jun 29 09:09:41 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

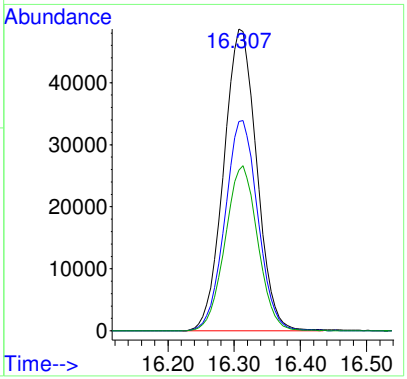


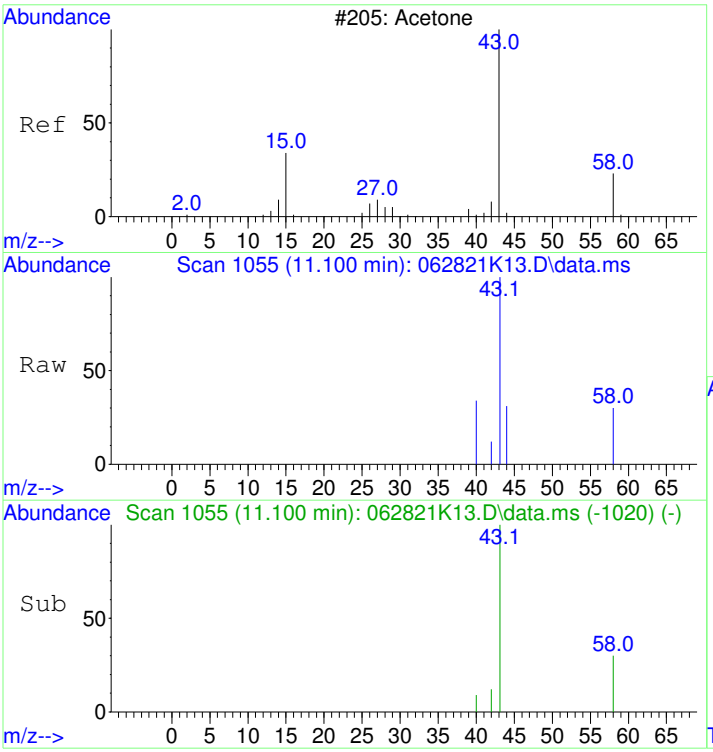



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. 0.000 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion: 49 Resp: 168706

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 69.7 | 53.3 | 93.3 |
| 128 | 53.7 | 37.1 | 77.1 |

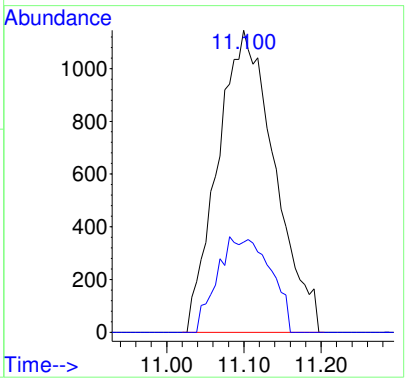


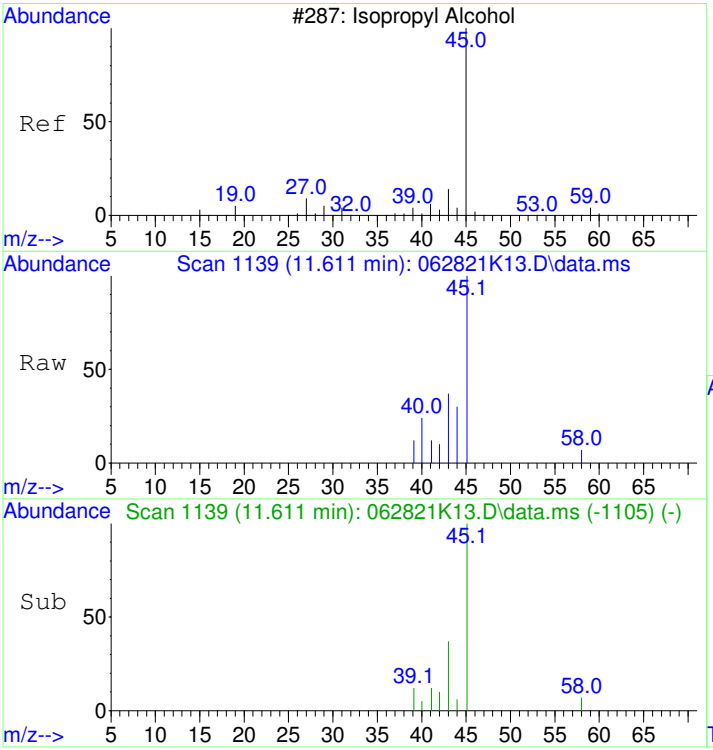




#14
Acetone
Concen: 0.76 ppbv
RT: 11.100 min Scan# 1055
Delta R.T. 0.012 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion: 43 Resp: 5860

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.4 | 13.5 | 53.5 |

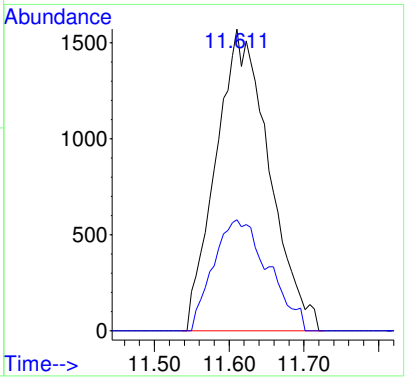


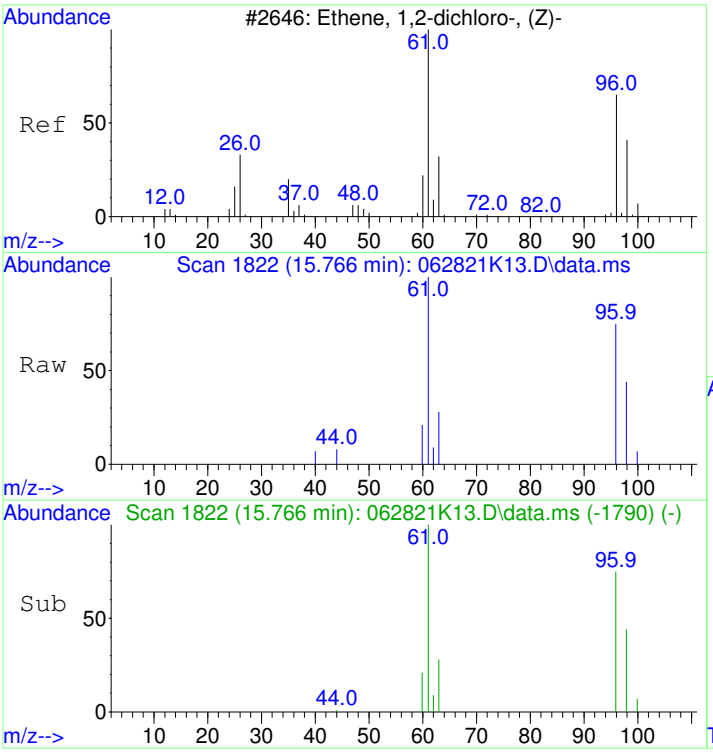



#16
2-Propanol
Concen: 1.15 ppbv
RT: 11.611 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion: 45 Resp: 7775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 38.0 | 3.0 | 43.0 |

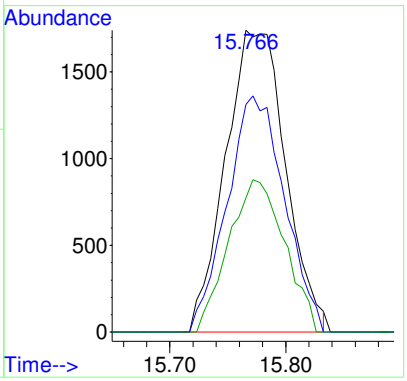


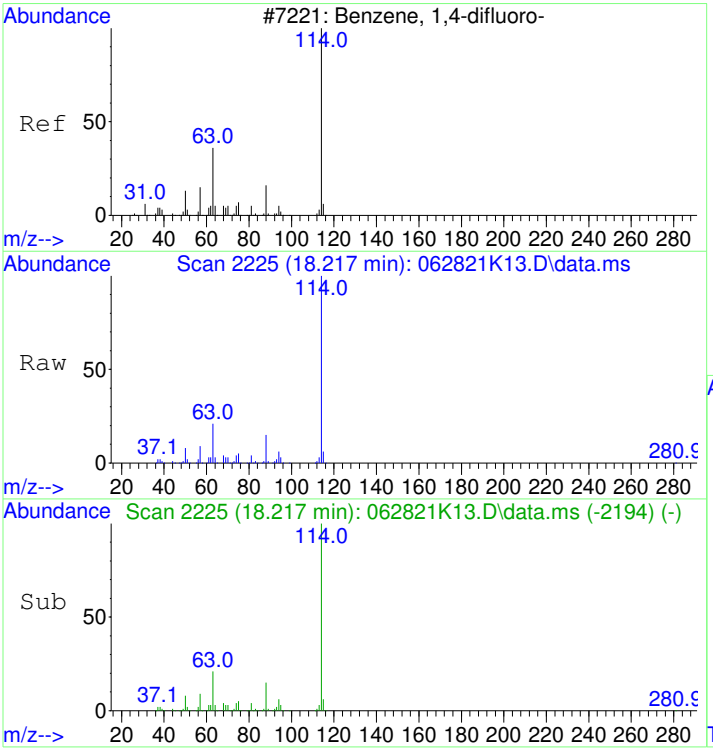




#24
cis-1,2-Dichloroethene
Concen: 1.07 ppbv
RT: 15.766 min Scan# 1822
Delta R.T. -0.006 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion: 61 Resp: 6268

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 75.0 | 57.1 | 97.1 |
| 98 | 0.0 | 0.0 | 20.0 |

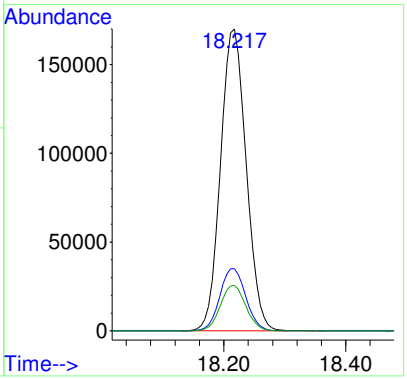


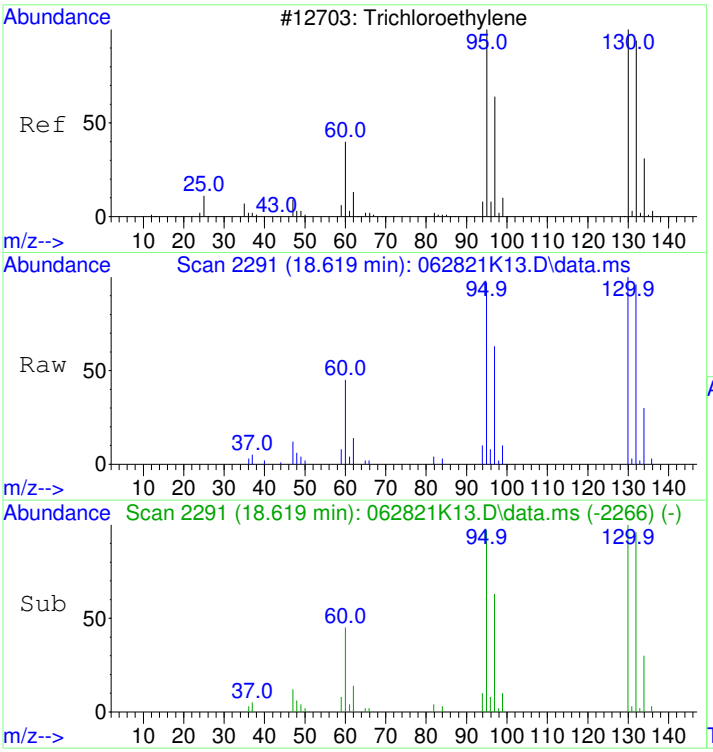



#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion:114 Resp: 497511

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.8 | 0.0 | 39.9 |
| 88 | 14.9 | 0.0 | 34.8 |

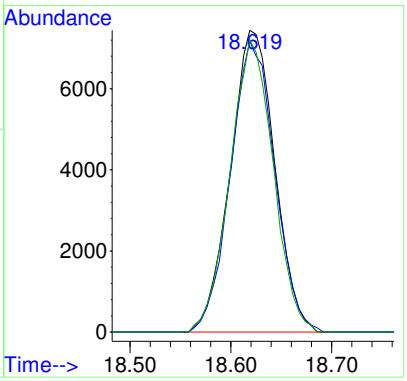


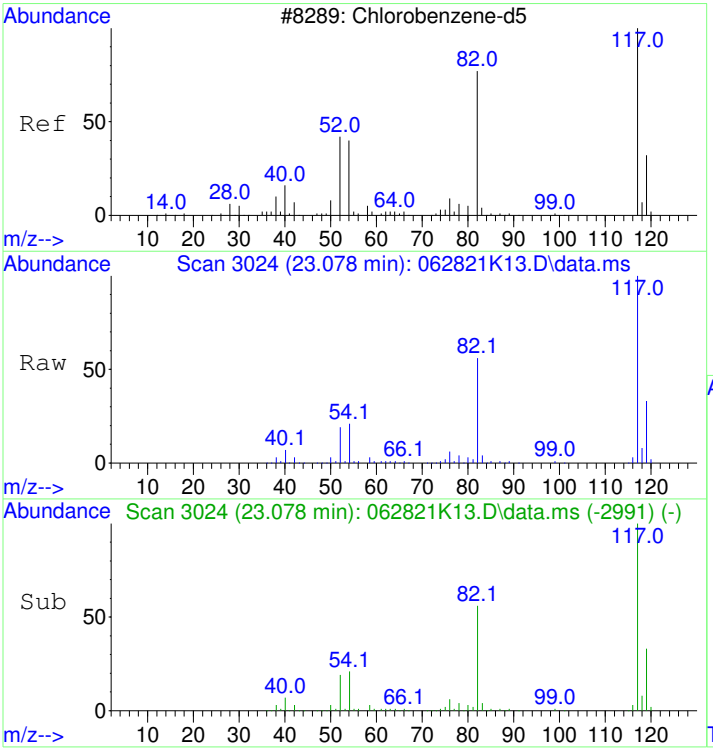




#37
Trichloroethene
Concen: 3.64 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. 0.000 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion:130 Resp: 22805

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.9 | 75.9 | 115.9 |
| 95 | 94.3 | 72.6 | 112.6 |

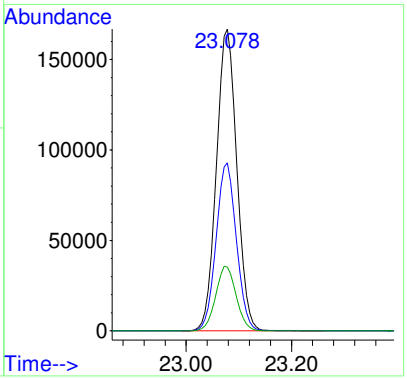





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. 0.000 min
Lab File: 062821K13.D
Acq: 28 Jun 2021 9:15 pm

Tgt Ion:117 Resp: 449831

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.1 | 34.8 | 74.8 |
| 54 | 21.4 | 0.6 | 40.6 |



# 2106036-08

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K14.D
InstName : HP5973K
Acq On : 28 Jun 2021 10:05 pm
Operator : LLH
Sample : 2106036-08
Misc : 200mL F6-025-3ft-G
ALS Vial : 22 Sample Multiplier: 2.21

REPORT

Quant Time: Jun 29 09:09:54 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

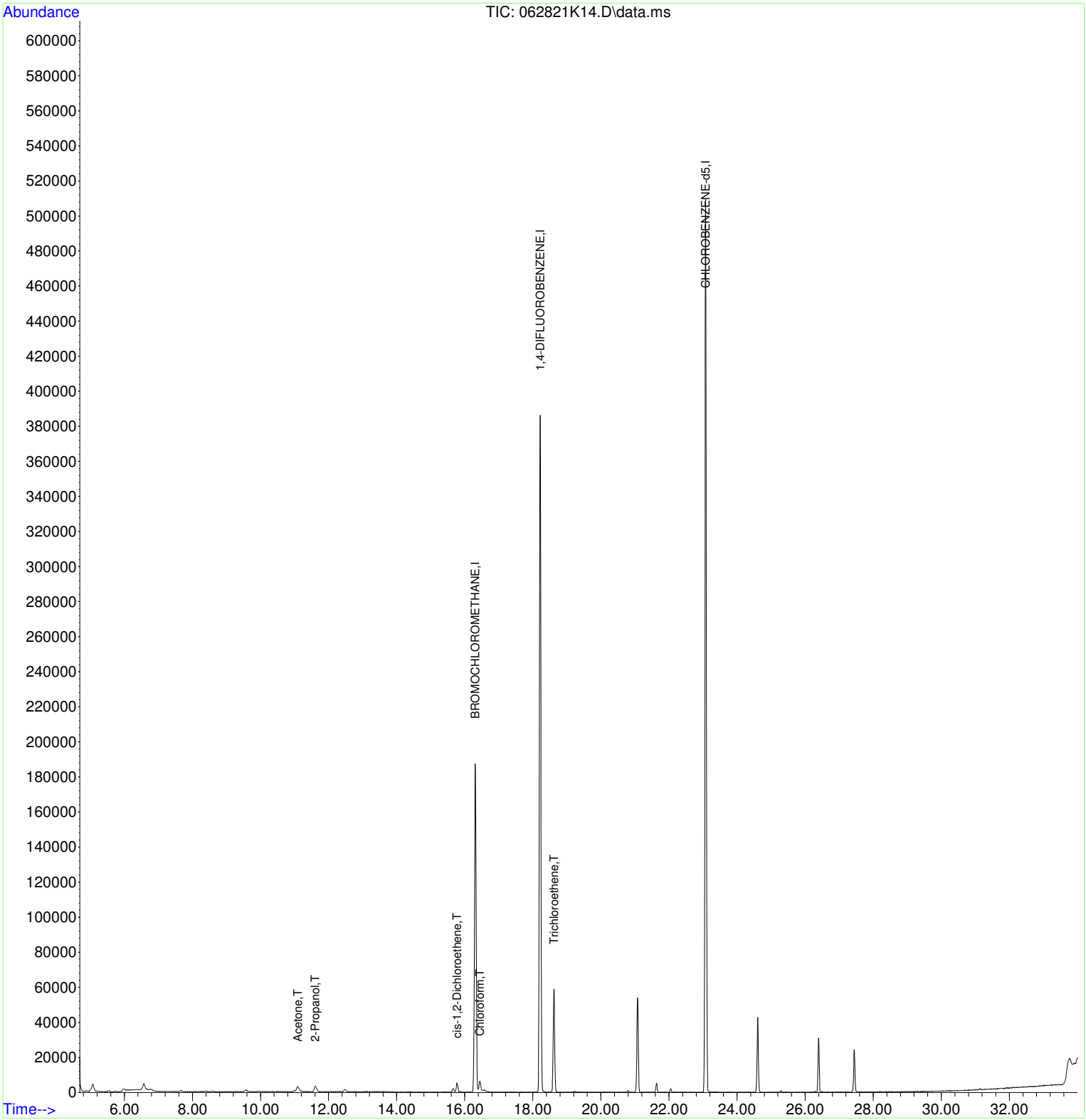
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 169248 | 23.40 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 496830 | 23.20 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 451651 | 21.40 | ppbv | 0.00 |
| Target Compounds | | | | | | Qvalue |
| 14) Acetone | 11.093 | 43 | 10544 | 1.36 | ppbv | 97 |
| 16) 2-Propanol | 11.604 | 45 | 8332 | 1.23 | ppbv | 68 |
| 24) cis-1,2-Dichloroethene | 15.772 | 61 | 5999 | 1.02 | ppbv # | 99 |
| 28) Chloroform | 16.441 | 83 | 4771 | 0.51 | ppbv # | 86 |
| 37) Trichloroethene | 18.619 | 130 | 33165 | 5.30 | ppbv | 98 |

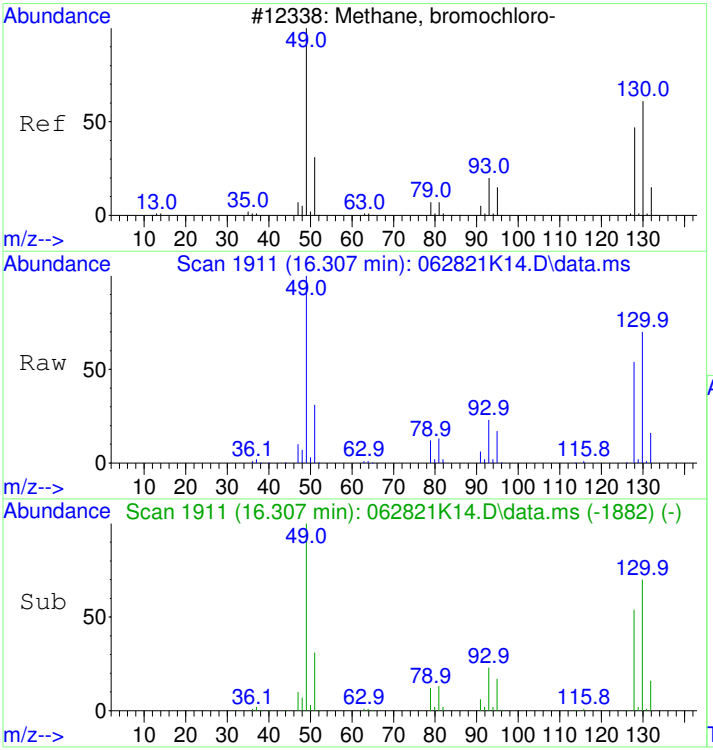
(#) = qualifier out of range (m) = manual integration (+) = signals summed

**REVIEWED**
**By LLH at 10:32 am, Jun 29, 2021**

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K14.D
InstName : HP5973K
Acq On : 28 Jun 2021 10:05 pm
Operator : LLH
Sample : 2106036-08
Misc : 200mL F6-025-3ft-G
ALS Vial : 22 Sample Multiplier: 2.21

Quant Time: Jun 29 09:09:54 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

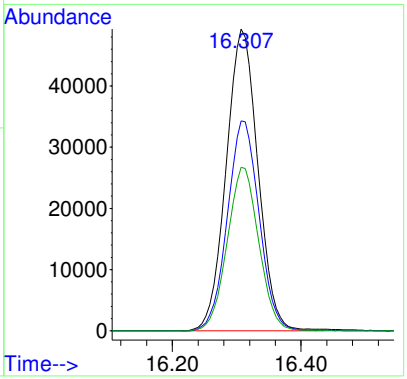


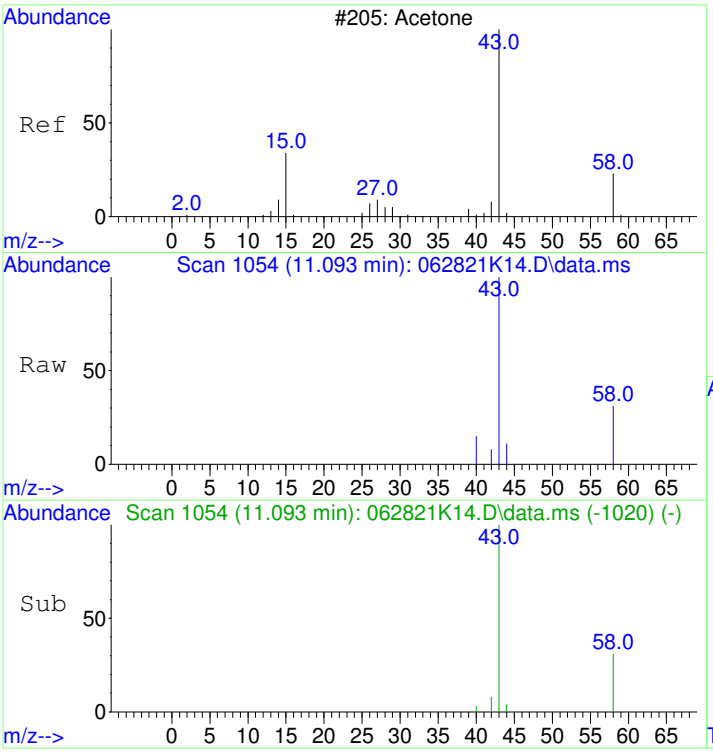



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.000 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion: 49 Resp: 169248

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 69.6 | 53.3 | 93.3 |
| 128 | 53.3 | 37.1 | 77.1 |

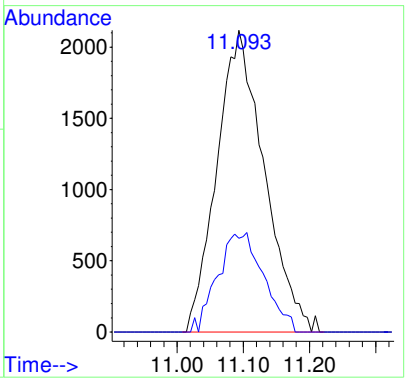


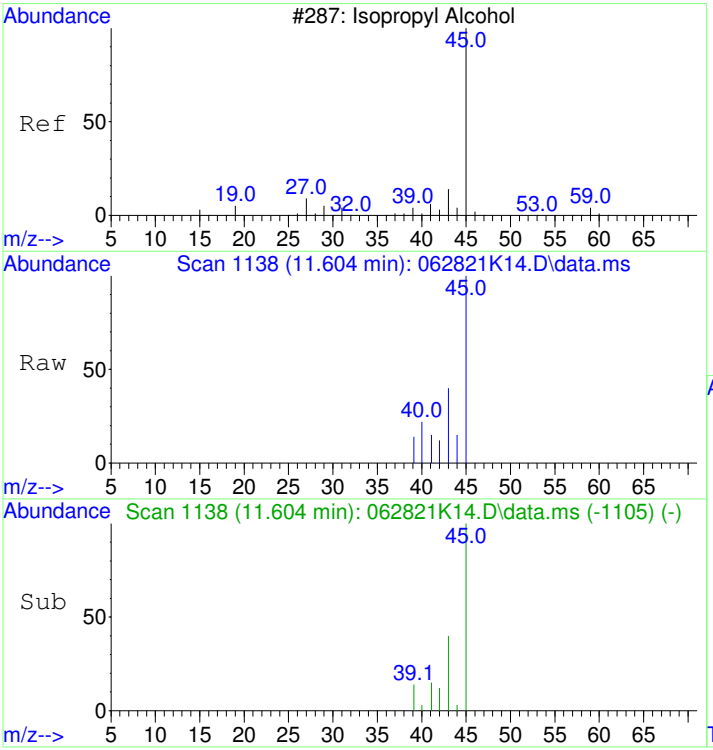




#14
Acetone
Concen: 1.36 ppbv
RT: 11.093 min Scan# 1054
Delta R.T. 0.006 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion: 43 Resp: 10544

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 32.0 | 13.5 | 53.5 |

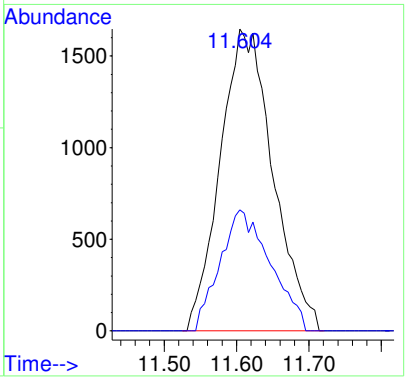


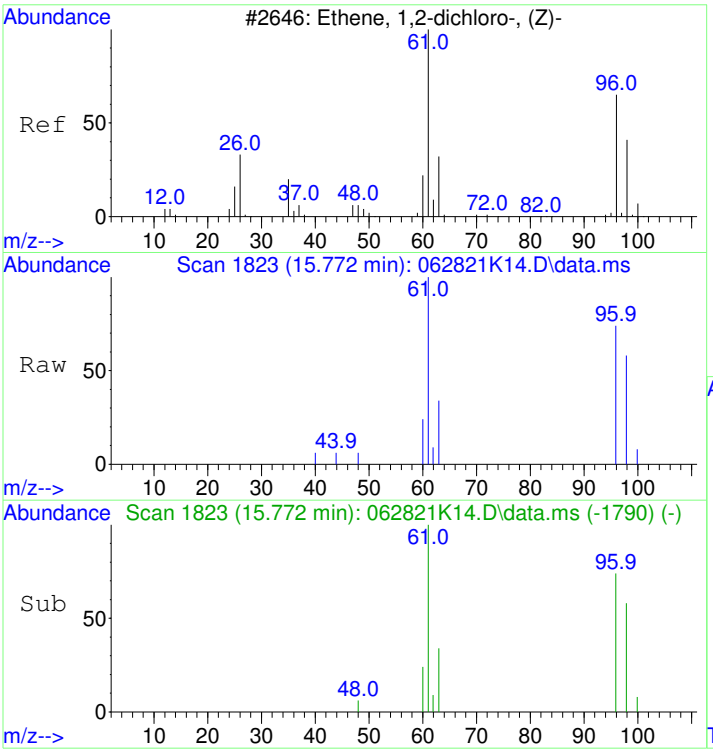



#16
2-Propanol
Concen: 1.23 ppbv
RT: 11.604 min Scan# 1138
Delta R.T. -0.000 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion: 45 Resp: 8332

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 38.3 | 3.0 | 43.0 |

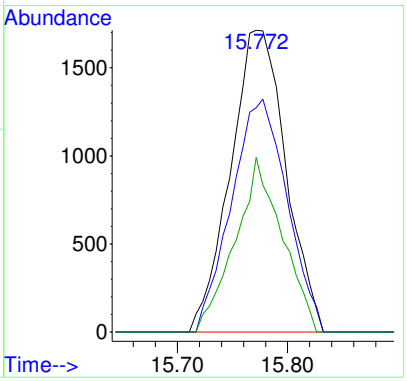


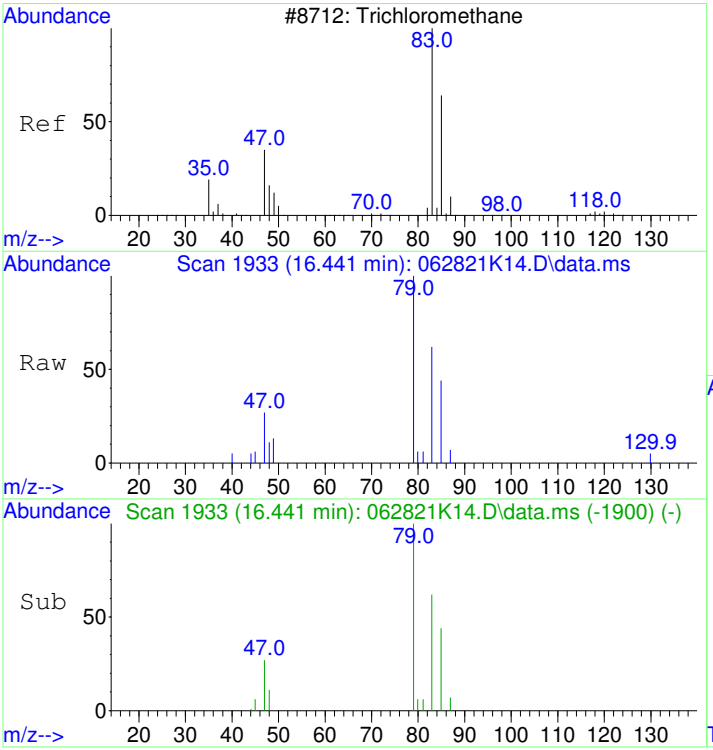




#24
cis-1,2-Dichloroethene
Concen: 1.02 ppbv
RT: 15.772 min Scan# 1823
Delta R.T. -0.000 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion: 61 Resp: 5999

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 77.6 | 57.1 | 97.1 |
| 98 | 0.0 | 0.0 | 20.0 |

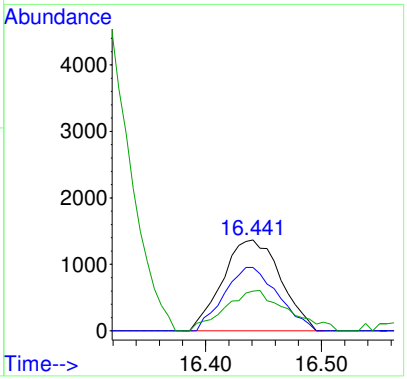


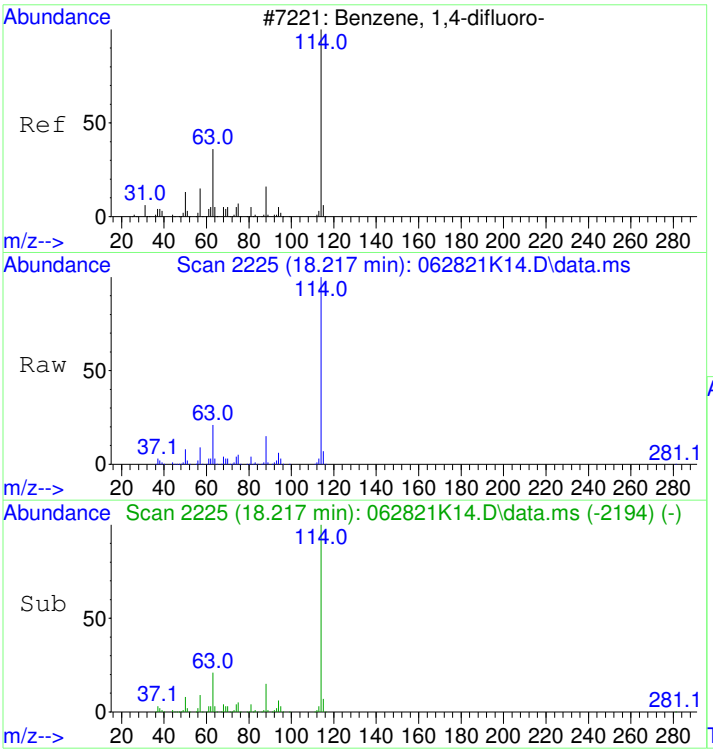



#28
Chloroform
Concen: 0.51 ppbv
RT: 16.441 min Scan# 1933
Delta R.T. -0.000 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion: 83 Resp: 4771

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.7 | 45.0 | 85.0 |
| 47 | 47.6 | 2.9 | 42.9# |

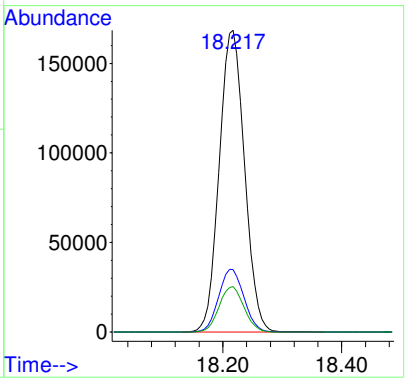


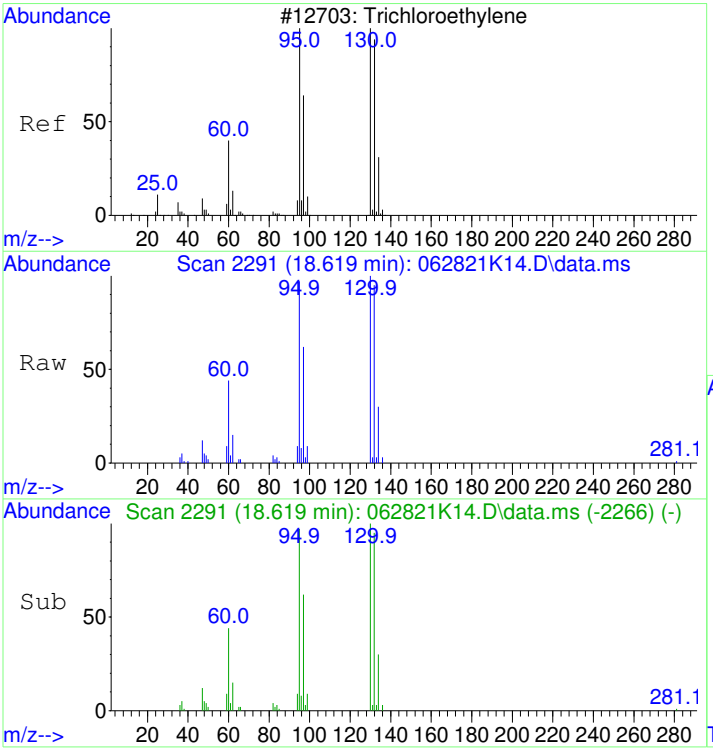




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. 0.006 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion:114 Resp: 496830

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.8 | 0.0 | 39.9 |
| 88 | 14.8 | 0.0 | 34.8 |

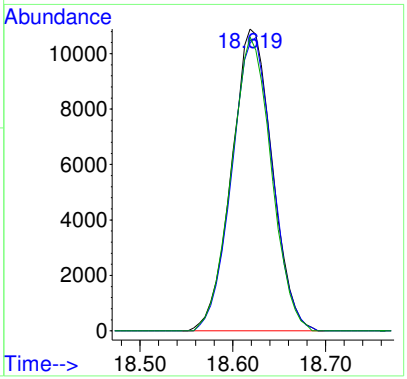


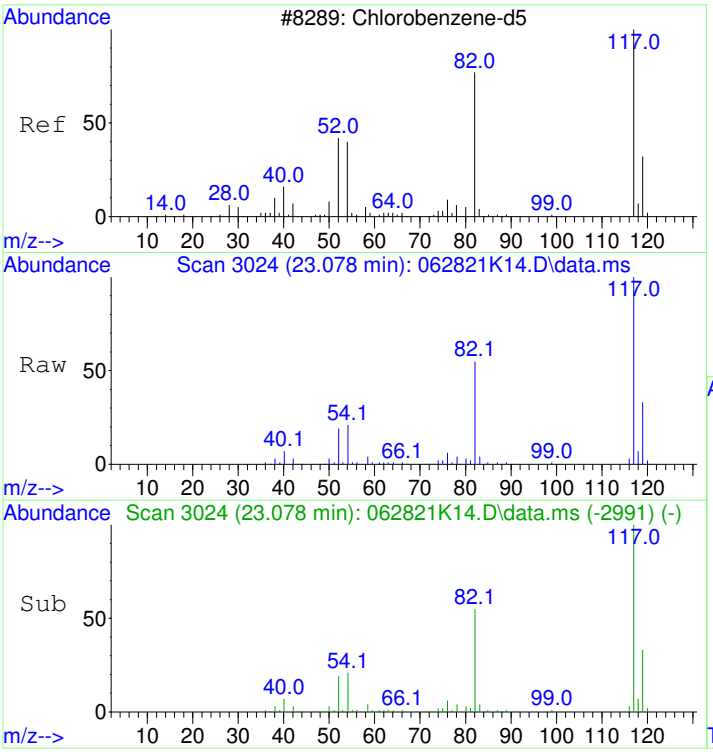



#37
Trichloroethene
Concen: 5.30 ppbv
RT: 18.619 min Scan# 2291
Delta R.T. -0.000 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion:130 Resp: 33165

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 96.9 | 75.9 | 115.9 |
| 95 | 95.7 | 72.6 | 112.6 |

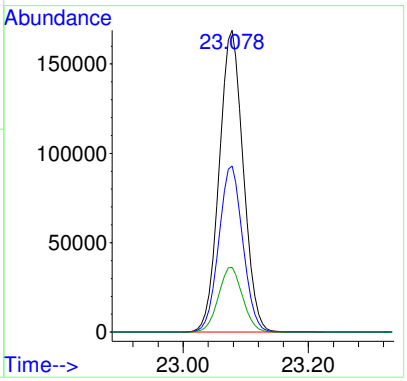



#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.000 min
Lab File: 062821K14.D
Acq: 28 Jun 2021 10:05 pm

Tgt Ion:117 Resp: 451651

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.0 | 34.8 | 74.8 |
| 54 | 21.6 | 0.6 | 40.6 |



# S21F072-IBL2

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K15.D
InstName : HP5973K
Acq On : 28 Jun 2021 10:56 pm
Operator : LLH
Sample : S21F072-IBL2
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 29 09:10:05 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 167237 | 23.40 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.211 | 114 | 496209 | 23.20 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 446927 | 21.40 ppbv | 0.00 |

Target Compounds Qvalue

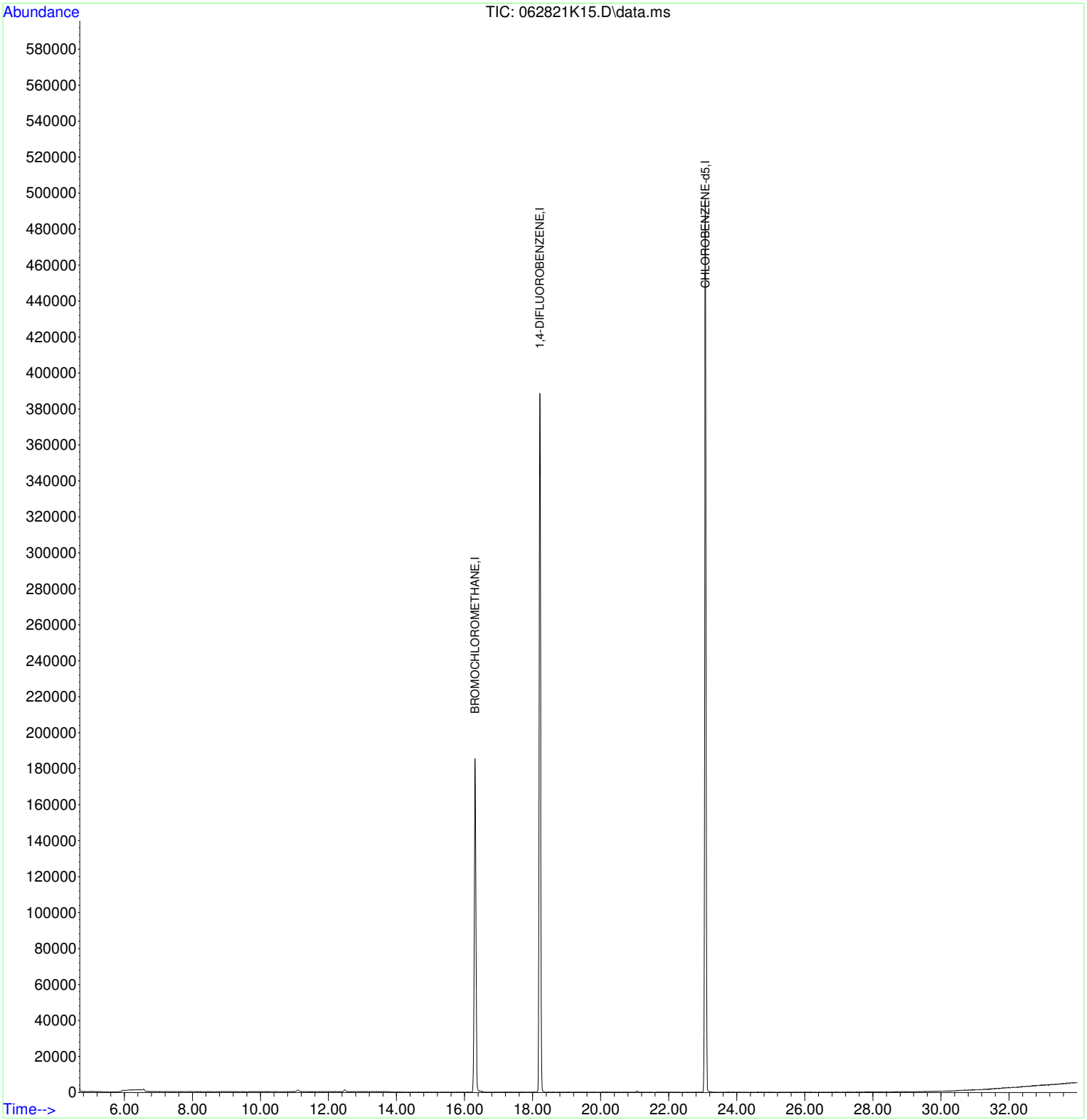
(#) = qualifier out of range (m) = manual integration (+) = signals summed

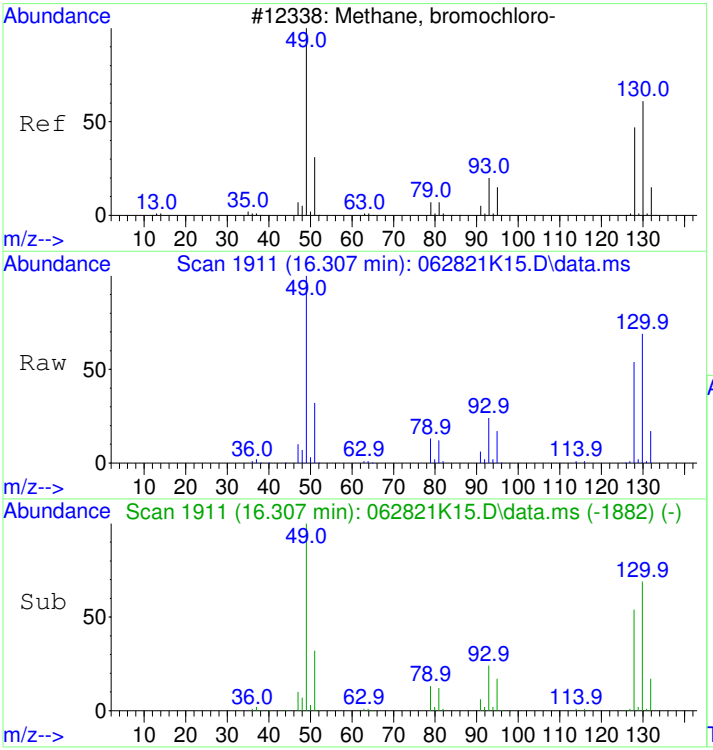
**REVIEWED**
**By LLH at 9:10 am, Jun 29, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\062821K_FSA\
Data File : 062821K15.D
InstName : HP5973K
Acq On : 28 Jun 2021 10:56 pm
Operator : LLH
Sample : S21F072-IBL2
Misc : 200mL BLANK
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jun 29 09:10:05 2021
Quant Method : D:\msdchem\1\2021\METHOD\061021K_TO15AA.M
Quant Title : TO15
QLast Update : Fri Jun 11 09:34:37 2021
Response via : Initial Calibration

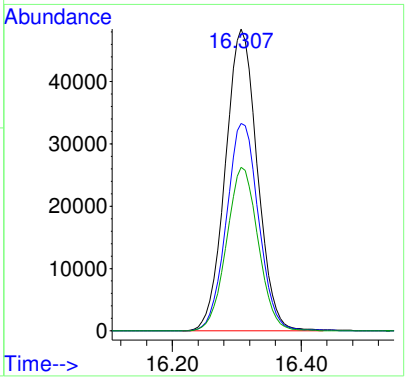


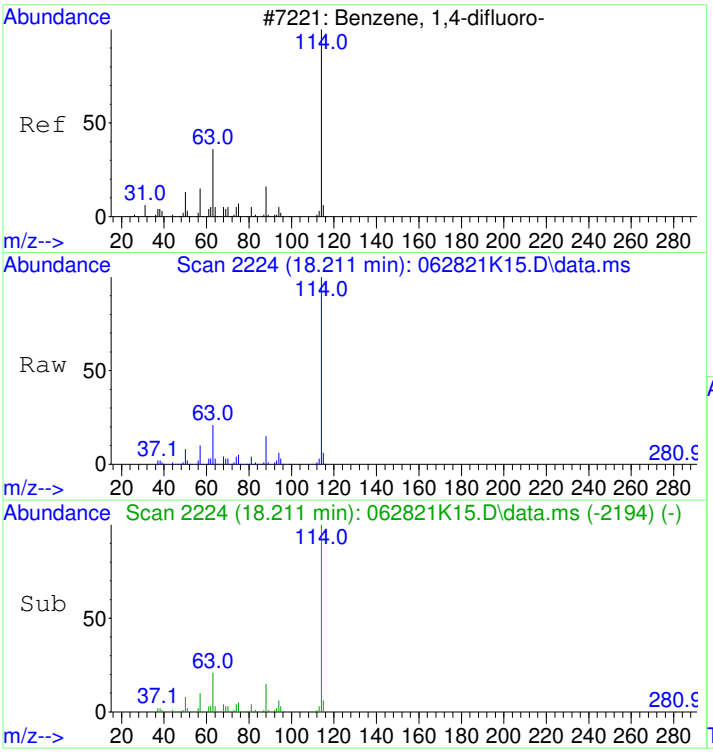



#1
BROMOCHLOROMETHANE
Concen: 23.40 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.000 min
Lab File: 062821K15.D
Acq: 28 Jun 2021 10:56 pm

Tgt Ion: 49 Resp: 167237

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 69.3 | 53.3 | 93.3 |
| 128 | 53.2 | 37.1 | 77.1 |

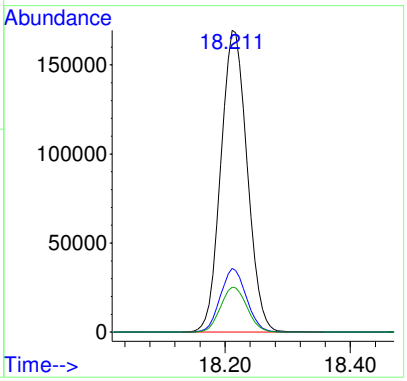


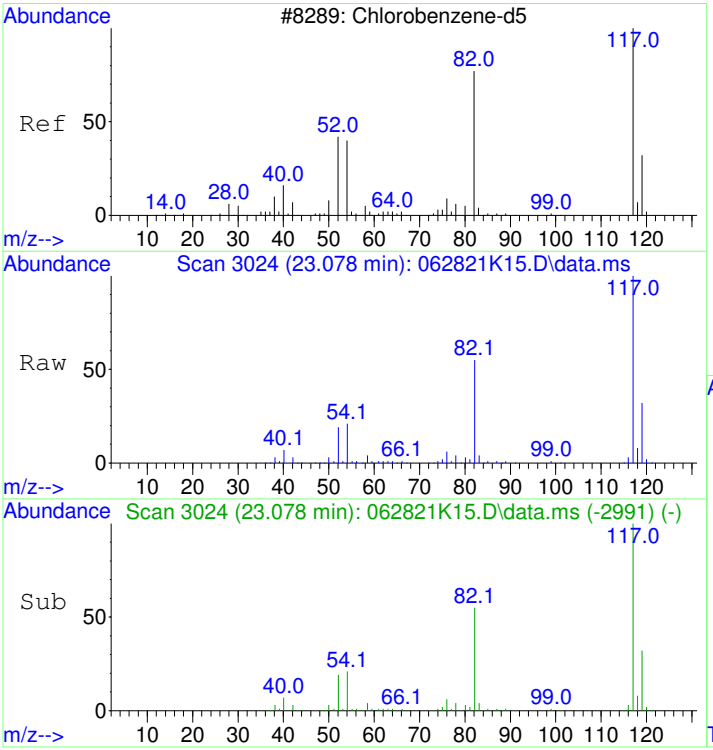




#32
1,4-DIFLUOROBENZENE
Concen: 23.20 ppbv
RT: 18.211 min Scan# 2224
Delta R.T. -0.000 min
Lab File: 062821K15.D
Acq: 28 Jun 2021 10:56 pm

Tgt Ion:114 Resp: 496209

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.7 | 0.0 | 39.9 |
| 88 | 14.9 | 0.0 | 34.8 |

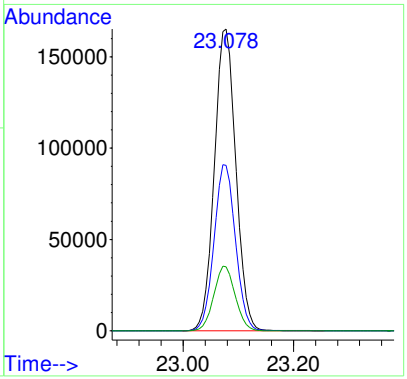





#43
CHLOROBENZENE-d5
Concen: 21.40 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.000 min
Lab File: 062821K15.D
Acq: 28 Jun 2021 10:56 pm

Tgt Ion:117 Resp: 446927

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.8 | 34.8 | 74.8 |
| 54 | 21.3 | 0.6 | 40.6 |



# Cannister Certifications

# 2106036-01

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\011521K_FSAA\
Data File : 011521K06.D
InstName : HP5973K
Acq On : 15 Jan 2021 3:17 pm
Operator : LLH
Sample : CAN #1997
Misc : 200mL RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

CLEAN

Quant Time: Jan 19 09:42:05 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 327151 | 19.60 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1344596 | 19.60 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 1180765 | 19.20 ppbv | 0.00 |

Target Compounds Qvalue

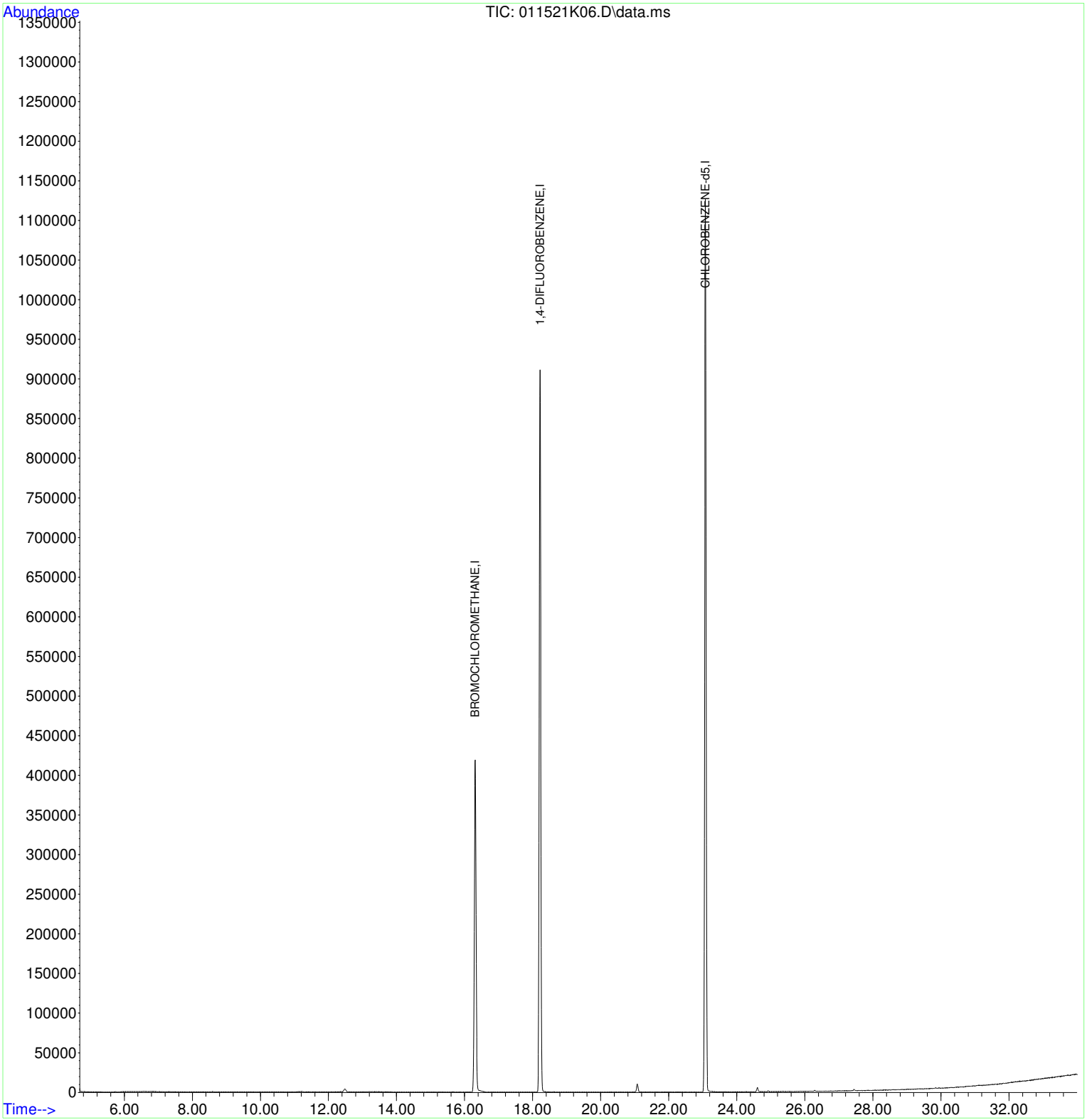
(#) = qualifier out of range (m) = manual integration (+) = signals summed

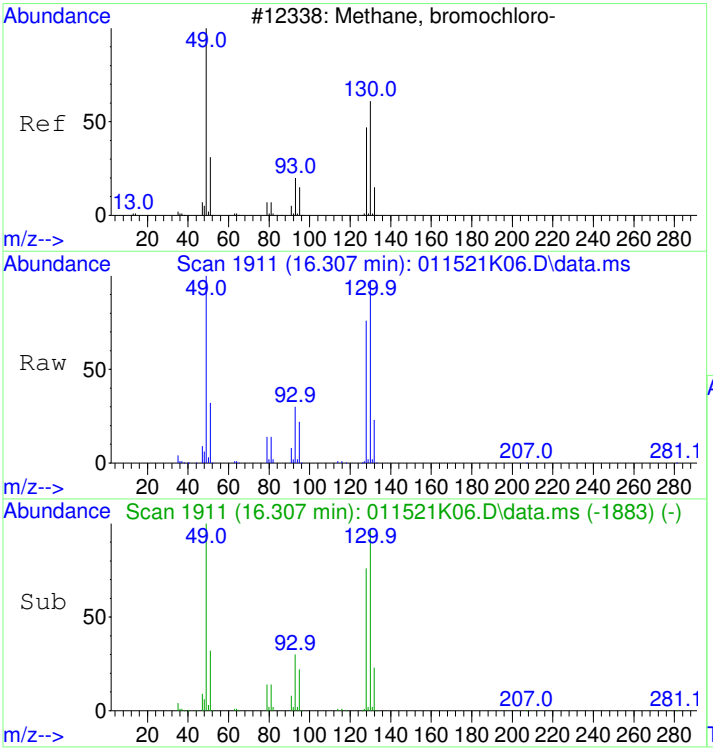
**REVIEWED**
**By LLH at 9:42 am, Jan 19, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\011521K_FSAA\
Data File : 011521K06.D
InstName : HP5973K
Acq On : 15 Jan 2021 3:17 pm
Operator : LLH
Sample : CAN #1997
Misc : 200mL RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 19 09:42:05 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

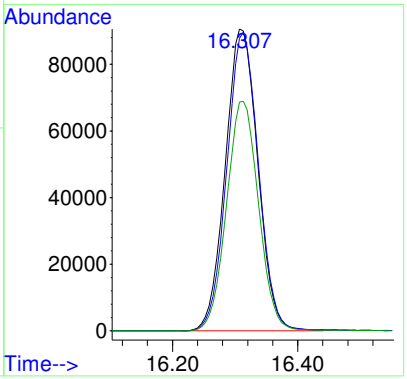


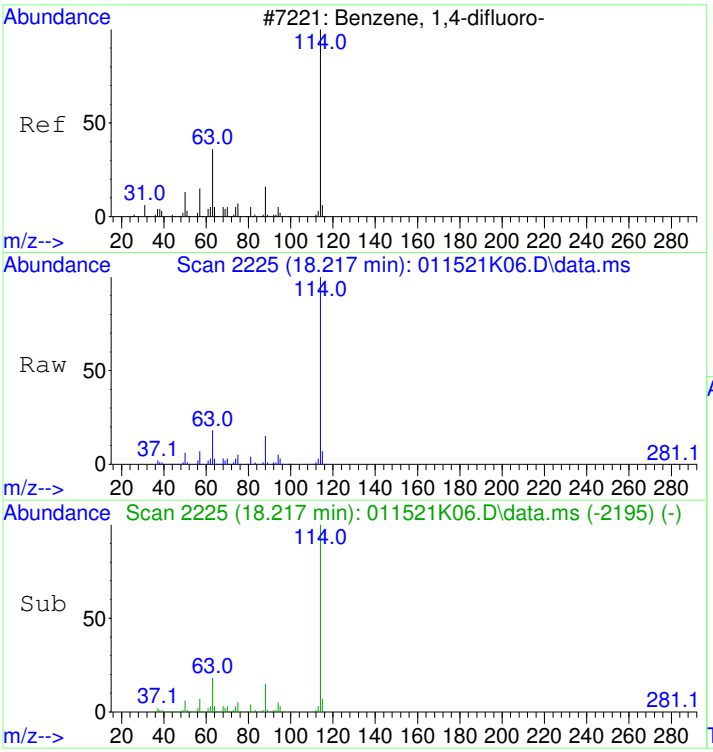



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.007 min
Lab File: 011521K06.D
Acq: 15 Jan 2021 3:17 pm

Tgt Ion: 49 Resp: 327151

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 96.2 | 73.4 | 113.4 |
| 128 | 74.2 | 52.1 | 92.1 |

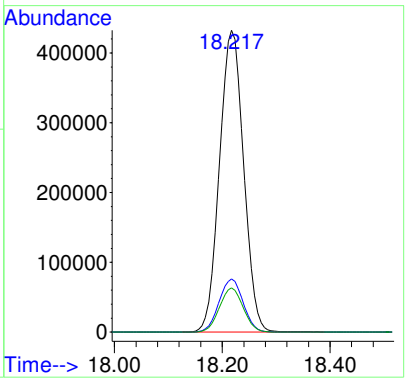


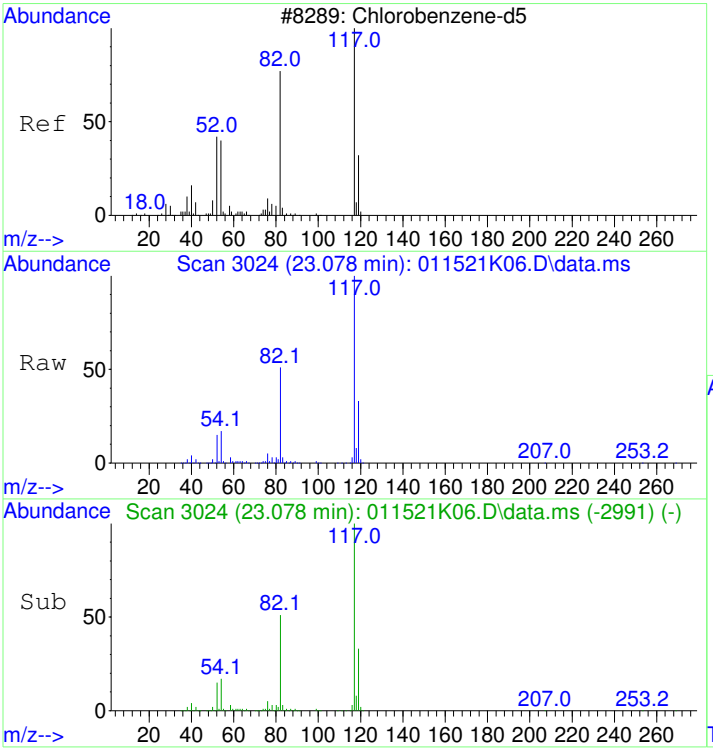




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 011521K06.D
Acq: 15 Jan 2021 3:17 pm

Tgt Ion:114 Resp: 1344596

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 17.6 | 0.0 | 37.7 |
| 88 | 14.4 | 0.0 | 34.4 |

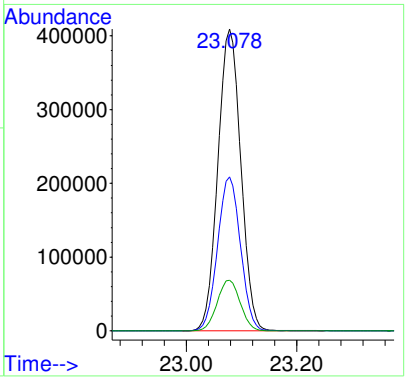





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 011521K06.D
Acq: 15 Jan 2021 3:17 pm

Tgt Ion:117 Resp: 1180765

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 50.9 | 31.2 | 71.2 |
| 54 | 16.9 | 0.0 | 37.2 |



# 2106036-02

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\011521K_FSAA\
Data File : 011521K07.D
InstName : HP5973K
Acq On : 15 Jan 2021 4:09 pm
Operator : LLH
Sample : CAN #2002
Misc : 200mL RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

CLEAN

Quant Time: Jan 19 09:42:24 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 324671 | 19.60 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1347389 | 19.60 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 1179845 | 19.20 | ppbv | 0.00 |

Target Compounds Qvalue

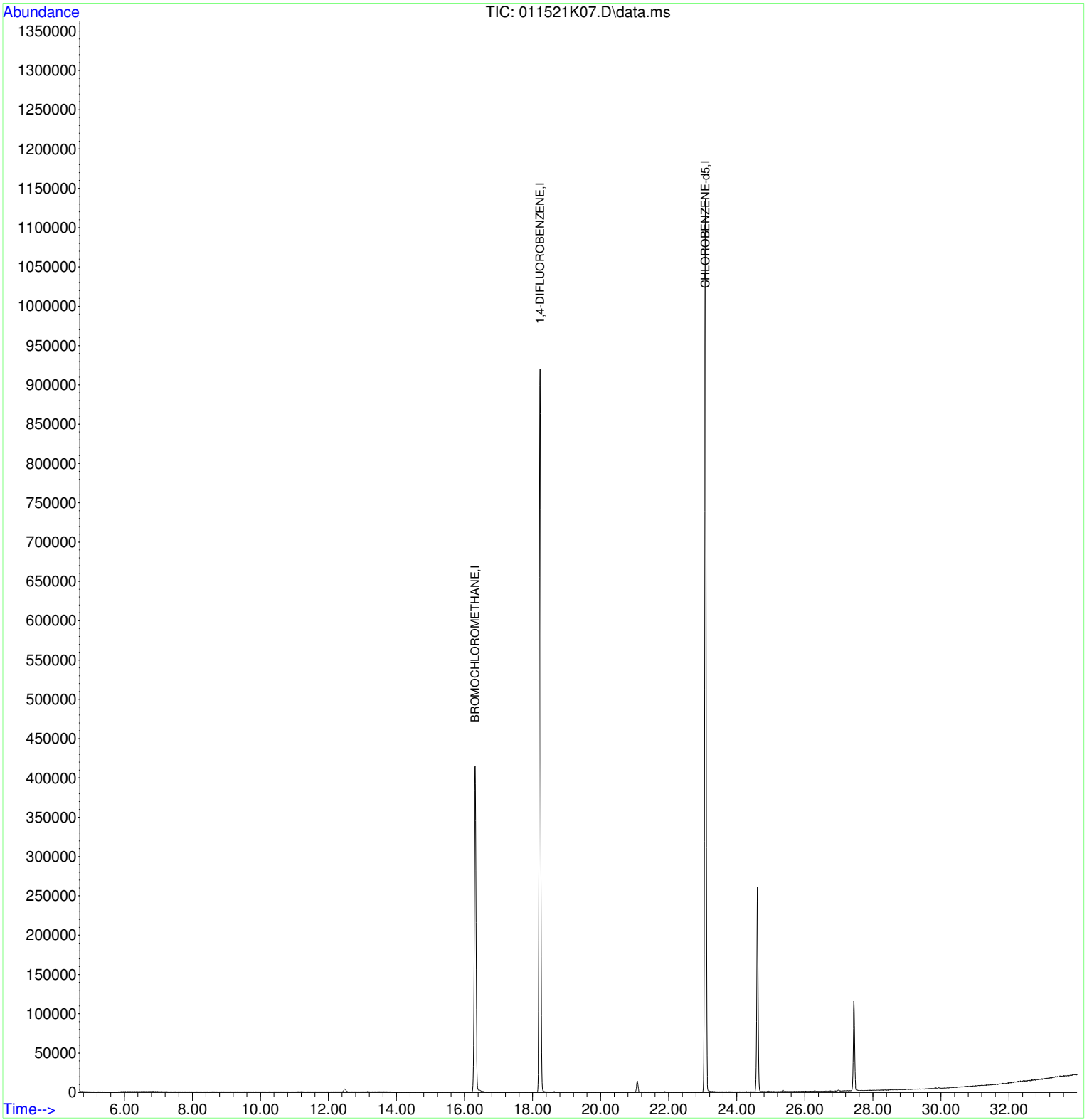
(#) = qualifier out of range (m) = manual integration (+) = signals summed

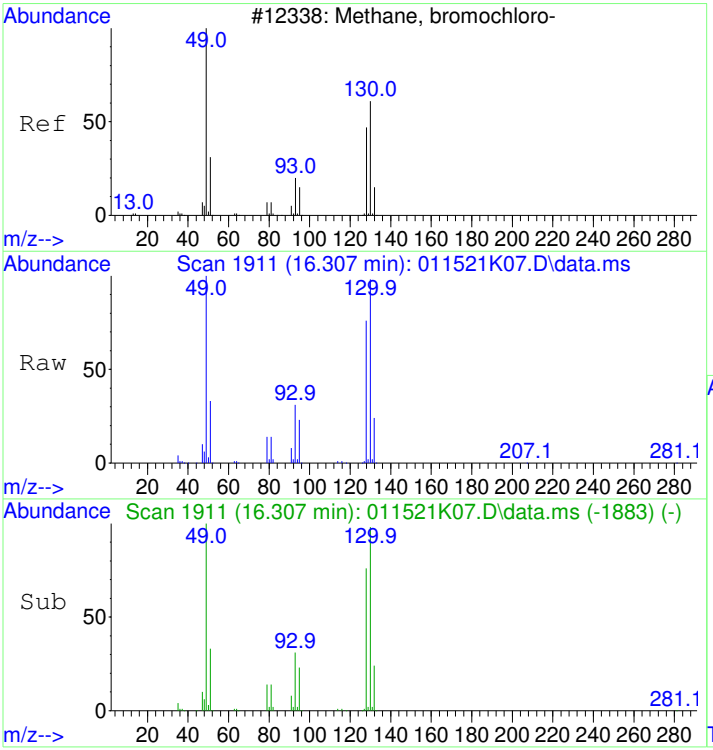
**REVIEWED**
**By LLH at 9:42 am, Jan 19, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\011521K_FSAA\
Data File : 011521K07.D
InstName : HP5973K
Acq On : 15 Jan 2021 4:09 pm
Operator : LLH
Sample : CAN #2002
Misc : 200mL RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jan 19 09:42:24 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

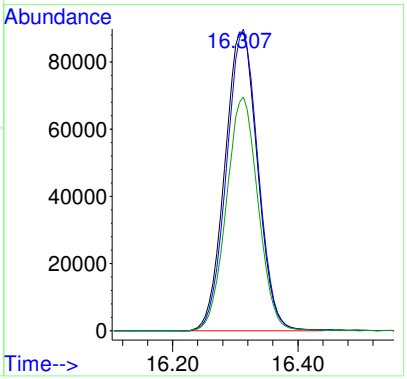


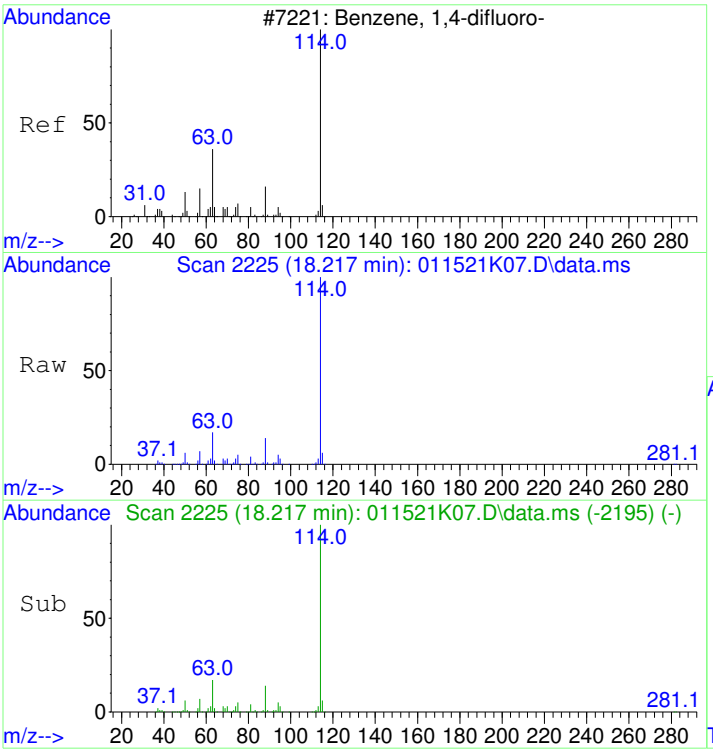



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.007 min
Lab File: 011521K07.D
Acq: 15 Jan 2021 4:09 pm

Tgt Ion: 49 Resp: 324671

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 96.9 | 73.4 | 113.4 |
| 128 | 74.9 | 52.1 | 92.1 |

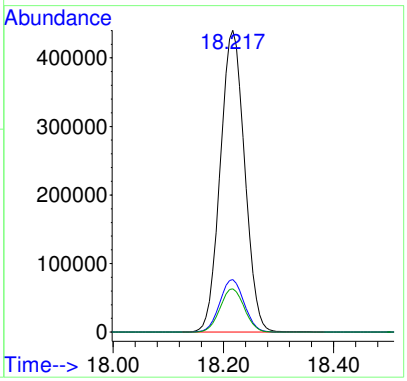


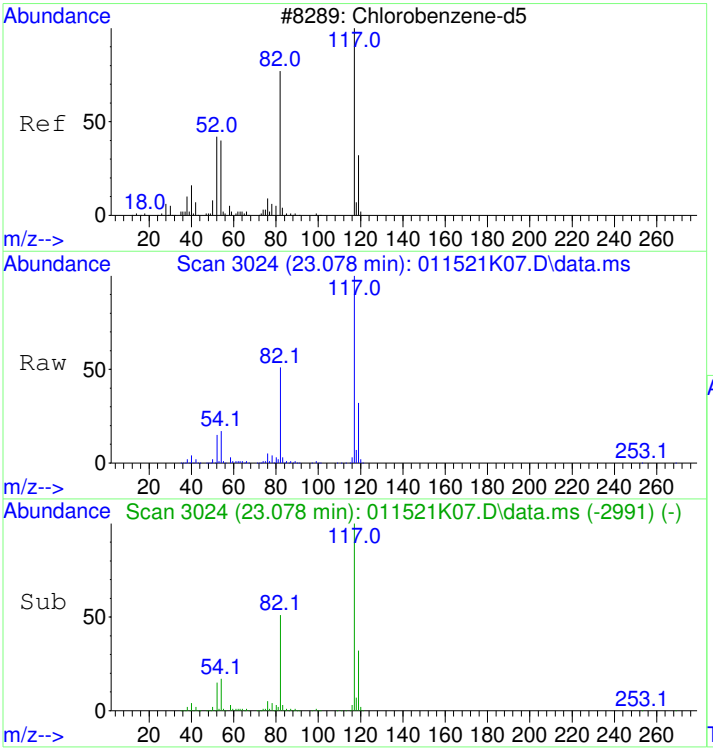




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 011521K07.D
Acq: 15 Jan 2021 4:09 pm

Tgt Ion:114 Resp: 1347389

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 17.5 | 0.0 | 37.7 |
| 88 | 14.3 | 0.0 | 34.4 |

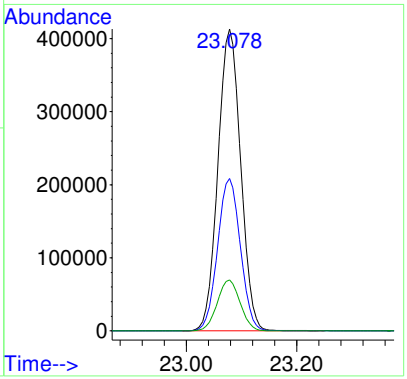





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 011521K07.D
Acq: 15 Jan 2021 4:09 pm

Tgt Ion:117 Resp: 1179845

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 50.6 | 31.2 | 71.2 |
| 54 | 16.9 | 0.0 | 37.2 |



# 2106036-03

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K17.D
InstName : HP5973K
Acq On : 8 Feb 2021 11:42 pm
Operator : LLH
Sample : S21B023-IBL2
Misc : 200ml CAN #648 RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

CLEAN

Quant Time: Feb 09 08:59:27 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.313 | 49 | 301510 | 19.60 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1149598 | 19.60 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 1030832 | 19.20 ppbv | 0.00 |

Target Compounds Qvalue

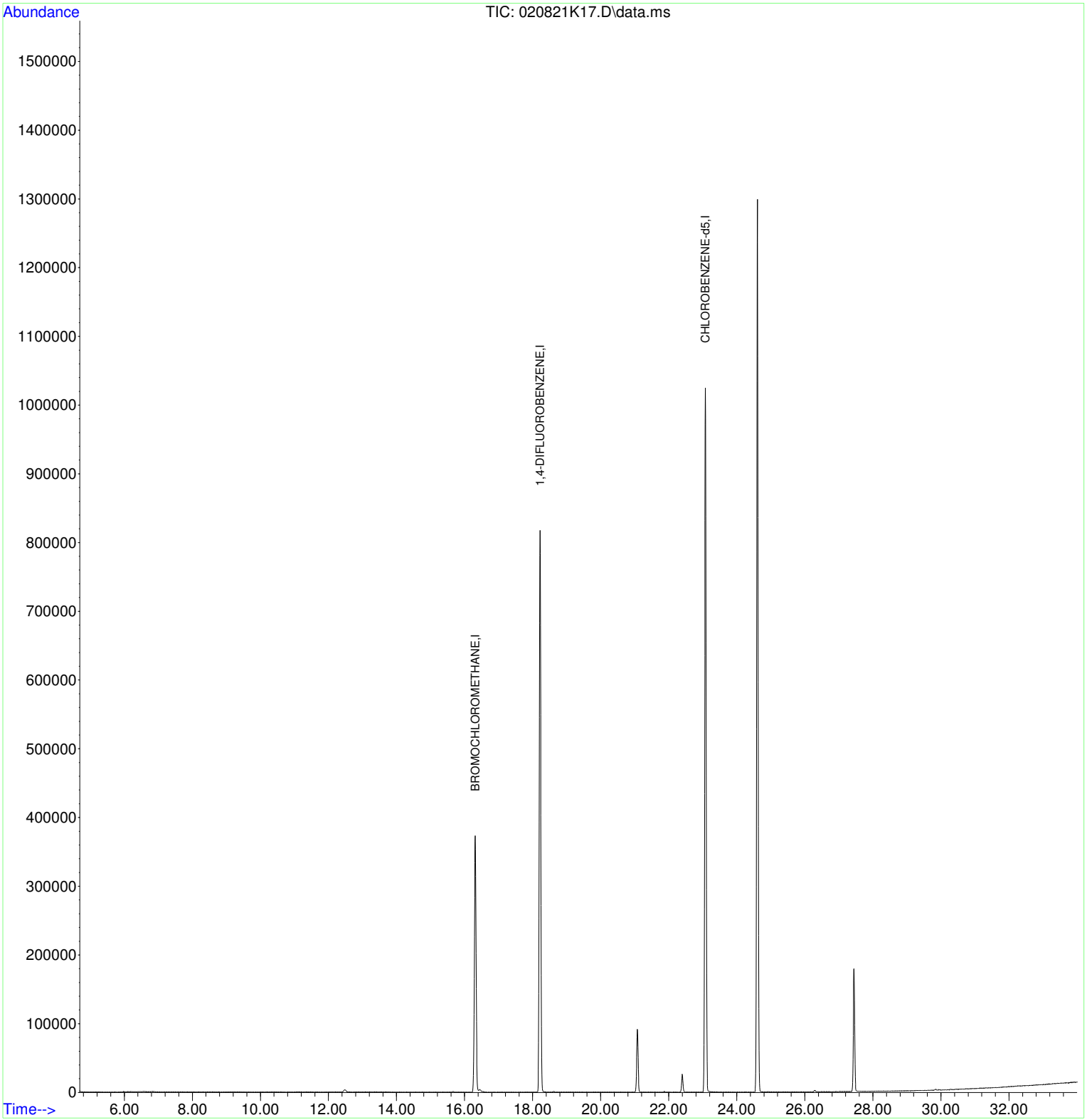
(#) = qualifier out of range (m) = manual integration (+) = signals summed

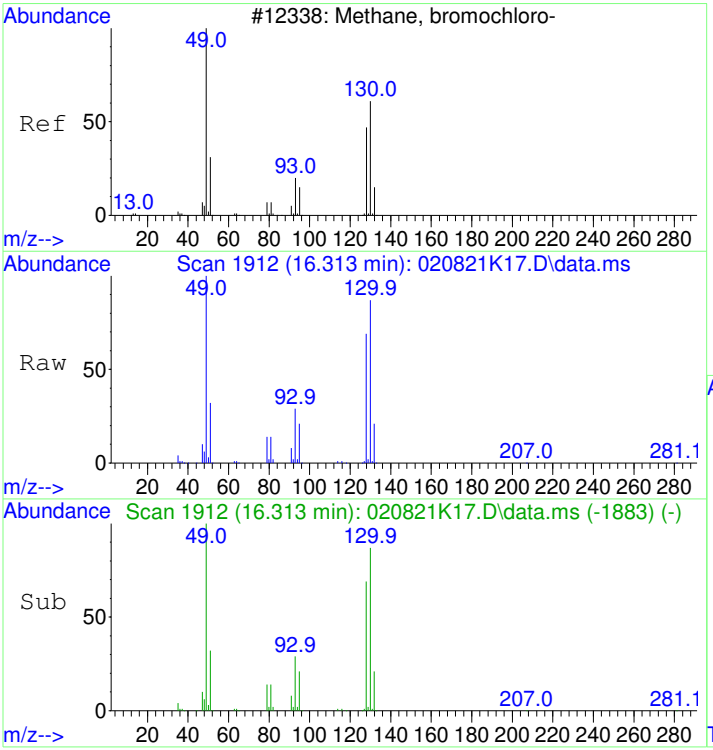
**REVIEWED**
**By LLH at 9:07 am, Feb 09, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K17.D
InstName : HP5973K
Acq On : 8 Feb 2021 11:42 pm
Operator : LLH
Sample : S21B023-IBL2
Misc : 200ml CAN #648 RECERTIFICATION
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 09 08:59:27 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

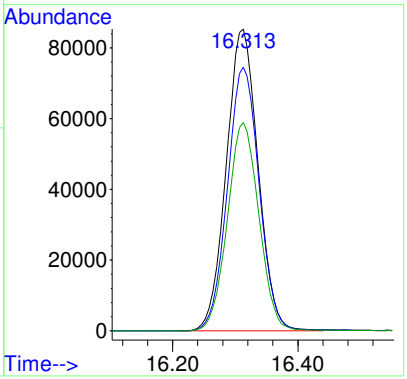


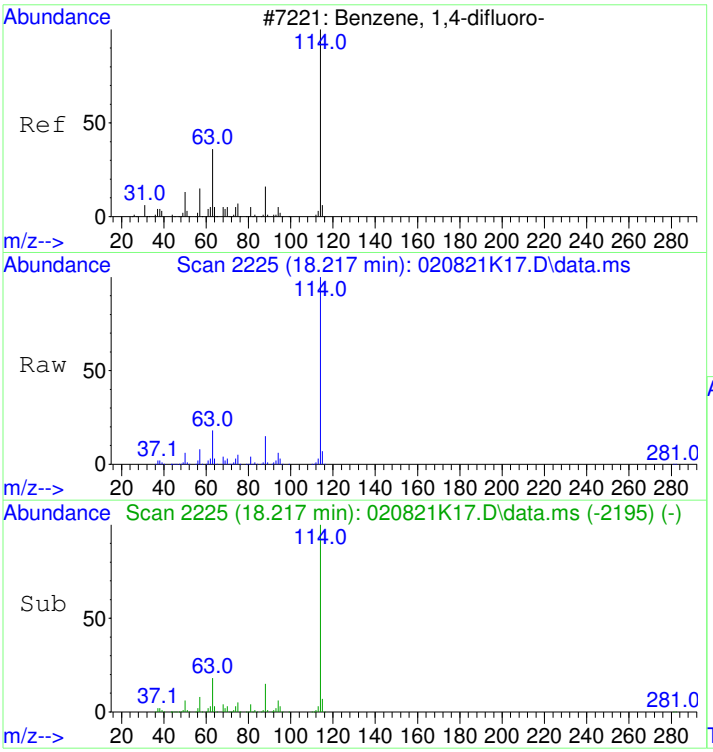



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.001 min
Lab File: 020821K17.D
Acq: 8 Feb 2021 11:42 pm

Tgt Ion: 49 Resp: 301510

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 87.1 | 73.4 | 113.4 |
| 128 | 67.5 | 52.1 | 92.1 |

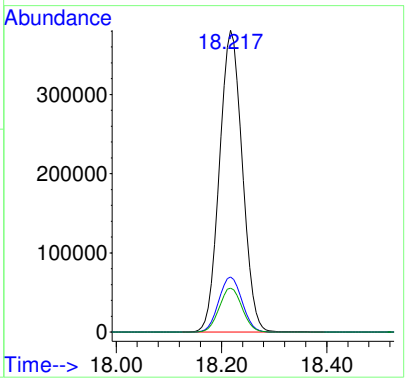


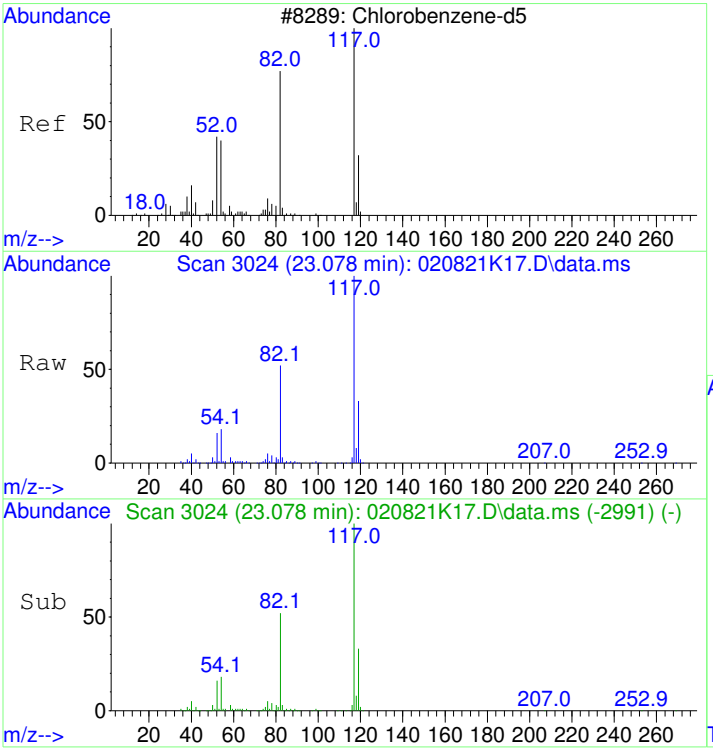




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 020821K17.D
Acq: 8 Feb 2021 11:42 pm

Tgt Ion:114 Resp: 1149598

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 18.6 | 0.0 | 37.7 |
| 88 | 14.6 | 0.0 | 34.4 |

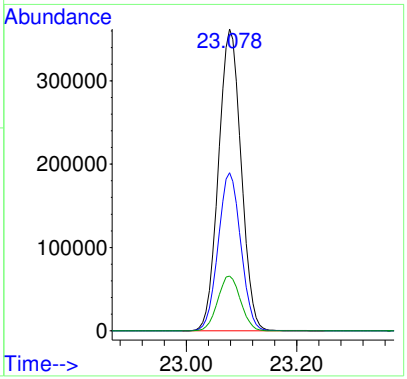





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 020821K17.D
Acq: 8 Feb 2021 11:42 pm

Tgt Ion:117 Resp: 1030832

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 52.3 | 31.2 | 71.2 |
| 54 | 18.3 | 0.0 | 37.2 |



# 2106036-04

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K25.D
InstName : HP5973K
Acq On : 9 Feb 2021 6:48 am
Operator : LLH
Sample : CAN #863
Misc : 200ml RECERTIFICATION
ALS Vial : 28 Sample Multiplier: 1

CLEAN

Quant Time: Feb 09 09:07:11 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 282786 | 19.60 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1068837 | 19.60 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 963876 | 19.20 ppbv | 0.00 |

Target Compounds Qvalue

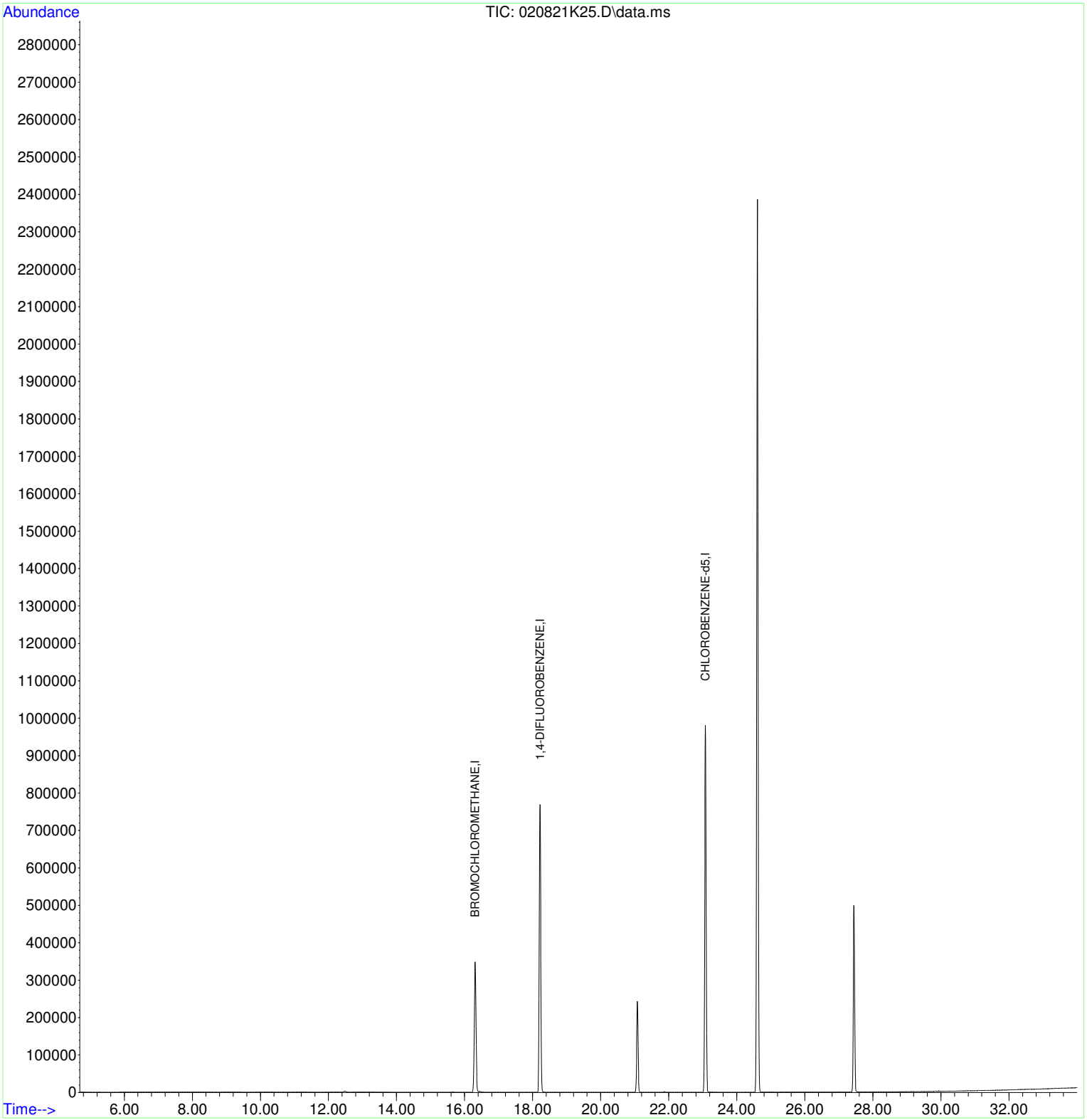
(#) = qualifier out of range (m) = manual integration (+) = signals summed

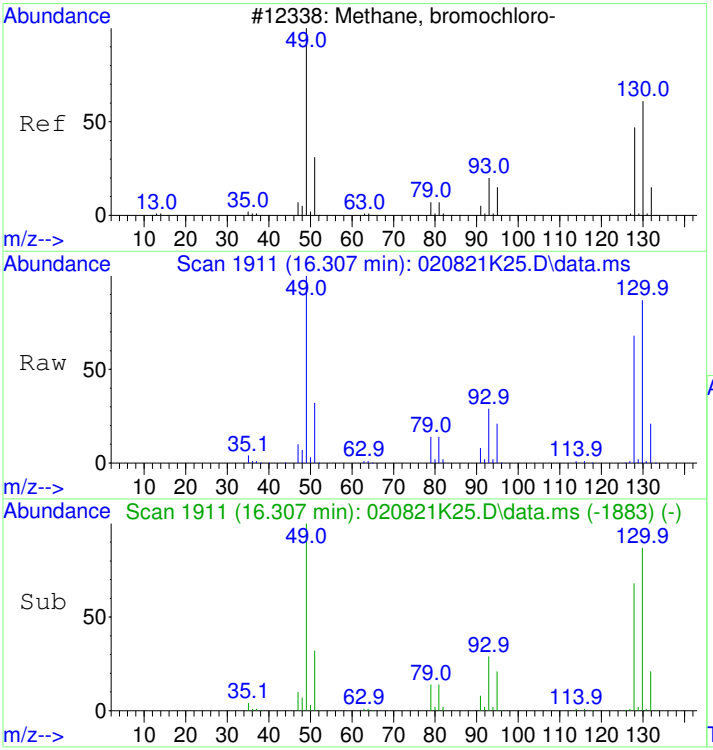
**REVIEWED**
**By LLH at 9:07 am, Feb 09, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K25.D
InstName : HP5973K
Acq On : 9 Feb 2021 6:48 am
Operator : LLH
Sample : CAN #863
Misc : 200ml RECERTIFICATION
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 09 09:07:11 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

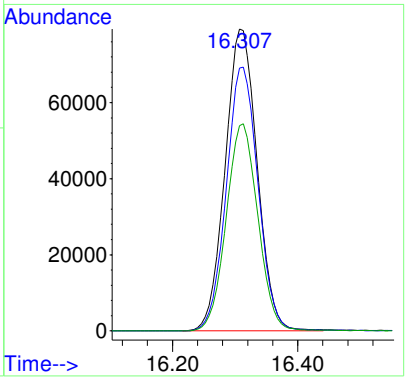


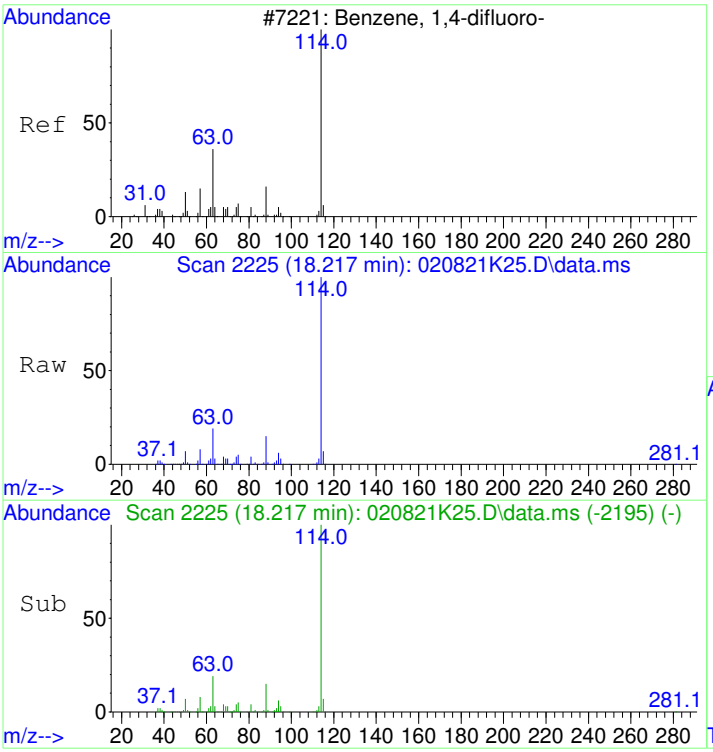



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.007 min
Lab File: 020821K25.D
Acq: 9 Feb 2021 6:48 am

Tgt Ion: 49 Resp: 282786

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 86.5 | 73.4 | 113.4 |
| 128 | 67.1 | 52.1 | 92.1 |

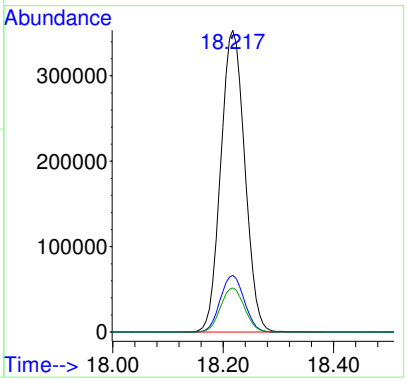


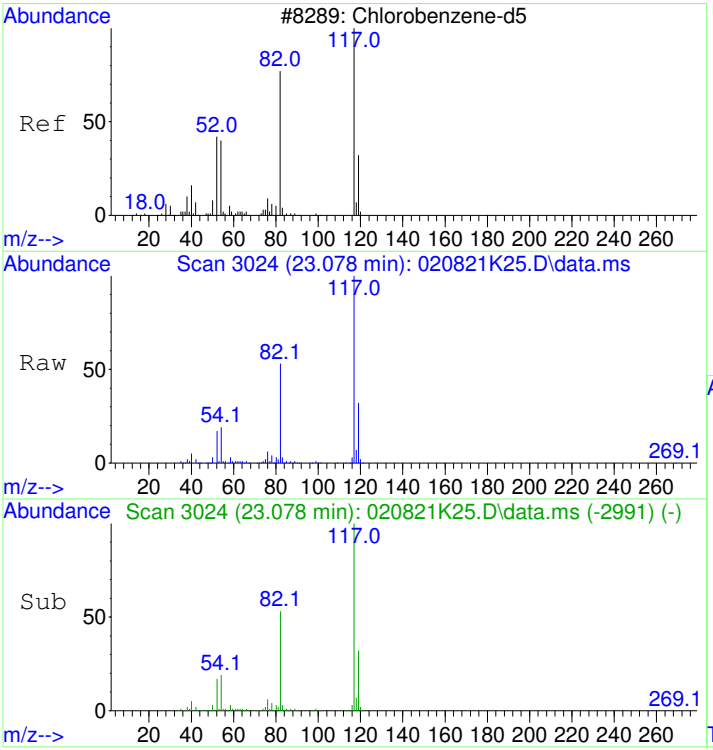




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 020821K25.D
Acq: 9 Feb 2021 6:48 am

Tgt Ion:114 Resp: 1068837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 18.8 | 0.0 | 37.7 |
| 88 | 14.6 | 0.0 | 34.4 |

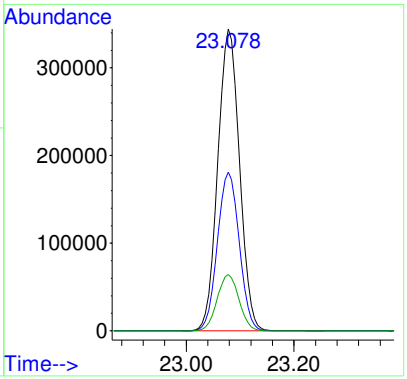





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 020821K25.D
Acq: 9 Feb 2021 6:48 am

Tgt Ion:117 Resp: 963876

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 52.7 | 31.2 | 71.2 |
| 54 | 18.7 | 0.0 | 37.2 |



# 2106036-05

Data Path : D:\msdchem\1\2021\DATA\011521K_FSAA\
Data File : 011521K05.D
InstName : HP5973K
Acq On : 15 Jan 2021 2:24 pm
Operator : LLH
Sample : CAN #856
Misc : 200mL RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

CLEAN

Quant Time: Jan 15 15:38:44 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) BROMOCHLOROMETHANE | 16.313 | 49 | 331527 | 19.60 | ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1367697 | 19.60 | ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 1200963 | 19.20 | ppbv | 0.00 |

Target Compounds Qvalue

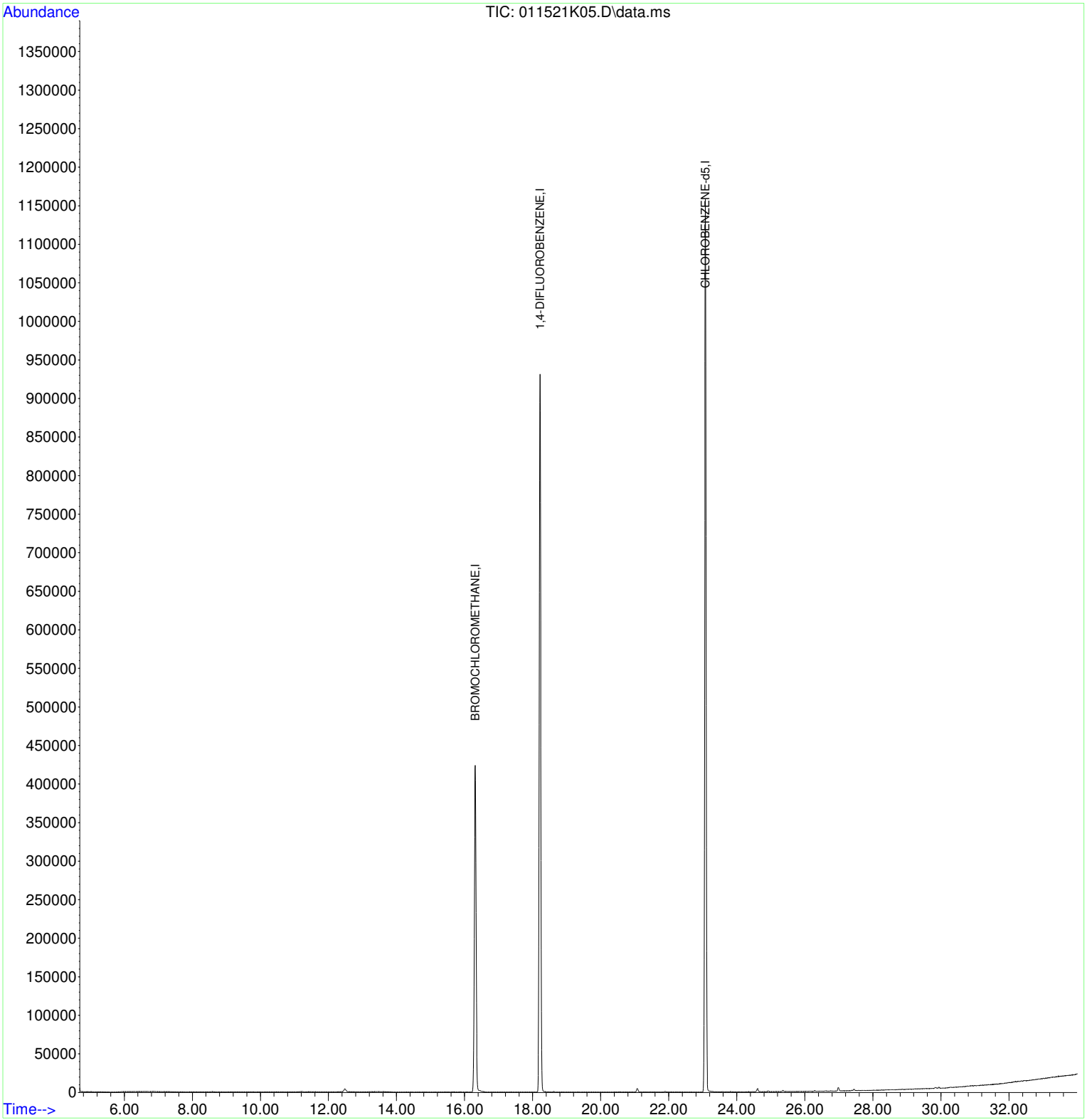
(#) = qualifier out of range (m) = manual integration (+) = signals summed

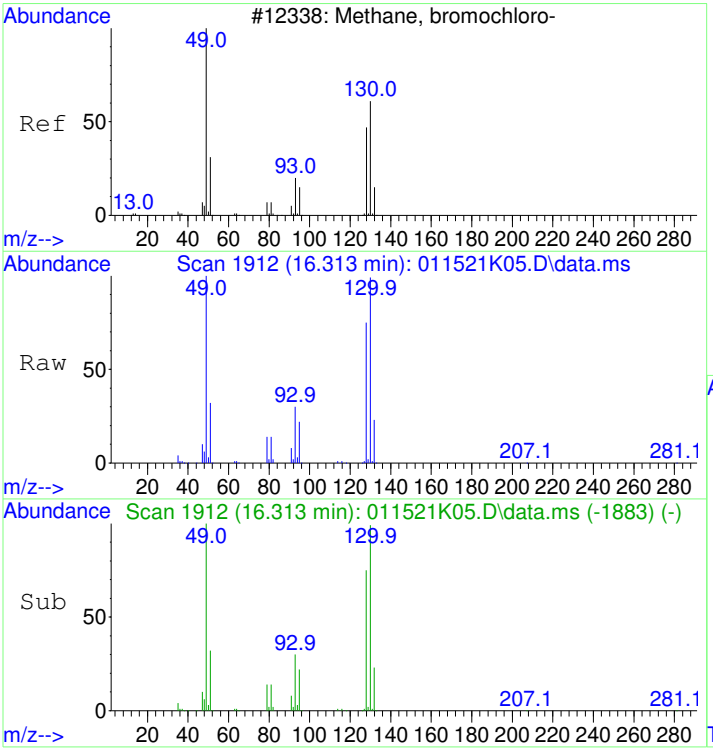
**REVIEWED**
**By LLH at 3:38 pm, Jan 15, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\011521K_FSAA\
Data File : 011521K05.D
InstName : HP5973K
Acq On : 15 Jan 2021 2:24 pm
Operator : LLH
Sample : CAN #856
Misc : 200mL RECERTIFICATION
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 15 15:38:44 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

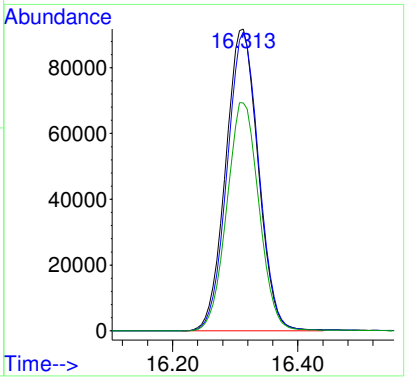


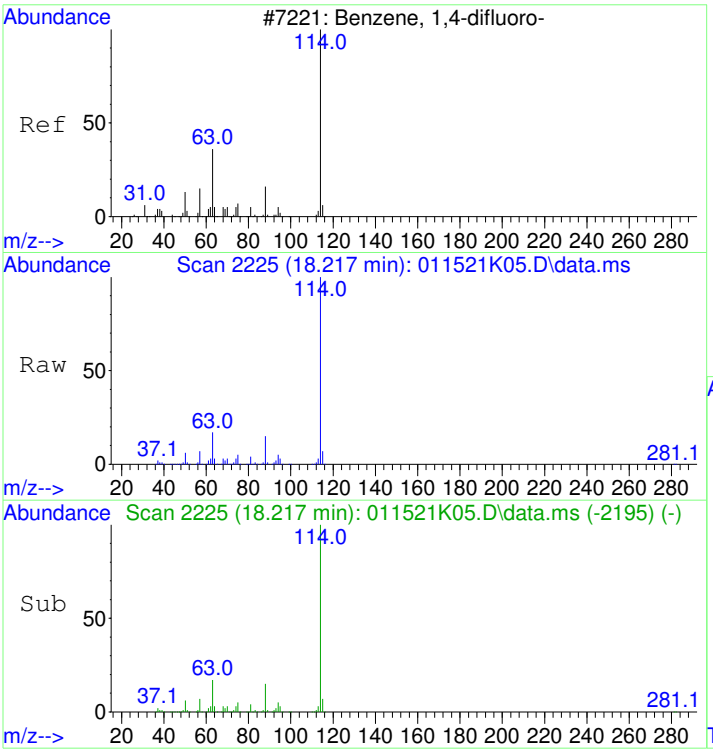



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.313 min Scan# 1912
Delta R.T. -0.001 min
Lab File: 011521K05.D
Acq: 15 Jan 2021 2:24 pm

Tgt Ion: 49 Resp: 331527

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 96.2 | 73.4 | 113.4 |
| 128 | 74.0 | 52.1 | 92.1 |

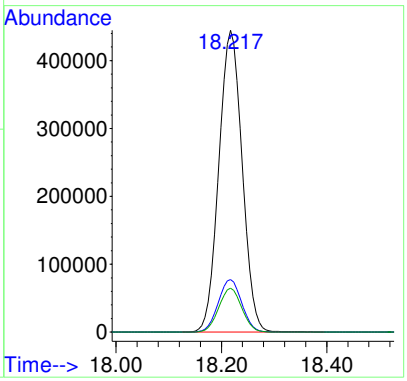


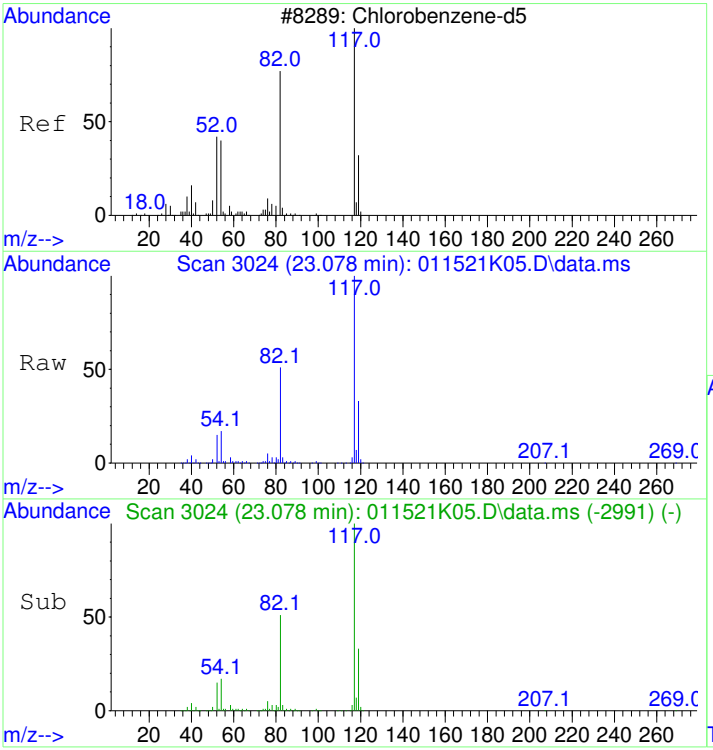




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 011521K05.D
Acq: 15 Jan 2021 2:24 pm

Tgt Ion:114 Resp: 1367697

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 17.5 | 0.0 | 37.7 |
| 88 | 14.4 | 0.0 | 34.4 |

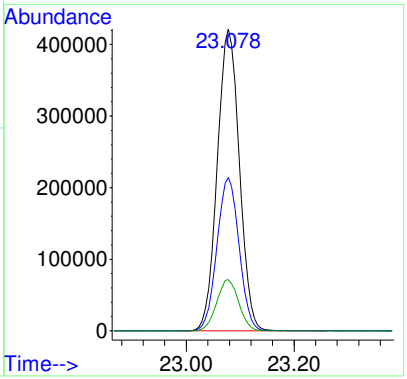





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 011521K05.D
Acq: 15 Jan 2021 2:24 pm

Tgt Ion:117 Resp: 1200963

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 50.8 | 31.2 | 71.2 |
| 54 | 16.9 | 0.0 | 37.2 |



# 2106036-06

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K26.D
InstName : HP5973K
Acq On : 9 Feb 2021 7:42 am
Operator : LLH
Sample : CAN #870
Misc : 200ml RECERTIFICATION
ALS Vial : 29 Sample Multiplier: 1

CLEAN

Quant Time: Feb 09 09:07:30 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 283177 | 19.60 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1063421 | 19.60 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 961760 | 19.20 ppbv | 0.00 |

Target Compounds Qvalue

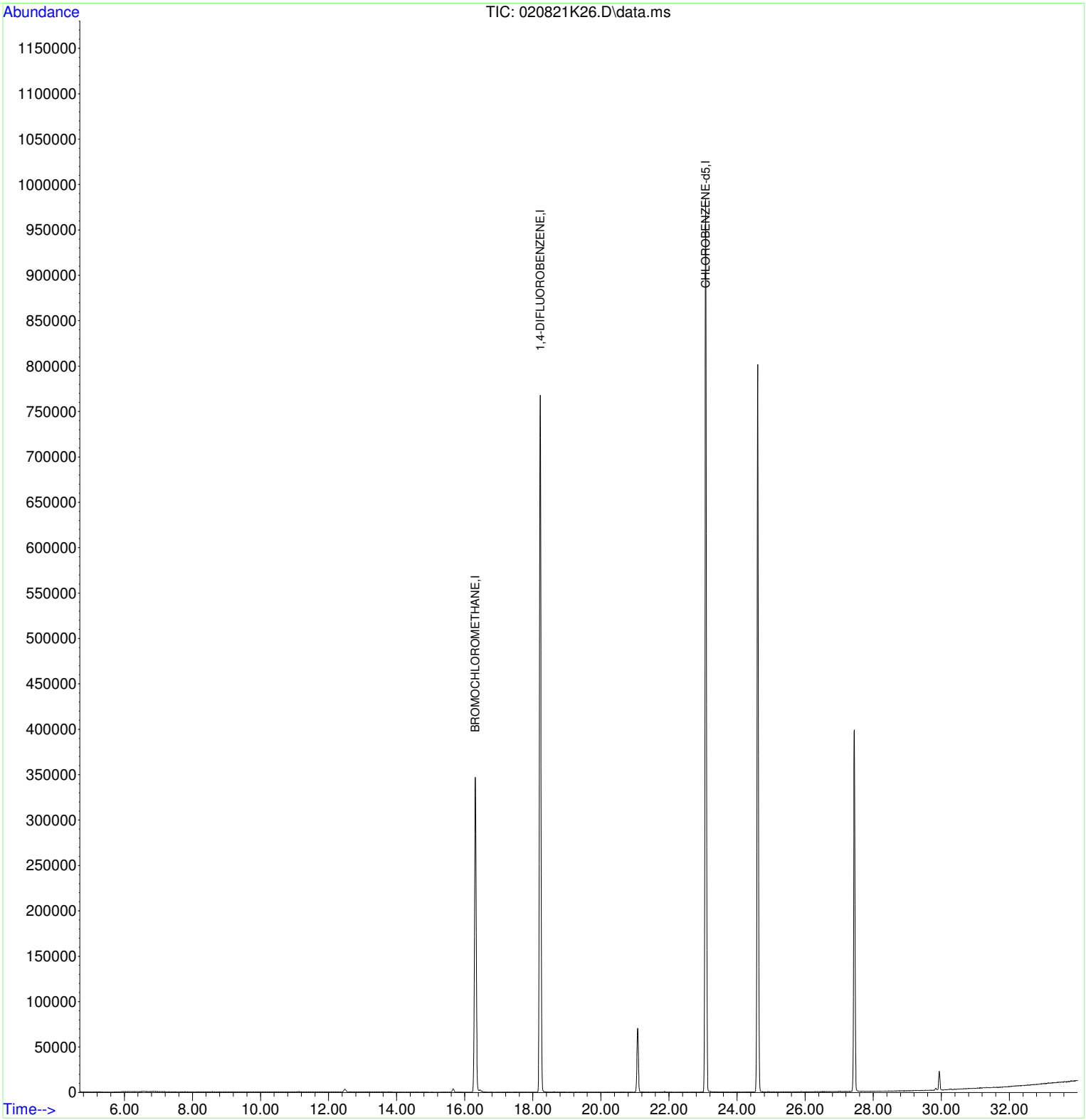
(#) = qualifier out of range (m) = manual integration (+) = signals summed

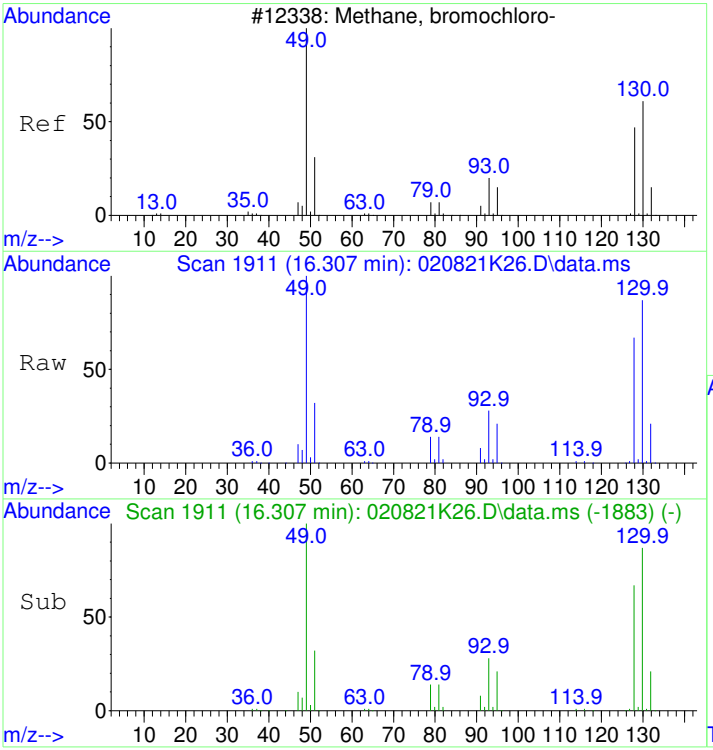
**REVIEWED**
**By LLH at 9:07 am, Feb 09, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K26.D
InstName : HP5973K
Acq On : 9 Feb 2021 7:42 am
Operator : LLH
Sample : CAN #870
Misc : 200ml RECERTIFICATION
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Feb 09 09:07:30 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

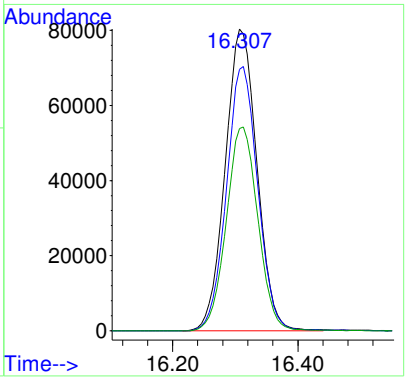


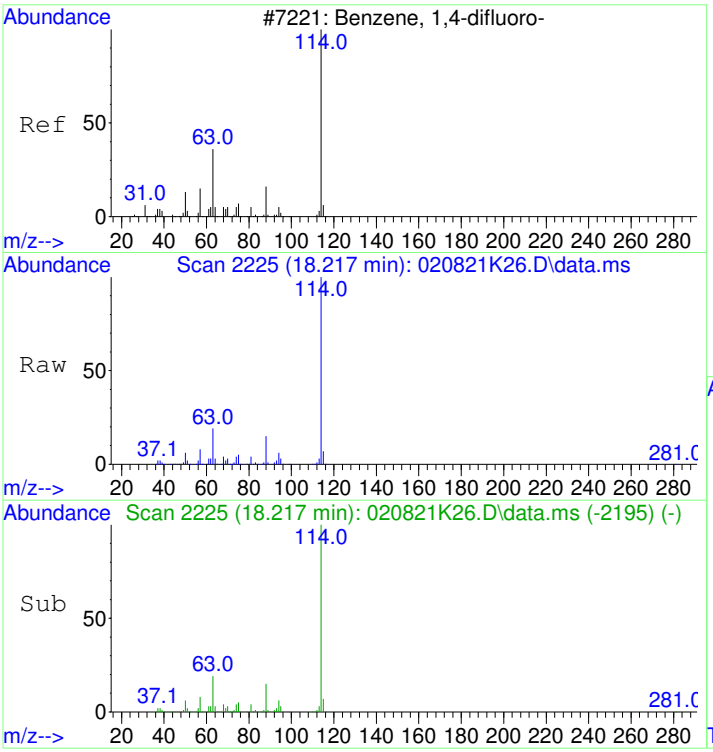



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.007 min
Lab File: 020821K26.D
Acq: 9 Feb 2021 7:42 am

Tgt Ion: 49 Resp: 283177

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 86.3 | 73.4 | 113.4 |
| 128 | 66.5 | 52.1 | 92.1 |

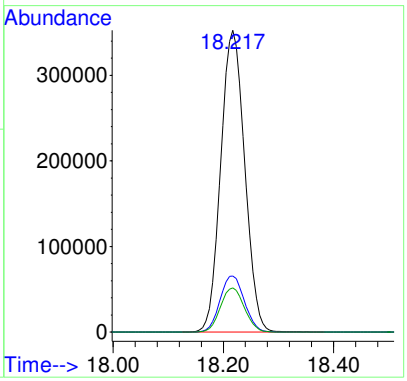


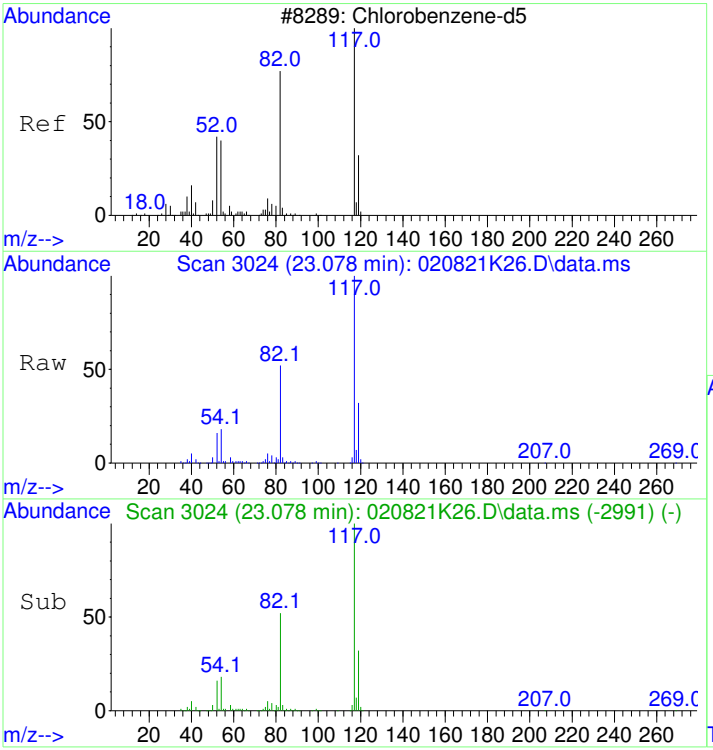




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 020821K26.D
Acq: 9 Feb 2021 7:42 am

Tgt Ion:114 Resp: 1063421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 18.9 | 0.0 | 37.7 |
| 88 | 14.6 | 0.0 | 34.4 |

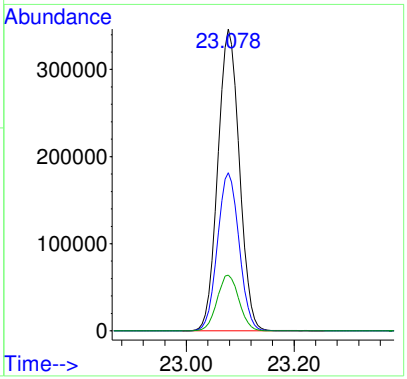





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 020821K26.D
Acq: 9 Feb 2021 7:42 am

Tgt Ion:117 Resp: 961760

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 52.5 | 31.2 | 71.2 |
| 54 | 18.7 | 0.0 | 37.2 |



# 2106036-07

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K24.D
InstName : HP5973K
Acq On : 9 Feb 2021 5:55 am
Operator : LLH
Sample : CAN #651
Misc : 200ml RECERTIFICATION
ALS Vial : 27 Sample Multiplier: 1

CLEAN

Quant Time: Feb 09 09:06:52 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 291824 | 19.60 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1098824 | 19.60 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 987896 | 19.20 ppbv | 0.00 |

Target Compounds Qvalue

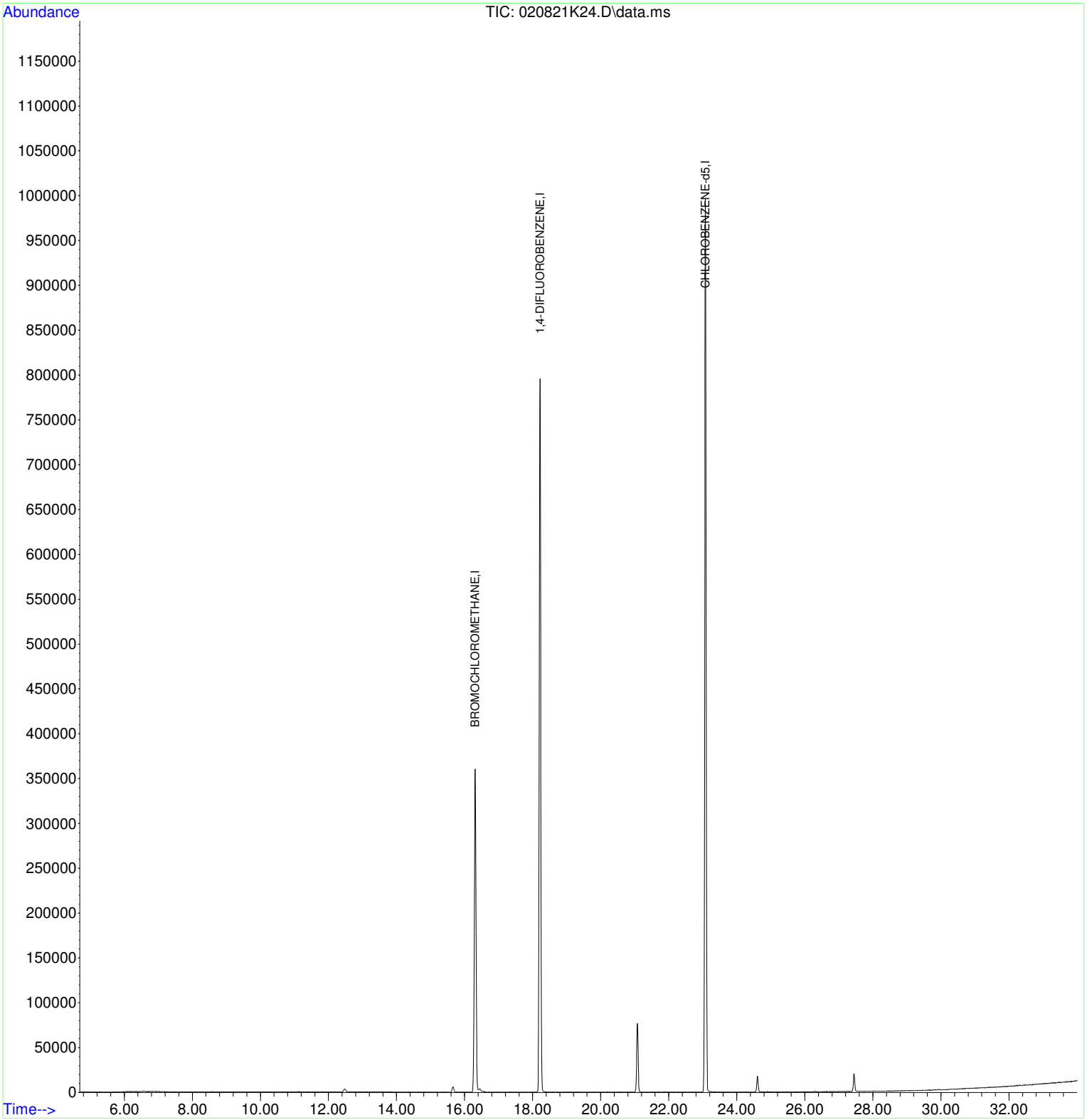
(#) = qualifier out of range (m) = manual integration (+) = signals summed

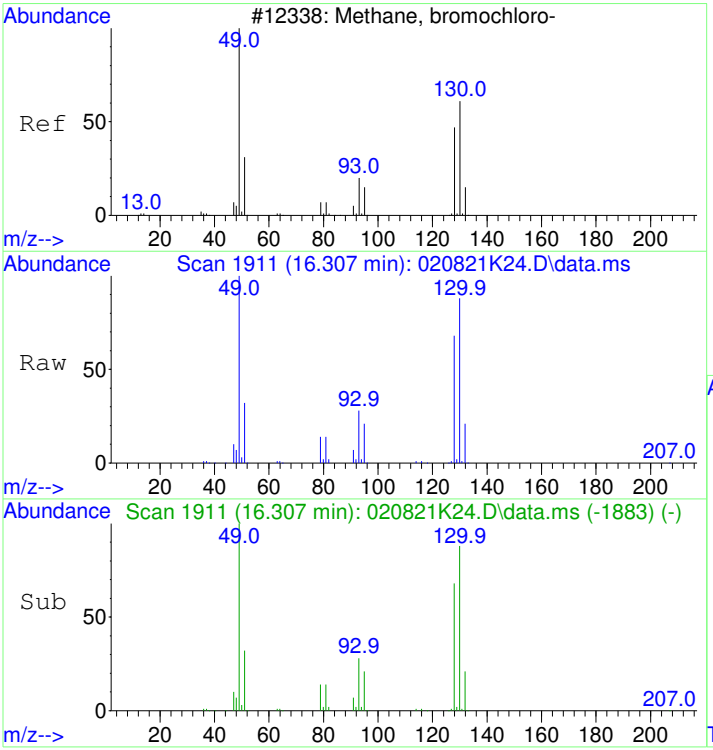
**REVIEWED**
**By LLH at 9:07 am, Feb 09, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K24.D
InstName : HP5973K
Acq On : 9 Feb 2021 5:55 am
Operator : LLH
Sample : CAN #651
Misc : 200ml RECERTIFICATION
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 09 09:06:52 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

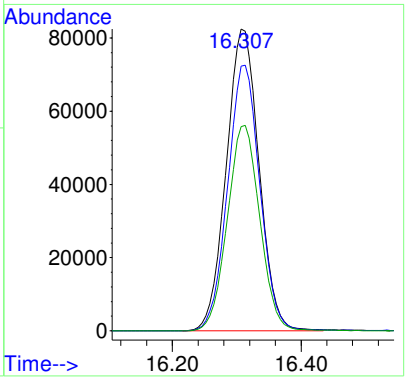


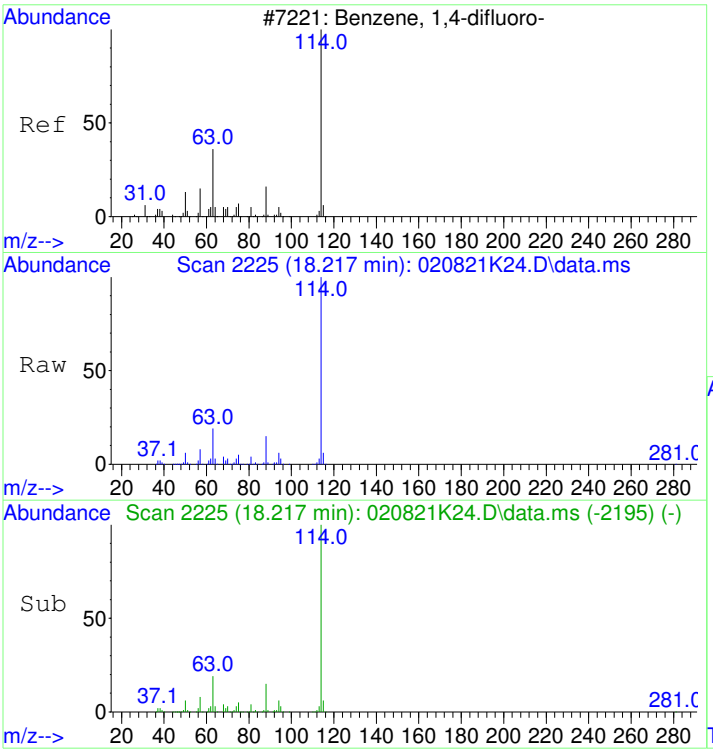



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.007 min
Lab File: 020821K24.D
Acq: 9 Feb 2021 5:55 am

Tgt Ion: 49 Resp: 291824

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 86.6 | 73.4 | 113.4 |
| 128 | 66.8 | 52.1 | 92.1 |

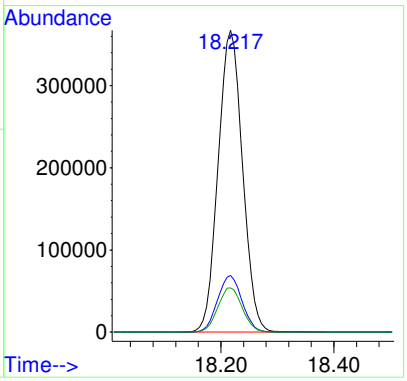


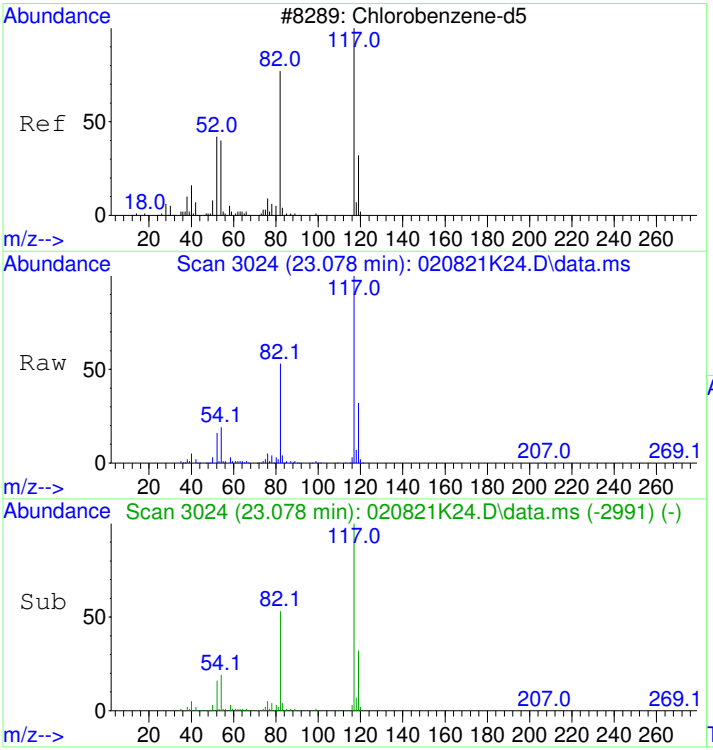




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 020821K24.D
Acq: 9 Feb 2021 5:55 am

Tgt Ion:114 Resp: 1098824

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 18.8 | 0.0 | 37.7 |
| 88 | 14.7 | 0.0 | 34.4 |

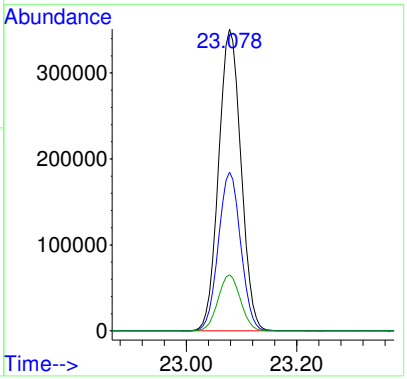





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 020821K24.D
Acq: 9 Feb 2021 5:55 am

Tgt Ion:117 Resp: 987896

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 52.4 | 31.2 | 71.2 |
| 54 | 18.6 | 0.0 | 37.2 |



# 2106036-08

Quantitation Report (Not Reviewed)

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K11.D
InstName : HP5973K
Acq On : 8 Feb 2021 6:24 pm
Operator : LLH
Sample : S21B023-IBL1
Misc : 200ml CAN #636 RECERTIFICATION
ALS Vial : 16 Sample Multiplier: 1

CLEAN

Quant Time: Feb 09 08:54:56 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) BROMOCHLOROMETHANE | 16.307 | 49 | 298953 | 19.60 ppbv | 0.00 |
| 32) 1,4-DIFLUOROBENZENE | 18.217 | 114 | 1159469 | 19.60 ppbv | 0.00 |
| 43) CHLOROBENZENE-d5 | 23.078 | 117 | 1030858 | 19.20 ppbv | 0.00 |

Target Compounds Qvalue

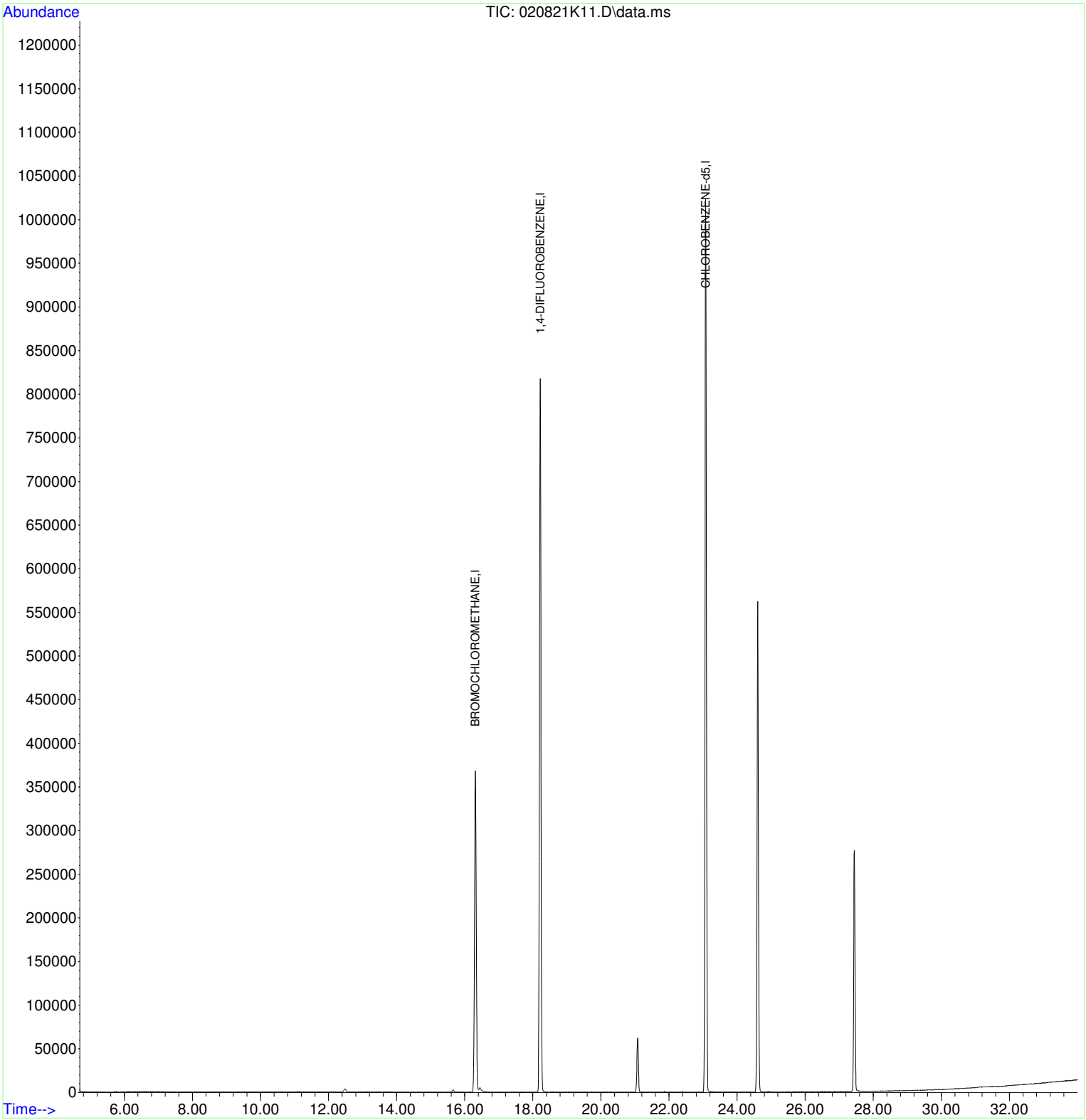
(#) = qualifier out of range (m) = manual integration (+) = signals summed

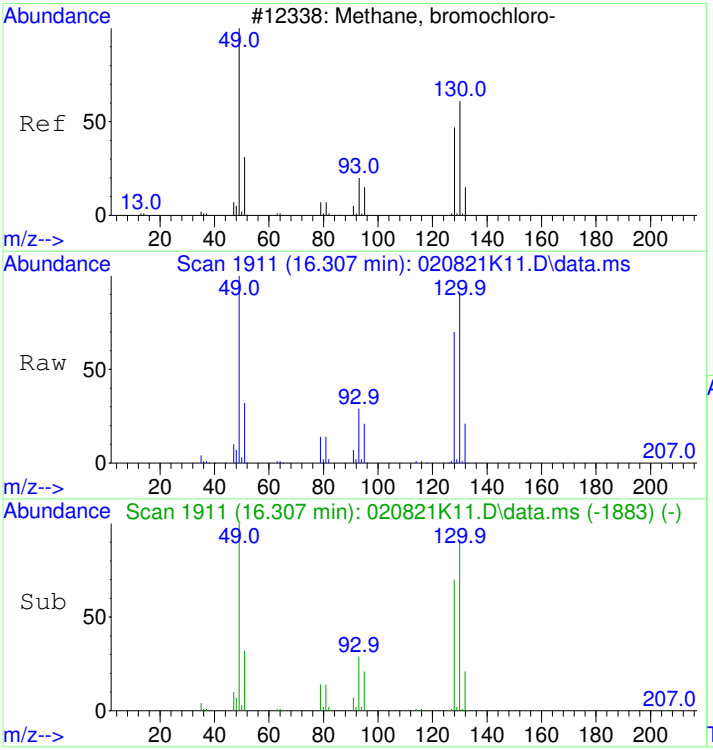
**REVIEWED**
**By LLH at 9:08 am, Feb 09, 2021**

Table of Contents

Data Path : D:\msdchem\1\2021\DATA\020821K_FSA\
Data File : 020821K11.D
InstName : HP5973K
Acq On : 8 Feb 2021 6:24 pm
Operator : LLH
Sample : S21B023-IBL1
Misc : 200ml CAN #636 RECERTIFICATION
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 09 08:54:56 2021
Quant Method : D:\msdchem\1\2021\METHOD\011321K_TO15AA.M
Quant Title : TO15
QLast Update : Thu Jan 14 09:50:21 2021
Response via : Initial Calibration

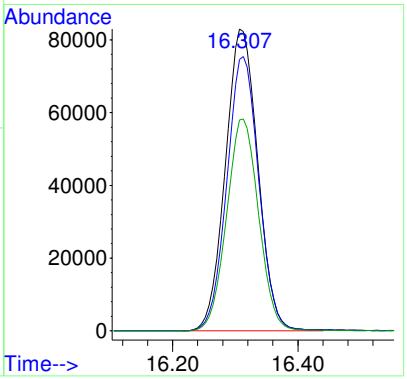


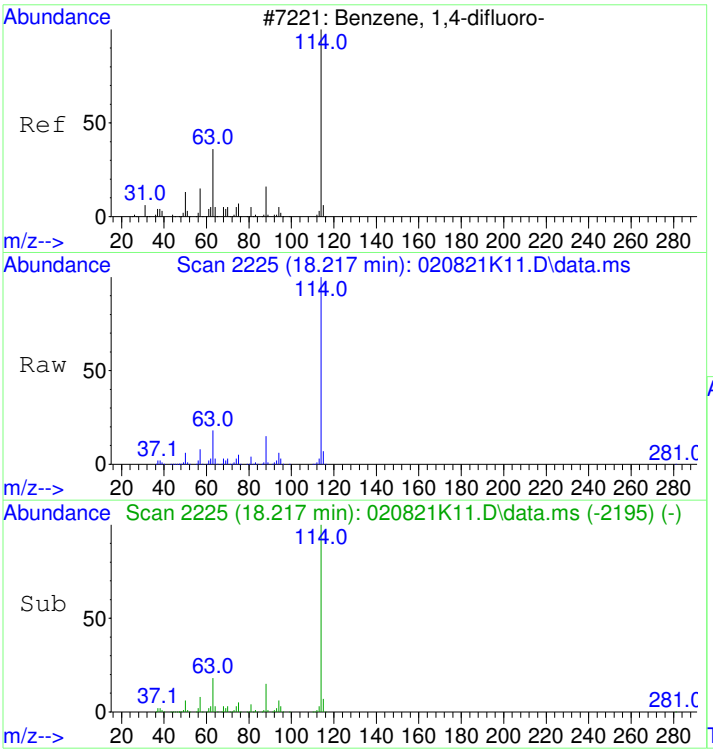



#1
BROMOCHLOROMETHANE
Concen: 19.60 ppbv
RT: 16.307 min Scan# 1911
Delta R.T. -0.007 min
Lab File: 020821K11.D
Acq: 8 Feb 2021 6:24 pm

Tgt Ion: 49 Resp: 298953

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 49 | 100 | | |
| 130 | 89.3 | 73.4 | 113.4 |
| 128 | 68.6 | 52.1 | 92.1 |

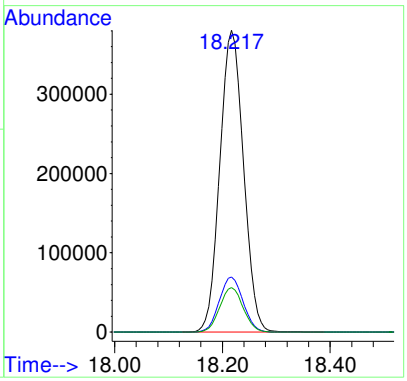


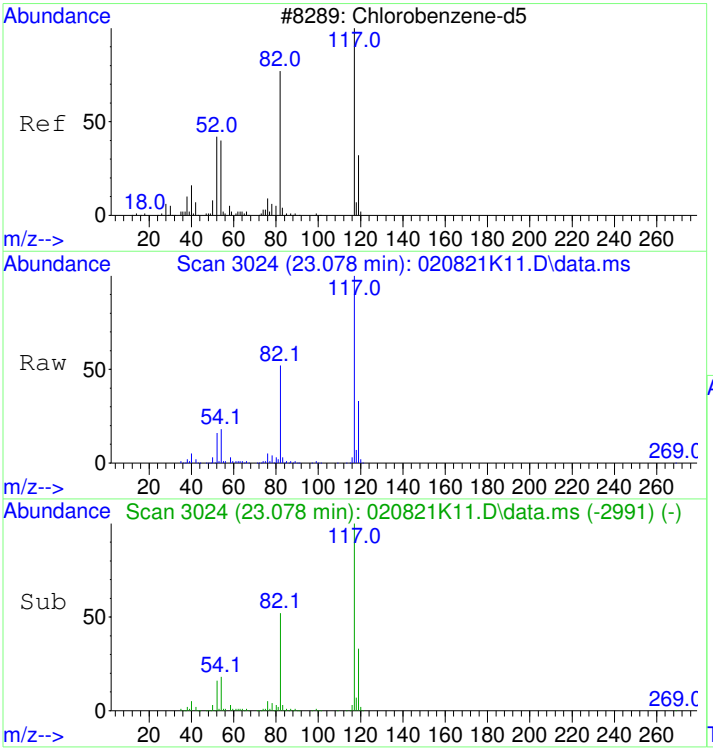




#32
1,4-DIFLUOROBENZENE
Concen: 19.60 ppbv
RT: 18.217 min Scan# 2225
Delta R.T. -0.001 min
Lab File: 020821K11.D
Acq: 8 Feb 2021 6:24 pm

Tgt Ion:114 Resp: 1159469

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 18.4 | 0.0 | 37.7 |
| 88 | 14.6 | 0.0 | 34.4 |

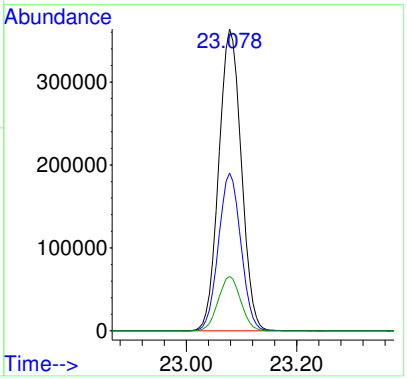





#43
CHLOROBENZENE-d5
Concen: 19.20 ppbv
RT: 23.078 min Scan# 3024
Delta R.T. -0.001 min
Lab File: 020821K11.D
Acq: 8 Feb 2021 6:24 pm

Tgt Ion:117 Resp: 1030858

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 52.0 | 31.2 | 71.2 |
| 54 | 18.0 | 0.0 | 37.2 |



# Analytical Standard Record

## EPA Region 9 Laboratory

## 1920101

| | | | |
|---|---|---|---|
| **Description:** | TO/14A GC/MS Tuning Mix, Stock 1 | **Expires:** | 04/30/20 |
| **Standard Type:** | Other Solution | **Prepared:** | 04/30/19 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 05/17/19 14:11 by LLH |
| **Vendor:** | Linde Spectra | **Lot Numb** | 1486911 |

Part #34424 Bar Code# AU010954 Cylinder # AB-111119
Do not use under 150psig.

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 0.104 |

BFB 192010l

THE LINDE GROUP

Linde

**SHIPPED TO:** GSS Warehouse
258 Lindbergh Ave.
Livermore, CA 94551-9512

**PAGE:** 1 of 1

AU010954

LH 05/17/19

## CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Sales#:** | 117153757 | **Cylinder Size:** | 185 (3.2" X 9.4") |
| **Production#:** | 1486911 | **Cylinder # :** | AB-111119 |
| **Certification Date:** | Apr-30-2019 | **Cylinder Pressure:** | 1700 psig |
| **P.O.# :** | 140786-RESTEK | **Cylinder Valve:** | CGA 180 / Aluminum |
| **Blend Type:** | CERTIFIED | **Cylinder Volume:** | 0.8 Liter |
| **Material#:** | 24087971 | **Cylinder Material:** | Aluminum |
| **Traceability:** | NIST by weight | **Gas Volume:** | 98 Liters |
| **Expiration Date:** | Apr-30-2020 | **Blend Tolerance:** | 10% Relative |
| **Do NOT use under:** | 150 psig | **Analytical Accuracy:** | 10% Relative |
| **Part Number:** | 4/30/202034424 | **NIST Traceable Certificate#:** | 18-73700 |

| COMPONENT | CAS NUMBER | REQUESTED CONC | CERTIFIED CONC |
|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 100 ppb | 104 ppb |
| Nitrogen | 7727-37-9 | Balance | Balance |

Source Identification Number: 279475

**ANALYST:** Brian Bramkamp

**DATE:** Apr-30-2019

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

# APPENDIX C.
# DOCUMENTATION OF EXTENDED USE

| | LIMS ID | Manu. Expiration Date | Reagent LIMS ID |
|---|---|---|---|
| Material, Expired | 1920101 | 4/30/20 | — |
| Analysis: TCLS | SOP # 21 | Rev. 2 | |

| | | | |
|---|---|---|---|
| Analysis Date: 4/15/20 | Instrument: | AG5973K | Analyst: LLH |

Criteria:

See SOP 893 R2 section 4.4

NEW EXPIRATION DATE: 07/30/21

| Analyte | Ave Response, Expired | Comparison (explain in criteria section) | Fail criteria? |
|---|---|---|---|
| Bromofluorobenzene | 1436950 | | NO |
| | | | |
| | | | |
| | | | |
| File ID (1) | 041520K07 | | |
| File ID (2) | | | |
| File ID (3) | | | |

Notes:

See attached BPBS TIC page.

| Approval Signatures | Approve (Y/N) | Signature | Print Name |
|---|---|---|---|
| Group Leader/Supervisor | Y | | Ziyad Rajabi |
| Technical Director | Y | RICHARD BAUER Digitally signed by RICHARD BAUER Date: 2020.08.12 14:16:34 -07'00' | |
| Lab QAO | Y | BARBARA BATES Digitally signed by BARBARA BATES Date: 2020.08.12 15:50:14 -07'00' | |
| | | LAB QAO Signature Date | |

The use of this exact layout is not required; however, the form title must be used. Clarity of the criteria and notes are of particular importance for extended due to the variety of materials and their intended use.

Data Path : D:\msdchem\1\2020\DATA\041520K_FSAA\
Data File : 041520K07.D
Acq On : 15 Apr 2020 4:26 pm
Operator : LLH
Sample : BFB 1920101
Misc : 40ml RECERTIFICATION
ALS Vial : 13 Sample Multiplier: 1

100ppbv std BFB

Quant Method : D:\msdchem\1\2020\METHOD\040120K_TO15AA.M
Quant Title : TO15

$\frac{40}{200}$ = 20ppbv

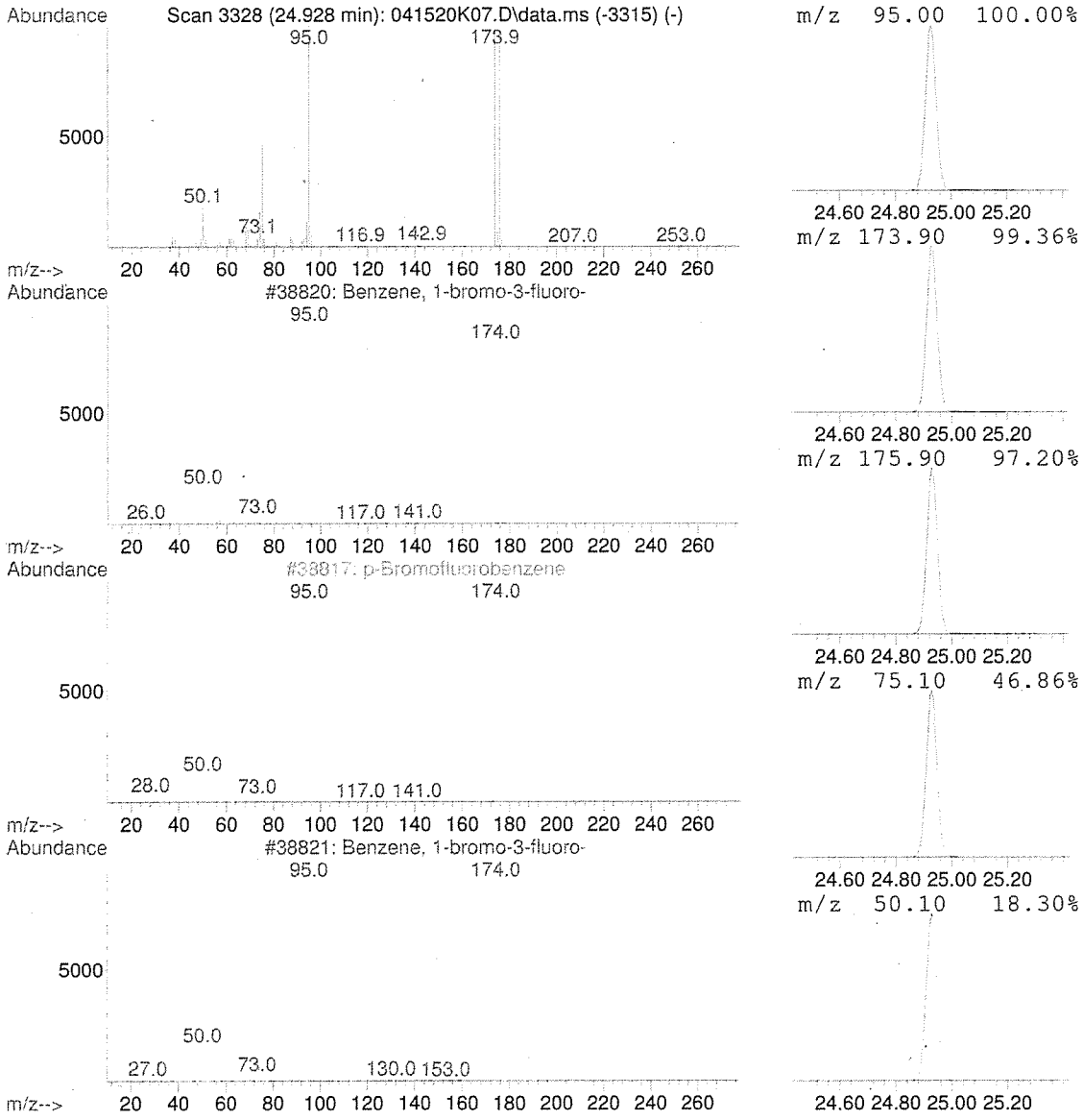
TIC Library : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p

**********

Peak Number 1 Benzene, 1-bromo-3-fluoro- Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 24.927 | 13.62 ppbv | 1436950 | CHLOROBENZENE-d5 | 23.090 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-bromo-3-fluoro- | 174 | C6H4BrF | 001073-06-9 | 98 |
| 2 | p-Bromofluorobenzene | 174 | C6H4BrF | 000460-00-4 | 97 |
| 3 | Benzene, 1-bromo-3-fluoro- | 174 | C6H4BrF | 001073-06-9 | 95 |
| 4 | Benzene, 1-bromo-2-fluoro- | 174 | C6H4BrF | 001072-85-1 | 95 |
| 5 | p-Bromofluorobenzene | 174 | C6H4BrF | 000460-00-4 | 94 |




Vem 4/29/20

Page 2 of 2

# Analytical Standard Record

## EPA Region 9 Laboratory

## 1920101

| | | | |
|---|---|---|---|
| **Description:** | TO/14A GC/MS Tuning Mix, Stock 1 | **Expires:** | 04/30/21 |
| **Standard Type:** | Other Solution | **Prepared:** | 04/30/19 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 04/26/21 14:59 by LLH |
| **Vendor:** | Linde Spectra | **Lot Numb** | 1486911 |

Part #34424 Bar Code# AU010954 Cylinder # AB-111119
See attached recertification. New expiration date 04/30/2021
Do not use under 150psig.

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 0.104 |

# RECERTIFICATION OF STANDARDS AND REAGENTS APPROVAL FORM

USEPA REGION 9 LABORATORY

LIMS ID: 1920101 Analyst: LLH

New expiration date: 04/30/22 Submission date: 06/02/21

PURPOSE OF STANDARD OR REAGENT BEING RECERTIFIED:

_____ Standards used for quantitative purposes (e.g., calibration, CCV, SCV, LCS, etc.)

_____ Neat materials

X Mixtures and neat materials used solely for instrument verification (e.g., MS tuning solutions, interelement interference checks, internal standards, surrogate standards, etc.)

APPROVALS:

| TITLE | NAME | SIGNATURE | DATE |
|---|---|---|---|
| Group Leader / Supervisor | Ziyad Rajabi | REVIEWED By ZAR at 3:36 pm, May 19, 2021 | 05/19/21 |
| Technical Director | Cynthia Williams | CYNTHIA WILLIAMS Digitally signed by CYNTHIA WILLIAMS Date: 2021.06.07 12:25:40 -07'00' | |
| Lab QAO | Barbara Bates | BARBARA BATES Digitally signed by BARBARA BATES Date: 2021.06.07 12:13:35 -07'00' | |

ATTACHMENTS:

- Recertification form
- Analytical data
- LIMS standards documentation

INSTRUCTIONS FOR DOCUMENTATION:

- Analyst completes this approval form for LIMS ID, new expiration date, and purpose section (remove check mark from non-applicable category); completes the recertification form; gathers documentation listed under attachments. Analyst creates a PDF combining all items and submits it to group leader or supervisor.
- Group leader/supervisor, Technical Director, and Lab QAO review documentation and approve recertification.
- Lab QAO provides a copy of the final recertification packet to analyst and/or group leader or supervisor for upload to the LIMS standard.
- Analyst updates the expiration date for the LIMS standard and adds a comment indicating the material has been recertified; prints and posts the corrected LIMS standard; posts the approval packet PDF to the LIMS standard.

DOCUMENTATION OF EXTENDED USE

| **Expired Material** | **LIMS ID** | **Manufacturer Expiration Date** | **Dilution LIMS ID** |
|---|---|---|---|
| 4-Bromofluorobenzene | 1920101 | 4/30/2020, recertified expiration 4/30/2021* | N/A |
| **Analysis:** TO-15 | **SOP #:** 311 | **Rev.#:** 4 | **New Expiration Date:** 4/30/2022 |
| **Analysis Date:** 04/23/2021 | **Instrument:** HP5973K | **Analyst**: LLH | |

**Criteria:**
This material is an MS tuning standard. The instrument response continues to be adequate.

| **Analyte** | **Ave Response, Expired** | **Comparison (explain in criteria section)** | **Fail criteria?** |
|---|---|---|---|
| 4-Bromofluorobenzene | 2084520 | N/A | N |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **File ID (1)** 042321KA01 | | | |
| **File ID (2)** | | Sequence: | S21D064 |
| **File ID (3)** | | Batch: | |

**Notes:**
*The original manufacturer's expiration date is 04/30/2020. This standard has been extended one time. Per SOP 893 R1 Section 6.4.5, materials that do not require verification of accuracy may be recertified indefinitely unless chemical stability is a documented problem. See attached BFB TIC page.

# Library Search Compound Report

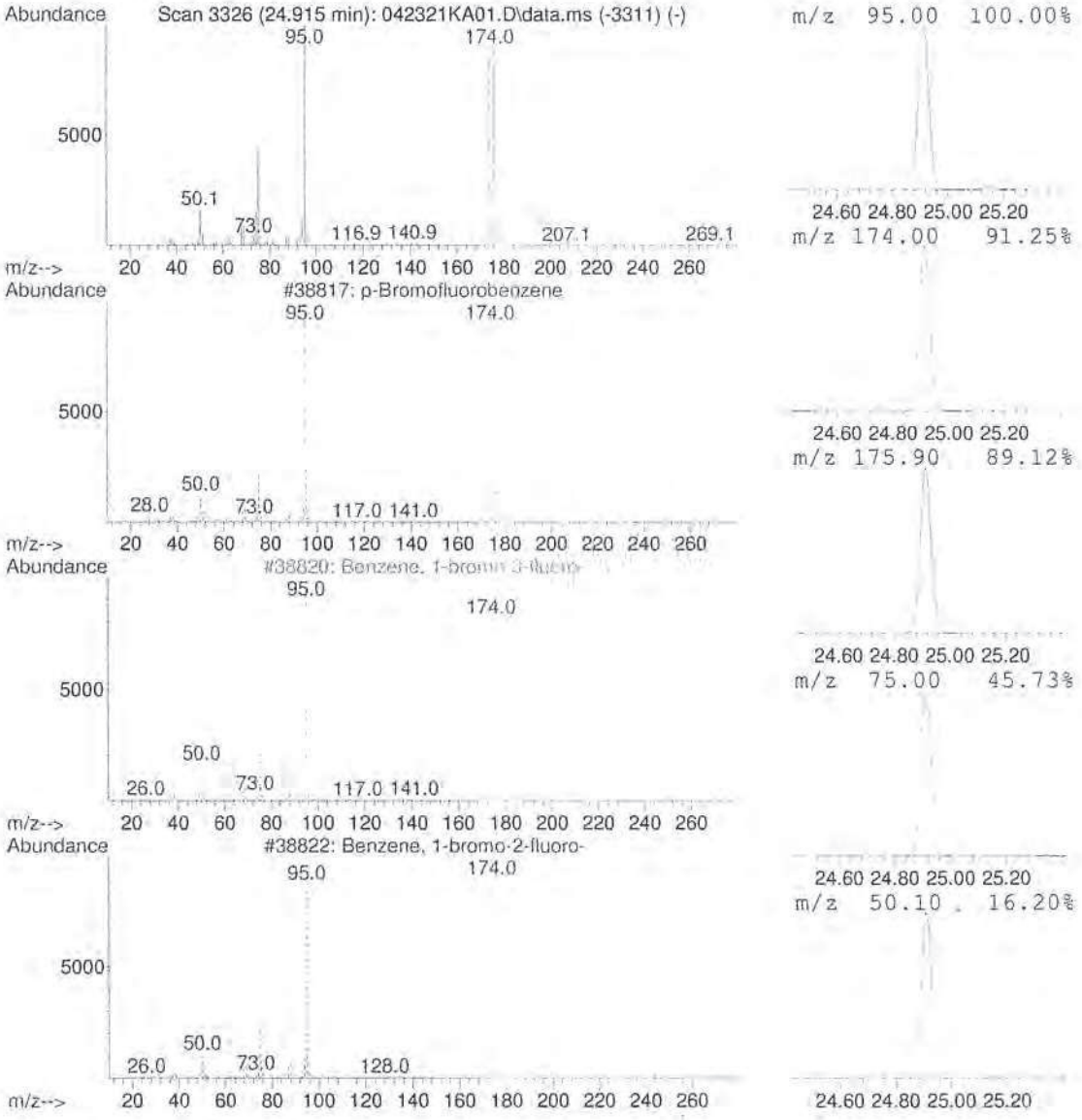
```
Data Path : D:\msdchem\1\2021\DATA\042321K_FSAA\
Data File : 042321KA01.D
Acq On    : 23 Apr 2021  10:35 am
Operator  : LLH
Sample    : S21D064-TUN1
Misc      : BFB 1920101
ALS Vial  : 31   Sample Multiplier: 1

Quant Method : D:\msdchem\1\2021\METHOD\030421K_TO15AA.M
Quant Title  : TO15

TIC Library    : C:\Database\NIST02.L
TIC Integration Parameters: lscint.p
```

**********

Peak Number 1 p-Bromofluorobenzene Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 24.915 | 16.85 ppbv | 2084520 | CHLOROBENZENE-d5 | 23.072 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | p-Bromofluorobenzene | 174 | C6H4BrF | 000460-00-4 | 97 |
| 2 | Benzene, 1-bromo-3-fluoro- | 174 | C6H4BrF | 001073-06-9 | 95 |
| 3 | Benzene, 1-bromo-2-fluoro- | 174 | C6H4BrF | 001072-85-1 | 94 |
| 4 | Benzene, 1-bromo-3-fluoro- | 174 | C6H4BrF | 001073-06-9 | 94 |
| 5 | Benzene, 1-bromo-3-fluoro- | 174 | C6H4BrF | 001073-06-9 | 94 |



# Analytical Standard Record

## EPA Region 9 Laboratory

## 1920101

| | | | |
|---|---|---|---|
| **Description:** | TO/14A GC/MS Tuning Mix, Stock 1 | **Expires:** | 04/30/20 |
| **Standard Type:** | Other Solution | **Prepared:** | 04/30/19 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 05/17/19 14:11 by LLH |
| **Vendor:** | Linde Spectra | **Lot Numb** | 1486911 |

Part #34424 Bar Code# AU010954 Cylinder # AB-111119
Do not use under 150psig.

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 0.104 |

# Analytical Standard Record

## EPA Region 9 Laboratory

## 1920101

| | | | |
|---|---|---|---|
| **Description:** | TO/14A GC/MS Tuning Mix, Stock 100pp | **Expires:** | 04/30/22 |
| **Standard Type:** | Other Solution | **Prepared:** | 04/30/19 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 06/08/21 09:12 by LLH |
| **Vendor:** | Linde Spectra | **Lot Numbe** | 1486911 |

Part #34424 Bar Code# AU010954 Cylinder # AB-111119
See attached recertification. New expiration date 04/30/2021. Re-re-extended to 04/30/22.
Do not use under 150psig.

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 0.104 |

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2026038

| | | | |
|---|---|---|---|
| **Description:** | TO-15 25 Compound Subset Standard, 10( | **Expires:** | 05/27/22 |
| **Standard Type:** | Other Solution | **Prepared:** | 05/27/20 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 110000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 06/23/20 14:23 by EM |
| **Vendor:** | Scott/Air Liquide | **Lot Numbe** | 160-401807593-1 |

Scott/Air Liquide Cylinder# ST0000227102; Bar code: AU011866 Supelco Cat No. 41979-U

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| Bromoform | 75-25-2 | 0.12 |
| 1,4-Dioxane | 123-91-1 | 0.12 |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.11 |
| 2-Butanone (MEK) | 78-93-3 | 0.11 |
| 2-Hexanone | 591-78-6 | 0.11 |
| 2-Propanol | 67-63-0 | 0.1 |
| 4-Ethyltoluene | 622-96-8 | 0.11 |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.11 |
| Acetone | 67-64-1 | 0.11 |
| Allyl chloride | 107-05-1 | 0.12 |
| Benzyl chloride | 100-44-7 | 0.1 |
| 1,3-Butadiene | 106-99-0 | 0.096 |
| Bromoethene | 593-60-2 | 0.11 |
| Vinyl acetate | 108-05-4 | 0.1 |
| Carbon disulfide | 75-15-0 | 0.12 |
| Chlorodibromomethane | 124-48-1 | 0.11 |
| Cyclohexane | 110-82-7 | 0.11 |
| Ethyl acetate | 141-78-6 | 0.11 |
| Heptane | 142-82-5 | 0.11 |
| Hexane | 110-54-3 | 0.11 |
| Propene | 115-07-1 | 0.11 |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.11 |
| Tetrahydrofuran | 109-99-9 | 0.099 |
| trans-1,2-Dichloroethene | 156-60-5 | 0.1 |
| Bromodichloromethane | 75-27-4 | 0.11 |

Scott

**Airgas Specialty Gases**
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

AU011866
2026038

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED HYDROCARBON

| | | | |
|---|---|---|---|
| Part Number: | X26NI99CA98C005 | Reference Number: | 160-401807593-1 |
| Cylinder Number: | ST0000227102 | Cylinder Volume: | 110.0 LG |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 1800 PSIG |
| Analysis Date: | May 27, 2020 | Valve Outlet: | 180 |
| Lot Number: | 160-401807593-1 | Expiration Date: | May 27, 2022 |

Traceability Statement: Hydrocarbon Process standards are NIST traceable either directly by weight or by comparison to Airgas laboratory standards that are directly NIST traceable by weight.

### CERTIFIED CONCENTRATIONS

| Component | Requested Concentration | Reported Mole % | Accuracy |
|---|---|---|---|
| 1,2 TRANS DICHLOROETHYLENE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,3 BUTADIENE | 100.000 PPB | 96.000 PPB | +/- 10% |
| 1,4 DIOXANE | 100.000 PPB | 120.000 PPB | +/- 10% |
| 4 ETHYL TOLUENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ACETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ALLYL CHLORIDE | 100.000 PPB | 120.000 PPB | +/- 10% |
| BENZYL CHLORIDE | 100.000 PPB | 100.000 PPB | +/- 10% |
| BROMO DICHLORO METHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| BROMOFORM | 100.000 PPB | 120.000 PPB | +/- 10% |
| CARBON DISULFIDE | 100.000 PPB | 120.000 PPB | +/- 10% |
| CHLORO DIBROMO METHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CYCLOHEXANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ETHYL ACETATE | 100.000 PPB | 110.000 PPB | +/- 10% |
| HEXANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ISOOCTANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ISOPROPYL ALCOHOL | 100.000 PPB | 100.000 PPB | +/- 10% |
| METHYL BUTYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL ETHYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL ISOBUTYL KETONE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL TERT BUTYL ETHER | 100.000 PPB | 110.000 PPB | +/- 10% |
| N HEPTANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| PROPYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| TETRAHYDROFURAN | 100.000 PPB | 99.000 PPB | +/- 10% |
| VINYL ACETATE | 100.000 PPB | 100.000 PPB | +/- 10% |
| VINYL BROMIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| NITROGEN | Balance | Balance | |

**Permanent Notes:** SIGMA ALDRICH P/N 41979-U

**Notes:** PO number: P488794
Date of manufacture: 18-May-2020

Rec'd 6/15/20
SIM/SCAN SCN SUBSET
VV em 6/25/20

Approved for Release

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

2035018/
AU012086

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED STANDARD-SPEC

| | | | |
|---|---|---|---|
| Part Number: | X40NI99CA98C000 | Reference Number: | 160-401857509-1 |
| Cylinder Number: | ST0000227189 | Cylinder Volume: | 98.0 LG |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 1800 PSIG |
| Analysis Date: | Jul 13, 2020 | Valve Outlet: | 180 |
| Lot Number: | 160-401857509-1 | | |

**Expiration Date: Jul 13, 2022** Mfture date: 7/6/2020

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

## ANALYTICAL RESULTS

| Component | Req Conc | Actual Concentration (Mole %) | Analytical Uncertainty |
|---|---|---|---|
| 1,1 DICHLOROETHANE | 100.000 PPB | 120.000 PPB | +/- 10% |
| 1,1 DICHLOROETHYLENE | 100.000 PPB | 120.000 PPB | +/- 10% |
| 1,1,1 TRICHLOROETHANE | 100.000 PPB | 100.000 PPB | +/- 10% |
| 1,1,2 TRICHLORO ETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,1,2,2 TETRACHLOROETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DIBROMO ETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLORO PROPANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2 DICHLOROETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2,4 TRICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,2,4 TRIMETHYLBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,3 DICHLORO BENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,3,5 TRIMETHYL BENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| 1,4 DICHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| BENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| BROMOMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CARBON TETRACHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLOROBENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| CHLOROFORM | 100.000 PPB | 110.000 PPB | +/- 10% |
| CIS 1,2 DICHLOROETHYLENE | 100.000 PPB | 120.000 PPB | +/- 10% |
| CIS 1,3 DICHLOROPROPENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ETHYL BENZENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| ETHYL CHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| HEXACHLORO 1,3 BUTADIENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| M XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYL CHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| METHYLENE CHLORIDE | 100.000 PPB | 120.000 PPB | +/- 10% |
| O XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| P XYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| PERCHLOROETHYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R11 TRICHLOROFLUOROMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R113 TRICHLOROTRIFLUOROETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| R114 DICHLOROTETRAFLUOROETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |

**Approved for Release**

Airgas
an Air Liquide company

**Airgas Specialty Gases**
Airgas USA, LLC
6141 Easton Road
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Plumsteadville, PA 18949
Airgas.com

| | | | |
|---|---|---|---|
| R12 DICHLORODIFLUOROMETHANE | 100.000 PPB | 110.000 PPB | +/- 10% |
| STYRENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| TOLUENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| TRANS 1,3 DICHLOROPROPENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| TRICHLOROETHYLENE | 100.000 PPB | 110.000 PPB | +/- 10% |
| VINYL CHLORIDE | 100.000 PPB | 110.000 PPB | +/- 10% |
| NITROGEN | Balance | | |

**Permanent Notes:**SIGMA-ALDRICH P/N 41900-U

**Notes:**PO number: P489739
Date of manufacture: 06-July-2020

Approved for Release

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2035018

| | | | |
|---|---|---|---|
| **Description:** | TO-14A 39 Component Mix Standard, 100 | **Expires:** | 07/13/22 |
| **Standard Type:** | Analyte Spike | **Prepared:** | 07/06/20 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 04/12/21 08:56 by EM |
| **Vendor:** | Scott/Air Liquide | **Lot Numbe** | 160-401857509-1 |

Sigma Aldrich P/N 41900-U Cylinder # ST0000227189 AU012086
Part No. X40NI99CA98C000 Airgas Analysis Date: 07/13/20

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.11 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.1 |
| Benzene | 71-43-2 | 0.11 |
| 1,4-Dichlorobenzene | 106-46-7 | 0.11 |
| 1,3-Dichlorobenzene | 541-73-1 | 0.11 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.11 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.11 |
| 1,2-Dichloropropane | 78-87-5 | 0.11 |
| Carbon tetrachloride | 56-23-5 | 0.11 |
| 1,2-Dichlorobenzene | 95-50-1 | 0.11 |
| Chlorobenzene | 108-90-7 | 0.11 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.11 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.11 |
| 1,1-Dichloroethene | 75-35-4 | 0.12 |
| 1,1-Dichloroethane | 75-34-3 | 0.12 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.11 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.11 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.11 |
| 1,2-Dichloroethane | 107-06-2 | 0.11 |
| Ethylbenzene | 100-41-4 | 0.11 |
| Trichlorofluoromethane | 75-69-4 | 0.11 |
| Trichloroethene | 79-01-6 | 0.11 |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.11 |
| Toluene | 108-88-3 | 0.11 |
| Tetrachloroethene | 127-18-4 | 0.11 |
| Styrene | 100-42-5 | 0.11 |
| o-Xylene | 95-47-6 | 0.11 |
| Bromomethane | 74-83-9 | 0.11 |
| Hexachlorobutadiene | 87-68-3 | 0.11 |
| Vinyl chloride | 75-01-4 | 0.11 |

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2035018**

| | | |
|---|---|---|
| Dichloromethane | 75-09-2 | 0.12 |
| Dichlorodifluoromethane | 75-71-8 | 0.11 |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.11 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.12 |
| Chloromethane | 74-87-3 | 0.11 |
| Chloroform | 67-66-3 | 0.11 |
| Chloroethane | 75-00-3 | 0.11 |
| m&p-Xylene | 179601-23-1 | 0.22 |

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2035018

| | | | |
|---|---|---|---|
| **Description:** | TO-14A 39 Component Mix Standard, 100 | **Expires:** | 07/13/22 |
| **Standard Type:** | Analyte Spike | **Prepared:** | 07/06/20 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 04/12/21 08:56 by EM |
| **Vendor:** | Scott/Air Liquide | **Lot Numbe** | 160-401857509-1 |

Sigma Aldrich P/N 41900-U Cylinder # ST0000227189 AU012086
Part No. X40NI99CA98C000 Airgas Analysis Date: 07/13/20

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.11 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.1 |
| Benzene | 71-43-2 | 0.11 |
| 1,4-Dichlorobenzene | 106-46-7 | 0.11 |
| 1,3-Dichlorobenzene | 541-73-1 | 0.11 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.11 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.11 |
| 1,2-Dichloropropane | 78-87-5 | 0.11 |
| Carbon tetrachloride | 56-23-5 | 0.11 |
| 1,2-Dichlorobenzene | 95-50-1 | 0.11 |
| Chlorobenzene | 108-90-7 | 0.11 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.11 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.11 |
| 1,1-Dichloroethene | 75-35-4 | 0.12 |
| 1,1-Dichloroethane | 75-34-3 | 0.12 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.11 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.11 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.11 |
| 1,2-Dichloroethane | 107-06-2 | 0.11 |
| Ethylbenzene | 100-41-4 | 0.11 |
| Trichlorofluoromethane | 75-69-4 | 0.11 |
| Trichloroethene | 79-01-6 | 0.11 |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.11 |
| Toluene | 108-88-3 | 0.11 |
| Tetrachloroethene | 127-18-4 | 0.11 |
| Styrene | 100-42-5 | 0.11 |
| o-Xylene | 95-47-6 | 0.11 |
| Bromomethane | 74-83-9 | 0.11 |
| Hexachlorobutadiene | 87-68-3 | 0.11 |
| Vinyl chloride | 75-01-4 | 0.11 |

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2035018**

| | | |
|---|---|---|
| Dichloromethane | 75-09-2 | 0.12 |
| Dichlorodifluoromethane | 75-71-8 | 0.11 |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.11 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.12 |
| Chloromethane | 74-87-3 | 0.11 |
| Chloroform | 67-66-3 | 0.11 |
| Chloroethane | 75-00-3 | 0.11 |
| m&p-Xylene | 179601-23-1 | 0.22 |

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2046062

| | | | |
|---|---|---|---|
| **Description:** | TO-15 25 Compound Subset Standard, 1pp | **Expires:** | 08/14/21 |
| **Standard Type:** | Other Solution | **Prepared:** | 08/14/20 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 11/11/20 13:08 by EM |
| **Vendor:** | Linde Spectra | **Lot Numbe** | 1517533 |

Linde Spectra via Restek; Cylinder# AB-114117; Bar code: AU012222
Part #34434.

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| Bromoform | 75-25-2 | 1.06 |
| 1,4-Dioxane | 123-91-1 | 1.04 |
| 2,2,4-Trimethylpentane | 540-84-1 | 1.05 |
| 2-Butanone (MEK) | 78-93-3 | 1 |
| 2-Hexanone | 591-78-6 | 0.9 |
| 2-Propanol | 67-63-0 | 0.93 |
| 4-Ethyltoluene | 622-96-8 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.96 |
| Acetone | 67-64-1 | 0.98 |
| Allyl chloride | 107-05-1 | 1.08 |
| Benzyl chloride | 100-44-7 | 0.9 |
| 1,3-Butadiene | 106-99-0 | 1.03 |
| Bromoethene | 593-60-2 | 1.02 |
| Vinyl acetate | 108-05-4 | 1.1 |
| Carbon disulfide | 75-15-0 | 1.04 |
| Chlorodibromomethane | 124-48-1 | 1.02 |
| Cyclohexane | 110-82-7 | 1.07 |
| Ethyl acetate | 141-78-6 | 1.02 |
| Heptane | 142-82-5 | 1.05 |
| Hexane | 110-54-3 | 1.02 |
| Propene | 115-07-1 | 1.02 |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.99 |
| Tetrahydrofuran | 109-99-9 | 0.91 |
| trans-1,2-Dichloroethene | 156-60-5 | 1.03 |
| Bromodichloromethane | 75-27-4 | 1.04 |

THE LINDE GROUP

**SHIPPED TO:** GSS Warehouse
258 Lindbergh Ave.
Livermore, CA 94551-9512

TO15 SUBSET

**PAGE:** 1 of 2

AU012222

## ANALYSIS REPORT

Recd 11/5/2020

2046062

| | | | |
|---|---|---|---|
| **Sales#:** | 117395939 | **Cylinder Size:** | 185 (3.2" X 9.4") |
| **Production#:** | 1517533 | **Cylinder # :** | AB-114117 |
| **Report Date:** | Aug-14-2020 | **Cylinder Pressure:** | 1700 psig |
| **P.O.# :** | P13943-RESTEK | **Cylinder Valve:** | CGA 180 / Aluminum |
| **Blend Type:** | QUALIFIED | **Cylinder Volume:** | 0.8 Liter |
| **Material#:** | 24086373 | **Cylinder Material:** | Aluminum |
| **Traceability:** | NIST by weight | **Gas Volume:** | 98 Liters |
| **Expiration Date:** | Aug-14-2021 | **Blend Tolerance:** | 10% Relative |
| **Do NOT use under:** | 150 psig | **Analytical Accuracy:** | 5% Relative |
| **Part Number:** | 34434 | **NIST Traceable Certificate#:** | 19-79403 |

| COMPONENT | CAS NUMBER | REQUESTED CONC | QUALIFIED CONC |
|---|---|---|---|
| Propylene | 115-07-1 | 1.00 ppm | 1.02 ppm |
| 1,3-Butadiene | 106-99-0 | 1.00 ppm | 1.03 ppm |
| Vinyl Bromide | 593-60-2 | 1.00 ppm | 1.02 ppm |
| Acetone | 67-64-1 | 1.00 ppm | 0.98 ppm |
| Isopropyl Alcohol | 67-63-0 | 1.00 ppm | 0.93 ppm |
| Carbon Disulfide (Analytical Accuracy ± 10%) | 75-15-0 | 1.00 ppm | 1.04 ppm |
| Allyl Chloride | 107-05-1 | 1.00 ppm | 1.08 ppm |
| Trans-1,2-Dichloroethene | 156-60-5 | 1.00 ppm | 1.03 ppm |
| Methyl Tert-Butyl Ether | 1634-04-4 | 1.00 ppm | 0.99 ppm |
| Vinyl Acetate | 108-05-4 | 1.00 ppm | 1.10 ppm |
| Methyl Ethyl Ketone | 78-93-3 | 1.00 ppm | 1.00 ppm |
| n-Hexane | 110-54-3 | 1.00 ppm | 1.02 ppm |
| Ethyl Acetate | 141-78-6 | 1.00 ppm | 1.02 ppm |
| Tetrahydrofuran | 109-99-9 | 1.00 ppm | 0.91 ppm |
| Cyclohexane | 110-82-7 | 1.00 ppm | 1.07 ppm |
| Bromodichloromethane | 75-27-4 | 1.00 ppm | 1.04 ppm |
| 1,4-Dioxane | 123-91-1 | 1.00 ppm | 1.04 ppm |
| 2,2,4-Trimethylpentane | 540-84-1 | 1.00 ppm | 1.05 ppm |
| n-Heptane | 142-82-5 | 1.00 ppm | 1.05 ppm |
| Methyl Isobutyl Ketone | 108-10-1 | 1.00 ppm | 0.96 ppm |
| Methyl Butyl Ketone | 591-78-6 | 1.00 ppm | 0.90 ppm |
| Dibromochloromethane | 124-48-1 | 1.00 ppm | 1.02 ppm |
| Bromoform | 75-25-2 | 1.00 ppm | 1.06 ppm |

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

THE LINDE GROUP

**SHIPPED TO:** GSS Warehouse
258 Lindbergh Ave.
Livermore, CA 94551-9512

**PAGE:** 2 of 2

T015 SUBSET
AU012222

## ANALYSIS REPORT

| | | | |
|---|---|---|---|
| **Sales#:** | 117395939 | **Cylinder Size:** | 185 (3.2" X 9.4") |
| **Production#:** | 1517533 | **Cylinder # :** | AB-114117 |
| **Report Date:** | Aug-14-2020 | **Cylinder Pressure:** | 1700 psig |
| **P.O.# :** | P13943-RESTEK | **Cylinder Valve:** | CGA 180 / Aluminum |
| **Blend Type:** | QUALIFIED | **Cylinder Volume:** | 0.8 Liter |
| **Material#:** | 24086373 | **Cylinder Material:** | Aluminum |
| **Traceability:** | NIST by weight | **Gas Volume:** | 98 Liters |
| **Expiration Date:** | Aug-14-2021 | **Blend Tolerance:** | 10% Relative |
| **Do NOT use under:** | 150 psig | **Analytical Accuracy:** | 5% Relative |
| **Part Number:** | 34434 | **NIST Traceable Certificate#:** | 19-79403 |

2046062

| COMPONENT | CAS NUMBER | REQUESTED CONC | QUALIFIED CONC |
|---|---|---|---|
| 4-Ethyltoluene | 622-96-8 | 1.00 ppm | 1.00 ppm |
| Benzyl Chloride (Analytical Accuracy ± 10%) | 100-44-7 | 1.00 ppm | 0.90 ppm |
| Nitrogen | 7727-37-9 | Balance | Balance |

Source Identification Number: 316674

**ANALYST:** Brian Bramkamp

**DATE:** Aug-14-2020

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2046063

| | | | |
|---|---|---|---|
| **Description:** | TO-14A 39 Component Mix Standard, 1.0 | **Expires:** | 08/14/21 |
| **Standard Type:** | Other Solution | **Prepared:** | 08/14/20 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 98000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 11/11/20 13:20 by EM |
| **Vendor:** | Linde Spectra | **Lot Numbe** | 1517532 |

Linde Spectra Cylinder # AB-114144 39 component AU012220 Part # 34400

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 1.08 |
| 1,1,1-Trichloroethane | 71-55-6 | 1.09 |
| Benzene | 71-43-2 | 1.1 |
| 1,4-Dichlorobenzene | 106-46-7 | 1.05 |
| 1,3-Dichlorobenzene | 541-73-1 | 1.04 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 1.1 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 1.02 |
| 1,2-Dichloropropane | 78-87-5 | 1.08 |
| Carbon tetrachloride | 56-23-5 | 1.08 |
| 1,2-Dichlorobenzene | 95-50-1 | 1.02 |
| Chlorobenzene | 108-90-7 | 1.1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 1.07 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 1.05 |
| 1,1-Dichloroethene | 75-35-4 | 1.09 |
| 1,1-Dichloroethane | 75-34-3 | 1.04 |
| 1,1,2-Trichloroethane | 79-00-5 | 1.09 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 1.1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 1 |
| 1,2-Dichloroethane | 107-06-2 | 1.06 |
| Ethylbenzene | 100-41-4 | 1.07 |
| Trichlorofluoromethane | 75-69-4 | 1.09 |
| Trichloroethene | 79-01-6 | 1.09 |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.99 |
| Toluene | 108-88-3 | 1.09 |
| Tetrachloroethene | 127-18-4 | 1.08 |
| Styrene | 100-42-5 | 1.1 |
| o-Xylene | 95-47-6 | 0.99 |
| Bromomethane | 74-83-9 | 1.07 |
| Hexachlorobutadiene | 87-68-3 | 1.1 |
| Vinyl chloride | 75-01-4 | 1.08 |

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2046063**

| | | |
|---|---|---|
| Dichloromethane | 75-09-2 | 1.09 |
| Dichlorodifluoromethane | 75-71-8 | 1.04 |
| cis-1,3-Dichloropropene | 10061-01-5 | 1.1 |
| cis-1,2-Dichloroethene | 156-59-2 | 1.1 |
| Chloromethane | 74-87-3 | 1.06 |
| Chloroform | 67-66-3 | 1.08 |
| Chloroethane | 75-00-3 | 1.06 |
| m&p-Xylene | 179601-23-1 | 2.16 |

ISO 9001:2015 Linde **SPECTRA** Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

THE LINDE GROUP

**SHIPPED TO:** GSS Warehouse
258 Lindbergh Ave.
Livermore, CA 94551-9512

**PAGE:** 1 of 2

TO15 PRIMARY
AU012220

## ANALYSIS REPORT

Recd 11/5/2020

2046063

| | | | |
|---|---|---|---|
| **Sales#:** | 117395939 | **Cylinder Size:** | 185 (3.2" X 9.4") |
| **Production#:** | 1517532 | **Cylinder # :** | AB-114144 |
| **Report Date:** | Aug-14-2020 | **Cylinder Pressure:** | 1700 psig |
| **P.O.# :** | P13943-RESTEK | **Cylinder Valve:** | CGA 180 / Aluminum |
| **Blend Type:** | QUALIFIED | **Cylinder Volume:** | 0.8 Liter |
| **Material#:** | 24086371 | **Cylinder Material:** | Aluminum |
| **Traceability:** | NIST by weight | **Gas Volume:** | 98 Liters |
| **Expiration Date:** | Aug-14-2021 | **Blend Tolerance:** | 10% Relative |
| **Do NOT use under:** | 150 psig | **Analytical Accuracy:** | 5% Relative |
| **Part Number:** | 34400 | **NIST Traceable Certificate#:** | 19-79403 |

| COMPONENT | CAS NUMBER | REQUESTED CONC | QUALIFIED CONC |
|---|---|---|---|
| Dichlorodifluoromethane | 75-71-8 | 1.00 ppm | 1.04 ppm |
| Chloromethane | 74-87-3 | 1.00 ppm | 1.06 ppm |
| Freon-114 | 76-14-2 | 1.00 ppm | 1.02 ppm |
| Vinyl Chloride | 75-01-4 | 1.00 ppm | 1.08 ppm |
| Bromomethane | 74-83-9 | 1.00 ppm | 1.07 ppm |
| Chloroethane | 75-00-3 | 1.00 ppm | 1.06 ppm |
| Freon-11 | 75-69-4 | 1.00 ppm | 1.09 ppm |
| 1,1-Dichloroethene | 75-35-4 | 1.00 ppm | 1.09 ppm |
| Methylene Chloride | 75-09-2 | 1.00 ppm | 1.09 ppm |
| Freon-113 | 76-13-1 | 1.00 ppm | 1.10 ppm |
| 1,1-Dichloroethane | 75-34-3 | 1.00 ppm | 1.04 ppm |
| Cis-1,2-Dichloroethylene | 156-59-2 | 1.00 ppm | 1.10 ppm |
| Chloroform | 67-66-3 | 1.00 ppm | 1.08 ppm |
| 1,2-Dichloroethane | 107-06-2 | 1.00 ppm | 1.06 ppm |
| 1,1,1-Trichloroethane | 71-55-6 | 1.00 ppm | 1.09 ppm |
| Benzene | 71-43-2 | 1.00 ppm | 1.10 ppm |
| Carbon Tetrachloride | 56-23-5 | 1.00 ppm | 1.08 ppm |
| 1,2-Dichloropropane | 78-87-5 | 1.00 ppm | 1.08 ppm |
| Trichloroethylene | 79-01-6 | 1.00 ppm | 1.09 ppm |
| Cis-1,3-Dichloropropene | 10061-01-5 | 1.00 ppm | 1.10 ppm |
| Trans-1,3-Dichloropropene | 10061-02-6 | 1.00 ppm | 0.99 ppm |
| 1,1,2-Trichloroethane | 79-00-5 | 1.00 ppm | 1.09 ppm |
| Toluene | 108-88-3 | 1.00 ppm | 1.09 ppm |
| 1,2-Dibromoethane | 106-93-4 | 1.00 ppm | 1.08 ppm |
| Tetrachloroethylene | 127-18-4 | 1.00 ppm | 1.08 ppm |
| Chlorobenzene | 108-90-7 | 1.00 ppm | 1.10 ppm |
| Ethylbenzene | 100-41-4 | 1.00 ppm | 1.07 ppm |
| P-Xylene | 106-42-3 | 1.00 ppm | 1.08 ppm |

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

ISO 9001:2015 Linde **SPECTRA** Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

THE LINDE GROUP

**SHIPPED TO:** GSS Warehouse
258 Lindbergh Ave.
Livermore, CA 94551-9512

**PAGE:** 2 of 2

2046063
AU012220

## ANALYSIS REPORT

TO15 PRIMARY

| | | | |
|---|---|---|---|
| **Sales#:** | 117395939 | **Cylinder Size:** | 185 (3.2" X 9.4") |
| **Production#:** | 1517532 | **Cylinder # :** | AB-114144 |
| **Report Date:** | Aug-14-2020 | **Cylinder Pressure:** | 1700 psig |
| **P.O.# :** | P13943-RESTEK | **Cylinder Valve:** | CGA 180 / Aluminum |
| **Blend Type:** | QUALIFIED | **Cylinder Volume:** | 0.8 Liter |
| **Material#:** | 24086371 | **Cylinder Material:** | Aluminum |
| **Traceability:** | NIST by weight | **Gas Volume:** | 98 Liters |
| **Expiration Date:** | Aug-14-2021 | **Blend Tolerance:** | 10% Relative |
| **Do NOT use under:** | 150 psig | **Analytical Accuracy:** | 5% Relative |
| **Part Number:** | 34400 | **NIST Traceable Certificate#:** | 19-79403 |

| COMPONENT | CAS NUMBER | REQUESTED CONC | QUALIFIED CONC |
|---|---|---|---|
| M-Xylene | 108-38-3 | 1.00 ppm | 1.08 ppm |
| Styrene | 100-42-5 | 1.00 ppm | 1.10 ppm |
| O-Xylene | 95-47-6 | 1.00 ppm | 0.99 ppm |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 1.00 ppm | 1.00 ppm |
| 1,3,5-Trimethylbenzene | 108-67-8 | 1.00 ppm | 1.10 ppm |
| 1,2,4-Trimethylbenzene | 95-63-6 | 1.00 ppm | 1.07 ppm |
| 1,3-Dichlorobenzene | 541-73-1 | 1.00 ppm | 1.04 ppm |
| 1,4-Dichlorobenzene | 106-46-7 | 1.00 ppm | 1.05 ppm |
| 1,2-Dichlorobenzene | 95-50-1 | 1.00 ppm | 1.02 ppm |
| 1,2,4-Trichlorobenzene | 120-82-1 | 1.00 ppm | 1.05 ppm |
| Hexachloro-1,3-Butadiene | 87-68-3 | 1.00 ppm | 1.10 ppm |
| Nitrogen | 7727-37-9 | Balance | Balance |

Source Identification Number: 316584

**ANALYST:** Brian Bramkamp

**DATE:** Aug-14-2020

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

Airgas
an Air Liquide company

2104093
AU0012327

**Airgas Specialty Gases**
Airgas USA, LLC
6141 Easton Road
Bldg 1
Plumsteadville, PA 18949
Airgas.com

# CERTIFICATE OF ANALYSIS

## Grade of Product: CERTIFIED STANDARD-SPEC

| | | | |
|---|---|---|---|
| Part Number: | X04NI99CA98C000 | Reference Number: | 160-401959604-1 |
| Cylinder Number: | ST0000229067 | Cylinder Volume: | 98.0 LG |
| Laboratory: | 124 - Plumsteadville - PA | Cylinder Pressure: | 1800 PSIG |
| Analysis Date: | Dec 31, 2020 | Valve Outlet: | 180 |
| Lot Number: | 160-401959604-1 | | |

**Expiration Date: Dec 31, 2022**

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

## ANALYTICAL RESULTS

| Component | Req Conc | Actual Concentration (Mole %) | Analytical Uncertainty |
|---|---|---|---|
| 1,4 DIFLUOROBENZENE | 100.000 PPB | 116.000 PPB | +/- 10% |
| BROMOCHLOROMETHANE | 100.000 PPB | 117.000 PPB | +/- 10% |
| CHLOROBENZENE-D5 | 100.000 PPB | 107.000 PPB | +/- 10% |
| NITROGEN | Balance | | |

**Permanent Notes:**RESTEK P/N 26353
Blend tolerance +/- 20%; allowed range 0.8 - 1.2 ppm

**Notes:**PO number: P16910

Signature on file
**Approved for Release**

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2104093

| | | | |
|---|---|---|---|
| **Description:** | TO-14A Internal Standard Mix, Stock | **Expires:** | 12/31/22 |
| **Standard Type:** | Other Solution | **Prepared:** | 12/31/20 |
| **Solvent:** | Nitrogen | **Prepared By:** | ** Vendor ** |
| **Final Volume (mls):** | 110000 | **Department:** | Air |
| **Vials:** | 1 | **Last Edit:** | 02/04/21 14:11 by LLH |
| **Vendor:** | Scott/Air Liquide | **Lot Numb** | 160-401959604-1 |

Restek Part # 26353, Cylinder #: ST0000229067 AU0012327
Original expiration: 12/31/22

| Analyte | CAS Number | Concentration (ppm) |
|---|---|---|
| Chlorobenzene-d5 | 3114-55-4 | 0.107 |
| Bromochloromethane | 74-97-5 | 0.117 |
| 1,4-Difluorobenzene | 540-36-3 | 0.116 |

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124007

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL Std 20 ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 2500 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0206 | ppmv |
| Bromoethene | 593-60-2 | 0.0204 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0208 | ppmv |
| Benzyl chloride | 100-44-7 | 0.018 | ppmv |
| Benzene | 71-43-2 | 0.022 | ppmv |
| Allyl chloride | 107-05-1 | 0.0216 | ppmv |
| Acetone | 67-64-1 | 0.0196 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0192 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.02 | ppmv |
| 2-Propanol | 67-63-0 | 0.0186 | ppmv |
| 2-Hexanone | 591-78-6 | 0.018 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.02 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.021 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0208 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.0218 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0216 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.02 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.022 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.0218 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0208 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.0218 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.021 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.0214 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0208 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0204 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0212 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0216 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0204 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.022 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0208 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124007**

| | | | |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.021 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0182 | ppmv |
| Bromoform | 75-25-2 | 0.0212 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0432 | ppmv |
| o-Xylene | 95-47-6 | 0.0198 | ppmv |
| Propene | 115-07-1 | 0.0204 | ppmv |
| Styrene | 100-42-5 | 0.022 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.022 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0216 | ppmv |
| Heptane | 142-82-5 | 0.021 | ppmv |
| Toluene | 108-88-3 | 0.0218 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.0206 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.0198 | ppmv |
| Trichloroethene | 79-01-6 | 0.0218 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.0218 | ppmv |
| Vinyl acetate | 108-05-4 | 0.022 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.0198 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.022 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0216 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0216 | ppmv |
| Chlorobenzene | 108-90-7 | 0.022 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0204 | ppmv |
| Chloroethane | 75-00-3 | 0.0212 | ppmv |
| Hexane | 110-54-3 | 0.0204 | ppmv |
| Chloromethane | 74-87-3 | 0.0212 | ppmv |
| Bromomethane | 74-83-9 | 0.0214 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.022 | ppmv |
| Cyclohexane | 110-82-7 | 0.0214 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0208 | ppmv |
| Dichloromethane | 75-09-2 | 0.0218 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0204 | ppmv |
| Ethylbenzene | 100-41-4 | 0.0214 | ppmv |
| Chloroform | 67-66-3 | 0.0216 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124007

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2046062 | TO-15 25 Compound Subset Standard, | 08/14/20 | ** Vendor ** | 08/14/21 | 11/11/20 13:08 by EM | 50 |
| 2046063 | TO-14A 39 Component Mix Standard, | 08/14/20 | ** Vendor ** | 08/14/21 | 11/11/20 13:20 by EM | 50 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124008

| | | | |
|---|---|---|---|
| Description: | TO-15K LOW Std 10 ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 2500 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0103 | ppmv |
| Bromoethene | 593-60-2 | 0.0102 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0104 | ppmv |
| Benzyl chloride | 100-44-7 | 0.009 | ppmv |
| Benzene | 71-43-2 | 0.011 | ppmv |
| Allyl chloride | 107-05-1 | 0.0108 | ppmv |
| Acetone | 67-64-1 | 0.0098 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0096 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.01 | ppmv |
| 2-Propanol | 67-63-0 | 0.0093 | ppmv |
| 2-Hexanone | 591-78-6 | 0.009 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.01 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.0105 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0104 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.0109 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0108 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.01 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.011 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.0109 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0104 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.0109 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.0105 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.0107 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0104 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0102 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0106 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0108 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0102 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.011 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0104 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124008**

| | | | |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.0105 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0091 | ppmv |
| Bromoform | 75-25-2 | 0.0106 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0216 | ppmv |
| o-Xylene | 95-47-6 | 0.0099 | ppmv |
| Propene | 115-07-1 | 0.0102 | ppmv |
| Styrene | 100-42-5 | 0.011 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.011 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0108 | ppmv |
| Heptane | 142-82-5 | 0.0105 | ppmv |
| Toluene | 108-88-3 | 0.0109 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.0103 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.0099 | ppmv |
| Trichloroethene | 79-01-6 | 0.0109 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.0109 | ppmv |
| Vinyl acetate | 108-05-4 | 0.011 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.0099 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.011 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0108 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0108 | ppmv |
| Chlorobenzene | 108-90-7 | 0.011 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0102 | ppmv |
| Chloroethane | 75-00-3 | 0.0106 | ppmv |
| Hexane | 110-54-3 | 0.0102 | ppmv |
| Chloromethane | 74-87-3 | 0.0106 | ppmv |
| Bromomethane | 74-83-9 | 0.0107 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.011 | ppmv |
| Cyclohexane | 110-82-7 | 0.0107 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0104 | ppmv |
| Dichloromethane | 75-09-2 | 0.0109 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0102 | ppmv |
| Ethylbenzene | 100-41-4 | 0.0107 | ppmv |
| Chloroform | 67-66-3 | 0.0108 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124008

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2046062 | TO-15 25 Compound Subset Standard, | 08/14/20 | ** Vendor ** | 08/14/21 | 11/11/20 13:08 by EM | 25 |
| 2046063 | TO-14A 39 Component Mix Standard, | 08/14/20 | ** Vendor ** | 08/14/21 | 11/11/20 13:20 by EM | 25 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124074

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL1 1.0 ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.00098 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.00104 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.00105 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.001 | ppmv |
| 2-Hexanone | 591-78-6 | 0.0009 | ppmv |
| 2-Propanol | 67-63-0 | 0.00093 | ppmv |
| Bromoform | 75-25-2 | 0.00106 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.00096 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.00104 | ppmv |
| Allyl chloride | 107-05-1 | 0.00108 | ppmv |
| Benzene | 71-43-2 | 0.0011 | ppmv |
| Benzyl chloride | 100-44-7 | 0.0009 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.00104 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.00109 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.001 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.00102 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.001 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.0011 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.00109 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.00104 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.00109 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.00105 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.00108 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.00105 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.00106 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.00108 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.00102 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.0011 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124074**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.00103 | ppmv |
| Bromomethane | 74-83-9 | 0.00107 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.00107 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.00091 | ppmv |
| Hexane | 110-54-3 | 0.00102 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.00216 | ppmv |
| o-Xylene | 95-47-6 | 0.00099 | ppmv |
| Propene | 115-07-1 | 0.00102 | ppmv |
| Styrene | 100-42-5 | 0.0011 | ppmv |
| Bromoethene | 593-60-2 | 0.00102 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.00108 | ppmv |
| Ethylbenzene | 100-41-4 | 0.00107 | ppmv |
| Toluene | 108-88-3 | 0.00109 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.00103 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.00099 | ppmv |
| Trichloroethene | 79-01-6 | 0.00109 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.00109 | ppmv |
| Vinyl acetate | 108-05-4 | 0.0011 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.00099 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.0011 | ppmv |
| Carbon disulfide | 75-15-0 | 0.00104 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.00108 | ppmv |
| Chlorobenzene | 108-90-7 | 0.0011 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.00102 | ppmv |
| Chloroethane | 75-00-3 | 0.00106 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.0011 | ppmv |
| Chloromethane | 74-87-3 | 0.00106 | ppmv |
| Heptane | 142-82-5 | 0.00105 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.0011 | ppmv |
| Cyclohexane | 110-82-7 | 0.00107 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.00104 | ppmv |
| Dichloromethane | 75-09-2 | 0.00109 | ppmv |
| Ethyl acetate | 141-78-6 | 0.00102 | ppmv |
| Vinyl chloride | 75-01-4 | 0.00108 | ppmv |
| Chloroform | 67-66-3 | 0.00108 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124074

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124008 | TO-15K LOW Std 10 ppbv (VIRTUAL | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 20 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124075

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL2 2.0 ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.00196 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.00208 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.0021 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.002 | ppmv |
| 2-Hexanone | 591-78-6 | 0.0018 | ppmv |
| 2-Propanol | 67-63-0 | 0.00186 | ppmv |
| Bromoform | 75-25-2 | 0.00212 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.00192 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.00208 | ppmv |
| Allyl chloride | 107-05-1 | 0.00216 | ppmv |
| Benzene | 71-43-2 | 0.0022 | ppmv |
| Benzyl chloride | 100-44-7 | 0.0018 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.00208 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.00218 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.002 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.00204 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.002 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.0022 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.00218 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.00208 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.00218 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.0021 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.00216 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.0021 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.00212 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.00216 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.00204 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.0022 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124075**

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|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.00206 | ppmv |
| Bromomethane | 74-83-9 | 0.00214 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.00214 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.00182 | ppmv |
| Hexane | 110-54-3 | 0.00204 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.00432 | ppmv |
| o-Xylene | 95-47-6 | 0.00198 | ppmv |
| Propene | 115-07-1 | 0.00204 | ppmv |
| Styrene | 100-42-5 | 0.0022 | ppmv |
| Bromoethene | 593-60-2 | 0.00204 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.00216 | ppmv |
| Ethylbenzene | 100-41-4 | 0.00214 | ppmv |
| Toluene | 108-88-3 | 0.00218 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.00206 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.00198 | ppmv |
| Trichloroethene | 79-01-6 | 0.00218 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.00218 | ppmv |
| Vinyl acetate | 108-05-4 | 0.0022 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.00198 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.0022 | ppmv |
| Carbon disulfide | 75-15-0 | 0.00208 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.00216 | ppmv |
| Chlorobenzene | 108-90-7 | 0.0022 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.00204 | ppmv |
| Chloroethane | 75-00-3 | 0.00212 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.0022 | ppmv |
| Chloromethane | 74-87-3 | 0.00212 | ppmv |
| Heptane | 142-82-5 | 0.0021 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.0022 | ppmv |
| Cyclohexane | 110-82-7 | 0.00214 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.00208 | ppmv |
| Dichloromethane | 75-09-2 | 0.00218 | ppmv |
| Ethyl acetate | 141-78-6 | 0.00204 | ppmv |
| Vinyl chloride | 75-01-4 | 0.00216 | ppmv |
| Chloroform | 67-66-3 | 0.00216 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124075

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124007 | TO-15K CAL Std 20 ppbv (VIRTUAL) | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 20 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124076

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL3 5.0 ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.0049 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0052 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.00525 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.005 | ppmv |
| 2-Hexanone | 591-78-6 | 0.0045 | ppmv |
| 2-Propanol | 67-63-0 | 0.00465 | ppmv |
| Bromoform | 75-25-2 | 0.0053 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0048 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0052 | ppmv |
| Allyl chloride | 107-05-1 | 0.0054 | ppmv |
| Benzene | 71-43-2 | 0.0055 | ppmv |
| Benzyl chloride | 100-44-7 | 0.0045 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0052 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.00545 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.005 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0051 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.005 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.0055 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.00545 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0052 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.00545 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.00525 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0054 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.00525 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0053 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0054 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0051 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.0055 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124076**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.00515 | ppmv |
| Bromomethane | 74-83-9 | 0.00535 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.00535 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.00455 | ppmv |
| Hexane | 110-54-3 | 0.0051 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0108 | ppmv |
| o-Xylene | 95-47-6 | 0.00495 | ppmv |
| Propene | 115-07-1 | 0.0051 | ppmv |
| Styrene | 100-42-5 | 0.0055 | ppmv |
| Bromoethene | 593-60-2 | 0.0051 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0054 | ppmv |
| Ethylbenzene | 100-41-4 | 0.00535 | ppmv |
| Toluene | 108-88-3 | 0.00545 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.00515 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.00495 | ppmv |
| Trichloroethene | 79-01-6 | 0.00545 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.00545 | ppmv |
| Vinyl acetate | 108-05-4 | 0.0055 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.00495 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.0055 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0052 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0054 | ppmv |
| Chlorobenzene | 108-90-7 | 0.0055 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0051 | ppmv |
| Chloroethane | 75-00-3 | 0.0053 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.0055 | ppmv |
| Chloromethane | 74-87-3 | 0.0053 | ppmv |
| Heptane | 142-82-5 | 0.00525 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.0055 | ppmv |
| Cyclohexane | 110-82-7 | 0.00535 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0052 | ppmv |
| Dichloromethane | 75-09-2 | 0.00545 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0051 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0054 | ppmv |
| Chloroform | 67-66-3 | 0.0054 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124076

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124007 | TO-15K CAL Std 20 ppbv (VIRTUAL) | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 50 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124077

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL4 10 ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.0098 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0104 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.0105 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.01 | ppmv |
| 2-Hexanone | 591-78-6 | 0.009 | ppmv |
| 2-Propanol | 67-63-0 | 0.0093 | ppmv |
| Bromoform | 75-25-2 | 0.0106 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0096 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0104 | ppmv |
| Allyl chloride | 107-05-1 | 0.0108 | ppmv |
| Benzene | 71-43-2 | 0.011 | ppmv |
| Benzyl chloride | 100-44-7 | 0.009 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0104 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.0109 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.01 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0102 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.01 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.011 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.0109 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0104 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.0109 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.0105 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0108 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.0105 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0106 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0108 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0102 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.011 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124077**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0103 | ppmv |
| Bromomethane | 74-83-9 | 0.0107 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.0107 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0091 | ppmv |
| Hexane | 110-54-3 | 0.0102 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0216 | ppmv |
| o-Xylene | 95-47-6 | 0.0099 | ppmv |
| Propene | 115-07-1 | 0.0102 | ppmv |
| Styrene | 100-42-5 | 0.011 | ppmv |
| Bromoethene | 593-60-2 | 0.0102 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0108 | ppmv |
| Ethylbenzene | 100-41-4 | 0.0107 | ppmv |
| Toluene | 108-88-3 | 0.0109 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.0103 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.0099 | ppmv |
| Trichloroethene | 79-01-6 | 0.0109 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.0109 | ppmv |
| Vinyl acetate | 108-05-4 | 0.011 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.0099 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.011 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0104 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0108 | ppmv |
| Chlorobenzene | 108-90-7 | 0.011 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0102 | ppmv |
| Chloroethane | 75-00-3 | 0.0106 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.011 | ppmv |
| Chloromethane | 74-87-3 | 0.0106 | ppmv |
| Heptane | 142-82-5 | 0.0105 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.011 | ppmv |
| Cyclohexane | 110-82-7 | 0.0107 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0104 | ppmv |
| Dichloromethane | 75-09-2 | 0.0109 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0102 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0108 | ppmv |
| Chloroform | 67-66-3 | 0.0108 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124077

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124007 | TO-15K CAL Std 20 ppbv (VIRTUAL) | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 100 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124078

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL5 15ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.0147 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0156 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.0158 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.015 | ppmv |
| 2-Hexanone | 591-78-6 | 0.0135 | ppmv |
| 2-Propanol | 67-63-0 | 0.014 | ppmv |
| Bromoform | 75-25-2 | 0.0159 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0144 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0156 | ppmv |
| Allyl chloride | 107-05-1 | 0.0162 | ppmv |
| Benzene | 71-43-2 | 0.0165 | ppmv |
| Benzyl chloride | 100-44-7 | 0.0135 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0156 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.0164 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.015 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0153 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.015 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.0165 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.0164 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0156 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.0164 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.0158 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0162 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.0158 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0159 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0162 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0153 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.0165 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124078**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0154 | ppmv |
| Bromomethane | 74-83-9 | 0.016 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.016 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0136 | ppmv |
| Hexane | 110-54-3 | 0.0153 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0324 | ppmv |
| o-Xylene | 95-47-6 | 0.0148 | ppmv |
| Propene | 115-07-1 | 0.0153 | ppmv |
| Styrene | 100-42-5 | 0.0165 | ppmv |
| Bromoethene | 593-60-2 | 0.0153 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0162 | ppmv |
| Ethylbenzene | 100-41-4 | 0.016 | ppmv |
| Toluene | 108-88-3 | 0.0164 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.0154 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.0148 | ppmv |
| Trichloroethene | 79-01-6 | 0.0164 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.0164 | ppmv |
| Vinyl acetate | 108-05-4 | 0.0165 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.0148 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.0165 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0156 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0162 | ppmv |
| Chlorobenzene | 108-90-7 | 0.0165 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0153 | ppmv |
| Chloroethane | 75-00-3 | 0.0159 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.0165 | ppmv |
| Chloromethane | 74-87-3 | 0.0159 | ppmv |
| Heptane | 142-82-5 | 0.0158 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.0165 | ppmv |
| Cyclohexane | 110-82-7 | 0.016 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0156 | ppmv |
| Dichloromethane | 75-09-2 | 0.0164 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0153 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0162 | ppmv |
| Chloroform | 67-66-3 | 0.0162 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124078

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124007 | TO-15K CAL Std 20 ppbv (VIRTUAL) | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 150 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124079

| | | | |
|---|---|---|---|
| Description: | TO-15K CAL6 20ppbv (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Calibration Stand: | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.0196 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0208 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.021 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.02 | ppmv |
| 2-Hexanone | 591-78-6 | 0.018 | ppmv |
| 2-Propanol | 67-63-0 | 0.0186 | ppmv |
| Bromoform | 75-25-2 | 0.0212 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0192 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0208 | ppmv |
| Allyl chloride | 107-05-1 | 0.0216 | ppmv |
| Benzene | 71-43-2 | 0.022 | ppmv |
| Benzyl chloride | 100-44-7 | 0.018 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0208 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.0218 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.02 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0204 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.02 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.022 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.0218 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0208 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.0218 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.021 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0216 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.021 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0212 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0216 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0204 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.022 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124079**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0206 | ppmv |
| Bromomethane | 74-83-9 | 0.0214 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.0214 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0182 | ppmv |
| Hexane | 110-54-3 | 0.0204 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0432 | ppmv |
| o-Xylene | 95-47-6 | 0.0198 | ppmv |
| Propene | 115-07-1 | 0.0204 | ppmv |
| Styrene | 100-42-5 | 0.022 | ppmv |
| Bromoethene | 593-60-2 | 0.0204 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0216 | ppmv |
| Ethylbenzene | 100-41-4 | 0.0214 | ppmv |
| Toluene | 108-88-3 | 0.0218 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.0206 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.0198 | ppmv |
| Trichloroethene | 79-01-6 | 0.0218 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.0218 | ppmv |
| Vinyl acetate | 108-05-4 | 0.022 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.0198 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.022 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0208 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0216 | ppmv |
| Chlorobenzene | 108-90-7 | 0.022 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0204 | ppmv |
| Chloroethane | 75-00-3 | 0.0212 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.022 | ppmv |
| Chloromethane | 74-87-3 | 0.0212 | ppmv |
| Heptane | 142-82-5 | 0.021 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.022 | ppmv |
| Cyclohexane | 110-82-7 | 0.0214 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0208 | ppmv |
| Dichloromethane | 75-09-2 | 0.0218 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0204 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0216 | ppmv |
| Chloroform | 67-66-3 | 0.0216 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124079

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124007 | TO-15K CAL Std 20 ppbv (VIRTUAL) | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 200 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124080

| | | | |
|---|---|---|---|
| Description: | TO-15K BS1 (VIRTUAL) | Expires: | 07/08/21 |
| Standard Type: | Analyte Spike | Prepared: | 06/08/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/11/21 10:19 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.0196 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.0208 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.021 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.02 | ppmv |
| 2-Hexanone | 591-78-6 | 0.018 | ppmv |
| 2-Propanol | 67-63-0 | 0.0186 | ppmv |
| Bromoform | 75-25-2 | 0.0212 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.0192 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.0208 | ppmv |
| Allyl chloride | 107-05-1 | 0.0216 | ppmv |
| Benzene | 71-43-2 | 0.022 | ppmv |
| Benzyl chloride | 100-44-7 | 0.018 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.0208 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.0218 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.02 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.0204 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.02 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.022 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.0218 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.0208 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.0218 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.021 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.0216 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.021 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.0212 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.0216 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.0204 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.022 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124080**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0206 | ppmv |
| Bromomethane | 74-83-9 | 0.0214 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.0214 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0182 | ppmv |
| Hexane | 110-54-3 | 0.0204 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.0432 | ppmv |
| o-Xylene | 95-47-6 | 0.0198 | ppmv |
| Propene | 115-07-1 | 0.0204 | ppmv |
| Styrene | 100-42-5 | 0.022 | ppmv |
| Bromoethene | 593-60-2 | 0.0204 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.0216 | ppmv |
| Ethylbenzene | 100-41-4 | 0.0214 | ppmv |
| Toluene | 108-88-3 | 0.0218 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.0206 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.0198 | ppmv |
| Trichloroethene | 79-01-6 | 0.0218 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.0218 | ppmv |
| Vinyl acetate | 108-05-4 | 0.022 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.0198 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.022 | ppmv |
| Carbon disulfide | 75-15-0 | 0.0208 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.0216 | ppmv |
| Chlorobenzene | 108-90-7 | 0.022 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.0204 | ppmv |
| Chloroethane | 75-00-3 | 0.0212 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.022 | ppmv |
| Chloromethane | 74-87-3 | 0.0212 | ppmv |
| Heptane | 142-82-5 | 0.021 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.022 | ppmv |
| Cyclohexane | 110-82-7 | 0.0214 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.0208 | ppmv |
| Dichloromethane | 75-09-2 | 0.0218 | ppmv |
| Ethyl acetate | 141-78-6 | 0.0204 | ppmv |
| Vinyl chloride | 75-01-4 | 0.0216 | ppmv |
| Chloroform | 67-66-3 | 0.0216 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124080

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124007 | TO-15K CAL Std 20 ppbv (VIRTUAL) | 06/08/21 | Estrellita Manuel | 07/08/21 | 06/11/21 10:19 by EM | 200 |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124081

| | | | |
|---|---|---|---|
| Description: | TO-15K SCV (VIRTUAL) | Expires: | 07/09/21 |
| Standard Type: | Calibration Standa | Prepared: | 06/09/21 |
| Solvent: | Zero Grade Air | Prepared By: | Estrellita Manuel |
| Final Volume (mls): | 200 | Department: | Air |
| Vials: | 1 | Last Edit: | 06/09/21 16:37 by EM |

| Analyte | CAS Number | Concentration | Units |
|---|---|---|---|
| Acetone | 67-64-1 | 0.011 | ppmv |
| 1,4-Dioxane | 123-91-1 | 0.012 | ppmv |
| 2,2,4-Trimethylpentane | 540-84-1 | 0.011 | ppmv |
| 2-Butanone (MEK) | 78-93-3 | 0.011 | ppmv |
| 2-Hexanone | 591-78-6 | 0.011 | ppmv |
| 2-Propanol | 67-63-0 | 0.01 | ppmv |
| Bromoform | 75-25-2 | 0.012 | ppmv |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 0.011 | ppmv |
| 1,3-Dichlorobenzene | 541-73-1 | 0.011 | ppmv |
| Allyl chloride | 107-05-1 | 0.012 | ppmv |
| Benzene | 71-43-2 | 0.011 | ppmv |
| Benzyl chloride | 100-44-7 | 0.01 | ppmv |
| Bromochloromethane | 74-97-5 | 0.0234 | ppmv |
| Bromodichloromethane | 75-27-4 | 0.011 | ppmv |
| 1,1,1-Trichloroethane | 71-55-6 | 0.01 | ppmv |
| 4-Ethyltoluene | 622-96-8 | 0.011 | ppmv |
| 1,2-Dichlorobenzene | 95-50-1 | 0.011 | ppmv |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.011 | ppmv |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.011 | ppmv |
| 1,1,2-Trichloroethane | 79-00-5 | 0.011 | ppmv |
| 1,1-Dichloroethane | 75-34-3 | 0.012 | ppmv |
| 1,1-Dichloroethene | 75-35-4 | 0.012 | ppmv |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.011 | ppmv |
| 1,4-Difluorobenzene | 540-36-3 | 0.0232 | ppmv |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 0.011 | ppmv |
| 1,4-Dichlorobenzene | 106-46-7 | 0.011 | ppmv |
| 1,2-Dichloroethane | 107-06-2 | 0.011 | ppmv |
| 1,2-Dichloropropane | 78-87-5 | 0.011 | ppmv |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 0.011 | ppmv |
| 1,3,5-Trimethylbenzene | 108-67-8 | 0.011 | ppmv |

Reviewed By Date

**Analytical Standard Record**

**EPA Region 9 Laboratory**

**2124081**

| | | | |
|---|---|---|---|
| 1,3-Butadiene | 106-99-0 | 0.0096 | ppmv |
| Bromomethane | 74-83-9 | 0.011 | ppmv |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.011 | ppmv |
| Tetrahydrofuran | 109-99-9 | 0.0099 | ppmv |
| Hexane | 110-54-3 | 0.011 | ppmv |
| m&p-Xylene | 179601-23-1 | 0.022 | ppmv |
| o-Xylene | 95-47-6 | 0.011 | ppmv |
| Propene | 115-07-1 | 0.011 | ppmv |
| Styrene | 100-42-5 | 0.011 | ppmv |
| Bromoethene | 593-60-2 | 0.011 | ppmv |
| Tetrachloroethene | 127-18-4 | 0.011 | ppmv |
| Ethylbenzene | 100-41-4 | 0.011 | ppmv |
| Toluene | 108-88-3 | 0.011 | ppmv |
| trans-1,2-Dichloroethene | 156-60-5 | 0.01 | ppmv |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.011 | ppmv |
| Trichloroethene | 79-01-6 | 0.011 | ppmv |
| Trichlorofluoromethane | 75-69-4 | 0.011 | ppmv |
| Vinyl acetate | 108-05-4 | 0.01 | ppmv |
| tert-Butyl methyl ether (MTBE) | 1634-04-4 | 0.011 | ppmv |
| cis-1,2-Dichloroethene | 156-59-2 | 0.012 | ppmv |
| Carbon disulfide | 75-15-0 | 0.012 | ppmv |
| Carbon tetrachloride | 56-23-5 | 0.011 | ppmv |
| Chlorobenzene | 108-90-7 | 0.011 | ppmv |
| Chlorobenzene-d5 | 3114-55-4 | 0.0214 | ppmv |
| Chlorodibromomethane | 124-48-1 | 0.011 | ppmv |
| Chloroethane | 75-00-3 | 0.011 | ppmv |
| Hexachlorobutadiene | 87-68-3 | 0.011 | ppmv |
| Chloromethane | 74-87-3 | 0.011 | ppmv |
| Heptane | 142-82-5 | 0.011 | ppmv |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.011 | ppmv |
| Cyclohexane | 110-82-7 | 0.011 | ppmv |
| Dichlorodifluoromethane | 75-71-8 | 0.011 | ppmv |
| Dichloromethane | 75-09-2 | 0.012 | ppmv |
| Ethyl acetate | 141-78-6 | 0.011 | ppmv |
| Vinyl chloride | 75-01-4 | 0.011 | ppmv |
| Chloroform | 67-66-3 | 0.011 | ppmv |

Reviewed By Date

# Analytical Standard Record

## EPA Region 9 Laboratory

## 2124081

**Parent Standards used in this standard:**

| Standard | Description | Prepared | Prepared By | Expires | Last Edit | (mls) |
|---|---|---|---|---|---|---|
| 2104093 | TO-14A Internal Standard Mix, Stock( | 12/31/20 | ** Vendor ** | 12/31/22 | 02/04/21 14:11 by LLH | 40 |
| 2124073 | TO-15 SCV (VIRTUAL) | 06/09/21 | Estrellita Manuel | 07/09/21 | 06/09/21 16:37 by EM | 200 |

Reviewed By Date